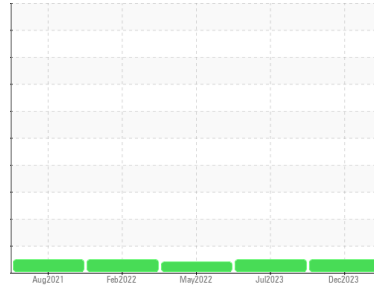




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
501032

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

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		GFL0099528	GFL0084265	GFL0052674
Sample Date	Client Info		15 Dec 2023	05 Jul 2023	20 May 2022
Machine Age	kms	Client Info	43629	13503	25386
Oil Age	kms	Client Info	0	0	24700
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	0.5
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	20	11	30
Chromium	ppm	ASTM D5185(m) >20	2	<1	5
Nickel	ppm	ASTM D5185(m) >4	2	<1	<1
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m) >3	0	<1	<1
Aluminum	ppm	ASTM D5185(m) >20	6	4	5
Lead	ppm	ASTM D5185(m) >40	0	0	<1
Copper	ppm	ASTM D5185(m) >330	3	2	6
Tin	ppm	ASTM D5185(m) >15	<1	0	<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	20	296	3
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	62	72	60
Manganese	ppm	ASTM D5185(m) 0	0	<1	3
Magnesium	ppm	ASTM D5185(m) 1010	909	528	1032
Calcium	ppm	ASTM D5185(m) 1070	1131	1342	1055
Phosphorus	ppm	ASTM D5185(m) 1150	1003	1091	1075
Zinc	ppm	ASTM D5185(m) 1270	1201	1181	1239
Sulfur	ppm	ASTM D5185(m) 2060	2560	2775	2709
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

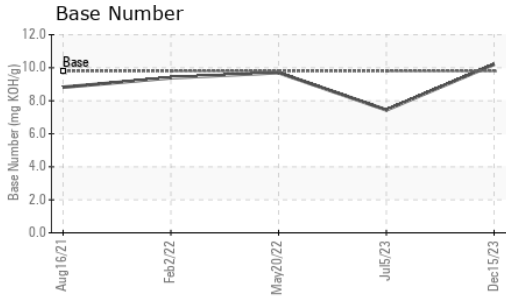
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	4	6	6
Sodium	ppm	ASTM D5185(m)	2	2	5
Potassium	ppm	ASTM D5185(m) >20	7	4	2

INFRA-RED

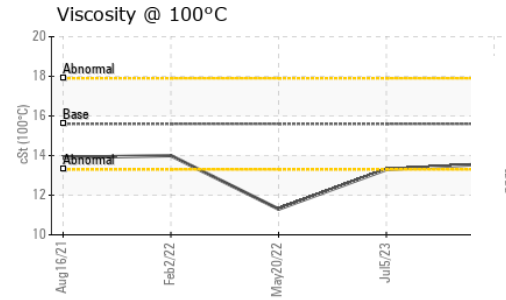
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0.3	0	0
Nitration	Abs/cm	ASTM D7624* >20	8.5	5.5	6.0
Sulfation	Abs.1mm	ASTM D7415* >30	19.6	18.9	20.0



OIL ANALYSIS REPORT



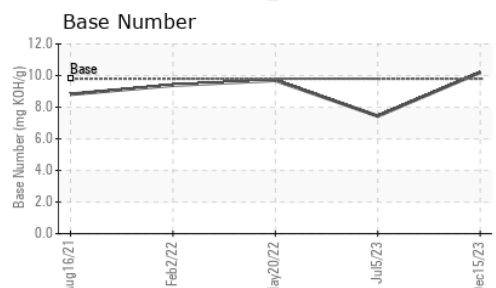
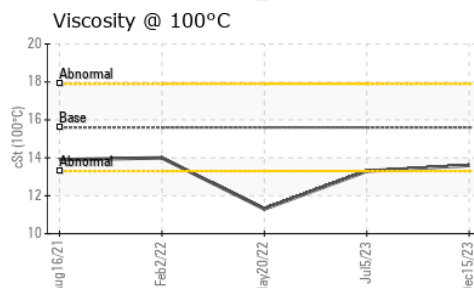
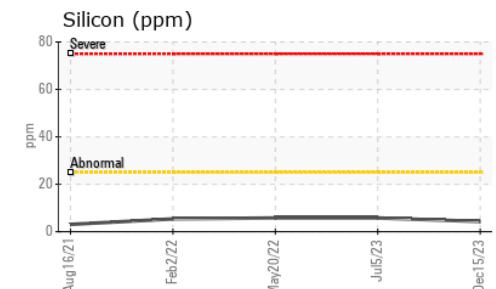
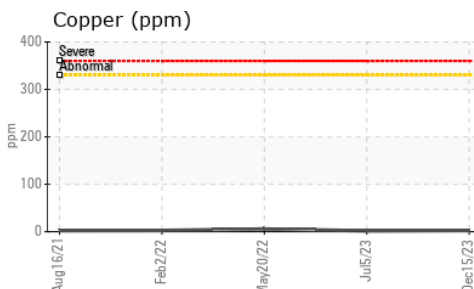
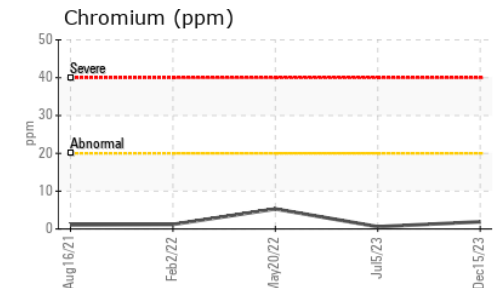
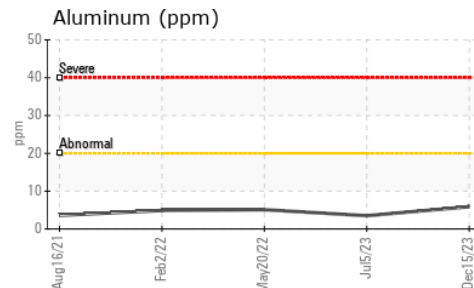
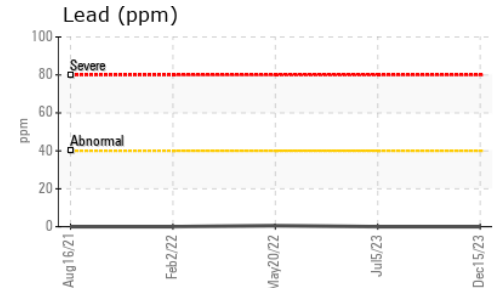
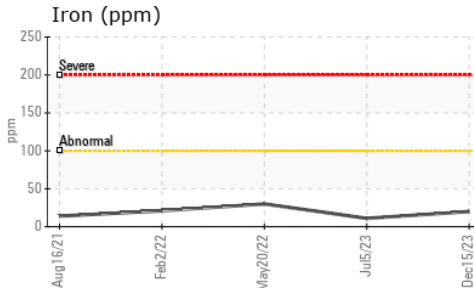
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	16.0	13.1	13.8
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	10.21	7.44	9.70



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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.6	13.3	▲ 11.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0099528 **Received** : 02 Jan 2024 220 Carmek Blvd
Lab Number : 02605738 **Diagnosed** : 04 Jan 2024 Rocky View County, AB
Unique Number : 5698823 **Diagnostician** : Wes Davis CA T1X 1X1
Test Package : MOB 2 **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.

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