



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
20597
 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		WC0936309	---	---
Sample Date		Client Info		04 May 2024	---	---
Machine Age	mls	Client Info		24150	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ATTENTION	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	74	---	---
Chromium	ppm	ASTM D5185m	>20	2	---	---
Nickel	ppm	ASTM D5185m	>4	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	2	---	---
Aluminum	ppm	ASTM D5185m	>20	28	---	---
Lead	ppm	ASTM D5185m	>40	3	---	---
Copper	ppm	ASTM D5185m	>330	35	---	---
Tin	ppm	ASTM D5185m	>15	4	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

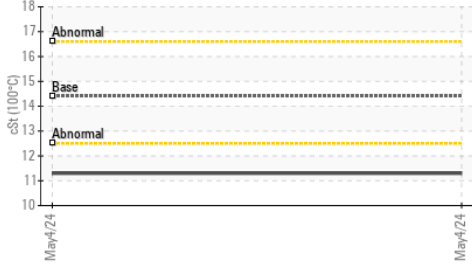
Silicon	ppm	ASTM D5185m	>25	51	---	---
Potassium	ppm	ASTM D5185m	>20	112	---	---
Fuel	%	ASTM D3524	>5	0.4	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	---	---
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

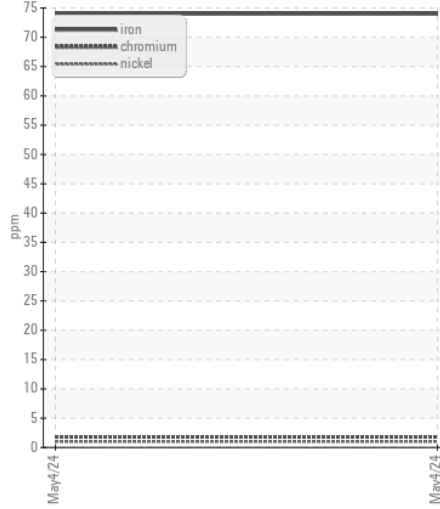
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	5	---	---
Boron	ppm	ASTM D5185m	250	123	---	---
Barium	ppm	ASTM D5185m	10	4	---	---
Molybdenum	ppm	ASTM D5185m	100	91	---	---
Manganese	ppm	ASTM D5185m		7	---	---
Magnesium	ppm	ASTM D5185m	450	645	---	---
Calcium	ppm	ASTM D5185m	3000	2478	---	---
Phosphorus	ppm	ASTM D5185m	1150	1315	---	---
Zinc	ppm	ASTM D5185m	1350	1776	---	---
Sulfur	ppm	ASTM D5185m	4250	4608	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.1	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	11.3	---	---

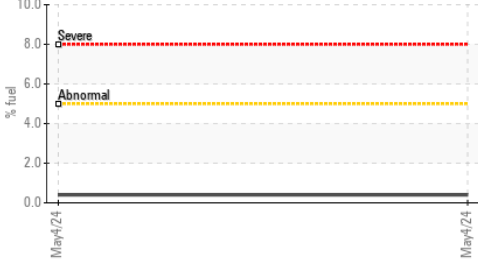
● Viscosity @ 100°C



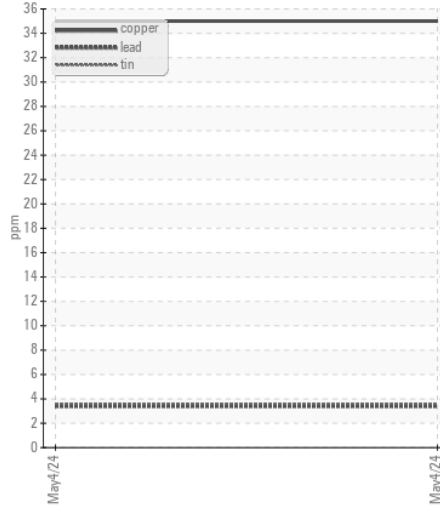
Ferrous Alloys



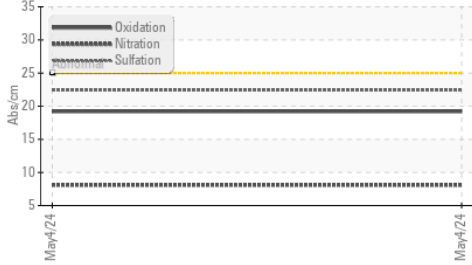
Fuel Dilution



Non-ferrous Metals



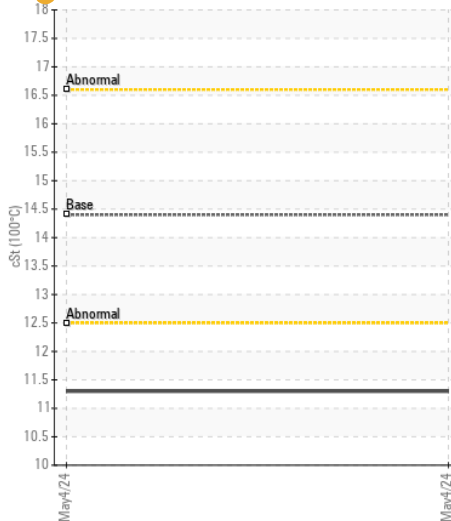
FT-IR (Direct Trend)



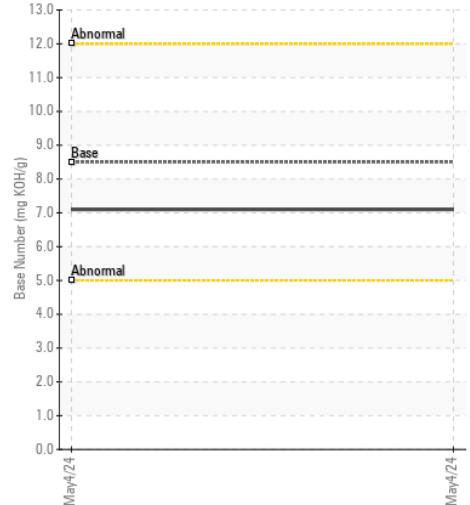
Base Number



● Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0936309

Lab Number : 06190043

Unique Number : 11046795

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 23 May 2024

Tested : 30 May 2024

Diagnosed : 30 May 2024 - Jonathan Hester

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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)