



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
JAL NM
 Machine Id
MRC-205
 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		TO60002308	TO60001999	TO60002009
Sample Date		Client Info		01 Apr 2024	28 Feb 2024	11 Jan 2024
Machine Age	hrs	Client Info		24045	23272	22140
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Filter Changed		Client Info		Not Changd	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	7	5	6
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	<1	2	<1
Lead	ppm	ASTM D5185m	>30	16	18	18
Copper	ppm	ASTM D5185m	>35	4	4	4
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	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.

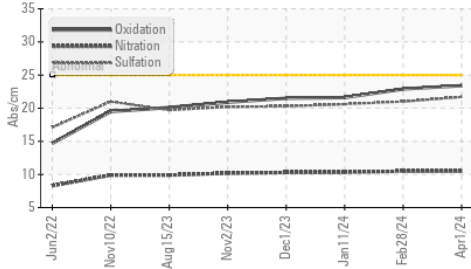
Silicon	ppm	ASTM D5185m	>+100	2	2	2
Potassium	ppm	ASTM D5185m	>20	0	3	2
Water	%	ASTM D6304	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	10.5	10.5	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.0	20.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	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

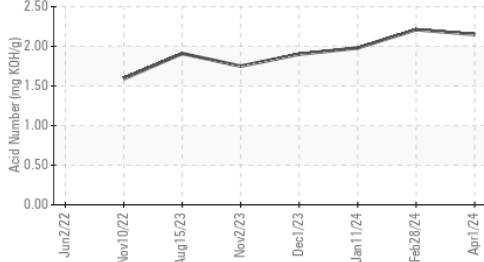
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	3	4
Boron	ppm	ASTM D5185m	100	64	67	67
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	1	2	2	1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	10	8	11	12
Calcium	ppm	ASTM D5185m	1150	1447	1383	1425
Phosphorus	ppm	ASTM D5185m	290	279	295	284
Zinc	ppm	ASTM D5185m	272	318	368	349
Sulfur	ppm	ASTM D5185m	1900	2754	2648	2270
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	22.9	21.6
Acid Number (AN)	mg KOH/g	ASTM D8045		2.15	2.21	1.98
Base Number (BN)	mg KOH/g	ASTM D2896	4.2	3.06	3.27	2.89
Visc @ 40°C	cSt	ASTM D445	122	156	155	153
Visc @ 100°C	cSt	ASTM D445	13	14.9	14.8	14.6
Viscosity Index (VI)	Scale	ASTM D2270	103	94	94	93

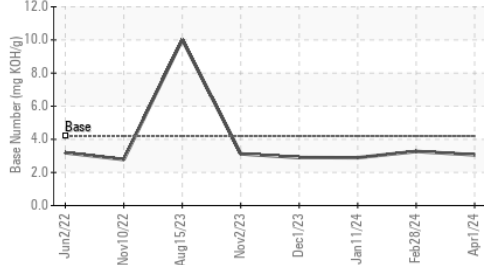
FT-IR (Direct Trend)



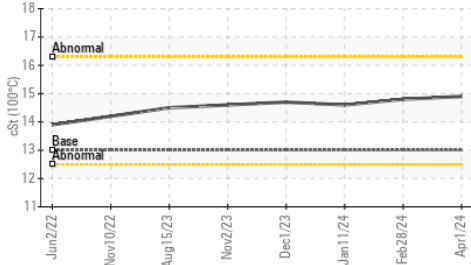
Acid Number



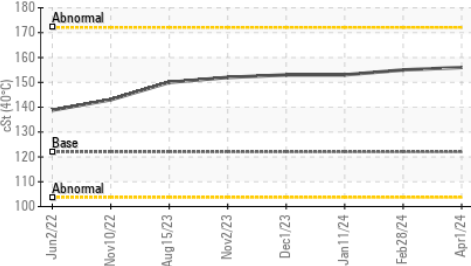
Base Number



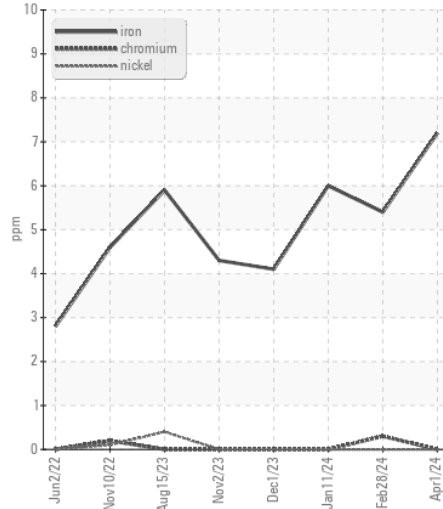
Viscosity @ 100°C



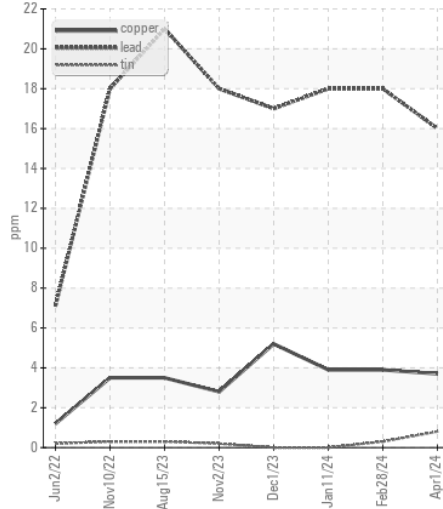
Viscosity @ 40°C



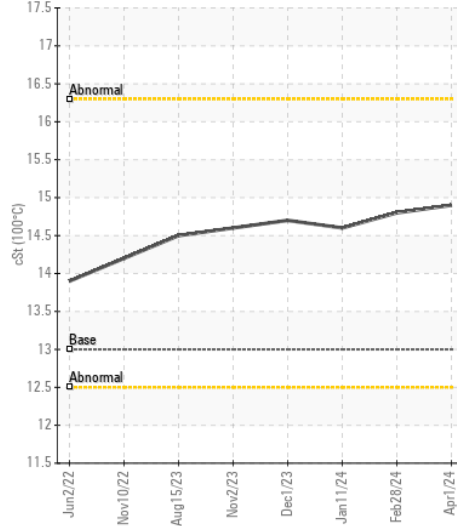
Ferrous Alloys



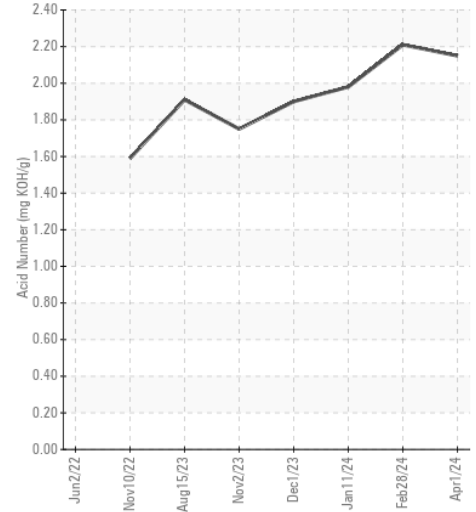
Non-ferrous Metals



Viscosity @ 100°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO60002308
Lab Number : 06154634
Unique Number : 10990057
Test Package : MOB 2 (Additional Tests: KF, KV40, PrtCount, 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)