



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
4207 4207
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- 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		WC0939349	---	---
Sample Date		Client Info		08 May 2024	---	---
Machine Age	hrs	Client Info		885	---	---
Oil Age	hrs	Client Info		202	---	---
Filter Age	hrs	Client Info		202	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	254	---	---
Chromium	ppm	ASTM D5185m	>20	14	---	---
Nickel	ppm	ASTM D5185m	>4	1	---	---
Titanium	ppm	ASTM D5185m		2	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	51	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	8	---	---
Tin	ppm	ASTM D5185m	>15	3	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

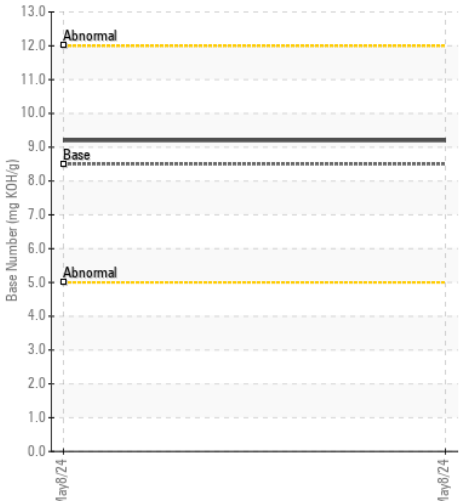
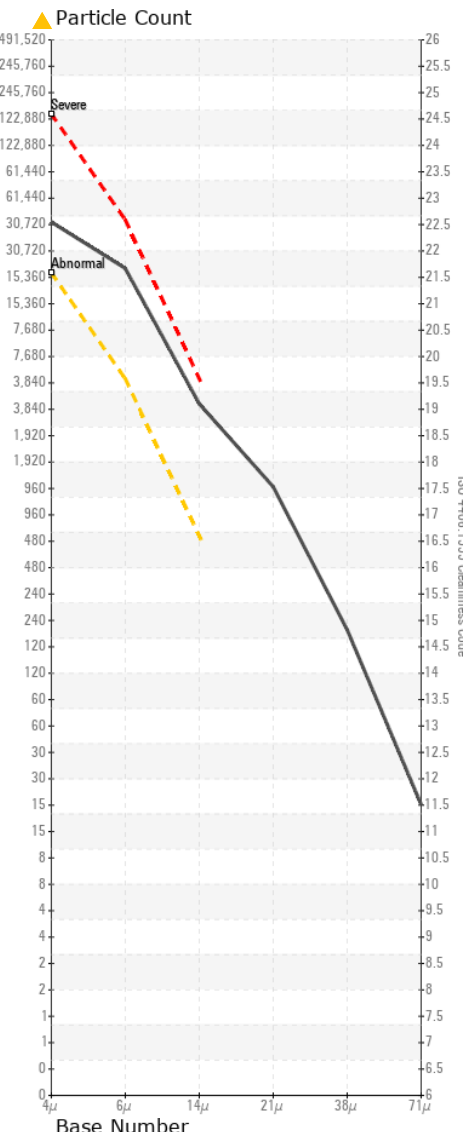
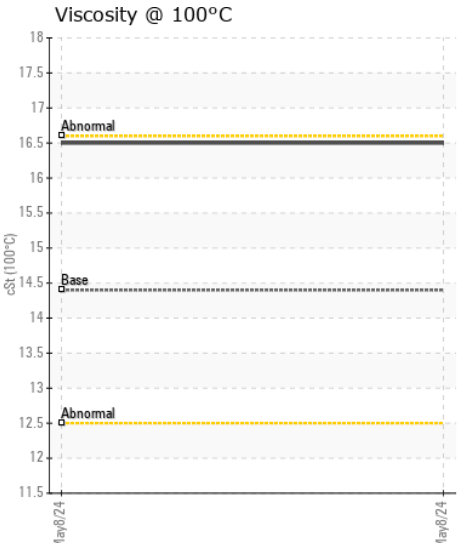
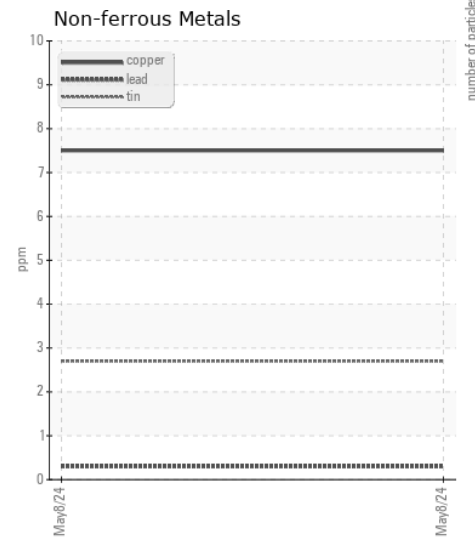
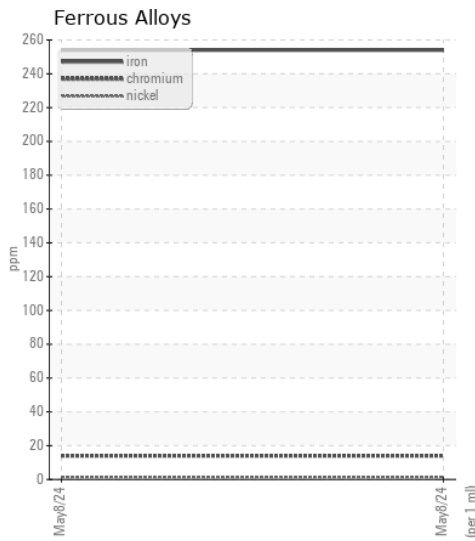
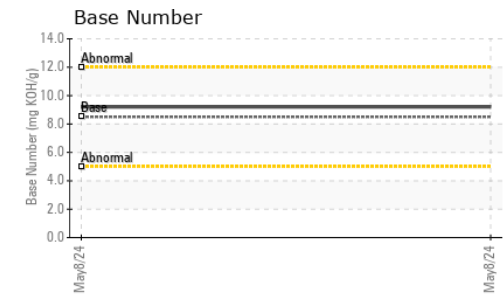
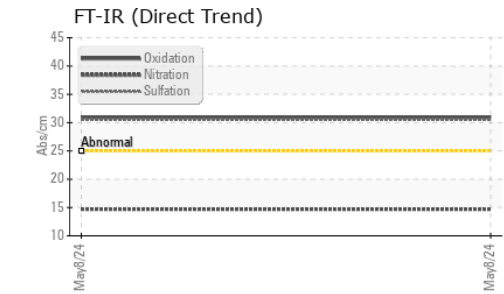
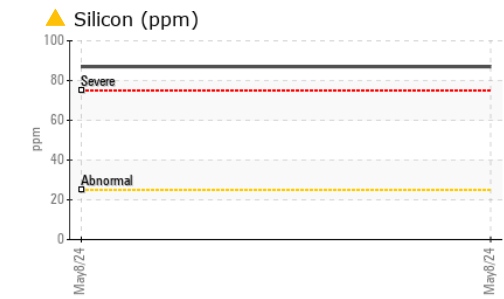
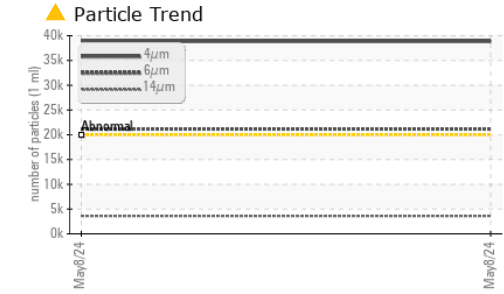
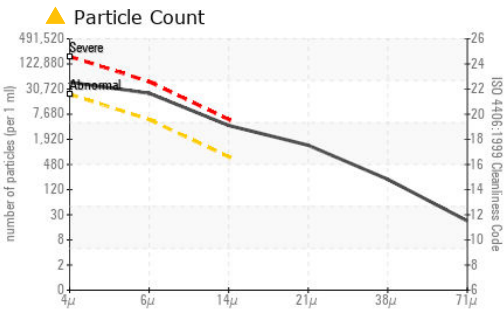
There is a moderate amount of particulates present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 87	---	---
Potassium	ppm	ASTM D5185m	>20	10	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	*ASTM D2982		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	14.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.5	---	---
