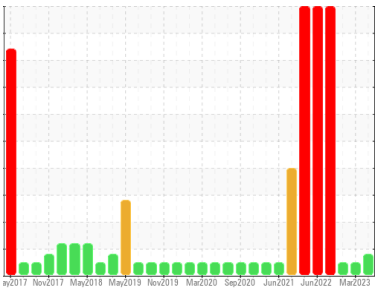
PROBLEM SUMMARY

Sample Rating Trend

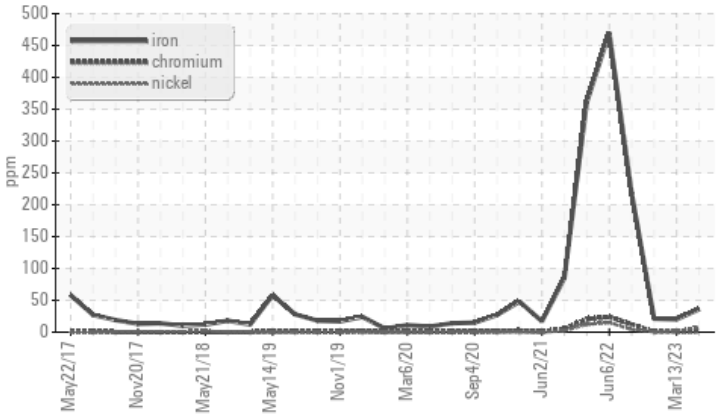


WEAR

Machine Id
10674
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (30 QTS)

COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



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	>4	▲ **7**	2	<1

Customer Id: GFL035
Sample No.: GFL0071559
Lab Number: 05888773
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
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

13 Mar 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

22 Sep 2022 Diag: Angela Borella

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

22 Jul 2022 Diag: Don Baldridge

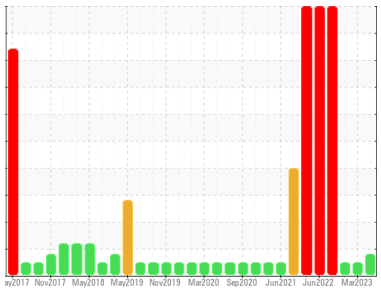
WEAR

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 advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.Piston, ring and cylinder 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

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
10674
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (30 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

Valve wear is indicated. All other component wear rates are normal.

Contamination

There is no indication of any contamination 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	history 1	history 2
Sample Number		Client Info		**GFL0071559**	GFL0053152	GFL0053236
Sample Date		Client Info		**29 Jun 2023**	13 Mar 2023	22 Sep 2022
Machine Age	hrs	Client Info		**8895**	8895	8895
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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	>75	**36**	20	21
Chromium	ppm	ASTM D5185m	>5	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	▲ **7**	2	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**4**	3	4
Lead	ppm	ASTM D5185m	>25	**<1**	0	0
Copper	ppm	ASTM D5185m	>100	**2**	<1	1
Tin	ppm	ASTM D5185m	>4	**<1**	0	0
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	**0**	7	41
Barium	ppm	ASTM D5185m	0	**2**	0	0
Molybdenum	ppm	ASTM D5185m	60	**65**	56	40
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**856**	795	472
Calcium	ppm	ASTM D5185m	1070	**1113**	1123	1656
Phosphorus	ppm	ASTM D5185m	1150	**1030**	905	729
Zinc	ppm	ASTM D5185m	1270	**1197**	1063	888
Sulfur	ppm	ASTM D5185m	2060	**3152**	3328	2844

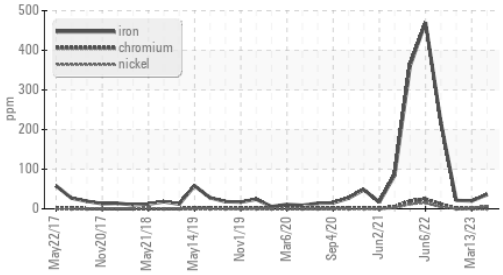
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**12**	9	9
Sodium	ppm	ASTM D5185m		**0**	4	2
Potassium	ppm	ASTM D5185m	>20	**4**	0	1

