

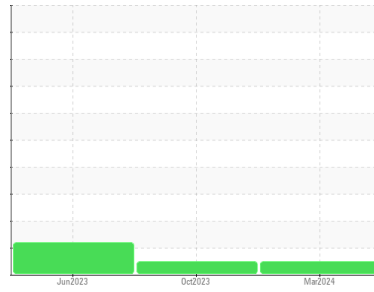


OIL ANALYSIS REPORT



Area
GM SEATTLE OFF ROAD SHOP
 Machine Id
[GM SEATTLE OFF ROAD SHOP] 24-752
 Component
Diesel Engine
 Fluid
SHELL 15W40 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PE0003402	PE0001990	PE0002199
Sample Date	Client Info		20 Mar 2024	17 Oct 2023	28 Jun 2023
Machine Age	hrs	Client Info	1010	805	502
Oil Age	hrs	Client Info	507	303	502
Oil Changed	Client Info		Changed	Not Changd	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	▲ 2.0
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	13	6	28
Chromium	ppm	ASTM D5185m >20	<1	0	<1
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	2	4
Lead	ppm	ASTM D5185m >40	1	0	0
Copper	ppm	ASTM D5185m >330	4	2	6
Tin	ppm	ASTM D5185m >15	<1	0	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	60	66	43
Barium	ppm	ASTM D5185m	0	0	<1
Molybdenum	ppm	ASTM D5185m	62	56	42
Manganese	ppm	ASTM D5185m	1	<1	5
Magnesium	ppm	ASTM D5185m	165	157	431
Calcium	ppm	ASTM D5185m	1833	1758	1686
Phosphorus	ppm	ASTM D5185m	975	872	879
Zinc	ppm	ASTM D5185m	1099	1077	1104
Sulfur	ppm	ASTM D5185m	3508	3201	3669

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	5	16
Sodium	ppm	ASTM D5185m >150	0	1	<1
Potassium	ppm	ASTM D5185m >20	2	3	<1

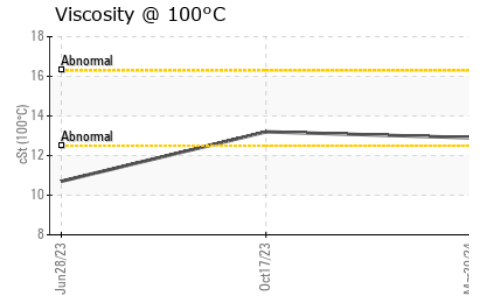
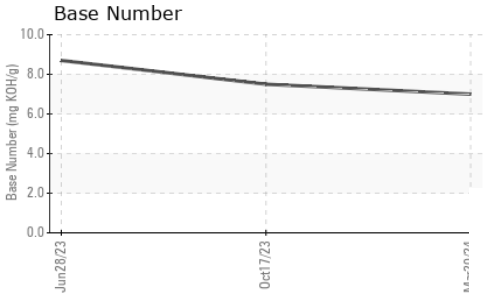
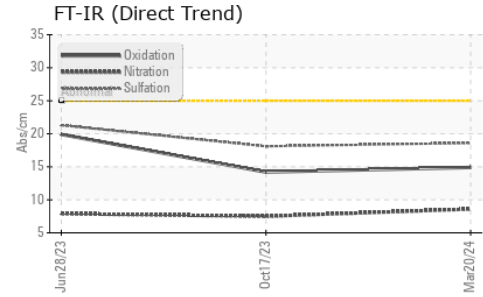
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.6	7.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.6	18.1	21.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.9	14.2	19.9
Base Number (BN)	mg KOH/g	ASTM D2896	7.0	7.5	8.7

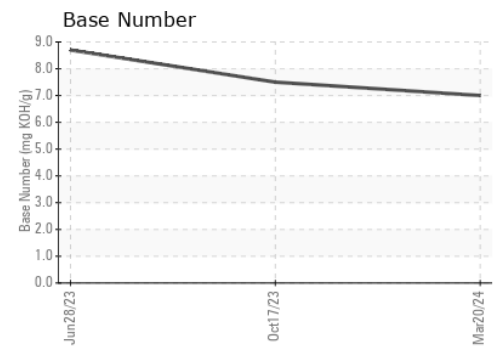
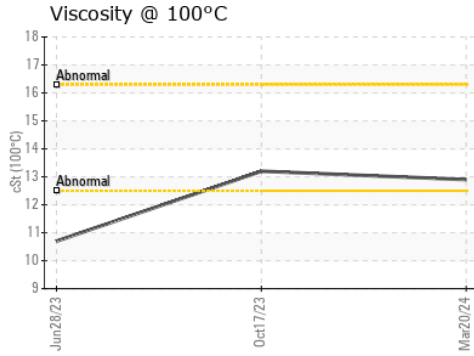
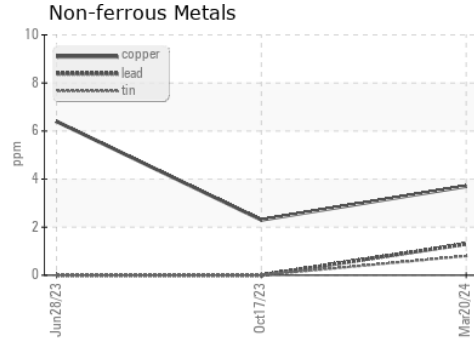
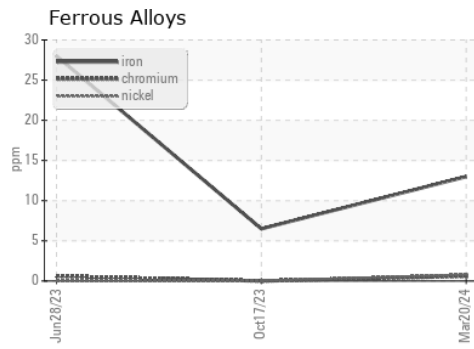
OIL ANALYSIS REPORT



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	12.9	13.2	▲ 10.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003402 **Received** : 22 Apr 2024
Lab Number : 06156720 **Tested** : 23 Apr 2024
Unique Number : 10992143 **Diagnosed** : 24 Apr 2024 - Sean Felton
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)