

CNC Accuracy and Thermal Growth

Technician		Cell#	
Serial Number		Date	
Model			
Accuracy or Thermal Growth Issue Description			
1. Description of the customer's complaint. Include customer expectations and a redlined blueprint showing the dimensional error of a finished part.			
Mandatory Attachments			
1. Has a tool list and program been submitted? This is necessary to evaluate the customer's application.		Complete	
2. An error report (NGC) or machine backup (CHC).		Complete	
3. What does the ballscrew alignment measure? Servo motor current data collection from HBC.		Complete	
4. Results of Haas thermal test program. (Reach out to Haas Applications for details)		Complete	
Mandatory Information			
5a. Is the machine NGC or CHC?		NGC CHC	
5b. What is the software version?			
5c. What is the Mocon version?		S K	
6a. Is the problem dimensional growth or shrinkage of machined parts?		Growth Shrinkage n/a	
6b. What axis did the growth or shrinkage happen on?			
6c. How much is the growth or shrinkage?			
6d. over what time period does this dimension change?			
7a. Is the shop in a temperature controlled environment?		Yes No	
7b. If yes to a, what is the ambient temperature?			
7c. If no to a, what is the temperature range and how does it change over time?			
7d. Is the machine near something that outputs a lot of hot or cold air? If so, please describe in the notes section. Examples: HVAC vents, bay doors, etc.		Yes No	
8. How long has the thermal growth or problem been happening?			
9. Describe the customer's application in the notes section. Examples: Lots of tool changes, rapid moves, high feedrates, etc.		Complete	
10a. Is the customer using the probe system?		Yes No	
10b. If yes to a, describe how they are using the probe system in the notes section.		Complete	
11. Is the customer cutting an abrasive material? Example: graphite.		Yes No Material	
12. Is the spindle fan operating correctly?		Yes No	
13. Have the thermal comp parameters been altered? (CHC or NGC with manager key)		Yes No n/a	
14. Have settings 109 – 112, 158 – 160, and 357 (NGC) been utilized and record them below.		Yes No	
109	110	111	112
		158	159
		160	357 (NGC)
15. Are any of the axes noisy when run with the rapids at 100%?		Yes No	
Mechanical checks			
16a. Is the ballscrew getting sufficient lubrication?		Yes No	
16b. Are the linear guides getting sufficient lubrication?		Yes No	
17a. What is the temperature of the ballscrew cold and after the customers program?		Cold	Hot
17b. What does the ballscrew torque measure at three locations? (Motor end, middle, and support end) specify in-lb or N-m. (Horizontal axis only)			
18a. Does the axis with the problem have a thermal sensor?		Yes No	
18b. If equipped, is it plugged into the correct location?		Yes No	
18c. If equipped, does the thermal sensor provide the correct readings? See the analog sensors troubleshooting guide.		Yes No	

Notes/ Observations:

[Empty area for notes and observations]

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