



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
GM Seattle Off Road Shop
Machine Id
[GM Seattle Off Road Shop] 28-224
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		PE0000594	PE0000363	PE12291196
Sample Date		Client Info		30 Nov 2023	17 Nov 2022	13 Jul 2021
Machine Age	hrs	Client Info		13268	11868	10623
Oil Age	hrs	Client Info		1400	840	719
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	35	15	15
Chromium	ppm	ASTM D5185m	>20	1	1	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	1	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>25	3	3	2
Lead	ppm	ASTM D5185m	>40	2	<1	1
Copper	ppm	ASTM D5185m	>330	7	<1	1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

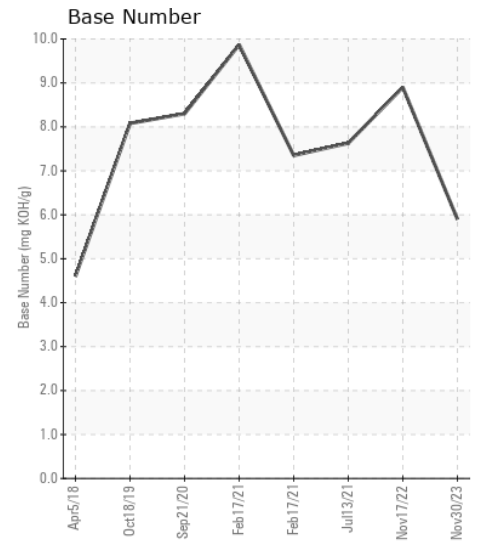
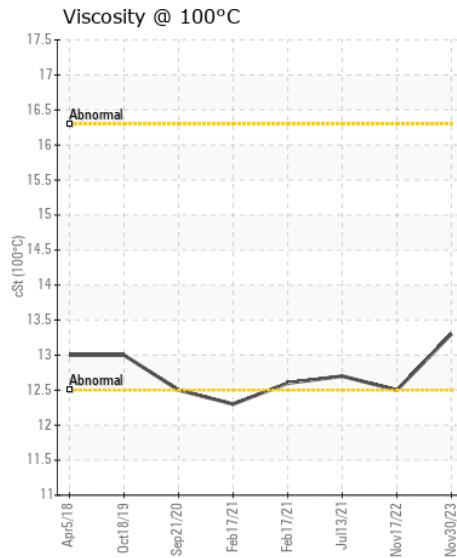
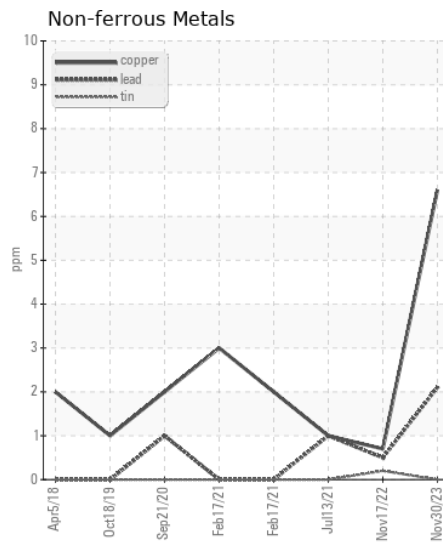
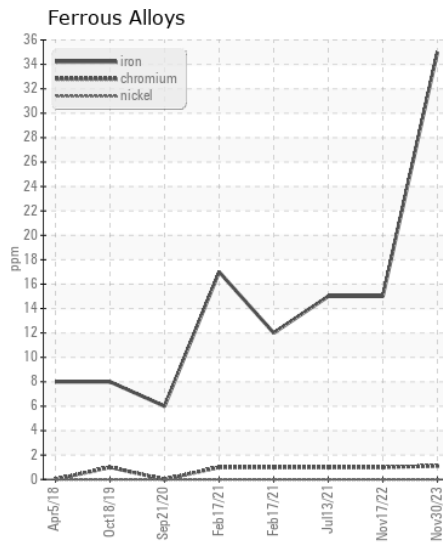
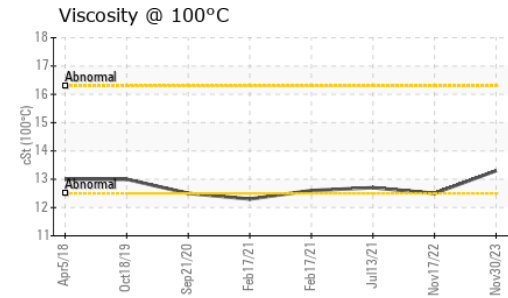
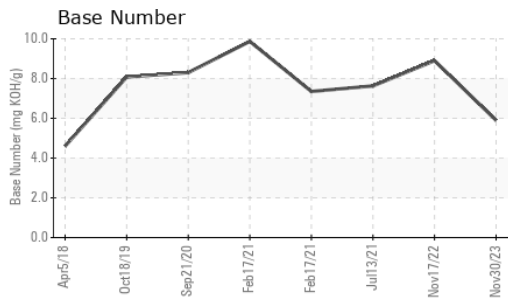
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	5	4
Potassium	ppm	ASTM D5185m	>20	0	1	1
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	1.4	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.9	8.5	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	20.5	---
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	>150	2	1	2
Boron	ppm	ASTM D5185m		73	42	40
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		60	32	38
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		168	535	556
Calcium	ppm	ASTM D5185m		2116	1670	1652
Phosphorus	ppm	ASTM D5185m		1061	972	975
Zinc	ppm	ASTM D5185m		1230	1170	1168
Sulfur	ppm	ASTM D5185m		3380	3992	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	13.3	14
Base Number (BN)	mg KOH/g	ASTM D2896		5.9	8.9	7.63
Visc @ 100°C	cSt	ASTM D445		13.3	12.5	12.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0000594 **Received** : 12 Jan 2024
Lab Number : 06059998 **Diagnosed** : 16 Jan 2024
Unique Number : 10831380 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

Gary Merlino Construction - Off Road Shop
 9125 10TH AVE SOUTH
 SEATTLE, WA
 US 98108
 Contact: Jesse Patterson
 oilsamples@gmccinc.com
 T: 1(866)292-1303

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)

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