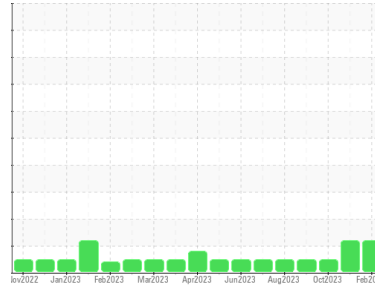




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
(62A0X10) ALEXANDER CITY
Machine Id
711006
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.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0080713	GFL0080723	GFL0079747
Sample Date	Client Info	15 Feb 2024	02 Jan 2024	10 Oct 2023
Machine Age	hrs	5937	5853	5570
Oil Age	hrs	1495	1411	1128
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2	
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	>90	44	25	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	8	4	2
Lead	ppm	ASTM D5185m	>40	1	<1	0
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	1	<1	0
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	13	18
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	69	60	60
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	997	888	812
Calcium	ppm	ASTM D5185m	1070	1138	1041	1013
Phosphorus	ppm	ASTM D5185m	1150	1096	1016	912
Zinc	ppm	ASTM D5185m	1270	1371	1198	1074
Sulfur	ppm	ASTM D5185m	2060	3387	3107	2751

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	9	7	4
Sodium	ppm	ASTM D5185m		37	24	11
Potassium	ppm	ASTM D5185m	>20	13	10	2
Fuel	%	ASTM D3524	>3.0	▲ 3.9	▲ 2.7	<1.0

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>6	0.6	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.5	8.3	5.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	17.8	16.7

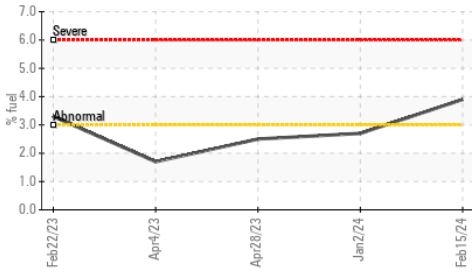
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	13.6	12.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.5	8.1	8.3

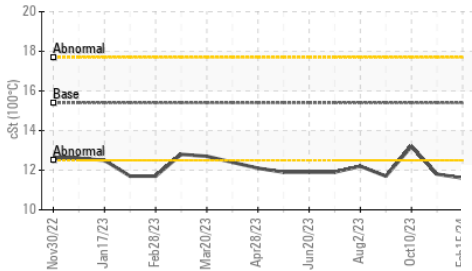


OIL ANALYSIS REPORT

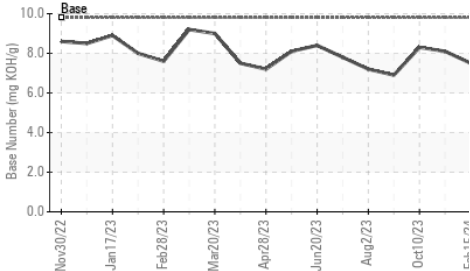
▲ Fuel Dilution



▲ Viscosity @ 100°C



Base Number

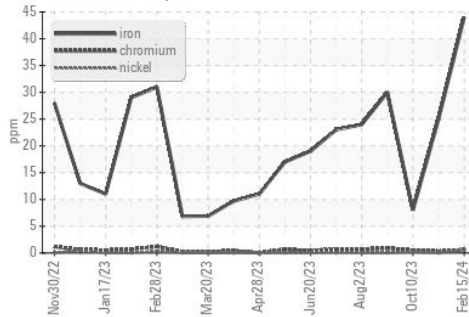


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

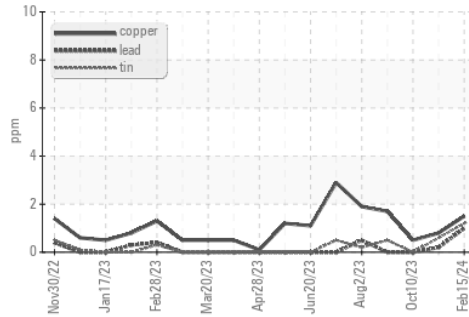
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 11.6	▲ 11.8	13.2

GRAPHS

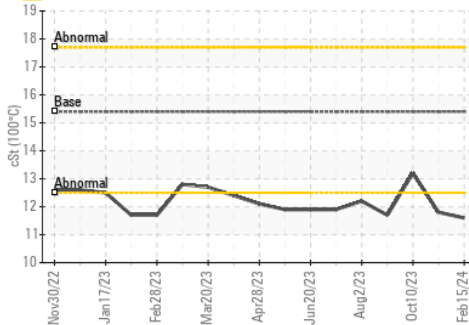
Ferrous Alloys



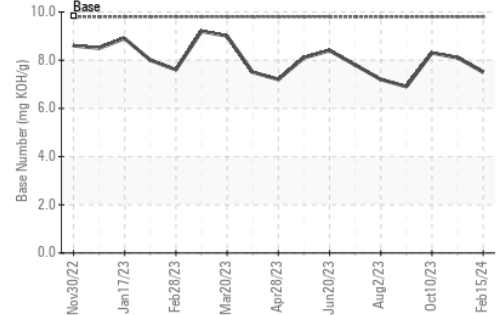
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0080713 **Received** : 01 Mar 2024
Lab Number : 06106601 **Tested** : 07 Mar 2024
Unique Number : 10910098 **Diagnosed** : 07 Mar 2024 - Wes Davis
Test Package : FLEET (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 172 - Montgomery-Alexander City-Tallahassee
 Multiple Sites
 Montgomery, AL
 US 36108
 Contact: Lisa Reeves
 lisa.reeves@gflenv.com
 T: (334)946-9566
 F:

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)