



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area  
**GATHERING STATIONS/BOA GATHERING STATION**  
Machine Id  
**MRC-294 - CAT**  
Component  
**Natural Gas Engine**  
Fluid  
**TULCO LUBSOIL GEO XL LOW ASH 40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TO60002163</b>	TO60001985	TO60001921
Sample Date		Client Info		<b>05 Feb 2024</b>	10 Jan 2024	02 Dec 2023
Machine Age	hrs	Client Info		<b>10147</b>	9407	8660
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	Not Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Not Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>11</b>	7	6
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>1</b>	<1	0
Lead	ppm	ASTM D5185m	>30	<b>36</b>	22	23
Copper	ppm	ASTM D5185m	>35	<b>5</b>	3	3
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

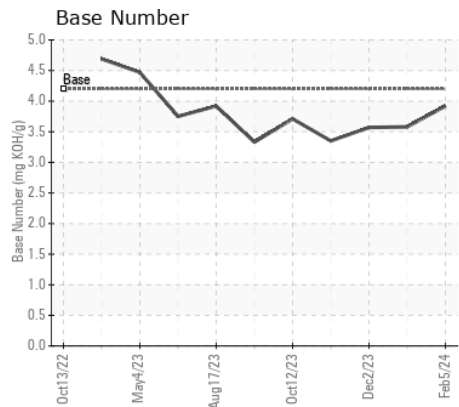
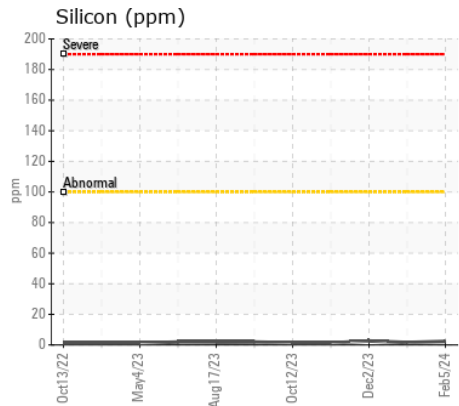
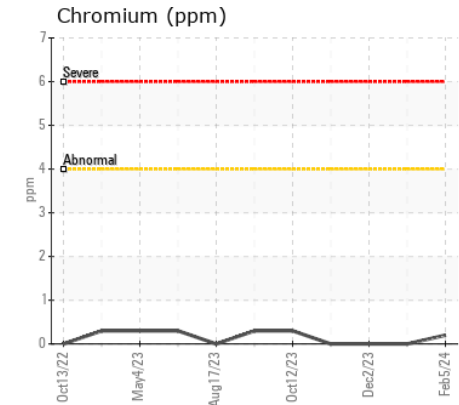
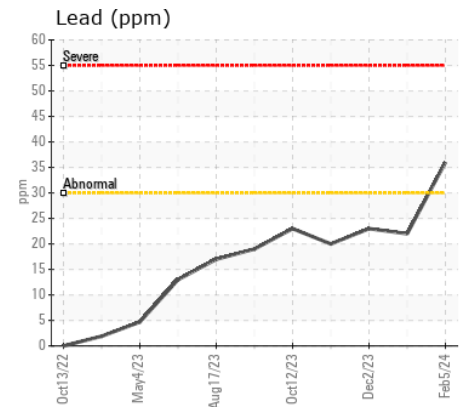
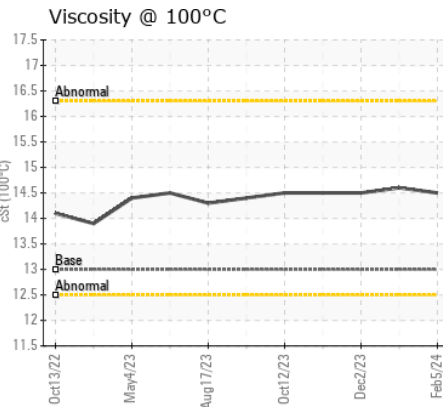
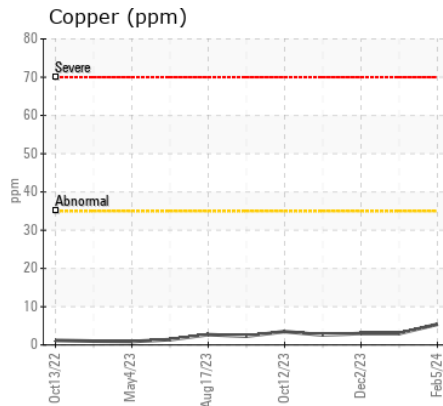
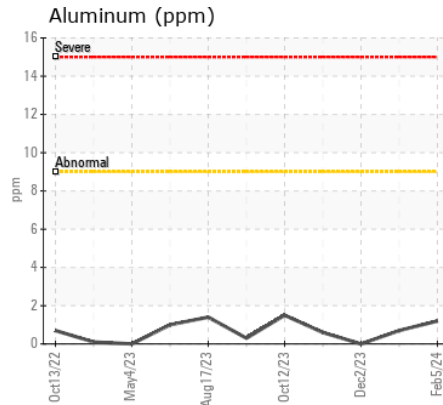
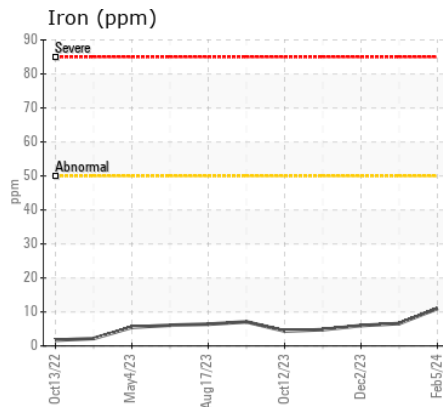
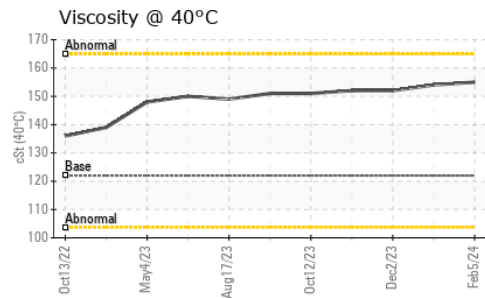
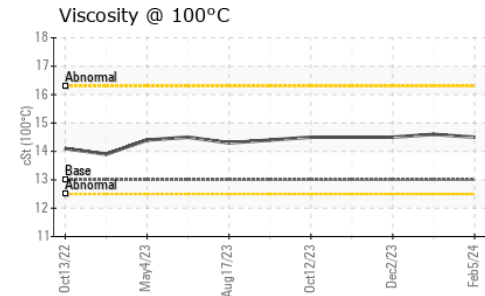
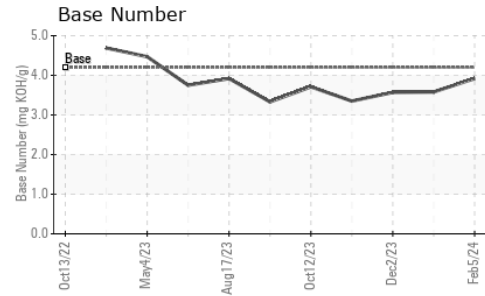
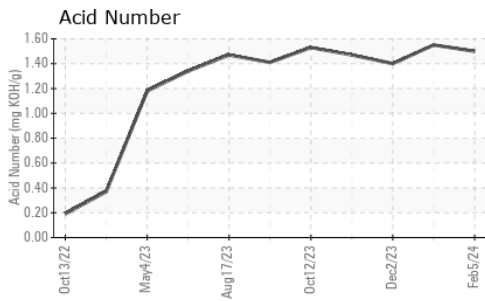
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	<b>2</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.1</b>	10.2	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	18.9	18.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	3	3
Boron	ppm	ASTM D5185m	100	<b>127</b>	75	88
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1	<b>2</b>	1	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	10	<b>19</b>	14	12
Calcium	ppm	ASTM D5185m	1150	<b>2063</b>	1441	1498
Phosphorus	ppm	ASTM D5185m	290	<b>408</b>	287	301
Zinc	ppm	ASTM D5185m	272	<b>542</b>	340	350
Sulfur	ppm	ASTM D5185m	1900	<b>3104</b>	2007	1771
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	19.4	19.1
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.50</b>	1.55	1.40
Base Number (BN)	mg KOH/g	ASTM D2896	4.2	<b>3.92</b>	3.58	3.57
Visc @ 40°C	cSt	ASTM D445	122	<b>155</b>	154	152
Visc @ 100°C	cSt	ASTM D445	13	<b>14.5</b>	14.6	14.5
Viscosity Index (VI)	Scale	ASTM D2270	103	<b>90</b>	92	93



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TO60002163

Lab Number : 06087583

Unique Number : 10875028

Test Package : MOB 2 ( Additional Tests: KV40, VI )

Received : 13 Feb 2024

Tested : 14 Feb 2024

Diagnosed : 14 Feb 2024 - Don Baldrige

MIDLAND - EOG RESOURCES INC.

5509 CHAMPIONS DRIVE

MIDLAND, TX

US 79706

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)