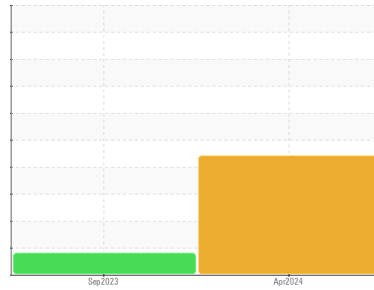




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
HOWARD SHEPPARD
 Machine Id
2611 HOWARD SHEPPARD
 Component
Front Differential
 Fluid
{not provided} (--- GAL)

DIAGNOSIS

▲ Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. 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 high amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

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		WC0934579	WC0876056	---
Sample Date	Client Info		13 Apr 2024	06 Sep 2023	---
Machine Age	mls	Client Info	171224	102353	---
Oil Age	mls	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			SEVERE	ABNORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	255	143
Chromium	ppm	ASTM D5185m	>10	2	<1
Nickel	ppm	ASTM D5185m	>10	<1	0
Titanium	ppm	ASTM D5185m		<1	0
Silver	ppm	ASTM D5185m		0	0
Aluminum	ppm	ASTM D5185m	>25	3	<1
Lead	ppm	ASTM D5185m	>25	<1	0
Copper	ppm	ASTM D5185m	>100	3	2
Tin	ppm	ASTM D5185m	>10	<1	0
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		83	73
Barium	ppm	ASTM D5185m		2	1
Molybdenum	ppm	ASTM D5185m		<1	0
Manganese	ppm	ASTM D5185m		19	14
Magnesium	ppm	ASTM D5185m		178	166
Calcium	ppm	ASTM D5185m		4	6
Phosphorus	ppm	ASTM D5185m		1661	1616
Zinc	ppm	ASTM D5185m		23	13
Sulfur	ppm	ASTM D5185m		23765	22247

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	21	13
Sodium	ppm	ASTM D5185m		4	4
Potassium	ppm	ASTM D5185m	>20	2	0
Water	%	ASTM D6304	>.2	0.010	0.044
ppm Water	ppm	ASTM D6304	>2000	104	449

FLUID CLEANLINESS

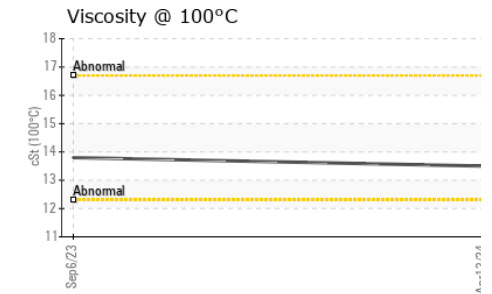
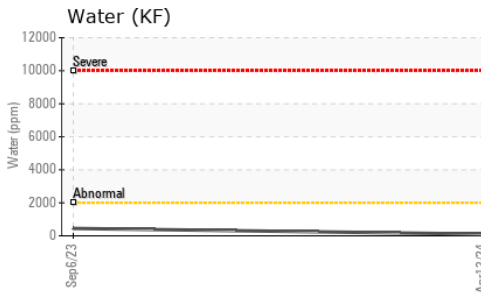
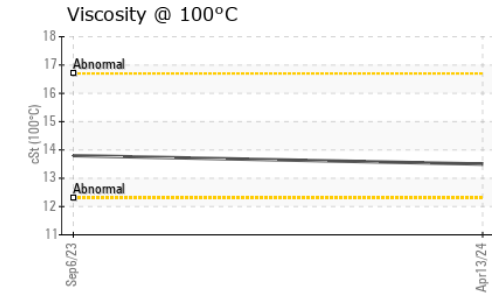
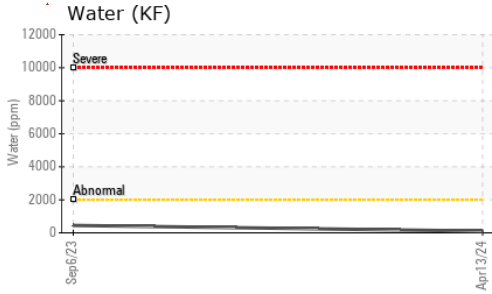
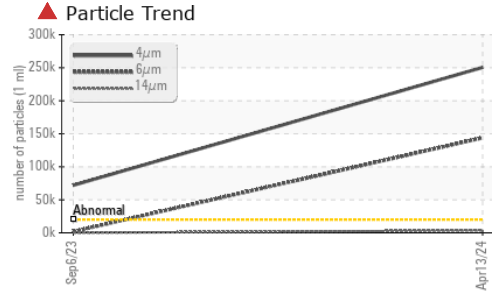
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 250509	▲ 72053	---
Particles >6µm	ASTM D7647	>5000	▲ 143870	1824	---
Particles >14µm	ASTM D7647	>640	▲ 3470	4	---
Particles >21µm	ASTM D7647	>160	● 231	1	---
Particles >38µm	ASTM D7647	>40	2	0	---
Particles >71µm	ASTM D7647	>10	0	0	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 25/24/19	▲ 23/18/9	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.80	0.71



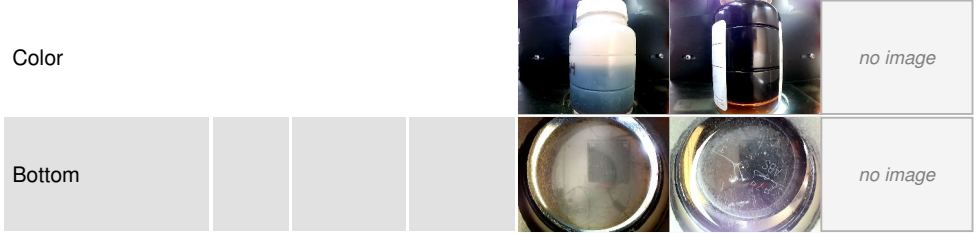
OIL ANALYSIS REPORT



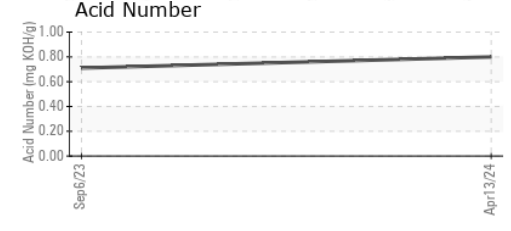
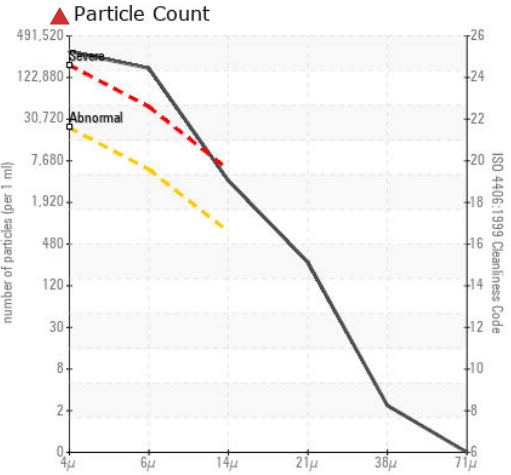
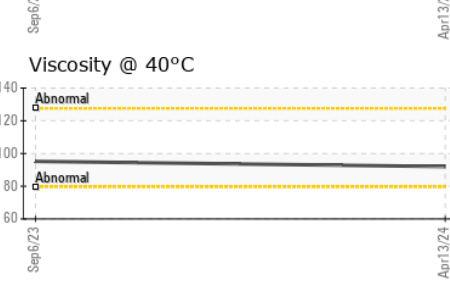
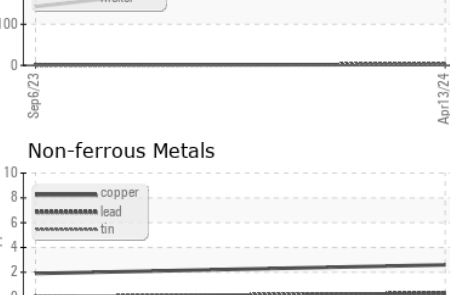
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	92.0	95.2	---
Visc @ 100°C	cSt	ASTM D445	13.5	13.8	---
Viscosity Index (VI)	Scale	ASTM D2270	147	147	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0934579

Lab Number : 06201494

Unique Number : 11063617

Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

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)

Received : 06 Jun 2024

Tested : 07 Jun 2024

Diagnosed : 07 Jun 2024 - Wes Davis

BASF - GIANNA CREDAROLI

500 WHITE PLAINS RD

TARRYTOWN, NY

US 10591

Contact: MIKE BARRY

mike.barry@basf.com

T:

F: