Storefront Punch

Important Notes:

A. Use guards provided on machine to avoid injury. Keep hands away from moving parts unless power is disconnected.

B. Avoid punching holes and then trying to relocate and punch same holes again. If punches enter into partial holes already punched flexing of punches can occur and cause damage to punches and die button inserts.

C. Always disconnect power before performing maintenance.

D. Lubricate punches with a silicone spray.

E. There is motor overload protection provided with the motor starter. If the overload trips and motor shuts off you can reset the machine by pressing downward on the on/off switch until overload latches back in. Reset is marked on the starter on/off legend plate.

Machine Setup:

1. Place storefront machine on level surface.

2. Check hydraulic fluid in hydraulic power unit reservoir. Fluid should be 1” to 2” form the top of the reservoir. If additional fluid is needed use general purpose hydraulic fluid.

3. Plug power cord into 110VAC single phase outlet. Avoid using long extension cords.

4. Turn machine on and off using motor starter switch.

5. Lubricate punches with a silicone type spray lubricant. WD-40 is also acceptable.

6. Remember to grease rods and bushings on die set once or twice per year.

PARTS IDENTIFICATION:

A. Hydraulic Cylinder
B. Hydraulic Pump Motor
C. Hydraulic Pressure Line
D. Hydraulic Return Line
E. Hydraulic Reservoir
F. Hydraulic Reservoir Fill Cap
G. Hydraulic Valve Assembly
H. Hydraulic Pressure Adjustment
I. Foot Switch
J. Micro Switch
K. Power On, Off Switch & Breaker
L. Upper Die Shoe
M. Lower Die Shoe
N. Punches
O. Buttons
P. Cylinder Rod Flange
Q. Die Cage
R. Frame
S. Die Guards (Not shown for clarity, Never operate EZ Punch without guards)
Operating Notes:

1.) Pressing the foot switch will bring the die shoe to down position and punch holes in extrusion. Note: Once holes are punched and die set is all the way down, remove foot from foot switch to allow die to set to go up to open position. Try not to hold the foot switch down after die is totally closed as this puts stress on the power unit.

2.) Use flip stop levers mounted on each side of die shoe for first hole location. This will give you the correct dimensions from sawed edge of part to first hole location. These are the head and sill locations.

3.) The intermediate locations for the required day light openings are determined by using the 10' run-out bar and three run-out bar stops. The tape measurer on run-out bar is applied to help locate run-out bar stop locations.

4.) The run-out bar stops will help support the extrusion as well as provide stop locations. The flipper arms on the run-out bar stops are weighted to allow them to flip up as the extrusion is moved past each stop. Once the extrusion clears the stop, you then back the extrusion up against the flipper arm when it flips to up position.

Die Maintenance and Sharpening

Replacing Punches:

Periodically, the punch die set may need to be removed to have the punches sharpened or replaced depending on wear. The following steps of procedures need to be followed to safely and easily remove die set from the machine.

1.) First, without any extrusions in die set, turn on the machine. Press foot switch and bring die to closed position. With the die in the closed position, turn the power unit starter to off position leaving the die down. This will allow more room to reach bolts in hydraulic cylinder rod flange.

2.) Unplug machine from power source

3.) Remove two ¼” Allen screws securing sheet metal guards in place on both sides of die.

4.) Remove two 5/16” Allen screws in round hydraulic cylinder flange on top of die shoe. (See parts diagram)

5.) Remove two ½” Allen bolts located on bottom die shoe. (See parts diagram)

6.) Once these four bolts are removed in steps 4 and 5 die shoe will be free to slide out of machine.

Important Note: Once die is out of machine, do not try to lift die off of machine by gripping top die shoe. The top can slide off large pins and fall causing serious injury. Lift by bottom die shoe plate only.
7.) Place die set on a secure work surface and remove upper die shoe from lower die shoe by pulling upward applying even force to both sides as you pull up. It may take two people as die shoe is heavy.
8.) To remove punches the punch holder blocks must be removed from the upper die shoe.
9.) First mark block so that everything goes back on as it comes off. Turning the punch holder block 180° will cause punches not to align correctly.
10.) Punch holder blocks are removed from die shoe by removing two bolts and two Dowel pins that hold each block in place.
11.) Once punch holder block are removed tap punches out of the top of the blocks. (See punch Diagram)
12.) Once new punches are installed reverse directions to reattach punch block holders.

