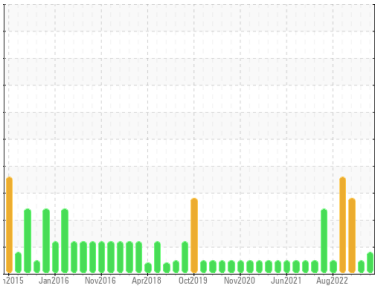
PROBLEM SUMMARY

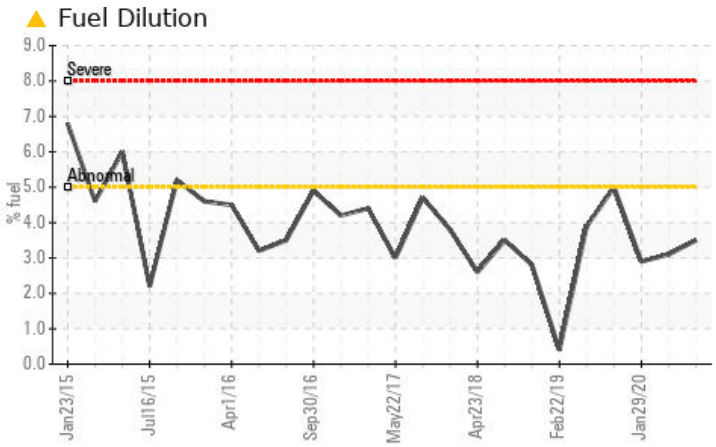
Sample Rating Trend



FUEL

Machine Id
2584
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

PROBLEMATIC TEST RESULTS

Sample Status				MARGINAL	NORMAL	ABNORMAL
Fuel	%	ASTM D3524	>5	▲ **3.5**	<1.0	<1.0

Customer Id: GFL035
Sample No.: GFL0085172
Lab Number: 06000237
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

11 Jul 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

---

16 May 2023 Diag: Don Baldridge

DIRT

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

---

13 Jan 2023 Diag: Jonathan Hester

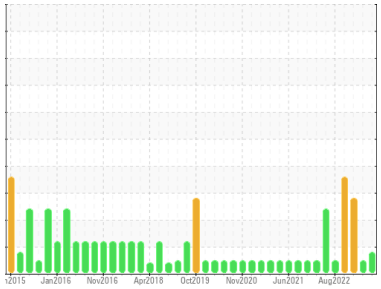
DIRT

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Light fuel dilution occurring. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
2584
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0085172**	GFL0071574	GFL0071592
Sample Date		Client Info		**02 Nov 2023**	11 Jul 2023	16 May 2023
Machine Age	mls	Client Info		**362050**	362050	362050
Oil Age	mls	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**8**	11	35
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	<1	1
Titanium	ppm	ASTM D5185m		**<1**	<1	1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	9	▲ 21
Lead	ppm	ASTM D5185m	>40	**<1**	0	1
Copper	ppm	ASTM D5185m	>330	**2**	1	5
Tin	ppm	ASTM D5185m	>15	**<1**	<1	1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**1**	2	2
Barium	ppm	ASTM D5185m	0	**5**	<1	0
Molybdenum	ppm	ASTM D5185m	60	**58**	65	60
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**837**	1021	858
Calcium	ppm	ASTM D5185m	1070	**1003**	1183	1163
Phosphorus	ppm	ASTM D5185m	1150	**1004**	1148	892
Zinc	ppm	ASTM D5185m	1270	**1137**	1376	1188
Sulfur	ppm	ASTM D5185m	2060	**2991**	4084	3297

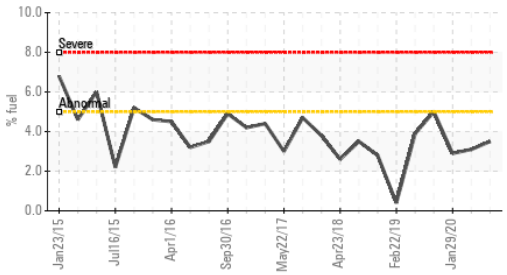
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	13	▲ 38
Sodium	ppm	ASTM D5185m		**2**	4	8
Potassium	ppm	ASTM D5185m	>20	**11**	5	8
Fuel	%	ASTM D3524	>5	▲ **3.5**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**9.0**	7.8	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.1**	18.3	22.0

