

# LABORATORY ANALYSIS



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Department **NC**  
Equipment No. **2009 MILL #9 (00032)**  
System **Hydraulic System**  
Oil Type **ENGINEERED LUBRICANTS ENLUBE 15-AW (158 GAL)**

## Diagnosis

Both particle counts and wear particles are down from last sample. No action is needed currently but sample again at next interval to monitor. L, % large particles, severity index and wpc levels are abnormal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. The condition of the oil is acceptable for the time in service.

## Sample Information

Lab Number	New	2406-00862	2404-00133	2301-00186
Date of Sample	(Typical)	25 Jun 2024	03 Apr 2024	04 Jan 2023
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Months on Sample		347.1	344.4	329.7
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		ABNORMAL	SEVERE	ABNORMAL

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

SSU Vis. @ 100F	SSU	145.2	145.7	134.0
cSt Vis. @ 40C	cSt	32.0	28.13	25.81

## % WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%	0.015	---	---
ppm Water (KF)	ppm	150	---	---

## COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	1.0	0.5	1.0
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## PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	19/15/10	21/17/13	17/14/11
4 Micron & Larger	particles/ml	>5000	4,667	17,381	648
6 Micron & Larger	particles/ml	>2500	255	1,187	111
14 Micron & Larger	particles/ml	>160	9	67	12
21 Micron & Larger	particles/ml	>40	2	17	5
38 Micron & Larger	particles/ml	>10	0	2	0
70 Micron & Larger	particles/ml	>3	0	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	22	21	33
Iron (Fe)	ppm	<5	<5	<5
Lead (Pb)	ppm	13	13	15
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	63	64	72
Magnesium (Mg)	ppm	<5	<5	<5
Phosphorus(P)	ppm	479	494	518
Silicon (Si)	ppm	9	9	8
Zinc (Zn)	ppm	668	544	548
Sulfur (S)	ppm	1,350	1,380	1,440

Customer Id: BACSTL  
Sample No.: EN24060862  
Lab Number: 24060862  
Test Package: TEST



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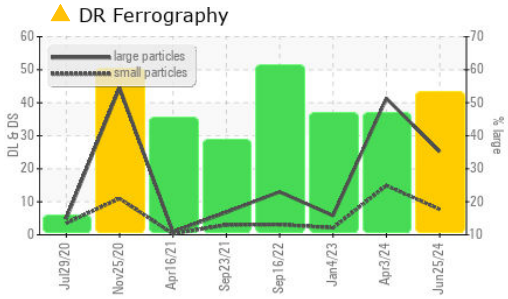
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# OIL ANALYSIS REPORT



### DR FERROGRAPHY READINGS

L		▲ <b>25.2</b>	▲ 41.3	■ 5.8
S		■ <b>7.7</b>	▲ 14.9	■ 2.1
WPC	DL + DS	▲ <b>32.9</b>	▲ 56.2	■ 7.9

