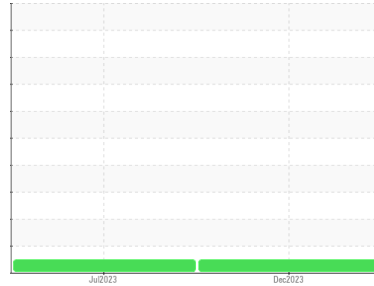


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
MORBARK 317 (S/N 4S8SZ1614DW040793)
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (15 GAL)

DIAGNOSIS

Recommendation

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 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		PCA0112900	PCA0100374	---
Sample Date	Client Info		04 Dec 2023	20 Jul 2023	---
Machine Age	hrs	Client Info	1219	1170	---
Oil Age	hrs	Client Info	49	83	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	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	3	5	---
Chromium	ppm	ASTM D5185m >20	<1	<1	---
Nickel	ppm	ASTM D5185m >4	<1	<1	---
Titanium	ppm	ASTM D5185m	<1	0	---
Silver	ppm	ASTM D5185m >3	0	0	---
Aluminum	ppm	ASTM D5185m >20	2	1	---
Lead	ppm	ASTM D5185m >40	0	<1	---
Copper	ppm	ASTM D5185m >330	<1	<1	---
Tin	ppm	ASTM D5185m >15	0	<1	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	14	10	---
Barium	ppm	ASTM D5185m	0	2	---
Molybdenum	ppm	ASTM D5185m	55	63	---
Manganese	ppm	ASTM D5185m	0	0	---
Magnesium	ppm	ASTM D5185m	848	932	---
Calcium	ppm	ASTM D5185m	941	1104	---
Phosphorus	ppm	ASTM D5185m	956	1042	---
Zinc	ppm	ASTM D5185m	1090	1207	---
Sulfur	ppm	ASTM D5185m	3379	3287	---

CONTAMINANTS

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

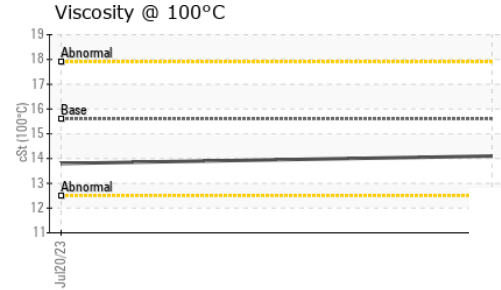
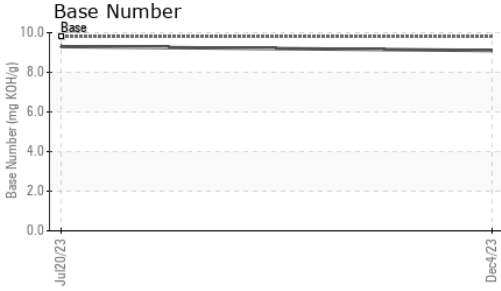
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	4.6	5.0	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.2	17.3	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.7	13.1	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.1	9.3	---

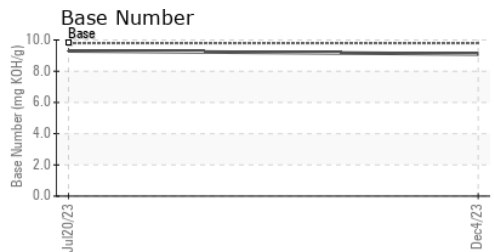
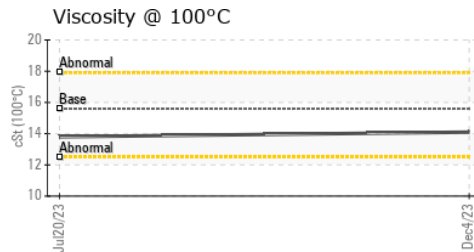
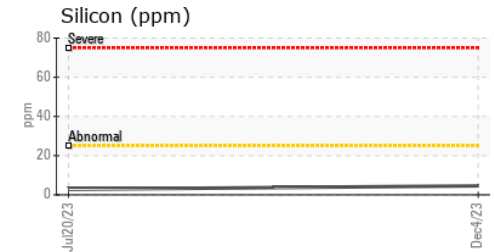
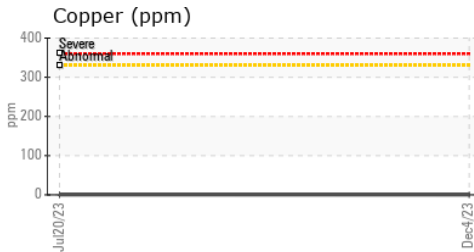
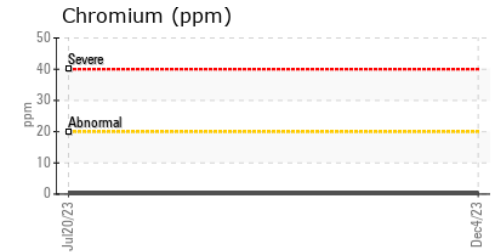
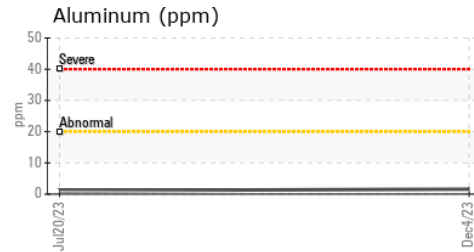
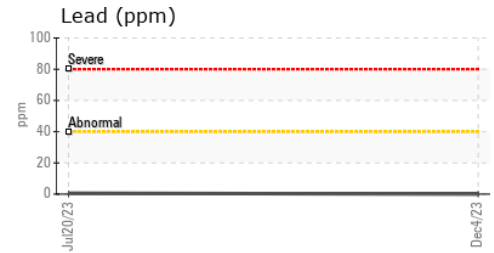
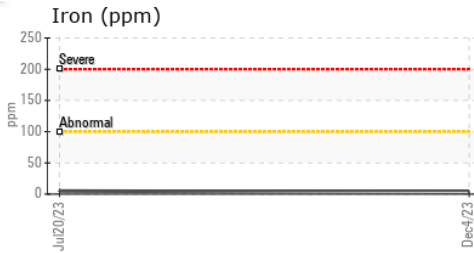
OIL ANALYSIS REPORT



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	14.1	13.8	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0112900 **Recieved** : 19 Dec 2023
Lab Number : **06039067** **Diagnosed** : 20 Dec 2023
Unique Number : 10794296 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

VILLAGE OF NORTH RIVERSIDE
 2345 S DESPLAINES
 NORTH RIVERSIDE, IL
 US 60546
 Contact: Service Manager
 vznrpdw@gmail.com

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)

T:
F: