

MODERATE - Installation requires metric tools and possibly cutting and drilling. The ability to closely follow instructions is imperative. If your mechanical experience is limited to simple jobs like changing oil and rotating tires, a Moderate installation will likely prove challenging.

ESTIMATED INSTALLATION TIME - Installation times are for a professional installer. Times may vary based on the skill level of the installer.

ESTIMATED INSTALL TIME - 3.7 hrs

PART NO. 30041

1998-2000 CAMARO/FIREBIRD
HIGH PERFORMANCE
LS6 INTAKE MANIFOLD KIT

PACKING LIST				
Item #	Check	Quantity	Part Number	Description
1	<input type="checkbox"/>	1	50090523M	High Performance LS6 Intake Manifold
2	<input type="checkbox"/>	2	12562788	Rear Coolant Block-Off Plate
3	<input type="checkbox"/>	1	12568478	Front Coolant Pipe
4	<input type="checkbox"/>	8	12533587	Intake Manifold Gasket
5	<input type="checkbox"/>	1	*****	Installation Instructions

WARNING: Radiator fluid can be extremely HOT. SLP recommends allowing the vehicle to cool (not running) for five hours before beginning the installation. SLP recommends wearing safety glasses for the complete installation.

WARNING - READ!

This fitting has been precisely and permanently assembled with special tooling and locking adhesive. The o-rings are made of a special material acceptable for use internal to engines. **DO NOT, UNDER ANY CIRCUMSTANCES,** attempt to 'tighten', 'loosen', or 'adjust' the fitting and / or o-rings. This is NOT a serviceable fitting or o-ring. Simply follow the included instructions for attachment of the modified EGR tube. Be sure NOT to 'over-tighten' the nut when installing the modified EGR tube. The nut only requires *1 and 1/4 turn past snug (finger tight)* for complete tightness and sealing. Be sure to hold the fitting with a separate wrench when tightening the nut. Do NOT tighten the nut without holding the fitting with a separate wrench.

INSTALLATION INSTRUCTIONS

Note: Refer to Photo 3 for identification of the following parts.

1. Disconnect the negative battery terminal. Loosen the worm screw clamps on the air intake bellow at the throttle body and mass airflow sensor. Carefully pry the air intake bellow from the throttle body and the mass airflow sensor, removing it from the vehicle.

2. Disconnect the manifold absolute pressure (MAP) sensor connector, the throttle position sensor connector, and the idle air control (IAC) connector. Disconnect the throttle control cable from the throttle body. Remove the throttle control cable from the throttle control cable bracket located on the intake manifold. Disconnect the knock sensor wire harness connector from the fuel rail stop bracket (fuel rail stop bracket is located at the left rear corner of the intake manifold).

3. Disconnect the EGR electrical connector. Loosen and remove the single bolt that fastens the EGR return line to the intake manifold. Loosen and remove the two bolts that fasten the EGR feed line to the exhaust manifold. While supporting the EGR valve, remove the bolts fastening the EGR valve bracket to the engine head. Carefully, remove the EGR return line from the intake manifold while removing the entire EGR valve, with the bracket, from the vehicle (it is necessary to remove the entire unit as it requires modification). Place on a suitable work surface.
4. Remove the positive crankcase ventilation (PCV) valve pipe from the left valve cover. Remove the PCV valve pipe strap nut. Remove the PCV valve pipe from the right valve cover and from the intake manifold. Disconnect the vacuum line between the throttle body and right valve cover at the throttle body. Disconnect the power brake booster vacuum line (located at the rear of the intake manifold near the MAP sensor).
5. Disconnect both coolant lines (one from the radiator, one from the coolant pipe underneath the intake manifold) at the throttle body using pliers to release the spring steel hose clamps. Pull the clamps back onto the coolant lines, which will make it possible to pull the coolant lines off the throttle body coolant hose barbs.
6. Disconnect the fuel line from the fuel rail using a fuel line disconnect tool. Depress the locking tabs together on the evaporative purge line and disconnect the evaporative purge line from the rear of the evaporative purge solenoid valve. Disconnect the secondary air pump solenoid valve vacuum lines from the secondary air pump solenoid valve (if equipped with a secondary air pump solenoid valve). Be sure to mark the vacuum lines, with labeled tape, to insure correct placement upon installation.
7. Disconnect the eight fuel injector connectors from the fuel injectors, secondary air pump solenoid valve connector (if equipped), and evaporative purge solenoid valve connector. Wire tie or tape the wire harness out of the way.
8. Remove the intake manifold bolts and the fuel rail ground strap nut. Remove the fuel rail stop bracket.
9. Carefully remove the intake manifold, fuel rail, and throttle body as a one-piece unit. Take care to keep the intake manifold and fuel rail in a level position as there will be residual gasoline in the fuel rail (or place tape over the inlet to the fuel rail). Place on a suitable work surface.
10. Remove the four fuel rail bolts. Apply steady pressure at the base of each fuel injector to release the o-ring seal from the intake manifold. Remove the fuel rail and fuel injectors as a one-piece unit from the intake manifold. Remove the three throttle body bolts. Remove the throttle body. Remove the two throttle cable bracket bolts and bracket.
11. Depress the locking tab on the evaporative purge line and disconnect the evaporative purge line from the intake manifold. Using a screwdriver to release the locking tabs, remove the secondary air pump solenoid valve bracket (if equipped) and the evaporative purge solenoid valve bracket from the intake manifold. Remove the secondary air pump solenoid valve vacuum line, with the small check valve, from the intake manifold.
12. Install the fuel rail to SLP's high performance LS6 intake manifold by applying steady pressure at the base of each fuel injector to seat the o-ring seals to the intake manifold. Install the four fuel rail bolts tightening to 10 Nm (89 lb-in). Install the throttle body to the intake manifold and tighten bolts to 12 Nm (106 lb-in). Install the throttle control cable bracket and bracket bolts, tightening bolts to 10 Nm (89 lb-in).
13. Install the secondary air pump solenoid valve bracket (if equipped) and the evaporative purge solenoid valve bracket to the high performance LS6 intake manifold. Be sure to fully seat the brackets in their slots. Connect the evaporative purge line to the high performance intake manifold. Connect the secondary air pump solenoid valve vacuum line, with the small check valve, to the high performance LS6 intake manifold and the secondary air pump solenoid valve.

14. Disconnect the knock sensor wire harness retaining clips from the coolant pipe (coolant pipe is located in the intake valley). Remove the coolant pipe bolts and studs. Remove the coolant pipe and coolant pipe gaskets. Clean up any excess coolant spilled during removal of the coolant pipe with paper toweling.
15. Install the coolant block-off plates over the rear coolant outlet ports tightening the bolts to 12 Nm (106 lb-in). Make sure mating surfaces are clean and use the new gaskets included in the kit. Install the front coolant pipe, included in the kit, with new gaskets to the front coolant outlet ports tightening the studs to 12 Nm (106 lb-in).
16. Carefully install the intake manifold, fuel rail, and throttle body as a one-piece unit. Install the fuel rail stop bracket. Install the fuel rail ground strap nut and the intake manifold bolts tightening to 5 Nm (44 lb-in) on the first pass and 10 Nm (89 lb-in) on the second pass.
17. Connect the eight fuel injector connectors to the fuel injectors. Connect the secondary air pump solenoid valve connector (if equipped), and evaporative purge solenoid valve connector.
18. Connect the secondary air pump solenoid valve vacuum line to the secondary air pump solenoid valve (if equipped with a secondary air pump solenoid valve). Connect the evaporative purge line to the evaporative purge solenoid valve. Connect the fuel line to the fuel rail.
19. Cut the head off the EGR return line with an appropriate cutting tool (SLP recommends using a fine toothed metal blade hacksaw), see Photo 1. **BE SURE TO CUT AS CLOSE TO THE ROLLED EDGE AS POSSIBLE**, as the return line will not be long enough to correctly fit into the brass fitting if this is not done. Carefully debur the cut edge of the EGR return line using a small round file or sandpaper.



Photo 1: EGR return line.

