

Product Information



Equipower™ Ultra Hydraulic Oil (6132, 6146, 6168)

Extended-Life Oil Provides Smooth Hydraulic Power

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A long-lasting, nonfoaming oil designed to protect the life of hydraulic systems, Equipower™ Ultra Hydraulic Oil (6132, 6146, 6168) offers superior protection against water contamination, rust, corrosion and oxidation. This formulation contains Monolec®, LE's exclusive wear-reducing additive, and is available in three different viscosity grades. It outperforms other commercial hydraulic oils in thermal, oxidative and hydrolytic stability.

Beneficial Qualities

Long-Lasting, Cost-Saving Service

- Extends drain intervals when properly maintained
- Reduces oil consumption, including need for make-up oil
- Minimizes labor and downtime required for oil change
- Eliminates fade or chatter by breaking up foam
- Provides longer service life than other commercial hydraulic oils

Wear Protection

- Protects metal components from scuffing, galling and other wear
- Minimizes equipment downtime and failure
- Is compatible with most seals and hoses
- Reduces need for replacement parts and labor

Water, Rust, Corrosion & Oxidation Resistance

- Separates rapidly from water, allowing for easy water drain-off
- Prevents rust and corrosion with R & O inhibitors
- Provides superior oxidation resistance
 - Reduces sludge and varnish formation
 - Prevents plugged orifices and sticky valves
- Maintains system cleanliness



Proprietary Additive

LE's proprietary additives are used exclusively in LE lubricants. Equipower Ultra Hydraulic Oil contains Monolec.

Monolec® wear-reducing additive creates a single molecular lubricating film on metal surfaces, vastly increasing oil film strength without affecting clearances. An invaluable component in LE's engine oils, industrial oils and many of its other lubricants, Monolec allows opposing surfaces to slide by one another, greatly reducing friction, heat and wear.





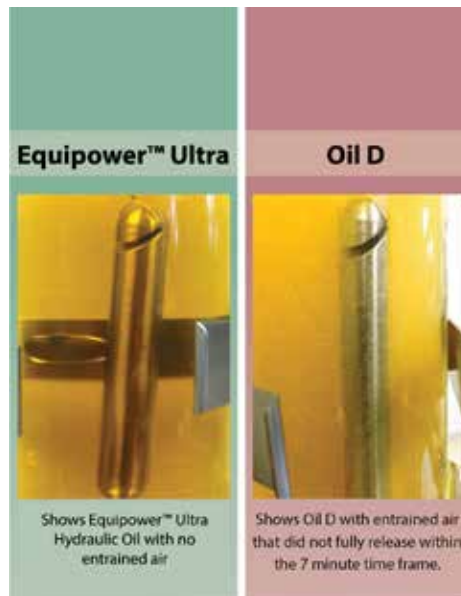
Air Release Lab Test Results

Results Recorded in Time (Minutes)
ASTM D3427



ISO 46 run at 50° C

To meet the test variant for the Parker Dennison HF-0 specification, the air release must be completed in 7 minutes or under.



This test measures the time for entrained air content to fall to a relatively low value. Entrained air in hydraulic oil can cause sponginess and lack of sensitivity of the control of turbine and hydraulic systems. It is critical that hydraulic fluid has the ability to separate entrained air from oil.



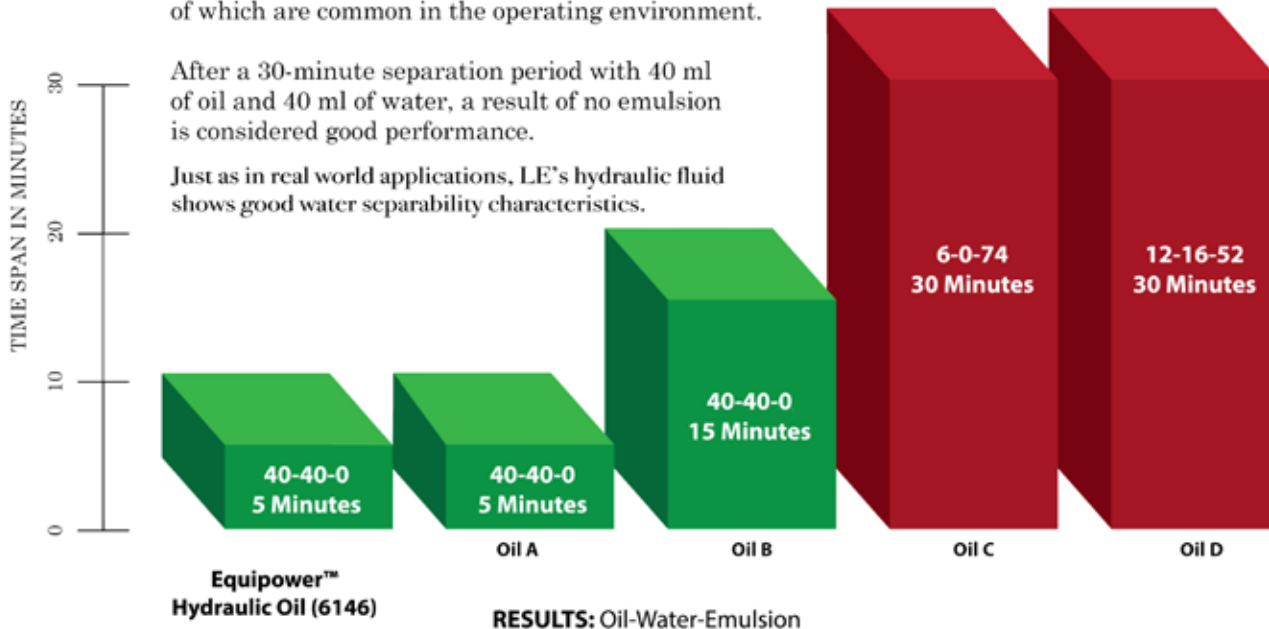
Water Separability Test Results

ASTM D1401

This test is performed as an indicator of an oil's ability to separate from water under conditions of high water contamination and agitation, both of which are common in the operating environment.

After a 30-minute separation period with 40 ml of oil and 40 ml of water, a result of no emulsion is considered good performance.

Just as in real world applications, LE's hydraulic fluid shows good water separability characteristics.





Equipower™ Ultra Hydraulic Oil

	<u>6132</u>	<u>6146</u>	<u>6168</u>
Color	Red	Red	Red
ISO VG	32	46	68
Relative Density @ 60°F/60°F, ASTM D1298	0.852	0.863	0.880
Viscosity @ 100°C, cSt, ASTM D445	5.70	7.10	8.85
Viscosity @ 40°C, cSt, ASTM D445	32.70	46.8	68.8
Viscosity Index ASTM D2270	≥100	≥100	≥100
Flash Point °C (°F), (COC), ASTM D92	214 (417)	219 (426)	224 (435)
Pour Point °C (°F), ASTM D97	-39 (-38)	-36 (-33)	-30 (-22)
Rust Test 4 hrs @ 60°C, DI H₂O, ASTM D665A	Pass	Pass	Pass
Rust Test 4 hrs @ 60°C, Sea H₂O, ASTM D665B	Pass	Pass	Pass
Copper Corrosion 3 hrs @ 100°C, ASTM D130	1b	1b	1b
Emulsion Characteristics @ 54°C, oil-water-emulsion/minutes, ASTM D1401	40-40-0/5	40-40-0/5	40-40-0/10
Air Release 9.0-90.0 cSt @ 40°C: 50°C, minutes, ASTM D3427	1.0	3.0	4.0
Dielectric Strength Kv, ASTM D877, KV	≥40	≥40	≥40

Performance Requirements Met or Exceeded

- AIST US Steel 126, 127
- ASTM D6158 (HM)
- Bosch-Rexroth RDE 90235
- DIN 51524-2 (HM)
- Eaton E-FDGN-TB002-E
- Fives (Cincinnati Machine)
 - P68 (6132)
 - P69 (6168)
 - P70 (6146)
- GB 11118.1-2011 (L-HM)
- GM LS-2
- ISO 11158 (HM)
- JCMAS P041 HK
- Parker (formerly Denison) HF-0
- SAE MS 1004 (HM)
- SEB 181222

Typical Applications

- Hydraulic pumps and systems:
 - In-plant stations
 - Forklifts
 - Construction equipment
 - Well service equipment
 - Utility service boom trucks

Recommendation

- This product should not be used for fire-resistant hydraulic fluid applications.