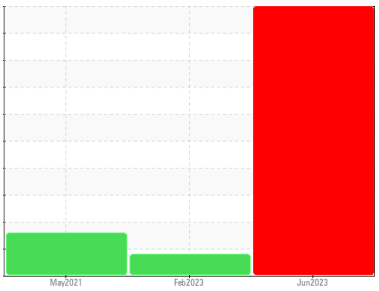
PROBLEM SUMMARY

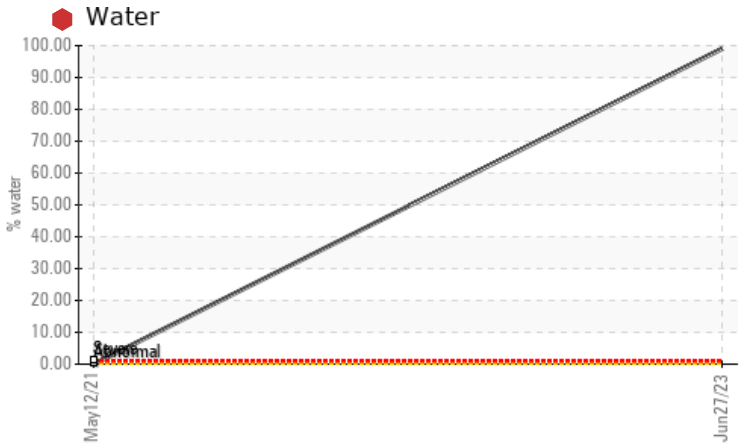
Sample Rating Trend

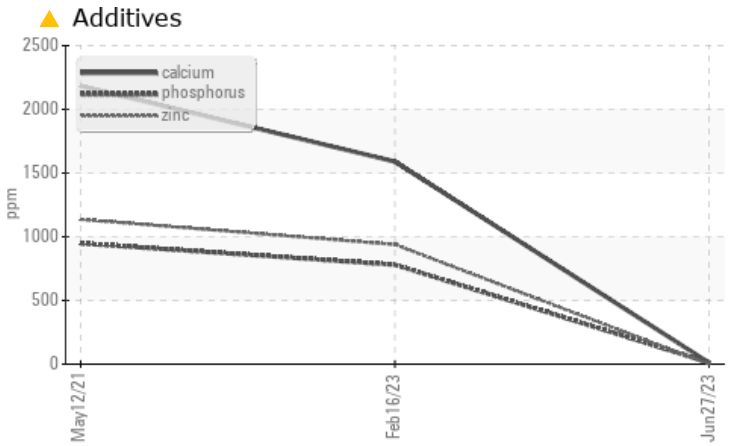


WATER

Machine Id
720028
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check for the source of water entry. 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. Please note that there was too much water present in the oil to perform a viscosity test. (Customer Sample Comment: Sampled oil)

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Molybdenum	ppm	ASTM D5185m	60	▲ **<1**	63	69
Magnesium	ppm	ASTM D5185m	1010	▲ **7**	688	234
Calcium	ppm	ASTM D5185m	1070	▲ **11**	1590	2183
Phosphorus	ppm	ASTM D5185m	1150	▲ **12**	780	948
Zinc	ppm	ASTM D5185m	1270	▲ **0**	939	1136
Sulfur	ppm	ASTM D5185m	2060	▲ **237**	3347	3582
Water	%	ASTM D6304	>0.2	⬢ **99.0**	---	---
ppm Water	ppm	ASTM D6304	>2000	⬢ **990000**	---	---
Emulsified Water	scalar	*Visual	>0.2	▲ **0.2%**	NEG	NEG
Free Water	scalar	*Visual		⬢ **>10%**	NEG	NEG

Customer Id: GFL622
Sample No.: GFL0083962
Lab Number: 05888225
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.
Alert	---	---	?	Please note that there was too much water present in the oil to perform a viscosity test.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

16 Feb 2023 Diag: Don Baldridge

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.Cylinder, crank, or cam shaft wear is indicated. All other 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

