ENERGY CONTROL PROCEDURE

The following Energy Control Procedure should be used for the equipment listed below.

Date Written: 2-24-11 Date of Revisions: _____
Authors: Ed Graef
Reviewing Personnel: _____ Date Reviewed: _____
Approvals: _____ Date Approved: _____

EQUIPMENT DESCRIPTION

GENERAL DESCRIPTION: A51 Horizontal Machining Centers (#2037,2038,2041,2042)
MANUFACTURER: Makino
MODEL: A51 SERIAL NUMBER: 468/455/521/564
LOCATION: Production Broadway wall and enclosed truck dock

CONTROLS

The following Controls, including "start/stop" buttons, toggle switches, emergency stop button, shut-off valves, etc. have been identified for this equipment.

Description of Control	Location on Equipment
Main breaker	Operator side electrical cabinet
Air supply	Rear of machine on top
Main Disconnect	On wall behind machine #
Power on Button	Control Pendant Operator Side

ENERGY SOURCES/ISOLATION DEVICES

The following Energy Sources and Energy Isolation Devices supporting this equipment have been identified.
Energy Types: (CHECK ALL THOSE APPLICABLE)

Electrical	**X**
Pneumatic	**X**
Hydraulic	**X**
Steam	
Chemical	
Thermal	
"Stored" Energy	
Other	

Sources / Devices	Location	Type of Lock/Tag Needed
Main breaker	Operator side electrical cabinet	Std. lock & tag
Air supply	Rear of machine on top	Pneumatic locking cover std. lock & tag
Main Disconnect	Wall behind machine	Std. lock & tag

SHUTDOWN PROCEDURES

The steps listed below must be followed to properly shut down and de-energize this equipment. To verify the effectiveness of each step follow the instructions in the "Verification" column.

Lock-Out/Tag-Out

Procedure	Device used	How to verify
NOTIFY "AFFECTED" AND "OTHER" EMPLOYEES OF IMPENDING EQUIPMENT SHUTDOWN		
Push control power off button	NA	Try manual function
Switch off main breaker	Std. lock & tag	Check for voltage
Disconnect main air supply	Locking cover std. lock & tag	Check gauge
Switch off machine breaker	Std. lock & tag	Try on button on opp. pendent

RELEASE AND RESTART PROCEDURES

The steps listed below must be followed to properly release this equipment from a locked or tagged out condition and restart it.

Procedure	Location
Inspect work area and remove tools and other non-essential items.	
Inspect equipment and components to make sure it is intact and ready to run.	
Notify “affected” and “other” employees in the area of impending restart and make sure they are safely positioned away from the equipment	
Unlock and reconnect main air supply	Rear of machine on top
Unlock Main disconnect	Wall behind machine
Unlock and switch on main breaker	Operator side electrical cabinet
Push control power on button	Operator panel
Zero return all axis	Operator panel