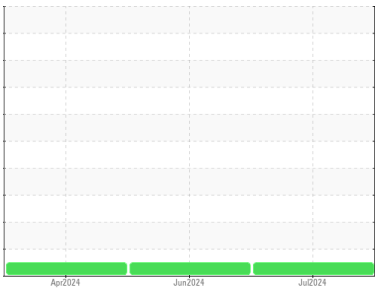
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
814019
Component
Diesel Engine
Fluid
NOT GIVEN (--- 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
Metal levels are typical for a new component breaking in.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0123008**	GFL0123021	GFL0119402
Sample Date		Client Info		**06 Jul 2024**	04 Jun 2024	25 Apr 2024
Machine Age	hrs	Client Info		**525**	372	204
Oil Age	hrs	Client Info		**153**	168	204
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**28**	25	19
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**4**	5	2
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	<1	<1
Aluminum	ppm	ASTM D5185m	>20	**6**	6	6
Lead	ppm	ASTM D5185m	>40	**2**	3	0
Copper	ppm	ASTM D5185m	>330	**271**	196	8
Tin	ppm	ASTM D5185m	>15	**2**	3	2
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**146**	268	459
Barium	ppm	ASTM D5185m		**<1**	0	<1
Molybdenum	ppm	ASTM D5185m		**122**	132	133
Manganese	ppm	ASTM D5185m		**5**	5	5
Magnesium	ppm	ASTM D5185m		**773**	751	780
Calcium	ppm	ASTM D5185m		**1557**	1571	1506
Phosphorus	ppm	ASTM D5185m		**780**	742	750
Zinc	ppm	ASTM D5185m		**903**	896	873
Sulfur	ppm	ASTM D5185m		**2762**	2804	2898

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**56**	64	68
Sodium	ppm	ASTM D5185m		**4**	4	3
Potassium	ppm	ASTM D5185m	>20	**7**	7	1
Fuel	%	ASTM D3524	>5	**<1.0**	<1.0	0.2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**10.1**	9.2	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.1**	24.6	24.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.8**	22.2	20.2
Base Number (BN)	mg KOH/g	ASTM D2896		**7.9**	8.4	9.2

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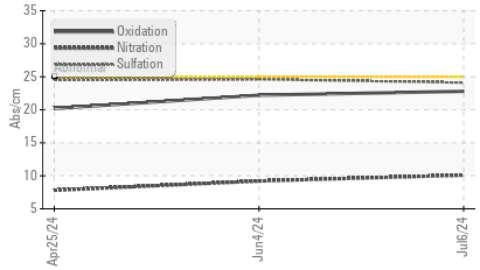
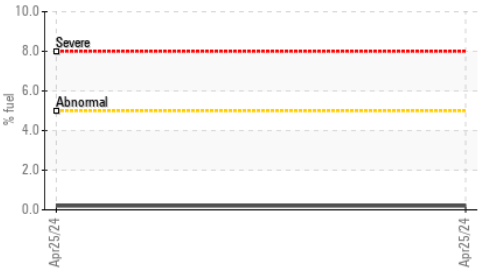
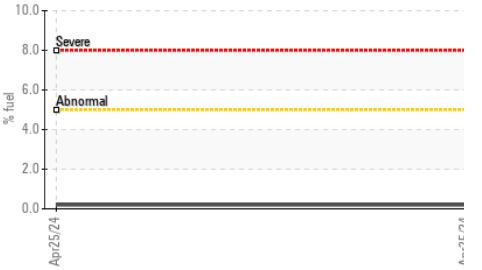
FT-IR (Direct Trend)



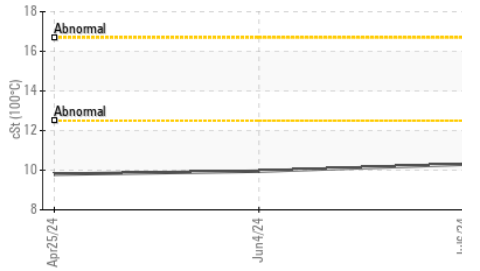
Fuel Dilution



Fuel Dilution



Viscosity @ 100°C

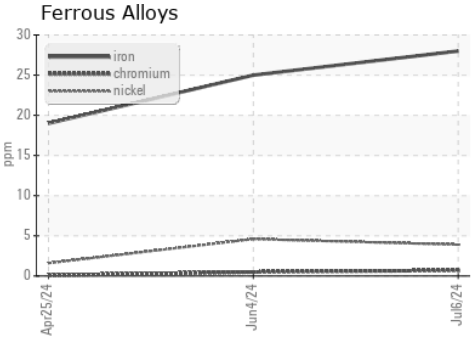


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

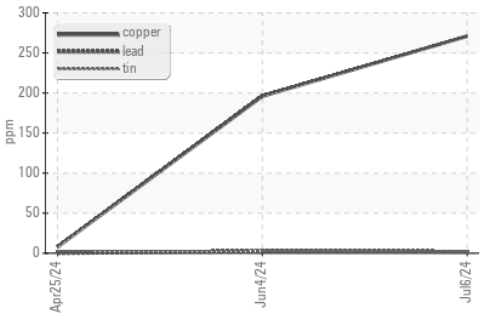
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**10.3**	9.95	9.8

GRAPHS

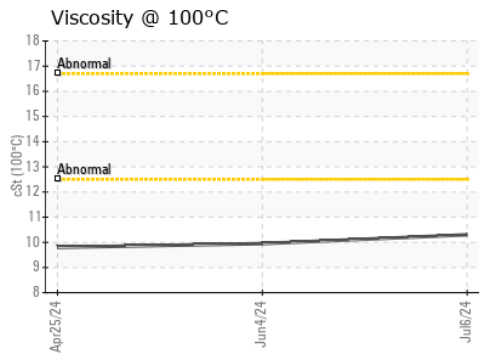
Ferrous Alloys



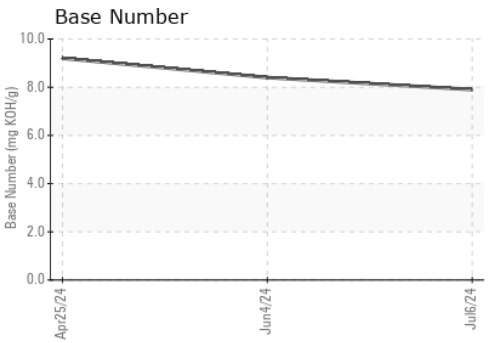
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0123008 **Received** : 11 Jul 2024
Lab Number : 06234346 **Tested** : 12 Jul 2024
Unique Number : 11123180 **Diagnosed** : 14 Jul 2024 - Don Baldridge
Test Package : FLEET (Additional Tests: FuelDilution)

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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Report Id: GFL814 [WUSCAR] 06234346 (Generated: 07/14/2024 12:18:08) Rev: 1

Submitted By: Nicole Walls