

Still operating today's equipment with yesterday's oils?

More than half of hydraulic equipment failures are preventable through proper maintenance using advanced fluid technologies designed to:

- Ensure pressure and power transmission
- Control flow
- Minimize wear
- Reduce friction
- Provide cooling
- Prevent rust and corrosion
- Maintain system cleanliness
- Provide a viscous seal

High Performance Oils and Greases

Royal Mfg Co LP, with its affiliates, Troco Oil Company and Wright Oil Company, has been compounding, blending, packaging, and marketing high-performance oils and greases since 1914.



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How much downtime can you afford?



ROZEP AW HYDRAULIC OILS



What's driving today's market?

Today's advanced hydraulic systems are being driven by the need for:

- A smaller footprint
- Higher operating pressures
- Increased power density
- Reduced cycle times
- A wider range of operating temperatures
- Increased demand for fluid filterability
- Reduced environmental impact



A Legacy of *Quality*, a History of PERFORMANCE



Performance as specified

Advanced Hydraulic Processes Demand

ROZEP AW Hydraulic Oils Deliver

Smaller systems

Demulsifiers, corrosion inhibitors, and anti-wear additives compensate for fluid that stays in the system longer.

Reduced cycle times

Extreme pressure (EP) additive reserves help to resist wear. In addition, anti-foam and demulsifier additives compensate for air and water contamination induced by shorter cycles.

Higher temperature and pressure

Excellent thermal stability and resistance to oxidation help extend the life of the oil, preventing premature equipment failure and downtime related to high-temperature or high-pressure operation.

Extended drain intervals

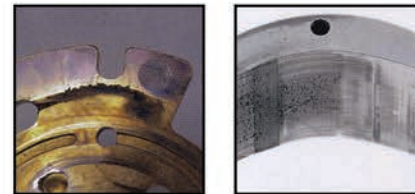
Exceptional thermal stability and resistance to oxidation, coupled with additive reserves for anti-wear, help extend the life of the oil, thereby reducing maintenance-related downtime.

ANALYZING HYDRAULIC SYSTEM FAILURES

Aeration

Symptom: Extremely loud crackling noise, which is higher pitched at higher pressures; milky appearance of fluid.

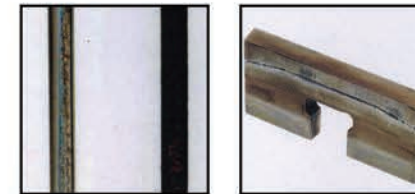
Cause: Dispersed air bubbles within the hydraulic fluid system have removed smaller metal particles from the pump under the pressure formed at the pump outlet.



High Temperatures

Symptom: Gradual reductions in performance; premature wearing of components; premature equipment failure.

Cause: Extreme duty cycles, or problems resulting in aeration, cavitation, over-pressurization, or contamination, can contribute to excessive temperatures.



Cavitation

Symptom: Noise similar to that caused by aeration.

Cause: A gaseous condition erupts within a liquid stream at a localized point where the fluid has failed to fill the entire space, as the pressure is reduced to the vapor pressure.



Over-Pressurization

Symptom: Premature equipment failure.

Cause: Operating a pump at pressures beyond its design capacity create extreme forces against various components.



Contamination

Symptom: Premature wearing of components; premature equipment failure.

Cause: A solid particle, liquid, or gas that has been introduced into the hydraulic fluid causes an abrasive action in the close mating tolerances between components, accelerating wear and tear.



Improper Viscosity

Symptom: Cavitation or leakage, and eventual hydraulic pump failure.

Cause: A higher-than-specified viscosity may lead to pump cavitation; a lower-than-specified viscosity may increase internal pump leakage, resulting in elevated temperature, wear and tear.



ROZEP AW specifications

ROZEP AW hydraulic oils are recommended for use in advanced, high-pressure hydraulic systems using vane, piston, or gear pumps, and meet or exceed the specification requirements of:

- Denison HF-0
- Eaton/Vickers M2950-S (Mobile) and I-286-S (Industrial)
- Cincinnati Machine P-68 (ISO 32), P-70 (ISO 46) and P-68 (ISO 68)
- General Motors LS-2, LH02, LH-04, and LH-06
- JCMAS HK (Japan Construction Mechanization Association Standard) for mobile construction equipment
- DIN 51524 Part 2
- U.S. Steel 127

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