



Technical Data

All-Purpose Turbine Oil (4941-4946)

A rust & oxidation (R & O) turbine oil designed with high-quality paraffinic base oil and additives that offer rust protection, oxidation stability, rapid water-separating characteristics and foam suppression. It will outperform conventional R & O turbine oils and is completely noncorrosive to equipment parts.

	4941	4943	4945	4946
Color	Amber	Amber	Amber	Dark Amber
ISO VG	32	68	150	220
Relative Density @ 60°F/60°F, ASTM D1298	-	-	0.88	-
Viscosity @ 100°C, cSt, ASTM D445	5.35	8.69	14.61	19.11
Viscosity @ 40°C, cSt, ASTM D445	31.73	67.88	151	225.1
Viscosity Index ASTM D2270	95	95	95	95
Flash Point °C (°F), (COC), ASTM D92	224 (435)	240 (465)	274 (525)	280 (535)
Pour Point °C (°F), ASTM D97	-30 (-22)	-24 (-11)	-18 (0)	-15 (5)
Rust Test 4 hrs @ 60°C, Sea H2O, ASTM D665B	Pass	Pass	Pass	Pass
Copper Corrosion 3 hrs @ 100°C, ASTM D130	1a	1a	1a	1a
Oxidation by RPVOT @ 150°C, minutes, ASTM D2272	510	510	510	510
Ash—Sulfated %, ASTM D874	<0.01	<0.01	<0.01	<0.01
Acid Number mg KOH/g, ASTM D664	<0.1	<0.1	<0.1	<0.1
Emulsion Characteristics @ 54°C, oil-water-emulsion/minutes, ASTM D140	40-40-0/10	40-40-0/10	40-40-0/10	40-40-0/10
Foaming Characteristics @ 24°C/93.5°C/24°C, 3 sequences, ml of foam/time to break, ASTM D892	0/0; 0/0; 0/0	0/0; 20/0; 0/0	0/0; 0/0; 0/0	0/0; 10/0; 0/0

Performance Requirements Met or Exceeded

- Denison (Parker-Hannifin) HF-1 (4941, 4943, 4945, 4946)
- DIN 51524 Part 1 (4941, 4943)
- MAG (Cincinnati Machine, Cincinnati Milacron)
 - o P-38 (4941)
 - o P-54 (4943)
 - o P-57 (4945)
- MIL-H-17672D (4941, 4943)

Typical Applications

- Applications requiring an R & O oil, including:
 - o Turbines
 - o Circulating oil systems
 - o Pumps
 - o Gear systems