**Helix Lateral Trainer Service Instructions** 

Topic: Excessive Resistance – Pedals Barely Rotate or Won't Rotate

**Applies to HLT2500, HLT3000, HLT3500** 

Date: 8-9-2018

Situation: People report excessive resistance. Pedals won't rotate or barely rotate.

**Overview:** This situation can have a few causes. These instructions are designed to help determine the cause quickly. Please follow instructions in order. Then test the unit operation. Continue the process until the issue has been pinpointed.

0. Is the unit quiet during use? If it is quiet, go to step 1. If the unit makes noise, try step 1 but also use your ears to pinpoint the source of the sound. The source of the noise might also be the cause of the resistance.

1. Check the lower control board (HLT2500, HLT3000, HLT3500).

Disconnect the alternator wires (red, black, white) on the lower control board. Try to rotate the pedals again. Is the resistance normal now? If so, replace the lower control board.

2. Check drive belts.

Are drive belt or belts stuck or are they aligned properly? Slightly loosen the drive belt or belts. Does that reduce resistance? If so, adjust belt tension just to the point that belts don't slip during use.

3. Check the jack shaft pulleys (HLT3500 only).

Remove the belts from the jack shaft pulleys. Spin each pulley. Each pulley should spin easily. Being difficult to spin, spinning roughly, making noise, or the presence of metal shavings indicates bad bearings.

4. Spin the alternator (HLT2500, HLT3000, HLT3500) or flywheel (H1000, H1000 Touch).

It should spin freely, without sound. Bad alternator bearings often squeal and vibrate oddly. Alternator/flywheel bearing failure is rather rare.

5. Inspect crank arms.

Excessive looseness around the bearing, grease, or metal shavings can indicate crank arm bearing failure. Remove the crank arm, rotate the other arm, and see whether the resistance is now normal. If resistance becomes normal when one crank arm is removed, then that removed crank arm would be the culprit.

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To double check, spin the crank arm with your hand. The crank arm bearings should spin smoothly.

If that crank arm seems good, secure it back onto the unit. Remove the other crank arm and test operation as above.

6. Inspect the main shaft bearings.

There are two main shafts on each unit, one on the left, the other on the right. These shafts run through the body of the product. Bad main shaft bearings can grind and create metal shavings.

Lift the crank arm while watching the main shaft. Space around the main shaft can indicate main shaft bearing failure.

Another way to determine whether the left or right shaft has an issue is to remove one gear. That allows you to spin each shaft alone and compare it to the other side. Does one shaft get caught or not spin freely?

For questions or suggestions, please contact <a href="mailto:bob@helixco.com">bob@helixco.com</a>, (617) 710-8638. Thank you.