

# DeLuxe STITCHER

COMPANY INC.

solving your wire stitching needs for 125 years...  
**ISP Stitching & Bindery Products**

Head Serial Number : \_\_\_\_\_

Date Purchased : \_\_\_\_\_

Where Installed: \_\_\_\_\_

(make/model of machine)

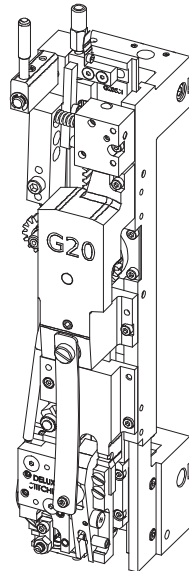
## G20 Stitcher Head

### OPERATION AND MAINTENANCE MANUAL

Wire Sizes: 23-28 Ga. Round and 21x25 and 20x24 Flat

Crown Sizes: 1/2" (13.5 mm) and 5/8" (15.9 mm)

Capacity: 2 sheets to 3/4" (20 mm)



Before using this Stitcher Head, all operators must study this manual and follow the safety warnings and instructions. Keep these instructions with the G20 Stitcher Head for future reference. If you have any questions, contact your local DeLuxe Stitcher Graphic Arts Representative or Distributor.



# ***WARNING!***

## **G20 Stitcher Head**

Machine 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 head without all stitcher machine guards in place. 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.

## ***EYEWEAR***



## ***REQUIRED***

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## **Introduction**

Each Head in the G20 Stitcher Head Series is basically identical with respect to operation. The style variations in the Heads mentioned below, occur in some of the component parts used for adaptation to single stitch or gang stitch machines. As model design changes are made, part numbers also change.

These Heads were designed with a side-feed element to eliminate the need for a Swivel and to increase their reliability. Well suited for all makes and models of Stitcher machines and collators, the G20-style Stitcher Head is user-friendly.

Typical Style Uses:

G20BHD .....	No. 19 and M19 Wire Stitchers
G20MHD .....	No. 27 and M27 Wire Stitchers
G20DHD, G20FHD, G20SHD .....	Automatic Saddle-Stitchers, Gang-Stitchers, Multibinders and Others

Examples of Replacement Heads for OEM Users\*:

AM Graphics .....	G20DSHD, G20SHD
Bielomatic .....	G20DHD
ECH Will .....	G20DHD
Harris 242, 750, 855, 950 .....	G20DSHD, G20SHD
Kugler .....	G20DHD
McCain 1500, 2500XL, 3000XL .....	G20SHD
Sheridan 705 .....	G20SHD



These are just a few examples of the replacement heads available for these OEM's.

## **Part No. Definition**

The part number for each Stitcher Head can be used to define the Stitcher Head itself, in most cases. The Head's model type, mounting style, nominal wire size and crown size can all be determined from the part number.

### **G20SHD241/2L (or SCP)**

**G20** = Model Type

**S** = Release Type or Original Equipment Manufacturer

**HD** = Head

**24** = Wire

**1/2** = Crown Size

**L** = Loop Stitch or Solid Clincher Plate

## **Model Differences**

Generally speaking, the following part numbers indicate which Stitcher Heads can be used as replacement heads for your Stitcher Machine or collating system\*. Refer to Figure 1 for more information.

- Style BHD (back release) - Models G20BHD19211/2, G20BHD20241/2 and G20BHD241/2L. These Heads are for use on Bolt-Mount / Crank-Driven Stitchers. They come with a Long Wire Guide Spring Assembly (G20286A), a Clincher Plate Assembly (7253A), two Rear Mounting Bolts (G20341), two Rear Clamp Pins (G20376) and two Bonnet Stud Nuts (HN1213).
- Style DHD - Models G20DHD20241/2. These Heads come with a Long Wire Guide Spring Assembly (G20286A), a Clincher Plate Assembly (7650A), a Bonnet Clamp Block (G20501) and a Bonnet Clamp Eccentric (G20524).
- Style SHD (side release) - Models G20SHD201/2, G20SHD205/8, G20SHD205/8-SCP, G20SHD241/2, G20SHD241/2-SCP, G20SHD241/2L, G20SHD245/8, G20SHD245/8-SCP, G20SHD20241/2 and G20SHD20245/8. These Heads come with a Short Wire Guide Spring Assembly (G20679A), a Clincher Plate Assembly (7650A) on the standard heads and a Sided Solid Clincher Plate (7650SCP) on those heads with a the Solid Clincher Plate option, a Bonnet Clamp Block (G20501) and a Bonnet Clamp Eccentric (G20524).

**\* These are just examples and should be used as reference only.**

# **Specifications**

## **Weight**

Shipping Weight ..... 22 lbs [10 kg]

## **Physical Dimensions**

Height ..... 17-1/2" [44.4 cm]

Width ..... 2-3/4" [7 cm]

## **Stitching Capacity** ..... Two Sheets to 3/4" [20 mm]

(Stitching capacities are highly dependent on wire type, tensile strength and machine capacity.)

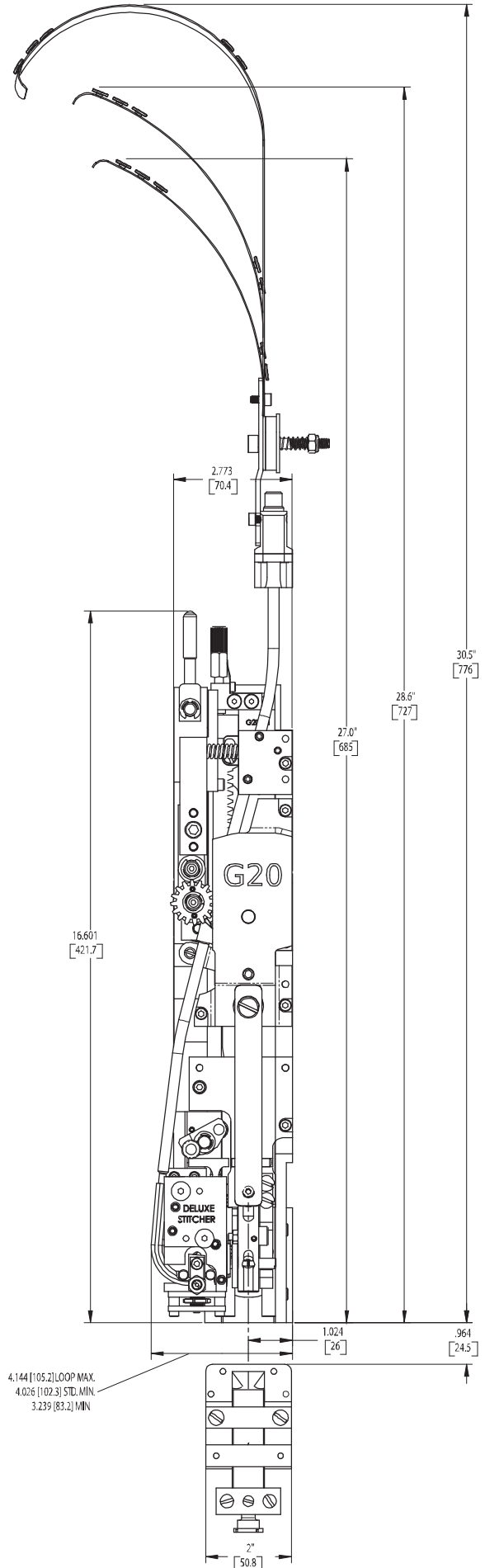
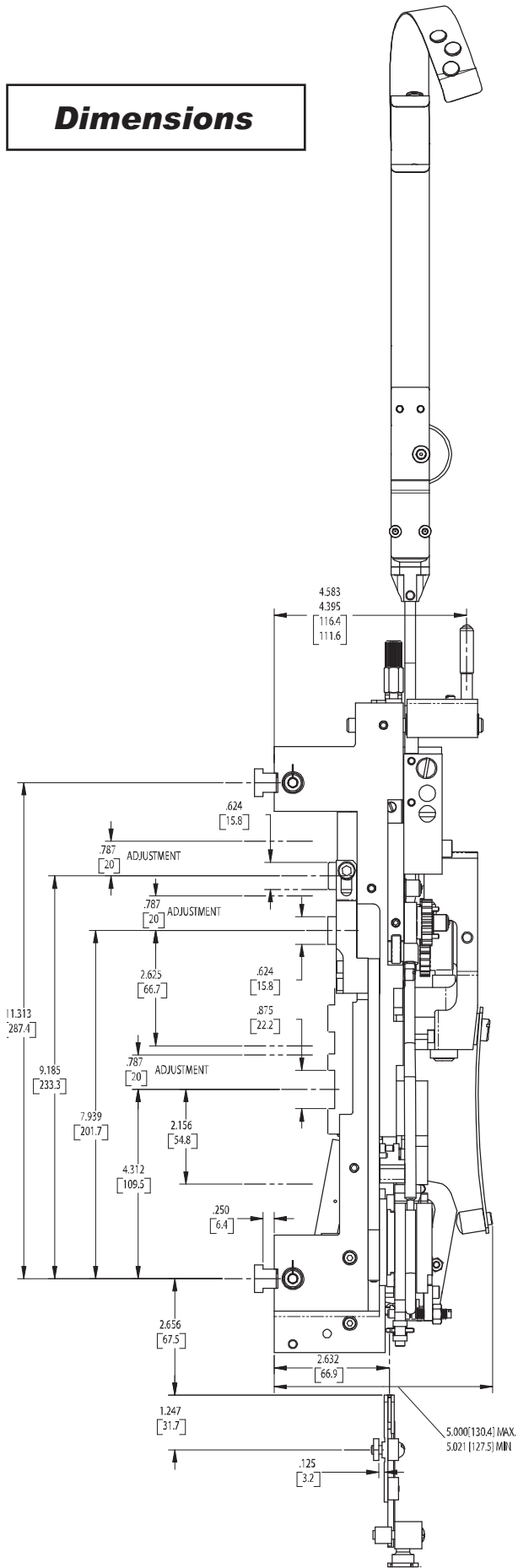
**Wire Types** ..... 20 through 28 round or 19 x 21-1/2,  
20 x 24, 20 x 25 and 21 x 25 flat  
(24 gauge round standard )

**Crown Sizes** ..... 1/2" [14 mm], 5/8" [16 mm]  
13/64" [5 mm] Loop

**Minimum Head Centers** ..... 2-3/4" [70 mm] at two sheets to  
1/16" [1.5 mm] material thickness  
Loop = 70 mm at two sheets to 2 mm

**Stitches Per Hour** ..... 18,000 or 12,000 with Loop Head

# Dimensions





## ***Installation***

### ***Pre-Inspection***

Carefully inspect the condition of the shipping container before unpacking your G20 Stitcher Head. If the container is broken or damaged and there is evidence that the Stitcher head may be damaged, immediately notify the carrier who delivered the head and the DeLuxe Stitcher Graphic Arts Representative from whom the G20 Stitcher Head was purchased.

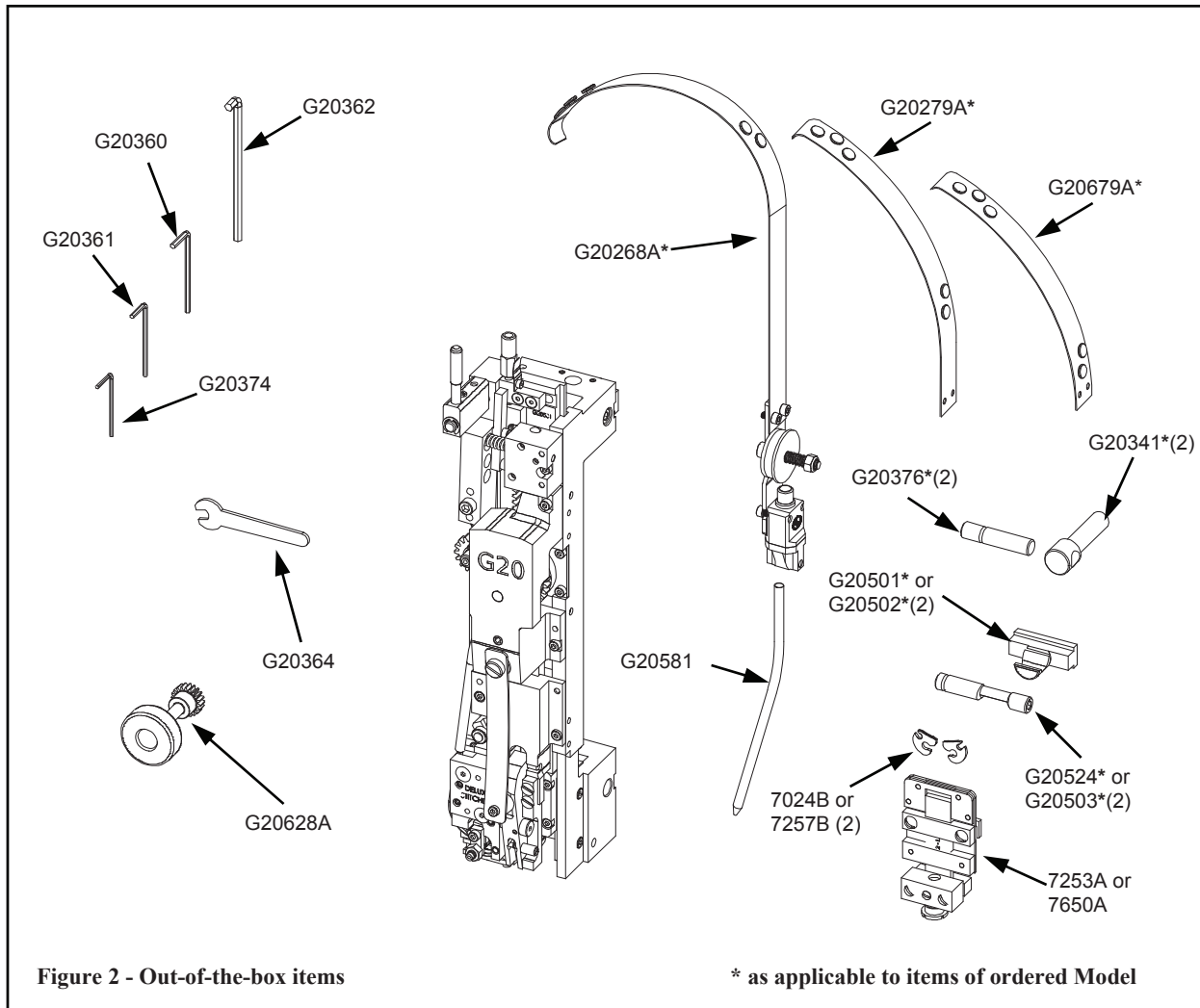
### ***Inspection***

As you carefully unpack the head, check to make sure all components were delivered and are in good working order. Refer to Figure 2 in this manual for reference to the following pieces:

- G20 Manual
- 2.0 mm Hex Key Wrench (G20374)
- 2.5 mm Hex Key Wrench (G20361)
- 3.0 mm Hex Key Wrench (G20360)
- 5.0 mm Hex Key Wrench (G20362)
- 7.0 mm Open End Wrench (G20364)
- Adjustment Handle Assembly (G20628A)
- Short (G20679A), Medium (G20279A) or Long (G20286A) Wire Guide Spring Assembly
- Moving Clinch Clincher Plate Assembly (7253A) or (7650A) or 2-Sided Solid Clincher Plate (7650SCP)
- Clincher Slide (18182), Clincher Slide Adjustment Block (18183), Clincher Slide Block Clamp (18184), Clincher Slide Adjustment Screw (18186), Set Screw (UA1428.1), two (2) Slotted Fillister Machine Screws (UA3216.4) and two (2) Round Head Machine Screws (UA3310.3). A Clincher Binder Plate (18179) and a Clincher Slide Retaining Strap (7256B) are included on the multi-head model Clincher Plate Assemblies.
- Flat (7024B) or Round (7257B) Clincher Points
- Two (2) Bonnet Clamp Blocks (G20501 or G20502) and Eccentrics (G20524 or G20503) or two (2) each of the following: Rear Mounting Bolt (G20341), Rear Clamp Pin (G20376) and Bonnet Stud Nut (HN1213)
- Stitch Samples