12 May 2021 Diag: Jonathan Hester

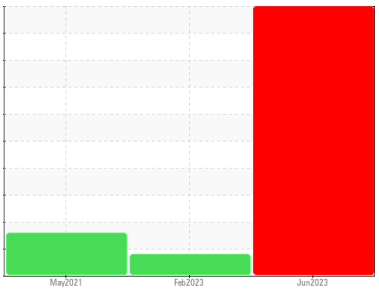
SOOT

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. There is an abnormal amount of solids and carbon present in the oil. Light fuel dilution occurring. 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



WATER

Machine Id
720028
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. 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. Please note that there was too much water present in the oil to perform a viscosity test. (Customer Sample Comment: Sampled oil)

Wear

All component wear rates are normal.

Contamination

Sample consists almost entirely of free water. There is a high concentration of water present in the oil.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0083962**	GFL0071418	GFL0018608
Sample Date		Client Info		**27 Jun 2023**	16 Feb 2023	12 May 2021
Machine Age	hrs	Client Info		**16062**	15918	4940
Oil Age	hrs	Client Info		**5**	10978	617
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Sample Status				**SEVERE**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**0**	▲ 125	104
Chromium	ppm	ASTM D5185m	>20	**0**	3	3
Nickel	ppm	ASTM D5185m	>4	**0**	2	2
Titanium	ppm	ASTM D5185m		**0**	9	5
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**<1**	19	20
Lead	ppm	ASTM D5185m	>40	**0**	6	2
Copper	ppm	ASTM D5185m	>330	**0**	6	6
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	0
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	**9**	20	21
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	▲ **<1**	63	69
Manganese	ppm	ASTM D5185m	0	**0**	2	1
Magnesium	ppm	ASTM D5185m	1010	▲ **7**	688	234
Calcium	ppm	ASTM D5185m	1070	▲ **11**	1590	2183
Phosphorus	ppm	ASTM D5185m	1150	▲ **12**	780	948
Zinc	ppm	ASTM D5185m	1270	▲ **0**	939	1136
Sulfur	ppm	ASTM D5185m	2060	▲ **237**	3347	3582

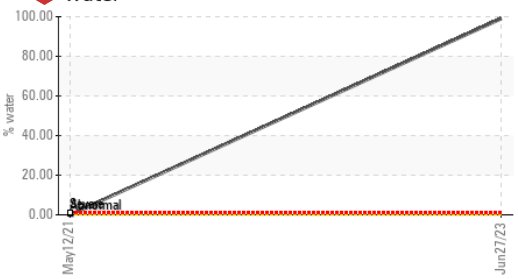
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**0**	8	5
Sodium	ppm	ASTM D5185m		**2**	49	10
Potassium	ppm	ASTM D5185m	>20	**3**	9	25
Fuel	%	ASTM D3524	>2.0	**0.9**	<1.0	▲ 2.3
Water	%	ASTM D6304	>0.2	⬢ **99.0**	---	---
ppm Water	ppm	ASTM D6304	>2000	⬢ **990000**	---	---
Glycol	%	*ASTM D2982		**0.0**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.6**	0.1	▲ 4.2
Nitration	Abs/cm	*ASTM D7624	>20	**8.2**	8.2	14.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.5**	22.1	32.1

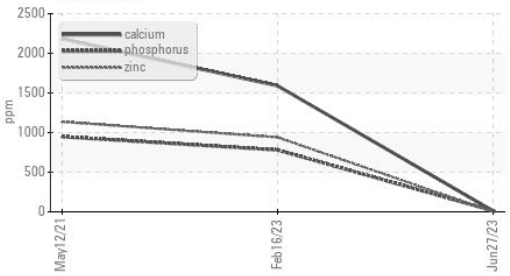
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.0**	20.2	19.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.5**	9.9	4.5

OIL ANALYSIS REPORT

Water



Additives

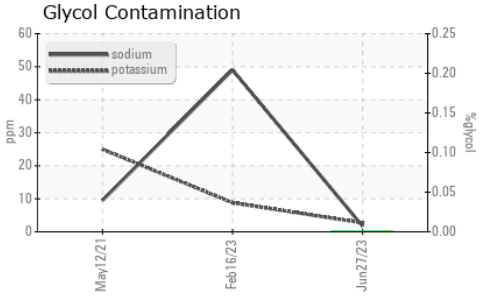


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	▲ **0.2%**	NEG	NEG
Free Water	scalar	*Visual		⬢ **>10%**	NEG	NEG

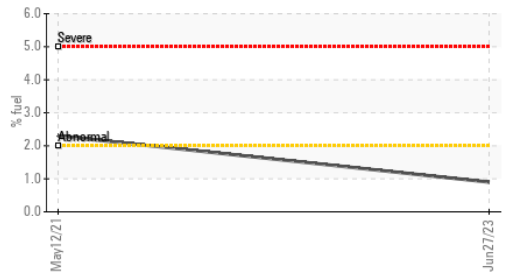
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**---**	12.7	13.7

GRAPHS

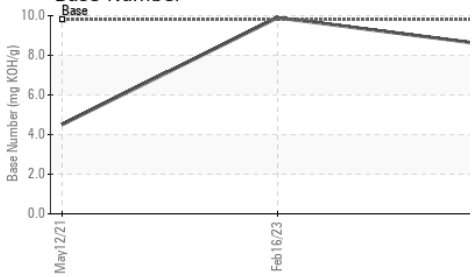
Glycol Contamination



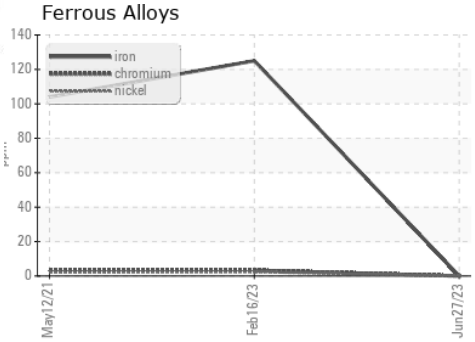
Fuel Dilution



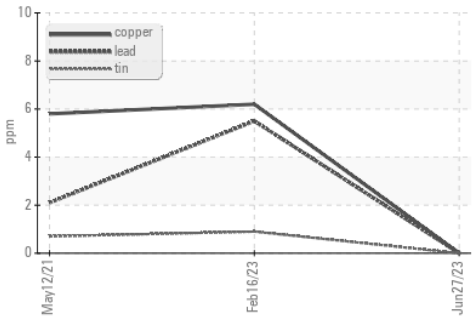
Base Number



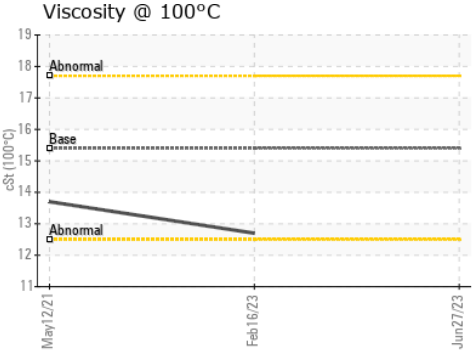
Ferrous Alloys



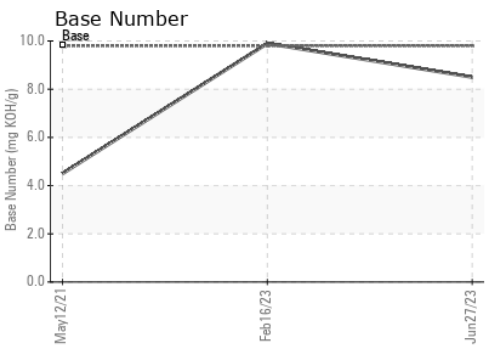
Non-ferrous Metals



Viscosity @ 100°C



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0083962 **Received** : 30 Jun 2023
Lab Number : 05888225 **Diagnosed** : 07 Jul 2023
Unique Number : 10538708 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, KF, PercentFuel)

GFL Environmental - 622 - Traverse City Hauling
160 Hughes Dr
Traverse City, MI
US 49686
Contact: GARY BREWER
T:
F:

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)