



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
GROVE 4301 (S/N 71183)
Component
Rear Left Final Drive
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0023388	---	---
Sample Date		Client Info		11 Jan 2023	---	---
Machine Age	hrs	Client Info		5255	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

Gear wear is indicated.

Iron	ppm	ASTM D5185m	>500	▲ 817	---	---
Chromium	ppm	ASTM D5185m	>10	3	---	---
Nickel	ppm	ASTM D5185m	>10	2	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m	>25	3	---	---
Lead	ppm	ASTM D5185m	>25	▲ 37	---	---
Copper	ppm	ASTM D5185m	>50	44	---	---
Tin	ppm	ASTM D5185m	>10	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	MODER	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

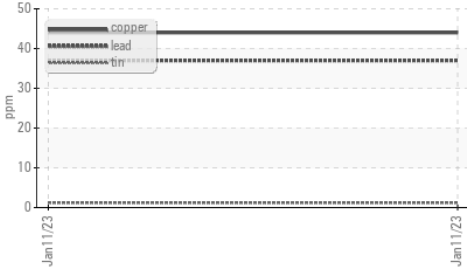
Silicon	ppm	ASTM D5185m	>75	39	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Water		WC Method	>0.2	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

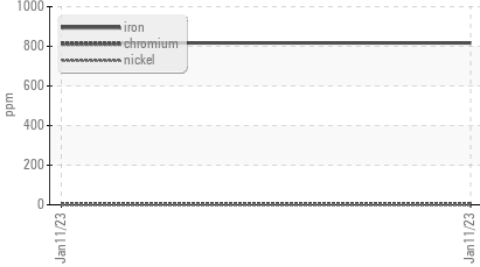
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>170	32	---	---
Boron	ppm	ASTM D5185m	400	71	---	---
Barium	ppm	ASTM D5185m	200	8	---	---
Molybdenum	ppm	ASTM D5185m	12	<1	---	---
Manganese	ppm	ASTM D5185m		21	---	---
Magnesium	ppm	ASTM D5185m	12	2	---	---
Calcium	ppm	ASTM D5185m	150	37	---	---
Phosphorus	ppm	ASTM D5185m	1650	977	---	---
Zinc	ppm	ASTM D5185m	125	16	---	---
Sulfur	ppm	ASTM D5185m	22500	23394	---	---
Visc @ 40°C	cSt	ASTM D445	143	135	---	---

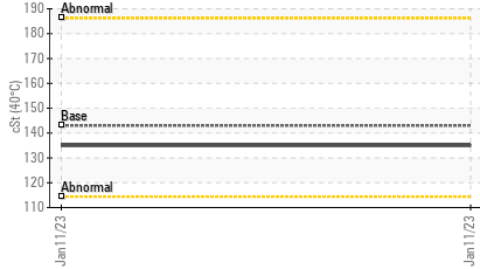
▲ Non-ferrous Metals



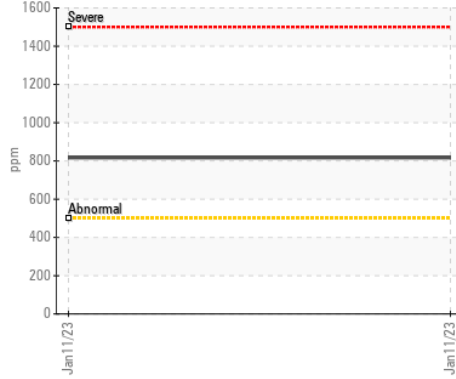
▲ Ferrous Alloys



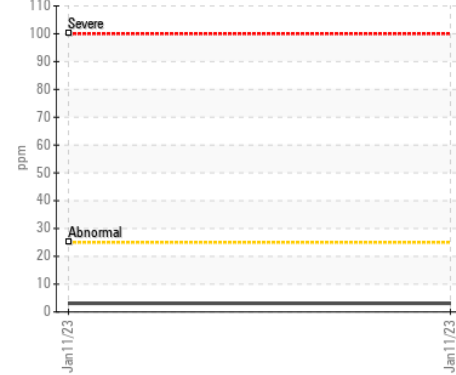
Viscosity @ 40°C



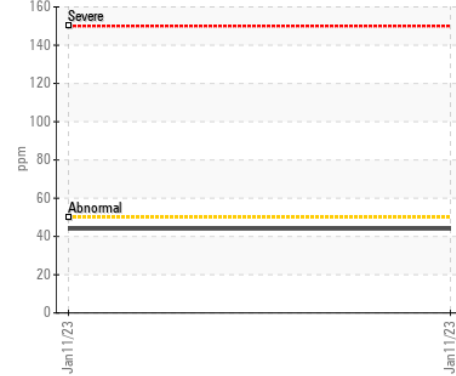
▲ Iron (ppm)



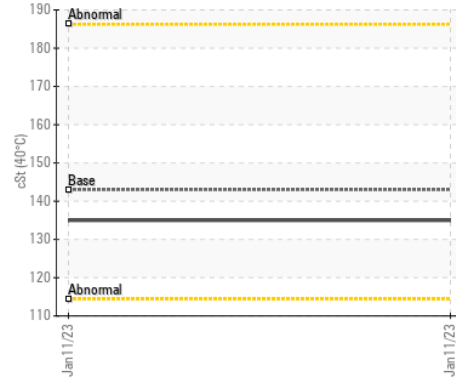
Aluminum (ppm)



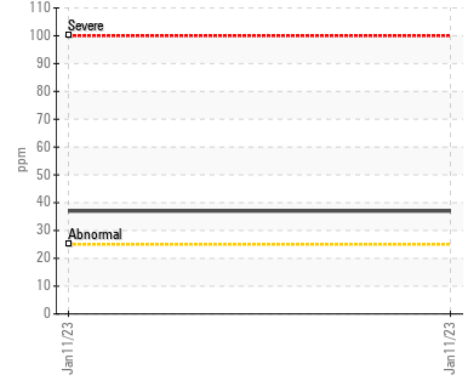
Copper (ppm)



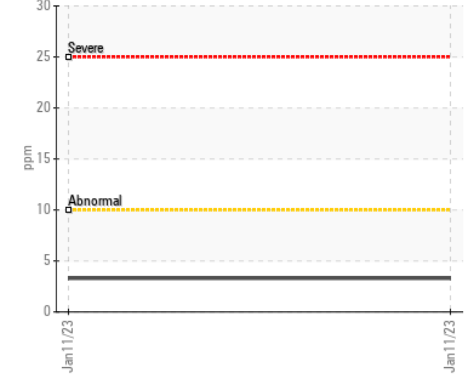
Viscosity @ 40°C



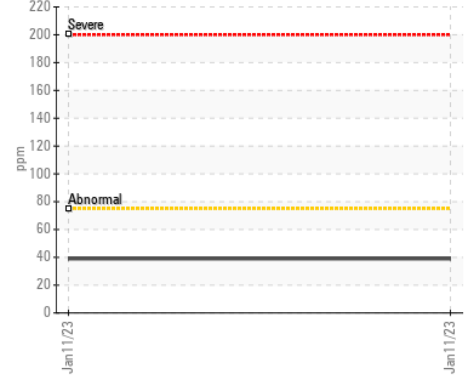
▲ Lead (ppm)



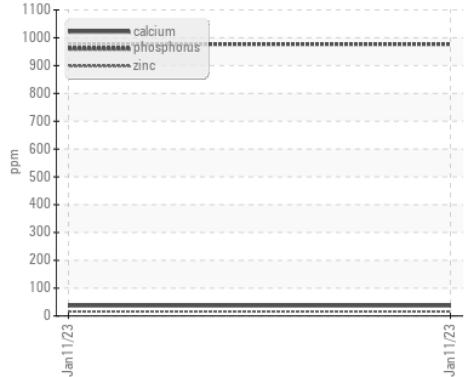
Chromium (ppm)



Silicon (ppm)



Additives



Certificate L2367

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

Sample No. : DC0023388

Lab Number : 05738679

Unique Number : 10293278

Test Package : MOB 1

Received : 13 Jan 2023

Tested : 16 Jan 2023

Diagnosed : 16 Jan 2023 - Don Baldrige

ABERDEEN PROVING GROUND

6721 RARITON AVENUE

ABERDEEN, MD

US 21005

Contact: TONY DAVIS

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T: (410)688-1725

F:

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)