

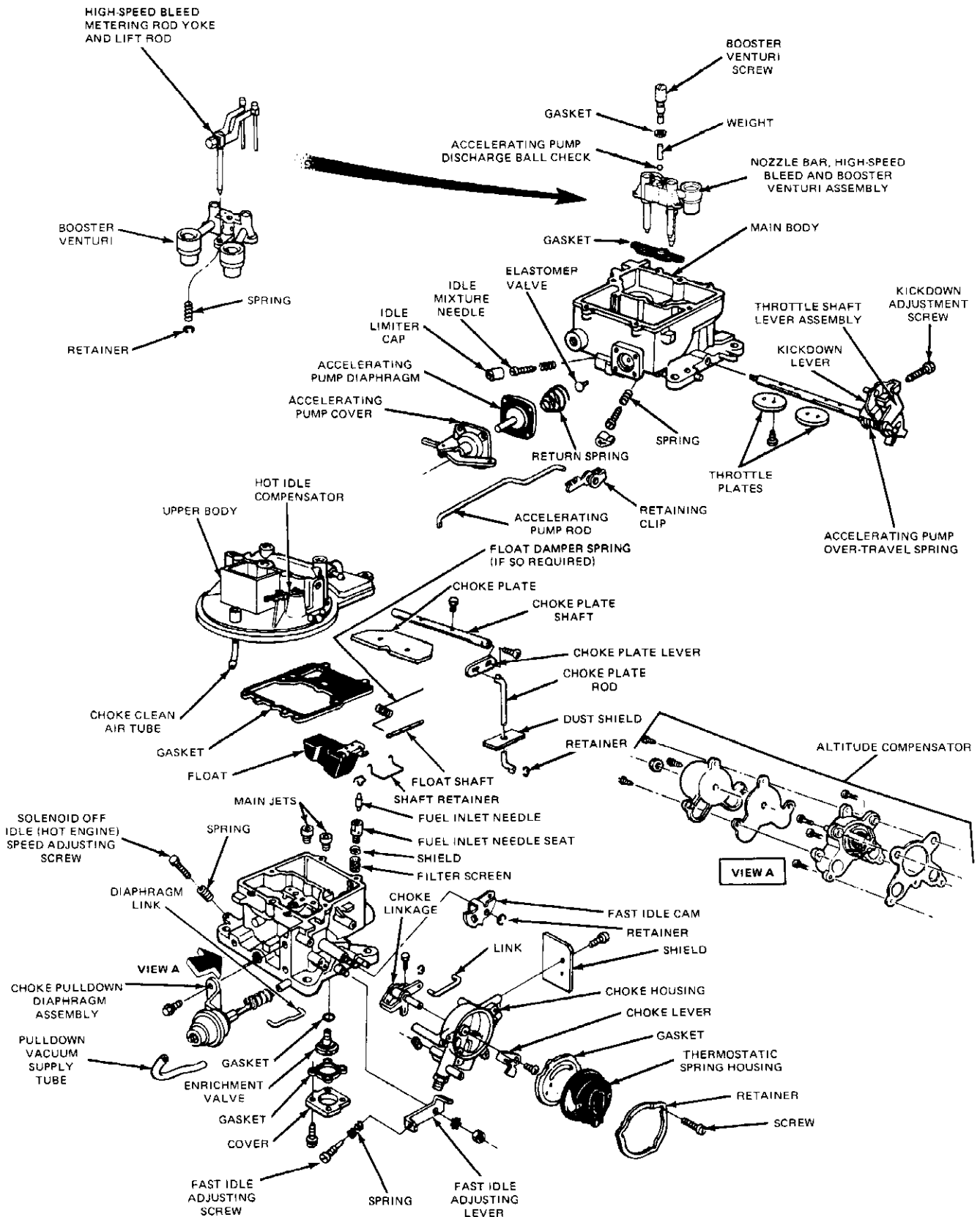


FIG. 27 Model 2150 2-V Carburetor—Disassembled View

16. Insert the float assembly into the fuel bowl and hook the float lever tab under the fuel inlet needle assembly. Insert the float shaft into its guides at the sides of the fuel bowl.
17. With a screwdriver, position the float shaft retainer in the groove on the fuel inlet needle seat (Fig. 23). Check the float setting. **Be sure the float does not interfere with the elastomer valve.**
18. Drop the accelerator pump discharge ball and weight (if removed during disassembly) into the passage in the main body.
19. Position the new booster assembly gasket and the booster venturi assembly in the main body. Install the accelerator pump discharge screw. Tighten the screw.

AUTOMATIC CHOKE

1. Position the fast idle cam lever on the thermostatic choke shaft and lever assembly. **The bottom of the fast idle cam lever adjusting screw must rest against the tang on the choke lever.** Insert the choke lever into the rear of the choke housing. Position the choke lever so that the hole in the lever is to the left side of the choke housing.
2. Install the fast idle cam rod on the fast idle cam lever. Place the fast idle cam on the fast idle cam rod and install the retainer. Place the choke housing vacuum pick-up port to main body gasket on the choke housing flange.
3. Position the choke housing on the main body and at the same time, install the fast idle cam on the hub on the main body. Position the gasket, and install the choke housing attaching screws. Install the fast idle cam retainer. Install the thermostatic spring housing.

CHOKE PULLDOWN DIAPHRAGM ASSEMBLY

Refer to procedure under Removal and Installation.

AIR HORN

Refer to Fig. 27 for the correct location of the parts.

1. If removed, position the bypass air choke plate shaft through the air horn, then install the bypass choke plate. Before tightening the mounting screws, check for proper fit and shaft rotation.
2. If the main choke plate shaft was removed, position the shaft in the air horn. Rotate the main choke plate shaft and connect the bypass choke link. Install the choke plate rod on the end of the main choke shaft.
3. If the choke plate was removed, insert the choke plate into the choke plate shaft. Install the choke plate screws snug, but not tight. Check for proper plate fit, binding in the air horn and free rotation of the shaft by moving the plate from the closed position to the open position. If necessary, remove the choke plate and grind or file the plate edge where it is binding or scraping the air horn wall. If the choke plate and shaft moves freely, tighten the choke plate screws while holding the choke in the fully closed position. Stake the choke plate screws by crimping the exposed threads with a diagonal cutter.
4. Position the fuel bowl gasket and the choke rod plastic seal on the main body. Position the air horn on the main body and gasket so that the choke plate rod fits through the seal and the opening in the main body.
5. Insert the end of the choke plate rod into the automatic choke lever. Install the air horn attaching screws and the carburetor identification tag. Tighten the attaching screws. Install the choke plate rod retainer. Install the air cleaner anchor screw. Tighten the air cleaner anchor screw to the specified torque.

Perform all automatic choke adjustments and other carburetor functions as required to meet specifications. See Group 29 for adjustments not covered in this Part.

Model 4350 4-V Carburetor

**PART
24-26**

7.5L (460 C.I.D.) V-8

SUBJECT	PAGE	SUBJECT	PAGE
DESCRIPTION		ADJUSTMENTS (Cont'd.)	
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Top Step Pulloff	26-2	Vacuum Piston and Metering	
General	26-1	Rods Adjustment	26-9
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DESCRIPTION

GENERAL

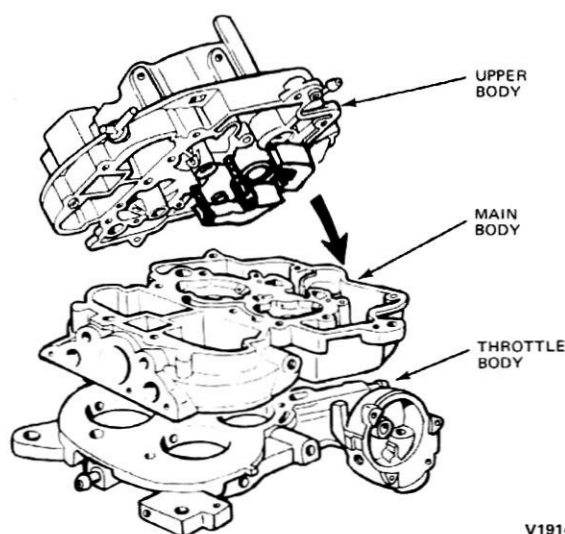
The Motorcraft Model 4350 4-V carburetor (Figs. 1, 2 and 3) has three main assemblies; the upper body, the main body and the throttle body.

The upper body, which serves as the main body cover, contains the choke plate, booster venturi assembly, the secondary air valve, accelerating pump plunger, mechanical fuel bowl vent valve and fuel inlet and float system.

The main body contains the fuel bowl and primary fuel metering system vacuum piston and rods.

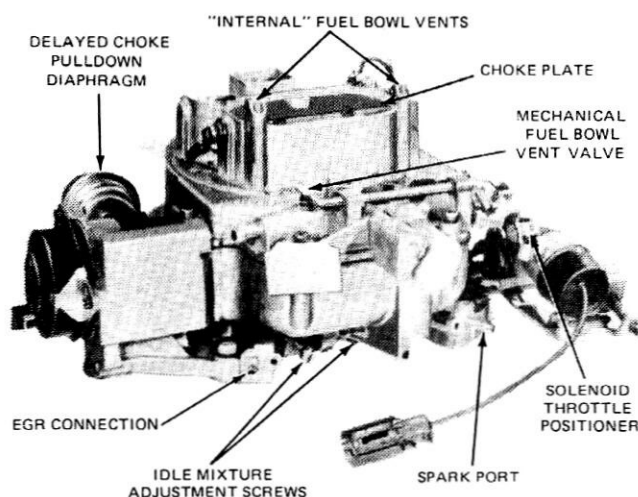
The throttle body contains both primary and secondary throttle plates. Primary throttle operation is from the accelerator linkage. Secondary throttle operation is accomplished by mechanical linkage from the primary throttle lever. A lockout tang coupled to the automatic choke linkage prevents operation until the choke is fully off. The secondary throttle shaft is split and loosely coupled in the center to allow tighter secondary throttle plate seating in the bores (Fig. 4).

Primary fuel metering is accomplished by tapered metering rods that are raised or lowered according to engine vacuum, limited by mechanical system that is



V1914-1B

FIG. 1 Model 4350 4-V Carburetor—Main Assemblies



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FIG. 2 Model 4350 4-V Carburetor—Front View

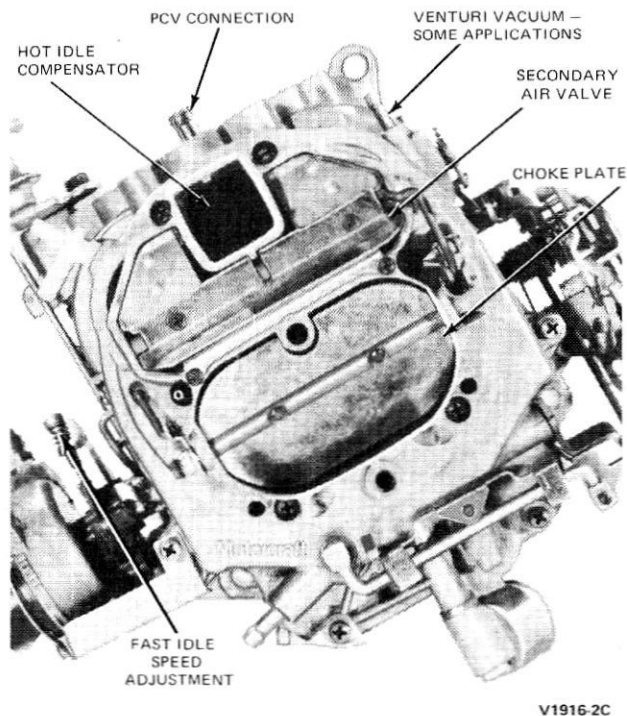


FIG. 3 Model 4350 4-V Carburetor—Top View Without Altitude Compensation

positioned according to throttle plate opening (Figs. 5 and 30). A lever on the acceleration pump operating shaft moves upward as the throttle is opened.

Under high engine vacuum conditions, the vacuum piston pulls the metering rods down into the main jets, causing a lean mixture to be delivered. Under acceleration, when engine vacuum is lowered, an internal spring causes the piston to rise. This puts the narrower part of the metering rod in the jet, causing a larger fuel opening and enriching the fuel mixture.

Fuel inlet to the fuel bowl is controlled by a twin pontoon type float (or two floats on police models) hinged to the upper body of the carburetor. The acceleration pump is piston type. The linkage and operating rod are part of the upper body, and the piston is suspended into the pump well in the fuel bowl.

The automatic choke system consists of a standard bimetallic thermostatic choke mechanism. Also, an electric assist is used when underhood temperatures are above 60°F. This system operates to assure full choke opening within a predetermined time of engine start.

The electric assist choke system consists of a choke cap, thermostatic spring, bimetallic temperature sensing disc (switch), and ceramic Positive Temperature Coefficient (PTC) heater (Fig. 6).

The choke is powered from the stator tap of the alternator, providing voltage to the system as long as the engine is running. The system is grounded through a ground strap connected to the carburetor body.

At temperatures below approximately 60°F., the switch is open and no current is supplied to the ceramic

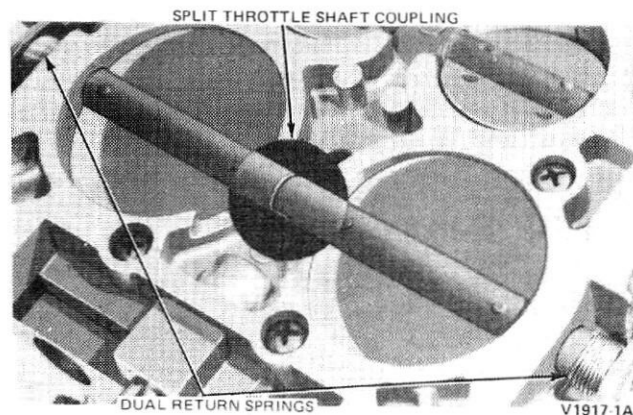


FIG. 4 Split Secondary Throttle Shaft

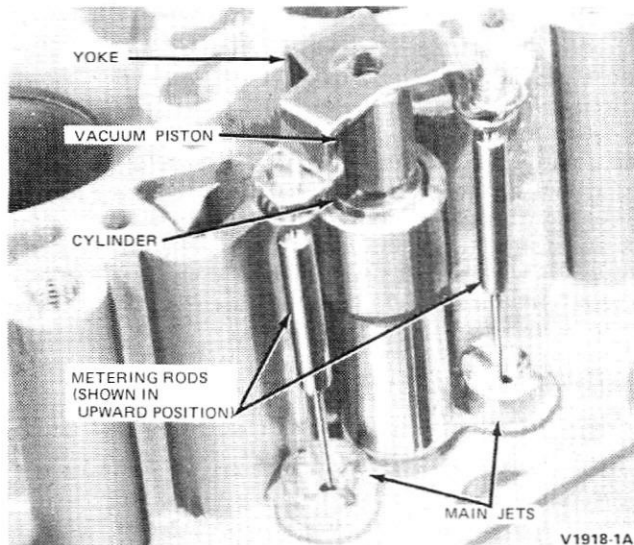


FIG. 5 Metering Rod Primary Metering System

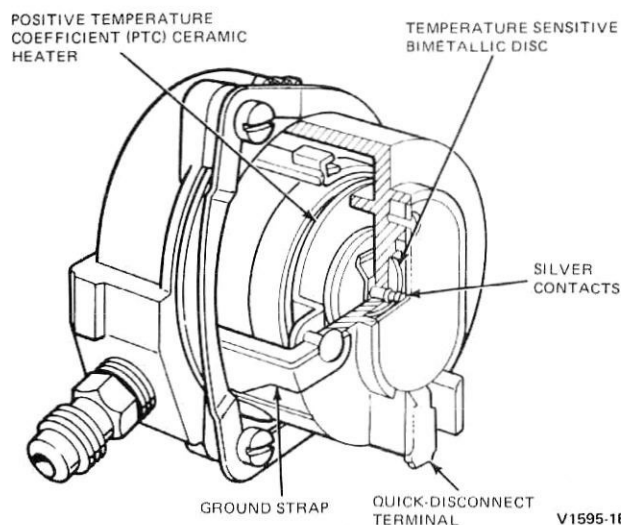


FIG. 6 Electric Assist Choke—Model 4350 4-V Carburetor

heater located within the thermostatic spring. Normal thermostatic choking action then occurs.

At temperatures above approximately 60°F., the temperature sensing switch closes and current is

supplied to the PTC ceramic heater. As the heater warms, it causes the thermostatic spring to pull the choke plate open within 70 seconds.

For test and adjustment information, refer to this Part and to Part 50-29.

DELAYED CHOKE PULLDOWN AND FAST IDLE TOP STEP PULLOFF

The Motorcraft 4350 4-V carburetor is equipped with a unique, vacuum-operated delayed choke pulldown diaphragm. This system operates in addition to the usual choke pulldown system in the choke housing.

The remotely-mounted delayed choke pulldown diaphragm assembly is connected to the automatic choke linkage by an override linkage (Fig. 7).

When the engine is first started, the piston inside the choke housing pulls the choke plate slightly open (initial choke pulldown). This is accomplished with engine vacuum through internal passages in the carburetor. At the same time, vacuum bleeds to the delayed choke pulldown diaphragm. When the delayed pulldown diaphragm is fully retracted (about 6-18 seconds after engine start) it opens the choke to the delayed pulldown setting. At the same time, linkage pulls the fast idle screw from the top step of the fast idle cam to the kickdown step.

HIGH ALTITUDE COMPENSATION

Some Carburetors Built for High Altitude Operation

Some Motorcraft Model 4350 4-V carburetors are equipped with altitude compensation, designed to provide improved high-altitude emission control and driveability (Fig. 8).

Intake air entering the by-pass intake is metered into the air flow below the primary, thus making for a leaner mixture needed at higher altitudes. Air flow is controlled by a valve activated by an aneroid attached to the rear of the carburetor main body housing.

To provide improved high-altitude cold engine starts, the bypass intake is equipped with a choke plate linked to the main choke system.

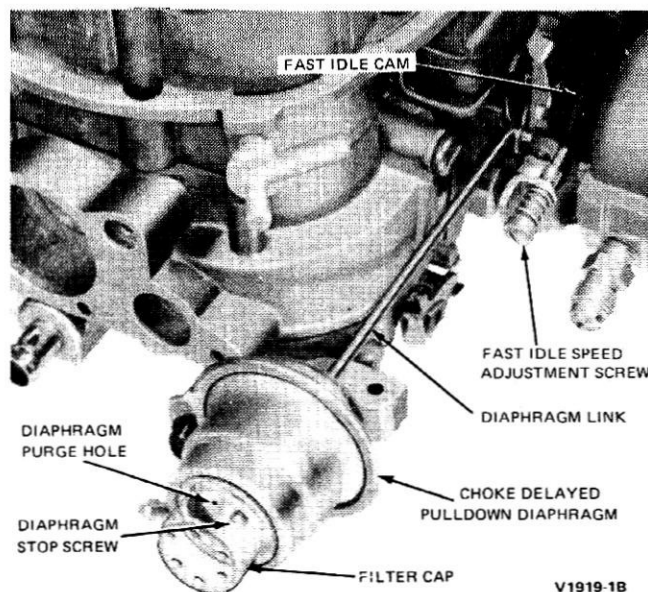


FIG. 7 Delayed Choke Pulldown and Fast Idle Top Step Pulloff Diaphragm

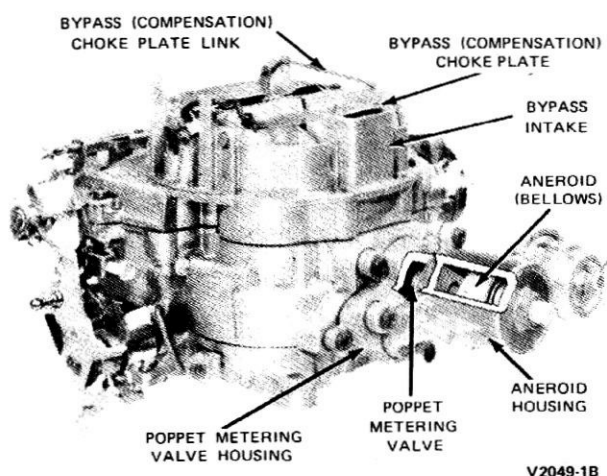


FIG. 8 Motorcraft Model 4350 4-V Carburetor With Altitude Compensation (Cutaway View)

ADJUSTMENT

Most carburetor adjustments are set at assembly, based on guidelines established for reduced engine emission and acceptable driveability.

Adjustments not covered in this Part will be found in Part 29-02 or Part 50-29. Adjustment points for all carburetor adjustments are shown in Figs. 8 thru 22.

ACCELERATOR PUMP ADJUSTMENT

The accelerator pump has only two adjustments, a piston-to-shaft pin position which is set at the factory to deliver the proper amount of fuel for the engine on which it is installed, and a capacity adjustment which should only be made if the operating arm is replaced.

This setting should not be changed from the specified adjustment (Fig. 12).

The control rod that operates the accelerator pump also operates the limiter that controls the height of the main metering rod piston (Fig. 13).

Do not turn the vacuum piston limiter adjusting nut in order to adjust the stroke of the accelerator pump. This adjustment is set at the factory and changing it could affect drivability of the vehicle.

Remove the upper body assembly and invert it (see Removal and Installation).