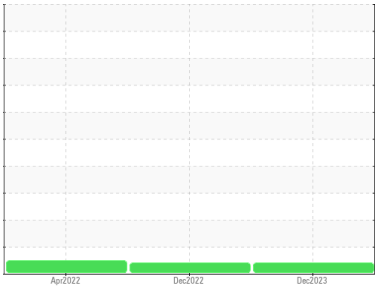
OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS

Area
HOWARD SHEPPARD
Machine Id
2560 HOWARD SHEPPARD
Component
Front Differential
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. 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

Insufficient sample was received to conduct all the routine laboratory tests. Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0876069**	WC0771228	WC0682422
Sample Date		Client Info		**28 Dec 2023**	02 Dec 2022	03 Apr 2022
Machine Age	mls	Client Info		**124924**	36197	2292
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	**397**	202	4
Chromium	ppm	ASTM D5185m	>10	**2**	2	0
Nickel	ppm	ASTM D5185m	>10	**<1**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**18**	4	<1
Lead	ppm	ASTM D5185m	>25	**<1**	<1	0
Copper	ppm	ASTM D5185m	>100	**2**	1	0
Tin	ppm	ASTM D5185m	>10	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

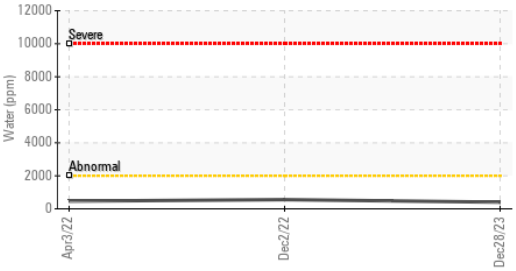
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**83**	113	109
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**0**	<1	0
Manganese	ppm	ASTM D5185m		**12**	8	<1
Magnesium	ppm	ASTM D5185m		**147**	155	196
Calcium	ppm	ASTM D5185m		**6**	3	0
Phosphorus	ppm	ASTM D5185m		**1618**	1595	1772
Zinc	ppm	ASTM D5185m		**1**	4	0
Sulfur	ppm	ASTM D5185m		**21825**	27643	23057

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**37**	10	1
Sodium	ppm	ASTM D5185m		**6**	4	0
Potassium	ppm	ASTM D5185m	>20	**<1**	1	0
Water	%	ASTM D6304	>.2	**0.040**	0.055	0.046
ppm Water	ppm	ASTM D6304	>2000	**402**	555.9	465.1

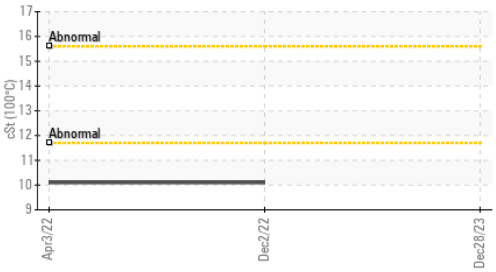
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**---**	0.74	0.79

OIL ANALYSIS REPORT

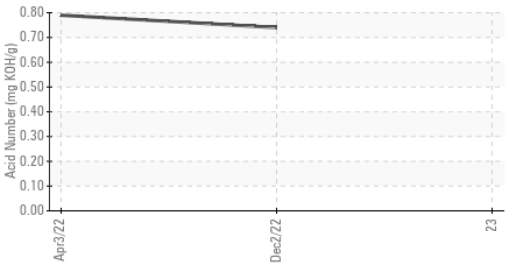
Water (KF)



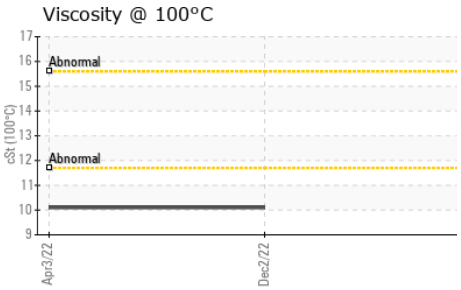
Viscosity @ 100°C



Acid Number

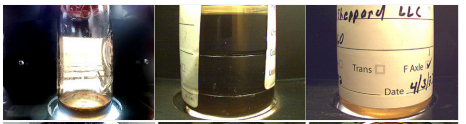
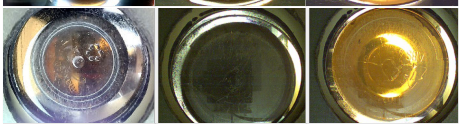


Viscosity @ 100°C



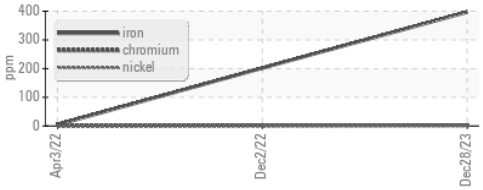
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	▲ MODER	NONE
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		**53.92**	67.0	109
Visc @ 100°C	cSt	ASTM D445		**---**	10.1	10.1

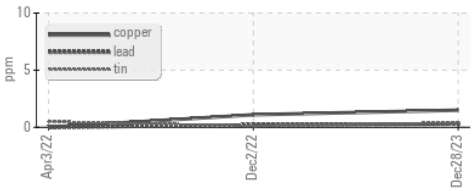
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

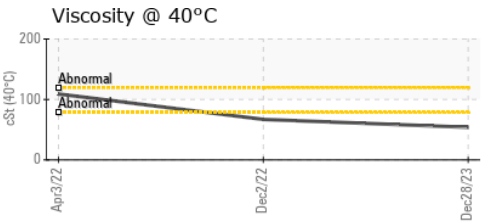
Ferrous Alloys



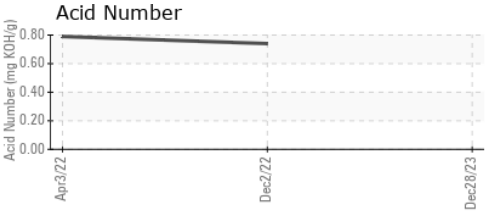
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0876069 **Recieved** : 08 Jan 2024
Lab Number : 06055132 **Diagnosed** : 10 Jan 2024
Unique Number : 10821081 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount)

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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