DAIHATSU

F300

[HD-ENGINE]

FUEL SYSTEM (HD-C Engine)

FU

WN88E-FU001

PRECAUTIONS

1. Before working on the fuel system, be sure to disconnect the ground cable from the negative (–) terminal of the battery.
2. When working on the fuel system, never allow any naked fire to be brought near the working site. Also, never smoke cigarette or the like.
3. Do not allow the fuel to get to any parts made of rubber or resin.
4. Do not work on the fuel system of more than one vehicle at the same time.
5. Be certain to keep each part of the fuel system from contamination.
6. Be very careful not to allow any dirt or the like be mixed into the fuel system during the servicing operation.
7. Make sure to keep the working site clean. Also, be sure not to loose any part, specifically small parts.
8. Never loose nor mix up those pins, clips and springs with each other.

WR88-FU002

TROUBLE SHOOTING

Problem	Possible cause	Remedy	Page
Engine will not start/hard to start (Only case where cranking by startor motor is normal)	Carburetor problems		
	• Choke operation	Check choke system	FU–4
	• Needle valve sticking or clogged	Check float and needle	FU–16
	• Vacuum hose disconnected or damage		EC–3
	• Fuel cut solenoid vlave not open	Check fuel cut solenoid valve	FU–4, FU–17
	• Outer vent valve not open	Check outer vent valve	FU–5, FU–17
Rough idle or stalls	Carburetor problems		
	• Idle speed incorrect	Adjust idle speed	MA–9
	• Slow jet clogged		FU–17
	• Idle mixture incorrect	Adjust idle mixture	EM–15
	• Fuel cut solenoid valve not open	Check fuel cut solenoid valve	FU–5, FU–17
	• Fast idle speed setting incorrect (Cold engine)	Adjust fast idle speed	EM–17
	• Choke valve open (Cold engine)	Check choke system	FU–4, FU–17
	• Fuel pump faulty		FU–29
	• Fuel filter clogged		FU–32
	• Fuel line clogged		
	• Fuel line bent or kinked		
Engine hesitates/poor acceleration	Carburetor problems		
	• Float level too low	Adjust float level	FU–22
	• Accelerator pump faulty		FU–4
	• Power valve faulty	Check power valve	FU–17
	• Power piston faulty	Check power piston	FU–17
	• Choke valve closed (hot engine)	Check choke system	FU–4
	• Choke valve stuck open (cold engine)		

WN88E-FU002

Problem	Possible cause	Remedy	Page
Engine hesitates/poor acceleration	• Fuel line clogged • Fuel pump faulty • Fuel filter clogged • Fuel line bent or kinked	Check fuel line Check fuel pump Replace fuel filter Replace fual line	 FU–29 FU–32
Engine dieseling (Runs after ignition switch is turned off)	Carburetor problems • Linkage stiking • Idle speed out of adjustment • Fuel cut solenoid faulty	 Adjust idle speed Check fuel cut solenoid valve	 FU–3 MA–9 FU–5, FU–17
Poor fuel mileage	Carburetor problems • Choke falty • Idle speed too high • Power valve always open • Idle mixture incorrect Fuel leak	 Check choke system Adjust idle speed Check power piston and valve Adjust idle mixture Repair as necessary	 FU–4 MA–9 FU–17 EM–15
Unpleasent odor	Outer vent valve always open	Check outer vent valve	FU–5, FU–17

WN88E-FU003

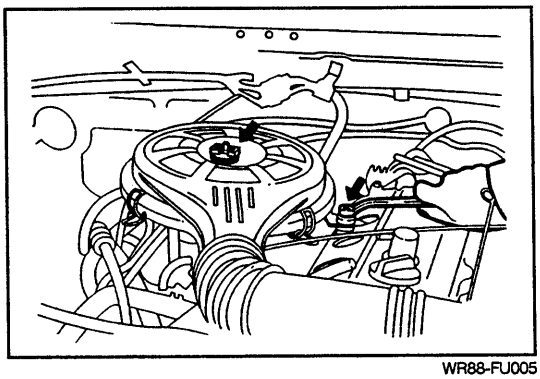
IN-VEHICLE INSPECTION

1. Removal of air cleaner

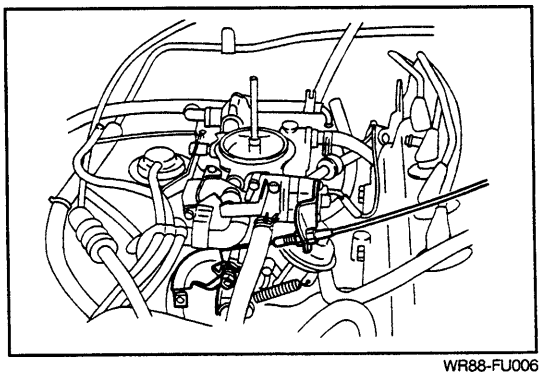
NOTE:
Before staring the engine, plug the ITC valve hoses, etc. to prevent rough idling.

(1) Remove the following hoses:
- Vacuum hose to BVSV
- ITC vacuum hose to carburetor
- PCV gas hose
- Hot air intake hose
- Cool air intake hose

(2) Remove the air cleaner.



WR88-FU005



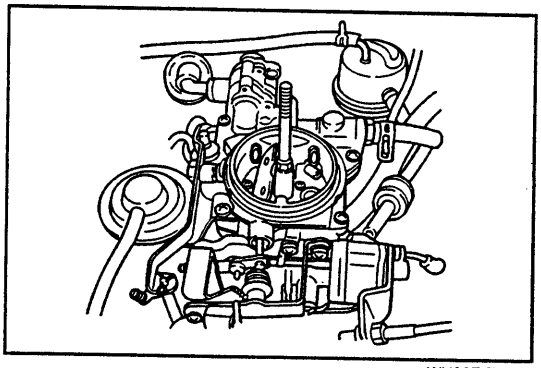
WR88-FU006

2. Inspection of carburetor and linkage

(1) Ensure that each screw plug is installed correctly.
(2) Check each linkage for evidence of excessive wear. Also, check to see if any snap ring is missing.
(3) With the acceleration pedal fully depressed, check to see if the throttle valve opens fully.

3. Inspection of choke system

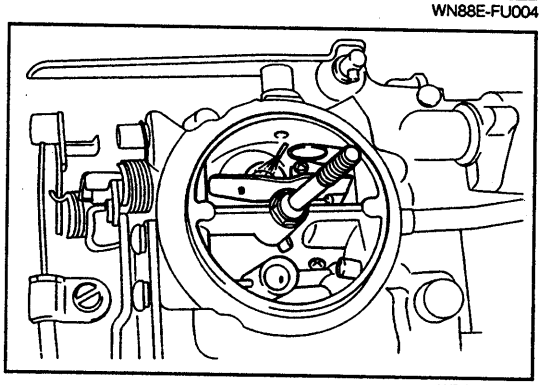
Check that choke valve is completely closed when engine is cold.
Then, start the engine, chek that choke valve is gradually opened in accordance with the warning-up condition of the engine.



WN88E-FU004

4. Inspection of acceleration pump

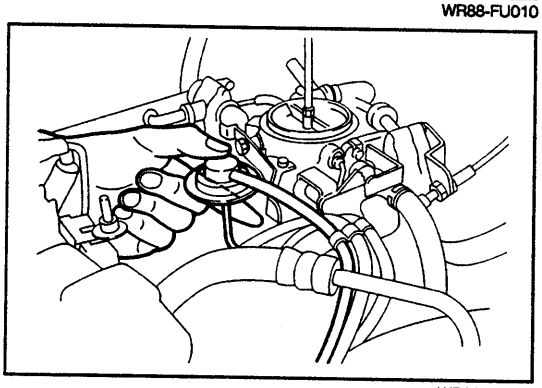
Check to see if the fuel spurts out from the acceleration nozzle when throttle valve is opened quickly.



WR88-FU010

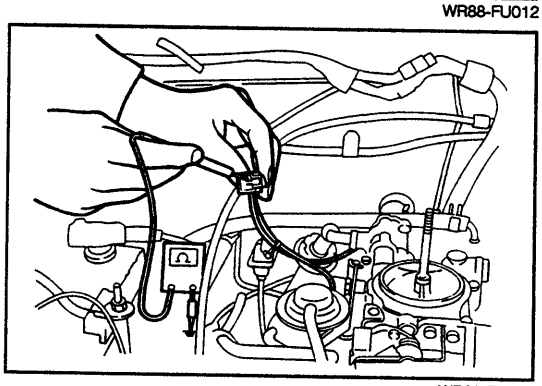
5. Inspection of solenoid valve

(1) Check to see if you can feel the operation of the solenoid valve when the ignition switch is turned ON/OFF.
If the solenoid valve remains inoperative, check the power supply for the solenoid valve. Then, proceed to the check described in the step (2) below.



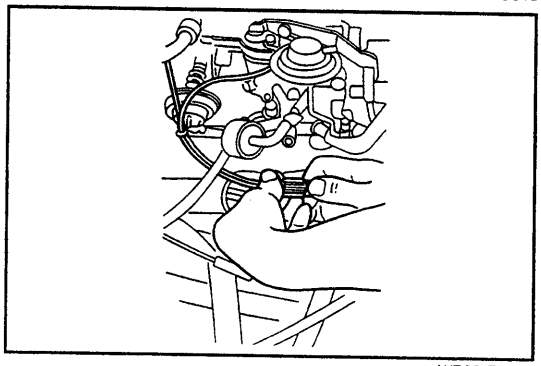
WR88-FU012

(2) Disconnect the connector from the carburetor. Check to see if the resistance between the solenoid valve terminal and the carburetor proper conforms to the specification.
Specified Resistance: 80 - 100Ω at 20°C (68°F)
If the resistance fails to conform to the specification, replace the solenoid valve.



WR88-FU013

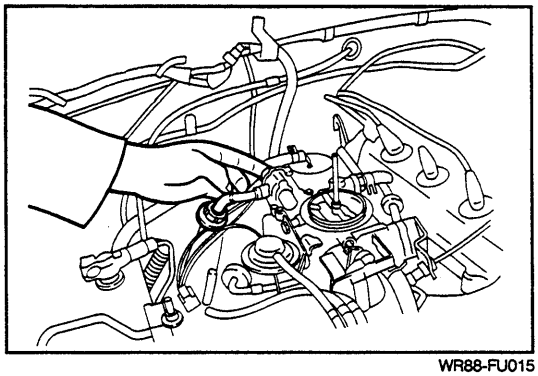
(3) Reconnect the connector.



WR88-FU014

6. Inspection of outer vent valve

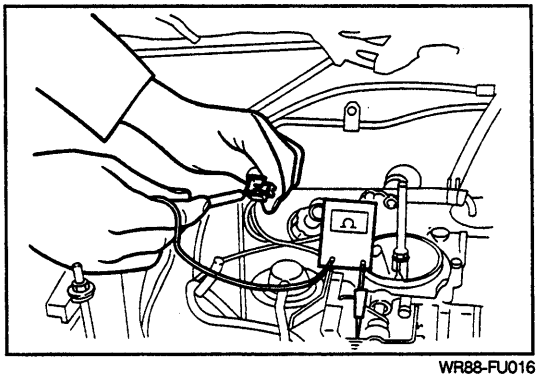
(1) Check to see if you can feel the operation of the outer vent valve when the ignition switch is turned ON/OFF.
If the outer vent valve remains inoperative, check the power supply for the outer vent valve. Then, proceed to the check described in the step (2) below.



WR88-FU015

(2) Disconnect the connector from the carburetor. Check to see if the resistance between the outer vent valve terminal and the carburetor proper conforms to the specification.
Specified Resistance: 30 - 40Ω at 20°C (68°F)

If the resistance fails to conform to the specification, replace the outer vent valve.

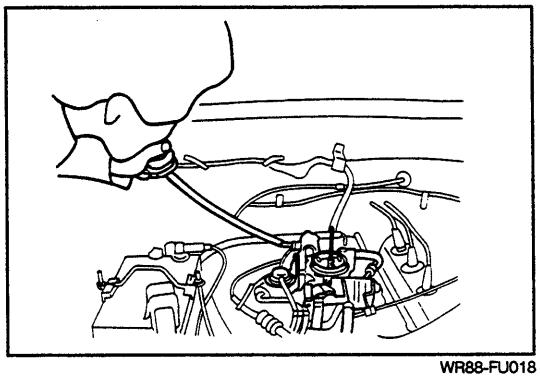


WR88-FU016

(3) Reconnect the outer vent valve connector.
(4) Disconnect the outer vent hose from the BVSV. Turn ON the ignition key switch.

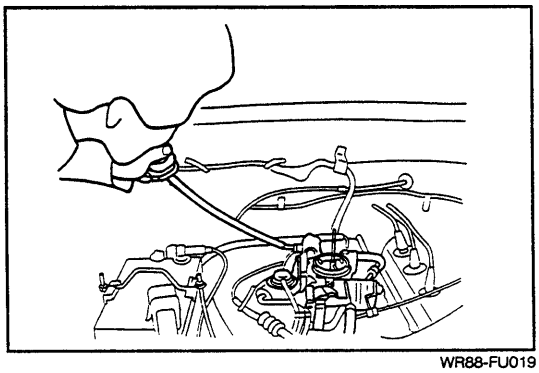
WR88-FU017

(5) Blow air from the outer vent hose. Ensure that no air continuity exists.
If air continuity exists, replace the outer vent valve.
WARNING:
Be very careful not to inhale the air.



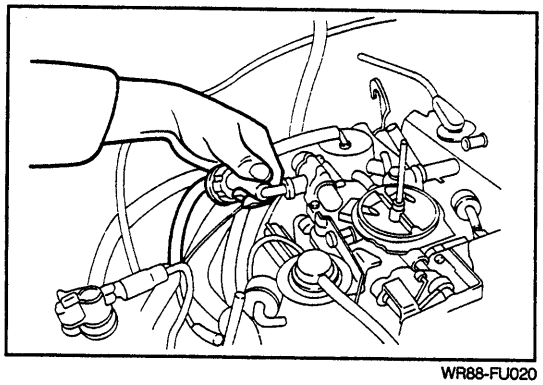
WR88-FU018

(6) Turn OFF the ignition key switch.
(7) Blow air from the outer vent hose. Ensure that air continuity exists.
If no air continuity exists, replace the outer vent valve.
WARNING:
Be very careful not to inhale the air.



WR88-FU019

(8) Connect the outer vent hose to the BVSV.



WR88-FU020

7. Inspection of choke braker

(See page FU–4, MA–5)

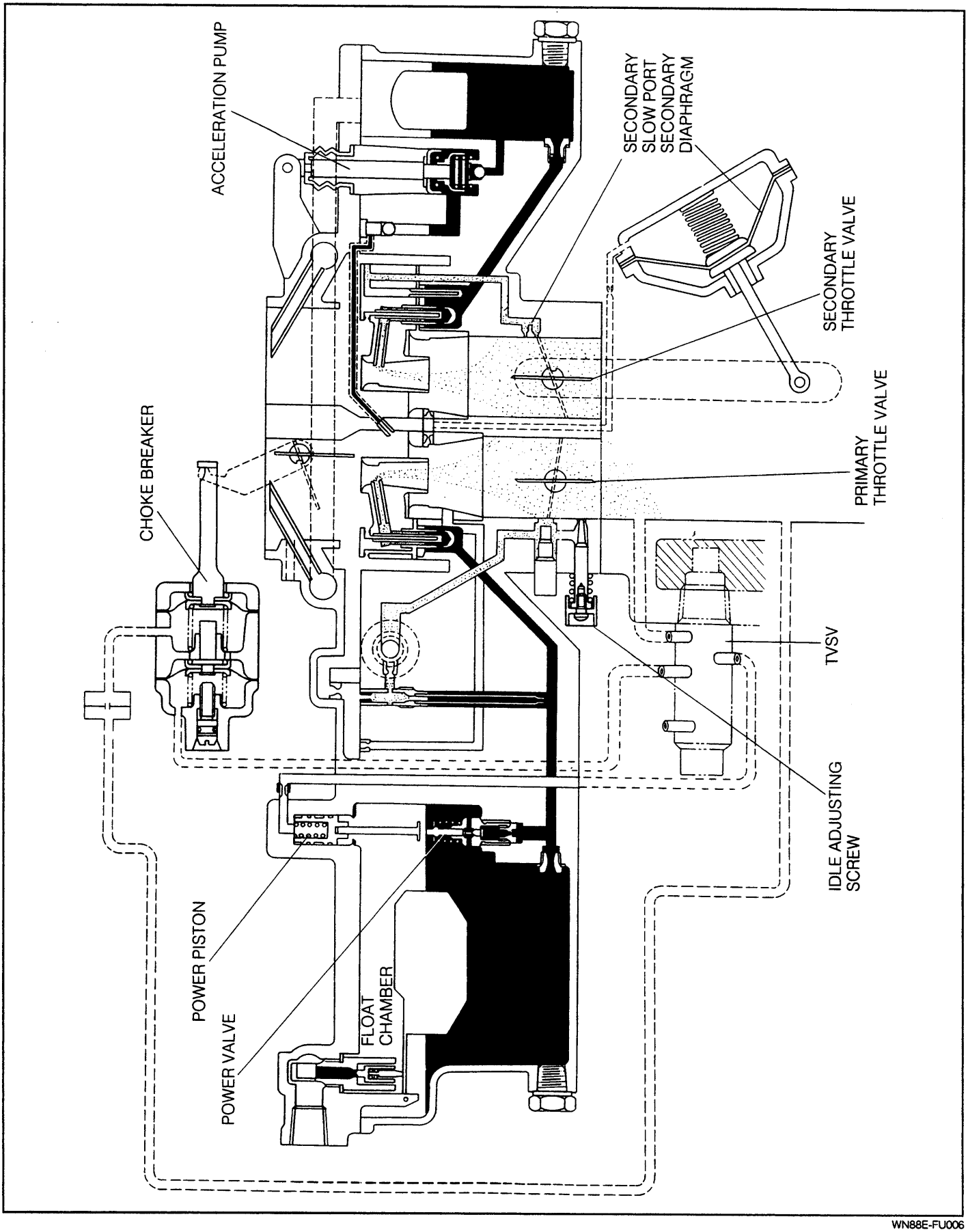
8. Inspection of throttle positioner

(See page MA–10)

WN88E-FU005

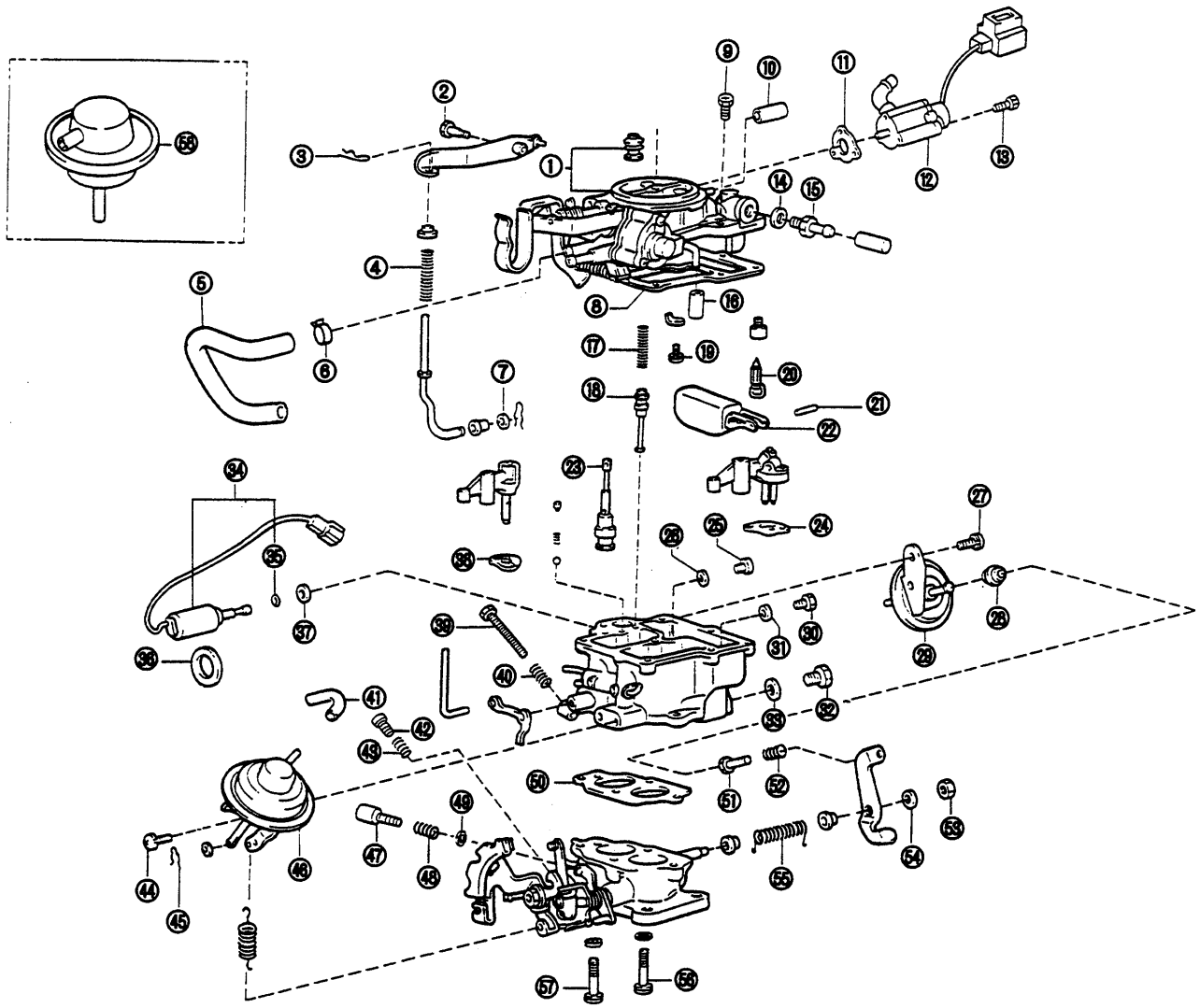
CARBURETOR

SCHEMATIC DIAGRAM



WN88E-FU006

COMPONENTS



① Air horn
② Pump arm set screw
③ Clip
④ Spring
⑤ Hose No. 2
⑥ Clip
⑦ Washer
⑧ Gasket
⑨ Bolt
⑩ Hose
⑪ Gasket
⑫ Outer vent valve
⑬ Bolt
⑭ Washer
⑮ Union nipple
⑯ Vacuum hose No. 2
⑰ Spring
⑱ Power piston
⑲
⑳ Needle valve
㉑ Float lever pin
㉒ Float assembly
㉓ Pump plunger
㉔ Venturi gasket No. 2
㉕ Main jet
㉖ Main jet gasket
㉗ Bolt
㉘ Boot
㉙ Positioner
㉚ 2nd main jet
㉛ 2nd main jet gasket
㉜ Main passage plug
㉝ Main passage plug gasket
㉞ solenoid valve
㉟ O ring
㊱ Gasket
㊲ Solenoid valve gasket
㊳ Venturi gasket
㊴ Throttle adjusting screw
㊵ Spring
㊶ Vacuum hose
㊷ Screw
㊸ Throttle adjusting spring
㊹ Diaphragm hosing set screw
㊺ Snap ring No. 1
㊻ Diaphragm sub assembly
㊼ Idle mixture adjusting screw
㊽ Idle adjusting spring
㊾ Washer
㊿ Body flange gasket
(51) Adjusting screw
(52) Adjusting screw spring
(53) Throttle lever set screw
(54) Lock washer
(55) Return spring
(56) Set screw
(57) Set screw
(58) Diaphragm

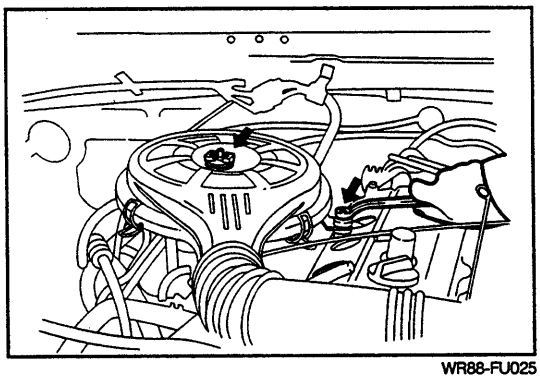
WN88E-FU007

REMOVAL OF CARBURETOR

1. Disconnect the ground cable terminal from the negative (–) terminal of the battery.
2. Drain the coolant. (See page CO–3)

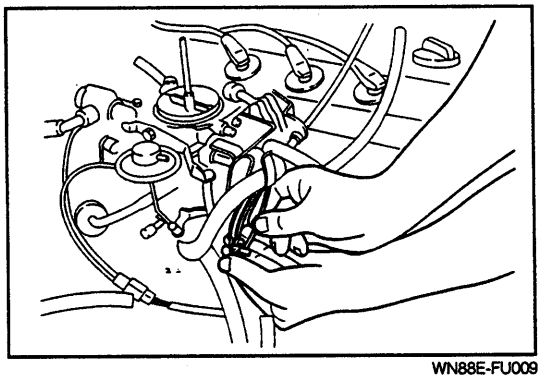
WN88E-FU008

3. Removal of air cleaner
   (1) Remove the following rubber hoses:
      1) Vacuum hose to BVSV
      2) ITC vacuum hose to carburetor
      3) Blow-by gas hose
      4) Cool air intake hose
      5) Hot air intake hose
   (2) Remove the air cleaner.



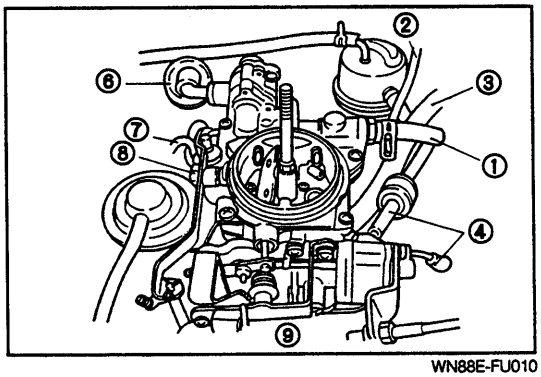
WR88-FU025

4. Disconnect the accelerator cable from the carburetor.



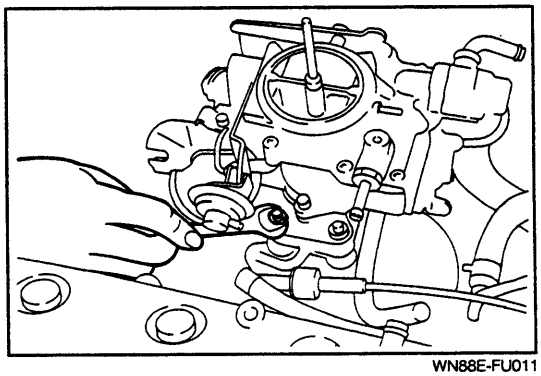
WN88E-FU009

5. Remove the following hoses from the carburetor:
   ① Fuel inlet hose
   ② ITC vacuum hose
   ③ PCV gas hose
   ④ Choke braker vacuum hose
   ⑤ Vacuum hoses to gas filter
   ⑥ Outer vent hose
   ⑦ Throttle positioner vacuum hose
   ⑧ Vacuum hose to distributor
   ⑨ Coolant circulating hoses



WN88E-FU010

6. Disconnect the solenoid valve outer vent valve connector.
7. Remove the four attaching nuts of the carburetor. Remove the carburetor.



WN88E-FU011

DISASSEMBLY OF CARBURETOR

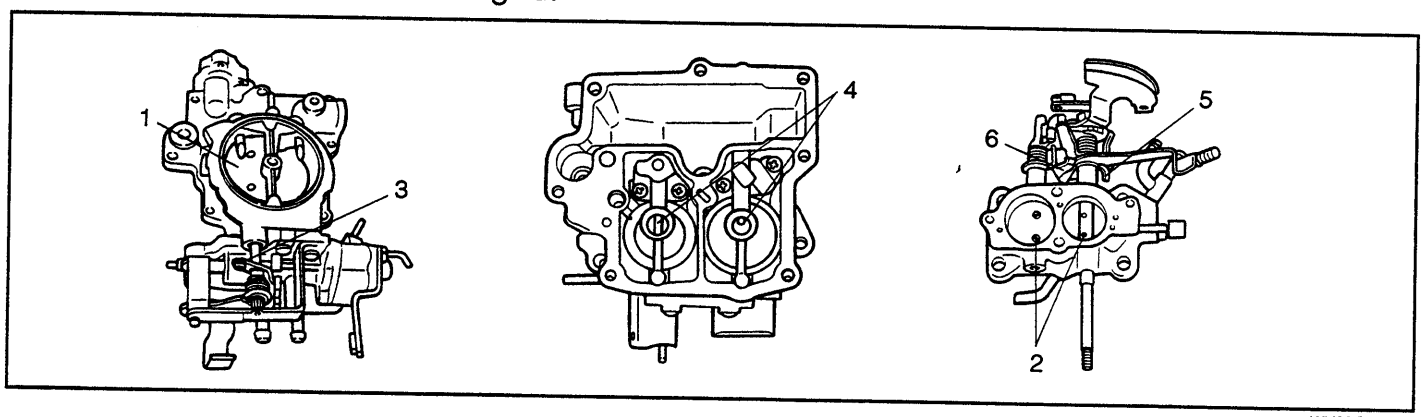
NOTE:
The following operations have been arranged in such a way that checks are performed for a certain single unit alone at a time. This will avoid any occurrence of wrong assembling of similar subassemblies which would likely occur when operations were carried out concurrently.

(1) Be sure to arrange the disassembled parts in order that reassembling may be performed readily.
(2) Do not mix up those balls, clips, springs and so forth.
(3) Be sure to employ the following SST, a set of screwdrivers for carburetor use.
SST: 09860-87201-000

WR88-FU029

Do not disassemble the following sections.

