



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Area
[3186660]
 Machine Id
2137384
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0034219	DC0025602	DC0017050
Sample Date		Client Info		21 Feb 2024	09 Feb 2023	01 Feb 2022
Machine Age	hrs	Client Info		0	655	553
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

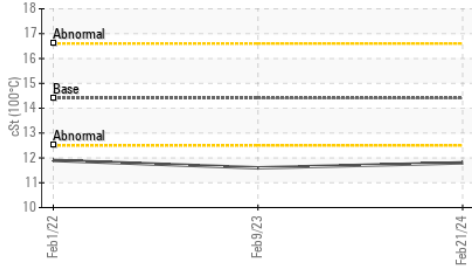
Silicon	ppm	ASTM D5185m	>25	5	4	4
Potassium	ppm	ASTM D5185m	>20	0	1	<1
Fuel	%	ASTM D3524	>5	▲ 2.9	▲ 4.2	▲ 5.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.9	5.9	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.1	16.3	18.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

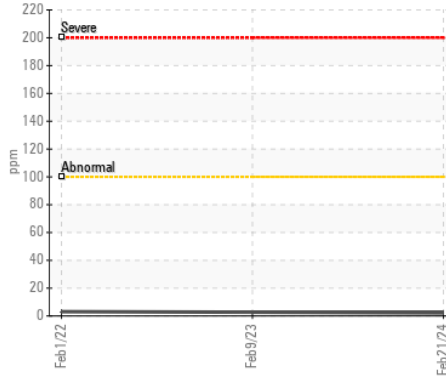
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	1	1	2
Boron	ppm	ASTM D5185m	250	6	12	25
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	6	16	46
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	108	285	864
Calcium	ppm	ASTM D5185m	3000	2001	1990	1158
Phosphorus	ppm	ASTM D5185m	1150	898	902	1056
Zinc	ppm	ASTM D5185m	1350	1031	1122	1207
Sulfur	ppm	ASTM D5185m	4250	3457	4013	2986
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.6	11.0	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.6	8.5	10.4
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.8	▲ 11.6	▲ 11.9

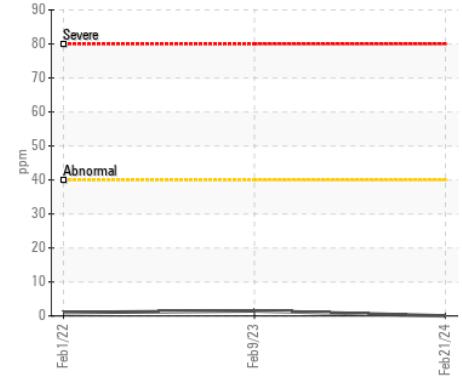
▲ Viscosity @ 100°C



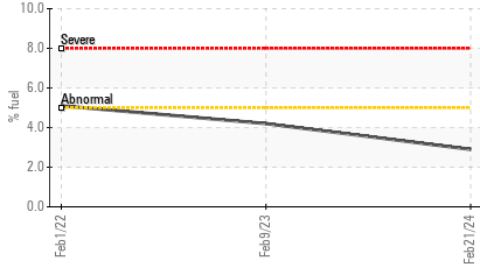
Iron (ppm)



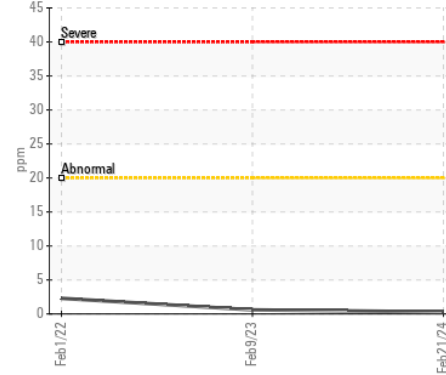
Lead (ppm)



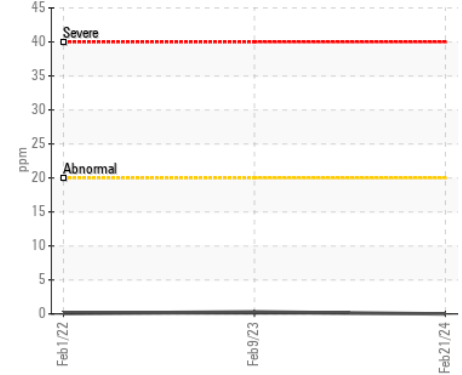
▲ Fuel Dilution



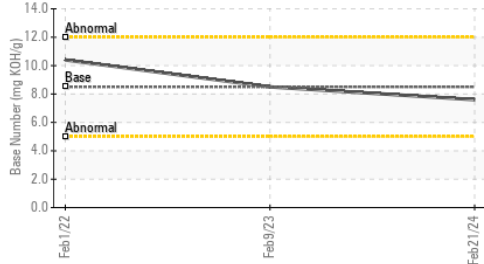
Aluminum (ppm)



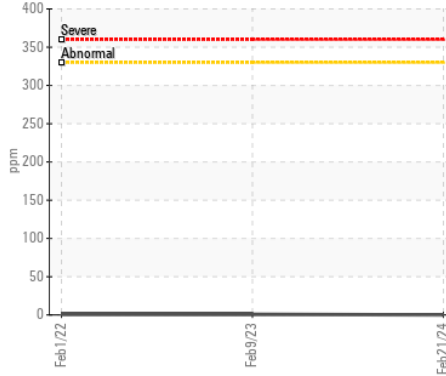
Chromium (ppm)



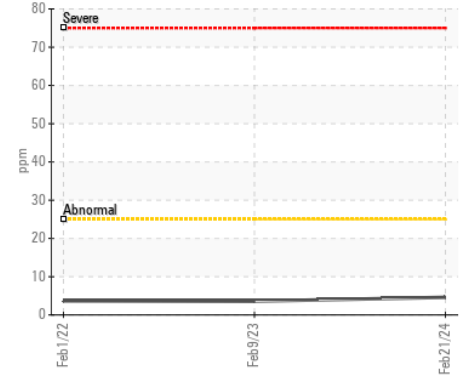
Base Number



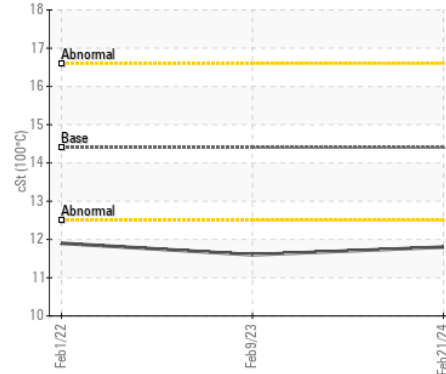
Copper (ppm)



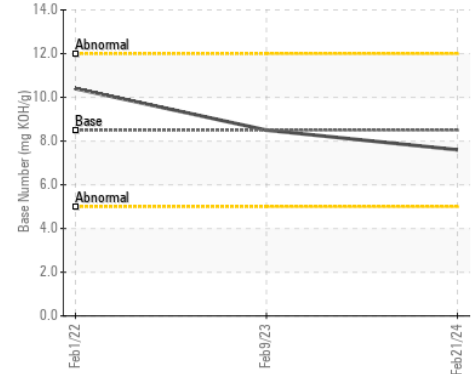
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0034219 **Received** : 22 Feb 2024
Lab Number : 06097540 **Tested** : 27 Feb 2024
Unique Number : 10890393 **Diagnosed** : 27 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel, TBN)

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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)