



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
8777
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NL0002039	NL0001843	---
Sample Date		Client Info		24 Apr 2024	09 Feb 2024	---
Machine Age	mls	Client Info		78569	39406	---
Oil Age	mls	Client Info		45000	40000	---
Filter Age	mls	Client Info		45000	40000	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	33	53	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	1	0	---
Aluminum	ppm	ASTM D5185m	>20	11	26	---
Lead	ppm	ASTM D5185m	>40	<1	0	---
Copper	ppm	ASTM D5185m	>330	62	115	---
Tin	ppm	ASTM D5185m	>15	3	6	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

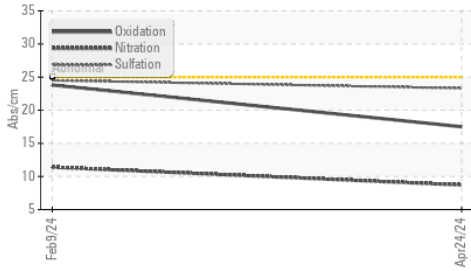
Silicon	ppm	ASTM D5185m	>25	15	▲ 69	---
Potassium	ppm	ASTM D5185m	>20	27	66	---
Fuel		WC Method	>5	<1.0	0.4	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.7	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	8.7	11.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	24.5	---
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

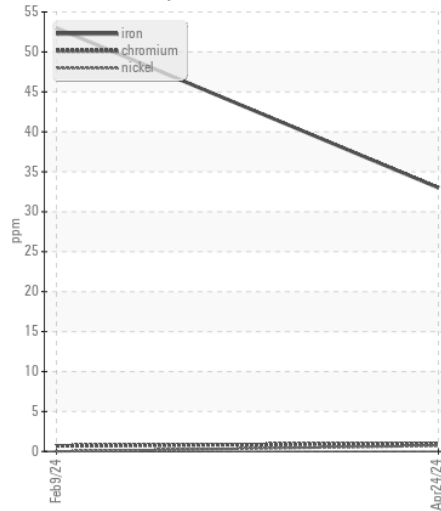
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	1	4	---
Boron	ppm	ASTM D5185m	250	77	98	---
Barium	ppm	ASTM D5185m	10	1	<1	---
Molybdenum	ppm	ASTM D5185m	100	88	119	---
Manganese	ppm	ASTM D5185m		2	4	---
Magnesium	ppm	ASTM D5185m	450	473	716	---
Calcium	ppm	ASTM D5185m	3000	1387	1536	---
Phosphorus	ppm	ASTM D5185m	1150	977	722	---
Zinc	ppm	ASTM D5185m	1350	1201	853	---
Sulfur	ppm	ASTM D5185m	4250	2667	2620	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	23.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.5	6.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.6	● 10.1	---

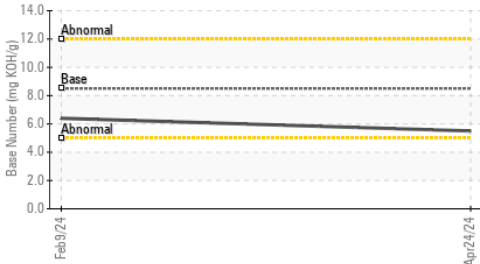
FT-IR (Direct Trend)



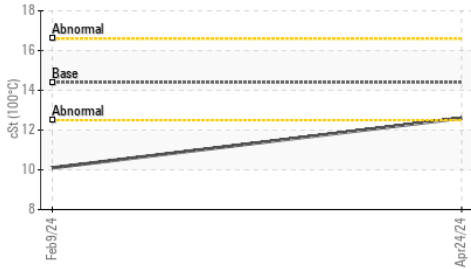
Ferrous Alloys



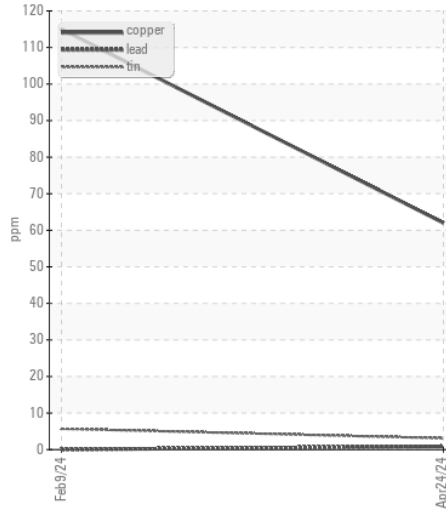
Base Number



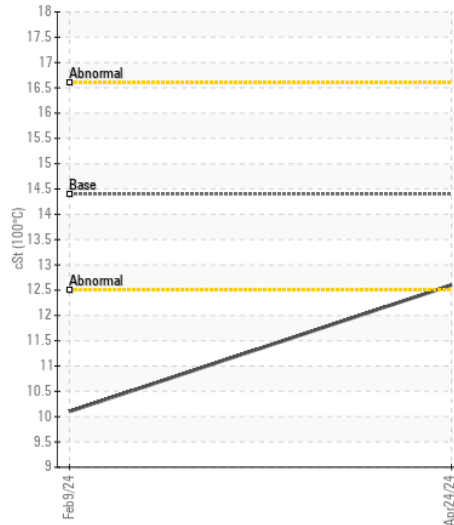
Viscosity @ 100°C



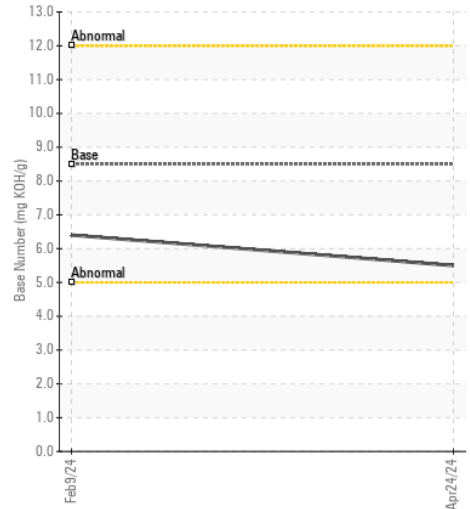
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0002039
Lab Number : 06217840
Unique Number : 11096037
Test Package : FLEET

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

FOX & JAMES NATIONALEASE - Manassas
 1145 INDUSTRIAL RD
 MANASSAS, VA
 US 20109
 Contact: JOSH ROLAND
 j.roland@foxandjames.com
 T: (571)379-5296
 F:

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)