



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2304
 Component
Diesel Engine
 Fluid
ROYAL PURPLE MOTOR OIL 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0719989	WC0720160	---
Sample Date		Client Info		08 Apr 2024	23 Oct 2023	---
Machine Age	mls	Client Info		171138	127261	---
Oil Age	mls	Client Info		50000	100000	---
Filter Age	mls	Client Info		50000	50000	---
Oil Changed		Client Info		Not Changd	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	72	▲ 138	---
Chromium	ppm	ASTM D5185m	>20	4	6	---
Nickel	ppm	ASTM D5185m	>4	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	63	77	---
Lead	ppm	ASTM D5185m	>40	0	2	---
Copper	ppm	ASTM D5185m	>330	82	248	---
Tin	ppm	ASTM D5185m	>15	2	3	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

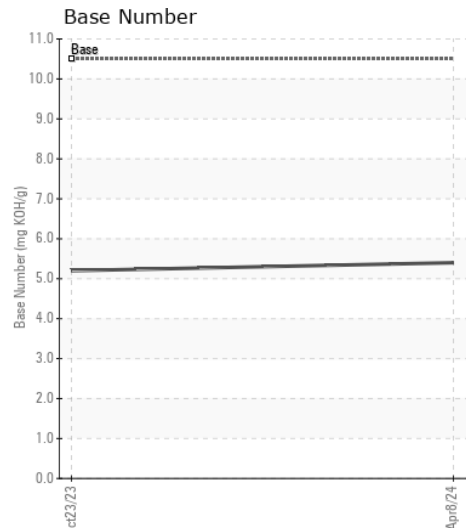
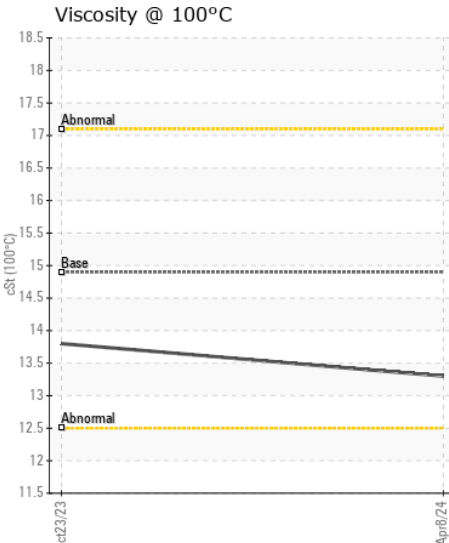
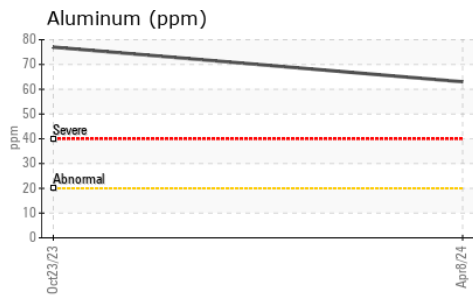
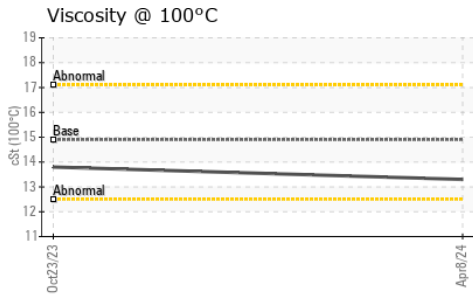
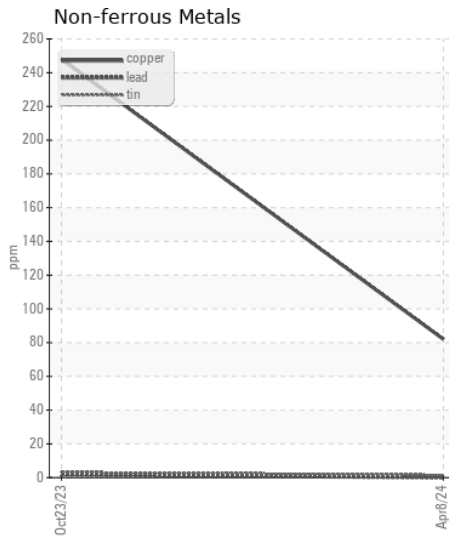
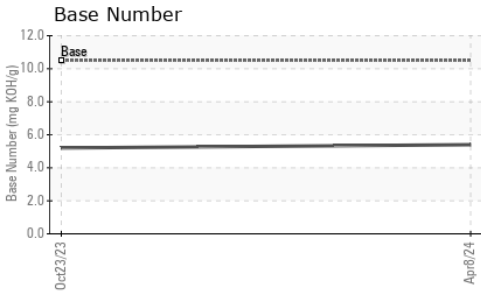
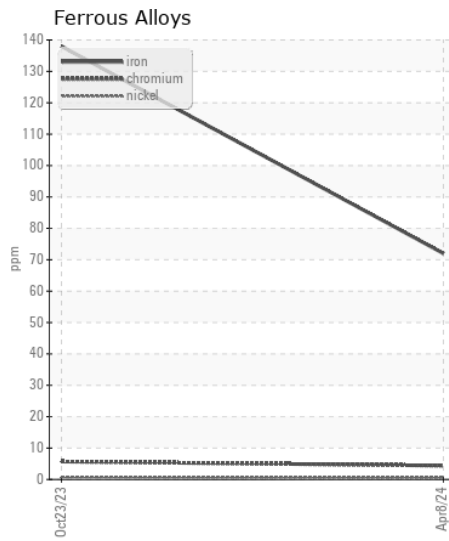
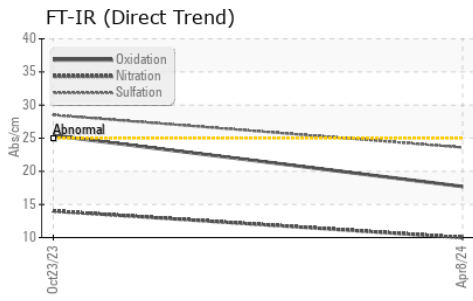
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	11	---
Potassium	ppm	ASTM D5185m	>20	180	213	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	1	1.7	---
Nitration	Abs/cm	*ASTM D7624	>20	10.0	14.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	28.5	---
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	---

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	4	---
Boron	ppm	ASTM D5185m	0	0	<1	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	100	3	5	---
Manganese	ppm	ASTM D5185m		1	3	---
Magnesium	ppm	ASTM D5185m	60	36	71	---
Calcium	ppm	ASTM D5185m	3050	2530	2252	---
Phosphorus	ppm	ASTM D5185m	1050	929	822	---
Zinc	ppm	ASTM D5185m	1200	1123	997	---
Sulfur	ppm	ASTM D5185m	12500	3041	2330	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	25.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	5.4	5.2	---
Visc @ 100°C	cSt	ASTM D445	14.9	13.3	13.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0719989 **Received** : 09 May 2024
Lab Number : 06174823 **Tested** : 10 May 2024
Unique Number : 11020876 **Diagnosed** : 10 May 2024 - Wes Davis
Test Package : FLEET

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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)