

The control switch is a DOUBLE CHANGE OVER SWITCH. (Not a double pole change over as this is subtly different) This switch contains two change over switches, one switch changes over when the rocker is operated in one direction and the other switch changes over when the rocker is operated in the other direction. So it carries out a few more functions than just a simple ON/OFF switch.

The Omnistep has a permanent magnet motor. This means that if you reverse the polarity the motor will run in the opposite direction. The switch is designed to do this. The motor rotates in one direction to extend and the other direction to retract.

Nominally 5 amps is the expected working current for the motor. If however you keep your finger on the switch after the step has fully extended or retracted then the motor will stall. Under this condition the current will increase to a significantly higher figure. Sometimes referred to as the "blocking current".

The Omnistep has two electrical components, the motor which moves the step and a switch that is OPEN only when the step is fully retracted. At all other times the switch will be closed.

Firstly the system is designed to retract the step and sound the alarm should you start your engine with the step extended.

Under this condition the control switch is as shown in switch picture A. Battery negative is connected to terminal 4 of the switch and comes back out of the switch at terminal 5. It is connected to the right hand end of the motor with a RDGN wire.

When the engine is running the FRIDGE relay is energised from the vehicle alternator D+ terminal. The fridge relay applies 12 volts to both the fridge and also the step relay terminal 86 (coil+) and one side of the alarm.

If the step is extended then the step switch will be closed. This will provide a negative supply to the alarm causing it to sound, and also the other end of the relay coil (85) causing it to energise.. Now that the relay is energised the fridge supply which is also connected to the relay terminal 87 is routed by the closed contacts to relay terminal 30 and provides a positive supply to the Omnistep motor. The motor will rotate causing the step to retract. When fully retracted the step switch will open, the relay will release, the alarm will go silent.

With the engine turned OFF the rocker switch can be depressed causing the step to extend.

Under this condition the control switch is as shown in switch picture C. Battery negative is connected to terminal 4 of the switch and comes back out of the switch at terminal 1. It is connected to the relay terminal 87a (normally closed contact) and comes out of the relay at terminal 30. From here it is routed to the left hand end of the motor.

A positive supply from the leisure battery enters the switch at terminal 3 via a BNGN wire. This positive supply leaves the switch at terminal 5 which is routed via a RDGN wire to the right hand end of the motor causing the step to extend. When the step has extended you must leave go of the switch or the current will increase to 14 amps!

With the engine turned OFF the rocker switch can be depressed causing the step to retract.

Under this condition the control switch is as shown in switch picture B. Battery negative is connected to terminal 4 of the switch and comes back out of the switch at terminal 5. It is routed to the right hand end of the motor.

A positive supply from the leisure battery enters the switch at terminal 3 via a BNGN wire. This positive supply leaves the switch at terminal 1. It is connected to the relay terminal 87a (normally closed contact) and comes out of the relay at terminal 30. From here it is routed to the left hand end of the motor causing the step to retract. When the step has retracted you must leave go of the switch or the current will increase to about 14 amps!

