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# HYDROIL MV

## ALL WEATHER

# HYDRAULIC FLUIDS

### MULTI-GRADE ANTI-WEAR R&O

ENSURES RAPID HYDRAULIC ACTION AT ALL TEMPERATURES Plus – PROTECTS AGAINST WEAR, RUST, CORROSION, and OXIDATION

#### TYPICAL CHARACTERISTICS\*

GRADE.....	MV-5W/20	10W/25
ISO Grade.....	32	46/68
ASTM Grade.....	150	315
Specific Gravity.....	0.877	0.879
Flash Point °C (°F).....	176 (350)	225 (437)
Pour Point °C (°F).....	-50 (-45)	-40 (-40)
Viscosity, SUS		
100°F.....	150	267
210°F.....	49.8	57.8
Viscosity, cSt		
40°C.....	39.2	57.5
100°C.....	7.2	9.6
Viscosity Index.....	150	152
Brookfield cP @		
-20°C (-4°F).....	1950	3100
-25°C (-12°F).....	----	----
-30°C (-22°F).....	7400	----
-35°C (-30°F).....	13800	55000
Oxidation Life, TOOT		
D943-54, hrs.....	2800+	2800+
4-Ball Wear D-2266		
1 hr, 40 kg, 65°C		
Scar Dia, mm.....	----	0.34
4-Ball EP D-2783		
Load Wear Index, kg..	----	30 min
Weld Point, kg.....	----	200 min

\*NOTE: Typical Characteristics are current as of the date of publication of this Technical Bulletin. This typical data cannot be guaranteed to be identical to the products produced at any specific time. The data provided in this publication are presented only as a guide to Como Lube & Supplies, Inc. lubricant users.



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**TROPHY® HYDROIL MV** are specially designed, premium quality, multi-grade, hydraulic fluids for year-round service in mobile equipment operating at very low or widely varying ambient temperatures (Summer through Winter). These special oils eliminate the need for different grades of oil for each season; which makes it more economical to use by reducing inventories, giving better performance over a broader temperature range, and providing needed protection to critical hydraulic parts at start-up.

**TROPHY® HYDROIL MV** resist thinning while maintaining a strong lubricating film to meet viscosity requirements at operating sump temperatures, while virtually eliminating bog-down usually associated with cold weather starting.

**TROPHY® HYDROIL MV** have superior anti-wear properties to substantially reduce pump wear caused by high pressure (over 1,200 psi), normally found in vane or piston pumps. They contain a special combination of active oxidation, rust, and corrosion inhibitors which reduce the adverse effects of hot spots; will resist sludge, gummy deposits, acid formation, and thickening over long periods of use. These high performance additives improve filterability, demulsibility and multimetal compatibility in the presence of water. During shut down a strong, tenacious oil film protects metal surfaces from rust and corrosion. A special foam suppressant is used to prevent foam build-up in the system and reservoir under conditions where the oil may become aerated.

**TROPHY® HYDROIL MV** are recommend for year-round use in all kinds of mobile hydraulic equipment, including cherry pickers, hydraulic cranes and shovels, backhoe, extension ladders, hoists, lift buckets, etc. They can also be used in stationary hydraulic equipment operating at abnormally low temperatures or exposed to temperature extremes. An excellent choice for log splitters.

**TROPHY® HYDROIL MV** are formulated to meet all basic industry standards for anti-wear hydraulic oils including, Cincinnati Milicron, Denison (HF-0, HF-2), Vickers (M-2950-S), and Racine.

Performance Range Minimum Start-Up Temperature (°C/°F)							
HYDROIL Product	Vickers	Denison	Mannesmann Rexroth	Oilgear	Bosch	Sauer Sunstrand	Eaton
MV 5W/20	-15 (5)	-20 (-4)	-20 (-4)	-5 (23)	-15 (5)	-20 (-4)	-25 (-13)
10W/25	-10 (14)	-15 (5)	-12 (11)	-5 (23)	-10 (14)	-15 (5)	-20 (-4)
Maximum Operating Temperature (°C/°F) Based on Viscometrics							
HYDROIL Product	Vickers	Denison	Mannesmann Rexroth	Oilgear	Bosch	Sauer Sunstrand	Eaton
MV 5W/20	65 (149)	75 (167)	100 (212)	65 (149)	55 (131)	100 (212)	75 (167)
10W/25	80 (176)	90 (194)	115 (239)	80 (176)	65 (149)	115 (239)	90 (194)

While the above guidelines based on viscometrics will adequately protect pump components, other limiting factors should be considered. For example, Vickers publishes a maximum temperature limit of 66°C (150°F) based on seal limitations. Sauer Sundstrand currently recommends a maximum reservoir temperature of 104°C (220°F).