



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MRC-323
 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		TO60002159	TO60001984	TO60001930
Sample Date		Client Info		05 Feb 2024	10 Jan 2024	02 Dec 2023
Machine Age	hrs	Client Info		5069	4312	3796
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	6	5	4
Chromium	ppm	ASTM D5185m	>4	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	<1	0
Lead	ppm	ASTM D5185m	>30	12	7	6
Copper	ppm	ASTM D5185m	>35	3	2	1
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

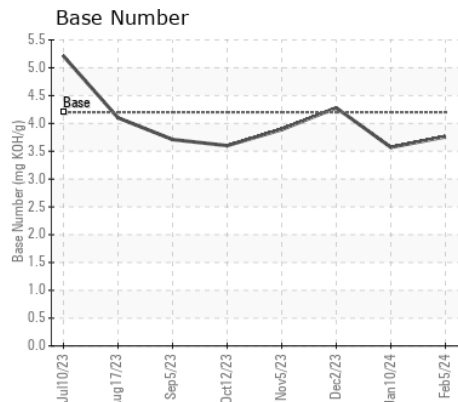
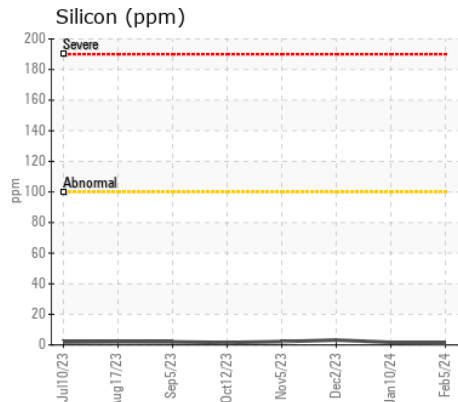
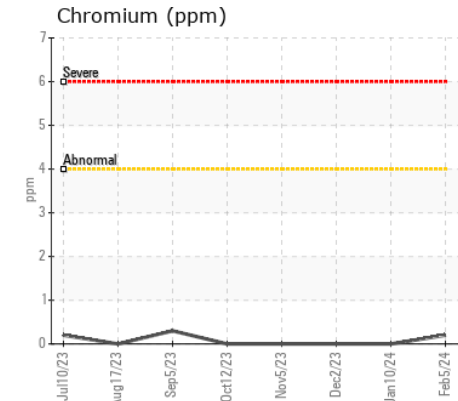
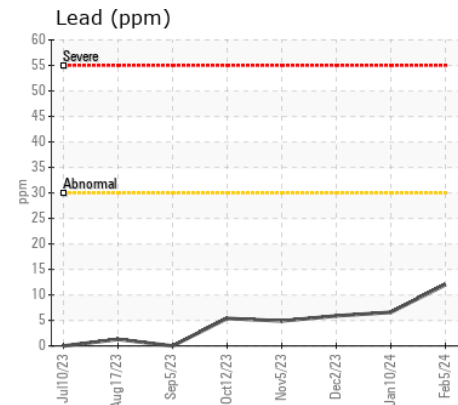
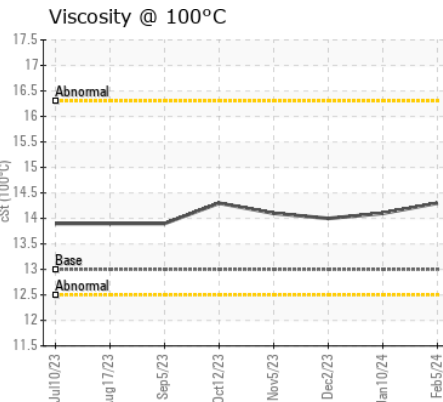
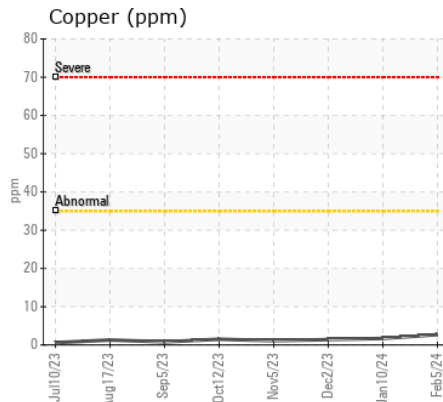
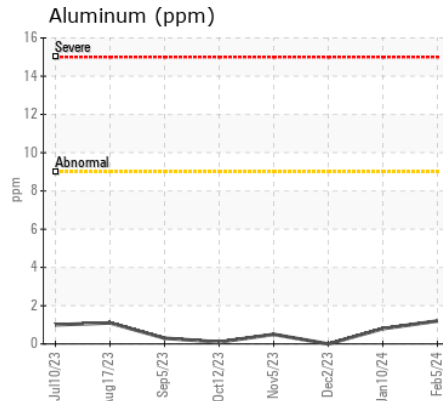
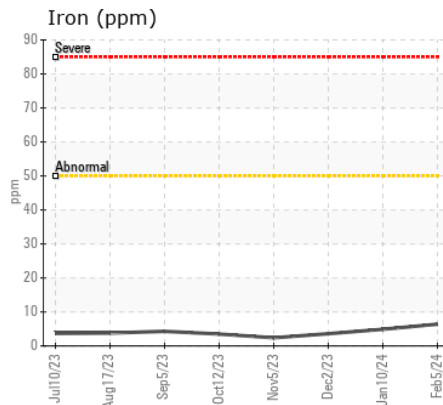
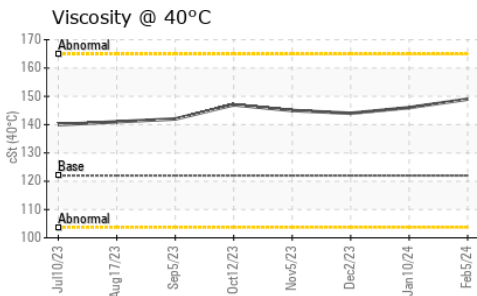
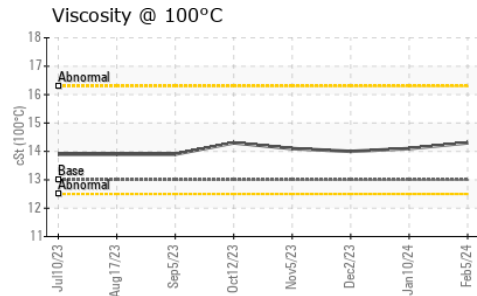
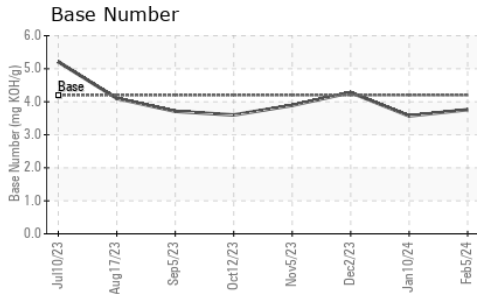
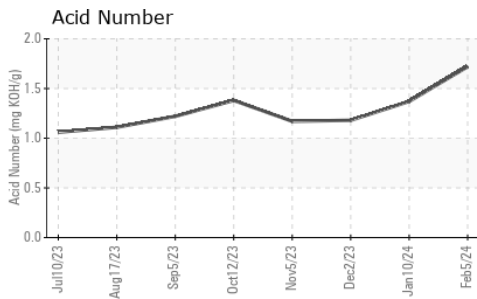
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	1	2	3
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.5	10.1	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.7	17.2	16.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		0	2	2
Boron	ppm	ASTM D5185m	100	112	87	97
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	1	1	<1	<1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	10	11	9	9
Calcium	ppm	ASTM D5185m	1150	1381	1376	1430
Phosphorus	ppm	ASTM D5185m	290	277	281	293
Zinc	ppm	ASTM D5185m	272	333	304	318
Sulfur	ppm	ASTM D5185m	1900	1311	1388	1382
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	16.2	15.5
Acid Number (AN)	mg KOH/g	ASTM D8045		1.72	1.37	1.18
Base Number (BN)	mg KOH/g	ASTM D2896	4.2	3.76	3.57	4.28
Visc @ 40°C	cSt	ASTM D445	122	149	146	144
Visc @ 100°C	cSt	ASTM D445	13	14.3	14.1	14.0
Viscosity Index (VI)	Scale	ASTM D2270	103	92	92	93



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO60002159 **Received** : 13 Feb 2024
Lab Number : 06087579 **Tested** : 14 Feb 2024
Unique Number : 10875024 **Diagnosed** : 14 Feb 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: KV40, VI)

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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)