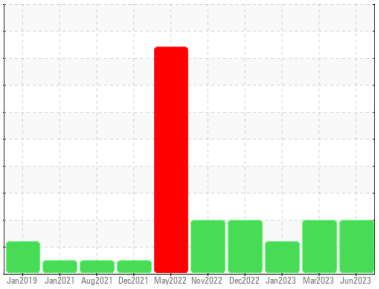
PROBLEM SUMMARY

Sample Rating Trend

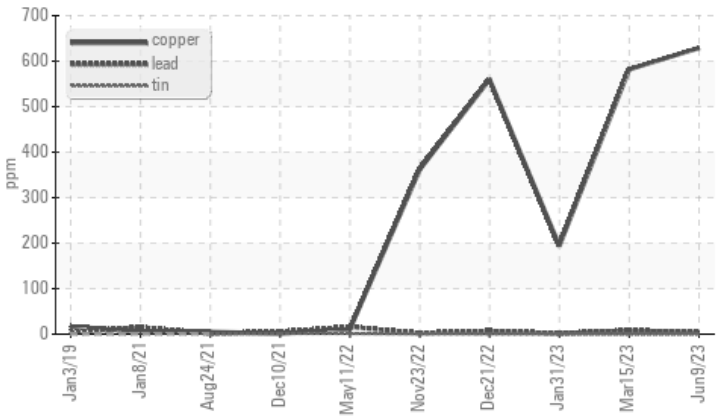


GLYCOL

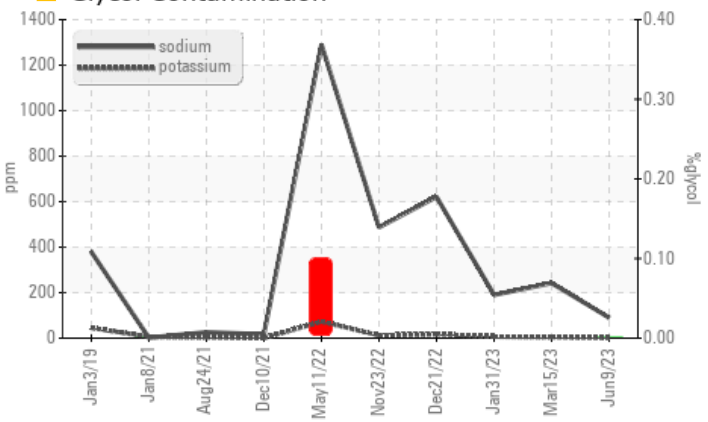
Machine Id
421020-401382
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Glycol Contamination



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ATTENTION
Copper	ppm	ASTM D5185m	>330	▲ **629**	▲ 582	194
Sodium	ppm	ASTM D5185m		▲ **90**	▲ 242	▲ 190

Customer Id: GFL822
Sample No.: GFL0079360
Lab Number: 05891941
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

15 Mar 2023 Diag: Angela Borella

GLYCOL

We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Sodium and/or potassium levels remain high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

31 Jan 2023 Diag: Angela Borella

GLYCOL

We advise that you check for the source of the coolant leak. Check for low coolant level. The 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. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

21 Dec 2022 Diag: Jonathan Hester

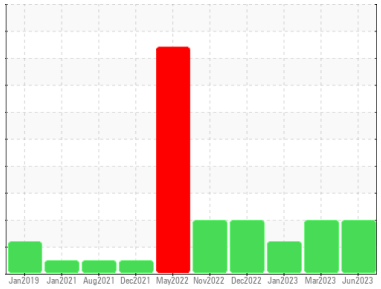
GLYCOL

We advise that you check for possible 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.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
421020-401382
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. Test for glycol is negative.

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		**GFL0079360**	GFL0067115	GFL0067068
Sample Date		Client Info		**09 Jun 2023**	15 Mar 2023	31 Jan 2023
Machine Age	hrs	Client Info		**19370**	18909	18609
Oil Age	hrs	Client Info		**700**	700	150
Oil Changed		Client Info		**Changed**	Changed	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	**22**	29	16
Chromium	ppm	ASTM D5185m	>20	**1**	2	1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	1	0
Lead	ppm	ASTM D5185m	>40	**4**	8	2
Copper	ppm	ASTM D5185m	>330	▲ **629**	▲ 582	194
Tin	ppm	ASTM D5185m	>15	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**0**	0	8
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**69**	87	78
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**1013**	1034	906
Calcium	ppm	ASTM D5185m	1070	**1125**	1161	1059
Phosphorus	ppm	ASTM D5185m	1150	**1049**	1077	1011
Zinc	ppm	ASTM D5185m	1270	**1271**	1389	1212
Sulfur	ppm	ASTM D5185m	2060	**3046**	3103	2840

