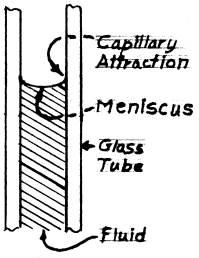

Manometer

by

A.R.E.

Capillary attraction of a fluid in a glass tube creates a meniscus (a concave curve for most liquids). A Manometer is so accurate you can place the bottom of the meniscus curve on the top edge of the scale line to make precise adjustments.

The manometer also works with side-draft and up-draft carburetors.

Fluid
Clear fluids make the meniscus stand out. Water (sterilized with 2 or 3 drops of Clorox bleach) or clear brake fluid give excellent results. Marvel Mystery Oil or ATF fluid (light red) are harder to read.

Gaskets
The four rubber gaskets will fit air intake openings of 34mm to 64mm (1-3/8 to 2-1/2 inches) in diameter (other sizes available). Or invert the gasket and place it on top of the air intake if the taper causes the pick-up to touch the internal carburetor or fuel injection mechanism.

Procedure

Attach the hose to the base and pick-up (see parts list item 8).

Select a gasket size and slide it on the pick-up tube (lube with soapy water if tight). Open the adjustment screw on top of pick-up so the four side holes are wide open (the side set-screw adjusts the drag on the top adjustment screw).

Fill glass tube approximately 1/2 full with fluid (both sides will be around line No. 11).

Hang or place the manometer base upright in the engine compartment so you can see the scale while making adjustments.

<u>For carburetors and fuel injection throttle bodies WITH adjustable throttle plates:</u>

This adjustment is for **<u>one</u>** carburetor or fuel injection throttle body assembly at a time.

Start the engine and use an accelerator pedal jack (Snap-On tool #B240B) or stick between the steering wheel and accelerator pedal to hold a constant engine speed of at least 2000 RPM (this eliminates the air bypass circuit which is active to 1800 RPM).

With a little pressure and a slight twist, the gasket will stay in each air intake as you make adustments.

Place the pick-up (with gasket installed) in the air intake (velocity stack) closest to the accelerator pedal linkage connection and adjust the pick-up top screw so the fluid level on the scale is six to eight numbers lower than the fluid level on the vacuum side of the tube.

over

Now move the bottom of the meniscus to the top edge of the nearest numbered line. You will be using the setting for this air intake (velocity stack) to balance all of the other adjustable throttle plates so each cylinder will receive **exactly** the same volume of air.

Now, **do not** touch the pick-up top screw for the following adjustments.

Move the pick-up to the next velocity stack and adjust the single throat throttle linkage in or out to place the bottom of the meniscus on the top edge of the original numbered line, then secure this linkage.

Now, go to the other velocity stacks, one at a time, and make the same linkage adjustment.

Then to re-check, go back to the starting velocity stack and see if the meniscus is still on the top edge of the original line. The engine will be running smoother and at a slightly higher RPM. You can quickly re-check the procedure.

Then to balance the individual carburetors or throttle bodies to each other, adjust each unit's accelerator pedal linkage until the Manometer scale reading is the same.

Now return the engine to idle and adjust each carburetor's Idle Stop Screw to the engine manufacturer's idle RPM and balance the air-flow with the Manometer and the idle stop screws.

For carburetors WITHOUT individual adjustable throttle plates:

Some two and three barrel carburetors (Weber, PMO, etc) have air bypass adjustment screws for each throat in place of adjustable throttle plates.

This adjustment is for **one** carburetor at a time.

Start the engine and use an accelerator pedal jack (Snap-On tool #B240B) or stick to hold constant the engine manufacturers idle RPM for the following adjustments.

Place the pick-up (with gasket installed) in an air intake and adjust the pick-up top screw so the fluid level on the scale is four to six numbers lower than the fluid level on the vacuum side of the tube.

Release the air bypass screw lock nut for each throat and screw the air bypass screws all the way in. Find the throat drawing the most air, which will be the lowest reading on the Manometer scale. Tighten the nut on this air bypass screw. Turn the pick-up top screw to move the meniscus to the top edge of the nearest numbered line on the scale. Now adjust the other air bypass screws to the same Manometer scale reading and tighten each lock nut in turn. This balances the throats of the individual carburetor.

To balance the individual carburetors to each other, open the pick-up adjustment screw and increase the engine speed to at least a constant 2000 RPM and adjust each carburetor's accelerator pedal linkage so the Manometer scale reading is the same for all carburetors.

Now return the engine to idle and adjust each carburetor's Idle Stop Screw to the engine manufacturer's idle RPM and balance the air flow with the Manometer and the idle stop screws.