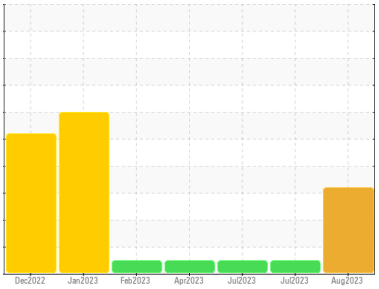
PROBLEM SUMMARY

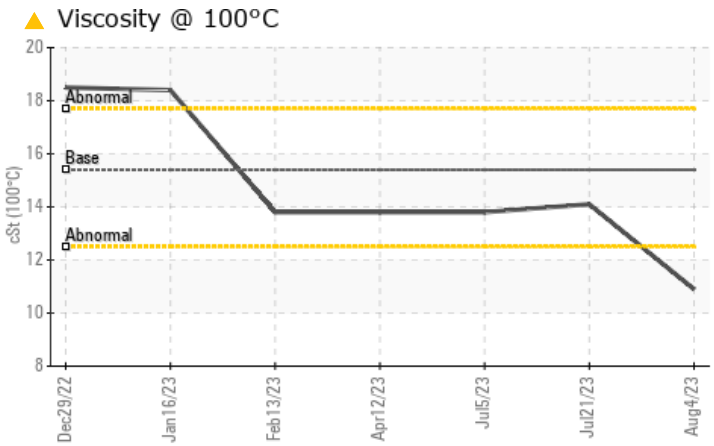
Sample Rating Trend

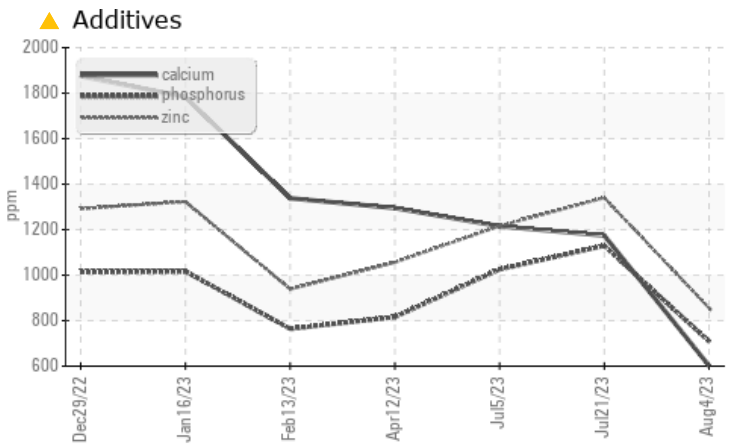


DEGRADATION

Machine Id
429052-402457
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Magnesium	ppm	ASTM D5185m	1010	▲ **491**	1048	860
Calcium	ppm	ASTM D5185m	1070	▲ **602**	1174	1215
Phosphorus	ppm	ASTM D5185m	1150	▲ **709**	1129	1025
Zinc	ppm	ASTM D5185m	1270	▲ **856**	1340	1216
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ **3.9**	8.9	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **10.9**	14.1	13.8

Customer Id: GFL867
Sample No.: GFL0086355
Lab Number: 05921976
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
Service/change Fluid	---	---	?	The oil is near the end of it's useful service life, recommend schedule an oil change.

HISTORICAL DIAGNOSIS

21 Jul 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor.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

05 Jul 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor.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

12 Apr 2023 Diag: Don Baldridge

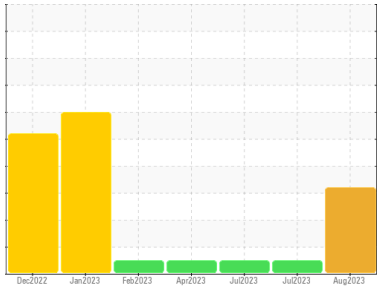
NORMAL

Resample at the next service interval to monitor.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



DEGRADATION

Machine Id
429052-402457
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation
The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

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

Fluid Condition
The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. The BN level is low. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0086355**	GFL0086350	GFL0045437
Sample Date		Client Info		**04 Aug 2023**	21 Jul 2023	05 Jul 2023
Machine Age	hrs	Client Info		**10776**	10632	10532
Oil Age	hrs	Client Info		**144**	10632	10532
Oil Changed		Client Info		**Not Changd**	Changed	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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	>110	**17**	17	27
Chromium	ppm	ASTM D5185m	>4	**<1**	1	2
Nickel	ppm	ASTM D5185m	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	<1	<1
Aluminum	ppm	ASTM D5185m	>25	**4**	3	2
Lead	ppm	ASTM D5185m	>45	**2**	0	6
Copper	ppm	ASTM D5185m	>85	**4**	<1	3
Tin	ppm	ASTM D5185m	>4	**<1**	0	<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	**4**	11	11
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**34**	66	74
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	▲ **491**	1048	860
Calcium	ppm	ASTM D5185m	1070	▲ **602**	1174	1215
Phosphorus	ppm	ASTM D5185m	1150	▲ **709**	1129	1025
Zinc	ppm	ASTM D5185m	1270	▲ **856**	1340	1216
Sulfur	ppm	ASTM D5185m	2060	**2257**	3839	3011

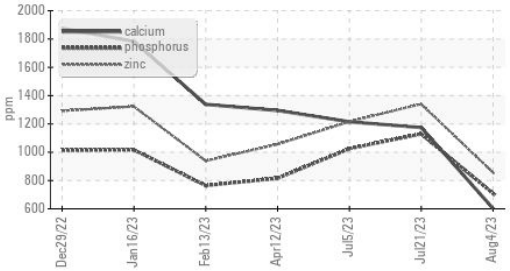
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**4**	7	9
Sodium	ppm	ASTM D5185m		**10**	1	0
Potassium	ppm	ASTM D5185m	>20	**2**	0	4
Fuel	%	ASTM D3524	>5	**1.9**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.5**	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**5.9**	7.3	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**16.6**	19.0	22.8

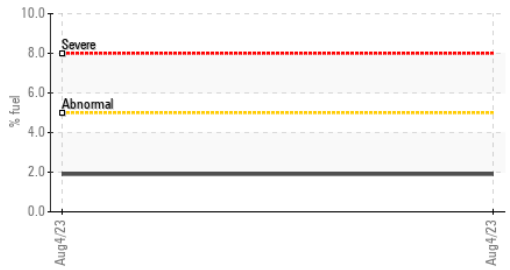
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**10.4**	14.6	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ **3.9**	8.9	7.7

OIL ANALYSIS REPORT

Additives



Fuel Dilution

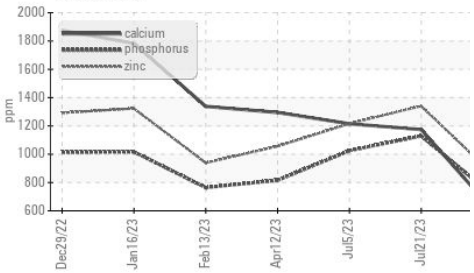


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

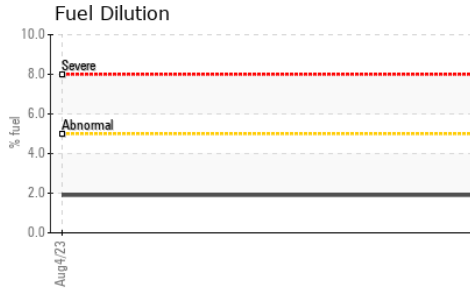
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **10.9**	14.1	13.8

GRAPHS

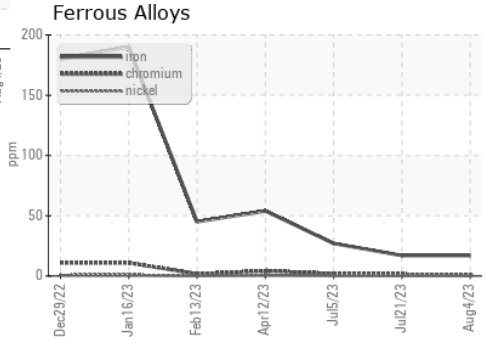
Additives



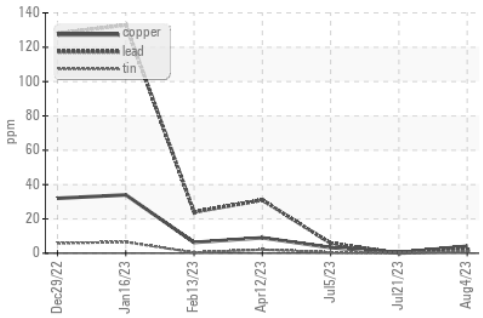
Fuel Dilution



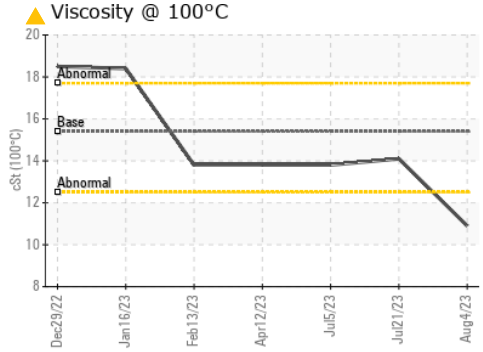
Ferrous Alloys



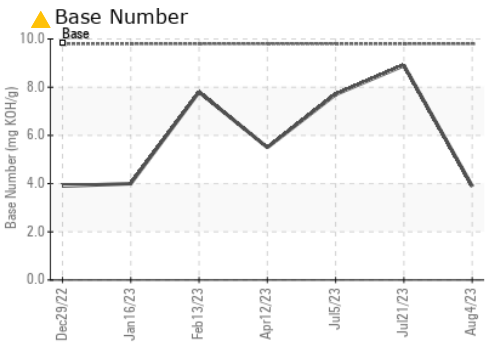
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086355 **Received** : 11 Aug 2023
Lab Number : 05921976 **Diagnosed** : 14 Aug 2023
Unique Number : 10601923 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)
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Trafford, AL
US 35172
Contact: Jonathan Williams
jonathan.williams@gflenv.com
T:
F:

Report Id: GFL867 [WUSCAR] 05921976 (Generated: 08/14/2023 11:30:15) Rev: 1

Submitted By: see also GFL868 - Chelsea Bryan