

# Hydraulic LP

## Low Pour Hydraulic Oil



### Features & Benefits

- Multi-grade
- HV / HVLP hydraulic fluid
- Expanded operating temperature range
- Excellent corrosion and wear protection for long pump life
- Superior foam resistance for efficient pump operation
- Excellent water tolerance where contamination is unavoidable
- Outstanding oxidation resistance for long service life

**Hydraulic LP** oils are HV/HVLP high-performance, multi-grade, anti-wear hydraulic oils. They offer the same wear and corrosion protection as traditional hydraulic oils but operate over a broader range of operating temperatures. The allowable temperature range limits the usefulness of hydraulic oil. Low temperatures will cause hydraulic oils to thicken, preventing the oil from feeding the pump fast enough, resulting in noise and wear damage. In high temperatures, oils become thinner, reducing the film thickness between moving parts of the machine and increasing friction and wear.

### Typical Results

| Method   | LP 15       | LP 22                    | LP 32       | LP 46       | LP 68        | LP 100        |
|--|-------------|--------------------------|-------------|-------------|--------------|---------------|
| <b>ASTM COLOUR (D1500)</b><br><b>DYED COLOUR</b>     | 1.0<br>-    | 1.0<br>Blue <sup>1</sup> | 1.0<br>-    | 1.5<br>-    | 1.5<br>-     | 2.5<br>-      |
| <b>VISCOSITY (D445)</b><br>cSt @ 40°C<br>cSt @ 100°C | 14.9<br>4.0 | 22.1<br>5.0              | 33.9<br>6.6 | 45.2<br>8.1 | 66.7<br>11.1 | 100.0<br>14.8 |
| <b>VISCOSITY INDEX (D2270)</b>                       | 184         | 161                      | 154         | 154         | 159          | 154           |
| <b>DENSITY @ 15°C (D4052) (kg/L)</b>                 | 0.84        | 0.85                     | 0.85        | 0.86        | 0.86         | 0.87          |
| <b>POUR POINT (D5950) (°C)</b>                       | -59         | -43                      | -45         | -41         | -38          | -33           |
| <b>FLASH POINT (D93) (°C)</b>                        | 174         | 185                      | 218         | 219         | 223          | 225           |
| <b>FOAM SEQUENCE I, II, III (D892)</b>               | ≤50/0       | ≤50/0                    | ≤50/0       | ≤50/0       | ≤50/0        | ≤50/0         |
| <b>COPPER CORROSION (D130)</b>                       | 1B          | 1B                       | 1B          | 1B          | 1B           | 1B            |
| <b>OXIDATION LIFE (D943) (HRS)</b>                   | 5500+       | 5000+                    | 5000+       | 4500+       | 3500+        | 3500+         |
| <b>ZINC CONTENT (%Wt)</b>                            | 0.04        | 0.04                     | 0.04        | 0.04        | 0.04         | 0.04          |
| <b>DEMULSE (D1401), TIME TO 40/40/0, (MIN.)</b>      | 15          | 20                       | 25          | 10          | 10           | 10            |
| <b>DI-ELECTRIC STRENGTH VALUE (kV)</b>               | 48          | 48                       | 48          | -           | -            | -             |

<sup>1</sup> Hydraulic LP 22B, only. Hydraulic LP 22 is not dyed. All other performance characteristics/testing are identical.

**Hydraulic LP** oils are true multi-grade hydraulic oils specially formulated to stand up to the high-shear environment of hydraulic pumps and motors without losing their multi-grade nature. This oil allows lower start-up temperature and higher operating temperatures for a given grade than the comparable single-grade hydraulic oil. This more comprehensive operating temperature range provides improved productivity, better operational flexibility and the possibility of using one grade of hydraulic oil year-round. These oils are particularly suited for mobile machinery and fixed machinery located outdoors.

**Hydraulic LP** oils are suitable for most hydraulic pumps and motors, even at pressures as high as 5,000 psi (350 Bar). They are NOT recommended for use with those pumps that contain silver-plated parts.

**Hydraulic LP 15 & 22** is suitable for use in snowplow applications. These grades have excellent cold temperature fluidity and high viscosity index to minimize viscosity fluctuations as the temperature changes. Hydraulic LP 22B is dyed blue for easy leak detection.

[www.irvingoil.com/lubricants](http://www.irvingoil.com/lubricants)  
1.800.574.5823

Always consult your owner's manual for verification of fluid type and grade!

Supporting data available to demonstrate acceptable performance. Check with your sales associate for latest product approvals.

Please note, these are typical performance indicators and can change without notice.

This data sheet replaces previous versions prior to October 6, 2022.

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### Specifications

✓ Meets Requirements

| Specifications/Claims                          | LP 15 | LP 22 | LP 32 | LP 46 | LP 68 | LP 100 |
|--|-------|-------|-------|-------|-------|--------|
| DIN 51524-2 (HLP) and DIN 51524-3 (HVLHP)      | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| ASTM D6158 (HV)                                | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| ISO 11158 (HV)                                 | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| SAE MS 1004 (HV)                               | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| Parker (formerly Denison) HF-0                 | -     | -     | ✓     | ✓     | ✓     | -      |
| Parker (formerly Denison) HF-1                 | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| Parker (formerly Denison) HF-2                 | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| Eaton M-2950-S, I-286-S3 and 35VQ25 (obsolete) | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| Eaton E-FDGN-TB002-E                           | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| Bosch Rexroth RE 90220, 90240 (obsolete)       | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| GM LS2   | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| Fives P-68                                     | -     | -     | ✓     | -     | -     | -      |
| Fives P-69                                     | -     | -     | -     | -     | ✓     | -      |
| Fives P-70                                     | -     | -     | -     | ✓     | -     | -      |
| AIST 126                                       | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |
| AIST 127                                       | ✓     | ✓     | ✓     | ✓     | ✓     | ✓      |

### Sizes & Order Codes

| Size                            | LP 15    | LP 22    | LP 22B <sup>2</sup> | LP 32    | LP 46    | LP 68    | LP 100   |
|---------------------------------|----------|----------|---------------------|----------|----------|----------|----------|
| 18.9L / 5 US gal Pail           | F0081840 | F0088440 | F0088540            | F0088640 | F0081740 | F0081640 | -        |
| 205L / 54.2 US gal Plastic Drum | -        | F0007550 | -                   | F0007750 | -        | -        | -        |
| 205L / 54.2 US gal Metal Drum   | -        | F0013550 | F0007650            | F0013650 | F0050450 | F0033450 | F0025050 |
| 1000L / 264 US Gal Tote         | F0028360 | F0007560 | -                   | F0007760 | F0028260 | -        | -        |
| 1000L / 264 US Gal Bulk Tote    | -        | F0108801 | -                   | F0108201 | F0110001 | -        | -        |
| Bulk                            | B0028301 | B0007501 | B0007601            | B0007701 | B0028201 | B0028101 | B0028001 |

<sup>2</sup> Hydraulic LP 22B Oil is dyed blue

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