



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
GM Seattle Off Road Shop
Machine Id
[GM Seattle Off Road Shop] 24-481
Component
Diesel Engine
Fluid
SHELL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0001012	PE12290999	PE12291394
Sample Date		Client Info		06 Dec 2023	04 Jan 2022	12 Feb 2021
Machine Age	hrs	Client Info		2769	2604	2487
Oil Age	hrs	Client Info		282	250	455
Filter Age	hrs	Client Info		282	---	---
Oil Changed		Client Info		Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	MARGINAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	23	20	41
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>2	0	1	1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>25	2	1	4
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	3	2	5
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

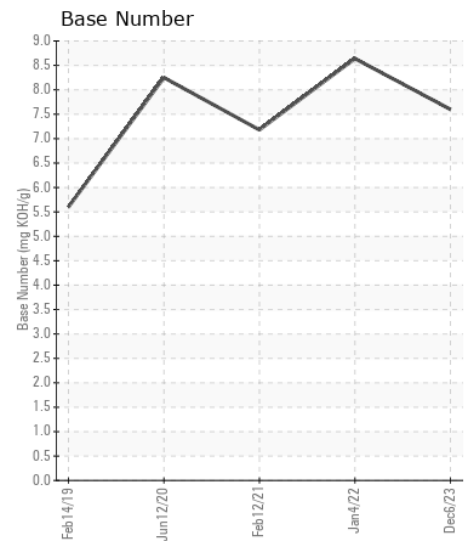
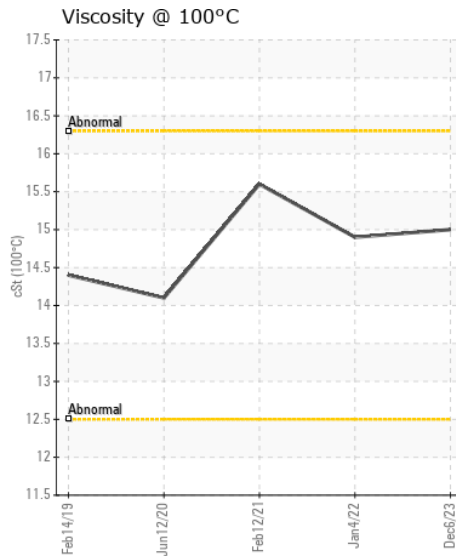
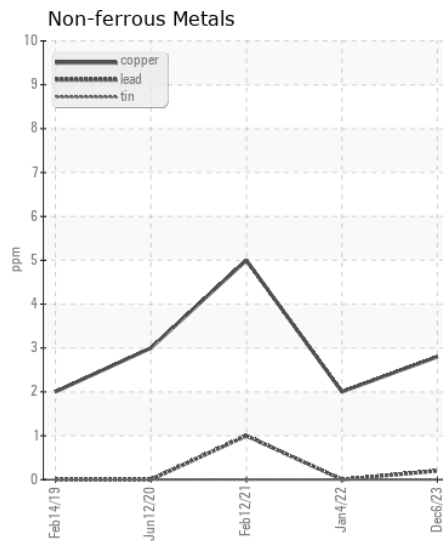
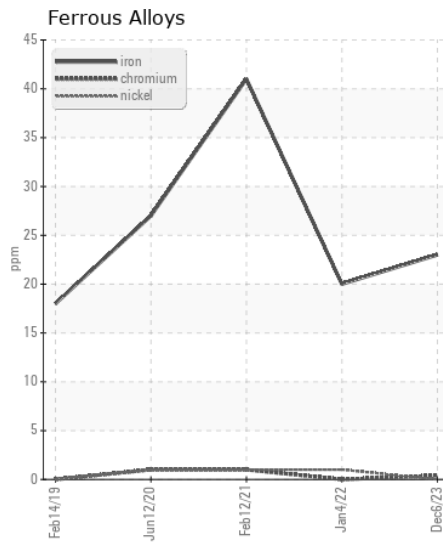
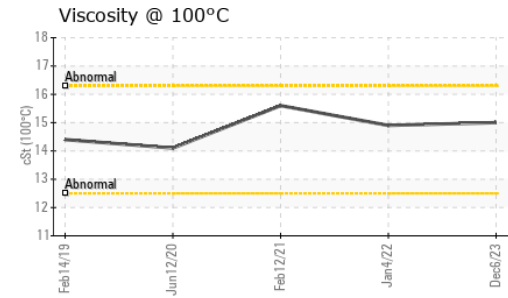
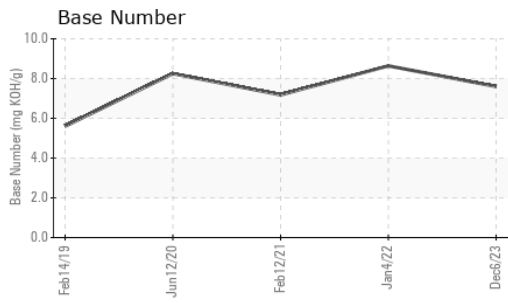
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	13	▲ 16	11
Potassium	ppm	ASTM D5185m	>20	<1	0	10
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.8
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9	14
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	---	---
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 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	>150	2	1	8
Boron	ppm	ASTM D5185m		97	22	62
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		29	16	29
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		266	191	668
Calcium	ppm	ASTM D5185m		2271	2668	2104
Phosphorus	ppm	ASTM D5185m		1084	1155	845
Zinc	ppm	ASTM D5185m		1248	1306	1107
Sulfur	ppm	ASTM D5185m		3747	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	13	21
Base Number (BN)	mg KOH/g	ASTM D2896		7.6	8.64	7.18
Visc @ 100°C	cSt	ASTM D445		15.0	14.9	15.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0001012 **Received** : 12 Jan 2024
Lab Number : 06059995 **Diagnosed** : 16 Jan 2024
Unique Number : 10831377 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, 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)