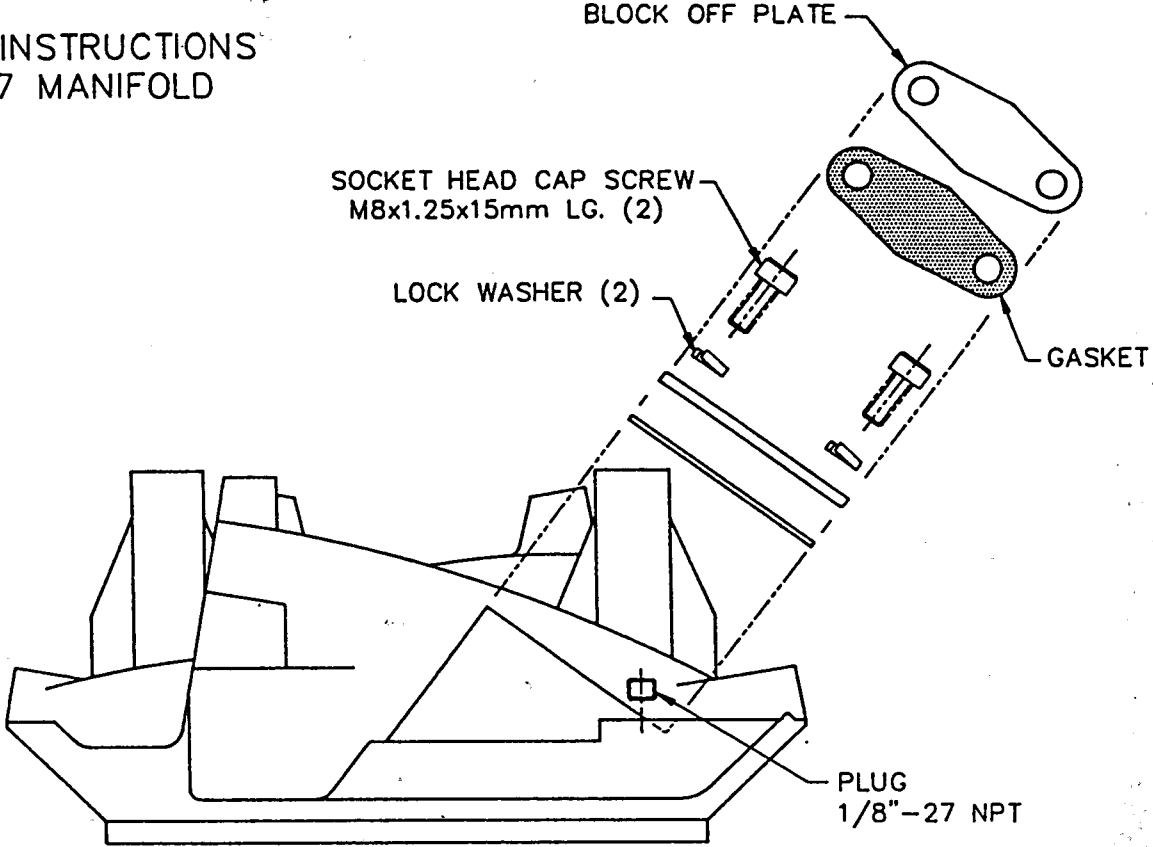
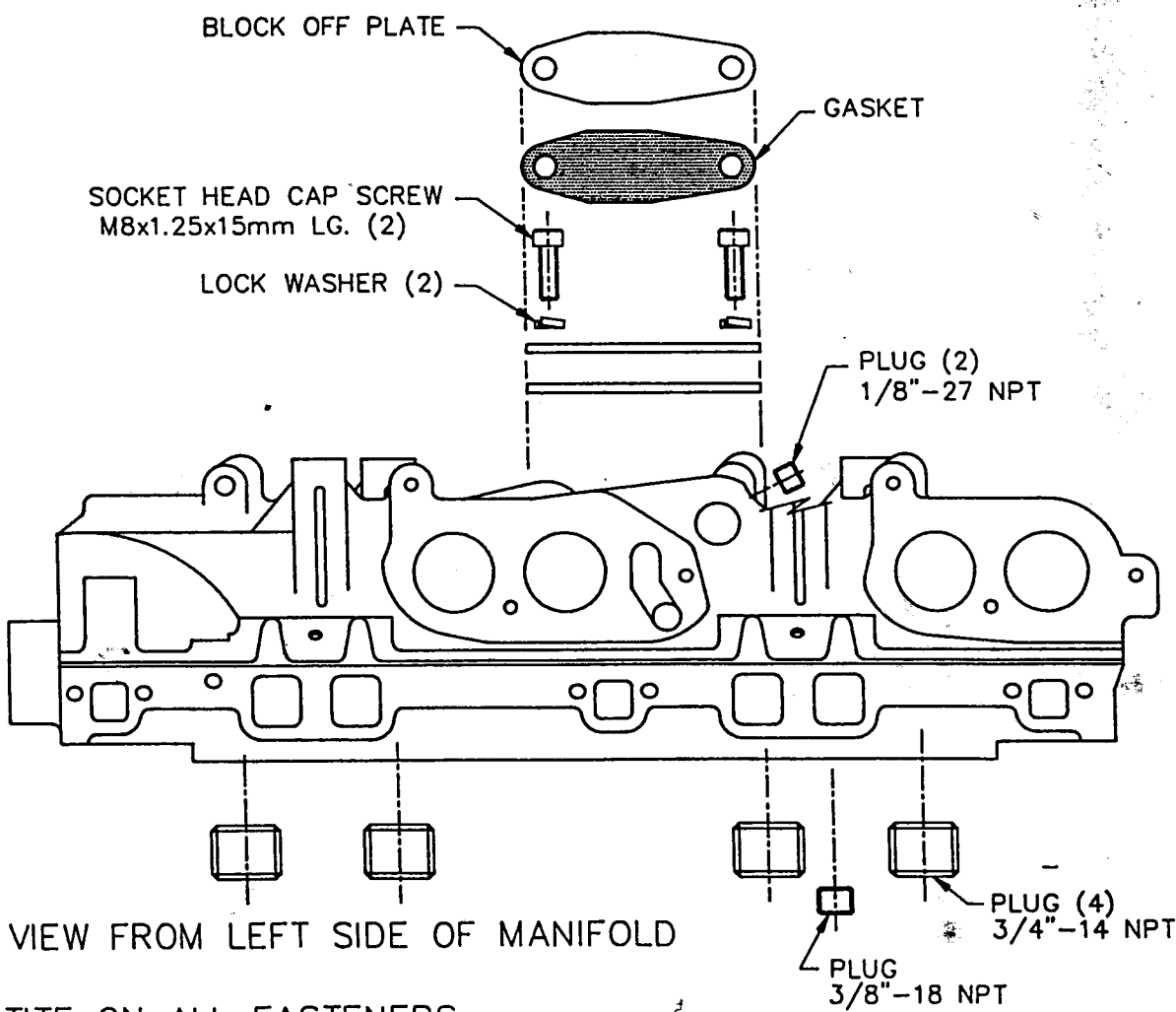


