

LUBE Hybrid Lubricant



High performance lubricant which incorporates all the advantages of both oil & grease. Eliminates the disadvantages of both.

- Next generation lubricant which contributes to the protection of the environment.
- Reduces lubricant consumption.
- Prevents the deterioration and decomposition of the cutting fluids; drastically reducing hazardous waste disposal.
- Reduces machine part abrasion.

Advantages of Oil: Liquidity, excellent migration properties, transport properties, no solidification.

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Advantages of Grease: High load carrying capacity, wear resistance, excellent oil film retention and adhesion properties.

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The advantages of Oil and Grease.

Operating temperature limit/LHL300 -20°C - +130°C
Operating temperature limit/LHL X100 -20°C - +150°C

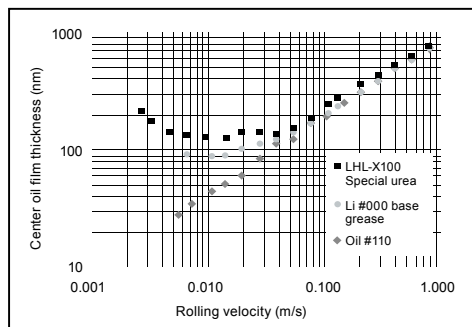
Model

Model	Part Number	Capacity	Color
LHL300-4S	249113	400mℓ	yellow
LHL300-7	249112	700mℓ	
LHL X100-2	249139	200mℓ	yellowish brown
LHL X100-4	249136	400mℓ	
LHL X100-7	249137	700mℓ	



LHL-X100 Performance Test Data Ambient Temperature Range -20°C - +120°C

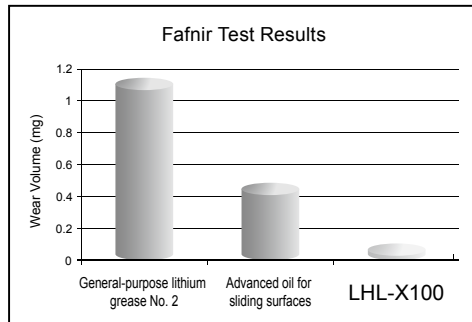
Basic Oil Film Thickness Evaluation Test



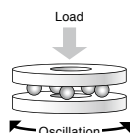
LHL-X100 special urea grease maintains a film at a lower speed than that of oil-soap grease.

Test results on oil film thickness as a basis of lubrication performance shows that the oil film is thinnest when rolling velocity is zero (or close to zero). Compared to oil, grease can form thicker oil films. However, this special urea grease can form thicker oil films than lithium grease can, preventing insufficient oil films.

Fretting Resistance Test

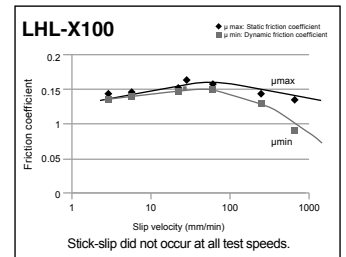
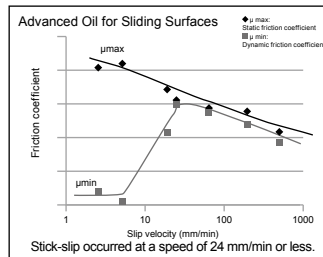


1. Evaluation method
Fafnir test (as per ASTM D 4170)
2. Test conditions (ASTM D 4170)
Bearings: ANDREWS W 5/8 (Use 2 sets.) Load: 2450 N (Contact pressure: 1861 MPa)
Angle of oscillation: 12 degrees (Average rolling speed: 0.065 m/s)
Oscillation cycle: 25 Hz Time: 22 hours Temperature: 25 degrees C
Amount of grease per bearing set: 1.0±0.05g
Measured amount of wear: Wear of each race way grinder per bearing set is reduced. (Gross mass wear of the test race way grinder is halved.)



Friction Coefficient Test (Stick-Slip Resistance Performance)

LHL-X100 did not cause stick-slip at all test speeds. Compared to even the most advanced oils for sliding surfaces, LHL forms lubrication films on metallic sliding surfaces successively to avoid metallic contact, even in low-speed areas because of special urea structure and additive.



- Test method
1. Tester: Bowden tester
2. Test conditions Material: Steel-Steel Temperature: Room temperature Load: 4 kgf Speed: 3, 6, 24, 30, 60, 240, 600 mm

Label description of LUBE Original Cartridge Grease



Example: Manufactured in July 2012

Part No.

Year (the last digit of the year)

A:Jan. B:Feb. C:Mar. D:Apr. E:May. F:Jun.
G:Jul. H:Aug. J:Sep. K:Oct. L:Nov. M:Dec.