

19. LIGHTS/METERS/SWITCHES

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SERVICE INFORMATION

GENERAL

- Some wires have different colored bands around them near the connector. These are connected to other wires which have the same color band.
- All plastic connectors have locking tabs that must be released before disconnecting, and must be aligned when reconnecting.
- The following color codes used are indicated throughout this section and on the wiring diagram.

Bu = Blue	G = Green	Lg = Light Green	R = Red
Bl = Black	Gr = Grey	O = Orange	W = White
Br = Brown	Lb = Light Blue	P = Pink	Y = Yellow

- To isolate an electrical failure, check the continuity of the electrical path through the part. A continuity check can usually be made without removing the part from the motorcycle. Simply disconnect the wires and connect a continuity tester or volt-ohmmeter to the terminals or connections.
- A continuity tester is useful when checking to find out whether or not there is an electrical connection between the two points. An ohmmeter is needed to measure the resistance of a circuit, such as when there is a specific coil resistance involved, or when checking for high resistance caused by corroded connections.

TORQUE VALUES

Thermostatic switch	18N-m<1.8kg-m, 13 ft-lb)
Ignition switch screw	7 N-m (0.7 kg-m, 5 ft-lb)
Temperature sensor	10N-m (1.0 kg-m, 7 ft-lb) Apply sealant to the threads

TOOLS

Digital Multitester	07411 -0020000 or KS-AHM-32-003 (U.S.A. only)
or	
Circuit tester (SANWA)	07308-0020000
or	
Circuit tester (KOWA)	TH-5H

TROUBLESHOOTING

TEMPERATURE WARNING SYSTEM

If the temperature warning light does not come on:

Disconnect the wires from the temperature sensor and short together the G/Bu and ground wires with a jumper wire.
—Check the warning light with ignition switch ON.

LIGHT DOES NOT COME ON LIGHT COMES ON → Faulty temperature sensor

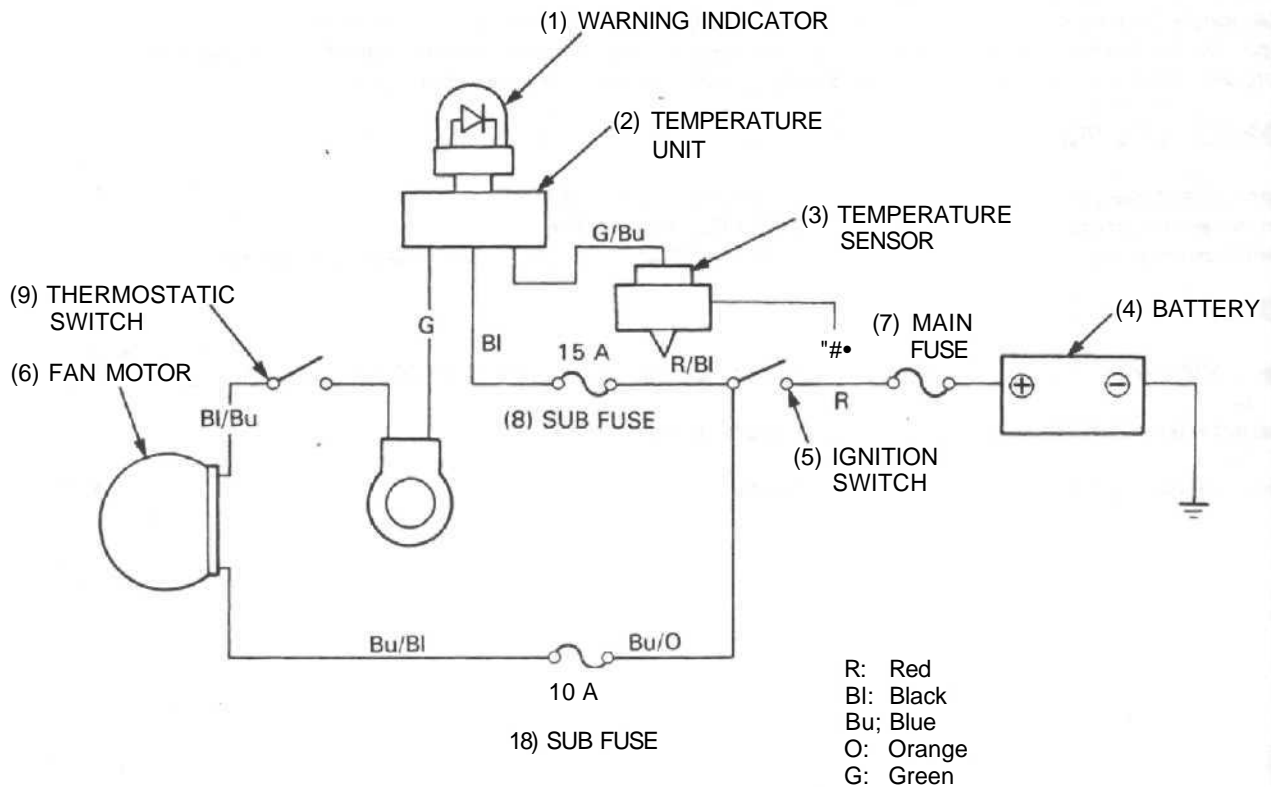
Measure the voltage between the G/Bu wire and ground

NO VOLTAGE LOW VOLTAGE → Faulty temperature unit

Disconnect the temperature unit 2P connector and the G/Bu wire from the meter and measure the voltage between the BI (2P connector) and G/Bu wire with ground.

NO VOLTAGE LOW VOLTAGE → Faulty temperature unit

• Open circuit in the wire harness between the 2P connector and temperature sensor.



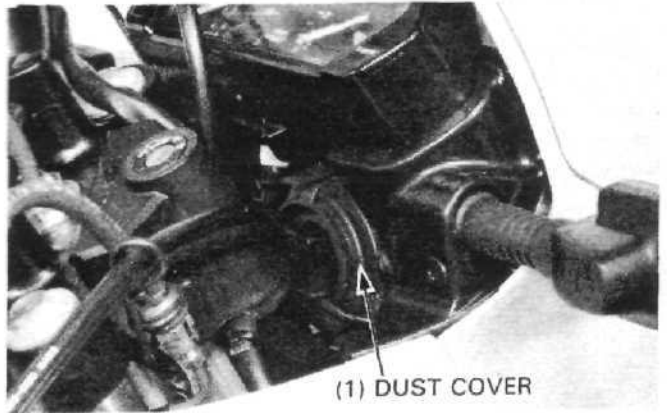
HEADLIGHT

CAUTION

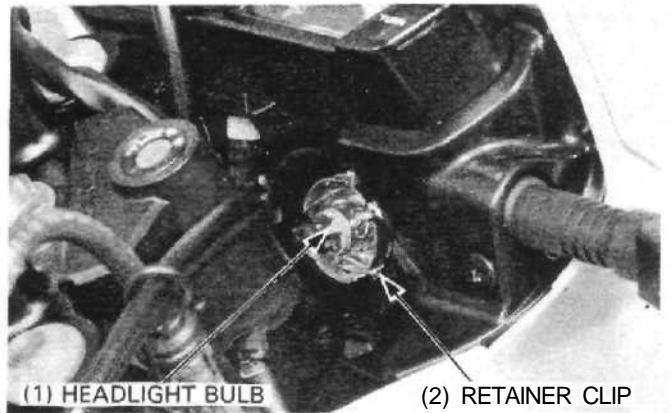
- Do not leave fingerprints on the bulb; they may create hot spots. Wear clean gloves when installing the halogen bulb. If you do touch the bulb with bare hands, clean it with an alcohol-moistened cloth before installing it in the case.

BULB REPLACEMENT

Remove the dust cover.



Remove the retainer clip and headlight bulb.

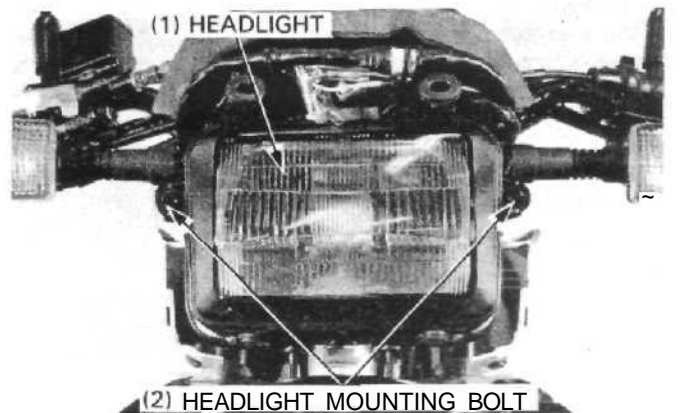


CASE REMOVAL

Remove the inner covers and the front fairing.



