

## Troubleshooting Why Your ABS Light is On - Range Rover Classic and Discovery 1

If your ABS Light is illuminated and you are not near a dealer or other diagnostic equipment, you can use the blink method to determine what is causing the fault. First locate and remove the ABS Warning Light Relay from the group of relays underneath the seat (consult owner's guide for specific vehicle location, if needed). Then, find the blue 4 pin connector under the front of the driver's seat on the RR (or under the black, cardboard lower dash on the Disco-1) and jumper the black to black/pink wire with the key on – a paperclip will work.

**ATTN:** Only pre OBDII Disco's had the blue 4-pin connector. All OBDII Disco I's you have to jump terminals 5 and 15 on the data link connector. The data link connector is where you would plug in your scanner to read engine codes.

Jumper together terminals 5 and 15 with a paper clip and with the ignition in the on position I, read the blink *codes*.

If you remove the paper clip while reading the code, it will erase that code. So that's what I did, read and erase each code, one at a time. Took for a test drive, light went out, all is well.

The ABS light will first flash a long then short blink to indicate the system is in diagnostic mode. Then you will start to get a flash sequence. Don't panic cause the code will repeat. There will be a set of flashes then a pause then another set of flashes then a long pause then it will repeat that code 2 more times. You are counting two sets of flashes (i.e. blink, blink, pause, blink, blink, blink, blink, blink, blink would be code 2-6 or "Stop Light Switch Fault...see codes below.) To clear the code...you need to remove the jumper during the flash sequence.

Note: You may have more than one code to clear so don't panic if you clear the code and another sequence begins. It will continue to flash the code(s) until it has been displayed then the ABS light will stay on. Turn the key off then back on & reinsert the jumper to go to the next code. If you are not sure of a code just leave the jumper in & cycle the key on & off to restart the sequence. Write down each code as you go & erase each one by pulling the jumper during the blink sequence to erase that code. When you pull the jumper, allow the sequence to finish. The ABS light will stay on after the code has finished blinking. Let me know if you need any more help or if you need to know what the codes mean.

The ABS code series always starts with the following sequence of 1 long, 1 short, pause 1 long, and 1 short. It then goes into displaying the codes. Every code starts with 2 pulses on (2.5s each) and then a series of pulses which are the rest of the code.

Codes:

2-12 Front Right

2-13 Rear Left

2-14 Front left

2-15 Rear Right

Reason: Too large an air gap, or sensor has been forced out by exciter ring – try tapping sensor back into place.

5-12 front right

5-13 rear left

5-14 front left

5-15 Rear Right

Reason: Sensor wire has an intermittent fault – check connection(s).

6-12 front right

6-13 rear left

6-14 front left

6-15 rear right

Reason: no output from sensor. Sensor may have too large an air gap. Try tapping in sensor(s), check connections.

4-12 Front right

4- 13 rear left

4- 14 front left

4- 15 rear right

Reason: Wiring to sensor is broken or sensor resistance is too high. Inspect wiring at sensors.

2-6 Stop light switch

Reason: Faulty switch or wiring. Replace brake light switch.

Code 2-7: Continuous supply to the ECU with the ignition off. Faulty valve relay or wiring.

Code 2-8: No voltage to ABS Solenoid valves. Faulty valve relay or wiring.

Codes 3-0 to 3-9: Open circuit or connection from ECU to solenoid valve in booster, or in ECU.

Codes 4-0 to 4-9: Short circuit to earth from ECU to solenoid valve in booster.

Codes 5-0 to 5-9: Short circuit to 12 volts in connection from ECU to solenoid valve in booster. Possible earth fault.

Codes 6-0 to 6-9: Short circuit between two connections from ECU to solenoid valve in booster.