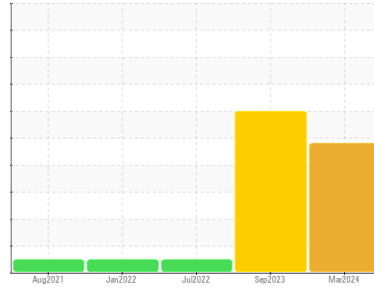




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
8286

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. The oil 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

Test for glycol is positive. There is a moderate concentration of glycol present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0112480	GFL0091630	GFL0054174
Sample Date	Client Info		17 Mar 2024	25 Sep 2023	06 Jul 2022
Machine Age	kms	Client Info	504440	502384	0
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	▲ 1	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>90	13	22	21
Chromium	ppm	ASTM D5185(m)	>4	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	1	1	1
Lead	ppm	ASTM D5185(m)	>50	<1	2	<1
Copper	ppm	ASTM D5185(m)	>55	3	7	6
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	4	2	2
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	57	63	53
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	905	991	960
Calcium	ppm	ASTM D5185(m)	1070	973	1050	1068
Phosphorus	ppm	ASTM D5185(m)	1150	950	1036	987
Zinc	ppm	ASTM D5185(m)	1270	1119	1229	1122
Sulfur	ppm	ASTM D5185(m)	2060	2441	2586	1901
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	4	6	4
Sodium	ppm	ASTM D5185(m)		● 54	● 36	6
Potassium	ppm	ASTM D5185(m)	>20	▲ 6	▲ 10	2
Glycol	%	ASTM D7922*		▲ 0.048	▲ 0.03	NEG

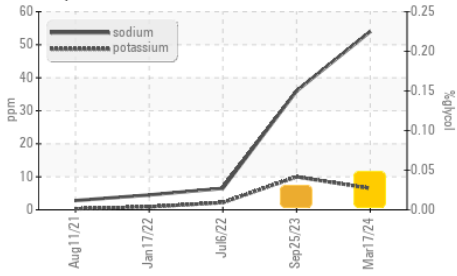
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	0.1	0.6	0.2
Nitration	Abs/cm	ASTM D7624*	>20	5.0	7.8	6.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.6	20.3	21.4



OIL ANALYSIS REPORT

▲ Glycol Contamination



FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	15.6	15.3
Base Number (BN)	mg KOH/g ASTM D2896*	9.8	9.04	---

VISUAL

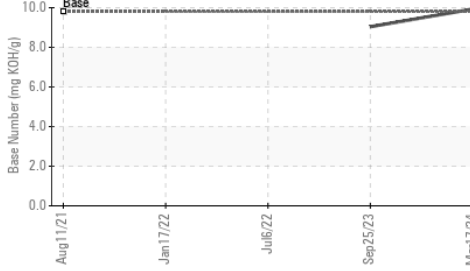
method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	>0.2	NEG	NEG
Free Water	scalar Visual*	NEG	NEG	NEG

FLUID PROPERTIES

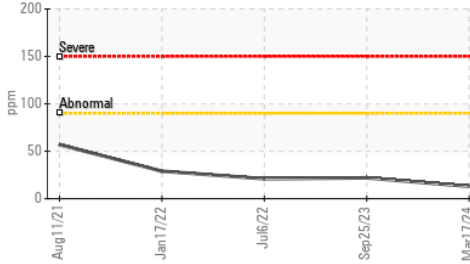
method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	15.4	13.6 ▲	11.4

GRAPHS

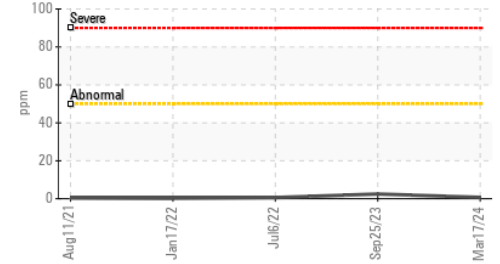
Base Number



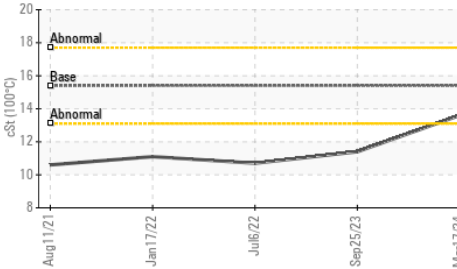
Iron (ppm)



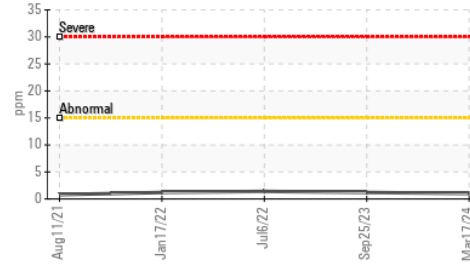
Lead (ppm)



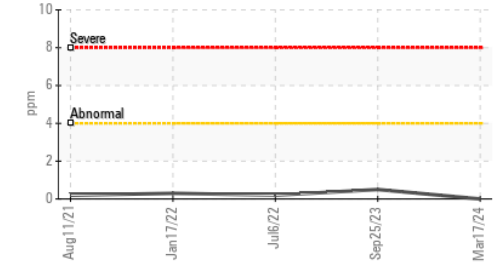
Viscosity @ 100°C



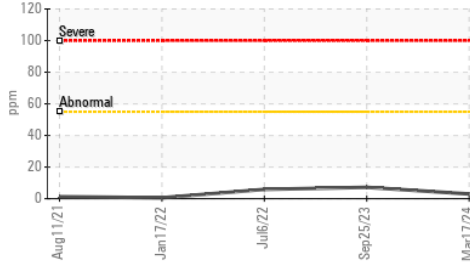
Aluminum (ppm)



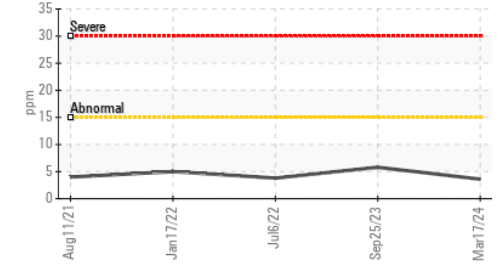
Chromium (ppm)



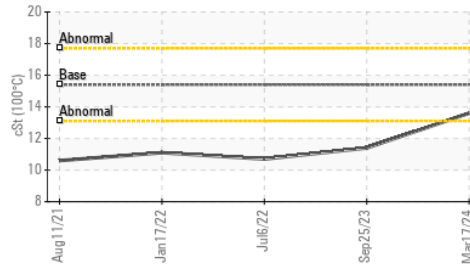
Copper (ppm)



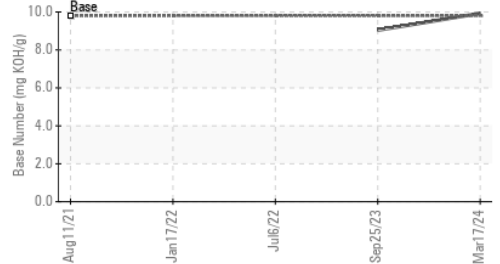
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0112480
Lab Number : 02624592
Unique Number : 5749711
Test Package : MOB 2 (Additional Tests: Glycol)

GFL Environmental - 550 - Rocky View County
 220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 Contact: GFL Calgary
 calgarymaintenance@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

T:
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