

TSB DXX 0006

TECHNICAL SERVICE  
BULLETIN

**INSTALLING THE SEALING  
CORE TO PREVENT VACUUM  
LEAKS**

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Since 1889



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## SAFETY

J.C. Steele and Sons equipment is designed to process large amounts of heavy products. To accomplish many of the required operations of our customers, high horsepower and heavy components are required. A great deal of time and effort has been invested into our equipment to make them as safe as practically possible. The safety features are no substitute of caution and common sense. A careless moment is all that is needed to cause a serious accident. Please refer to the machine's Owner's Manual for a detailed list of safety precautions.

## GENERAL DESCRIPTION

The sealing core, packing, and shredder assembly is designed to seal for vacuum at the exit end of the sealing core. This is the end closest to the vacuum chamber. To prevent vacuum leaks the seal must be formed at this end of the sealing core by using a combination of the packing, the raw material (clay, shale, etc.), and proper assembly of the shredder so the split is not in line with the sealing core split. These instructions also include the recommended application of silicone sealant in areas to ensure vacuum is sealed.

## SPECIAL TOOLS NEEDED

- Silicone sealant

## MANPOWER ESTIMATE

This procedure will require 1 man for 30 minutes, depending on maintenance state of equipment and ease of access.

## PROCEDURE



FIG 1: The exit end of the sealing core, as viewed from the pug sealer vacuum chamber. The “split” shown is oriented at the top position. The other split (not shown) is at the bottom position.

1. Apply silicone sealant as shown in Figure 2 to ensure that the leak is closed.



FIG 2: There are two possible avenues here for a vacuum leak. The first leak pathway is the two splits. These normally fill with material (clay, shale, etc.). In these photographs silicone has been applied into the casting splits. This silicone and the raw material (clay, shale, etc.) that will fill in behind it will seal for vacuum here.



FIG 3: The second possible leak pathway is between the inside of the sealing core and the shaft. This normally is sealed with the packing. Again, silicone can be used prior to installing the packing to increase the certainty that vacuum is sealed. A silicone bead has been applied between the shaft and sealing core inside diameter at the bottom of the groove where the packing will seat. Alternatively, silicone can be applied to this region before the sealing core halves are installed on the shaft.

2. Install the packing before the silicone has dried. Figure 4 shows the packing installed.



FIG 4: Sealing core with packing installed

3. The shredder should be installed so the shredder splits are not aligned with the splits in the sealing core. In this example the splits in the sealing core are on the top and the bottom (see Figure 1).



FIG 5: Shredder splits on the left and right