

TB215 (Rev2) - Auto Lube Pump Configuration for Millport and Atrump/Centroid Machines

Purpose

This document describes how to properly configure automatic lubrication pump hardware settings for use with Centroid controls. These guidelines can be used with any automatic lubrication pump. See Tech Bulletin TB171 for more information on different software configurations for other types of lubrication systems.

Software Configuration

Parameter 179 controls the operation of automatic lubrication pumps. The default value for this parameter is shown below:

Parameter	Description	Value
179	XPLC Parameter LP9	3015

The value 3015 indicates every 30 minutes the lubrication pump will be activated for 15 seconds by applying power through the PLC. The timer is only activated when running a program or using MDI. This value may be adjusted as necessary depending on your particular machine as shown in the examples below:

- Mills that run long jobs (>30 minutes) with a lot of slow movements: 3015.
- Lathes running short jobs with many fast movements: 1010.
- Mills running many short jobs: 2015.

Hardware Configuration

The pictures below show the correct hardware configurations for typical automatic lubrication pumps.

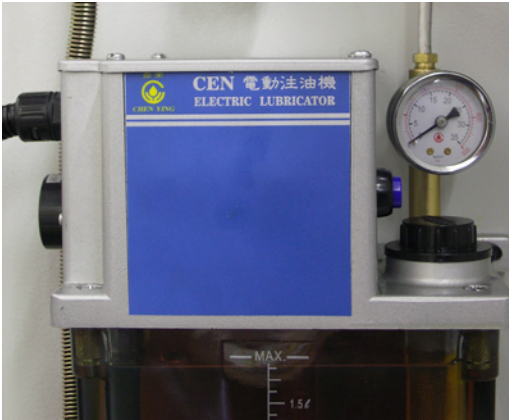


The interval (INT) timer should be set to 0 in all cases. When power is applied to the lubrication pump, the interval (INT) timer dictates when the pump will start running. For example, if the interval (INT) is set to 30, the pump will start running 30 minutes after power is applied. The control will only apply power to the lubrication pump for 15 sec. every 30 min. If this is set to anything other than 0, when power is applied the pump will never be activated.

If equipped, the activation (ACT) timer determines how long the pump will run supplying lubrication to the machine. This value must be greater than the activation time set by the control for proper operation. For example, if the control is set to pump for 15 sec. and the lube pump is set to 10, the activation (ACT) timer on the pump will override the control, shorting each cycle by 5 sec.

NOTE: Failure to configure the hardware properly may lead to inadequate lubrication of the machine resulting in premature wear and possible damage.

Lube pumps included with new model Atrump/Centroid machines have eliminated the hardware controls, an added a pressure guage as shown in the following picture:



These pumps are designed to be operated exclusively with the Centroid control. The same guidelines for parameter 179 as listed above should be followed with this model pump.

The pressure guage can be used to diagnose several different problems including leaks and blockages by monitoring the max pressure, time to build to max pressure, and the time to bleed off to zero. These values should be recorded when a new machine is installed, and checked on a weekly basis as part of normal routine maintenance.

To measure the max pressure, build time and bleed time first set parameter 179 to 0.0000. Then press <F3> MDI from the main menu. As soon as MDI starts power will be applied and the unit will begin to pump. Once max pressure has been reached, press <esc> to exit MDI and stop the pump. Be sure to reset parameter 179 to its original value before using machine.

Every unique machine will have its own set of values that should be compared to the original values at the time of installation. The values themselves can vary due to voltage, lube line lengths, restrictors and other factors, so monitoring these values over time is the only way to effectively diagnose and prevent problems that can lead to significant wear and damage to the machine.

A reduced max pressure and/or reduced time to bleed off to zero indicate possible leaks in the system. A greater max pressure and/or shorter time to build to max pressure can be an indication of blockages in the system.

Document History

Rev2 Created on **2009-06-03** by **#244**

[Rev1](#) Created on **2008-03-27** by **#244**