

KEIHIN 2-BARREL - HONDA CVCC ENGINE

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).

CARBURETOR IDENTIFICATION

| Application | Carburetor No. | |
|-------------------------------|----------------|--------------|
| | Man. Trans. | Auto. Trans. |
| Civic 1300 | CB11A | |
| Civic 1500 Sedan | | |
| Federal | CB13A | CB13B |
| All Others ^⓪ | CB14A | CB14B |
| Station Wagon | | |
| Federal | CB13C | CB13D |
| All Others | CB14A | CB14B |
| Accord LX | | |
| Federal | CB23A | CB23B |
| Calif | CB21A | CB27A |
| High Altitude | CB25A | CB25B |
| Accord (Sedan) & Prelude | | |
| Federal | CB22A | CB22B |
| Calif. | CB20A | CB26A |
| High Altitude | CB24A | CB24B |

⓪ - High altitude GL sedan (5-speed) - CB14B

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.

COLD (FAST) IDLE RPM

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

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, thermostatic valve 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-thermostatic valve tube at choke opener. If choke opener lever moves away from stop, replace thermostatic valve and repeat test. If lever touches stop, clean choke opener joint orifice with .02" (.5 mm) drill bit (or equivalent) and repeat test. If lever is still against stop, check for broken diaphragm, misaligned choke cover or defective bimetal choke spring.

4) With coolant temperature above 66°F (19°C), disconnect and plug choke opener-to-thermostatic valve tube at choke opener. Lever should touch stop. If lever does not touch stop, choke opener has air leak. If lever touches stop, the tube is leaking or thermostatic valve is defective.

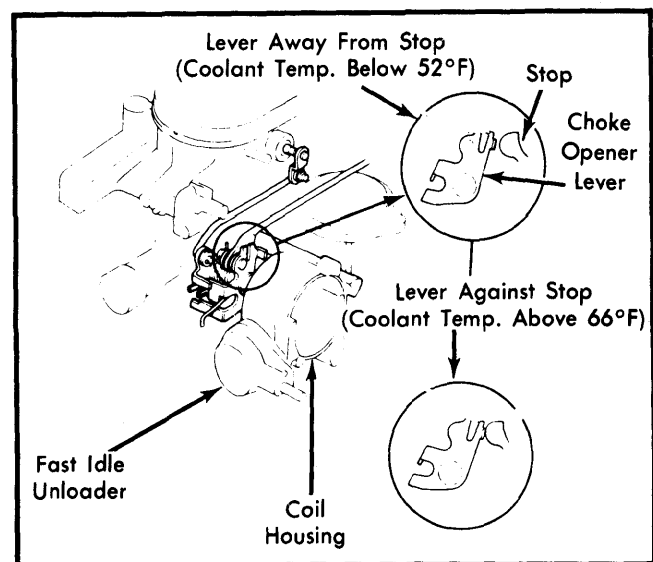


Fig. 1 Checking Choke Opener Lever Position

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 CVCC ENGINE (Cont.)

2) Push choke opener rod in towards diaphragm until it stops. Measure choke valve clearance. Adjust clearance to .030-.036" (.76-.90 mm) on Civic or .265-.271" (.61-.75 mm) on all other models. See Fig. 2.

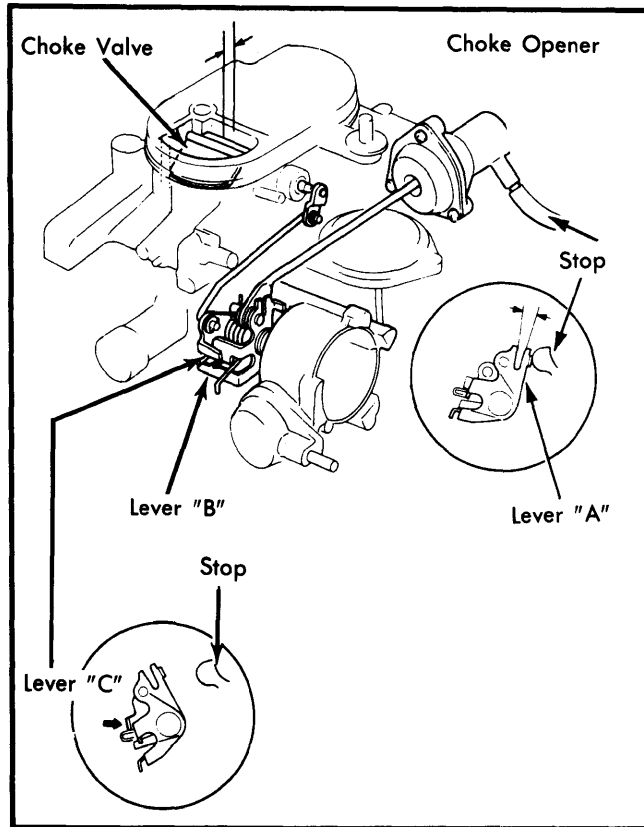


Fig. 2 Measuring Choke Valve Opening

3) Reconnect choke opener tube. With lever "B" held against stop, push choke opener rod in until it stops. Adjust clearance to .054-.062" (1.39-1.57 mm) on Federal Civic 1500, Accord and Prelude or .062-.070" (1.58-1.76 mm) on all other Civic models by bending opener lever "A".

4) Following step 3), immediately release lever "B" and adjust choke clearance to .13-.15" (3.4-3.8 mm) on Federal Civic 1500; .15-.17" (3.9-4.3 mm) on all other Civic models or .073-.089" (1.85-2.25 mm) on Accord and Prelude, by bending lever "C".

Choke Coil Tension and Heater – 1) As engine warms up, choke valve should fully open. If choke does not open at all, check voltage across connectors of choke cover. If no voltage, check external resistor for 4.5-5.5 ohms resistance, fuses, voltage regulator and wiring. If voltage, check for 18-26 ohms resistance across choke cover leads. If resistance exceeds specifications, replace choke cover assembly and recheck.

2) If choke does not open fully, inspect linkage. Disconnect air sensor wires, start engine and measure for 9.5-12 volts across choke cover leads. If more than 12 volts, replace external resistor. If still ineffective, replace choke cover assembly.

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 models except Calif. Civic 1500, if voltage is present, replace thermosensor and retest. On Calif. Civic 1500, disconnect thermosensor connector. If voltage at connector disappears, replace thermosensor. If voltage remains, replace diode in emission control box and retest.

NOTE – Diode should have continuity in one direction only; from yellow wire to yellow/red wire on Calif. Civic 1500.

Air Temperature Sensor – Disconnect and remove sensor from air cleaner. Check continuity across sensor lead wires. Continuity should be present at 57-73° F (14-23° C), but absent below this temperature range. Replace 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. See Fig. 3.

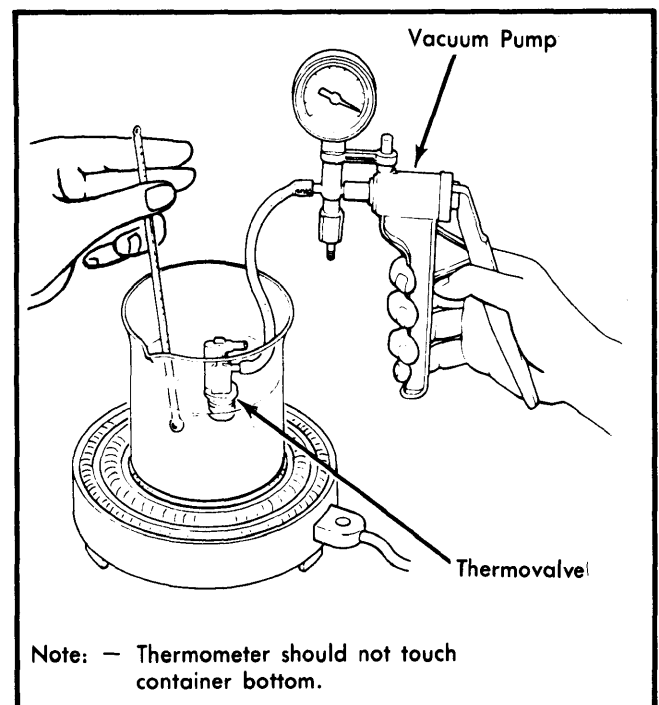


Fig. 3 Testing Automatic Choke Thermovalve

KEIHIN 2-BARREL – HONDA CVCC ENGINE (Cont.)

