

# Cat<sup>®</sup> HYDO<sup>™</sup> Advanced



## Recommended Use

- Preferred lubricant for most Cat hydraulic and hydrostatic systems.
- Appropriate for other manufacturers' machines which recommend oils that pass the Vickers 35VQ25 vane pump test (See "Typical Characteristics" on page 2 for more information).

## Discover the Difference

Cat<sup>®</sup> HYDO<sup>™</sup> Advanced is a heavy duty, long life, emulsifying hydraulic oil. Cat HYDO Advanced was developed, tested and approved by Caterpillar to meet the same high standards as all Genuine Cat Parts.

**6000-Hour Drain Intervals**—Provides extended oil-change intervals over Cat HYDO in compartments when used in conjunction with our S•O•S Services oil analysis program.

**Enhanced Wear Protection** – Provides maximum long lasting anti-wear protection for high pressure piston, vane and gear hydraulic pumps. Excellent filterability, fast air release and exceptional anti-corrosion properties provide additional protection to the hydraulic system. Detergent and dispersant properties keep components clean and transport contaminants to the filters.

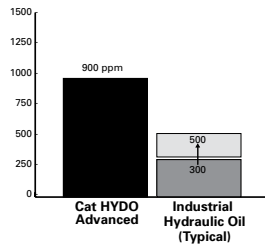
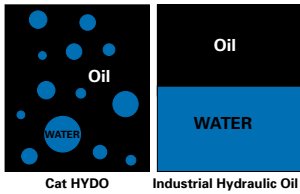
**Wide Temperature Range** – Excellent low temperature flow characteristics and high temperature viscosity allows for use in wide temperature range.

**CATERPILLAR<sup>®</sup>**

# Cat® HYDO Advanced

## Cat HYDO Advanced vs. Industrial Hydraulic Oils

Cat HYDO Advanced is formulated to hold and disperse water so that it does not harm mobile hydraulic systems. Industrial hydraulic oils—often described as anti-wear—do not contain emulsifiers and are specifically designed to separate water as shown below. Separated water drawn through the system can damage pumps and other components. If this water freezes, it can cause even more serious damage. Avoid oils whose specifications indicate that they “separate,” “shed” or “release” water.



Typical industrial hydraulic oils separate water and oil, which can cause valve sticking or excessive wear on your hydraulic system. Cat HYDO Advanced disperses small amounts of water throughout the oil to ensure proper lubrication.

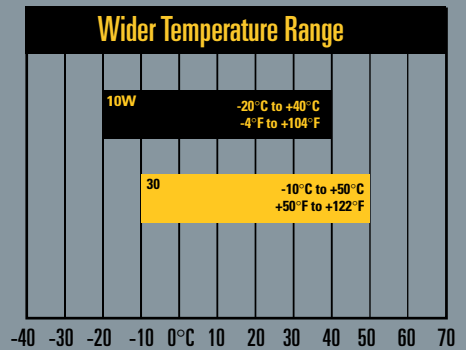
Caterpillar recommends a minimum of 900 ppm zinc for protecting pumps, motors and valves from excessive wear. Cat HYDO Advanced contains more zinc than typical anti-wear industrial hydraulic oil to maximize your hydraulic system's life and performance.

### Typical Characteristics\*

SAE Viscosity Grade	10W
Density (ASTM D4052)	0.863
Vickers Vane Pump Test (35VQ25)	Pass
FZG (ASTM D5182)	12
4 Ball (40kg/30min/600rpm/93°C)(ASTM D4172)	0.37mm
Flash Point, °C (ASTM D92)	227
Pour Point, °C (ASTM D97)	-39
Pumping @ -30°C mPaS (ASTM D4684)	15,000
Brookfield @ -20°C cP (ASTM D2983)	2,900
<b>Viscosity</b>	
cSt @ 40°C (ASTM D445)	42.0
cSt @ 100°C (ASTM D445)	6.7
Viscosity Index (ASTM D2270)	114
<b>Foam Test **</b>	
Seq. 1, ml. (ASTM D892)	0/0
Seq. 2, ml. (ASTM D892)	5/0
Seq. 3, ml. (ASTM D892)	0/0
Zinc, % wt. (ASTM D4951)	0.090
TOST Oxidation Stability (ASTM D943)	> 5000 h
Air Release @ 50°C (ASTM D3427)	4 min
Rust Protection (ASTM D665A)	Pass
Copper Strip Corrosion 3 hr @ 100° (ASTM D130)	1A

\* The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

\*\* New oil, as received, with 0.1% water by volume added.



### Other Recommended Oils

To minimize the number of oils on your job site, the following oils can be used as direct replacements for Cat HYDO:

DEO™ 15W-40    TDTO™ 10W  
MTO            TDTO-TMS™

For startups in extremely cold temperatures down to -30°C (-22°F), consider using Cat DEO SYN™ 5W-40. This is a full synthetic diesel engine oil.

### Health and Safety

Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at [www.catmsds.com](http://www.catmsds.com).

## CAT® DEALERS DEFINE WORLD-CLASS PRODUCT SUPPORT.

We offer you the right parts and service solutions, when and where you need them.

The Cat Dealer network of highly trained experts keeps your entire fleet up and running to maximize your equipment investment.



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