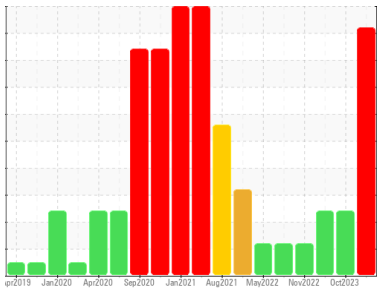
PROBLEM SUMMARY

Sample Rating Trend

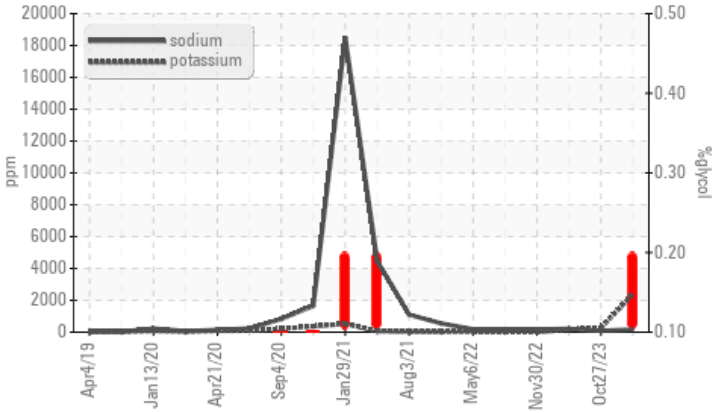


GLYCOL

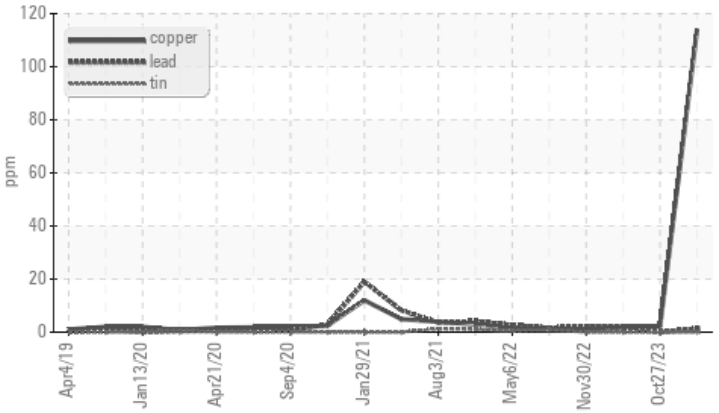
Area
GFL035
Machine Id
12005
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (38 QTS)

COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Non-ferrous Metals



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	ABNORMAL	ABNORMAL
Copper	ppm	ASTM D5185m	>100	▲ **114**	2	2
Sodium	ppm	ASTM D5185m	>158	▲ **170**	▲ 85	▲ 209
Potassium	ppm	ASTM D5185m	>20	▲ **2379**	▲ 279	▲ 164
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

Customer Id: GFL035
Sample No.: GFL0116458
Lab Number: 06137262
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

GLYCOL

27 Oct 2023 Diag: Jonathan Hester

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

GLYCOL

01 Mar 2023 Diag: Jonathan Hester

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

GLYCOL

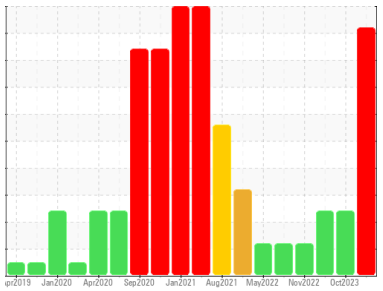
30 Nov 2022 Diag: Don Baldridge

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. Sodium and/or potassium levels remain elevated. Test for glycol is negative. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Area
GFL035
Machine Id
12005
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (38 QTS)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear
The copper level is abnormal.

Contamination
Sodium and/or potassium levels are high. Test for glycol is positive. High concentration of dirt present in the oil.

Fluid Condition
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0116458**	GFL0085233	GFL0053171
Sample Date		Client Info		**22 Mar 2024**	27 Oct 2023	01 Mar 2023
Machine Age	hrs	Client Info		**18706**	18706	18706
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>75	**51**	48	63
Chromium	ppm	ASTM D5185m	>5	**3**	3	3
Nickel	ppm	ASTM D5185m	>4	**2**	<1	4
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>15	**4**	8	5
Lead	ppm	ASTM D5185m	>25	**1**	0	2
Copper	ppm	ASTM D5185m	>100	▲ **114**	2	2
Tin	ppm	ASTM D5185m	>4	**0**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**6**	7	9
Barium	ppm	ASTM D5185m	10	**0**	4	0
Molybdenum	ppm	ASTM D5185m	100	**48**	62	76
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**666**	800	991
Calcium	ppm	ASTM D5185m	3000	**1314**	913	1336
Phosphorus	ppm	ASTM D5185m	1150	**870**	1009	1054
Zinc	ppm	ASTM D5185m	1350	**1217**	1090	1382
Sulfur	ppm	ASTM D5185m	4250	**3663**	2668	3618

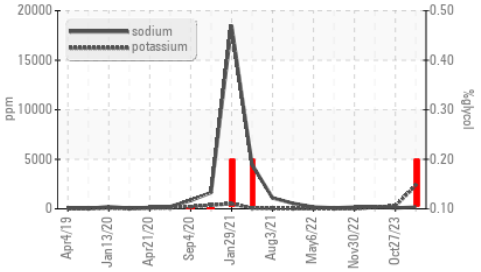
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**16**	17	20
Sodium	ppm	ASTM D5185m	>158	▲ **170**	▲ 85	▲ 209
Potassium	ppm	ASTM D5185m	>20	▲ **2379**	▲ 279	▲ 164
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.7**	1.4	1.8
Nitration	Abs/cm	*ASTM D7624	>20	**11.0**	9.0	15.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.2**	20.5	30.7

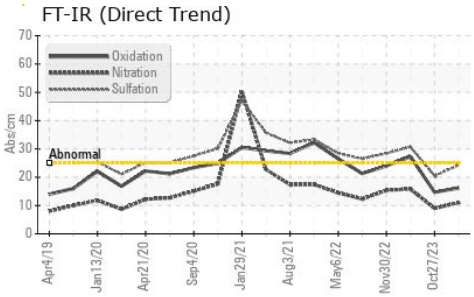
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.2**	14.7	27.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**9.3**	8.9	6.3

OIL ANALYSIS REPORT

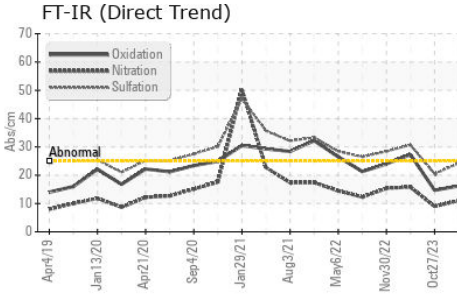
Glycol Contamination



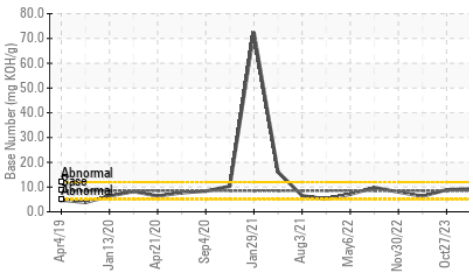
FT-IR (Direct Trend)



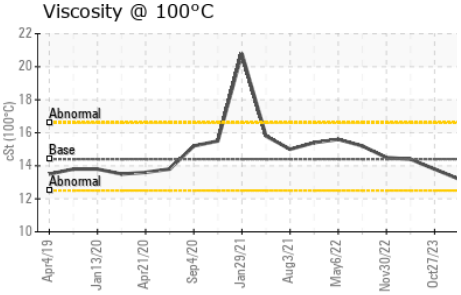
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

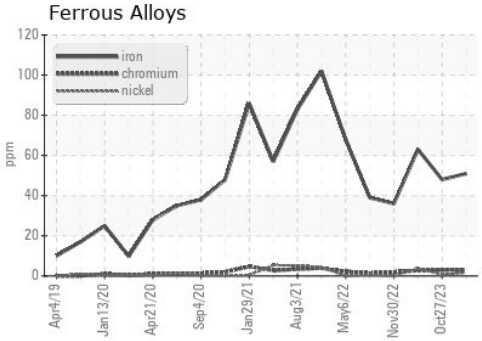


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

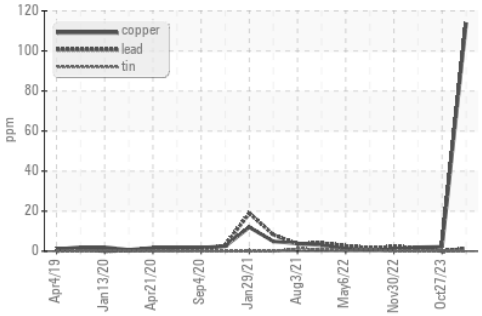
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**13.2**	13.8	14.4

GRAPHS

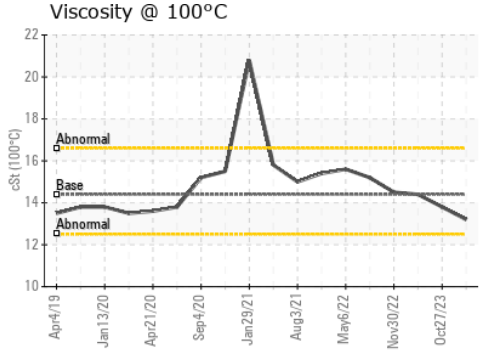
Ferrous Alloys



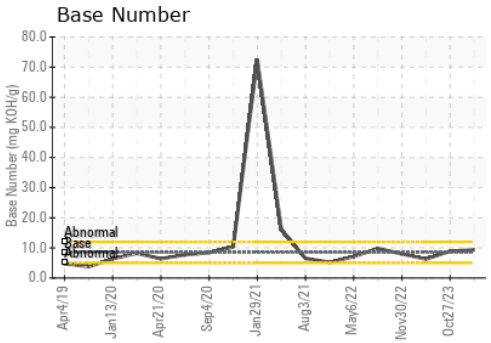
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116458
Lab Number : 06137262
Unique Number : 10956727
Test Package : FLEET (Additional Tests: Glycol)

Received : 03 Apr 2024
Tested : 04 Apr 2024
Diagnosed : 05 Apr 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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