LABORATORY ANALYSIS

ENGINEERED LUBRICANTS
11525 Rock Island Court, St. Louis, MO 63043
Tel: 1-800-876-0008 info@englube.com

Department **REYLAM-PRESS**

Equipment No. **MAN11 DEREELER (LAM LINE 11) (00051)**

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 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	**2404-00844**	2401-00686	2310-00764
Date of Sample		(Typical)	**05 Apr 2024**	19 Jan 2024	10 Oct 2023
Oil Added			**UNK**	UNK	UNK
Last Drain Date			**--**	--	--
Months on Sample			**162.7**	160.2	157.0
Last Filter Service			**--**	--	--
Sample Point			**---**	---	---
Sample Status			**ABNORMAL**	NORMAL	ABNORMAL

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

SSU Vis. @ 100F	SSU		**270.8**	236.6	243.5
cSt Vis. @ 40C	cSt	46	▲ **52.39**	45.83	47.15

% WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%		▲ **0.150**	---	---
ppm Water (KF)	ppm		▲ **1,500**	---	---

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8		**1.5***	1.0	0.5

PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	**18/16/11**	19/16/13	20/18/14
4 Micron & Larger	particles/1ml	>5000	**1,912**	2,524	▲ 5,053
6 Micron & Larger	particles/1ml	>2500	**352**	567	1,457
14 Micron & Larger	particles/1ml	>160	**17**	47	147
21 Micron & Larger	particles/1ml	>40	**3**	15	40
38 Micron & Larger	particles/1ml	>10	**0**	2	3
70 Micron & Larger	particles/1ml	>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		**50**	53	60
Magnesium (Mg)	ppm		**<5**	<5	<5
Phosphorus(P)	ppm		**480**	437	493
Silicon (Si)	ppm		**<5**	<5	<5
Zinc (Zn)	ppm	715	**544**	526	597
Sulfur (S)	ppm		**1,930**	1,320	1,380

Customer Id: MOTMCA
Sample No.: EN24040844
Lab Number: 24040844
Test Package: TEST

To manage this report scan the QR code

To discuss the diagnosis or test data:
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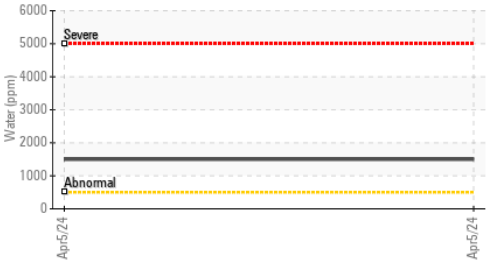
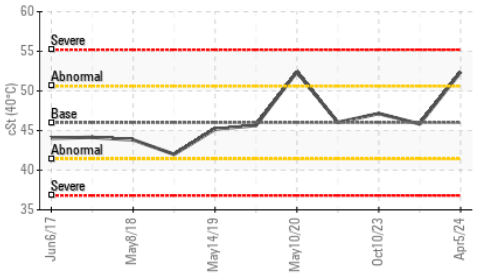
OIL ANALYSIS REPORT

Water (KF)



Viscosity @ 40°C



DR FERROGRAPHY READINGS

L			**2.5**	4.0	3.0
S			**0.8**	0.9	1.2
WPC	DL + DS		**3.3**	4.9	4.2