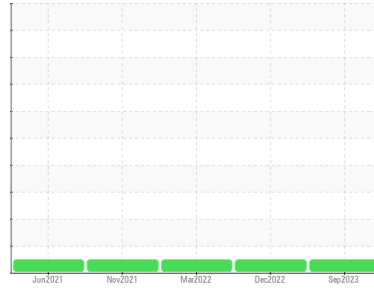




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
(PA8132)
Machine Id
526000

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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0029313	GFL0048942	GFL0020096
Sample Date	Client Info			11 Sep 2023	30 Dec 2022	24 Mar 2022
Machine Age	hrs	Client Info		15612	633890	14090
Oil Age	hrs	Client Info		589	1300	494
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>5	<1.0	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>80	15	27	30
Chromium	ppm	ASTM D5185(m)	>5	1	1	2
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	6	11	17
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>150	3	8	8
Tin	ppm	ASTM D5185(m)	>5	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	2	3	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	59	59	63
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	966	963	1055
Calcium	ppm	ASTM D5185(m)	1070	1031	1079	1107
Phosphorus	ppm	ASTM D5185(m)	1150	1036	1091	1081
Zinc	ppm	ASTM D5185(m)	1270	1175	1178	1278
Sulfur	ppm	ASTM D5185(m)	2060	2465	2576	2349
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

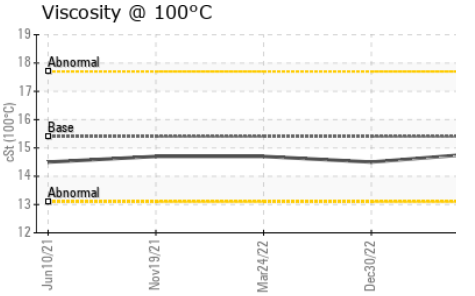
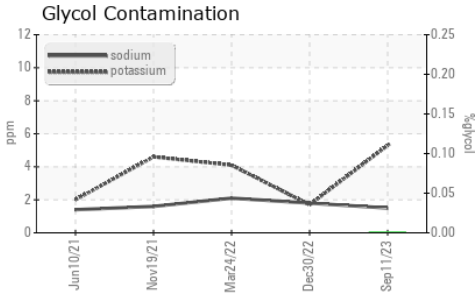
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	5	7	9
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	5	2	4
Glycol	%	ASTM D7922*		0.0	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.5	0.2	0.7
Nitration	Abs/cm	ASTM D7624*	>20	7.1	8.0	10.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.5	21.0	23.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.3	15.0	18.0



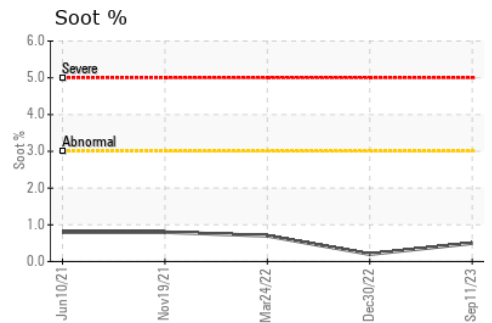
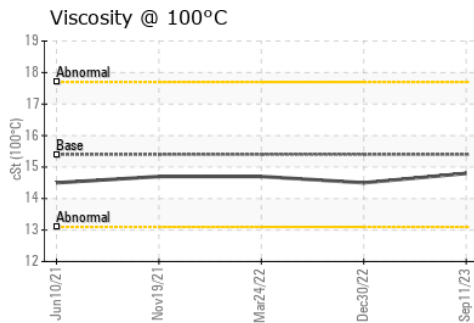
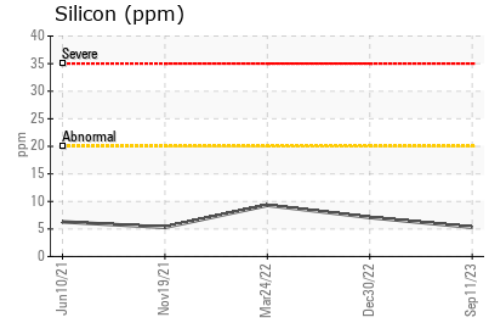
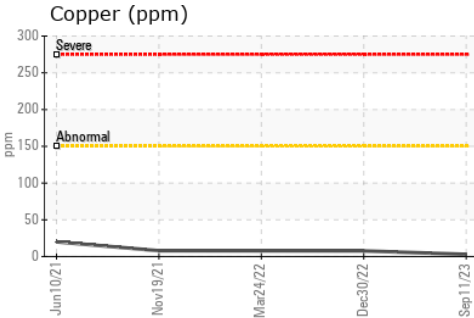
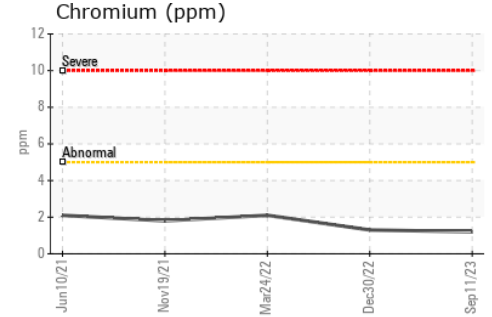
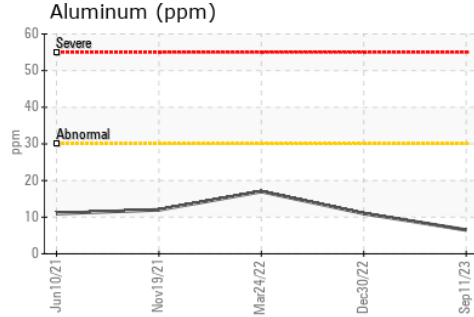
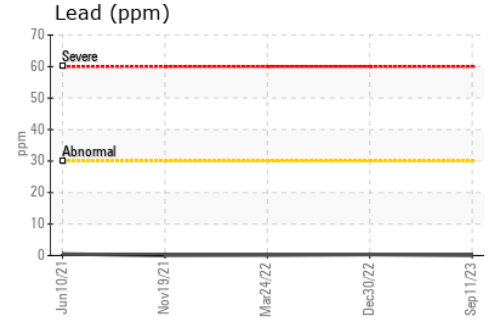
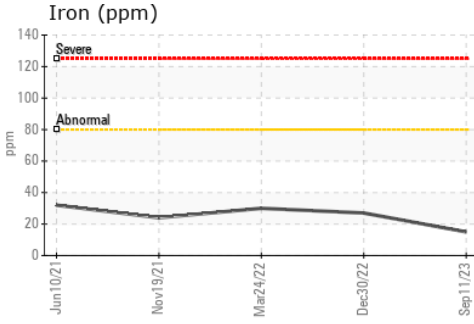
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	15.4	14.8	14.5

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 571 - Cranbrook Hauling TS LF
Sample No. : GFL0029313 **Received** : 18 Sep 2023 1425 Industrial Road 2
Lab Number : 02583129 **Diagnosed** : 19 Sep 2023 Cranbrook, BC
Unique Number : 5644194 **Diagnostician** : Wes Davis CA V1C 5X5
Test Package : MOB 1 (Additional Tests: Glycol) Contact: Michael Miles

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.

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