CAPACITOR INSTRUCTIONS FOR MODELS MD, MDT, AND SDT

REPLACEMENT OF CAPACITOR, RESISTOR AND DIODES IN THE POWER SUPPLY:

You should have received corresponding email pictures to aid in the installation.

The kit is easiest to install with the drive unit removed from the machine. (The drive unit holds and spins the distributor.)

Tools Required: wire snipper, soldering tool, screwdriver, ¼-inch socket, ratchet. A good de-soldering tool would be a big help, but is not necessary.

(See pictures on the pages 3-4 to aid in installation.)

1. Remove the nuts and bolts that hold the drive unit to the case.
2. Remove back panel of the machine.
3. Remove leads from the meter banks and the power lead from the bottom of the case at the power supply. Make a note of where the leads are connected for re-assembly later.
4. Remove the belt. (It can be pulled off the pulleys by hand.)
5. Run the RPM crank wheel in a few turns to help the drive unit come out more easily.
6. Grasp the drive unit from the front and remove from the case. Set drive unit on its side on a workbench. Remove all connections from the power supply.
7. Remove the screws that hold the power supply. Pull power supply away from the drive unit and place on workbench.
8. Remove and DISCARD the vacuum tube. It is NO LONGER NEEDED.

   Now, picture the back of the vacuum tube socket as a clock, with the six o'clock position being at the bottom where the bracket is attached.
9. Cut the yellow wire from the transformer at the "five o'clock" position on the socket, fold it back and tie it off. It will no longer be used.
10. The other yellow wire in the "eight o'clock" position on the socket can remain as is.
11. Solder in the two diodes from the kit, one from the orange wire at the "eleven o'clock" position, and one from the red wire at the "one o'clock" position, down to the "five o'clock" position. Make sure the silver bands on the two diodes are facing DOWN, toward the bottom of the bracket.
12. Remove the 10mf/600 volt capacitor and strap in the middle of the power supply, and discard both.
13. Remove the brown 5000 ohm resistor from the top of the choke and replace it with the new 2.7K ohm/10 watt resistor. Do not solder it in yet.
14. The two capacitors soldered together will replace the 10mf/600 volt capacitor. Install the new

capacitors where the old capacitor was. The two capacitors will be suspended and the strap is not needed. Make sure the black-capped ends are facing the ground connector. Now solder the 2.7K ohm resistor and capacitor leads in place.

Power supply is complete.

THE NEXT STEP IS THE FOUR-CAPACITOR BOARD LOCATED UNDER THE POWER SUPPLY.

If you have a three-capacitor board, jump to step #9.

(See pictures on the pages 3-4 to aid in installation.)

1. The four-capacitor board is held down with three screws. Remove screws and rod retaining bracket and move the rod that contacts the four brass "fingers" out of the way. Note the position of the blue wire that runs under the board and up between the upright posts to reinstall later.
2. Pull the four-capacitor board out and place on workbench.
3. Cut rivets and remove rectangular "wax box" and clean the board.
4. It does not matter in which direction you install the capacitors. I install them with the printing facing up. Pre-fit all parts first before soldering.
5. Install capacitors as seen in picture. On the right side of the capacitors, loop each wire over the one above it and solder.
7. Reinstall the four-capacitor board and power supply.
8. Bolt drive unit back into case and reconnect all connectors.
9. Some models may use a three-capacitor board with three individual capacitors. If you have this, follow these directions:
    A. Remove and discard the three capacitors, and clean the board.
    B. Remove solder from all holes to facilitate installing new capacitor leads.
    C. Solder one lead from each new capacitor to a brass finger.
    D. Solder the other lead from each new capacitor to a ground.
    E. It does not matter in which direction you install the capacitors. I install them with the printing facing up.
    F. Reinstall the three-capacitor board and power supply.

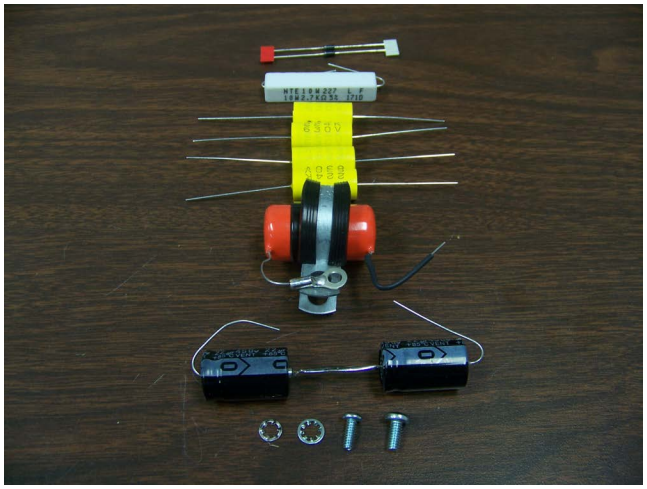
THE LAST STEP IS THE CAPACITOR UNDER THE CHUCK COVER.

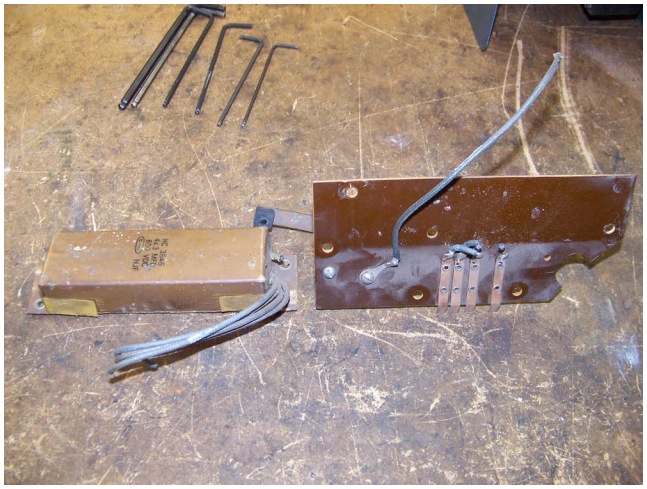
(See pictures on the pages 3-4 to aid in installation.)

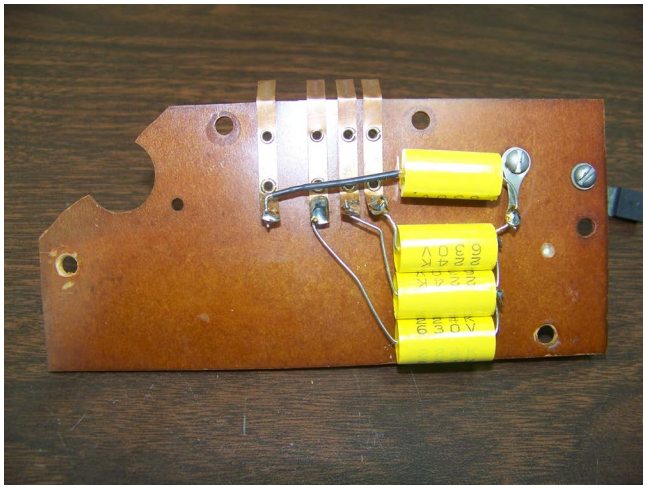
1. Remove the two ¼" bolts holding down the chuck cover. They are located under the two clamp arm rods.

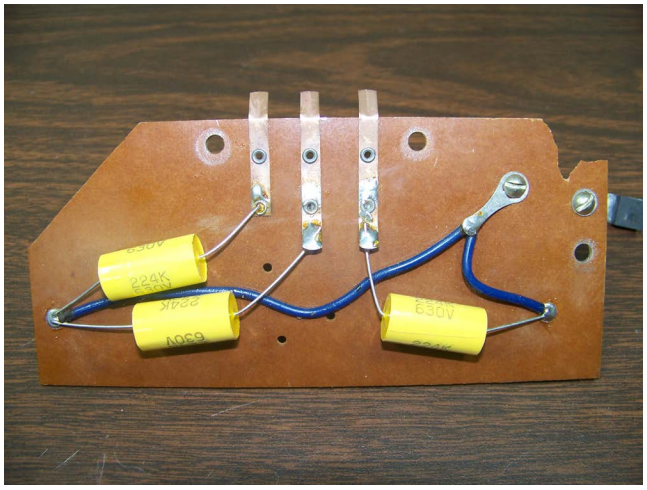
2. Move the cover to the left or right. It has an attached wire, so you won't be able to remove it from the machine. You are now looking at the flashtube and the capacitor that you will change.
3. Un-solder the two wires at the flashtube terminal. One comes from the capacitor and the other is the high-voltage wire from the power supply.
4. Remove and discard the screw, capacitor and strap. Sun used two different-sized screws to hold down the capacitor: 8-32 and 6-32. Your kit contains new screws and lock washers in both sizes. Install the new capacitor and strap using the corresponding screw from the kit, to match the original screw size. Put the matching internal tooth lock washer UNDER the new capacitor strap.
5. Re-solder the high-voltage wire and the lead from the new capacitor onto the flashtube terminal. (See emailed pictures to aid in installation.)
6. Now would be a good time to lightly sand the brass ring under the chuck cover with 600-grit sandpaper where the two flashtube carbon brushes make contact.

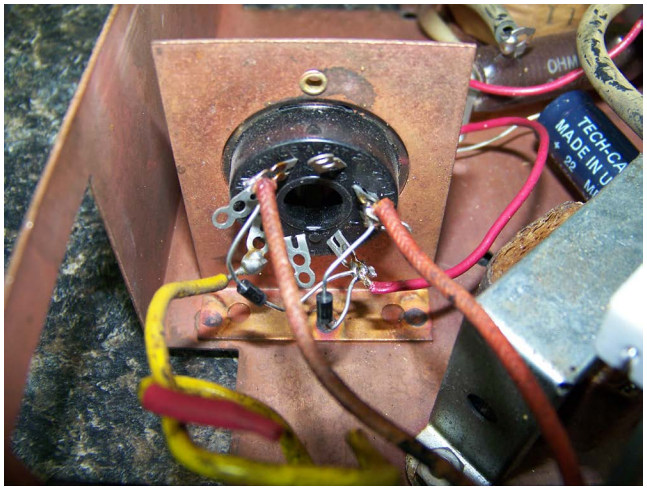
   Clean the ring, and LIGHTLY lube it with synthetic lube or equivalent.
7. Carefully set chuck cover back in place, making sure the two carbon brushes and springs are in their tubes on the flashtube.
8. Reinstall the two ¼" bolts that hold the cover on. Job is complete!

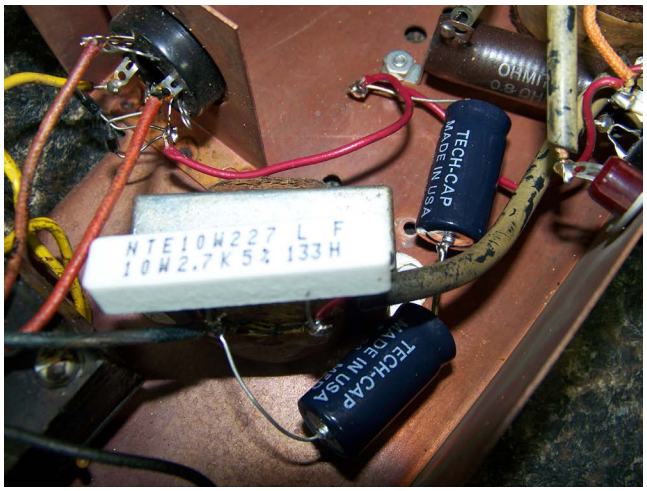











NTE10W227 L F
10W2.7K 5% 133H
TECH-CAP
MADE IN USA