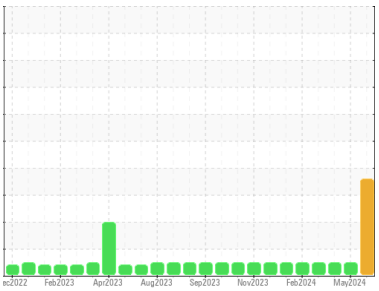
PROBLEM SUMMARY

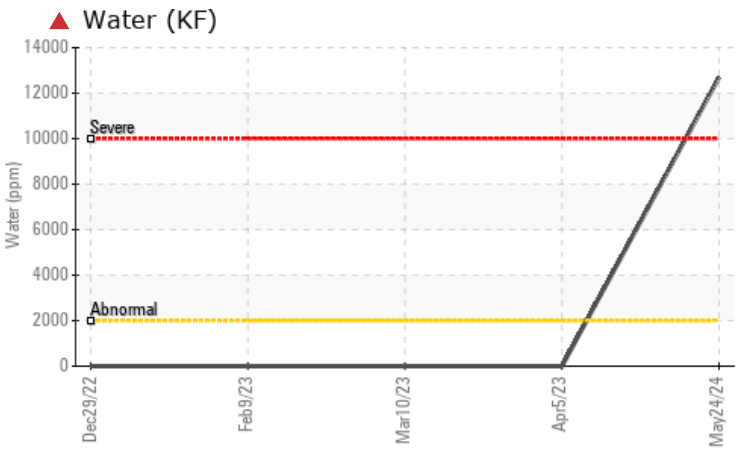
Sample Rating Trend

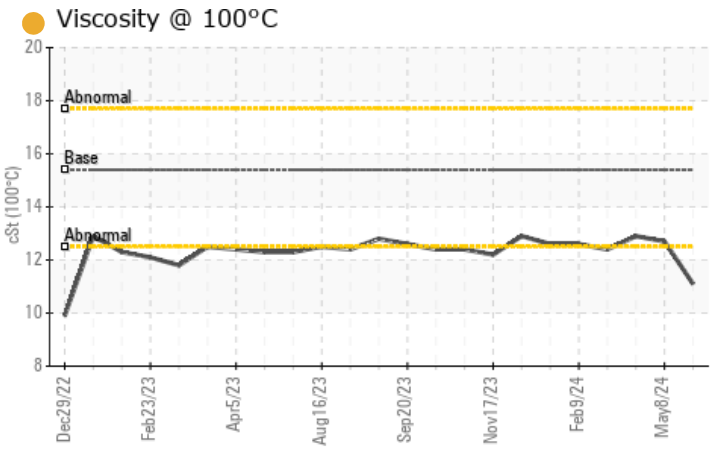


WATER

Machine Id
413026
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Please note that there was too much water present in the oil to perform an accurate viscosity test.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	NORMAL	NORMAL
Water	%	ASTM D6304	>0.2	▲ **1.27**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **12700**	---	---

Customer Id: GFL010
Sample No.: GFL0122173
Lab Number: 06193407
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
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	Please note that there was too much water present in the oil to perform a viscosity test.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

NORMAL

08 May 2024 Diag: Wes Davis
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

NORMAL

18 Apr 2024 Diag: Wes Davis
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

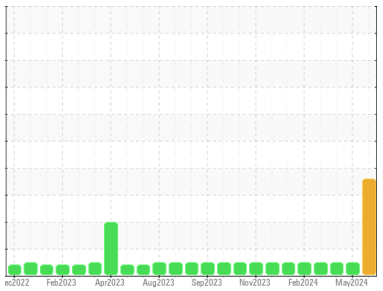
NORMAL

14 Feb 2024 Diag: Wes Davis
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



WATER

Machine Id
413026
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Please note that there was too much water present in the oil to perform an accurate viscosity test.

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. There is a high concentration of water present in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0122173**	GFL0118032	GFL0118018
Sample Date		Client Info		**24 May 2024**	08 May 2024	18 Apr 2024
Machine Age	hrs	Client Info		**3857**	3724	3594
Oil Age	hrs	Client Info		**133**	565	435
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**SEVERE**	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	>120	**4**	15	11
Chromium	ppm	ASTM D5185m	>20	**0**	1	<1
Nickel	ppm	ASTM D5185m	>5	**1**	5	3
Titanium	ppm	ASTM D5185m	>2	**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**3**	3	2
Lead	ppm	ASTM D5185m	>40	**<1**	1	<1
Copper	ppm	ASTM D5185m	>330	**<1**	3	2
Tin	ppm	ASTM D5185m	>15	**1**	2	1
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**13**	6	5
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**61**	60	63
Manganese	ppm	ASTM D5185m	0	**<1**	1	<1
Magnesium	ppm	ASTM D5185m	1010	**839**	830	901
Calcium	ppm	ASTM D5185m	1070	**996**	1011	1107
Phosphorus	ppm	ASTM D5185m	1150	**923**	925	965
Zinc	ppm	ASTM D5185m	1270	**1116**	1128	1151
Sulfur	ppm	ASTM D5185m	2060	**3138**	2908	3263

