

LABORATORY ANALYSIS



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Department **TRANSFER ATIZAPAN**
Equipment No. **149 HYD KAUFMAN 9101 (00075)**
System **Hydraulic System**
Oil Type **ENGINEERED LUBRICANTS ENLUBE 15-AW (--- GAL)**

DIAGNOSIS

The oil is near the end of its useful service life, recommend schedule an oil change. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. L, % large particles and severity index levels are abnormal. There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. cSt Vis. @ 40C is abnormally high. Zinc (Zn) ppm levels are abnormally low. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

Lab Number	New	2312-00044	2310-00472	2306-00784
Date of Sample	(Typical)	13 Nov 2023	20 Sep 2023	16 Jun 2023
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		ABNORMAL	SEVERE	SEVERE

VISCOSITY @ 100F OR 40C (ASTM D-445)

SSU Vis. @ 100F	SSU	234.0	203.4	245.5
cSt Vis. @ 40C	cSt	32.0	▲ 45.33	▲ 47.54

% WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%	0.020	---	---
ppm Water (KF)	ppm	200	---	---

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	RED	RED	RED
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PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	22/20/16	22/20/17	22/19/13
4 Micron & Larger	particles/ml	>5000	▲ 27,090	▲ 33,408	▲ 31,392
6 Micron & Larger	particles/ml	>2500	▲ 5,041	▲ 7,414	▲ 4,078
14 Micron & Larger	particles/ml	>160	▲ 453	▲ 645	■ 80
21 Micron & Larger	particles/ml	>40	▲ 145	▲ 185	■ 18
38 Micron & Larger	particles/ml	>10	■ 6	▲ 15	■ 3
70 Micron & Larger	particles/ml	>3	■ 0	■ 1	■ 0

ICP - OILS (REPORTED IN PARTS PER MILLION)

Aluminum (Al)	ppm	<5	<5	<5	
Antimony (Sb)	ppm	<5	<5	<5	
Cadmium (Cd)	ppm	<5	<5	<5	
Chromium (Cr)	ppm	<5	<5	<5	
Cobalt (Co)	ppm	<5	<5	<5	
Copper (Cu)	ppm	■ 6	■ 7	■ 7	
Iron (Fe)	ppm	■ 5	■ 11	■ 15	
Lead (Pb)	ppm	<5	5	<5	
Manganese (Mn)	ppm	<5	<5	<5	
Molybdenum(Mo)	ppm	<5	<5	<5	
Nickel (Ni)	ppm	<5	<5	<5	
Silver (Ag)	ppm	<5	<5	<5	
Tin (Sn)	ppm	<5	<5	<5	
Titanium (Ti)	ppm	<5	<5	<5	
Vanadium (V)	ppm	<5	<5	<5	
Barium (Ba)	ppm	<5	<5	<5	
Boron (B)	ppm	<5	<5	<5	
Calcium (Ca)	ppm	28	21	11	
Magnesium (Mg)	ppm	<5	<5	<5	
Phosphorus(P)	ppm	382	325	225	
Silicon (Si)	ppm	<5	<5	<5	
Zinc (Zn)	ppm	668	▲ 372	■ 279	■ 181
Sulfur (S)	ppm		1,140	1,050	1,060

Customer Id: ENC0005J03
Sample No.: EN23120044
Lab Number: 23120044
Test Package: TEST



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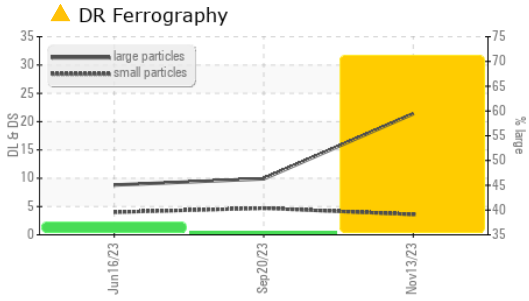
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OIL ANALYSIS REPORT



DR FERROGRAPHY READINGS

L		▲ 21.4	■ 9.9	■ 8.8
S		■ 3.6	■ 4.7	■ 4.0
WPC	DL + DS	■ 25	■ 14.6	■ 12.8

