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# Part Replacement Instruction

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**Product:** SUPERSTAR 1 & 2 and STARLET 1 & 2

**Part Replaced:** Aircraft Cable Assembly

**Required Tools:**

#2 Phillips Screw Driver  
Slotted Screw Driver  
5/64" Allen Wrench  
11/32" Box End Wrench  
Adjustable Wrench  
Needle Nose Pliers  
1" Turnbuckle with 8 x 32 thread  
Spring Scale (Good to 25 lbs.)  
Loctite 222 (Red)  
Roll of 1" wide Masking Tape

**Procedure:**

NOTE: This procedure is applicable to both the single and double-head SUPERSTAR and STARLET embroidery machines. While the location of the X Motor and the length of the Cable will vary between these different machines, the procedure for replacing and adjusting each is the same. We recommend that you read through the entire procedure before beginning, to gain a thorough understanding of what is required.

1. Turn the machine off and unplug the Power Cord from the wall socket.
2. Unscrew the Locking Screws from the front of the left and right Side Covers and raise the Side Covers.

3. For single-head machines, go to the next step. For double-head machines, remove the Center Cover, as described below:

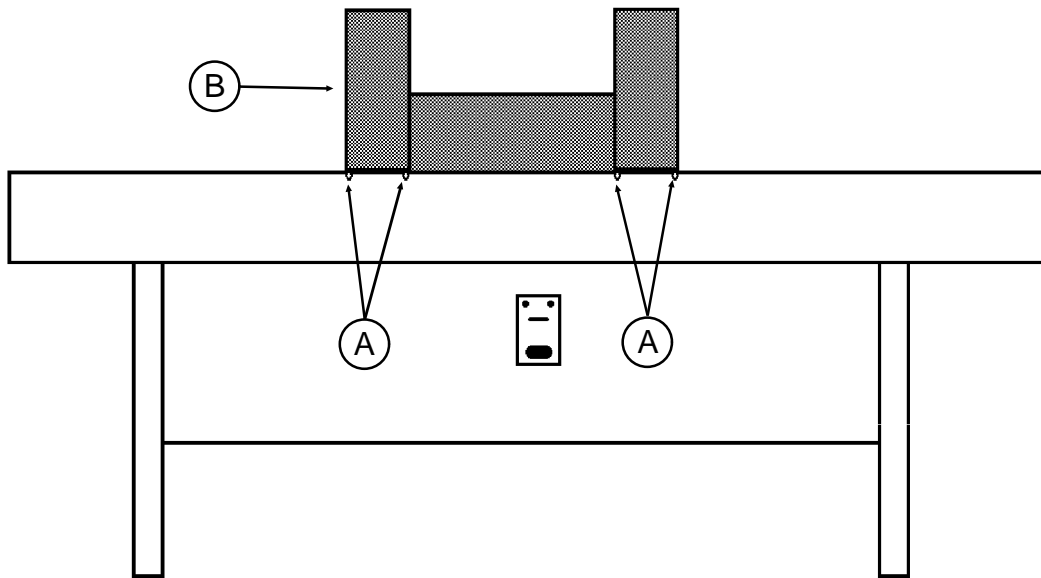


Figure 1

- A. Unthread both heads.
- B. Remove the eight Retaining Screws (Figure 1-A) holding the Center Cover (Figure 1-B) on the machine. Note that four of the Screws can only be reached from under the machine.
- C. Carefully lift the Center Cover off of the machine and lay it aside.
4. Locate the X Motor (See Figure 2) and trace the path of the Aircraft Cable from the Motor to each end. Take note of the position of each of the pulleys that the Cable passes around.

