

Landice L-Series Treadmills Error Codes

OS or O5 Error on Landice L-Series Treadmills

Probable Cause

An OS or O5 error on the Landice L-Series treadmills, such as the L7, L8 and L9, indicates an over speed condition and this occurs when the actual speed of the running belt is faster than the set speed. The possible causes for an overspeed, OS or O5, error are:

- A) User weight is over 200lbs, treadmill elevation is set between 10% and 15% grade and speed is set between .5 mph and 3 mph
- B) User is pushing against treadmill belt causing it to go faster than the set speed
- C) Defective lower board or misaligned speed sensor
- D) Maladjusted speed potentiometer

Corrective Action

A) Gravitational force will enable the user's weight to move the treadbelt faster than the set speed. The speed sensor will pick up this increase in flywheel speed and sends this information up to the display electronics. The microprocessor will then compare the actual speed to the displayed speed, determine a runaway speed condition and shut the treadmill down. An overspeed will display in the window. This is a safety feature built into all treadmills that utilize closed loop speed circuitry.

The way to address an over speed condition due to gravity is have the user decrease elevation below 10% or increase the speed.

B) Similar to the gravitational force, a user can be holding onto the handrails and pushing the running belt in such a manner where they are using the treadmill like a manual machine rather than a motorized one. User needs to set speed compatible for their actual walking or jogging speed so they are not pushing the belt.

C) It's possible a blown motor control board is the problem. This occurs more frequently with PWM drives than SCR drives. However, this problem is becoming rare due to the PWM circuitry which senses this condition and shuts itself down before the drive motor receives any DC voltage at all. This means you'll get an LS or L5 error if your PWM is blown, not an OS or O5 error. This is a safety feature on all Landice home treadmills with PWM motor control boards. The SCR motor control boards also have internal protection to prevent an over speed condition from occurring due to an internal component failure. In the rarest of cases, on home treadmills, a faulty relay board can cause an OS or O5. To verify this, using a digital voltmeter, with treadmill turned on, measure the DC voltage between the V+ and P1 on the PWM board. The reading should be between 6-7 VDC. Also measure the DC voltage between P1 and P2 on the PWM board. The reading should be between 0.5 VDC and 6-7 VDC. If either of these voltages measure zero, replace the relay board.

D) Get into Open Loop Speed mode and check the speed. Adjust pots as necessary to bring up correct speed for max and min.

CE Error on Landice L-Series Treadmills

Probable Cause

A CE error on the Landice L-Series treadmills such as the L7, L8 and L9 indicates a communication error. Causes for this error are:

- A) Failure of upper or lower board
- B) Faulty cable/harness connection

Corrective Action

- A) Replace upper or lower board if necessary.
- B) Inspect cable/harness between upper and lower board. Reset connection if necessary. Replace cable/harness if necessary.

PO Error on Landice L-Series Treadmills

Probable Cause

A PO or Pot Out error on the Landice L-Series treadmills such as the L7, L8 and L9, indicates the elevation system is not functioning or the elevation potentiometer is out of range. Causes for a PO or Pot Out error are:

- A) Elevation potentiometer is out of calibration
- B) Faulty upper display board

- C) Faulty pwm/relay board
- D) Faulty elevation motor

Corrective Action

A) Confirm elevation system works properly in diagnostics mode. If so, calibrate the elevation potentiometer.

B) If elevation system does not work properly in diagnostics mode, determine which button or direction has the problem.

Do this by disconnecting the elevation motor from the relay board. Hold the UP button on display and verify if the UPSW light on the relay board is lit. Hold the DOWN button on the display and verify if the DNSW light on the relay board is lit.

If neither lights were lit when corresponding button was held, then inspect the orange (UP) wire and the purple (DOWN) wire on both the wire connector on the relay board and the wire connector on the upper display board for loose connections or pushed pins. If all harness connections are intact, then replace the upper display board.

C) If elevation system does not work properly in diagnostics mode, determine which button or direction has the problem.

Do this by disconnecting the elevation motor from the relay board. Hold the UP button on display and verify if the UPSW light on the relay board is lit. Hold the DOWN button on the display and verify if the DNSW light on the relay board is lit.

If both lights were lit when corresponding button was held, then again hold the UP button on the display and verify if the yellow UP light on the relay board is lit and then hold the DOWN button on the display and verify if the yellow DN light on the relay board is lit. If neither the yellow UP or the yellow

DN lights on the relay board are lit when corresponding button is pressed on display, then replace the pwm/relay board combo.

If both the UP and DN lights on the relay board light up simultaneously when either button is pressed on the display board then replace the pwm/relay board combo.

D) If the UPSW light on the relay board and the DNSW light on the relay board both lit when their corresponding UP or DOWN buttons were pressed on the display and both the yellow UP light on the relay board and the DN light on the relay board both lit as their corresponding UP or DOWN buttons were pressed on the display but the elevation system still is not functioning, inspect the black (UP) wire and the red (DOWN) wire on the 6 pin elevation motor connector to the relay board. If connections are intact, replace the elevation motor.

LS Error on Landice L-Series Treadmills with No Belt Movement

Probable Cause

A LS error on the Landice L-Series treadmills can also look like L5 and this error code means there is a loss of speed signal. If this error occurs with no belt movement, the causes for the LS or L5 error are:

- A) Faulty upper display board or faulty relay board
- B) Improper speed control wiring
- C) Improper motor control wiring
- D) Worn or faulty motor brushes
- E) Faulty pwm/relay combo board or faulty drive motor

Corrective Action

A) Enter Open Loop Speed mode and set treadmill speed to confirm proper line voltage to pwm board and that the green BELTSW light is lit on the relay board. Replace upper display board or relay board if necessary.

B) Inspect speed control wiring and correct wiring if necessary:
Checking purple wire from V+ on pwm board to P3 on the relay board

Checking orange wire from P1 on pwm board to P1 on the relay board

Checking brown wire from P2 on pwm board to P2 on the relay board

Confirm P3 on pmw board has no connection

C) Inspect motor control wiring, checking wires from motor to A+ and A-. Correct wiring if necessary.

D) Inspect motor brushes verifying brushes slide freely, are at least 3/8" long, are curved and have no burns or cracks. Also check the brush springs and verify that the brush copper wire is not burned or broken. Replace both motor brushes if necessary.

E) Inspect motor turns and is not seized up or has a broken shaft. Replace motor if necessary. Also verify at least 90VDC present from the black (A+) wire and white (A-) wire from the pwm board to the drive motor. If voltage is present, replace pwm/relay combo board. If no voltage present, replace drive motor.

The following codes apply only to mills with SCR Control boards

CE- Communication Error resulting from upper/lower board failure or harness connection problem.

When in Diagnostic mode and an error is detected the following codes will appear:

ERR 1- Upper board Ram error. Replace board.

ERR 2- Upper board ROM error (try replacing E Prom)

ERR 4- Upper Board NVRAM error. Replace board

ERR 8- Upper board serial port pin error (check harness connections)

ERR 16- Communication Error

Note: If two or more errors are detected, the code will be the sum of the individual error

codes. Example: Err 12= Err 8 + Err 4