



Technical Topic

Grease Fittings with Pressure Relief

There are millions of pieces of industrial equipment in operation today that are lubricated with grease. Many of these applications are in very tough service and non-ideal environments, which makes regreasing an integral part of the maintenance activities. Using spring-loaded grease fittings helps prevent overpressurization of the bearing housing and protect bearings with shields from being damaged. Pressure-relief fittings can also reduce the time it takes to complete the regreasing activity.

Shut-Off Grease Fittings

These fittings prevent overpressurization of the bearing chamber and shield during grease injection. While a typical grease gun can put out as much as 10,000 psi, this fitting provides pressure-specific shut-off at the greasing inlet. When a predefined shut-off pressure (typically 20 psi) is exceeded, the grease will not be allowed to flow into the bearing chamber. When pressure falls below the shut-off pressure, the grease flow will resume. The typical design includes a 60-degree angle and a 1/8-inch PTF male pipe thread for pressure relief.



Pressure-Relief Vent Fitting

This fitting works as a pressure-relief valve at the grease plug (or outlet). When the design pressure (typically 1 to 5 psi) is exceeded, the valve will open and vent off grease. When the

pressure is relieved, the valve will close to form a seal like a normal grease plug. In doing so, this device provides the additional advantage of eliminating the run-in that is required after regreasing (typically 15 to 30 minutes).



The Benefits

Pressure-relief fittings are available in a variety of quantities and sizes from various suppliers including Alemite, Lincoln, and McMaster-Carr (check the manufacturers' Web sites for the supply source nearest to you).

While pressure-relief fittings are inexpensive (often less than one dollar apiece) and can easily be replaced during the next scheduled regreasing, without them the operation of the equipment is affected. Their use can result in a number of benefits:

- Improved bearing reliability through elimination of failures from overpressurization of the bearing shield (i.e., motor bearings)
- Reduced regreasing time
- Improved lubricant quality through reduced high-pressure churning
- Contaminants should be reduced through adequate flushing

If you're in doubt or want to know more about ExxonMobil greases, contact your ExxonMobil Technical Help Desk or Field Engineer for assistance.

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