# 15/25/35kV 200A LOADBREAK BUSHING INSERT
# INSTALLATION & OPERATING INSTRUCTIONS

## DESCRIPTION:

The CHARDON bushing insert is designed for assembly to a high-voltage bushing well and is used as a mating loadbreak connector for a loadbreak elbow. Using bushing inserts makes field installation and replacement possible and efficient. The bushing insert is designed to operate with a bushing well meeting the interface requirements of the IEEE Standards for Separable Insulated Connector Systems, ANSI / IEEE 386.

The Bushing Insert interface meet the ANSI / IEEE 386 requirements listed below:

- Class 15kV 200A (8.3kV and 8.3/14.4kV)
- Class 25kV 200A (15.2kV and 15.2/26.3kV)
- Class 35kV 200A (21.1kV and 21.1/36.6kV)

## KIT CONTENT:

- Bushing Insert with Shipping Cap (not insulating)
- Grounding Wire
- Silicone Grease
- Paper Towel
- Instruction Sheet

**CAUTION:**

• The installation of Chardon products must be carried out by qualified technical personnel.
• Contact with energized equipment can cause serious damage and even death.
• Wear appropriate protective equipment.
• Make sure Chardon Accessories are completely dry and in good condition at the time of installation.

**DANGER:**

• Do not touch or handle energized products without adequate protective equipment. Errors in the compliance of this instruction can result in damage to the product, serious injuries to people and even death.
• All associated equipment must be de-energized during installation and maintenance.
• The following instructions do not cover details or variables in the change / installation of the product, to prevent contingencies, please contact the team of Chardon technicians if required.

## SAFETY INFORMATION

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians, who are familiar with this equipment should install, operate and service it.

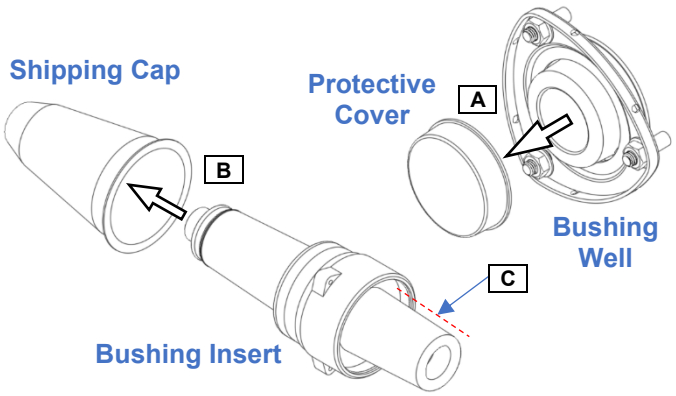
## Warranty

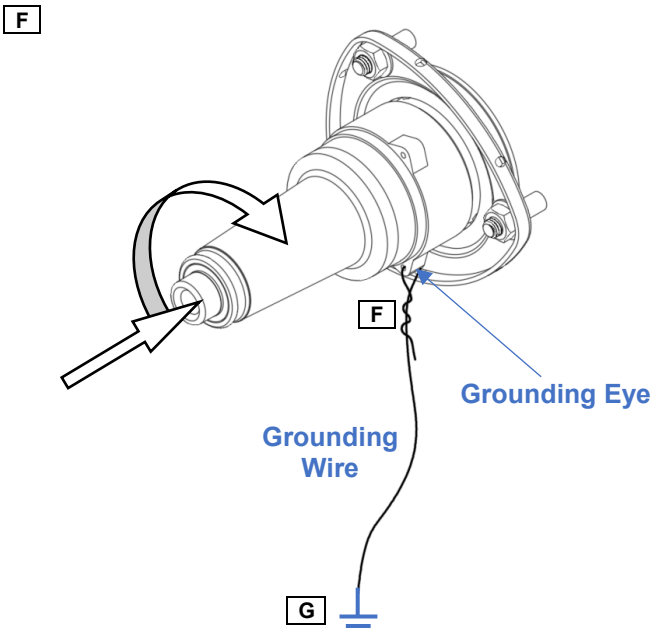
Chardon products are guaranteed for a period of 2 years after their date of purchase, to make this guarantee effective you can come only by presenting a purchase invoice to your authorized Chardon distributor. The warranty will not be valid in the following cases:

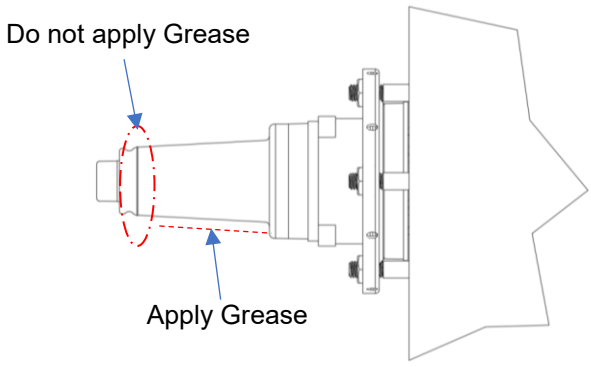
1. When the product has been used under conditions other than normal.
2. When the product has not been operated according to the instructions for use.
3. When the product has been altered or repaired by persons not authorized by Chardon.
4. When using components that are no compatible with Chardon accessories.



**FOR MORE INFORMATION, PLEASE CONTACT YOUR LOCAL DEALER.**




## STEP 1:

A. Remove the protective cover from the high-voltage bushing well.
B. Remove the **Shipping Cap** from **Bushing Insert**.
C. Clean bushing well and apply a thin uniform coating of **Silicone Grease** provided to the bushing insert interface as shown.

> **NOTE:**
> Do not substitute other lubricants for those provided.

## STEP 2:

D. Place the bushing insert into the bushing and tighten in a clockwise direction until it bottoms, achieving a final minimum torque of 150 inch pounds up to a maximum of 180 inch pounds by wrench or hand.
E. Replace the cover after tightening if the mating product is not to be assembled immediately.
**Do not energize bushing with shipping cap installed.**

> **WARNING:**
> THE SHIPPING CAP IS NOT SUITABLE AS AN INSULATING CAP FOR ENERGIZED USE.

F. Attach a piece of **Grounding Wire** equivalent to #14 copper wire to the grounding eye on the body of the bushing insert.
Hold the strand with pliers close to the rubber eye hole and tightly twist the loose end around the strand at least 2 turns. Ensure wire is successfully contacting with the rubber eye.
G. Attach the other end of the wire to a ground connection.

## STEP 3:

H. Clean the operating interface.
I. Uniformly apply one tube of **Silicone Grease** provided to the bushing operating interface. Do not apply Grease to the groove of bushing top.

> **WARNING:**
> ALL ASSOCIATED APPARATUS MUST BE DE-ENERGIZED BEFORE PREPARATION OR REPREPARATION PROCEDURES.

### LOADBREAK OPERATION

- Securely fasten a suitable live-line tool to the pulling eye of the mating loadbreak elbow.
- Without exerting any pulling force, slightly rotate the elbow clockwise to break surface friction between the elbow and bushing.
- Withdraw the elbow from the bushing with a fast, firm, straight motion, being careful not to place the connector near a ground plane.
- Place the elbow on an appropriate accessory device, following the operating instructions for that accessory.
- Place an insulated protective cap with drain wire attached to system ground on any exposed energized bushing using a suitable live-line tool.

### LOADMAKE OPERATION

- Area must be clear of obstructions or contaminants that would interfere with the operation of the loadbreak elbow.
- Securely fasten a suitable live-line tool to the pulling eye.
- Place the loadbreak elbow over the bushing, inserting the white arc follower of the probe into the bushing approximately 2 1/2" until a slight resistance is felt.
- Immediately thrust the elbow onto the bushing with a fast, firm, straight motion, with sufficient force to latch the elbow to the bushing.
- Push again on the elbow with the live-line tool, and then pull gently to make sure that it is secure.