

Vector Drive Inspection Report

Technician		Cell#	
Serial Number		Date	
Model			

Vector Drive Type

20HP	
40HP	
60HP	

Why is the Vector Drive being replaced?

1a. What alarms are generated?		1b. Does the alarm reset?	
1c. When does the alarm occur?			
2. Is the drive physically damaged?			

3. Other - Describe the issue:

Mandatory Troubleshooting

4a. What is the incoming voltage to the machine? Measure the incoming voltage at the main circuit breaker and record the measured values below.

L1-L2	L2-L3	L1-L3	L1-GND	L2-GND	L3-GND

4b. What is the main transformer tap setting.

5a. What was the measured DC BUSS output voltage?

5b. Does the DC Buss gauge in diagnostic match the actual measured DC BUSS voltages?

Answer questions 6 - 8 if the alarm occurs at power on or servos on, if not skip to question 9.

6. Power OFF. Wait for the Vector Drive to fully discharge. Disconnect the Spindle Motor Output cables from the drive. Power on the machine does the alarm reset? *If you answer yes, then the problem is with the spindle motor, Y/D or cabling.*

7. Power OFF. Wait for the Vector Drive to fully discharge. Disconnect the 320V output cables from the drive. Disable all the axis (except Z in mills, X in lathes and Y on Horizontal machines). Power on the machine does the alarm reset? *If you answer yes, then the problem is with one of the drive amps.*

8. Power OFF. Wait for the Vector Drive to fully discharge. Disconnect the regen cables from the drive. Power on the machine does the alarm reset? *If you answer yes, then the problem is with the regen load.*

9a. Power OFF. Wait for the Vector Drive to fully discharge. Disconnect all the cables from the drive. With a Multimeter set to Ohms measure and fill out the readings below:

TB-4 to GND (Chassis)	TB-5 to GND (Chassis)	TB-6 to GND (Chassis)
TB-2 (Black Lead) to TB-9 (Red Lead)	TB-2 (Black Lead) to TB-10 (Red Lead)	TB-2 (Black Lead) to TB-11 (Red Lead)
TB-3 (Red Lead) to TB-9 (Black Lead)	TB-3 (Red Lead) to TB-10 (Black Lead)	TB-3 (Red Lead) to TB-11 (Black Lead)

9b. With a Multimeter set to OHMS measure and fill out the reading below:

TB-1 (Red Lead) to TB-3 (Black Lead)	
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10. Did you checked Y/D wiring?	
11. Did you checked spindle motor cables for shorts to chassis?	
12. Did you checked the spindle motor for shorts to chassis?	
13. Did you checked the axis amps for shorts to chassis?	
14. Did you checked the axis cables/motors for shorts to chassis?	
15. Did you ohm out the Regen box, what was the Ohm reading?	
16. Was a ferrite filter installed on the output wires going to the spindle motor?	

Notes/ Observations:

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