



# LUCAS OIL PRODUCTS, INC. PRODUCT DATA SHEET

## AW HYDRAULIC OILS ISO VG 22, 32, 46, 68, 100, 150, 220



Lucas Oil AW Hydraulic Oils are specially formulated to resist oxidation for longer life and greater machine cleanliness while also providing excellent anti-wear (AW) protection. In industry standard oxidation tests, Lucas Oil AW Hydraulic Fluids exceeded the performance of industry leading products by between two and four times, delivering up to 12,000 hours of fluid life. Lucas Oil AW Hydraulic Oils are formulated with proprietary dispersant technology to prevent accumulation of lacquer and gums on hydraulic components. Our unique balance of friction modifiers and anti-wear additives reduce both energy consumption and system wear-and-tear on expensive components, reducing the likelihood of equipment failure and unplanned downtime. Finally, Lucas Oil AW Hydraulic Fluids are filtered before packaging to an ISO Cleanliness rating of 16/14/11, reducing contamination and premature failure due to wear caused by foreign particles.

### PART NUMBER AND SIZE:

**ISO 22** 11169 - 5 Gallon Pail (1 Pail), 11171 - 55 Gallon Drum (1 Drum), 11172 - Per Gallon Tote (1 Tote)

**ISO 32** 10401 - 5 Gallon Pail (1 Pail), 18057 - 6 Gallon (1 Box), 10403 - 55 Gallon Drum (1 Drum), 10414 - Per Gallon Tote (1 Tote), 11141 - 1 Quart

**ISO 46** 10404 - 5 Gallon Pail (1 Pail), 18058 - 6 Gallon (1 Box), 10406 - 55 Gallon Drum (1 Drum), 10415 - Per Gallon Tote (1 Tote),

**ISO 68** 10407 - 5 Gallon Pail (1 Pail), 18059 - 6 Gallon (1 Box), 10409 - 55 Gallon Drum (1 Drum), 10416 - Per Gallon Tote (1 Tote),

**ISO 100** 10503 - 5 Gallon (1 Pail), 11188 - 55 Gallon (1 Drum), 11189 - Per Gallon Tote (1 Tote)

**ISO 150** 11106 - 5 Gallon Pail (1 Pail), 10672 - 55 Gallon Drum (1 Drum), 11126 - Per Gallon Tote (1 Tote)

**ISO 220** 10961 - 5 Gallon Pail (1 Pail), 10962 - 55 Gallon Drum (1 Drum), 10963 - Per Gallon Tote (1 Tote)

### FEATURES AND BENEFITS:

- Polymer modified formulations for improved high temperature film thickness and improved wear protection.
- Specially formulated to deliver up to 12,000-hour fluid service interval.
- Balanced anti-wear and friction reducing formulation for improved energy efficiency and wear protection.
- Outstanding demulsibility and air-release for maximum power transmission.
- Filtered to 16/14/11 ISO Cleanliness Rating.

### MAIN APPLICATIONS:

Suitable for use wherever a conventional (i.e. mineral or petroleum base oil) AW Hydraulic Fluid is recommended. Superior performance over commodity HF is to be expected. Follow OEM recommendations for the appropriate ISO viscosity grade.

### SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS:

Satisfies the performance requirements of: US Steel 127, 136; Denison HF-0, HF-2; DIN 51524 Part II; Vickers I-286S, M-2950-S; Cincinnati Machine (Fives) P68, P69 and P70



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## TYPICAL PHYSICAL CHARACTERISTICS:

GRADE, ISO	ASTM	22	32	46	68
API Gravity	D4052	33.76	32.27	31.1	30.21
Specific Gravity @ 60°F	D4052	.856	.864	.870	.875
Density @ 60°F, lbs/US Gal	D4052	7.126	7.210	7.25	7.294
Flash Point, Closed Cup, °F	D93	>400	>400	>400	>400
Viscosity @ 40°C, cSt	D445	23.2	32.0	46.6	68
Viscosity @ 100°C, cSt	D45	4.7	5.56	7.32	9.1
Viscosity Index	D2270	122	110	119	105
Color	Visual	Pale Yellow	Pale Yellow	Pale Yellow	Pale Yellow
ISO Cleanliness Rating	ISO 4406	16/14/11	16/14/11	16/14/11	16/14/11

GRADE, ISO	ASTM	100	150	220
API Gravity	D4052	30.11	29.45	29.3
Specific Gravity @ 60°F	D4052	.875	.879	.88
Density @ 60°F, lbs/US Gal	D4052	7.287	7.317	7.324
Flash Point, Closed Cup, °F	D93	>400	>400	>400
Viscosity @ 40°C, cSt	D445	101.1	155.76	213.3
Viscosity @ 100°C, cSt	D445	11.78	15.43	20.2
Viscosity Index	D2270	105	100	110
Color	Visual	Pale Yellow	Pale Yellow	Pale Yellow
ISO Cleanliness Rating	ISO 4406	16/14/11	16/14/11	16/14/11

These characteristics are typical of current production. However, slight variations in these characteristics may occur.

### LINKS AND ADDITIONAL INFORMATION:

For additional product or health and safety information, including product Safety Data Sheets, visit [LucasOil.com](http://LucasOil.com)