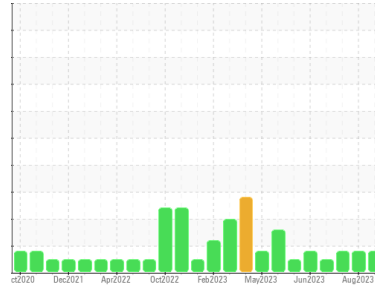




PROBLEM SUMMARY

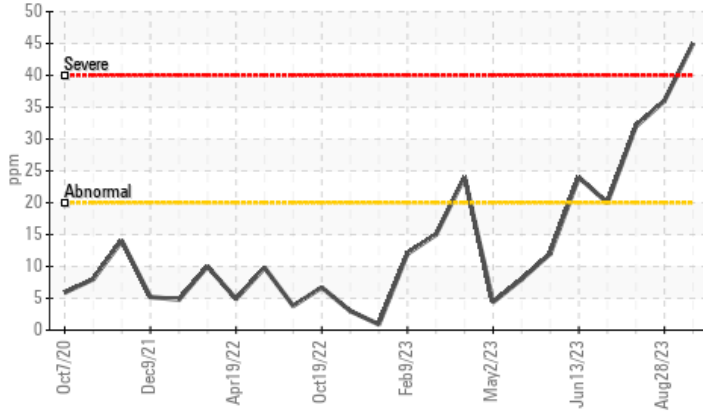
Sample Rating Trend



Machine Id
728007
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (12 QTS)

COMPONENT CONDITION SUMMARY

▲ Aluminum (ppm)



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status	ABNORMAL	ABNORMAL	ABNORMAL
Aluminum	ppm	ASTM D5185m	>20
	▲ 45	▲ 36	▲ 32

Customer Id: GFL010
 Sample No.: GFL0091369
 Lab Number: 05944013
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@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

28 Aug 2023 Diag: Sean Felton

WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. 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



16 Aug 2023 Diag: Don Baldrige

WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. 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



12 Jul 2023 Diag: Don Baldrige

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.

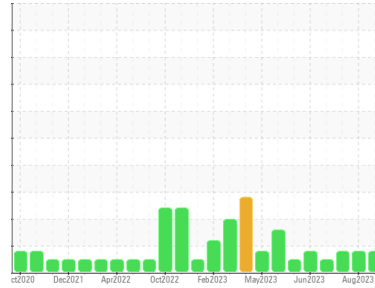
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
728007

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (12 QTS)

DIAGNOSIS

Recommendation

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

Wear

The aluminum level is abnormal. 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	history1	history2
Sample Number	Client Info	GFL0091369	GFL0091451	GFL0088751
Sample Date	Client Info	01 Sep 2023	28 Aug 2023	16 Aug 2023
Machine Age	hrs	11649	11617	11450
Oil Age	hrs	494	462	295
Oil Changed	Client Info	Changed	Not Changd	Not Changd
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >90	57	46	31
Chromium	ppm ASTM D5185m >20	1	1	<1
Nickel	ppm ASTM D5185m >2	0	0	0
Titanium	ppm ASTM D5185m >2	<1	0	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	▲ 45	▲ 36	▲ 32
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	2	1	1
Tin	ppm ASTM D5185m >15	3	2	2
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	13	10	10
Barium	ppm ASTM D5185m 0	<1	0	0
Molybdenum	ppm ASTM D5185m 60	72	67	64
Manganese	ppm ASTM D5185m 0	1	<1	<1
Magnesium	ppm ASTM D5185m 1010	942	936	894
Calcium	ppm ASTM D5185m 1070	1294	1226	1214
Phosphorus	ppm ASTM D5185m 1150	1086	1044	994
Zinc	ppm ASTM D5185m 1270	1347	1346	1240
Sulfur	ppm ASTM D5185m 2060	3483	3557	3367

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	5	5
Sodium	ppm ASTM D5185m	3	1	3
Potassium	ppm ASTM D5185m >20	20	15	18

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.5	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	13.2	11.9	10.7
Sulfation	Abs/.1mm *ASTM D7415 >30	26.3	24.3	20.9

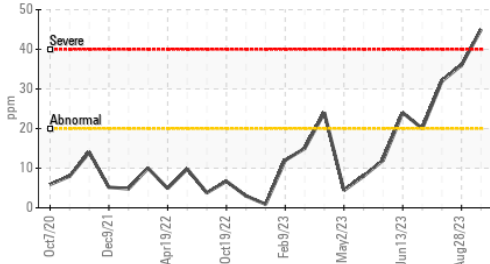
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	26.8	24.0	19.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	4.8	5.2	6.4



