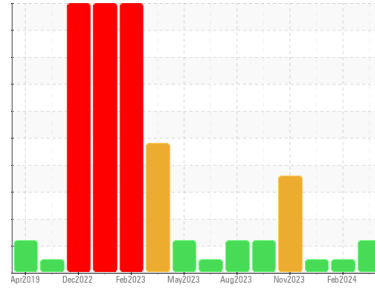




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
928073-260342

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain high. Test for glycol is negative.

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	GFL0104838	GFL0104948	GFL0088131
Sample Date	Client Info	25 Mar 2024	15 Feb 2024	27 Dec 2023
Machine Age	hrs	30893	30733	131562
Oil Age	hrs	2809	0	0
Oil Changed	Client Info	Changed	N/A	Not Changd
Sample Status		ATTENTION	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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	16	15	7
Chromium	ppm ASTM D5185m >20	<1	<1	0
Nickel	ppm ASTM D5185m >4	<1	0	0
Titanium	ppm ASTM D5185m	0	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	5	5	2
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	0	<1	0
Tin	ppm ASTM D5185m >15	0	0	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	1	0	0
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	62	61	60
Manganese	ppm ASTM D5185m 0	<1	<1	0
Magnesium	ppm ASTM D5185m 1010	892	888	984
Calcium	ppm ASTM D5185m 1070	1010	964	1034
Phosphorus	ppm ASTM D5185m 1150	974	974	1031
Zinc	ppm ASTM D5185m 1270	1206	1126	1257
Sulfur	ppm ASTM D5185m 2060	3242	2745	3132

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	8	5
Sodium	ppm ASTM D5185m	90	76	36
Potassium	ppm ASTM D5185m >20	4	1	1
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

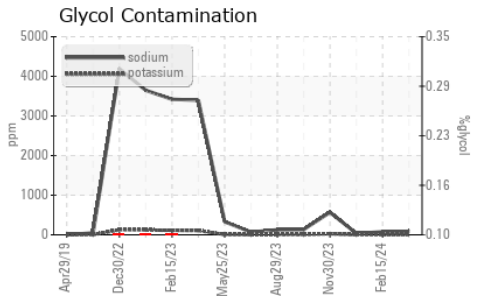
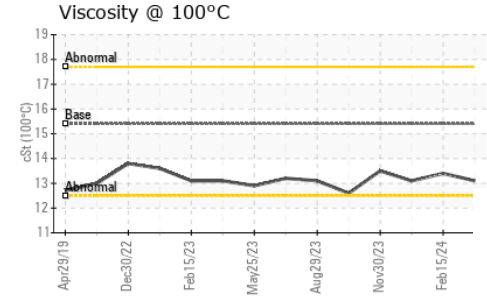
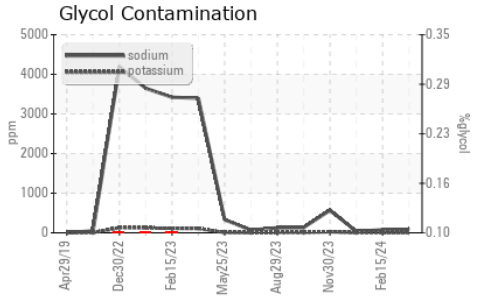
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.7	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	10.7	9.3	8.4
Sulfation	Abs/.1mm *ASTM D7415 >30	21.7	20.5	19.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.7	17.5	17.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	6.5	7.6	8.3



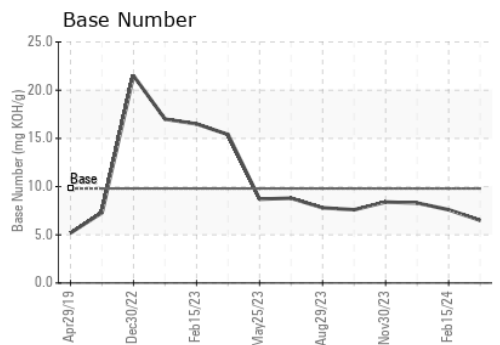
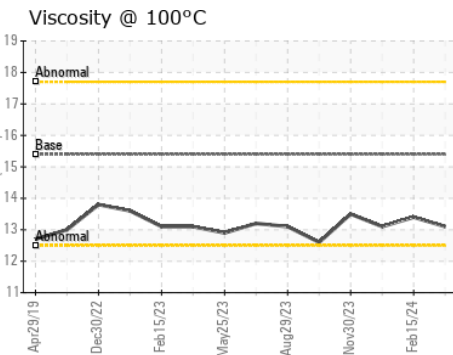
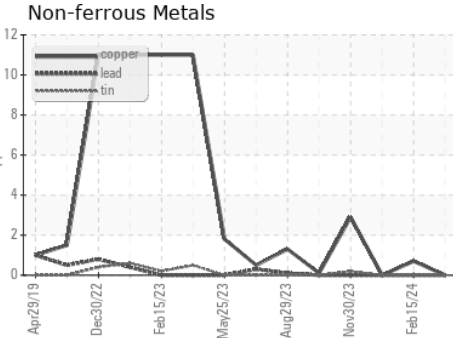
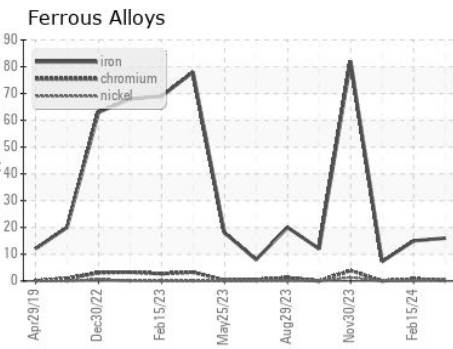
OIL ANALYSIS REPORT



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	13.1	13.4	13.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104838 **Received** : 29 Mar 2024
Lab Number : **06133130** **Tested** : 03 Apr 2024
Unique Number : 10952595 **Diagnosed** : 03 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 820 - Joplin Hauling
 3700 West 7th Street
 Joplin, MO
 US 64801
 Contact: James Jarrett
 jjarrett@gflenv.com
 T: (417)310-2802
 F:

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)