

LABORATORY ANALYSIS



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ABB MOTORS & MECHANICAL
3560 SCARLET OAK BLVD.
ST. LOUIS, MO
US 63122
Contact: Service Manager

Equipment No. **19 (00022)**
System **Gear Lube System**
Oil Type **MOBIL MOBILFLUID 424 (--- GAL)**

T:
F:

DIAGNOSIS

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The condition of the oil is acceptable for the time in service. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

Lab Number	New	2305-00343	---	---
Date of Sample	(Typical)	05 May 2023	---	---
Oil Added		UNK	---	---
Last Drain Date		--	---	---
Last Filter Service		--	---	---
Sample Point		---	---	---
Sample Status		SEVERE	---	---

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

SSU Vis. @ 100F	SSU	275.2	---	---
cSt Vis. @ 40C	cSt	55	53.23	---

% WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%	0.045	---	---
ppm Water (KF)	ppm	450	---	---

% WATER - RELATIVE HUMIDITY SENSOR (ASTM D7546)

% Water	%	0.045	---	---
ppm Water	ppm	450	---	---

TOTAL ACID NUMBER (NEUT. NO.)(ASTM D974)

TAN, mg KOH/g	mg KOH/g	6.26	---	---
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PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/17/14	18/14/12	---	---
4 Micron & Larger	particles/ml	>5000	1,735	---	---
6 Micron & Larger	particles/ml	>1300	156	---	---
14 Micron & Larger	particles/ml	>160	23	---	---
21 Micron & Larger	particles/ml	>40	23	---	---
38 Micron & Larger	particles/ml	>10	16	---	---
70 Micron & Larger	particles/ml	>3	14	---	---

Customer Id: ENC0009101
Sample No.: EN23050343
Lab Number: 23050343
Test Package: TEST



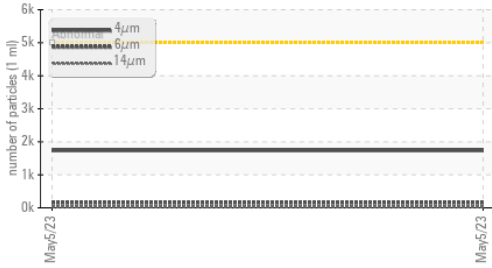
To manage this report scan the QR code

To discuss the diagnosis or test data:
Brad Fritz +1 (314)872-9540
bfritz@englube.com

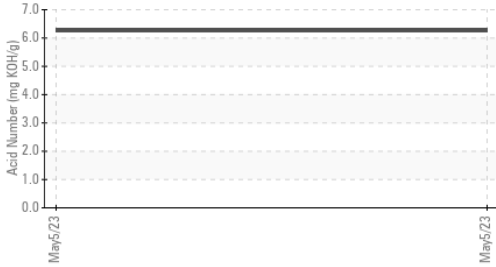
To change component or sample information:
Tracy Weaks +1 (314)872-9540
tweaks@englube.com

OIL ANALYSIS REPORT

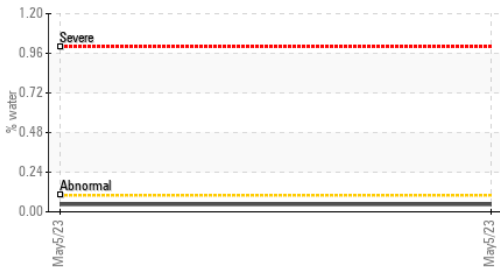
▲ Particle Trend



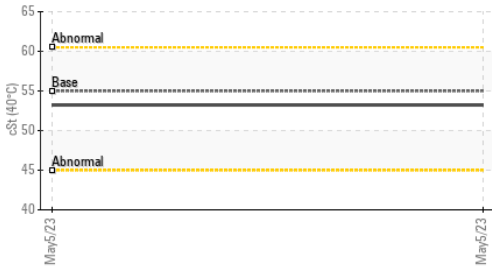
Acid Number



Water



Viscosity @ 40°C



ENERGY DISPERSIVE XRF - PPM (*BELOW MINIMUM DETECTION LIMIT)

Aluminum (Al)	ppm	*	---	---
Antimony (Sb)	ppm	*	---	---
Cadmium (Cd)	ppm	*	---	---
Chromium (Cr)	ppm	*	---	---
Cobalt (Co)	ppm	*	---	---
Copper (Cu)	ppm	*	---	---
Iron (Fe)	ppm	80	---	---
Lead (Pb)	ppm	*	---	---
Manganese (Mn)	ppm	*	---	---
Molybdenum(Mo)	ppm	■*	---	---
Nickel (Ni)	ppm	*	---	---
Potassium (K)	ppm	■*	---	---
Tin (Sn)	ppm	*	---	---
Titanium (Ti)	ppm	*	---	---
Vanadium (V)	ppm	*	---	---
Barium (Ba)	ppm	■*	---	---
Calcium (Ca)	ppm	■ 3,430	---	---
Magnesium (Mg)	ppm	■*	---	---
Phosphorus(P)	ppm	■ 1,090	---	---
Silicon (Si)	ppm	*	---	---
Zinc (Zn)	ppm	■ 1,310	---	---
Chlorine (Cl)	ppm	67	---	---
Sulfur (S)	ppm	3,810	---	---

DR FERROGRAPHY READINGS

L		■ 2.1	---	---
S		■ 1.3	---	---
WPC	DL + DS	■ 3.4	---	---

FERROGRAM

AFerr Dilution		■ 1:1		
Rubbing Wear		■ 3		
Severe Wear Rolling/Sliding				
Red Oxides				
Dark Oxides		■ 3		
Abrasive Wear (cutting) Small				
Abrasive Wear (cutting) Large				
Spheres - Small				
Spheres - Large				
Chunks				
Reworked Particles		■ 2		
White Nonferrous Metal				
Copper Alloy				
Molybdenum Disulfide				
Corrosive Wear				
Friction Polymer				
Fibers				
Nonmetallic Crystalline				
Nonmetallic Amorphous Material		■ 4		
Other				