

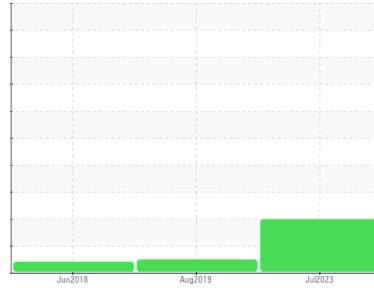
# PROBLEM SUMMARY

Sample Rating Trend

ISO

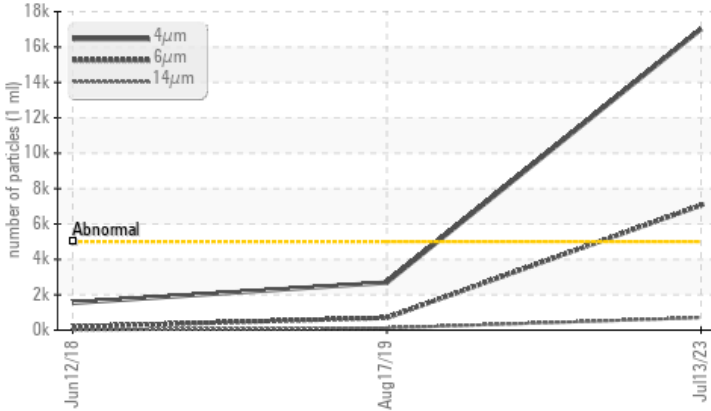


Area  
**GM Seattle Off Road Shop**  
 Machine Id  
**[GM Seattle Off Road Shop] 26-525**  
 Component  
**Hydraulic System**  
 Fluid  
**ISO 46 (--- GAL)**



## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	MARGINAL
Particles >4µm	ASTM D7647	>5000	▲ <b>17008</b>	2687	1547
Particles >6µm	ASTM D7647	>1300	▲ <b>7062</b>	699	198
Particles >14µm	ASTM D7647	>160	▲ <b>706</b>	123	17
Particles >21µm	ASTM D7647	>40	▲ <b>154</b>	56	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ <b>21/20/17</b>	19/17/14	18/15/11

Customer Id: GARSEA  
 Sample No.: PE0001399  
 Lab Number: 05903708  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### NORMAL



#### 17 Aug 2019 Diag: Wes Davis

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### VISCOSITY



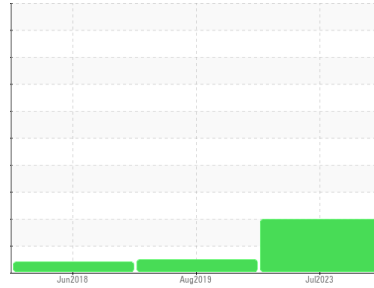
#### 12 Jun 2018 Diag: Wes Davis

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area  
**GM Seattle Off Raod Shop**  
 Machine Id  
**[GM Seattle Off Raod Shop] 26-525**  
 Component  
**Hydraulic System**  
 Fluid  
**ISO 46 (--- GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. The 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 high amount of particulates present in the oil.

### 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	<b>PE0001399</b>	PE12291826	PE12292419
Sample Date	Client Info	<b>13 Jul 2023</b>	17 Aug 2019	12 Jun 2018
Machine Age	hrs	<b>4803</b>	2905	1950
Oil Age	hrs	<b>4803</b>	2905	1950
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status		<b>ABNORMAL</b>	NORMAL	MARGINAL

## WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184	<b>9</b>	---	---	
Iron	ppm	ASTM D5185m >20	<b>18</b>	6	4
Chromium	ppm	ASTM D5185m >10	<b>1</b>	0	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	1	1
Aluminum	ppm	ASTM D5185m >10	<b>3</b>	2	1
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >75	<b>18</b>	7	2
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	3	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>9</b>	29	45
Barium	ppm	ASTM D5185m	<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>0</b>	1	2
Calcium	ppm	ASTM D5185m	<b>97</b>	81	69
Phosphorus	ppm	ASTM D5185m	<b>304</b>	287	221
Zinc	ppm	ASTM D5185m	<b>248</b>	217	108
Sulfur	ppm	ASTM D5185m	<b>4738</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >20	<b>7</b>	3	4
Sodium	ppm	ASTM D5185m	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	0

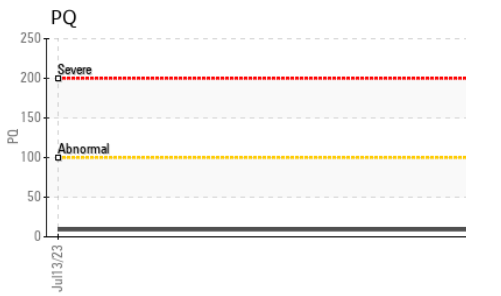
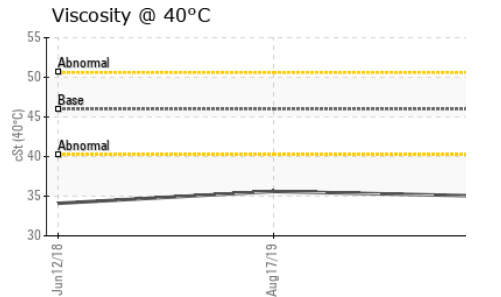
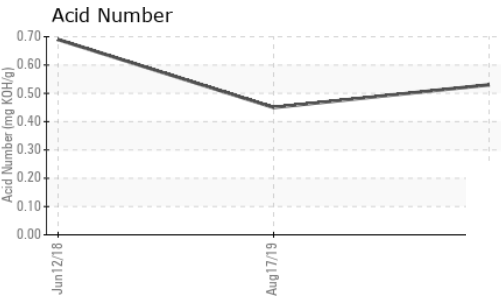
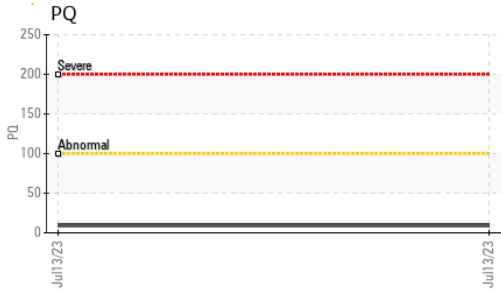
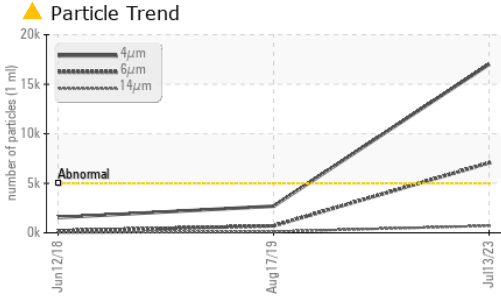
## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>▲ 17008</b>	2687	1547
Particles >6µm	ASTM D7647 >1300	<b>▲ 7062</b>	699	198
Particles >14µm	ASTM D7647 >160	<b>▲ 706</b>	123	17
Particles >21µm	ASTM D7647 >40	<b>▲ 154</b>	56	---
Particles >38µm	ASTM D7647 >10	<b>3</b>	12	---
Particles >71µm	ASTM D7647 >3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>▲ 21/20/17</b>	19/17/14	18/15/11

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.53</b>	0.45	0.69

# OIL ANALYSIS REPORT



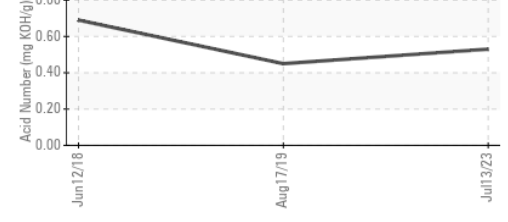
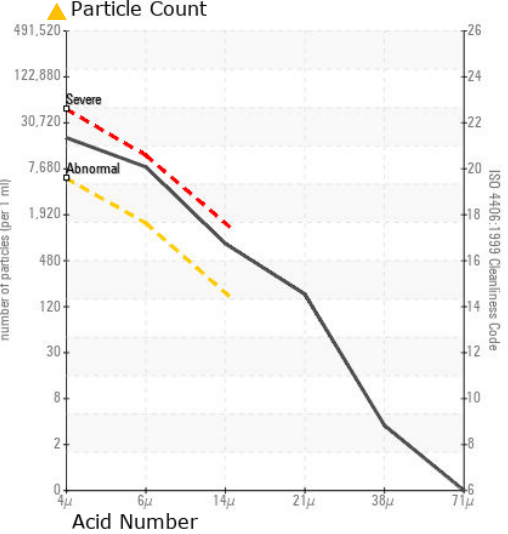
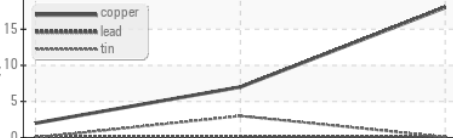
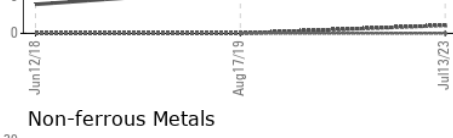
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
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	46.0	35.0	35.6	▲ 34.1

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

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0001399 **Received** : 20 Jul 2023  
**Lab Number** : 05903708 **Diagnosed** : 24 Jul 2023  
**Unique Number** : 10565064 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN )

**Gary Merlino Construction - Off Road Shop**  
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 SEATTLE, WA  
 US 98108  
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Certificate L2367  
 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)