Particles >4µm		ASTM D7647	>20000	▲ 38862	---	---
Particles >6µm		ASTM D7647	>5000	▲ 21170	---	---
Particles >14µm		ASTM D7647	>640	▲ 3603	---	---
Particles >21µm		ASTM D7647	>160	▲ 1214	---	---
Particles >38µm		ASTM D7647	>40	▲ 187	---	---
Particles >71µm		ASTM D7647	>10	▲ 19	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 22/22/19	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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	8	---	---
Boron	ppm	ASTM D5185m	250	115	---	---
Barium	ppm	ASTM D5185m	10	2	---	---
Molybdenum	ppm	ASTM D5185m	100	88	---	---
Manganese	ppm	ASTM D5185m		3	---	---
Magnesium	ppm	ASTM D5185m	450	992	---	---
Calcium	ppm	ASTM D5185m	3000	1713	---	---
Phosphorus	ppm	ASTM D5185m	1150	1363	---	---
Zinc	ppm	ASTM D5185m	1350	1582	---	---
Sulfur	ppm	ASTM D5185m	4250	3911	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	30.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.2	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	16.5	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0939349 **Received** : 10 May 2024
Lab Number : 06176639 **Tested** : 15 May 2024
Unique Number : 11022692 **Diagnosed** : 15 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: Glycol, PrtCount, TBN)

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)

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