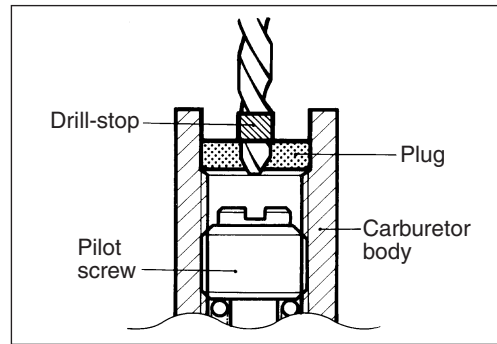


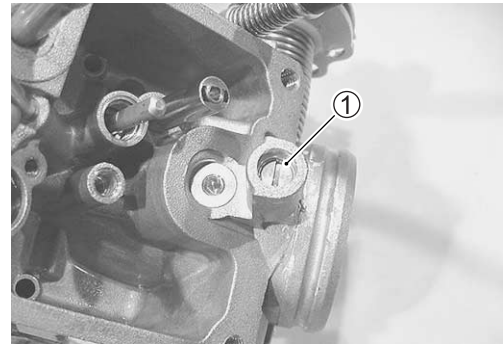
- Use a 1/8" size drill bit with a drill-stop to remove the pilot screw plug. Set the drill-stop 6 mm from the end of the bit to prevent drilling into the pilot screw. Carefully drill through the plug. Thread a self-tapping sheet metal screw into the plug. Pull on the screw head with pliers to remove the plug. Carefully clean any metal shavings from the area. (For E-03, 28, 33)

**▲ CAUTION**

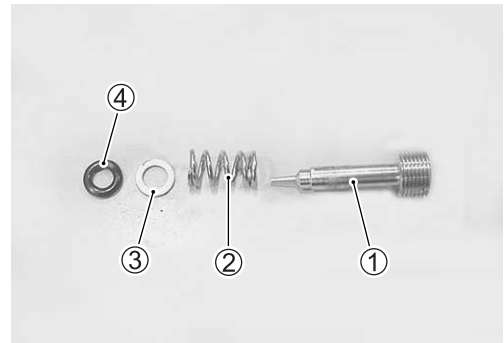
**Replace the plug with a new one.**



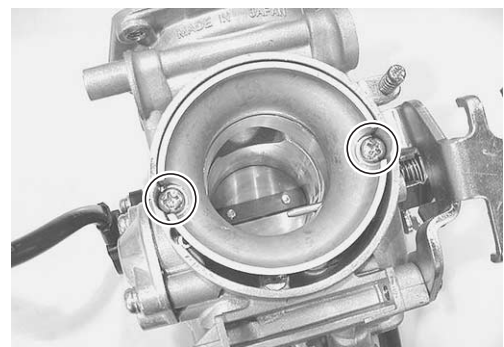
- Slowly turn the pilot screw ① in clockwise and count the number of turns until the screw is lightly seated. Make a note of how many turns were made so the screw can be reset correctly after cleaning.



- Remove the pilot screw ① with the spring ②, washer ③, and O-ring ④.



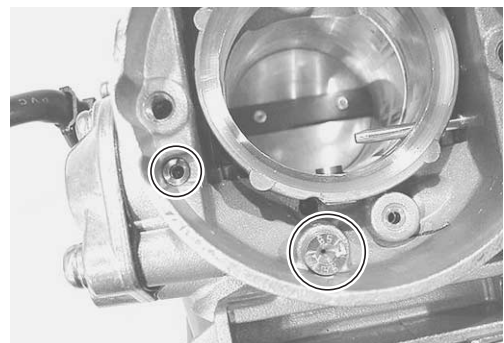
- Remove the funnel ⑤.



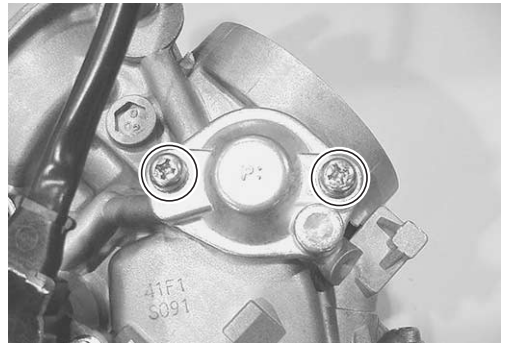
- Remove the pilot air jets ⑥.

**▲ CAUTION**

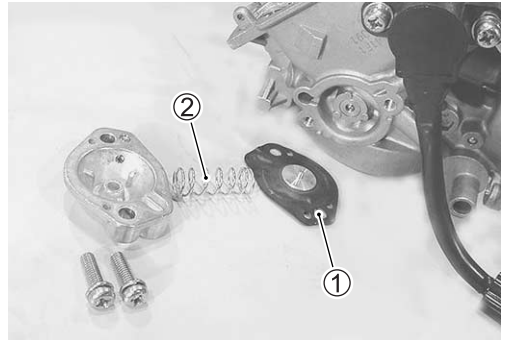
**Do not use a wire for cleaning the passage and jets.**



- Remove the casting valve cover.



- Remove the casting valve ① and the spring ②.



## CARBURETOR CLEANING

### ⚠ WARNING

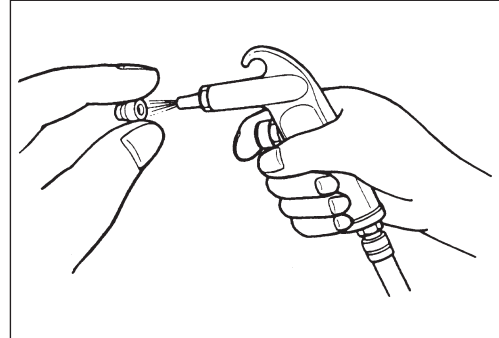
Some carburetor cleaning chemicals, especially diptype soaking solutions, are very corrosive and must be handled carefully. Always follow the chemical manufacturer's instructions on proper use, handling and storage.

- Clean all jets with a spray-type carburetor cleaner and dry them using compressed air.
- Clean all circuits of the carburetor thoroughly – not just the perceived problem area. Clean the circuits in the carburetor body with a spray-type cleaner and allow each circuit to soak if necessary to loosen dirt and varnish. Blow the body dry using compressed air.

### ⚠ CAUTION

Do not use a wire to clean the jets or passageways. A wire can damage the jets and passageways. If the components cannot be cleaned with a spray cleaner, it may be necessary to use a dip-type cleaning solution and allow them to soak. Always follow the chemical manufacturer's instructions for proper use and cleaning of the carburetor components.

- After cleaning, reassemble the carburetor with new seals and gaskets.



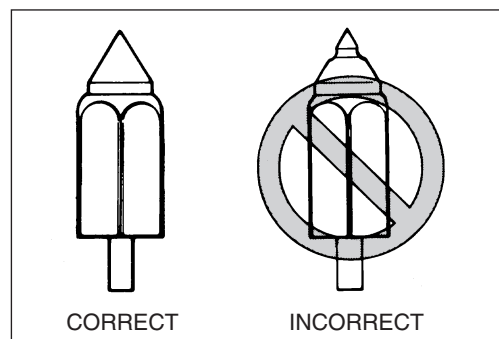
## CARBURETOR INSPECTION

Check the following items for any damage or clogging.

- |                                |                |                                  |
|--------------------------------|----------------|----------------------------------|
| * Pilot jet                    | * Float        | * Starter (enricher) jet         |
| * Main jet                     | * Needle valve | * Gasket and O-ring              |
| * Main air jet                 | * Jet needle   | * Throttle shaft oil seal        |
| * Pilot air jets               | * Valve seat   | * Pilot outlet and by-pass ports |
| * Needle jet air bleeding hole | * Piston valve | * Coasting valve                 |

### NEEDLE VALVE INSPECTION

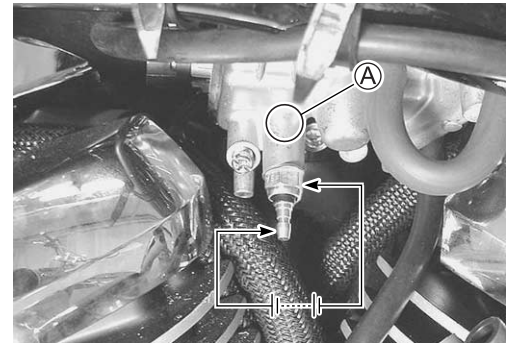
If foreign matter is caught between the valve seat and the needle valve, the gasoline will continue flowing and overflow. If the valve seat and needle valve are worn beyond the permissible limits, similar trouble will occur. Conversely, if the needle valve sticks, the gasoline will not flow into the float chamber. Clean the float chamber and float parts with gasoline. If the needle valve is worn, as shown in the illustration, replace it along with a new valve seat. Clean the fuel passage of the mixing chamber using compressed air.



## CARBURETOR HEATER INSPECTION

(for E02, E19)

- Disconnect the carburetor heater terminal lead wires.
- Connect the positive  $\oplus$  terminal of a 12V battery to the terminal of the carburetor heater and the battery negative  $\ominus$  terminal to the terminal.
- Check that the heater section  $\textcircled{A}$  is heated in 5 minutes after the battery has been connected.



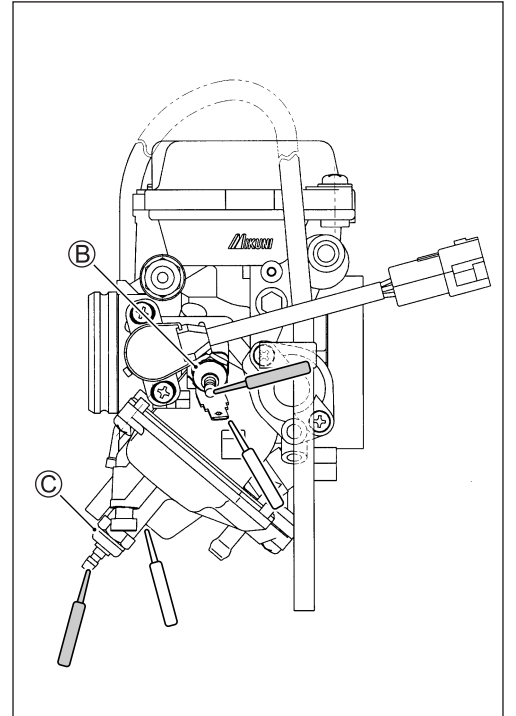
- Measure the resistance between the terminals.

**TOOL** 09900-25008: Multi-circuit tester

**DATA** Carburetor heater resistance: STD:

$\textcircled{B}$  35 W: 4 – 12  $\Omega$

$\textcircled{C}$  25 W: 4.6 – 13.3  $\Omega$



## THERMO-SWITCH INSPECTION

(for E02, E19)

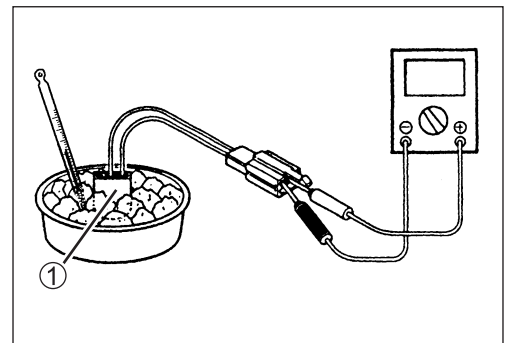
- Cool the thermo-switch  $\textcircled{1}$  with ice water and check for continuity.

**TOOL** 09900-25008: Multi-circuit tester

**DATA** Thermo-switch continuity:

Below 8 – 14°C Yes

Above 13 – 25°C No



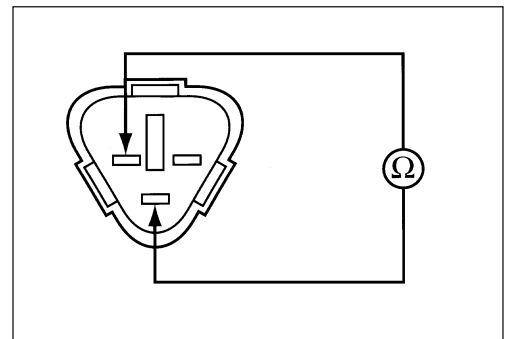
## THROTTLE POSITION SENSOR INSPECTION

Measure the resistance between the terminals as shown in the illustration.

**DATA** Throttle position sensor resistance: Approx. 5 k $\Omega$

**NOTE:**

When performing this test, it is not necessary to remove the throttle position sensor.

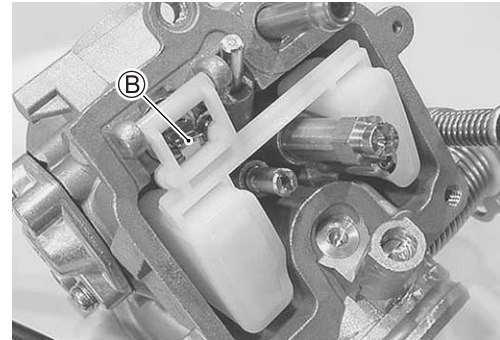
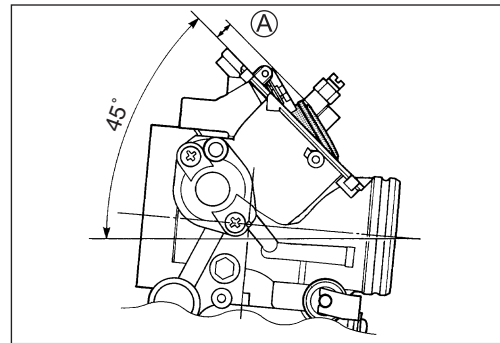


### FLOAT HEIGHT ADJUSTMENT

- Measure the float height (A) by using a calipers with the carburetor slanting at an angle of 45° (as shown in the right illustration) and the float arm just contacting the needle valve.
- Bend the tongue (B) of the float arm as necessary to bring the height (A) to the specified value.

**DATA** Float height (A):  $7.0 \pm 0.5$  mm ( $0.28 \pm 0.02$  in)

**TOOL** 09900-20102: Vernier calipers



## REASSEMBLY AND REINSTALLATION

Carburetor reassembly can be performed in the reverse order of disassembly. When reassembling, carefully observe the following instructions.

### ▲ CAUTION

- \* Assemble the parts taking consideration of their function.
- \* Replace O-rings (A) with new ones.

- After cleaning, reinstall the pilot screw to the original setting by turning the screw in until it lightly seats, and then backing it out the same number of turns counted during disassembly.

### ▲ CAUTION

- Replace the O-ring (A) with a new one.

- Apply grease to the O-ring and install the accelerating plunger.

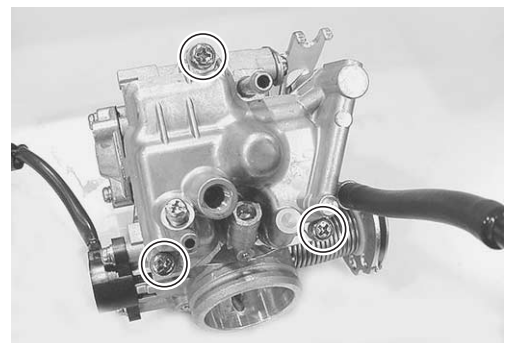
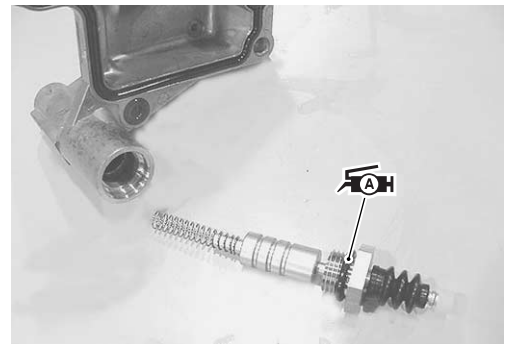
For USA

 99000-25030: SUZUKI SUPER GREASE "A"

