



BP Energol SHF-HV

High VI Hydraulic Oil

Description

The BP Energol SHF-HV hydraulic oil range of premium high viscosity index lubricants are based on the latest stabilised zinc additive technology.

Application

Energol SHF-HV contains a shear stable VI improver which helps maintain the viscosity characteristics of the product over a wide temperature range even during prolonged use. The VI Improver also imparts a very low pour point which enables the product to be used in very cold environments. Energol SHF-HV exhibits excellent corrosion and wear protection as well as outstanding thermal and oxidative stability. In addition, Energol SHF-HV has excellent hydrolytic stability and separates rapidly from water contamination upon standing.

These grades are intended for two main types of duty :

- Outdoor plant likely to operate in wide ranges of temperature - such as machinery subjected to cold start up conditions and high temperature continuous running. Examples include off-highway and marine applications.
- Indoor manufacturing equipment that incorporates control systems requiring a hydraulic fluid whose viscosity change with temperature is minimal. Examples include precision machine tools.

The Energol SHF-HV range is fully compatible with the elastomers materials commonly used for static and dynamic seals, such as nitrile, silicone and fluropolymers.

Energol SHF-HV is classified as follows:

DIN classification - HVLP

ISO 6743/4 - Hydraulic Oils Type HV

Energol SHF-HV grades meet the requirements of:

DIN 51524 Part 3

Cincinnati Milacron (P 68-69-70)

Denison HF-0 & HF-2

US Steel 126 & 127

Eaton (formally Vickers) I-286-S & M-2950-S

Advantages

- High viscosity index and low pour point enables the product to be used over a wide temperature range
- Good shear stability means no excessive loss in viscosity due to mechanical shearing.
- Excellent antiwear performance provides extended wear protection for hydraulic pumps. Reduced down time due to unscheduled maintenance and savings from reduced replacement part costs.
- Low deposit formation and longer oil life provides an overall reduction in lubricant costs and used oil disposal costs.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.
- Good filterability gives a cleaner system with less frequent filter changes.

Typical Characteristics

| Test | Method | Units | 15 | 32 | 46 | 68 | 100 | 150 |
|---|-------------------------|--------------------|-------|-------|-------|-------|-------|-------|
| Density @ 15°C | ISO 12185 / ASTM D4052 | g/ml | 0.88 | 0.87 | 0.88 | 0.88 | 0.88 | 0.89 |
| K.V. @ 40°C | ISO 3104 / ASTM D445 | mm ² /s | 15 | 32 | 46 | 68 | 100 | 150 |
| K.V. @ 100°C | ISO 3104 / ASTM D445 | mm ² /s | 3.8 | 6.2 | 8.1 | 10.8 | 13.2 | 17.7 |
| Viscosity Index | ISO 2909 / ASTM 2270 | - | > 150 | > 150 | > 150 | > 140 | > 130 | > 130 |
| Pour Point | ISO 3016 / ASTM D97 | °C | -48 | -39 | -36 | -36 | -33 | -30 |
| Flash Point, PMC | ISO 2719 / ASTM D93 | °C | 160 | 200 | 220 | 220 | 220 | 220 |
| Foam Sequence I | ISO 6247 / ASTM D892 | mls/mls | 20/0 | 20/0 | 20/0 | 20/0 | 20/0 | 20/0 |
| Demulsification @ 54°C | ISO 6614 / ASTM D1401 | mins | 5 | 10 | 15 | 15 | - | - |
| Demulsification @ 82°C | ISO 6614 / ASTM D1401 | mins | - | - | - | - | 20 | 20 |
| Air Release @ 50°C | ISO / 9120 / ASTM D3427 | mins | 4 | 4 | 8 | 8 | 12 | 24 |
| FZG (A8.3/90), fail stage | ISO 14635-1 / DIN 51354 | - | - | 11 | 12 | 12 | 12 | 12 |
| Rust Test (24 hrs synthetic sea water) | ISO / 7210 / ASTM D665B | - | Pass | Pass | Pass | Pass | Pass | Pass |
| K.V. @ 100°C after 4 hours KRL | DIN 51350 T6 | % loss | - | - | 9.5 | - | - | - |

Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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