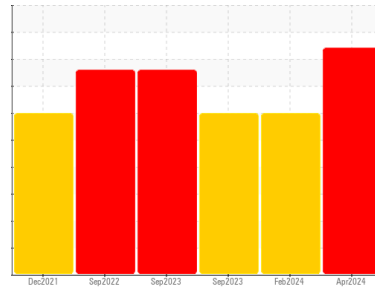




# PROBLEM SUMMARY

## Sample Rating Trend



Machine Id

**016-0114**

Component

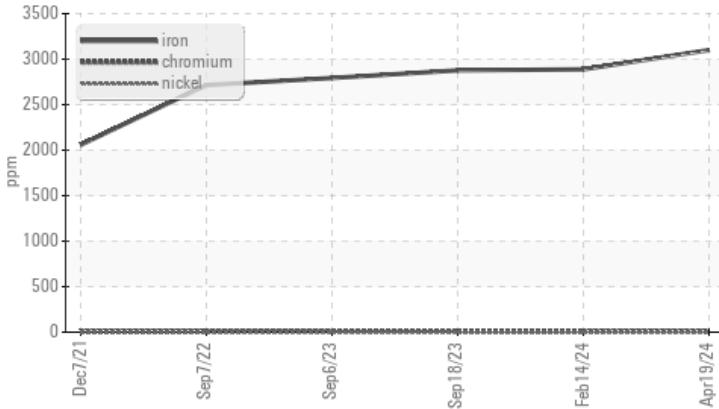
**Front Differential**

Fluid

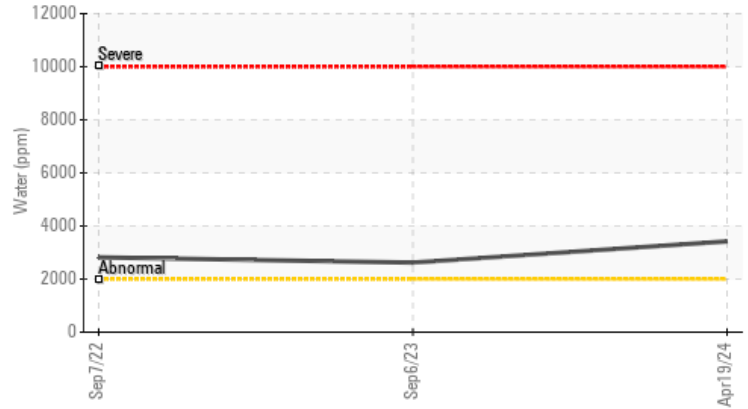
**SCHAEFFER SCHAEFFER 293 MOLY 75W90 (2 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Ferrous Alloys



### ▲ Water (KF)



## RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. ( Customer Sample Comment: Front differential/axle )

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>500	▲ <b>3100</b>	▲ 2888	▲ 2877
Water	%	ASTM D6304	>.2	▲ <b>0.342</b>	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ <b>3420</b>	---	---

Customer Id: AECCHATN

Sample No.: WC0904079

Lab Number: 06159494

Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:

Jonathan Hester +1 919-379-4092 x4092

[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:

Customer Service +1 1-800-237-1369

[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

## HISTORICAL DIAGNOSIS

### WEAR



#### 14 Feb 2024 Diag: Don Baldrige

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



### WEAR



#### 18 Sep 2023 Diag: Sean Felton

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



### WEAR



#### 06 Sep 2023 Diag: Don Baldrige

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. There is a light concentration of water present in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

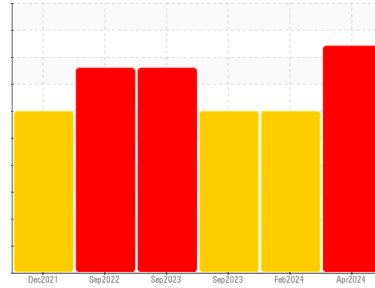
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

**016-0114**

Component

**Front Differential**

Fluid

**SCHAEFFER SCHAEFFER 293 MOLY 75W90 (2 GAL)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. ( Customer Sample Comment: Front differential/axle )

### ▲ Wear

Gear wear is indicated.

### ▲ Contamination

Appearance is hazy. There is a moderate concentration of water present in the oil.

### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0904079</b>	WC0904077	WC0815202
Sample Date	Client Info		<b>19 Apr 2024</b>	14 Feb 2024	18 Sep 2023
Machine Age	hrs	Client Info	<b>12677</b>	12374	11460
Oil Age	hrs	Client Info	<b>12553</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>SEVERE</b>	SEVERE	SEVERE

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	<b>▲ 3100</b>	▲ 2888	▲ 2877
Chromium	ppm	ASTM D5185m >10	<b>8</b>	8	8
Nickel	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	2
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>4</b>	2	4
Lead	ppm	ASTM D5185m >25	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >100	<b>&lt;1</b>	3	3
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>100</b>	83	102
Barium	ppm	ASTM D5185m	<b>7</b>	7	8
Molybdenum	ppm	ASTM D5185m	<b>391</b>	362	349
Manganese	ppm	ASTM D5185m	<b>27</b>	26	28
Magnesium	ppm	ASTM D5185m	<b>4</b>	3	2
Calcium	ppm	ASTM D5185m	<b>176</b>	114	111
Phosphorus	ppm	ASTM D5185m	<b>1418</b>	1376	1323
Zinc	ppm	ASTM D5185m	<b>58</b>	36	46
Sulfur	ppm	ASTM D5185m	<b>24730</b>	21559	23032

## CONTAMINANTS

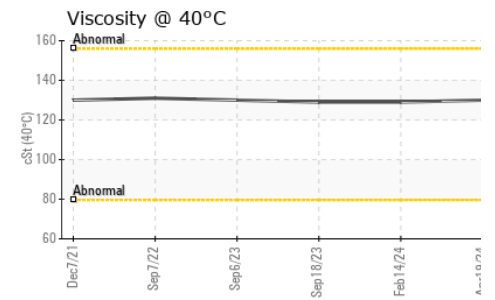
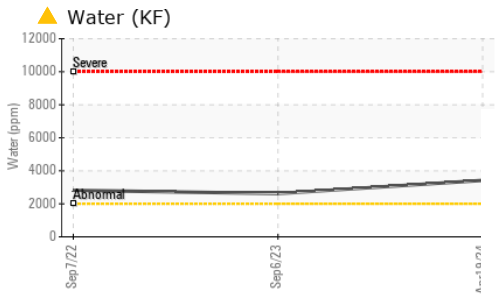
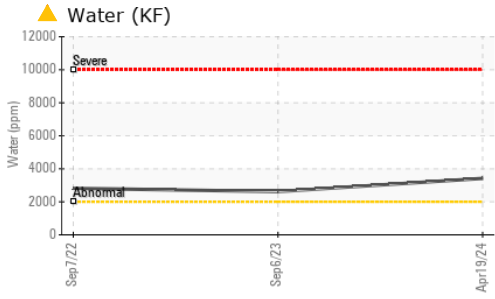
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	<b>25</b>	24	24
Sodium	ppm	ASTM D5185m	<b>4</b>	4	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	2
Water	%	ASTM D6304 >.2	<b>▲ 0.342</b>	---	---
ppm Water	ppm	ASTM D6304 >2000	<b>▲ 3420</b>	---	---

## VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual NONE	<b>NONE</b>	MODER	NONE
Debris	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual NORML	<b>HAZY</b>	NORML	NORML
Odor	scalar	*Visual NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual >.2	<b>0.2%</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG



# OIL ANALYSIS REPORT

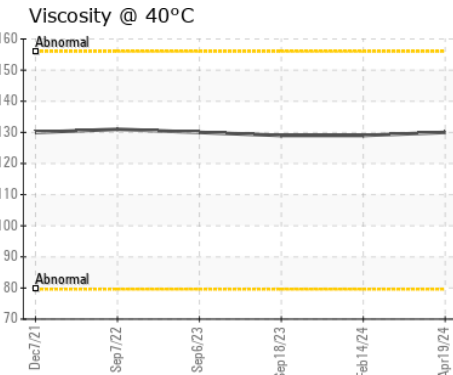
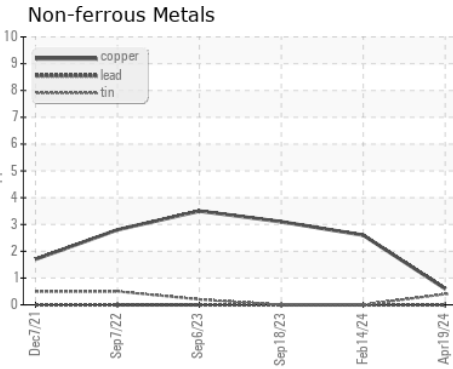
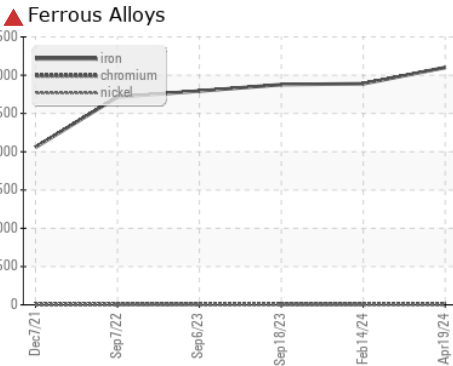


FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	130	129	129

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0904079      **Received** : 24 Apr 2024  
**Lab Number** : 06159494      **Tested** : 25 Apr 2024  
**Unique Number** : 10994917      **Diagnosed** : 26 Apr 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: KF )

**SHIMMICK CONSTRUCTION**  
 5535 TRAILHEAD DRIVE  
 CHATTANOOGA, TN  
 US 37415  
 Contact: DANIEL LISELLA  
 daniel.lisella@shimmick.com

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)

T:  
F: