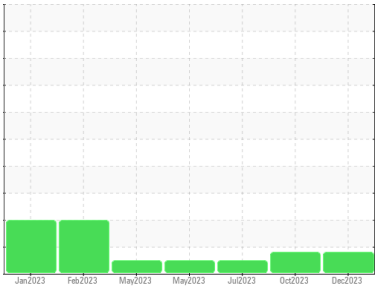
PROBLEM SUMMARY

Sample Rating Trend

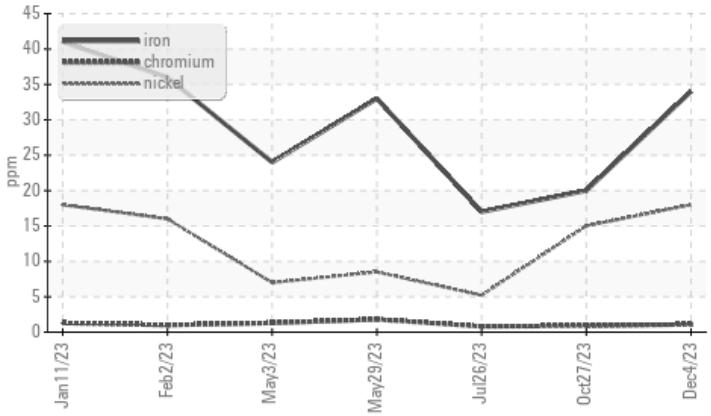


WEAR

Machine Id
813001
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



RECOMMENDATION

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	NORMAL
Nickel	ppm	ASTM D5185m	>4	▲ **18**	▲ 15	5

Customer Id: GFL683
Sample No.: GFL0103105
Lab Number: 06025621
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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

27 Oct 2023 Diag: Don Baldridge

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.Valve 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

26 Jul 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the component make and model with your 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

29 May 2023 Diag: Wes Davis

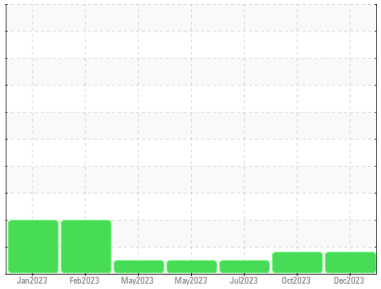
NORMAL

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.Metal levels are typical for a new component breaking in. 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



WEAR

Machine Id
813001
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0103105**	GFL0091947	GFL0075053
Sample Date		Client Info		**04 Dec 2023**	27 Oct 2023	26 Jul 2023
Machine Age	hrs	Client Info		**1853**	1658	1180
Oil Age	hrs	Client Info		**600**	478	250
Oil Changed		Client Info		**Changed**	N/A	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
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	>100	**34**	20	17
Chromium	ppm	ASTM D5185m	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	▲ **18**	▲ 15	5
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	<1	<1
Aluminum	ppm	ASTM D5185m	>20	**1**	1	0
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	**31**	18	69
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**<1**	4	3
Barium	ppm	ASTM D5185m	0	**2**	4	0
Molybdenum	ppm	ASTM D5185m	60	**63**	61	61
Manganese	ppm	ASTM D5185m	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**943**	878	972
Calcium	ppm	ASTM D5185m	1070	**1080**	933	1086
Phosphorus	ppm	ASTM D5185m	1150	**940**	1035	999
Zinc	ppm	ASTM D5185m	1270	**1220**	1144	1220
Sulfur	ppm	ASTM D5185m	2060	**2633**	2457	3224

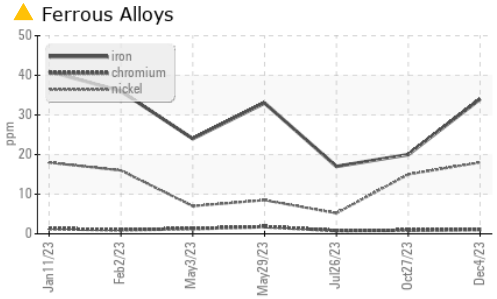
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**8**	8	8
Sodium	ppm	ASTM D5185m		**2**	4	3
Potassium	ppm	ASTM D5185m	>20	**2**	0	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**1.5**	1.1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	**10.6**	8.7	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.1**	20.4	20.2

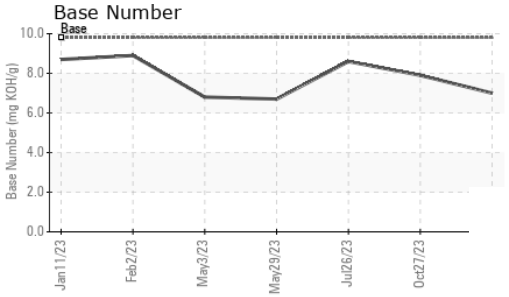
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.3**	15.4	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**7.0**	7.9	8.6

OIL ANALYSIS REPORT

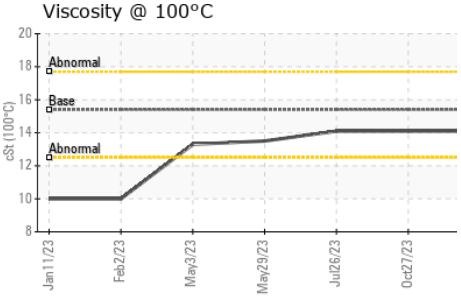
Ferrous Alloys



Base Number



Viscosity @ 100°C

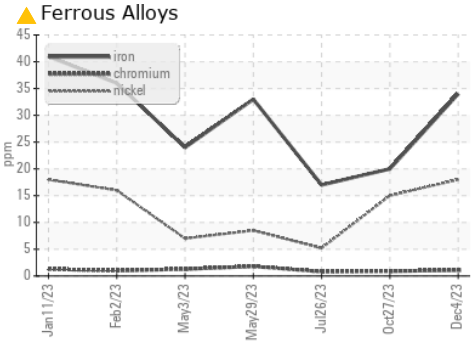


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

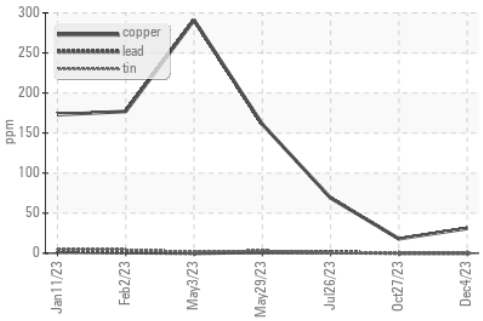
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.1**	14.1	14.1

GRAPHS

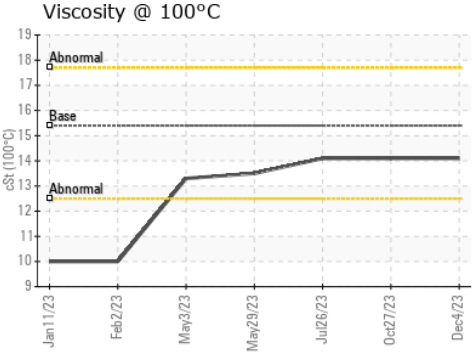
Ferrous Alloys



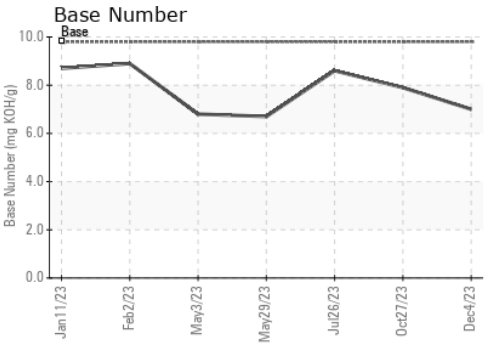
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103105
Lab Number : 06025621
Unique Number : 10770121
Test Package : FLEET

Received : 05 Dec 2023
Diagnosed : 07 Dec 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 - 683 - Ruckersville Hauling
261 INDUSTRIAL DR
Ruckersville, VA
US 22698
Contact: Jaf Finney
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T: (434)990-4972
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Report Id: GFL683 [WUSCAR] 06025621 (Generated: 12/07/2023 23:26:45) Rev: 1

Submitted By: Jaf Finney