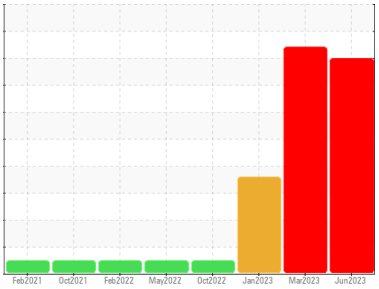
PROBLEM SUMMARY

Sample Rating Trend

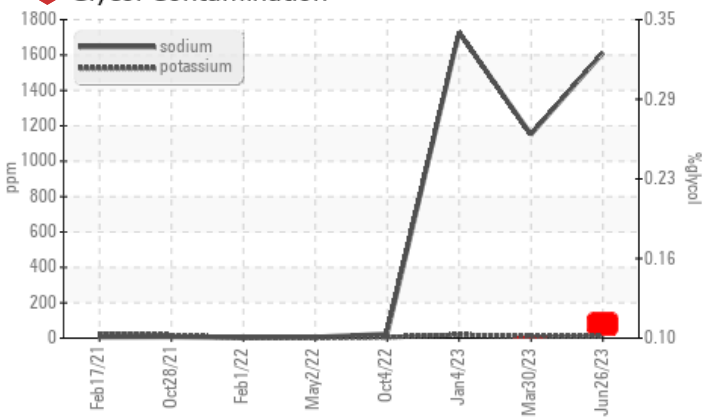


GLYCOL

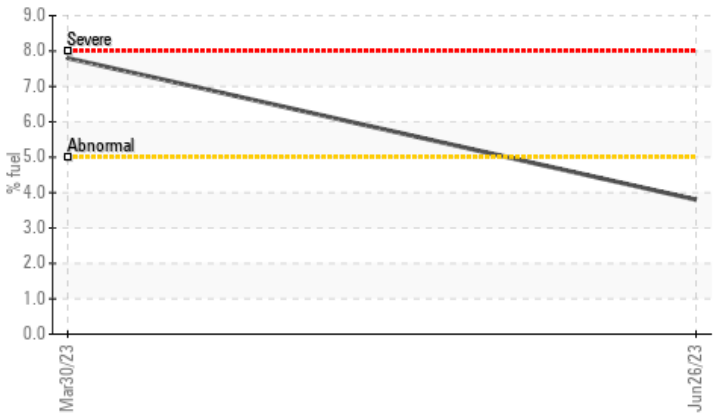
Machine Id
7807M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Glycol Contamination



Fuel Dilution



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	ABNORMAL
Sodium	ppm	ASTM D5185m		▲ **1612**	▲ 1152	▲ 1727
Fuel	%	ASTM D3524	>5	▲ **3.8**	▲ 7.8	<1.0
Glycol	%	*ASTM D2982		⬢ **0.12**	⬢ 0.10	NEG

Customer Id: GFL465
Sample No.: GFL0082736
Lab Number: 05887275
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.
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

30 Mar 2023 Diag: Don Baldridge

GLYCOL

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. 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. Sodium and/or potassium levels are high. There is a moderate amount of fuel present in the oil. There is a high concentration of glycol present in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

view report

04 Jan 2023 Diag: Jonathan Hester

DIRT

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

04 Oct 2022 Diag: Wes Davis

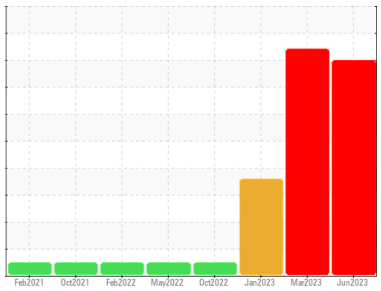
NORMAL

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

Sample Rating Trend



GLYCOL

Machine Id
7807M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels remain high. Light fuel dilution occurring.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0082736**	GFL0071235	GFL0063313
Sample Date		Client Info		**26 Jun 2023**	30 Mar 2023	04 Jan 2023
Machine Age	hrs	Client Info		**14586**	14506	13896
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	ABNORMAL

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	**13**	35	54
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	2
Nickel	ppm	ASTM D5185m	>4	**1**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	2	▲ 13
Lead	ppm	ASTM D5185m	>40	**<1**	<1	1
Copper	ppm	ASTM D5185m	>330	**21**	2	2
Tin	ppm	ASTM D5185m	>15	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**134**	33	33
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**109**	95	110
Manganese	ppm	ASTM D5185m	0	**1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**722**	784	847
Calcium	ppm	ASTM D5185m	1070	**889**	1001	1021
Phosphorus	ppm	ASTM D5185m	1150	**867**	801	828
Zinc	ppm	ASTM D5185m	1270	**1050**	1071	1165
Sulfur	ppm	ASTM D5185m	2060	**2669**	2618	2984

