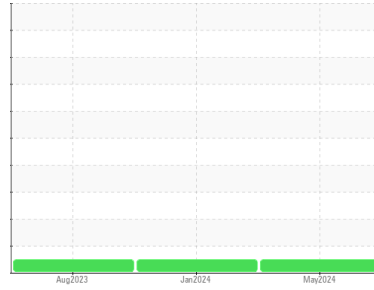




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

211017

Component

Front Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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			GFL0110204	GFL0110179	GFL0060489
Sample Date	Client Info			24 May 2024	08 Jan 2024	16 Aug 2023
Machine Age	hrs	Client Info		28022	25348	21759
Oil Age	hrs	Client Info		2674	600	600
Oil Changed	Client Info			Not Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
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	>100	43	62	105
Chromium	ppm	ASTM D5185m	>20	3	2	6
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	6	5	13
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	<1	2	6
Tin	ppm	ASTM D5185m	>15	0	<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	2	138	111	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	4	9	58
Manganese	ppm	ASTM D5185m	0	<1	<1	2
Magnesium	ppm	ASTM D5185m	950	129	157	954
Calcium	ppm	ASTM D5185m	1050	2240	1748	1096
Phosphorus	ppm	ASTM D5185m	995	1075	924	993
Zinc	ppm	ASTM D5185m	1180	1296	1040	1221
Sulfur	ppm	ASTM D5185m	2600	4232	3309	3478

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	7	6	10
Sodium	ppm	ASTM D5185m		1	9	2
Potassium	ppm	ASTM D5185m	>20	2	4	1

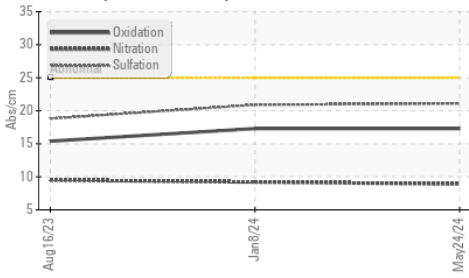
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.9	9.2	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	20.9	18.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	17.3	15.4
Base Number (BN)	mg KOH/g	ASTM D2896		6.3	6.2	8.1

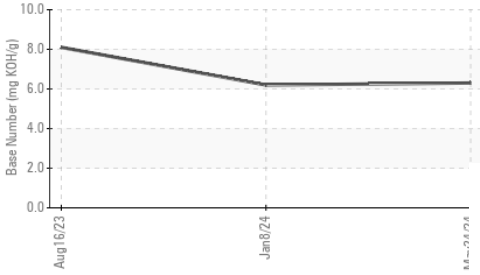


OIL ANALYSIS REPORT

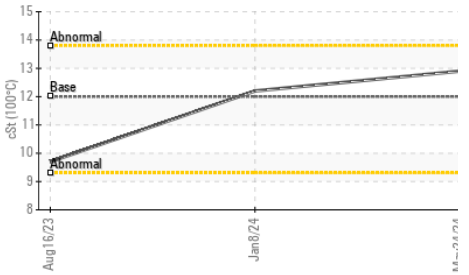
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

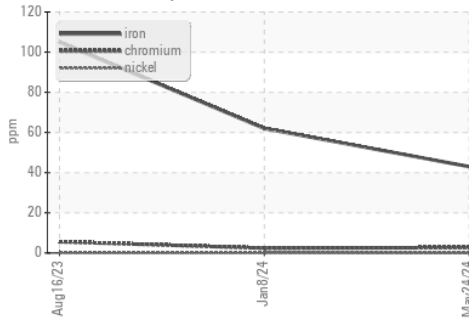


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

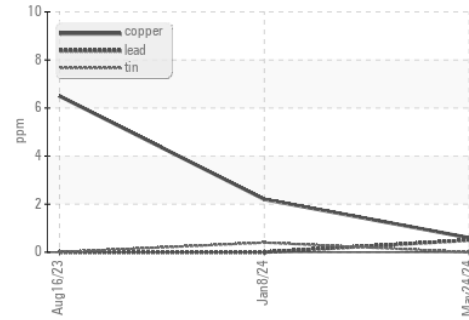
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.9	12.2

GRAPHS

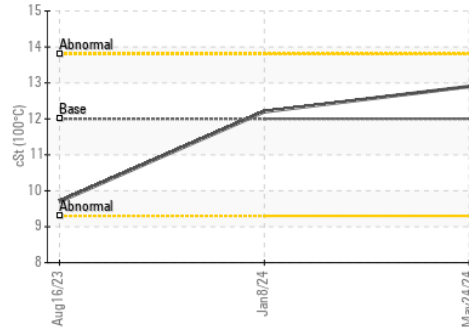
Ferrous Alloys



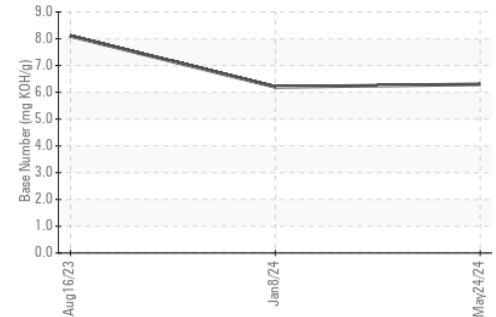
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0110204
 Lab Number : 06193336
 Unique Number : 11050088
 Test Package : FLEET

Received : 28 May 2024
 Tested : 30 May 2024
 Diagnosed : 30 May 2024 - Sean Felton

GFL Environmental - 660 - Lynchburg Hauling
 2410 Mayflower Drive
 Lynchburg, VA
 US 24501

Contact: Delbert Beasley
 dbeasley@countyrecycling.net
 T: (434)665-5998

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)

F: