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MAXXLIFE HT™ 220 AND HT 600: THE LITTLE BROTHER BIG BROTHER CONCEPT

-PRODUCT DESCRIPTION-

MaxxLife HT 220, the little brother, and MaxxLife HT 600, the big brother, are unique lubricating greases utilizing an entirely new approach in thickener technology. The MaxxLife HT greases provide exceptional lubricity, thermal stability, rust protection, and water washout resistance. The extreme pressure (EP), antiwear, and corrosion properties are directly supported by this unique synthetic, very polar, thickener. These properties are in the soap structure of the thickener which thereby assures that they reach the metal surface giving more efficient results, as reflected below in the test data. This is different from those like lithium and lithium complex greases where additives are formulated into the base oils of the formulation as components and must compete for the metal surface against the independent more polar soap thickener. Their mechanical stability surpasses conventional greases and makes them ideal for use in high load applications. They contain no heavy metals or other environmentally undesirable components. MaxxLife HT 220 is truly an outstanding multi-purpose grease and the MaxxLife HT 600, with a heavier base oil, improves performance in larger, heavier loaded, slower moving bearings, and sliding surfaces. The chemistry is matched to improve compatibility and performance when used together in combination if necessary, for example the 220 will have easier pumpability in cold temperature applications improving the channel ability in bearings while the 600 may be necessary in the same application during higher temperature summer months (consult Renewable Lubricants, Inc. for technical questions). These greases also give the end user a choice of use in multiple diverse applications, for example 220 in high speed bearings in motors and pumps compared to 600 in larger slower moving steel mill bearings. As a general rule, use MaxxLife HT 600 in bearings larger than 3 in. shaft diameter and/or operating less than 1,000 RPM. They have no significant shortcomings and are probably the closest things to all-purpose lubricants on the market today.

-APPLICATIONS-

The MaxxLife HT greases are recommended for any application where good lubricity, mechanical and thermal stability and rust protection are required. Operations utilizing lithium complex, calcium complex, aluminum complex, or polyurea can easily be converted to MaxxLife HT greases to improve costs and performance levels while lowering downtime. Typical industries that can benefit from the use of MaxxLife HT greases include:

- Automotive (chassis and wheel bearing grease)
- Agricultural/construction (fifth wheel, king pin and bearing grease)
- Industrial (conveyor, electric motor, high temperature application, roller bearing grease)

-PERFORMANCE-

Mechanical Stability –

Tests in the ASTM grease worker show virtually no change in consistency after 100,000 strokes, in addition, no significant change was observed in the conventional Shell Roll Test (D-1832). The Shell Roll test was modified from 6 hours at room temperature to 100 hours at 150°F, to increase the severity and again, no softening was observed.

Load Carrying Ability –

Timken values of 65 pounds OK load, LWI of 65 kg and weld point of 500 kg are typical for MaxxLife HT

greases. Four Ball Wear tests (D-2266) also demonstrate the excellent lubricity of this product.

Thermal Stability –

1. Dropping Point - MaxxLife HT greases will not become pourable until temperatures approaching 600°F are reached. After cooling to room temperature, they return to their original grease structure, unlike some lithium complex, polyurea, calcium complex and clay greases.
2. Wheel Bearing Leakage (D-1263) - in this test, modified at 325°F, MaxxLife HT greases show no leakage, hardening or other signs of failure and are comparable to other premium greases.
3. Lubrication Life (D-3336) - MaxxLife HT greases exhibited outstanding performance in this test. A more severe version (run at 325°F) showed even more impressive results (600 hours).

Oxidation Stability –

Bomb oxidation stability tests (D-942) produced pressure drops of only 2 PSI after 500 hours and 9 PSI after 1,000 hours. These values reflect the excellent resistance of MaxxLife HT greases oxidation when compared to other premium lithium and lithium complex greases, etc. which usually only give 5 PSI at 100 hours.

In a specially set up modification of GM 9075-D, panels were coated with grease and exposed in an oven at 300°F for one week. Other premium greases showed coking and turned into hard crusty substances, whereas MaxxLife HT greases retained their soft, greasy textures.

Resistance to Water-

In a variation of the ASTM work stability test, MaxxLife HT greases were mixed with 50% water and after working 100,000 strokes, remained virtually unchanged in consistency. Other premium greases run in this test tend to slump or break down.

Water Resistance - MaxxLife HT greases have exhibited excellent adhesion, high water absorption and no sign of breakdown.

Water Washout (D-1264) - MaxxLife HT greases scored an excellent rating on this test.

Corrosion Resistance-

In the Rust Test Rating (D-1743) MaxxLife HT greases pass this test and are equivalent to other premium greases. In a more severe version of this test, modified with synthetic sea water, MaxxLife HT greases still gave 1,1,1 ratings.

The MaxxLife greases were tested in the Salt Fog Test (ASTM B 117) where typically scores would be considered good at 40 to 100 hours for corrosion inhibitors and preservative oils. The MaxxLife greases scored an incredible >4,000 hours in this severe test. Due to this additional corrosion protection these MaxxLife HT greases will outperform other premium conventional greases in wet and humid conditions.