



STEALTHRAM INTAKE MANIFOLD

FOR THE SMALL BLOCK CHEVY
WITH VORTEC STYLE CYLINDER HEADS

PART NUMBER 7542 & 7542P

INTRODUCTION:

Congratulations on your purchase of the StealthRam Vortec Intake Manifold! This manual contains all the information needed to install this manifold. Please read all the **WARNINGS** and **NOTES**. They contain valuable information that can save you time and money. It is our intent to provide the best possible products for our customer; products that perform properly and satisfy your expectations. Should you need information or parts assistance, please do not return the unit to the store without first contacting technical service at 1-270-781-9741 or 1-866-GOHOLLEY (1-866-464-6553), Monday through Friday, 7 a.m. to 5 p.m. Central Time. By using this number, you may obtain any information and/or parts assistance that you may require. Please have the part number on hand of the product you purchased when you call technical service.

WARNING! READ AND FOLLOW THE INSTRUCTIONS BEFORE, DURING, AND AFTER INSTALLATION TO PRESERVE THE WARRANTY.

APPLICATIONS:

The **StealthRam Intake Manifold** was designed for use on small block Chevrolet engines with Vortec style cylinder heads. The design is specifically for off-road use. It has no provision for EGR.

NOTE: It may be necessary to purchase some of the parts listed below (or the equivalent) in order to properly complete the manifold installation. Determination of equivalency is the responsibility of the consumer and Holley Performance Products does not assume that responsibility.

This manifold comes assembled for shipping purposes. It may be easier to install if the upper manifold is removed. When reassembling, use sealant on the upper-to-lower gaskets. Torque the socket head cap screws to 18 to 20 ft./lbs. Note that there is a 3/8-18 NPT hole on the underside of the upper manifold. This is for a remote IAC or as an extra vacuum source. If this is not used, it needs to be plugged.

PARTS REQUIRED:

- A. Intake Manifold Gasket Set (OE GM Gaskets or Felpro Replacement Vortec Gaskets)
- B. Throttle Body (Holley recommends the use of Holley P/N 112-503 [included in MPFI kits])
- C. Thermostat Housing Gasket
- D. Throttle Cable Mounting Bracket

<u>Lokar</u>	<u>GM</u>
TCB-40TP1	14084305
TCB-40TP2	
TCB-40TP3	
TCB-40SP	
- E. Throttle Cable

TC-1000TP	14080202
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- F. Silicone Based Sealant (such as Permatex Silicone Form-A-Gasket, Dow Corning Silastic RTV, or an equivalent)
- G. Small Diameter Distributor (such as a GM small-cap HEI with remote coil)
- H. Intake manifold bolts and washers (1/4x20 -1-1/2" Fasteners)
- I. Loctite™ 242 "Blue" threadlocker
- J. StealthRam Fuel Rail System (non adjustable P/N 534-192 or adjustable P/N 534-193 fuel pressure regulator)

TOOLS REQUIRED:

- | | |
|--------------------------|-----------------------|
| A. Socket Set—3/8 Drive | G. Needle Nose Pliers |
| B. Open End Wrenches | H. Drain Bucket |
| C. 10" Adjustable Wrench | I. Timing Light |
| D. Ignition Wrench Set | J. Torque Wrench |
| E. Screwdriver Set | K. 1/4" Allen Wrench |
| F. Gasket Scraper | |

NOTE: To reduce chances of engine contamination by dirt or other material, it is advisable to clean the engine exterior before starting the manifold change.

NOTE: If the engine is a 1996 or later Gen 1 GM block, you must install a coolant bypass line from the intake manifold to the water pump. 1995 and earlier blocks are already machined with the bypass provision in the block. The bypass should run to the passenger's side outlet on the water pump using a 5/8" hose.

INSTALLATION:

NOTE: The following instructions should be supplemented with a factory service manual that will have detail specific to each application.

1. Disconnect the ground cable from the battery.
2. Drain the radiator (it may be necessary to remove the bottom radiator hose if there is no drain plug in the radiator).

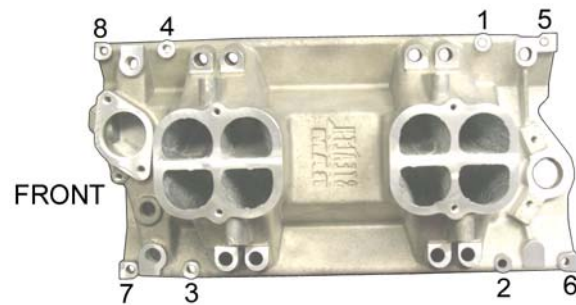
NOTE: Be careful of hot water and steam if the engine is still warm.

3. Disconnect the throttle linkage.
4. Remove the gas cap to relieve the pressure from the fuel system and disconnect and plug the fuel line at the carburetor.
5. Tag and remove the coil wires and the coil bracket.
6. Remove the top alternator bracket.
7. Remove the top radiator hose complete with thermostat housing. Remove the thermostat.
8. Remove the distributor cap.
9. Carefully note the position of the rotor and the distributor vacuum advance can (a sketch could be helpful).
10. Remove the distributor hold-down clamp and remove the distributor.

NOTE: Do not crank the engine while the distributor is out of the engine.

11. Remove the manifold hold-down bolts.
12. Loosen or remove one valve cover (if necessary to remove intake). It may be necessary to use a new gasket to prevent oil leakage.
13. Carefully remove the manifold assembly.
14. Place clean paper towels or rags in the intake ports to prevent scrapings and foreign materials from entering the cylinder head ports and the engine.
15. Clean the old gaskets from the cylinder head and block surfaces.
16. Holley suggests running a 1/4-20 tap in each manifold bolt hole in each cylinder head to clean the hole. If a tap is not available, run a manifold bolt through each hole before installing the manifold. Use a shop vac to remove any metal shavings from the tapped holes.
17. Carefully remove the port stuffing and valley rags when the cylinder head and block surfaces are clean.
18. Transfer all fittings from the old manifold before installing the new manifold. Pipe plugs should be used to close off all unused openings.

19. Install the intake manifold gaskets
20. Lay a ¼" high bead of RTV silicon sealant across the front and rear china walls, overlapping the intake gasket at four corners.
21. Carefully lay the intake manifold in place.
22. Apply Loctite™ 242 "Blue" threadlocker to the intake bolt threads.
23. Start all the hold-down bolts by hand.
24. It is very important that the intake manifold is torqued properly or damage to the gasket will occur. Tighten all eight bolts, in the sequence shown in figure 1 to 30 inch/pounds. Then tighten to 60 inch/pounds. Finally, tighten to 132 inch/pounds (132 inch/pounds = 11 foot/pounds)



25. Reinstall the valve cover.
26. Install the thermostat, thermostat housing gasket (using silicone sealant on both sides of the gasket), and the thermostat housing. Assure the thermostat housing has been cleaned of any old gasket material.
27. Replace the distributor.
28. Install the distributor hold-down clamp and "snug down".
29. Install the ignition coil and attach all the wires.
30. Reinstall the upper manifold using sealant on the upper-to-lower gaskets. Torque the socket head cap screws to 18 to 20 ft./lbs. **Note that there is a 3/8-18 NPT hole on the underside of the upper manifold. This is for a remote IAC or as an extra vacuum source. If this is not used, it will need to be plugged.** There are 4 holes at the rear of the upper manifold—two 3/8-18 NPT and two 1/8-27 NPT. These are for the air temp sensor, brake booster, distributor vacuum, map sensor, etc.
31. Install the throttle body per the throttle body instructions.
32. Connect the throttle linkage, hoses, and throttle bracket.
33. Install the alternator bracket in the original location and tighten the belt.
34. Ensure that all the unused water fittings and vacuum ports are properly plugged.
35. Close the drain and fill the radiator to the proper level with coolant. Replenish, as necessary.
36. Reinstall the gas cap.
37. Reconnect the battery.
38. Check for proper hood clearance before closing the hood.

GENERAL INFORMATION:

1. The cylinder head faces and the end surfaces of the manifold must be milled to compensate if the cylinder heads have been milled or the cylinder block “decked”. This is necessary to maintain correct port alignment, minimize the possibility of manifold leaks, and assure proper engine performance.

NOTE: The cylinder head faces are each 35° from the horizontal.

NOTE: The firing order is 1-8-4-3-6-5-7-2.

**Holley Performance Products
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**For online help, please refer to the Tech Service section of
our website: www.holley.com**

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199R-10343

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Date:12-16-04