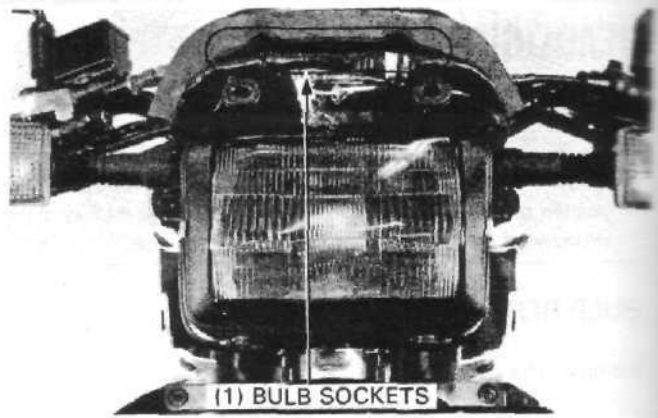
Disconnect the headlight connectors.
Remove the headlight mounting bolts and headlight.



INSTRUMENT CASE

BULB REPLACEMENT

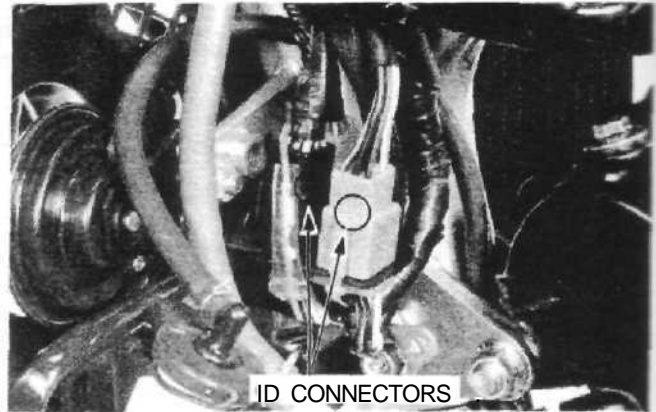
Remove the front fairing and the headlight case (page 1 9-3). Remove the bulb socket from the case then replace the bulb with a new one.



METER REPLACEMENT

Remove the fuel tank (page 4-3).

Remove the connector box cover and disconnect the meter connectors.



- Speedometer

Disconnect the speedometer cable from the meter and disconnect the turn signal relay connectors from the relay.

Remove the mounting bolts and free the case from the fairing bracket, then remove the speedometer.



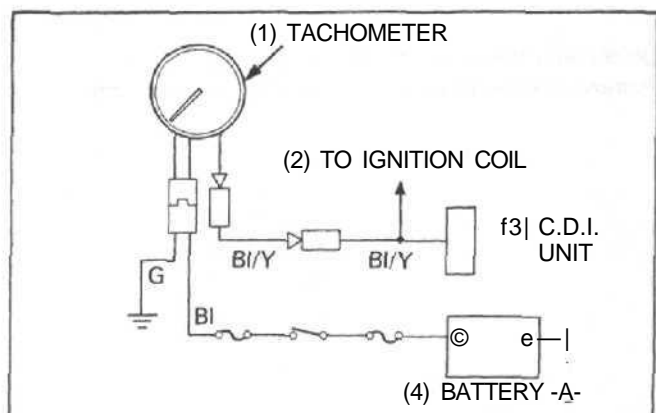
- Tachometer

If the tachometer does not work properly turn the ignition switch ON and check the voltage between the Black and Green wires at the 2P connector. There should be battery voltage. If not, check the continuity between the meter Black/Yellow wire and the Black/Yellow wire at the CDI unit. If the circuit is OK, check for a loose connector.

If the connector is OK, the tachometer is faulty.

If there is no voltage:

- Black wire open circuit
- Faulty tachometer



TURN SIGNAL/TAIL LIGHT BULB

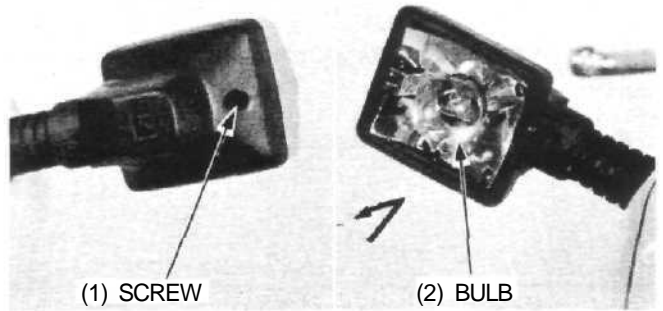
TURN SIGNAL LIGHT BULB REPLACEMENT

Remove the turn signal lens attaching screw.
While pushing in, turn the bulb counterclockwise to remove.
Replace the bulb, if necessary.

Install in the reverse order of removal.

NOTE

- Seat the rubber gasket properly.



TAIL LIGHT/LICENSE LIGHT BULB REPLACEMENT

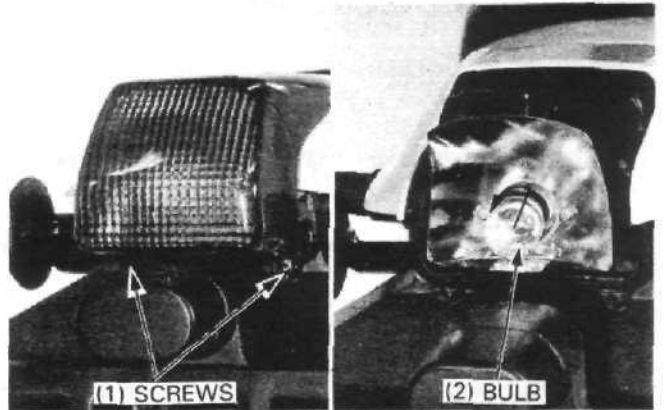
Remove the tail light lens attaching screws and lens.

While pushing in, turn the bulb counterclockwise to remove.
Replace the bulb, if necessary.

Install in the reverse order of removal.

NOTE

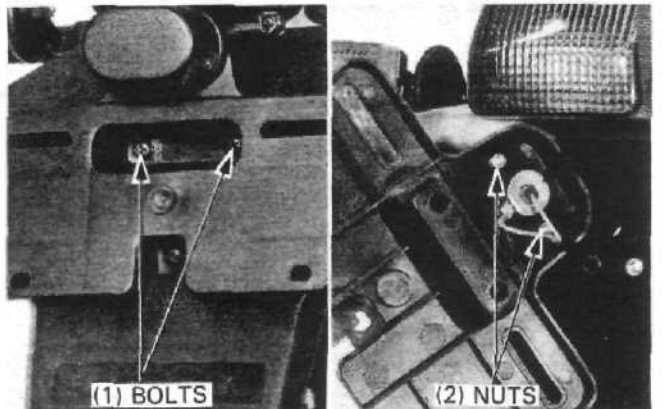
- Seat the rubber gasket properly.



Remove the license light cover mounting nuts and cover.
Remove the lens and bulb.

While pushing in, turn the bulb counterclockwise to remove.
Replace the bulb, if necessary.

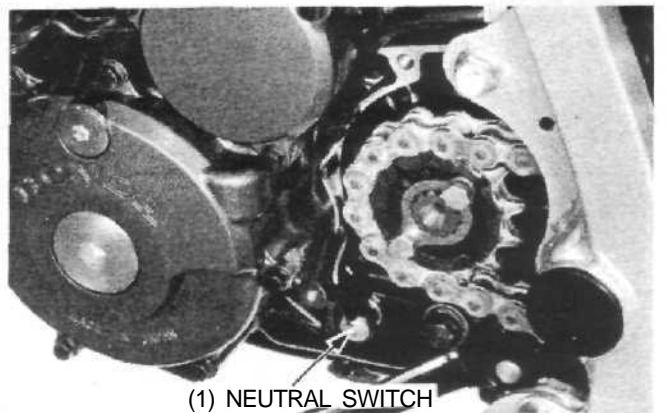
Install the bulb and lens in the reverse order of removal.



NEUTRAL SWITCH

Remove the drive sprocket cover (page 8-2).
Check the neutral switch for continuity between the switch terminal and ground.

There should be continuity when the transmission is in neutral.
There should be no continuity with the transmission in any gear.



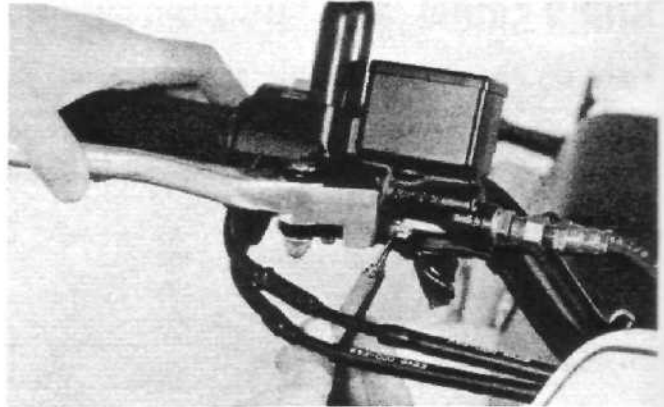
LIGHTS/METERS/SWITCHES

FRONT BRAKE LIGHT SWITCH

Disconnect the front brake light switch connectors and check for continuity.

The switch should show continuity with the front brake applied.

Replace the switch if necessary.



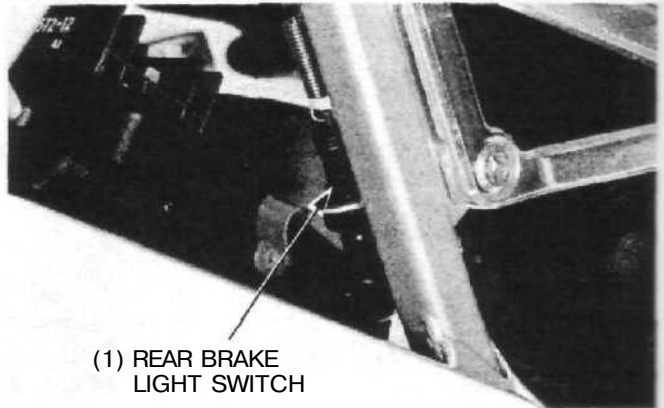
REAR BRAKE LIGHT SWITCH

Disconnect the rear brake light switch and check for continuity.

The switch should have continuity with the rear brake applied and no continuity with the released.

Replace or readjust the rear brake light switch if necessary.

See page 3-14 for adjustment procedures.

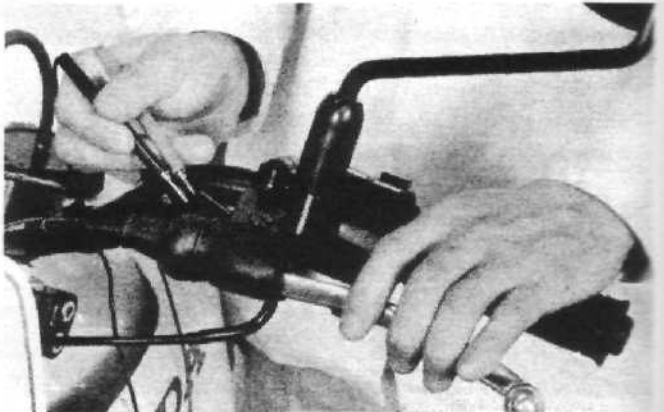


CLUTCH SWITCH

Disconnect the clutch switch connectors and check for continuity.

The switch should have continuity with the clutch lever applied.

Replace the clutch switch if necessary.



HANDLEBAR SWITCH

RIGHT HANDLEBAR SWITCH

Remove the front fairing (page 15-2).

Disconnect the right handlebar switch connector (9P) and check for continuity between terminals.

Continuity should exist between the color coded wires in each chart.

Starter Button

	IG	ST	HL1	HL2
FREE			○	○
PUSH	○	●		
COLOR	Bl/W	Y/R	W/G Br	Bu/W

Engine Stop Switch

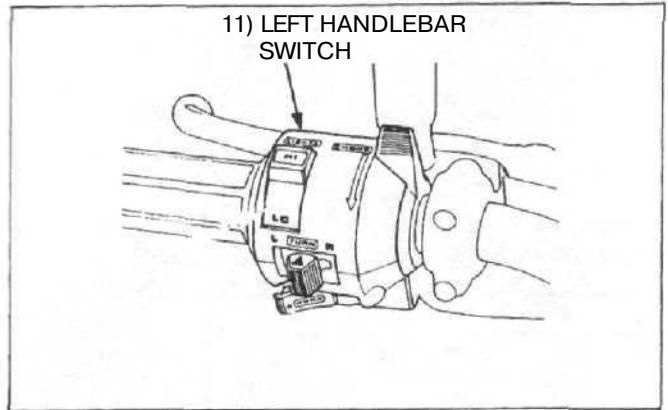
	IG	BATe
OFF		
RUN	○	●
COLOR	Bl/W	Bl/R

LEFT HANDLEBAR SWITCH

Disconnect the left handlebar switch connector (9P) and check for continuity between terminals. Continuity should exist between the color coded wires in each chart.

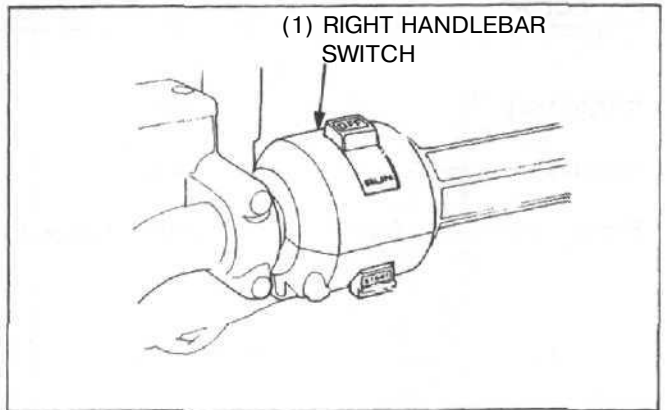
Dimmer Switch

	Hi	HL	Lo
Hi	○	○	
(N)	○	○	○
Lo		○	○
COLOR	Bu	Bu/W	W



Turn Signal Switch

	R	W	L
R	○	○	
N			
L		○	○
COLOR	Lb	Gr	0

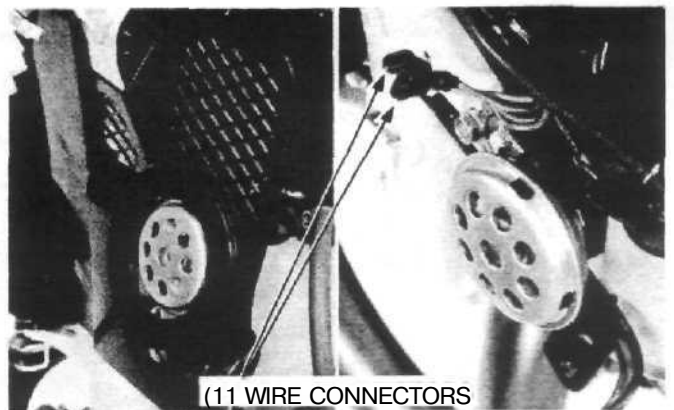


Horn Switch

	BAT3	Ho
FREE		
PUSH	○	○
COLOR	Bl	Lg

HORN

Disconnect the wire connectors from the horn and connect a 12V battery to the horn wire terminals. The horn is normal if it sounds when the 12 V battery is connected across the horn terminals.



IGNITION SWITCH

INSPECTION

Remove the fuel tank (page 4-3).
 Disconnect the ignition switch wire connector.

Check for continuity should exist between the terminals in each switch position. Continuity should register as shown:

	BAT1	BAT2	FAN
ON	O — 1 — O	O	O
OFF			
LOCK			
COLOR	R	R/BI	Bu/O

REMOVAL

Disconnect the ignition switch wire connectors.
 Remove the headlight (page 19-3) and instrument (page 19-4).

Remove the ignition switch cover.
 Drill the ignition switch stay special mounting bolts out with a sharp 4 mm (5/32 in) drill bit.

Remove the ignition switch stay.
 Remove the screws and ignition switch from the stay.
 Install a new ignition switch on the stay with the screws.

