

# LABORATORY ANALYSIS



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Department **TRANSFER ATIZAPAN**  
Equipment No. **93 HYD KAUFMAN 118 (00076)**  
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 advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. Zinc (Zn) ppm levels are abnormally low.

## SAMPLE INFORMATION

Lab Number	New	2312-00045	2310-00473	2306-00785
Date of Sample	(Typical)	<b>13 Nov 2023</b>	20 Sep 2023	16 Jun 2023
Oil Added		<b>UNK</b>	UNK	UNK
Last Drain Date		--	--	--
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

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

SSU Vis. @ 100F	SSU	174.0	173.2	173.4
cSt Vis. @ 40C	cSt	32.0	33.50	33.55

## 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	21/18/12	19/16/10	19/17/12
4 Micron & Larger	particles/ml	>5000	<b>▲ 12,727</b>	3,418	4,706
6 Micron & Larger	particles/ml	>2500	<b>■ 1,450</b>	382	745
14 Micron & Larger	particles/ml	>160	<b>■ 37</b>	6	31
21 Micron & Larger	particles/ml	>40	<b>■ 10</b>	2	10
38 Micron & Larger	particles/ml	>10	<b>■ 2</b>	1	1
70 Micron & Larger	particles/ml	>3	<b>■ 0</b>	0	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	<b>■ &lt;5</b>	<5	<5	
Iron (Fe)	ppm	<b>■ 6</b>	7	7	
Lead (Pb)	ppm	<5	<5	<5	
Manganese (Mn)	ppm	<5	<5	<5	
Molybdenum(Mo)	ppm	<b>19</b>	23	27	
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	<b>34</b>	29	32	
Magnesium (Mg)	ppm	<5	<5	<5	
Phosphorus(P)	ppm	<b>406</b>	392	404	
Silicon (Si)	ppm	<5	<5	<5	
Zinc (Zn)	ppm	668	<b>▲ 460</b>	<b>▲ 440</b>	<b>▲ 473</b>
Sulfur (S)	ppm	<b>1,530</b>	1,390	1,560	

Customer Id: ENC0005J03  
Sample No.: EN23120045  
Lab Number: 23120045  
Test Package: TEST



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To discuss the diagnosis or test data:

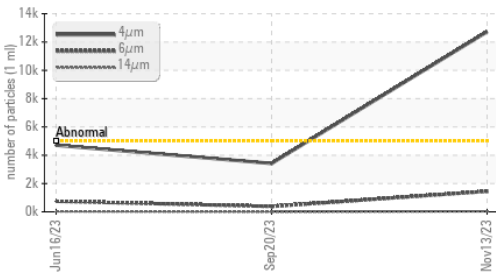
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# OIL ANALYSIS REPORT

### ▲ Particle Trend



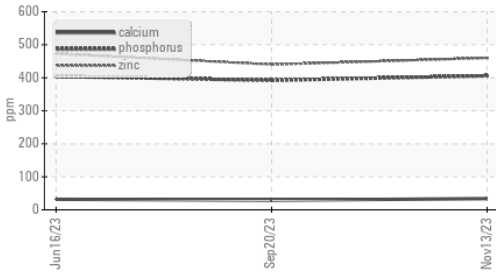
### DR FERROGRAPHY READINGS

L		■ 11.2	■ 10.2	■ 13.2
S		■ 5.2	■ 5.4	■ 2.5
WPC	DL + DS	■ 16.4	■ 15.6	■ 15.7

### CONTAMINATION

Water	>0.05	<b>NEG</b>	NEG	NEG
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### ▲ Additives



### Viscosity @ 40°C

