



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2314
 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		WC0719879	WC0719872	WC0537328
Sample Date		Client Info		28 Mar 2024	30 Sep 2023	26 Mar 2023
Machine Age	mls	Client Info		251636	198734	127628
Oil Age	mls	Client Info		100000	50000	100000
Filter Age	mls	Client Info		50000	50000	50000
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	89	36	▲ 104
Chromium	ppm	ASTM D5185m	>20	2	1	5
Nickel	ppm	ASTM D5185m	>4	<1	<1	1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	12	6	32
Lead	ppm	ASTM D5185m	>40	0	0	3
Copper	ppm	ASTM D5185m	>330	48	44	309
Tin	ppm	ASTM D5185m	>15	0	<1	5
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

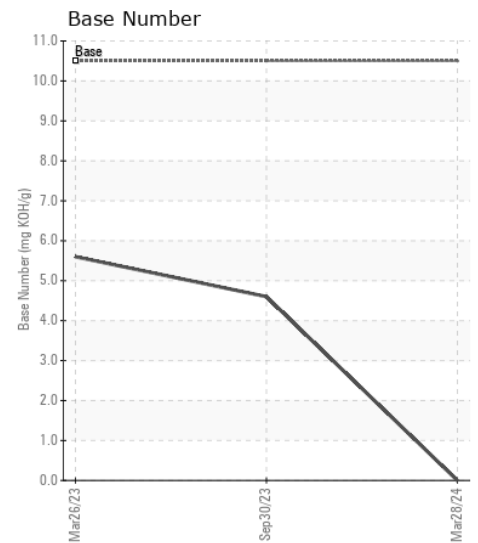
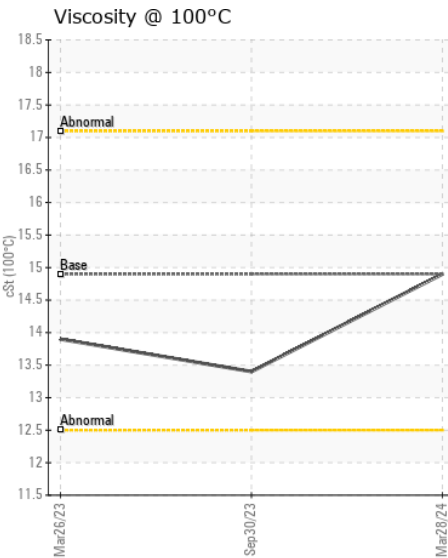
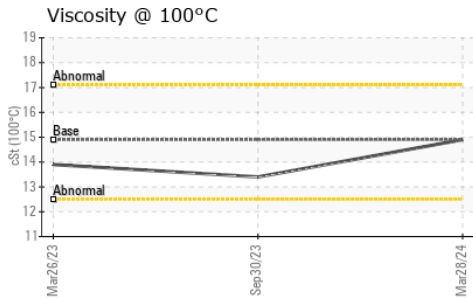
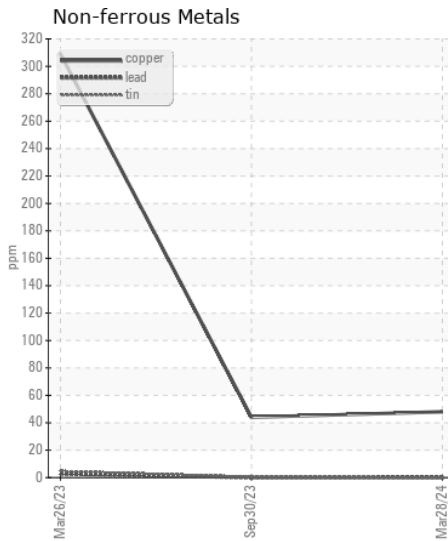
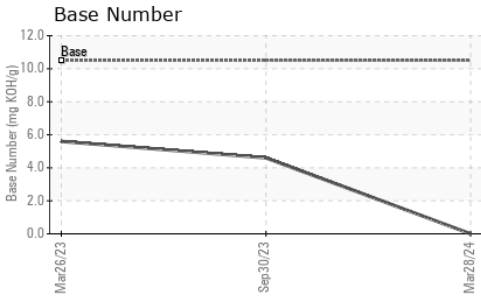
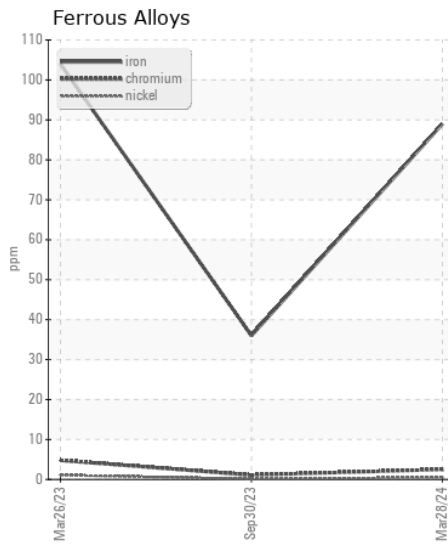
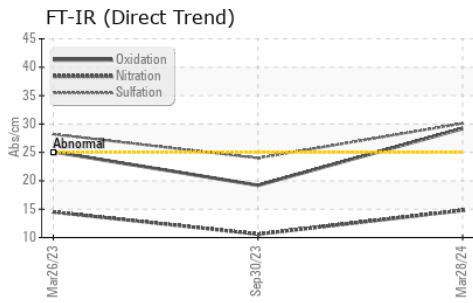
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	13	11	8
Potassium	ppm	ASTM D5185m	>20	17	12	74
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.9	1	1.7
Nitration	Abs/cm	*ASTM D7624	>20	14.8	10.6	14.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.1	24.0	28.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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		4	3	3
Boron	ppm	ASTM D5185m	0	0	0	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	100	16	12	7
Manganese	ppm	ASTM D5185m		1	<1	3
Magnesium	ppm	ASTM D5185m	60	239	186	95
Calcium	ppm	ASTM D5185m	3050	2359	2211	2531
Phosphorus	ppm	ASTM D5185m	1050	896	841	910
Zinc	ppm	ASTM D5185m	1200	1087	1105	1166
Sulfur	ppm	ASTM D5185m	12500	2863	2666	3043
Oxidation	Abs/.1mm	*ASTM D7414	>25	29.2	19.2	25.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	0.0	4.6	5.6
Visc @ 100°C	cSt	ASTM D445	14.9	14.9	13.4	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0719879

Lab Number : 06149453

Unique Number : 10979531

Test Package : FLEET

Received : 15 Apr 2024

Tested : 16 Apr 2024

Diagnosed : 17 Apr 2024 - Don Baldrige

DILLON TRANSPORTATION

4445 NORTH INTERSTATE WAY

KINGMAN, AZ

US 86401

Contact: T LAMOREAUX

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T:

F:

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)