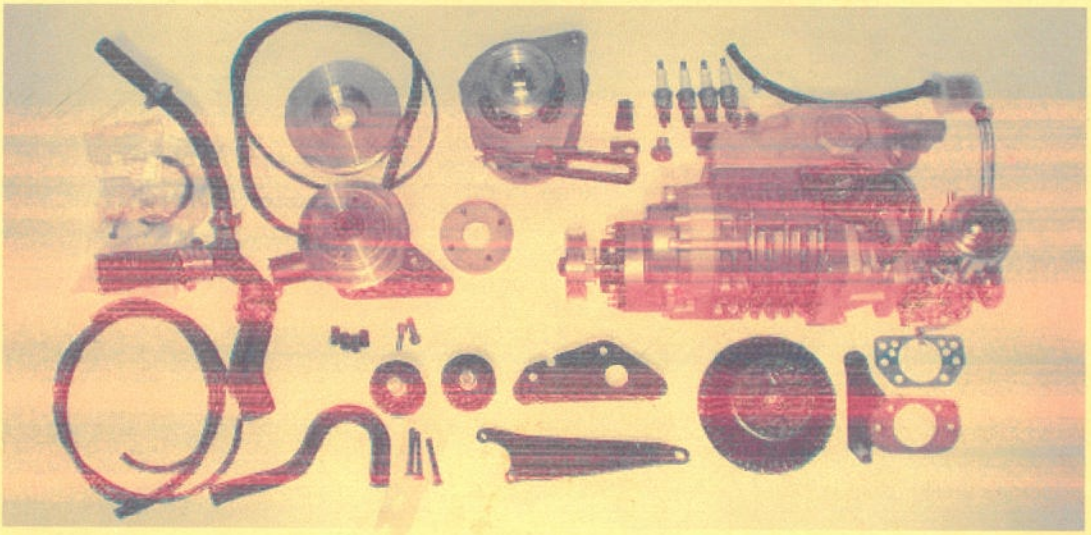
MGB Supercharger System

Installation Instructions

For 1968 to 1974-1/2

PART # 150-068

440 Rutherford St. P.O. Box 847 Goleta, CA 93117
1-800-667-7872 • FAX 805-692-2525 • www.mossmotors.com



Please read and understand these instructions completely before you begin the installation.

A few notes before you begin:

Emission Equipment - This supercharger system may not be legal in your state.

Installation – The mechanical installation of a supercharger system is a relatively simple bolt-on affair. However, tuning a supercharged engine for maximum performance and engine life requires a high level of skill and understanding of engine systems. Achieving the proper balance of air/fuel ratio, boost and ignition timing could require considerable effort. The kit has been engineered for a stock engine and should provide a reasonable state of tune with good performance. Your results will definitely be different and may require further tuning.

Hose clamps - Re-use hose clamps, or purchase new ones where necessary. Use new hose clamps on all fuel connections.

If you have vacuum assisted brakes - you MUST install a check valve (Moss Part # 150-071) in the vacuum line. This will prevent pressurized air from reaching the brake booster system and damaging it. To install, remove the larger of the 3 plugs in the back of the supercharger manifold and install the barbed fitting using teflon tape on the threads. Using 3/8in vacuum line, install the check valve between the barbed fitting and the brake booster (closer to the booster) with the check valve arrow pointing toward the supercharger manifold.

Engine condition - This system is designed to suppliment an engine in good condition, not to make up for lost power in a tired one. If your car has a tired engine, you should overhaul it before installing a supercharger system. Your engine should have a fresh tune up, including new spark plug wires, points, condensor, distributor cap and rotor. Champion RN7YC (332) spark plugs, #052-272, are included with the system, gap 0.035in. Be aware that when replacing plugs, cross-refer-

enced plugs may NOT be the same heat ranges, "hotter" plugs could lead to detonation and engine damage. If your engine mounts are old or worn, we recommend replacing them, you will be removing them during the installation process anyway - #413-010 R/H, #413-020 L/H.

Distributor - For optimum performance, we recommend changing to the #143-110 vacuum advance distributor. If you are not going to change your distributor, set the ignition advance statically to 13Þ before disassembly. If your car has a fully centrifugal advance style distributor, set the initial advance to 3Þ to 4Þ at 850 RPM. This will yield a total of 35Þ to 36Þ of advance. We recommend that you know what advance curve your distributor has before setting the initial timing. **Full advance too soon or too much total advance can lead to detonation and engine damage.**

Carburetor - The supplied SU HIF 44 carburetor has been pre-tuned and jetted for a supercharged MGB with a stock engine. The metering rod, jet, and slide have been altered to run properly and safely on a wide range of supercharged, unmodified engines. We cannot be responsible for modified engines - we recommend dyno tuning modified engines, while reading the air fuel ratio, to avoid running into lean conditions. The carburetor has a BCA needle, a 4.5oz spring, and uses 85-90 WT oil in the dashpot.

Fuel Requirements - You must run premium fuel in your supercharged MGB.

How superchargers work - Superchargers compress the air/fuel mixture, filling cylinders with a greater charge than when normally aspirated. Normally aspirated engines produce vacuum, read in inches of mercury, superchargers and turbochargers produce boost, read in positive pounds per square inch.

Boost capacity is determined by supercharger RPM which is, of course, affected by pulley size (the smaller the supercharger pulley, the faster the supercharger turns at the same engine speed). Actual boost is determined by atmospheric pressure (a combination of altitude, temperature & humidity) and internal engine back pressure which is governed by engine design, intake/exhaust valve overlap and engine compression.

Assuming that the car has a stock camshaft and the engine is in good shape, you may expect 6 to 8.5 lbs. of boost with the Moss supercharger system utilizing the supplied 2.75in pulley.

Raising your compression ratio one point (8:1 to 9:1) is equivalent to adding one psi of boost. Therefore a higher compression engine with a less boost will make similar power to a low compression engine with more boost, all else being equal.

Higher boost in a higher compression engine will often lead to detonation and engine damage. The most common mistake in supercharged tuning is trying to run too much boost.

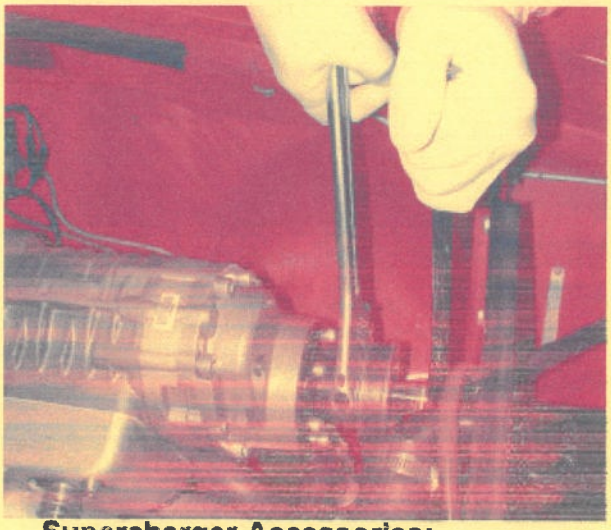
Pulleys and Boost - Our low compression car made the most power from 7.25 to 8.5 lbs. of boost with the stock cylinder head and the supplied 2.75in pulley. We achieved the most boost at sea level, on a 50Þ morning. When you change the pulley to anything other than the supplied 2.75in pulley, it voids your supercharger warranty.

If you have a modified cylinder head, you may have good results with the high boost, 2.60in pulley, #052-221 and we recommend a camshaft with enough duration to relieve cylinder pressure. There was no HP gain from installing this pulley on an engine without any modifications.

If you are using the high boost pulley and have detonation problems and/or very high boost you may want to consider the lower boost 2.85in pulley, #052-276. This pulley should lower the boost 1 to 1.5 PSI. Although we had no problems with an early model car (with a higher compression engine) you may have improved driveability with this pulley.

Our dyno sheets were produced with the recommended distributor, the same carburetor tuning as supplied in this system, and 17 degrees of initial timing, on a 1973 MGB with a stock engine and 8.0:1 compression, at sea level using a Mustang chassis dynamometer - **your results will definitely vary.**

Changing the supercharger pulley - The nose of the supercharger is delicate and should be treated as such. You may have luck removing the pulley without removing the supercharger. If not, you need to remove the supercharger and use the appropriate pulley puller. When installing a pulley, put anti-seize on the pulley shaft. Slip the pulley over the key and threads, wiggle if necessary - do not use a hammer. Use an 18mm socket, and torque the pulley to 40 ft-lb. Use a crescent or 1-1/2in wrench on the back of the pulley to counteract the torque. See image on next page.



Supercharger Accessories:

- Boost Gauge Kit, #150-028 - period correct face
- Vacuum Check Valve, #150-071 - Required if your car has vacuum assisted brakes
- Distributor, #143-110 - it has the proper advance curve and was used for all dyno testing and tuning
- Champion RN7YC (332) Spark Plugs, #052-272
- K&N Air Filter Cleaning Kit, #001-130
- High Boost 2.60in Pulley, #052-221
- Low Boost 2.85in pulley, #052-276

Tools required:

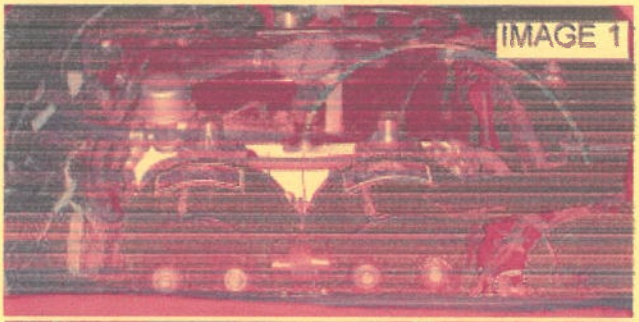
Sockets: US - 5/16in, 7/16in, 1/2in, 9/16in, 7/8in (or 22MM), 1-5/16in, 13/16in spark plug. Also a 1/2in swivel socket will make installation easier. Metric - 10, 22 (or 7/8IN). 6MM Allen socket if you have one.
Drives: 1/4in, and 3/8in ratchet. 1/2in drive torque wrench and breaker bar. A 1/2in impact wrench and 3/8in air ratchet will make installation easier.
Wrenches: 1/2, 7/16, 9/16, 7/8IN, and a 13mm combination. 1/2in ratcheting wrench. 7/16in tubing (flare nut) wrench.
Allen wrenches: 6MM, 7/32in and 5/32in.
Other tools: A feeler gauge or spark plug gap gauge. Cold (flat) chisel, large and small flat blade screw drivers. Floor jack, gasket scraper, BrakeKleen and
rags, coolant and catch pan, a bottle of anti-seize and a hammer. An electric drill and 1/4in bit. A timing light - we recommend a timing light with an adjuster wheel so that you can set your timing more accurately. You may also need wire cutters **and crimpers, depending on your alternator.**

Installation:

1. Disconnect the battery negative cable, block your wheels, and open the hood.

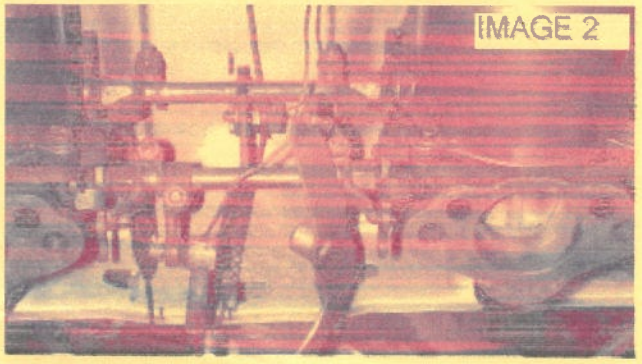
2. Drain coolant; please dispose of properly if you are not re-using it. On some cars the radiator has a pet - cock to drain coolant and on others the lower radiator hose must be disconnected from the radiator. Once the radiator is drained, and you haven't already, disconnect the lower radiator hose from the radiator.

3. Using a 1/2in socket, remove air cleaners. **IMAGE 1**

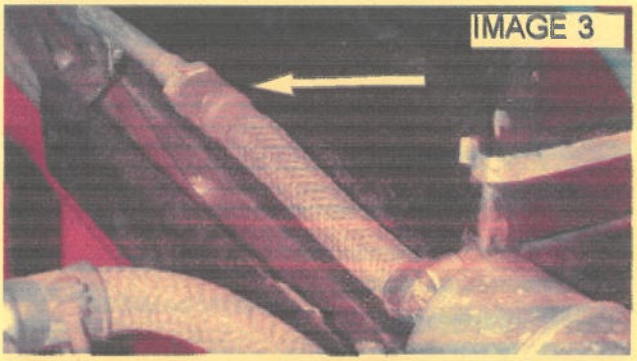


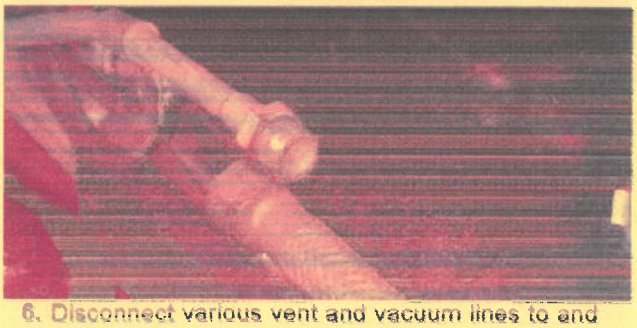


4. Once the air cleaners are removed, you can disconnect the choke and throttle cables. Also disconnect the throttle return springs. **IMAGE 2**



5. Disconnect the fuel line at the threaded junction, at the back of the engine, in front of the heater box. Remove the excess line and filter (from the junction forward the cars vary, don't worry if yours is different than the pictures, the junction is the key point). **IMAGE 3**



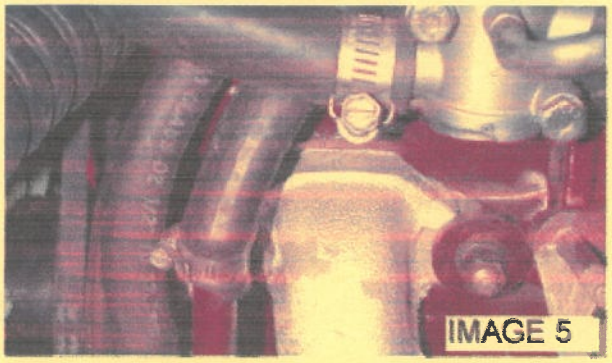


6. Disconnect various vent and vacuum lines to and from the carburetors. If you decide not to go with our recommended distributor, pay close attention to the vacuum arrangement of your distributor - it will either be manifold or ported vacuum. Manifold vacuum is taken from the intake manifold. Ported vacuum is taken from the top of the carburetor.

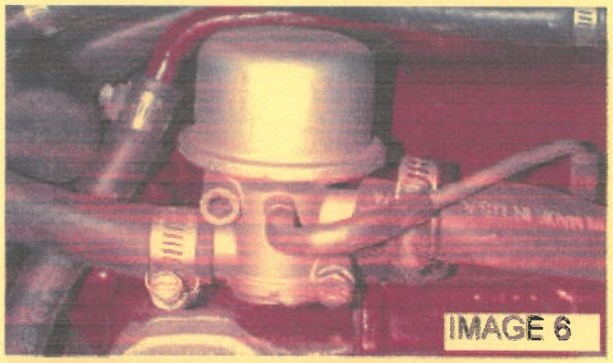
7. Using a 1/2in wrench, remove the nuts securing the carburetors. Then remove the carburetors. **IMAGE 4**

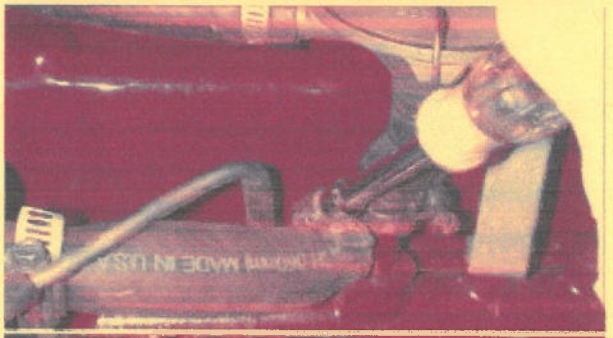


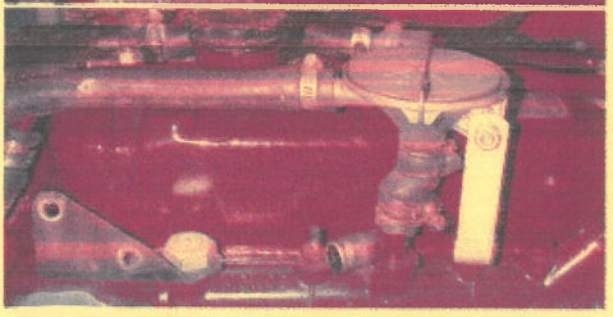
8. Disconnect rubber hose on engine side cover vent. **IMAGE 5**



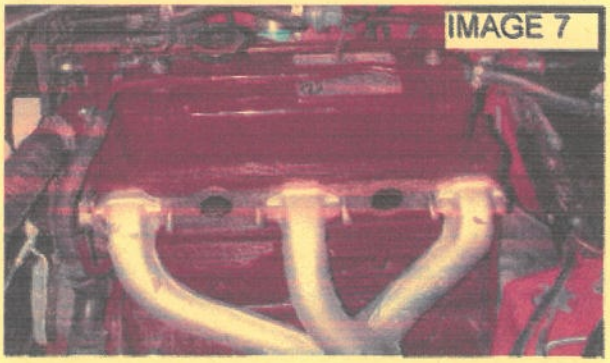
9. Remove the "gulp" valve using a 7/16in socket and wrench. This is the valve located above the forward carburetor, connected to the smog pump (air pump). Disconnect the vacuum source from the intake manifold. Disconnect the large hose from the intake manifold. The smog pump will not be used. **IMAGE 6**



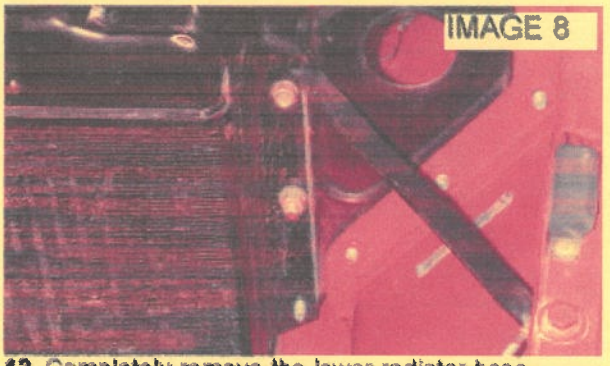




10. Using a 1/2in socket, remove the nuts securing the intake manifold. Then remove the intake manifold. A new intake/exhaust manifold gasket is included in your supercharger system, replace your old one. You will reuse the manifold fasteners. Also, this is a good time to replace your studs if they are corroded or worn. **IMAGE 7**

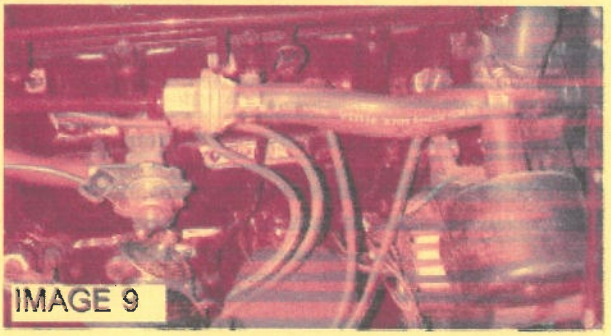


11. Remove upper radiator hose. Now, using a 1/2in socket and wrench, remove the 6 bolts that secure the radiator, and remove the radiator from the car. **IMAGE 8**



12. Completely remove the lower radiator hose assembly, and adjoining heater hose at the valve cover.

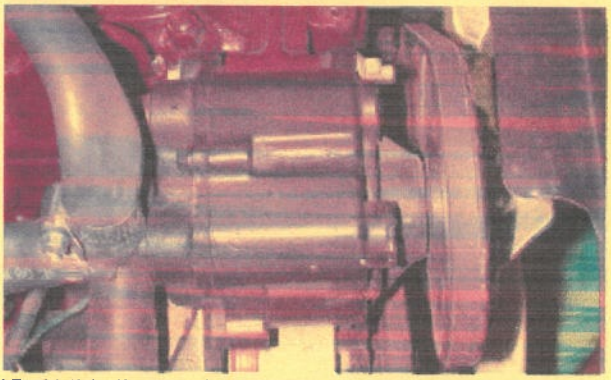
13. Remove the hose clamp and hose that leads to the air injection rail. **IMAGE 9**





14. Remove the smog pump (air pump). Remove the adjuster bolt for the smog pump. Loosen the pivot bolt, then remove the fan belt. Now remove the pivot bolt, and remove the smog pump. The smog pump will not be re-installed. **IMAGE 10**





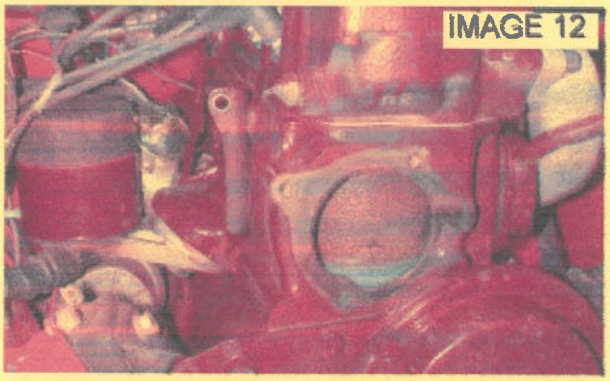
15. At this time, using a 7/16in socket, just loosen the four bolts which hold the fan to the water pump.

16. Loosen the 22MM (this could be different for your car, use the appropriate socket) nut in the center of the alternator. You will need to stop the fan from turning, a carefully positioned rag can help. We recommend using an impact wrench for loosening this nut. **IMAGE 11**



17. Loosen the alternator bolts, and remove the belt. Then unplug and remove the alternator.

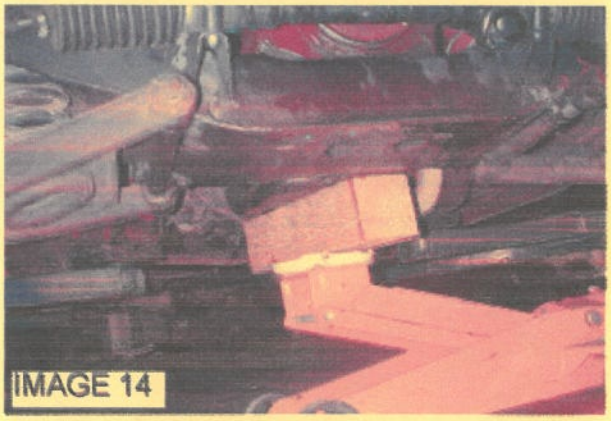
18. Remove the four 7/16in headed bolts holding on the fan and water pump pulley, and remove them. Using a 1/2in socket, remove the water pump. You may need a catch pan for additional coolant. Scrape the gasket surface in preparation for the new water pump. **IMAGE 12**

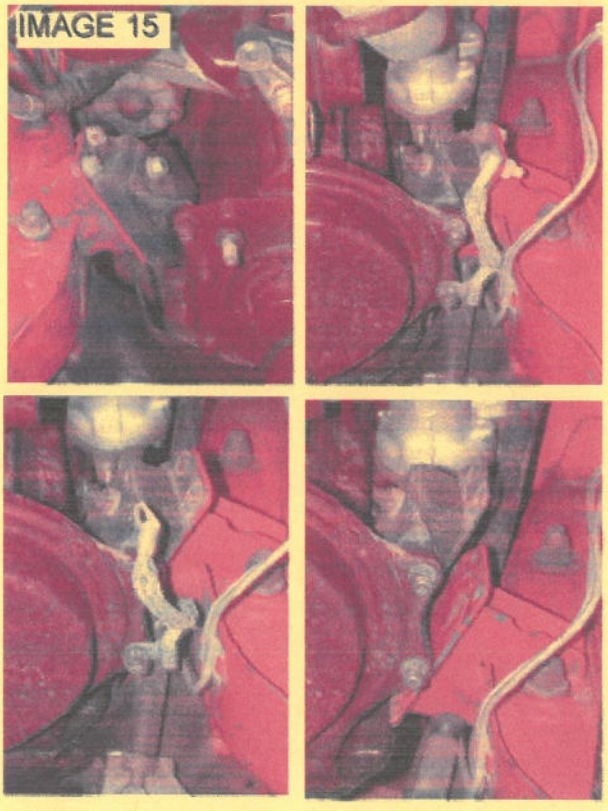


19. Install the supplied new water pump. Included is a new gasket, new bolts, and lock washers (2 - 5/16-24 x 1in, 1 - 5/16-24 x 1.25in, 1 - 5/16-24 x 1.75in). You will not need to re-install the smog pump adjuster bracket. **IMAGE 13**



