



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
MACK 2419
Component
Diesel Engine

Fluid
CERTIFIED SPECTRA XTREME 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0107634	---	---
Sample Date		Client Info		17 Apr 2024	---	---
Machine Age	mls	Client Info		19640	---	---
Oil Age	mls	Client Info		19640	---	---
Filter Age	mls	Client Info		19640	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

Metal levels are typical for a components first oil change.

Iron	ppm	ASTM D5185m	>120	41	---	---
Chromium	ppm	ASTM D5185m	>20	1	---	---
Nickel	ppm	ASTM D5185m	>5	2	---	---
Titanium	ppm	ASTM D5185m	>2	<1	---	---
Silver	ppm	ASTM D5185m	>2	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	29	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	59	---	---
Tin	ppm	ASTM D5185m	>15	4	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

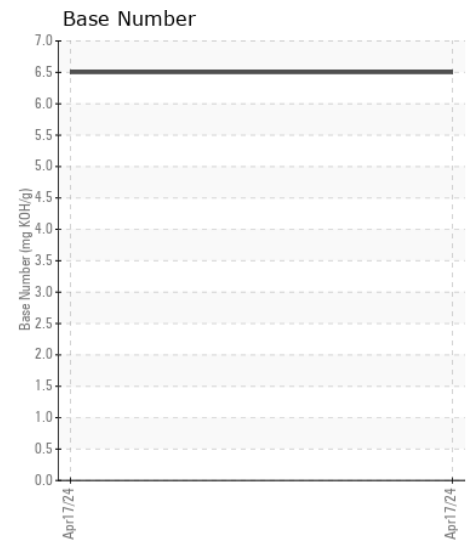
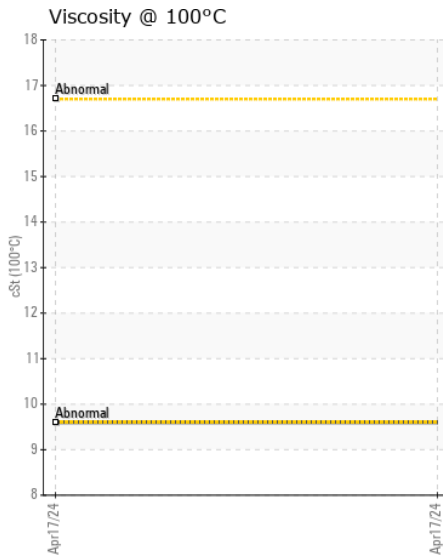
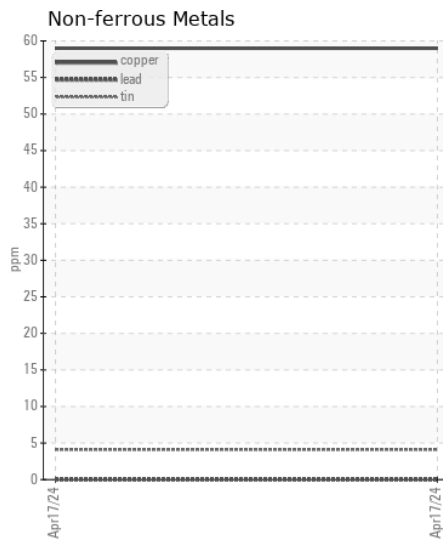
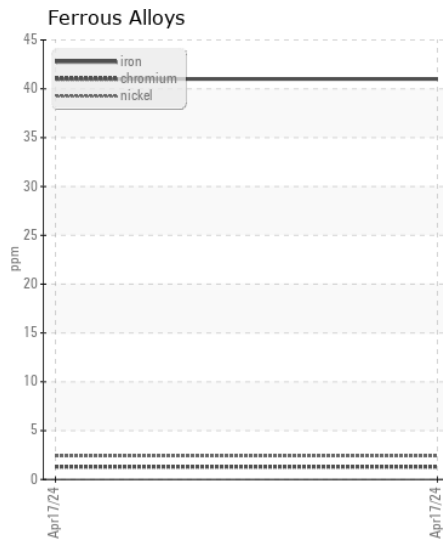
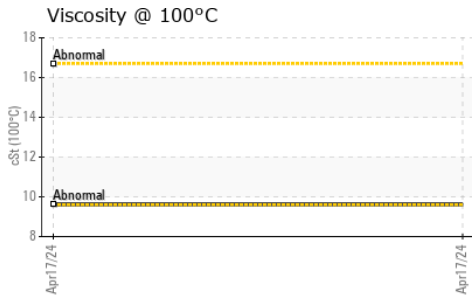
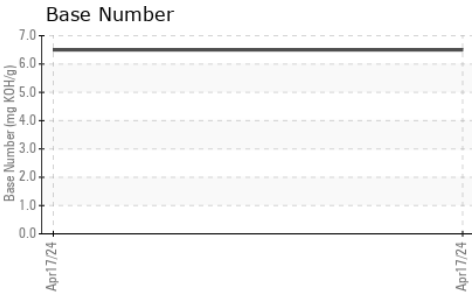
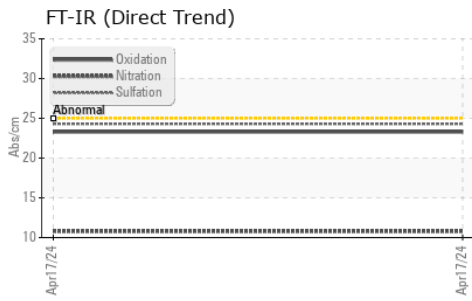
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	64	---	---
Potassium	ppm	ASTM D5185m	>20	69	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>4	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.3	---	---
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	---	---

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.

Sodium	ppm	ASTM D5185m		3	---	---
Boron	ppm	ASTM D5185m		116	---	---
Barium	ppm	ASTM D5185m		<1	---	---
Molybdenum	ppm	ASTM D5185m		138	---	---
Manganese	ppm	ASTM D5185m		6	---	---
Magnesium	ppm	ASTM D5185m		764	---	---
Calcium	ppm	ASTM D5185m		1532	---	---
Phosphorus	ppm	ASTM D5185m		728	---	---
Zinc	ppm	ASTM D5185m		829	---	---
Sulfur	ppm	ASTM D5185m		2507	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.5	---	---
Visc @ 100°C	cSt	ASTM D445		9.6	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0107634
Lab Number : 06160175
Unique Number : 10995598
Test Package : FLEET

Received : 25 Apr 2024
Tested : 26 Apr 2024
Diagnosed : 26 Apr 2024 - Wes Davis

Z FORCE TRANSPORTATION INC
 700 E JOE ORR RD
 CHICAGO HEIGHTS, IL
 US 60411
 Contact: MIKE PROCANIN
 mprocanin@zforcetransportation.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)