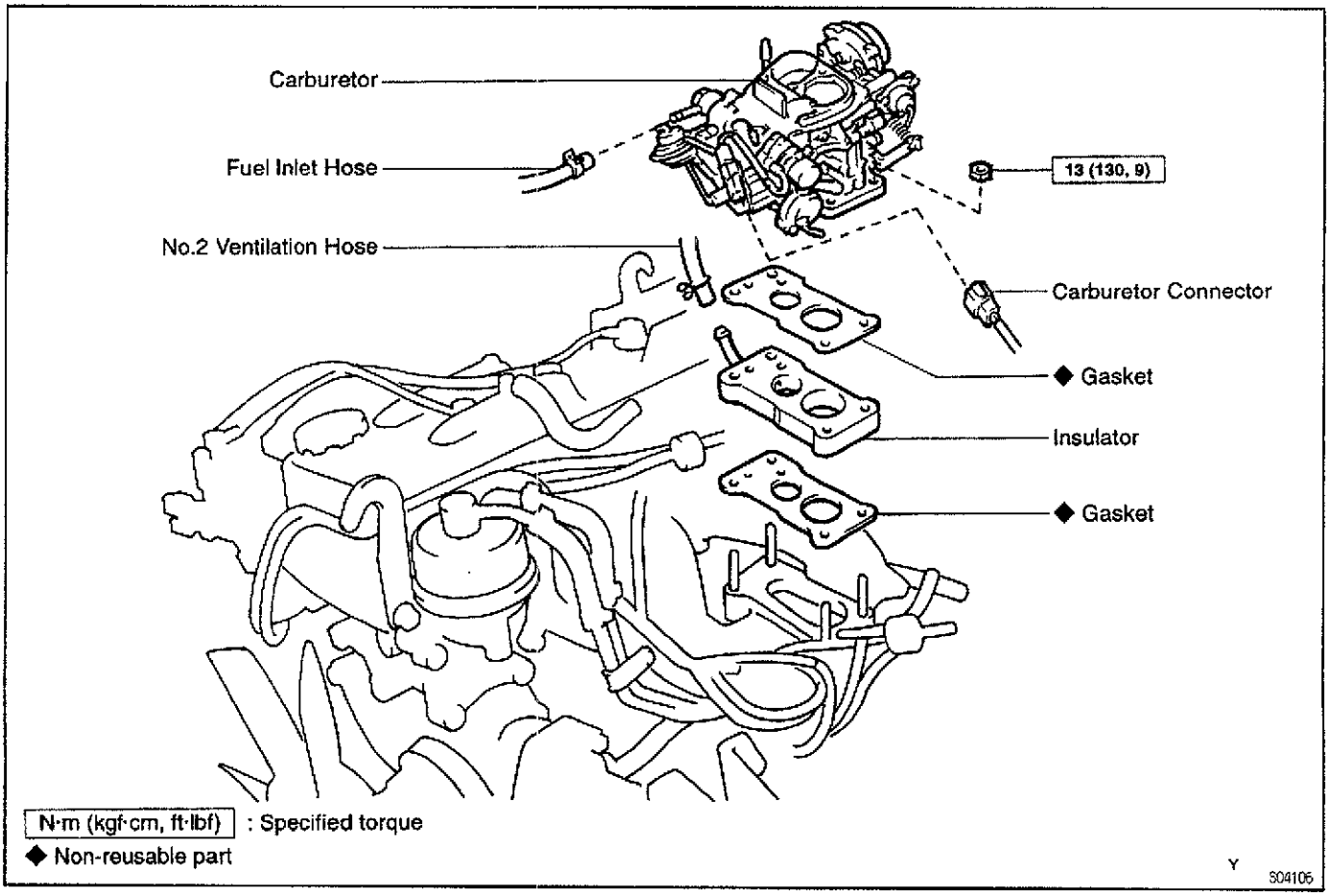
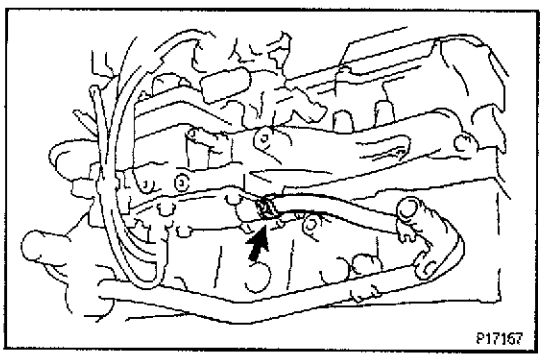
CARBURETOR

COMPONENTS FOR REMOVAL AND ASSEMBLY

EG40Z-02

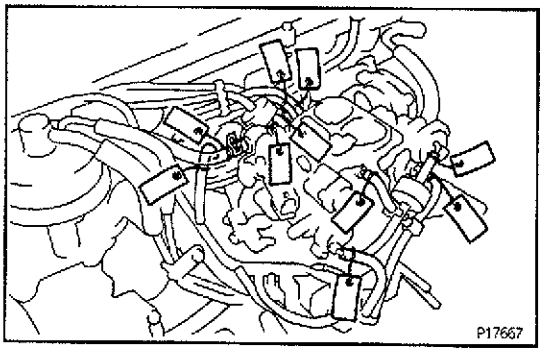




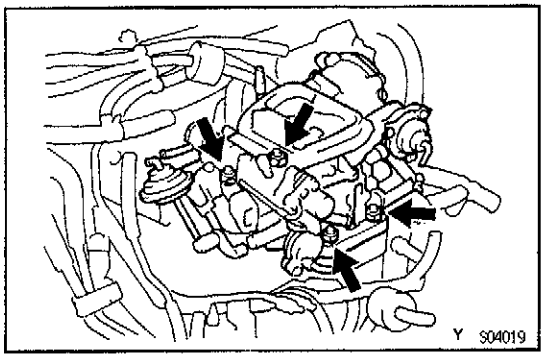
CARBURETOR REMOVAL

EG410-02

1. **DRAIN COOLANT**
   Disconnect the water bypass hose from the intake manifold and drain the coolant from the manifold.
2. **DISCONNECT CARBURETOR CONNECTOR**



3. **DISCONNECT FOLLOWING HOSES:**
   (a) Fuel inlet hose
   (b) Outer vent control hose
   (c) No.2 ventilation hose
   (d) Emission control hoses
   HINT: Before disconnecting the emission control hoses, use tags to identify how they should be reconnected.

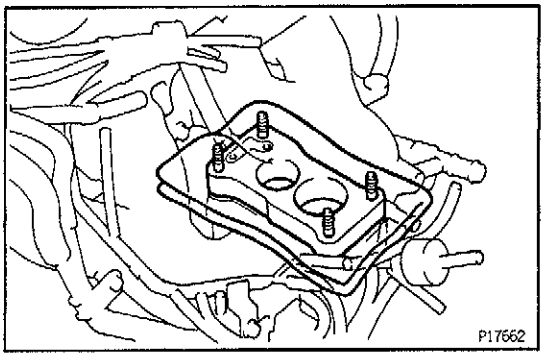


EG

4. REMOVE CARBURETOR

(a) Remove the 4 carburetor mounting nuts.

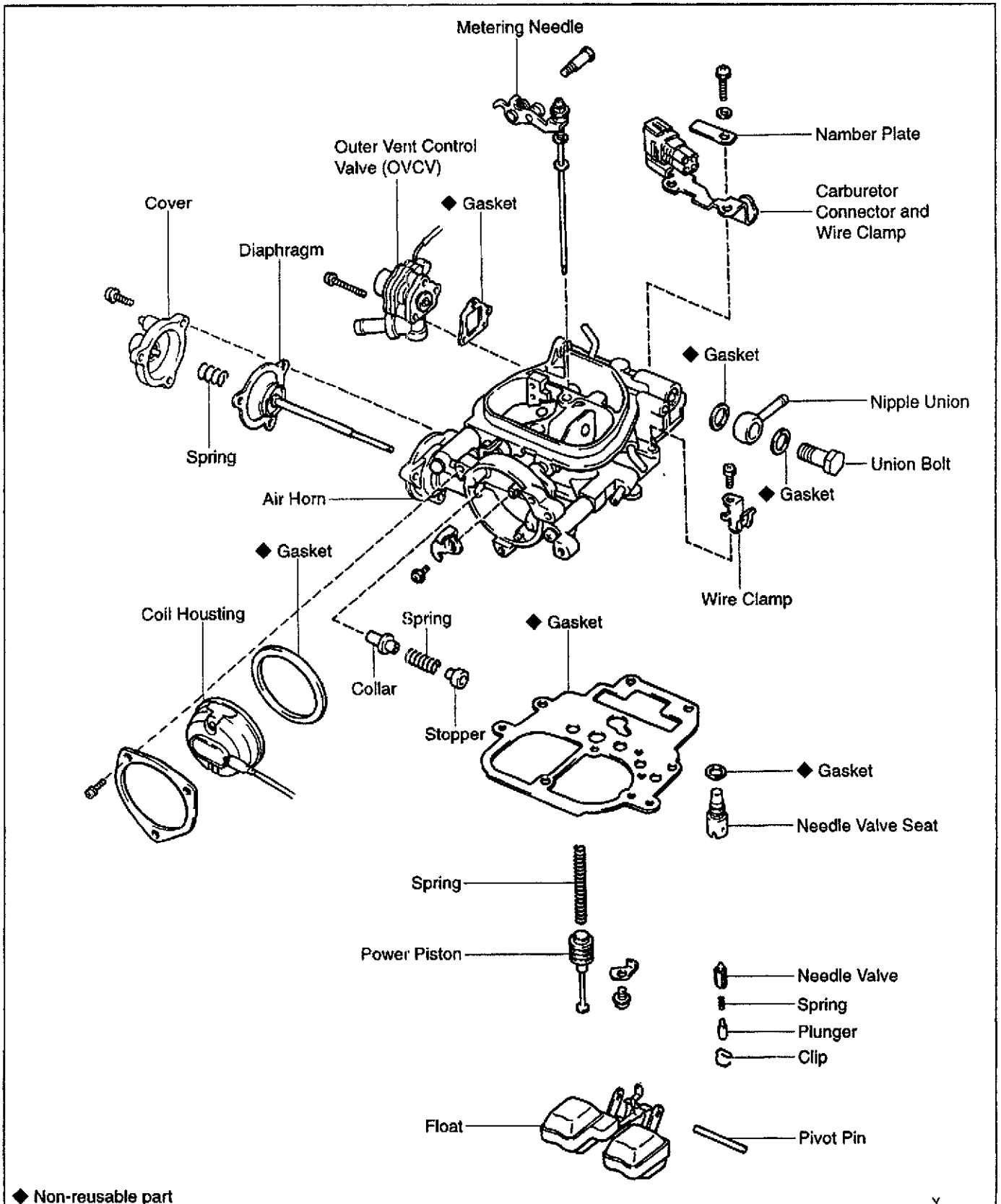
(b) Lift out the carburetor.

