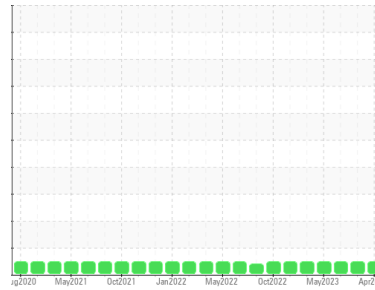




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(YA156307)

Machine Id
830006

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON SHP 15W40 (32 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: E service)

Wear

All 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	GFL0111072	GFL0098532	GFL0087787
Sample Date	Client Info	23 Apr 2024	01 Nov 2023	04 Aug 2023
Machine Age	hrs	8454	8005	7439
Oil Age	hrs	449	566	625
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	18	24	12
Chromium	ppm	ASTM D5185m >4	2	4	1
Nickel	ppm	ASTM D5185m >2	0	<1	<1
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >9	2	1	<1
Lead	ppm	ASTM D5185m >30	0	11	<1
Copper	ppm	ASTM D5185m >35	1	2	<1
Tin	ppm	ASTM D5185m >4	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	8	3	5
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	60	59	56
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 1010	599	587	502
Calcium	ppm	ASTM D5185m 1070	1714	1650	1592
Phosphorus	ppm	ASTM D5185m 1150	739	685	652
Zinc	ppm	ASTM D5185m 1270	1007	953	918
Sulfur	ppm	ASTM D5185m 2060	2663	2208	2244

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	6	8	7
Sodium	ppm	ASTM D5185m	6	13	2
Potassium	ppm	ASTM D5185m >20	0	0	3

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	11.9	12.5	10.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.9	27.5	21.0

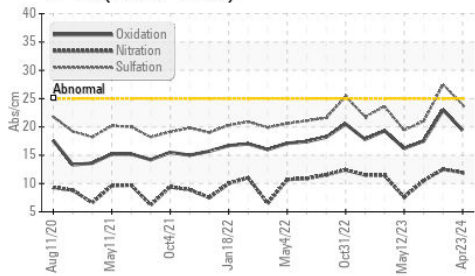
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.4	23.0	17.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	3.9	2.7	4.5

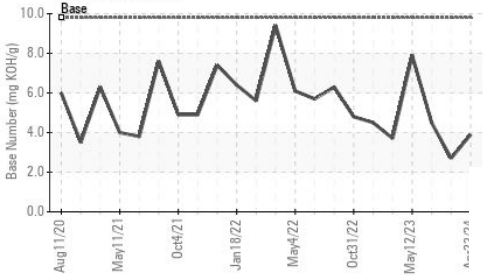


OIL ANALYSIS REPORT

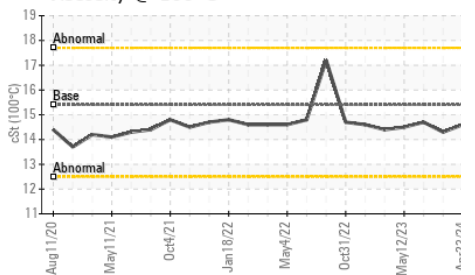
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

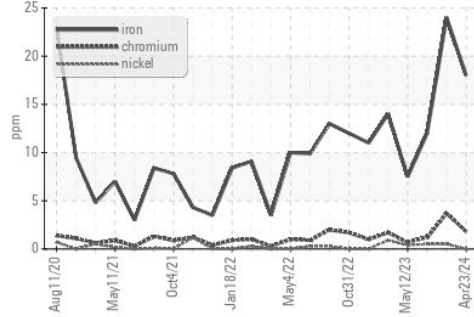


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

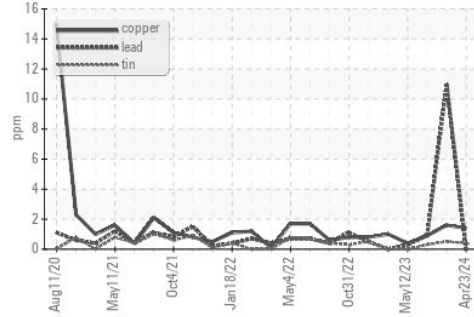
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.6	14.3	14.7

GRAPHS

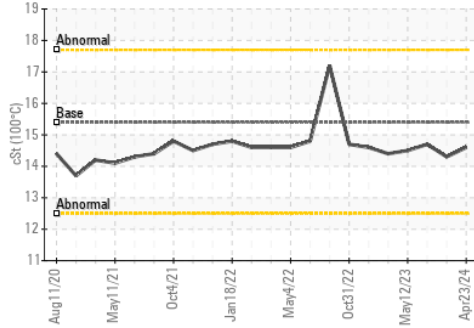
Ferrous Alloys



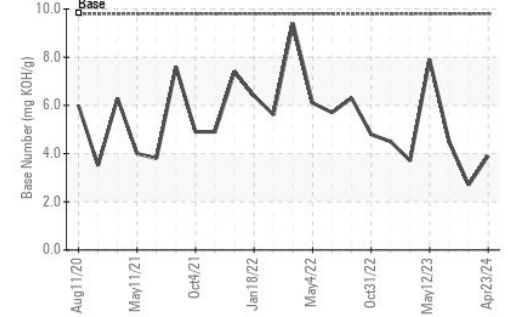
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111072 **Received** : 24 Apr 2024
Lab Number : **06158948** **Tested** : 25 Apr 2024
Unique Number : 10994371 **Diagnosed** : 25 Apr 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 006 - Wilmington
 3618 US Highway 421 N
 Wilmington, NC
 US 28401
 Contact: Eric Wood
 eric.wood@gflenv.com
 T: (717)723-1956
 F: (910)762-6880

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)