

UNIVERSAL MARINE CARBURETOR MODEL 4010 AND 4011

INSTALLATION AND ADJUSTMENT INSTRUCTIONS

NOTICE

For the safety and protection of person's and property, all United States Coast Guard (U.S.C.G.) and other marine safety requirements and recommendations as well as the following instructions must be carefully studied and applied. Failure to follow the above will void your warranty, which is also voided by certain conditions stated in the second paragraph thereof.

WARNING

For the safety and protection of yourself and others, installation, adjustment and repair must be performed **ONLY** by a trained mechanic having adequate marine fuel systems experience. It is particularly important to remember one of the very basic principles of marine safety: fuel vapors are heavier than air and tend to collect in lower places. This means that **ANY** fuel spilled during the replacement of your marine carburetor will vaporize and remain in the lowest extremes of the engine compartment of your vessel where an explosive fuel/air mixture can be ignited by any spark or flame. Great care must be exercised to prevent spillage and thus eliminate the formation of such fuel vapors. In all cases, it is necessary to have and properly operate the bilge blower for a sufficient time to remove all vapors before trying to start your vessel's engine.

NOTE

Because these marine carburetors are universal, it may be necessary for the mechanic to "tune" carburetor variables such as jets, power valves, secondary diaphragm springs, etc. Due to the remote distance between the helm and the engine in most boats, it is **STRONGLY** recommended that the mechanic have an assistant to operate the appropriate helm controls during this installation. Prior to installation, check your throttle cable bracket. It may be necessary to purchase a Holley throttle cable flange adapter to properly secure your throttle cable. If your throttle cable bracket bolts to the intake manifold, you can proceed with the installation. If your throttle cable bracket is retained by carburetor hold-down bolts, you may need to purchase a Holley throttle cable flange adapter Part No. 717-6 for Model 4011 or Part No. 717-5 for Model 4010.

IMPORTANT NOTE

A United States Coast Guard approved fire extinguisher in proper operating condition should be nearby at all times during removal, installation and starting procedure.

REMOVAL (WARNING: The following steps must be carefully studied and applied)

1. Disconnect battery (to prevent accidental arcing) and extinguish any flame or other arcing equipment.

2. Label and remove all hoses going to the flame arrestor.

3. Remove flame arrestor.

4. Remove existing carburetor following the procedure outlined below.

A) Carefully disconnect fuel line. Catch all fuel left in the fuel line in a suitable container and **REMOVE** container from vessel before continuing further. Absorb any fuel spilled immediately with a shop towel or rag and remove from the vessel.

B) Label and disconnect all vacuum lines to the carburetor, distributor, etc.

C) Disconnect any choke rods, heat tubes, and any electrical wires from the carburetor.

D) Disconnect and remove throttle linkage. Save all retaining clips.

E) Unbolt carburetor and remove.

WARNING: Be **EXTREMELY** careful not to tilt carburetor, which may cause fuel to spill. **REMOVE** carburetor from vessel. If fuel spill occurs, see instructions 4A above.

F) Stuff shop rags or paper towels into manifold opening and remove original flange gasket. Clean manifold face being careful to prevent particles from falling into manifold.

5. Remove throttle cable ball, if so equipped and mount on Holley lever. (Note hole relationship on new lever as you remove ball from old lever). (See Fig. #1)

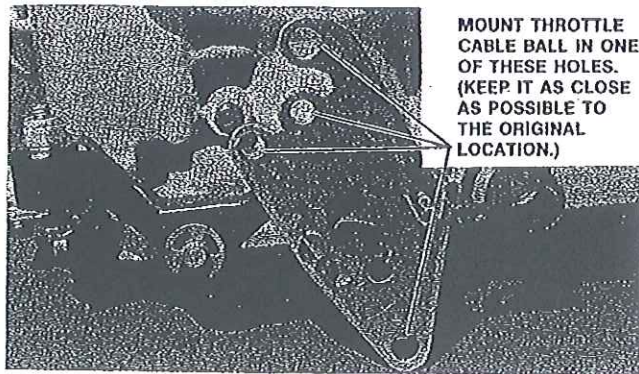


Figure 1

INSTALLATION

6. Remove shop rags or towels from manifold opening and place new carburetor flange gasket provided on manifold.

7. Install Holley throttle cable flange adapter if required. Place new carburetor flange gasket provided on top of adapter.

8. Place new carburetor on top of the flange gasket on the manifold. Next, install the carburetor hold-down nuts, which should be tightened down progressively in a criss-cross pattern, first by hand, and then with the proper wrench. Torque to 60-80 in.-lbs. **DO NOT OVERTIGHTEN** so as to prevent damage to the throttle body. Vacuum leaks not only result in poor performance but can also cause a fire hazard due to induction system back firing.

9. Reconnect throttle and throttle return spring. Manually operate linkage to assure correct travel by opening to wide open throttle and back to closed throttle.

WARNING: Check the assembled throttle linkage for sticking and/or binding to be sure that there is no interference when the throttle lever is operated between the idle and the full wide open throttle positions. Sticking or binding throttle linkage can result in personal injury and property or engine damage due to uncontrolled engine speed.

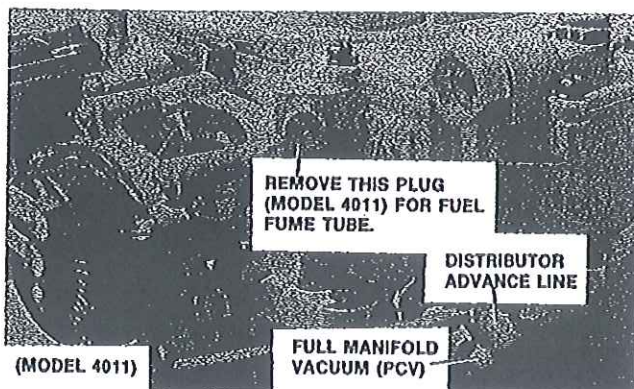


Figure 2

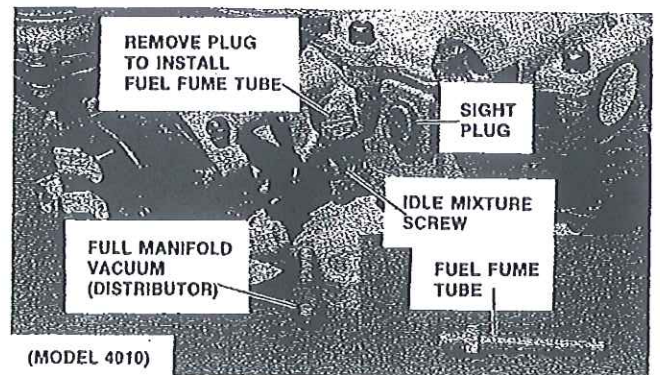


Figure 3

Figure 3A

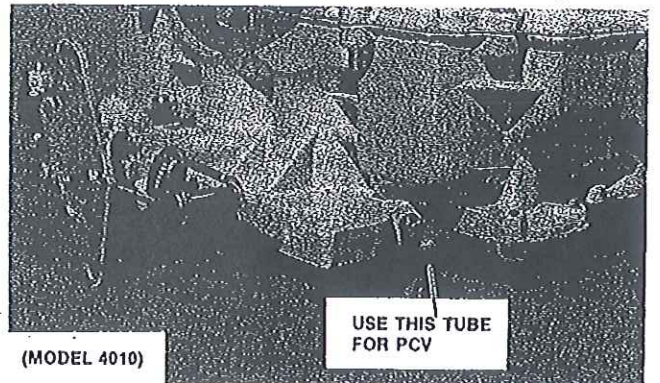


Figure 4

WARNING: Check for sticking by having the assistant go to the helm and opening and closing the throttle controls while the experienced mechanic watches the operation of the carburetor to detect any malfunction.

10. Connect the distributor advance line (if so equipped) to the carburetor. (See Fig. #2 and Fig. #3)

CHROME DUAL FEED FUEL LINES

If you have:

Model 4010, order by Holley Part No. 734-1.

Model 4011, order by Holley Part No. 734-2.

11. Connect fuel line to the carburetor being careful not to strip or cross-thread the fittings, which creates a fuel leak and fire hazard. The carburetor comes equipped with a flare tube fittings. Use the proper flare nut wrench on the fuel fittings. Torque these fittings to 150 in. lbs. The connection must be checked again with the engine idling.

WARNING: If inlet is found to be wet after idling check, reassemble and retorquing the inlet fittings.

WARNING: On some applications where the fuel pump vent hose was attached to the carburetor, it will be necessary to purchase fuel fume vent kit, Holley Part No. 726-1. This kit will fit both Model 4010 and 4011. Figs. 2 and 3 show the location of installing the fume tube. Remove plug and screw in tube. Tighten with a 7/16 wrench. If your application originally comes with the vent hose attached to the flame arrestor, it will not be necessary to obtain the fuel fume vent kit. (See Fig. #3A)

IMPORTANT NOTE

WARNING: If it is necessary to replace the fuel line, use U.S.C.G. approved "TYPE A" or "B" hose **ONLY**. No other type of hose is recommended. This hose is used between fixed lines from the fuel tank to engine fuel pump or fuel filter/water separator, whichever ever comes first.

If the vessel is equipped with a fuel line hose, inspect the hose for signs of cracking or deterioration which could result from gasoline mixed with alcohol, wear or other causes. This inspection should be done at least annually.

FUEL LINE (Between Fuel Pump and Carburetor)

WARNING: It is **EXTREMELY IMPORTANT** that a **ONE PIECE** metallic fuel line that meets or exceeds U.S.C.G. regulations be used between the fuel pump and the carburetor. This line should be made of seamless annealed copper, nickel copper or copper nickel and have a minimum wall thickness of 0.029 inches. **DO NOT** use any type of rubber fuel line between the carburetor and the fuel pump. Since the dangers of fire or explosion are present, it is safer, more economical and less time consuming to do the job right in the beginning.

ELECTRIC CHOKE WIRE INSTALLATION

If your installation came originally equipped with an electric choke, you may use the original choke wire. However, on some applications where no choke wire is present, it is recommended to use a proper **SHIELDED** female connector in combination with #14 gauge insulated wire for providing voltage to the choke cap. Attach the connector with wire attached to the positive terminal (+) of the choke cap. Attach the other end of the wire with proper **SHIELDED** connector to an **Ignition activated 12-volt source**. (See Fig. #5)

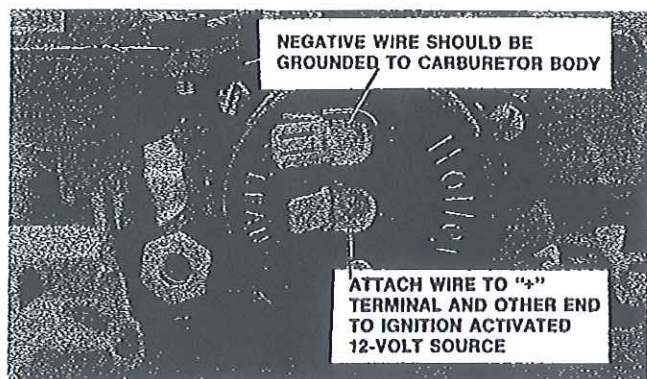


Figure 5

12. Open hatches and let bilge ventilate naturally until no fuel vapors are present.

NOTE: Flame arrestor should be clean before installing.

WARNING: Install flame arrestor stud from unassembled

parts kit. Install flame arrestor.

13. Reconnect all hoses to the flame arrestor.

14. Reconnect battery.

WARNING: Operate bilge blower at least for a minimum of 10 minutes or longer if necessary, until all fumes have been safely expelled from the bilge area.

15. Without operating the throttle, crank engine for 15-30 seconds to allow fuel bowls to fill. If engine does not start, stop cranking, open and close throttle twice and crank again until engine starts.

WARNING: Start engine and check fuel line and inlet fittings for possible leaks. If any fuel leakage or weeping is detected, shut engine off immediately and correct cause. Wipe any leakage and remove rag, towel, etc. from vessel and operate bilge blower again as instructed above before proceeding.

16. When no leaks are present, allow engine to warm up to operating temperature, then adjust carburetor idle speed to engine manufacturers specifications if necessary.

WARNING: Check clearance between the flame arrestor and engine hatch before closing. **DO NOT SLAM** or close hatch the first time after carburetor is installed without checking clearance.

17. To obtain the best performance with your Holley marine carburetor, it is strongly recommended you use one of Holley's low restriction flame arrestors. Most original equipment flame arrestors are extremely restrictive and limit total airflow, robbing engine power. Holley flame arrestors will allow your engine to take full advantage of your new Holley performance carburetor.

MAINTENANCE

(WARNING: The following recommendations are important).

All fuel system components, including metal fuel lines and carburetor hold down nuts, but especially non-metallic components such as hoses, gaskets, etc. should be inspected frequently by an experienced marine fuel systems mechanic.

All engines, but especially today's higher horsepower engines, produce high temperatures in the engine compartment which contribute to fast deterioration of non-metallic materials (hoses, insulated wires, etc.).

Some fuels have an alcohol blend of up to 10% of (a) ETHANOL, which will slowly absorb moisture from the air causing internal corrosion or (b) methanol, which will attack and prematurely destroy rubber diaphragms and seals causing leaks.

Hoses which exhibit surface cracks when bent 180° should be replaced. Any presence of liquid fuel or fuel vapors demands reinspection of fuel fittings and line replacement if required. It is **EXTREMELY IMPORTANT** that **NO FUEL LEAKAGE** occurs at any time after installation.

Periodically, recheck airhorn screws, torque to assure proper sealing. Torque to 30 inch lbs.

It is recommended that the fuel be removed from the carburetor whenever the boat is expected to be not operated for an extended period, as at the end of the season, and that the carburetor be checked for leaks when the boat is to be operated again as at the beginning of the season, because non-metallic parts such as gaskets may dry out and shrink from the absence of fuel during the period of non-operation resulting in a fuel leak.