

# LABORATORY ANALYSIS



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Department **REYLAM - FACILITIES**  
 Equipment No. **COMP05 AIR COMPRESSOR #5 (00004)**  
 System **Hydraulic System**  
 Oil Type **ENGINEERED LUBRICANTS ENLUBE S-CHEM PAO-ACO-48 (--- GAL)**

**COPELAND (MHDS)**  
 6001 S. 35TH STREET, SUITE D"  
 REYNOSA, ZZ  
 US  
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 T:  
 F:

## Diagnosis

We recommend that you drain the oil from the component if this has not already been done. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. Phosphorus(P) ppm levels are severely low. Sulfur (S) ppm levels are severely low. cSt Vis. @ 40C is severely high. The viscosity of the oil is higher than normal, possibly indicating the addition of a heavier grade of oil.

## Sample Information

Lab Number	New	2405-00180	2401-00450	2310-00874
Date of Sample	(Typical)	<b>28 Apr 2024</b>	10 Jan 2024	16 Oct 2023
Oil Added		<b>UNK</b>	UNK	UNK
Last Drain Date		--	--	--
Months on Sample		<b>67.6</b>	64.1	61.3
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

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

SSU Vis. @ 100F	SSU	221.5	<b>264.3</b>	266.1	267.2
cSt Vis. @ 40C	cSt	43.3	<b>▲ 51.15</b>	▲ 51.49	▲ 51.70

## % WATER - KARL FISCHER (ASTM E203)

% Water (KF)	%	<b>0.015</b>	0.008	0.015
ppm Water (KF)	ppm	<b>150</b>	80	150

## COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	0.5	<b>5.5</b>	6.0	6.5
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## TOTAL ACID NUMBER (NEUT. NO.)(ASTM D974)

TAN, mg KOH/g	mg KOH/g	0.57	<b>0.45</b>	0.61	0.66
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## PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>21/19/14	<b>16/14/11</b>	21/20/17	18/17/14
4 Micron & Larger	particles/ml	>20000	<b>367</b>	14,041	2,070
6 Micron & Larger	particles/ml	>5000	<b>131</b>	5,730	845
14 Micron & Larger	particles/ml	>160	<b>18</b>	855	106
21 Micron & Larger	particles/ml	>40	<b>6</b>	313	32
38 Micron & Larger	particles/ml	>10	<b>0</b>	29	1
70 Micron & Larger	particles/ml	>3	<b>0</b>	2	0

Customer Id: MOTMCA  
 Sample No.: EN24050180  
 Lab Number: 24050180  
 Test Package: TEST



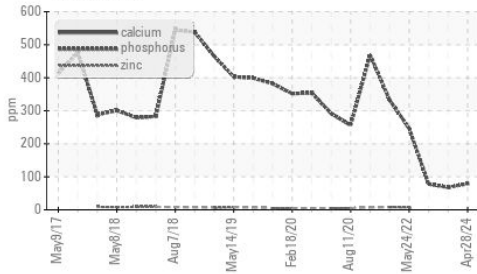
To manage this report scan the QR code

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

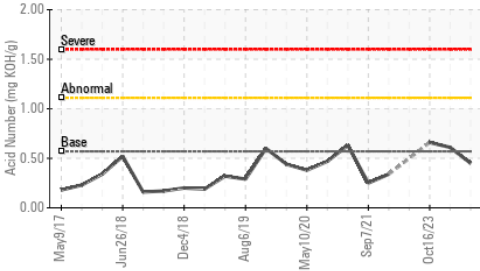
To change component or sample information:  
 Tracy Weaks +1 (314)872-9540  
[tweaks@englube.com](mailto:tweaks@englube.com)

# OIL ANALYSIS REPORT

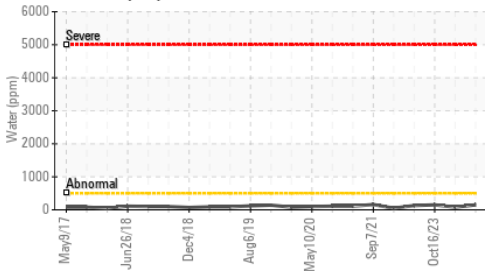
### ▲ Additives



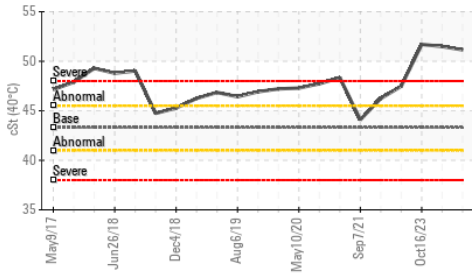
### Acid Number



### Water (KF)



### Viscosity @ 40°C



### 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	14	
Calcium (Ca)	ppm	5	<5	<5	
Magnesium (Mg)	ppm	5	<5	<5	
Phosphorus (P)	ppm	220	▲ 79	▲ 68	▲ 78
Silicon (Si)	ppm	5	<5	<5	<5
Zinc (Zn)	ppm	5	<5	<5	<5
Sulfur (S)	ppm	1745	▲ 340	■ 197	▲ 27

### DR FERROGRAPHY READINGS

L		■ 0.5	▲ 19.7	■ 3.3
S		■ 0.1	■ 1.2	■ 1.9
WPC	DL + DS	■ 0.6	■ 20.9	■ 5.2