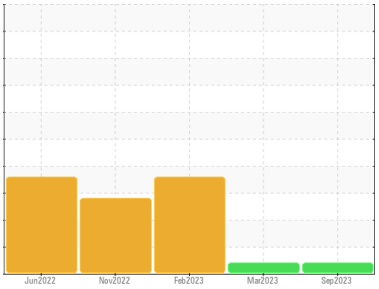
PROBLEM SUMMARY

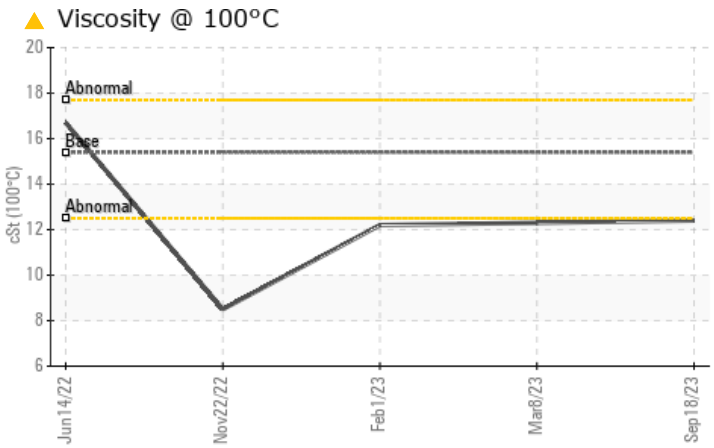
Machine Id
4561M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

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**	ATTENTION	SEVERE
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **12.4**	▲ 12.3	▲ 12.2

Customer Id: GFL405
Sample No.: GFL0087263
Lab Number: 05964462
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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

08 Mar 2023 Diag: Sean Felton

VISCOSITY

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. Fuel content negligible. 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

01 Feb 2023 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. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Test for glycol is negative. Fuel is present in the oil and is lowering the viscosity. 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.

view report

22 Nov 2022 Diag: Jonathan Hester

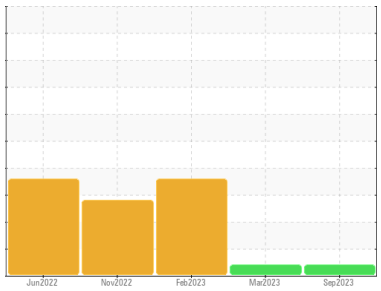
FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high 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. The oil is no longer serviceable due to the presence of contaminants.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
4561M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

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
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		**GFL0087263**	GFL0072920	GFL0060718
Sample Date		Client Info		**18 Sep 2023**	08 Mar 2023	01 Feb 2023
Machine Age	hrs	Client Info		**22285**	21442	21192
Oil Age	hrs	Client Info		**843**	250	450
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	ATTENTION	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	0.7	12.1
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	**24**	6	43
Chromium	ppm	ASTM D5185m	>20	**1**	0	2
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**5**	2	3
Lead	ppm	ASTM D5185m	>40	**0**	0	4
Copper	ppm	ASTM D5185m	>330	**8**	0	2
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

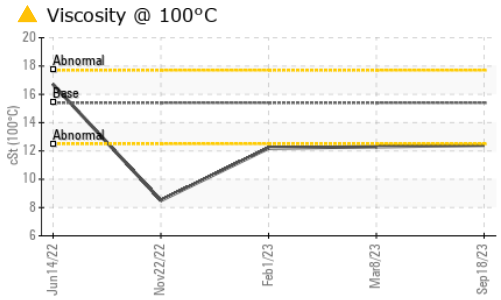
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**33**	94	11
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**46**	21	71
Manganese	ppm	ASTM D5185m	0	**4**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**529**	286	924
Calcium	ppm	ASTM D5185m	1070	**1543**	1689	1156
Phosphorus	ppm	ASTM D5185m	1150	**760**	854	1007
Zinc	ppm	ASTM D5185m	1270	**959**	1122	1239
Sulfur	ppm	ASTM D5185m	2060	**2847**	3260	2513

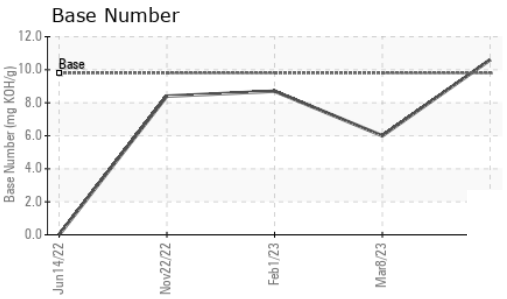
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	4	9
Sodium	ppm	ASTM D5185m		**52**	3	246
Potassium	ppm	ASTM D5185m	>20	**3**	3	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.4**	0.3	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**7.8**	7.6	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.0**	20.3	23.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.8**	15.8	23.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**10.6**	6.0	8.7

OIL ANALYSIS REPORT

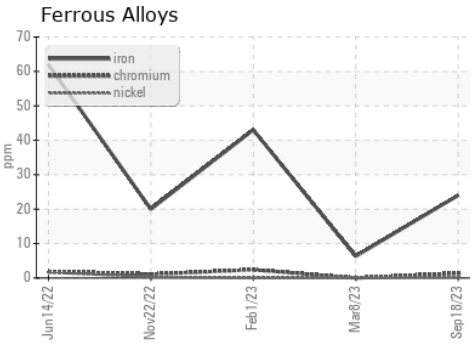


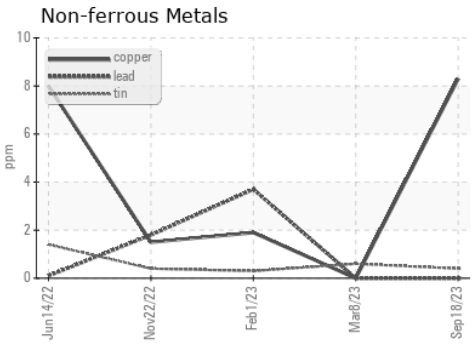


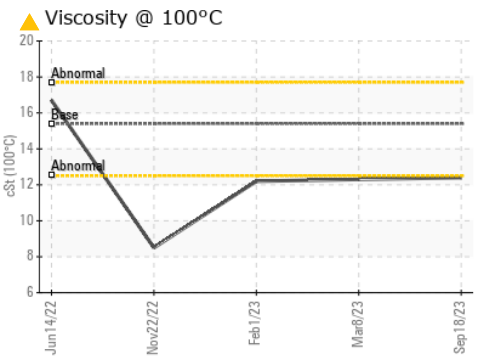
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

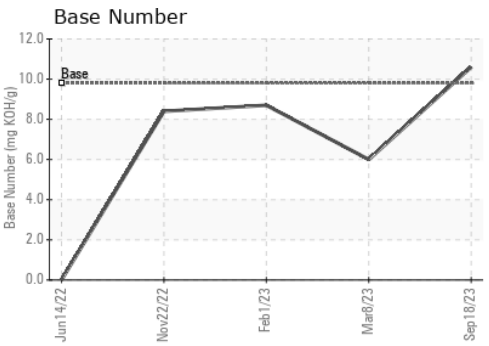
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **12.4**	▲ 12.3	▲ 12.2

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087263
Lab Number : 05964462
Unique Number : 10671013
Test Package : FLEET

Received : 29 Sep 2023
Diagnosed : 01 Oct 2023
Diagnostician : Don Baldridge

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)

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