TORQUE: 7 N-m (0.7 kg-m, 5 ft-lb)

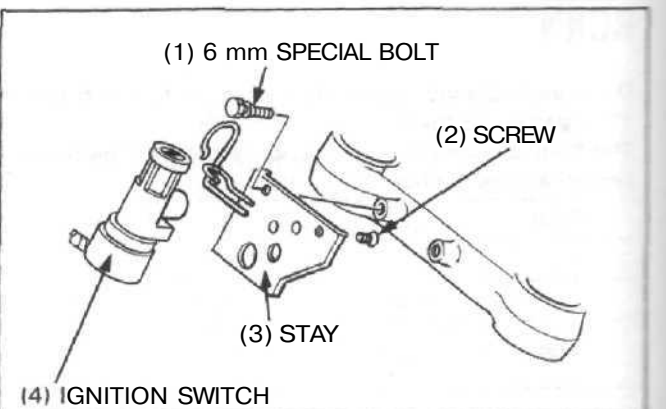
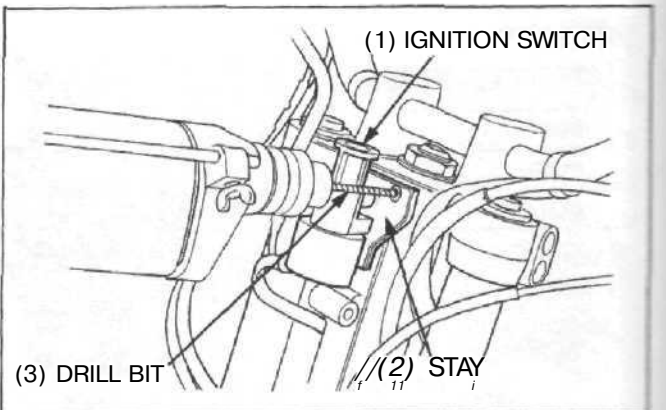
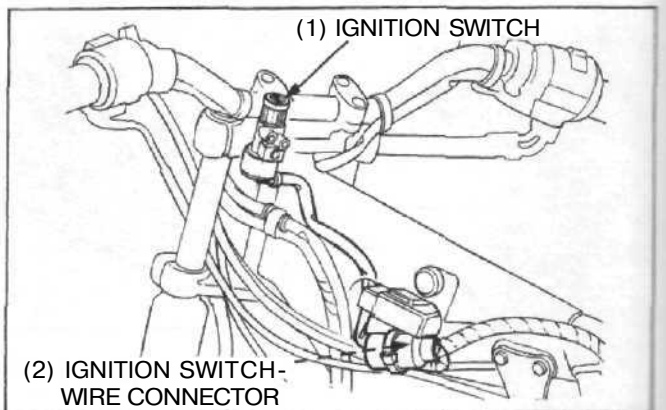
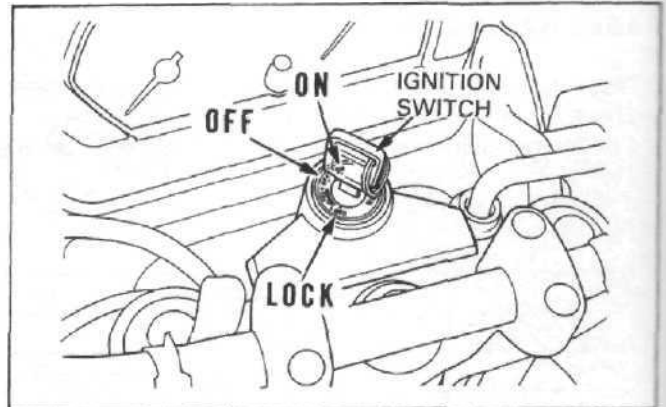
Clean the threads of the fork bridge thoroughly.

Install the ignition switch stay and tighten new 6 mm special bolts until the bolt heads break off.

NOTE

- The bolt heads are painted black.

Connect the ignition switch wire connectors.
 Install the removed parts.



THERMOSTATIC SWITCH

The cooling fan motor is actuated by the thermostatic switch located in the bottom of the radiator.

If the fan motor does not start, disconnect the 2P: Black connector from the switch.

Connect together Black/Blue and Green terminals of the 2P connector with a suitable jumper wire.

Turn the ignition switch ON. The cooling fan motor should start running. If it does not start, check for battery voltage from the Black/Blue lead of the fan motor connector and ground with ignition switch ON.

If there is no voltage, check for a blown fuse, loose terminals or connectors, or an open circuit.

If there is voltage, inspect the thermostatic switch as follows: Drain the coolant (page 5-4) and remove the thermostatic switch.

Connect one lead of an ohmmeter to the connector of the thermostatic switch and the other to the body.

Suspend the thermostatic switch in a pan of coolant (50—50 mixture) and check the temperatures at which the switch opens and closes.

Make sure that there is no continuity at room temperature and then gradually raise the coolant temperature. The switch should show continuity (close) at 93°—97°C (199°—207°F).

