



# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**HOWARD SHEPPARD**  
 Machine Id  
**2612 HOWARD SHEPPARD**  
 Component  
**Rear Differential**  
 Fluid  
**{not provided} (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0876053</b>	---	---
Sample Date	Client Info		<b>28 Dec 2023</b>	---	---
Machine Age	mls Client Info		<b>160490</b>	---	---
Oil Age	mls Client Info		<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m	>500	<b>108</b>	---	---
Chromium	ppm ASTM D5185m	>10	<b>&lt;1</b>	---	---
Nickel	ppm ASTM D5185m	>10	<b>0</b>	---	---
Titanium	ppm ASTM D5185m		<b>0</b>	---	---
Silver	ppm ASTM D5185m		<b>0</b>	---	---
Aluminum	ppm ASTM D5185m	>25	<b>2</b>	---	---
Lead	ppm ASTM D5185m	>25	<b>0</b>	---	---
Copper	ppm ASTM D5185m	>100	<b>&lt;1</b>	---	---
Tin	ppm ASTM D5185m	>10	<b>0</b>	---	---
Vanadium	ppm ASTM D5185m		<b>0</b>	---	---
Cadmium	ppm ASTM D5185m		<b>0</b>	---	---

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m		<b>74</b>	---	---
Barium	ppm ASTM D5185m		<b>&lt;1</b>	---	---
Molybdenum	ppm ASTM D5185m		<b>0</b>	---	---
Manganese	ppm ASTM D5185m		<b>7</b>	---	---
Magnesium	ppm ASTM D5185m		<b>168</b>	---	---
Calcium	ppm ASTM D5185m		<b>5</b>	---	---
Phosphorus	ppm ASTM D5185m		<b>1588</b>	---	---
Zinc	ppm ASTM D5185m		<b>7</b>	---	---
Sulfur	ppm ASTM D5185m		<b>22867</b>	---	---

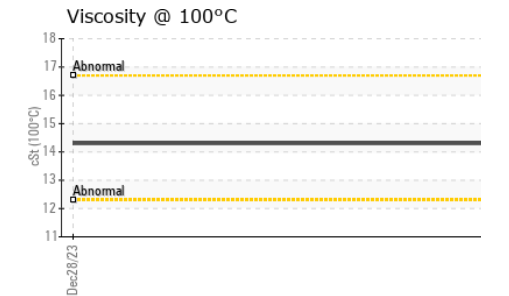
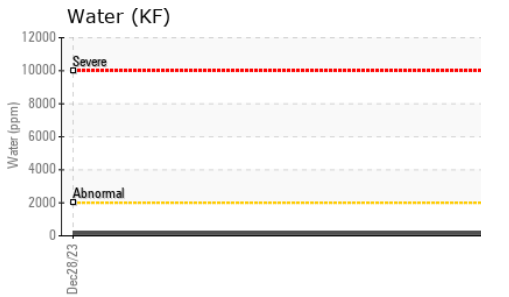
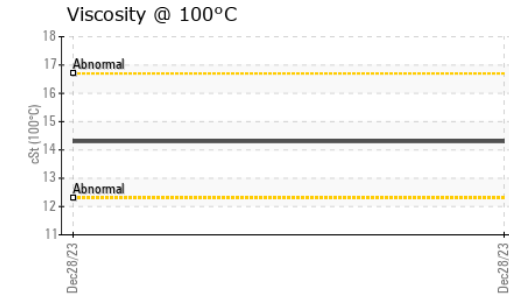
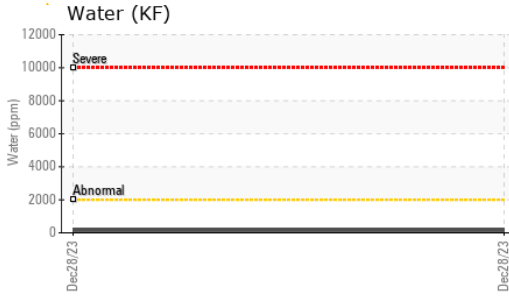
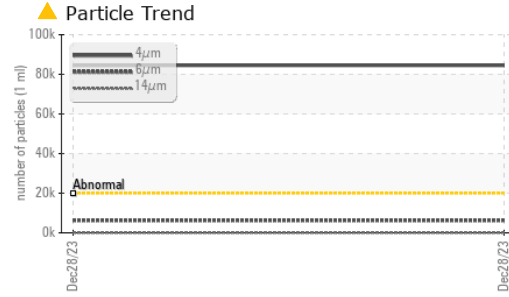
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m	>75	<b>10</b>	---	---
Sodium	ppm ASTM D5185m		<b>6</b>	---	---
Potassium	ppm ASTM D5185m	>20	<b>0</b>	---	---
Water	% ASTM D6304	>.2	<b>0.014</b>	---	---
ppm Water	ppm ASTM D6304	>2000	<b>148</b>	---	---

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 84506</b>	---	---
Particles >6µm	ASTM D7647	>5000	<b>▲ 6273</b>	---	---
Particles >14µm	ASTM D7647	>640	<b>65</b>	---	---
Particles >21µm	ASTM D7647	>160	<b>17</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>▲ 24/20/13</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045		<b>0.68</b>	---	---



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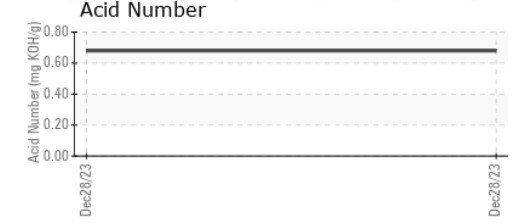
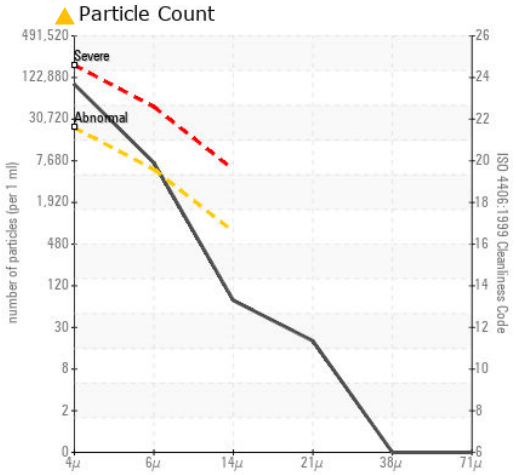
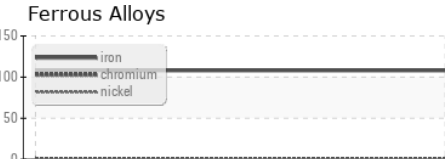
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	97.9	---	---
Visc @ 100°C	cSt	ASTM D445	14.3	---	---
Viscosity Index (VI)	Scale	ASTM D2270	150	---	---

## SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				
Bottom				

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0876053 **Received** : 08 Jan 2024  
**Lab Number** : 06054909 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10820858 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KF, KV100, PrtCount, VI )

**BASF - GIANNA CREDAROLI**  
 500 WHITE PLAINS RD  
 TARRYTOWN, NY  
 US 10591  
 Contact: GIANNA CREDAROLI  
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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)