For the other countries

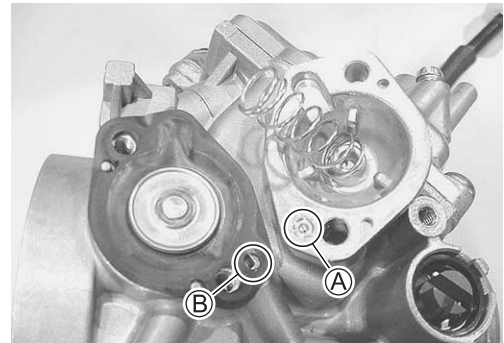
 99000-25010: SUZUKI SUPER GREASE "A"

- Fit the seal rings securely to the float chamber and install the float chamber to the throttle body.



### COASTING VALVE

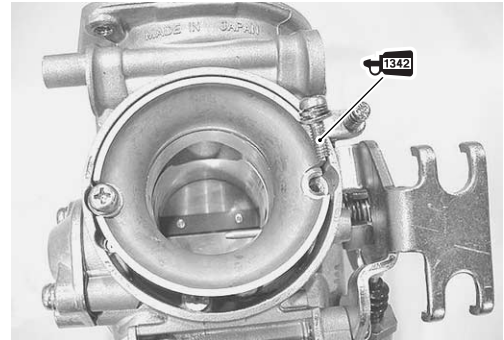
- When installing the coasting valve to the body, align the hole ① of the diagram and air hole ② of the cover.



### FUNNEL

- Apply a small quantity of THREAD LOCK “1342” to the funnel stopper screws and tighten them.

 99000-3250: THREAD LOCK “1342”

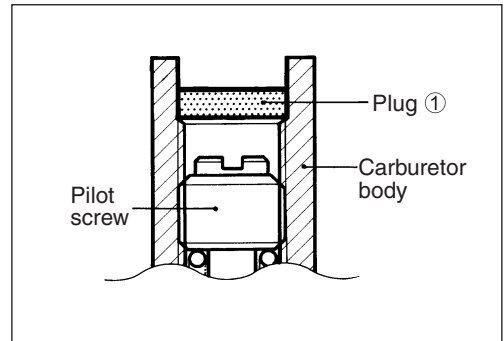


### PILOT SCREW

- After cleaning, reinstall the pilot screw to the original setting by turning the screw in until it lightly seats, and then backing it out the same number of turns counted during disassembly.
- Install new plug ① by tapping it into place with a punch. (For E-03, 28, 33)

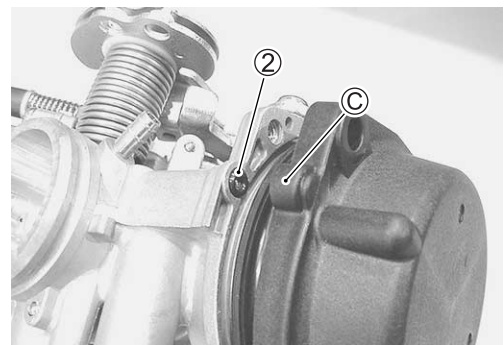
#### ⚠ CAUTION

Replace the O-ring with a new one.



### CARBURETOR TOP CAP

- Before installing the carburetor top cap, install the O-ring ②.
- Align the protrusion ③ of the carburetor top cap with the O-ring ②.



### STARTER PLUNGER

Apply a small quantity of grease to the starter plunger O-ring.

#### For USA

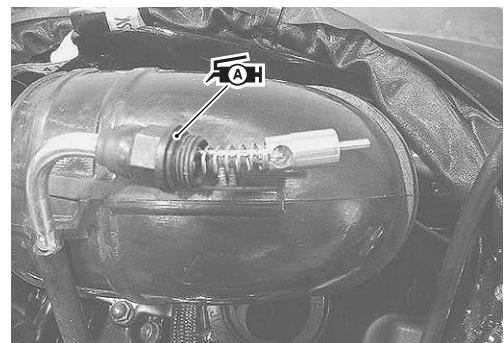
 99000-25030: SUZUKI SUPER GREASE “A”

#### For the other countries

 99000-25010: SUZUKI SUPER GREASE “A”

#### ⚠ CAUTION

Replace the O-rings with new ones.



