Nordson

Instruction Sheet
P/N 1104555A

Filament Transformer Replacement

WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation. A qualified and competent electrician must carry out all electrical maintenance and servicing of this equipment.

WARNING: This equipment operates at high voltages up to 5000 volts dc and is therefore potentially dangerous. The electrician servicing this equipment must take all precautions.

WARNING: Isolate the equipment at the main disconnect or lockout before removing any of the cover panels.

Improved Filament Transformer

See Figure 1. The old filament transformer has rigid solid secondary wires covered with orange silicone insulation. The new, improved transformer has flexible, silicone insulated secondary wires.

NOTE: To replace both filament transformers, order two filament transformer kits. The filament transformer kit contains one transformer, one ferrite, two insulation sleeves, and four wire ties for the sleeves.

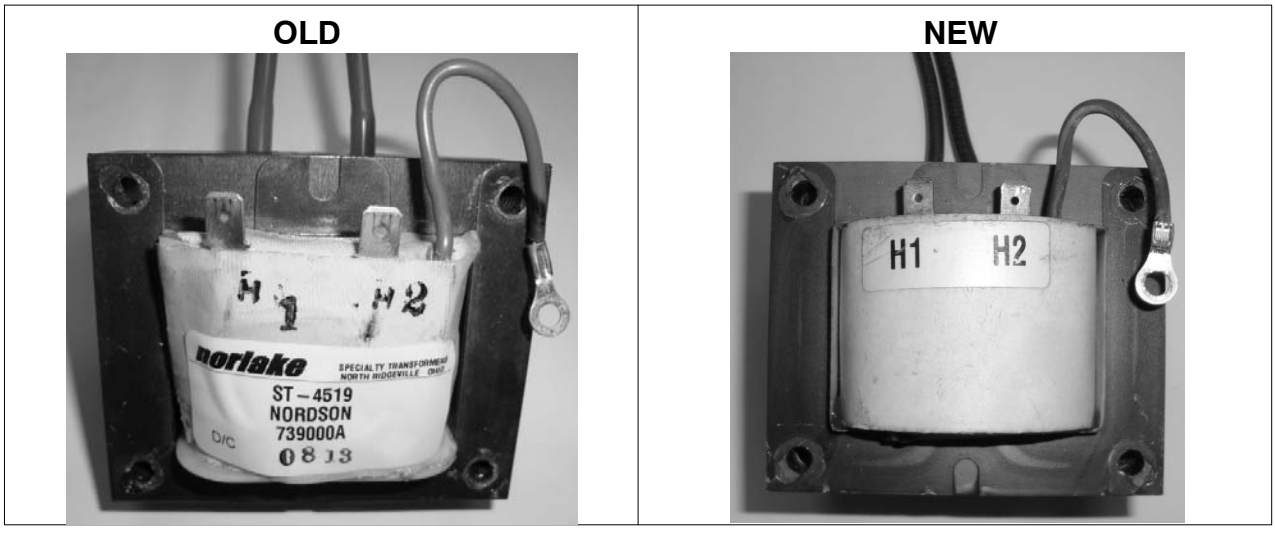

Figure 1 Old and New Filament Transformers

Preparation

Tools Required: Philips screwdriver, flat blade screwdriver, diagonal cutters, and 7-mm wrench.

1. Turn off the UV system at the system controller.
2. Allow the lamphead fan to complete its cooling cycle. Always allow sufficient time for the bulb to cool before proceeding.
3. Turn off the main electrical disconnect. Follow all relevant OSHA-established lockout procedures.
4. Disconnect the unicable from the lamphead.
5. If necessary, loosen the lamphead mounting fasteners and remove the lamphead from its mounting.
6. Remove the M4 screws from the lamphead cover, and remove the cover from the lamphead. For more information, refer to your Coolwave 2 system manual.
7. Remove the two M4 screws shown in Figure 2.

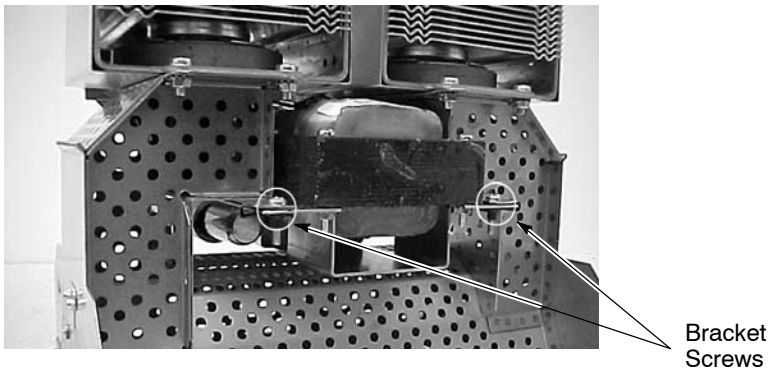

Figure 2 Transformer Bracket Screws

8. See Figure 3. Pull the the transformer bracket from the wave guide assembly far enough out to access the wiring connections.