## Pre-Installation

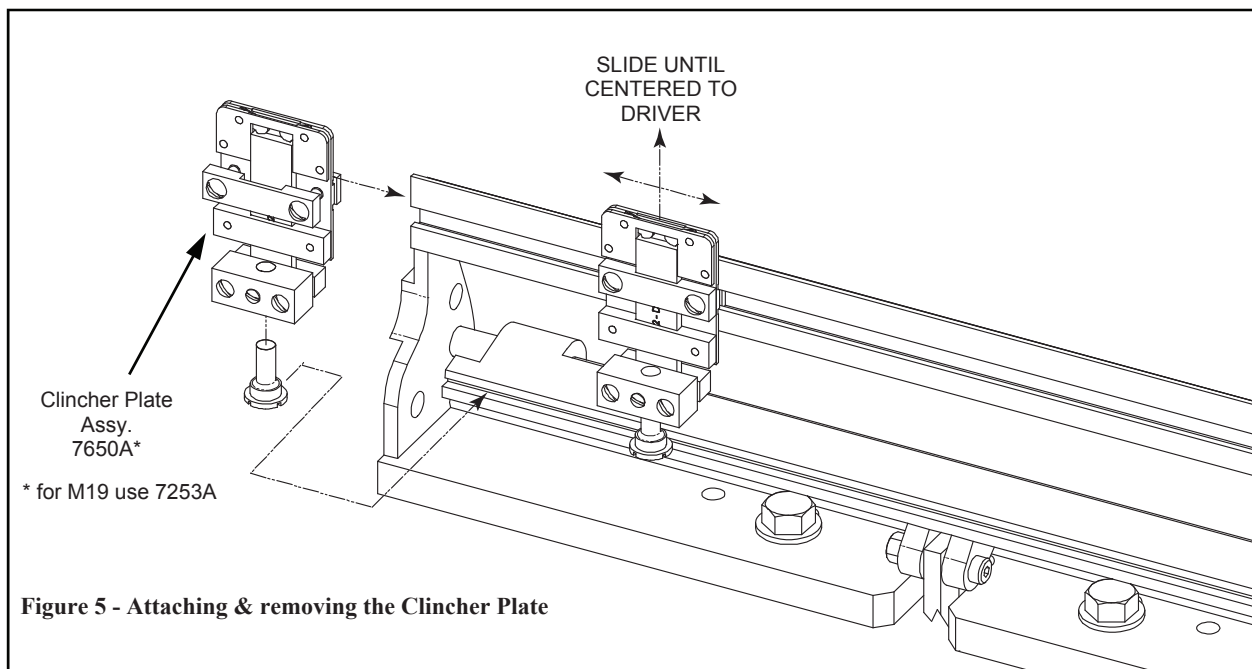
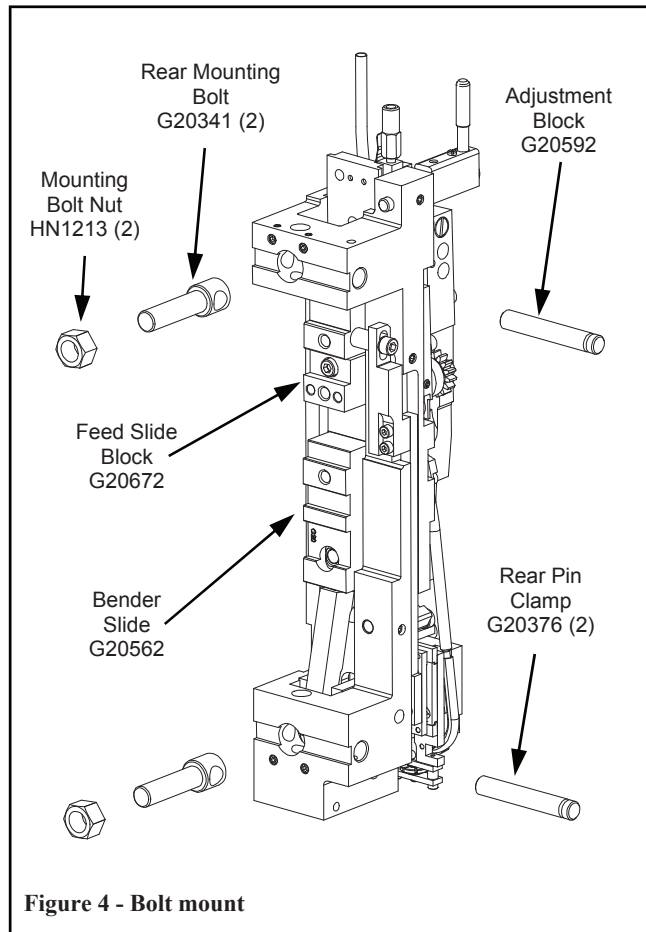
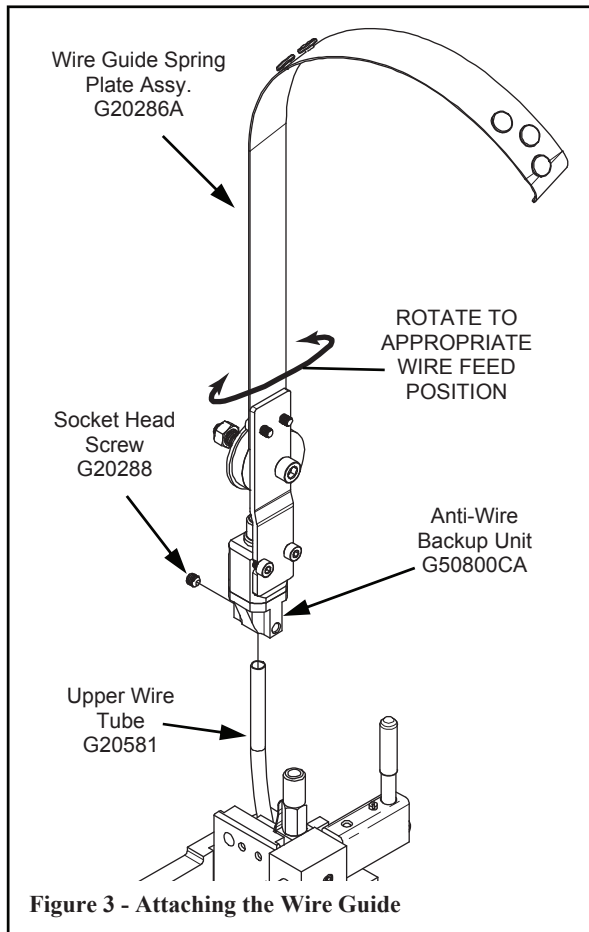
Please take a few moments to fill out the registration card located on page 45 prior to beginning installation.



## Assembly

- Attach Wire Guide Spring Assembly to the G20 Head and secure with Socket Head Screw. (See Figure 3)
- Appropriately mount G20 Head[s] as shown in Figure 4 (Bolt Mount) or Figure 6 (Multiple Head Mount).
- Slide the Clincher Plate Assembly into the clincher mounting rail of the Stitcher as shown in (Figure 5).
- Loosen set screw and rotate Wire Guide Spring Assembly to an appropriate position and re-tighten screw. (Figure 3)

## Mounting (Figures 3-5)



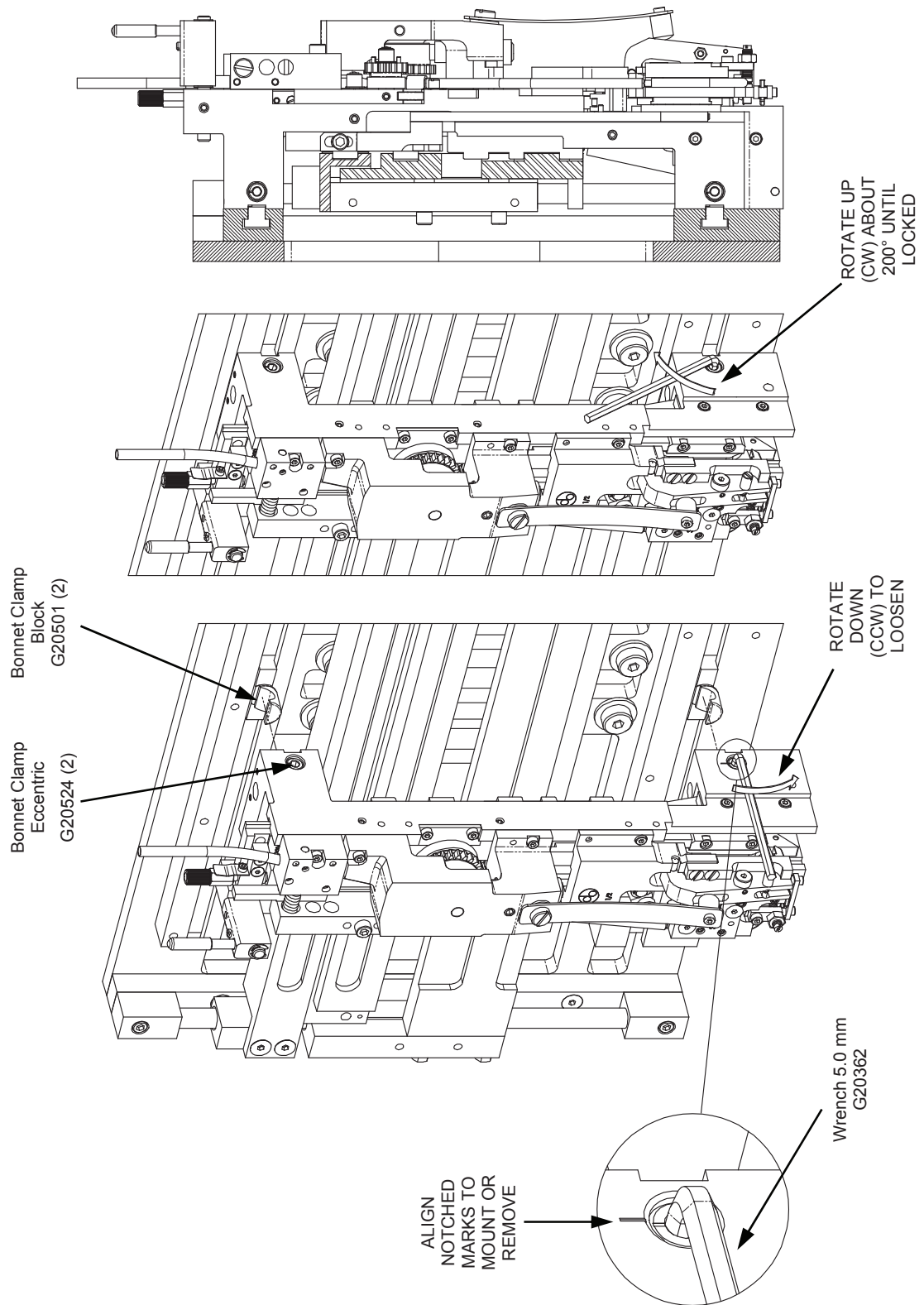
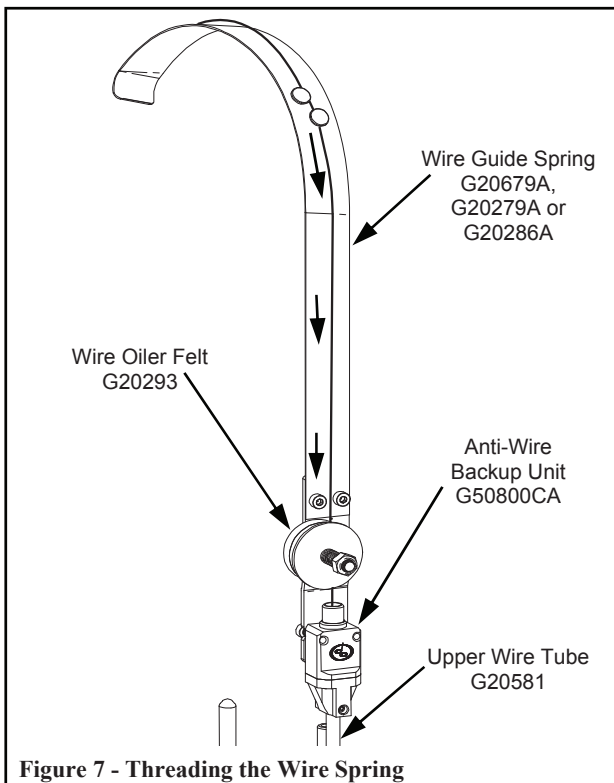


Figure 6 - Attaching & removing Heads

## Operation

### Wire Threading (Figures 7-10)

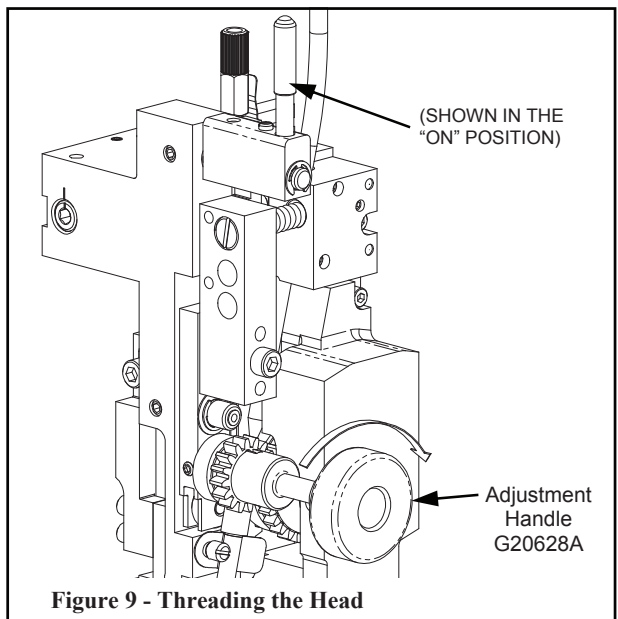
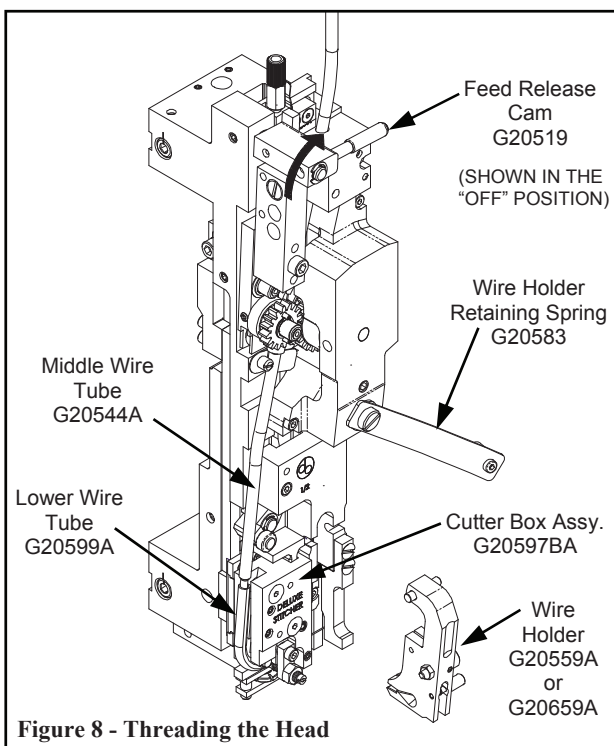


1. Slide the Wire Holder Retaining Spring over and remove the Wire Holder Assembly [Fig. 8].

2. Pass the wire from the Spool over the Wire Guide Spring between the Wire Guide Studs and the two (2) Wire Oiler Felts, then into the Anti-Wire Backup Unit and finally into the Upper Wire Tube [Fig. 7].

3. Disengage the Feed Release Cam. Using a needle-nose pliers, gently guide the wire through the Upper Wire Tube, between the Small and Large Feed Gears and into the Middle Wire Tube Assembly. (Or with the gears remaining engaged, place the Adjustment Handle Assembly over the pins in the Small Feed Gear and rotate clockwise. [See Fig. 9]) Engage the Gears again by turning the Feed Release Cam.

4. Turn the Stitcher machine on and cycle it until the wire emerges from the Lower Wire Tube in the Cutter Block Assembly. If the wire does not emerge, turn the Wire Straightener Nut and trip the Stitcher until the wire is visible to the right of the Left Wire Guide Bar. Make



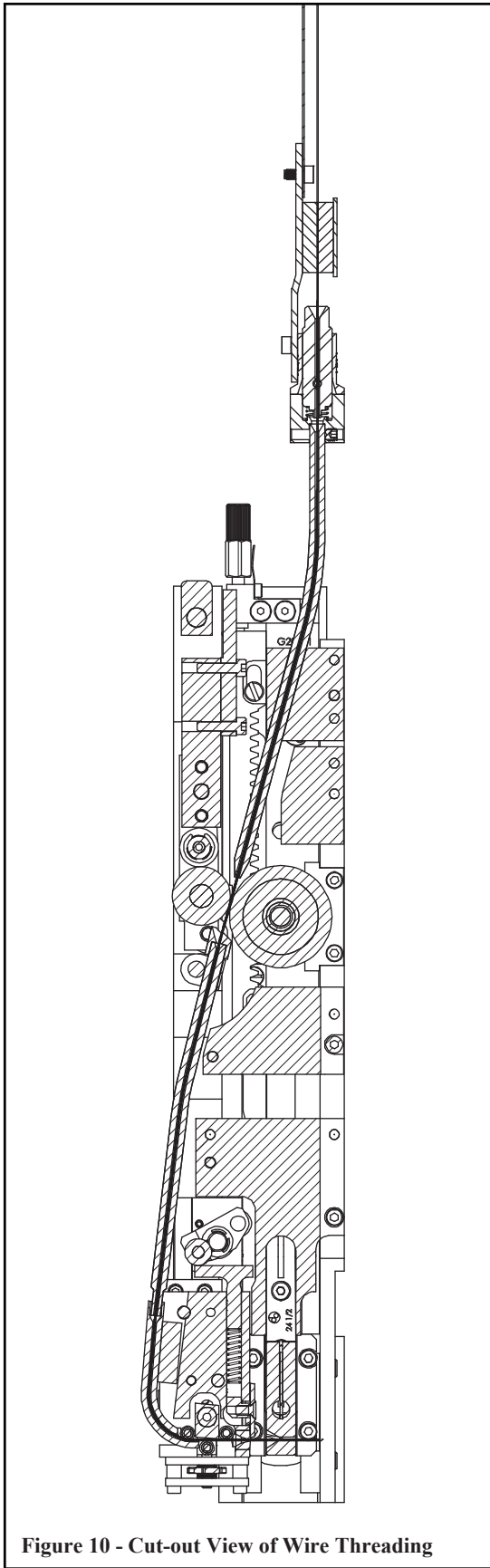


Figure 10 - Cut-out View of Wire Threading

sure the wire is leaving the Head completely straight horizontally and that it is not touching either the Left or Right Wire Guide Bar as it passes. Complete wire straightening instructions follow.

**Wire Straightening (Figures 11-13)**

Front to Back Adjustments—Figs. 11a-11c

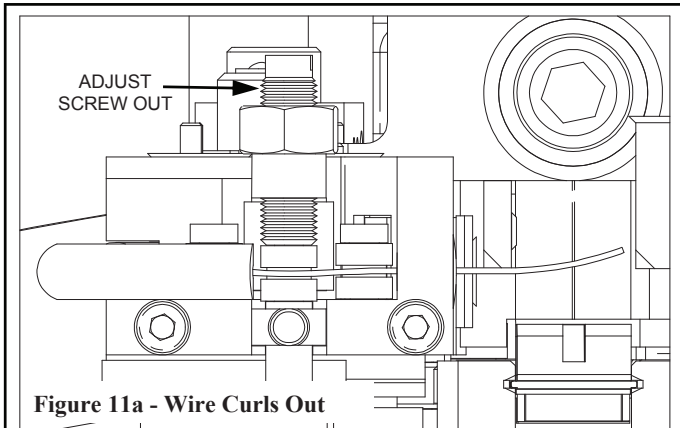


Figure 11a - Wire Curls Out

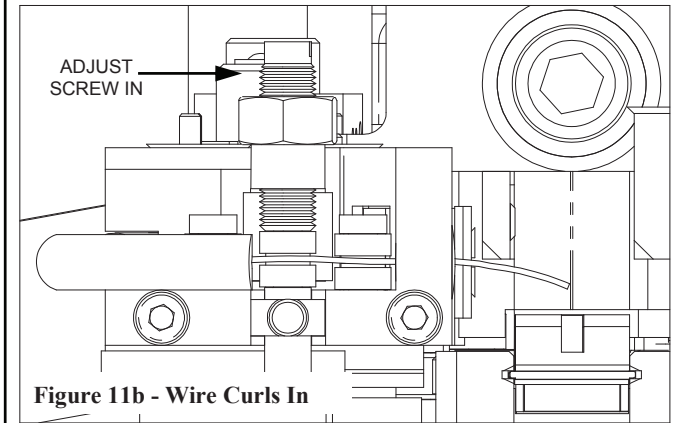


Figure 11b - Wire Curls In

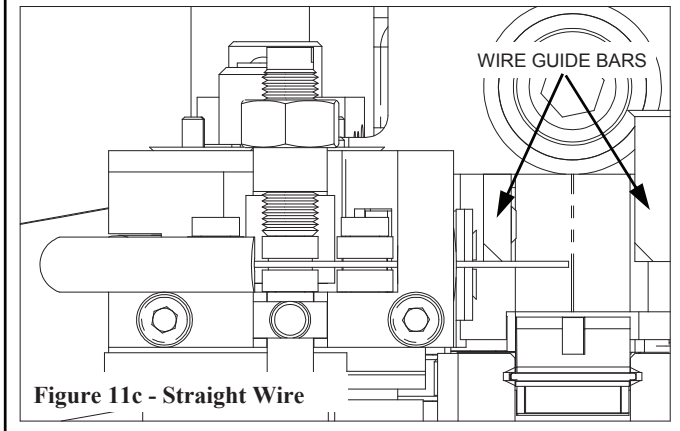
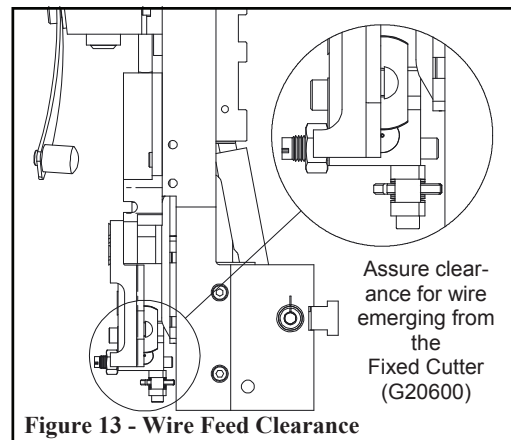
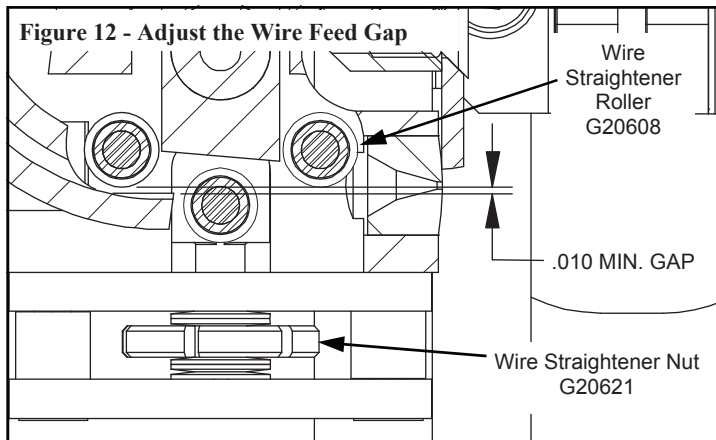