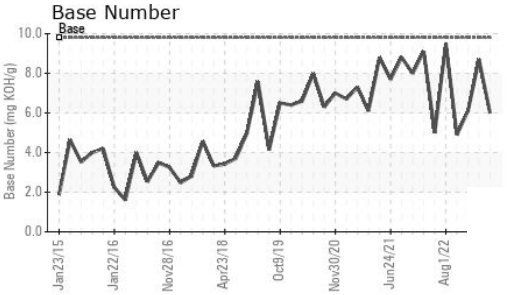
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.4**	15.0	19.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.0**	8.7	6.1

OIL ANALYSIS REPORT

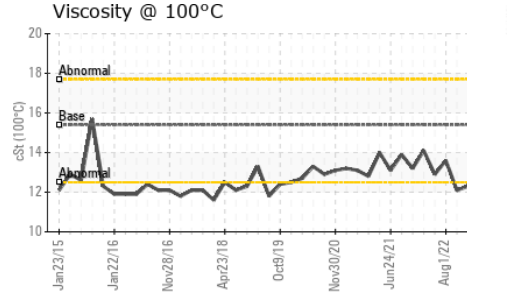
Fuel Dilution



Base Number



Viscosity @ 100°C

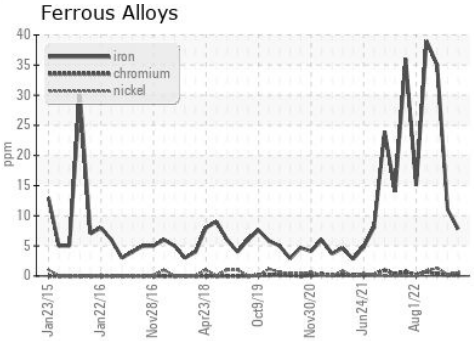


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

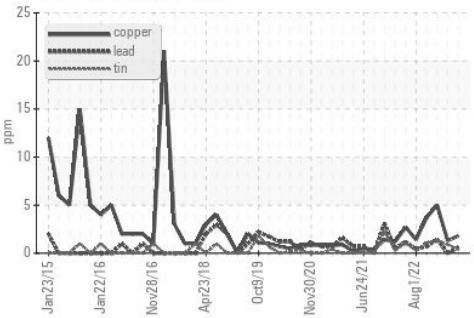
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**12.2**	13.2	▲ 12.3

GRAPHS

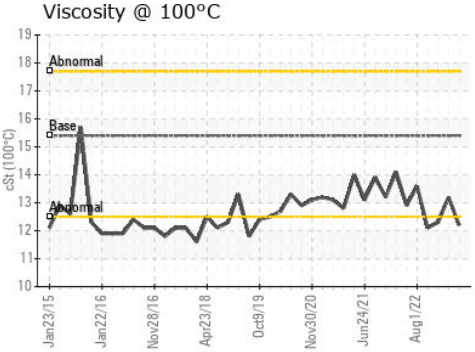
Ferrous Alloys



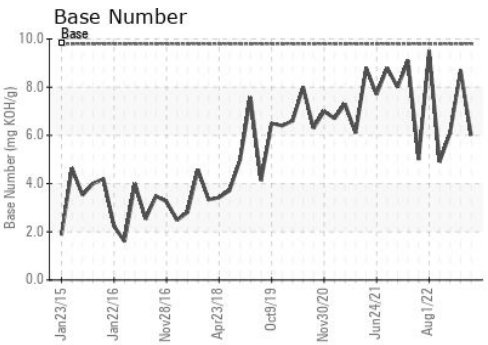
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0085172 **Received** : 07 Nov 2023
Lab Number : 06000237 **Diagnosed** : 08 Nov 2023
Unique Number : 10728597 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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 - 035 - Greensboro
1236 Elon Place
High Point, NC
US 27263
Contact: JORGE COSTA
jorge.costa@gflenv.com
T: (336)668-3712
F: