

ARCHIVED SAOCA FORUM THREADS FOR 2.8L V6 CONVERSION

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Engine

Air Filter - types

Britbeam

Bob here's the AIR CLEANER for your list or bill of materials.

This air cleaner requires no cutting or adapting it fits on my Holley with Offy manifold with 1/4" clearance between the acorn nut and hood. (tested and measured with playdough).

The air cleaner is 9" diameter fits 5 1/8" neck and uses a Felpro #60038 gasket. This gasket is important because it adds very little height to the total height. The air cleaner works well on my engine certified by use on my car today. I know everyone has been saying use a 10" but this looks good and fits perfect. Do not use the 3 bar spinner nut that comes with it. Use a acorn nut or even lower profile nut. See part numbers below.

Also here is the cable for the accelerator and bracket I used. You could make your own bracket but just turn loose the \$40 bucks and save yourself a days worth of wasted time fabricating. The time is better spent on other items needed for completion of your project. I purchased these parts at "PEP Boys". The quality of the chrome looks good. I installed my hood tonight now it once again looks like a innocent little Alpine (wolf in sheep's clothing).

Air cleaner MFG. Spectre P/N 4770

Accel Cable MFG. Spectre P/N 2430

Carb cable mount-Mfg. Spectre P/N 2418

Fel-Pro gasket #60038

Future 13-6516

bryang

I ended up getting the cheapie as earlier discussed and I've since removed it when I put the hood back on. I'm going to run the triangular Edelbrock unit with the foam filter for the time being. It fits and it should be O.K. if I don't get any backfire through the carbs. I'm a little nervous because when it's under the hood I won't be able to tell if it is on fire until the paint starts blistering on the hood. I drove it back from my friends after painting it and it seemed to do fine this time with no fires! I can't seem to find a setup in the 10 to 11 inch range with a recessed base. I think I may end up making my own base plate and using the top half of something else.

V6 JOE

I would recommend not using the Edelbrock triangular air filter. I used it on my first Alpine, and found out that it will filter out only rocks and small children.

When I removed it for the first time, after having run it for a while, I found a fine grit in the throats of the carburetor. This is the same grit we run filters on our engines to avoid.

The other thing, is the reason you mentioned. The fact that the foam in the filter can catch fire if the engine backfires. I think running without a filter would be preferable to using this poor excuse for a filter; at least you wouldn't run the risk of fire.

Chuck Ingram

Joe,

I used the high density filter material from the my hvlp turbine. Yes it can burn but not as easily as the original foam from that type of air cleaner. On the 2.6 I did have that problem. This was caused by valve timing and adjustment. Mine was off by so little and occasionally would cough on full instant throttle opening. Once everything was set up I never had this problem again. The problem occurred as I really didn't set up positive adjusting to the cam I was using.

On another note. I hope you are feeling OK and 2004 will see you hale and hearty spewing out your wisdom on the sunbeam.

V6 JOE

Hi Chuck,

The major complaint about the Edelbrock air filter, was that it wasn't worth a darn as far as filtering is concerned. The fact that it could catch fire was a minor concern, as far as I am concerned. Most guys are having their engines rebuilt before they do the conversion, and I'd hate to see them not get a long life out of their engine.

Chuck Ingram

Joe,

When I first had the foam burning surprise I had to have the carb rebuilt. As I said I never had that again.

bryang

Well here we all are talking about the carbs again so.. I have a friend that says that the power valve can be ruined when you get a backfire up through the carb. I've heard that as well, but since I have no idea what a power valve is, I just sit and nod knowingly. I'm sure it must be a pretty important part. He also says that there is a way of modifying the carb so that this is a thing of the past. Apparently you can drill a hole in the lower plate and insert a steel ball bearing that will cut off air / exhaust? from damaging the power valve. He's going to do the mod to mine but he says that the carb has to be cold. Anyone heard of such a mod?

KennyJ

How old is your carb? Holley has been putting the anti-blowback valve in most its carbs for almost 10 years.

The Power valve is in the primary bowl. You basically have "jets" for three throttle positions, 1) Idle (not jets per se, hole in the metering plate), 2) mid range (the "jets" as we know them) and 3) High RPM/Low vacuum (the power valve).

The power valve actuates at a specified vacuum setting (a 65 opens at 6.5 inches of mercury, 55, 75 etc) to enrichen the mixture for heavy throttle/high load applications. He is correct in the older Holleys, 1 backfire and you were replacing a power valve (about \$6.95 plus \$5.00 worth of gaskets).

To back up a bit, the power valve has holes to flow fuel and a diaphragm to actuate with vacuum. It is a valid, and good mod, if the carb is not already fitted with one.

V6 JOE

Hi Kenny,

The power valve itself doesn't have holes in it, it merely uncovers a couple of small holes in the metering block, when the vacuum in the manifold drops to whatever level that the valve has been calibrated to. This adds fuel

to the circuit when the throttle has been opened suddenly, in order to keep the engine from leaning out under these conditions.

The power valve diaphragm breaks when the engine backfires, because it can't handle those kind of pressures. The best indication that the power valve is broken, is if the engine all of a sudden starts to run rich, in all but full throttle conditions.

bryang

O.K. I've got the hood on and adjusted. If I cut down 1/8" off of the round air cleaner that I purchased, there should be no clearance problems. I put a piece of tape on top of the nut that comes with the air cleaner and gently lowered the hood. It did touch, so I figure if I take it down an eighth inch it should be fine.

Pemberton ltd

Well I made my air cleaner fit today. I recently bought an Edeibrock 10 in aluminum air cleaner with a 2 in filter. Originally the base was 3/4 in tall and I went and cut it down to 3/8 in and it fits just fine now. Because I cut it from the bottom it no longer has the lip to make it fit snug on the carb. I plan on taking the piece that was cut off and tacking it onto the inside and that should take up the difference and make it fit nice and snug. Either way it looks great and I can close the hood.

manyfords

You are doing the exact same thing I did and I got 1/8 inch clearance between the top of the air cleaner and underside of the bonnet. It ain't much, but clearance is clearance and no scratchee the bonnet.

bryang

I'm looking for an air cleaner for my V6 conversion and I'm hoping that some of you who have done this can tell me what works. I was using the triangular mesh one with the foam filter, but unfortunately I discovered the hard way that those elements are flammable. Joe has suggested using an 11 inch recessed base air cleaner. I have found 11 inch air cleaners and I have found recessed base air cleaners, but never found an 11 inch recessed base air cleaner. I'd really, really like to find one by this weekend so any help would be greatly appreciated. I've already been through Summit Racing and JEG's to no avail.

V6JOE

If you can't find an 11 inch one, look for a 10 inch, or even a 9 inch one. The main thing is to use a recessed base, or you'll have hood clearance problems.

bryang

I'm looking and looking. There are tons of 14 inch recessed base units. There must be a lot of people doing this conversion because I can't find a 9, 10 or 11 inch recessed base one. Maybe I'll have to make my own. It really should be an item that you can just walk in to Schucks and buy. It probably is in most states, but not around here. Well, back to

KennyJ

It has been a while since I shopped for these, but if memory serves me correct, both Moroso and Milodon (www.X.com) have recessed based air cleaners, but they may be all 14". Milodon makes an 8.5 "...but recessed ... I doubt. You could always cut the base and lid from a stock air cleaner to get your drop base, might even find an aluminum setup out of an early 5.0/Farmont/LTD II/etc.

Don't forget to try NAPA, they have some chrome setups, and maybe exactly what you need. Also Transdapt (sells a 10 inch for sure), Ford Motorsports, Or even Speedway Motors.

Ahh, found it at \$14.95, deep dish chrome air cleaner, 10".

Britbeam

Kenny I looked at the air cleaner on Speedway. Does the term Deep Dish mean it is recessed? I see they have 14" air cleaners they call recessed. What do you think?

Thanks for finding this site.

V6JOE

The 14" diameter filter will look out of place on such a small engine. That's the reason I suggest the 10" one.

Britbeam

I agree the 10" is the way to go and there is one on the speedway site but it describes it as deep dish not recessed as you've suggested. I'm going to call them today for a better explanation.

bryang

Hopefully deep dish means recessed because I ordered it yesterday. I'll let you know as soon as I get it. I should have called for confirmation but I was too excited. Now that I think about it, deep dish could mean that the top is dished which wouldn't do me much good. I can use anything right now since I don't have a hood on but I'm wanting to put a hood on sometime down the road and I'd like to be able to close it without putting a big crescent crease in it.

Barry Knight

I hope someone finds a solution to this, because I have the same problem.

The recessed base air cleaners drop the filter element so that it surrounds the carburetor. If you measure out from the air cleaner hold down bolt / stud location, you will find that a Holley 390 is about 10 inches in "diameter." Unfortunately, a 10 inch OD filter (perhaps 8" ID) is not large enough to go around a 10" diameter carburetor.

A 14" air cleaner (about 12" filter ID) is large enough to be dropped around the carburetor, but as Joe noted, the appearance is not good.

On my Chevy 3.4 V6, an air cleaner larger than 10' diameter will not clear the distributor. Is the 2.8 Ford that much different?

KennyJ

Then how about the dual side mount Holley air cleaner setup. This was once popular with the Pantera group, until they found it choked performance of the Cleveland, but for a 2.8, I am sure it flows plenty. Plus, she is kinda purty!!!

<http://www.holley.com/HiOctn/ProdLine/Products/AMS/AMSAC/64280.html>

V6JOE

The recessed base doesn't drop the filter below the top of the carburetor. What it does do, is make it a little above flush with the top of the carburetor float bowls. A regular filter base stands up above the air horn of the carburetor, at least 3/8's of an inch. the recessed base drops the filter about 1/4 inch below the air horn. The difference in height is about 1/2 to 5/8's of an inch. When you are talking about hood clearance, 1/2 inch can mean all the difference in the world.

V6JOE

Kenny,

This filter looks like it would work and looks good too. Does it have a fitting on the bottom, for a breather vent hose. Maybe that's why it has the disclaimer of it not being approved for pollution controlled cars. I suppose it would be no big deal to drill and tap it for a fitting to connect the vent tube.

KennyJ

I am not sure about that. You are right thought, an easy fix. The setup run's in the \$120-130 range last time I looked, but it is extremely low and with some polished, finned rocker covers would look Bad A**!

Britbeam

I called Speedway motors and they told me that the Deep Dish 10" air cleaner is the recessed type that fits over the carb. So I guess the final word needs to come from Kenny when he receives his air cleaner but this is what they just told me. Kenny please let us know when it arrives. They told me it would fit the Holley 390 cfm. This is a heck of a deal. I'm sure for this amount of money the quality of the chrome might not be triple chrome but function is what I need now.

KennyJ

Actually, it is Bryan who ordered it. I just lead him to Speedway Motors....

Bill-G

A few days ago I saw an X-Stream Air Cleaner Lid on a Sunbeam Tiger. I wonder if that could be adapted to our V6's?

<http://www.knfilters.com/universal/X-stream.htm>

bryang

I got the air cleaner today and it isn't recessed as I had hoped. I'm going to cut down the flange and that will probably drop it enough for now. I'll keep looking for the elusive recessed base 11 incher. The quality is about what you would expect for what I paid for, meaning not much on both accounts. It's a Tiawanese unit. Not saying anything negative about the Tiawanese. All fine folks I'm sure. They are just producing what some penny pinching capatalist told them to, so if the quality isn't great I guess I'll have to find the guy that had them made to complain. Anyhooo ... unless you plan on cutting one down, I'd recommend against buying this unit.

Let me know if anyone finds a good one out there.

Britbeam

Thanks Bryan for the update. Maybe we will find something before long with everyone looking.

Britbeam

Howbout Jim Diamond's air cleaner in the V6 Joe pictures. Jim could you share with us who mfg's this air

cleaner? Is it recessed and what is the OD of the air cleaner.

Thanks nice engine

Barry Knight

The link to the carb bonnets is:

<http://www.knfilters.com/Racing/plenum.htm>

The #85-1060 fits a Holley, but sticks up 3-1/8" above the carb flange which is about the same as a conventional air filter.

The #85-8921 & 8927 only stick up 2-1/2" above the carb flange, but they don't fit a Holley. One of the pictures shows the 8927 on a Holley, so an adapter ring must be possible (how thick ?).

The bottom line is that the top of the air cleaner or carburetor bonnet must be higher than the choke horn and vent tube. Most of the time, the top of the hold-down stud for the air cleaner or carb bonnet is the highest point.

I think a carb bonnet and a remote filter with cold air intake is the way to go for performance and looks. The relatively small diameter of the bonnets may solve some clearance problems, but I can't see how it will dramatically reduce the maximum height of the intake system.

manyfords

Mine is a 10" Edelbrock unit. The collar that goes around the carburetor air horn was over an inch tall. To lower the bottom as close to the carburetor as possible, I sectioned the ring that goes around the air horn by cutting it off, leaving only about 1/4 inch on the bottom piece of the air cleaner. I then trimmed the cut off piece so it would fit inside the piece I just cut it from. I pop riveted the small piece to the big piece, then epoxied all the gaps and smoothed them so as not to interrupt the air flow. The bottom of the air cleaner now rests just barely above the tops of the float bowls and the air cleaner clears the hood by about 1/4 inch.

I have a triangular Edelbrock air cleaner that has the same problem...the base has a ring about an inch or so tall which makes the whole unit too tall, so in order to make it work, I would have to go through the same process to modify it.

I have a 9" K and N and a 9" No name swap meet air cleaner. The K&N is too tall. The No name has only a 1/4 inch collar on the bottom piece and clears the top of the carb OK, but just doesn't look as nice on the engine.

Ideally, if one of us could find a source for a 9 or 10" air filter element that is only about an inch to an inch and a half tall, we wouldn't be having this problem. Look how skinny or short the Tiger factory air cleaner elements are.....that's what we need in a 9 or 10 inch circular air cleaner.

Manyfords aka Jim Dimond

manyfords

Answer to Britbeam: It is a 10 inch Edelbrock air cleaner. The bottom piece was sectioned by me to where it just barely clears the jet changing ports on top of the float bowls. I then pop riveted the cut off portion back onto the bottom piece and epoxied the inside of where the two pieces mated, blending the rough edges by smoothing the epoxy as it was hardening and sanding it when it was completely hard. Since it is on the inside of the air cleaner, it can't be seen unless you take the top off. I gained a little over 1/2 inch clearance by doing this. I put a piece of clay on the forward most point of the air cleaner, where it would most likely hit the underside of the hood/bonnet and closed it. It did squash the clay and when I measured the squashed area, I found I have 2/10ths of an inch clearance between the top of the air cleaner and the underside of the hood/bonnet. Ain't much, but clearance is

clearance.

Carburetor - Holley

V6 JOE

What usually gets us into trouble with Holleys, is that if the engine seems to not be running just right, we start messing with the carb first. We need to see if there is something else that may be causing the problem, like, plugs, points, timing or coil, because if the carb hasn't been messed with, it won't change. It will continue to work as it has before. The only thing that will cause it to start to give trouble, is if it gets some debris from the gas source. Holleys DON'T like dirty gas. Be sure to keep a good filter in the system, and when you change the filter, or disconnect the gas line for any purpose, let the gas run for a little bit, to make sure that no dirt gets into the system. It might sound like a pain in the gas to be so careful, but it's the only way to assure yourself of many miles of trouble free service.

V6 JOE

The Holley Carburetor that is on the car, has vacuum operated secondaries. They will not open mechanically, unless you put a sheet metal screw in the slot the little piece of linkage fits in, so that it can't slide in the slot, therefore opening the secondaries. I never felt the big kick in the pants when the secondaries opened like I did on my big block Fords, but it just went. I think the thing you're missing is the intake honk that only a big block can produce.

The fact that it is idling at 1,500 rpm, leads me to believe that it has a vacuum leak. The first thing I would do, is look for a leak, then readjust the idle richness screws so that it idles about 800 rpm. The timing should be at 12 degrees initial.

I think the best thing to do is take it to a dyno shop. They will fix all these little problems, and set the jetting correctly, put a curve in the distributor, put in the correct heat range plugs, and tell you how much power the engine is putting out.

Cylinder Head – modifications

Fordpine

I've completed porting/polishing of the cylinder heads and am now ready to send them off to the machine shop for fitment of the 2.91, exhaust valve seats, replacement of the valve guides and recutting of the intake valve seats. The heads I am using are from a '85 Bronco II and, they 'appear' to be stock. However, I have a few questions regarding the amount to be shaved off of the heads in order to raise the compression. I've seen a couple of different compression ratios listed and this has created some confusion for me. REALLY!!! The Mutt II engine, claims 8.0 to 1, whilst the Bronco II claims 8.2 to 1. When I look up the part numbers for the pistons, they appear to be interchangeable, which would indicate that the difference in compression would come from the heads. If this is correct, how much should I have machined off of the Bronco II heads in order to reach the desired 8.5 to 1 compression ratio? How can I confirm that the heads are "stock" and have not been previously modified?

V6 JOE

You can safely take off .030 from your heads without worrying about 8.7 to 1 compression in your engine. The reason I mention 8.5 to 1 is, that's what you'll get when you mill the heads .030. The heads won't safely take

more than a .030 material removal, and that is about what you get by taking that much off. If the heads would support removal of more material I would say to shoot for 9.0 to one, but without different pistons, that can't be safely achieved.

These engines are of a thin wall design, so don't have much material to work with, both in the bore on the block and on the heads and is why I don't recommend boring the block more than .030 either. Well, maybe .040 on the block, in a pinch.

Fordpine

OK, I shall specify 0.030" - but I don't know for certain if anyone has already cut any off of the heads. The engine in question has previously been rebored, 0.020" over, but I don't know if any work was done elsewhere on the engine. Usually, when crankshafts are re-ground, a number stamping shows up somewhere on the crank, denoting the undersize. Is there any similar marking standard for head modifications? Just curious.

V6 JOE

It is rare for anyone to mill the heads, unless they have warped. No one wants to pay for doing something that isn't necessary. If your machinist has a known stock head available, you could measure the two and compare the results, but I would almost bet that they are stock. I don't know of anyone who marks their heads for milling size, but there might be, I've just never run into it.

That's what happens to us old inspectors; we trust nothing and suspect everything. I double check everything at least once.

Jim E

I am in the camp of just cut off what it takes to clean the head up and maybe a smidge more maybe. Here is my thoughts on this... with all the valve and port work these heads get a little pricey you chop .030 off and then down the road you blow a head gasket and warp a head you got little or nothing left to get another surface on the heads. Oh you might get away with another .010 cut but you might not depending on the history of the heads. I would take the meat off the block deck if I wanted to bump the compression with out buying a set of after market pistons. I suggest decking the block anyway just to true up the thing side to side.

On the pistons I think there is a small difference in compression height between the R/BII pistons and the MII that accounts for the difference in ratios. At least I have seen them listed with different numbers. Could be the aftermarket picked one and built the pistons to that spec to cut costs instead of making both. I am not sure this is true is just my impression from the differnt numbers I have seen for the two engines.

One other thing. You will need to have the intake cut to fit if you remove much material from the heads and or block.

Jim E

One more note... I cannot shut up...

Have heard of guys decking the 2.8 to a zero deck height. Then when you build a stroker with a 2.9 crank in a 2.8 block the piston actually extends above the deck with stock spec rods and pistons. Some of the 4x4 guys build these as a cheap way to gain displacement and compression.

Fordpine

Being that my intended use would be for "daily FUN seeker," as opposed to Street scorcher. Reliability, long life and ease of maintenance are key, important elements to what I would like to have. I'll instruct the machine shop accordingly.

I'll also make it a point to store the Mutt II engine that I bought for the 'other' goodies. One never knows when a rainy day will sprinkle camel dung from the skies above.

DAN MOORE

Along this same line you mentioned that after you had your heads done you got your intake manifold planed and that the info in the Pruitt book was inaccurate can you tell me if you did your new manifold or was it really needed or what you found was inaccurate? I had my heads done after I port and polished them and they took off .025 to true them so I am interested in what you came up with?

Jim E

It has been a while but will give it a go. I had the heads milled just a little more than enough to clean them up and also decked the block to make it equal on both sides. The intake I have needed to be repaired in the water passages and I am thinking the heat twisted it pretty good. So I am not sure if the numbers from the book were wrong or the method the machinist used was wrong but when we cut it to what we thought were the right numbers the intake was far from fitting. In the end I took the long block and intake to the machine shop and we figured out how much more material to remove. I do not have a number. I also know other folks have used the figures from the book and it worked so I believe there was a problem in how we first cut my intake.

DAN MOORE

Thanks for the info I take it this is to line up the intake ports because machining the heads would drop total height .025 doesn't seam like a lot but on the angle of the intake it would be more.

Series Vince

Do any of you have any advice on directing the guy who is going to do my heads? I'm having them ported/polished, larger valves installed and milled.

I could use any advice on specs or good practices for these heads so that I can pass this info along.

Jim E

Man it is a job of work porting the 2.8 heads. I did mine after the bronze guides and seats were installed for the larger valves but if I were to do it again I would change it around a bit. You want to rough shape the boss around the guide first and clean up the runners, then install the new guides. Have to do the guides before you can install the seats. Then if you can bowl cut the valve throats you are way ahead of the game. Then do the final port work on the boss around the guides and clean up the throats, final cut the seats, would do a three angle valve job here. You may also have to machine the tops of the new guides to fit seals.

Here is the best image I have right now of the work on the boss around the guides, you want to reduce it in size and sort of tear drop shape it. The rest of the work is just removing casting lines and cleaning up the ports. You will need to do a final match between the heads and the intake because they are way off lining up. I did the match work on mine on the intake side.

The absolute best bet is to do this all to a set of the 1974 heads that do not have the smog port.

bryang

You also might want to drill the extra cooling passage hole in the heads. It isn't too difficult and supposedly it helps alleviate some of the heat built up between the two exhaust ports that are close together.

V6 JOE

The bronze guide should be tear dropped too, but the ports look wonderful. I know you worked very hard to get the ports to look like that, but when you put the hammer down, you will be glad you did.

Bill Blue

Jim, what did you use for the port work? I removed over a pound of cast iron from my 2.0 head, using a die grinder and carbide burrs. Don't think I spent that kind of time on it.

Jim

Burrs for removing material and sanding balls for the finish surface used an air powered die grinder.

Engine – modifications

V6 JOE

There are very few after market parts for this engine, as most of you v6'ers know, but that shouldn't stop anybody.

The most important part that you can change for longevity, are the pistons. It costs about \$450.00 for a set of forged pistons. They can be obtained from several suppliers, like Venolia, BRC or JE pistons. I recommend using 7.5 to 1 compression, especially with both blower and nitrous being used. The top ring land should be lowered from the stock position, to protect them from all that heat generated by the power adders.

The stock rods can be used without worry, once they have had their beams polished to remove stress risers. They are lighter than a set of Carrillo rods. I would suggest using ARP bolts from the 302 V8 to replace the stock bolts.

The two center main caps should be pinned with hollow dowels around the main studs that hold down the main caps. The object is for the main caps to not move while under so much pressure. With these modifications, the bottom end should be bullet proof, as long as the nitrous oxide injection is set up with enough fuel so as not to lean out the mixture and burn another piston.

I would have a professional set up the nitrous and have a stand alone fuel system just for the nitrous. That way you run less of a chance of leaning out.

There are a lot of other common Hot Rod tricks that any engine will respond to. I like the idea of blower and nitrous together.

V6 JOE

The 2.8 V6 comes with 8.0 to 1 compression. If you have the heads milled .030 max., you will have about 8.5 to 1. It will put out about 200 hp. with this kind of compression, if the heads, cam and carburetion are modified. It will run on regular gas with this kind of compression, and get pretty good mileage too.

If the Holley four barrel is used, it will produce the 135 hp, and if the stock two barrel is used, it will produce 125 hp. (These numbers are approximate).

I always try to suggest that my friends go with the most performance they can afford, because I have had my engines in every state of tune there is, and have found that more power equates to more FUN and driveability. I'm glad to see that my friends are wanting to upgrade their Alpines to have more power.

Jim E

You can also deck the block to bump the compression. I would have the block decked even if I was not looking to up the compression as there is usually a difference in deck height side to side and you will have a smoother/better running engine if you have more equal compression on both banks.

The other thing to keep in mind is the intake will have to be cut after you mill the heads or deck the block. The valley is so narrow a small cut on either of these surfaces will result in the angle being off and the intake will not seal.

I used a set of 2.9 intake and exhaust valves in my heads they are a good bit bigger. You will then need to bowl cut and work the ports on the heads to match the bigger valves. I also installed bronze guides. These heads are a real pain to port.

I also upgraded to a set of ARP rod bolts found the ones for a 302 were a direct fit.

Another thing I did was to remove all the casting parting lines from the inside and outside of the block and polished the beams of the rods.

Then I went with Jose's cam grind suggestion and also had my rocker assemble rebuilt.

Bought a set of Isky lifters and springs.

Replaced the oil pump drive with a new one.

Engine – placement

V6 JOE

These cars are all a little different, and the position of the mounts can be slightly different. On some Alpines, the mounts hang off of the back of the crossmember. The pictures that Jim posted, will show you how to add a piece of muffler pipe to support the washer and make it look factory.

The main determining factor for the correct engine placement is the clearance between the header on the passenger side and the steering arm as it swings past the header. That clearance should be about .060, and should be measured with the front wheels sitting on ramps, so that the weight of the car is on the front wheels.

Place the engine transmission on the two crossmembers, with the two bolts where the transmission mount/crossmember meet, loose enough so that the whole assembly can slide forward and backward to where you can get the clearance to the arm you need. After you have located the engine where it has approximately the same amount of clearance on both sides, check that you have the clearance to the steering arm, and then you can mark where the two mounts go. You also need to make sure the transmission tailhousing sits exactly in the middle of the driveshaft tunnel. This is very important, because if it is too high or low in the tunnel, the driveshaft u-joints will hit every time you hit a bump. The same goes for the side to side placement.

V6 JOE

I just remembered that I might not have told all of you that are doing the conversion, how to easily mount

the engine. As you know, the front crossmember on your Alpine isn't exactly flat. It has a contour and the mounts have the same contour to match. This causes the mounting holes to be on a slight angle away from each other, rather than on the same plane. This causes the bolts to be hard to start, unless you get have them exactly right in relation to each other.

The easiest way to get the job done, is to take one of the rubber mount donuts and modify it, (Did I say modify??). The donut looks like a hat with a thick brim, in cross section. The spud on top, is there to fit into the hole in the mount plate that locates the engine positively. It doesn't need to have both spuds to locate it, so if you remove the spud from one of the donuts, the spudless rubber donut will slide to wherever it needs to go, to facilitate starting the second bolt. Be sure to screw in the bolt with the spud first then the bolt with the modified donut second. If you don't cut it, it can be a big pain to mount, but if you do, it will take about a minute to bolt it down. I know that some of you will want to keep both spuds, so you decide for yourselves, but I just wanted to let you know that there is a short cut.

V6 JOE

I forgot to add, DON'T cut the spud off of the donut until you are ready to assemble it for the last time, because you will need it to index it in the mount plate hole to locate the proper place for the mounting points. If you cut it off before then, you won't be able to be sure where the mounting points go because the donut will move all over the place.

V6 JOE

I've had something running around my head for a few days, after having a conversation with a friend of mine (customer), about something he'd overheard at another conversation. I feel I need to share some information. I feel, that if I know something and don't pass on the information, I'm responsible for the outcome. Some probably think I'm a know it all, but I feel a great responsibility toward the guys that read this board.

The subject that my friend and I discussed, was engine placement. He had overheard someone saying he really didn't want to have to modify the steering link to accommodate the V6 engine he planned to put in his Alpine. The fellow that he was talking to at the time, told him, that if he just placed the engine further forward, he wouldn't have to do it. Now, on the surface that sounds reasonable, but in reality, it is the worse advice he could have given. I'll elaborate.

When modifying an Alpine (or any other car for that matter), you want the engine placed as far back and down as far as possible. The reason being, you want the engine as far back as possible to try to move as much weight rearward to try to come as close as possible to a 50/50 weight distribution for better handling and braking. You want the engine down as far as possible, to lower the center of gravity so the car will lean less as you make a turn, thereby enhancing the handling.

If the engine is placed forward, several things will happen, and none of them good.

1)The fine Alpine handling will be gone, because it will understeer/push more than the designers wanted for the car to have. This means that the car won't want to follow the line you have chosen, it will want to run wide.

2)The engine will have to be placed higher in the car, because of the front crossmember, unless you are going to extensively modify the front crossmember to accommodate the engine in this location, when you raise the engine you have effectively raised the center of gravity of the car. This causes the car to want to roll more when you turn, again, making it want to run wider still.

3)The farther forward and higher placement will now cause hood clearance problems, because the hood drops toward the front. The only solution for this, is either a large hood scoop, or an ugly bulge in the hood. Hood clearance is at a premium, even when the engine is placed back and down. (You might want to ask some of the guys that have V6 Alpines about this.)

4)With the engine forward, you will not have enough room to have a fan on the engine. Some guys want to put electric fans in front of the radiator anyway, but even the electric fan manufacturers advise against this practice, because it actually blocks air from getting to the radiator. You might ask, "How can this be", but the motor of the fan is in the way of the incoming air stream. The fan will have to be running anytime the engine is at normal operating temp.

If the reason for not wanting to replace the steering link is because \$150.00 seems high, I will give instructions free to anyone who wants to modify it himself. Trying to save a few bucks here is not wise. You will have a lot of money invested in doing the conversion, and you don't want to end up with something that is going to handle worse than what you had to start with.

As I've said before, You can do the conversion any way you wish, because it's your car, but it seems foolish to me to end up with less of a car than what you wanted, just to save a few bucks

V6 JOE

The reason the center steering link has to be modified on a V6 conversion, is that the bellhousing has the two top bolts in a weird position. They sit higher than the radius of the bellhousing, and they interfere with the steering being able to reach full lock to lock, because the stock steering link hits them at the two extremes.

The modified link is raised 1" and pushed back 1/2" to be able to clear these two bolts. The only other way to keep the steering link from hitting them, is to slide the engine forward, and this would be a disaster.

V6 JOE

The easiest way to install the drive train, is to have the car raised about a foot off of the floor, place the transmission, with it's support crossmember in the car. Leave the two nuts that go to the transmission mount where it sits on the crossmember, a little loose, so the whole engine and transmission can slide back and forth. Support the transmission from underneath with a jack and then install the engine from the top. It is much easier to install them seperately, than trying to do it with them bolted together.

If you follow the instructions I gave at the top, you'll have an easy time locating the engine and trans.

SUNBEAMV6

I was wondering if anybody else has had clearance problems with the right side header on the V6 conversion. The header on the right side on my conversion is touching the frame of the car. Are there any suggestions on what to do with this? Should I just dimple the header to provide more room or is there a better way to provide more room for the header.

manyfords

Had this same problem with mine. I heated up the "frame rail" in the area marked off with chalk, then hammered it in (dished the area) so it would clear the header. I don't recommend dishing the header pipe ... might affect performance, as well as looks of the header. Unless you know what you are looking for, you can't even see the dished area from above. BTW, I did it with the engine still in the car.

V6 JOE

You should never dent the header. The frame rail is the best thing to dent. If you heat it first, it will dent easily, without tearing or breaking anything.

Engine Pulley

Series Vince

I am running into a problem with the 2 groove crank pulley on my 2.8 V6. As many of you are probably aware... the large pulley hits the crossmember when trying to mount the engine. I have searched the boards and have not found a solid answer on to what you guys are doing about the pulley in question. I was under the impression that this motor (76 capri) would have the correct front pulleys, water pump, etc. Should it be removed and machined down? Is there a single grove pulley we can use that will clear?

Also... I can't seem to figure out a way to get that fan spacer off (look at the pic). Does anyone one else have one of these on theirs?

V6 JOE

You have one of the earlier 2.8's, so the pulley should be a two piece affair. There are four 10mm bolts that you remove from the center, and the outer pulley will just come off. Be sure to leave the large bolt in, as it holds the pulley on to the crank.

The fan spacer is just tight on the water pump shaft. Just take a hammer and hit it on the side and it should come off.

SeriesVince

The outer pulley doesn't seem to be my problem though... it appears that the larger, inside pulley is hitting on the crossmember...

SeriesVince

So the larger pulley tucks just behind the crossmember? Am I seeing that correctly? How much clearance would you say there is?

Jim

That is only the rear part of a two piece pulley from a early Mustang II and it is about the width of a fan belt away from the frame at the closest point.

Could be you have the engine too far forward if you are coming in contact with the frame in this area. Frame mounts should be about like this. Well plus or minus depends on the car.

V6 JOE

I think you might have the engine too far forward, or you don't have the rubber mounts under the engine mount plates, where they sit on the crossmember. Do you have the headers on the engine now? How much clearance to the steering arm on the passenger side is there when you turn the steering wheel? There should be only about .060 clearance between the header and the steering arm.

SeriesVince

Looks like I may have the engine a bit too far forward. I don't have the headers on yet (but I know I need to get them on for the proper fit) and I'm sure the rubber mounts will give me another 1/4 or so to work with.

Pembertonltd

I had the same problem with mine and I was able to move it back a little, but what really helped was to add a few large washers to act as spacers and raise the engine in the front just enough to clear the crossmember.

V6 JOE

If you remember, we put some washers to raise the engine where it should be, because you had cut out some material from the front crossmember when you installed the Datsun engine. The piece you welded in to replace that missing piece, was too low, so needed the extra washer to get the engine where it should be. Vince won't have to do this, because his crossmember is stock, so the engine will sit where it needs to be, without adding washers. If he adds more height to the engine placement, he'll run into problems clearing the hood later.

bryang

I had to machine one of the grooves off of the stock lower pulley. On the top spacer for the fan pulley, I had to machine that down as well. My lower pulley is very close to the crossmember but not touching. I think everyone's will be a tad different but you'll be able to clear everything.

Oil Filter – fitting

Britbeam

What oil filter are you V6 guys using to clear Joe's headers? I tried a Ph8 Fram but too long it hits the header so it's easy to see I need a shorter filter. Just thought someone might have the number of filter they are using.

V6 JOE

If the filter you are using is too long, you can rotate the adapter a little so the filter doesn't hit the header. You might have to break off the tang that keeps it from rotating though. I like this method, because I like to run as big a filter as I can get on there.

Oil Pump – high volume

SeriesVince

Have any of you v6ers out there used the high volume oil pump for your 2.8... or are you all running the stock pump? I was just looking to see if it was a necessary or even worthwhile upgrade for this application.

V6 JOE

I would suggest using the high volume pump. I have used it in all of my engines, and customers engines with good success. You will lose a little power with it (1-2 hp.), because the rotors and case are a bit deeper, so takes more power to move the extra volume of oil, but I consider it worth it.

Jim E

I went with the pump upgrade on the thought that more is good. My engine is still on the stand so that is about all I

can say.

Britbeam

I installed the Melling Hi volume pump in my 2.8 5000 miles ago. No Problems and its not much more in cost to install. I think the additional protection is a good idea.

rootesracer

I installed a high volume oil pump on my old Capri. I dropped a washer in the intake, and the engine ate it.

It bugged the rod bearing so that the oil pressure had noticeably suffered, but not so bad the engine was ruined. I pulled the affected head, cleaned it all out, put it back together and was surprised the oil pressure was much better at idle.

The engine made it another 20k miles before it spun a rod bearing and needed rebuilt. Cheap insurance.

Valves – adjusting

V6 JOE

The valves on the 2.8 will be quiet, if they are adjusted properly. Most of the 2.8's you hear run, will be making noise to varying degrees, because the owner doesn't follow the factory valve adjustment schedule and doesn't know the trick to get it right. The factory suggests adjusting the valves every twelve thousand miles, but most guys don't do it that often.

The valves on this little engine are a bit tricky to adjust. I have never run into another engine with solid lifters, that I have had to use this trick. When I adjust the valves on the 2.8, I make them snug to the point where some might think is too tight, but as long as you can move the feelers gage blade, it isn't too tight. Then I rotate the engine, (you can either bump it with the starter, or if you can turn it with a breaker bar and socket on the crank), a little bit, and check the gap. In most cases, and I don't know why this is, you'll find that it is a little loose. Adjust the slack out again, and repeat the process again, until you no longer get slack. For some reason, it is hard to find the exact heel of the cam on the first try. It takes sneaking up on it, to do the adjustment right. It won't hurt anything to have them so that you can hear them, but if you want the quietest and best running adjustment, this is what I suggest.

At the invasion, I asked Bob Sharkey if he wanted for me to adjust his valves, and at the same time, show him how to do it so he could do them himself later. He said yes, and I began to adjust them. When he saw how I was adjusting them, he got very worried, and was thinking of not doing it. I laughed and told him it would be alright. you should have seen him as I went about working. I must give him credit for trusting me enough to let me finish.

When I got through, he started it up and it was silent in the valve train. He had gotten so used to the noise, that he didn't notice it, but when it ran after the adjustment, he really noticed the difference. He took it for a drive and pronounced it good. I have spoken with him several times since he got hack from the invasion, and he reports that all is well.

V6 JOE

In reading Jim's answer about adjusting the Four cylinder valves cold, I remembered that I hadn't said to adjust the valves on the 2.8 V6 hot or cold.

The manual says to do it hot, but, this little engine oils so well up top, that if you try doing it while running,

you'll take a hot oil bath. If you run it to temp then adjust them, you will get lots of oil all over the place, because the heads don't have much of a lip at the bottom to hold all the oil that will be pooled there. I suggest you adjust them cold to factory specs, in the manner I suggested.

It sounds like heresy, but that is the way I've done it with these engines for years, and haven't burned a valve yet. The performance of the engines has been great with the valves adjusted snug.

Valves – from 2.9 V6

MikeL

Question for anyone running 2.9 valves. Did you use the springs for a 2.8 or for the 2.9 and would there be a difference such as spring bind with the 2.8 springs?

I set my valves to the clearance recommended by the cam grinder. Just because the 2.9 valve is shorter. In height there should be no difference in clearance, right?

After setting the valves twice they seem a little noisier than I expected. They start out quiet and get louder after a few miles. I do have a valve train setup by Delta with the split adjusters that are not supposed to loosen up.

V6 JOE

I recommend using the 2.9 springs with the 2.9 valves. What did Delta give you for lash settings? I adjust them to .014 intake and .016 exhaust. I would adjust them like I posted a while back, snug. You will get less noise that way, but if you say that they are quiet for a while, then get looser, you might be having a problem, because they shouldn't get loose in such a short while. They should need adjusting about every 12K miles.

The difference in valve length should have no bearing on valve lash.

MikeL

he box from Delta has .018 for both settings intake and exhaust. It is a reground cam.

V6 JOE

Are you using a cam with stock specs, or are you using a higher performance grind? I still ran the stock gap settings, even with my high performance cams.

V6 JOE

The 2.9 V6 valves are big enough to require a hard seat installed on the exhaust valve side because the induction hardened seat that comes stock on the 2.8 head is only about .060 deep. The intake doesn't need the hardened seat because it doesn't get hot enough to cause receding of the valve.

The amount of horse power obtained when the valves are bigger and the ports opened up, is about 50 hp., and definitely worth the expense and effort. It will make the 2.8 come alive. I recommend using the 2.9 V6 valve springs too. They are plenty stiff to handle the rpm's, but are not too stiff to be cam killers. The cam I suggest isn't the most radical cam you can use, but I've found that it is the best for the street. You would need to take your cam to a grind shop to have them put the grind you desire on it.

Drivetrain

Clutch

SERIES6

Ok. Got my bellhousing, flywheel, transmission, bracket, trans mount, and the adaptor... .Missing a pressure plate for the Mustang II. Been told to get it from a Ford dealership, who told me they were discontinued thru Ford in 1989....

What's everyone using? Is there something in the aftermarket?

V6 JOE

Just go to the nearest parts store and ask for a clutch and pressure plate for a 1975 Mustang II, with the four speed. They'll have it in stock, or can have it for you the next day. It doesn't have to be new. It can be a rebuilt unit. Make sure it is a Mustang II pressure plate though. The Capri unit looks similar, but isn't as heavy duty.

Jim E

I think the part number for the good one from NAPA is MU161

MikeL

Where does the adaptor come into play? And what is the source or dimensions

DAN MOORE

I got a new set up from Weber in Cal. disc 260135 and pressure plate 360031 \$330 including shipping. Cclaims 300% more pressure than stock. For another \$360 he offered to make me an aluminium flywheel but that would only be good for racing applications so I declined.

Jim E

I checked on line NAPA does not have that one [part number MU161] listed now but Advanced Auto parts does for \$187. That is for new not rebuilt and has the disc, pressure plate, throw out bearing. The kit also has an alignment tool that will not work for the V8 T5 unless you wrap a bit of tape around the end of the tool where it goes in the pilot bearing.

Jim E

Mike you need a pilot bearing adaptor to use the T5 behind the 2.8. The input shaft on the T5 is not long enough to reach the 2.8 crank it is also a different diameter. Joe has the adaptors made up I do not recall where or how much. The other thing is the front bearing retainer on the V8 T5 is too big to fit the hole in the 2.8 bell housing and you need to have it turned down. I bought one from a guy on ebay that did not have to be turned down think he is with Driveline specialist., they all most always have auctions up for T5 parts. Anyway I called the guy told him what I was doing and he sold me the retainer was maybe \$40.

V6 JOE

The input shaft of the T5 five speed transmission is shorter than the one on the Mustang II fourspeed transmission. The adapter fits on the outside of the flywheel, moving the pilot bearing closer to the transmission, so it can support the shorter T5 input shaft.

Iron Age Engineering, in Sumner, Washington, can supply the correct adapter. The price is \$90.00 plus shipping and handling.

The other thing about the adapter, is you need to know which transmission you have, to get the correct adapter. The V8 five speed has a larger diameter pilot bearing spud on the end of the input shaft, than the four cylinder five speed does. The two adapters are not interchangeable, so make sure which one you need.

SERIES6

Okiedoke.... Got the Clutch/Pressure Plate/ Bearing kit ordered thru Napa. Did an inventory on all the stuff I've accumulated. Next question. Clutch cable. As much as I'd prefer to go with the hydraulic set up Manyfords put together, what cable do you use and what modifications are necessary?

Jim E

Far as I know no one is going with a cable. The state of the art set up right now is a bracket that I made a short run of and a Wilwood pull slave using the factory release arm in the MII bellhousing.

Britbeam

Nick the clutch cable would really get cooked by the headers and the life would be short. I thought about using the cable but decided to go with the cylinder type setup and now 4000 plus miles trouble free. You will be happy with this. After all when you need to blow the doors off the local competition you need it to function. No matter how you slice it the Alpine V6 is not your mothers Alpine. It will make a 4cyl Alpine cry for the power of the V6. The car takes on a whole new /better handling experience. As V6 Jose would say Put the V6 in the Alpine and now you have a Performance sports car.

V6 JOE

The contact information for the pilot bearing adapter is the following:

Iron Age Engineering
P.O. Box 1450
Buckley, Wa. 98321

ironageeng@aol.com -remove the asterisks

(253) 826-2034

Ask for Jeff and tell him if you have the V8 transmission (large bearing), or the four cylinder transmission (small bearing), and he'll send you what you need.

SERIES6

The guy at Iron age and the one that makes the X-member/trans support are both great to work with.

Anything special I need to know about the flywheel bolts? (Aside from they need to be longer than stock due to the pilot bearing adaptor.)

V6 JOE

Just be sure you use hardened bolts that are the same amount longer as the adapter is thick. The rest is gravy.

SERIES6

I just ordered my Wilwood slave unit (part number 260-1333) from these folks in Maine. \$50 including shipping. Actually, any order \$50+ shipping is free.

V6 JOE

I recommend using a pedal stop, to keep from overtraveling the fingers on the pressure plate. I don't know how much travel the pull type slave cylinder has, but before you depress the pedal for the first time after bleeding the system, place the car on a small incline, then slowly depress the pedal, until the car begins to move. You should adjust the stop to that point and just a little farther to ensure full disengagement. I grenaded three clutch and pressure plate sets, before I discovered what was causing it. One of the sets was a very expensive "Center Force" unit.

Jim E

I am using the stock mustang II throw out from the NAPA clutch kit which I think is part number MU 161. The throw out has a plastic body which was a surprise to me have never seen one with plastic making up the body of the bearing.

Chuck Ingram

I used the stock bearing with a spring on the arm to pull it back like days of old. You don't need a heavy duty spring. Also the Alpine spring on the pedal should release all pressure that may reside from the slave cylinder. YOU DO NOT want the cylinder to start pulling as soon as you start to depress the clutch pedal. Sometimes we do go overboard as Joe says. We tend to make things more complicated than necessary. As they say less is sometimes more. You should have seen the fancy way I originally was going to mount the V6. You would have thought I was going to put something like 1000 HP in the Alpine. Simplicity won out thank goodness. As I said in another thread I perfected the do everything 3 times over in 1962 so I was really good at that concept by the time I did the 62.

Kirk B

OK guys, next question. By the way, got the clevis problem solved. Just cut the clevis end off the old/original master cylinder, drilled a hole in the end and welded a bolt to the inside. I'll back another bolt up against it once it's adjusted and it should hold just fine.

Now for the new question. It appears that the Wilwood slave cylinder is exactly the opposite of the picture of Dwains on Jim E's website. To put the "motion" side of the slave on the bellhousing the Wilwood end pieces must be reversed. I'm assuming that the side of the slave that has the boot is the side that moves. Once this is all moved around, the hydraulic feed hole is on the top and the bleed fitting is on the side. Is this going to make it impossible to bleed properly?

Jim E

Pretty sure you can just swap the bleeder and the line fittings around. I have not done this yet but looks like it should not be a problem.

The end the clevis goes on had the, what ever you call the fitting with the pivot ball with the hole in it, just unscrewed it and put it on the other end so it is on the bracket on the block.

Jim E

Here is a picture of what I came up with about 12 5/8 inch hole center to hole center. The bleeder and the fitting connections are swapped around. Took some work to get the length right had to dig in the parts bin and make fool around with the length of the stud on the engine side but it is very doable

Jim E

Just a FYI on the external pull slave front. The hole in the release arm on the Mustang II bell housing [I am talking the pivot point where the pull slave attaches] is big much bigger than the bolt hole in the clevis I used so I needed to make a bushing. What I did was grip a 8 MM allen head cap screw in the vise and drill a hole thru the head on the bolt, the drill size I needed was 8 MM. The cap screw I used the head is a press fit in the hole on the release arm and just as wide as the clevis. Ok so I chucked a 8mm allen head bolt up in the vise and drilled a 8mm hole down thru the head of the bolt then cut the head off the bolt and put it in the pivot hole in the MII release arm and gave it a couple of weld spots here and there then ground it smooth.

My guess is if you are not trying to do this you have no idea what I am talking about and if you are trying to do this you will think what the heck is he talking about... if you are of the later group and are wondering how to fill the big hole in the release arm and the above does not make sense ask and I will try and tell again. I will also post a picture of this in a day or three.

Jim E

Here we have a few pictures of my home made bushing and how it all came together.

The hole in the Mustang II release arm is bigger then the hole in the clevis I used. Here is what I came up with. The head on a 8 mm allen head cap screw is a press fit in the hole. So I drilled the head for an 8 mm bolt and stuck it in the arm. Then just gave it three welds and ground them down until it fit in the clevis, this may not be needed but I felt better about it being welded in place. There you have it one more thing done.

You can sort of see where the bellhousing had to be cut away to fit the external pull slave in this last picture. The black dot on the B/H was used as a reference sighting thru the hole in the release arm this let me know where the arm was when the throw out bearing is in contact with the pressure plate which helps when making up the length of the pull slave assembly.

V6 JOE

I don't think you had to weld the bushing in, since the clevis would hold it in place. It looks good though.

Jim E

Was thinking the bushing could turn in the hole on the arm instead of the bolt turning in the bushing, so I welded. Then too with it welded it cannot fall out when the slave is not attached.

SUNBEAMV6

I am wondering if anybody has come up with any other clutch options besides the hydraulic throwout bearing? I thought I read somewhere of somebody coming up with a set up that would mount on the outside of the transmission rather than inside the bellhousing and I also read where somebody used a ranger hydraulic hearing setup. So I am just looking for the best options and any ideas anybody has out there. Also does a Ranger clutch kit (pressure plate and disc) fit on a Mustang II 2.8 engine?

MikeL

I have a ranger throwout bearing setup in my car. I had to add a 3/16 shim behind the bearing to make it work properly.

hayfever

The setup on this page looks like it mounts outside of the transmission, if you e-mailed the company you could probably get more info. Maybe they would sell the slave & brackets without the master cylinder (since it's spec'd for a 70's Ford).

Chuck Ingram

Dwain, saw how you did the slave cylinder. Looks neat. I'm glad you were able to use my idea. I do know that it will last you along time. Here is something I never told anyone about it. Reverse the line and the bleeder so the line is in top position. This will allow you to actually pump the pedal when you need to refill and not get under the car to bleed the system. Mind you it takes a good minute of pumping. Neat eh?

Britbeam

Thanks Chuck it is working great. I bled it one time when I installed it. I've got over 1500 trouble free miles from it so far. I appreciate you sharing the idea. As you can see I had to mfg a different bracket design but it works like well it is stock Ford. I did use a sawsall on the bellhousing loop(attach point for the old clutch cable). It allows the cyl to tuck right up against the bellhousing. I can't see why anyone would want to put a clutch slave inside the bellhousing. I'll tell you my tranny (T5) will not come out without pulling the engine. That's my 2 cents. Just came back from a night run with the new electronic Tach & speedo the ease of reading the bright lit gauges is a beaut.

Britbeam

The P/N for the slave cylinder is 62-102-u -universal Blue. When I purchased mine it was \$82.52 including shipping.

Call Neal Performance Products
PH 858-677-6784

Also check the internet. I think Jim was lucky to get one for less. Is that correct Jim? Building this bracket is not that difficult and now someone (me) has taken the time to save the measurements. This took one Saturday due to installing headers on/off, taking into consideration of any interference with steering, bellhousing etc. I made this bracket to fit the threaded holes in the 2.8 block only not a 2.6 or any other engine. I think you will be pleased with the bracket and you get a time savings.

V6 JOE

The only clutch and pressure plate that will work correctly with the Mustang II bellhousing, are the ones from the Mustang II. The bellhousing is deeper than any other Ford bellhousing for the V6, so needs the taller pressure plate from the Mustang II to be able to reach back to meet the throwout bearing.

61Alpine

On the slave, is it a push or pull slave, and how much push or pull (length) is needed. The Wilwood one on ebay is a pull with 1.25" stroke. Will that work?

V6 JOE

The 1.25" pull should be enough to make the clutch work. In fact, I would see if you need a clutch pedal stop, to keep from over traveling the pressure plate.

V6 JOE

If you look at some of the pictures that Jim posted, you'll see a side view of the T5 with the bearing on that

shows the bearing has an old regular throw out bearing behind it to space it out far enough to make the bearing work. The old type bearing just happens to be the right length to place the bearing within the .100/.300 distance recommended by the manufacturer for best operation.

I forgot to mention, that if you use a pull type hydraulic cylinder, all of this is moot, because it will use the original (old) type throw out bearing, actuated by the stock clutch bell crank.

Chuck Ingram

It's not getting by on the cheap to use the slave cylinder as you say but doing something that will work and be reliable for years and years. As you know I did this set up 25 years ago and it is still working. There is an alternative however. You can use a different arm from early ford tranny, drill the bell housing on the right side of the bell housing to accept the clutch arm and use the alpine/tiger slave cylinder. A friend did this on his tiger when he went to the 5 speed. He raced this car and as far as I know it stood up to the demands. However I still like the simplicity of the Neal's slave cylinder.

Chuck Ingram

Easy to service is right. If it need adjusting I open the bonnet and reach down. Mind you need 2 hands with a wrench in each. To remove the slave cylinder I would think it would take about 5 minutes once the car is on ramps or jackstands. I will find out this winter as I do need to do the disc and pressure plate for sure.

Driveshaft

ChemTeacher

I've acquired a 3:55 8 inch rear end from a Mustang II and went to get a driveshaft from a mid 80's T- bird. The bolt pattern on the rear end is rectangular with the narrow end (that the U-bolt goes though) is about 1 5/8 in wide. All the drive shafts I found were much less rectangular and almost square. None of them used U-bolts, rather bolts went through the end of the drive shaft and threaded into the rear end. Joe thinks that I have a rare "narrow" yolk on my rear end and that I can purchase (perhaps from NAPA) a different yolk. Anyone else had this problem? or perhaps another solution?

V6 JOE

Can you post a picture of the yoke on your rear end, and the end of your driveshaft? I'd like to see what you're encountering.

mcclja

You're welcome to email the pic to me (**mcclja@coolgoose.com**) and I can post it using space from my site.

KennyJ

8 inch and 9 inch yokes are interchangeable. The only difference is the 9" is about 1 inch longer (thus 1 inch shorter driveshaft).

Your square mounting is from a 7.5 / 8.8 type rear end, thus it is a different u-joint, and mount to the rear end. The yoke is actually the bolt plate in this instance. I don't know the spread on the 7.5 / 8.8 u-joint, but I do know the C-4 / AOD use the same slip joint as the T-5, thus you could get a shaft from any 60's 70's RWD Ford product that used an Automatic and have it shortened.

Correct me if I am out in left field.

V6 JOE

I have never run into the problem that Bill has. I've always used the driveshaft from a 1983-1989 Thunderbird with the 3.8 V6 and automatic without a problem. Bill has an 8" rear end from a Mustang II, but the driveshafts he's getting, are not mating up to it. I had heard that Ford made two different yokes to fit the 8". I've never seen it, but I guess the only way we can find out, is to go to a Ford dealer and ask the parts guy.

The reason for using the Thunderbird shaft, is it is smaller in diameter than, either the V8 or Turbo four shaft. The drive tunnel in the Alpine is very narrow, so to avoid having the driveshaft hit the tunnel, you need a small diameter shaft

KennyJ

I was wondering if the diameter was the reason. Just from his discussion, it sounds like he still has the plate yoke to bolt up to the 7.5/8.8 on it. I think he should remove the plate and actually measure the u-joint. It appears that he is talking about 2 different types of mountings (u-bolt vs plate). What do you think?

As for the rest of my note, I just thought that people should know the 8" and 9" yokes are interchangeable.

V6 JOE

I think he's got the wrong driveshaft, but when I spoke with him, it sounded like he had taken it out from the car himself. I've never run into a problem with using the Thunderbird V6 automatic shaft before. When he gets back, I'll have him clarify a few things.

ChemTeacher

Hello. I'm back from So. Cal. I've sent a copy of the picture of the driveshaft and rear end to Jim M. so that he can post them. Can't wait to see what is what.

mclja

Here it is

V6 JOE

Thank you for the picture. I cleared up the whole problem in my mind.

If you carefully remove the flange from the end of the driveshaft, but leave the U-joint, I believe you'll find that the U-joint trunions will fit right into the yoke on the 8"; Then using two new U bolts and nuts, you can bolt the two together.

It's just that the newer shafts use a flange to join the driveshaft to the rear end yoke, versus the older method of the U-joint trunions fitting directly into the yoke on the rear end and being held by two U bolts.

A little hint; now would be a good time to put in a new U-joint, rather than use an old one that might give you problems later.

To remove the flange from the U-joint, just remove the snap rings from the two bores of the flange. Then, using a press, carefully remove the flange, or the whole U-joint. It can be done with big hammers and a couple of sockets too, but it's too easy to bend the ears on the driveshaft clevis if you're not careful.

ChemTeacher

Thanks. Now it fits. Bill

Kirk B

I just took in the yoke from the *T5*, the driveshaft from the Mustang II and had them make a new one for me with all new u-joints. I don't know of any existing driveshaft that is the correct length.

Fordpine

I'm in the process of removing the stock rear end from my car (62 - S2) so I can take it, along with the Mutt II, 8" unit I am planning on using, to the machine shop for shortening. If anyone has gone through this daunting experience, I would appreciate any comments I may arm myself with when talking to the machinist who will perform the surgery.

V6 JOE

The fact that you are taking the old Alpine rear end along, is a good idea, because the machinist can duplicate the exact dimensions from it. The only thing I would suggest, is having the machinist make a set of the late Alpine shock mounts and weld them on, so you can go to the later telescoping type shocks, rather than the lever type shocks it came with.

jandrscovill

Just a thought, you might also want to only narrow it to the same width as the front rather than the original too narrow width.

Fordpine

Sounds like a clever suggestion. Thanks, I'll take measurements for wheel well clearances as well.

Fordpine

Good thinking on the shock mounts to the later model style. When I bought the Mutt II axle assembly (rear end), I had the spring shackle bolts and plates included - even though I don't know if I can use them. The plates/bolts not only serve to fasten the rear axle to the springs, but also have provisions (mounting eyes) for the shock absorbers. However, the question now is: where/how would the upper end of the shock mount to the chassis, and what mounting provisions will be needed? Which tells me I should mount the Mutt II axle in place prior to being shortened and make all of the necessary measurements and notations. Jeff also commented on the width across the front axle flanges being wider, which I shall take into account when having the rear axle shortened.

Jim E

Provided you are not worried about messing up the paint I would either trim or roll the inner lip on the rear fenders. I just trimmed mine back until it was about 1/4 inch at the top of the well a bit wider at the bottom edges. You then need to weld the inner and outer sheet metal back together. Either trimming or rolling will free up a little room for a bigger tire and if you make the rear track as wide as the front think you will have to do something to the lip.

V6 JOE

The way I've done the shock conversion, is to drill two holes where the later Alpines have their upper shock mounts, and then weld in a couple of large diameter washers around the holes, to strengthen the sheetmetal at that spot, so the parent metal doesn't fatigue and crack there. If you want, you could weld in a piece of metal all the way across the top of that section of the body where you have to drill the holes. Either way will work, and you can fit longer shocks than the ones in the picture that Jim provided.

I prefer the longer shocks, to allow more travel before bottoming of the shock occurs.

Rearend - shortening

Fordpine

I'm in the process of mounting the Mutt II rear axle so I can get a better idea how much travel, etc., and positioning of the necessary brackets or reinforcement bits/parts.

In looking at the Mutt II axle, it is really not that much wider than the Alpine's axle, so as to rule out leaving it stock length, flaring the wheel wells a tad, and resorting to some positive offset on the wheel rims. It would, (I'm guessing here), still allow for a wider tire and bring the wheels into alignment with the wells. But, what effect would this have on everything else that may need to be taken into account, say, handling, safety, cost and workscope? I already know that shortening the axle works and is successfully installed on many conversions. My curiosity, however, begs these questions.

V6 JOE

I would duplicate the dimensions of the Alpine rear end exactly, and not try to make it as wide as the front track, because if you do, you will have problems fitting wider tires without having to do major surgery to your fenders. I have run 15 X 7.5 rims with 8 inch wide tires on my Alpines, with only bending the inner lip up with a pair of Vise Grips. If you cut the lip instead of just bending it up, you run the risk of cutting the tire rather than just rubbing up against the flat part of the bent up part of the lip, if for some reason you're cornering hard and the tire is pushed out a bit.

You will have about 3/4 inch clearance to the spring, and about the same to the fender, with 8 inch wide tires. To get this clearance on both sides, you'll need to run a rim with neutral offset, so that the tire won't be too far to one side or the other.

SDuncan

I have installed the Ford 8" rearend into my car without shortening it but I also installed a set of LAT wheel flares on my car that allowed me to trim the fenders as needed to make the necessary clearance. I am running 16x7" rims with 225/50/16. It changes the lines of the car which isn't to everyone's tastes but I like the look and the stance of the car. My point is that without some major tweaking of the rear fenders openings, you'll need to have the 8" shortened.

Fordpine

Thanks for the input. Are you running the same tires all the way around?

SDuncan

So far, yes. The front arches were modified with flares as well and while there doesn't seem to be any rubbing, I won't know for sure until I have the car running. I'd like to go with some 245's at the back but until I find some different wheels, I'll stick with what I have.

Bill Blue

As near as I can tell, the only thing that holds the 8" axle in place is friction, albeit a LOT of friction. The axles are pressed into the bearings, the bearings are held captive. That is all that holds them in place. The axle is not held captive. It is possible, although probably damned difficult (I've never heard of it happening), to pull the axles out without disassembly of anything.

Fordpine

In some axles I've worked on, (non Ford) the axle shafts are retained by some circlips or special retainers. It seems inconceivable, that only the interference fit between the bearings and shafts hold these parts together - and I'm not doubting your words. I've pressed axle bearings on, in the past, and it did not seem to require inordinate pressure to fully seat them. It would appear, to me anyway, that side thrust, vibration, speed and loading would work them out. I must confess, however, I've seldom (never) heard of any that have actually parted company with the rest of the car, under normal driving conditions.

NICKODELL

Don't knock friction as a method of fastening critical components, if it's done properly. The steel tires (the relatively thin circumferential ring that contacts the rail) on steam locomotives for a century and a half were shrunk onto the wheels. I.e. they were heated and pressed onto the wheel, and only held by friction.

They were held so firmly that cases of tires parting company were almost nonexistent, in fact when time came to replace them they had to be machined off.

It's hard to imagine a component subject to more stress, vibration and hammer blows. In engineering, press- and shrink-fitting as been a reliable method of fastening, if done properly.

V6 JOE

The 8" Ford axle doesn't use C clips, and is the reason I recommend using it rather than the 8.8, that does. To shorten the 8.8, you'd have to use a C clip eliminator kit, which would cost more. The biggest reason to not use the 8.8, is that it uses the axle itself as the inner race of the wheel bearing, so when the bearing goes south, you'll have to replace the axle and do all the machining all over again.

I recommend using the 8" in this application, because it is very strong and lighter than the 8.8 or the 9".

Fordpine

I had an interesting conversation with the machinist who may perform the necessary modifications to my rear axle. In principle, he offered a couple of different methods to accomplish the reduction in length:

a) Cut the axle 3.5" from one end only. 3.5" is needed in order to reuse the same axle shaft, but have it shortened and resplined. My guess, and I don't know, is that the amputation is made from the "short" end of the axle. I then contacted Moser Engineering about this and they confirmed they needed 3.5" to cut the new splines. This, of course, throws a new 'twist' to fit the 'new' offset axle to the Alpine and find proper alignment with the driveshaft.

Benefits: Only one side of the axle needs to be cut, and one axle shaft modified (cut and resplined). The unmodified end is not disturbed and "standard" axle shaft length is retained, making it available at local parts houses, should a replacement be needed. Also, a "substantial" reduction in labor/parts cost for the mod.

I know little about what repercussions this option may engender.

b) Cut the desired amount from each side of the axle and order custom axle shafts.

Benefit: Spend ALL that is left of my money so I can stop this madness, and hang the new axle shafts over the mantle for future smothering of any wild ideas about conversions.

The axle would be the same, proportionally shorter on each side.

Downside: I don't know, at this point.

I'd like to hear from those of you who have had the Ford 8" axle modified, and what was done to make it happen.

V6 JOE

You don't want to take the whole amount from one side, because it will put the pinion flange too far to one side and will cause the drive shaft to rub on the side of the driveshaft tunnel. The tunnel is very narrow, so wont allow movement of the pinion flange too far to either side.

Just have him duplicate the same dimensions of your old rear end and you'll be allright.

DAN MOORE

If memory serves me correctly the alpine rearend is 52.5 from brake drum face to brakedrum face now I have dismantled my mII rear end can't remember the total measurement. Do any of you remember the total measurement? Or do I have to reassembly it or if someone can just tell me the amount to take off each end it would be deeply appr. I would do a search but it doesn't seem to work and poor Jan has enough problems as it is now. For some reason 3.5 inches seams too long or not enough taken off.

V6 JOE

The way I tell my customers to measure them, is from axle flange to axle flange, thereby avoiding the dished drum of the Alpine.

Norman, could you have your machinist measure your Alpine rear end and give Dan the measurement, along with the distance from the center the pinion flange to the face of flange of the shortest side. That way Dan will know exactly how wide it had to be, plus he'll know where to place the pinion flange.

Bill Blue

Joe, the Alpine axle is offset. If driveshaft clearance is an issue and the money is going to be spent to cut both ends, end up with what you started with, a symmetrical axle.

I am going to use the Alpine driveshaft, so took all the stuff off the drivers side to gain clearance around the battery box. However, I did not cut that much off my axle.

V6 JOE

I know the stock Alpine rear end is offset, but it isn't offset enough to cause the binding with the tunnel I described. I have also placed the pinion in the center, but some guys don't like that, fearing drive shaft vibrations, so just mentioned the stock offset.

Do you think your Alpine driveshaft will take all that power your turbocharged four is going to produce? I used the Alpine driveshaft in my first V6 Alpine, and it ate U-joints like they were candy. They were just too small to take the gaff. Of course not many folks drive like I used to, so that might be something to consider too.

rootsracer

Hey guys, I don't think the alpine axle is offset. The pinion is offset by like an inch from the centerline of the case, but that shouldn't affect the sheetmetal.

The alpine uses the same axles on both sides, and the case itself doesn't look offset, and I can't think of any reason that the case would be offset when the axles are not.

Jim E

This I know for sure on my car with either the stock rear end or the Tiger rear end in place you look down the tunnel and the pinion flange is offset to the right side of the car a bit perhaps an inch.

rootsracer

Yeah, that's just the pinion offset, the hump of the rear axle is dead middle of the case.

If you look at the front of the pumpkin, you can see the pinion is not in the middle of the casting, but the axle is still symmetrical.

Just so long as the trans is perpendicular to the pinion, the U-joints will take that offset with no probs.

Fordpine

If I recall correctly (not a good thing to go by!), the Alpine's pinion flange is offset to the right side (USA passenger's side) and the Mutt II's pinion flange is offset to the left (USA driver's side) and, almost, by the same amount - give or take.

Fordpine

Jim has it right, again. It is, for sure, offset on mine as well. I would bet (with someone else's money!) it is almost 1.5"

V6 JOE

Hi Jarrid, I wasn't talking about making the housing offset. If you re-read what I said, you'll see that I was always talking about the pinion flange. The pinion location is what's critical, not the housing centerline. The drive shaft will be bolted to the pinion flange, so this makes the pinion location critical, to avoid binding of the drive shaft against the tunnel wall.

Bill Blue

Hi Joe. I do not have a clue as to what the Alpine driveshaft can take. I used the Alpine shaft because when I was at that stage of my conversion, it was very evident the Ford U-joint was too big. Not knowing about the Tbird auto driveshaft, I welded the Ford splined shaft to the Alpine U-joint.

I do know I will be running 165R 13 street tires, which should limit the abuse the driveshaft (front U joint) has to take.

Fordpine

First, Jarrid is correct in saying that the hump of the Alpine's rear axle is centered between the wheels. The pinion shaft, however, is not. From what I could determine, it is offset by 1.00" and shorter to the passenger's side (USA cars).

Here are the 'fresh' measurements taken from the Alpine's rear axle assembly:

Face of axle flange to face of axle flange, total: 50.5" (inches.)

Driver side (USA) face of axle flange to CL of pinion shaft: 25.75" (inches.)

Passenger side (USA) face of axle flange to CL of pinion shaft: 24.75" (inches.)

Face of brake drum to face of brake drum: 52.5" (inches)

(Note: the measurements were taken by placing a ruler across the face and along the outer periphery of each drum, avoiding the balancing ridges, as well as the 'dished' part of the drum, accuracy could be in question).

Driver's side (USA) face of brake drum to CL of pinion shaft: 26.75" (inches)

Passenger side (USA) face of brake drum to CL of pinion shaft: 25.75" (inches)

These measurements are close, but far from exact. Joe is correct in saying there is a higher discrepancy if the measurements are taken from face of drum to face of drum, due to the "dish" in each of the drums. Also, the balancing ridges, cast into the drums are machined to different heights, from the dish of the drum. So, they're not a good reference point where one could take consistent measurements from. By the way, my car has the axle flanges that come with having spoked wheels. I don't know if there is any dimensional difference with lugged flanges, as opposed to these.

V6 JOE

The mounting pads should be welded on the housing so that the pinion has no angle, or to the angle that Alpine came with stock. I have run the 8" rear end with the pinion completely level, and had no problems. I know that most manufacturers place it on a slight angle upward, but I have not found it necessary in this application.

V6 JOE

The V6 has very little room to fit in the Alpine engine bay, and this has caused us to make the engine and transmission sit level in the car, rather than at an angle like most cars have it. The size of the drive shaft tunnel also adds to this restriction, because you have to make sure that the transmission tailhousing sits right in the middle of the tunnel, or it will hit the sides or top and bottom of the tunnel.

I've found that if you cock the pinion too far, it can cause bad vibrations. On the other hand, if you leave it with very little angle or no angle, it seems to work just fine. The drive shaft in the conversion is a very short shaft, (something like 23") and the effect of any angle is increased because of it. For those of you that are thinking of cutting down an 8" for your car, you might want to offset the pinion to one side of center by 1/2" toward the drivers side. if you move it more than that, you'll run into interference with the side of the tunnel. That offset will keep the u-joints working all the time, so will cancel any vibrations from the shaft spinning.

I suggest you remove the wedges and try running it without them to see if it helps.

V6 JOE

You need to put the weight of the car on the rear tires. That way you will know exactly what the angle is. I would just make the mounting pads parallel with the pinion center line. Since the engine sits level with the ground in this application, you'll be putting the pinion on the same plane as the crank.

V6 JOE

I would have stock style shock mounts welded to it, like the series IV/V cars have it. Then you can have a couple of large washers welded where the series IV/V have the tubular shocks mounted to the body, then drill a hole where the washer has it's hole and you will now be able to upgrade to the later style shocks.

V6 JOE

The reason to get an extra axle, is because in a few rare cases I've run into, the axle, past the splined end, was smaller in diameter than the splined end, so couldn't be turned to the spline size. Most Ford axles are bigger in diameter, so can be turned down to the spline size, then have the splines cut, but once in a while, the axle won't work.

My personal preference is to not change the body lines of the Alpine, so I recommend having the axle housing cut and modified so it can be bolted right in place of the stocker.

There are many ways to mount tubular shocks, so whichever way it's done, it's a worthwhile modification. I just found it easier to copy the factory shock mounts.

bryang

I set up my narrowed rear end to have the pinion centered. This required having more cut off of one side than the other. On the axles, they were as Joe says narrower as they got past the splines. I believe that the splines on these are rolled in rather than cut. I'm not sure if many shops have the machinery to roll splines. I found that the axles from Moser were a pretty good deal and since I had them cut the axle I just bought the axles at the same time. On the shock mounts I just carefully removed the Series V ones from the stock rear end and put them on the new narrowed rear end. When you put your pinion in make sure to put some sealant around the studs, under the nuts. I didn't and I've got a slight leak.

ChemTeacher

I have my Ford 8 inch rear end. Never taken one apart. What is involved in the shortening process. I've read on a previous post about buying axles? Does anyone know of a place near Sacramento that does this sort of work?

KennyJ

You could send the axles and housing to Moser (sp?) engineering and have them shorten it for you. If you start with a pretty wide axle, there is enough meat to remachine the splines instead of purchasing new axles. For this, you might get some a long side axle out of a big car with a 9" and 28 spline (Fairlane/Torino would do). Thus you would take your long axle, move it to the short side (thus cut and resplined) and then have the really long axle cut and resplined for the longer side. I come from a small town, and the local machine shop guy was more than able to do the cut and respline.

As for disassembly, take off the brake drums. The backing plate is bolted to the housing with 4 bolts in a circular pattern. Remove all 4 bolts (and nuts). Now, don't pull on the backing plates, but pull on the axle flang. It might take a quick tug, at worst, use something like a slide hammer, and the axle, retainer and hearing should slide out as a unit.

Then all you do is remove the bolts around the pumpkin, and remove the center section (be careful, it is really heavy!).

oldflotsam

This is where I will probably send mine.

[Http://www.currieenterprises.com/html/custom/rearendproducts.htm](http://www.currieenterprises.com/html/custom/rearendproducts.htm)

Barry Knight

One decision you need to make is the width after narrowing. The Alpine (and Tiger) rear axle is about $50\text{-}3/4$ inches flange-to-flange. For whatever reason, the rear tread width is about $2\text{-}1/2$ inches narrower than the front tread width and the rear wheels have a "tucked in" appearance. If I were going to have an axle narrowed, I would probably go with a f-to-f width between 52 and 53 inches.

V6 JOE

If you do that, you'll have trouble getting bigger wheels under it without cutting out the inside lip where the inner fender and outer skin of the body join.

I would rather use a different offset on the front wheels to tuck them in a bit.

alpine-64

I believe the reason that the alpiners had a narrower track at the rear than the front was for handling reasons. By making the rear track narrower they made sure that the rear of the car would break traction and stopping the car from just understeering.

mclja

Wayne, Currie is where I've had some work on mine and I have to say I am not impressed. My experience was bad enough that I decided not to let them finish the job. Twice they lost my paperwork, they accidently changed the bolt pattern on the housing, and they threw out my backing plates thinking that I was switching to disc brakes. All this took place over an eight week period on a job that was supposed to take two weeks. In the end, all they did was hot-tank and narrow the housing. I'm going to have the rest done somewhere else.

bryang

This is the only rear end I've ever had modified, but I will say that the service and quality I got from Moser was top notch. It was cheaper for me to send my axle housing to them for shortening and order their axles to my length and have all shipped back than it was to do it locally and wait forever. If you order new axles as I did, It may be a good time to switch to a more popular bolt pattern since you would be buying blank axles anyway. It wont cost anymore at that point. I wish I would have thought when I did mine. Anyway ... Moser has nice stuff and the prices are really good.

oldflotsam

I guess I'll check into Moser. I got an email today from quad4 that the bellhousings are ready for my 2.3dohc.

ChemTeacher

Where is Moser located? Do they have a website? If not, do you have a phone number?

Barry Knight

Moser Engineering is in Portland, Indiana.

<http://www.moserengineering.com/>

TEL 260-726-6689

FAX 260-726-4159

Bill-G

I'm having Rearend Specialties, 408.988.3619, near the San Jose airport shorten mine. I'll let you know how it works out. I'm trying to get the measurements to give them now.

mclja

Those of you who have had the 8" shortened; how did you match up the shock mounts with the original Alpine rear-end? Did you have the mounts ground off the stock rear-end and welded on or...? What kind of costs did you run into to have that and the leaf-spring pads done?

bryang

Hi Jim, I ground the 8" mounts off and fitted the mounts from the Alpine rear end. I bought new leaf spring pads and put them on the axle in the appropriate position (pinion angle), tacked them and then removed assembly to fully weld them in. I'm also running (2"?) spacer blocks that I bought from a guy who was using them on a Tiger he was racing. I haven't driven the car further than a few miles so far so I don't know how well the shocks work but I used the same shocks as those in a 67(?) Camaro. I was looking into Spax, but they are a little pricey for me at the moment. I may be a little over shocked. On the front I may be as well. I bought a set of Tiger springs that had a coil removed from the same guy. I was thinking originally that the weight of the V6 might necessitate that, but in reality there is probably less than 50 lbs difference. I will probably end up cutting the original Alpine springs down a coil or two and trying those out. I like the suspension stiff, but not that stiff.

Bill Blue

I did it entirely differently. I made a chinese copy of the shock mounts that were on the Mustang, using 1/4" thick x 1.5" angle iron. The angle iron is bolted to the bottom of the spring plate, parallel to the axle. If you are really interested I can get more detailed info to you. As near as I can tell, the new shock mounting stud is within 1/4" of the location of the stock Alpine stud.

Bill-C

Rearend Specialties is shortening my housing for \$130.

The axles and other work is the \$ killer I think. The dimensions that I gave them were: axle flange to axle flange 50 5/8 in.; spring width = 2 1/2 in.; spring location, inside to inside = 35 1/2 in. - outside to outside = 40 1/8; drive shaft location = center.

I haven't figured out the shock mounting yet though!

Chuck Ingram

You will need to either cut brackets from an axle or make up brackets. Either way they will need to be welded on the axle.

mcclja

Thanks for all the info guys. I'll probably go the route Bryan did, but I'd be interested to see your setup Bill. If you have pictures could you email them to me (at **mcclja@coolgoose.com**)? If you can, I'll post one or two of them on this thread.

Barry Knight

Bill's solution is simple, cheap, effective and can be easily changed anytime. What's not to like?

bryang

That is definitely simpler than the route I went. Looks pretty clean too.

Bill Blue

Jim, I noticed that no one has mentioned the spring pads. I made mine, each one uses two pieces of angle iron. Each piece was cut to fit the axle contour, then welded together length wise. The result is a decent copy of the Alpine pad. If you don't have a band saw to cut the radius it could be a very tough job. Most people would not want to make one. I did mostly because I have the equipment and enjoy making stuff.

Northern Tool (NorthernTool.com) has a weld on spring seat, item #12426W-1401 that looks like it could be adapted. The only problem I see is the locating hole is 5/8". Nothing a spacer and some tack welding would not cure. I think it would be worth a try, they are only three bucks a piece.

Bill-G

Rearend Specialties said they would include the spring pads when shortening my housing.

Transmission – using Mustang V6 T-5

MikeL

Just went for a ride around the block. About 20 miles or so. Mississippi has BIG blocks. I did not push it but what an improvement over the Ranger transmission (which was in the car when I purchased it). The 3.8 T-5 shifts are crisp and smooth. Going through the gears feels right with a very nice progression.

I must explain my feeling of glee. The truck transmission had a shifter that was soft and combine that with the truck's straight cut gears. First gear was too short, second was too long and 3,4 & 5 were too close.

My car has a Mustang II engine and flywheel.

When I picked up the 3.8 Transmission everyone was in agreement that the input shaft only needed to be turned down to a smaller diameter to fit inside the Mustang flywheel and the transmission front cover needed to be turned down to fit inside the Mustang II bellhousing. That is true and can only be done at a machine shop.

The other modification needed to the 3.8 T-5 is to reduce the length of the input sleeve the throwout bearing slides on. The input sleeve bottomed out against the clutch plate. The sleeve had to be shortened. It was cut by trial and took several small cuts until I felt I got the length right. I was able to do this at home with a Sawsall. It was not a lot maybe a total of about 1/2 an inch to cut off.

Would I do it again? Yes. I have an 8 inch 3.55 rear and viewing the options of gears the 3.8 vs 5.0 I did not find the 5.0 to offer a greater advantage over the 3.8. If anything the 3.8 seems to have a closer ratio than the 5.0 but still offer a high top end gear.

Again thanks to all for their support and help!!

V6 JOE

I think the V6 transmission will be much better than the V8 one, if the ratios are closer, like you say. The V6 likes to rev, and that is where it makes it's power, so if the gear spread is closer, it will keep the engine closer to where it is giving it's best.

I know you are happy with your Alpine, now that it shifts like a true sports car. If you want better acceleration, you can go to a set of 4.11's, and the overdrive will make it comfortable on the freeway. The 3.55's are good for just regular driving on the street though.

MikeL

I read a lot on the web about T-5's before I made my choice.

The trans I got is from a 98 3.8 Mustang.

1st 2nd 3rd 4th 5th torque
3.35 1.99 1.33 1.00 .68 300

The tag on the transmission reads 1352-238 different web sites will show the gear numbers slightly different. 1.93 vs 1.99 or .73 vs .68

I got my numbers off a Ford web site so I won't argue with anyone about them. Some neat sites to visit to gain information:

www.coolcats.net/tech/ - Has info on T-5's with some facts and figures. It is a Cougar web site.

www.fordracingparts.com - A Ford web site, look through parts and downloads for charts on transmissions and speedometer gears.

www.fortesparts.com - Transmission and speedometer gears.

www.bgsflex.com/auto.html - type in as shown for all types of engine calculation programs.

www.xse.com/leres/ - Type in as shown than click on his box for the SS camero which will lead you to a gear ratio calculator.

I used this one to figure there was not much difference between a 5.0 and a 3.8 T-5.

I also read where the later T-5 were about the same in torque "300". The 3.8 required a longer bellhousing and input shaft to meet the shifter location in the mustang.

Cooling

Fans and Shrouds

Pembertonltd

Has anyone ever found a decent electric fan or pair of electric fans that will cool the engine and does anyone know the approximate cfm that is needed to keep the engine cool.

Chuck Ingram

I would get my self an after market cooling fan. Usually 6 blades with an uneven pattern. The blades will be more or less behind the line with the hub. This then leaves a good space between the radiator and fan. I would then make a full shroud. For best effect the shroud should be 1 inch more in diameter than that of the fan. Fan blades should be 1/2 inch into the shroud. I would not advise electric fans in front of the radiator as they will hinder air flow through the radiator. The only other option is a new single core aluminum radiator available from Doug Jennings. I have this as well and it was one good investment.

Pembertonltd

Do you have any fans that you recommend that will fit in there?

V6 JOE

Whatever you do, please don't use a metal Flex-o-Lite fan. It will ruin your radiator. I'd use one of the plastic fans available in the junk yards.

Mike L

I got my blade from a ford ranger. On the outer ring where you attached it to the metal disk. I used an 1/8 inch thick piece of metal and grade 8 bolts and washers. I used a longer bolt and added an extra nut and washer between the outer ring and metal to move the blade for clearance.

Jim E

Bret I ran an electric pusher off a BMW on my Alpine when I had the 4 in it. Do not recall which BMW it is off of. Sounds like you are having cooling issues. I know Dwain was fighting this until he put the Volvo fan on his car. Pretty sure that settled his over heating issue.

Chuck Ingram

You can buy a 14" fan and no cutting necessary.

Pembertonltd

Chuck, are you talking about an aftermarket fan or pulling one from another car that has a 14 inch fan

Pembertonltd

Does anyone know why Dwaine cut the blades thinner. I understand the shortening of the blade, but it seems

that by thinning the blade it would not produce as much air.

V6 JOE

Dwain trimmed the blades, thinking they would hit the crank pulley. He had to get another fan to use, because the one he cut down, wouldn't pull much air anymore. If you get a 14" fan, it should fit with little or no trimming. Dwain, you might want to give Bret some instructions as to what you did to adapt your fan.

Jim E

You want to get the adaptor made up and then figure out what needs to be removed from the fan blades for your car. I know Dwain had his adaptor mounted on the front side of the Volvo fan at first. This had the fan back toward the engine and required him to trim off a lot of the fan blades. The result did not cool as well as wanted so he moved the adaptor plate to the back or engine side of the fan and started over with another fan and trimmed it to fit. This left him more fan blade to pull air and also placed the fan closer to the radiator. Result one cool ride.

Not sure on why no one is building a shroud, one guess is it would be a job to fit one and make it look ok. Once I get to that point I will look and see what it would take.

Pembertonltd

I have gone as far as making a shroud for the fan that just lost it's blade and ruined my radiator. I was running about 200 or so in stop and go traffic with an outside temp in the 60-70s. I am always looking for a better way to keep the engine cool, especially with living in the desert. I also blocked off the holes for the horns.

Chuck Ingram

Brett, Yes I did mean an aftermarket fan.

Chuck Ingram

quote: jandrscovill wrote: Just out of cuiousity, why isn't anyone fabing shrouds, they make such a huge difference

Good question. I think then the fan would have to come with it. Another thing to consider is a standard engine location as I'm sure this will not be the same in every conversion. Hence the problem.

Using a good craft paper board it is relatively easy to make up templates. A good hint however is to make the shroud in 2 pieces. By making a spring type of clip to slide over onto the matching piece which will line it up you only need 1 screw per side to secure the top to the bottom. Of course you still need mounting brackets to be able to mount it to the radiator bolts

bryang

On the trimming of the Volvo plastic fan, I just trimmed off the ends so that they would clear the water inlet. Make sure to trim just a tad extra so that when it flexes it doesn't hit anything. I learned that the hard way. Mine self-shaped itself all the way to the Invasion. I'll trim a bit more off of the new one and should be O.K.

Jim E

Bryan did you make your own adaptor plate?

Pembertonltd

Well I just picked up a new fan and radiator. I was also informed that my plans for the shroud were not exactly the best plans since they didn't actually cover the radiator core. It was more or less a round circle of metal and was up against the radiator, but left way too much that was not covered. Anyone have some good plans for a shroud or did anyone make one out of an existing shroud from another car.

Chuck Ingram

From craft board cut your circle to fit the fan with 1/2 inch clearance. Leave some excess at this point. Duct tape this to fan leaving the fan blades 1/2 inch into the circle. Make templates from the sides and top of the radiator, bend and bring them to meet the piece around the fan. Cut to fit and tape together. Transfer to metal and weld them together. Flanging the edges and first riveting will let you easily fit it before welding. You will need to make brackets to attach this then using the radiator bolts.

A simple version I know. Bends will be straight but it is nicer to roll them for appearance. You can make this 1 piece but to install or remove you will need to remove the radiator.

Pembertonltd

I am wondering, is anyone running a shroud out there or are most people going without?

Chuck Ingram

I'm running a full shroud on the Lister and will have a full shroud when I finish the 62. I never had a shroud on the 62 but had a 4 core radiator. Could run all day at 185 on the highway even when the air temperature was very hot. You just can't go wrong with a nice shroud. More air will flow through the rad with a shroud compared to no shroud. Hence better cooling.

61Alpine

I was at a sheet metal shop today and I asked him roughly what he would charge to make a shroud. He said about \$300-400. So I will be making my own.

Pembertonltd

I was wondering as to how hard it would be to take an existing full shroud and cut sections out of it in order to make it fit the Alpine. Sort of like cutting it into quarters and then sectioning it back. You would have to keep the circle the same ratio though. Any ideas?

Chuck Ingram

I think to try and resection an existing shroud would be wasted time in regards to the time it would take to make a new one. Believe me it isn't hard. For bends you can use 2 pieces of angle iron clamped on the metal you wish to bend. This is a primitive brake but it works for me. I have since made a brake.

Make sure you use a piece of wood the length of the bend to hammer on or just to bend the piece. I like the wood because you don't bang up the piece you are bending. If you wish this bend to be rounded you can work it over a piece of pipe using a good dollying hammer. Be sure to go slow and take your time over the whole bend. In other words not all at once in one spot.

Pembertonltd

Does your shroud come out and get replaced in pieces or do you have to put it on the radiator and then put the whole thing in. I am wondering, since there is very little space under the hood with the alternator on one side and the brake booster on the other plus the fan in the middle.

Chuck Ingram

On the Lister it is a 2 piece. The bottom was made after the original was made. As to space the shroud will only cover the front 1/2 inch of the blades so there should be room enough.

Question is how far are the fan blades away from the radiator? This is why I went to an aftermarket cooling fan. The blades are sort of behind the line drawn across the hub of the fan. More space equals more cooling with a shroud.

Pembertonltd

Do you make the shroud in sections so you can install it while the fan and radiator are in or what? There is not much room with the alternator, brake booster and fan in the compartment

Chuck Ingram

Basically it can be one piece but to keep it easy a 2 piece will work as it will be easier to fit. From the fan the shroud will be angling back to the radiator so equipments should easily clear.

Pembertonltd

Well I took the car out and the stupid fan blade broke on me. So I guess that when I get back from our vacation I will have to reinstall one. It is upsetting, because now I will have to take off the shroud and the radiator in order to replace the fan. I don't think that I can make it clear without doing that. I will ask though if anyone has an extra fan that fit the car to please let me know. I had put a fan from a Mazda truck on it, but I know that most of the guys are using Volvo fans. I checked the radiator afterward and noticed that there are some areas where the fins are dented in a little. There is no leaking though. How can I tell if there was any real damage to the radiator?

CHRIS

Has anyone ever tried an electric fan setup with the conversion?

V6 JOE

Yes, and I don't recommend them, because there isn't room behind the radiator for it, (unless you move the radiator forward), and they block the incoming air if you put it in front of the radiator.

Britbeam

Chris I tried the electric fan and it was good until the outside temp reached 90 degrees at that point I wasn't comfortable in traffic. I'm using the Volvo fan on a adapter I had made. Its nothing more than a flat plate with the proper holes drilled for the fan and holes drilled for the water pump. Of course you have to orient the hole circles to each other. I fought having the fan as I thought electric would be better it wasn't for me. I would say this is personal choice but once again V6 Joe is correct. I think its natural for guys doing the mod to try to find out things on their own because if your doing this mod your a mix of street rodder/ fabricator etc. and its just norm to try on our own but Joe has been their many times.

Pembertonltd

What year and model of Volvo fan did you use? How many blades and did you have to cut it down by much

Pembertonltd

I was still wondering if there is any way of finding out if my radiator was damaged when the blade broke. Please see my first question. I figured that since I have to probably pull the radiator again to put on the new fan blade I should find out about the radiator. Also I have noticed that most of the guys are using a Volvo fan. I was wondering if there was much difference between using a Volvo and a Mazda 7 bladed fan with irregular spacing.

V6 JOE

There really isn't a difference in which fan you use. I would look for another Mazda fan, if it just bolts on. The fact that one broke on you, shouldn't discourage you from using another one. What you experienced, was just a fluke. These plastic fans, if it is a plastic fan, usually don't come apart like that.

If it is a steel fan, then I would suggest that you switch to a plastic one. The Volvo fan shouldn't be more than 14" in diameter, or you'll have to trim it to get it to swing.

The adapter isn't hard for a machine shop to make for you. It should be .375 thick to the diameter of the water pump pulley, where the fan mounts, then the rest should be .250 thick. Since these cars are all different, there is a small possibility that the .375 thickness puts the fan too close to the radiator. If this is the case, have the extra .125 removed, so the adapter is .250 all the way across.

Make sure they make the center hole the same diameter as the hole in the water pump pulley. The outside diameter of the adapter should be just large enough to fit into the fan housing, and the holes for mounting the fan should be tapped to the size of the bolts that came from the fan originally. That way you don't have to mess with extra nuts and washers. They will just screw into the adapter and simplify things for you.

Britbeam

Any old Volvo box car seems to have the same fan and you will probably find the fan to be the same as the Mazda. The Volvo fan will have to be trimmed to fit your set up, easily accomplished.

Pembertonltd

Can anyone help me with some info on fans for my V6? I saw Joe over the weekend and he told me to use a 14 inch with as many blades as possible but wasn't sure as to which car it should be pulled from. He suggested that it be a clutch type of fan and told me that I would have to have an adapter be made to attach it to the motor. Are there any inputs regarding the adapter and if someone in southern California had one made, who did it for you and how much. Measurements and such would also be a big help.

Chuck Ingram

I would go to a good speed shop and get a good cooling fan. It should have 6 blades and be uneven in spacing. They are pretty universal. The uneven spacing moves more air. Most of these have the blades back of the face and probably will have extra spacers when you buy one. The advantage is to have more space between the fan and the radiator. Good spacing will be in the 3 inch area. This allows you to make or adapt a cowl which will do wonders in the cooling department.

bryang

I used a plastic fan, non-clutch that I bought at an import parts store. It was for, I believe, a Volvo 240 series? I think it was about \$15.00. Anyway, the diameter is very close to the stock plastic fans used on the 80's Rangers and Bronco II's. The difference being where the steel mounting face in the center of the fan is located. The Volvo's is closer to the front. I had a machine shop fab me an aluminum spacer that I connected to the fan and

the pulley. You should get the radiator situated and then with the fan unmounted on the pulley, you should be able to measure the thickness of the required spacer / adapter. You will probably end up trimming a little plastic off of the fan. They are easy to cut so be careful. I took one blade and cut it how it needed to be and then used the scrap piece as a template for trimming the other blades. My fan now sits about 1/4" from the radiator and it really seems to move a lot of air. I think it may have one more blade than the stock Ranger one as well.

Pembertonltd

It was mentioned to me that I should go with a full shroud. The stock radiator that I have has a very small shroud on top. Obviously this doesn't count. Does anyone have any ideas of what to use or how to make a full shroud that will keep the cooling to a maximum. Once again, any help is greatly appreciated. I am anxious to get this car running so I can be part of the in-crowd with a hot running (not temp wise) Sunbeam.

V6 JOE

You want a fan of no larger than 14" in diameter, and with the mounting surface in the middle of the width of the plastic ring that has the blades. You can then have an adapter made to mount it to the water pump. The adapter should cost around \$75.00/\$100.00. I would also have the mounting holes for the fan, tapped, so you don't have to worry about long bolts and nuts sticking out too far.

Bret, you'll have to go to a sheet metal shop to have them fabricate a custom shroud to fit your radiator. I would imagine it will set you back about \$ 150.00/\$200.00.

Chuck Ingram

It is not necessary to have a shroud made. If you are handy. Use light cardboard and make one using duct tape to hold it together. Then simply trace the pieces to 20 gauge white coat metal. You can even rivet it together. Side will mount as to the radiator mounting bolts. Try to have as much space as possible between the radiator and fan. The fan blades should be about 1/2" into the shroud with about 1/2" clearance around the blades pending on the torque movement of the engine

bryang

I think I might give your fabrication suggestion a whirl. I thought that we wanted the fan as close as possible to the radiator though. Mine is about 1/8" away.

Chuck Ingram

You are getting pretty close. What happens to the fan as you increase speed? I know the Alpine fan won't really flex to the front but with 1/8th clearance I would have concern. Without a shroud you do need the fan relatively close. You are only using what ever the fan covers of the radiator. For full effect you should have more clearance if obtainable such as reducing the distance of the spacer. However a shroud will still work more efficiently, such as giving a higher percentage of air moving through the radiator.

V6 JOE

The plastic fans we're talking about won't flex into the radiator like the flex fans will.

Chuck is right when he says that a shroud works better, because the shroud causes air to be moved through the whole radiator, not just the area where the fan is.

If you don't have a shroud, the fan has to be close to the radiator, or it will draw air from around the outside of the fan, and won't draw air through the radiator like it should. Air, like water, takes the path of least resistance.

Pembertonltd

Can anyone give me some ideas on how to close up the bottom of the shroud where it fits under the radiator and the bumper. There is very little room to hook a piece of metal into the area.

V6 JOE

You might want to get a piece of poster board, and cut a piece to exactly fit the hole that would cover the gap between the radiator and your shroud, with about 1/8th inch overlap, so the shroud will seal against it. Then remove the radiator and take it to the radiator shop, and have them solder on to your radiator, a piece of sheetmetal that duplicates your pattern. Be sure to mark the radiator where the piece has to go, so that it will line up correctly with the shroud after it has been soldered on. If the shroud and filler piece don't exactly fit flush, put some weather stripping between them, to create a seal.

Radiator – hoses

Britbeam

For those of you installing the Joe Rodriguez kit etc. I would like to share some radiator hose part numbers with you. If you took Joes advice and built to the specs he suggest on your thermo outlet and lower radiator hose connection you will find the bends you need in the following part numbers.

I'm installing the V6 in a series 2 with a series 2 early radiator with out a radiator cap. I have installed a T from Jegs in the upper hose for the cap and overboard vent.

The lower hose is without a doubt a real female dog so expect to spend a little more time fitting this one.

Dayton P/N-70641

Dayton P/N-70749

61Alpine

Dwain, sounds like you are about there. I know what you mean about the bottom radiator hose. I had to take my radiator out to have it upgraded. When I put it back in, I had my son drop the radiator in from the top while I was underneath making sure to get the hose on correctly. The second time was so much easier than the first. Probably took all of 5 minutes the second time compared to about an hour the first time.

Britbeam

That's right and another Bear is getting that grommet around the gas tank fill tube. Just finished that now I'm hooking up the accel cable to the carb. Just when you think your close you see more to do. But it will be worth it.

Radiators

V6 JOE

I'm sorry I didn't tell you how I solve the lower hose problem. I have the radiator shop place a 90 degree elbow, coming out from the bottom of the bottom tank on the drivers side, rather than out the back. If you place the elbow facing toward the middle of the radiator pointed slightly back toward the engine, it will allow you to use an elbow from some preformed radiator hose to connect it to the engine. You need to keep the length of the elbow to under 1.5" in length, or it will place the opening past the inlet for the engine, and will kink any hose you

might try to use. The elbow only has to hang down from the lower tank, just enough to be able to fit the hose and clamp, with about .125 clearance. It will make putting the lower hose on a snap.

It will be well worth your time to have the radiator modified this way before you try to install it, because if you don't know how to swear now, I can almost guarantee you that you will be proficient at it when you're done.

V6 JOE

Both the thermostat housing and the radiator outlet need to be modified. The lower radiator outlet needs to come out of the bottom and use a 90 degree elbow, pointing toward the middle of the radiator and slightly back. The nipple should not be longer than 1.0"/1.5" long, so that it doesn't go past where the engine water intake is. If you make it too long, you will have a hard time with the hose kinking on you.

V6 JOE

The best thing to do for a radiator, is modify your Alpine radiator. You need at least a heavy duty three core to replace the original three core your Alpine came with.

The inlet and outlet have to be switched from the stock configuration. The radiator inlet needs to be on the passenger side, and the outlet needs to be on the driver's side. The outlet needs to come out from underneath the end tank, rather than out the back like normal. It needs to have a 90 degree elbow coming out from the bottom, pointing toward the middle of the radiator, and pointing a slight bit toward the engine (about 5 degrees). Do not make the nipple more than about an inch long, because it will be too long and will actually pass the inlet nipple on the engine, and make it hard to fit a hose without kinking it.

On this application, a fan mounted in front of the radiator will actually block the air from going through the radiator and cause the fan to have to run continually. An engine mounted fan is more efficient and will handle the cooling chores well.

Pembertonltd

Does anyone have a good recovery system that they can share with me. What should I be looking at in one and what kind of PSI should I be looking at for the cap. I am running a 180 degree thermostat with a small hole drilled in it per Joe's recommendation. I live in the desert of California and will probably run Water Wetter with water instead of using the anti-freeze as I had mentioned in another post. Where is a good place to mount it and any drawbacks.

rootsracer

14 to 18 PSI is a good pressure, but are you sure you want to go water wetter? It does help with the making the water better transfer the heat, but it doesn't increase the boiling point like ethylene glycol does. Also doesn't help nearly as well with corrosion as normal antifreeze does.

I've had to use water wetter at the race track because they don't let you run anti-freeze, but as soon as I got home, the antifreeze goes right back in.

Pembertonltd

According to the stuff that I had read on the web and talking to the company that makes it, it drops the temp anywhere from 6 to 20 degrees. Wouldn't that keep it from overheating and boiling that easy? They also said that it does a good job at corrosion, of course they are the ones that make it, so they are biased. I had never really talked to anyone that used it, so I was just going by what I had read. Do you run a recovery system on your car?

NICKODELL

I'll probably get a lot of argument about this, but I favor the least cooling system pressure for 'pines, like almost none.

Pressurization only became common in the late 1950s when radiators became smaller, under-hood (sorry, bonnet) space became restricted, allowing less cooling airflow, and mixtures became leaner and engines ran hotter. About 1/3 of the heat energy is used to drive the car; another third goes straight out the exhaust; and one third is lost to the cooling system. It has been calculated that at 60 mph, a typical modern car engine generates enough heat from the radiator to heat an average house when the outside air is at 20 deg. F. (You're burning a gallon of fuel every hour just to heat the cooling system, radiator and air passing through it).

The amount of heat that the cooling system can dissipate is directly related to its temperature. At 250 degrees F, a much smaller cooling capacity and radiator surface area is possible than at 212. Trouble is that, all things being the same, raising the temperature to such heights is not possible without reaching boiling point (b.p.).

Enter the pressurized system. A typical 15 psi raises the boiling point of pure water (at sea level) from 212 to 250 degrees. A 50:50 antifreeze mixture raises unpressurized coolant b.p. to 227 deg., so a 15 psi pressurized system using 50:50 can have a b.p. of 280 degrees or more. (Which is why they have lurid warnings about not removing the radiator cap when the engine is hot. Suddenly reducing the pressure to atmospheric in this way will cause the coolant to flash into superheated steam, and if you're in the way can give you 3rd. degree burns or blind you).

Such pressures and temperatures are fine for new-technology engines designed for them, with low mileage, but with our older engines (both design and age) and radiators, IMHO you're risking leaks operating at 15 psi., especially since antifreeze enhances water's ability to seek out weak spots.

Radiator caps have two seals. The top prevents coolant escape from the top of the filler neck, the bottom one is spring loaded and seals the orifice where the neck meets the top tank. The spring force controls the allowable pressurization and acts as a combined one-way and safety valve. Overpressure is prevented when it gets high enough to raise the bottom seal against the spring force and dump enough coolant from the overflow.

The one-way function allows the valve to lift when the engine cools, preventing a vacuum effect from collapsing hoses. If you connect a coolant recovery bottle and pipe (kits are available at outlets like Pep Boys) to the overflow nipple at the base of the filler neck, this will prevent the loss of coolant as the temperature/pressure rise, and also the ingestion of air when it cools/falls.

I use a radiator cap with a very low pressure spring that allows only nominal (maybe 1 psi) pressurization, but works with the coolant recovery system also. As I use 60% antifreeze the b.p. of the coolant, even with almost no pressurization, is somewhere over 235 degrees, which is right off the "H" end of the temperature gauge anyhow.

rootesracer

I run a 12 PSI cap on a modified Sli header tank (stock is 7 PSI), and yes I run an overflow.

Water wetter is a surfactant, it lets the water make an intimate contact with a larger area of the metal by reducing the water's surface tension. The corrosion resistance of the surfactant itself is terrible, if not counterproductive, so IIRC they add some water soluble oil to help out with the pump seal lubrication and to help reduce corrosion, which would not help out with the cooling properties. It's a fine balance between the higher thermal transfer, and the corrosion resistance I suspect.

I have been wary of Redlines claims. It all sounds good, but my own use doesn't leave me convinced of too much.

Every time I ran the stuff, I ended running at the same temperatures (~200F) that I would run with antifreeze. The

problem was that if you sat idling on a hot day (I am in SoCal too) the temperature would climb above 220F. Bear in mind that 220F is the average temperature of the water, not the actual temperature where there might be hot spots, so having something that is not going to boil till 265F makes me feel a tad better.

Also when I would flush the water weter out, the water was always rusty after a race weekend, which for the alpinex alloy head is not a good indicator.

I wouldn't worry so much running water weter for racing because the airflow at speed is always sufficient to cool the engine. Its when you run it hard then get stuck in traffic that I would worry about.

Barry Knight

I recall reading somewhere that the Alpine (and Tiger) are supposed to use a 13 PSI cap, rather than the more normal 15 PSI, to prevent bulging the ends of the heater core. If the ends bulge out, you will play heck getting the heater core out again.

I am NOT saying that you can't get away with a 15 PSI cap; I suspect that many have been and are being used.

V6 JOE

Personally, I use a radiator cap with no more than 10/12 lbs., because if you're running a heater, you could damage the heater core. I once ruined my heater core when my engine overheated. The heater core swole up like a toad. I could hardly pry it out of it's hole.

If you are racing your Alpine and aren't running a heater core, you could probably get away with the higher pressure caps.

Jim E

I have read that water weter is snake oil

TE/AE did a series on cooling in tigers and WW made no measurable difference.

Jim E

I run a 70/30 mix the 70 being distilled water and the 30 anti freeze. Do not have to worry much about freezing here in the south.

Bill Blue

Years ago I read that one of the benefits of running higher pressure systems is that it reduces water pump cavitation. As the unpressurized system is heated, water vapor (steam) forms in the intake side of the water pump due to pump suction, reducing pump capacity at the very moment it is needed the most. A few psi increases the temp this becomes a problem to a point above the highest acceptable working temp.

May or may not be true, sounds good to me.

Barry Knight

Some interesting information to add to the confusion:

Anti-freeze (ethylene glycol) does a good job on the cold side, but it actually makes things worse on the hot side.

The thermal conductivity of water is about 2.5 times higher than that of anti-freeze, so the more anti freeze you add to the coolant, the lower the thermal conductivity! With a 13 PSI radiator cap, the sea level boiling point of

water is about 251 degrees and a 50/50 mix of anti-freeze and water only raises the boiling point to about 266 degrees. Since the coolant temperature should be well below 251 degrees, adding anti-freeze accomplishes nothing except to reduce heat transfer in the cooling system.

In my opinion, the best summertime coolant is water and a corrosion inhibitor. Since coolant freezing will most likely ruin your engine and/or radiator, you should use enough anti-freeze to prevent freezing in the winter.

SDuncan

Are you V6 guys still using the heater core? I don't ever anticipate driving the car in weather that requires heat but some guys think I should put it back in anyway.

Jim E

I unhooked mine when I was running the Weber engine for some reason, but will install it with the V6 if nothing else so the defroster will maybe sort of work. Then you can also use it to help bleed off engine heat in a pinch.

Chuck Ingram

I tried the water wetter and really thought it was money poured down the drain. Here we use at least 50/50 water antifreeze mix. We do need the protection to at least -40F. I keep mine at -50 summer and winter. As to rust I think it does a good job in the anti corrosion department as when I do drain I do not see anything but a nice green color.

As to keeping the cool you want as much air as possible going through the rad. Hence horn openings blocked .shrouded fans and even the space under the rad blocked. A smaller water pump pulley is also a great benefit.

61Alpine

I have the heater core in my V6 Series I here in Utah. Took it for a drive with the top down, windows up and heater blowing, two weeks ago. Temp was about 38 degrees and with gloves and a hat I was perfect.

Pembertonltd

Well I got a resevoir from Auto Zone, but it is way to big to fit to the left side of the radiator. Any suggestions on a smaller one that can be used.

V6 JOE

The Volvos from the seventies used to have a plastic overflow bottle that fit into a dovetail bracket that was soldered to the side of the radiator. The dovetail bracket can be removed and soldered to your radiator frame, then the bottle will slip into the dovetail bracket. It is small in diameter, about 2.0", and about 10" long. It has the nipple to connect the hose to the filler neck, at the bottom, and a radiator cap at the top. You can run a small hose from there to the radiator. The Turbo Alpine has this type bottle, and it works great.

Pembertonltd

Sounds like the type of thing that I need. I got the car put on the road today and It is quite fast. I still want a better ride though. I will be making my horn hole plugs tomorrow. I actually made one today but ran out of metal so I will do the other tomorrow. The pattern that I got from the board was just a little too big so I had to size it better for my car. Like you said it seems that they are all just a little different. But it is running well, except still a little warmer than I like.

V6 JOE

Yes, I've seen them and they look great.

Your engine is a fresh rebuild, so is still tight, which will cause it to run hotter than after it's broken in. When it's broken in, it will feel more powerful as well. If you like the power now, you'll like it even better later.

I wouldn't worry too much about the temp, as long as it's not spitting out coolant. These engines were designed to run hotter, for smog reasons, so as long as it doesn't lose water, you're OK.

After it's well broken in, about 5K miles, I would suggest using Mobil One synthetic oil. It will reduce the friction even more, and make the engine perform better and last longer. It is more expensive than paraffin based oils (it is the least expensive of the synthetics), but I feel it is worth it, especially in a hot climate like where you live. Paraffin based oils begin to burn at around 230 degrees, but the synthetic oils won't burn until around 400+ degrees.

I used to see 250 degree oil temp's while running at 90 mph for hours, through the San Joaquin Valley in the summertime. When I disassembled the engine to rebuild it, there was no damage to any of the parts. Everything looked like new inside.

Britbeam

I could use some input from some of you V6 guys who have made your radiator choice for the conversion. I'm talking 2.8 V6. I have a local radiator shop working up a quote for doing the 3 or 4 row restoration of the series 2 radiator. From what they are suggesting I'm not in favor of what they want to charge. The first words out of their mouth was Oh this will be a Custom Job. Somehow I see lots of \$\$\$\$\$\$\$\$\$\$

What about aftermarket radiators anyone found a radiator that will work? We are restricted by the size of the radiator. I see some in Jegs, Summit etc. but the size is the problem. Sure would appreciate your input.

Britbeam

The measurements are 13 X 22. Typical Ford outlet locations. Outlet top passenger side and inlet bottom drivers side. Although with these locations the inlet would have to be changed to come out the bottom drivers side at 90 degrees and slightly angled toward the engine. Spacing between the 90 degree and the bottom of radiator can be as small as enough to clear the hose sliding on. So if you find something I would still need to custom fit the inlet but not a problemo.

Kirk B

I had US Radiator build a 3 core "Desert Cooler" for my V6 conversion. Just send them your radiator and they do the rest. The cost was \$285... a small price to pay compared to being stuck on the side of the road. They advertise in all the street rod magazines and ship worldwide UPS. Mine came well packaged and protected. Just last weekend I zipped up the Camarillo grade on Highway 101 in 95 degree temperatures passing everyone in sight. The temp never got above 200!!!!

gwl

Over the Summer I needed to put a new radiator in my Healey replica which has the 2.8 V6 in it. Some radiators can be pretty pricey and I was kind of on a tight budget but after looking around I found I could get a new 3 core radiator on-line for a 1965 Mustang with 289 for only \$120. I then took it to a local radiator shop and had the inlet and outlets changed to the correct size and configuration for \$50. So for around \$170 I was able to put in a new 3 core radiator. I don't know why some radiators for certain cars are so expensive and others so cheap, but radiators for the first generation of classic Mustangs are cheap compared to most others. I also had space limitations. This is a fairly small down-flow radiator which mounts by the sides and the overall diameter is about 18"

by 22" (core is 16 and 3/4 x 16 and 3/4).

Britbeam

Thanks to all for your input. I did spoke with US Radiator and their current price is \$300.00 plus shipping. They seem to be great to deal with and willing to answer all my questions. They did request I ship them my radiator to pattern after. As it all shakes out I can get the local radiator shop that the local street rodders recommend for less than it would cost with shipping etc. and I would have someone local to back it up.

Chuck Ingram

I always check out people at car shows that are local. Some one always knows of good shops. We are slightly a car crazy city. There are quite a few good shops with a following.

Britbeam

Chuck I took your advice and went with the local guys on the radiator. After all was said and done shipping etc. it was better to go local. I had the rad in 4 days with it done the way I wanted with inlet & outlet correctly installed with 3 row core. Of course you use your old tanks and frame. New modern type core with more rows.

Pembertonltd

I took in my radiator today to have it reworked by a man that has been in the business for more than 20 years. He wasn't sure as to how U.S. Radiator was doing their radiators, so I downloaded some info from the web for him. The final option was for him to use my stock tanks and place baffles in them to route the water to the bottom of the radiator and then with another baffle on the bottom tank it would bring the water back up. He decided that he would use a 2 row dimpled core with 5/8 in tubes and 15 fins to the inch rather than the 1/2 inch tube that U.S. Radiator uses. After talking to another 3 radiator builders the general concensus was that the 5/8 tube set up was a better choice even if I did not use the baffles in it. He fells that using this set up with the 3 pass baffles will work just fine. The other good part is that it will take him about 3 days and will run some where between 250 and 300. Hope that this will help with some of your questions. The shop is here in Temecula Ca. south of Riverside and north of San Diego.

V6Mark

Guys - I don't know whether this was already covered - but would a Tiger radiator be suitable for the 2.8 conversion without the need to modify?

DAN MOORE

I used the Tiger rad. Just took it to a rad shop and had them change inlet and outlet locations has worked fine for 21 years and when I'm done total resto hope it still works fine.

V6 JOE

I think a custom radiator will work better than a stock Tiger radiator, because it will be thicker and have a bit more capacity to boot.

Temperature Gauge

bryang

I'm getting closer (I think) to the first firing up of my conversion. Having lots of fun figuring out the wiring and all. Another thing I'm trying to figure out is exactly which holes to plug on the intake manifold and which tubes to block off on the carb. I plan on using the stock gauges and I'm trying to figure out where to hook up the water temp gauge sender unit. There is a threaded hole on the upper water inlet and it seems like the logical place to me. Unfortunately, when I sold the stock engine I didn't keep any of the senders. Any chance that someone out there knows of a NAPA part # sender that will work with the stock gauge?

Barry Knight

I am fairly sure that all Alpine S-3/5 gauges used the "Stewart-Warner" standard of 240 / 33 ohms. That was also the prevalent American standard at the time, so if you can find a general aftermarket water temp. sender that will fit, it will probably work OK. The sender is nothing but a variable resistor, so don't worry about damaging the gauge; a shorted sender will "peg" the gauge at full hot and an open sender will make it read full cold. You can try the sender before installing it by hooking it up at room temp (cold) and then heating it up in really hot water (mid-scale).

Remember that single wire senders ground through the threads, so don't use Teflon tape unless the sender has two terminals.

bryang

I'm going to order the stock sender and an adapter sleeve as per recommendations from Joe. Actually at this point, I may just plug the hole so I can start it. I'm not going to wait until I get the water temp sender to start it. I'm nervously anxious to hear it start up.

Thermostat

MikeL

I am put my engine back together and have a 160 degree thermostat. Should I replace the 185 I have in it? What is the advantage to running a higher degree?

V6 JOE

I recommend using the 185 degree thermostat, because these engines were designed to run hotter. They get better mileage and are more efficient at those temps.

Water Temp Sender and Overflow Tank

Pembertonltd

I would like to know where is the best place to install the water temp sender on the 2.8. I want to make sure that I get the most accurate reading.

bryang

I mounted mine in the upper outlet I believe. I'm a little paranoid though as I don't know if I actually have water circulating. I keep thinking that I did something stupid like put the thermostat in backwards or something. While we are on the subject of water, what have the rest of you been doing for an expansion / overflow tank?

Britbeam

On the sender I'm using the upper water outlet and it works fine. That's the where it was when I pulled the engine from the Mustang 2. Pep boys has a expansion tank for about \$8. Works great. I have the early series radiator so I have the radiator cap actually in the upper hose using a billet alum housing (JEGS) with the overflow hose connected to the housing. Pure function.

bryang

My sender is in the intake manifold just below the upper water neck. Hope this helps. As far as the expansion tank goes, doesn't the bottom of the tank need to be higher than the top of the radiator?

Britbeam

I'm not sure about the bottom of the expansion tank being higher than the radiator. On my Alpine I have the bottom of the tank below the top of the radiator and it circulates both in/out. My 2000 Buick has the bottom of the tank below the top of the radiator and it works fine.

V6 JOE

The overflow tank works on vacuum, so doesn't need to be higher than the radiator. The coolant is forced into the tank when the water gets warm, then as it cools when the engine is turned off, the coolant is pulled back into the radiator by vacuum as it cools. As long as the little hose in the expansion tank is covered by the coolant, it will lift it back into the radiator.

Electrical

Battery - placement

Britbeam

Has anyone found a low profile battery that would fit in the trunk between the spare tire panel and the bottom floor? If so would you share make & part number.

As the right side exh pipe will need to go through the Battery box area the battery will need to go in the trunk. I would like to not cut the trunk floor for sunken pan for the battery.

V6 JOE

Why don't you check out one of those dry cell batteries that can be placed in any position? That way you could place it on it's side to see if it will fit where you want it.

Chuck Ingram

What series do you have? If it is series 3 and up you can easily make it like how the tiger battery is placed. Also making the cover as Tigers have will make a neat looking trunk as every thing will be hidden. Amazing how much can be hidden under this. I know as I did this for the Lister. On the 62 however I did not move the battery. Have a good muffler shop do the pipes and you will be okay. On the 62 my fuel pump is mounted to the side of the battery box with an extra 1/8th plate added as well to minimize the sounding board effect.

Britbeam

Thanks to all. Joe I believe the miata uses a dry cell battery so I will check on that.

Fuel Pump – types and location

CHRIS

I'm getting ready to buy the electric fuel pump for my V6 conversion. I was wondering, what pump people were using and where they are mounting them?

I was also wondering, what material is best for running the fuel from the pump to the carburetor. Steel tubing or a flexible hose setup?

61 Alpine

I used the red Holley pump from Summit Racing. I used one of the metal braided flexible hoses and mounted the pump on the back of the battery box. Not a good spot it humms pretty good and you can hear it vibrating in the car.

Bill Blue

Mine is from a Volvo "or something like that". Bought it from a guy that said it was too much pump for his application. Mounted it on the bottom of the trunk, behind the spare tire well. Used an inline tee with a restrictor on the line back to the tank to hold line pressure to 16 psi. Have yet to put it on the road so don't know what the noise level is. I used 1/4" brake line. It has much to recommend it. Cheap, durable and fairly easy to bend into place.

Bil

I agree with Rob about the Holley "Red" electric pump. It hums and whirrs constantly (because it's a rotary vane style pump I believe). I use it in a Jeep V6 and it delivers plenty of gas at about 7 psi). For my 4 cyl. Alpine, I have been using a Walbro diaphragm-type with old style mechanical points. It is a 4 psi pump mounted near the tank and heard clicking to "charge" up the gas lines when needed. I have only replaced points once in about 9 years. Most electric pumps now seem to be "pusher" types and are mounted as close to the gas tank as practical. My Singer uses an SU "sucker" type pump though (insert joke here) and is mounted next to the engine. As reliable as these electric pumps are, I still keep an old mechanical pump handy for emergencies.

V6 JOE

I recommend the Holley red pump, because the Holley carburetor needs 5/7 lbs. of pressure to work right; especially with the V6, since it will use more gas than the four cylinder at wide open throttle. I mount the pump under the trunk floor, with a piece of rubber insulating it from the body and can't hear the pump while the engine is running. You can hear it when it you first turn the key, as the pump pressurizes the line. The other reason, is reliability. The Holley should last for years.

V6 JOE

Mounting it to the battery box, is like mounting it to a drum. The box will augment the sound, plus it's closer to the passenger compartment than the trunk floor.

bryang

Yeah. I need to isolate mine a little more with a piece of rubber or something. It's loud.

Bill Blue

Where is the best place to locate an electric fuel pump on a Series V? The general idea seems to locate it so it will have gravity feed from the tank. To me, that means it should be behind the rear axle. The most logical place seems to be under a tank or fastened to the spare tire well. I know that a fuel pump in the trunk is not a good idea, but neither is it a good idea to place two gas tanks and a half dozen hose connections in the trunk.

Paul Almjeld

I fastened the electric fuel pump on my Series V to the back side of the wheel well. It is low enough to be gravity fed to the pump but is up and out of the way of being struck by any obstacles. It is convenient to install in that location. I have a Carter pump.

Barry Knight

Pumps push better than they pull, so low and back certainly makes sense but there is not a good place to put the pump close to the center connection on the crossover pipe.

Tigers had the pump in the spare tire well, but I don't like the idea of a pump in the trunk and I intend to store the spare tire Alpine style.

To me, the best compromise seems to be under the trunk floor immediately behind the spare tire well, maybe with a shield of some kind. Low on the back side of the battery box would be my next choice.

Pembertonltd

I placed mine right in front of the cross tube and under the trunk. This way I am able to route the fuel line in the same manner that it was when it was stock. I was able also to use all of the stock tabs to hold down the fuel line all of the way to the engine.

61Alpine

I mounted mine on the back side of the battery box. Only problem is you can hear it when just idling along. I put a rubber gasket between the pump and the box. That helped but did not stop the noise.

Nick O'Dell

One piece of advice I hope you'll follow. Fit a "crash" switch! This is an inertia switch that cuts off the pump in the event of a shunt. Unlike the mechanical kind that shut off when the engine stops rotating, in an accident an electric pump will keep sending fuel into the engine without this switch. If you're trapped and can't reach the ignition switch, you'll sit there while up to 11 gallons of fuel is delivered to what could be a fire.

V6 JOE

You can put the pump close to the battery, so that it gets a good power supply, but even with the bottom of the fuel tanks, so they get all the fuel in the tanks.

I should add, please use an oil pressure sensing switch in the circuit, so in case of an accident, the fuel pump won't keep on running and spill gas all over the place. It's a safety issue.

Nick O'Dell

Use an inertia switch. An oil pressure switch is no good in a crash where the engine keeps running. I witnessed such a crash once, where the throttle was jammed at max, and it's a terrifying scene with the engine screaming up to self-destruction and nobody able to reach the ignition switch. Another reason: in such a situation (jammed throttle) the engine putting a rod through the block or some other catastrophic failure is quite likely to provide the spark necessary for a fire.

bryang

I am running the Holley 4 barrel carb with the Holley Red pump and I think that it puts out too much pressure at the carb. I've installed one of those hoaky fuel pressure regulators inline but it doesn't seem to help. I've been told to run a fuel pressure regulator that has a return to the tank. I have found one or two examples of these regulators but don't really think that the 150 -200 dollar range seems right. Has anyone found a cheaper alternative? How did you plumb it back to your tank? I have to replace the upper equalizer tube between the tanks and I figured that I could just tee into that. Sound plausible?

KennyJ

On the return line, I think that would work great. The other option would be to weld a nipple in the filler neck, or gauge bung for the return line.

As for regulators, its gonna hurt, but the good ones do cost a bit of money. You might try to find a car that used them from the factory and retrofit it (purchased either new or from a Pick-A-Part yard).

Chuck Ingram

Find a good speed shop. They should have some that are not that expensive. I have had one since mile 1 on the 62. I forget the setting as I never had to do anything to it. I think I'm running around 4 pounds pressure.

Britbeam

I thought the Holley Red fuel pump had a built in regulator? Why do you feel your getting too much pressure ? What are the symptoms?

Chuck Ingram

I'm not using a Holly fuel pump. I'm using an inline with I think it was 7 pounds plus. I was told I needed 4 pounds. It works and if it isn't broken, don't fix it. I would think symptoms would be a bogging down sensation when flooring it from a dead stop. Poor gas mileage comes to mind.

V6 JOE

The Holley, like most carburetors, needs between 5-7 lbs. of pressure to function properly. I'm surprised you're only running 4 lbs., but if it works, don't change it.

The advice you gave about going to a speed shop is good. You can get a good quality regulator for between \$50.00/\$70.00. I'd also recommend putting a little pressure gauge in the line to monitor the pressure.

If you don't have enough pressure, the engine will run out of fuel when you have the throttle open for a bit of time, like when you are passing another car. That is definitely not the time to lose power.

rpanter

I had a -6AN fitting welded to my tank above the original tank output. Any good regulator will cost a bit. I am

using a TWM unit. I also have a liquid filled Jegs pressure gauge mounted in the engine compartment next to the regulator.

Chuck Ingram

Now you have me wondering. For my own curiosity I'm going out to check it. I have no wish though to change whatever the setting is. After all those miles I'm happy. Still starts on the first turn, runs great and I'll leave it until??

bryang

The primary symptom I'm getting is fuel spraying out of the connection at the carburetor. I have installed an inline unit and have it running at (supposedly) 4 lbs. I don't know if those things really work or not. I suppose they do. Now, I wouldn't mind paying up to \$100 for a good unit with a return, but I think that \$200+ is a little ridiculous. I think that the ones I've seen are for fuel injection systems and run at much higher pressures. Does anyone know of a car that ran a stock set up similar to what I'm after, that I could use?

I plan on going to the salvage yard soon. KennyJ gave me a good tip on getting a fuel shut off (inertia activated) switch from a Mustang. While I was out there retrieving that I could look for a regulator with a return function.

V6 JOE

It shouldn't be spraying gas at the carb fitting, even with 30 lbs. The sign that it has too much pressure, is fuel bleeding out the vent tube. I think you have a bad connection at the fitting. Replace the fitting if it has a problem, but I don't think you have too much pressure.

Barry Knight

You should not need an external regulator with your setup. The Holley Red pump has an adjustable relief valve and is rated at a maximum of 7 PSI. The Holley carb (390?) needs 5 to 7 PSI. If the pump is working right, it can't provide more pressure than the carb can handle. If the pump is not working right, a regulator is not the answer.

It's hard to see how you can have too much pressure, but using a gauge to check the fuel pressure would show you what the problem is (or isn't).

Fuel leaking at the carburetor inlet sounds like a hardware problem, not a fuel pressure problem. Even if you had too much pressure for the needle valve to handle, fuel should come out of the bowl vent rather than at the fuel inlet connection.

b ryang

I'll double check my connections. You're probably correct. I thought the pump ran at a higher pressure than that.

Fuel Pump – wiring

bryang

I almost got the Alpine V6 started yesterday. I wired up the fuel pump through a relay and toggle switch. I must have missed something somewhere, I'm an electrical dimwit. When I turned the key all the way the starter kicked in for a sec and I backed off since I really didn't want it to start and also because that is the only sound that the car has made in the past two years and it was rather startling. I have already pulled all the plugs and disconnected the coil, and set the timing to straight up. I'm going to squirt a little oil down each of the spark plug holes, find out what is wrong with the fuel pump wiring hopefully and try it again. I wonder if the pump will start up if it's empty. I was just testing the connections to see if they were working, I haven't actually put gas in yet. I'm

also wondering if one of the connectors on the back of the ignition switch is a "ignition hot" that I could wire to for the fuel pump and get rid of all of this relay stuff. I do know that one of the connectors on the rear of the ignition switch is dedicated solely (according to the wiring diagram) to the map light. I would love to hear from anyone who has done the conversion and remembers how they wired it Any ideas?

Barry Knight

The fuel pump needs to be on anytime the ignition is on. The easy way to do this is a connection to the high side of the ballast resistor.

There are lots of Tigers and Alpines using electric fuel pumps wired directly to the ignition circuit, but the right way is to use the relay so the switch does not have to handle the additional current to run the pump.

The electric pump should prime OK as long as it is lower than the fuel level in the tank. Some pumps may be OK when run dry, but it is not good practice.

Chuck Ingram

Definitely put a switch in. A hidden one YES as stated to cut it out to prevent theft. Sometimes I forget and the car goes 30 to 50 feet and stalls and I swear. I should remember it was me and not the car. A visual, easy to see and cut off the pump switch is a nice touch. Comes handy when you want to crank the engine only.

bryang

I got it to work last night by wiring it to a hot (with Ignition off) fuse. I'm going to search around for a circuit that is hot only when the ignition is on. I will probably end up hiding the toggle as suggested. I would also enjoy knowing that if a friend were to drive the car, the fuel pump would shut off when the ignition is turned off. I've heard of a switch that cuts the fuel pump off if the oil pressure drops below a certain point. I doubt if I've got the room for that and it would probably end up being one more thing to worry about.

DAN MOORE

The switch you mentioned is a good idea but they were used on industrial motors i/e welders, compressors and were not very reliable.

MikePhillips

One thing to keep in mind if you allow the pump to run and the tank's empty is that most pumps use the gas flow to lubricate and cool the pump. So don't allow it to run long or You'll shorten the life of the Pump.

Ignition

MikeL

Bryang, How did you resolve your distributor problem? Did you stick with the dura spark or use another? I set my timing (dura spark) at 12 degrees and underload (20-25 miles @ 80 mph) the advance creeps to the point it overheats and shuts down. While overheated (or cooled to the point it will restart) I check the timing and it is way off. The Distributor hold down is tight from start to finish.

KennyJ

Well, I am not Bryan, but I have a lot of experience with the Duraspark. You are describing the standard failure of

a Duraspark box. Go invest in a new, or good used one and your problem should disappear.

If you keep the box in an area where it has good airflow, it will last a long, long time.

I have 1 (ok 2) questions: 1) are you running the "Blue" strain relief box, and 2) Do you have all the wires hooked up? 3) (dang) Are you running only one power wire, or a cranking and running power wire?

MikeL

Kenny, I have a MSD 6A box under the dash with the Purple wire from the box connected to the Orange and Black distributor wire and the Green wire from the box connected to the Purple Distributor wire. Also using a MSD Blaster 3 coil if that makes any difference. Sounds like you are saying the problem is in the box and not the Distributor?

rootesracer

Actually the described mode of failure relates to the Duraspark box, not the dizzy itself.

Also MSD boxes usually work perfect, or not at all, they don't usually retard timing, unless they have a multi-step rev limiter, and you have crossed the rev limiter.

If you are using just the dizzy, for its VR pickup, and going to the MSD box, then the problem is either the timing in the dizzy is changing, or the MSD box is doing funny stuff.

When you said "overheat" you mean the box, or the engine?

Lastly, most duraspark dizzys have two vacuum ports on the advance, one is the vacuum advance, the other is a retard.

Actually they are the same diaphragm, just opposite sides of it, and if the diaphragm leaks, then the timing can do funny things.

1) unplug all the vacuum lines to it and see if the timing stays put.

2) put a vacuum pump/gauge on either port and make sure it isn't leaking.

3) if the timing still changes with the vacuum lines removed, you should look into the mechanical advance getting stuck, or look into the MSD box.

bryang

I ended up getting a new box and mounted it under the dash. On a related note for some unknown reason my rotor phasing was off and I checked it with a cap I destroyed for that purpose. I ended up modifying a stock cap so that it would lock in at a different position and my rotor would be phased correctly. Now if I could just get to pulling that Holley and putting in the new power valve....

MikeL

I ran the car without the vacuum advance and the hose to the manifold plugged.

At idle the timing didn't move I did get the advance at increased RPMs. The car ran sweet until the engine temp warmed up and any effort to speed was met with the same problem as before. From what I experienced before it was excessive timing advance.

Since I have the benefit of the before mentioned brain trust I seek their comments on my plan. A rebuilt

Distributor will set me back around 60 to 70 bucks. I am OK with that.

I would opt to go back to the Ford Ignition Module with the blue grommet for 22 dollars instead of going with another MSD 6a for \$170. Will I have any problems keeping the MSD coil? Does the MSD box have that great of a value over the Ford Blue Box?

I too backfired my Holley on rebuild startup. Since I live close to sea-level I bought a trick kit for the gaskets, Jets .052 .053 and .054 and replaced the power valve with the same number. I also replaced the secondary diaphragm. And for the fun of it purchased a quick change spring kit and springs for the secondary.

rootesracer

You need to be sure if your problem is advance related. Most problems with ignition systems cause retard related problems not advances, since the signal doesn't get to the box till the stator crosses the VR sensor. Any processing delay of that signal will cause retard.

If you are finding that the ignition is advanced after you feel the problem, then you should look into if your mechanical advance is sticking, and remedy that.

I would not go back to the ford module unless the MSD module can be deemed the problem. MSD boxes are pretty reliable, and can help light off poor air fuel mixtures since it gives 3 or so ignition hits at idle. The ford ignition is an ok ignition, but since the money is already spent, the 6A is just plain better.

You should be able to use the blaster coil on the duraspark ignition, but between you and me, the blue duraspark coil has more spark energy.

KennyJ

If you are not running the vacuum advance/retard unit (not all are retard units), I would "pin" it in position. You can't get rid of the unit, for it holds the advance plate, but you can drill a small hole in the arm and put a roll pin in it to keep it from "pulling" advance. If you are tricky enough, you could run it through the body of the advance unit, and hold it rock steady.

I pinned the ones I used in my stock car, and the other cars I converted for people. From what I read, the MSD helps light off a poor mixture, but I never had a problem with breakup or advance with the Blue unit and stock coil/distributor, up to 7000 RPMs.

You might also check how long the screws are that hold the pickup unit, they could be hanging up, etc. Also, there are plastic bushin^s that hold the weights in the distributor on the "newer" models. These can break over time and do funny things to your timing. You have to remove the star wheel to get the pickup plate off, but I would see what is under there! Use 2 big flat bladed screwdrivers, one under each side of the star, then lever it up, off the shaft (don't lose the little roll pin that locates the star wheel!).

That is about all that can really go wrong with the basic distributor, the weights and the vacuum advance. Some of the advance units are adjustable with an allen wrench, thus you can really bind them up with the spring pressure to hold them in place. If it is weak, it could be causing some running issues.

V6 JOE

I agree with Jarred. Timing problems are usually because of running retarded. If the engine isn't pinging, it's not advanced. Typically, overheating is caused by the timing being retarded. When you mentioned the overheating, the first thing I thought of was that it's retarded.

Try moving the timing up about two degrees at a time, run the car and accelerate it hard. Keep moving the

timing up in two degree increments until it pings slightly under hard acceleration, then move it back two degrees and it should be right.

Since you've already got the MSD, unit I suggest you keep it, because I really doubt that it is the problem. The MSD unit will just stop working when it goes bad. Ask me how I know.

I would recheck the timing on your engine, to be sure it is right. It isn't unusual to have the pulley timing marks be wrong.

NICKODELL

If I might disagree a tad. True, late ignition timing causes overheating for two reasons;

1) as the spark initiates the ignition too late in the cycle, the expanding charge leaves via the exhaust port before having done all its useful work. The driver compensates by giving the car more throttle, so the cooling system has to reject more heat;

2) the burning charge is exhausted while still close to, or at, the peak ignition temperature, which overheats exhaust valve and port, again dumping more heat into the cooling system.

However, over-advanced timing can also cause overheating for the same reason as #1. In this case the spark occurs too early and an excessive proportion of the charge expansion occurs when the piston is still rising on the compression stroke; essentially the engine is fighting against itself. With less of the expansion doing useful work, again the driver instinctively gives the engine more stick, the result being more heat generated. So the symptoms related here may be due to over-advance.

61Alpine

Does anyone make an aftermarket distributor for the Ford V6 2.8L engine? I have been looking but so far I have not found one.

MikeL

Question for Jose, Duraspark was tuned by Ford for a stock cam I am running a cam from Delta with a duration @ .016
279 Degrees

Intake Opens 34 Closes 66 Exhaust
Opens 62 Closes 34

Jose you always talk about running big cams what type of ignition. Were you running in your first car?

I checked the Timing it is very close. It doesn't take much movement to change degrees does it? I also pulled and broke down the distributor and nothing looks warn or broken, springs tight. I am going to peg it like Kenny suggested than I can discount the problem with the MSD box. When I get it all back together with a pegged distributor should I start at 12 degrees?

V6 JOE

I have used the Duraspark with all the cams I've used, with excellent results. The 2.8 V6 with the Duraspark, isn't sensitive to cam changes like the later fuel injected Mustangs are.

I used a Mallory dual point distributor in my first engine, because I didn't know how to hook up the electronic ignition at the time. It worked OK, but was a pain to change the points. It was easier to just pull the distributor, change the the points, then reset the timing, than try to do it when the distributor was in the car.

The timing marks on the pulley are in 2 degree increments, I believe, and yes, it is very little. Mark, you should start at the factory recommended 12 degrees, when you start all over again.

An answer for NICKODEL:

Timing that is too far advanced, will cause severe detonation, which will cause destruction of the engine way before any overheating could occur. I worked on a 1950 Plymouth with the straight six engine, that actually broke the crankshaft because of the ignition being too far advanced, and it never had the problem of overheating.

MikeL

If the timing is set at 12 degrees BTDC than advance applied by the distributor is anytime before that? Like 30 degrees BTDC?

So when would a V6 timing retard? The distributor has a centrifugal advance and on mine only one port for the vacuum advance. I assumed the retard port on some distributors was to bring the advance back quicker.

rootesracer

"If the timing is set at 12 degrees BTDC than advance applied by the distributor is anytime before that? Like 30 degrees BTDC?"

Yes,

"So when would a V6 timing retard?"

The distributor has a centrifugal advance and on mine only one port for the vacuum advance.

"I assumed the retard port on some distributors was to bring the advance back quicker."

Yes again. The retard port had several functions. One was obviously emissions, the timing was retarded at higher manifold pressures (lower manifold vacuum levels).

The retard port is intended to go to the manifold vacuum ports on the intake, but I found on my 77 Capri was if you conveniently plug that port, the idle was more stable since the manifold pressure wasn't messing with the ignition timing.

You would want to reconnect the port for an emissions test though because late timing is always best for HC and CO emissions.

rootesracer

"You are talking about the distributors with the dual vacuum posts right?" Yes

"I am thinking the Duraspark box also has a function that pulls out some advance at crank up for easier start provided you wire it up correctly. Right?"

No, the duraspark box has no intelligence whatsoever. It doesn't advance or retard the spark ever. It fires the coils at the zero-crossing point of the VR sensor in the dizzy, and controls the dwell to keep from toasting the coil and

drive transistors, that is all.

The dizzy is responsible for all aspects of timing. But since the dizzy with retard port would have the timing retarded at crank (since the manifold vacuum is low), you would have a retarded spark till the engine makes manifold vacuum.

rootsracer

http://www.therangerstation.com/tech_library/DurasparkII_2.htm

The nomenclature is right, and it would not be too tough to retard the timing with the starter solenoid wire as a signal, so my guess is that is legit.

The module still has no intelligence, retard in this case would be a fixed time delay added to the trigger signal before the spark instant.

I have never seen these wires though on a duraspark, so its probably late modules only or application specific.

Ignition – distributor and ECM

bryang

I've got the Alpine running a lot better than it was, but I'm still losing spark, or misfiring at higher revs. My question is this: Which distributor, cap and adapter did you use if you went with the Duraspark system?

There are two basic choices:

1) Distributor (NAPA #'s) NRD482691, cap FA136 and adapter FA139 (it's the earlier style that I'm using and was used on the Mustang It's and Pintos up until 1979 I believe)

2) Distributor NRD 482698, cap FA145 and adapter FA146SB (later style, used on the 80's Bronco It's)

The adapters and caps are not interchangeable with the different models. I took the Bronco II one and placed it over mine to see if it lined up the same and it didn't. It should be pretty obvious by now that I'm no mechanical genius, but is it possible that since my engine core was from a Bronco II and I'm using the distributor setup from a Mustang II something is amiss? I realize that is probably pretty silly, but at this point I feel like I've ruled out everything that I'm aware of. It's a riddle all wrapped up in a mystery.

V6 JOE

It doesn't matter where the engine came from, they are all the same as far as to which distributor you use. If you are using the later style distributor, (Large cap), switch to the small cap, (Early style). I'm a bit surprised you're having a problem.

I imagine, you have a new electronic ignition coil, but just for grins, try a different coil. The one you have might be weak.

bryang

At this point, being the kind of enthusiast that I am, I have changed out the distributor, coil and brain. I am using the earlier (smaller) version of the distributor, cap and adapter. I tested the coil at the higher rpm range while the car was on the scope and it is putting out 14V throughout the whole range. The problem is, as the rpms go up the spark length gets shorter, until it is nonexistent. It's like if the cap itself were rotated 1/2 inch or so counter-clockwise and the distributor body remained in the position it is in, everything would be peachy. In that condition,

the rotor would be under the proper position on the cap. That is why I was wondering if there were different versions of the caps available. At one point I thought I might be off a tooth on the distributor, but I think it would be further out than it is if I were. Anyhow ... it's running, but just not as optimally as I know it should. I've still got to get about 50 other things going before I hit the road so I'd better focus elsewhere for the time being.

rootesracer

Sacrifice a cap and cut a window in it to SEE whether the rotor is aligned at the spark instant.

bryang

O.K. I went and got a new cap and made a view slot with the jigsaw. When the car starts up the idle is fairly high from the choke, a quick blip and it's down in the 1200rpm or so range. The timing light is showing it running at 12 degrees advance. The rotor position, when it is under the #1 cylinders post, is such that the trailing edge of the rotor is arcing back slightly to the post. When I increase the rpm's to the extent of full advance, the position of the rotor is close to dead center under the post.

bryang

So... it sounds to me like I need to lift the distributor and rotate it one tooth counter-clockwise. If this results in the distributor shaft turning approximately 1/2 inch at the end or the rotor it would mean that while running at 12 degrees advance I'd be centered up and under full advance, the leading edge would be under the post. If the leading edge is under the post under higher rpms then it seems to me that the spark duration would be longer than if it was centered.

bryang

I'm surfing around on the internet and I found an MSD Ignition site that addresses rotor phasing. According to the site, with the vacuum disconnected, the rotor should have the trailing edge lined up with the distributor cap terminal. With the vacuum attached, the leading edge should be lined up with the terminal on the distributor cap. Well, as I stated in my previous post, mine (with the vacuum attached) has the trailing edge lined up with the distributor cap terminal. This means that my rotor is out of phase. Anyone familiar with this set up know about how much rotation (at the rotor tip) a one tooth turn will produce? I can't recall how many teeth are on but if it is around 32 or so I guesstimate that it would produce in the ballpark of about 1/2".

bryang

Hmmm ... now I'm second guessing again. I'm not sure that rotating the shaft will be the answer I'm looking for. But, I don't think that the magnetic pickup is movable so it may be the only thing I can do.

bryang

Well, I took the Alpine back up to the mechanic this morning to have him scope it with the holed distributor cap. He's recommending that I file off the tab on the cap so that we can get the rotor phase correct. I guess I'll give it a shot.

bryang

Well, I took my V6 Alpine to the mechanics last week to have him dial in the timing on the scope. I had just changed the distributor, coil and the ECU. I moved the new ECU inside the cockpit to keep it out of the heat and I had changed the distributor at the instruction of the mech. He was under the impression that something was wrong with the magnetic pick up.

Finally ... I'll get to my question. Is there a different (1) cap or (2) distributor adapter sleeve available? The reason I ask is that while watching the show on the scope, as the RPM's increased the signal got shorter and shorter until it would cut out. The timing is set with a total advance of 32 degrees. It's almost as if the rotor is in the wrong position to get the energy to the right spot on the cap. If I had an adapter sleeve (the proper terminology escapes me) that had the cap rotated 1/2" counter clockwise, it seems that everything would be peachy. Anyway, I looked at NAPA and a few other places to see if there were different caps or sleeves and they all seem to be the same. Am I missing something fundamental? It runs great until around 4700-5000 rpms.

rootesracer

Is it possible you are off a tooth on the dizzy phasing?

You certainly want to make sure the rotor is pointing at the cap terminals when you get fire, which as the mechanical advance comes on can shift the rotor phase out of position and you get a weak spark because of arcing between the rotor and cap terminals.

Tatra-603T2

"Is it possible you are off a tooth on the dizzy phasing?"

This would change the static timing as well so is unlikely.

"You certainly want to make sure the rotor is pointing at the cap terminals when you get fire, which as the mechanical advance comes on can shift the rotor phase out of position and you get a weak spark because of arcing between the rotor and cap terminals."

Don't forget that there is **ALWAYS** an arc between the rotor arm and the studs in the cap, they never (or shouldn't) actually touch. If the static timing is correct but the rotor arm is out of phase with the cap then it looks like there is something wrong with the position of the pick-up in the base-plate. However, are you sure the rotor arm is out of phase with the cap? Which are the pulses that disappear? If they are the pulses at the plugs then try checking the LT pulses at the coil - it could be that the new ECU is faulty.

rootesracer

"This would change the static timing as well so is unlikely."

Nobody just installs a dizzy and thinks the timing is right, you start the engine and strobe it to set the timing. If they dizzy is put in out of phase to the engine, and you set the timing with the timing light, you end up pointing the dizzy where it needs to be to get the timing right. The problem is that when this occurs, the rotor doesn't point right at the cap terminals even though the timing is right as shown with the strobe. You get a weak spark either at idle that gets better at higher rpms, or one that is fine at idle but gets worse at higher rpms. Just depends on whether you are one tooth advanced, or retarded from correct phasing.

Tatra-603T2

Obviously! - But I think you're forgetting that the relative positions of the pick-up, the rotor arm and the distributor cap are set in manufacture. Rotate the shaft by one tooth and you then have to rotate the entire body by the same angle to get the correct static timing back. Result - the phase between the rotor arm and the cap returns to the same value. Only if you can rotate the base plate carrying the pick-up by a significant angle within the distributor body can you effectively change the phase between the rotor arm and the cap.

bryang

Jarrid, your comment is the first thing I thought of. I'm pretty sure that I'm dropped in correctly with the distributor though. I must have taken that thing in and out 50 times before I got it to line up where I think it was supposed to. I even asked the mechanic if that was what was going on and he told me it wasn't. It still bothers me though and makes me want to pull it and turn it one tooth. I may end up giving that a shot at some point. The mech has it set at 32 degrees total advance. We even pulled the star wheel to see if it could be rotated and it couldn't. I was also thinking that maybe something was wrong with the advance mechanism but since this is the second distributor in as many weeks I doubt it.

bryang

The most logical assumption I can come up with at this point is that I'm one tooth advanced. Does that sound correct to you? Joe also gave me some advice regarding the wiring of the ECU via the phone last night and I'm going to check into that first, before I pull the distributor.

Barry Knight

As Jarrid noted, the tip of the rotor has to be lined up with the appropriate cap terminal when the ignition fires or the spark has no place to go.

There is a way to eliminate rotor phasing as a possible problem, but it requires sacrificing a distributor cap. On the side of the distributor cap next to the terminal for #1 cylinder, CAREFULLY make the largest hole you can without cutting through the metal conductors. Chose the location that will give you the best view of the rotor when #1 cylinder fires with the engine running. A high speed grinder (e.g., a Drenel too]) works well, but take your time. If you get in a hurry, you will probably break the distributor cap.

Install the modified distributor cap, start the engine and do whatever it takes to get one-half of your total advance (including vacuum if appropriate). Point the timing light at the hole in the distributor cap and you should be able to check the position of the rotor tip relative to the #1 terminal in the distributor cap when the ignition fires. With one-half of the total advance, the center of the rotor tip should point at the center of the distributor cap #1 terminal. With less advance or more advance, the rotor will move toward one side or the other of the #1 cap terminal, but the rotor tip and the cap terminal must always be in close proximity (overlapped) when the ignition fires.

If you find out that rotor phasing is the problem, then something is off in the trigger mechanism (star wheel, magnetic pickup, mounting plate position, etc.).

Bill Blue

Jarrid, if he is running the Dura Spark system and the pickup is wired incorrectly (firing on the back of the trigger rather than the front), could that cause the problem?

bryang

Paul, That is essentially what my mechanic was saying. It's like only one of the components needs to be turned. I may give Barry's idea a try. I've bought almost everything twice on this so I don't see why the distributor cap should be any different!

Thanks Again to all for all the input.

Tatra-603T2

I know this may sound silly, but there's no way the star wheel can have been put on upside down is there?

husky_drvr

Have you tried to check the voltage and current to the coil? As the revs go up, the coil requires more current to continue sparking. It sounds like you might have too small a lead wire or too much resistance going to the coil or maybe the infamous 'bad earth syndrome'. I would check for electrical problems before pulling the distributor.

rootesracer

"Jarrid, if he is running the Dura Spark system and the pickup is wired incorrectly (firing on the back of the trigger rather than the front), could that cause the problem?"

Having the reluctor coil polarity wrong can cause problems. but usually only causes a timing error of the width of the stator tooth, since the VR sensor generates a positive voltage as it enters the tooth and a negative voltage of the same amplitude on its exit.

The duraspark module, not to be confused with an ECU, will trigger the spark on the zero crossing point of the VR sensor output.

If the sensor were wired wrong, it usually will trigger on the exit of the tooth instead of the entry as you would like it to.

My parting shot on the dizzy phasing will be that positioning the the drive gear in the wrong position WILL cause the rotor phasing to be off by the angle of the number of teeth error.

Dont belive it? Take Barry's advice and cut away the cap and have a looksee. You don't think the engineers at ford were idiots when they gave you a procedure to phase the dizzy to the crank do you?

Tatra-603T2

UNTIL you then rotate the body, and hence the cap, by exactly the same angle to correct the static timing! - We'll have to agree to differ on this one.

Chuck Ingram

I may be redundant but have you gone back to the old adage of #1 piston TDC on the compression stroke and set the rotor to # 1 lead? I went to the dual breaker distributor to simply keep it simple. No messing around. TDC with primary points open, rotor on #1. Replace cap, start and set timing. Easy to replace points at anytime. Use MSD and your points will last a long, long time as well as your plugs.

bryang

I think I will give Barry's test a whirl. I did check on the wiring as Joe suggested and I had the coil 180 out. I doubt that this was the culprit as I still have the nagging feeling that I am one tooth off. I will check into it as soon as I get these doors put together and update everyone.

bryang

"...if he is running the Dura Spark system and the pickup is wired incorrectly (firing on the back of the trigger rather than the front), could that cause the problem?"

Having the reluctor coil polarity wrong can cause problems. but usually only causes a timing error of the width of the stator tooth, since the VR sensor generates a positive voltage as it enters the tooth and a negative voltage of the same amplitude on its exit.

The duraspark module, not to be confused with an ECU, will trigger the spark on the zero crossing point of the VR sensor output. If the sensor were wired wrong, it usually will trigger on the exit of the tooth instead of the entry as you would like it to.?

Well, after chatting with Joe the other day and double checking my wiring I found that the Duraspark module was wired up to the neg side of the coil rather than the positive side. Hopefully this will be the fix I was looking for!

bryang

Well, as planned, my mechanic took apart the carb and jetted it to where we think it should be. It is still having some problems though. I bought a remanufactured distributor from NAPA when I put the engine together. It seems that when the engine is put on the oscilloscope (sp?) it is o.k. in the lower rpm range but when it gets revved, say to the point one imagines that the secondary circuit of the carb is supposed to kick in, it sputters out. According to the reading on the scope the signal is cutting out, or graphically flattening out the normally curving line. My mechanic believes that there is something amiss with the electronic pickup. So... now the next thing to spend money on is another distributor or an electronic pick up. I just made him \$180.00 heavier and don't want to fatten him up too much at the moment so I'm looking for other possible solutions if possible. Any ideas out there?

bryang

On the way home it did it's little petering out routine again. When it warms up really good it starts to sputter around 2500 rpms. If you let off the gas it dies. When you start it back up, you can rev it a bit but as soon as you try to put it under load (drive off) it stalls. I lift the hood and check all the connections and usually it will start back up and drive off. I have no idea of what this could be. I read that a guy with the same setup was having a similar problem wherin once the engine bay reached a certain temp it would conk out. He pulled the ECM put it in a toaster oven at 250 and then tested all the connections and noted that there were some gaps. Then he threw it in the freezer and tested it and found that it worksd perfectly. I'm wondering if I moved my ECM to the cockpit side of the firewall if that would improve anything?

rootesracer

On the Duraspark module, it needs to be mounted in a relatively cool location, and you have to make sure the coil+ballast resistance is not too low, or they will cut out at higher RPMs due to internal overheating.

bryang

I was toying with the idea of mounting the module under the dash on the firewall. I also saw an article on a hot rod the other day in which the guy mounted the coil on the cockpit side of the firewall. He was doing it to remove clutter from the engine bay but I thought it might be a good idea to keep the coil cool. I don't think the engine is running too hot as the water temp gauge is staying between 190 and 200F. I think I may just have some tempermental components.

KennyJ

Doesn't sound like a Box to me, they usually totally conk out, then once they cool, it starts up and runs fine until it get hot again. Not saying it can't be the box, but that isn't the normal pattern.

As stated earlier, the ballast resistor/coil combination could be the culprit. You need 1.1 ohms of resistance for keyed power to the coil.

I am betting on something real simple. My Boss 302 had a very similar problem. Would run great really cold, then once it warmed up it would idle OK, but missed under load and the max RPM dropped like a rock, creeping its way to 3000 max or less until it cooled. My problem ended up being a broken coil lead! The carbon "wire" had a "break" of some sort, and as it got hot the ohm reading would skyrocket. I can't tell you how many times it

took to find it. The wire looked fine, cold, the readings were OK, hot they were terrible (but how many times do you take a hot reading on a wire). Don't really know if it was possible, but it is what I found.

bryang

Thanks for the info. I might try to replace just the wire to the coil. I have no ballast resistor. You may be on to something though. I at first thought I had a bad connection to the coil as I had the nail head type connectors on top of it and if I wiggled it around a bit it would start up and run fine. I changed out the coil for a threaded post but the problem is still there. It could be in part of the wire in the used pigtail I have.

MikePhillips

Certainly sounds like a break, possibly right at the connector since wiggling it around seems to help. I had that happen once with a wire that looked ok but would open up under vibration. It seemed that it's own weight was just enough to cause a gap to open and when you lifted it up, the gap would close.

V6 JOE

I like putting both the brain box and coil, inside the passenger foot well, behind the false floor there. It not only cleans up the engine compartment, but helps keep these electronic parts cooler.

bryang

Well, I might just end up doing that. I will have to fab up a foot rest though since I don't have one and it's a RHD. It would make it a little easier to get to rather than under the dash, that's for sure.

rootsracer

"I might try to replace just the wire to the coil. I have no ballast resistor."

You have to put a ballast resistor on the duraspark setup. The factory wiring didn't look like they used a ballast resistor, but actually the wire between the module and the coil was resistance wire.

bryang

If I have added wire to the factory resistance wire would I retain the resistance characteristics? I probably oversimplified it but if the wire coming out has built in resistance then whatever I attach beyond that point (unless it's a lower resistance) should not effect the current. Is this correct?

KennyJ

The resistance wire should measure 1.1 ohms. If you are attaching regular 12 to 16 guage wire to the end of this the difference would be negligible. Look at your coil first, Ford did produce some setups that used an internally resisted coil (and they are printed on the side). If you have an internally resisted coil, you do not run the resistance wire or ballast resistor.

rootsracer

I had a Capri years ago (*with* the 2.8).
It had the Duraspark2 ignition.

It would eat a module about once a year. The module would get flakey on hot days, and stop running for about 10 minutes, then it would work again.

I always kept a spare in the back, and when one failed, I would toss it, grab the new one and buy another spare to toss in the back.

After about 5 years of this, I said this is crap, decided to figure out why it happened so regularly. An experienced mechanic told me that the duraspark2 module as it ran, will overheat, which degrades the internal circuitry. After enough time, some of the internal circuitry that current limits the coil goes south, and the module cuts the current all the time, until the unit cools down, then it will run again for a while.

The mechanic said that adding an "extra ballast resistor between the module and the coil will result in a reduced peak current, and the module will last years longer, if not for decades.

I added a .5 ohm 20w resistor in line with the resistance wire, and the module has acquired 10 years and still works.

Spark energy is probably less intense at higher RPMs, but it doesn't seem to effect the engines operation.

bryang

I'm going to see if I can get the "stock" set up to work for the moment. I may go with a more remote mount as well. I will also keep my ear to the ground for a Crane setup for when this one fails but what are the chances of that?

Chuck Ingram

You don't need all that fancy stuff. Just buy an Accell dual point distributor with bearings instead of bushings. Trust me as it has been running as long as the engine. Used to have multi spark but changed (after it stopped working good) to the accell super coil. It works great.

V6 JOE

The only thing I hated about the Mallory dual point distributor I used to begin with, was that it was easier to remove the distributor from the engine, change the points, than put it back in and then set the time again, than to try to do it with the distributor in place.

There is also the fact that the points and plugs have to be changed about every 8K with the Mallory, where as, the Duraspark Ignition needs to have the plugs changed only about every 35K/40K.

Pernbertonltd

Well my car is turning over, but from what I can figure I am not getting spark from the coil. I am using the aftermarket Painless wiring and have done what Joe says as far as using the white wire and the wire from the ignition switch and hooking them up to the positive side of the coil. The coil is brand new. Another thing is that I get power to both the positive side and the negative side of the coil when the key is on. Can anyone tell me if this is normal and possibly where I fouled things up at.

rootesracer

Getting battery voltage to both sides of the coil is perfectly normal. The coil is a relatively low resistance, so it will even light a test light on the coil-lead.

To see if the ignition is working, connect one end of a test light to coil+, the other to coil-.

When you crank the engine, you should see the light pulse on and off. If you don't, then your ignition is not working.

KennyJ

If you have all the matching duraspark harnesses, parts, etc, it is a pretty easy thing to wire up. Modules usually go bad when they are warm, thus they usually always work when cold (even bad ones). Have you disassembled the distributor? It is either the pickup (in the distributor) or the module if you are wired correctly and you have power. The module gets its ground through the case.. do you have it bolted down?

Ignition - Duraspark

KennyJ

For those of you converting, I have hand made/excel wiring diagram that could come of help to you. It has the factory wiring colors noted. It is from a Ford manual, but simplified, and is designed for the 'Blue' strain module.

It would be most helpful for those who do not have the "jumper" harness that goes between the 3 pieces (coil/module/distributor).

bryang

Why couldn't you have done this 2 years ago! Finding that little pigtail was an exasperating experience to say the least. Someone did mention to me though that another pigtail, not necessarily from the 2.8 Mustang II or Capri would work. I can't remember so don't quote me but I think that one from a mid 70's to mid 80's Ford F-150 with the V8 will work as well. It might be worth looking into if someone is having a hard time finding the "proper" one.

gdive

I don't have any ignition components yet and have a distributor from a Mustang II and one from a late model EEC Ranger. Which one should I use??

Bill Blue

I have a Chiltons that describes how to hook up the module, but this will simplify things. In addition, I have a problem.

The distributor started life wearing points. Somewhere along the way, it has been converted to electronic with an aftermarket armature and stator. The stator has two identical black wires. Chiltons cautions that the stator polarity must be observed or the system will be out of phase and not work properly. Any ideas about how to determine polarity? Chiltons simple says to hook up like colored wires.

KennyJ

Bill: As for determining polarity...beats me...sorry. The good thing is that most Ford distributors had the same body, thus you could convert a points to electronic as long as you had the top end to any Ford electronic distributor. I would just open one up and see which colored wires go where labeling them as such. If you don't have access to one, I can look at one of mine this weekend and get back to you.

Gdive: I would use the Mustang II distributor. The EEC's are famous for eating modules (because of heat). I think you could use the EEC to get the signals for the Duraspark, but off the top of my head I don't know exactly how.

rootsracer

Duraspark armatures usually have two colored wires to allow polarity. Mine was black/wht and black/purple. The engine will usually run with the wires backward, the error is the width of the stators tooth. You will know it is correctly wired if you try both ways. The connections that produces the more advanced timing is the correct connection. The timing difference will be something like 15 degrees. Lastly duraspark modules also suffer from heat failures just like the EECs do. Mount it in a the coolest place you can, and always keep a spare in the car.

V6 JOE

What year did the Dura Spark come out? I've used the electronic ignition from the Mustang II and some of the early Rangers, but I don't know when Ford first used the Dura Spark.

KennyJ

My memory is fading, but I believe the year was 1974. That was the "brown" strain year (I only know that from having a couple).

And I agree with Rootsracer, the modules go out also (though not as quick as the EEC modules do). Carrying a spare is a good thing, but they are so popular, you can find them most anywhere (especially if you are traveling). You can tell you lost a module if the car shuts off like you turn the key. They will usually cool off and work again in a semi-short period of time, but replace it at that point.

rootsracer

74 still had points.

75 was the first year duraspark was used.

77 "I think" came the duraspark 2, same basic thing, but the coil was improved for higher voltages needed for leaner burning, and the module was uprated to take the lower impedance coil.

Bill Blue

My conversions (at this point I have two) are for the 2.0 distributor and both wires are BLACK with some funky male/female plug ends. Now that I know what to for it won't make any difference.

BTW, Chiltons states that electronic ignition was introduced by Ford in mid 74 for selectd models, became standard in 75. It was referred to as simpley "Breakerless system". In 1977 they were named Dura Spark I and II. It looks like there are potentially three correct answers to Joe's question.

V6 JOE

I have a way to hook up the electronic ignition from the early Mustang II thru the early Rangers, with only one wire. It is a stand alone set up, (you don't have to wire it into the car wiring), that takes only a one wire hook up.

I found out how to do this when I bought an electronically controlled 302 V8, to put into a non-electronically controlled truck. The wrecking yard I bought it from, said it took them a long time to figure out how to make them run on a test stand. They graciously told me how to do it.

If anyone would like for me to explain how to do this, either call me or send me an e-mail and I'll explain.

KennyJ

Basically the same deal Joe. There are really only 2 wires that do not cross between the ignition components and the main harness (well three actually), they are power, cranking power, and tachometer.

I just did the schematic for those who are not using the factory jumper harness between the 3 components.

The red wire on the module is main power, the white wire is the cranking power, and the dark green lead is the tach signal.

V6 JOE

The factory brain box has two pigtails. one has about four wires, (This connects to the distributor). The other pigtail has only two wires.

I just use the factory pigtail that runs between the brain box and the distributor, that has the two male ends to connect them. The other pigtail on the brain box has only two wires, a red and a white one. With the box grounded to the body by the mounting screws, simply connect the wire that corresponds to the white wire, to the hot side,(+), of the coil, and it will fire right up. The wire that corresponds to the red wire doesn't connect anywhere.

I tell my customers to carry a spare brain box wrapped in a towel, tucked in a corner of the trunk and they'll have a back up. I've never had one of these boxes go bad on me, but I've heard that they will just die all of a sudden, so it's a good idea to carry a spare.

rootesracer

Dont forget to connect a ballast resistor when making your own harness with the duraspark. The factory harnesses didnt look like they used a ballast resistor, but in actuality the lead that connects to the coil+ is actually resistance wire. I found that running the duraspark without the ballast resistor was a great way to accelerate thier life (although the spark is really hot).

KennyJ

I show the resistance wire in the diagram I forward off to people. I believe it is a 1.1 ohm wire, available at the local Napa. You can purchase some coils that are internally resisted, but they are few and far between.

bryang

For anyone doing the conversion I picked up a bit of really helpful advice this weekend. I looked for months for the electrical pigtail from a Mustang II that goes from the Duraspark module to the coil and to the distributor. Apparently the pigtail is also found on Ford F150 pickups from around 1977-1986 that use the same system. You'll want to use the ones that are related to the module that has the blue wiring plug on the backside. Apparently these pigtails are a lot neater (shorter) and will probably a whole lot more abundant.

Wiring - Aftermarket

KennyJ

I did my wiring years ago with a painless panel and a ton of bulk wire. I would suggest 1st and foremost, mount the box and work out.

Purchase two large bags of medium sized zip ties (8 inchers) to hold the bundles as you route wires. I would

bundle some, route them, then figure out I needed more in the bundle, so I would put on another zip tie. When I was done, I cut off the zip ties 1 area at a time, and replaced them with 1 (using the ones with the screw holes in them to secure the harness).

The dash was pretty easy, well, I thought it was all easy, but I had a great coach years ago in my father. The toughest thing on the dash is the instrument bulbs, how much slack to keep in the harness. Gauges themselves are easy.

I also used Bosch/Ford relays for headlights (high/low) and the horn (3 relays total). I mounted them near the fuse block.

My block is mounted vertical, behind the wiper switch. Since I mentioned wipers, look back on the board to find the correct wiring. ..I screwed this one up. It switches the ground for speeds, on/low/high, and the power is constant (needs this for the park mechanism).

I chose an amp gauge, but I can tell you a voltmeter is easier!

I also chose a Ford 60 amp alternator and external regulator, works great for me!

Brakes

Emergency Brakes

bryang

This one is for those that have done the V6 conversion and swapped out the rear ends to 8 inchers. What are you doing for an emergency brake set up? I've looked at the Lokar stuff and it looks good but if you have any experience with anything else I'd love to hear about it. I thought about one of the rear end brakes but I was wondering if those would actually work if you weren't running something like a Detroit Locker.

V6 JOE

Most auxilliary brakes are called "Parking Brakes", because they don't really help in an emergency situation. I've never run a parking brake with any of my Alpines and didn't have a problem. having said that; if you still want one, there is a brake that has a simple little disc that bolts to the U-joint yoke on the 8" rear end, and it has a small caliper that is actuated by a cable, that bolts to the pinion retaining bolts on the front of the third member. You can find it in the advertising pages in Street Rodder magazine.

There is one that costs about \$300.00, but if you keep on looking, you can find the same thing for about half that price in that magazine.

bryang

I think I'll go look for that magazine. I did a little limited research and found a few in the 350 dollar range but then I ran across these guys and I'm waiting to hear back from them but it looks promising:

http://www.tsmmfg.com/Pinion_Mounted_Parking_Brakes.htm

Chuck Ingram

You can run a cable up to and through tunnel from your alpine brake. The original might be long enough. The end must be secure. Get the ford clip and make it so you can adjust it You then need a clevis and hook this bracket on this. With the adjustabiliy you should be able set you emergency brake up nice and easy. Saying all this I guess I better check just how I did it so I'll get back on this. I screwed around on the 62 but this works excellent on the Lister. Here no emergency brake. No license

Bill Blue

Strange about the "emergency" brake thing. I suspect most cars do not have them. Ford very clearly states in the owners manual that it is a parking brake, plain and simple. They also state it is sometimes used to stop the car if the service brake fails, but to expect poor brake performance and long stopping distances. Does anyone know why they are required?

V6 JOE

I know that in some states and countries, the parking brake is required to license a vehicle, but in the states I've lived in, they were a bit more relaxed.

I think it can still be a good idea to have one on your car, so your car won't roll so easily when you park it, but to be able to count on them for an emergency situation, is unrealistic.

Having said that, I realize that we have to comply with all safety regulations that apply in our respective states, so I won't advise anyone to eliminate it on their Alpine.

bryang

I only call them "emergency brakes" out of habit. I usually only use them for parking as I don't like to think of the car getting bumped while it is parked in gear. Another use I have for them could be considered an "emergency" of sorts. If you happen to be driving a bit over the suggested speed limit and you notice one of our finest behind you can lightly put on the "emergency" brake to slow yourself to within the recommended speed. When you use the emergency brake no brake lights appear that might attract unwanted attention.

V6 JOE

One of my customers, who is a police officer, and I had a conversation about not lighting up the brake lights when a patrol car is behind, so as to not let the officer know we were aware we were speeding. He gave me a suggestion. He said that the police cars have a switch that cuts off the brake lights, so a person going in the opposite direction won't know that the officer is slowing down to turn around to give chase. I asked about what happens if he forgets that the switch is engaged and then doesn't have stop lights when he's normal driving. He said that when the switch is activated, a light on the dash goes on, letting him know that the switch is activated.

I don't know if anyone on this board would want to install such a switch, but I thought it would be a good idea.

bryang

Hmnm. I was trying to think of another toggle to add to the dash. With my track record on wiring I'd probably end up wiring it to something like the coil or the fuel pump!

bryang

Well, I may as well post this to the appropriate thread.....There are two or more versions of the 8 inch rear end, an early one and a later one. I have the later one and it's been shortened etc. What I need to know is ... What size are my U-joints? 1-1/8" or 1-1/16"? I need the info to order the pinion mounted parking brake. I can't crawl under the car because I'm at the office right now. Anyone know for sure?

bryang

O.K. Never mind. I went home at lunch and measured it. If I did that correctly I have 1-1/16" u joints. Anyhoo ... I just ordered the pinion brake set up minus the cable since I won't know a length until it is installed. I'll let you know how it turns out.

bryang

This question would most likely be directed to those who have done or are doing the Ford 2.8 V6 conversion and have switched to a narrowed Ford 8 inch rear end. I'm looking to see what everyone else is doing as far as emergency / parking brake set ups. I've looked into the brake set up for the driveline but the most inexpensive ones (that I can find) are around \$300.00.

Kirk B

I just got the Lokar universal cable kit and attached it to the Sunbeam brake handle. It cost around \$50 and was a piece of

cake.

Brake Upgrades

Pembertonltd

Does anyone have any ideas about running better brakes on the Alpine. I am running the stock axels and rear end. I don't really want to have to go to a Ford rear end or anything. I have a 67 with a booster. In the past I have noticed that when I was going down hills, etc it seems that the brakes would tend to over heat and not always stop the best. I am a little worried now that I have the extra power of the V-6. Any ideas.

Tatra-603T2

Good question. The Alpine brakes are good enough to lock all 4 wheels as they stand (I've locked all 6 while towing a 1 tonne caravan) but the two main problems are keeping them cool (I've boiled the fluid in the callipers) and the safety aspect of only being single circuit. IIRC there was an article in The Alpine Horn around 20 years ago about fitting ventilated discs from an Escort I believe but retaining the same callipers with a spacer so as not to upset the brake balance. Ducting some clean cool air would help and going to a tandem master cylinder with the same bore as the original and adding a second servo as on the works Tigers would solve the single/dual circuit problem.

Bill Blue

Paul, is the Euro Escort rotor really that thin? The thinnest ventilated disc I can find here are .750"+, way to thick to put into the stock caliper.

Jim

Bret you can try a different front brake pad. I have found the cheap pad for a 1984 Saab 900S to be my favorite. Then the Datsun pad might feel better for you. For about \$20 a set it would not hurt to try it. You may need to remove a little material from the edges of these pads so they will not stick in the caliper. Just test fit them and if they need it grind a little metal of the sides of the pads.

A set of those braided lines to replace the rubber ones might help. Then if you have not replaced the rubber lines a new set are in order.

On the back things get a little more complex. The self adjusting brakes do not work very well and the manual adjust are not a lot better. I talked to Doug Jennings about this a time or two and he feels the thing to do is go with the earlier larger bore rear wheel cylinders. This is easy if you have the manual adjust brakes if you have the self adjust it is a job of work which requires you to change the backing plates so you can run the larger bore wheel cylinders.

You could give Doug Jennings a call at Tiger Auto Service tell him what you want and then see what he says. Doug has worked the brakes on Alpines and Tigers and has it all pretty much figured out as to what works and what does not. My guess is he would sell you a package of parts that will work together out of the box if you wanted to go that way.

Tatra-603T2

quote:Bill Blue wrote:

"Paul, is the Euro Escort rotor really that thin? The thinnest ventilated disc I can find here are .750"+, way to thick to put into the stock caliper."

I'm not sure how thick it is, Bill, or what thickness of spacer was used but I've found the original article which was in the October '86 Alpine Horn (page 8) by George McWatters of Ulster who used his LeMans in competition. He used RS2000 discs.

casey

I've done a dual-master cylinder conversion...I used a master cylinder from a Nissan F10 and Tilton remote reservoirs. It's been working great, and if anyone wants pictures and a more detailed write-up I can try get some posted (someone might have to host them for me).

Bill Blue

Have you considered adapting a Ford backing plate to the Alpine axle? This would open up a few more options on wheel cylinder size. I believe that Ford used up to 1" cylinders on the 8" axle. Don't know if it will work, just a possibility.

For dual cylinder M/C, I adapted an Aspire unit. It has 3/4" bore and is fairly compact. The adaptor is very simple. The Aspire bolt holes are arrayed horizontally rather than vertically. Because there is such a big difference in bolt patterns, it becomes very easy to make and does not require modifying the Alpine. It is not like there are overlapping bolt patterns. Should work if you do not have the Strombergs in the way.

Using the Tempo/Pontiac setup in the front should increase front braking 40% and has no brake fluid inside the wheel, which should help avoid fluid boiling.

Pembertonltd

What is the benefit of running a dual master cylinder. Does one take care of the front brakes and the other the rear brakes or what. Do you need a proportioning valve. Is it a big job to do and does it help out that much

V6 JOE

The dual master cylinder set up is mostly for safety. In case one cylinder fails, you still have one that works. The factory usually puts one front wheel and the opposite rear wheel on one circuit, then the other cylinder takes care of the other wheels. If you are using disc brakes in front and drums in back, like the stock Alpine does, it is much easier to hook up the system so the front brakes work with one cylinder, and the other cylinder takes care of the rear brakes.

Unless you use a dual cylinder set up like the Tilton unit I just put on the car I'm working on, which has a balance bar to adjust front to rear braking, you'll have to use a proportioning valve to adjust the amount of pressure to the rear brakes. It isn't too complicated to set up.

Like I said before, the main advantage to dual master cylinders is safety. I haven't noticed a marked difference in performance from the brakes, on cars that I've had that had dual master cylinders versus the ones that didn't.

Bill Blue

I don't think Joe meant it, but his response could lead one to think that if an inline dual MC is used, you must use a proportioning valve. If the front and rear MC chambers are the same dia., you will have the same front/rear braking as stock.

Misc

2.8 V6 – Basic Information

from <http://www.therangerstation.com>

The 2.8L V6

The 2.8L, is a Ford engine that has been used since 1974. It had been used in the Ford Pinto, Mustang, Aerostar, and Mercury Capri. The 2.8L in the Ranger is a revised version of the older 2.8. It has emission parts, and electronic sensors for the Ranger's EEC IV computer system. This engine has some performance parts around and can create a fair amount of power. The downsides to this engine are as follows: rubber valve seals which, when old, cause oil burning, noisy 'non-hydraulic' valves, and a carburetor which is not necessarily the best match for the engine. Note that its 'non-hydraulic' valves are only bad because of noise. In essence, hydraulic valves are worse than non-hydraulic as non-hydraulic can withstand greater forces and therefore performance engines often have non-hydraulic valves. Certain parts are discontinued such as the engine mounts and carburetor jets: these items will have to be found used.

The Motorcraft 2150 Carburetor

I am sure anyone who has owned a 2.8L for a long time has had problems with the carb. The carb was made by Holley for Ford, and similar carbs are found on many Ford engines (most 171-302ci) from the mid sixties to the mid eighties. All are variations from the same design and the basic differences are the jet size, choke, and other specifications. The Ford Ranger comes stock with the 2150A carburetor, which is computer controlled unlike the previous 2150 models; without a computer, the 2150A is basically useless. An easy performance add-on is a Holley 350, or 300cfm 2bbl carb. Holley makes them brand new for about \$275 US, and should bolt in place of your old one (it comes with either automatic or electric choke). Personally, I modified my Ranger with the addition of a 2150 carburetor off of a 1979 Mustang (and Pinto) with the 2.8L, eliminating the necessity for the computer feed back. This modification (a no brainer) has had only positive effects.

2.81, Performance Tips

The 2.8L can produce a good amount of performance and almost anything logical could make a difference. Although, some are a waste of time and money as they do not improve performance very much. The key to producing performance is thinking efficiency, not power, for power is the end result of efficiency. This is the very reason why new cars are quieter, smoother, lighter and more powerful. An automobile engine is only about 25% efficient at producing power to the wheels so to make a vehicle 100% efficient would in theory give it 4X the horse power so, for example, a stock 2.8L Ranger at 100% efficiency could produce 470 horsepower at the same fuel mileage, run whisper quiet and run at room temperature.

Some good examples of efficiency are as follows:

Air Intake

Modifying the way the fresh air gets to the carburetor can make a huge difference. First make sure it is fresh cool air; for every 7 degrees Fahrenheit cooler the air is, the engine's power will increase by one horsepower. So make sure from the air cleaner, there is fresh cool air. The best source will be from the grill area as the force of the vehicle's

movement will help air flow creating a Ram-Air effect. All one has to do is buy (possibly at the auto wrecker) some air hoses and route them from the filter box to a good source (the grill). Make sure you buy enough hoses of the right shape. Some later 2.8s may come stock with this type of system.

Intake/Exhaust

It is true for all vehicles that a performance intake and exhaust system will improve performance. Note that adding a performance exhaust system while leaving the stock air intake system on will not make a difference. Just because there is a large route to exit, does not mean more air can enter the system. But replacing the intake and exhaust with something from Flowmaster or another company will make a difference.

Ignition

Replacing the ignition coil and spark plug wires with a performance 12V coil and 8mm (or larger) wires will improve starting power and increase the spark at the spark plug. Note that 8mm or larger wires could cause damage to the stock ignition coil unless a performance coil is added in conjunction with the wires. I did this to my truck using an Accel universal 12V coil and KEN 8mm performance spark plug wires. Spark plugs are an ongoing issue for performance upgrades. The best spark plug after a year of research, believe it or not, is the spark plug which originally came with your truck, a Motorcraft unit, physics can not seem to prove this, but I assure you it is very true. Go to your local Ford parts dealer for original style spark plugs.

Some Good Parts:

-turbo performance muffler - *increase flow (free-flowing), better power. better mileage, nice performance sound*

-Ram Air - *faster and cooler air is more power (I noticed a good difference with this!)*

-Performance Ignition Coil - *available through Ford Motorsports, or a good auto supply store, will increase starting power and amount of power at spark plugs. A must have for larger plug wires.*

-Platinum Spark Plugs - *will help produce a 'stronger' spark (NGK makes plugs equivalent to BOSCH but at more affordable prices)*

-Headers - *increase flow and power, good power sound - Note to only buy ceramic coated headers otherwise they will rust within a year or two!*

4.0 V6 – Conversion Problems

V6 JOE

The mounts, bellhousing, flywheel and starter fit both the 2.8 and 4.0, but you'd need to do almost as much work to make the 4.0 fit the Alpine, as putting in a small block V8. The engine is too long and the exhaust port configuration would require you to go to a rack and pinion steering arrangement. LOTS of WORK!

If you had a Tiger shell, it would be simple to do the swap, but an Alpine presents too much work to swap. I have thought of doing just that for years, but every time I think of doing it, reality sets in and I forget it.

If you were to front half the car, then it would be the way to go.

V6 JOE

Actually, the fact that the 4.0 doesn't have a distributor, is a blessing, because the normal location of the distributor on these V6's, is in the back, and would cause interference with the heater core and hood latch. The electronics could be handled by something like what Jarid uses for his applications.

The biggest problem with the 2.9, 3.0 and 4.0 V6s is the exhaust port configuration. The steering arm on the driver's side, runs right into the rearmost exhaust port. To surmount this problem, you'd have to go to a rack and pinion steering setup. The engine, with a longer block, the serpentine belts front dress and longer water pump, is too long to go in without moving the whole engine/transmission combination back under the firewall.

It can be done, but the expense and work needed to accomplish this swap, is too much in my opinion. There are guys willing to put the V8 in there, so I guess someone would be willing to attempt this swap too. It would make a great car, but unless you did something other than what the Tiger has for steering, it would be as limited as the Tigers are. It just wouldn't corner like an Alpine. You would have to use something like Chuck is using on his 62, in order to get it to handle better than the Tiger.

A well set up turbocharged 4.0 could produce as much as 500 hp. Can you imagine driving that handful?? I would love to see it, but I doubt you'd be able to get me to drive it. The wheelbase is just too short.

V6 JOE

I forgot to mention some of the other problems the 4.0 V6 poses for this conversion. The engine block is taller because of the increased stroke. Being taller, it is wider too; sort of like the 351 Windsor engine versus the 302. The 2.8 V6 is a tight fit as it is, so anything wider is more of a problem.

Because the engine is used in a truck application, where there is no scarcity of room, the engine has an intake manifold that stands up real proud on the engine. This would cause an interference with the hood on the Alpine. A sheet metal manifold could be fabricated, but that would set you back about \$300/\$400 to start with.

In order to avoid having the shifter on the transmission too far back, the tail housing from an AMC T5 transmission, (I believe this is the one used in the Tiger application, to keep the shifter in the same place), would have to be used. I understand that they are a very rare piece, so would be expensive and hard to acquire.

Although the 4.0 V6 is powerful, it poses so many problems, that it would be better to investigate putting the crank from it, into a 2.8 V6 block. I have heard that this has been done already, but don't know what problems have to be solved to make this work. The least thing that it would require, is a set of custom pistons to accommodate the longer stroke and it might even require custom rods too, but that would have to be investigated. The increased displacement might be limited in its breathing capability by the flow capacity of the 2.8 V6 heads. We'd have to investigate whether the 4.0 valves could be installed in the 2.8 heads to increase flow enough to support the bigger displacement. It would be a good idea to have the 2.8 heads extrude honed, to open up the ports enough so they would work in this application.

If all this could be accomplished, I believe it would make an interesting engine for the Alpine, but all of these things I've mentioned cost quite a bit to do, so it would be up to the individual to decide if he wanted to go to the expense of making a stroker out of the 2.8 V6.

After having said all that, I think it would be much easier and cheaper to build the 2.8 to be able to handle a power adder, (blower, turbo or nitrous oxide injection), and run some nitrous oxide. I think it would support about 100 hp. of nitrous oxide, which would make the engine produce about 300 hp. total. I can tell you from experience, that that kind of power in an Alpine, makes it an E ticket ride.

Bolt - sizes

61 Alpine

Tonight I crawled under my #1 V6 Alpine and took out some bolts. Went to Lowe's and matched them up.

Transmission Crossmember to Frame:

M8 1.00 3/4"

Transmission to Bellhousing:

M12 1.75 About 2"

Engine to Bellhousing:

M10 1.50 50M

Careful when you thread them in make sure this is correct. But everything I have seems correct. I will try tomorrow night fitting the new bolts in.

All I could find were grade 5. I am going to a special bolt manufacturer tomorrow to see what they have. Hoping for grade 8.

Barry Knight

Unless they have been changed at some point, the 8 bolts that attach the transmission crossmember to the chassis are 5/16"x24 UNF (about 3/4" long).

bryang

I think Barry is right and those are not metric. I remember doing mine and I had a heck of a time. I tried metric and they seemed to fit but the SAE ones worked. I don't know how the heck I ended up losing so many bolts and stuff on this project since it all took place in one room, but I did. I remember the trans mount being a real pain in the Mainly because I couldn't seem to get the bolts to bite and it took me 20 trips to the industrial fastener supply shop. If you've got a thread chaser or tap in the size and pitch Barry mentioned I'd run it through before you mount the crossmember.

Barry Knight

Now that I think about it some more, this might be a situation where I would leave well enough alone.

A 5/16"-24 bolt has a diameter of 0.3125" and a thread pitch of 0.0417".

A M8-1.0 bolt has a diameter of 0.3150" and thread pitch of 0.0394"

The difference between the two bolts is extremely small, but the M8-1.0 is slightly larger (0.0025")

61 Alpine

Today I bought some 5/16" 24 bolts for the Trans mount and they are the ones. I also tried the other bolts in the engine/bell and the Bell/Trans and the ones I listed are correct.

Bolts – reuse or replace

MikeL

I am rebuilding a V6 which bolts can be reused and which should be changed out? Rod bolts for sure, how many times can a head bolt be tightened (reused)? Main bearing Bolts?
I plan on removing the Flywheel. Are those bolts reused?

Barry Knight

I suspect you will get a wide variety of answers; here's my opinion.

Modern engines use a lot of torque-to-yield fasteners that should not be re-used, but the fasteners on the older stuff we are dealing with was torque-to-stress and can be re-used as long as there is no damage. That's the technical answer.

I think replacing the rod bolts and main bearing cap bolts is definitely a good idea and new head bolts are cheap insurance to ensure the best possible head gasket sealing (they won't solve the problem of warped heads and decks). Assuming that the flywheel is properly mounted, the bolts are not that highly stressed. On the other hand, if the flywheel were to come loose.....

The bottom line is that new, high quality fasteners (Grade 8 at least; better yet, ARP or equivalent) are a better choice for critical applications than 25+ year old fasteners with an unknown history. Good fasteners are a small expense; the consequences of fastener failure are usually expensive and sometimes hazardous.

Where they can be used and if you can get them, I prefer studs / nuts to bolts. It reduces wear and tear on hidden threads in the engine block and often makes engine assembly easier.

Exhaust

Pembertonltd

I remember some time ago seeing some photos of how the exhaust was routed through the x-frame and how they cut the hole in the passenger side to make the pipes go to the rear. Can anyone remember where or what page that photo was at. I am going to do the exhaust this week and don't want to re-create the wheel.

Jim

<http://community.webshots.com/album/128504244vyxMiY>

I have some pictures up on my space of a couple of different ways it has been done.

Pembertonltd

I noticed that the headers had been cut into to make them go through the x-frame. I really don't want to do that since mine are ceramic coated and all. Is there another way of passing them through and leaving the headers the way Joe designed them.

Jim

I figure the muffler shop can do it with out chopping the headers. Maybe you should print a picture showing what you want so they have a better idea. You also want to note the battery box on that car has been shortened so the muffler will fit up tight.

manyfords

Mine are ceramic coated also (Jet Hot coated). The alterations made to my headers by the muffler shop only disturb about 3 inches of the collector pipe and it's under the car where it can't be readily seen. My car is built to be a driver and not a show car, so I didn't care about that. Now, to cover Joe's design of the header. I asked him about why they were turned out towards the rocker panels and his reply was that it was easier for the user and/or muffler shops to route the pipes to the outside rather than down the middle and thru the X member. It is my opinion that an exhaust pipe and muffler hanging down and visible from the side view is not aesthetically pleasing and does nothing to enhance the beauty of the Sunbeams. A side exit exhaust system is loud and if you drive your car a lot, it can get very annoying after a while. The enlarged holes in the passenger side of the X member do not weaken the entire unibody of a Sunbeam and should not pose a problem unless you are driving the bejeebers out of it, under race conditions or severe off roading. For ordinary highway use, I have never had any problems with the structure of any of the Sunbeams I have so modified. These are tough little cars and enlarging two holes and cutting a third one do not harm it and makes the exhaust system all but invisible under the car, except for the twin pipes out the back.

Pembertonltd

Jim, did you use mandrel bent or regular piping for your exhaust. Also not to be too nosey, but what did it set you back to do everything that you did. Including the cuts on the headers and the cross over pipe. I would like to know that way I know if I am getting hosed.

V6 JOE

The exhaust doesn't have to come out in front of the rear wheel, if you run the pipe under the rocker sill.

Just continue the pipe back, to just in front of where the front spring eye is, turn the pipe in at a 45 degree angle, to just inside where the spring is and again, at a 45 degree angle, turn it back and under the rear axle and back to dual tips. You can hang the mufflers under the trunk, so they don't drag over bumps. You'll have to trim the bottom of the battery box and use one of the new small dry cell batteries, or totally remove it and place the battery in the trunk, like the Tigers do.

If you paint the pipe black and place it up tight to the body, without having it touch it, it is almost invisible. The early Healy's had exhaust pipes that were visible from the side, and they didn't look bad

manyfords

Bret: \$310 and I supplied the mufflers (SpinTech) that are similar to Flowmasters. Primarily because they are the right size. I paid \$65 apiece for the mufflers in California. Spintech has a website you can check them out....I have \$530 total in the exhaust system. The muffler shop I used does a lot of hotrod and custom cars and he uses regular pipe, not mandrel bent. Makes his curves from U shaped pipes.. .2.5 inch all the way, front to back.

Jose: Probably just as much work for the muffler guy to build the system as you suggest. It's just my personal preference to not see pipes and mufflers hanging under a car from the side view. Mine's pretty low and I also don't want to hit the exhaust system on speed bumps or going up into my driveway. I have a good friend that has an Austin Healey 3000. He has to go into driveways at a 45 degree angle so he won't drag his muffler. He knocked it off and put so many holes in it from running over stuff he's lost count. If only I could get that sound his Healey makes sounds like a sports car is supposed to sound. Regards to the family. ..hope all is well with you and yours.

V6 JOE

I wasn't saying I was against what you did with your car. I was just saying that the exhaust didn't have to come out in front of the rear wheel, (my favorite by the way), but could be routed all the way back without having to go to the added expense of making holes in the cruciform.

The Healy has problems with dragging the exhaust system, because it sits so low to begin with.

I don't like dragging the exhaust either, but in the turbo Alpine, there is no way around it, because of the four inch pipe it requires for the exhaust. It doesn't drag much, except for the occasionally high speed bump, and those I took at an angle to avoid dragging the pipe.

Pembertonltd

Manyfords, how do you like your spintech mufflers. Any drawbacks. How is the noise and the clearance, etc. Do you recommend them or not

SteveC

I came across this information while searching for exhaust ideas. I looks pretty sharp to me.
<http://www.tigersunited.com/techtips/PaulickExhaust/pt-PaulickExhaust1.asp>

Barry Knight

That is a VERY nice looking Tiger exhaust system. To do than to an Alpine, you would have to cut exhaust passages through both front legs in the "X" and cut notches in both rear legs in the "X". The necessary pieces are available as repair parts for the Tiger, but they are definitely not inexpensive.

Joe's approach avoids the cutting issue by running the exhaust under everything close to the outside of the car.

The Alpine has one exhaust passage through the middle of the cruciform (just left of center). The passage is still there in the Tiger, but the left side mounting plate for the transmission crossmember is welded over it. Joe's transmission crossmember for the V6 conversion attaches to the stock Alpine mounting locations, so the exhaust passage through the cruciform is not blocked. I think the approach that Jim Diamond used of fabricating a second exhaust passage through the cruciform (on the right side, matching the left side) is by far the neatest solution for a V6 conversion. The fabrication is relatively simple (cut two round holes in sheet metal and weld in a piece of 3" exhaust pipe to make the passage) and the exhaust system does not hang down below the chassis.

For me, fabricating the right side exhaust pass through is worth the effort to get the ground clearance for the exhaust system. Others may see modifying the cruciform as totally wrong. To each his own.

Britbeam

My pipes are routed the V6 Joe way and if your muffler shop knows what their doing they can be tucked up tight like mine. The only pipe you'll see on mine is where the header connects to the pipe in the wheel well. It's just enough to look Bad to the Bone. I painted the aluminized pipes with black ceramic paint from NAPA. It does not burn off. It's been on for 4000 miles with out burning off. Joe you can tell them do my pipes show from the side? I didn't cut the battery box either and I'll bet I've got the lowest ground clearance of any Alpine. Of course I don't clear speed bumps. I used 12" Turbos under the rear aft of the axle. Had a ground clearance problem but adjusted the front of the muffs up 1 1/4" Bingo no drag. The exhaust down the rocker as Joe suggest works good and looks good. I used 2" pipe also from headers right out the back. Sounds great and cockpit noise is low enough to talk to your Lady.

Pembertonltd

Dwain, how did you go about not cutting into the battery box?

Britbeam

Bret I just happened to have the Beam on jacks so I went and checked it out. The pipes run to the back along the rocker then at the front mount position for the spring it turns in approximately 45 degrees towards the center of the car (per V6 Joe) and passes under the rear corner of the Bat box. What can I say it doesn't drag or look bad but the pipe does angle up at that point.

manyfords

Bret: Can't advise as to noise or performance as yet, since I have not fired the engine. As for model number of the mufflers, I don't know. Boxes went in trash bin long time ago and I don't have the receipt for them. They were just over 12 inches in length and about 3 inches thick. I had measured a set of stock Tiger mufflers and these SpinTechs were the closest in size I could find. Most Turbo mufflers are about the same approximate size and a lot of people use them. I understand Midas Muffler and Meineke Muffler both have Turbo mufflers that sound nice and are the right size. I did shorten my battery box by 6 inches so the muffler on passenger side would clear. I use the modified box as a storage unit for tools and things I don't want swiped out of the glove box. My exhaust system is patterned after the original Tiger system, including the pipes under the rear end and out the back. Had the muffler shop even cut the same exhaust tip angle as Tiger. Modern exhaust tips have too severe an angle cut at the exit point. Good luck with yours.

Pembertonltd

Joe I took the car down today and they are going to figure out the best way of routing the piping. When the pipe goes to the back does it go between the axel and the body or does it go under the axel. And the other thing is to get it to tuck in next to the sill on the passenger side, it has to go under the x-frame right? Anyway let me know if I am on the right route. I have a number of oil leaks that I am going to have to figure where they are coming from. It appears that they are up higher on the engine than down below. The car runs very strong though as I drove it the 10 miles to the exhaust place.

V6 JOE

Bret, put the pipes under the rear end, like the Tigers do. You can put it over the rear end, like they are on the turbo Alpine, but it is expensive and difficult to do it that way and isn't necessary.

The pipes under the rocker panels will hang under the extreme outside edges of the cruciform. You don't need to cut into the cruciform at all, just make sure it is as close to the body as possible, without touching. If it touches the body anywhere, it will transmit a terrible racket into the cabin.

sharong

Just a thought on rattling noise. I drive a Subaru daily and I had a toe hitch put on. The tail pipe hit the hitch and made an awful vibration amplified inside the car. Drove me crazy for a few weeks. My dad suggested that I put a Teflon spacer between the tail pipe and tow bracket, and that got ride of the noise. When I got my sunbeam the previous owner had installed a new exhaust system. The main pipe down center was hitting inside the x-frame and rattling very loud. I couldn't talk to my passenger in the car. I climbed under and loosened the brackets to the pipe and slipped in a Teflon spacer and no more noise. It doesn't take much and you could put the exhaust pipe right up against the Teflon against the car body. Would get the pipes up tight and reduce noise from the pipes.

Barry Knight

Teflon is a Dupont trademark for PolyTetraFluoroEthylene (PTFE) which is a very useful material.

Its primary claims to fame are chemical resistance and non-stick properties. There are a few things that will attack PTFE, but you will not find them in the average garage.

PTFE is good but not great when it comes to temperature resistance; it begins to soften at about 500 degrees F. and melts at a little over 600 degrees F. This is excellent for a thermoplastic material, but exhaust gases leaving the engine can be close to 1500 degrees F. You need to be far enough "downstream" to allow the exhaust gases to cool to the point that the PTFE can survive. Sharong's "anti- rattle" solution is very good, but you need to stay a reasonable distance from the fire.

PTFE is not flammable, but in a flame it can decompose into some really nasty stuff.

V6 JOE

Hey Bret, how did your exhaust come out? How did they do it and how much did it cost? How does it sound, now that it has an exhaust system on it and how does it run?

Pembertonltd

Well I get the car back tomorrow, but it will go straight to the tranny shop so they can put the speedo sender in, I have a few leaks as I had mentioned before and hopefully they can tighten everything up. The other day when I drove it the 10 mi., it ran very good and very strong. The exhaust will run right at 450.00 and they ran it out the back with the mufflers in the far back. I haven't seen or heard it yet, but I will let you know tomorrow.

Pembertonltd

It sounds great. They used a set of Trans Am mufflers on the car, since they would fit right. Painted the pipes a gloss black so you don't even notice them and finished up with chrome tips that are angle cut like the Tigers. It sounds sort of like a Porsche. You definately know that it is not a 4 or an 8, but it sort of leaves you wondering as to what is actually in it. I only drove it a block to the tranny shop, but it is incredibly fast. I would have to say it is right up there with my SHO.

V6Mark

I'm undecided which way to route my exhausts (still some time off- but thinking about it). Just wondering what mufflers (silencers) are recommended if I decide to go along the sills and exit in front of the rear wheels.

Off the peg / inline / or flowmaster types or do the mufflers have to be custom built too? Any advice pictures etc would be greatly appreciated.

Pembertonltd

From what I understand, the turbo mufflers are good. The problem with bringing them out in front of the rear wheels from what I understand, is that it gets very noisy.

V6 JOE

Placing the exhaust so it exits in front of the rear wheel can reduce ground clearance too, because the mufflers must go under the seats and because of their thickness, they hang down a little bit. The extra noise can be

beautiful, if you are a power freak like me. If you run it all the way back, it will be quieter, but will increase the expense a bit. Either way, she'll sound great.

61Apine

I used the smallest "Turbo" muffler that the shop had available. My main concern was clearance. The muffler is directly under the seats. My pipes exit right in front of the rear wheels. Noise. Nah. It just sounds really nice. Not too loud not too quiet. Just right. Clearance, not great but if I go slow over a speed bump I can clear without scraping.

Chuck Ingram

I originally went for the side pipe mufflers on the 62. They looked great and sounded terrific. Were really too low. However they seemed to burn out quicker than ordinary mufflers. When the 2nd set went I went to the ordinary dual exhaust. They have lasted a long time but the insides seem to be not much anymore. After going dual, they still sounded good but much more comfortable. We could talk without too much raising the voices.

Bill-G

Joe, Rod suggested that I use large oval pipe routed near the outside edge of the car where the "frame" is not as thick and to extend the tailpipe far enough back that the exhaust gas does not enter through the trunk lid seal. I'm not sure how difficult it is to get oval exhaust pipe.

V6 JOE

You asked if you could use oval pipe under the rocker panels, and I said I didn't see why not, but I don't know if oval pipe can be obtained. I have never used oval pipe on any of my conversions, so can't say if it can be done.

V6Mark

Hey, I just had a thought, as I need new outer sills maybe I could run the exhaust between the inner and outer sills exiting through a cut out in front of the rear wheel arch - thereby avoiding the ground clearance problems associated with an 'external' exhaust.

Barry Knight

Try this link for oval tubing:

<http://www.spintechmufflers.com/>

Go to Accessories and then Oval Tubing.

V6 JOE

The problem with glasspacks, when used on a six cylinder engine, is that they are very raspy. You can hear the car coming from three blocks away, and that is when they are new. In a few years, when the fiberglass burns out, it will seem like they are augmenting the noise, instead of suppressing it. For some reason, V8's don't seem to make as much racket with glasspacks. Unless your area doesn't have noise restrictions and you like the noise, I would recommend not using them.

bryang

I'm running mine out the back with a pair of Supertrapp tunable exhausts. I think I have some more "tuning" to do on them but they sound pretty good. I was going to run them out in front of the rear wheels but I would have lost too much ground clearance because the ends of the exhaust are 5 inches in diameter. I still have to remember they are back there when I transition to a steep climb. I need to get this thing put back together because the rear end is so light that I don't have to do much to break the rear tires free. Anyhoo, it's too bad there is no room in the rear fender wells. I remember there was a tuckaway exhaust made for aircooled VW's that put the muffler up into the rear fenders where it couldn't effect ground clearance. Then the tail pipe was dropped out just behind the rear wheels to the outside. I thought it looked a lot better than the big dual glasspacks hanging under the car. Unfortunately I don't think we have the room in our wheel wells.

V6Mark

<http://www.drgas.com>

I was just surfing around and came across this site which does some great looking exhaust products - particularly interesting are the low profile SpinTech mufflers (only 2 inches deep!) and various other bits to help resolve clearance problems.

Anybody used them / know of them?

guruatbol

Try the flowmaster ones that look like the glass packs.. they have metal baffels inside that spiral down the length....

They should last longer than the glass packs and sound much better ... they make them in different lengths so you can get one that fits nearly perfect...

Pembertonltd

I have a friend that tells me that there is a new type of muffler that allows both sides of pipes to go into one muffler and back out with 2 pipes. It is not supposed to restrict flow or anything. Has anyone heard about this set up and would this possibly be the answer that would allow us to keep the battery box behind the passenger seat.

ATALLAMCS

I looked it up for you--go to Summit Racing and look up Walker Mufflers--it is part number 1 7725--2.5" dual inlet, 2.5' dual outlet--super turbo muffler, low restriction.
good luck. (\$93.39)

Pembertonltd

Thanks for the info. What do you think? Will it work?

ATALLAMCS

Personally, I think it is a very good idea especially for a V6--between the larger diameter pipe and the length of the muffler it should achieve your goals. I have a tiger and several other sunbeams each with custom exhaust according to the purpose, need and engine specifics of each car.

Pembertonltd

I agree. I think that this may very well work out. I will have to see if the measurements will fit in. I am sort of surprised that nobody else hasn't tried this setup since the battery box tends to be a problem with the series 5 cars. I would like to see what Joe has to say about this. He tends to be pretty knowledgeable.

Britbeam

Bret I installed dual exhaust down each side as Joe suggest turning in at a 45 degree at rear fwd spring attach going under the axle with 2- 12" turbo mufflers. This was accomplished with battery box in its original position. The exhaust is low in the rear but I'm due a spring job come winter front and rear. I'm pretty much in the low rider stance at this point (no big speed bumps at this time). The only place you see the pipes are in the front wheel well where it turns out from the headers to rocker and of course at the rear. Use a little black heat paint and they are not as noticeable. Just enough to let you know it's not stock. I personally cant believe 2 pipes into 1 muffler will work as balanced even if its separate chambers. One pipe would have to be longer to get to the muffler. Will it make a difference I personally think its not what I would want to do. Where would you cross over? Anyway that's my dimes worth.

V6 JOE

Bret, I don't know how this particular muffler flows, but if it has more back pressure than individual exhaust mufflers, I suggest not using it. These little motors had true dual exhaust from the factory, in every automotive application. The Mustang II used one big muffler at the back, but the capacity of it was enough that it didn't make much back pressure. In your particular case, since you're running an automatic, a little back pressure might increase torque a bit and help you. Other than that, I recommend a true dual exhaust set up.

Pembertonltd

Joe, if you get a chance to ask any of your contacts, see what they say about the back pressure. It would decrease a lot of the problems with the fitting and all.

V6 JOE

Through my experience with these little 2.8's, I've learned that they don't like any back pressure. They put out the most power running free. I know that there are differing opinions about this subject, but that is my opinion.

V6 JOE

Bill, I am against cutting into the cruciform of the Alpine to run a pipe through it like the Tiger does, unless you weld a pipe in the hole, and also weld on the Tiger patch panel to strengthen the cruciform again. (That particular patch panel cost about \$200.00 the last time I looked.)

That's the reason I made the headers to back and to the outside, on about a 30 degree angle. I then run the exhaust pipe under the rocker panels to just before the front spring eye, then turn in the pipe at a 45 degree angle, until the pipe clears the spring and the shock mounts, then straight back under the rear end and hang turbo type mufflers under the trunk floor, with the tips sticking out about an inch past the bumper. If you put the exhaust this way, you won't have a problem with ground clearance and you'll have a true dual exhaust system. Please don't run a single exhaust on the V6, because you'll defeat the purpose of doing the swap. It will cost you horse power.

V6 JOE

Bill, I forgot to mention that I ran the exhaust on my Alpine out in front of the rear wheel, with the mufflers under the seats on the outside of the cruciform. It took up some ground clearance, but I liked hearing the

exhaust note and it made it easy to remove the whole exhaust system when I went to the drags.

Fuel Line - material

Bill Blue

Okay, now that we hashed over the pump location, next is fuel line material for low pressure.

The stock material is a semi flexible black plastic. A good candidate, but I hesitate to use it under pressure, especially since it is over 35 years old. Does anyone know what this stuff is?

Don't want to use rubber hose as it is prone to sagging and getting into trouble. Copper is not as easily bent as some might imagine and work hardens from vibration.

My limited experience with steel makes me think it is rather difficult to bend and fish through the body. Kenny, how did your project work out?

Plastic comes in all flavors with different fuel resistance characteristics, of which I know nothing. I do know that some plastic appears to be very fuel resistant but over time becomes very brittle. Ask me how I know that one!

A lot of the stuff used by racers is priced at \$'s/foot, and the 'Beam requires about 13 feet. Gets rather expensive very quickly.

Chuck Ingram

Why would you hesitate to use a good material for a fuel line? First of all copper for a fuel line is not allowed here, at least in Manitoba. I have used steel lines. Mind you it takes time to get it right and I admit I had a hard time doing it. A good tube bender was a tremendous help. There is also the steel spring that you slip on the line to allow hand bending with out crimping. I needed both. I did take some liberties as I'm not concerned with stock appearance but safety.

Bill Blue

Chuck, I am trying to discover good candidates, not eliminate them. Reasons to not use a good material include high cost and difficulty of installation. The very best material is safe, cheap and easy to install. I would use the old flex plastic line in a heartbeat if I had no safety concerns.

bryang

I used rubber tubing. It's a little hard to get it to squeeze into the old tabs but it works. For the portions that didn't follow the old route, I used a metal/rubber hose clamp that is fastened to the body.

rootesracer

Bill, the racing hose you have seen is about as good as it gets. It has a nylon or teflon internal hose, with metal sheathing on the outside. You will need something to handle higher than normal fuel pressures. It can be bent readily. It will not rot or contaminate your fuel (as rubber will). It will not work harden due to vibration. Its not tougher than a boot to bend. It wont get brittle and burst (like the stock SV fuel hose).

Depending on your application, you would use #4 or #6 line, and AN fittings. This material runs around \$4 per foot, but much less if you find it on ebay. Also many hose supply venders sell similar products for a tad less. HTH

Bill Blue

I have seen this material in on line catalogues but have not been able to get an idea of the actual diameters. What is the approximate I.D. of the #4 and #6 line?

KennyJ

I used nylon. I purchased it at the local Weatherhead dealer specifically for gasoline purposes. It has been on the car about 6 years and has held up fine. It is a cloudy white color, and you can see the yellow gasoline through it. I retreaded the T outlet near the tanks and put a pipe to compression fitting in the fuel pump. I use compression fitting with the small steel sleeve inside the tubing to prevent the compression kink.

It is easy to route, fits the stock locations and mounts, and was pretty cheap.

I plan to replace it one day with steel. I think steel is pretty easy to work with, and I use the simple benders (handle with a stop lock and a multi-groove wheel). I have done quite a few brake and fuel lines for cars, and this simple tool has never kinked a line, and it makes the sharpest bends available (around 1.5 inch diameter). Purchased it at NAPA.

rootesracer

Bill,

#4 is 1/4 ID.

#6 is 3/8 ID.

#4 is fine for probably up to 300 BHP worth of fuel at 20+ PSIG.

#6 is more commonly used for higher performance, but is overkill for the power levels we are talking here.

Chuck Ingram

Kenny, your tube bender sounds like mine. Very good as you say. However there was a couple of spots I found the spring tube was great for some of those tight spots where I need just a little more bend after I had the line in place and almost done. The bender was just too much in these instances. We also can't use nylon or rubber for the fuel lines here.

Bill Blue

What can you use besides steel?

KennyJ

How about aluminum. Popular with the race car crowd. Bends easy, polishes really nice, and you can use the fancy fittings.

Barry Knight

Both Jeg's and Summit Racing sell aluminum fuel line and the appropriate fittings.

Chuck Ingram

Aluminum sounds good. I never considered it. No shops here even suggested it. Mind you that was some time back in the past.

V6 JOE

The stock fuel line will flow more than enough fuel to support the V6. This conversion takes very little modifying of the stock Alpine, and that's why it's the easiest and best way to go if you want more power.

Jose's Kit

V6JOE

I recommend using the T5 transmission from the 5.0 V8 Mustang, instead of the T54 from the Turbo Thunderbird. I've also added an alternator bracket to the list of parts I can provide. The following is a list of the parts I supply.

Basic Kit: Headers, Motor mounts, Transmission support cross member.

Modified Center Link. It comes with proper, ball and socket tie rod ends.

Alternator Bracket: It comes with all the bolts to mount it. It will also mount three different AC Delco alternators. 63 amp with one wire hook up, 65 amp and 72 amp.

Pilot Bearing Adapter: Used if you want to use a five speed transmission, and comes with a new needle roller pilot bearing.

If you are mechanically inclined, you won't have any trouble doing the conversion. I've had guys that had never done any mechanic work in their lives, do the swap successfully. The only thing that is not a bolt it operation, is the transmission tunnel has to be cut on the drivers side and pushed out an inch, and the back of the transmission tunnel and top of the drive shaft tunnel have to be cut out for clearance for the wider and longer transmission.

Mustang II – required parts

V6 JOE

These parts can be used from Mustang II:

2.8 V6, if it is rebuildable \$200/\$300

Front timing cover \$75/\$100

Heads \$200/\$250

Bellhousing \$100/\$150

8" rear end \$200/\$300

Electronic ignition \$25

Four speed transmission \$150/\$200 (though I don't recommend it, since there are more modern five speeds available, but in a pinch, could be used)

The wheels will also fit the Alpine too \$100/\$150

Throttle Linkage

V6 JOE

I would suggest using a cable kit, or a cable from a later car, in place of a throttle linkage. I've used a cable for my throttle since the first car, and have had success. There are several throttle cable kits in the parts stores, for less than \$30.00 U.S. They are very easy to connect and look perfect too, because they are made to be cut to your requirements, so it looks factory.

Jim E section

Jim E

07-30-2003 at 04:27 PM V6 swap so far...

I am in the gather up the parts and learn about the engine phase right now. Have talked with V6 Joe about the engine build several times and also have done some web crawling, I keep coming back to the fact that Joe knows what works with these engines and am planning to stick close to his suggestions. The 2.9 valves in the 2.8 heads looks to be an easy swap and should make the engine breath a lot better so that is definitely in the works. I have the Offy intake and 390 Holley which came on the engine I got from Jummpin Jan, so that is as good as it gets for carh and intake. Will port the heads and gasket match them to the intake. On the bottom end I am thinking to deck the block a bit to raise the compression, shooting for 9 to 1 and I think the 2.8 is around 8 to 1 stock. The rotating assembly will get balanced and use stock pistons. The cam... up in the air there are a few grinds out there and then Delta has a grind for the stock shaft that Joe told me about which is the leading canidate right now. There is also a posiblity the engine already has a aftermarket cam in it so will have to wait and see after I get it opened up what I have. I am looking to build a nice mover but not to wild so I can enjoy the thing with out having to tinker all the time.

The transmission is a snag I got a T5 with the engine but it is a Turbo coupe transmission and the gear set is wrong, at first I thought I would live with it but the more I thought about it have decided to get a 5.0 T5 with the better gear set. These come in a couple versions one has a 3.35 first gear and there is also a aftermarket and a Motorsport units that have a 2.95 first gear, which is the one I want, I think. The trouble is so does everyone else and the 5.0 T5s are all a bit pricey. I found a aftermarket transmission this morning with the 2.95 gear but it has a bunch of 5.0 Mustang stuff included in the package and is \$850 which is more than I had planed to spend, hoped to get one in the \$500 range and sell the turbo coupe unit to help offset the cost. We will see how it works out, may go ahead and buy the \$850 trans and try to flog the Mustang hits.

On the rear end I had thought to go with a Tiger rear but it will blow the budget due to having to swap gears and set it up, so looks like I will stick with the Alpine rear and put hardened keys in the hubs, the rear disc brake project that is in the wings will also come forward while the hubs are off. So there it is I am moving on the swap it is not going very fast but figure it will not happen over night and I need to sell off more bits to to keep buying the new stuff.

Jim E

SeriesVince

07-30-2003 at 04:56 PM Re: V6 swap so far...

Jim-

How does the valve swap work? Is there anything else that needs to be physically changed to accept the 2.9 valves? like seats? I have the valves but have yet to pull the heads off of my v6.

Vince

Jim E

07-30-2003 at 05:51 PM Re: V6 swap so far...

The 2.9 valves have the same stem size and are only .030 shorter, the valve heads are of course bigger so you will need to put in new exh seats and cut new mt seats. Then you will need to either have them bowl cut or use a grinder and

rework the bowls. I will take pictures and link/or post them to the board when I get to that point. Jim E

KennyJ

07-31-2003 at 12:06 AM Re: V6 swap so far...

From my days working in the machine shop...

If the heads were made for unleaded fuel, usually they are induction hardened quite a ways out. Thus no need for new seats, just cut yours bigger. It costs less and is more reliable. I used a cutter instead of stones, thus i had a lip that I would blend into the bowl. (this is from putting 1.94/1.60 valves in a late model 5.0 Ford engine that had 1.78/1.48 if memory serves me correct).

This particular engine has over 60,000 miles on the rebuild and running strong. Kenny

bryang

07-31-2003 at 02:21 AM Re: V6 swap so far...

Hi Jim,

It sounds to me like you are moving right along, not slowly. When you get done maybe you can help me finish mine. It only took me 2 years to round up all the parts. That was due to budgeting rather than scarcity. I wish I would have done the larger valves though. Ill have to make that a winter project a few years from now.

Good Luck,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hillman minx estate (for sale!)

Jim E

08-06-2003 at 11:05 PM Re: V6 swap so far

Kenny, nice tip on the seats I think the engine was made for unleaded but will have to check to be sure. That would save a buck or two.

On the swap front not much action, my pulling the engine apart keeps getting stalled by work. I did pull the intake and a few other parts off it today, [pictures coming on this]. So some progress but not much. Spending a lot of time getting bits ready to sell and doing the ebay thing to pay the way. Bid on and won a T5 on ebay, it is the 3.35 first gear unit and not the good 2.95 one but the price was right now if it is a good transmission.... will see what I get when it gets here. The Webers came off the 0GM and are up on ebay as I am sure most of you have seen. Put the 150s on and have a ugly vacuum leak, but it at least allows me to move the car around for now, may replace the intake gasket or may not. Another ebay V6 part arrived today my \$1.25 timing chain cover that cost \$20 to ship, aaarrgg, looks good I just do not know the engines well enough to tell if it is really a Mustang II cover, will have to email you a picture Joe. Still lots of little fiddlin bits to gather up, starter, flywheel [heard the 4.0 is the way to go Jan any more info on that]on and on it goes. I see many hours of cleaning and glass beading coming up. Well that is all the V6 news on my front that is fit to print. Jim E [man the board is quiet is everyone at a

secret Alpine event?]

MikePhillips

08-07-2003 at 11:14 AM Re: V6 swap so far...

What, and not tell you about it Jim?? (Quick everybody move to another room...)

Jim E

08-12-2003 at 02:28 AM Re: V6 swap so far...

I worked on my project today, spent some time with the glass bead cabinet and also turned a wrench or two. My \$1.25 Mustang II timing chain cover is now clean and beaded looks nice, just need to run atap in all the holes. The water neck will go in the mail to get modified and I will be one tiny step closer. On the engine I finally got the heads pulled off, not that it is a big deal took all of 10 minutes. The engine has a set of flat top pistons in it which just might be the good forged slugs, I hope. ^{Does} look as if it had some water in one of the bores, will try and clean it up, soak it with something and hope to save the piston. I do not think flat tops are a over the counter item for the 2.8 so these may be well worth the effort to save them. This engine has a sticker on it from a performance builder so I am hoping for more good hypo bits inside. We will see once I get an engine stand freed up and can open up the bottom end. The intake is the Offy and has some corrosion nothing to severe but a trip to the aluminum welder is in the future. I cleaned it up and gave it a turn in the glass beader looks better but still needs a little more bead time, figure to get it fixed then finish cleaning it up. Well that is about it for now, I do have some pictures and will put them up and post the link here shortly... Jim E

Still waiting for my ebay T5....

Jim E

08-12-2003 at 03:06 AM Re: V6 swap so far...

Here is the link to the Lump pictures... not much to look at so far.

<http://home.bellsouth.net/p/s/community.dll?ep=87&subpageid=99098&ck=>

bryang

08-12-2003 at 04:17 AM Re: V6 swap so far...

Well it sounds like you are well on your way. I took a long time to gather up all the parts but it sounds like you have almost everything and very quickly too. I think the stock pistons are flat tops. At least when I was rebuilding mine they were. I looked for a set of forged but couldn't find them easily. They are out there though, Joe has a list of suppliers I believe. Good find on the timing cover too. I think I got mine for 25.00. If I ever do this conversion again, It will go a heck of a lot quicker. I'm used to working on air cooled VW and Porsche stuff with minor modifications. This is really the first American or British car I've worked on. It sounds like you have access to all the right stuff and the experience to be able to finish the whole thing up pretty fast.

Anyhoo..good luck with the rest of the engine build, you'll love the sound of the V6!

Bryan

bryan gilbreath

saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion
61 hillman minx estate (for sale!)

V6 JOE
08-12-2003 at 06:12 AM Re: V6 swap so far...

Hi Bryan,

The stock pistons were dished to produce the 8.0 to 1 compression ratio of the stocker. The ones Jim has may be cast, but more likely they are forged, because I don't know anyone that makes a flat top cast piston for this application. There could be some surprises though.

Jim, that engine is pretty rough looking. It looks like it was under water for a while. I wish you the best of luck with those pistons. If they are forged, you might have saved yourself \$450.00/\$500.00.

Joe

bryang
08-12-2003 at 02:25 PM Re: V6 swap so far...

Hmm. I'll take your word for it. I thought that my new pistons were flat across the top, but I've been wrong before. That would be cool if Jim's motor had some forged ones in it. As far as the water part goes, mine had water in a few of the cylinders as well. I think it was from someone storing the engine uncovered outside. Luckily, the rust machined out. I hope you got a good deal on the engine. It actually looks a lot better than mine when I got it. I think I paid around \$700.00 for mine because I was told that it ran great when it was removed. Ha! Fortunately, I didn't try to use it as is and I was planning on a rebuild.

Jim, since you seem to be pretty adept at modifications there is one that is mentioned in the Pruett book that is pretty easy to do. It involves drilling an extra cooling passage in the head. I did it to mine and while I can't say if it made any difference, I can say that I think it should. Well have fun putting it together!

Bryan

bryan gilbreath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion
61 hillman minx estate (for sale!)

Jim E
08-12-2003 at 07:40 PM Re: V6 swap so far...

I have heard about the cooling modification but do not have the details. Would really like to see what is involved as this is the time to do it.

GOOD NEWS of the day. The engine is fine finished pulling it apart took it to the machine shop and all it needs is a hone and rings!!!! Hurray!!!! The Lump is being cleaned as I type this and the machine work could be

done tomorrow. The cam is a Comp Cam 264 which is the biggest one they make for the 2.8 have not decided whether or not to use it and still have to check the lobes to see that they are OK. So a good day in V6 swap land for me!!! Now if the #@\$ T5 would just show up... The head mods will also get under way this week... now if I just do not run out of money. Jim E

Chuck Ingram

08-12-2003 at 10:30 PM Re: V6 swap so far...

Hi Jim.

I thought that you made a small fortune selling your old engine with all the goodies that were on or done to it. You are now at the point where a money tree comes in handy. If you can't find one you look in the yellow pages under banks. All kidding aside you will soon be where it starts to get exciting as it is almost ready. There always seems a few more little details.

Well after 132,000 miles I'm finally going to have to do some mechanical work. I was thinking slave cylinder and I rebuilt mine but alas it is the throwout bearing[maybe] and the clutch which seem to be the problem area. Will still drive it as it is only just starting to be noticed once in awhile in 4th. No slippage in 1st, 2nd or 3rd at all. I know but no one else can feel it..,

I hope you will have as many fun miles as we have had. 011ie my wife calls it old faithful as all my other vehicles have had some problem over the years. To her the most important part is the key that starts the car on the first turn. She has never even put gas in her Caddy.

Anyway enjoy the experianca and if you need any advise on the slave cylinder let me know.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

bryang

08-12-2003 at 10:43 PM Re: V6 swap so far...

Hi Jim,

I have the Pruett book and I'll send it to you for your use if you'll pass it along to the next V6 convert for their use. It details all you would want to know about the extra cooling passages etc. Congrats on the condition of the engine. Hopefully you'll have better luck getting your tranny off of Ebay than I did. I've only a few bad experiences and that was one of them. It finally took me threatening to call his local police. All in all a 3 month process. And no drain plug in it to boot. If it turns out that the trans I got was junk I'm going to drive it down to California in my trunk and make the guy eat it. Well, enough of that for now. You can email me offlist with your address and I'll round up the book.

Congrats Again,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hillman minx estate (for sale!)

V6 JOE

08-12-2003 at 10:52 PM Re: V6 swap so far

Bryan,

You are correct. The stock pistons for the 2.8 are flat tops. I keep thinking of the last 2.8's I've worked on; the turbo engine and the supercharged engine, both of which have dished pistons. The pistons for the turbo motor are TRW forged pistons for the Ford 200 ci. straight six, and the pistons for the supercharged engine are custom BRC forged pistons.

I'm really getting to be an old man. I can't remember squat anymore. Sorry for the misinformation.

Joe

Jim E

08-13-2003 at 12:26 AM Re: Re: V6 swap so far...

quote:bryang wrote:

Hi Jim,

I have the Pruett book and I'll send it to you for your use if you'll pass it along to the next V6 convert for their use. It details all you would want to know about the extra cooling passages etc. Congrats on the condition of the engine. Hopefully you'll have better luck getting your tranny off of Ebay than I did. I've only a few bad experiences and that was one of them. It finally took me threatening to call his local police. All in all a 3 month process. And no drain plug in it to boot. If it turns out that the trans I got was junk I'm going to drive it down to California in my trunk and make the guy eat it. Well, enough of that for now. You can email me offlist with your address and I'll round up the book.

Congrats Again,

Bryan

That is a deal, I would like to look at it at least, will send it back or pass it to the next guy.

Jim Ellis

P0 Box 9593

Columbia SC 29290

I spoke to the T5 guy from ebay and he says the T5 is in the mail, this fellow has called me twice when I was not home, to let me know it is on the way and all is well. Looks like tomorrow it will get here. Jim E

bryang

08-13-2003 at 02:40 PM Re: V6 swap so far

Glad to hear the trans is on the way! I'll put the book in tomorrow's mail and you should have it by the middle of

next week. Just pass it along to whoever is next or send it back when you're done. I performed the head mod so I'm sure that you'll have zero problems.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hillman minx estate (for sale!)

Jim E

08-13-2003 at 09:29 PM Re: V6 swap so far...

The block has been hot tanked and honed looks good not perfect but very usable. Some minor eyebrows at the very top of a bore or two but nothing to worry about. Went back in the tank for another cleaning. Now waiting to get the crank [was standard will turn 10/10] then will put the crank and a piston/rod in and see how far the piston is down the hole so the block can be trued and decked. Doing this to bump the compression from the 8-1 shooting for 9-1. Heads are at the shop getting a bath then checked for cracks. Not much will get done to the heads until I get a look at the book to see how to modify them with the extra cooling holes. Then will get started on the bigger valves and cleaning up the ports and such. The stumper for the day is a flywheel and front lower pulley. NAPA lists a flywheel for about \$45 plus a \$45 core so if I cannot dig one up will just buy one from them. So far I have had no joy at the pick a parts for a flywheel.

Had a talk with Delta Cams today and will be sending my Comp Cam in for a new profile, the V6 Joe grind. I ask them about rocker shafts for the 2.8 and they have them at around \$17 each or if you send them the assembly they will rebuild both with new shafts springs and rocker overhaul for around \$75 for the pair, which seems like a deal, for what you get, then just the shafts sounds good too. Jim E

bryang

08-13-2003 at 09:33 PM Re: V6 swap so far...

Jim,

I mailed you the book today at lunch. You should have it by the time you get your heads back hopefully. Bryan

bryan gilbreath

saoca #125

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Jim E

08-15-2003 at 09:40 PM Re: V6 swap so far...

Get a load of this UPS lost the T5... a 80 pound transmission and they lost it... friggin lost it

bryang

08-15-2003 at 09:49 PM Re: V6 swap so far...

Jim, It is probably sitting in one of their warehouses somewhere between you and the seller. I've had that happen before on a large part. Probably the guy who was working the night shift pushed it to the side so the dayshi It guy would have to load it or some such thing. Or it started leaking on the way and they pushed it to the side. I tracked mine with the tracking # to the warehouse / hub where someone went out and looked and sure enough, there it was and they loaded it up and sent it on its way. Sometimes this Ebay stuff can be pretty frustrating. But I think that without the internet, I would have never even heard about the V6 swap. I'd probably still be racking my brains trying to find a master cylinder for a , "What did you call that, a Sunbeam?".

I hope you get your trans soon and it is in good shape.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hiliman minx estate (for sale!)

Jim

08-16-2003 at 12:11 AM Re: V6 swap so far...

Yea I bet/hope you are right, the last scan of the actual package was in one of the hubs. My wife said "it got pushed in the corner no one wants to pick it up it is just too heavy, settle down it will get here" I just hate to think it will not show up was a real deal... Jim E

Jim E

08-18-2003 at 04:16 PM Re: V6 swap so far...

There is joy in swap land the big brown truck just delievered my T5. Looks like the thing was shipped with oil in it.... and now it has oil out of it... UPS bagged it and put it in another box and here it is. Oh Joy, I will now go dance about!!! Jim E

Jim E

08-18-2003 at 04:23 PM Re: V6 swap so far...

There is a bit less joy now, thing has a lot of input shaft play.... guess I will he learning about bearings and such in T5s..

bryang

08-18-2003 at 04:28 PM Re: V6 swap so far...

Cool Jim. Glad to hear it finally showed up. When mine eventually did show up it was in a box that was about 3-4 times bigger than it needed to be (think kitchen oven size) and it had an old ski jacket and some rotten carpet padding thrown in for padding. The padding did absolutely no good since the thing could bounce all over inside the box. Anyhoo... you can make the trans a little easier to fit your modified tunnel by removing the aluminum tabs that stick out the sides. I don't have mine in front of me right now or I could be more specific. You'll no doubt know them when you see them.

Again, congrats on getting the trans. I know how it is waiting for stuff especially when you are tracking it and UPS shows it one hub away on Friday and you know they don't deliver on the weekends. Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hillman minx estate (for sale!)

Jim E

08-20-2003 at 02:27 AM Re: Re: V6 swap so far.

quote:bryang wrote:

Jim,
I mailed you the book today at lunch. You should have it by the time you get your heads back hopefully. Bryan

The book arrived today. Thanks

bryang

08-20-2003 at 02:33 PM Re: V6 swap so far...

Great. There is a lot of good info in there. There is also a lot of stuff that isn't necessary unless you are building a full on race engine. I used it for doing some minor porting, port and intake matching and the extra cooling passage primarily. Be careful when you drill through the heads for the extra cooling of course. Have fun. I hope the book is helpful.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hillman minx estate (for sale!)

Jim

08-22-2003 at 02:03 PM Re: V6 swap so far...

Lot of little things going on right now which means I am going in about a dozen directions.

The T5 is on hold until I get the new steel bearing retainer, which I bought on ebay. So once it gets here I will get it turned down to fit the Mil bell housing. Then replace the input shaft bearing and race and set the end play. Still need to clean the thing up and think about a shifter, I have a stock one but am keeping my eyes open for a deal on a aftermarket shifter.

The engine build is stalled, again it is a parts I do not have thing. Found a flywheel on the Range Station for \$25 plus shipping so that should come together, if the guy gets back to me. Then can move ahead with the engine. I picked up a MIT V6 I got on ebay so I now have the short bottom pulley, and a single groove water pump pulley. The engine also has a Dura Spark and a starter that I needed, plus the back bottom water neck. Not sure what I will do with the rest of it, the V6 that is, may sell it part it out or who knows.

Need to pull the trigger on valve springs and get moving on the head work.

The OGM will go in the shop and the 1725 will get pulled either today or this weekend and shipped to the new owner.

So many things to do... Jim E

Chuck Ingram

08-23-2003 at 01:22 AM Re: V6 swap so far

Jim.

Be happy you have time to work on it. I think I can get back to my cars next week finally.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

DAN MOORE

08-23-2003 at 02:34 PM Re: V6 swap so far...

Hi Jim

are the fly wheels the same on the ranger and the Mu ? the reason I ask is that the MIT uses a 9.5 disc by 1 1/16 10 spline and the ranger uses a 8 7/8 disc 1' 23 spline, and every time i ask centerforce they say the pressure plates are not inter changable because I would like to use their dualfriction disc.

Dan

Jim E

08-24-2003 at 03:35 AM Re: V6 swap so far...

I may not be the guy to answer this at this point but will relay what I have heard so far, for what it is worth. Joe tells me to use a Ranger flywheel and a Mil pressure plate and disc, so the MIT should bolt up. I have heard the 4.0 flywheel will work as in bolt to the 2.8 crank but am not sure what clutch to use with it. The flywheel not to use is the M11 as it is a bit odd and has a different center piece that is two parts. I am only telling what I have read and been told here as have not got the parts on hand yet to be able to say what is what but when I do I will relay the info. Jim E

[Edited by Jim E on 08-24-2003 at 06:15 PM GMT]

Jim E

08-24-2003 at 04:45 AM Re: V6 swap so far...

I got a little work done on the swap today for a picture or two click on the link below.

<http://home.bellsouth.net/p/s/community.dll?ep=87&subpageid=101308&ck=>

Chuck Ingram

08-24-2003 at 12:41 PM Re: V6 swap so far...

Jim.

Good to see you are doing things. The pictures solved a problem. I'm doing a 1725 and po must have assembled fuel pump wrong. I see your in and out ports are angled. Never thought about it till now as he ran out of money. Motor is still on the stand.

another fantastic summer day.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

08-24-2003 at 01:57 PM Re: V6 swap so far...

Chuck,

The fuel pumps come with the inlet/outlets pointing front to back and make getting the fuel line on a pain. I unbolt the top of the pump and rotate the housing one bolt hole, makes life easier. Jim E

Chuck Ingram

08-24-2003 at 04:52 PM Re: V6 swap so far...

Jim

Anything that makes life easier is OK by me.

I don't think I'll be touching that motor for awhile. At least until he has more money. Life is great and its still sunny and hot.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

V6 JOE

08-24-2003 at 06:51 PM Re: V6 swap so far...

Jim,

Actually the Mustang II flywheel is the one to use. Some of the earlier flywheels, like from the Capri, use a spacer behind the flywheel. The Mustang II flywheel is a one piece wheel that doesn't require the spacer, so if you are looking for a flywheel to use behind the 2.8, make sure which one you've got. I will add; even the flywheel with the spacer will work, but only with the spacer.

Joe

Jim E

08-24-2003 at 07:43 PM Re: V6 swap so far...

I read this over again and now I know I do not know what I am doing with the flywheel/clutch set up. I am off to compare some part numbers on the WWW. Sorry for leading anyone a stray on this. Jim E

DAN MOORE

08-24-2003 at 11:42 PM Re: V6 swap so far

Jim

You didn't lead anyone astray just got us thinking, which is good for us oldfolks I think

Dan

Jim E

08-25-2003 at 01:38 AM Re: V6 swap so far...

I talked to V6 Joe on this and he used a stock set up on the turbo car with no problems, and is fairly certain the MII unit will bolt to the Ranger/B II flywheel. I have not yet been able to find a pressure plate with a common part number for the two but have not given up and a new line of thought just came to me on this....

On the 4.0 Flywheel I did find some info., but it is related to the 2.9 for what it is worth. The 4.0 will bolt up to the 2.9 but requires the 4.0 clutch and starter. the ring gear is in a different plane and the ranger starter will not due. Which after talking to Joe brings up stopper on this, the ranger starter will not fit the MIT bellhousing so the 4.0 starter if it fits the ranger bell then it also will not fit the MII bell. Jim E

I am off to check my new thoughts on the 2.8 clutch fitment questions...

Chuck Ingram

08-25-2003 at 01:42 PM Re: V6 swap so far..

Jim.

I like it. You would think you had a lawyer in the family.

Slight thunderstorm but clearing. Taking the lister out to stretch a bit. Not far, maybe 100 miles.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

08-28-2003 at 03:41 AM Re: V6 swap so far...

The 4.0 flywheel thing has me more confused now have found a site where they state using a MutII bell and the 4.0 stuff and list the starter as a part required... so I give on the 4.0 flywheel front. I have no intention of going that way so will not devote anymore time to the research.

On the ranger flywheel I am no closer to knowing for sure the MutII clutch set up will fit the ranger flywheel but am going to hit the parts stores and see if anyone has both pressure plates in stock for a comparison.

My new steel bearing retainer, shift fork pads and seals for the T5 came today so I should get the transmission buttoned up here soon. Just need to turn down the retainer to fit the MutII bell and set the input shaft end play on the T5, then hope the internals are good.

The 1725 got strapped to a pallet yesterday and will be picked up in the AM for its ride to NH. Getting all the oil and coolant out of it so it would not leak on the ride was not so easy but it is done. Feels like I have nothing done and everything to do but I know I am moving ahead. Keep drifting off course with thoughts of painting the car a different colour... I cannot get Bob B's Sli out of my head love that green color. Then there is the rear end... use the Tiger dana 44 or stick with the Alpine... brakes floors and when I get to the speedometer I am in overload. Jim E will I make the next Invasion is drifting thru my head too..

[Edited by Jim E on 08-28-2003 at 03:42 AM GMT]

old flotsam

08-28-2003 at 01:25 PM Re: V6 swap so far...

I thought the 1725 was authentic. We all know to get the oil and coolant out all you have to do is park the car.

Wayne

oldflotsam

08-28-2003 at 01:28 PM Re: V6 swap so far...

P.S. I recieved my bellhousing for the tS to 2.3dohc Duratech. Time to start measuring to see what must be done to make it fit.

bryang

08-28-2003 at 02:48 PM Re: V6 swap so far...

Hey Jim,

I know exactly where your head is at. Mine has been there for the last two years. I can't get this project out of my head. I can't wait to be done with it, but I don't know what i'll think about when it is. One thing you'll want

to check is the fit of the M11 bellhousing over the bearing retainer for the T5. I had to machine a bit off of mine to get it to fit. But now that I think back on it, it may be because I used the Tilton Hydraulic setup. If you are going to use the stock bearing retainer you may be fine.

I still have not decided what color I'm going to paint mine. I did the engine compartment black so that it wouldn't matter what the body color was. Now, I wish I would have picked a color and did the engine compartment. At least that way I'd have one less thing to think about.

Well, have fun with it!

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

V6JOE

08-28-2003 at 07:15 PM Re: V6 swap so far...

Bryan,

The front transmission cover has to be turned down, whether you use the Tilton throwout bearing or not. It is about .060 too large on the O.D. to be able to fit the Mustang II bellhousing.

Joe

bryang

08-28-2003 at 08:37 PM Re: V6 swap so far...

Aha. I thought that was probably the case, but I wasn't sure. I'm hoping to limp mine over to the garage for a dial in session next week.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Britbeam

08-29-2003 at 02:07 AM Re: V6 swap so far...

I've just turned down my front cover and it was about the same amount. You need about .002 to .0025 clearance fit. Jim I understand how you could get brain burn from thinking on this conversion. I've been thinking of all the angles for 3 years and now as I'm reaching the finish of the assembly on the engine it hasn't changed. Just as I'm ready to install the distributor I see I need to make clearance for the distributor to clear the offy manifold and clearance between the valve cover to offy intake. One modification leads to another, another & another. But it's great

making it happen just think how it will be to be on the road.Maybe we need to go Back to "The Tail of the Dragon"alias Deals gap.Checkout Tailofthedragon.com

High Fins Dwain Cooke

Jim E

08-29-2003 at 03:07 AM Re: V6 swap so far...

Once I get the thing put together I am up for a run on Deals Gap, that has to be one of the most fun drives there is.. Had such a blast running it with the old tired stock 1725 cannot imagine what it would be like with a tuned V6... we got to do it! Jim E

Chuck Ingram

08-29-2003 at 01:30 PM Re: V6 swap so far...

Dwain.

It is so long ago I did mine that the small stuff has gone to never never land of memories.

