



# 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] 28-232**  
Component  
**Transmission (Auto)**  
Fluid  
**CAT TDTO 30W (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PE0003030</b>	PE0003231	PE12292244
Sample Date		Client Info		<b>16 May 2024</b>	26 Jan 2024	01 Oct 2018
Machine Age	hrs	Client Info		<b>2780</b>	2606	0
Oil Age	hrs	Client Info		<b>2780</b>	1548	0
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	<b>21</b>	17	---
Iron	ppm	ASTM D5185m	>160	<b>23</b>	8	1
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>50	<b>2</b>	2	0
Lead	ppm	ASTM D5185m	>50	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m	>225	<b>&lt;1</b>	8	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

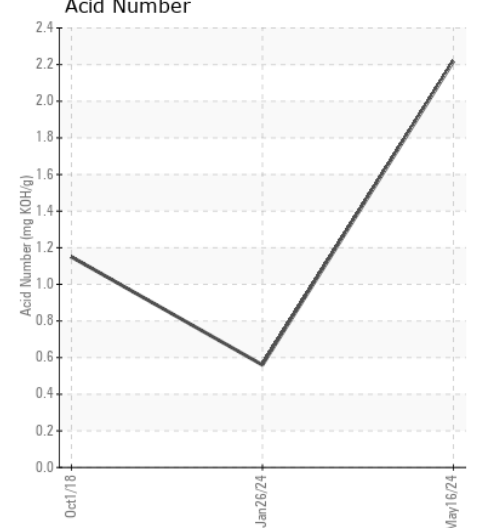
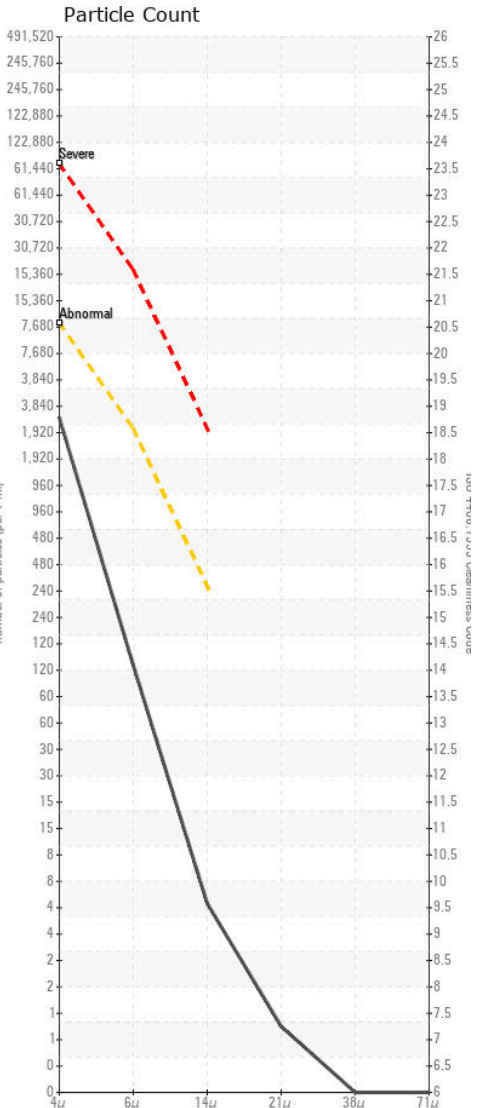
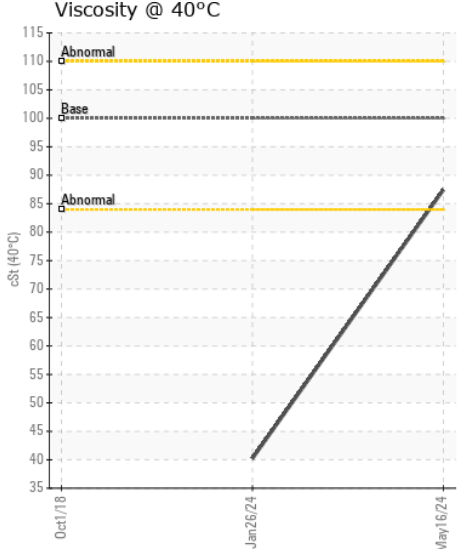
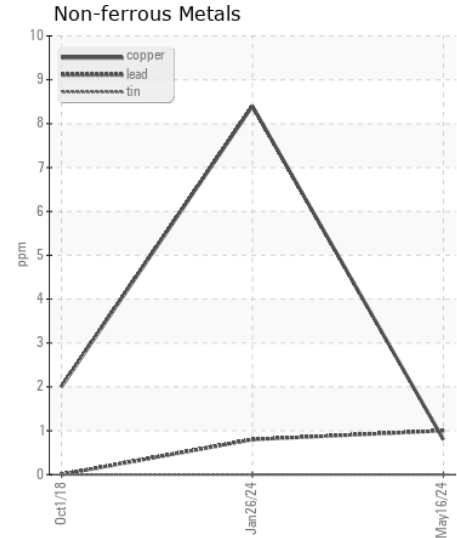
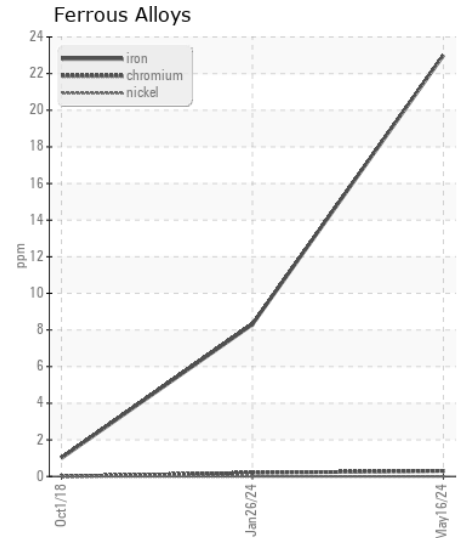
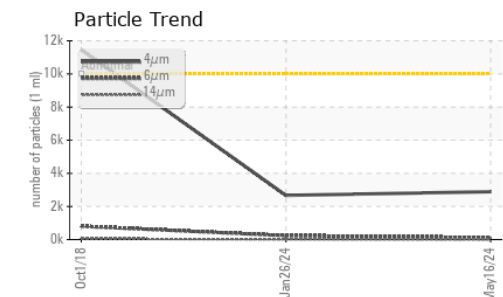
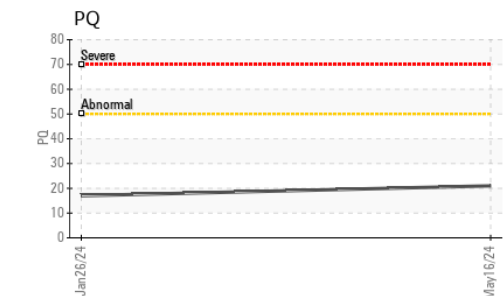
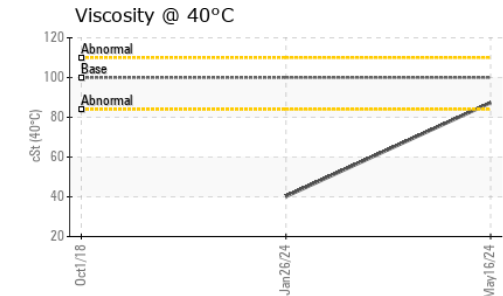
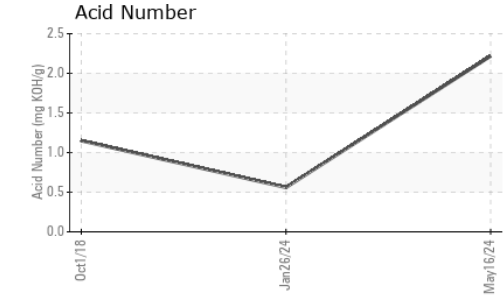
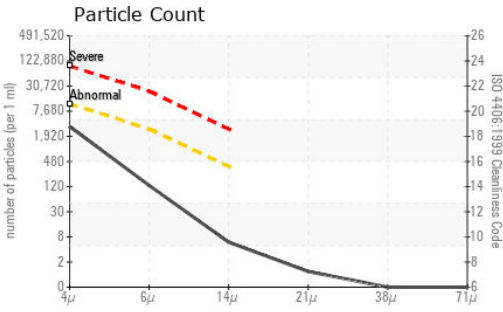
There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	1	1
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	1	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>10000	<b>2892</b>	2667	11455
