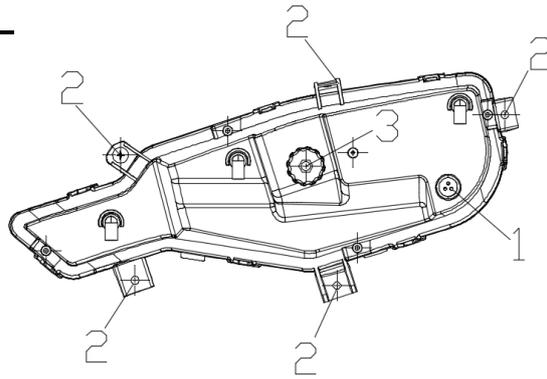


CHAPTER 8 ELECTRICAL

- 8.1 PARTS INSPECTION AND SERVICE
- 8.2 BATTERY
- 8.3 IGNITION SYSTEM
- 8.4 CHARGING SYSTEM
- 8.5 ELECTRICS STARTING SYSTEM
- 8.6 COOLING SYSTEM
- 8.7 LIGHTING SYSTEM
- 8.8 REVERSE LIMIT SYSTEM
- 8.9 GEAR POSITION INDICATOR SWITCH TEST
- 8.10 SPEEDOMETER SYSTEM
- 8.11 MAIN SWITCH AND HANDLE SWITCH
- 8.12 FUEL GAUGE/ FUEL LEVEL SENSOR
- 8.13 THE OPERATION PRINCIPLE OF THE ELECTRIC 4WD SHIFT
- 8.14 WIRING DIAGRAM

8.1 PARTS INSPECTION AND SERVICE**HEADLIGHT LAMP REPLACEMENT
ATV300-T3**

1. Use LED light sources. High beam: 12V 7.8w; Low beam: 12V 7.2w; Side Light: 12V 2.4w.
2. Unplug the lamp (1) from the harness.
3. Loosen the five fastening screws (2), remove the lamp and replace it with a new headlamp assembly.

**HEADLIGHT ADJUSTMENT**

1. The headlight beam can be adjusted vertically. High beam and low beam can only be adjusted simultaneously.
2. Place the vehicle on a level surface with the headlight approximately 25' (7.6m) from a wall.
3. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
4. Start the engine and turn the headlight switch to high beam.
5. Observe headlight aim. The most intense part of the headlight beam should be aimed 2' (51mm) below the mark placed on the wall in step 2. NOTE : Riding weight must be included on the seat.
6. Loosen (3) but not remove pivot bolt/ screw and adjust beam to desired position. The upper and lower adjustment range is $\pm 3^\circ$
7. Tighten nut and bolt / screw.

8.2 BATTERY

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing Antidote:

External: Flush with water.

Internal: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.

Eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN

WARNING: The gases given off by a battery are explosive. Any spark or open flame near a battery can cause an explosion which will spray battery acid on anyone close to it. If battery acid gets on anyone, wash the affected area with large quantities of cool water and seek immediate medical attention.

To ensure maximum service life and performance from a new battery, perform the following steps.

NOTE: Do not service the battery unless it will be put into regular service within 30 days. After initial service, add only distilled water to the battery. Never add electrolyte after a battery has been in service.

NOTE: New Battery must be fully charged before use.

1. Remove vent plug from vent fitting.
2. Fill battery with electrolyte to upper level marks on case.
3. Set battery aside and allow it to cool and stabilize for 30 minutes.
4. Add electrolyte to bring level back to upper level mark on case.

NOTE: This is the last time that electrolyte should be added. If the level becomes low after this point, add only distilled water.

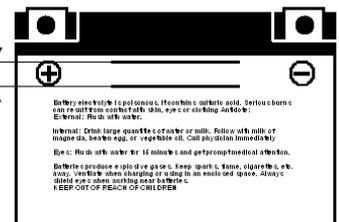
5. Charge battery at 1 /10 of its amp /hour rating. Examples: 1 /10 of 14 amp battery = 1.4 amp; 1/10 of 7 amp battery = 0.7 amp (recommended charging rates).
6. Check specific gravity of each cell with a hydrometer to assure each has a reading of 1.270 or higher.

BATTERY INSPECTION / REMOVAL

The battery is located under the left rear fender. Inspect the battery fluid level. When the battery fluid nears the lower level, the battery should be removed and distilled water should be added to the upper level line. To remove the battery:

1. Disconnect holder strap and remove cover.
2. Disconnect battery negative (-) (black) cable first, followed by the positive (+) (red) cable.

Maintain between upper
and lower level marks

**CAUTION**

Whenever removing or reinstalling the battery, disconnect the negative (black) cable first and reinstall the negative cable last!

3. Disconnect the vent hose.
4. Remove the battery.
5. Remove the filler caps and add *distilled water only* as needed to bring each cell to the proper

level.

Do not overfill the battery.

To refill use only distilled water. Tap water contains minerals which are harmful to a battery.

Do not allow cleaning solution or tap water to enter the battery. It will shorten the life of the battery.

5. Reinstall the battery caps.

BATTERY INSTALLATION

1. Clean battery cables and terminals with a stiff wire brush. Corrosion can be removed using a solution of one cup water and one tablespoon baking soda. Rinse with clean water and dry thoroughly.

2. Reinstall battery, attaching positive (+) (red) cable first and then the negative (-) (black) cable.

3. Install clear battery vent tube from vehicle to battery vent.

WARNING: Vent tube must be free from obstructions and kinks and securely installed. If not, battery gases could accumulate and cause an explosion. Vent should be routed away from frame and body to prevent contact with electrolyte. Avoid frame, corrosion will occur.

4. Route cables so they are tucked away in front and behind battery.

5. Reinstall battery cover and holder strap.

Do not start the engine with the battery disconnected. Vehicle lamps will burn out if battery is disconnected during vehicle operation. Also, the reverse speed limiter can be damaged.

BATTERY TESTING

Whenever a service complaint is related to either the starting or charging systems, the battery should be checked first.

Following are three tests which can easily be made on a battery to determine its condition: OCV Test, Specific Gravity Test and Load Test.

MF (Maintenance Free) battery does not require the Specific Gravity Test and Refill

Open Circuit Voltage Test

Battery voltage should be checked with a digital multimeter. Readings of 12.6 or less require further battery testing and charging.

NOTE: Lead acid batteries should be kept at or near a full charge as possible.

Load test

CAUTION: Remove spark plug high tension leads and connect securely to engine ground before proceeding.

NOTE: This test can only be performed on machines with electric starters. This test cannot be performed with an engine or starting system that is not working properly.

A battery may indicate a full charge condition in the OCV test and the specific gravity test, but still may not have the storage capacity necessary to properly function in the electrical system. For this reason, a battery capacity or load test should be conducted whenever poor battery performance is encountered. To perform this test, hook a multimeter to the battery in the same manner as was done in the OCV test. The reading should be 12.6 volts or greater. Engage the electric starter and view the registered battery voltage while cranking the engine. Continue the test for 15 seconds. During this cranking period, the observed voltage should not drop below 9.5 volts. If the beginning voltage is 12.6 or higher and the cranking voltage drops below 9.5 volts during the test, replace the battery.

8.3 IGNITION SYSTEM

IGNITION SYSTEM TROUBLESHOOTING**No Spark, Weak or Intermittent Spark**

- Spark plug gap incorrect
- Fouled spark plug
- Faulty spark plug cap or poor connection to high tension lead
- Related wiring loose, disconnected, shorted, or corroded
- Ignition switch faulty
- Terminal board or connections wet, corroded
- Poor ignition coil ground (e.g. coil mount loose or corroded)
- Faulty stator (measure resistance of all ignition related windings)
- Incorrect wiring (inspect color coding in connectors etc.)
- Faulty ignition coil winding (measure resistance of primary and secondary)
- Worn magneto (RH) end crankshaft bearings
- Sheared flywheel key
- Flywheel loose or damaged
- Trigger coil air gap too wide (where applicable) should be 0.030-0.050" (0.75-1.25 mm)
- Excessive crankshaft run out on magneto (RH) end should not exceed 0.005" (0.13mm)
- Faulty ECU model

CIRCUIT DIAGRAM

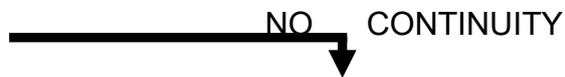
IF THE IGNITION SYSTEM FAILS TO OPERATE

Procedure

Check:

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Fuse (Main) 2. Battery 3. Spark plug 4. Ignition spark gap 5. Spark plug cap resistance 6. Ignition coil | <ol style="list-style-type: none"> 7. Pickup coil resistance 8. Main switch 9. Wiring connection
(entire ignition system) |
|--|--|

1. Fuse



Check switches

Replace the fuse.



2. Battery

- Check the battery condition.

Refer to "BATTERY INSPECTION"



- Clean battery terminals.
- Recharge or replace the battery.



Standard spark plug: DR8EA / NGK

3. Spark plug

- Check the spark plug condition.
- Check the spark plug type.
- Check the spark plug gap.