I do know that the mallory dual point distributor cleared the manifold.It has to be exactly right however as the condenser is very close.I do mean close as there is little room to readjust for timing.I set mine at TDC and set the points open just passed the optimum clearance on the primary points.This is important as it can cause faulty tach reading.I don;t remember making clearance for the valve covers but it is fun removing them as you sort of need to just slip them on at the right angle.

fun stuff.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

bryang

08-29-2003 at 04:24 PM Re: V6 swap so far...

I'd also double check the sides of the Offenhauser manifold for alignment with your heads. I'm sure that you already knew this. I didn't at the time. I had to have a bit shaved off because I had the block cut down as well as the heads, hence a changed geometry. There is a pretty helpful guide in the Pruett book that gives you a start as far as figuring out how much to shave if any.

Chuck is right, one little thing leads to another. I went in to this thinking I'd be done in a few months. The only engine experience I had *was* with air-cooled VW's and Porsches. I would have given up a long time ago if it were not for Joes expert help and all the tips I received off of this board.

I've got my V6 scheduled to be dialed in on the 17th. I finally found a good ol mechanic that knows what the heck I'm talking about and he figures he can have my carb dialed in and have it running smoothly in about two hours.

Well, I hope you have a very productive Labor Day weekend on the project. Good Luck, Bryan

bryan gilbreath

saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion
61 hillman minx estate (for sale!)

Chuck Ingram
08-29-2003 at 06:45 PM Re: V6 swap so far...

My heads are planed and the manifold planed to match. "Important thing to remember if planing the heads".I do remember some of the good things I did. Mine is a 2.6 so there are some differences in terms relating to the 2.8 external measurement.As to what they are,I couldn't say.

Chuck
62 Alpine V6 becoming a 302
64 Spirit of Lister

B ritbeam
08-29-2003 at 08:34 PM Re: V6 swap so far...

Bryan,
Did you purchase your carb new from Jegs? I notice they offer a spring kit Is this necessary to get the engine running properly? I thought the 390cfm was ready out of the box.I guess Irn a little off balance in this area.When I changed from Zenith to weber (on the 1592) I installed started it up adjusted mixture/idle and enjoyed a good running system. My engine is built towards the mild side so I assumed the carb was ready to run for this configuration. Thanks for your input everyone.

Long Live the Beams
Dwain

V6JOE
08-29-2003 at 10:46 PM Re: V6 swap so far...

Hi Dwain,

You don't have to modify the rocker covers. All you have to do is turn the distributor body, so the vacuum advance canister is facing the back of the engine. It will not fit in the stock orientation. Just set the wires in the cap, so that the rotor is pointing to the number one wire, when the engine is at top dead center, and put the rest of them in the correct firing order. Joe

Britbeam
08-30-2003 at 01:52 AM Re: V6 swap so far...

Thanks Joe,
The half circle on the rear of the offy interferes while trying to install the shaft portion of dist down in the hole it wont allow a straight shot when installing the dist.It appears a small amount of the cast being removed will take care of it no real problem.
What about the carh question.Is the carb ready to use out of the box or does it require a lot of adjustment?Do I need to purchase that spring kit Jegs offers with the carb?
Well the Beam is going to have a weekend without my hands on it.The trout streams are calling.Another one of my afflections.

Dwain

Jim E

08-31-2003 at 02:40 PM Re: V6 swap so far...

Got a few hours in on the car yesterday, removed the transmission and scrapped about 10 pounds of oil and dirt off the underside, what a mess. Think I will use the steam cleaner on it am afraid it will catch fire when I start fixing the floors if I do not get the oil off it.

Anyone need a full syncro transmission, shifts well just leaks oil like a rusty bucket. Jim E

V6JOE

08-31-2003 at 06:18 PM Re: V6 swap so far...

Dwayne,

You don't have to do anything to the carburetor. Just run it like it is right out of the box. The most you'll have to do is adjust the idle richness screws in the front metering block.

I would suggest running a good fuel filter before the carburetor, as Holleys can be pretty finicky and don't like any crud in them.

Joe

Britbeam

09-01-2003 at 12:56 AM Re: V6 swap so far...

Thanks Joe,

As always appreciate your guidance.

Dwain

bryang

09-02-2003 at 02:32 PM Re: V6 swap so far...

I bought my carb slightly used and I may need re-jetting due to it being used on another application. I think that typically though, as Joe indicated these are pretty much ready to use out of the box. If by "springs" you mean throttle return springs, then the answer is no. I bought a universal kit for about \$40.00 total, I think it was a mounting kit and a cable kit actually. I got mine at Schucks. I was going to try to fabricate something, but when I looked at the kit I realized I'd rather spend the extra \$ than a whole Saturday running around town scrounging up parts.

Hope to hear everyone has theirs fired up soon!

Bryan

bryan gilbreath

saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hillman minx estate (for sale!)

Jim E
09-02-2003 at 03:37 PM Re: V6 swap so far...

While I have not tuned on a Holley in years... I think the spring they are talking about has something to do with the vacuum secondaries and when they kick in, believe they are color coded for different rates. Jim E

Jim E
09-03-2003 at 06:53 PM Re: V6 swap so far...

I have verified that 2891302 5116th ARP rod bolts are a direct fit for the 2.8 rods. The part number is ARP-154-6002, they also list a rod bolt for the 2.8 but the same bolt then sells for more money and you get less of them.... go figure. Jim E

bryang
09-03-2003 at 07:27 PM Re: V6 swap so far

Yeah, the headlight glass on the old bugs is the same as the old 356's too and it costs about a fourth as much. Funny how that works too. Maybe we should all be compiling a list somewhere of all of these parts that interchange and sources etc, that we could get to Joe and he could include with the kit. It would save a new guy a lot of unnecessary legwork possibly.

Bryan

bryan gilbreath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hillman minx estate (for sale!)

ChemTeacher
09-03-2003 at 07:42 PM Re: V6 swap so far...

Boy, a list like that would sure help. Just putting the V6 together and waiting for the kit from Joe. Bill

Jim E
09-03-2003 at 08:51 PM Re: V6 swap so far...

Joe is the one who told me about the 302 rod bolts working but he had thought it required a modification to the rod bolt holes. I had a stock 302 rod bolt to try and it is a direct fit so the ARP units will also fit.

A list would be nice...

V6 JOE

09-04-2003 at 12:06 AM Re: V6 swap so far...

Hi Guys,

Jim, check that the fillet radius under the bolt head isn't resting on the edge of the bolt hole. The ones on the turbo engine looked like they were seated, but were actually sitting on the fillet radius. If the bolt hole is chamfered a bit, the head of the bolt will sit on the milled flat provided for the bolt head.

It's good to be back from So. Cal. I didn't have access to a computer for the last few days, so I couldn't answer any questions.

Joe

Jim E

09-04-2003 at 12:23 AM Re: V6 swap so far...

I just have the stock [?] 302 rod bolt I tried for fit right now but the ARP bolts will be in tomorrow and I will check it out for fitment. I did notice the 2.8 rod bolt had a squared offside and a rounded side on the head, while the 302 bolt did not have a rounded side both sides of the head were straight. The bolt came from a rod out of the junk pile at the machine shop so I am not sure what year or if it is a after market bolt or just that it is a 302 rod. Oh and nice to have you back, and thanks for the heads up on the bolt fitment. Jim E

Jim E

09-10-2003 at 03:12 AM Re: V6 swap so far...

Still collecting parts, got my valve springs, lifters, retainers and locks in the other day, bought Isky stuff, so now just need a set of 2.9 valves and the heads can get rolling.

The ARP rod bolts look to be a good fit. Picked up the rods today and will polish the beams before the installing the new bolts and resized. This is most likely over kill on the rods but only takes my time to do, so why not.

Spent a couple hours with a razor blade removing paint from the OGM and guess what it is gray under the red. Seems to be pretty solid so far.... need to pull the interior and get a start on the floors. The hood has a bad crease so will be replacing it, think my parts car has a good one. The trunk has a luggage rack from who knows what car and a bunch of holes where it is bolted on so the parts car trunk lid will move to the OGM also.

Front end is on the agenda have everything but the A arm bushings for the rebuild. Rear end... have the Tiger rear

and there is a big swap meet in NC this weekend so will go see if I can find a 19 spline Dana 44 posi, might try and pick up a after market T5 shifter too.

So many things to do if I could just stop sleeping. Jim E

V6 JOE

09-10-2003 at 02:12 PM Re: V6 swap so far...

Jim,

I spoke with a guy last night about his car. He has a 2.0 Ford four cylinder motor in it, with a five speed. He also put in a Tiger rear end with 4.11 gears and a posi unit from an old International Harvester Scout. He said he'd try to look up the information, like what year, and get back to me with it. I hadn't thought about the Scout having a Dana posi, but he says that's where he got it.

Joe

rootesracer

09-10-2003 at 04:45 PM Re: V6 swap so far...

The IH scout used a dana 27 or dana 25. Dana 27s are usually front axles, but I am pretty sure that there are some rear axles too.

I think volvo used a variation of the dana 27 in some vehicles and called it the M27, which had optional LSD.

The dana 25 from what I understand is a rear axle setup that was a leftover from post war jeeps, which also had LSD.

Lastly there was also the Dana 23, which was used on Jeep CJ2s and 3s, also used in morgans and studebakers. This is a light duty axle (7 inch RP?) that was available in LSD.

The Dana 23 carrier was the basis for the Rootes factory limited slip that was installed in the stock axle casing of factory race alpins.

If anyone has additional information on the dana 23 or the Rootes LSD option I'd love to here it.

Rootesracer

Jarrid Gross
61 SII, 1725 EFI

V6 JOE
09-10-2003 at 09:52 PM Re: V6 swap so far...

Jarrid,

Thanks for the information. There are a lot of guys that want to use the Tiger rear end in their conversions, and this will help them find what they need.

Joe

Chuck Ingram
09-10-2003 at 11:29 PM Re: V6 swap so far...

Just to throw some more on this. Massey Ferguson, if I'm remembering right, combine used the same diff as the tiger. How to I know? Brute conversions down the street built a rear end for a friends Tiger.

Chuck
62 Alpine V6 becoming a 302
64 Spirit of Lister

chili203
09-19-2003 at 10:07 PM Re: V6 swap so far...

quote:Jim E wrote:

I am in the gather up the parts and learn about the engine phase right now. Have talked with V6 Joe about the engine build several times and also have done some web crawling, I keep coming back to the fact that Joe knows what works with these engines and am planning to stick close to his suggestions. The 2.9 valves in the 2.8 heads looks to be an easy swap and should make the engine breath a lot better so that is definitely in the works. I have the Offy intake and 390 Holley which came on the engine I got from Jummpin Jan, so that is as good as it gets for carb and intake. Will port the heads and gasket match them to the intake. On the bottom end I am thinking to deck the block a bit to raise the compression, shooting for 9 to 1 and I think the 2.8 is around 8 to I stock. The rotating assembly will get balanced and use stock pistons. The cam.... up in the air there are a few grinds out there and then Delta has a grind for the stock shaft that Joe told me about which is the leading candidate right now. There is also a possibility the engine already has a aftermarket cam in it so will have to wait and see after I get it opened up what I have. I am looking to build a nice mover but not to wild so I can enjoy the thing with out having to tinker all the time.

The transmission is a snag I got a T5 with the engine but it is a Turbo coupe transmission and the gear set is wrong, at first I thought I would live with it but the more I thought about it have decided to get a 5.0 T5 with the better gear set. These come in a couple versions one has a 3.35 first gear and there is also a aftermarket and a Motorsport units that have a 2.95 first gear, which is the one I want, I think. The trouble is so does everyone else and the 5.0 T5s are all a bit pricey. I found a aftermarket transmission this morning with the 2.95 gear but it has a bunch of 5.0 Mustang stuff included in the package and is \$85() which is more than I had planed to spend, hoped to get one in the S500 range and sell the turbo coupe unit to help offset the cost. We will see how it works out,

may go ahead and buy the \$850 trans and try to flog the Mustang bits.

On the rear end I had thought to go with a Tiger rear but it will blow the budget due to having to swap gears and set it up, so looks like I will stick with the Alpine rear and put hardened keys in the hubs, the rear disc brake project that is in the wings will also come forward while the hubs are off. So there it is I am moving on the swap it is not going very fast but figure it will not happen over night and I need to sell off more bits to to keep buying the new stuff.

Jim E

Hi Jim,

I was poking around on the web and found your V6 stuff. I know it has been a long time since we talked so let me refresh your memory a bit. I met you at the Charleston Brit show years ago. I am the guy from Raleigh with the White SV that came from Cali. Remember me?

Anyway, a while back you said you might be able to build me hopped up 1725. Well I have sort of scrapped that idea and am planning on converting to a V6 myself Are you available anytime in the next year to take on the project or part of it for me? I more or less have the ability to do alot of the work myself but time is a huge issue for me. Can you give me an email or call sometime to chat a bit.

Hope all is well. Say 1-Ti to Eric *for* me too.

thanks a bunch, Tony

Tony Anderson

contacttony@yahoo.com

919-247-8669

Jim E

09-20-2003 at 03:01 AM Re: V6 swap so far...

Hi Tony,

Very good to hear from you, Eric G and I were wondering about you just the other day. I get up NC way pretty often was just there this week we will have to get together. I will give you a call and we can chat about the swap.

Jim E

65sunbeam

09-20-2003 at 10:13 PM Re: V6 swap so far...

Hello Tony! Good to hear you are still around and with the Alpine too. I have been trying to get in touch with you. Hope you can come down to Charleston the end of October for the British car show again. We hope to have a few Sunbeams there...

cheers, Eric

Jim E

09-21-2003 at 02:46 AM Re: V6 swap so far...

The story in V6 land... the cam is on the way back from Delta, I got the V6 Joe grind which is a 290/280 with 500 or thereabouts lift, I also bought a set of rocker assemblies from Delta for less than \$75 seems like a deal. The engine has been in a bit of a holding pattern for one reason or another but I did finish up polishing the rod beams today so that is one step closer. The only other real progress is more paint has

come off the OGM, have been using a razor blade to take the top coat off. Here is a picture or two of things.
Jim E

the above is a stock rod and also one that has had the casting flash removed. above is
the finished rods, this is what is referred to as polishing the beams... above is the OGM
with paint coming off

look the OGM really is gray, go figure

[Edited by Jim E on 09-21-2003 at 02:48 AM GMT]

[Edited by Jim Eon 09-21-2003 at 02:01 PM GMT]

John W

09-21-2003 at 03:29 AM Re: V6 swap so far

Jim: I know your 1725 was probably the best on the road, so I don't doubt that your V-6 is going to be the same; and I may be the only person who doesn't know this, which only means no one else will ask, but, with all that said, what's the gain from polishing the connecting rods? John W.

B395018007 (Late Series V)

Jim E

09-21-2003 at 03:48 AM Re: V6 swap so far...

Well.., most would say about nothing.. but the lines goes something like this. The parting flash from the casting, read the ridge you see on the stock rod beam, can cause something called a stress riser which can lead to a crack which shortly there after leads to a broken rod and a lump-0-junk. By polishing the ridge off the beam it is suppose to reduce the chance of breaking a rod by eliminating the stress risers. The long and short of it is a stronger rod. Now this would only be something you would worry about if you were revving the living day lights out of the engine.., oh course I would never do that... Jim E Oh and they look really nice polished also...

[Edited by Jim E on 09-21-2003 at 03:51 AM GMT]

Bill Blue

09-21-2003 at 12:29 PM Re: V6 swap so far...

What, no balance job or shot blasting for stress relief?

Jim, what are the other toys lurking in the edges of the pictures? Bill

Jim E

09-21-2003 at 02:13 PM Re: V6 swap so far...

When I said done I just mean done with the monkey work that I can do myself. I may not have them shot peened but they will get the ARP rod bolts and the whole thing will be balanced.

I work on my car in a friend's shop who does restoration. There are all kinds of toys in the place. I was standing between a Porsche 928 and a euro spec Alfa when I took the picture. Behind the 0GM is a MK8 or 9 or 10 Jag sedan [never could keep those straight] and there is a A1-I 3000 sort of in front. These are all customer cars in for work the A1-I 3000 is getting the engine and brakes rebuilt. The Jag is a full on resto which is on hold. Think the 928 is in for some maintenance and AC work and the Alfa well let's just say it is tired.

Jim E

09-24-2003 at 04:11 AM Re: V6 swap so far...

The Mustang II pressure plate does not fit the Bronco/Ranger flywheel

Jim E

09-26-2003 at 03:00 AM Re: V6 swap so far

I got a package from Delta Cams today, my cam and a set of their rebuilt rocker assemblies for the 2.8. The rockers are nice and I think a great buy for the money at \$72 for the set. All new shafts, springs and the tips are surfaced. I am guessing they would do stock Alpine assemblies. I got the V6 Joe grind on the cam and the Delta part number is DEL-906-SP-HP, if anyone wants to order one. I may have mentioned this before but I really like Delta the service is just outstanding and I do not know how they do it for what they charge. Here is a picture of the rocker assemblies.

I dropped my shiny rods off at the machine shop along with the Isky valve springs and such. The 2.9 valves came in today so all is lining up for the engine. Well except for the flywheel, need to get my hands on a Mutt II flywheel. Jim E

Series Vince

09-26-2003 at 02:24 PM Re: V6 swap so far...

Jim E.-

How much did the cam run you?

Thanks Vince

Jim E

09-26-2003 at 03:06 PM Re: V6 swap so far...

The grind was a little less than \$50 but keep in mind you have to send them your cam to grind.

SeriesVince

09-26-2003 at 05:02 PM Re: V6 swap so far...

Thanks Jim!!

Jim E

09-29-2003 at 02:29 AM Re: V6 swap so far...

Here is the cam card from Delta on my V6 cam.

Bill Blue

10-01-2003 at 02:45 AM Re: V6 swap so far

Jim, that is one hot cam! Seems most manufacturers don't make a 2.8 street cam with over 480 thou (or thereabout) lift. The 500 jobs are labelled "competition only". Looks like you'd better stress relief those rods! And I thought that with all that torque you'd changed your ways.

Bill

Jim E

10-01-2003 at 04:39 AM Re: V6 swap so far

The cam grind is one Joe uses and recommends for the engine, and is reported to have a bit of a lope. I talked with Joe about the cam on several occasions before ordering it and am comfortable with his recommendation. With the head work and the intake/carb this thing should be a nice mover. I full intend to do some drag racing and a 50 shot of goofy gas is not out of the question. In the end if the cam is too hot or I want a engine with different manners I will make a change but this round it will be a bit hotter than stock... Jim E

You only live once, then there are the HBs last words "Watch this!"

V6 JOE

10-01-2003 at 10:53 AM Re: Re: V6 swap so far...

quote:Bill Blue wrote:

Jim, that is one hot cam! Seems most manufacturers don't make a 2.8 street cam with over 480 thou (or thereabout) lift. The 500 jobs are labelled "competition only". Looks like you'd better stress relief those rods! And I thought that with all that torque you'd changed your ways.

Bill

Bill,

This is a cam I've used in all my normally aspirated engines since 1975. I have many of my customers using it without any trouble. The engine is still tractible, and I've gotten as much as 24 miles per gallon with an engine using this cam. I recommend claying the valves before running it, or any other high lift cam. The difference between .503 and .480 is .023, which is minimal, considering the fact that you should have at least .100 clearance between valve and piston, to be safe. If .023 is going to cause a problem, it's because it had a clearance problem to start with.

This particular cam grind was recommended to me by the guy who ported my first set of 2.8 V6 heads. He recommended it be run straight up. I think it is the best grind for a street engine, and as you know, I don't believe in too radical an engine for the street. This cam will idle at 800 rpm. with only a slight lope, yet it will pull strongly to 7,000 rpm, when you run the Holley four barrel. My series IV ran mid 14's at 100 mph flat with this cam, yet I drove the car every day to commute to work.

I have made the mistake of going with a bigger cam than this, against the advice of Jerry of Delta Engineering, and learned a hard lesson. Listen to your cam grinder! He has ground this particular cam profile for me for years, with good results.

Joe

Bill Blue

10-02-2003 at 01:33 AM Re: V6 swap so far...

Joe, the thing I noticed about this cam that I think is unusual is the cam lobe angle is different for the intake and exhaust. Of course I just recently became aware of such things. Do you know the reason for that?

Is this the cam you used on the turbo? In my humble opinion, car jocks get too hung up on numbers in general (bigger has got to be better) and would probably be as well off and a whole lot more satisfied if they did not know the specs of the cam (or carb) they run. What works, works. Numbers don't get you down the road. The only time they are important is when a person decides they need "more" or "less". Bill

V6 JOE

10-02-2003 at 02:26 AM Re: V6 swap so far...

Hi Bill,

The reason for the difference in lobe duration and lift between intake and exhaust, is because the intake side on the 2.8 V6 heads doesn't flow as well as the exhaust side, so to compensate, it gets a bit more of both to bring the two ports closer to the ideal ratio.

I'm a great believer in, "less can be more", if you know not to overdo it. I too had to learn this truth the hard way. When I was a young enthusiastic car nut in training, I thought, that if some was good, then more had to be better. It took me a long time, lots of errors and lots of money, to discover that well balanced, but smaller changes, made more power.

I try to preach this message to whoever will listen. The end result is, that more guys are enjoying streetability, along with plenty of performance.

I have run the turbo motor with both this cam grind and special turbo grinds, but I've found very little performance difference between them. Maybe in an all out race application it would have a difference, but on the street, it appeared

to perform almost the same. Joe

Jim E

10-03-2003 at 02:27 AM Re: V6 swap so far...

I have been crawling the junk yards looking for some parts and noticed the alloy pan on the 4.0 V6 thought it would be nice if it would fit the 2.8. Well today I took my steel pan and compared it to the alloy pan on a 4.0 and it is close but no way will it work. Would have been nice, oh well. Jim E

Chuck Ingram

10-03-2003 at 12:13 PM Re: V6 swap so far...

Jim.

I ENVY YOU.

To have time to roam around the junk yards is something I no longer have time for. There is just too many things that I must do, want to do and would really like to do.

The must do's are getting there. Only problem is that around home we can't leave things as they are. This takes up a lot of time lately. but it still is sunny every day and we are immensely enjoying it.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

10-07-2003 at 12:29 AM Re: V6 swap so far...

Chuck me neither but I sneak off and do it anyway..

Stopped by the machine shop today to look in on the progress. The heads are about ready to come home for the port work. New bronze guides are in and the seats for the bigger 2.9 valves are also all but done, will finish them after I do my cutting and grinding so if I slip will not have to grind the seats again. Worked a couple days on the T5, mostly cleaning, what a mess. Got the old input shaft bearing off and the new one on. Taught myself to set the end play for the input shaft. Now just take it back apart and put some gasket sealer on the surfaces that need it and cross my fingers that it is really a good one. I will be taking a bunch of time off work between now and the end of the year so things should get in gear here shortly, maybe even get to light this thing off at Christmas time. Now that would be a nice present from santa... then back apart for paint, but that is getting way ahead of myself here. Jim E

Jim E

10-15-2003 at 02:57 AM Re: V6 swap so far

You all getting sick of this yet? My thoughts were to keep this V6 swap all in one thread, might be a better idea to have broken it down into subsystems. Anyway on we or I go. Picked up the heads and started the port work on them.. the V6 heads are much harder to work than the Alpine head, the difference is not so much that the

alpine head is aluminium and the v6 head is iron, but the space to get the tool in to for the port work. Very tight on the V6 head I am starting to learn why port work cost so much money when you pay to have it done.

I have made some progress on the rear end, bought a locker for my Tiger axle. The power locker I got is from a International Scout 800 which think..., is the same as the tiger carrier. So now I am waiting for the unit to arrive and then will pick a gear ratio, thinking 4.11 or so. Found the locker on ebay and am starting to think that I should get sponsorship from them what with all the bits I have bought on there for this project. Jim E

jwest_sV

10-15-2003 at 04:13 AM Re: V6 swap so far...

Jim you probably already know this, But make sure your axle spine count matches the spider gears in the posi the early scout should be ok, and make sure your posi matches your R&P ratio, there is one for 3.90 and higher (numerically) and a different one for lower gears. The good sellers on ebay will tell you this. Other sources for dana 44 posi's is jeep 4x4 shops and v8 studebakers cars and 1/2 ton pick-ups. I have a Tiger rear to put in back of my v6 project so I am keen to see how you make out. John

Jim E

10-15-2003 at 05:04 AM Re: V6 swap so far...

I am aware of the spline count and was careful to get the right one, as in 19. The carrier I bought is for the lower gear ratios as I am thinking to run a 4.11 or so gear. I bought a Power Locker which from what I have read is one of the better units. I suggest anyone thinking of going the Tiger rear end route look into the different lockers

<http://pacific.telebyte.com/allanw/binder/info/locker.html>

this is one of the places I checked out before laying down the cash, the other thing is as you pointed out the break in what gears the thing will take. Will post how the rear end build goes as it goes. Jim E

Jim E

10-16-2003 at 02:36 AM Re: V6 swap so far

More head porting today, what a grind...

The new Ebay purchase arrived, the IH Power locker for the Dana 44 it is marked as an A3 and looks OK but I figure to take it by the rear end guy and ask for an expert opinion on what I have condition wise. Then figure out which gear sets it will carry and source a ring and pinion plus all the bearing and shims and a different yoke to match the new pinion spline count. Then there is a drive shaft, traction bars and on and on. When is the Invasion?? the days just fly by. Jim E

chili203

10-16-2003 at 03:48 PM Re: V6 swap so far

Hi Jim, Joe, and all the rest of you fellow V6 converts,

This may be a stupid question.(I should put that in as my disclaimer on all my questions). Does anyone have any comments on whether or not the frame will need to be reinforced to handle the additional torque provided by the V6 conversion? I thought at one point I saw a frame diagram showing that the tiger had additional beams welded across the xframe in the center of the car.

Thanks in advance,
Tony Anderson

V6 JOE

10-16-2003 at 03:57 PM Re: V6 swap so far...

Hi Tony,

The stock Alpine unibody, is a wonderfully strong unit. I haven't found it necessary to add anything to it to be able to handle the torque from the 2.8 V6. The turbo Alpine I had has been raced for years, including abuse like 5,000 rpm, drop the clutch starts, using slicks, without any evidence of weakness. The body on it is still as solid as it was the day it came from the factory. You can feel confident that your V6 conversion will last for many years without any problems.

Joe

chi I i203

10-16-2003 at 04:02 PM Re: V6 swap so far...

That's good news. thanks
Joe!

Barry Knight

10-16-2003 at 07:03 PM Re: V6 swap so far...

Tony,

Tigers do have a pair of steel plates welded on the inner sides (one on the left and one on the right) of the X-frame just forward of the center. These plates simply provided a place to bolt on the crossmember for the toploader transmission.

Barry Knight Conyers,
GA
SV-V6 conversion in progress

Jim E

10-16-2003 at 11:31 PM Re: V6 swap so far...

Another day of porting... will it ever end..

Picked up the Tiger rear end today. Will give it a clean and inspect, then take it apart and try and flog the stock

gears and carrier on ebay. I want to do the disc brake deal on this rear end while I am building it but we will see. The stock Alpine rear end needs to find a new home, interior needs to come out. Wanted to prime the car this week but did not happen. Oh well the mid point must be coming up... just have not seen it yet, once things stop coming off and start going back on I will be happier. Jim E

KennyJ

10-16-2003 at 11:44 PM Re: V6 swap so far...

The first set of 5.0 litre heads I ever ported took me about 60 hours. At the time I was single and had a case of insomnia, thus most my porting was done between 1 and 4 am.

Figure you could spend about 40 hours with the right tools the first time out.

Don't waste your time polishing the exhaust port please. Once a little bit of carbon builds up (which takes precious little time if you run a choke) your polishing is worthless. I just left my finish 'stone' finished.

Kenny

Jim F

11-07-2003 at 01:40 AM Re: V6 swap so far...

Only small things are happening on the swap. I removed more bits from the car head lights, tail lights, grill, bumpers, 4 cylinder engine mounts, wiring under the hood... did some cleaning there is oil on everything. Head porting is about half done plan on finishing up this weekend. Today I took the flywheel to the machine shop and got it surfaced and put on a new starter gear. Have determined my ebay powr-lok posi unit is for 3.92 and higher numeric gear sets. Also found a site that gives a fairly clear and straight forward description of installing and setting up a Dana 44 ring and pinion. I am going to put new clutch packs in the powr-lok and order a gear set, have not decided for sure if I will install the gear myself or farm it out. Figure I am not at the halfway point yet but getting close, which may be just wishful thinking.

61 Alpine

11-07-2003 at 11:35 AM Re: V6 swap so far...

I just started work on my #2 Alpine. I have a fly wheel but since it was not attached to the engine when I pulled it, I am not sure it is the correct one. It is the right bolt pattern but it seems smaller than the first one. If anyone has their engine torn apart and could measure the diameter for me that would be great. Thanks,

Rob

Rob Wiseman V6 Alpine

Series I

Jim E

11-07-2003 at 02:26 PM Re: V6 swap so far...

I do not have the flywheels in front of me but the easy way to tell if it is a Ranger/Bronco II is measure the

distance between the two of the bolt holes that hold the pressure plate on it is just under 3 inches. This measurement is hole to hole with the locator pin in the middle of the holes, there are three pins and three pairs of holes. On the Capri or Mutt 11 flywheel this measurement is around five and a half inches. The other thing to measure is the contact or wear circle the clutch disc made on the flywheel, bronco ranger is a little under 9 inches and the mutt capri is 9 1/2. You want the Mutt or Capri flywheel. I have looked at both and they are different heights and diameters. I think you would have issues running the Ranger Bronco flywheel. I also looked at a 4.0 flywheel while visiting with Jan and it is different than both the ranger/Bronco and Mutt/Capri in every measurement mentioned. The kit is made to work with the Mutt or Capri flywheel I would make sure I had one of these or you may have starter engagement issues. The other thing is the B/R clutch disc has a different spline count and you would have to either have a 8 7/8 ten spline disc made or figure out a disc from a different application that would work. I had a heck of a time finding a Mutt II or Capri flywheel.

6lAlpine

11-09-2003 at 12:01 PM Re: V6 swap so far...

I'll keep looking for the Mustang II flywheel. I also need the timing chain cover.

Rob Wiseman V6 Alpine
Series I

Jim E

11-09-2003 at 04:45 PM Re: V6 swap so far...

I think the flywheel is the hardest part to find. The Muttis I found in the yards were either bare shells, automatics or 4 bangers. The one Capri V6 I found was also an auto transmission car. Think we may have to figure out how to fit the 4.0 flywheel at some point.

guest

11-09-2003 at 08:40 PM Re: Re: V6 swap so far...

Spicer (Dana) 23 were used in Military and Early CJ2a rear axles, as well as in the 2wd Jeep Station Wagon and Jeepster (VJ-2, VJ-3). The Military and Early CJ2a were full floating, the Wagon/Jeepsters were semi floating with a 4.88 ratio: 39/8 teeth. This is from the tag on my VJ-3 and my Willys Service Manual which also lists the Timken Bearing part nos. A fair amount of information on these axles can be found on various vintage Jeep [sites.](http://thenoseknows@att.net)

Lastly there was also the Dana 23, which was used on Jeep CJ2s and 3s, also used in morgans and studebakers. This is a light duty axle (7 inch RP?) that was available in LSD.

The Dana 23 carrier was the basis for the Rootes factory limited slip that was installed in the stock axle casing of factory race alpiners.

If anyone has additional information on the dana 23 or the Rootes LSD option I'd love to here it.

Rootesracer

DAN MOORE

11-11-2003 at 03:17 AM Re: V6 swap so far...

Hi Jim

On the MUSTANG II NETWORK CLASSIFIEDS there is a guy with 2 2.8 mustang engines He is in southern west virginia he might have what you want? But be careful I bought a set of heads of him and was told they were off a 74 stang casting 74 tm and when I got them the casting # was 84 tm 1985 bronco>
But it is worth a try?

Dan

Jim E

11-11-2003 at 03:26 AM Re: V6 swap so far

I have finally got all the stuff I need, actually a bit more than I need at this point. So anyone else needing swap bits go for it.

Have read the 1974 year heads are the best flowing. I have a Mustang II engine that is from a 1975 not sure what the difference is between the 1974 head and all the rest, sort of had my fingers crossed that my MIT engine might be a carry over from 74.

Speaking of heads I should have my port work done and some pictures up before much longer...

DAN MOORE

11-11-2003 at 06:16 AM Re: V6 swap so far...

Hi Jim

Diff in heads is that there is a small port in 75 and later heads that was used to heat manifold for choke (exhaust gas cross over) casting # for 74 is 74 tm any thing later had this cross over 75 trn and on I am in process of building a second motor and i know Joe doesn,t advise it but i went whole 9 yards on motor and am redoing body for 4th and last time . just had it sandblasted now fun begins. Have watched your progress with intrest and may use some of your idea,s

Dan

Jim E

11-11-2003 at 01:46 PM Re: V6 swap so far

Oh so that is it, simple, could not figure out what they were talking about, will check my M11 engine. Thanks
Jim

Jim E
11-14-2003 at 05:30 PM Re: V6 swap so far...

The brown truck delivered my headers today and here they are...

I had them coated by Performance Coatings, so they should last just about forever. [Edited

by Jim E on 11-14-2003 at 05:30 PM GMT]

Jim E
11-14-2003 at 10:53 PM Re: V6 swap so far

By the way the headers are top notch. I looked them over and they are as well made as you could ask for with nice thick flanges. I cannot wait to get this thing done...

jumpinjan
11-15-2003 at 04:15 AM Re: V6 swap so far

I-Icy Jim,
You failed to mention what color are you going to paint your series V? Glen Green or Thistle Gray Jan

Jan Servaites - SAOCA Member no.8
EMAIL: jservaites(at) '60 Series I Alpine
(439) '62 Series II Alpine (#39) '62
Harrington LeMans (939) '62 Harrington
LeMans (#39)
YOUR FRUSTRATION ELIMINATOR

Jim B
11-15-2003 at 04:27 AM Re: V6 swap so far...

I will be going with the original red or maybe a nice green... then black is nice of course white is good too.., so yes I have decided to paint it some color just not sure which one... perhaps gray

Chuck Ingram
11-15-2003 at 09:42 PM Re: V6 swap so far...

Jim

Red is nice but you see too much red as it is. Now BRG is a nice choice but then black, white, gray or yellow are also nice.

Deels ions, decisions? Another sunny day.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

11-19-2003 at 06:51 AM Re: V6 swap so far...

Got a visit from the brown truck again today. The rest of my V6 kit has arrived, very nice stuff. I will post some pictures of the parts in a day or so, the cross over tube is a piece of art work and the trans mount is super. Heck all the stuff is top shelf.

Chuck Ingram

11-19-2003 at 02:33 PM Re: V6 swap so far...

Jim.

Look forward to seeing part pictures.

"Crossover tube" Are you refering to an equalizer exhaust tube? It's good for a few more ponies. every day is sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

11-19-2003 at 03:04 PM Re: V6 swap so far...

Chuck,

The tube is for the steering, moves the thing up out of the way. Will get some pictures posted a little later.

Jim E

11-20-2003 at 04:16 AM Re: V6 swap so far...

Here is a link to the pictures of the V6 kit. <http://home.bellsouth.net/p/s/conununity.dll?ep=87&subpageld=116750&ck>

Chuck Ingram

11-20-2003 at 02:07 PM Re: V6 swap so far

Jim.

The parts look good. Mounts are similar to mine except a little shorter than mine where they bolt on to the engine. Transmission mount is looking very nice. I never modified the thermostat housing. To be honest I never even thought of modifying the steering tube. It would have been a whole lot easier back then. I went to the Mustang front end and I must say it is great. However it will be in the way to do the clutch as I must remove motor and tranny I think. Will see how it goes.

I look forward to your updates. And another sunny day. Actually cloudy and very windy but then it is always sunny for us.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

gwl

11-20-2003 at 02:43 PM Re: V6 swap so far

Jim E, the headers you posted a picture of on November 14, are those Edelbrock Headers or did you get them from Joe (ie, part of his kit)? I've got Edelbrock on my Bil and they look real similar.

Gary

Jim E

11-20-2003 at 02:55 PM Re: V6 swap so far...

The headers are from Joe and are part of the V6 kit, they are made from sections of tubing welded together.

gwl

11-20-2003 at 03:29 PM Re: V6 swap so far...

Thanks Jim E. Those headers really look nice. I've gotten parts from Joe and they are of excellent quality. And I should add, his support was second to none.

Gary

[Edited by gwl on 11-20-2003 at 04:13 PM GMT]

CHRIS

11-20-2003 at 04:10 PM Re: V6 swap so far...

Jim, I just saw the V6 kit photos, those parts look great. I can't wait! This kit is going to be the best

Christmas present I ever bought for myself.

Chris
Modesto, Ca
SAOCA # 0240
1967 Series V Alpine (V6 in the
making)

V6 JOE
11-21-2003 at 11:26 AM Re: Re: V6 swap so far...

quote:Chuck Ingram wrote:

Jim.

The parts look good. Mounts are similar to mine except a little shorter than mine where they bolt on to the engine. Transmission mount is looking very nice. I never modified the thermostat housing. To be honest I never even thought of modifying the steering tube. It would of been a whole lot easier back then. I went to the Mustang front end and I must say it is great. However it will be in the way to do the clutch as I must remove motor and tranny I think. Will see how it goes.

I look forward to your updates. And another sunny day. Actually cloudy and very windy but then it is always sunny for us.

Hi Chuck,

You'd still have to remove the engine to work on the clutch. The modified steering link only makes it easier to keep the stock steering components and have the engine back where it belongs.

Joe

V6 JOE
11-21-2003 at 11:49 AM Re: Re: V6 swap so far...

quote:Chuck Ingram wrote:

Jim.

The parts look good. Mounts are similar to mine except a little shorter than mine where they bolt on to the engine. Transmission mount is looking very nice. I never modified the thermostat housing. To be honest I never even thought of modifying the steering tube. It would of been a whole lot easier back then. I went to the Mustang front end and I must say it is great. However it will be in the way to do the clutch as I must remove motor and tranny I think. Will see how it goes.

I look forward to your updates. And another sunny day. Actually cloudy and very windy but then it is always sunny for us.

Chuck,

I think the difference in length of the motor mounts, is because the 2.6 V6 has its mounting points farther back on the engine block than the 2.8

Joe

Chuck Ingram

11-21-2003 at 06:50 PM Re: V6 swap so far...

Joe.
That would do it regarding the mounts. Will probably work on the Tiger first. Need the speedo gear replaced. I do know that a clutch was replaced on a tiger at Sum 3 without pulling the motor and tranny. Doug Jennings had a hand in that.

Chuck
62 Alpine V6 becoming a 302
64 Spirit of Lister

V6 JOE
11-21-2003 at 07:18 PM Re: V6 swap so far...

I would have loved to see that, but I can tell you for sure, that it can't be done on an Alpine with the T5 transmission.

The only good thing about the V6 Alpine, in this respect, is that the engine can be removed in 45 minutes, and replaced in about an hour fifteen minutes. It got so that I could do all this without having to removing the hood.

Joe

Barry Knight
1 1-21-2003 at 07:31 PM Re: V6 swap so far

Chuck,

I have vivid memories of replacing the clutch on a friend's Mk-I Tiger without removing the engine or transmission in about 1965. We didn't know any better and changing the clutch on my '57 Chevy was easy, so

I recall that getting the clutch out was not all that difficult, but aligning the clutch disk and getting the transmission back in took a long time and required considerable special purpose language. I also remember lying on my back and bench pressing the toploader transmission into position. I would struggle to pick up one end nowadays.

Ah, to be 19 again!

Barry Knight Conyers,
GA
SV-V6 conversion in progress

Jim E

11-21-2003 at 09:55 PM Re: V6 swap so far...

Reminds me of a joke... come now fellows you have to take one or the other out to put a clutch in. While you might just completely unbolt the trans and slide it back until the input shaft is just resting on the hole in the bell you did everything but drop it on the ground, to me that is pulling the trans.

The joke... Went night fishing and took my dads lantern. Caught a fish and got to jumpin around and knocked the lantern in the water. Went fishing again the next night and guess what I caught the lantern and it was still burning!

V6 JOE

11-21-2003 at 10:02 PM Re: V6 swap so far...

Ah, to be 19 again! Barry,

You don't know how I wish that right now. We never knew what it was, to physically say, I can't do that. We were able to do incredible things, that we now look back on and wonder; How did we do that?

Joe

Chuck Ingram

11-21-2003 at 11:01 PM Re: V6 swap so far

Joe and Barry.

Yes we were something else in days gone by.

I didn't get smarter as time passed and I still think I can do every thing but at times them bones say hold on now and think a minute before you do something dumb. Never mind 19. I would gladly be 42 again as I thought I was in my prime back then.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

12-05-2003 at 05:14 AM Re: V6 swap so far...

Well with work and all I have not got much done lately.... so I took three days off. For the past two days I have been grinding on the heads, figured I had a day or so to go and looks like it was really three days that is if I finish up tomorrow. Man I hate porting these friggin cast iron heads.

Jim E

12-06-2003 at 06:02 AM Re: V6 swap so far...

Heads are done, finally. I did all I could stand to do packed them up and went to the machine shop, guy took one look and grabbed the grinder and in about an hour they really looked good. I have pictures of how far I took them but none of what they look like after the expert got done. I will post pictures of both one day next week. I also plugged the six smog holes on the exhaust side with brass plugs, now drill the four steam vents and will be about there.

Here is a few shots of what they looked like when I was done..

jandrscovill

12-06-2003 at 06:25 AM Re: V6 swap so far...

You are an animal Jim!

Are you planning on having your car completely done for Dayton? Body and all i mean, are you doing the body and paint, or are you having it done?

I've got this one almost ready for final prime, interior is gutted, and i mean gutted. I'm making just about everything myself except for the seats. Motor is finally in the putting it back together stage (1725) UT-OH, gotta go, the wifes water just broke!

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

12-06-2003 at 06:34 AM Re: V6 swap so far...

Wow a new bundle of joy coming, congradulations.

I want to have it done paint and all for Dayton but we will see what happens.

Doing everything I can myself [read all the monkey work] may even paint it, friend with a body shop said he would show me how and I can use his spray booth. I have a lot to go to be ready for the Invasion, but I really want to have it done by then. Think there is enough time to make it the money thing may be the problem...

jwest_sV

12-06-2003 at 10:16 PM Re: V6 swap so far...

Jim, I just had a bit of a crazy idea:- if I brought a set or *two* of V6 heads to the next Invasion would you be willing to give a workshop on how to port and polish them for the do it yourselfer? I would like to try to do a set

of heads for my V6 but not screw up on doing it. john

Jim E

12-07-2003 at 02:01 AM Re: V6 swap so far...

I would be happy to do what we can, the only thing is the iron heads are a different animal than the soft alloy Alpine heads. You need to figure on spending 20-30 hours working a set maybe more than that. Then I do not know where we will be and whether or not there will be a place to do any grinding and cutting on heads, it is loud and makes a mess. Still we can do as much as possible and if nothing else I can bring pictures of my heads we can draw pictures talk about how to do it where to remove material and such. I am no expert when it comes to porting these heads. I sort of followed the Pruett book picture on shaping the guide boss and just cleaned them up in the port area, but not knowing exactly how to do something never stopped me before.

Jim E

12-08-2003 at 10:14 PM Re: V6 swap so far...

Things are moving. Got a call this morning from the machine shop... "bring me the balancer and what do we want the valve spring pressure at open and closed" followed by "I'm a waitin on you" which always means get it in gear or it will cost more... of course the balancer or bottom pulley and the info on the valve springs was at the shop with the car, which is 30 minutes in the wrong way. Got the stuff and off to the machine shop, I love going to the machine shop. The heads were there seats done three angle on the valves all my new springs and retainers laid out. Lovely really lovely all the nice porting and the Isky bits. Then on the other work station the last two rods were being heated to fit the pistons, all balanced those new 302 ARP rod bolts install big ends resized, beams polished. The crank was laid in the balance machine waiting for the rings and rod bearings to come in so it could be balanced. Then I was ask "what you going to do with the deck" here I had debated with myself what to do, deck it a bunch or just enough to square it up. The Pruett book says no more than .020 should be cut off and I have a pretty big cam so in the end I decided to just square it up and got to watch the whole thing being done. Ended up the drivers side of the block was 4 thousands taller than the passenger side. I also learned this is not uncommon and the drivers side is taller on almost every block. So now I have a square block with 8 thousand removed from the deck and another 8 thousand cut off the heads so the compression may will be a little higher but not a lot. The engine kit will be in tomorrow and the rest of the machine work should be done the day after at the latest. Jim E

6lAlpine

12-09-2003 at 12:16 AM Re: V6 swap so far...

Jim,

Just curious, I am getting ready to take my engine into the shop. Would you be willing to share your costs on the engine parts and work.

You could email me at:

Thanks, Rob

Rob Wiseman V6 Alpine
Series I

Rob Wiseman V6 Alpine
Series I

Jim E
12-09-2003 at 12:31 AM Re: V6 swap so far...

I will tell it here so everyone can see got nothing to hide and your cost may be more as I am buddies with the guy who runs the machine shop. Pit crew for his drag car and drink beer with him, then you never know I may be over paying...

That aside the guesstimate when I started was about \$1400 but that was with a bore and new pistons, after opening up the engine the bores were close enough that I just honed the block and am reusing the pistons. The price above also included the 2.9 valves and all that goes with it, seats new guides three angle. Balance the rotating assembly, resize the rods, deck the block, mill the heads... and the parts [I did buy the 302 rod bolts outside this]. I am not sure what the bill will be with out having to buy the pistons or pay for the bore job but it should be a bit less. I will post the cost here in a day or two when I have to fork over the cash but that should give you an idea, my guess is it will be in the 5700-1000 range which is a pretty good spread but I know the block drew blood today so we will see... Oh and I also spent money on the cam grind and the rocker assemblies both from Delta which was around \$125. The three things I would add to any 2.8 build would be the 302 rod bolts, the Delta rocker assemblies and the Delta cam grind all total about \$200 but money well spent in my opinion. The head porting I did myself but if you were to pay to have it done figure \$700 more or less. I may be leaving something out here and there but that is as near as I can figure it off the top of my head. The proof will be when it is on the road and how well it runs... I am all ready thinking about a turbo build in the back of my mind.

Jim E
12-11-2003 at 03:19 AM Re: V6 swap so far...

Cost more than I thought... but then everything does. Parts were \$510 labor \$1000. Got 2.9 valves, seats, guides, three angle valve job, surface heads, steam holes drilled, boild block, hone, cam bearings installed, rods sized, balance, surface flywheel, install F/W ring gear, freeze plugs, cut intake, decked block, checked block and heads for cracks. [think that is all]

Other costs in the build not included in the above, ARP rod bolts, flywheel ring gear, Isky lifters valve springs and retainers, cam grind, rebuilt rocker assembly, oil pump, timing gears. I assemble the engine. Figure I have around \$2k in this engine, will be interesting to see what it pulls on the dyno.

Chuck Ingram
12-11-2003 at 06:16 PM Re: V6 swap so far...

Barry.

I did end up dropping the motor and tranny. I have headers and by the time you remove them as well as motor mounts and brackets there's not much left to drop it.

I think I was at my prime at 42.1 at least know a lot more than when I was 19

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim E

12-30-2003 at 04:07 PM Re: V6 swap so far...

Two weeks off to work on the car and not much done, well I have worked on it but it does not seem like I am getting any closer. Latest thing is the floor pans or where there use to be floor pans... at least the stuff under where the floor pans were is solid.., well back to scraping black gunk off the inside of the tub.

My intake does not fit after cutting it like the Pruett book said to cut it, Ijust hope it is fixable. This is a real kick in the head.

V6 JOE

12-30-2003 at 04:33 PM Re: V6 swap so far

Hey Jim,

I was just thinking about the fact you had the block decked .008'. Did your machinist also take anything from the front and rear of the center of the block? That might be what is causing the manifold to bottom out before the two sides can seat on the heads. I don't know if this is the cause, but I thought it would be a good thing to check out.

Joe

chili203

12-30-2003 at 04:35 PM Re: Re: V6 swap so far...

Hi Jim,

It's Tony A.

Sorry to hear about the intake and the slow going. But from my perspective you have really made a lot of progress. I can't wait to see your car when it is all done. With your attention to detail I would bet that the OGM *will win* some pretty nice trophies. Keep your chin up and have a great New Year. God Bless,

T

Jim E

12-30-2003 at 04:36 PM Re: V6 swap so far...

No did not remove any material from the top of the block. I think one of two things is wrong either he did not cut enough off the bottom or he did not have it square to the world when he cut it or C I read the spec wrong and cut off to much.

Chuck Ingram

12-30-2003 at 07:25 PM Re: V6 swap so far...

re Milling.

I had my manifold matched to the heads and block by the shop which built my 2.6 V6 in the first place. They were the ones who did the planing of the heads and block. They did the block assembly and the valve job. I did the rest. The only problem was I had to redo valve timing and lash to match the cam I used.

I do know that I didn't have any problems with installing the manifold. I remember them telling me how they match the manifold to the heads and block but it is so long ago I just don't remember. Did I say it is sunny?

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Chuck Ingram

12-30-2003 at 07:37 PM Re: V6 swap so far...

Hey Jim.

Boy this page sure has interest. 3 825 look at's is more than any other heading. I guess this makes 3826. Best wishes for 2004

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

12-31-2003 at 04:43 AM Re: V6 swap so far

Oh Chuck it is like a train wreck folks just cannot look away.

Today I assembled the short block, went smooth felt like I really got something done. Now to put the top end on it and bolt that set of finned alloy rocker covers on. Not sure what is going to happen with the intake talked to the guy who machined it and looks like I will take the engine by the shop and see what we can do... must be a way to fix it...

DAN MOORE

01-09-2004 at 03:52 PM Re: V6 swap so far...

Hi Jim

You been holding out on us Jim just saw your valve cover,s on Ranger Station SWEET But do they fit an American Ford V6

Dan

Jim E

01-09-2004 at 04:07 PM Re: V6 swap so far...

They do fit, I posted a picture of them here first on another thread. I will be

selling a set of those here shortly.....

DAN MOORE

01-09-2004 at 05:54 PM Re: V6 swap so far

Sorry Jim

Didn,t notice pictures before have always lived by the theory You Can Never Go Back they are nice looking valve covers

Dan

Jim E

04-11-2004 at 05:24 AM Re: V6 swap so far...

While the floor pan replacement has side tracked me for the last good bit I am here to report progress on the actual swap. Tonight I got the transmission in, it will have to come back out for a little more tweaking on the tunnel but I am close. When I get the tunnel in shape I can put the driver side front floor in and then on to the engine. I might get this done in time for the Invasion after all.

The tunnel mod does have me a little worried, how much clearance do in need on the sides? I think I will be good but would rather get it right and not have to do it over.

Working in a shop with a nice tool supply is a real bonus. I used a ram [jack gizmo used to straighten bent sheet metal and such on wrecked cars]to expand the tunnel in on the drivers side toward the front. Went thru the Alpine transmission oil fill hole and against the inside of the sill. Work great or at least I think it did...

V6 JOE

04-11-2004 at 06:16 AM Re: V6 swap so far...

Jim,

All you need is at least a quarter inch of clearance to the tightest spot, and you're good. In most cars, the engine and transmission can move a bit when the engine torques over under acceleration, but with the mounts we provide, the engine and transmission dont move much, so you don't have to worry about the drive train touching the body.

I'm glad to hear you've made some progress on the actual conversion. The transmission tunnel modification is the hardest part of the job. The rest of it is down hill from there.

Joe

alpine 64

04-11-2004 at 11:20 AM Re: V6 swap so far

Hi Joe,

All down hill from here....hahaha i guess that could be read 2 ways.. some people probably think it was all downhill when Jim went V6!!!

Also joe, i posted some links of the weber conversion i did.. would love to know what you think., if patterns re-appear i gather i will do a little more with the webers then be dropping you a mail and some

(ps: the link is set as my homepage)

1963 Alpine Sli SAL 018692 LB9008874RR0M (engine) 1965
Alpine SIVGT SAL 540798
B941031 IOGTODHRO HBH 01641 (engine)
SAOCA: #381

V6 JOE

04-11-2004 at 12:43 PM Re: V6 swap so far...

Hi Michael,

Some people still believe the earth is flat too. I also know some guys that think Ford hasn't made a car since 1932. I try to not disturb these folks, because they are enjoying their dreams.

There was a time when I felt like a lone voice crying in the wilderness, but there have been some who have become enlightened, and have joined the heretics of the dark side.

The proof is in the pudding, as they say. Joe

V6 JOE

04-11-2004 at 12:47 PM Re: V6 swap so far...

Michael,

I forgot to ask you where is your home page. I'd love to see your handy work. Please give me the address so I can see it.

Joe

Jim E

04-11-2004 at 0 1: 12 PM Re: V6 swap so far...

I think if you click on the little house icon at the bottom a posters message it will take you to their homepage if they have it set up to do so.

The tunnel mod has been a walk in the park compared to what I have been doing. Now getting the transmission up

in there by myself was not so simple until I thought to use two floor jacks.

How about a oil fill access for the T5, did not think to look will I need to make a hole or is the factory hole going to be close enough? I will check it out just thinking out loud.

By the way just between us I can not wait to go racing in the thing!

alpine 64

04-11-2004 at 03:37 PM Re: V6 swap so far...

Hi Joe,

Yes as Jim said click the little house icon at the bottom of my posts and you will be taken there. The V6 group certainly makes up a large gathering on the board these days... and generally when a conversion is done it seems to also be in conjunction with a restoration (i know it wasn't always meant to be that way... sorry Jim) So i guess it means more well presented alpines.. even if they are not stock.

Jim, as for racing.. what kind., we talking 1/4.. or are you going to show us how much better it handles with that 6 in it? should be a fun ride., especially with a nice trick rear end in there... i guess it will not be long before you are working on fitting bigger front discs

1963 Alpine SIT SAL 018692 LB9008874RR0M (engine) 1965
Alpine SJVGT SAL 540798
B941031 IOGTODHRO HBH 01641 (engine)
SAOCA: #381

V6 JOE

04-11-2004 at 04:46 PM Re: V6 swap so far...

Michael,

I love your Alpine, especially the way the engine looks with those Webbers on it. I can see that you really appreciate your baby. I love modified cars of any stripe, but especially a good looking Alpine like yours.

Those Webbers scream "Horse Power". How much difference do they make over the stock set up?

I've seen more power from a small block Ford with a good four barrel Holley, than with the four webbers my brother had put on it, but the cool factor of the Webbers made him keep them for a while. To be honest, he might not have had them tuned correctly, so he might not have been getting the most from them. I just love the look of all those air horns.

Joe

V6 JOE

04-11-2004 at 04:50 PM Re: V6 swap so far...

Jim,

The access hole in the transmission tunnel for servicing the stock transmission, lines up with the oil plug on the T5 so you can fill it through there. The only reason I filled it from underneath, is because I wanted a one piece carpet in the car, so had to cover the access hole for the transmission.

Joe

Chuck Ingram

04-11-2004 at 05:51 PM Re: V6 swap so far...

Jim

To fill from underneath I use one of those transfer type guns. Basically a tube with a plunger and an outlet with a small hose connected. I used a little heat and bent the end of that plastic hose like a nice 90 degrees. You can suck the oil up but I found it faster to unscrew the tube end and fill it up. Impatient or what? This makes it so easy to fill the tranny or rear end.

As to lifting the tranny I bought one of those tranny adapters for the big floor jack. It sure has come in handy for so many things. I use it for rear ends as well as front ends. I did modify it a bit with bolt on pieces and when parts are tied down it makes life simple to move them into place.

Like having a helper.

Have a Happy Easter and may it be sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

04-12-2004 at 01:06 AM Re: V6 swap so far...

Well I was thinking 1/4 mile racing but as they said in Stripes... I am willing to learn... The rear end is a Tiger Dana 44 with a Power-lok and a 4.09 gear.

Had the trans in and out a time or two today, think I have the tunnel hammered into shape. I see that you could get at the liii hole from the stock access or underside. I am not sure at this point if I will weld the stock hole up or leave it be.

Chuck I could use one of those gizmos but have got by with out it this time. I used two floor jacks one on each end of the T5 and while it was not perfect it got it done.

Eric stopped by for a how do you do today, we talked story and had a good time. Nice when a friend drops by so you can BS each other.

Oh and by the way I am thinking this is going to be one BFA.

Chuck Ingram

04-12-2004 at 11:52 AM Re: V6 swap so far...

Jim

The nice thing about the adapter is it does allow for changing the angle while the tranny is on it. and its sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

04-20-2004 at 01:27 PM Re: V6 swap so far...

Just bought a Steda tri ax shifter on ebay. This is one of the after market 5.0 Mustang units with stops. The stops keep you from damaging the shift forks if you get to wild banging the gears. Anyone else running an after market shifter on thier T5?

Put in some late night work on the car this weekend. The last floor pan is about done and I may even set the engine this week, if all goes well.

bryang

04-20-2004 at 02:35 PM Re: V6 swap so far...

Hi Jim,

I just put in the Pro 5.0 shifter on my t5 trans a few weeks ago. I'm hoping it does what everyone claims it's supposed to do. It certainly looks and feels better than the stock shifter set up.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hillman minx estate (for sale!)

Jim E

04-20-2004 at 02:52 PM Re: V6 swap so far...

I wanted a PRO 5 but the deal on the Steda was to good to pass up. Did you have any trouble adjusting the stops? The shifter I have is used and of course has no instructions but I figure I can find them on the www somewhere.

Need to take my radiator in and get it upgraded, is there a fin density or per square inch I should ask for and I need to swap both outlets to the opposite sides? I should just do a search I am sure this has all been posted before.

bryang

04-20-2004 at 04:47 PM Re: V6 swap so far...

Hi Jim,

I didn't adjust the stops on mine as they seemed fine as is. I bought a lightly used one as well. I will probably do some minor adjusting on it as soon as I really get it rolling.

With the radiator I went with a 3 row core. I also had them add about an inch and a half in height to the radiator. With the inlet and outlet I had them moved to the left hand side (looking from the cockpit. I ended up doing the lower one a few times to get it pointing in the right direction. If I remember right, it elbows out and to the left. I experimented with a few different hoses and ended up going with one of the flexible units on the bottom. It's a little tight down there but it might not be if there wasn't the extra depth I added. Also, I ended up profiling my fan blades a bit so that they wouldn't hit the outlet from the engine.

