



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
4532
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0112557	GFL0102593	GFL0101727
Sample Date		Client Info		13 Apr 2024	07 Feb 2024	30 Nov 2023
Machine Age	hrs	Client Info		27796	27280	26745
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	NORMAL	MARGINAL

WEAR

Chromium ppm levels are abnormal. Ring wear is indicated.

Iron	ppm	ASTM D5185(m)	>110	68	57	63
Chromium	ppm	ASTM D5185(m)	>4	▲ 5	2	2
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	5	5	3
Lead	ppm	ASTM D5185(m)	>45	1	1	2
Copper	ppm	ASTM D5185(m)	>85	2	2	2
Tin	ppm	ASTM D5185(m)	>4	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

There is no indication of any contamination in the oil.

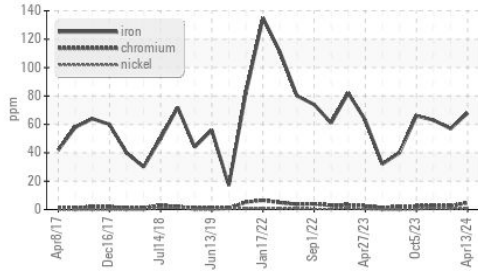
Silicon	ppm	ASTM D5185(m)	>30	13	8	10
Potassium	ppm	ASTM D5185(m)	>20	1	2	<1
Fuel		WC Method	>5	<1.0	<1.0	▲ 2.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	1.4	1.3	1.3
Nitration	Abs/cm	ASTM D7624*	>20	16.3	13.3	13.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	29.6	26.8	26.6
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

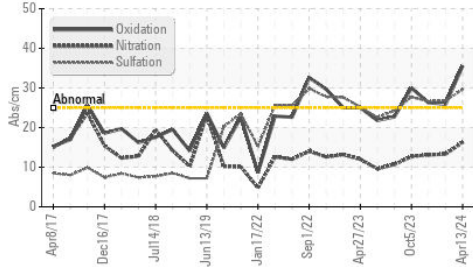
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		8	7	8
Boron	ppm	ASTM D5185(m)	2	2	2	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	49	59	61
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	950	790	945	981
Calcium	ppm	ASTM D5185(m)	1050	885	1063	1078
Phosphorus	ppm	ASTM D5185(m)	995	795	981	983
Zinc	ppm	ASTM D5185(m)	1180	979	1164	1194
Sulfur	ppm	ASTM D5185(m)	2600	1823	2395	2266
Oxidation	Abs/.1mm	ASTM D7414*	>25	35.5	25.9	26.3
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	10.7	11.6	12.1

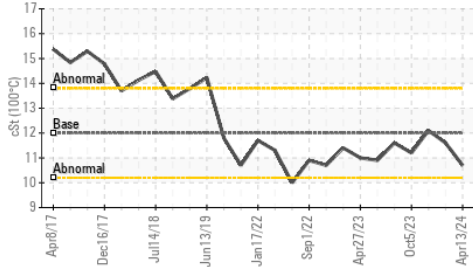
▲ Ferrous Alloys



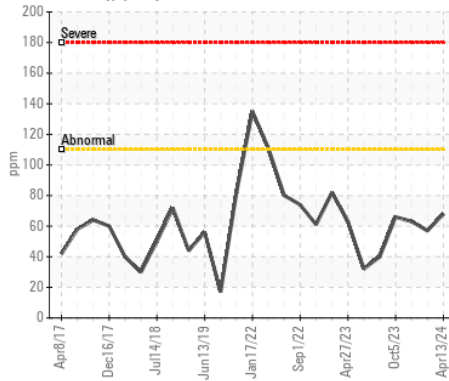
FT-IR (Direct Trend)



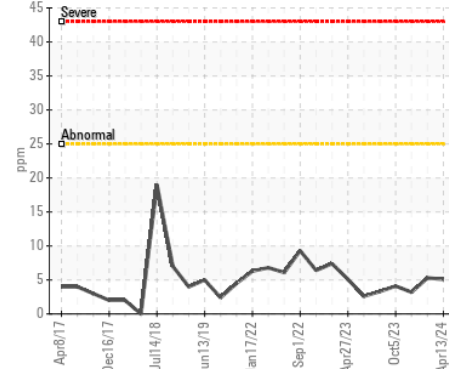
Viscosity @ 100°C



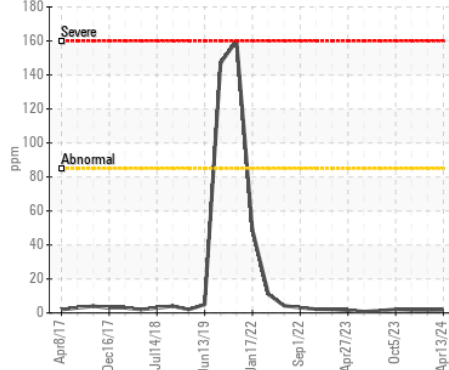
Iron (ppm)



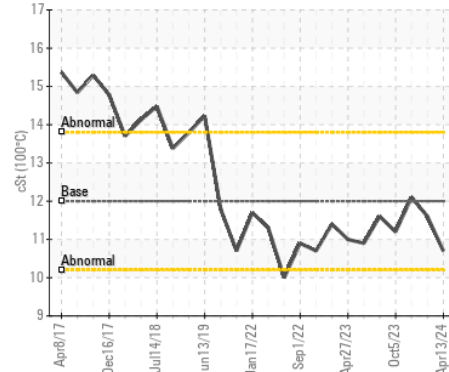
Aluminum (ppm)



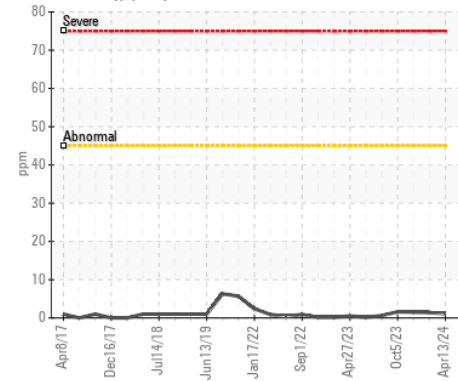
Copper (ppm)



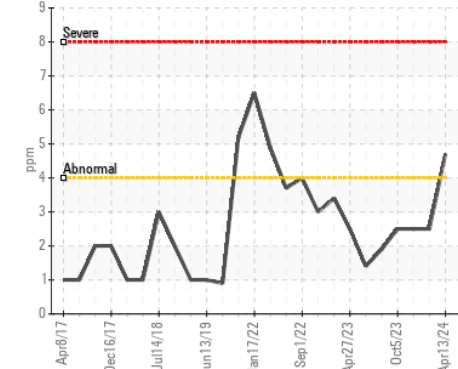
Viscosity @ 100°C



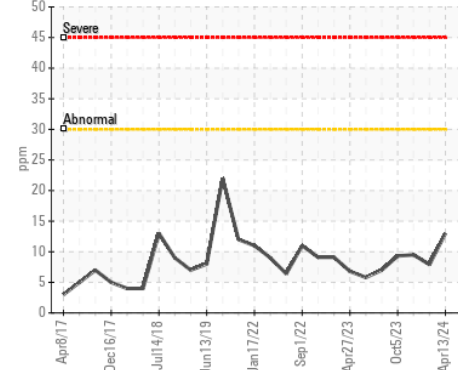
Lead (ppm)



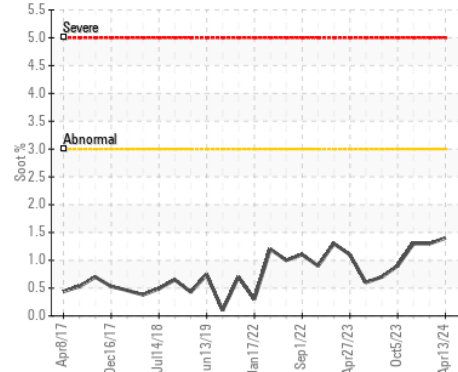
▲ Chromium (ppm)



Silicon (ppm)



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0112557
Lab Number : 02631529
Unique Number : 5772682
Test Package : MOB 1

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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.