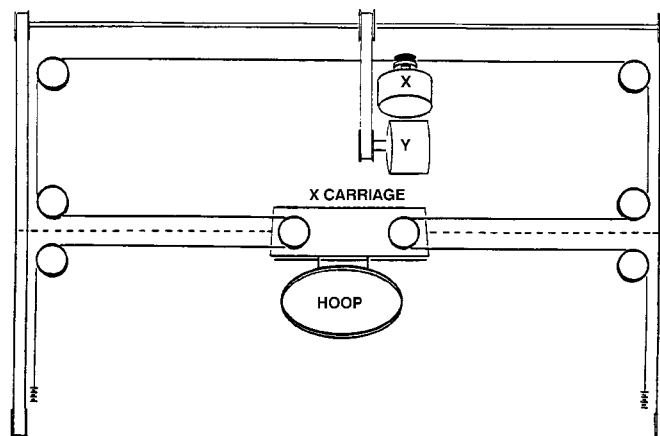


Figure 2

5. Remove the Lock Nut (Figure 3-C) from the Mounting Stud (Figure 3-D) on each end of the Cable.

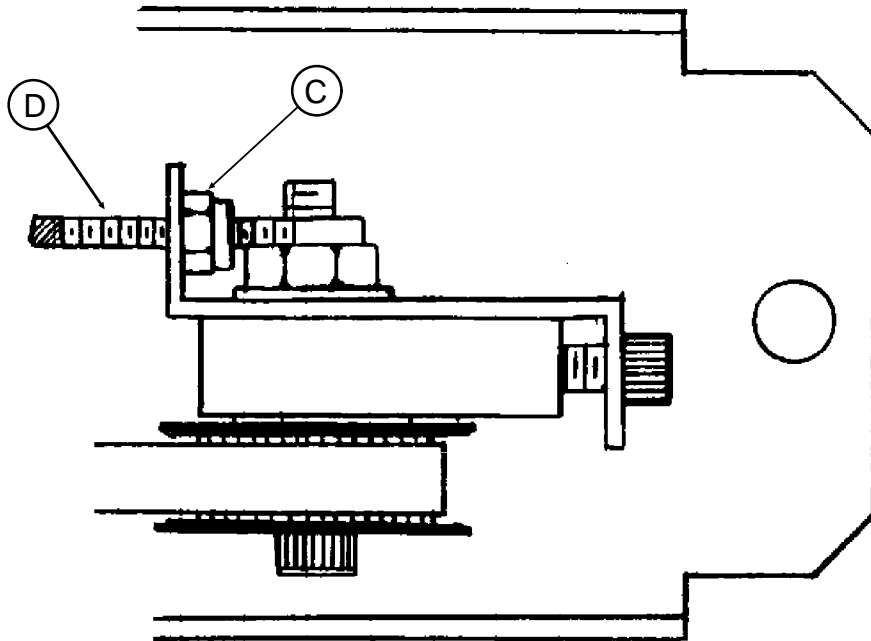


Figure 3

6. Pull both ends of the Cable away from the Pulleys and allow them to drape down the rear of the machine.
7. Loosen the Sew Screws (Figure 4-E) holding the Aircraft Cable Hub (Figure 4-F) on the X Motor Shaft.

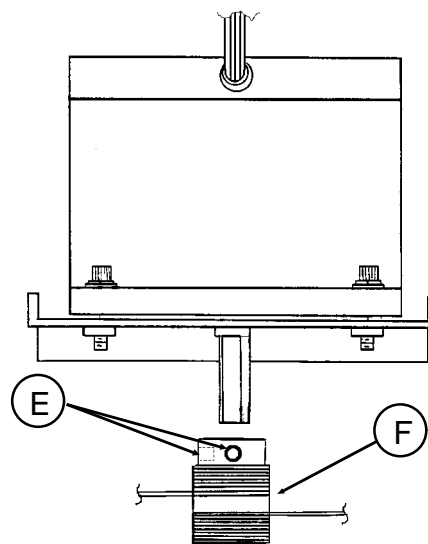


Figure 4

8. Remove the Aircraft Cable Hub from the X Motor Shaft and discard the old Aircraft Cable Assembly.

NOTE: The new Aircraft Cable Assembly comes with the Cable wound onto the Hub, the wound portion taped to the Hub to hold it in place, and the remainder of the Cable bundled and taped around the Hub. When unwrapping the Assembly, do not remove the inner piece of tape, since this will allow the wound portion of the Cable to loosen and fall off of the Hub.

9. Remove the outer piece of tape holding the Aircraft Cable Assembly together and allow the Cable ends to straighten out.
10. Remove the Set Screws from the Aircraft Cable Hub, place a small drop of Loctite on each, and reinstall them in the Hub.
11. Install the Aircraft Cable Hub on the Z Motor Shaft, making sure that:
  - A. The Set Screws are on the Motor side of the Hub,
  - B. The Set Screws are aligned with the flats on the Motor Shaft (see Figure 4),
  - C. The Cable is spooling off of the bottom of the Hub,
  - D. The longer section of the Cable is routed toward the right side of the machine, as viewed from the rear, and
  - E. The end of the Z Motor Shaft is flush with the end of the Hub.
12. Tighten the Set Screws holding the Aircraft Cable Hub to the Z Motor Shaft.
13. Move the X Carriage to the center of the sewing area and tape it firmly to the Table Top.
14. Route the ends of the Cable around the rear corner Pulleys, between the Beam and the Table Top, and let them hang off of the front of the machine.

**CAUTION: Do not let the X Motor rotate during the next eight steps. Motor rotation will cause the Aircraft Cable to cut or pull the tape holding it to the Hub, and may allow the Cable to unwrap.**

NOTE: The next five steps are to be performed on each side of the machine. Complete steps 15 to 19 on one side, then complete the same steps on the other side.

15. Form a small loop on the Cable, and slide the loop over the X Carriage Pulley (Figure 5-G).

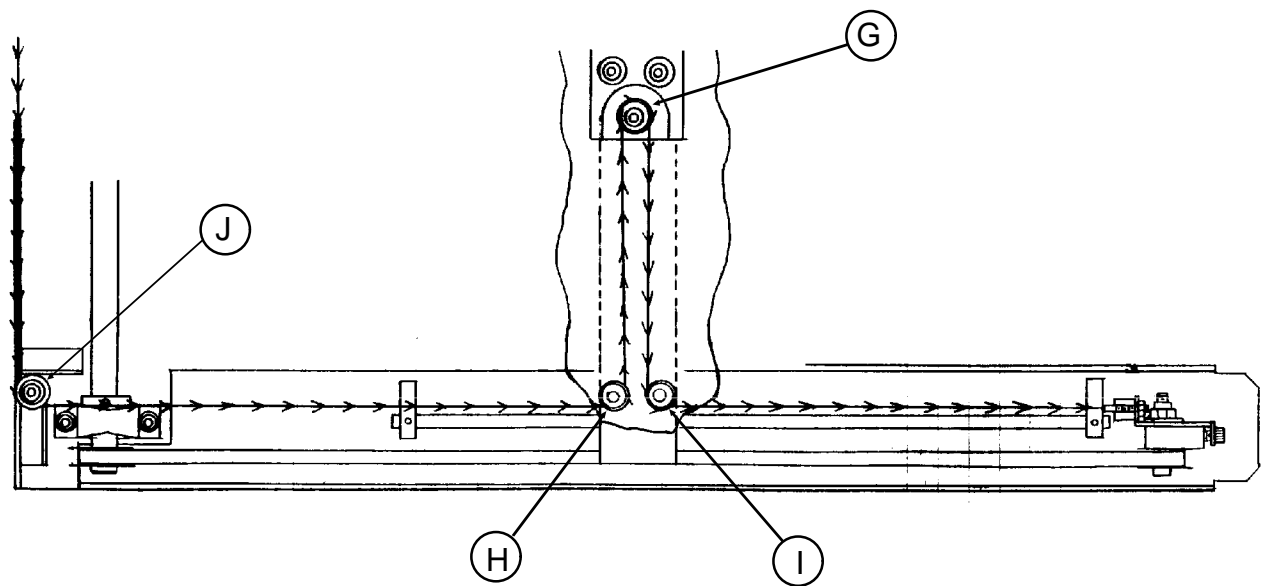


Figure 5

16. While keeping a slight tension on the Cable (toward the front of the machine), lay it into the groove in the Rear Beam Pulley (Figure 5-H).
17. While continuing to keep a slight tension on the Cable, lay it in the groove of the Front Beam Pulley (Figure 5-I).
18. While continuing to keep a slight tension on the Cable, lay it in the groove of the Rear Corner Pulley (Figure 5-J).
19. Tape the Mounting Stud on the end of the Cable to the Table Top, making sure to keep a slight forward tension on the Cable.

