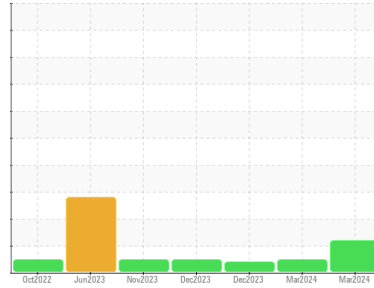




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
4607M

Component
Diesel Engine

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

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are 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	GFL0104440	GFL0104373	GFL0059271	
Sample Date	Client Info	15 Mar 2024	04 Mar 2024	31 Dec 2023	
Machine Age	hrs	Client Info	18274	21710	21515
Oil Age	hrs	Client Info	0	600	21515
Oil Changed	Client Info	N/A	Changed	Changed	
Sample Status		ABNORMAL	NORMAL	ABNORMAL	

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	12	16	6
Chromium	ppm ASTM D5185m >20	<1	0	<1
Nickel	ppm ASTM D5185m >4	<1	0	0
Titanium	ppm ASTM D5185m	<1	0	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	2	1	2
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	3	0	<1
Tin	ppm ASTM D5185m >15	<1	<1	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	5	<1	3
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	63	57	45
Manganese	ppm ASTM D5185m 0	<1	0	<1
Magnesium	ppm ASTM D5185m 1010	927	995	793
Calcium	ppm ASTM D5185m 1070	1034	1075	820
Phosphorus	ppm ASTM D5185m 1150	1001	1103	896
Zinc	ppm ASTM D5185m 1270	1234	1275	1098
Sulfur	ppm ASTM D5185m 2060	3216	3254	2683

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	3	8
Sodium	ppm ASTM D5185m	▲ 108	16	2
Potassium	ppm ASTM D5185m >20	3	0	2
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

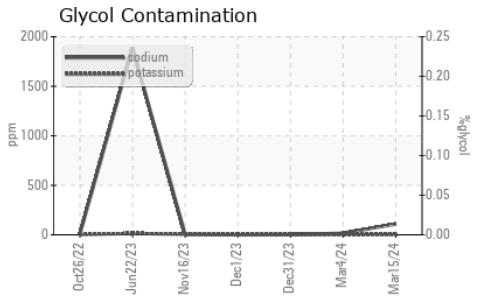
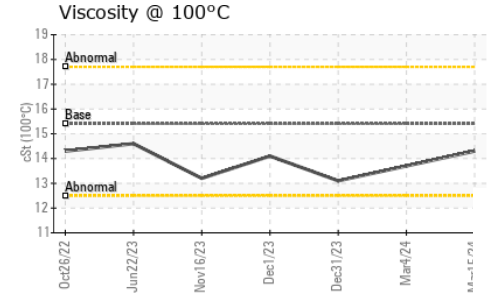
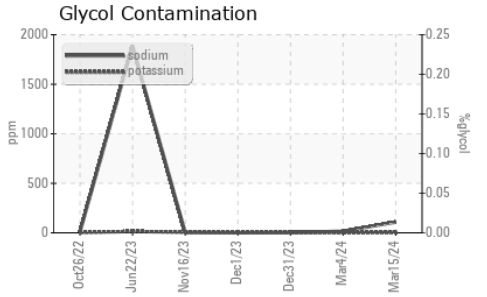
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.2	0.2	0
Nitration	Abs/cm *ASTM D7624 >20	6.6	6.5	3.9
Sulfation	Abs/.1mm *ASTM D7415 >30	18.6	18.3	18.0

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.9	14.1	13.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.8	8.4	7.8



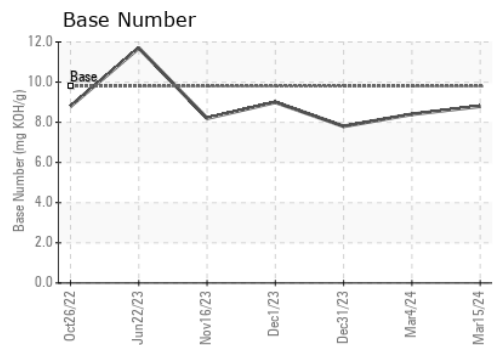
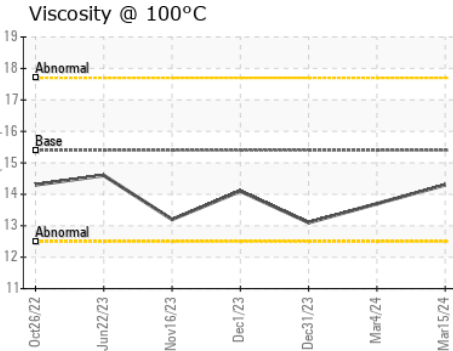
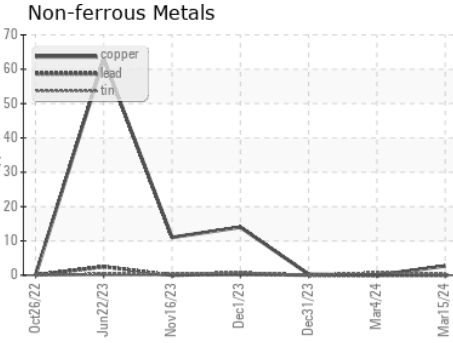
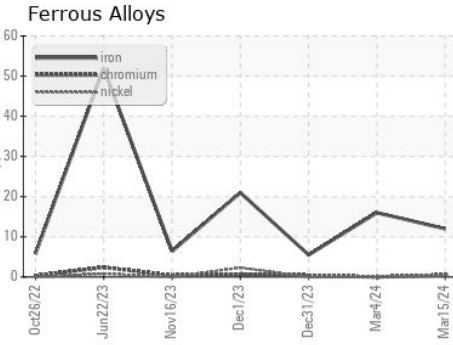
OIL ANALYSIS REPORT



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	▲ MODER
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	14.3	13.7	13.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104440 **Received** : 19 Mar 2024
Lab Number : **06122111** **Tested** : 21 Mar 2024
Unique Number : 10936262 **Diagnosed** : 21 Mar 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340
 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)