Hydraulic oil H10

Bardahl Hydraulic Oil is the group designation for a series of complete mineral oils, which are not only intended for use in hydraulic systems, but can also be used for oil baths and circulation lubrication. This line of products is versatile and has many application possibilities.

Bardahl Hydraulic Oil has the characteristics that also apply to the Bardahl Hydraulic Oil Additives.
These oils have been developed for use in hydraulic systems, in which mineral oils are used. The product is composed of oxidation-resistant base oils and contains baptisms against corrosion and oxidation formation.
These hydraulic oils contain Bardahl's special formula of polar-organic high-pressure substances, which provide an oil film, which adheres to the material and cannot be squeezed away by high pressures and temperatures.
Due to these good anti-wear properties, a long service life of the parts is ensured.
It was mainly the hydraulic systems of the "hydrostatic type"*, which, due to high working pressures, necessitated an oil with exceptionally good anti-wear properties.
The very high lubricating properties make these oils extremely suitable for use in gearboxes with hydraulic drive and combined lubrication.

Wear

The Bardahl Hydraulic Additive has served as the basis for the development of **Bardahl Hydraulic Oil H10** product. It is therefore self-evident that this line of hydraulic oils have extremely good high pressure properties.

Viscosity

The viscosity of a hydraulic oil is generally kept as low as possible, in order to keep friction loss to a minimum. The downside when using a thin oil is the occurrence of internal leakage losses, which can significantly reduce the efficiency. The viscosity of the oil should therefore show as few deviations as possible in case of temperature changes. The viscosity index (V.I.) improved dopes present in the liquid must ensure that the viscosity deviates as little as possible from the most ideal for the system in question.

Temperature

The temperature in the hydrostatic systems can increase significantly as a result of the high pressures. The oil must therefore prevent that due to elevated temperatures and the oxygen present, a rapid oxidation or even charring (cavitation) occurs. The presence of a solidification point reducer ensures that the oil remains liquid even at a low temperature. This solidification point decreases as the viscosity increases.

Corrosion

The presence of Bardahl components ensure optimal protection against rusting, by means of an oil film, which adheres to the material and retains its lubricating capacity even after a long standstill. It is therefore important that any water (or steam) present is separated by the oil as soon as possible. A good water separation capacity is indispensable for any hydraulic oil.

Specifications

AFNOR - NF E 48-603 HM | AFNOR - NF E 48-690 | AFNOR - NF E 48-691 | DENISON - HF-2 | DIN - 51524 PART 2 | EATON VICKERS - I-286-S | EATON VICKERS - M-2950-S | ISO - 11158, HM | ISO - 6743-4, HM

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Analysis data

Test			Results
Class ISO	**Method**	**Unit**	**H10**
Viscosity at 100°C	ASTM D445	mm²/s	2.7
Viscosity at 40°C	ASTM D445	mm²/s	10
Viscocity index	ASTM D2270		98
Viscocity at		mpa.s	
Straight Ash		Wt. %	0.2
Sulphated Ash		Wt. %	0.2
TAN	ASTM D664	mg KOH/g	1.0
TBN;	ASTM D2896	mg KOH/g	0.2
Pourpoint;	ASTM D6892	°C	-33
Specific gravity at 15/15°C	ASTM D4052	**g/ml**	0.843
Firepoint; COC	ASTM D92	°C	154

Analysis data

Test			Results							
Class ISO	**Method**	**Unit**	**H10**	**H15**	**H22**	**H32**	**H32/46**	**H46**	**H68**	**H100 >**
Viscosity at 100°C	ASTM D445	mm²/s	**2.7**	3.8	4.9	6.1	7.1	7.9	10.4	15.2
Viscosity at 40°C	ASTM D445	mm²/s	**10**	15	22	32	40	46	68	103
Viscocity index	ASTM D2270		**98**	172	168	148	155	151	150	155
Viscocity at		mpa.s		-30°C 1100	-25°C 1000	-25°C 1500	-25°C	-25°C 3000	-20°C 3200	
Straight Ash		Wt. %	**0.2**	0.2	0.2	0.2	3000	0.2	0.2	0.2
Sulphated Ash		Wt. %	**0.2**	0.2	0.2	0.20	0.2	0.20	0.20	0.2
TAN	ASTM D664	mg KOH/g	**1.0**	1.0	1.0	1.0	0.20	1.0	1.0	1
TBN;	ASTM D2896	mg KOH/g	**0.2**	0.2	0.2	0.2	1.0	0.2	0.2	0.2
Pourpoint;	ASTM D6892	°C	**-33**	-60	-48	-39	0.2	-39	-33	-24
Specific gravity at 15/15°C	ASTM D4052	**g/ml**	**0.843**	0.875	0.875	0.865	-36	0.870	0.870	0.870
Firepoint; COC	ASTM D92	°C	**154**	156	184	188	0.870	220	234	228

Hydraulic oil H10

Article number 76155
Contents 5 liter

Article number 76182
Contents 25 liter

Article number 76186
Contents 60 litres

Article number 76192
Contents 210 litres

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