



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
207
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		DC0032725	DC0025116	---
Sample Date		Client Info		12 Dec 2023	06 Dec 2022	---
Machine Age	mls	Client Info		344542	334220	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Iron	ppm	ASTM D5185m	>100	49	53	---
Chromium	ppm	ASTM D5185m	>20	<1	2	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	1	3	---
Lead	ppm	ASTM D5185m	>40	7	4	---
Copper	ppm	ASTM D5185m	>330	▲ 505	108	---
Tin	ppm	ASTM D5185m	>15	1	1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

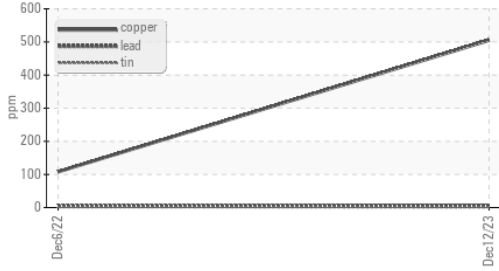
Silicon	ppm	ASTM D5185m	>25	5	7	---
Potassium	ppm	ASTM D5185m	>20	<1	0	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol	%	*ASTM D2982		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	8.8	11.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	25.1	---
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

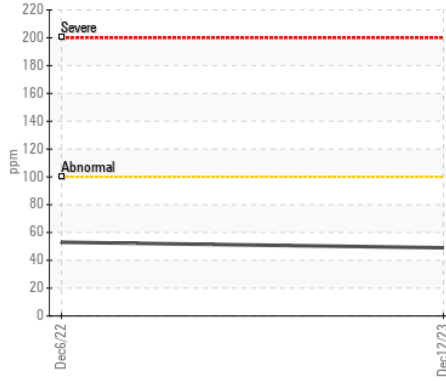
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>158	3	7	---
Boron	ppm	ASTM D5185m	250	4	27	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	12	43	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	450	151	517	---
Calcium	ppm	ASTM D5185m	3000	2052	1578	---
Phosphorus	ppm	ASTM D5185m	1150	837	717	---
Zinc	ppm	ASTM D5185m	1350	1036	882	---
Sulfur	ppm	ASTM D5185m	4250	2968	2478	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	25.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.5	8.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.0	12.8	---

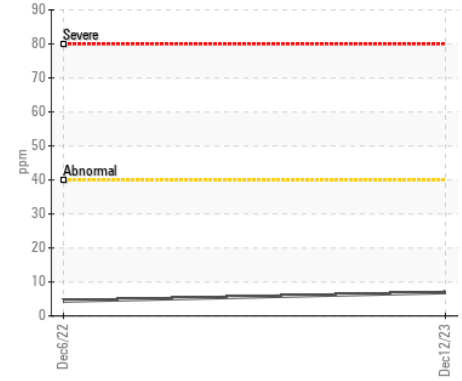
▲ Non-ferrous Metals



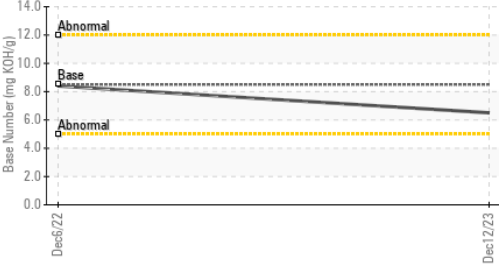
Iron (ppm)



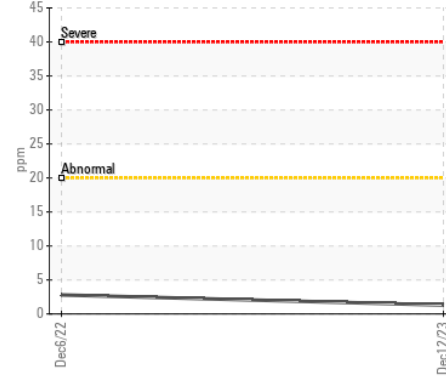
Lead (ppm)



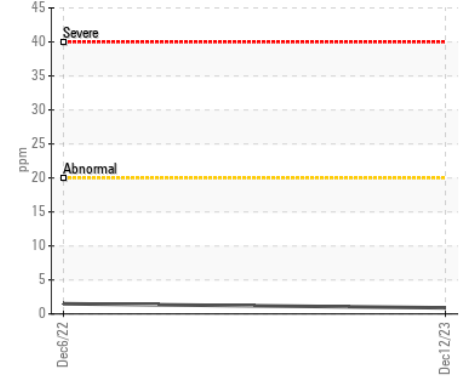
Base Number



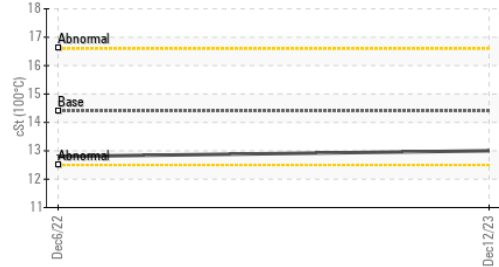
Aluminum (ppm)



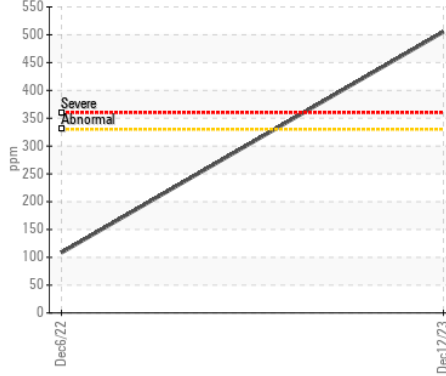
Chromium (ppm)



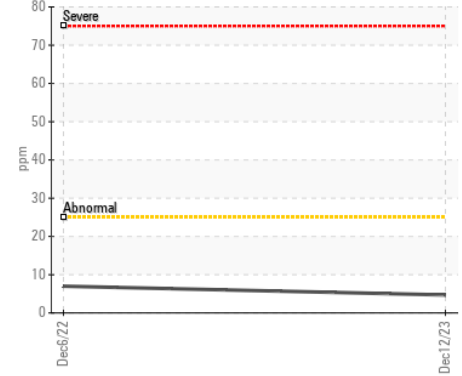
Viscosity @ 100°C



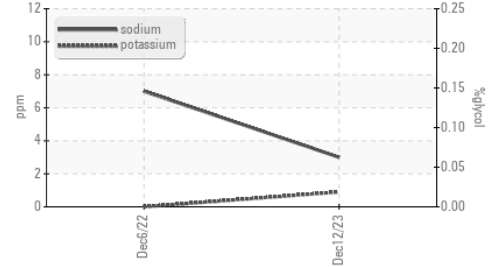
▲ Copper (ppm)



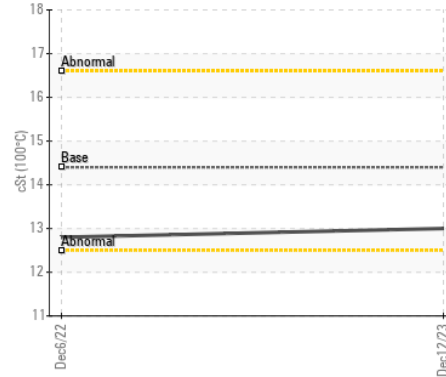
Silicon (ppm)



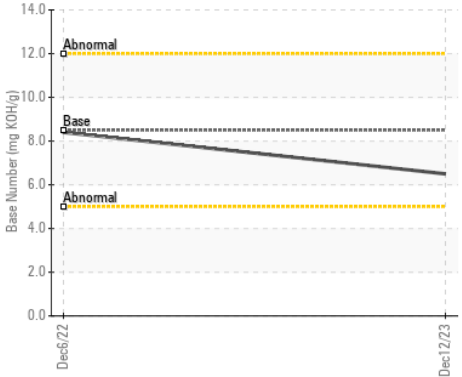
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0032725 **Received** : 10 Jan 2024
Lab Number : 06056486 **Diagnosed** : 12 Jan 2024
Unique Number : 10822435 **Diagnostician** : Jonathan Hester
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

FRANCIS O DAY
 14900 SOUTHLAWN LN
 ROCKVILLE, MD
 US 20850
 Contact: JAMIE FORESTER

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)

T:
F: