

ENERGY CONTROL PROCEDURE

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

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Approvals: FRANK REPROGLE Date Approved: _____

EQUIPMENT DESCRIPTION

GENERAL DESCRIPTION: Robot Welders (3106)

MANUFACTURER: Lincoln

MODEL: System 40 SERIAL NUMBER: F48904

LOCATION: South / Broadway side of production 2nd robot welder from exit door

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
Hydraulic on / off button	Hydraulic pump unit
Control power on button	Rear control panel
Main disconnect controller	Left of the control panel
On/off switch welder	Right rear of cell
Main air disconnect	Right rear of cell
On/off button smoke collector	Right side of cell
Gas ball valve	Right rear of cell
Emergency stop buttons	Front operator panel, rear control panel and teach pendant

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
Hydraulic pump	Right front inside cell	Lock and tag, plug device
Control disconnect	Left of control panel	Lock and tag
Welder breaker	480v breaker panel behind robot cells	Lock and tag, breaker device
Smoke collector breaker	480v breaker panel behind robot cells	Lock and tag, breaker device
Main air disconnect	Inside cell right of robot base	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		
Turn off control breaker	Lock & tag breaker device	Try to turn on control
Turn off welder breaker	Lock & tag breaker device	Try to turn on welder
Turn off smoke collector breaker	Lock & tag breaker device	Try to turn on smoke collector
Unplug hydraulic pump	Lock & tag, plug device	Try to use hydraulics
Pull lever to close air disconnect	Lock and tag	Try air nozzle

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.

<u>Procedure</u>	<u>Location</u>
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	
Open air disconnect	Inside cell right side robot base
Plug in hydraulic pump	Right front inside cell
Turn control breaker on	480V breaker panel behind robot cells
Turn welder breaker on	480V breaker panel behind robot cells
Turn smoke collector on	480V breaker panel behind robot cells