19. LIGHTS/SWITCHES/INSTRUMENTS

SERVICE INFORMATION

GENERAL

- Some wires have different colored bands around them near the connector. These are connected to other wires which correspond to the band color.
- All plastic plugs 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 = Gray	O = Orange	W = White
Br = Brown	Lb = Light Blue	P = Pink	Y = Yellow

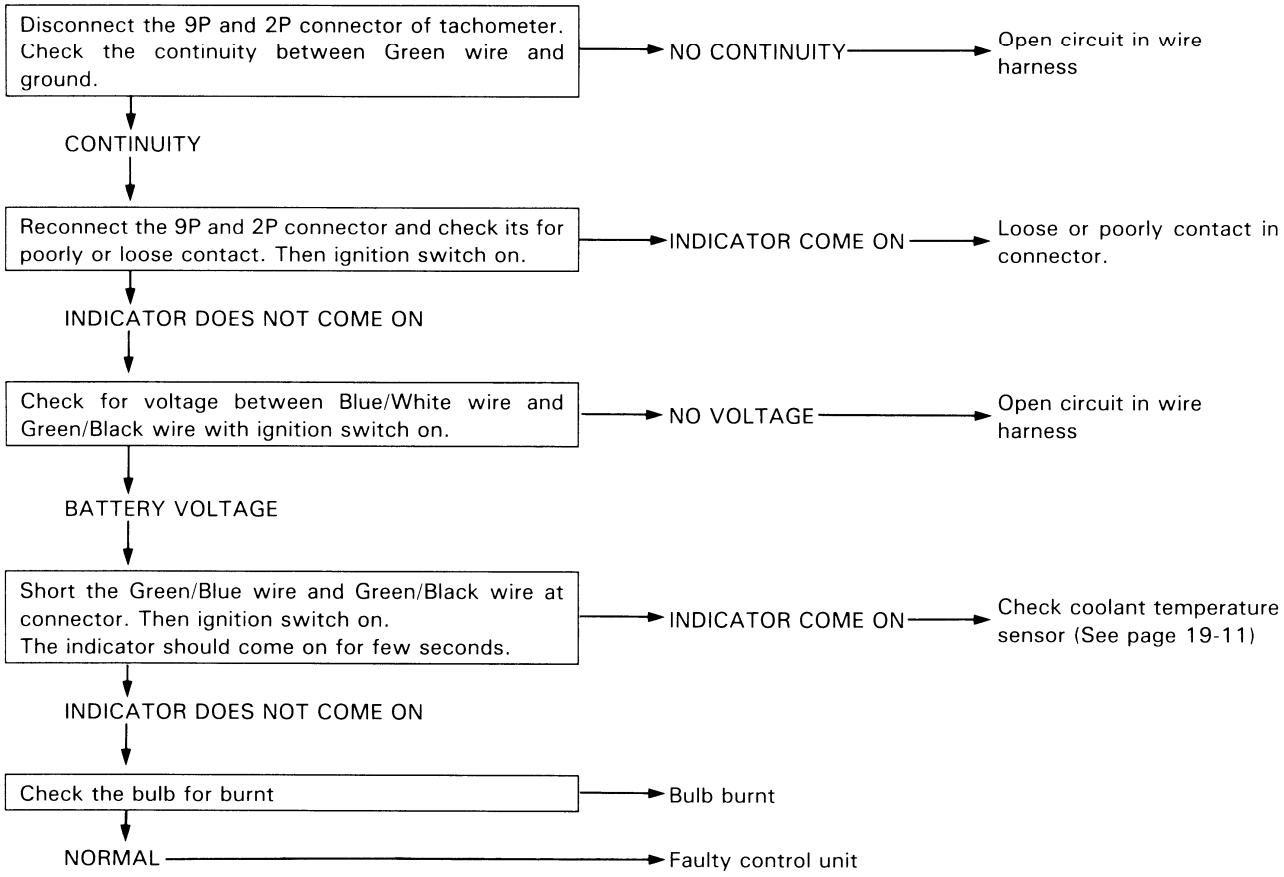
- To isolate an electrical failure, check the continuity of the electrical path through the part. A continuity check can usually be made without removing the part from the motorcycle. Simply disconnect the wires and connect a continuity tester or volt-ohmmeter to the terminals or connections.
- A continuity 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.

TROUBLESHOOTING

COOLANT TEMPERATURE WARNING INDICATOR SYSTEM

NOTE: The coolant temperature warning indicator should come on for few seconds then turn off when the ignition switch is turned on.

INDICATOR DOES NOT COME ON

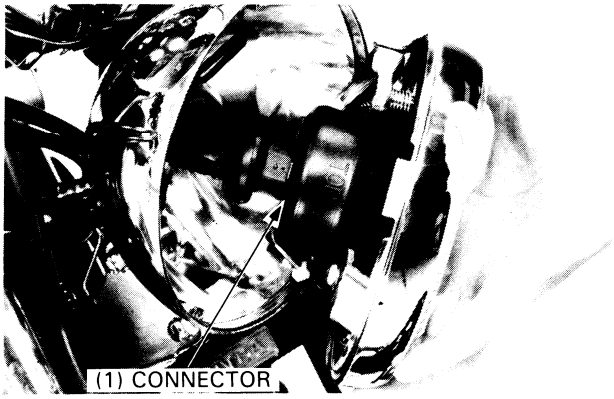


HEADLIGHT

REMOVAL

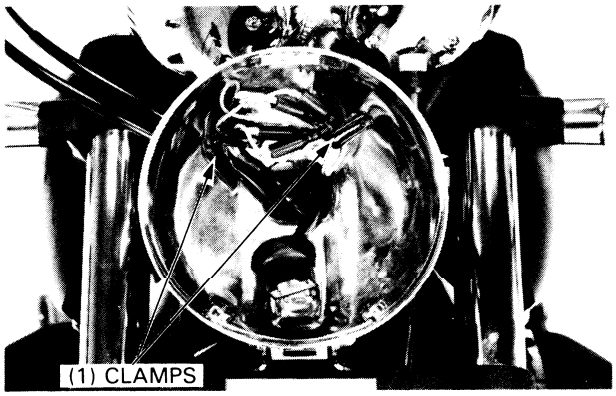
Remove the two headlight mounting screws.

Disconnect the wire connector and remove the headlight.



CASE REMOVAL/INSTALLATION

Remove the wire connectors from the clamps in the headlight case.



Remove the headlight case mounting nuts and headlight case.

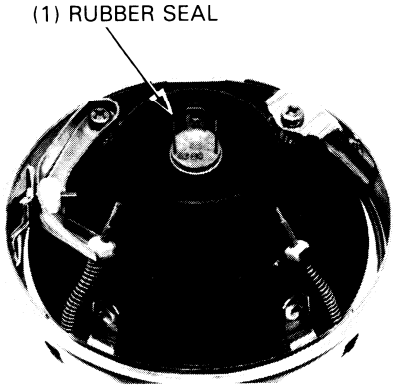
Install the headlight case in the reverse order of removal.

HEADLIGHT BULB REPLACEMENT

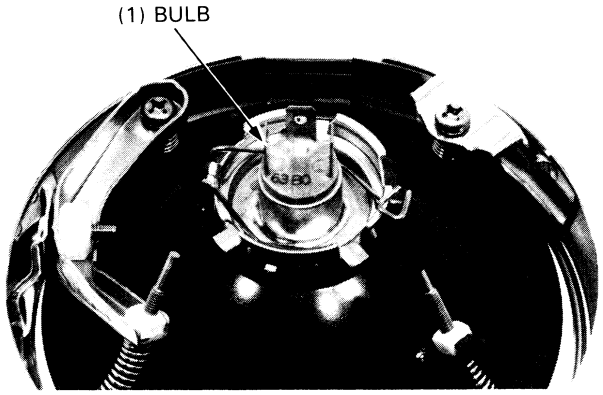
Remove the seal rubber.

CAUTION

- *Wear clean gloves when installing the halogen bulb. If you touch the bulb with your bare hands, clean it with a cloth moistened with alcohol to prevent its early failure.*



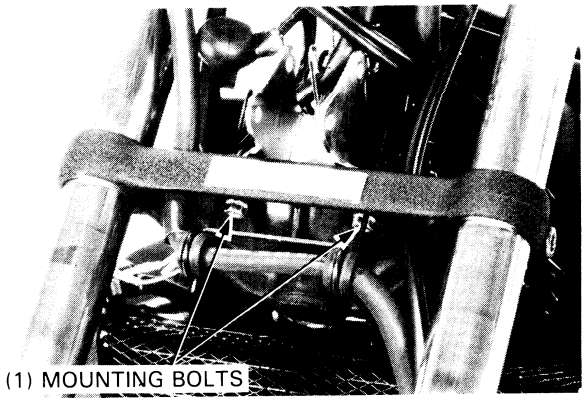
Remove the bulb set spring and replace the bulb.
Install the rubber seal.



BRACKET REMOVAL/INSTALLATION

Remove the front brake hose from the hose clamp.
Remove the two mounting bolts and headlight bracket.

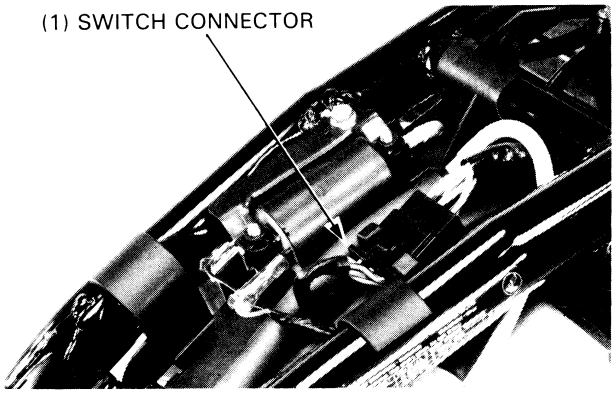
Install the headlight bracket in the reverse order of removal.



IGNITION SWITCH

INSPECTION

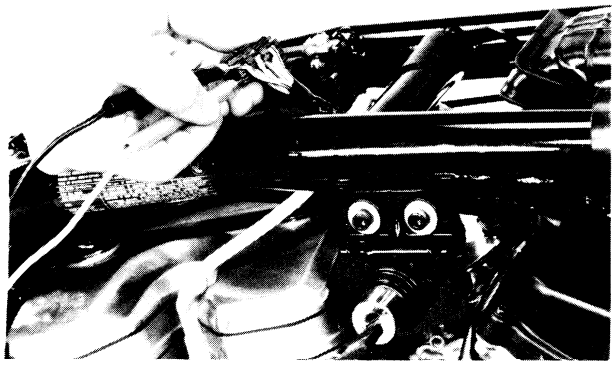
Remove the seat and fuel tank (page 4-17).
Disconnect the ignition switch connector.



Check for continuity with the switch in the ON and PACK positions.

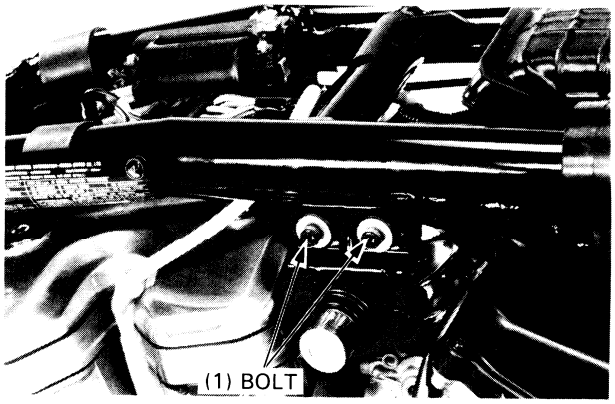
SWITCH POSITIONS:
ON: R/Bl to R to Bu/O, Br to Br/W-Continuity
PARK: R to Y/Bl-Continuity

Terminal / Position	IG	BAT	FAN	TL1	TL2	PA
OFF						
ON (●)	O	O	O	O	O	
PACK		O				O
Color code	R/Bl	R	Bu/O	Br	Br/W	Y/Bl



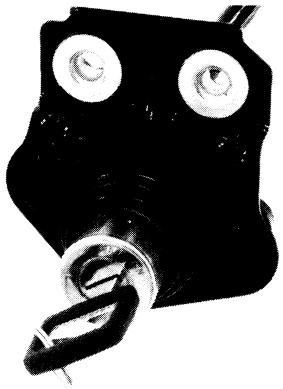
REMOVAL/INSTALLATION

Remove the seat and fuel tank.
Disconnect the ignition switch connector.
Remove the ignition switch mounting bolts and ignition switch.
Install the ignition switch in the reverse order of removal.



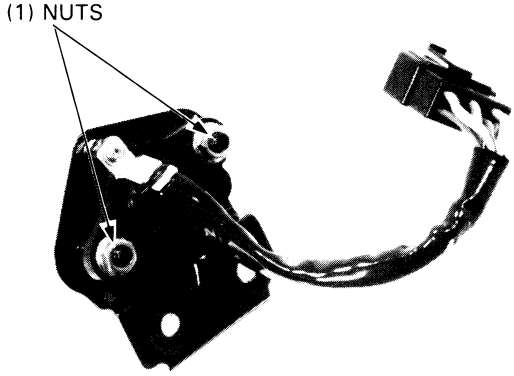
DISASSEMBLY/ASSEMBLY

Insert the ignition key and turn it between the ON and OFF detent positions.



Remove the cover mounting nuts and cover, then remove the three screws and pull the contact base from the switch.

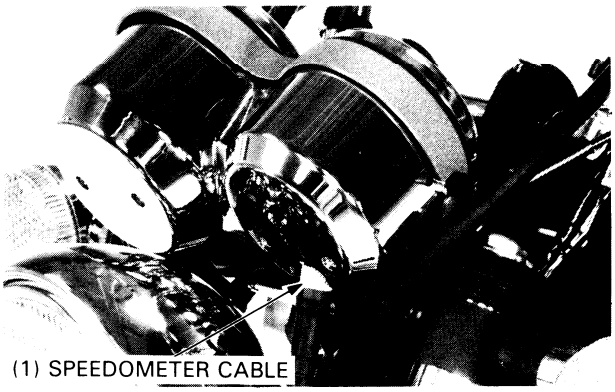
Assemble the ignition switch in the reverse order of disassembly.



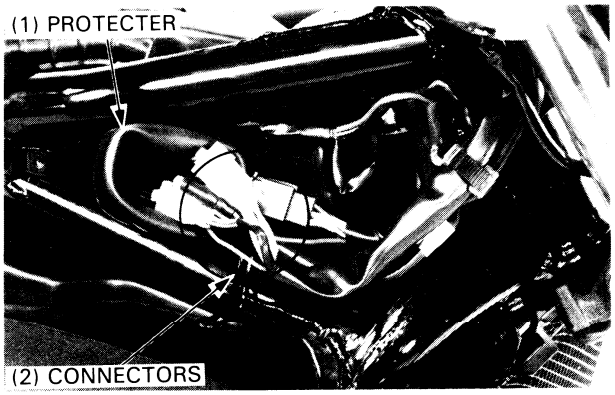
INSTRUMENTS

REMOVAL

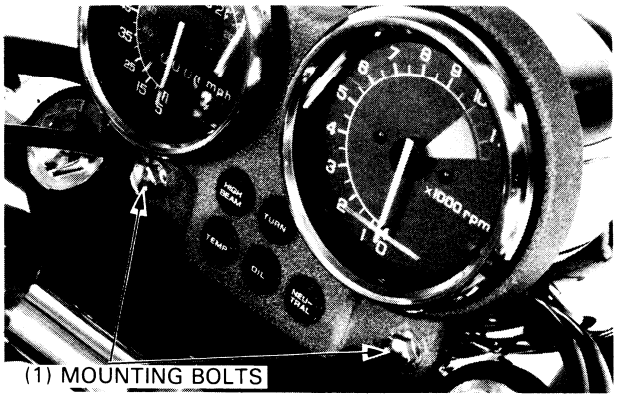
Disconnect the speedometer cable.



Remove the seat and fuel tank (page 4-17).
Remove the right frame cover.
Remove the wire band, and disconnect the meter wire connectors in the rubber protecter.



Remove the instrument mounting bolts and instrument.

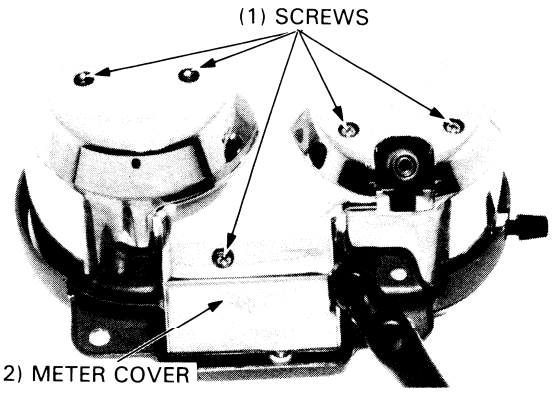


DISASSEMBLY

Remove the five screws and meter cover.

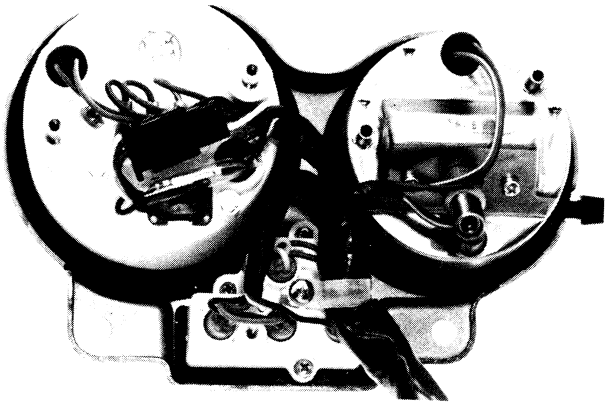
CAUTION

- *Do not leave the instruments upside down or damping fluid will leak onto the inside of the lens.*



Replace the bulbs if necessary.

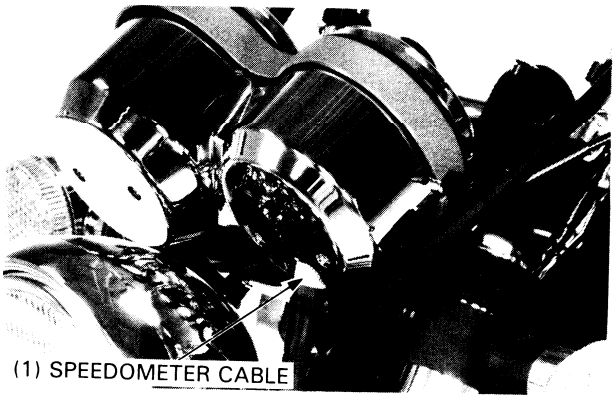
If a replacement bulb does not light, check the wiring for a short or open circuit, or check for loose connections.



ASSEMBLY/INSTALLATION

Lubricate the speedometer cable with light oil before reconnecting.

Assemble and install the instruments in the reverse order of disassembly and removal.



OIL PRESSURE SWITCH

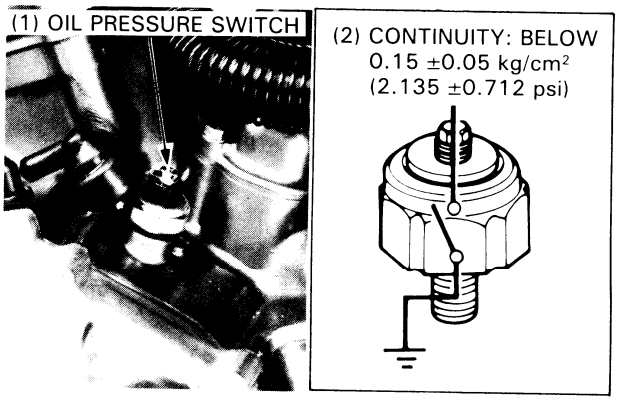
Disconnect the oil pressure switch wire from the switch by removing the terminal screw. Turn the ignition switch ON.

Ground the oil pressure switch wire to the engine. The oil pressure warning light should come on. If the light does not come on, check the wires for a loose connection or an open circuit. Check also for a burnt out bulb, and replace or repair if necessary.

If the oil pressure and warning systems are normal and the warning light comes on, replace the oil pressure switch with a new one.

Apply a sealing agent to the new switch threads when replacing the switch.

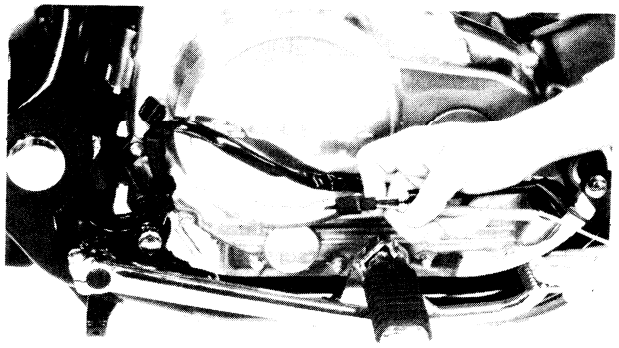
TORQUE: 10—14 N·m (1.0—1.4 kg-m, 7—10 ft-lb)



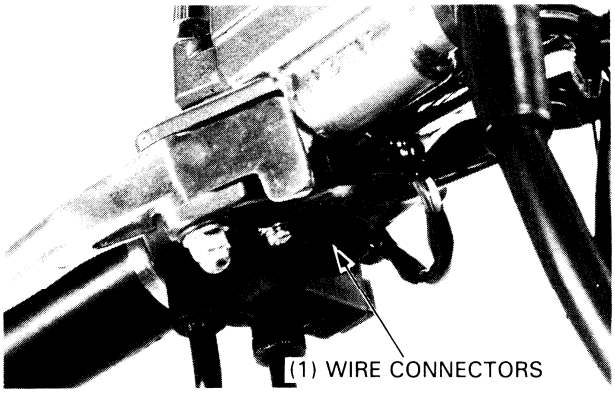
BRAKE LIGHT SWITCH

Remove the right side cover and disconnect the brake light switch connector.

Check the rear brake light switch for continuity with the rear brake applied.
Replace the switches if necessary.

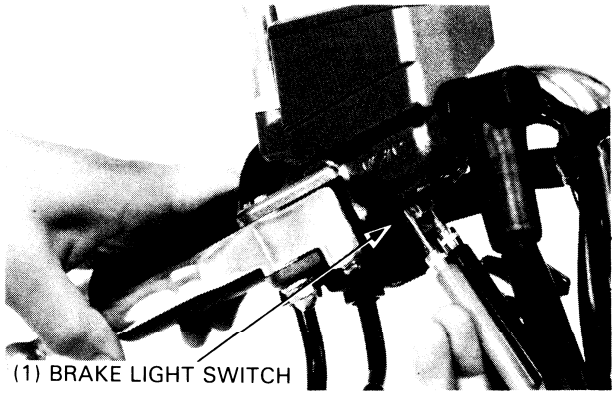


Disconnect the wire connectors from the front brake light switch.



Check the front brake light switch for continuity with the front brake applied.

Replace the switches if necessary.

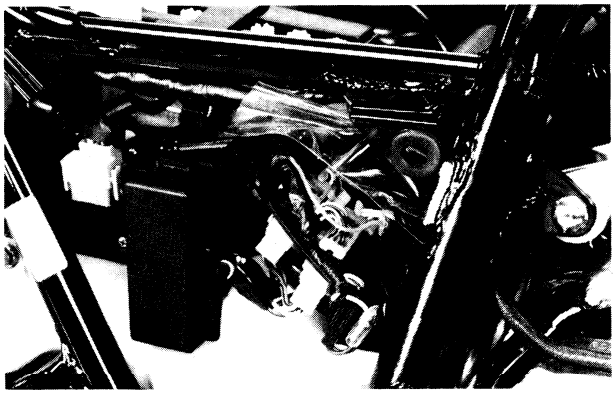


NEUTRAL SWITCHES

Remove the right side cover and disconnect the neutral switch connector.

Check the switch for continuity between the connector terminal and ground with the transmission in neutral.
There should be continuity.
There should be no continuity with the transmission in any gear.

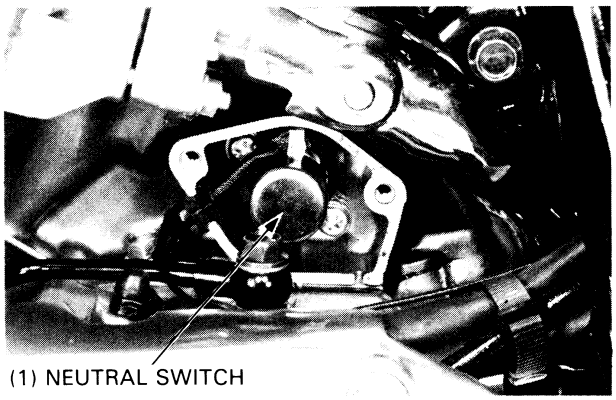
Color code / Position	Lg/R
1st	
N	○
2nd	
3rd	
4th	
5th	
OD	



REMOVAL/INSTALLATION

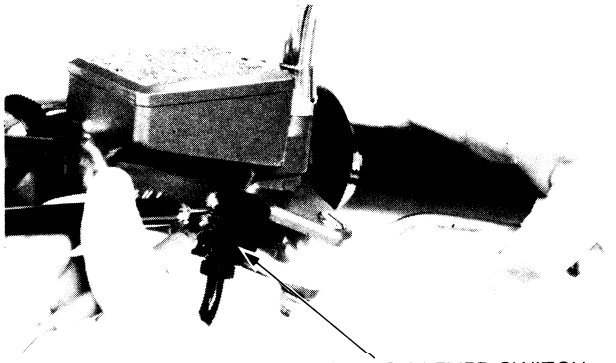
Remove the rear cover.
Remove the switch cover mounting bolts and cover, then remove the switch mounting screws and neutral switch.
Align the shift drum shaft groove with the neutral switch and insert the neutral switch in the crankcase.
Install the neutral switch in the reverse order of removal.

TORQUE: 10—14 N·m (1.0—1.4 kg-m, 7—10 ft-lb)



CLUTCH SWITCH

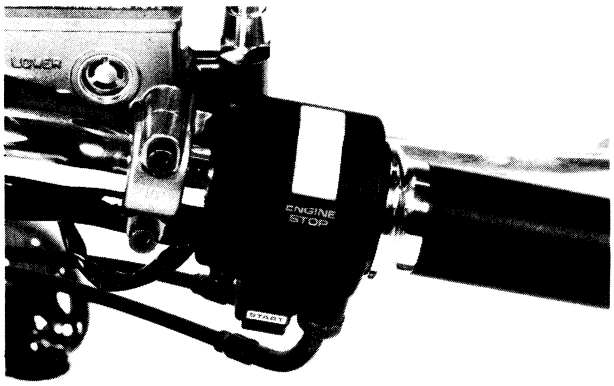
Check continuity of the clutch lever (safety) switch with the clutch released and applied. Replace if necessary.



(1) CLUTCH LEVER SWITCH

HANDLEBAR SWITCHES

The handlebar cluster switches (lights, turn signals, horn, etc.) must be replaced as assemblies.
Remove the headlight and switch coupler cover.
Continuity tests for the components of the handlebar cluster switches follow:
Continuity should exist between the color coded wires in each chart.



STARTER BUTTON

Bl to Y/R with button pushed in.
Bl/R to B/W with button out.

Starter Button

	BAT 3	HL	BAT 2	ST
FREE	O	O		
PUSH			O	O
Color code	Bl/R	Bu/W	Bl	Y/R

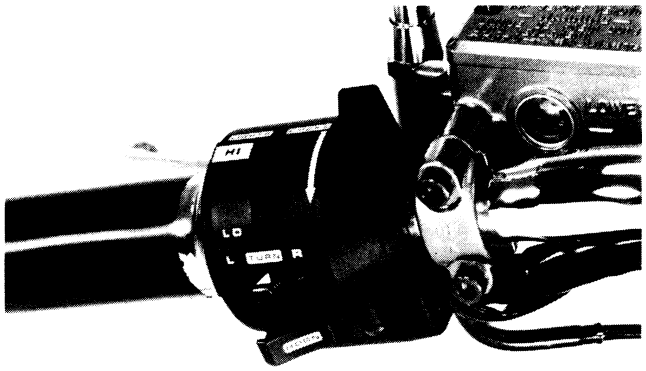
ENGINE STOP SWITCH

RUN: Bl to Bl/W
OFF: No continuity

Engine Stop Switch

	BAT 1	IG
OFF		
RUN	O	O
OFF		
Color code	Bl	Bl/W

DIMMER SWITCH



HI: **Bu/W to Bu**
MIDDLE (N): **Bu/W to Bu and W**
LO: **Bu/W to W**

Dimmer Switch

	HL	LO	HI
LO	O	O	
(N)	O	O	O
HI	O		O
Color code	Bu/W	W	Bu

TURN SIGNAL SWITCH

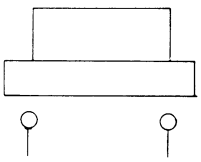
LEFT: **Gr to O, Br/W to O/W.**
OFF: **Br/W to O/W to Lb/W.**
RIGHT: **Gr to Lb, Br/W to O/W to Lb/W.**

	W	R	L	P	PR	PL
RIGHT	O	O		O		O
OFF				O	O	O
LEFT	O		O	O	O	
Color code	Gr	O	Lb	Br/W	O/W	Lb/W

HORN SWITCH

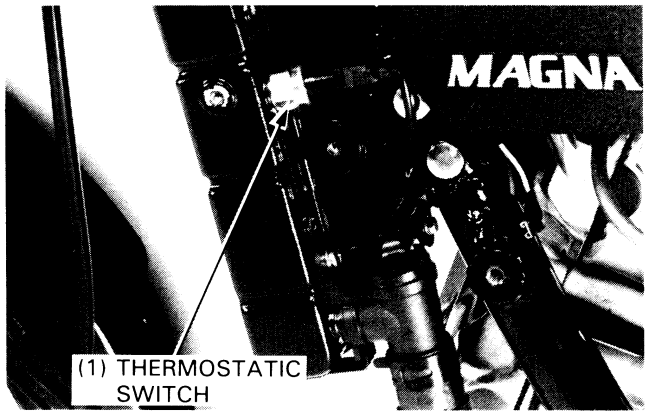
Lg to W/G with button depressed.
No continuity with button released.

Horn Button

	Ho	BAT 4
		
Color code	Lg	W/G

THERMOSTATIC SWITCH

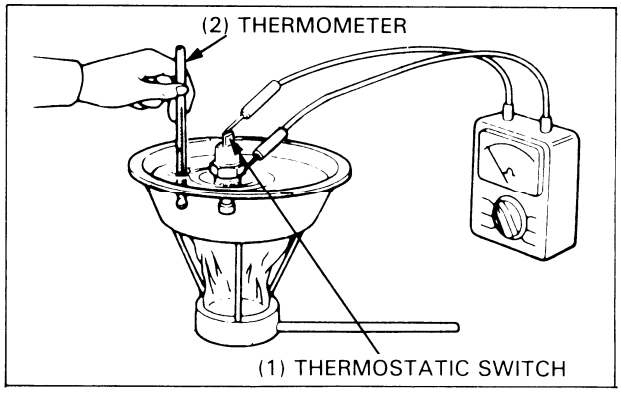
The cooling fan motor is actuated by the thermostatic switch located in the radiator.
If the fan motor does not start, disconnect the switch connector from the thermostatic switch and short coupler terminals together with a jumper wire as shown.
Turn the ignition switch on.
The cooling fan motor should start running.
If it does not run, check for battery voltage from the black lead (positive) to black/blue (negative) of the fan motor connector.
If there is no voltage, check for a blown on faulty fuse, loose terminals or connectors, or an open circuit.
If it runs, inspect the fan thermostatic switch as follows:



Suspend the 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 switch continuity with room temperature and gradually raise the coolant temperature. The switch should show continuity (close) at 98—110°C (208—215°F).

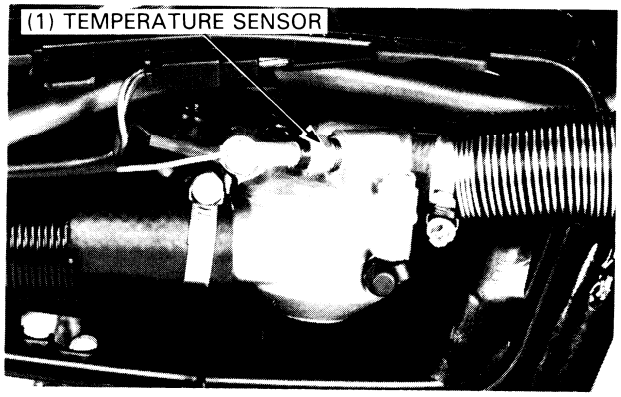
NOTE

- Keep temperature constant for 3 minutes before testing continuity. A sudden change of temperature will cause an error in the temperature reading between the thermometer and the switch.
- Do not let the thermometer or switch touch the pan as it will cause a false reading.
- Soak the switch in coolant up to its threads.



TEMPERATURE SENSOR

Disconnect the green/blue wire from the temperature sensor. Drain the coolant and remove the temperature sensor from the thermostat case.

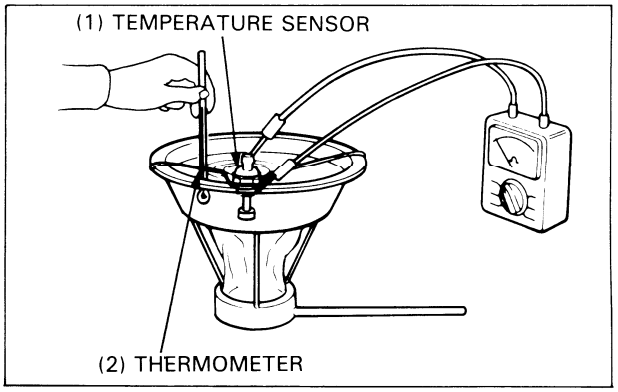


Suspend the unit in oil with a thermometer over a heater and measure the resistance through the unit as the oil heats up.

Temperature	50°C	80°C	100°C	120°C
	122°F	176°F	212°F	248°F
Resistance	154Ω ± 20%	52Ω ± 20%	27Ω ± 20%	16Ω ± 20%

WARNING

- ***Wear gloves and eye protection.***
- ***Heated oil is highly flammable. Keep it away from open flames.***

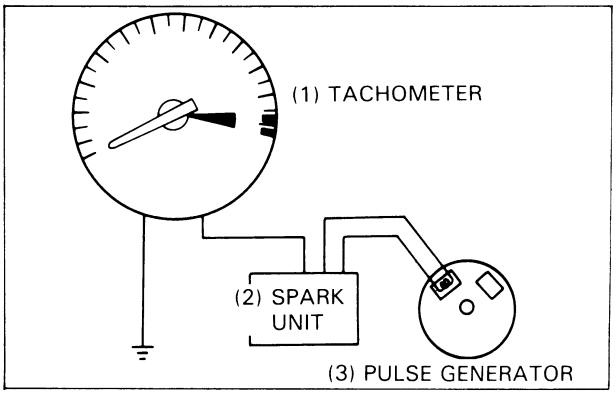


NOTE

- Oil must be used as the heated liquid to check operation above 100°C (212°F).
- You'll get false readings if either the thermometer or temperature unit touches the pan.

TACHOMETER

If the tachometer does not work properly, replace the 1-3 spark unit with a new one and recheck the operation.
If the problem still appears, reinstall the original spark unit and replace the tachometer.



TALL LIGHT BULB/LICENSE BULB REPLACEMENT

TALL LIGHT

Remove the license base mounting bolts, nuts, collar and license base from the rear fender.
Remove the rear cover mounting bolts and rear cover.
Remove the tall light lens mounting bolts and rear cover.
Remove the tall light lens mounting screws and the lens.
Replace the tall light bulbs.

LICENSE BULB

Remove the license base, then remove the license cover from the base.
Replace the bulb.

Install the tall light and license light assembly in the reverse order of removal.

NOTE

- Assemble the removed parts properly with care not to damage them