

Smart Sifter

Lubrication Instructions

The Norvell Smart Sifter drive is equipped with four (4) long life grease lubricated bearings, two (2) gearboxes, and two (2) splined vertical couplers. Before installing the bearings and gearboxes, they are carefully checked, cleaned, and then lubricated with Conoco Multiplex Red #2¹ grease, unless otherwise specified by the customer, using a hand-pump gun system.

Compatible vs. Comparable:

Please Note: The Conoco Multiplex Red # 2 grease furnished by Norvell is lithium based. Please do not mix this grease with one of a different base. While you may find *comparable* greases, **NOT ALL GREASE IS COMPATIBLE**. Should your facility require a Food Grade grease, completely purge bearings, gear boxes, & couplers prior to use. Incompatible greases will starve the component for lubrication, and can potentially ruin the sifter.

Bearings:

Your sifter is equipped with four (4) bearings. The factory lubrication instructions are as follows:

- After the initial 30-day period of operating the sifter, check your bearings lubrication.
- Under normal conditions, the bearings should be re-lubricated every 3 months or at intervals of approximately 700 hours of operation (whichever comes first), for the life of the unit.
- When applying grease, apply four to six strokes.²
- Service life and efficiency of bearings will be affected by oxidation or contamination of the lubricating grease. Improved performance will be obtained by periodic re-lubrication.
- Re-lubricate more frequently if unit is operated in abnormally high ambient temperatures or unusually contaminating atmosphere.
- If the bearing is running excessively hot or if there is a roughness/grinding when turning the shaft, these are signs that the bearing has been running dry and could require replacement.
- **Caution:** Avoid over-greasing as this could damage the sifter bearing grease seals.
 - Bearings should be checked occasionally for damaged grease seals causing leaks. If the seal leaks, grease bearings as often as necessary until bearings can be replaced at a convenient time.
 - Each bearing compartment contains a zero-pressure grease-release zerk. The installed zerk contains no spring or ball within its structure to trap built up pressures or overflowing grease. This protection is a definite over-lubrication safety factor, assuming that no leaks occur at the oil seals; and providing the zerk fitting opening is maintained and not plugged.

- Keep in mind that during periods of operation, expansion and contraction takes place within the sifter bearing compartments. This causes pressure, which may result in excessive grease discharging through the grease zerk. Norvell sifter drive bearings are designed to operate at 180-degree temperatures. The neoprene grease seals are designed to accept temperatures up to 250 degrees. Sifter bearings may run hot during their first 48 hours of operation and will taper down in heat as they are run.

Gear Boxes:

Your sifter is equipped with two right-angle gearboxes. The factory lubrication instructions are as follows:

- Purge once a year, regardless of 24/7 operation or a few hours a day. Gear boxes do not require quarterly re-lubrication as long as they are purged once a year.
 - Remove coverplate (pictures 1 & 2 below)
 - Remove lower grease plug of gear box (picture 3 below)
 - Add grease to upper grease zerk (picture 4 below), while turning the shaft, until clean grease is running out the lower grease hole.

Pictures 1 & 2:



New Style

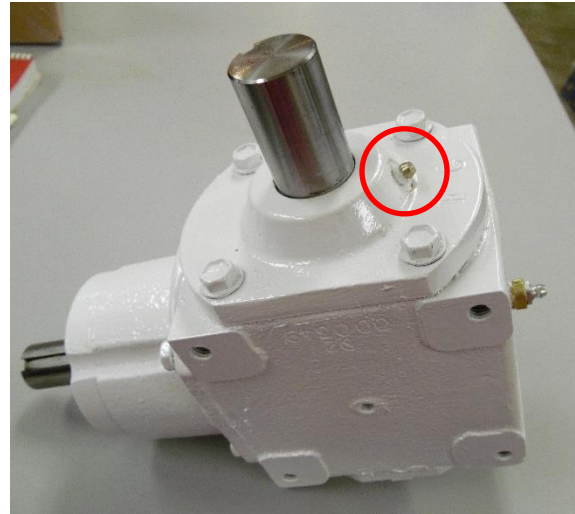


Older Style

Picture 3:



Picture 4:



- Inspect units for extensive noise or backlash to determine if factory replacement parts may be needed.

Vertical Couplers:

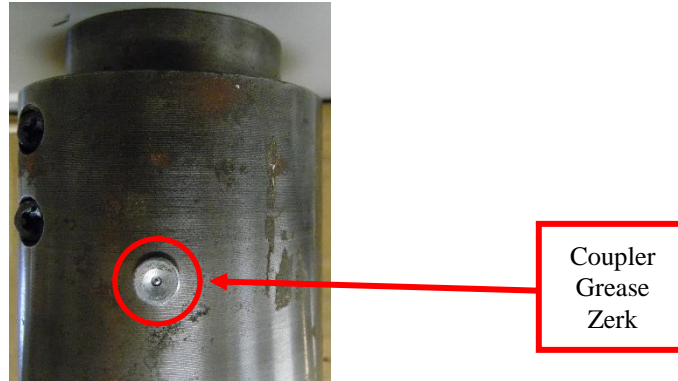
Your sifter is equipped with two (2) SS-250-14 Splined Vertical Couplers. The factory lubrication instructions are as follows:

- After the initial 30-day period of operating the sifter, check your vertical couplers lubrication.
- Under normal conditions, the vertical couplers should be re-lubricated every 3 months or at intervals of approximately 700 hours of operation (whichever comes first), for the life of the unit.
- Norvell has provided a grease gun injection needle (picture 1 below) to access the couplers grease fitting (picture 2 below).

Picture 1:



Picture 2:



- Remove the gear box cover plate and rotate the shafts, if necessary, in order to view the coupler grease zerk.
 - When applying grease, apply five to ten strokes or until you see grease coming out of the bottom on the back side of the coupler.²
 - Note that it may be necessary to block the front, bottom side of the coupler so that the grease will work it's way all around the coupler.
- Service life and efficiency of splined vertical coupler will be affected by oxidation or contamination of the lubricating grease. Improved performance will be obtained by periodic re-lubrication.
- Re-lubricate more frequently if unit is operated in abnormally high ambient temperatures or unusually contaminating atmosphere.
- Inspect units for signs of fretting (ex: red dust) to determine if factory replacement parts may be needed.

- 1 Conoco Multiplex Red #2 is a high-quality, multipurpose, extreme-pressure, lithium based grease. This grease is recommended for heavy-duty, heavily loaded anti-friction and plain bearings.*
- 2 Please note that every grease gun is different and there are multiple variables to be taken into consideration; such as ambient temperature, humidity, continuous hours of operation, etc.; that will affect how much grease will be required.*
- 3 Norvell recommends using Conoco Multiplex Red #2 or an equivalent lithium based grease.*



**4002 Liberty Bell Road
Fort Scott, KS 66701
Phone: 800-653-3147
Fax: 620-223-3115
Email: sales@norvellco.com**