ASSEMBLY INSTRUCTIONS
FOR #74197 MANIFOLD



VIEW FROM BACK OF MANIFOLD



VIEW FROM LEFT SIDE OF MANIFOLD

USE LOC-TITE ON ALL FASTENERS



PART NO. 74197

SUPERRAM MANIFOLD BASE
SMALL BLOCK CHEVY

WARNING: READ ALL INSTRUCTIONS BEFORE STARTING THIS INSTALLATION. FUEL LINES AND FUEL RAIL MAY BE UNDER HIGH PRESSURE, UNBOLT AND UNSCREW VERY CAREFULLY AS TO RELEASE ANY RESIDENT PRESSURE OR FUEL. **NOTE** THAT THE FOLLOWING INSTRUCTIONS MUST BE DONE WHILE VEHICLE IS COLD AND HAS NOT OPERATED WITHIN 24 HOURS. ALWAYS USE EXTREME CAUTION WHEN WORKING WITH ELECTRICAL, FUEL, AND COOLANT SYSTEM COMPONENTS.

ACCEL SuperRam Manifold Base is a direct bolt-in replacement but offers improved performance and fuel economy potential. This totally new small block manifold base increases manifold port volume and raconteurs port shape for increased inlet air flow velocity, providing maximum charge density.

The ACCEL SuperRam Manifold Base accepts OEM TPI runners, ACCEL high flow TPI runners, or ACCEL SuperRam Plenum/Runner Kit. ACCEL's SuperRam Manifold Base is equipped with EGR ports for use with vehicles originally equipped with EGR.

Please read the following instructions carefully before installing your new SuperRam Manifold. Also we recommend that you study your applicable OEM service manual before you begin your installation. Please make a note of your engine configuration with special attention to all vacuum, fuel, and electrical connections for your future reference. It is a good habit to tag each part from your engine upon removal. This will help facilitate your re-assembly. If you have any questions or problems, please contact our Tech Line at (313) 380-1328.

Tools Required

Pliers
8mm + 10mm Deep Socket
1/4" Socket
Flat blade screwdriver
16mm + 1/2" tubing wrenches
Turx head sockets (T40+T45)
Needle nose pliers
Rubber mallet
9/16, 3/4, 7/8, 15/16 open
end wrenches

Parts Supplied with Manifold

2 EGR Block Off Plate
1 1/8" - 27 NPSF Pipe to
3/8 Hose Fitting
4 3/4" - 14 NPTF Pipe Plugs
1 3/8" - 18 NPTF Pipe Plug
4 M8X1.25X2cm Hex Cap Screws

NOTE: THE SUPERRAM MANIFOLD BASE (PART #74197) IS LEGAL FOR SALE ON CALIFORNIA POLLUTION-CONTROLLED MOTOR VEHICLES. EXECUTIVE ORDER #D-221-12.

GASKETS AND SEALANT

- A. Be sure to use only OEM or equivalent gaskets when installing your SuperRam Manifold. Do not use high performance or competition intake gaskets for street applications due to material deterioration under street conditions, an internal leakage of vacuum and oil may occur.
- B. Apply an OEM approved RTV sealant to both sides of the manifold as well as to the head surfaces.
- C. Eliminate the manifold end seals and be sure to use only OEM approved RTV sealers designed for use with oxygen (O₂) sensors. Apply a bead of sealant approximately 1/4" high across the block end seal surface overlapping the intake gasket at the four corners. This procedure eliminates end seal slippage and deterioration.

INSTALLATION PROCEDURE

PLEASE NOTE THAT THE FOLLOWING INSTRUCTIONS MUST BE DONE WHILE VEHICLE IS COLD AND HAS NOT OPERATED WITHIN 24 HOURS. ALWAYS USE EXTREME CAUTION WHEN WORKING WITH ELECTRICAL, FUEL, AND COOLANT SYSTEM COMPONENTS.

- 1. Disconnect battery.
- 2. Drain coolant.
- 3. Disconnect throttle body from Mass Air Flow sensor boot.
- 4. Disconnect all lines from throttle body, (linkage, water, vacuum, etc....)
- 5. Remove linkage attachments from plenum and place out of the working area. Make note of their position for use in re-assembly.
- 6. Disconnect plenum from runners and remove. It may not be necessary to remove throttle body from plenum.
- 7. Remove all connections, (i.e., 9th injector, not on 1989 and later vehicles, fuel, vacuum, electrical, water, etc..), from intake system.

WARNING: FUEL LINES AND FUEL RAIL MAY BE UNDER HIGH PRESSURE, UNBOLT AND UNSCREW VERY CAREFULLY AS TO RELEASE ANY RESIDENT PRESSURE OR FUEL.

8. Remove runner from base plate.
9. Remove fuel rails from base plate.
10. Remove distributor from engine marking and noting the position of the rotor and housing for easier re-installation at later date.
11. Disconnect EGR tube from rear of manifold (it may be necessary on aluminum head engines only). Be careful as to not damage the EGR tube connection at the exhaust pipe.
12. Remove manifold from engine.
13. Be sure to cover intake port and lifter valley to prevent any foreign objects damaging their operation.

