



# Electrostatic Animal Guard

(Formerly the Guthrie Guard)

## Instruction Sheet

### Kit Contents:

- 25 Electrostatic Animal Guards
- 1 Instruction Sheet

**WARNING:** 3M™ Electrostatic Animal Guard is not intended for use on equipment bushings or insulators where the voltage rating exceeds 36 kV.

### Guard Selection Chart:

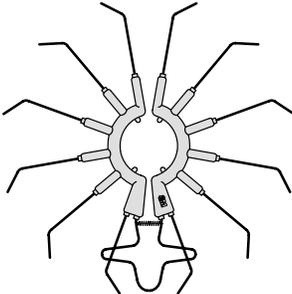
Guard	Insulator Neck Diameter*	
	Without Center Nubs Trimmed	With Center Nubs Trimmed
GG-7525	0.75" to 1.5" (19,1 mm to 38,2 mm)	1.5" to 2.5" (38,2 mm to 63,7 mm)
GG-1525	1.5" to 2.5" (38,2 mm to 63,7 mm)	N/A
GG-2545	2.5" to 3.5" (63,7 mm to 88,9 mm)	3.5" to 4.5" (88,9 mm to 114,7 mm)
GG-4565	4.5" to 5.5" (114,7 mm to 139,7 mm)	5.5" to 6.5" (139,7 mm to 165,7 mm)

\*Insulator neck diameter is defined as the diameter of the insulator between the skirts.

Table 1

### IMPORTANT NOTES:

1. Guards are for the protection of electrical equipment only. They DO NOT protect individuals (craftsperson or public) from injury or electrocution if contact is made with energized circuits or hardware.
2. Closely inspect the condition of the insulator prior to installation. The guard should not be put on an insulator that is at all suspect. It is recommended that equipment with bad insulators be de-energized.
3. The added weight of auxiliary equipment (CLF's, fault fighters, etc.) may be such that equipment should be de-energized as a precaution before installation.
4. Should these instructions conflict with the standard operating procedures and safety precautions established by a particular utility company, those company procedures shall take precedence over the instructions outlined here.

 <p><b>Electrostatic Animal Guard</b></p>	<p><b>3M™</b></p> <p><b>Electrostatic Animal Guard</b> (Formerly the Guthrie Guard)</p> <p><b>GG-7525                      GG-2545</b></p> <p><b>GG-1525                      GG-4565</b></p>						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DR.: D. Tracy</td> <td style="width: 50%;">APP.: S. Cox</td> </tr> <tr> <td>NUMBER OF PAGES: 4</td> <td>SCALE: Not to scale</td> </tr> <tr> <td>ISSUE DATE: 6/10/98</td> <td>ISSUE: C</td> </tr> </table>	DR.: D. Tracy	APP.: S. Cox	NUMBER OF PAGES: 4	SCALE: Not to scale	ISSUE DATE: 6/10/98	ISSUE: C	<b>78-8121-1101-7</b>
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## 3M™ Electrostatic Animal Guard Installation

**NOTE:** Only qualified personnel may install the 3M™ Electrostatic Animal Guard. Personnel must wear appropriate protective equipment and use only tools that are designed and tested for high voltage work. OSHA regulations and established utility safety standards must be adhered to. Only competent personnel who understand proper safety procedures may select, install, and service the guards. This instruction sheet is not a substitute for adequate training and experience in safety procedures for this type of equipment. If there is any conflict in the defined procedures of this instruction sheet and the installer's standards, STOP and contact the 3M Electrical Products Division at 1-800-245-3573 before installation.

1. Determine the voltage rating of the equipment to be protected.

**WARNING:** The 3M™ Electrostatic Animal Guard is not intended for use on equipment where the voltage rating exceeds 36 kV.

2. Verify that there are proper clearances for the installation of the 3M™ Electrostatic Animal Guard (*see Table 2 below*). Staggering guards on adjacent insulators is permissible and sometimes is required to achieve the minimum clearances.

### Minimum Clearance:

Equipment Voltage Rating	Guard to Energized Conductor	Guard to Ground Source or Other Insulator	Guard to Opposing Energized Conductor or Hardware*
36 kV and below	1.5" (38,2 mm)	2.5" (63,7 mm)	4.0" (101,6 mm)

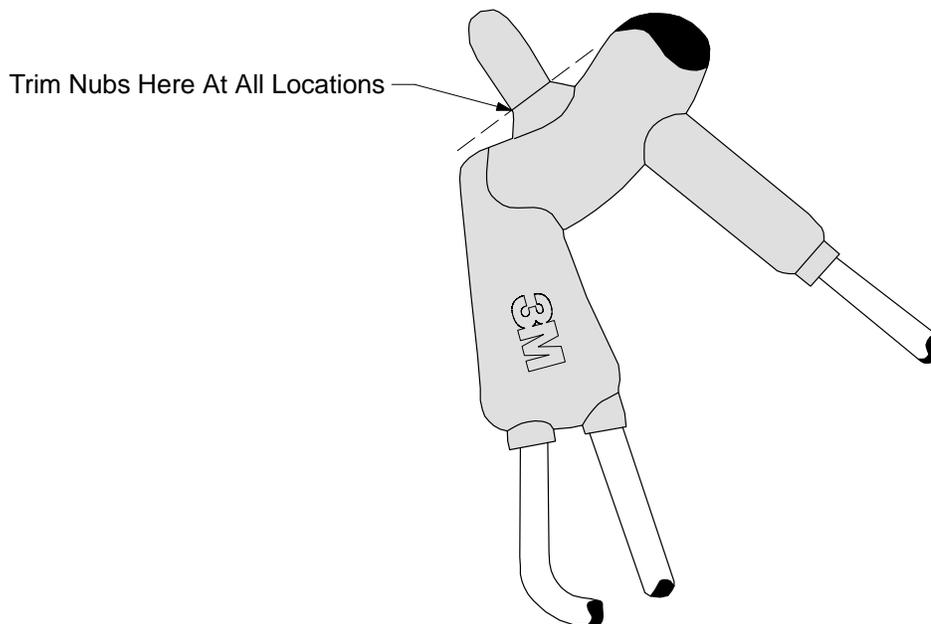
\*3M™ Electrostatic Animal Guards that are installed in the primary zone must be considered energized hardware.

Table 2

**WARNING:** Never install a guard on energized equipment where the guard may come into contact with a high voltage source, another guard or ground source.

3. Measure the diameter of the insulator's neck to verify that the guard fits the insulator (*see Guard Selection Chart, Table 1 on front page*). The center nubs may be trimmed to fit larger diameters for model numbers GG-7525, GG-2545, and GG-4565 (*see Figure 1*).

Figure 1



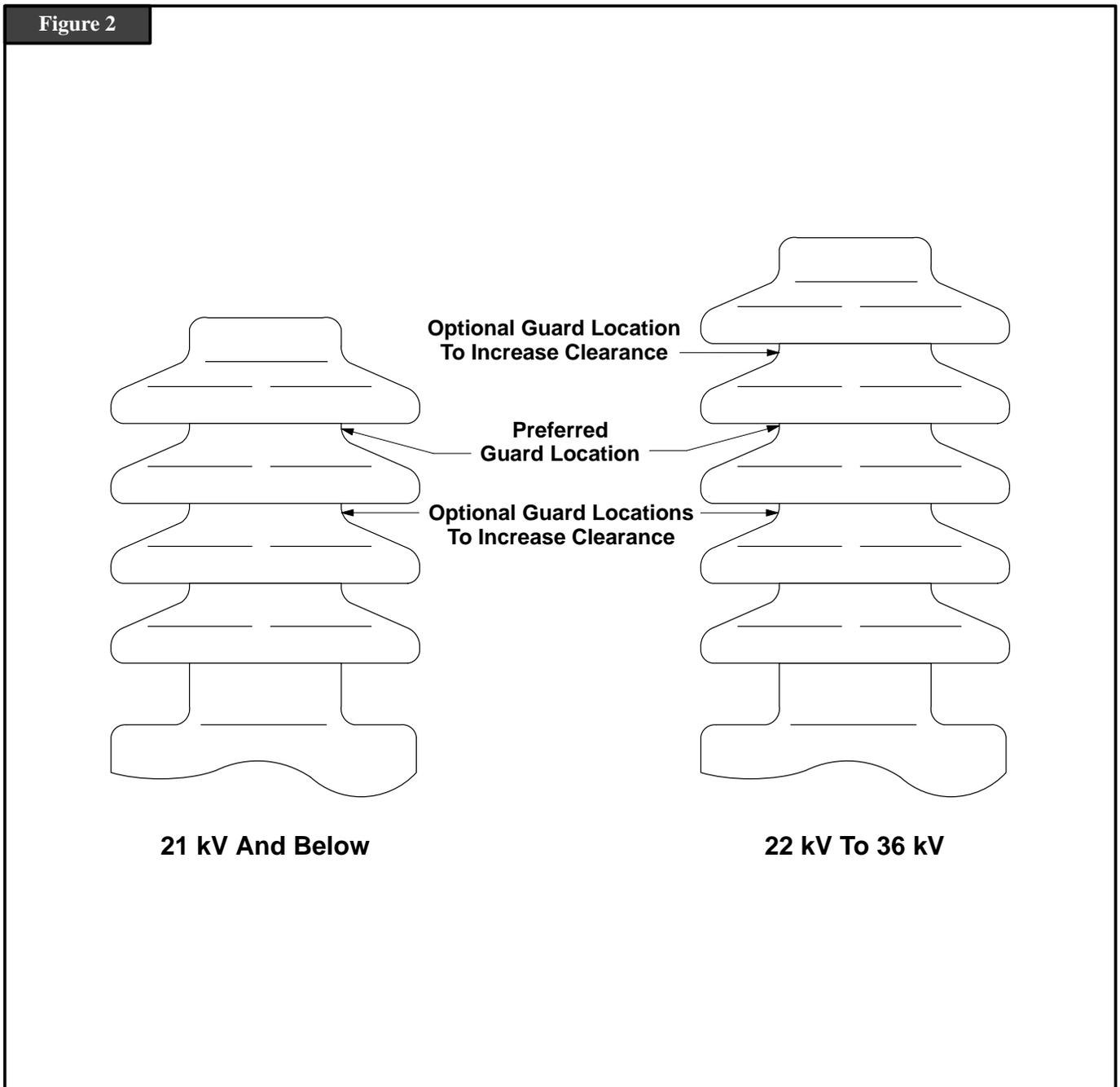
**NOTE: If you are uncertain of the insulator's neck diameter, clearance, or rating of the equipment, consult with your supervisor or engineering department before proceeding.**

- Attach the guard to the hot-stick. The guard is to be installed between skirts based on *Table 3* below (see *Figure 2*). Gently push the guard onto the insulator neck with the radials pointing upwards. The guard may be installed with the radials inverted or between neighboring skirts to those preferred to get the proper clearance requirements in *Table 2*.

Equipment Voltage Rating	Preferred Location of Electrostatic Guard*
21 kV and below	Between top 2 skirts
22 kV to 36 kV	Between 2 <sup>nd</sup> and 3 <sup>rd</sup> skirts from top

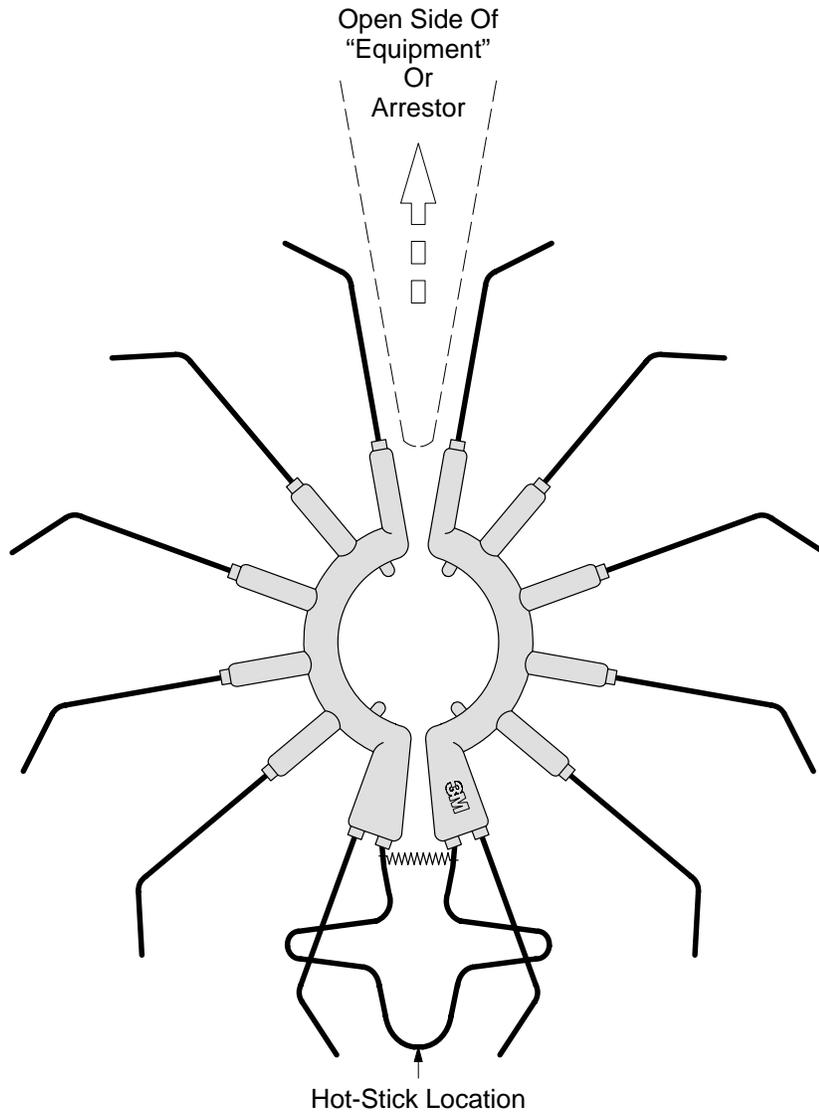
\*The location of the guards on adjacent insulators may be between different skirts than recommended in *Table 3* (i.e. "staggered") in order to meet the minimum clearance requirements in *Table 2*.

Table 3



**NOTE: Under no circumstances should a guard be forced onto an insulator.**

Figure 3



5. Remove the hot-stick.

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