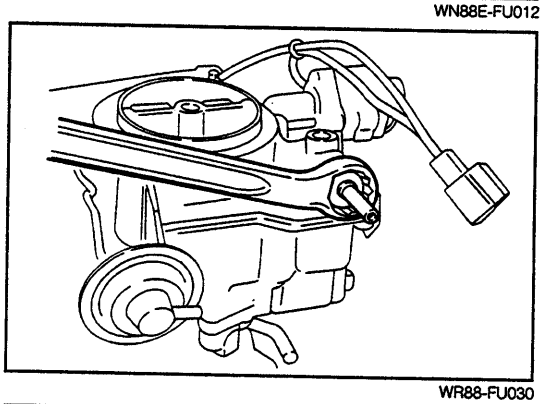
1. Choke valve set screw
2. Throttle valve set screw
3. Automatic choke mechanism
4. Small venturis
5. Fast idle adjust screw
6. Acceleration lever, link connecting nut



WN88E-FU012

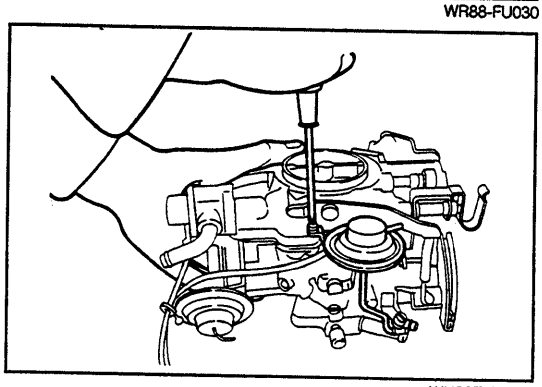
DISASSEMBLY OF AIR HORN

1. Remove the air cleaner set bolt.
2. Removal of air horn assembly
   (1) Remove the fuel inlet union and gasket.



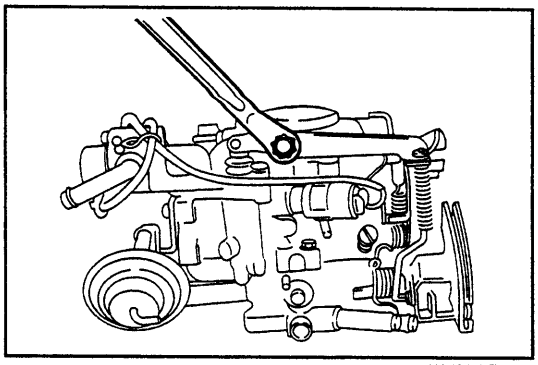
WR88-FU030

(2) Remove the idle-up actuater for power steering. (only for power steering equipped vehicle)



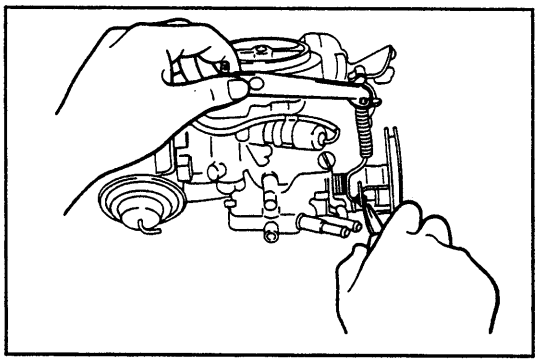
WN88E-FU013

(3) Remove the accelerator pump arm set screw.



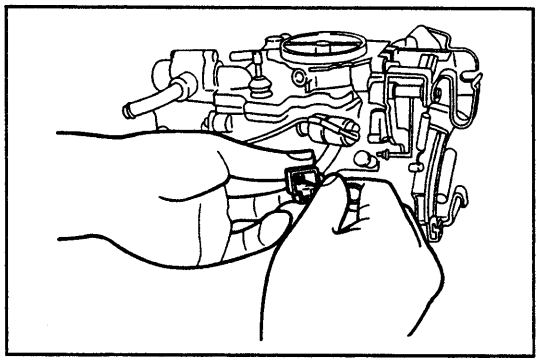
WN88E-FU014

(4) Remove the accelerator pump rod and lever.



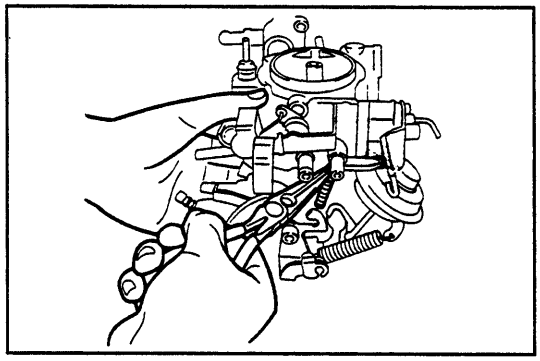
WN88E-FU015

3. disconnect the outer vent valve connector from the socket.



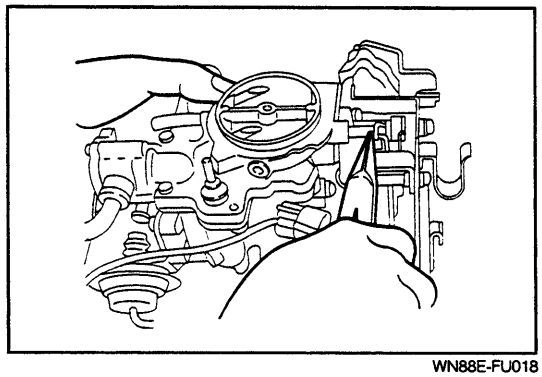
WN88E-FU016

4. Remove the spring from the carburetor.



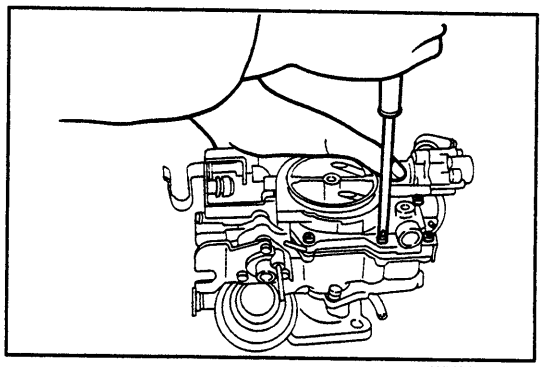
WN88E-FU017

5. Disconnect the choke lever linkage at the upper side.



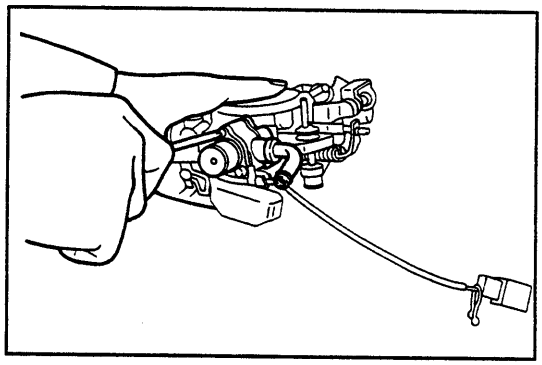
WN88E-FU018

6. Remove the 7 screws (5 screws, in case of idle-up actuator equipped model) and disassemble the air horn assembly.



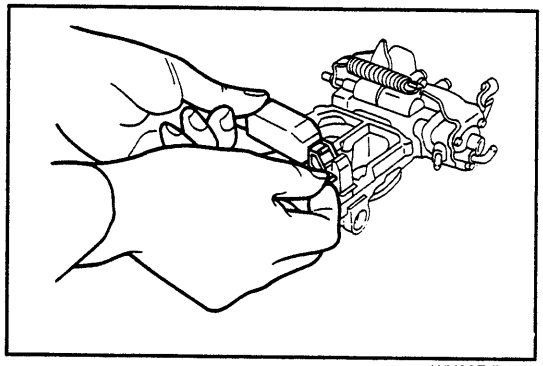
WN88E-FU019

7. Remove the outer vent valve assembly by removing the three screws.



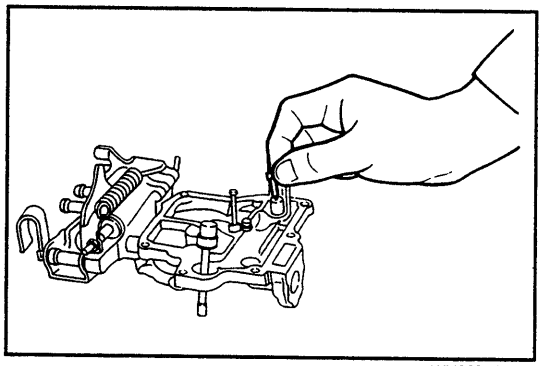
WN88E-FU020

8. Remove the float.



WN88E-FU021

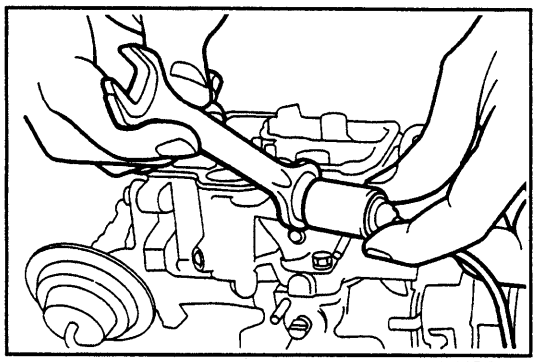
9. Remove the needle valve.



WN88E-FU022

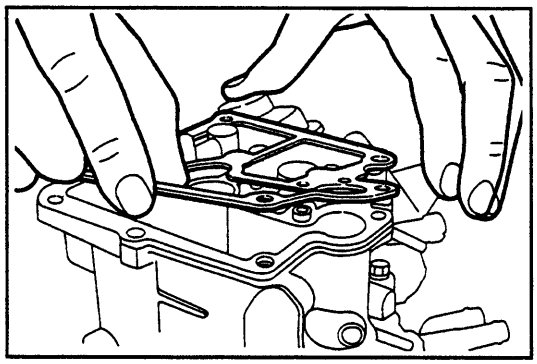
DISASSEMBLY OF CARBURETOR

1. Remove the solenoid valve wire clamp.
2. Remove the solenoid valve.



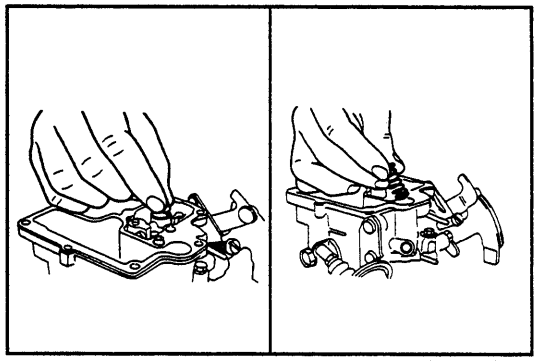
WN88E-FU023

3. Remove the gasket.



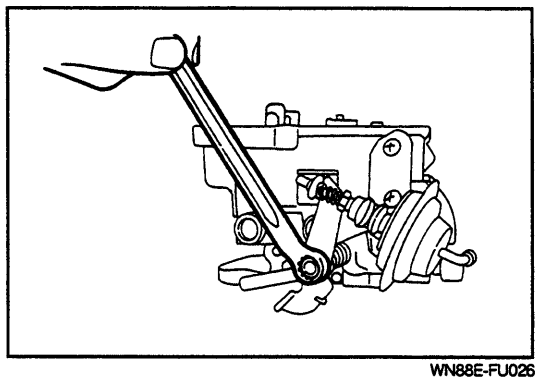
WN88E-FU024

4. Remove the discharge weight and spring ball.
5. Remove the acceleration pump return spring.



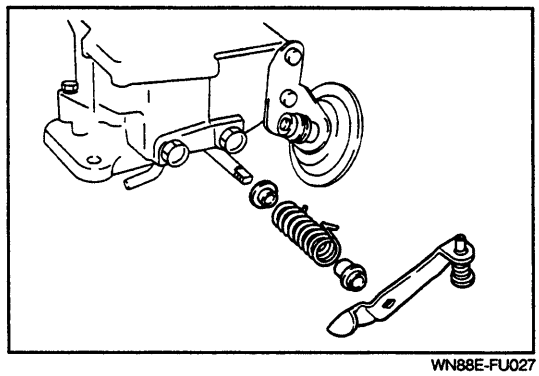
WN88E-FU025

6. Removal of throttle positioner
   (1) Remove the throttle lever set nut.



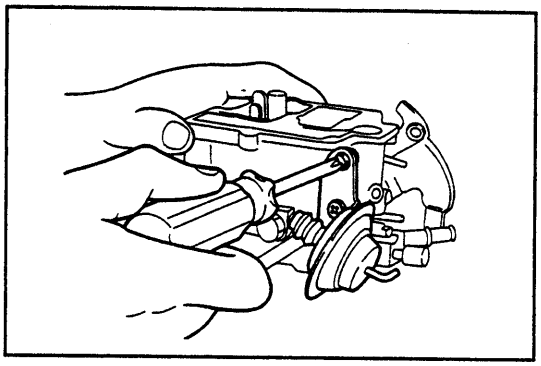
WN88E-FU026

   (2) Remove the throttle positioner lever.
   (3) Remove the collars and spring.



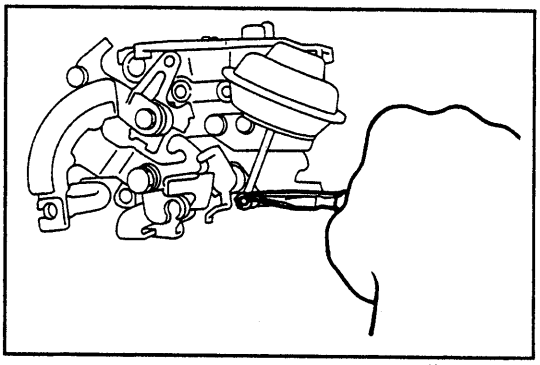
WN88E-FU027

(4) Remove the throttle positioner.



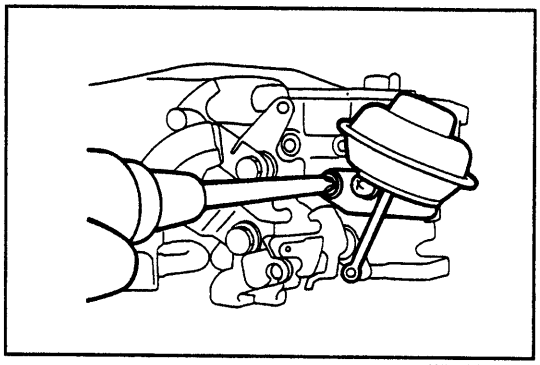
WN88E-FU028

7. Removal of secondary throttle valve diaphragm
   (1) Remove the spring.
   (2) Remove the pin. Disconnect the link.



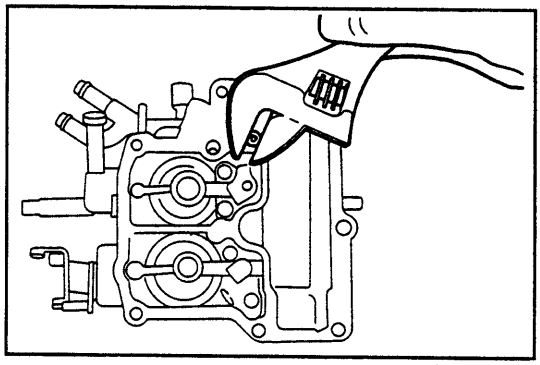
WN88E-FU029

(3) Remove the secondary throttle valve.
(4) Remove the rubber hose.



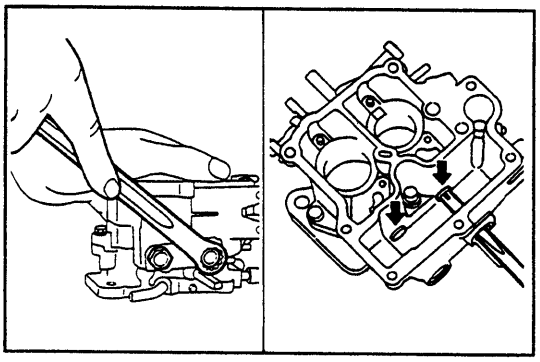
WN88E-FU030

8. Remove the slow jet.
   NOTE:
   Never reuse the "O" ring.



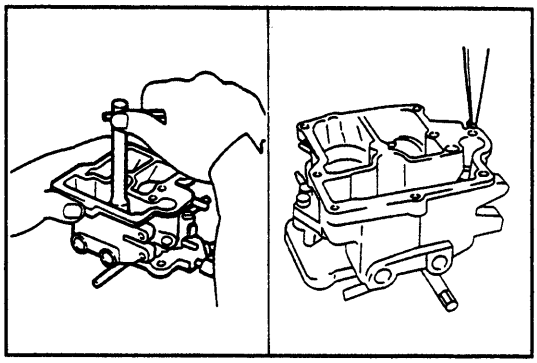
WN88E-FU031

9. Remove the main passage plugs. Remove the primary and secondary main jets.



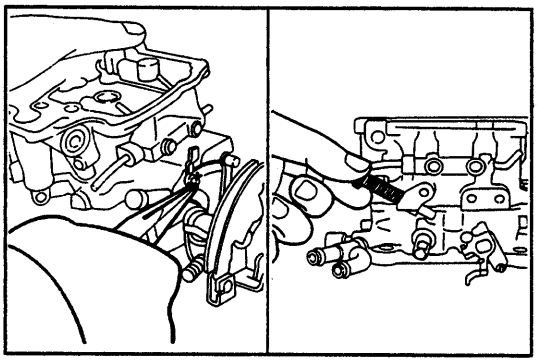
WN88E-FU032

10. Remove the power valve, using the SST.
11. Remove the acceleration pump check ball retainer.



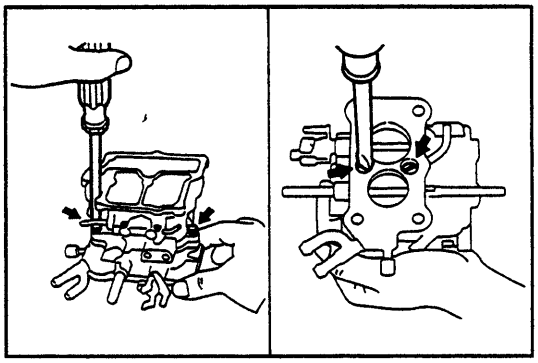
WN88E-FU033

12. Remove the auto choke linkage.
13. Remove the throttle adjusting screw.



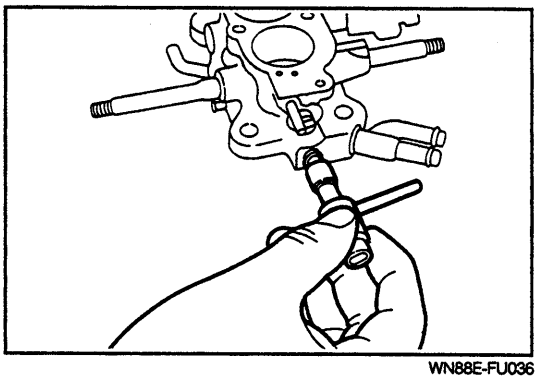
WN88E-FU034

14. Disassembly of the carburetor body and flange.
    (1) Remove the attaching bolts and nuts.
    (2) Disassemble the carburetor body and flange.



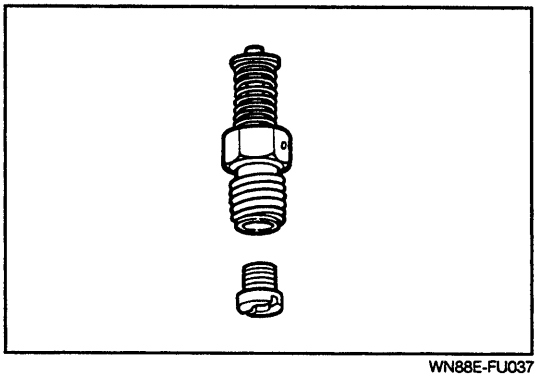
WN88E-FU035

15. Remove the idle mixture adjusting screw, using the SST.



WN88E-FU036

16. Remove the power jet from the power valve.

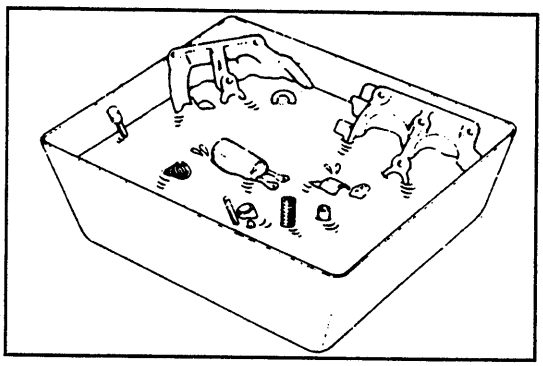


WN88E-FU037

CLEANING OF EACH PARTS

1. Clean the carburetor parts except for the diaphragms and electrical parts, using carburetor cleaner and a soft brush.
2. Remove carbon deposits by means of a soft brush.
3. Clean each of the jets and nozzles, using compressed air.
   NOTE:
   Never clean the jets or orifices with a piece of wire or a drill. This could enlarge the openings and result in poor fuel mileage.

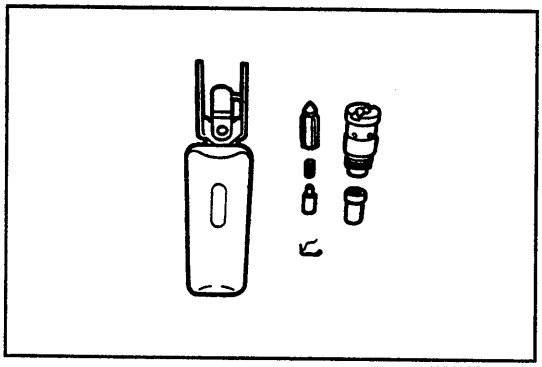
   WARNING:
   Be sure to protect uour eyes with safety goggles, when using compressed air.


WR88-FU073

INSPECTION OF CARBURETOR

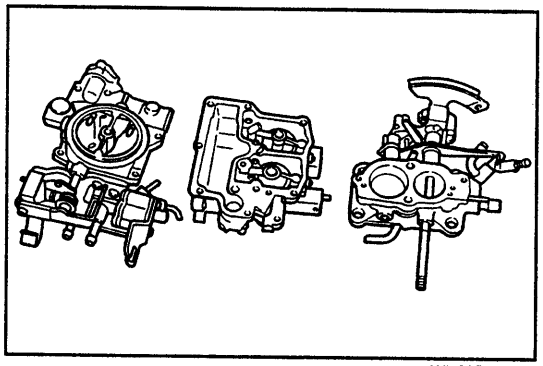
1. Inspection of float and needle valve

(1) Inspect the float lever pin for scratches excessive wear, and damage.
(2) Inspect the float for broken lip or damage.
(3) Inspect the valve and plunger for wear or damage.
(4) Inspect the spring for deformation.
(5) IInspect the strainer for breakage, restriction or damage.
(6) Inspect the valve seat for wear or damage.


WN88E-FU038

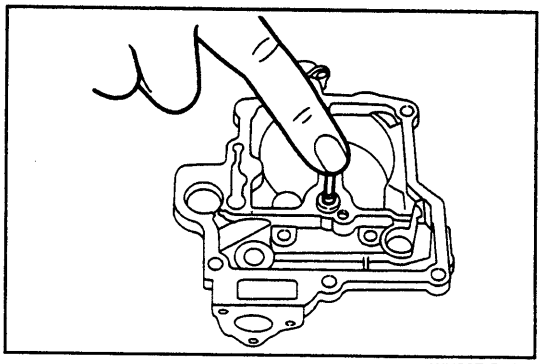
2. Inspection of air horn, body and flange

(1) Check each part for cracks, wear or damage.
(2) Check to see if each valve functions smoothly.
(3) Check each air passage for restriction.
Replace any defective part, as required.


WN88E-FU039

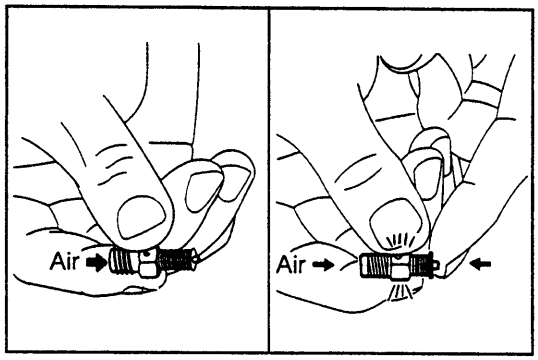
3. Inspection of power piston

Check to see if the power piston functions smoothly.


WN88E-FU040

4. Inspection of power valve

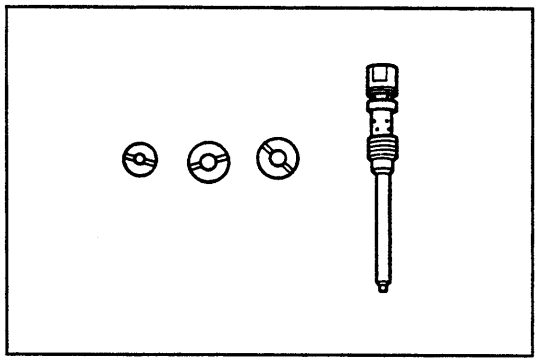
Ensure that air continuity exists when the valve is pushed. Also, ensure that no air continuity exists when the valve is not pushed.



WR88-FU077

5. Inspection of jets

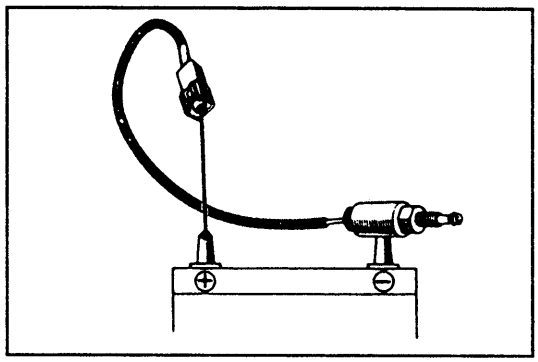
Check each jet for restriction or damage.



WR88-FU078

6. Inspection of solenoid valve

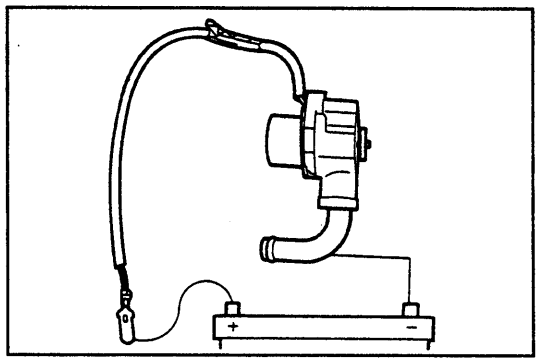
Ensure that the valve is opened when the solenoid valve is energized. Also, ensure that the valve is closed when the solenoid valve is not energized.



WR88-FU079

7. Inspection of outer vent valve

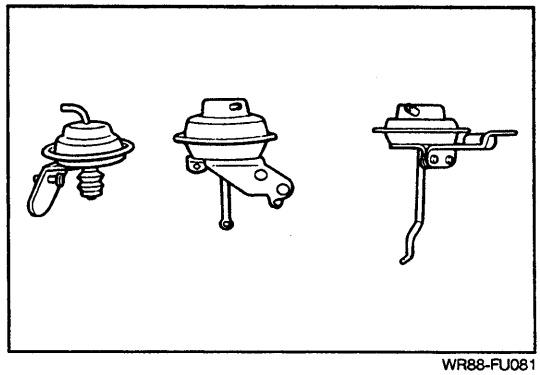
Ensure that the valve is closed when the solenoid valve is energized. Also, ensure that the valve is opened when the solenoid valve is not energized.



WR88-FU080

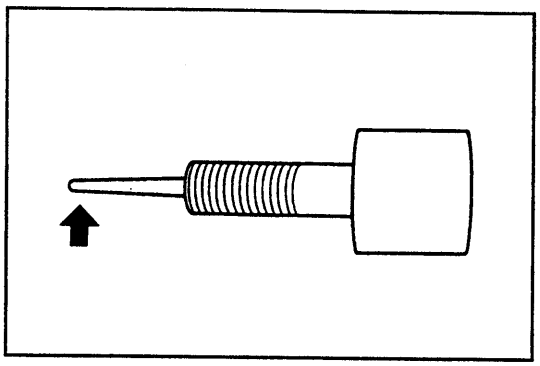
8. Inspection of each diaphragm

Ensure that the rod is drawn into the diaphragm chamber when a negative pressure is applied to each diaphragm.



WR88-FU081

9. **Inspection of idle mixture adjusting screw**
   Check to see if any damage or wear is present at the tip end of the adjusting screw.



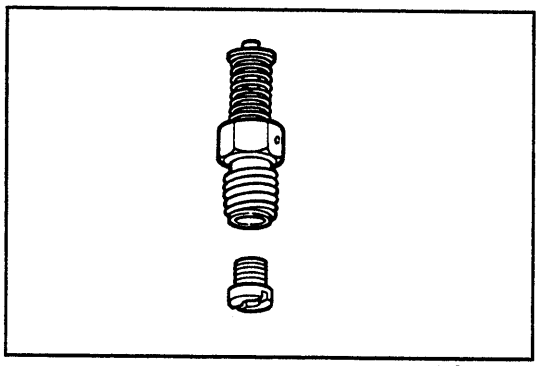
WR88-FU082

ASSEMBLY OF CARBURETOR

NOTE:
Be sure to use new gaskets and "O" rings.

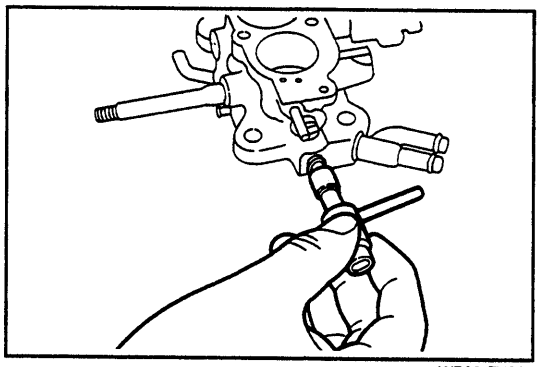
ASSEMBLY OF CARBURETOR BODY & FLANGE

1. Install the power jet in the power valve.



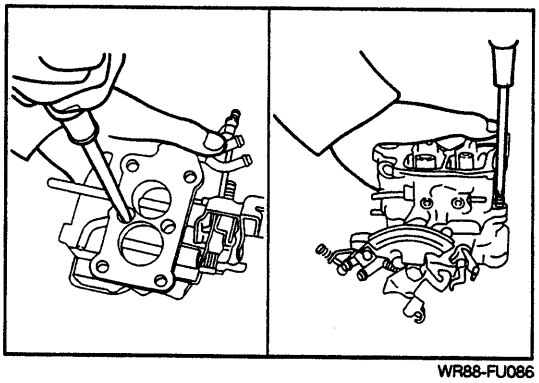
WR88-FU084

2. Screw in the idle mixture adjusting screw fully into the flange, using the SST. Then, back off the adjusting screw four turns.
   NOTE:
   Care must be exercised to ensure that no damage may be made to the tip-end of the adjusting screw by tightening the idle mixture adjusting screw excessively.



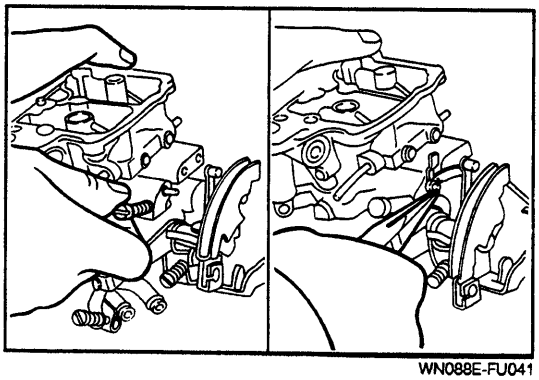
WR88-FU085

3. Assembly of carburetor body and flange
   Install the throttle body with a new gasket interposed.



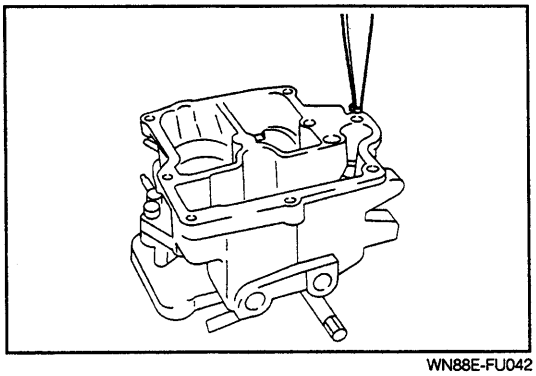
WR88-FU086

4. Install the throttle adjusting screw.
5. Install the auto choke linkage.



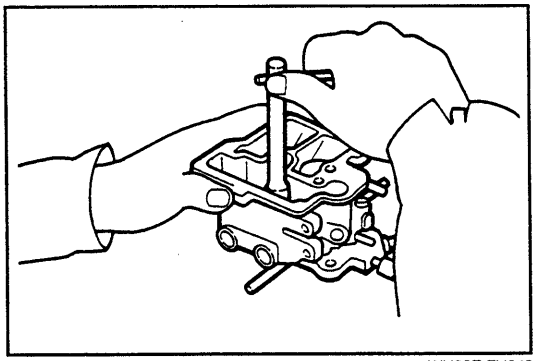
WN088E-FU041

6. Install the check ball retainer with the acceleration pump check ball inserted in place.



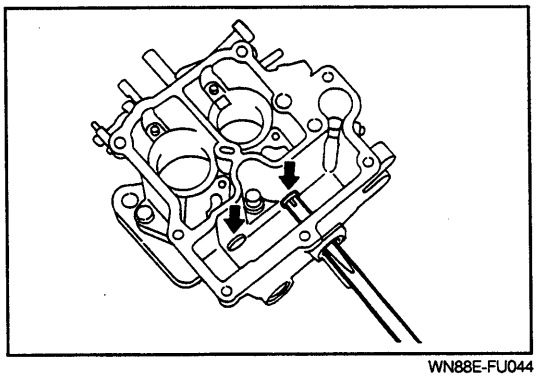
WN88E-FU042

7. Install the power valve, using the SST.



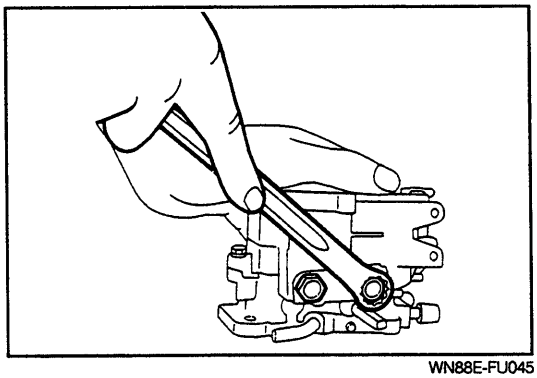
WN88E-FU043

8. Install the primary and secondary main jets.
   NOTE:
   Be sure to use new gaskets.



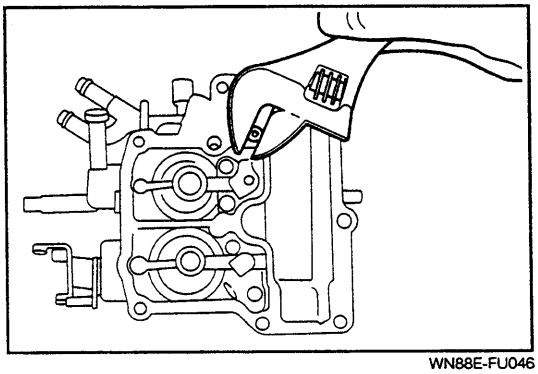
WN88E-FU044

9. Install the main passage plug.
   NOTE:
   Be sure to use a new gasket.



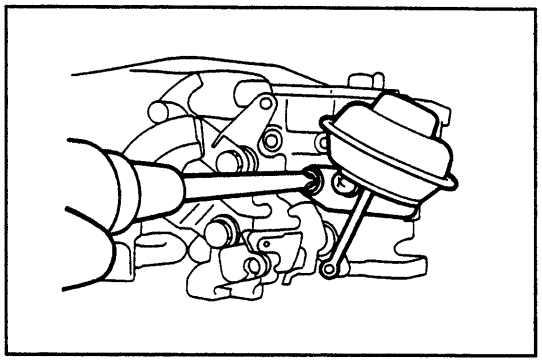
WN88E-FU045

10. Install the slow jet, with a new "O" ring.



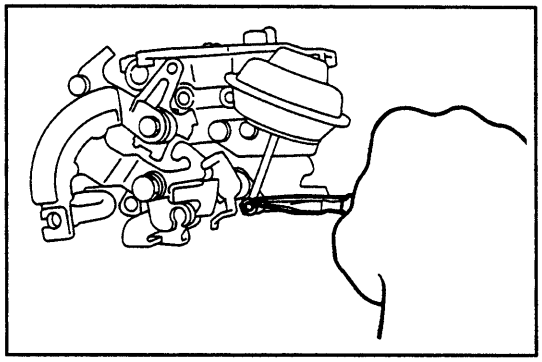
WN88E-FU046

11. Installation of secondary throttle diaphragm
    (1) Connect the rubber hose to the diaphragm.
    (2) Install the diaphragm to the carburetor body.
    (3) Install the rubber hose to the carburetor body.



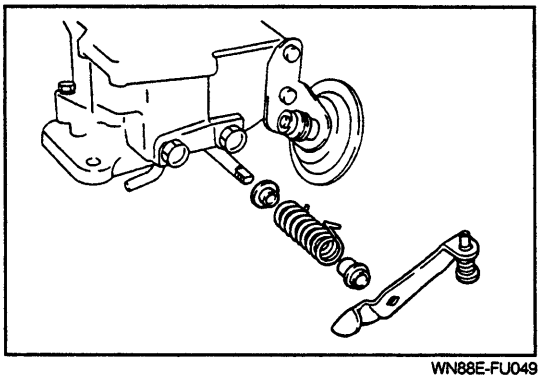
WN88E-FU047

12. Connect the diaphragm rod and install the washer snap ring.
13. Install the spring.



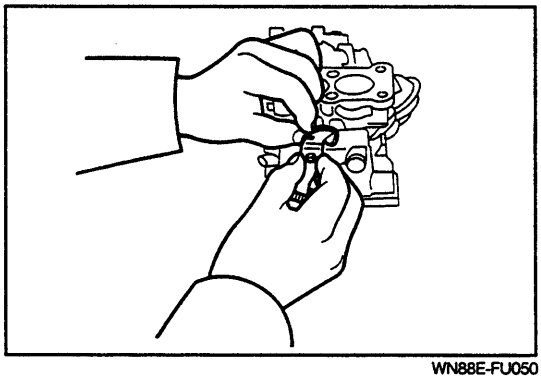
WN88E-FU048

14. Installation of the throttle positioner
    (1) Install the collar, throttle return spring and thrust washer onto the throttle shaft.



WN88E-FU049

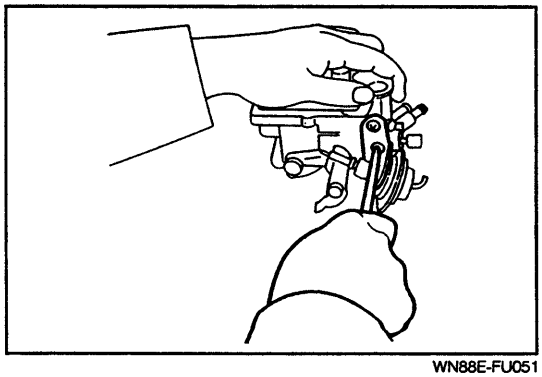
    (2) While installing the dashpot lever on the throttle shaft, attach the return spring to the dashpot lever.
    (3) Install the spring washer, then tighten the nut.



WN88E-FU050

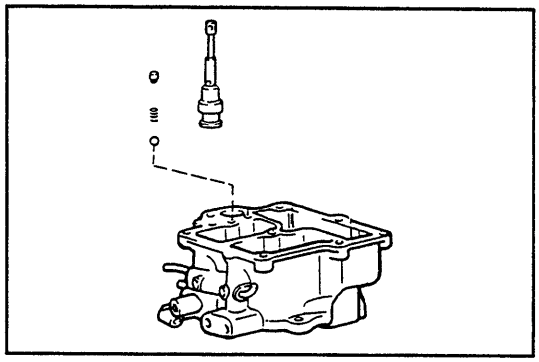
    (4) Install the throttle positioner.

NOTE:
Be careful not to damage the rubber boot section during the installation.



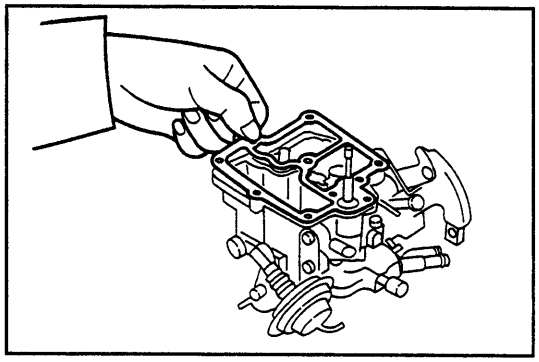
WN88E-FU051

15. Assembly of the acceleration pump
    (1) Install the return spring for the acceleration pump.
    (2) Install the ball, spring and discharge weight.
    (3) Assemble the acceleration pump to the carburetor.



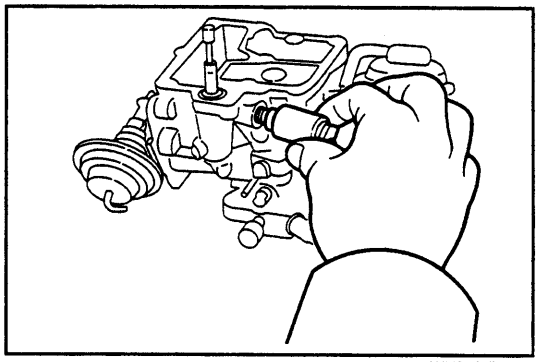
WN88E-FU052

16. Install the gasket.



WN88E-FU053

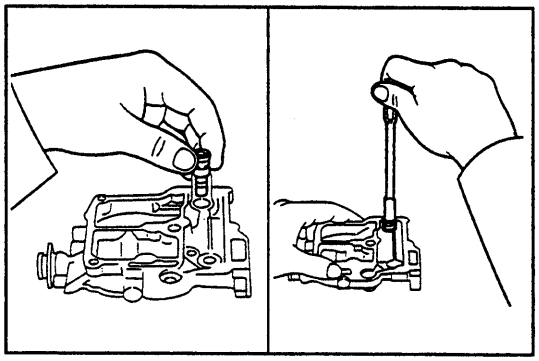
17. Install the solenoid valve.
18. Install the solenoid valve wire clamp in place.



WN88E-FU054

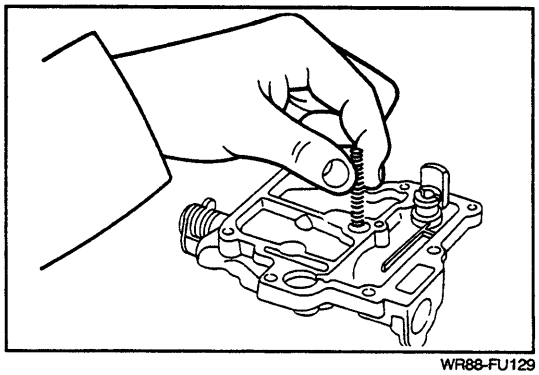
ASSEMBLY OF AIR HORN

1. Install the needle valve seat to the air horn with a new gasket interposed.



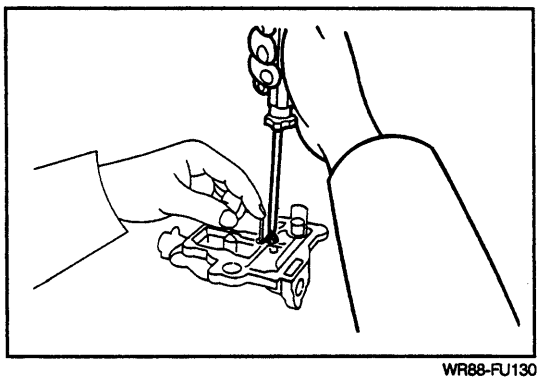
WR88-FU128

2. Insert the power piston spring into the air horn.



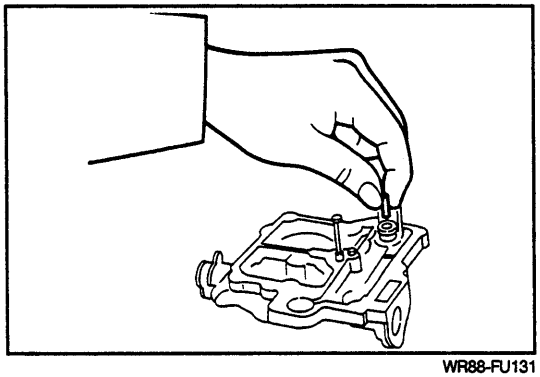
WR88-FU129

3. While inserting the power piston into the air horn, install the lock plate.



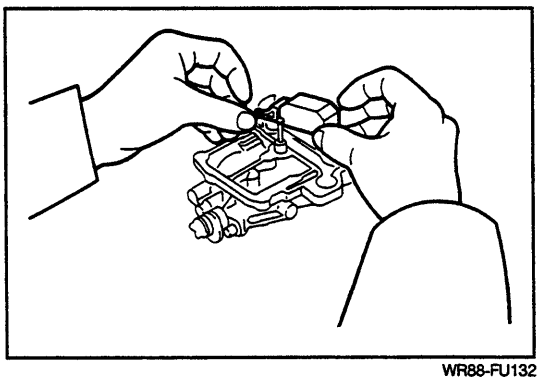
WR88-FU130

4. Remove the snap pin for pulling-off needle valve use. Insert the snap pin into the valve seat.



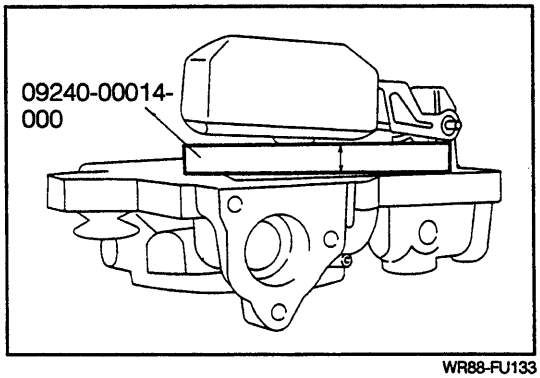
WR88-FU131

5. Install the float.



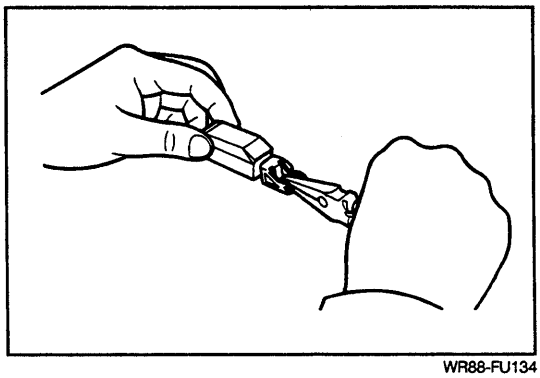
WR88-FU132

6. Adjustment of float level
   (1) Check the dimension under the float's own weight, using the following SST.
   Dimension under Float's Own Weight:
   8 mm (0.315 inch)
   SST: 09240-00014-000



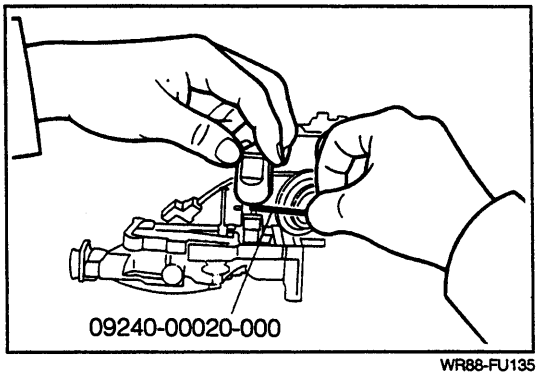
WR88-FU133

Adjust the dimension under the float's own weight by bending the lip section of the float if the measured value fails to conform to the specified value.



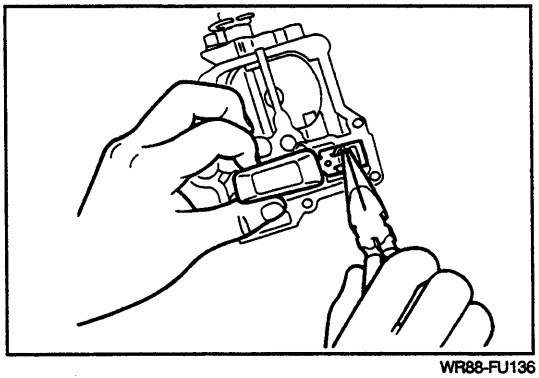
WR88-FU134

(2) Check the lip dimension using the following SST.
Lip Dimension: 1.6 mm (0.063 inch)
SST: 09240-00020-000

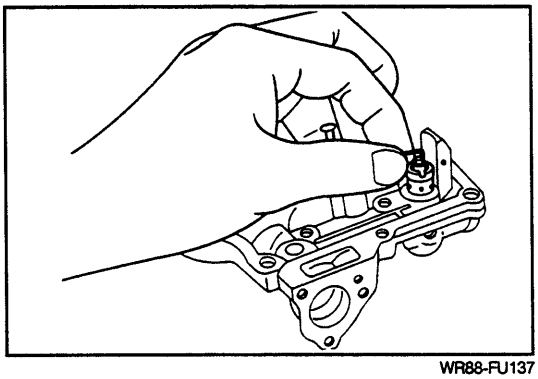


WR88-FU135

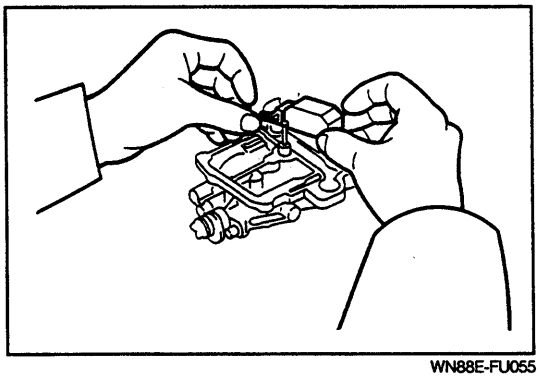
Adjust the lip dimension by bending the lever of the float if the measured value fails to conform to the specified value.


WR88-FU136

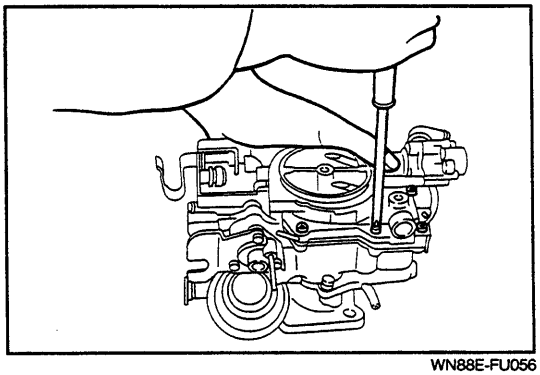
(3) Remove the float. Install the snap pin for pulling-off use to the needle valve.


WR88-FU137

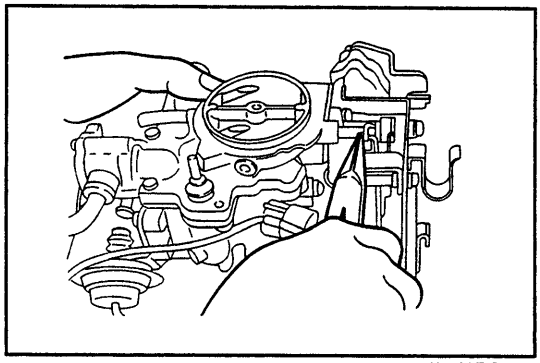
(4) Install the float.


WN88E-FU055

7. Install the air horn assembly onto the carburetor body.
8. Tighten the 7 screws (5 screws in case of the idle-up actuator equipped model) of the air horn.

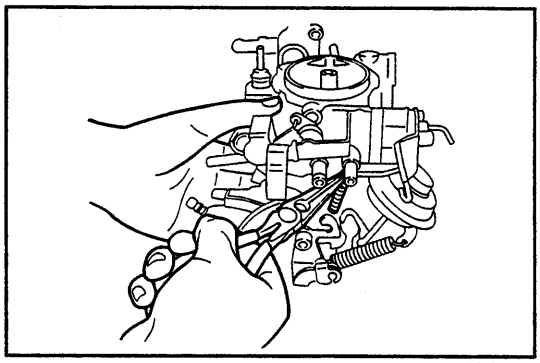

WN88E-FU056

9. Connect the choke lever linkage at the upper side.



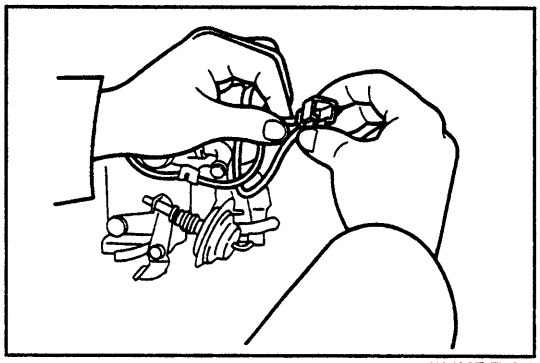
WN88E-FU057

10. Install the spring to the carburetor.



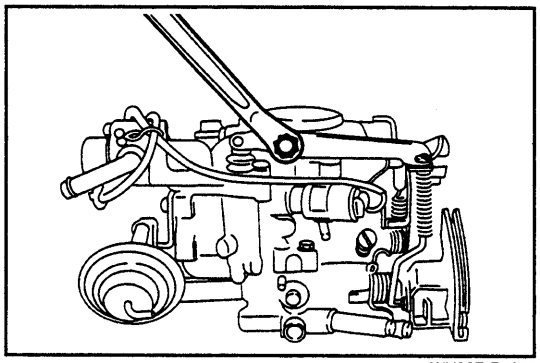
WN88E-FU058

11. Connect the outer vent terminal to the connector.



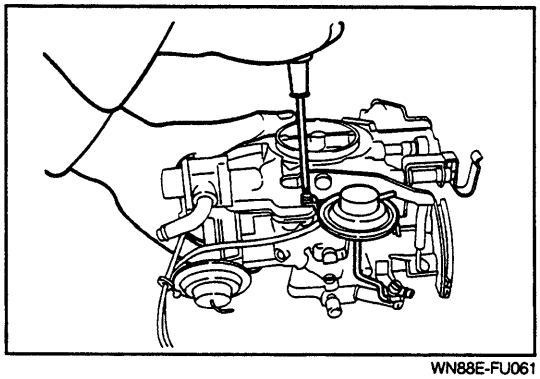
WN88E-FU059

12. Install the accelerator pump and lever.
    Tighten the accelerator pump arm set screw.



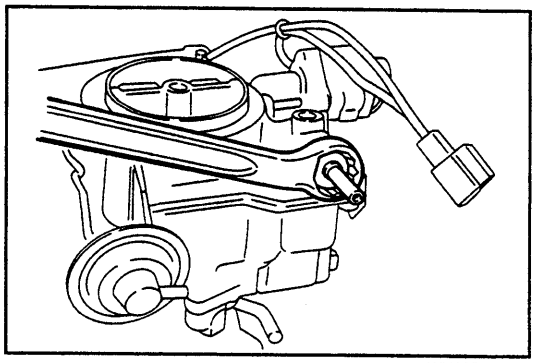
WN88E-FU060

13. Install the idle-up actuator to the carburetor.
    (only for the power steering-equipped vehicle).



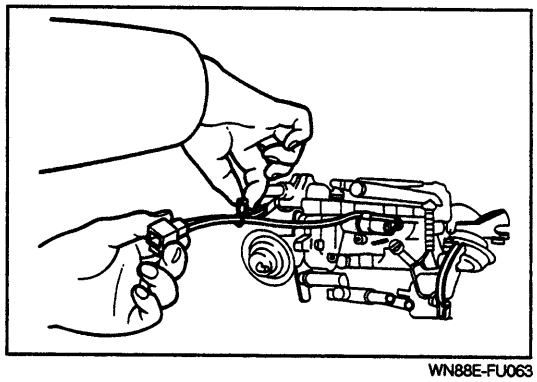
WN88E-FU061

14. Install the gasket and fuel inlet union.
15. Install the air cleaner set bolt.



WN88E-FU062

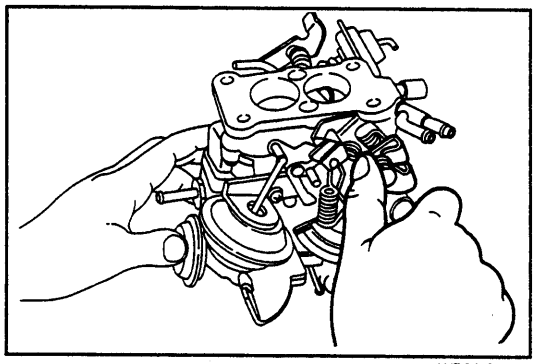
16. Attach the harness clamp.



WN88E-FU063

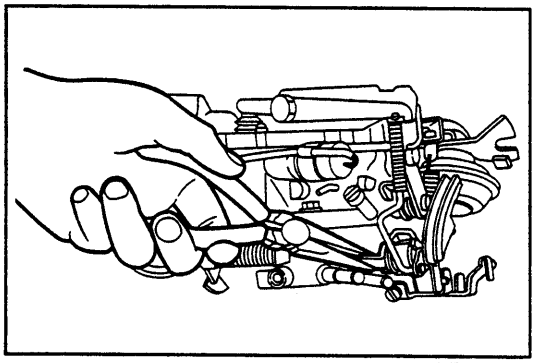
ADJUSTMENT OF CARBURETOR

1. Inspection of throttle valve opening angle
   (1) Visually inspect the valve opening angle when the primary throttle valve is opened fully.
   Full Opening Angle: 90°



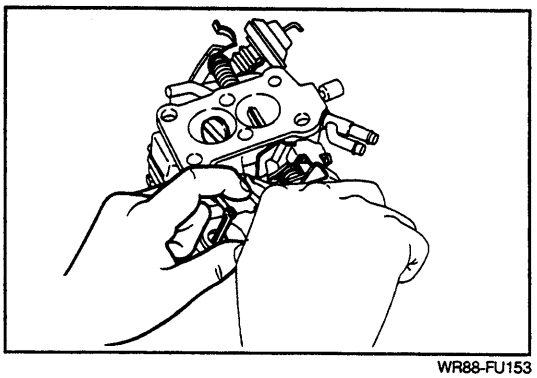
WR88-FU151

Adjust the opening angle by bending the throttle lever stopper if the measured value fails to conform to the specified value.



WR88-FU152

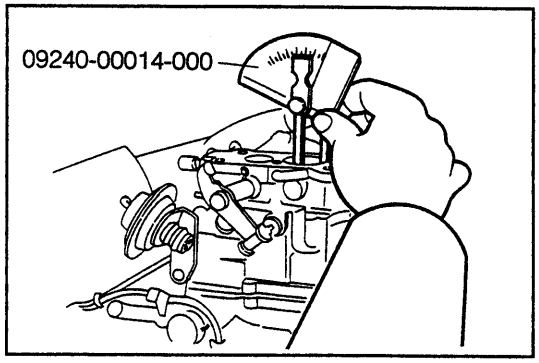
   (2) Visually inspect the valve opening angle when the secondary throttle valve is opened fully.
   Full Opening Angle: 80°



WR88-FU153

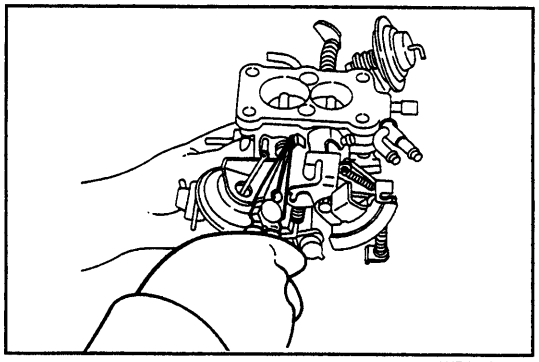
Adjust the opening angle by bending the throttle lever stopper if the measured value fails to conform to the specified value.

2. Inspection of kick-up opening angle
   Measure the opening angle of the secondary valve when the primary throttle valve is opened fully, using the following SST.
   SST: **09240-00014-000**
   Kick-Up Opening Angle: 23°

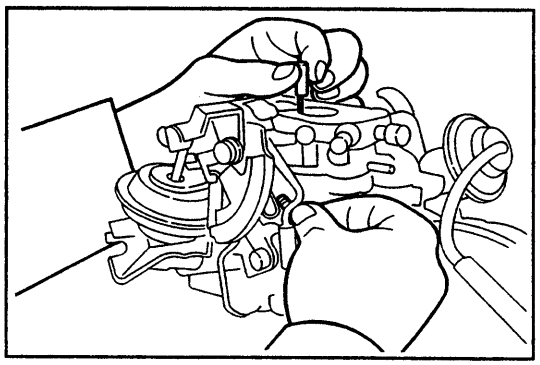


WR88-FU154

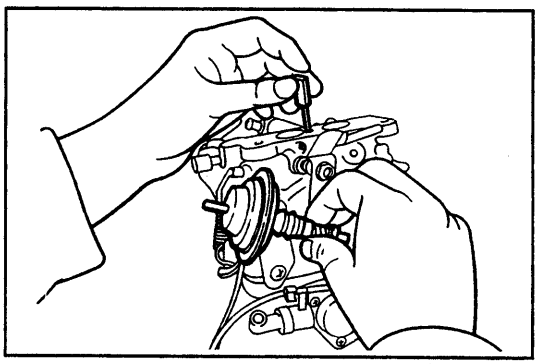
   Adjust the kick up opening angle by bending the secondary throttle lever if the measured value fails to conform to the specified value.


WR88-FU155

3. Adjust the throttle adjusting screw so that the throttle valve opening angle may become 0.3 mm (0.0118 inch).
   NOTE:
   Be sure to apply a negative pressure to the throttle positioner so as to keep it in an operating state.


WN88E-FU064

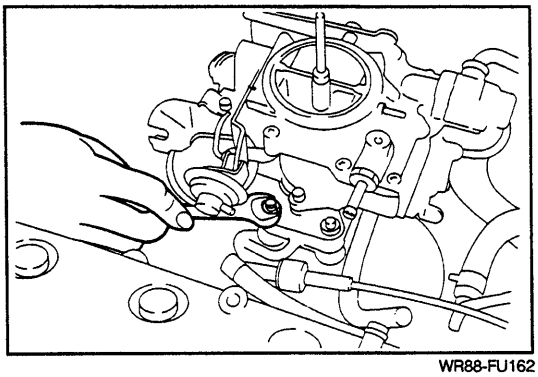
4. Under the condition that a negative pressure is not applied to the throttle positioner, adjust the opening angle of the throttle valve to about 0.45 mm (0.0177 inch).


WN88E-FU065

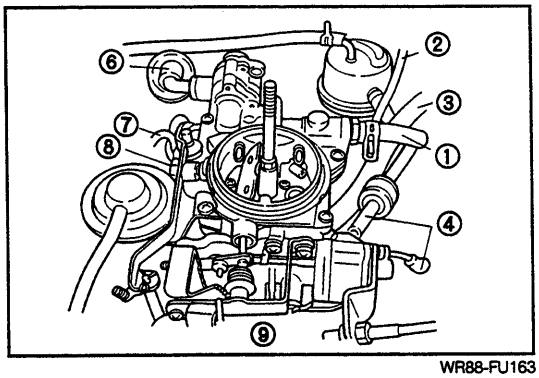
5. Ensure that each part operates smoothly.
6. Install the air cleaner set bolt.

INSTALLATION OF CARBURETOR

1. Inspection of heat insulator
   Visually inspect the gasket surface of the heat insulator. Replace the heat insulator if it exhibits damage.
2. Install the carburetor to the intake manifold with the heat insulator interposed. Tighten the attaching nuts to the specified torque.
   Tightening Torque: 1.5 - 2.2 kg-m (10.8 - 15.9 ft-lb)


WR88-FU162

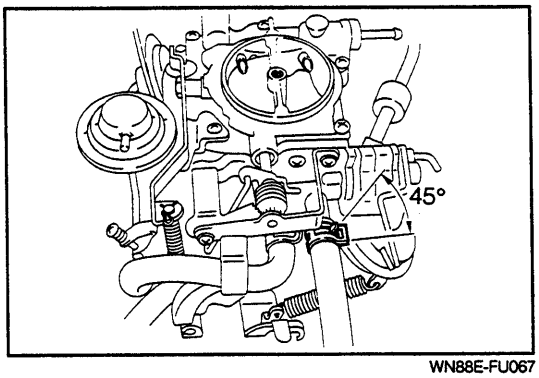
3. Connect the outer vent valve connector of the solenoid valve and the throttle position sensor connector.
4. Connect the following hoses to the carburetor.
   ① Fuel inlet hose
   ② ITC vacuum hose
   ③ PCV gas hose
   ④ Choke braker vacuum hose
   ⑤ Vacuum hoses to gas filter
   ⑥ Outer vent hose
   ⑦ Throttle position vacuum hose
   ⑧ Vacuum hose to distributor
   ⑨ Coolant circulating hoses



WR88-FU163

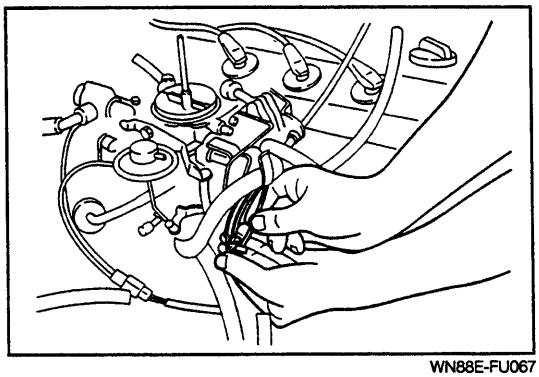
   NOTE:
   Ensure that the hose clamp is installed at correct position as indicated at right figure.

5. Connect the accelerator cable to the carburetor. Adjust the axial play of the accelerator cable to 3 - 8 mm (0.12 - 0.31 inch).

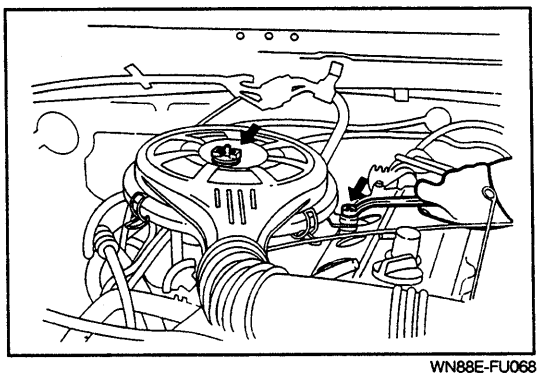


WN88E-FU067

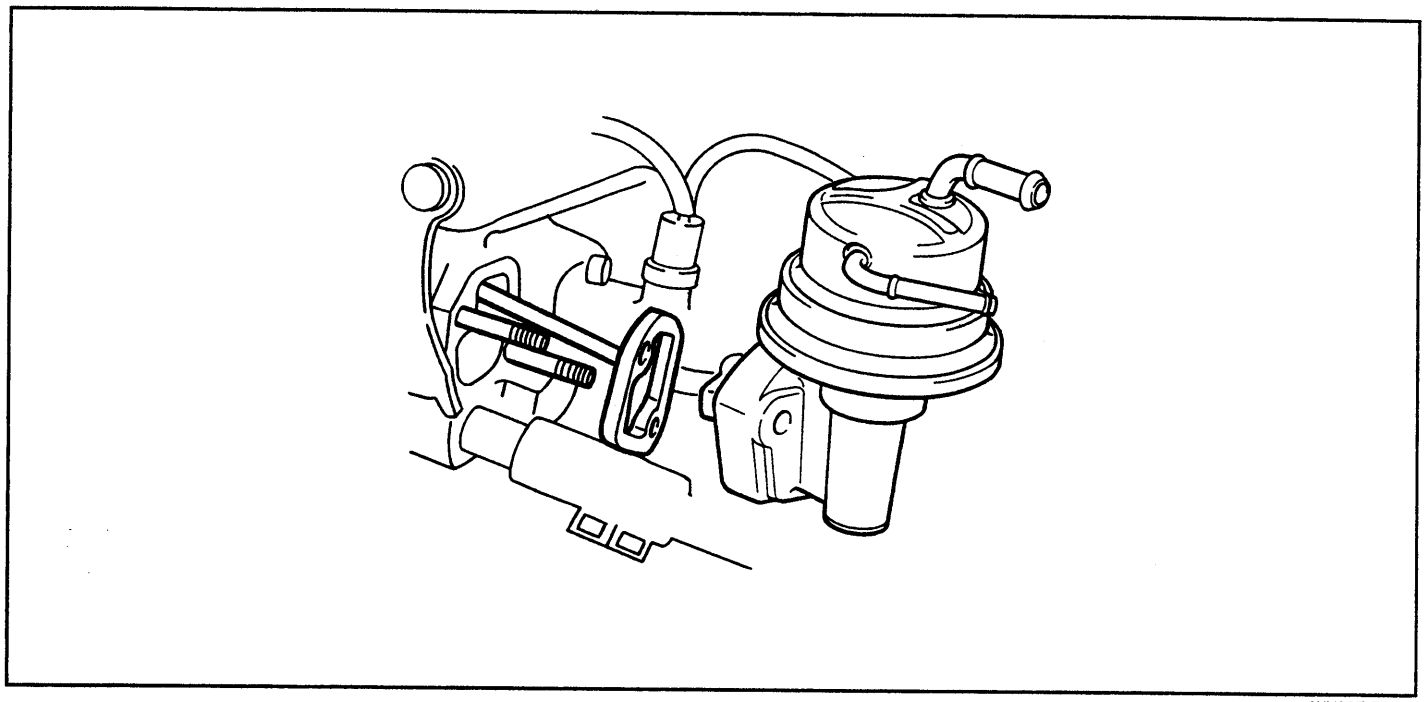
6. Install the air cleaner.
7. Connect the following rubber hoses to the air cleaner.
   (1) Vacuum hose to BVSV
   (2) ITC vacuum hose to carburetor
   (3) Blow-by gas hose
   (4) Cool air intake hose
   (5) Hot air intake hose


WN88E-FU067

8. Fill coolant.
   (See page CO-3.)
9. Connect the ground cable to the negative (–) terminal of the battery.
10. Tune up the engine.


WN88E-FU068

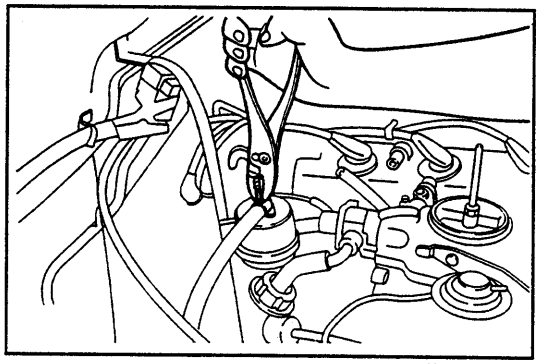
FUEL PUMP



WN88E-FU070

REMOVAL OF FUEL PUMP

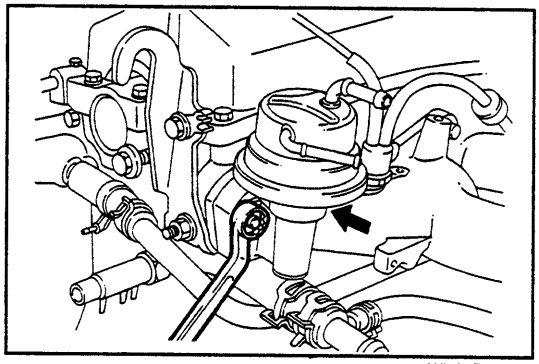
1. Disconnect the fuel hoses from the fuel pump.
   NOTE:
   Plug the disconnected hose so that no fuel will flow out.



WN88E-FU071

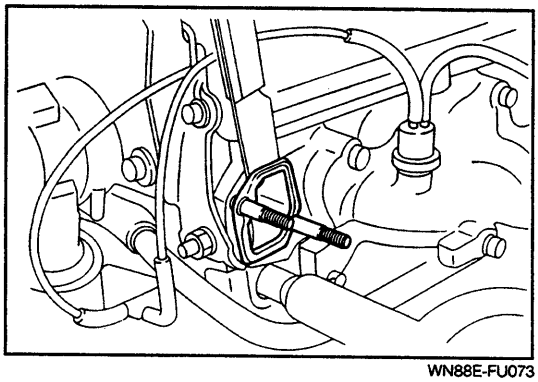
2. Remove the fuel pump by removing the attaching nuts.
   NOTE:
   Since the engine oil will flow out, be sure to put a suitable cloth so that no engine oil may splash on the starter and so forth.

3. Remove the insulator.
   NOTE:
   Never reuse the insulator.



WN88E-FU072

4. Cut the gasket along the intake manifold. Remove any gasket material remaining on the fuel pump installation section, using a gasket scraper.
   NOTE:
   This cutting of the gasket is required only when the gasket used at the assembly line in the manufacturer has been installed.
   Be very careful not to damage the gasket installation surface during the operations.



WN88E-FU073

INSPECTION

1. Inspection of fuel pump

CAUTION:

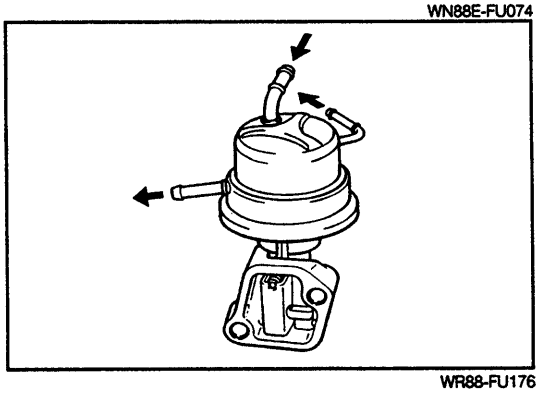
- **Prior to the check, fill a small amount of fuel into the fuel pump. Thus, the inspection should be performed under a condition that the valve is wet. When the valve is dry, the following inspection can not be performed correctly.**

WARNING:

- **Never work on the fuel system in proximity of a fire.**
- **Never allow any fire to be brought near the working site.**

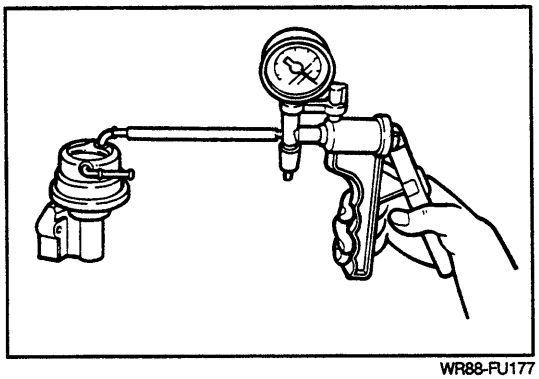
(1) Blow air from the inlet side of the fuel pump. Ensure that air continuity exists.
Replace the fuel pump if no air continuity exists.

WN88E-FU074



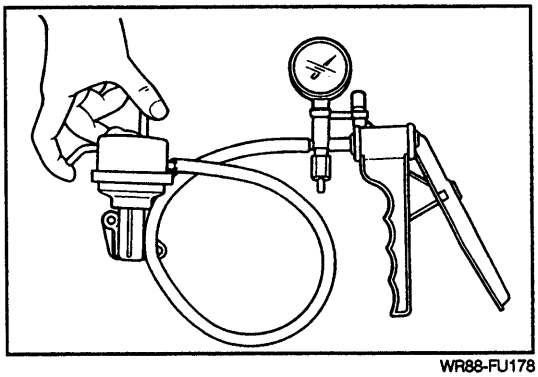
WR88-FU176

(2) Install a MityVac to the inlet side of the fuel pump and apply a negative pressure. Ensure that the applied pressure is retained.
Replace the fuel pump if the pressure is not retained.



WR88-FU177

(3) Plug the inlet pipe and return pipe of the fuel pump. Install a MityVac to the outlet pipe and apply a negative pressure. Ensure that the applied pressure is retained.
Replace the fuel pump if the pressure is not retained.



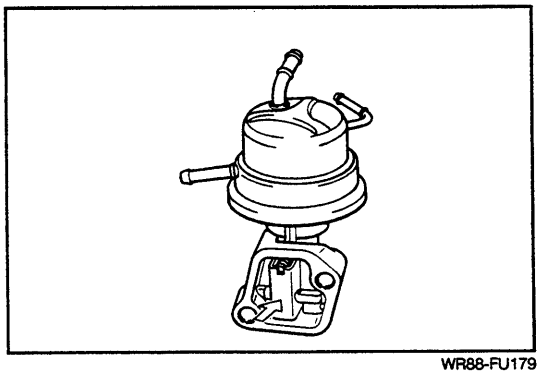
WR88-FU178

(4) Visually inspect the push rod-contact-surface of the fuel pump.

NOTE:

When the contact surface is not a mirror-like surface, it means that the contact surface is worn out.

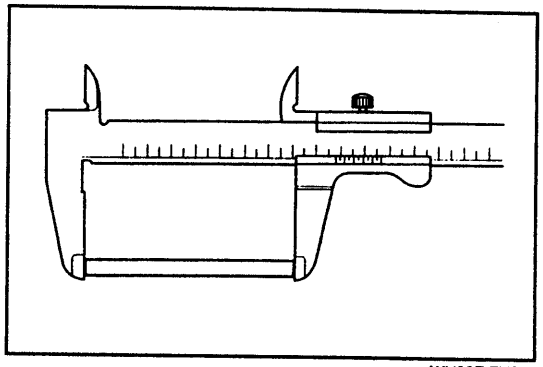
Replace the fuel pump if the contact surface exhibits wear.



WR88-FU179

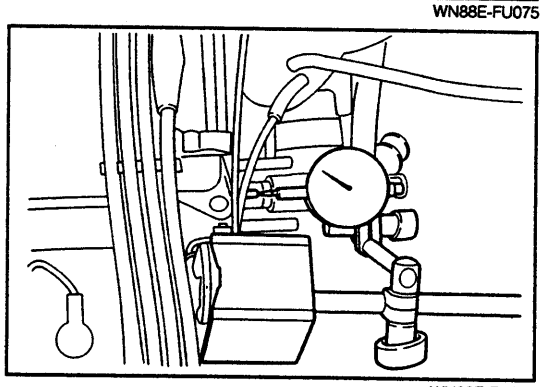
2. Inspection of fuel pump push rod
   Ensure that the overall length of the push rod is the specified value or more.
   Minimum Length: 87.00 mm (3.425 inch)
   Reference
   STD: 87.95 - 88.25 mm (3.463 - 3.474 inch)

   Replace the push rod if its overall length is less than the specified value.


WN88E-FU075

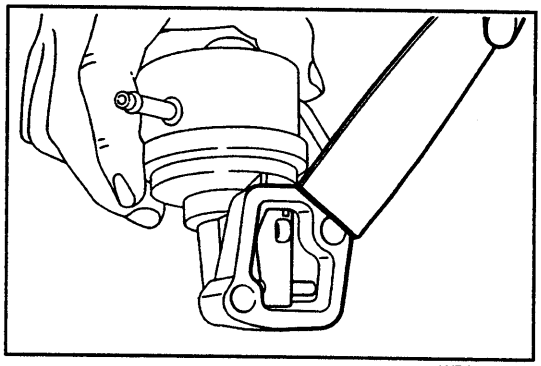
4. Checking fuel pump cam for wear
   (1) Insert the push rod of the fuel pump into the cylinder head. Set a dial gauge.
   (2) Turn the crankshaft two turns. Measure the stroke of the push rod of the fuel pump. Ensure that the stroke is the specified value or more.
   Minimum Stroke: 4.8 mm (0.189 inch)

   Replace the camshaft if the stroke is less than the specified value.


WN88E-FU076

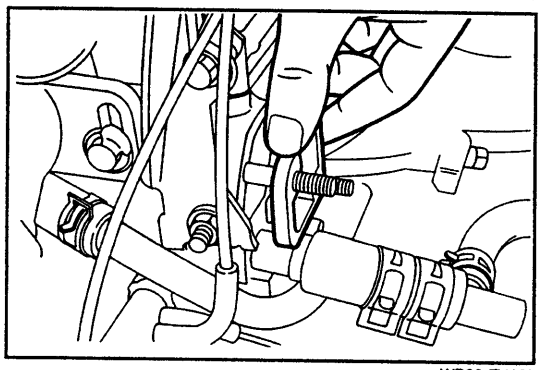
INSTALLATION OF FUEL PUMP

1. Remove any remaining gasket material from the insulator installation surface of the fuel pump, using a gasket scraper.
   NOTE:
   Be very careful not to damage the gasket contact surface.

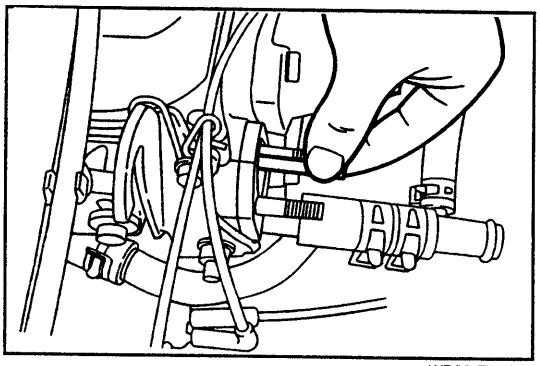

WR88-FU183

2. Wipe off any oil from the oil pump installation surface of the cylinder head.

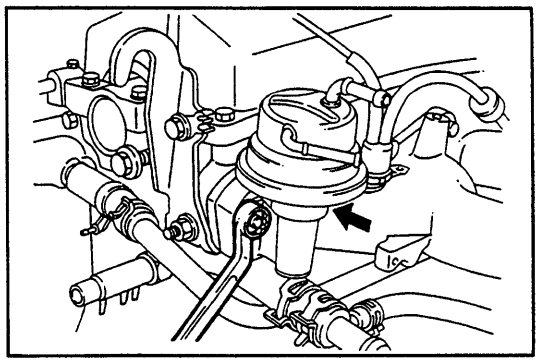
3. Install a new insulator to the cylinder head.
   NOTE:
   Never reuse the insulator.


WR88-FU185

4. Insert the fuel pump push rod into the cylinder head.

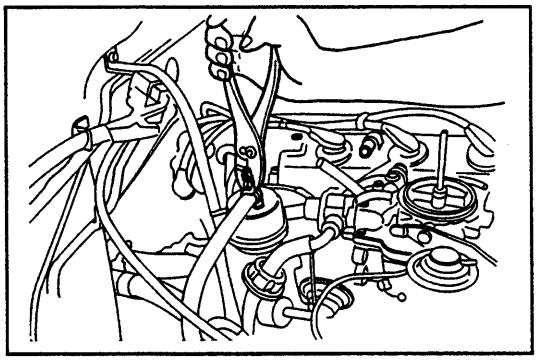

WR88-FU185A

5. Install the fuel pump to the cylinder head. Tighten the attaching nuts.
   Tightening Torque: 1.5 - 2.2 kg-m (10.8 - 15.9 ft-lb)



WR88-FU186

6. Connect the fuel hose to the fuel pump. Attach the hose bands.

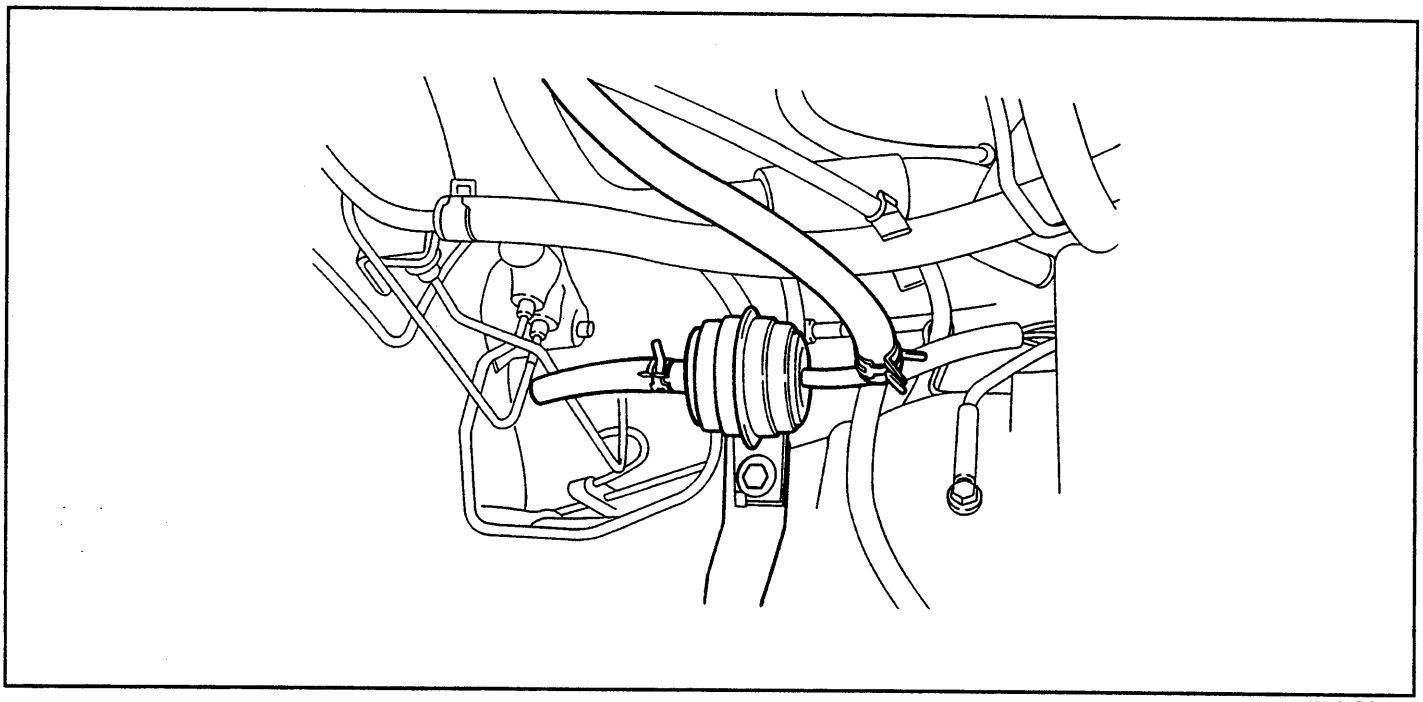


WR88-FU187

7. Connect the connector of the distributor.
8. Start the engine. Ensure that the engine exhibits no fuel leakage.
   Repair any leaky points, as required.

WR88-FU188

FUEL FILTER



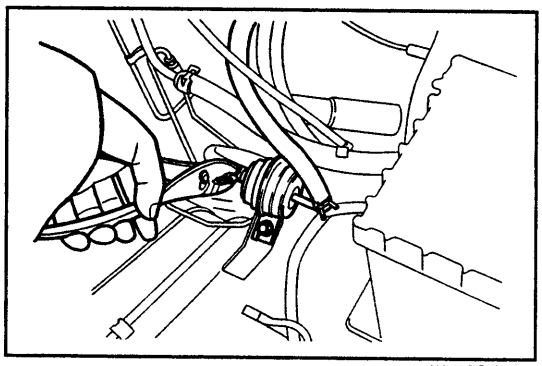
WN88E-FU077

REPLACEMENT OF FUEL FILTER

WARNING:

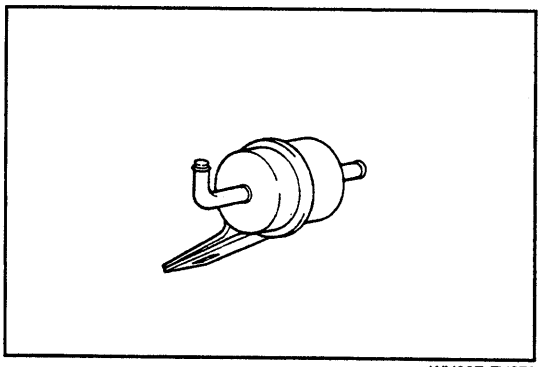
- **Never work on the fuel system in proximity of a fire.**
- **Never allow any fire to be brought near the working site.**

1. Disconnect the fuel hose from the fuel filter.
   NOTE:
   Plug the disconnected hose so that no fuel may flow out.



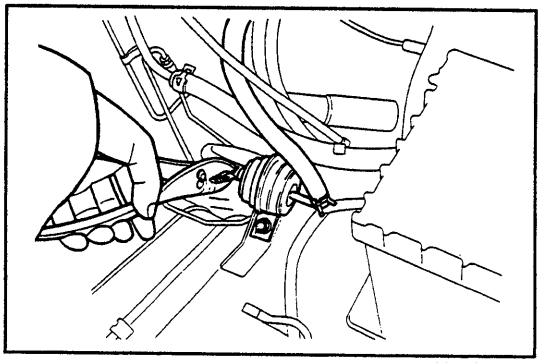
WN88E-FU078

2. Remove the fuel filter by removing the attaching bolt.
3. Install a new fuel filter. Tighten the attaching bolts.



WN88E-FU079

4. Connect the fuel hose to the fuel filter. Attach the hose bands.
5. Start the engine. Ensure that the engine exhibits no fuel leakage.
   Repair any leaky points, as required.



WN88E-FU080