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.

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.

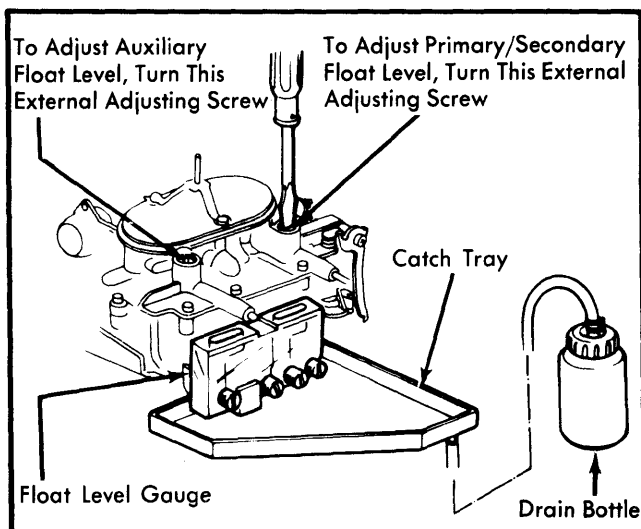


Fig. 4 Keihin Float Level Adjustment – External

ACCELERATOR PUMP

Accelerator pump stroke is adjusted by bending accelerator pump lever tang to get a clearance of .57-.60" (14.5-15.1 mm) between tang and throttle body stop tab. See Fig. 5.

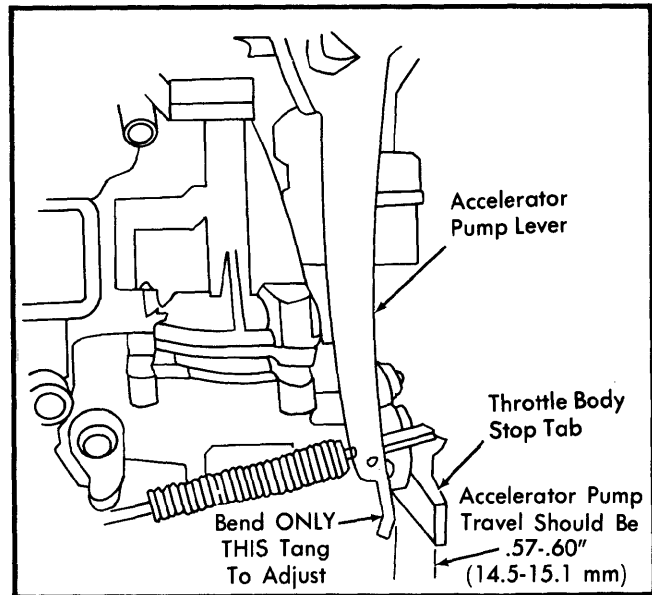


Fig. 5 Keihin Accelerator Pump Adjustment

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 $1\frac{3}{4}$ turns.

LAMBDA LINKAGE

NOTE – To adjust, remove carburetor from vehicle and place upside down on stand.

1) Back out throttle stop screw. Install dial indicator holder (07974-6570501) then mount dial indicator. See Fig. 6. Loosen linkage adjustment screw lock nut. See Fig. 8.

2) Tighten adjustment screw until primary throttle plate just opens. At this point, set dial indicator to zero. Loosen adjustment screw until dial indicator has a reading of $.004\pm.0004"$ $.10\pm.01$ mm). See Fig. 8.

3) Tighten lock nut without changing position of adjustment screw. Readjust throttle stop screw when carburetor is installed on vehicle.

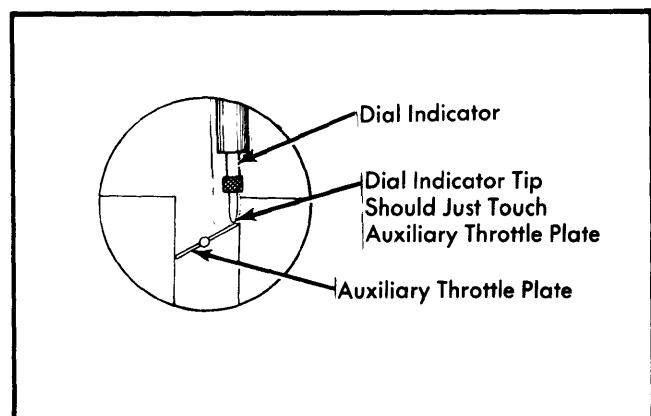


Fig. 6 Positioning Dial Indicator on Throttle Plate

KEIHIN 2-BARREL – HONDA CVCC ENGINE (Cont.)

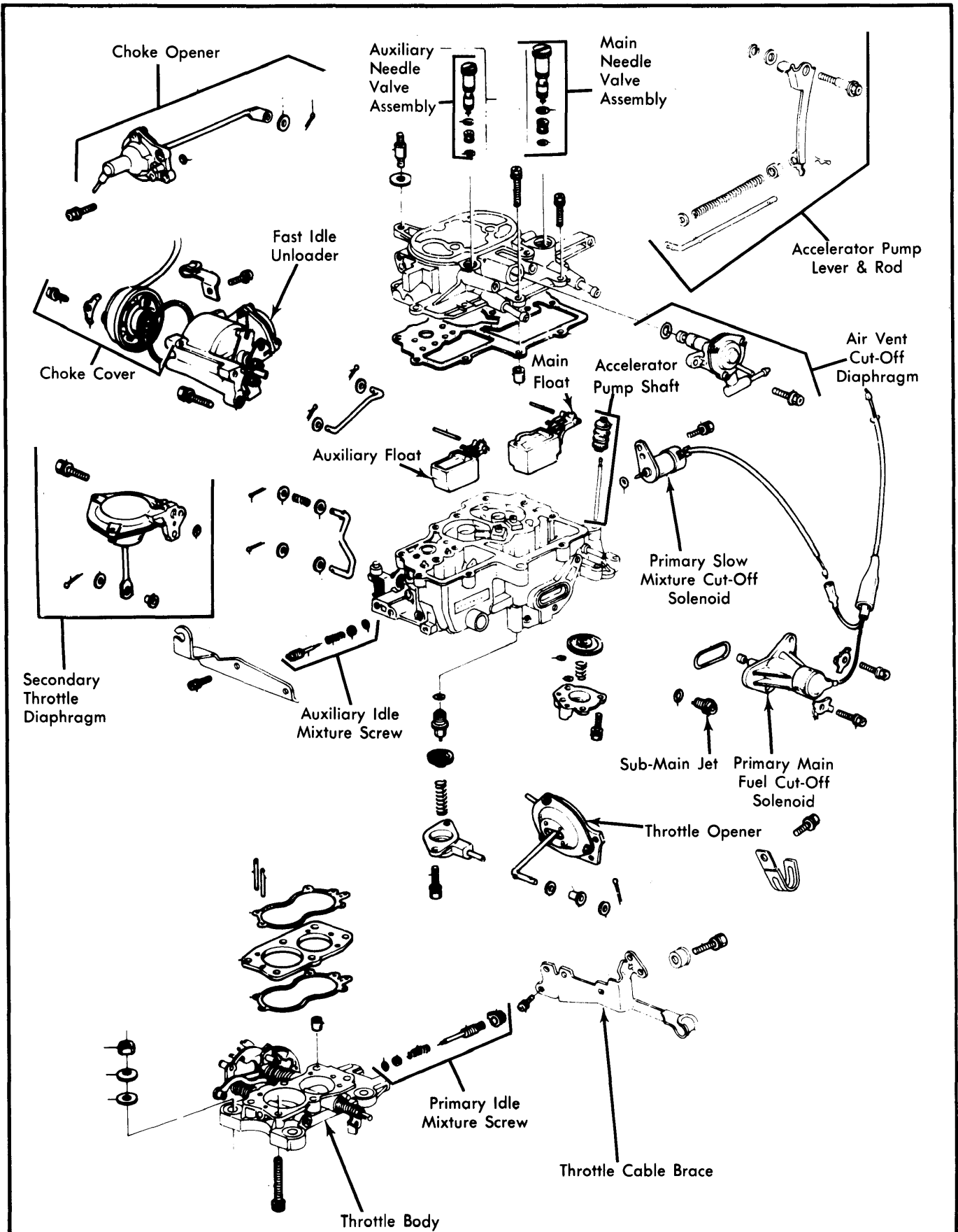


Fig. 7 Exploded View of Keihin Carburetor

1980 Keihin Carburetors

KEIHIN 2-BARREL – HONDA CVCC ENGINE (Cont.)

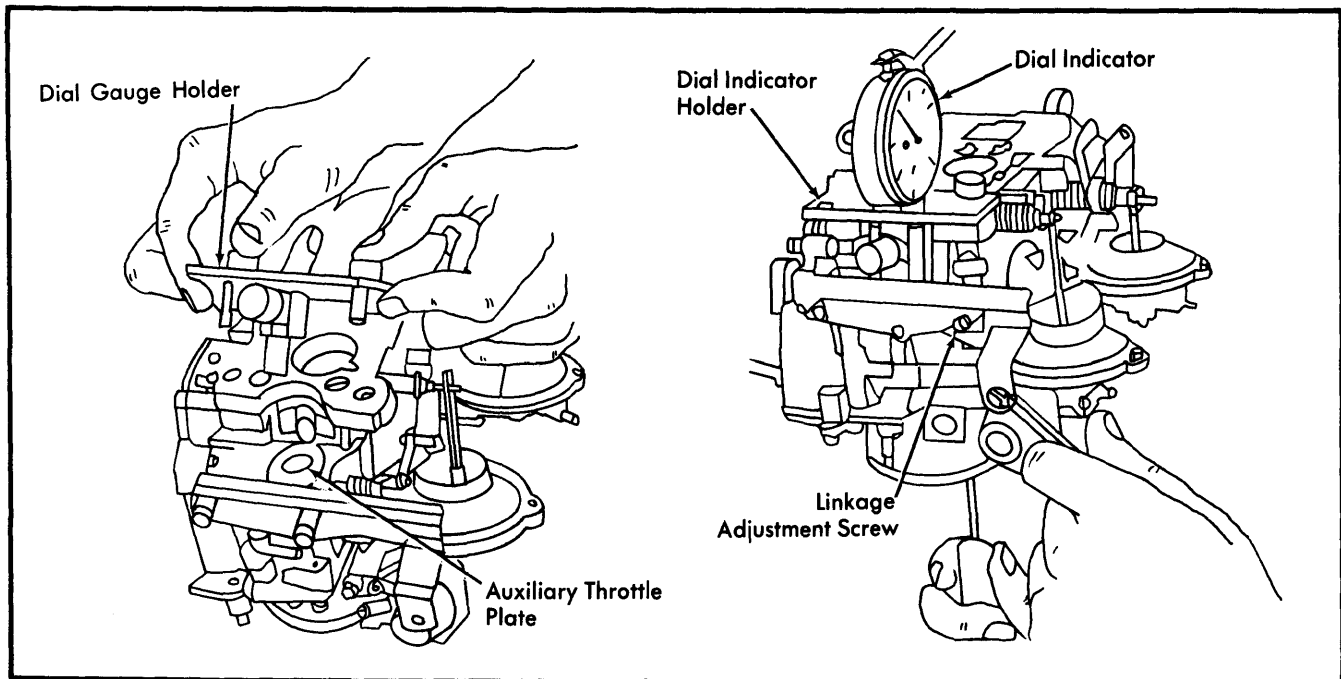


Fig. 8 Lambda Linkage Adjustment With Dial Indicator

AIR JET CONTROLLER (CALIF. & HIGH ALTITUDE)

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.

1) To test, disconnect hose from air jet controller (AJC). Connect hand vacuum pump to AJC using hose of same length and

inside diameter as hose to carburetor. Slowly apply more than 8 in. Hg vacuum to each port in turn and observe time it takes for vacuum to drop to zero.

2) For elevations below 1500 feet, time for each port should be longer than 5 seconds; elevations between 1500 and 3000 feet, time may be either longer or shorter than 5 seconds; elevations above 3000 feet, time should be shorter than 5 seconds. If any are not to specifications, replace AJC and retest.