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. **TURNSC0401 TURNSTYLE #1-04 (00123)**

System **Gearbox**

Oil Type **ENGINEERED LUBRICANTS ENLUBE 85-EP GEAR OIL (--- 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. We recommend that you drain the fluid from the component if this has not already been done. We recommend an early resample to monitor this condition.Iron (Fe) ppm levels are abnormal. Gear wear is indicated. There is a high 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 no longer serviceable as a result of the abnormal and/or severe wear.

Sample Information

Lab Number		New	**2404-00876**	2401-00760	2310-00796
Date of Sample		(Typical)	**05 Apr 2024**	19 Jan 2024	10 Oct 2023
Oil Added			**UNK**	UNK	UNK
Last Drain Date			**--**	--	--
Months on Sample			**168.9**	166.5	163.3
Last Filter Service			**--**	--	--
Sample Point			**---**	---	---
Sample Status			**SEVERE**	ABNORMAL	ABNORMAL

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

SSU Vis. @ 100F	SSU		**262.4**	861.8	1,122.5
cSt Vis. @ 40C	cSt	220	▲ **50.79**	▲ 163.9	▢ 212.4

% WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%		▲ **2.46**	NEG	NEG

PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>23/22/16	**21/17/11**	24/22/18	23/22/18
4 Micron & Larger	particles/1ml	>80000	▢ **12,464**	● 92,269	▢ 41,531
6 Micron & Larger	particles/1ml	>40000	▢ **641**	▢ 35,752	▢ 21,530
14 Micron & Larger	particles/1ml	>640	▢ **18**	▲ 2,200	▲ 1,483
21 Micron & Larger	particles/1ml	>160	▢ **4**	● 303	▲ 231
38 Micron & Larger	particles/1ml	>40	▢ **0**	▢ 2	▢ 0
70 Micron & Larger	particles/1ml	>10	▢ **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		**6**	<5	<5
Chromium (Cr)	ppm		**<5**	<5	<5
Cobalt (Co)	ppm		**<5**	<5	<5
Copper (Cu)	ppm		▢ **17**	▢ <5	▢ <5
Iron (Fe)	ppm		▲ **73**	▢ <5	▢ <5
Lead (Pb)	ppm		**14**	<5	<5
Manganese (Mn)	ppm		**6**	<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		**16**	<5	<5
Calcium (Ca)	ppm		**45**	13	<5
Magnesium (Mg)	ppm		**<5**	<5	<5
Phosphorus(P)	ppm	234	▢ **478**	▢ 315	▢ 256
Silicon (Si)	ppm		**<5**	<5	<5
Zinc (Zn)	ppm		**468**	113	<5
Sulfur (S)	ppm		**1,770**	2,580	2,890

Customer Id: MOTMCA
Sample No.: EN24040876
Lab Number: 24040876
Test Package: TEST

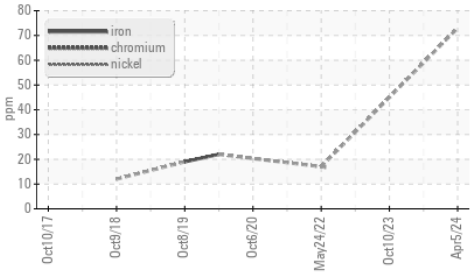
To manage this report scan the QR code

To discuss the diagnosis or test data:
Brian Klutenkamper +1 (314)872-9540
bklutenkamper@englube.com

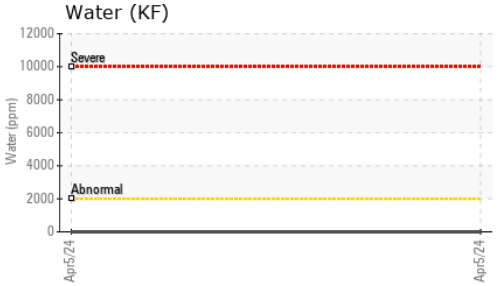
To change component or sample information:
Tracy Weaks +1 (314)872-9540
tweaks@englube.com

OIL ANALYSIS REPORT

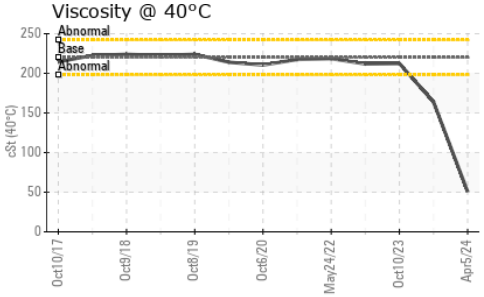
Ferrous Alloys



Water (KF)



Viscosity @ 40°C



DR FERROGRAPHY READINGS

L			**17.0**	22.4	2.9
S			**14.4**	4.0	1.7
WPC	DL + DS		**31.4**	26.4	4.6