



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
MIXERS
Machine Id
[MIXERS] M210
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0721115	WC0721053	PCA0078074
Sample Date		Client Info		22 Jun 2023	10 Mar 2023	13 Oct 2022
Machine Age	hrs	Client Info		11803	11223	11223
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	15	11
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		1	2	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	4	2	1
Lead	ppm	ASTM D5185m	>40	2	4	1
Copper	ppm	ASTM D5185m	>330	85	9	4
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

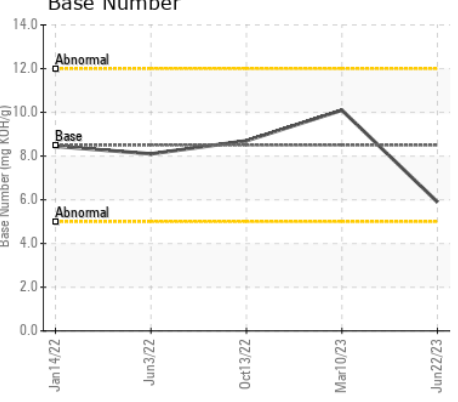
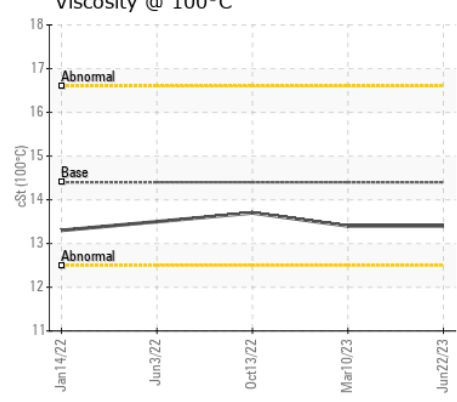
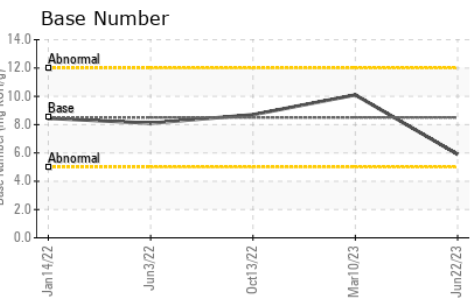
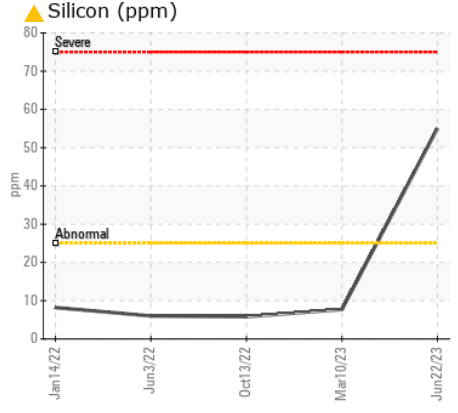
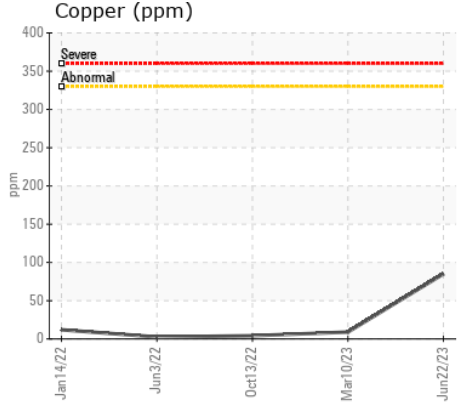
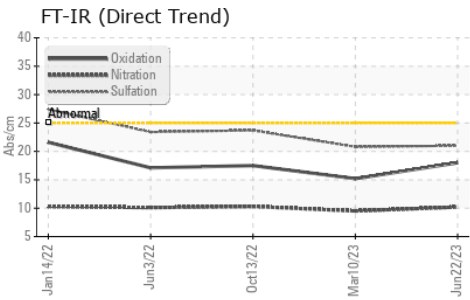
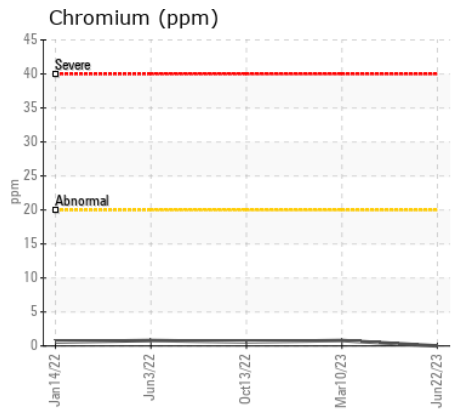
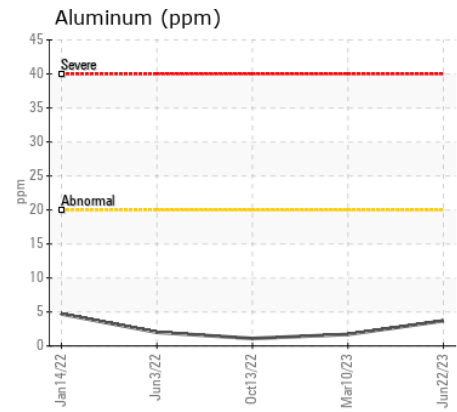
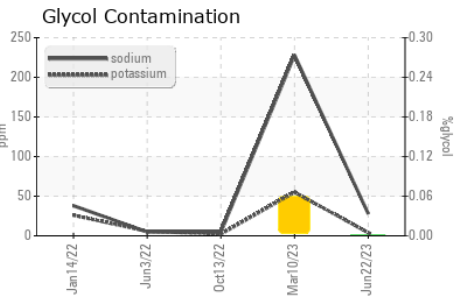
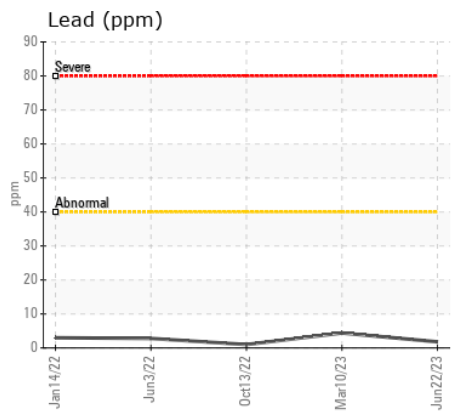
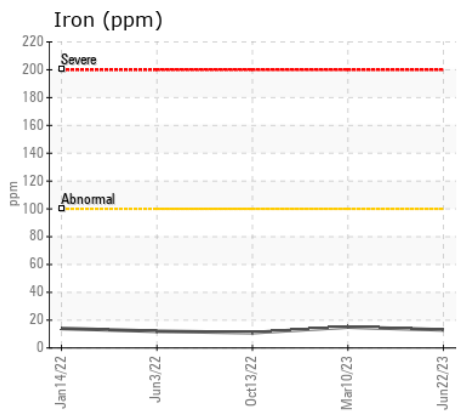
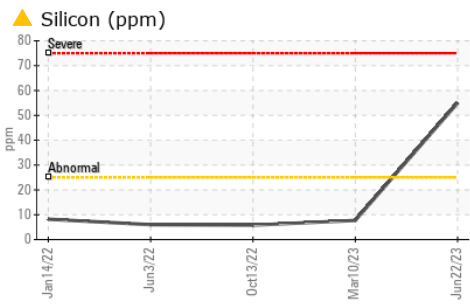
Elemental level of silicon (Si) above normal indicating ingress of seal material. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	▲ 55	8	6
Potassium	ppm	ASTM D5185m	>20	4	▲ 55	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.0	▲ 0.06	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	10.2	9.5	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	20.8	23.7
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	28	● 228	5
Boron	ppm	ASTM D5185m	250	38	16	31
Barium	ppm	ASTM D5185m	10	5	0	0
Molybdenum	ppm	ASTM D5185m	100	82	89	44
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	63	860	815
Calcium	ppm	ASTM D5185m	3000	1911	1150	1175
Phosphorus	ppm	ASTM D5185m	1150	881	994	968
Zinc	ppm	ASTM D5185m	1350	1125	1199	1171
Sulfur	ppm	ASTM D5185m	4250	3540	2896	3698
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	15.2	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.9	10.1	8.7
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	13.4	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0721115
Lab Number : 05883898
Unique Number : 10534381
Test Package : MOB 2
Received : 26 Jun 2023
Tested : 03 Jul 2023
Diagnosed : 05 Jul 2023 - Doug Bogart

CONSTRUCTION SERVICES
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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)