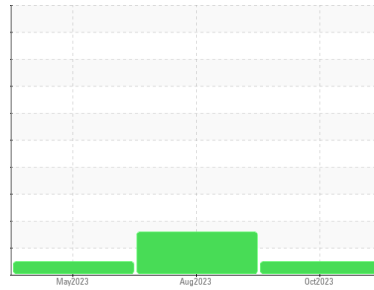




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id INTERNATIONAL DUMP TRUCK 9

Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (--- 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			WC0822236	WC0517495	WC0822418
Sample Date	Client Info			07 Oct 2023	19 Aug 2023	16 May 2023
Machine Age	mls	Client Info		265043	255176	247175
Oil Age	mls	Client Info		9868	8000	9655
Oil Changed	Client Info			N/A	Changed	Changed
Sample Status				NORMAL	ATTENTION	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	6	11	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	<1
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	1	2	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		4	6	9
Barium	ppm	ASTM D5185m		3	0	0
Molybdenum	ppm	ASTM D5185m		59	62	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		890	896	967
Calcium	ppm	ASTM D5185m		1035	1103	1087
Phosphorus	ppm	ASTM D5185m		941	1017	1021
Zinc	ppm	ASTM D5185m		1137	1214	1281
Sulfur	ppm	ASTM D5185m		2763	3118	3634

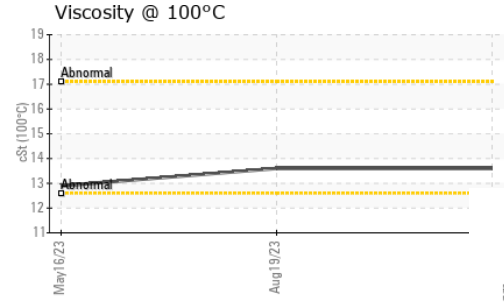
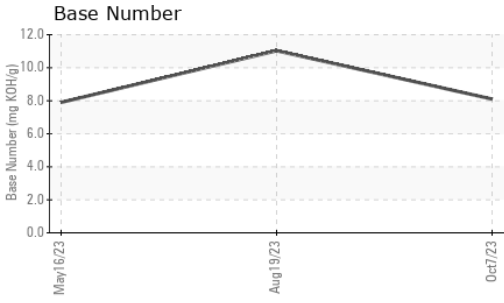
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	3
Sodium	ppm	ASTM D5185m		3	<1	2
Potassium	ppm	ASTM D5185m	>20	2	3	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.1	7.7	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.6	20.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	15.5	17.3
Base Number (BN)	mg KOH/g	ASTM D2896		8.1	11.03	7.9



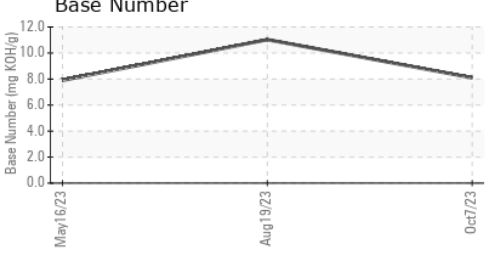
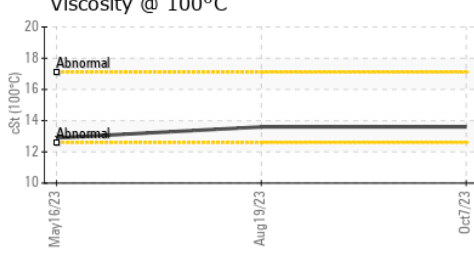
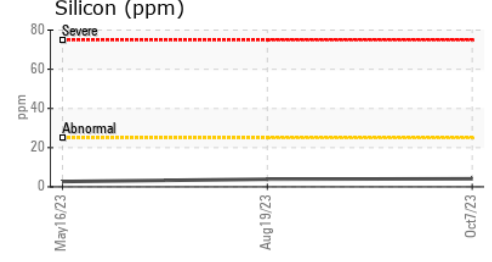
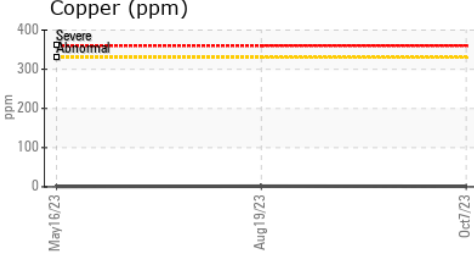
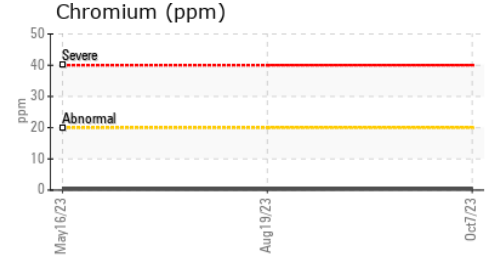
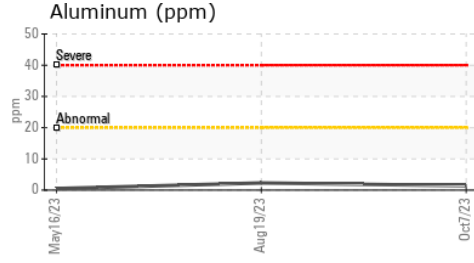
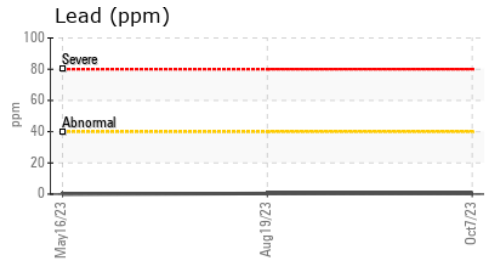
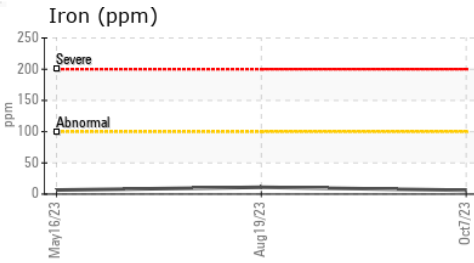
OIL ANALYSIS REPORT



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	13.6	13.6	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0822236 **Received** : 16 Oct 2023
Lab Number : 05980233 **Diagnosed** : 17 Oct 2023
Unique Number : 10697528 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

C.L. BENTON & SONS INC
 706 38TH AVE N
 MYRTLE BEACH, SC
 US 29577
 Contact: NEIL
 neil@clbenton.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)

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