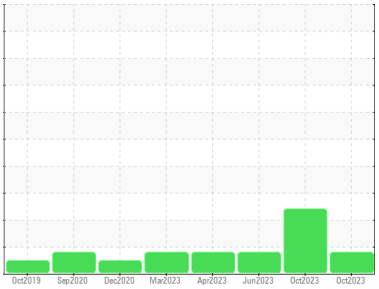
PROBLEM SUMMARY

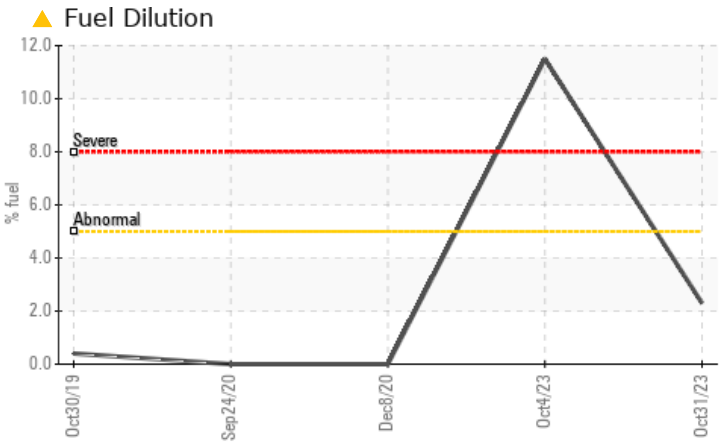
Machine Id
724016-310049
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



FUEL

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				MARGINAL	SEVERE	MARGINAL
Fuel	%	ASTM D3524	>5	▲ 2.3	⬢ 11.5	<1.0

Customer Id: GFL821
Sample No.: GFL0090284
Lab Number: 05997620
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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

04 Oct 2023 Diag: Jonathan Hester

FUEL

We advise that you check the fuel injection system. 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.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

24 Jun 2023 Diag: Doug Bogart

WEAR

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The chromium level is abnormal. All other 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

25 Apr 2023 Diag: Don Baldridge

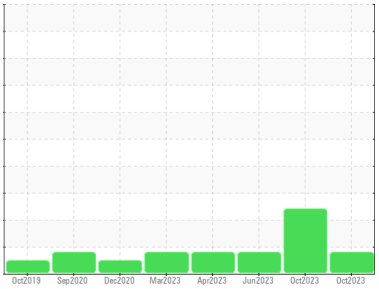
WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The chromium level has decreased, but is still abnormal. All other 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



FUEL

Machine Id
724016-310049
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0090284**	GFL0090157	GFL0076785
Sample Date		Client Info		**31 Oct 2023**	04 Oct 2023	24 Jun 2023
Machine Age	hrs	Client Info		**9364**	9271	8710
Oil Age	hrs	Client Info		**150**	150	600
Oil Changed		Client Info		**Not Changd**	N/A	Changed
Sample Status				**MARGINAL**	SEVERE	MARGINAL

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	>80	**38**	27	62
Chromium	ppm	ASTM D5185m	>5	**4**	<1	▲ 8
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>30	**2**	8	4
Lead	ppm	ASTM D5185m	>30	**<1**	<1	0
Copper	ppm	ASTM D5185m	>150	**2**	3	2
Tin	ppm	ASTM D5185m	>5	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**<1**	5	3
Barium	ppm	ASTM D5185m	0	**4**	0	0
Molybdenum	ppm	ASTM D5185m	60	**58**	51	61
Manganese	ppm	ASTM D5185m	0	**<1**	<1	1
Magnesium	ppm	ASTM D5185m	1010	**850**	783	962
Calcium	ppm	ASTM D5185m	1070	**987**	847	1110
Phosphorus	ppm	ASTM D5185m	1150	**927**	851	1045
Zinc	ppm	ASTM D5185m	1270	**1132**	1062	1311
Sulfur	ppm	ASTM D5185m	2060	**2912**	2908	3646

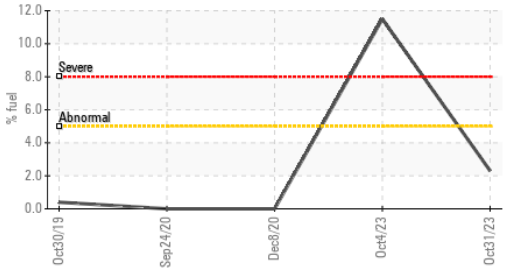
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**6**	8	5
Sodium	ppm	ASTM D5185m		**0**	39	1
Potassium	ppm	ASTM D5185m	>20	**2**	7	1
Fuel	%	ASTM D3524	>5	▲ **2.3**	⬢ 11.5	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**1.4**	0.9	2.3
Nitration	Abs/cm	*ASTM D7624	>20	**6.6**	7.6	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.9**	20.0	22.7

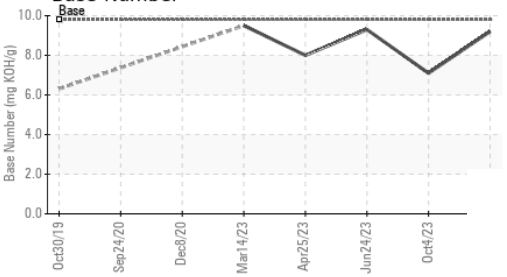
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**13.3**	15.5	14.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.2**	7.1	9.3

OIL ANALYSIS REPORT

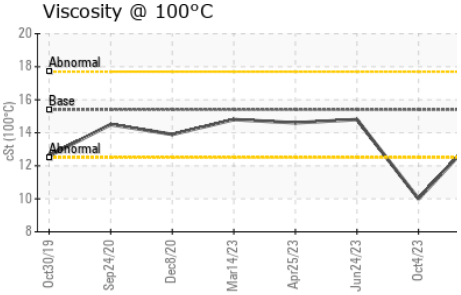
Fuel Dilution



Base Number



Viscosity @ 100°C

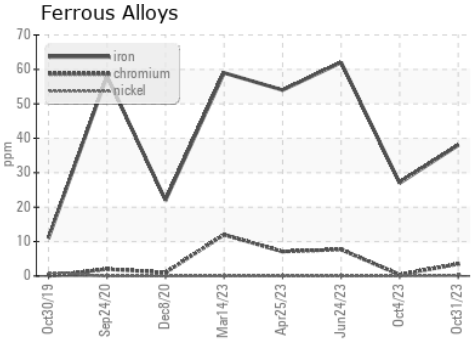


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

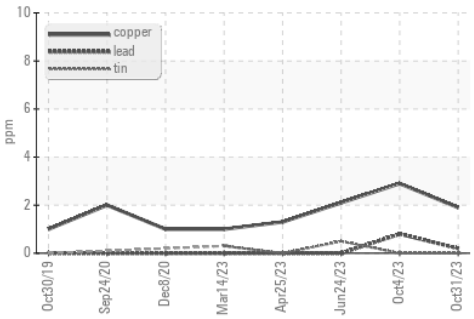
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.0**	▲ 10.0	14.8

GRAPHS

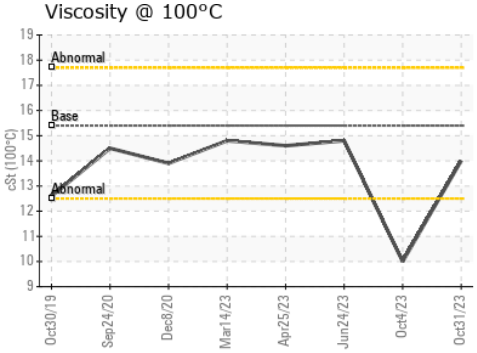
Ferrous Alloys



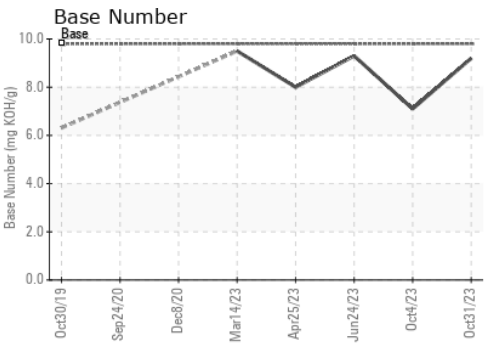
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090284 **Received** : 03 Nov 2023
Lab Number : 05997620 **Diagnosed** : 06 Nov 2023
Unique Number : 10725980 **Diagnostician** : Don Baldridge
Test Package : FLEET (Additional Tests: 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)

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Contact: Landen Johnson
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T: (417)664-0010
F:

Report Id: GFL821 [WUSCAR] 05997620 (Generated: 11/06/2023 09:22:34) Rev: 1

Submitted By: GFL821, GFL824 and GFL829 - Landen Johnson