



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
GM Seattle Off Road Shop
Machine Id
[GM Seattle Off Road Shop] 24-587
Component
Hydraulic System
Fluid
CASTROL DUAL RANGE HV HYD OIL ISO 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0003077	PE12291059	---
Sample Date		Client Info		10 Apr 2024	12 Nov 2021	---
Machine Age	hrs	Client Info		4190	3404	---
Oil Age	hrs	Client Info		4190	3404	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Chngd	Not Chngd	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	17	14	---
Chromium	ppm	ASTM D5185m	>10	2	1	---
Nickel	ppm	ASTM D5185m	>10	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		<1	<1	---
Aluminum	ppm	ASTM D5185m	>10	3	1	---
Lead	ppm	ASTM D5185m	>10	2	3	---
Copper	ppm	ASTM D5185m	>75	15	14	---
Tin	ppm	ASTM D5185m	>10	<1	0	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

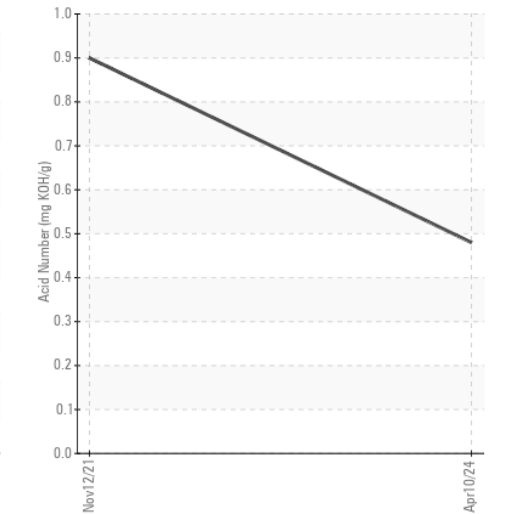
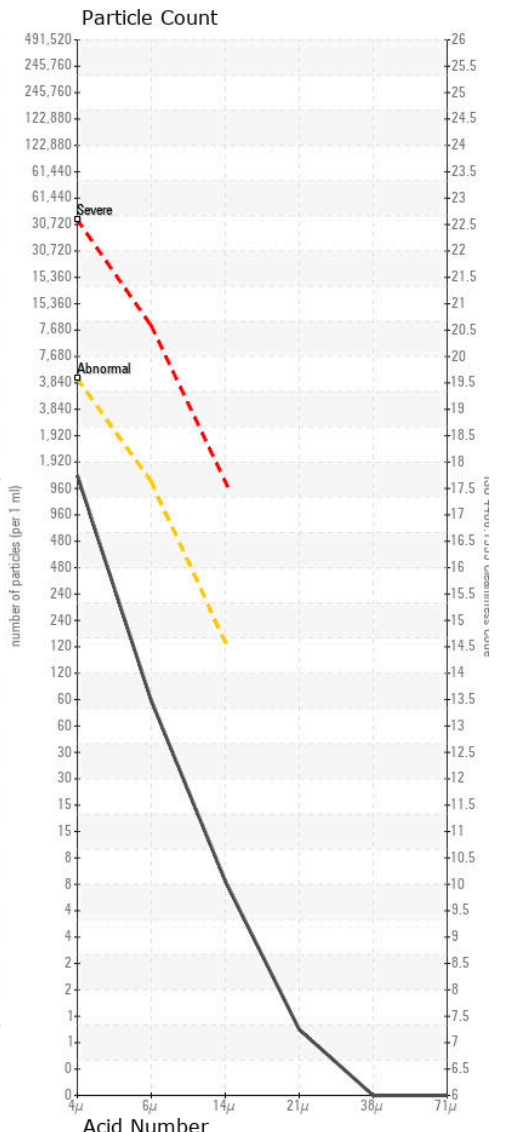
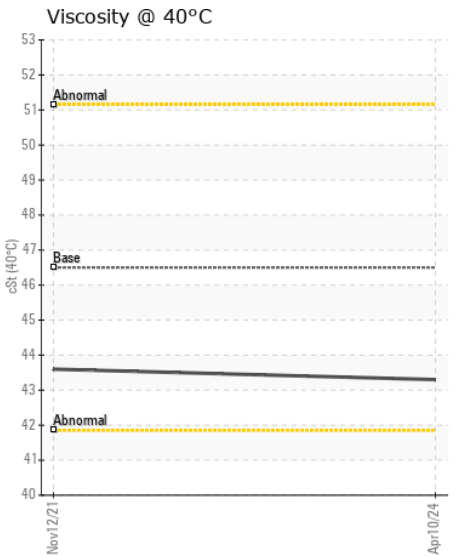
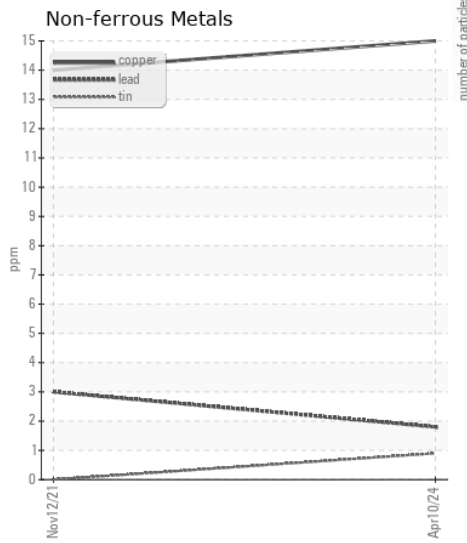
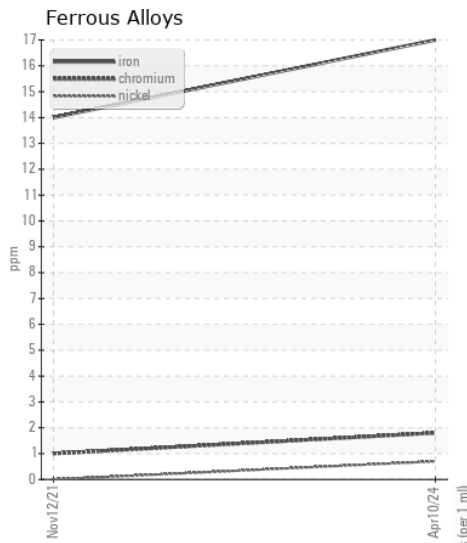
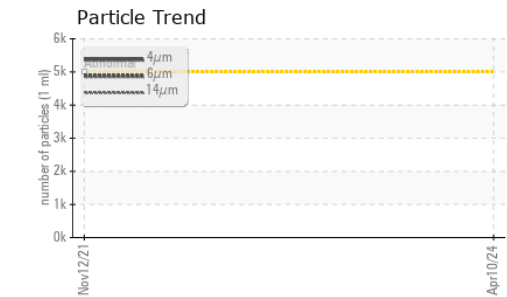
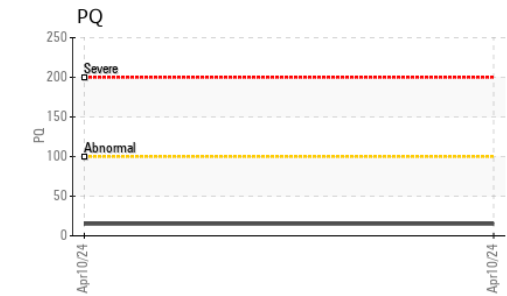
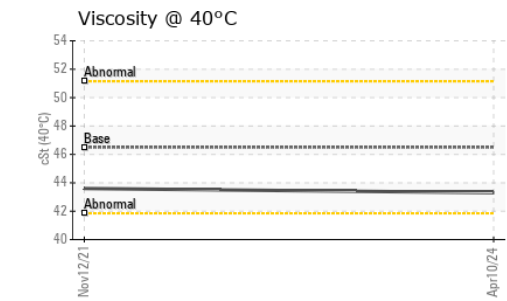
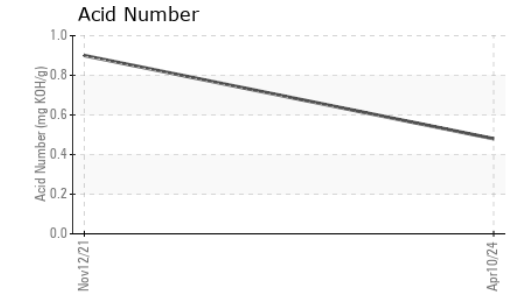
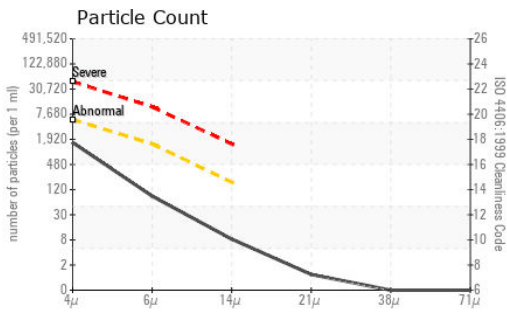
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	6	4	---
Potassium	ppm	ASTM D5185m	>20	2	1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	1412	---	---
Particles >6µm		ASTM D7647	>1300	74	---	---
Particles >14µm		ASTM D7647	>160	7	---	---
Particles >21µm		ASTM D7647	>40	1	---	---
Particles >38µm		ASTM D7647	>10	0	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/13/10	18/15/12	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	0	---
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m		0	1	---
Molybdenum	ppm	ASTM D5185m		<1	0	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		5	3	---
Calcium	ppm	ASTM D5185m		107	81	---
Phosphorus	ppm	ASTM D5185m		562	442	---
Zinc	ppm	ASTM D5185m		634	528	---
Sulfur	ppm	ASTM D5185m		2686	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.48	0.90	---
Visc @ 40°C	cSt	ASTM D445	46.5	43.3	43.6	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003077 **Received** : 22 Apr 2024
Lab Number : 06156857 **Tested** : 23 Apr 2024
Unique Number : 10992280 **Diagnosed** : 24 Apr 2024 - Angela Borella
Test Package : CONST (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

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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)