Mill Spindle Inspection Report

Technician		**Cell#**	
Serial Number		**Date**	
Model			

Why is the Spindle being replaced?

1a. What is the symptom?	Noise ☐ Exceeds 140 °F ☐ Seized ☐ Other ☐
1b. When does the symptom occur?	spindle running ☐ intermittently ☐
2. Is the spindle physically damaged?	yes ☐ no ☐

3. Other - Describe the issue:

Mandatory Troubleshooting

Lubrication	
4. Are there leaks around the sight glass?	yes ☐ no ☐
5. Did you see 1 to 3 drops of oil during the oil pump cycle?	yes ☐ no ☐
6. Is the lube line for the spindle loose or not fully seated in the fitting? **If yes, the following must be answered for a replacement spindle.**	yes ☐ no ☐
6a. Was the lube line hanging freely inside the head, not fully seated in the fitting, or has any part been damaged?	yes ☐ no ☐
6b. If you answered yes to 6a **pictures and video must be submitted**. If the line was loose a good video of you pulling on the line must be submitted. If damaged good pictures or video must be submitted.	Done ☐ n/a ☐
6c. Have you taken good picture or video of where you found the oil in the spindle head and the condition of the oil?	Done ☐ n/a ☐
6d. Is the cut on the end of the lube line straight? It must be straight for a proper seal with the fitting.	yes ☐ no ☐
Spindle Condition	
Inline Spindles	
7. Has the spindle motor alignment been verified?	yes ☐ no ☐
8. Has the NCE gap been reset with the correct shim?	yes ☐ no ☐ Shim dimension Value: Axial Alignment Value: Radial Alignment Value:
Belted Spindles	
9. Is the drive sprocket/belt in good condition?	yes ☐ no ☐
10. Is the encoder sprocket/belt in good condition?	yes ☐ no ☐
11. Has the belt tension been verified?	yes ☐ no ☐
Inline & Belted Spindles	
12. Look through the alarm history is there any Z-Axis servo Errors alarms generated?	yes ☐ no ☐
13. Has a vibration test been performed? If no, run a test and attach to service notification.	yes ☐ no ☐
14. Has a motor only vibrations test been performed? If no, run a test and attach to service notification.	yes ☐ no ☐
15. Has the spindle been balanced? If no, balance the spindle.	yes ☐ no ☐
16. Is the TSC union or coolant collector making noise?	yes ☐ no ☐
17. Is the spindle taper in good condition?	yes ☐ no ☐
18. Is the spindle fan working?	yes ☐ no ☐
19. Is the spindle fan vibrating?	yes ☐ no ☐
20. On machines equipped with TSC. Did you performed a Vibration analysis with the TSC Union/Adapter removed?	yes ☐ no ☐
21. Has the spindle to toolchanger alignment been verified?	yes ☐ no ☐
HSK Spindle Only	
22. Has the push out been verified?	yes ☐ no ☐
23. Has the grippers been greased? If yes, what grease is being used?	yes ☐ no ☐ value:
Drawbar Condition	
24. Has the drawbar clamp force been checked? If yes, what is the force value?	yes ☐ no ☐ value:
25.If the spindle is belted with a carbide drawbar has the face runout been verified? If yes, what is the value?	yes ☐ no ☐ value:
26. What is the drawbar shaft runout?	value:
27. Are the ball bearings and drawbar cup in good condition?	yes ☐ no ☐
Tool Holders Condition	
28. Are the pull studs in good condition?	yes ☐ no ☐
29. Have the pull studs been torqued to spec?	yes ☐ no ☐
30. Are the correct pull studs and tool holders being used?	yes ☐ no ☐
31. Have the tool holders been balanced? If no, balance them.	yes ☐ no ☐

Spindle Deflection Test	
32. Has the Spindle Deflection Test been performed? If yes, please what is the push, pull, and lost motion values? NOTE: Please only perform this if steps 1-30 have been performed and verified, and the machine is continuing to have surface finish issues. Total deflections should not exceed 0.0025 for 40 taper and 0.003 for 50 taper. **Do not add lost motion to total deflection.**	yes☐ no☐ Push Deflection: Pull Deflection: Lost Motion:

Notes/ Observations:

Attach this report, an error report, and any relevant documentation to a service notification in the Haas Service App.