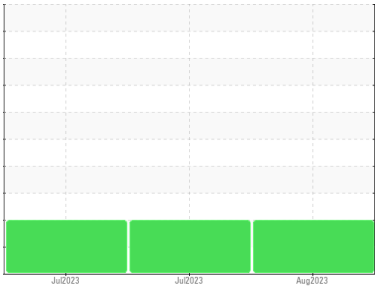
PROBLEM SUMMARY

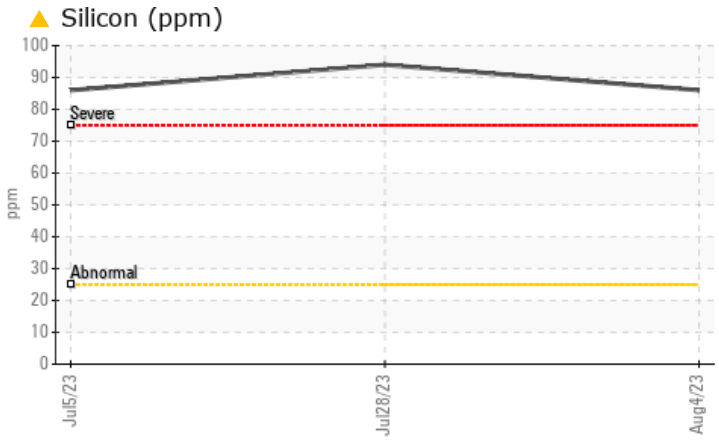
Machine Id
414059
Component
Front Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- LTR)

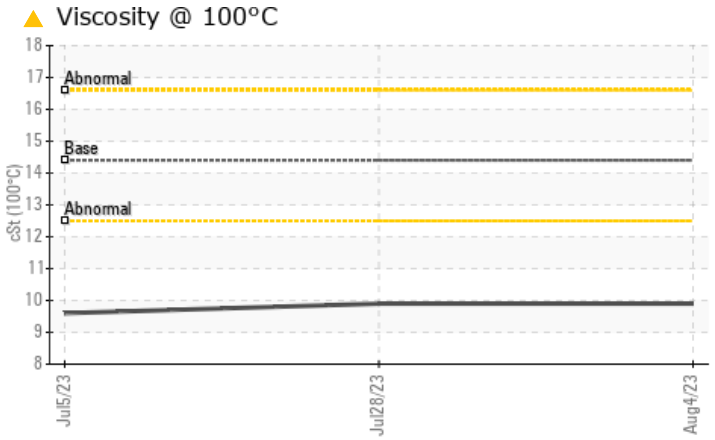
Sample Rating Trend



DIRT

COMPONENT CONDITION SUMMARY





RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Silicon	ppm	ASTM D5185m	>25	▲ **86**	▲ 94	▲ 86
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **9.9**	▲ 9.9	▲ 9.6

Customer Id: GFL166
Sample No.: GFL0087835
Lab Number: 05919637
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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

28 Jul 2023 Diag: Jonathan Hester

DIRT

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

05 Jul 2023 Diag: Jonathan Hester

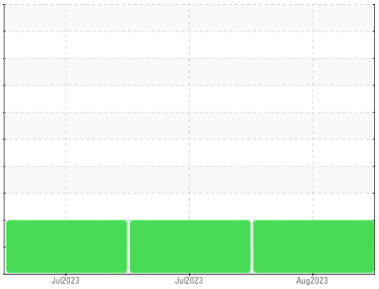
DIRT

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
414059
Component
Front Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0087835**	GFL0087837	GFL0087845
Sample Date		Client Info		**04 Aug 2023**	28 Jul 2023	05 Jul 2023
Machine Age	hrs	Client Info		**366**	3123	3124
Oil Age	hrs	Client Info		**366**	200	600
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	0.5
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**27**	28	24
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**0**	<1	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**1**	1	<1
Aluminum	ppm	ASTM D5185m	>20	**8**	9	9
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	**54**	30	21
Tin	ppm	ASTM D5185m	>15	**2**	2	2
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**256**	285	370
Barium	ppm	ASTM D5185m	10	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	100	**106**	112	109
Manganese	ppm	ASTM D5185m		**3**	3	3
Magnesium	ppm	ASTM D5185m	450	**690**	719	633
Calcium	ppm	ASTM D5185m	3000	**1437**	1487	1497
Phosphorus	ppm	ASTM D5185m	1150	**728**	757	685
Zinc	ppm	ASTM D5185m	1350	**876**	923	826
Sulfur	ppm	ASTM D5185m	4250	**2895**	3082	2909

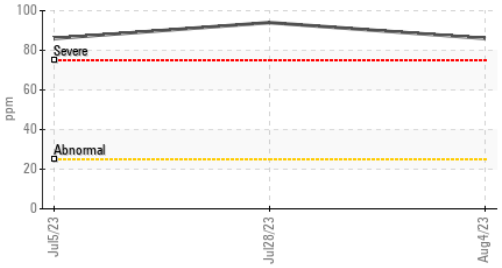
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **86**	▲ 94	▲ 86
Sodium	ppm	ASTM D5185m	>158	**3**	4	5
Potassium	ppm	ASTM D5185m	>20	**20**	20	23

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.2**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**7.2**	7.3	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.9**	24.8	25.6

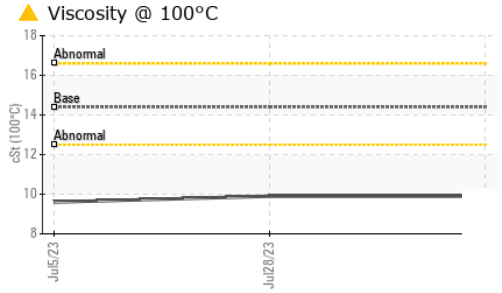
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.6**	20.2	20.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**8.6**	9.1	9.9

OIL ANALYSIS REPORT

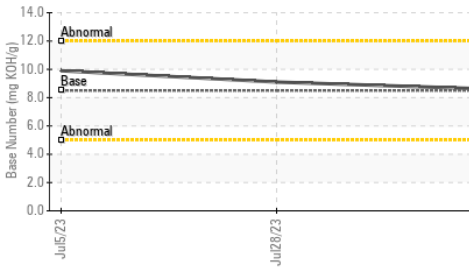
Silicon (ppm)



Viscosity @ 100°C



Base Number

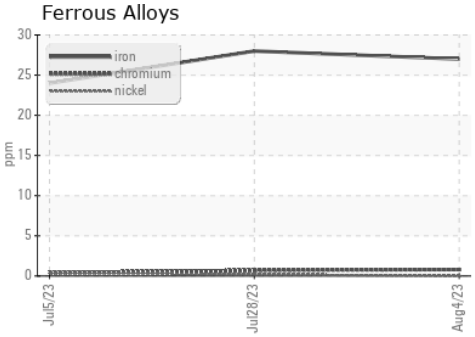


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

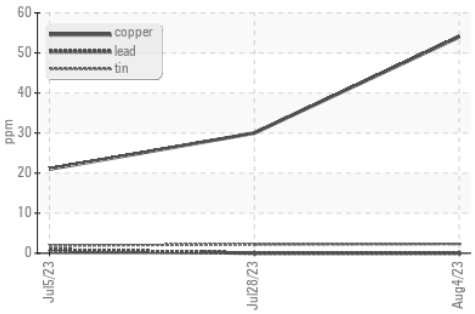
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **9.9**	▲ 9.9	▲ 9.6

GRAPHS

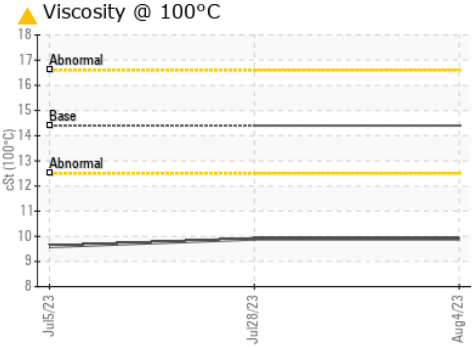
Ferrous Alloys



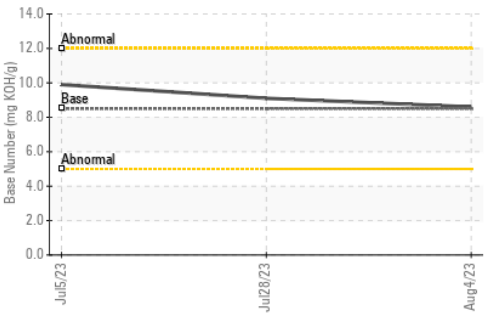
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087835
Lab Number : 05919637
Unique Number : 10591551
Test Package : FLEET

Received : 09 Aug 2023
Diagnosed : 10 Aug 2023
Diagnostician : 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)

GFL Environmental - 166 - Phenix City
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Phenix City, AL
US 36869
Contact: DEAN PEACE JR
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T:
F:

Report Id: GFL166 [WUSCAR] 05919637 (Generated: 08/10/2023 12:16:17) Rev: 1

Submitted By: DARRIN WRIGHT