



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2309
 Component
Diesel Engine
 Fluid
ROYAL PURPLE MOTOR OIL 15W40 (47 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		WC0720096	WC0720149	WC0719737
Sample Date		Client Info		27 Apr 2024	29 Dec 2023	09 Aug 2023
Machine Age	mls	Client Info		284319	236461	186834
Oil Age	mls	Client Info		50000	100000	50000
Filter Age	mls	Client Info		50000	50000	50000
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	57	▲ 106	65
Chromium	ppm	ASTM D5185m	>20	2	4	3
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	17	38	31
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	29	60	61
Tin	ppm	ASTM D5185m	>15	<1	2	1
Vanadium	ppm	ASTM D5185m		<1	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.

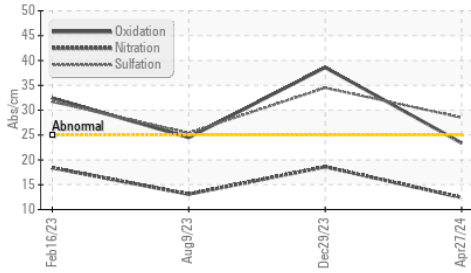
Silicon	ppm	ASTM D5185m	>25	8	11	7
Potassium	ppm	ASTM D5185m	>20	38	87	71
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.5	2.1	1.2
Nitration	Abs/cm	*ASTM D7624	>20	12.4	18.6	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.5	34.5	25.4
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

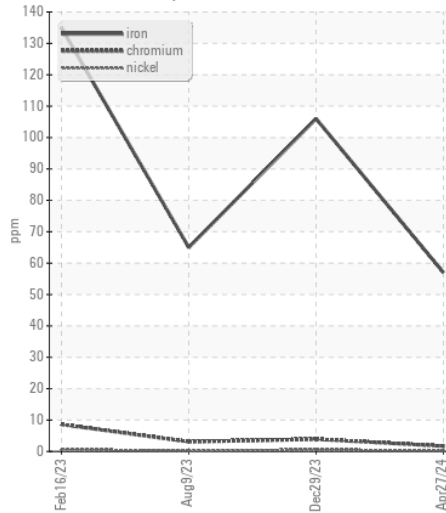
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	4	4
Boron	ppm	ASTM D5185m	0	0	1	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	100	12	51	52
Manganese	ppm	ASTM D5185m		<1	2	2
Magnesium	ppm	ASTM D5185m	60	186	831	807
Calcium	ppm	ASTM D5185m	3050	2442	1802	1523
Phosphorus	ppm	ASTM D5185m	1050	1059	1159	1002
Zinc	ppm	ASTM D5185m	1200	1227	1501	1272
Sulfur	ppm	ASTM D5185m	12500	3427	2776	2863
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	38.6	24.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	4.8	▲ 3.1	5.6
Visc @ 100°C	cSt	ASTM D445	14.9	13.8	14.8	13.0

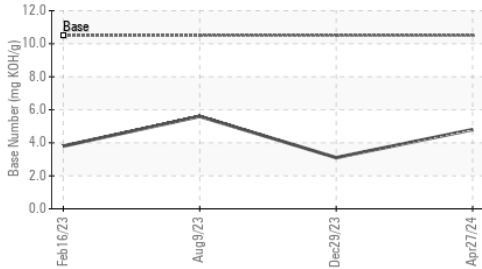
FT-IR (Direct Trend)



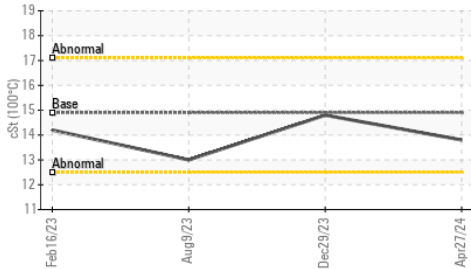
Ferrous Alloys



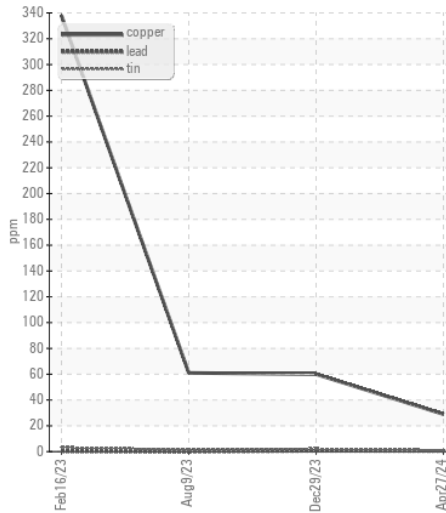
Base Number



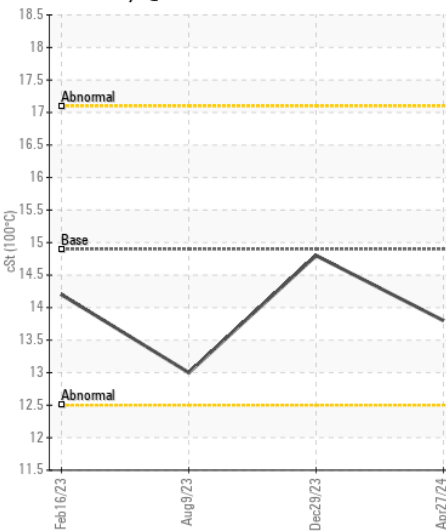
Viscosity @ 100°C



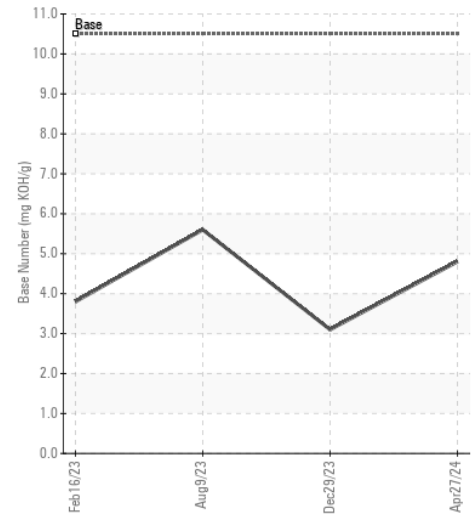
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0720096
Lab Number : 06174824
Unique Number : 11020877
Test Package : FLEET

Received : 09 May 2024
Tested : 10 May 2024
Diagnosed : 10 May 2024 - Wes Davis

DILLON TRANSPORTATION
 974 TN WALTZ PARKWAY
 ASHLAND CITY, TN
 US 37015

Contact: MASON NICHOLSON
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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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