



TROUBLESHOOTING CARBURETION SYSTEMS

FLOAT STYLE CARBURETOR LEAKAGE WHILE RUNNING

There are some situations that could cause a symptom of leakage while operating. These are rare and can be challenging to troubleshoot accurately. Most cases of leakage during operation can be attributed to the same problems that cause static leakage. There are however, additional possibilities when it comes to this scenario. It should be noted that there are two types of leakage while running.

The first type of leakage is external. This could be caused by deteriorated tank and strap assemblies and loose, torn or missing external gaskets (adjustment nut packings or bowl nut washer etc.). The second type of leakage is internal. A symptom of this would be an engine that displays a leak through the brass "drain" insert in the throat of the carburetor or "wets" the air cleaner element with fuel. This type of leakage can be caused by any number of problems:

- Loose or damaged main nozzle (2 piece flo-jet)
- Clogged air filter element (externally vented carburetors only)
- Excessive vibration
- Incorrect fuel inlet seat size
- Improper float level
- Clogged muffler
- Porosity in the carburetor casting
- Improper valve clearance
- Intake valve seat loose

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SPECIFIC CARBURETOR TROUBLESHOOTING – REPAIR TIPS

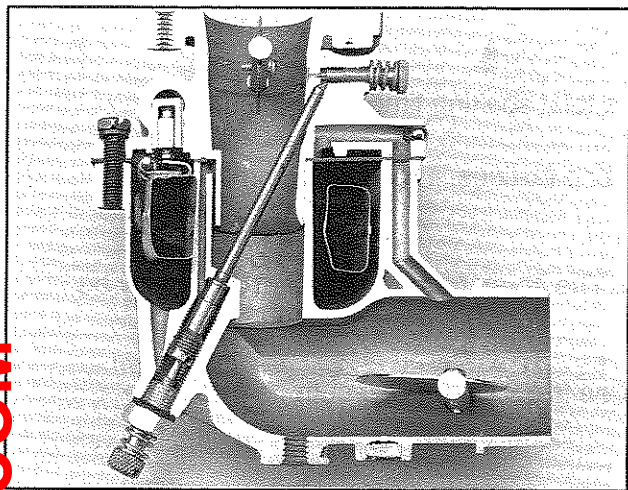


Fig. 24

BENCH TEST

You can quickly and easily bench test this condition. Install the nozzle/jet assembly into the lower carburetor body. Thread a 1/4" bolt into the base at the speed control bracket boss to use as a "handle". Grip the bolt head in a vise and position the body so that it is level. See Figure 25.

Add fuel to the bowl until it is three quarters full. If the tapered sealing area is intact, there will be no fuel leakage into the carburetor throat.

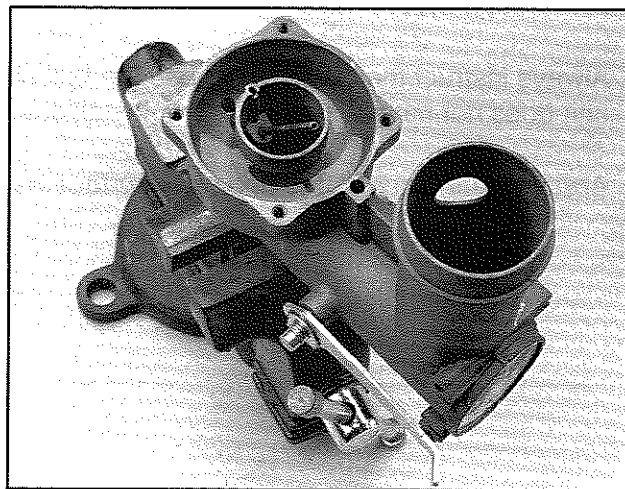


Fig. 25

TWO PIECE FLO-JET LEAKAGE (cont.)

If the sealing area integrity is in doubt, take the old nozzle and remove the threads with a bench grinder. Place a small amount of lapping compound on the nozzle at the taper and insert it into the body of the carburetor. With a jet screwdriver, gently lap the nozzle just as you would when you lap a valve in. Remove the old nozzle and clean the carburetor body completely.

Using a new nozzle/jet, install the Teflon washer from a # 391413 carb repair kit over the tube and seat it on the sealing surface of the new nozzle and install. The Teflon washer acts like a gasket providing a better sealing surface for both the nozzle/jet and the body of the carburetor.

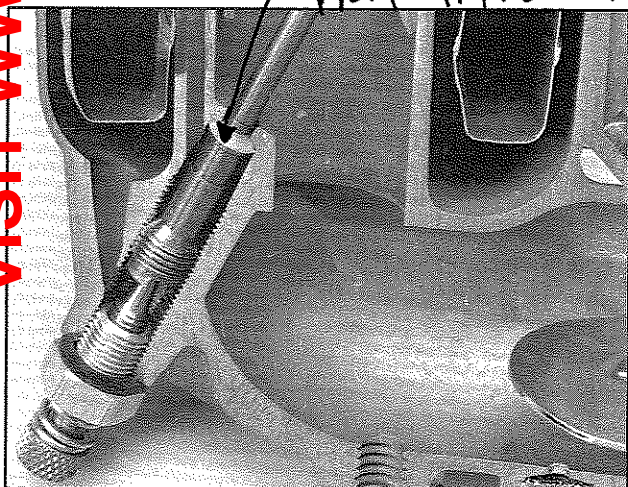


Fig. 26

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ADDITIONAL SERVICE TIPS

- The proper and thorough cleaning of a float style carburetor includes the removal of all parts including the welch plugs (on larger carburetors).
- The use of commercial carburetor cleaners is limited to a total soaking time of 30 minutes.
- Always use good quality carburetor spray solvents with long nozzles. These help immensely in reaching internal orifices and passageways.
- Always wear eye protection when cleaning a carburetor. The spray from the aerosol can easily be deflected and get into your eyes.
- The removal, cleaning and inspection of the inlet seat area is critical for optimum performance especially in chronic leakage cases.
- Always install new fuel lines and fuel filter (#493629 recommended) when repairing a unit with a carburetion system leak.
- Always instruct the customer to use the fuel shut off valve when transporting the equipment. If the unit does not have a shut off valve, install one.
- Always clean your hands and work surface before starting any carburetor repair.

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