Repair or replace the spark plug



Spark plug gap: 0.6 ~ 0.7mm



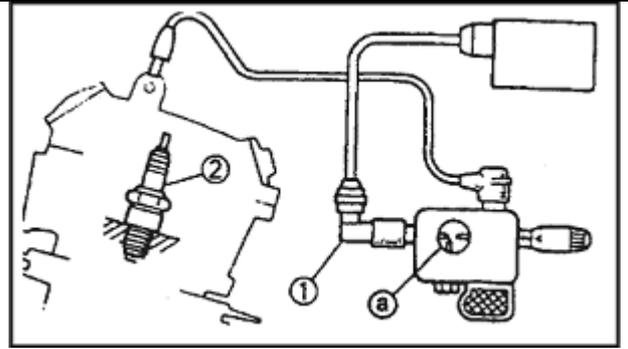
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*



4. Ignition spark gap

- Disconnect the spark plug cap from the spark plug
- Connect the ignition tester 1 as shown.
- 2 Spark plug
- Turn the main switch to "ON".
- Check the ignition spark gap .
- Check the spark by pushing the starter switch, and increase the spark gap until a misfire occurs.



MEETS SPECIFICATION

The ignition system is not faulty.



**Minimum spark gap:
6mm (0.24 in)**

OUT OF SPECIFICATION
OR
NO SPARK

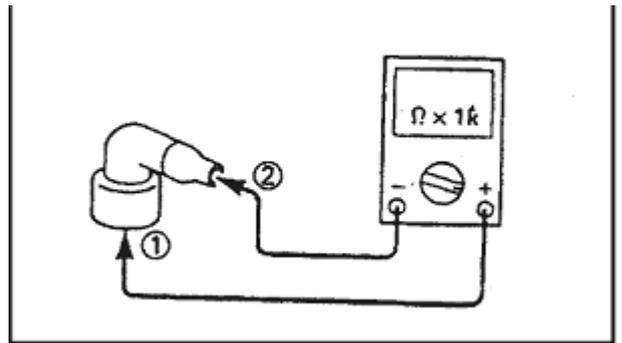
5. Spark plug cap resistance

- Remove the spark plug cap.
- Connect the pocket tester ($\Omega \times 1 \text{ k}$) to the spark plug cap.

NOTE:

- When removing the spark plug cap, do not pull the spark plug cap from high tension cord.
- Remove → Turning counterclockwise
- Connect → Turning clockwise.
- Check the high tension cord when connecting the spark plug cap.
- When connecting the spark plug cap, cut the high tension cord about 5mm.

Tester (+) lead →
Spark plug side ①
Tester (-) lead →
High tension cord side ②



OUT OF SPECIFICATION

Replace the spark plug wire



**Spark plug wire
resistance:
5K Ω (20 °C)**



CORRECT

*

*

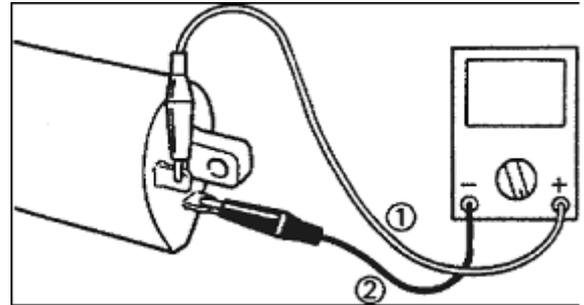


6. Ignition coil resistance

Disconnect the ignition coil connector from the wire harness.

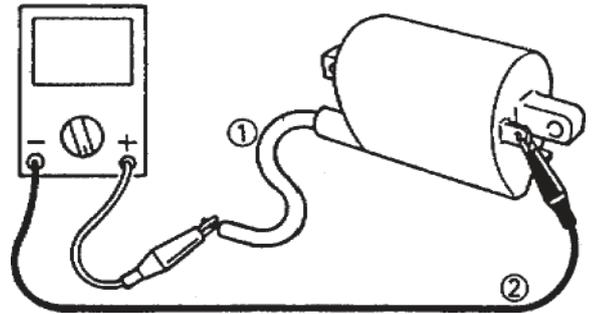
- Connect the pocket tester (1) to the ignition coil.
- Check if the primary coil has the specified resistance.

Tester (+) lead
Pink Terminal
Tester () lead B/Y
Terminal



Primary coil resistance:
3.6-4.8Ω(20 °C)

Tester (+) lead
Spark plug lead
Tester (—) lead
Pink Terminal



- Connect the pocket tester (Ω×1k) to the ignition coil.
- Check the secondary has the specified resistance



Secondary coil resistance:
10.7-14.5 KΩ (20°C)



BOTH MEET
SPECIFICATION

OUT OF SPECIFICATION



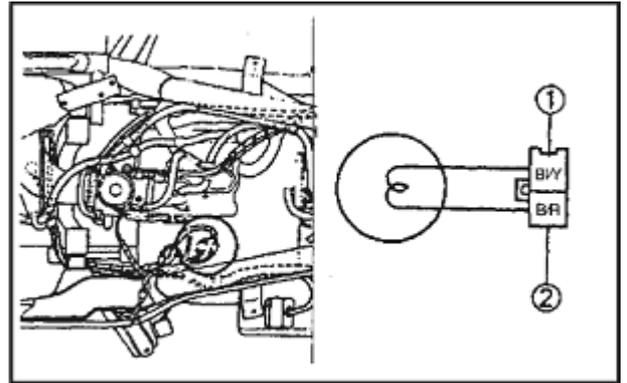
Replace the ignition coil.

*

*

7. Pickup coil ↓istance

- Disconnect the pickup coil coupler from the wire harness.
- Connect the pocket tester (Ω 100) to the pickup coil coupler.



Tester (+) lead →

B/Y Terminal ①

Tester (-) lead →

B/R Terminal ②

- Check the pickup coil has the specified resistance.



Primary coil resistance:
168 -252 Ω (20°C)

MEETS
SPECIFICATION

8. Main switch

CHECK SWITCHES

CONTINIUTY

OUT OF SPECIFICATION

Replace the pickup coil.

NO CONTINUITY

Replace the main switch

NO CONTINUITY

9. Wiring connection

- Check the connection of the entire ignition system
Refer to "CIRCUIT DIAGRAM".

CORRECT

Replace the igniter unit.

Correct

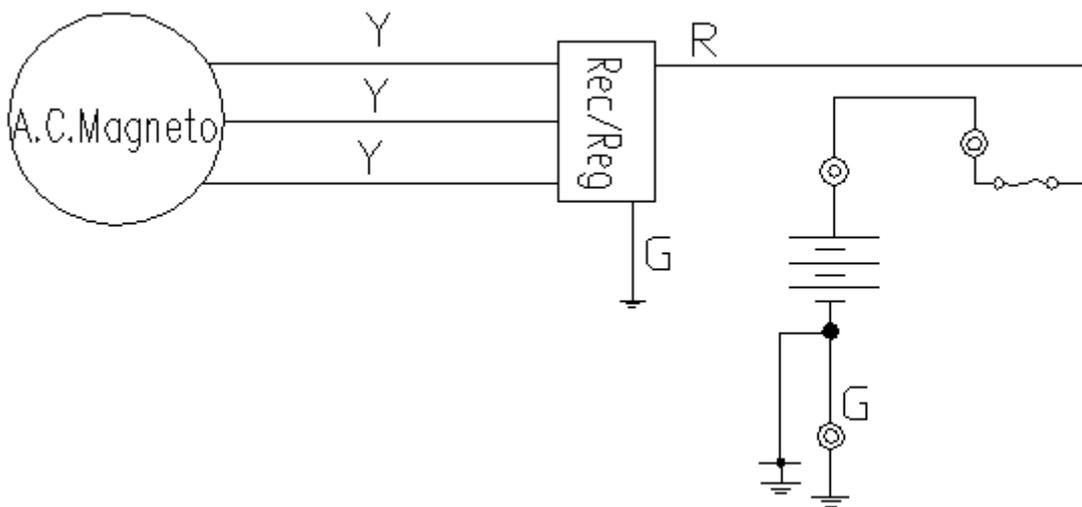


POOR CONNECTIONS



8.4 CHARGING SYSTEM

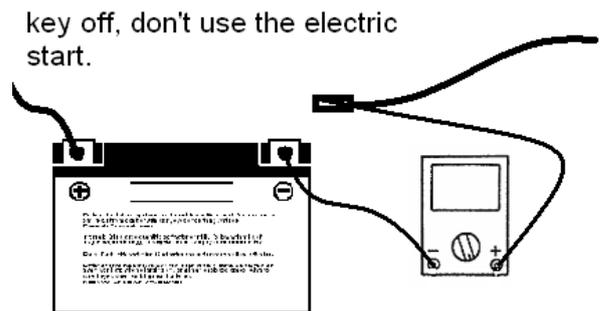
CHARGING SYSTEM CIRCUIT DIAGRAM



CURRENT DRAW - KEY OFF

CAUTION: Do not connect or disconnect the battery cable or ammeter with the engine running. Damage will occur to light bulbs and speed limiter. Connect an ammeter in series with the negative battery cable. Check for current draw with the key off, if the draw is excessive, loads should be disconnected from the system one by one until the draw is eliminated. Check component wiring as well as the component for partial shorts to ground to eliminate the draw.

<p>Current draw key off: Maximum of 0.01DCA(10mA)</p>
--



CHARGING SYSTEM

Procedure

Check:

- 1. Fuse (Main)
- 2. Battery
- 3. Charging voltage

- 4. Stator coil resistance
- 5. Wiring system (entire charging system)

1. fuse

2. Battery

Check the battery condition.
Refer to "BATTERY INSPECTION"

3. Charging voltage

Connect the engine tachometer to the spark plug lead.

● Connect the pocket tester (DC20V) to the battery

Test (+) lead→

Battery (+) terminal ①

Tester (-) lead→

Battery (-) terminal ②

Measure the battery terminal voltage.

start the engine and accelerate to about 5,000rpm

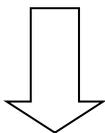
● check the terminal voltage

Measured voltage-terminal

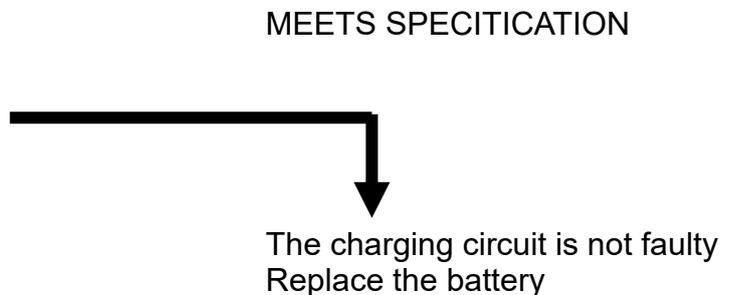
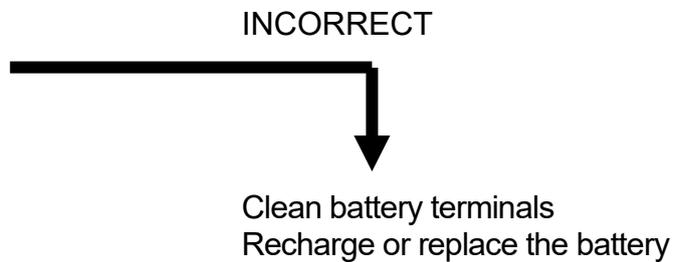
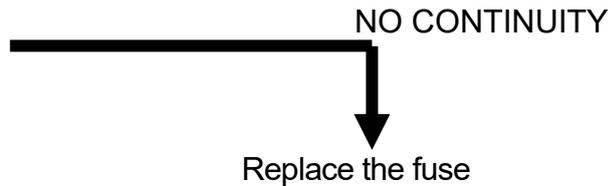
Voltage:

0.2-2.5V up

NOTE: Use a fully charged battery.



OUT OF SPECIFICATION



4. Starter coil resistance

Remove the A.C. magneto coupler from wire harness

Connect the pocket tester ($\Omega X1$) to the stator coil

Tester (+) lead –yellow terminal

Tester (-) lead –yellow terminal

Measure the stator coil resistance

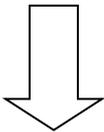
Stator coil resistance $0.5-0.8\Omega$ (20°C)

OUT OF SPECIFICATION



Replace the stator coil

MEETS SPECIFICATION



5. Wiring connection

check the entire charging system for connections

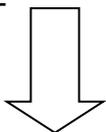
Refer to "CIRCUIT DIAGRAM"

POOR CONNECTION



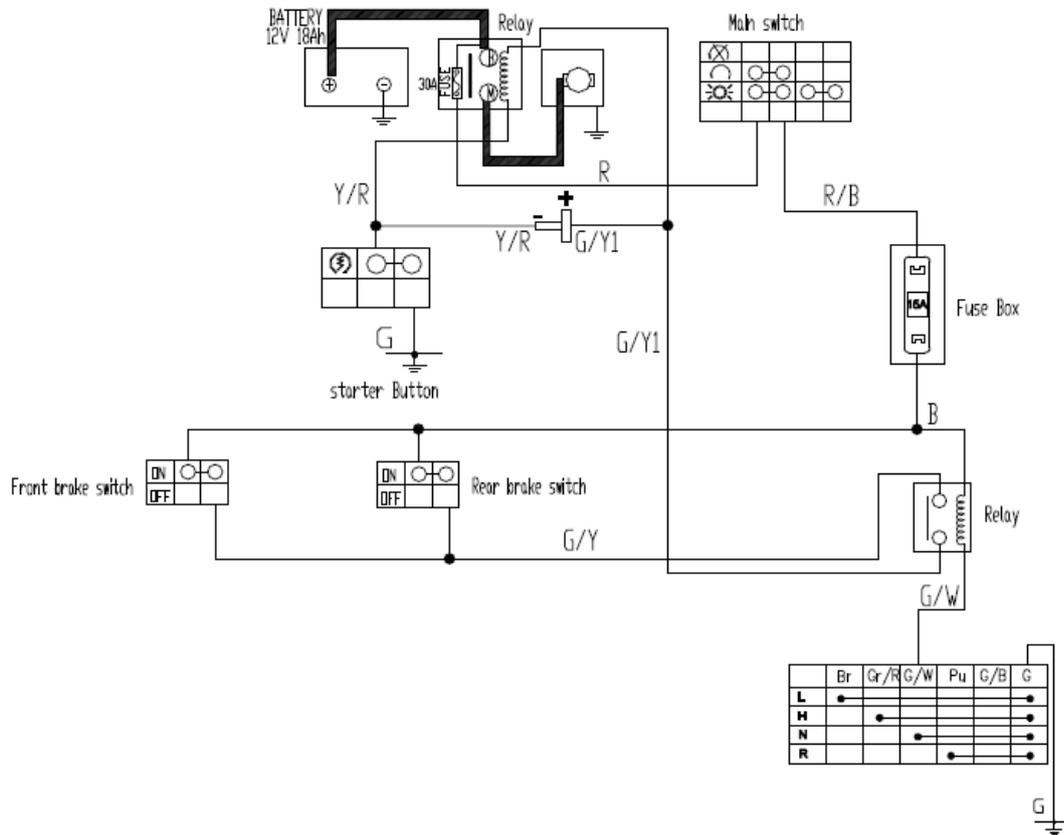
correct

CORRECT



Replace the rectifier/regulator

**8.5 ELECTRICS STARTING SYSTEM
DIAGRAM**



TROUBLESHOOTING

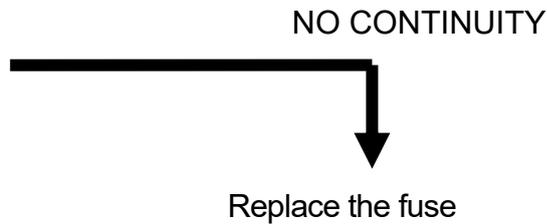
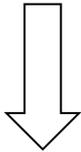
IF THE STARTER MOTOR FAILS TO OPERATE

Procedure

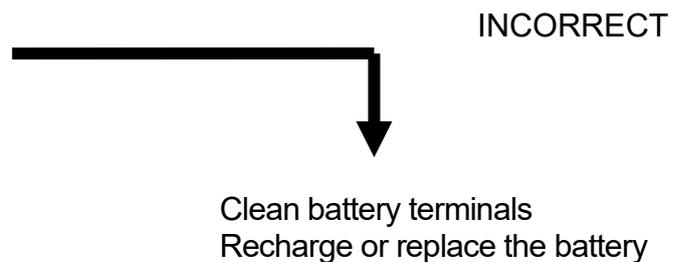
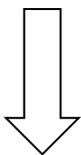
Check:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Fuse (Main) 2. Battery 3. starter motor 4. starter relay 5. starting circuit cut-off relay 6. main switch | <ol style="list-style-type: none"> 7. front/rear brake switch 8. starter switch 9. wiring connection (entire starting system) |
|---|--|

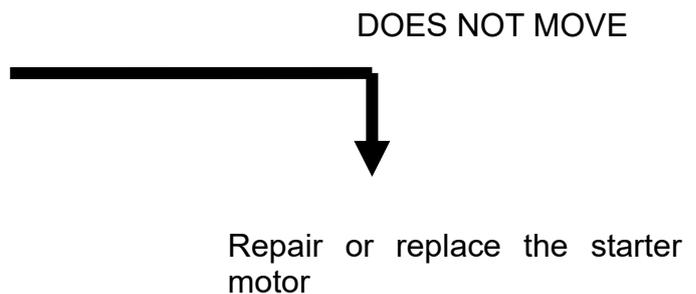
1. fuse
refer to "CHECKING SWITCHES" section



2. Battery
Check the battery condition.
Refer to "BATTERY INSPECTION" section in CHAPTER 3



3. Starter motor
Connect the battery positive terminal and starter motor cable using a jumper lead.
Check the starter motor operation



4. Starter relay

●Disconnect the relay unit coupler from the wire harness.

●Connect the pocket tester ($\Omega \times 1$) and battery (12V) to the relay unit coupler terminals.

Battery (+) lead →
Green/Yellow terminal ①

Battery (-) lead →
Yellow/Red terminal ②

●Check the starter relay for continuity.

Test (+) lead → ③ terminal

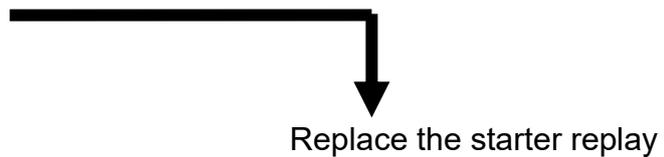
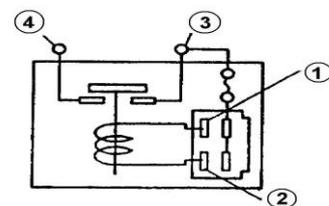
Test (-) lead → ④ terminal



WARNING

A wire used as a jumper lead must have the equivalent capacity as that of the battery lead or more, otherwise it may burn.

This check is likely to produce sparks, so be sure that no flammable gas or fluid is in the vicinity



5. Starting circuit cut-off relay

●Disconnect the starting circuit cut-off relay coupler from the wireharness.

●Connect the pocket tester ($\Omega \times 1$) and battery (12V) to the starting circuit cut-off relay coupler terminals.

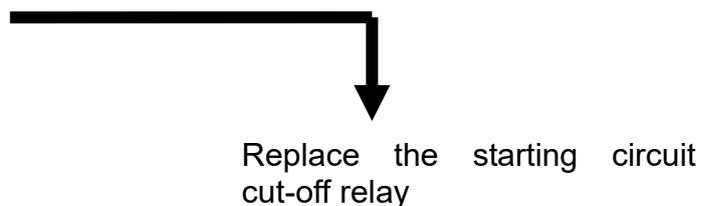
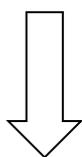
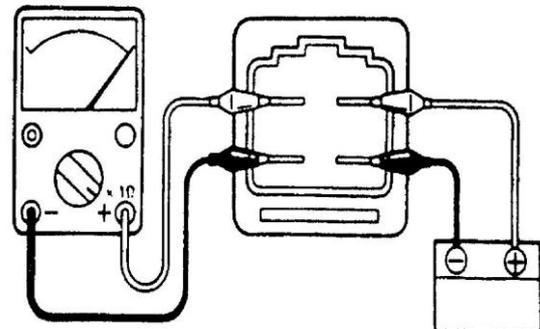
Battery (+) lead → terminal ②

Battery (-) lead → terminal ④

●Check the starting circuit cut-off relay for continuity.

Test (+) lead → ① terminal

Test (-) lead → ③ terminal



6. Main switch
CHECK SWITCHES



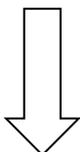
NO CONTINUITY



Replace the main switch

7. Front /rear brake switch

CHECKING SWITCHES



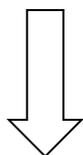
NO CONTINUITY



Replace the brake switch

8. Starter switch

CHECKING SWITCHES



NO CONTINUITY



Replace the handlebar switch

9. Wiring connection

Check the connections of the entire starting system.

Refer to "CIRCUIT DIAGRAM

POOR CONNECTION



Correct

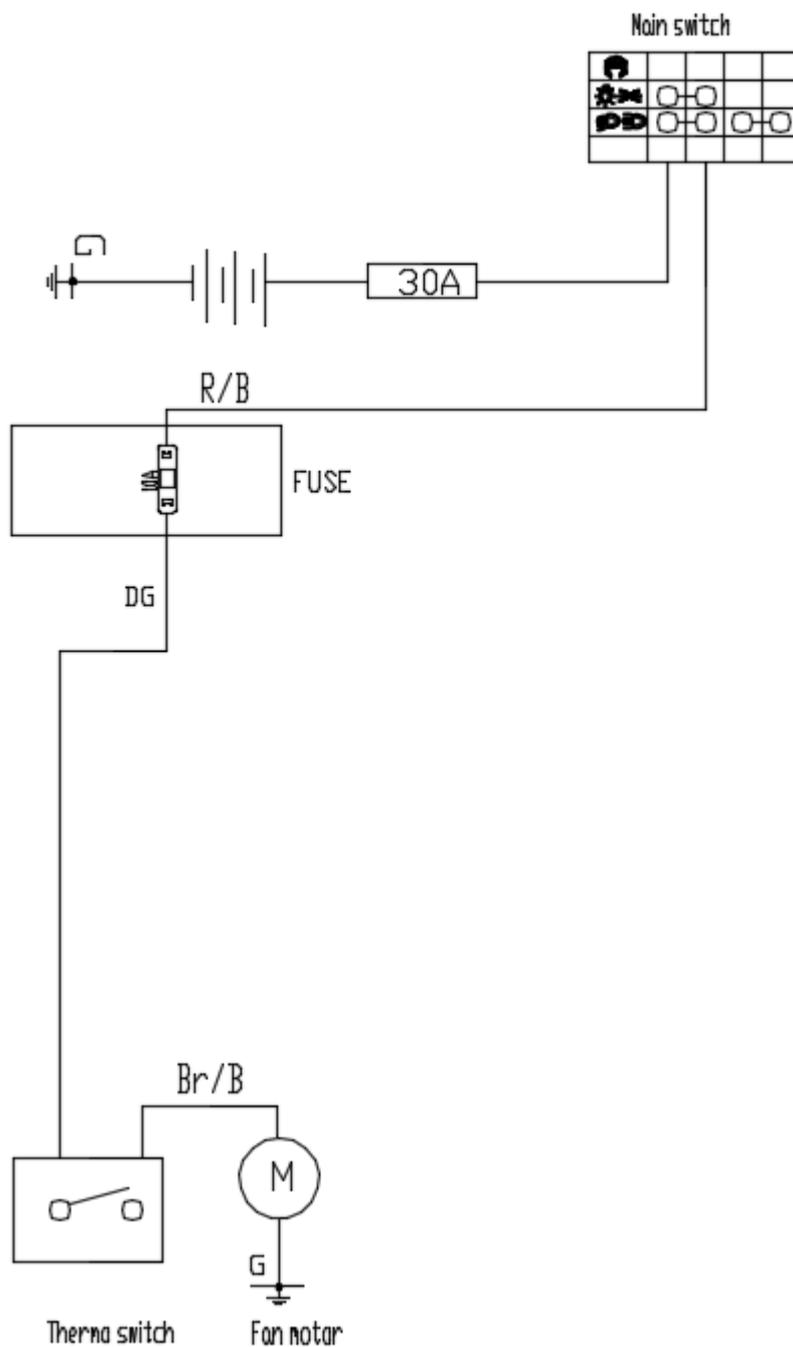
8.6 COOLING SYSTEM

IF THE FAN MOTOR FAILS TO TURN

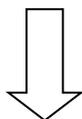
Procedure

Check:

1. Fuse (Main, Fan)
2. Battery
3. Main switch
4. Fan motor (inspection)
5. Thermo switch
6. Wiring connection (entire cooling system)



1. fuse
CHECK SWITCHES



2. Battery
Check the battery condition.

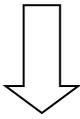
NO CONTINUITY



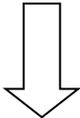
Replace the fuse

INCORRECT

Refer to "BATTERY INSPECTION" section



3 Main switch
CHECK SWITCHES

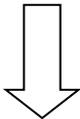


Clean battery terminals
Recharge or replace the battery

NO CONTINUITY

Replace the main switch

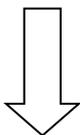
4. Fan motor(inspection 1)
Connect the battery to the fan motor.
Battery (+) lead→**Green/Blue terminal**
①
Battery (-) lead→**Green ground** ②
Check the fan motor operation



DOES NOT MOVE

Replace fan motor

5. Fan motor (inspection 2)
Turn the main switch to off.
●Remove the thermo switch lead from thermo switch.
●Connect jumper lead to thermo switch leads.
●Turn the main switch to on



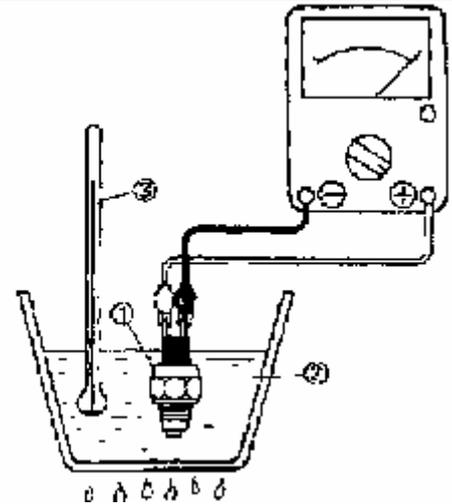
DOES NOT MOVE

The wiring circuit from battery to fan motor is faulty. Repair

6. Thermo switch

Remove the thermo switch from the radiator.

- Connect the pocket tester ($\Omega X1$) to the thermo switch ①.
- Immerse the thermo switch in the water ②
- Check the thermo switch for continuity.



NOTE:

Measure temperatures while heating the coolant with the temperature gauge

WARNING

- Handle the thermo switch with special care. Never subject it to strong shocks or allow it to be dropped. Should it be dropped, it must be replaced.
- Do not touch the thermo switch to the bottom of the heated vessel.

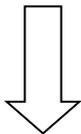
88±3°C Thermo switch "ON"

80 °C Thermo switch "OFF"

OUT OF SPECIFICATION



Replace the thermo switch



Wiring connection

- Check the connection of the entire cooling system. Refer to "CIRCUIT DIAGRAM"

UPPER CONNECTION



Correct

IF THE HEAT ALARM UNIT WORKING

When the main switch is turned on, the temperature of the engine begins to go up. As it comes to 88±3°C the thermostat is connected and the fan starts to work, cooling the coolant, if the thermostat or the fan, fails to work; the coolant temperature will keep rising. The heat alarm unit operates the moment the temperature reaches 115±5°C with the buzzer sounding and the signal flashing. Stop the engine now to have the circuit fixed.

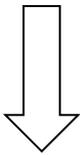
Procedure

Check:

- | | |
|--------------------|--|
| 1. Fuse(Main, Fan) | 4. Thermo unit |
| 2. Battery | 5. Voltage |
| 3. Main switch | 6. Wiring connection (entire cooling system) |

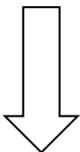
1. fuse

CHECKING SWITCHES



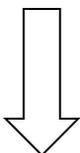
2. Battery

Check the battery condition.
Refer to "BATTERY INSPECTION"



3. Main switch

CHECKING SWITCHES



NO CONTINUITY



Replace the fuse

INCORRECT



Clean battery terminals
Recharge or replace the battery

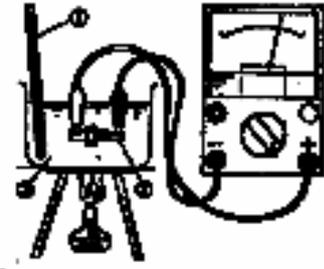
NO CONTINUITY



Replace the main switch

4. Thermo unit

- Drain the coolant and remove the thermo unit from the cylinder head.
- Immerse the thermo unit ② in the coolant ③ .
- ① Thermometer.



Coolant temperature

Resistance

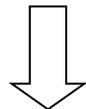
Handle the thermo unit with special care. Never subject it to strong shocks or allow it to be dropped. Should it be dropped, it must be replaced. Do not touch the thermo unit to the bottom of the heated vessel.

OUT OF SPECIFICATION



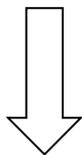
Replace the thermo unit

MEETS SPECIFICATION



8. x0001 Voltage

- Connect the pocket tester (DC20V) to the Temperature gauge couple.
- Tester (+) lead → Green/Blue terminal**
- Tester (-) lead → Green ground**
- Turn the main switch to on.
- Check for voltage (12V) on the temperature gauge lead.



OUT OF SPECIFICATION



The wiring circuit from main switch to temperature gauge is faulty. Repair.

- 8. x0001** Wiring connection check the connections of the entire cooling system. Refer to "CIRCUIT DIAGRAM"



Replace the temperature gauge

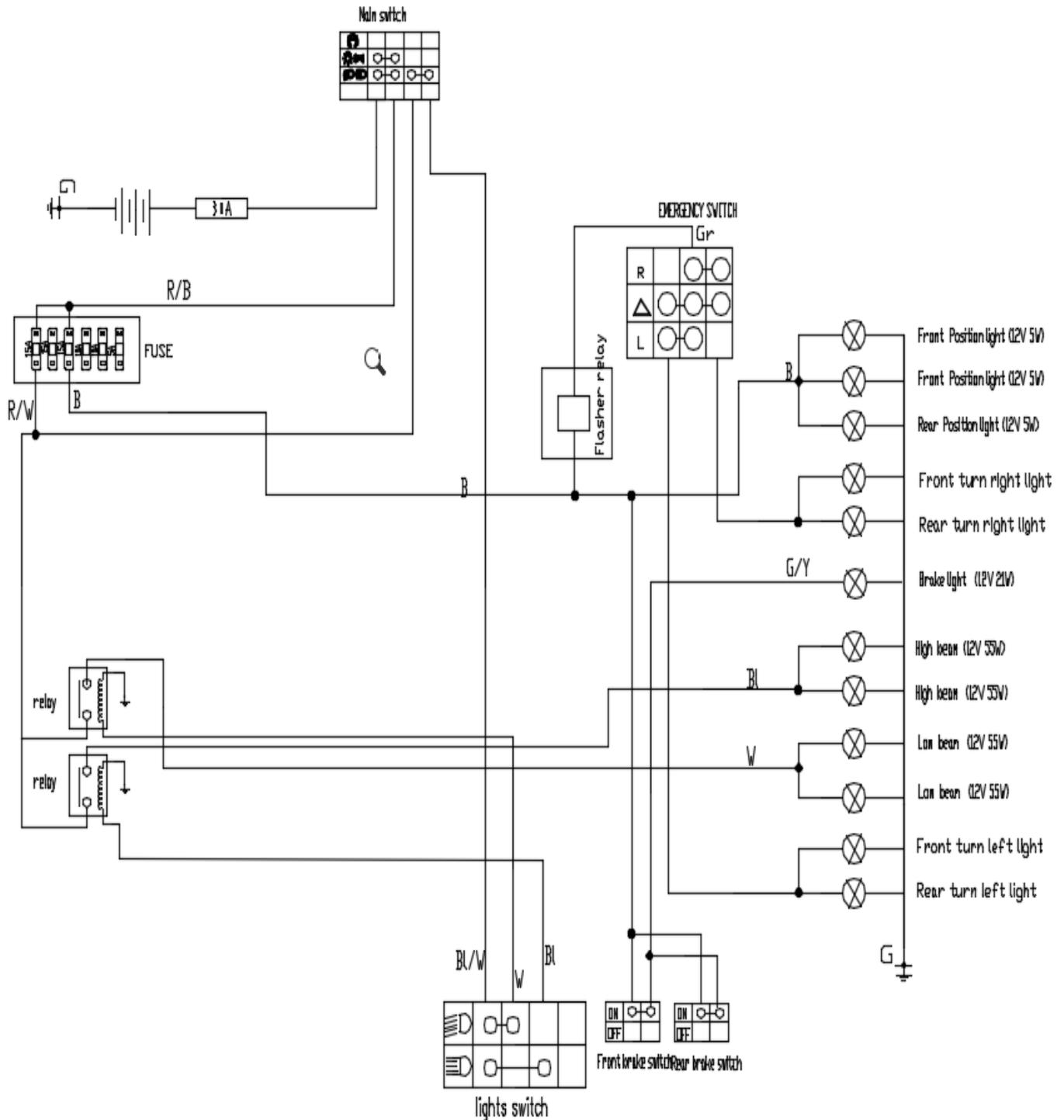
POOR CONNECTION



CORRECT

8.7 LIGHTING SYSTEM

FOR EUROPE MODEL



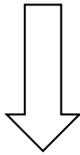
TROUBLESHOOTING

Procedure

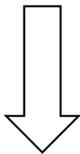
Check:

- 1. Fuse (Main)
- 2. Battery
- 3. Main switch
- 4. Lights switch
- 5. Dimmer switch
- 6. Wiring connection (entire lighting system)

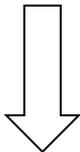
1. fuse
refer to "CHECKING SWITCHES"
section



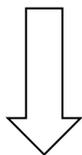
2. Battery
Check the battery condition.
Refer to "BATTERY INSPECTION" section
in CHAPTER 3



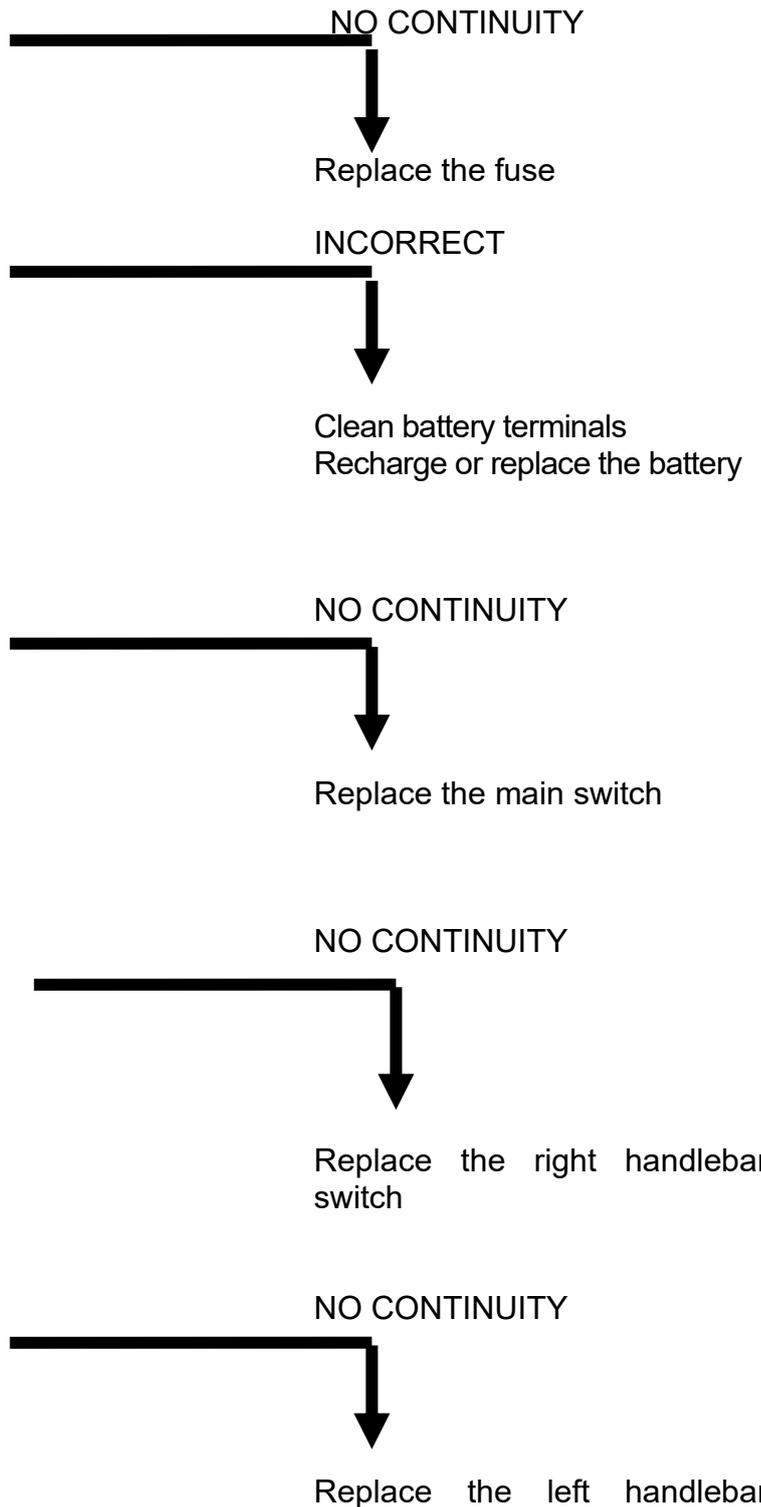
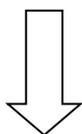
3. Main switch
CHECK SWITCHES



