

## CHAPTER XXI

### FRONT SQUIRTS

#### Front Squirts Caused by Loose Lines

**HARDING:** Many front squirts are caused by loose or squabbled lines. This may be caused by the operator, or it may be the result of misalignment of the first elevator jaws with the line delivery rails, or nicks in the jaws, or faulty line delivery slide. A very tricky one is main shaft bearing starting to freeze up, which looks exactly like mold slide set too tight.

#### Tight Lines

A tight line will cause a squirt if the vise automatic is not adjusted to stop the machine.

#### Misadjusted Pump Stop

If it allows loose lines to cast, it will make hairlines and occasional squirts.

#### Damaged First Elevator Duplex Rail or Elevator Jaws

Sloppy fit, worn back jaws, or anything that will allow a matrix to climb half-way onto the duplex rail, will result in a malformed toe, and if the mat is a thick one, a squirt.

Often too a matrix that has been thus swollen on the toe will go through the magazine and bind in the jaw the next trip around, hindering justification and causing a squirt.

The old Linotype duplex rails with only two lugs were weak in the center and would bend if sprung in by a mat that jumped up, thus making it easier for the next one to jump up.

Elevator jaws that are too tight will prevent spread of the line. Sometimes mats bind only in the bold-face position.

A broken jaw spring pawl or too long a spring pawl screw will cause squabbled lines.

**Double Raised Lines**

That old bugaboo, the legendary double-black of every operator, of course causes delightful front squirts. One can buy a safety device for almost every machine, and it is worth the price. Double-black lines also have hang-overs, because they usually swell the toes of a number of mats, which later bind in the jaw. On a Linotype the line starts spreading from the right, so generally such an obstructed line opens the pump stop for a cast. Most Intertypes, starting with the old 42-em 72-channel display machine, have a block that prevents a cast if anything keeps the pot from going forward fully.

**Forward Thrust of Mold Disk**

If the mold disk comes too far forward it will prevent spread of the line and often cause a squirt.

**First Elevator Downstroke Misadjusted**

Either too high or too low, mats may bind and cause a squirt.

**Cleaning up a Front Squirt**

**HARDING:** Don't be rough. Front squirts can be cleaned out with a surprisingly small amount of force.

If a little metal has run along the combinations of the mats and the machine stops at transfer, raise the second elevator by hand to be sure it is clear. Lock the spaceband pawl and let the machine come to normal.

Open the vise, put a piece of furniture against the mats, lean the weight of your body against the elevator, and tap out the matrices.

When metal holds several mats together, spread the end mat away from the others with a screwdriver, then work it off with a pair of pliers. If they are too much imbedded, wind a piece of string around them and dunk in a clean metal pot several times; tap them at the pot top as you bring them out; let them cool. If you leave either mats or bands in metal too long they will be softened.

**LOOMIS:** Don't be rough. Don't gouge jaws or molds with steel. Don't get in a hurry to yank off molds or jaws. I have seen very few squirts, if any, in thirty years, that could not be cleaned out with small force and no dismantlement.

For mats well embedded in the jaw, look first to the counterbores for the two big screws that hold the first elevator front jaw in place. If the metal has lapped over into these, pry it out. Then I take a large screwdriver and lean against the mats from the left side. Usually this is persuasive. Hammering can be done if necessary. You may ruin the end mat, but the time saved is worth much more.

Now, with metal around the duplex rail put your abdomen against the first elevator to support it. Take a solid 12- or 14-point slug, lay it lengthwise,

edge on, against the rail, and hammer the rail in. The squirt metal will pop out. Try the rail to be sure it is free.

### Squirt Metal Around the Mold

**HARDING:** Use a small steel-handled screwdriver to chisel through the metal that flowed up over the mold cap. Cut—*gently*—a groove along the corner of the mold cap, then drive what is on top of the mold cap through to the back.

**LOOMIS:** Some m-o's melt the metal from a mold cap screw hole. It may be this can be done safely, but I'm scared. One way is to remove the mold, tapping from behind with a pig, grip the screw with a pair of pliers and take it out through the bottom; then drill out the metal. I am loath to recommend this, for it involves removing the mold, against which I am firmly. On rare occasions I have done it, but usually, by working your mold cap screwdriver as a drill, you can reach the slot in the screw head, and then you can turn out the screw.

With metal around the mold screws, loosen them one at a time, clean out the metal, and re-tighten. This can apply to the alignment plate screws also.

Now there is the matter of metal around the mold locking stud, which at first looks impossible without removing the mold. But wait. Tap a little, pry a little. Get out all you can. Then get your small screwdriver in under the metal and start a rotary motion. With a little persuasion the metal will move, for there are no big crevices in which it can lodge—and the fight is over. Keep moving around and lifting, and you get the whole business out.

Now there is left the difficulty of the first elevator that gets embedded in metal on top of the vise cap and won't rise, won't allow you to open the vise, won't even let you go out for coffee. This also will yield to patience and persistence as well as to force. (Persistence means force applied in the same total energy but in smaller packages.) Probably the disk is still forward. Lower the mold disk cam handle and pry in various spots until you find a weak one, then break the disk away from the jaws. If the metal has run into the jaws, you can do a certain amount of prying between back jaw and disk—but not too much, or you will twist the back jaw. Between the left-hand vise jaw and the disk is a safe place, with a piece of cut base to protect the mold if there is one there. Having gotten the disk back, now try prying up the first elevator. This is a fairly safe operation, but you may find overlaps of metal that have to be worked out first.

At any rate, remember this: cleaning up a squirt is a process of digging away a little metal at a time, here and there. Don't try to get it all at once.

### Check the Vise Automatic

**HARDING:** Don't neglect this, for the vise automatic is in a fine place to receive squirts. Check the dog and the stop rod pawl. See that they work freely.

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# LINECASTING OPERATOR-MACHINIST

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