I'd recomend doing a really good and thorough test fitting before you have the radiator redone. It would also be a good time to build a shroud. I'm going to build one, I just don't know when. I let mine run for a bit the other day and the temp went to about 200 before the thermostat opened up and then it cooled down to 190ish. I read that someone else had the same thing going on. I wonder if the 180 degree thermostats are really 200 degree.

Anyhoo ... my fan appears to move quite a bit of air so that is good. The real test will come in a month or two when we start getting some of our balmy 110 degree days.

Have fun!

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillrnan minx estate (for sale!)

Jim E

04-20-2004 at 10:55 PM Re: V6 swap so far...

Guess I will hold off on the radiator for a while.

Here is a picture of the shifter I got on the ebay. I have read these aftermarket shifters make a lot of difference in how the transmission feels and shifts.

[Edited by Jim F on 04-20-2004 at 10:56 PM GMT]

V6 JOE

04-20-2004 at 11:12 PM Re: V6 swap so far

Hi Jim,

The way to adjust the shifter, is to put it in gear, (either forward or back), and adjust the stop to give you about .030/.040 clearance to the handle. That way the transmission will be sure to go completely into gear. If you place the adjuster against the handle where it rests when it is in gear, it might not go into gear completely when you shift hard. The extra clearance will not hurt the transmission, because it won't go far enough to put pressure on the shifting fork.

Joe

Chuck Ingram

04-21-2004 at 12:31 PM Re: V6 swap so far...

Jim.

I use synthetic in my t5s. The Lister was a bit sticky but nothing you could really say was not good. Went to synthetic and problems disappeared.

As to radiators and cooling I would definitely go to the Griffin aluminum rad. See Doug Jennings on this. An after market cooling fan, not flex fan, with the erratic blade pattern. These have the blades behind the face of the fan or as the front of the blades are even with the face. This allows more room from face of fan to the rad. Using a full shroud will definitely keep you cool. Also block the horn openings and dam the space under the rad to keep any hot air from circulating back through the rad. The Lister ran so hot at first the heat gauge wanted to go to Florida where it would be cooler. I now run all day on the highway at 160 to 170F. I still have extra capacity to cool as I have a grid under the trunk. This is controlled by valves in the engine compartment.

its another sunny day again. did 5 miles on the bike before 6.30 AM

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

V6 JOE

04-21-2004 at 12:57 PM Re: V6 swap so far...

Hi Chuck,

What is the cost of the aluminum radiator from Doug Jennings? I've been having a hard time getting a heavy duty three core radiator for one of my customers, and if they are pretty close in price, I'd tell him to go that way. The cheapest one I can find costs 8276.00, not counting shipping.

Joe

bryang

04-21-2004 at 02:16 PM Re: V6 swap so far...

Hey Jim,

Nice looking shifter. Mine is very similar. I think they look good enough to be exposed. But then I like looking at nice machine work. Most likely it would be difficult to keep clean. What are you going to do for a shift boot? I

looked around and didn't find anything. I'm making my own. I had a ring cut out of apx.1/8" stainless which I'll screw to the trans tunnel. I've got enough leather left from recovering the seats to make the boot part. Anyhoo ... I wasn't sure how you were finishing the shifter area of your trans tunnel. If you don't end up reusing the stock cover piece you could probably find a shift ring that would work. I sat in the car last night and the new shifter position is great. I kept my center console and I can rest my arm on it and still be on the shifter. It's pretty cozy. I ended up hiding my fuel pump relay switch inside the console along with a few 12v lighter / chargers.

Have a great weekend,
Bryan

bryan gilbreath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hillman minx estate (for sale!)

Jim E
04-21-2004 at 09:41 PM Re: V6 swap so far...

I have not decided what to do to finish off the hole yet. I did install the shifter today just to be sure it fit and to get a look at it in there. Did not get to do any welding today but did clean up some parts for the engine and install the cross link from the kit. Thought it would be much harder to remove the stock link but it was not had at all. I like the idea of putting some charger/lighters somewhere what with cell phones and all you need one or two of those gizmos. I felt bad not getting more done today... happens everytime take time off work get nothing done work late at night and things happen.... not sure why that is... well got two more days so will keep plugging away, I guess anything I get done is a step closer to blazing the hides.

Jim E
04-21-2004 at 09:44 PM Re: V6 swap so far...

Here is a question.... anyone thinking top shot for their V6.... looks pretty simple to install

bryang
04-22-2004 at 02:31 AM Re: V6 swap so far

Are you talking about a nitrous plate injection system? I am thinking about one. Down the road a bit though. I took off early from work today to get it aligned. They couldn't do it because I can't drive it up on the platform. I'm going to have to go some where with a pit. A word of caution : don't cut 2-1/4" off of 11-1/4 inch springs and not expect a significant drop. I guess my front end is sitting 3 inches lower than it would be with the series V springs. Hrnmm anyway, yeah I'm thinking about getting one of those setups. Only a few things that trouble me: 1) I didn't use forged pistons and 2) the air cleaner height issue.

Have fun, I know what you mean about getting stuff done when you go to all the trouble to set aside time for it. I usually get more done on my lunch hour.

Have Fun,
Bryan

bryan gilbreath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hillman minx estate (for sale!)

Jim E
04-22-2004 at 02:47 AM Re: V6 swap so far...

This is what I am thinking of...

V6 JOE
04-22-2004 at 03:13 AM Re: V6 swap so far...

Jim,

Where did you find this set up? How much does it cost? It looks like it would have no problem with hood clearance, especially if you used one of those K&N filter tops.

Joe

bryang
04-22-2004 at 04:15 AM Re: V6 swap so far

Yeah, where did you find that? That looks pretty slick and I now know that I really want one. I'd better get my brakes working reallly good first though.

Bryan

[Edited by bryang on 04-21-2004 at 09:15 PM GMT]

bryan gilbreath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hiliman minx estate (for sale!)

Jim E
04-22-2004 at 11:32 AM Re: V6 swap so far...

It is made by NOS called a "Top Shot" the picture is from Summit and they list them at near \$500 for a complete system, of course that is shipped with an empty bottle.

I do not think I can post a link directly to the page that has this part on it but if you go to [and look up part number NOS-05090](#) you can have a look.

I have been looking around for a system and having a hard time finding one at the 50HP level the lowest I have found so far is 75HP. I have found a very interesting site a fellow in the UK put up that talks about building a system. He has some strong opinion of U.S. off the shelf systems, he feels they almost all have a flaw in how they are set up.

<http://www.dly-nitrous.fsnet.co.uk/index.htm>

Chuck Ingram

04-22-2004 at 12:23 PM Re: V6 swap so far...

JIM

The rad I believe is around \$300 US. That is what I paid when I bought mine from Doug back in 99. John Weber had one and could keep his Tiger cool in town driving in Florida. So I did buy one and it was well worth it. This with the fan as suggested and full shroud with the blocking will certainly do the job. I also have the high volume water pump, matching 160 thermostat which has 3 holes from the factory. I may

have to go back to a standard 160 thermostat as this is a bit to cool for engine efficiency. If it keeps the 351 cold it will certainly keep your V6 cool.

sunny again. -6C but still rode 5 miles this AM. Jim I'm going to get in shape to do other stuff

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

bryang

04-22-2004 at 03:14 PM Re: V6 swap so far...

Hey Jim,

Great link on the nitrous! I'm going to have to read up on this when I get a chance. It would be nice to be able to put together a system in the \$200.00 range. A little more work for me but I hate parting with \$ if I even think I can do something better and cheaper.

Thanks,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

04-25-2004 at 05:23 AM Re: V6 swap so far...

Tomorrow I will go to the shop and work on the car while the shop is closed and get something done... my days off were not very productive. Cleaned some stuff, put the cross tube in, stuck the bell housing on, installed the shifter.... made a couple patch panels for the underside. I dug the locker out of the pile and replaced the clutch packs, did it wrong so get to take it apart and do it over, set it up just like it was when I took it apart and it is wrong the clutches were installed correct for a Dana 23 not a 44... well at least it is not torqued just ran the bolts

in hand tight as I need to find replacement bolts... which should be interesting they have a metric head and a standard thread pitch... go figure. Posted a picture of the new shifter installed up on my web space if you want a look at it.

Chuck Ingram

04-25-2004 at 03:53 PM Re: V6 swap so far...

Hey Jim

Did you contact Doug Jennings yet about the rad?

I would like to know the pricing now as I might be considering another conversion.

Its sunny but still cold at 6 AM on those 5 mile bike runs that I'm doing to get in shape for all that other stuff.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

04-25-2004 at 07:54 PM Re: V6 swap so far...

No I have not ask about it, guess I am putting it off and working other stuff for now.

Jim E

04-26-2004 at 12:18 AM Re: V6 swap so far...

Got about 4 hours in on the car today and actually got something done. the driver side pan is in and I started the under side welding. My buddy Eric G. stopped by in one of his Alpines and we had a talk for the full story and to get a peak at Eric's car trip on over to the space and check out the last few images.

<http://community.webshots.com/album/129345359FFOOwu>

V6 JOE

04-26-2004 at 04:01 AM Re: V6 swap so far...

Hi Jim,

Now the fun begins. I won't take you long to drop the V6 in, since you've done all the hard stuff already. I'm excited for you. Don't forget to call me if you run into any problems. I don't think you will, but just in case.

Joe

Chuck Ingram

04-26-2004 at 12:17 PM Re: V6 swap so far

Jim.

You're getting there. Shifter location looks nice. 2 cylinders shorter sure makes it easier. Sunny again but the wind was terrible. Only rode 2 miles and it felt like 10.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

05-03-2004 at 02:36 AM Re: V6 swap so far...

Today I got a few hours in on the engine, figured to button it up but spent most of the time cleaning and painting parts. Maybe next go I can get it closer. Still need to take it back to the machine shop and get the intake worked again, it does not fit quite right. Hoping the guy can fix it but I have a spare in case it is not useable. Was a real sinking feeling to see the Offy intake not sit down between the heads right. My camera man stopped by today and took a picture or two. <http://community.webshots.com/album/129345359FFOwuI0>

V6 JOE

05-03-2004 at 09:40 AM Re: V6 swap so far...

Jim,

I love seeing the parts all laid out before assembly. I've always enjoyed the assembly process, because it is so clean. It's like putting a puzzle together; then having it come to life when you get to start for the first time, is a thrill.

You've come to the part where the fun begins. I hope you get the manifold to fit, so you don't have to throw it away.

Joe

Jim E

05-10-2004 at 08:51 PM Re: V6 swap so far...

Had a couple of goes at the engine assembly. I had installed the crank and rods a while back and stopped when I discovered the intake issue plus I needed a new oil pump drive. So now I have gone back to it and have the bottom end all buttoned up the heads on the rocker assemblies mounted. I also made a fuel pump block off plate today. So now I just need to adjust the valves and get an intake cut to fit clean up my alloy rocker covers rebuild the Holley buy a fuel pump run new fuel line make the clutch slave mounting bracket get fan have a radiator built have the gear set installed in the Dana 44 buy and cut a drive shaft make brackets for the rear disc brake calipers.....lets see am I forgetting anything... yes gauges wiring seat rails... seam seal the new pans... I will never

make it

bryang

05-10-2004 at 09:09 PM Re: V6 swap so far

Sure you will. It sounds like you're a lot more adept at getting the stuff together than I ever dreamt of being. I only took a year and a half or so to get where you're at now. If you can just forget about sleep on the weekends you'll be fine!

Have fun. I was really paranoid about milling my intake and it scared the heck out of me the first time I set it between the heads (before milling it). It seems like there was an eighth of an inch gap at the bottom of the sides and no gap at the top. Anyway, I might have gotten lucky using the suggested milling calculations from the Pruett book, but they seemed to work for me.

Good Luck!

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

05-10-2004 at 10:39 PM Re: V6 swap so far

That is how my intake is now both of them the cut and the uncut... should get back to the machine shop this week with the lump and the intakes.

When I installed the rockers today I ran the adjusters down on a couple closed valves and then set all the rest to about the same number of threads showing on the top side of the adjuster. Which is not many maybe a thread or two... might need lash caps or longer push rods. The contact on the valve tip looks ok just seems there should be more adjustment.

Jim

05-11-2004 at 09:53 PM Re: V6 swap so far...

Did a real valve adjust and things look better. Masked the top end off, knocked the rust off the block and sprayed it Ford blue. Tomorrow off to the machine shop for the intake fitment. Just got the rear seal to put in and the water pump then there is the oil dip stick... timing pointer..., distributor...

Thinking the timing marks on the Mustang II balancer is not right for the later Bronco engine, could be right though just seems off..

Chuck Ingram

05-12-2004 at 12:23 PM Re: V6 swap so far...

Jim.

Timing mark is easy to verify. Of course you would know about the piston top dead center trick. There are tapes that stick to the damper for just that. They are usually for dialling in the cam. we got dumped 10 inches of snow yesterday but hey its still sunny regardless of that

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

V6 JOE

05-12-2004 at 02:11 PM Re: V6 swap so far.

Jim,

The two engines are identical, as far as the crank and it's timing goes. It should work without a problem, but the pulley has some extraneous marks on it, and has caused some confusion for some of the guys. The little loop on the timing pointer, is not the place to use for timing. That hole is for a sensor that reads the square notch on the pulley. The edge of the pointer farther down is where the timing marks have to line up.

Joe

Jim E

05-12-2004 at 02:18 PM Re: V6 swap so far...

I have a pointer from a MII that I was thinking to use, it just has the sharp pointer on the end. The Bronco pointer has the hole and I was thinking the MII pointer as it came with the balancer I am using would be the one to use.

Just to be clear number 1 is the front passenger side piston, right? Believe it or not the book on these is a bit confusing, to me anyway.

With what I think is #1 at the top of the bore the pointer is not on the timing marks on the balancer, which would be at about 11 o'clock, the marks are about at 2 o'clock. This cause me no end of confusion...

bryang

05-12-2004 at 03:06 PM Re: V6 swap so far...

Hey Jim,

I'll check mine at lunch to see what the firing order is and what the layout is as far as cylinder numbering. On another note I had Paul Scofield stop by my hovel yesterday to look at the Alpine. Of course, since someone was watching her and she's still a bit shy it took a couple tries to get her started, complete with the strange running backwards and belching smoke out the carb. He was passing through Boise on his way back to Colorado. It was nice to finally meet another Alpine person in the flesh. He's the first member I've met from this group. Hope he has a safe trip back home. Speaking of members and their locations, do we as a group have a travelers helper list? I've seen other clubs make one. Essentially it is a list of members addresses and phone

numbers and what tools they have and what kind of help they can offer and how far they are willing to travel etc. to help out a fellow enthusiast who might be stranded on the side of the road in their area. I think it would be pretty cool to have one of these. A bit off topic I guess.

I'll check at lunchtime,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion

61 hiliman minx estate (for sale!)

Chuck Ingram

05-12-2004 at 07:28 PM Re: V6 swap so far...

Jim.

Yes #1 is passenger side front. Firing order is 1-4-2-5-3-6. Mind you that is the Mustang. Bronco should be same as basic same engine..

damm snow is slow in melting but sunny anyway

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

05-14-2004 at 05:03 PM Re: V6 swap so far...

Took the engine to the machine shop for intake fitment.... they are going to cut it again..., lots.... I hope it works.... might get to fit the engine tomorrow for the first go round

Britbeam

05-14-2004 at 07:04 PM Re: V6 swap so far...

Hey Jim,

Good luck with fitting the engine. #1 is passenger side front. We cruised up to Townsend running 70/75 mph on freeway. Oh so smooth. Five hours up and five hours back no problem. You're gonna love it. We didn't go to the Tail of the Dragon but we did quite a few other twisties. Nice show good folks, the hotel was family owned/american owned and very nice. The ole Alpine placed 3rd out of 7 Sunbeams (Tigers & Alpines) I'm working on my cruise control installation. That means I've just acquired it. My buddy

Mustang John had one he gave me brand new. Hey Free is good. He's going to the Invasion with us. I will probably travel I-65 I understand it's a much smoother road. Keep it up enjoy hearing your reports.

Remember I've been there. Dwain

Cooke

62 S2 V6

Jim E

05-14-2004 at 08:07 PM Re: V6 swap so far...

Dwain, you keep me motivated to get the car back on the road with your words of how much fun you are having with your car.

Joy! the intake now fits, had to cut another .048 of each side and a slight angle change. I am so happy the thing fits! Which means I now have a spare Offy intake if anyone needs one.

Now if I can get to work on the car tomorrow I will be one happy fellow! [Edited

by Jim Eon 05-15-2004 at 01:28 AM GMT]

bryang

05-14-2004 at 09:35 PM Re: V6 swap so far...

Congrats on the manifold fitting. It couldn't get my head wrapped around it before I had mine milled. It didn't seem to me that it would fit after milling and it scared the crap out of me to have it done. But, as you now know, it works. Hope to hear you've got her fired up soon. If I can avoid responsibility this weekend I should be able to get a lot done on the project as well.

Congrats Again,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Britbeam

05-15-2004 at 12:12 PM Re: V6 swap so far...

You guys are to be making great progress. I know how frustrating it can be trying to fit engine parts. I got lucky on the head/intake but then I didn't cut them but just enough to clean them up .007. I had a lot of Saturdays, week nights, holidays etc invested but thanks to a understanding wife she let me alone to stand on the pedal til it was running. On our trip to Townsend she really bonded with the car and said she now feels much safer with having the power to pass/manuver through traffic at will. She wants to name the car Oh well guess I can live with that to have her in the car with me. Its Saturday the sun is out, tops down and Life is s0000000 g0000d.

Dwain

Jim E

05-16-2004 at 12:05 AM Re: V6 swap so far

Oh yea! The V6 is sitting in the car! pictures at 111 got the intake port matched and was about to call it a day then decided what the hay how long could it take to just set the engine in the car and bolt it to the bellhousing.. answer about 10 minutes. I am smiling now!

<http://community.webshots.com/album/129345359FFOOwu?763>

I added the new pictures to the web space they are at the end of the album. I am so jacked to have the engine in!

[Edited by Jim Eon 05-16-2004 at 12:15 AM GMT]

Jim E

05-16-2004 at 03:26 AM Re: V6 swap so far...

The timing mark issue came clear today, I realized I had the pulley on the hub backward. Flipped it around and all is well, but it does look right on wrong more right than when it is on the right way round.

Britbeam

05-16-2004 at 03:55 PM Re: V6 swap so far

Jim I made the same mistake. I thought I had put it on the forum. Its easy to do with that extra mark on the other side. I was trying to start mine and realized there was no way the degree marks were anywhere close to the pointer. Glad to hear parts are going on. Jim how far are you from Atlanta? Are maybe I should ask how long time wise do you live from Atlanta?

You bet the Tops down

Dwain

Jim E

05-16-2004 at 04:07 PM Re: V6 swap so far...

3 1/2 hours or a little more, made the trip last week for work was in town about 2 hours. Thought about calling you but just had no time to spare, maybe next time.

Britbeam

05-17-2004 at 01:45 AM Re: V6 swap so far...

Anytime your in town and want to come by let me know. I live about 15 miles south of the airport and I can be off work at 2:00pm. Would love to show you the Beam

Dwain

MikePhillips

05-17-2004 at 12:35 PM Re: V6 swap so far...

Good job Jim. Now's when all the work starts to really feel worth it.

Jim E

05-19-2004 at 10:41 PM Re: V6 swap so far...

Question... I got the driver side header on today but it seems like I should have ground the mounting bosses off the back of the driver side head. Joe, Dwain you guys or anyone else do this, think I could move the engine back a little farther with those two pieces ground off...

On the pass side... man that is tight still have not got enough stuff out of the way. Brake lines were right in the way bent them back, still no joy think I need to move the engine over a little.

Britbeam

05-20-2004 at 01:32 AM Re: V6 swap so far...

Jim I will try to answer as best I can. The first item on moving the engine back. The headers will dictate how far back the engine can be set. The contact of the steering passing the header will determine the aft position. The steering on my car just will pass the header without touching. I didn't cut anything on the engine. When my engine was nailed down I had approx 1/8" on passenger side and 1/4" drivers side between the header and side rails.

When you have clearance on each side, clearance at the header to steering rods and enough room to slip your water pump belt between the pulley and cross member nail it down. (Just as a side bar I also centered the crank bolt looking thru the old alpine crank starter hole)

Now also your first step I feel is to center the tailshaft of the tranny in the tunnel and recheck after you temporary locate the engine,

On the brake line I relocated mine towards the front of the eng compartment taking it totally away from the heat. Then entered the front of the wheel well to connect with the brake.

Everything on this V6 mod is about clearance not how much but do you have clearance. What looks like too little clearance will probably be ok as this engine just doesn't rock (more power transfer not wasted) Also each car has had a different 40 yrs. I know mine had suffered a couple of wrecks at least so as I said each car is different.

Trust this info on how I did it will help. Joe could probably give some clarity to what I've said. I will be off guiding a hike on the AT but will check with you when I get back.

Dwain Cooke

62 S2 V6

Jim E

05-20-2004 at 02:13 AM Re: V6 swap so far...

Thanks Dwain. The brake line is going to have to get moved sounds like you have a good way of doing that, which should give me enough room to mount the passenger side header and then move the engine around to get it where it needs to be. I did use your sight down the hole for the crank trick. Still thinking I have the engine too far back. I will get it only, had about an hour to tinker with it today so just as I was getting going it was time to stop. Could be when I get the engine where it needs to be the cross over tube will have the room it needs to clear the back of the head on the driver side. Then if I can move the engine back a 1/2 inch more by grinding those mounts off the head I will do it but I am part way off the cross member with the mounts now. Oh well just getting going with this part feeling my way along. Do need to get the engine nailed down so I can move on so cannot play around with it too long.

Chuck Ingram

05-20-2004 at 12:23 PM Re: V6 swap so far...

Jim

Just keep on plugging away. When I did mine (way back when in the olden days)I had no one to ask.I did some of mounting over till I was satisfied that the engine and driveline lined up to the rear and the carb base was near level.It sure is nice to see all the friendly advice that is now available, its sunny and I'm still riding every 6AM

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim E

05-20-2004 at 12:45 PM Re: V6 swap so far...

Chuck was that back when the Snap On man drove a horse and buggy?

I think with the kit from Joe getting the carb base level is taken care of but had thought to lay a level on the intake to see. Right now my brake lines are holding me back wanted to avoid removing them but off they will come. Should be replaced after near 40 years anyway.

V6 JOE

05-20-2004 at 06:51 PM Re: V6 swap so far...

Hi Jim,

I'll call you today to go through the procedure with you. You won't have to grind anything to get it to where it needs to be.

Joe

Chuck Ingram

05-21-2004 at 11:40 AM Re: Re: V6 swap so far...

quote:Jim E wrote:

Chuck was that back when the Snap On man drove a horse and buggy?

Hey Jim.

No not quite back that far.It was just after he got his prototype model T from Henry.

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim E

05-24-2004 at 02:11 PM Re: V6 swap so far...

I am working the placement of the engine and transmission and as it has been mentioned here it is a tight fit. I have had the engine in and out three times, not a big deal only takes a few minutes. I thought I had it just where it needed to be had all the clearances just like Joe said then when I placed the frame mounts it all went away. I am fairly sure the engine needs to move forward a little to clear the steering in the tie rod area but have a clearance issue on the passenger side with a header tube and the frame. When I move the engine forward it hits there when it does not hit there it hits at the tie rod area. I think either I need to rotate the engine a little in a counter clockwise direction and move it forward or heat up the offending frame area and pound it out of the way. Have been tossing around ideas and wonder if decking the block and milling the heads could be a reason I have a clearance issue or perhaps I just do not have the engine in the right spot or my car is just a tick narrow. I was tempted to spike it where she lays this weekend but stepped back and will have a nother go at it.

there are a few new pictures at the end of the album if you want a look.

<http://community.webshots.com/album/129345359FFOOwu>

bryang

05-24-2004 at 02:31 PM Re: V6 swap so far...

Hey Jim,

Only two or three times eh? I think I placed mine about fifty. Are you putting the headers on after you get it set? I know that on mine it may not be exactly centered. I have around 3/8" gap between the header and the frame rail on one side and next to nothing on the other side. As far as the fore and aft positioning and the location of the mounts, my mounts hang off of the back of the crossover about a half inch if I remember correctly. Also, on one side it's pretty tight getting to a few of the header bolts because of the steering assembly. I got everything set, checked all the clearances, double checked and then marked the position of the mounts, pulled the engine back out to weld them in. I had a friend who is a welder come over and help me weld them in as well as weld up all my seams on the tunnel mod. He told me that I would have to hold the mounts in place while he tacked them so I did. He then proceeded to put a really nice weld in all around the perimeter. Only problem was I didn't notice that he had turned the mounts over (nut side up to give me something to hold on to). S0000 ... I'd recommend tacking them in place when you get it set and then pulling the engine for the *final*.

It sounds like you are getting pretty close though. Have fun!

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

05-24-2004 at 02:43 PM Re: V6 swap so far...

Oh my upside down.... I had planned on tacking the mounts with the engine in place then pulling the engine and finishing the job.

I am placing the engine and then putting the headers on and it is a squeeze but not horrible.

Yep both sides on mine hang off the back does not bother me will just weld up a piece of tubing as Joe suggests. I just cannot seem to get the engine in just the right spot, then with only an 1/8 inch of space the right spot is

pretty limited. I think I am very close, well know I am very close, you have to be about there to have the engine in place with the headers on. hahahaha Anyway the one spot that has me is the passenger side where the one header tube is VERY close to the frame rail... thinking will have to get the Ford wrench out and give it a hot love tap, then I can move the engine a bit and get the space. Then it could be I am just not thinking about how to shift the engine correctly and need to think about it some more.

bryang

05-24-2004 at 04:35 PM Re: V6 swap so far

Yep, upside down. It took me about an hour to realize it. Then I thought I'd just cut the nut off and place it on from below. I looked under and saw a few gaps where I thought it was doable so I didn't woory about it. Needless to say, that didn't work out. I ended up cutting them out and redoing them. As far as being really tight on one side, that is what I've got as well. As soon as I put a few miles on her and everything settled into it's final (hopefully) resting position I ended up getting a little interference between one of the headers and one of the tie rod ends. A little grinder magic took care of that. I think that if I pull the headers to have them ceramic coated I'll end up tapping one of the framerails a bit to get some clearance. I think on one side I'd be lucky to get a sheet of paper between the header and the frame rail. Everything appears centered though as far as positioning on the suspension and the crank pully and hole in the apron so it may be that the frame is a little out of whack. Anyway ... it sounds like you're getting close pretty fast. Good Luck,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

bryang

05-24-2004 at 04:39 PM Re: V6 swap so far...

Oh yeah, almost forgot. I checked out your pics. It's looking pretty cool. Its hard to imagine that I was at that point. It looks like you have the correct crank pully. I didn't and had to have it turned down a tad to remove an extra groove. The belt will be a tight fit but it will go.

Good Luck,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

V6 JOE

05-25-2004 at 02:51 AM Re: V6 swap so far...

Jim,

You will need to lift the engine on one side or the other, to rotate it along it's axis, until you get close to even clearance on both sides. The front crossmember is not flat on top, so the engine wants to sit in about the same place, but if you rotate it, you'll get it where it needs to be. Since it is so tight, it doesn't need too much rotation to set it right. It just takes a little patience, because if you don't have one of those screw type levelers, (the kind that lets you tilt the engine to different angles), on your hoist, it's hard to do.

Joe

b ryang

05-25-2004 at 03:26 AM Re: V6 swap so far...

As with everything it takes a while for something to soak in to my noggin. I imagine if I rotated the engine even a quarter of a degree I'd probably be sitting perfectly centered. I think Joe hit the nail on the head with the patience. Although I'm taking a long time to do my project I'm a little impatient. Hence, the doing everything twice or more. You'd think I would have learned by now.

Anyway, picturing it in the minds eye, I can see that with a little more rotation I'd be perfect. But, it works now and, unless I get really bored, I'm not going to bother with it.

Jim sounds like he knows his way around the engine bay a little better and faster so I'm sure that he'll get it right. Good Luck,

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

05-25-2004 at 03:38 AM Re: V6 swap so far...

thanks Joe,

I have shifted it around in that direction and still have not hit the happy spot, will try it again. Really think it needs to go forward just a touch but I could be thinking wrong, right now it cannot go forward any or the pass side header will contact the frame rail. Which is why I am thinking to reshape it just a tiny bit to get a little forward room.

Do not think I am at my wits end or frantic over this, to me it is just part of the fun of playing with cars. This being my first go at this I am sure it is just the learning curve slapping me around a bit. Once I get it the whole thing will be very simple and I will have a clearer vision of how it goes. I would rather not heat and beat or cut and weld the frame horn/rail but if that is what it ends up taking it does not bug me to do it. I can see that it should fit and before I put the frame side of the mounts under the rubber mounts it was just right so it could very well be I just have the engine in the wrong spot and the room is there. just seems like the thickness of the frame side mounts raised the engine about the clearance space I had, as in it moved the engine higher which raised the headers, the lower you get on the header at the interference point of the tie rods the closer to the rear of the car the header tube is which brings the header closer to the tie rod... and if you have not actually looked at this in the car you are thinking what the heck is he talking about.

I really am having a blast with this cannot wait to go for a drive!

Jim E

05-31-2004 at 05:51 AM Re: V6 swap so far...

Got a few hours in on the car today and in the end I had the frame mounts tack welded in place. I shifted the engine every which way and could not get it where I felt good about the clearance actually I could not get it where it would totally clear in the tie rod to header area so with some help from Eric G and the gas axe heated the frame and formed it a touch. Just a small area on the passenger side frame rail. This let me move the engine forward just a touch giving me about 60 thousandths clearance on the pass side and a tick more than that on the driver side. Eric did the heat and beat for me and might I say did a very good job of it little sanding and you would never know.

61 Alpine

05-31-2004 at 10:25 AM Re: V6 swap so far...

Boy does that bring back some memories. I had days when I was fitting my engine when I would have it in and out of the car 3 times in a few hours so I could pound on the tranny tunnel getting it just right.

In the end I have about 1/8" clearance from the headers to the tie rod end. Maybe less but it doesn't touch. I did have to "mold" the frame just a touch on the passenger side.

When it was all said and done it looks like it came from the factory that way. I had a mechanic friend tuning my engine last week and he was really impressed with how it fit and looked in the bay. Boy did my head swell.

Rob Wiseman V6 Alpine
Series I

Barry Knight

05-31-2004 at 01:23 PM Re: V6 swap so far...

Rob hit the nail on the head with a sledgehammer!

If you want to get very good at installing and removing engines and transmissions, do an engine swap in an Alpine. You can't do anything with the driveline in place, so out it comes. Then you put it back in to see what you did wrong. Then you take it out again so you can fix your mistakes, put it in again so you can measure,

Barry Knight Conyers,
GA
SV-V6 conversion in progress

Jim E

05-31-2004 at 02:43 PM Re: V6 swap so far...

I am at 5X, has to come out now then in and out for some clutch slave fitment couple more times should do it. Putting the engine in and out is no big deal on this with no clutch or flywheel just a few minutes then those who have done this know that. I bet when you get up around 20X you can do it with your eyes close.

The tunnel area is fine for me, then I had the floors out and the tunnel hanging in the breeze, with the driverside floor pan out it was pretty easy to move things around. When I was first welding the seam of the driver side pan and tunnel things would move around too easy. First weld or two had me using a 2x4 as a pry with my foot to get

the tunnel over to the pan, a screw driver in my left hand to press the pan down to the tunnel lip and the welder in my right hand good thing nothing needed scratched at that point.

Chuck Ingram

05-31-2004 at 06:52 PM Re: V6 swap so far...

Jim

After all that would you be able to scratch at all⁹ may it be sunny for you

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

MikePhillips

06-01-2004 at 11:01 AM Re: V6 swap so far...

It's a little late for you now Jim but what have done for things like that is push it into place and drive a few small gauge sheet metal screws through to hold things in place. Then when its all tacked down, remove them and weld over the holes. Lot easier than trying to hold it in place whole welding.

Jim B

06-01-2004 at 06:43 PM Re: V6 swap so far...

Such a simple idea, wish I had known or thought of it. Well next time.

Chuck Ingram

06-01-2004 at 10:31 PM Re: V6 swap so far...

Surprising how many times the trees get in the way when we are looking for the forest.

My problem is I can put a tool down right in front of me and then 10 minutes later can't find it. Of course soon as I go get another one there it is right where I put it. It really is a sunny day.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

06-01-2004 at 10:40 PM Re: V6 swap so far...

Chuck that is called C.R.S. and I also have it, only thing to do is buy several of everything so you always have one handy.

Chuck Ingram

06-02-2004 at 12:28 PM Re: V6 swap so far...

Jim

You have no idea of how many duplicates I have of small tools. I can usually find the big ones. Heck I even have 3 welders. 2 bandsaws. 3 skill saws. 2 routers and the list goes on. Now I ask myself how come I have so much stuff.

How is the car coming? I was thinking of going 5 speed while the engine and tranny are out but I do 72 MPH at 3000 RPM and that is with the trailer behind it. No neck snapping starts. With the 16 gallon tank I can really cruise. and another sunny day.

The Vintage Sports Car Rendezvous starts tomorrow and the weatherman has promised great weather.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

06-02-2004 at 01:25 PM Re: V6 swap so far...

Car is coming slow having trouble getting time to work on it.

5 speed would be nice but sounds like you must have a gear and tire combo that would not work real well with the v8 T5 OD ratio. The 4 cylinder transmission might be better with the .80 or so OD and they are pretty cheap to buy. Then if you are pleased with what you have now would be a lot simpler to stick a clutch in it and carry on.

Chuck Ingram

06-03-2004 at 01:38 AM Re: V6 swap so far

Jim.

Yes Pm pretty happy with the way it is. My range is about 400 plus miles on a full tank. I picked up my clutch today. good old Canadian Tire. Ordered it on this past Thursday and picked it up this afternoon. Good price and good delivery time. Came from Vancouver BC. Big problem is time for the next few days what with other projects and the Rendezvous. Will probably have you post a few pics in the next while.

I hope its sunny for you

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

06-03-2004 at 03:26 AM Re: V6 swap so far...

Pulled the engine back out today so I could work on the mounts, need to finish welding them in and make up the supports for where they are off the back of the frame. I used some exhaust tubing and cut little 1/2 circles to weld in. Spent an hour or so fiddling with it couple different angles to match up. then crawled under the car and beat and welded the floor pans to the old metal for a cleaner job of it. One of those spinny round car holders

would be nice not much fun welding on your back under there the splatter is a pain.

Jim E

06-03-2004 at 10:20 PM Re: V6 swap so far...

more welding and beating and removal of oil soaked tar on the underside sure can

blow a lot of light bulbs with weld splatter

can almost see the light at the end of the tunnel that or it is the train coming

Jim S

06-03-2004 at 10:51 PM Re: Re: V6 swap so far...

quote:Jim E wrote:

can almost see the light at the end of the tunnel that or it is the train coming

Or some joker teasing you with a flashlight!

Jim Stone 66 Series V

Jim E

06-14-2004 at 03:00 AM Re: V6 swap so far...

Still plugging away, got a couple hours today on installing the new seat rail mounts. These were the rusty bits that the seats were bolted to they were attached by rust to the rusty floor pans. The replacements are a lot thicker material than the originals and I think I got them indirectly from Martel, at least I recall Jan saying that is where he got them. Anyway does not matter, the trick is getting them in the right spot and welding a nut on the underside of the replacements where the rear of the seat rail bolts down and still have everything line up. Jan you were right I should have made a jig... oh well next time. hahahahaha next time right that will be right after hell freezes over at least that is when I plan on doing the next floor replacement. So I got one side all lined up and the nuts welded on and was ready to weld the rear sections in and I noticed the handle that you use to adjust the seat and got to thinking does it go so it is closest to the door or the tunnel and could not recall. Could someone let me know which way this thing goes? thanks

MikePhillips

06-14-2004 at 11:18 AM Re: V6 swap so far

Seat back adjusting handle goes on the door side.

Jim E

06-14-2004 at 11:30 AM Re: V6 swap so far...

Not that one the handle that you use to move the seat forward and back, the seat bottom that is.

Jim S

06-14-2004 at 12:02 PM Re: V6 swap so far...

Just checked - the handles go towards the transmission tunnel and you move them closer to the tunnel to slide the seat.

Jim Stone 66 Series V

jumpinjan

06-14-2004 at 06:50 PM Re: V6 swap so far...

Jim, do you want to borrow my seat rail jig? Jan

Jan Servaites - SAOCA Member no.8

EMAIL: jservaites(at) '60 Series I Alpine

(#39) '62 Series II Alpine (#39) '62

Harrington LeMans (#39) '62 Harrington

LeMans (#39)

YOUR FRUSTRATION ELIMINATOR

<http://www.erikaandiirn.com/forumarchive/jimsupdates.htm>

8/1/2005

Jim E

06-14-2004 at 06:54 PM Re: V6 swap so far...

I want to but will have them welded back in before I could get it if all goes well. I will just make it up as I go just time consuming lining the stuff up, but thanks for the offer.

Chuck Ingram

06-15-2004 at 12:14 PM Re: V6 swap so far...

Jim.

Did you ever think that it would take this long. I'm just doing the clutch on the 62 and I'm not finished yet. Almost though as I just have some small things to put back. With luck I will be finished tomorrow. That is if it rains today then I will have extra time.

Will be leaving on the 25th with it to British Columbia to friends wedding anniversary and staying there. Will

be able to take Rally In The Valley while we are there as it is only 25 miles from where we will be.
Lousy weather but as always it still is sunny

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim E

06-15-2004 at 12:42 PM Re: V6 swap so far...

Well it is taking a while, by my calculations I have had the car off the road right at a year now. I see why there are cars that have been apart for years. For me the travel time is a problem the garage I work on the car at is 20 [or so] minutes away one way so I cannot just sneak off out back and tinker for a few when work is slow. The floor work has been the real time eater on this thing so far.

Chuck Ingram

06-16-2004 at 01:01 AM Re: V6 swap so far

Jim

This is where I'm lucky.I just have to go through a couple of doors and I'm there.It did rain so got some work done on the 62.Just have to replace the mufflers,put the car down and put on the hood.Leaving on the 25th to go west.will take the 62 and trailer.With a couple of side trips should make about 3000 miles. We are looking forward to this trip.We had our invite for this anniversary January 2nd.Its one of my wifes best friends and they were making sure we could come. Park city is only 1000 miles south from where we will be staying but will not be there.It will be the first STINT I miss. Its even looking sunnier

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

jandrscovill

06-16-2004 at 04:18 AM Re: V6 swap so far...

Have a great trip Chuck, be safe!

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

06-16-2004 at 04:39 AM Re: V6 swap so far...

Yes Chuck have a nice time sounds like a blast getting to drive the Alpine 3k. Best to you and a full report on the trip would be nice.

Chuck Ingram

06-16-2004 at 12:38 PM Re: V6 swap so far...

Thanks for the good wishes. We always try to have uneventful trips. That is car wise. The 62 has been a most reliable, fun car. I find that when we are by ourselves on a trip we meet the most interesting people. I guess they fell a bit more free to approach us.

It is 25 years come July since it was first driven on the highways and byways.

Now if the lousy weather clears up it will be really sunny. But then it is great fun driving in the rain with the top down. The 62 down windshields have more rake and are better for this.

Will see what I can do about a report. Plan to see Scott Duncan in Regina. He has bought an Alpine that is here in Winnipeg. Looks like he will pick it up while we are on the road.

Now to get the mufflers off.

as always. its sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Chuck Ingram

06-18-2004 at 11:09 PM Re: V6 swap so far...

Its ready

Hey guys. The car is ready and cleaned. The crack in the fiber glass trailer is repaired. The tank is full. Now all we have to do is get ourselves ready and everything in order. Thank goodness we have 4 Sons that can take care of everything that may come up.

Still leaving on the 25th. Man I deserve this trip, and its sunny again

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Chuck Ingram

06-19-2004 at 07:50 PM Re: V6 swap so far...

Did I say the car was ready?. Apparently best laid plans can go wrong. Decided to take it to one of our favorite spots which is about 18 miles from home. Especially since we had free dinner plus gift certificates for being in a commercial.

Well sure started off nice and about 1 mile from home I'm losing power. Lost gas flow, checked and everything working. Started and it stalled. did this twice and then no problem. Now for the fun. Put into first and off we go. Went to shift in second and no go. Lost the ##### clip that holds the rod in the 1st and 2nd shifter. Drove home

in first by accelerating and then putting in the clutch and coasting. Thank goodness only a mile from home. I have fixed this and eliminated the clips altogether.

I cannot find what the fuel problem was but do suspect dirt somehow got into the line when we had the engine out. Secondly I wonder about the fuel regulator acting up. It is as old as the car. HERE'S WHERE YOU COME IN JOE. I forgot what the fuel line pressure is for the 390 holly.

Anyway we came home and changed to the Lister. Maybe I should drive it west. Still will be fun. Supper was good as it didn't cost a cent. Funny how good free food can taste isn't it?
but then everyday is sunny.

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Chuck Ingram

06-21-2004 at 03:33 PM Re: V6 swap so far...

MORE ON THE TRIP

It seems I have a problem that is one of those hard to find kind. I lost spark or fuel again. Same results as before. It started again after a couple of tries. So when I check it out at home everything says good. Due to lack of time and my wife's worries we will drive the Lister. I really did want to take it in the first instance but 011ie remembers how faithful the 62 was plus top down driving is great. Oh well power to go like hell up those steep hills.
yep its still sunny even though we won't take the 62

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

husky_drvr

06-21-2004 at 04:30 PM Re: V6 swap so far...

Chuck,

if it is not an loose wire or bad ground from the recent clutch replacement, a couple of not so obvious ignition problems you might check. if you have a spare ignition condenser try changing out the one in the '62. I have also had a contact breaker arm (aftermarket replacement for Bosch) break in a manner that was not obvious until I tried to set the points at which time the arm separated.

HTH

husky_drvr

[Edited by husky_drvr on 06-21-2004 at 11:35 AM GMT]

Rootes Group cars are for FUN Some
people have fun everyday!

Chuck Ingram

06-22-2004 at 11:31 AM Re: V6 swap so far

I should know better as I always advise check the small things first. Well I spent a couple of hours yesterday cleaning all the electrical contacts and replacing a few female clips. Checked everything over and replaced the fuel

filter. Will pick up a new fuel regulator this AM. It ran in the carport for 30 minutes without losing a beat. Weather was lousy yesterday so I didn't want to be on the side of the road in rain. I will see what happens and just may make a trailer hitch for the Lister. I have till Friday morning, it really is sunny this AM

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Chuck Ingram

06-22-2004 at 10:06 PM Re: V6 swap so far...

What can I say-It happened again but this time I finally found it. A fuse was acting up and this time it went. Hoorah. Then we go for a drive and the exhaust donuts blow. Took them out of a new gasket set and thought they don't look so great. Always trust yourself. I ended up exchanging those with some new ones I had. We are now on track with the 62.

its even looking sunnier

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

V6 JOE

06-23-2004 at 12:52 AM Re: V6 swap so far...

Chuck,

I'm pulling for the '62! I hope you get it fixed in time. I know the Lister would be a gas to drive on the open road, but I just have a soft spot for V6 Alpines.

Jose

Chuck Ingram

06-23-2004 at 12:18 PM Re: V6 swap so far

Hi Joe

I imagine you are getting ready also for your big move. It must be getting up there on the excitement or anxiety scale. I sincerely wish you the best for the so called golden retirement age. I find that we are working more projects than ever especially with 4 boys and their families all getting help. At this moment I'm taking the 62. I don't think there are any more little things that can go wrong. Last night I lost my signal lights. I have several relays set up and one was or seemed to be stuck. A shot of full 13.6 volts did the trick. We are going to my sons place for lunch which is 25 miles from home and will take the 62. I'm assuming it will be fine and my wife will feel better about taking it. We really want the trailer as our friends have cherry trees and the timing will be right. I'm going to run an extra long plug in to the cigar lighter so we can put one of those coolers in the trailer to bring back lots of cherries. I don't need to remember to unplug it as the relays will disconnect as the ignition is turned off. Again it is too bad you are leaving at this time as it would of been something to meet you in B.C. at the Rally In The Valley.

You'll have to keep us informed about your trip as you go along. Just write a note here at the end of each day, telling us about your daily adventure.

Jose

61 Alpine

06-27-2004 at 12:04 PM Re: V6 swap so far...

Looking at your seat rails and what I did are two completely different things. I had to make a mounting to move my seats back. I have my seat against the rear shelf. Can't go back any further and I still am cramped for leg room. But that is okay because it is such a blast to drive.

[Edited by 61Alpine on 06-27-2004 at 05:04 AM GMT]

Rob Wiseman V6 Alpine
Series I

Jim E

06-27-2004 at 02:20 PM Re: V6 swap so far...

While it may seem odd coming from me I really wanted to stay as close to factory as possible with the sheet metal replacement. Do not think it would fool anyone but I did my best. Then leg room is not an issue for me if it were I might have moved stuff around too.

I would like to see a picture of how you handled the seat rails. What I would really like to see is some other floor replacement pictures to see how people handled some of the issues that go with doing this job.

Jim E

07-08-2004 at 12:40 AM Re: V6 swap so far...

Here my shameless plug for the restoration shop owned by my buddy Norman. This is the shop where I do the work on my Alpine. Without his help there is no way I could ever have this much fun. By the way Norman does not approve of the V6 swap... "This is not right, you should restore the car" Norman is a bit of a purist, but I still like him. Norman came to the Invasion last year just to say Hi and talk story. He is a car nut just like the rest of us only he gets to play cars all day long every day. Oh and he also has an Alpine only it is French... maybe he will loan it to me for the Invasion this year.

[Edited by Jim E on 07-08-2004 at 12:45 AM GMT]

Jim E

07-09-2004 at 04:18 PM Re: V6 swap so far...

Been working the battery box area or guess you could say the back seat. I had some rust around the battery box, not bad but there none the less. Then there was about 2 dozen holes drilled here and there, some for the roll bar and some for who knows what. One of the holes was in just the right spot so that driving in the rain it would squirt water on the passengers neck. Welded all the holes up. The other thing I noticed is where the roll bar mounts there was a lot of distortion and the metal is just plain thin and will oil can. So I made up pieces for under each mount point and beat/welded them in place. Some new pictures on page 4 if you want to look.

<http://community.webshots.com/album/129345359FFOOwu/3>

G5sunbeam

07-11-2004 at 06:20 AM Re: V6 swap so far

Lookin' good Jim!

You know what we say in the trade:

5)Cut to suit

6)Beat to fit

7)Paint to hide.....

You and your shameless plug!! Eric

Bob Berghult

07-11-2004 at 11:32 AM Re: V6 swap so far

You forgot to nun, no knearl, no knerl, no, oh forget it grind it smooth

Bob Berghult SAOCA No.

14 Atlanta Chapter

Series IV B9405637LRX39(mine) Series II B9

119501 LRXSB3O(wife's) Series 3 GT

B9203825LRX39(son's)

Jim E

07-16-2004 at 03:17 AM Re: V6 swap so far...

Think I am done with the panel beating... well hope I am anyway. Here are some new and exciting rust repair photos added to page four and five, finished fixing the battery box and patched the hole in the RR wheelwell. So now just a million more things to do and I am done. I also took some pictures of the underside of the floor pans.

http://commuilty.webshots.com/albtim/1_2934535_9FFOOwul3

61 Alpine

07-16-2004 at 04:23 AM Re: V6 swap so far...

Jim, Looking good. Wish I was that far along. I have mine up on a rotisserie and the floor all cut out. Rest of

the bottom is sand blasted.

Rob Wiseman

V6 Alpine Series I

Jim E

07-16-2004 at 01:08 PM Re: V6 swap so far

Thanks Rob. The underside of mine is not all that clean just scraped what would come off and some burnt off. The oil soaked tar will flame on when you are welding.

Jim E

07-19-2004 at 11:32 PM Re: V6 swap so far...

Forgot to take my camera with me so picture this.... solid floors seam sealed and painted a lovely chocolate brown. Hope to seam seal the underside and brush on some more paint tomorrow.

Jim E

07-21-2004 at 02:46 AM Re: V6 swap so far...

Underside is done and here are some top side pictures too. The last few pictures are of the V6 motor mounts welded in place.

Now the V6/t5 goes back in and I can get back on track with the swap. Rust sucks.

<http://community.webshots.com/album/129345359FFOOwu14>

V6 JOE

07-21-2004 at 03:45 AM Re: V6 swap so far...

Jim,

It is looking good, especially the motor mounts. You did a great job welding the extra little pieces to fix the overhang of the washers.

The pictures will help lots of guys that wanted to see what the mounts look like when installed. Jose

Jim E

07-21-2004 at 04:19 AM Re: V6 swap so far...

Thanks Joe,

Those were cake, just used some muffler pipe that was the same diameter as the washers [or near the same anyway] and a couple hours of shaping to fit. When I look back on it could have done the shape to fit a lot quicker did not have to be so exact. When I finished shaping them they fit like a glove which is not really needed many errors would have been taken care of with the weld. I cannot take credit for welding those in by the way my buddy Norman got bored one day when I was not there and welded them for me, not that I am complaining mind you.

The floors.., oh my the floors.., the seam sealer I used was a little past its prime and did not go on well it did not lay down as well as I would have liked but to be honest I just do not care anymore. I want to move ahead and a less than smooth seam I am just not going to worry about screw it. I want to drive this thing before before I die and it is just not going to be perfect. Like another beam friend told me no matter what you do it will be better than it was before. I am just glad to have the rust repair behind me!

bryang

07-21-2004 at 04:21 AM Re: V6 swap so far...

Hey Jim,

That is looking really nice. Makes me wish I would have replaced all my pan stuff. It wasn't too bad, but I'll always wonder...

Anyhoo... looks really nice.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

alpine-64

07-21-2004 at 09:05 AM Re: V6 swap so far...

Just great Jim.. thats all i can say

1963 Alpine SIT SAL 018692 LB9008874RR0M (engine) 1965

Alpine SIVGT SAL 540798

B941031 I OGTODHRO HBH 0 1641 (engine)

SAOCA: #381

Chuck Ingram

07-21-2004 at 12:13 PM Re: V6 swap so far

Jim

It is looking great.Either that or you are a master with that camera.Really good pictures.

You better stand back,have a *few* cool ones and let the stress level cool down.I do know what you are saying

as I've been there and had to walk away a few times. However since I did my first one I always had another sunbeam to go for a drive.

Keep smiling and let the sun shine at all times

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

krogp

07-21-2004 at 11:11 PM Re: V6 swap so far

Jim,

Looking good, wish mine was that far along. I have one pan to replace and both rockers. Dipping this Friday. Good luck on the remainder of the project.

Paul

SAOCA Member #424 1967

series V

B 395018148 LRX Seattle,

WA

Jim E

07-21-2004 at 11:43 PM Re: V6 swap so far...

Thanks everyone for the nice words. I really am pleased with the floors and pleased that they are pretty much done. I guess when you are the one doing the stuff you notice every little thing that did not come out as well as you picture it in your mind. Think I will give all the top side seams one more coat of sealer hit it with the primer again and carry on. Guess I could have ground the welds down more/better but it will do for me.

Jim E

08-19-2004 at 03:46 AM Re: V6 swap so far...

I have been working on my clutch slave bracket and here is what I have made up using Dwains template. I added a few gussets and trimmed it down a bit from Dwains model.

alpine_64

08-19-2004 at 04:10 AM Re: V6 swap so far

Nice Jim, will you be grinding back the welds and giving it a nice shiny coat of blue to match the motor?.. maybe satin black :P

1963 Alpine SIT SAL 018692 LB9008874RR0M (engine) 1965

Alpine SIVGT SAL 540798
B941031 IOGTODHRO HBH 01641 (engine)
SAOCA: 4381

Jim B
08-19-2004 at 04:27 AM Re: V6 swap so far...

The welds.... arrggg... I really wanted nice welds [on the gussets that is] so I waited for the pro to do it.... think he must have been tired or something. Yea I will clean up the welds on the side you can see and paint it black. I did all the other welds myself... what welds you say.. they are there made this up out of some square tube that I cut open and welded up in Z sort of shape. I almost ground all three gussets off and did it again but after a day on this thing decided to live with it.

alpine 64
08-19-2004 at 04:39 AM Re: V6 swap so far...

Still looks like a nice job.. am looking forward to the final pics.. as i'm sure is everyone else..

1963 Alpine Sil SAL 018692 LB9008874RR0M (engine) 1965
Alpine SIVGT SAL 540798
B941031 IOGTODHRO HBH 01641 (engine)
SAOCA: #381

Jim E
08-20-2004 at 03:59 AM Re: V6 swap so far...

You put the engine in and you pull the engine out then you put it back in.... worked on fitment of the clutch slave bracket today. You have to grind away an ear on the bellhousing for the slave to clear. I removed the ear before installing the engine/trans but did not remove enough so out it came ground off somemore still not enough. Then I just wormed my way in with the grinder and trimmed it with the engine in place and the slave clears just fine. Had a few minutes left on the day so I bolted the wheels on and set the car on the ground to see how the weight of the V6/T5 affected the ride height. While there are still lots of stuff off the car at this point like the radiator water pump clutch flywheel the car looks like it is sitting higher in the front than it did with the 4 cylinder. I got on the front of the car and my 175 Pounds made about no difference in the height. Think this means the Sill springs and the Hillman spindles are a must.

husky_drvr
08-20-2004 at 01:05 PM Re: V6 swap so far...

Jim,
did you try to roll it or work the steering with the extra weight? good tires on a clean floor might have enough side scrub to not let the suspension settle easily.
just a thought,
Don

Rootes Group cars are for FUN Some people have fun everyday!

bryang

08-20-2004 at 02:24 PM Re: V6 swap so far

Jim,

I know what you mean about the pulling and installing of the engine. I did mine more than 25 times. Most of those were in relation to setting up the Tilton unit. I think you'll be better off with your cool bracket for sure.

On the ride height I think Don is right. Mine would settle quite a bit after moving it around, I think it will settle more. Possibly up to an inch. When I was setting up my front end or rear end (6-8 times, I forget) I could always expect to get more settlement out of it after driving around the block.

Anyhoo ... nice looking bracket. Is Joe's guy working on one as well? That would definitely be something I would have bought had it been available.

Have fun with it, it's looking like you'll be out dumping that clutch in puddles in no time! Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

08-20-2004 at 10:21 PM Re: V6 swap so far...

I did roll the car around a little, mostly to sweep under it, and turn the wheel back and forth. I figure it will go down a bit when I get the rest of the stuff on it but am still thinking it looks higher now than before.

It is Friday and there is a big drag race south of here, time go have some fun!

alpine-64

08-21-2004 at 08:23 AM Re: V6 swap so far...

Jim,

As someone who has had their car off the ground for long periods of time I can tell you that the spings take a while to settle in again., it will lower lots in some time.. a drive will speed up the process but you will get there soon enough, as for the spindles., see what you think after you have taken the car for a few runs.

1963 Alpine Sli SAL 018692 LB9008874RR0M (engine) 1965

Alpine SIVGT SAL 540798

B941031 IOGTODHRO HBH 01641 (engine)

SAOCA: 4381

guruatbol

08-21-2004 at 03:40 PM Re: V6 swap so far...

Jim, that is really looking good....! only wish I was that far along.. I haven't even started doing the work yet...

Are all sunbeams that yucky orange? It seems every one I see that is a project is ... Mine is... Keep posting updates ... I'll do same ... You are very talented and are doing a fine job... Mel

Mel Hewitt
Northern Occupied Mexico

Jim E
08-21-2004 at 04:33 PM Re: V6 swap so far...

Hay Mel,
All the really nice ones are yucky orange it is well known "YO" cars are faster and win more shows than Your black blue green or other color cars. I have come to like the color it really does look nice on a well done car.

Thanks for the nice words on my project and work.

Jim E
09-13-2004 at 09:47 PM Re: V6 swap so far...

I have been working on the hole for the T5 and this is what I came up with using the stock cover and adding a bit here and there.

bryang

09-13-2004 at 10:40 PM Re: V6 swap so far...

Looking good Jim. I remember being at that point. You're not too far from pulling wheelies now! I planned on working on mine a lot last weekend but it didn't happen. Gotta get stuff done before the weather gets bad. Anyh000 ... it looks really nice. When you're setting the ride height I'd recommend leaving it a half inch higher than you want it because it will settle a bit more. I'm now thinking of dropping the rear just a half inch. One inch wasn't working out, two was definitely too much. Maybe I should just leave it as is... Bryan

I won't put a smily on cuz you hate 'em

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

09-14-2004 at 03:52 AM Re: V6 swap so far...

Oh you can put a smilie on I don't mind,

Note the engine is out again I am gaining on you in that department. Think the next time it goes in it might get to stay until it comes apart for paint. I almost feel like I am getting close, tomorrow will stab the eng/trans back in and look at the radiator for modification. Next is hit the yards for a drive shaft and drop the dana off for getting the gears set up. Order some bits and make a run at getting it back on the road.

SDuncan

09-19-2004 at 11:35 PM Re: V6 swap so far...

I just spent the past half hour reading through your thread, Jim, and it was very enjoyable to read about all the progress you have made. I try to read it as things are posted, but I thought I'd take some time to re-read it start to Finish and tie it all together. It sounds like the light is visible at the end of that tunnel now.

I also browsed through all the photos on your website. I especially enjoyed the photos from the Invasion. I hope my car is done so I can make it for next year.

Scott Duncan

1966 Series V Turbo

1980 Porsche 924
SAOCA Member 4291

Jim E
09-20-2004 at 03:06 AM Re: V6 swap so far...

The swap has taken me longer than I thought it would but things always do. I really have not put a lot of time in the actual nuts and bolts of the swap over the past year plus. The floor work was a big job and ate up lots of hours. then I tend to get side tracked on different small parts of the swap and have a bunch of different things in different stages of completion. Focus on one thing or system at a time would be the smart way to go about it but my mind does not work that way so I just have to deal with it. I had planned on getting some car work in this weekend but my bride informed me that the trim on the house was not painting itself., go figure... it is unpainting itself why cant it paint itself. The car is starting to come together all the little half finished bits are becoming finished bits. I might actually get to put the engine back in and leave it in until it is time for paint.

Hay maybe by next Invasion we will both be done and can swap rides.

Jim E
10-06-2004 at 02:37 AM Re: V6 swap so far...

The plan is to prime and maybe top coat the engine bay before the engine goes in for the final time. So I have been welding up holes and grinding and sanding and wire wheeling. There is not a lot of area that you can get to with a DA in the engine compartment so this is another of those not much fun jobs. The area under/around the master cylinders was a real mess from all the years of brake fluid dripping. Still have a bunch of holes to weld up and then will wet sand it prime sand prime sand.... but it is getting there.

Do this job for a few hours and dipping seems like a pretty good idea.

SDuncan
10-06-2004 at 03:00 AM Re: V6 swap so far...

That looks an awful lot like my engine bay. I will agree that it is a lot of work to try and clean it up. There are so many nooks and crannies in there. So, does this mean that your motor is ready to go back in for the final time? That's a good milestone for sure.

Scott Duncan
1966 Series V Turbo
1980 Porsche 924

SAOCA Member 4291

Jim E
10-06-2004 at 03:32 AM Re: V6 swap so far...

I think so but you never know, that is the plan anyway. Was going to just leave the engine compartment as it was

and pull everything back down after it was running but the plan is evolving as I go.

jandrscovill

10-06-2004 at 12:45 PM Re: V6 swap so far...

Hey Jim, funnything, i primed on sunday but unfortunately haven't had a chance to topcoat til tonight i hope. The wife has a pinched nerve in her back so i've been playing Mr. Mom. Boy i can't wait any longer though, to get some fresh color on the project allways rekindles drive.

I used glass bead in my engine bay, it worked great!

I still don't know how to post pics so ill just continue to save them all and maybe do a webpage or something later. I think i have like 300 pics. right now.

So maybe we'll be ready for the next Invasion eh?

Great to see things coming along.

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

MikePhillips

10-06-2004 at 04:34 PM Re: V6 swap so far...

Funny how having that nice, clean, redone engine can make it's home up front look like it just isn't quite good enough for it.

Jim E

10-06-2004 at 05:59 PM Re: V6 swap so far...

Yes everything I do makes something else look not so good and to think at one time I thought it all looked pretty good... that is until the first time I parted it on a field with other Alpines that is... then I knew it was a beater. Hope to be a bit better than beater status when this is all done.

<http://www.erikaandjim.com/forumarchive/jimsupdates.htm>

8/1/2005

MikePhillips

10-07-2004 at 04:39 PM Re: V6 swap so far...

Don't think you'll need to worry about that. Looks good to me so far.

Jim E

10-23-2004 at 04:44 AM Re: V6 swap so far...

Have spent two days wet sanding the engine compartment have no finger prints left, this is not a fun job either.

Jeff are you using single stage paint? I cannot decide which to use single or two stage. then there is the color thing, leaning toward Alfa red at this point.

[Edited by Jim E on 10-23-2004 at 04:47 AM GMT]

Chuck Ingram

10-23-2004 at 12:20 PM Re: V6 swap so far...

Jim

There is such a thing as gloves.I have sanded fingers many times.I was a fine finish painter for woodwork.worked alone to keep my standard up on new homes.standard was 6 coats and sanding twice.Just didn't have the feel with gloves.

I do use them now as much as possible for everything.

I look forward to see end results.

its still sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

jandrscovill

10-23-2004 at 10:59 PM Re: Re: V6 swap so far...

quote:Jim E wrote:

Jeff are you using single stage paint? I cannot decide which to use single or two stage. then there is the color thing, leaning toward Alfa red at this point.

Jim, it's really a matter of preference when using solid colors as far as i'm concerned. But with metallics i always go 2-stage so as i can sand it real flat and buff on a shine that Ajax can't take off! As far as a solid red though, if you go single stage then you don't run the risk of color sanding through your clearcoat, it also makes for easier brush touch up later as you don't then need clear. As long as you use a good urethane product (screw enamel) single stage is easier in the long and short run.

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Britbeam

10-25-2004 at 01:00 AM Re: V6 swap so far...

Guys just thought I would tell you about a product. I purchased a scotch brite wheel at home depot(blue in color) and I used it on my air grinder. It does come apart while your using it so I would recomend a face shield but man does it clean down to the metal better than a wire wheel and its particles dent stick in your skin like wire does. I used 3 of these wheels to do my trans tunnel and floor for the mod plus inside the engine compartment.

Just thought I would pass it on.

Dwain V6 Krazy

Jim E

10-25-2004 at 02:29 AM Re: V6 swap so far...

Thanks Dwain I will check it out.

Jim E

10-26-2004 at 09:16 PM Re: V6 swap so far...

I bought a bucket of primer the etching filling sort hope to spray some here shortly.

Think Twill start a paint thread and see if some of you folks who have done this stuff can teach some of us who have not about paint.

Jim E

10-27-2004 at 06:33 PM Re: V6 swap so far

Broke down and ordered a new 390 Holley and the brown truck just dropped it off, now for a wiring harness and gauge set.

Running out of stuff to buy so 1 must be getting close. [Edited by

Jim E on 10-27-2004 at 06:34 PM GMT]

SDuncan

10-27-2004 at 10:03 PM Re: V6 swap so far

What kind of guages and harness are you thinking about going with?

Scott Duncan

1966 Series V Turbo 1980

Porsche 924

SAOCA Member #291

Britbeam

10-27-2004 at 10:23 PM Re: V6 swap so far...

Jim you wont regret spending the money on the new Holley carb. You cant beat out of the box performance this little carb will give you with minimal adjustment.
Drove mine to work today. Theres nothing like crusin the the freeway at 70 with the ability to accelarate above.
Dwain V6 Krazy

bryang

10-27-2004 at 10:39 PM Re: V6 swap so far...

Youse guys are making me want to buy a new Holley. I bought mine slightly used and saved 70.00. I've spent 250 trying to get it to run right. Joe said to but a new one so I guess I'd better do it. It's coolyou're getting so close Jim. You should record the start up and post the file!
Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

10-28-2004 at 03:41 AM Re: Re: V6 swap so far

quote:SDuncan wrote:

What kind of guages and harness are you thinking about going with?

<http://www.tpigauges.com/prod03.htm>

Think I will go with TPI gauges over the Dolphin just because they come with red needles.

<http://www.ezwiring.com/>

For the harness I am going to use the EZ Wiring mini 20

I have a used 390 Holley but it needs a kit and I just decided to sell the used carb and buy a new one. Got enough to sort out yet with out having to rebuild the carb and tinker with it.

[Edited by Jim E on 10-28-2004 at 03:44 AM GMT]

Chuck Ingram

10-28-2004 at 12:59 PM Re: V6 swap so far

I went the new holly when i first did my conversion. Can't be beat. One thing with the holly is you never ever want to have a backfire. This meeses up the power valve. Here we have a great carb shop. Give them all the info and when it comes back all you need to do is instal lit. You may need to adjust idle speed but that about all. It is completely bench tested and set to your engine configurations.. In fact I'm taking a pair of strombergs in today. we are still sunny but the weather has been rain and inor rain.

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim E

10-28-2004 at 01:39 PM Re: V6 swap so far...

There is a power valve saver out there wonder if the new units come with it installed, have to check on that.

Just looked on the Holley website and the new 390 carb comes with power valve blow out protection. [Edited by Jim E on 10-28-2004 at 02:09 PM GMT]

SDuncan

10-28-2004 at 03:05 PM Re: V6 swap so far...

I went with the same harness as you are considering. I haven't installed it yet but it looks pretty straightforward, even for a hack like me. I went with the Dolphin guages but I got the white-faced ones and they do come with red/orange needles. Those TPI ones look pretty good too. Part of me is wishing I had bought the Autometer guages as I am going to need a boost and a air/fuel guage and Dolphin doesn't make either of those. I can get them with the white face but the lettering doesn't really match.

Scott Duncan

1966 Series V Turbo 1980
Porsche 924
SAOCA Member #291

Jim E

10-28-2004 at 03:18 PM Re: V6 swap so far...

The Dolpin gauges come with black faces and red needles? I would rather go with only the one vender if they do I ask them a few months back and they said they did not offer that combination.

Oh I read your post again you got the white face. [Edited by Jim

E on 10-28-2004 at 03:19 PM GMT]

bryang

10-28-2004 at 03:22 PM Re: V6 swap so far...

Hey Jim,

I think if you just bought one new it probably has the power valve protection. I had a friend, who is in the know on these things, modify mine so that it is protected. I don't know what all is involved but he had to drill a hole in something and put in a ball bearing so that when you did get a backfire the power valve MIGHT not blow out. I also got a metering block conversion on mine so that you can use standard jets rather than changing those metering plates.

Anyhoo ... Chuck is right, you don't want a backfire as it will blow the powervalve even sometimes with the protection. I have a new powervalve sitting on my desk ready to give this used carb one last shot. If that fails I'm going to start saving for a new carb.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

11-03-2004 at 04:21 AM Re: V6 swap so far...

Finally got the under hood area primered, used a etching filling primer. Looks like it came out pretty good my friend Norman sprayed it for me. So now I can stab the engine and transmission back in and have a go at getting this thing driving.

[http://home.bellsouth.net/p/s/community.dll?](http://home.bellsouth.net/p/s/community.dll?ep=334&fileid=1296199&groupid=143503&f6ldend=175199&curRec=1&folderview=thumbs&ck=)

ep=334&fileid=1296199&groupid=143503&f6ldend=175199&curRec=1&folderview=thumbs&ck=

The above link should take you to a few more pictures of the under hood primer if you want a look.

Ordered the wiring harness, gauges and the LAT bolt on traction bars should be in soon. [Edited

by Jim E on 11-03-2004 at 04:23 AM GMT]

alpine_64

11-03-2004 at 06:34 AM Re: V6 swap so far

Jim.

Looks really sweet. I am sure you are just churning over what colour to do. It can't be to long before she fires up.

1963 Alpine Sli SAL 018692 LB9008874RR0M (engine) 1965

Alpine SIVGT SAL 540798

B941031 I OGTODHRO HBH 01641 (engine)
SAOCA: #381

V6y JOE

11-03-2004 at 09:16 AM Re: V6 swap so far...

YESSSSSS!!! Can't wait till you fire it up. Jose

Chuck Ingram

11-03-2004 at 01:47 PM Re: V6 swap so far

Jim.

If you are that close I fail to see why you don't paint the compartment first. I know you have had the engine in and out a few times now. I therefore assume all what evers are done since it is in primer. Just my one of my million thoughts for the day but do keep it up and soon it will be done.

May it be sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

11-03-2004 at 02:49 PM Re: V6 swap so far...

Chuck,

I just do not know... thought to paint the engine bay now but also think I want to get everything bolted in first then pull it back down and paint the whole car. I need to do at least one final fitment of things like the radiator, see where the wiring harness will come thru the firewall and such so I can weld up some of the extra holes in the engine bay. We will see nothing is set in stone.

[Edited by Jim E on 11-03-2004 at 02:50 PM GMT]

MikePhillips

11-03-2004 at 05:12 PM Re: V6 swap so far...

Personally Jim if it were me I'd test fit everything except the engine and transmission. I think those would dimensionally be done up in cardboard or something of yours routing around them. Then, remove everything to paint the bay. It's a lot easier, and neater, than attempting to mask stuff off to paint. If you mask around things, no matter how careful you are you'll have some overspray and small areas where you didn't get or the masking was a tiny bit too big. After all that work, why settle for not going all the way??

Jim B

11-03-2004 at 05:32 PM **Re:** V6 swap so far...

My thinking is to get it all fitted and then take it back down to parade rest and paint it. Were this a stock build would paint it now as everything would be pretty much a bolt on. With so many things being changed and all I see me damaging new paint.

The other thing that is floating around in my head to do is take it to bare metal now and prime the whole thing. Fit the engine trans radiator pull it apart top coat it then assemble run brake and fuel lines wiring and such. I am pretty sure a version of this idea will be what I do in the end.

[Edited by Jim E on 11-03-2004 at 05:37 PM GMT]

Chuck Ingram

11-03-2004 at 05:52 PM Re: V6 swap so far...

Jim.Sounds as you are determined.Keep going.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

jandrscovi 11

11-04-2004 at 03:59 AM Re: V6 swap so far...

Hey Jim,

I spent about 2 hours last friday at the speed shop getting what i needed for fuel and brakes.

3/8 aluminium fuel line with fittings 3/16

brake lines and fittings

Earls fuel filter

Gee, and only spent \$265.00 OUCH!

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

11-04-2004 at 04:10 AM Re: V6 swap so far...

I was going to order aluminium fuel line from Summit but several folks said it was a bad idea to run it on a street car.

[Edited by Jim E on 11-04-2004 at 04:11 AM GMT]

jandrscovill

11-04-2004 at 04:15 AM Re: V6 swap so far...

Why? Stress? seems to work on race cars but then again who knows?

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

11-04-2004 at 04:21 AM Re: V6 swap so far...

That is the same thing I thought works on race cars but guess it cannot stand up to everyday use.

Summit has a 25 foot roll of 3/8 steel line for about \$25. Think I will order it here shortly. They also sell brake line 25 foot is \$12. Both are wrapped and copper plated or some such special non sense

[Edited by Jim E on 11-04-2004 at 04:24 AM GMT]

Jim E

11-07-2004 at 02:44 PM Re: V6 swap so far...

well.... I took the windshield off removed the dash, broke the duck bill.., more or less removed everything from the interior but the steering column and wheel. Then wire wheeled and hand sanded with 100 all the little nooks and crannies under the dash and also the hole the heater core goes in. What a mess, dirt, jute, old glue, rust, leaves.., ugly. So I am going to blow it out wipe it down put a coat of primer on it and move on to the trunk.

andrscovill

11-07-2004 at 04:50 PM Re: V6 swap so far...

Hey Jim, it never ends i'm tellin' ya, it never ends!

Today i'm hoping to weld in my battery box and repair the trans tunnel where it looks like the tailshaft got pushed back and sent through the floor,(yes, she was hit pretty hard in the left front at some point). Then i can finish spraying the bottom and running that new plumbing.

Geez, sorry this is your subject line, oops!

Jeff Scoville

(The Nitpicker)

Two Series Ii's
One Series III
Two Series TV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
11-07-2004 at 09:11 PM Re: V6 swap so far...

You got that right everytime I think I am moving ahead I end up taking something else off the car. Hay post away I got no issues with this thing being about just my piece of rusty junk.

New pictures coming...

Jim E
11-07-2004 at 09:29 PM Re: V6 swap so far...

Must be some point where you start putting parts back on... I just have not got there yet.

Laying on your back sanding the under dash is fun...

this area was not so bad but getting the glue off was a pain.

paint always make things look beter.. even better than they are

still wet

Just a note I am using a brush on primer for this stuff in the tub and on the underside, then top coating it with a brush on paint. Which will most likely send some folks screaming into the night. This is just how I am doing it I am not saying it is the right way or the best way or anything like that. It is just my way and a lot of this I am making up as I go.

Jim E
11-27-2004 at 04:10 AM Re: V6 swap so far...

Have been pecking away at this... Cleaned up Tiger rear end I am using and primed and painted it. Was ready to take it to have the gear set installed and got a scare. Seems there are two different versions of the Powr-Lok that I am using besides the difference in gear sets they will take. There is a full floating and a semi floating. I need the semi and was not sure I had that version. The difference is in the cross shafts that the spider gears ride on. The semi floating has holes in the cross shafts to accept a couple of spacer buttons that hold the axles against the tapered bearings out near the hubs. Well I have the right locker but do not have the buttons so am now on the hunt. Then the other thing with the locker is I replaced the clutch pack and used oil to lube it when I assembled the thing [stupid]... now I learn this may cause the steel clutches to gaul so it will have to come apart again and

get lubed with posi gear oil. got lucky on this and had a guy from the tiger email list to thank for sending me some pointers on installing the mighty Powr-lok.

Today I spent a little time working on the rust in the cowl. I have an area on the driver side near the cowl vent that had some bondo dug it out and found a hole about as big as a fifty cent piece. This is an area that is not easy to fix as it is a double wall, you cannot just go under the dash and get to the back. So I thought about cutting a piece of cowl out of another car and welding it in, an ugly job of work to get so it would look right. Then I got to thinking and decided to try and work a piece of metal in the hole. So I cut out a patch just a little bigger than the hole and could just slip it in the hole, but could not hold it up tight against the hole. So back out it came and I welded a small bolt on the patch and instant handle, held it as tight against the underside of the hole as I could and welded it in place. Now will get my buddy to lead it for me and no more rusty cowl. One more spot I know of that has rust, well filler anyway I assume there is rust there, the bottom of the left front fender. I am tempted to leave it be as it has been in there for years and not caused a problem but I think I will dig it out and have a go at fixing it.

Tatra 603T2

11-27-2004 at 11:28 AM Re: V6 swap so far

This double skinned section on top of the scuttle between the screen & the bonnet is an absolute pain. On Series III onwards the two skins were spot welded together and when rust builds up between the skins it tries to force them apart. The spot welds hold and cause dimples on the area around the heater air intake grilles. Basically, if you've got dimples - you've got rust.

Paul Norton - S.A.O.C. President & Information Officer.

* * * * * Happy Easter * * * * * "April Showers" or "It's Not Sunny!" or "Let's Keep Them On The Road - No Matter What The State Of The Road!" or "Let's See Paul Scofield Do This With His!" or "Jan said it needed dipping!"

Jim E

11-28-2004 at 12:39 AM Re: V6 swap so far...

Here is my cowl patch note there are dimples, guess this is about as good as example of dimples as you can get.

here is the area on my left front fender that I suspected of having rust... well what it has is a dent

last but not least here is the Tiger rear end I will be using all cleaned up primed and painted and ready to go get new gears installed

[Edited by Jim E on 11-28-2004 at 12:40 AM GMT]

S Duncan

11-28-2004 at 01:56 AM Re: V6 swap so far...

Looks good, Jim. It's nice that you have that Tiger rearend, no farting around trying to get the 8" to fit. The sad part about these cars is the the spare tire well obstructs the view of the diff from the rear. It's nice when you can see that nice painted pumpkin from behind.

Scott Duncan
1966 Series V Turbo 1980
Porsche 924
SAOCA Member #291

Jim E
11-28-2004 at 03:38 AM Re: V6 swap so far...

Yes the Tiger rear end being a real bolt in is great. I think the dana will take anything the V6 can throw at it even in a turbo state of tune. I got lucky on this rear end and swapped some parts for it other wise they sell for around \$500 add a set of gears and a locker and it is as much or more than what it costs to set up a 8 inch.

Bill Blue
11-28-2004 at 01:31 PM Re: V6 swap so far...

Jim, I don't think a person saves any money with the Tiger rear. Less futzing around, though. Have not been keeping track of costs (too depressing), but I think it cost me about 400 for the 8" and narrowing with new axle bearings. Shock hangers and spring pads were made out of angle iron, maybe \$2 worth.

Bill

V6 JOE
11-28-2004 at 03:56 PM Re: V6 swap so far...

The biggest advantage the Ford 8" has over the Tiger rear end, is ease of working on it. No axle hubs to deal with, replaceable third member to change gear ratios quickly, better and cheaper brakes, not to mention less weight. The V6 will never break a Tiger rear end, but neither will it break the Ford 8".

I like the idea that I can have two sets of gears to do different things with your Alpine. For all around street use, the 3.55's are ideal, but if you want slalom your Alpine or drag race it, in an hour and a half, you could put in a set of 4.1 l's and you could have a killer.

The only advantages to the Tiger rear end , that I can see, is it's a direct bolt in and the emergency brake hook up is the same.

They both cost about the same by the time you have modified the 8" to fit, so the difference I can see is in your personal preference.

Jose

Jim E
11-28-2004 at 04:24 PM Re: V6 swap so far...

All true. For me the Tiger rear end was handy and to be honest if I had sold off the parts I traded for it I could have gone 8 inch for about the same money. I am in it for about \$500-600 right now with a new gear set and install kit plus the locker and new clutch pack for it. Still need axle bearings, shims and seals plus the cost of gear set up so another \$300 more or less.

I figure you can spend the best part of a grand pretty easy on this no matter how you go.

I also think for most the stock Alpine rear end would work for a good long time if you go thru it.

V6 JOE

11-28-2004 at 11:22 PM Re: V6 swap so far...

I also think for most the stock Alpine rear end would work for a good long time if you go thru it.

The Alpine rear end is pretty strong, and unless you abuse it, like I did for five years before it broke, you should have good service from it. I drag raced it for five years, before the spider gears said ADIOS.

The biggest reason for going with the 8", is to get some higher gearing than the stock 3.89's the Alpine came with. The guys that are going automatic with their V6's, will need to change the rear gear ratio, to make it more useable on the street, although if you are running the A4LD with overdrive, the overdrive gearing will help while cruising on the freeway.

If you are going to be reasonable with your Alpine, I believe you'll have good success with the stock rear end; that is of course if you do as Jim said, mainly, go through it and fix the weak points.

Jose

Jim E

12-08-2004 at 03:56 AM Re: V6 swap so far...

Working on getting the car ready to paint. Found more rust of course not horrible but will eat up more time to fix. The rust is in the area where the soft top attaches to the body just below the tops rear window. Have been working on the jambs and the fender wells cleaning and sanding. Who ever it was that said to use a torch to heat up the tar so it will scrap off easy I owe a beverage. That really works well then when the tar is off a shot of carb cleaner and wipe it down hit it with the wire wheel a little 100 grit sanding and prime.

Found a set of thrust buttons for the Dana so I now have all the parts and can get the gears set up.

Jim E

12-09-2004 at 12:41 PM Re: V6 swap so far...

Here are a couple images of the fender wells with primer. They cleaned up pretty good.

the valance needs some work to straighten and strengthen before I can clean it up

Did not want to take the gas tanks out but oh well they needed to come out just to clean the trunk. I used purple

stuff and scotch bright and the hose with lots of water.

One thing of interest the gas tanks have been out before and are coated on the inside but the DPO must not have pulled the connecting tube and cleaned it. The point where the fuel line connects to the tube was full of paint chips. I do not see how any gas got thru to be honest. Doing the gas tanks is now added to my list of things you do to any Alpine.

Chuck Ingram

12-09-2004 at 01:56 PM Re: V6 swap so far...

Oh yes it is a must do item. I remember many years ago (like the olden days eh Jim) about how we found out that routes painted the inside of the tanks. Actually ended up using a see through filter that was easy to open and clean until the tanks were done in a very short time once the car was sorted out. The problem is even more pronounced if there was little or no gas for a long period of time.

So yes it is a must do.

and another sunny day ahead.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

bryang

12-09-2004 at 05:45 PM Re: V6 swap so far...

Yes, I had all the paint peel off the interior of my tanks since it sat so long. I finally got it to run. I think I'd rather pull the engine than pull tanks. I really wish I had the earlier tank set up. You getting the idea that I dislike those leaky dual tanks?

Anyhoo ... it's looking good Jim. You'll be in paint in no time. You made the final decision on color yet? The main reason I did my engine bay black is because I couldn't choose a color and I figured that if I ever decided to change colors, the black would go with anything. Especially black I guess! Have Fun,

Bryan

bryan gilbrath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hiliman rninx estate (for sale!)

Jim E

12-10-2004 at 04:16 AM Re: V6 swap so far...

Thinking the color will be red, not sure which red but red. The Alfa red which has a lot of orange in it and is very near the original red or there is a Ford red called Performance Red [I think] that is close to the top of the list. Was thinking green but have about dismissed that color from the running.

Gas tanks... what a set up.... y tanks have been coated at some point in the past but from the looks of thing the cross over tube was never removed and coated. I don't look forward to putting them back in. A fuel cell would be nice well at least safer but would end using the trunk. I will just clean and reuse the stock tanks.

Today a removed tar from the rear fender wells, battery box and a bit of the trunk bottom. Looks very nice when you get it cleaned up. Must have removed 30 pounds or more of tar so far.

Cowl and dash where the windshield sits got some lead today. The passenger side fender to cowl seam also got filled. This lead stuff is something else once it is on and worked to shape you cannot tell there was ever any rust and the fender seam being filled is just plain slick! thinks I will do the rocker seams also. Let me say that another way think I will have it done, my friend who owns the shop I am doing the work on the car at is the lead man.

Almost felt like I was getting somewhere today.

Chuck Ingram

12-10-2004 at 01:35 PM Re: V6 swap so far...

Jim

Glad to see you are using lead. Years back when I was at the chrome shop He asked me if I was still using lead. I said yes and he said back into the back of the shop. He then GAVE (yes gave me) me 100 plus pounds of lead left over when they still had the body shop.

My problem with apply lead however is I just always want to make it just a little better and then it slides off. I learned good enough is good enough and just skim over a good film of filler.

And its sunny again.

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim E

12-10-2004 at 01:46 PM Re: V6 swap so far...

You are lucky to have a store of lead to use. I had to buy some and it is about \$12 a pound and can only be had thru Eastwood right now as far as I can find. Anyone know of a place to buy 70 30 lead other than Eastwood?

andrscofill

12-10-2004 at 01:51 PM Re: V6 swap so far...

Thanks Jim,

Now i really feel bad. I just went for the "Blast away the loose stuff and pound on some more undercoating" method.

But truth be told if i tried stripping this one down to bare metal, i'd end up with no car at all!

She should be sitting on all fours by the end of the weekend. Rear end goes back in today then i'll have to slide

the car over so i can get to the right front. This one car garage/shop really sucks. I'll send you a couple of pies after the suspension is back in.

Jeff Scoville
(The Nitpicker)
Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
12-10-2004 at 02:08 PM Re: V6 swap so far...

hahaha well I am getting carried away I guess. The underside is going to get a coat of black brush on paint will be nice but not factory. The more I do the more I see that needs done. The removing of the tar is a job of work but my labor is cheap.

Jim S
12-10-2004 at 11:33 PM Re: Re: V6 swap so far

quote:Jim E wrote:

Thinking the color will be red, not sure which red but red. The Alfa red which has a lot of orange in it and is very near the original red or there is a Ford red called Performance Red [I think] that is close to the top of the list.

Jim, if you are looking for a good--almost correct--red, you might want to check out Mazda Sunrise Red, color code RH, from the late 70's/early 80's. I was parked next to a red RX-7 around that time and compared its color to the original paint in my trunk. It was hard to tell the difference. That is what I used the first time I painted my car and I was very happy with the color. Unfortunately, when I re-did it about 10 years later, they must have mixed it wrong and I didn't realize it until I was done. While I got a very nice red out of it, it has less orange than it should and is impossible to match.

[Edited by Jim S on 12-11-2004 at 05:34 AM GMT]

Jim Stone 66 Series V

Jim E

12-11-2004 at 04:03 AM Re: V6 swap so far...

Jim S.
I will take a look in the color chips at that one thanks.

Looks like the 19 spline Powr-Lok for the Dana 44 is going up in value, this one is for the higher gear sets but

man that seems like a lot of money.

[http://cgi.ebay.com/ebaymotors/ws/eBayISAPI.dll?](http://cgi.ebay.com/ebaymotors/ws/eBayISAPI.dll?ViewItem&category=34208&item=4509888283&rd=1)

ViewItem&category=34208&item=4509888283 &rd= 1

Jim F

12-11-2004 at 08:35 PM Re: V6 swap so far...

Got to do some lead work myself it is no where as easy as it is made to look by someone who knows what they are doing. One fender to cowl seam to fill and then maybe the sill to fender seams plus the rust in the soft top attachment area and a few dents to beat on and then maybe just maybe the body work will be done.... maybe

Jim E

12-18-2004 at 12:17 AM Re: V6 swap so far...

More fun with a torch and scraper.

Still more to remove but this is getting close.

The factory used a butt load of tar on these cars must be 50-75 pounds of the stuff.

SDuncan

12-18-2004 at 12:59 AM Re: V6 swap so far...

Looking good, Jim. What are you going to do with the underside when it's cleaned up? I remember you saying you'd be painting it with something you brush on. Is it just paint or some type of rock-guard stuff? I had the my car media blasted so they removed all that stuff for me. I weighed out the time vs. cost and decided to go that route. It looks like I saved myself a lot of hard work.

What shocks are those?

[Edited by SDuncan on 12-18-2004 at 07:59 AM GMT]

Scott Duncan

1966 Series V Turbo 1980

Porsche 924

SAOCA Member 4291

Jim E

12-18-2004 at 03:18 AM Re: V6 swap so far...

Just using a oil base primer and matching top coat for the under side, it is brush on and nothing special just

paint.

The torch and scrapper thing is not much fun, works but if I were paying me to do it would not be cheap.

Chuck Ingram

12-18-2004 at 05:19 PM Re: Re: V6 swap so far

quote:Jim E wrote[/b

The torch and scrapper thing is not much fun, works but if I were paying me to do it would not be cheap.

But Jim aren't you are working by the hour for zip.

I know I sure do and it costs me to help the boys it always seems.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

SDuncan

12-18-2004 at 05:34 PM Re: V6 swap so far...

Hey, time is money, even when you are working for yourself. The time I saved by having my car blasted allowed me to pick up some extra overtime, to pay for my car to be blasted. Kind of like the dog chasing its own tail, I guess.

Scott Duncan

1966 Series V Turbo 1980

Porsche 924

SAOCA Member #291

Jim E

12-19-2004 at 12:28 AM Re: V6 swap so far...

Chuck you nailed it my labor is free.

On the work front the one where they actually pay me [and some of you know what I do...] I am in management and get the same pay whether I work 10 hours or 60.

SDuncan

12-19-2004 at 12:54 AM Re: V6 swap so far...

In those types of jobs aren't you more likely to work the 60 hours than the 10? One benefit of my job is we get lots of time off so I get to sign up for the odd overtime shift and make what I'm really worth.

Scott Duncan
1966 Series V Turbo 1980
Porsche 924
SAOCA Member #291

Jim E
12-19-2004 at 01:15 AM Re: V6 swap so far...

60 70 80 what ever it takes

Britbeam
12-19-2004 at 02:32 AM Re: V6 swap so far...

Great job Jim are you shooting to be finished by showtime in Townsend? Dwain
V6 Krazy

Jim E
12-19-2004 at 01:39 PM Re: V6 swap so far

That would be fun! Do not know if I can make it but will keep after it.

Jim E
12-19-2004 at 05:56 PM Re: V6 swap so far...

Here are a few pictures of tar removal and lead work. Nothing special and no words describing but if you want a look just click on the below link.

[http://home.bellsouth.net/p/s/community.d11?
ep=3 34&fileid= 135591 6&groupid= 1435 03&folderid= 1821 45&curRec= 1 &folderview=thumbs&ck=](http://home.bellsouth.net/p/s/community.d11?ep=334&fileid=1355916&groupid=143503&folderid=182145&curRec=1&folderview=thumbs&ck=)

Jim E
12-21-2004 at 11:20 PM Re: V6 swap so far...

Was off work today and spent the day on my back with the torch heating and removing tar almost done. I may be a nut but it just looks so much better with the tar off I cannot help my self.

61 Alpine
12-22-2004 at 12:29 AM Re: V6 swap so far

I did the entire bottom of my #2 Alpine earlier this year, but I had mine on a rotisserie so it was much easier. Then I sandblasted the entire bottom of the car. (wont do that again) to messy.

Rob Wiseman V6 Alpine

Series I

Jim E

12-26-2004 at 10:42 PM Re: V6 swap so far...

Got a few hours in today. Removed the rear end and worked getting the rest of the tar off. I need to weld in the frame side bracket for the Tiger panhard rod and make up the disc brake caliper brackets. The underside is getting close.

MikePhillips

12-27-2004 at 12:32 PM Re: V6 swap so far...

If you're using the original Tiger frame bracket for the panhard rod you might want to look at reengineering it. In service they had a tendency to break off the frame under even normal use.

V6 JOE

12-27-2004 at 01:28 PM Re: V6 swap so far...

Jim,

You might be making more work for yourself than is necessary. I have never found it necessary to use a panars bar, with any of my modified Alpines. The minimum amount of deflection of the leaf springs, I've found, is inconsequential.

Jose

Chuck Ingram

12-27-2004 at 01:43 PM Re: V6 swap so far...

Jim

Joe is right about the panhard. I do not have one on either the 62 or the Lister. Of course this is for reasonable road driving (racing??) and not autocross. When I did the Tiger I of course had it as it was an original piece of the Tiger. When I first had the Lister out I was using the shocks set at an angle to do the job. It was a great setup and really worked but I changed it quite soon as the ride was ULTRA STIFF. Traction bars set close will also be a help in this with out sacrificing ride. This is what I did for the Lister.

sunny now but I must now go to clear snow.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

12-27-2004 at 05:49 PM Re: V6 swap so far...

Have heard of them being removed from Tigers for one reason or another. At this point I have it have the bracket

so it is going on. I thought the bracket looked a little flimsy but see no sign of it parting with the frame piece it was welded to or otherwise breaking. Figure to install it and if I do not like it or want to try the car without it I can take it off. Welding the bracket to the frame is very little work at this point.

Chuck Ingram

12-27-2004 at 09:15 PM Re: V6 swap so far...

Jim

I believe removing them was a cheap way of not having to replace the bushings and rubbers. I will say if you got it, go for it. Everything in its place will be a help. It takes many things to make a big picture. Sorry to hear how your weather has gone.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

alpine 64

12-28-2004 at 07:57 AM Re: V6 swap so far...

Jim,

A guy here racing a Tiger found the rear end moved round a little in hard cornering without the panhard rod (but that was racing) Also I believe that they moved the position on the MKII ears? Maybe have a look into that, see what they did and why.

1963 Alpine Sil SAL 018692 LB9008874RR0M (engine) 1965

Alpine SIVGT SAL 540798

B941031 1OGTODHRO HBH 01641 (engine)

SAOCA: 4381

MikePhillips

12-28-2004 at 12:04 PM Re: V6 swap so far...

The rod angles down from the frame to the axle and it's on the wrong side so the force on it is sort of a downward pulling action rather than a straight across push. I put a bunch of extra weld on mine to try to make it stay. So far it has, but then I'm not as enthusiastic a driver as some are.

Jim E

12-28-2004 at 02:20 PM Re: V6 swap so far...

So Rootes engineered and installed a part that is not well thought out and breaks. Go figure.

MikePhillips

12-28-2004 at 05:33 PM Re: V6 swap so far

It's the sort of thing you find in a short and small run car. And let's face it, Rootes really didn't have the time or money to go through a proper development cycle with Tigers. The panhard bracket breaking, the ackennann steering problems, overheating, etc are all things that should have been worked out before any were sold to the public. By any automotive business measure of the time, discounting the "cottage" manufacturers like Morgan or Lotus, only building approximately 7700 units in 3 1/2 years should be considered a flop when we were the major market. The Fiero was considered a flop because they were only selling 40,000 a year.

Jim E

12-31-2004 at 03:43 AM Re: V6 swap so far...

Welded the panhard bracket in today and sat the Tiger rear end on the springs to see how it all lined up. Looks good but I did notice one thing. The s@#@\$@!!! battery box is not going to clear the Dana. Will have to cut the box off or out and move the battery to the trunk. Guess this is one reason the Tigers have the battery in the trunk and a hole where the box is.

[Edited by Jim E on 12-31-2004 at 08:43 AM GMT]

V6 JOE

12-31-2004 at 09:45 AM Re: V6 swap so far...

Jim,

Just think of it as an "Opportunity", to improve the balance of the car by placing it in the trunk, on the passengers side.

It will also help plant the right tire on launch, while drag racing. Jose

Jim E

01-01-2005 at 04:15 AM Re: V6 swap so far

Here is my new storage box.

Ran out of primer so had to stop for the day.

Few more shots of the underside click the link.

[http://home.bellsouth.net/p/s/cornmunity.dll?](http://home.bellsouth.net/p/s/cornmunity.dll?ep=334&fileId=1373937&groupid=143503&folderid=175199&curRec=27&folderview=list&ck=)

[ep=334&fileId=1373937&groupid=143503&folderid=175199&curRec=27&folderview=list&ck=](http://home.bellsouth.net/p/s/cornmunity.dll?ep=334&fileId=1373937&groupid=143503&folderid=175199&curRec=27&folderview=list&ck=)

andrscovill

01-02-2005 at 06:48 PM Re: V6 swap so far...

Hey Jim,

Kinda late now, but couldn't you have just narrowed the box some to clear the diff? Those "Optima" dry cell batteries are quite small and don't leak all over either.

You could always revise the box again, but i'm not sure if your used to having to do things twice or more before your happy!

If i only did things once the car would have been done a year ago, i just hope all the revisions are worth it in the end.

Happy new year!

Jeff Scoville

(The Nitpicker) Two
Series II's One Series III
Two Series IV's Three
Series V's

And a Mark I Tiger SAOCA
Member #280

Jim E

01-02-2005 at 07:25 PM Re: V6 swap so far...

Twice is enough on this part. I thought about taking the corner or side off the box. I have one of those gell cell batteries but do not think the one I have would fit in any smaller box. Had thought to put the battery in the trunk in the first place so now it is going there for sure.

AutoX47

01-03-2005 at 06:51 AM Re: V6 swap so far...

Wow that underside looks amazing Jim, you deserve every bit of fun this car gives to ya

Andrew Zizzo

Enjoying a'66 Series V Alpine! - The Story Dues
paying SAOCA Member

Jim E

01-11-2005 at 03:23 AM Re: V6 swap so far

Here is my take on the rear disc brake conversion. I am using Alfa Spider rear rotors and calipers from a Merkur Scorpio. this is a first trial fit to see what was what and if it would actually work space wise. I will turn the diameter of the rotor down about 1/2 inch and open up the hole in the center to fit the Tiger hub. Then make a weld on bracket to mount the caliper.

Barry Knight

01-11-2005 at 02:04 PM Re: V6 swap so far...

Jim,

I like the looks of what you are doing on the rear brakes.

What are the factors that influenced your choice of the Alfa rotors and the Scorpio calipers?

Barry Knight Conyers,
GA
SV-V6 conversion in progress

<http://www.erikaandjim.com/fonimarchive/jimsupdates.htm>

8/1/2005

Jim E

01-11-2005 at 02:40 PM Re: V6 swap so far...

On the rotors there was a set laying around the shop, bolt pattern matches, dumb luck. The calipers I bought a while back to use on my car before I started the conversion to V6. I had heard about some other folks using the Merkur unit on kit cars and that it adapted well. So I did some searching found Mr. Merkur and bought the calipers. The E brake pull is a little awkward not sure I can cipher a way to make it work with the Alpine stuff but we will see.

The rotors are fairly cheap by the way at about \$30. Not sure the Merkur Scorpio calipers would be a great choice... as I am not sure you can just go to the corner parts house and buy a set.

Jim E

01-11-2005 at 03:02 PM Re: V6 swap so far

and so far the rotor/caliper combo will not fit in a stock steel wheel but does fit a 13 inch minilight. Think it will fit a steel wheel once I turn the diameter of the rotor down a bit so I can move the caliper in.

Barry Knight

01-11-2005 at 04:45 PM Re: V6 swap so far...

Jim,

My carefully engineered approach is not doing very well lately, so I could use some dumb luck!

What is the thickness of the Alfa rotors? Do they fit over the Tiger wheel flange without turning down the OD of the flange?

Barry Knight Conyers,
GA
SV-V6 conversion in progress

Jim E

01-11-2005 at 04:54 PM Re: V6 swap so far...

The rotors are solid did not measure them but long about 10mm at a guess.

They do not fit over the hub and I am going to open up the hole in the rotor. You would have to completely remove the raised portion on the hub to get it to fit with no change to the hole in the rotor.

rootesracer

01-11-2005 at 08:15 PM Re: Re: V6 swap so far

quote:Jim E wrote:

The rotors are solid did not measure them but long about 10mm at a guess.

They do not fit over the hub and I am going to open up the hole in the rotor. You would have to completely remove the raised portion on the hub to get it to fit with no change to the hole in the rotor.

Jim,

Have you looked into these?

[http://cgl.ebay.com/ebaymotors/ws/eBayISAPI.dll?](http://cgl.ebay.com/ebaymotors/ws/eBayISAPI.dll?ViewItem&category=42605&item=7946598944&rd=I&ssPageNameWDVW)

ViewItem&category=42605&item=7946598944&rd=I&ssPageNameWDVW

I know its not 4 lug, but it could get you more than halfway there.

Jarrid Gross

61 SII, 1725 EFI

Jim E

01-11-2005 at 11:42 PM Re: V6 swap so far...

I have looked at those just cannot bring myself to pay that much for a bracket. or even a bracket and rotors.

Then I cannot tell if it will fit in the little 13 inch wheels. [Edited by

Jim E on 01-12-2005 at 05:45 AM GMT]

61 Alpine

01-12-2005 at 03:50 AM Re: V6 swap so far...

Jim, when you cut the floor pans, did you make a template from construction paper or how did you get the pans just the right size. That is my project for next week.

Rob Wiseman V6 Alpine

Series I

Jim E

01-12-2005 at 05:06 AM Re: V6 swap so far...

I made templates from cardboard and duct tape, used the tape if I did not have a big enough piece of cardboard or cut it small, then if I pooched the template to bad just tossed it and started over [I used cardboard but poster paper or some other fairly stiff paper would due IjList had cardboard so used it]. I spent a lot of time getting the templates as good as I could and even more time ciphering just how I was going to do it as in where what would be welded to what and in what order. Then hole prep was real important. You just want to be real sure you do not weld yourself into a corner. So anyway I made the templates and made them a tick small as the pans grow when you start welding on them. I also put a flange on some edges, like the sill side of the front pans and I put mine on going up instead of down like the factory did. I just thought it would be easier with the flange going up. Where I put the flange on I did not have it on the template but just laid it out with a straight edge after I marked the pans from the template. Bent my flanges trimmed t te line and beat it in place beat it back out trimmed some more bent curved swore it would never fit but they did. The pans Jan has and I hope they are the ones yo have are fairly soft and easy to work so if your pan grows when you are welding it in you can work the metal with your buddy the hammer. I would do the rear pans first as they are a little easier.

I have some pictures and will post a link here a little later.

Save your templates by the way you can someties flip them over and use them for the other side with minor mods.

[Edited by Jim E on 01-12-2005 at 10:25 AM GMT]

Jim E

01-12-2005 at 05:20 AM Re: V6 swap so far

images of rear pan work in no special order

<http://community.webshots.com/user/sunbeamjim> Let me

know if this link works. anyone

[Edited by Jim E on 01-12-2005 at 06:53 PM GMT]

6lAlpine

01-12-2005 at 12:47 PM Re: V6 swap so far...

Jim,

The picture wouldn't open. When you flanged the front pans, did you punch holes in them and spot weld them in or did you weld a continuous bead all the way across the top.

I have the front pans I bought from Jan and hope to start putting them in next week. I have one small repair to make to the cross member before I do that but it should he fairly easy.

Rob Wiseman V6
Alpine
Series I

Jim E
01-12-2005 at 02:00 PM Re: V6 swap so far...

Only drilled holes and plug or spot welded where the transmission mount connects to teh pans and another spot or two. Did not weld the entire length if the seams it is not needed just welded a spot every 1/2 inch or so. What I would do is tack the pan in so it is pretty much where it is going then pick an edge and weld it in a couple places oh maybe 6 inches apart then use Mr Hammer and a old screw driver beat things together between the welds also use the screw driver to press against the pan to hold it down while welding the spot. You want the seam to be tight when you weld.

I changed the above link hope it will work now. [Edited by Jim E
on 01-12-2005 at 08:36 PM GMT]

j andrscovill
0 1-12-2005 at 03:34 PM Re: Re: V6 swap so far...

quote:Jim E wrote:
images of rear pan work in no special order

<http://community.webshots.com/user/sunbeamjirn> Let me

know if this link works. anyone

Yes Jim, the link works.

Hey, remember last year at this time, we were both dillusional thinking we would be done for LAST years "Invasion".

Any bets on this years?

[Edited by Jim E on 01-12-2005 at 06:53 PM GMT]

Jeff Scoville
(The Nitpicker)
Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E

01-12-2005 at 03:39 PM Re: V6 swap so far...

Oh yes I remember. I am not betting hope I make it but I am not counting on it. Still have a rusty patch to fix not to mention the car has almost everything that will come off removed.

jandrscovill

0 1-12-2005 at 04:06 PM Re: V6 swap so far...

Same here, i'm puting the steering box back together today and hopefully will have the front end all back together by sunday(right!)

I remember almost 2 yrs ago, in may, telling Tom Weincek that i would have this car done for the car show out this way in sept. of that year, WOW, was i wrong!

Jeff Scoville

(The Nitpicker)

Two Series H's

One Series III

Two Series TV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

AutoX47

01-12-2005 at 05:43 PM Re: Re: V6 swap so far...

quote:jandrscovill wrote:

Same here, i'm puting the steering box back together today and hopefully will have the front end all back together by sunday(right!)

I remember almost 2 yrs ago, in may, telling Tom Weincek that i would have this car done for the car show out this way in sept. of that year, WOW, was i wrong!

I don't think he's gonna give you a hard time about taking a while to finish though

Andrew *Zizzo*

Enjoying a'66 Series V Alpine! - The Story Dues

paying SAOCA Member

Jim E

01-12-2005 at 06:04 PM Re: V6 swap so far...

Yes I am thinking Torn was a while in getting his ride on the road.

AutoX47

01-12-2005 at 06:14 PM Re: V6 swap so far...

Good guy no matter what pace he works on his car

Heck I thought I was going to have my car on the road by the time I left. Now imjust about done with the engine all I have after that is finish the brake lines and she should be road worthy (+ tune)

Andrew Zizzo

Enjoying a66 Series V Alpine! - The Story Dues
paying SAOCA Member

Jim E

0 1-12-2005 at 06:23 PM Re: V6 swap so far...

That is it we are pacing ourselves!

Oh we must be talking about two different fellows. Oh and

just in case... that was a joke.

[Edited by Jim E on 01-13-2005 at 08:42 AM GMT]

6lAlpine

0 1-14-2005 at 03:52 AM Re: V6 swap so far...

Jim,

A couple more questions.

#1 .On the front pans did you put a flange on the rear of the pan and about how much?

#2. I figured since I have the floor pans out I would make the initial mods to the tunnel for the V6 Bell Housing.

Can you messure the relationship of the bellhousing to the front lip of the tunnel in the engine bay. That will give me a pretty good idea if I am getting the correct amount of tunnel mod. #3. With the Bellhousing, I am going to use the pull slave with the arm on the bellhousing. When the clutch is not compressed, what is the angle of the are on the bellhousing and how far forward or rear of verticle. That will tell me how I am on clearance.

If you can get that info without to much trouble that would be helpful. No rush because I won't get to that on a critical stage for a week or two.

Spent the tonight welding on the little studs on numerous dents and pulling them Out. Just about have all of the dents in the body pulled so I won't need any filler.

Rob Wiseman V6 Alpine

Series I

Jim B

01-14-2005 at 04:15 AM Re: V6 swap so far...

On my car the piece that goes across the floors and seperates the front and rear pans needed some work. So I put flat patches on the up and down sides and a cap on the top of it. I added a flange to the cap where the rear

edge of the front pans attach to the cross piece. So I had a flange sticking forward that the front pans layed on top of, stuck out maybe 1/2 inch. this helped when it came to fitting the pans as it allowed me to be off a bit with sizing the pans.

On the tunnel mod... I moved the driverside edge over about 1/2 inch at the bottom where it meets the floor. Then there is a triangle area by your right foot that needs to be pushed out and I also bolloned the tunnel along the driver side. I used a ram but you could do it with a bottle jack and some wood blocks.

The clutch arm will not be a problem as far as clearing the floor, once you get the tunnel to where the T5 fits your worries on clearing are over. Oh I guess you may have to bend the arm in toward the transmission but I think you will be fine.

I will go look and see if I have pictures of the front pan work that will help. [Edited

by Jim B on 01-14-2005 at 06:39 PM GMT]

Jim E

01-14-2005 at 04:29 AM Re: V6 swap so far...

Ok here is a picture of the flange I put onthe cap of the cross piece toatach the rear of the floor edge of the floor pans to.

<http://image10.webshots.com/11/0/66/3/136106603HmaZkTph.jpg>

The above link will take you to a picture of the triangle area you need to push out. I made a relief cut as it creased the metal when I pushed it out.

http://image12.webshots.com/13/0/68/17/136106817GsJUaP_ph.jpg another view of the same

<http://216.77.188.54/coDataImages/p/Groups/143/143503/folders/124609/1229467shifterhole.JPG> this one is how I did the area around the shifter

<http://community.webshots.com/scripts/editPhotos.fcgi?action=viewall&albumID=129345359> If you have not done so you might want to check these pictures out.

<http://www.erikaandjim.com/forumarchive/jimsupdates.htm>

8/1/2005

V6 JOE

01-14-2005 at 05:52 AM Re: Re: V6 swap so far...

quote:61Alpine wrote:

- Jim,
A couple more questions.
#1. On the front pans did you put a flange oil rear of the pan and about how much?
#2. I figured since I have the floor pans out I would make the initial mods to the tunnel for the V6 Bell Housing.

Can you measure the relationship of the Bellhousing to the front lip of the tunnel in the engine bay. That will give me a pretty good idea if I am getting the correct amount of tunnel mod. #3. With the Bellhousing, I am going to use the pull slave with the arm on the bellhousing. When the clutch is not compressed, what is the angle of the are on the bellhousing and how far forward or rear of verticle. That will tell me how I am on clearance.

If you can get that info without to much trouble that would be helpful. No rush because I won't get to that on a critical stage for a week or two.

Spent the tonight welding on the little studs on numerous dents and pulling them out. Just about have all of the dents in the body pulled so I won't need any filler.

Hi Rob,

The transmission tunnel doesn't need to be widened for the bellhousing. I just needs clearance for the transmission. The bellcrank for the clutch stands straight up when the clutch is engaged, and moves forward about 1" when the clutch is released. It will not hit the body at all.

Jose

61 Alpine

0 1-14-2005 at 11:44 AM Re: V6 swap so far...

Jose and Jim, thanks for the info. I know I have done this before and would just look at my other car, but it is put away for the winter in an unlit shop so I can't see what I would like to see. I have the Bellhousing fitting pretty good now but am not in a position to hoist the trans in yet.

Jim I see from the posted picture what you are talking about on the front floor with the little lip you created. I have my drivers side template in just perfect so I should be able to get a pretty exact cut on the pan. First of next week I'll get the right side pan template cut.

Thanks for your help.

Rob Wiseman V6 Alpine
Series I

Jim E

01-14-2005 at 08:0 1 PM Re: V6 swap so far...

If you do not put or have a flange on the cross piece you might want to think about putting one on the pan going down to weld to the cross piece.

andrscovi II

01-16-2005 at 03:34 AM Re: V6 swap so far...

Jim, am i wrong in assuming this is THE most veiwed post ever? Let alone replies. PS I think i found a V6 candidate! Question is, will I ever get all these cars done?

Jeff Scoville
(The Nitpicker)
Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
0 1-16-2005 at 04:40 AM Re: V6 swap so far...

Jeff think you could safely assume that to be true. We do wander off the original subject from time to time but that does not bother me in the least.

Did you get a ride or drive in one of the V6 cars? That is enough to make a fellow want one. My advice for anyone looking at doing the conversion is to start collecting the Mustang II parts and get on the list for the deluxe kit. Oh and welcome to the Dark side by the way.

Made some head way on my car the lead work on the cowl is about done. Just wait until you all see the before and after pictures it is unreal.

jandrscovill
01-16-2005 at 04:48 AM Re: V6 swap so far...

Cool, Glad to hear things are going well. No, i haven't ridden in a V6 Alpine yet, but i figure now that i have a 4cyl. and an 8cyl. I'll need a 6 to keep my Carma in check.
Gotta try em all right?

Jeff Scoville
(The Nitpicker) Two
Series II's One Series III
Two Series IV's

Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
01-16-2005 at 04:57 AM Re: V6 swap so far...

Jeff did you just make a *few* new purchases?

alpine-64
01-16-2005 at 10:41 AM Re: V6 swap so far...

Jeff,

Guess you got those 5 for sale... great! Please post some photos esp the blue tig.. will you be using the tiger to finish off the S3 resto? :P

1963 Alpine Sli SAL 018692 LB9008874RR0M (engine) 1965
Alpine SIVGT SAL 540798
B941031 IOGTODHRO HBH 01641 (engine)
SAOCA: 9381

jandrscovill

0 1-17-2005 at 02:53 AM Re: Re: V6 swap so far...

quote:Jim E wrote:

Jeff did you just make a few new purchases?

Yes Jim, see "Amelia" in the factory correct section for the short story of the LONG weekend. And no, the tiger will be restored as a gift to my father.

[Edited by jandrscovill on 01-16-2005 at 09:23 PM GMT]

Jeff Scoville
(The Nitpicker)
Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Chuck Ingram

01-17-2005 at 0 1: 06 PM Re: Re: Re: V6 swap so far...

And no, the tiger will be restored as a gift to my father. [Edited

byjandrscovill on 01-16-2005 at 09:23 PM GMT]

Jeff

I'm available to be adopted as your father.

Chuck

62 Alpine V6 becoming a 302
64 Spirit of Lister

andrscovi 11
01-17-2005 at 0 1: 52 PM Re: Re: Re: Re: V6 swap so far

quote:Chuck Ingram wrote
Jeff
I'm available to be adopted as your father.

Funny you should say that Chuck, as i was adopted by my parents 41 years ago.

Jeff Scoville
(The Nitpicker)
Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

jandrscovill
0 1-17-2005 at 03:18 PM Re: V6 swap so far...

Say Jim, let me know when you've got a free weekend to come up and help me install a full set of floor pans, should give us enough time for a few games of pool and beers!

Jeff Scoville (The
Nitpicker)

Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
01-17-2005 at 04:43 PM Re: V6 swap so far...

Oh man last weekend would have been perfect.

MikePhillips
01-17-2005 at 05:02 PM Re: V6 swap so far...

If you guys can get floor pans installed in a weekend you're better men than I...

61 Alpine

01-18-2005 at 11:03 AM Re: V6 swap so far...

Jim,

Back to the floor pans for a minute. Since I am making a flange to go across the front of the cross member for the pan to sit on, why not make a flange to go all the way down the side. That way I could just cut the pan to fit. Drop it in and weld away.

Sounds like an easier way to make it fit. Not correct but then neither is the V6 I am putting it.

Rob Wiseman V6

Alpine

Series I

Jim E

01-18-2005 at 01:33 PM Re: V6 swap so far...

You could do that if you want, I thought about it but decided it would be easier to just bend the flange for the sill side on the pan. less welding and less grinding Could see doing it either way.

Jim E

01-19-2005 at 07:47 PM Re: V6 swap so far...

before

after

rootesracer

01-19-2005 at 07:51 PM Re: Re: V6 swap so far

quote:Jim E wrote: before

after

Boy I dont miss the days I was doing what you are now.

How'd ya get behind that panel to straighten in, and more importantly how'd you shrink the metal?

Jarrid Gross

61 SII, 1725 EFI

Jim E

0 1-19-2005 at 07:56 PM Re: V6 swap so far...

Dug all the rust I could out from between the two panels beat the high spots down ground/wire wheeled off all the paint and rust and a friend of mine used lead to get it to what you see in the second picture. Few more pictures at this link if you want a look, still have some work to do on the passenger side but it is getting there. Oh and notice the seam is gone.

[http://home.hellsouth.net/p/s/cornmunity.dll?](http://home.hellsouth.net/p/s/cornmunity.dll?ep=334&fileid=1400160&groupid=143503&folderid=186028&curRec=7&folderview=thumbs&ck)

ep=334&fileid=1400160&groupid=143503&folderid=186028&curRec=7&folderview=thumbs&ck

[Edited by Jim E on 01-20-2005 at 12:57 AM GMT]

Chuck Ingram

01-20-2005 at 03:03 AM Re: V6 swap so far...

Jim

Thats a mean looking chisel of a tool

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

01-20-2005 at 03:18 AM Re: V6 swap so far...

Norman uses all sorts of items with edges to work the lead he also uses a couple of different shaped rasp. I did some of the shaping to get the feel of it and try and learn how to do it but when I watch my buddy work it I know I have a long way to go in the skills department as far as lead work goes. He knows what he is doing and he is good.

61 Alpine

01-20-2005 at 04:06 AM Re: V6 swap so far...

Jim,

I am about to start the paint removal process. Tell me about your wire wheel you used to remove paint. Last time I used chemicals (not fun). I also used my DA works but not very fast. So I am open to suggestions. Maybe even a photo of it would help.

Thanks

Rob Wiseman V6 Alpine
Series I

Jim E
01-20-2005 at 04:19 AM Re: V6 swap so far...

My car had been painted one time and the repaint came off fairly easy with razor blades. Just pretty much scrap it off by pushing the blade against the paint. By a big box of the ones made to fit a handle for scraping paint off windows and such if you do it this way and some areas a handle works some it is easier with the blade only. The factory paint is on pretty tight and would not come off easy with the razor blade method. I have been using the DA and just taking the factory paint off to about the primer coat for now will go to bare metal when I know I am ready to etch prime it. The wire wheel I only use where there is rust pits and holes hard to get at areas with crack filler and such. Would not attempt to strip the car with wire wheels. They also seem to build heat if you are not careful and could distort the metal. I also have a thing that is like a scotch brite pad wheel that I use in some tight areas. I will be using the DA and plenty of sanding pads [80 grit] to strip my car have heard to many stories of chemical stripper coming back to bite the new paint.

61Alpine
01-20-2005 at 05:08 AM Re: V6 swap so far

Darn I was hoping you had some magic method to make it caner.
I do like the finish you get when you use the DA to strip the paint. So I guess the DA is how I am going.

Rob Wiseman V6
Alpine
Series I

Jim
01-20-2005 at 05:11 AM Re: V6 swap so far.

I wish... Might would try soda blasting have seen cars and parts done that way and it is pretty slick, does cost more than DA pads though.

Bill Blue
01-20-2005 at 11:42 AM Re: V6 swap so far

Rob, what grit of paper are you using with the DA? Bill

61Alpine
01-20-2005 at 01:40 PM Re: V6 swap so far

I think I started with a 50 grit and moved to 80 as I neared bare metal.

Rob Wiseman V6

Alpine
Series I

S Duncan
0 1-20-2005 at 02:50 PM Re: V6 swap so far

I had my car soda blasted and it turned out pretty well. I guess the main caveat to that though is I was having some sand blasting done on the bottom, so it was convenient to have the soda blasting done at the same time. It sure does a nice job along the door jambs, trunk/hood lips, and anywhere else that is hard to reach. However, when it was all said and done, I still ended up with 2 spots on the lip under the hood where the paint didn't stick. Something must have got on to the metal between blasting and priming.

BTW, nice job on that metal repair Jim. You just might be an "artiste" in the making. [Edited

by SDuncan on 0 1-20-2005 at 09:52 PM GMT]

Scott Duncan
1966 Series V Turbo 1980
Porsche 924
SAOCA Member #291

Jim E
01-20-2005 at 04:53 PM Re: V6 swap so far

Thanks Scott but I can take little credit for how the lead work came out my friend is the one who put the finishing touch on it.

bryang
0 1-22-2005 at 05:07 AM Re: V6 swap so far...

That metal work is looking sweet. I'm going to have to learn lead. I've ran into it occasionally while working on old cars. There was even some on my Alpine and it was a nicely done repair. Too bad the rest of the repairs done on it afterwards were so bad.

Anyway ... 11,000 something views on this post Jim. Congrats! ... somebody must be interested in the V6 swap!
Bryan

bryan gilbrath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hillman minx estate (for sale!)

61 Alpine
01-23-2005 at 01:24 AM Re: V6 swap so far

Jim or any other V6ers.

I am getting ready to fit my engine. I bought the engine, bell housing, and transmission all at separate locations. Can anyone tell me what size bolts I need for:

- 8)Engine to Bellhousing
- 9)Bellhousing to Transmission
- 10)Alpine Transmission mounts

Thanks,

Rob Wiseman V6 Alpine
Series I

61 Alpine
01-25-2005 at 04:15 AM Re: V6 swap so far...

Jim and others,

When you are welding in the floor pans, did you prime the cross members or underside of the floor pan first. Just as a precaution I figure it would be a good idea.

I put the L runners in that I mentioned and I have the floor pans cut to fit. It is so easy this way, hardly any bending to make them fit.

Rob Wiseman V6
Alpine
Series I

Jim E
01-25-2005 at 01:00 PM Re: V6 swap so far...

I did not but you certainly can think they even make a weld thru primer just for that sort of thing.

61 Alpine
01-25-2005 at 0 1: 12 PM Re: V6 swap so far

That is what I was thinking. I would get some weld through primer and just hit the spots where it is metal on metal. Then I would coat the areas that are inaccessible when covered with an anti rust paint.

Rob Wiseman V6
Alpine
Series I

jandrscovill
02-13-2005 at 07:39 PM Re: V6 swap so far...

Jim, since you started this thread i had never seen it drop off the first page of topics. Hopefully it's because your spending all your time working on the Alpine!

Keep us informed Bud, I for one keep motivated knowing were both trying hard to make the Invasion this year (with cars running)

Hope things are going well, post some new pics if you get a chance.

I might actually have the 4 banger poppin by weeks end if I can put this tranny back together, first one, "parts is parts" I always say!

Jeff Scoville
(The Nitpicker)
Two Series 1Is
One Series III
Two Series IV's
Three Series V's And a Mark
I Tiger

SAOCA Member #280

Jim E
02-13-2005 at 07:43 PM Re: V6 swap so far...

Man work is really putting a stopper on fun.

V6 JOE
02-13-2005 at 11:28 PM Re: V6 swap so far...

I might actually have the 4 banger poppin by weeks end if I can put this tranny back together, first one, "parts is parts" I always say!

Hi Jeff,

I'm glad you're almost ready to make it run. This is the exciting time, after all the work, pinched fingers, scrapes and traumas you've been through to get to this point, it will be gratifying to hear it bark for the first time. Let us know when it does fire for the first time.

Jose

Jim E
02-17-2005 at 12:40 AM Re: V6 swap so far

Ok after longer than I like to think about I got a couple hours in on my car. Worked on the steering box which leaks... took the top off and cleaned it out removing the oil and packed it with silicon bearing grease so now maybe it will not leak... also here is a picture of the lead work done on the cowl I think it is slicker than a minnies peter.

andrscovill

02-17-2005 at 01:34 AM Re: V6 swap so far...

That steering box thing kinda has me baffled. After taking mine completely apart and cleaning everything I replaced the 0-ring on the output shaft and packed it with wheel bearing grease, put on the top and it works great! Not to say that when it heats up it won't work a little differently, (I'm thinking better) but with the 0-ring replacement (Ace) it shouldn't leak a hit.

Nice to see some progress Jim, i'm working my a\$\$ off and creating more projects every day! Today I spent 3-4 hours cleaning and straightening the "fins" on my oil cooler.

Therapy I call it, At least that's what my wife says I need!

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series TV's

Three Series V's

And a Mark ITiger SAOCA

Member #280

Jim E

02-17-2005 at 04:06 AM Re: V6 swap so far...

I would be happy if my steering box would just not leak long enough to get paint on the car.

alpinesixtwo

02-17-2005 at 04:26 AM Re: V6 swap so far...

Bryan G

I see you have a copy of "How to Build and Modify Ford 60 Degrees V-6 Engines" By Sven Pruett. I have been looking online for a copy of that book and they are as hard to find as your *T-5* was. Any chance down the road after you get it back I can borrow it to make a copy of it and I'll send it right back. I have a 1725 that has been good to me so far but I have V-6 envy and I'd like to get reading so when It's time to swap I have a thought about what I'm doing.

Cheers,

Chris Cirillo Alpine six

two

Jim E

02-17-2005 at 04:47 AM Re: V6 swap so far...

I have Bryans book right now email me and I will hook you up so to speak.

alp inesixtwo

02-17-2005 at 08:11 AM Re: V6 swap so far...

Jim E.

Hey thanks, well since I'm having trouble with the signing in process I still can't PM anyone. I will put my email address up just remove the * symbols you can email me and I will contact you back with my info.

**clrllovlle*@aol*.com

Cheers,
Chris Cirillo

Alpine six two

bryang

02-17-2005 at 06:05 PM Re: V6 swap so far...

Hey Chris,

Glad to hear you're thinking about the swap. Yeah, Jim can hook you up. Probably the most useful info in there is the extra cooling passage in the heads and the info on cutting the intake if necessary. If your 1725 is holding up you're going about it the right way. Take your time and gather up your bits and pieces for the swap. You can find the intakes on Ebay occasionally. I think Jan was even selling a few V6's but I don't know how close he is to you. I bought another V6 on Ebay that has supposedly been rebuilt and I'm going to build it up as a turbo unit in the future. Of course I'll be tearing into it to do that so I'll be able to tell if it has been rebuilt and there is enough meat left. In any case it was about a third of the price I paid for my core motor the first go around and it has most of the right stuff on it. I just kinda wish it would have come with the manifold and headers. That would be asking a bit though! Have fun!

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

SDuncan

02-17-2005 at 08:48 PM Re: V6 swap so far...

Bryan,

It's interesting that you have already bought another engine in anticipation of your next project. I was out at our government salvage yard the other day and saw a wrecked Bronco II with a 2.8 in it. The odometer said 126,000km (78,000 miles) and the condition of the vehicle supported that. The vehicle had been hit on the back so there was no damage at the front. They were selling that whole truck for \$300. It has crossed my mind more than once during the past few days to buy it, take the motor out and sell the rest for scrap.

BTW, I think it is kinda cool how Jim's thread here sort of becomes the coffee row of the board. To me it is the online equivalent of guys gathering at Jim's garage, getting a update on his progress and everyone just shooting the breeze. Some people get bent out of shape when their topics wonder, I am just glad Jim is good about it.

Scott Duncan -- - 1966
Series V Turbo 1980 Porsche

924

SAOCA Member 4291

bryang

02-17-2005 at 09:10 PM Re: V6 swap so far...

Yeah, my mind has a habit of meandering. I guess it is good that Jim is such a good sport about it. I bought the Corky Bell Turbocharging book and have started to read up. I knew way less than I thought I did. Lots of things to consider. Of course the more considering I do the more expensive it gets. I just had a thought though.. I might be able to get hold of an earlier series Alpine that has no engine or anything. Maybe that would be the best turbo route.. I'm already lacking garage space though.

You should get that Bronco just for the extra engine even though you'll probably never need it. I just need more people in the packrat club!

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

SDuncan

02-17-2005 at 09:36 PM Re: V6 swap so far...

I hear you about the packrat thing. It drives my wife crazy. The only reason I am even considering this Bronco is that a guy in town asked me a couple weeks ago if I was interested in the Alpine he has sitting in his barn. Same thing as you mentioned, early series, no motor or transmission but the body is good and the rest is complete. He knew that I have one already and thought I would give it a good home and see it get back on the road. I'd be even more tempted if the one I was working on now was finished. It's hard to think of another project when you are neck-deep in one already.

Scott Duncan

1966 Series V Turbo 1980

Porsche 924

SAOCA Member 9291

Jim E

02-17-2005 at 09:47 PM Re: V6 swap so far...

I am of two lines of thought. One is I do not mind if we talk about other Alpine stuff on this thread it has wandered all about think there is even a stretch where a fellow talks about going on vacation in his Alpine, so hijack away. Two is... and this is the mod hat on Jim... we need to stay on topic as far Alpine content. I do not want to talk about MGs or steam tractors or your aunts lumbaygo this is an Alpine board. Other than that have at it.

Speaking of Alpine stuff. Looks like SCAT is going to have a meeting this weekend, couple fellows will stop out at the garage to have a look at my car then we go of to Eric G. place for some more Alpine stuff. Hell I might even take a picture or two.

SCAT is South Carolina Alpine Tiger we are a club with no rules and no dues and it ain't easy to get in, well we will take most anyone... almost.

aardvark

02-17-2005 at 10:06 PM Re: V6 swap so *far*..

Jim,

What if my aunt got lumbago putting a V6 into her Alpine. Can I talk about it then?

Jim E

02-17-2005 at 10:10 PM Re: V6 swap so far...

Well you could mention it in passing provided her Alpine was a real butt kicking son of a biscuit eater

aardvark

02-17-2005 at 10:13 PM Re: V6 swap so far

OH!!

jandrscovill

02-17-2005 at 10:36 PM Re: Re: V6 swap so *far*..

quote:bryang wrote:

I just need more people in the packrat club! Bryan

Try making your wife park her new Volvo outside for the last 19 months while i'm working on my dads Alpine in our garage, let alone since starting this project buying 8 more (7 Alpines, 1 Tiger) I'm the packrat president!

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

AutoX47

02-18-2005 at 01:52 AM Re: Re: Re: V6 swap so far...

quote:jandrscovill wrote:

quote:bryang wrote:

IjList need more people in the packrat club! Bryan

Try making your wife park her new Volvo outside for the last 19 months

You ANIMAL!!! Bring that beauty over here and I will put an old 16T on it and then you won't park it outside

As for packing, I may not have a lot to pack but I spread it around ... like a block, side and timing covers at Jeff's house, car using 3 spots at my uncles, motor and trans at my friend Rich's, modified pulley in my friend's van, and tons of parts scattered around my parents' house

Andrew Zizzo

Enjoying a'66 Series V Alpine! - The Story Dues
paying SAOCA Member

Jim E

02-19-2005 at 04:19 AM Re: V6 swap so far...

Working on my rear disc brake conversion.

Using Alfa rotors and Merkur Scorpio calipers. The rotors required the center hole to be opened up to fit over the Tiger hub [which is the same size as an Alpine hub by the way so this could be done on an Alpine rear end] also reduced the diameter of the rotor by 1/4 inch to better fit the caliper and inside the minilights.

The Alfa Spider rotor is the right bolt pattern and the offset of the hat is a good fit. Now to make a caliper bracket and figure out the c-brake

bryang

02-19-2005 at 05:03 AM Re: V6 swap so far...

Jim,

As soon as you are done ship them to me and I'll test them out for you. I'll let you know if they work OK or not so that you can easily build another setup for your car.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

02-19-2005 at 05:07 AM Re: V6 swap so far...

Bryan will get right on that! hahahaha you would need to swap to a Tiger rear end for them to fit though. With that 8 inch Ford rear end you have a rear disc brake conversion should be a walk in the park!

Jim E

02-19-2005 at 05:11 AM Re: V6 swap so far...

I actually would suggest anyone wanting to do a rear disc set up look for a different caliper the Scorpio unit is not all that common. I do think the Alfa rotor is a good fit though and sell for about \$35 each from the corner parts house. Then I am under \$100 on this so far so who can argue with the parts choice.

[Edited by Jim Eon 02-19-2005 at 10:12 AM GMT]

65sunbeam

02-19-2005 at 11:41 PM Re: V6 swap so far

Hey Jim

It was good seeing the progress you have made on your car today. Those rear discs look great on the rear too. Our SCAT meeting today was a blast. It sure was fun getting OD behind the wheel of my RHD Alpine! It is always fun to see someone drive a RED car for the first time Nice to see that Todd Smith is getting his car back on the road too. There will soon be 4 Sunbeam owners with cars on the road around Columbia. Eric

Bill Blue

02-20-2005 at 01:34 AM Re: V6 swap so far

Jim, mind telling me why a disc brake on the 8" is a walk in the park? I could use a little direction. Bill

Jim E

02-20-2005 at 03:16 PM Re: V6 swap so far...

Bill,

I thought you had already done rear disc brakes on an 8 inch. I have seen several different brackets for disc brakes on the 8 inch then there is the mustang stuff that will work, seen Toyota brakes on one. Would think you can get a rotor on the end of the axle with out having to machine the center of the rotor like with the Dana. Perhaps I am wrong and it would not be a walk in the park.

andrscovill

02-20-2005 at 05:20 PM Re: V6 swap so far...

Surely there must be an "over the shelf" conversion for the 8".

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's
And a Mark I Tiger SAOCA
Member #280

Chuck Ingram
02-20-2005 at 05:57 PM Re: V6 swap so far...

Actually there is. At least I do remember it. I believe the company's name was Currie. At least I think it was or it is part of the name. Really would have to dig in stuff to even see if there is a remote chance I still have their old catalogue. I think I may have thrown it out.
It's sunny again.

Chuck
62 Alpine V6 becoming a 302
64 Spirit of Lister

V6 JOE
02-20-2005 at 07:00 PM Re: V6 swap so far...

Hi Jeff,

There is a kit for adding a disc brake to the 8" rear end housing, but it costs about \$300. If I were going to do one for myself, I think I'd buy one of these and save myself the time and trouble of trying to do it myself.

Hi Bill,

I'm presently doing a disc brake conversion on an 8" rear, with a set of 1996 Mustang GT Rear discs. They have the E-brake set up already, and have the correct 4 bolt pattern for the Mustang 11 8". They aren't vented, and have about the same diameter as the stock Alpine, so look better esthetically as a package with the Alpine front discs. I don't think you need the vented brakes in back, unless the fronts are also vented, because you'll have better braking in the rear than in front.

The only thing I've encountered with these brakes, is that they have to be swapped side to side, because they come off of a coil sprung car, and the E-brake arms interfere with the leaf springs of the Alpine. It really doesn't cause a problem, except to bleed them, you have to loosen the mounting bolts and rotate the caliper on the disc so that the bleeder is at the top, so it will be able to purge the air bubbles.

I found a pattern for the adapter for these brakes, on a Mustang site. The distance between the mounting holes should be about 1/4" more than what this guy put in his sketch, so that there will be enough clearance between the caliper and rotor.

I haven't completed the job yet, but have mounted the discs and calipers and they look like they will work without much problem. I'll let you know what I encounter when I get back to Bakersfield and finish assembling the rear discs.

Jose

Bill Blue

02-20-2005 at 10:38 PM Re: V6 swap so far...

Jim, I had put the Tempo front disc's on the 8", but learned it will be way too much brake. The Tempo has a 2.36" piston, and even with just a 9 1/4" rotor it will be too much brake.

At the present time it looks like the front setup is going to be a 10 1/2" vented rotor with 2.38" GM metric caliper. This is a lot of brake, but my old setup still will be too much. Looks like a winning combo might be the Tempo 9 1/4" vented rotors and 1.69" piston Contour rear caliper.

Joe, the '96 Mustang is worth looking into. All the info I had been able to collect indicated Mustang used 4 bolt vented rotors up to '93, then went to a 5 bolt 1/2" rotor. Do you know the piston size on the '96 caliper?

Bill

V6 JOE

02-21-2005 at 02:13 AM Re: V6 swap so far

Bill,

You are right. This getting old, is no good. I can't remember squat. The 94 and later Mustang bolt pattern is a five bolt pattern. I had the front hubs changed to the Ford five bolt pattern. The Alpine now has the five bolt pattern both in front and back. Sorry I had a brain fart and gave the wrong info.

With the engine combo you're using, you might want to go to the five bolt pattern too. The other thing I like about the five bolt pattern, is that it opens up the availability of lots of different wheel designs. I payed \$100 to have the front hubs changed, which isn't too expensive. We plan on using Torque thrust wheels on it when it's done.

Jose

Bill Blue

02-21-2005 at 12:31 PM Re: V6 swap so far...

Jim, I cannot find any data on the Alfa rotors. How thick are they? Bill

Jim E

02-21-2005 at 02:39 PM Re: V6 swap so far...

Bill they are a solid rotor minimum thickness is 8.5 mm I think or 8 mm anyway they are basically a 1/2" thick rotor and around 12 mm new.

I see there is a set on ebay right now used but cheap.

There must be a common rear caliper from a small import that would not be a night mare to mount and not be too big. The kit for Tigers uses a Fiat rear caliper and an Audi Fox rotor [I think] The rotor has to be worked as much or more than the Alfa rotor. The the Fiat caliper I am not sure how hard it would be to get about like the merkur I am using at a guess. I have to go to the junk yard later this week will try and take some pictures of rear calipers.

Bill Blue

02-22-2005 at 02:43 AM Re: V6 swap so far

Jim, I have noticed the small fwd cars typically use a very wimpy rear caliper. For instance, the Escort Piston is only 1 3/36", way too small for what I am doing. As a result it seems calipers from larger cars are needed. I think it is due to the approximately 70/30 balance of the typical fwd sedan.

Bill

Jim E

02-22-2005 at 03:23 AM Re: V6 swap so far

I see. The Scorpio caliper is 1 1/2 or thereabouts.

Here are my rear caliper brackets so far. Still need to figure out how to mark them for the bolt holes and the one side is a little wider than the other but it is getting there. I will do some final shaping once I know they are right. Thinking to weld the brackets to the housing but may make up clamps just have not decided yet.

The piece of steel I found to make these out of had been left outside to properly age... so it has a some rust freckles.

[Edited by Jim E on 02-22-2005 at 08:24 AM GMT]

Jim E

03-03-2005 at 08:30 PM Re: V6 swap so far...

I ordered a set of the Outlaw M16 calipers and pads for the front brakes today. The M16 is a bolt on upgrade 4 pot caliper that I heard about on here from another fellow. Found a speed shop here in SC that beat all the other price quotes. Still is not a cheap upgrade.

Chuck Ingram

03-06-2005 at 01:50 AM Re: V6 swap so far...

Jim

As I mentioned before I like the Outlaw calipers. I certainly would consider these if it was just to upgrade the calipers. Take note people. I know I may have influenced you but then just think no mods to fit them. That has to be worth at least half of the price.

My spindles should be done early next week as well as my driveshaft. The nice thing about the Mustang spindle is it is able to be enlarged to fit the Alpine ball joints (yes they are bigger than the Mustang ball joints) and it is only 3/16th of an inch shorter.

I look forward to when you get them and mount them and show us.

It must be getting sunnier in that shop

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Chuck Ingram

03-06-2005 at 01:53 AM Re: Re: V6 swap so far...

The piece of steel I found to make these out of had been left outside to properly age... so it has a some rust freckles.

[Edited by Jim E on 02-22-2005 at 08:24 AM GMT]

Gee Jim I didn't think any others knew about my aging process.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

03-06-2005 at 02:06 AM Re: V6 swap so far...

Dang Chuck you are rusty too.. *will* have to give you a WD 40 bath.

My Outlaw calipers should be here early next week will be fun to see how well they fit. I have been looking high and low for years for a bolt on or even near bolt on 4 pot caliper.

Chuck Ingram

03-06-2005 at 02:01 PM Re: Re: V6 swap so far...

quote:Jim E wrote:

Dang Chuck you are rusty too.. *will* have to give you a WD 40 bath. Now if I had arthritis it would help.

Oh it is so sunny again

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Bill Blue

03-06-2005 at 03:14 PM Re: V6 swap so far...

Jim, I don't seem to be tracking the M16 caliper thing very well. Why do you consider them an upgrade? Aren't these the ones that use the Alpine rotor and have the same total piston area as the Girling?

Don't tell me I am wasting my time working out the final details of the 10.5" vented rotor, 2.38" caliper piston setup.

Jim E

03-06-2005 at 04:20 PM Re: V6 swap so far...

Bill you seem to be right on track. The Outlaw calipers only give you less weight and newer design with the same piston area, no difference on paper as far as clamping goes.

Jim E

03-06-2005 at 04:55 PM Re: V6 swap so far

Bill do you know what the brake arm ratio is for our cars. Or does anyone have a arm handy and can measure the distance from the mounting point to the center of the pedal and the distance from the mounting point to the point where the M/C rod attaches. Would like to do some figuring for the master cylinder I will need.

Barry Knight

03-06-2005 at 07:56 PM Re: V6 swap so far...

Jim,

I measured this on mine a couple of days ago and found that the overall length (pivot to center of pad) was about 12' and the pivot point to the M/C hole was about 3".

Hope this is what you needed.

Barry Knight

Conyers, GA

SV-V6 conversion in progress

Jim E

03-06-2005 at 08:38 PM Re: V6 swap so far...

Thanks Barry that is just what I was alter.

V6 JOE

03-06-2005 at 09:43 PM Re: Re: V6 swap so far...

quote:Bill Blue wrote:

Jim, I don't seem to be tracking the M16 caliper thing very well. Why do you consider them an upgrade? Aren't these the ones that use the Alpine rotor and have the same total piston area as the Girling?

Don't tell me I am wasting my time working out the final details of the 10.5" vented rotor, 2.38" caliper piston setup.

Bill

Hi Bill,

One of the reasons the the calipers Jim is using are better, is because they have more pistons. Although they might equal the same volume as the stock caliper pistons, they use a longer brake pad, thus increasing the swept area. The more swept area you have, the more friction you generate. The longer pad requires more pistons, in order to avoid flexing the brake pad when the brakes are applied. With the more friction surface you have, the less pressure you need to get the same amount of braking, and thus generating less heat at the same time. The difference in pad surface between the two, is almost double. I think the stock pads are only about .600 the area of the ones that Jim is using. The pads will outlast the stock pads as well, because they are less stressed.

Another reason is that the after market calipers are made of aluminum, so are lighter by 6.75 lbs. each, over the stock Alpine calipers. Race car builders kill, to get lower unsprung weight, because it improves handling markedly. Being made of aluminum, they dissipate heat faster than the cast steel stock ones do. Again, making the brakes more efficient.

Most High end cars, Ferrari, Lamborghini, Porsche, just to name a few, use multiple piston calipers for all of the reasons mentioned. They aren't cheap, but if you think of it, How much will it cost you to build and redesign and rebuild something you can make work, and in the end, end up with something that won't work as well as this system, that has already proven itself?

Jose

Barry Knight

03-07-2005 at 01:18 AM Re: V6 swap so far...

The area of the brake pads has nothing to do with the amount of braking force generated and more pistons do not necessarily generate more braking force. What matters is the amount of force pushing the pad / shoe against the rotor / drum and that is a function of piston area. A larger! thicker pad will last longer, but it will not generate more braking force.

The mass of the calipers is completely unsprung, so the weight reduction contributes to both ride quality and handling.

The thermal conductivity of aluminum is about 4-5 times that of steel, so I suppose it will dissipate more heat, but most of the heat energy is in the rotors, not the calipers.

[Edited by Barry Knight on 03-06-2005 at 08:38 PM GMT]

Barry Knight Conyers,
GA
SV-V6 conversion in progress

V6 JOE

03-07-2005 at 02:57 AM Re: V6 swap so far...

Barry,

The size of the friction material part of the brake pad, (length and width), not the thickness, determine the swept area, which does affect the amount of friction surface available. The more friction surface you have, the more mechanical advantage you have over the disc, which directly affects braking performance. That is the reason that race cars use up to eight piston calipers. They wouldn't spend that kind of money, to not add any improvement to their cars. Very high end cars also use these high performance calipers too, at a very high price I might add, To be able to handle the higher demands their performance capability can generate.

The stock Alpine brakes are marginal for racing. I can attest to that, and I used to just drag race my V6 Alpine. At the 100 mph. through the traps that it would reach, I had to wait for a while to make back up runs, because if I did back to back runs, I would run into brake fade. Not to where they wouldn't stop, but enough that they didn't

work well and I would end up going farther down the shut off area before I was going slow enough to be able to turn around safely. The ability of the aluminum caliper to dissipate heat better, enables the it to keep the brake fluid from boiling. True, that the majority of the heat goes with the disc, but heat that isn't dissipated easily from the caliper, adds to brake fade, and loss of braking totally, if the fluid boils. I realize that 99.99% of the guys here will never abuse their brakes to that extent, but if you intend to make a high performance car, and are willing to convert to discs brakes all the way around, I think it would be wise to consider upgrading to these calipers.

The calipers that Jim is using are much better than what you'd believe. They might be a bit pricy, but you usually get what you pay for. If you prefer to use the stock caliper, that is fine with me. I was just explaining why the after market calipers are better.

Jose

[Edited by V6 JOE on 03-07-2005 at 08:19 AM GMT]

Barry Knight

03-07-2005 at 04:38 AM Re: V6 swap so far

Joe,

The frictional force between two moving rigid surfaces is determined by the coefficient of friction (a function of the materials) and the normal force (perpendicular load). The equation for frictional force does not include surface area.

The primary reason for increasing pad size is so the pads will last longer or a softer pad can be used (a softer pad normally increases braking force). Since the pad height is typically limited by hub and wheel size, making the pad longer is the only practical way to get increased pad volume. With a long pad, multiple pistons are needed to maintain even mechanical pressure.

Increasing the length of the pad does not increase the swept area. Swept area is primarily a function of rotor size; pad height is a factor, but pad length is not.

I agree that the Outlaw *M-16* calipers are a better mousetrap than the 45 year old Girlings, that is not the issue. I also agree that the stock brakes are marginal for hard use, but that is also not the issue.

The issue is the notion that bigger pads or more pistons result in greater braking force. If the pad material is the same and the normal force is the same, a bigger pad does not change the frictional force. If the total piston area is the same and the hydraulic pressure is the same, more pistons do not change the frictional force.

Barry Knight Conyers,
GA

SV-V6 conversion in progress

V6 JOE

03-07-2005 at 11:54 AM Re: V6 swap so far...

Barry,

I have to respectfully disagree with your premise, that the added size of the four piston caliper brake pad, doesn't increase the amount of friction available to help stop the disc better. The larger the contact patch of the pad, the more surface to grab the disc. If there were no advantage to a larger pad, there would be no reason for the race car builders to go to the extra trouble and expense of adding them to their cars. The larger brakes would be redundant.

A good example of what I'm trying to explain, is the following.

Take a drag race car, that has 500 hp. and weighing 2,500 lbs. Now put a set of 26" tall by 6" wide slicks on it and make a few passes. I can tell you, that the car will over power those slicks, for a distance at least, until they finally hook up.

Now, take and mount a set of 26" by 10" slicks on the same car. Make a few passes and see how it performs. I can guarantee you, that not only will it hook up, but will most likely lift the front wheels in the process, as it leaves the line hard, because it now has good traction. The only variable in this equation, is the difference in contact patch with the pavement. The diameter of the tire is the same. The compound of the tire is the same. The weight of the car and horse power are the same. The only difference is that one patch is longer by 4" than the other, because of the wider tire.

This is not just theory, it is the reason racers try to get the biggest contact patch they can afford or that the rules will allow. You might say that that works because it is a rolling tire but that the pad sliding on the disc is somehow different, but it is the very same principle.

The very fact that so many folks and even factories go with these larger calipers, has to be saying something, or they wouldn't be so popular.

Jose

Barry Knight

03-07-2005 at 12:41 PM Re: V6 swap so far...

Joe,

The analogy between the brake pad and the tire is not valid; one material is rigid and the other is viscoelastic. They are not even remotely the same thing.

For rigid materials, the frictional force between two moving surfaces is determined by the coefficient of friction of the materials and the normal force. The size of the contact patch has nothing to do with the sliding friction.

I am not saying that bigger brakes do not have advantages, but I am saying that bigger pads do not increase frictional force. The ONLY ways to increase frictional force are to use materials with a higher coefficient of friction and / or increase the normal force.

Until the laws of physics are changed, that is how it works. [Edited by

Barry Knight on 03-07-2005 at 08:07 AM GMT]

Barry Knight Conyers,
GA
SV-V6 conversion in progress

Chuck Ingram
03-07-2005 at 0 1: 11 PM Re: V6 swap so far...

Guys
I just have to add what is my opinion. I'm no engineer as to co effeiciency etc. I will say that on the Lister when I went to Mustang 2 parts which included the vented rotors and calipers my braking distance decreased. All I can say is the Mustang calipers and brake pads are larger than the Girling This with the 150% effecient rebuild of the servo gives me great braking. Then there is also the larger braking of the 8 inch ford rear end which does come into play. I state though I do not race but when I had to make a panic stop thank god for the lap and shoulder belts.
but isn't it so sunny today

Chuck
62 Alpine V6 becoming a 302
64 Spirit of Lister

Tatra 603T2
03-07-2005 at 01:21 PM Re: Re: V6 swap so far...

quote:Barry Knight wrote:

For rigid materials, the frictional force between two moving surfaces is determined by the coefficient of friction of the materials and the normal force. The size of the contact patch has nothing to do with the sliding friction.

I am not saying that bigger brakes do not have advantages, but I am saying that bigger pads do not increase frictional force. The ONLY ways to increase frictional force are to use materials with a higher coefficient of friction and / or increase the normal force.

Until the laws of physics are changed, that is how it works.

Absolutely correct, Barry. $F=p.R$. Apply the same force across a larger area and the force per unit area reduces by the same factor as the area increases so the two cancel out.

Paul Norton - S.A.O.O President & Information Officer.

* * * * * Happy Easter * * * * * "April Showers" or "It's Not Sunny!" or "Let's Keep Them On The Road - No Matter What The State Of The Road!" or "Let's See Paul Scofield Do This With His!" or "Jan said it needed dipping!"

V6 JOE
03-07-2005 at 02:40 PM Re: Re: V6 swap so far...

quote:Barry Knight wrote: Joe,

The analogy between the brake pad and the tire is not valid; one material is rigid and the other is viscoelastic. They are not even remotely the same thing.

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I am not saying that bigger brakes do not have advantages, but I am saying that bigger pads do not increase frictional force. The ONLY ways to increase frictional force are to use materials with a higher coefficient of friction and / or increase the normal force.

Until the laws of physics are changed, that is how it works. [Edited by

Barry Knight on 03-07-2005 at 08:07 AM GMT] Barry,

I don't mean to offend you, but I still disagree. The matter of difference of material has very little to do with it. What I was referring to, was the fact that regardless of what material you are using, if you compare it to the identical material and application, you will always get more friction (drag), because of the increased surface area.

It only makes sense that the more surface you have against the disc, the more friction there will be over the face of that disc. If you had half of the circumference covered by the brake pad, you can't say that you would be able to exert the same amount of drag with a pad that only covered one eighth of the circumference. It won't even come close.

I have too much experience with brakes and modifying them, to not know that the larger pads do have more grip.

I'm telling you that they don't make them bigger for nothing. Reality superceeds theory, every time. You might be misunderstanding the particular law of physics that you're quoting, because it works in the real world and that to me means that there is a disconnect somewhere. That to me is worth way more than any supposed theory.

Jose

V6 JOE
03-07-2005 at 02:44 PM Re: Re: Re: V6 swap so far...

quote:Tatra603T2 wrote: quote:Barry

Knight wrote:

For rigid materials, the frictional force between two moving surfaces is determined by the coefficient of friction of the materials and the normal force. The size of the contact patch has nothing to do with the sliding friction.

I am not saying that bigger brakes do not have advantages, but I am saying that bigger pads do not increase frictional force. The ONLY ways to increase frictional force are to use materials with a higher coefficient of friction and / or increase the normal force.

Until the laws of physics are changed, that is how it works.

Absolutely correct, Barry. FtR. Apply the same force across a larger area and the force per unit area reduces by the same factor as the area increases so the two cancel out.

Paul,

You made my point. The pressure to generate the same amount of stopping force is less than with the smaller pads, thus showing that the larger pad is working better than the smaller pad. That has been my point all along.

Jose

Barry Knight

03-07-2005 at 03:00 PM Re: V6 swap so far...

Joe,

What part of the equation for frictional force indicates that greater contact area results in greater frictional force?

THE EDIT WAS TO CORRECT A SPELLING ERROR, NOT TO CHANGE THE CONTENT. [Edited by

Barry Knight on 03-07-2005 at 01:15 PM GMT]

Barry Knight Conyers,

GA

SV-V6 conversion in progress

Jim E

03-07-2005 at 05:38 PM Re: V6 swap so far...

Do not think all things are equal and some of the advantages of the four piston caliper are not going to be easy to figure on paper.

I do see that with the same area piston the clamp force is going to be the same with 1,2 or 8 pistons. Then maybe not depending on how ridged the calipers are, the multiple piston calipers are typically stiffer [I guess you would call it] than the units with less and larger pistons. The single piston caliper being the worst of all for this, or so I read.

Also see and have read that the clamp is the same no matter how small the pad as far as how hard it will mash on the rotor. Then when you bring in what the pad is made of and whether it will take the load how it reacts to heat and such I would think it is about impossible for a guy like me to figure out when, where or which is better short of bolting them on the car and using the seat of the pants dyno or maybe a G tech gizmo. So would seem with pads made of the same material there would be a point where the larger pad would win just because it could hold more heat before it stopped working. Then again there are pad materials out there that will keep working after you melt the seals out of the calipers.

Will my car stop better with the Outlaw calipers than the Girling? I want to think it will. Will it be enough better that I can tell it... we will see.

Tatra 603T2

03-07-2005 at 07:40 PM Re: Re: Re: Re: V6 swap so far...

quote:V6 JOE wrote:

quote:Tatra603T2 wrote: quote:Barry

Knight wrote:

For rigid materials, the frictional force between two moving surfaces is determined by the coefficient of friction of the materials and the normal force. The size of the contact patch has nothing to do with the sliding friction.

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Absolutely correct, Barry. $F=iR$. Apply the same force across a larger area and the force per unit area reduces by the same factor as the area increases so the two cancel out.

Paul,

You made my point. The pressure to generate the same amount of stopping force is less than with the smaller pads, thus showing that the larger pad is working better than the smaller pad. That has been my point all along.

Jose

Read it again a couple of times please Jose. The pressure per unit area will be lower but the total pressure will be identical (all other things being equal). What I said was "Apply the same force across a larger area and the force per unit area reduces by the same factor as the area increases so the two cancel out.

Barry is right, as any physics teacher will tell you. The basic equation is $F=iR$. There is no symbol for contact area in that equation.

In the immortal words of James Doohan (Scotty):- "You canna change the laws of physics"

Paul Norton - S.A.O.C. President & Information Officer.

* * * * * Happy Easter * * * * * "April Showers" or "It's Not Sunny!" or "Let's Keep Them On The Road - No Matter What The State Of The Road!" or "Let's See Paul Scofield Do This With His!" or "Jan said it needed dipping!"

V6 JOE

03-07-2005 at 08:54 PM Re: V6 swap so far...

Gentlemen,

I guess we're going to have to agree to disagree. Apparently I can't convince you of what I'm saying, and you will never convince me that what my experience over the years has proven to me, is wrong. Jim's brakes will outperform the stockers by a long margin, and will have other beniuits as well. In the end, the proof is in the pudding.

He will have payed the same or less to add these high performance brakes, when he is done, and will have vastly superior braking to boot. I wil leave the argument there, because going any further is pointless and I don't want to wast our time anymore.

Jose

Jim E

03-07-2005 at 09:44 PM Re: V6 swap so far...

Perhaps we should move to the other end of the car. I got the hole placement figured out for the rear caliper brackets, also added a piece for a little more stiffness, do not think it was needed but did it anyway. Then trimmed the ears and they are ready to weld on the housing.

Chuck Ingram

03-07-2005 at 09:49 PM Re: V6 swap so far...

Jim

They are looking pretty nice.

I don't think you aged the metal enough as the design is somehow not even. Must be the light. You need a bit of sunshine

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

03-07-2005 at 09:58 PM Re: V6 swap so far...

Chuck it be close enough for me..

I take it you mean how one side of a bracket does not match the other ... [or front and back or?] well you got to figure I chewed them out of a piece of steel with a hack saw and a cut off wheel then clamped them together and shaped as close as I could get with grinders of one sort or another. I am wishing I had waited and got a non-aged piece of steel now but then once they are on the car with a lick of paint all will be well.

We got sun and warm it is T shirt weather again!

[Edited by Jim E on 03-08-2005 at 03:02 AM GMT]

jandrscovill

03-07-2005 at 11:52 PM Re: V6 swap so far...

Was t-shirt weather here yesterday, now we have snow flurries and a low of 19 tonight. But alas, the garage is a nice 70 degrees.

Nice to see you getting somewhere Jim, all the details are just incredible eh?

Jeff Scoville

(The Nitpicker)

Two Series II's
One Series III
Two Series IV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
03-08-2005 at 12:01 AM Re: V6 swap so far...

I hear we are headed back down to the 50s and rain tomorrow. Still not so bad. Details.,
mercy takes a lot of little pieces in all the right places

Chuck Ingram
03-08-2005 at 01:27 AM Re: Re: V6 swap so far...

quote:Jim E wrote:

Chuck it be close enough for me..

I take it you mean how one side of a bracket does not match the other ... [or front and back or?] well you got to figure 1 chewed them out of a piece of steel with a hack saw and a cut off wheel then clamped them together and shaped as close as I could get with grinders of one sort or another. I am wishing I had waited and got a non-aged piece of steel now but then once they are on the car with a lick of paint all will be well.

We got sun and warm it is T shirt weather again!

Jim
Glad to see you have some sun.I was refering to the nice patina of the metal
Your friend should have the epoxy primer for heavy filling.then just sand and there it is like perfect.

Chuck
62 Alpine V6 becoming a 302
64 Spirit of Lister

Jim B
03-08-2005 at 02:00 AM Re: V6 swap so far...

Oh I get it now hahahaah

Chuck Ingram
03-09-2005 at 08:27 PM Re: V6 swap so far...

Just one more comment on front brakes.

"The sum of the parts is sometimes more than the parts"

My 4.5 inch grinder packed it in yesterday.Took it back and they gave me a new one even though it was a year

old.

Now doesn't that make it sunny today.

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

DAN MOORE

03-09-2005 at 11:10 PM Re: V6 swap so far...

Hi Chuck

That,s not a grinder it,s a hand lathe

Dan

Chuck Ingram

03-10-2005 at 02:00 AM Re: V6 swap so far...

Dan

It sure is a hell of alot easier to use in small areas compared the the big

7 inch.Actually I have a 4 inch one as well.They sure see a lot of work and they replaced the 4 inch one a couple of weeks a go.Sure is nice with no questions asked.

See its sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Bill Blue

03-10-2005 at 10:46 PM Re: V6 swap so far...

Was out of town for a few days, so I missed the great four piston caliper discussion.

I can see one advantage of the long, narrow pad. It allows the clamping force to be applied closer to the perimeter of the rotor, giving slightly better performance with no weeght penalty.

Given the choice though, I will go with bigger, rather than (possibly) refined brakes.

Jose, I understand where you are comming from with the comment about using available bolt on instead of backyard engineering. However, if mankind is to advance, mankind must continue to push the envelope. Besides, working on cars is a drag. My enjoyment comes from solving problems and making things work. It also gives me great cover when I have to do something four times.

Chuck Ingram

03-10-2005 at 11:23 PM Re: Re: V6 swap so far...

Given the choice though, I will go with bigger, rather than (possibly) refined brakes.

My enjoyment comes from solving problems and making things work. It also gives me great cover when I have to do something four times.

Bill

Oh so true and this is *why* I'm going Mustang.

I did think that I would have my spindles back and test the fit. wouldn't you know the shop only machined the top as the foreman marked the tops as top. You would think the machinist would query why 2 different size ball joints that are marked top and bottom for fitting were doing?. Now another delay.

Not enough to make it cloudy

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

V6 JOE

03-11-2005 at 12:28 AM Re: Re: V6 swap so far...

quote:Bill Blue wrote:

Was out of town for a few days, so I missed the great four piston caliper discussion.

I can see one advantage of the long, narrow pad. It allows the clamping force to be applied closer to the perimeter of the rotor, giving slightly better performance with no weeght penalty.

Given the choice though, I will go with bigger, rather than (possibly) refined brakes.

Jose, I understand where you are coming from with the comment about using available bolt on instead of backyard engineering. However, if mankind is to advance, mankind must continue to push the envelope. Besides, working on cars is a drag. My enjoyment comes from solving problems and making things work. It also gives me great cover when I have to do something four times.

Bill

Hi Bill,

Thanks for your answer. The question originally made was, why were the aftermarket brakes better, so I attempted to give a logical answer, based on my experience, and the rest is history. From the previous posts, I had gotten the impression that the question was made to criticize someone else's decision to use these brakes.

I agree, that trying to design our own parts is a very important and fun part of working on our cars. As you know, I'm presently working on adapting the Mustang GT rear discs to a Ford 8", so you know that I believe in doing this. I admire your tenacity in continuing to refine your rear disc conversion. I usually don't buy after market parts, unless I don't think I can do it as good or better. The fact that I did my V6 conversion, shows that I share the same spirit as you and all of the other modifiers on this board. Just love inventing and designing stuff. If working on our cars were just about bolting on parts, I would lose interest pretty quickly. I have never owned a car that I didn't modify in some way or other.

I can see that you're enjoying your project, including the frustrating parts of it, and that makes me happy. We'll continue to enjoy our hobby, as long as we can lift a wrench, torch, drill, welder and all the other stuff of our crazyness.

Jose

Bill Blue

03-11-2005 at 01:03 AM Re: V6 swap so far...

Jose, I do not want to give the impression I was criticizing anyone. I thought that Jim had considered the M16, decided against it and was very surprised at his announcement.

My post was an indirect, but crude, way of asking why he had changed his mind. Sure set off something, didn't it? Lurking in the back of my mind was the possibility of a larger pistoned unit.

I am sure my front brakes will outperform the Girlings, as the components were designed to stop a two ton car. I will be anxious to compare them to the M16. All it will take is the minor miracle of Jim and I getting our cars done and to an Invasion before I croak.

Bill

Jim E

03-11-2005 at 01:23 AM Re: V6 swap so far...

Sometimes you just got to pull the trigger and move ahead. I looked at it and has waffling between the Wilwoods and the M1 6 made a choice and moved ahead. Pretty sure I could make the Wilwoods fit the stock mounting points then I could not get it right the first go and ruin a set of calipers. The M16s will stop better than the stock Girlings the rear disc conversion will give me rear brakes that work and I will end up with better brakes than I had. I want to get this thing back on the road in my life time and inventing brakes and a thousand other things is not the way to get there. To be honest at this point I am more worried about having a stout enough engine to get a picture with daylight under the front tires when I drop the hammer than whether or not my brake choice is right.

V6 JOE

03-11-2005 at 02:39 AM Re: V6 swap so far...

Hey Bill,

Are you changing your front stock brakes, in order to go bigger, or are you leaving them and just adding the vented discs to the back?

Jose

Bill Blue

03-11-2005 at 01:54 PM Re: V6 swap so far

Joe, I am changing everthing, including the MC. Will have 1" X 10.5' rotors with 2.38" pistons in front. Rears are to be determined. Very tough to find a rear setup with parking brake that I can modify and will fit inside a 13" wheel.

I am going to stay with 13" wheels and tires, even though 14's are overall a better deal. This is because I have a nice set of them that I like and I am hard headed.

Bill

thorlp

03-11-2005 at 11:44 PM Re: V6 swap so far

Bill take a look at the fiat 124 rear discs.

Stan Gorski Sarasota

Fl B9472504

Bill Blue

03-11-2005 at 11:47 PM Re: V6 swap so far...

I hear the 124 brakes will not fit inside a 13" wheel. Is that wrong? Bill

andrscovill

03-12-2005 at 05:07 PM Re: Re: V6 swap so far...

quote:Jim E wrote:

To be honest at this point I am more worried about having a stout enough engine to get a picture with daylight under the front tires when I drop the hammer than whether or not my brake choice is right.

WOW! That would be the coolest. The only way *i* ever thought i'd see an Alpine with light under the tires was either on jack stands or going off a cliff. I like your way better than either!

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

03-26-2005 at 07:40 PM Re: V6 swap so far...

Finally the Outlaw calipers showed up, had to wait for them to be made. Here is a side by side.

Chuck Ingram

03-26-2005 at 10:16 PM Re: V6 swap so far...

My they do look so sweet a piece.

If I could write in sanscript I would as I can't read your quotation either but isn't it so nice and sunny

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

03-26-2005 at 10:19 PM Re: V6 swap so far...

"V6" is what it is supposed to say the first bit being the "V" part and you know the 6. I got it from a online translation service so who knows what it really says if anything.

[Edited by Jim E on 03-27-2005 at 03:22 AM GMT]

andrscovill

03-27-2005 at 0 1: 17 AM Re: V6 swap so far

Nice to see you posting at least something with regard to your project. Seems to be getting down to crunch time for this years "Invasion", but what the hey, make it or not, let's keep having fun!

Jeff Scoville

(The Nitpicker)

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One Series III

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Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

03-27-2005 at 01:35 AM Re: V6 swap so far

I have not got much done on it of late just about have to take time off work to get to work on the car. The business world has changed so much in the last year or so it is just unreal.

Jim E

04-18-2005 at 11:34 PM Re: V6 swap so far...

I am all over the place with this the closer I get the more of the thousand little jobs that still need done step up.

Had to order some more lead to fill the rocker seams so that puts the paint job on the back burner. Working the gas tanks another fun job. The DPO had sealed them but did not remove the paint.

Now I am thinking about the front end rebuild. Have they dropped Hillman spindles and everything I need but A arm bushings and sway bar bushings. Thinking to order the mid level bushings from SS anyone used them?

bryang

04-19-2005 at 02:15 PM Re: V6 swap so far...

Hey Jim,

I don't think they are ever done are they? I need to get back to work on mine and finish up a bunch of stuff before I really start driving it. Those Outlaw calipers look BOSS. You just have to keep raising the bar don'tcha? Mr. Bigger Valves and Mr. Ported Heads. Ha! Well, I'd better start saving up for brakes now. I'm too lazy at the moment to search and see if you've addressed this but do you have the e-brake figured out? Going with a Lokar setup? I think I'm going to try to modify the diff brake setup on mine. Anyhoo ... on the Hillman spindles, what were they from? I've got a little wagon sitting in back I might be able to rob. Anyone ever tried to modify the alpine spindles to sit higher (to lower the car)? I wanna hear that thing start up.

Bryan

bryan gilbreath

saoca #125

65 sunbeam imp

67 sunbeam alpine v6 conversion 61

hillman minx estate (for sale!)

Jim E

04-19-2005 at 03:00 PM Re: V6 swap so far...

I am using a Lokar knock offset of cables I found on ebay they were about \$50. Will use the factory handle. Should be fairly simple from the looks out.

The Hillman spindles I have are *off* a SV Minx. Look at a set of stock Alpine spindles on the back side as in toward the spring and note the dimple that is opposite the axle it is down low. The "dropped spindle" this dimple is about 1 inch higher up the arm. Once you know what to look for it is easy to spot.

Oh and they are made out of gold.... just try and buy a set.

bryang

04-19-2005 at 03:22 PM Re: V6 swap so far...

Yeah, I imagine they are. I'm just trying to come up with a way to get her down lower without sacrificing ride quality. It's one of those have your cake and eat it too things. On the Imp I'm having to modify stuff on the suspension as per the old rally guys advice so I'm looking for possible mods I can do with the Alpine as well. I'll keep looking for the spindles. They are probably not the right ones that I have on my Estate anyway. I was thinking of selling that one because I've got too many projects. Funny thing is though all of my friends who are always telling me I need to get rid of stuff are now telling me that I shouldn't get rid of the wagon. They all like it. Maybe I'll get it running under it's own steam or maybe I'll drop my extra 2.8 in it. Anyhoo ... don't mean to hijack Glad to hear yours is coming along. Bryan

bryan gilbreath
saoca #125
65 sunbeam imp
67 sunbeam alpine v6 conversion 61
hillman minx estate (for sale!)

Jim E
04-19-2005 at 03:54 PM Re: V6 swap so far...

Hijack away if it means a hot rod Hillman wagon. That would be way cool. Turbo coupe 4 or a rotary. I bet you could put a rotary in one for the change you find in the seat cushions. I know where there is a rusted out Rx7 right now that could be had for very little. A running driving T coupe is another very cheap donor. The the 2.8 would be pretty slick too.

jandrscovill
04-22-2005 at 01:51 AM Re: V6 swap so far...

Jim, I hate to ask, are you going to be far enough along to bring the 0GM to the "Invasion"?

Jeff Scoville
(The Nitpicker)
Two Series II's
One Series III
Two Series TV's
Three Series V's
And a Mark I Tiger SAOCA
Member #280

Jim E
04-22-2005 at 02:11 AM Re: V6 swap so far...

May the fleas of a thousand camels infest your shorts.

I am trying.. man oh man I want to get this thing done. Drove a an Alfa with the top down today then drove John's pine last weekend. It's a kiln me.

jandrscovill

04-22-2005 at 02:20 AM Re: V6 swap so far...

Me too, I'm so close to paint I can already smell the fumes and feel the braincells dying!

Maybe i'll win the Mega game so my wife will let me take a couple of weeks off work so I can get this thing done! If I did win, I can honestly say a huge part of my joy would be having nothing but time to work on the Sunbeams and whatever else I could find to do! I'd probably even buy everyone a beer.

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

04-22-2005 at 02:33 AM Re: V6 swap so far

The beer thing sounds pretty good right now... hang on

I keep plugging away so I must be getting closer., right? right!!!

The old retirement fund if it would just pay off. Then I would not have to worry about medical infriggingsurance and could play cars all day.

We will get there I know we will.

Jim E

04-22-2005 at 02:40 AM Re: V6 swap so far

Have had a request for a clutch bracket so will make another run of them up here shortly. Will

look like this.

for doing this

Jim E

04-23-2005 at 07:56 PM Re: V6 swap so far

Had fun with my gas tanks yestarday. The DPO had sealed the tanks and not done a good prep job. The sealer was over the old paint and was not stuck tight. So I used paint stripper and a steam cleaner and chain and gravel

and all sorts of fun stuff to finally get the insides ready to etch. Jim S. and I have gone in on the stuff to do our tanks and bought it from Hirsch the etch, sealer, cleaner and all. Well I put the etch in the tanks and followed the instructions and it did just about nothing... I find out the etch is muratic acid [sp?] and the kit etch is not a very strong solution. So off I go to see what you can buy locally. The first stop is a lumber company and I find a gallon of 34% MA for \$2.50 hmmm I say. Buy the stuff and back to the shop dump half in each tank seal it up and aggitate. I notice right off this has more bite as when it spills on the cement it boils getting it on me it burns. The kit etch did niether. So I am happily spinning the tanks ever 15 minutes or so and the guy who owns the shop asks me what I am doing.... "etching these friggin tanks" "Did you dilute the acid" says he? "heck no" says I "it will eat the tanks gone" says he "good" says I cause I am sick of these tanks. I did shorten the etch period about then and after an hour the insides of the tanks looked good an even light grayish color and a somewhat ruff texture. The gallon of stuff I bought for \$2.50 worked much better than the \$10 pint of stuff that came with the kit. Now a couple hours of rotating the tanks with the sealer in them and I will be done.

Chuck Ingram

04-24-2005 at 11:26 AM Re: V6 swap so far

Jim

Yes Muratic acid can do much. But as you were advised and then shortened your time you were on the right track. Durnp a yucky greasy part in it and watch but with safety glasses and of course heavy duty rubber gloves.

We used it diluted to clean and precondition concrete floors before painting. Thinned first coat of paint 50% and it would never peel.

Now doesn't that type of information brighten your day

Chuck

62 Alpine V6 becoming a 302

64 Spirit of Lister

Jim E

04-25-2005 at 02:17 AM Re: V6 swap so far...

Chuck I am about to the point that I wear safety glasses to bed.

Jim E

05-13-2005 at 07:47 PM Dropped spindles

This is a secret... some Hillman cars came with spindles that are dropped about one inch compared to the Alpine/Tiger spindle. So if you think your late alpine is too high in the front these will give you a drop and not screw up the ride. Ledgend has it these spindles only came on cars sold in Austrailia but I have found that to be untrue as my US spec Hillman had them and I know of at least 3 US Hillmans to have the dropped spindle. The quick way to ID the dropped spindle is to look at the dimple that is oposite of the stub axle on a stock Alpine it is very close to the where the lower ball joint nut bottoms out on the spindle on the dropped unit it is about 1 inch higher.

The above is the Hillman dropped unit.

[Edited by Jim E on 05-14-2005 at 12:49 AM GMT)

Jim E

05-13-2005 at 07:52 PM Re: V6 swap so far...

Here is the stock Alpine spindle.

Jim F

05-13-2005 at 08:13 PM Re: V6 swap so far...

Took a few days off work and played car. Got the under dash finished up cleaned and primed also trimmed the inner lip on the rear fender wells so if I want to run a bigger tire I will be good. I just cut the lip down to about 1/4 inch and welded the inner and out skins back together. Then I fixed the rust in the area where the soft top connects to the body just in front of the trunk lid. Got the Hillman spindles ready for the front end rebuild just need to order the bushings and can start that part of the project.

jandrscovill

05-17-2005 at 02:45 AM Re: V6 swap so far

Good to hear some progress is being made. Are you gonna slow the pace as your not in a hurry for the Invasion this year, or still trying to have her back asap?

I'm in final prime and the 4 banger is back in, still hopeful for this year but my stomach is getting pretty nervous!

And now of course I get conned into re-painting a huge All-terrain, drive and go crane with a 160 foot boom! At least it's only three colors. Then again, it will give my trigger finger a good refresher, BLAH! All this and now the family vacation gets planned for the weekend before and the week leading up to the meet.

I guess if I don't have the car done i'll just be a few beers ahead of everyone else after the "rally".

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series TV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

V6 JOE

05-17-2005 at 03:02 AM Re: V6 swap so far

Jeff,

I'm pulling for you with all my might. I'm confident that you will make it there with your Alpine.

I believe Jim Ellis will be there too with his baby. It might need a little paint, but...

Jose

Jim E

05-17-2005 at 03:09 AM Re: V6 swap so far...

Little soon to say if it will be driving in time. My guess is it is a long shot depends on so many things.

AutoX47

05-17-2005 at 03:16 AM Re: V6 swap so far...

Jeff, my father and I don't want to caravan by ourselves! EDIT: As if I can talk

[Edited by AutoX47 on 05-16-2005 at 09:17 PM GMT]

Andrew Zizzo

Enjoying a'66 Series V Alpine! - The Story Dues
paying SAOCA Member

jandrscovill

05-17-2005 at 03:20 AM Re: V6 swap so far...

Hey Jim, I just booked my room so i'm definitely going. I'm also considering driving my SIV on vacation (n. of detroit) and then down on friday, so if i get the S-V done and there also, i'll gladly let you run the S-IV around.

I'll try and get that Weber on by then!

Andrew, my dad could use some highway company. We'll see as we get closer. [Edited

byjandrscovill on 05-16-2005 at 11:23 PM GMT]

Jeff Scoville

(The Nitpicker)

Two Series II's

One Series III

Two Series IV's

Three Series V's

And a Mark I Tiger SAOCA

Member #280

Jim E

05-17-2005 at 03:31 AM Re: V6 swap so far...

Thanks Jeff that is very nice of you!

Right now it looks like Eric and I will wheel the Honda up dragging a small trailer... then I do have a hitch for the Alpine.

Jim E

05-26-2005 at 02:19 AM Re: V6 swap so far...

I have a run of the clutch brackets about ready to go for those who are interested. Just a little grinding to pretty them up and a coat of primer should be ready to ship by Monday.

Norman C

05-27-2005 at 08:15 PM Re: Re: V6 swap so far...

Hi Bryan,

Before sending my heads out to the machine shop, to be modified for new valves and to be shaved, I would like perform the mod you referenced below, to enhance cooling.

If I may quote from your post:

--it involves drilling an extra cooling passage in the head.--

Is it one passage? I see four coolant holes in the the block, per bank, that do not transfer through to the heads; these are adjacent to the center bore on each bank. I don't have a copy of the Pruett manual so I'm not entirely sure what the details for this mod are. What size drill is recommended? Can anyone elaborate, please?

As usual, thanks for your help, Norman

Castaneda

#480

Jim, since you seem to be pretty adept at modifications there is one that is mentioned in the Pruett book that is pretty easy to do. It involves drilling an extra cooling passage in the head. I did it to mine and while I can't say if it made any difference, I can say that I think it should. Well have fun putting it together!

Bryan

Jim E

05-27-2005 at 09:08 PM Re: V6 swap so far...

The book says the hole size is 5/16ths drilled to a depth of 1 inch. There are 4 holes that you will be drilling in the heads and you use the head gaskets as a template to center punch the places you drill. The HG has the holes they are between the bores or to the left and right of the center bore/combustion chamber.

Norman C

05-27-2005 at 10:24 PM Re: Re: V6 swap so far...

Jim,

Thanks for the timely response and info; it's quite clear, now, what needs to be done.

Norman

quote:Jim E wrote:

The book says the hole size is 5/16ths drilled to a depth of 1 inch. There are 4 holes that you will be drilling in the heads and you use the head gaskets as a template to center punch the places you drill. The HG has the holes they are between the bores or to the left and right of the center bore/combustion chamber.

Jim E

05-30-2005 at 01:38 AM Re: V6 swap so far

The brackets are done, these are made to use an external pull slave like the Wilwood unit.

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