



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**2305**  
 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>WC0720100</b>	WC0720150	WC0720144
Sample Date		Client Info		<b>17 Jun 2024</b>	28 Dec 2023	25 Aug 2023
Machine Age	mls	Client Info		<b>477109</b>	426428	372490
Oil Age	mls	Client Info		<b>50000</b>	100000	50000
Filter Age	mls	Client Info		<b>50000</b>	50000	50000
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>35</b>	84	42
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	18	18
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>27</b>	15	54
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

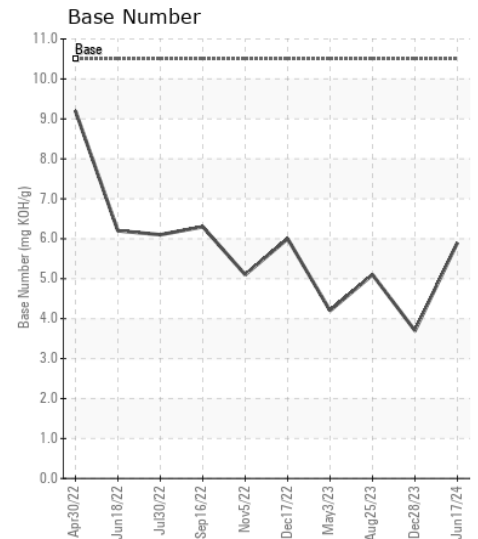
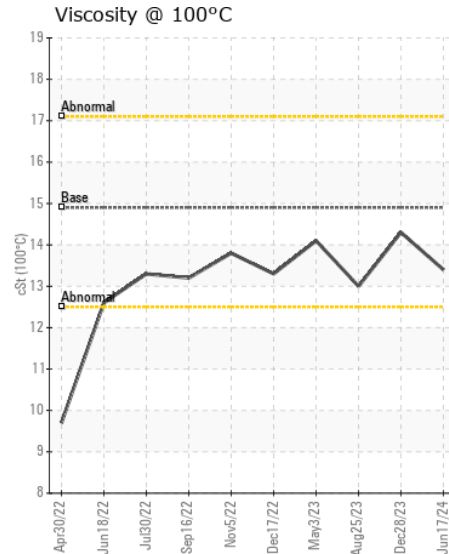
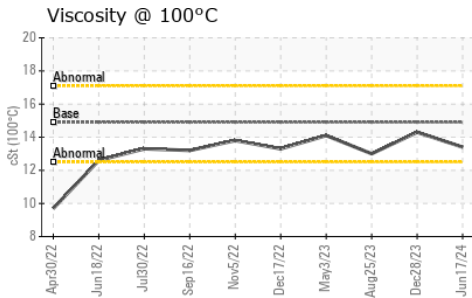
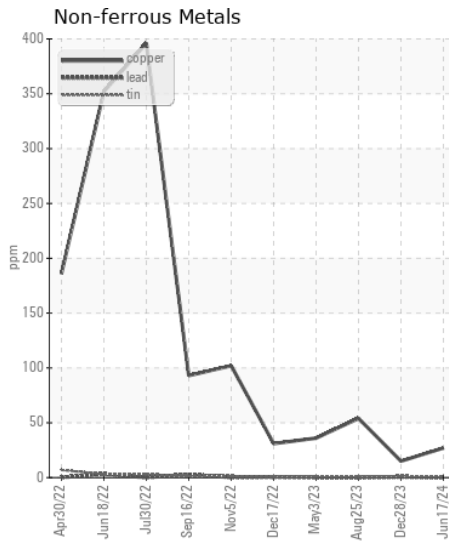
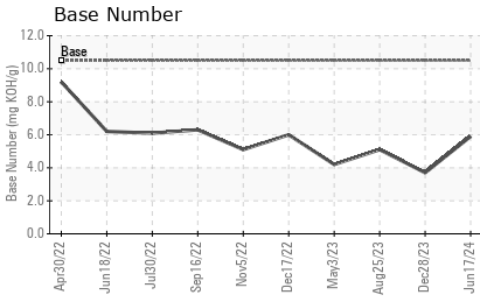
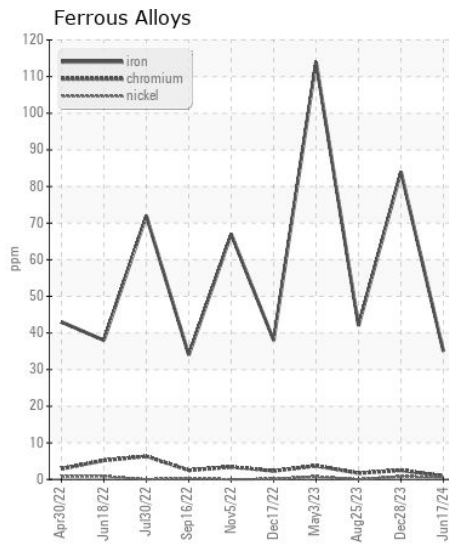
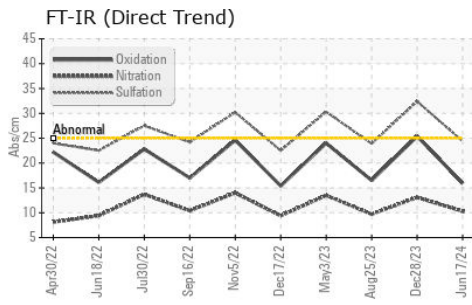
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	14	8
Potassium	ppm	ASTM D5185m	>20	<b>20</b>	40	34
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.3</b>	2.1	1.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.3</b>	13.1	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.4</b>	32.4	23.9
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>6</b>	4	3
Boron	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>3</b>	5	6
Manganese	ppm	ASTM D5185m		<b>1</b>	1	1
Magnesium	ppm	ASTM D5185m	60	<b>57</b>	118	116
Calcium	ppm	ASTM D5185m	3050	<b>2518</b>	2577	2386
Phosphorus	ppm	ASTM D5185m	1050	<b>995</b>	1060	895
Zinc	ppm	ASTM D5185m	1200	<b>1143</b>	1304	1109
Sulfur	ppm	ASTM D5185m	12500	<b>3821</b>	3538	3603
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	25.4	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>5.9</b>	▲ 3.7	5.1
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.4</b>	14.3	13.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0720100  
**Lab Number** : 06213288  
**Unique Number** : 11086152  
**Test Package** : FLEET

**Received** : 18 Jun 2024  
**Tested** : 19 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Wes Davis

**DILLON TRANSPORTATION**  
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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)