



DELUXE STITCHER

COMPANY INC.

solving your wire stitching needs for 125 years...

Machine Serial Number : _____

Head Serial Number : _____

Date Purchased : _____

Model M2 Stitchers

OPERATION AND MAINTENANCE MANUAL

M2-AST Stitcher...with 26D Head...115V and 60HZ

M2-BST Stitcher...with 26D Head...230V and 50HZ

M2G8-AST Stitcher..with G8 Head...115V and 60HZ

M2G8-BST Stitcher..with G8 Head...230V and 50HZ

Before using this Stitcher, all operators must study this manual and follow the safety warnings and instructions. Keep these instructions with the M2 Stitcher for future reference. If you have any questions, contact your local DeLuxe Stitcher Graphic Arts Representative or Distributor.

WARNING!

Model M2 Stitchers

Operators and others in the work area should always wear safety glasses to prevent serious eye injury from fasteners and flying debris when loading, operating, or unloading this machine.

Do not operate this stitcher without all guards in place. The stitcher will not operate without the front guard closed properly. Do not modify the guards in any way. Always disconnect the power supply before removing any guards for servicing.

Never operate the machine with wire feeding through the head unless there is stock above the clinchers, otherwise serious damage may result.

Always turn power off when making adjustments. Always disconnect the power supply before any disassembly work.

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Introduction

The DeLuxe Stitcher M2 Book Stitcher is a combination light & heavy duty stitcher designed to staple both flat and saddle work ranging in thickness from a few sheets to 1/4" for 2601 heads, 5/16" (8mm) for G8 heads.

The recommended wire sizes to be used on the M2 are as follows: 25 to 30 round wire for 2601 heads, 24 to 28 for G8 heads.

The M2 is easily adjusted from saddle work to flat work by means of tilting the 5-1/2" (14cm) x 26" (66cm) work table. An adjustable work guide and adjustable work stops are easily attached to the work table and provide for accurate registering of flat work for uniform spacing of staples.

The M2 is footswitch operated and is belt driven by a 1/2 HP motor, making possible operating speeds up to 215 stitches per minute. The motor is mounted on an adjustable bracket which can be raised or lowered for adjusting the driving belt tension. The machine driving mechanism is thoroughly shielded thus preventing the possibility of personal injury.

The M2 has a 14" (35.6cm) throat depth for both flat and saddle stitching. The work table is approximately 34" (86.4cm) above the floor, and there is approximately 17/32" (24mm) clearance between the top of the work table and the stitching head.

The M2 weighs approximately 325 lb (145 kgs) net, shipping weight is approximately 380 lb (172 kgs). With the table installed, the M2 requires about 28" (71.1 cm) x 30" (76.2cm) of floor space.

Because of the length of the work table, the M2 must be secured to the floor to meet CE stability requirements. Sound level readings at the normal operator position are approximately 84 dBC.

Specifications

Weight

| | |
|-------------------|---|
| Shipping Weight | 396 lbs (180 kg) |
| 26D Stitcher Head | 6 lbs. (3 kg) |
| G8 Stitcher Head | 9 lbs. (4 kg) |
| Wire Spool | 5 lbs. (2.3 kg) or 10lbs. (4.6 kg) optional |
| Foot Switch | 4.5 lbs. (2.0 kg) |
| Table | 8 lbs. (3.5 kg) |

Shipping Dimensions

| | |
|----------------|----------------|
| Height | 65.0" (165 cm) |
| Width | |
| With Tables | 33" (84 cm) |
| Without Tables | 16" (41 cm) |
| Depth | 29" (74 cm) |

| | |
|---------------------------|--|
| Stitching Capacity | Two Sheets to 3/4" (19 mm) (with G8 Heads) |
| | at 20# paper stock (75 g/m ²) |
| | Two Sheets to 1/4" (6.5 mm) (with 26D Heads) |
| | at 20# paper stock (75 g/m ²) |

| | |
|-------------------|---|
| Wire Types | 24-26 Round, (STANDARD) |
| | 23 Round, 20x25 and 21x25 Flat (OPTIONAL) |

Throat Depth

| | |
|----------------|-------------|
| Flat or Saddle | 14" (36 cm) |
|----------------|-------------|

| | |
|-------------------|-------------------------------|
| Side Stops | 6-1/4 - 23-3/4" (16 cm-60 cm) |
|-------------------|-------------------------------|

Power Requirements

| | |
|------------------|--------------|
| M2-AST, M2G8-AST | 115VAC 60 Hz |
| M2-BST, M2G8-BST | 230VAC 50 Hz |

Minimum Recommended Circuit Capacity

| | |
|--------|-------|
| M2-AST | 8.1 A |
| M2-BST | 5.8 A |

Installation

The M2 is a free standing, floor mounted, wire stitcher. The following parts must be assembled after shipment: work table, spool bracket, spool stud, wire spool, adjuster handwheel handle, and wire guide springs. The M2 can be lagged to the floor, if desired, after leveling.

Thread the wire onto the head and make adjustments to wire length & straightness as described in the head Operation Manual.

Electrical power is provided through the attached line cord to be connected to an appropriate supply outlet rated as shown:

| | | |
|--|-------------|-------------|
| SUPPLY POWER | 115V / 60HZ | 230V / 50HZ |
| M2 Rated Current | 9.2A | 4.6A |
| M2 Interrupt Current, Internal Breaker | 12kA | 12kA |

WARNING

Do not operate the M2 under power until the machine has been turned over manually (see below) to verify that the stitching heads are operating freely.

Belt Guard Removal and Assembly

WARNING

Always disconnect the power supply before making any adjustments or servicing the stitcher.

The plastic belt guard must first be removed before the M2 can be turned over manually. To remove the belt guard, remove the retaining screw from the top of guard. Press on one side tab while prying out the locking face. This will release the first tab. Next, pull down slightly on the top of the guard to release the bottom tab. Guard will now be free to lift off remaining tabs on mounting plate.

To reassemble, interlock the top tab and one side tab. Pull down slightly on top of guard to interlock bottom tab, then squeeze mounting plate and guard together to lock remaining tab, completing assembly. Reassemble the retaining screw at the top of the guard.

To turn the machine manually, it is necessary to first disconnect the power and remove the belt guard

Turning Machine Manually

Always disconnect the power supply before making any adjustments or servicing the stitcher.



(see above). Locate the actuator assembly on the wrap spring clutch and push the actuator to pivot it away from the control collar cam, releasing the brake. The machine will rotate one revolution when the large drive pulley is turned manually in the direction of the arrow on the pulley (top of pulley toward front of machine).

Operating Adjustments

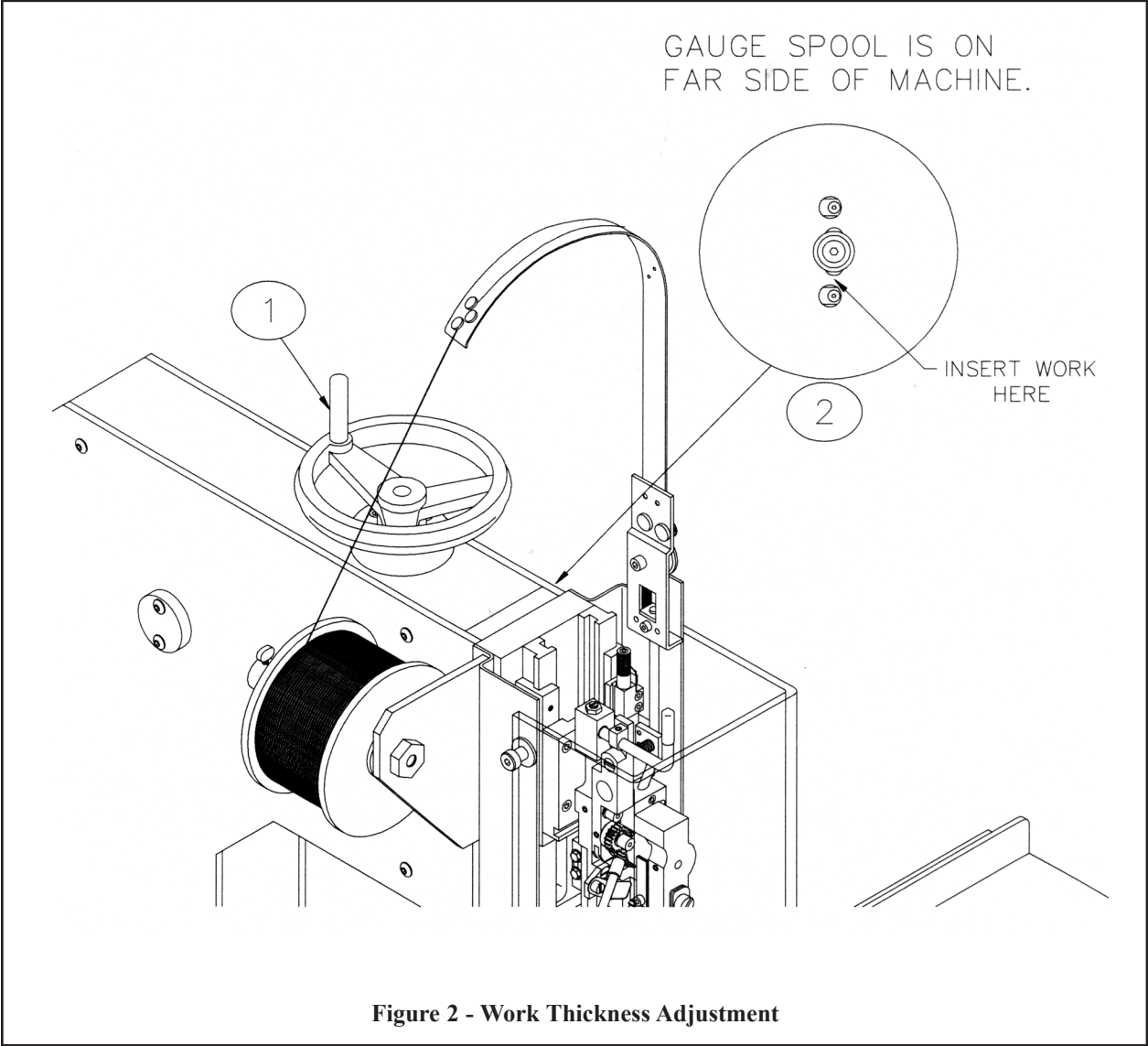
The quality and quantity of work that can be stitched on the M2 is dependent upon the operator making the various operating adjustments as accurately as possible. The following information and instructions are provided so that the operator will clearly understand how to make the required operating adjustments.

Adjusting the Machine for Thickness of Work (See Figure 2)

Turn the thickness adjustment handwheel (1) clockwise until the gage spool (2) is raised sufficiently to allow a sample of work to be inserted between the gage spool and its lower stop.

With the work held in this position, turn the handwheel (1) counter-clockwise until the work is firmly clamped between the gage spool (2) and the stop.

Turn the handwheel back clockwise just enough to allow the work to be withdrawn from the gage, then return the handwheel to the setting at which the work was firmly clamped.



⚠ CAUTION

If the Machine is operated on work thicker than is set to handle, damage will result and the Stitcher will not operate properly.

Raising or Lowering the Clinchers (See Figure 3)

Always disconnect the power supply before making any adjustments or servicing the stitcher. **WARNING**

If staples are being loosely clinched, requiring that the clinchers be raised or lowered, proceed as follows:

Remove the clincher guard (1) . Loosen the clincher adjustment binder screw (2). Rotate the clincher adjustment screw (3) to raise or lower the clincher points as needed.

Retighten the binder screw (2) and attach the clincher guard (1). Turn the machine over manually a few revolutions and ensure that the machine is operating freely before running under power.

