

Elevation Motor Replacement



**** CAUTION ****

Always turn the power switch to the off position. Unplug the treadmill power cord from the power outlet.

Tools:

- Replacement elevation motor
- Philips-head screwdriver
- Pliers
- Tap nuts, 1/2-inch (2)
- Allen wrench, 9/64 in.
- Socket wrench with 17-mm socket
- Shop hammer
- Large screwdriver or steel chisel

Procedure: Lift motor shroud

The drive motor is located below the plastic shroud at the front of the treadmill. To remove the shroud to access the motor, proceed as follows:

1. Remove the Philips-head screw at the center of the front edge of the shroud.
2. Lift up the front of the shroud, lifting from both sides to separate the Velcro strips.
3. Lift the shroud up the vertical rails as far as it can go, then suspend it using a bungee cord looped over the gooseneck rail and hooked up under the upper edge of the shroud.

Tip the Treadmill on its side

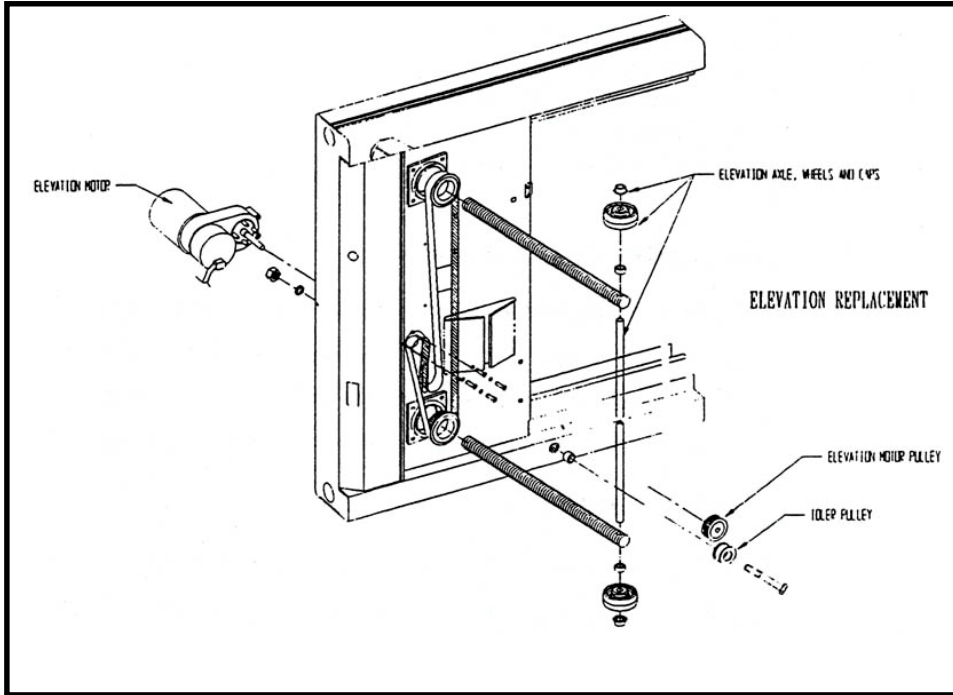
Lift either side of the treadmill and tip the treadmill on its side. This makes accessible both the elevation motor and the belt drive train below the motor plate.

Remove the Elevation Motor

1. Using pliers, remove the end cap (tap nuts) from both ends of the wheel axle at the front end of the treadmill.
2. Remove the wheels and the bushings from both ends of the axle, then remove the axle from the treadmill.
3. At the bottom of the motor plate, loosen the idler pulley-mounting nut using a 17-mm socket wrench. See **Diagram A**.

