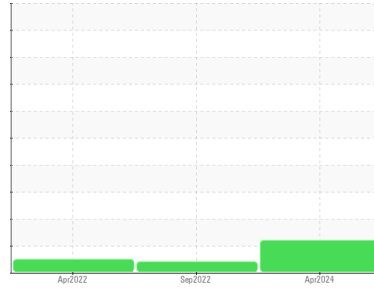




# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Area  
**HOWARD SHEPPARD**  
 Machine Id  
**2572 HOWARD SHEPPARD**  
 Component  
**Rear Differential**  
 Fluid  
**GEAR OIL SAE 75W90 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of silt (particulates < 14 microns in size) 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>WC0934650</b>	WC0771235	WC0692955
Sample Date	Client Info			<b>14 Apr 2024</b>	23 Sep 2022	06 Apr 2022
Machine Age	hrs	Client Info		<b>193763</b>	51459	1231
Oil Age	hrs	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>246</b>	142	40
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	<1	3
Aluminum	ppm	ASTM D5185m	>25	<b>5</b>	4	1
Lead	ppm	ASTM D5185m	>25	<b>0</b>	0	<1
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	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	<b>242</b>	253	203
Barium	ppm	ASTM D5185m	200	<b>2</b>	<1	0
Molybdenum	ppm	ASTM D5185m	12	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>10</b>	8	8
Magnesium	ppm	ASTM D5185m	12	<b>2</b>	0	3
Calcium	ppm	ASTM D5185m	150	<b>8</b>	4	7
Phosphorus	ppm	ASTM D5185m	1650	<b>1380</b>	1263	1191
Zinc	ppm	ASTM D5185m	125	<b>13</b>	6	4
Sulfur	ppm	ASTM D5185m	22500	<b>27602</b>	25318	17911

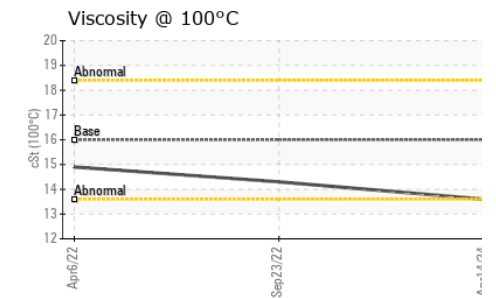
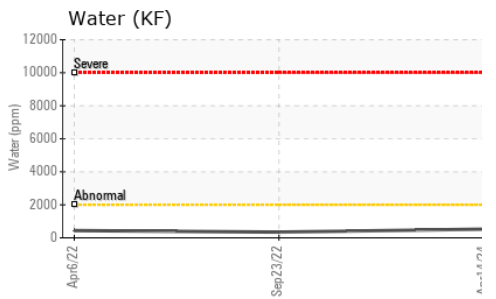
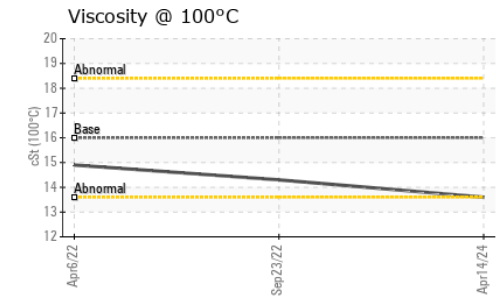
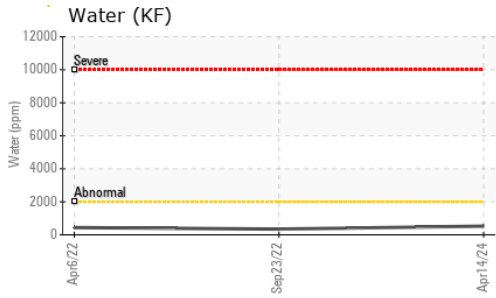
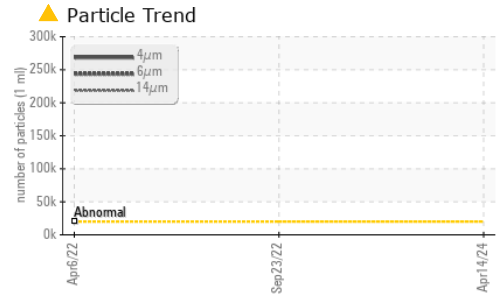
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	<b>32</b>	23	14
Sodium	ppm	ASTM D5185m		<b>6</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	2
Water	%	ASTM D6304	>.2	<b>0.052</b>	0.034	0.043
ppm Water	ppm	ASTM D6304	>2000	<b>525</b>	346.9	439.9

