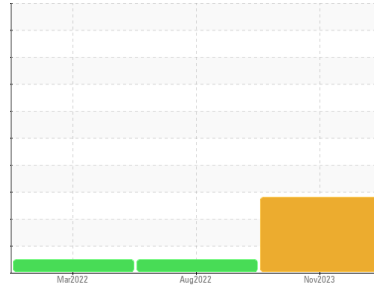




PROBLEM SUMMARY

Sample Rating Trend



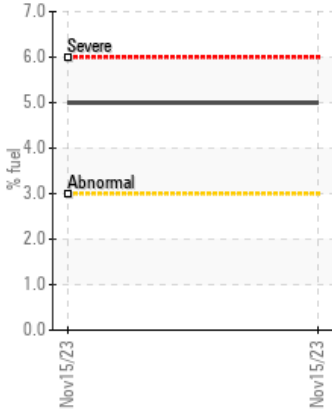
WEAR



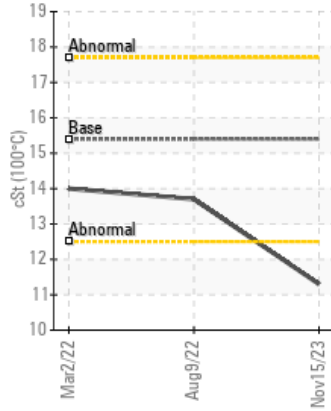
Machine Id
4639M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (36 GAL)

COMPONENT CONDITION SUMMARY

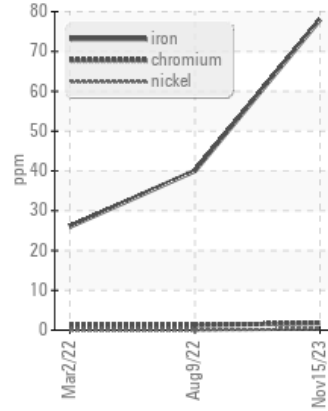
▲ Fuel Dilution



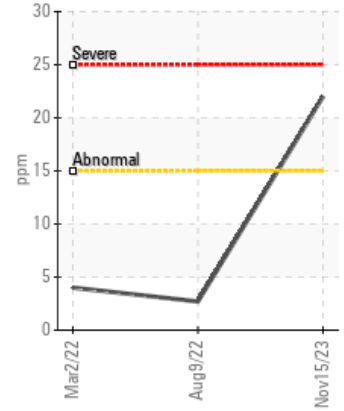
▲ Viscosity @ 100°C



▲ Ferrous Alloys



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	▲ 78	40	26
Aluminum	ppm	ASTM D5185m	>15	▲ 22	3	4
Fuel	%	ASTM D3524	>3.0	▲ 5.0	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.3	13.7	14.0

Customer Id: GFL410
 Sample No.: GFL0084961
 Lab Number: 06010559
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +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.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

09 Aug 2022 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



02 Mar 2022 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.

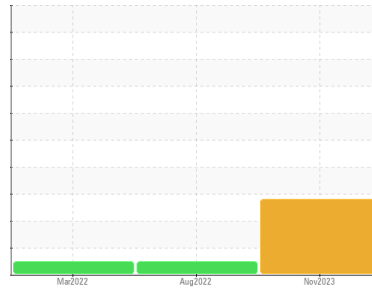
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
4639M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (36 GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Piston, ring and cylinder wear is indicated.

Contamination

There is a moderate amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. 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	GFL0084961	GFL0052082	GFL0018451
Sample Date	Client Info	15 Nov 2023	09 Aug 2022	02 Mar 2022
Machine Age	hrs	18139	15878	14263
Oil Age	hrs	18139	15878	0
Oil Changed	Client Info	Changed	N/A	N/A
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>75	▲ 78	40	26
Chromium	ppm	ASTM D5185m	>5	2	1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	▲ 22	3	4
Lead	ppm	ASTM D5185m	>25	<1	<1	<1
Copper	ppm	ASTM D5185m	>100	3	1	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Antimony	ppm	ASTM D5185m		---	---	0
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	22	3	2
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	60	48	58	63
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	809	860	979
Calcium	ppm	ASTM D5185m	1070	928	1029	1131
Phosphorus	ppm	ASTM D5185m	1150	872	1006	1066
Zinc	ppm	ASTM D5185m	1270	1100	1211	1358
Sulfur	ppm	ASTM D5185m	2060	2643	2736	2575

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	22	8	12
Sodium	ppm	ASTM D5185m		6	5	6
Potassium	ppm	ASTM D5185m	>20	3	2	3
Fuel	%	ASTM D3524	>3.0	▲ 5.0	<1.0	<1.0

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>6	1	1.1	1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	11.1	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	24.3	25.0

