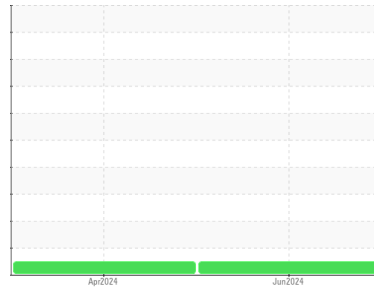




OIL ANALYSIS REPORT

Machine Id
MACK 20139
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

Sample Rating Trend



NORMAL



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		SBP0007381	SBP0007389	---
Sample Date	Client Info		12 Jun 2024	17 Apr 2024	---
Machine Age	hrs	Client Info	8664	8214	---
Oil Age	hrs	Client Info	450	514	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	7	10	---
Chromium	ppm	ASTM D5185m	>5	<1	<1	---
Nickel	ppm	ASTM D5185m	>4	0	<1	---
Titanium	ppm	ASTM D5185m	>5	0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>25	2	2	---
Lead	ppm	ASTM D5185m	>40	0	<1	---
Copper	ppm	ASTM D5185m	>150	0	<1	---
Tin	ppm	ASTM D5185m	>4	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	<1	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	50	11	9	---
Barium	ppm	ASTM D5185m	5	0	0	---
Molybdenum	ppm	ASTM D5185m	50	47	56	---
Manganese	ppm	ASTM D5185m	0	0	<1	---
Magnesium	ppm	ASTM D5185m	560	557	529	---
Calcium	ppm	ASTM D5185m	1510	1629	1674	---
Phosphorus	ppm	ASTM D5185m	780	740	737	---
Zinc	ppm	ASTM D5185m	870	957	982	---
Sulfur	ppm	ASTM D5185m	2040	2767	2587	---

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	4	5	---
Sodium	ppm	ASTM D5185m		3	2	---
Potassium	ppm	ASTM D5185m	>20	<1	2	---

INFRA-RED

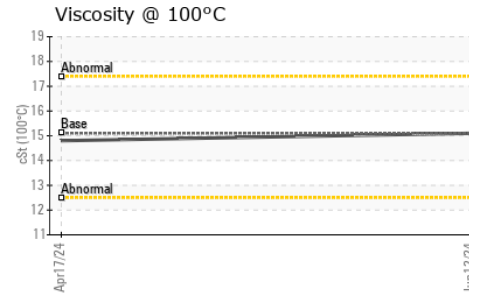
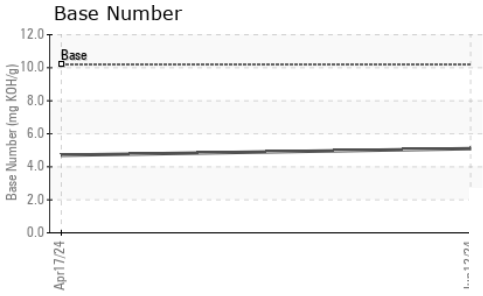
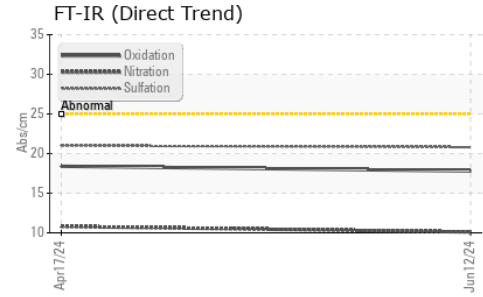
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0	0	---
Nitration	Abs/cm	*ASTM D7624	>20	10.1	10.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	21.0	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	18.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	5.1	4.7	---



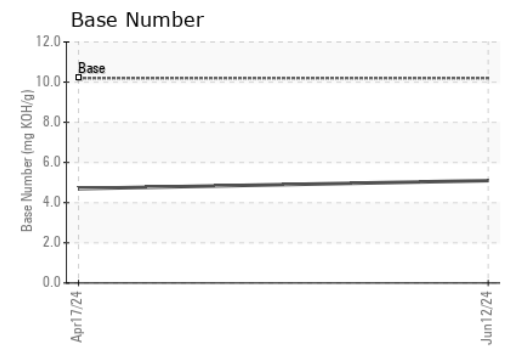
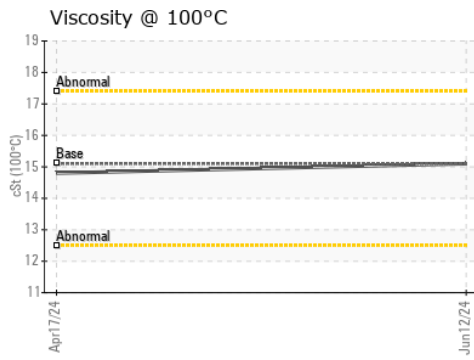
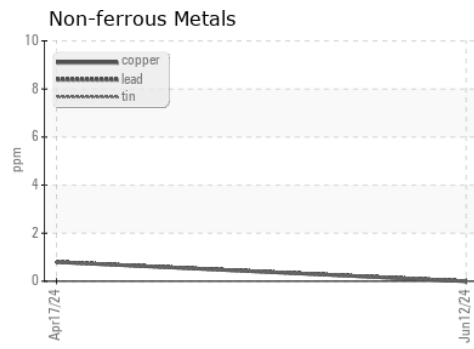
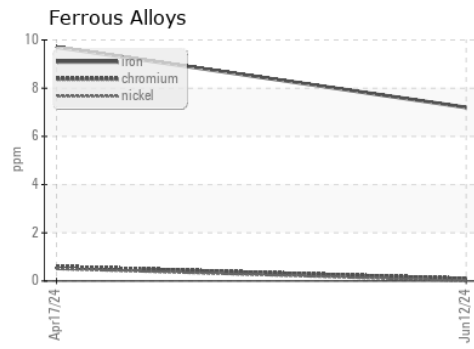
OIL ANALYSIS REPORT



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	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.8	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0007381 **Received** : 17 Jun 2024
Lab Number : **06211265** **Tested** : 18 Jun 2024
Unique Number : 11084129 **Diagnosed** : 18 Jun 2024 - Wes Davis
Test Package : FLEET

FCC ENVIRONMENTAL SERVICES NEBRASKA LLC
 59902 N 16TH ST
 OMAHA, NE
 US 68110
 Contact: TROY BEAN
 troy.bean@fccenvironmental.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)