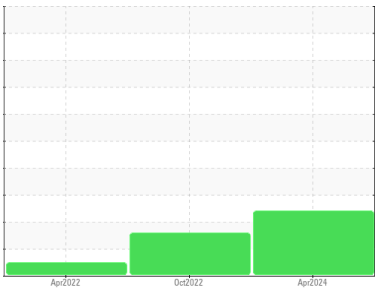
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
HOWARD SHEPPARD
Machine Id
2563 HOWARD SHEPPARD
Component
Front Differential
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear
Gear wear is indicated.

Contamination
There is a high amount of particulates present in the oil.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0934577**	WC0771233	WC0682429
Sample Date		Client Info		**12 Apr 2024**	15 Oct 2022	03 Apr 2022
Machine Age	mls	Client Info		**189671**	38877	396
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	▲ **791**	319	3
Chromium	ppm	ASTM D5185m	>10	**5**	2	0
Nickel	ppm	ASTM D5185m	>10	**1**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**9**	3	<1
Lead	ppm	ASTM D5185m	>25	**<1**	0	0
Copper	ppm	ASTM D5185m	>100	**3**	1	0
Tin	ppm	ASTM D5185m	>10	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**100**	109	109
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	0
Manganese	ppm	ASTM D5185m		**19**	11	<1
Magnesium	ppm	ASTM D5185m		**150**	148	186
Calcium	ppm	ASTM D5185m		**2**	2	0
Phosphorus	ppm	ASTM D5185m		**1597**	1540	1708
Zinc	ppm	ASTM D5185m		**13**	4	0
Sulfur	ppm	ASTM D5185m		**24011**	26361	22502

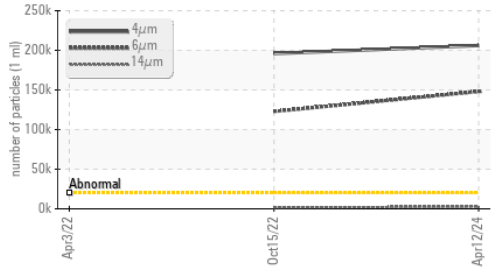
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**41**	14	1
Sodium	ppm	ASTM D5185m		**6**	4	0
Potassium	ppm	ASTM D5185m	>20	**2**	0	0
Water	%	ASTM D6304	>.2	**0.010**	0.035	0.051
ppm Water	ppm	ASTM D6304	>2000	**102**	358.0	510.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **206090**	▲ 195904	---
Particles >6µm		ASTM D7647	>5000	▲ **148045**	▲ 122816	---
Particles >14µm		ASTM D7647	>640	▲ **2596**	▲ 1713	---
Particles >21µm		ASTM D7647	>160	**29**	54	---
Particles >38µm		ASTM D7647	>40	**1**	2	---
Particles >71µm		ASTM D7647	>10	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/24/19**	▲ 25/24/18	---

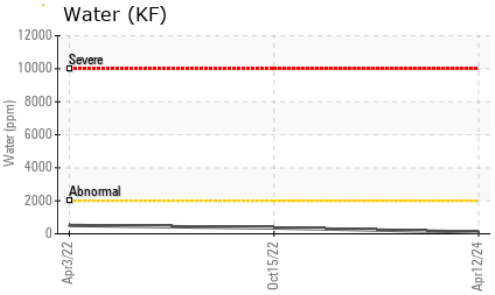
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.90**	0.76	0.82

OIL ANALYSIS REPORT

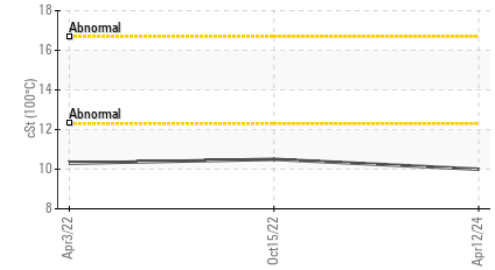
Particle Trend



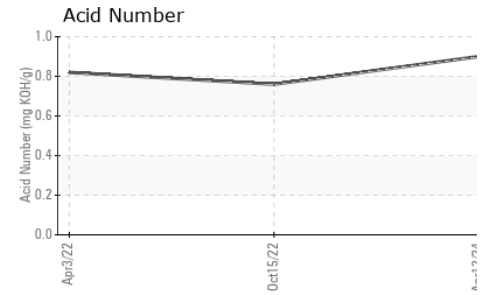
Water (KF)



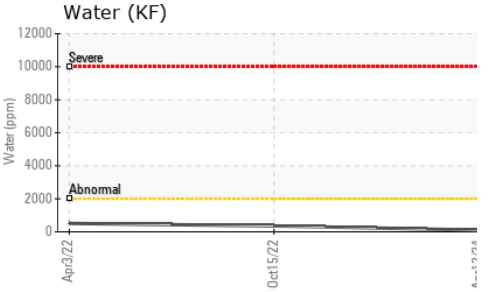
Viscosity @ 100°C



Acid Number



Water (KF)



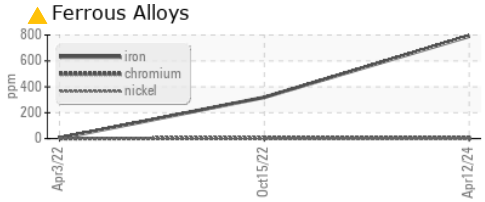
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**56.4**	58.3	96.1
Visc @ 100°C	cSt	ASTM D445		**10.0**	10.5	10.3
Viscosity Index (VI)	Scale	ASTM D2270		**165**	171	86

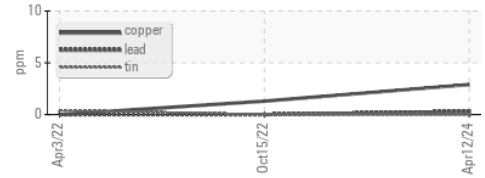
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

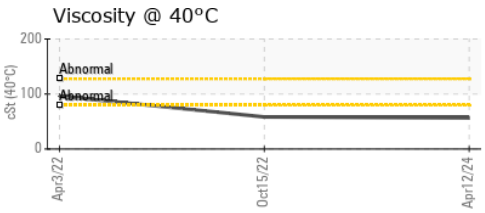
Ferrous Alloys



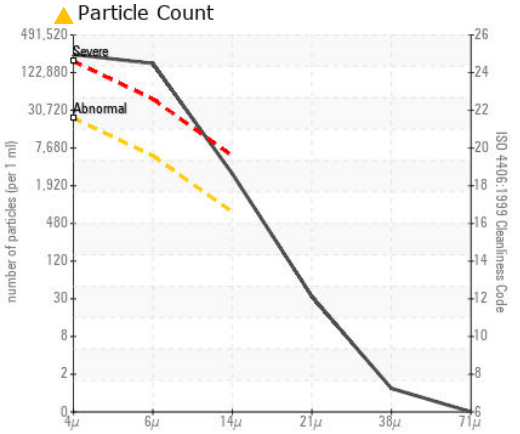
Non-ferrous Metals



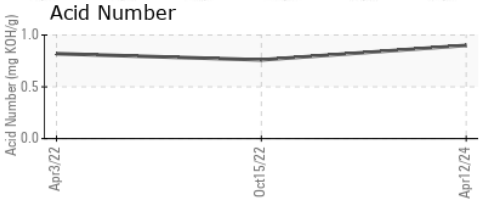
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0934577 **Received** : 06 Jun 2024
Lab Number : 06201502 **Tested** : 07 Jun 2024
Unique Number : 11063625 **Diagnosed** : 11 Jun 2024 - Doug Bogart
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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