



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 extra long 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. Our unique balance of polymer modifiers and anti-wear additives are designed to 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:

- Specially formulated to deliver up to 12,000-hour fluid service interval.
- Polymer modified formulations for improved high temperature film thickness and improved wear protection.
- Anti-wear formulation for robust equipment protection.
- Outstanding demulsibility and air-release for maximum power transmission.
- Filtered to 16/14/11 ISO Cleanliness Rating to protect system components.

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	45	68
API Gravity	D4052	33.8	32.3	31.1	30.2
Specific Gravity @ 60°F	D4052	0.856	0.864	0.870	0.875
Density @ 60°F, lbs/US Gal	D4052	7.13	7.21	7.25	7.29
Flash Point, Closed Cup, °F	D93	>400	>400	>400	>400
Viscosity @ 40°C, cSt	D445	23.2	32.0	46.6	68.0
Viscosity @ 100°C, cSt	D45	4.7	5.6	7.3	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
Steel corrosion protection	D665	Pass	Pass	Pass	Pass
Copper corrosion, 3 hours at 100 °C	D130	1A	1A	1A	1A
FZG A/8.3/90 Load Stage Fail	DIN 51502	12	12	12	12
4-ball wear scar, 15kg, mm	D4172	--	0.32	0.32	0.32
4-ball wear scar, 40kg, mm	D4172	--	0.48	0.48	0.48

GRADE, ISO	ASTM	100	150	220
API Gravity	D4052	30.1	29.5	29.3
Specific Gravity @ 60°F	D4052	0.875	0.879	0.880
Density @ 60°F, lbs/US Gal	D4052	7.29	7.32	7.32
Flash Point, Closed Cup, °F	D93	>400	>400	>400
Viscosity @ 40°C, cSt	D445	101.1	155.8	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
Steel corrosion protection	D665	Pass	Pass	Pass
Copper corrosion, 3 hours at 100 °C	D130	1A	1A	1A
FZG A/8.3/90 Load Stage Fail	DIN 51502	12	12	12

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