

CARTER RBS SINGLE BARREL

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Motorcraft Carburetor Number

Application Auto. Trans.
250" 6 Cyl..... D30F-CA

CARBURETOR IDENTIFICATION

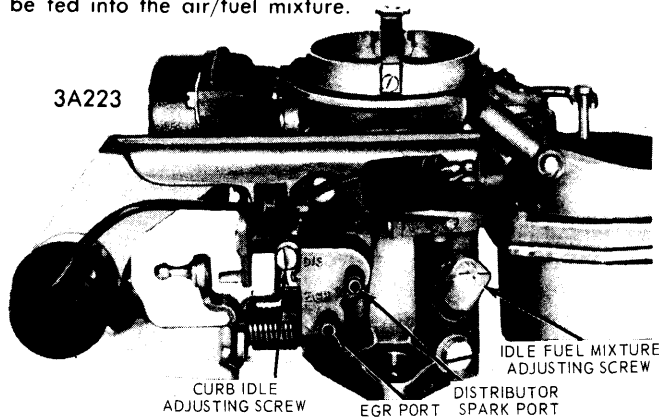
Carter or Motorcraft number stamped on a metal tag attached to air horn. Lower line of characters and digits on tag designates design or production changes and production date information. Carburetor number, as designated above, will also be on identification tag.

DESCRIPTION

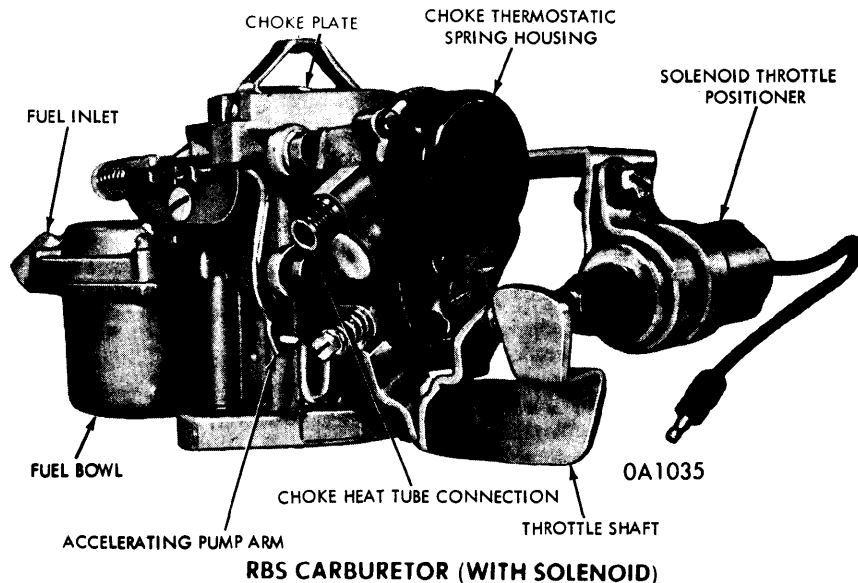
Single venturi design with aluminum body casting and pressed steel fuel bowl. Two internal vapor vents provide for fuel vapor dissipation. Metering rod is diaphragm controlled, accelerating pump is spring actuated, and the integral automatic choke has a vacuum piston in the thermostatic spring chamber. A solenoid throttle-positioner is used to control idle. An Exhaust Gas Recirculation port connects to primary bore and allows a metered amount of exhaust gas to be fed into the air/fuel mixture.

► **NOTE** — Do not attempt to adjust or tamper with idle mixture screws locked in position with plastic limiter caps. If limiter caps and idle mixture screws are removed for carburetor overhaul, fuel bowl or throttle body replacement, special procedure is required to correctly readjust idle mixture screws. See appropriate article in Tune-Up section of Exhaust Emission Manual.

Adjust with engine at normal operating temperature (choke valve wide open and fast idle not operative), air cleaner installed, automatic transmission in "D", air conditioner OFF and headlights OFF. On vehicles equipped with an anti-stall dashpot, adjust engine curb idle using curb idle adjusting screw. If it is not possible to make carburetor adjustment with air cleaner installed, make adjustment with it removed, reinstall and check idle speed. On vehicle equipped with a throttle solenoid, turn solenoid plunger in or out to obtain specified RPM. On California vehicles, turn either the solenoid plunger or screw contacting the plunger. Disconnect solenoid lead wire and adjust idle to 500 RPM in "N". Reconnect solenoid lead wire and open throttle lever slightly by hand and note that solenoid plunger follows throttle lever to provide specified higher idle speed. Turn idle mixture screw inward to obtain the smoothest idle possible within the range of limiter cap.

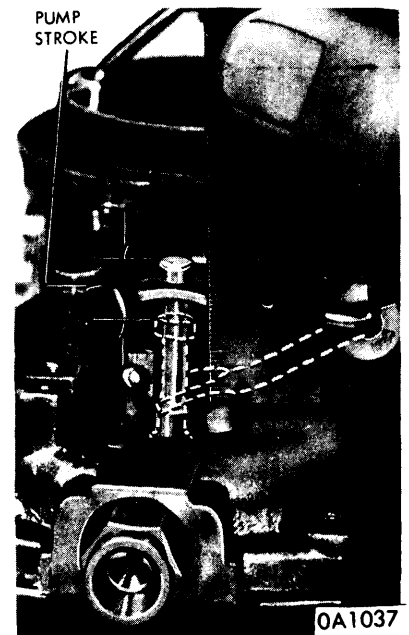


EGR PORT LOCATION



RBS CARBURETOR (WITH SOLENOID)

Curb idle speed and mixture must be correct before setting fast idle speed. Disconnect vacuum line from carburetor spark port and distributor vacuum advance unit and run a jumper hose directly between these points. With engine at normal operating temperature, air cleaner removed and tachometer connected, position fast idle adjusting screw on kickdown step of fast idle cam and check RPM. Adjust to specifications on engine tune-up decal by turning fast idle speed screw as required.

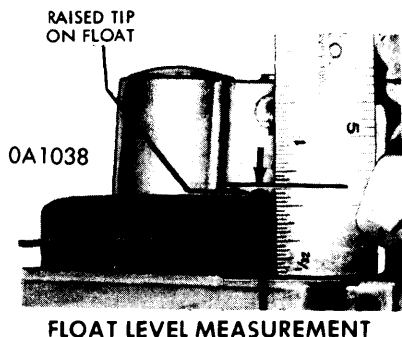


ACCELERATING PUMP STROKE

CARTER RBS SINGLE BARREL (Cont.)

Float Level

With carburetor assembly inverted (bowl and bowl gasket removed) and with only the weight of the float resting on inlet needle, measure the vertical distance from the main body casting surface for the fuel bowl to the raised tips on the outer side of float. Measure for specified setting at both ends of float, equalize the measurement, if necessary by holding float lever securely at the narrow portion with needle-nose pliers and twisting the float as required. While holding tab, float may be adjusted to specification. **NOTE** - Hold tab of float lever away from inlet needle during adjustment.



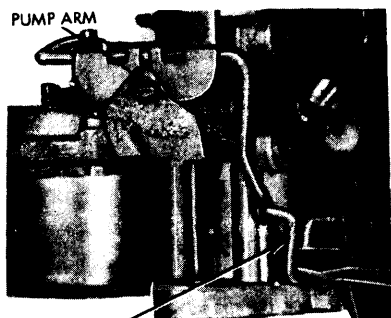
FLOAT LEVEL MEASUREMENT

Accelerating Pump

Ford Models 1) - Back off idle speed adjusting screw, open choke valve, seat throttle valve in bore.

2) Measure distance or height from flat surface of main body casting to top of pump stem. Open throttle wide and again measure height. Pump stroke (see Specifications) is difference between two measurements.

3) To adjust stroke, open or close pump connector link at offset portion.



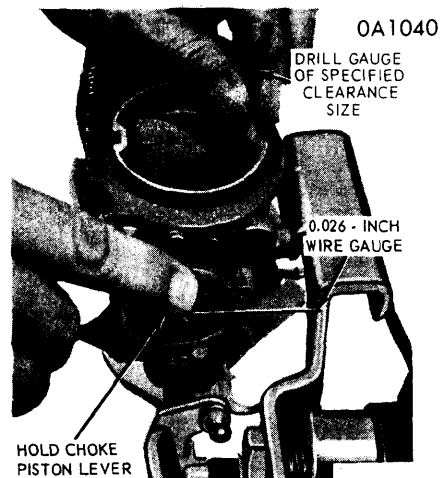
PUMP STROKE ADJUSTMENT

Unloader

With throttle valve wide open, clearance between lower edge of choke valve and wall of air horn should be as indicated in table. To adjust, bend tang on throttle lever.

Choke Valve Pulldown

Bend a .026" wire gauge 90° approximately 1/8" from its end. Open choke valve and place gauge so bent portion is between top of slot in choke piston cylinder and bottom of slot in piston. While holding wire gauge in place, close choke valve by pressing piston lever in choke housing counterclockwise until gauge is snug in piston slot. While exerting light pressure on piston lever to hold gauge in place, measure clearance between lower edge of choke valve and air horn wall using correct size drill rod (see Specifications). If clearance not correct adjust by bending choke piston lever as required. **CAUTION** - Remove piston lever for bending - use care not to distort piston link.



HOLD CHOKE PISTON LEVER

CHOKE PISTON LINKAGE

Automatic Choke

Loosen choke cover screws and rotate choke cover and coil assembly to align reference mark on cover with correct graduation of scale on housing (see Specifications).

CARBURETOR ADJUSTMENT SPECIFICATIONS

Motorcraft Number	Idle Speed (Engine RPM)		Float Level Setting	Accel. Pump Setting	Choke Pull-Down	Unloader Setting	Auto. Choke Setting
	Hot	Fast					
D30F-CA	⊙	1600	9/16"	.400"	.300"	.250"	1 Rich

(⊙) - Set to specifications shown on engine tune-up decal located in engine compartment.

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OVERHAUL

Disassembly

1) Remove anti-stall dashpot or throttle positioner solenoid and bracket as an assembly (when used). Remove automatic choke cover and coil assembly and gasket. Remove choke piston lever screw from end of choke shaft, remove piston lever, choke piston and link as an assembly. Remove air cleaner anchor screw bracket from air horn.

2) Remove fork lever from choke shaft, remove staking and take out choke valve screws, remove valve and slide choke shaft out.

3) Remove fast idle cam retainer and plastic collar, remove cam and disengage connector rod from cam and choke shaft fork lever. Remove pump arm connector link, free retaining spring from pump arm at plunger end, remove pump arm retainer screw and retainer, then remove pump arm, spring, and plastic sleeve.

4) Take out fuel bowl attaching screws, remove bowl and gasket. Remove float pin attaching screws, remove float pin, float, fuel inlet needle valve and seat assembly.

5) Use a light hammer to tap down on upper end of pump plunger shaft to remove cover on lower face of casting, **CAUTION** - Pump plunger and spring will drop out with cover.

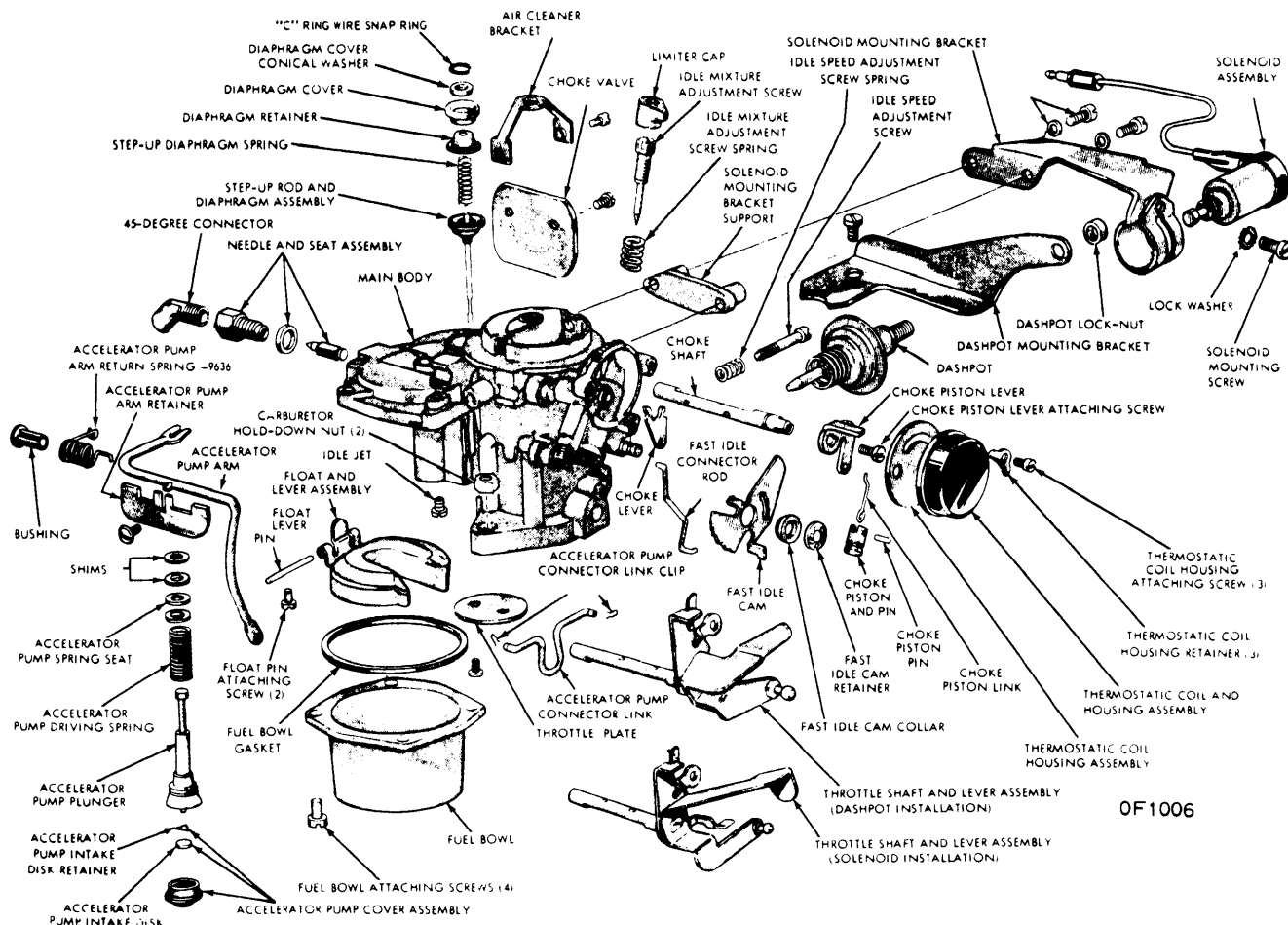
6) Remove snap ring and pry conical washer out of upper end of step-up metering rod diaphragm housing, pierce diaphragm cover with a sharp pointed tool and pry cover out, remove diaphragm retainer, spring, and diaphragm and step-up metering rod assembly.

7) If necessary to remove throttle valve or shaft, scribe throttle plate and lower face of mounting flange lightly for correct installation. remove staking from throttle valve screws with a file, remove screws, lift out valve and slide throttle shaft and lever assembly out.

8) Remove (plastic) idle limiter cap, being certain to note position of tab. After removing limiter cap, count the number of turns necessary to lightly seat needle (this will aid in reassembly). Remove idle mixture screw and spring, fast idle speed screw and spring, and idle speed screw and spring. **CAUTION** - Do not disturb or attempt to remove slotted idle passage plug, located directly below idle mixture adjusting screw, as this screw is pressed in and any change in position will affect idle performance.

Cleaning & Inspection

Wash all parts except pump diaphragm, power valve, step-up rod diaphragm, dashpot and throttle positioner solenoid in clean carburetor solvent, rinse in kerosene and dry with



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CARTER RBS SINGLE BARREL CARBURETOR ASSEMBLY

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compressed air. Wipe all parts which can not be immersed in solvent with clean cloth. Blow out all passages with air. Check all parts for wear or damage.

Reassembly

Use all new gaskets, reassemble carburetor by reversing disassembly procedure while noting the following:

Accelerating Pump Assembly – Install pump plunger with spring, spring seat, and shims in carburetor body. Install new cover on bottom of body, use a 5/8" socket to press on outer edge of cover and tap with light hammer to seat cover on bottom of carburetor body.

Step-Up Metering Rod & Diaphragm Assembly – Install idle jet in main body. Insert metering rod in sleeve in casting and drop into place in main body, position diaphragm spring and retainer over diaphragm. Install new diaphragm cover. Use 1/2" socket and light hammer to

seat diaphragm cover in casting. Install new conical washer over diaphragm cover and use a 7/16" socket and light hammer to tap washer down until it is flat in main body.

Throttle Valve Installation – Install valve on shaft with scribe marks (made during disassembly) aligned, install valve screw just snug. Close valve and check alignment by holding main body up to light – little or no light should show around valve. Tap valve lightly to seat it and hold valve closed while tightening screws securely. Stake attaching screws while supporting shaft with a metal bar or block of wood.

Choke Valve Installation – Center choke valve in same manner as throttle valve (above) while tightening screws.

Idle Mixture Adjusting Screw & Limiter Cap – Install adjusting screw and spring, but do not install limiter cap until after carburetor has been installed on engine and idle mixture adjusted.