MOLD CAVITY MAINTENANCE

Mold Interior

This section of the manual is devoted to repairing mold cavity surface problems and parting line problems. All mold surface problems should be corrected immediately to prevent scrap parts and additional damage to the mold surface.

Mold Surface Problems	Norstar Solution (as listed below)
1) Excess mold release	A
2) Pigment contamination	A
3) Nicks & scratches/cracks	B
4) Recoating required	A
5) Pitting (holes)	B

Solutions:

A) Sandblasting:

Can be damaging and must be done in a controlled situation (it removes some surface material during the process and can cause damage if not done properly).

Recommended method: Use 50 lbs pressure maximum at a distance of no less than 18 inches away from mold surface.

NOTE: If mold surface has pitted area or porosity, sandblasting is likely to increase the problem.

B) Welding:

The method recommended for cast aluminum molds is Tig welding. Recommended welding rod alloy is 4043.

Areas of welding must be clean – remove release, PTFE, pigment, resin and any other foreign material. To accomplish a good weld, remove the contaminated area and build up with solid weld, then resurface as required.

NOTE: Welding within 2” of the parting line may affect parting line fit and offset.

MOLD VENTING

As part of routine mold inspection, the venting of the mold should be checked.

PARTING LINE

TONGUE AND GROOVE

Parting Line Problems (Before working on the mold, check venting)	**Norstar Solutions (as listed below)**
1) Offset Caused by shifting of parting line	A
2) Excessive flash on the part Caused by improper mating of the parting line	B
3) Binding Caused by improper alignment when mold is serviced, both opening and closing	C
4) Nicks, gouges Caused by use of improper tools for cleaning the parting line or during part removal.	D

Solutions – Tongue and Groove Parting Line

A) If minimal, it can be removed by grinding and resurfacing and/or retexturing. If offset is excessive, we recommend the mold be returned to Norstar for evaluation.

B) Remove excess resin build-up on parting line, being careful not to gouge the parting line. After cleaning parting line, clamp tool at each mounting post on the flange (not frame clamp) and stress relieve. Leave clamp on until mold is cool to the touch.

Adjustment to mounting may be required. See Pages 9 and 10 for mounting and framing adjustments. If adjustments to the mounting system do not resolve the flash problem, the tool should be returned to Norstar for refitting.

C)Remove a minimum amount of material from the side wall of the tongue or the groove, from either the male half or the female half of the mold. Be careful not to remove too much or offset may result.

D) Continued on the next page.

Proper removal of excess material

Parting Line

Tongue and Groove

D)The photos to the right show recommended procedures to prevent nicks and gouges on the parting line.

Use nonmetallic Scrapers to clean The parting line.

Use pry points that are built on the frame of the mold.

Note: Norstar installs a pry point at each clamp location. If using bolt sets we will install pry points if requested.

Use FORCE 1 mold Opener to assist in Mold separation. (Can be ordered through Norstar catalog.)

Parting Line

Flat with Aligning Pins

Parting Line Problems (Before working on the mold, check venting)	**Norstar Solution (as listed below)**
1) Offset Caused by shifting of the parting line	A
2) Excess flash on the part Caused by improper mating of parting line	B
3) Binding Caused by improper alignment when the mold is serviced, both opening & closing	C
4) Nicks, gouges Caused by use of improper tools for cleaning parting line or part removal.	D

Solutions – Flat with Aligning Pins parting Line

A) Monitor steel dowels regularly and tighten nut as required. Replace if broken. (Dowel pins are available in the Norstar catalog) If offset is excessive, return to Norstar for refitting.

Remove excessive resin build-up on the parting line, being careful not to gouge parting line. After cleaning parting line, clamp tool at each mounting post on the flange (not frame clamp) and stress relieve. Leave clamp on until mold is cool to the touch.

B) Adjustment to mounting may be required. See Pages 9 & 10 for mounting and framing adjustments, if adjustments to the mounting system do not resolve the flash problem.

C) Check alignment pins and receivers to be sure they are properly aligned and secure. Check also to be sure that when mold halves separate they remain parallel and true until past the alignment pins.

D) The following are recommended by Norstar to prevent nicks and gouges on the parting line.

- Use nonmetallic scrapers to clean the parting line.
- Use pry points that are built on the frame of the mold
- Use FORCE 1 mold opener to assist in mold separation. (See Norstar catalog) See page 7 in this manual for photos of the above recommendations.