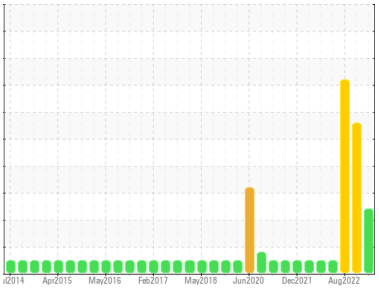
PROBLEM SUMMARY

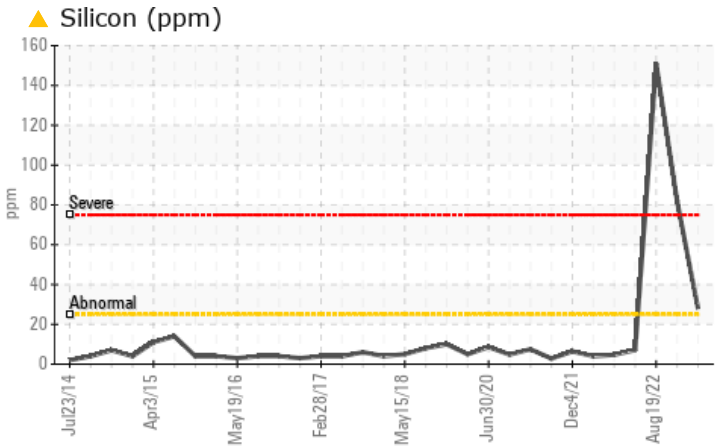
Sample Rating Trend

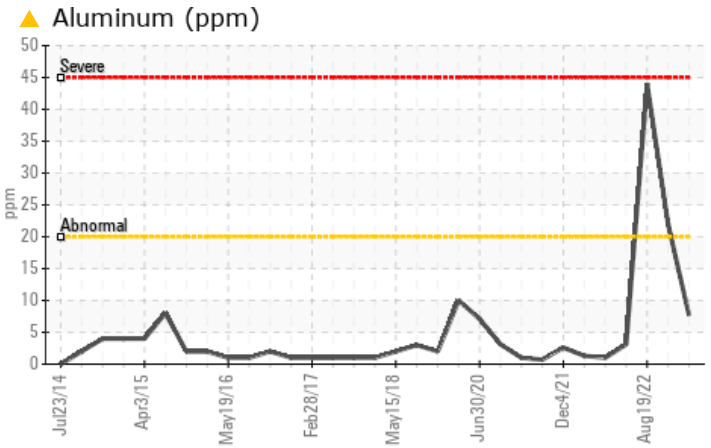


DIRT

Machine Id
2558
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	SEVERE	SEVERE
Aluminum	ppm	ASTM D5185m	>20	▲ 8	▲ 22	▲ 44
Silicon	ppm	ASTM D5185m	>25	▲ 28	⬢ 82	⬢ 151

Customer Id: GFL018
Sample No.: GFL0066871
Lab Number: 05891149
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.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

28 Feb 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. We recommend an early resample to monitor this condition.All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report

19 Aug 2022 Diag: Don Baldridge

DIRT

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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.Cylinder, crank, or cam shaft wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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

30 Mar 2022 Diag: Wes Davis

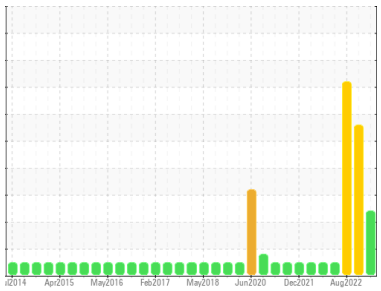
NORMAL

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



DIRT

Machine Id
2558
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation
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.

Wear
All component wear rates are normal.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

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

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0066871**	GFL0055900	GFL0055878
Sample Date		Client Info		**04 Jul 2023**	28 Feb 2023	19 Aug 2022
Machine Age	hrs	Client Info		**509420**	509420	509420
Oil Age	hrs	Client Info		**509420**	509420	150
Oil Changed		Client Info		**Changed**	Changed	Not Changd
Sample Status				**ABNORMAL**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>120	**54**	73	▲ 248
Chromium	ppm	ASTM D5185m	>20	**5**	12	▲ 21
Nickel	ppm	ASTM D5185m	>5	**<1**	2	1
Titanium	ppm	ASTM D5185m	>2	**<1**	2	3
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	▲ **8**	▲ 22	▲ 44
Lead	ppm	ASTM D5185m	>40	**<1**	2	4
Copper	ppm	ASTM D5185m	>330	**5**	8	21
Tin	ppm	ASTM D5185m	>15	**<1**	1	2
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**7**	8	8
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**62**	61	61
Manganese	ppm	ASTM D5185m	0	**1**	1	3
Magnesium	ppm	ASTM D5185m	1010	**961**	799	768
Calcium	ppm	ASTM D5185m	1070	**1098**	1150	1048
Phosphorus	ppm	ASTM D5185m	1150	**1065**	983	943
Zinc	ppm	ASTM D5185m	1270	**1295**	1125	1116
Sulfur	ppm	ASTM D5185m	2060	**3835**	3066	2795

