
SECTION E: SYSTEM SETUP

Now that the equipment is positioned and all connections have been made, the IMA system is ready to be made operational. This section of the manual will take a step-by-step approach to making the system operational and checking the initial setup variables.

Turning the main breaker on

- Check electrical connections to ensure the power is connected properly.
- Close the electrical cabinet.



Always close the electrical cabinet door before turning on the main breaker.

- Turn the main breaker on.
- Turn the Master Control Relay (MCR) on by pressing the Control On illuminated push button. The Quick Dump/Soft Start air supply valve will activate. All cylinders on the machine and Cable Processor Module will move slowly to their “home” positions.

Checking the pneumatic system

Now that the air supply to the system is on and the soft start valve is activated, the pneumatic system is charged with air.

- Check the pneumatic gauges inside the pneumatic cabinet.
- Check that the pressure settings coincide with the pressure settings on the Suggested Timer and Pressure Setting Chart located in the drawing holder mounted on the inside of the door. Adjust the pneumatic regulators as required.
- Advance and retract all pneumatic cylinders by pressing the appropriate push buttons on the control panel with the Setup/Manual/Auto key selector switch in the setup position.

Installing the tooling

If the tooling was packed separately for shipment, or alternate tooling needs to be installed, the following procedure is recommended:

Fixed tool installation

1. Turn the control power on.
2. Remove the ejector pin retainer and ejector pins by sliding the retainer out of its holder.
3. Turn the machine control on, and select the setup mode.
4. Advance the ejector by pressing the Ejector Advance illuminated push button. This will lift the ejector pin shaft.
5. Place the ejector pin retainer on the bottom of the fixed tool, (with the correct side down and the correct end to the back).
6. Push the ejector pins into their correct holes. Pull the retainer and pins down from the tool slightly, so the retainer “hangs” by the ejector pins. Make sure the flat on the back ejector pin is in the correct position (flat across the back of the retainer).
7. Slide the tool into place, being careful to slide the ejector pin retainer into its holder (the end of the ejector shaft). When in position, the fixed tool will drop down onto the two alignment dowels.
8. Retract the ejectors by pressing the Ejector Retract illuminated push button. Install the four screws which hold the fixed tool to the fixed tool holder.

Movable tool installation

1. Install the cooling lines to the movable tool.



CAUTION!

Do not allow any coolant to fall into the melt pot. Install the coolant lines when the tool is clear of the molten alloy. An explosion could occur if coolant is spilled into the melt pot.

2. Turn on the tool coolant supply and drain valves. Check for coolant leaks and repair as necessary.
3. Install the movable tool through the rear of the Cable Processor Module. Fit the alignment pins into the corresponding alignment holes in the fixed tool.

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4. Install the parting line flash guard.
 5. Manually close the main slide and fasten the 10 mm draw bolt using an 8 mm hex (Allen) wrench.
 6. Install the Cable-In-Place switch air supply line.

Checking the coolant system

- Turn off the coolant supply and drain valves which regulate the coolant flow to and from the operating head/tooling.
- Turn on the coolant supply and drain to the machine.
- Check for coolant leaks and repair as required.
- Slowly open the coolant supply and drain valves to the operating head/tooling. Again, check for leaks.



CAUTION!

There must be no coolant leaks in the melting pot area. If coolant comes in contact with molten alloy, an explosion of molten alloy may result.

Repair any coolant leaks before proceeding with the initial start up of the system.

Turning the melt pot on

- Turn the melt pot on by turning the Melt Pot selector switch to the on position. It will take approximately 2 hours for the alloy to reach operating temperature.

Checking the nozzle heater

Turn on the gas supply to the machine. Check for gas leaks in the piping up to the gas solenoid valve located under the parts tray. Repair any leaks immediately.

Turn on the nozzle heater. Check for gas leaks in the piping from the gas solenoid valve to the twin torch tip. Repair any leaks immediately.

Ignite the gas/air mix with a suitable device. Adjust the air regulator, and air and gas needle valves so a soft, blue flame envelopes the base of the nozzle. Reposition the twin torch tip if necessary.

Checking the nozzle alignment

When the alloy has reached operating temperature, the nozzle alignment must be checked in case it was knocked out of alignment during shipping.

To check the nozzle alignment, see Section G1: Machine Maintenance. Read the section titled Nozzle seat/nozzle tip alignment.

Checking timer settings

Check that the timer settings coincide with those on the Suggested Timer and Pressure Setting Chart located in the drawing holder mounted on the inside of the pneumatic cabinet door.

To view the preset value for a timer using the Allen-Bradley Data Table Access Module (DTAM™), press [F()] and the number of the timer. The preset value will automatically be displayed. To change the preset value, enter the new value using the numeric keys and press the [Enter] key.