

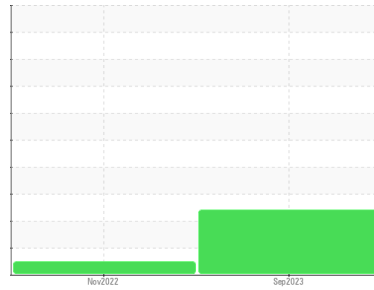


OIL ANALYSIS REPORT



Machine Id
DZ-6
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

● Wear

All component wear rates are normal.

▲ Contamination

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

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KFS0003926	KFS0002878	---
Sample Date	Client Info		21 Sep 2023	30 Nov 2022	---
Machine Age	hrs	Client Info	5592	4586	---
Oil Age	hrs	Client Info	0	0	---
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	24	43	---
Chromium	ppm	ASTM D5185m >20	<1	<1	---
Nickel	ppm	ASTM D5185m >2	0	0	---
Titanium	ppm	ASTM D5185m >2	0	<1	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >25	11	6	---
Lead	ppm	ASTM D5185m >40	<1	7	---
Copper	ppm	ASTM D5185m >330	14	12	---
Tin	ppm	ASTM D5185m >15	<1	1	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	41	5	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	41	29	---
Manganese	ppm	ASTM D5185m	<1	<1	---
Magnesium	ppm	ASTM D5185m	487	400	---
Calcium	ppm	ASTM D5185m	1851	2390	---
Phosphorus	ppm	ASTM D5185m	993	1076	---
Zinc	ppm	ASTM D5185m	1185	1312	---
Sulfur	ppm	ASTM D5185m	3693	7771	---

CONTAMINANTS

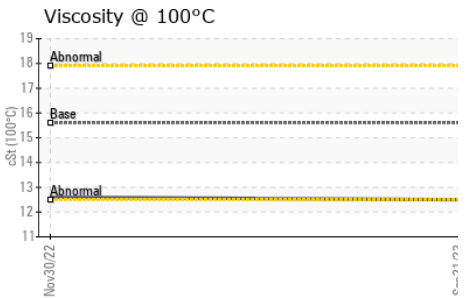
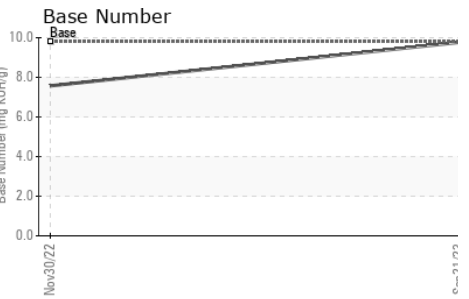
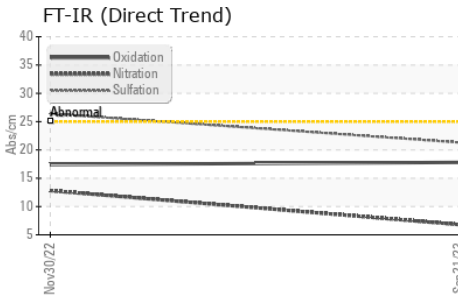
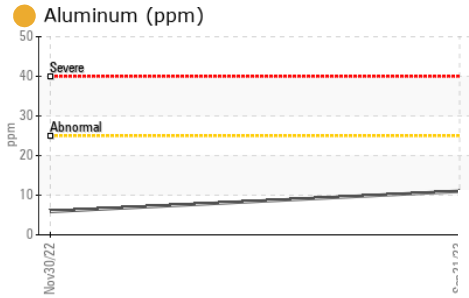
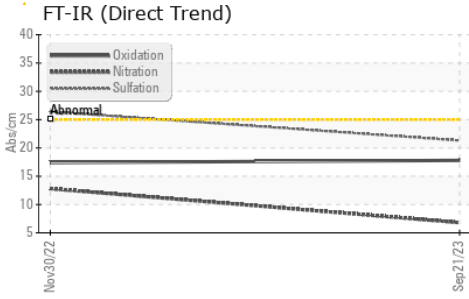
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 47	9	---
Sodium	ppm	ASTM D5185m	23	4	---
Potassium	ppm	ASTM D5185m >20	12	<1	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.9	---
Nitration	Abs/cm	*ASTM D7624 >20	6.8	12.8	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.3	26.4	---

FLUID DEGRADATION

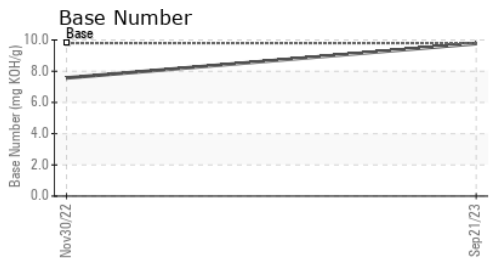
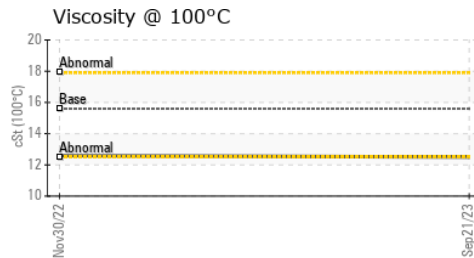
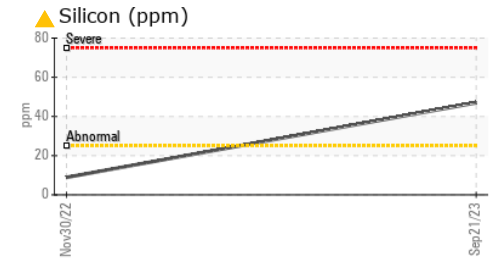
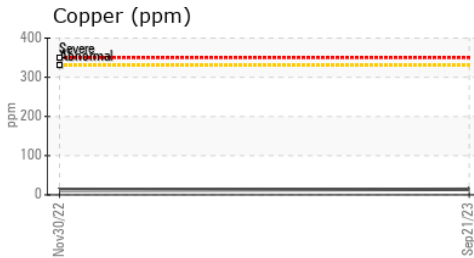
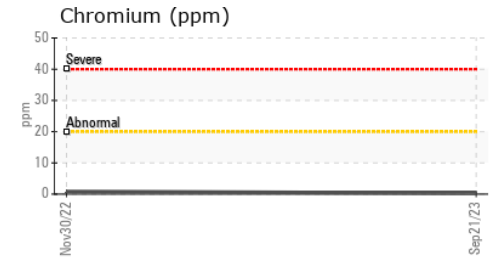
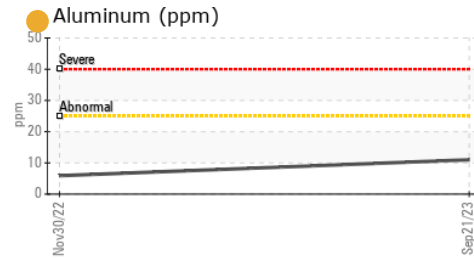
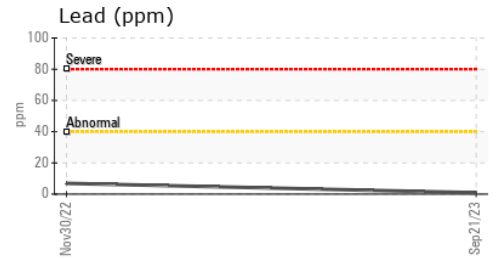
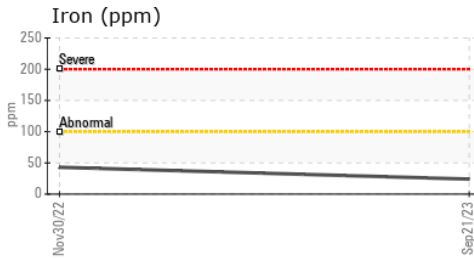
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.8	17.4	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.77	7.57	---



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	12.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0003926 **Received** : 29 Sep 2023
Lab Number : 05965561 **Tested** : 03 Oct 2023
Unique Number : 10672112 **Diagnosed** : 04 Oct 2023 - Jonathan Hester
Test Package : MOB 2

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 COLUMBIA, TN
 US 38401
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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)