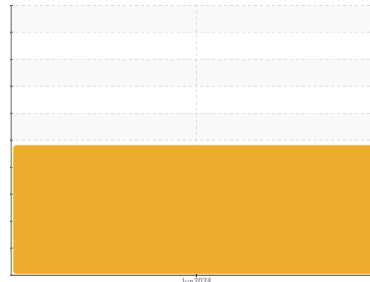




OIL ANALYSIS REPORT

Sample Rating Trend



SOOT



Machine Id
CJ412652 LIMERICK

Component
Diesel Engine

Fluid
{not provided} (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

▲ Wear

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

▲ Contamination

There is a high amount of fuel present in the oil. There is an abnormal amount of solids and carbon present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 15W40 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0554133	---	---
Sample Date	Client Info		25 Jun 2024	---	---
Machine Age	kms	Client Info	275264	---	---
Oil Age	kms	Client Info	0	---	---
Oil Changed	Client Info		Not Chngd	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		3	---	---
Iron	ppm	ASTM D5185(m) >127	▲ 145	---	---
Chromium	ppm	ASTM D5185(m) >3	2	---	---
Nickel	ppm	ASTM D5185(m) >30	2	---	---
Titanium	ppm	ASTM D5185(m) >2	<1	---	---
Silver	ppm	ASTM D5185(m) >2	0	---	---
Aluminum	ppm	ASTM D5185(m) >59	15	---	---
Lead	ppm	ASTM D5185(m) >29	7	---	---
Copper	ppm	ASTM D5185(m) >135	2	---	---
Tin	ppm	ASTM D5185(m) >2	<1	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	51	---	---
Barium	ppm	ASTM D5185(m)	0	---	---
Molybdenum	ppm	ASTM D5185(m)	12	---	---
Manganese	ppm	ASTM D5185(m)	<1	---	---
Magnesium	ppm	ASTM D5185(m)	17	---	---
Calcium	ppm	ASTM D5185(m)	1835	---	---
Phosphorus	ppm	ASTM D5185(m)	745	---	---
Zinc	ppm	ASTM D5185(m)	932	---	---
Sulfur	ppm	ASTM D5185(m)	2228	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >18	9	---	---
Sodium	ppm	ASTM D5185(m)	61	---	---
Potassium	ppm	ASTM D5185(m) >20	10	---	---
Fuel	%	ASTM D7593* >2.0	▲ 11.4	---	---
Glycol	%	ASTM D7922*	0.0	---	---

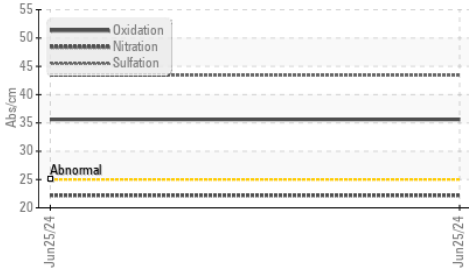
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	▲ 5.6	---	---
Nitration	Abs/cm	ASTM D7624* >20	22.2	---	---
Sulfation	Abs./1mm	ASTM D7415* >30	43.4	---	---

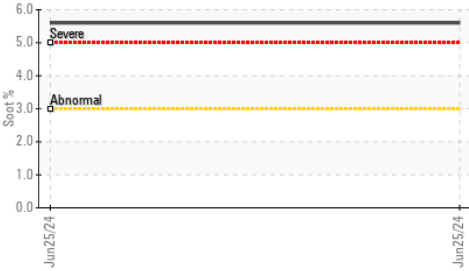


OIL ANALYSIS REPORT

▲ FT-IR (Direct Trend)



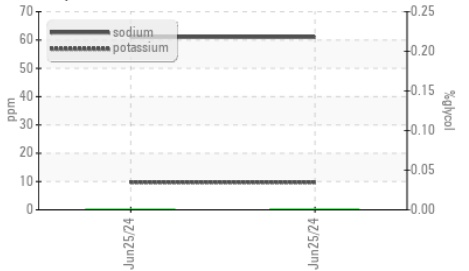
▲ Soot %



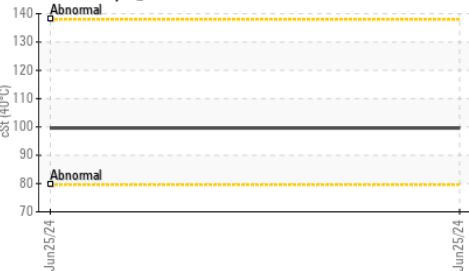
▲ Ferrous Alloys



▲ Glycol Contamination



▲ Viscosity @ 40°C



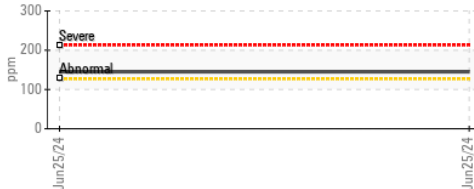
FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	35.6	---	---

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	VLITE	---	---
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	---	---

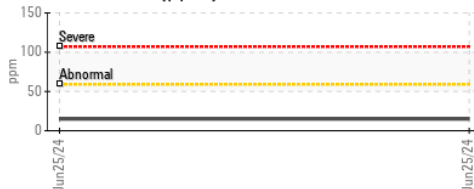
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	150	---	---

GRAPHS

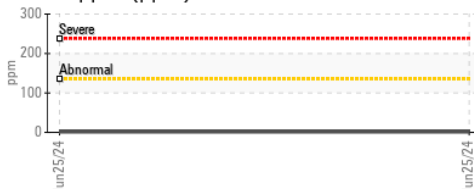
▲ Iron (ppm)



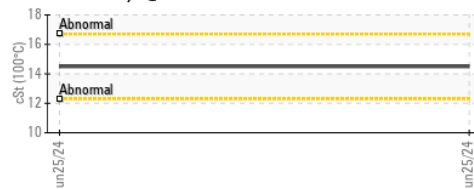
▲ Aluminum (ppm)



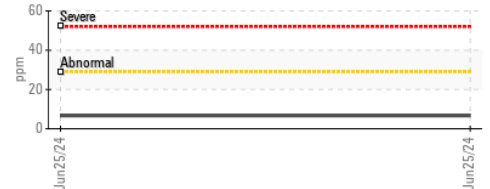
▲ Copper (ppm)



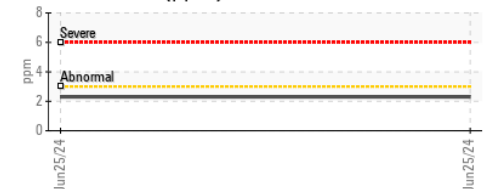
▲ Viscosity @ 100°C



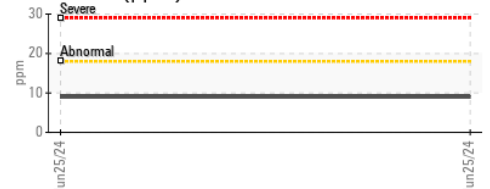
▲ Lead (ppm)



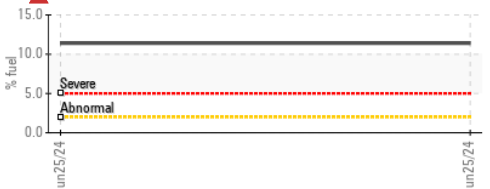
▲ Chromium (ppm)



▲ Silicon (ppm)



▲ Fuel Dilution



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0554133
Lab Number : 02644288
Unique Number : 5801827
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, PQ, VI, Visual)

Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 02 Jul 2024 - Kevin Marson

Rush Truck Centres
 400 Colonnade Dr
 Kemptville, ON
 CA K0G 1J0
 Contact: S. Martel
 smartel@rushtruckcentres.ca
 T: (613)258-3467
 F: (613)258-4927

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.