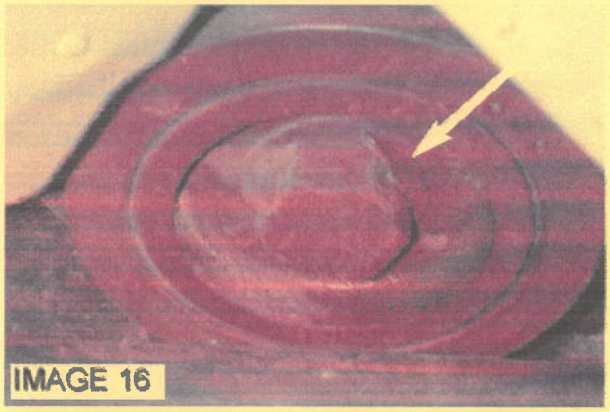
20. You must remove the crankshaft pulley to install the new serpentine pulley. To do so, you need to raise the engine slightly. First, set a jack, with a wood block on it (or something similar to protect the oil pan), underneath your car. Apply very slight pressure to the oil pan. When removing the driver's (left) side engine mount, complete removal of the ground strap will be necessary. The strap will be relocated to the mount on the other side of the car. Remove each of the 4 bolts that hold the engine mount to the chassis. A 1/2in ratcheting box end wrench is a very handy tool when disconnecting the engine mounts from the chassis. **IMAGE 14**

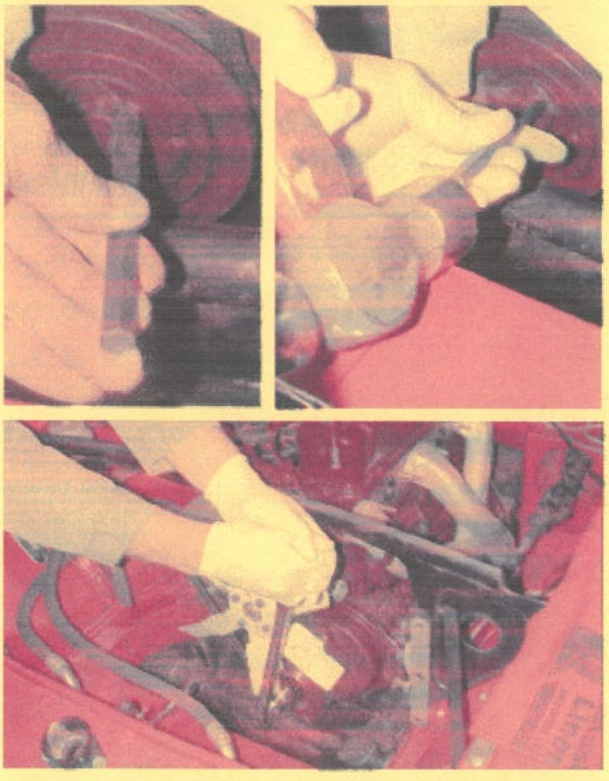

IMAGE 14


IMAGE 15

21. Once all 8 fasteners are clear, jack up the engine enough to get to the crank pulley. A few inches should be enough, two inches was sufficient in our test car. **IMAGE 15**

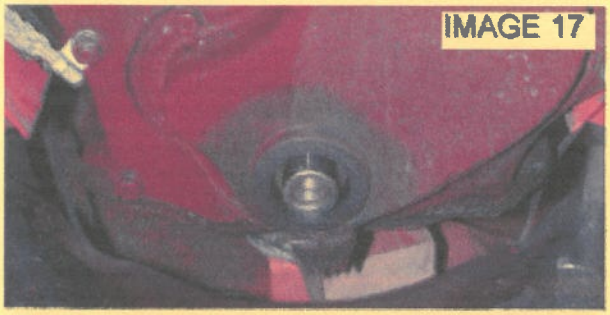
22. Remove the crank pulley. There is a tab-locking washer holding the crank pulley bolt in place. Using a hammer and a chisel bend the tab away from the bolt. Put the car in gear and set the e-brake. Using a breaker bar and a 1-5/16in socket remove the crank pulley bolt. You may need a friend to hold the brakes on. You may also need an impact wrench to remove the bolt if it is stubborn. With the bolt removed, remove the pulley. You may have to rock it back and forth to slide it off of the crank. **IMAGE 16**

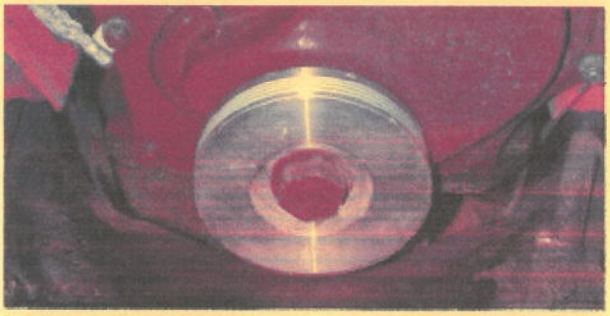

IMAGE 16

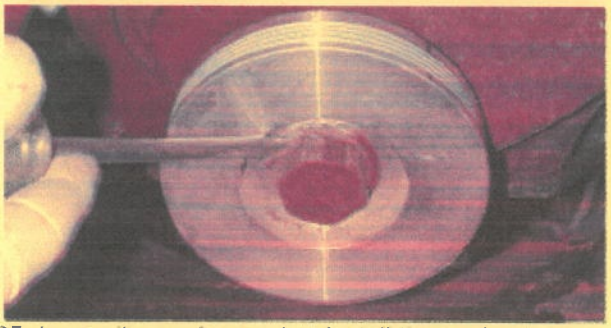


23. Compare your old pulley to your new serpentine pulley, the new pulley has two timing marks, please determine the appropriate mark for your application. If desired, you can use a black marker on the extraneous mark to eliminate confusion.

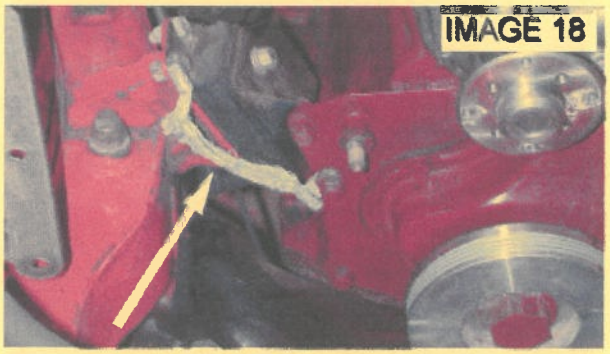
24. Now install your new serpentine pulley. A little anti-seize on the end of the crank may ease installation. You may also need a rubber mallet to install it. We have supplied a new tab washer that will need to be bent toward the crank pulley and fit into the slot on the pulley. Make sure that the bent tab on the tab-locking washer sits properly in the crank pulley. Tighten and torque the bolt to 70 lb-ft (9.6 kg-m). You may want to also use anti-seize on the crank pulley bolt. Again you may need someone to hold the brakes while you torque the bolt. Bend the tab-locking washer over the bolt head, with a screwdriver. Use a rag to protect the pulley. **IMAGE 17**



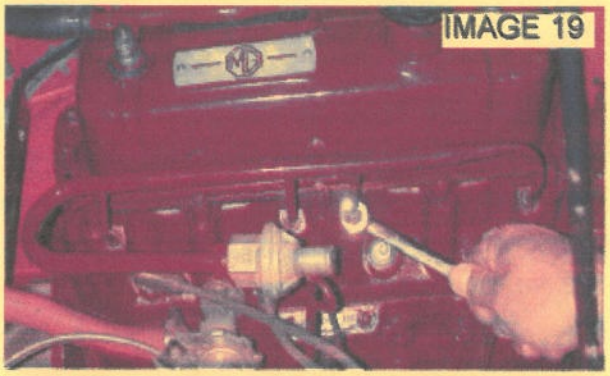




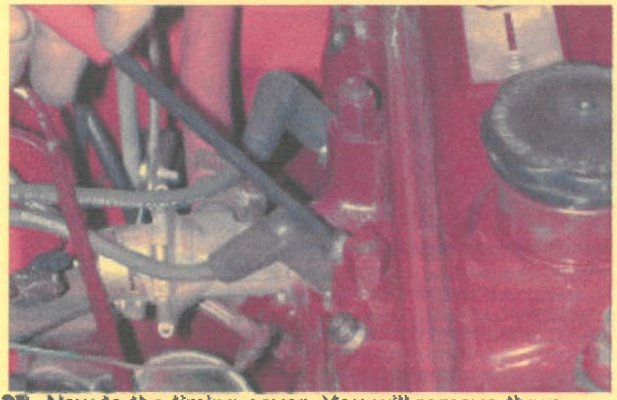
25. Lower the engine, and re-install the engine mount bolts. You may want to keep the jack under the engine just in case you have to use it to aid in alignment. Don't forget to relocate the ground strap to the passenger's (right) side engine mount. Make sure that the strap has a good, clean, bare surface to ensure proper contact. It is essential to have a ground strap, the electrical system will search for a ground when trying to start the car - this could damage to a number of systems, so don't forget. **IMAGE 18**



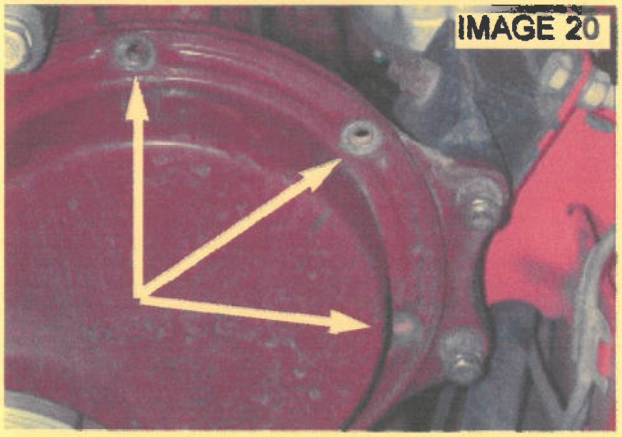
26. Remove the air injection tubes. We highly recommend that you use a tubing wrench (flare nut wrench) to break them loose! Then a standard open end wrench may be used once they are loose. However a standard open wrench is not recommended for breaking the nuts loose, they can very easily damage the heads. The wrench size is 7/16in. Be patient, these seem to have very long threads. You will then insert the four 7/16-20 by 1/2in set screw plugs into the air injection tube holes. We recommend putting anti-seize on the plugs. Use a 7/32in Allen wrench, tighten snugly. **IMAGE 19**



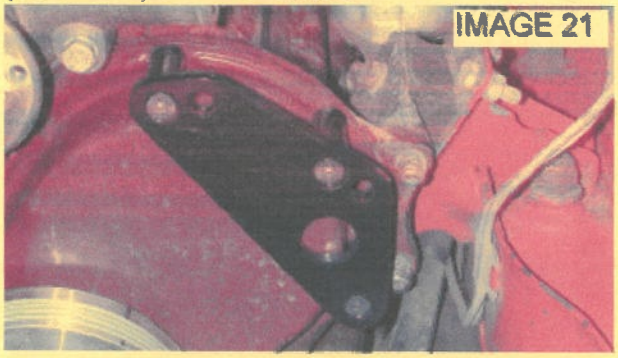




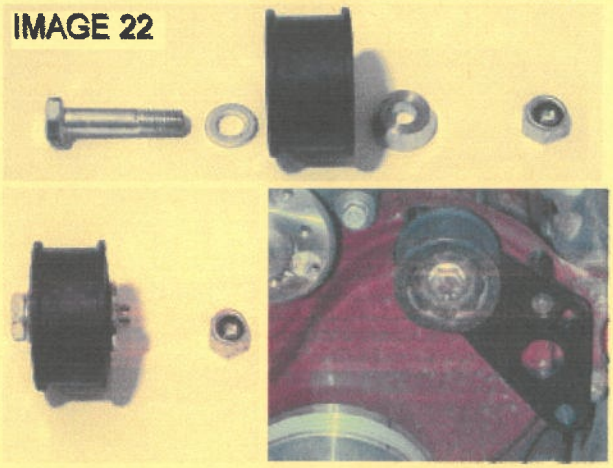
27. Now to the timing cover. You will remove three timing cover bolts to install the idler pulley plate. Use a 7/16in socket. See illustration. **IMAGE 20**



