

19. SWITCHES

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SERVICE INFORMATION

GENERAL INFORMATIONS

- Some wires have different colored bands around them near the connector. These are connected to other wires which correspond with 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.

B = Blue LG = Light Green

Bk = Black O = Orange

Br = Brown P = Pink

G = Green R = Red

Gr = Grey W = White

LB = Light Blue 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 voltohmmeter 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, as when there is a specific coil resistance involved, or
 when checking for high resistance caused by corroded connections.

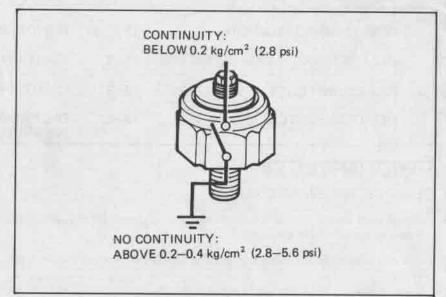


OIL PRESSURE WARNING SWITCH

Check for continuity while applying pressure to the switch.

Replace the switch if necessary.

Apply a liquid sealant to the switch threads.

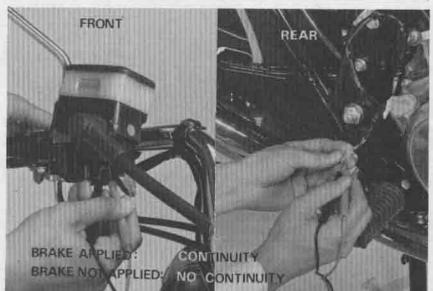


BRAKE SWITCHES

Check the rear brakelight switch for continuity with the rear brake applied,

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

Replace the switches if necessary.



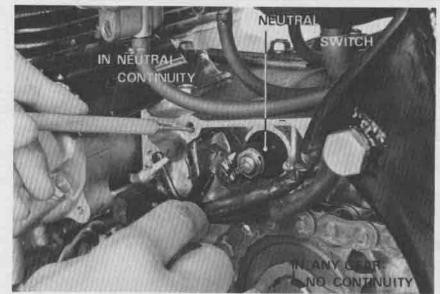
NEUTRAL SWITCH

Remove the foot pegs, gearshift pedal and left rear crankcase cover.

Check the switch for continuity between the switch terminal (wire removed) and ground with the transmission in neutral.

Check again with transmission in any gear.

Replace the neutral switch if necessary.



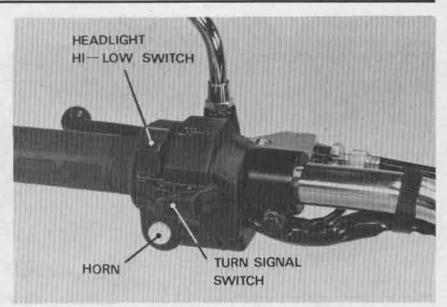


HANDLEBAR SWITCHES

The handlebar cluster switches (lights, turn signals, horn, passing, dimmer start and stop) must be replaced as assemblies.

Continuity tests for the components of the handlebar cluster switches follow:

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



HEADLIGHT HI-LOW SWITCH

HI:

B/W to B

MIDDLE (N):

B/W to W to B

LO:

B/W to W

Headlight Hi-Low Switch

| | HL | Hi | Lo |
|------------|-----|----|----|
| Hi | 0 | 0 | |
| (N) | 0 | 0 | 0 |
| Lo | 0 | | 0 |
| Code color | B/W | В | W |

TURN SIGNAL SWITCH

LEFT: OFF: Gr to O, Br/W to LB/W Br/W to O/W to LB/W

RIGHT:

Gr to LB, Br/W to O/W

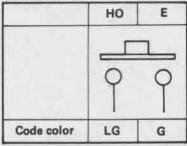
Turn Signal Switch

| | w | L | R | P | PL | PR |
|------------|------|----|----|------|-----|------|
| LEFT | 0 | -0 | | 0- | | -0 |
| OFF | | | | 0 | 0 | -0 |
| RIGHT | 0- | | 0 | 0- | -0 | |
| Code color | ' Gr | 0 | LB | Br/W | O/W | LB/W |

HORN BUTTON

LG to G with button depressed No continuity with button released

Horn Button



SWITCHES



STARTER BUTTON

Bk/R to B/W with botton released Bk to Y/R with button depressed

Starter Button

| | BAT ₅ | HL | BAT ₂ | ST |
|------------|------------------|-----|------------------|-----|
| FREE | 0 | -0 | | |
| START | | | 0- | -0 |
| Code color | Bk/R | B/W | Bk | Y/R |

ENGINE STOP SWITCH

RUN:

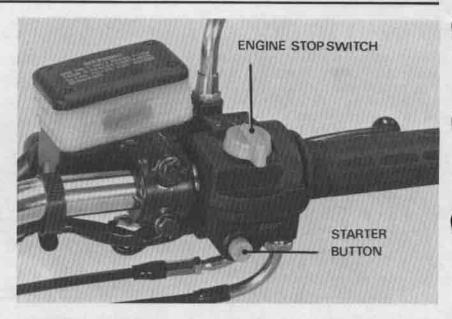
Bk to Bk/w

OFF:

No continuity

Engine Stop Switch

| | BAT ₂ | IG |
|------------|------------------|------|
| OFF | | |
| RUN | 0 | 0 |
| OFF | | |
| Code color | Bk | Bk/W |





IGNITION SWITCH

Remove the instrument cluster and disconnect the plug.

Remove the ignition switch.

NOTE

Identify the wire colors at the connector. There are no colors on the switch.

Check continuity of terminals on the ignition switch in each switch position.

SWITCH POSITION

LOCK:

No continuity

OFF:

No continuity BAT₁ to IG, TL₁ to TL₂

ON: PARK:

P to BAT

| Terminal Position | P | BAT | IG | TLi | TL ₂ |
|----------------------|---|-----|----|-----|-----------------|
| Р | 0 | 0 | | | |
| ON | | 0 | 9 | 0- | 0 |
| OFF | | | | | |
| LOCK | | | | | |

CLUTCH SWITCH

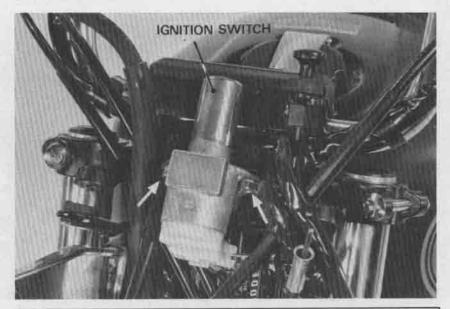
Check continuity of the clutch lever (safety) switch with the clutch released and applied. Replace if necessary.

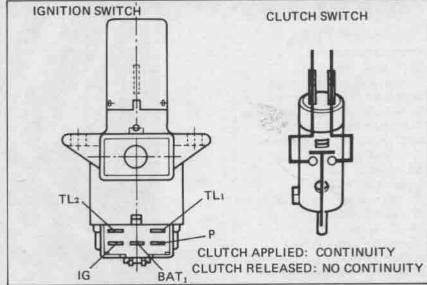
REMOVAL

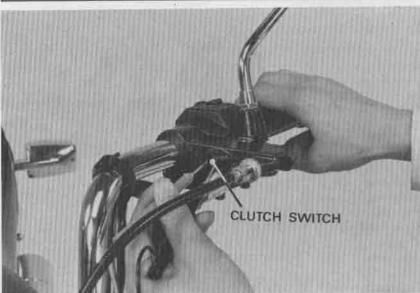
Unplug the wires. Remove the clutch lever and cable. Remove the switch.

NOTE

The switch case has a small protrusion that must point toward the handlebar when installed.









OIL PRESSURE/STOPLAMP WARNING LIGHT SYSTEM

SYSTEM TEST

Turn the ignition switch ON.

The OIL/STOPLAMP warning light should go on.

If it does not, follow the troubleshooting below to determine the cause.

TROUBLESHOOTING

- 1. Burnt out bulb
- 2. Open circuit (B/R)
- 3. Burnt out fuse
- 4. Faulty oil pressure switch

Start the engine.

Check that the OIL/STOPLAMP warning light should go off.

If it does not, follow the troubleshooting below to determine the cause.

TROUBLESHOOTING

Engine Oil System

- 1. Oil level low
- 2. Faulty oil pressure switch
- 3. Plugged oil pick-up screen
- 4. Pressure relief valve stuck open
- 5. Oil pump worn or faulty
- 6. Oil pump drive gear broken
- 7. Internal oil leakage

Brakelight

- 1. Burnt out bulb
- 2. Poor connector or socket contact
- 3. Open circuit

Wiring Harness

- 1. Poor connector contact
- 2. Open circuit
- 3. Short circuit (B/R to Ground)

Stoplamp Warning Unit

- 1. Internal open circuit (G/Y and G)
- 2. Internal short circuit (B/R and G)

STOPLAMP WARNING UNIT TEST

Remove the stoplamp warning unit.

Connect the unit Bk/Br wire to the positive terminal of a 12V battery.

Connect the G wire to the negative terminal, Connect a 12V-3.4W test lamp between the Bk/Br and B/R wire terminals.

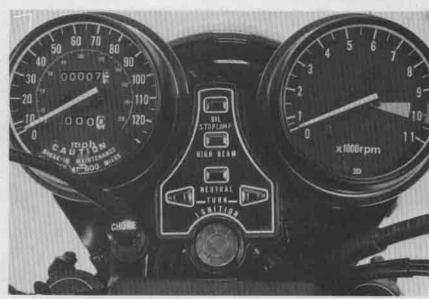
Jump the G/Y wire to the G wire. The test lamp should go off.

Disconnect the B/Y and G wire. The test lamp should go on.

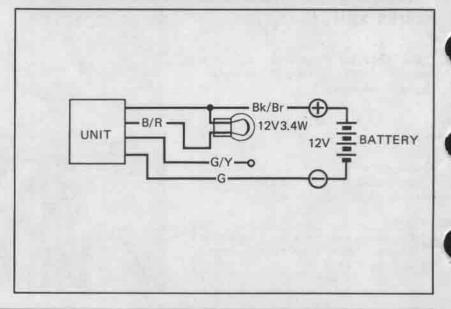
Reconnect the G/Y and G wire. The test lamp should stay on.

Disconnect Bk/Br wire from the battery and then reconnect it. The test lamp should go off

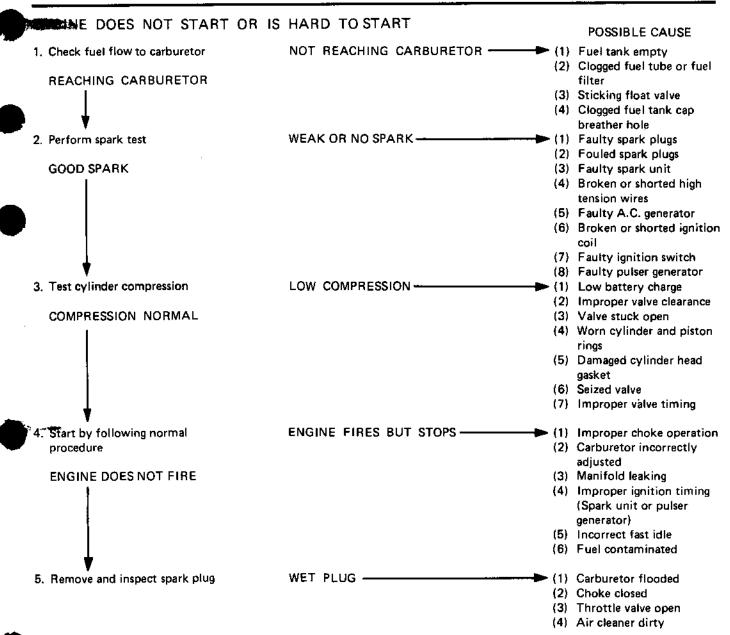
Replace the unit if it does not pass the above test.







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TROUBLESHOOTING



| | ENGINE LACKS POWER | | | DOCCUPI E CALICE |
|-----|--|------------------------------|-------------|--|
| | Raise wheels off ground and spin by hand | WHEELS DO NOT SPIN FREELY- | | POSSIBLE CAUSE) Brake dragging) Worn or damaged wheel |
| | WHEEL SPINS FREELY | | | bearing) Wheel bearing needs |
| | • | | (4 | lubrication Drive chain too tight |
| | 2. Check tire pressure | PRESSURE LOW | | |
| | PRESSURE NORMAL | | (2) | Faulty tire valve |
| | 3. Accelerate rapidly from low to second | ENGINE SPEED CHANGED | | Clutch slipping |
| | ENGINE SPEED LOWERED WHEN CLUTCH IS RELEASED | WHEN CLUTCH IS RELEASED | | Worn clutch disc/plate Warped clutch disc/plate |
| 4 | 4. Accelerate lightly | ENGINE SPEED NOT INCREASED | | Carburetor choke closed |
| | ENGINE SPEED INCREASES | | (2) | Clogged air cleaner |
| | 1 | | | Restricted fuel flow Clogged fuel tank breather |
| | | | (5) | tube Clogged muffler |
| | Charle invision at the | | | |
| · | 5. Check ignition timing | INCORRECT | | Faulty spark unit Faulty pulser generator |
| | CORRECT | | (3) | Faulty ignition advancer |
| 6 | 6. Check valve clearance | INCORRECT — | | Improper valve adjustment |
| | CORRECT | | (2) | Worn valve seat |
| 7 | . Test cylinder compression | TOO LOW | - (a) | Mal as an of |
| | NORMAL | | (2) | Worn cylinder and piston |
| | | | (3) (4) | Leaking head gasket Improper valve timing |
| 8 | Check carburetor for clogging | CLOGGED — | | Carburator not carried |
| | NOT CLOGGED | | - (1) | frequently enough |
| 9 | Remove spark plug | FOULED OR DISCOLORED - | | Plugs not serviced frequently |
| | NOT FOULED OR DISCOLORED | | | enough |
| | 1 | | (2) | Spark plug with incorrect heat range |
| Ŧ | 0.Check oil level and condition | INCORRECT | | Oil level too high |
| | CORRECT | | (2) (3) | Oil level too low Contaminated oil |
| 11. | Remove cylinder head cover and | VALVE TRAIN NOT LUBRICATED - | | |
| | inspect lubrication | PROPERLY | (2) | Clogged oil control orifice |
| | VALVE TRAIN LUBRICATED PROPERLY | | | |
| 12. | Check for engine overheating | OVERHEATING - | (1) | Excessive carbon build-up |
| | NOT OVERHEATING | | | in combustion chamber Use of poor quality fuel Clutch slipping |
| 13. | Accelerate or run at high speed | ENGINE KNOCKS - | | Worn piston and cylinder |
| | ENGINE DOES NOT KNOCK | | (2) | Wrong type of fuel |
| | = === Kilook | | (3) | Excessive carbon build-up in combustion chamber |
| | | | (4) | Ignition timing too advanced (Faulty spark unit or advaner) |
| | | | | • |



POOR PERFORMANCE AT LOW AND IDLE SPEEDS POSSIBLE CAUSE 1. Check ignition timing and valve (1) Improper valve clearance (2) Improper ignition timing clearance (Faulty spark unit or CORRECT spark advancer) 2. Check carburetor low speed INCORRECT-See Fuel System. (1) Clogged passages Section (2) Float level incorrect circuits CORRECT (1) Deteriorated insulator. 3. Check for leaking manifold LEAKING -O-ring NO LEAK (2) Loose carburetor WEAK OR INTERMITTENT SPARK -→ (1) Faulty, carbon or wet 4. Perform spark test fouled spark plug (2) Faulty spark unit GOOD SPARK (3) A.C. generator faulty (4) Faulty ignition coil (5) Faulty spark advancer POOR PERFORMANCE AT HIGH SPEED INCORRECT - (1) Improper valve clearance 1. Check ignition timing and valve clearance (2) Faulty spark unit (3) Faulty pulser generator CORRECT (4) Faulty spark advancer FUEL FLOW RESTRICTED ----→ (1) Lack of fuel in tank 2. Disconnect fuel tube at carburetor (2) Clogged fuel line FUEL FLOWS FREELY (3) Clogged fuel tank breather hole (4) Clogged fuel valve 3. Remove carburetor and check for CLOGGED -🖚 (1) Clean clogged jet NO CLOG 4. Check valve timing INCORRECT -(1) Cam sprocket not installed properly CORRECT WEAK-→ (1) Faulty spring 5. Check valve spring tension NOT WEAKENED POOR HANDLING — Check tire pressure - (1) Steering adjustment nut 1. If steering is heavy too tight (2) Damaged steering head bearings (1) Excessive wheel bearing 2. If either wheel is wobbling play (2) Distorted rim (3) Improperly installed wheel hub (4) Swing arm pivot bushing excessively worn (5) Distorted frame (6) Improper drive chain tension or adjustment (1) Improperly adjusted shock 3. If the motorcycle pulls to one side absorber (2) Front and rear wheels not aligned (3) Bent front fork

(4) Bent swing arm