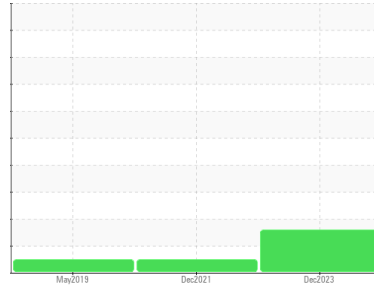




OIL ANALYSIS REPORT

Sample Rating Trend

WATER



Area
GM Seattle Off Road Shop
 Machine Id
[GM Seattle Off Road Shop] 26-213
 Component
Transmission
 Fluid
CHEVRON DRIVE TRAIN FLUID HD 30 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate concentration of water present in the fluid. 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 fluid is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PE0002177	PE12290975	PE12291953
Sample Date	Client Info		04 Dec 2023	02 Dec 2021	31 May 2019
Machine Age	hrs	Client Info	9724	8523	7641
Oil Age	hrs	Client Info	9724	1823	941
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			ABNORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		16	---	---
Iron	ppm	ASTM D5185m >200	12	18	10
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	<1	1
Aluminum	ppm	ASTM D5185m >50	2	2	2
Lead	ppm	ASTM D5185m >50	<1	1	0
Copper	ppm	ASTM D5185m >200	4	8	5
Tin	ppm	ASTM D5185m >10	0	0	0
Antimony	ppm	ASTM D5185m	---	0	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	17	39	45
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	5	9	11
Manganese	ppm	ASTM D5185m	0	---	---
Magnesium	ppm	ASTM D5185m	32	30	41
Calcium	ppm	ASTM D5185m	4208	3578	4407
Phosphorus	ppm	ASTM D5185m	937	961	924
Zinc	ppm	ASTM D5185m	1154	1149	1118
Sulfur	ppm	ASTM D5185m	4986	---	---

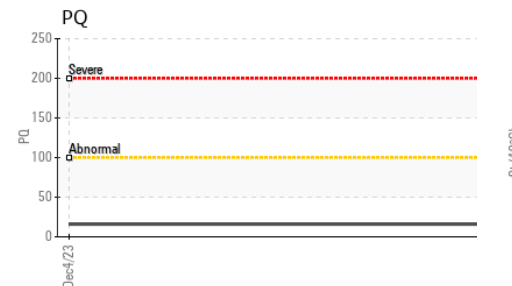
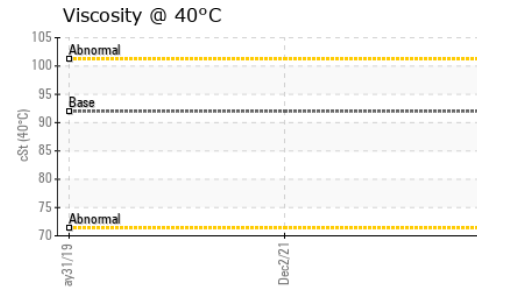
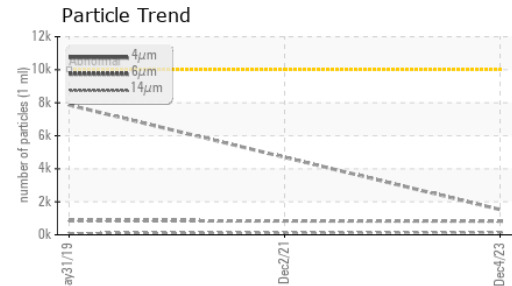
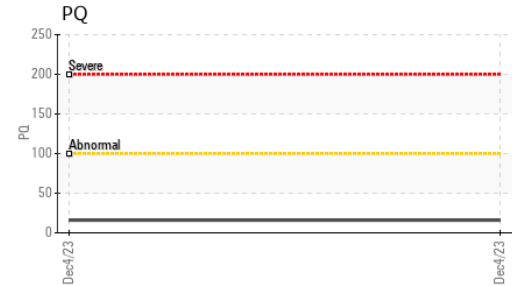
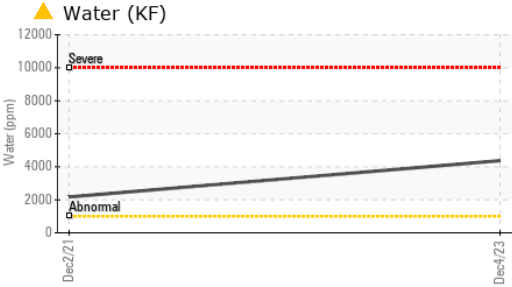
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	8	7	7
Sodium	ppm	ASTM D5185m	0	2	2
Potassium	ppm	ASTM D5185m >20	2	0	4
Water	%	ASTM D6304 >0.1	▲ 0.437	---	---
ppm Water	ppm	ASTM D6304 >1000	▲ 4370	2172	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	1531	---	7865
Particles >6µm	ASTM D7647	>2500	834	---	853
Particles >14µm	ASTM D7647	>320	142	---	103
Particles >21µm	ASTM D7647	>80	48	---	35
Particles >38µm	ASTM D7647	>20	7	---	6
Particles >71µm	ASTM D7647	>4	1	---	---
Oil Cleanliness	ISO 4406 (c)	>20/18/15	18/17/14	21/16/13	20/17/14

OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.96	1.80	1.43

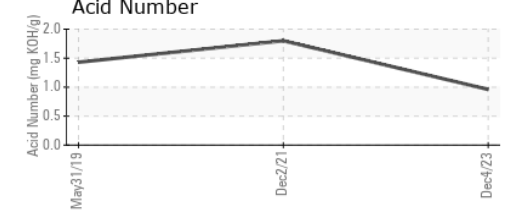
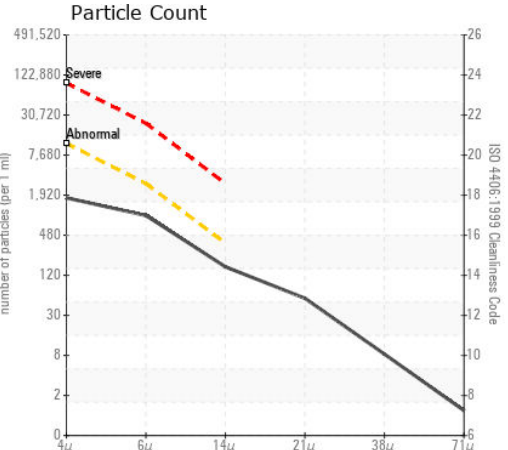
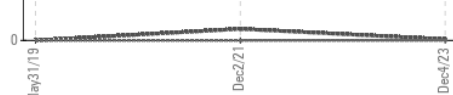
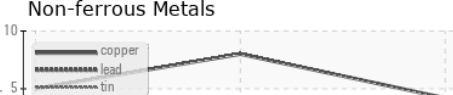
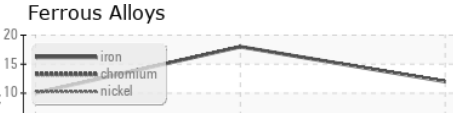
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	0.2%	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	92	88.7	---	---

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. : PE0002177 **Received** : 12 Jan 2024
Lab Number : **06060125** **Diagnosed** : 18 Jan 2024
Unique Number : 10831507 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: ICP, KF, KV40, PQ, PrtCount, SCREEN)

Gary Merlino Construction - Off Road Shop
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 SEATTLE, WA
 US 98108
 Contact: Jesse Patterson
 oilsamples@gmccinc.com
 T: 1(866)292-1303
 F:

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)