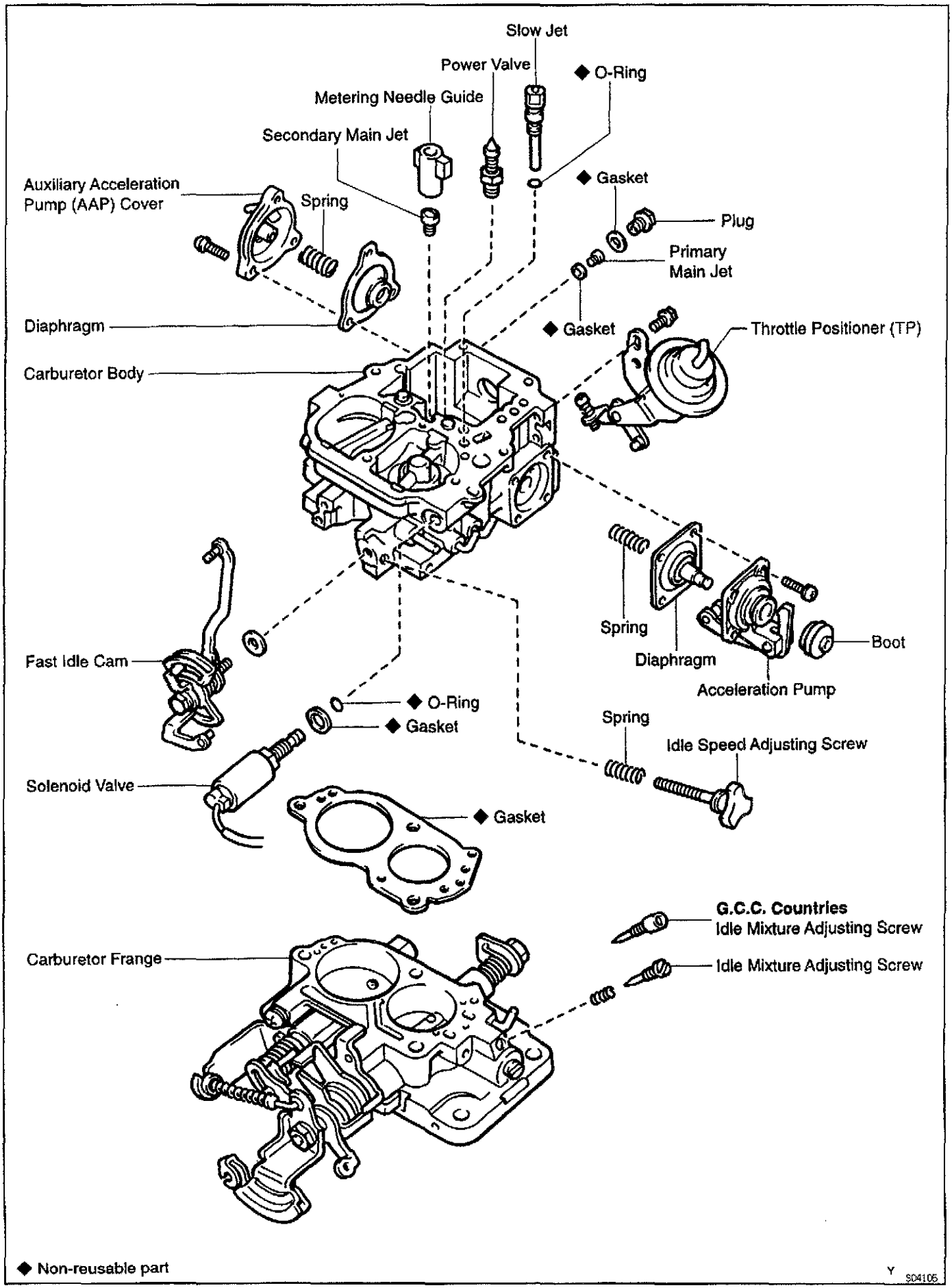


(c) Cover the inlet hole of the intake manifold with a cloth.

COMPONENTS FOR DISASSEMBLY AND ASSEMBLY

EG0018-05




Slow Jet
Power Valve
◆ O-Ring
Metering Needle Guide
Secondary Main Jet
Auxiliary Acceleration Pump (AAP) Cover
Spring
◆ Gasket
Plug
Primary Main Jet
Diaphragm
◆ Gasket
Throttle Positioner (TP)
Carburetor Body
Fast Idle Cam
Spring
Diaphragm
Boot
Acceleration Pump
◆ O-Ring
◆ Gasket
Spring
Idle Speed Adjusting Screw
Solenoid Valve
◆ Gasket
G.C.C. Countries
Idle Mixture Adjusting Screw
Carburetor Frange
Idle Mixture Adjusting Screw
◆ Non-reusable part
Y S04105

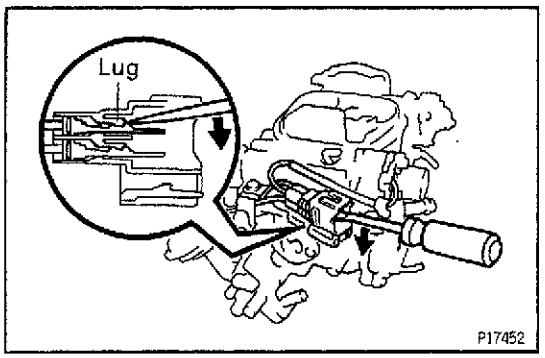
EG783-01

CARBURETOR DISASSEMBLY

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

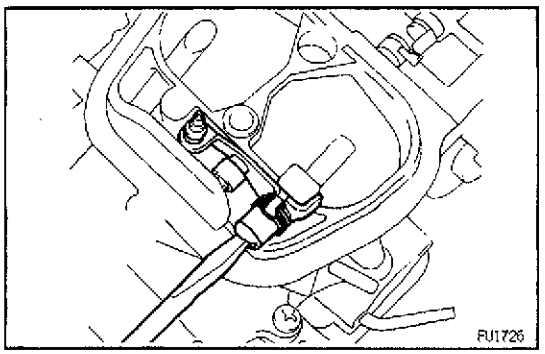
(a) To facilitate reassembly, arrange parts in order.
(b) Be careful not to mix up or lose balls, clips or springs.

Air Horn Disassembly



1. DISCONNECT WIRES FROM CARBURETOR CONNECTOR

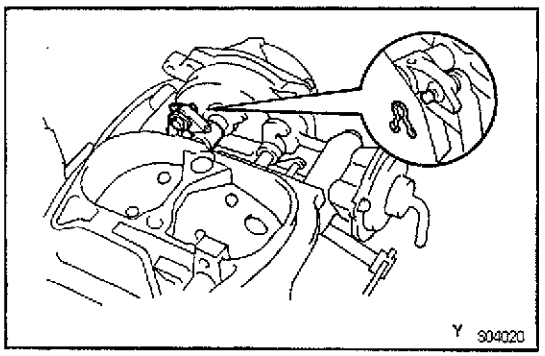
Pry up the locking lugs with a screwdriver and pull out the terminal.



2. REMOVE METERING NEEDLE

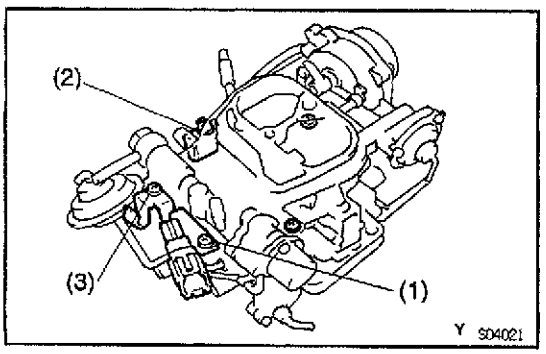
Loosen the screw and remove the metering needle.

3. REMOVE NIPPLE UNION

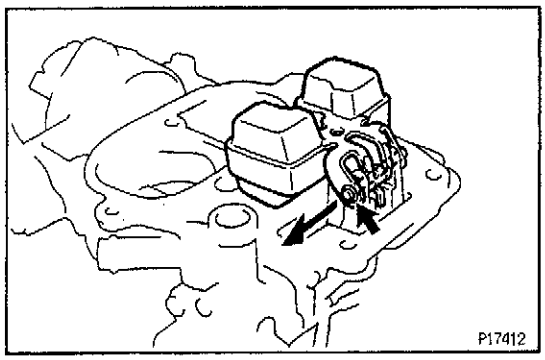


4. REMOVE AIR HORN ASSEMBLY

(a) Remove the snap ring and disconnect the fast idle link.

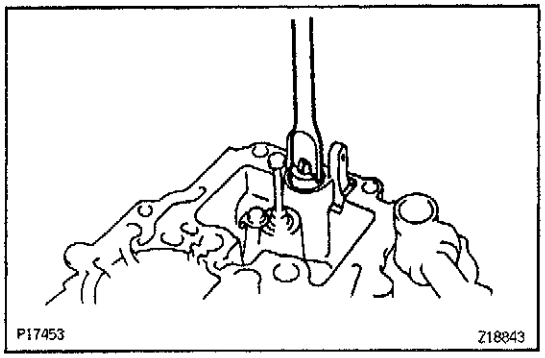


(b) Remove the 5 screws and following parts:
  (1) Number plate
  (2) Wire clamps
  (3) Vacuum hose clamp
(c) Lift off the air horn assembly together with the air horn gasket.

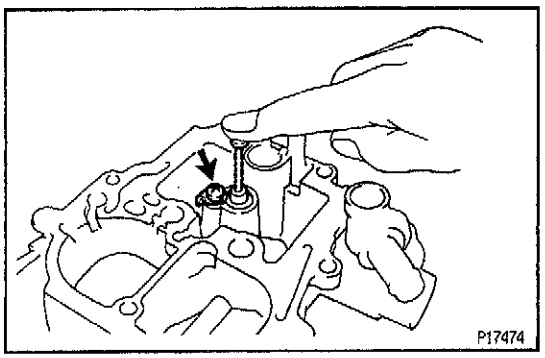


5. REMOVE FLOAT AND NEEDLE VALVE
Remove the float pivot pin, float and needle valve subassembly.

6. REMOVE AIR HORN GASKET



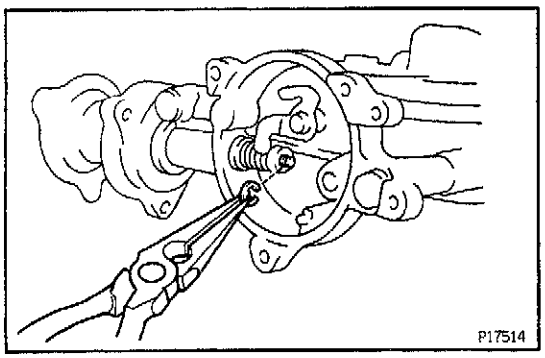
7. REMOVE NEEDLE VALVE SEAT
Remove the needle valve seat and gasket.



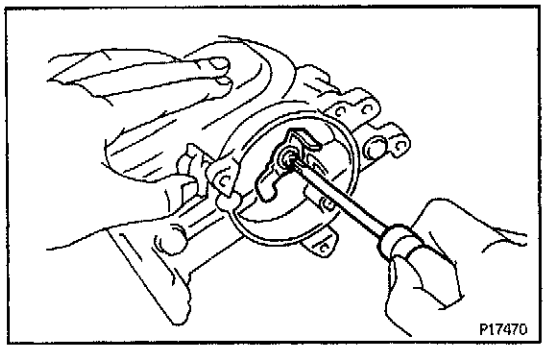
8. REMOVE POWER PISTON
Remove the screw, retainer, power piston and spring.

9. REMOVE OUTER VENT CONTROL VALVE (OVCV)
Remove the 3 screws, wire clamp, OVCV and gasket.

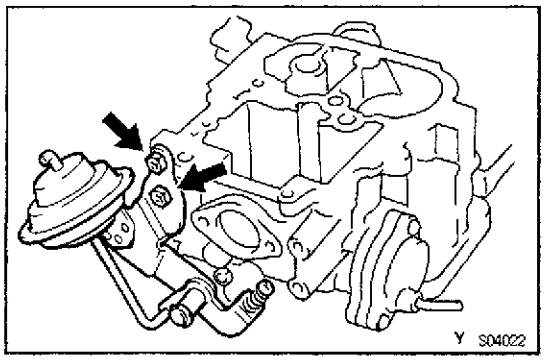
10. REMOVE COIL HOUSING
Remove the 3 screws, retainer, coil housing and gasket.



11. REMOVE CHOKE BREAKER (CB)
(a) Remove the 3 screws, cover and spring.
(b) Remove the E–ring, stopper, spring collar and diaphragm.

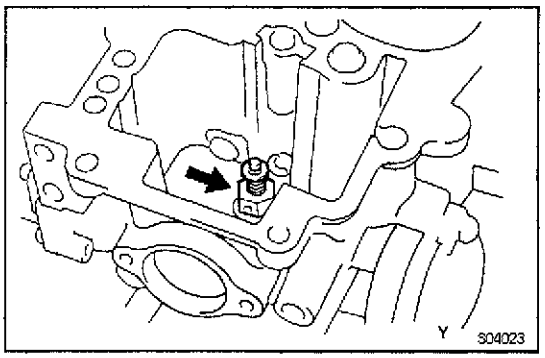


(c) Remove the screw and choke lever.

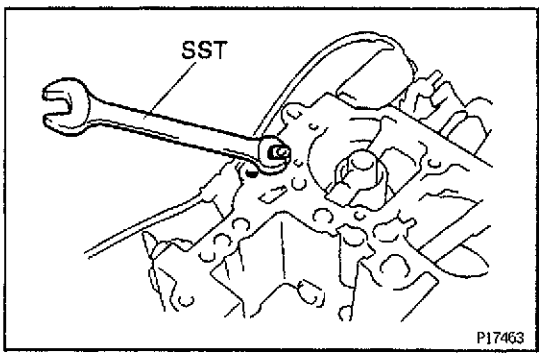


Carburetor Body Disassembly

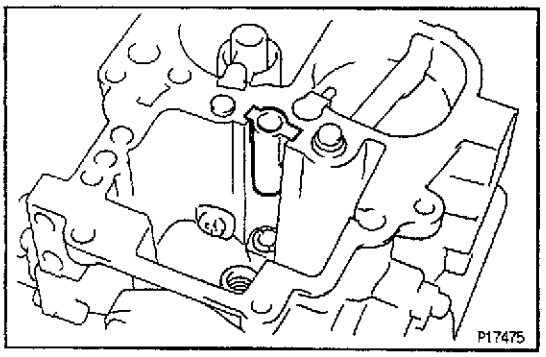
1. REMOVE THROTTLE POSITIONER (TP)
Remove the 2 screws and TP.



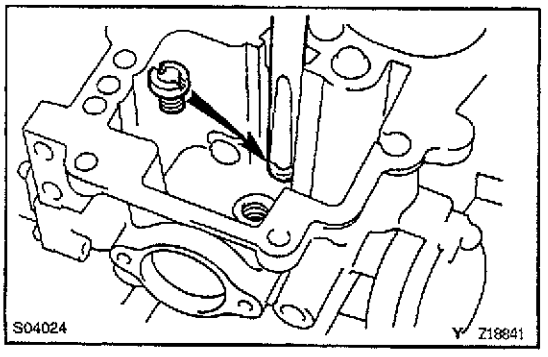
2. REMOVE POWER VALVE
Remove the power valve.



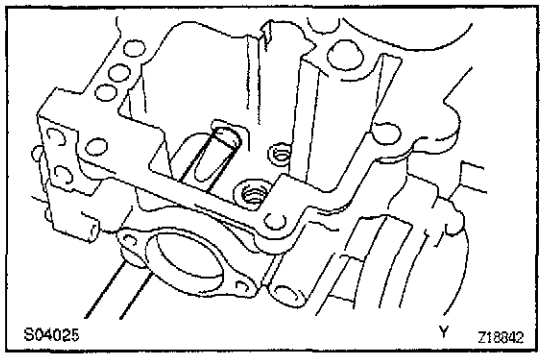
3. REMOVE SLOW JET
Using SST, remove the slow jet.
SST 09922–00010

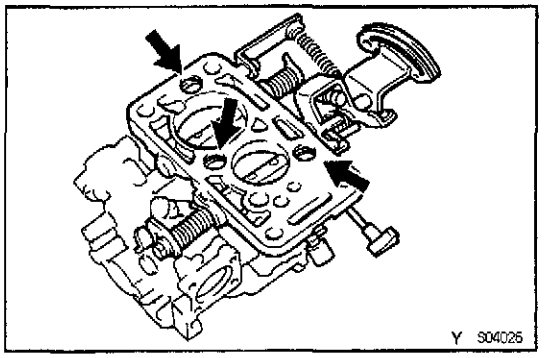


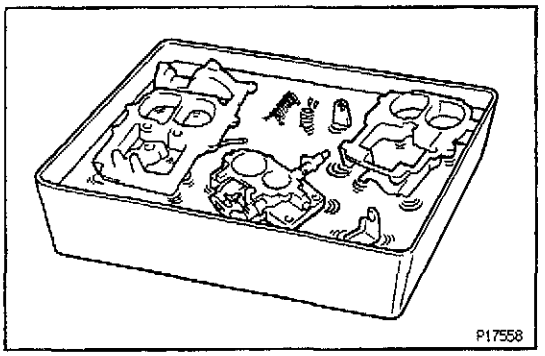
4. REMOVE SECONDARY MAIN JET
(a) Remove the metering needle guide.

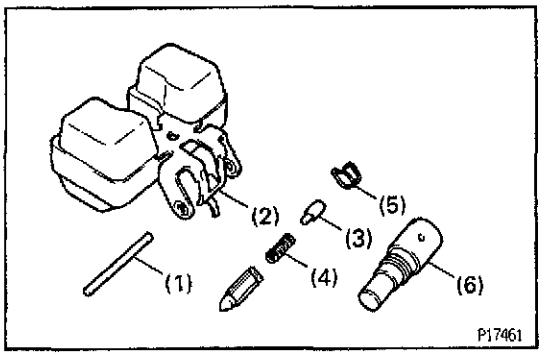


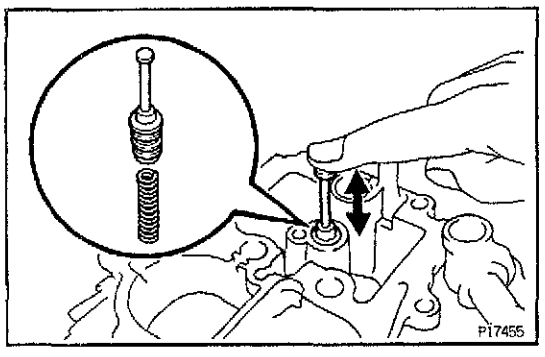
(b) Remove the secondary main jet.











5. REMOVE PRIMARY MAIN JET

(a) Remove the passage plug and gasket.

(b) Remove the primary main jet and gasket.

6. REMOVE ACCELERATION PUMP

Remove the 4 screws, pump housing, spring and diaphragm.

7. REMOVE AUXILIARY ACCELERATION PUMP (AAP)

Remove the 3 screws, pump housing, spring and diaphragm.

8. REMOVE FUEL CUT SOLENOID VALVE

Remove the solenoid valve and gasket.

9. REMOVE FAST IDLE CAM

10. SEPARATE CARBURETOR BODY AND FLANGE

(a) Remove the 3 screws.

(b) Separate the body and flange.

GENERAL CLEANING PROCEDURE

EG0UF-05

CLEAN DISASSEMBLED PARTS BEFORE INSPECTION

(a) With a soft brush wash clean the cast parts in 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 material from the jets, fuel passages and restrictions in the body.

INSPECTION OF CARBURETOR

EG7M-01

1. INSPECT FLOAT AND NEEDLE VALVE

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

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

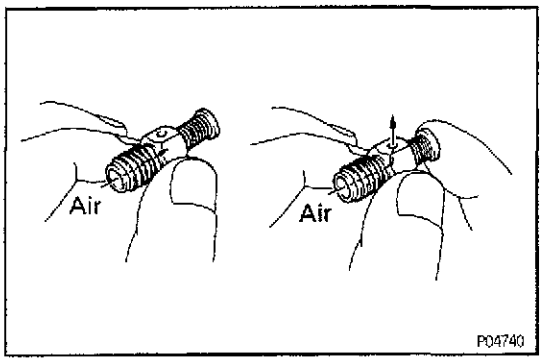
(c) Inspect the spring (3) for breaks and deformation.

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

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

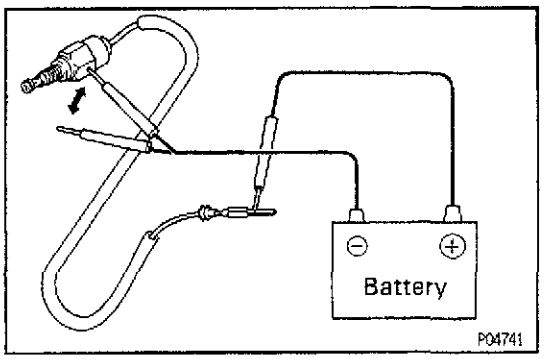
2. INSPECT POWER PISTON

Check that the power piston moves smoothly.



3. INSPECT POWER VALVE

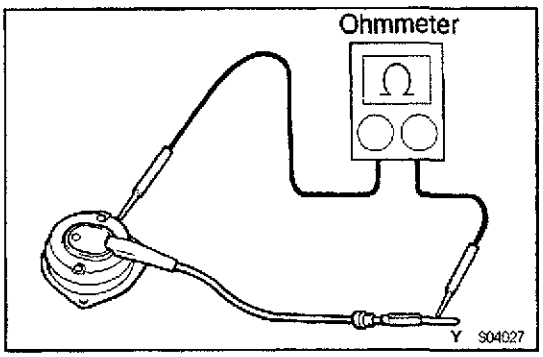
Check for faulty opening and closing action.



4. INSPECT FUEL CUT SOLENOID VALVE

(a) Connect the connector terminals 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 is not operating properly, replace it.



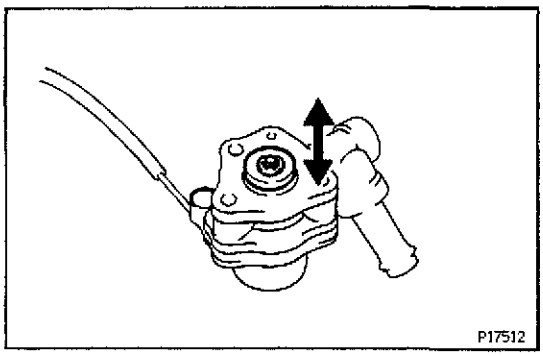
5. INSPECT CHOKE HEATER (COIL HOUSING)

Using an ohmmeter, measure the resistance between the terminals.

Resistance:

At 20°C (68°F): 1.7 – 1.9 Ω

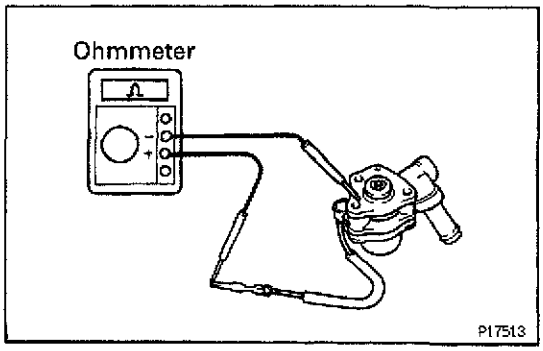
If a problem is found, replace the choke heater.



6. INSPECT OUTER VENT CONTROL VALVE (OVCV)

(a) Check the valve and seats for damage.

(b) Check the valve rod moves smoothly.

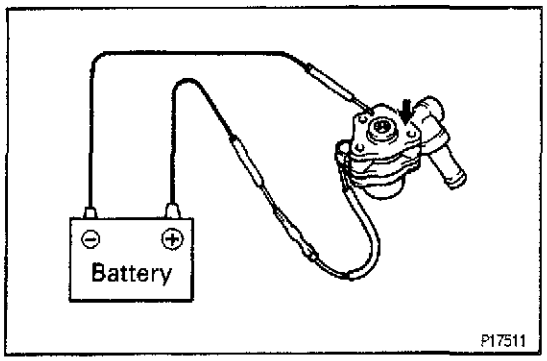


(c) Using an ohmmeter, measure the resistance between the wire terminal and body.

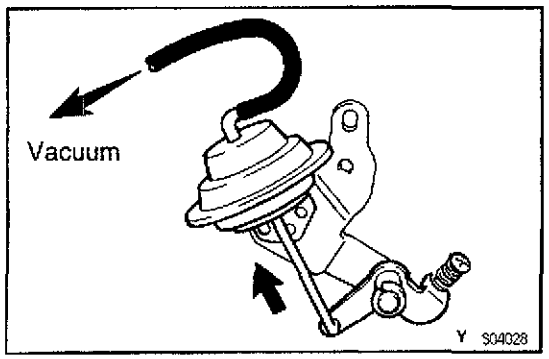
Resistance:

Cold: 32 – 38 Ω

If the resistance is not within specification, replace the OVCV.

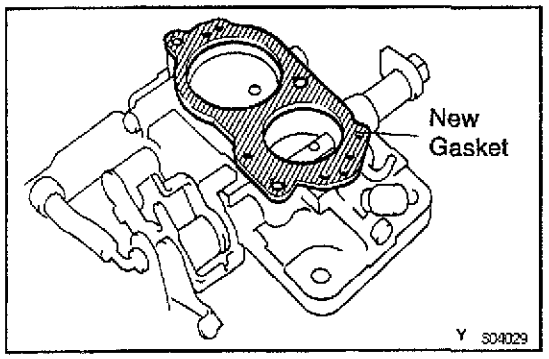


(d) Connect the OVCV body and wire terminal to the battery terminals and check that the valve retracts. If the OVCV is not operating properly, replace it.



7. THROTTLE POSITIONER (TP) DIAPHRAGM

(a) Apply vacuum to the diaphragm.
(b) Check that the vacuum does not drop immediately.
(c) Check that the link moves when vacuum is applied.



EG7B5-01

CARBURETOR ASSEMBLY

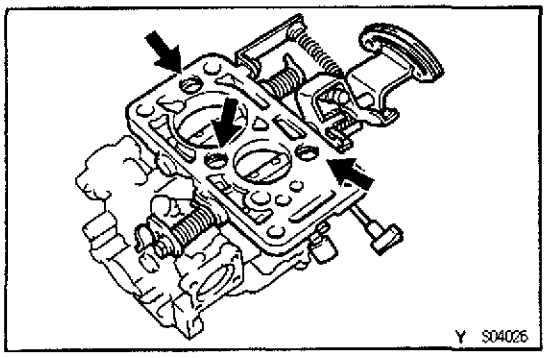
HINT: Use new gaskets and O–rings throughout.

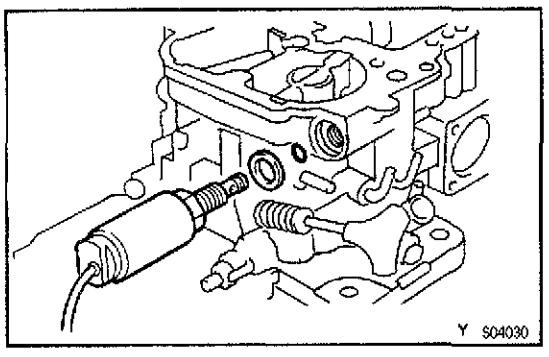
Carburetor Body Assembly

1. ASSEMBLE CARBURETOR BODY AND FLANGE

(a) Assemble the flange and body together with a new gasket.
(b) Install the passage screw together with the spring washer.

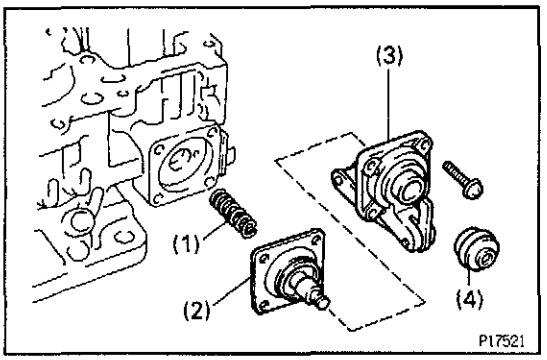
2. INSTALL FAST IDLE CAM





3. 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.

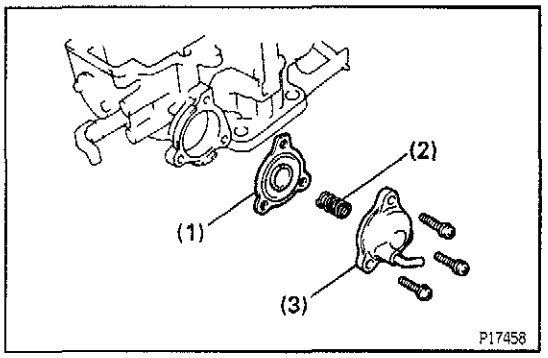


4. INSTALL ACCELERATION PUMP

Install the following parts with the 4 screws.

(1) Spring
(2) Diaphragm
(3) Cover
(4) Boot

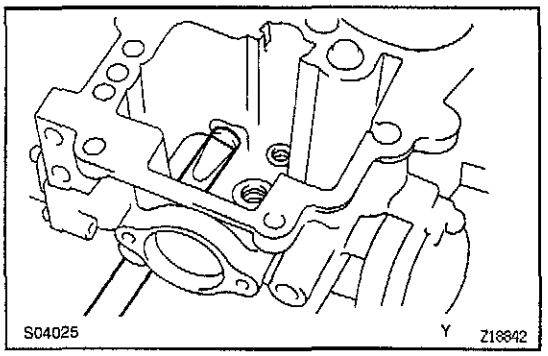
EG



5. INSTALL AUXILIARY ACCELERATION PUMP (AAP)

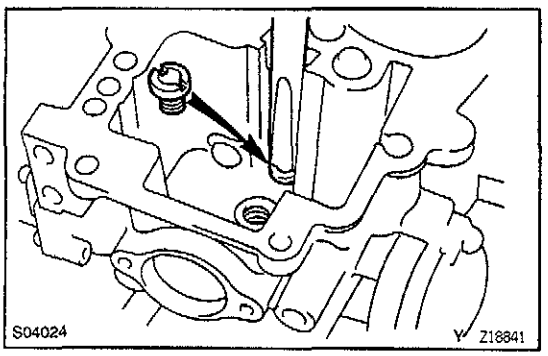
Install the following parts with the 3 screws.

(1) Diaphragm
(2) Spring
(3) Cover



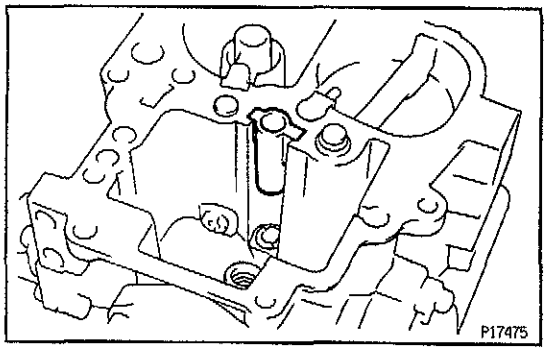
6. INSTALL PRIMARY MAIN JET

(a) Install the primary main jet with new gaskets.
(b) Install the primary passage plug with new gasket.

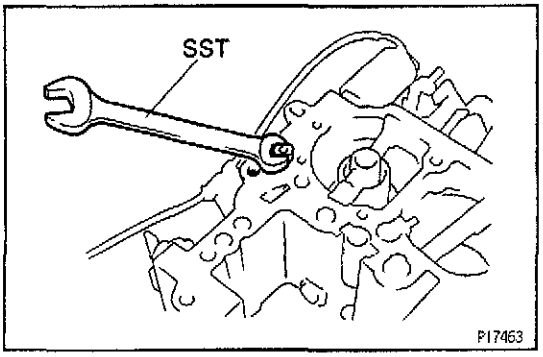


7. INSTALL SECONDARY MAIN JET

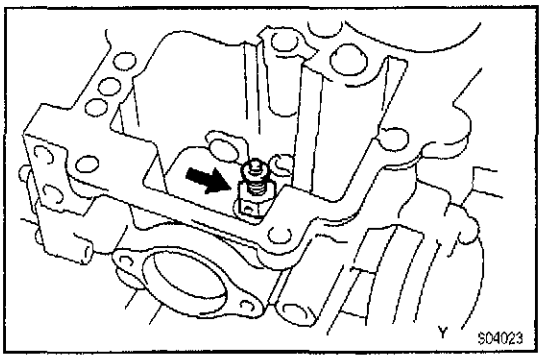
(a) Install the secondary main jet.



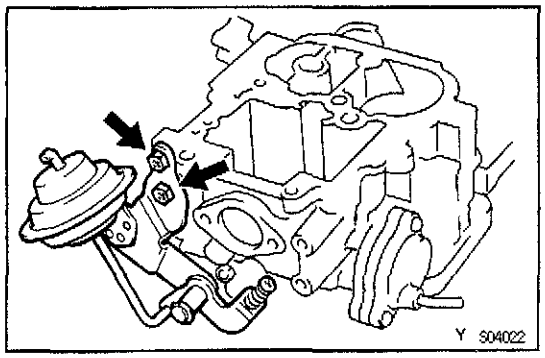
(b) Install the metering needle guide.



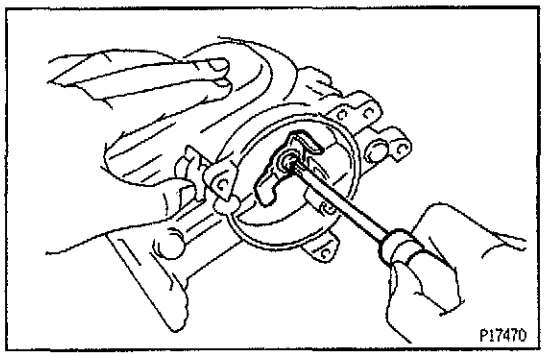
8. **INSTALL SLOW JET**
Using SST, install the slow jet.
SST 09922–00010



9. **INSTALL POWER VALVE**



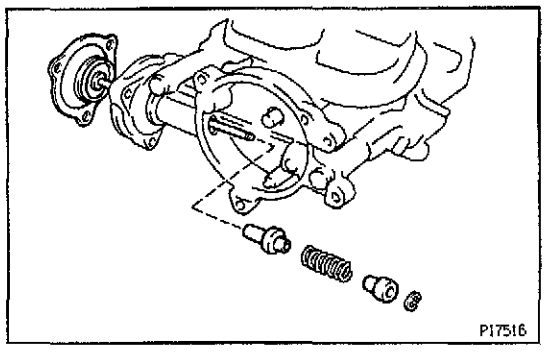
10. **INSTALL THROTTLE POSITIONER (TP)**
Install the TP with the 2 screws.



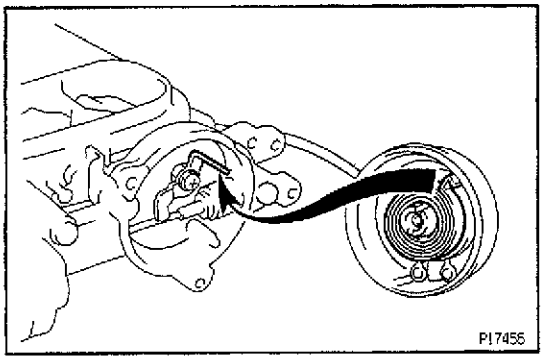
Air Horn Assembly

1. **INSTALL CHOKE BREAKER (CB)**

(a) Install the choke lever with the screw.



(b) Insert the diaphragm into the thermostat case, and install the collar, spring and stopper with the E–ring.
(c) Insert the shaft of the diaphragm into the hole of the thermostat case.
(d) Install the spring, cover and 3 screws.



2. INSTALL COIL HOUSING

(a) Install the gasket to the thermostat case.

(b) Align the bimetallic spring with the wire spring and in stall the coil housing, aligning the choke lever as shown in the illustration.

(c) Align the scale center line of the thermostat case with the coil housing line, and install the plate with the 3 screws.

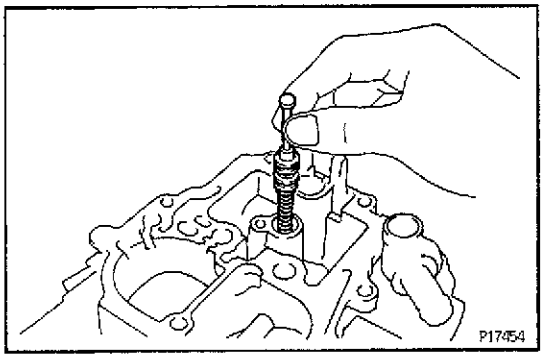
(d) Check the choke valve action.

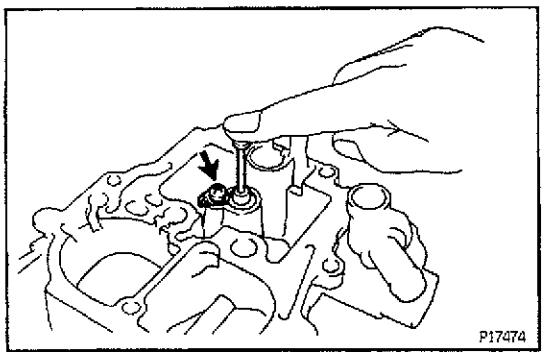
3. INSTALL OUTER VENT CONTROL VALVE (OVCV)

Install a new gasket, the wire clamp and OVCV with the 3 screws.

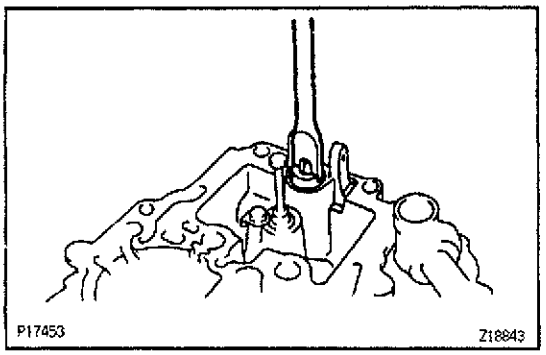
4. INSTALL POWER PISTON

(a) Install the spring and power piston.



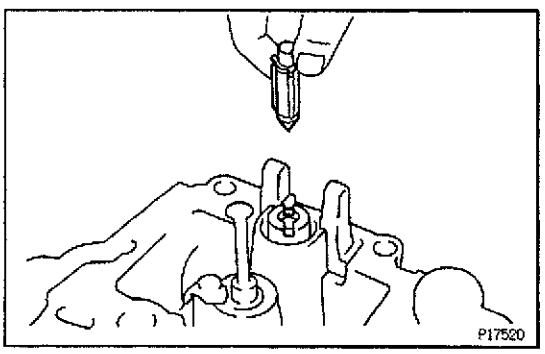


(b) Install the retainer and screw.



5. INSTALL NEEDLE VALVE SEAT

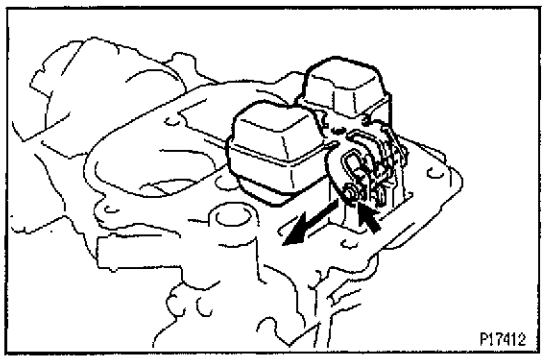
Install the valve seat together with a new gasket.



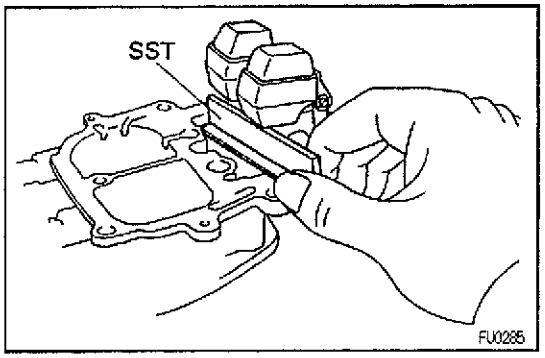
6. ADJUST FLOAT LEVEL

(a) Insert the needle valve, spring and plunger into the needle valve seat.

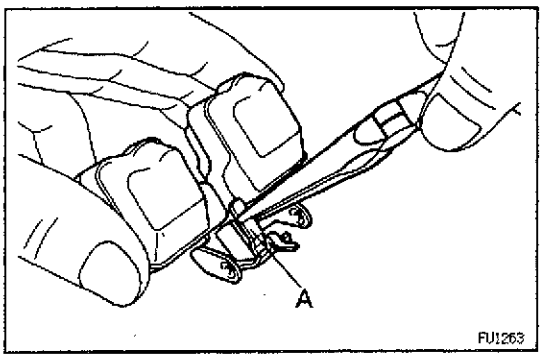
HINT: After adjusting the float level, install the clip onto the needle valve.



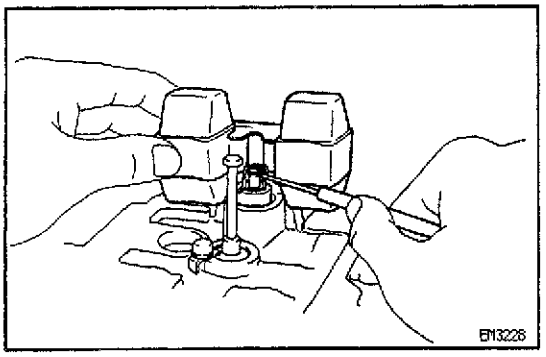
(b) Install the float with the pivot pin.



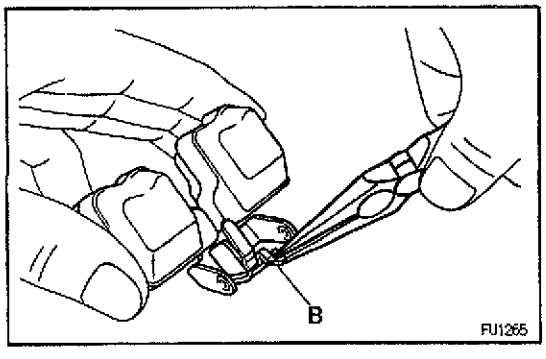
(c) Allow the float to hang down by its own weight.
Using SST, measure the clearance between the float tip and air horn.
SST 09240–00014
Float level (Raised position):
9.8 mm (0.386 in.)
HINT: This measurement should be made without a gasket on the air horn.



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

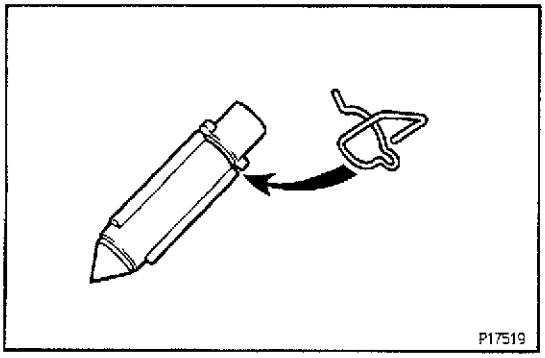


(e) Lift up the float.
Using SST, measure the clearance between the needle valve plunger and float lip.
SST 09240–00020
Float level (Lowered position):
0.9 – 1.1 mm (0.035 – 0.043 in.)



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

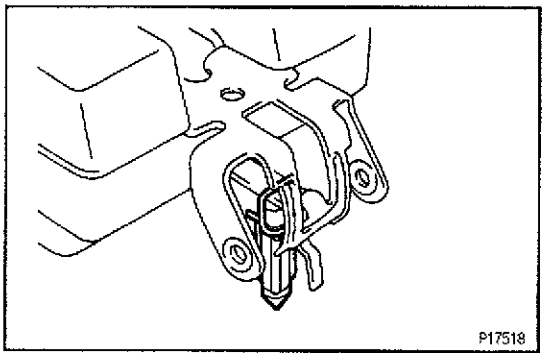
(g) After adjusting the float level, remove the float, plunger, spring and needle valve.



(h) Assemble the clip onto the needle valve.

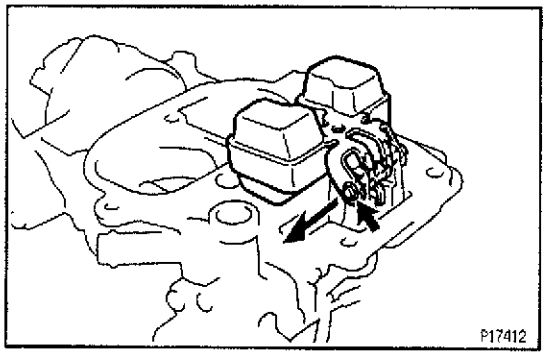
7. INSTALL NEW AIR HORN GASKET

Place the air horn gasket on the air horn.

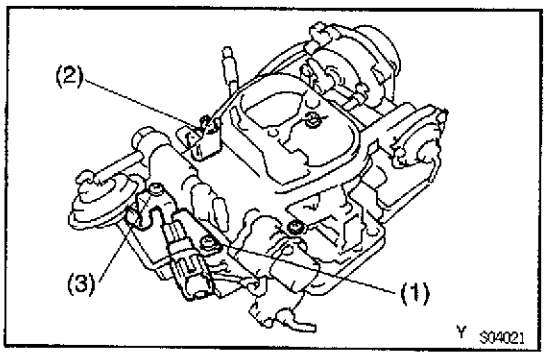


8. INSTALL NEEDLE VALVE AND FLOAT

(a) Hook the needle valve clip to the lip portion of the float.



(b) Install the float and secure it with the pivot pin.

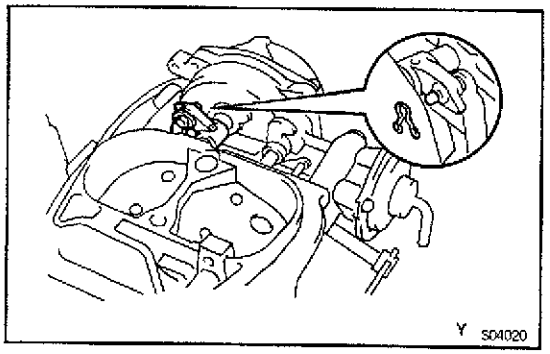


9. INSTALL AIR HORN ASSEMBLY

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

(b) Install the following parts with the 5 screws:

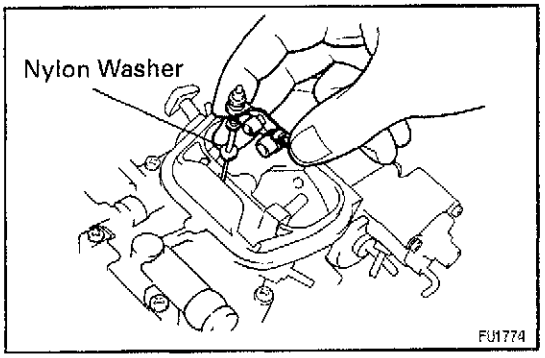
(1) Number plate
(2) Wire clamps
(3) Vacuum hose clamp



(c) Connect the fast idle link and install the snap ring.

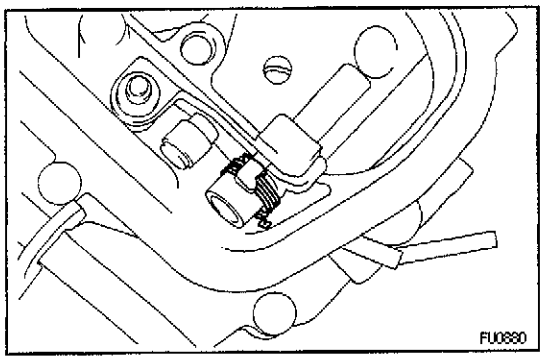
10. INSTALL NIPPLE UNION

Install a new gasket and nipple union

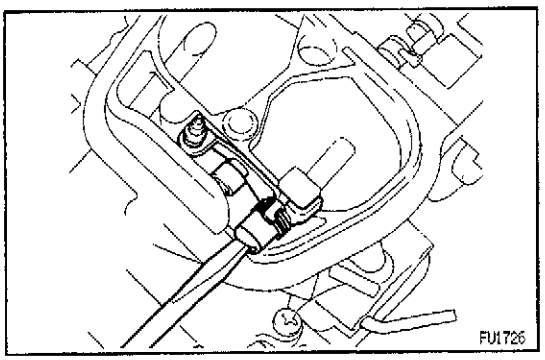


11. INSTALL METERING NEEDLE

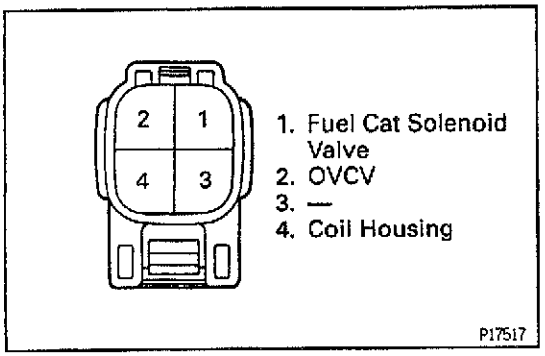
(a) Insert the metering needle into the air horn with the nylon washer.



(b) Hook the spring end into the hole.



(c) Tighten the screw with the steel washer.
(d) Secure the link with the snap ring.



12. CONNECT WIRES TO CONNECTOR

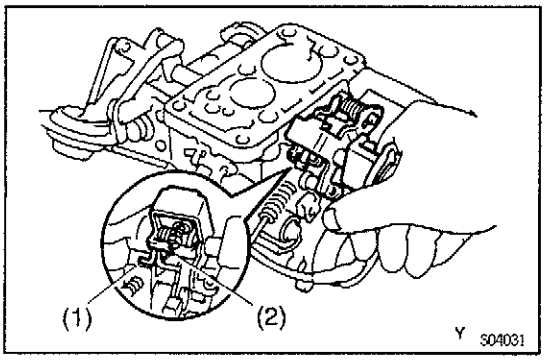
(a) Push in the terminal until it is securely locked in the connecting lug.
(b) Pull on the wire to check that it is securely locked.

13. CHECK EACH PART OPERATES SMOOTHLY

EG7B9-02

CARBURETOR ADJUSTMENT

HINT: Use SST 09240–00014 and 09240–00020 to make adjustment.



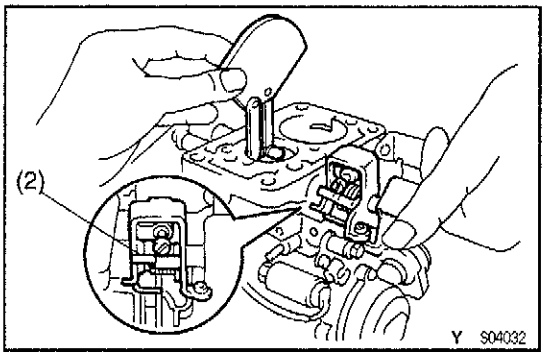
1. CHECK AND ADJUST THROTTLE VALVE OPENING

(a) Check the full opening angle of the primary and secondary throttle valves.

Standard angle:

90° from horizontal

(b) Adjust by bending the respective first throttle arm levers for the primary (1) and secondary (2).



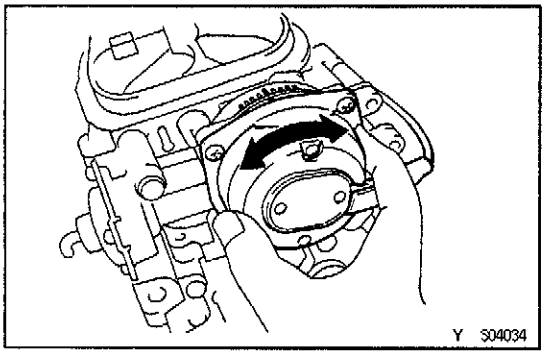
2. CHECK AND ADJUST SECONDARY TOUCH ANGLE

(a) Check the primary throttle valve opening angle at the same time the secondary throttle valve just starts to open.

Standard angle:

50° from horizontal

(b) If the angle is not within specification, adjust by bending the respective first throttle arm levers for (2).



3. SET AUTOMATIC CHOKE

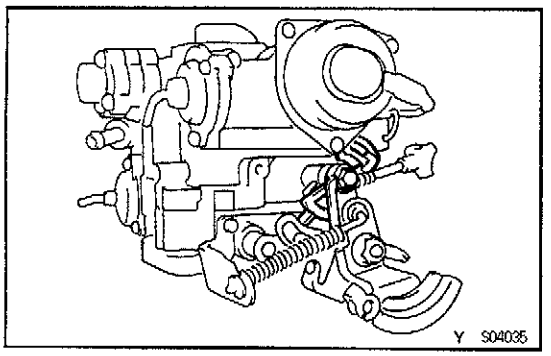
(a) Set the coil housing line so that it is aligned with the center line of the thermostat housing.

HINT: The choke valve becomes fully closed when the atmospheric temperature reaches 30°C (86°F).

(b) Depending on vehicle operating conditions, turn the coil housing and adjust the engine starting mixture.

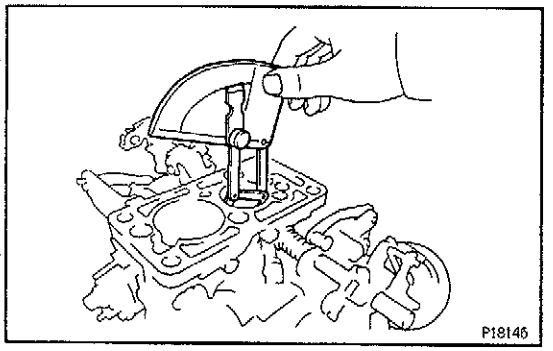
If too rich ..... Turn clockwise

If too lean ..... Turn counterclockwise



4. CHECK AND ADJUST FAST IDLE SETTING

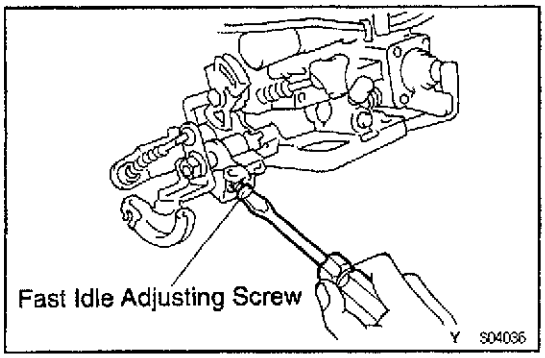
(a) Set the throttle shaft lever to the 1st step of the fast idle cam as shown.



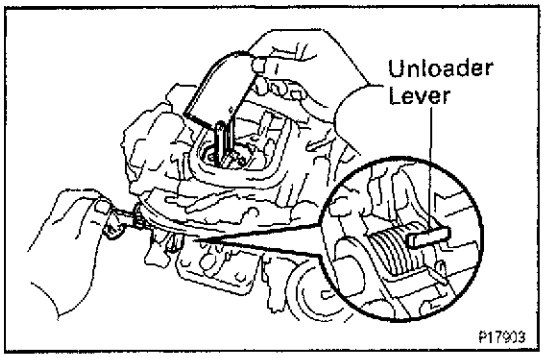
(b) With the choke valve fully closed, check the primary throttle valve angle.

Standard angle:

16° from horizontal



(c) Adjust by turning the first idle adjust screw.



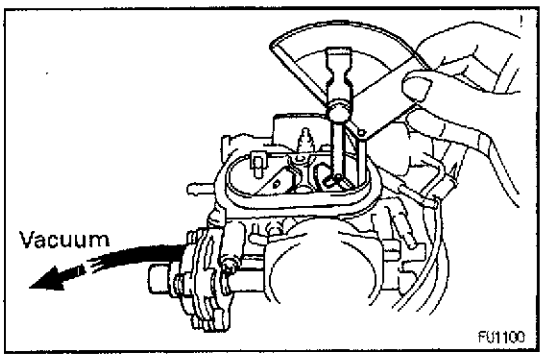
6. CHECK AND ADJUST UNLOADER

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

Standard angle:

25° from horizontal

(b) Adjust by bending the primary throttle arm.



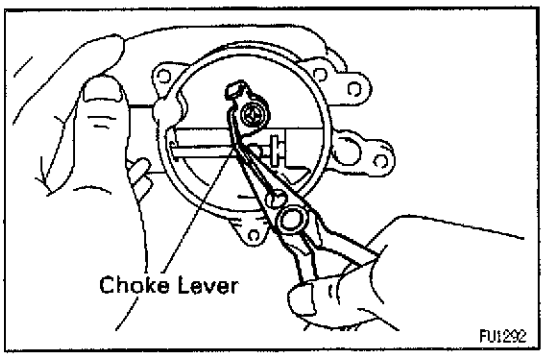
7. CHECK AND ADJUST CHOKE BREAKER (CB)

(a) Apply vacuum to the CB.

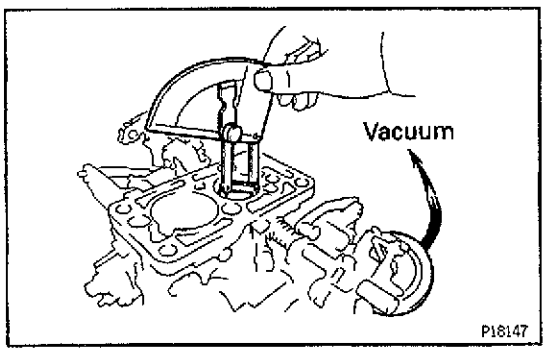
(b) Check the choke valve angle.

Standard angle:

22 – 33° from horizontal



(d) Remove the coil housing and adjust by bending the choke lever.



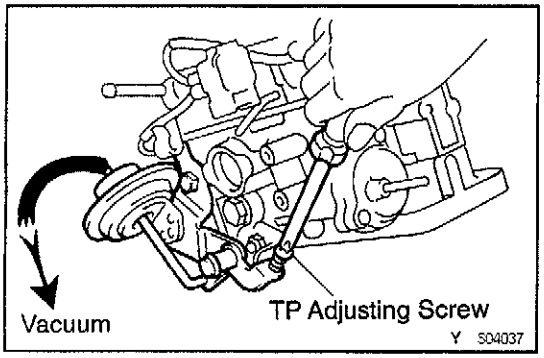
8. CHECK AND ADJUST THROTTLE POSITIONER (TP)

(a) Apply vacuum to throttle positioner (TP).

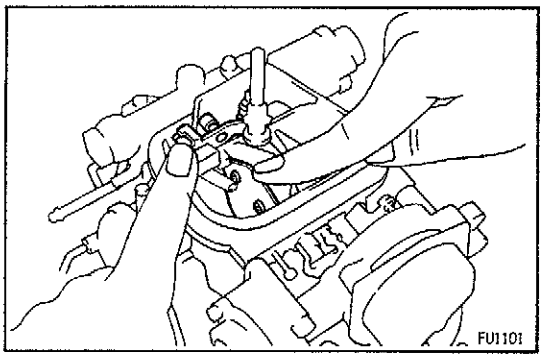
(b) Check the primary throttle valve angle.

Standard angle:

9.8° from horizontal



(c) Adjust by turning the TP adjusting screw.

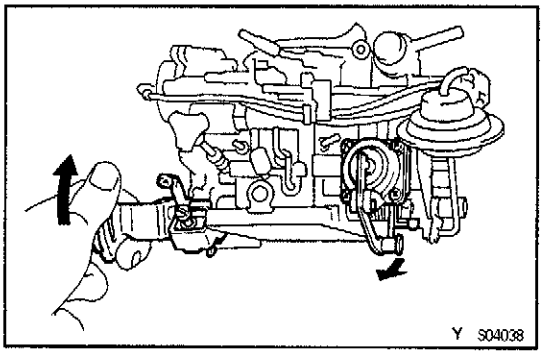


9. CHECK AIR VALVE AND METERING NEEDLE

(a) Check that the air valve and metering needle move smoothly together.

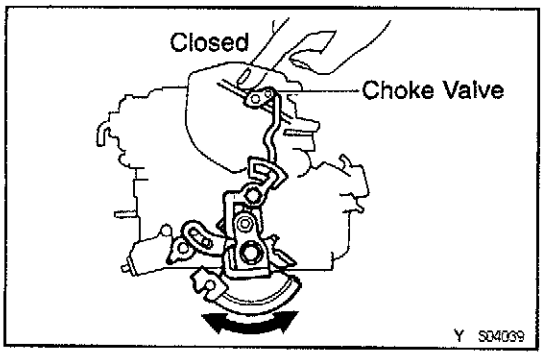
(b) While the primary throttle valve angle is at the idle position, check the air valve opening angle.

(c) While the primary throttle valve is full opened, check that here is clearance between the connecting rod and stopper.



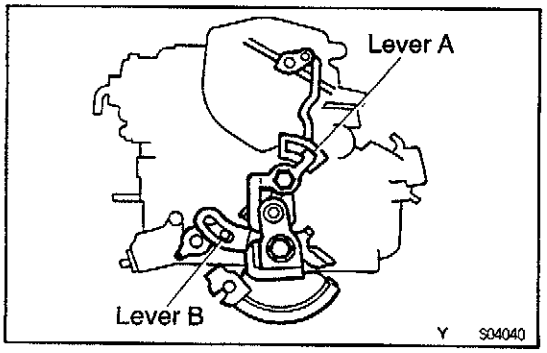
10. CHECK AND ADJUST ACCELERATION PUMP

Rotate the throttle shaft and check that the pump lever and diaphragm rod move smoothly.

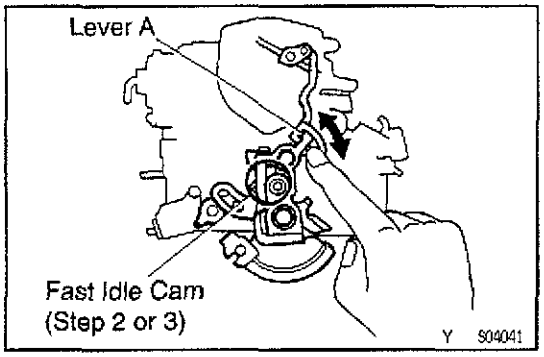


11. CHECK AND ADJUST SECONDARY THROTTLE VALVE LOCK SYSTEM

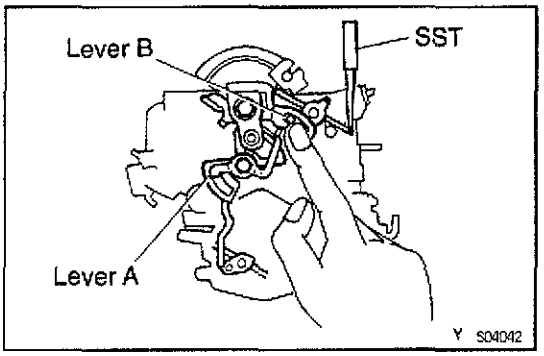
(a) While holding the throttle slightly open, push the choke valve closed, and hold it closed as you release the throttle valve.



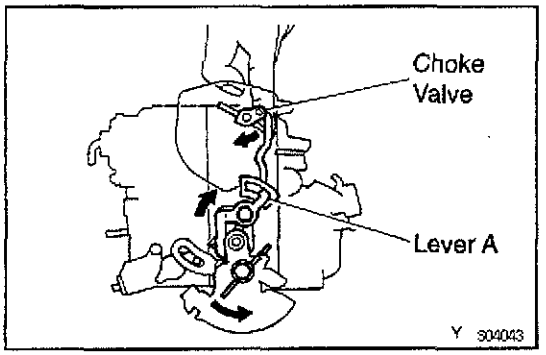
(b) In condition (a), check that lever A is holding lever B locked as shown.



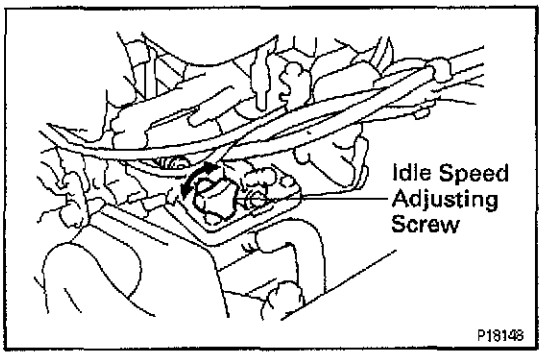
(c) Check that the lever A moves smoothly at step 2 or 3 of the fast idle cam.
Adjust by bending the top of lever A.



(d) In condition (a), rotate lever B to where it makes contact with lever A on this position, using SST, measure the clearance between the secondary valve bore.
Adjust by bending the top of lever A.
SST 09240–00020
Standard clearance:
0 – 0.5 mm (0 – 0.020 in.)



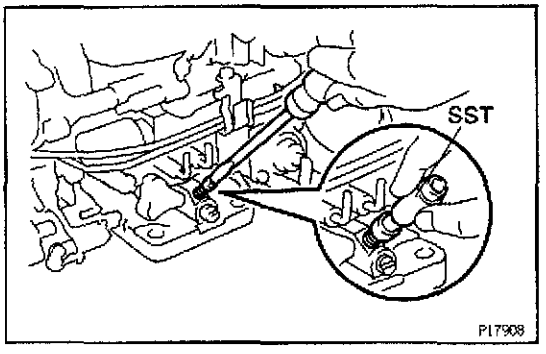
(e) With the choke valve opened (above 52°), check that *lever A unlocks when the throttle valve is opened.*



12. PRESET IDLE SPEED ADJUSTING SCREW

(a) Check the primary throttle valve angle.
Standard angle:
5.5° from horizontal

(b) Adjust turning the idle speed adjusting screw.



13. 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:
Return 2 and 1/4 turns from fully closed position
HINT: Use SST if necessary.
SST 09243–00020
NOTICE: Do not screw the screw tip in too tightly.

14. CHECK EACH PART OPERATES SMOOTHLY