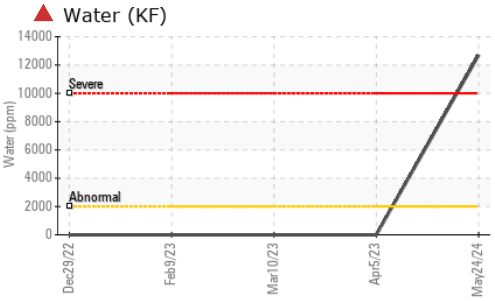
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**3**	6	4
Sodium	ppm	ASTM D5185m		**6**	7	7
Potassium	ppm	ASTM D5185m	>20	**6**	9	4
Fuel	%	ASTM D3524	>3.0	**0.4**	<1.0	<1.0
Water	%	ASTM D6304	>0.2	▲ **1.27**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **12700**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.2**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**9.1**	8.7	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**14.1**	19.7	18.9

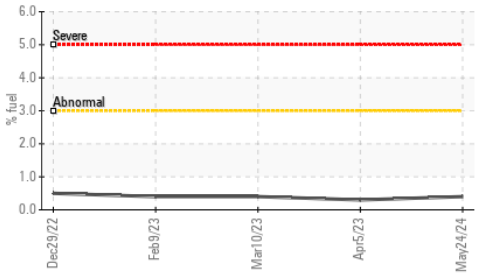
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.7**	15.9	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**13.1**	6.8	7.2

OIL ANALYSIS REPORT

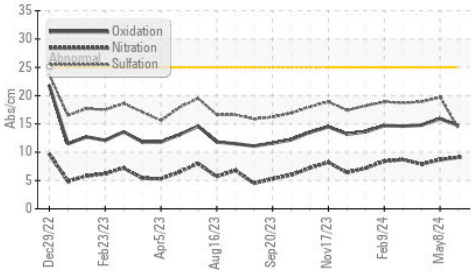
Water (KF)



Fuel Dilution



FT-IR (Direct Trend)



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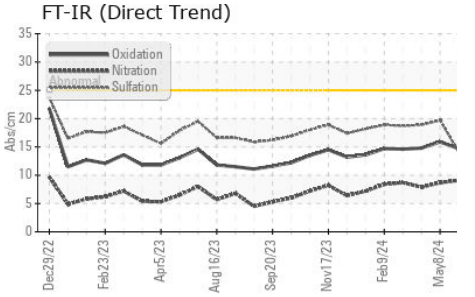
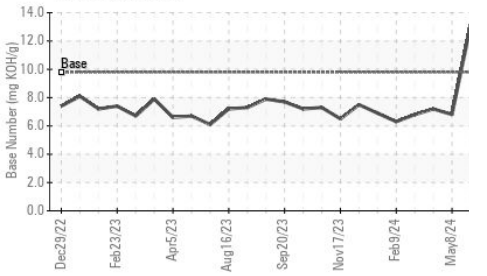


Base Number

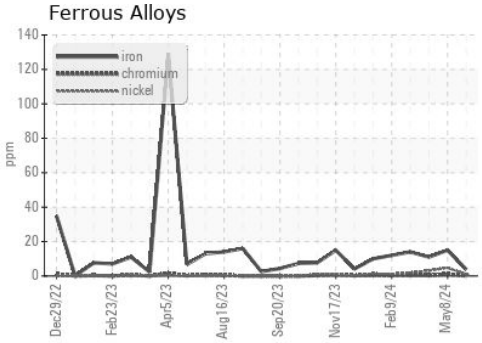


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	**0.2%**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

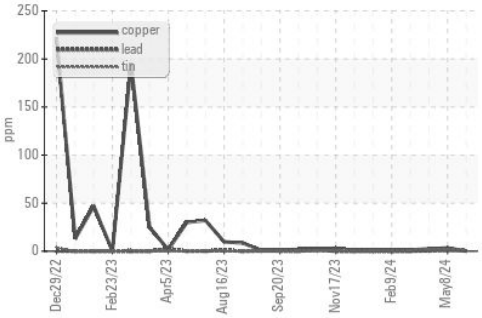
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**11.1**	12.7	12.9

GRAPHS

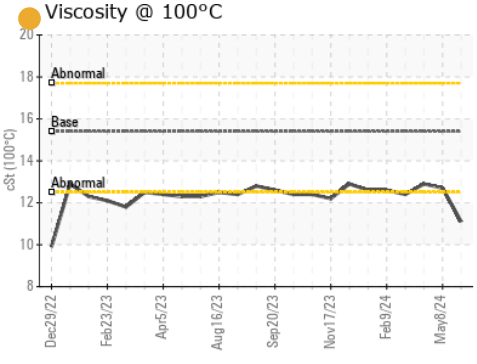
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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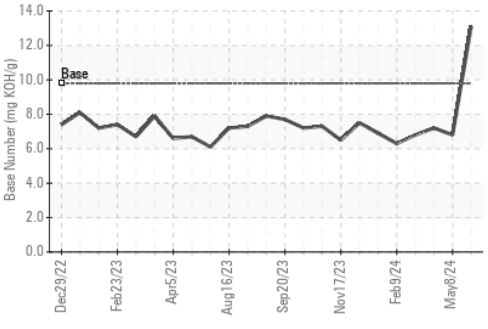

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122173
Lab Number : 06193407
Unique Number : 11050159
Test Package : FLEET (Additional Tests: FuelDilution, KF, PercentFuel)

Received : 28 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 2024 - 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 - 010 - Stockbridge
1280 Rum Creek Parkway
Stockbridge, GA
US 30281
Contact: JOSHUA TINKER
joshuatinker@gflenv.com
T:
F:

Report Id: GFL010 [WUSCAR] 06193407 (Generated: 05/31/2024 18:03:16) Rev: 1

Submitted By: JOSHUA TINKER