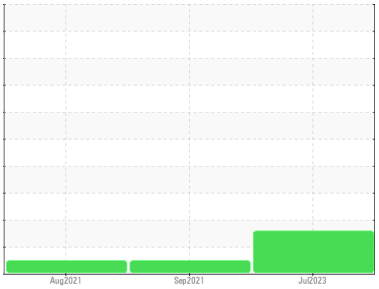
PROBLEM SUMMARY

Sample Rating Trend

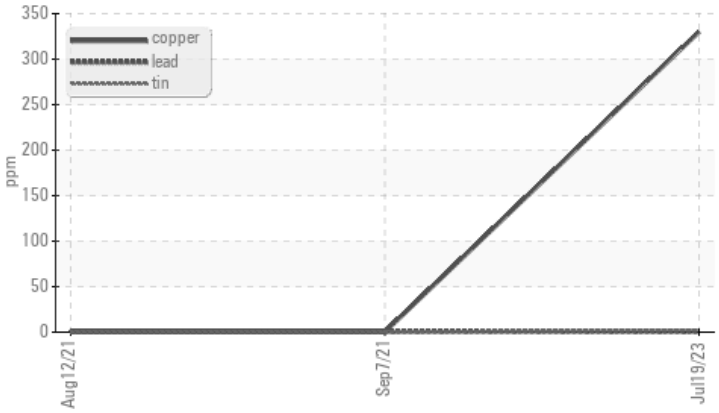


WEAR

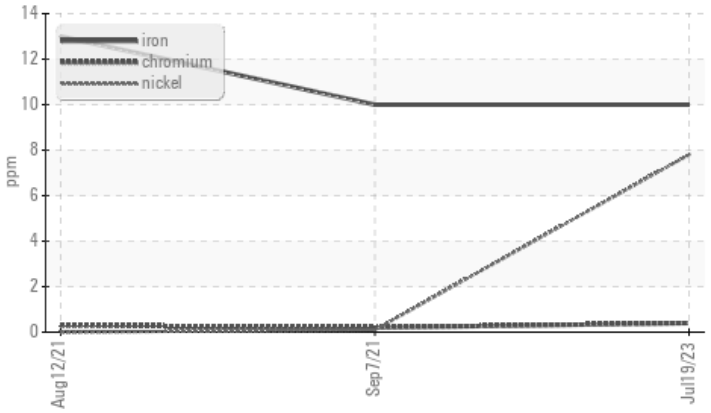
Machine Id
OR1007
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Ferrous Alloys



RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Nickel	ppm	ASTM D5185m	>4	▲ **8**	<1	0
Copper	ppm	ASTM D5185m	>330	▲ **330**	<1	<1

Customer Id: GFL550
Sample No.: GFL0087135
Lab Number: 05904199
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	Please specify the component make and model with your next sample.

HISTORICAL DIAGNOSIS

07 Sep 2021 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

12 Aug 2021 Diag: Wes Davis

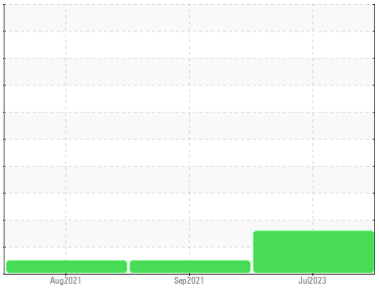
NORMAL

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.
 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

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
OR1007
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Wear

Copper and nickel ppm levels are abnormal. Exhaust valve wear is indicated. Bearing wear is indicated.

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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0087135**	GFL0031908	GFL0031893
Sample Date		Client Info		**19 Jul 2023**	07 Sep 2021	12 Aug 2021
Machine Age	hrs	Client Info		**27328**	6457	5979
Oil Age	hrs	Client Info		**20871**	478	0
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**10**	10	13
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	▲ **8**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>20	**3**	1	<1
Lead	ppm	ASTM D5185m	>40	**0**	<1	0
Copper	ppm	ASTM D5185m	>330	▲ **330**	<1	<1
Tin	ppm	ASTM D5185m	>15	**2**	<1	0
Antimony	ppm	ASTM D5185m		**---**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Beryllium	ppm	ASTM D5185m		**---**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

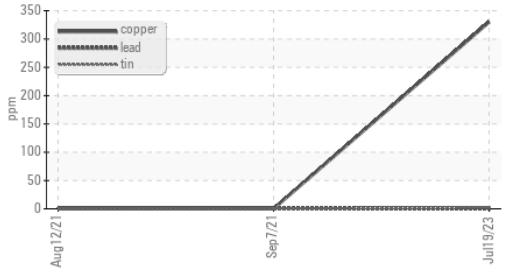
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**4**	2	2
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**65**	57	56
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**946**	986	965
Calcium	ppm	ASTM D5185m	1070	**1167**	1042	1018
Phosphorus	ppm	ASTM D5185m	1150	**1004**	1043	1024
Zinc	ppm	ASTM D5185m	1270	**1262**	1199	1179
Sulfur	ppm	ASTM D5185m	2060	**3411**	2628	2559
Lithium	ppm	ASTM D5185m		**---**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**11**	3	3
Sodium	ppm	ASTM D5185m		**7**	2	2
Potassium	ppm	ASTM D5185m	>20	**6**	<1	<1

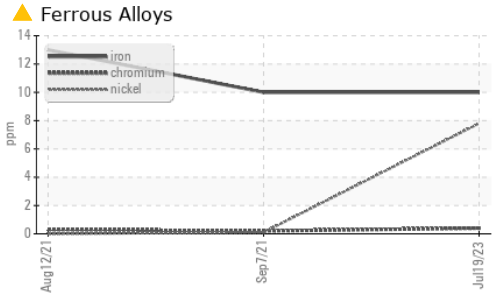
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.5**	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**8.8**	5.3	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.9**	18.9	19.1

OIL ANALYSIS REPORT

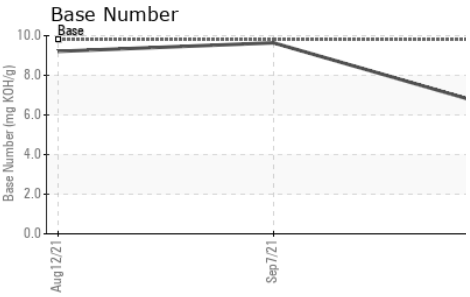
Non-ferrous Metals



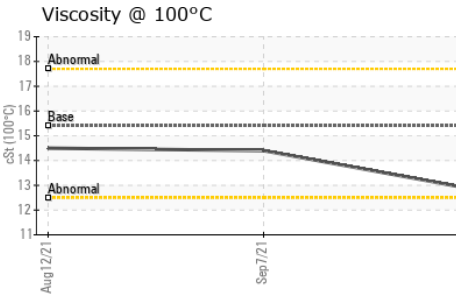
Ferrous Alloys



Base Number



Viscosity @ 100°C



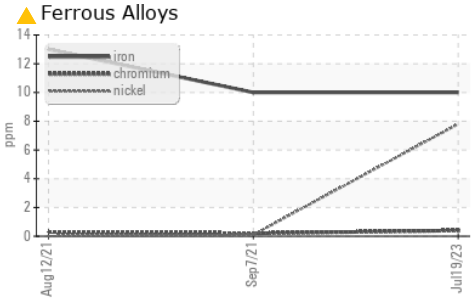
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.3**	13.1	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.5**	9.64	9.21

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

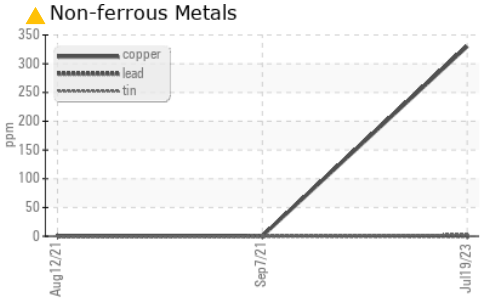
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**12.8**	14.4	14.5

GRAPHS

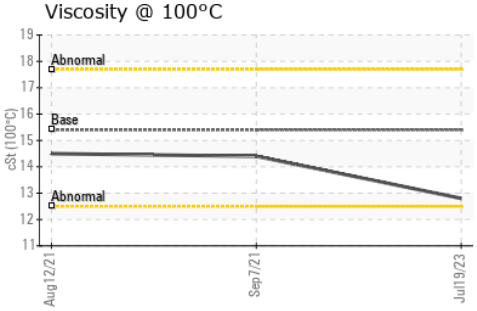
Ferrous Alloys



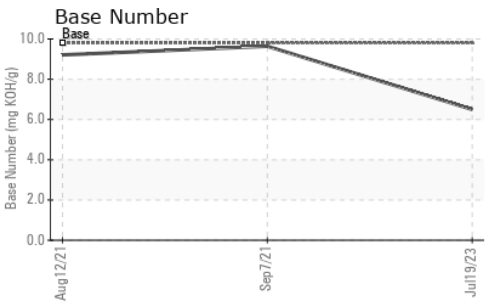
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087135
Lab Number : 05904199
Unique Number : 10565555
Test Package : FLEET

Received : 21 Jul 2023
Diagnosed : 24 Jul 2023
Diagnostician : Angela Borella

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 - 550 - Rocky View County
220 Carmek Blvd
Rocky View County, AB
CA T1X 1X1
Contact: GFL Calgary
calgarymaintenance@gflenv.com
T:
F: (403)369-6163