



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Area
Contracting
Machine Id
4285 4285
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (3 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. 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		WC0939307	WC0740742	---
Sample Date		Client Info		16 May 2024	27 Sep 2022	---
Machine Age	hrs	Client Info		3008	1620	---
Oil Age	hrs	Client Info		492	843	---
Filter Age	hrs	Client Info		492	843	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	16	22	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>2	<1	0	---
Titanium	ppm	ASTM D5185m	>2	<1	0	---
Silver	ppm	ASTM D5185m	>2	<1	0	---
Aluminum	ppm	ASTM D5185m	>25	4	5	---
Lead	ppm	ASTM D5185m	>40	2	2	---
Copper	ppm	ASTM D5185m	>330	4	5	---
Tin	ppm	ASTM D5185m	>15	1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

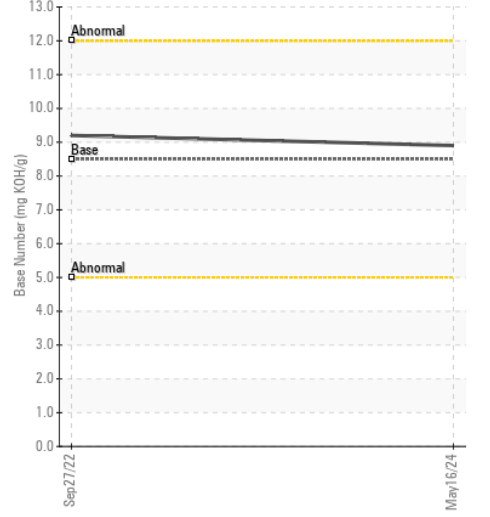
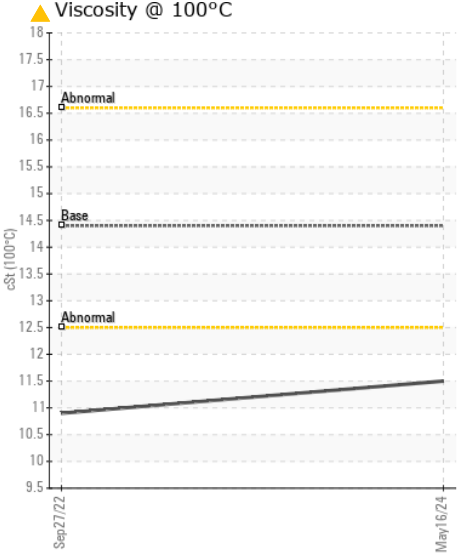
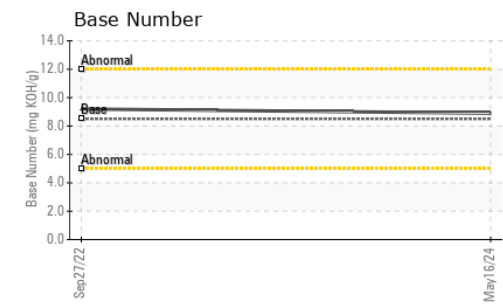
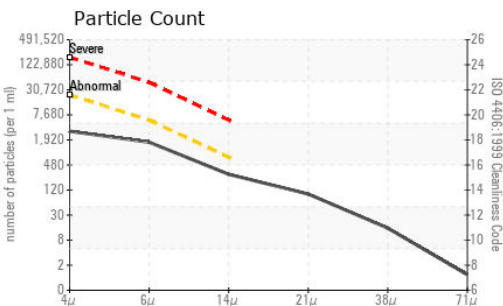
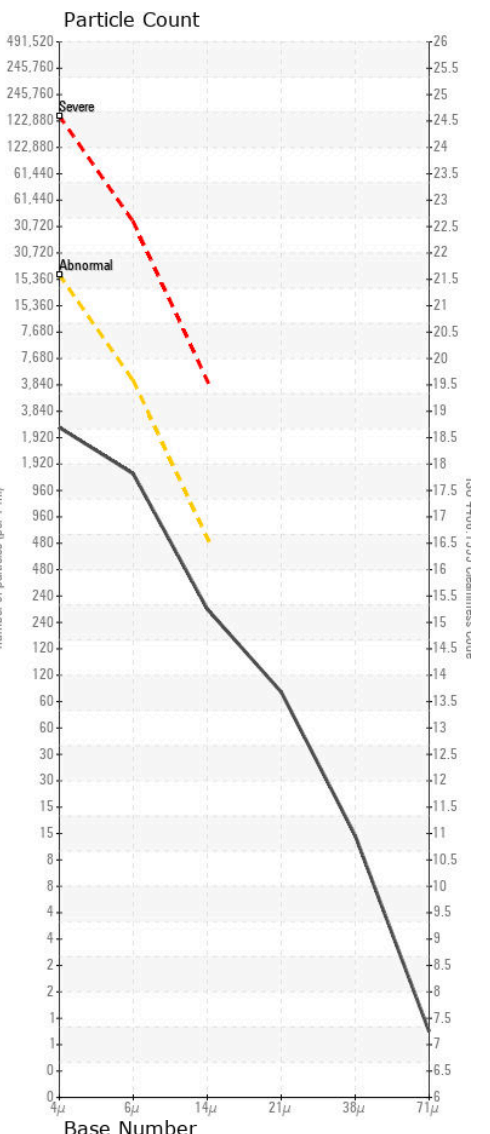
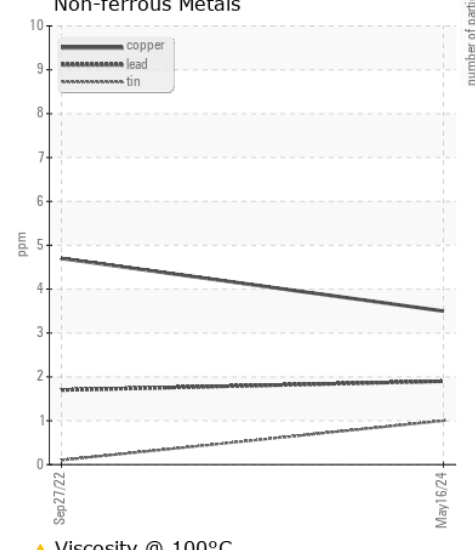
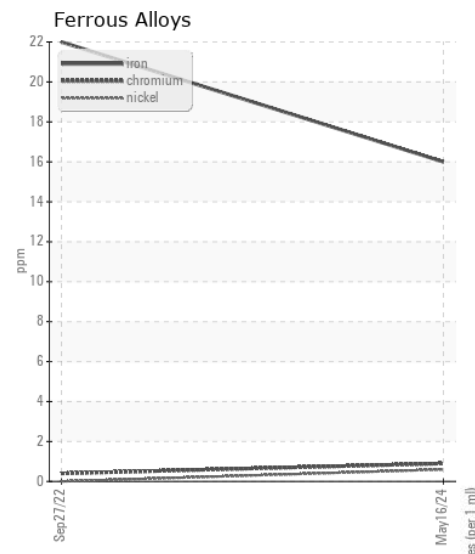
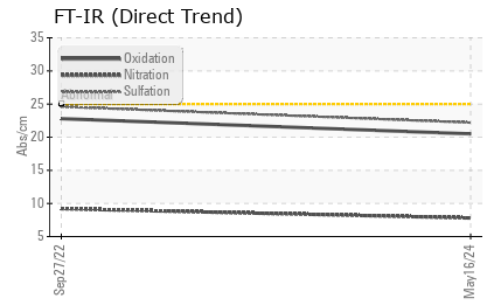
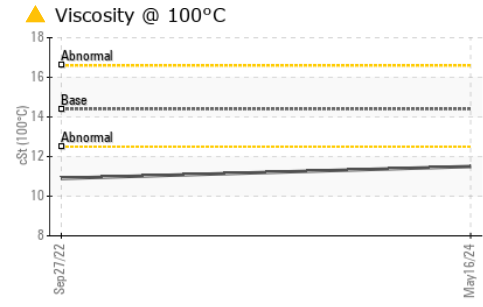
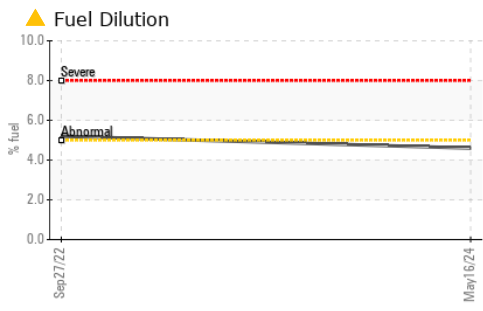
There is a moderate amount of fuel present in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>25	7	5	---
Potassium	ppm	ASTM D5185m	>20	2	1	---
Fuel	%	ASTM D3524	>5	▲ 4.6	▲ 5.2	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	7.8	9.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	24.6	---
Particles >4µm		ASTM D7647	>20000	2714	5531	---
Particles >6µm		ASTM D7647	>5000	1479	3013	---
Particles >14µm		ASTM D7647	>640	252	513	---
Particles >21µm		ASTM D7647	>160	85	173	---
Particles >38µm		ASTM D7647	>40	13	27	---
Particles >71µm		ASTM D7647	>10	1	3	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/18/15	20/19/16	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>158	3	<1	---
Boron	ppm	ASTM D5185m	250	58	46	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	44	39	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	450	488	450	---
Calcium	ppm	ASTM D5185m	3000	1604	1731	---
Phosphorus	ppm	ASTM D5185m	1150	759	730	---
Zinc	ppm	ASTM D5185m	1350	887	922	---
Sulfur	ppm	ASTM D5185m	4250	2603	2934	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.5	22.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.9	9.2	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.5	▲ 10.9	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0939307 **Received** : 21 May 2024
Lab Number : 06185996 **Tested** : 24 May 2024
Unique Number : 11042748 **Diagnosed** : 24 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PercentFuel, PrtCount, 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)