



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id
708 708
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0939282	WC0784639	---
Sample Date		Client Info		17 May 2024	18 Aug 2023	---
Machine Age	hrs	Client Info		839	760	---
Oil Age	hrs	Client Info		80	71	---
Filter Age	hrs	Client Info		80	71	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

Piston and cylinder wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 240	81	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>4	3	2	---
Titanium	ppm	ASTM D5185m		1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	▲ 86	37	---
Lead	ppm	ASTM D5185m	>40	1	<1	---
Copper	ppm	ASTM D5185m	>330	12	7	---
Tin	ppm	ASTM D5185m	>15	8	3	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

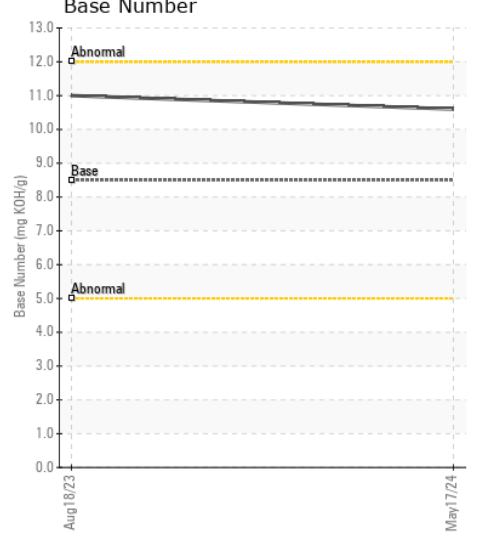
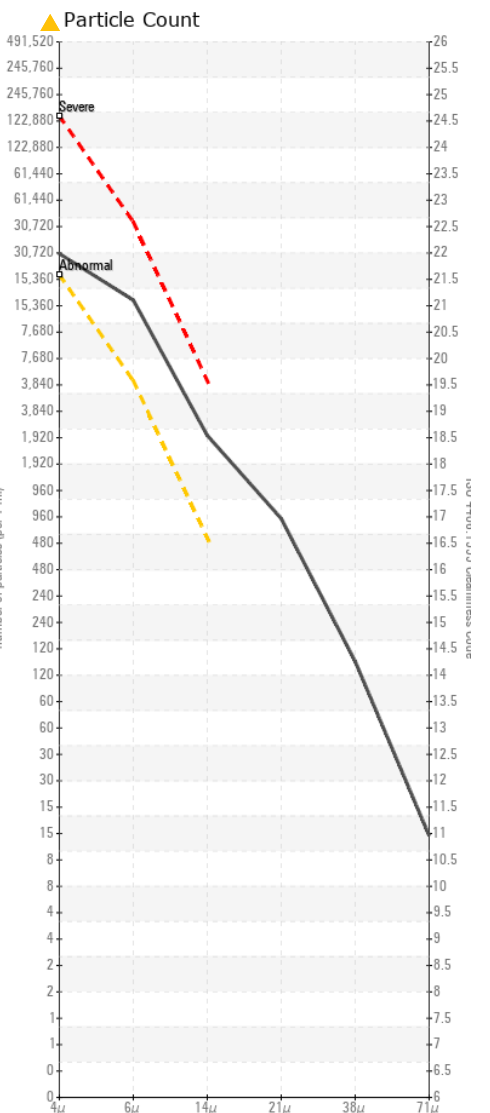
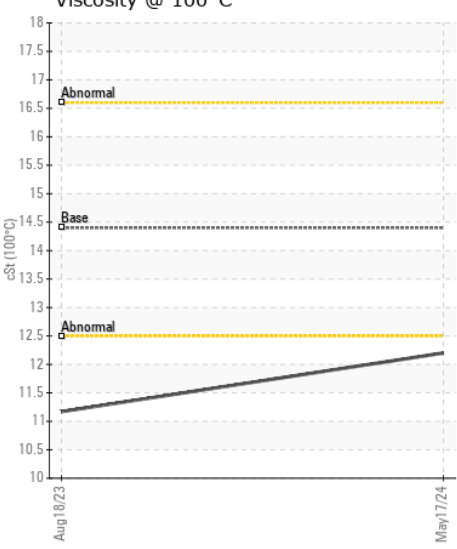
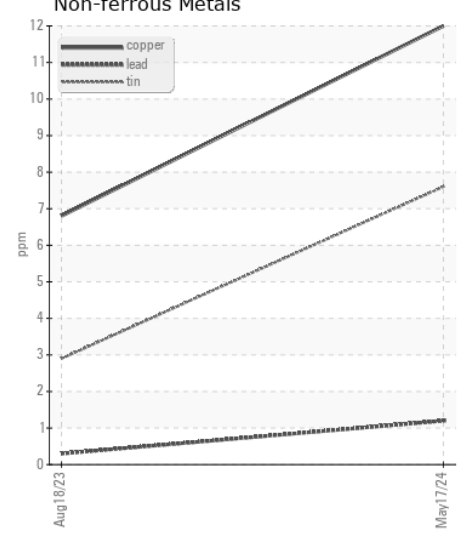
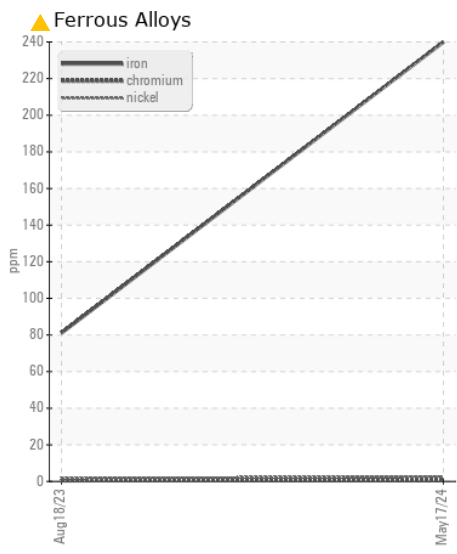
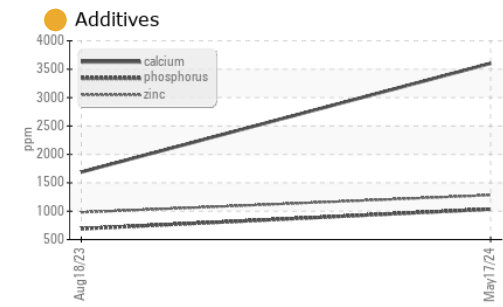
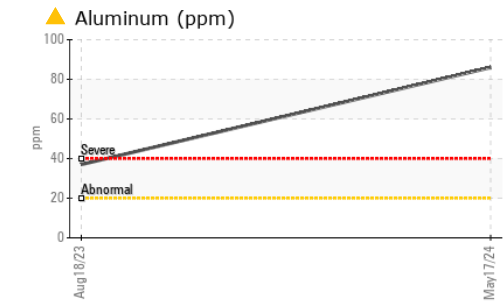
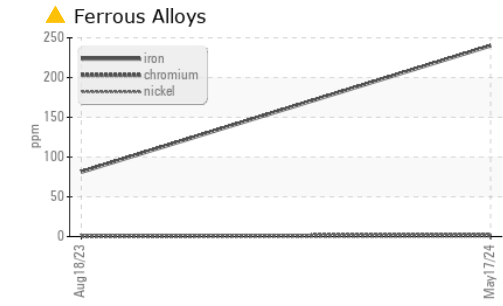
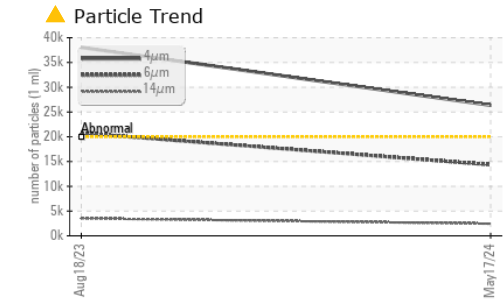
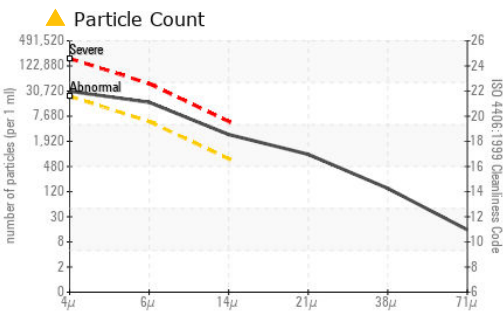
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	28	13	---
Potassium	ppm	ASTM D5185m	>20	6	4	---
Fuel	%	ASTM D3524	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	7.6	8.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	20.9	---
