

LABORATORY ANALYSIS



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

Department **WINDING**
 Equipment No. **CLAM06 CLAMP MACHINE 6 (00006)**
 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

All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above 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	2405-00142	2312-00757	2307-00022
Date of Sample	(Typical)	28 Apr 2024	14 Dec 2023	27 Jun 2023
Oil Added		UNK	UNK	UNK
Last Drain Date		--	--	--
Months on Sample		294.9	290.6	285.1
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		NORMAL	ABNORMAL	SEVERE

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

SSU Vis. @ 100F	SSU	237.2	232.0	232.2
cSt Vis. @ 40C	cSt	46	44.94	44.97

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	0.5	1.0	1.0

PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	21/19/14	22/20/17	23/21/17
4 Micron & Larger	particles/ml	>5000	16,876	20,950	69,292
6 Micron & Larger	particles/ml	>2500	2,929	7,316	12,467
14 Micron & Larger	particles/ml	>160	160	817	688
21 Micron & Larger	particles/ml	>40	52	241	178
38 Micron & Larger	particles/ml	>10	8	22	12
70 Micron & Larger	particles/ml	>3	1	2	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	100	71	72	
Magnesium (Mg)	ppm	<5	<5	<5	
Phosphorus(P)	ppm	496	508	506	
Silicon (Si)	ppm	<5	<5	<5	
Zinc (Zn)	ppm	715	610	598	615
Sulfur (S)	ppm	1,530	1,800	1,870	

Customer Id: MOTMCA
 Sample No.: EN24050142
 Lab Number: 24050142
 Test Package: TEST

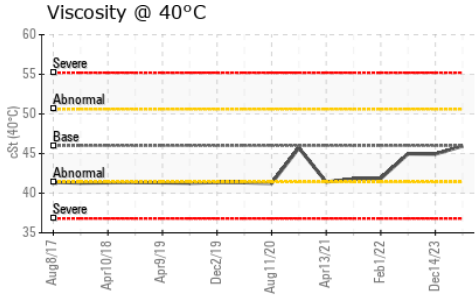


To manage this report scan the QR code

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

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

OIL ANALYSIS REPORT



DR FERROGRAPHY READINGS

L		■ 10.2	■ 6.6	▲ 60.0
S		■ 3.1	■ 2.5	▲ 12.6
WPC	DL + DS	■ 13.3	■ 9.1	▲ 72.6

Contamination

Water	>0.05	NEG	NEG	NEG
-------	-------	------------	-----	-----