Situation 1
Will not tilt
Dynamic through joystick

"Will not tilt, Dynamic through joystick" means that when the power chair is turned on and the tilt actuator function is selected on the joystick utilizing Dynamic electronics, the seating system will not tilt. Note any fault by observing the joystick display. If a fault code is displayed, refer to Appendix B to interpret the code. Follow recommended troubleshooting procedures as indicated in the Dynamic Diagnostic section of this manual. If there is no fault code, perform the following actions in the order given until the problem is corrected.

1. Operate the mode button on the joystick until an "A" (or "tilt," on specialty controls) is displayed. Observe the tilt and listen to the actuator motor.

If the motor in the actuator runs, but the tilt does not operate, replace the actuator.

If the joystick will not display the "A" or "tilt," try reprogramming the joystick with the Dynamic Wizard program. This will enable the TAM module on the electronics. If the "A" or "tilt" still does not appear after you reprogram, replace the joystick and program it for use on the chair.

2. If the actuator motor does not run, locate the TAM module. This module will be mounted to the back of the tilt system inside a black case. On the module, you will have a status indicator light (on the TAM module, this light will be located in the letter "D" of the word DX on the module). This indicator light should be on steady. See figure 4.42.

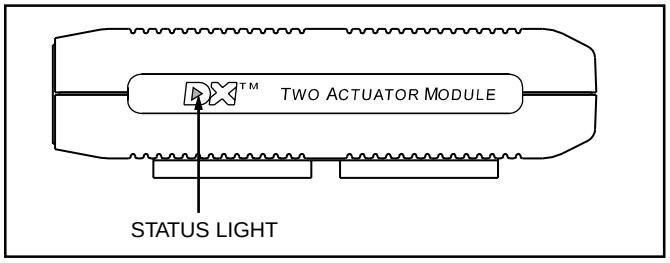

Figure 4.42. TAM Status Light Location

If the status light is flashing, replace the module.

3. If the status light is not flashing, locate and remove the two Bus cables. See figure 4.43. One Bus cable will connect the joystick to the TAM module, the other will connect the TAM module to the utility tray assembly. Set the multimeter to measure resistance and test for continuity through each pin of the Bus cable. The reading should indicate less than one ohm of resistance when measuring from pin 1 to pin 1, pin 2 to pin 2, pin 3 to pin 3, and pin 4 to pin 4 of the Bus cable. As you are performing this test, bend the cable to ensure that there is not a connection problem.

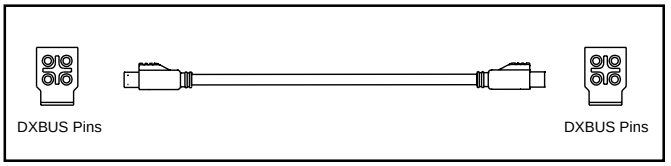

Figure 4.43. Bus Cables

If you see an "open" on any of the four pins, replace the Bus cable.

The meter reads_____ohms on pin 1
The meter reads_____ohms on pin 2
The meter reads_____ohms on pin 3
The meter reads_____ohms on pin 4

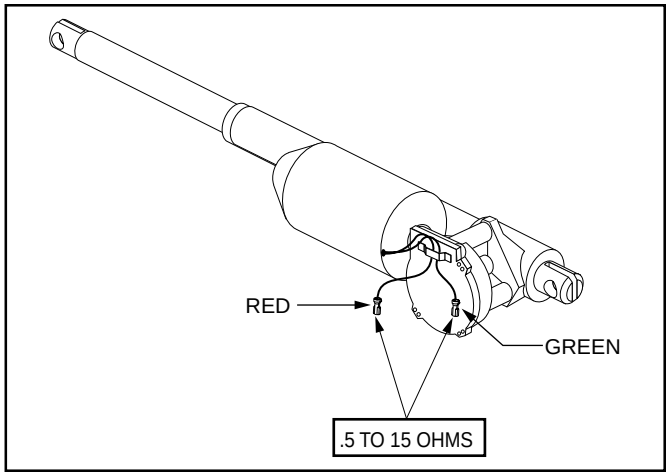

Figure 4.44. Dynamic Actuator with Harnesses

4. If the readings were within tolerance on each Bus cable, move to the actuator assembly located under the tilt system. Disconnect the red and green wires on the actuator motor. Set the multimeter to measure resistance and take a reading from the red and green pigtails of the actuator motor. See figure 4.44. You should see between .5 to 15 ohms resistance.

The meter reads_____ohms.

If the readings are outside tolerance, replace the actuator assembly.

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

5. If the actuator resistance is normal, set the meter to the DC voltage scale. Insert the leads into the versa tilt harness (these are the red and black pigtails which plug into the actuator motor pigtails) and operate the joystick to the tilt up position, the reading should be approximately 24 volts DC. Now operate the joystick to the down position and the reading should be approximately -24 volts DC. If the readings are reversed, make sure the leads are in the correct wires. See figure 4.45.

The meter reads_____volts DC.

If the voltage reading yields approximately 24 volts DC, replace the actuator assembly.

The multimeter may indicate voltage for only a second or two. Without an actuator connected, the TAM will reduce the voltage to nearly zero to protect the system. This is normal operation.

6. If the multimeter is reading less than 15 volts DC, disconnect the molex connector in port "A" of the TAM module. See figure 4.46. Set the multimeter to measure resistance and check for continuity from the molex connector to the opposite end of the harness connectors leading to the actuator (these will be red and black pigtail connectors). The reading should indicate less than one ohm of resistance. See figure 4.47.

The meter reads_____ohms.

If an "open" is indicated for either reading, replace the versa tilt harness assembly.

7. Make sure all of the harness connections are connected correctly. See figure 4.48 for correct harness installation.

8. Replace the TAM module and reconnect the actuator. If this does not correct the problem, troubleshoot the joystick using the Dynamic Diagnostic Guide in this manual.

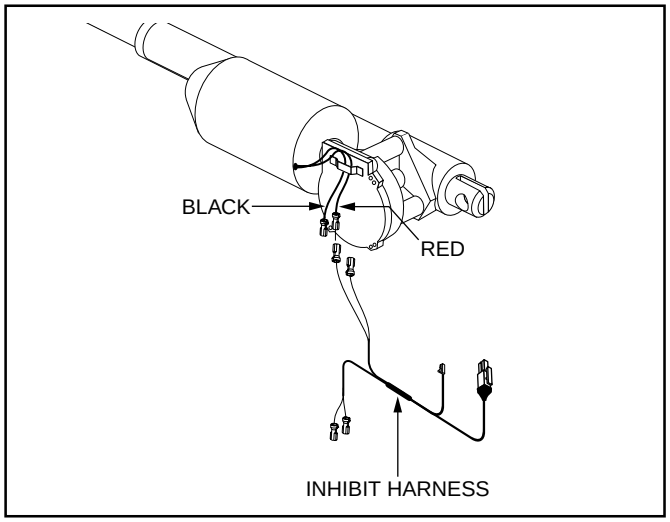

Figure 4.45. Dynamic Actuator with Harnesses

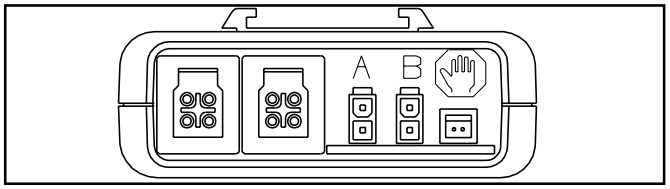

Figure 4.46. Side View of TAM Module

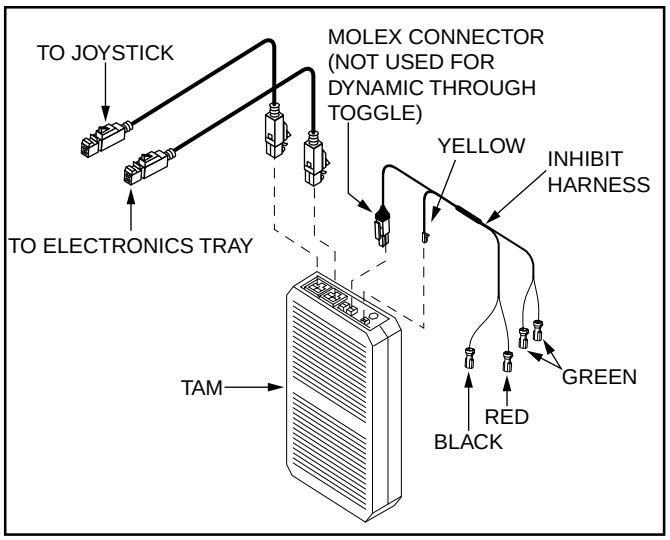

Figure 4.47. TAM with Harnesses

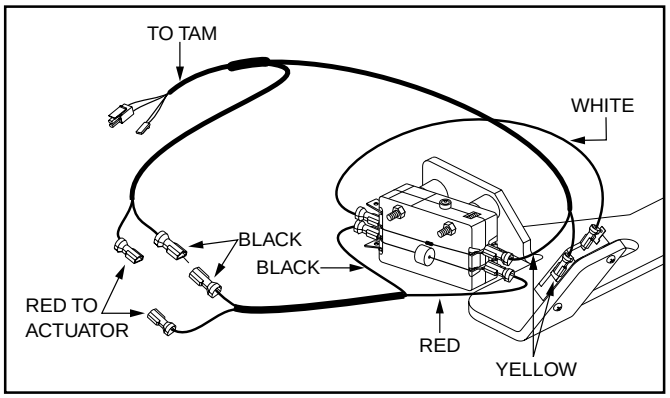

Figure 4.48. Dynamic Switch Harness Connections