OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area
COWAN
Machine Id
COWAN 224536
Component
Rear Differential
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 5W40 Gear Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. Please specify the component make and model with 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. 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	history 1	history 2
Sample Number		Client Info		**WC0828689**	---	---
Sample Date		Client Info		**24 May 2023**	---	---
Machine Age	mls	Client Info		**100**	---	---
Oil Age	mls	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>500	**21**	---	---
Chromium	ppm	ASTM D5185m	>10	**<1**	---	---
Nickel	ppm	ASTM D5185m	>10	**1**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m		**0**	---	---
Aluminum	ppm	ASTM D5185m	>25	**0**	---	---
Lead	ppm	ASTM D5185m	>25	**<1**	---	---
Copper	ppm	ASTM D5185m	>100	**<1**	---	---
Tin	ppm	ASTM D5185m	>10	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

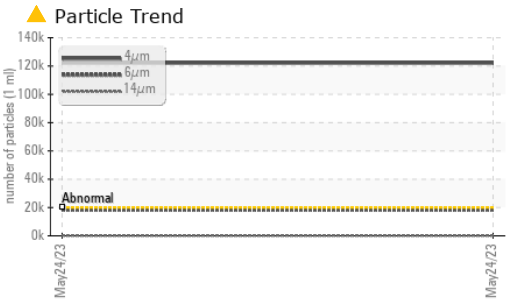
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m		**278**	---	---
Barium	ppm	ASTM D5185m		**<1**	---	---
Molybdenum	ppm	ASTM D5185m		**0**	---	---
Manganese	ppm	ASTM D5185m		**4**	---	---
Magnesium	ppm	ASTM D5185m		**<1**	---	---
Calcium	ppm	ASTM D5185m		**5**	---	---
Phosphorus	ppm	ASTM D5185m		**1512**	---	---
Zinc	ppm	ASTM D5185m		**0**	---	---
Sulfur	ppm	ASTM D5185m		**32919**	---	---

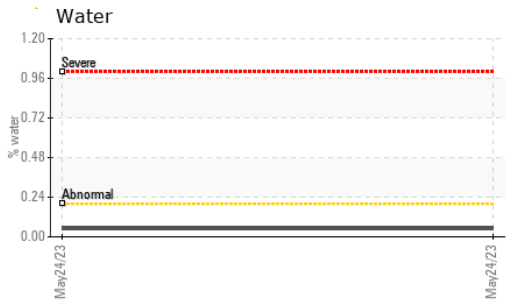
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>75	**23**	---	---
Sodium	ppm	ASTM D5185m		**4**	---	---
Potassium	ppm	ASTM D5185m	>20	**3**	---	---
Water	%	ASTM D6304	>.2	**0.050**	---	---
ppm Water	ppm	ASTM D6304	>2000	**500.9**	---	---

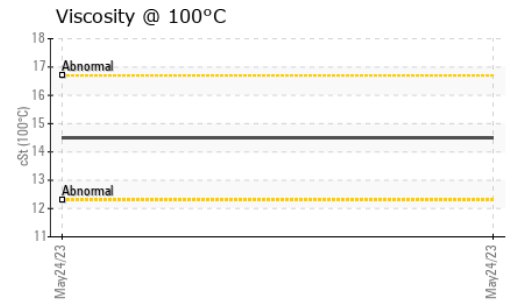
FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647	>20000	▲ **122136**	---	---
Particles >6µm		ASTM D7647	>5000	▲ **18397**	---	---
Particles >14µm		ASTM D7647	>640	**144**	---	---
Particles >21µm		ASTM D7647	>160	**15**	---	---
Particles >38µm		ASTM D7647	>40	**0**	---	---
Particles >71µm		ASTM D7647	>10	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **24/21/14**	---	---

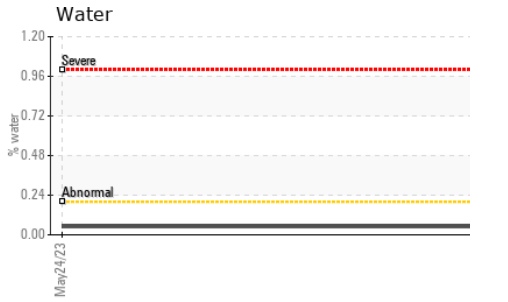
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045		**2.32**	---	---

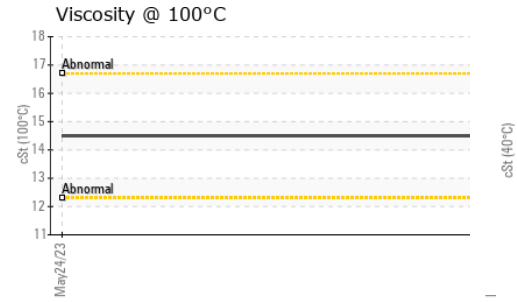
OIL ANALYSIS REPORT





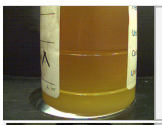




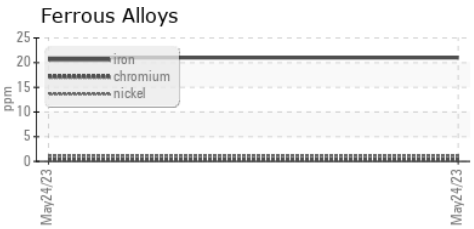


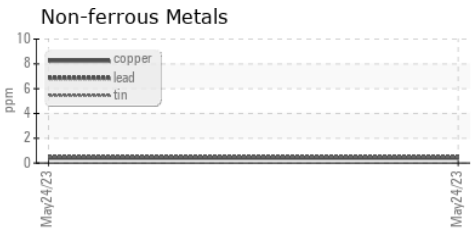
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

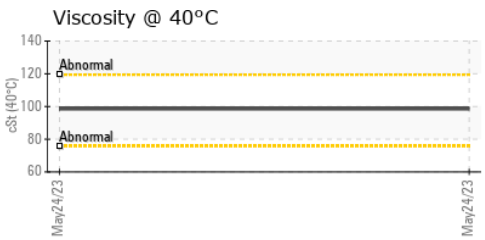
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445		**98.6**	---	---
Visc @ 100°C	cSt	ASTM D445		**14.5**	---	---
Viscosity Index (VI)	Scale	ASTM D2270		**152**	---	---

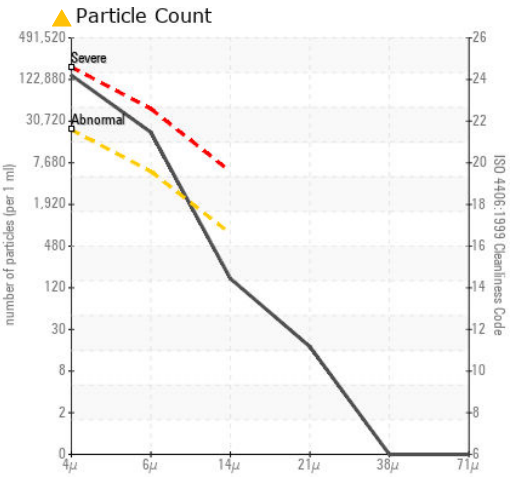
SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

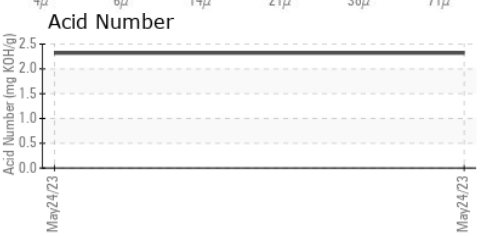
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0828689 **Received** : 22 Jun 2023
Lab Number : 05881474 **Diagnosed** : 30 Jun 2023
Unique Number : 10526577 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

Certificate L2367

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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