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# Part Replacement Instruction

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**Product:** EMC 1M, EMC 1MTL, EMC 6M, EMC 6ML, EMC 6MTL, EMC 6/4M,  
& EMC 6/4MTL

**Part Replaced:** Driver Bar/Reciprocator

**Required Tools:**

Flat Blade Screw Driver  
3mm Allen Wrench  
2.5mm Allen Wrench  
2mm Allen Wrench

**Procedure:**

NOTE: While the Drive Bar and Reciprocator used in the single needle and six needle peripherals is the same, the procedure for replacing them is different. This procedure is written in two parts to reflect this fact. Part One will deal with the single needle peripherals, and Part Two will cover the six needle models.

## **Part One: Single Needle**

1. Turn the peripheral off and unplug the Power Cord from the wall socket.
2. Unthread the head.
3. Remove the Thread Spool Saddle from the Head.
4. Unplug the Thread Break Cable (Figure 1-A) from the Needle Case.

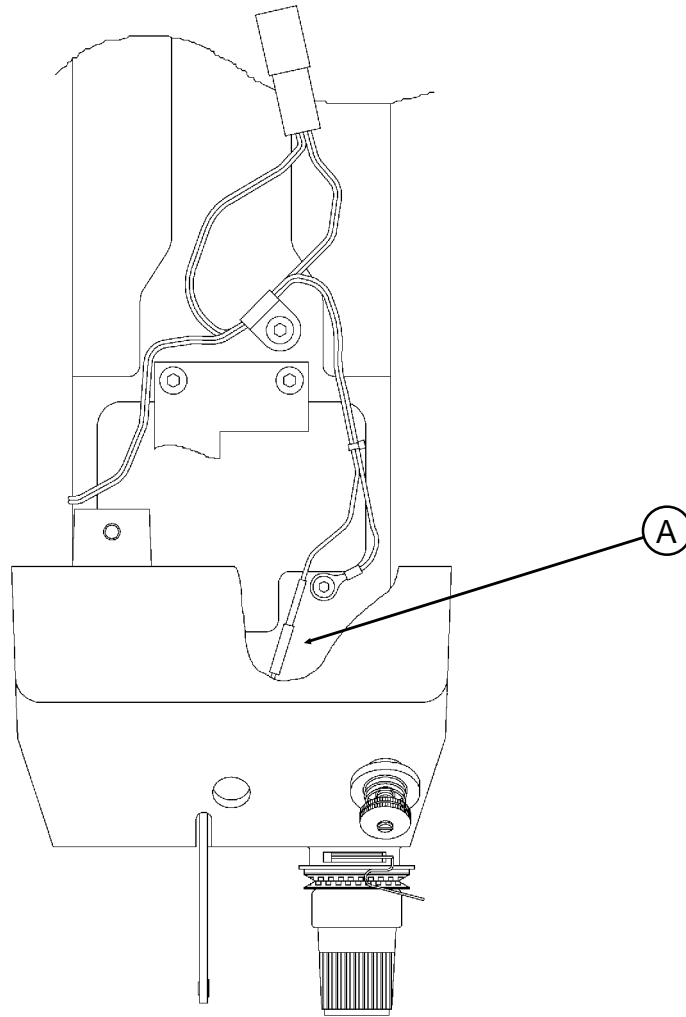


Figure 1

5. Slide the Cover Plate (Figure 2-B) off of the front of the Needle Case.

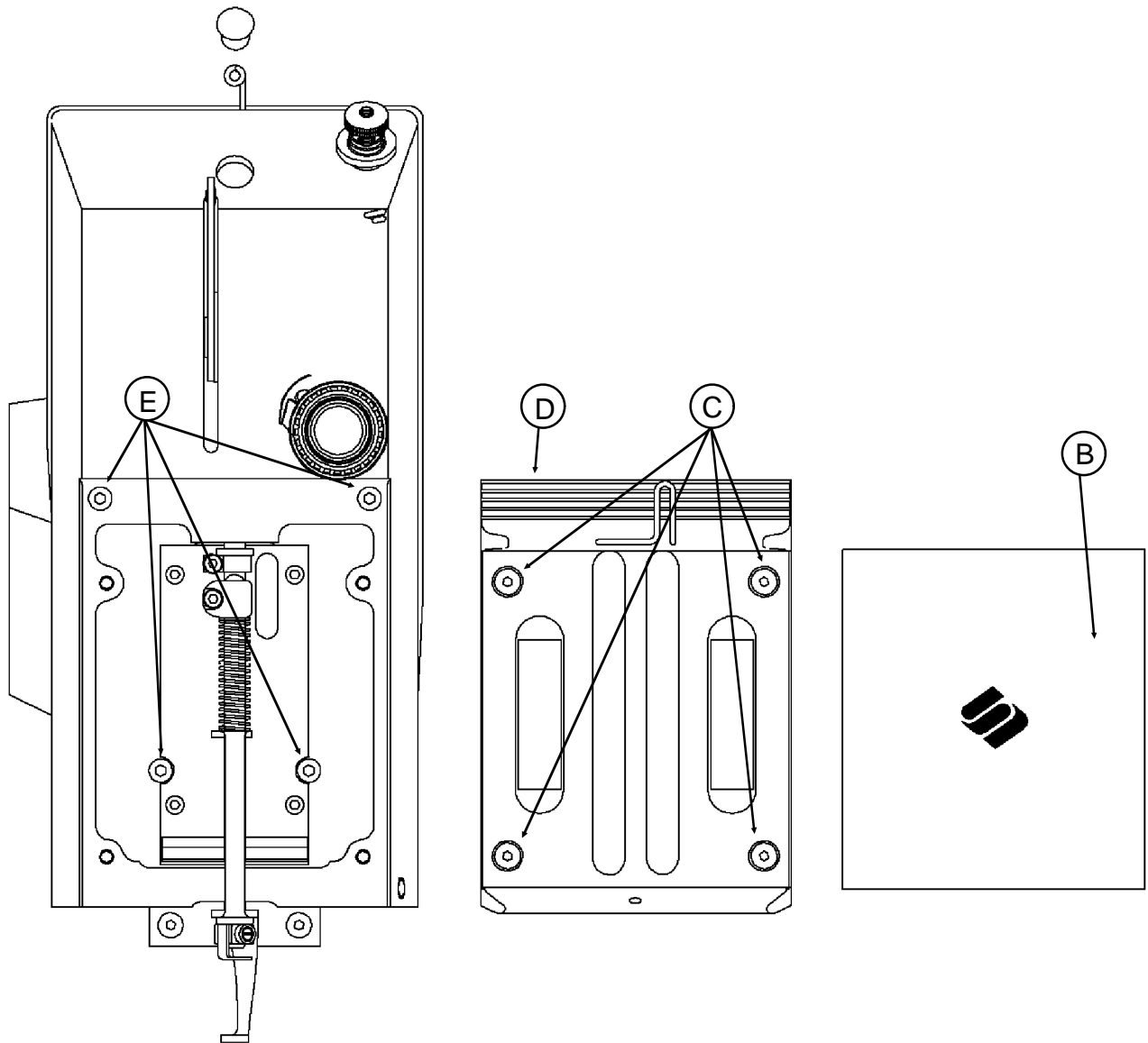


Figure 2

6. Remove the four Retaining Screws (Figure 2-C) holding the Needle Case Cover (Figure 2-D) on the Needle Case.
7. Remove the four Retaining Screws (Figure 2-E) holding the Needle Case on the front of the Head.
8. Remove the Needle Case from the Head.

9. Loosen the Set Screw (Figure 3-F) holding the Take-Up Lever Assembly (Figure 3-G) in place.
10. Slide the Take-Up Lever to the right and out of the Head.