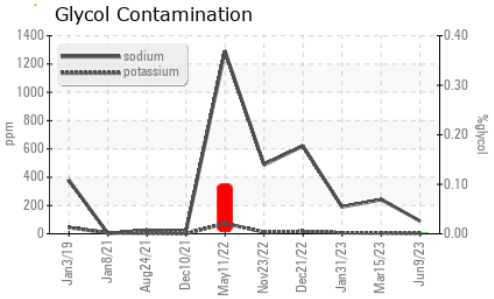
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**2**	4	4
Sodium	ppm	ASTM D5185m		▲ **90**	▲ 242	▲ 190
Potassium	ppm	ASTM D5185m	>20	**1**	5	7
Glycol	%	*ASTM D2982		**0.0**	NEG	NEG

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**0.6**	0.6	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**8.9**	9.9	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.6**	21.5	19.8

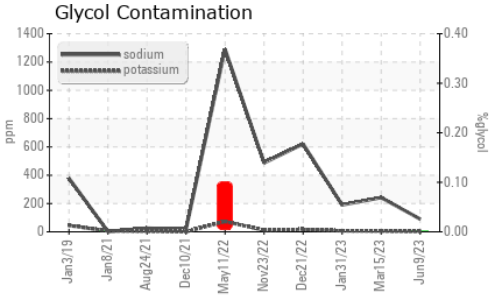
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.0**	17.6	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.9**	8.1	10.1

OIL ANALYSIS REPORT

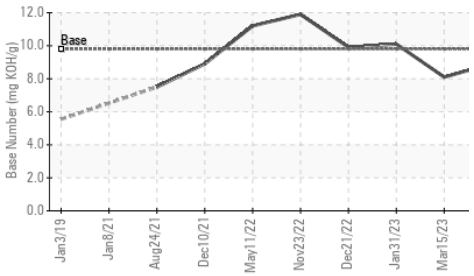
Glycol Contamination



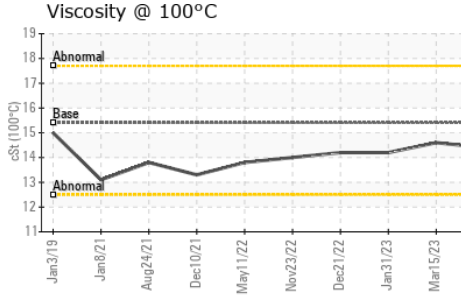
Glycol Contamination



Base Number



Viscosity @ 100°C

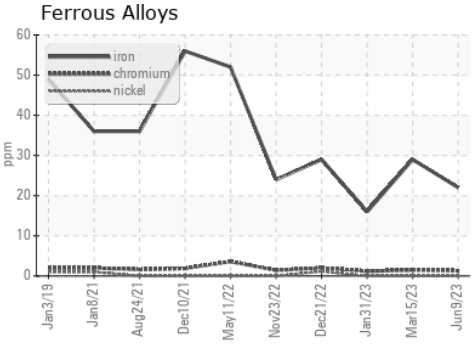


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

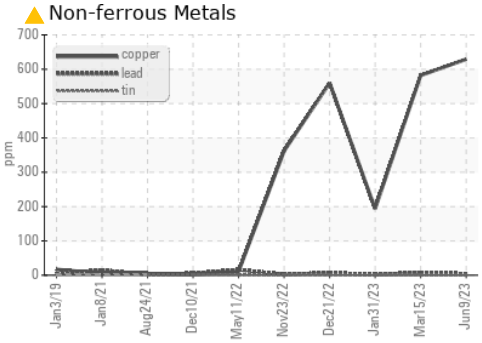
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.4**	14.6	14.2

GRAPHS

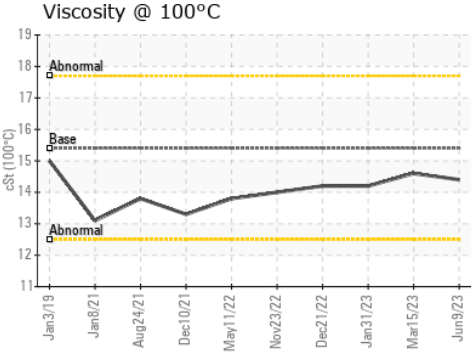
Ferrous Alloys



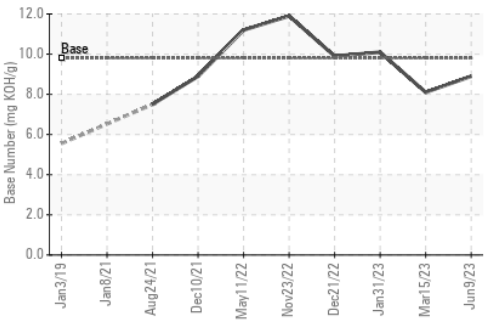
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0079360 **Received** : 07 Jul 2023
Lab Number : 05891941 **Diagnosed** : 10 Jul 2023
Unique Number : 10547751 **Diagnostician** : Don Baldridge
Test Package : FLEET (Additional Tests: Glycol)

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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T: (417)403-3641
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