Particles >4µm		ASTM D7647	>20000	▲ 26360	● 38044	---
Particles >6µm		ASTM D7647	>5000	▲ 14360	▲ 20725	---
Particles >14µm		ASTM D7647	>640	▲ 2444	▲ 3527	---
Particles >21µm		ASTM D7647	>160	▲ 823	▲ 1188	---
Particles >38µm		ASTM D7647	>40	▲ 127	▲ 183	---
Particles >71µm		ASTM D7647	>10	▲ 13	▲ 19	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 22/21/18	▲ 22/22/19	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	▲ MODER	---
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

Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>158	32	48	---
Boron	ppm	ASTM D5185m	250	11	68	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	10	43	---
Manganese	ppm	ASTM D5185m		4	1	---
Magnesium	ppm	ASTM D5185m	450	● 121	532	---
Calcium	ppm	ASTM D5185m	3000	● 3603	1689	---
Phosphorus	ppm	ASTM D5185m	1150	1036	690	---
Zinc	ppm	ASTM D5185m	1350	1282	979	---
Sulfur	ppm	ASTM D5185m	4250	● 11527	2509	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	20.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.6	11.0	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.2	11.17	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0939282 **Received** : 21 May 2024
Lab Number : 06185992 **Tested** : 29 May 2024
Unique Number : 11042744 **Diagnosed** : 29 May 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, 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)