

Operator's manual

20 Gauge

Super-Speed



LOCKFORMER

Installation

Provide a clean, flat, well lighted installation site. Level the machine and anchor it to the floor. Inspect the gears and drive assembly, and remove any debris that may have accumulated during shipping.

Standard electrical installation requires a 115 volt grounded power supply. Provide a 115 volt receptacle at the point of operation. If a 230 volt motor is ordered, install the power supply in compliance with local and national electrical codes. For further information, contact a certified electrician or the Lockformer Service Department at (630) 964-8000.

Operating Instructions

BASIC OPERATION

Hold the stock against the entrance gauge and slide it into the forming head. Be sure that the stock remains against the gauge until the trail edge of stock is engaged in the rolls.

Note: Minimum part length is 7 inches. If a shorter piece is needed, run a long piece, then notch and cut it to size.

Make hold down adjustments, as outlined below, to accommodate slight variations in metal thickness and hardness.

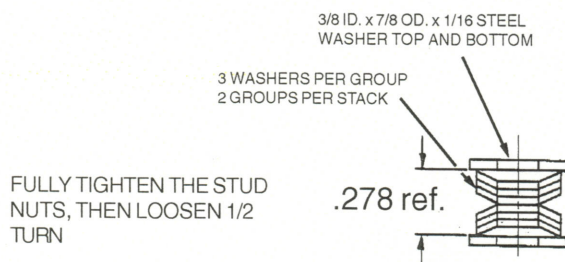
HOLD DOWN ADJUSTMENT PROCEDURE

1. DISCONNECT POWER !
2. Install lock outs to prevent accidental start up.
3. Remove top cover.
4. Tighten the hold down bolts until snug, then loosen them 3/4 turn.
This setting should give good results for all stock thicknesses.
5. INSTALL THE COVER, remove lock outs, restore power.
6. Run a test piece.
If the stock slips in the rolls, tighten the hold down bolts equally in small increments until the desired results are obtained.
If the stock curls up after forming or shows extremely heavy pressure marks, loosen the hold down bolts slightly.
7. Machine is now ready for production.

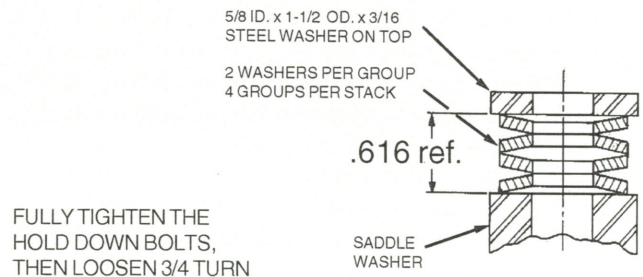
Do not adjust hold downs unless the stock slips in the rolls, pulls away from the entrance gauge, or curls when exiting the rolls.

BELLEVILLE SPRING WASHERS

3/8" HOLD-DOWN STUDS



5/8" HOLD-DOWN BOLTS



PITTSBURGH LOCKHAMMER-OVER LEG ADJUSTMENT

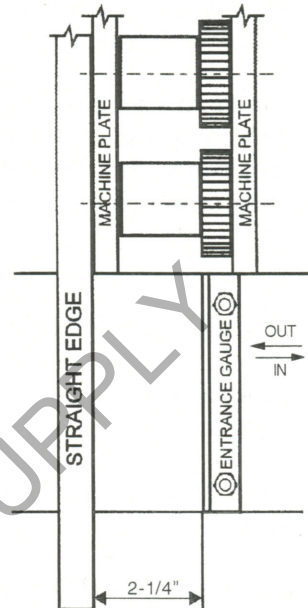
The width of the Pittsburgh lock hammer over leg is adjustable. Move *only* the right hand entrance gauge in to produce a wider leg and out for a narrower leg. ALWAYS move both ends of the entrance gauge equally, keeping it parallel to the top machine plates.

Never move the exit gauge bar for this roll set. This gauge is not intended to contact the material under normal circumstances.

