



TEXACO RANDO[®] HD ASHLESS

32, 46, 68

CUSTOMER BENEFITS

Texaco Rando HD Ashless oils deliver value through:

- **Premium performance** — Ashless formulation meets or exceeds pump manufacturer's requirements for viscosity, rust and corrosion protection, hydrolytic stability, water separability, foam inhibition, and filterability.
- **Superior oxidation stability** — Longer service life than conventional antiwear hydraulic oils or vegetable hydraulic oils.
- **Excellent antiwear properties** — Provides excellent wear protection.
- **Environmental sensitivity** — Passes the stringent acute aquatic toxicity (L-50) test and is inherently biodegradable, minimizing long-term environmental concerns. Suitable for conventional recycling programs - unlike vegetable hydraulic oils.

FEATURES

Texaco Rando HD Ashless oils are designed to give maximum protection to hydraulic pumps in high-performance industrial applications as well as in environmentally sensitive areas.

They are formulated with high quality base stocks and an ashless ("zinc-free") additive system that provides superior oxidation stability, water separability, foam suppression, and protection against wear, rust and corrosion.

They are designed to meet or exceed the performance requirements of conventional antiwear hydraulic oils, especially in severe, high-output applications such as axial piston pumps, while providing an additional level of safety in case of leaks or incidental discharge to the environment.

Texaco Rando HD Ashless oils are long-life lubricants, with longer TOST (oxidation stability) lives than conventional hydraulic fluids. A longer TOST life equates to longer service life, which improves the customer's bottom line. This level of oxidation stability is especially applicable in high efficiency (high speed, high temperature, high output) applications where severe stress is placed on the hydraulic fluid.

Many hydraulic systems are required to operate in environmentally sensitive areas where leaks or spills of hydraulic fluid may result in contamination of the soil or nearby waterways. Conventional antiwear hydraulic oils are formulated with metal-containing performance additives which will persist in the environment in the event of leaks. Vegetable-based hydraulic oils meet the environmental requirements, but fall short of the performance requirements.

APPLICATIONS

Texaco Rando HD Ashless oils are designed for use in mobile and stationary hydraulic vane-, piston, and gear-type pumps.

The antiwear performance of these oils makes them especially suited for high performance industrial applications utilizing axial piston pumps where pressures may exceed 5000 psi.

The zinc-free formula makes it perfectly suited for applications involving yellow metals found in axial piston pumps.

They are well suited for applications situated in environmentally sensitive areas.

Texaco Rando HD Ashless oils have shown excellent performance in applications involving servo-valves using multimetal components.

Texaco Rando HD Ashless oils meet the requirements of:

- **Denison** HF-0, HF-2
- **Cincinnati Machine** P-68 (ISO 32), P-70 (ISO 46), P-69 (ISO 68)
- **Vickers** for use in M-2950-S (mobile) and I-286-S (stationary) hydraulic systems. Passes Vickers 35VQ25 pump test.

Texaco Rando HD Ashless oils meet the requirements (discontinued in 1998) of the **U.S. Department of Agriculture (USDA)** for use in federally inspected meat and poultry plants as H2 lubricants with no food contact.

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

TYPICAL TEST DATA

	32	46	68
<i>CPS Number</i>	221635	221636	221637
<i>MSDS Number</i>	8612	8612	8612
AGMA Grade	—	1	2
API Gravity	32.8	31.9	31.8
Viscosity, Kinematic cSt at 40°C cSt at 100°C	33.6 5.6	46.0 6.8	64.6 8.5
Viscosity, Saybolt SUS at 100°F SUS at 210°F	173 45.0	237 49.0	334 54.8
Viscosity Index	104	101	102
Flash Point, °C(°F)	222(432)	224(435)	224(435)
Pour Point, °C(°F)	-33(-27)	-30(-22)	-30(-22)
Oxidation Stability Hours to 2.0 mg KOH/g acid number, ASTM D 943	>6000	>6000	>6000

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.