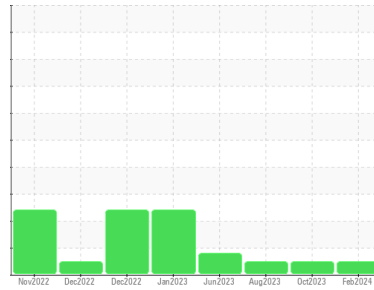




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
4524M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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	GFL0101067	GFL0092789	GFL0080814
Sample Date	Client Info	12 Feb 2024	31 Oct 2023	28 Aug 2023
Machine Age	hrs	19975	19975	19975
Oil Age	hrs	19975	19975	19975
Oil Changed	Client Info	N/A	N/A	Not Chngd
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<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 >90	22	12	55
Chromium	ppm	ASTM D5185m >20	<1	<1	3
Nickel	ppm	ASTM D5185m >2	0	<1	<1
Titanium	ppm	ASTM D5185m >2	0	0	<1
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >20	2	5	13
Lead	ppm	ASTM D5185m >40	<1	<1	4
Copper	ppm	ASTM D5185m >330	<1	1	2
Tin	ppm	ASTM D5185m >15	<1	0	<1
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	2	<1	2
Barium	ppm	ASTM D5185m 0	0	4	0
Molybdenum	ppm	ASTM D5185m 60	59	47	63
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 1010	1012	711	1062
Calcium	ppm	ASTM D5185m 1070	1011	886	1174
Phosphorus	ppm	ASTM D5185m 1150	1051	506	1092
Zinc	ppm	ASTM D5185m 1270	1290	992	1381
Sulfur	ppm	ASTM D5185m 2060	3253	2195	3758

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	8	4	14
Sodium	ppm	ASTM D5185m	3	6	14
Potassium	ppm	ASTM D5185m >20	1	4	5

INFRA-RED

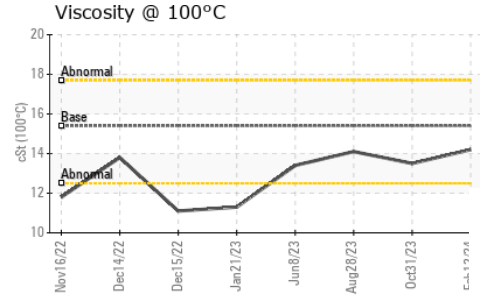
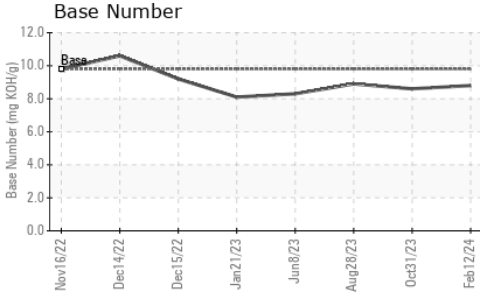
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >6	0.2	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	6.8	7.0	9.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.7	18.8	20.6

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.2	14.9	18.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.8	8.6	8.9



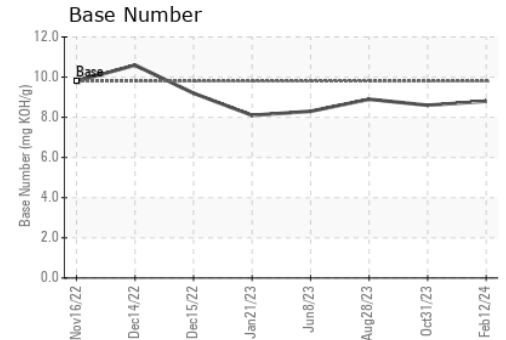
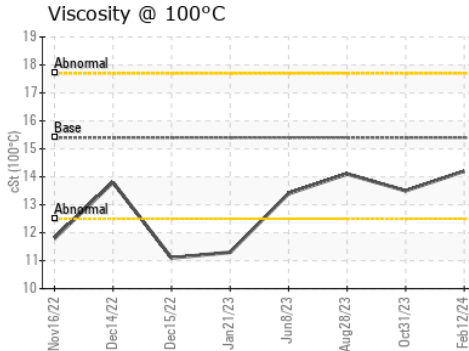
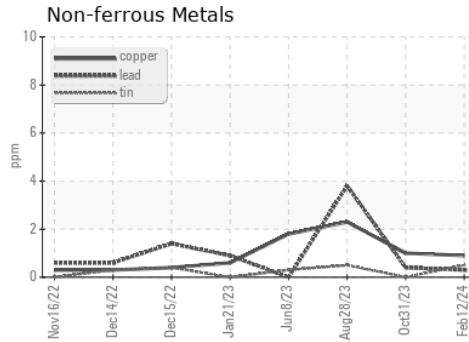
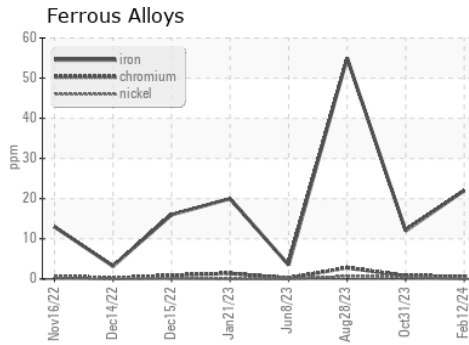
OIL ANALYSIS REPORT



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	14.2	13.5	14.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0101067
 Lab Number : **06089807**
 Unique Number : 10882660
 Test Package : FLEET

Received : 15 Feb 2024
 Tested : 16 Feb 2024
 Diagnosed : 16 Feb 2024 - Wes Davis

GFL Environmental - 455 - Flint
 2051 W. Bristol Rd
 Flint Township, MI
 US 48507
 Contact: MARK WOMBLE
 mwomble@gflenv.com
 T: (586)825-9514
 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)