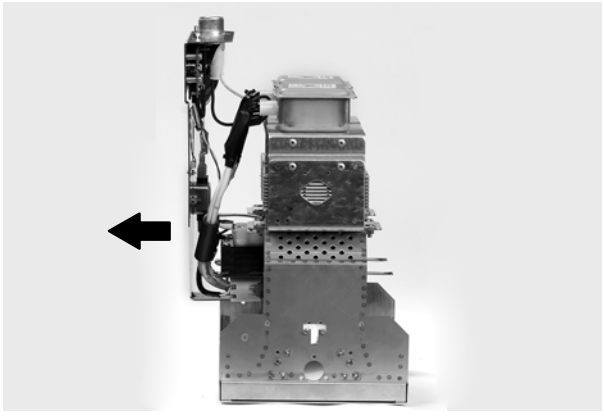

Figure 3 Removing the Transformer Bracket (External Blower Version Shown)

Filament Transformer Replacement

CAUTION: Be careful not to cut or damage the black insulating sleeves. Damaged sleeves could allow high voltage to arc and damage the magnetrons or other components. Replace damaged sleeves.

1. See Figure 4. Cut the four wire ties securing the black HV insulation sleeves to the X1 and X2 secondary cables and the white and black 20 AWG HV harness cable at the magnetron.
2. Slide the insulation sleeves down to expose the ring-tongue terminal connections. Note the connections of the white and black 20 AWG HV wires connected to the magnetron FA terminals.
3. Remove the terminal screws and disconnect the cables from the magnetron pigtails.

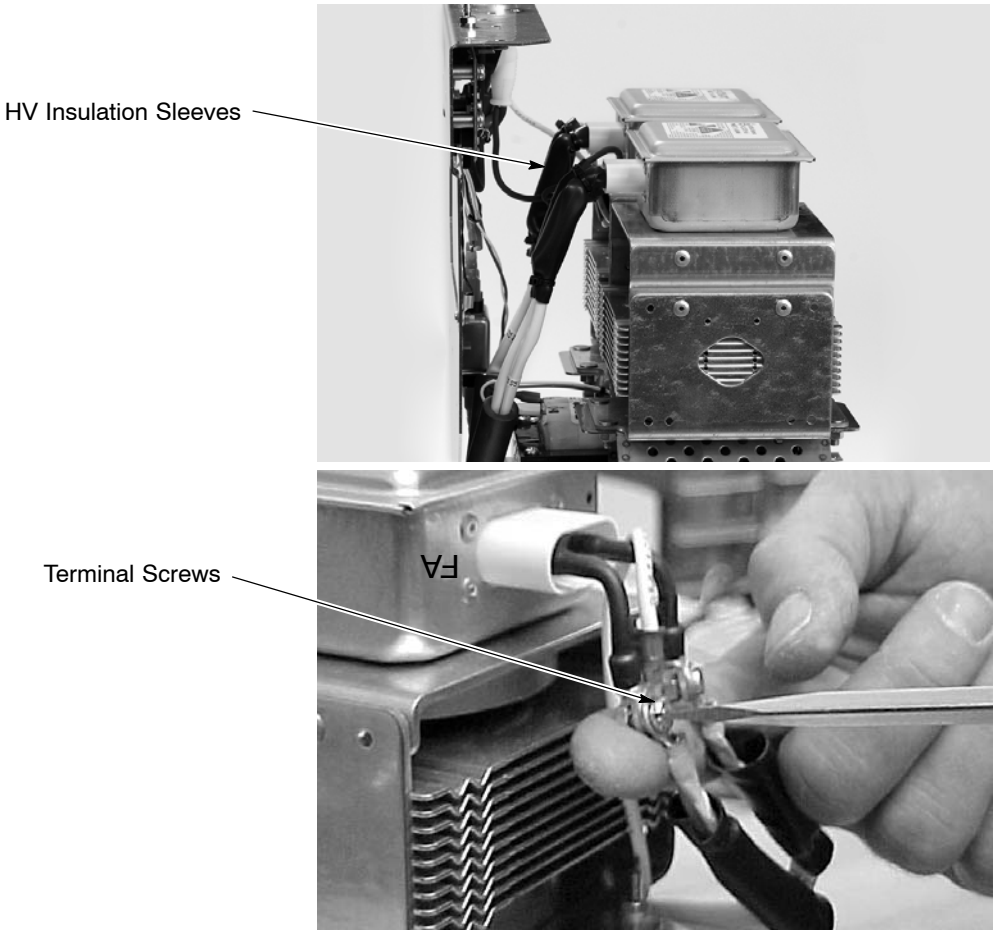

Figure 4 Insulation Sleeve Removal and HV Connections

4. Remove the transformer bracket from the wave guide assembly.
5. See Figure 5. Note the colors of the primary wires connected to the transformer H1 and H2 terminal tabs, then disconnect the wires from the H1 and H2 tabs.

6. Remove the four M4 screws and nuts securing the transformer and transformer ground wire to the bracket. Cut wire ties around the secondary cables as necessary, then remove the transformer from the bracket.

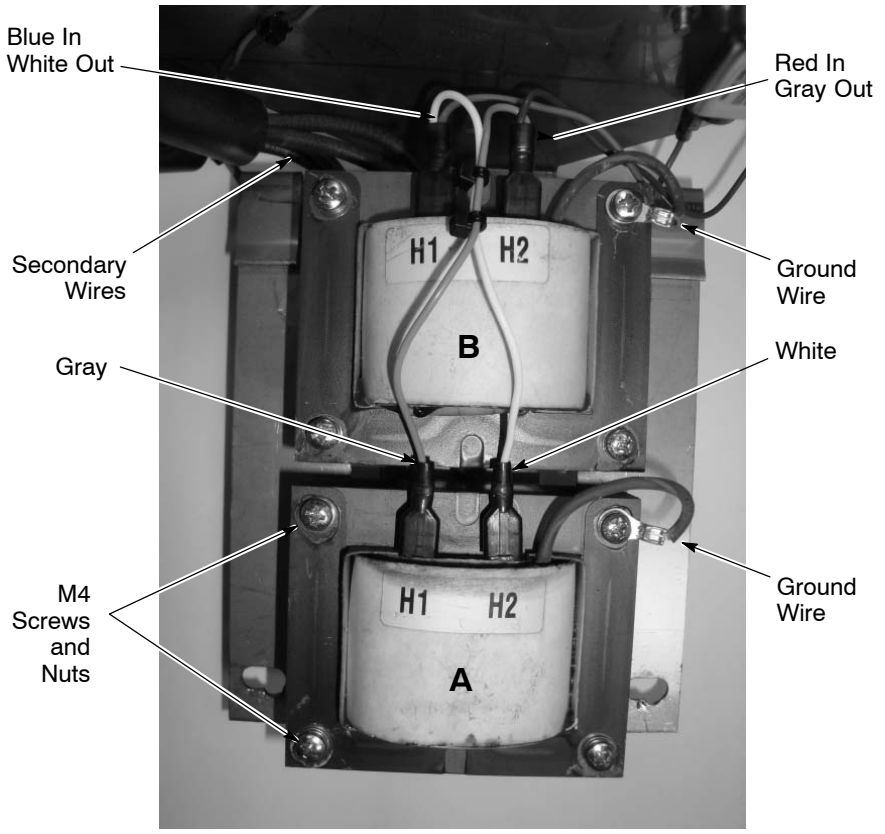

Figure 5 Transformer Wiring and Fasteners

7. See Figure 5. Install the new transformer on the bracket. If replacing transformer A, route the X1 and X2 secondary cables through the cable way under transformer B.

NOTE: See Figure 8 for a complete wiring diagram.

8. Secure the transformer to the bracket with the M4 screws and nuts, securing the green transformer ground wire to the transformer with the screws.
9. See Figure 6. Arrange the secondary cable ferrites of both transformers as shown. Install wire ties below the ferrites to prevent them from sliding down the secondary cables, then install another wire tie joining both pairs of secondary cables approximately 2 inches (51mm) above the ferrites.

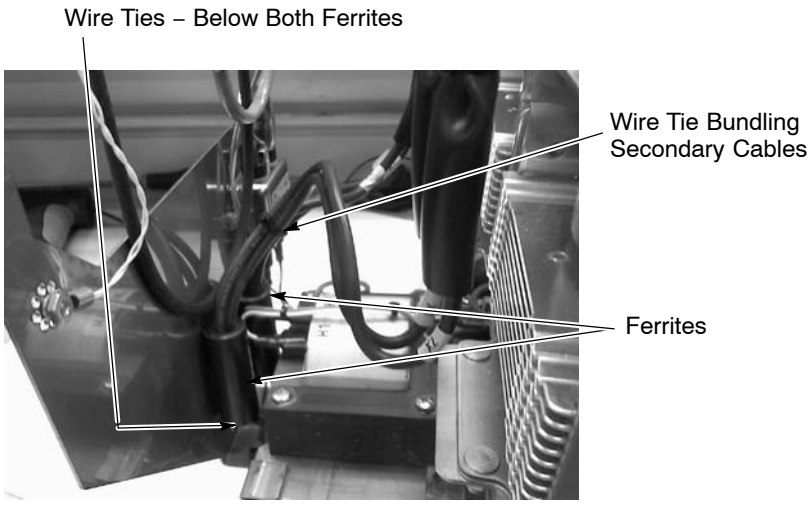

Figure 6 Installing Wire Ties on Secondary Cables

10. Slide a new insulation sleeve over the X2 secondary cable, and another over the X1 secondary cable.

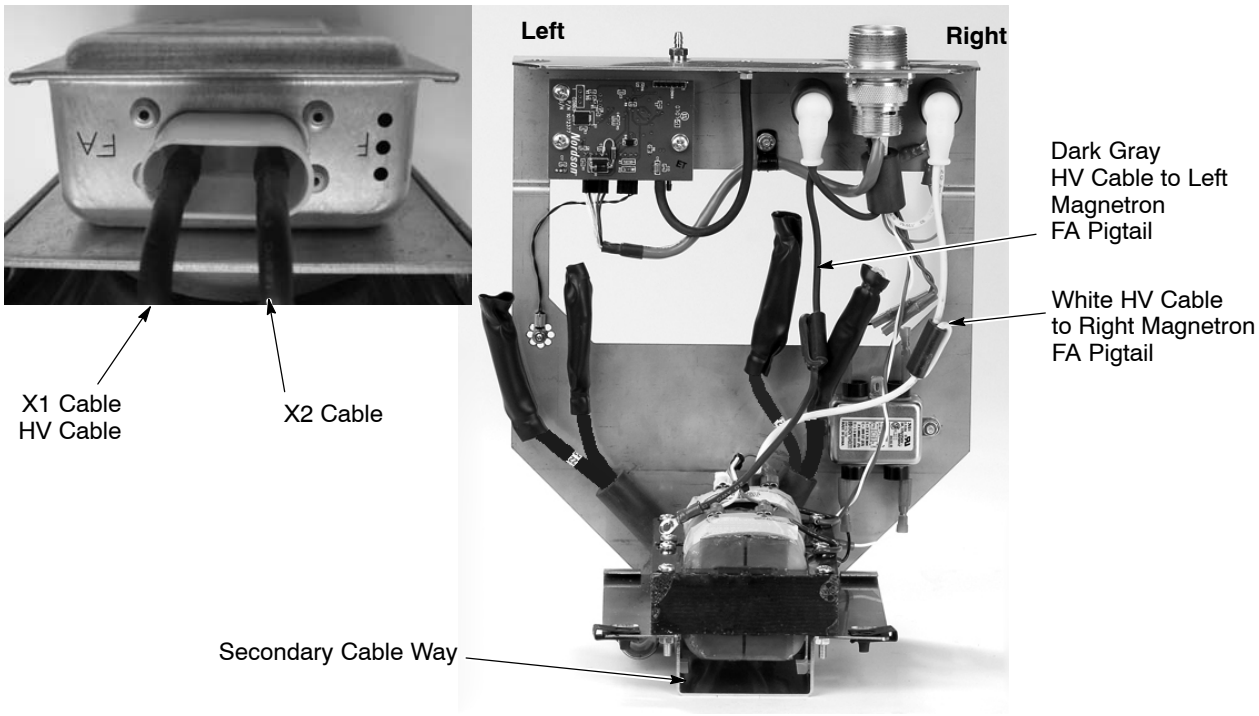

Figure 7 Wiring to Magnetrons

11. Connect the primary wires to the transformer H1 and H2 tabs exactly as shown in Figures 5 and 8.
12. Slide the transformer bracket part way back into the wave guide assembly.
13. See Figure 4. Connect both the X1 transformer secondary cable and 20 AWG HV cable with ferrite to the **FA** terminal pigtail with one of the screws removed in step 3.

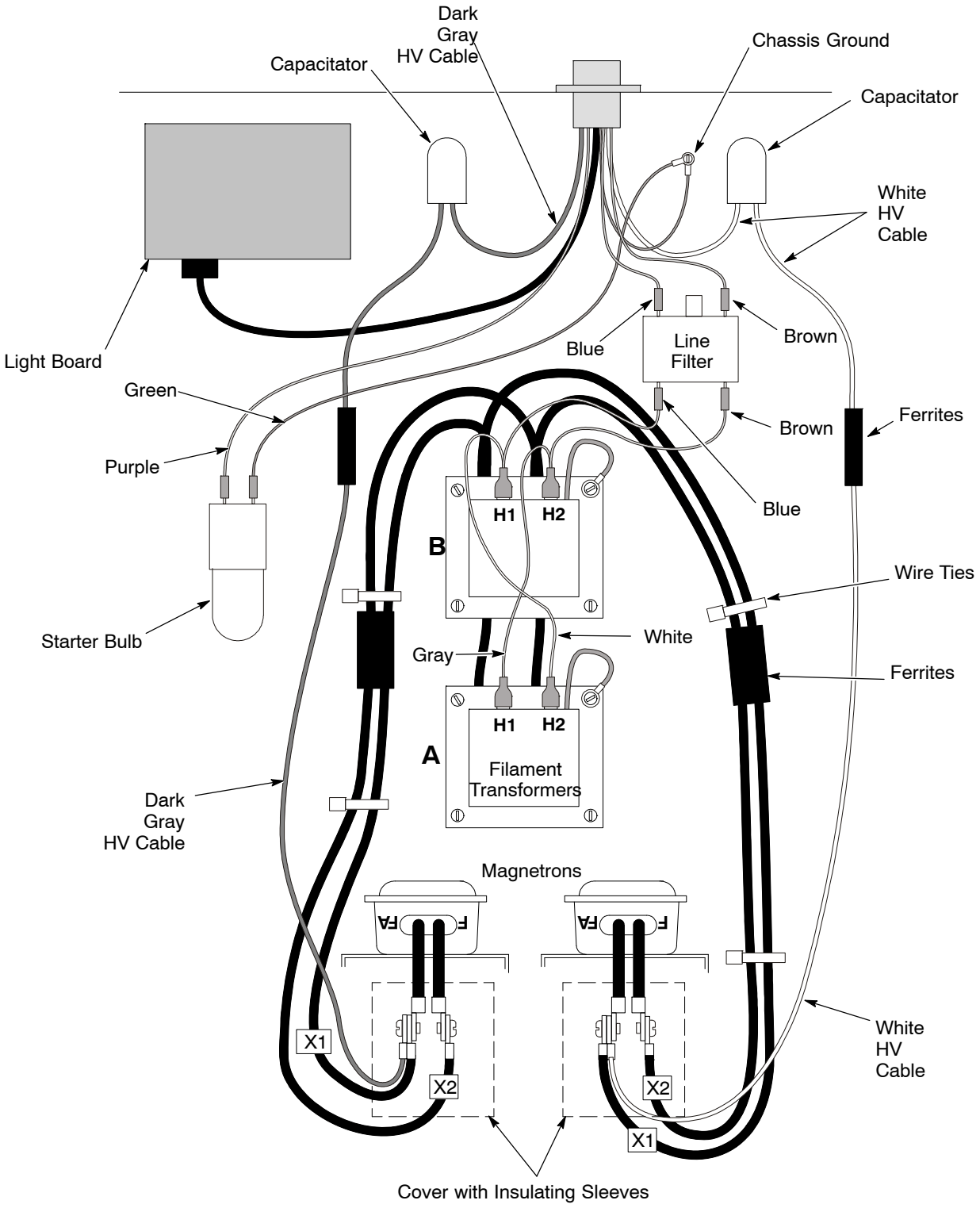

Figure 8 Transformer Wiring

14. With the other screw, connect the X2 transformer secondary cable to the magnetron **F** terminal pigtail.
15. Slide the insulation sleeves over the ring-tongue terminal connections and secure them top and bottom with the new wire ties.

16. Slide the transformer bracket all the way into the wave guide assembly. Secure the bracket with the two M4 screws shown in Figure 2.

Re-Assembly

1. Check all wiring connections and make sure they are secure and that insulation is intact.
2. Install the cover on the lamphead.

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