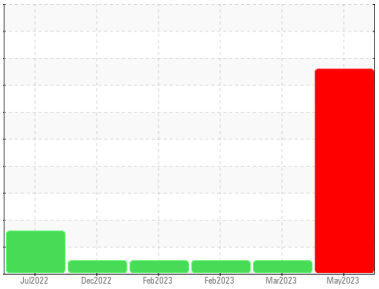
PROBLEM SUMMARY

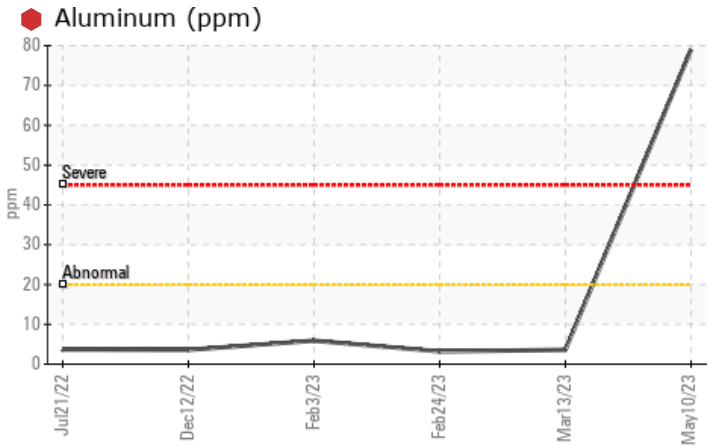
Machine Id
427083-402340
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

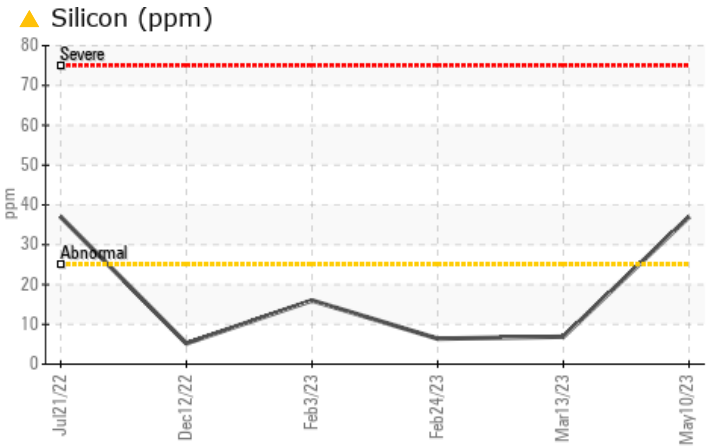
Sample Rating Trend



WEAR

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Aluminum	ppm	ASTM D5185m	>20	**79**	4	3
Silicon	ppm	ASTM D5185m	>25	**37**	7	6

Customer Id: GFL867
Sample No.: GFL0045438
Lab Number: 05848480
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

Action	Status	Date	Done By	Description
Inspect Wear Source	MISSED	Jun 07 2023	?	We advise that you inspect for the source(s) of wear.
Resample	MISSED	Jun 07 2023	?	We recommend an early resample to monitor this condition.
Check Dirt Access	MISSED	Jun 07 2023	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

13 Mar 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

24 Feb 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

03 Feb 2023 Diag: Wes Davis

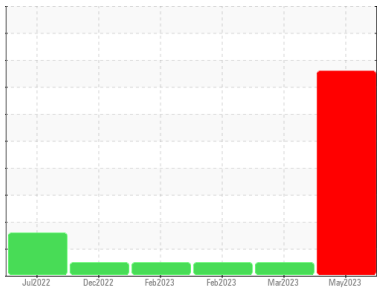
NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
427083-402340
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear
The aluminum level is severe. Piston wear is indicated.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0045438**	GFL0045423	GFL0045409
Sample Date		Client Info		**10 May 2023**	13 Mar 2023	24 Feb 2023
Machine Age	hrs	Client Info		**16719**	16303	16236
Oil Age	hrs	Client Info		**16719**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	N/A
Sample Status				**SEVERE**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**41**	5	4
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>5	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**79**	4	3
Lead	ppm	ASTM D5185m	>40	**0**	<1	<1
Copper	ppm	ASTM D5185m	>330	**3**	<1	0
Tin	ppm	ASTM D5185m	>15	**<1**	<1	0
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	0	**10**	152	168
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**59**	77	81
Manganese	ppm	ASTM D5185m	0	**<1**	1	<1
Magnesium	ppm	ASTM D5185m	1010	**913**	676	688
Calcium	ppm	ASTM D5185m	1070	**1117**	1235	1303
Phosphorus	ppm	ASTM D5185m	1150	**947**	810	852
Zinc	ppm	ASTM D5185m	1270	**1215**	1071	1082
Sulfur	ppm	ASTM D5185m	2060	**3089**	2922	3039

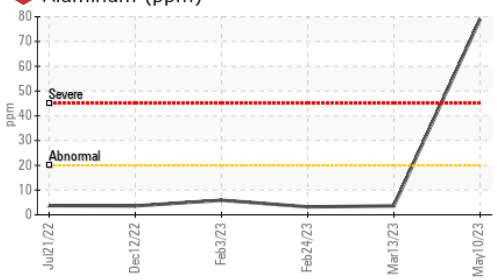
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**37**	7	6
Sodium	ppm	ASTM D5185m		**5**	2	1
Potassium	ppm	ASTM D5185m	>20	**2**	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.8**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**8.6**	8.2	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.4**	19.2	19.7

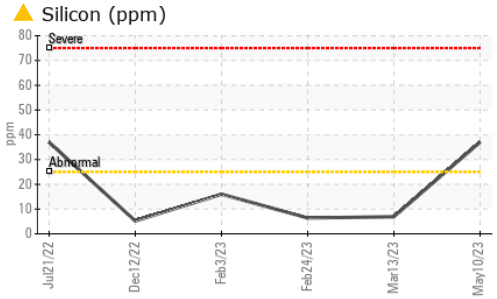
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.4**	13.3	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.2**	9.3	8.0

OIL ANALYSIS REPORT

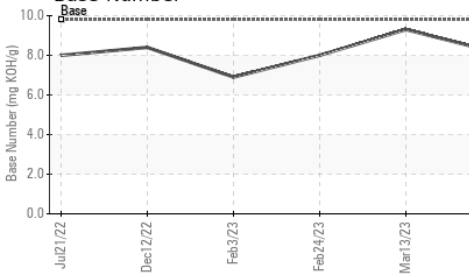
Aluminum (ppm)



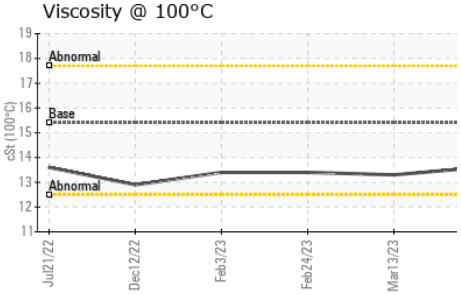
Silicon (ppm)



Base Number



Viscosity @ 100°C

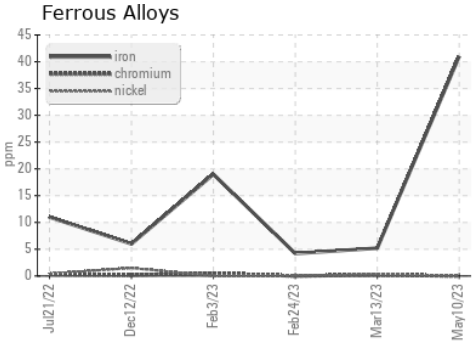


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

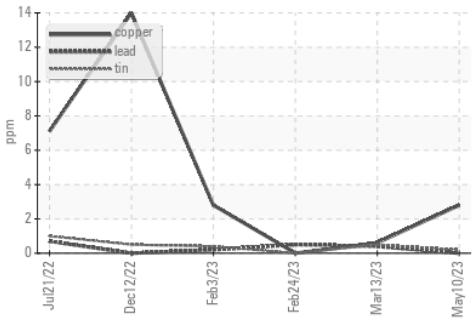
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.6**	13.3	13.4

GRAPHS

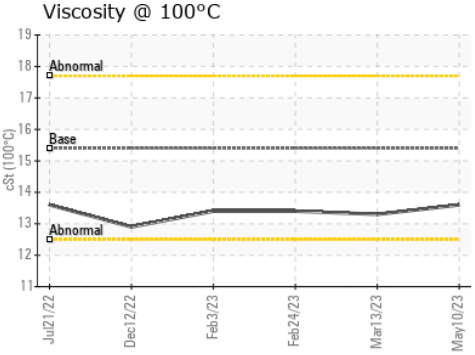
Ferrous Alloys



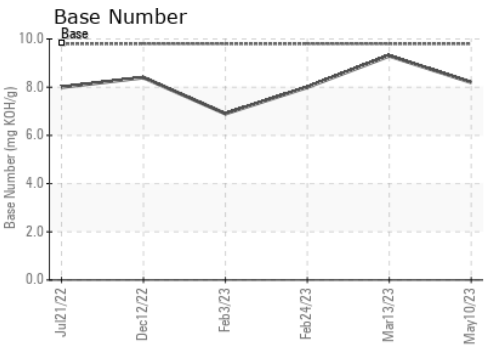
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0045438
Lab Number : 05848480
Unique Number : 10472587
Test Package : FLEET

Received : 16 May 2023
Diagnosed : 18 May 2023
Diagnostician : Jonathan Hester

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 - 867 - Trafford (Blount Hauling)
1130 County Line Rd
Trafford, AL
US 35172
Contact: Jonathan Williams
jonathan.williams@gflenv.com
T:
F:

Report Id: GFL867 [WUSCAR] 05848480 (Generated: 07/27/2023 11:51:54) Rev: 1

Submitted By: see also GFL868 - Chelsea Bryan