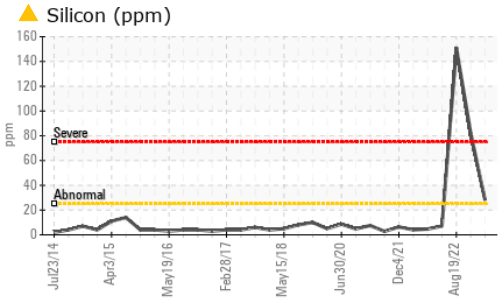
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	▲ **28**	⬢ 82	⬢ 151
Sodium	ppm	ASTM D5185m		**2**	<1	11
Potassium	ppm	ASTM D5185m	>20	**6**	8	14

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>4	**1.1**	0.8	3
Nitration	Abs/cm	*ASTM D7624	>20	**6.7**	5.9	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.3**	18.7	24.7

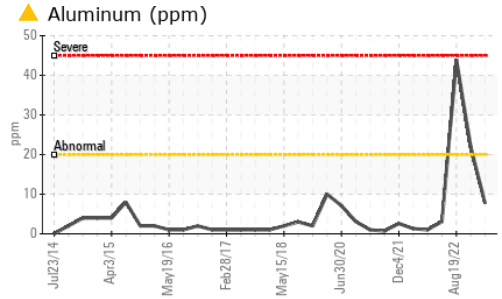
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.9**	13.0	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.5**	9.6	9.7

OIL ANALYSIS REPORT

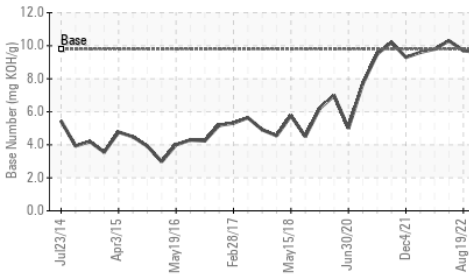
Silicon (ppm)



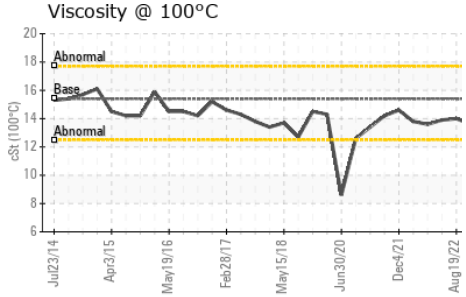
Aluminum (ppm)



Base Number



Viscosity @ 100°C

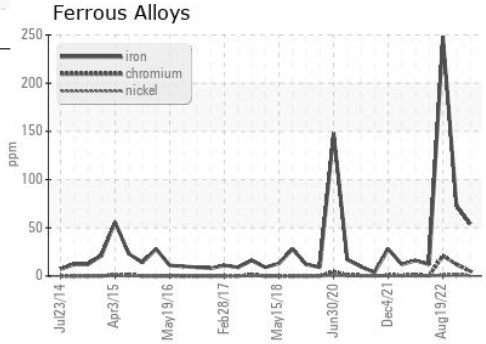


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

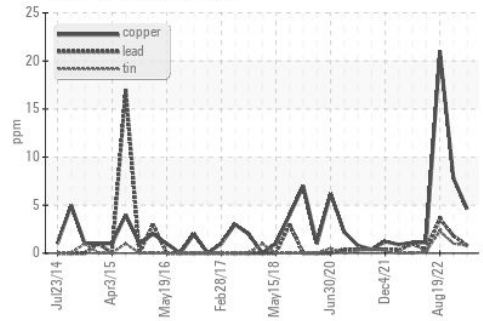
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.7**	13.6	14.0

GRAPHS

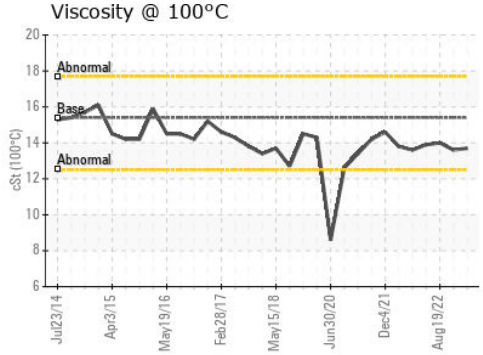
Ferrous Alloys



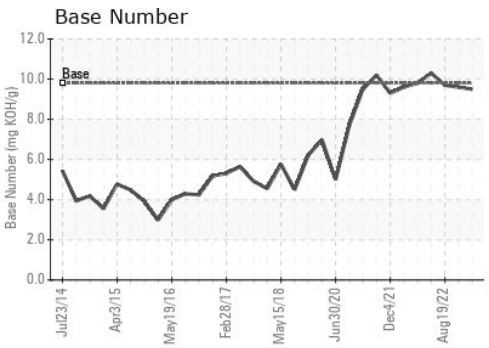
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066871
Lab Number : 05891149
Unique Number : 10546959
Test Package : FLEET

Received : 06 Jul 2023
Diagnosed : 07 Jul 2023
Diagnostician : Sean Felton

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 - 018 - Fayetteville
4621 Marracco Drive
Hope Mills, NC
US 28348
Contact: Robert Carter
robert.carter@gflenv.com
T: (910)596-1170
F:

Report Id: GFL018 [WUSCAR] 05891149 (Generated: 07/07/2023 14:36:22) Rev: 1

Submitted By: Robert Carter