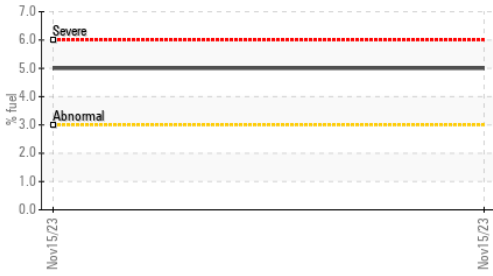
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	20.7	22.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	7.7	6.8

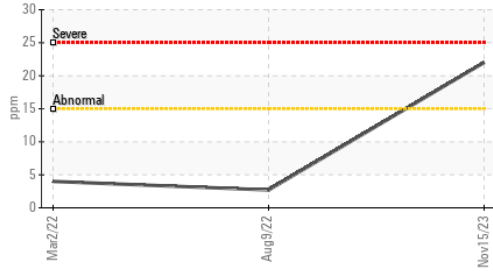


OIL ANALYSIS REPORT

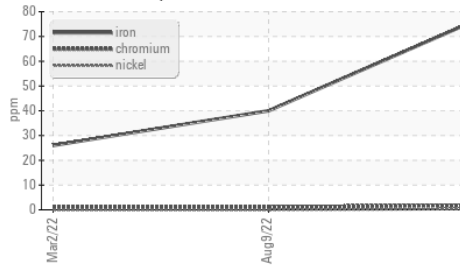
▲ Fuel Dilution



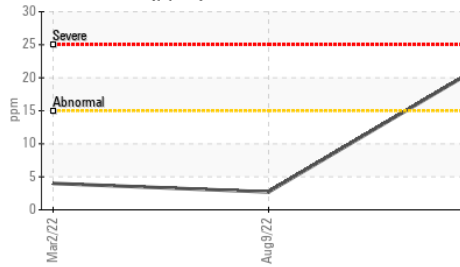
▲ Aluminum (ppm)



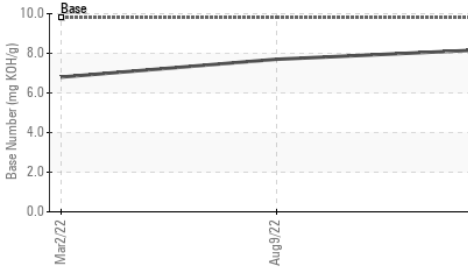
▲ Ferrous Alloys



▲ Aluminum (ppm)



▲ Base Number

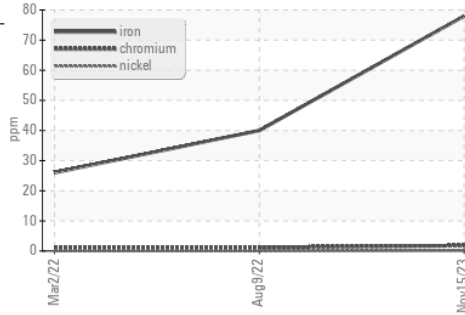


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

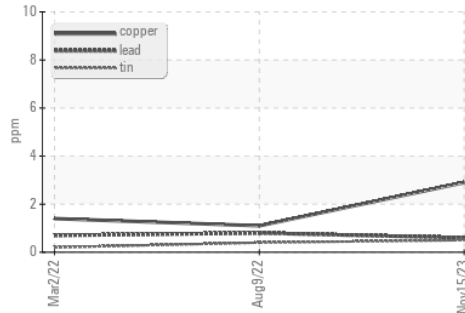
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4 ▲ 11.3	13.7	14.0

GRAPHS

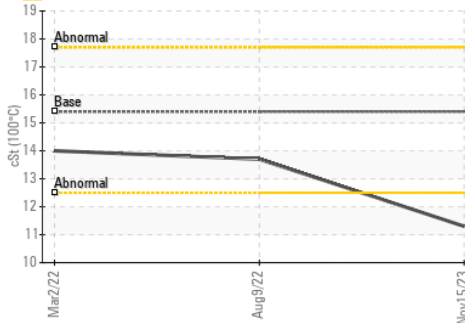
▲ Ferrous Alloys



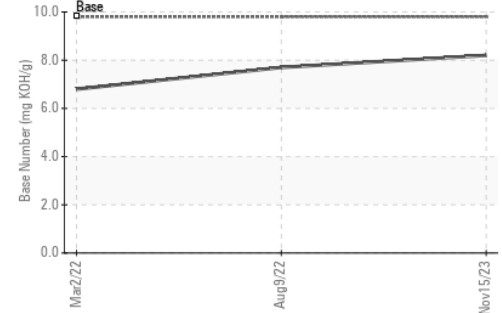
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084961 **Received** : 17 Nov 2023
Lab Number : 06010559 **Diagnosed** : 20 Nov 2023
Unique Number : 10749703 **Diagnostician** : Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340
 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)