

ELECTRIC STARTING SYSTEM MR

Troubleshooting

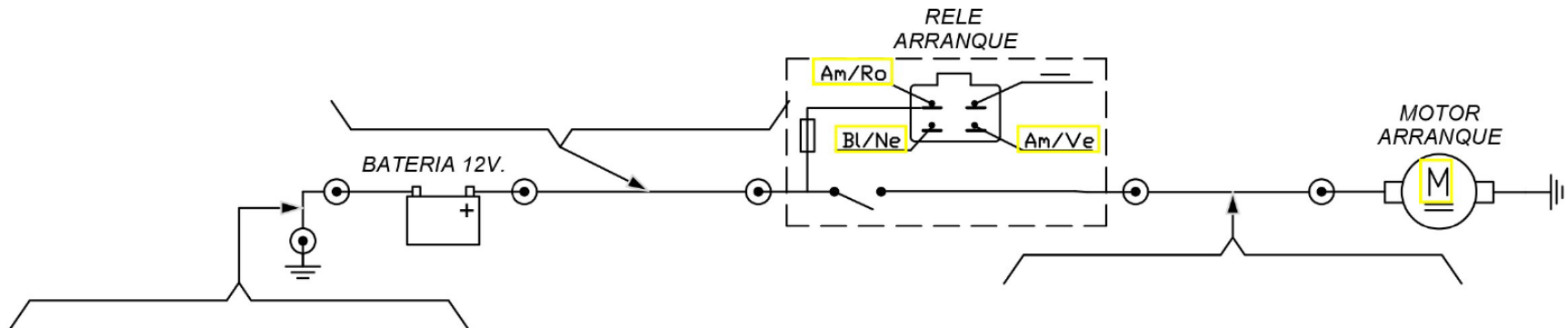
ELECTRIC STARTING SYSTEM

Troubleshooting

Circuito de arranque

The starting circuit on this model consist of:

- Battery (Batería)
- Starter relay (Relé de arranque)
- Starter motor (Motor de arranque)



ELECTRIC STARTING SYSTEM

Troubleshooting

ELECTRIC STARTING SYSTEM DOES NOT OPERATE

Procedure

Check

- | | |
|-------------------------------|---|
| 1 – Fuse (Main and ignition) | 5 – Starter relay |
| 2 – Battery | 6 – Main switch |
| 3 – Starter Motor | 7 – Diodes module |
| 4 – Starter relay (connector) | 8 – Wiring connection
(entire starting system) |

NOTE:

- Remove the following parts before troubleshooting:
 - 1 – Seat
 - 2 – Fuel tank
 - 3 – Left and right lateral cover
- Use the following special tools in this troubleshooting:
 - 1 – Multimeter
 - 2 – Clamp meter (DC)

ELECTRIC STARTING SYSTEM

Troubleshooting

1 – Fuse (Main and ignition)

- Remove the fuses
- Check the fuses for continuity



CONTINUITY

2 – Battery

- Check the battery condition

**Open circuit voltage:
13 V or more at 20 °C**



CORRECT

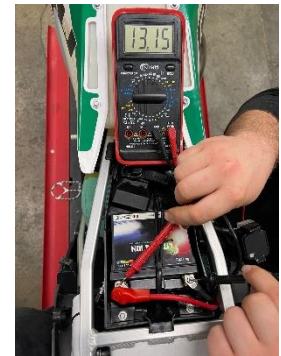
*

NO CONTINUITY

Replace fuse(s)

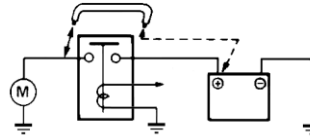
INCORRECT

- Clean battery terminals
- Recharge or replace the battery



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Jumper lead*

WARNING

- A wire for jumper lead must have the equivalent capacity as that of the battery lead or more, otherwise it may cause the jumper lead to be burned.
- This check is likely to produce sparks, so be sure that no flammable gas or fluid is in the vicinity.

3 – Starter Motor

- Connect the battery positive terminal and starter motor cable using a jumper lead*
- Check the starter motor for operation



**DOES NOT MOVE OR
IT'S RETAINED**

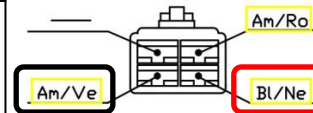
Follow troubleshooting
“STARTER MOTOR DOES NOT WORK”



MOVES

4 – Starter relay (connector)

- Connect the multimeter to the relay terminals.
- Check voltage (12V or more)
- Check continuity of the relay when pressing the start button.



**WITHOUT CONTINUITY
AND VOLTAGE**

Replace relay



**WITH CONTINUITY
AND VOLTAGE**

*

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5 – Starter relay

- Connect the multimeter to the relay terminals.
- Check continuity and voltage drop (10 V or more) of the relay when pressing the start button



WITH CONTINUITY
AND VOLTAGE

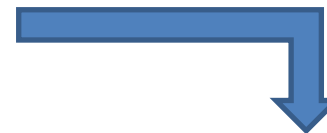
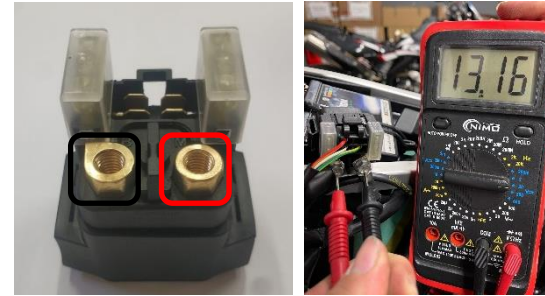
6 – Main switch

- Disconnect the main switch coupler from the wireharness
- Check continuity of main switch



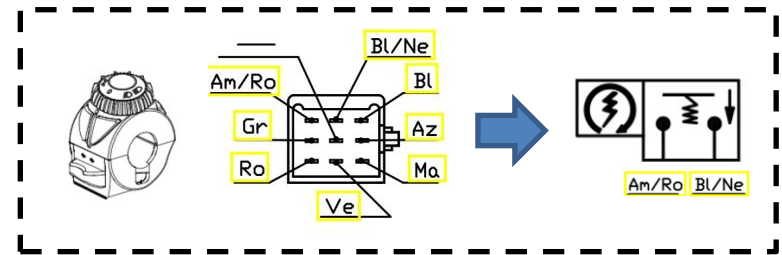
WITH CONTINUITY

*



WITHOUT CONTINUITY
OR VOLTAGE

Replace relay



WITHOUT CONTINUITY

Replace main switch

ELECTRIC STARTING SYSTEM

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7 – Diodes module

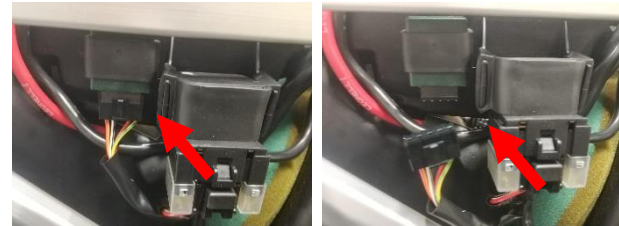
- Disconnect the diodes module coupler from the wireharness
- Check if vehicle start when pressing the start button



INCORRECT

8 – Wiring connection (entire starting system)

- Check the entire starting system for connections.



CORRECT

Replace diodes module



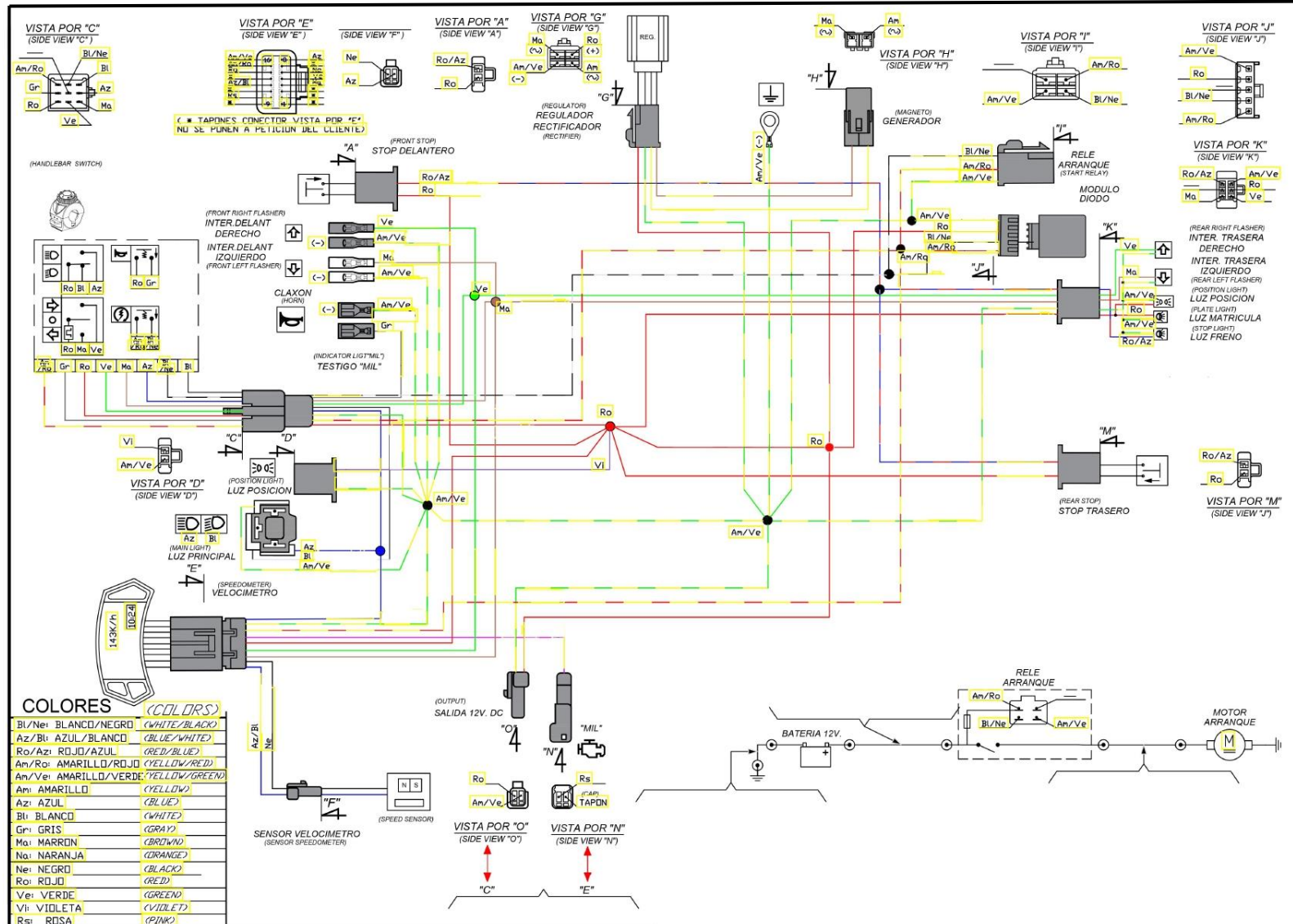
POOR
CONNECTION

- Clean connectors and ensure a good connection of terminals
- Repair or replace wiringharness

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ELECTRIC DIAGRAM:



ELECTRIC STARTING SYSTEM

Troubleshooting

STARTER MOTOR DOES NOT WORK

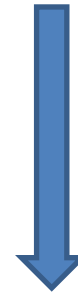
- Connect clamp meter to the positive wire of battery
- Check amperage when activating electric motor

AMPERAGE = 0A



Replace starter motor

AMPERAGE $\geq 100A$



Replace starter case

STARTING MOTOR PERFORMANCE	
	CURRENT (A)
NO-LOAD	MAX. 40 A
LOCK	MAX. 270 A