

HITACHI DCS 328 2-BARREL

Courier (2000 cc & 2300 cc)

DESCRIPTION

Carburetor is a 2-stage, 2-barrel downdraft type. The primary stage includes a curb idle system, a piston-type accelerator pump system, idle transfer system, main metering system and power enrichment system. The secondary stage includes an idle transfer system and main metering system. An electric heater warms a bi-metal connected to the choke valve, controlling choke valve and throttle valve position automatically. Carburetor also features a coasting richer (deceleration) valve, slow fuel cut valve, secondary throttle diaphragm and dash pot (Calif. Man. Trans.).

| CARBURETOR IDENTIFICATION | |
|---------------------------|----------------|
| Application | Carburetor No. |
| 2000 cc | |
| Federal | 215282-B21 |
| Calif. | 215282-B31 |
| 2300 cc | |
| Federal | DCS328-8 |
| Calif. | DCS328-7 |

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate TUNE-UP SERVICE PROCEDURES article.

IDLE MIXTURE

See appropriate TUNE-UP SERVICE PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP SERVICE PROCEDURES article.

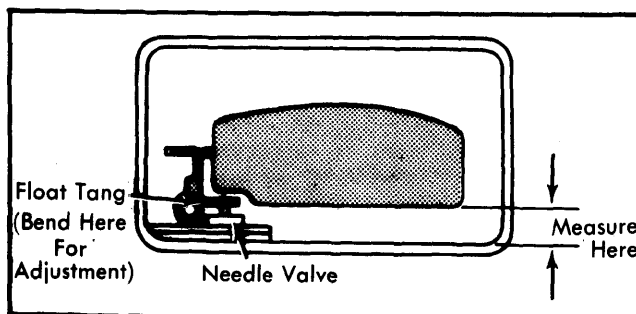


Fig. 1 Measurement for Float Level Adjustment (Carburetor Upside-Down)

FLOAT LEVEL

With engine running, check fuel level in bowl sight glass. If fuel level is not within specified range, remove carburetor from engine. Remove fuel bowl cover and invert carburetor. Allow

float to lower by its own weight. Measure clearance between float and edge of bowl. If clearance is not to specifications, bend float tang to achieve proper clearance. See Fig. 1.

FAST IDLE CAM ADJUSTMENT

Close choke valve fully. Place fast idle screw on the high (1st) step of fast idle cam. Adjust throttle valve opening clearance by turning fast idle adjusting screw clockwise to increase or counterclockwise to decrease the opening clearance. See Fig. 2.

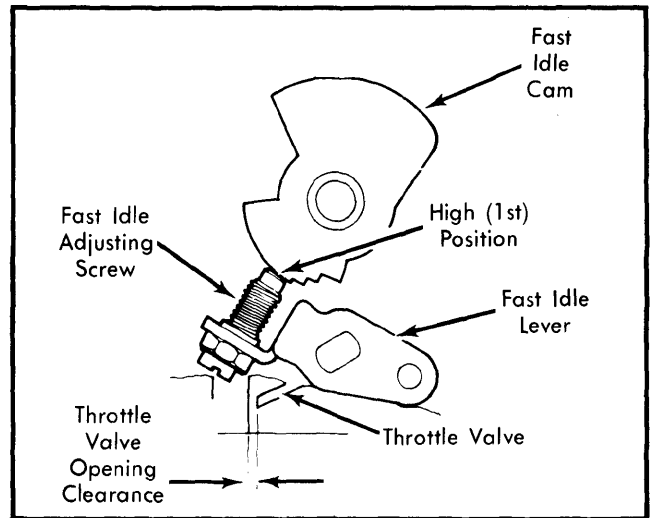


Fig. 2 Adjusting Fast Idle Cam

CHOKE VALVE OPENING ANGLE ADJUSTMENT

Adjust fast idle cam. Position fast idle adjusting screw on 2nd step of fast idle cam. See Fig. 3. Adjust choke valve opening clearance to specification by bending starting arm. If a large adjustment is needed, bend choke rod.

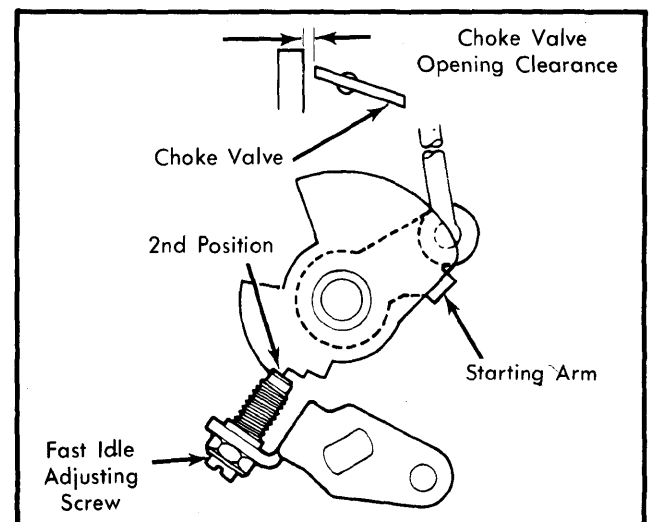


Fig. 3 Adjusting Choke Valve Opening Clearance

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CHOKE DIAPHRAGM ADJUSTMENT

Apply approximately 15.6 in.Hg vacuum to choke diaphragm vacuum tube. See Fig. 4. Check that fast idle cam is on high (1st) position. Press choke valve slightly, then adjust choke valve opening to specifications by bending choke lever.

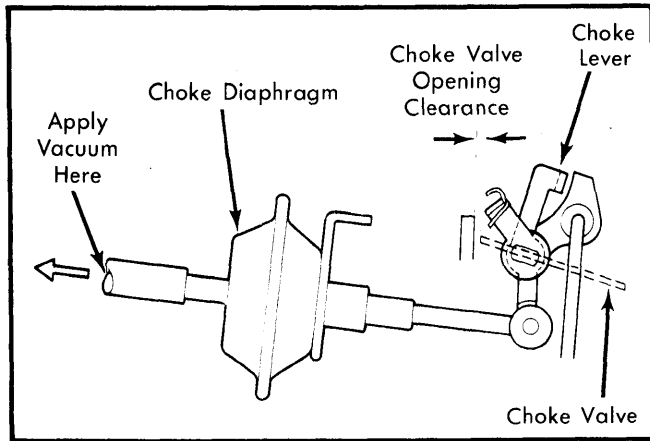


Fig. 4 Adjusting Choke Diaphragm Clearance

CHOKE UNLOADER ADJUSTMENT

Close choke valve fully. Open primary throttle valve fully. Measure choke valve opening clearance. See Fig. 5. Bend unloader adjusting nail to obtain specified clearance.

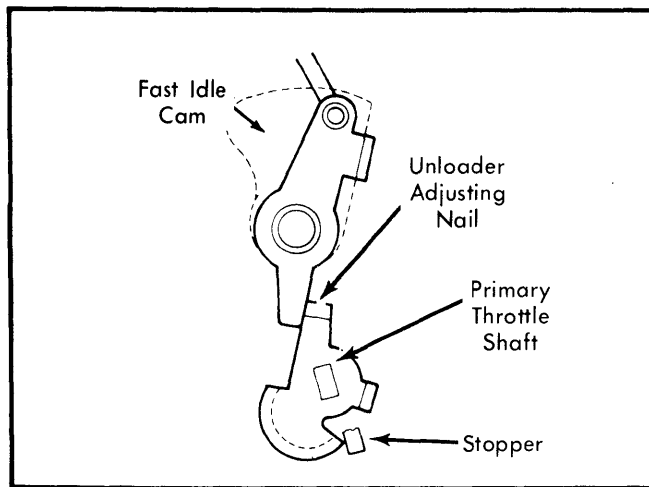


Fig. 5 Adjusting Choke Unloader

AUTOMATIC CHOKE ADJUSTMENT

Be sure bi-metal (thermostat) cover is positioned over choke arm so bi-metal spring hooks the arm. Check operation of choke valve by turning bi-metal cover. To set, align index mark on bi-metal cover with center mark on choke housing. Tighten attaching screws. See Fig. 6.

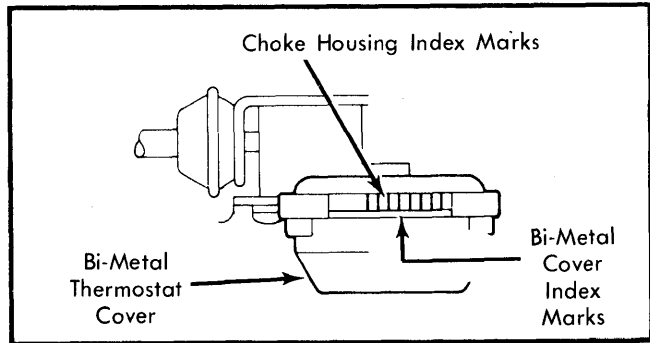


Fig. 6 Adjusting Automatic Choke

OVERHAUL

DISASSEMBLY

Air Horn - 1) Unhook and remove throttle return spring and remove vacuum sensing tube from choke diaphragm. Remove clip fastening choke thermostat lead to diaphragm cover and remove lead.