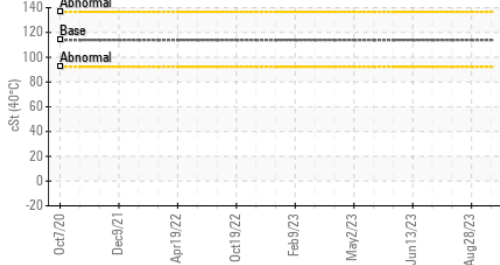
OIL ANALYSIS REPORT

▲ Aluminum (ppm)



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

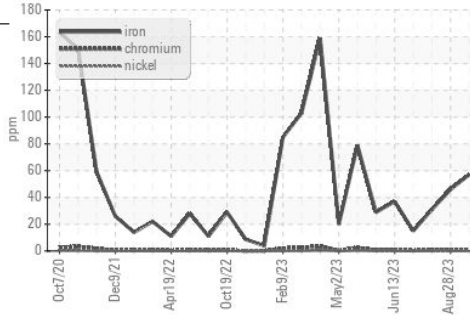
Viscosity @ 40°C



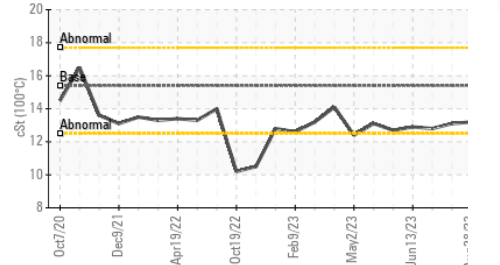
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.1

GRAPHS

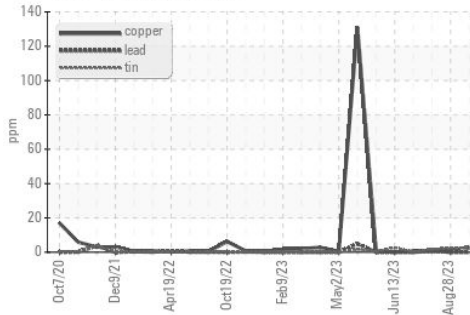
Ferrous Alloys



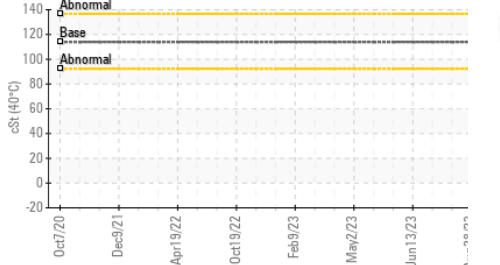
Viscosity @ 100°C



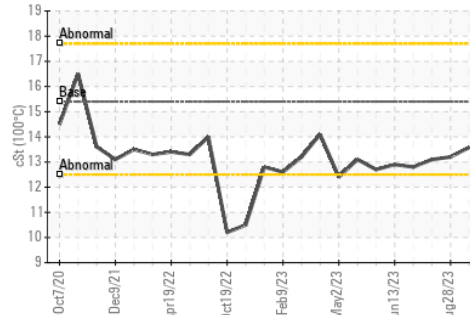
Non-ferrous Metals



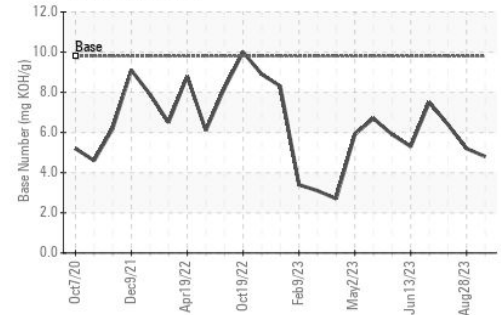
Viscosity @ 40°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0091369 **Received** : 06 Sep 2023
Lab Number : 05944013 **Diagnosed** : 12 Sep 2023
Unique Number : 10634625 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: KV40)

GFL Environmental - 010 - Stockbridge
 1280 Rum Creek Parkway
 Stockbridge, GA
 US 30281
 Contact: JOSHUA TINKER
 joshuatinker@gflenv.com

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)

T:
F: