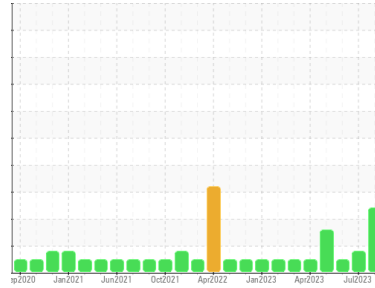




PROBLEM SUMMARY

Sample Rating Trend



WEAR



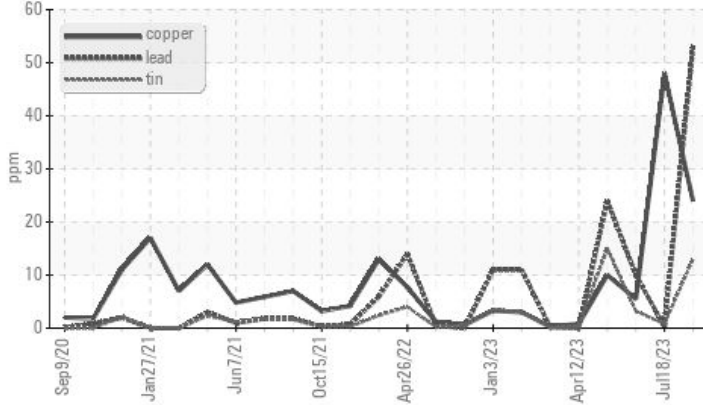
Machine Id
526013-7002

Component
Diesel Engine

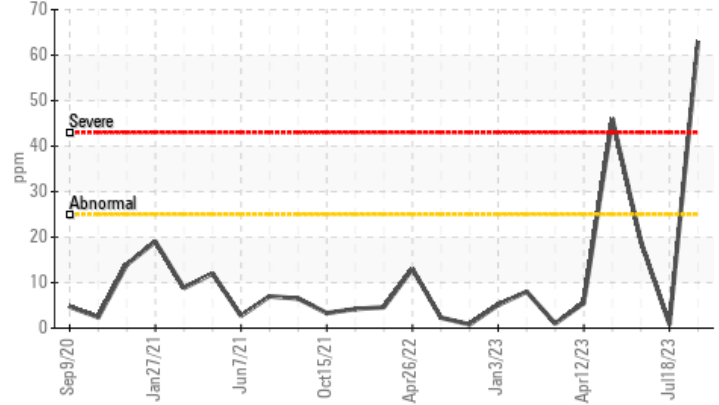
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Aluminum (ppm)



RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	MARGINAL	NORMAL
Aluminum	ppm	ASTM D5185m	>25	▲ 63	<1	19
Lead	ppm	ASTM D5185m	>45	▲ 53	<1	10
Tin	ppm	ASTM D5185m	>4	▲ 13	<1	3

Customer Id: GFL657
Sample No.: GFL0086572
Lab Number: 05921043
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldrige +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.

HISTORICAL DIAGNOSIS

18 Jul 2023 Diag: Don Baldrige

WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. An increase in the copper level is noted. 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



08 Jun 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



25 Apr 2023 Diag: Don Baldrige

WEAR



Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition. The aluminum level is abnormal. The tin level is abnormal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

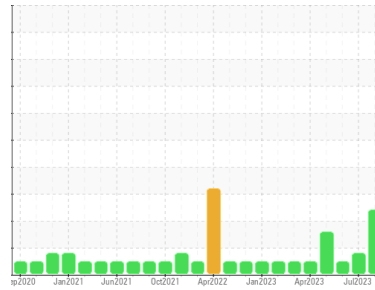
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
526013-7002

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

▲ Wear

Bearing and/or bushing 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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0086572	GFL0070903	GFL0067919	
Sample Date	Client Info	08 Aug 2023	18 Jul 2023	08 Jun 2023	
Machine Age	hrs	Client Info	19531	19505	19390
Oil Age	hrs	Client Info	0	306	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed	
Sample Status		ABNORMAL	MARGINAL	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 >110	63	14	12
Chromium	ppm ASTM D5185m >4	<1	0	<1
Nickel	ppm ASTM D5185m >2	2	<1	<1
Titanium	ppm ASTM D5185m	<1	<1	0
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >25	▲ 63	<1	19
Lead	ppm ASTM D5185m >45	▲ 53	<1	10
Copper	ppm ASTM D5185m >85	24	▲ 48	6
Tin	ppm ASTM D5185m >4	▲ 13	<1	3
Vanadium	ppm ASTM D5185m	<1	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	4	6	5
Barium	ppm ASTM D5185m 0	0	0	2
Molybdenum	ppm ASTM D5185m 60	67	63	66
Manganese	ppm ASTM D5185m 0	1	<1	<1
Magnesium	ppm ASTM D5185m 1010	1020	955	876
Calcium	ppm ASTM D5185m 1070	1255	1142	1139
Phosphorus	ppm ASTM D5185m 1150	1028	1036	1063
Zinc	ppm ASTM D5185m 1270	1352	1217	1247
Sulfur	ppm ASTM D5185m 2060	3776	3609	3260

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	6	7	4
Sodium	ppm ASTM D5185m	2	17	1
Potassium	ppm ASTM D5185m >20	6	0	4

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.3	0.2	0.2
Nitration	Abs/cm *ASTM D7624 >20	13.4	7.7	10.4
Sulfation	Abs/.1mm *ASTM D7415 >30	26.2	18.4	22.1

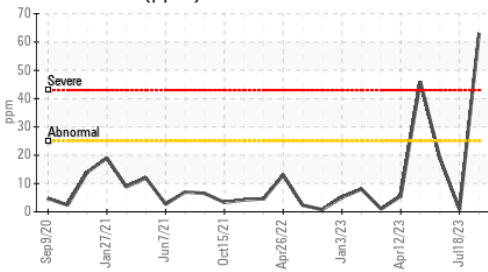
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	26.8	14.8	21.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	5.0	8.6	7.4

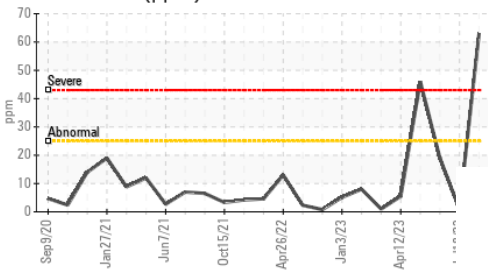


OIL ANALYSIS REPORT

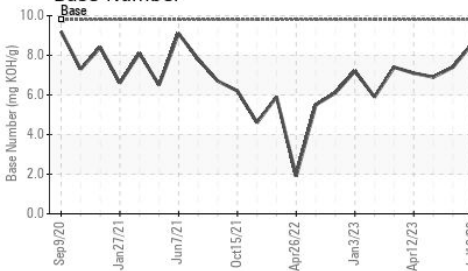
▲ Aluminum (ppm)



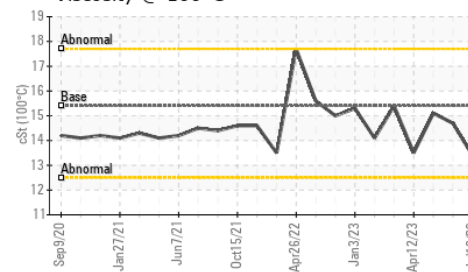
▲ Aluminum (ppm)



Base Number



Viscosity @ 100°C

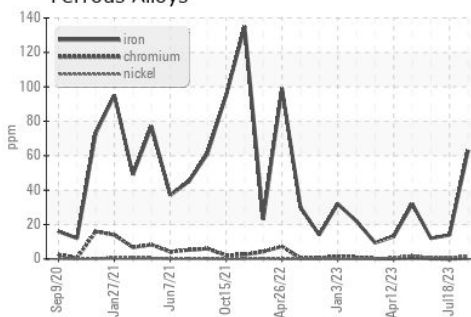


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

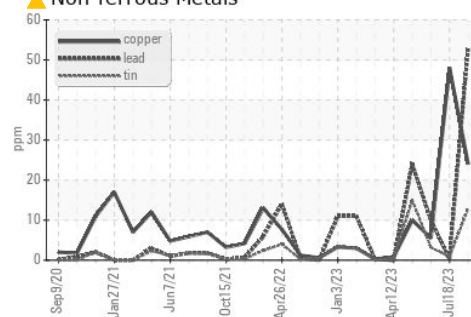
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	15.1	13.4	14.7

GRAPHS

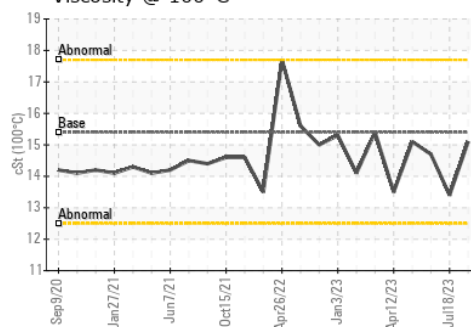
Ferrous Alloys



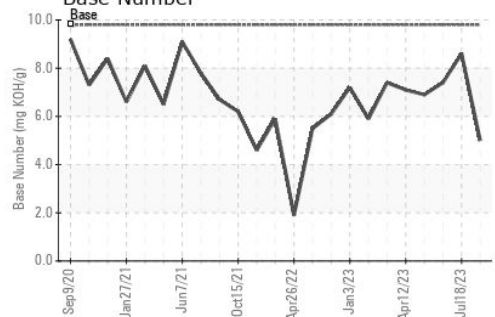
▲ Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086572 **Received** : 10 Aug 2023
Lab Number : 05921043 **Diagnosed** : 11 Aug 2023
Unique Number : 10592957 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 657 - Charlottesville Hauling
 5498 Richmond Road
 Troy, VA
 US 22974
 Contact: Brian Ulickas
 bulickas@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)