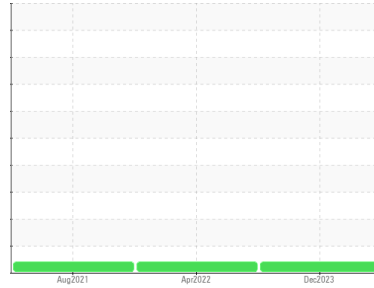




Machine Id
422 (S/N K6K00361)

Component
Diesel Engine

Fluid
PETRO CANADA DURON HP 15W40 (--- LTR)



DIAGNOSIS

▲ Recommendation

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

There is no indication of any contamination in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0044196	PCA0044222	PCA0044208
Sample Date	Client Info		05 Dec 2023	11 Apr 2022	13 Aug 2021
Machine Age	hrs	Client Info	13767	12058	11653
Oil Age	hrs	Client Info	576	405	326
Oil Changed		Client Info	Changed	Changed	Changed
Sample Status			ATTENTION	ATTENTION	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	0.4
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	16	19	9
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	0	<1	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >20	3	8	0
Lead	ppm	ASTM D5185m >40	2	2	2
Copper	ppm	ASTM D5185m >330	0	4	<1
Tin	ppm	ASTM D5185m >15	<1	1	0
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	3	6	9
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	60	60	61
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	933	1058	947
Calcium	ppm	ASTM D5185m	1096	1195	1067
Phosphorus	ppm	ASTM D5185m	1100	1178	1031
Zinc	ppm	ASTM D5185m	1257	1300	1191
Sulfur	ppm	ASTM D5185m	3059	3074	2734

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	17	2
Sodium	ppm	ASTM D5185m	2	5	2
Potassium	ppm	ASTM D5185m >20	0	3	<1

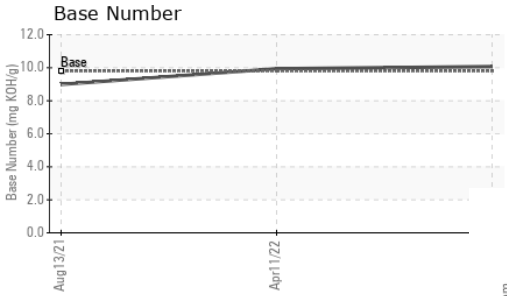
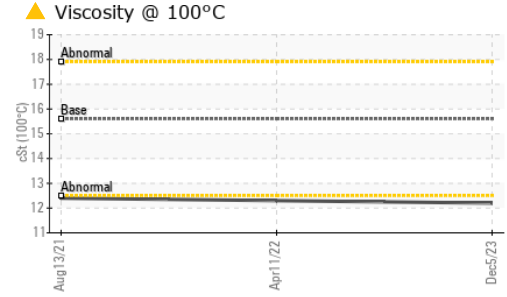
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.4	0.5
Nitration	Abs/cm	*ASTM D7624 >20	8.3	7.2	7.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.2	20.2	20.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.3	15.1	15.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	10.07	9.94	8.99

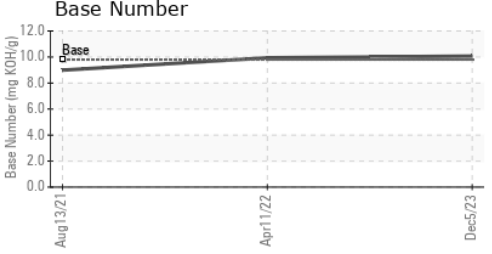
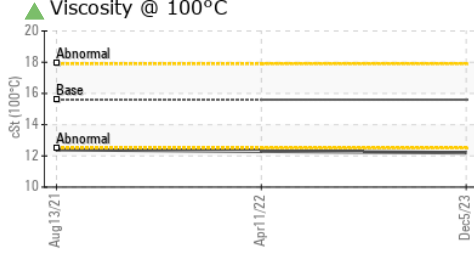
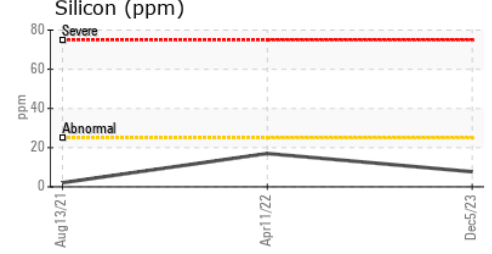
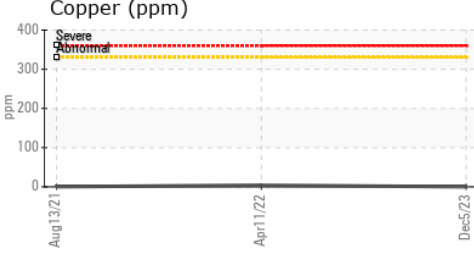
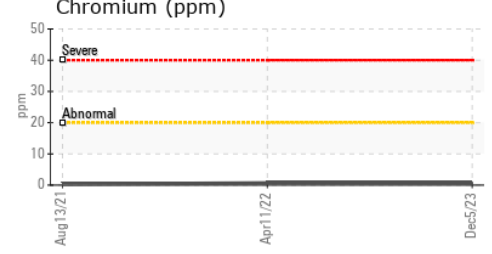
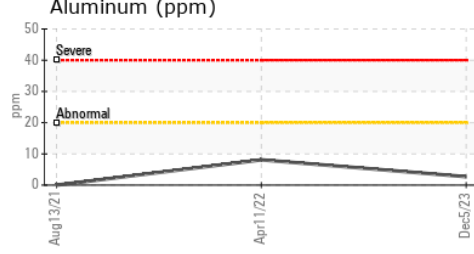
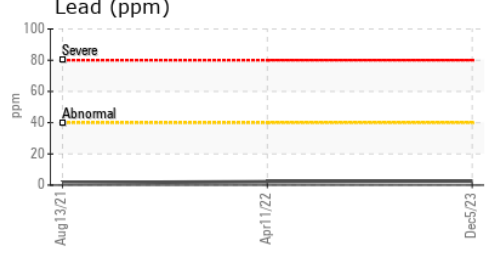
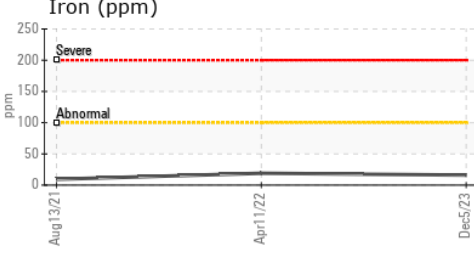
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.6 ▲ 12.2	▲ 12.3	▲ 12.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0044196 **Recieved** : 26 Dec 2023
Lab Number : 06045686 **Diagnosed** : 28 Dec 2023
Unique Number : 10806294 **Diagnostician** : Angela Borella
Test Package : MOB 2

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Certificate L2367
 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)