Elevation Motor Replacement

Diagram A

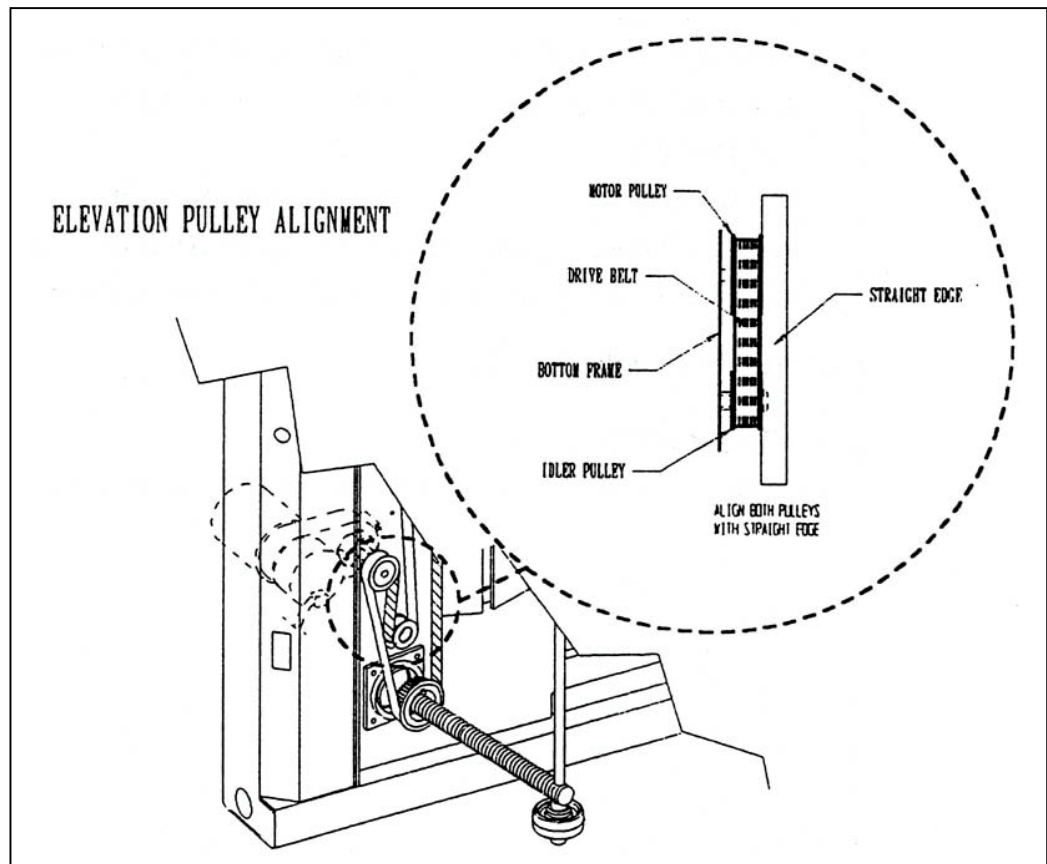


4. Slide the idler pulley in its slot to loosen the elevation drive belt, then remove the belt from the idler pulley.
5. Using an Allen wrench, loosen the screws around the drive pulley, then remove the pulley from the elevation motor shaft.
6. At the Motor Control Board, disconnect the elevation motor cable from connector J5.
7. At the upper surface of the motor plate, remove the four screws that hold the elevation motor to the motor plate. Use a 9/64-inch Allen wrench.
8. Remove the elevation motor from the treadmill.

Elevation Motor Replacement

Replacement the Elevation Motor

1. Position the elevation motor in its mount. Be sure to hold the motor's electrical cable closely against the motor to prevent its being pinched between the motor and the treadmill frame.
2. Replace and tighten the four screws that hold the elevation motor to the motor plate. Use a 9/64-inch Allen wrench.
3. Connect the motor cable connector to the connector J5 on the Motor Control Board.
4. At the bottom of the motor plate, replace the drive pulley on the motor shaft.
5. Check vertical alignment of the drive pulley, idler pulley, and right hand elevation screw bearing. To do this, rest a straightedge on the pulley and the bearing faces, then position the drive pulley on the shaft until alignment is achieved. **See Diagram B.**



Elevation Motor Replacement

6. Tighten Allen screws in the drive pulley, taking care to preserve the alignment achieved in the preceding step.
7. Place the drive belt over the idler pulley.
8. Slide the idler pulley tightly against the belt, then finger tighten the mounting screw on the idler pulley shaft.
9. Manipulate the drive belt so that it is flush with the inside surface of all pulley flanges and the right-hand drive screw bearing.
10. Tighten the idler pulley mounting nut $\frac{1}{4}$ to $\frac{1}{2}$ turn.
11. Using a large screwdriver or steel chisel, and a hammer, tap the middle of the idler pulley shaft sharply to drive the pulley against the belt.
12. If you have a belt gauge, measure belt tension. Adjust tension until the gauge indicates 50 to 60 pounds, then tighten the idler pulley mount nut. If you have not suitable belt gauge, pinch the sides of the belt together, using strong thumb and finger pressure, in the middle of the belt length. The sides of the belt should not quite touch. Re-adjust belt tension if necessary loosening the idler pulley mounting nut, then repeating the preceding steps **11** and **12** until correct belt tension is achieved.
13. Re-install the wheel axle, align with bushings, wheels, and *new* tap nuts.

Set the Treadmill Upright

Test Treadmill Operation

After you have completed replacement of the elevation motor, perform a complete system test.