

Procedure 5.2 - Troubleshooting the Incline System

Incline System Description:

The incline system on these units consists of an AC line voltage driven incline motor (120 Vac or 240 Vac), and an internal 1 K Ω potentiometer for incline position identification. The incline motor contains two motor windings, one to operate the motor in an “upward” direction and the other to operate the motor in a “downward” direction. As the incline motor is operated, the motor also rotates the potentiometer via an internal gear system. Therefore, the position of the incline system can be determined by monitoring the value of the internal potentiometer. The incline motor is initially set at a known starting position (calibration, See Procedure 4.1), subsequent motor movement is tracked via the potentiometer resistance reading.

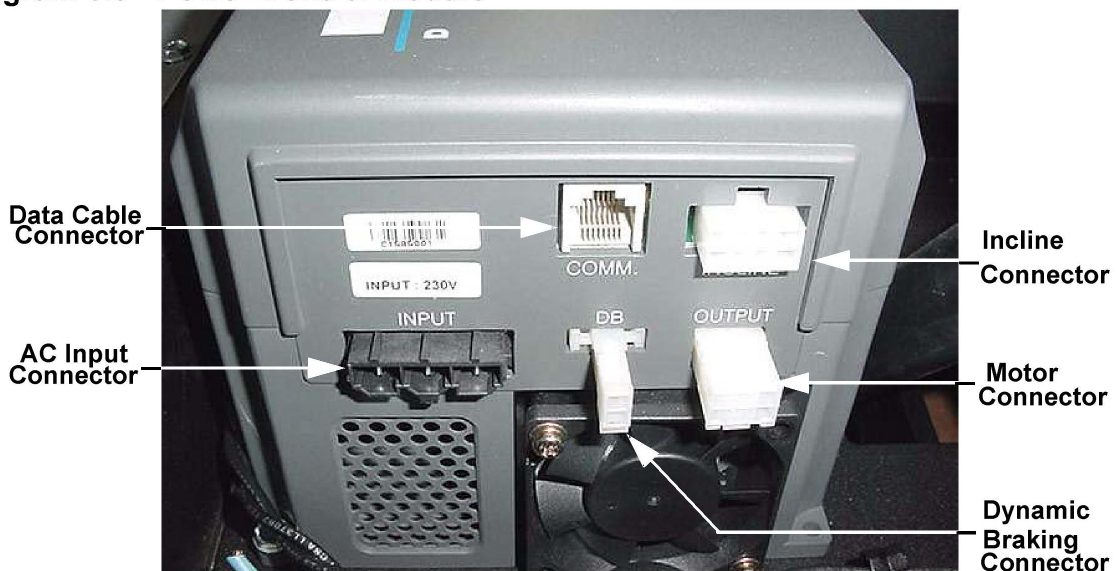
Note:

All resistance measurements must be performed with power removed from the treadmill. Performing resistance measurements with voltage applied may damage your ohmmeter.

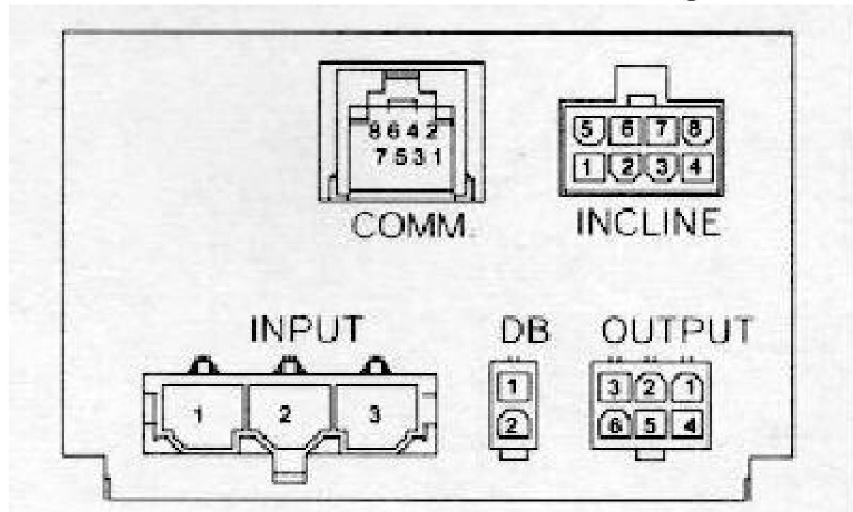
Procedure

1. If the incline motor operates but creates a incline error (error 40 or 42) go to step 14. If the incline motor will not move continue with step 2.
2. Set the treadmill's on/off switch in the “on” position.

Diagram 5.3 - Power Control Module



3. With the incline below 15%, connect an AC voltmeter between terminals 1 & 6 of the **INCLINE** connector. See Diagrams 5.3 and 5.4. Set the treadmill in the manual program and press the **INCLINE ▲** key. The AC voltmeter should read AC line voltage (either 120 Vac or 240 Vac). Note that the AC line voltage reading will only be present before an error condition is displayed.

Diagram 5.4 - Power Control Module Connector Numbering

4. If the incline moves normally skip to step 7.
5. If the display indicates that the incline should be moving and the incline motor does not move and AC line voltage is present, skip to step 12.
6. If the display indicates that the incline should be moving and the incline motor does not move and AC line voltage is not present, replace the power control module.
7. With the incline above 0%, connect an AC voltmeter between terminals 1 & 5 of the **INCLINE** connector. See Diagrams 5.3 and 5.4. Set the treadmill in the manual program and press the **INCLINE ▼** key. The AC voltmeter should read AC line voltage (either 120 Vac or 240 Vac). Note that the AC line voltage reading will only be present before an error condition is displayed.
8. If the incline moves normally skip to step 11.
9. If the display indicates that the incline should be moving and the incline motor does not move and AC line voltage is present, skip to step 12.
10. If the display indicates that the incline should be moving and the incline motor does not move and AC line voltage is not present, replace the power control module.
11. The incline is moving normally in both directions, there is either is not an incline problem or the problem is intermittent. Intermittent problems are often caused by poor connections or wiring problems.

12. Set the treadmill's on/off switch in the "off" position. Visually inspect the incline motor's wiring and connector for any broken or improperly crimped connections. With an ohmmeter, measure between terminals 1 & 5 and 1 & 6 of the **INCLINE** connector. Both readings should be approximately 12Ω . If either reading is significantly high or open replace the incline motor.
13. If you have performed all of the procedures above and have been unable to correct the problem, call Precor customer service.
14. Set the treadmill's on/off switch in the "off" position. Remove the incline motor's connector from the **INCLINE** connector on the power control module. Visually inspect the incline motor's wiring and connector for any broken or improperly crimped connections. With an ohmmeter, read between terminals 3 & 4, 4 & 8 and 3 & 8 of the **INCLINE** connector. Terminals 3 & 4 should read approximately $1K\Omega$. The sum of the readings between terminals 4 & 8 and 3 & 8 should total approximately $1K\Omega$. If either reading is significantly high or open, replace the incline motor.
15. If you have performed all of the procedures above and have been unable to correct the problem, call Precor customer service.