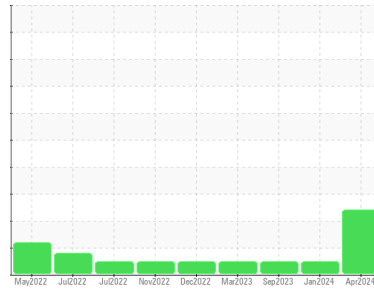




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
422042-24

Component
Diesel Engine

Fluid
MOBIL DELVAC 1300 SUPER15W40 (10 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

Fluid Condition

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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0110804	GFL0088462	GFL0088472
Sample Date	Client Info	09 Apr 2024	12 Jan 2024	13 Sep 2023
Machine Age	hrs	24710	24154	23634
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<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 >100	10	8	4
Chromium	ppm ASTM D5185m >20	0	0	<1
Nickel	ppm ASTM D5185m >4	0	0	<1
Titanium	ppm ASTM D5185m	<1	0	<1
Silver	ppm ASTM D5185m >3	0	0	<1
Aluminum	ppm ASTM D5185m >20	1	3	2
Lead	ppm ASTM D5185m >40	0	0	1
Copper	ppm ASTM D5185m >330	0	<1	<1
Tin	ppm ASTM D5185m >15	0	0	1
Vanadium	ppm ASTM D5185m	0	<1	<1
Cadmium	ppm ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	33	214	327
Barium	ppm ASTM D5185m 0	0	0	44
Molybdenum	ppm ASTM D5185m 0	14	84	74
Manganese	ppm ASTM D5185m	0	0	1
Magnesium	ppm ASTM D5185m 0	44	355	363
Calcium	ppm ASTM D5185m	2052	1322	1242
Phosphorus	ppm ASTM D5185m	885	1065	927
Zinc	ppm ASTM D5185m	1033	1225	1162
Sulfur	ppm ASTM D5185m	3465	3122	3456

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	6	6
Sodium	ppm ASTM D5185m	▲ 45	17	3
Potassium	ppm ASTM D5185m >20	▲ 52	1	4
Glycol	% *ASTM D2982	0.0	NEG	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.4	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	10.4	8.8	7.0
Sulfation	Abs/.1mm *ASTM D7415 >30	25.2	22.3	18.9

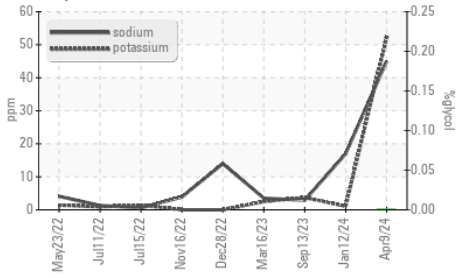
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.5	16.6	12.8
Base Number (BN)	mg KOH/g ASTM D2896 9.4	4.6	6.0	7.3

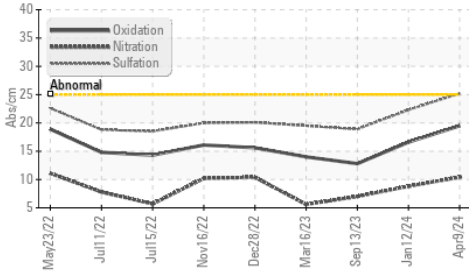


OIL ANALYSIS REPORT

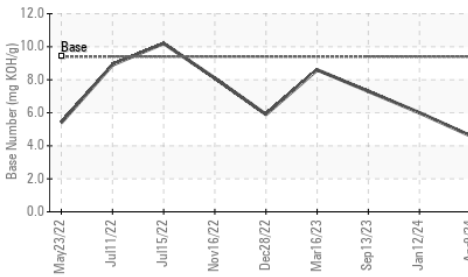
Glycol Contamination



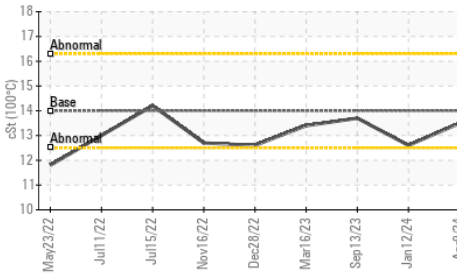
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

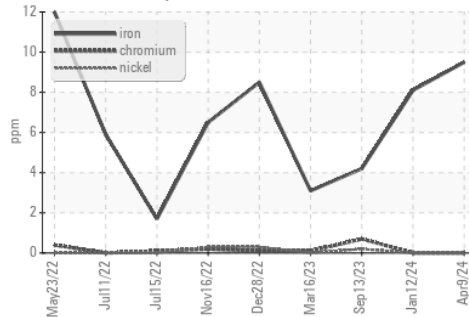


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

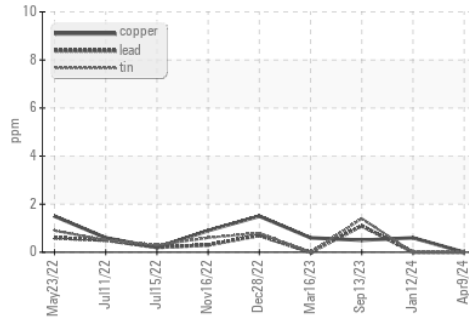
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 14	13.5	12.6	13.7

GRAPHS

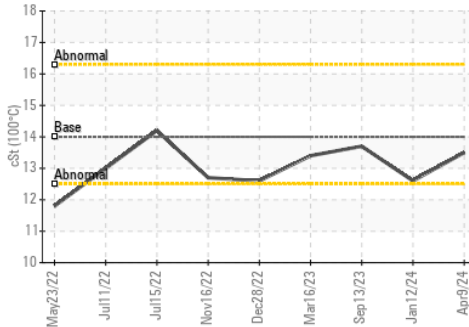
Ferrous Alloys



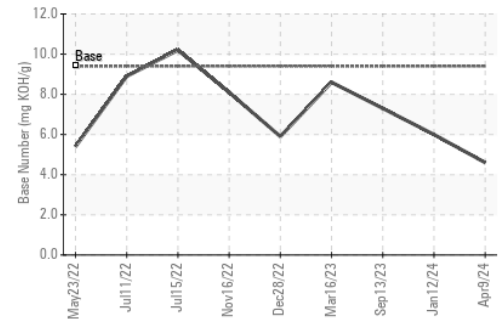
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0110804

Lab Number : 06148216

Unique Number : 10978294

Test Package : FLEET (Additional Tests: Glycol)

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)

Received : 15 Apr 2024

Tested : 17 Apr 2024

Diagnosed : 17 Apr 2024 - Jonathan Hester

GFL Environmental - 146 - Augusta

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Augusta, GA

US 30909

Contact: JEFFERY WASHINGTON

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T:

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