FUEL SYSTEM

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PRECAUTIONS

1. **Before working on the fuel system, disconnect the cable from the negative battery terminal.**
2. **When working on the fuel system, keep away from possible fire hazards and do not smoke.**
3. **Keep gasoline off rubber or leather parts.**
4. **Work on only one component group at a time to help avoid confusion between similar looking parts.**
5. **Keep work area clean to avoid contamination of the carburetor and components.**
6. **Be careful not to mix up or lose clips and springs.**

TROUBLESHOOTING

Problem	Possible cause	Remedy	Page
Engine will not start/ hard to start (cranks ok)	Carburetor problems ● Choke operation ● Needle valve sticking or clogged ● Vacuum hose disconnected or damaged ● Fuel cut solenoid valve not open	 Check choke system Check float and needle valve Check fuel cut solenoid valve	 FU-12 FU-12
Rough idle or stalls	Carburetor problems ● Idle speed incorrect ● Slow jet clogged ● Idle mixture incorrect ● Fuel cut solenoid valve not open ● Fast idle speed setting incorrect (cold engine) ● Choke valve open (cold engine)	 Adjust idle speed Adjust idle mixture Check fuel cut solenoid valve Adjust fast idle speed Check choke system	 EM-7 EM-7 FU-12 EM-11
Engine hesitates/ poor acceleration	Carburetor problems ● Float level too low ● Accelerator pump faulty ● Power valve faulty ● Choke valve closed (hot engine) ● Choke valve stuck open (cold engine) Fuel line clogged	 Adjust float level Check power piston and valve Check choke system Check choke system Check fuel line	 FU-17 FU-12
Engine dieseling (runs after ignition switch is turned off)	Carburetor problems ● Linkage sticking ● Idle speed or fast idle speed out of adjustment ● Fuel cut solenoid faulty	 Adjust idle speed or fast idle speed Check fuel cut solenoid valve	 EM-7, 11 FU-12
Poor gasoline mileage	Carburetor problems ● Choke faulty ● Idle speed too high ● Deceleration fuel cut system faulty ● Power valve always open Fuel leak	 Check choke system Adjust idle speed Check deceleration system Repair as necessary	 EM-7
Insufficient fuel supply to carburetor	Fuel filter clogged Fuel pump faulty Fuel line clogged Fuel line bent or kinked	Replace fuel filter Replace fuel pump Check fuel line Replace fuel line	FU-24

ON-VEHICLE INSPECTION

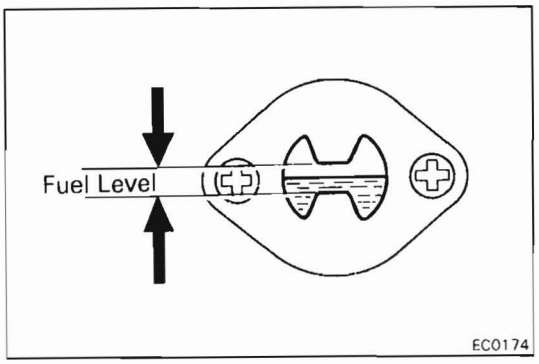
1. REMOVE AIR CLEANER OR AIR INTAKE CONNECTOR FROM CARBURETOR

2. INSPECT CARBURETOR AND LINKAGE

(a) Check that the various set screws, plugs and union bolts are tight and correctly installed.

(b) Check the linkage for excessive wear and missing snap rings.

(c) Check that the throttle valves open fully when the accelerator pedal is fully depressed.



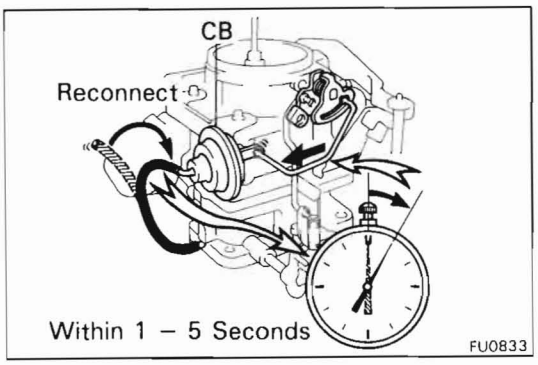
3. INSPECT FLOAT LEVEL

Check that the float level is about even with the correct level in the sight glass.

If not, check the carburetor needle valve and float level and adjust or repair as necessary.

COLD ENGINE

4. (w/ CB)
INSPECT CHOKE BREAKER (CB) SYSTEM



(a) Start the engine.

(b) Disconnect the vacuum hose from the CB and check that the choke linkage moves.

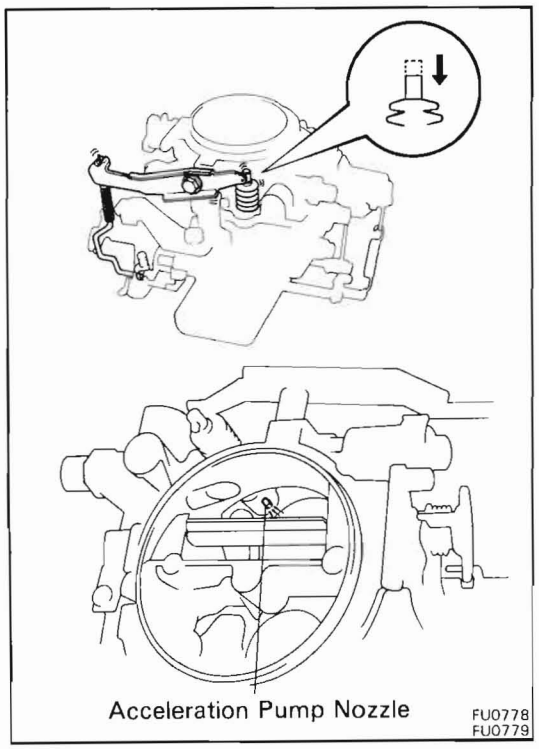
(c) Reconnect the vacuum hose to the CB and check that the choke linkage moves within the specified time after reconnecting the hose.

Time: 1 – 5 seconds

HOT ENGINE

5. INSPECT ACCELERATION PUMP

Open the throttle valve, and check that gasoline spurts out from the acceleration nozzle.



6. INSTALL AIR CLEANER ASSEMBLY OR AIR INTAKE CONNECTOR TO CARBURETOR

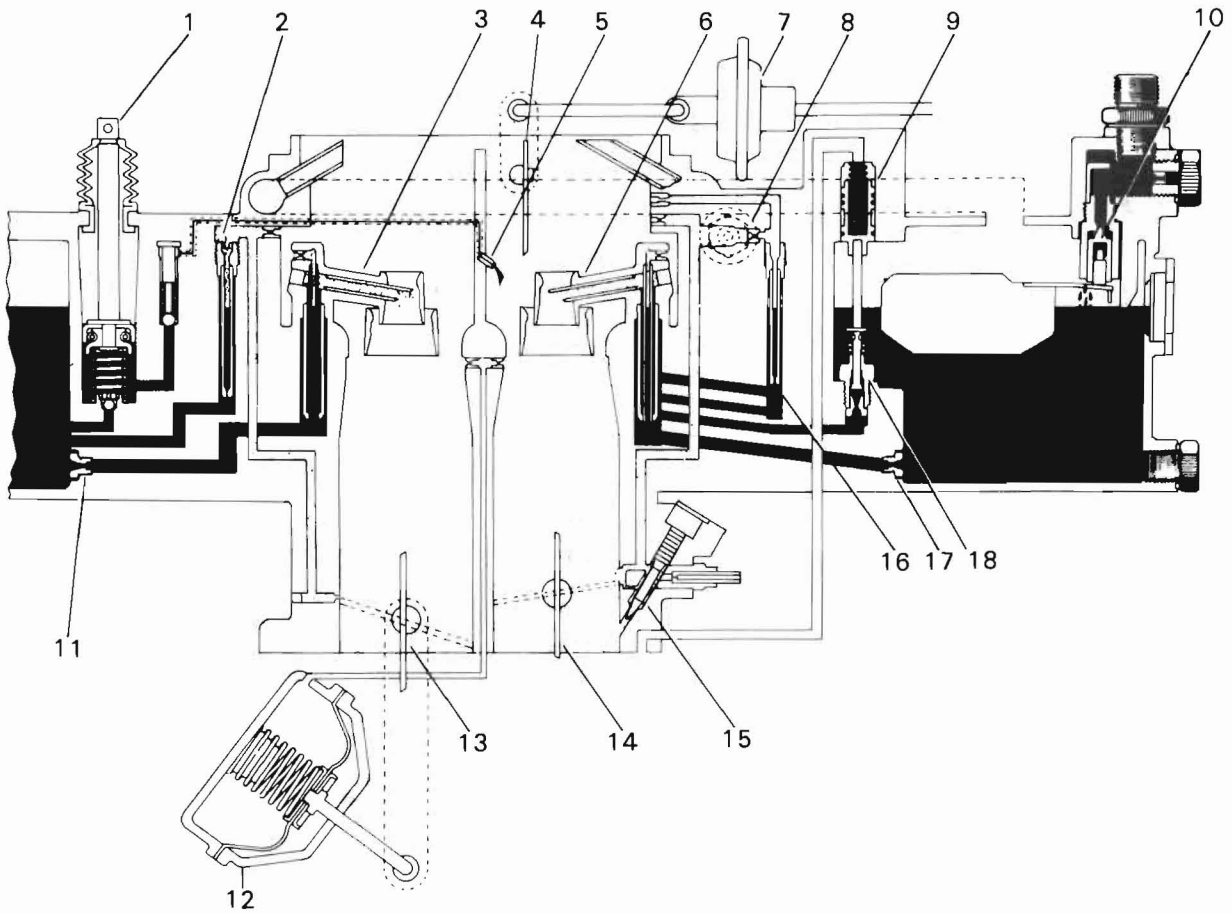
7. INSPECT AND ADJUST IDLE SPEED AND MIXTURE (See page EM-7)

8. INSPECT AND ADJUST FAST IDLE SPEED (See page EM-11)

9. INSPECT AND ADJUST THROTTLE POSITIONER SETTING SPEED (See page EM-12)

CARBURETOR

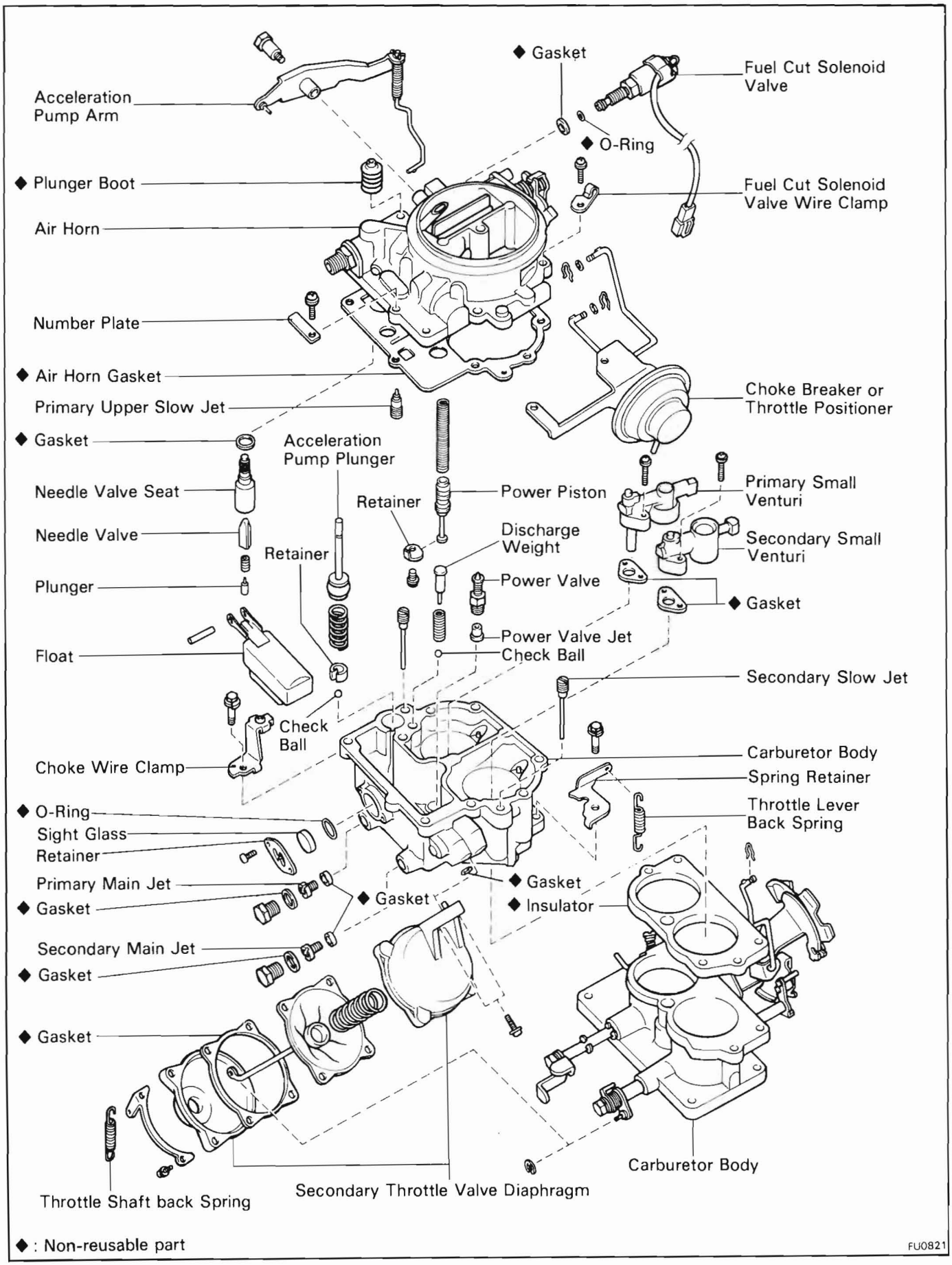
CARBURETOR CIRCUIT



1. Acceleration Pump Plunger
2. Secondary Slow Jet
3. Secondary Main Nozzle
4. Choke Valve
5. Acceleration Nozzle
6. Primary Main Nozzle
7. Choke Breaker
8. Fuel Cut Solenoid Valve
9. Power Piston
10. Needle Valve
11. Secondary Main Jet
12. Secondary Throttle Valve Diaphragm
13. Secondary Throttle Valve
14. Primary Throttle Valve
15. Idle Mixture Adjusting Screw
16. Primary Slow Jet
17. Primary Main Jet
18. Power Valve

FU0820

COMPONENTS



◆ : Non-reusable part

FU0821

REMOVAL OF CARBURETOR

1. REMOVE AIR CLEANER ASSEMBLY OR AIR INTAKE CONNECTOR

2. DISCONNECT CONNECTOR OF FUEL CUT SOLENOID VALVE

3. DISCONNECT CABLES

(a) Accelerator throttle cable

(b) Choke cable

(c) Automatic transmission throttle cable

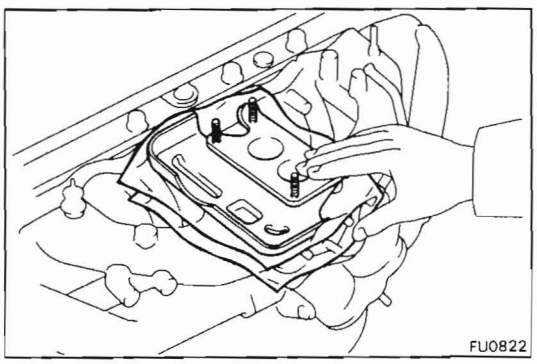
4. DISCONNECT FUEL INLET PIPE

5. DISCONNECT HOSES

(a) Emission control hoses

NOTE: Before disconnecting the emission control hoses, use tag to identify how they should be reconnected.

(b) (w/ Outer Vent Control Valve)
Outer vent control hose



6. REMOVE CARBURETOR

(a) Remove the four mount nuts.

(b) Lift out the carburetor.

(c) Cover the inlet hole of the intake manifold with a cloth.

DISASSEMBLY OF CARBURETOR

(See page FU-5)

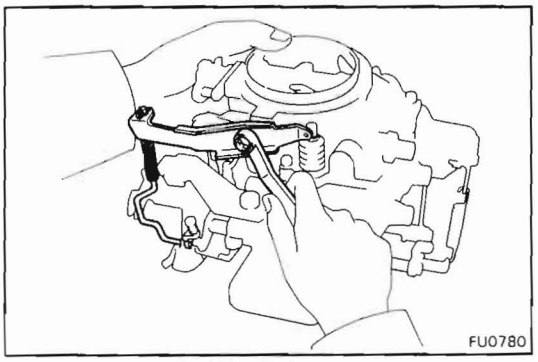
The following instructions are organized so that you work on only one component group at a time. This will help avoid confusion from similar looking parts from different sub-assemblies being on your workbench at the same time.

(a) To facilitate reassembly, arrange parts in order.

(b) Be careful not to mix up or lose clips and springs.

(c) Use SST (carburetor driver set).

SST 09860-11011



Disassembly of Air Horn

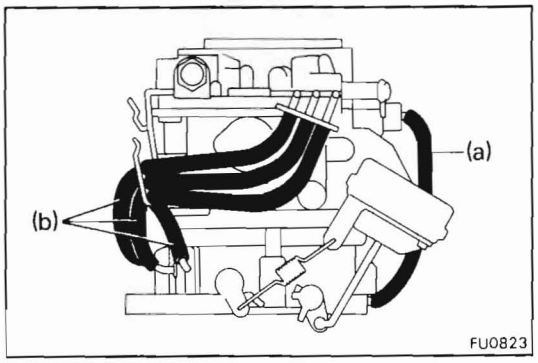
(See page FU-5)

1. REMOVE ACCELERATION PUMP ARM

(a) Remove the pivot bolt.

(b) Disconnect the pump arm from the pump plunger.

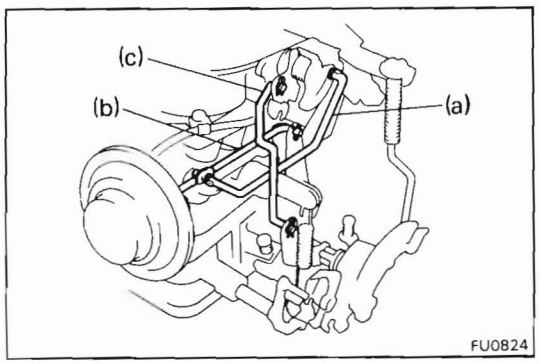
(c) Disconnect the pump connecting link from the throttle lever and remove the pump arm and pump connecting link.



2. DISCONNECT VACUUM HOSES FROM FLANGE PORTS

(a) (w/ CB only)
Choke breaker (CB) vacuum hose

(b) (S. Arabia and Australia)
Other three vacuum hoses

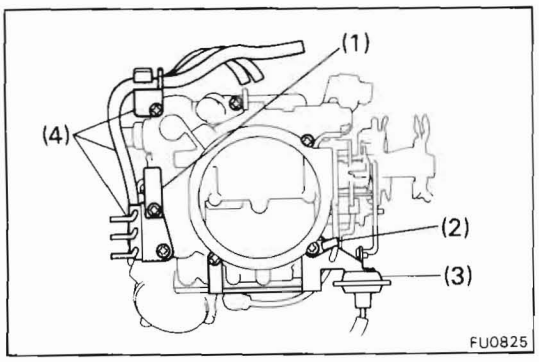


3. DISCONNECT LINKS FROM LEVERS

(a) (w/ CB)
Choke breaker (CB) link

(b) (w/ TP)
Throttle positioner (TP) link

(c) Fast idle Link



4. REMOVE AIR HORN ASSEMBLY

(a) Remove the seven screws and following parts:

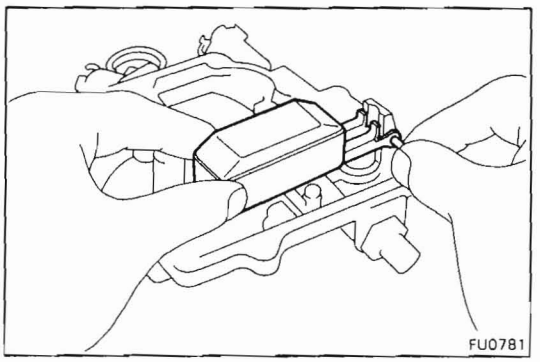
(1) (General countries M/T)
Number plate

(2) Wire clamp of fuel cut solenoid valve

(3) (w/ CB or TP)
Choke breaker (CB) with hose or Throttle positioner (TP)

(4) (S. Arabia and Australia)
Vacuum pipe supports with three hoses

(b) Lift off the air horn assembly together with the air horn gasket.



5. REMOVE FLOAT

Remove the pivot pin and float.

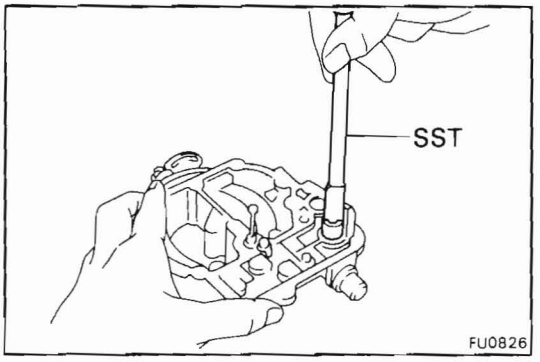
6. REMOVE NEEDLE VALVE

Remove the plunger, spring and needle valve.

7. REMOVE ACCELERATION PUMP PLUNGER

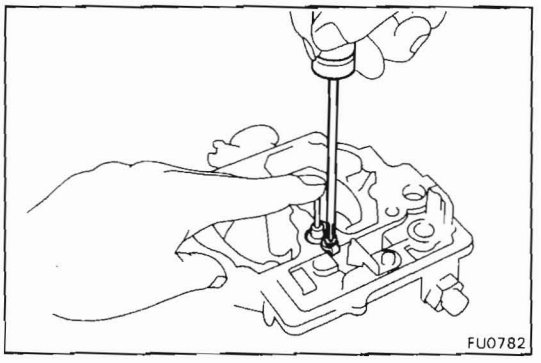
Remove the pump plunger and boot.

8. REMOVE AIR HORN GASKET



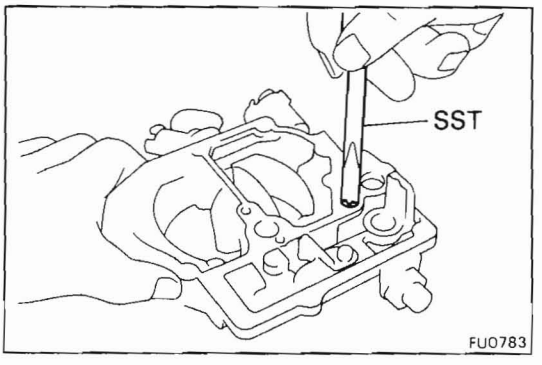
9. REMOVE NEEDLE VALVE SEAT

Remove the needle valve seat and gasket.

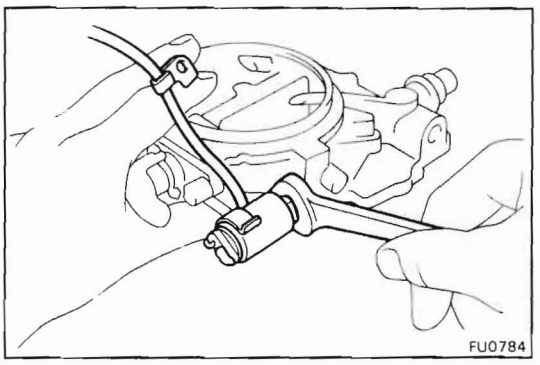


10. REMOVE POWER PISTON

Remove the screw, retainer, power piston and spring.

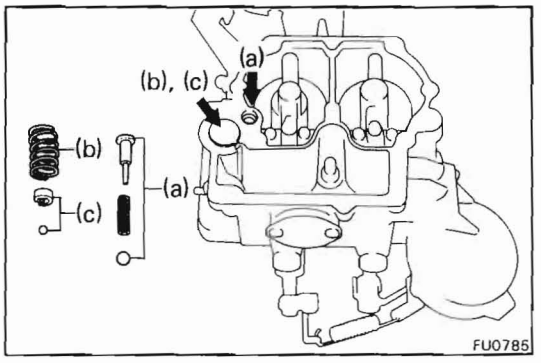


11. REMOVE PRIMARY UPPER SLOW JET



12. REMOVE FUEL CUT SOLENOID VALVE

Remove the solenoid valve and gasket.



Disassembly of Carburetor Body

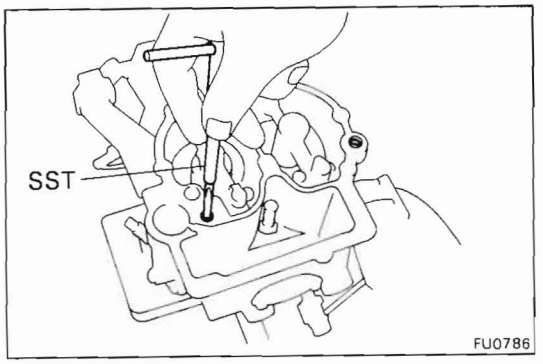
(See page FU-5)

1. REMOVE CHECK BALLS FOR ACCELERATION

(a) Remove the pump discharge weight, spring and large ball.

(b) Remove the plunger spring.

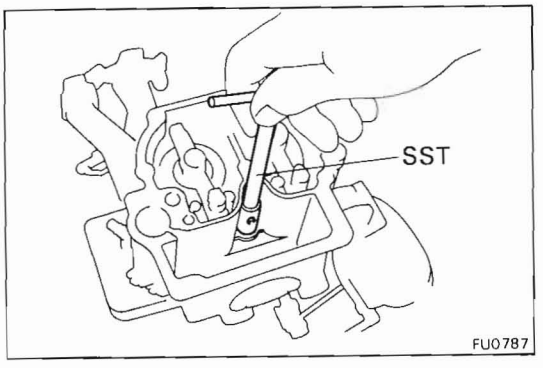
(c) Using tweezers, remove the plunger retainer and small ball.



2. REMOVE SLOW JETS

(a) Remove the primary slow jet.

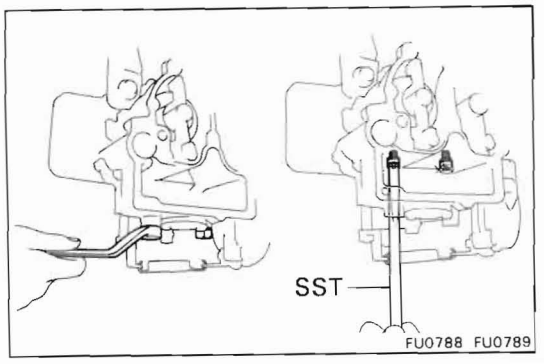
(b) Remove the secondary slow jet.



3. REMOVE POWER VALVE

(a) Remove the power valve and jet assembly.

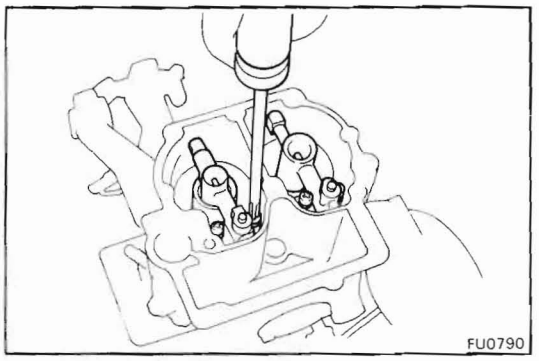
(b) Disassemble the power valve and jet.



4. REMOVE MAIN JETS

(a) Remove the primary main passage plug and gasket, and remove the primary main jet and gasket.

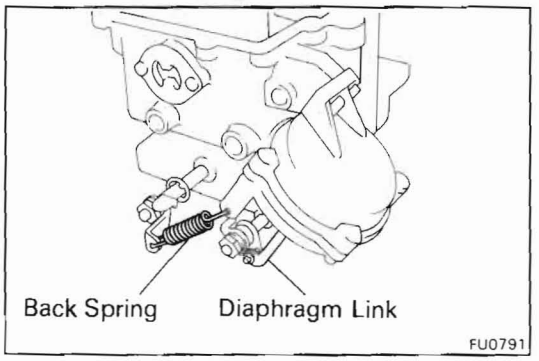
(b) Remove the secondary main passage plug and gasket, and remove the secondary main jet and gasket.



