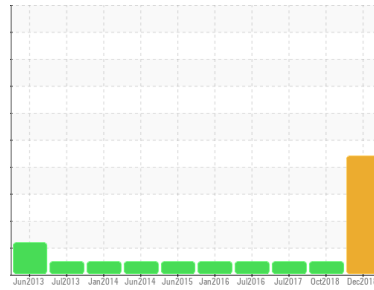


OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
MACK 124
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (36 LTR)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. 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.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN level is low. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number			PC977588	PC977564	PC394507
Sample Date			27 Dec 2018	25 Oct 2018	18 Jul 2017
Machine Age	kms		992771	896190	791557
Oil Age	kms		10071	86510	82743
Oil Changed			Not Changed	Changed	Changed
Sample Status			SEVERE	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Glycol	ASTM D2982		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185	>120	6	48	34
Chromium	ppm ASTM D5185	>20	0	<1	<1
Nickel	ppm ASTM D5185	>5	<1	1	1
Titanium	ppm ASTM D5185	>2	0	0	0
Silver	ppm ASTM D5185	>2	0	0	0
Aluminum	ppm ASTM D5185	>20	1	5	4
Lead	ppm ASTM D5185	>40	<1	3	6
Copper	ppm ASTM D5185	>330	<1	2	3
Tin	ppm ASTM D5185	>15	0	<1	1
Antimony	ppm ASTM D5185		0	0	<1
Vanadium	ppm ASTM D5185		0	0	0
Beryllium	ppm ASTM D5185		0	0	0
Cadmium	ppm ASTM D5185		0	0	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185	2	<1	2	<1
Barium	ppm ASTM D5185	0	0	0	<1
Molybdenum	ppm ASTM D5185	50	33	59	52
Manganese	ppm ASTM D5185	0	<1	<1	<1
Magnesium	ppm ASTM D5185	950	508	905	856
Calcium	ppm ASTM D5185	1050	546	1083	1239
Phosphorus	ppm ASTM D5185	995	546	946	973
Zinc	ppm ASTM D5185	1180	632	1184	1260
Sulfur	ppm ASTM D5185	2600	1416	2145	2334
Lithium	ppm ASTM D5185		0	0	<1

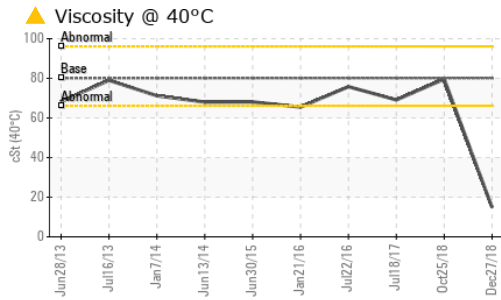
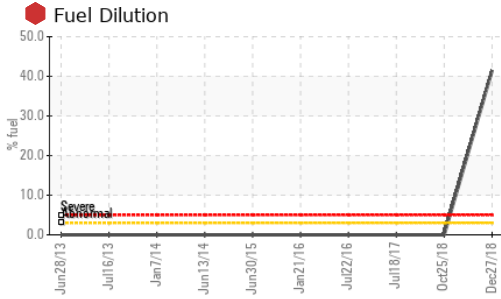
CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185	>25	4	6	6
Sodium	ppm ASTM D5185		1	6	6
Potassium	ppm ASTM D5185	>20	<1	2	1
Fuel	% ASTM D3524	>3.0	41.5	<1.0	<1.0

INFRA-RED

	method	limit/base	current	history 1	history 2
Soot %	% ASTM D7686	>4	0	0.4	0.2
Nitration	Abs/cm ASTM D7624	>20	7.2	14.0	12.7
Sulfation	Abs/.1mm ASTM D7415	>30	16.4	29.2	30.3

