

LABORATORY ANALYSIS



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Department **WINDING**
 Equipment No. **INSE1003 COIL INSERTER-AUXILIARY (00075)**
 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
 francisco.castillo@Copeland.com
 T:
 F:

Diagnosis

Check seals and/or filters for points of contaminant entry. 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. We recommend you service the filters on this component. 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 silt (particulates < 14 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	2405-00151	2312-00766	2308-01093
Date of Sample	(Typical)	28 Apr 2024	14 Dec 2023	14 Aug 2023
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		SEVERE	SEVERE	ABNORMAL

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

SSU Vis. @ 100F	SSU	244.1	243.3	243.6
cSt Vis. @ 40C	cSt	46	47.11	47.17

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	2.5	2.0	1.5
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PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	23/19/14	23/21/16	21/18/14
4 Micron & Larger	particles/ml	>5000	▲ 49,344	▲ 77,140	▲ 11,141
6 Micron & Larger	particles/ml	>2500	● 3,562	▲ 11,088	■ 2,115
14 Micron & Larger	particles/ml	>160	■ 127	▲ 451	■ 132
21 Micron & Larger	particles/ml	>40	● 46	▲ 83	■ 39
38 Micron & Larger	particles/ml	>10	■ 5	■ 2	■ 3
70 Micron & Larger	particles/ml	>3	■ 1	■ 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	■ <5	■ <5	■ <5
Iron (Fe)	ppm	■ 5	■ 6	■ <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	71	70	66
Magnesium (Mg)	ppm	<5	<5	<5
Phosphorus(P)	ppm	507	513	490
Silicon (Si)	ppm	<5	<5	<5
Zinc (Zn)	ppm	715	610	610
Sulfur (S)	ppm	1,490	1,430	1,350

Customer Id: MOTMCA
 Sample No.: EN24050151
 Lab Number: 24050151
 Test Package: TEST

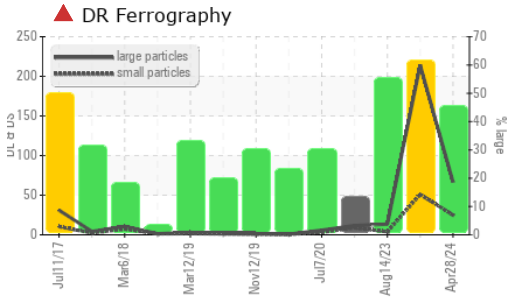


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OIL ANALYSIS REPORT



DR FERROGRAPHY READINGS

L		▲ 66.6	▲ 214.0	■ 13.5
S		▲ 25.0	▲ 51.0	■ 3.9
WPC	DL + DS	▲ 91.6	▲ 265	■ 17.4

Contamination

Water	>0.05	NEG	NEG	NEG
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