



Area
R/L
Machine Id
11209
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (20 LTR)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0083067	---	---
Sample Date		Client Info		02 Jul 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	73	---	---
Chromium	ppm	ASTM D5185(m)	>20	2	---	---
Nickel	ppm	ASTM D5185(m)	>5	<1	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	9	---	---
Lead	ppm	ASTM D5185(m)	>40	1	---	---
Copper	ppm	ASTM D5185(m)	>330	69	---	---
Tin	ppm	ASTM D5185(m)	>15	<1	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

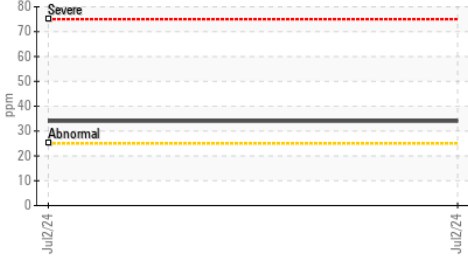
Silicon	ppm	ASTM D5185(m)	>25	▲ 34	---	---
Potassium	ppm	ASTM D5185(m)	>20	8	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	ASTM D7922*		0.0	---	---
Soot %	%	ASTM D7844*	>4	0.1	---	---
Nitration	Abs/cm	ASTM D7624*	>20	10.0	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.9	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

FLUID CONDITION

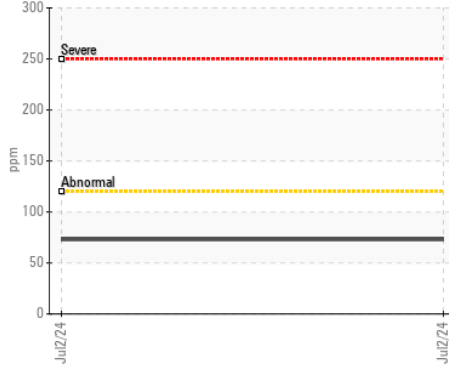
Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		7	---	---
Boron	ppm	ASTM D5185(m)	2	38	---	---
Barium	ppm	ASTM D5185(m)	0	5	---	---
Molybdenum	ppm	ASTM D5185(m)	50	43	---	---
Manganese	ppm	ASTM D5185(m)	0	6	---	---
Magnesium	ppm	ASTM D5185(m)	950	523	---	---
Calcium	ppm	ASTM D5185(m)	1050	1580	---	---
Phosphorus	ppm	ASTM D5185(m)	995	678	---	---
Zinc	ppm	ASTM D5185(m)	1180	849	---	---
Sulfur	ppm	ASTM D5185(m)	2600	1823	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	22.9	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	74.8	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.1	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	144	138	---	---

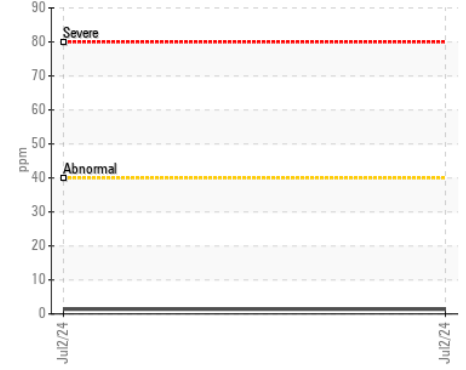
▲ Silicon (ppm)



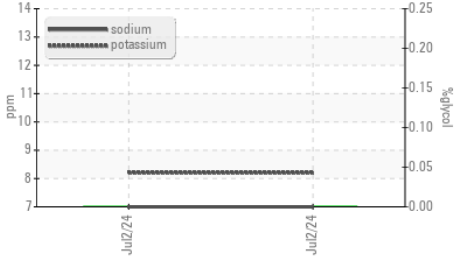
Iron (ppm)



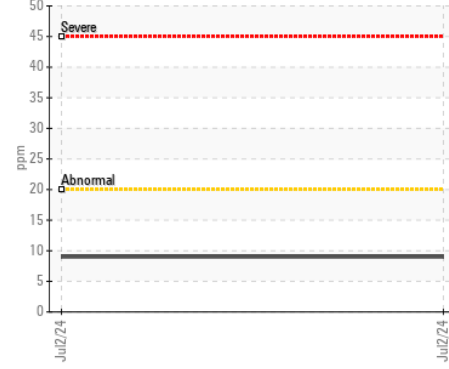
Lead (ppm)