OPENING ROLL

CAUTION

The flat roll mounted horizontally after the last roll station maintains the opening of the gap in the Pittsburgh lock. If burrs or twists caused by snips are present on the stock, they should be flattened. Failure to do this can result in breakage of the opening roll.

**INSTALLATION and OPERATION OF AUXILIARY ROLLS**

NOTE: Standard auxiliary rolls are interchangeable between the standard Lockformer 20 and the Super-Speed models. Since different entrance gauges are required, the model for which the rolls are intended should be specified.

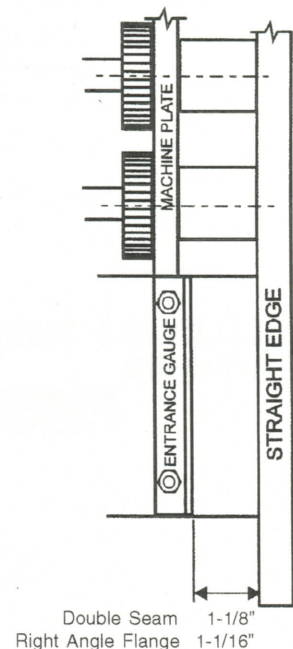
DOUBLE SEAM or STRAIGHT RIGHT ANGLE FLANGE ROLLS

1. DISCONNECT POWER.
2. Install lock outs to prevent accidental start up.
3. Remove the cover.
4. Unscrew and remove the right hand side table top section. This will expose the auxiliary shafts on which the rolls will be mounted.
5. Select the first pair of rolls which are marked T1 (Top roll first station) and B1 (Bottom roll first station). Slide them as a mated pair onto the shafts. All information stamped on the rolls must face outward. Slide a key into each keyseat. Follow this procedure in sequence with each remaining pair of rolls.
6. Fasten the rolls onto the shafts with the screws and washers provided.
7. Mount the entrance gauge and set it to the dimensions shown in the illustration.
8. Mount the exit gauge so the outside face of the vertical leg is parallel to the part as it passes over the exit table. Set to allow approximately 1/16" clearance between the part and the exit gauge.
9. Replace the table top.
10. INSTALL THE COVER.
11. Remove the lock outs.
12. Restore power to the machine.

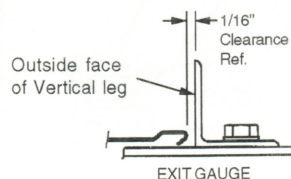


DOUBLE SEAM

RIGHT ANGLE FLANGE

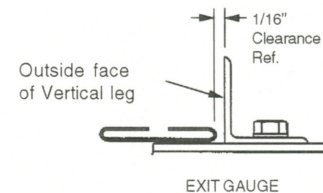
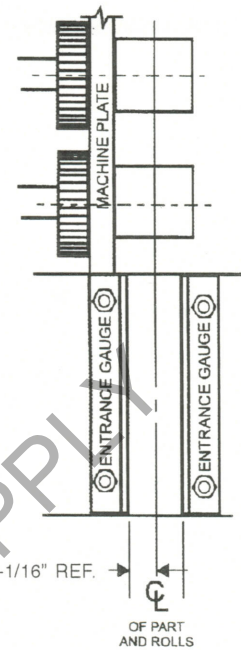


Double Seam 1-1/8"
Right Angle Flange 1-1/16"



