

TB223 (Rev1) - Maintenance Schedule & Operating Conditions for Proper Care of CNC Machine Tools

Environmental Requirements:

Operating Temperature Range: 40°F to 104°F (5°C to 40°C)

Ambient Humidity: 30% - 90% relative humidity, non-condensing

Altitude: 0-6000ft. (0-1830M)

NOTE: Maximum daily temperature variation should not exceed 18°F (10°C)

Power Requirements:

Input Supply Voltage: 200-240VAC, 1 or 3-phase, 14kVA

Input Supply Frequency: 50 or 60Hz +/- 1%

Circuit Breaker: 40AMP

Service Wire Size: 8GA

NOTE: For Wye power the neutral must be grounded. For Delta power a central leg or one leg ground should be used.

Air Requirements:

Minimum Input Supply: 100 PSI, 4scfm

Minimum Input Air Line Hose Size: 3/8" ID (1/4" ID Non-ATC)

Main Regulator: 90-100 PSI

NOTE: Excessive oil and water in the air supply may cause damage to the machine.

NOTE: Compressor should be set to turn on when pressure drops to 100PSI

The above general requirements are for Atrump/Centroid machining centers and may not apply to all machine applications. Consult your installation/service manual for specific guidelines for your machine tool.

Maintenance Schedule:

Daily	<ul style="list-style-type: none"> - Check coolant level, top off with water if necessary - Check way lube tank level. Fill if necessary; do not fill past MAX line - Clean chips from way covers, limit switches, tilt-table, toolchanger, spindle nose - Wipe spindle taper, lightly oil - Check for abnormal noise or vibration - Verify operation of ESTOP - Verify drawbar operation - Empty chip/swarf trays
Weekly	<ul style="list-style-type: none"> - Check/clean chip auger filter - Check air regulator/gauge for 90-100 PSI - Check for proper operation of drain on air regulator filter* - Verify operation of auto lube system. Note max. pressure, time to build to max pressure, and time to bleed off to zero. Verify control settings. (see TB215 for more information on lube settings and diagnosing problems) - Clean exterior surface with mild cleaner. DO NOT use solvents - Verify operation of auxiliary safety devices (i.e. door interlock switch, etc.)
Monthly	<ul style="list-style-type: none"> - Verify machine level - Check input voltage - Inspect way cover operation, oil lightly if necessary - Clean air filters on electrical cabinet and control console* - Remove sediment from coolant tanks. POWER OFF system before servicing - Inspect/clean way oil filter - Inspect/clean air regulator filter - Run Drag Plot. 5% increase requires servicing, contact your dealer.
6-Months or 1000hrs.	<ul style="list-style-type: none"> - Inspect/clean electrical cabinet* - Inspect ground connections - Inspect axis drive belts for tension/wear - Inspect spindle drive belt(s) - Check all hoses and lube lines for damage/leaks - Grease toolchanger fittings (located behind carousel cover) - Add/replace drawbar oil - Check rotary gear oil, add if necessary - Replace coolant and thoroughly clean coolant tanks** - Inspect ways/gibs for adequate lubrication, signs of wear/rust***
Annually or 2000hrs.	<ul style="list-style-type: none"> - Replace rotary gear oil - Replace fan filters on electrical cabinet and control console* - Replace way oil filter(s) - Replace air regulator filter*

*NOTE: May need to be serviced sooner due to environmental conditions.

**NOTE: Coolant may need to be replaced sooner if foul odor or excessive oil is present. Always dispose of used coolant/oil in accordance with your

local environmental waste regulations.

***NOTE: Requires Centroid service technician for any and all adjustments/repairs.

Lubrication Requirements:

System	Quantity	Lubricant					
		CPC	Mobil	Hangsterfers	Shell	Exxon	Gulf
Coolant*	50Gal (190L) 5-8%			S-500			
Way Lube	1.75L	Way Lubricant 68	Vactra 2	Way Oil 2	Tonna Oil 68	Febis 68	Gulfway 68
Air Filter Regulator	0.1L	Circulation Oil R-32	D.T.E Light Oil	Antiwear 32	Turbo Oil T32	Teresso 32	Harpny 32
Draw Bar	80%						
Oil Cooler	40 C Scale						

*NOTE: Coolant should be prepared using deionized or distilled water for best results. Tap water containing various chemicals and minerals can leave deposits on machine surfaces causing premature wear, corrosion or component failure.

Polycarbonate Windows/Guards:

All windows and guards should be periodically checked for discoloration, cracking, or other signs of damage/wear. Polycarbonate can be weakened by exposure to coolant, cutting fluids, and chemicals containing amines. Windows/guards should be replaced if degradation is suspected. It is recommended that all polycarbonate windows/guards be replaced every 2-3 years.

Safety devices:

Safety devices are provided to ensure that operators are protected at all times. It is essential that these are checked on a regular basis to ensure that they are working correctly. Contact your dealer immediately if any of these devices require servicing.

Device	Description of Maintenance
E-Stop	Push the Emergency Stop button after daily start up according to operators manual. Emergency Stop Detected message displayed on screen means the E-Stop is working properly.
Door Interlock	Door Interlock With the enclosure door open, press <F3> MDI from the main menu. If this function is not allowed, the safety device is operating properly.
Main Power Switch	Check the tightness of the holder every six months, if loose it must be tightened. If the fixing screw between the holder and link wears, a replacement shall be fitted according to the specification on the electrical parts list.

Machine Storage:

Storage temperature range: -4°F to 158°F (-20°C to 70°C)

Antirust coating should be applied to all metal surfaces before storage of machine.

Any water-based coolant or other fluids should be completely removed from machine and all hoses drained prior to storage.

If the machine will not be used for more than six months, the spindle and axis drive belts should be loosened to prevent fatigue from long-term tension.

CENTROID is now pleased to offer our Preventative Maintenance Program. Have your CENTROID equipped machine tool serviced by

Certified Factory Technicians in 6mo. intervals to keep your machine running 100%. Contact your dealer today for a quote and to schedule your Preventative Maintenance.

Document History

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