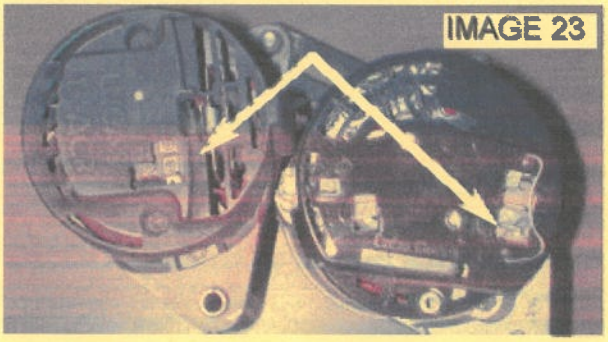
28. Install the idler plate, with the three spacers behind it, using the included 1/4-28 flat head screws, and tighten using a 5/32in Allen wrench. Loctite (thread-lock) the screws. **IMAGE 21**



29. Install one idler pulley. Mount inner most idler pulley first, this is the one that is closest to the water pump and uses the shorter of the two 3/8 bolts. Slip the flat washer over the bolt, then the idler, then the spacer (cone inside the pulley). Install this assembly on the idler plate, in the hole closest to the water pump, then start the lock nut. Tighten to 25ft-lbs. You can not install the outer idler until the supercharger is in place. **IMAGE 22**

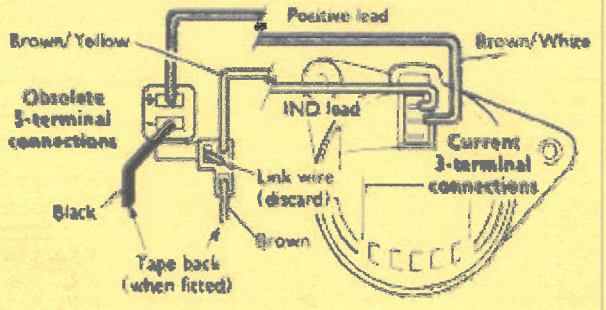


30. Install the alternator. We highly recommend using the supplied alternator, if you must use your existing alternator, you need to have new bearings installed, and make sure that the adjuster system will work with your alternator. Either way, you will need to use your existing alternator fan and move it to the new alternator. Our alternator required a 7/8in or 22mm socket. NOTE: There are two different plugs used - as the 5-terminal alternators have become obsolete, a 3-terminal alternator is supplied with the supercharger system. An adapter is also included, # 540-280. The following are instructions for the terminal conversion, skip the next step if your alternator has the same plug as the new one. **IMAGE 23**



31. Terminal conversion: Insure that the battery is disconnected. Cut off wires as needed. Remove and discard link wire (see illustration). Remove wiring harness tape, for about 1in. Slide small insulator over remaining IND wire (brown/yellow), and solder to the small terminal. Separately tape them back into the harness; the brown and black wires are not used, as they are no longer required. Connect the small brown/yellow IND wire to the small terminal on the alternator. Connect the large brown/white positive lead to either of the two large terminals on the alternator. **IMAGE 24**

IMAGE 24



32. Install your fan and old key on the new alternator (this is a good time to re-finish it if desired). Install the new pulley and start the nut. Tighten the nut to 45 ft-lb. We have had good luck holding the fan with a rag and using an impact to tighten the pulley. **IMAGE 25**

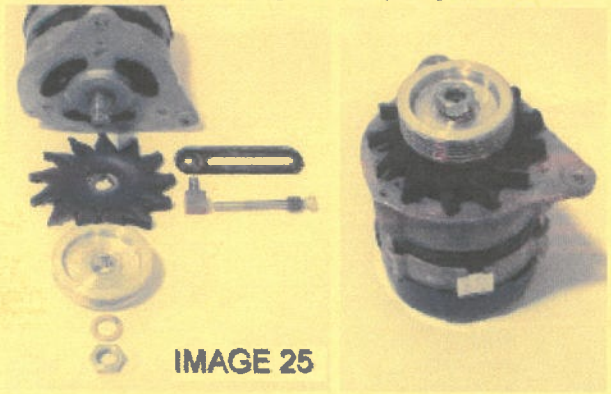


IMAGE 25

33. Install the slide and tensioner assembly. Place the square headed adjuster bolt through the hole in the tensioner slide, and thread it into your new alternator. The square headed adjuster should not be tightened all the way - the slide needs to be able to move a little. Install and snug a nylock nut on the male threads of the square headed adjuster bolt on the inside of the alternator ear. Now find the 2.5in long 5/16-24 bolt, and thread the jam nut all the way on, now thread this assembly through the square headed adjuster, the bolt will thread toward the slide (as shown in the photo). This bolt is used to adjust the alternator to create proper belt tension. **IMAGE 26**

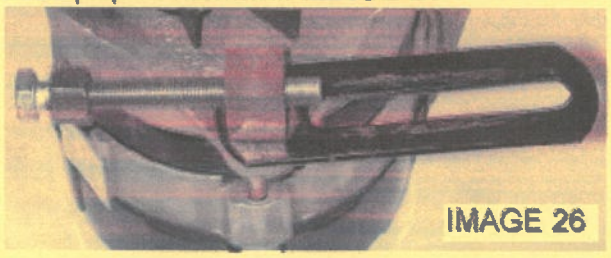


IMAGE 26

34. Install the alternator assembly on the car, using your previously removed pivot bolts and the tensioner slide system. Hang the alternator on the pivot bolts and make sure the slide is over its stud. There is a sleeve in the rear pivot of the alternator that slides to adjust to the brackets. Now slip the adjuster receiver block over the big, custom adjuster nut, and install on the stud. Slip the end of the long adjuster bolt into the adjuster receiver block. Snug the nut over the slide but do not tighten - you will need to actuate the slide when you put the belt on. Snug the alternator pivot bolts. **IMAGE 27**

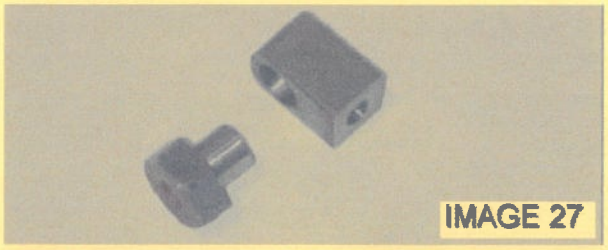
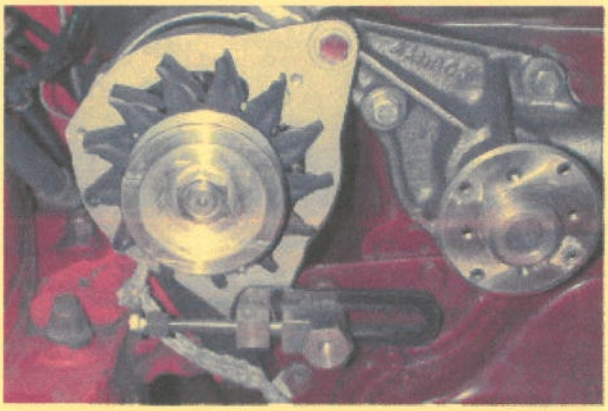


IMAGE 27



35. Using a straight edge, check alignment of the alternator pulley - if necessary, you can use up-to two (of the 4) supplied 5/16 washers as shims on the pivot brackets. With the straight edge on the crank pulley there should be about 1/16" gap between the straight edge and the alternator pulley. This is due to flange thickness variations and is normal. **IMAGE 28**

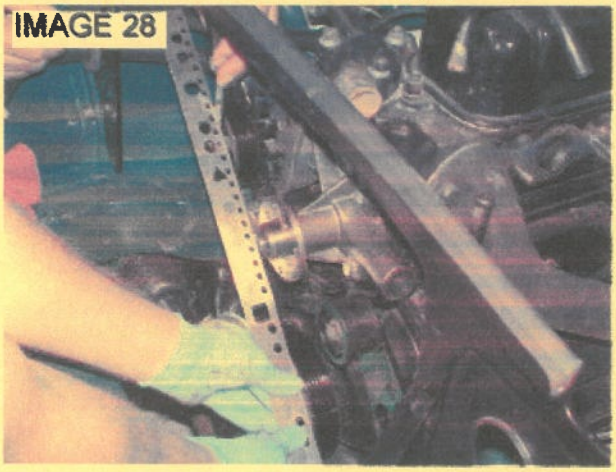
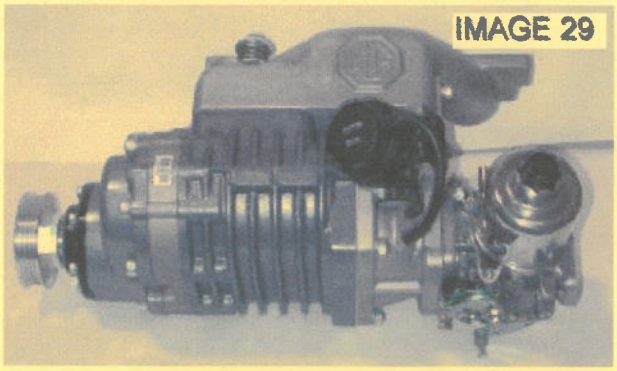
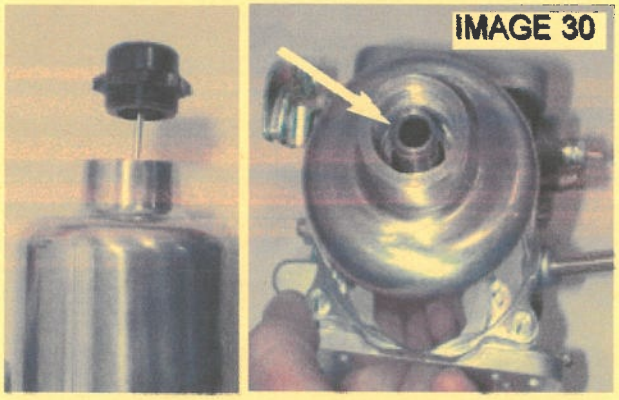


IMAGE 28

36. Now to the supercharger assembly. The supercharger, manifold and carburetor come pre-assembled. **IMAGE 29**

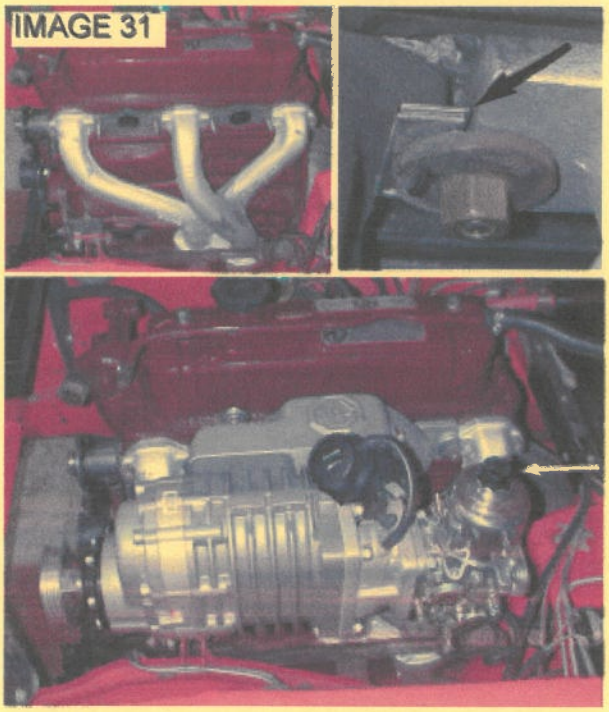


37. Fill the carburetor dashpot with oil. The carburetor is shipped dry and should be filled with the included 85-90WT oil (# 052-335). Unscrew the black dashpot cap, and pull it up to remove the damper. Set it aside. Now fill the center shaft (piston shaft) to about 1/2in from the top, with the supplied oil (you may want to use side-cutters to increase the opening in the bottle nozzle). Reinstall the damper and screw on the dashpot cap. Although oil weight can be changed for tuning, we highly recommend using the included 85-90WT oil unless you are very familiar with SU carburetors, and have a dynamometer and wide-band O2 sensor available for tuning. **IMAGE 30 and white arrow on IMAGE 31**

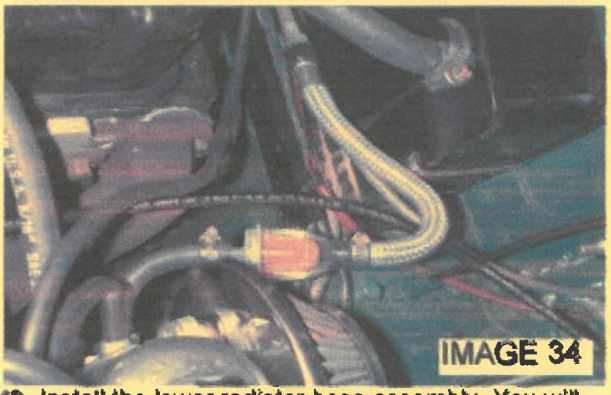


38. 38. At this point replace your intake/exhaust gasket. Remove your exhaust manifold, clean the surface, and install the supplied intake gasket. As previously stated, this is a good time to replace the studs. You will use your old, large manifold fastener washers. Reinstall the exhaust manifold.

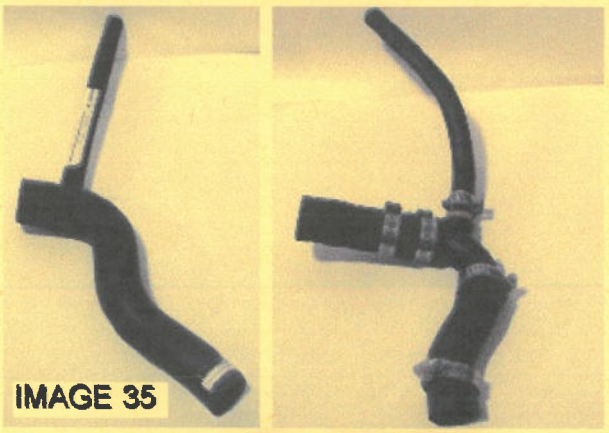
39. Install the supercharger assembly. Hold the assembly and place it carefully on the car. Once the blower is in position, determine if the flange thickness of the exhaust manifold and intake manifold are the same, if so, finger-tighten the manifold fasteners. If not, you will need to shim the washers. If they are different, measure, as accurately as possible, the thickness of the exhaust manifold flange, and your new intake manifold flange. Use the supplied shims to achieve the proper thickness. The supplied adhesive can be used to hold multiple shims together and also hold the shims to the washers to aid in assembly. Once your shims are in-place, hang the blower. Slip on the big washers, lock washers, and start the nuts. Tighten the manifold fasteners from the center ones to the outer ones; torque them to 20 ft-lb (we had good luck using a swivel socket). **IMAGE 31**

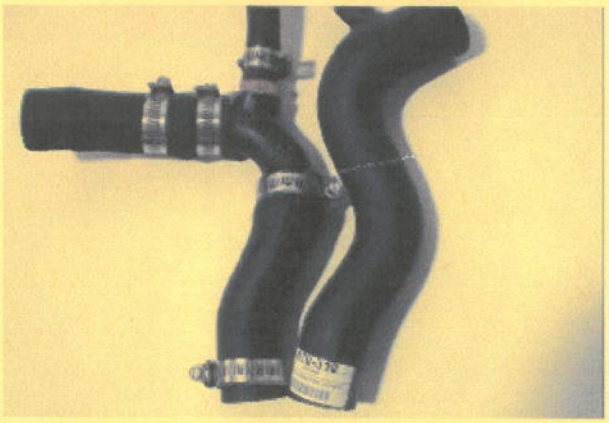


40. Install the front supercharger support bracket. Using a 6mm Allen wrench, remove two blower housing bolts - the two bottom most bolts on the gear housing. They are tight, you may want to use an Allen socket. Install the support bracket to the supercharger, apply Loctite to the bolts, and finger tighten (make sure the bolt heads are all the way down, against the bracket). This brace connects the blower to the back of the idler plate, assure that the bracket faces the right way. **IMAGE 32**

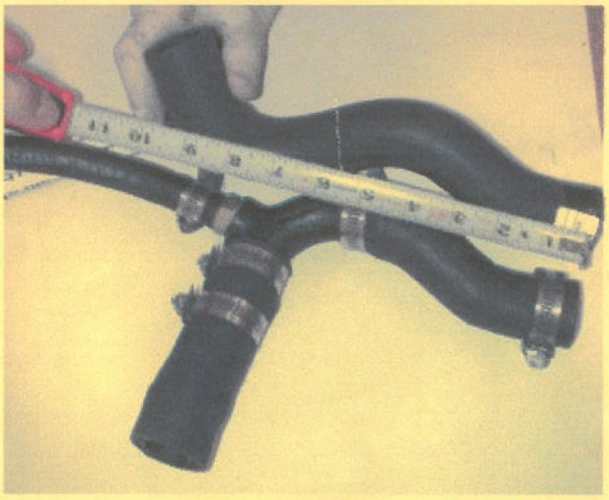

IMAGE 34

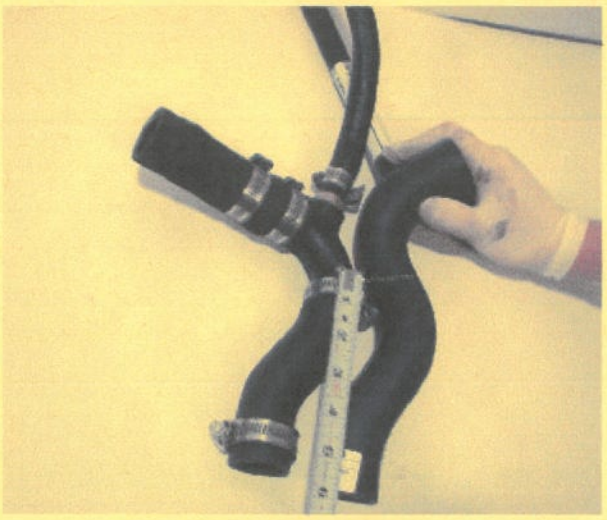
43. Install the lower radiator hose assembly. You will only use a portion of the provided molded lower hose. See the pictures for a better understanding of the assembly. The new hose will be cut 5-3/4in from the end furthest from the small diameter offshoot. The uncut end will connect to the radiator while the cut end will connect to the uncluttered end of the elbow. If you want, use some silicone lubricant or WD-40 to ease the installation of the elbow. Make sure to note the proper alignment of the molded hose. Now install the 5in of straight radiator hose on the other end of the elbow. Put the washer on the hose barb, and install the hose barb into the elbow. Tighten. Then install the 11in of 1/2in heater hose. Make sure to clamp all connections. **IMAGE 35**


IMAGE 35



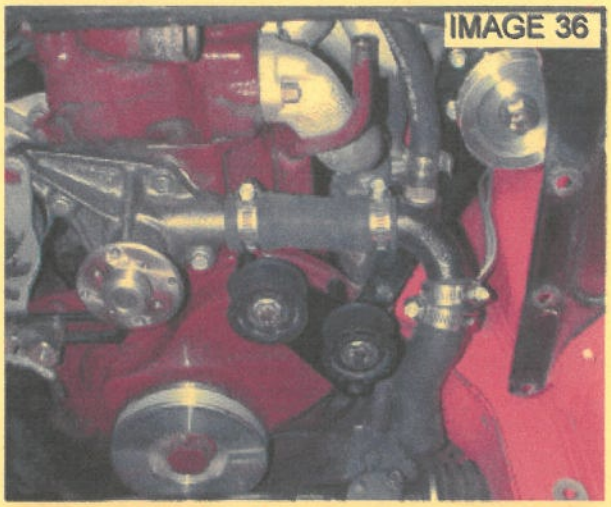


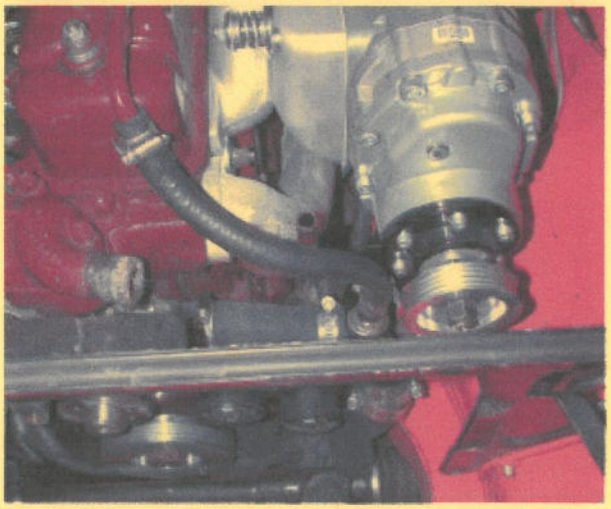




44. Install your lower radiator hose assembly to the water pump. Please look at the images to make sure that your hose is the right shape and will not interfere with anything. Install the heater line from the elbow to the metal tubing which crosses the valve cover, and

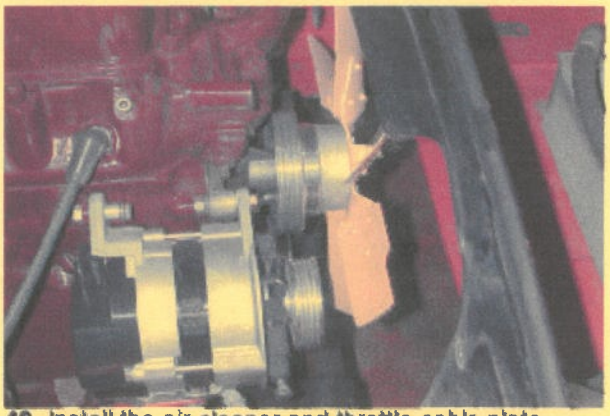
clamp (use 2 new clamps). Double check all clamps. Slip the lower radiator hose clamp over the hose and wedge it there for later.
IMAGE 36



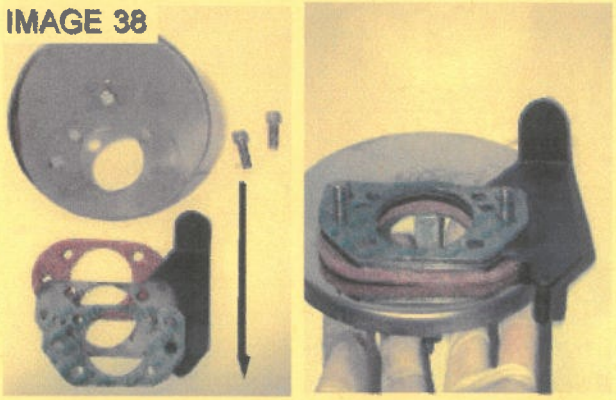


45. Install the new water pump pulley and your old fan. If you had a long water pump you will need the supplied fan spacer. Use the supplied bolts if you use the spacer, and your old bolts if you don't, and a 7/16in socket. Don't forget the lock washers. Tighten to 9 ft-lb. Snug in a cross pattern. Spin the fan to make sure everything is OK. **IMAGE 37**

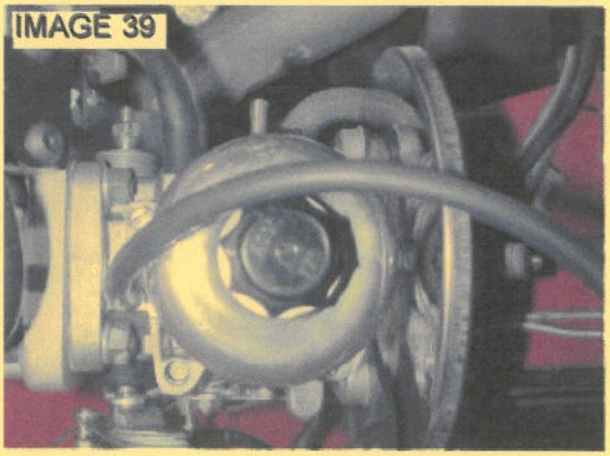




46. Install the air cleaner and throttle cable plate assembly. Disassemble the air cleaner. Apply thread lock to the two 5/16in diameter bolts that hold the assembly to the carburetor. Slip one 5/16IN flat washer onto each bolt. The bolts go first through the back plate of the air cleaner (from what will be the inside of the air cleaner), then through the cork gasket, then the throttle cable plate and then the thin paper gasket to the carburetor. **IMAGE 38**

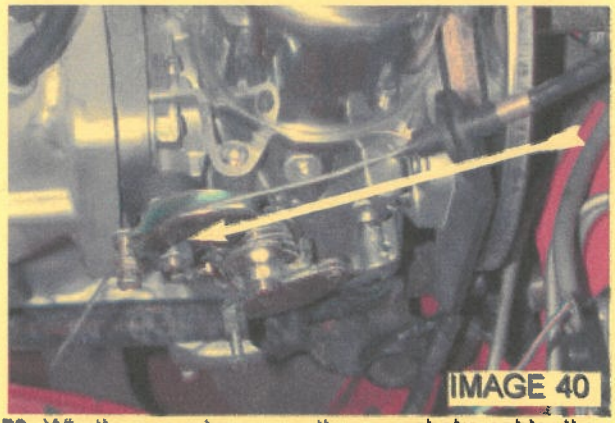


47. Install the assembly on the carburetor, using a 1/2in socket. Snug. **IMAGE 39**

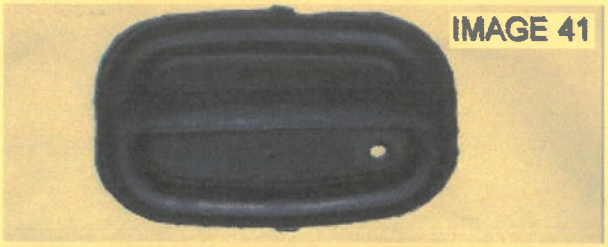


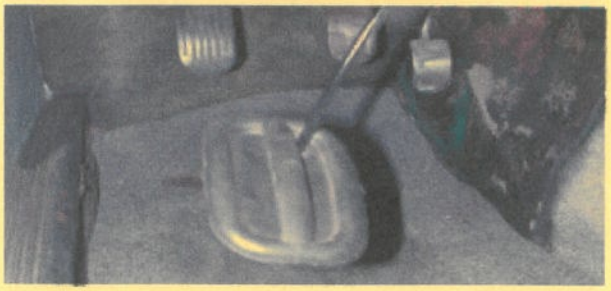
48. Install the new throttle cable. Lubricate the cable with automotive grade grease before installing. It is very straightforward, just trace the old cable. Route the cable behind the hood hinge to avoid interference. You may want to shorten/trim your cable, if not, you can zip tie it out of the way, just make sure it is not bent so much that the cable can not function properly.

49. Slip the throttle cable through the top hole on the throttle cable bracket, over the bellcrank, and through the trunion. Lock the cable in with the trunion bolt. Check travel - make sure you get full range of motion, both wide open throttle and closed throttle. You will need to verify the same on the choke. **IMAGE 40**

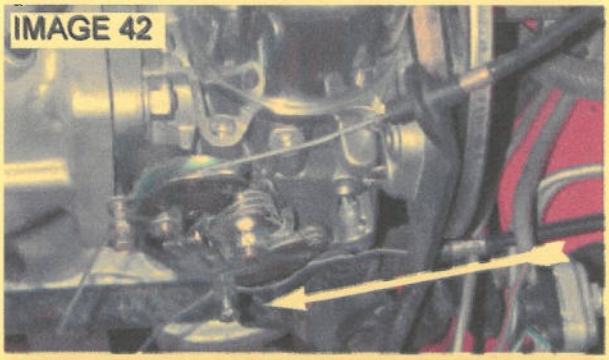

IMAGE 40

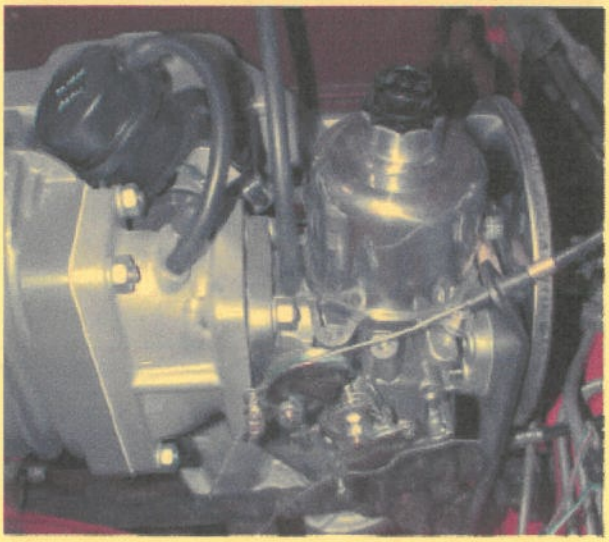
50. Whether or not you use the new choke cable, the route will change - if you are using your existing cable, pull it back through the firewall, into the interior of the car. Now remove the big body plug (a rubber panel approx 3in x 4in, located behind the clutch master cylinder) from the inside of the car. Now drill a 1/4in hole in the plug - the hole needs to be located in the recess on the right side (center of the car) of the plug in the lower quadrant, once it is re-installed. **IMAGE 41**


IMAGE 41



51. Install the choke cable. If your choke cable is good, you can use it. If it is beat up, replace it with the included cable. If you do not have a choke cable, install the new cable in a reasonable place under the dashboard (many cars have a plastic plug where the choke normally goes). Now route the chosen cable - slip the cable through the hole in the body plug (the plug should be free), feed the cable into the engine compartment (snaking it through the master cylinder bracket), and install the body plug. Now route the cable to the carburetor, feed it through the throttle cable bracket, and the trunion and tighten. Check travel - make sure you get full range of motion, both wide open choke and closed choke. **IMAGE 42**


IMAGE 42



52. Install the serpentine belt. Follow the belt path in the photo. Now tighten the belt with the alternator adjuster system to 90 lbs of tension. YOu can estimate this to be 3/8" perpendicular deflection over a 1 foot span. Do not over tighten the belt or premature belt wear or bearing failure may occur. After 500 miles, recheck the belt tension and periodically thereafter. Lock the jam nut on the adjuster and using a 7/8in socket, tighten the custom adjuster nut. Also tighten the pivot bolts. **IMAGE 43**

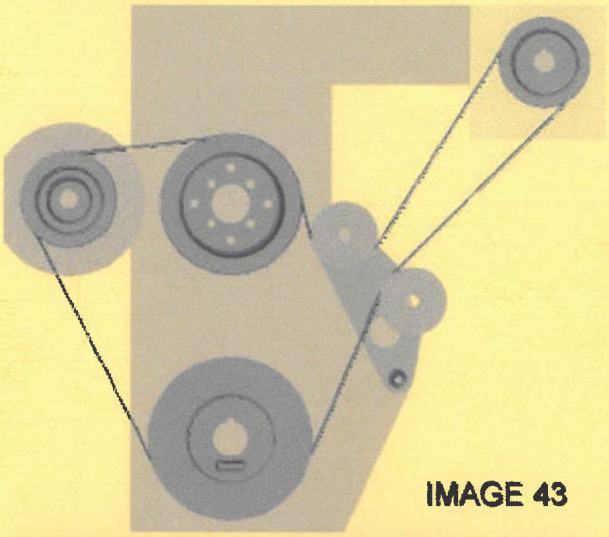


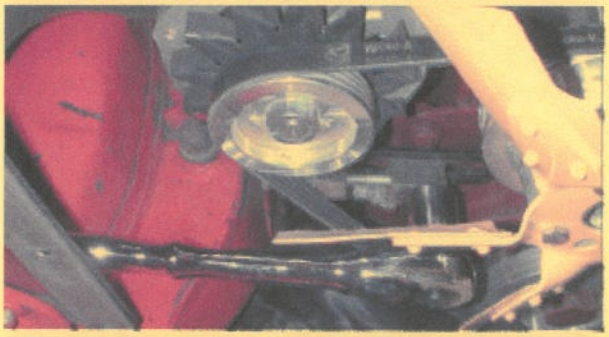
IMAGE 43

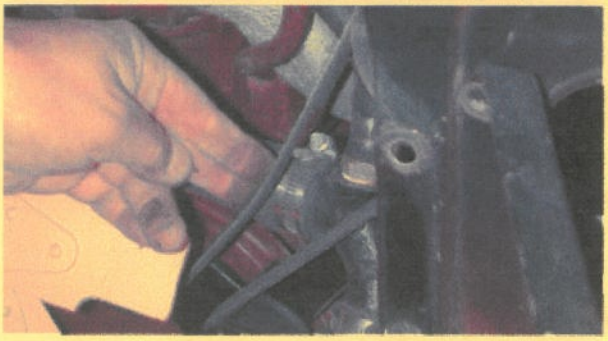




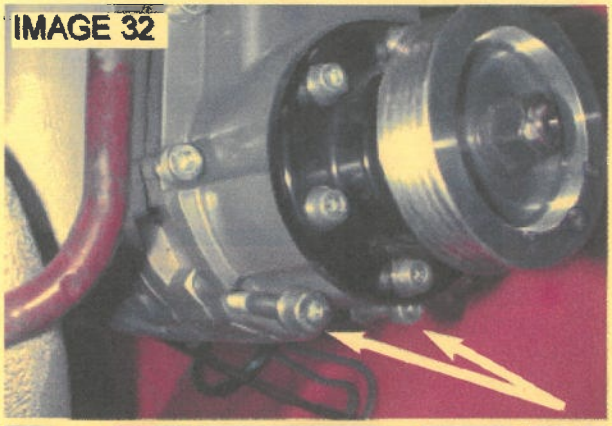




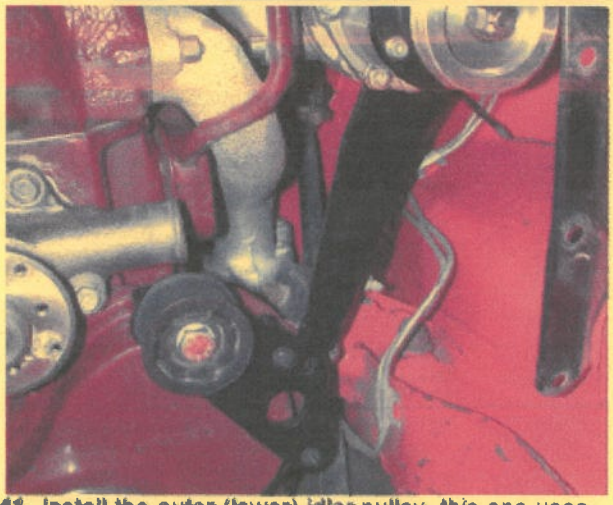




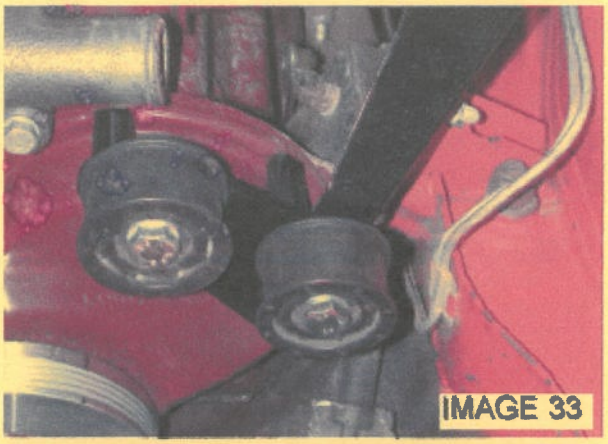
53. Install the side cover vent. Assemble the hose setup: find the 1/2in diameter molded hose, the barb adapter, and 18in of the 5/16in hose. Cut the molded hose as shown in the photo. Install the barb into the 5/16in hose, and connect it to the long, straight side of the shortened molded hose. Now install the hose assembly. The large end fits over the side cover vent tube and the hose routes up to the coolant tube on the valve cover. The hose follows the tube rearward to the carburetor and connects to the barb on the engine side of the carburetor, closest to the blower (see photo). Use two of the included tie wraps to secure the hose to the coolant tube. IMAGE 44







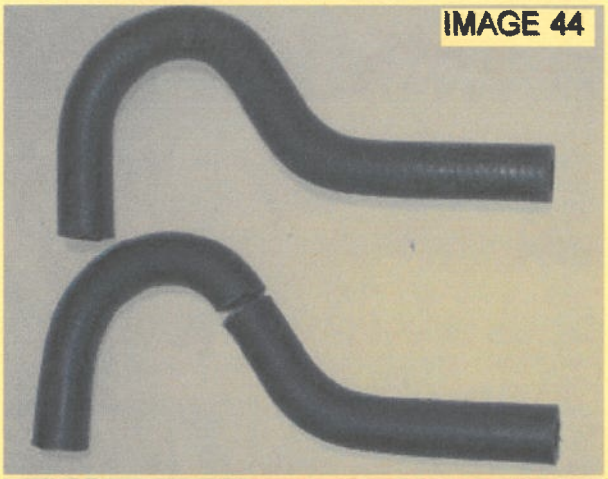
41. Install the outer (lower) idler pulley, this one uses the longer of the two 3/8in bolts. Again, slip the flat washer over the bolt, then the idler, then the spacer (cone inside the pulley). Install this assembly on the idler plate in the available hole, make sure the bolt goes through the supercharger support bracket, then put on the M10 "D" washer (the "D" washer sits against the back of the support bracket) and start the lock nut. Tighten the idler bolt to 25 ft-lbs. Then tighten the blower housing bolts, and torque them to 20 ft-lb. **IMAGE 33**

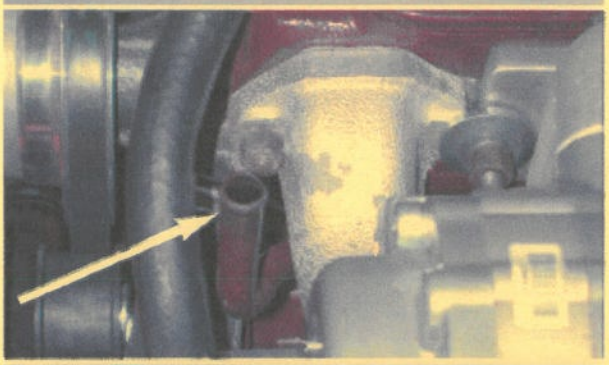


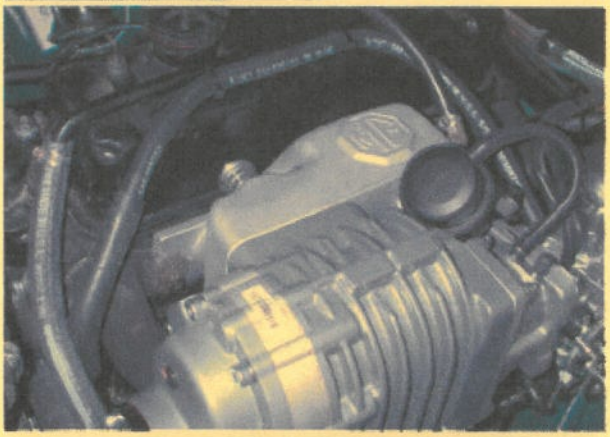


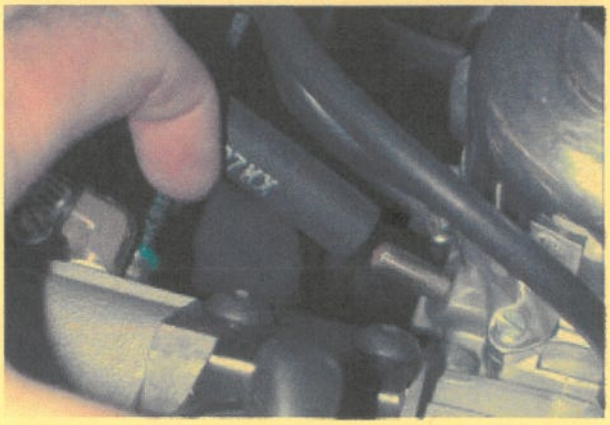
42. Install the fuel line. The fuel lines differ year to year, we have included the parts necessary to do a typical installation. Now connect your hard fuel line to the carburetor. Included in the supercharger system are new flexible fuel lines, and a new fuel filter. Your new braided line should connect to your existing hard line. Connect this to the "IN" side of the fuel filter, and connect about 5in of 1/4in fuel line from the "OUT" side of the filter to the carburetor. Make sure that there are no kinks in the hoses, and tighten all connections. If the new line does not work (it worked for all models we researched), you may have luck with this scheme: Re-connect the original hard line (removed in step 6) at the back of the engine (in front of the heater core) and mark the piece past the connector (toward the carburetor) about two inches from the connection. Remove the fuel line, and using a tubing cutter, cut at the mark. De-burr. You will need to find some 5/16in fuel line to connect the flexible line to this modified piece. In the off chance that these options do not work, you should have enough pieces to work out a viable solution. **IMAGE 34**

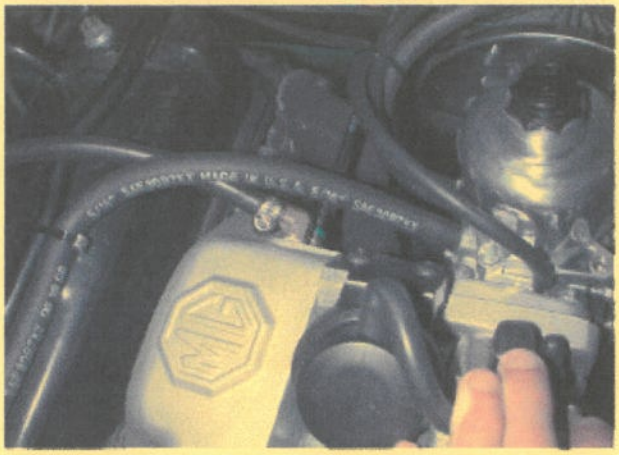
IMAGE 44





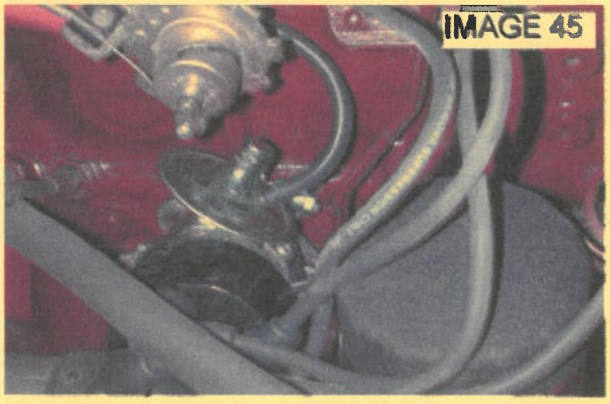


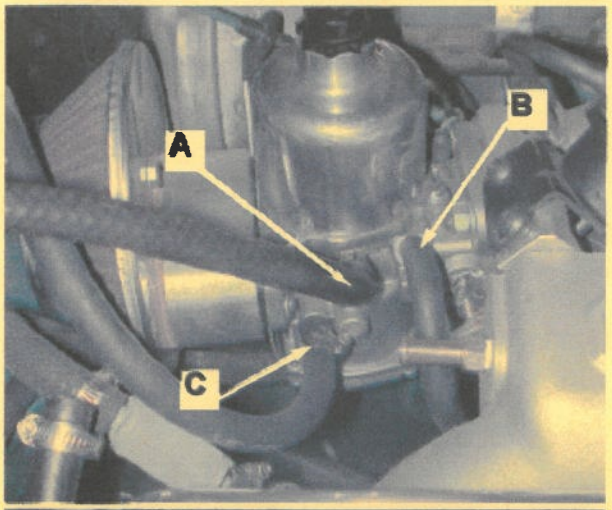


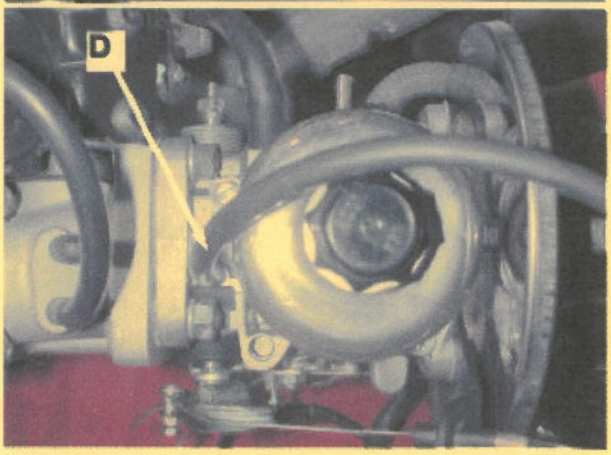


54. Hook up the vacuum advance using the 5/32in vacuum tubing. For the recommended distributor, the tubing connects to the barb on the top, back of the carburetor, route the hose behind the valve cover, to the distributor. We highly recommend using distributor #143-110. You may already have this distributor, which is great. If you don't, your existing distributor may not have an advance curve that is compatible with the supercharger. If you do not use the recommended distributor, please hook up the advance the same way that you determined necessary in step 6. You may need to use some of the supplied vacuum caps, and on other cars you will need to hook up your evaporative system. Also, if you have a run-on valve, you will need to hook it up to the intake manifold using the included 90Þ fitting - there are three plugs on the manifold, one each for the run-on valve, boost gauge (#150-028), and vacuum brakes source. If your car has vacuum boosted brakes, you MUST use a check valve, #150-071. Also, do NOT plug the carburetor bowl vent. Either hook it up to the evap system with the supplied 7/32in hose or if your car does not have an evap system, you may also connect the carburetor vent hose to one of the original metal tubes that fasten to the engine and vent out at the bottom of the engine. **IMAGE 45**

IMAGE 45



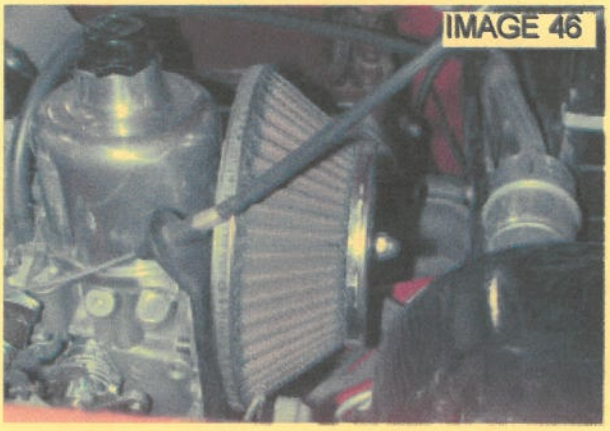




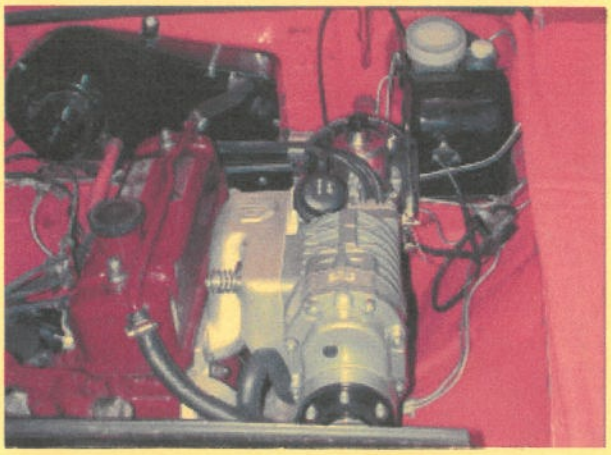
GLOSSARY:
A. BOWL VENT - TO EVAPORATE CANISTER OR VENT TO ATMOSPHERE A LENGTH OF HOSE.
B. SIDE COVER VENT.
C. FUEL INLET.
D. VACUUM ADVANCE (PORTED VACUUM).

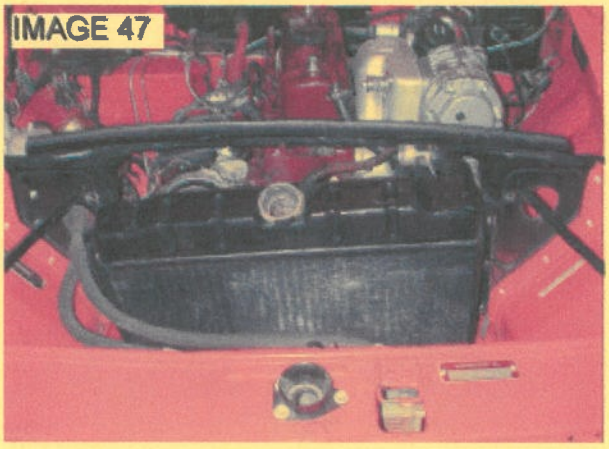
55. Install the air cleaner. The cap and element should go on easily, on some cars the brake lines needed to be slightly nudged out of the way. Use a 10MM socket to tighten the nut on the end. **IMAGE 46**

Do not run your car without the air cleaner, as that will severally damage the supercharger.

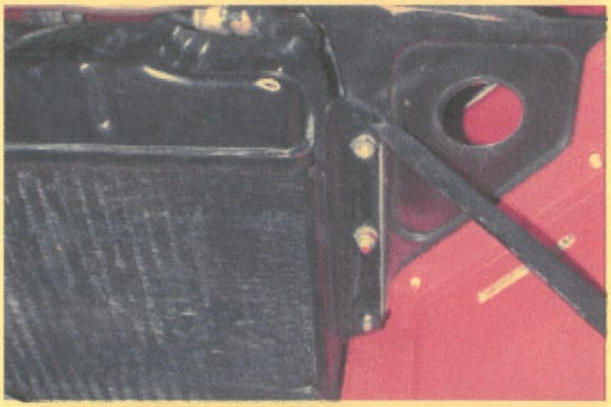


56. Install the radiator. Make sure you already have a lower radiator hose clamp on the lower hose. Slip the radiator into place and start all the bolts using a 1/2in socket. Work at it gingerly. Tighten the radiator bolts. Now work the lower radiator hose over the fitting. Some lubricant may be helpful in slipping the hose over. There is not much room to work, so be patient. Make sure that there is clearance to the idler pulleys, the belt system, and the chassis. If everything is OK, tighten the hose clamp. If not, you will need to twist (rotate) the hose assembly to gain clearance. Then tighten the hose clamp. Use a 5/16in socket and a 1/4in drive ratchet to tighten the hose clamp. Also make sure there are no kinks in the hoses. **IMAGE 47**



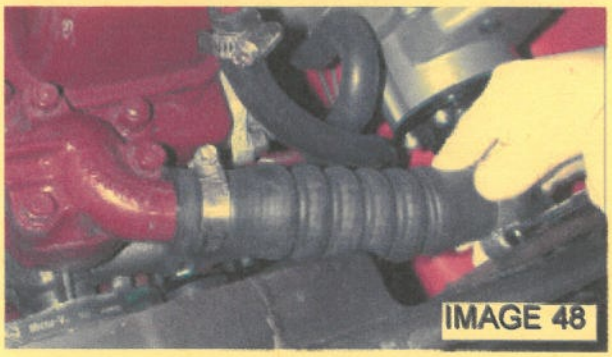






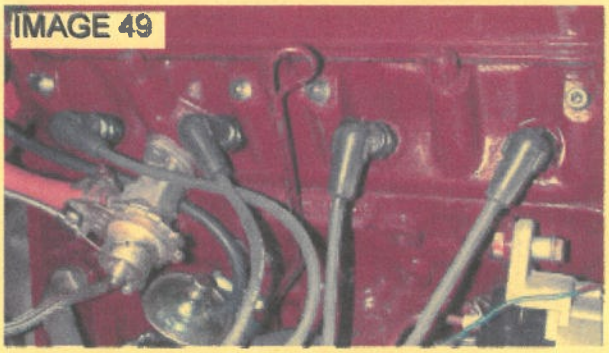


57. Install the upper radiator hose. If your hose or clamps show any age, we highly recommend replacing them. **IMAGE 48**

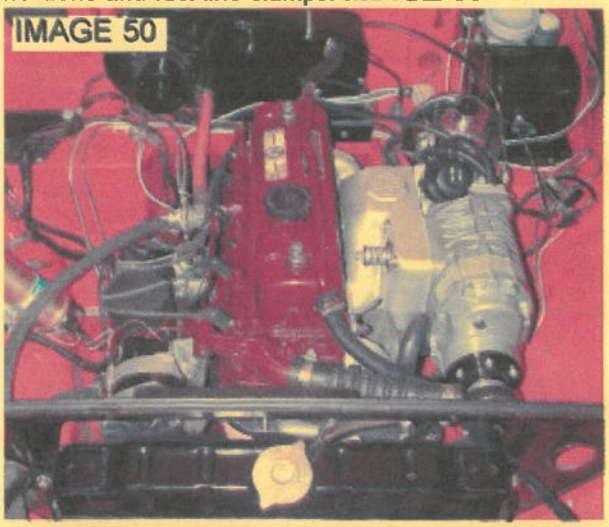


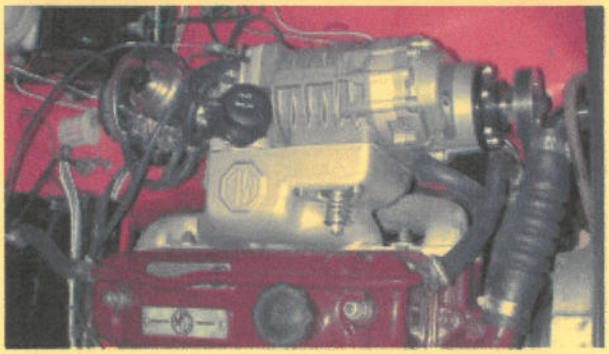
58. Double check all radiator hose connections and clamps, and refill your radiator with the proper mix of coolant and water. Re-install the radiator cap - check the cap, and replace it if it is no longer functioning at the indicated pressure.

59. Install the supplied spark plugs. We recommend using anti-seize on the threads. The gap is .035IN. Again, we highly recommend installing new spark plug wires, points, condenser and the cap and rotor. You will need a 13/16in socket on the new plugs. **IMAGE 49**



60. Double check everything, especially all bolts, connections and fuel line clamps. **IMAGE 50**



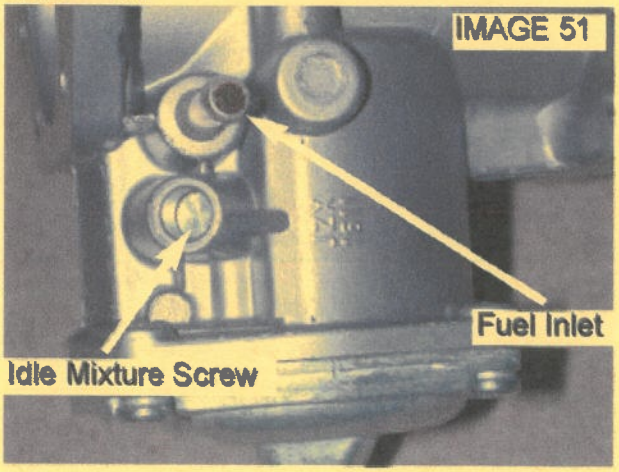


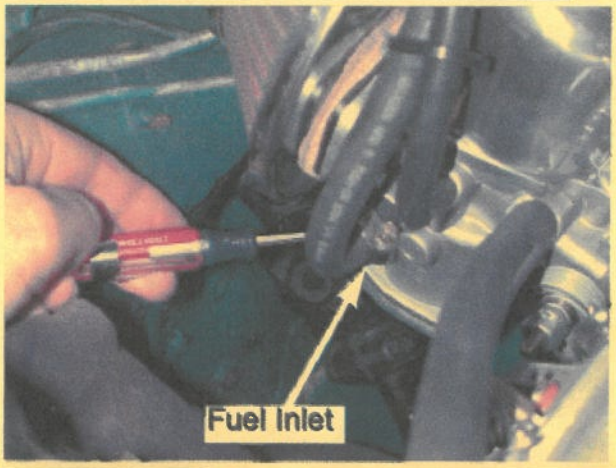
61. Check that your fire extinguisher is close and in good working order.

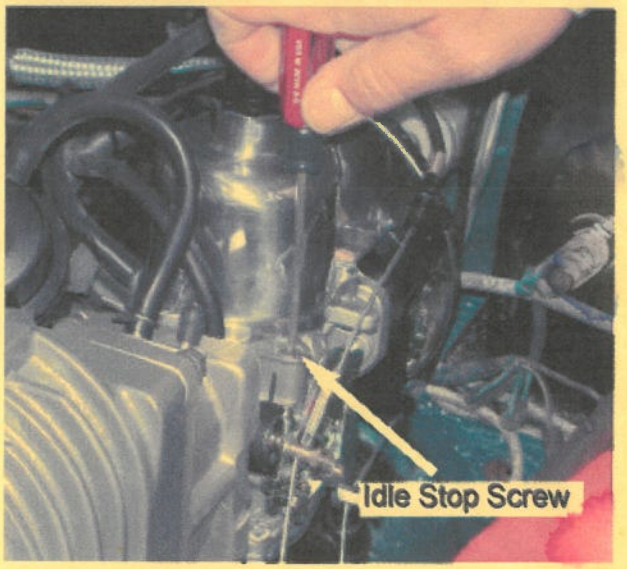
62. Pressurize the fuel system. Re-connect the battery negative cable. Turn the ignition to on, and your fuel pump should pressurize. Turn the key off, and check very carefully for fuel leaks.

63. Pull the choke to the full on position. Do not depress the throttle pedal. Start the car. When the car starts for the first time with the supercharger, bring the engine up to 2200 RPM, as the car warms, reduce the choke amount until the car is warm enough to run without it. With the supercharger pushing volumes of air into the engine, you will have to use the choke more frequently and for longer periods of time than you may be used to. Do not roll into the throttle hard until the engine is fully warmed up, this can cause backfiring - the backfire valve is there to protect your engine as best it can. The idle mixture screw has been set at 3 3/4 turns out. We found this to be a good initial setting. If your car is not idling smoothly, turn the screw in or out 1/2 turn or until the idle smoothes out. Turning the screw in enriches the mixture and out leans out the idle mixture. As the engine smoothes out it may rev up and an adjustment must be made to the idle stop screw. **Use caution when working around the hot exhaust manifold.**

IMAGE 51







64. Turn off the car and double check everything. After running it up to operating temperature, check everything again. Once it cools, you will need to re-check the coolant level.

65. Run your engine, and set your idle at 900 to 950RPM. Remove the vacuum advance, plug it, and set 13Þ of timing, this is a conservative number, we recommend 15Þ and found that 17Þ was the most we could run in our 8:1 compression engine - you are free to experiment at your own risk. Test the timing: When driving under load, listen very carefully for engine knocking (detonation), if you hear any sort of knocking, you will need to retard your timing, and experiment. Our recommended numbers worked for the cars we tested, however every MGB is a little different. If you want to experiment with additional timing, be very careful, and advance your timing 2Þ at a time. Listen for knocks/detonation. A knocking engine will self-destruct fairly quickly.

66. Enjoy!

Warranty - Moss Superchargers are warranted against defects in material and workmanship by Moss Motors, Ltd., for **12 months from the date of shipment** provided that there is no alteration or substitution of the provided components and configuration. we will replace defective components or refund your purchase price at our discretion. The warranty does not cover labor, failure of a related component, failure resulting from faulty installation, failure resulting from the use of low octane fuel nor would the liability of Moss motors, Ltd., exceed the cost of the original supercharger kit.
For warranty repairs, contact your selling dealer. Warranty for all components must be supported by the proper registration documentation including the original purchase invoice.

Moss Motors, LTD.
440 Rutherford Street
P.O. Box 847
Goleta, California 93117

www.mossmotors.com

Customer	: Moss Motors, ,	Miles	: 95171.0
License	: MG4VIC	Weight	: 0.0
VIN	:	HP @ 50 MPH	: 0.00
Yr/Mk/Mdl	: 1973 MG B Roadster	Cyl/Disp.	: 4/1800
Comments	:		

HorsePower Curve Test Results

Test Run	: 1/29/2003 10:57:45 AM	Base Run	: 2/18/2003 10:30:20 AM
Max Power	: 94.0 @ 4750 RPM	Max Power	: 50.1 @ 4250 RPM
Max Torque	: 118.4 @ 3000 RPM	Max Torque	: 74.1 @ 2750 RPM
Comments	:		

