



Machine Id
2126944

Component
Rear Differential

Fluid
GEAR OIL SAE 75W90 (--- QTS)

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 that you drain the oil from the component if this has not already been done. 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. Excessive free water present. There is a moderate concentration of water present in the oil.

FLUID CONDITION

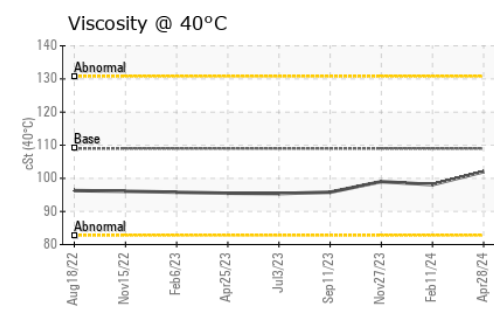
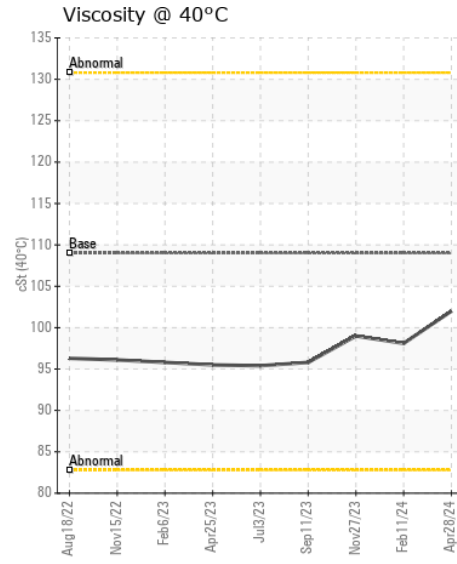
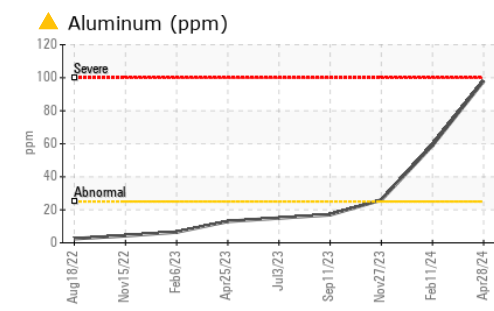
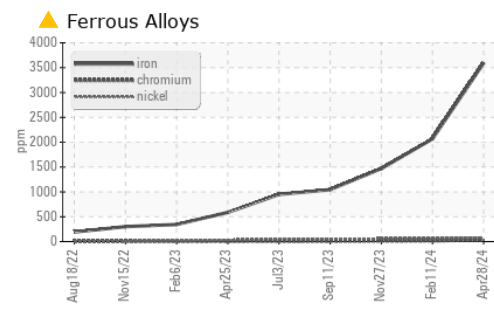
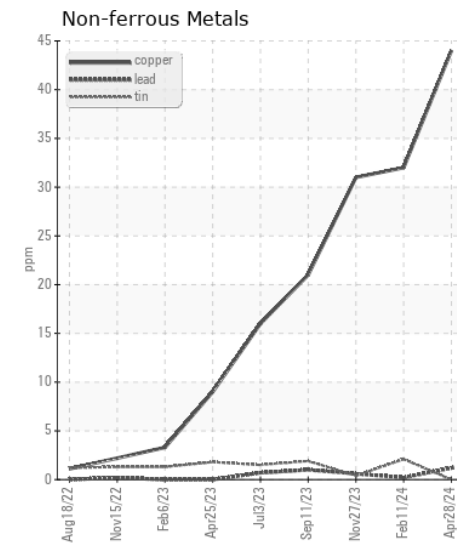
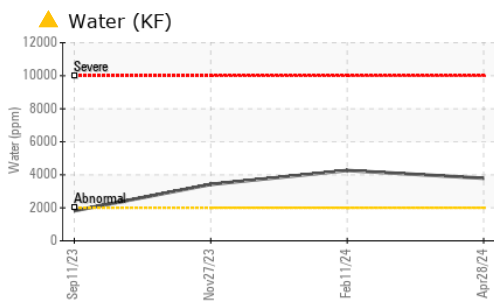
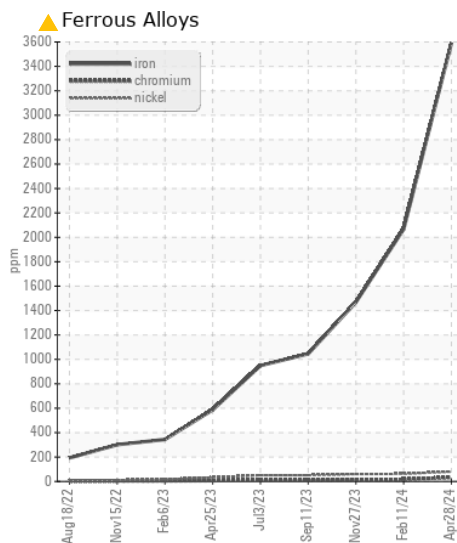
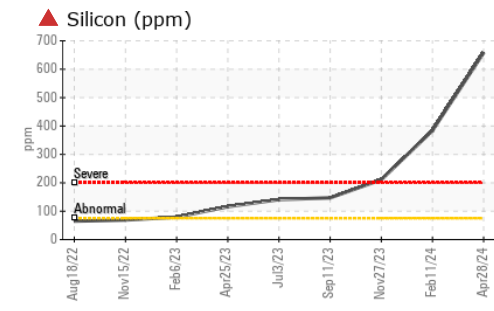
The condition of the oil is acceptable for the time in service. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0125029	PCA0114772	PCA0113246
Sample Date		Client Info		28 Apr 2024	11 Feb 2024	27 Nov 2023
Machine Age	mls	Client Info		195961	176450	153425
Oil Age	mls	Client Info		195961	176450	153425
Filter Age	mls	Client Info		195961	176450	153425
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Not Changed	Not Changed	Not Changed
Sample Status				SEVERE	ABNORMAL	ABNORMAL

Iron	ppm	ASTM D5185m	>500	▲ 3592	▲ 2067	▲ 1469
Chromium	ppm	ASTM D5185m	>10	▲ 32	▲ 17	▲ 13
Nickel	ppm	ASTM D5185m	>10	▲ 81	▲ 62	▲ 60
Titanium	ppm	ASTM D5185m		9	5	3
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>25	▲ 98	● 59	● 26
Lead	ppm	ASTM D5185m	>25	1	<1	<1
Copper	ppm	ASTM D5185m	>100	44	32	31
Tin	ppm	ASTM D5185m	>10	0	2	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>75	▲ 658	▲ 384	▲ 211
Potassium	ppm	ASTM D5185m	>20	24	13	11
Water	%	ASTM D6304	>.2	▲ 0.379	▲ 0.426	▲ 0.342
ppm Water	ppm	ASTM D6304	>2000	▲ 3790	▲ 4260	▲ 3420
Silt	scalar	*Visual	NONE	NONE	NONE	▲ HEAVY
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%

Sodium	ppm	ASTM D5185m		32	18	9
Boron	ppm	ASTM D5185m	400	36	23	37
Barium	ppm	ASTM D5185m	200	2	0	0
Molybdenum	ppm	ASTM D5185m	12	2	<1	1
Manganese	ppm	ASTM D5185m		59	36	32
Magnesium	ppm	ASTM D5185m	12	38	6	9
Calcium	ppm	ASTM D5185m	150	184	105	58
Phosphorus	ppm	ASTM D5185m	1650	1035	927	1031
Zinc	ppm	ASTM D5185m	125	97	52	48
Sulfur	ppm	ASTM D5185m	22500	26457	25218	26399
Visc @ 40°C	cSt	ASTM D445	109	102	98.1	99.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0125029 **Received** : 09 May 2024
Lab Number : 06174450 **Tested** : 13 May 2024
Unique Number : 11020503 **Diagnosed** : 13 May 2024 - Angela Borella
Test Package : FLEET (Additional Tests: KF)

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 T:
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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)