2) Remove accelerator pump rod from lever. Remove clip fastening pump lever to pump shaft and remove lever.

NOTE - On 2300 cc engines, it is also necessary to loosen screw in pump lever.

3) Remove clip and remove choke rod from starting arm.

NOTE - On 2300 cc engines, it is also necessary to unhook unloader return spring.

4) Mark position of choke thermostat cover index mark on choke housing.

5) Remove screws fastening air horn to main body and remove air horn and choke thermostat assembly. Remove choke thermostat cover by removing screws.

NOTE - On 2300 cc engines, it is necessary to grind off rivet heads to remove thermostat cover.

6) On 2000 cc engines, remove screws fastening choke thermostat to air horn and remove choke thermostat housing.

7) On all models, remove clip and remove choke diaphragm rod from choke lever. Remove screws and remove choke diaphragm and bracket assembly.

Main Body - 1) Remove screws fastening throttle body to main body, then remove main body and gasket from throttle body. Remove fuel cut valve.

2) On 2300 cc engines, remove screws fastening coasting richer valve to main body and remove coasting richer solenoid valve.

3) On all models, remove bolt fastening fuel inlet fitting to main body and remove fitting. Remove fuel strainer and then remove fuel inlet bolt and needle valve assembly.

4) Remove screws fastening fuel bowl sight glass cover and remove cover gasket, glass and rubber gasket from main body. Remove float lever pin, then remove float.

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5) Remove accelerator pump plunger boot and plunger assembly. Remove plunger spring, then invert carburetor and remove inlet check ball.

NOTE — On 2300 cc engines, remove screws fastening accelerator pump plunger to main body and remove cover plunger and gasket.

6) Remove screw and washer that retain pump discharge weight and ball, invert carburetor, and remove weight, spring and check ball.

7) Remove jets, emulsion tubes, power valve and all air bleeds from main body.

8) On 2300 cc engines, remove screws fastening diaphragm chamber to main body and remove diaphragm chamber assembly.

Throttle Body (2000 cc Engines Only) — 1) Remove cotter pin and washer, then disconnect throttle. Remove the screws fastening throttle lever bracket to diaphragm chamber and remove throttle lever bracket. Remove diaphragm cover and diaphragm return spring.

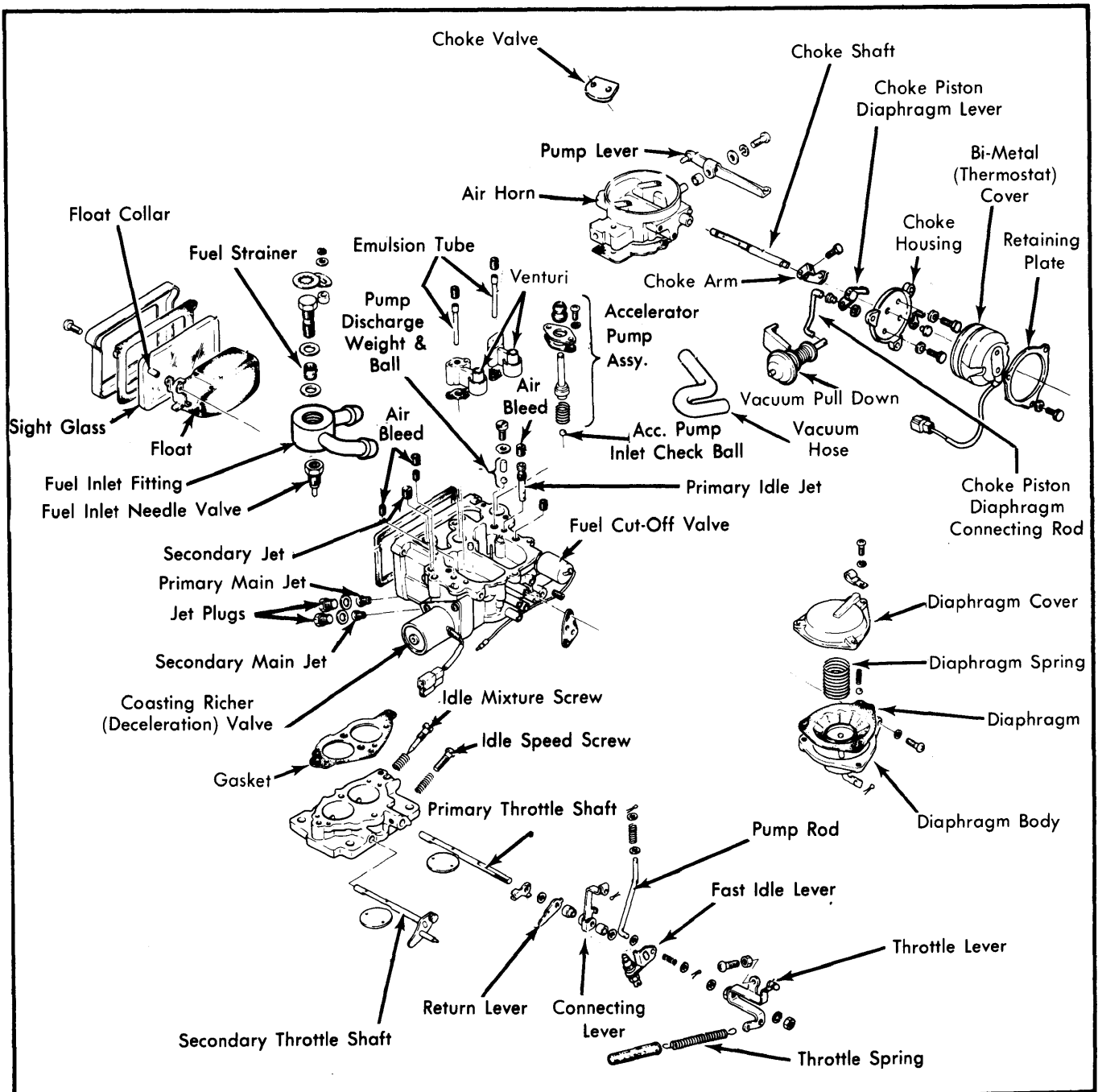


Fig. 7 Exploded View of Hitachi DCS 328 2-Barrel Carburetor (Ford Courier 2300)

1981 Hitachi Carburetors

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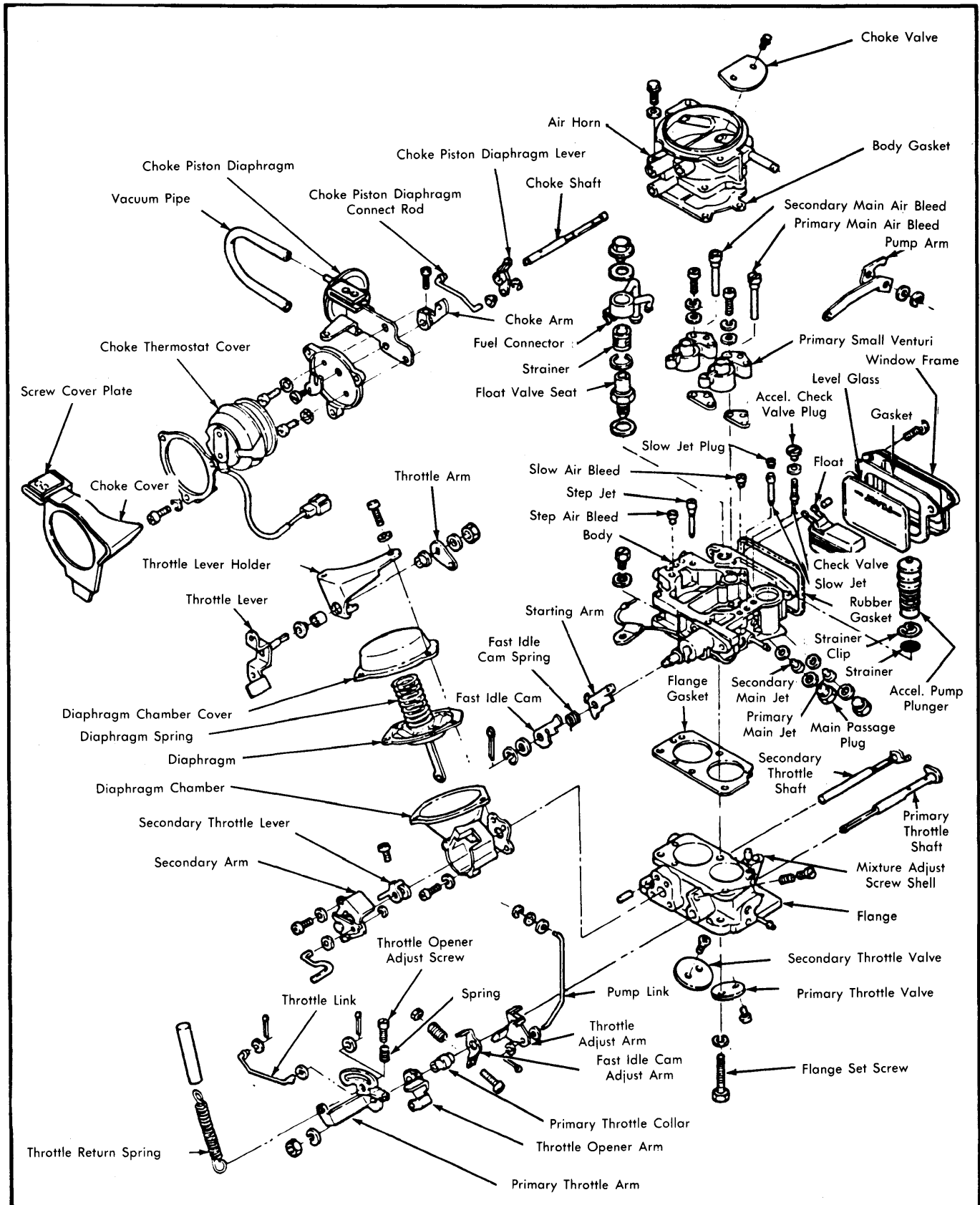


Fig. 8 Exploded View of Hitachi DCS 328 2-Barrel Carburetor (Ford Courier 2000)

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2) Remove clip and disconnect secondary throttle rod. Unhook secondary arm spring from bolt and loosen bolt and screw. Remove secondary arm and spring assembly from diaphragm chamber.

3) Remove clip from diaphragm rod and remove diaphragm. Loosen screw and remove secondary throttle lever from secondary throttle shaft.

4) Remove three screws fastening diaphragm chamber to throttle body and remove diaphragm chamber.

5) Remove mixture adjust screw cap by pulling entire shell outward while turning it counterclockwise, or shell can be cut off. Remove mixture adjusting screw from throttle body.

INSPECTION & CLEANING

Clean all parts thoroughly in solvent and check all passages and parts for wear or damage. Make sure that all jets are clear and clean. Do not attempt to clean jets by using wire or other objects which might damage calibrated orifices. Discard old gaskets and use new gaskets for assembly.

REASSEMBLY

Reassemble carburetor in reverse order of disassembly. Make sure that primary and secondary components are installed in their correct locations. When installing throttle valve or choke valve, make sure to eliminate gap between valve and wall of carburetor. When assembling float, ensure float collar is installed.

| CARBURETOR ADJUSTMENT SPECIFICATIONS | | | | | |
|--------------------------------------|----------------------------------|------------------------------------|--|---------------------------------------|------------------------------------|
| Application | Fast Idle Adjustment In. (mm) | Choke Valve Adjustment In. (mm) | Choke Diaphragm Adjustment In. (mm) | Choke Unloader Adjustment In. (mm) | Float Level Adjustment In. (mm) |
| Courier 2000cc Eng. Federal | .051-.059 (1.3-1.5) | .016-.028 (0.4-0.7) | .047-.067 (1.2-1.7) | .079-.099 (2.0-2.5) | .335 (8.5) |
| | .051-.059 (1.3-1.5) | .024-.036 (0.6-0.9) | .065-.085 (1.7-2.2) | .079-.099 (2.0-2.5) | .335 (8.5) |
| 2300cc Eng. Federal | .058-.066 (1.5-1.7) | .039-.051 (1.0-1.3) | .051-.071 (1.3-1.8) | .090-.110 (2.3-2.8) | .236 (6.0) |
| | .061-.071 (1.6-1.8) | .041-.067 (1.1-1.7) | .063-.079 (1.6-2.0) | .094-.126 (2.4-3.2) | .236 (6.0) |