DRIVE CLEAT ROLLS

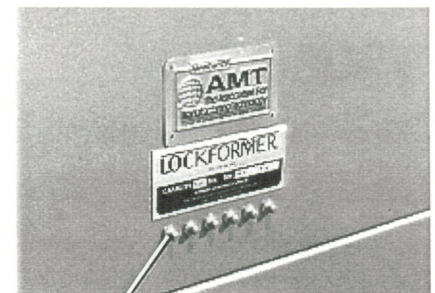
1. DISCONNECT POWER.
2. Install lock outs to prevent accidental start up.
3. Remove the cover.
4. Unscrew and remove the right hand side table top section. This will expose the auxiliary shafts on which the rolls will be mounted.
5. Select the first pair of rolls which are marked T1 (Top roll first station) and B1 (Bottom roll first station). Slide them as a mated pair onto the shafts. All information stamped on the rolls must face outward. Slide a key into each key seat. Follow this procedure in sequence with each remaining pair of rolls.
6. Fasten all rolls except the top number 2 onto the shafts with the screws and washers provided. Do not insert a mounting screw into the top 2 rollshaft; this allows the roll to "float" laterally, and center itself to the bottom roll as the stock passes through.
7. Mount the entrance gauges so that the centerline of the stock aligns with the centerline of the rolls.
8. Tighten the stud nuts so that the **T5** and **B5** rolls do not separate as the drive cleat passes through.
9. Mount the exit gauge so the outside face of the vertical leg is parallel to the part as it passes over the exit table. Set to allow approximately 1/16" clearance between the part and the exit gauge.
10. Replace the table top.
11. INSTALL THE COVER.
12. Remove the lock outs.
13. Restore power to the machine.



IMPORTANT: BE SURE TO CUT STOCK EXACTLY 2-1/8 INCHES WIDE TO INSURE AN ACCURATELY FORMED CLEAT.

MAINTENANCELUBRICATION

Six grease fittings are located on the side panel of the stand. Lubricate these fittings after every eight hours of operation. The recommended lubricant is Molub-Alloy 777-1 or equivalent. Apply grease to all drive gears after every 40 hours of operation. If the machine is to be used in a damp environment, apply a film of oil or grease to all unpainted metal surfaces to prevent rust.

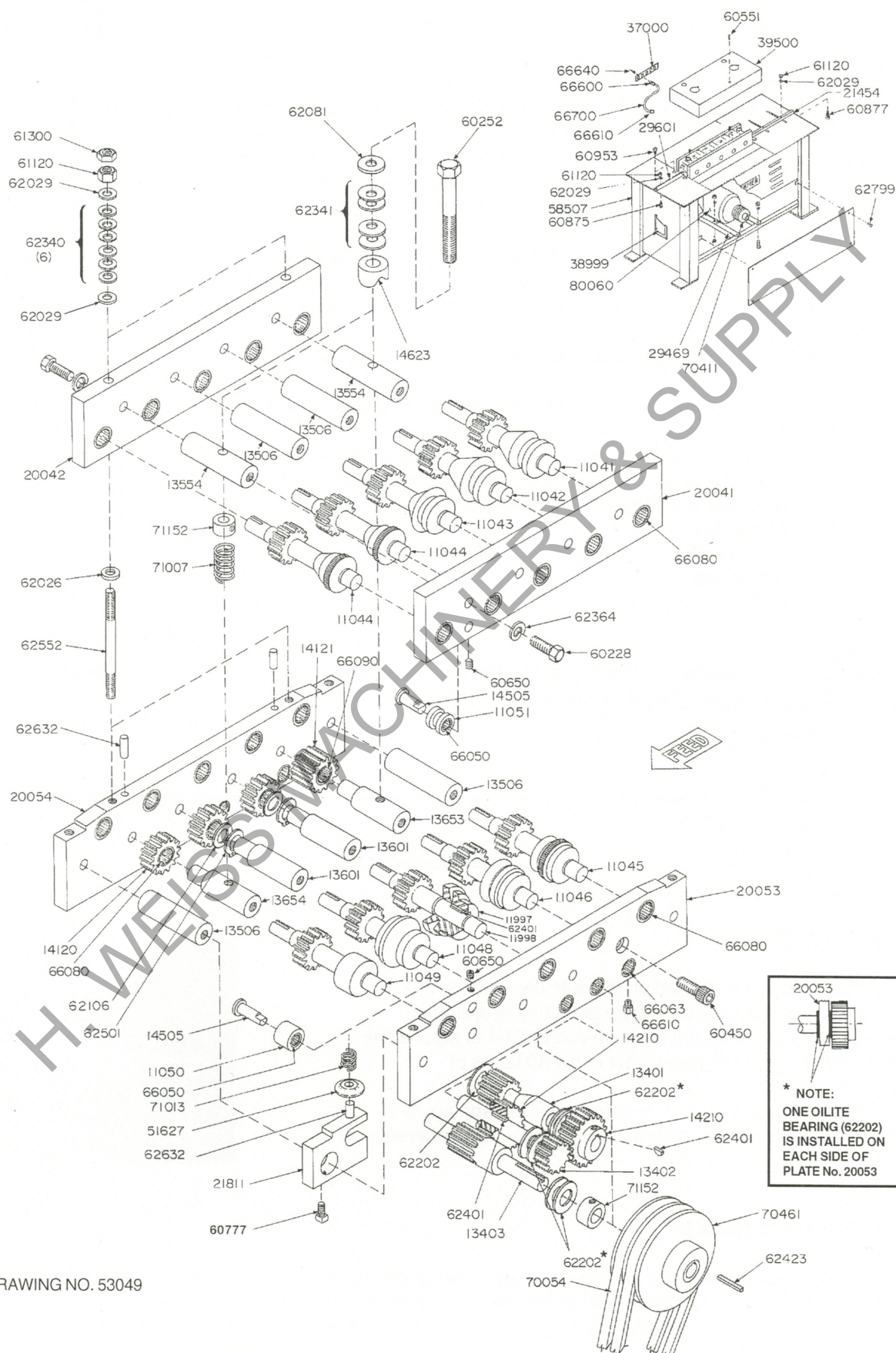


GREASE
FITTINGS

CLEANING THE ROLLS

Keeping the roller dies clean is an important step toward efficient operation of your machine. Lockformer's GALV-OFF aerosol spray cleaner, will soften galvanized build up so that it flakes off by itself. Daily use is recommended to prevent harmful deposits from building up. GALV-OFF cleans and lubricates, as well as protects the forming rolls.

20 Super Speed Illustrated Parts Breakdown



DRAWING NO. 53049

20 Super Speed Parts List

| NEW PART NUMBER | OLD PART NUMBER | DESCRIPTION | QUANTITY |
|-----------------|-----------------|--------------------------------------|----------|
| 20053 | 2101-A | Lower Plate (Left) | 1 |
| 20054 | 2101-B | Lower Plate (Right) | 1 |
| 20041 | 2102-A | Upper Plate (Left) | 1 |
| 20042 | 2102-B | Upper Plate (Right) | 1 |
| 11045 | 2103 | Bottom 1 Forming Roll | 1 |
| 11046 | 2104 | Bottom 2 Forming Roll | 1 |
| 11997, 11998 | 2105 | Bottom 3 Forming Roll | 1 |
| 11048 | 2106 | Bottom 4 Forming Roll | 1 |
| 11049 | 2107 | Bottom 5 Forming Roll | 1 |
| 11041 | 2108 | Top 1 Forming Roll | 1 |
| 11042 | 2109 | Top 2 Forming Roll | 1 |
| 11043 | 2110 | Top 3 Forming Roll | 1 |
| 11044 | 2111 | Top 4 Forming Roll | 1 |
| 11044 | 2112 | Top 5 Forming Roll | 1 |
| 11050 | 2113 | Lower Idler Roll | 1 |
| 11051 | 2114 | Upper Idler Roll | 1 |
| 13554 | 2115 | Plain Spacer Drilled | 2 |
| 13654 | 2116 | Step Spacer Tapped | 1 |
| 13601 | 2117 | Step Spacer | 1 |
| 62501 | 2117 | Retaining Ring | 2 |
| 13506 | 2118 | Plain Spacer | 4 |
| 14210 | 2119 | 3 inch Gear With Hub 28 teeth | 2 |
| 51627 | 2120 | Opening Roll | 1 |
| 14505 | 2121 | Idler Roll Pins | 2 |
| 9952500 | 2122 | Opening Roll Holder | 1 |
| 66080 | 2123 | Bearing 7/8" ID x 3/4" Long | 23 |
| 66063 | 2124 | Bearing 3/4" ID x 3/4" Long | 6 |
| 13401 | 2125 | Third Drive Shaft | 1 |
| 13402 | 2126 | Second Drive Shaft | 1 |
| 13403 | 2127 | First Drive Shaft | 1 |
| 66050 | 2128 | Bearing 5/8" ID x 3/4" Long | 2 |
| 70054 | 2130 | V-Belt (B size Browing No. 5148) | 2 |
| 29601 | 2131 | Exit Angle Gauge | 1 |
| 70461 | 2132 | Machine Pulley (Double Groove) | 1 |
| 62401 | 2135 | Woodruff Key No. 9 | 3 |
| 60650 | 2136 | Hex Head Set Screw 5/16 x 5/16 | 2 |
| 14623 | 2137 | Locking Collar | 2 |
| 60953 | 2138 | Flat Head Cap Screw | 4 |
| 62081 | 2139 | Steel Washer for Part No. 2144 | 4 |
| 62364 | 2140 | Washer | 19 |
| 60875 | 2141 | Carriage Bolt 3/8 x 1 for Ent. Gauge | 2 |
| 37000 | | Lube Bracket | 2 |

| NEW PART NUMBER | OLD PART NUMBER | DESCRIPTION | QUANTITY |
|-----------------|-----------------|---------------------------------|----------|
| 71152 | 2142 | 3/4" Collar | 3 |
| 60450 | 2143 | 1/2 - 13 x 1" S.H.C. Screw | 1 |
| 60252 | 2144 | Hold Down Stud 5/8 x 6 | 2 |
| 66600 | 2145 | Connector (Lubrication) | 6 |
| 66610 | 2146 | Half Union (Lubrication) | 6 |
| 62552 | 2147 | Hold Down Stud 3/8 x 4-3/4 | 2 |
| 14120 | 2149 | Idler Gear (66080 Bearing) | 3 |
| 62341 | 2150 | Spring Washer 1-1/2" O.D. | 8 |
| 62340 | 2150 | Spring Washer 3/4" O.D. | 12 |
| 58507 | 2152 | Stand Assembly | 1 |
| 39500 | 2153 | Forming Head Cover | 1 |
| 60777 | 2154 | Set Screw 3/8 x 3/4" | 1 |
| 62026 | 2155 | Spacer Washer 3/8" | 2 |
| 21454 | 2156 | Entrance Gauge Bar | 2 |
| 66700 | 2157 | Plastic Tubing 11" Lg. | 3 |
| 66700 | 2158 | Plastic Tubing 16" Lg. | 3 |
| 80060 | 2161 | Motor 2 H.P. | 1 |
| 62633 | 2162 | Dowel Pin | 2 |
| 62029 | 2163 | Steel Washer 3/8" | 14 |
| 61120 | 2164 | Hex Nut 3/8" | 6 |
| 61300 | 2165 | Hex Jam Nut 3/8" | 2 |
| 60750 | 2166 | Square Head Set Screw 1/4 x 1/2 | 6 |
| 66640 | 2167 | Grease Fitting (Alemite) | 2 |
| 60877 | 2168 | Carriage Bolt 3/8 x 1-3/4 | 2 |
| 80923 | | Starter 609AOW | 1 |
| 80928 | | Enclosure Back | 1 |
| 21811 | 2122-A | Opening Roll Holder | 1 |
| 62632 | 2122-B | Dowel Pin | 1 |
| 71013 | 2122-C | Spring | 1 |
| 13653 | | Spacer Main Idler | 1 |
| 14121 | | Main Idler Gear (66090 Bearing) | 1 |
| 60228 | 2140-A | Hex Head Screw 1/2 - 13 x 1-3/4 | 19 |
| 62423 | | Straight Key | 1 |
| 71007 | | Compression Spring | 1 |
| 66090 | | Main Idler Bearing | 1 |
| 66610 | | Half Union | 6 |
| 29469 | | Motor Base | 2 |
| 70411 | | Sheave 2BK28 | 1 |
| 82247 | | Heater W-47 | 1 |
| 60551 | | Round Head Screw 1/4-20 x 1/2 | 9 |
| 62706 | | Washer | 2 |
| 62202 | | Oilite Thrust Bearing | 7 |