

## Procedure 6.4 - Troubleshooting the Lift System (electrical)

1. If the lift motor will not move skip to step 7. If the lift motor moves and an error occurs continue with step 2.
2. Access the diagnostics program per Procedure 3.2 and proceed to the lift calibration portion of the diagnostics program. If the lift calibration number is 0 or 255 skip to step 3. Operate the lift, if the lift calibration number does not increment as the lift moves, skip to step 3. If the calibration number increments as the lift moves, recalibrate the lift per Procedure 5.3. If recalibration does not correct the problem, continue with step 3.
3. Set the C544 circuit breaker in the *off* position. Using an ohmmeter, measure between terminal 4 (brown wire) and terminal 6 (orange wire) of the P2 connector on the lower PCA. The measurement should be approximately 10 K $\Omega$ . If the measurement is open ( $\infty$ ) or significantly high or low, replace the lift motor.
4. Using an ohmmeter, measure between terminals 4 and 5 of P2 and measure between 5 and 6 of P2 on the lower PCA. The two measurements should total approximately 10 K $\Omega$ . If the measurement is open ( $\infty$ ) or significantly high or low, replace the lift motor.
5. If you have performed all of the above tests and an error still occurs when the lift motor operates, there are three parts that could cause the problem. There are not any good tests to check these parts other than substituting a known good part. They are lower PCA, ribbon cable and upper PCA. Replace only one part at a time. If the new part does not correct the problem replace the original part.
6. If you have performed all of the above tests and the lift system is still not functioning, call Precor Technical Support.
7. Set the C544 circuit breaker in the *off* position. Remove the F2 (2 amp slow blow) fuse from the lower PCA. Measure the fuse with an ohmmeter. The measurement should be 1 $\Omega$  or less. If the fuse is good, re-insert the fuse and skip to step 9. If the fuse is open ( $\infty$ ) or significantly high, replace the fuse. Before operating the lift motor it is necessary to perform a continuity test on the lift motor.
8. Remove the P2 connector from the lower board. Using an ohmmeter, measure between terminals 1 and 3 of P2, between terminals 1 and 2 of P2 and between terminals 2 and 3 of P2. The measurements should be approximately 14.5 $\Omega$ , 14.5 $\Omega$  and 29 $\Omega$ , respectively. If any of the measurements are significantly low, replace the lift motor.
9. Re-insert the P2 connector in the lower PCA. Set the C544 circuit breaker in the *on* position. Using an AC voltmeter, monitor the voltage between terminals 1 and 2 (red and white wires) of the P2 connector. Enter the manual program and press the **RAMP ▲** key. The measurement should be approximately 120 Vac (line voltage). If the voltage is present and the lift motor moves normally, skip to step 10. The voltage will only be present until such time as an error occurs. If line voltage is not present skip to step 11. If line voltage is measured but the motor does not move, replace the lift motor.

10. Monitor terminals 1 and 3 (white and black wires) of P2. Enter the manual program and press the **RAMP ▼** key. The measurement should be approximately 120 Vac (line voltage). If the voltage is present and the lift motor moves normally skip to step 12. The voltage will only be present until such time as an error occurs. If line voltage is measured but the motor does not move, replace the lift motor.
11. If line voltage is not present in both steps 9 and 10, there are three parts that could cause the problem. There are not any good tests to check these parts other than substituting a known good part. They are lower PCA, ribbon cable and upper PCA. Replace only one part at a time. If the new part does not correct the problem replace the original part.
12. If you have performed all of the above tests and the lift system is still not functioning, call Precor Technical Support.