NOTE

- Keep the temperature for 3 minutes to confirm continuity. A sudden change of temperature will Cause an incorrect temperature reading between the thermometer and switch.
- Do not let the switch or thermometer touch the pan as it will give a false reading.
- Immerse the switch in coolant up to its threads.

Install the thermostatic switch.

TORQUE: 18 N*m (1.8 kg-m, 13ft-lb)

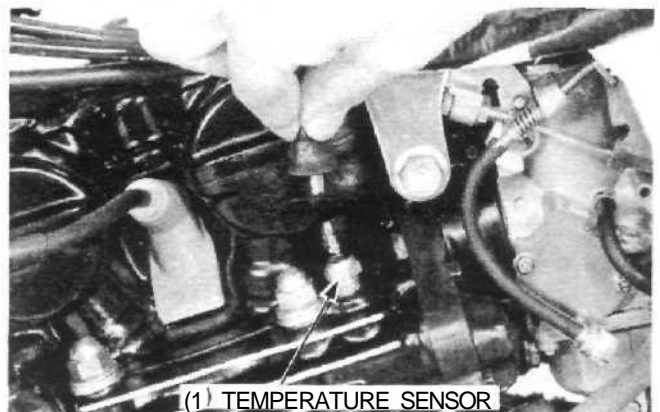
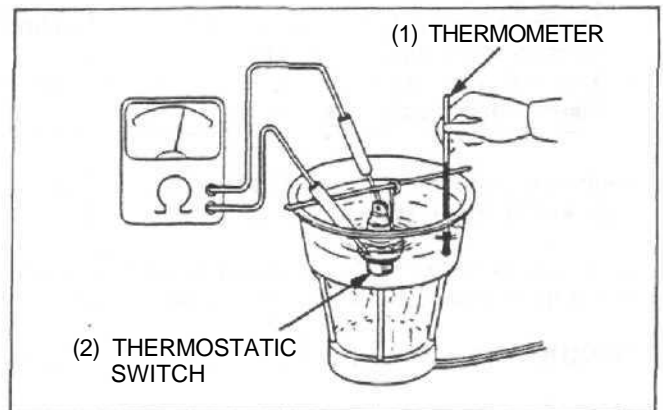
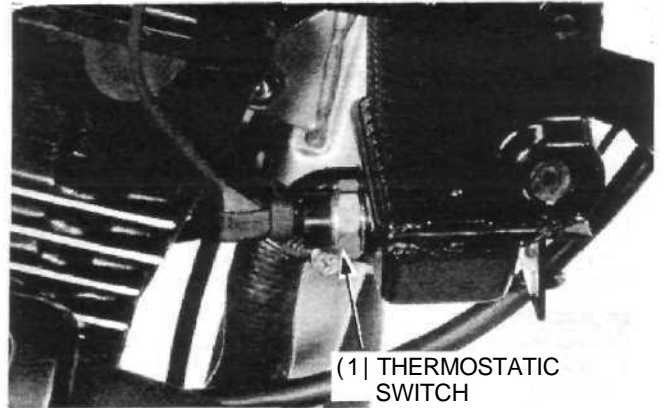
Fill the cooling system (page 5-4),

TEMPERATURE SENSOR

Disconnect the Green/Blue wire from the temperature sensor.

Check for continuity between the sensor body and ground. There should be continuity.

If there is no continuity, check the thermostat housing for looseness and recheck.



LIGHTS/METERS/SWITCHES

Drain the coolant (page 5-4) and remove the temperature sensor.

Suspend the temperature sensor in a pan of coolant over a heater and measure the resistance through the sensor as the coolant heats up.

Temperature	50°C (122°F)	100°C (212°F)
Resistance	130-180 Ω	25-30 Ω

AWARNING

- *Wear gloves and eye protection.*

NOTE

- The coolant must be used as the heated liquid to check the function above 100°C (212°F)
- You will get false readings if either the sensor or thermometer touches the pan.

Replace the sensor if it is out of specifications by more than 10% at any temperature listed.

Apply sealant to the temperature sensor threads.
Install the temperature sensor to the cylinder head.

TORQUE: 10 N-m (1.0 kg-m, 7 ft-lb)

Connect the Green/Blue wire to the temperature sensor.
Fill the cooling system (page 5-4).