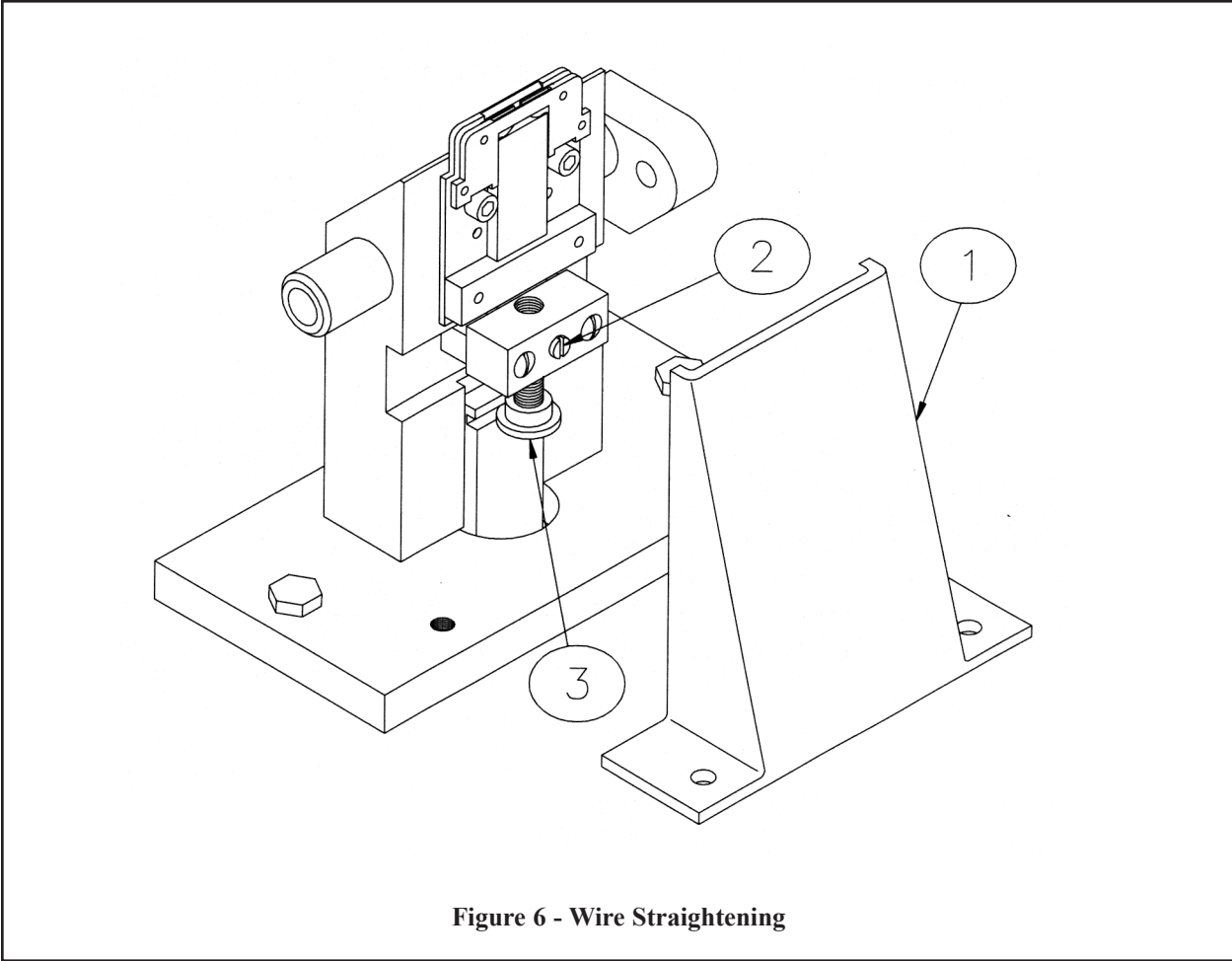


Figure 6 - Wire Straightening

Maintenance

To insure continuous operation of the M2 Stitcher, the operator should be sure that the machine is regularly lubricated and carefully maintained. The operator should periodically inspect all moving parts for signs of wear and, when required, replace the worn parts.

The following instructions are provided so that the operator will understand how to lubricate the machine, and how to adjust the clutch.

Lubrication (See Figure 4)

If the machine is operated on work thicker than it is set to handle, damage will result.

WARNING

Use an S.A.E. No. 10 oil for lubricating the M2 Stitcher. Machines that are in constant use should be lubricated daily. Machines that are operated periodically should be lubricated just prior to use. Usually only a drop of oil is required at each lubrication point in the Stitcher. After lubricating the machine, wipe off any excessive oil.

Refer to the stitcher head Operation Manual for additional lubrication points on each stitching head.

