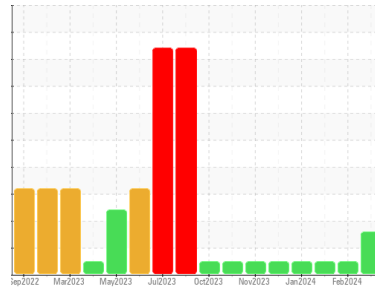




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
721018-361460

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Note that there appears to be a discrepancy in the total time on this component, when compared to the historical data.

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal.

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	GFL0104797	GFL0104938	GFL0104907
Sample Date	Client Info	04 Apr 2024	05 Feb 2024	25 Jan 2024
Machine Age	hrs	Client Info	1308	1211
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	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	69	16	9
Chromium	ppm ASTM D5185m >20	13	2	1
Nickel	ppm ASTM D5185m >4	<1	0	<1
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	5	2	2
Lead	ppm ASTM D5185m >40	4	2	2
Copper	ppm ASTM D5185m >330	3	2	1
Tin	ppm ASTM D5185m >15	3	2	1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	0	1	<1
Barium	ppm ASTM D5185m 0	<1	0	0
Molybdenum	ppm ASTM D5185m 60	65	57	56
Manganese	ppm ASTM D5185m 0	2	<1	1
Magnesium	ppm ASTM D5185m 1010	1009	971	854
Calcium	ppm ASTM D5185m 1070	1193	1002	957
Phosphorus	ppm ASTM D5185m 1150	1082	1012	963
Zinc	ppm ASTM D5185m 1270	1309	1239	1150
Sulfur	ppm ASTM D5185m 2060	3334	3066	2828

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ 30	6	4
Sodium	ppm ASTM D5185m	32	19	15
Potassium	ppm ASTM D5185m >20	4	1	3

INFRA-RED

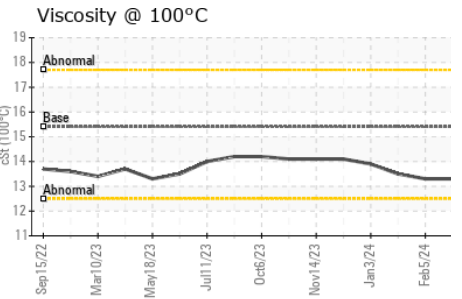
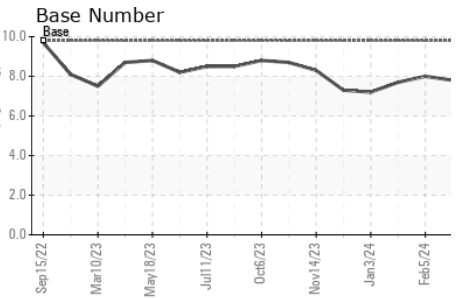
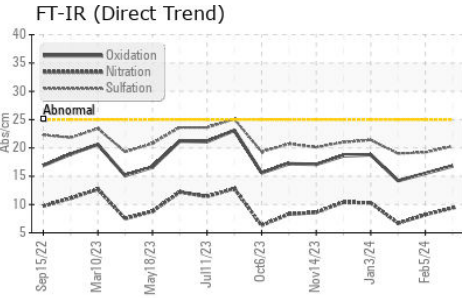
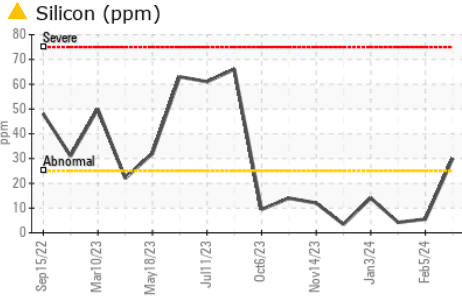
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.7	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	9.4	8.2	6.7
Sulfation	Abs/.1mm *ASTM D7415 >30	20.3	19.2	19.0

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	16.8	15.5	14.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.8	8.0	7.7



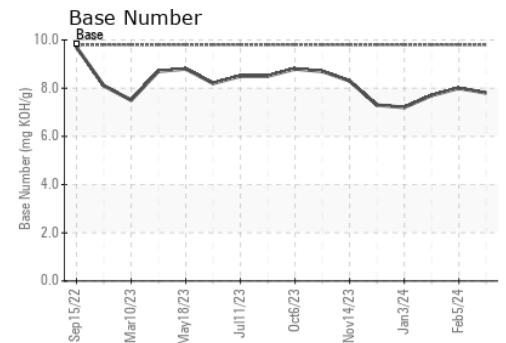
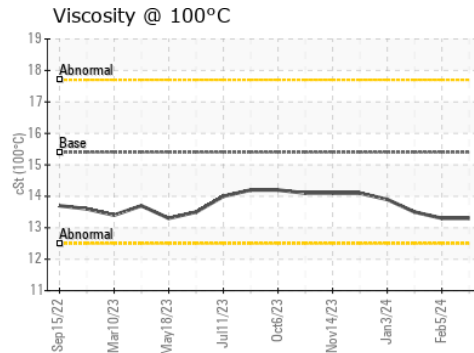
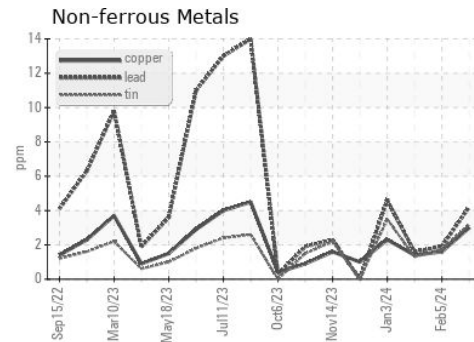
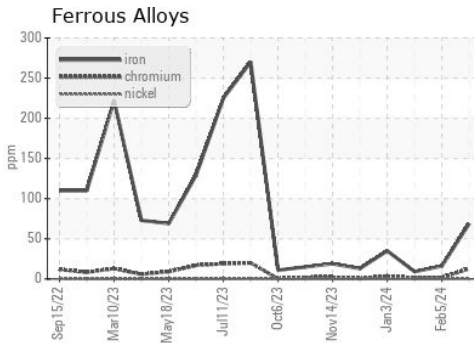
OIL ANALYSIS REPORT



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	13.3	13.5

GRAPHS



Certificate L2367

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)

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0104797

Lab Number : 06143650

Unique Number : 10968458

Test Package : FLEET

Received : 09 Apr 2024

Tested : 10 Apr 2024

Diagnosed : 12 Apr 2024 - Don Baldrige

GFL Environmental - 820 - Joplin Hauling

3700 West 7th Street

Joplin, MO

US 64801

Contact: James Jarrett

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