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>6	**1**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**8.5**	6.5	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.4**	18.5	23.7

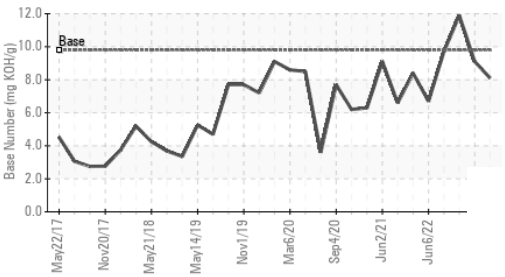
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.3**	13.9	21.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.1**	9.1	11.9

OIL ANALYSIS REPORT

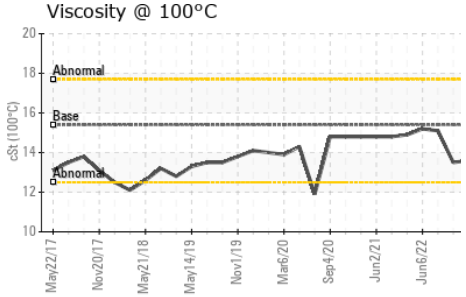
Ferrous Alloys



Base Number



Viscosity @ 100°C

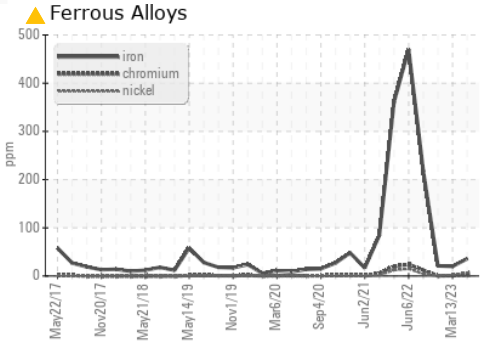


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

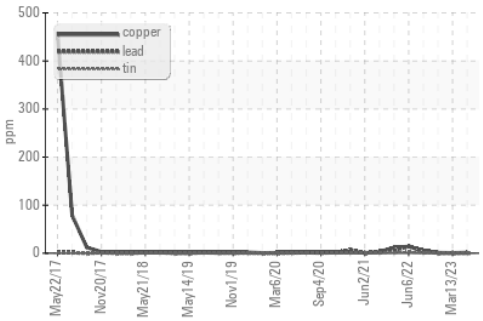
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.9**	13.6	13.5

GRAPHS

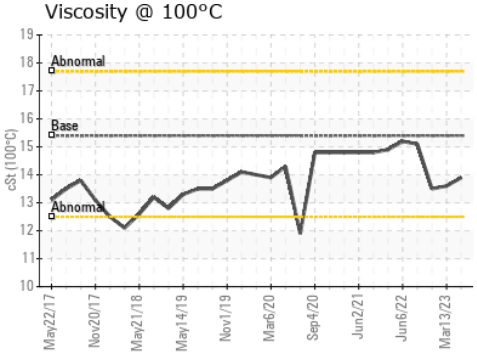
Ferrous Alloys



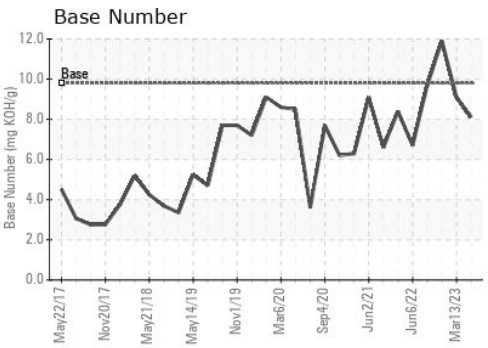
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0071559
Lab Number : 05888773
Unique Number : 10539256
Test Package : FLEET

Received : 03 Jul 2023
Diagnosed : 05 Jul 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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