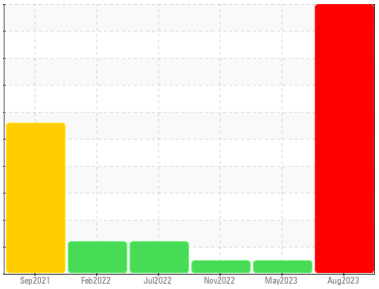
PROBLEM SUMMARY

Sample Rating Trend

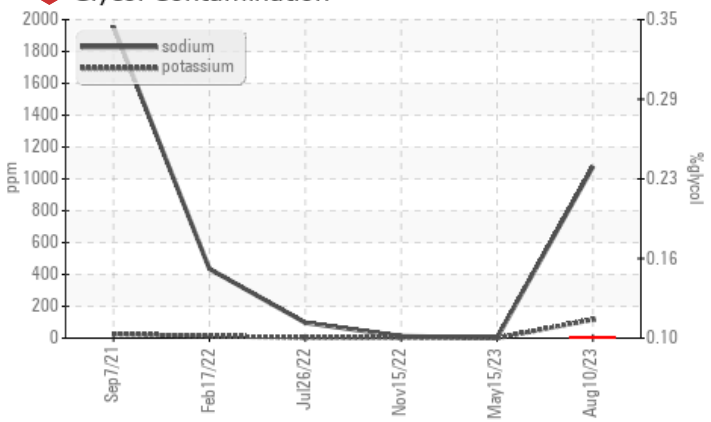


GLYCOL

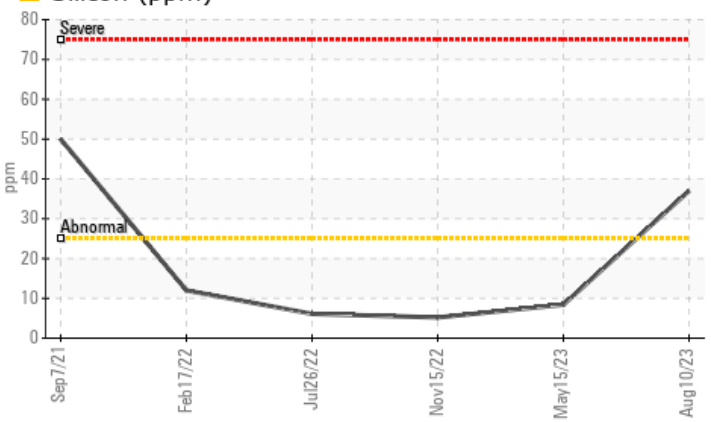
Machine Id
362M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Glycol Contamination



Silicon (ppm)



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Silicon	ppm	ASTM D5185m	>25	▲ 37	8	5
Sodium	ppm	ASTM D5185m		▲ 1077	3	12
Potassium	ppm	ASTM D5185m	>20	▲ 117	0	3
Glycol	%	*ASTM D2982		⬢ 0.10	NEG	NEG

Customer Id: GFL415
Sample No.: GFL0086651
Lab Number: 05924015
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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

15 May 2023 Diag: Wes Davis

NORMAL

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

15 Nov 2022 Diag: Sean Felton

NORMAL

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

26 Jul 2022 Diag: Jonathan Hester

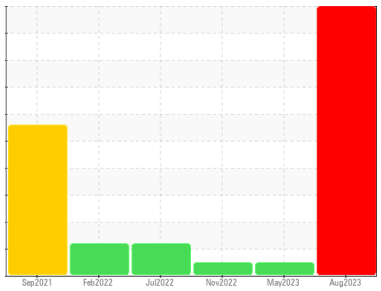
GLYCOL

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 remain elevated. Test for glycol is negative. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
362M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
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.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. Test for glycol is positive. Elemental level of silicon (Si) above normal indicating ingress of seal material.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0086651**	GFL0081450	GFL0057355
Sample Date		Client Info		**10 Aug 2023**	15 May 2023	15 Nov 2022
Machine Age	hrs	Client Info		**12409**	4242	2853
Oil Age	hrs	Client Info		**11568**	11568	11568
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	**57**	9	26
Chromium	ppm	ASTM D5185m	>20	**3**	0	2
Nickel	ppm	ASTM D5185m	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**6**	2	5
Lead	ppm	ASTM D5185m	>40	**3**	0	<1
Copper	ppm	ASTM D5185m	>330	**16**	0	<1
Tin	ppm	ASTM D5185m	>15	**<1**	0	<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	**19**	2	3
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**119**	58	57
Manganese	ppm	ASTM D5185m	0	**1**	0	<1
Magnesium	ppm	ASTM D5185m	1010	**1045**	932	956
Calcium	ppm	ASTM D5185m	1070	**1250**	1075	1082
Phosphorus	ppm	ASTM D5185m	1150	**960**	1029	979
Zinc	ppm	ASTM D5185m	1270	**1438**	1267	1197
Sulfur	ppm	ASTM D5185m	2060	**3804**	3501	2982

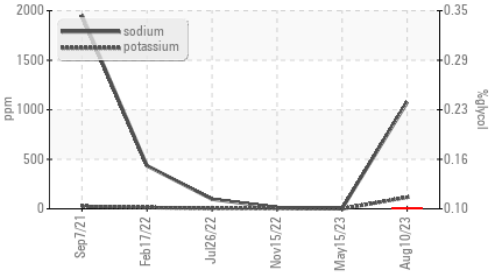
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **37**	8	5
Sodium	ppm	ASTM D5185m		▲ **1077**	3	12
Potassium	ppm	ASTM D5185m	>20	▲ **117**	0	3
Glycol	%	*ASTM D2982		⬢ **0.10**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.8**	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**13.1**	6.7	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.2**	19.6	22

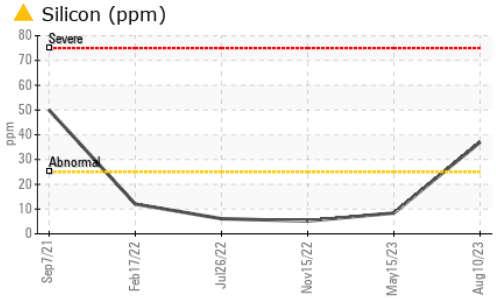
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.6**	15.4	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**7.2**	9.0	8.7

OIL ANALYSIS REPORT

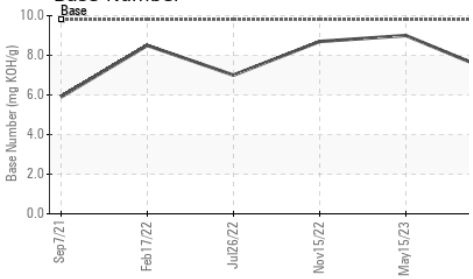
Glycol Contamination



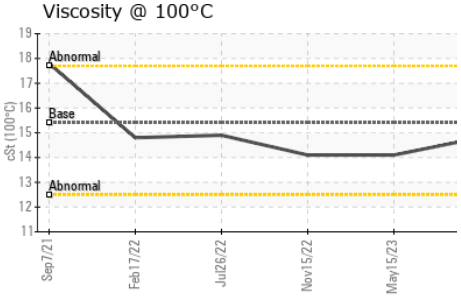
Silicon (ppm)



Base Number



Viscosity @ 100°C

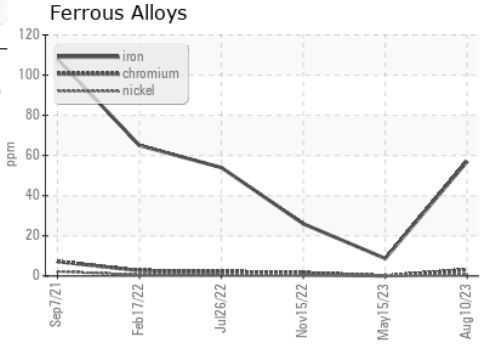


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

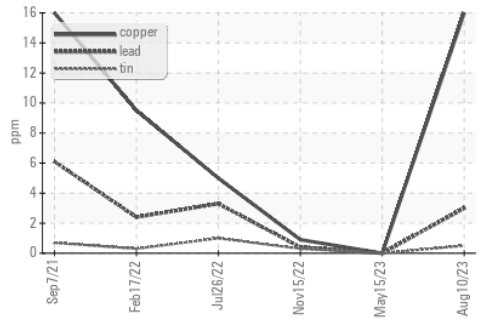
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.8**	14.1	14.1

GRAPHS

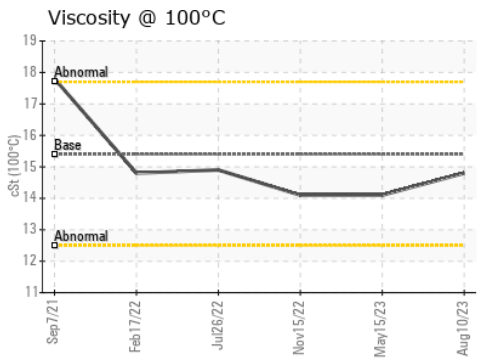
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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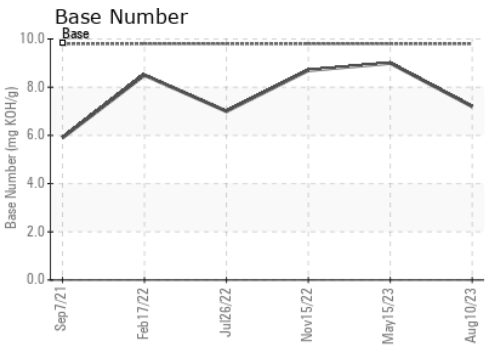

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086651
Lab Number : 05924015
Unique Number : 10603962
Test Package : FLEET (Additional Tests: Glycol)

Received : 14 Aug 2023
Diagnosed : 15 Aug 2023
Diagnostician : Doug Bogart

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)

GFL Environmental - 415 - Michigan East
6200 Elmridge
Sterling Heights, MI
US 48313
Contact: Frank Wolak
fwolak@gflenv.com
T: (586)825-9514
F: