



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
2329
Component
Diesel Engine
Fluid
ROYAL PURPLE MOTOR OIL 15W40 (--- QTS)

RECOMMENDATION

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0720151	WC0719709	---
Sample Date		Client Info		22 Dec 2023	24 Apr 2023	---
Machine Age	mls	Client Info		242759	90595	---
Oil Age	mls	Client Info		100000	50000	---
Filter Age	mls	Client Info		50000	50000	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

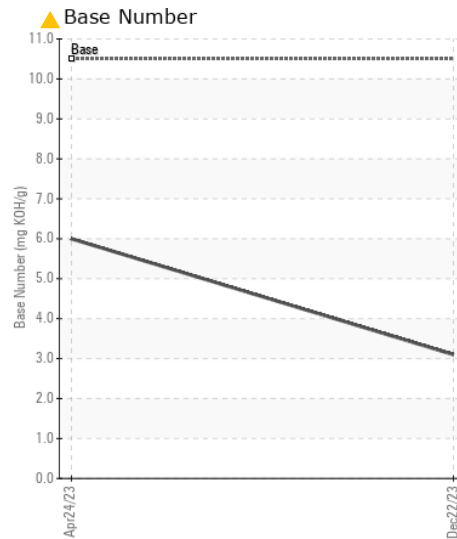
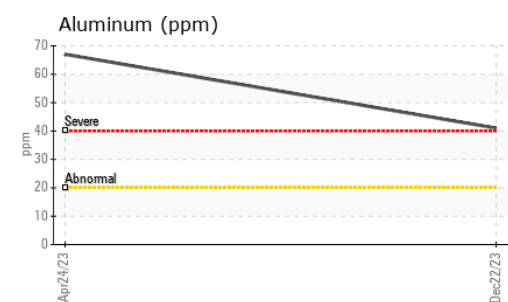
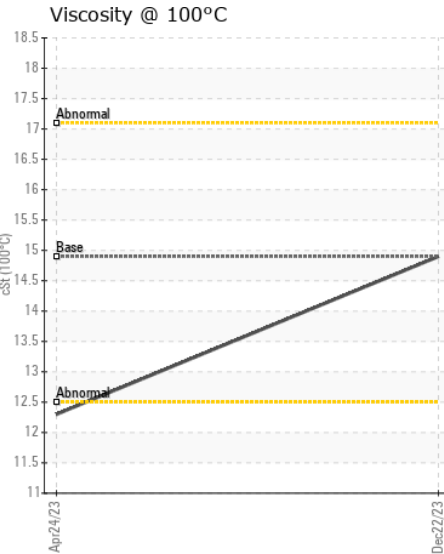
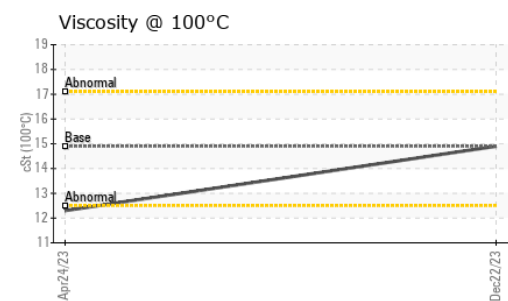
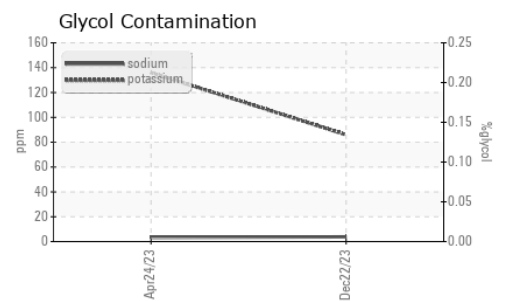
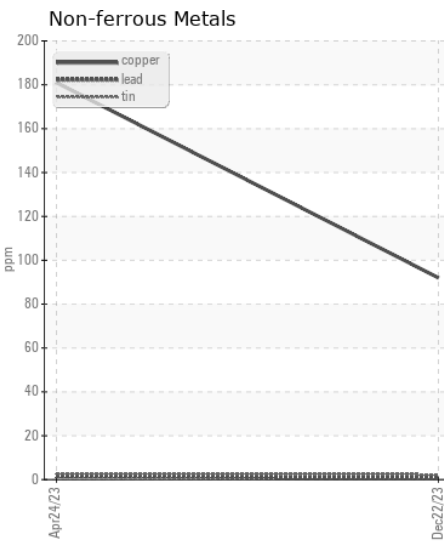
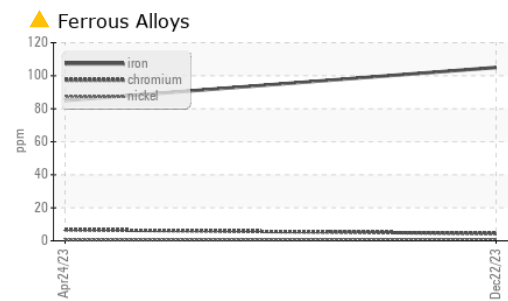
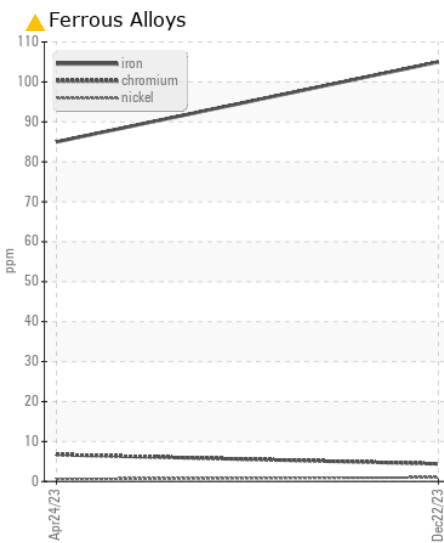
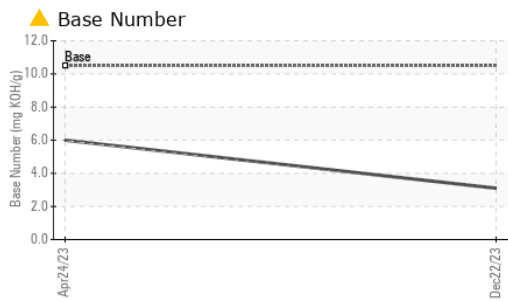
Iron	ppm	ASTM D5185m	>100	▲ 105	85	---
Chromium	ppm	ASTM D5185m	>20	4	7	---
Nickel	ppm	ASTM D5185m	>4	1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	41	67	---
Lead	ppm	ASTM D5185m	>40	<1	1	---
Copper	ppm	ASTM D5185m	>330	92	181	---
Tin	ppm	ASTM D5185m	>15	2	3	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

Silicon	ppm	ASTM D5185m	>25	14	6	---
Potassium	ppm	ASTM D5185m	>20	86	136	---
Fuel		WC Method	>5	<1.0	0.3	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	2.9	1.2	---
Nitration	Abs/cm	*ASTM D7624	>20	16.7	12.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	33.8	24.5	---
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

Sodium	ppm	ASTM D5185m		4	3	---
Boron	ppm	ASTM D5185m	0	0	2	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	100	11	54	---
Manganese	ppm	ASTM D5185m		2	3	---
Magnesium	ppm	ASTM D5185m	60	205	848	---
Calcium	ppm	ASTM D5185m	3050	2505	1508	---
Phosphorus	ppm	ASTM D5185m	1050	1017	931	---
Zinc	ppm	ASTM D5185m	1200	1325	1203	---
Sulfur	ppm	ASTM D5185m	12500	3096	2285	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	31.4	24.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	▲ 3.1	6.0	---
Visc @ 100°C	cSt	ASTM D445	14.9	14.9	12.3	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0720151 **Received** : 08 Jan 2024
Lab Number : 06054715 **Diagnosed** : 10 Jan 2024
Unique Number : 10820664 **Diagnostician** : Sean Felton
Test Package : FLEET

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Certificate L2367
 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)