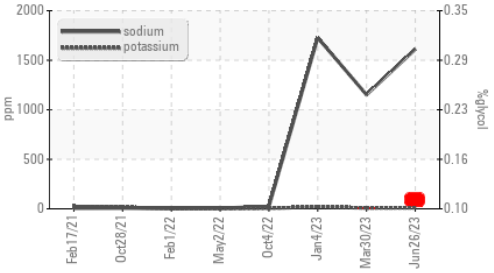
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**24**	20	▲ 31
Sodium	ppm	ASTM D5185m		▲ **1612**	▲ 1152	▲ 1727
Potassium	ppm	ASTM D5185m	>20	**10**	9	19
Fuel	%	ASTM D3524	>5	▲ **3.8**	▲ 7.8	<1.0
Glycol	%	*ASTM D2982		⬢ **0.12**	⬢ 0.10	NEG

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**0.2**	1	2.8
Nitration	Abs/cm	*ASTM D7624	>20	**11.6**	12.2	16.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.0**	21.6	25.2

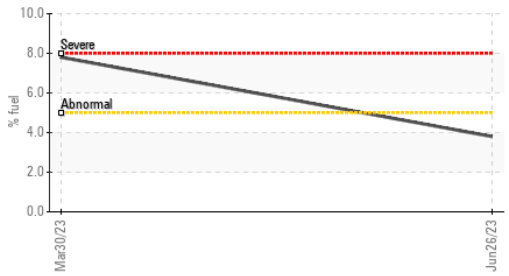
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.7**	18.6	17.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**13.9**	9.5	13.6

OIL ANALYSIS REPORT

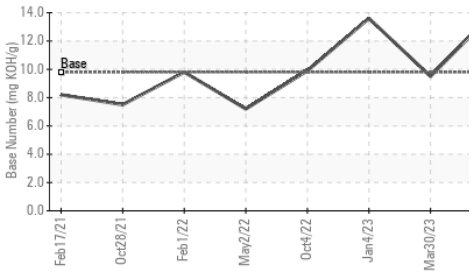
Glycol Contamination



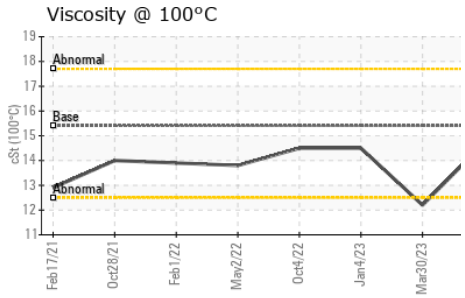
Fuel Dilution



Base Number



Viscosity @ 100°C

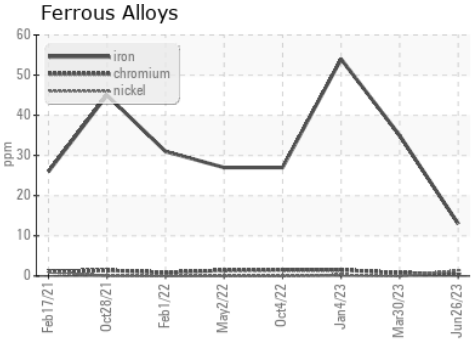


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

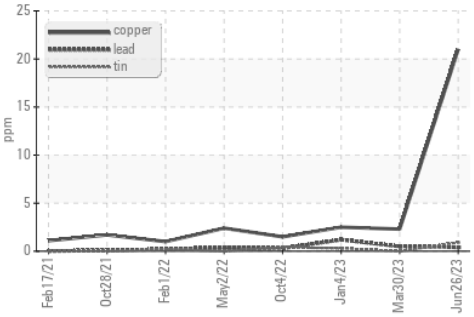
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.7**	▲ 12.2	14.5

GRAPHS

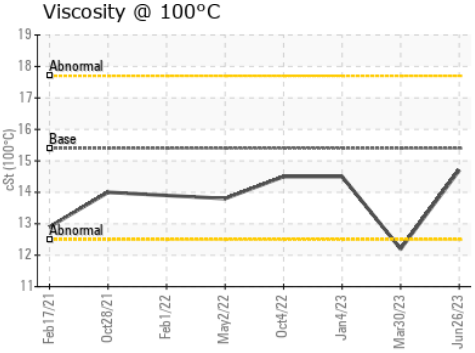
Ferrous Alloys



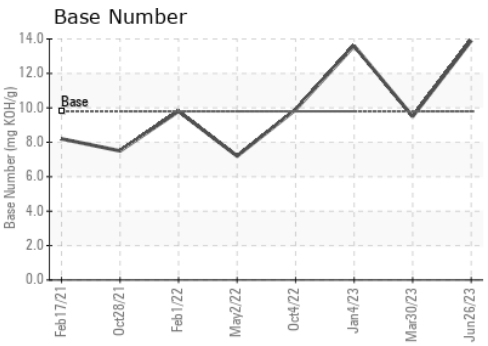
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0082736 **Received** : 29 Jun 2023
Lab Number : 05887275 **Diagnosed** : 03 Jul 2023
Unique Number : 10537758 **Diagnostician** : Jonathan Hester
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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