



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**GOLDEN BEAR**  
Machine Id  
**MRC-271**  
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>TO60002275</b>	TO60002278	TO60002001
Sample Date		Client Info		<b>09 Apr 2024</b>	28 Feb 2024	01 Feb 2024
Machine Age	hrs	Client Info		<b>16080</b>	15103	14465
Oil Age	hrs	Client Info		<b>1</b>	0	1
Filter Age	hrs	Client Info		<b>1</b>	0	1
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>6</b>	9	7
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>&lt;1</b>	2	1
Lead	ppm	ASTM D5185m	>30	<b>16</b>	30	22
Copper	ppm	ASTM D5185m	>35	<b>9</b>	17	13
Tin	ppm	ASTM D5185m	>4	<b>1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

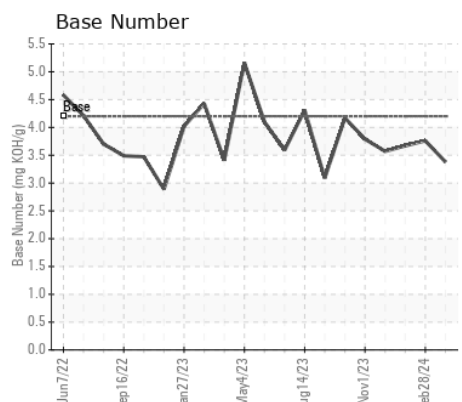
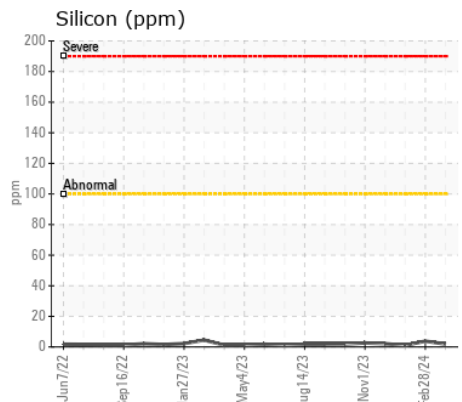
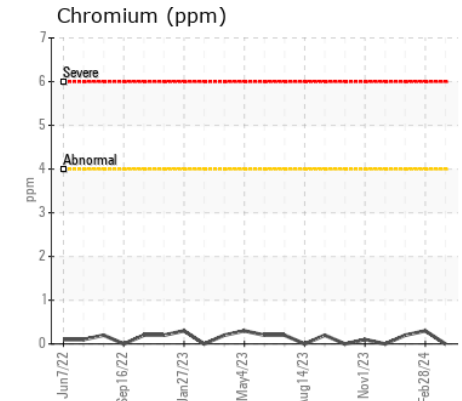
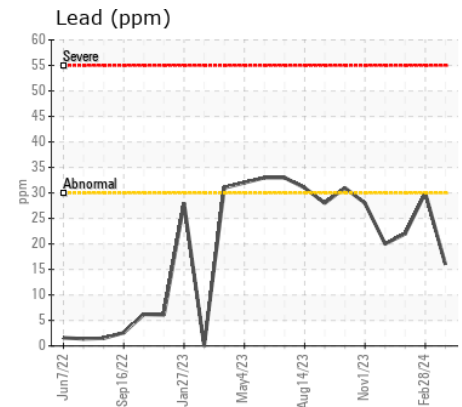
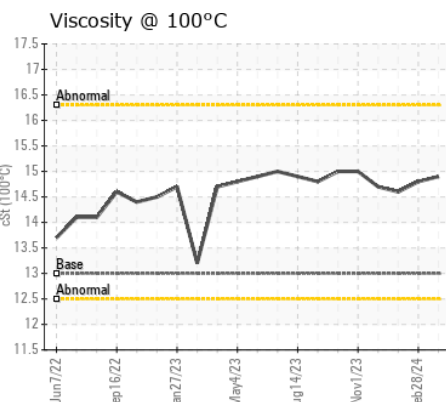
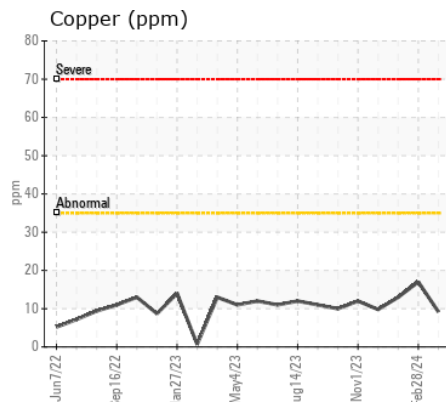
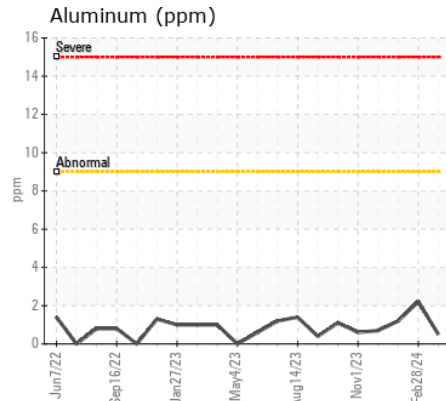
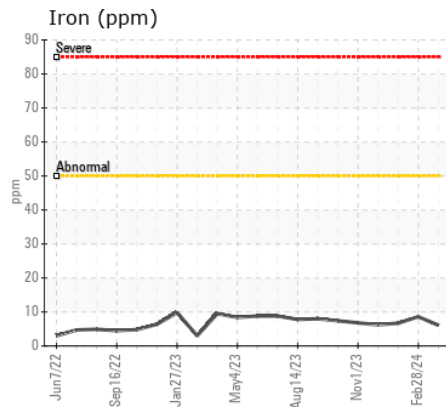
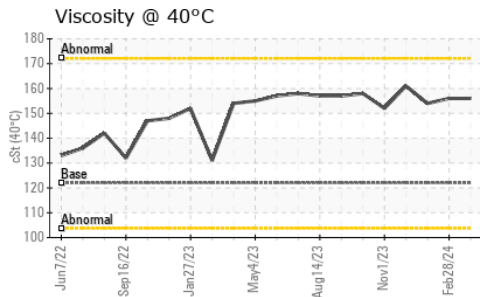
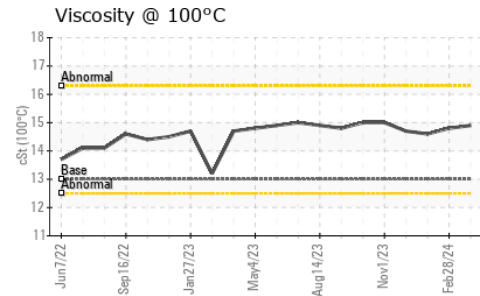
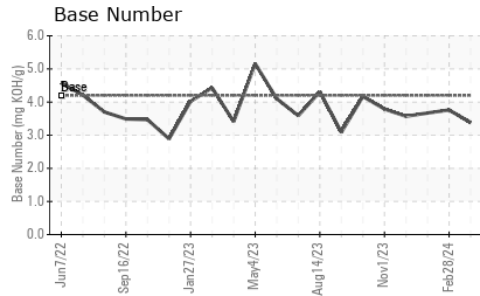
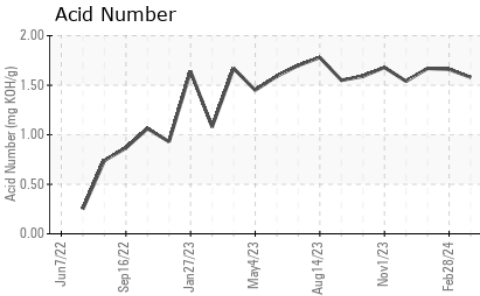
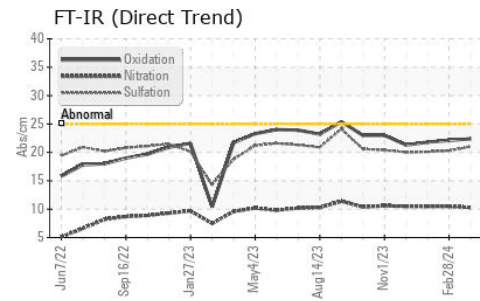
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	<b>2</b>	4	1
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	3
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.3</b>	10.5	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	20.3	20.1
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>7</b>	9	3
Boron	ppm	ASTM D5185m	100	<b>58</b>	102	87
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1	<b>&lt;1</b>	2	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	10	<b>8</b>	16	12
Calcium	ppm	ASTM D5185m	1150	<b>1489</b>	2150	1433
Phosphorus	ppm	ASTM D5185m	290	<b>283</b>	433	282
Zinc	ppm	ASTM D5185m	272	<b>326</b>	553	366
Sulfur	ppm	ASTM D5185m	1900	<b>3179</b>	4093	2219
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.4</b>	22.1	21.8
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.58</b>	1.66	1.67
Base Number (BN)	mg KOH/g	ASTM D2896	4.2	<b>3.38</b>	3.76	3.67
Visc @ 40°C	cSt	ASTM D445	122	<b>156</b>	156	154
Visc @ 100°C	cSt	ASTM D445	13	<b>14.9</b>	14.8	14.6
Viscosity Index (VI)	Scale	ASTM D2270	103	<b>94</b>	93	92



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO60002275  
**Lab Number** : 06154632  
**Unique Number** : 10990055  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI )

**Received** : 19 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 23 Apr 2024 - Wes Davis

**MIDLAND - EOG RESOURCES INC.**  
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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)