

Machine Id
79118
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (18 LTR)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0071321	PC0061125	AP107044
Sample Date		Client Info		05 Mar 2024	13 Apr 2022	09 Jul 2018
Machine Age	hrs	Client Info		0	11430	6153
Oil Age	hrs	Client Info		0	200	900
Filter Age	hrs	Client Info		0	200	900
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Chromium and iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Ring wear is indicated.

PQ		ASTM D8184*	>65	0	---	---
Iron	ppm	ASTM D5185(m)	>80	▲ 85	54	46
Chromium	ppm	ASTM D5185(m)	>5	▲ 8	1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	19	16	17
Lead	ppm	ASTM D5185(m)	>30	0	0	<1
Copper	ppm	ASTM D5185(m)	>150	3	2	2
Tin	ppm	ASTM D5185(m)	>5	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

There is no indication of any contamination in the oil.

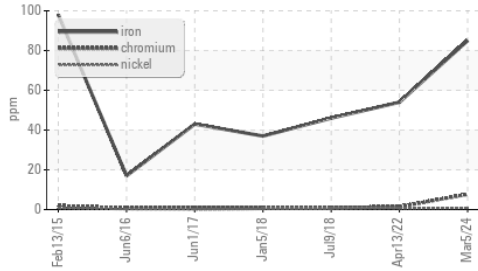
Silicon	ppm	ASTM D5185(m)	>20	8	8	7
Potassium	ppm	ASTM D5185(m)	>20	9	9	16
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	0.0
Soot %	%	ASTM D7844*	>3	1.6	0.7	1.2
Nitration	Abs/cm	ASTM D7624*	>20	16.3	12.6	12.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	29.7	23.9	25.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

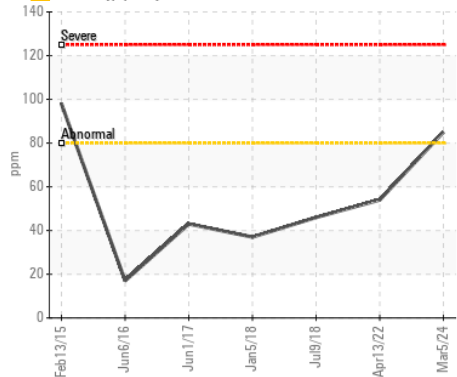
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		5	9	5
Boron	ppm	ASTM D5185(m)	2	8	54	16
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	62	57	43
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	962	1055	950
Calcium	ppm	ASTM D5185(m)	1050	1080	896	1030
Phosphorus	ppm	ASTM D5185(m)	995	976	1026	999
Zinc	ppm	ASTM D5185(m)	1180	1190	1176	1227
Sulfur	ppm	ASTM D5185(m)	2600	2338	2653	2732
Oxidation	Abs/.1mm	ASTM D7414*	>25	30.7	20.3	21.7
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	81.3	69.0	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.9	11.1	12.8
Viscosity Index (VI)	Scale	ASTM D2270*	144	140	152	---

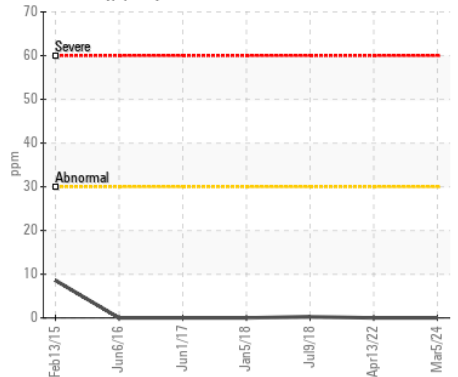
▲ Ferrous Alloys



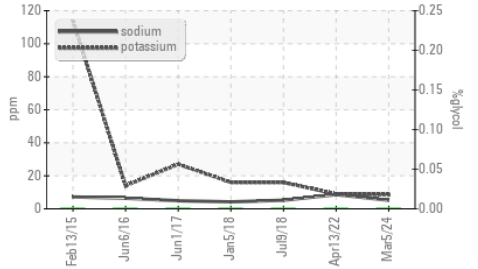
▲ Iron (ppm)



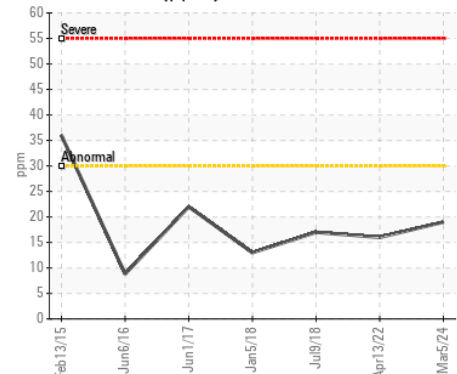
Lead (ppm)



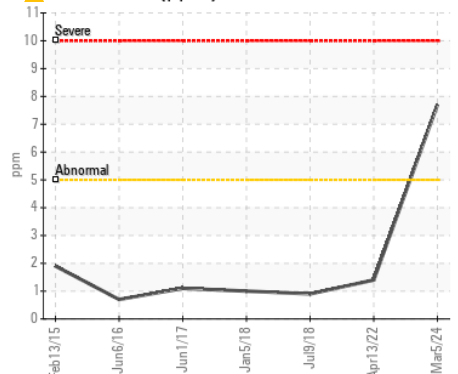
Glycol Contamination



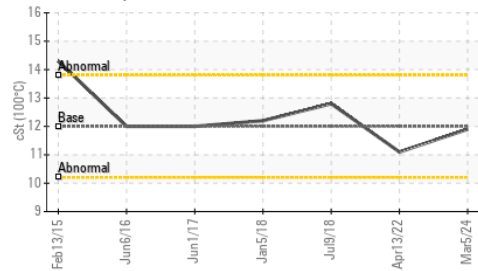
Aluminum (ppm)



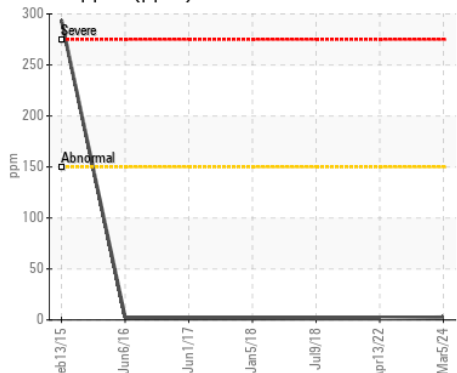
▲ Chromium (ppm)



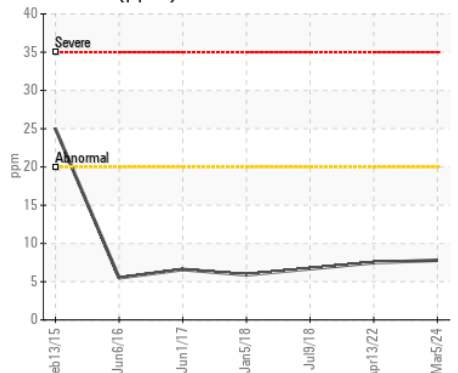
Viscosity @ 100°C



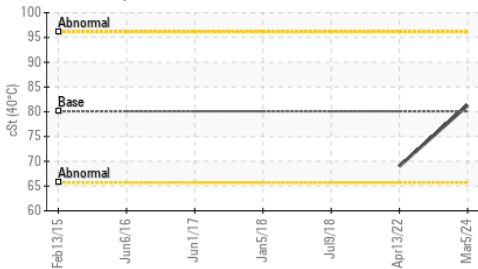
Copper (ppm)



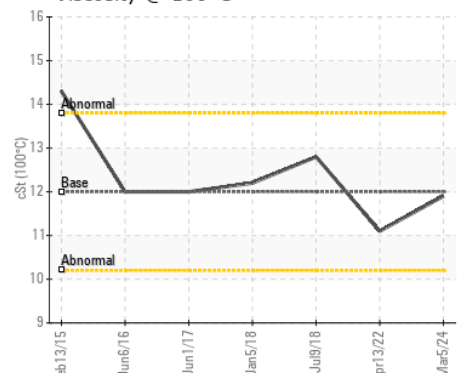
Silicon (ppm)



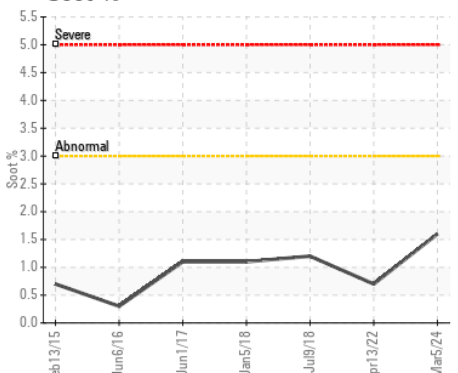
Viscosity @ 40°C



Viscosity @ 100°C



Soot %



PQ



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0071321 **Received** : 06 Mar 2024
Lab Number : 02620121 **Tested** : 06 Mar 2024
Unique Number : 5737231 **Diagnosed** : 06 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KV40, PQ, VI)

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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.