

**Original '53-'55 6.V  
Stop Light Switch**

**Notice the wiper coordinator in this G.M. service picture that was a car option only "as many people think."**

## Fuel Injection Article Cont.

### INSTALLATION OF FUEL INJECTION UNIT ON ENGINE

Prior to reinstalling the Fuel Injection unit on the engine, it is good practice to perform the fuel flow check described earlier and illustrated in figure 120 to check that fuel lines have been properly reinstalled.

1. Remove masking tape sealing intake ports in adapter plate, position Fuel Injection and adapter gasket on adapter plate, and secure with eight nuts and lockwashers. Tighten nuts evenly in a criss-cross pattern to 15 ft.-lbs.

2. Connect distributor spark control pipe (fig. 166) into 45-degree fitting in air meter, then tighten fitting at distributor end of pipe.

3. Attach electrical connector for starting cut-off switch and cold enrichment coil into wiring harness connector on dash.

4. Install accelerator and transmission TV rod swivels into throttle bellcrank on intake manifold. If necessary, adjust swivel position to permit free entry into holes in bellcrank levers. Check for full throttle and TV travel by holding the accelerator in the "wide-open" position. Readjust rod swivel positions as required.

5. Install air cleaner as described under "Maintenance and Adjustments."

6. Install fuel line into fitting on fuel meter.

7. Install fuel injection pump drive cable as follows:

7. a. Carefully pull the fuel pump drive shaft from its housing being careful not to lose the small fiber washer located at the distributor end of the shaft between the thrust bearing and the shaft housing. Examine the thrust bearing to insure that it is held securely on the shaft and the dimension from the end of the shaft to nearest face of the bearing is  $17/32$ " as shown earlier in figure 142.

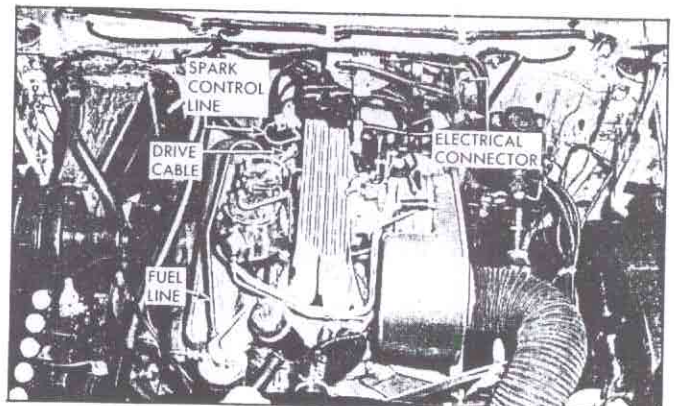
7. b. Prealign the fuel injection pump and distributor driveline members by inserting one end of the shaft into the fuel pump, then rotate the shaft to engage the other end in the distributor drive socket.

7. c. Carefully disengage shaft from both distributor and pump without rotating shaft. Reinstall fiber washer in distributor end of shaft housing and install shaft in housing.

7. d. Slide drive shaft assembly into position at fuel pump and carefully engage shaft in fuel pump driven member. Do not rotate shaft once it is engaged.

7. e. Engage shaft at distributor end and hold shaft housing firmly while tightening retaining nut to secure installation. This nut should be tightened to approximately 10 ft.-lbs.

8. Adjust idle speed and mixture as described previously in "Maintenance and Adjustments." This completes the installation of fuel injection.



**Fig. 166—Fuel Injection Installed on Engine**



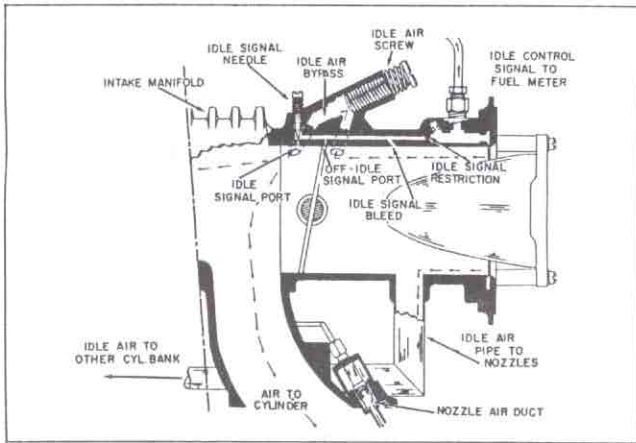


Fig. 173 - Idle Air and Fuel Signal Circuits - 7014900

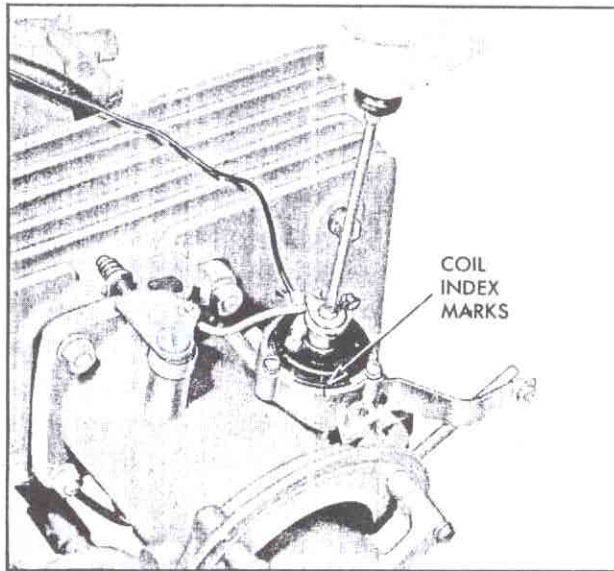


Fig. 174—Adjusting Cold Enrichment Rod Length

### Service Differences

From a diagnosis standpoint, the addition of the cranking signal valve and the integration of the boost and idle signals into the signal venturi signal line constitute the only changes that will alter the adjustments and diagnosis for the 7014900 fuel injection models over those provided for the 7014800 units covered earlier in these pages.

### COLD ENRICHMENT ROD LENGTH ADJUSTMENT

To adjust the length of the rod connecting the fast idle cam and counterweight lever on 7014900 units, the following procedure is recommended:

1. Check the thermostatic coil position. Properly installed, the stat housing should be indexed  $1\frac{1}{2}$  notches rich (fig. 174).

2. To hold the trip lever and the counter-weight tab together, twist the attaching screw its full limit clockwise. Then note the point where the fast idle screw contacts the cam. If rod length is correct, fast idle screw will touch at the center of the high step of the cam. Otherwise bend rod to lengthen or shorten as required to provide this adjustment.

### TROUBLE SHOOTING

#### Won't Start

1. Check for correct cold starting procedure. Accelerator should be depressed to the floor and then released to index the fast idle cam. If the driver holds the throttle open by keeping accelerator depressed, the additional air admitted may be causing the mixture to be too lean for combustion.

2. To check cranking signal valve operation, disconnect the hose connecting the cranking signal valve to the main control diaphragm. Attach a 2 or 3 foot length of windshield wiper hose to the open end of the tube, from the main control diaphragm. Lightly suck on the hose (about as hard as on a cigarette) while cranking the engine. If the engine now starts, it can be assumed that the cranking signal valve is stuck shut and must be replaced.

3. Check for fuel flow during cranking by loosening the fuel meter-to-distributor fuel line at the fuel meter. If fuel flows from the loose connection during cranking, retighten the fuel line connection and check for fuel flow at the nozzles by disconnecting one of the nozzle fuel lines. If fuel flows, the trouble is probably in the ignition system. However, if fuel flowed from the fuel meter line but does not flow from the nozzle line, the check valve in the 8-way fuel distributor is stuck shut. Free check valve or replace distributor.

4. If fuel flow does not occur after completing the check in step 3, check for a broken fuel meter pump drive cable. Also check for a defective engine fuel pump.

5. When none of the preceding will correct the trouble, it will be necessary to remove the fuel injector from the engine and check for a stuck spill plunger. If the spill plunger is free, either the main control diaphragm is ruptured or the internal linkage in the fuel meter is broken.

CONTINUED IN NEXT ISSUE STRAIGHT TALK