OIL ANALYSIS REPORT

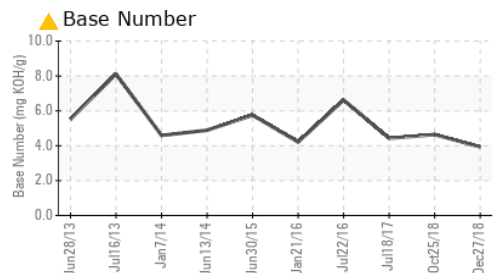
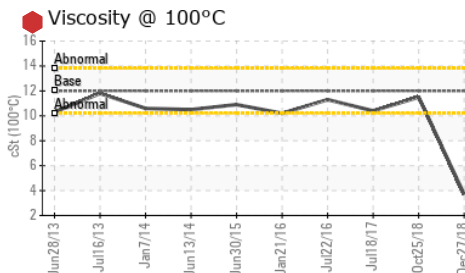
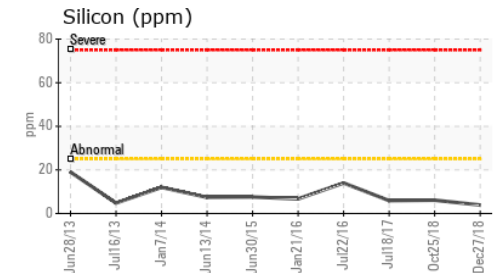
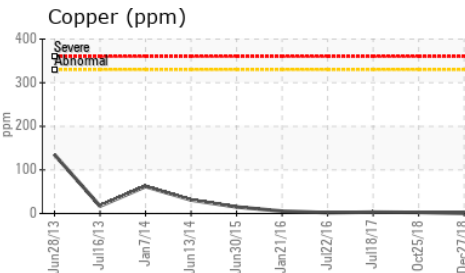
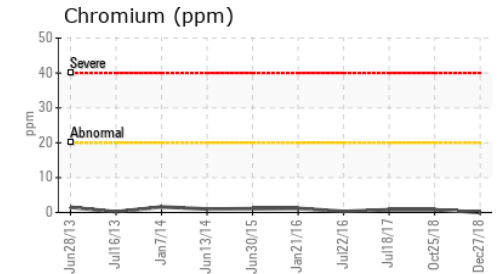
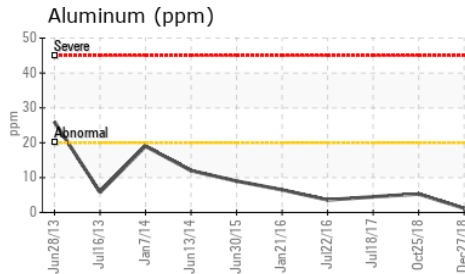
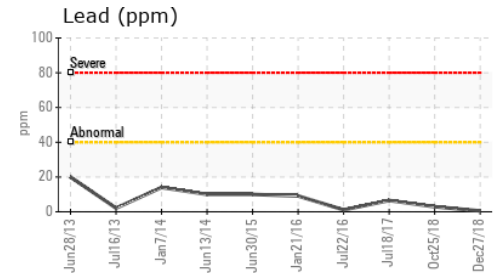
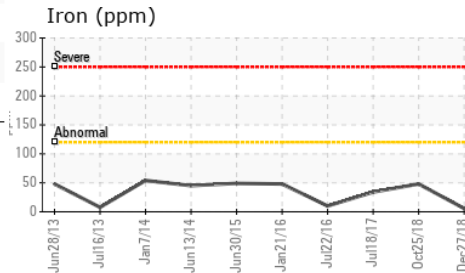


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs./1mm	ASTM D7414	>25	12.7	30.4	25.6
Base Number (BN)	mg KOH/g	ASTM D2896		▲ 3.93	4.64	4.43

VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279	80.1	▲ 14.9	79.6	69.1
Visc @ 100°C	cSt	ASTM D7279	12.00	● 3.7	11.5	10.4
Viscosity Index (VI)	Scale	ASTM D2270	144	139	136	136

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 28 Dec 2018
Lab Number : **01234567** **Diagnosed** : 02 Jan 2019
Unique Number : 12345678 **Diagnostician** : Bill Quesnel
Test Package : MOB 2 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

Cusany Logistics Inc.
 1212 Industrial Place
 Centerville, OH
 USA 75900
 Contact: Jim Leduc
 jim.leduc@cusanylogisticsinc.com
 T: (305)555-1212
 F: (305)555-1222

To discuss diagnosis or test data, contact Technical Support at 1-800-268-2131.
 To change component or sample information, contact Customer Service at 1-800-268-2131.