INSPECTION PROCEDURE OF EXTRUDER THRUST BEARING COVER PLATE AND AUGERSHAFT NUT
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

This Technical Service Bulletin outlines the inspection procedure for the thrust bearing cover plate and auger shaft nut in extruders. This procedure applies to all extruders and seal assembly designs. The part names may differ between different designs.

Each time the fast feed augers are removed, the condition of the auger shaft nut and cover plate should be inspected. Specifically, the clearance gap between the nut and the cover plate should be checked and grease should be evident in this area. The nut is the part that clamps to the threads of the auger shaft and rotates with the auger shaft. The cover plate is the stationary part that is positioned between the main seal (Cat seal) and the dirt in the vacuum chamber.
1. The gap between the cover plate and the nut is where grease should purge.
   - This grease purge is critical to keeping dirt away from the main seal, which holds oil in the thrust and radial bearings.

2. Over time, the nut and cover plate will wear. The sharp edges will become rounded. Typical wear is shown in Figure 2.
   - If the clearance gap between the nut and cover plate becomes too large, then dirt can reach the main seal even if they are being greased properly.
Example of worm profile shown. At this time, the nut and cover plate should be replaced.

Maximum gap for grease purge should be approximately 1/32" (.06 mm)

FIG 2: The condition when the nut and cover plate should be replaced.