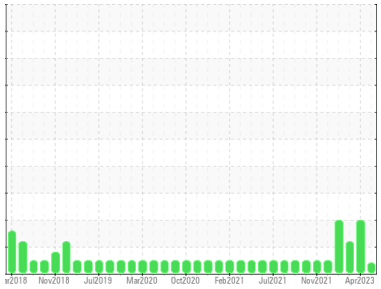
PROBLEM SUMMARY

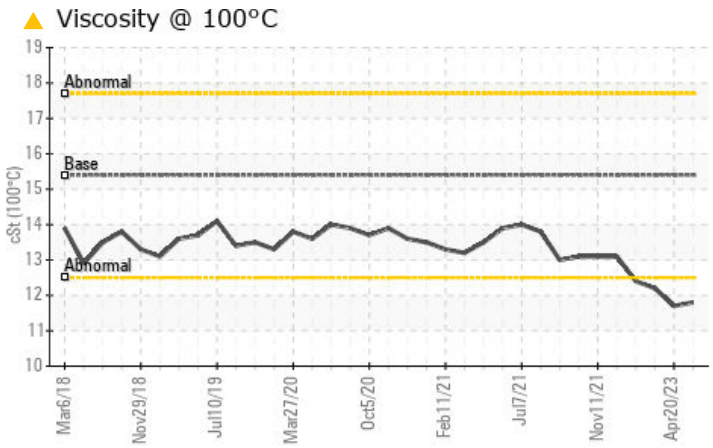
Sample Rating Trend



VISCOSITY

Machine Id
CUMMINS 10861
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

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				**ATTENTION**	ABNORMAL	ABNORMAL
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.8**	▲ 11.7	▲ 12.2

Customer Id: GFL009
Sample No.: GFL0057573
Lab Number: 05899639
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

20 Apr 2023 Diag: Jonathan Hester

WEAR

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Light fuel dilution occurring. 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

27 Jan 2023 Diag: Don Baldridge

WEAR

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. There is no indication of any contamination in the oil. 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

09 Dec 2022 Diag: Doug Bogart

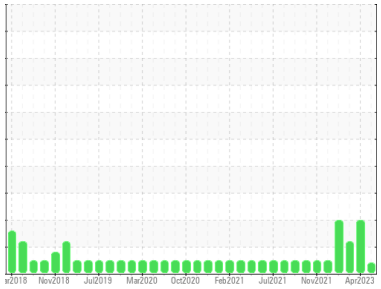
WEAR

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
CUMMINS 10861
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

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

There is no indication of any contamination in the oil.

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		**GFL0057573**	GFL0057650	GFL0057634
Sample Date		Client Info		**12 Jul 2023**	20 Apr 2023	27 Jan 2023
Machine Age	hrs	Client Info		**13491**	14234	14234
Oil Age	hrs	Client Info		**0**	13305	14234
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**ATTENTION**	ABNORMAL	ABNORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>75	**30**	35	20
Chromium	ppm	ASTM D5185m	>5	**2**	2	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**5**	3	4
Lead	ppm	ASTM D5185m	>25	**<1**	<1	0
Copper	ppm	ASTM D5185m	>100	**76**	▲ 192	▲ 132
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**8**	5	9
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**72**	70	62
Manganese	ppm	ASTM D5185m	0	**<1**	1	<1
Magnesium	ppm	ASTM D5185m	1010	**825**	847	750
Calcium	ppm	ASTM D5185m	1070	**1156**	1131	1065
Phosphorus	ppm	ASTM D5185m	1150	**936**	960	931
Zinc	ppm	ASTM D5185m	1270	**1172**	1179	1099
Sulfur	ppm	ASTM D5185m	2060	**2806**	2653	2395

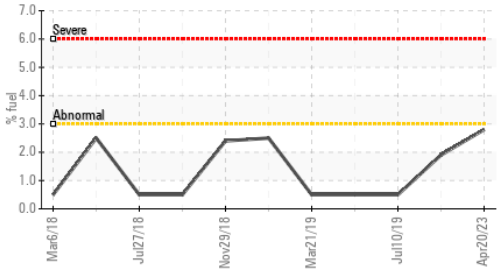
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**5**	7	6
Sodium	ppm	ASTM D5185m		**<1**	2	2
Potassium	ppm	ASTM D5185m	>20	**11**	13	13
Fuel	%	ASTM D3524	>3.0	**<1.0**	▲ 2.8	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.9**	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**9.9**	9.5	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.6**	20.4	18.5