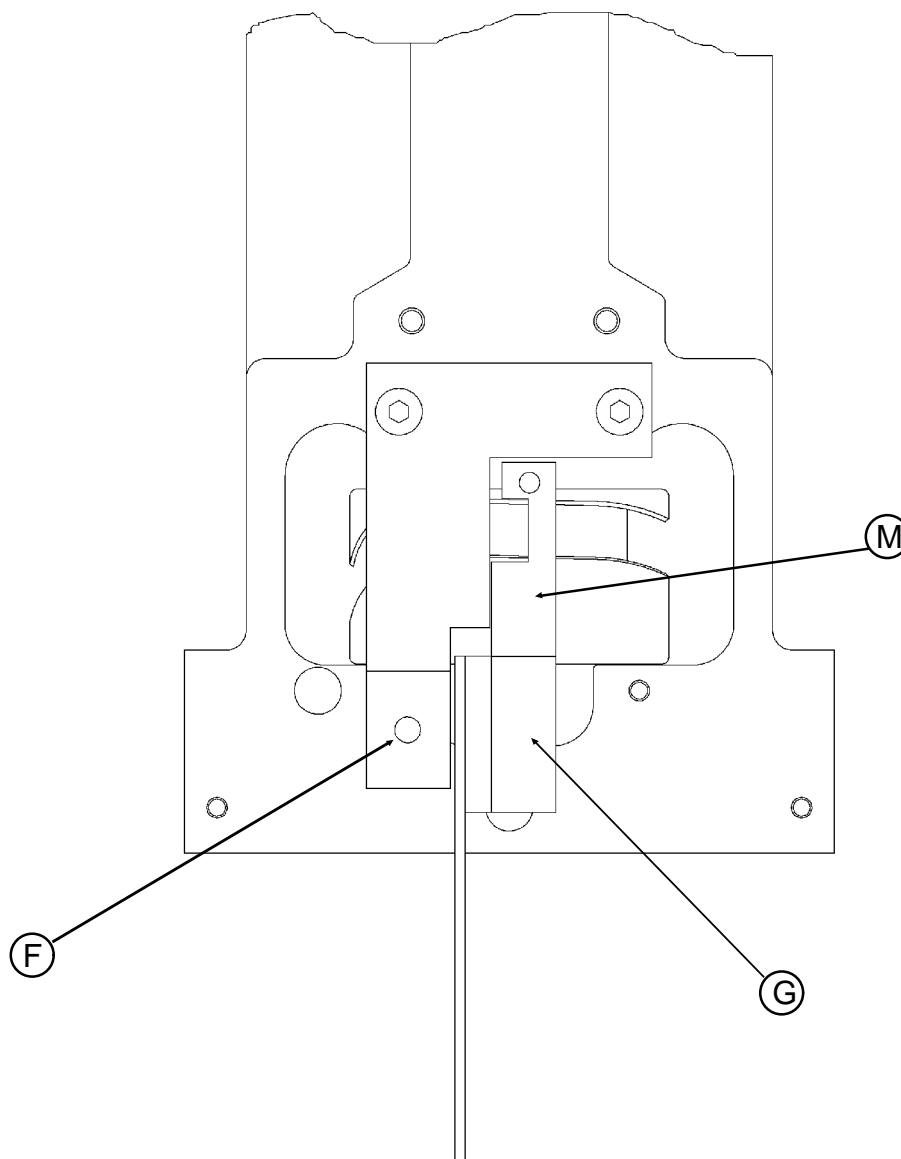


Figure 3

11. Remove the "C" Clip (Figure 4-H ) from the bottom of the Driver Bar (Figure 4-I).

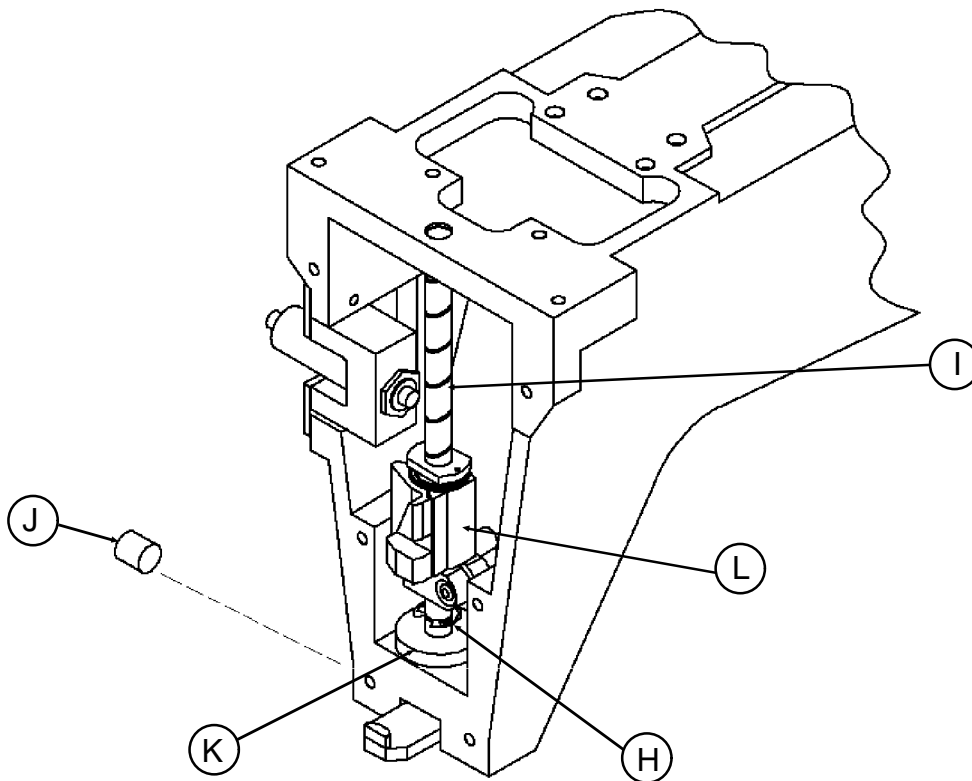


Figure 4

12. Loosen the Driver Bar Set Screw (Figure 4-J).

13. Slide the Driver Bar up and out of the Head, taking care not to drop the Roller Bearing (Figure 4-K) in the bottom of the Head Cavity.

NOTE: If you are only replacing the Driver Bar, go to step 17.

14. Pull the old Reciprocator (Figure 4-L) out of the Head and discard it.

15. Place a drop of oil on the silver stud on the rear of the new Reciprocator.

16. Slide the new Reciprocator into the Head, making sure that it is oriented properly and that the stud on the rear of the Reciprocator slides into the Connecting Rod inside the Head.

17. Place a few drops of oil on the Drive Bar.

18. Slide the Driver Bar into place, using the following order of events.
  - A. The flat on the bottom of the Drive Bar should face to the left.
  - B. Through the top of the Head.
  - C. Through the Reciprocator.
  - D. Through the Roller Bearing.
  - E. Into the lower hole.
19. Reinstall the "C" Clip removed in step 11.
20. Make sure that the Drive Bar is as far down as it will go, then tighten the Set Screw loosened in step 12.
21. Plug the Power Cord into the wall socket and turn the peripheral on.
22. After the peripheral has downloaded, go to Head-Up.
23. Slide the Take-Up Lever Assembly into place, making sure that the first (Top) tooth of the Drive Gear (Figure 3-M) is engaged in the fifth valley (from the Bottom) of the Take-Up Lever Gear.
24. Make sure that the Take-Up Lever Assembly is fully seated, then tighten the Sew Screw loosened in step 9.
25. Turn the peripheral off.
26. Replace the Needle Case and secure it with the Retaining Screws removed in step 7.
26. Replace the Needle Case Cover and secure it with the Retaining Screws removed in step 6.
27. Replace the Cover Plate.
28. Plug the Thread Break Cable into the Needle Case.
29. Replace the Thread Spool Saddle.
30. Turn the peripheral on, and thread the Head.
31. Perform a test sew out.

