

ANSI/SPI B151.1 FOLLOW-UP

The Focus, a Safety Bulletin entitled “Structural Foam Machines Safety Updates from Clause 6 of ANSI/SPI B151.1” was sent out from Uniloy Milacron at the beginning of October 2000, and this Technical Support letter is the companion piece to that Safety Bulletin. Please note a copy of this Safety bulletin is supplied with this mailing for your reference.

We have researched how compliance to this Standard affects Uniloy-Springfield machines. The changes required can be broken down into two categories, namely, mechanical and electrical, and to support these we are offering the following information. Additional to these we are also offering safety signs as used on new machines that support both of these categories.

Mechanical Mechanically, the guarding issues on each machine will be different.

1. Clamp Guarding.

The Standard states: Fixed guards shall be attached to the bottom of the front and rear gates providing a floor clearance between 12-14 inches and fixed guarding shall be installed adjacent/behind the front and rear gates providing a floor clearance of 12-14 inches.

Uniloy feels that the best way for us to support this is to offer full gate assemblies with improved guarding, latches, and new style interlocking switches.

Option A. Uniloy Milacron can supply new style generic safety gate assemblies that can be altered by you to fit for your machines. These gates will include the following:

- Safety doors
- Gate rails
- Skirting
- Fixed guards for behind the front and rear gates
- New style interlock switches
- New style latching mechanisms
- Mounting brackets
- Window panels
- Miscellaneous nuts, bolts and fasteners
- Parts list and assembly drawings

Option B. Uniloy can custom design new gates to fit your machine. This may entail you supplying pictures and dimensions for the machines to be retrofitted and/or a visit from one of our servicemen or engineers. It would include all the same type of items as in option 1A.

2. Melt Relief Guarding.

The Standard states: A guard shall be provided to protect the front, rear, and top of the purging area.

Option A. Uniloy can custom design new guards for your melt relief valve, including a special Teflon coated dump pan. This may entail you supplying pictures and dimensions for the machines to be retrofitted and/or a visit from one of our servicemen or engineers.

Option B. Uniloy can re-supply the guards that were released with the machine.

3. Fill Pipe and Accumulator Guarding.

The Standard states: A cover or barrier shall be provided to prevent inadvertent contact with high voltage and/or high temperature when the injection unit is in normal operating procedures

Option A. Uniloy can custom design new guards for your fill pipe(s) and melt accumulator(s). This may entail you supplying pictures and dimensions for the machines to be retrofitted and/or a visit from one of our servicemen or engineers.

Option B. Uniloy can re-supply the guards that were released with the machine.

4. Catrac Guarding.

The Standard states: Fixed guarding shall be installed over and around catrac and the adjacent opening accessing the rear clamp area.

Uniloy can custom design new guards for your Catrac area. This may entail you supplying pictures and dimensions for the machines to be retrofitted and/or a visit from one of our servicemen or engineers.

All of the above options from Uniloy would have to be assessed and quoted on a machine-by-machine basis. If a fact finding trip to your plant is required, it will be charged at time and material for actual travel and living expenses only. If installation by a Uniloy serviceman is requested, it will be charged at our standard service rates.

Electrical Electrically, there are only 3 areas that our original machines may not comply with the new Standard. Each area is listed below with the Uniloy package offering directly following:

1. Emergency Stops

The Standard states: Emergency stop controls shall be provided inside the front and rear gates in a location readily accessible from between the gate and adjacent tie bars of the molding area.

Uniloy is offering Parts list 161555 which includes:

- Two (2) 4x4 enclosures
- Two (2) E-stop push buttons and nametags

The e-stop buttons need to be tied in series with an existing e-stop circuit. Additional wire and connecting devices will be needed to connect these devices in your machines. Due to the locations you may put them, the amount of wire and fittings needed may vary. We recommend using blue 16ga THHN wire for 24Vdc systems and red 14ga THHN wire for 110Vac systems.

2. Gate Safety Devices.

The standard states: Manual or Power-operated gates shall be fitted with one of two safety devices, either a Double Acknowledgement System or a Gate Block. Uniloy is not offering a gate block option at this time.

The Double Acknowledgement System requires a safety system “reset” control button located on the outside of the front and rear gates with a clear view to the molding area, actuated prior to actuating the cycle start control button. A monitoring device in the control circuit shall be provided to check proper operation and sequencing.

Uniloy is offering a reset button assembly, which includes:

Four (4) 4x4 enclosures

Two (2) reset buttons and 2 nametags

Two (2) coiled cables

One (1) safety relay

Uniloy will supply a generic schematic for wiring details. Additional wire and connecting devices will be needed to connect these devices in your machines. Due to the locations you may put them, the amount of wire needed will vary. Reset buttons need to be installed on the gates in an area where a clear view of the mold area is available. This will take the place of the existing reset button on the operator’s panel, if you have one, which must be removed. The safety relay will need to be installed in the main control cabinet. We recommend for 24Vdc systems using blue 16ga THHN wire (and blue with a white stripe 16ga THHN wire for the common). For 110Vac systems, use red 14ga THHN and white 14ga THHN.

Purge Pan

The standard states: The dump pan/purge guard shall be electrically interlocked so when the pan is removed (out of protected position), screw rotation, and screw or plunger forward shall be prevented.

Uniloy is offering a Dump Pan Photo Eye assembly, which includes:

- One (1) photo eye and cable
- One (1) bracket
- One (1) relay

Uniloy will supply a generic schematic for wiring details. This photo eye circuit should stop the extruder and close the dump valve if the pan is pulled out from under the dump valve. The photo eye needs to be adjusted and located in such a way that the circuit will perform as stated above. We recommend for 24Vdc systems using blue 16ga THHN wire (and blue with a white stripe 16ga THHN wire for the common). For 110Vac systems, use red 14ga THHN and white 14ga THHN.

These Packages can be used on either relay controlled or PLC controlled machines, and are offered in both 110vac and 24vdc applications. Please specify your control voltage when ordering.

Safety Signs

In addition, Uniloy is also offering ANSI approved safety signs. The listing below specifies quantities of each sign used on a Uniloy-Springfield machine. Signs can be purchased individually or as a package (Part list number 162853) that includes an assembly drawing which shows the location of each sign.

Item	Qty	Description
109204	10	Safety Sign - Caution Hot Surface
109205	12	Safety Sign - Danger High Voltage
109206	3	Safety Sign - Warning Ground Plugs
109207	1	Safety Sign - Warning Screw Area
109209	2	Nameplate Safety Tague Hyd. Equipment
109210	4	Safety Tag Safety Instructions
122382	2	Safety Sign Danger Clamp
122383	2	Safety Sign Danger Clamp
122385	2	Safety Sign Rotating Shaft
122385	1	Safety Sign Foreign Objections
122386	2	Safety Sign Warning Hot Plastic
122387	2	Safety Sign Melt Dump
122389	2	Safety Sign High Pressure Gas
132760	7	Safety Sign No Step/Standing
154607	1	Safety Sign Run with Water