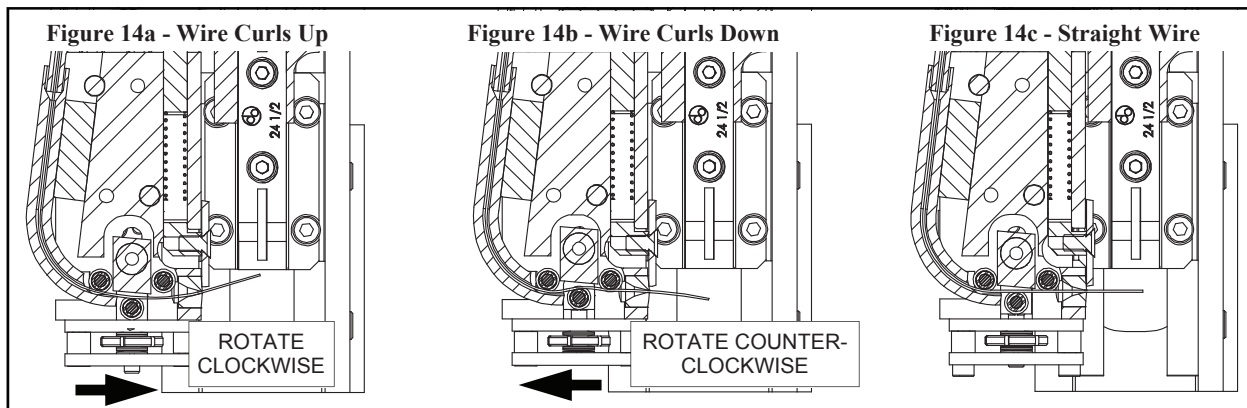
Figure 11c - Straight Wire

## Adjusting the Straightness (Figures 12-13)

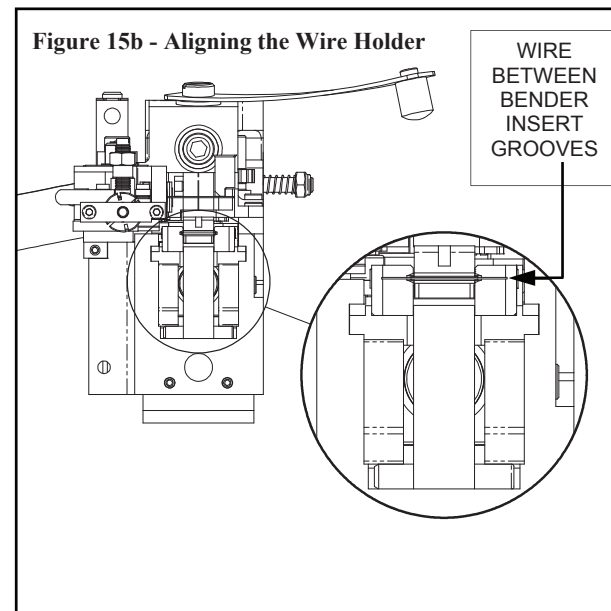
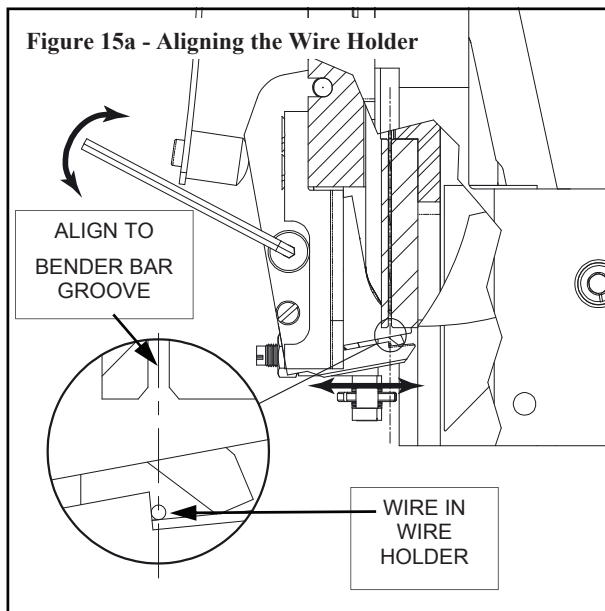


(Loosen Flat Head Screws to adjust. [See Fig. 16])

## Front to Back Adjustments—Figs. 14a-14c

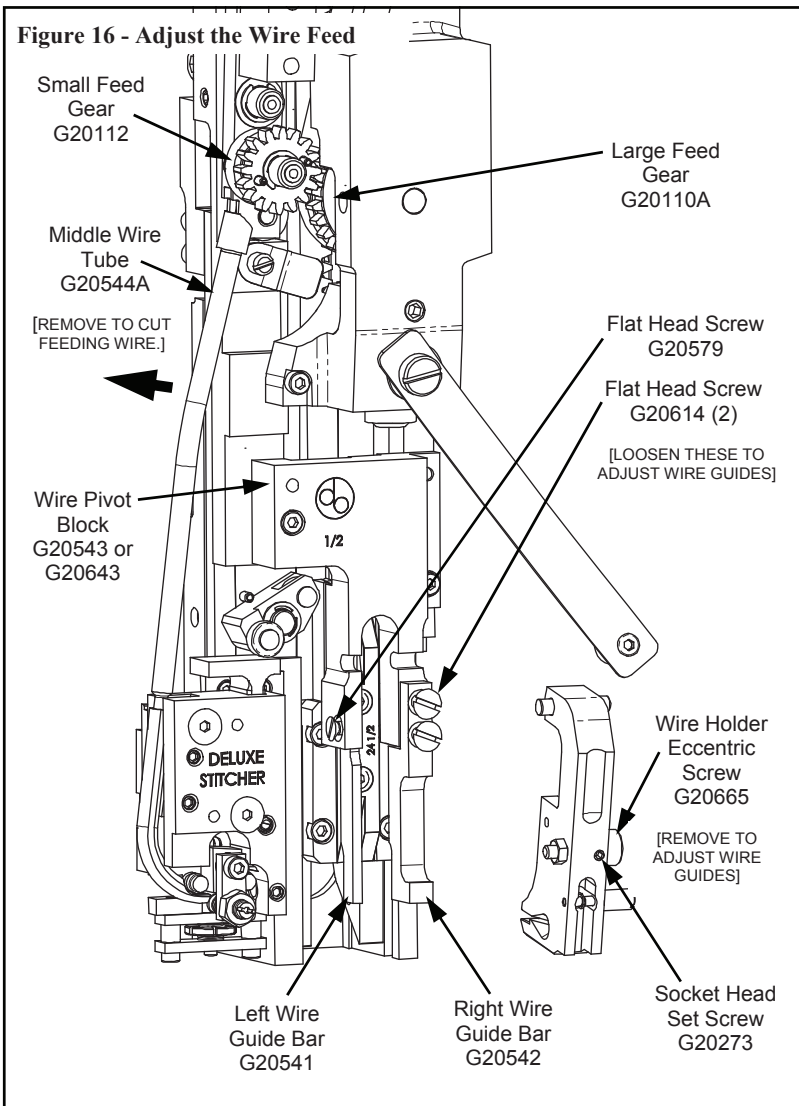


## Aligning the Wire Holder—Figs. 15a-15b





**Figure 16 - Adjust the Wire Feed**



Adjust wire straightness every 3 - 10 lbs. of wire used, depending on its size:

- 5-10 lbs. Spool every 3 lbs.
- 10-25 lbs. Spool every 5 lbs.
- 25-70 lbs. Spool every 7 lbs.
- 70 lbs.+ Spool every 10 lbs.

If the wire coming out of the Lower Wire Tube does not properly pass through the Wire Straightener Roller groove, it has to be aligned by adjusting the position of the Lower Wire Tube. Turn the Wire Straightener Nut so that the maximum amount of space is allowed for the wire between the two (2) Wire Straightener Rollers. Loosen, but do not remove, the two (2) Socket Head Set Screws in the Cutter Block Assembly.

One adjustment is to move the Tube up or down. Make sure the Wire Tube is close enough to the Wire Straightener Roller, but not pressed against the Roller. Leaving a 0.010" (.025mm) space between the Tube and the Wire Straightener Roller is a good gauge.

[Fig. 12] Tighten the two (2) Set Screws and double check the space between the Tube and the Roller before proceeding. The other adjustment is to tilt the Wire Tube toward or away from the Cutter Block. If the wire feeding out of the Cutter Block is curving up then tilt the Wire Tube toward the Cutter Block Assembly. If the wire is curving down then tilt the Wire Tube away from the Cutter Block Assembly [Fig. 13]. Before tightening the Set Screws, verify that there is still at least a 0.010" clearance between the Lower Wire Tube and the Wire Straightener Roller [Fig. 12].

Once the wire is successfully feeding between the two (2) Wire Straightener Rollers, turn the wire feeding off with the Feed Release Cam, remove the Middle Wire Tube enough to cut the wire as it exits from between the Large Feed Gear and the Small Feed Gear [Fig. 16] and remove the wire. Turn the wire feeding back on and activate the Stitcher head until the wire feeds out of the Lower Wire Tube. Make sure that the wire feeds between the Wire Straightener Rollers without assistance, if not, make adjustments to the Lower Wire Tube until it does.



## Setting the Length & Alignment of the Stitch (Figures 17-21)

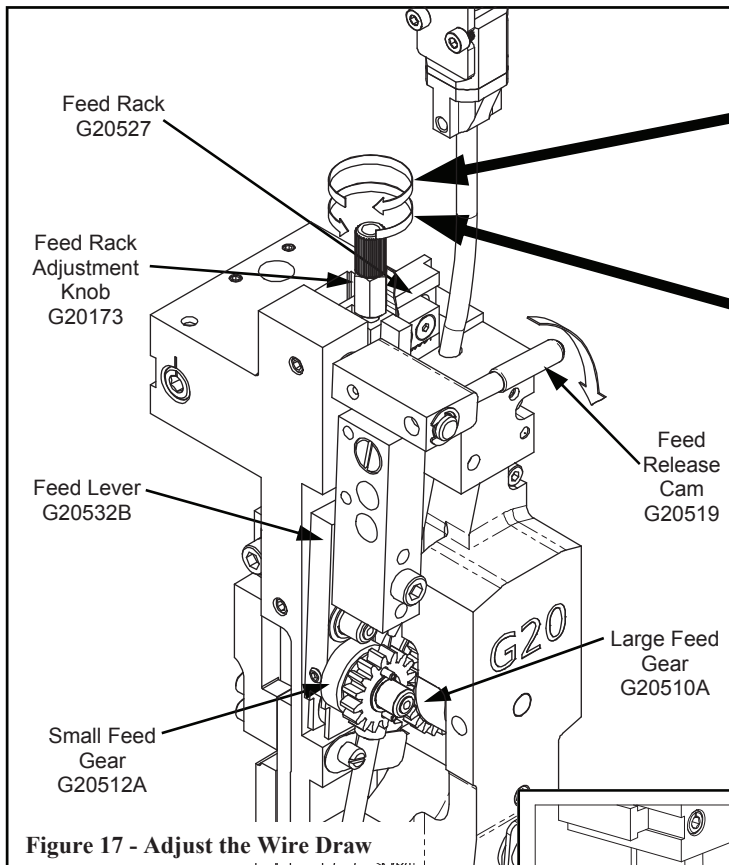
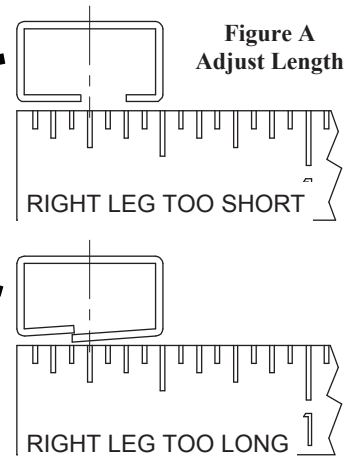


Figure 17 - Adjust the Wire Draw

To adjust the length of stitch, disengage the Small Feed Gear by turning the Feed Release Cam 1/4 turn clockwise and turn the Feed Rack Adjustment Knob as necessary. [See Figs. 17-21.]

After the length/draw adjustment, if the stitch was too long, the resulting stitch will be one as seen in Figure B. If the stitch was too short, the resulting stitch will be one as seen in Figure C. In either case, adjust as instructed below the illustrations to achieve the correct stitch as seen in Figure D.



Before making any adjustments, make sure your stitching machine compression setting is set to the proper thickness of work.

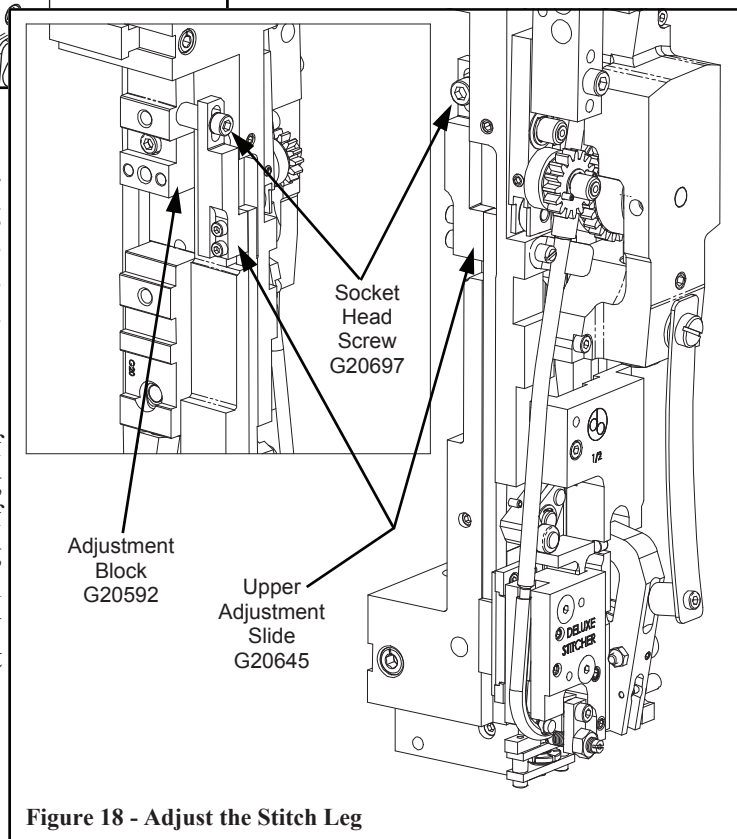
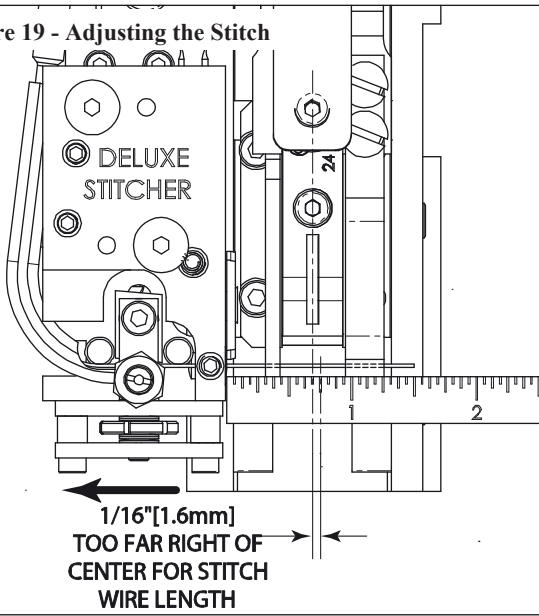
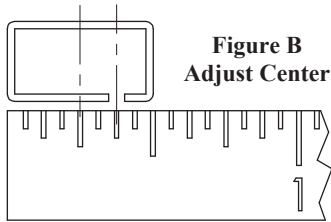
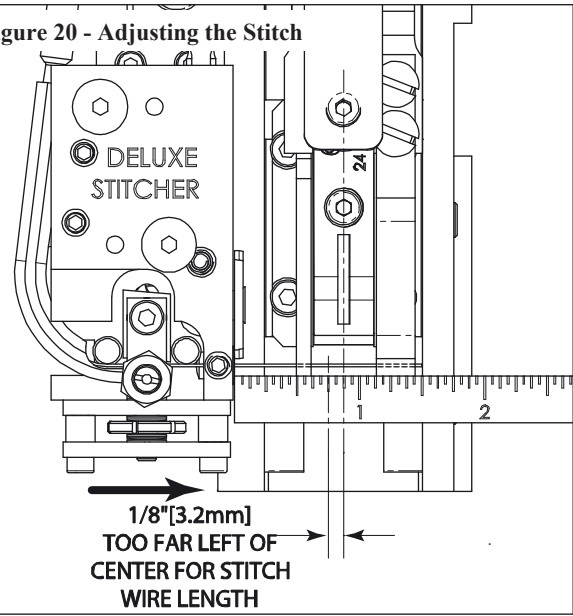


Figure 18 - Adjust the Stitch Leg

**Figure 19 - Adjusting the Stitch**

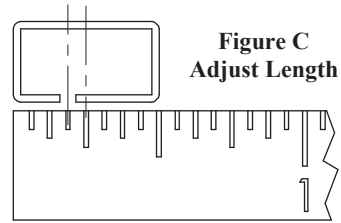


**Figure 20 - Adjusting the Stitch**



**Figure B**  
Adjust Center

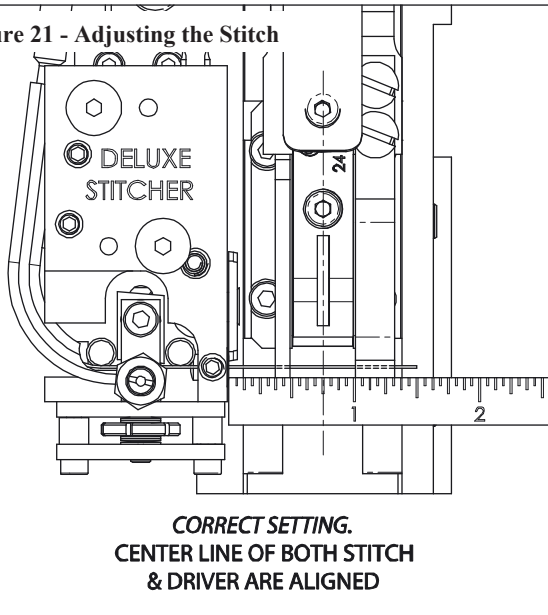
Gap of stitch is 1/16" off center to the right. To correct, move Cutter Box 1/16" to the left.



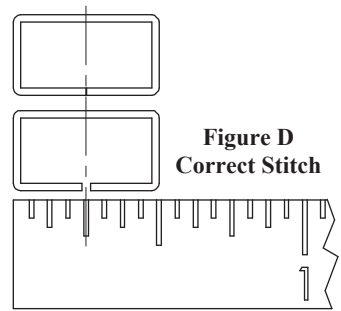
**Figure C**  
Adjust Length

Gap of stitch is 1/8" off center to the left. To correct, move Cutter Box 1/8" to the right.

**Figure 21 - Adjusting the Stitch**



**CORRECT SETTING.**  
CENTER LINE OF BOTH STITCH  
& DRIVER ARE ALIGNED



**Figure D**  
Correct Stitch

The ideal stitch has the center of gap aligned to the center of the finished stitch.

## Aligning the Clincher Plate (Figures 22-25)

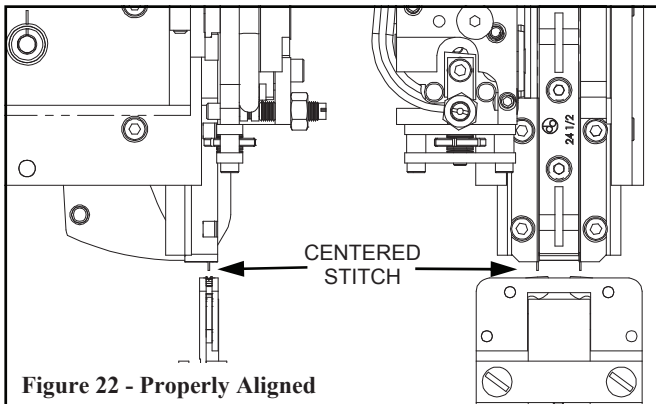


Figure 22 - Properly Aligned

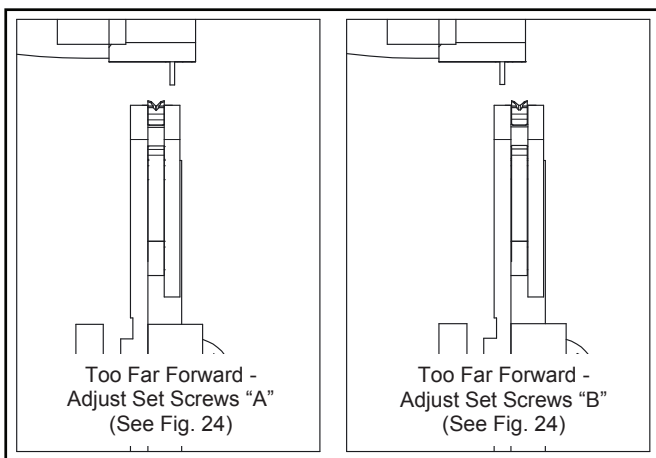


Figure 23 - Front To Back Alignment

To produce properly clinched staples, the center of the Clincher Plate (standard or Solid) must be exactly in line with the Driver both left-to-right and front-to-back.

### Front-to-Back

Looking from the side of the Stitcher Head, make sure the rib of the Driver or the stitch wire is aligned with the center of the gap between the front and back plates of the Clincher Plate or the Clincher Points.

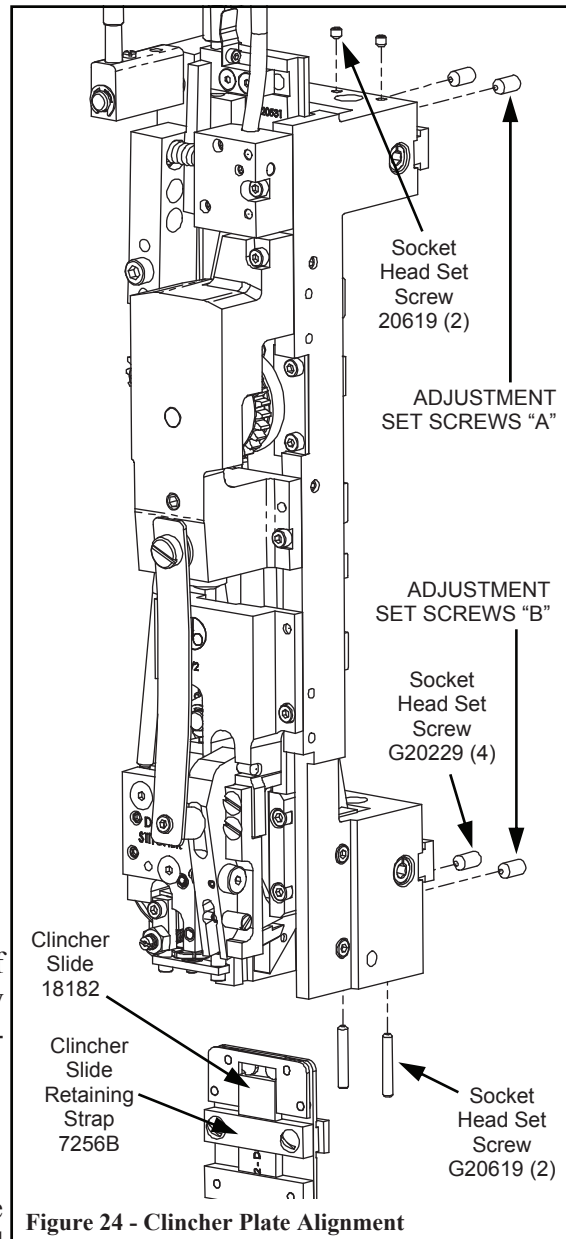
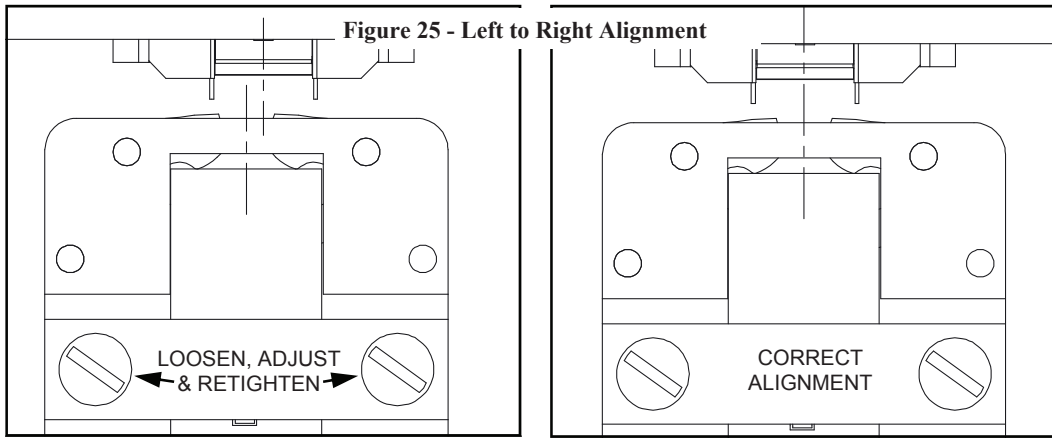


Figure 24 - Clincher Plate Alignment

*Note: Adjustments must be made to the screws in the back of the G20 while the Stitcher Head is removed from the Stitcher Machine. When adjusting Set Screws A or B, keep the other set flush or under. Slight adjustments to the set screws make significant differences in position.*

If alignment is too far forward of the Clincher Plate, adjust the Socket Head Set Screws [“A”] until they stick out slightly from the back of the Head. If it is positioned towards the back of the Clincher



Plate, then adjust the lower set screws [“B”] until they stick out slightly from the back of the Head. (Fig. 24) Once the position is set, tighten the two (2) Socket Head Set Screws in the top and the two (2) Socket Head Set Screws in the bottom of the Stitcher Head.

### Left-to-Right

Ensure that Clincher Plate is centered with Driver. If not, loosen the two (2) Round Head Machine Screws in the Clincher Slide Retaining Strap and center the Clincher Plate. Secure this position

## **Aligning the Clincher Points (Figures 26-28)**

The position of the Clincher Points should be set flush, or slightly above flush, with the Clincher Plate (see Fig. 26). To ensure this, manually turn the Stitcher machine until the Driver is at the lowest position of its stroke and the Clincher Points are at their highest position. Turn the Stitcher machine just past this point to reveal the Clincher Points' position. Clincher Points that do not pivot high enough will produce a weak clinch and if they pivot too high will cause poor stitch quality or cut the stock being stitched.

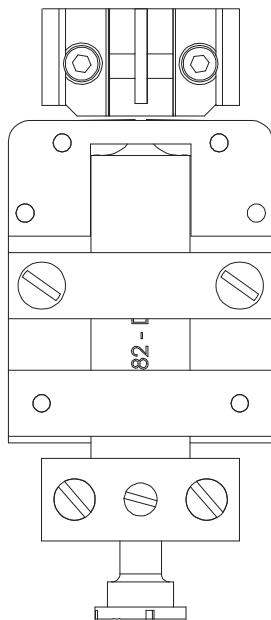


Figure 26 - Set Points

and if they pivot too high will cause poor stitch quality or cut the stock being stitched.

*Note: Ensure that the Stitcher machine's compression setting is correct before making Clincher Point adjustments.*

To adjust the Clincher Points, loosen the Slotted Set Screw in the Adjustment Block and turn the Clincher Slide Adjustment Screw as illustrated in Fig. 27. When height is set, re-tighten the set screw.

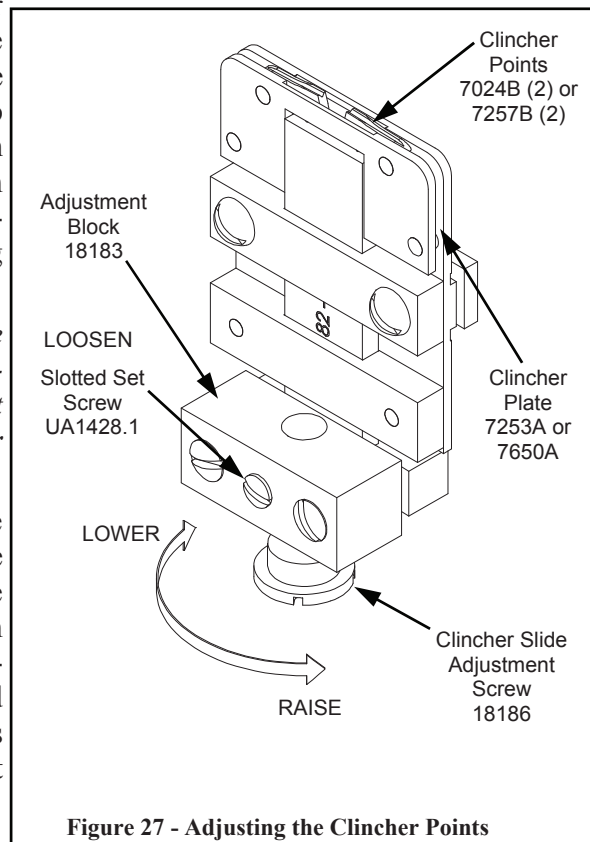


Figure 27 - Adjusting the Clincher Points

For a Solid Clincher Plate, the legs of the stitch are formed when the wire hits the Clincher Plate instead of movable Clincher Points. The resulting stitch will be curled legs instead of flat. (See Fig. 28)

The only adjustment that can be made to a Solid Clincher Plate is to make sure it is centered below the Head's Driver and even that adjustment can only be made on multi-head Stitcher machines.

**Maintenance**

**Lubrication (Figures 29-30)**

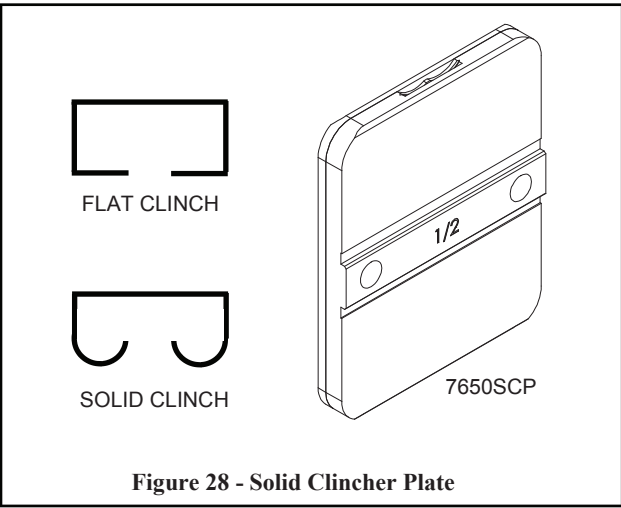


Figure 28 - Solid Clincher Plate

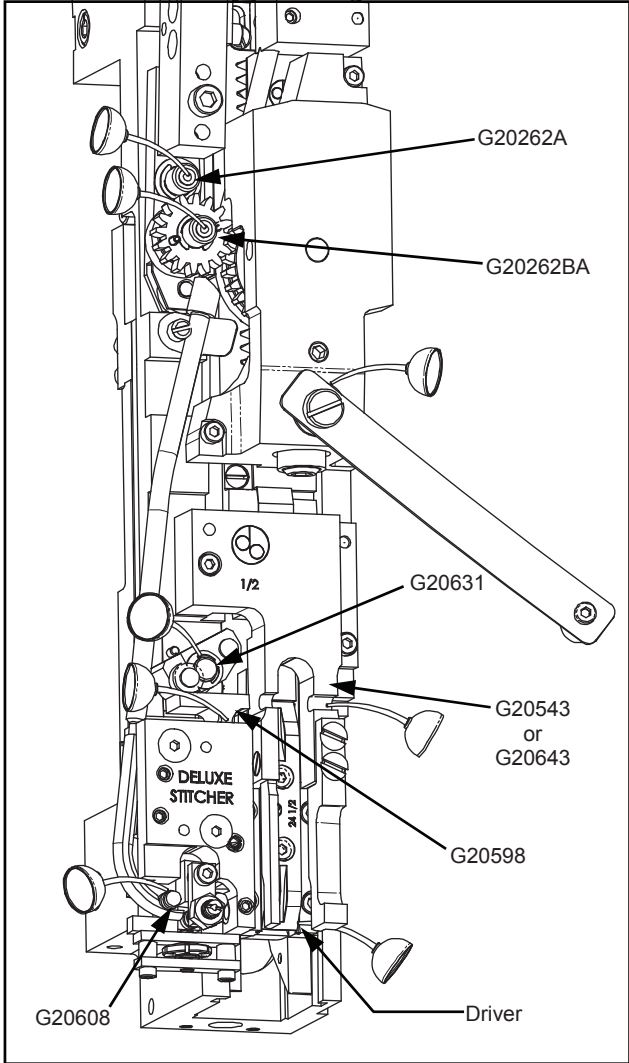


Figure 29 - Lubrication

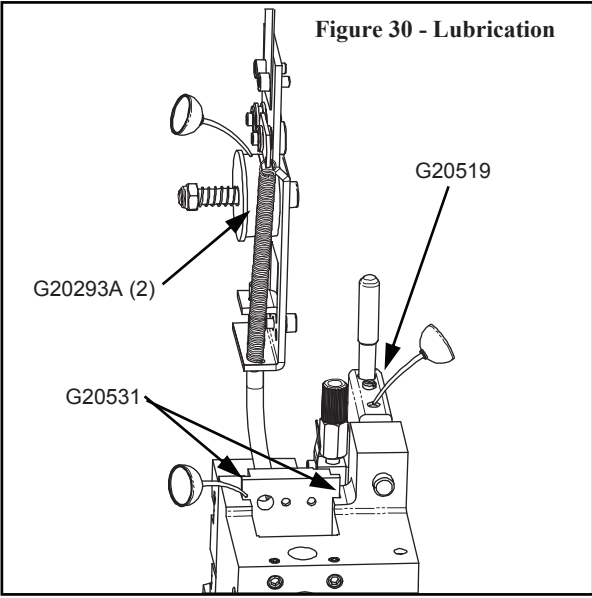


Figure 30 - Lubrication

- Use standard S.A.E. #10 oil for lubricating.
  - Heads in constant operation should be lubricated daily.
  - Heads that are operated periodically should be lubricated every five pound wire spool change or every month, whichever comes first.
  - Usually, only a drop of oil is required at each lubrication point.
  - Take care that parts of the head that contact the work to be stitched are free of oil.
- ☒ Lubricate regularly instead of excessively. Ex-

cessive oiling will result in work becoming spotted with oil.

Use one drop of oil in the following lubrication points:

- top of the Bonnet on both sides of the Feed Slide (G20531).
- the oil hole in the Feed Release Cam (G20519).
- the fittings on the two (2) Feed Lever Pin As-

semblies (G20262BA and G20262A).

- the Cutter Operating Lever Pivot Pin (G20631) and Cutter Lever Bearing Pin (G20571).
- the Wire Rollers (G20608) in the Cutter Block Assembly (G20597BA).
- where the Wire Holder Assembly (G20559BA) pivots in the Wire Holder Pivot Block (G20543 or G20643).

## **Cleaning (Figures 31)**

In addition to proper lubrication, routine cleaning is important for the maintenance of your G20 Head. The entire Head should be torn down and rebuilt every three months or 15 million stitches, whichever comes first and the following areas should be cleaned once a month:

- Large Feed Gear (G20510A): remove and wash in an oil-dissolving solvent, dry and re-lubricate. An optional Feed Gear Grease Kit (G20KG) is available
- Anywhere that dust, oil or pieces of wire and paper have built up - for example: around the Clincher Points and around the Wire Straightener Rollers.

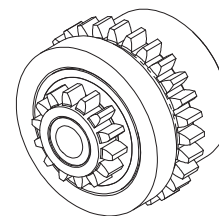


Figure 31 - Large Feed Gear

## **Ordering Spare Parts**

In time, you will need to replace some parts in your G20 style Stitcher Head. When this happens, first locate the needed part in one of the following diagrams. Then locate the DeLuxe Stitcher part number and contact your Graphic Arts Representative to order the part by the part number, description and quantity.

## **Replacing Spare Parts (Figures 32-34)**

### **Removing and Replacing the Wire Cutters - Figure 32**

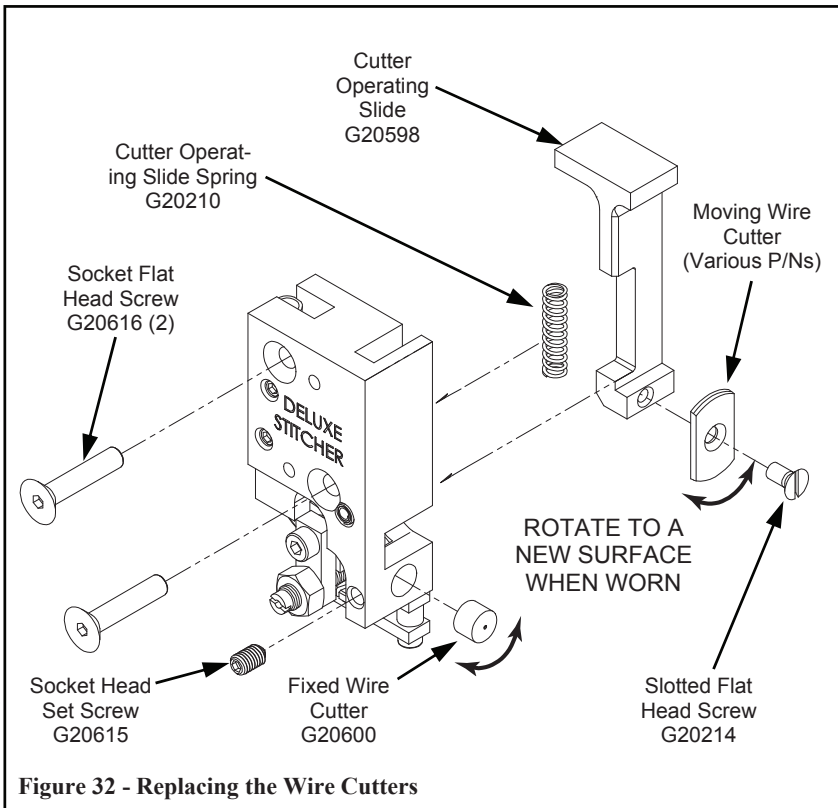
Loosen and remove the two (2) Socket Flat Head Screws on the front of the assembly and pull the Cutter Block away from the G20 Head. Be careful, the Cutter Operating Slide may spring out from the Cutter Block Assembly. Loosen the Flat Head Screw securing the Moving Wire Cutter to the Cutter Operating Slide and rotate it until a new cutting surface is exposed. If there are no more sharp edges available, remove it and install a new Moving Cutter. Be sure to tighten it completely so that the Cutter does not rotate on the Slide.

Likewise the Fixed Wire Cutter can be rotated when the cutting surface is worn or replaced when no sharp surfaces are left. Loosen the Socket Head Set Screw securing the Cutter. Rotate the Cutter to a new surface or replace it if completely worn. The Cutter can be rotated three or four



times before needing to be replaced. Before tightening it down, make sure the Fixed Wire Cutter is aligned correctly within the Cutter Block.

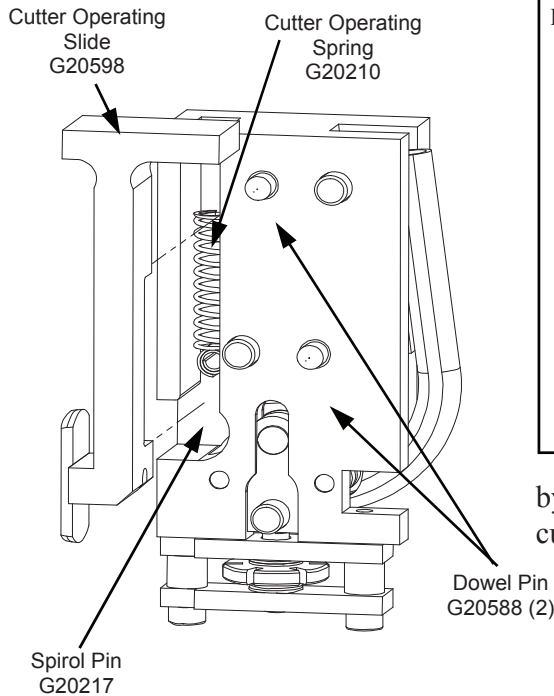
To obtain a clean edge on the cut wire, there can be no gap between the Moving and Fixed Cutters. Replace the Cutter Operating Slide by compressing the Cutter Operating Spring with the top surface of the spring recess and compress it against the Spirol Pin and push it into position. Holding this position, push the Fixed Cutter against the Moving Cutter, using a small screwdriver as a lever. Tighten the Cap Screw to secure the position of the Fixed Cutter. Test it once before re-assembling the Cutter Block by compressing the Cutter Operating Slide.



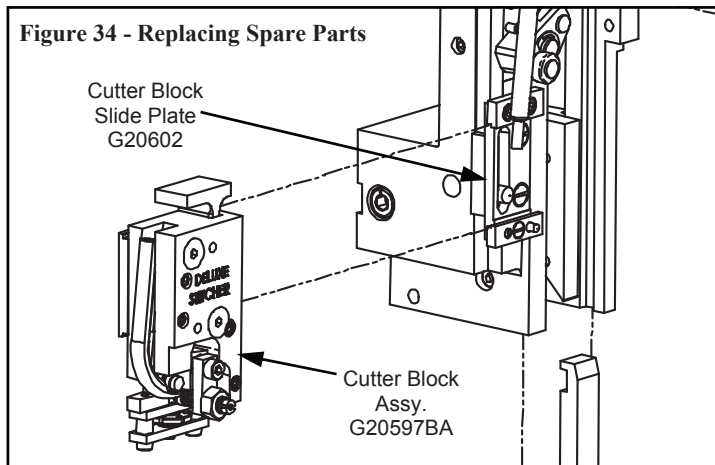
**Figure 32 - Replacing the Wire Cutters**

The Moving Cutter must pass the Fixed Cutter freely and with no visible gap.

Securing the Cutter Operating Slide from springing out, re-assemble Cutter Block Assembly



**Figure 33 - Replacing Spare Parts**



by aligning the Cutter Block with the Slide Plate and secure with the (2) Socket Head Flat Screws.

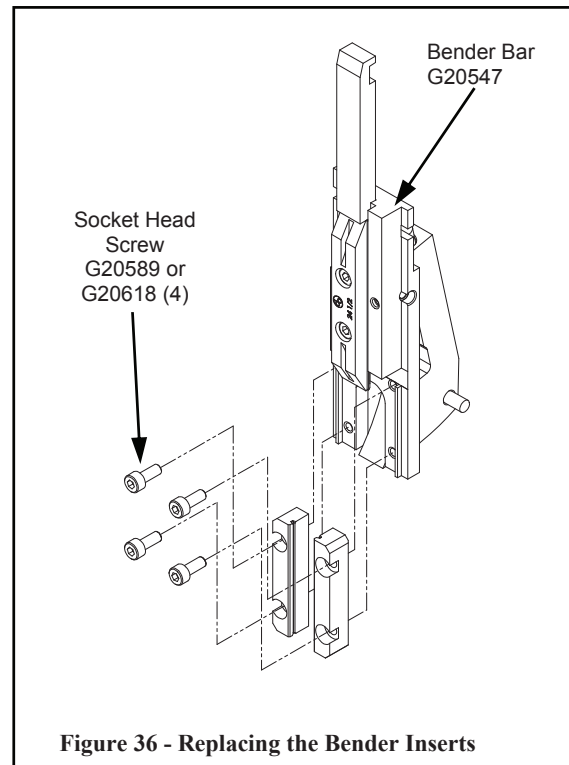
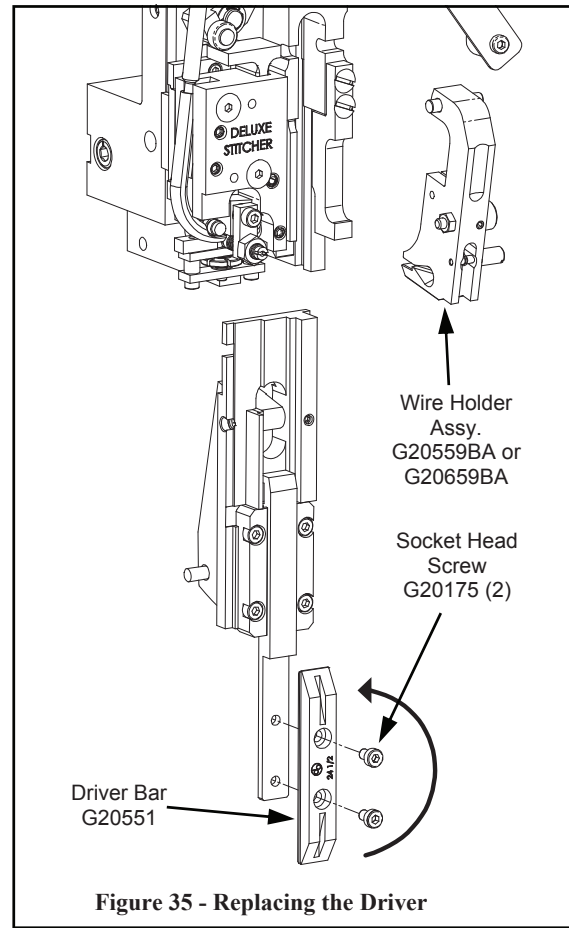
### Removing and Replacing the Driver (Figure 35)

If the staples produced have crowns that are buckled or corners that stick up, or if wire is jamming between the Driver and Driver Bar, the Driver may have to be reversed or replaced. Swing the Wire Holder Retaining Spring off of the Wire Holder Assembly and out of the way. Remove the two (2) Socket Head Cap Screws securing the Driver to the Driver Bar and slide the Driver out from between the two (2) Bender Inserts. The ends of the Driver are identical so when one end is worn or chipped, it can be reversed. If both ends are worn, replace the existing Driver with a new one. Add a little thread locker to the Screws before returning them to the Driver Bar. Replace the Wire Holder Assembly and Wire Holder Retaining Spring.

### Removing and Replacing the Bender Inserts (Figure 36)

If the legs of the formed stitch are spread, the crown buckled or the wire exiting the head sheared the Bender Inserts may have to be replaced. Remove the two (2) Socket Head Cap Screws securing each of the Bender Inserts and slide them down and out from the Bender Bar. The Cutter Block Assembly may have to be repositioned or removed to gain access to the Bender Insert Screws. If only one end of the inserts is worn, reverse their positions on the Bender Bar and replace the Screws securing them. If there is excessive build-up or damage to the Inserts, replace them with new. Make sure the Inserts are placed firmly against the steps on the Bender Bar and the Driver\* can pass freely between the Bender Inserts once the Screws are tightened.

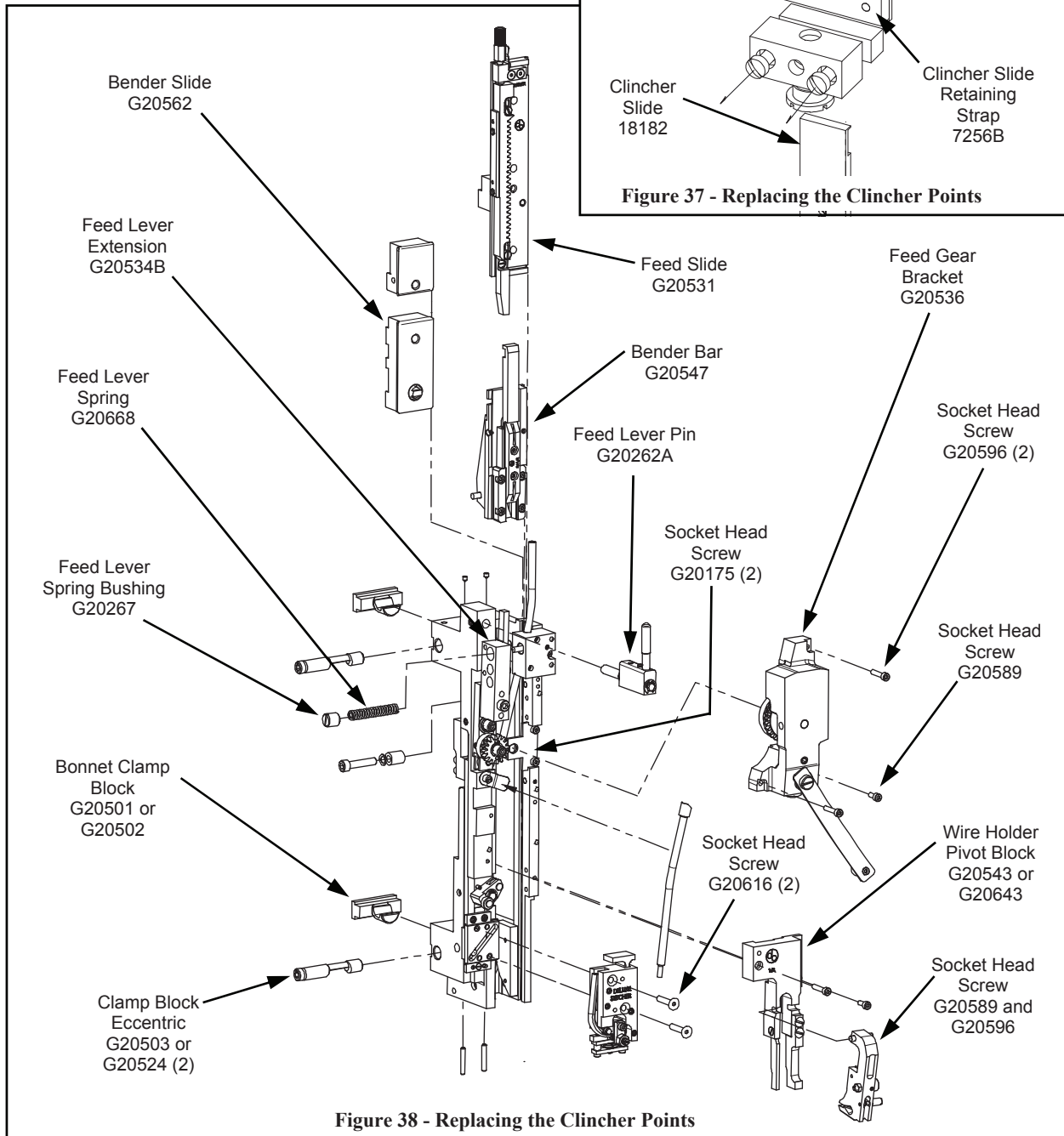
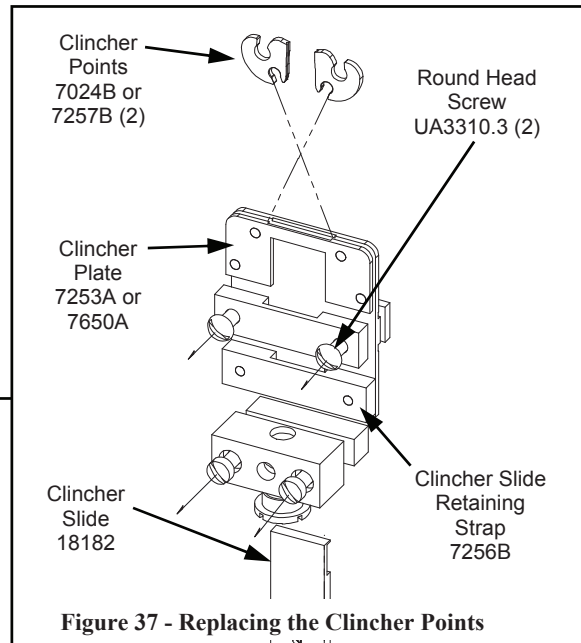
Be sure the gauge and crown size of the Bender Inserts match the gauge and crown size of the Driver installed. For a complete list of parts and their descriptions, refer to page 47 at the back of this manual.





## Removing and Replacing the Clincher Points (Figure 37)

The Clincher Point, when worn, may cause poorly formed staple legs. Loosen, but do not remove, the two (2) Round Head Machine Screws until the Clincher Slide can be disengaged from the Clincher Plate Assembly or slid out of the Clincher Plate Assembly or down within it. Rotate the Clincher



## **Troubleshooting (Figure 39)**

The quality and quantity of work that can be produced with the G20 Stitcher Head is dependent upon the operator making all adjustments as accurately as possible and carefully maintaining the head. The cause of staple imperfections usually can be traced to inaccurate settings or normal wear of moving parts. In the event of trouble of this nature occurring, the operator can, by referring to the following troubleshooting chart, quickly locate and remedy the cause or causes of the trouble.

The following is a brief list of problems and solutions which should cover the majority of situations encountered when stitching with the G20 Stitching Head. In the event of problems of this nature occurring, the operator can, by referring to the following troubleshooting chart, quickly locate the



**PROBLEM:** Crown Not Straight

**SOLUTION:** Straighten the wire. (See page 13) Align the Clincher Points. (See page 18) Reverse or replace the worn or broken Driver. (See page 23) Make sure the Cutters are aligned and not dull. (See page 21) Check for correct wire size and strength being used. Check for correct work thickness setting.



**PROBLEM:** Leg[s] Buckled

**SOLUTION:** If the ends of an unformed piece of wire are not smooth, the Wire Cutters are worn. Check for wear and rotate or replace if needed. (See page 21) Make sure the Cutters are aligned properly. (See page 22) Make sure the correct wire size is being used and that the wire is straight. (See page 13).



**PROBLEM:** Corner Buckled

**SOLUTION:** Check the Driver for a chipped corner and rotate or replace it if needed. (See page 23) Align the Wire Holder. (See page 13) Straighten wire. (See page 13) Check the tensile strength of the wire or use thicker wire.



**PROBLEM:** Clinch Too Loose

**SOLUTION:** The Clincher Points are too low and need adjusting. (See page 18) The compression of the stitcher machine is insufficient and needs to be increased.



**PROBLEM:** Left Leg Too Short / Right Leg Too Long

**SOLUTION:** Adjust the position of the Cutter Block Assembly by moving it away from the Head. (See page 15)



**PROBLEM:** Left Leg Too Long / Right Leg Too Short

**SOLUTION:** Adjust the position of the Cutter Block Assembly by moving it away toward the Head. (See page 15)



**PROBLEM:** Staple Legs Too Long or Too Short  
**SOLUTION:** Correct the overall wire draw by repositioning the Feed Slide within the G20 Head. (See Page 16)



**PROBLEM:** Left Leg Missing  
**SOLUTION:** Straighten the wire. (See page 13) The Wire Holder Assembly is not aligned properly with the groove in the Bender Bar.



**PROBLEM:** Legs are Spread or Contracted  
**SOLUTION:** Straighten the wire. (See page 13) Replace worn Bender Inserts. (See page 23)



**PROBLEM:** Legs Stray Forward or Backward Consistently  
**SOLUTION:** The Clincher Points are not aligned properly front to back. (See page 17) Straighten the wire. (See page 13)



**PROBLEM:** Stitch Stray Randomly In and Out and Front to Back  
**SOLUTION:** Straighten the wire. (See page 13) Make sure the Cutters are aligned properly. (See page 21) Check the tensile strength of the wire or use thicker wire.

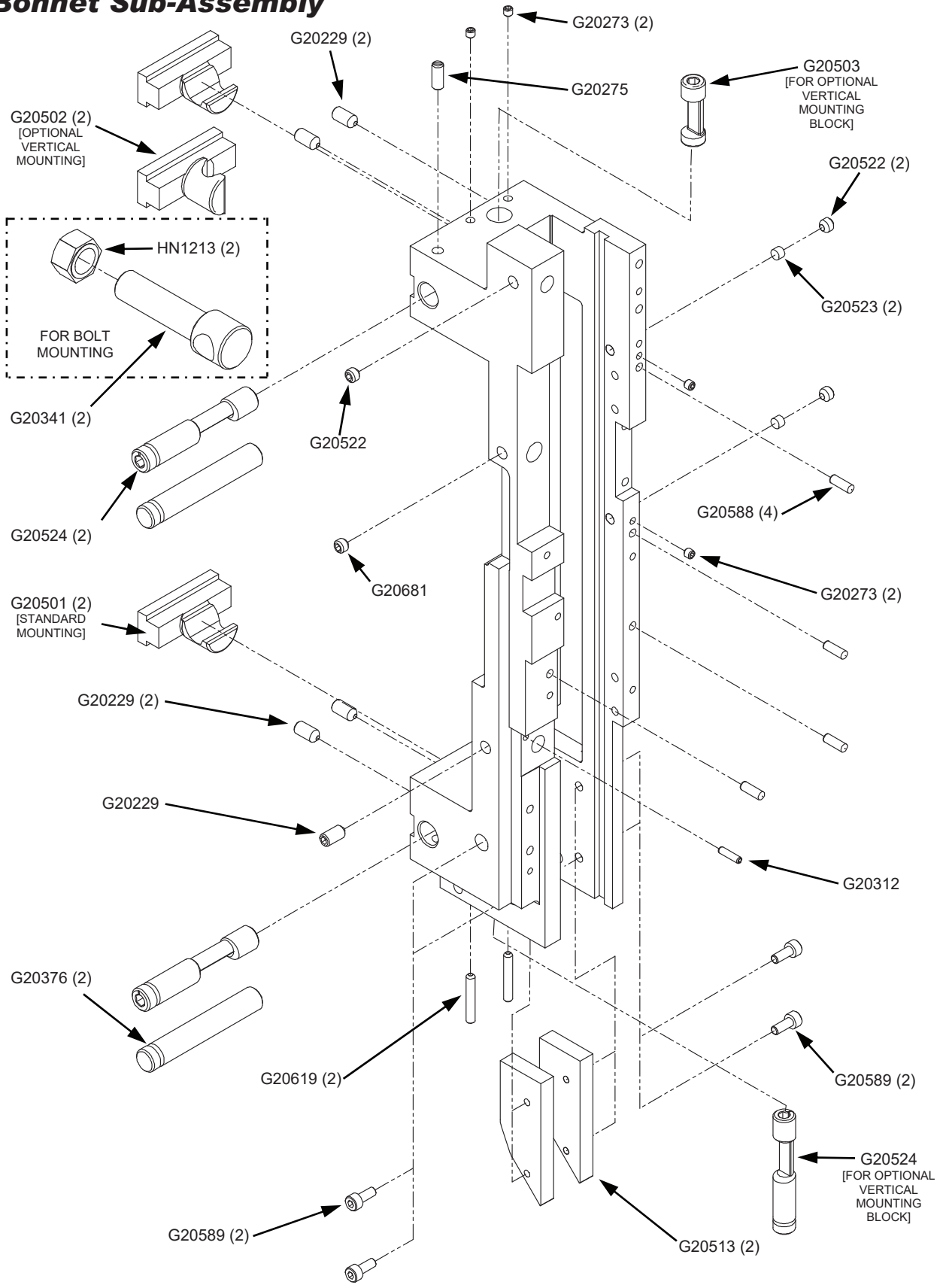


**PROBLEM:** Weak crown, crown breaks off after stitch  
**SOLUTION:** Align the Wire Holder with the grooves in the Bender Bar (See page 13). Check the tensile strength and size of the wire being used.

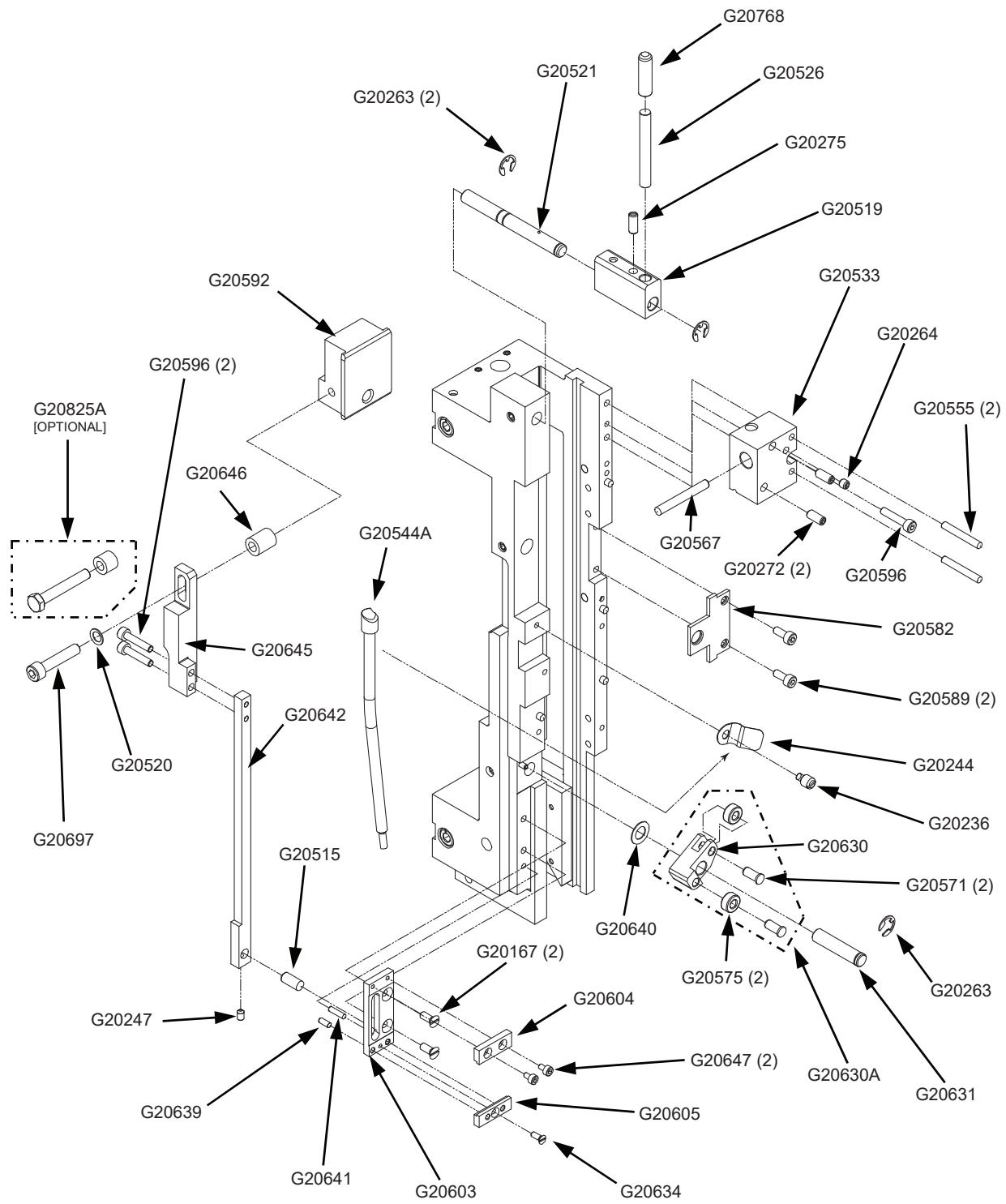
**PROBLEM:** No wire being drawn  
**SOLUTION:** Make sure the Feed Release Cam is turned to the “on” position and the Feed Gears engaged. (See page 12)

**Figure 39**  
**Troubleshooting**

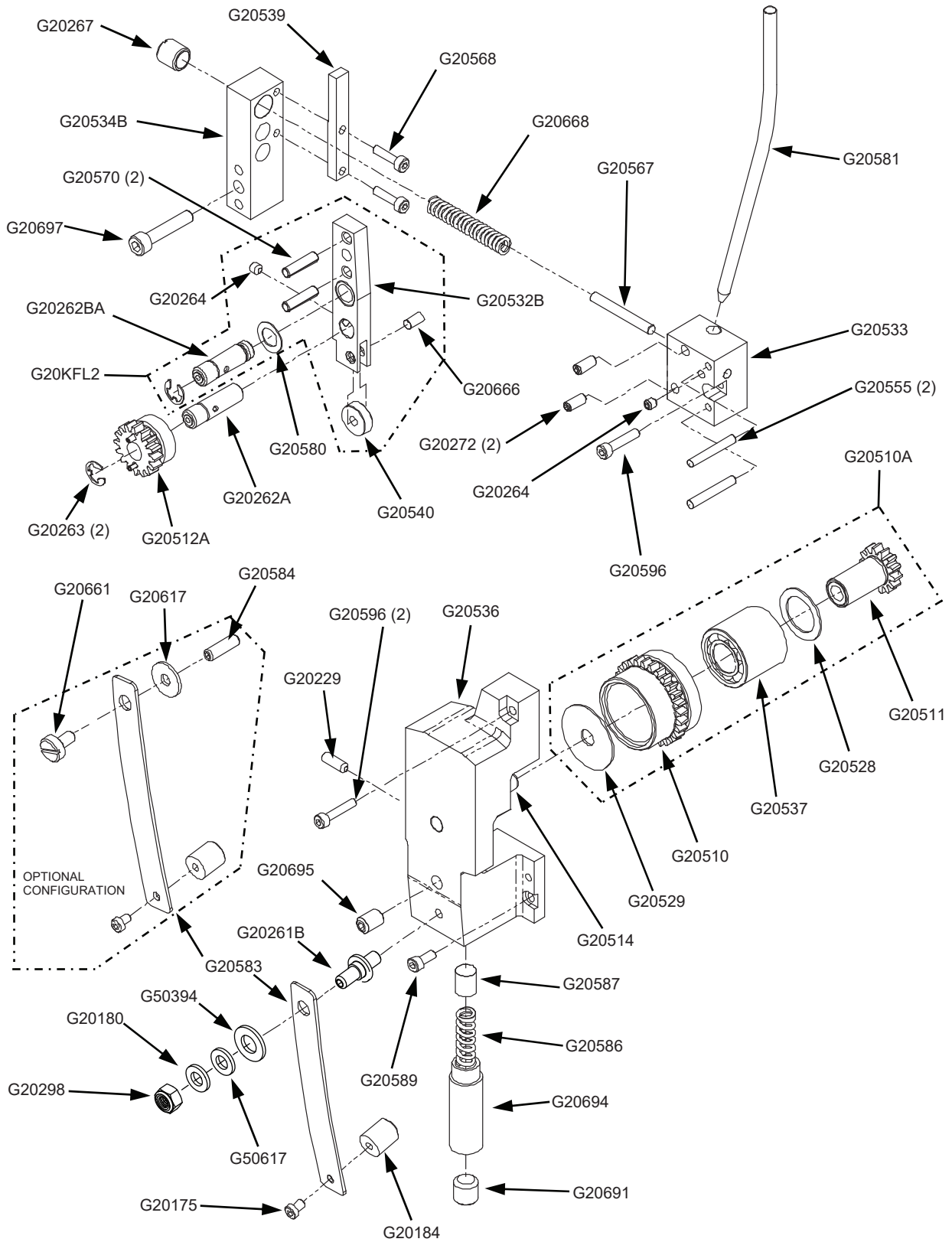
# Bonnet Sub-Assembly



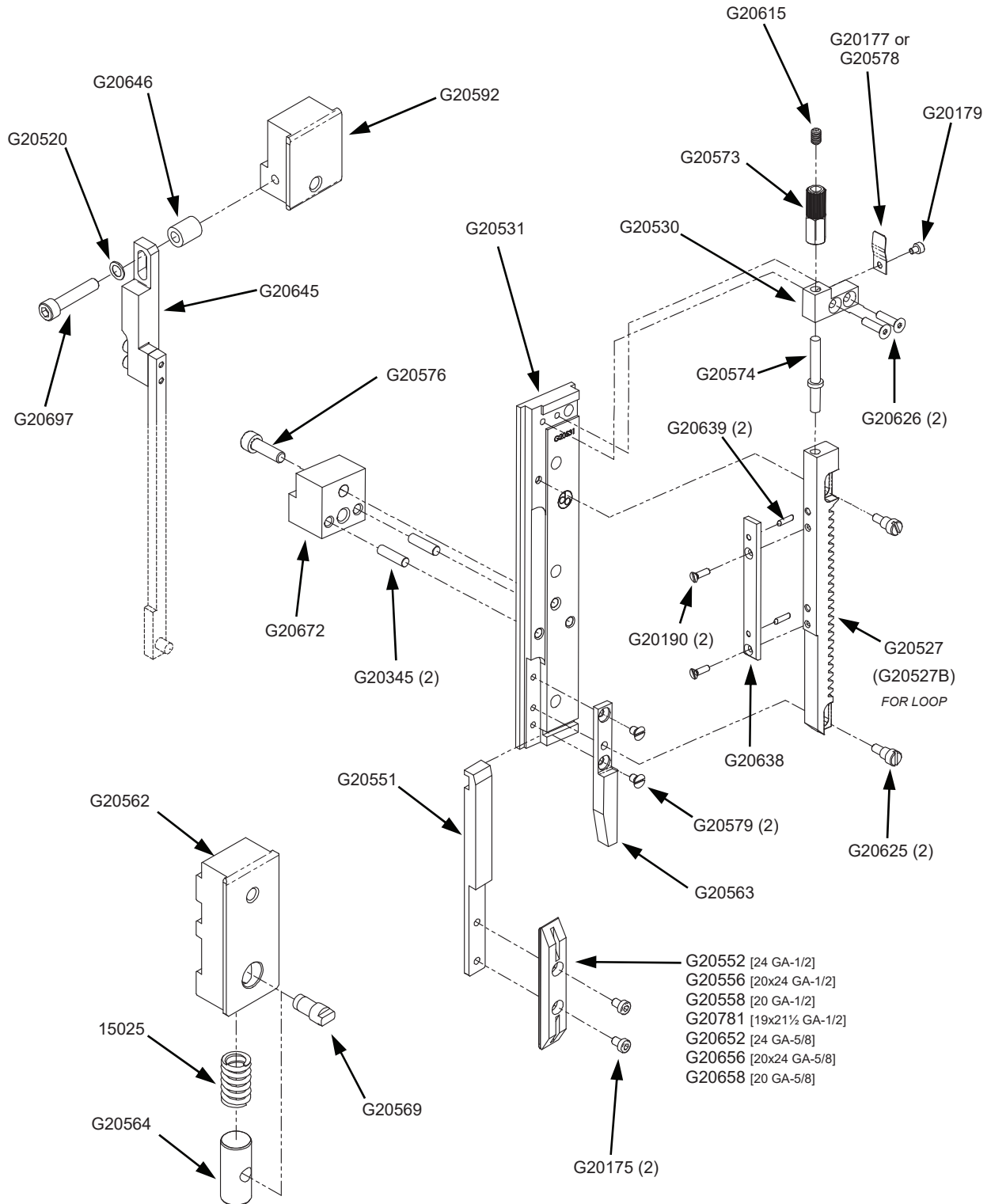
# Bonnet Sub-Assembly



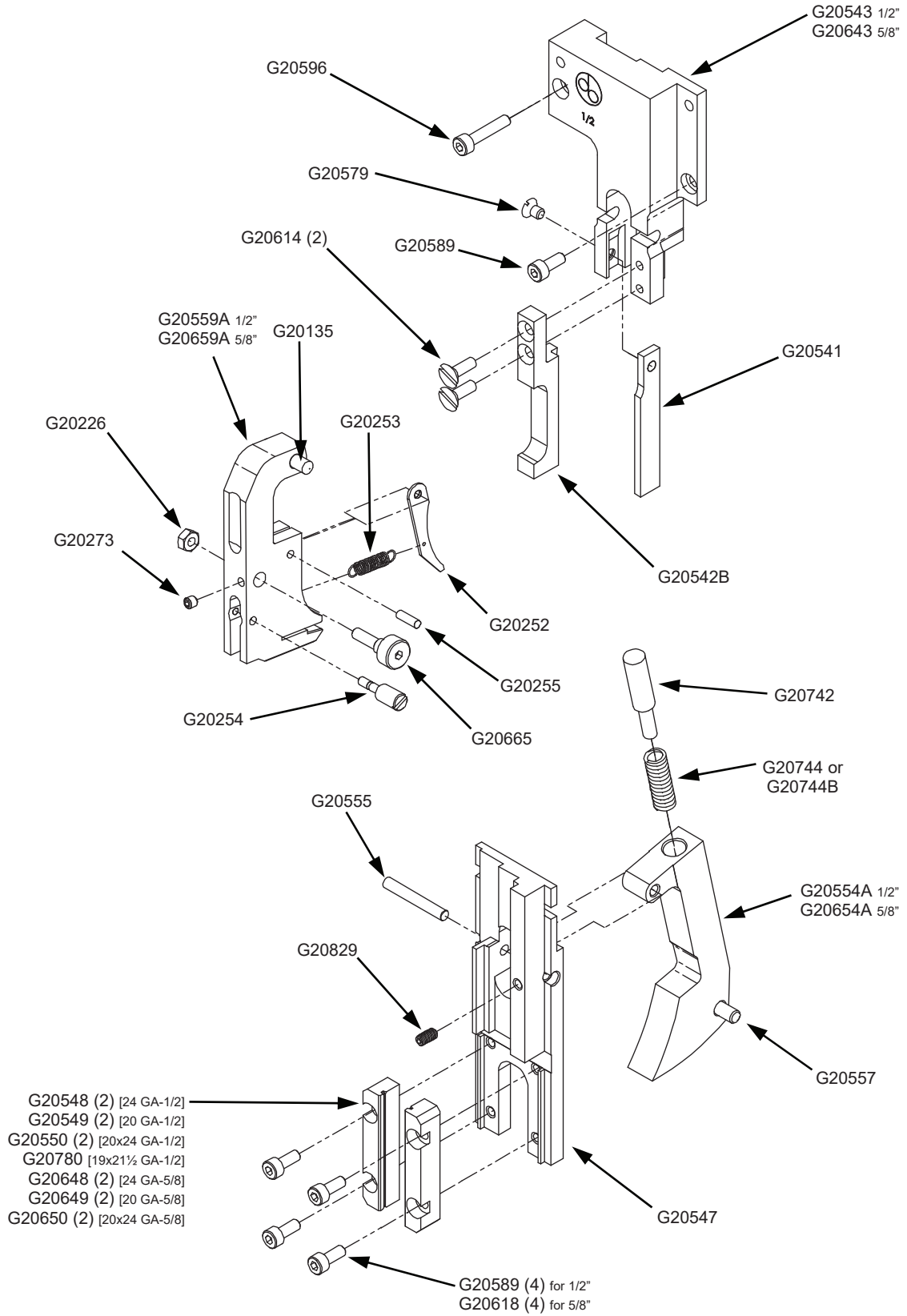
# Feed Lever and Feed Gear Assemblies



# Driving and Feed Slide Assemblies



# Driving and Feed Slide Assemblies

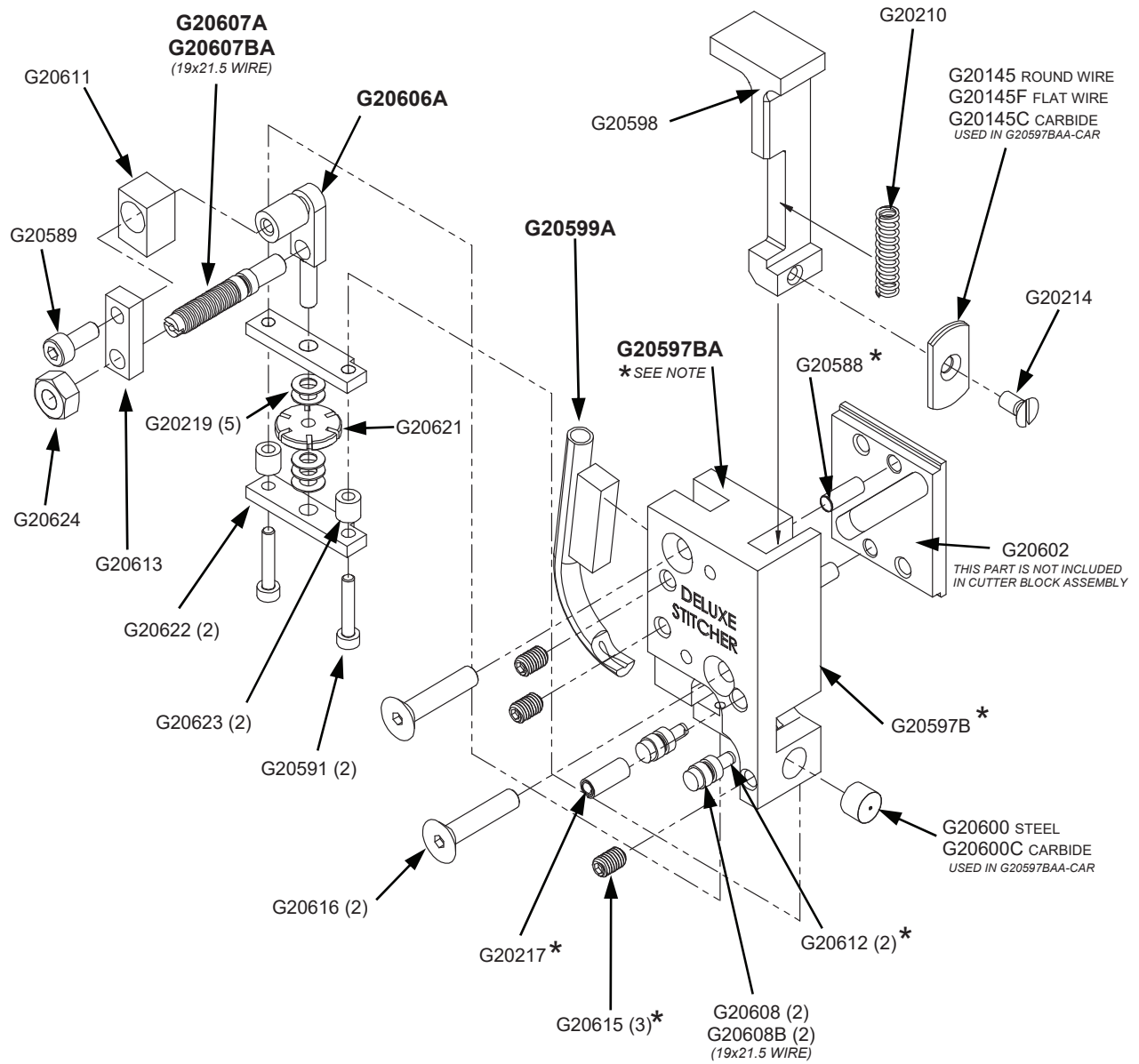




# Cutter Block Assembly

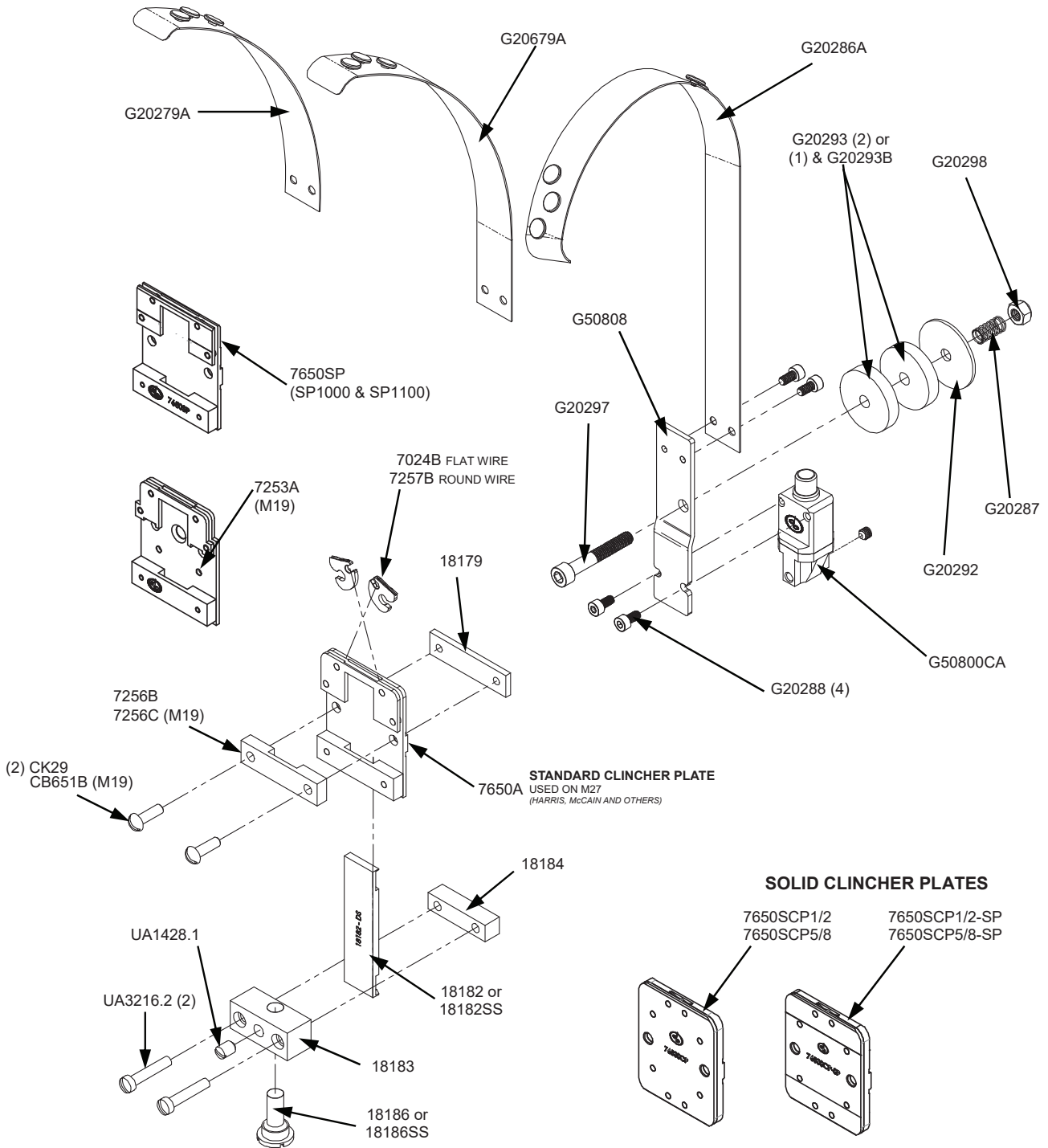
**G20597BAA - CUTTER BOX ASSEMBLY COMPLETE**

**G20597BAA-CAR - CUTTER BOX ASSEMBLY COMPLETE - CARBIDE**

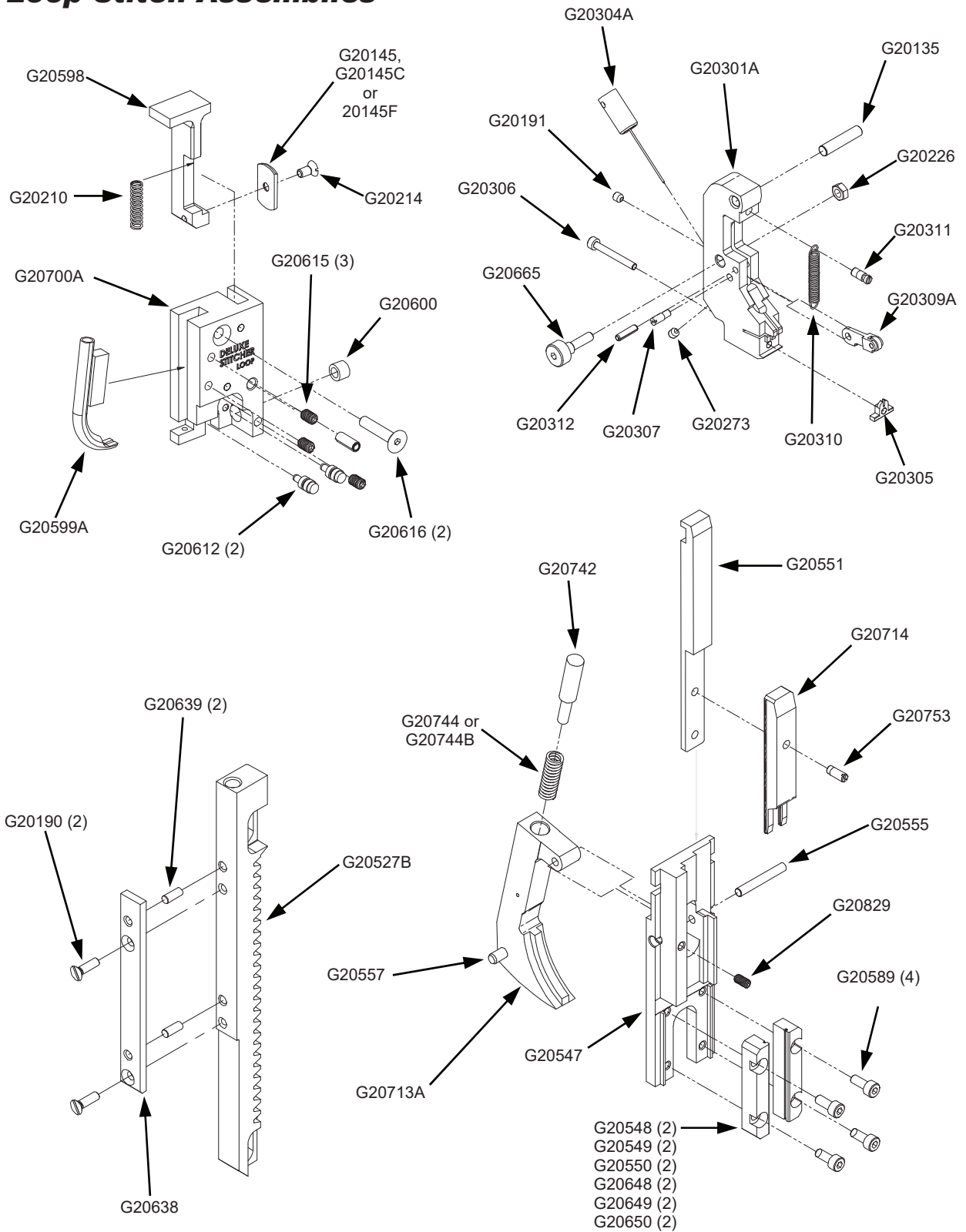


\* PARTS INCLUDED IN G20597BA ASSEMBLY

# Wire Guide Bracket, Spring and Clincher Plate Assemblies



# Loop Stitch Assemblies



## Part | Number Description Cross-Reference

15025	Bender Slide Spring	1	G20255	Hook Pivot Pin	1
18179	Clincher Binder Plate	1	G20262A	Feed Lever Pin Assembly	1
18182	Clincher Slide	1	G20262BA	Feed Lever Pin Assembly	1
18182SS	Clincher Slide-Harris	1	G20263	Feed Lever E-Ring	6
18183	Clincher Slide Adjustment Block	1	G20264	Screw M5 x.8 x 5 SHC	2
18184	Clincher Slide Block Clamp	1	G20267	Feed Lever Spring Bushing	1
18186	Clincher Slide Adjustment Screw	1	G20272	Screw M5 x.8 x 12	2
18186SS	Clincher Slide Adjustment Screw-Harris	1	G20273	Screw, M4 x 0.7 x 4, Nylon	4
7024B	Clincher Point Flat - 1/2	2	G20275	Ball Spring Plunger	1
7253A	Clincher Plate Assembly - 1/2	1	G20287	Wire Oiler Felt Spring	1
7256B	Clincher Slide Retaining Strap	1	G20288	Screw, M4 x.7 x 8 SHC	2
7257B	Clincher Point 1/2 - Round	2	G20292	Wire Oil Felt Washer	1
7650A	Clincher Plate Assembly	1	G20293B	Wire Oiler Felt-Thin	1
7650SCP	Solid Clincher Plate	1	G20297	Screw, M6 x 1x 40 SHC	1
CB651B	Screw, #10-32 x 3/8", Fillister Head	2	G20298	Nylock Lock Nut, M6 x 1	1
G20135	Dowel Pin, M5 x 24	1	G20301A	Wire Holder Assembly - Loop	1
G20145	Moving Cutter—Round Wire	1	G20304A	Wire Hook Assembly - Loop	1
G20145C	Moving Cutter - Carbide	1	G20305	Anvil - Loop	1
G20145F	Moving Cutter - Flat Wire	1	G20306	Screw M3 x 0.5 x 25	1
G20167	Screw, M4 x 0.7 x 10 FHC	2	G20307B	Lever Pivot Screw - Loop	1
G20175	Screw M4 x 0.7 x 6 SHC	3	G20309A	Wire Holder Lever Assembly - Loop	1
G20177	Feed Rack Adj. Knob Pointer	1	G20310	Wire Holder Roller Lever Spring	1
G20179	Screw M3 x 0.5 x 4, SHC	1	G20311	Spring Anchor Screw	1
G20184	Wire Holder Retaining Spring Foot	1	G20312	Spirol Pin, M3 x 12	1
G20190	Screw M3 x.5 x 10- FHM- Slotted	4	G20341	Rear Mounting Bolt	2
G20191	Screw M4 x 0.7 x 8	1	G20345	Dowel Pin, M5 x 20	2
G20210	Cutter Operating Spring	1	G20360	Hex Key Wrench, 3.0mm	1
G20214	Screw M4 x 0.7 x 8 FHM	5	G20361	Hex Key Wrench 2.5mm	1
G20217	Spirol Pin M5 x 12	1	G20362	Clamp Wrench 5.0mm	1
G20219	Wire Straightener Disc Spring	4	G20364	Open End Wrench	1
G20226	Hex Nut M4 x 0.7	1	G20374	Hex Key Wrench 2.0mm	1
G20229	Set Screw M6 x 1.0 x 12, Nylon	7	G20376	Rear Clamp Pin	2
G20236	Tube Pivot Screw	1	G20500	Bonnet – G20	1
G20244	Tube Pivot Clip	1	G20500A	Bonnet Assembly, G20	1
G20247	Screw M4 x 0.7 x 6, Nylon	1	G20501	Bonnet Clamp Block – Horizontal	2
G20252	Wire Hook	1	G20502	Bonnet Clamp Block – Vertical	2
G20253	Wire Hook Spring	1	G20503	Bonnet Clamp Eccentric-Short	1
G20254	Wire Hook Spring Screw, Nylon	1			

## Part / Number Description Cross-Reference

G20510	Large Feed Gear	1	G20554A	Supporter Assembly-1/2"	1
G20510A	Large Feed Gear Assembly	1	G20555	Dowel Pin, M4 x 30	1
G20511	Feed Pinion	1	G20556	Driver, 1/2" - 20 x 24 Wire	1
G20512A	Small Feed Gear Assembly	1	G20557	Dowel Pin, M5 x 28	1
G20513	Supporter Guide Plate	2	G20558	Driver, 1/2" - 20 Wire	1
G20514	Feed Gear Shaft	1	G20559BA	Wire Holder Assembly—1/2"	1
G20515	Dowel Pin, M6 x 14	1	G20562	Bender Slide	1
G20519	Feed Release Cam	1	G20563	Cutter Operating Lever Cam	1
G20520	Ribbed Lock Washer-M6	2	G20564	Bender Slide Plunger	1
G20521	Feed Release Cam Shaft	1	G20567	Dowel Pin, M5 x 40	1
G20522	Screw, M6 x 1.0 x 5, Nylon	3	G20568	Screw, M4 x 0.7 x 16	2
G20523	Feed Slide Wear Plug	2	G20569	Bender Slide Pin	1
G20524	Bonnet Clamp Eccentric-Standard	2	G20570	Spirol Pin. M5 x 20	2
G20526	Dowel Pin 1/4" x 2	1	G20571	Cutter Lever Bearing Pin	2
G20527	Feed Rack	1	G20573	Feed Rack Adjustment Knob	1
G20527B	Feed Rack—Loop	1	G20574	Feed Rack Adjustment	1
G20527BA	Feed Rack Assembly - Loop	1	G20575	Bearing M5 x 5 x 11	2
G20528	Feed Pinion Washer	1	G20576	Screw, M6 1.0 x 20	1
G20529	Feed Gear Washer	1	G20578	Rack Adjustment Knob Detent	1
G20530	Feed Rack Block	1	G20579	Screw, M4 x 0.7 x 6	3
G20531	Feed Slide	1	G20580	Shim Washer	2
G20532B	Feed Lever	1	G20581	Upper Wire Tube	1
G20533	Feed Lever Spring Block	1	G20582	Feed Gear Shaft Plate	1
G20534B	Feed Lever Extension	1	G20583	Wire Holder Retaining Spring	1
G20536	Feed Gear Bracket	1	G20584	Screw M6 x 1.0 x 20	1
G20537	Feed Gear Clutch	1	G20586	Feed Gear Friction Spring	1
G20539	Feed Lever Cam Bar	1	G20587	Feed Gear Friction Plug	1
G20540	Feed Lever Bearing	1	G20588	Dowel Pin, M4 x 12	4
G20541	Wire Guide Bar—Left	1	G20589	Screw, M4 x 0.7 x 10, Nylon	13
G20542B	Wire Guide Bar—Right	1	G20591	Screw, M3 x 0.5 x 16	2
G20543	Wire Holder Pivot Block-1/2"	1	G20592	Adjustment Block	1
G20544A	Middle Wire Tube Assembly	1	G20596	Screw, M4 x 0.7 x 20	6
G20547	Bender Bar	1	G20597BA	Cutter Block Assembly	1
G20548	Bender Inserts-1/2" - 24 Wire	2	G20598	Cutter Slide	1
G20549	Bender Inserts-1/2" - 20 Wire	2	G20599A	Lower Wire Tube Assembly	1
G20550	Bender Inserts-1/2" - 20 x 24 Wire	2	G20600	Fixed Wire Cutter	1
G20551	Driver Bar	1	G20600C	Fixed Wire Cutter - Carbide	1
G20552	Driver, 1/2" - 24 Wire	1	G20602	Cutter Block Slide Plate	1

## Part / Number Description Cross-Reference

G20603	Cutter Block Guide Plate	1	G20549	Bender Inserts-5/8" - 20 Wire	2
G20604	Cutter Block Rail - Upper	1	G20550	Bender Inserts-5/8" - 20 x 24 Wire	2
G20605	Cutter Block Rail - Lower	1	G20654A	Supporter Assembly-5/8	1
G20606A	Straightener Slide Assembly	1	G20659BA	Wire Holder Assembly—5/8"	1
G20607BA	Wire Roller Assembly 19x21-1/2	1	G20661	Wire Holder Retaining Spring Screw	1
G20608	Wire Roller	2	G20665	Wire Holder Eccentric Screw	1
G20608B	Wire Roller 19x21-1/2	2	G20666	Feed Lever Bearing Pin	1
G20611	Wire Guide Block	1	G20667	Screw M4 x 0.7 x 10	1
G20612	Wire Roller Stud	2	G20668	Feed Lever Spring	1
G20613	Straightener Arm	1	G20672	Feed Slide Block	1
G20614	Screw M4 x 0.7 x 12	2	G20681	Screw, M6 x 1.0 x 5, Nylon	1
G20615	Screw M5 x 0.8 x 8	4	G20691	Screw, M12 x 1.75 x 12	1
G20616	Screw M5 x 0.8 x 25	2	G20694	Feed Gear Friction Bushing	1
G20617	Washer, M6 x 18 x 1.6	1-3	G20695	Screw, M8 x 1.25 x 12, Flat Point	1
G20618	Bender Screw—5/8	4	G20697	Screw, M6 x 1.0 x 30	2
G20619	Screw, M4 x 0.7 x 25	2	G20700A	Cutter Block Assembly - Loop	1
G20621	Straightener Nut	1	G20700AA	Cutter Block Assy. Complete - Loop	1
G20622	Straightener Nut Plate	2	G20713A	Supporter Assembly - Loop	1
G20623	Straightener Nut Spacer	2	G20714	Driver - Loop	1
G20624	Hex Nut M6 x 0.75	1	G20742	Supporter Plunger	1
G20625	Screw, Feed Rack Guide, Nylon	2	G20744	Supporter Spring	1
G20626	Screw, M4 x 0.7 x 16, Nylon	2	G20744B	Supporter Spring - Light	1
G20628A	Adjustment Handle Assembly	1	G20753	Driver Retaining Screw	1
G20630A	Cutter Operating Lever Assy.	1	G20768	Yellow Vinyl Cap	1
G20631	Cutter Operating Lever Pivot Pin	1	G20780	Bender Insert 1/2 - 19x21-1/2 Wire	2
G20634	Screw, M3 x 0.5 x 8	1	G20781	Driver 1/2 - 19x21-1/2 Wire	1
G20638	Feed Rack Cam Plate	1	G20825A	Extended Cutter Adj. Spacer Assy.	1
G20639	Dowel Pin, M3 x 8	3	G20829	Screw M4 x 0.7 x 8	1
G20640	Washer, M8 x 14 x 0.5	1	G50279A	Wire Guide Spring Assembly - Short	1
G20641	Dowel Pin, M3 x 12	1	G50286A	Wire Guide Spring Assembly - Long	1
G20642	Adjustment Slide - Lower	1	G50679A	Wire Guide Spring Assembly	1
G20643	Wire Holder Pivot Block-5/8"	1	G50800CA	Wire Anti-Back Up Unit	1
G20645	Adjustment Slide - Upper	1	HN1213	Bonnet Stud Nut	1
G20646	Adjustment Slide Connector	1	UA1428.1	Set Screw 1/4-28X1/4	1
G20647	Screw, M3 x 0.5 x 5, Nylon	2	UA3216.4	Screw 10-32x7/8	2
G20548	Bender Inserts-5/8" - 24 Wire	2	CK29	Screw 10-32x5/8	2

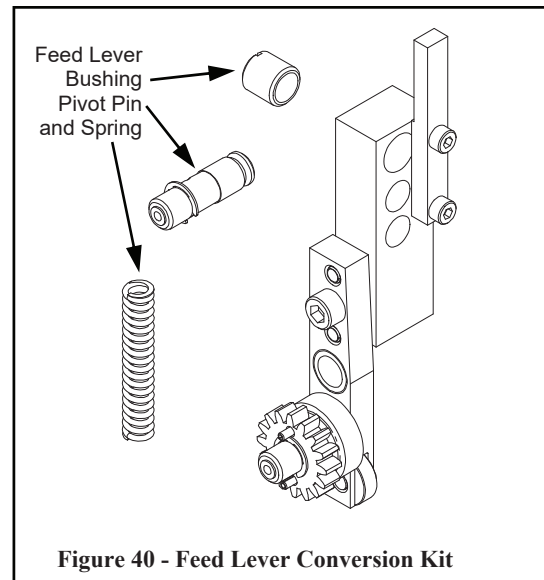
## **Optional Equipment**

In addition to the standard features offered with the G20 Stitcher Head, optional equipment items can be purchased to better accommodate your stitching needs. The following kits can be purchased from your Graphic Arts Representative.

### **G20FLC (Figure 23)**

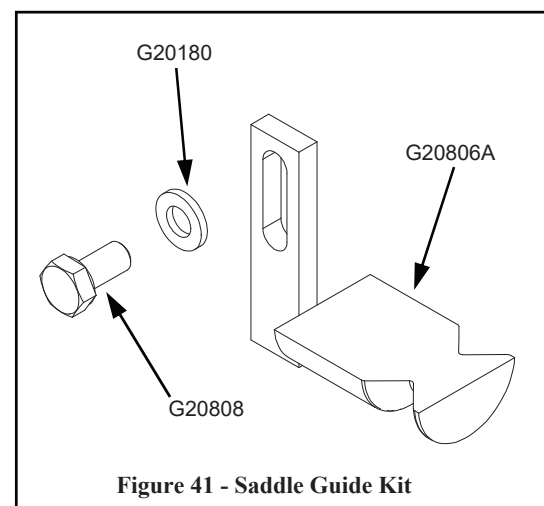
The G20 Feed Lever Conversion Kit converts the Transport/Feed Lever Assembly on your existing Hohner 70/20 Heads to the DeLuxe Stitcher Feed Lever Assembly. The G20FLC offers high quality parts for less money and provides extra durability for a longer life. Included in this Kit are the Feed Lever Assembly and Feed Lever Extension, already assembled, the new Feed Lever Pivot Pin, Feed Lever Spring and Bushing.

Save money on a new head by converting your old Hohner Heads with this Conversion Kit.



### **G20K1 (Figure 24)**

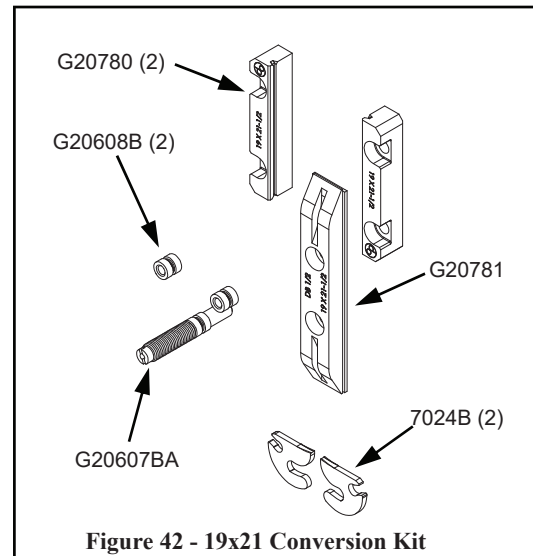
The G20 Saddle Guide Kit attaches to the outside of the G20 Head with a Hex Head Cap Screw, which is included. This Guide centers the stock under the Stitcher head for better and more accurate binding performance.



## **G20K1921 (Figure 25)**

The G20 19x21 Conversion Kit allows existing G20 Stitcher Heads to accommodate 19x21 gauge flat wire. 19x21 gauge flat wire allows your M19G20, M27G20 and other collating systems to consistently stitch at a higher capacity through thicker stock.

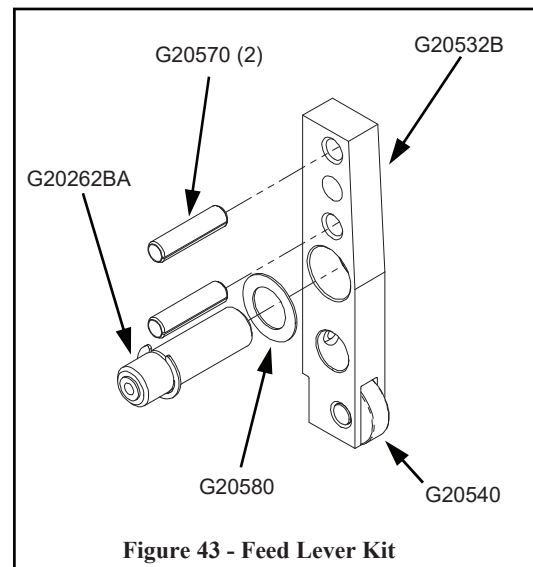
The parts included in this Kit have to only replace their counterparts on the existing head. Complete instructions are included with each Conversion Kit.



## **G20KFL2 (Figure 26)**

The G20 Feed Lever Kit is intended for use on Stitchers using DeLuxe Stitcher G20 Stitching Heads. The G20KFL2 includes one Feed Lever Pin Assembly, one Feed Lever E-Ring, one Feed Lever, one Feed Lever Bearing, two Spirol Pins, two Shim Washers and one Feed Lever Bearing Pin.

Since variations of the G20 Feed Gear were manufactured in the past, the G20KFL2 was created to ensure replacement parts are always compatible.



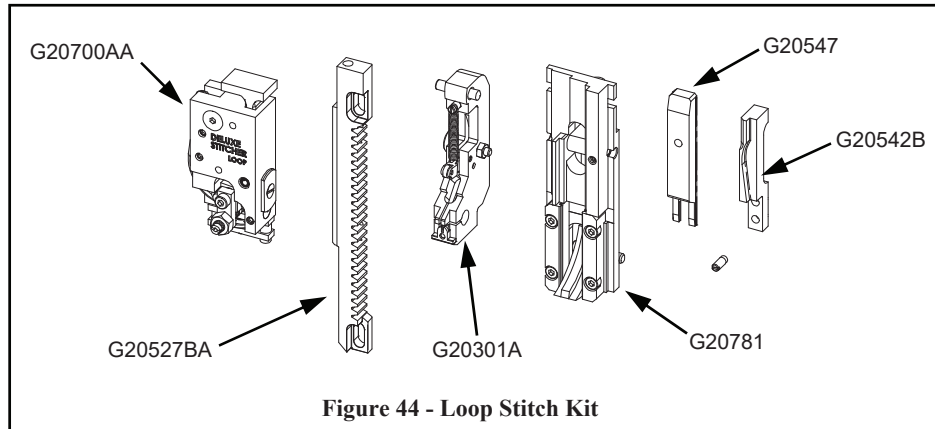
## **G20KG**

The G20 Feed Gear Grease Kit assists in the regular cleaning and maintenance performed on the G20 Stitcher Head and its component parts. See the Maintenance section, on page 21 of this manual, for more information. Be sure to follow the instructions carefully and always use the correct grease to repack the Gear.



## **G20KL (Figure 27)**

The standard G20 Head can be converted into a 24 or 25 gauge wire loop stitching head by exchanging four complete sub-assemblies and adding a new Driver and Right Wire Guide Bar included in the G20 Loop Stitch Kit. For further instructions and parts diagrams on Loop Stitching, refer to page 46 in this manual.



## **G20KSH & G20KSH230**

The G20KSH Stop Stitch Kit is designed for use with the G20 Series Stitching Heads. It mounts on the existing Stop Stitch Brackets of Harris Saddle Stitchers. The Stop Stitch Kit stops the feeding of wire through the stitching heads by pushing open the Feed Release Handles (thereby stopping the wire feed) when it receives a signal from the calipers of the Stitcher. It is available for standard 115V Harris Saddle Stitchers as well as for 230V models by requesting part number G20KSH230.

## **G20KSM**

This kit is intended for use on McCain Stitchers using DeLuxe G20 Stitching Heads. The G20KSM includes two Stop Stitch Shims and two Screws which assemble to the McCain Saddle Stitcher. This Kit makes use of the components of the Saddle Stitcher itself and is easy to install.

## **G20RPK**

The G20 Repair Kit is a collection of the most common replacement parts for the G20 Head organized in a handy, see-through box. This Kit saves both time and money for the user of the G20 Head.

# **NOTES**

# **NOTES**



*L i m i t e d*

*DeLuxe Stitcher Company* warrants to the original retail purchaser that this product is free from defects in material and workmanship and agrees to repair or replace, at *DeLuxe Stitcher's* option, any defective product within 90 days from the date of purchase. This warranty is not transferable. It covers damage resulting only from defects in material or workmanship and does not cover conditions or malfunctions resulting from normal wear, neglect, abuse or accident.

This warranty is in lieu of all other express warranties. Any warranty of merchantability or fitness for a particular purpose is limited to the duration of this warranty. *DeLuxe Stitcher* shall not be liable for any incidental or consequential damages.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

To obtain warranty service you must return the product, at your expense, together with proof of purchase to an authorized *DeLuxe Stitcher Company* Graphic Arts Dealer.

Always use genuine *DeLuxe Stitcher* parts. When ordering parts, please identify the part number, the part name, the wire size and crown size of your *Stitcher*.

*DeLuxe Stitcher Company, Inc.*  
3747 N. Acorn Lane  
Franklin Park, Illinois 60131  
Phone: 847-455-4400 800-634-0810



*W a r r a n t y*

# REGISTRATION

To better service your wire stitching needs, please take a moment to fill out and return this registration card.

Name : \_\_\_\_\_  
( First ) ( Middle Initial ) ( Last )

Company : \_\_\_\_\_

Street Address : \_\_\_\_\_

City : \_\_\_\_\_ State/Province : \_\_\_\_\_ Zip : \_\_\_\_\_

Country : \_\_\_\_\_

Phone : \_\_\_\_\_ Fax : \_\_\_\_\_ E-mail : \_\_\_\_\_

Machine(s) Purchased : \_\_\_\_\_

Serial Number(s) : \_\_\_\_\_

With Head(s) : \_\_\_\_\_  
( Type/Quantity Purchased )

Serial Number(s) : \_\_\_\_\_

Head(s) Purchased : \_\_\_\_\_

Serial Number(s) : \_\_\_\_\_

Date Received : \_\_\_\_\_

Dealer Name : \_\_\_\_\_

Dealer Street Address : \_\_\_\_\_

City : \_\_\_\_\_ State/Province : \_\_\_\_\_ Zip : \_\_\_\_\_

Country : \_\_\_\_\_

Dealer Phone : \_\_\_\_\_

Other Bindery Products Used : \_\_\_\_\_

## CUSTOMER

## PRODUCT

## DEALER

Please take a moment to fill out the attached card and mail it to DeLuxe Stitcher Company, Inc. In addition, duplicate the information for your records to assist when making further inquiries.

### PRODUCT

Machine(s) Purchased : \_\_\_\_\_

Serial Number(s) : \_\_\_\_\_

With Head(s) : \_\_\_\_\_  
(Type/Quantity Purchased)

Serial Number(s) : \_\_\_\_\_

Head(s) Purchased : \_\_\_\_\_

Serial Number(s) : \_\_\_\_\_

### DELUXE STITCHER GRAPHIC ARTS REPRESENTATIVE

Date Received : \_\_\_\_\_

Dealer Name : \_\_\_\_\_

Dealer Street Address : \_\_\_\_\_

City : \_\_\_\_\_ State/Province : \_\_\_\_\_ Zip : \_\_\_\_\_

Country : \_\_\_\_\_

Dealer Phone : \_\_\_\_\_

Would you like information sent to you about new products that would benefit your company?  Yes  No

## Common Replacement Parts for 112" Crown

Below is a list of the most common wear/replacement parts for the G20 Stitcher Head. This guide should help you when ordering replacement parts. If the part you need is not listed below, please refer to the more detailed parts list on pages 48-50 in this manual.

<u>Description</u>	<u>Item Number</u>
Moving Wire Cutter-Flat Wire	G20145F
Screw M4x.7x6, w/ Nylon Patch	G20175
Screw, M3x0.5x6-Nylon	G20190
Cutter Operating Spring	G20210
Screw, M4x0.7x8	G20214
Wire Hook	G20252
Wire Hook Spring	G20253
Wire Hook Spring Screw, Nylon	G20254
Feed Lever Pin Assembly	G20262A
Feed Lever Pin Assy. (w/V-Groove)	G20262BA
Feed Lever E-ring	G20263
Feed Lever Bearing	G20540
Driver 1/2 - 20x24 Gauge	G20556
Washer Shim	G20580
Feed Gear Friction Spring	G20586
Feed Gear Friction Plug	G20587
Fixed Wire Cutter	G20600
Feed Rack Cam Plate	G20638
Dowel Pin	G20639
Feed Lever Bearing Pin	G20666
Feed Lever Spring	G20668
Screw, M6x1.0x5-Nylon	G20681
Supporter Spring	G20744



**DELUXE STITCHER**  
**COMPANY INC.**  
 3747 N. Acorn Lane  
 Franklin Park, IL 60131  
 Attn: Customer Service

\* You can purchase the G20RPK which includes these and other common replacement parts





COMPANY INC.

**ISP** **Stitching & Bindery Products**

3747 Acorn Lane • Franklin Park • Illinois 60131

Phone: 847-455-4400 • 800-634-0810

Fax: 847-455-4900 • 800-417-9251

<https://www.deluxestitcher.com>

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