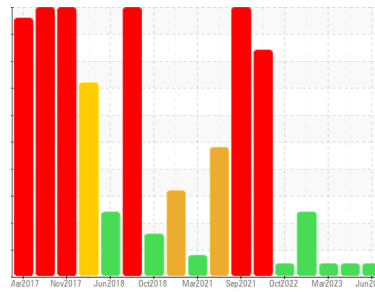




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
4587

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 10W30 (--- 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	history 1	history 2
Sample Number	Client Info	GFL0085916	GFL0072814	GFL0072842
Sample Date	Client Info	25 Jun 2023	04 Jun 2023	07 Mar 2023
Machine Age	hrs	1663	1477	960
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185(m) >110	31	58	53
Chromium	ppm ASTM D5185(m) >4	2	4	4
Nickel	ppm ASTM D5185(m) >2	<1	<1	<1
Titanium	ppm ASTM D5185(m)	0	0	<1
Silver	ppm ASTM D5185(m) >2	<1	0	<1
Aluminum	ppm ASTM D5185(m) >25	2	3	3
Lead	ppm ASTM D5185(m) >45	4	10	7
Copper	ppm ASTM D5185(m) >85	2	6	15
Tin	ppm ASTM D5185(m) >4	<1	2	2
Antimony	ppm ASTM D5185(m)	0	0	<1
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	history 1	history 2
Boron	ppm ASTM D5185(m) 2	2	2	2
Barium	ppm ASTM D5185(m) 0	0	0	<1
Molybdenum	ppm ASTM D5185(m) 50	58	62	61
Manganese	ppm ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 950	956	978	975
Calcium	ppm ASTM D5185(m) 1050	1029	1086	1137
Phosphorus	ppm ASTM D5185(m) 995	1054	1065	1088
Zinc	ppm ASTM D5185(m) 1180	1169	1184	1220
Sulfur	ppm ASTM D5185(m) 2600	2435	2373	2487
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185(m) >30	5	7	6
Sodium	ppm ASTM D5185(m)	6	7	6
Potassium	ppm ASTM D5185(m) >20	<1	1	<1

INFRA-RED

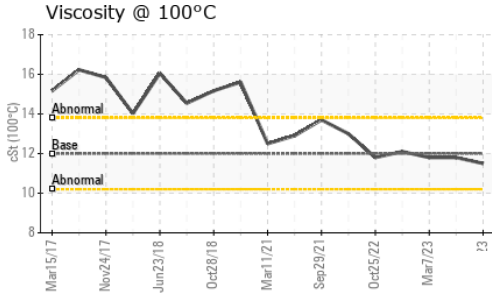
method	limit/base	current	history 1	history 2
Soot %	% ASTM D7844* >3	0.5	0.8	0.4
Nitration	Abs/cm ASTM D7624* >20	8.5	10.6	9.2
Sulfation	Abs/.1mm ASTM D7415* >30	21.0	22.7	20.9

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm ASTM D7414* >25	17.6	20.3	17.5



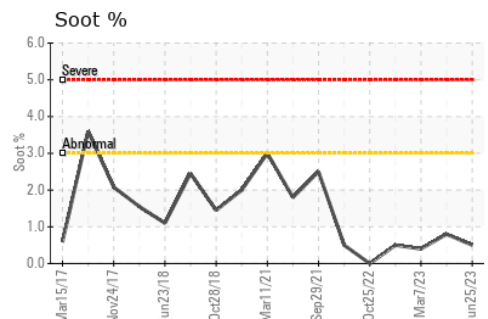
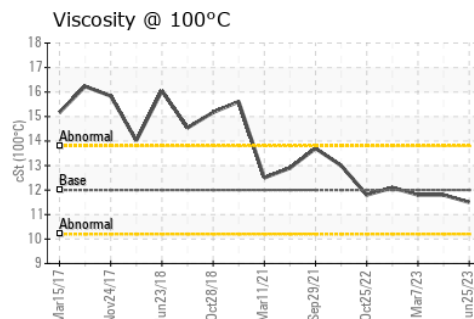
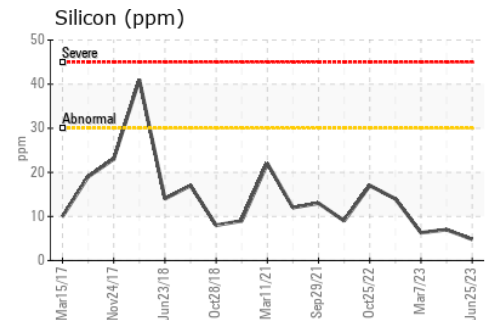
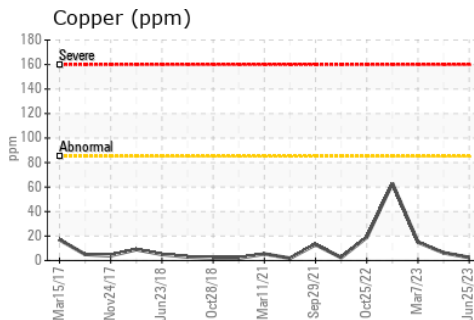
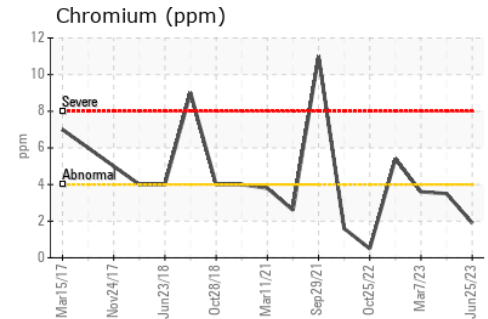
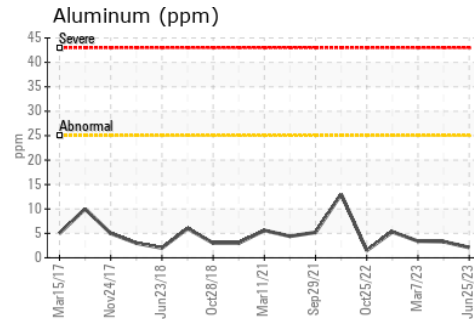
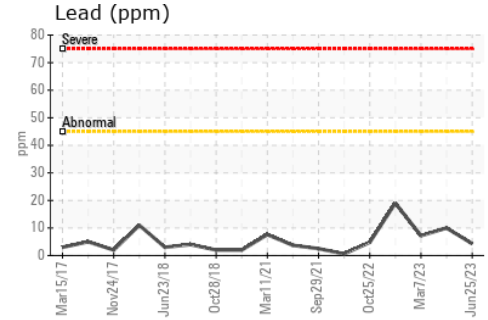
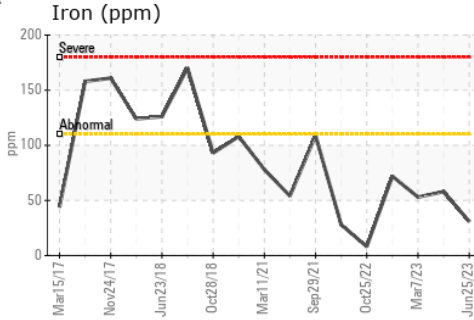
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.8	11.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW
Sample No. : GFL0085916 **Received** : 04 Jul 2023
Lab Number : 02567703 **Diagnosed** : 04 Jul 2023
Unique Number : 5604749 **Diagnostician** : Wes Davis
Test Package : MOB 1

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.

Contact: Tim Greig
 tgreig@gflenv.com

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F: