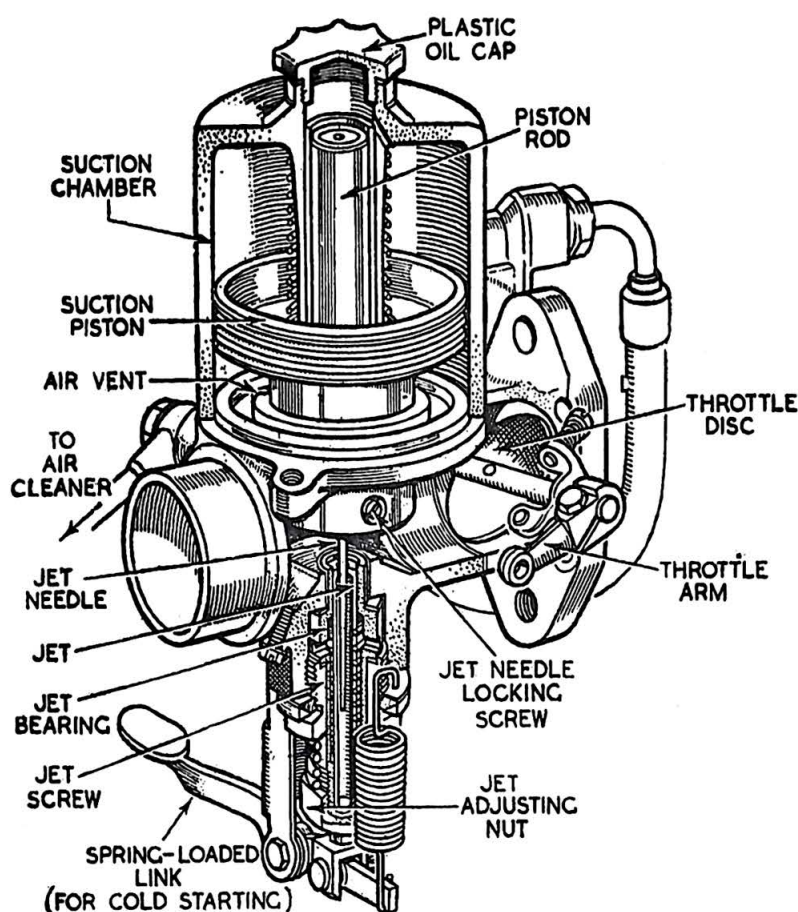


Tuning Tips on the 1952 Thunderbird - S. U. Equipped



As the S. U. carburetor is much different in operation than the Amal, a few dealers and mechanics have had the feeling that the S. U. carburetor would not function properly. We realize that it is human nature to fear what we do not understand, but as the S. U. carburetor is a simple mechanism, there is nothing to fear if you follow these tuning tips. Should you have a Thunderbird in your area which is lacking in top speed, or fails to carburet properly at lower speeds, use the following procedure as outlined:

1. Check spark plugs
2. Check magneto (contact points, brushes, etc.)
3. Check spark lead (with auto-advance unit locked in full advance position, points should not open later than 37° B. T. C. or earlier than 42° B. T. C. The exact amount of spark lead depends a great deal on the compression ratio, altitude above sea level in your area, type of gasoline being used, etc. Because of this you must arrive at your own standard spark lead.)
4. Remove plastic oil cap on top of carburetor and add a few drops of light machine oil. (If plastic cap has been lost, the carburetor will not function properly.)
5. Check butterfly shaft and return springs. The following reasons may keep the butterfly from closing:
 - a. Shaft bent or galled.
 - b. Return spring on left side of carburetor coil bound.
 - c. Throttle cable binding in housing.
6. Check for air leaks at all gaskets, i. e. head to manifold, carburetor to manifold, etc.
7. Check tappets for proper clearance

If the above procedure is followed, and discrepancies corrected, the engine should function perfectly. If all checks have been made and engine still does

not carburetor properly, then carburetor should be removed, cleaned, lubricated and reassembled. This is a simple operation and every mechanic should familiarize himself with the procedure. Here is your check list for use after carburetor is assembled. (We assume you have read the S. U. instruction book.)

1. Does piston rise and fall freely with no indication of bind at any point? Should it bind, remove plastic oil cap and try again. If piston is free with oil cap removed, then cap should be replaced with new cap. (Inner bore may not be concentric with threads.)
2. With plastic oil cap removed, does piston rise and fall freely? Should it bind, the trouble probably lies in the needle and jet. (Needle should not touch jet at any time.) To center jet and needle, use the following procedure:
 - a. Remove plastic oil cap.
 - b. Screw "jet adjusting nut" upward until it is finger tight.
 - c. Loosen "jet screw" – this is the 13/16" hex nut immediately above "jet adjusting nut" and spring
 - d. With "jet screw" (it is a 13/16" hex nut) loosened so that the alloy washer is free, push "piston rod" downward, and at the same time put an upward pressure on "jet adjusting nut". This two-way pressure will properly center jet with needle.
 - e. While holding this two way pressure, tighten "jet screw" (13/16" hex). Jet and needle should now be centered and piston should rise and fall freely. (Don't forget to oil piston rod.)
 - f. Reassemble carburetor on engine.
 - g. Adjust carburetor.

WARNING:

1. If needle is bent - replace it!
2. Do not raise or lower position of needle. Step-cut on needle should be flush with bottom of piston!
3. Do not run engine without air cleaner hooked up!

JOHNSON MOTORS, INC.

Pasadena 1, California