Particles >6µm		ASTM D7647	>2500	<b>113</b>	237	804
Particles >14µm		ASTM D7647	>320	<b>5</b>	17	44
Particles >21µm		ASTM D7647	>80	<b>1</b>	6	13
Particles >38µm		ASTM D7647	>20	<b>0</b>	0	3
Particles >71µm		ASTM D7647	>4	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>19/14/10</b>	19/15/11	21/17/13
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	---

## 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>&lt;1</b>	0	1
Boron	ppm	ASTM D5185m		<b>4</b>	0	---
Barium	ppm	ASTM D5185m		<b>2</b>	1	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Magnesium	ppm	ASTM D5185m		<b>11</b>	4	3
Calcium	ppm	ASTM D5185m	2980	<b>3379</b>	194	172
Phosphorus	ppm	ASTM D5185m	1100	<b>1031</b>	795	727
Zinc	ppm	ASTM D5185m	1270	<b>1271</b>	1187	913
Sulfur	ppm	ASTM D5185m		<b>7705</b>	2174	---
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>2.218</b>	0.56	1.15
Visc @ 40°C	cSt	ASTM D445	100	<b>87.4</b>	40.2	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0003030 **Received** : 14 Jun 2024  
**Lab Number** : 06210677 **Tested** : 20 Jun 2024  
**Unique Number** : 11083541 **Diagnosed** : 20 Jun 2024 - Jonathan Hester  
**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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