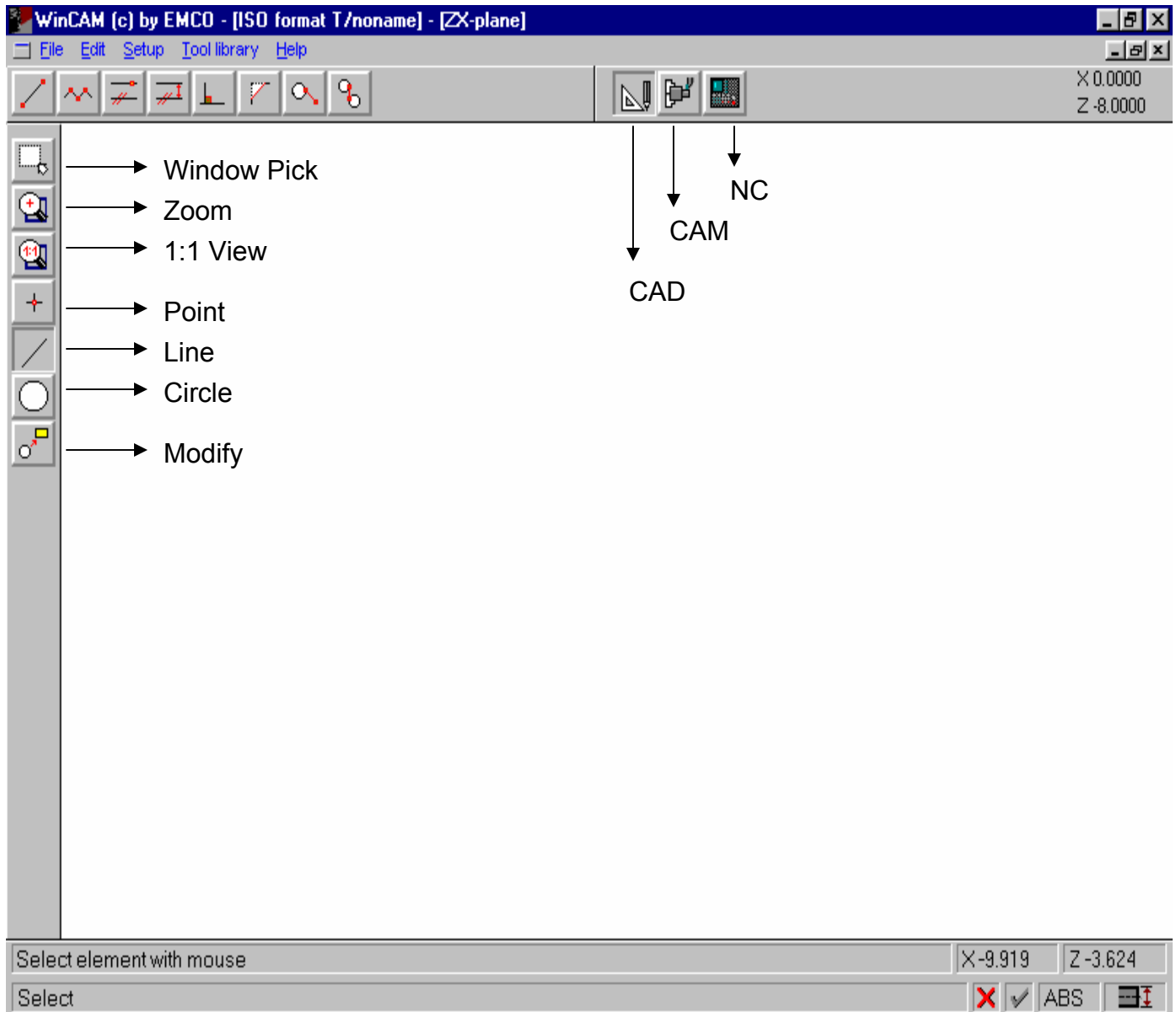


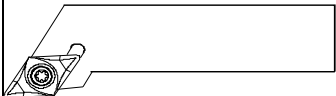

# WinCAM Turning Training Guide

5/8/03 Version 3  
Made by EMCO  
Authored by Chad Hawk

WinCAM is an icon driven system with three basic parts:  
Cad, Cam and Machine. In this picture you can see the

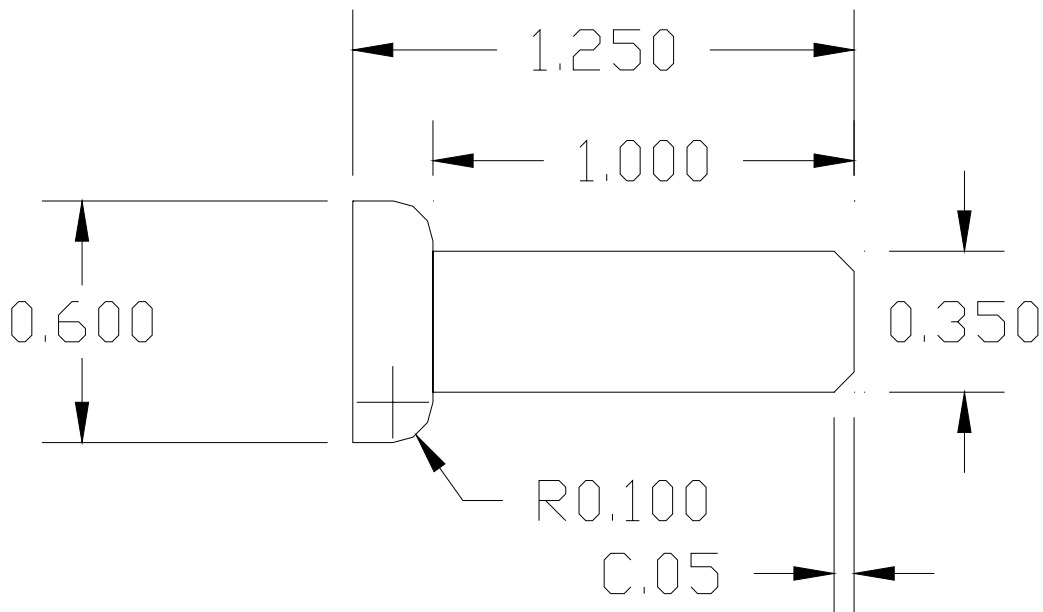


## Tool Position 2

260 601	Right hand Turning Tool	No. SDJCR 1210 D07	
271056	Indexable inserts for Aluminum	No. DCGT 070204-27 H10T	

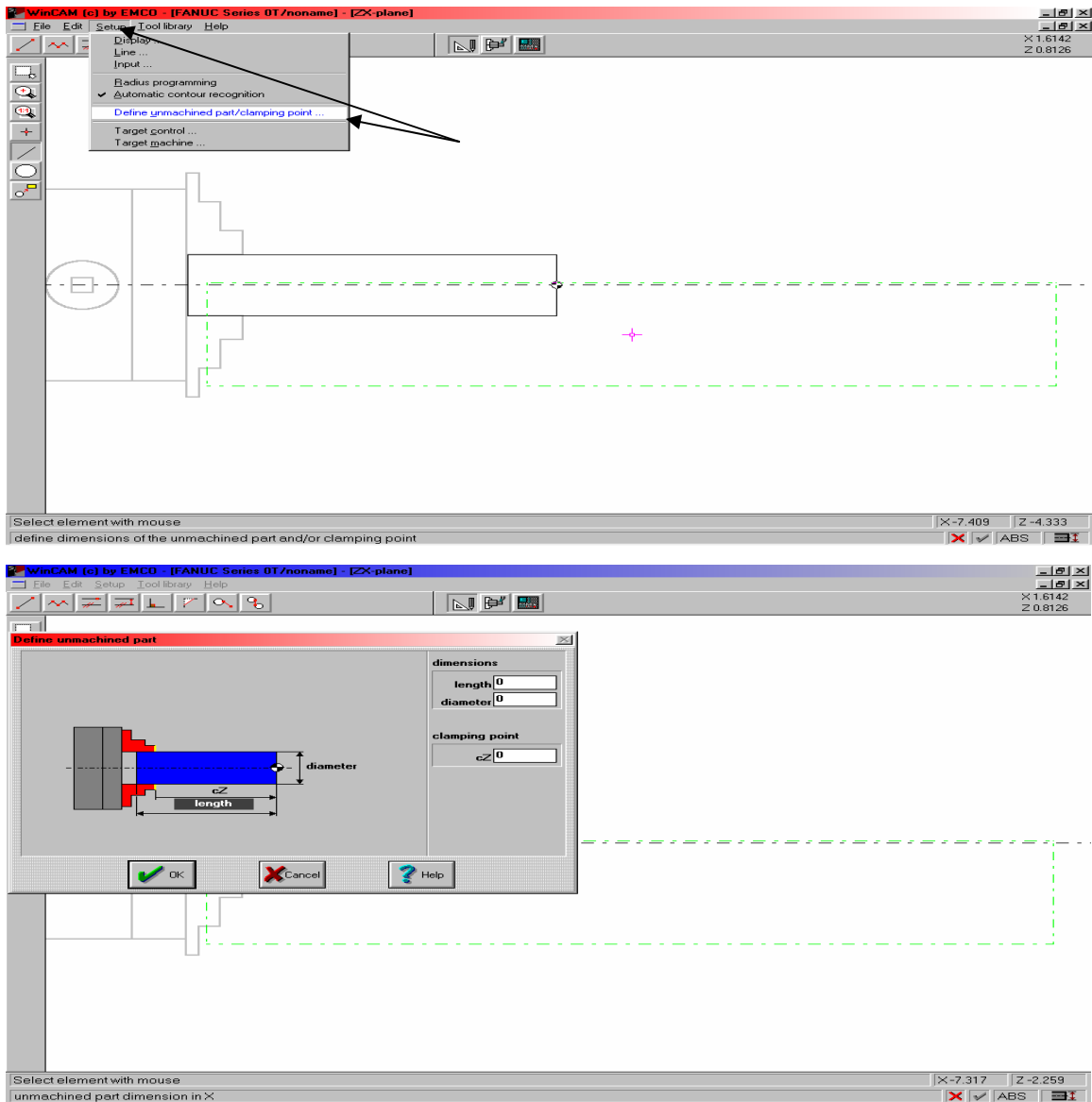
**PART SIZE = .75" DIA. X 3.0 " 2011-T3 ALUMINUM**

### Demo



# WinCAM Turn Step by Step CAD Setup

1. LEFT CLICK ON **SETUP** (THE TOP BAR OF THE SCREEN)
2. CLICK ON DEFINE **UNMACHINED PART/CLAMPING POINT**



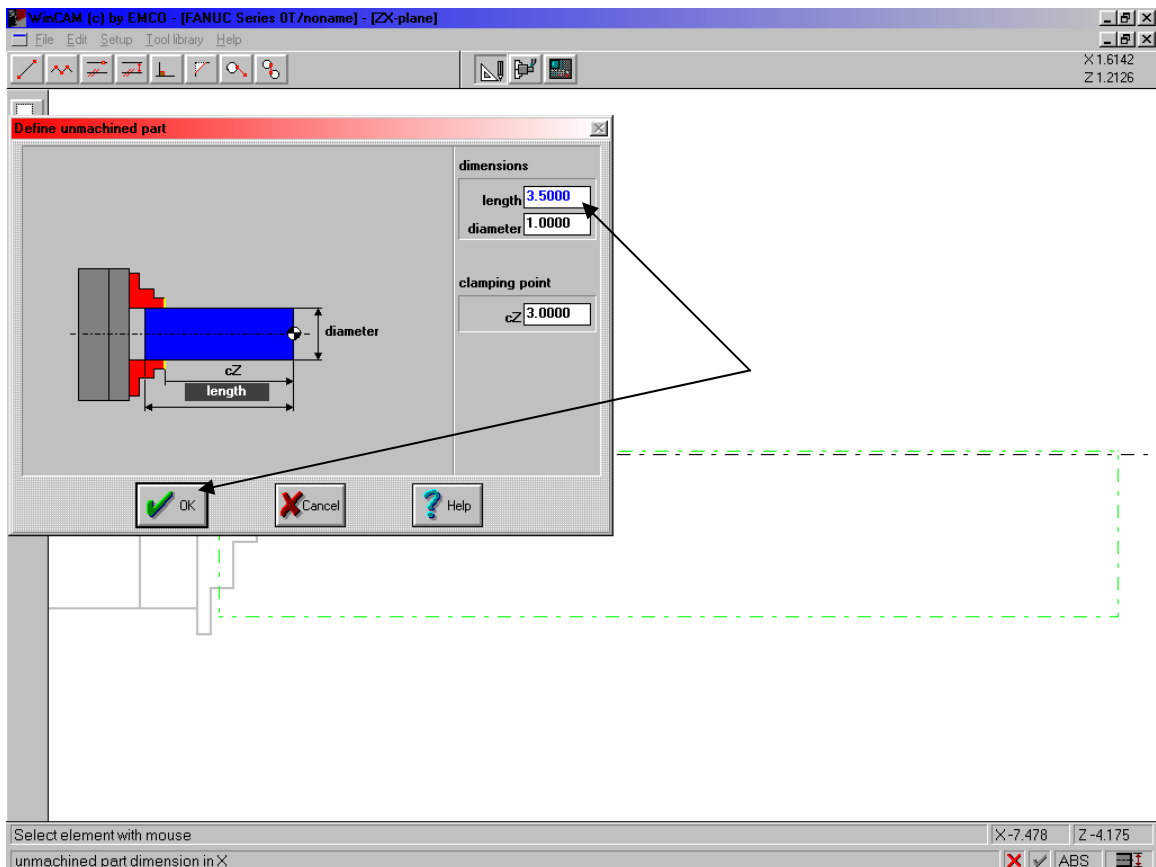
3. DOUBLE CLICK ON THE DIMINSIONS length  (WHITE AREA)

4. TYPE **3.** IN THE LENGTH BOX / THEN PRESS TAB


5. TYPE **.75** IN THE DIAMETER BOX / THEN PRESS TAB

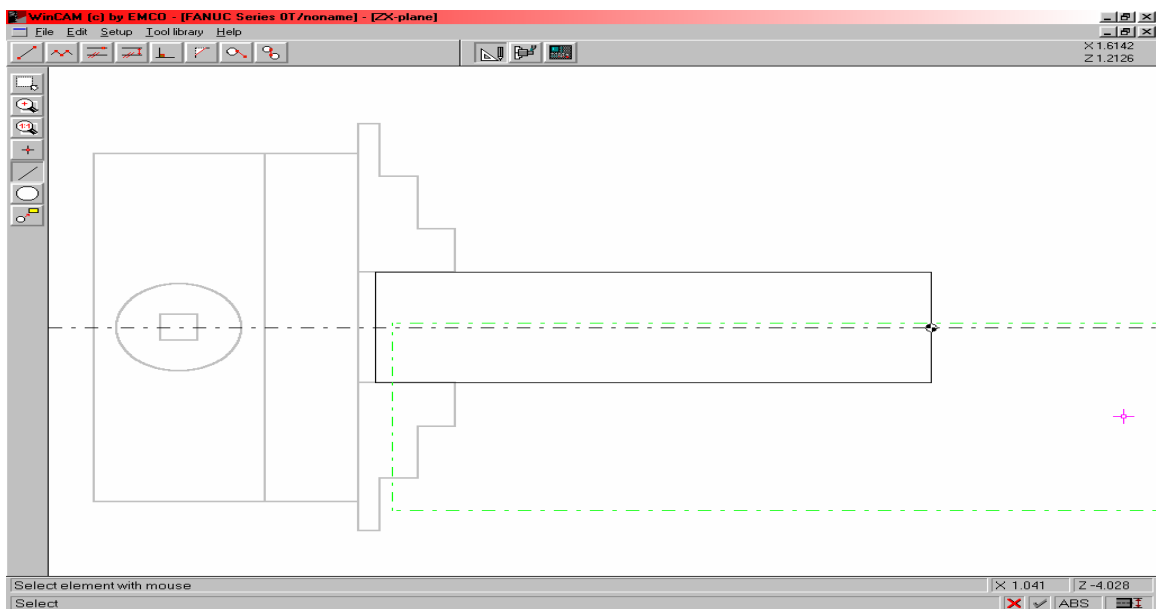
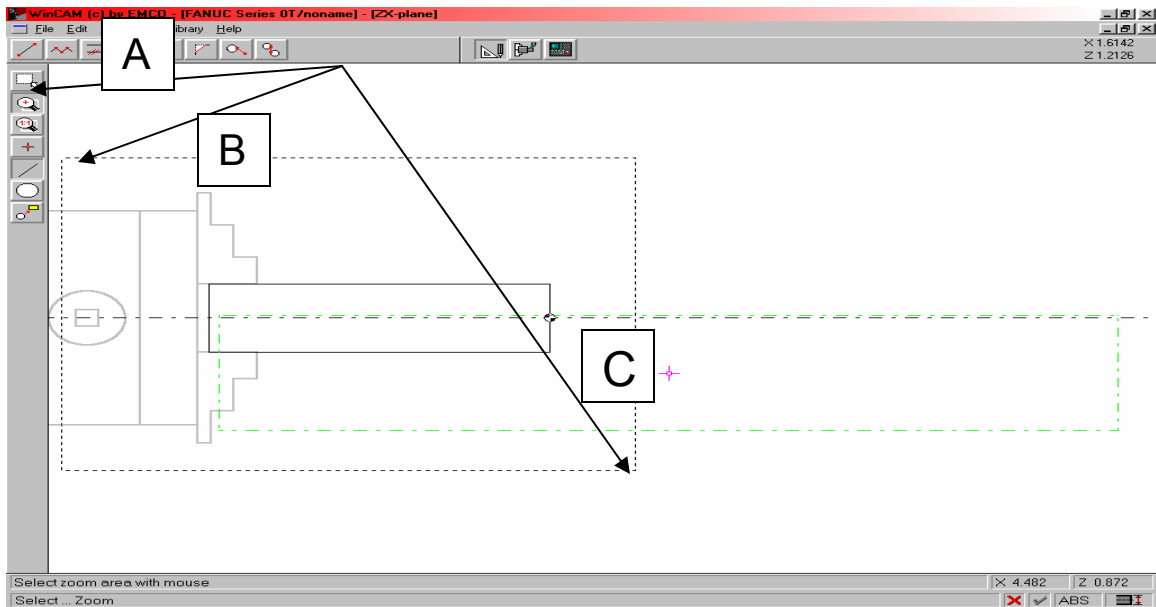
6. TYPE **2.5** IN THE **cZ** VALUE (AMOUNT OF STOCK PAST CHUCK JAWS)


7. CLICK OK 

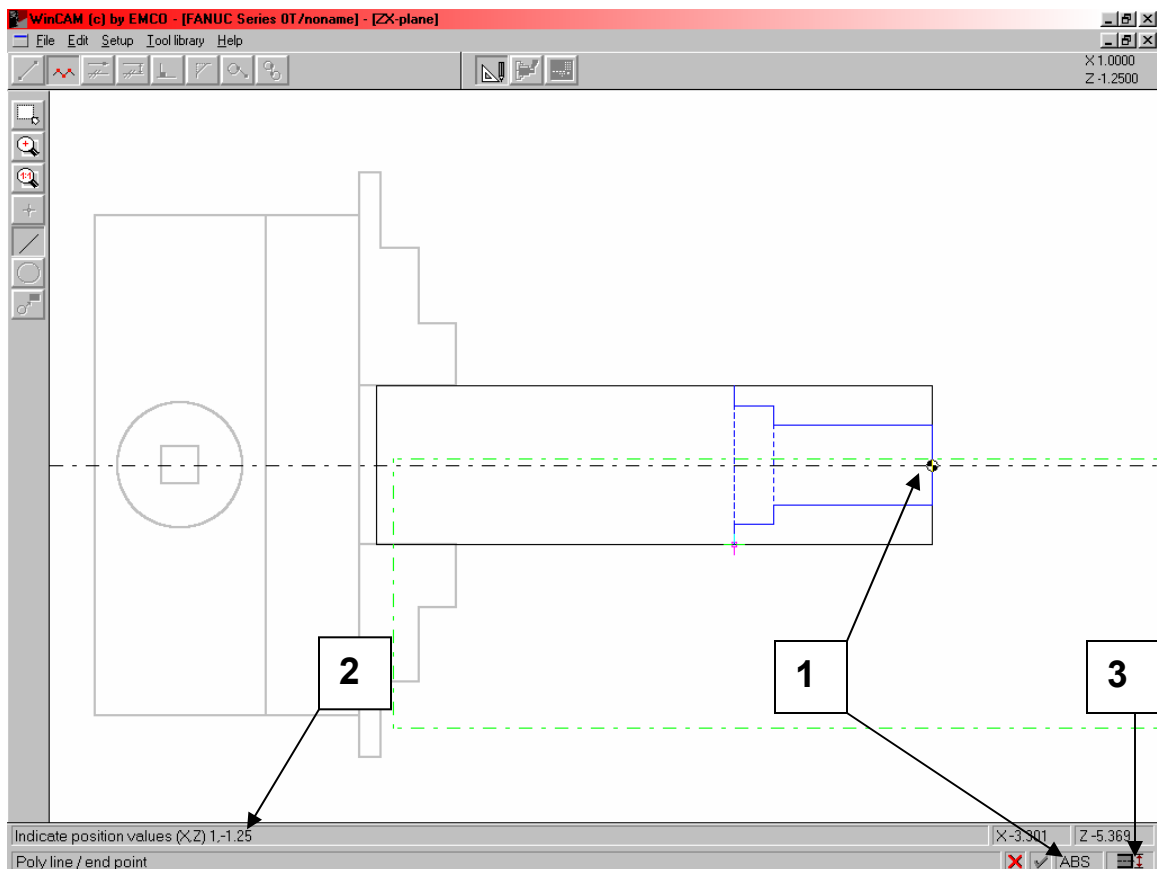


**NOTE: PLACE THE MOUSE POINTER OVER ANY ICON AND WINCAM AUTOMATICALLY IDENTIFY THE ICON AT THE LOWER LEFT OF THE SCREEN.**

8. CLICK ON THE **ZOOM DRAWING ELEMENT** ICON  (A)
9. PLACE THE **MOUSE POINTER** OR + SYMBOL TO THE UPPER LEFT SIDE OF THE CHUCK (B)
10. CLICK & HOLD THE **LEFT** MOUSE BUTTON & DRAG TO THE BOTTOM RIGHT SIDE OF THE CHUCK (C)
11. LET GO OF MOUSE; YOUR VIEW WILL ENLARGE



12. CLICK ON THE **POLYLINE** ICON  (MULTIPLE LINE)
13. TYPE **0, 0** FOR THE START POINT / THEN PRESS **ENTER** ON THE PC KEYBOARD
14. TYPE **.35, 0** FOR THE NEXT POINT / PRESS **ENTER**
15. TYPE **.35, -1.** FOR THE NEXT POINT / PRESS **ENTER**
16. TYPE **.6, -1.** FOR THE NEXT POINT / PRESS **ENTER**
17. TYPE **.6, -1.25** FOR THE NEXT POINT / PRESS **ENTER**
18. TYPE **.75, -1.25** FOR THE ENDING POINT / PRESS **ENTER**



#### NOTES:

- 1: CORDINATES ARE ABSOLUTE FROM REFERENCE POINT
- 2: ALL VALUES TYPED IN ARE LOCATED AT LOWER LEFT OF THE SCREEN
- 3: X CORDINATES ARE CALLED OUT AS DIAMETER VALUES

19. CLICK ON **POLYLINE** ICON  THIS DESELECTS  
POLYLINE (MULTIPLE LINES)

20. CLICK ON **INSERT CHAMFER** ICON 

21. CLICK ON THE **CORNER** OF THE SMALL DIAMETER (1)

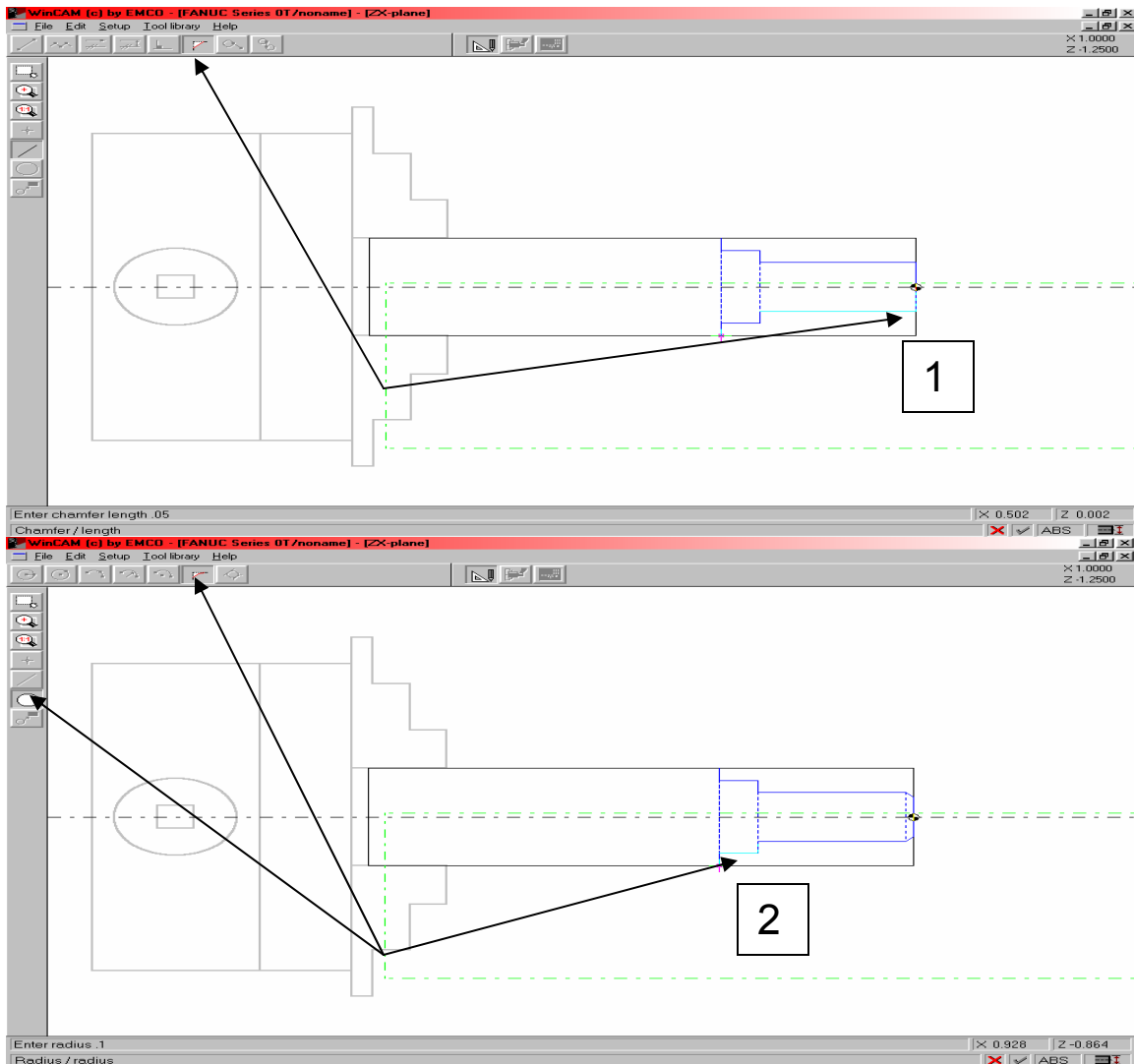
22. TYPE **.05** FOR THE CHAMFER / THEN PRESS ENTER

23. CLICK ON THE **CIRCLE** ICON 

24. CLICK ON THE **INSERT RADIUS** ICON 

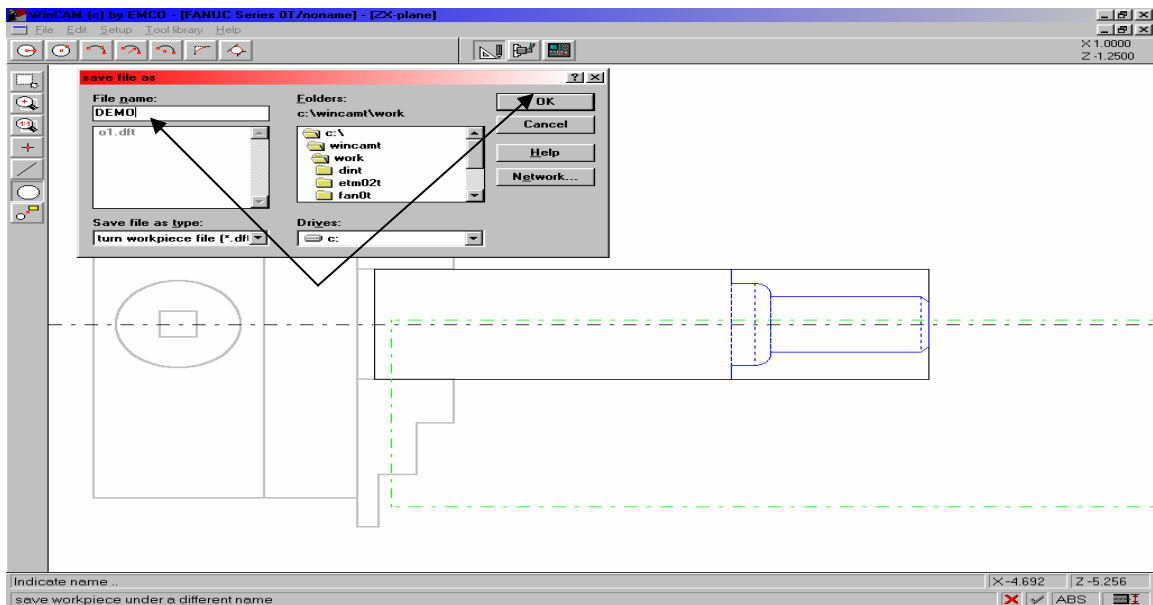
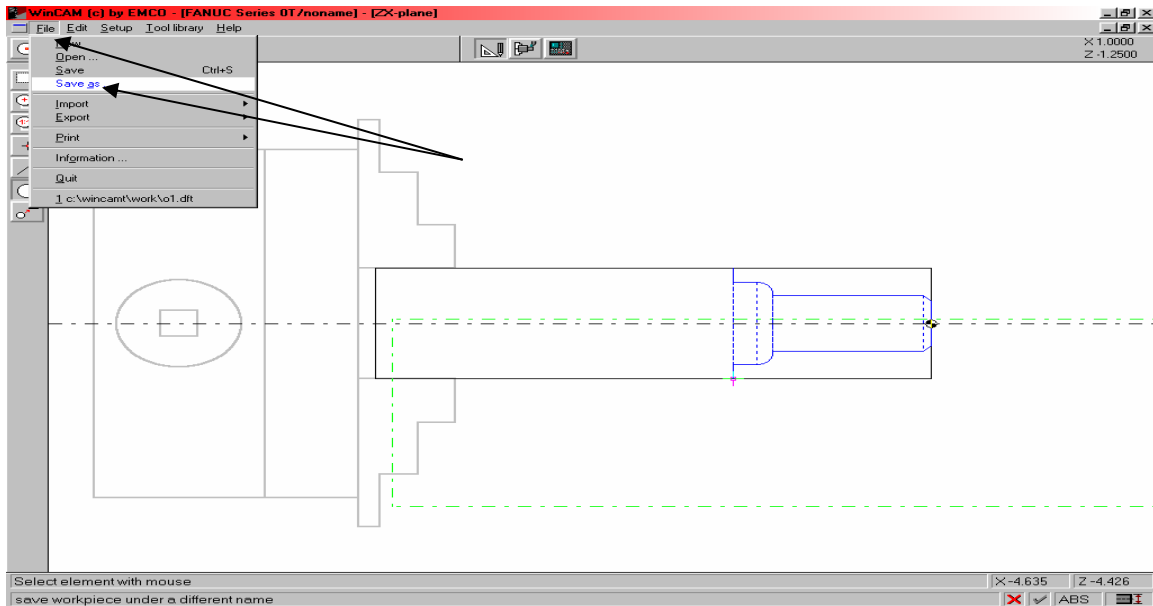
25. CLICK ON THE **CORNER** OF THE LARGER DIAMETER (2)

26. TYPE **.1** FOR THE RADIUS / THEN PRESS **ENTER**






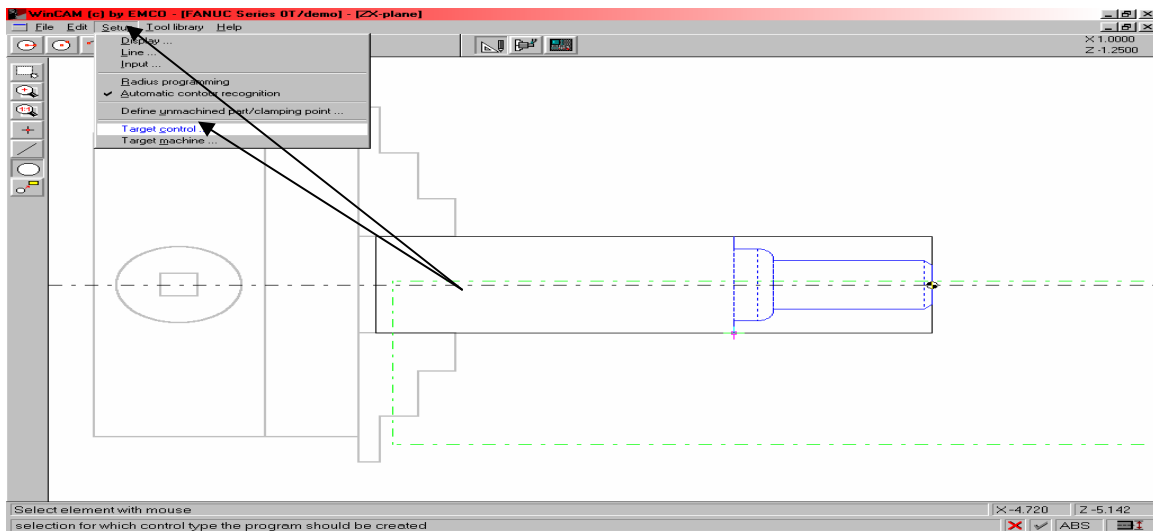
1. CLICK ON **FILE** (TOP LEFT OF THE SCREEN)
2. CLICK ON **SAVE AS**
3. TYPE **Level1**
4. CLICK **OK**



You have just completed the CAD portion  
of the Step by Step guide, go to the next  
page for CAM

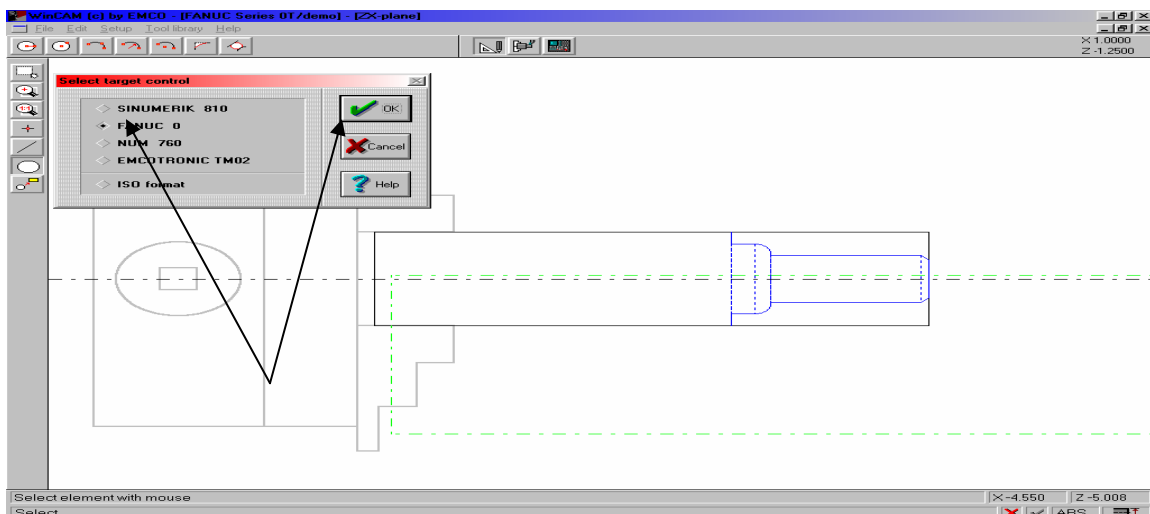
# WinCAM Turn Step by Step CAM Setup

1. SELECT **CAM** ICON (UPPER MIDDLE OF SCREEN)   
THIS SWITCHES MODES TO COMPUTER AIDED MACHINING
2. CLICK ON **SETUP** (TOP LEFT OF THE SCREEN)
3. CLICK ON **TARGET CONTROL**



**Note:** Only use step (4) if you purchased the option(s) for  
Siemens, Fanuc, Num 760 or Emcotronic TM02

4. CLICK ON THE **POST** FOR THE PROGRAM TO BE  
FORMATTED example (**FANUC O**) THEN CLICK OK 



5. CLICK ON **TOOL LIBRARY**

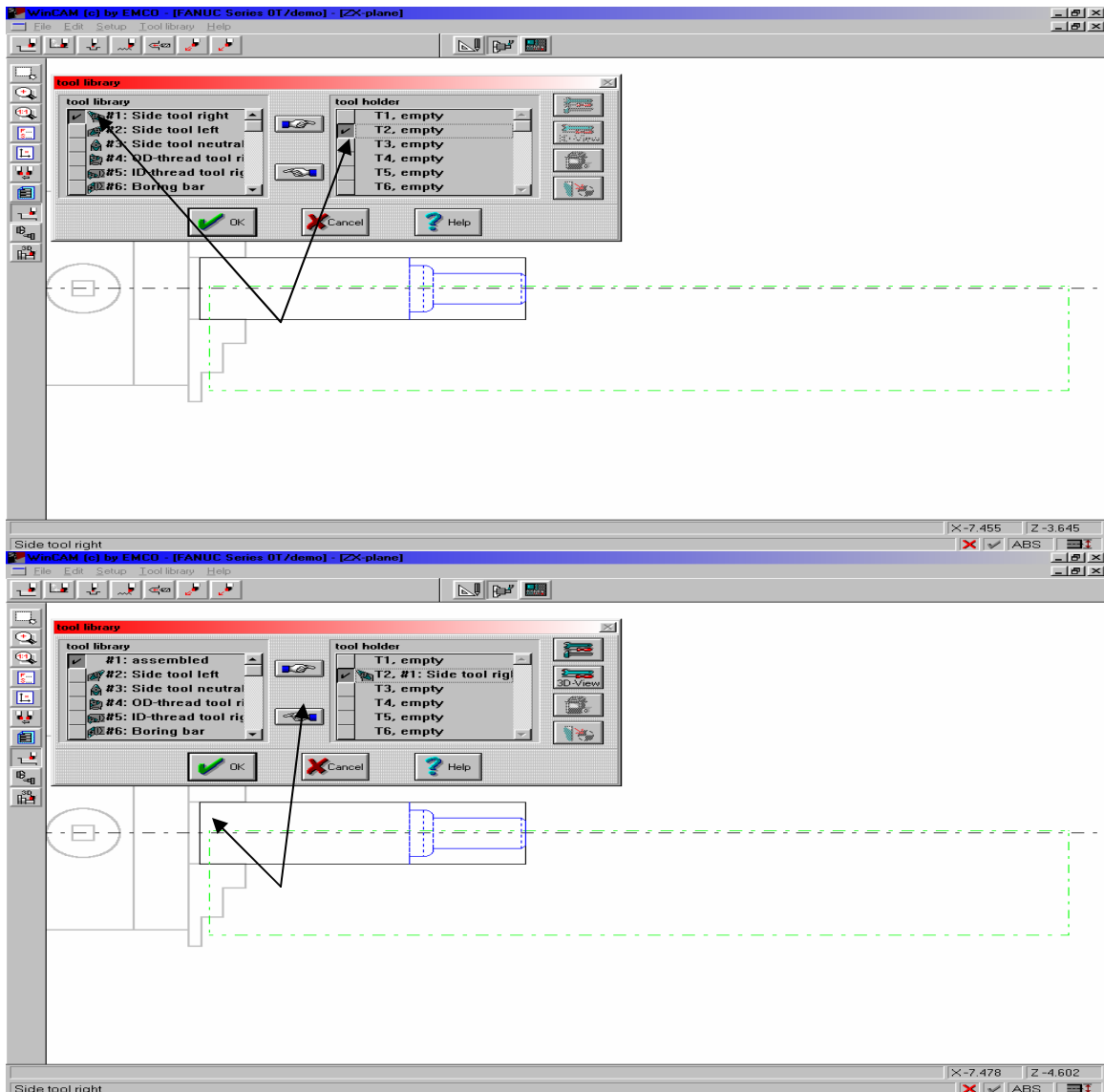
6. CLICK THE GRAY BOX ☒ **#1: Side tool right** UNDER TOOL LIBRARY

7. CLICK THE GRAY BOX ☒ **T2, empty** UNDER TOOL HOLDER

8. CLICK THE **TRANSFER** ICON  (THIS PLACES TOOL IN TOOL HOLDER)

9. CLICK OK  OK

Note: Tools numbers 2,4,6 are O.D. tools / Numbers 1,3,5 are I.D tools  
PC 50/55 TURN ONLY



10. CLICK ON **CHANGE TOOL ICON** 

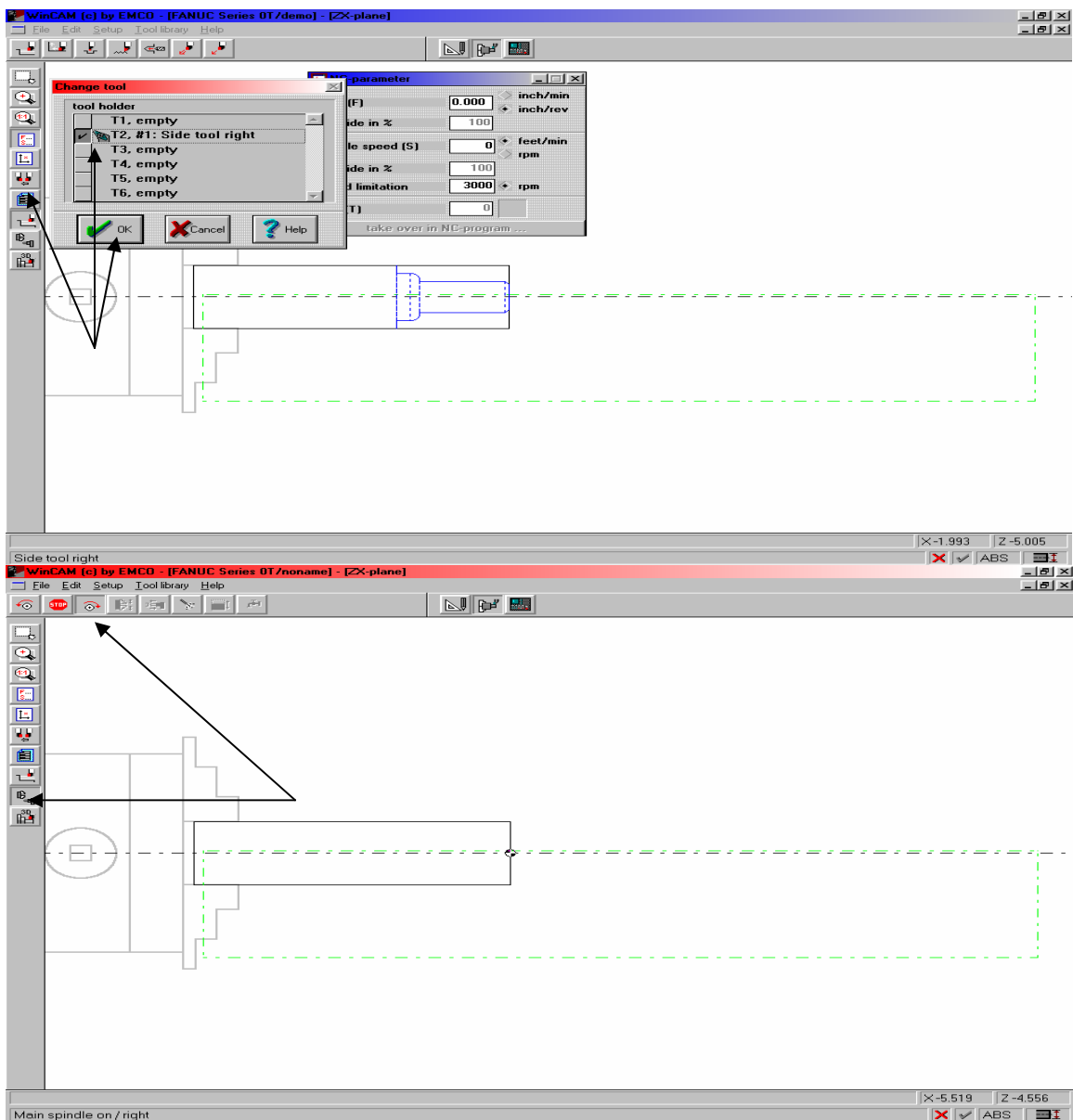
11. CLICK THE  **#1: Side tool right**

12. CLICK OK 

13. CLICK ON THE **PERIPHERY (CLAMPING DEVICES, ETC.)**

ICON 

14. CLICK ON **MAIN SPINDLE ON/RIGHT ICON**  (M03)



15. CLICK ON **MACHINING** ICON 

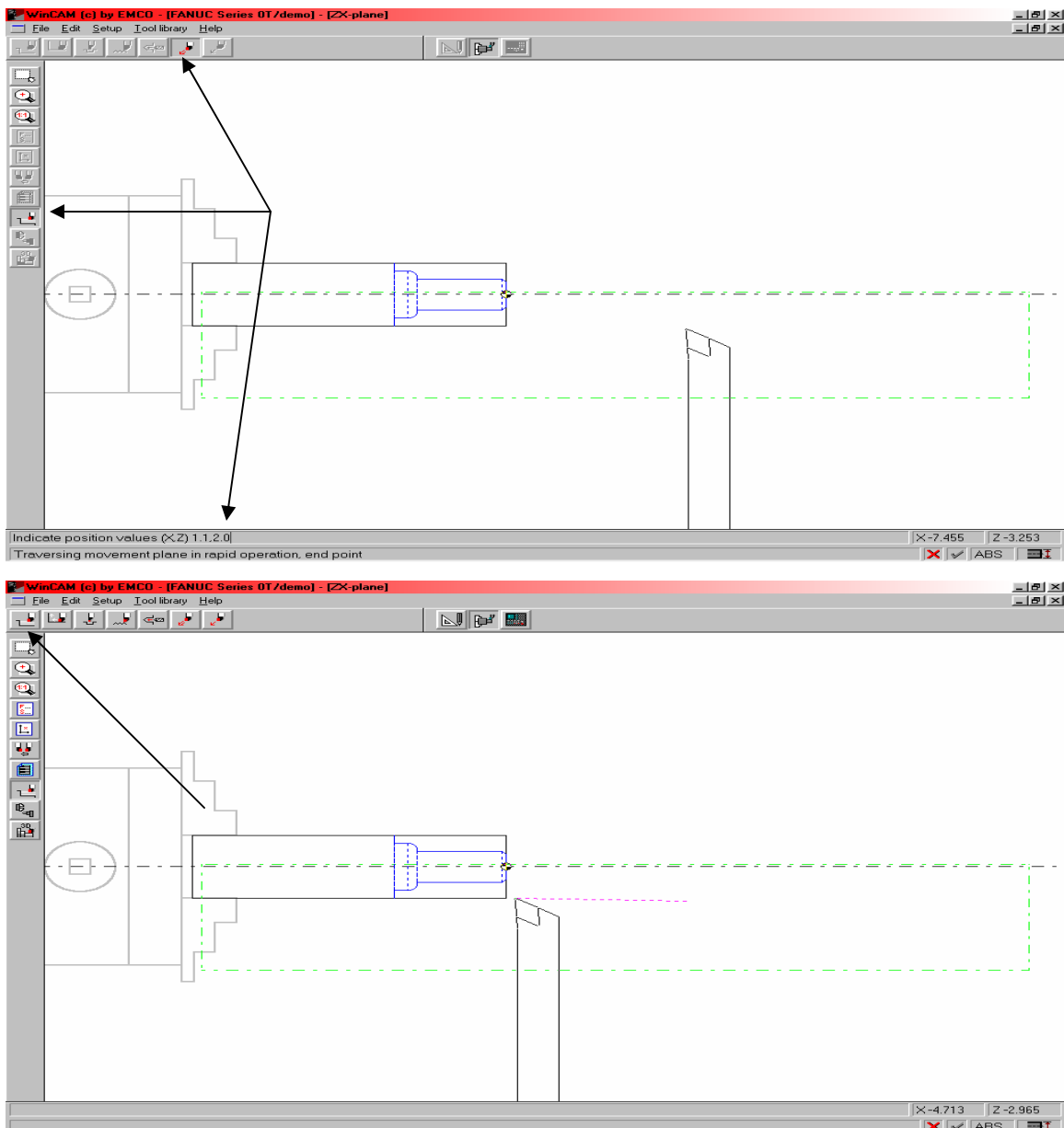
16. CLICK ON **MOVEMENT IN RAPID MOTION** ICON  (G00)


17. TYPE **1.1, 2.0** (SAFE MOVE) / THEN PRESS **ENTER**

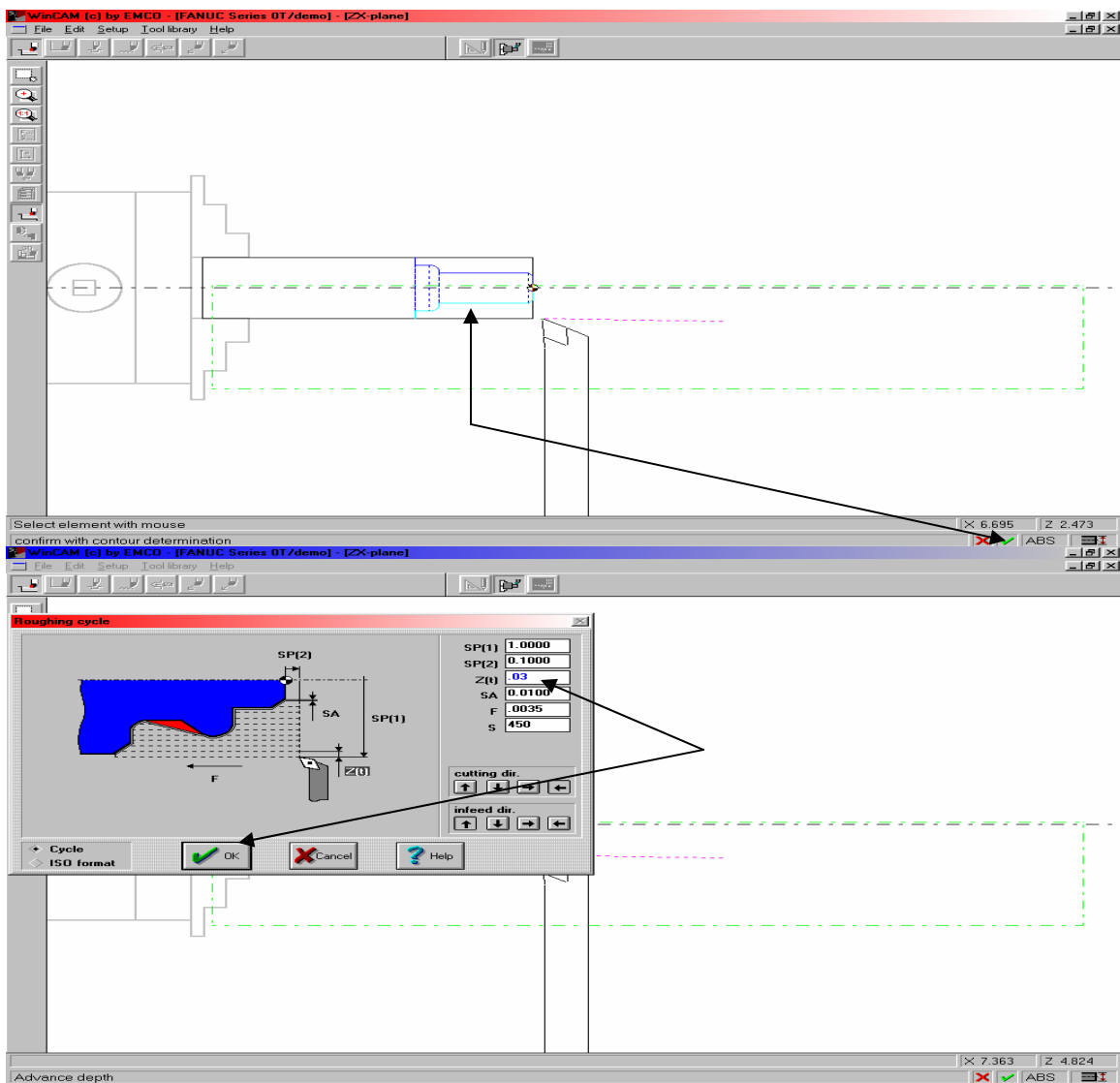
18. CLICK ON **MOVEMENT IN RAPID MOTION** ICON  (G00)



