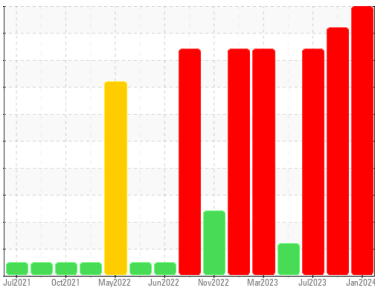
PROBLEM SUMMARY

Machine Id
727109-36
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

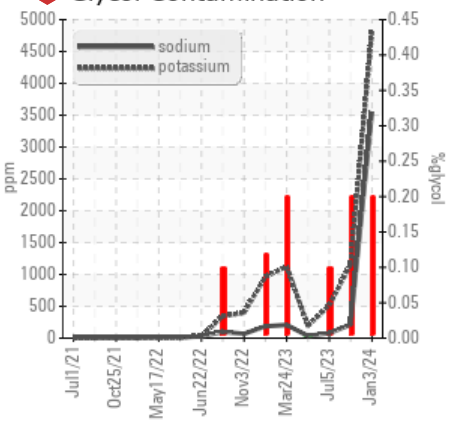
Sample Rating Trend



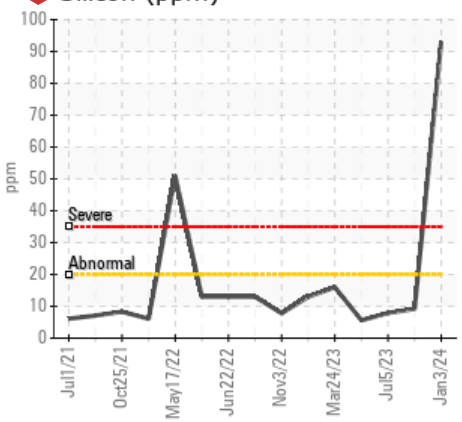
GLYCOL

COMPONENT CONDITION SUMMARY

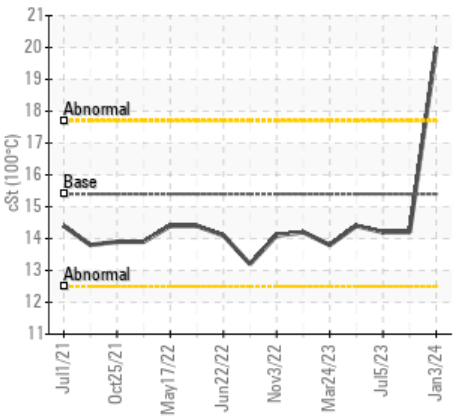
Glycol Contamination



Silicon (ppm)



Viscosity @ 100°C



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. 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.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Silicon	ppm	ASTM D5185m	>20	**93**	9	8
Sodium	ppm	ASTM D5185m		**3548**	213	79
Potassium	ppm	ASTM D5185m	>20	**4813**	1161	514
Glycol	%	*ASTM D2982		**0.20**	0.20	0.10
Visc @ 100°C	cSt	ASTM D445	15.4	**20.0**	14.2	14.2

Customer Id: GFL657
Sample No.: GFL0058063
Lab Number: 06050606
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	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
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

27 Sep 2023 Diag: Jonathan Hester

GLYCOL

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.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. 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

05 Jul 2023 Diag: Wes Davis

GLYCOL

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.All component wear rates are normal. 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

31 Mar 2023 Diag: Doug Bogart

GLYCOL

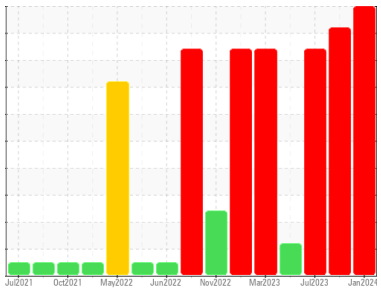
We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Machine Id
727109-36
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

Sample Rating Trend



GLYCOL

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. 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.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0058063**	GFL0058038	GFL0082530
Sample Date		Client Info		**03 Jan 2024**	27 Sep 2023	05 Jul 2023
Machine Age	hrs	Client Info		**11686**	11275	11182
Oil Age	hrs	Client Info		**411**	92	16
Oil Changed		Client Info		**Not Changd**	Changed	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<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	>80	**31**	20	19
Chromium	ppm	ASTM D5185m	>5	**2**	1	<1
Nickel	ppm	ASTM D5185m	>2	**2**	<1	<1
Titanium	ppm	ASTM D5185m		**2**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**8**	6	<1
Lead	ppm	ASTM D5185m	>30	**5**	<1	1
Copper	ppm	ASTM D5185m	>150	**128**	▲ 258	33
Tin	ppm	ASTM D5185m	>5	**2**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**252**	5	4
Barium	ppm	ASTM D5185m	0	**2**	2	<1
Molybdenum	ppm	ASTM D5185m	60	**752**	178	118
Manganese	ppm	ASTM D5185m	0	**1**	1	<1
Magnesium	ppm	ASTM D5185m	1010	**846**	899	978
Calcium	ppm	ASTM D5185m	1070	**912**	1030	1100
Phosphorus	ppm	ASTM D5185m	1150	**996**	1053	1049
Zinc	ppm	ASTM D5185m	1270	**1156**	1220	1272
Sulfur	ppm	ASTM D5185m	2060	**3111**	3145	3843

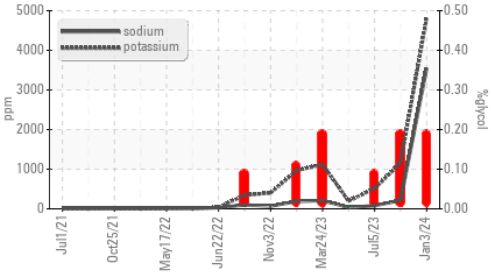
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	⬢ **93**	9	8
Sodium	ppm	ASTM D5185m		▲ **3548**	▲ 213	▲ 79
Potassium	ppm	ASTM D5185m	>20	▲ **4813**	▲ 1161	▲ 514
Glycol	%	*ASTM D2982		⬢ **0.20**	⬢ 0.20	⬢ 0.10

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**20.4**	7.0	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**17.8**	18.7	18.4

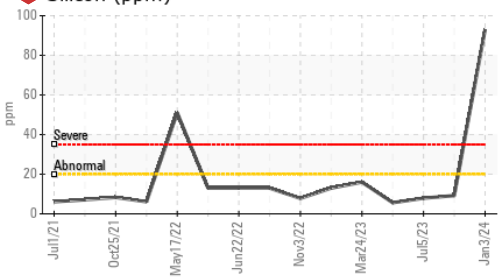
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.8**	13.8	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**62.9**	10.4	10.4

OIL ANALYSIS REPORT

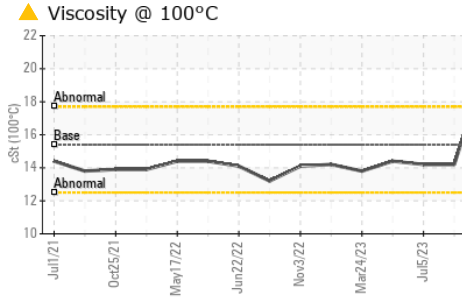
Glycol Contamination



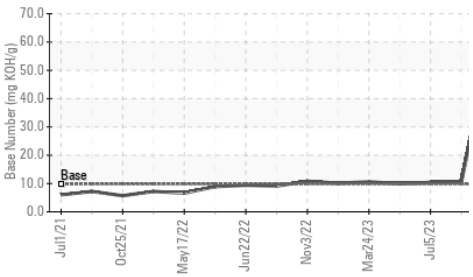
Silicon (ppm)



Viscosity @ 100°C



Base Number

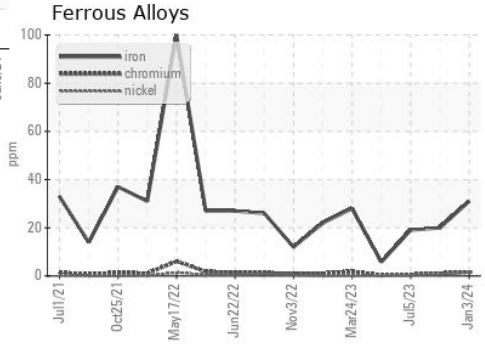


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

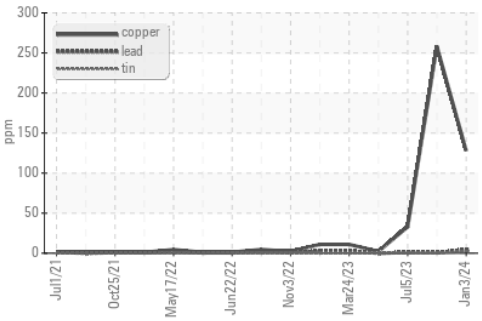
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **20.0**	14.2	14.2

GRAPHS

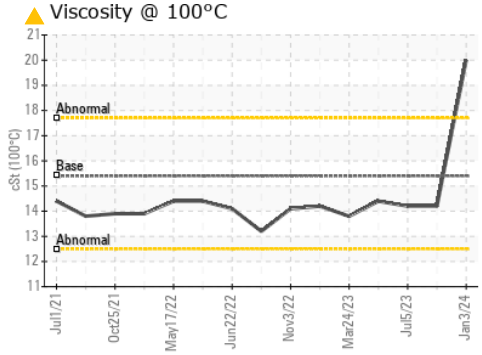
Ferrous Alloys



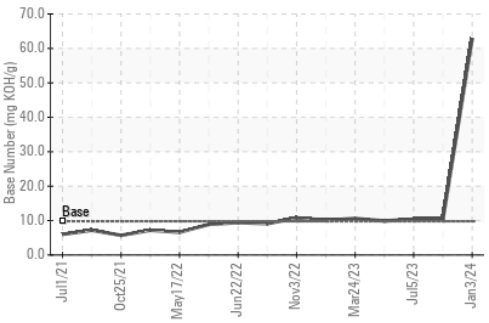
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0058063
Lab Number : 06050606
Unique Number : 10816555
Test Package : FLEET

Recieved : 04 Jan 2024
Diagnosed : 05 Jan 2024
Diagnostician : Jonathan Hester

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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