

HITACHI DCG 306, DCH 306, DCJ 306 & DCP 306 2 BARREL

Datsun 210 & 310
Mazda GLC
Subaru

COLD (FAST) IDLE RPM

See appropriate Tune-Up article in TUNE-UP section.

DESCRIPTION

Carburetor is a two barrel downdraft design with primary and secondary throttle systems. A choke valve and idle circuit are used in primary system only. Both primary and secondary venturis have main fuel nozzles. When the primary throttle valve is nearly wide open, secondary throttle valve begins to open. An auxiliary throttle valve, located above secondary throttle valve, provides smooth operation as secondary begins to open. A mechanical accelerator pump and vacuum operated power valve are used for increased fuel requirements. An anti-dieseling solenoid valve is used to stop fuel flow in idle circuit (on some models) when the ignition switch is turned off. To control exhaust emissions, Subaru uses a coasting by-pass system, Mazda an anti-afterburn valve and throttle opener system, and Datsun uses a throttle opener control system (except on California models). All models use an electric choke system. Some models use an altitude compensation device to maintain optimum air/fuel ratio at higher altitudes as the air becomes less dense.

CARBURETOR IDENTIFICATION

Application	Hitachi Carb. No.	
	Man. Trans.	Auto. Trans.
Datsun		
210 Models		
1237 cc		
Federal	DCH306-105 .....	.....
Calif.	DCH306-115 .....	.....
1397 cc		
Federal	DCH306-100 .....	.....
Calif.	DCH306-110 .....	.....
1488 cc		
Federal .....	.....	DCH306-101
Calif. ....	.....	DCH306-111
310 Models		
1397 cc		
Federal	DCH306-102 .....	.....
Calif.	DCH306-112 .....	.....
Mazda GLC	DCG306	DCG306
Subaru		
Federal	①DCP306-4	②DCP306-3
	③DCJ306-15	④DCP306-5
Calif.	DCP306-1	DCP306-2

- ① - Hatchback, Sedan and Hardtop.
- ② - Except Station Wagon.
- ③ - Except Hatchback, Sedan and Hardtop.
- ④ - Station Wagon only.

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate Tune-Up article in TUNE-UP section.

IDLE MIXTURE

See appropriate Tune-Up article in TUNE-UP section.

FLOAT LEVEL

NOTE - Float level may be checked through the sight glass of the float chamber. If fuel is not within .06" (1.5 mm) of the mark with engine idling, remove air horn and proceed according to the following steps.

1) With air horn removed and inverted, raise float and lower it slowly until it just touches needle valve. Measure distance between float and air horn gasket surface (gasket removed).

2) Bend tang to adjust to specifications. See Carburetor Adjustment Specifications table for correct specifications.

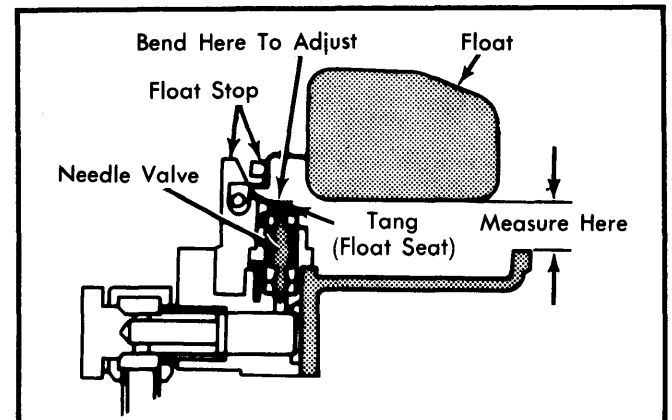


Fig. 1 Float Level Measurement and Adjustment Points

FLOAT DROP

After checking float level, raise float until float stop contacts air horn projection. With float held up in this position, measure clearance between float tang and needle valve seat. If clearance is not to specifications, adjust by bending float stop. See Carburetor Adjustment Specifications table for correct specifications.