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	<b>▲ 264394</b>	---	---
Particles >6µm		ASTM D7647	>5000	<b>▲ 97669</b>	---	---
Particles >14µm		ASTM D7647	>640	<b>514</b>	---	---
Particles >21µm		ASTM D7647	>160	<b>27</b>	---	---
Particles >38µm		ASTM D7647	>40	<b>0</b>	---	---
Particles >71µm		ASTM D7647	>10	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>▲ 25/24/16</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	2.00	<b>2.07</b>	2.09	2.43



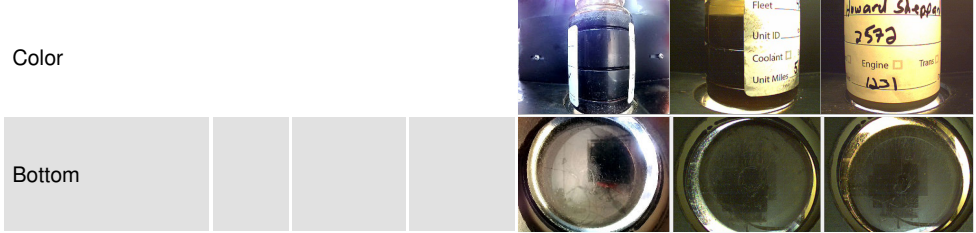
# OIL ANALYSIS REPORT



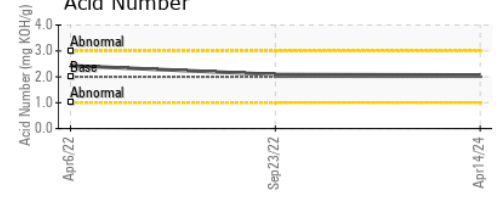
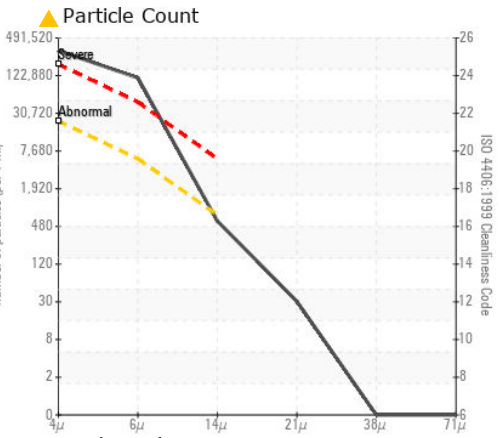
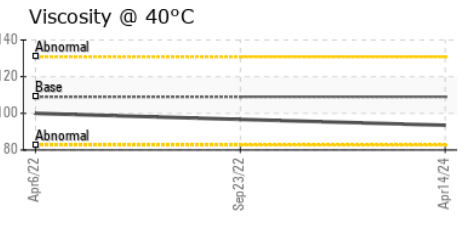
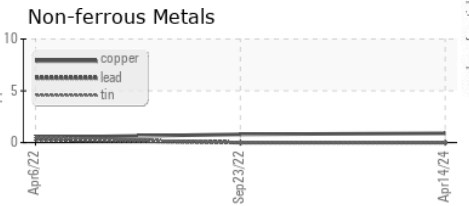
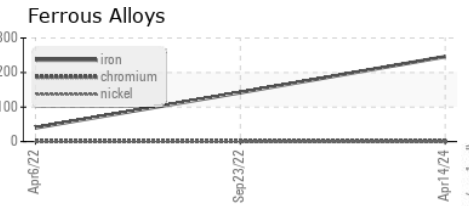
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	109	93.5	96.7
Visc @ 100°C	cSt	ASTM D445	16.0	13.6	14.3
Viscosity Index (VI)	Scale	ASTM D2270	157	146	152

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0934650      **Received** : 30 May 2024  
**Lab Number** : 06195901      **Tested** : 02 Jun 2024  
**Unique Number** : 11058024      **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)