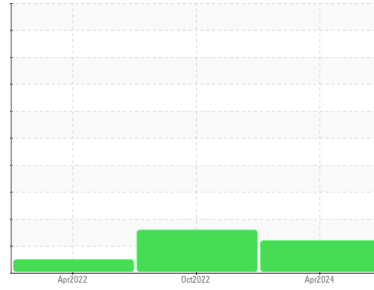




# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Area  
**HOWARD SHEPPARD**  
 Machine Id  
**2570 HOWARD SHEPPARD**  
 Component  
**Front Differential**  
 Fluid  
**GEAR OIL SAE 75W90 (--- GAL)**

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data updates of elemental data and confirmation of viscosities.

#### 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>WC0934655</b>	WC0797102	WC0692951
Sample Date	Client Info		<b>14 Apr 2024</b>	18 Oct 2022	05 Apr 2022
Machine Age	mls	Client Info	<b>177134</b>	55631	177
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>179</b>	215	21
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	4	<1
Lead	ppm	ASTM D5185m >25	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >100	<b>1</b>	2	<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 400	<b>16</b>	224	275
Barium	ppm	ASTM D5185m 200	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 12	<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185m	<b>5</b>	12	7
Magnesium	ppm	ASTM D5185m 12	<b>2</b>	2	<1
Calcium	ppm	ASTM D5185m 150	<b>11</b>	7	5
Phosphorus	ppm	ASTM D5185m 1650	<b>313</b>	1267	1482
Zinc	ppm	ASTM D5185m 125	<b>22</b>	13	4
Sulfur	ppm	ASTM D5185m 22500	<b>17188</b>	22037	22320

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	<b>53</b>	34	6
Sodium	ppm	ASTM D5185m	<b>25</b>	5	4
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	0
Water	%	ASTM D6304 >.2	<b>0.012</b>	0.033	0.052
ppm Water	ppm	ASTM D6304 >2000	<b>127</b>	332.7	524.8

### FLUID CLEANLINESS

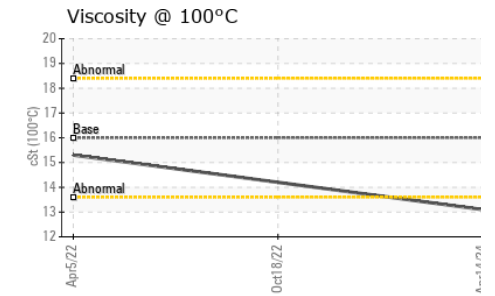
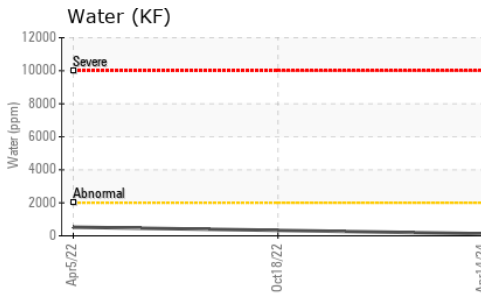
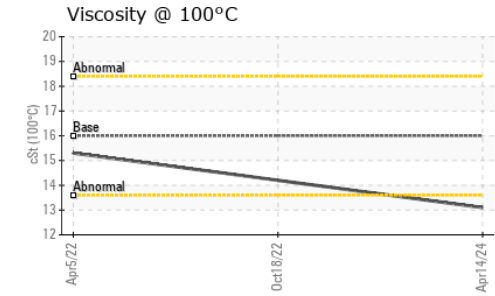
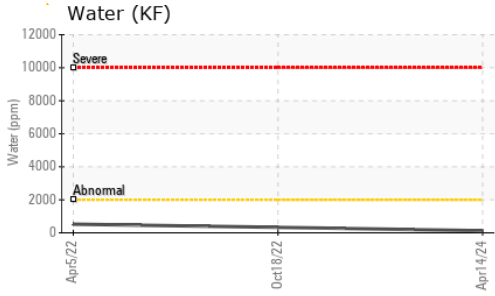
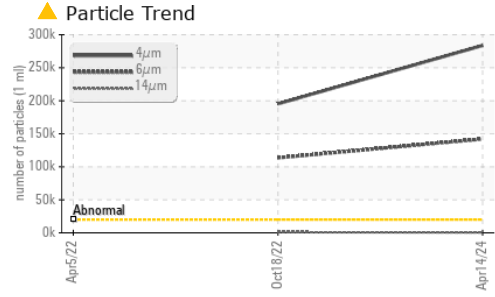
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 283762</b>	▲ 195333	---
Particles >6µm	ASTM D7647	>5000	<b>▲ 142050</b>	▲ 113630	---
Particles >14µm	ASTM D7647	>640	<b>573</b>	● 938	---
Particles >21µm	ASTM D7647	>160	<b>47</b>	62	---
Particles >38µm	ASTM D7647	>40	<b>1</b>	8	---
Particles >71µm	ASTM D7647	>10	<b>0</b>	1	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 25/24/16</b>	▲ 25/24/17	---

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 2.00	<b>0.61</b>	2.29	2.41



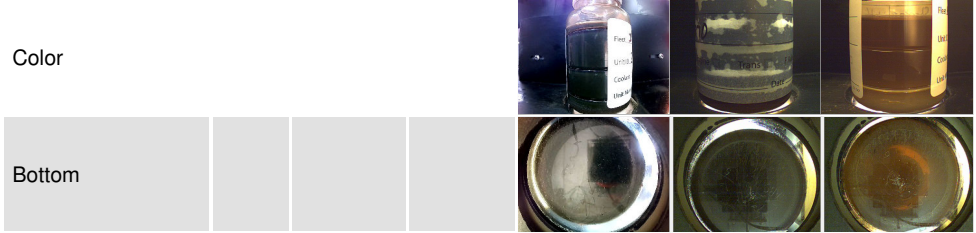
# OIL ANALYSIS REPORT



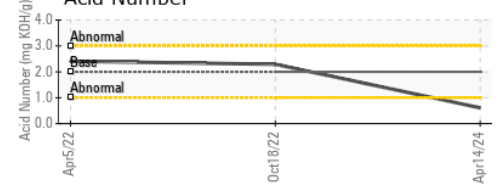
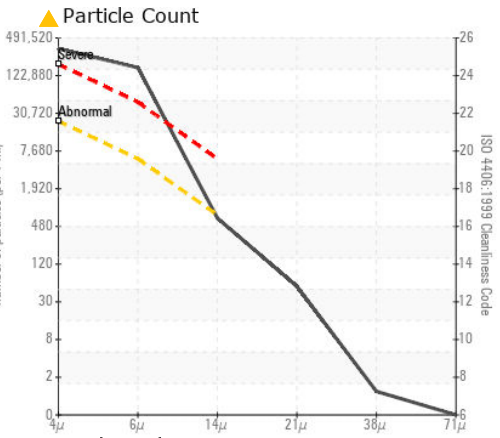
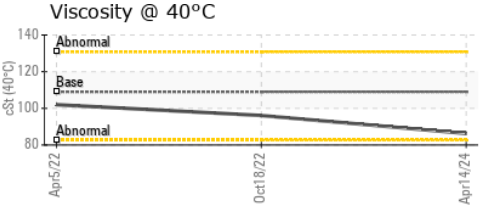
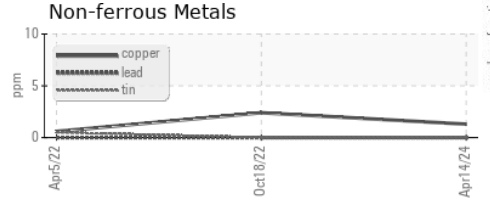
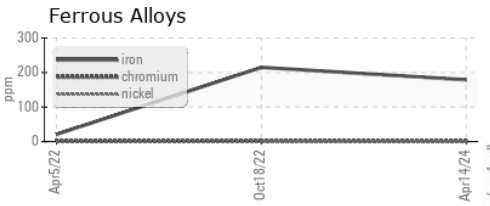
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	86.3	96.1
Visc @ 100°C	cSt	ASTM D445	16.0	13.1	14.2
Viscosity Index (VI)	Scale	ASTM D2270	157	152	151

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0934655      **Received** : 30 May 2024  
**Lab Number** : 06195907      **Tested** : 13 Jun 2024  
**Unique Number** : 11058030      **Diagnosed** : 13 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)