20. Carefully, install the entire EGR valve, with the bracket, into the vehicle while inserting the modified EGR return line into the brass fitting on SLP's intake manifold. The modified EGR return line should simply press into the pre-assembled brass fitting approximately 1 inch. If for some reason the brass fitting becomes disassembled, refer to Figure 1 for correct assembly of the nut, ferrules, and fitting. Tighten the EGR mounting bracket to head bolts to 40 Nm (30 lb ft). Be SURE the EGR return line is FULLY seated into the brass fitting BEFORE tightening the brass fitting, see Figure 1. Once the brass fitting is finger-tight, tighten it an additional 1-1/4 turns to correctly mate the ferrules to the EGR return line. **Be sure to use a large screwdriver or similar tool to keep the brass fitting from turning**, see Photo 2. **BE CAREFUL NOT TO DAMAGE THE O-RING SEALS WHEN TIGHTENING THE BRASS FITTING AND DO NOT ALLOW THE BRASS FITTING TO ROTATE AS THIS WILL ALSO TEAR THE O-RING SEALS.** Install the two bolts that fasten the EGR feed line to the exhaust manifold and tighten to 20 Nm (15 lb ft). Connect the EGR electrical connector.

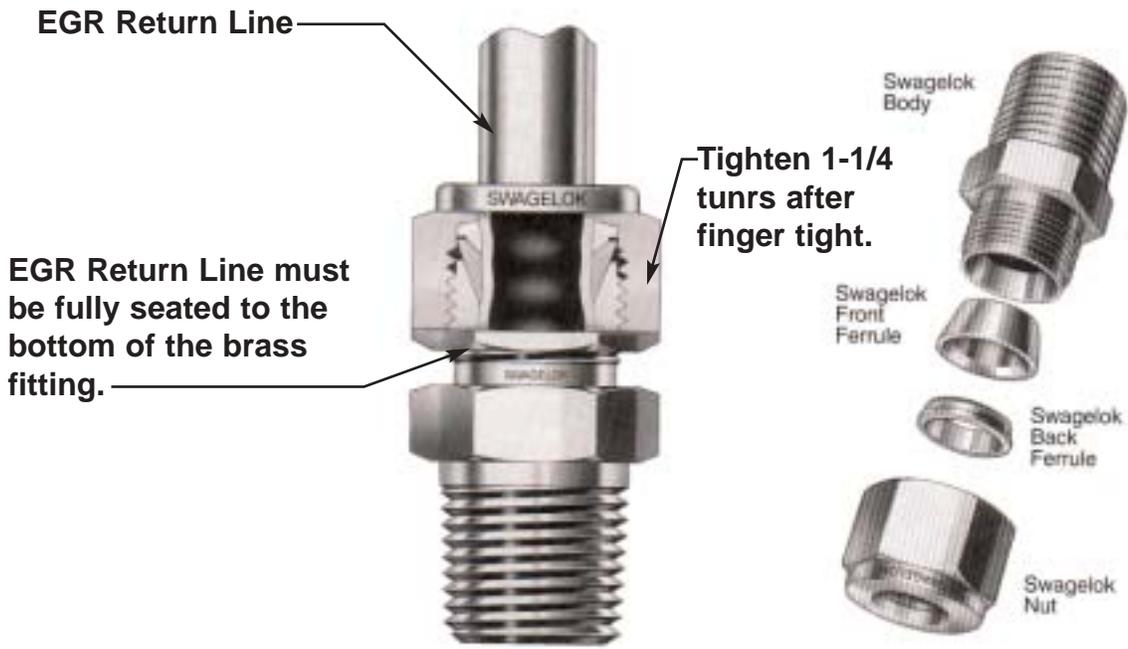


Figure 1: Brass Fitting.

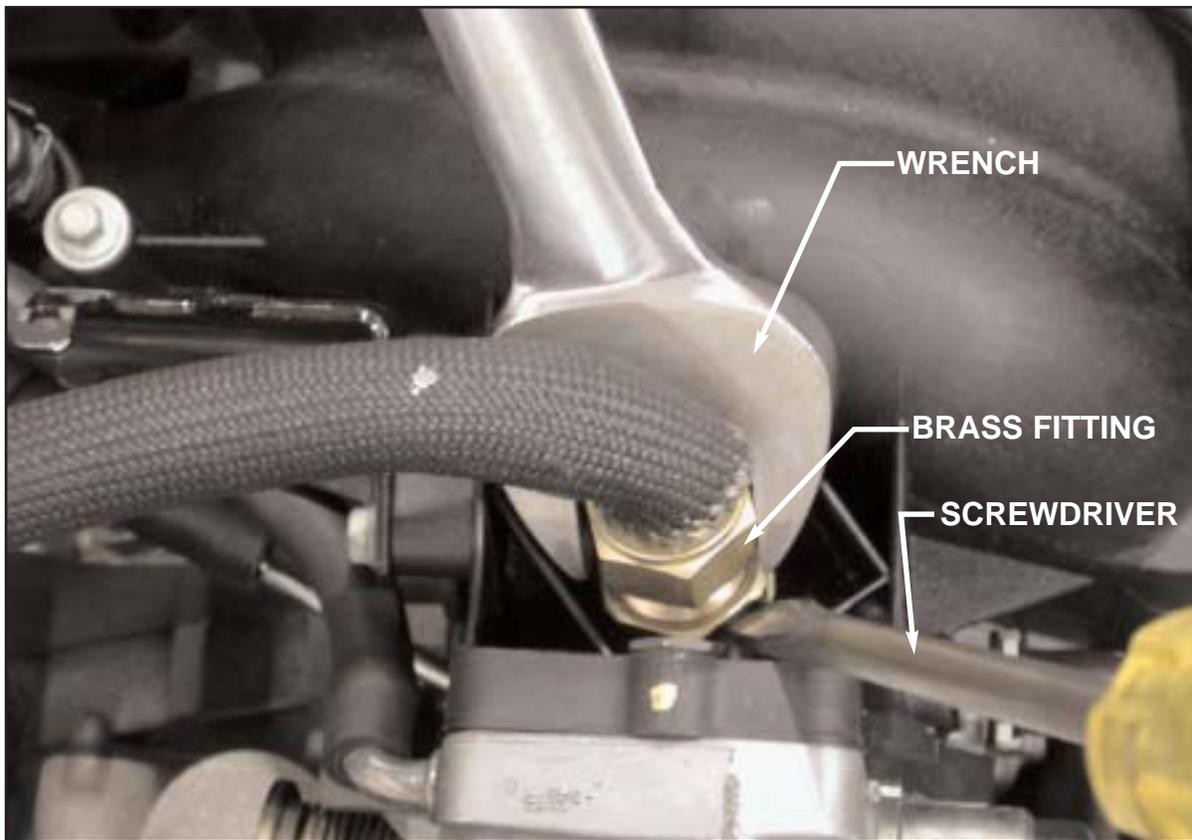


Photo 2: Tightening brass fitting.

21. Connect both coolant lines (one from the radiator, one from the coolant pipe) at the throttle body. Use pliers to set the spring steel hose clamps to their correct positions. Lubricant will ease the positioning of the coolant lines to the throttle body coolant hose barbs. Connect the power brake booster vacuum line to the large vacuum port at the rear of the high performance intake manifold (located near the MAP sensor). Connect the positive crankcase ventilation (PCV) valve pipe to the left valve cover. Connect the PCV valve pipe to the right valve cover and to the intake manifold. Install the PCV valve pipe strap nut tightening to 12 Nm (106 lb-in). Connect the vacuum line between the throttle body and right valve cover at the throttle body.
22. Connect the knock sensor wire harness connector to the fuel rail stop bracket (fuel rail stop bracket is located at the left rear corner of the intake manifold). Install the throttle control cable to the throttle control cable bracket located on the intake manifold. Connect the throttle control cable to the throttle body. Connect the manifold absolute pressure (MAP) sensor connector, the throttle position sensor connector, and the idle air control (IAC) connector.
23. Install the air intake bellow to the vehicle by carefully inserting it onto the throttle body and the mass airflow sensor. Tighten the worm screw clamps on the air intake bellow at the throttle body and mass airflow sensor. Connect the negative battery terminal.
24. Check for correct engine coolant level. Top off engine coolant if necessary. Use appropriate GM approved Dex-Cool coolant. Start and run vehicle for twenty minutes after reaching operating temperature. Allow vehicle to fully cool. Check for correct engine coolant level. Top off engine coolant if necessary.

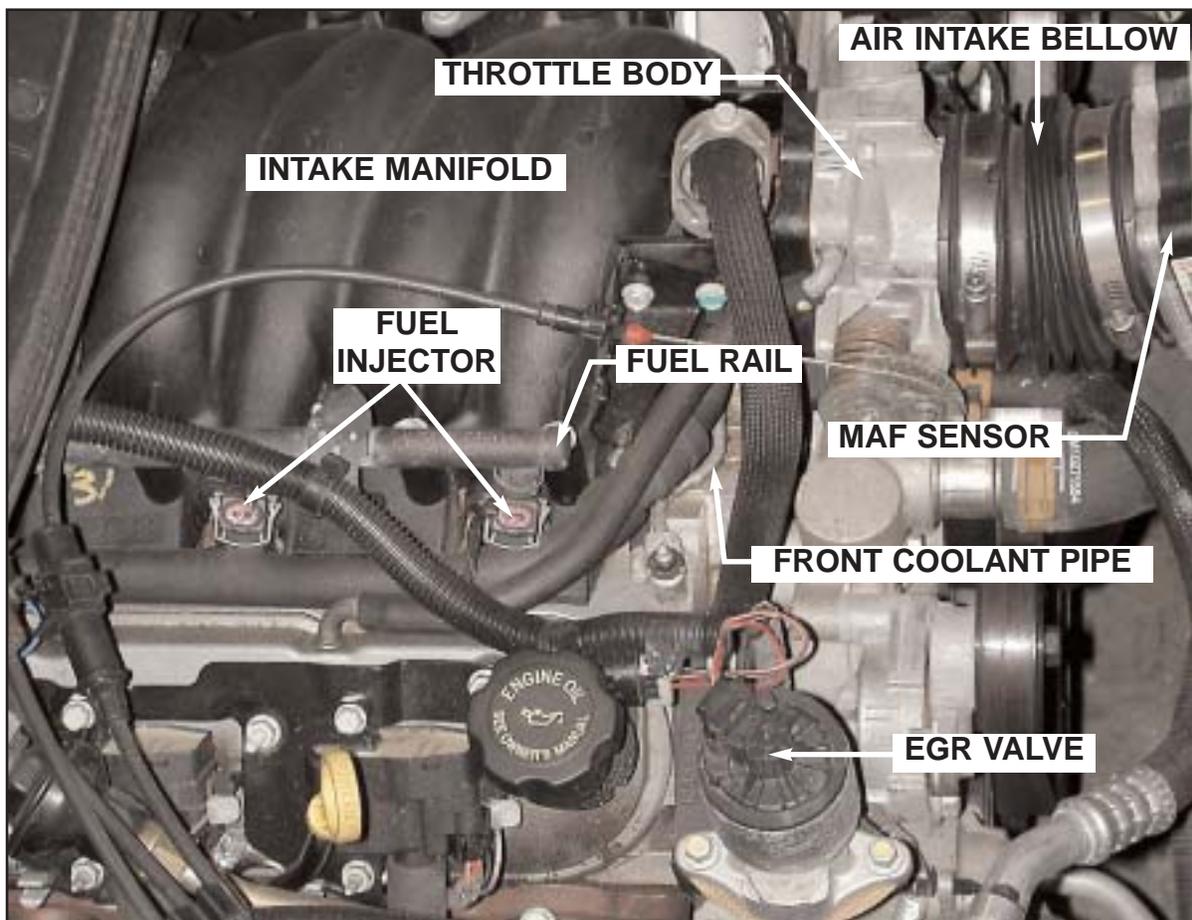


Photo 3: Part identification.