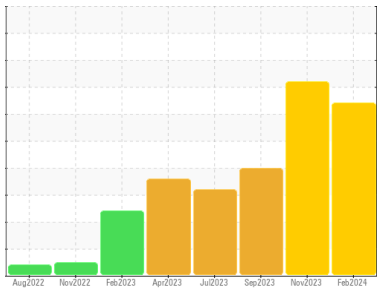
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
2126944
Component
Rear Differential
Fluid
GEAR OIL SAE 75W90 (--- QTS)

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. We recommend an early resample to monitor this condition.

Wear
Gear wear is indicated.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a moderate concentration of water 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		**PCA0114772**	PCA0113246	PCA0106123
Sample Date		Client Info		**11 Feb 2024**	27 Nov 2023	11 Sep 2023
Machine Age	mls	Client Info		**176450**	153425	132152
Oil Age	mls	Client Info		**176450**	153425	132152
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	▲ **2067**	▲ 1469	▲ 1046
Chromium	ppm	ASTM D5185m	>10	▲ **17**	▲ 13	9
Nickel	ppm	ASTM D5185m	>10	▲ **62**	▲ 60	▲ 51
Titanium	ppm	ASTM D5185m		**5**	3	1
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>25	● **59**	● 26	● 17
Lead	ppm	ASTM D5185m	>25	**<1**	<1	1
Copper	ppm	ASTM D5185m	>100	**32**	31	21
Tin	ppm	ASTM D5185m	>10	**2**	<1	2
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

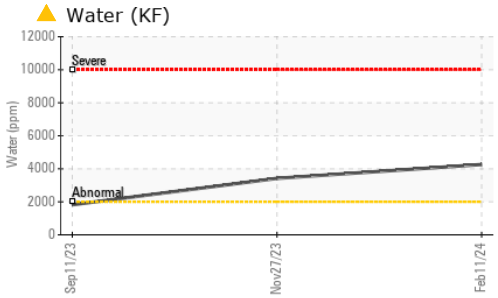
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	**23**	37	50
Barium	ppm	ASTM D5185m	200	**0**	0	0
Molybdenum	ppm	ASTM D5185m	12	**<1**	1	<1
Manganese	ppm	ASTM D5185m		**36**	32	26
Magnesium	ppm	ASTM D5185m	12	**6**	9	0
Calcium	ppm	ASTM D5185m	150	**105**	58	35
Phosphorus	ppm	ASTM D5185m	1650	**927**	1031	1082
Zinc	ppm	ASTM D5185m	125	**52**	48	35
Sulfur	ppm	ASTM D5185m	22500	**25218**	26399	24779

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	▲ **384**	▲ 211	▲ 147
Sodium	ppm	ASTM D5185m		**18**	9	10
Potassium	ppm	ASTM D5185m	>20	**13**	11	6
Water	%	ASTM D6304	>.2	▲ **0.426**	▲ 0.342	0.182
ppm Water	ppm	ASTM D6304	>2000	▲ **4260**	▲ 3420	1820

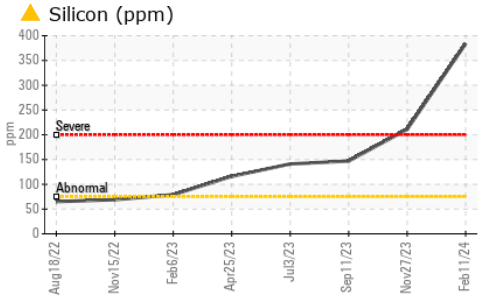
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	▲ **0.2%**	0.2%	0.2%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

OIL ANALYSIS REPORT

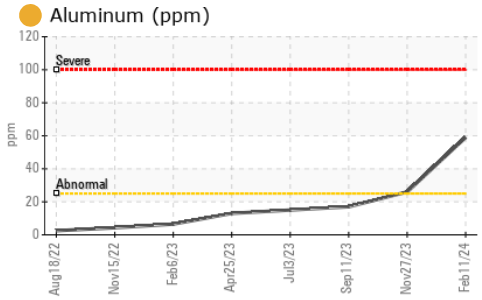
Water (KF)



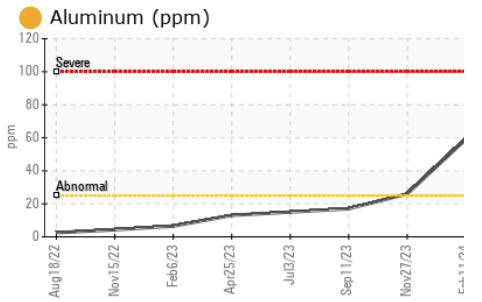
Silicon (ppm)



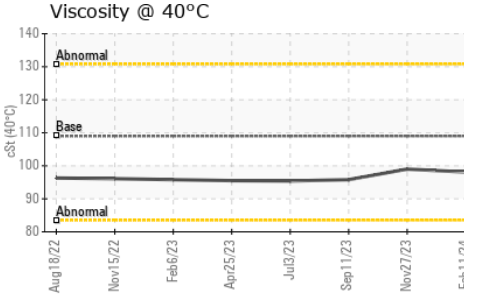
Aluminum (ppm)



Aluminum (ppm)



Viscosity @ 40°C

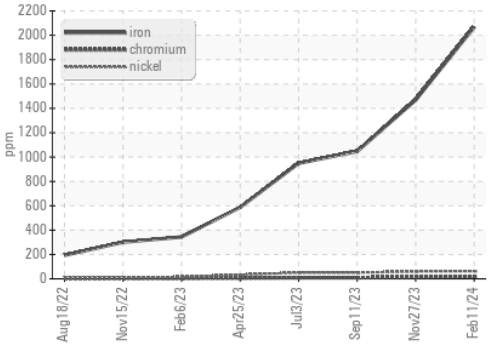


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	109	**98.1**	99.0	95.8

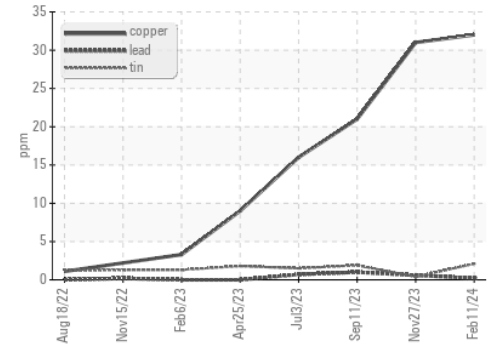
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

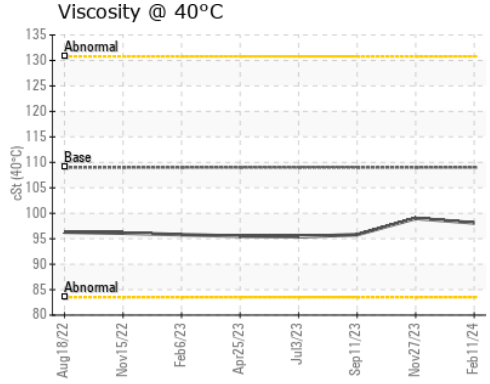
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0114772
Lab Number : 06118642
Unique Number : 10927475
Test Package : FLEET (Additional Tests: KF)

Received : 14 Mar 2024
Tested : 18 Mar 2024
Diagnosed : 18 Mar 2024 - Don Baldridge

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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