PREPARATION FOR INSTALLATION

Be sure to trial fit your new intake system on your work bench just prior to installation on your vehicle. By following this procedure you will become more familiar with what component goes where and why. Please note that because of the many different ways that the vehicle manufacturers route their fuel lines, some material may need to be removed from the runners in order to clear fuel lines and original equipment distributor housings which may indeed require slight filing and/or grinding to clear the larger passages cast into the ACCEL SuperRam Manifold. Please check for any obstructions before installing the manifold on to the engine. In some cases it is possible to re-index the distributor for adequate clearance by simply rotating the distributor housing to different position and also re-routing and re-connecting the spark plug wires back to their required original location. Be sure to prepare all flange surfaces of the plenum, runners, manifold, and cylinder heads by scraping any old gasket material off. Transfer all fittings and sensors, which may include an oil splash shield from your original manifold to the ACCEL SuperRam Manifold. Make sure to use teflon tape on all pipe threads and that your new intake system is free of all foreign objects including tools, sockets, dirt, grease, gaskets material, etc..

SUPERRAM MANIFOLD INSTALLATION

NOTE: ON SOME 1990 ENGINES ONLY TWO OF THE THREE PIPE THREADED HOLES ON THE FRONT OF THE MANIFOLD ARE USED. PLUG THE EXTRA HOLE WITH A PIPE PLUG. FOR ENGINES WITH IRON HEADS, ATTACH THE INCLUDED BLOCK-OFF PLATE AND SCREWS TO THE REMOVE EGR PAD ON THE RIGHT SIDE OF THE MANIFOLD. BE SURE TO USE A HIGH TEMPERATURE RTV TO SEAL GASKETS SURFACES.

- A. Install manifold on engine and begin to replace all connections. See figure 1 for correct manifold bolt tightening sequence. Torque all marked bolts to 25 ft/lbs.
- B. Re-install the distributor and any other electrical connections as per original equipment specifications. See figure 2 for cylinder numbering and firing order.
- C. Place the fuel rail on the mounting posts, but do not attach at this time.
- D. Place your runners into position on the SuperRam Manifold making sure to use the proper runner/gasket on the correct side and street bolts. **CAUTION:** If you are using stock runners, be sure to use the included gaskets on the passenger side runner with the EGR balance tube.
- E. Tighten fuel rail down.
- F. Place plenum into position and start bolts. Make sure the correct gaskets are used and are aligned with gaskets retaining pins.
- G. Tighten all runner and plenum bolts.
- H. Attach all fuel, water, and electrical connections to the throttle body. On some year vehicles it may be necessary to discard the original pre-formed steel tubing which ran from the OEM manifold to a rubber hose connecting to the charcoal canister on the passenger side of the engine. Discard the original pre-formed steel tubing (if equipped) which ran from the valve cover vent to the throttle body and replace with a 3/8" rubber hose.
- I. Re-connect the throttle body to the MAFS boot.
- J. Re-connect all throttle body linkage.

K. Replace coolant.

L. Re-connect battery.

EGR VALVE

The ACCEL SuperRam Manifold will accept an OEM EGR valve.

NOTE: Emission laws must be checked for legality of any ignition, injector, or manifold changes. The ACCEL SuperRAM Manifold delivers excellent drivability and power, utilizing the factory OEM engine settings.

COMPATIBLE COMPONENTS

Use only components which are compatible with computer-controlled engines, such as ACCEL's new exhaust headers and new hydraulic cam shafts.

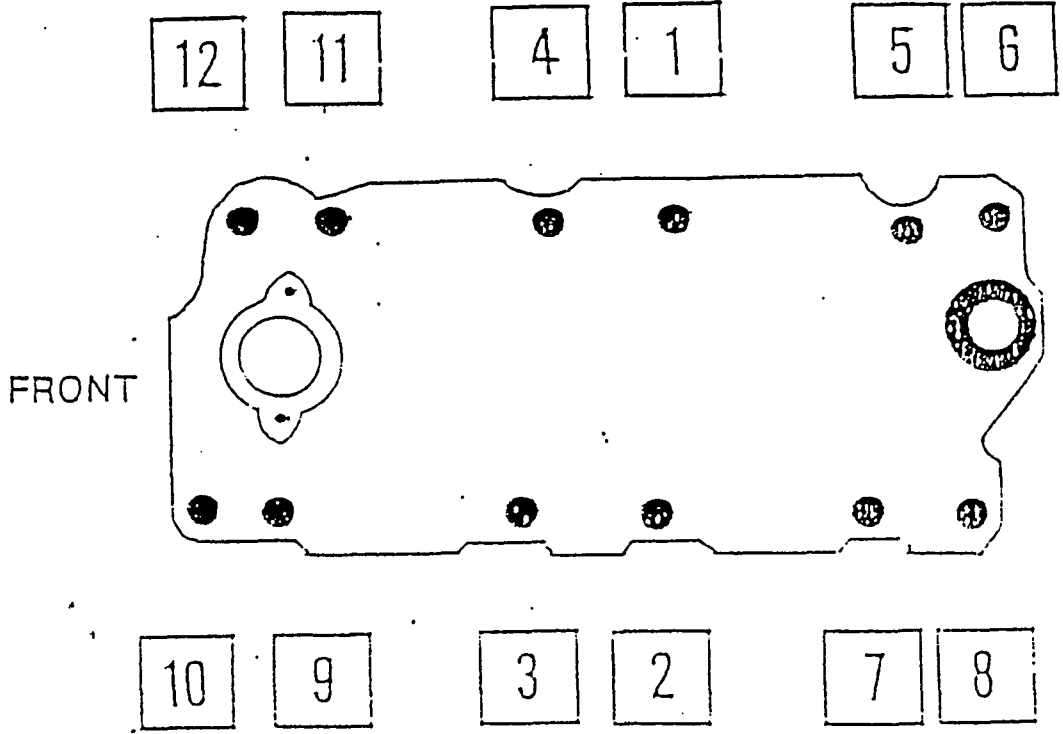


Figure 1 — Intake manifold tightening sequence

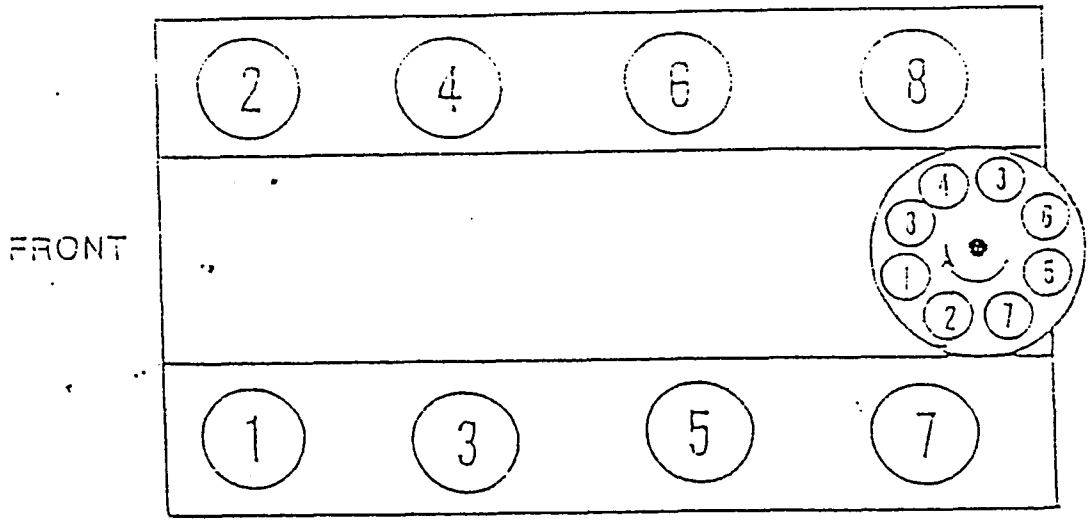


Figure 2 — 262-400 c.i.d. Chevrolet — turn distributor counterclockwise to advance timing