SPEED REDUCER MAINTENANCE

The Speed Reducer is assembled with sealed, self-lubricating bearings. There is no need for the user to lubricate them. Also, the cap screws (14) used to provide tension to the belts are preset at the factory and should not need adjusting, though you should periodically check the setting.

To check the Speed Reducer's belt tension setting:

1. For each of the two tension adjusting cap screws (14), measure the distance between the inside edges of the two washers (15). The distance should ALWAYS measure **27/32"**.
2. If the distance is off, use a 3/16" Allen wrench to adjust each of the two tension adjusting cap screws (14) to exactly **27/32."**

MAINTENANCE CHART

Every 10 hours or monthly	Clean the external housing thoroughly. Make sure all four cap plugs (8) are installed.
Every 50 hours or every 6 months	Check belt tension. Adjust according to above instructions, if needed.

TROUBLESHOOTING GUIDE

Problem	Possible Causes	Solution
No power at Speed Reducer	•Reducer not properly coupled to headstock. •Coupler setscrew not properly tightened. •Mark V headstock spindle not turning.	•Properly couple Reducer to headstock. •Properly tighten setscrew. •Remove Reducer and refer to your Mark V Owners Manual.
Speed Reducer stalls	•Loose setscrew in coupler. •Reducer not properly coupled to headstock. •Belt in Reducer has broken. •Belt in Mark V headstock has broken. •Belt slippage due to wear in Mark V headstock. •Belt slippage due to wear in Reducer. •Excessive work load caused by dull or improper cutters.	•Proper tighten setscrew. •Properly couple Reducer to headstock. •Replace belt in matched set only. Contact Customer Service or nearest Shopsmith Showroom. •Replace belt. Refer to Mark V Owners Manual and contact Customer Service or Shopsmith Showroom. •Properly tension belt. Refer to Mark V Owners Manual. •Properly tension according to above. •Sharpen cutters and/or select proper cutters.
Inacurrate drilling or boring	•Assembly hardware is loose. •Misalignment of Reducer •Deflection of table due to excessive drilling force (improper speed and/or feed rate for cutter and/or material being drilled).	•Properly tighten hardware. •Properly align Reducer. Refer to ths Owners Manual. •Select proper speed and feed rate for cutter and material during drilling or boring.
Excessive vibration	•Loose hardware at quill clamp (4) or support bracket assembly (31).	•Properly tighten hardware.
Burning of workpiece and/or cutter	•Dull cutters. •Improper speed and/or feed rate for cutter and/or material of workpiece.	•Properly sharpen cutters. •Select proper feed and speed rate for cutter and/or material of workpiece.