

CITGO HYDURANCE® AW FLUIDS



Date 07/16

DESCRIPTION: CITGO HyDurance AW Fluids are superior anti-wear hydraulic and circulating oils specially formulated to provide outstanding resistance to sludge formation, are chemically stable, and exhibit excellent anti-wear protection and filterability.

QUALITIES: CITGO HyDurance AW Fluids are formulated with high quality base stocks and premium additive components to offer trouble-free service in high-pressure, high-output industrial hydraulic circuits.

CITGO HyDurance AW Fluids offer:

Thermal Stability: Superior resistance to heat-related sludging in sensitive electro-hydraulic servos.

Hydrolytic Stability: Will not contribute to the formation of metal-etching acids or corrosive reactants.

Rust and Corrosion Protection: Inhibited against rusting in both fresh and sea water and pass both A and B Sequences of the ASTM D665 Turbine Oil Rust Test.

Wear Protection: Excellent antiwear protection to pumps, motors, valves, and other hydraulic circuit components. Approved against stringent equipment performance requirements.

Anti Foam Performance: Resistant to foaming and will not foster abnormal air entrainment in properly designed hydraulic circuits.

Demulsibility: Readily separate water permitting draining of contaminating water from circulating systems.

Excellent Filterability: Premium performance in wet and dry filterability testing.



CITGO HyDurance® AW 68 Fluid

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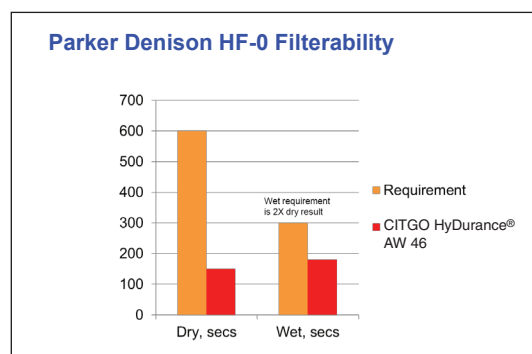
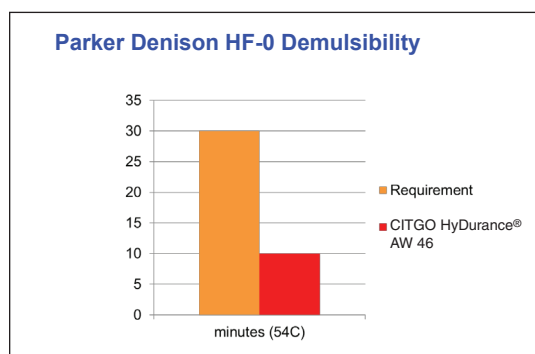
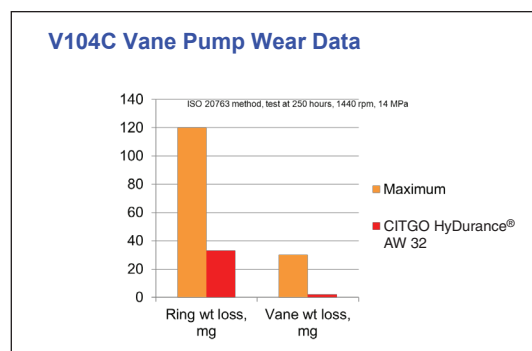
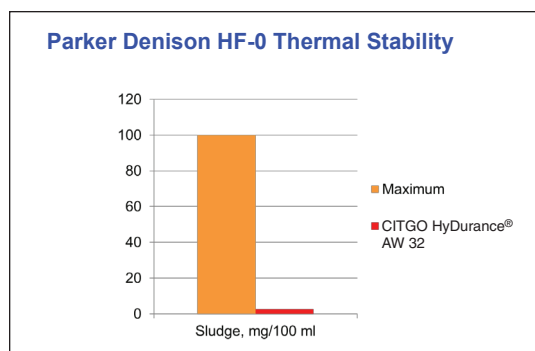
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APPLICATIONS: CITGO HyDurance AW Fluids are recommended for service in industrial and mobile hydraulic systems when used in accordance with equipment manufacturers' recommendations. They are designed to provide maximum service life to vane, piston, and gear pumps as well as other circuit components such as motors and servos.

CITGO HyDurance AW Fluids are also recommended for use as a gear and bearing lubricant in industrial applications where rust and oxidation inhibited oils are required. Consult owner's manual for proper lubricant selection.

CITGO HyDurance AW Fluids meet:

- ASTM D 6158 HM (2005)
- Fives Cincinnati P-68, 69, 70
- Parker Denison HF-0 (Revision J)
- DIN 51524-2 (2006)
- Eaton Brochure 03-401-2010
- General Motors LS-2 (1997)
- JCMAS HK P041 (2004)
- ISO 11158 HM (FDIS 2008)
- SEB 181 222 (2007)
- US Steel 126, 127, 136



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TYPICAL PROPERTIES:

CITGO HYDURANCE® AW FLUIDS

GRADE	22	32	46	68	100	150
Material Code	633606001	633607001	633608001	633609001	633610001	633611001
Gravity, ASTM D4052, °API	33.7	32.6	31.2	30.8	28.6	29.3
Density, lb/gal	7.13	7.18	7.24	7.26	7.36	7.33
Flash Point, ASTM D92, COC, °F (°C)	399 (204)	417 (214)	446 (230)	468 (242)	471 (244)	500 (260)
Viscosity, cP at -40°C ⁽¹⁾	-	-	-	-	-	-
cP at -35°C ⁽¹⁾	-	-	-	-	-	-
cP at -20°C ⁽¹⁾	-	-	-	-	-	-
cSt at 40°C	22.3	32.3	46.6	68	98	149
cSt at 100°C	4.45	5.59	6.96	9.0	11.1	14.8
Viscosity Index	110	111	106	107	98	99
FZG (A/8.3/90), pass load, ISO 14635-1	12	12	12	12	12	12
Pour Point, ASTM D97, °F (°C)	-40 (-40)	-27 (-33)	-22 (-30)	-17 (-27)	-6 (-21)	0 (-18)
Color, ASTM D1500	L0.5	L0.5	L0.5	L0.5	L3.0	L2.5
Water Separability, ASTM D1401 ⁽²⁾	40-40-0	40-40-0	40-40-0	40-40-0	40-40-0	40-40-0
Oxidation Test, ASTM D943, Hrs.	6000	6000	6000	5000	4000	2850
Rust Test, ASTM D665 A, B ⁽³⁾	Pass	Pass	Pass	Pass	Pass	Pass
Meets Fives Cincinnati Requirement	-	P-68	P-70	P-69	-	-
AFNOR NF E 48-603	HM22	HM32	HM46	HM68	HM100	HM150
ISO VG No.	22	32	46	68	100	150

Notes: (1) ASTM D 2893 Brookfield Viscosity.

(2) 30 minutes max. separation time to ≤3ml emulsion. Test temperature is 130°F for grades up through ISO 68.

Test temperature is 180°F for ISO 100 and 150.

(3) Pass - No Rust.

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Values shown are typical values only and do not constitute a specification. The information contained herein is subject to change without notice.