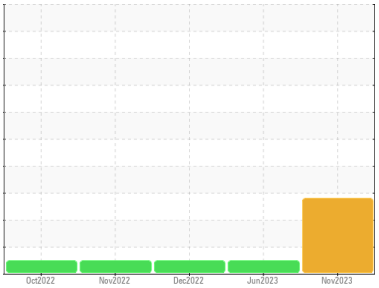
PROBLEM SUMMARY

Machine Id
579M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

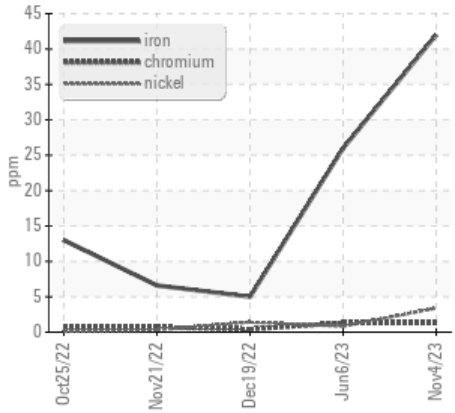
Sample Rating Trend



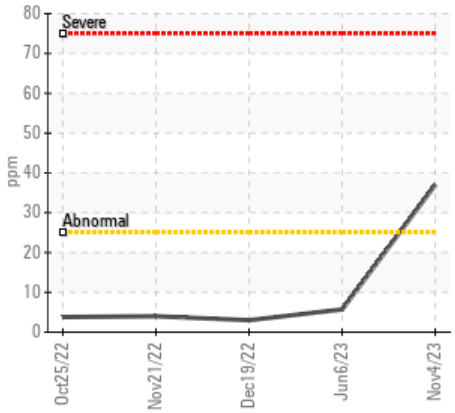
DIRT

COMPONENT CONDITION SUMMARY

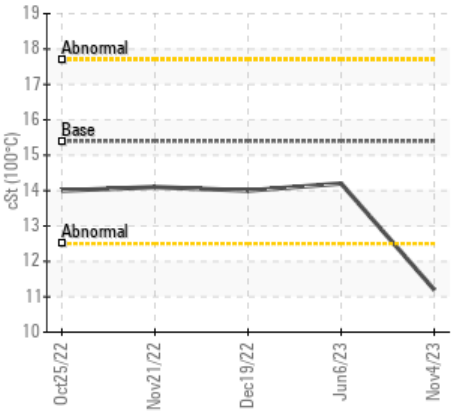
▲ Ferrous Alloys



▲ Silicon (ppm)



▲ Viscosity @ 100°C



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Nickel	ppm	ASTM D5185m	>2	▲ **3**	<1	1
Silicon	ppm	ASTM D5185m	>25	▲ **37**	6	3
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.2**	14.2	14.0

Customer Id: GFL405
Sample No.: GFL0097663
Lab Number: 06009341
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@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.

HISTORICAL DIAGNOSIS

06 Jun 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

19 Dec 2022 Diag: Jonathan Hester

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

21 Nov 2022 Diag: Wes Davis

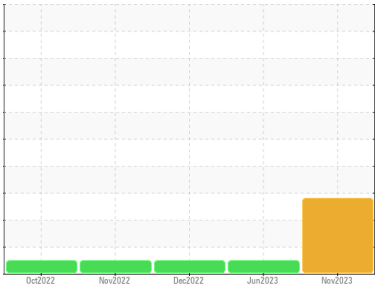
NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.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



DIRT

Machine Id
579M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
Exhaust valve wear is indicated.

Contamination
Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0097663**	GFL0072954	GFL0060658
Sample Date		Client Info		**04 Nov 2023**	06 Jun 2023	19 Dec 2022
Machine Age	hrs	Client Info		**6686**	6054	4978
Oil Age	hrs	Client Info		**632**	750	500
Oil Changed		Client Info		**Changed**	Changed	Changed
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	>90	**42**	26	5
Chromium	ppm	ASTM D5185m	>20	**1**	1	<1
Nickel	ppm	ASTM D5185m	>2	▲ **3**	<1	1
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**3**	1	<1
Lead	ppm	ASTM D5185m	>40	**<1**	1	0
Copper	ppm	ASTM D5185m	>330	**72**	1	0
Tin	ppm	ASTM D5185m	>15	**3**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**48**	3	1
Barium	ppm	ASTM D5185m	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185m	60	**94**	64	55
Manganese	ppm	ASTM D5185m	0	**4**	<1	0
Magnesium	ppm	ASTM D5185m	1010	**739**	999	861
Calcium	ppm	ASTM D5185m	1070	**1319**	1179	1023
Phosphorus	ppm	ASTM D5185m	1150	**742**	1061	951
Zinc	ppm	ASTM D5185m	1270	**952**	1358	1156
Sulfur	ppm	ASTM D5185m	2060	**2060**	3482	2964

