

TROUBLESHOOTING THE DRIVE TRAIN

If you hear a grinding or clicking noise, or experience excessive vibration during exercise, or if the steps are not functioning properly, you probably have a problem in the drive train. Attempt to isolate the problem area by performing the following tests in precisely the order listed below. Refer to the "Parts Removal and Replacement" Section of this Manual for all disassembly and assembly instructions.

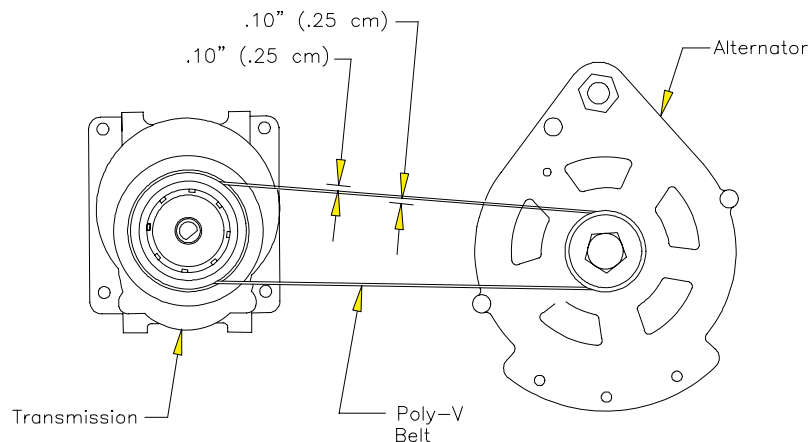
1. Unplug the power supply from the AC wall outlet and remove the side covers.



WARNING

TO REDUCE THE RISK OF INJURY, DO NOT OPERATE THE MACHINE WHILE THE SIDE COVERS ARE REMOVED. DO NOT ROTATE THE STAIRS WHILE ANYONE'S HANDS ARE INSIDE THE MACHINE.

2. Check the condition and the tension level of the Poly-V belt. Replace the belt if it is excessively worn.
 - a. Adjust the tension level so that you can deflect either side of the belt $1/10$ " (0.3 cm) at the center between the alternator and the transmission pulleys (See Drawing Below). Noise can be generated by a belt that is too tight or too loose.



- b. If the noise is still present, remove the Poly-V belt and rotate the staircase without standing on it. With the Poly-V belt removed, the staircase will rotate very quickly.
- c. If the noise no longer exists, replace the alternator.



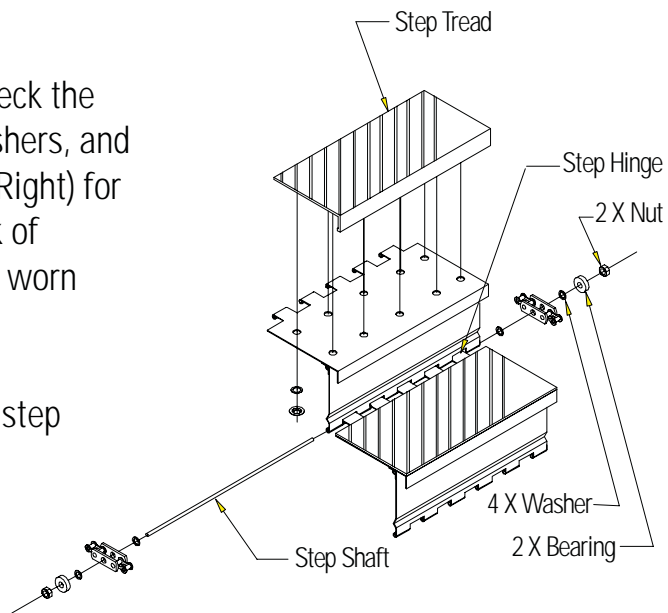
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3. Check the condition of the alternator.
 - a. Unplug the alternator from the relay board and remove the Poly-V belt.
 - b. Spin the alternator pulley with your fingers. It should spin freely and remain spinning for at least one and one-half revolutions. If it does not spin as it should, the bearings may be bad and the alternator should be replaced.
 - c. If the pulley does spin freely, check the alternator for noise, roughness, or the presence of black powder inside the alternator or near the outside of the case. If any of these conditions exist, the brushes may be bad and the alternator should be replaced.
 - d. Reconnect the Poly-V belt and adjust the belt tension.
4. Check the drive chain mechanism. Rotate the stairs and look for chain links that do not flex as the chain travels over the sprockets. If the links are frozen or sticking, replace the chain.
5. Check the transmission.
 - a. Rotate the steps by hand and listen for the noise.
 - b. If you hear the noise, remove the drive chain and the Poly-V belt. Rotate the steps by hand again and listen for the noise. If the noise has gone away, replace the transmission.
6. Check the step chain assemblies.
 - a. Have your assistant slowly exercise on the machine. Observe the staircase. If the staircase moves to the left or right during exercise, ensure the set screws in the bearing adjusters are tight.
 - b. Rotate the stairs and look for chain links that do not flex as the chain travels over the sprockets. If the links are frozen or sticking, replace the chain.

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7. Check the condition of the upper and lower sprocket assemblies. Replace the sprocket assembly if it is worn excessively, has broken teeth, or if it is bent.
8. Check the alignment of the upper and the lower sprocket assemblies. The outside face of the upper and lower sprockets should be 1-11/16" (4.3 cm) from the outside edge of the left frame rail. Loosen the nuts on the pillow block bearing collars and tighten or loosen the bearing adjuster set screws until the distance to both sprockets is correct. Tighten the pillow block bearing nuts and verify the distance.
9. Check the step assembly.

- a. Rotate the steps and check the hinges, step shafts, washers, and bearings (See Figure to Right) for wear, corrosion and lack of lubrication. Replace any worn parts.
- b. Ensure the nuts at each step shaft end are tight.



10. Reinstall all parts. If the problem still exists, contact the Customer Service Department at 800-331-3578 for further assistance.

PARTS REMOVAL AND REPLACEMENT

COVERS



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There are five covers on the machine: two side covers, a back cover, a bottom cover, and a top cover. The side covers overlap the top cover. The side covers must be removed before the top cover and/or the bottom cover can be removed.

All covers are held in place with reusable plastic fasteners (refer to Figure 5 for their location). To remove the fasteners, slide either end of the fastener removal tool under the edge of the pin head (refer to Figure 6). The pin should not be removed. Pull the cover away from the frame. Do NOT use the fastener removal tool or any other sharp tool to pry out the fastener base because you may damage the covers - use the fastener removal tool to remove the pin.

To reinstall the fastener, insert the base of the fastener through the cover and into the frame. When the base is in place, push the pin in all the way to secure the fastener.

Side Covers

1. Remove the 14 fasteners on each side cover.
2. Pull the cover away from the frame.

Top Cover

1. Remove both side covers.
2. Lift the top cover away from the frame.
3. Set the top cover in place. Secure the side covers to complete reinstallation.