



## PRODUCT BULLETIN

### CAM2 Ultra Turbine Oil

PRODUCT # 302, 156, 157, 158, 159, 160, 161, 162, 192

**CAM2 Ultra Turbine Oils** are premium, ashless turbine fluids designed to cool and lubricate steam, hydraulic, gas, turbo, and hydroelectric turbines operating under moderate to severe conditions. The ashless formulation contributes to optimum turbine performance and reliability by resisting the formation of varnish and sludge buildup.

**CAM2 Ultra Turbine Oils** outstanding resistance to oxidation and thermal stability minimizes fluid breakdown caused by air and high temperatures. The thermal and oxidation stability of these lubricants, due to their high level of refinement, has been further enhanced by their unique formulation. The ashless additive protects against oxidation deposit formation or the generation of acidic material keeping the fluid from breaking down at higher temperatures.

**CAM2 Ultra Turbine Oils** have very good demulsibility characteristics allowing quick release of moisture. They minimize entrained air which otherwise could result in low lubricant film strength between moving parts and pump cavitation increasing wear. This quick air release allows for longer fluid life and reduced maintenance due to downtime.

**CAM2 Ultra Turbine Oils** are formulated with non-volatile oxidation inhibitors which promote long oil life. At high temperatures, inhibitors can be lost due to evaporation which has become a common problem in systems with high bearing temperatures and limited system capacities. Ultra Turbine's ability to retain inhibitors minimizes down time and extends drain intervals.

They display excellent performance in several key tests including the Fresh Water Corrosion Test (ASTM D665, Procedure A), the severe Synthetic Sea Water Rust Test (ASTM D665, Procedure B), ASTM D892 Foam Stability Test, ASTM D668 Rust and Corrosion Test, and the RPVOT ASTM D2272 where it performed for over 8,000 minutes displaying extended drain capability.

## FEATURES

- **Excellent oxidation resistance** allows for over 8,000 hours of extended service operation in severe conditions
- **Excellent thermal stability** provides sludge and deposit control
- **Rust and corrosion protection** for all system components
- **Excellent water separation and demulsibility** keeps water-in-oil to a minimum helping eliminate rust and corrosion
- **Excellent anti-foam and rapid air release** minimizes possibility of pump cavitation
- **High viscosity index** minimizes viscosity changes with temperature
- **Ashless formulation** is more environmentally friendly and promotes greater oxidation stability
- **Excellent Air Compressor lubricant** when OEM recommends R&O type oil

## APPLICATIONS

**CAM2 Ultra Turbine Oils are recommended for applications calling for rust and oxidation inhibited oils**

- Gas, steam and hydraulic turbines
- Steam turbines except GE Frame 7000
- Hydraulic systems
- Air compressors
- Industrial bearings
- Circulating systems
- A myriad of assorted industrial applications: hoists, electric motor bearings, machine tools, etc.
- Gear sets calling for AGMA R&O oil

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#### SPECIFICATIONS

**Ultra Turbine Oils** shows suitable performance in the following applications:

- AGMA R&O Gear Oils 1, 2, 3, 4, 5, 6EP, 7EP
- MAG Cincinnati, Cincinnati Machine P-38 (ISO 32), P-55 (ISO 46), P-54 (ISO 68), P-57 (ISO 150)
- Denison HF-0
- British Standard 489
- General Electric GEK 32568, GEK 107395, GEK 46506, GEK27070
- Solar ES 9-224, Class II (ISO 32)
- Siemens TLV 9013 04
- Alstom HTGD 90 117
- Solar Turbines ES9-224
- MIL-H17672D (ISO VG 32, 46, 68)
- U.S.Steel 224
- DIN 51515-1
- AIST 125ISO 8068

#### TYPICAL CHARACTERISTICS

ISO Viscosity Grade	Test Method	22	32	46	68	100	150	220	320	460
Product Code		302	156	157	158	159	160	161	162	192
AGMA Grade				1	2	3	4	5	6EP	7EP
Viscosity, cSt @ 100°C	ASTM D-445	4.65	5.4	6.6	8.7	11.4	15.1	19.5	25.1	31.9
Viscosity, cSt @ 40°C	ASTM D-445	22	32	42-50	61-74	92-108	140-160	210-230	308-332	414-504
Viscosity Index	ASTM D-2270	>130	>120	>120	>110	>100	>100	>100	>100	>100
Pour Point, °C (°F)	ASTM 5949	-32 (-25)	-32 (-25)	-29 (-20)	-29 (-20)	-23 (-10)	-22 (-9)	-22 (-9)	-22 (-9)	-18 (0)
Flash Point,(°C)	ASTM D-92	>220	>225	>226	235	240	240	240	240	243
Color	ASTM D-1500	2.0 max	2.0 max	2.0 max	2.5 max	2.5 max	3.0 max	4.5 max	4.5 max	4.5 max
Oxidation Life Hrs to 2.0 Acid No	ASTM 943	8000+	8000+	8000+	8000+	8000+	8000+	8000+	8000+	8000+
Foam Tendency/Stability ml @ 75 °F	ASTM 892	60/0	60/0	60/0	60/0	60/0	60/0	60/0	60/0	60/0

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