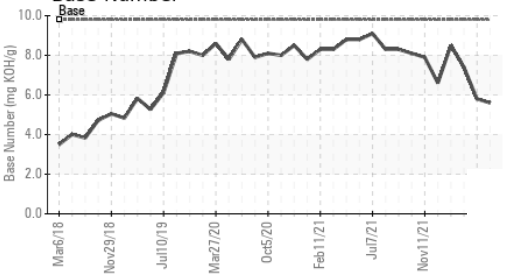
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.9**	16.3	13.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**5.6**	5.8	7.4

OIL ANALYSIS REPORT

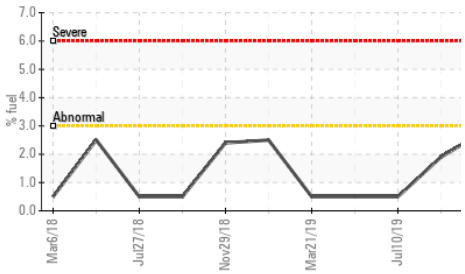
Fuel Dilution



Base Number



Fuel Dilution

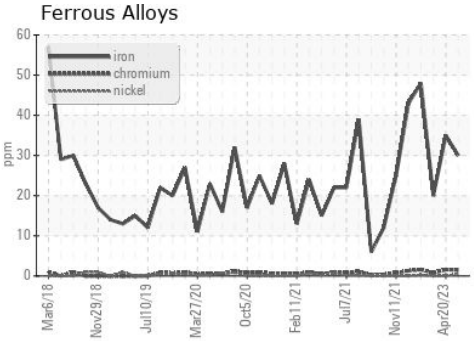


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

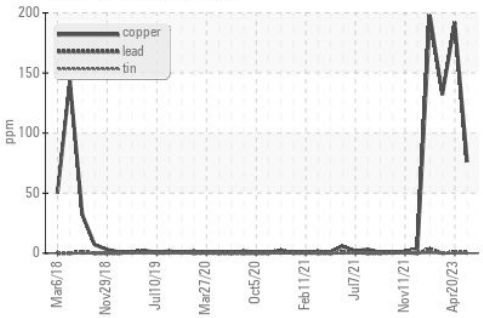
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.8**	▲ 11.7	▲ 12.2

GRAPHS

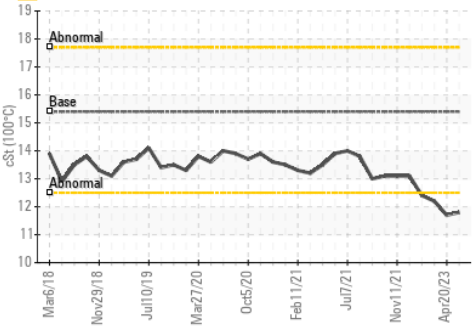
Ferrous Alloys



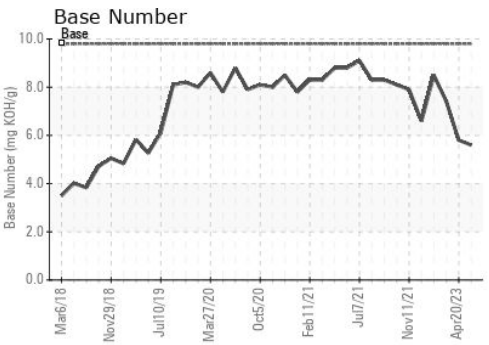
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0057573 **Received** : 17 Jul 2023
Lab Number : 05899639 **Diagnosed** : 19 Jul 2023
Unique Number : 10560995 **Diagnostician** : Jonathan Hester
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)

GFL Environmental - 009 - Fairburn
6905 Roosevelt Hwy
Fairburn, GA
US 30213
Contact: Eric Jones
erjones@gflenv.com
T: (678)630-9927
F:

Report Id: GFL009 [WUSCAR] 05899639 (Generated: 07/19/2023 09:20:11) Rev: 1

Submitted By: Eric Jones