5. REMOVE SMALL VENTURIES

(a) Remove the two screws, primary small venturi and gasket.

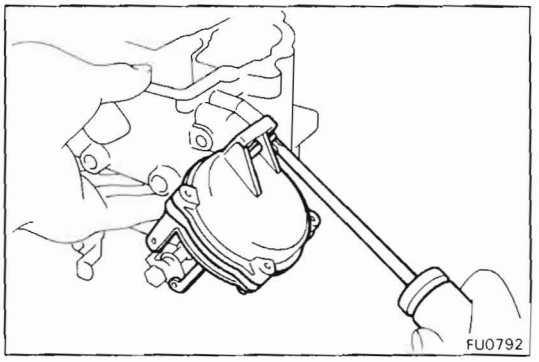
(b) Remove the two screws, secondary small venturi and gasket.



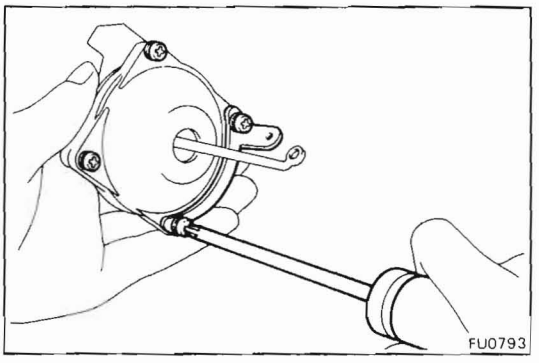
6. REMOVE SECONDARY THROTTLE VALVE DIAPHRAGM

(a) Remove the throttle shaft back spring.

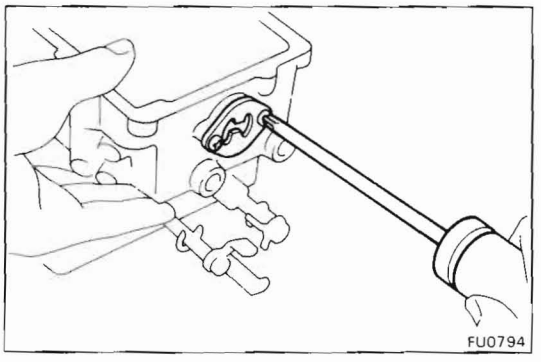
(b) Remove the E-ring and disconnect the diaphragm link.



(c) Remove the two screws, throttle valve diaphragm assembly and gasket.

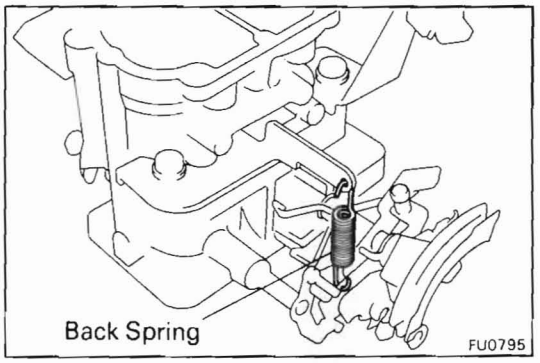


(d) If necessary, remove the four screws and spring retainer and disassemble the throttle valve diaphragm.



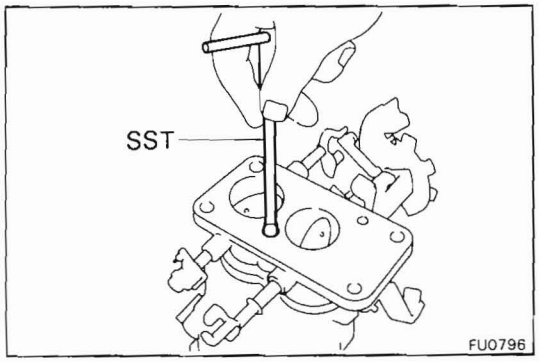
7. IF NECESSARY, REMOVE SIGHT GLASS

Remove the two screws, retainer, sight glass and O-ring.

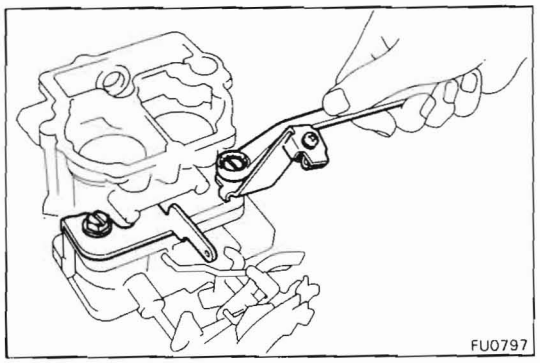


8. SEPARATE CARBURETOR BODY AND FLANGE

(a) Remove the throttle lever back spring.



(b) Remove the passage screw and spring washer.

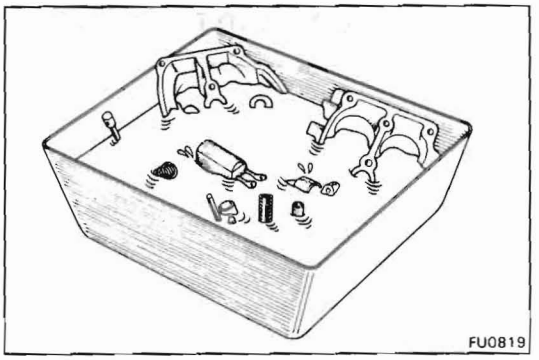


(c) Remove the bolt, spring washer and choke wire clamp.

(d) Remove the bolt, spring washer and spring retainer.

(e) Separate the body and flange.

(f) Remove the insulator.


FU0819

GENERAL CLEANING PROCEDURE

CLEAN DISASSEMBLED PARTS BEFORE INSPECTION

(a) Wash and clean the cast parts with a soft brush and carburetor cleaner.

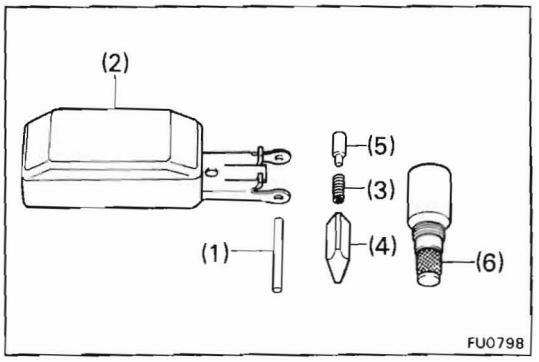
(b) Clean off the carbon around the throttle valve.

(c) Wash the other parts thoroughly in carburetor cleaner.

(d) Blow all dirt and other foreign matter from the jets, fuel passages and restrictions in the body.

INSPECTION OF CARBURETOR

1. INSPECT FLOAT AND NEEDLE VALVE



FU0798

(a) Check pivot pin (1) for scratches and excessive wear.

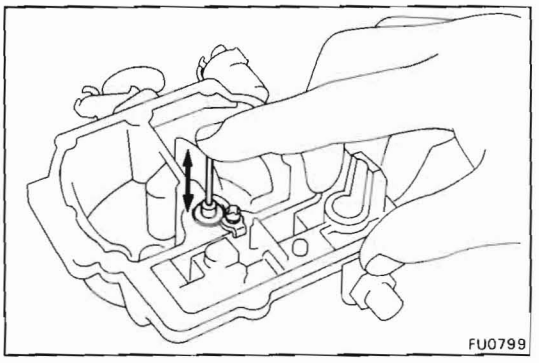
(b) Check the float (2) for broken lips and wear in the pivot pin holes.

(c) Check the spring (3) for breaks and deformation.

(d) Check the needle valve (4) and plunger (5) for wear or damage.

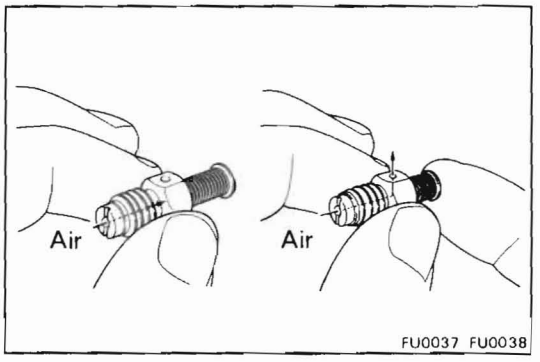
(e) Check the strainer (6) for rust and breaks.

2. INSPECT POWER PISTON


FU0799

Check that the power piston moves smoothly.

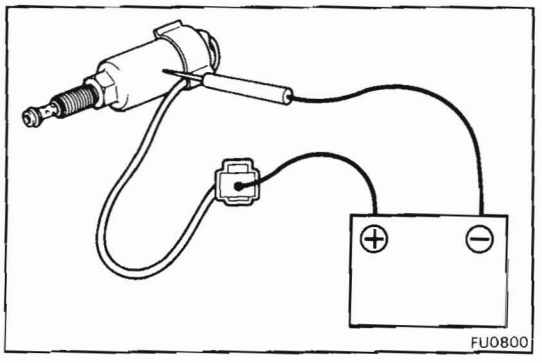
3. INSPECT POWER VALVE



FU0037 FU0038

Check for faulty opening and closing action.

4. INSPECT FUEL CUT SOLENOID VALVE



FU0800

(a) Connect the valve body and terminal to the battery terminals.

