



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**2323**  
 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		<b>WC0719904</b>	WC0719910	WC0537325
Sample Date		Client Info		<b>03 Dec 2023</b>	04 Aug 2023	23 Mar 2023
Machine Age	mls	Client Info		<b>0</b>	116935	72206
Oil Age	mls	Client Info		<b>50000</b>	100000	50000
Filter Age	mls	Client Info		<b>0</b>	50000	25000
Oil Changed		Client Info		<b>N/A</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>41</b>	82	53
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	4	3
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>14</b>	38	28
Lead	ppm	ASTM D5185m	>40	<b>1</b>	2	<1
Copper	ppm	ASTM D5185m	>330	<b>71</b>	135	119
Tin	ppm	ASTM D5185m	>15	<b>3</b>	4	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

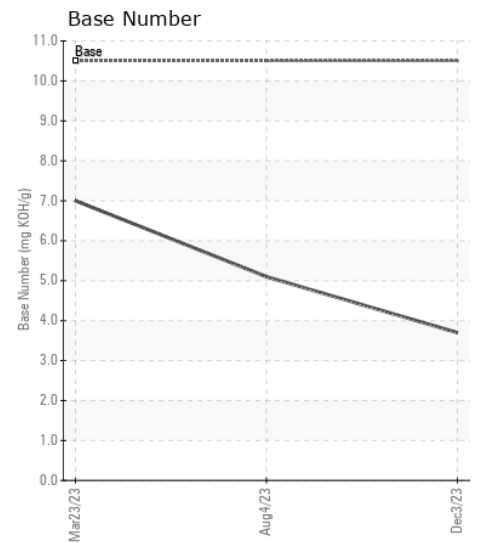
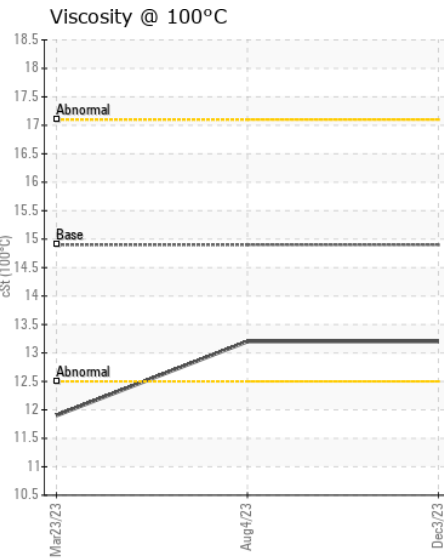
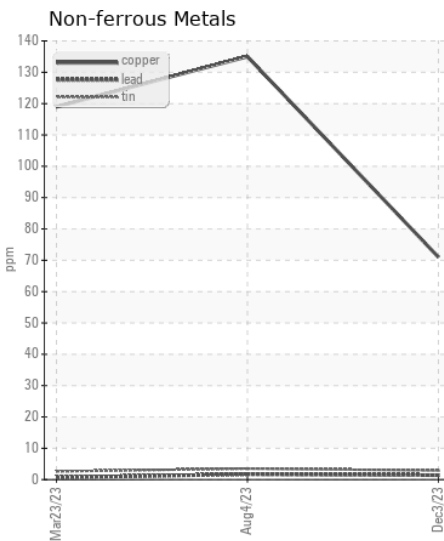
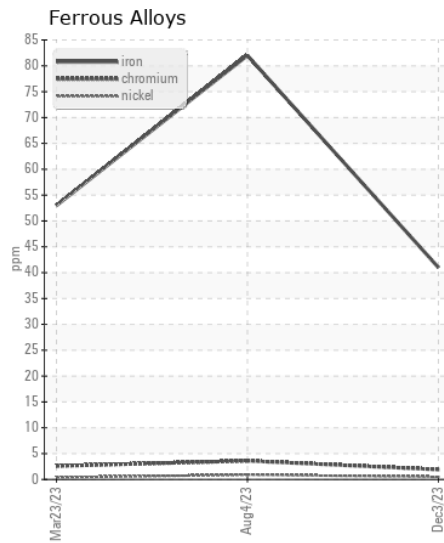
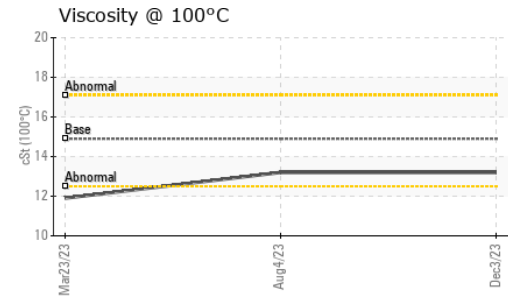
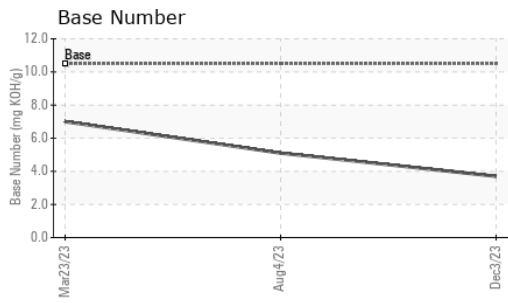
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	9	7
Potassium	ppm	ASTM D5185m	>20	<b>27</b>	86	74
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	0.3
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	1.4	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	15.6	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.9</b>	26.1	22.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>3</b>	3	3
Boron	ppm	ASTM D5185m	0	<b>2</b>	<1	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>17</b>	63	62
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	2
Magnesium	ppm	ASTM D5185m	60	<b>215</b>	1010	962
Calcium	ppm	ASTM D5185m	3050	<b>2130</b>	1426	1333
Phosphorus	ppm	ASTM D5185m	1050	<b>870</b>	984	925
Zinc	ppm	ASTM D5185m	1200	<b>1134</b>	1314	1209
Sulfur	ppm	ASTM D5185m	12500	<b>2726</b>	2183	2244
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.8</b>	29.6	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>3.7</b>	5.1	7.0
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.2</b>	13.2	11.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0719904 **Received** : 16 Jan 2024  
**Lab Number** : 06061851 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10833233 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**DILLON TRANSPORTATION**  
 4445 NORTH INTERSTATE WAY  
 KINGMAN, AZ  
 US 86401  
 Contact: T LAMOREAUX  
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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)

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F: