Haytalras

INSTALLATION INSTRUCTIONS

Catalog #4001,4031

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common tools and procedures. However, you should be familiar with and comfortable working on your vehicle. If you do not feel comfortable performing this in stallation, it is recommended to have the installation completed by a qualified mecha nic. If you have any questions, please feel free to contact us by email **haytalras@gmail.com**

IMPORTANT NOTE: Proper installation is the responsibility of the installer. Improper installation will void your warranty and may result in poor performance and engine or vehicle damage.

DESCRIPTION: This manifold was throroughly checked at the factory. It has been pressure tested to assure that no air or water leaks occur. All the tapped holes have been cleaned after polishing with the proper taps. The manifold has been vapor blasted to clean it and then meticulously hand detailed before packing for shipment.

PARTS REQUIRED:

1. Intake manifold gasket set.
2. Oil resistant, silicone based sealant such as Mr.Gasket Part No. 7809, or equivalent.
3. Spray gasket adhesive, such as Fel Pro's "Spray Tack" Part No. 220, or equivalent.
4. Pipe plugs, If needed, either 3/8 or 1/2-NPT.
5. Carburetor base gasket (usually supplied with car buretor).
6. Teflon tape or pipe dope.

NOTE: Never install tapered (pipe) fittings in an aluminum anifold without Teflon tape or thread damage and/or leakage will likely occur.

MANIFOLD REMOVAL PROCEDURE:

WARNING: Do not attempt to remove manifold from a hot engine. Allow the engine time to cool down sufficiently before removal.

1. Disconnect battery ground cable.
2. Tag vacuum and crankcase ventilation hoses leading to air cleaner, if so equipped, making note of routing and connection points. Now remove vacuum and crankcase hoses allowing removal of the air cleaner assembly.
3. Note the routing of remaining vacuum lines from carburetor and intake manifold. After being tagged, remove vacuum lines.
4. Drain radiator by opening drain plug at lower corner of radiator. If no drain plug is present, it may be necessary to remove the lower radiator hose. CAUTION: Coolant may still be hot. Allow engine to cool down before proceeding.
5. Disconnect throttle linkage and springs, transmission kick-down/cruise control (if applicable), and carburetor choke rod.
6. Remove gas cap to relieve pressure from fuel system. Disconnect fuel line at carburetor using flare wrenches. Plug fuel line to prevent fuel leakage. Remove carburetor.
7. Tag and disconnect ignition coil and sensor wires. Remove coil and coil bracket, if mounted on manifold.
8. Remove radiator hose, thermostat housing and thermostat.
9. Remove remaining water hoses and fittings from manifold.
10. Remove all manifold vacuum fittings.
11. Remove any remaining brackets from the manifold.
12. Loosen or remove valve covers, if needed, to aid in manifold removal.

IGNITION REMOVAL PROCEDURES:

FOLLOW INSTRUCTIONS CAREFULLY, AS SERIOUS DAMAGE CAN OCCUR WHEN IGNITION IS NOT RE-INSTALLED CORRECTLY.

1. Remove distributor cap.
2. Note position of rotor, then mark the distributor housing in line with the rotor tip.
3. Note position of distributor vacuum canister and place a reference mark on a convenient surface.
4. Note how far points are open or note position of magnetic trigger wheel (if so equipped); if closed, note the distance from point block to cam lobe.
5. Remove distributor. DO NOT rotate engine after removing distributor.
6. Remove the intake manifold-to-cylinder head bolts.
7. Remove intake manifold.

PREPARATION FOR INSTALLING MANIFOLD:

1. Clean all mating surfaces thoroughly.
2. **CAUTION:** To prevent gasket pieces from falling into ports and valley when cleaning old gaskets from head surfaces, insert rags into ports and lay rags in lifter valley. When clean, remove rags carefully. Make sure that all particles that fell on rags are completely removed. Wipe surfaces with lacquer thinner or alcohol soaked rags to remove any oil or grease. **NOTE:** This is a must for proper gasket sealing.

INSTALLING INTAKE MANIFOLD:

1. Apply a thin coat of spray adhesive to the cylinder head side of the intake gasket surface. Lay manifold gasket in place, aligning ports and bolt holes.
2. Apply a 1/4" wide bead of oil-resistant RTV-silicone sealant to the front and rear block sealing surfaces, making sure to overlap manifold gaskets at all four corners. Do not use cork or rubber seals.

