



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
1660
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0948929	WC0932821	WC0821394
Sample Date		Client Info		10 Jun 2024	12 Apr 2024	29 Jun 2023
Machine Age	mls	Client Info		174442	170632	153648
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Not Changd
Filter Changed		Client Info		N/A	N/A	Not Changd
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	92	21	86
Chromium	ppm	ASTM D5185m	>20	4	<1	3
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	5	8	35
Lead	ppm	ASTM D5185m	>40	3	1	0
Copper	ppm	ASTM D5185m	>330	116	<1	58
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

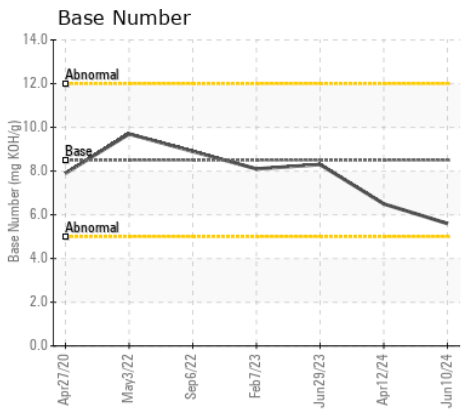
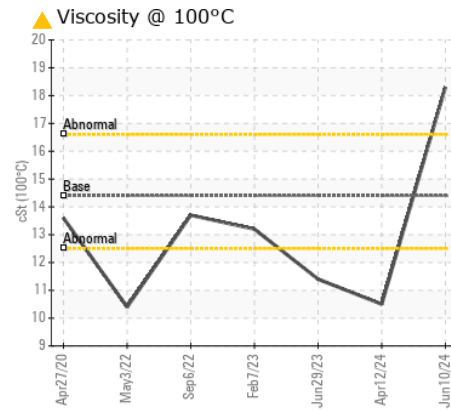
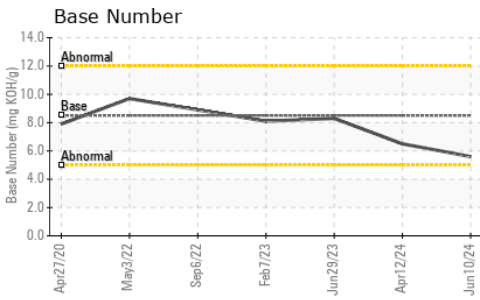
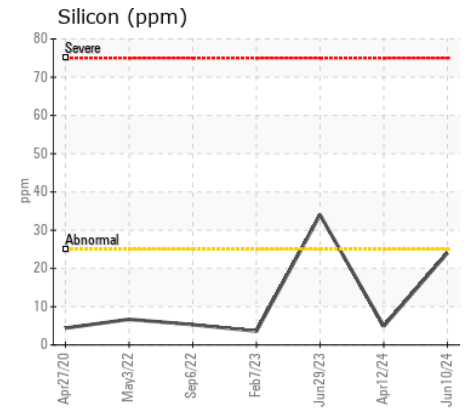
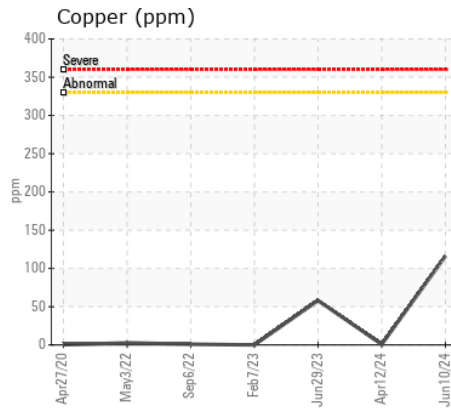
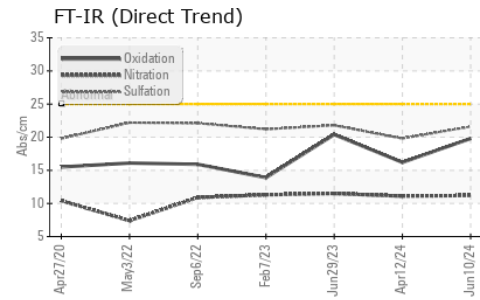
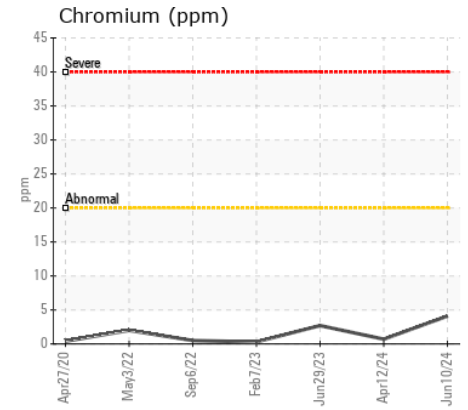
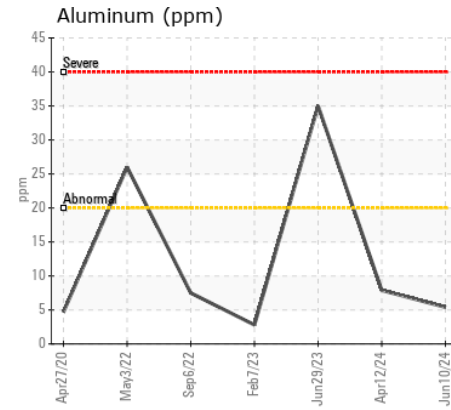
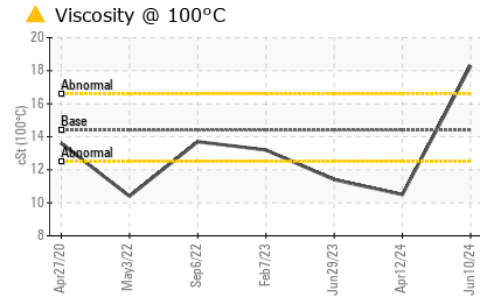
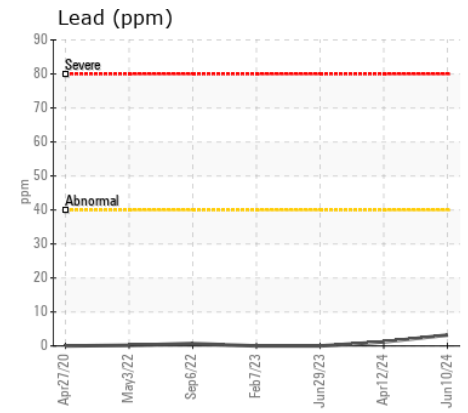
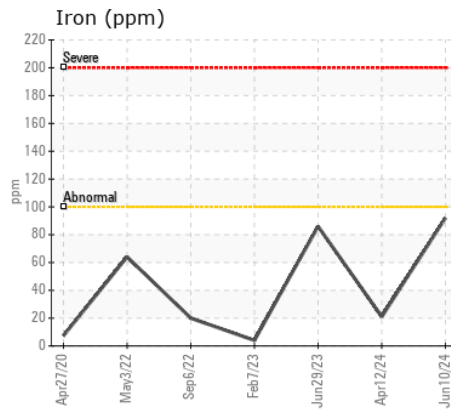
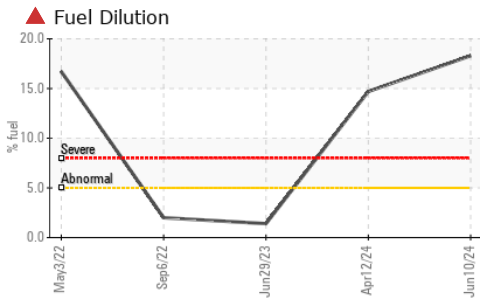
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	24	5	▲ 34
Potassium	ppm	ASTM D5185m	>20	3	28	185
Fuel	%	ASTM D3524	>5	▲ 18.3	▲ 14.7	1.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.9	0.5
Nitration	Abs/cm	*ASTM D7624	>20	11.2	11.1	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	19.8	21.8
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>158	5	20	13
Boron	ppm	ASTM D5185m	250	48	29	24
Barium	ppm	ASTM D5185m	10	3	0	5
Molybdenum	ppm	ASTM D5185m	100	74	76	54
Manganese	ppm	ASTM D5185m		4	<1	8
Magnesium	ppm	ASTM D5185m	450	296	94	875
Calcium	ppm	ASTM D5185m	3000	1488	1969	1285
Phosphorus	ppm	ASTM D5185m	1150	755	960	779
Zinc	ppm	ASTM D5185m	1350	875	1094	968
Sulfur	ppm	ASTM D5185m	4250	2752	3751	2910
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	16.2	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.6	6.5	8.3
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 18.3	▲ 10.5	● 11.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0948929 **Received** : 26 Jun 2024
Lab Number : 06220872 **Tested** : 28 Jun 2024
Unique Number : 11099069 **Diagnosed** : 28 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

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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)