

TB130 (Rev1) - PLC Modification for Atrump Lube Pumps

Overview

This document describes how to modify the M400 PLC program to run the lube pump at all times unless Emergency Stop is pressed. This is necessary because the Chen Ying CESD pumps use an electronic timer that resets each time lube power is switched off. If no job runs as long as the interval set on the pump (usually 15 or 20 minutes), then the pump will never cycle and the machine will run without lube.

Changing the PLC program:

1. Exit to the DOS prompt: **Ctrl + Alt + X**
2. Change to the PLC directory: **C:\CNC7> CD \PLC**
3. Copy the PLC source file to a new file, named M400L.SRC:
C:\PLC> COPY M400.SRC M400L.SRC
4. Edit the new file: **C:\PLC> EDIT M400L.SRC**
5. Change the header comments as follows:

```
. * * * * *
;
; * File: M400L.src
; * Purpose: PLC program for M400 controls, Atrump CESD lube pumps
; * Author: Keith S. Dennison
; * Created: 05/27/97
; * Modifications:
; * 09/10/97 KSD Added Vector drive support by echoing
; * SpindleRelay and CCW_relay to
; * MEM78 and MEM79
; * 12/02/01 YOU Changed lube output to run all the time
; * unless E-stop or low lube
. * * * * *
```

6. Scroll down until you find the following lube output line (around line 254):

Lube = (CNC_program_running AND / Lube_low AND / E_stop)

7. Change it to read as follows: **Lube = (/ Lube_low AND / E_stop)**

8. Save the file: **Alt + F**, then **S**

9. Exit back to the DOS prompt: **Alt + F**, then **X**

10. Compile the modified PLC program: **C:\PLC> PLCCOMP /i M400L**

```
PLCCOMP v. 6.03 - Centroid PLC compiler  
Copyright 1999 Centroid Corp.Compilation successful
```

11. Return to the control software: **C:\PLC> CNC7M4**

Testing

Release the Emergency Stop button and check to see that the lube pump has power (press the Manual cycle button on the lube pump and see if it runs). Press the Emergency Stop button and check to see that the lube pump does not have power (press the Manual cycle button again and verify there is no response).

Document History

Rev1 Created on **2001-12-03**