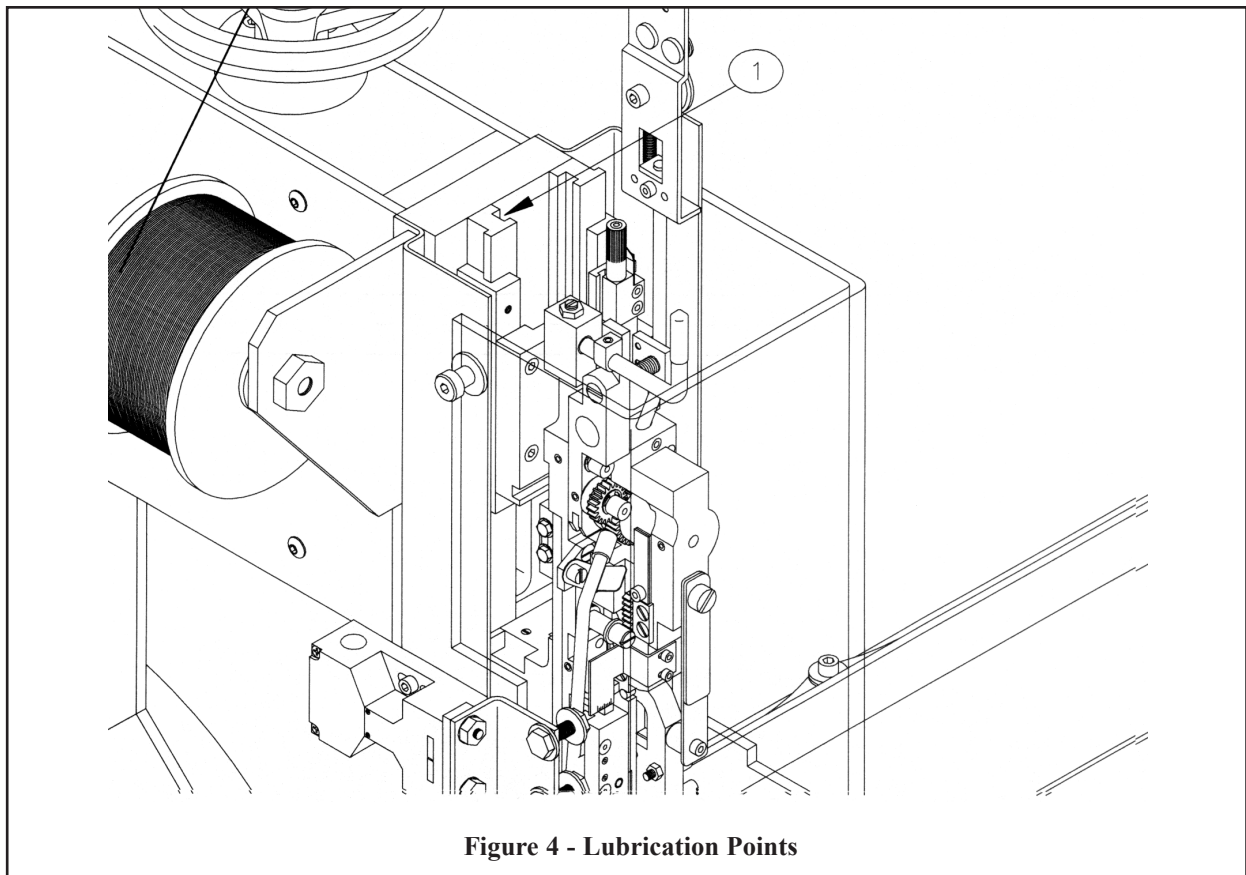
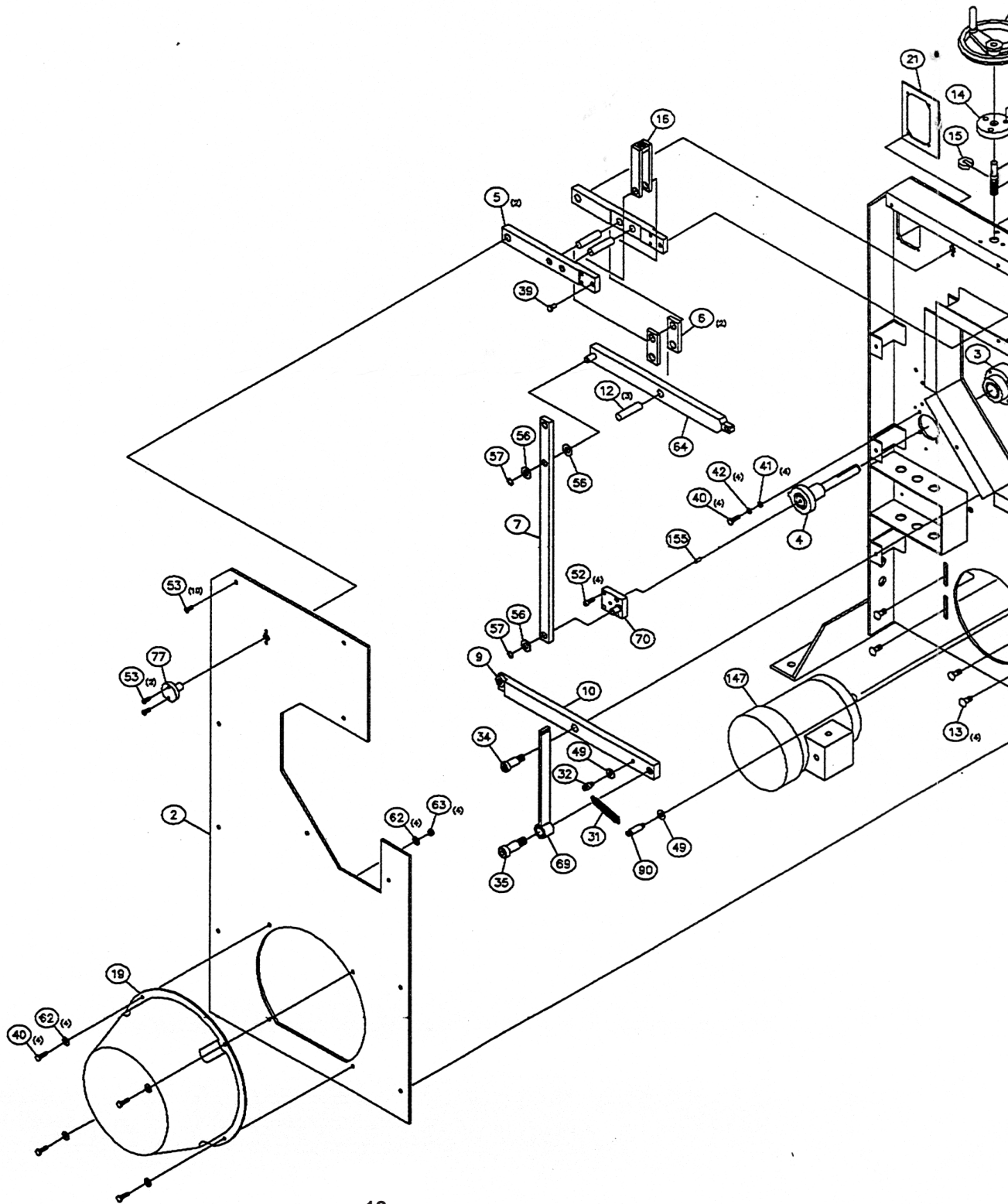
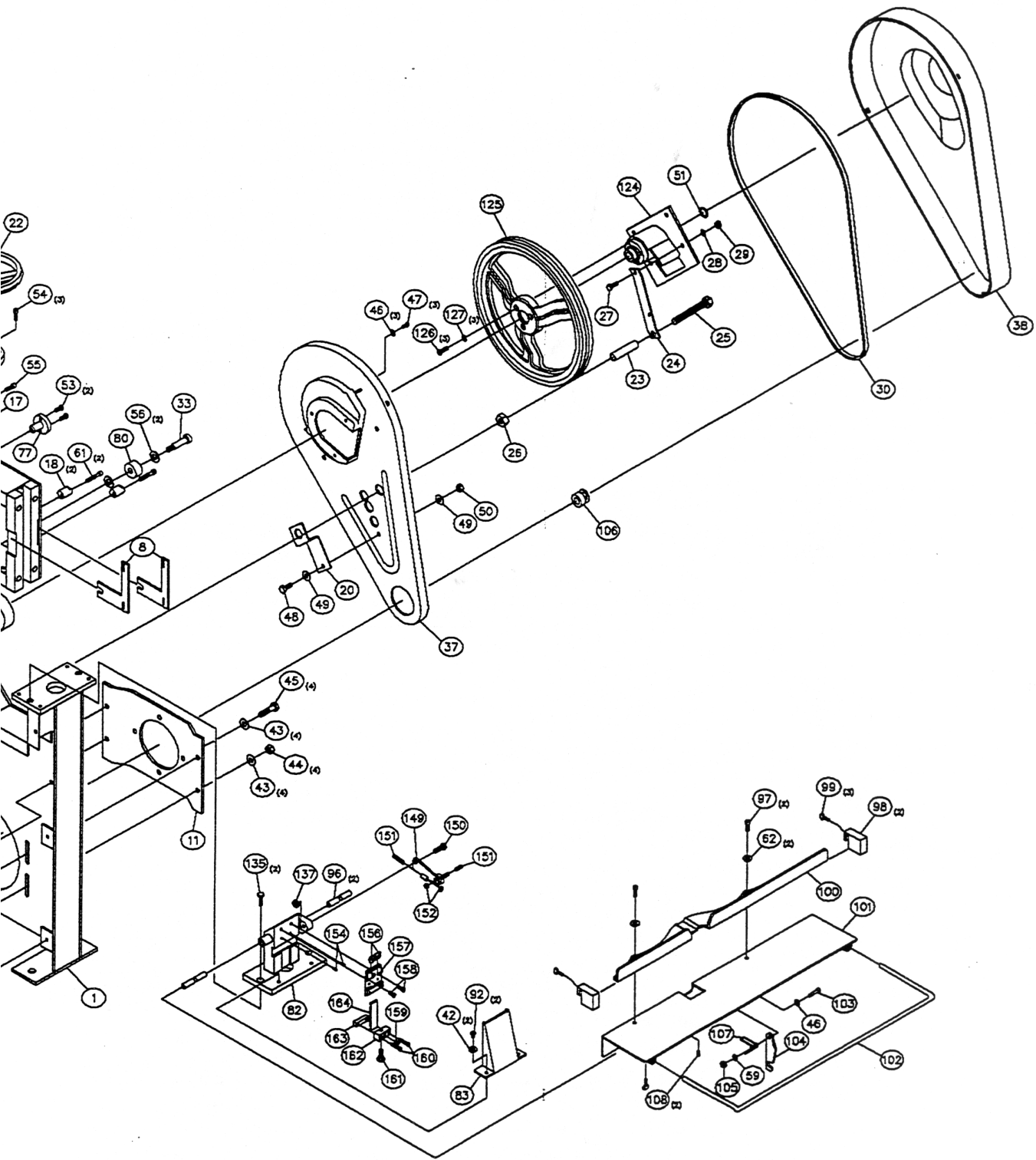


Figure 4 - Lubrication Points

Figure B - Machine Assembly





Part Number / Description Cross-Reference

| INDEX | ITEM NO. | DESCRIPTION | QTY | ITEM NO. | DESCRIPTION | QUANTITY | |
|-------|----------|-----------------------------|-----|----------|-------------|---------------------------|---|
| 1 | G30001A | Frame Weldment | 1 | 38 | 7676 | Belt Guard | 1 |
| 2 | G30002 | Side Cover Plate - Left | 1 | 39 | G30130 | Adjuster Stud | 2 |
| 3 | G30006A | Bearing Housing Assembly | 1 | 40 | P7507 | Screw 1/4-20x3/4 | 1 |
| 4 | G30007B | Crank Shaft Assembly | 1 | 41 | PW14.6 | Washer | 1 |
| 5 | G30011A | Adjuster Lever Assembly | 1 | 42 | LW14 | Lock Washer | 1 |
| 6 | G30017A | Pivot Link Assembly | 1 | 43 | PW38 | Washer | 1 |
| 7 | G30020A | Upright Link Assembly | 1 | 44 | HN3816 | Hex Nut 3/8-16 | 1 |
| 8 | G30031B | Adjuster Fork | 1 | 45 | UA6112.1 | Screw 3/8-16x3/4 | 1 |
| 9 | G30041A | Clincher Roller Assembly | 2 | 46 | PW10.3 | Flat Washer 3/16 | 1 |
| 10 | G30043B | Clincher Lever | 1 | 47 | UA3806.9 | Screw 10-32x3/8 | 1 |
| 11 | G30048 | Motor Mounting Plate | 1 | 48 | UA5112.1 | Screw 5/16-18x3/4 | 1 |
| 12 | G30049 | Dowel Pin 5/8x2-1/2 | 1 | 49 | PW516 | Washer | 2 |
| 13 | G30067 | Bolt 3/8-16x1 | 1 | 50 | HN51618 | Hex Nut 5/16-18 | 1 |
| 14 | G30099B | Adjustment Crank Housing | 1 | 51 | P7863 | Retaining Ring | 1 |
| 15 | G30100B | Adjuster Crank Shaft Insert | 1 | 52 | UA4812.1 | Screw 1/4-20x3/4 | 1 |
| 16 | G30101 | Adjuster Yoke | 1 | 53 | UA4810.5 | Screw 1/4-20x5/8 | 1 |
| 17 | G30102 | Adjuster Shaft Screw | 1 | 54 | UA4810.1 | Screw 1/4-20x5/8 | 1 |
| 18 | G30103 | Adjuster Stop | 1 | 55 | UA4808.3 | Screw 1/4-20x1/2 | 1 |
| 19 | G30117B | Motor Cover | 2 | 56 | PW12 | Washer Zinc 1/2 | 1 |
| 20 | G30118 | Belt Guard Bracket | 1 | 57 | CB837E | Retaining Ring | 1 |
| 21 | G30127 | Starter Mounting Flange | 1 | 58 | UA3808.1 | Screw 10-32x1/2 | 1 |
| 22 | G30128 | Hand Wheel | 1 | 59 | PW10 | Washer | 2 |
| 23 | FC9632 | Anchor Spacer | 1 | 60 | LW10 | Lock Washer | 1 |
| 24 | FC9656 | Clutch Anchor | 1 | 61 | UA4816.1 | Screw 1/4-20x1 | 1 |
| 25 | UA8164 | Screw 1/2-13x4 | 1 | 62 | PW14 | Flat Washer | 1 |
| 26 | HN1213.2 | Hex Jam Nut 1/2-13 | 1 | 63 | HN1420 | Nut 1/4-20 | 1 |
| 27 | 7681 | Screw Clutch Anchor | 1 | 64 | G30013A | Drive Lever Assembly | 1 |
| 28 | SW14 | Lock Washer | 1 | 65 | G30014 | Slider Pin | 1 |
| 29 | HN1420.5 | Hex Nut 1/4-20 | 2 | 66 | G30016 | Slider | 1 |
| 30 | 850730 | V-Belt | 1 | 69 | G30037A | Clincher Upright Link Asy | 1 |
| 31 | 35 | Clincher Slide Link Spring | 1 | 70 | G30005A | Crank Throw Assembly | 1 |
| 32 | 406 | Cl. Op. Lever Spring Screw | 1 | 73 | G30027 | Face Plate Adapter | 2 |
| 33 | G30061 | Shoulder Screw 1/2x1-1/2 | 1 | 74 | G30028 | Slider Guide | 1 |
| 34 | G30063 | Shoulder Screw 5/8x1 | 1 | 75 | G30029 | Slider Guide Screws | 1 |
| 35 | G30064 | Shoulder Screw 3/4x1-1/4 | 1 | 76 | G30030B | Adjuster Slide | 1 |
| 36 | G30065 | Screw 1/2x1 | 1 | 77 | G30097 | Adjuster Pivot Pin | 1 |
| 37 | 7675 | Belt Guard | 1 | 78 | G30032 | Adjuster Plate | 1 |

| INDEX | ITEM NO. | DESCRIPTION | QTY | ITEM NO. | DESCRIPTION | QUANTITY |
|-------|-----------|-----------------------------|-----|----------|-------------------------------------|----------|
| 80 | G30152 | Adjuster Spool | 1 | 126 | UA4812.7 Screw 1/4-20x3/4 | 1 |
| 81 | G30034 | Drive Plate Adapter | 1 | 127 | SW14.1 Lock Washer | 2 |
| 82 | G30044A | Clincher Mounting Asy | 1 | 130 | SU-0308853 Screw 3/8X3/8 | 1 |
| 83 | G30113 | Clincher Guard | 1 | 135 | G30159 Screw 1/2-20x1-1/4 | 1 |
| 84 | G30124 | Actuator Key Bracket | 2 | 137 | HN51618.2 Hex Jam Nut 5/16-18 | 1 |
| 85 | G30142 | Guard - Right | 1 | 138 | SW516.2 Lock Washer | 1 |
| 86 | G30143 | Guard - Left | 11 | 139 | UA3410.4 Screw 10-32x5/8 | 1 |
| 87 | G30157 | Wire Spool Bracket | 1 | 147 | 850300 Motor 1/2 HP | 1 |
| 88 | HN1024 | Nut 10-24 | 1 | 149 | 7645A Table Support Brkt Asy - RH | 1 |
| 90 | 36 | Pin | 1 | 150 | UA5120.2 Screw 5/16-18x1-1/4 | 1 |
| 91 | G30145 | Head Guard | 1 | 151 | UA4828.3 Set Screw - Cup Point | 1 |
| 92 | UA3806.16 | Screw 1/4-20x3/8 | 1 | 152 | HN1420.2 Hex Jam Nut 1/4-20 | 2 |
| 93 | UA3812.2 | Screw 10-32x3/4 | 1 | 154 | 29 Dowel | 1 |
| 94 | UA3806.3 | Screw 10-32x3/8 | 1 | 155 | G20243 Dowel Pin 1/4x9/16 | 1 |
| 96 | 203B | Work Table Swivel Pin | 2 | 156 | 7024B Clincher Point 1/2 - Flat | 1 |
| 97 | 63 | Work Guide Screw | 1 | or | 7257B Clincher Point 1/2 - Round | 1 |
| 98 | 7423 | Work Stop | 1 | 157 | 7253A Clincher Plate Assembly 1/2 | 1 |
| 99 | 425 | W/G Spring Holder Screw | 1 | 158 | 9081 Screw | 1 |
| 100 | M7201B | Work Guide | 1 | 159 | 38 Clincher Slide Adjust Screw | 2 |
| 101 | 7656A | Work Table Assembly | 1 | 160 | UA3216.2 Clincher Slide Block Screw | 1 |
| 102 | 7056 | Work Table Extension | 1 | 161 | 18186 Clincher Slide Adjust Screw | 1 |
| 103 | UA3810.10 | Shoulder Screw 1/4x5/8 | 1 | 162 | 18183 Clincher Slide Adjust Block | 1 |
| 104 | 7648 | Table Support | 2 | 163 | 18184 Clincher Slide Block Clamp | 1 |
| 105 | HN1032 | Nut 10-32 | 1 | 164 | 18182 Clincher Slide | 1 |
| 106 | 850696 | Pulley | 1 | 200 | 850302 Starter Enclosure | 1 |
| 106 | 850738 | Pulley | 1 | 201 | 850303B Terminal Strip - Holes | 1 |
| 107 | B554 | Torsion Spring | 1 | 202 | 850304 Footswitch | 1 |
| 108 | 38 | Clincher Slide Adjust Screw | 1 | 203 | 850308 Safety Interlock Switch | 1 |
| 112 | 7690 | Tension Spring | 1 | 204 | 851005 Strain Relief | 2 |
| 113 | 7691 | Set Collar - Reamed | 1 | 205 | 86243 Power Cord - 115V | 1 |
| 114 | 7693 | Spool Stud | 1 | 205 | 850307 Power Cord - 230V | 1 |
| 115 | M11009 | Plastic Washer | 1 | 206 | 850314 Strain Relief | 1 |
| 116 | 2245 | Spool Washer | 2 | 207 | 850315 Strain Relief Nut | 1 |
| 117 | PG10271 | Washer 9/16 | 1 | 208 | 850305 UV Trip - 115V | 1 |
| 124 | 850673 | Electric Clutch - 115V | 1 | 208 | 850306 UV Trip - 230V | 2 |
| 124 | 850674 | Electric Clutch - 230V | 1 | 209 | 850301 Motor Starter | 1 |
| 125 | 7678 | Drive Pulley | 1 | | | |

Clutch-Brake Maintenance

Always disconnect the power supply before making any adjustments or servicing the stitcher.

 **WARNING**

This stitcher is equipped with a solenoid actuated, continuous trip, wrap spring clutch-brake unit. It is a dependable device and seldom needs service. But should a malfunction occur, the following information is a service and troubleshooting guide for maintenance of this unit.

Actuator

The actuator is a simple, straight-forward mechanical linkage. When the actuator does not trip, the following checks should be made:

| PROBLEM | CAUSE AND REMEDY |
|---|--|
| No Power to the Coil | Check all wiring and switching in the Clutch Actuation System |
| Lack of continuity in the Coil windings | Replace the Coil |
| Mechanical binding of the Plunger | The Coil may have shifted, or the Plunger end may have mushroomed due to striking the backstop. In the latter, the plunger may be filed or turned to its true diameter |
| Insufficient clearance of the Actuator over the Stop Collar | Adjust the linkage as needed |
| Actuator loaded by the Stop Collar so hard that the Actuator cannot be pulled by the Coil | Breaking force is exceeding the limits of the Brake, or the differential setting of the unit is too close (see Assembly/Disassembly instructions) |

Clutch and Brake Springs

With the brake engaged (full limit of output), the input hub should be free to rotate by hand. With the clutch engaged, the input and output hubs should rotate together. If the unit does not rotate in either of these modes, the clearance between the hubs of the unit on the shaft may have been disturbed or damaged. See Assembly/Disassembly instructions for re-adjusting.

Listed below are additional checks to be made if the clutch does not function correctly:

| PROBLEM | CAUSE AND REMEDY |
|---|---|
| Clutch Brake does not drive but Input turns | <ul style="list-style-type: none"> A. Drive Spring may be broken at crossover point from an overload caused by a jam. Replace Spring and check Hubs for damage. B. Collar may not snap forward because of foreign matter restricting movement. Clean unit. C. Actuator does not pull in. See Actuator section. |
| Clutch-Brake jams and stalls Input Motor | <ul style="list-style-type: none"> A. Spring tang broken off Drive Spring, not allowing Clutch to disengage while Brake is engaged. Replace Drive Spring. B. Clutch output bound up. Check clearance between Output Hub and Brake Hub. C. Completely out of adjustment caused by losing an internal Spring Tang. Replace Spring. |
| Output does not repeat stopping point | <ul style="list-style-type: none"> A. Not enough inertia to actuate brake. B. Tang broken off Brake Spring, replace Spring. C. Adjust Collar Locking Screw, may be loose allowing Adjusting Screw to rotate. |

Disassembly (See Figure 5)

Always disconnect the power supply before making any adjustments or servicing the stitcher

 **WARNING**

To disassemble the clutch-brake unit (124) it will first be necessary to remove the drive pulley (125) from the stitcher by removing the V-belt (30), retaining ring (51), and clutch anchor screw (27). Disconnect the ground and solenoid wires, and swing the anchor strap (24) clear of the drive pulley assembly and slide it off of the drive shaft. Remove the three screws (126) connecting the drive pulley to the clutch-brake unit.

When disassembling the clutch-brake unit, always mark the spring tang locations with reference to which slots they go in if the same springs are to be used for reassembly. To disassemble the clutch-brake unit, proceed as follows:

Release Actuator Lever so that clutch is engaged and brake released. Remove Retaining Ring and Shim Washer, if any, from the input Hub end. Remove input Hub by rotating opposite to the drive direction. Remove Retaining Ring and Shim Washer, if any, from the Mounting Plate end.

Remove Output Shaft Springs and Control Collar assembly by rotating Output Shaft in the drive direction (DO NOT DISASSEMBLE BRAKE HUB FROM MOUNTING PLATE). Remove Control Collar from the Output Shaft and Spring assembly by extracting toward the Brake Spring end.

Assembly (See Figure 5)

Replace Clutch, Brake and Anti-Backup Springs as required. Assemble Springs concentric and square to the Output Shaft. Assemble Control Collar over the Output Shaft and Spring assembly by inserting from the Brake Spring end (it will be necessary to extend Brake Spring using long nose pliers). Place the Brake Spring tang in any one (1) of the nine (9) Control Collar slots at random.

Assemble Output Shaft, Springs, and Control Collar assembly to the Mounting Plate assembly by rotating Output Shaft in the drive direction. Assemble Retaining Ring to Output Shaft at the Mounting Plate end (smooth surface facing Brake Hub). Check end play between Hub and Retaining Ring with feeler gauge. There should be 0.004" to 0.010" end play. Use Shim Washer to adjust.

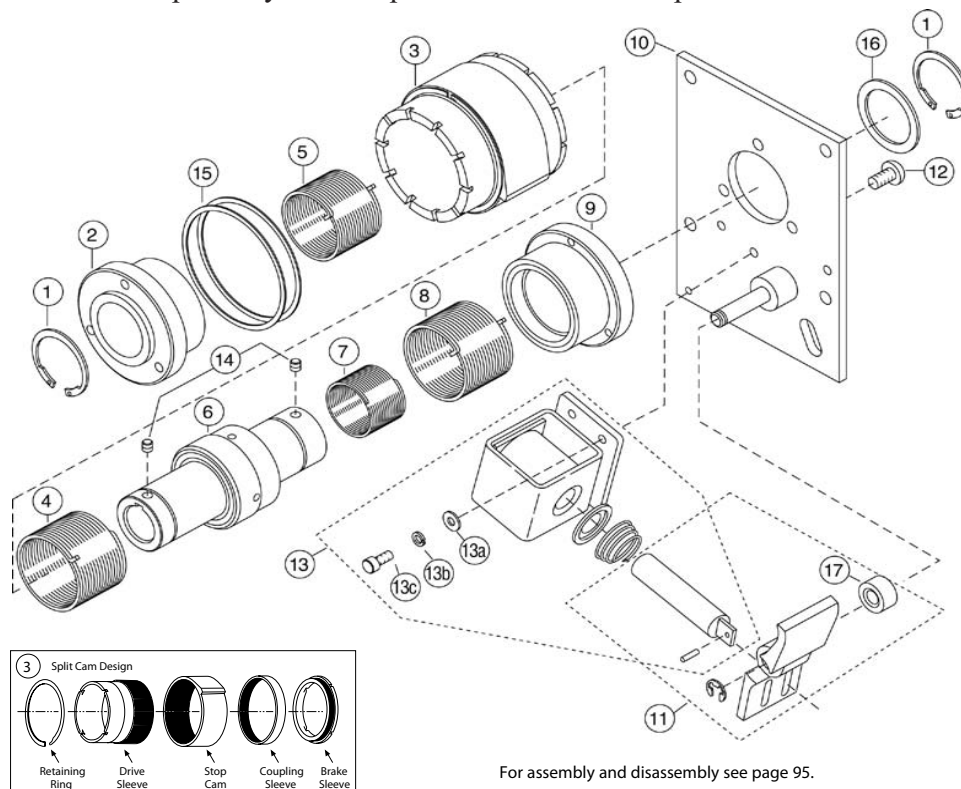
Rotate Output Shaft in the drive direction until it reaches a full brake position. With the Clutch Spring Tang not in slot, insert the Input Hub by rotating opposite to the drive direction. Select the one (1) of ten (10) Control Collar slots for the Clutch Spring Tang that will provide a 0.38" to 0.50" circumferential overtravel of the Control Collar when released.

Note: At this point it may be necessary to reselect one (1) of the nine (9) Control Collar slots for the Brake Spring Tang (release Actuator Lever, remove Clutch Spring Tang from slot, then move Control Collar axially toward the Input Hub end and rotate it opposite to the drive direction to pick up the next slot). Continue to select Control Collar slots until the 0.38" to 0.50" specification is achieved.

Assemble Retaining Ring to Output Shaft at the Input Hub end (smooth surface facing Input Hub). Check end play between Input Hub and Retaining Ring with feeler gauge. There should be 0.002" to 0.003" end play on the Input Hub.

Reassemble unit to machine.

IMPORTANT: After Clutch is assembled to machine, the Clutch Plate should be free to float on bearing - the anchor strap is only there to prevent rotation of the plate.



For assembly and disassembly see page 95.

| COMPONENT PARTS | | | |
|-----------------|---|----------|------------|
| Item | Description | Rotation | Part No. * |
| 1 | Retaining Ring | | 850886 |
| 2 | Input Hub Anti-Overrun | | 851321 |
| 3 | Control Collar (Specify No. of Stops) Standard - 1.8" Adjustable | | 850880 |
| 4 | Drive Spring | CW | 850868 |
| 5 | Anti-Overrun Spring | CW | 850991 |
| 6 | Output Assembly 0.750 Bore | | 850891 |
| 7 | Anti-Back Spring | CW | 850962 |
| 8 | Brake Spring | CW | 850889 |
| 9 | Brake Hub | | 850892 |

| COMPONENT PARTS | | | |
|-----------------|--|----------|------------------|
| Item | Description | Rotation | Part No. * |
| 10 | Plate Assembly | CW | 850890 |
| 11 | Actuator Assembly (includes plunger) | CW | 850974 |
| 12 | Button Head Cap Screw (3) | | 850994 |
| 13 | Coil Assembly "D" Frame 230 AC 115 AC | | 850998 850999 |
| 13a | Flatwasher | | 850995 |
| 13b | Lockwasher—Split | | 850996 |
| 13c | Skt. Head Cap Screw (2) | | 851123 |
| 14 | Headless Socket Set Screw (2) (.75 Bore only) | | 851124 |
| 15 | Shim (2) | | 851125 |
| 16 | Shim .005 .010 | | 851126 851127 |
| 17 | Spacer | | 850869 |

Shims used as required

Figure 5 - Clutch-Brake

Lubrication

The clutch-brake unit is designed with the bearing parts made from sintered metal that has been impregnated with oil and normally do not need to be re-lubricated. In cases where there is severe duty, the unit may be re-oiled or flushed out with minimal or no disassembly by using a light bearing oil as used in manufacture (Shell Bearing Infusion Oil #33). If disassembly of the unit for cleaning and oiling is necessary, follow the detailed disassembly instructions to the point needed, flush and wipe parts in the oil to be used for re-lubrication. **DO NOT USE SOLVENT** to clean the parts. To get more cleaning action for the oil, it may be heated while cleaning the components, but bring the parts back to ambient temperature submerged in cool oil.

Coil Replacement

Place the Spring onto the Plunger with the narrow end towards the Actuator. Slide the Solenoid onto the Actuator and Plate Assembly. Assemble the Solenoid to the Plate Assembly with the cap screws and washers. **DO NOT** tighten more than finger tight.

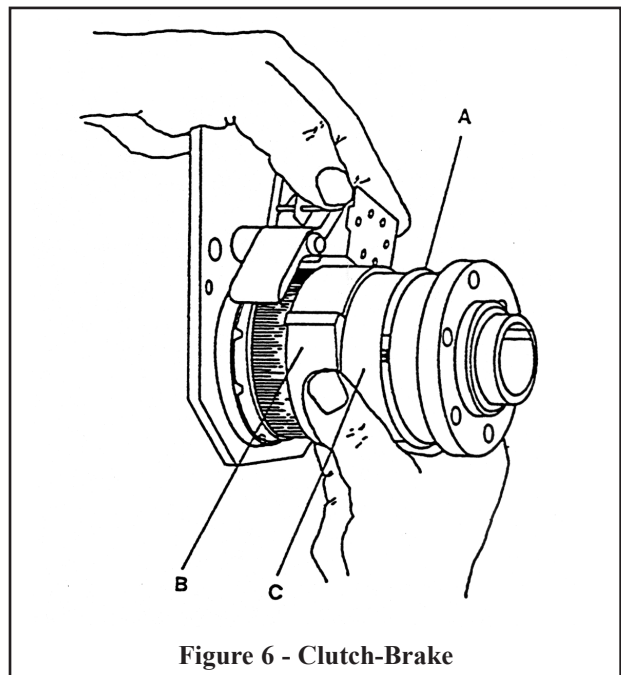
Energize the Coil and adjust the gap between the Actuator and the top of the Collar Stop to 0.015" to 0.030" by sliding the Solenoid assembly. Note: push the Collar toward the Actuator to allow for Collar movement. Tighten the cap screws.

Control Collar Adjustment

The stopping position of the head can be changed if necessary by adjusting the position of the stop cam on the control collar sleeve. Turn the machine manually until the driver is in the desired stopping position, the proceed as follows:

Work Retaining Ring "A" out of its groove and slide it forward on Sleeve "C". Slide Cain "B" off Splines, rotate to align Collar Stop with Actuator and slide the Cam back on the Splines. The Actuator Prawl will have to be held clear during this operation. Slide the Retaining Ring back into its groove.

Note: Make sure brake is locked up before proceeding to insure getting the proper stop point.



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NOTES

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