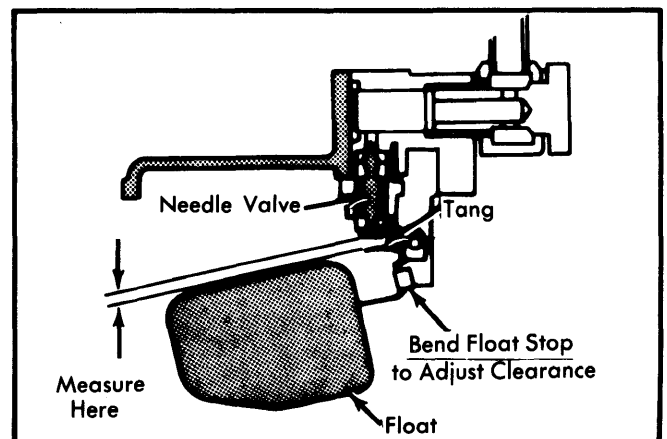


Fig. 2 Float Drop Measurement and Adjustment Points

HITACHI DCG 306, DCH 306, DCJ 306 & DCP 306 2-BARREL (Cont.)

FAST IDLE (OFF CAR)

Datsun - With choke cover removed, place fast idle adjusting screw on second step of fast idle cam and measure clearance between primary throttle plate and throttle bore. See Fig. 3. To adjust, turn fast idle screw to the following specifications:

DCH306-105 .....	.025-.032" (.63-.80 mm)
DCH306-101 and DCH306-111 ....	.039-.046" (.98-1.17 mm)
DCH306-100, DCH306-102, and DCH306-112 .....	.028-.035" (.72-.89 mm)

Mazda - Ensure that long arm of cam lever is on high (first) step of fast idle cam and hold choke fully in closed position. Measure clearance of .054" (1.37 mm) between throttle plate and bore wall. If necessary to adjust, turn screw clockwise to increase or counterclockwise to decrease clearance.

Subaru - With choke in closed position, place fast idle lever on first (highest) step of fast idle cam. Adjust fast idle screw to obtain throttle plate-to-throttle bore clearance as follows:

Auto. Trans. ....	.060" (1.5 mm)
Man. Trans.	
Calif. ....	.052" (1.3 mm)
Fed. Hatchback, Sedan & Hardtop .....	.041" (1.1 mm)
All Others .....	.050" (1.27 mm)

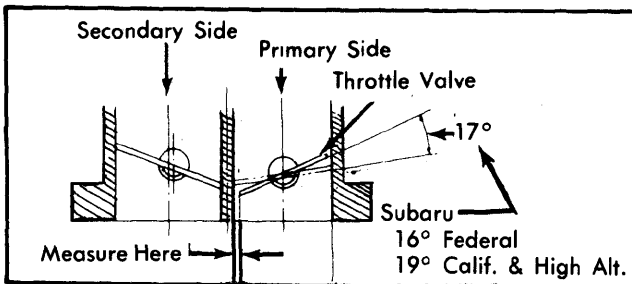


Fig. 3 Fast Idle Bench Adjustment

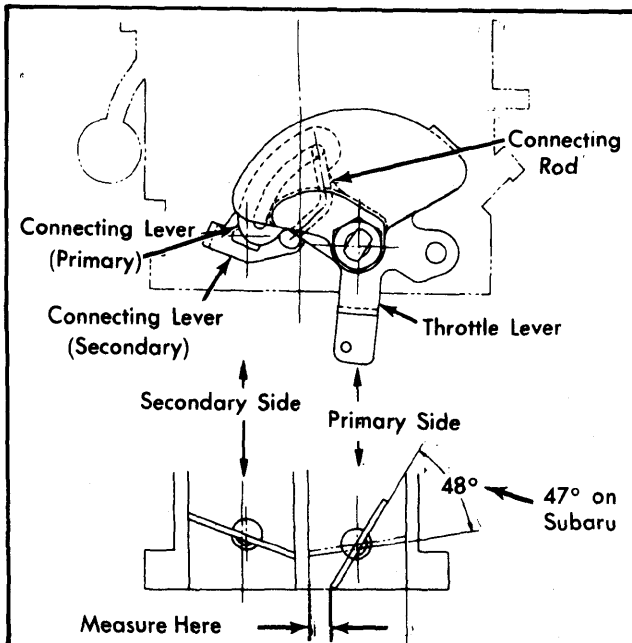


Fig. 4 Secondary Throttle Initial Opening Adjustment

SECONDARY THROTTLE INITIAL OPENING

All Models - With primary-to-secondary throttle connecting rod contacting end of slot in primary throttle lever, measure clearance between primary throttle plate and bore. If adjustment is necessary, bend connecting rod to obtain specified clearance. See Carburetor Adjustment Specifications table for correct specifications. See Fig. 4.

VACUUM BREAK

All Models - Open throttle and close choke. Release throttle lever first, to trap choke closed. Remove choke cover, and using rubber band, hold choke valve closed. Manually pull vacuum break diaphragm stem out fully (keep straight) in order to compress diaphragm. Measure clearance between choke valve and air horn wall. If adjustment is necessary, bend vacuum break connecting rod. See Fig. 5.

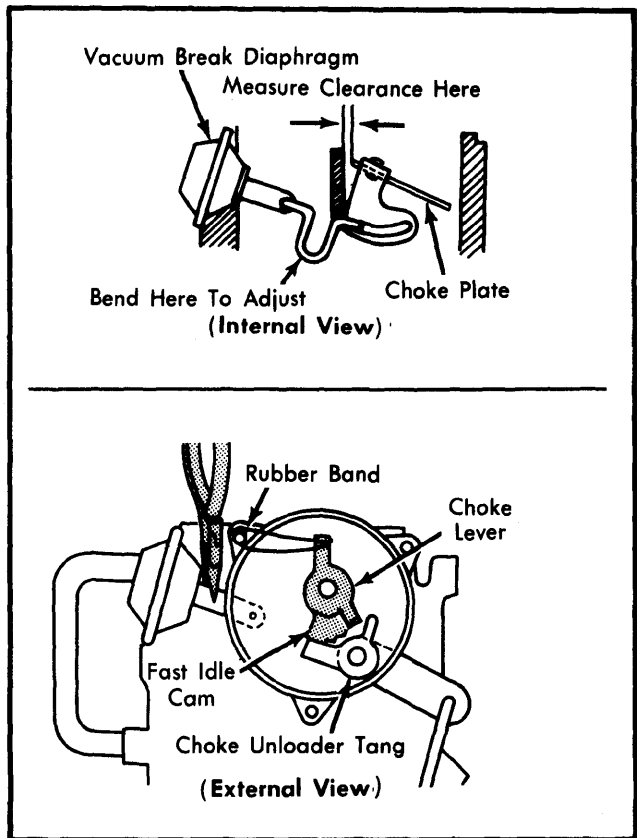


Fig. 5 Vacuum Break Adjustment

CHOKE UNLOADER

All Models - Open throttle valve to wide open position. Hold choke valve closed with rubber band (see Fig. 9). With throttle wide open and choke closed with rubber band, measure clearance between choke valve and air horn wall. If adjustment is necessary, bend choke unloader tang. See Carburetor Adjustment Specifications Table for correct specifications. See Fig. 9.

1980 Hitachi Carburetors

HITACHI DCG 306, DCH 306, DCJ 306 & DCP 306 2-BARREL (Cont.)

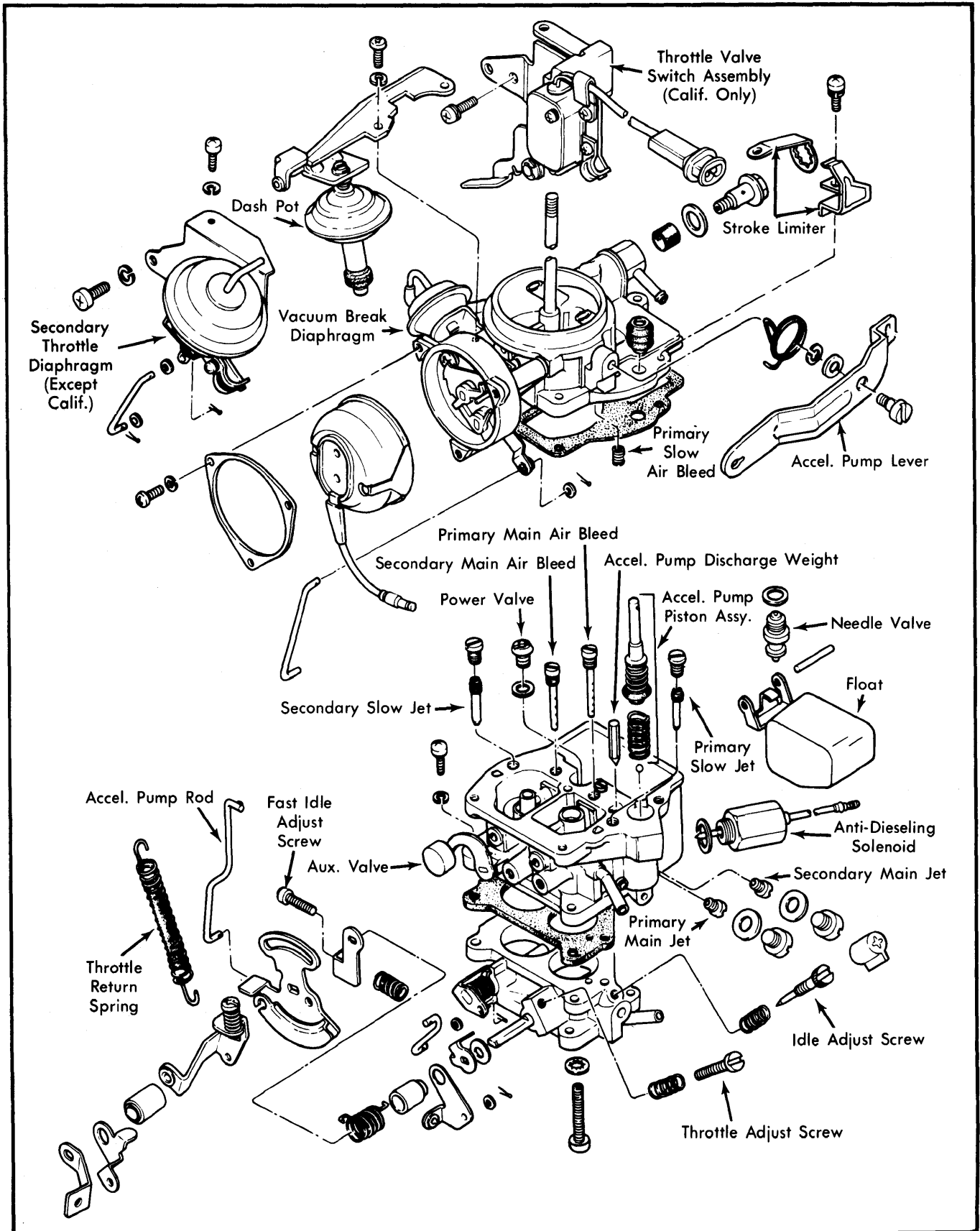


Fig. 6 Exploded View of Datsun 210 and 310 Hitachi DCH 306 Carburetor

1980 Hitachi Carburetors

HITACHI DCG 306, DCH 306, DCJ 306 & DCP 306 2-BARREL (Cont.)

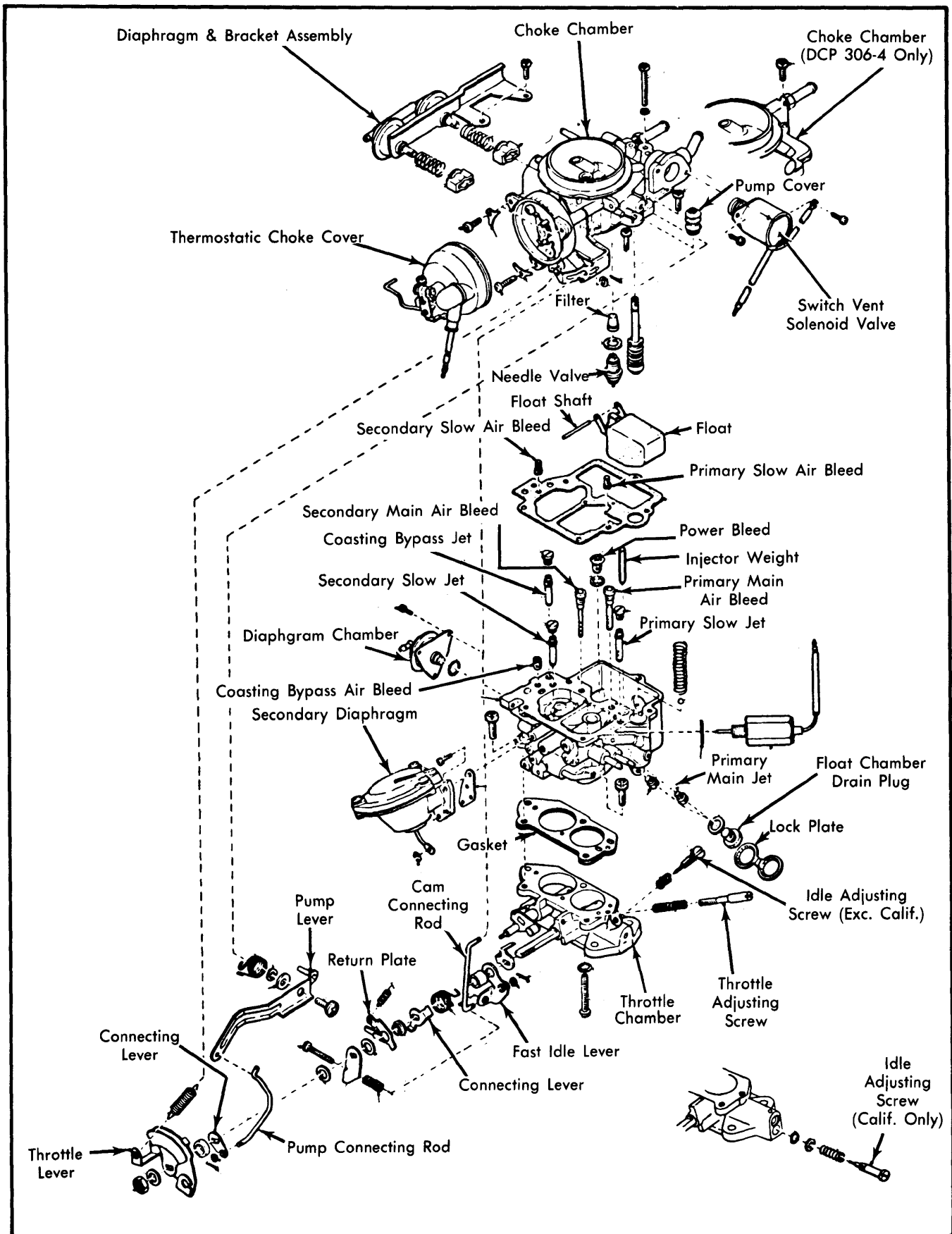


Fig. 7 Exploded View of Subaru Hitachi DCP 306 Carburetor (DCJ 306 Similar)

1980 Hitachi Carburetors

HITACHI DCG 306, DCH 306, DCJ 306 & DCP 306 2-BARREL (Cont.)

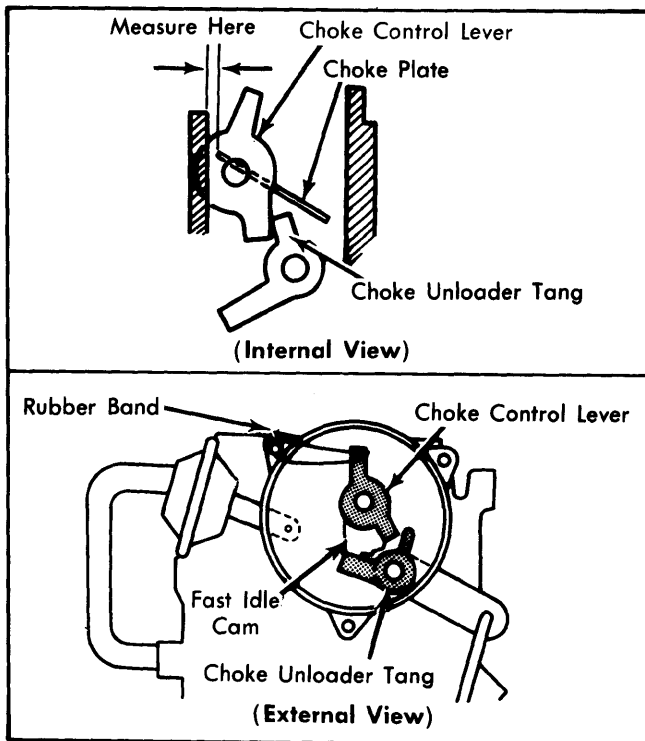


Fig. 9 Choke Unloader Adjustment

2) Remove throttle return spring, accelerator pump lever and connecting rod. Remove spring hanger and choke linkage (if equipped) and remove choke housing. Remove carburetor main body cover using care not to damage float.

3) Remove accelerator piston, return spring and check ball. Remove float, needle valve and filter. Remove air bleeds and emulsion tubes. Remove slow jets and power valve. Remove drain plugs and main jets. Remove servo diaphragm by-pass jet and air bleed.

4) Remove throttle body from main body with (3) set screws. Do not remove anti-dieseling solenoid except to replace. Throttle body should not be disassembled unless a throttle valve or rod is being replaced.

CLEANING & INSPECTION

Replace all parts contained in service overhaul kits. Soak metal parts (except anti-dieseling solenoid) in a suitable cleaner. Blow air through passages to clean and dry. Inspect all parts for wear and replace as necessary.

OVERHAUL

DISASSEMBLY

1) Main jets and needle valves on both primary and secondary sides are accessible from outside carburetor. Remove for service as necessary.

REASSEMBLY

Reverse disassembly procedure and note the following: Check each link system for smooth operation. Adjust float and linkage as required.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting In. (mm)	Float Drop Setting In. (mm)	Choke Linkage In. (mm)	Secondary Throttle In. (mm)	Unloader Setting In. (mm)	Vacuum Break In. (mm)
	Hot	Fast						
Datsun 210	700 ^②	^③	.59 (15)	.051-.067 (1.3-1.7)	.....	.218-.240 (5.53-6.12)	.093 (2.36)	.071-.078 (1.80-1.98)
310	750	2400-3200 ^④	.59 (15)	.051-.067 (1.3-1.7)	.....	.218-.240 (5.53-6.12)	.093 (2.36)	.071-.078 (1.80-1.98)
Mazda GLC	650-750	3000-4000	.43 (11)	.051-.067 (1.3-1.7)	.....	.240 (6.12)	.09 (2.28)	.05 (1.3)
Subaru	850-950 ^⑤	.....	.41 (10.5)	.051-.067 (1.3-1.7)	.....	.240 (6.12)	.04 (1.11)	.067 (1.7)

① - Auto. Trans. in DRIVE.

② - Auto. Trans. 650 RPM.

③ - Fast idle on second step of cam as follows: 1237 cc & 1397 cc Federal - 2400-3200 RPM, Calif. - 2300-3100 RPM; 1488 cc Federal - 2700-3500 RPM, Calif. - 2600-3400 RPM.

④ - Calif. Models - 2300-3100 RPM.

⑤ - Hatchback, Sedan and Hardtop - 750-850 RPM.