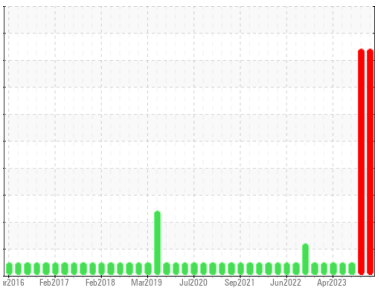
PROBLEM SUMMARY

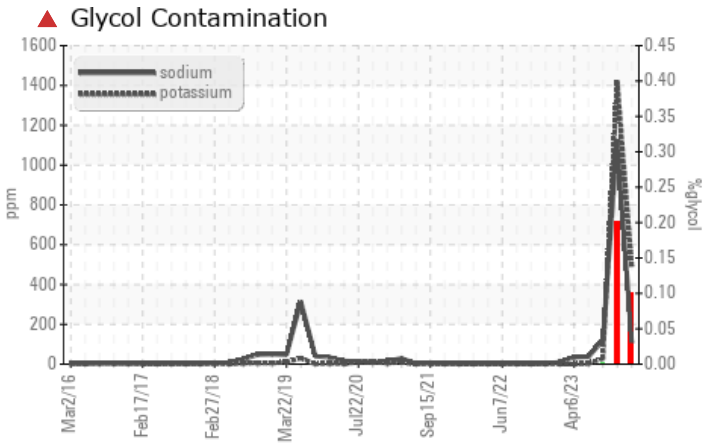
Sample Rating Trend



GLYCOL

Area
(YA130662) 020
Machine Id
2514
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	NORMAL
Potassium	ppm	ASTM D5185m	>20	▲ **498**	▲ 1420	28
Glycol	%	*ASTM D2982		▲ **0.10**	▲ 0.20	0.0

Customer Id: GFL020
Sample No.: GFL0117869
Lab Number: 06157392
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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 from the component if this has not already been done.
Flush System	---	---	?	We advise that you flush the component thoroughly before re-filling with oil.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

GLYCOL

24 Nov 2023 Diag: Don Baldridge

We advise that you check for the source of the coolant leak. 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. Test for glycol is positive. There is a high concentration of glycol present in the oil. 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

NORMAL

28 Sep 2023 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

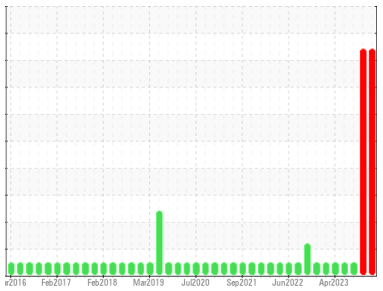
22 Jun 2023 Diag: Wes Davis

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



GLYCOL

Area
(YA130662) 020
Machine Id
2514
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Test for glycol is positive. There is a high concentration of glycol 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		**GFL0117869**	GFL0091162	GFL0091165
Sample Date		Client Info		**19 Apr 2024**	24 Nov 2023	28 Sep 2023
Machine Age	hrs	Client Info		**25806**	25280	0
Oil Age	hrs	Client Info		**738**	738	600
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**SEVERE**	SEVERE	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>165	**59**	35	31
Chromium	ppm	ASTM D5185m	>5	**1**	<1	1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	2	0
Lead	ppm	ASTM D5185m	>150	**0**	6	2
Copper	ppm	ASTM D5185m	>90	**5**	3	1
Tin	ppm	ASTM D5185m	>5	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**6**	27	6
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**60**	88	67
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**890**	863	1001
Calcium	ppm	ASTM D5185m	1070	**1079**	1016	1151
Phosphorus	ppm	ASTM D5185m	1150	**993**	994	1048
Zinc	ppm	ASTM D5185m	1270	**1151**	1189	1309
Sulfur	ppm	ASTM D5185m	2060	**3246**	2876	3137

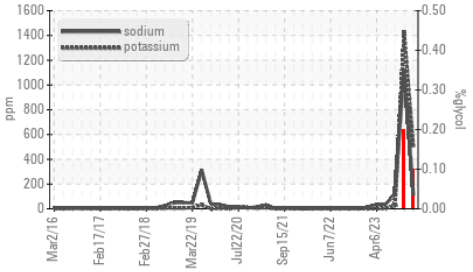
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	**4**	22	8
Sodium	ppm	ASTM D5185m		● **110**	▲ 1127	120
Potassium	ppm	ASTM D5185m	>20	▲ **498**	▲ 1420	28
Glycol	%	*ASTM D2982		▲ **0.10**	▲ 0.20	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	**2.3**	2.2	3.1
Nitration	Abs/cm	*ASTM D7624	>20	**10.4**	14.8	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.0**	25.4	26.2

