



# OIL ANALYSIS REPORT

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

Machine Id  
**2302**  
 Component  
**Diesel Engine**  
 Fluid  
**ROYAL PURPLE MOTOR OIL 15W40 (--- QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0719852</b>	WC0719874	WC0719934
Sample Date		Client Info		<b>12 Mar 2024</b>	03 Sep 2023	13 May 2023
Machine Age	mls	Client Info		<b>426537</b>	327876	279973
Oil Age	mls	Client Info		<b>100000</b>	50000	50000
Filter Age	mls	Client Info		<b>50000</b>	50000	50000
Oil Changed		Client Info		<b>Changed</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>72</b>	60	39
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>15</b>	15	16
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>12</b>	26	28
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

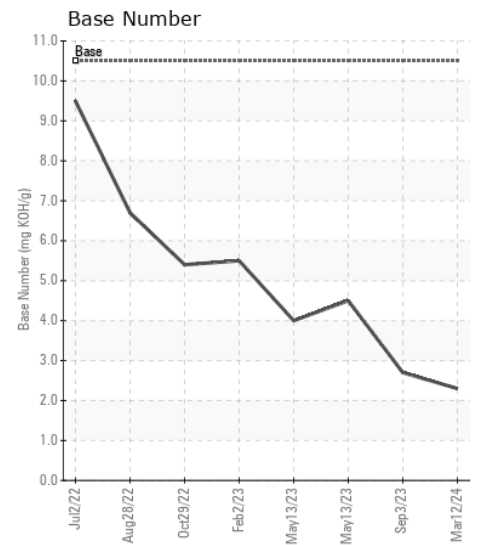
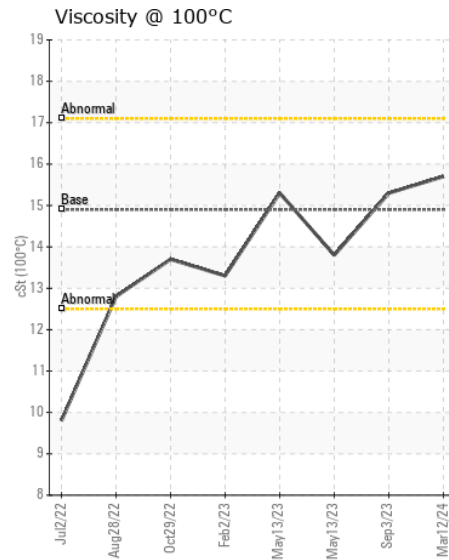
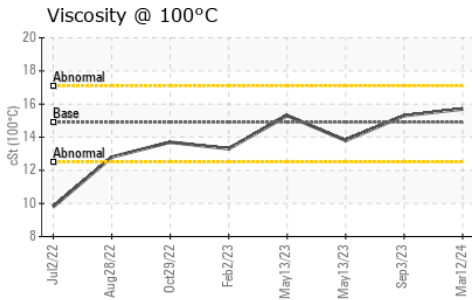
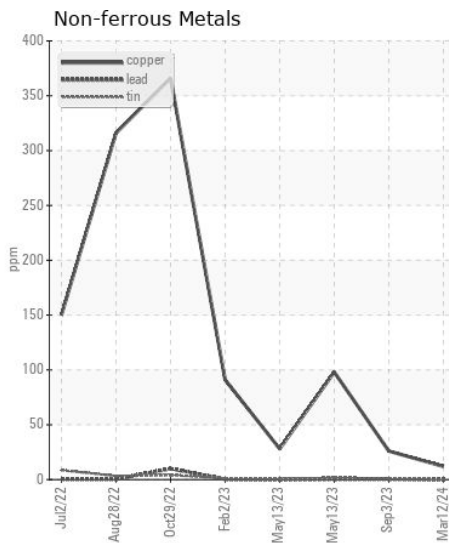
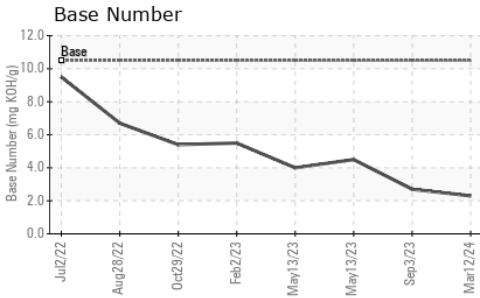
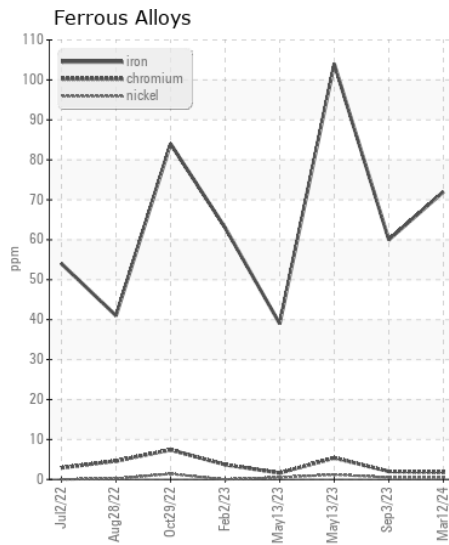
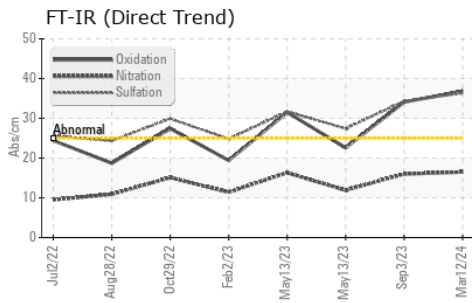
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>16</b>	9	7
Potassium	ppm	ASTM D5185m	>20	<b>27</b>	36	33
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>1.6</b>	1.5	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>16.5</b>	16.0	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>36.3</b>	34.3	27.4
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>5</b>	3	3
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>&lt;1</b>	<1	3
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	60	<b>14</b>	21	48
Calcium	ppm	ASTM D5185m	3050	<b>2617</b>	2747	2728
Phosphorus	ppm	ASTM D5185m	1050	<b>896</b>	988	978
Zinc	ppm	ASTM D5185m	1200	<b>1045</b>	1320	1211
Sulfur	ppm	ASTM D5185m	12500	<b>3315</b>	3387	3811
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>36.8</b>	34.1	22.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>2.3</b>	2.7	4.5
Visc @ 100°C	cSt	ASTM D445	14.9	<b>15.7</b>	15.3	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0719852  
**Lab Number** : 06149461  
**Unique Number** : 10979539  
**Test Package** : FLEET

**DILLON TRANSPORTATION**  
 4445 NORTH INTERSTATE WAY  
 KINGMAN, AZ  
 US 86401  
 Contact: T LAMOREAUX  
 t.lamoreaux@dillontransportation.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)

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F: