

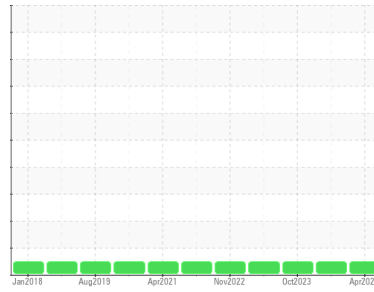


OIL ANALYSIS REPORT



Area
GM Seattle Off Road Shop
 Machine Id
[GM Seattle Off Road Shop] 24-587
 Component
Diesel Engine
 Fluid
SHELL 15W40 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PE0003076	PE0002128	PE0001993
Sample Date	Client Info			10 Apr 2024	12 Jan 2024	17 Oct 2023
Machine Age	hrs	Client Info		4190	4122	4078
Oil Age	hrs	Client Info		365	298	254
Oil Changed	Client Info			Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3	6	4
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	3	4	3
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

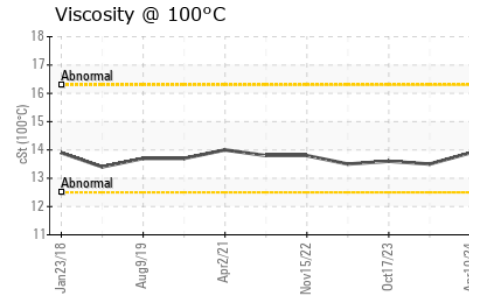
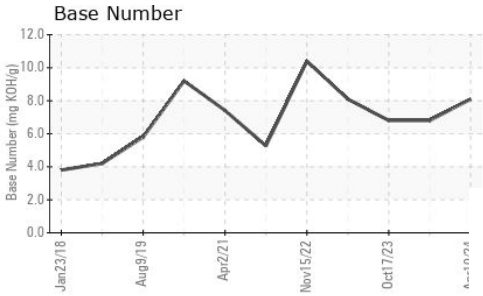
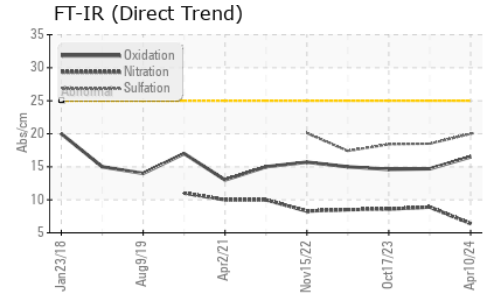
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		186	81	81
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		11	69	68
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		38	117	110
Calcium	ppm	ASTM D5185m		2029	2066	1895
Phosphorus	ppm	ASTM D5185m		1031	1006	916
Zinc	ppm	ASTM D5185m		1119	1146	1123
Sulfur	ppm	ASTM D5185m		3754	3528	3359

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	3	3
Sodium	ppm	ASTM D5185m	>150	<1	2	2
Potassium	ppm	ASTM D5185m	>20	8	2	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.4	8.9	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	18.5	18.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	14.7	14.6
Base Number (BN)	mg KOH/g	ASTM D2896		8.1	6.8	6.8

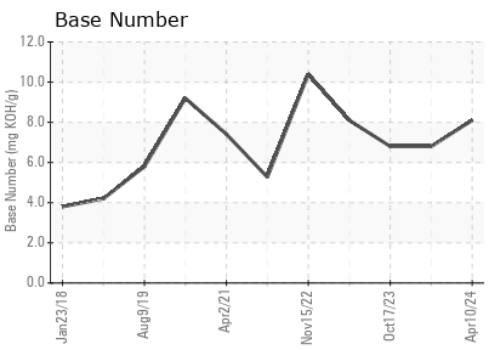
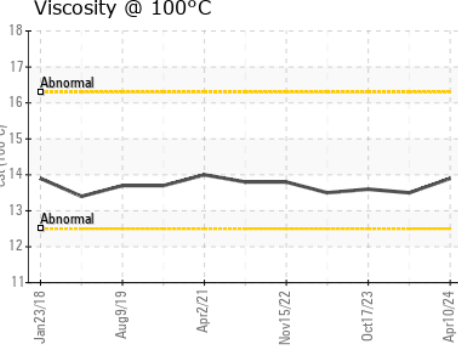
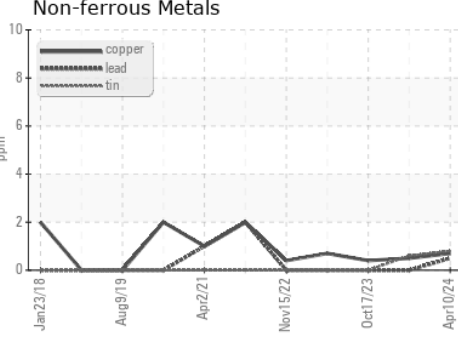
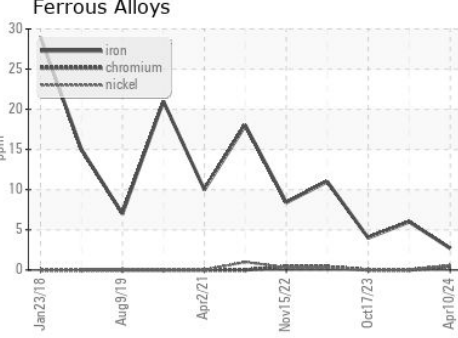
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.9	13.5	13.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003076 **Received** : 22 Apr 2024
Lab Number : **06156717** **Tested** : 23 Apr 2024
Unique Number : 10992140 **Diagnosed** : 24 Apr 2024 - Sean Felton
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)