SUPER SERVICE BARS/'N' UNIT

Installation Instructions for Simco Equipment

IMPORTANT -- DO NOT DESTROY

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE PROCEEDING WITH THE INSTALLATION AND OPERATION, OF THIS EQUIPMENT.

SIMCO®

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INSTALLATION INSTRUCTIONS FOR SIMCO SUPER SERVICE NON-SHOCKLESS STATIC BAR WITH MODEL "N---" POWER SUPPLY

PLEASE READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION.

Always turn off current to power supply before any work is done on the equipment unless instructions state otherwise.

1. Mount the Super Service Static Bar to machine with brackets provided.
2. Run high voltage bar cable on insulators along machine frame or wall to the power supply.
3. Cut the high voltage cable to desired length. Be sure to allow additional length to reach the high voltage output terminal block inside the power supply case.
4. Strip 3/8 inch insulation from the end of the high voltage cable and inset the cable through one of the straight through fittings.
5. Loosen one of the connection screws on the high voltage output terminal block. Insert the stripped end of the cable under the screw and tighten. Re-tighten the straight thru connector to snug fit. Pull gently on the cable to make certain the connection is secure.

When installing the AC line power wiring, use a 3-conductor cable. Two conductors will supply the line voltage and the third conductor will provide the ground connection between the ground at the power source (junction box or panel) and the ground post on the inner side of the wiring compartment of the power unit case. The power supply is factory-set to operate up to 300" of static bar.

LOCATING SATIC BARS

1. Best locations are usually just ahead of places where static gives trouble.

2. The material to be neutralized should have a background of free air and not be in contact with another surface, since static charges cannot be easily neutralized from between two surfaces in intimate contact. If material must be discharged where it is in intimate contact with a flat plate or board, it may be done effectively by cutting a slot in the plate or board and mounting the static bar in this slot. Partial contact of the material with a background surface may not interfere with effective static elimination; however, this should be avoided as much as possible.

3. Static bars may be mounted with points facing up, down, or at any angle, provided they face the material to be discharged. The material should not make contact with the bar.

4. Distances of static bars from the material to be discharged:
   ¾" Super Service Bar – The plastic surface of the bar should not be less than ½" nor more than1 ½" from the material. For best operation, keep between 5/8" and 1".
   ½" Super Service Bar – The plastic surface should not be less than ¼" from the material nor more than 1". For best operation, keep between 3/8" and 7/8".

5. When required, mounting brackets are provided that can be bent and twisted to support static bars from the frame of the machine or from convenient stationary shafts that span the machine. Under no condition should the active face of the bar be covered by metal or clamps.

MOUNTING THE POWER SUPPLY : Mount the power supply to the machine frame (preferably on the side away from the operator) or to a convenient wall or post. The lamp on the power supply indicates "off" and "on". Order replacement from Simco, specifying power supply model number.

CABLE SUPPORTS: Cable supports are sued to guide the high voltage cables from the bars along the frame of the machine to the power supply. Cable should always be kept at least ¼" away from machine frames, walls and ceiling. If it must touch the machine frame at any points, it should be encased in protective plastic tubing. To install the cable supports, press the split bushing out of the eye and apply bushing to cable at desired location. Mount the eye, then press the bushing with cable back into the eye. Close the eye with pliers to clamp the cable. Be sure that a cable support is located to remove all strain and motion from the cable where it enters a static bar and the power supply.

GROUNDING

Frame of machine – It is essential for successful operation of the eliminator that the frame of the machine be thoroughly grounded, either by well-grounded electrical conduit or by a heavy copper wire to a water or steam pipe.

Super Service Static Bars – The metal casing must be grounded. When not grounded, a shock is obtainable from the casing and the equipment will not function properly. Grounding is automatic when the bars are supported from wooden or other non-conductive members, a separate wire must connect the mounting bracket on one end of the bar to a metal part of the grounded machine frame or to a well-grounded electrical conduit, water pipe, or steam pipe.

Power Supply – The power supply must be grounded either by bolting it to the grounded machine frame or by connecting a heavy copper wire from the ground terminal on the side of the box to a well-grounded electrical conduit or to a water or steam pipe.

TESTING PROCEDURES

Spark Test – In normal operation, no sparking should be visible at the static bar. To determine if the bar is functioning properly, take a piece of wire and connect it to the outer aluminum casing or any other close ground. Then approach the other end of the wire along the plastic top surface of the bar from the edge toward a point, until sparking begins. Sparking should occur when the end of the wire is approximately halfway between the points and the edge of the bar.

Locating a Faulty Bar – When the spark test fails, the most likely cause is a short circuit in a static bar. To find which bar is at fault, disconnect the bars one at a time from the terminal block inside the power supply and spark test the remaining bars. Check the faulty bar for metal fragments which may have fallen across the points to any ground metal. Such fragments can short-circuit the bar and make it inoperative until they are removed. If no metal fragments are found and the bar has been thoroughly cleaned, there may be a short-circuit to ground of the high voltage cable or a short-circuit inside the bar. If examination shows the full length of cable to be OK, the bar must be replaced. Other possible causes of faulty operation are loose connections or a short-circuit in the wiring of the power supply or a defective transformer. However, trouble in the power supply is rare.

PROPER CARE OF METAL ENCASED STATIC BARS: Turn off equipment before cleaning, before removing static bars from machine, or before breaking any ground connection. Use a moderately stiff brush or compressed air to keep the face of the bar clean, and to remove any metal filings or fragments. Periodic use of the brush or air will prevent the points from accumulating hardened balls of lint, grease, and other foreign matter which reduces their sharpness and decreases efficiency. Occasional pressing of a soft pencil eraser down over each point in turn and twisting slightly is one easy way to remove built-up deposits Remove ink and resistant coatings by wiping points with a commercial cleaner. Including the static bars in the regular procedure of cleaning the machine will pay dividends in service.

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