

## Vector Drive Inspection Report

<b>Technician</b>		<b>Cell#</b>	
<b>Serial Number</b>		<b>Date</b>	
<b>Model</b>			

### Vector Drive Type

<b>20HP</b>	
<b>40HP</b>	
<b>60HP</b>	

### Why is the Vector Drive being replaced?

<b>1a.</b> What alarms are generated?		<b>1b.</b> Does the alarm reset?	
<b>1c.</b> When does the alarm occur?			
<b>2.</b> 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)
<b>TB-2 (Black Lead) to TB-9 (Red Lead)</b>	<b>TB-2 (Black Lead) to TB-10 (Red Lead)</b>	<b>TB-2 (Black Lead) to TB-11 (Red Lead)</b>
<b>TB-3 (Red Lead) to TB-9 (Black Lead)</b>	<b>TB-3 (Red Lead) to TB-10 (Black Lead)</b>	<b>TB-3 (Red Lead) to TB-11 (Black Lead)</b>

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

<b>TB-1 (Red Lead) to TB-3 (Black Lead)</b>	
---	--

<b>10.</b> Did you checked Y/D wiring?	
<b>11.</b> Did you checked spindle motor cables for shorts to chassis?	
<b>12.</b> Did you checked the spindle motor for shorts to chassis?	
<b>13.</b> Did you checked the axis amps for shorts to chassis?	
<b>14.</b> Did you checked the axis cables/motors for shorts to chassis?	
<b>15.</b> Did you ohm out the Regen box, what was the Ohm reading?	
<b>16.</b> 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.