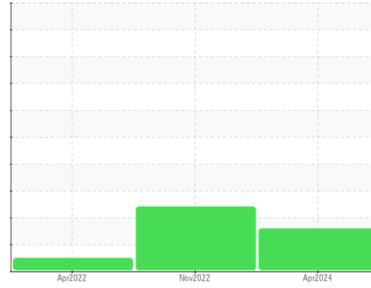




# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Area

**HOWARD SHEPPARD**

Machine Id

**2566 HOWARD SHEPPARD**

Component

**Rear Differential**

Fluid

{not provided} (--- GAL)

### DIAGNOSIS

#### ▲ Recommendation

We recommend you service the filters on this component if applicable. 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

Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type. 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>WC0934658</b>	WC0771211	WC0682440
Sample Date	Client Info		<b>14 Apr 2024</b>	02 Nov 2022	03 Apr 2022
Machine Age	mls	Client Info	<b>210821</b>	78226	1466
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	NORMAL

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	<b>299</b>	142	2
Chromium	ppm	ASTM D5185m >10	<b>2</b>	1	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>10</b>	3	<1
Lead	ppm	ASTM D5185m >25	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >100	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>94</b>	101	105
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>7</b>	5	<1
Magnesium	ppm	ASTM D5185m	<b>152</b>	150	198
Calcium	ppm	ASTM D5185m	<b>6</b>	4	0
Phosphorus	ppm	ASTM D5185m	<b>1642</b>	1536	1783
Zinc	ppm	ASTM D5185m	<b>14</b>	5	0
Sulfur	ppm	ASTM D5185m	<b>27967</b>	24263	23313

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	<b>29</b>	10	2
Sodium	ppm	ASTM D5185m	<b>5</b>	3	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	0
Water	%	ASTM D6304 >.2	<b>0.057</b>	0.029	0.033
ppm Water	ppm	ASTM D6304 >2000	<b>572</b>	299.4	330.0

### FLUID CLEANLINESS

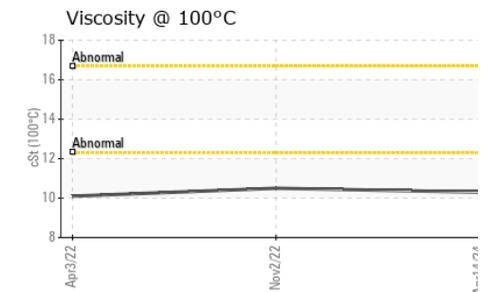
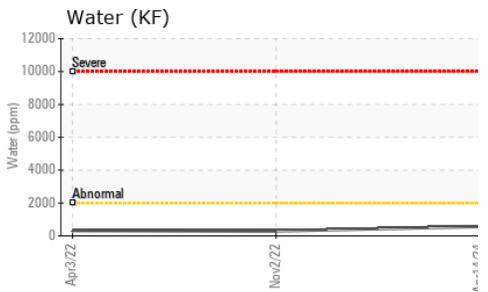
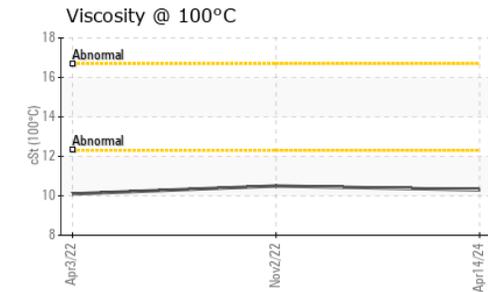
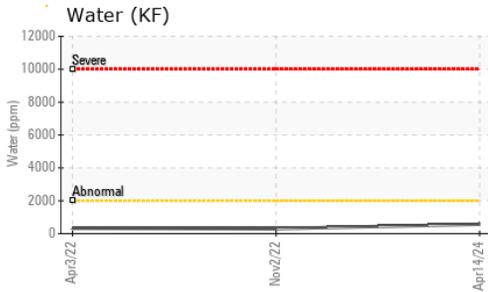
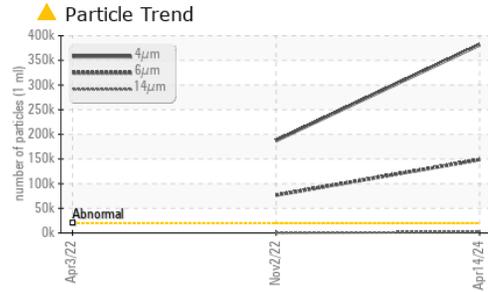
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ <b>381568</b>	▲ 187275	---
Particles >6µm	ASTM D7647	>5000	▲ <b>148565</b>	▲ 76600	---
Particles >14µm	ASTM D7647	>640	▲ <b>1874</b>	190	---
Particles >21µm	ASTM D7647	>160	<b>91</b>	12	---
Particles >38µm	ASTM D7647	>40	<b>1</b>	1	---
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>26/24/18</b>	▲ 25/23/15	---

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.14</b>	0.84	0.76



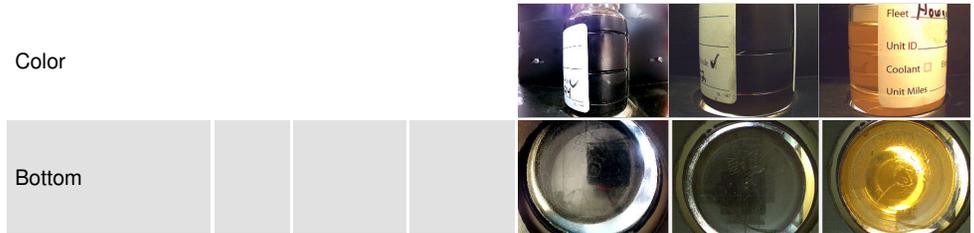
# OIL ANALYSIS REPORT



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

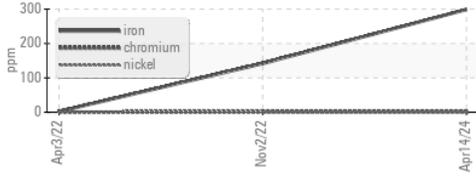
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	57.2	▲ 58.2	91.9
Visc @ 100°C	cSt	ASTM D445	10.3	10.5	10.1
Viscosity Index (VI)	Scale	ASTM D2270	170	172	88

SAMPLE IMAGES	method	limit/base	current	history1	history2
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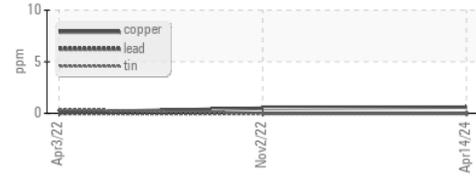


## GRAPHS

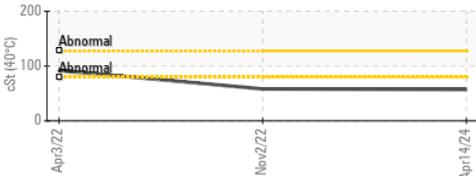
### Ferrous Alloys



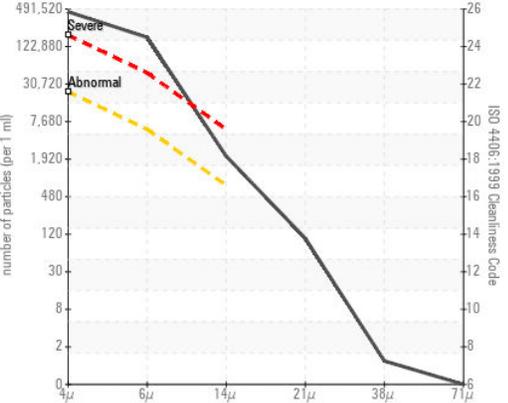
### Non-ferrous Metals



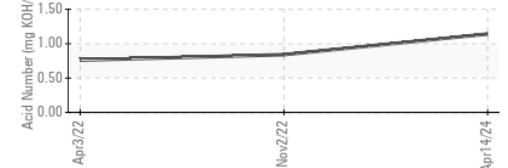
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0934658 **Received** : 30 May 2024  
**Lab Number** : 06195917 **Tested** : 02 Jun 2024  
**Unique Number** : 11058040 **Diagnosed** : 02 Jun 2024 - Doug Bogart  
**Test Package** : MOB 2 ( Additional Tests: KF, KV100, PrtCount, VI )

**BASF - GIANNA CREDAROLI**  
 500 WHITE PLAINS RD  
 TARRYTOWN, NY  
 US 10591  
 Contact: MIKE BARRY  
 mike.barry@basf.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)