

 **DeLuxe STITCHER**

COMPANY INC.

solving your wire stitching needs for 125 years...

ISP Stitching & Bindery Products

**OWNERS
MANUAL**

**MODEL HF
SILVERSTITCHER**



MODEL HF SILVERSTITCHER

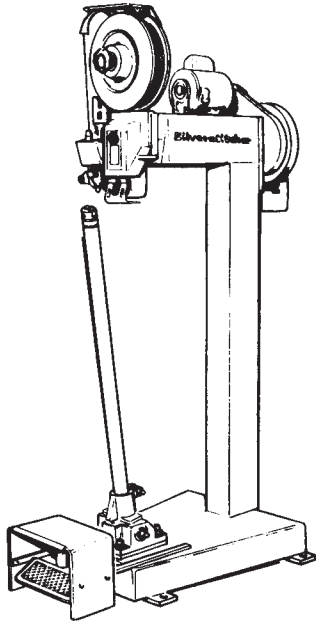
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INSTRUCTIONS FOR:

**INSTALLATION
MAINTENANCE
OPERATION**

**OF THE
MODEL HF SILVERSTITCHER**



Set for _____ wire stitching

Serial Number _____ Type _____

Wire Size _____ Crown Width _____

Cutter Blade Size _____

Special Parts: _____

The Model HF Silverstitcher incorporates the latest in engineering design for attaining optimum mechanical performance, improved service ability, and adequate operator safety. With these plus features at hand and with proper care and service, your HF Silverstitcher will give years of reliable, trouble free and safe service. This manual points the way to get top performance from your stitcher. Read the instructions thoroughly - study the diagrams carefully. Best stitching performance will be assured if all adjustments are made as instructed so that you get the following desired results.

- 1 GOOD CUT-OFF**
- 2 UNIFORM WIRE DRAW**
- 3 EQUAL LEG LENGTH**
- 4 PROPER CLINCHER ALIGNMENT**
- 5 SUFFICIENT COMPRESSION**

KNOW YOUR STITCHER

YOUR MODEL HF SILVERSTITCHER MAY BE EQUIPPED FOR EITHER FLAT WIRE STITCHING OR FOR ARCUATE STITCHING. KNOW WHICH SYSTEM IS USED IN YOUR STITCHER TO DETERMINE PROPER MAINTENANCE, SERVICE, AND ORDERING OF PARTS.

FLAT WIRE STITCHER

Flat stitching wire is fed from a coil, through the stitcher feed wheels, onward through the guide tube and straightener rolls, to the former and driver assembly where a stitch is formed and driven.

The cross section of stitching wire remains flat.



FLAT WIRE CROSS SECTION

ARCUATE STITCHER

Flat stitching wire is fed from a coil, through special feed wheels which induce an arc in the wire cross section before the wire is fed onward through the guide tube and straightener rolls, and to the former and driver assembly where a stitch is formed and driven.



ARCUATE WIRE CROSS SECTION

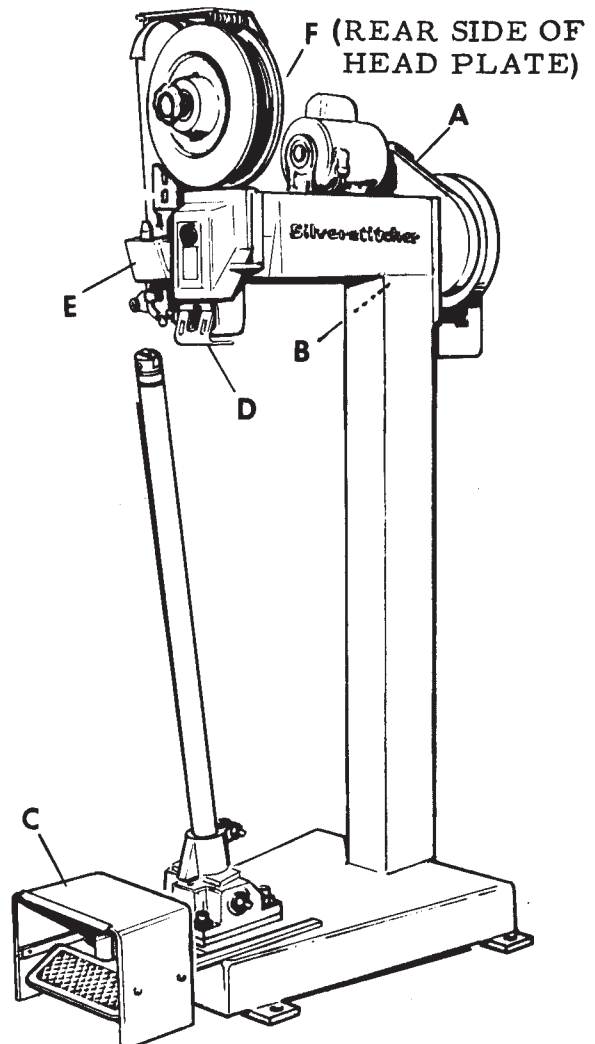
SAFETY PRECAUTIONS And PROCEDURES

1. Make sure electrical power is turned off before performing any adjustment or maintenance.
2. Keep hands, tools and clothing clear of stitching area.
3. Become familiar with the moving components of your machine. Keep fingers away from areas that could pinch or cut.
4. Wear adequate safety equipment for eye and face protection. Observe your plant safety rules.
5. Exert "good housekeeping" in your work area. Keep it as clean and as uncluttered as possible.
6. A well maintained machine is a safer machine. Clean and lubricate the machine at regular intervals. Check machine daily for broken or worn parts. Replace as necessary. DO NOT attempt to operate the machine if a part is broken.
7. Route all electrical cables away from pedestrian and transportation lanes.
8. See "Safety Guards" information. It points out areas where additional caution should be exercised. If you are unsure how to safely operate or maintain your Stitcher, contact your Interlake Service Representative.

SAFETY GUARDS

FOR YOUR SAFETY, MAKE SURE ALL SAFETY GUARDS ARE PROPERLY IN PLACE BEFORE OPERATING MACHINE.

- A. **BELT & PULLEY GUARD (CB-2020-B and CB-2021)** — This guard covers a revolving part. Do not operate machine unless this guard is properly in place. Keep hands, clothing and tools clear when machine is in operation or hand wheel is used to cycle machine.
- B. **POWER RELAY (CB-2454)** provides low voltage protection. The motor is prevented from automatically restarting if electrical power is interrupted.
- C. **FOOT PEDAL GUARD (CB-2103)** — This guard safeguards against accidental actuation of machine. DO NOT remove. See page 5.
- *D. **FINGER GUARD (CB-2111-D)** — This guard helps to prevent the operator's fingers from entering a pinch point area. Never put fingers under this guard.
- E. **FEED WHEEL & CAM GUARD (CBB-69-J)** — This guard covers moving parts that could pinch or cut. Do not operate machine unless this guard is properly in place.
- F. **WIRE FEED GEAR GUARD (CB-27)** — This guard covers revolving gears. Do not operate machine unless this guard is properly in place. Keep hands, clothing and tools clear when machine is in operation.

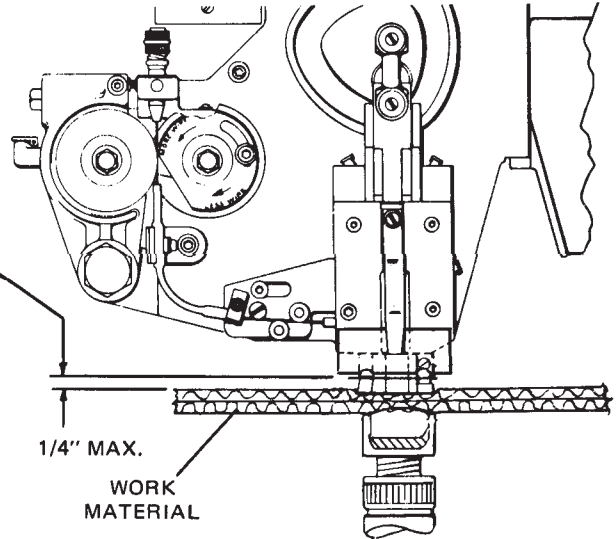


SAFETY PRECAUTIONS AND PROCEDURES

ADJUST FINGER GUARD AS CLOSE AS POSSIBLE TO WORK MATERIAL, 1/4" GAP MAXIMUM.

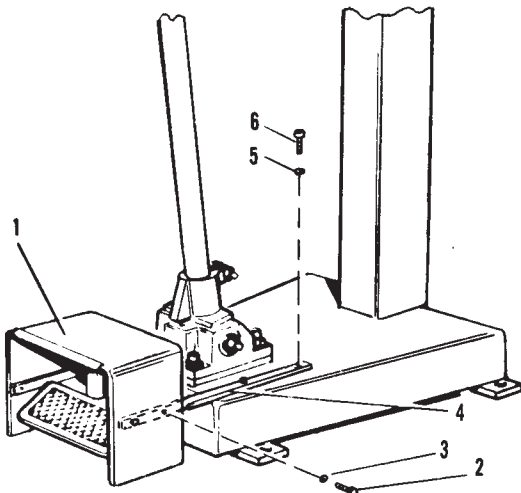
WARNING

NEVER PUT FINGERS UNDER FINGER GUARD. SEE SAFETY INFORMATION ON PAGE 4 OF THIS MANUAL.



WARNING

FOOT PEDAL GUARD (INDEX "C", PAGE 4) MUST BE ATTACHED TO BASE FRAME BEFORE OPERATING THIS MACHINE. USE SCREWS PROVIDED AND MOUNT IN POSITION AS SHOWN IN DIAGRAM BELOW



Index Number	Part Number	Part Name	Number Required
1	CB-2103	Pedal Guard	1
2	CB-110-D	Cap Screw	4
3	CB-371-B	Lock Washer	4
4	CB-2104	Pedal Guard Support	2
5	CB-371-A	Lock Washer	4
6	CB-51	Cap Screw	4

COIL HOLDER & WIRE COIL

COIL HOLDER:

Remove twine and packing used to secure the coil holder during shipment. Make sure stitching wire is threaded through the feed tube and wire straightener assembly and into the cutter tube.

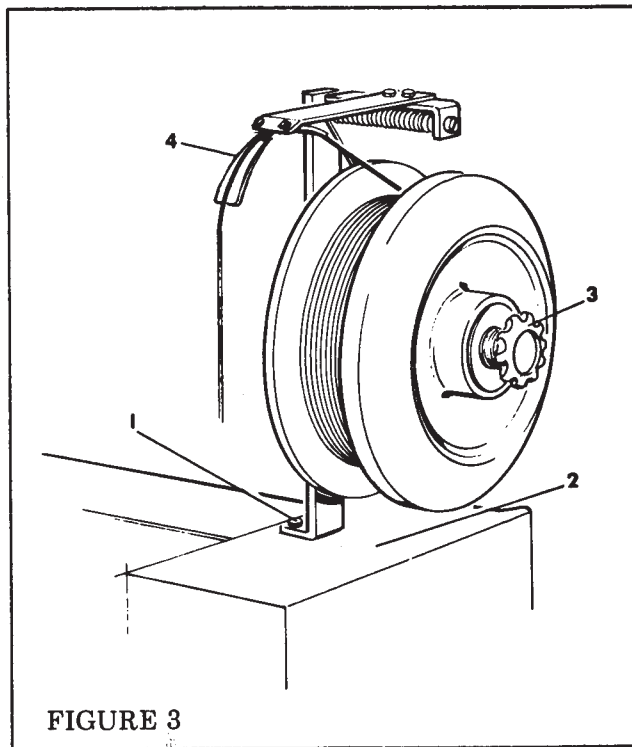
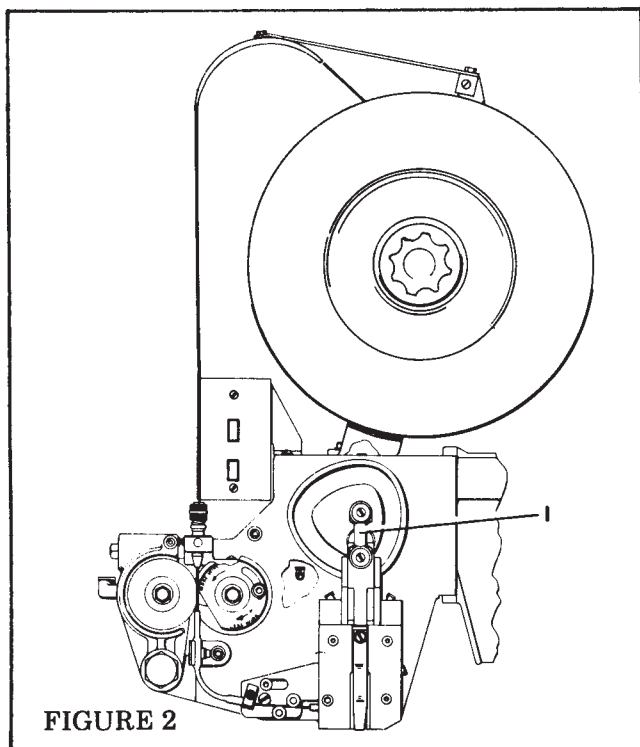
WIRE COILS:

1. Remove wrapper from 25 pound coil of stitching wire. Make sure that the wire is the proper size for your stitching machine.
2. Remove cover of 25 pound coil holder by pressing inward on the knob (Index 3, Figure 3) while turning knob to release the cover shaft from the main hub and reel assembly.
3. Place coil of stitching wire on the hub. Make sure the leading end of the stitching

wire feeds toward the wire guide (Index 4, Figure 3). Hold the wire end in one hand and cut tape ties from coil of stitching wire. Replace cover, press knob inward and turn 90 degrees.

4. Turn stitcher drive wheel by hand until driver link (Index 1, Figure 2) is in vertical position.
5. Bring leading end of stitching wire over coil holder wire guide and thread wire through the check pawl assembly and between the feed wheels.

Make sure stitcher wire is threaded through the feed tube and wire straightener assembly and into the leading end into the cutter tube.



MODEL HF SILVERSTITCHER

SET MACHINE FOR STITCHING:

To set your machine properly, follow these five important steps (Figure 4).

1. Lower the clincher (A) as far as possible by turning the adjusting nut (B).
2. Step on foot pedal and turn drive wheel by hand until the former housing (C) is at the lowest point of its stroke.
3. Place a piece of material to be stitched over the clincher.
4. If the work material is solid fibre, turn the adjusting nut (B) until the material is held firmly between the clincher and formers. If the work material is corrugated fibre, turn the adjusting nut (B) until clincher and formers make a slight compression of the work material.
5. Return stitcher to neutral by rotating drive wheel until it turns freely.

CAUTION

Avoid damage to your stitcher by following these rules:

1. *Never operate your stitcher with wire feeding unless you have work material between the clincher and formers.*
2. *Do not drive one stitch on top of another.*

Following are two recommended lists of parts, either one of which should be maintained according to preference. Group No. 1 is for the minimum parts required for emergency servicing. Group No. 2 combined with Group No. 1 more fully protects the users of Model HF Silverstitchers where down time must be minimized.

GROUP NO. 1:

NAME	QUANTITY
Clutch Pin	1
Clutch Pin Spring	1
Cutter Blades	2
Cutter Blade Screws	2
Cutter Tubes	2
Former Plunger (5/16" crown or under)	1
Former Plunger Spring (5/16" crown or under)	1

GROUP NO. 2: (consists of Group No. 1 plus the following items)

NAME	QUANTITY
Check Pawl Assembly	1
Clincher	1
Former & Driver Assembly	1
Drive Pins	2

When ordering parts, include the following information:

- (a) Serial number of stitcher.
- (b) Wire Size.
- (c) Stitcher, Model Number.
- (d) Stitch width, (example) 3/8", 7/16" or 1/2" crown.
- (e) Equipped for Flat or Arcuate stitching.

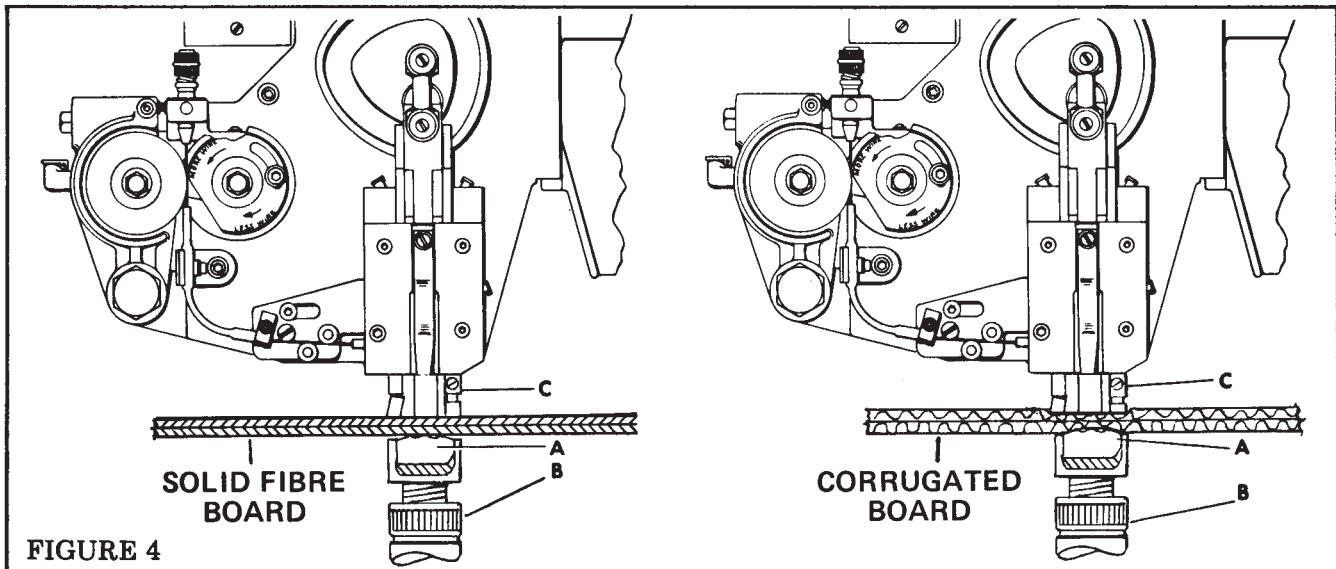


FIGURE 4

OPERATION



PREVENT ACCIDENTS BY FOLLOWING THESE RULES

1. **DO NOT PUT YOUR HANDS NEAR AREA TO BE STITCHED WHEN MACHINE IS OPERATING.**
2. **TURN THE MOTOR OFF WHEN THE STITCHER IS NOT IN USE.**

Turn ON the power and place the material over the clincher. Make sure that the box is in the correct position for stitching (Figure 5 shows the correct placement of stitches).

POST STITCHERS

Press down on the foot pedal gradually until the post is locked in an upright position. Then press the pedal down the rest of the way to engage the

clutch. The machine will continue to stitch until the pedal is raised slightly.

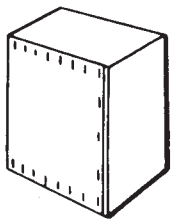
ARM, TOP AND SEAM STITCHERS

The clutch is engaged by stepping on the foot pedal (or electric trip if the machine is so equipped). These models will also continue to stitch while the pedal is held down.

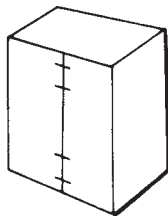
NOTE

According to the Consolidated Freight Classification Rulings, wire stitches used to close corrugated and solid fibre shipping boxes should be placed not more than 2-1/2" apart along the edges of the flaps. While the number of stitches required depends primarily on the

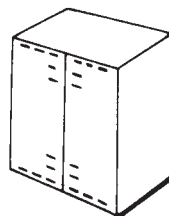
size of the box, the weight of the contents should also be considered. A box with a heavy load will often need more than the minimum number of stitches. The illustrations shown in Figure 5 are a guide for the correct placement of stitches.



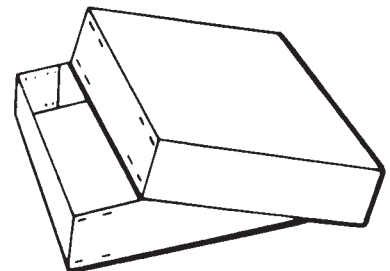
Bottom stitching of full flap slotted container (F.F.S.C.)



Top stitching of overlap slotted container (O.S.C.)



Bottom stitching of regular slotted container (R.S.C.)



Side and end stitching of telescope container

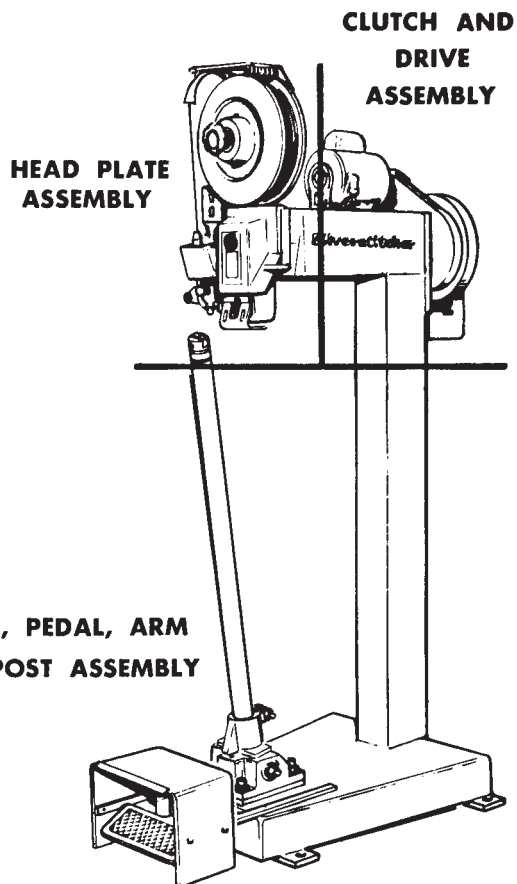
FIGURE 5

MODEL HF SILVERSTITCHER




TROUBLE SHOOTING

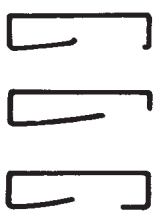






The Maintenance Trouble Shooting and Adjustment information in this section plays a very important role in eliminating or reducing production line down time.

The various kinds of mechanical trouble that may occur in your stitcher are described below. Possible causes and remedies are given for each kind of mechanical trouble. The remedies are indexed to the various sections under Adjustments, which gives more detailed information about your stitcher and recommended remedies. Unless you recognize which of the causes is correct, check each one until the correct cause is located.



HEAD PLATE ASSEMBLY (Includes wire feeding, straightening, and forming parts)

TROUBLE	POSSIBLE CAUSE	REMEDY
A. DEFECTIVE STITCHES		PAGE
1. One or both legs buckled  NOTE Since buckled legs are often concealed by the board and may appear the same as a short leg, always remove two or more stitches to see which condition is occurring. 	1. Clincher block is worn or improperly aligned 2. Insufficient compression 3. Unequal leg length 4. Burred stitch leg 5. Incorrect wire size 6. Insufficient arc in wire 7. Worn former legs 8. Broken plunger spring 9. Worn anvil	21 21 15 18, 19 17 23 20 20
2. Wrinkled crown		
3. One leg is consistently too short or too long 	1. Right-hand feed wheel improperly adjusted - single head stitcher 2. Right-hand feed wheel improperly adjusted - dual head stitcher	14, 15 14, 15

TROUBLE	POSSIBLE CAUSE	REMEDY
4. Varying leg length 	1. Excessive brake tension on 25-pound coil holder 2. Dirty or worn check pawl 3. Broken wire guide assembly on 25-pound coil holder 4. Excessive tension on wire straightener 5. Former plunger not operating	14 14 14 18 20
5. Corner of crown distorted or fractured 	1. Excessive compression 2. Broken driver end 3. Worn former legs 4. Clincher block improperly aligned or worn 5. Incorrect wire size 6. Worn anvil	21 23 23 21 20
6. Stitch crown not flat and legs not bent back into board 	Insufficient compression	21
7. One or both legs turn out 	1. Clincher block improperly aligned 2. Dull or improperly adjusted cutter blade and tube 3. Loose post	21 18, 19 26
8. Flat piece of wire 	1. Former plunger is not operating 2. Broken anvil spring 3. Excessive brake tension on coil holder	20 20 14
9. Stitches come out in pieces 	1. Former plunger is not operating 2. Cutter tube has been improperly inserted 3. Incorrect wire size	20, 21 18, 19
10. Both stitch legs are either too long or too short 	Improper size of cutter blade	18, 19

IMPORTANT

The former and driver assembly (Figure 33) should be removed and cleaned at least every 30 days. At this time, the former screws should be tightened and any burrs in the screw slots should be rubbed down with emery cloth. See page 22.

MODEL HF SILVERSTITCHER

TROUBLE	POSSIBLE CAUSE	REMEDY
B. WIRE BUCKLES BETWEEN THE FEED WHEELS AND WIRE GUIDE		
	1. Machine operated without work under head	21, 22
	2. Dull or incorrectly adjusted cutter blade or tube	18, 19
	3. Short wire draw	11
	4. Incorrect timing on dual-head stitcher	16
	5. Incorrect timing on single-head stitcher	16
	6. Worn or flattened former roller	22
	7. Wire straightener out of adjustment	18
	8. Former plunger is not operating	20
	9. Slot at bottom of anvil is dirty	20
C. WIRE TANGLES ON COIL HOLDER		
	1. Loose brake on 25-pound coil holder	14
D. BROKEN CUTTER TUBE		
	1. Tube has been improperly inserted	18, 19
	2. Dull tube or cutter blade	18, 19
E. SHEARED SCREWS ON CUTTER BLADE		
	1. Tube has been improperly inserted	18, 19
	2. Dull tube or cutter blade	18, 19
F. MACHINE SPEED IS LESS THAN NORMAL		
	1. Loose V-belt	25
	2. Motor failure	
	3. Incorrect motor size	
	4. Brake too tight	26

CLUTCH DRIVE ASSEMBLY

A. CLICKING NOISE	PAGE
NOTE	
<i>Always drive one stitch under power since clicking noise will normally occur when motor is turned on after machine has been turned over by hand</i>	
1. Broken clutch pin	25
2. Broken clutch pin spring	25
3. Worn drive pins	25
4. Brake is improperly adjusted	26

TROUBLE	POSSIBLE CAUSE	REMEDY
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B. RAPID WEAR OF V-BELT

	1. Improper tension	25, 26
	2. Motor pulley improperly aligned with main drive wheel	25, 26
	3. Oil on V-belt	25, 26

C. MOTOR HUMS OR GRINDS

NOTE

Check to see if motor specifications are the same as your power supply

D. STITCHER REPEATS WITHOUT PRESSURE ON THE FOOT PEDAL

	1. Broken clutch pin	25
	2. Broken clutch plate or spring	24
	3. Main drive wheel is frozen on drive shaft	25

FRAME, PEDAL, ARM AND POST ASSEMBLY

A. MACHINE WON'T STITCH WHEN FOOT PEDAL IS PRESSED AS FAR AS POSSIBLE

	1. Clutch plate out of adjustment	24
	2. Stitcher is not placed on a level floor	6
	3. Worn clutch plate	24

B. POST DOES NOT RETURN OR RETURNS SLOWLY WHEN PRESSURE IS REMOVED FROM FOOT PEDAL

	1. Pivot stud is too tight or not lubricated	24
	2. Foot pedal return spring is weak or broken	24
	3. Toggle links not adjusted properly or not lubricated	26, 27

MODEL HF SILVERSTITCHER

MAINTENANCE and ADJUSTMENTS

⬅ WARNING ➡
Turn off electrical power before making any adjustments.

COIL HOLDER

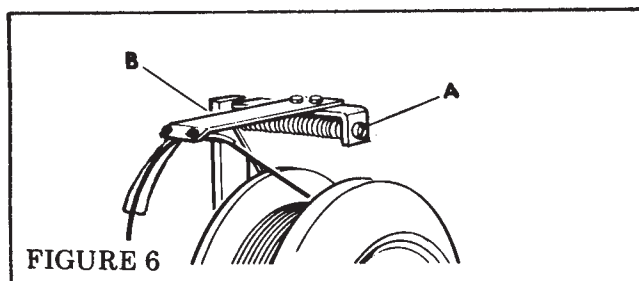
COIL HOLDER BRAKE ADJUSTMENT: Figure 6

Coil holder brake adjustment is factory set for nominal tension. If further adjustment is needed, loosen end nut (B) on brake bracket shaft and, with a screwdriver, turn shaft (A) to the right to increase tension; to the left to decrease tension. Tighten nut (B).

CHECK PAWL

The check pawl (Index B, Figure 7, also Index 18, Figure 40) permits the wire to flow forward into the stitching head but prevents it from moving in a reverse direction. When it does not function properly the wire slips backward and causes short legged stitches. This condition is usually caused by an accumulation of dirt which prevents the small rollers that grip the wire from moving freely.

To clean, remove the wire from the pawl by pressing down on the sleeve and pushing the wire down slightly. Then pull wire up and withdraw from the check pawl. The pawl can then be removed by



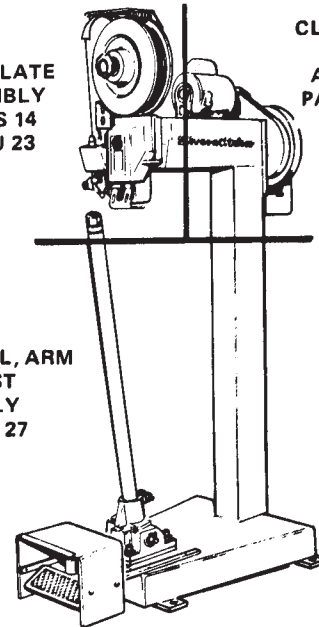
14

FIGURE 6

HEAD PLATE
ASSEMBLY
PAGES 14
THRU 23

CLUTCH AND
DRIVE
ASSEMBLY
PAGES 24-26

FRAME, PEDAL, ARM
AND POST
ASSEMBLY
PAGES 26, 27



loosening lock screw (Index C, Figure 7). Clean the pawl by shaking it in any grease-cutting agent. After cleaning and drying, insert a six-inch piece of wire in the pawl and attempt to pull it in the reverse direction. If all the dirt has been removed and it continues to slip, replace with a new part.

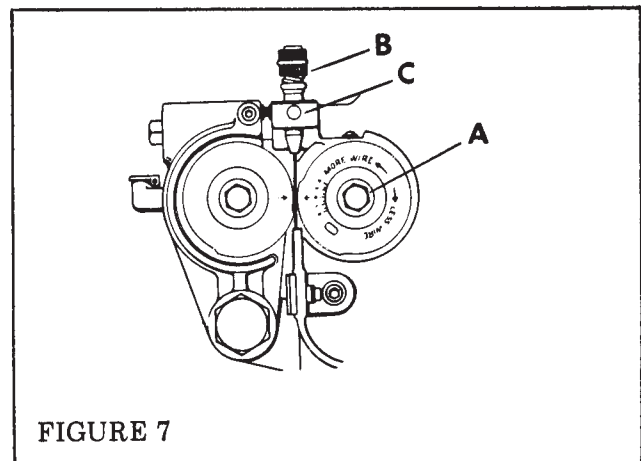


FIGURE 7

MACHINES EQUIPPED FOR FLAT WIRE STITCHING

FEED WHEELS

The feed wheels each have a cam or high spot. The relationship of the high spots on these two wheels determines the amount of wire which is fed into the machine (Figure 8). The right hand feed (Index A, Figure 8) controls the length of the right stitch leg. More wire is fed by adjusting this wheel counterclockwise; less wire is fed by adjusting the wheel clockwise.

FLAT WIRE

NOTE

The length of the left stitch leg is determined by the thickness of the cutter blade.

TEST THE LENGTH OF THE STITCH LEGS:

(1) Turn off the motor. (2) Step on the foot pedal and turn the drive wheel slowly until the formers and driver (Figure 9) are at the lowest point of their stroke and the driver bar pushes the stitch partially out of the former legs. (3) Check lower part of the stitch legs to see if they are uneven (Figure 9). (4) If the leg length is uneven turn drive wheel until formers and driver are at the highest point of their stroke.

ADJUST THE FEED WHEELS FOR LEG LENGTH:

Turn off the motor and loosen the feed wheel screw (Index A, Figure 10). Since turning the screw will cause the gears to rotate unless held in place, it is necessary to apply clockwise pressure on a screwdriver inserted in the driver link (Index B, Figure 10). The feed wheel can now be turned as required. Usually a movement of $1/32''$ to $1/16''$ is sufficient. The bolt should be tightened while applying counterclockwise pressure on the screwdriver. This operation should be repeated until the length of the stitch legs is equal or not more than a $1/64''$ variation exists. If you are unable to get proper leg length, check spacing between the feed wheels.

CHECK SPACING OF FEED WHEELS:

(1) Remove the wire from the stitcher. (2) Turn drive wheel until high spots of feed wheels face each other. (3) Check spacing with feeler gauge between feed wheels. Adjust spacing according to the chart below:

FEED WHEEL SPACING FOR VARIOUS THICKNESS OF WIRE

WIRE THICKNESS	.017 and .020	.023 and .024	.028
OPENING BETWEEN FEED WHEELS	.008	.010	.012

ADJUST FEED WHEEL SPACING:

(1) Loosen lock screw (Index C, Figure 10). (2) Turn set screw (Index D, Figure 10) to desired position. (3) Lock set screw by tightening lock screw. (4) Turn flywheel until formers and driver are at the highest point of their stroke. Occasionally, a groove is worn in one or both of the feed wheels. This causes the wire to slip and results in uneven leg lengths.

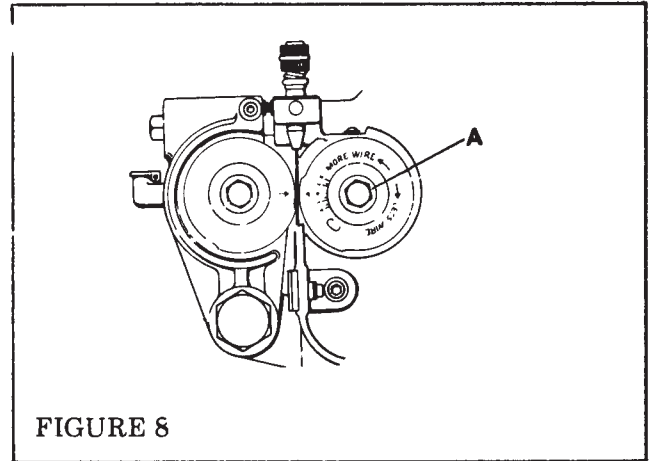


FIGURE 8

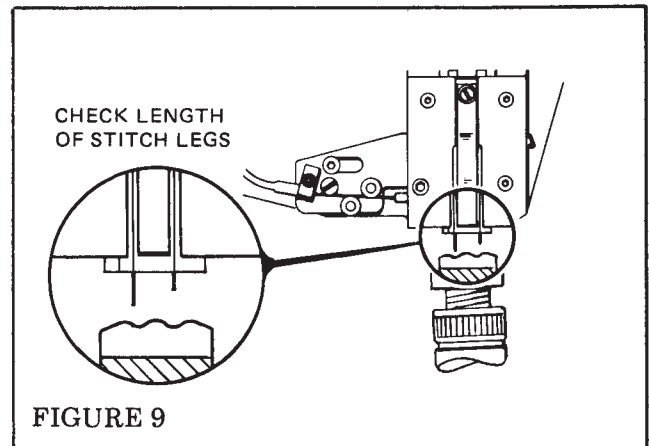


FIGURE 9

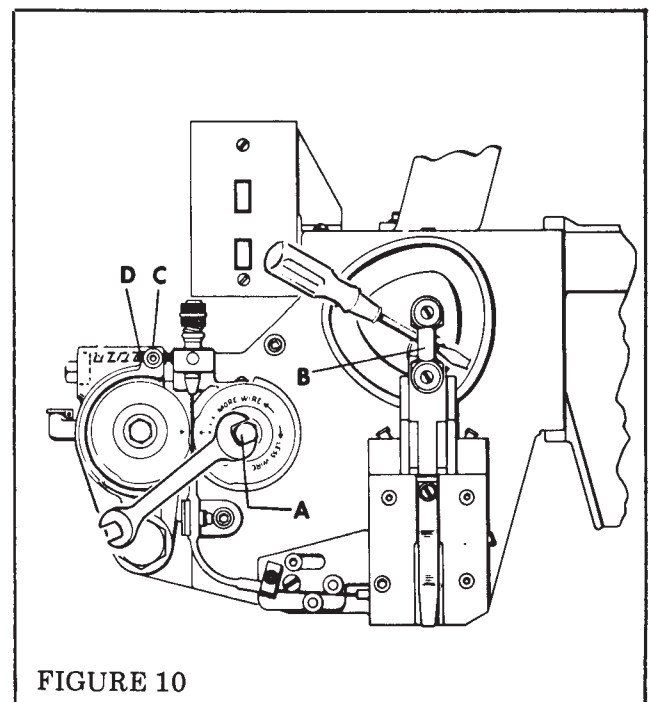


FIGURE 10

MODEL HF SILVERSTITCHER

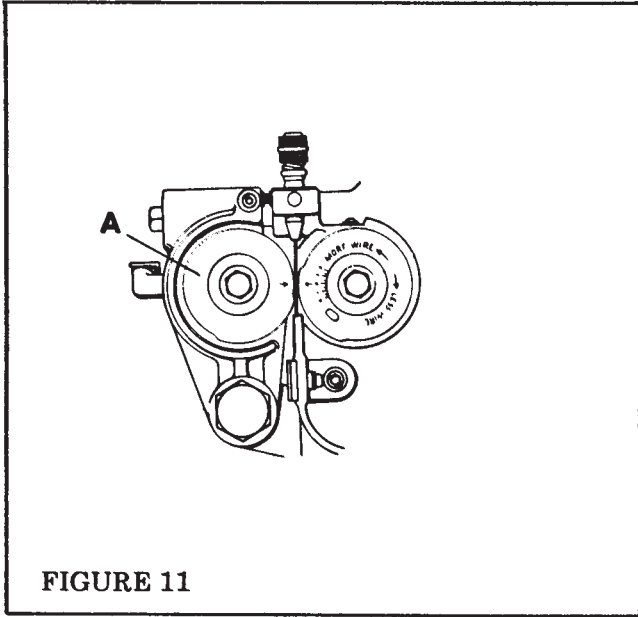


FIGURE 11

FEED WHEEL TIMING

The left hand feed wheel (Index A, Figure 11) controls the time at which the wire is fed into the head of the stitcher. If the timing is incorrect, the wire feeds before the cutter blade has cleared the exit of the slot in the cutter tube. This causes the wire to buckle.

Stitchers equipped with 1/4" or smaller size cutter blades are correctly timed when the left hand feed wheel arrow is approximately horizontal when the stitcher is in neutral. The gears are also marked (Index A, Figure 12) so that when meshed with these marks opposite each other, the machine is timed properly for the size cutter blade with which the machine was originally equipped. When changing from 1/4" or smaller size cutter blades to 5/16" or larger size blades, the wire will usually buckle between the feed wheels and the feed tube unless the machine is retimed.

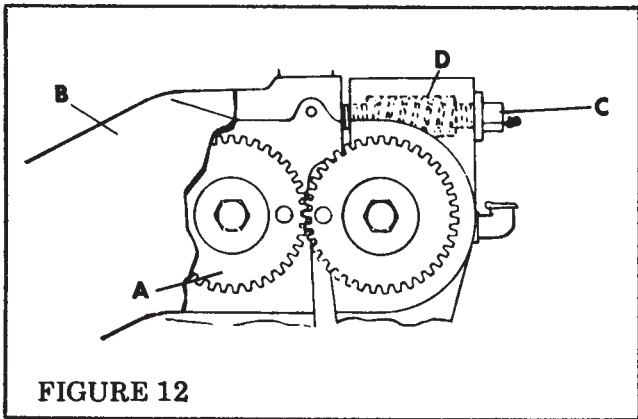


FIGURE 12

RETIME THE MACHINE:

- (1) Remove the gear guard (Index B, Figure 12).
- (2) Remove the compression spring stud (Index C, Figure 12) and compression spring (Index D, Figure 12), loosening the head plate hinge. Do not let hinge plate fall away.
- (3) Move hinge plate slightly so gears become disengaged and then turn free gear up one notch.
- (4) Press hinge plate to engage gears.
- (5) Insert compression spring and stud.
- (6) Tighten.
- (7) Re-adjust length of the right leg. (Also see "FEED WHEELS", Page 14).

NOTE

When changing to a 3/8" cutter blade, it is often necessary to move the gear two notches. In this case, the above procedure must be repeated. The left feed wheel arrow must never drop below the horizontal when stitcher is in neutral.

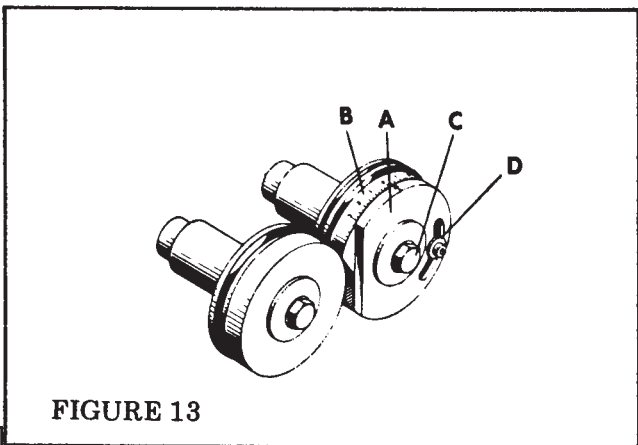


FIGURE 13

MACHINES EQUIPPED FOR ARCUATE WIRE STITCHING

The relationship of the flat on the cam plate (Index A, Figure 13) with the flat on the right hand feed wheel (Index B, Figure 13) determines the amount of wire which is fed into the machine.

The right hand feed wheel controls the length of the right stitch leg. Move cam plate clockwise to obtain less wire draw-counterclockwise to obtain more wire.

NOTE

The length of the left stitch leg is determined by the thickness of the cutter blade.

ADJUST THE CAM PLATE FOR LEG LENGTH:

Turn off the motor and loosen feed wheel screw (Index C, Figure 13). Since turning this screw causes the gears to rotate unless held in place, it is necessary to apply clockwise pressure on a screwdriver inserted in the driver link (Index B, Figure 14). Loosen Allen capscrew (Index D, Figure 13) and turn cam as required. Move the arrow on the cam plate left to increase the right leg; move the arrow right to decrease the right leg. After making cam plate adjustment, tighten Allen capscrew and feed wheel screw while applying counterclockwise pressure on the screwdriver inserted in the driver link. This operation should be repeated until the lengths of stitch legs are equal or there is not more than a 1/64" variation.

CORRECT AMOUNT OF ARC:



The wire should have an arc from .026" to .030". Unless there is a sufficient amount of arc in the wire, the stitches may not penetrate or clinch properly. When the feed wheels have become worn from long use they should be replaced in order to maintain the correct amount of arc.

TO ADJUST FOR AMOUNT OF ARC:

- (1) Loosen set screw, (Index A, Figure 14)
- (2) Turn set screw (Index B, Figure 14) in to decrease and out to increase the amount of arc.
- (3) Lock set screw, (Index A, Figure 14)

FEED WHEEL ALIGNMENT

Improper alignment will induce camber or will prevent the forming of a full arc. The ridge on the left hand feed wheel should mate with the groove in the right hand feed wheel. This can be checked by looking down through the check pawl hole after having removed the check pawl and while holding a piece of white paper under the feed wheels. If the alignment is not correct, it will be necessary to grind off the required amount from the front surface area around the hinge plate pivot hole. (See Index I, Figure 14). Generally, this is required for stitchers already in the field which were not originally made for Arcuate stitching. In these machines the face plate positions the left hand feed wheel too far forward for correct Arcuate alignment.

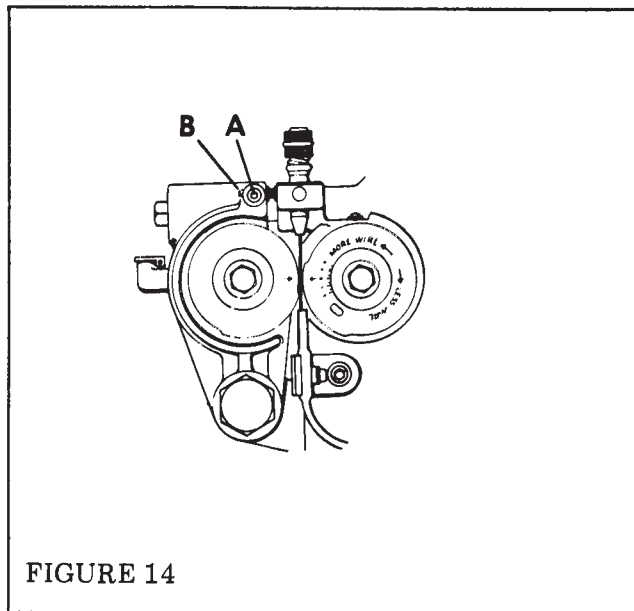


FIGURE 14

FEED WHEEL TIMING:

The right feed wheel (Index B, Figure 15) controls the time at which the wire is fed into the head of the stitcher. If the timing is incorrect, the wire will feed before the cutter blade has cleared the exit of the slot in the cutter tube. This causes the wire to buckle. When the stitcher is in neutral the feed gear (Index A, Figure 16) is properly positioned with the idler gear when the pins in the feed wheel shaft (Index E, Figure 15) are in a vertical position. If a 5/16" or larger size cutter blade is used, reposition the feed gear by one tooth clockwise as you stand in front of the machine.

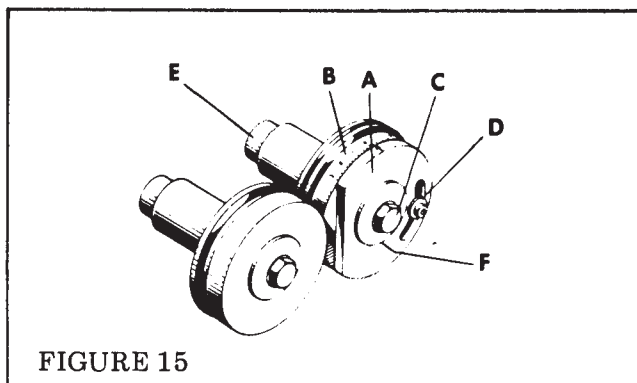
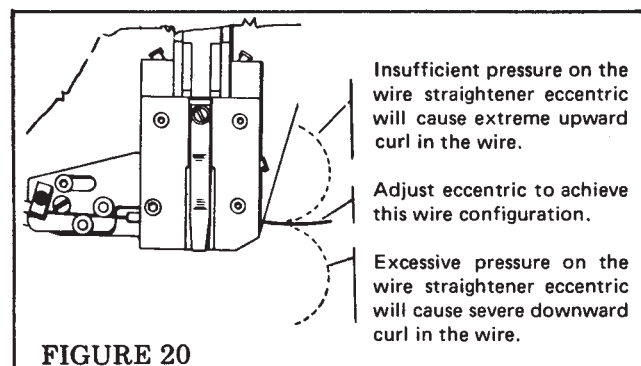
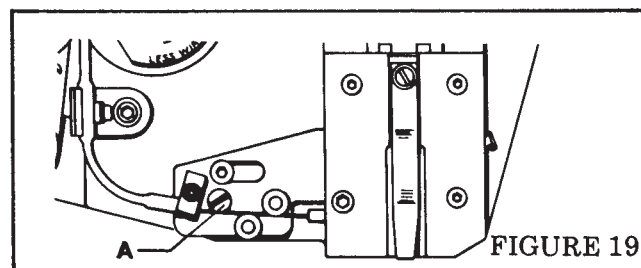
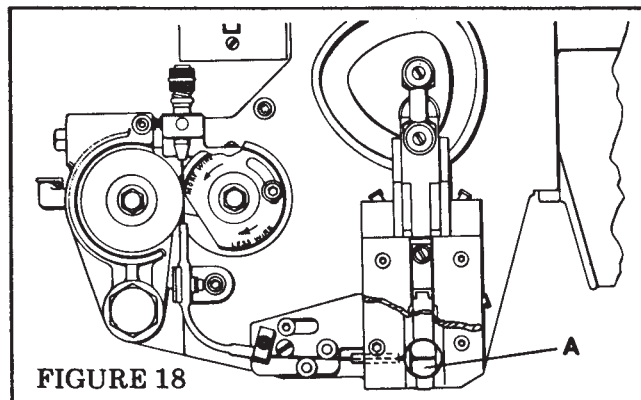
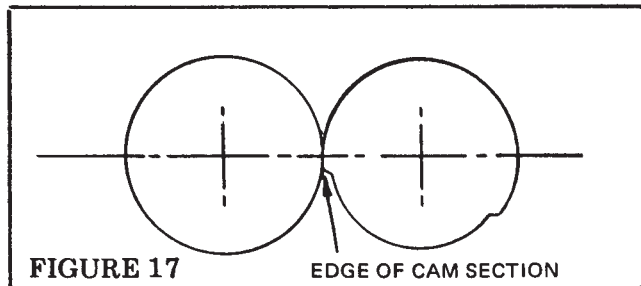
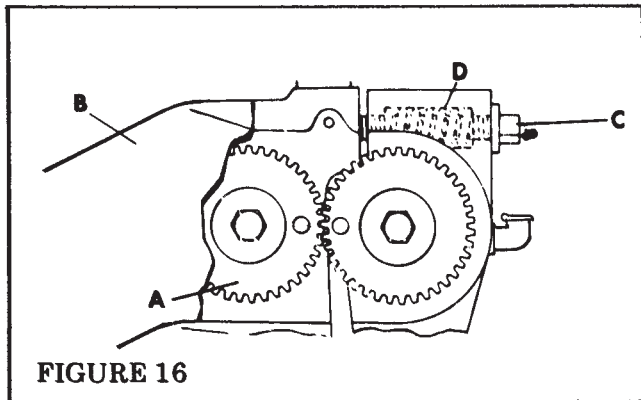


FIGURE 15

MODEL HF SILVERSTITCHER



18

RETUNE THE STITCHER:

- (1) Remove the gear guard (Index B, Figure 16).
- (2) Remove the compression spring stud (Index C, Figure 16) and compression spring (Index D, Figure 16) allowing the head plate hinge to swing down out of place.
- (3) Remove the feed wheel screw and feed wheel (Indexes C and B, Figure 15).
- (4) Push the feed wheel shaft (Index E, Figure 15) back until the feed gear is disengaged from the idler gear.
- (5) Reposition the gears as described in the preceding paragraph.

FOR CORRECT TIMING:

1. Machine is to be in neutral position.
2. The teeth on the gears marked with the symbol "O" are to be mated with each other.
3. Right hand feed wheel is to be positioned so as to have leading edge of cam section just below the horizontal center line of the feed wheels. See Figure 17.

ARCuate WIRE

WIRE STRAIGHTENER

The wire straightener on your Model HF Silverstitcher has been factory set to guide the stitching wire size to be used. Occasional trim adjustment may be necessary for proper tracking of the stitching wire into the cutter tube and through the slot in the anvil (Index A, Figure 18).

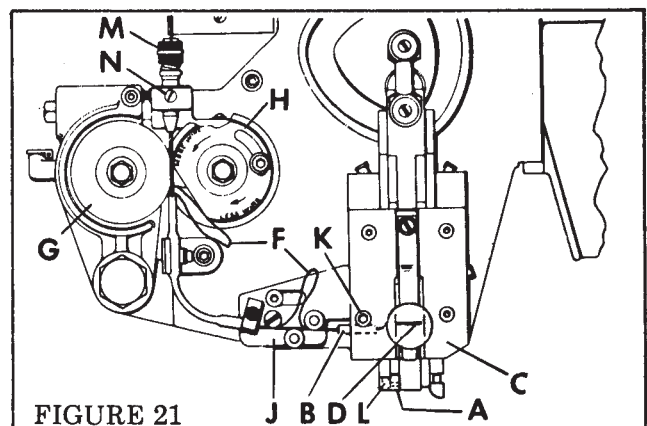
To adjust, turn wire straightener eccentric (Index A, Figure 19). (Also see Figure 20.)

CAUTION

Turn motor off before making any adjustments.

CUTTER BLADE AND CUTTER TUBE

The cutter blade and cutter tube cut the wire prior to the forming of the stitch. To insure a good clean shear of the wire, the cutter blade (Index A, Figure 21) and the cutter tube (Index B, Figure 21) must



be kept sharp and the cutter tube properly inserted in the slide box (Index C, Figure 21). Always check both of these parts since they operate as a unit. Replacing one and leaving the other dull will not remedy the trouble. The blade (Figure 22) is reversible and both cutting edges should be used before replacing. The lower edge of a dull tube will often snap off because the wire does not shear off properly and sometimes becomes wedged between the cutter tube (Figure 23) and the blade. Occasionally a heavy burr on the end of the wire will cause it to stick in the anvil (Index D, Figure 21). This will in turn result in the buckling (F) of the wire between the feed wheels (G and H) and wire straightener (J).

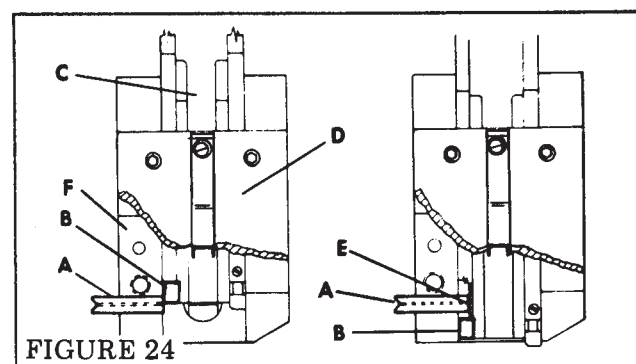
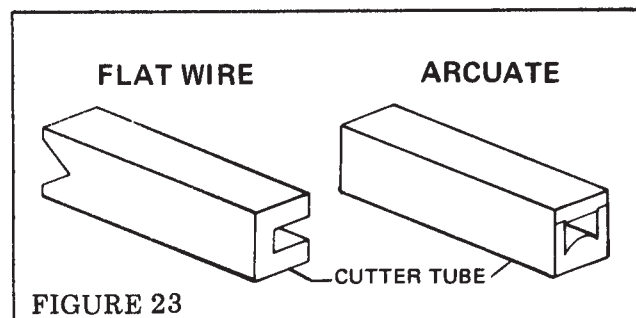
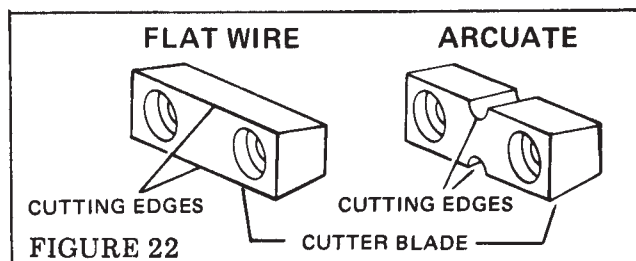
The tube can be removed by loosening the cutter tube clamp screw (K). To remove the cutter blade, step on the foot pedal and rotate the main drive wheel in the direction indicated by the blue arrow until the former and driver unit reaches the lowest point of its stroke. Then remove the cutter blade screws (L). When reassembling, always replace the cutter blade first and return the machine to neutral by completing the revolution of the drive wheel. Then insert the cutter tube (Index A, Figure 24) with the slot toward the rear of the machine and press tightly against cutter blade (Index B, Figure 24) while tightening the cutter tube clamp screw. Always make the first stitch by hand before turning on the power. If the tube is inserted when the machine is not in neutral it will extend beyond the blade (Index E, Figure 24) and cause the tube to break, the cutter blade screws to shear off, or the lower part of the housing below the tube to crack off when the stroke is completed.

For some special stitching applications requiring an unusually short wire draw, a specially hardened left former leg is used as a cutter blade. The left former leg cannot be reversed when it becomes dull (as a cutter blade can) but must be replaced with a new left former leg.

CAUTION

To avoid serious damage:

1. *Adjust cutter tube (Index A, Figure 24) only when stitcher is in neutral position. Stitcher is in neutral position when former and driver assembly (Index C, Figure 24) is at the highest part of its stroke.*
2. *Do not operate stitcher under power when face plate (Index D, Figure 24) is not in place.*
3. *Before operating stitcher under electrical power, make certain all parts of the stitcher are operating freely by turning the drive wheel three or four turns by hand while foot pedal is pressed down.*



The length of the right leg is determined by the setting of the right hand feed wheel. The length of the left leg is determined by the thickness of the cutter blade. The thicker the blade the longer the leg. Increasing or decreasing the cutter blade size by 1/16" increases or decreases the length of the left leg by 1/16". The right leg must then be increased or decreased by the same amount as instructed under FEED WHEELS.

NOTE

If it is necessary to increase the thickness of the cutter blade to more than 5/16", make certain the slide box (Index F, Figure 24) has a milled out section to accept the additional thickness. See page 31 for various sizes of cutter blades available.

MODEL HF SILVERSTITCHER

ANVIL

After a stitch has been driven, a new length of wire is fed into the stitching head and comes to rest with equal lengths on each side of the anvil. This part forms the support over which the wire is bent into a U shape by the former legs (Index A, Figure 25).

Sometimes the corners of the anvil become worn from long use. Worn anvil corners prevent the stitch legs from being bent properly. The legs tend to flare out and to strike the clincher block improperly, see Figure 26. Replace the anvil if it is worn.

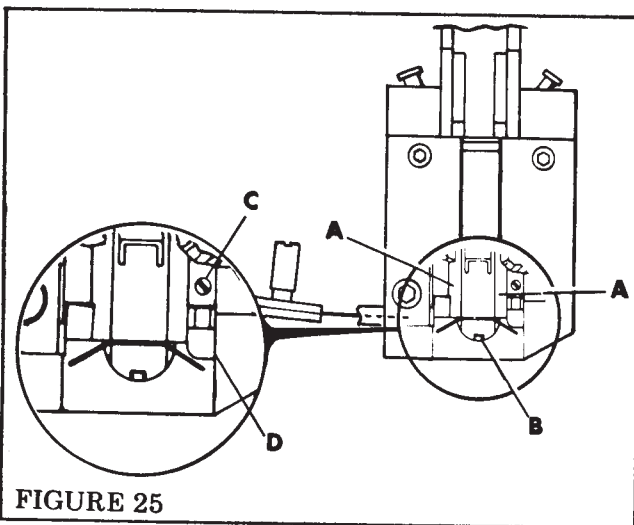


FIGURE 25

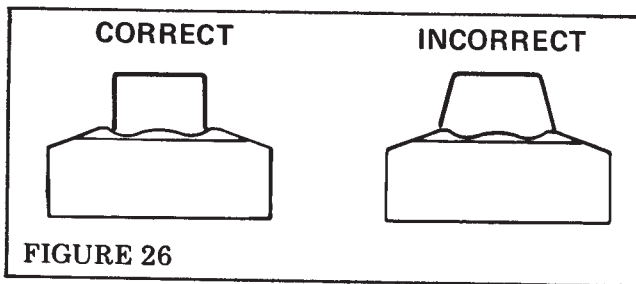


FIGURE 26

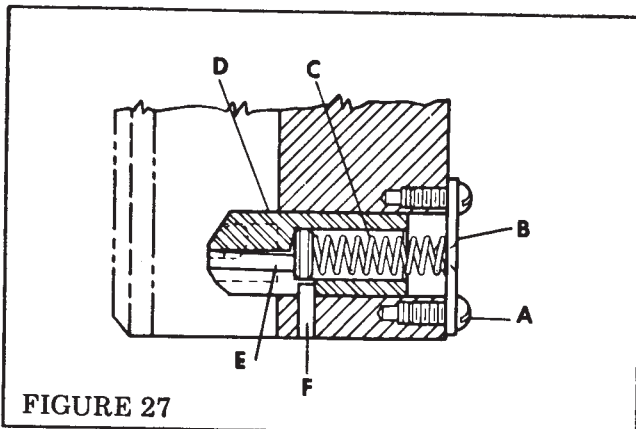


FIGURE 27

The anvil (Index D, Figure 27) is backed by an anvil spring (Index C, Figure 27) which keeps it constantly in position to receive the wire. If this spring breaks and the anvil is not kept in proper position, the wire comes out in a single straight piece.

The anvil can be removed by loosening the two anvil plate screws (Index A, Figure 27) which hold the anvil plate (Index B, Figure 27) in place. The spring is removed by the same procedure. Before installing a new anvil or replacing the old one, clean and oil the hole in the slide box in which the anvil fits. If installing a new part, check to see that it is the proper size for your machine by comparing with your old one. There is only one way to insert the anvil since it is slotted on the bottom to receive the anvil stop pin (Index F, Figure 27). This pin prevents the anvil from rotating or moving too far forward. If the slot at the bottom of the anvil becomes dirty, the anvil may bind. The anvil spring then cannot push the anvil to its forward position where the wire groove in the anvil assists to guide the wire into the former plunger. Buckling of the wire results. Clean the slot at the bottom of the anvil to overcome the binding. After installing, press against the anvil to see that it retracts freely.

Occasionally, a new anvil with sharp corners will cut into the stitches and cause them to crack. Do not try to round off the corners. Return the part to the factory.

Since worn former legs (Index A, Figure 25) can cause similar symptoms, refer to page 23.

FORMER PLUNGER OR WIRE GRIPPER PIN

The end of the wire must be held firmly while it is being cut off by the cutter blade. This function is performed by the Former Plunger (Index D, Figure 25) on those stitchers equipped with Former Plunger or by the Wire Gripper Pin (Index E, Figure 27) on those models having the gripper type anvil. Without the pressure exerted on the wire by the Former Plunger or the Gripper Type Anvil, the wire will spring forward. This causes (1) a short left stitch leg or (2) a long right stitch leg or (3) the wire to fall out of the anvil (Index B) as a straight piece or (4) the wire to slip to one side so that it does not line up with the groove in the former legs.

TEST THE OPERATION OF THE FORMER PLUNGER:

(1) Step on the foot pedal and turn the drive wheel in the direction of the blue arrow until the former and driver assembly is at the lowest point of its stroke. (2) Apply upward pressure with your finger on the former plunger. This should cause the plunger to retract easily into the former housing and spring outward when released.

If the plunger is stuck in the housing, loosen the plunger screw (Index C, Figure 25) and pry the plunger loose. The plunger often sticks because it is dirty or requires oiling. Place a drop of oil on the plunger each time the rest of the machine is lubricated.

If the plunger is bent, it can usually be straightened. If broken, it must be replaced. A weak or broken plunger spring (Index 71, Figure 40) will not exert sufficient pressure against the wire. It must be replaced. A worn plunger blocks the path of the wire as it is being fed. This causes the wire to buckle between the feed wheels and the wire guide. Replace the plunger.

GRIPPER PIN

When the stitcher is not equipped with a former plunger for holding the wire firm while being cut off, the anvil is probably of the gripper style. This style contains a wire gripper pin (Index E, Figure 27) for holding the wire firm when it is being cut. Either type of anvil is removed or installed in the same manner and uses the same anvil spring, but before installing the gripper type anvil, the wire gripper pin must be fully seated in the anvil. Turning the slotted head of the wire gripper pin with a screwdriver will help to seat the pin quickly.

CLINCHER BLOCK

The purpose of the clincher block (Index 7, Figure 42) for Post-type stitchers or (Index 53, Figure 42) for Arm-type stitchers is to turn back the legs of the stitch after they have penetrated the work material. To do this, the legs must strike the block with equal spacing from the outside edges of the grooves (Figure 28).

To test this alignment, drive five or ten stitches into a section of your work. The high spots on either side of the clincher block will leave impressions on the under side of the material being stitched. It is an easy matter then to see if the space between the point each stitch leg penetrates the board and the impression of the clincher block are equal. If one leg is closer to the impression on the material than the other, the clincher block will require adjusting.

To adjust, loosen set screw (Index 8, Figure 42; Index 51 on 42) and move block in the proper direction to center legs. Tighten screw. The clincher block is reversible and can be turned when it becomes worn along one side.

For additional information on adjustment of posts, see page 27.

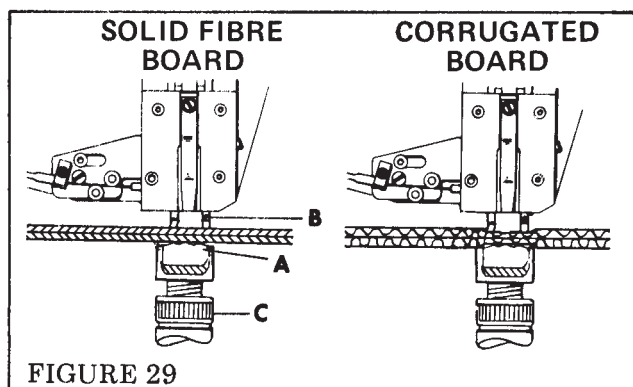
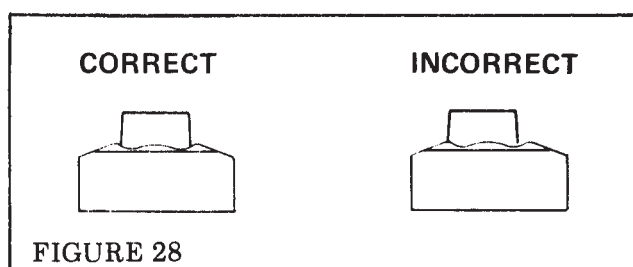
CLINCHER COMPRESSION

Unless the work material is compressed properly between the clincher block (Index A, Figure 29) or (Index 53 Figure 42) and the former and driver unit (Index B, Figure 29), the stitches will not penetrate or clinch properly. Insufficient compression causes the legs of the stitch to buckle or the stitch crown to wrinkle or bow downward. Excessive compression causes the corners of the stitch to fracture and the clincher block to indent the underside of the board excessively. It will also cause damage to many of the working parts.

Never operate the machine without work material under the stitching head since the formed stitch might be drawn up into the head. This causes the wire to buckle on the next stitch.

OBTAIN CORRECT COMPRESSION:

See Figure 29. (1) Lower the clincher block (Index A) as far as possible. (2) Step on the foot pedal and turn the drive wheel in the direction of blue arrow by hand until the former housing (Index B) is at the lowest point of its stroke. (3) Place work material on the clincher block with your left hand. (4) If the material is solid fibre, turn the adjusting nut (Index C on post type stitchers; Index 50, Figure 42 on arm type machines) until the material is held firmly between the clincher block and formers. If the work material is corrugated fibre, turn the adjusting nut (Index C, Figure 29) until the clincher block and formers slightly compress the work material. (5) Turn drive wheel until the driver link (Index B, Figure 14) is in a vertical position and drive wheel turns freely.



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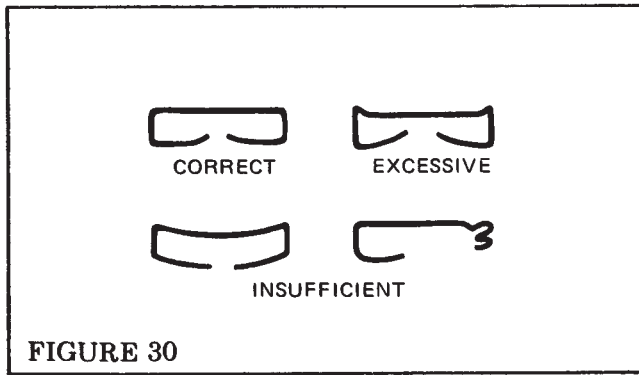


FIGURE 30

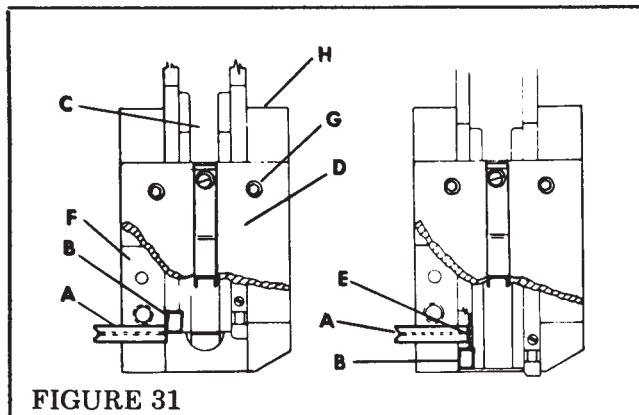


FIGURE 31

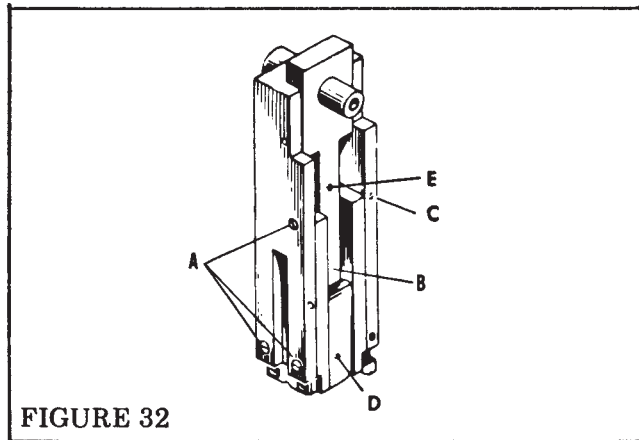


FIGURE 32

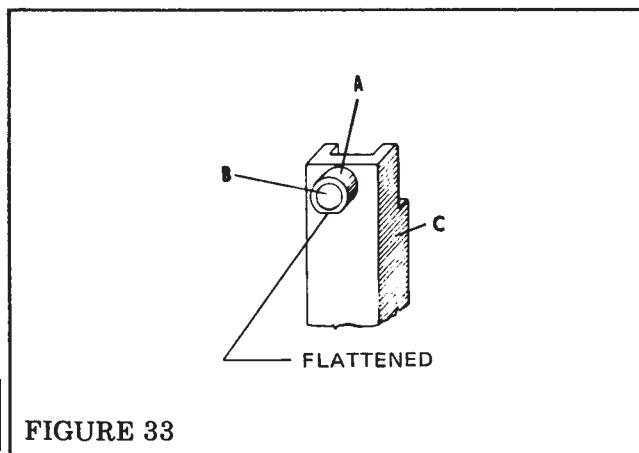


FIGURE 33

To determine if additional adjustment is necessary for proper compression, drive 10 stitches in the work material. Compare the stitches with Figure 30. Increase or decrease compression slightly if necessary.

FORMER AND DRIVER ASSEMBLY

NOTE

This unit (Figure 32) should be removed and cleaned at least every 30 days. At this time, the former screws (Index A) and driver screws (Index B) should be tightened and any burrs in the screw slots should be rubbed down with emery cloth.

REMOVE THE ASSEMBLY:

- (1) Turn main drive wheel until the former and driver assembly is at the highest point of its stroke.
- (2) Remove three face plate screws (Index G, Figure 31) and face plate (Index D, Figure 31).
- (3) Then remove the two screws attaching driver link (Index 96, Figure 40) and remove the driver link.
- (4) Complete assembly can now be pulled from the slide box (Index H, Figure 31).

When replacing this assembly, always loosen the cutter tube clamp screw (Index I, Figure 31) and withdraw the cutter tube (Index A, Figure 31) slightly. See page 18 of this section and Figure 31. After the assembly is in position in the slide, slip the driver link on and fasten the two screws. Then replace the face plate and face plate screws. Press the cutter tube tightly against the cutter blade and tighten the cutter tube clamp screw.

FORMER ROLLER

The former roller (Index A, Figure 33) is mounted on the rear of the former housing (Index C, Figure 33) by means of the roller stud (Index B, Figure 33). It rides in the track of the former cam (Index 99, Figure 40) and is the means by which the former and driver assembly is raised and lowered for each stroke. Excessive compression of the work material or jamming of the machine will cause the roller to flatten (Figure 33). Lack of oil will cause this part to bind on the stud and not rotate properly. More often, the lack of oil will cause the roller to wear on the stud, creating a loose fit.

As a result of this wear, the former and driver assembly rides too low. In addition, the cutter blade will not clear the exit of the cutter tube when the formers are at the highest point of their stroke. This causes wire to buckle between the feed wheels and feed tube.

To check the former roller, remove the former and driver assembly as described on page 22 of this sec-

tion. If the roller is worn, it must be replaced by driving the stud out. The new stud and roller should be driven on and the stud peened over and ground flush with the surrounding surface. It is very important that the stud be driven in straight so that the roller will ride flat in the cam.

Oil roller before replacing the former and driver unit.

FORMER LEGS

The former legs (Index A, Figure 35) perform two functions. They (1) bend the wire over the anvil (Index B, Figure 35) to form a stitch and (2) act as a guide until the stitch is driven into the work material.

When the former legs become worn, the stitch legs are not bent sharply over the anvil and tend to flare outward instead of staying at approximately right angles to the crown. The legs of the stitch hit the clincher block improperly and buckle or fracture the corner of the crown (Figure 34).

If the former legs are worn, they must be replaced. Remove the former and driver assembly (see page 22 of this section). Then remove the former leg screws (Index 83, Figure 40) and (Index A, Figure 32)

When installing former legs, screw on one leg tight to the former housing (Index C, Figure 32) and leave the second leg loose. Then, with driver end loosely attached, insert the driver bar and tighten the other leg and driver end. After all the screws are tightened, the driver bar should fit snugly, but not so tight that you cannot move it up and down in the housing by hand.

Since a worn anvil (Index B, Figure 35) can cause similar symptoms, refer to page 20.

DRIVER END

The driver end (Index D, Figure 32) fits into the recessed section of the lower end of the driver bar (Index E, Figure 32). It drives the stitch into the work material by applying pressure directly over the stitch legs.

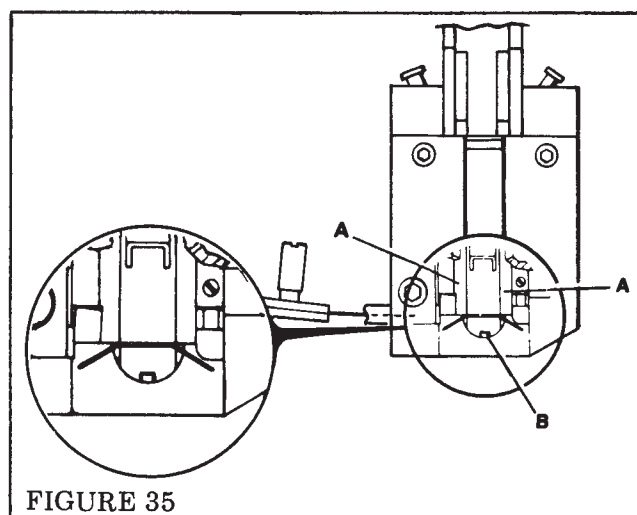
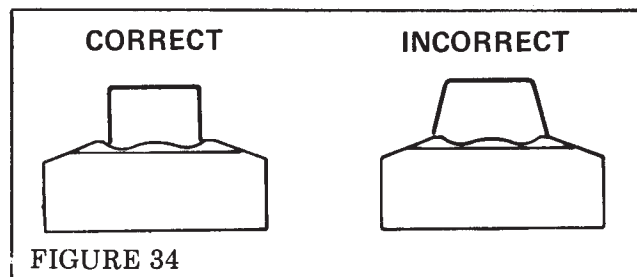
If your machine is equipped for flat wire stitching, the driver end is reversible, providing it is not a special type with radius end. If your machine is equipped for Arcuate Wire Stitching, the driver end is not reversible.

Occasionally, the tip of the driver end is chipped from excessive compression or stitching without work material under the head of the machine. The driver end also wears from normal use. When this happens, the part should be reversed or replaced.

A very loose fit of the driver bar indicates that either this part or the former legs (Index A, Figure 35) are worn and must be replaced.

REVERSE OR REPLACE THE DRIVER END:

(1) Remove the former and driver assembly (page 22 of this section). (2) Remove the driver and screws (Index 88, Figure 40). (3) Reverse or replace the driver end. (4) Slip the driver bar into the former legs as far as possible still leaving the screw heads exposed for tightening. (5) Tighten the driver and screws.



MODEL HF SILVERSTITCHER

CLUTCH & DRIVE ASSEMBLY

CLUTCH PLATE (See Figure 36)

The clutch plate (Index A) holds the clutch pin (Index B) in a retracted position in the clutch hub (Index C). When the foot pedal is pressed, the clutch plate should lower sufficiently to clear the clutch pin, allowing the pin to spring forward to engage the drive pins in the drive wheel.

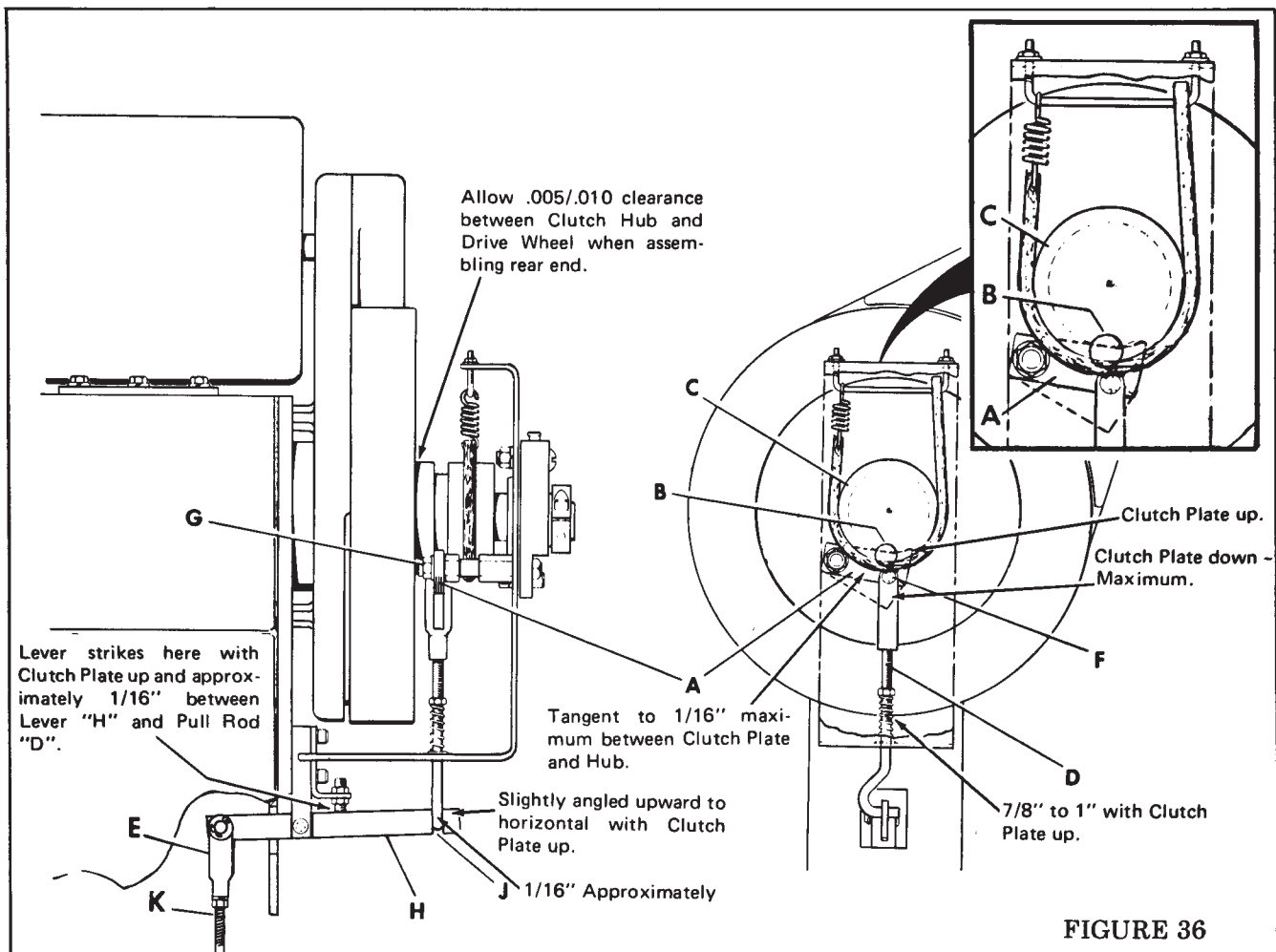
Proper clutch plate adjustment requires the clutch plate to be activated by the pull rod (Index D) after the post is in stitching position. Proper adjustment of clutch activating parts is shown in Figure 36.

Should the clutch plate tip break off, the machine will continue to stitch without pressure on the foot pedal. This uncontrolled operation of the stitcher should alert the operator to turn the power OFF immediately before attempting to trouble-shoot the problem.

Infrequently the machine may fail to stitch because the clutch plate has raised a burr on the clutch pin or hub; a condition that will cause the clutch pin (Index B, Figure 36) to stick in the hub. Remove the burr to resume operations.

CLUTCH PLATE ADJUSTMENT

1. Turn off power. Press the foot pedal and turn the machine over by hand until the clutch pin "B" clears (springs forward) the clutch plate "A".
2. Release the foot pedal. The clutch plate should ride up into the clutch hub groove and bottom out. If the clutch plate does not bottom out in the groove, adjust by turning pull rod "D" further out of the clevis until it does bottom out.
3. Press the foot pedal until it strikes the floor or frame. The clutch plate should now be lowered sufficiently to clear the clutch pin when the machine is running. The maximum lowered position being when there is a 1/16" gap between the clutch plate and the clutch hub (see Figure 36). If adjustment is required, turn lift rod "K" further out of clevis "E" to increase clutch plate travel and turn the lift rod further into the clevis to decrease clutch plate travel.
4. Secure adjustments.



CLUTCH PIN

Power from the drive wheel (Index 15, Figure 41) is delivered to the drive shaft (Index 36, Figure 40) through the engagement of the clutch pin (Index 50, Figure 41) with the drive wheel pins (Index 21, Figure 41).

The clutch pin gradually wears with use and eventually causes a clicking noise. The machine will not stitch when the pin becomes badly worn and does not engage with the drive wheel pin. The same condition occurs when a broken clutch pin spring (Index 51, Figure 41) cannot push the clutch pin out of the clutch hub or when the clutch plate (Index 36, Figure 41) raises a burr on the pin and causes it to stick in the hub.

Occasionally, the machine will continue to stitch because the clutch pin breaks and becomes wedged between the main drive wheel pin and the clutch hub.

REPLACE CLUTCH PIN OR SPRING AS FOLLOWS:

1. Remove collar, Index 34, Figure 41.
2. Pull down on actuator rod and turn 90 degrees to free its hooked end from the actuating lever.
3. With fingers grasping clutch and brake assembly, and with thumbs against drive shaft end, pull entire clutch and brake assembly free from the drive shaft.
4. Clutch hub along with its pin and spring are now easily accessible.
5. Service or replace clutch parts and assemble in reverse order.

NOTE

The driving end of the clutch pin is squared off so that it will engage the drive wheel pins either in a forward or a reverse direction. This feature will enable the operator to back off the stitching mechanism from any jam that may occur by turning the drive wheel by hand in a reverse direction while the clutch pin is engaged.

DRIVE PINS

Each drive wheel contains two drive pins (Index 21, Figure 41). The clutch pin (Index 50, Figure 41) engages these pins causing the drive shaft to rotate. The drive pins wear with use and must be replaced. However, the original pins can be given a quarter turn and used a second time (Figure 37).

REPLACE OR TURN THE DRIVE PINS:

1. Remove drive wheel employing steps listed under CLUTCH PIN.
2. Remove drive pin set screws (Index 19 & 20, Figure 41) from the drive wheel. Insert a drift pin into the hole and tap out the drive pins. Turn each drive pin to gain a new working surface or insert new drive pins. Make sure that their top surfaces are flush with the drive wheel hub. Insert set screws. Reassemble drive wheel and clutch and brake assembly.

DRIVE WHEEL

While the motor is running, the drive wheel (Index 15, Figure 41) rotates constantly on the drive shaft (Index 36, Figure 40). When the foot pedal is depressed, the clutch pin (Index 50, Figure 41) engages the drive pins (Index 21) and causes the shaft to rotate. If the drive wheel is not oiled sufficiently, it will wear rapidly. Excessive tension on the V-belt will also cause wear on this part. Lack of lubrication may cause the drive wheel to freeze on the shaft and the machine will stitch without pressure on the foot pedal. A frozen drive wheel will necessitate the removal of the shaft and all attaching parts so that the drive wheel may be pounded from the shaft.

V-BELT

The V-belt (Index 13, Figure 41) transmits power from the motor pulley to the main drive wheel. It must be properly adjusted and free from distortion or it will wear out rapidly.

If the V-belt is too loose, the stitcher will run slower than intended; if too tight, it will cause excessive strain and wear of the motor and drive wheel bearing.

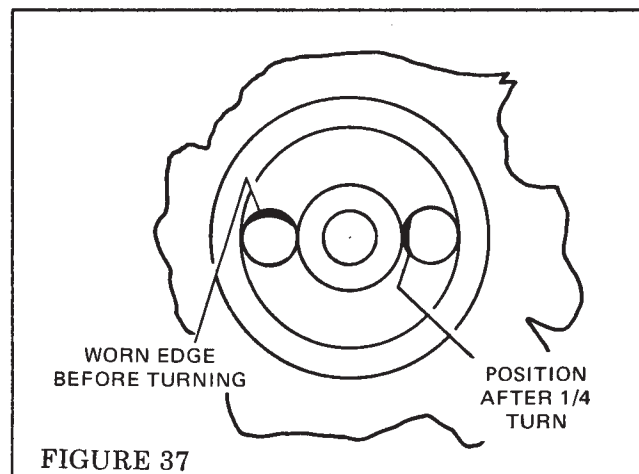


FIGURE 37

MODEL HF SILVERSTITCHER

A properly adjusted V-belt fits snugly in the grooves of the motor pulley and of the drive wheel. Alignment between the pulley and drive wheel groove must be accurate for straight line tracking of the belt.

To adjust for proper alignment, loosen the motor pulley set screw (Index 14, Figure 41) and slide the pulley on its shaft until it aligns with the drive wheel pulley groove. Tighten set screw.

To adjust V-belt tension, loosen motor mounting screws (Index 3, Figure 41) and slide motor horizontally to achieve tension desired. Before tightening motor mount screws, be sure motor has not assumed a cocked position with relation to the attitude of the drive wheel. Upon accurate motor alignment, tighten motor mounting screws.

IMPORTANT

Make sure there is no oil on the V-belt or in the pulley grooves.

BRAKE BRACKET ADJUSTMENT

The HF Silverstitcher employs a constant pressure brake belt to assure that the stitching cycle consistently stops in neutral position. Neutral is indicated when the drive wheel turns freely on the shaft.

To tighten brake, first loosen both wing nuts (Index 27, Figure 41). Then lower the hex nuts (Index 28, 41) approximately one-sixteenth of an inch and re-tighten the wing nuts.

To loosen the brake, loosen both wing nuts to the desired brake tension. Then turn the hex nuts up to the bracket and re-tighten the wing nuts.

If oil has been permitted to saturate the brake belt, erratic stopping conditions may occur. When this happens, replace brake belt and clean oil film from the clutch hub before reassembling. Do not attempt to overcome this condition by adding tension to the brake bracket, or parts failure may occur.

POST Figure 38

The function of the post, Figure 38, is to move the clincher block into stitching position and to provide a ridged support for the clincher block. Any excess movement or travel in any direction will cause the clincher block to be improperly aligned with the stitch legs. For this reason, the stitcher should never be moved by pulling or pushing on the post.

SIDE TO SIDE ADJUSTMENT

If it is impossible to align the clincher block with the stitch legs by adjusting at top, it is likely that the post is loose or misadjusted. Make sure first that post is firmly held in the base clamp by tightening the clamp screw (Index A, Figure 38).

Side to side misadjustment or looseness may be corrected by adjusting nuts "B" one on either side. Loosen one nut and tighten the other to attain proper lateral attitude. After adjustment is met, tighten both nuts slightly to stabilize the setting. Do not over tighten or the post will bind. If binding is evident, loosen each side nut until the post moves freely.

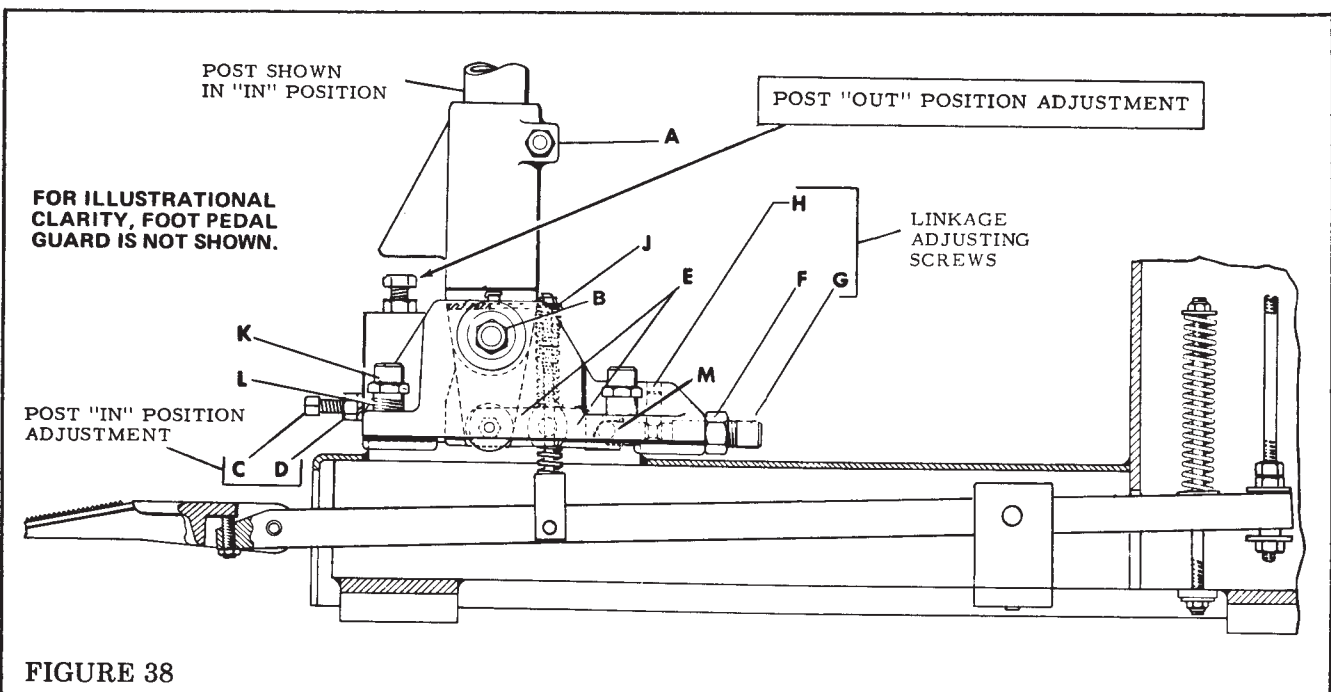


FIGURE 38

POST "IN" POSITION ADJUSTMENT

The post "in" position must be achieved so that the clincher is aligned under the head properly with minimum post bounce or vibration. This adjustment is made as follows:

1. With the foot pedal depressed loosen nut "D" and adjust screw "C" so that the clincher is properly located. Tighten nut "D".
2. Loosen set screw "H" and nut "F".
3. With the foot pedal depressed, turn screw "G" out until the link "E" and pin contact each other at point "M". Turn screw "G" out one more revolution.
4. With the foot pedal still depressed turn screw "G" in until it bottoms out. Then tighten 1/8 more turn and secure set screw "H". Release the foot pedal. Tighten nut "F".

If the post vibrates excessively when being brought into position, repeat steps 2 thru 4 above but adjust screw "G" in slightly more than before.

If the post bounces excessively when being brought into position, repeat step 4 above but adjust screw "G" out slightly more than before.

POST SUPPORT REMOVAL AND ADJUSTMENT

Replacement of specific post actuating parts or linkages may require that the entire post support assembly be separated from the base frame. Remove the post support assembly as follows:

1. Remove nut, spring, and flat washer, and sleeve at "J".
2. Remove four capscrews "K".
3. Lift entire post and post support assembly from the base frame.

During disassembly of the post support from the base frame, the adjusting feet "L" may become disturbed, or of necessity, be removed altogether. These adjusting feet control the attitude of the entire post assembly and, hence, the relation of the clincher block to the former and driver assembly. Slight adjustment or movement of the adjusting feet is magnified greatly at the top of the post and, therefore, precise adjustment is imperative.

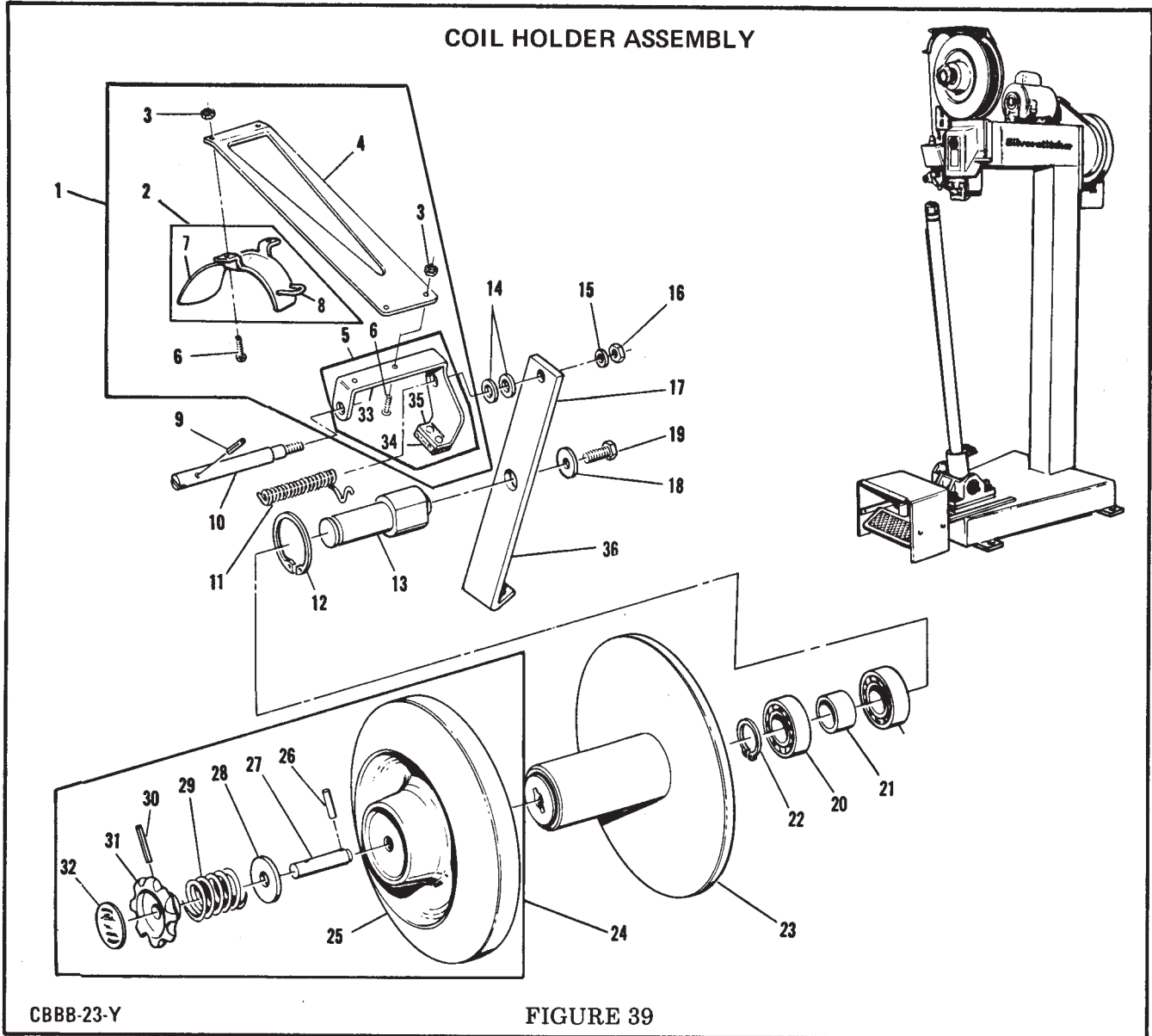
Before replacing the post support assembly, make sure each of the adjusting feet protrude from the bottom of the support by 1/16 inch. Place post support on the base frame and insert, but do not tighten the four holding capscrews. Push post in toward the head assembly and check visual alignment. Turn adjusting feet, if needed, to obtain correct attitude of the post.

Replace elastic stop nut, spring and flat washer and sleeve at "J". Tighten four capscrews "K".

MODEL HF SILVERSTITCHER

NOTES

PARTS LIST



Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
1	B-5603-A	Wire Guide Assembly Complete	1	19	CB-35-A	Screw	1
2	C-7433-A	Wire Guide Assembly	1	20	D-26889-F	Bearing	2
3	D-27398-F	5-40 N.C. Elastic Stop Nut	4	21	D-27394-F	Bearing Spacer	1
4	C-7432-F	Wire Guide Spring	1	22	D-26892-F	Retaining Ring	1
5	C-20528-A	Brake Bracket & Lining Assembly	1	23	CBB-24-A	Main Hub & Reel Plate Reel Assembly	1
6	D-27396-F	Round Hd. Machine Screw	4	24	CBBB-1787	Cover Assembly - Complete	1
7	C-7433-F	Guide	1	25	CBB-1787	Cover Assembly	1
8	CB-38	Staple	1	26	CB-1784	Drive-Lok Pin	1
9	D-25524-F	Roll Pin	1	27	CB1785	Stud	1
10	CB-2072	Brake Bracket Shaft	1	28	CB-1896	Washer	1
11	D-26894-F	Torsion Spring	1	29	D-24821-F	Cam Lock Spring	1
12	D-26893-F	Retaining Ring	1	30	D-25931-F	Roll Pin	1
13	CB-2071	Hub Shaft	1	31	D-24826-F	Knob	1
14	CB-2125	Washer	3	32	CB-1870	Decal	1
15	CB-371-B	Lockwasher	1	33	C-7507-F	Brake Bracket	1
16	CB-102-A	Nut	1	34	D-26886-F	Brake Lining	1
17	CB-8-L	Bracket	1	35	D-26887-F	Rivet	2
18	CB-175	Washer	1	36	CB-8-L	Bracket	1

MODEL HF SILVERSTITCHER

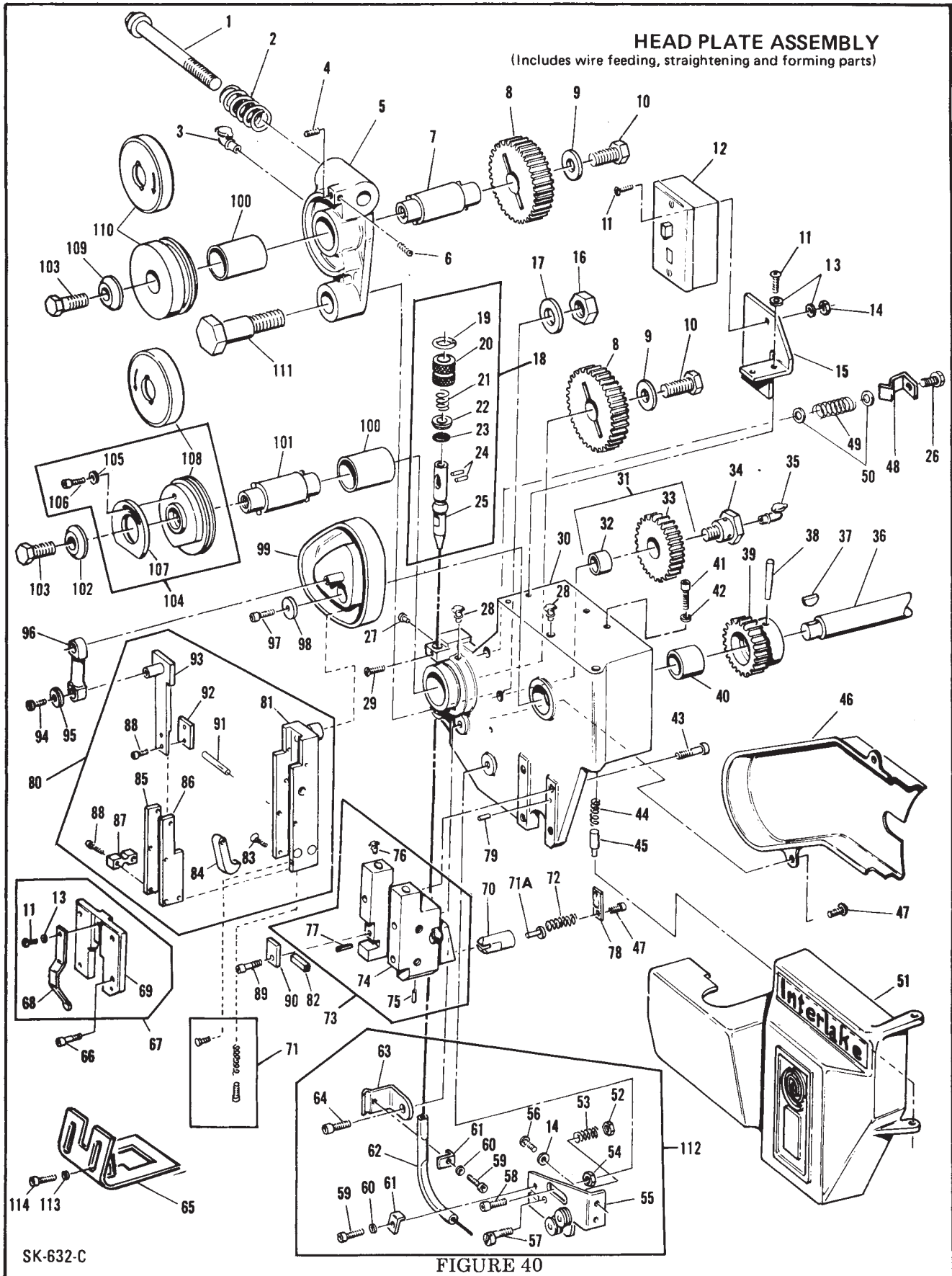
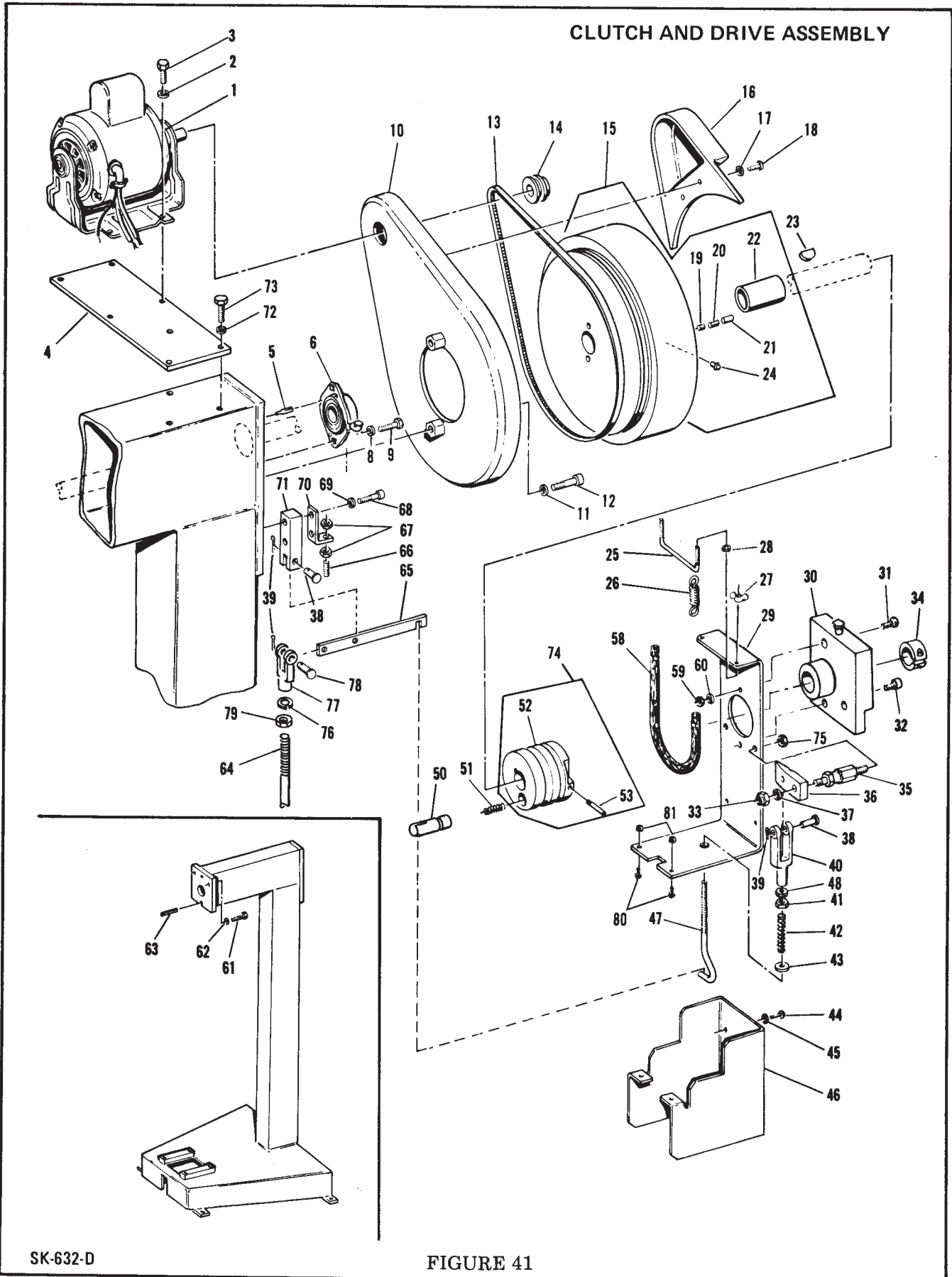


FIGURE 40

Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
1	CB-580	Compression Spring Stud	1	71	CB-98-A	Former Plunger	1
2	CB-526	Compression Spring (Flat Wire)	1		CB-95	Former Plunger Spring	1
	CB-526-A	Compression Spring (Arcuate)	1		CB-96	Former Plunger Screw (5/16" crown or under)	1
3	CB-45-H	Oil Cup	1				
4	CB-141	Hinge Adjusting Lock Screw	1	71A	CB-1101	Wire Gripper Pin (3/8" crown or over)	1
5	CB-47-A-1	Head Plate Hinge	1				
6	CB-596	Hinge Adjusting Screw	1	72	CB-114	Anvil Spring	1
7	CBB-29	Feed Wheel Shaft - Left	1	73	CBB-115	Slide Box Assembly	1
	CBB-29-A	Feed Wheel Shaft - Left - Arcuate	1	74	CB-115	Slide Box	1
8	CB-28	Feed Wheel Gear	2	75	CB-92	Anvil Stop Pin	1
9	CB-329	Gear Washer	2	76	CB-45	Oil Cup	3
10	CB-35-A	Capscrew	2	77	CB-284	Cutter Tube Clamp Pin	1
11	CB-126	10-32 x 3/8" Rd. Hd. Machine Screw	5	78	CB-111	Anvil Plate	1
12	CB-285-C2	Manual Starting Switch	1	79	CB-118	Dowel Pin	2
13	CB-988	Lockwasher	5	80	CBBB-83-J8	Former & Driver Assembly 7/16" Crown, .103 x .020 Arcuate Wire	1
14	CB-278	Nut	2		CBBB-83-	Former & Driver Assembly 7/16" Crown, .103 x .020 Flat Wire	1
15	CB-2069-F	Switch Bracket	1				
16	CB-735	Hinge Stud Nut	1	81	CBB-83	Former Housing & Stud Assembly	1
17	CB-734	Lockwasher	1	82	CB-52	Cutter Tube	1
18	CBB-340	Check Pawl Assembly	1		CBB-52W	Cutter Tube - Arcuate	1
19	CB-517	Wire Check Pin Retainer	1	83	CB-55	Former Leg & Screw	6
20	CB-515	Wire Check Sleeve	1	84	CB-93	Supporter	1
21	CB-337	Check Pawl Spring	1	85	CB-58	Left Former Leg	1
22	CB-335	Spring Retaining Washer	1		CB-58-G6	Left Former Leg - Arcuate (.103 x .020 Wire)	1
23	CB-340	Lock Ring	1				
24	CB-516	Wire Check Pin	2	86	CB-60	Right Former Leg	1
25	CB-513	Check Pawl Body (for .103 Wire)	1		CB-60-G6	Right Former Leg - Arcuate (.103 x .020 Wire)	1
26	CB-2249	Screw	1				
27	CB-681	Stop Pin	1	87	CB-57	Cutter Blade (1/8" Thick)	1
28	CB-45	Oil Cup	2		CB-57-B	Cutter Blade (3/16" Thick)	1
29	CK-29	Lock Screw	1		CB-57-D	Cutter Blade (1/4" Thick)	1
30	CB-47-H2	Head Plate	1		CB-57-E	Cutter Blade (5/16" Thick)	1
31	CBB-26-H	Idler Gear and Bushing	1		CB-57-G	Cutter Blade (3/8" Thick)	1
32	CB-712-1	Bushing	1		CB-57-M	Cutter Blade (1/4" Thick, Angle Cut-off)	1
33	CB-26-H	Idler Gear	1		CB-57-P	Cutter Blade (5/16" Thick, Angle Cut-off)	1
34	CB-61-B	Idler Gear Stud (L.H. Thread)	1		CB-57-A3	Arcuate Cutter Blade (1/8" Thick)	1
35	CB-45-E	Oil Cup	1		CB-57-C3	Arcuate Cutter Blade (3/16" Thick)	1
36	CB-107-L4	Drive Shaft (16" Stitcher)	1		CB-57-E3	Arcuate Cutter Blade (1/4" Thick)	1
	CB-107-M4	Drive Shaft (25" Stitcher)	1		CB-57-G3	Arcuate Cutter Blade (5/16" Thick)	1
37	CB-75	Woodruff Key	1		CB-57-I3	Arcuate Cutter Blade (3/8" Thick)	1
38	CB-106	Drive Gear Taper Pin	1	88	CB-56	Screw	4
39	CB-104	Drive Gear	1	89	CB-53	Cutter Tube Clamp Screw	1
40	CB-105	Head Plate Bushing	1	90	CB-54	Cutter Tube Clamp	1
41	CB-51	1/4-20 x 3/4" Soc. Hd. Capscrew	2	91	CB-91	Supporter Stud	1
42	CB-371-A	1/4" Lockwasher	2	92	CB-117-A	Driver End	1
43	CB-110-A	Soc. Head Screw	3		CB-117-M6	Driver End - Arcuate (.103 x .020 Wire)	1
44	CB-128	Spring	2				
45	CB-2062	Hinge Pin	2	93	CBB-82-A	Drive Bar & Stud Assembly	1
46	CB-27	Gear Guard	1	94	CB-79	Screw	2
47	CB-112	Screw	4	95	CB-80	Washer	2
48	CB-2247	Latch	1	96	CB-81	Driver Link	1
49	CB-364	Spring	1	97	CB-77	Screw	1
50	CB-2125	Washer	2	98	CB-76	Washer	1
51	CBB-69-L	Cover	1	99	CBB-74	Former Cam & Stud	1
52	CB-860-C	Elastic Stop Nut	1	100	CB-1153-A	Bronze Bearing	2
53	CA-9069	Eccentric Spring	1	101	CBB-37-A	Feed Wheel Shaft - Right	1
54	CB-102	5/16-18 Hex Nut	1		CBB-29-A	Feed Wheel Shaft - Right - Arcuate	1
55	CBB-1293-A	Straightener Bracket & Roller Assembly	1	102	CB-34-C	Feed Wheel Washer	1
56	CB-46	10-32 x 1/2" Rd. Hd. Machine Screw	2		CB-34-D	Feed Wheel Washer - Arcuate	1
57	CB-1299	Wire Straightener Eccentric	1		CB-35-C	Feed Wheel Screw	2
58	CB-110-B	5/16-18 x 1-3/4" Soc. Hd. Screw	1	103	CB-36-F1	Feed Wheel Assembly - Right - Arcuate	1
59	CR-128	8-32 x 1/2" Soc. Hd. Capscrew	2	104	CB-806	Washer - Arcuate	1
60	CB-1262	Washer	2	105	CB-325	Screw - Arcuate	1
61	CB-1296	Wire Tube Clamp	2	106	CB-804	Feed Wheel Cam - Arcuate	1
62	CB-1301-B	Wire Feed Tube	1	107	CB-36-A	Feed Wheel - Right	1
63	CB-1295-A	Bracket	1		CB-36-F1	Feed Wheel - Right - Arcuate	1
64	CB-388	Soc. Head Screw	1	108	CB-34-D	Feed Wheel Washer	1
65	CB-2111-D	Finger Guard	1	109	CB-32-A	Feed Wheel - Left	1
66	CB-51	Face Plate Screw	3		CB-32-F1	Feed Wheel - Left - Arcuate	1
67	CBB-86-D2	Face Plate Assembly	1	110	CB-577-A	Hinge Stud	1
68	CB-89-C	Supporter Spring	1	111	CBBB-	Wire Straightener & Guide Assembly	1
69	CB-86-D2	Face Plate	1		1293-B		
70	CB-116-P3	Anvil - 3/8" Crown	1	112	CB-988-A	#8 Lockwasher	2
	CB-116-L3	Anvil - 7/16" Crown	1	113	CB-401	#8-32 x 3/8" Rd. Hd. Capscrew	2
	CB-116-O3	Anvil - 1/2" Crown	1	114			

MODEL HF SILVERSTITCHER



Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
1	M-3-LA	Electric Motor, 1/3 H.P. - 1725 RPM - 60 cycle - 7.0A - 1 Phase - 115 VAC	1	42	CB-114	Spring	1
2	CB-175	Washer	4	43	CB-718	Washer	1
3	CB-35-A	5/16-18 x 5/8" Hex. Hd. Screw	4	44	CB-287-A	6-32 x 1/4" Rd. Hd. Machine Screw	2
4	CB-13-P	Motor Bracket	1	45	CK-50	6-32 Lockwasher	2
5	CB-2075	Lok Dowel	2	46	CB-2054	Rear Cover	1
6	CBB-2073-B	Flange Cartridge Bearing	1	47	CB-2050	Clutch Plate Pull Rod	1
7	Not Used			48	CB-493	1/4-20 Nut	1
8	CB-371-B	Lockwasher	2	49	Not Used		
9	CB-53	Hex. Hd. Capscrew	2	50	CB-130-A	Clutch Pin	1
10	CB-2020-B	Belt Guard	1	51	CB-128	Spring	1
11	CB-371-B	Lockwasher	2	52	CB-129-H	Clutch Hub	1
12	CB-110-C	Soc. Hd. Screw	2	53	CB-127	Clutch Pin Guide Screw	1
13	CB-1298-B	V-Belt	1	54	Not Used		
14	CB-176-A	Pulley	1	55	Not Used		
15	CBB-20-A2	Drive Wheel Assembly	1	56	Not Used		
16	CB-2021	Motor Pulley Guard	1	57	Not Used		
17	CB-988	Lockwasher	2	58	CB-123-B	Brake Strap	1
18	CB-624	Rd. Hd. Machine Screw	2	59	CB-102	5/16-18 Hex Nut	2
19	CB-377-C	Socket Setscrew	2	60	CB-371-B	Lockwasher	2
20	CB-377-B	Socket Setscrew	2	61	CB-375-A	3/8-16 x 1-1/2" Hex. Hd. Capscrew	3
21	CB-131	Drive Pin	2	62	CB-889	Lockwasher	3
22	CB-693-C	Bushing	1	63	CB-835-L	Roll Pin	2
23	CB-286	Woodruff Key	1	64	CB-2055-D	Lift Rod	1
24	CB-45-A	Oil Cup	1	65	CB-2051-B	Pull Rod Lever	1
25	CB-2059	U-Bolt	1	66	CK-30	Dog Point Setscrew	1
26	D-30473-F	Brake Spring	1	67	CB-411	Hex. Jam Nut	2
27	CB-2174	Wing Nut, #5-40	2	68	CB-629-A	1/4-20 x 1" Soc. Hd. Screw	2
28	CB-2175	Nut, #5-40	2	69	CB-371-A	Lockwasher	2
29	CBB-2053-C	Bracket & Bearing Block Assembly	1	70	CB-2067	Stop Bracket	1
	CB-2053	Bracket (Only)		71	CB-2052	Clevis	1
30	CBB-2162	Bearing Block Assembly	1	72	CB-371-A	Lockwasher	3
31	CB-2172	Upper Screw	1	73	CB-487-A	1/4-20 x 5&8" Hex. Hd. Capscrew	3
32	CB-53	Lower Screw	1	74	CBB-129-Q	Clutch Hub Assembly	1
33	CB-860	5/16-18 Elastic Stop Nut	2	75	CB-102	Nut	1
34	CB-1297	Split Collar	1	76	CB-889	3/8 Lockwasher	1
35	CB-133-A	Clutch Plate Stud	1	77	CB-11	Lift Rod Fork	1
36	CB-134-B	Clutch Plate	1	78	CB-171-B	Pin (With Cotter)	1
37	CT-32-B	Washer	1	79	D-30541-F	3/8-16 NC Nut	2
38	CB-171-A	Pin	2	80	D-27396-F	#5-40 x 3/8" Rd. Hd. Screw	2
39	CB-451	Cotter Pin	2	81	D-27398-F	#5-40 Elastic Stop Nut	2
40	CB-11-A	Fork	1				
41	CB-860-C	Elastic Stop Nut	1				

MODEL HF SILVERSTITCHER

FRAME, PEDAL, ARM AND POST ASSEMBLY

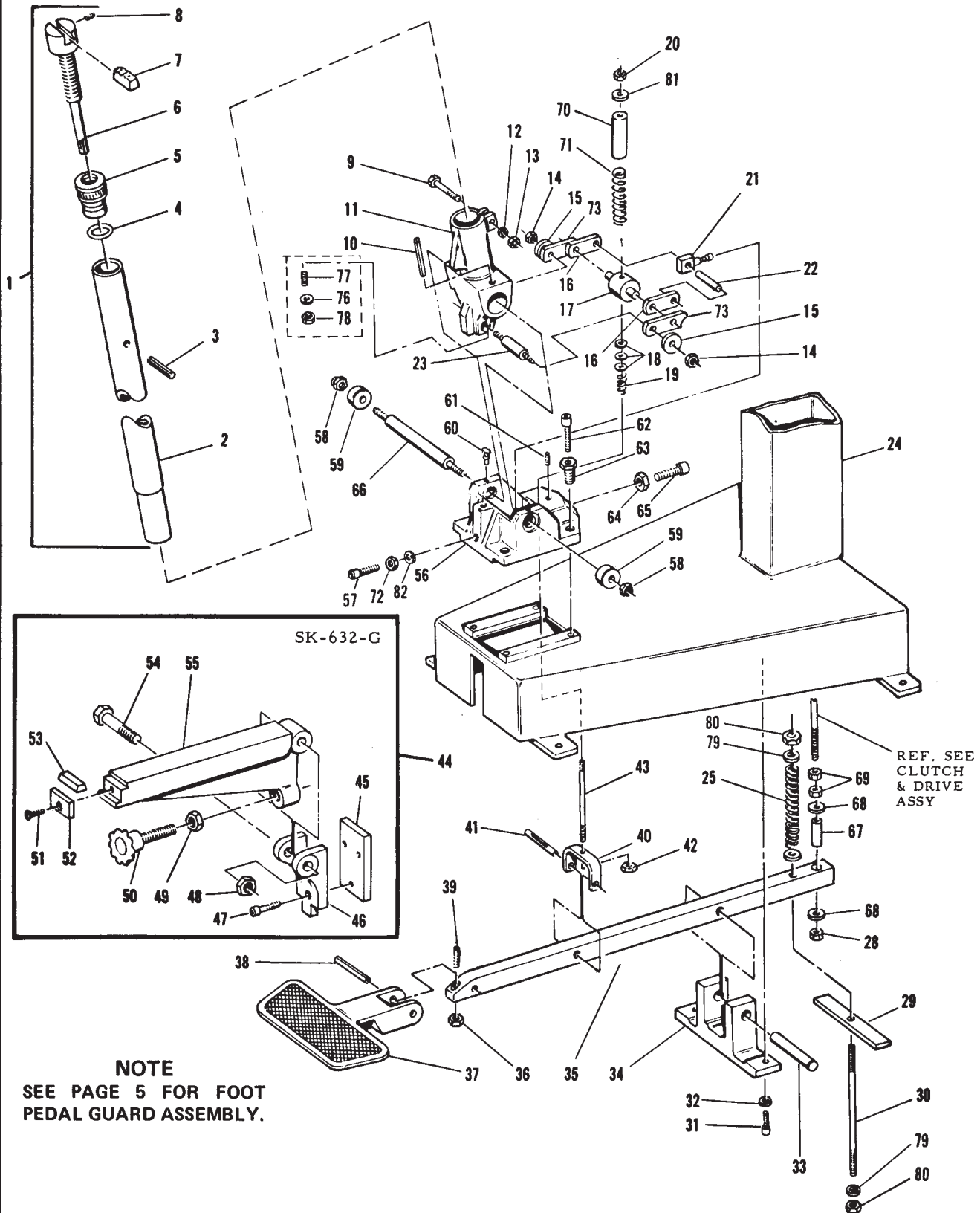
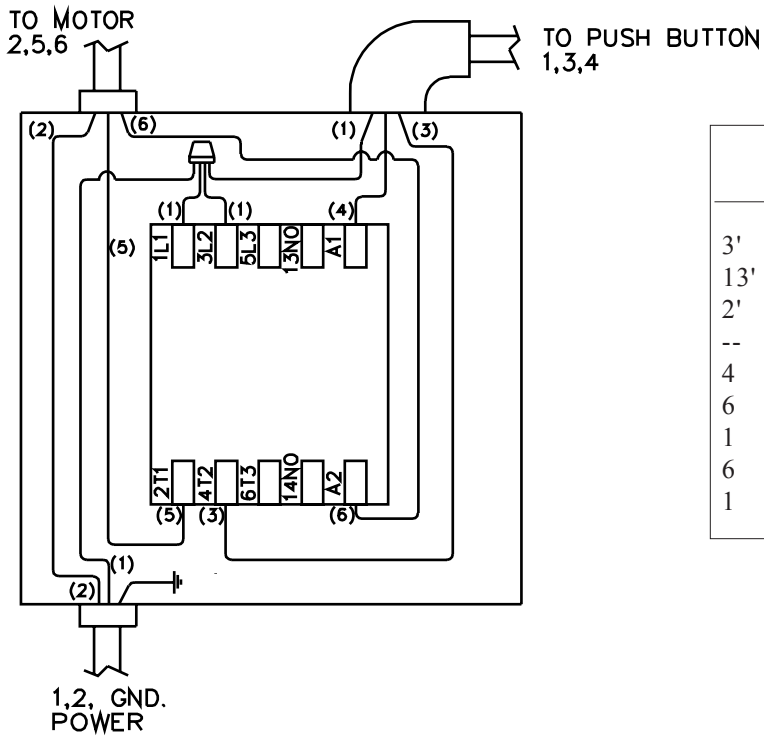
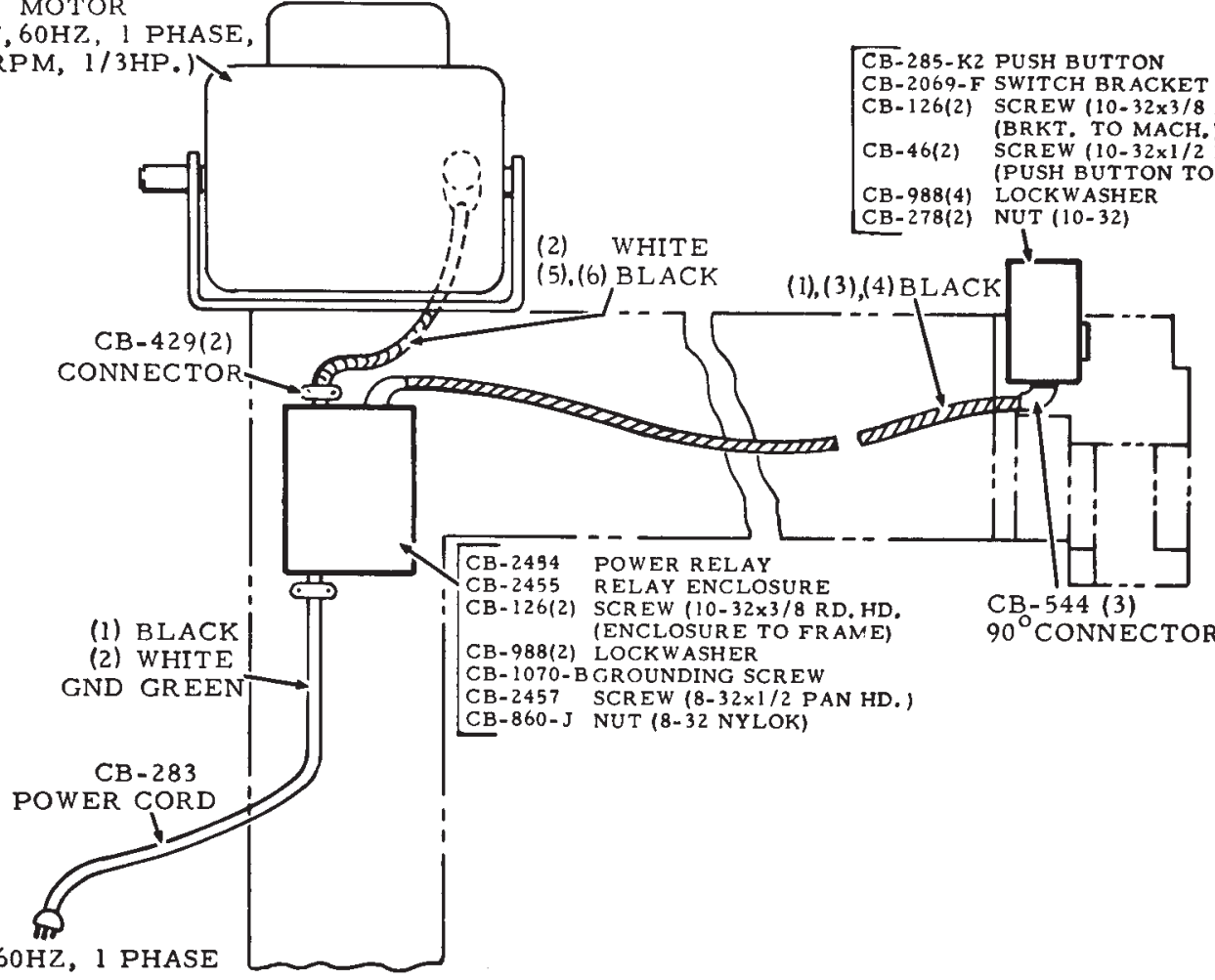


FIGURE 42

Index Number	Part Number	Part Name	Number Required	Index Number	Part Number	Part Name	Number Required
1	CBBB-121-A3	Post Assembly	1	47	CB-192-A	Arm Bracket Screw (16" Stitcher)	3
2	CB-121-A3	Post Tube	1		CB-192-B	Arm Bracket Screw (25" Stitcher)	3
3	CB-835-M	Roll Pin	1	48	CB-195	Pivot Bolt Nut (16" Stitcher)	1
4	CB-2074	"O" Ring	1		CB-195-C	Pivot Bolt Nut (25" Stitcher)	1
5	CB-15-B	Adjusting Nut	1	49	CB-302	Hex. Nut	1
6	CB-14-M	Post Head	1	50	CBB-19-A	Arm Adjusting Nut & Stud	1
7	CB-119	Clincher Block (1/2" Crown)	1	51	CB-189	Clamp Screw (16" Stitcher)	1
	CB-119-Z	Clincher Block (7/16" Crown)	1		CB-189-A	Clamp Screw (25" Stitcher)	1
	CB-119-B	Clincher Block (3/8" Crown)	1	52	CB-188	Clincher Block Clamp (16" Stitcher)	1
8	CB-59	Clincher Block Screw	1		CB-188-B	Clincher Block Clamp (25" Stitcher)	1
9	CB-631	3/8-16 x 2-1/2" Hex. Hd. Capscrew	1	53	CB-187-K7	Clincher Block (16" Stitcher - 7/16" Crown)	1
10	CB-835	Roll Pin	1		CB-187-U7	Clincher Block (25" Stitcher - 7/16" Crown)	1
11	CB-2-F	Post Support	1		CB-187-C	Clincher Block (16" Stitcher - 3/8" Crown)	1
12	CB-889	Lockwasher	1		CB-187-E	Clincher Block (25" Stitcher - 3/8" Crown)	1
13	D-30541-F	3/8-16 N.C. Hex. Jam Nut	1		CB-187-F	Clincher Block (16" Stitcher - 1/2" Crown)	1
14	CB-860	5/16-18 Elastic Stop Nut	2		CB-187-H	Clincher Block (25" Stitcher - 1/2" Crown)	1
15	CB-329	Washer	2	54	CB-191	Pivot Bolt (16" Stitcher)	1
16	CB-2088	Toggle Link	2		CBB-191-A	Pivot Bolt (25" Stitcher)	1
17	CB-2089	Toggle Pin	1	55	CB-17-H8	Straight Arm - 16"	1
18	CB-718	Washer	3		CB-17-B	Straight Arm - 25"	1
19	CB-364	Spring	1	56	CB-158-J	Post Support Bracket	1
20	CB-860-C	Elastic Stop Nut	1	57	CB-377-G	Square Head Setscrew	1
21	CB-2092	Toggle Adjusting Stud	1	58	CB-860-A	1/2-20 NF3 Elastic Stop Nut	2
22	CB-2091	Toggle Pin	1	59	CB-827	Pivot Bearing	2
23	CB-2090	Post Toggle Pin	1	60	CB-45	Oil Cup - Gits No. 360	2
24	CB-1-M5	Frame (16" Stitcher)	1	61	CB-377-B	Socket Setscrew	1
	CB-1-N5	Frame (25" Stitcher)	1	62	CB-689	1/2-13 x 1-3/4" Soc. Hd. Capscrew	4
25	CB-2278	Foot Lever Spring (16" Machine)	1	63	CB-828-A	Adjusting Foot	4
	CB-2197	Foot Lever Spring (25" Machine)	3	64	CB-2094	5/8-18 Hex. Nut	1
26	Not Used			65	CB-2093	5/8-18 x 1-1/2" Soc. Setscrew	1
27	Not Used			66	CB-2056	Pivot Stud	1
28	CB-821	3/8-16 Elastic Stop Nut	1	67	CB-2196	Spacer (16" Machine)	1
29	CB-2098	Bar	1		CB-2196-A	Spacer (25" Machine)	1
30	CB-2279	Rod (16" Stitcher)	1	68	CB-179	Washer	2
	CB-2279-A	Rod (25" Stitcher)	1	69	D-30541-F	Hex. Nut	2
31	CB-487-B	1/4-20 x 1" Hex. Hd. Capscrew	2	70	CB-2277	Spacer	1
32	CB-371-A	1/4" Lockwasher	2	71	CB-962-A	Compression Spring	1
33	CB-2061	Pivot Pin	1	72	CB-145-A	1/2-13 Hex. Nut	1
34	CB-2018-A	Bracket	1	73	CB-2088-A	Link	2
35	CB-4-F	Foot Pedal Lever (16" Machine)	1	74			
	CB-4-G	Foot Pedal Lever (25" Machine)	1	75			
36	CB-102	Nut	1	76	CB-889	3/8 Lockwasher	1
37	CB-16-H	Foot Pedal	1	77	CB-377-F	3/8-16 x 1" Soc. Setscrew - Flat Point	1
38	CB-835-N	Roll Pin	1	78	D-30541-F	3/8-16 Hex. Nut	1
39	CB-890	Setscrew	1	79	CB-175	Washer (16" Stitcher)	2
40	CB-2101	Bracket	1		CB-718	Washer (25" Stitcher)	2
41	CB-2106	Grooved Pin	1	80	CB-860	Nut (16" Stitcher)	2
42	CB-493	1/4 Hex. Nut	1		CB-860-C	Nut (25" Stitcher)	2
43	CB-2100-B	Toggle Pull Rod	1	81	CB-175	Washer	1
44	CBB-17-H8	Straight Arm Assembly (16" Machine)	1	82	CB-734	1/2" Lockwasher	1
	CBB-17-J8	Straight Arm Assembly (25" Machine)	1				
45	CB-2120	Back Plate (16" Stitcher)	1				
	CB-2120-A	Back Plate (25" Stitcher)	1				
46	CB-18	Arm Bracket (16" Stitcher)	1				
	CB-18-A	Arm Bracket (25" Stitcher)	1				

M3L MOTOR
(115V, 60HZ, 1 PHASE,
1725RPM, 1/3HP.)

- CB-285-K2 PUSH BUTTON
- CB-2069-F SWITCH BRACKET
- CB-126(2) SCREW (10-32x3/8 RD. HD.)
(BRKT. TO MACH.)
- CB-46(2) SCREW (10-32x1/2 RD. HD.)
(PUSH BUTTON TO BRKT.)
- CB-988(4) LOCKWASHER
- CB-278(2) NUT (10-32)



MISCELLANEOUS HARDWARE NOT INDICATED		
3'	E14	3/8 FLEXIBLE STEEL CONDUIT
13'	EF1309F	14 GA. STRANDED WIRE-BLACK
2'	EF1311F	14 GA. STRANDED WIRE-WHITE
--	EF1307F	14 GA. STRANDED WIRE-GREEN
4	D37200F	BUSHING
6	CB2302	PRESSURE TERMINAL
1	ERC55	WIRE JOINT
6	CB2302B	DISCONNECT TERMINAL
1	CB2302C	WIRE JOINT

WHEN ORDERING PARTS, PLEASE STATE: QUANTITY REQUIRED, PART NUMBER, PART NAME, WIRE SIZE AND CROWN WIDTH OF YOUR STITCHER.



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