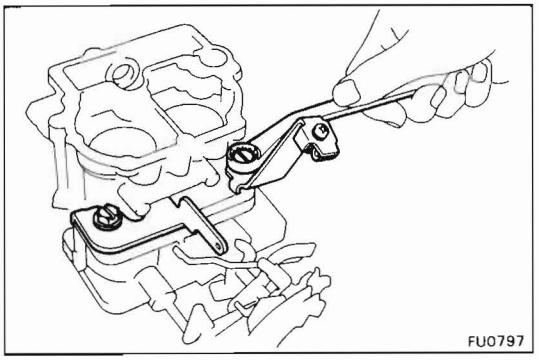
(b) You should feel a click from the solenoid valve when the battery power is connected and disconnected.

If the solenoid valve does not operate properly, replace it.

ASSEMBLY OF CARBURETOR

(See page FU-5)

NOTE: Use new gaskets and O-rings throughout.



Assembly of Carburetor Body

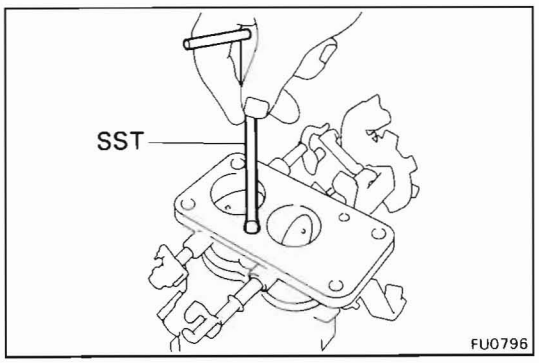
(See page FU-5)

1. ASSEMBLE CARBURETOR BODY AND FLANGE

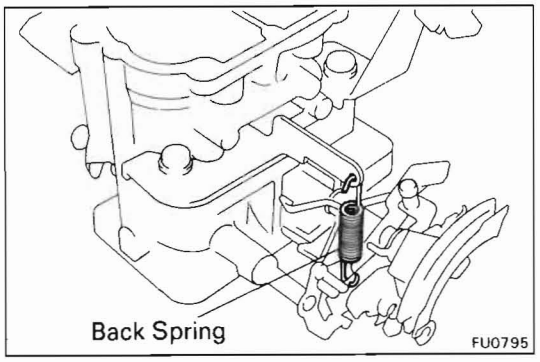
(a) Assemble the flange and body together with a new insulator.

(b) Install the spring retainer with the bolt.

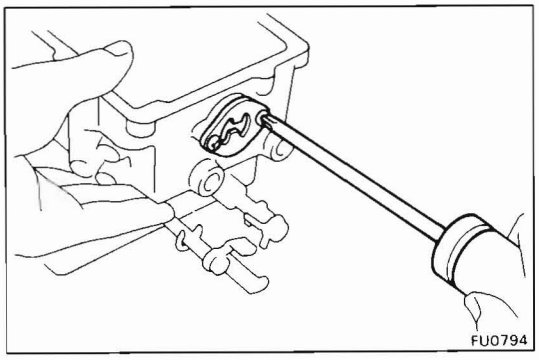
(c) Install the choke wire clamp with the bolt.



(d) Install the passage screw together with the spring washer.

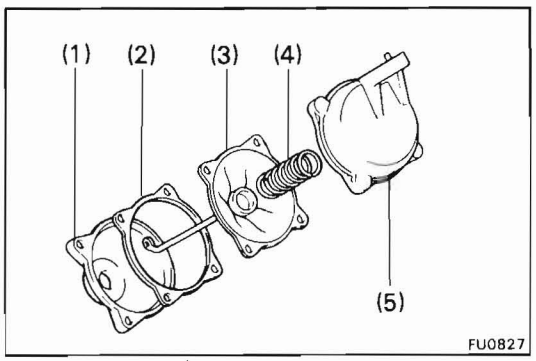


(e) Install the throttle lever back spring.



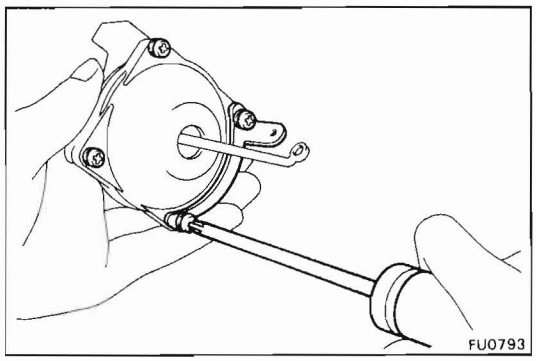
2. INSTALL SIGHT GLASS

Install a new O-ring, the sight glass and retainer with the two screws.

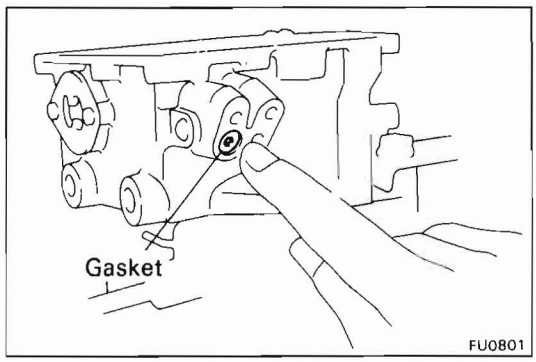


3. INSTALL SECONDARY THROTTLE VALVE DIAPHRAGM

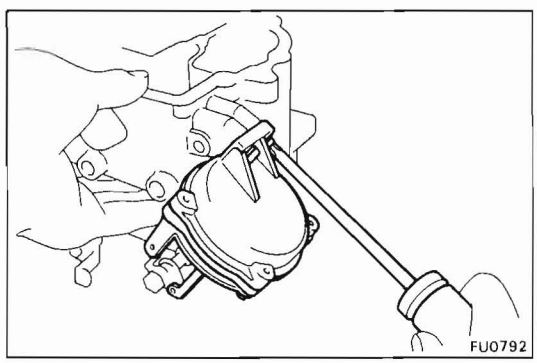
(a) Assemble the housing (1), a new gasket (2), the diaphragm (3), spring (4) and cover (5).



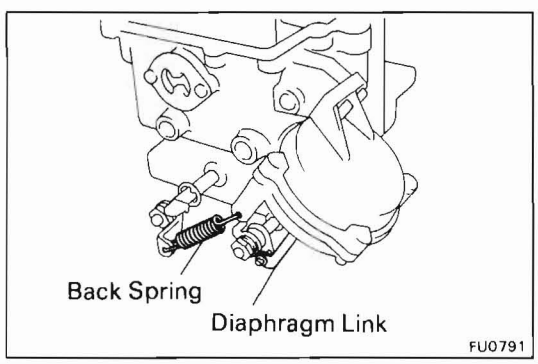
(b) Install the spring retainer and four screws.



(c) Place a new gasket in position on the carburetor body.

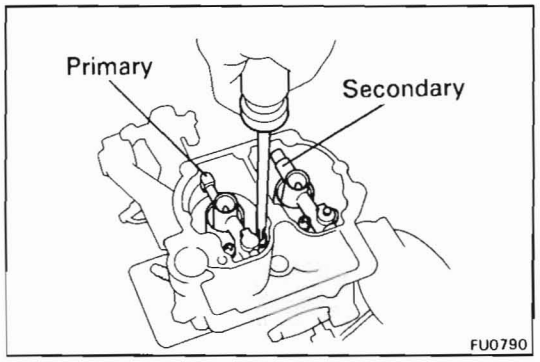


(d) Install the throttle valve diaphragm with the two screws.



(e) Connect the diaphragm link with the E-ring.

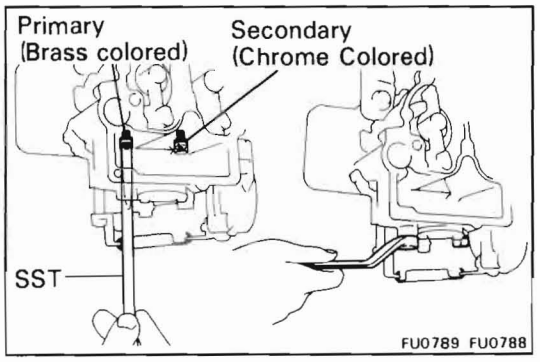
(f) Install the throttle shaft back spring.



4. INSTALL SMALL VENTURIES

(a) Install a new gasket and the primary venturi with the two screws.

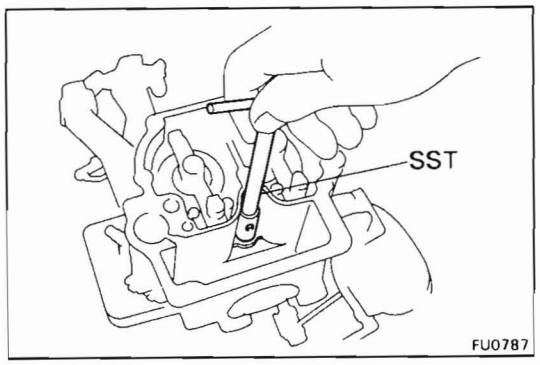
(b) Install a new gasket and the secondary venturi with the two screws.



5. INSTALL MAIN JETS

(a) Install a new gasket and the primary main jet (Brass colored). Install a new gasket and the passage plug.

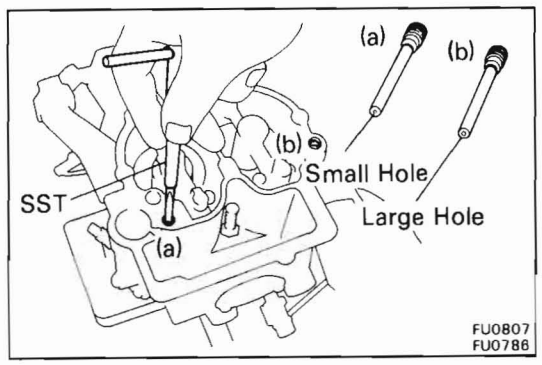
(b) Install a new gasket and the secondary main jet (Chrome colored). Install a new gasket and the passage plug.



6. INSTALL POWER VALVE

(a) Assemble the power valve and jet.

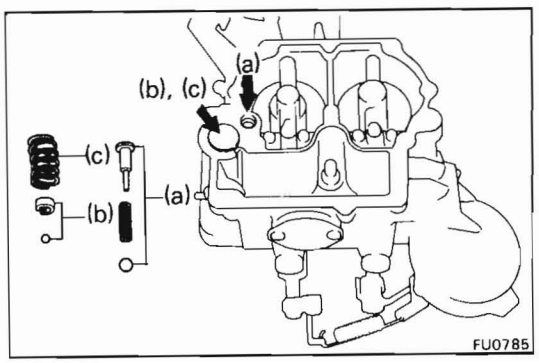
(b) Install the power valve assembly.



7. INSTALL SLOW JETS

(a) Install the primary slow jet.

(b) Install the secondary slow jet.

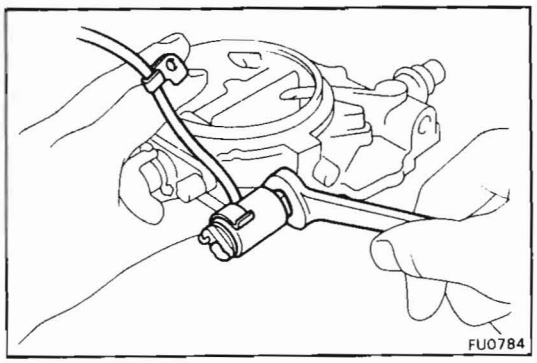


8. INSTALL CHECK BALLS FOR ACCELERATION

(a) Install the pump discharge large ball, spring and weight.

(b) Using tweezers, install the plunger small ball and retainer.

(c) Install the plunger spring.



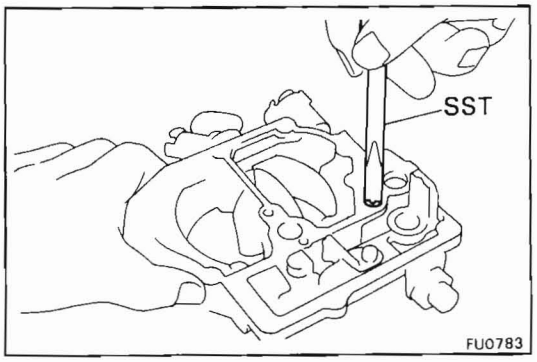
Assembly of Air Horn

(See page FU-5)

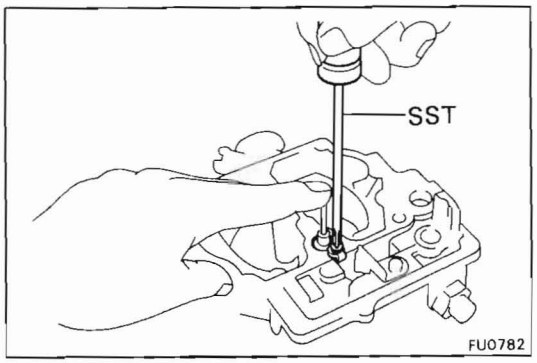
1. INSTALL FUEL CUT SOLENOID VALVE

(a) Install a new O-ring to the solenoid valve.

(b) Install the solenoid valve together with a new gasket.

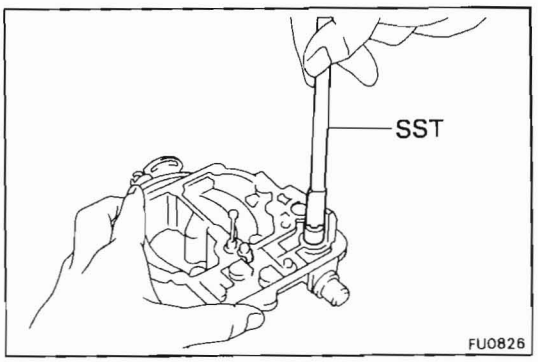


2. INSTALL PRIMARY UPPER SLOW JET



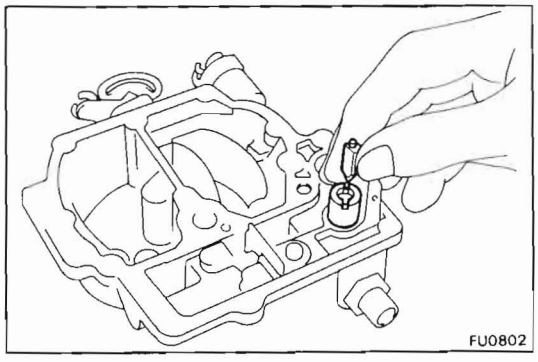
3. INSTALL POWER PISTON

Install the spring and power piston with the retainer and screw.



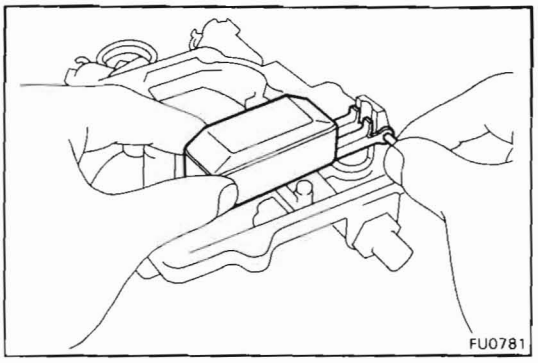
4. INSTALL NEEDLE VALVE SEAT

Install the valve seat together with a new gasket.



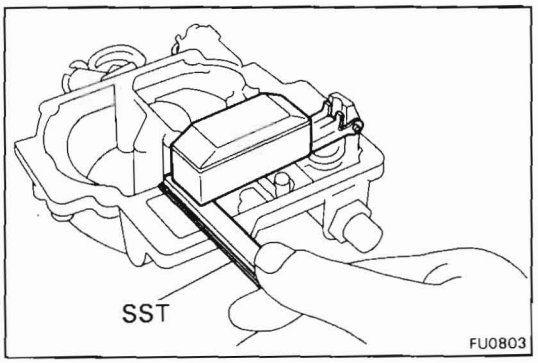
5. INSTALL NEEDLE VALVE

Insert the needle valve, spring and plunger into the needle valve seat.



6. ADJUST FLOAT LEVEL

(a) Install the float with the pivot pin.

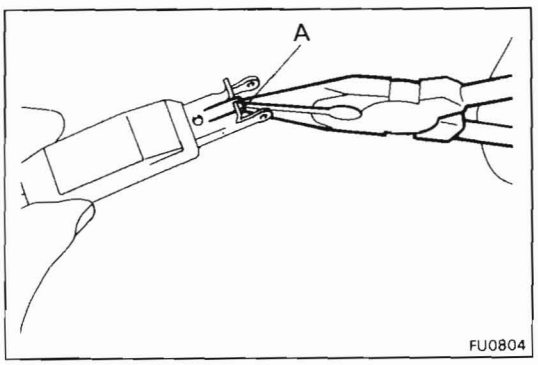


(b) Allow the float to hang down by its own weight. Using SST, measure the clearance between the float tip and air horn.

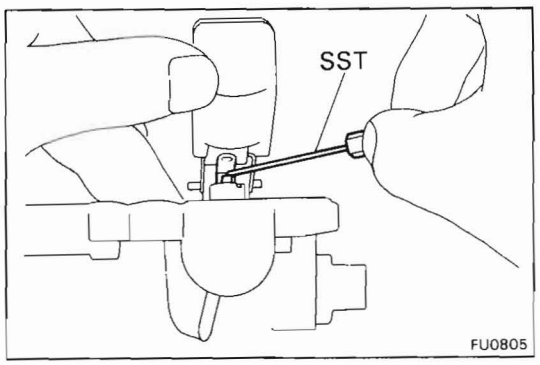
SST 09240-00014

Float level (raised position): 6.0 mm (0.236 in.)

NOTE: This measurement should be made without a gasket on the air horn.



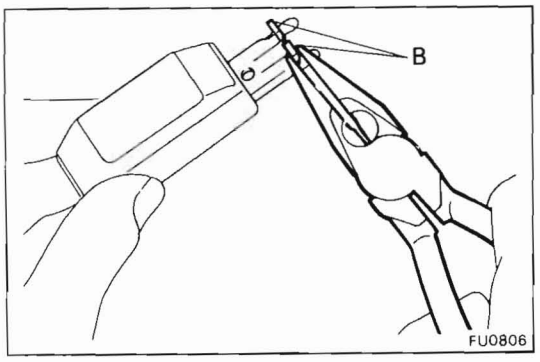
(c) Adjust by bending the portion of the float lip marked A.



(d) Lift up the float.
Using SST, measure the clearance between the needle valve plunger and float lip.

SST 09240-00020

Float level (lowered position): 1.1 mm (0.043 in.)



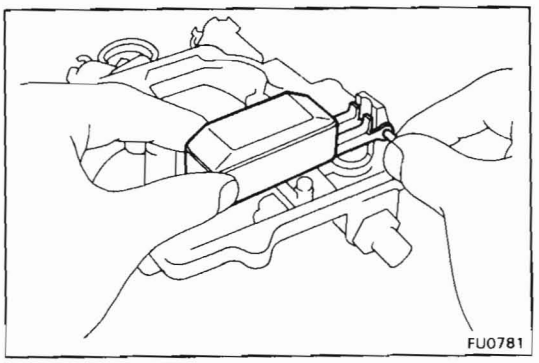
(e) Adjust by bending the position of the float lip marked B.

7. INSTALL NEW AIR HORN GASKET

Place the air horn gasket in the air horn.

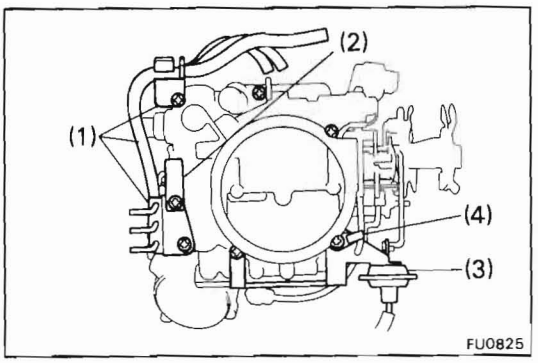
8. INSTALL ACCELERATION PUMP PLUNGER

Install a new boot and the pump plunger.



9. INSTALL FLOAT

Install the float with the pivot pin.



10. INSTALL AIR HORN ASSEMBLY

(a) Place the air horn in the carburetor body.

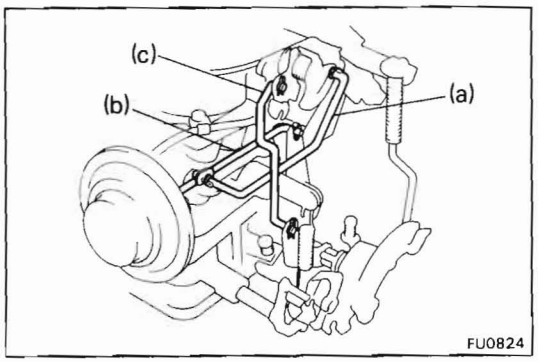
(b) Install the following parts with the seven screws:

(1) (S. Arabia and Australia)
Vacuum pipe supports with three hoses

(2) (General Countries M/T)
Number plate

(3) (w/ CB or TP)
Choke breaker (CB) with hose or throttle positioner (TP)

(4) Wire clamp of fuel cut solenoid valve

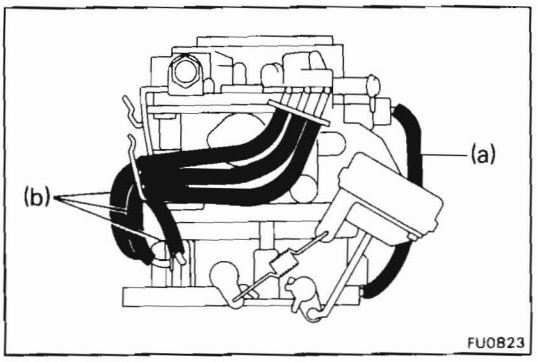


11. CONNECT LINKS

(a) (w/ CB)
Choke breaker (CB) link

(b) (w/ TP)
Throttle positioner (TP) link

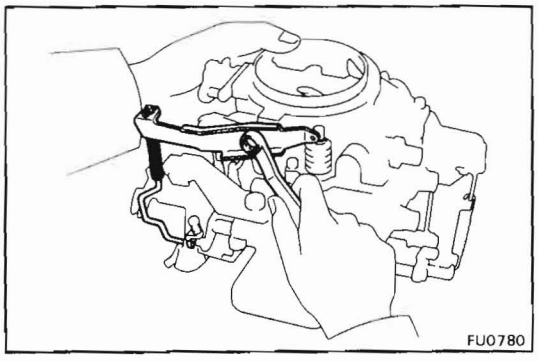
(c) Fast idle link



12. CONNECT VACUUM HOSES:

(a) (w/ CB only)
Choke breaker (CB) vacuum hose

(b) (S. Arabia and Australia)
Other three vacuum hoses



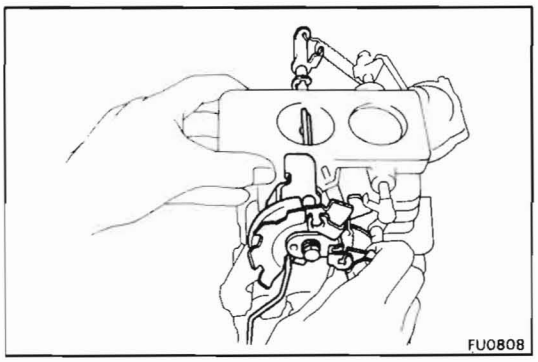
13. INSTALL ACCELERATION PUMP ARM

(a) Connect the pump connecting link to the throttle lever.

(b) Connect the pump arm to the pump plunger.

(c) Install the pump arm with the pivot bolt.

14. CHECK FOR SMOOTH OPERATION OF EACH PART



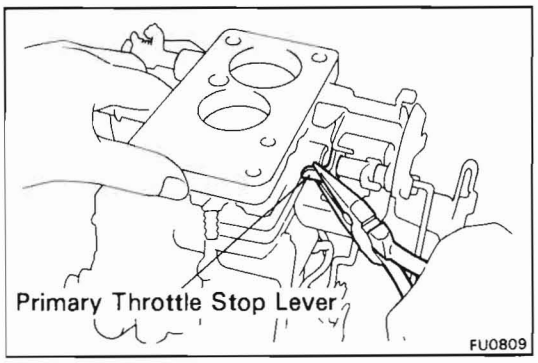
ADJUSTMENT OF CARBURETOR

NOTE: Use SST 09240-00014 to make adjustment.

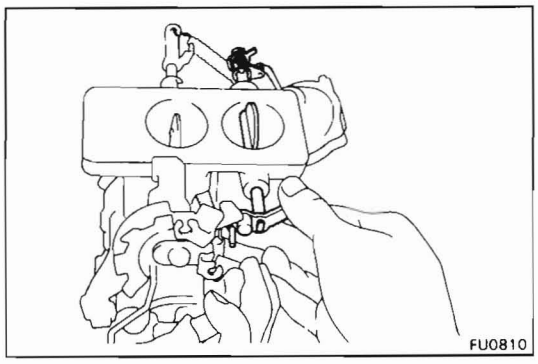
1. CHECK AND ADJUST THROTTLE VALVE OPENING

(a) Check the full opening angle of the primary throttle valve.

Standard angle: 90° from horizontal

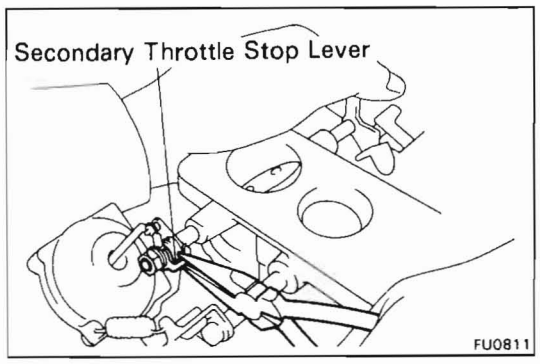


(b) Adjust by bending the primary throttle stop lever.

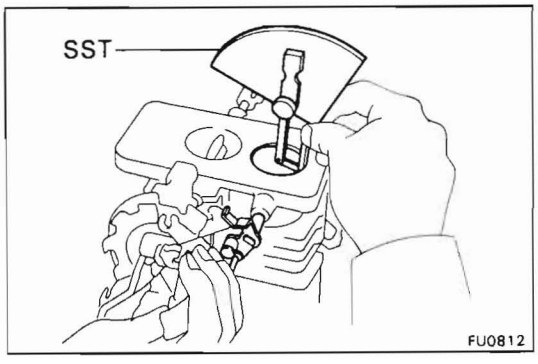


(c) Check the full opening angle of the secondary throttle valve.

Standard angle: 90° from horizontal



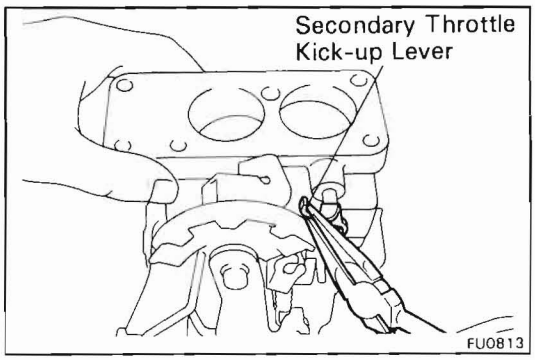
(d) Adjust by bending the secondary throttle stop lever.



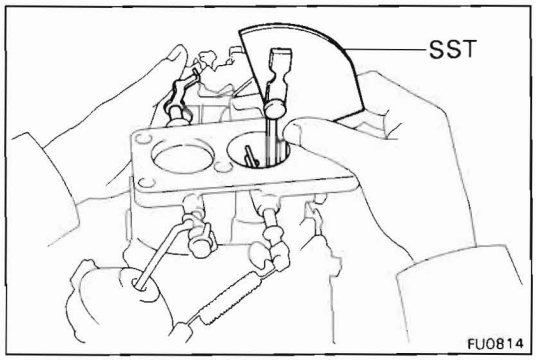
2. CHECK AND ADJUST KICK-UP SETTING

(a) With the primay throttle valve fully opened, check the opening angle of the secondary throttle valve.

Standard angle: 25° from horizonal



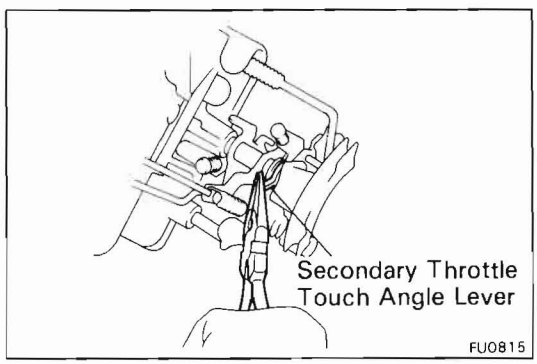
(b) Adjust by bending the secondary throttle kick-up lever.



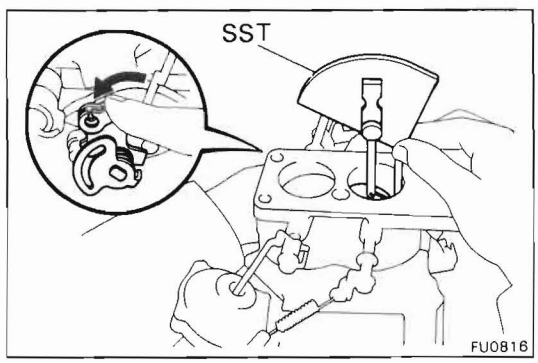
3. CHECK AND ADJUST SECONDARY TOUCH ANGLE

(a) Check the primary throttle valve opening angle at the same time the primary kick lever just touches the secondary kick lever.

Standard angle: 67° from horizontal



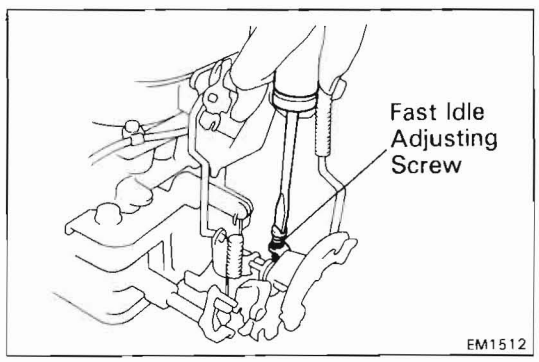
(b) Adjust by bending the secondary throttle touch angle lever.



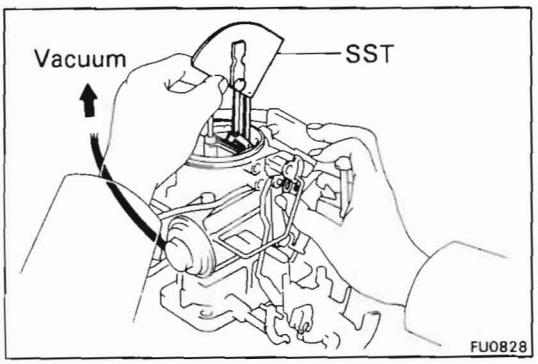
4. CHECK AND ADJUST FAST IDLE SETTING

(a) With the choke valve fully closed, check the primary throttle valve angle.

Standard angle: 23° from horizontal



(b) Adjust by turning the fast idle adjusting screw.

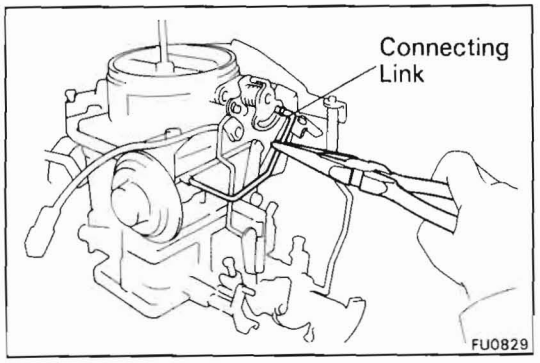


5. CHECK AND ADJUST CHOKE BREAKER (CB)

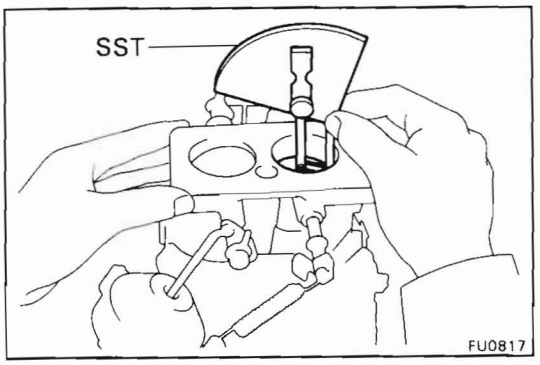
(a) With the choke valve fully closed, apply vacuum to the CB.

(b) Check the choke valve angle.

Standard angle: 38° from horizontal



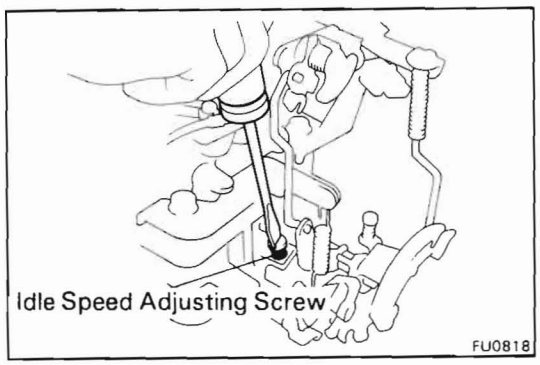
(c) Adjust by bending the connecting link.



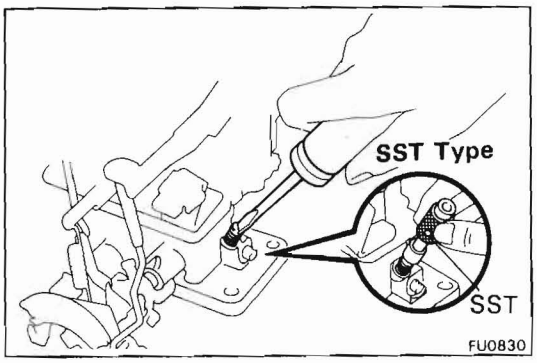
6. PRESET IDLE SPEED ADJUSTING SCREW

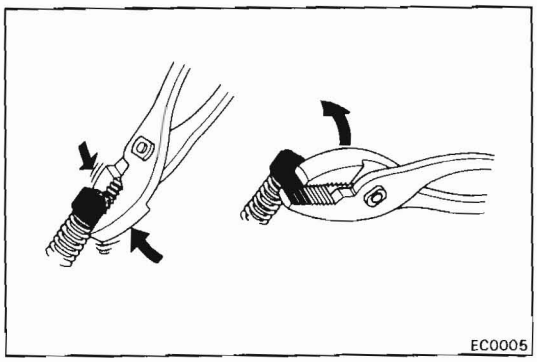
(a) Check the primary throttle valve angle.

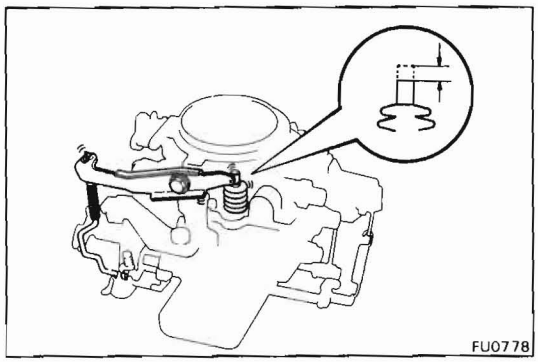
Standard angle: 14° from horizontal



(b) Adjust by turning the idle speed adjusting screws.







7. PRESET IDLE MIXTURE ADJUSTING SCREW

If the idle mixture adjusting screw has been removed, fully screw it in and then unscrew it the following amount.

Standard:

S. Arabia M/T
Return 3 3/4 turns from fully closed
S. Arabia A/T
Return 4 1/2 turns from fully closed
Other Return 2 turns from fully closed

SST 09243-00020 (S. Arabia)

CAUTION: Use care not to screw it in too tightly and damage the screw tip.

NOTE: If there is an idle limiter cap on the idle mixture adjusting screw, remove it.

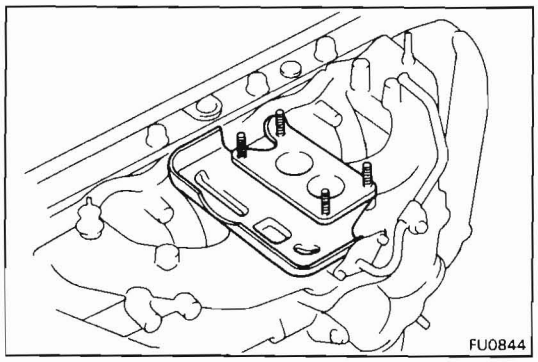
8. CHECK AND ADJUST ACCELERATION PUMP STROKE

(a) Rotate the throttle shaft and check the length of the stroke.

Standard stroke: 9.5 mm (0.374 in.)

(b) Adjust the pump stroke by bending the connecting link.

9. CHECK FOR SMOOTH OPERATION OF EACH PART



INSTALLATION OF CARBURETOR

1. **INSTALL CARBURETOR**
   (a) Place the insulator on the intake manifold.
   (b) Install the carburetor with the four nuts.

2. **CONNECT HOSES**
   (a) Emission control hoses
   (b) (w/ Outer Vent Control Valve)
   Outer vent control hose

3. **CONNECT FUEL INLET PIPE**
   Torque: 150 kg-cm (11 ft-lb, 15 N·m)

4. **CONNECT CABLES**
   (a) Accelerator throttle cable
   (b) Choke cable
   (c) Throttle cable for automatic transmission

5. **CONNECT CONNECTOR OF FUEL CUT SOLENOID VALVE**

6. **INSTALL AIR CLEANER ASSEMBLY OR AIR INTAKE CONNECTOR**

7. **CHECK AND ADJUST IDLE SPEED AND IDLE MIXTURE (See page EM-7)**

8. **CHECK AND ADJUST FAST IDLE SPEED (See page EM-11)**

9. **CHECK AND ADJUST THROTTLE POSITIONER SETTING SPEED (See page EM-12)**