Replacements Die Button Inserts

1.) Mark all pieces before removal to make sure everything goes back together correctly.
2.) Remove die set from machine using directions listed on the replacing punches section.
3.) Remove components on lower die shoe. Refer to drawing labeled as die button replacement.

Adjusting Hydraulic Pressure

1.) Refer to power unit drawing
2.) Locate pressure adjustment screw.
3.) The screw is turned using a 3/16” Allen wrench. Note: There is a lock nut around screw that needs to be loosened to turn pressure adjustment screw.
4.) Do not turn up pressure too high or motor will stall.
5.) To adjust pressure to a safe maximum first have someone press foot switch with power on and bring die closed.
6.) While holding foot switch down turn pressure adjustment screw clockwise until motor tries to stall.
7.) Back set screw out ¼ turn (Counter clockwise) and tighten lock nut.
Mark punch holder blocks as "A" and "B" in order to remember where each block goes.

Center Glaze Die Set

Die Set

Mark block as "B".

Punch Replacement Notes.
PUNCH REPLACEMENT NOTES.

MARK BLOCK AS "A"

(1) 3.35" LONG PUNCH
(1) 3.15" LONG PUNCH
THIS SIDE OF PUNCH
HOLDER

(4) 3.25" LONG
PUNCHES
ARE PLACED IN
CENTER OF PUNCH
HOLDERS

MARK BLOCK AS "B"

(1) 3.35" LONG PUNCH
(1) 3.15" LONG PUNCH
THIS SIDE OF PUNCH
HOLDER

NOTE: Always check punch and die button alignment by entering punches in to die buttons before re-installing die in to machine. This is done by sliding top die shoe down on pins and bushings by hand. There should be clearance around each pin
Die button Punch BLADE Diagram:

Step 1: (A) Remove die set from machine following instructions on page 8 of manual.

Step 2: (A) Remove upper die shoe from lower die shoe by lifting up slowly. (May have to pry slightly.)

Step 3: (B) Remove part stripper and die button assembly from bottom die shoe.

Step 4: (C) Remove part stripper plate from assembly.

Step 5: (D) Tap die buttons out from top side of plate and replace.

Step 6: Reverse above steps to re-assemble die.

Note: Shortest blade should only penetrate the die button by 1/32" to 1/16". If greater or less, adjust hydraulic ram rod up or down.

Note: If new die buttons protrude above bottom plate, grind down top of button flush with bottom plate.
*Jumper required for top plate to go back up
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Trouble shooting for machine power unit over heating and throwing breaker.

Usually the problem is the electric limit switch that activates when the punch comes all the way up in the open position. If this switch is not operating correctly it will cause the machines power unit to always be under pressure which as a result will cause heating problems and trip circuit breaker.

To test this:

Make sure punch die SHUT height is correct by using the attached information showing the correct shut dimension. Be sure to measure from the correct points shown.

Another way to test this is to do the following:

Remove limit switch safety cover.
Turn machine on and use a screwdriver tip to manually press upward on limit switch actuator button.
If the switch is not operating correctly you will hear the machine power unit go into a quiet idle when you press it with the screwdriver tip.
If this is the case you will need to adjust your die open and shut height to the dimension in the diagram. (3.875")

Adjusting shut and open height:

Remove machine safety gaurds.
Turn machine on (WITH HANDS CLEAR) and press foot pedal to bring punch to down position.
With punch down turn off power unit.
Look for round flange attached to cylinder rod.
Loosen large 1-1/4 hex nut.
Screw threads on cylinder rod clockwise (looking down over machine) into flange.
Usually a half a turn is enough.
Tighten hex nut.
Check that closed dimension is close to 3.875".
Replace gaurds.