

Troubleshoot

Start / Stop Switch

Symptoms :

- Engine do not crank when press the start button
- Relay in the Fuse box do not “click” when put the lanyard In
- Ski do not turn off when press the press the stop button
- Ski do not turn off when lanyard is off
- Coil do not spark when engine cranking

Causes :

- Faulty Power Fuse
- Faulty Starter Relay Fuse
- Faulty Main Relay
- Faulty Start / Stop Switch
- Faulty Starter Relay
- Faulty Starter Motor

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, **Check the Main Relay (section “3. Check the Main Relay”)**

2. Check the Start fuses

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 Start fuse is blown or there is no continuity on the pins, **change the fuse**
4. If the fuse keeps blowing
 - **Test the Continuity on the Start button of the Start Stop Switch (section “6. Test Start Button continuity”)**
 - **Test the Starter Relay (See “Starter Relay Troubleshoot” document)**

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



Main Relay

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 :

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”
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. Test Short Circuit

1. Make sure the Start / Stop Switch is correctly installed / fastened on the Handle bar
2. Disconnect the 3 Pins Weather Pack Male Connector between the Start Stop Switch and the Electrical-Bar
3. Disconnect the 3 Pins Weather Pack Female Connector between the Start Stop Switch and the Electrical-Bar
4. Remove the Lanyard off the Start / Stop Switch
5. Take a multimeter set in Continuity or Ohm (“Ω”), 200 if manual
6. Test the Continuity between each pins of the Start / Stop switch on both connector



3 Pins Weather Pack Male Connector



3 Pins Weather Pack Female Connector

7. Result of the Short Circuit test :

Black probe \ Red probe		Start Stop Switch - Connector 1 (Male)			Start Stop Switch - Connector 2 (Female)		
		Pin A - Black Wire	Pin B - Grey Wire	Pin C - Black Wire	Pin A - Red Wire	Pin B - Orange Wire	Pin C - White Wire
Start Stop Switch - Connector 1 (Male)	Pin A - Black Wire	x	Continuity Or 0-10 Ω	x	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”
	Pin B - Grey Wire	Continuity Or 0-10 Ω	x	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”
	Pin C - Black Wire	x	No Continuity Or “OL”	x	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”
Start Stop Switch - Connector 2 (Female)	Pin A - Red Wire	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	x	No Continuity Or “OL”	No Continuity Or “OL”
	Pin B - Orange Wire	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	x	No Continuity Or “OL”
	Pin C - White Wire	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	No Continuity Or “OL”	x

If one of the tests is not correct, Replace the Start / Stop Switch

5. Test Lanyard Continuity

1. Make sure the Start / Stop Switch is correctly installed / fastened on the Handle bard
2. Disconnect the 3 Pins Weather Pack Male Connector between the Start Stop Switch and the Electrical-Bar
3. Disconnect the 3 Pins Weather Pack Female Connector between the Start Stop Switch and the Electrical-Bar
4. Remove the Lanyard off the Start / Stop Switch
5. Take a multimeter set in Continuity or Ohm (Ω), 200 if manual
6. Test the Continuity between the Red Wire of the Start / Stop Switch and the White Wire of the Start / Stop Switch
7. Result of the Short Circuit test :

		Start Stop Switch - Connector 2 (Female)	
		Pin A - Red Wire	Pin C - White Wire
Start Stop Switch - Connector 2 (Female)	Pin A - Red Wire	x	No Continuity Or "OL"
	Pin C - White Wire	No Continuity Or "OL"	x

If one of the tests is not correct, Replace the Start / Stop Switch

8. Put the Lanyard back on the Start / Stop Switch
9. Take a multimeter set in Continuity or Ohm (Ω), 200 if manual
10. Test the Continuity between the Red Wire of the Start / Stop Switch and the White Wire of the Start / Stop Switch
11. Result of the Short Circuit test :

		Black probe	
		Pin A - Red Wire	Pin C - White Wire
Start Stop Switch - Connector 2 (Female)	Pin A - Red Wire	x	Continuity Or 0-10 Ω
	Pin C - White Wire	Continuity Or 0-10 Ω	x

If one of the tests is not correct, Replace the Start / Stop Switch

6. Test Start Button continuity

1. Make sure the Start / Stop Switch is correctly installed / fastened on the Handle bard
2. Disconnect the 3 Pins Weather Pack Male Connector between the Start Stop Switch and the Electrical-Bar
3. Disconnect the 3 Pins Weather Pack Female Connector between the Start Stop Switch and the Electrical-Bar
4. Remove the Lanyard on the Start / Stop Switch
5. Take a multimeter set in Continuity or Ohm ("Ω"), 200 if manual
6. Test the Continuity between the Red Wire of the Start / Stop Switch and the Orange Wire of the Start / Stop Switch
7. Result of the Short Circuit test :

		Black probe	
		Pin A - Red Wire	Pin B - Orange
Start Stop Switch - Connector 2 (Female)	Pin A - Red Wire	x	No Continuity Or "OL"
	Pin B - Orange Wire	No Continuity Or "OL"	x

If one of the tests is not correct, Replace the Start / Stop Switch

8. Put back the lanyard In
9. Test the Continuity between the Red Wire of the Start / Stop Switch and the Orange Wire of the Start / Stop Switch
10. Result of the Short Circuit test :

		Black probe	
		Pin A - Red Wire	Pin B - Orange
Start Stop Switch - Connector 2 (Female)	Pin A - Red Wire	x	No Continuity Or "OL"
	Pin B - Orange Wire	No Continuity Or "OL"	x

If one of the tests is not correct, Replace the Start / Stop Switch

11. Test the Continuity between the Red Wire of the Start / Stop Switch and the Orange Wire of the Start / Stop Switch with the lanyard in and keep pressing the Start Button

12. Result of the Short Circuit test :

		Black probe	
		Pin A - Red Wire	Pin B - Orange Wire
Start Stop Switch - Connector 2 (Female)	Pin A - Red Wire	x	Continuity Or 0-10 Ω
	Pin B - Orange Wire	Continuity Or 0-10 Ω	x

If one of the tests is not correct, Replace the Start / Stop Switch

7. Test Kill Button continuity

1. Make sure the Start / Stop Switch is correctly installed / fastened on the Handle bard
2. Disconnect the 3 Pins Weather Pack Male Connector between the Start Stop Switch and the Electrical-Bar
3. Disconnect the 3 Pins Weather Pack Female Connector between the Start Stop Switch and the Electrical-Bar
4. Remove the Lanyard on the Start / Stop Switch
5. Take a multimeter set in Continuity or Ohm ("Ω"), 200 if manual
6. Test the Continuity between the Black Wires (If it possible to link the black wires and put the probe to measure both in same time) of the Start / Stop Switch and the Grey Wire of the Start / Stop Switch
7. Result of the Short Circuit test :

		Start Stop Switch - Connector 1 (Male)		
		Pin A - Black Wire	Pin B - Grey Wire	Pin C - Black Wire
Start Stop Switch - Connector 1 (Male)	Pin A - Black Wire	x	Continuity Or 0-10 Ω	x
	Pin B - Grey Wire	Continuity Or 0-10 Ω	x	Continuity Or 0-10 Ω
	Pin C - Black Wire	x	Continuity Or 0-10 Ω	x

If one of the tests is not correct, Replace the Start / Stop Switch

8. Put back the Lanyard on the Start / Stop Switch
9. Test the Continuity between the Black Wires (If it possible to link the black wires and put the probe to measure both in same time) of the Start / Stop Switch and the Grey Wire of the Start / Stop Switch
10. Result of the Short Circuit test :

		Start Stop Switch - Connector 1 (Male)		
		Pin A - Black Wire	Pin B - Grey Wire	Pin C - Black Wire
Start Stop Switch - Connector 1 (Male)	Pin A - Black Wire	x	No Continuity Or "OL"	x
	Pin B - Grey Wire	No Continuity Or "OL"	x	No Continuity Or "OL"
	Pin C - Black Wire	x	No Continuity Or "OL"	x

If one of the tests is not correct, Replace the Start / Stop Switch

11. Test the Continuity between the Black Wires (If it possible to link the black wires and put the probe in order to measure both in same time) of the Start / Stop Switch and the Grey Wire of the Start / Stop Switch, with the lanyard in and keep pressing the Kill Button
12. Result of the Short Circuit test :

<div style="display: flex; align-items: center;"> <div style="width: 50%; text-align: center;">Black probe</div> <div style="width: 50%; text-align: center;">Start Stop Switch - Connector 1 (Male)</div> </div>				
		Pin A - Black Wire	Pin B - Grey Wire	Pin C - Black Wire
Start Stop Switch - Connector 1 (Male)	Pin A - Black Wire	x	Continuity Or 0-10 Ω	x
	Pin B - Grey Wire	Continuity Or 0-10 Ω	x	Continuity Or 0-10 Ω
	Pin C - Black Wire	x	Continuity Or 0-10 Ω	x

if one of the tests is not correct, Replace the Start / Stop Switch

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