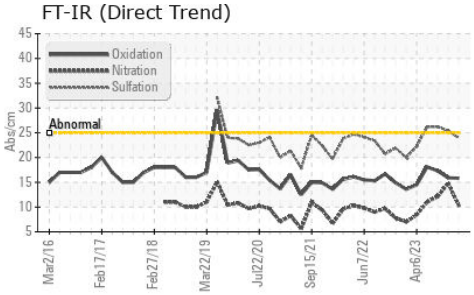
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.8**	15.9	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**5.5**	13.0	7.3

OIL ANALYSIS REPORT

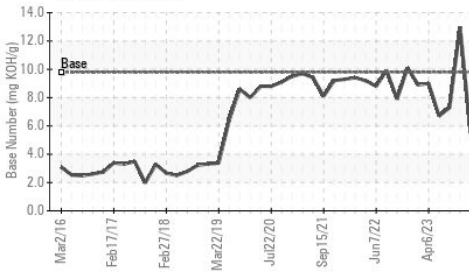
Glycol Contamination



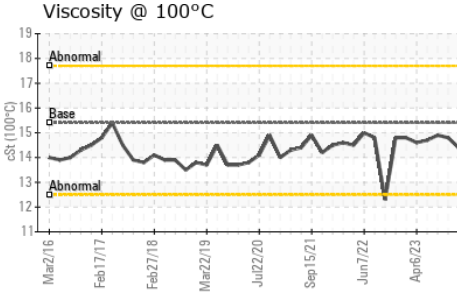
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

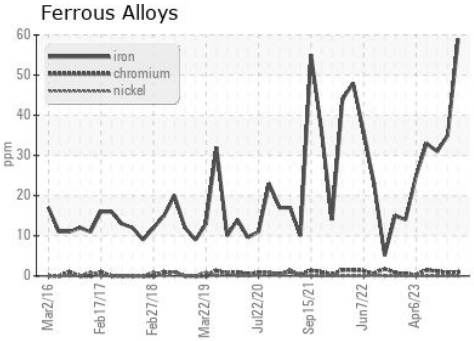


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

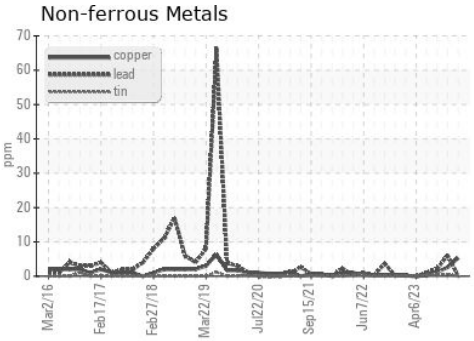
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.4**	14.8	14.9

GRAPHS

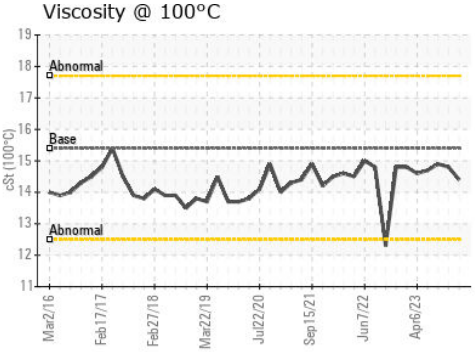
Ferrous Alloys



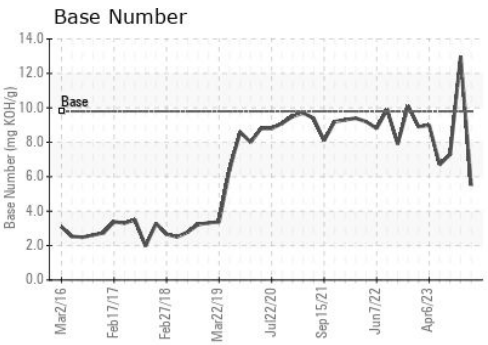
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117869
Lab Number : 06157392
Unique Number : 10992815
Test Package : FLEET

Received : 23 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Wes Davis

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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