4. Light switch
CHECK SWITCHES



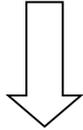
5. Dimmer sw
CHECK SWITCHES



switch

6. Wiring connection

Check the connection of the entire lighting system



POOR CONNECTIONS



correct

7. check the condition of each of the lighting system's circuits

Refer to "LIGHTING SYSTEM CHECK"

LIGHT SYSTEM CHECK

1. If the headlight and the high beam indicator light fail to come on

1. Bulb and bulb socket

CHECK SWITCHES



NO CONTINUITY



Replace the bulb and/ or bulb socket

2. Voltage

Connect the pocket tester (DC20V) to the headlight and high beam indicator light couplers.

A When the dimmer switch is on low beam.

B When dimmer switch is on high beam

Headlight::

Tester (+) lead → White ① or Blue ② lead

Tester negative (-) lead → Green ③ lead

Turn the main switch to on.

Turn the light switch to on position.

Turn the dimmer switch to low beam or high beam.

Check for voltage (12V) on the lead at bulb socket connectors



OUT OF SPECIFICATION

The wiring circuit from the main switch to

This circuit is not faulty

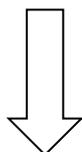
bulb socket connector is faulty.
Repair

2. the taillight fails to come on

1. Bulb and bulb socket

CHECK SWITCHES

CONTINUITY



2. Voltage

Connect the pocket tester (DC20V) to the bulb socket connector.

Tester (+) lead→

Black terminal ①

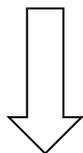
Tester (-) lead→

Green terminal ②

Turn the main switch to on.

Turn the lights switch to on pilot position.

Check the voltage (12V) on the bulb socket connector



This circuit is not faulty

NO CONTINUITY



Replace the bulb and /or bulb socket

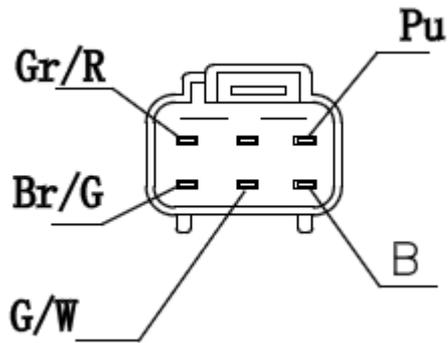
OUT OF SPECIFICATION



The wiring circuit from main switch to bulb connector of faulty.
Repair

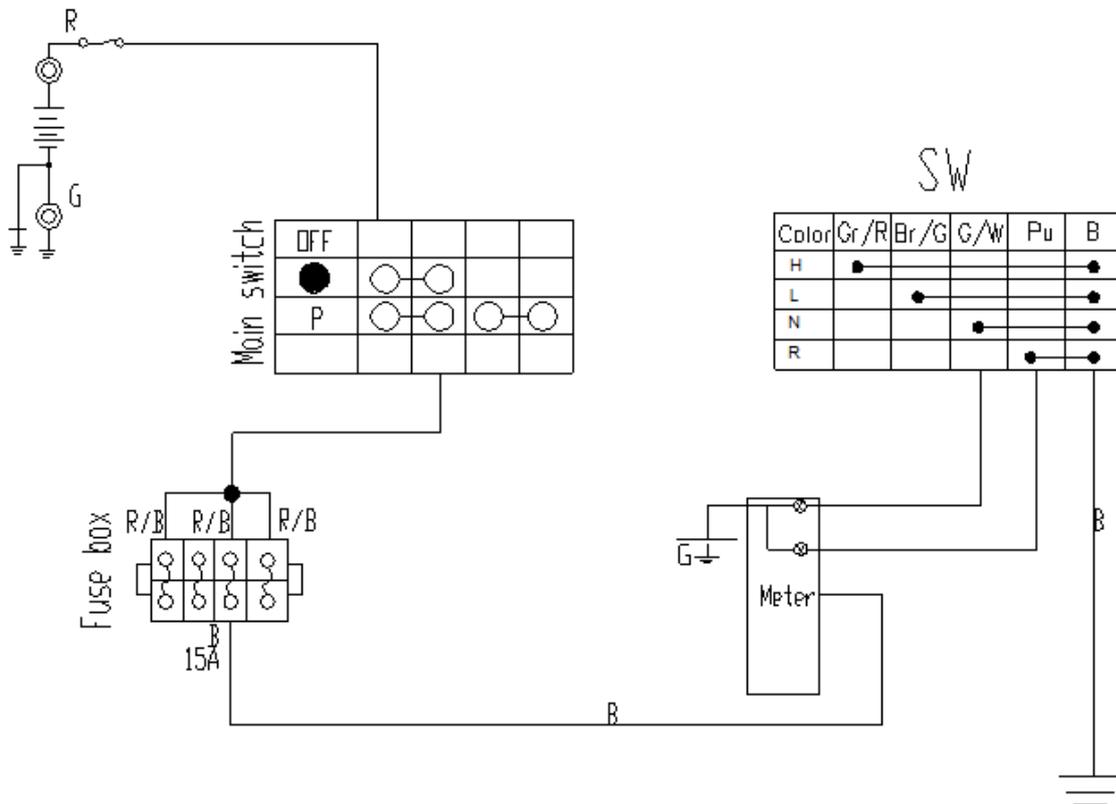
8.9 GEAR POSITION INDICATOR SWITCH TEST

Switch table



Color	Gr/R	Br/G	G/W	Pu	B
H	●				●
L		●			●
N			●		●
R				●	●

Switch schematic



8.10 SPEEDMETER SYSTEM

OPERATION OF SPPED SENSOR

Speed Sensor is on the rear axle

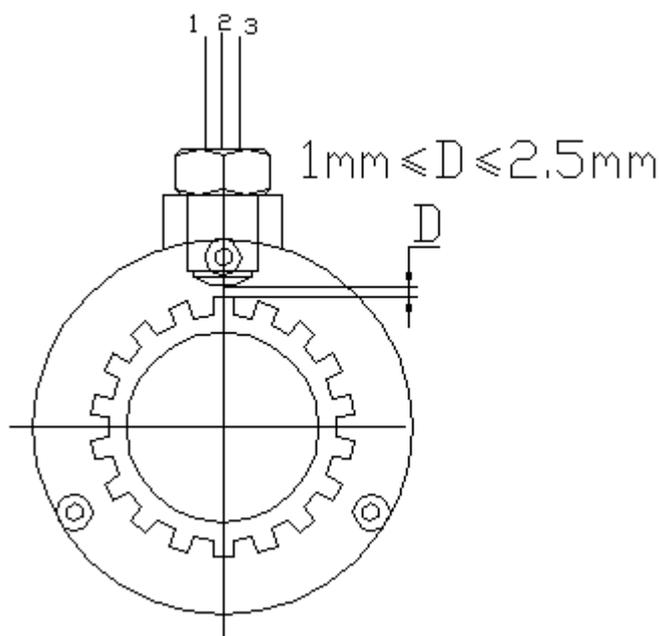
Operation Instructions of Electric Dial Meter and Speed Sensor/ Operation Instructions of LCD Meter and Speed Sensor

A. Hall Sensor is a new type sensor used to measure speed, angle, revolution and length, etc by means of voltage pulse signals converted from sensing gear ratio of black metal gear or gear rack.

B. Main Technical Parameter for sensor:

Item	Code	Vol value	Unit
Operating voltage	Vcc	5-20	V
Operating current	Icc	≤15	mA
Low voltage output	Vol	≤ 0.4	V
Hight voltage output	Voh	≥ (Vcc-1)	V
Operating distance	D	1mm ≤ D ≤ 2.5mm	mm

C. The following is the graphic illustration for sensor installation, Wire 1 (red) is positive and wire 2 (black) negative, Wire 3 (yellow) works as the one to output signals.



Note: Always screw in the sensor by hand when installation or adjustment.

- 1, Align one tooth of the splines to the centre of the hole of the sensor by turning the rear axle.
2. Screw the sensor in (CW) by hand slightly until resistance is felt.
3. Turn the sensor CCW by 1 to 2 turn(s).
4. Tighten the jam nut.

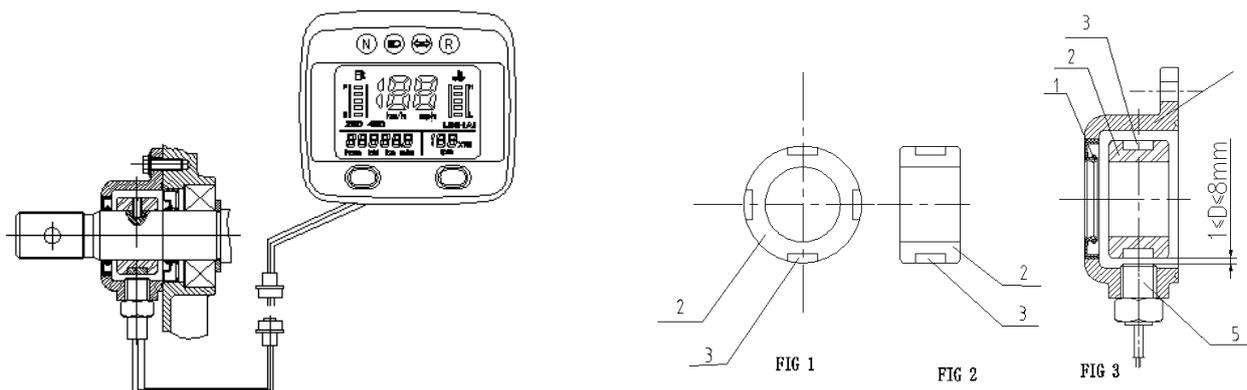
Speed Sensor on the Transmission Out Put Shaft.

Operation Instructions of LCD Meter and Speed Sensor

Main Technical Parameter:

Item	Code	Vol value	Unit
Operating voltage	Vcc	5-20	V
Operating current	Icc	≤15	mA
Operating distance	D	1mm≤D≤8mm	mm

The following is the graphic illustration for sensor installation.



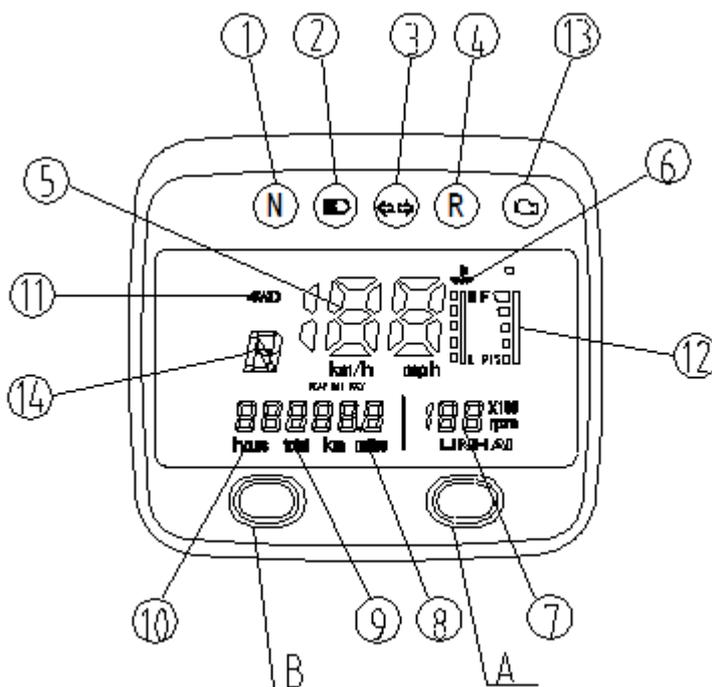
1. OIL SEAL	4. THE COVER
2. DOWEL PIN	5. THE HALL SENSOR
3. MAGNET	

METER

Dial Meter

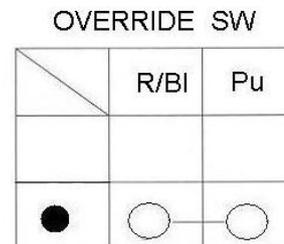
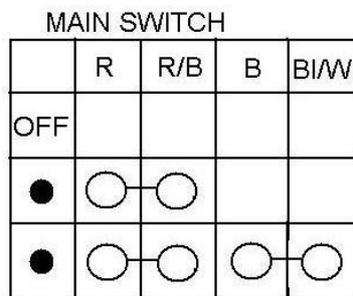
Item	Vol value	Unit
Operating voltage	10V~18V	V
Operating current	≤ 500mA	A
Operating Environmental temperature	-10°C~65°C	°C
Battery warning voltage	≤11.5V	V

LCD Meter



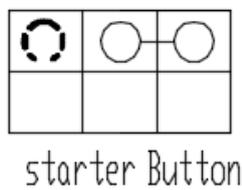
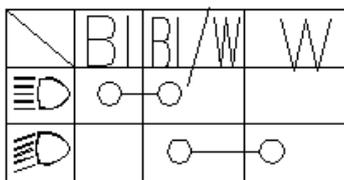
- | | |
|------------------------------|--------------------------------|
| 1. Neutral indicator light | 10.Engine working hour counter |
| 2. High beam indicator light | 11.2WD/4WD indicator |
| 3. Turn indicator light | A: km/ mile selector |
| 4. Reverse indicator light | B: hour / distance selector |
| 5. Speedometer | 12. Fuel gauge Indicator |
| 6. Coolant temperature meter | 13. EFI |
| 7. Engine rpm meter | 14.Gear position |
| 8、9. The odometer | |

8.11 MAIN SWITCH AND HANDLE SWITCH

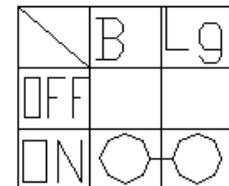
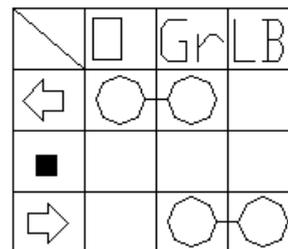


300ATV-T3 HANDLE SWITCH SCHEMATIC FOR EUROPE MODEL

HIGH/LOW BEAM SWITCH



TURN INDICATORS SWITCH HORN SWITCH



8.12 FUEL GAUGE/ FUEL LEVEL SENSOR

Removal

Turn the ignition switch to “OFF” .
 Remove the fuel tank cover.
 Remove the three bolts, retaining plate and fuel level sensor from the fuel tank.

Installation

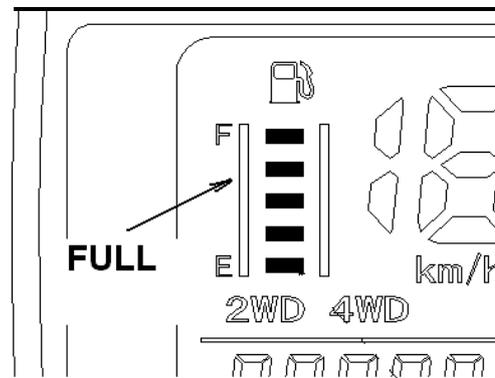
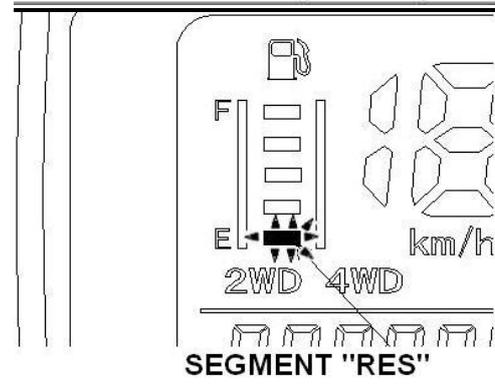
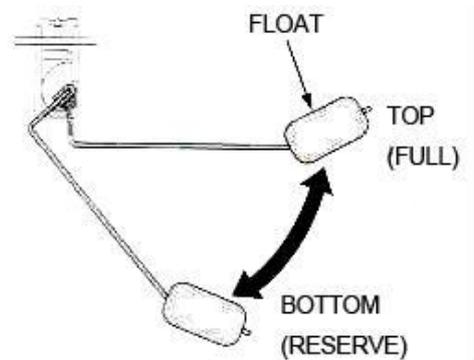
Install a new seal rubber onto the fuel level sensor.
 Install the retainer plate onto the sensor by aligning the tab with the groove.

Install the sensor into the fuel tank while aligning the groove in the plate with the boss on the fuel tank.

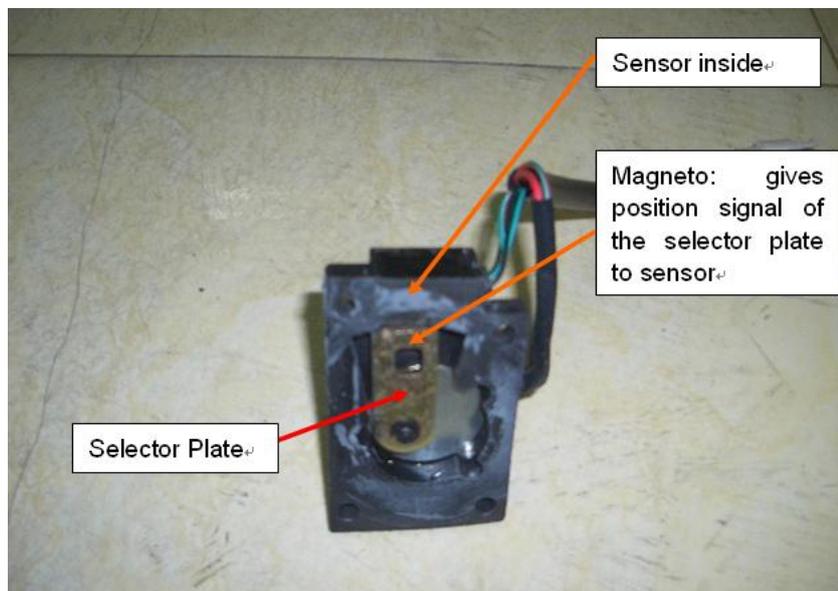
Install and tighten the bolts securely.
 Install the removed parts in the reverse order of removal.

Fuel Gauge / Fuel level Sensor Inspection

Move the float to the bottom (RESERVE) position, turn the ignition switch to “ON” and check the fuel gauge.



FLOAT POSITION	RESISTANCE(20°C/
----------------	------------------

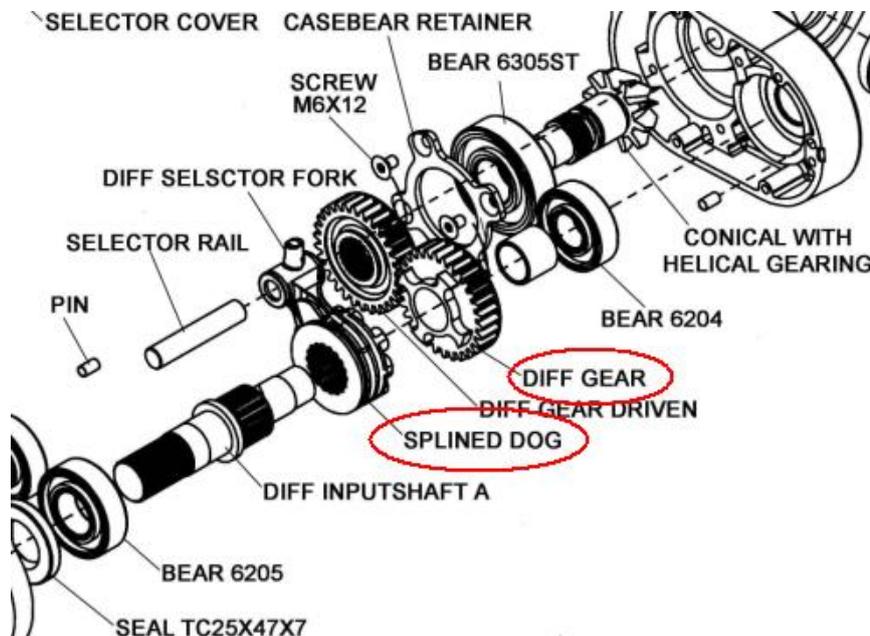
8.13 THE OPERATION PRINCIPLE OF THE ELECTRIC 4WD SHIFT

SHIFT MOTOR ASSY

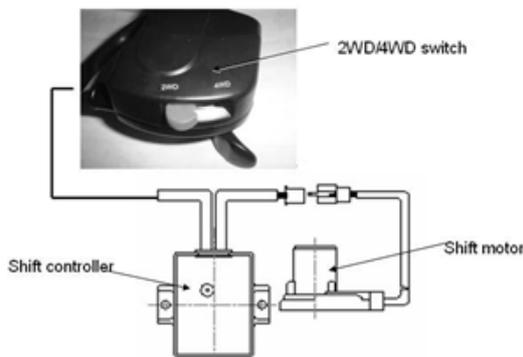
(Fig 1)

- 1, The rider shifts 2WD to 4WD by the Switch on handlebar.
 2. The Switch gives signal to Controller.
 - 3, The controller gives power to the Shift Motor.
 - 4, If the Splined Dog (Fig 2) is in right position, 4WD will engage immediately. This information will be given to the Sensor by the Magneto on the Selector Plate, and then to the Controller. Controller lights the 4WD indicator.
 5. If the Splined Dog is not in right position, 4WD won't engage, this information will be given to the Sensor by the Magneto on the Selector Plate, and then to the Controller. The controller will try to drive the Shift Motor several times in 1 min.
- During this time, the 4WD indicator is not on, this requires the rider to back or move (ride) the ATV a little to allow the Dog change position for engagement. (See owner's manual or decal).
- If the rider doesn't do as the owner's manual, after 1 min, the buzzer comes on and 4WD indicator blinks, remind the rider to re-shift.

Shift from 4WD to 2WD is same as above.



(Fig 2)



CAUTION:

Always shift as the vehicle stop.

NOTE:

When shift 2WD/ 4WD, the mechanics in the front gear box maybe still engaged/ disengaged, the mechanics would finally disengaged/ engaged when rides on a hard surface or rides in reverse.

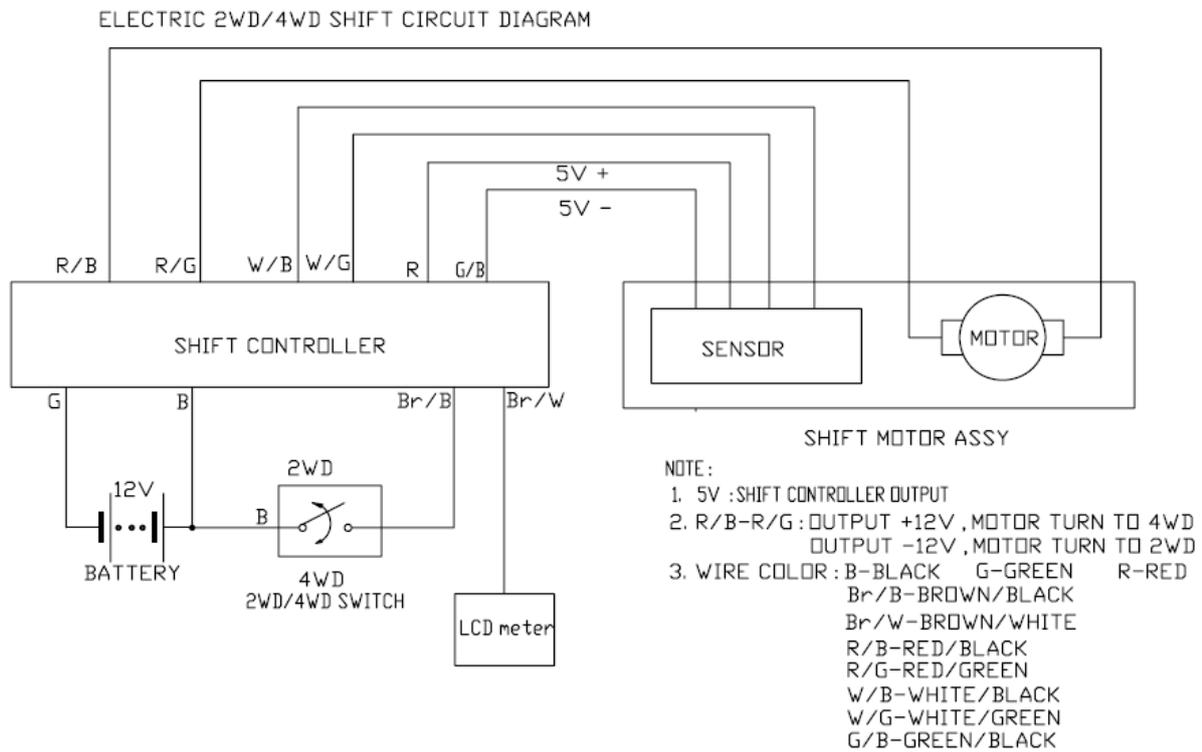
The buzzer will beep if the procedure which list above is not done in 1 minute.

Re-shift to stop the buzzer.

CAUTION

Do not switch on 4WD if the rear wheels are spinning. This may cause severe machine damage. When switch on 4WD, the button will stay in 4WD position but 4WD mechanics maybe still disengaged. Always apply throttle gently and let the wheels move slightly to allow the 4WD mechanics finally engage. The 4WD indicator on the speedometer will come on when 4WD engaged.

(Fig 3) Page from owner's manual



(Fig 4)

8.14 WIRING DIA

