



## 1985-92 Large Tube Runner Installation Instructions Executive Order D-301

**NOTE:** *These instructions assume you have working knowledge of hand tools, their operation, and of the car of which you are working. If you do not feel comfortable with this assumption, it is recommended that you take the parts and vehicle to a qualified facility for the installation of these parts. It is recommended you have access to a factory shop manual for installation. Arizona Speed & Marine, Inc. accepts no responsibility for improper or faulty installation of the parts or for the accuracy or omissions in these instructions.*

1. Disconnect negative battery cable from battery.
2. Remove distributor cover from plenum using a T15 torx driver.
3. Loosen large clamp that secures the inlet hose to the throttle body, and place hose aside, (Extra care should be taken on vehicles with a Mass Air Flow sensor, to prevent damage to the MAF sensor).
4. Remove throttle cables from throttle body.
5. Remove the three throttle cable bracket mounting screws, and lay bracket & cables aside.
6. Remove the four 10mm throttle body-mounting bolts, if one of the lower bolts can not be removed because of heater hose interference, just leave it loose.
7. Disconnect the power brake booster vacuum line, in some cases it may be a steel tube, be careful not to damage the tube when removing from plenum.
8. Remove the two vacuum lines from the rear/passenger side of the plenum, identify the two lines to avoid confusion during re-assembly.
9. Using a T-40 torx driver, remove all of the upper runner bolts that attach the OEM runners to the plenum.
10. Carefully slide plenum straight up enough to remove the air temp sensor connector, then remove plenum.
11. Once the plenum is removed, additional performance can be gained if the port openings are matched to the ASM runner gasket. If this is done, be sure to thoroughly clean the plenum before re-assembly.
12. On some models, (Corvettes) it may be necessary to remove the four screws that secure the valve covers on both sides of the engine. On the top lip of the valve covers wiring loom assemblies, are secured in place by two metric nuts. These plastic wiring looms must be disconnected to allow removal of the valve covers. Using a 10MM wrench, remove the nuts and slide the plastic hold-down brackets off the studs. On the driver's side remove the front stud using a 8MM end wrench to disconnect the vacuum tubing that is attached to the bolt in the intake manifold.

13. On Corvette models, the lower bolt in the AIR pump may prevent removal of the driver's side valve cover. Loosen the bolt to allow enough clearance to remove the valve cover. The 8MM metric Torx head bolts that secure the stock runner to the manifold assembly can now be removed. Caution: There is one bolt located in the rear of the stock runner that is threaded from the opposite side of the stock runner. This requires removal from the passenger side of the vehicle. It may be helpful to loosen the fuel line that is attached at the rear of the fuel rail & the nozzle that is secured by the third bolt on the bottom of the stock runner to make removal easier.
14. The runner on the driver's side can be removed. Use caution to prevent foreign material from entering the intake manifold. Remove any gasket materials, match up the gaskets to the proper port configuration, and install the larger gaskets that are supplied with the RUNNER kit. Insert the plastic locating pins that protrude through the intake gaskets into the holes in the intake manifold.
15. Lower the coolant level in the system enough to remove the stock thermostat, and replace it with a 180 degree unit.
16. Carefully place the driver's side RUNNER in location and partially thread the socket head 8 MM x 25 MM bolts (supplied with the kit) through the RUNNERS into the intake manifold. Be careful not to cross-thread the bolts as damage to the aluminum threads will occur. Use of anti-seize compound or light oil on the bolt threads will be helpful. Once all the bolts have been started, evenly tighten all the bolts until the RUNNERS are secured to the intake manifold. Re-install the fuel line, vacuum lines, valve cover, and wiring loom into proper positions. Re-tighten the bolt that secures the air pump, if it was previously loosened.
17. Place clean rags in the intake manifold ports and over the valve train while the stock runner is removed from the passenger side of the vehicle.
18. Follow same procedure to remove valve cover and wiring loom from the passenger side, if necessary, to allow access to the lower bolts.
19. The 8 MM metric Torx head bolts that secure the stock runner to the manifold assembly can be removed. Caution: There is one bolt located in the front of the stock runner that is threaded into it from the opposite side. Remove it from the driver's side of the vehicle.
20. After all bolts have been removed, the stock runner on the passenger side can be removed. Use caution to prevent foreign material from entering the intake manifold. Remove any gasket materials from the manifold surface, match the gaskets to the proper port configuration, and install the larger gaskets supplied with the RUNNERS kit. Insert the plastic locating pins that protrude through the intake gaskets into the locating holes in the intake manifold.
21. Carefully place the passenger side RUNNER in location and partially thread the socket head 8 MM x 25 MM bolts (supplied with the kit) through the RUNNERS into the intake manifold. Be careful not to cross-thread the bolts as damage to the aluminum threads will occur. Use of anti-seize compound or light oil on the bolt threads will be helpful. DO NOT TIGHTEN THE BOLTS AT THIS TIME.
22. Install the larger plenum chamber gaskets that are supplied with the RUNNERS kit. Insert the plastic locating pins that protrude through the intake gaskets into the holes in the RUNNERS, allowing room to reinstall the wire connector that attaches to the MAT sensor located in the bottom of the plenum chamber.
23. THE FOLLOWING STEPS ARE IMPORTANT TO AVOID DAMAGE TO THE PLENUM CHAMBER GASKETS. Once all the bolts have been started, evenly tighten

all the bolts until the RUNNERS are secured to the plenum chamber. After the plenum bolts have been secured, evenly tighten bolts in the RUNNERS on the passenger side to the intake manifold.

24. Install the 4 metric bolts that secure the throttle body to the plenum chamber.
25. Install the flexible hose on the front of the TPI unit, and tighten the clamp. Carefully snap close the clips to the cold air duct located on each side of the Mass Air Flow Sensor.
26. Slide the throttle cable bracket onto the stud located between the upper RUNNERS tubes on the driver's side, and install the three screws that secure the throttle cables to the plenum chamber.
27. Actuate the accelerator pedal to ensure proper operation.
28. Carefully re-connect the metal vacuum lines located at the side of the plenum chamber toward the rear of the passenger side.
29. Connect positive battery cable back on to the battery.
30. Refill coolant to the required level in the radiator & coolant recovery tank.
31. Start the vehicle and check for any fuel leaks. If any are present tighten them to avoid ignition.
32. The vehicle should idle as it did before installation, providing no other changes were made. If it does not, ensure that all vacuum lines are connected to their original locations. A vacuum leak will cause an erratic idle condition. By spraying a lubricant like WD-40 around the source of the leak, the idle will change. Locate the problem area and make the appropriate corrections. Replace any cracked or damaged vacuum hoses.
33. Follow timing instructions for your particular vehicle, and set the engine timing as described. Install the distributor cap cover using a Torx driver #T-15.

In the event you have questions or comments concerning the installation, call (480) 753-0208.