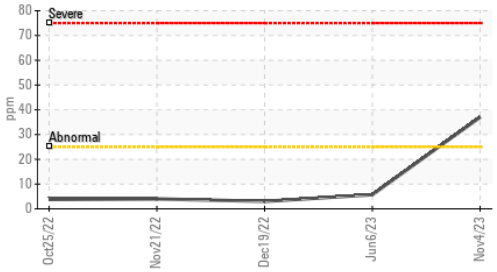
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **37**	6	3
Sodium	ppm	ASTM D5185m		**7**	7	3
Potassium	ppm	ASTM D5185m	>20	**4**	3	1
Fuel	%	ASTM D3524	>3.0	**0.5**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.7**	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**11.2**	9.8	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.9**	21.9	18.1

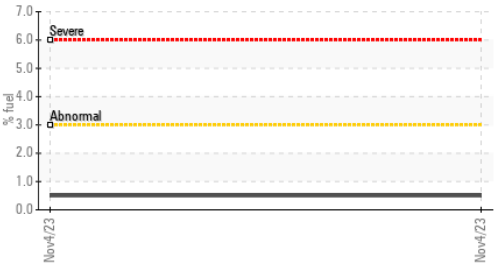
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.8**	19.7	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.2**	7.9	8.9

OIL ANALYSIS REPORT

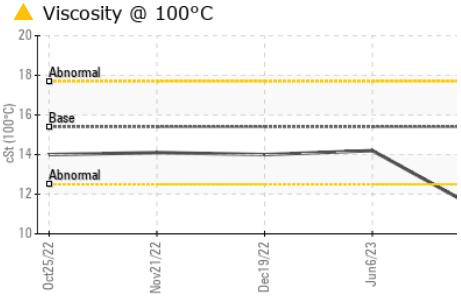
Silicon (ppm)



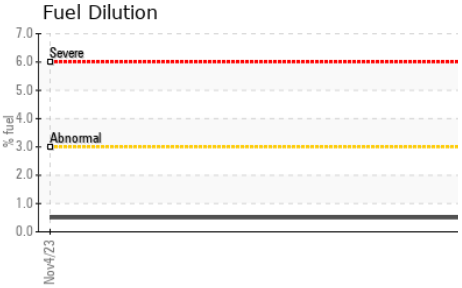
Fuel Dilution



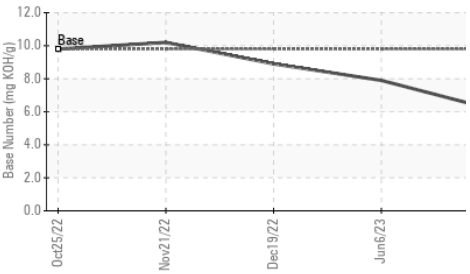
Viscosity @ 100°C



Fuel Dilution



Base Number

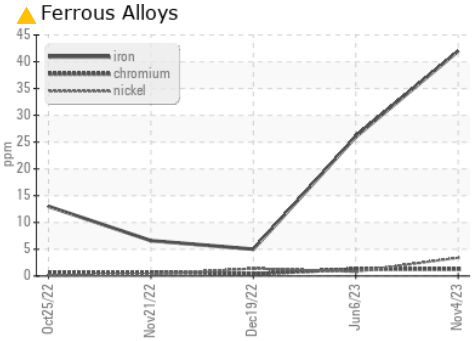


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

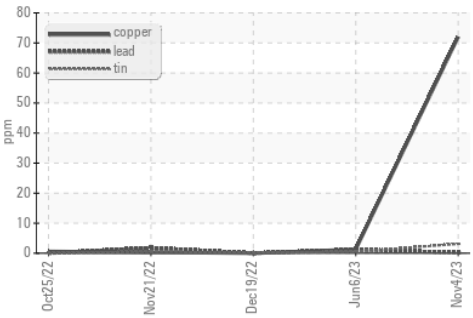
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.2**	14.2	14.0

GRAPHS

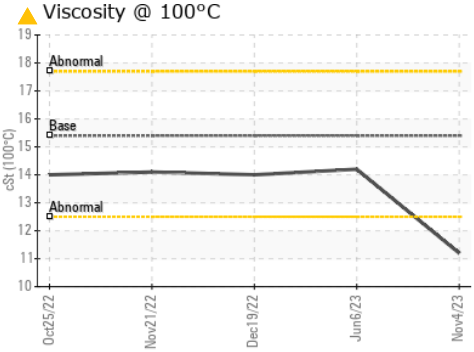
Ferrous Alloys



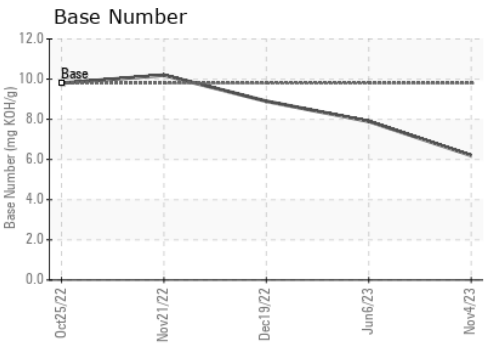
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0097663 **Received** : 16 Nov 2023
Lab Number : 06009341 **Diagnosed** : 20 Nov 2023
Unique Number : 10743103 **Diagnostician** : Sean Felton
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 - 405 - Arbor Hills
7400 Napier Rd
NORTHVILLE, MI
US 48168
Contact: John Nahal
jnahal@gflenv.com
T:
F: