INSTALLATION GUIDE
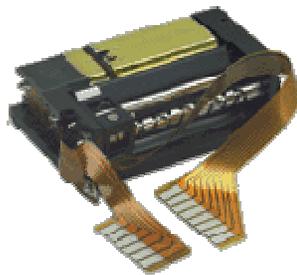
Version 1.2

OEM Thermal Printer Replacement for the Sage-Endec EAS Encoder/Decoder Model SE1822

Overview:

Over time, many thermal printers supplied with the Sage-Endec EAS Encoder-Decoder have failed due to use. The most common failure mode has been the inability to advance the thermal paper properly causing multiple strike over of the text and illegible printing, or failure of the thermal print head. The supplied thermal printer module is the exact OEM replacement for the printer installed in the Endec.

Follow the instructions below carefully and you will find the replacement process is easy and fast. If you have any questions or concerns do not hesitate to contact us at DM Engineering.

Printer mtg. bracket
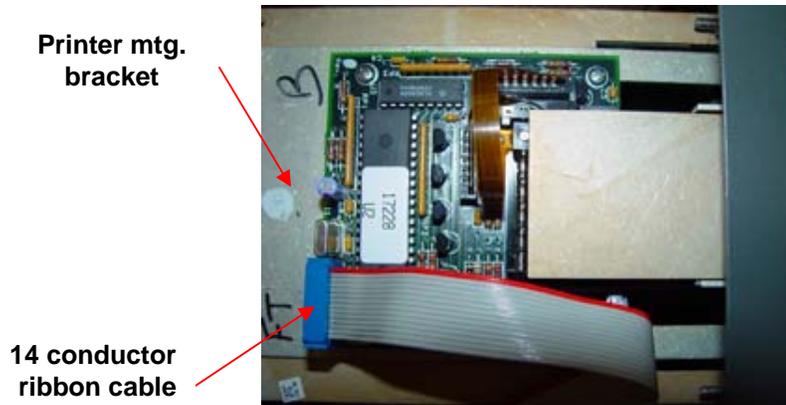
14 conductor ribbon cable

Fig. 1

Note: ESD precautions should be observed when following this procedure to avoid damage to the printer PCB.

1. Remove all power to the Endec and open the paper drawer by removing the 2 knurled thumbscrews on the front panel. Slide the printer drawer outwards and remove the paper from the printer.
2. Replace the printer drawer back into the Endec and secure with the 2 thumbscrews.
3. Remove the 6 Endec top cover retaining screws and set aside for safe keeping. Slide the cover to the rear of the Endec and remove.
4. While holding the aluminum printer mounting plate down with your finger, carefully disconnect the 14 conductor ribbon cable from P1 on the PCB. Note the orientation of the ribbon cable for reconnection. (see Fig. 1)
5. Remove the 4 PCB mounting screws and set aside for reinstallation. (see Fig. 2)
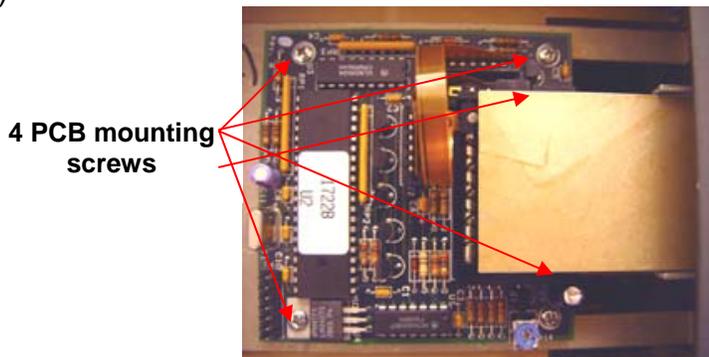
4 PCB mounting screws

Fig. 2

6. Remove the printer PCB from the Endec. While holding the PCB down with one hand, remove the outer Kapton ribbon cable from its socket by firmly grasping the cable where it enters the socket and pulling upwards while rocking the cable from side to side. (see Fig. 3 & 4)
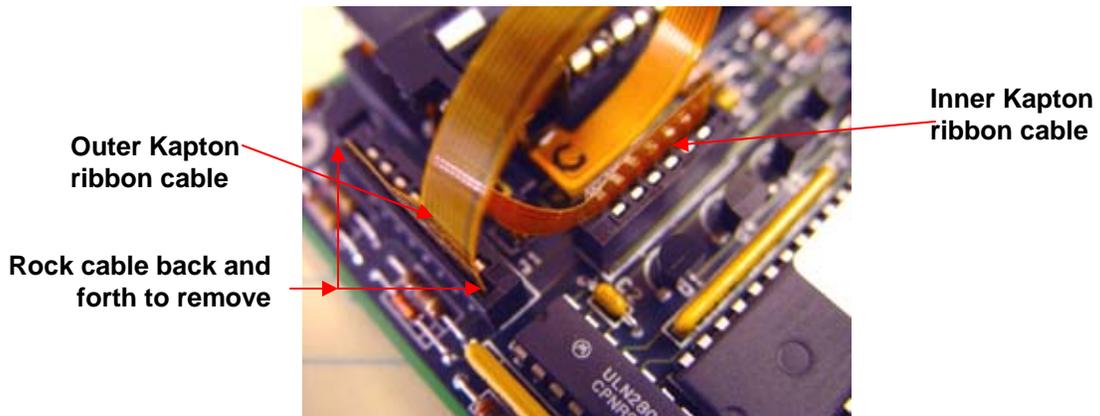7. Remove the inner Kapton ribbon cable in the same manner.

Inner Kapton ribbon cable

Outer Kapton ribbon cable

Rock cable back and forth to remove

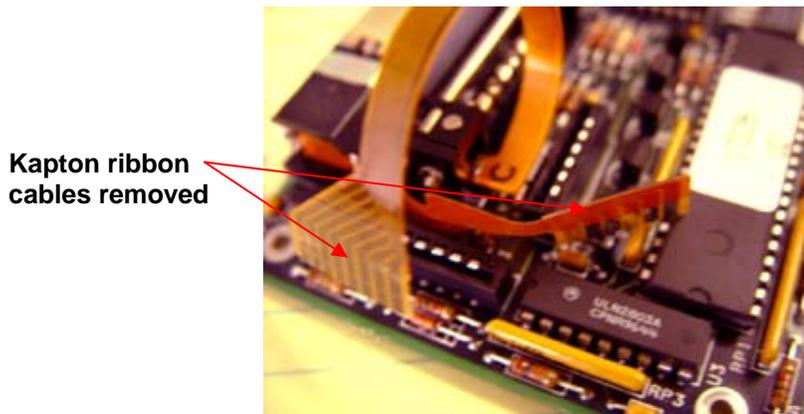Fig. 3

Kapton ribbon cables removed

Fig. 4

8. Turn the PCB assembly over and remove the 2 thermal printer module mounting screws, set aside for reinstallation and remove the printer module. (see Fig. 5 & 6)

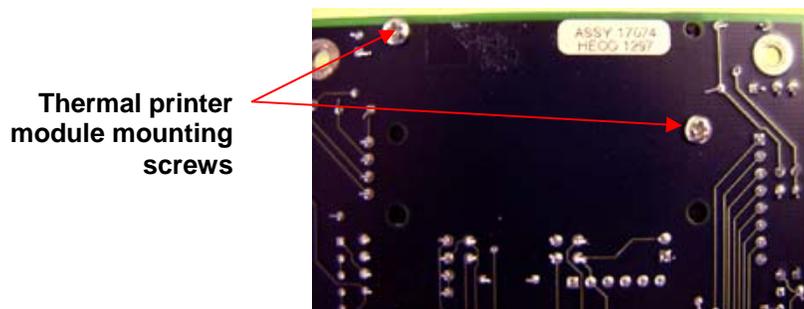**Thermal printer module mounting screws**

Fig. 5

Fig. 6

9. Unpack the new printer module and install it on the top side of the PCB using the 2 screws previously removed. Be careful to not over tighten these screws as they will strip the plastic printer body easily. Snug is OK!

10. Reinstall both Kapton ribbon cables in their respective sockets. Assure that they are fully inserted in the sockets.

11. Reinstall the PCB assembly into the Endec and secure with the 4 mounting screws. Make sure the screws are snug

12. Reconnect the 14 conductor ribbon cable using the same orientation as when removed and that no pins are exposed on either side of the connector indicating incorrect installation of the connector.

13. Open the printer drawer and reinstall the printer paper. (See Fig. 7) Use the command **menu.paper feed(password)**. Note: If the paper feed does not work the printer may be configured in the OFF state. To turn it on enter **menu.configure.printer.yes.** You will be prompted to enter your password.
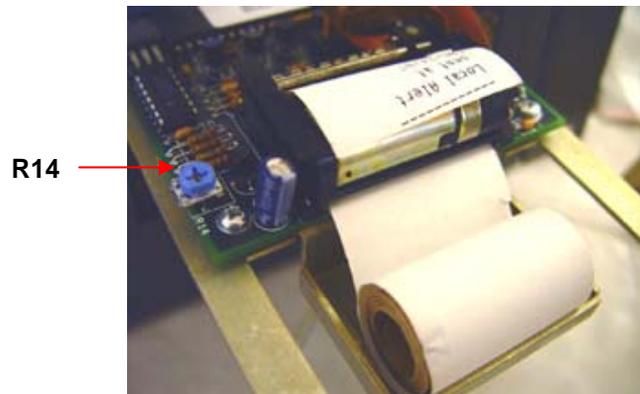

Fig. 7

14. Test the printer by running an RWT off line. If the print density is too dark, adjust R14 in the counter-clockwise direction to achieve good print density. If too light, adjust R14 in the clockwise direction only enough to get good print density. Overdriving the printer to achieve a dark print-out may cause damage to the printer driver circuitry or thermal print head assembly over time, and such damage is not covered by our warranty.

15. Remove power from the Endec and close and secure the printer drawer with the 2 thumb screws.

16. Replace the top cover and secure with the 6 flat head screws.

Trouble Shooting:

If the printer does not operate after replacing the printer module, check the following items:

1. Make sure that the printer is still enabled in the Endec programming by entering ***menu.configure.printer.yes***
2. Assure that all ribbon and Kapton cables are fully and <u>correctly</u> inserted in their sockets. The solder tabs on the Kapton cable should be in direct contact with the socket fingers.
3. If the printer mechanism advances the paper and the print head recognizes line feeds, but there is no text, make sure that the paper is correctly installed. (See Fig 7 above) Next, assure that the contrast potentiometer (R14) is advanced far enough to give the proper print density. (See step 14 above) Q7, D3, C3 and/or U1 could also be the culprit if there is no print density at all with R14 turned fully clockwise.
4. If there is no printer activity at all, check the fuse. The fuse is a Littelfuse Pico-II Slo-Blo fuse soldered under the PCB. This is a .75A fuse and may be purchased at Mouser Electronics, part # 576-0473.750MRT1L or at Digi-Key, part # F2340CT-ND.
5. If none of these remedy the situation there may be another component problem on the board. Contact us and we will try to help you. Replacement PCB assemblies are available from Harris, but they are <u>very</u> pricey.

Warranty Information:
The OEM thermal printer and is warranted for a period of 90 days from the date of purchase. This warranty covers failure of the OEM thermal printer module only. Neither the Endec nor the printer PCB assembly and it components are covered under this warranty. Any misapplication, physical or electrical damage from outside sources or by the customer is not covered. The customer must pay return shipping costs to the factory, and DME will pay shipping costs to return the warranted printer to the customer. Any priority shipping costs are to be the responsibility of the customer as ground service is standard. Please contact the factory for an RMA number prior to any returns. Items returned without an RMA may be sent back to the customer unopened.

Technical Support
If you have questions, experience difficulties with the product or require further information please contact DME at: 805-987-7881, toll free 800-249-0487, or E-mail technical support at: support@dmengineering.com, or visit www.DMEngineering.com for the latest User Guide.