

HEAT COIL AND PROTECTOR SPRING CONTACTS CLEANING

1. GENERAL

1.01 This section describes methods for cleaning heat coil washers or caps and protector spring contacts.

1.02 The section is reissued to revise the list of tools, materials, and test apparatus, to delete method of checking coils for short-circuited windings, and in general, to bring the section up to date. Since this reissue covers a general revision, the arrows ordinarily used to indicate changes have been omitted. Detailed reasons for reissue will be found at the end of the section.

1.03 If the power cleaning apparatus covered in this section is not available, the protector springs may be cleaned by hand with abrasive cloth. Abrasive cloth should also be used for cleaning heat coil washers or caps unless coils can be secured from an office where power cleaning apparatus is available.

2. TOOLS, MATERIALS, AND TEST APPARATUS

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
KS-2827	Pliers, Heat Coil
KS-6916	Brush
KS-14377 or KS-14410	Vacuum Cleaner
—	Goggles, coverall, clear lenses
—	Insulating Shield (prepared locally as covered in 2.01)
—	Drill, All-angle, Albertson and Co, No. 1495-WE (or the portable motor equipment previously used which is no longer available)
MATERIALS	
—	Abrasive Cloth, 150 Grade
—	Electrical Tape

CODE OR SPEC NO.	DESCRIPTION
TEST APPARATUS	
1W13A	Cord (each end equipped with No. 365 connecting clip or KS-6278 connecting clip)
KS-14510,L1	Volt-ohm-milliammeter

2.01 Preparation of Insulating Shield

- (1) Cut a piece of 1/32-inch thick vulcanized fiber to the dimensions shown in A, Fig. 1.
- (2) Soak the fiber in water.
- (3) Bend the fiber to the shape shown in B, Fig. 1.
- (4) Allow the fiber to dry thoroughly before using.

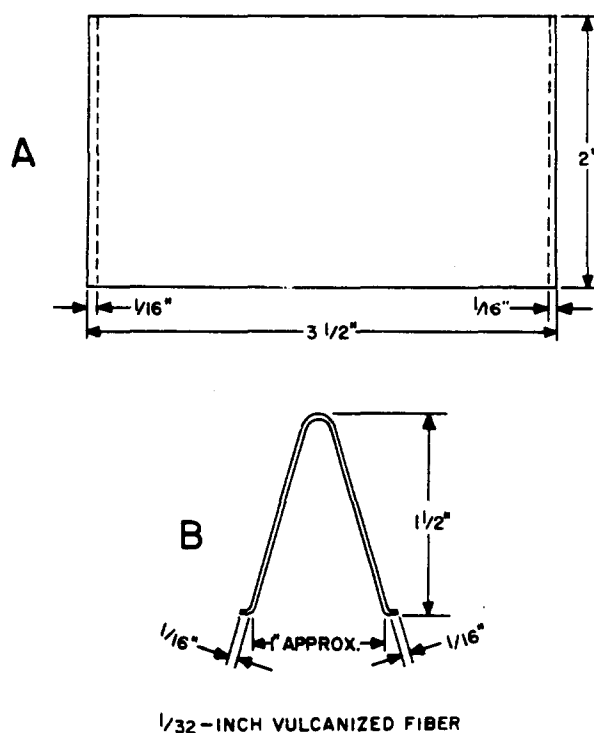


Fig. 1 – Insulating Shield for Protector Springs

3. PROCEDURES TO BE FOLLOWED BEFORE REMOVING HEAT COILS FROM PROTECTOR SPRINGS

3.01 *Caution: Before removing any heat coil, determine that it is permissible to open the conductor. Make the associated circuit busy in accordance with approved procedures before removing the heat coil. Never attempt any work on a circuit protected by special safeguarding measures unless expressly directed to do so by a person normally responsible for maintaining service on this type circuit.*

3.02 Have an adequate supply of cleaned or new heat coils on hand so that when heat coils to be cleaned are removed, they can be replaced immediately.

4. CLEANING PROCEDURES

General

4.01 Adjacent springs on the same side of the protector strip should be protected from crosses which might be caused by the wire cleaning brush. Use the insulating shield shown in Fig. 1 for this purpose. Hold the sides of the shield together and insert the shield between the springs to be cleaned and the springs of the protector directly above and below.

4.02 Remove the heat coils using the KS-2827 heat coil pliers.

4.03 *Caution: Before cleaning protector springs with the KS-6916 brush mounted in the all-angle drill, remove the ground connection from the frame of the drill as follows. If the drill is equipped with a ground lead extending from the plug, insulate the tip of this lead with electrical tape to prevent possible grounding. If the drill is equipped with a 3-prong plug, use a 3 to 2 adapter for connecting the drill to the power outlet in order to eliminate the ground connection from the circuit. After eliminating the ground connection as covered above, check that there are no internal shorts between each prong of the plug and the drill frame using the KS-14510 volt-ohm-milliammeter.*

4.04 *Caution: Protective goggles shall be worn when using power cleaning apparatus specified in this section.*

Protector Springs

4.05 Clean the contact surface of the springs with the KS-6916 brush mounted in the all-angle drill. Best results are obtained by holding the spindle of the brush in line with the springs and at an angle of approximately 45 degrees to the horizontal.

4.06 After cleaning the protector springs as covered in 4.04, vacuum all the protectors in the vertical row in which the springs were cleaned. Use either the KS-14377 or the KS-14410 vacuum cleaner equipped with a small brush to remove any metallic particles or other material which may have been deposited during the cleaning operation.

Heat Coil Washers or Caps

4.07 Before cleaning, visually check the heat coils and discard coils if they have operated or have any of the following defects.

- (1) Loose connections on head of coil.
- (2) Loose contact pin or washer.
- (3) Damaged or loose winding.
- (4) Dirty or tarnished contact pins.
- (5) Contact pin showing evidence of having been cut or operated.

4.08 Clean heat coils in satisfactory mechanical condition which have dirty or corroded washers or caps as follows. Apply the KS-6916 brush mounted in the all-angle drill to the cap or washer of the heat coil. Do not clean the pin contact of the heat coil because the cleaning procedure is liable to damage the winding. After cleaning the heat coils, recheck the coils as covered in 4.07.

REASONS FOR REISSUE

1. To revise the list of tools, materials, and test apparatus (2 of previous issue).
2. To delete reference to No. 22B test set (1.1 of previous issue).
3. To delete method of checking heat coils for short-circuited windings [3(c) of previous issue].
4. To add caution to be observed before removing heat coil (3.01).