

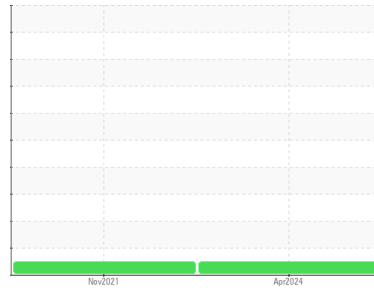


OIL ANALYSIS REPORT



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)

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. The amount and size of particulates present in the system are acceptable.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	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	---
Oil Changed	Client Info		Not Chngd	Not Chngd	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		15	---	---
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	---
Antimony	ppm	ASTM D5185m	---	0	---
Vanadium	ppm	ASTM D5185m	<1	0	---
Cadmium	ppm	ASTM D5185m	<1	---	---

ADDITIVES

	method	limit/base	current	history1	history2
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	---	---

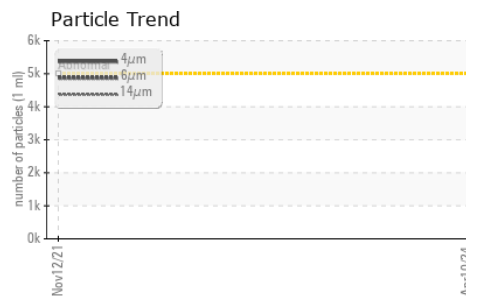
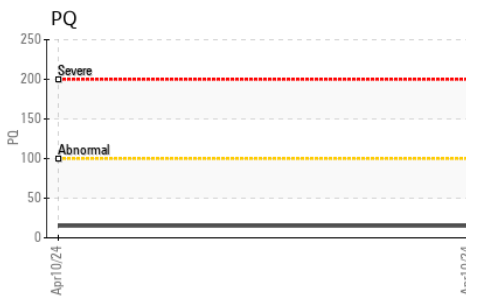
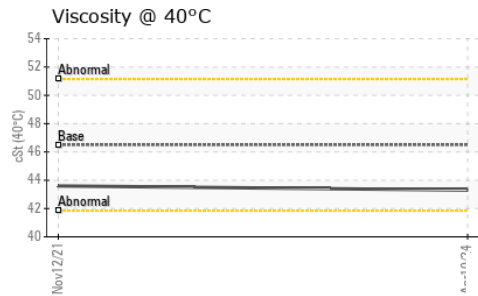
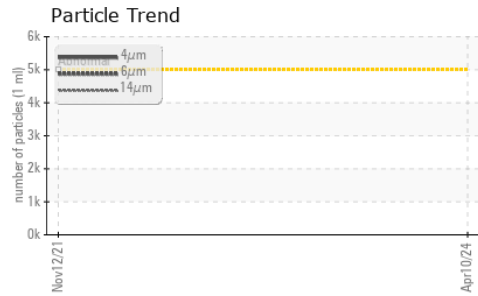
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	6	4	---
Sodium	ppm	ASTM D5185m	0	0	---
Potassium	ppm	ASTM D5185m >20	2	1	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
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	---

OIL ANALYSIS REPORT



FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.48	0.90	---

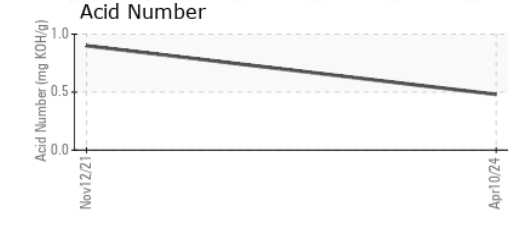
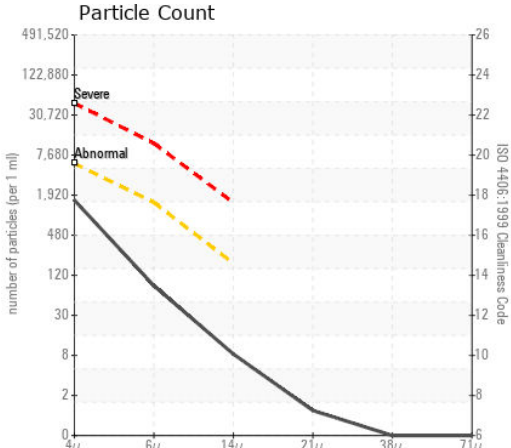
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	43.3	43.6	---

SAMPLE IMAGES

method	limit/base	current	history1	history2
Color			no image	no image
Bottom			no image	no image

GRAPHS



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)