3. Carefully position your intake manifold on engine. Make sure that all bolt holes are centered. If manifold must be moved, re-check gasket placement. Install intake bolts. If your engine is a SB Chevy and has '87-'95 cast iron heads, and your new manifold has four slotted holes for the four center attachment bolts, you must insert the supplied aluminum adapters into the slotted holes. If you have '86 or earlier heads, or most aftermarket heads, you do not need to use these adapter inserts. Use the four straight bushings instead. NOTE: Thread sealant should be used on all bolt threads.

4. Begin torquing bolts, first to 10 ft/lbs, then 15 ft/lbs, following the factory sequence, (see illustrations) and finally torque to 25 ft/lbs. Note that Vortec and SB Ford torque specs are different. See individual specifications for specific manifolds of these instructions.

INSTALLING FITTING, PLUGS AND STUDS:

1. Install flttings, plugs, carburetor studs and accessory bolts from your original manifold. Use Teflon® tape or pipe dope on all pipe threads.

CAUTION: Do not over-tighten or cross-thread fittings, plugs, studs or bolts in manifold. Damage to threads or cracked mounting boss may result unless caution is used when installing,

2. Install all water sensors and vacuum fittings into manifold.

3. Plug all un-used water and vacuum ports in the manifold.

NOTE: Use Teflon® tape or pipe dope on all pipe threads. Anti-seize compound is recommended when installing aluminum pipe plugs in an aluminum manifold.

INSTALLING CARBURETOR:

1. Place new carburetor gasket on clean carburetor mounting surface. Do not use any type of sealant on carburetor gasket.

2. Install carburetor.

3. Connect all linkage and throttle springs.

4. Connect all vacuum and fuel lines. Refer to your tags or drawing for correct placement from Manifold Removal Procedures section.

5. Automatic transmissions only: Adjust kick-down or throttle pressure linkage for proper shift points. Check all linkages, making sure that they all function properly.

6. Re-tighten gas cap.

WIRES, BRACKETS AND VALVE COVERS:

1. If valve covers were removed, re-install with new gaskets.

2. Install coil brackets, coil, wires, and all remaining brackets that were removed from manifold.

INSTALLING THERMOSTAT:

1. Install thermostat and apply silicone sealant on both sides of gasket and place on manifold. Clean thermostat housing of any old gasket material before positioning on gasket. Start bolts by hand, then tighten.

2. Install heater and radiator hoses. NOTE: Check that radiator drain plug is closed before replacing coolant.

INSTALLING IGNITION:

1. Install distributor at this time making sure distributor fully engages the oil pump drive shaft.

2. Check location of rotor and distributor body, making sure your reference marks line up. Refer to Ignition Removal section (steps 2, 3, and 4). Install hold-down clamp and tighten distributor just enough that it still can be rotated by hand. Re-install distributor cap and wires.

3. Connect battery cable.

4. Hook up timing light and start engine; set timing to factory specs, tighten distributor.

5. Check for possible fuel, oil, or coolant leaks and proper choke operation.

6. Install air cleaner.

CAUTION: Check that there is adequate clearance for throttle and choke linkages through their range of travel.

IMPORTANT: Check for adequate hood clearance before closing hood. Clearance should be 0.5" min.

7. Operate engine for 30 minutes. Allow engine to cool and re-torque manifold bolts.

GENERAL INFORMATION:

1. Periodically (every six months or 6000 miles) re-check the torque on the manifold bolts to minimize the possibility of a vacuum leak.

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

3. Ignition tlmlng should be set to factory specifications. Any attempt to further advance the initial ignition setting will result in an adverse effect on exhaust emission levels and improper engine operation. Since idle speed increases as the ignition is advanced, the only way to bring the idle speed down to an acceptable level, is to close the throttle plates with the idle speed adjustment screw. Closing the throttle plates in this manner will change the geometry between the throttle plates and the idle fuel ports. This can cause idle quality deterioration and make It difficult to get the idle mixture rich enough. If more advance is desired, it should be done in the distributor advance curve.

4. If changing from a 2BBL intake manifold (NOTE: Check legality in your state), it is sometimes necessary to adjust the transmission kick-down linkage to the carburetor in order to obtain wide-open throttle. This adjustment is made by loosening the locking grommet and pulling enough kick-down cable through the grommet to achieve full throttle. Lock the grommet against the kick-down cable and connect kick-down linkage to the carburetor. Consult the appropriate chassis service manual for more detailed adjustment instructions.

INSTRUCTIONS FOR SPECIFIC MANIFOLDS:

4001 - Typhoon for 260-289-302 SB Ford V8

1. Street Legal - These manifolds are a stock replacment part when used with the OEM carburetor in 1965-66 289 Shelby Mustangs. This manifold will not accept stock EGR equipment.

2. This manifold will accept all stock parts (in most cases) when used with the stock carb or one of the carbs recommended below.

3. Intake Gaskets - Use Fel-Pro #1250 or OEM equivalent.

4. Carburetor recommendations:
   - a. OEM 4BBL
   - b. Holley #0-4779 750 cfm
   - c. Edelbrock #1405 600 cfm
   - d. Edelbrock #1407 750 cfm

5. Clearances - In some applications with an Edelbrock or Holley carb, there may be some interference with the stock air cleaner. Use an Edelbrock Air Cleaner #1221 or adapter #8092.

Caution: Check hood clearance when using a spacer.

6. Brackets - A throttle mounting adapter plate is supplied with each manifold to adapt both early and later type stock throttle

brackets to our manifold. Our bracket bolts to the manifold with the slotted hole towards the center of the manifold and then the stock throttle bracket bolts to our bracket. See Fig. 3 on page 6.

7. Torque specs. See sequence chart on page 6. Following this sequence, torque bolts to 10 lb. ft. Then following same sequence, torque bolts to 15-18 lb. ft. Do not over tighten as damage to the manifold may occur.

4031 - 260/289/302 SBFord V8

1. This is a medium rise single plane manifold intended for racing applications. Not intended for street use as there is no provision for choke, emission parts, etc. Will not fit Boss 302 or 255 cid engine. This is a non-EGR manifold.

2. This manifold can be used with ported factory cast iron 289, 302, or 351W cylinder heads, (on a 289/302 block) or aftermarket AR, TFS, or Edelbrock Performer aluminum heads. Early ('69, '70, & '71) 351W, or aftermarket aluminum heads are highly recommended.

3. Use a Holley double pumper 4150 style carburetor. Exact size of carb is dependent upon the total displacment of your engine. See Holley catalog for recommendations.

4. Additional parts that may be required: Edelbrock #8011 automatic transmission rod extension kit. Edelbrock #8016 ball end stud for Ford Holley carbs.

5. Port matching to your heads is recommended for optimum

6. A one-inch carburetor spacer may provide better performance on some applications. A slight richening of the jets may be required.

7. If a Mallory Comp 9000 distributor is used, the fins on the performance. side of the distributor may possibly interfere with the manifold. If necessary, trim the fins on one side of the distributor for clear-ance.

8. Always check for hood clearance before closing the hood when installing a taller than stock manifold such as this one.

CARE OF YOUR MANIFOLD

1. If you purchased one of our super show polished manifolds you already know that the quality of the polished finish is extremely high. Every nook and cranny has been hand ground and then highly polished to a high lustre. To maintain this highly polished look, you will have to periodically hand polish the manifold surfaces using any of the many metal polishes available. If the finish is not subjected to moisture or direct sun exposure for extended periods of time, the original finish should maintain a high degree of shine for a year or more. You may improve the shine by rubbing out the manifold with cornstarch or commercial whiting compound.

If any water or radiator coolant gets on the manifold we recommend that you immediately wipe it clean and give the affected area a quick rubdown with metal polish. If water or coolant is left on the manifold it will spot it and the spots may be quite difficult to polish out by hand.

2. Satin finish (unpolished) manifolds have a bead blasted finish which is then vapor blasted to provide a clean, uniform finish. This type of finish can be fairly easily stained by oil or gasoline residue. To clean these type of stains from the manifold will usually require a commercial engine cleaner or you can use lacquer thinner with a clean cloth.

CAUTION: Your manifold is cast of aluminum. Aluminum is a very soft material and any threaded holes can be easily stripped. While every precaution was taken during the manufacturing process of your manifold, and all the tapped holes were chased by hand with a tap after the polishing process to clean the threads, it is always possible that something may have been missed. As a result, we strongly recommend that you visually examine all tapped holes before installing the manifold. Also we recommend that you run a bolt or pipe plug of the proper size into each tapped hole to make sure that they start easily and at least turn in a few threads by hand. Again, do this before installation. If you find any tapped holes that are difficult to start or to thread, we strongly suggest that you run a tap into the hole to clean the threads before attempting to complete the installation. Do not force a bolt into a tapped hole if you meet resistance because you will most likely strip the threads which will make the manifold useless and will also void your warranty.

If you elect not to use these additional tapped holes, you will need to plug them with either 3/8-NPT or 1/2-NPT pipe plugs. While we recommend using steel or stainless steel plugs, if you use aluminum plugs you must use anti-seize compound or Teflon® tape or the plugs may seize.

Bolt tightening sequences:

