KEIHIN 2-BARREL – HONDA

Accord
Civic
Prelude

DESCRIPTION

Carburetor is a two barrel, three venturi downdraft design. Carburetor contains two systems, primary and auxiliary. Primary system utilizes primary and secondary venturi, float system, accelerator pump system, and an idle system. Auxiliary system utilizes an auxiliary venturi with a float and idle system. Auxiliary system provides fuel to the pre-combustion chamber.

Carburetor components include electrically heated, automatic choke, choke opener diaphragm, secondary throttle opener diaphragm, fuel shut-off solenoid, primary/secondary main fuel cut-off solenoid, primary slow mixture cut-off solenoid, fast idle unloader and air jet controller (Calif. and high altitude models).

NOTE – *Air jet controller (AJC) is an atmospheric pressure sensing device, controlling the amount of air flow into slow and main air jets of auxiliary carburetor and secondary slow air jet of main carburetor.*

CARBURETOR IDENTIFICATION

Application	Carburetor No. Man. Trans.	Auto. Trans.
Civic		
Federal	CB31E	CB31D
Calif.	CB32C	CB32E
High Alt.	CB32K	CB32J
Accord LX		
Federal	CB38A	CB38B
Calif.	CB40A	CB40B
High Alt.	CB40C	CB40D
Accord & Prelude		
Federal	CB37A	CB37B
Calif.	CB39A	CB39B
High Alt.	CB39C	CB39D

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.

AUTOMATIC CHOKE

Both the choke valve setting and fast idle position are controlled during engine warmup by the automatic choke. It consists of a 5 ohm resistor on the firewall, an air intake sensor in air cleaner assembly, thermovalve in thermostat housing, voltage regulator, choke opener and fast idle unloader.

Choke Coil Tension and Linkage – Remove air cleaner and open and close throttle fully to engage fast idle cam. If choke valve does not fully close, remove choke cover and inspect linkage. Reinstall cover, aligning index marks. Recheck clearance. If choke still does not close properly, replace cover.

Choke Opener and Linkage – **1)** Open and close throttle fully to engage fast idle cam. Start engine. Choke valve should partially open. If choke opens partially, go on to step **3)**. If choke does not partially open, check linkage for free movement and retest.

2) If choke still does not partially open, check position of choke opener lever. Clearance should exist between choke opener lever and stop when engine coolant temperature is below 52° F (11°C). If engine stalls or runs rough when lever is pulled against stop, go to step **3)**. Clearance should not exist between choke lever and stop when engine coolant temperature exceeds 66°F (19°C). If clearance exists, go on to step **4)**.

3) With coolant temperature below 52°F (11°C), disconnect choke opener-to-thermovalve tube at choke opener. If choke opener lever moves away from stop, replace thermovalve and retest. If lever touches stop, clean choke opener joint orifice and retest. If lever is still against stop, replace choke opener diaphragm and retest.

4) With coolant temperature above 66°F (19°C), disconnect and plug choke opener hose. Lever should touch stop. If lever does not touch stop, replace thermovalve.

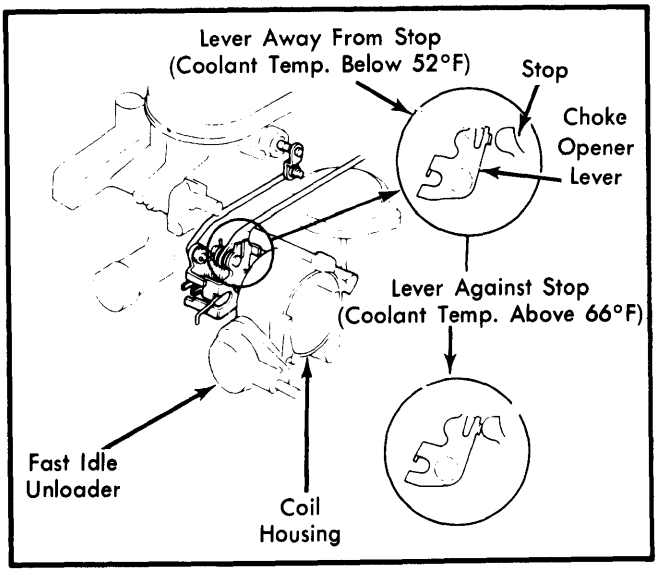

Fig. 1 Checking Choke Opener Lever Position

Choke Valve Opening Adjustment – **1)** Remove choke cover. Fully close choke valve. Fully open, then close throttle valve. Disconnect choke opener tube and apply 85 psi (6 kg/cm²) air to choke opener.

KEIHIN 2-BARREL – HONDA (Cont.)

2) Reconnect choke opener tube. Push choke opener rod towards the opener diaphragm until it stops, then pull choke drive lever down against choke opener lever and measure clearance between choke blade and carburetor body. Adjust to 1st stage clearance specification by bending Tab D.

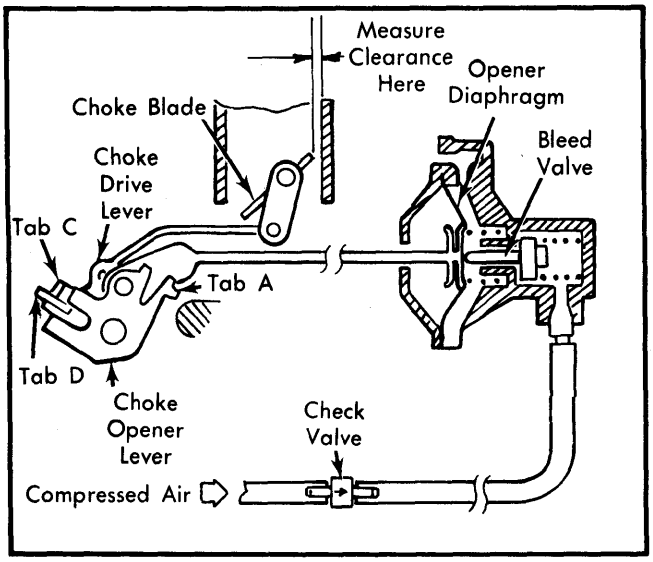

Fig. 2 Measuring Choke Valve Clearance

3) Hold choke opener lever and choke drive lever together and push them toward opener diaphragm until they stop. Measure choke blade clearance and adjust to 2nd stage clearance by bending Tab A.

4) While still holding choke opener lever, release choke drive lever and measure choke blade clearance. Adjust to 3rd stage clearance specification by bending Tab C.

Choke Coil Tension – **1)** With engine cold, remove air cleaner. Then open and close throttle fully. Choke blade should close completely; above 82°F (28°C) choke will only partially close.

2) If choke does not close properly, remove choke cover and check for free movement of linkage and repair as necessary. If choke still does not close properly, replace choke cover.

Choke Coil Heater – **1)** As engine reaches normal operating temperature, choke blade should fully open. If it does not, inspect choke linkage and repair as necessary.

2) If choke still does not open fully, disconnect air temperature sensor connector and check for voltage at Blue/White wire to ground (leave choke wires connected). Voltmeter should read battery voltage.

3) If there is no voltage, check for an open circuit between choke heater and battery. Repair as necessary.

4) If battery voltage is present, check for voltage at Red wire to ground. Voltmeter should read 2-4 volts. If there is no voltage, replace choke cover. If battery voltage is present, check for open circuit in external resistor or short in choke heater. Repair as necessary.

Fast Idle Unloader – **1)** Connect tachometer to cold engine. Start engine and allow to reach operating temperature. Do not manually open throttle. As engine warms up, speed should drop below 1400 RPM.

2) If engine speed does not drop below 1400 RPM, disconnect fast idle unloader hose and check for vacuum. If vacuum is present, check diaphragm for leaks and free movement of unloader rod and retest.

3) If no vacuum is present, test voltage at unloader solenoid valve-to-emission control box connector. If no voltage is present, replace unloader solenoid and retest.

4) On all, except California models, if voltage is present, replace thermosensor and retest. On California models, disconnnect thermosensor connector. If voltage at connector disappears, replace thermosensor. If voltage remains, replace diode in emission control box and retest.

Air Temperature Sensor – Disconnect and remove sensor from air cleaner. Check for voltage across sensor lead wires. Voltage should be present at 40-73° (4.5-23°C), but absent below this temperature range. Replace air temperature sensor if not to specifications.

Thermovalve – Drain engine coolant until level is below distributor holder. Remove distributor holder and thermovalve. Suspend thermovalve in cold water with vacuum pump attached to thermovalve. Slowly heat water and note temperature and vacuum readings. Valve should open below 60°F (15°C) and not hold vacuum. Valve should close above 77°F (25°C) and hold vacuum.

THROTTLE CABLE

1) Check that throttle cable operates smoothly with no binding or sticking. Check cable free play at linkage. Adjust cable deflection to .16-.40" (4-10 mm) by turning adjusting nut. Tighten lock nut.

2) Throttle valve should open fully when accelerator pedal is depressed and return to idle position when pedal is released.

FLOAT LEVEL

NOTE – *Be sure to use correct float gauge and catch tray when checking float level. Use Float Level Gauge 07501-6950100 for all models. Use Catch Tray 07501-6950202 for Civic and 07501-6950201 for Accord and Prelude models. Gauge includes a see through adapter, with a red line as a fuel level indicator. Gauge is installed where primary main cut-off solenoid, auxiliary main jet plug and air vent cut-off diaphragm mount to carburetor body.*

1) With air cleaner removed and carburetor installed on vehicle, remove primary main cut-off solenoid, auxiliary main jet plug and air vent cut-off diaphragm. Attach special float level gauge, catch tray and drain bottle to carburetor.

2) Start engine and allow it to stabilize. Float level should remain at red line on gauge. If not, adjustment is made by turning external float level adjusting screws. *See Fig. 4.*

KEIHIN 2-BARREL – HONDA (Cont.)

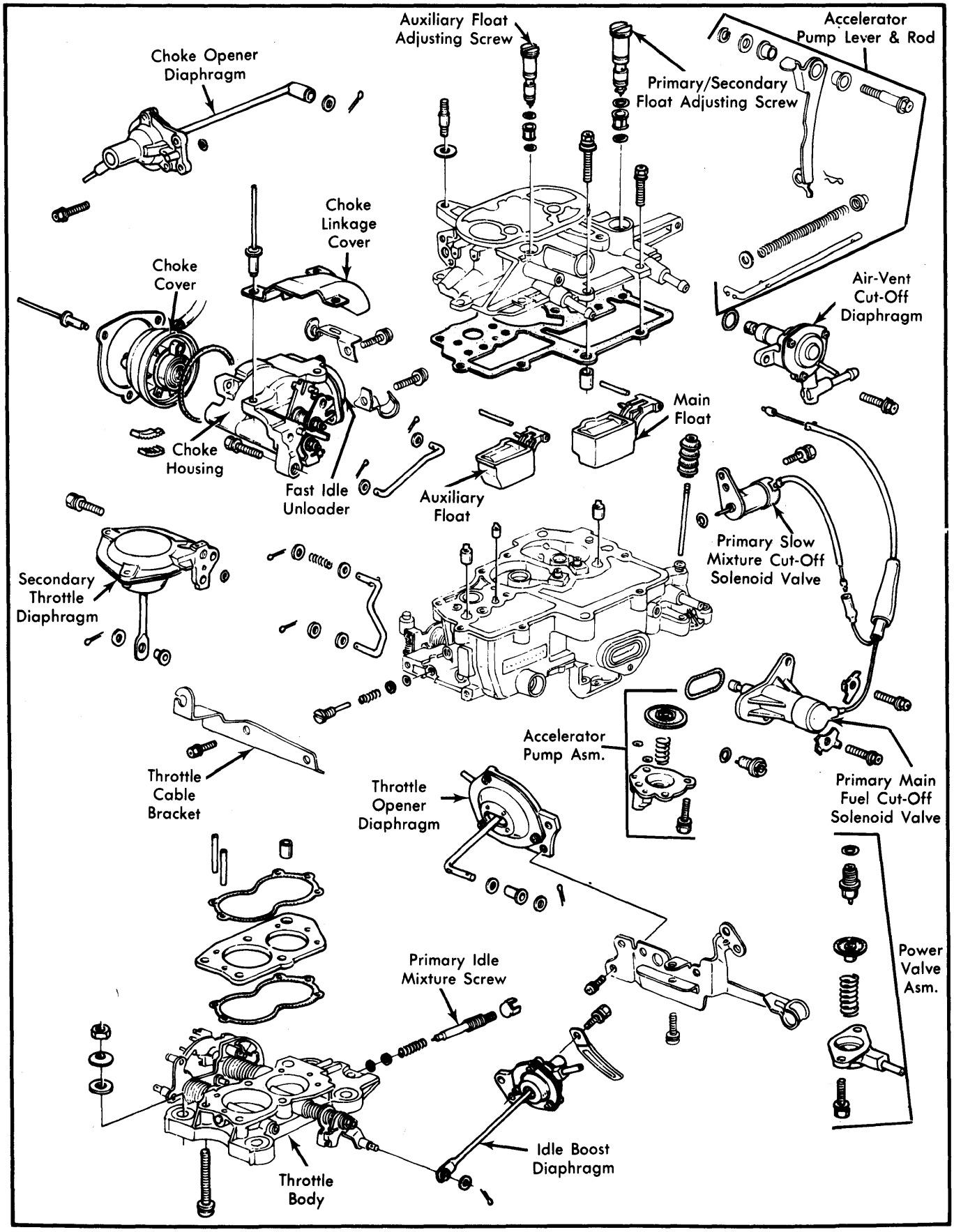

Fig. 3 Exploded View of Keihin 2-Bbl. Carburetor

KEIHIN 2-BARREL – HONDA (Cont.)

3) Allow time for fuel level to stabilize and check again. When correct float level is achieved, paint adjusting screws to keep adjustment from changing.

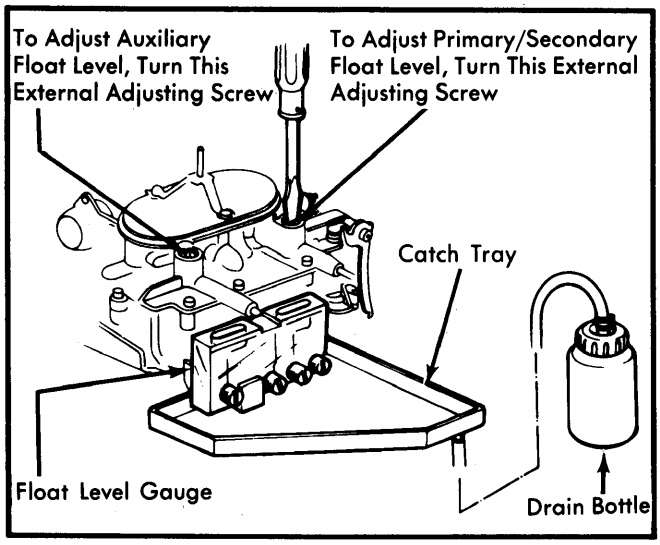

Fig. 4 Keihin Float Level Adjustment (External)

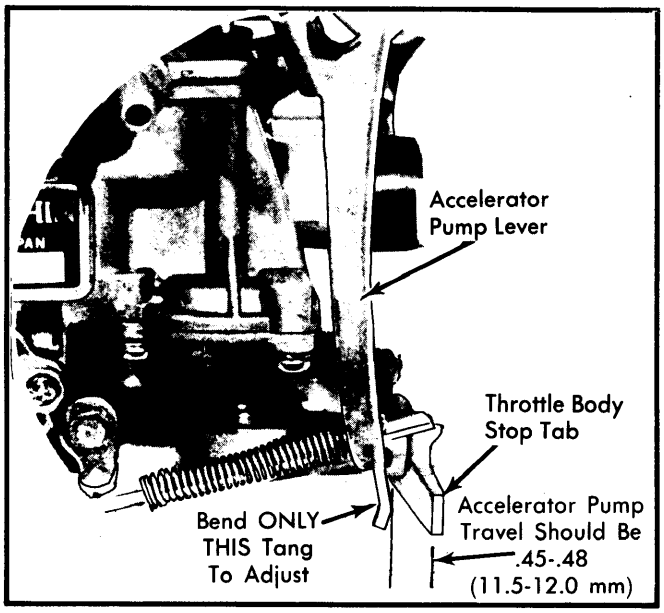

Fig. 5 Keihin Accelerator Pump Adjustment

ACCELERATOR PUMP

Accelerator pump stroke is adjusted by bending accelerator pump lever tang to obtain a clearance of .45-.48" (11.5-12.0 mm) between tang and throttle body stop tab. See *Fig. 5*.

AUXILIARY IDLE MIXTURE

Auxiliary idle mixture screw position should be marked before removal. If screw is removed and not marked, lightly seat screw then back out 1¾ turns.

CHOKE VALVE CLEARANCES

Application	1st Stage Clearance In. (mm)		2nd Stage Clearance In. (mm)		3rd Stage Clearance In. (mm)	
	Man. Trans.	Auto. Trans.	Man. Trans.	Auto. Trans.	Man. Trans.	Auto. Trans.
Accord						
Federal	.040-.046 (1.02-1.16)	.034-.040 (.863-1.02)	.072-.080 (1.83-2.03)	.072-.080 (1.83-2.03)	.151-.169 (3.84-4.29)	.151-.169 (3.84-4.29)
Calif.	.040-.046 (1.02-1.16)	.040-.046 (1.02-1.16)	.072-.080 (1.83-2.03)	.072-.080 (1.83-2.03)	.151-.169 (3.84-4.29)	.151-.169 (3.84-4.29)
High Alt.	.046-.052 (1.16-1.32)	.040-.046 (1.02-1.16)	.072-.080 (1.83-2.03)	.072-.080 (1.83-2.03)	.161-.179 (4.08-4.55)	.151-.169 (3.84-4.29)
Civic						
1300 All Models	.034-.040 (.863-1.02)	.034-.040 (.863-1.02)	.065-.073 (1.65-1.85)	.065-.073 (1.65-1.85)	.142-.160 (3.61-4.06)	.142-.160 (3.61-4.06)
1500 Exc. High Alt.	.034-.040 (.863-1.02)	.034-.040 (.863-1.02)	.065-.073 (1.65-1.85)	.065-.073 (1.65-1.85)	.142-.160 (3.61-4.06)	.142-.160 (3.61-4.06)
1500 High Alt.	.040-.046 (1.02-1.16)	.034-.040 (.863-1.02)	.065-.073 (1.65-1.85)	.065-.073 (1.65-1.85)	.142-.160 (3.61-4.06)	.142-.160 (3.61-4.06)
Prelude						
Federal	.040-.046 (1.02-1.16)	.034-.040 (.863-1.02)	.072-.080 (1.83-2.03)	.072-.080 (1.83-.2.03)	.151-.169 (3.84-4.29)	.151-.169 (3.84-4.29)
Calif.	.040-.046 (1.02-1.16)	.040-.046 (1.02-1.16)	.072-.080 (1.83-2.03)	.072-.080 (1.83-2.03)	.151-.169 (3.84-.4.29)	.151-.169 (3.84-4.29)
High Alt.	.046-.052 (1.16-1.32)	.040-.046 (1.02-1.16)	.072-.080 (1.83-2.03)	.072-.080 (1.83-2.03)	.161-.179 (4.08-4.55)	.151-.169 (3.84-4.29)