

## CITGO HYDURANCE™ AW/AL HVI FLUIDS

Date 08/13



**DESCRIPTION:** CITGO HyDurance AW/AL HVI Fluids are superior anti-wear and anti-leak, high viscosity index hydraulic and circulating oils specially formulated to provide outstanding performance under wide temperature ranges. They have excellent resistance to sludge formation, are chemically stable, and exhibit premium protection and filterability.

**QUALITIES:** CITGO HyDurance AW/AL HVI Fluids are formulated with high quality base stocks and premium additive components to offer trouble-free service in high-pressure, high-output hydraulic circuits operating under wide temperature conditions. They contain a seal conditioning agent to help prevent and minimize minor leaks and helps provide longer seal life.

CITGO HyDurance AW/AL HVI 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 D 665 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.

**Seal conditioner** for longer seal life.

**APPLICATIONS:** CITGO HyDurance AW/AL HVI Fluids are recommended for service in industrial and mobile hydraulic systems when used in accordance with equipment manufacturers' recommendations. CITGO HyDurance AW/AL HVI Fluids offer excellent low temperature pumpability and are recommended for use in mobile and other hydraulic equipment in heavy duty all weather service. 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/AL HVI Fluids are also recommended for use as a gear and bearing lubricant in industrial applications where rust and oxidation inhibited oils are required.

CITGO HyDurance AW/AL HVI Fluids meets or exceed

- Parker Denison HF-0 (Revision J)
- Eaton Brochure 03-401-2010

- DIELECTRIC STRENGTH RATED
- WIDE TEMPERATURE PERFORMANCE
- SEAL CONDITIONER

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Date 08/13 - (Continued)

## TYPICAL PROPERTIES:

## CITGO HYDURANCE™ AW/AL HVI FLUIDS

| Grade   | HVI-68    | HVI-100   |
|---|-----------|-----------|
| Material Code                                     | 633624001 | 633625001 |
| Gravity, ASTM D 4052, °API                        | 31.0      | 30.5      |
| Density, lb/gal                                   | 7.25      | 7.27      |
| Flash Point, ASTM D 92, COC, °C (°F)              | 234 (453) | 258 (496) |
| Viscosity   |           |           |
| cP at -23°C <sup>(1)</sup>                        | 9,100     | 19,700    |
| cSt at 40°C                                       | 68.0      | 103.3     |
| cSt at 100°C                                      | 10.8      | 14.3      |
| Viscosity Index                                   | 149       | 142       |
| Four Ball Wear, mm, ASTM D 2266                   |           |           |
| 20 kg load  | 0.30      | 0.30      |
| 40 kg load  | 0.46      | 0.46      |
| Pour Point, ASTM D 97, °C (°F)                    | -33 (-27) | -33 (-27) |
| Water Separability, ASTM D 1401 <sup>(2)</sup>    | 40-40-0   | 40-40-0   |
| Rust Test, ASTM D 665 A, B <sup>(3)</sup>         | Pass      | Pass      |
| Dielectric Strength, KV ASTM D 877 <sup>(4)</sup> | 35        | 35        |

**Notes:** (1) ASTM D 2893 Brookfield Viscosity.

(2) 30 minutes max. separation time to ≤3ml emulsion. Test temperature is 180°F.

(3) Pass - No Rust.

(4) Minimum dielectric strength is 28 KV when packaged by CITGO Petroleum. Dielectric strength is sensitive to humidity and contamination; opened containers may exhibit lower values. Store sealed containers properly in dry environment.