

LABORATORY ANALYSIS



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Department **WINDING**
 Equipment No. **CLAM03 CLAMP MACHINE 3 (00003)**
 System **Hydraulic System**
 Oil Type **ENGINEERED LUBRICANTS ENLUBE 20-AW (--- GAL)**

COPELAND (MHDS)
 6001 S. 35TH STREET, SUITE D"
 REYNOSA, ZZ
 US
 Contact: GERARDO GUERRERO
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 T:
 F:

Diagnosis

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. L, s, severity index and wpc levels are severe. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sample Information

Lab Number	New	2405-00140	2312-00755	2307-00020
Date of Sample	(Typical)	28 Apr 2024	14 Dec 2023	27 Jun 2023
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Months on Sample		303.8	299.5	294.0
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		SEVERE	SEVERE	SEVERE

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

SSU Vis. @ 100F	SSU	238.0	238.6	238.3
cSt Vis. @ 40C	cSt	46	46.22	46.16

COLOR (BASED ON ASTM D1500 STANDARDS)

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

ISO CODE	ISO 4406(c)	>19/18/14	24/21/17	24/22/17	23/20/17
4 Micron & Larger	particles/ml	>5000	▲ 153,727	▲ 121,031	▲ 43,635
6 Micron & Larger	particles/ml	>2500	▲ 18,851	▲ 21,977	▲ 9,521
14 Micron & Larger	particles/ml	>160	▲ 866	▲ 699	▲ 670
21 Micron & Larger	particles/ml	>40	▲ 346	▲ 167	▲ 180
38 Micron & Larger	particles/ml	>10	▲ 37	13	14
70 Micron & Larger	particles/ml	>3	4	2	2

ICP - OILS (REPORTED IN PARTS PER MILLION)

Element	Unit	<5	<5	<5
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	■ <5	■ <5	■ <5
Iron (Fe)	ppm	■ <5	■ <5	■ <5
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	91	95	98
Magnesium (Mg)	ppm	<5	<5	<5
Phosphorus(P)	ppm	496	528	527
Silicon (Si)	ppm	<5	<5	<5
Zinc (Zn)	ppm	715	■ 570	■ 589
Sulfur (S)	ppm	1,540	1,660	1,680

Customer Id: MOTMCA
 Sample No.: EN24050140
 Lab Number: 24050140
 Test Package: TEST

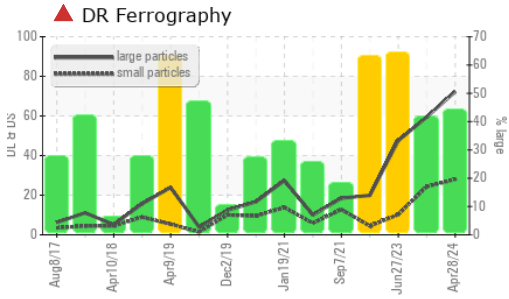


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OIL ANALYSIS REPORT



DR FERROGRAPHY READINGS

L		▲ 72.3	▲ 59.5	▲ 47.5
S		▲ 28.0	▲ 24.3	▲ 10.2
WPC	DL + DS	▲ 100.3	▲ 83.8	▲ 57.7

Contamination

Water	>0.05	NEG	NEG	NEG
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