



Product Data

Castrol Tribol 943 AW

Hydraulic & Circulating Oil

Description

Castrol Tribol™ 943 AW (anti-wear) hydraulic and circulating oils were developed to meet the demands of the most severe hydraulic applications. These high performance, ashless (zinc-free), multi-service oils can extend service life for uninterrupted machine availability and production. The following performance characteristics are emphasized:

Oxidation stability to significantly extend safe oil service life and to protect tight machine clearance from varnish or deposits.

Anti-wear protection to maintain crucial tolerance characteristics of advanced hydraulic systems and to protect gears and bearings in circulating systems.

Corrosion resistance to give protection, exceeding normal industry standards, against damage from condensed atmospheric moisture.

Applications

Hydraulics - designed for the most sophisticated hydraulic operations, robots, and other NC machines, Tribol 943 AW oils may be used in any industrial, marine, or mobile applications.

Circulating systems - outstanding anti-wear properties make Tribol 943 AW oils ideal for multi-component systems including anti-friction and journal bearings and all types of gears except where manufacturers specify AGMA "EP" or "Compounded" gear oils.

Compressors – Tribol 943 AW 32 and Tribol 943 AW 46 in centrifugal and flooded screw compressors can significantly extend oil service life compared with conventional petroleum compressor oils and ATF fluids. In fact, drain intervals approach the range of some synthetic fluids. Tribol 943 AW oils may also be used in reciprocating compressors if temperatures are not high and units are not prone to valve deposits.

The wide array of Tribol 943 AW applications provides excellent opportunity to consolidate inventory.

The Tribol 943 AW range is fully compatible with the elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers.

Tribol 943 AW is classified as follows:
DIN 51502 classification - HLP
ISO 6743/4 - Hydraulic Oils Type HM

Tribol 943 AW grades meet the requirements (for appropriate viscosity grade) of:
DIN 51524 Part 2
Cincinnati Lamb (Milacron) P 68-69-70
Denison (Parker Hannafin) HF-0
US Steel 126 & 127
Eaton (formerly Vickers) 35VQ 25, I-286-S & M-2950-S
Bosch Rexroth RE90220
Lee Norse 100-1
Jeffrey No. 87
Ford M-6C32
B.F. Goodrich 0152

Advantages

- The base oils in Tribol 943 AW are selected for chemical and thermal stability. They are also selected for the naturally high film strength necessary to prevent rupture at the highest pump pressures and tightest clearances where operating conditions usually lead to mixed or boundary (contact) lubrication. The premium base oils also maintain unsurpassed cleanliness, therefore minimizing formation of varnish deposits and wear debris in any system.
- The anti-wear characteristics of Tribol 943 AW oils are achieved by a unique additive system which does not include zinc. The advanced anti-wear additive systems maintain critical dimensions in robots and other NC machines, therefore extending the service life of valves, pumps, gears, and bearings.
- Tribol 943 AW oils do not contain silicone and are free of lead, zinc, chlorinated solvents and barium. They contain less than 2 ppm of phenol. They are formulated to address environmental concerns.
- The unsurpassed oxidation stability of Tribol 943 AW oils is a result of extensive research to stabilize petroleum oils at high operating temperatures. The balanced, total additive system in Tribol 943 AW oils also inhibits foaming and provides an unusual degree of corrosion protection see Typical Characteristics.

Typical Characteristics

Test	Units	Method	943AW-22	943AW-32	943AW-46	943AW-68	943AW-100
ISO Viscosity Grade	-	-	22	32	46	68	100
Density @ 15°C	-	ASTM D 4052	0.88	0.88	0.88	0.88	0.86
Kinematic Viscosity @ 40°C @ 100 °C	cSt	ASTM D 445	22 4.3	32 5.4	46 6.8	68 8.8	100 11.6
Viscosity Index	-	ASTM D 445	> 100	> 100	> 100	> 100	> 100
Pour Point	°C / °F	ASTM D 97	-33 / -27	-30 / -22	-27 / -17	-24 / -11	-26 / -15
Flash Point	°C / °F	ASTM D 92	205 / 401	210 / 411	215 / 419	226 / 440	252 / 285
Foam Sequence I	mls	ASTM D 892	10/0	10/0	10/0	10/0	0/0
Water Separability @ 54°C	Min	ASTM D 1401	10	15	15	15	20
Air Release Value	Min	ASTM D 3427	4	4	8	8	< 5
FZG Fail Stage (A8.3/90)	-	DIN 51354	-	12	12	12	> 12
Rust Test (24 hrs – distilled water)	-	ASTM D 665A	Pass	Pass	Pass	Pass	Pass
Rust Test (24 hrs – synthetic sea water)	-	ASTM D 665B	Pass	Pass	Pass	Pass	Pass
Vickers Pump Test (100 hrs) Total Weight Loss	mg	-	-	< 10	< 10	< 10	< 10
Oxidation Resistance	hours	ASTM D 943	18,000+	18,000+	18,000+	18,000+	18,000+

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28 July 2011

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