

Situation 3

Will not tilt

Dynamic or PG through toggle

“Will not tilt, Dynamic or PG through toggle” means that when the power chair is turned on and the toggle switch using Dynamic or PG electronics is activated, the seat will not tilt. Perform the following actions in order until the problem is corrected:

1. Operate the tilt toggle switch and listen to the actuator. If the actuator runs but the tilt does not operate, replace the actuator.
2. If the actuator does not run, disconnect the three-pin connector from the toggle switch. Using a multimeter set to measure resistance, check the operation of the toggle switch by performing the following procedure (refer to figure 4.53):
 - A. Insert the positive (red) lead from the multimeter into the center pin of the connector leading to the toggle switch.
 - B. Insert the negative lead into one of the outer pins. Observe the multimeter reading. No continuity should be present.
 - C. Move the toggle switch in one direction, then the other. Continuity should be observed *in one direction only*.
 - D. Repeat steps A through C with the other outer pin.
 - E. If the continuity readings are incorrect, replace the toggle switch.
3. Disconnect the 9-pin plug from the tray of the power chair base and examine the shape of the pins. On two corners are pins that have flat sides on them. In the middle of these two pins is a round pin. These are the corresponding pins leading to the toggle switch. Using a multimeter set to measure resistance, check the wiring harness by performing the following procedure (refer to figure 4.54):
 - A. Insert the red lead into the center round pin of the connector for the toggle switch.
 - B. Insert the black lead into one of the outer pins of the same connector for the toggle switch. No continuity should be present.
 - C. Disconnect the toggle switch and repeat step B with the other outer pin. No continuity should be present.

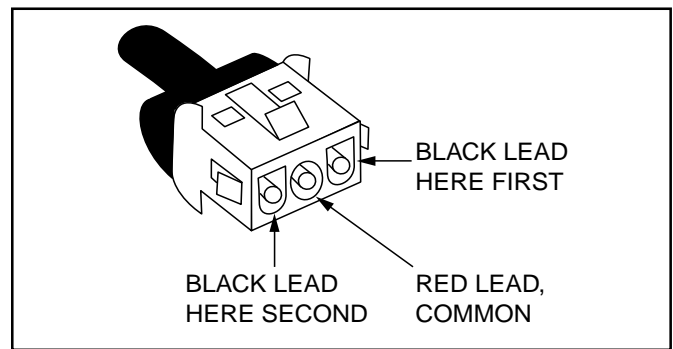


Figure 4.53. 3-Pin Connector Test.

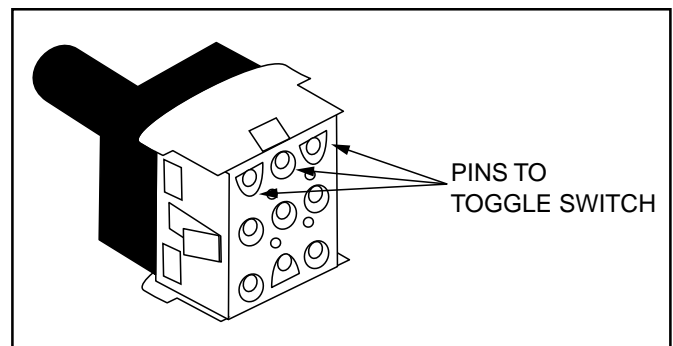


Figure 4.54. Toggle Connector Test



If continuity is observed with either outer pin, replace the main wiring harness.

4. Disconnect the plugs on the actuator. Using a multimeter set to measure resistance, take a reading through the actuator motor pigtails. See figure 4.55. Normal resistance is between 3 and 15 ohms. If the actuator reads significantly different from this, replace the actuator.



A reading of less than .5 ohms could indicate a shorted motor winding.

5. Using a multimeter set to measure 24 VDC, insert the red meter lead into the red wire in the inhibit harness leading to the actuator. Insert the black meter lead into the black wire in the same wire harness. See figure 4.56. Operate the tilt toggle switch to the up position. Note the voltage recorded on the meter. Operate the tilt toggle switch to the down position. The voltage recorded should be plus or minus 24 VDC (corresponding to the position of the toggle switch). Reconnect the actuator. If the voltage recorded during the test indicates 24 VDC, replace the actuator.
6. Locate the 15-amp fuse in the Power Take Off (PTO) harness under the shroud of the power chair that leads to the current limit box. See figure 4.57. Verify that the fuse is good. If the fuse is defective, replace it with one of the same type.
7. Disconnect the wiring harness to the actuator under the seat. Using a multimeter set to measure resistance, check continuity from the black wire leading to the actuator to the red wire leading to the actuator. See figure 4.58. If continuity is present in this test, replace the wiring harness.
8. Disconnect the PTO harness from the current limit box. See figure 4.57. Check for battery voltage at the connector. If there is voltage, replace the current limit box.

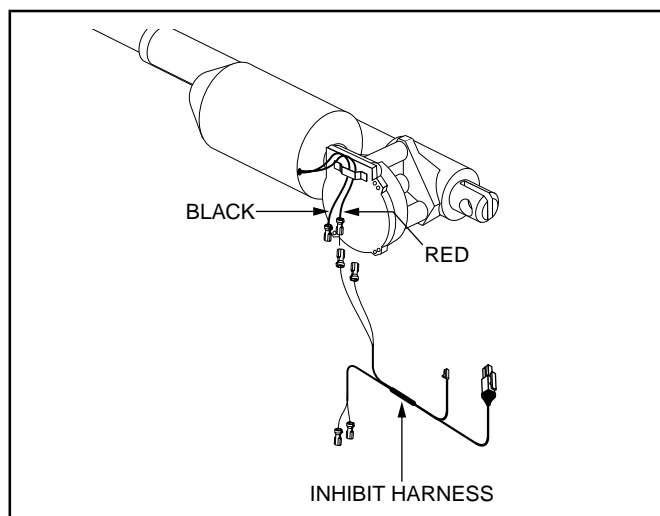


Figure 4.55. Dynamic Actuator with Harnesses

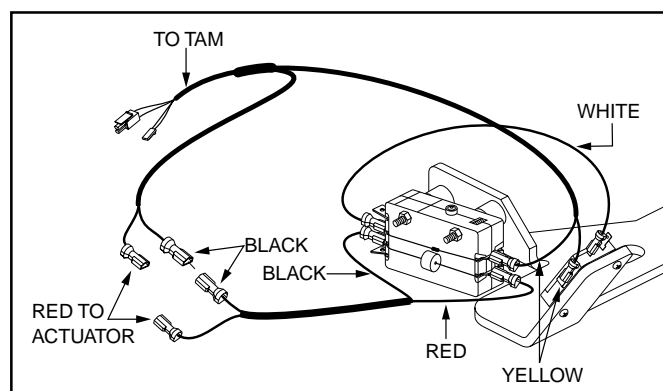


Figure 4.56. Dynamic Switch Harness Connections

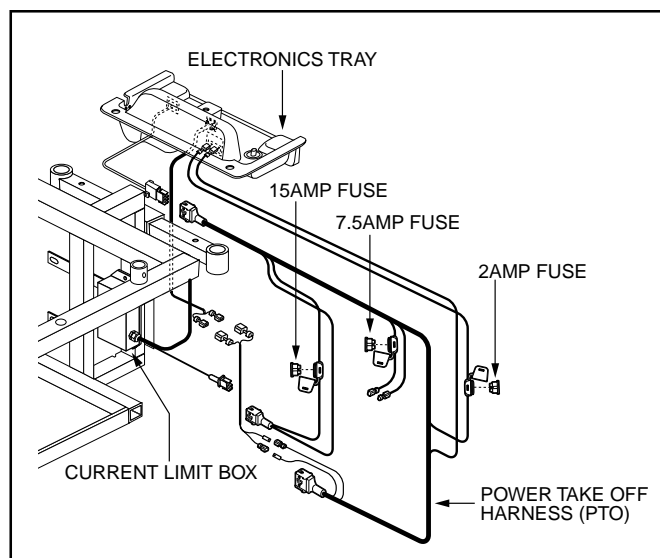


Figure 4.57. PTO Harness Connections

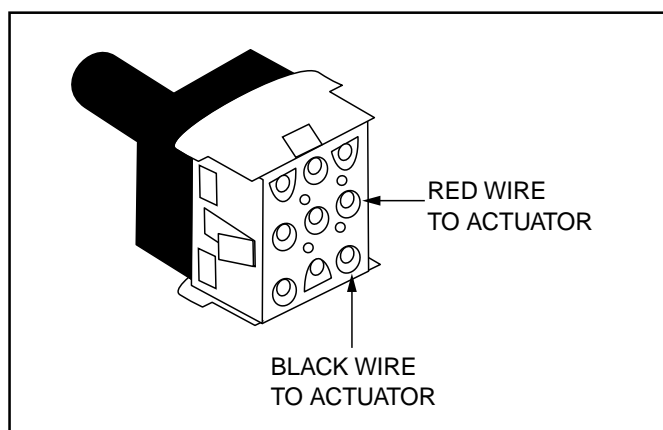


Figure 4.58. 9-Pin Connector Test