

Soft Foot Check:

This is a good time to inspect the motor for “soft foot”. Soft foot is defined as one or more of the motor feet that are not co-planar with the other feet. Either a foot is longer or shorter than the others, or one or more motor feet are bent. This condition, if left uncorrected, can lead to misaligned motor bearings, electrical and mechanical vibrations, hot operating conditions and bearing failure.

With an equal amount of shim under each foot, loosen all the motor foot bolts and verify that all the shim packs are tight. If one shim pack is found to be loose, add shim material until it is tight, then retighten all the foot bolts. Loosen one of the foot bolts and inspect the gap between the foot and the base with feeler gauges. Retighten that foot.

Record the results and repeat this step on the other three feet. Readings in excess of 0.005” should be corrected. An un-even gap around one foot indicates a bent foot condition exists and requires correction by machining or “step-shimming”



Soft-Foot Check Using Feeler Gages

Sheave Installation and Inspection:

Retighten all the motor feet bolts and assemble the sheave on the motor shaft in accordance with the manufacturers recommendations.

Check the sheaves for wear using a sheave gage tool. Select the proper gage for the sheave and place the “V” in the belt groove. Using feeler gages, measure the gap between the edge of the “V” and the belt groove. A gap in excess of 1/32” (31 mils) indicates the sheave is worn out and needs to be replaced. The top of the sheave gage should not touch the top of the sheave. A gap of The sheave should be checked in several places around it’s diameter. Multiple belt sheaves should be checked in each groove.

Use a dial indicator on the face of the sheave while tightening the taper lock bushing bolts. Adjust the bolts to obtain a sheave face TIR of less than 0.0005” (0.5 mils) per inch of sheave diameter. (Using the above numbers, a 10” diameter sheave should have an axial TIR of less than 0.005”) The closer the Axial TIR is to zero, the better the alignment results will be.

