



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
1407
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0870741	WC0806692	WC0806677
Sample Date		Client Info		24 Jan 2024	21 Jul 2023	18 Apr 2023
Machine Age	mls	Client Info		214106	204101	199130
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	MARGINAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	22	5	12
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	2	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	6	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	<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

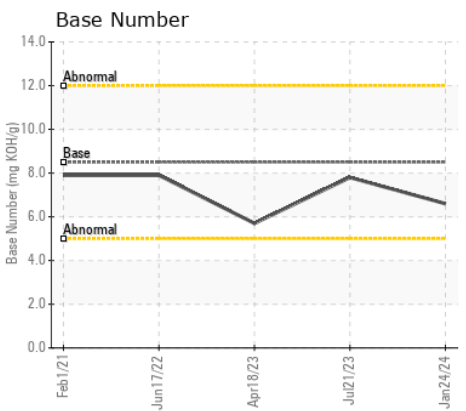
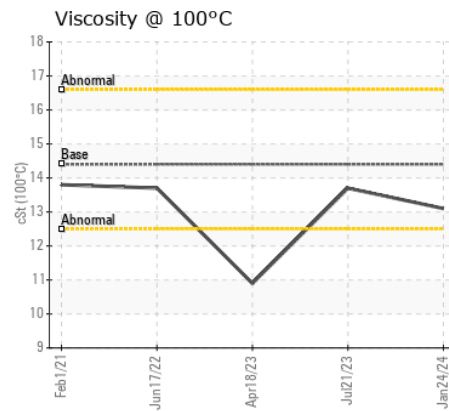
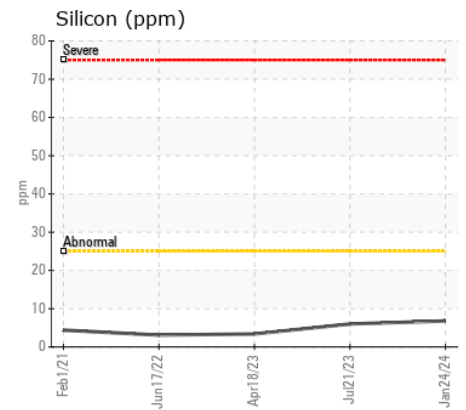
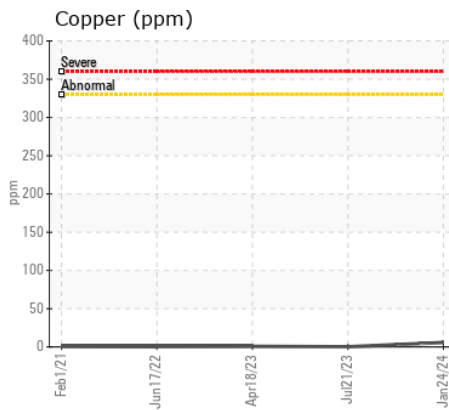
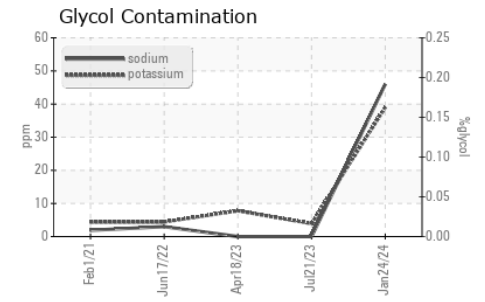
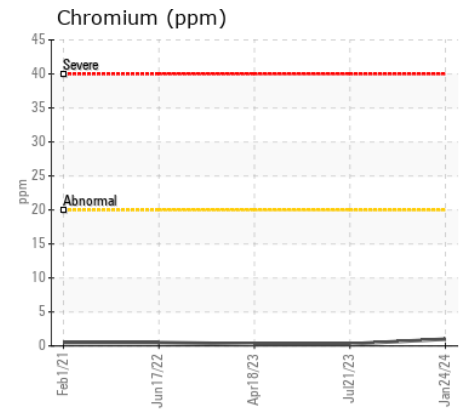
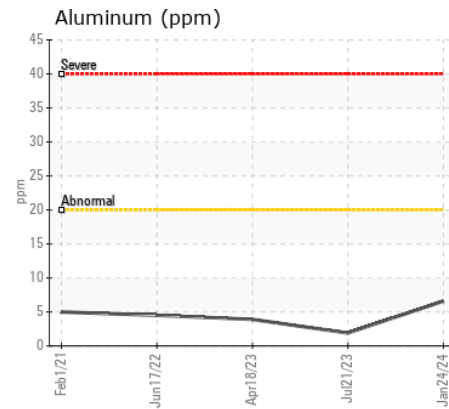
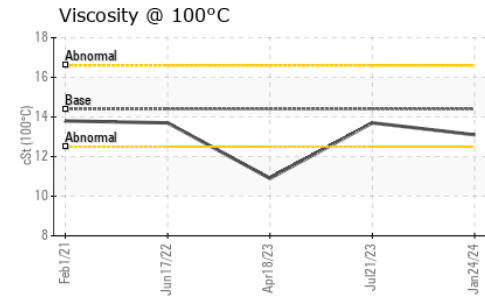
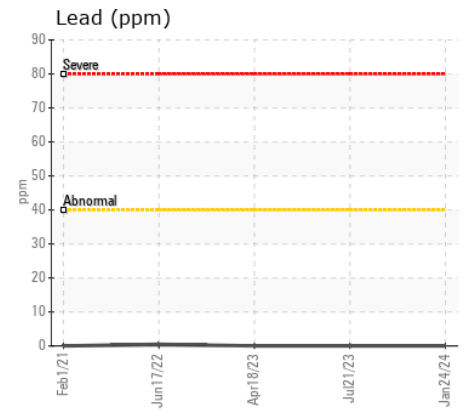
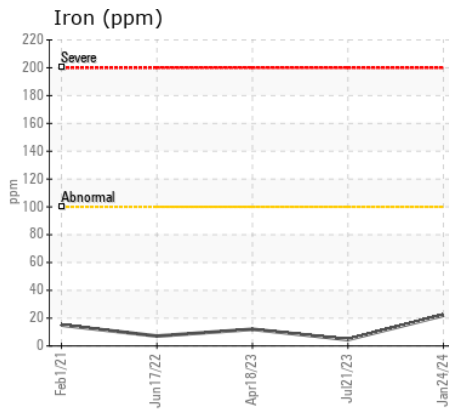
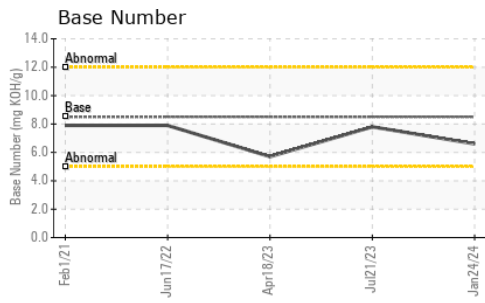
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	7	6	3
Potassium	ppm	ASTM D5185m	>20	39	4	8
Fuel		WC Method	>5	<1.0	3.2	11.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.2	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.1	7.0	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	17.2	18.0
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	>158	46	0	0
Boron	ppm	ASTM D5185m	250	32	57	39
Barium	ppm	ASTM D5185m	10	0	5	0
Molybdenum	ppm	ASTM D5185m	100	95	74	79
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	450	111	154	60
Calcium	ppm	ASTM D5185m	3000	2070	1851	1949
Phosphorus	ppm	ASTM D5185m	1150	1056	965	900
Zinc	ppm	ASTM D5185m	1350	1255	1084	1086
Sulfur	ppm	ASTM D5185m	4250	3972	3645	3347
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	12.8	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.6	7.8	5.7
Visc @ 100°C	cSt	ASTM D445	14.4	13.1	13.7	10.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870741 **Received** : 29 Feb 2024
Lab Number : 06104871 **Tested** : 05 Mar 2024
Unique Number : 10903101 **Diagnosed** : 05 Mar 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

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Certificate L2367
 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)