19. TYPE **.750, .1** (CYCLE POSITION) / THEN PRESS **ENTER**

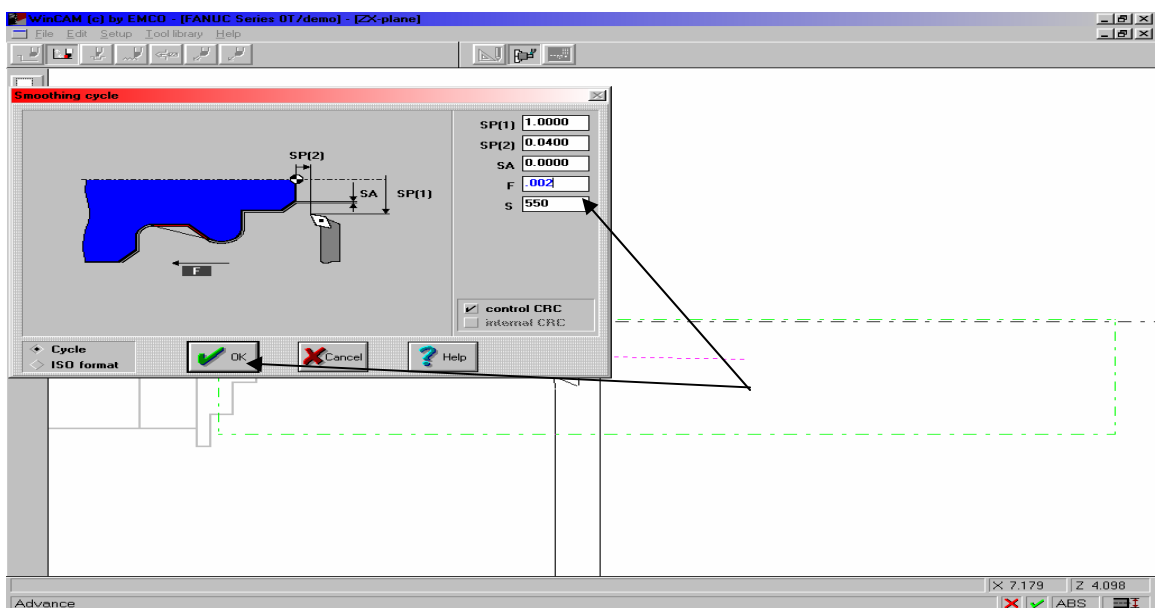
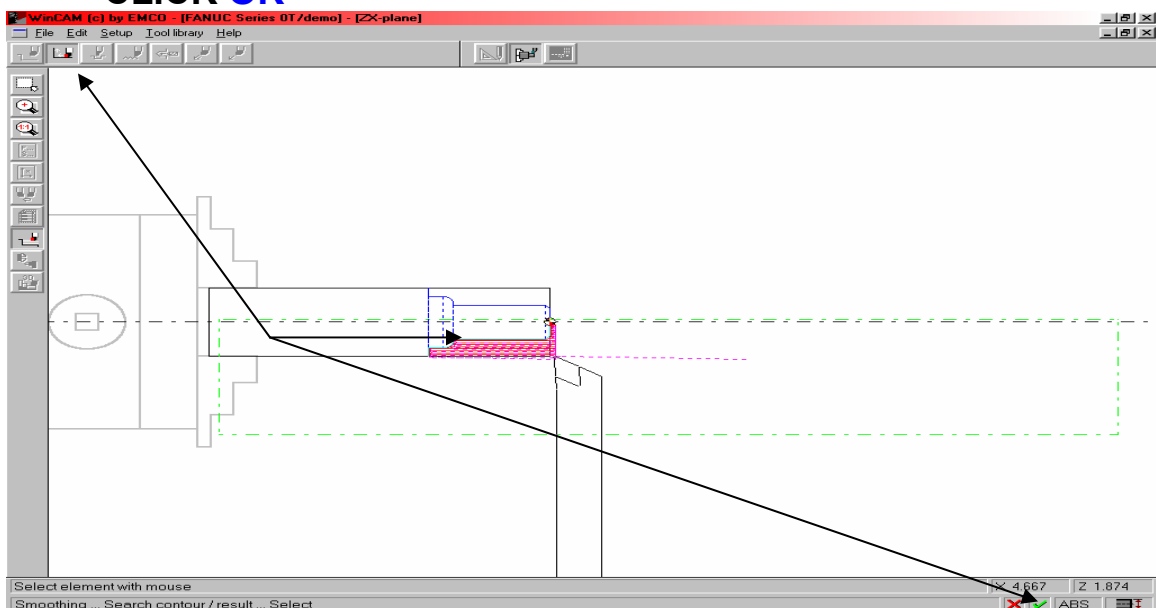
20. CLICK ON **ROUGHING** ICON  (G73)



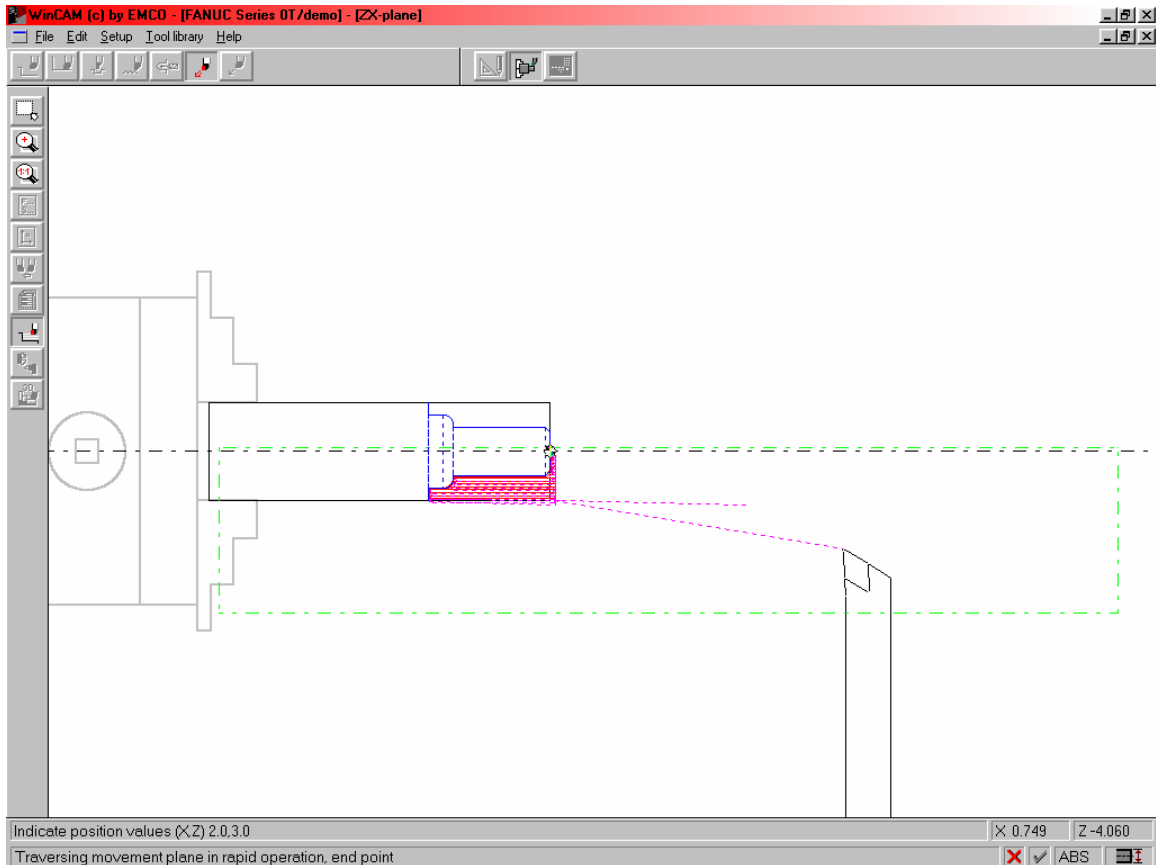
21. CLICK ON THE **CONTOUR** BEING MACHINED
22. CLICK THE GREEN CHECK MARK  (LOWER RIGHT CORNER OF THE SCREEN)
23. DOUBLE CLICK **Z(t)** (WHITE AREA)
24. TYPE **.03** (ADVANCE DEPTH) / THEN PRESS **TAB**
25. TYPE **.005** IN SA (FINISH OFFSET) / THEN PRESS **TAB**
26. TYPE **.0035** IN F (ADVANCE) = DEFAULT (G95) FEED PER REVOLUTION / THEN PRESS **TAB**
27. TYPE **450** IN S (SPINDLE SPEED) = (G96) / CLICK **OK**



28. CLICK ON **FOLLOW CONTOUR** ICON  (G72)
29. CLICK ON THE **CONTOUR** BEING MACHINED
30. CLICK THE GREEN CHECK MARK  (LOWER RIGHT CORNER OF THE SCREEN)
31. DOUBLE CLICK ON THE **F** (ADVANCE) (WHITE AREA)
32. TYPE IN **.002** / THEN PRESS **TAB**
33. TYPE **550** IN **S** (FOR SURFACE FEET PER MINUTE) / THEN **CLICK OK**

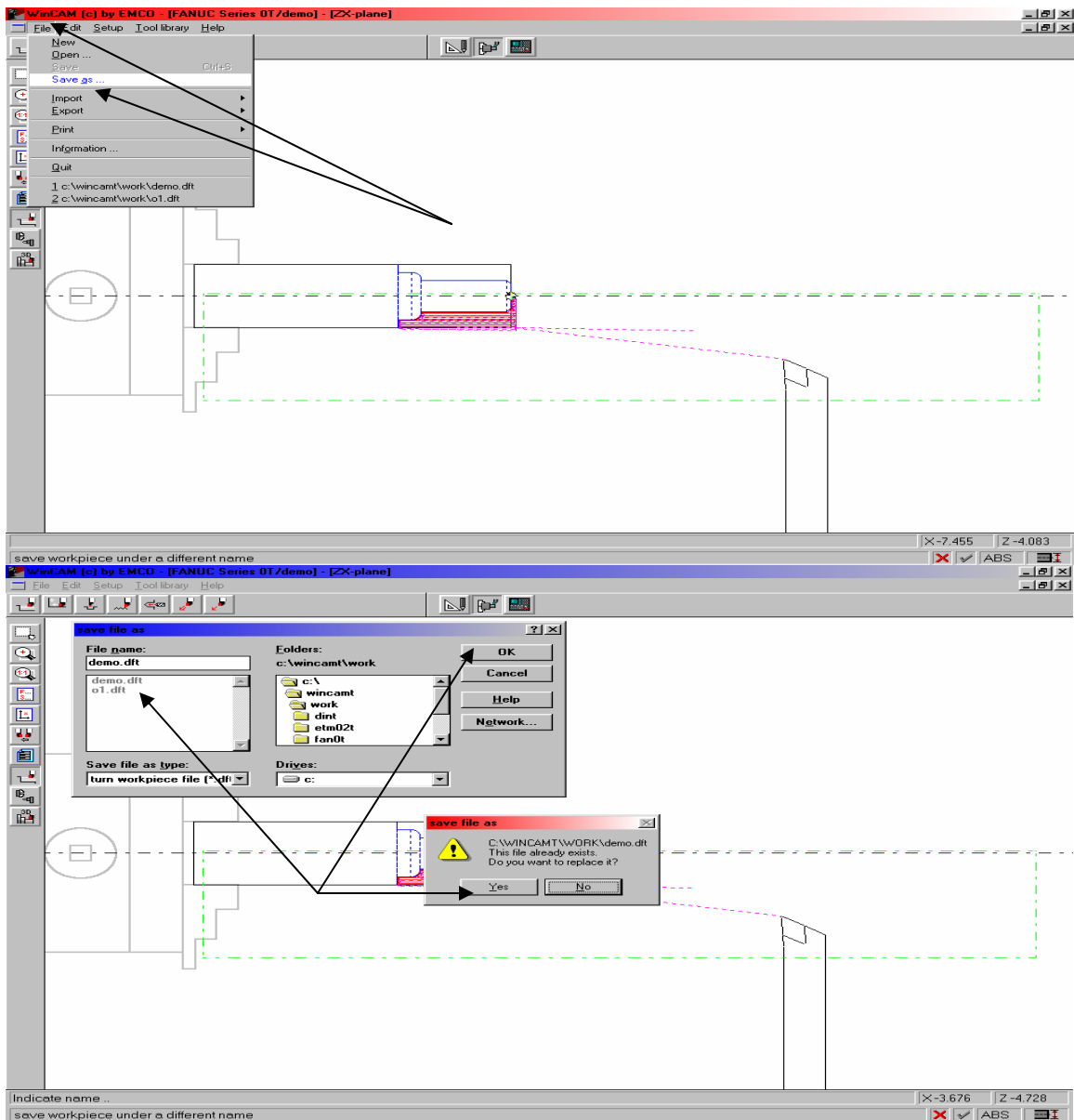


34. CLICK ON **MOVEMENT IN RAPID MOTION** ICON  (G00)
35. TYPE **2.0, 3.0** (SAFE MOVE) / THEN PRESS **ENTER**



1. CLICK ON **FILE** (TOP LEFT OF THE SCREEN)
2. CLICK ON **SAVE AS**
3. CLICK ON **Level1.DFT**
4. CLICK **OK**
5. CLICK **YES** TO FILE ALREADY EXISTS





You have just completed CAM portion  
of the Step by Step guide, go to the next  
page for MACHINE

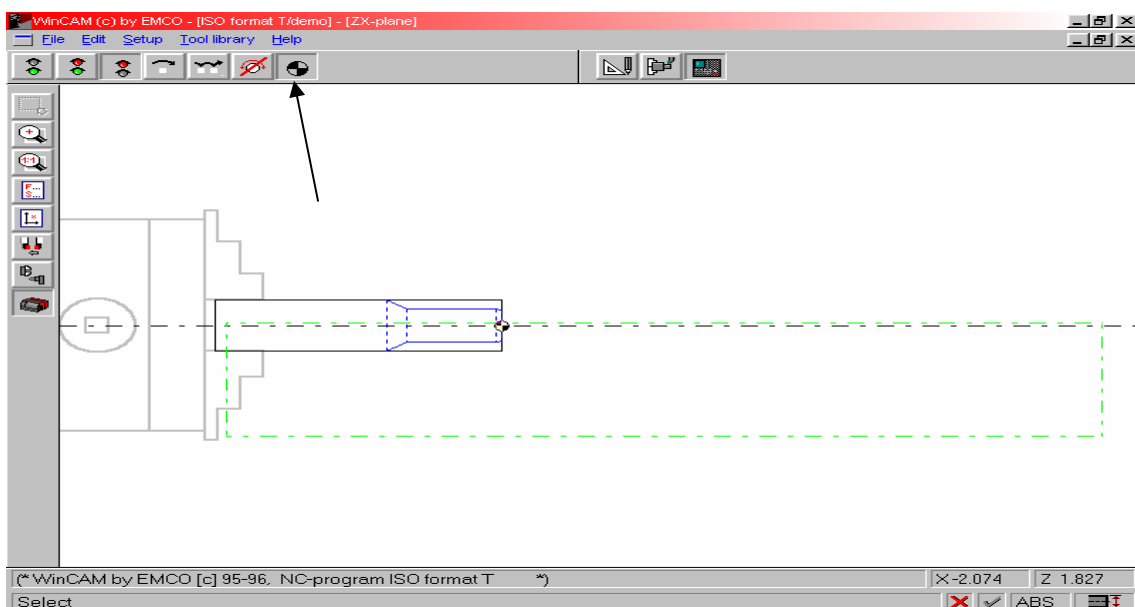
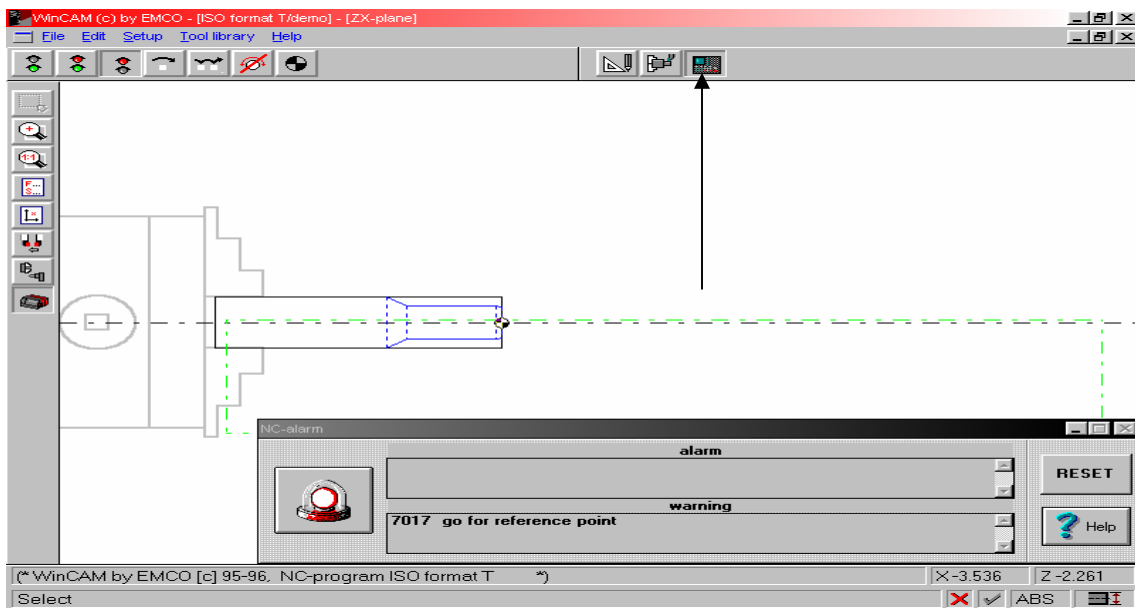
# WinCAM Turn Step by Step MACHINE Setup

1. CLICK ON THE **MACHINE** ICON



2. MAKE SURE DOOR IS CLOSED

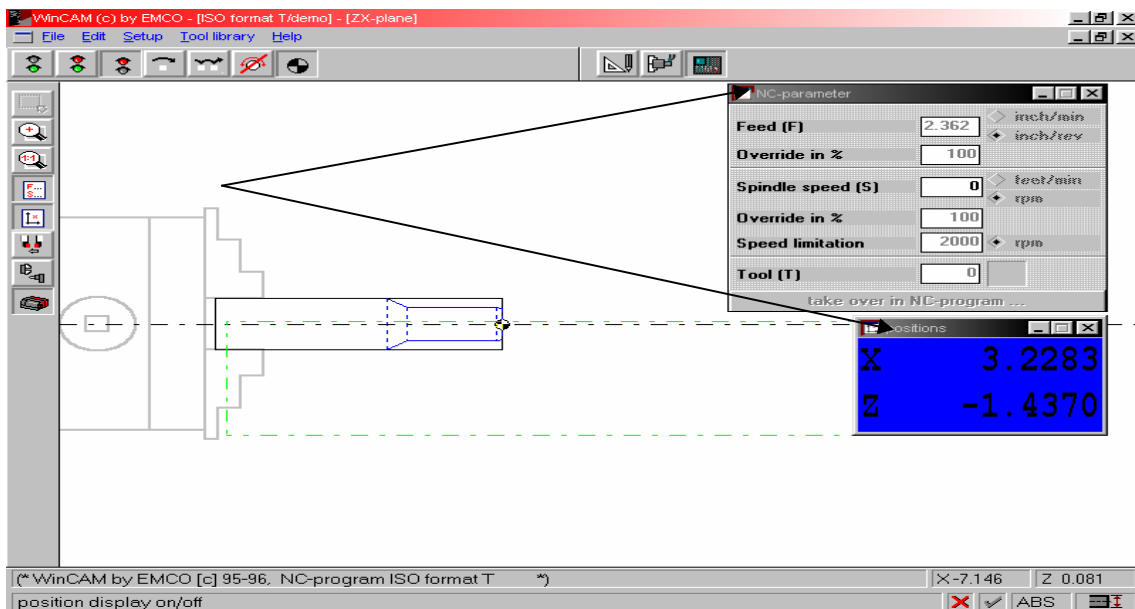
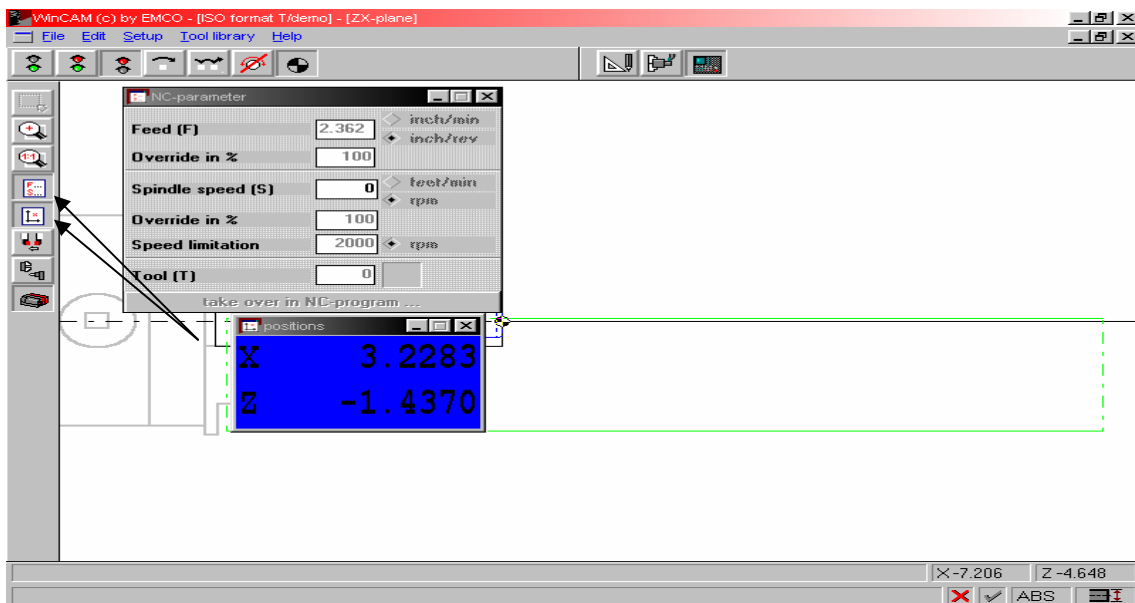
3. CLICK ON THE **REFERENCE** ICON



4. Click on **NC PARAMETERS ON/OFF**  & **POSITION**

**DISPLAY ON/OFF** 

5. MOVE BOTH SCREENS TO A VIEWABLE POSITION BY  
CLICKING IN THE GRAY BAR AND DRAGGING THE  
WINDOW TO A NEW POSITION



6. CLICK ON **TOOL CHANGE** ICON

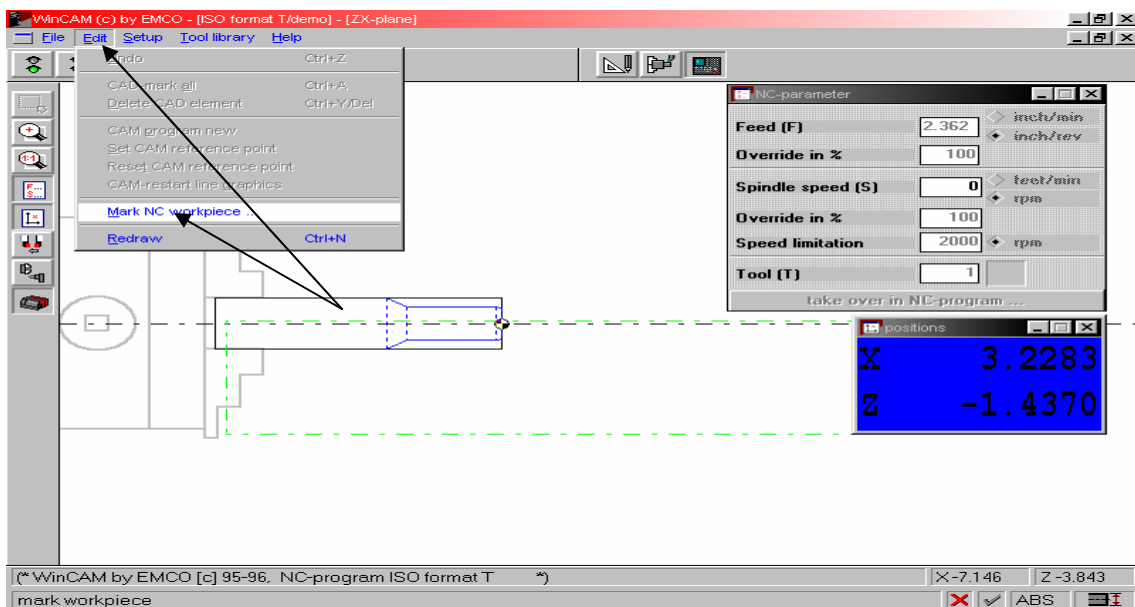
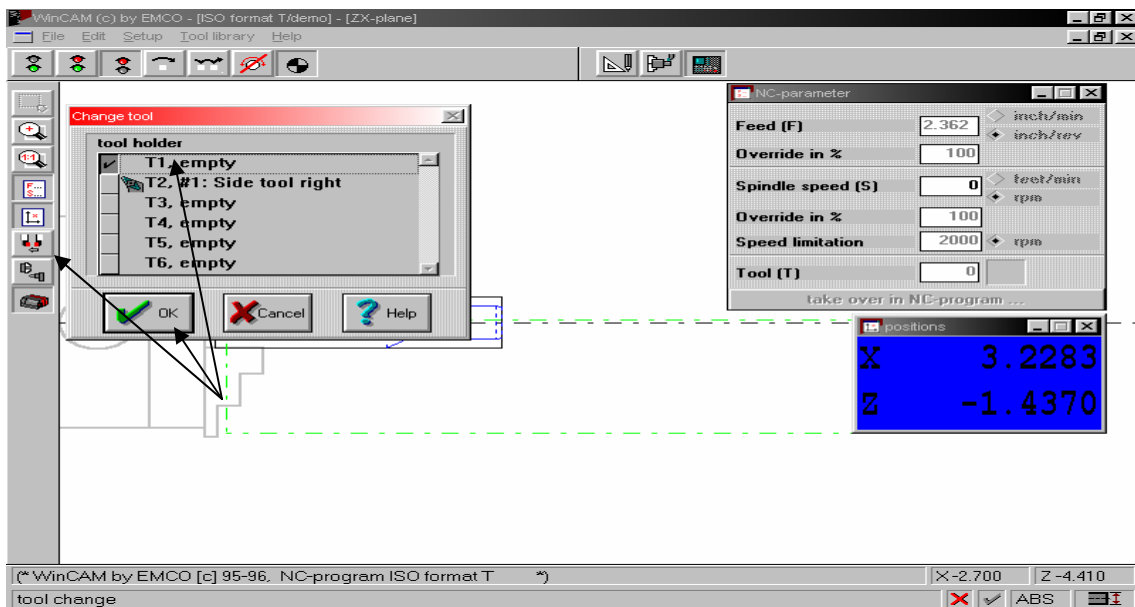


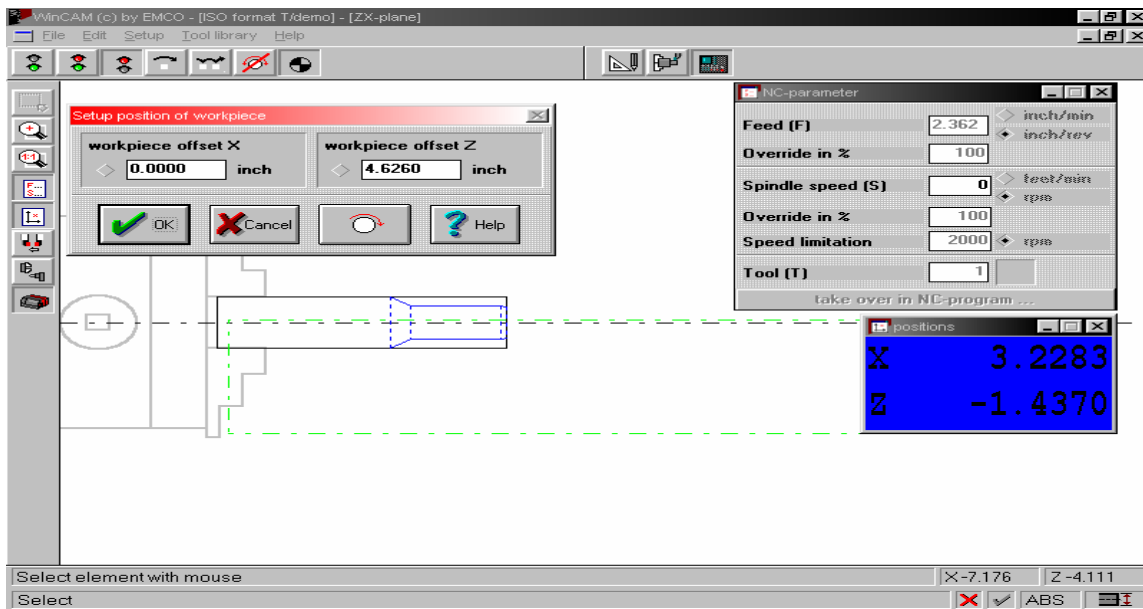
7. CLICK ON **T1, EMPTY**

8. CLICK **O.K.**

9. CLICK ON **EDIT**

10. CLICK ON **MARK NC WORKPIECE**





## HINT 1

The number keys on the NUMERIC KEYPAD with arrows moves the AXIS in the X or Z plane

Key (2) moves the AXIS DOWN

Key (4) moves the AXIS LEFT

Key (6) moves the AXIS RIGHT

Key (8) moves the AXIS UP

## HINT 2

The plus key on the number Keypad increases the feed rate  
The minus key decreases the feed rate

Press & hold CTRL Key with the plus Key this increases the spindle speed

Press & hold CTRL Key with the minus key this decreases the spindle speed

**Toggle Back**

Esc	Mode	Λ	F3	F4
			F5	F6
			F7	F8

**Over Toggle**

Output	Input	>	Display
--------	-------	---	---------

Chuck	Turret	Air	Jog	Jog	Spindle	Spindle	Tailstock	Tailstock	Door
1	2	3	4	5	6	7	8	9	0
Tab	Q	W	E	R	T	Y	U	I	O
Caps Lock	A	S	D	F	G	H	J	K	L
Shift	Z	X	C	V	B	N	M		
Ctrl		Alt	Space Bar				Alt		Ctrl

Backspace	Cancel
-----------	--------

Alter		Page Up
Delete	End	Page Down

<	Λ	>
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**Number Keys**

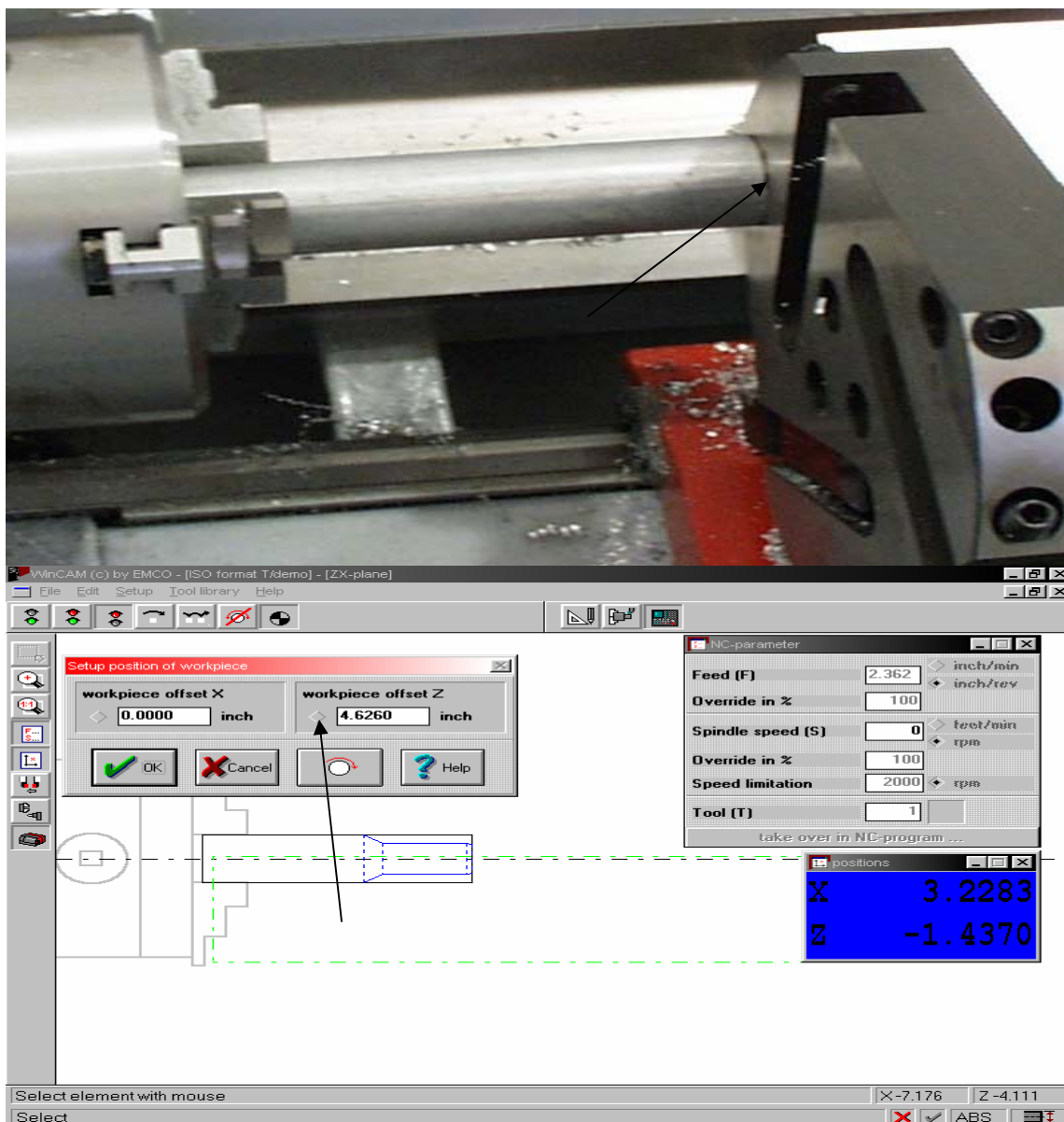
Num Lock	Eng Fun	Op Stop	⏻ -
	Skip	SBL	Λ/Λ -
	X+		⏻ +
Z-	REF ALL	Z+	Λ/Λ +
	X-		NC Start or
Reset		Nc Stop	(cycle start)

1. Any key with Gray highlight Press Ctrl + the key for that function
2. Some keys have two functions to them for 1st function just press the key
3. 2nd function will be Grey press Ctrl + the key for the function
4. Some automative keys when you press them 1 time this will close/tum off press them again will open/tum on
5. F1 is a toggle key for the modes: Zero, Auto, Edit, MDI, Jog and F1 then F11 give Increment Step
6. F12 is a toggle key for the Display screens: Position, Program, Offsets, Parameter, Alarm and F12 then F11 then F3 gives Graph
7. F12 then F11 then F3 then F11 then F3 gives you 3D view
8. Press enter 2 times this is the same as pressing EOB insert
9. Alt + F4 will exit the software back to the desktop
10. The Top right corner will allow the screen to be minimized, restored and close just like a standard windows screen

The machine functions are active only with NUM LOCK on

Keys are active they will move the axes if used as numbers. Use numbers on the keyboard.

11. TOUCH THE FACE OF THE **TURRET** TO THE END OF THE **WORKPIECE** USING THE ARROW KEYS ON THE NUMERIC KEYPAD (**HINT 1& 2 ON PAGE 20**)
12. CLICK ON **WORK PIECE OFFSET Z** DIAMOND ICON 
13. LEAVE “WORK PIECE OFFSET X” BLANK (**ALWAYS 0**)
14. WRITE DOWN THE NUMBER / THEN CLICK **O.K.**



15. MOVE THE **TURRET** OFF THE WORKPIECE ABOUT 1" IN THE Z AXIS BY USING THE NUMBER (6) ARROW KEY ON THE NUMERIC KEYPAD (**HINT 1& 2 ON PAGE 20**)

16. CLICK ON **TOOL CHANGE** ICON 

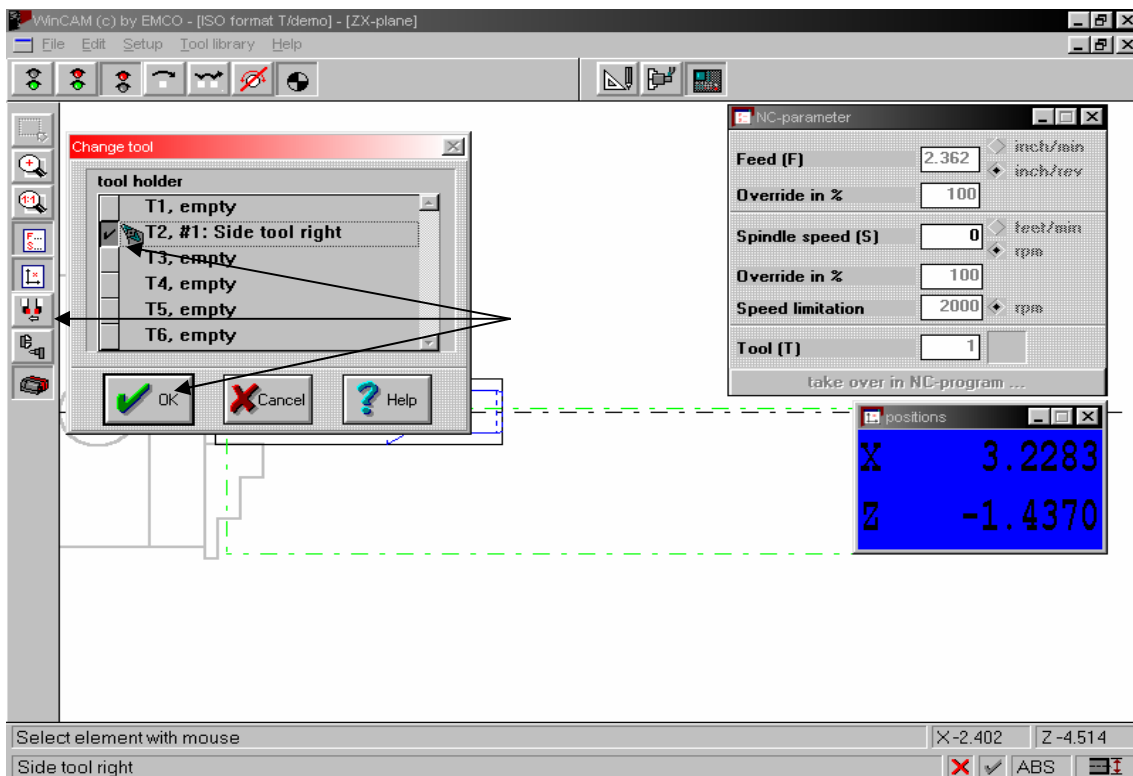
17. CLICK ON **T2,#1: SIDE TOOL RIGHT**

18. CLICK O.K.

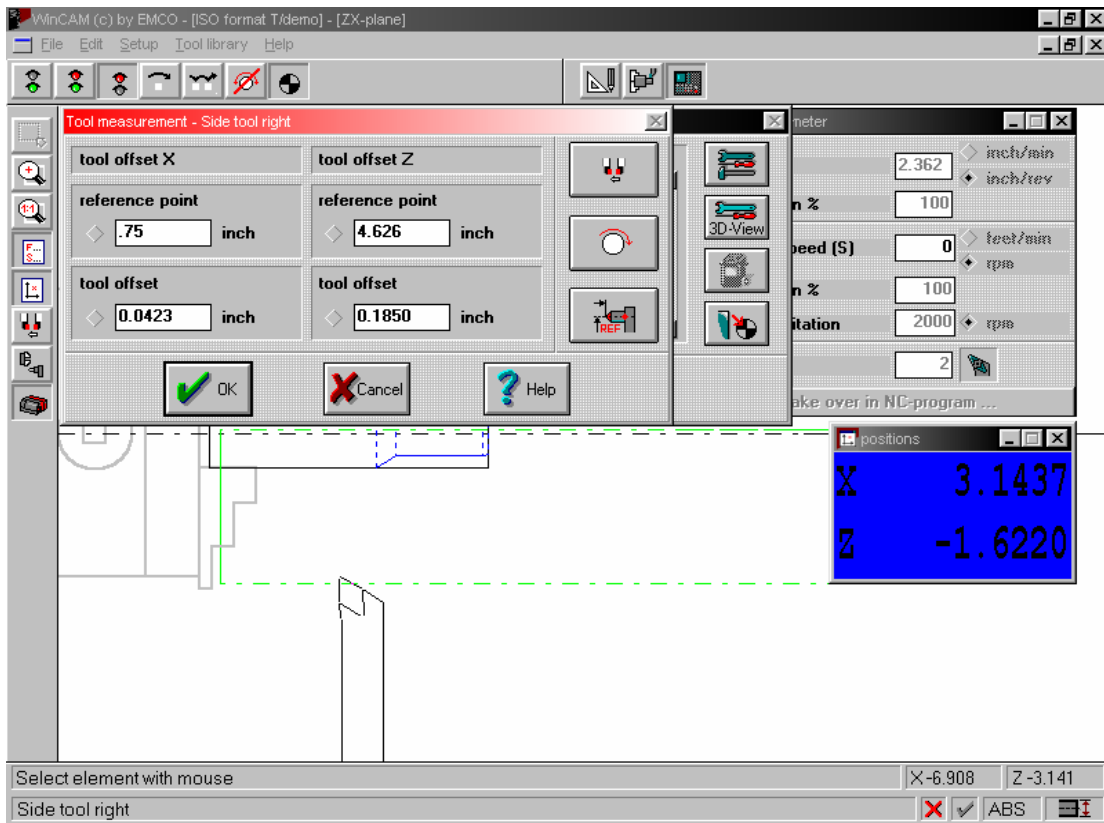
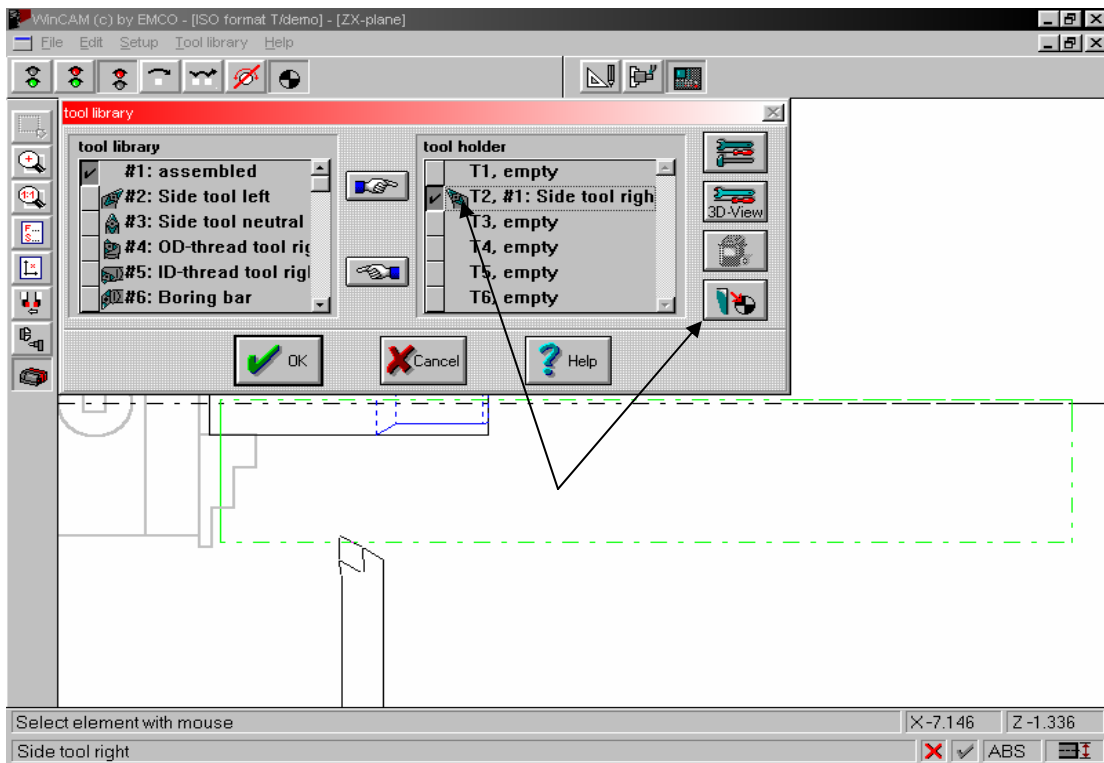
19. CLICK ON **TOOL LIBRARY**


20. CLICK ON **T2, #1: SIDE TOOL RIGHT** THEN CLICK **TOOL**

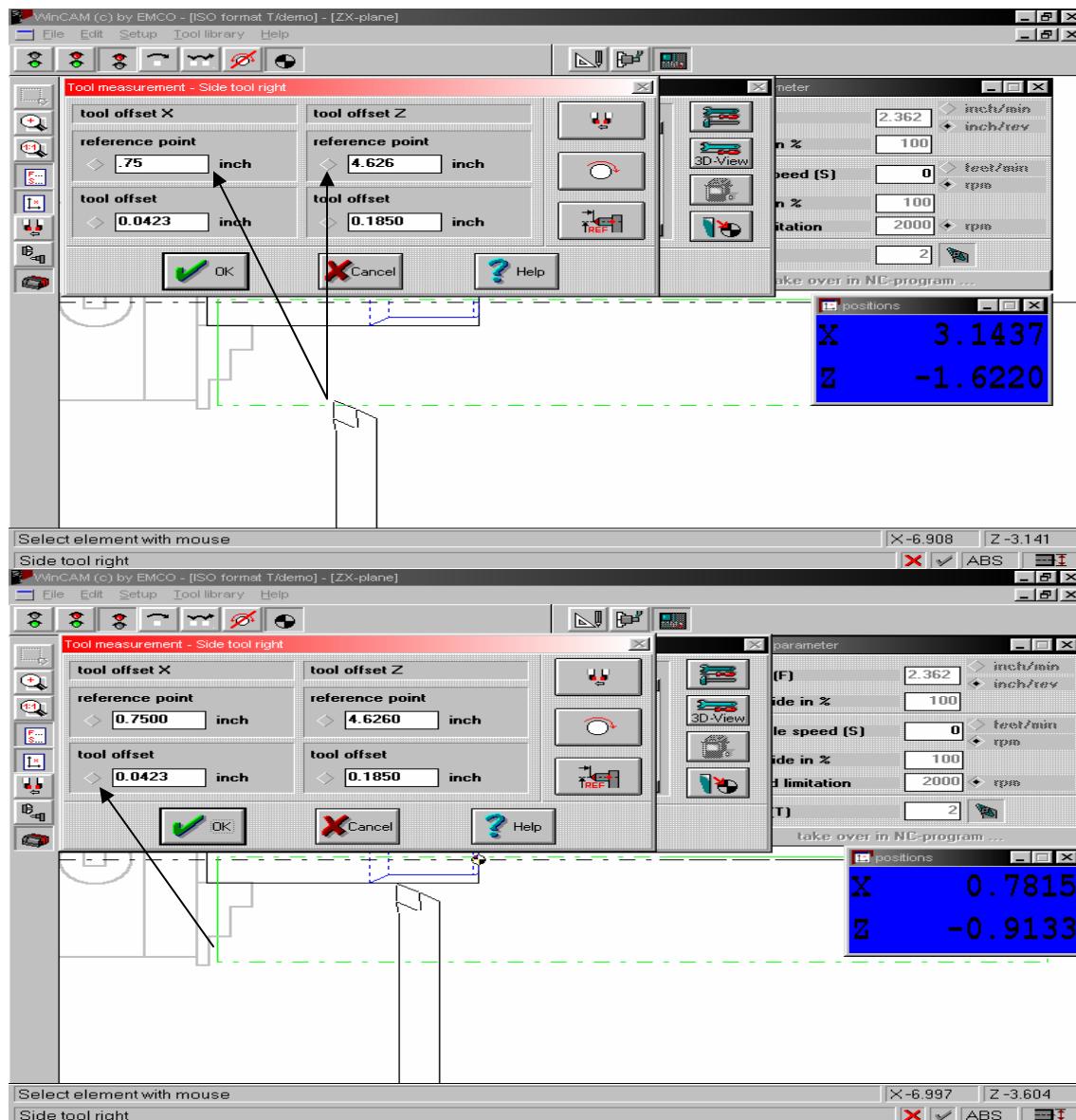
**REFERENCE** ICON 







21. UNDER **TOOL OFFSET X REFERENCE POINT TYPE** IN  
DIAMETER OF THE WORKPIECE
22. UNDER **TOOL OFFSET Z REFERENCE POINT TYPE** IN  
WORKSHIFT NUMBER FROM **LINE 14**
23. MOVE THE **T2** & SCRATCH THE **O.D.** USING THE ARROW  
& FEED KEYS ON THE NUMERIC KEYPAD (**HINT 1& 2 ON  
PAGE 20**)
24. UNDER **TOOL OFFSET X** CLICK ON **TOOL OFFSET ICON** 

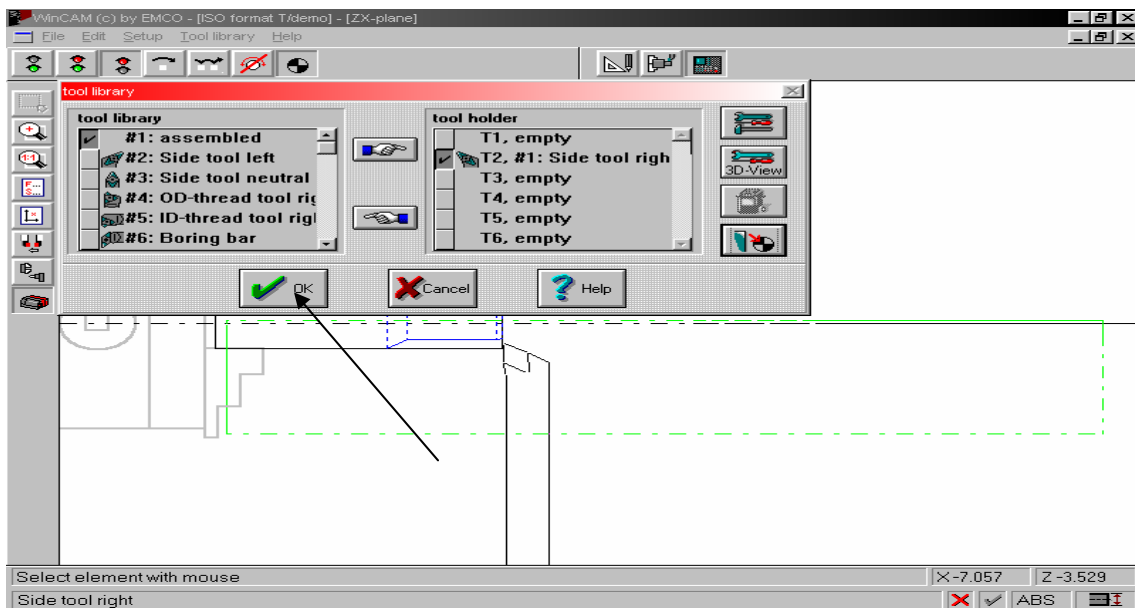
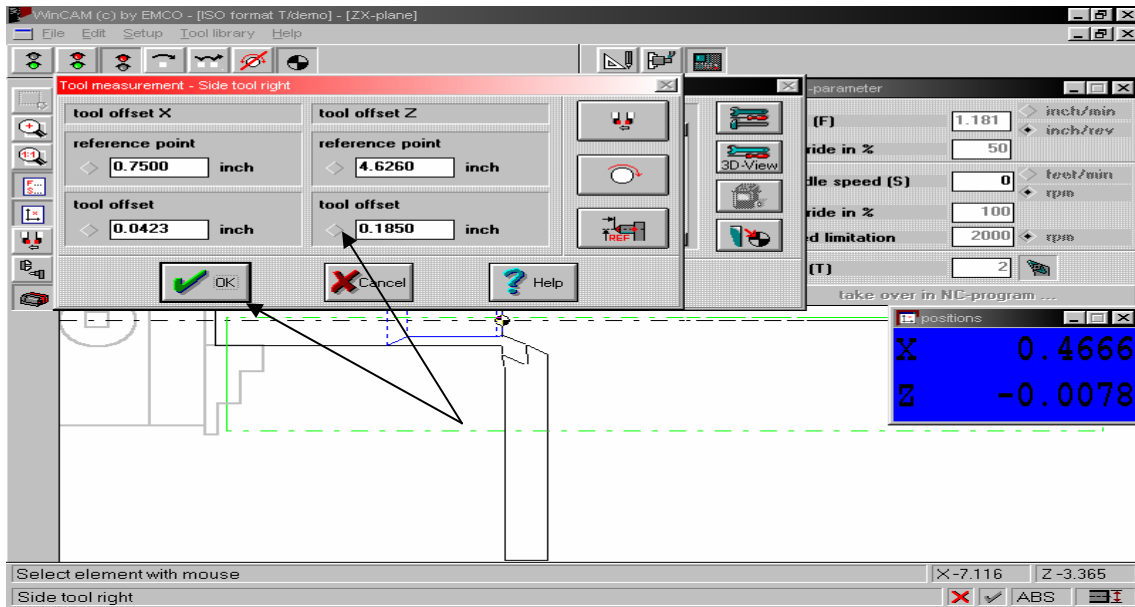


25. MOVE **T2** & SCRATCH THE **FACE** OF THE WORKPIECE

26. UNDER **TOOL OFFSET Z** CLICK ON **TOOL OFFSET** ICON 







27. CLICK **O.K.**

28. ON **TOOL LIBRARY** CLICK **O.K.**



29. DO THE SAME FOR **All O.D. TOOLS** (STEPS 15-28)
30. I.D TOOLS ARE THE SAME BUT **X** IN THE TOOL OFFSET IS 0 UNLESS IT IS A BORING BAR
31. NOW CLICK ON **START PROGRAM** (CYCLE START) **2** TIMES

**Note: Use Single Block & Feed at a lower rate for testing a Program**

<p><b>Tools numbers 2,4,6 are O.D. tools</b>  <b>Tools numbers 1,3,5 are I.D tools</b>  <b>PC 50 / 55 TURN ONLY</b></p>	
<b>NOTE</b>	
Start program _____	
Stop program (NC stop) _____	
Stop program (Reset) _____	
Skip Block (skip) _____	
Single block operation (single) _____	
Test run without main spindle (dry run) _____	
Go for Reference _____	