

## Procedure 6.2 - Replacing the Limit Switches, Actuator Shaft or Switch Bracket

**Note:**

The limit switches and the actuator shaft are mounted on the switch bracket (see Diagram 5.1).

**WARNING**

Always turn off the circuit breaker and unplug the treadmill before you remove the treadmill hood.

**Procedure**

1. Remove the hood.
2. If you are removing the actuator shaft or switch...

**THEN...**

Skip to Step 12 (to remove the upper limit bracket switch), Step 6 (to remove the down limit switch) or Step 9 (to remove the zero sense switch).

**OTHERWISE...**

Continue with the next step.

### Removing the Upper Limit Switch

**WARNING**

When power is applied to the treadmill, the wires connected to the upper and lower limit switches carry high voltage. Turn off the treadmill and unplug the power cord from the wall outlet before you perform the following steps.

3. Carefully remove the red wires from the upper limit switch.

**Note:**

See Diagram 6.2 for limit switch wiring.

4. Remove the screws and washers that secure the limit switch to the switch bracket.
5. If you are removing more than one limit switch...

**THEN...**

Continue with the next step to remove the down limit switch or Step 9 to remove the zero sense switch

**OTHERWISE...**

Skip to Step 11.

### Removing the Down Limit Switch

6. Carefully remove the black wires from the down limit switch.
7. Remove the screws and washers that secure the limit switch to the switch bracket (see Diagram 5.1).
8. If you are removing the zero sense switch...

**THEN...**

Continue with the next step.

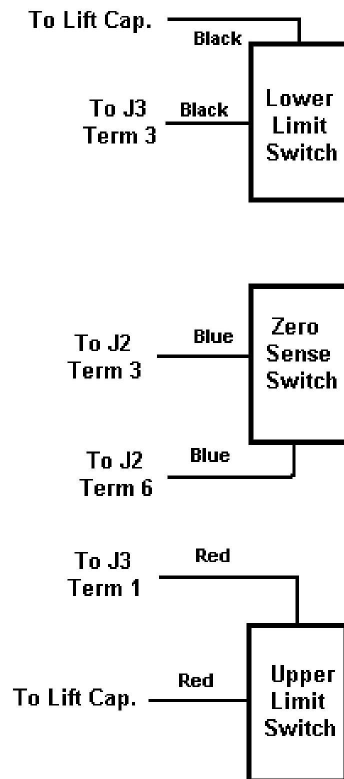
**OTHERWISE...**

Skip to Step 11.

### Removing the Zero Sense Switch

9. Carefully remove the blue wires from the zero sense switch.
10. Remove the two screws and washers that secure the limit switch to the switch bracket (see Diagram 5.1).

### Diagram 6.2 - Limit Switch Wiring Diagram



11. If you are removing the actuator shaft or switch bracket...

**THEN...**

Continue with the next step.

**OTHERWISE...**

Skip to Step 26.

### **Removing the Actuator Shaft and Switch Actuator**

12. Remove the screw that secures the switch actuator to the actuator shaft. Set aside the screw and switch actuator.
13. Remove the shoulder screw that connects the actuator shaft and actuator block to the lift platform.

**Note:**

If necessary, hold the actuator shaft with the pliers and support the actuator block firmly with your hand when you perform Step 14.

14. Unscrew the actuator shaft from the actuator block. Set aside the actuator block.
15. Slide the actuator shaft from the switch bracket.
16. If you are removing the switch bracket...

**THEN...**

Continue with the next step.

**OTHERWISE...**

Skip to Step 20.

### **Removing and Replacing the Switch Bracket**

17. Remove the socket head screws and washers that secure the switch bracket to the lift motor platform. Set aside the switch bracket.
18. Position the switch bracket at its mounting location.
19. Replace the socket head screws and washers that secure the switch bracket to the lift motor platform.

### **Replacing the Actuator Shaft and Switch Actuator**

20. Slide the actuator shaft through the switch bracket until it is positioned at its mounting location.
21. Thread the actuator block onto the lower end of the actuator shaft.

**Note:**

If necessary, use the pliers to secure the actuator block to the actuator shaft.

22. Position the shoulder screw removed in Step 13 through the actuator block and into the base of the lift platform.
23. Tighten the shoulder screw that connects the actuator shaft and actuator block to the lift platform.
24. Position the switch actuator on the top of the actuator shaft.
25. Replace the screw that secures the switch actuator to the actuator shaft.
26. If you must replace one or more of the limit switches...

**THEN...**

Continue with the next step to replace the upper limit switch, skip to step 31 to replace the down limit switch or skip to Step 35 to replace the zero sense switch.

**OTHERWISE...**

Skip to Step 38.

### **Replacing the Upper Lift Limit Switch**

27. Position the limit switch at its mounting location.
28. Replace the screws and washers that secure the limit switch to the switch bracket.
29. Connect the red wires disconnected in Step 3 to the limit switch terminals.
30. If you are replacing more than one limit switch...

**THEN...**

Continue with the next step (to replace the down limit switch) or skip to Step 35 (to replace the zero sense switch).

**OTHERWISE...**

Skip to Step 38.

### **Replacing the Down Lift Limit Switch**

31. Position the limit switch at its mounting location.
32. Replace the screws and washers that secure the limit switch to the switch bracket.
33. Connect the black wires disconnected in Step 6 to the limit switch terminals.
34. If you are replacing the zero sense switch...

**THEN...**

Continue with the next step.

**OTHERWISE...**

Skip to Step 38.

**Replacing the Zero Sense Switch**

35. Position the limit switch at its mounting location.
36. Replace the screws and washers that secure the limit switch to the switch bracket.
37. Connect the blue wires disconnected in Step 9 to the switch terminals.
38. Calibrate the lift assembly as described in Procedure 4.1 of this appendix.
39. Check the operation of the treadmill as described in Section Three of this appendix.