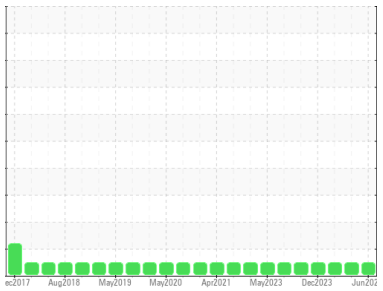
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
801031
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (19 LTR)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
Metal levels are typical for a new component breaking in.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0122327**	GFL0117876	GFL0111722
Sample Date		Client Info		**28 Jun 2024**	23 May 2024	14 Mar 2024
Machine Age	kms	Client Info		**88443**	88443	13803
Oil Age	kms	Client Info		**0**	600	600
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
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)	>80	**13**	26	36
Chromium	ppm	ASTM D5185(m)	>5	**<1**	<1	1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>30	**3**	2	3
Lead	ppm	ASTM D5185(m)	>30	**0**	0	0
Copper	ppm	ASTM D5185(m)	>150	**<1**	<1	1
Tin	ppm	ASTM D5185(m)	>5	**0**	0	0
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	**196**	6	10
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**113**	61	64
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	0
Magnesium	ppm	ASTM D5185(m)	1010	**722**	976	972
Calcium	ppm	ASTM D5185(m)	1070	**1478**	1098	1115
Phosphorus	ppm	ASTM D5185(m)	1150	**728**	1029	1032
Zinc	ppm	ASTM D5185(m)	1270	**889**	1229	1224
Sulfur	ppm	ASTM D5185(m)	2060	**2063**	2411	2528
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**7**	4	4
Sodium	ppm	ASTM D5185(m)		**6**	9	10
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.5**	0.6	0.7
Nitration	Abs/cm	ASTM D7624*	>20	**8.3**	11.0	12.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.7**	22.8	25.0

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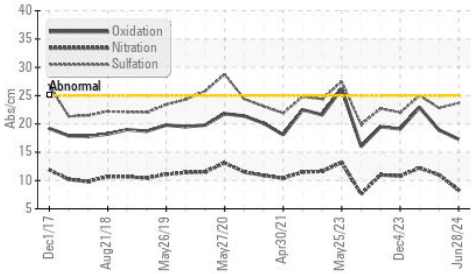
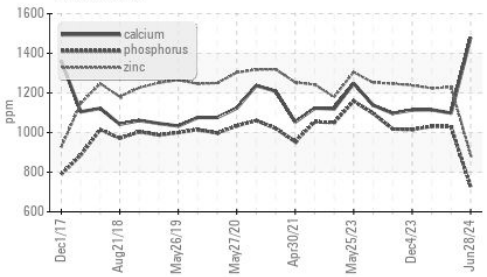
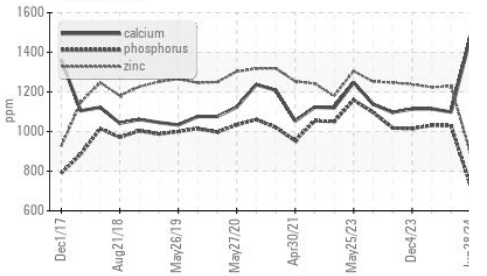
FT-IR (Direct Trend)



Additives



Additives



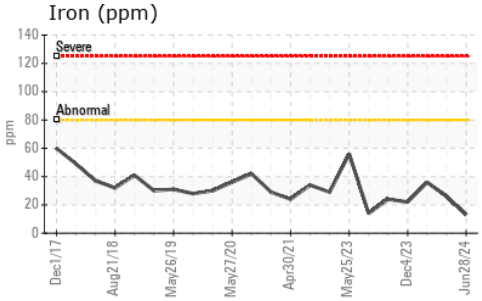
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**17.3**	18.9	22.9

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

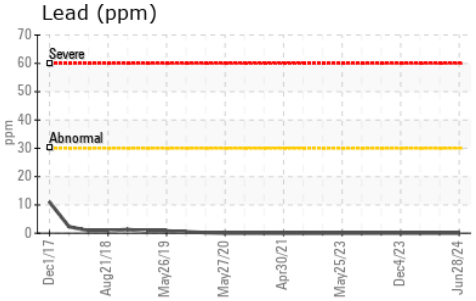
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**14.4**	14.3	13.8

GRAPHS

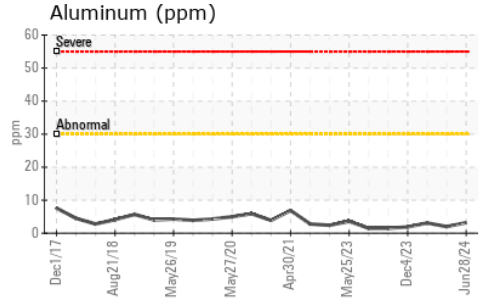
Iron (ppm)



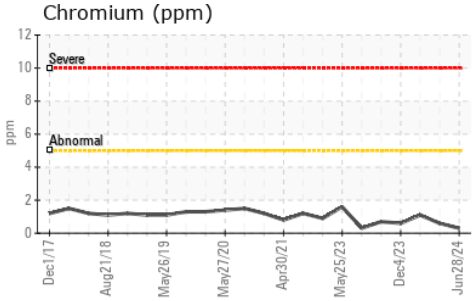
Lead (ppm)



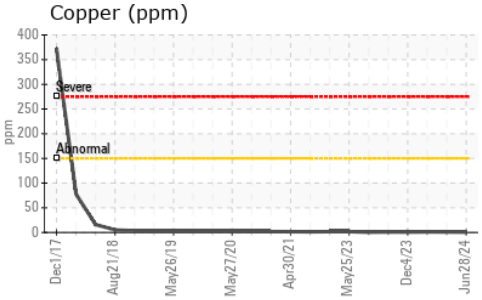
Aluminum (ppm)



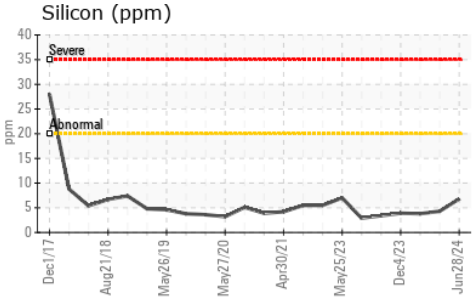
Chromium (ppm)



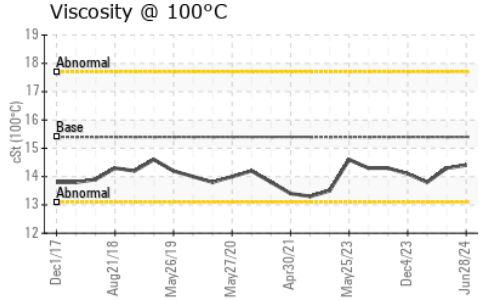
Copper (ppm)



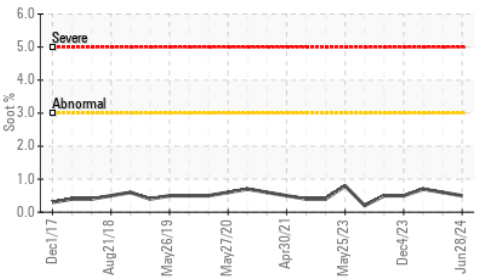
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0122327
Lab Number : 02645202
Unique Number : 5802741
Test Package : MOB 1

Received : 03 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 2024 - Kevin Marson

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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