

LABORATORY ANALYSIS



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Department **WINDING**
Equipment No. **INSU05 SLOT INSULATOR LINE 05 (00119)**
System **Hydraulic System**
Oil Type **ENGINEERED LUBRICANTS ENLUBE 20-AW (60 GAL)**

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. L, % large particles and severity index levels are abnormal. 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 still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sample Information

Lab Number	New	2405-00166	2312-00779	2202-00539
Date of Sample	(Typical)	28 Apr 2024	14 Dec 2023	01 Feb 2022
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		SEVERE	ABNORMAL	ABNORMAL

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

SSU Vis. @ 100F	SSU	223.4	223.1	222.4
cSt Vis. @ 40C	cSt	46	43.23	43.08

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	1.5	1.5	1.5
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PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	22/20/17	20/19/15	21/19/16
4 Micron & Larger	particles/ml	>5000	▲ 21,747	▲ 9,544	▲ 10,653
6 Micron & Larger	particles/ml	>2500	▲ 7,140	▲ 3,413	▲ 3,691
14 Micron & Larger	particles/ml	>160	▲ 945	▲ 239	▲ 576
21 Micron & Larger	particles/ml	>40	▲ 334	▲ 77	▲ 187
38 Micron & Larger	particles/ml	>10	▲ 27	■ 4	■ 8
70 Micron & Larger	particles/ml	>3	2	■ 0	■ 1

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	■ <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	97	96	98	
Magnesium (Mg)	ppm	<5	<5	<5	
Phosphorus(P)	ppm	519	526	510	
Silicon (Si)	ppm	<5	<5	79	
Zinc (Zn)	ppm	715	■ 628	■ 625	■ 658
Sulfur (S)	ppm	2,380	2,400	2,750	

Customer Id: MOTMCA
Sample No.: EN24050166
Lab Number: 24050166
Test Package: TEST

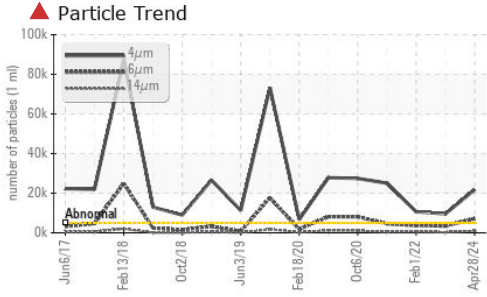


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OIL ANALYSIS REPORT



DR FERROGRAPHY READINGS

L		▲ 23.8	■ 8.4	■ 7.2
S		■ 2.7	■ 0.4	■ 5.1
WPC	DL + DS	■ 26.5	■ 8.8	■ 12.3

Contamination

Water	>0.05	NEG	NEG	NEG
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