



## ELROD MACHINE & MFG.

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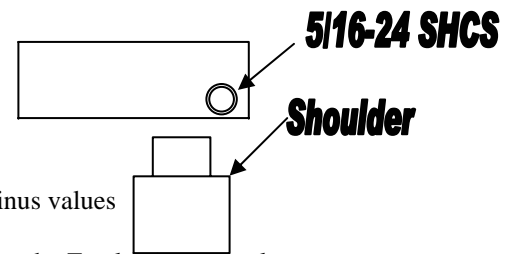
### Set Z Home Instructions Pre 2009 Using G28 To Offset And Gain Lost Z Axis Travel Due To Reference Mark and Limit Switch Offset

Follow these instructions to reestablish Z Home on your machine.

Jog the quill down to its fully extended position

Loosen up your ball nut block by turning the 5/16-24 S.H.C.S. CCW. Roll the quill down using the manual handle in your tool box until the block and ball nut back are back in place (Ball nut journal completely capture by the ball nut block. And against the shoulder of the ball nut journal)

1. Go to the main screen on your controller
2. F2 Load cursor to the CNC7 Sub directory and Enter
3. Cursor to the file CNC7.hom F10 to accept
4. F6 Edit and delete the 2<sup>nd</sup> line if it has a G91 in it. For example : G91 G1 Z.085 F3 and save file
5. Esc to the main screen
6. F1 Setup
7. F3 Config
8. 137 enter
9. F2 machine
10. F1 Jog
11. Cursor over to Z travel limit section and enter .500 for Z plus and -6.000 Z minus values
12. F10 Save
13. Press ESC until at the main screen then F1 Setup F9 WCS F1 Return then clear the Z value in G28 column.
14. F10 Save
15. Turn off machine and re home
16. After homing machine Press ALT -D DRO should be set to machine coordinates (Machine will be above DRO)
17. Now jog the Z Axis up until the the Z + limit switch is tripped.
18. Record this value on the Z axis Display. For example lets say .100
19. Now Press F1 Setup F9 WCS F1 Return and enter the recorded value **-.010** in the Z section of Return G28
20. F10 Save
21. Esc. to main menu
22. F1 Setup F3 Config password 137 enter.
23. F2 Mach, F1 Jog , cursor to Z Plus limit value
24. Make sure DRO still says machine
25. Enter the Z plus value entered in the G28 Z value
26. Jog the Z down until the Z minus limit is tripped, subtract .010 from this value and enter this value in the Z minus section .
27. F10 Save, Now software travel limits are saved.
28. Shut off and Re Home the machine
29. To load a program F2 Load Cursor to ncfiles subdirectory enter pick a file F10 accept.



***You have just reset your home position in Z and you can now load your old program and start running again.***

## **Set Z Home Instructions 2009 and Up Using G91 Inserted On Second Line Of CNCM.hom To Offset And Gain Lost Z Axis Travel Due To Reference Mark and Limit Switch Offset**

RESET Z AFTER LEAVING IN 2 AXIS AND GOING TO 3 AXIS AND JOGGING Z WITHOUT READING MESSAGE ON THE SCREEN

IMPORTANT: MAKE SURE THE RETURN TUBE ON THE BALLNUT IS FACING TOWARD YOU AND THAT THE SHOULDER OF THE BALLNUT IS FIRMLY AGAINST THE BOTTOM OF THE BALL NUT BLOCK!

THEN RE-TIGHTEN TO 22 FT-LBS AND PROCEED WITH STEPS BELOW

1. F7 UTIL
2. F5 FILE OPS
3. CURSOR TO C:\ ENTER
4. CURSOR TO C:\CNCM ENTER
5. FIND CNCM.HOM
6. F4 EDIT
7. PLACE A COLON : INFRONT OF THE SECOND LINE "SHOULD BE G91 G1 Z.XXX F.XXX
8. SAVE FILE AND EXIT EDITOR
9. ESC TO MAIN MENU
- 10 F1 SETUP
- 11 F3 CONFIG P/W 137 ENTER
12. F2 MACHINE
- 13 F1 JOG
- 14 GO TO ROW #3 AND IN THE Z PLUS TRAVEL PLACE A 1.000 AND Z MINUS TRAVEL PLACE A -5
- 15 F10 SAVE
- 16 PRESS ESCAPE TO MAIN MENU
- 16 F2 LOAD
- 17 CURSOR TO "UP" HIT ENTER
18. CURSOR TO CNCM.HOM
- 19 F10 ACCEPT
- 20 PRESS CYCLE START TO EXECUTE CNCM.HOM (RE HOMES MILL) YOU MAY GET A MESSAGE SAYING ENCODER COUNTS HAVE CHANGED ACCEPT WITH "Y"
- 21 PRESS ALT D TO GO TO MACHINE COORDINATES SCREEN
- 22 JOG Z UP UNTIL IT JUST TOUCHES THE ROLLER
- 23 CHANGE TO "INCR" MODE AND JOG Z IN THE X10 LIT MODE UNTIL YOU GET Z LIMIT TRIPPED.
- 24 WRITE DOWN THE VALUE FOR EXAMPLE SAY .150
- 25 JOG OFF OF THE LIMIT
- 26 F6 EDIT
- 27 REMOVE THE COLON FROM THE SECOND LINE AND PLACE THE NUMBER RECORDED IN LINE 24 - .010 SO THE VALUE WILL BE IN THIS LINE .140
- 28 SAVE AND EXIT FROM THE EDITOR
- 29 RE RUN CNCM.HOM BY PRESSING CYCLE START.
- 30 CHANGE TO "CONT" MODE AND JOG THE Z MINUS DOWN UNTIL IT JUST TOUCHES THE MINUS LIMIT ROLLER
- 31 NEXT CHANGE BACK TO "INCR" MODE AND JOG Z DOWN WITH X10 LIT UNTIL YOU GET Z-LIMIT TRIPPED
- 32 RECORD THAT NUMBER SAY -4.850
- 33 F1 SETUP
- 32 F3 CONFIG P/W 137 ENTER
- 33 F2 MACHINE
- 34 F1 JOG
- 35 GO TO ROW #3 AND IN THE Z PLUS TRAVEL PLACE A 0.000 AND Z MINUS TRAVEL PLACE NUMBER IN ROW 3 ADD +.01 SO IT WILL BE -4.840
- 36 F10 SAVE

***You have just reset your home position in Z and you can now load your old program and start running again.***