



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**MRC-298**  
 Component  
**Natural Gas Engine**  
 Fluid  
**TULCO LUBSOIL GEO XL LOW ASH 40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TO60001961</b>	TO60001928	TO60001717
Sample Date		Client Info		<b>05 Jan 2024</b>	02 Dec 2023	04 Nov 2023
Machine Age	hrs	Client Info		<b>7619</b>	6829	6177
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	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>5</b>	4	3
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>30	<b>15</b>	13	10
Copper	ppm	ASTM D5185m	>35	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
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**

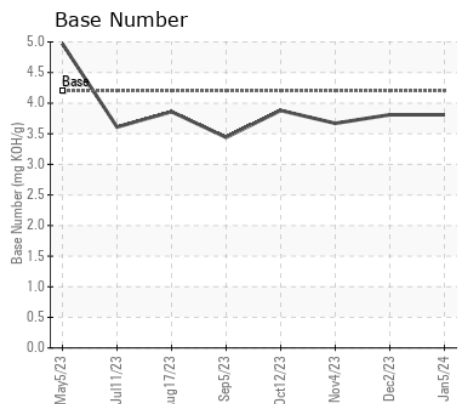
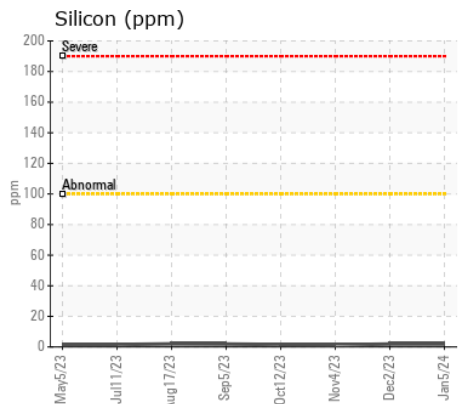
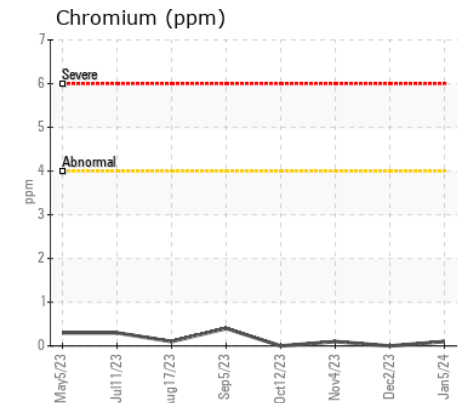
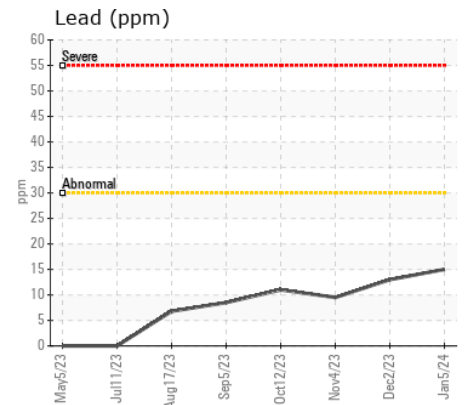
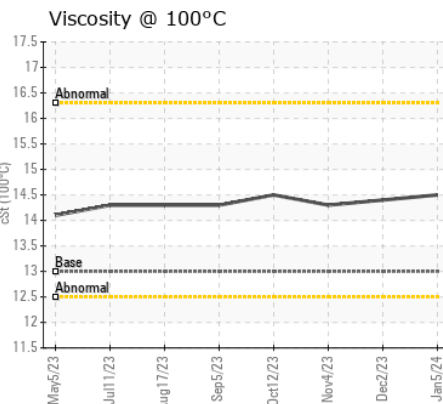
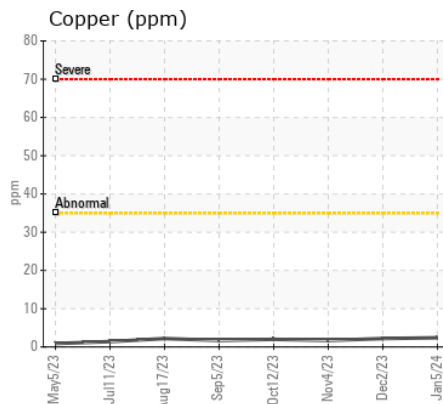
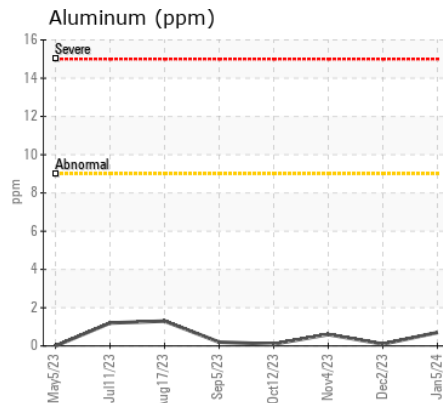
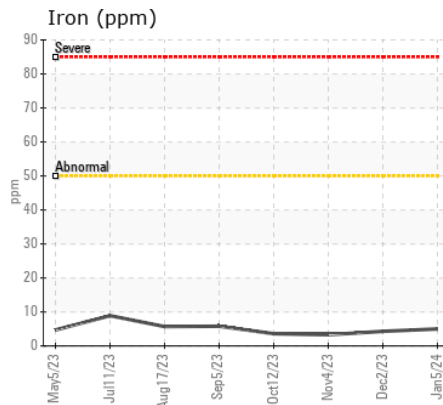
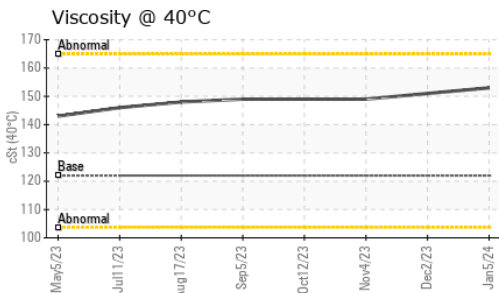
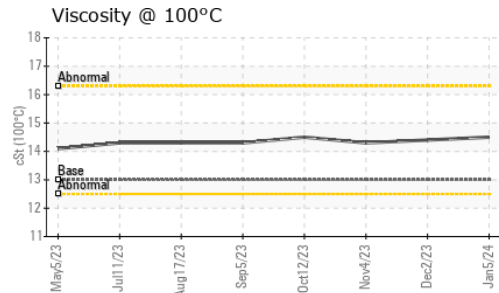
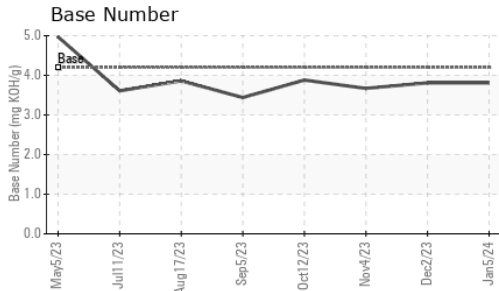
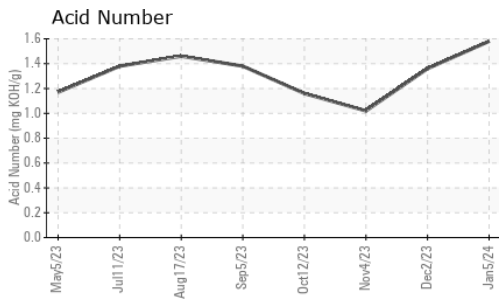
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	<b>2</b>	2	1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	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>10.3</b>	10.0	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	18.5	18.3
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>3</b>	3	3
Boron	ppm	ASTM D5185m	100	<b>81</b>	84	74
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	<1
Magnesium	ppm	ASTM D5185m	10	<b>21</b>	19	20
Calcium	ppm	ASTM D5185m	1150	<b>1402</b>	1445	1265
Phosphorus	ppm	ASTM D5185m	290	<b>286</b>	303	208
Zinc	ppm	ASTM D5185m	272	<b>327</b>	338	306
Sulfur	ppm	ASTM D5185m	1900	<b>1676</b>	1533	1282
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.9</b>	18.7	17.6
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.58</b>	1.36	1.02
Base Number (BN)	mg KOH/g	ASTM D2896	4.2	<b>3.81</b>	3.81	3.67
Visc @ 40°C	cSt	ASTM D445	122	<b>153</b>	151	149
Visc @ 100°C	cSt	ASTM D445	13	<b>14.5</b>	14.4	14.3
Viscosity Index (VI)	Scale	ASTM D2270	103	<b>92</b>	92	92



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : TO60001961 Recieved : 17 Jan 2024  
 Lab Number : 06063753 Diagnosed : 19 Jan 2024  
 Unique Number : 10835135 Diagnostician : Wes Davis  
 Test Package : MOB 2 ( Additional Tests: KV40, VI )

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)

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