

Troubleshoot

Hall Effect Sensor

Symptoms:

- Ski do not spark
- Engine Speed Inconsistency

Causes:

- Defective Hall effect sensor
- Defective ECU

Requirement

Multimeter



1. Check the Power fuses

1. Remove the fuses from the fuse box
2. Visually check if the Power fuse is blown, if you are not sure you can use your multimeter as continuity mode and put the black probe on one pin of the fuse and the red probe on the other pin
3. If the Power fuse is blown or there is no continuity on the pins, **change the fuse**
4. If the fuse keeps blowing when Powering on the Engine by putting the lanyard in, **go to section 3 for “Check the Main Relay”**

2. Check the ECU fuse

1. Remove the fuses from the fuse box
2. Visually check if the start fuse is blown, if you are not sure you can use your multimeter as continuity mode and put the black probe on one pin of the fuse and the red probe on the other pin
3. If the ECU fuse is blown or there is no continuity on the pins, **change the fuse**
4. If the fuse keeps blowing
 - **Contact your local dealer**

3. Check the Main Relay

1. Remove the Cover on the Fuse box
2. Remove the Lanyard off the start Stop Switch
3. Put the lanyard back on the Start Stop switch to hear the Main relay clicking
4. If the Main relay do not click or not sure :
 1. Remove the Main relay from the fuse box
 2. Take a multimeter set in Ohm (“Ω”) measurement or “200” if manual
 3. Test the resistance value between the pins of the Main relay
 4. Result of the resistance test :



Main Relay

Black probe / Red probe	Main Relay - Pin 85	Main Relay - Pin 86	Main Relay - Pin 87	Main Relay - Pin 30
Main Relay - Pin 85	x	50 – 120 Ω	Open Loop – “OL”	Open Loop – “OL”
Main Relay - Pin 86	50 – 120 Ω	x	Open Loop – “OL”	Open Loop – “OL”
Main Relay - Pin 87	Open Loop – “OL”	Open Loop – “OL”	x	Open Loop – “OL”
Main Relay - Pin 30	Open Loop – “OL”	Open Loop – “OL”	Open Loop – “OL”	x

If one of the tests is not correct, Replace the Main Relay

4. Loom Continuity Test Sequence :

The “Beep” Sound is the continuity on the multimeter

Connect the Battery to the ski and remove the lanyard.

1. Disconnect the 3 pin DTM connected to the Hall Effect Sensor and Disconnect The ECU to the Loom.

Make sure the engine Connector is connected.

Set the multimeter on continuity or Ohmmeter meter (“200”).

On the Loom Side, connect the Red Probe of the multimeter on the Pink wire of the ECU Connector (position “B6”) and the Black Probe of the multimeter on the Pink wire of the Hall Effect Connector (Position 3 of the DTM Connector).

The Multimeter should “beep” or show a value between 0-5.

If the value is up to 5, clean the connectors and re-test.

2. On the Loom Side, connect the Red Probe of the multimeter on the Brown wire of the ECU Connector (position “C7”) and the Black Probe of the multimeter on the Brown wire of the Hall Effect Connector (Position 1 of the DTM Connector).

The Multimeter should “beep” or show a value between 0-5.

If the value is up to 5, clean the connectors and re-test.

If the value still up superior that 5 or the Multimeter do not beep or show an Open Loop (“OL”)

3. Turn On the Ski

Set the multimeter DC Voltmeter (V).

On the Loom Side, connect the Red Probe of the multimeter on the Pink wire of the Hall Effect Connector (position 3 of the DTM Connector) and the Black Probe of the multimeter on the Brown wire of the Hall Effect Connector (Position 1 of the DTM Connector).

4. Turn of the Ski

5. Hall Effect Sensor Test Sequence:

1. Set the Multimeter in Ohmmeter (“20k)

Connect the White Wire of the Hall effect Sensor (Position 2 of the DTM Connector) on the Red Probe of the Multimeter and the Black Wire (Position 1 of the DTM Connector) on the black Probe of the Multimeter

The Value should be between 10k and 20k

2. Connect the Red Wire of the Hall effect Sensor (Position 3 of the DTM Connector) on the Red Probe of the Multimeter and the Black Wire (Position 1 of the DTM Connector) on the black Probe of the Multimeter

The Value should be between 100k and 200k

If one of the results is not correct, there is an issue

Contact your local dealer