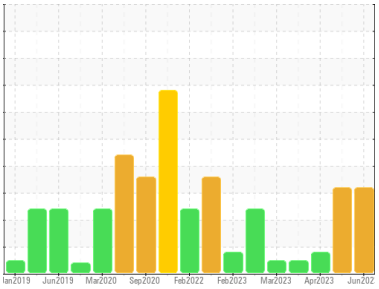
PROBLEM SUMMARY

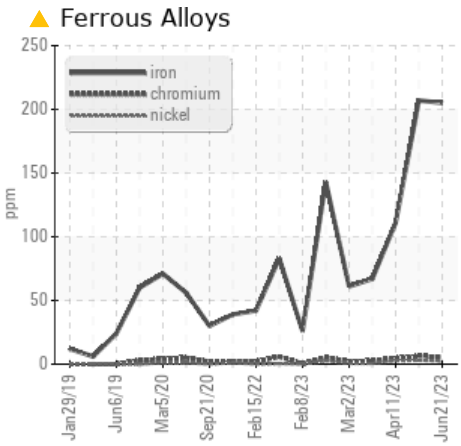
Machine Id
723028-305164
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

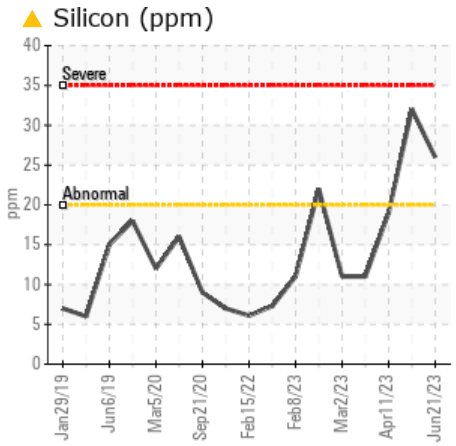
Sample Rating Trend

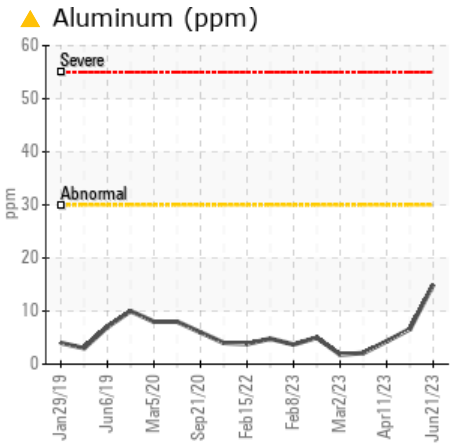


DIRT

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>80	▲ **205**	▲ 207	▲ 111
Aluminum	ppm	ASTM D5185m	>30	▲ **15**	▲ 7	4
Silicon	ppm	ASTM D5185m	>20	▲ **26**	▲ 32	19

Customer Id: GFL856
Sample No.: GFL0084736
Lab Number: 05884947
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +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
Resample	---	---	?	We recommend an early resample to monitor this condition.
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

01 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. 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 condition of the oil is acceptable for the time in service.

view report

11 Apr 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

06 Mar 2023 Diag: Wes Davis

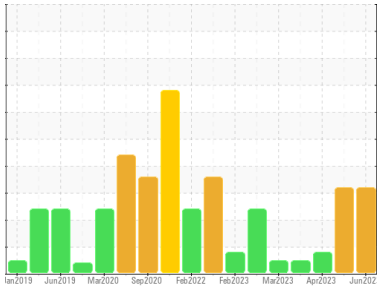
NORMAL

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
723028-305164
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition.

Wear
Cylinder, crank, or cam shaft wear is indicated.

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		**GFL0084736**	GFL0078204	GFL0078067
Sample Date		Client Info		**21 Jun 2023**	01 May 2023	11 Apr 2023
Machine Age	mls	Client Info		**299745**	296669	295330
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	**<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	>80	▲ **205**	▲ 207	▲ 111
Chromium	ppm	ASTM D5185m	>5	**6**	6	5
Nickel	ppm	ASTM D5185m	>2	**2**	3	2
Titanium	ppm	ASTM D5185m		**<1**	<1	1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	▲ **15**	▲ 7	4
Lead	ppm	ASTM D5185m	>30	**12**	0	<1
Copper	ppm	ASTM D5185m	>150	**6**	4	2
Tin	ppm	ASTM D5185m	>5	**2**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	1
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**3**	3	<1
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**77**	59	53
Manganese	ppm	ASTM D5185m	0	**2**	2	2
Magnesium	ppm	ASTM D5185m	1010	**1267**	963	806
Calcium	ppm	ASTM D5185m	1070	**1367**	1062	870
Phosphorus	ppm	ASTM D5185m	1150	**1296**	1002	820
Zinc	ppm	ASTM D5185m	1270	**1655**	1260	1035
Sulfur	ppm	ASTM D5185m	2060	**4002**	3402	2743

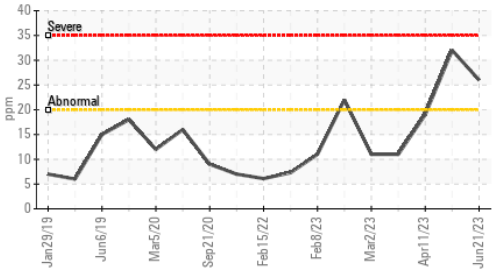
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>20	▲ **26**	▲ 32	19
Sodium	ppm	ASTM D5185m		**7**	10	8
Potassium	ppm	ASTM D5185m	>20	**2**	2	3

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**1.9**	2	1.2
Nitration	Abs/cm	*ASTM D7624	>20	**18.4**	12.5	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**32.8**	23.2	18.9

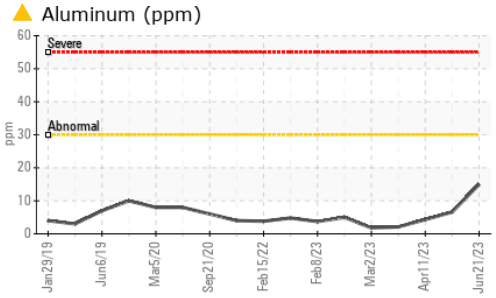
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**35.7**	21.0	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.5**	7.7	8.2

OIL ANALYSIS REPORT

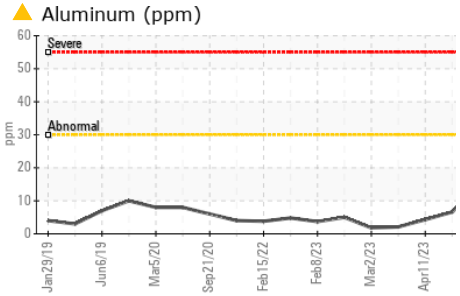
Silicon (ppm)



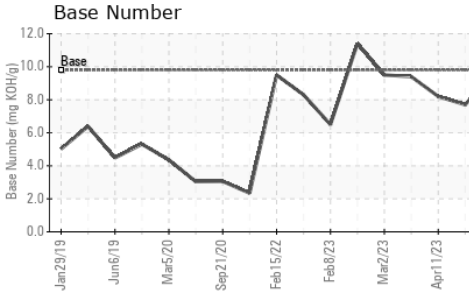
Aluminum (ppm)



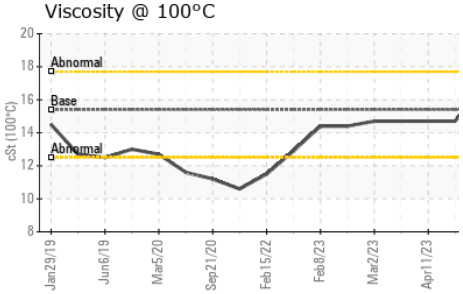
Aluminum (ppm)



Base Number



Viscosity @ 100°C

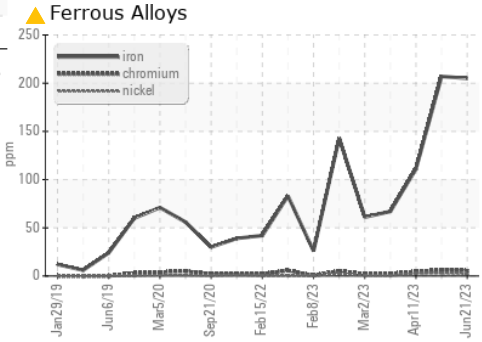


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

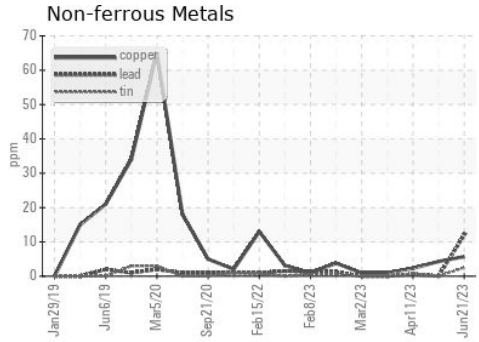
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**16.8**	14.7	14.7

GRAPHS

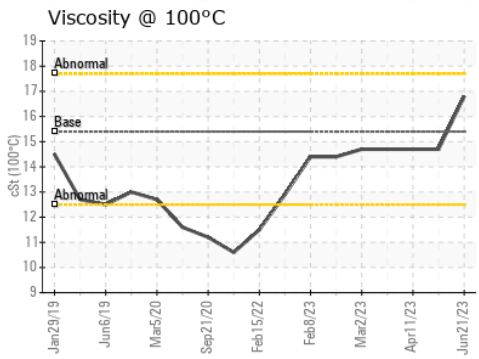
Ferrous Alloys



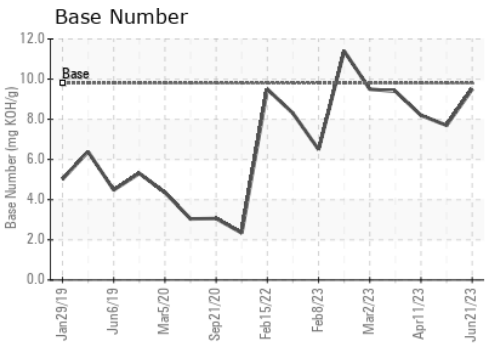
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084736
Lab Number : 05884947
Unique Number : 10535430
Test Package : FLEET

Received : 27 Jun 2023
Diagnosed : 30 Jun 2023
Diagnostician : Don Baldridge

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)

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