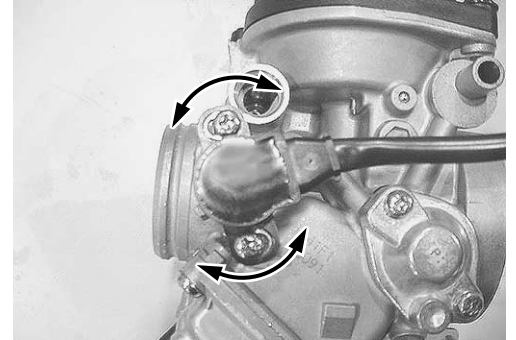
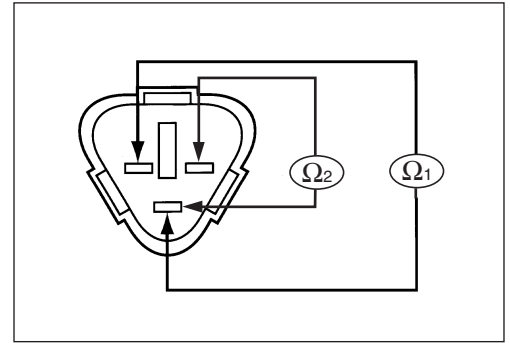
### THROTTLE POSITION SENSOR POSITIONING

- Install the throttle position sensor with the flats on the throttle shaft end securely engaged with the slot on the throttle position sensor.
- Measure the resistance  $\Omega 1$  between the throttle position sensor terminals as shown in the illustration.

**DATA** Throttle position sensor resistance  $\Omega 1$  : **Approx. 5 k $\Omega$**

- Measure the resistance  $\Omega 2$  between the throttle position sensor terminals as shown in the illustration.
- Fully open the throttle valve with the throttle lever.
- Position the throttle position sensor until resistance  $\Omega 2$  is 3.09 – 4.63 k $\Omega$ .
- When the resistance  $\Omega 2$  is within specification, tighten the throttle position sensor mounting screws.

**DATA** Throttle position sensor resistance  $\Omega 2$  :  
3.09 – 4.63 k $\Omega$



- After the assembly and installation on the engine have been completed, perform the following adjustment.
  - \* Throttle cable adjustment (☞ 2-11)
  - \* Idle speed adjustment (☞ 2-10)

### CARBURETOR HEATER

- Apply thermo-grease to the threads and tighten the carburetor heater. (for E-02, 19)

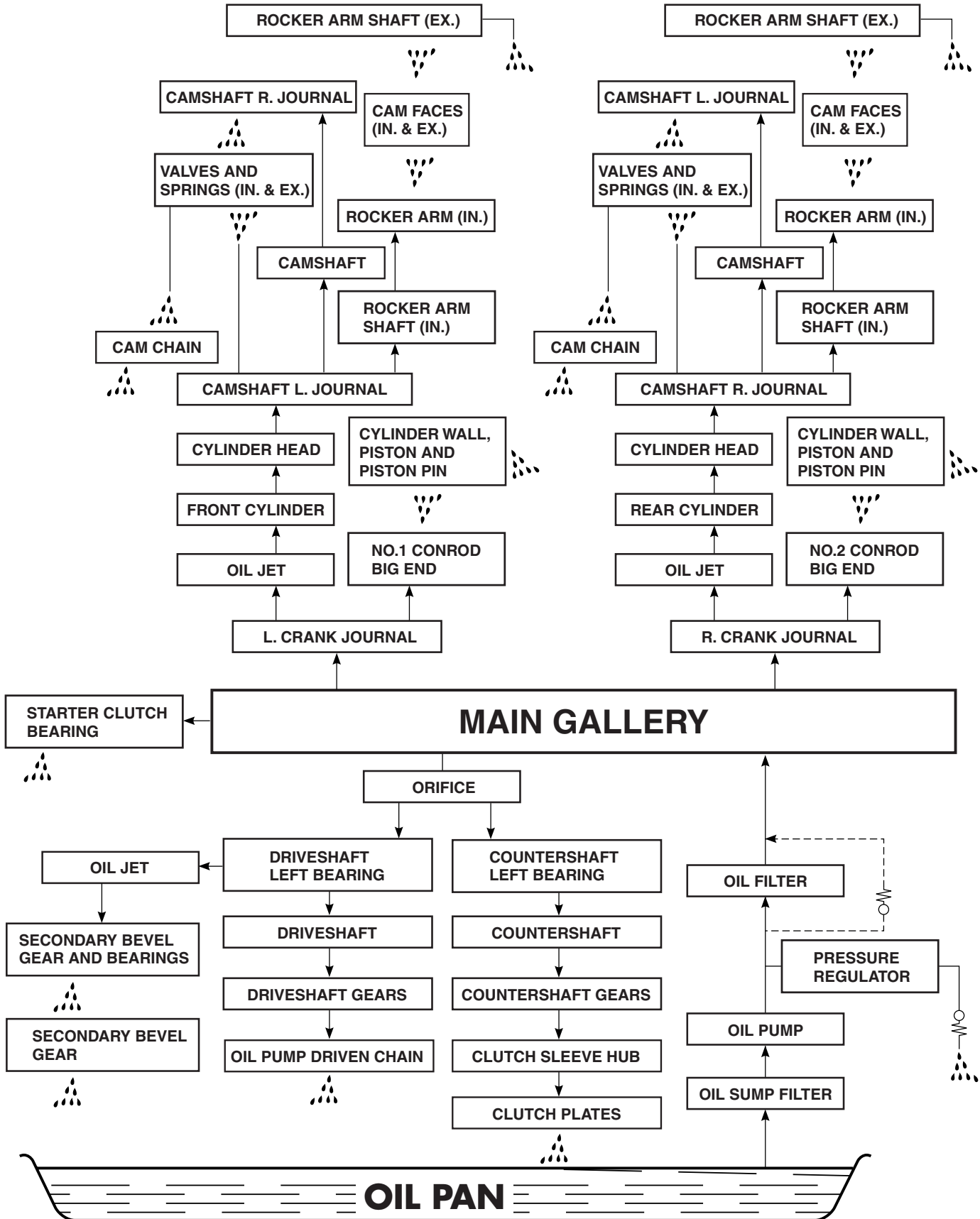
**GEH** 99000-59029: THERMO-GREASE

**U** Carburetor heater: 3 N·m (0.3 kgf·m)

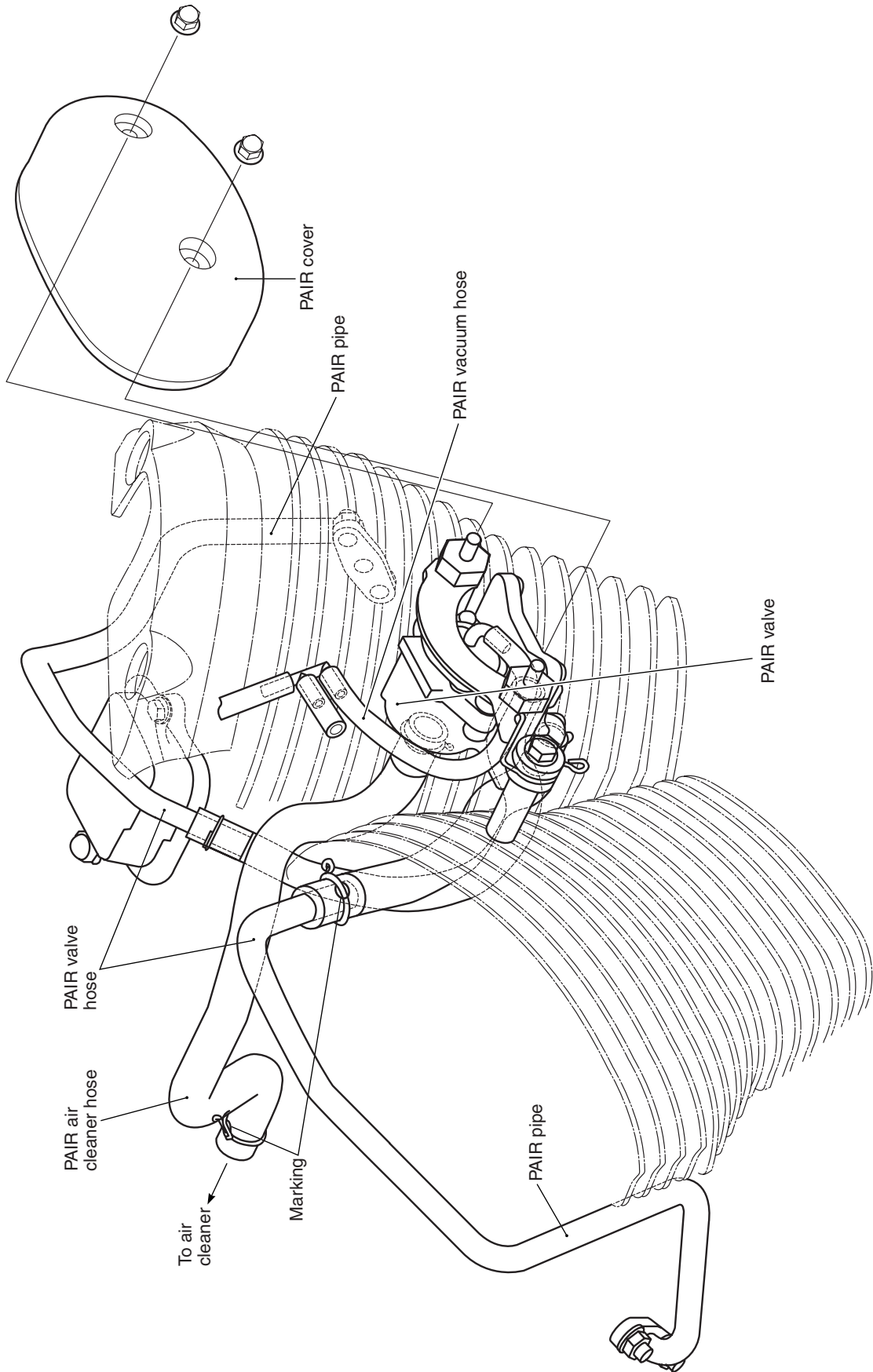




# LUBRICATION SYSTEM CHART



# PAIR (AIR SUPPLY) SYSTEM HOSE ROUTING



## PAIR (AIR SUPPLY) SYSTEM INSPECTION

### HOSES

- Inspect the hoses for wear or damage.
- Inspect that the hoses and pipes are securely connected.

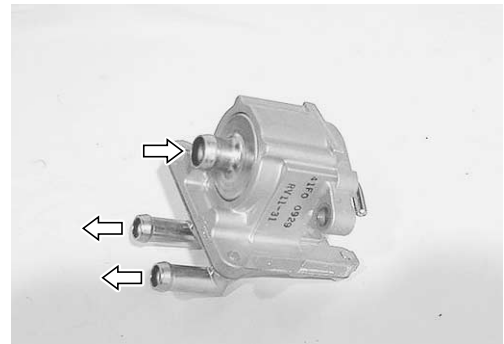
### PAIR REED VALVE

- Remove the PAIR valve cover.
- Inspect the reed valve for the carbon deposit.
- If the carbon deposit is found in the reed valve, replace the PAIR control valve with a new one.



### PAIR CONTROL VALVE

- Inspect that air flows through the PAIR control valve air inlet port to the air outlet ports.
- If air does not flow out, replace the PAIR valve with a new one.



- Connect the vacuum pump gauge to the vacuum port of the control valve as shown in the photograph.
- Apply negative pressure of the specification slowly to the control valve and inspect the air flow.
- If air does not flow out, the control valve is in normal condition.
- If the control valve does not function within the specification, replace the control valve with a new one.



**DATA** Negative pressure range: More than 72 kPa  
(540 mmHg)

**TOOL** 09917-47010: Vacuum pump gauge

#### ▲ CAUTION

Use a hand operated vacuum pump to prevent the control valve damage.

