



Gimble Head Artifact T-0200 Setup

Using Custom VPS Template



Gimble Head Artifact T-0200 Setup

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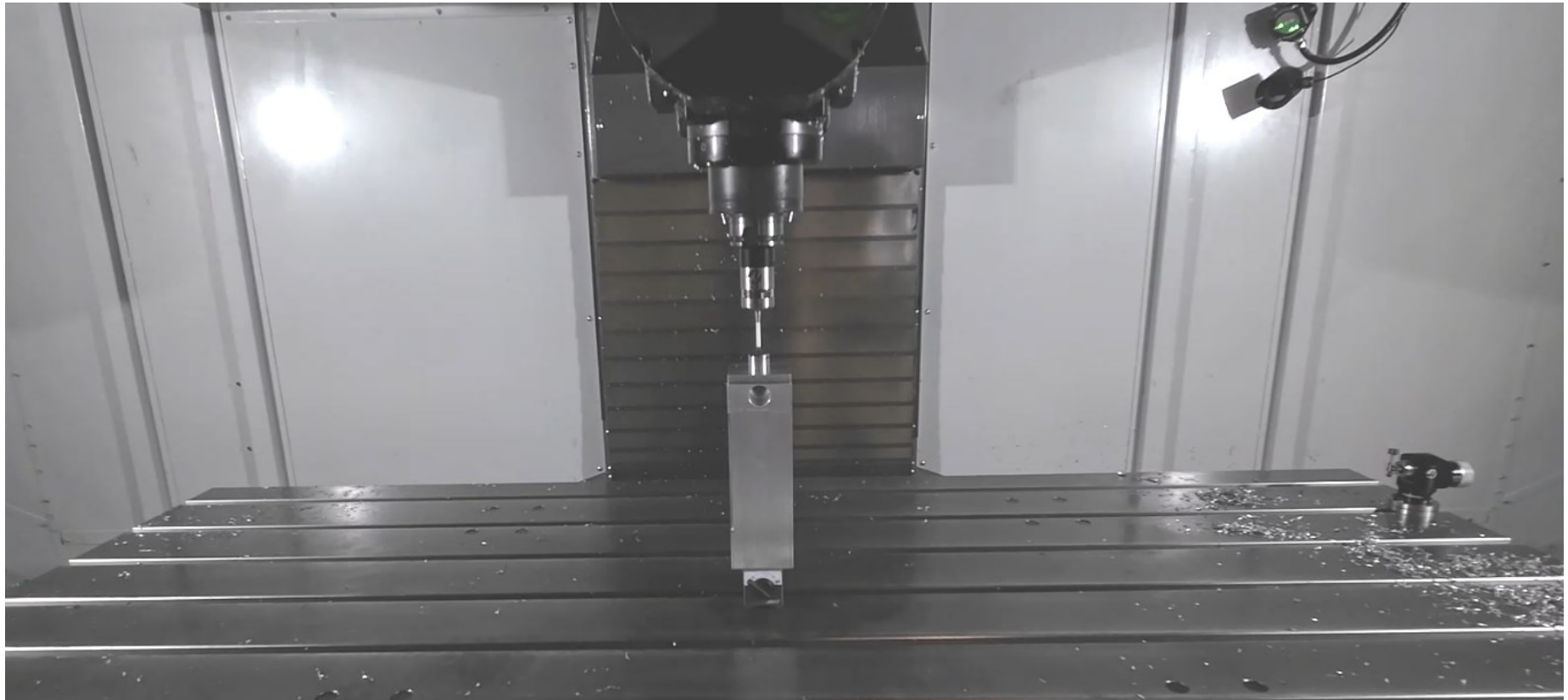
Overview:

Geometry check using the probe artifact should be done after final test cut is complete at the factory and the data is collected for future reference.

Geometry check using the same probe artifact should be done after machine is installed. The results are saved to the User Data/DPRNT directory and should be entered as an attachment with the installation report.

Geometry check details:

- Runs geometry check twice without MRZP and again with the values restored.
- Sets G54 work offset
- Probes X axis Web to set G55 work offset
- Checks artifact alignment
- C axis TIR probing C0., C45., C90., C135, C180. C-135., C-90. and C-45.
- B axis sweep C0. every 10 degrees B90. through B-90.
- B axis sweep C180. every 10 degrees B-90. through B90.
- C axis sweep B90. every 20 degrees C-180. through C180.
- Checks each bore twice B90. and B-90. (the DPRNT data is relative to the direction of the probe)
- Probes X axis B90. C0 and B-90. C0.
- Tolerance is setup in the program for each of the sections
- The program will stop with a message when the probe position is out of tolerance
- Press the "Y" button to continue the check



1. Verify TCPC/DWO is enabled in rotary settings
2. Verify setting # 261 = File
3. Verify setting # 262 = User Data/DPRNT
4. Collect error report using "SHIFT F3" with MRZP setting displayed
5. Position T-0200 in center of machine travel
6. Indicate parallel to the X axis with in ± 0.0002 "
7. Make sure BLOCK DELETE is "**OFF**"
8. Select **091824.nc** for all machine models except the VR-5 must use **091924.nc**
9. Probe in the spindle
10. Handle jog X and Y axis to centerline of 1" boss with the Z axis 0.250" above boss
11. Cycle start

Machine Type and work holding

- VR, HDC and GM-2 5 axis
- Probe Artifact Haas #T-0200
- Mag Base
- Indicator

Machine Options

- WIPs

Verify TCPC/DWO is enabled in Rotary settings

Axis	Configuration	Name	Model	Direction
<input checked="" type="checkbox"/> 4th Axis	B Axis	Base	VR-B-P18	Normal
<input checked="" type="checkbox"/> 5th Axis	C Axis	Base	VR-C-P18	Normal

4th Axis	5th Axis	Name	Model
--	--	--	63A-B-P18
--	--	--	63A-C-P18
--	--	--	63F-B-P18
--	--	--	63F-C-P18
--	--	--	DY-MD-B-S7-S1-V1
--	--	--	DY-MD-C-S7-S1-V1
--	--	--	EC1600-5AX-A-P18
--	--	--	EC1600-5AX-A-P19
--	--	--	EC1600-5AX-A-P3
--	--	--	EC1600-5AX-P18
--	--	--	EC1600-5AX-P19
--	--	--	EC1600-5AX-P9
--	--	--	EC1600-P18
--	--	--	EC1600-P19
--	--	--	EC1600-P8
--	--	--	EC1600-P9

TCPC/DWO Enabled

Verify setting # 261 = File

Verify setting # 262 = User Data/DPRNT

Group	Name	Value	Unit
261	DPRNT Store Location	>	File
262	DPRNT Destination File Path	>	User Data/DPRNT
263	DPRNT Port		8080

261 - DPRNT Store Location

DPRNT is a macro function that lets the machine control communicate with external devices. The Next-Generation Control (NGC) lets you output DPRNT statements

[View full text.](#)

SETTINGS type MRZP “F1”

The screenshot shows the 'Settings' window with the 'Settings' tab selected. The 'Search' field is set to 'F1' and 'MRZP'. The table below lists various MRZP settings:

	Name	Value	Unit
255	MRZP X Offset	0.0000	IN
256	MRZP Y Offset	0.0000	IN
257	MRZP Z Offset	0.0000	IN
300	MRZP X Offset Master	0.0004	IN
301	MRZP Y Offset Master	-0.0010	IN
302	MRZP Z Offset Master	0.0000	IN
303	MRZP X Offset Slave	0.0004	IN
304	MRZP Y Offset Slave	0.0000	IN
305	MRZP Z Offset Slave	8.6160	IN

At the bottom right, there is a button labeled 'ORIGIN' and a link 'Restore default settings menu.'.

Save “SHIFT F3” Error report to USB

The screenshot shows the 'Settings' window with the 'Generating Error Report' dialog box open. The dialog box has a list of options to be saved:

- Collecting Hardware Debug Data ☒
- Saving System Configuration Files ☐
- Saving System Data Files ☐
- Saving System Log Files ☐
- Saving Diagnostic Information ☐
- Saving History Files ☐
- Saving Active Program ☐
- Saving XML Data ☐
- Saving IO States ☐
- Save Queue Dumps ☐
- Saving Log Files ☐
- Zippping File ☐

At the bottom of the dialog box, it says 'Current status: Processing...' and has an 'Exit [CANCEL]' button.

In the background, the 'Settings' window is visible, showing the 'MRZP' settings table and the 'ORIGIN' button with the link 'Restore default settings menu.'.

Position T-0200 in center of machine travel

Indicate parallel to the X axis with in +/- .0002"



- First time running the program, make sure **icon**



BLOCK DELETE is **"OFF"** = no

- The BLOCK DELETE can be turned **"On"** to skip probing G54 work offset again when running the program a second time.

- Select **O91824.nc** for all gimbal head machine models except the VR-5
- VR-5 must use **O91924.nc**
- Probe in the spindle

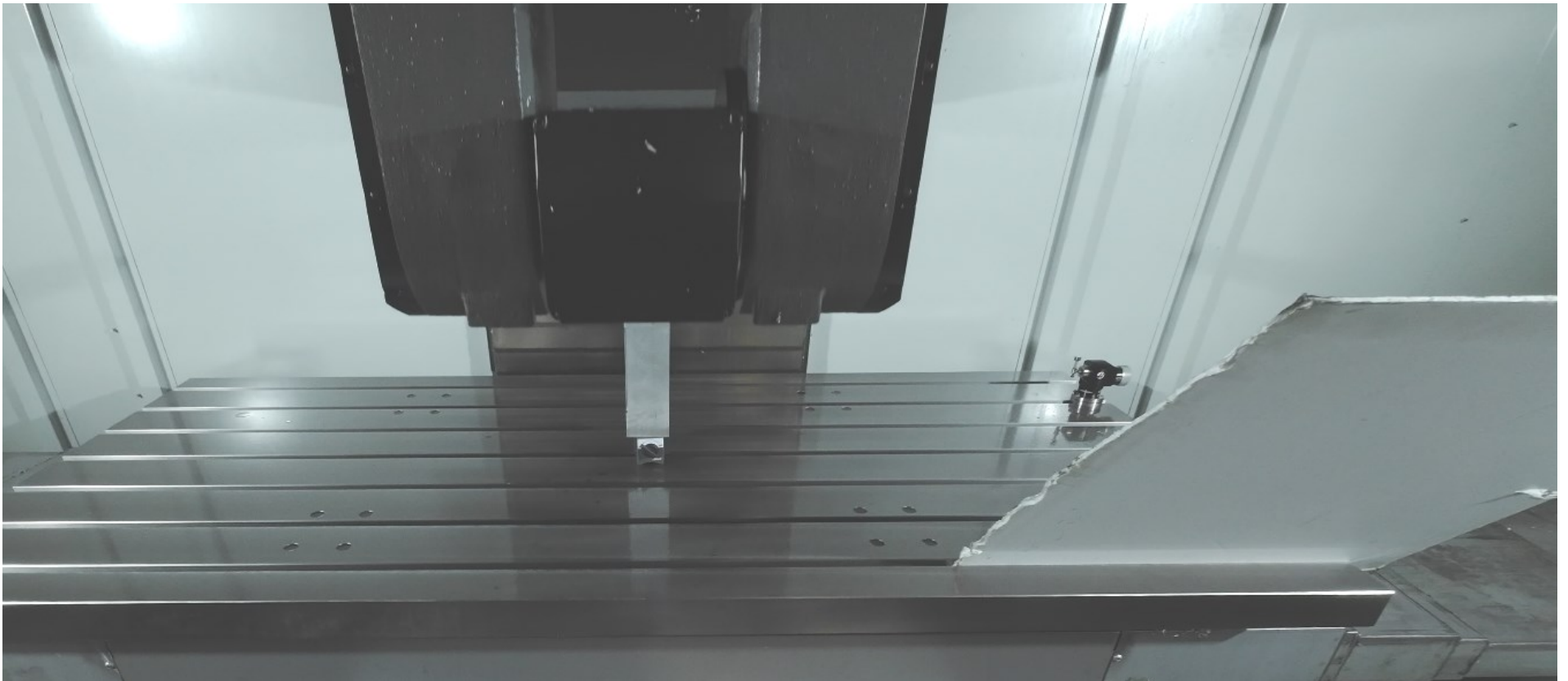
First time running the program

Handle jog X and Y axis to centerline
of 1" boss with the Z axis 0.250"

Probes Z axis and Boss to set the G54
position



- Recommend using a white foam board or cardboard set in the front right T-Slot
- This reflect the OMI signal when running this test and the MRZP calibration program



***** Caution *****

- Geometry check program runs through the cycle twice
- The first run saves MRZP settings #300-#305 to macro variables #10900-#10905 then sets Settings #300-#304 to zero.
- The second run restores MRZP settings #300-#304 from #10900-#10904 before running the cycle again
- If the program is stopped and restarted during the first run the values in #10900-#10904 would be over written with zero (reason for SHIFT F1 screen shot of MRZP value).
- Before restarting a program that was stopped during the first run must have the MRZP Settings #300-#304 restored.
- Use values from the screen shot or macro variables #10900-#10904 to manually restore the settings
- Or run Restore MRZP Settings program O09300.nc to automatically restore the settings

Restore MRZP Settings program O09300.nc

O09300

(RESTORE MRZP SETTINGS)

G103 P1

G167 P300 Q#10900 K10755

G167 P301 Q#10901 K10755

G167 P302 Q#10902 K10755

G167 P303 Q#10903 K10755

G167 P304 Q#10904 K10755

G103

M30

DPRNT. OUT File sample

Please contact Ernie Simmons with questions about setup and running test.

Date:,9:17:24

Time:,22:8

SN#:, 120XXXX

ARTIFACT#:, 3

MRZP SETTINGS

#300:,.0000

#301:,.0000

#302:,.0000

#303:,.0000

#304:,.0000

#305:,.8.6160

ALIGNMENT +/-,.0002

ALIGNMENT,ERROR:,.0001

C AXIS TIR

+/-:, .0400]

B .000,C .000,Y -1.5918

B .000,C .000,ERROR, .0000

B .000,C 45.000,ERROR, .0003

B .000,C 90.000,ERROR, -.0002

B .000,C 135.000,ERROR, -.0012

B .000,C 180.000,ERROR, -.0023

B .000,C -135.000,ERROR, -.0030

B .000,C -90.000,ERROR, -.0025

B .000,C -45.000,ERROR, -.0010

B AXIS B90 DEG / B-90 EVERY 10 DEG