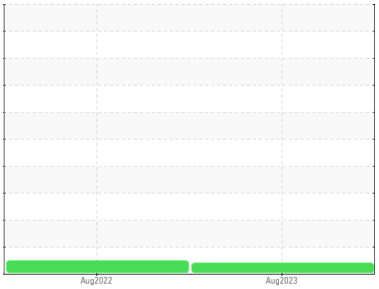
OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS

Area
HOWARD SHEPPARD
Machine Id
2609 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. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris 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		**WC0876057**	WC0771213	---
Sample Date		Client Info		**29 Aug 2023**	15 Aug 2022	---
Machine Age	mls	Client Info		**107675**	366	---
Oil Age	mls	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	NORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**165**	<1	---
Chromium	ppm	ASTM D5185m	>10	**<1**	0	---
Nickel	ppm	ASTM D5185m	>10	**0**	0	---
Titanium	ppm	ASTM D5185m		**0**	0	---
Silver	ppm	ASTM D5185m		**0**	2	---
Aluminum	ppm	ASTM D5185m	>25	**6**	0	---
Lead	ppm	ASTM D5185m	>25	**0**	0	---
Copper	ppm	ASTM D5185m	>100	**<1**	0	---
Tin	ppm	ASTM D5185m	>10	**0**	0	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	<1	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**234**	264	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	0	---
Manganese	ppm	ASTM D5185m		**3**	0	---
Magnesium	ppm	ASTM D5185m		**<1**	1	---
Calcium	ppm	ASTM D5185m		**2**	1	---
Phosphorus	ppm	ASTM D5185m		**1424**	1451	---
Zinc	ppm	ASTM D5185m		**5**	5	---
Sulfur	ppm	ASTM D5185m		**23081**	23167	---

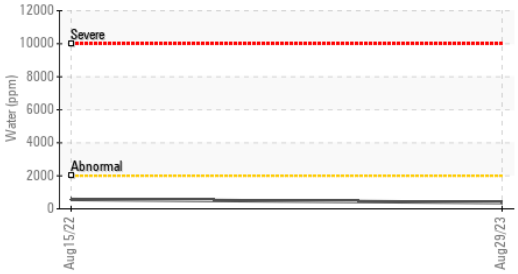
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**23**	0	---
Sodium	ppm	ASTM D5185m		**4**	<1	---
Potassium	ppm	ASTM D5185m	>20	**0**	<1	---
Water	%	ASTM D6304	>.2	**0.037**	0.056	---
ppm Water	ppm	ASTM D6304	>2000	**378**	568.8	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**---**	4546	---
Particles >6µm		ASTM D7647	>5000	**---**	1060	---
Particles >14µm		ASTM D7647	>640	**---**	57	---
Particles >21µm		ASTM D7647	>160	**---**	13	---
Particles >38µm		ASTM D7647	>40	**---**	1	---
Particles >71µm		ASTM D7647	>10	**---**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**---**	19/17/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**2.32**	2.39	---

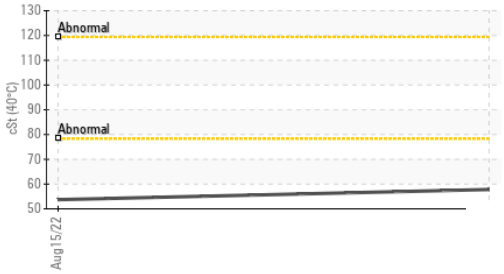
OIL ANALYSIS REPORT

Water (KF)

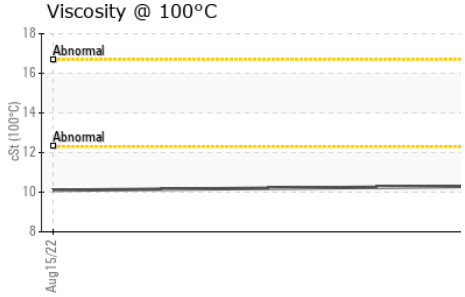


Viscosity @ 100°C

Viscosity @ 40°C

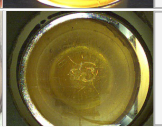


Viscosity @ 100°C



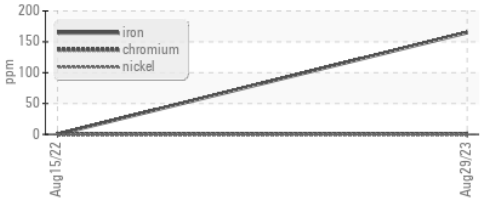
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	▲ **MODER**	NONE	---
Sand/Dirt	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		**57.8**	53.7	---
Visc @ 100°C	cSt	ASTM D445		**10.3**	10.1	---
Viscosity Index (VI)	Scale	ASTM D2270		**168**	178	---

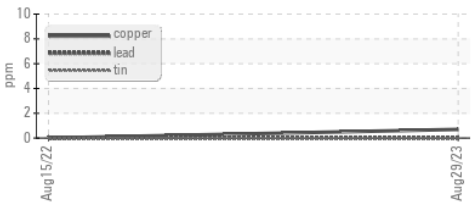
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

GRAPHS

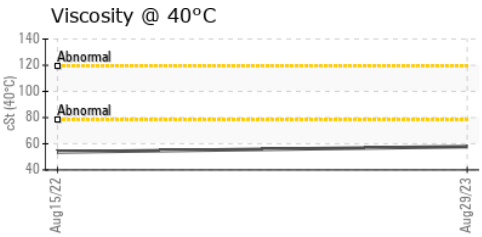
Ferrous Alloys



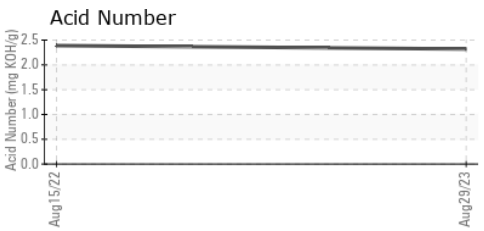
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0876057 **Recieved** : 08 Jan 2024
Lab Number : 06054917 **Diagnosed** : 10 Jan 2024
Unique Number : 10820866 **Diagnostician** : Jonathan Hester
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)

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