NOTE: The next three steps are to be performed on each side of the machine. Complete steps 20 to 22 on one side, then complete the same steps on the other side.

20. While keeping a slight forward tension on the Cable, untape the Mounting Stud and feed the end through the Cable Bracket (Figure 6-K).

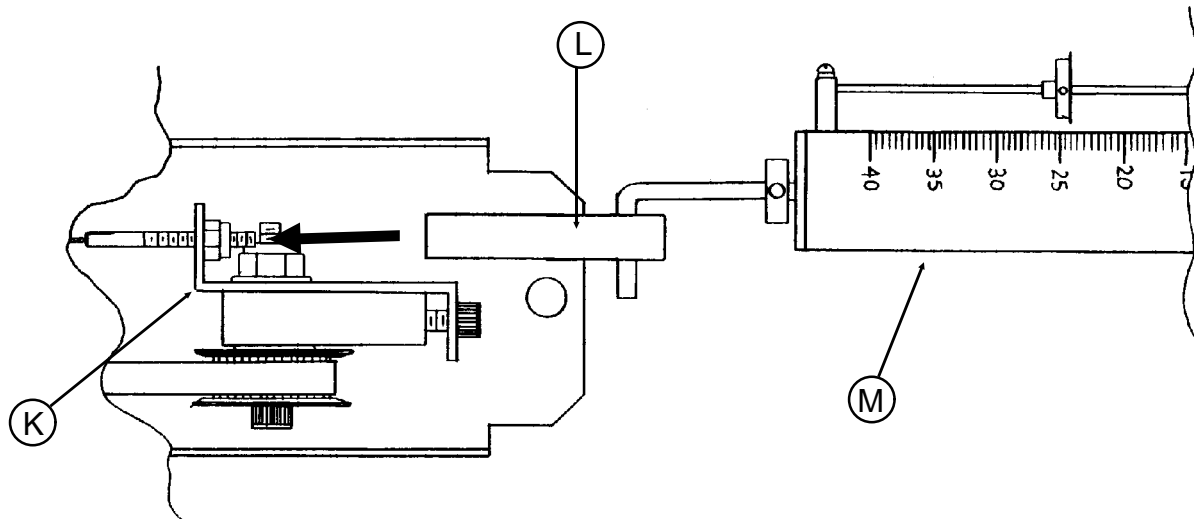


Figure 6

21. Thread the Locking Nut onto the Stud far enough to hold it in place and maintain a slight tension on the Cable.
22. Verify that the Cable is still routed correctly through the Pulleys.

**CAUTION: When tightening the Locking Nuts, grip the Mounting Stud at the Cable crimp with a pair of pliers or an adjustable wrench, so that the Stud does not turn.**

23. Tighten the Locking Nuts so that approximately 1/2 inch of the Stud protrudes past the end of the Nut.
24. Remove the tape holding the X Carriage to the Table Top, and the tape holding the Aircraft Cable on the Aircraft Cable Hub.
25. Move the X Carriage from side to side, and the Beam from front to rear, and verify that they move smoothly. If not, check all Pulleys and verify that the Aircraft Cable is in all Pulley groves.
26. Attach the Turnbuckle (Figure 6-L) to the end of the Mounting Stud on one side of the machine. Make sure that the Turnbuckle screws on at least two full rotations.
27. Attach a Spring Scale (Figure 6-M) to the Turnbuckle.

28. Pull the Spring Scale directly away from the machine until the Locking Nut just pulls away from the Cable Bracket.
29. The Spring Scale should indicate 24 lbs. If not, adjust the tension as follows:
  - A. Tighten the Locking Nut on the other side of the machine,
  - B. Move the X Carriage fully from side to side twice, and
  - C. Recheck the tension (as in step 28).
30. Continue to check and adjust the tension until the Spring Scale indicates 24 lbs.
31. Remove the Turnbuckle from the Mounting Stud.
32. On a double-head machine, reinstall the Center Cover and secure it with the eight Retaining Screws removed in step 3.
33. Lower both Side Covers and secure them with the Retaining Screws removed in step 2.
34. Thread the machine.
35. Plug the Power Cord into the wall socket and turn the machine on.
36. Perform a test sew out.

END OF PROCEDURE