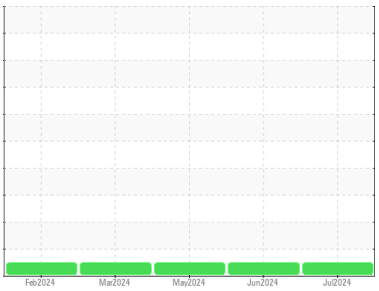
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
434026
Component
Natural Gas Engine
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

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		**GFL0127181**	GFL0122071	GFL0116543
Sample Date		Client Info		**10 Jul 2024**	03 Jun 2024	14 May 2024
Machine Age	hrs	Client Info		**1203**	928	801
Oil Age	hrs	Client Info		**1203**	928	801
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**41**	33	33
Chromium	ppm	ASTM D5185m	>4	**2**	<1	1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>9	**18**	13	10
Lead	ppm	ASTM D5185m	>30	**9**	4	2
Copper	ppm	ASTM D5185m	>35	**17**	12	10
Tin	ppm	ASTM D5185m	>4	**2**	2	1
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		**7**	15	6
Barium	ppm	ASTM D5185m		**7**	7	7
Molybdenum	ppm	ASTM D5185m		**56**	55	51
Manganese	ppm	ASTM D5185m		**4**	4	4
Magnesium	ppm	ASTM D5185m		**800**	766	833
Calcium	ppm	ASTM D5185m		**1302**	1195	1281
Phosphorus	ppm	ASTM D5185m		**704**	715	686
Zinc	ppm	ASTM D5185m		**936**	869	947
Sulfur	ppm	ASTM D5185m		**2206**	2477	2766

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**82**	80	82
Sodium	ppm	ASTM D5185m		**2**	6	4
Potassium	ppm	ASTM D5185m	>20	**92**	72	52

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**12.9**	11.8	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.5**	23.4	22.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**23.6**	21.4	20.6
Base Number (BN)	mg KOH/g	ASTM D2896		**3.5**	3.5	3.8

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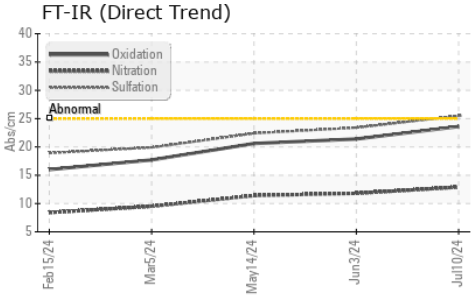
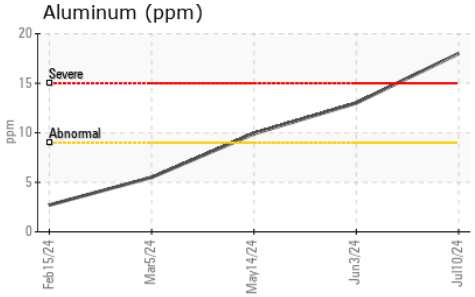
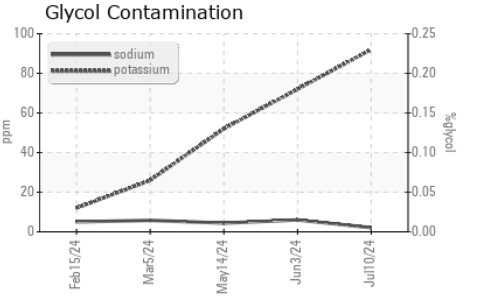
FT-IR (Direct Trend)



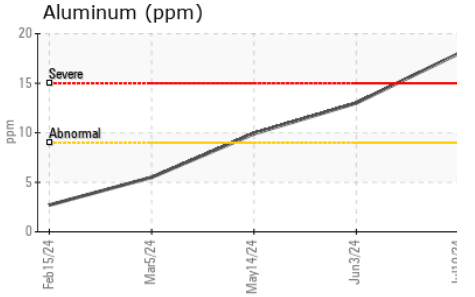
Aluminum (ppm)



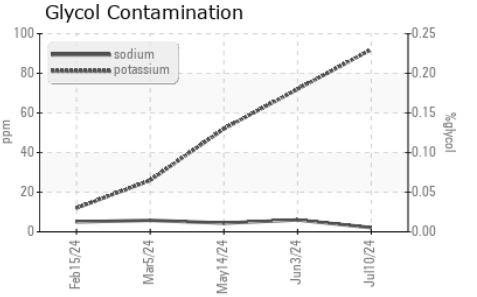
Glycol Contamination



Aluminum (ppm)



Glycol Contamination

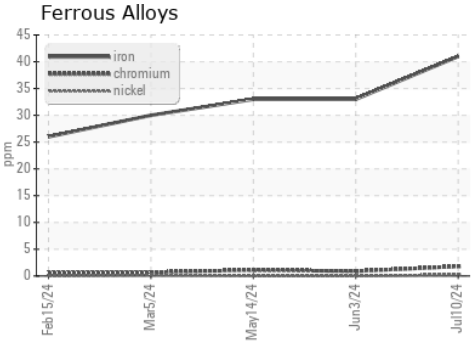


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

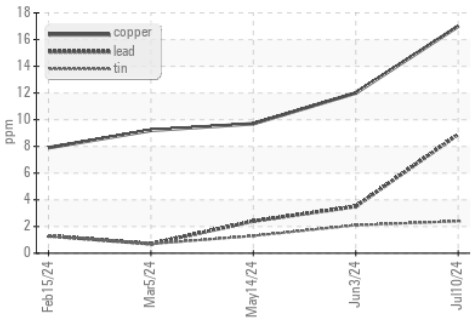
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**12.1**	11.9	11.8

GRAPHS

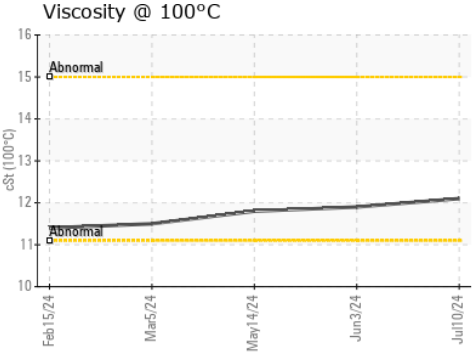
Ferrous Alloys



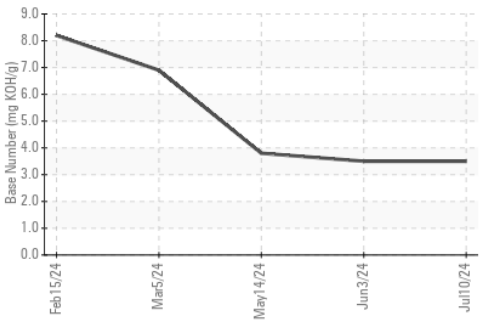
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0127181
Lab Number : 06235531
Unique Number : 11124365
Test Package : FLEET (Additional Tests: Glycol)

Received : 15 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 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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F:

Report Id: GFL652 [WUSCAR] 06235531 (Generated: 07/16/2024 12:04:20) Rev: 1

Submitted By: TECHNICIAN ACCOUNT