END OF PROCEDURE

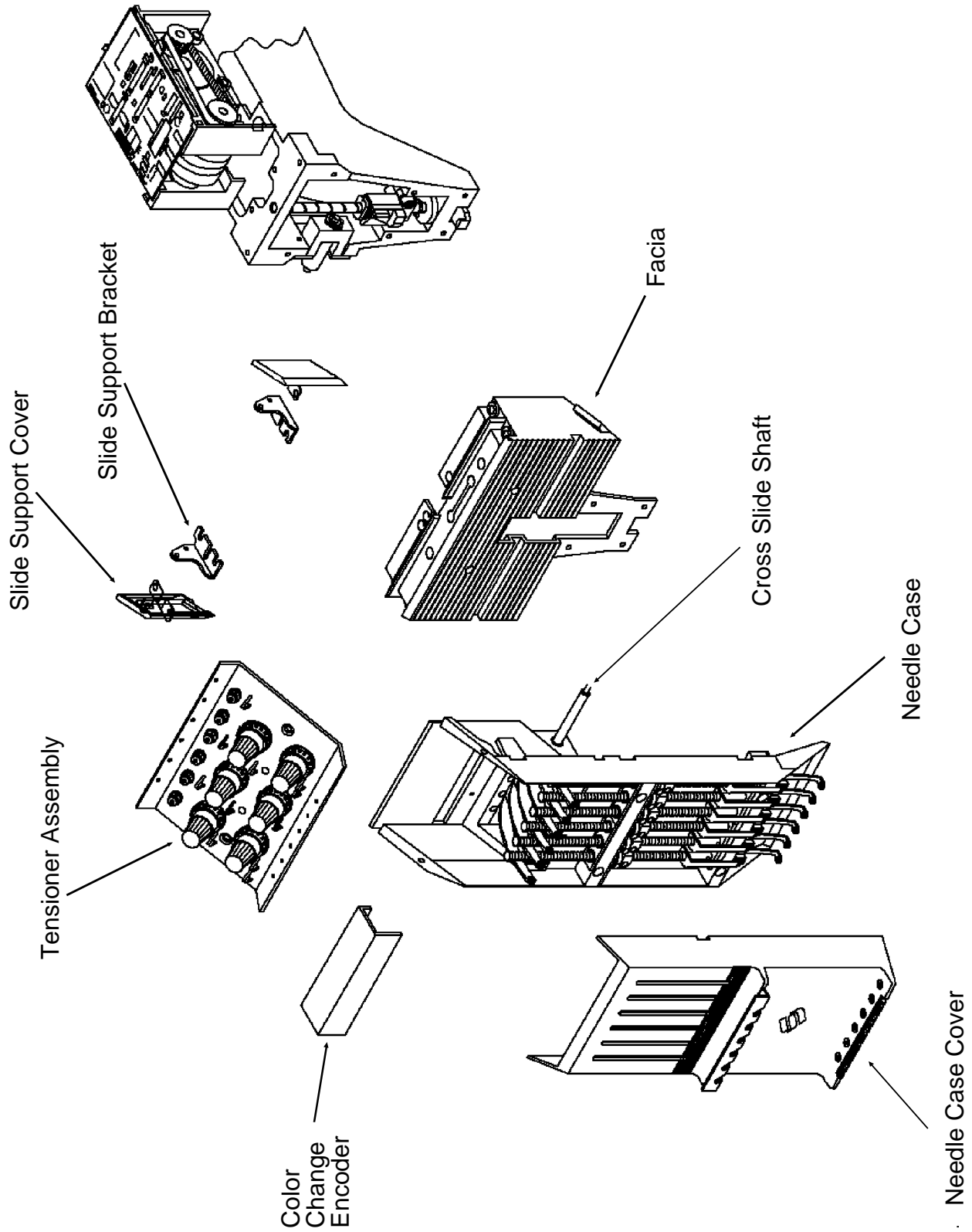


Figure 5

## **Part Two: Six Needle**

NOTE: The components and assemblies referred to in steps 4 through 12 can be found on Figure 5.

1. Turn the peripheral off and unplug the Power Cord from the wall socket.
2. Unthread the head.
3. Remove the Thread Spool Saddle from the Head.
4. Remove the two Retaining Screws holding the Tensioner Assembly on the Needle Case.
5. Slightly lift the Tensioner Assembly, unplug the flat blue Ribbon Cable from the bottom of the Tensioner Assembly, and remove the Tensioner Assembly from the Head.
6. Remove the Needle Case Cover from the front of the Needle Case.
7. Remove the two Retaining Screws holding the Color Change Encoder in the Needle Case, and remove the Encoder.
8. Remove the two Retaining Screws holding the left Slide Support Cover and Slide Support Bracket.
9. Remove the Slide Support Cover and Bracket.

NOTE: There are two small Spacers on the right end of the Cross Slide Shaft in some peripherals. You must make sure that these Spacers are in place when reassembling the unit.

10. Slide the Cross Slide Shaft to the left enough to disengage it from the right Slide Support Bracket and Cover.
11. Remove the Needle Case from the Head.
  - A. Lift up slightly on the Needle Case.
  - B. Rotate the top of the Needle Case forward.
  - C. Pull the Needle Case up and away from the Head.
12. Remove the Facia from the Head.
  - A. Remove the four small Retaining Screws from the top of the Facia.
  - B. Remove the six large Retaining Screws from the front of the Facia.
  - C. Pull the Facia away from the Head.
13. Remove the "C" Clip (Figure 4-H) from the bottom of the Driver Bar (Figure 4-I).
14. Loosen the Driver Bar Set Screw (Figure 4-J).

15. Slide the Driver Bar up and out of the Head, taking care not to drop the Roller Bearing (Figure 4-K) in the bottom of the Head Cavity.

NOTE: If you are only replacing the Driver Bar, go to step 19.

16. Pull the old Reciprocator (Figure 4-L) out of the Head and discard it.
17. Place a drop of oil on the silver stud on the rear of the new Reciprocator.
18. Slide the new Reciprocator into the Head, making sure that it is oriented properly and that the stud on the rear of the Reciprocator slides into the Connecting Rod inside the Head.
19. Place a few drops of oil on the Drive Bar.
20. Slide the Driver Bar into place, using the following order of events.
  - A. The flat on the bottom of the Drive Bar should face to the left.
  - B. Through the top of the Head.
  - C. Through the Reciprocator.
  - D. Through the Roller Bearing.
  - E. Into the lower hole.
21. Reinstall the "C" Clip removed in step 13.
22. Make sure that the Drive Bar is as far down as it will go, then tighten the Set Screw loosened in step 14.
23. Place the Facia in position on the front of the Head.
24. Loosely install the Retaining Screws removed in step 12.
25. Tighten the Facia Retaining Screws in the order shown in Figure 6.

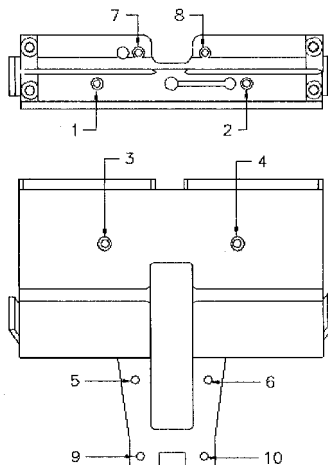


Figure 6

26. Plug the Power Cord into the wall socket and turn the peripheral on.
27. After the peripheral has downloaded, go to Head-Up.
28. Replace the Needle Case on the front of the Head.
  - A. With the top of the Needle Case held at a slight outward angle, place the Lower Guide Bar into the Guide Bar Retainer (Figure ) on the bottom of the Head.
  - B. Rotate the top of the Needle Case up and into position.
  - C. If the Take-Up Lever that is engaged with the Drive Gear is out of position (not level with the rest of the Take-Up Levers), lift up slightly on the Needle Case and move the Lever into the correct place.
29. Slide the Cross Slide Shaft to the right so that it is in place in the right Slide Support Bracket.
30. Replace the left Slide Support Bracket and Cover and secure them with the Retaining Screws removed in step 8.
31. Turn the peripheral off.
32. Route the flat blue Ribbon Cable (from the Color Change Board) through the slot in the top of the Needle Case.
33. Replace the Color Change Encoder and secure it with the two Retaining Screws removed in step 7.
34. Plug the blue Ribbon Cable into the Receptacle on the bottom of the Tensioner Assembly.
35. Replace the Tensioner Assembly and secure it with the two Retaining Screws removed in step 4.
36. Replace the Thread Spool Saddle on the Head.
37. Turn the peripheral on and thread the Head.
38. Perform a test sew out.

END OF PROCEDURE