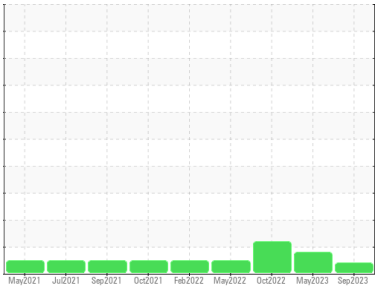
PROBLEM SUMMARY

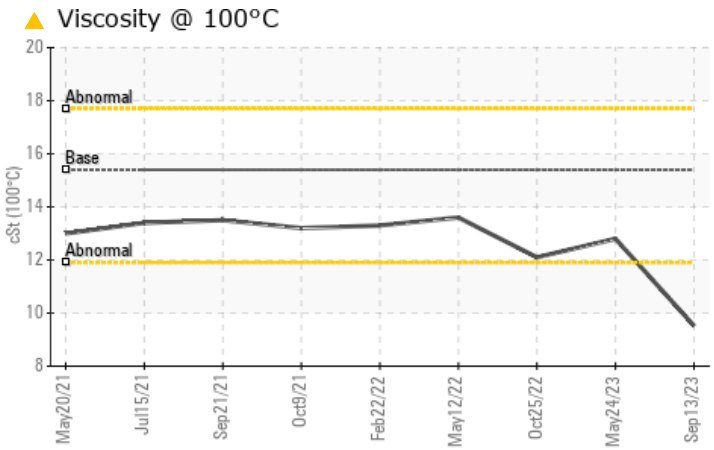
Machine Id
422033-402481
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

Sample Rating Trend



VISCOSITY

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ABNORMAL	ABNORMAL
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **9.52**	12.8	▲ 12.1

Customer Id: GFL885
Sample No.: GFL0092578
Lab Number: 05952000
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	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

24 May 2023 Diag: Sean Felton

FUEL

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report

25 Oct 2022 Diag: Doug Bogart

FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of fuel present in the oil. 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

12 May 2022 Diag: Wes Davis

NORMAL

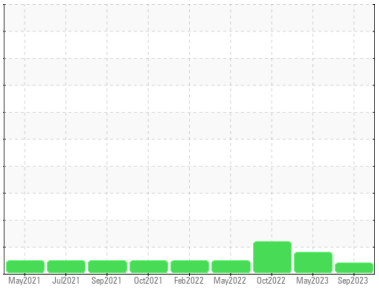
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity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

view report

OIL ANALYSIS REPORT

Machine Id
422033-402481
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. 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. 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		**GFL0092578**	GFL0081535	GFL0055555
Sample Date		Client Info		**13 Sep 2023**	24 May 2023	25 Oct 2022
Machine Age	hrs	Client Info		**22358**	21663	0
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	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	>120	**2**	36	14
Chromium	ppm	ASTM D5185m	>20	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**0**	1	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**1**	2	5
Lead	ppm	ASTM D5185m	>40	**0**	14	2
Copper	ppm	ASTM D5185m	>330	**0**	2	1
Tin	ppm	ASTM D5185m	>15	**0**	2	<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	**3**	2	4
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**58**	56	56
Manganese	ppm	ASTM D5185m	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**935**	829	829
Calcium	ppm	ASTM D5185m	1070	**1176**	1083	1057
Phosphorus	ppm	ASTM D5185m	1150	**1030**	894	938
Zinc	ppm	ASTM D5185m	1270	**1275**	1203	1122
Sulfur	ppm	ASTM D5185m	2060	**3710**	3218	3420

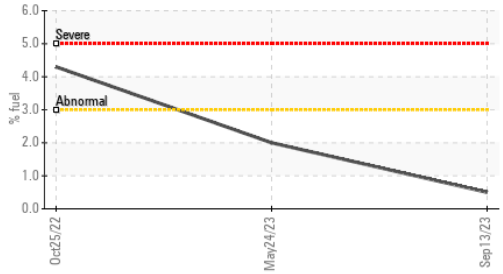
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**4**	5	5
Sodium	ppm	ASTM D5185m		**2**	23	3
Potassium	ppm	ASTM D5185m	>20	**3**	8	10
Fuel	%	ASTM D3524	>3.0	**0.5**	▲ 2.0	▲ 4.3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.1**	1.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**5.4**	9.8	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**17.8**	24.4	20.9

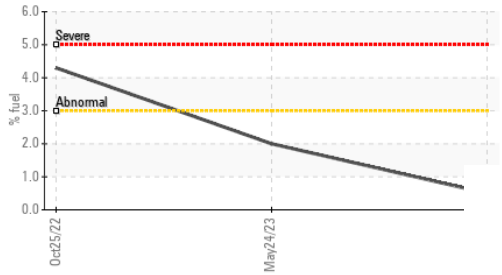
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**13.4**	18.5	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.7**	5.6	8.7

OIL ANALYSIS REPORT

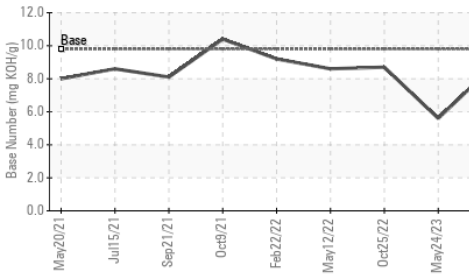
Fuel Dilution



Fuel Dilution



Base Number

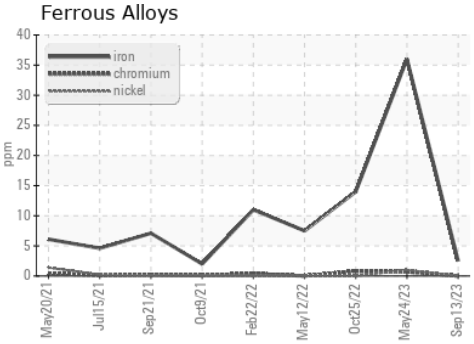


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

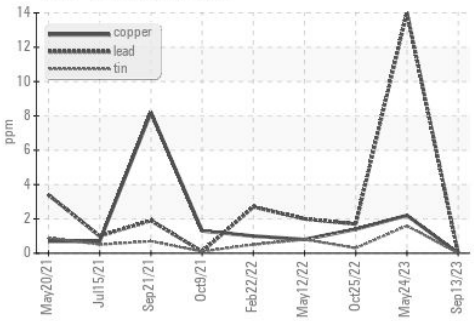
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **9.52**	12.8	▲ 12.1

GRAPHS

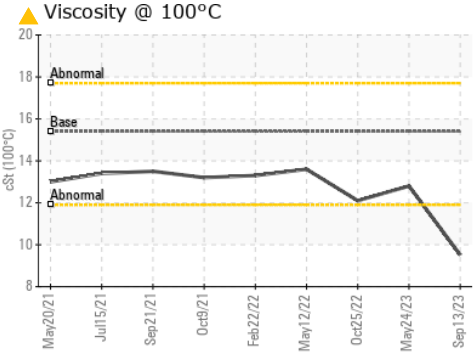
Ferrous Alloys



Non-ferrous Metals



▲ Viscosity @ 100°C



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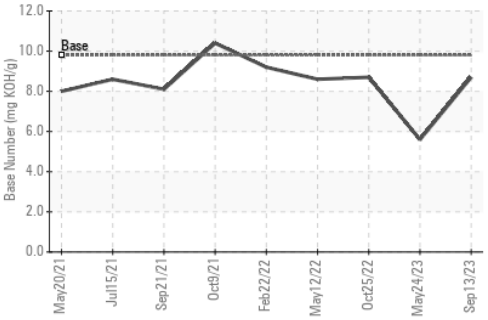

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0092578
Lab Number : 05952000
Unique Number : 10647959
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 14 Sep 2023
Diagnosed : 22 Sep 2023
Diagnostician : Jonathan Hester

GFL Environmental - 885 - Orlando
1263 W Landstreet Rd
Orlando, FL
US 32824
Contact: DAWN WALLACE
T:
F:

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)

Report Id: GFL885 [WUSCAR] 05952000 (Generated: 09/30/2023 15:00:19) Rev: 1

Submitted By: TIMOTHY MOURER