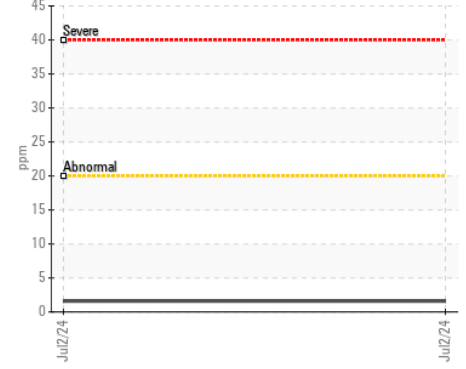
Glycol Contamination



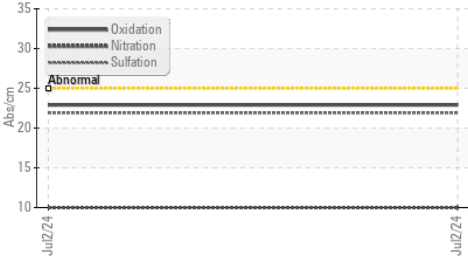
Aluminum (ppm)



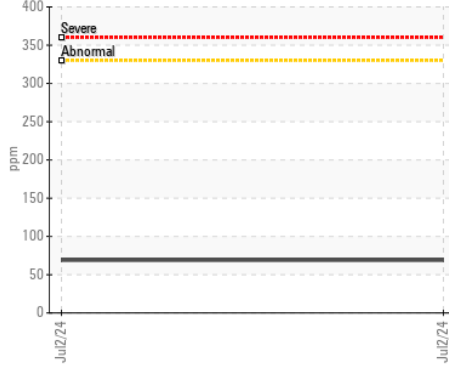
Chromium (ppm)



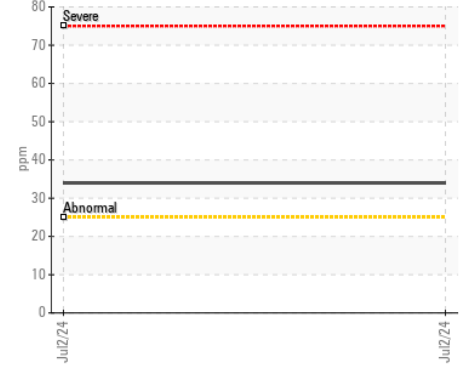
FT-IR (Direct Trend)



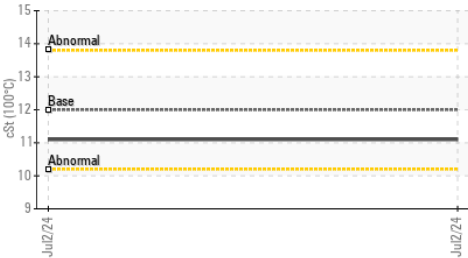
Copper (ppm)



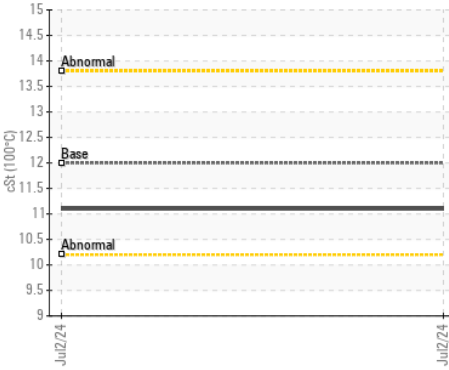
▲ Silicon (ppm)



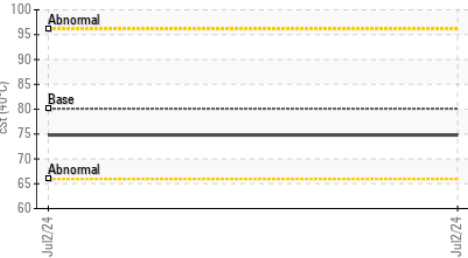
Viscosity @ 100°C



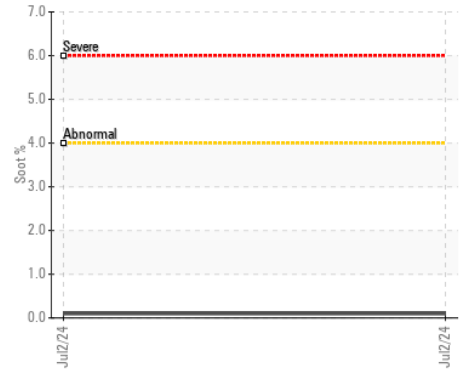
Viscosity @ 100°C



Viscosity @ 40°C



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083067 **Received** : 03 Jul 2024
Lab Number : 02645209 **Tested** : 03 Jul 2024
Unique Number : 5802748 **Diagnosed** : 04 Jul 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KV40, VI, Visual)

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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