



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**GM Seattle Off Road Shop**  
Machine Id  
**[GM Seattle Off Road Shop] 24-590**  
Component  
**Hydraulic System**  
Fluid  
**CAT HYDO (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment:  
Top Up Amount: 2 gallons )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PE0003087</b>	PE12291043	PE12291709
Sample Date		Client Info		<b>04 Jun 2024</b>	06 Dec 2021	23 Jan 2020
Machine Age	hrs	Client Info		<b>3235</b>	1320	4
Oil Age	hrs	Client Info		<b>3235</b>	1320	4
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Oil Added</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	<b>8</b>	6	1
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	0
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	1	0
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	2	0
Copper	ppm	ASTM D5185m	>75	<b>7</b>	8	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

## CONTAMINATION

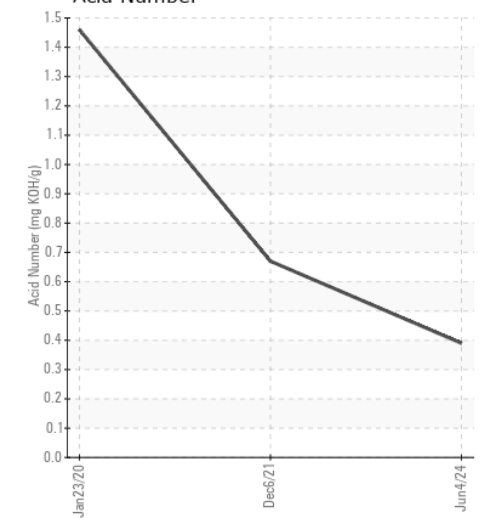
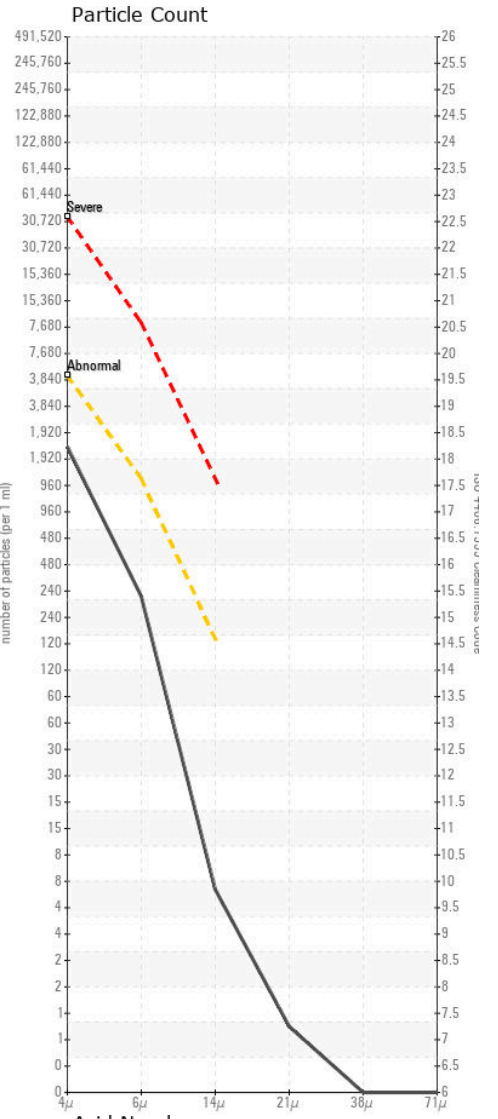
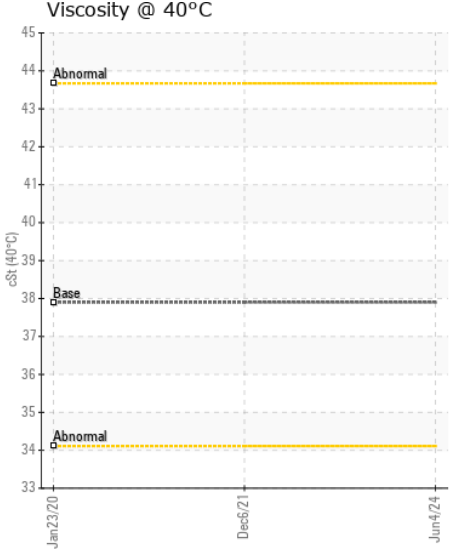
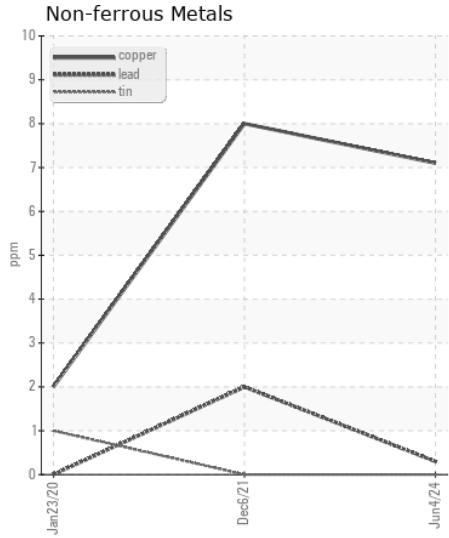
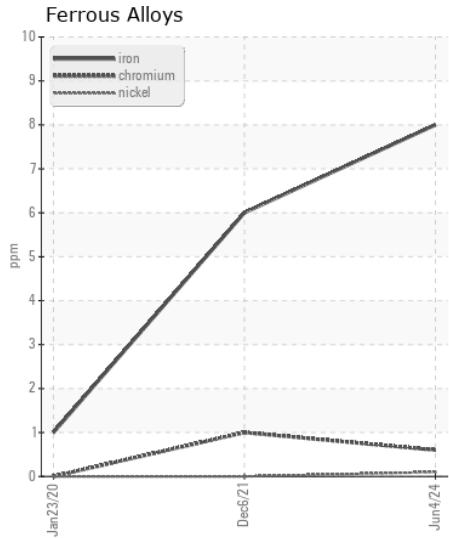
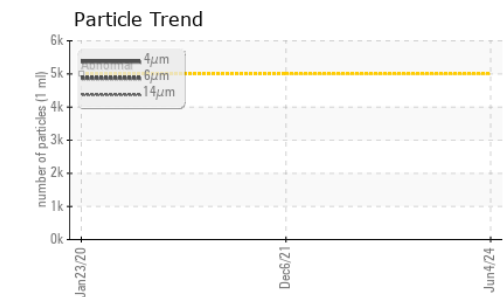
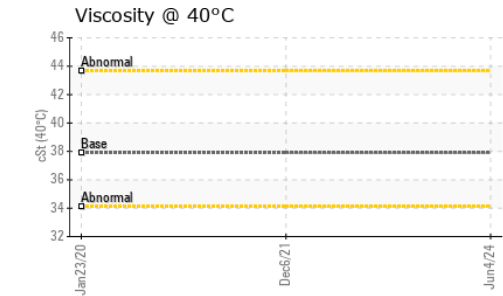
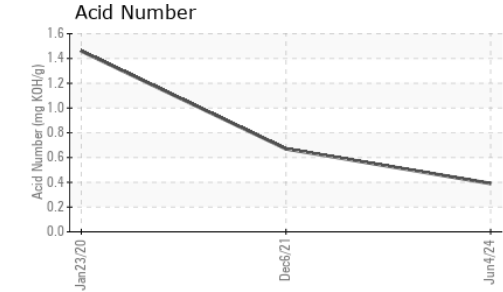
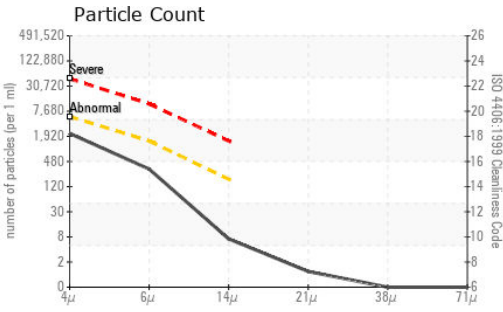
There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	2	0
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>1973</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>278</b>	---	---
Particles >14µm		ASTM D7647	>160	<b>6</b>	---	---
Particles >21µm		ASTM D7647	>40	<b>1</b>	---	---
Particles >38µm		ASTM D7647	>10	<b>0</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>18/15/10</b>	18/16/12	18/17/14
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	---	---

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the fluid is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>0</b>	4	2
Boron	ppm	ASTM D5185m		<b>0</b>	1	0
Barium	ppm	ASTM D5185m		<b>2</b>	2	3
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>4</b>	3	2
Calcium	ppm	ASTM D5185m		<b>244</b>	348	154
Phosphorus	ppm	ASTM D5185m	1100	<b>522</b>	688	706
Zinc	ppm	ASTM D5185m	1210	<b>665</b>	797	954
Sulfur	ppm	ASTM D5185m		<b>1640</b>	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.39</b>	0.67	1.46
Visc @ 40°C	cSt	ASTM D445	37.9	<b>42.3</b>	---	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0003087 **Received** : 14 Jun 2024  
**Lab Number** : 06210681 **Tested** : 18 Jun 2024  
**Unique Number** : 11083545 **Diagnosed** : 18 Jun 2024 - Angela Borella  
**Test Package** : CONST ( Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN )  
 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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