



## Using G54-G59 Work Offset Codes with MASSO

### About G54-G59 Codes

G54 – G59 codes are used to make multiple work offsets. Basically, you are defining a new “part Z-zero” position to run another part. In the picture below we are using G54 to define Z-Zero for the first pen blank and G55 to define Z-Zero for the second pen blank.

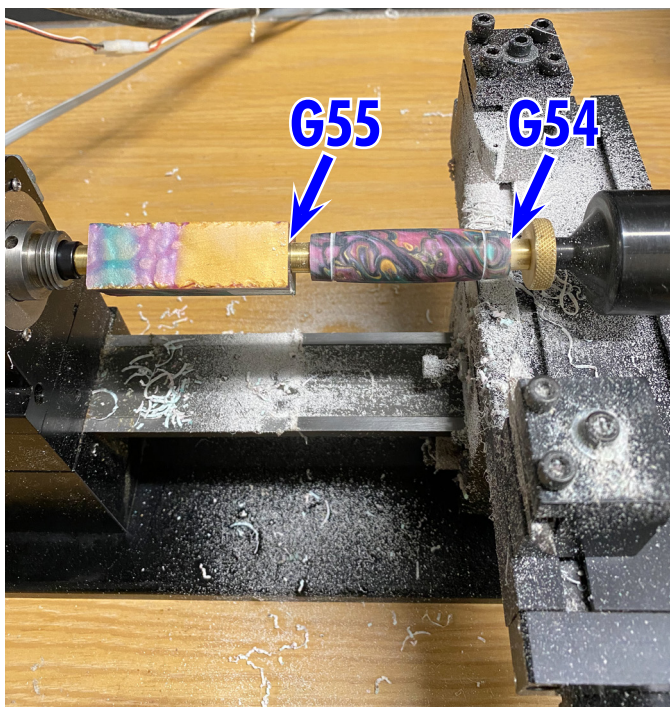


FIGURE 1

### MASSO G54 – G59 Instructions

1. You must teach Z0 for G54 and use G54 for the first part.
2. Then you move your Z-axis to the next position. With MDI, you type in the designated G50's that you want (from this point on G50's represent G54-G59 codes); for example, G55. Then you teach that position as the G55 position.
3. All successive G50's will all be related to the original G54 position.
4. Steps for teaching G54 – G59 positions.
  - A. Call up a tool that you are going to use on the MDI command page, for example “T1 M6.”
  - B. Move the tool to the desired Part Z-Zero position.
  - C. Go to the **F4 Tools & Work Offset** page and teach Z0 for the designated tool (see Figures 2-4).

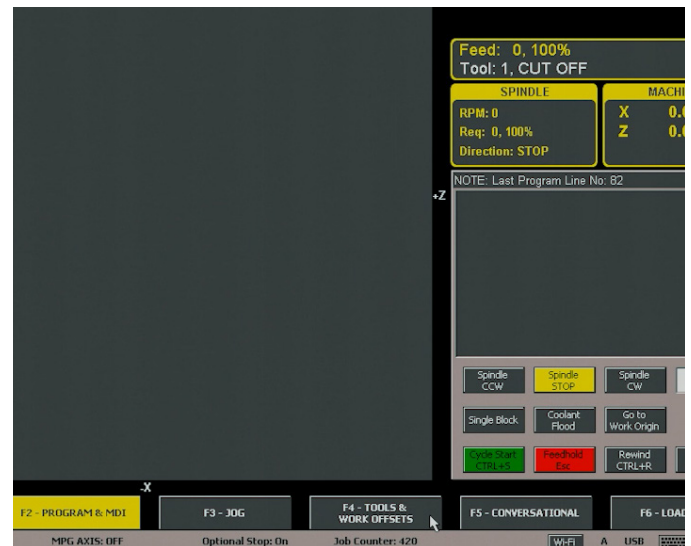


FIGURE 2—The cursor is over the F4 Tools & Work Offsets tab.

Tool No	Slot No	Tool Name	Z Offset	X Offset	Z Wear	X Wear	Tool Radius	Tool Dir
0		G53 BLANK	0.000	0.000	0.000	-0.000	0.000	0
1		CUT OFF	-3.408	-1.466	-0.002	-0.003	0.000	1
2		55 FINISH TOP	-4.988	-3.218	-0.080	0.002	-0.000	2
3		THRD	-11.154	-0.501	-0.000	-0.006	0.000	1
4		CTR DRILL	-9.434	-1.090	-0.000	-0.000	0.000	0
5		1/8 DRILL	-7.061	-2.671	0.000	-0.000	0.000	0
6		C BORE	-9.393	-0.113	-0.000	-0.000	0.000	0
7		BEARING	-12.436	-1.199	-0.015	-0.000	0.000	0
8		TEST TOOL	-9.896	-0.121	0.000	0.000	0.000	0
9		#3 CTR DRILL	-8.637	-0.153	0.000	-0.000	0.000	0
10		1/4" DRILL LONG	-6.192	-3.482	0.000	-0.000	0.000	0
11		.062 GROOVE	-11.592	-0.993	0.000	-0.000	0.000	0
12		55 FINISH BOTTOM	-4.988	-3.218	0.000	0.002	0.000	0
13		55 ROUGH TOP	-9.276	-0.233	-0.080	0.012	0.000	0
14		55 ROUGH BOTTOM	-11.897	-0.233	0.000	0.012	0.000	0
15			0.000	0.000	0.000	-0.000	0.000	0

Work Offset	Work Offset Name	Z
54	TOP PEN BLANK	0.00003
55	BOTTOM PEN BLANK	-3.99996
56		0.00000
57		0.00000
58		0.00000
59		0.00000

FIGURE 3—Select your tool. In this example, it is Tool No. 2.

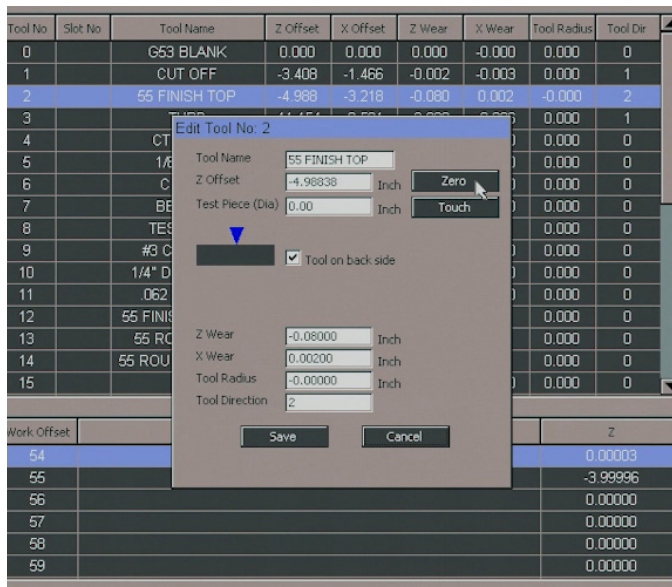


FIGURE 4—Click the Zero button.

D. Now click on G54 and then click on Autoload.

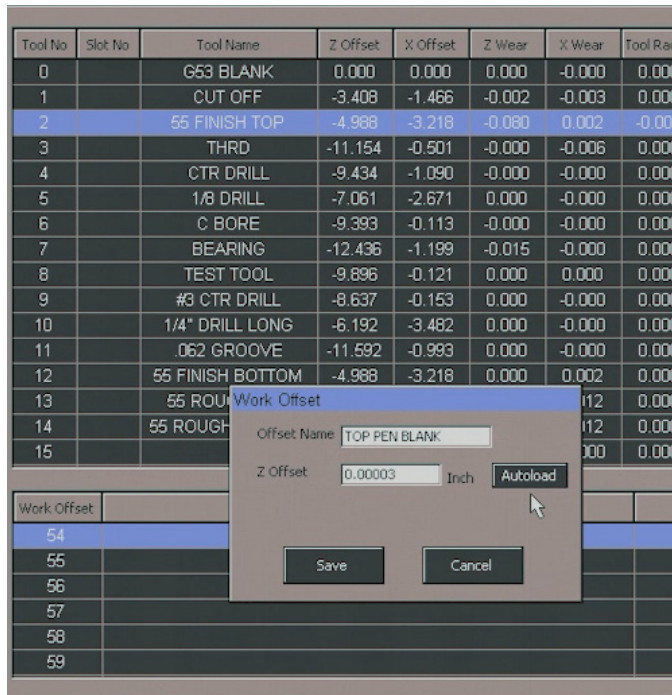


FIGURE 5—Click the Autoload button.

Now you have set your G54 Work Offset for the first part.

5. To set the next G50's offset, follow the previous steps above with the following changes:

- First go into the MDI mode and input "G55" (or whichever G50's number you are using for the next position).
- You can either continue to use Tool #1 or you can call up a different tool that will be used on the next operation.

- Move the tool to the desired Part Z-Zero position.
  - There is no reason to teach the tool at the G55 position if you have already set it previously.
  - Call up G55 (or whichever G50'ss number you are using) and click on Autoload.
- Now your G55 is set.

#### NOTES:

To find out which G50's setting your controller is currently using, look at the bottom tool bar on the far left side. It will show "Work Offset: G5\_".

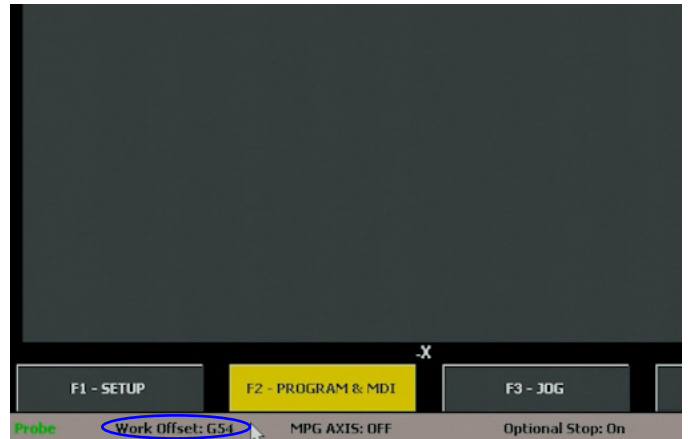


FIGURE 6—The blue outline shows which work offset code is currently in use.

Thank you,  
Sherline Products Inc.