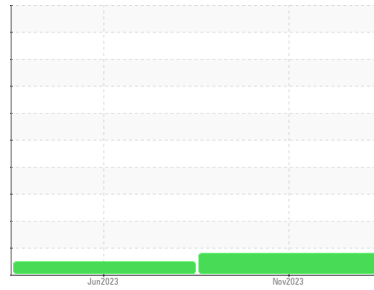




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
EX-11
 Component
Diesel Engine
 Fluid

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Contamination

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		KFS0002898	KFS0003966	---
Sample Date	Client Info		21 Nov 2023	02 Jun 2023	---
Machine Age	hrs	Client Info	11022	379	---
Oil Age	hrs	Client Info	11022	379	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ABNORMAL	NORMAL	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	22	18	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	<1	---
Aluminum	ppm	ASTM D5185m	>20	3	4	---
Lead	ppm	ASTM D5185m	>40	2	2	---
Copper	ppm	ASTM D5185m	>330	681	627	---
Tin	ppm	ASTM D5185m	>15	2	3	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		<1	0	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		27	4	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		30	62	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m		435	949	---
Calcium	ppm	ASTM D5185m		1469	1076	---
Phosphorus	ppm	ASTM D5185m		772	1035	---
Zinc	ppm	ASTM D5185m		1089	1294	---
Sulfur	ppm	ASTM D5185m		3332	3602	---

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	23	57	---
Sodium	ppm	ASTM D5185m		3	14	---
Potassium	ppm	ASTM D5185m	>20	7	15	---

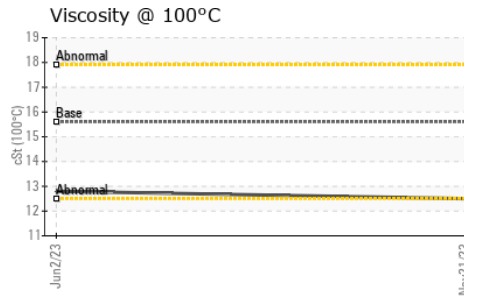
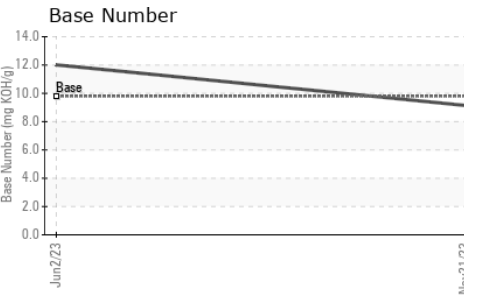
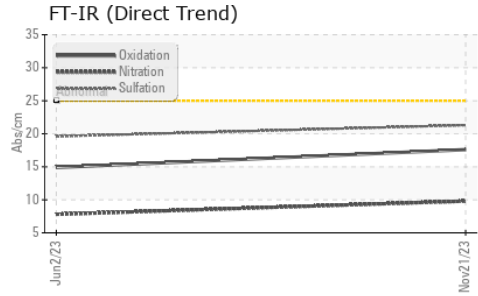
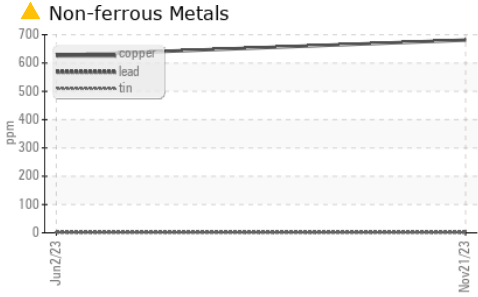
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.4	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	9.8	7.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	19.6	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	14.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.14	12.01	---

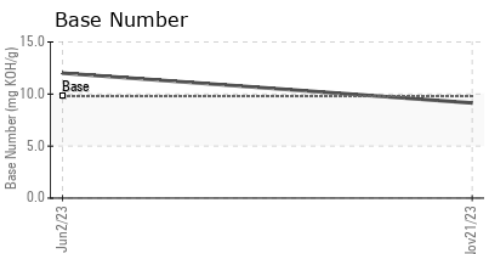
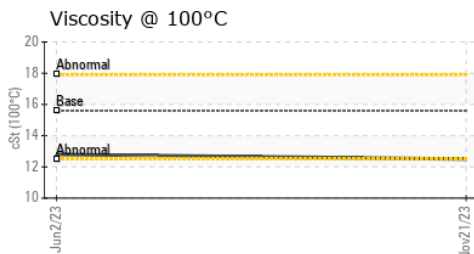
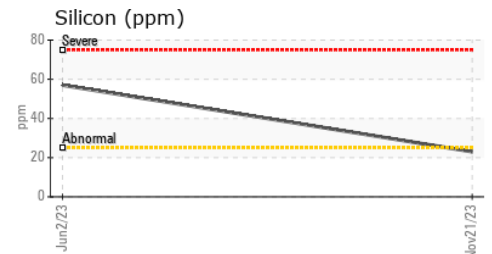
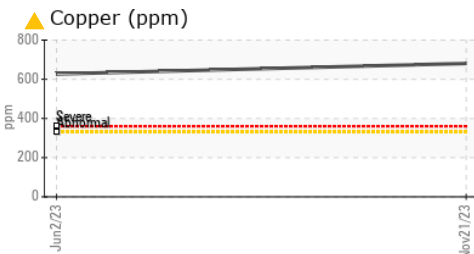
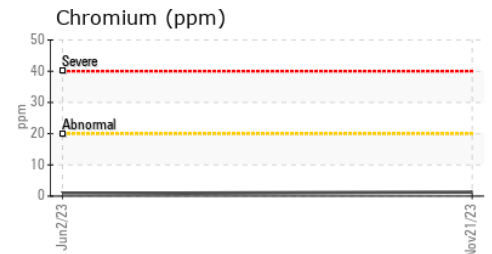
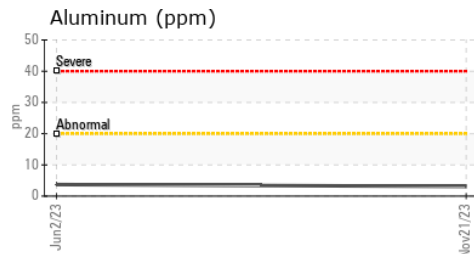
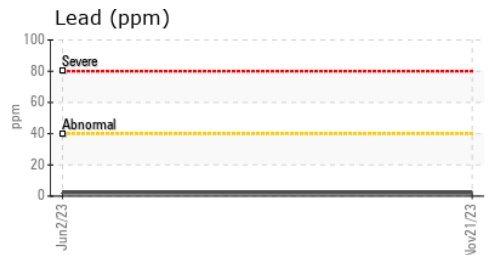
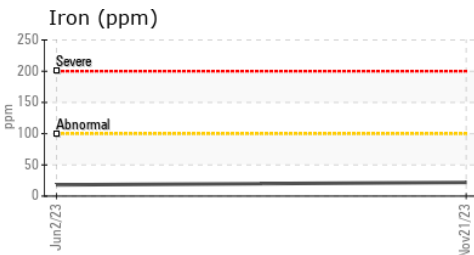
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
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	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.6	12.5	12.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0002898 **Received** : 24 Nov 2023
Lab Number : 06017531 **Tested** : 28 Nov 2023
Unique Number : 10756675 **Diagnosed** : 29 Nov 2023 - Jonathan Hester
Test Package : MOB 2

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 COLUMBIA, TN
 US 38401
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 ben@slectharness.com
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 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)