

LABORATORY ANALYSIS



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Department **REYLAM-PRESS**
 Equipment No. **MAN20 DEREELEER (LAM LINE 20) (00105)**
 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

We advise that you check for the source of water entry. 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 advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a moderate concentration of water present in the oil. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sample Information

Lab Number	New	2404-00859	2401-00702	2310-00779
Date of Sample	(Typical)	05 Apr 2024	19 Jan 2024	10 Oct 2023
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		ABNORMAL	NORMAL	NORMAL

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

SSU Vis. @ 100F	SSU	272.1	237.0	243.4
cSt Vis. @ 40C	cSt	46	45.89	47.13

% WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%	0.147	---	---
ppm Water (KF)	ppm	1,470	---	---

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	1.5*	1.0	<0.5
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PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	18/16/11	19/17/13	19/17/13
4 Micron & Larger	particles/ml	>5000	2,117	4,562	3,844
6 Micron & Larger	particles/ml	>2500	354	1,178	871
14 Micron & Larger	particles/ml	>160	15	72	51
21 Micron & Larger	particles/ml	>40	3	20	13
38 Micron & Larger	particles/ml	>10	0	2	1
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	<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	52	63	62
Magnesium (Mg)	ppm	<5	<5	<5
Phosphorus(P)	ppm	474	489	503
Silicon (Si)	ppm	<5	<5	<5
Zinc (Zn)	ppm	715	600	603
Sulfur (S)	ppm	1,900	1,770	1,430

Customer Id: MOTMCA
 Sample No.: EN24040859
 Lab Number: 24040859
 Test Package: TEST

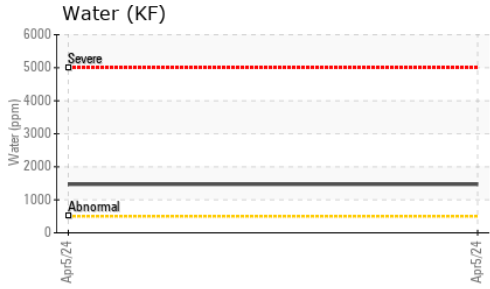


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OIL ANALYSIS REPORT



DR FERROGRAPHY READINGS

L		■ 0.1	■ 3.0	■ 1.3
S		■ 0.1	■ 0.7	■ 1.0
WPC	DL + DS	■ 0.2	■ 3.7	■ 2.3

