



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
2305
 Component
Diesel Engine
 Fluid
ROYAL PURPLE MOTOR OIL 15W40 (--- QTS)

RECOMMENDATION

No corrective action is recommended at this time. 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		WC0720150	WC0720144	WC0719716
Sample Date		Client Info		28 Dec 2023	25 Aug 2023	03 May 2023
Machine Age	mls	Client Info		426428	372490	320705
Oil Age	mls	Client Info		100000	50000	100000
Filter Age	mls	Client Info		50000	50000	50000
Oil Changed		Client Info		Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	84	42	▲ 114
Chromium	ppm	ASTM D5185m	>20	2	2	4
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	18	18	27
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	15	54	36
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

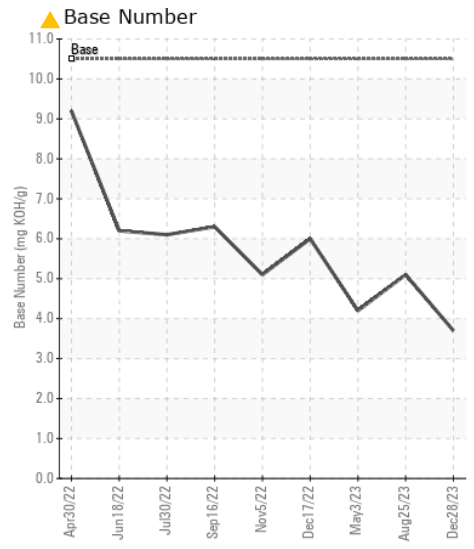
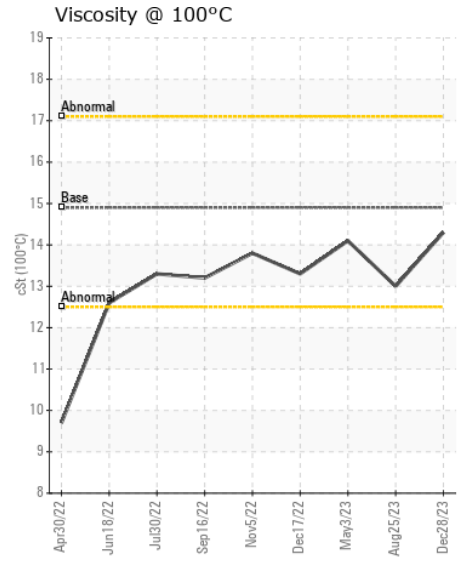
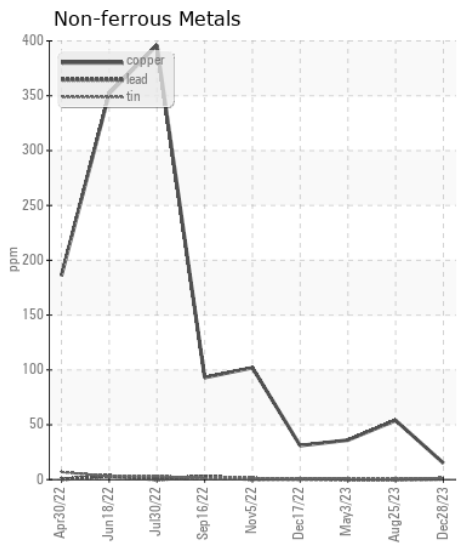
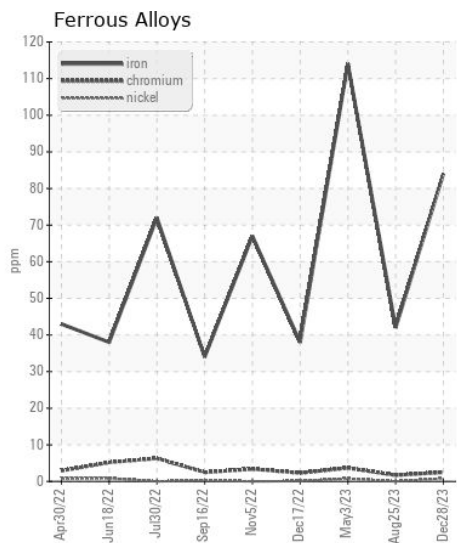
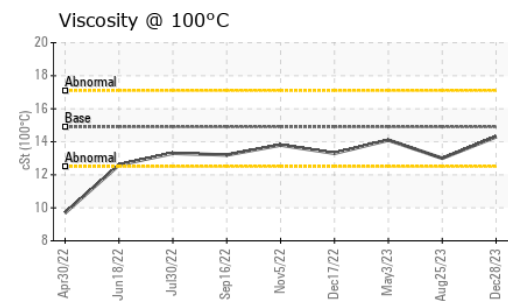
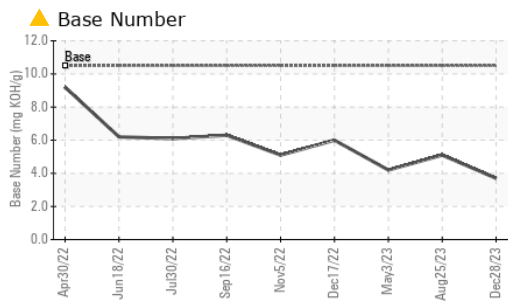
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	14	8	11
Potassium	ppm	ASTM D5185m	>20	40	34	58
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	2.1	1.1	1.9
Nitration	Abs/cm	*ASTM D7624	>20	13.1	9.7	13.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.4	23.9	30.3
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.

Sodium	ppm	ASTM D5185m		4	3	3
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	100	5	6	<1
Manganese	ppm	ASTM D5185m		1	1	2
Magnesium	ppm	ASTM D5185m	60	118	116	20
Calcium	ppm	ASTM D5185m	3050	2577	2386	2542
Phosphorus	ppm	ASTM D5185m	1050	1060	895	919
Zinc	ppm	ASTM D5185m	1200	1304	1109	1175
Sulfur	ppm	ASTM D5185m	12500	3538	3603	3520
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.4	16.5	24.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	▲ 3.7	5.1	4.2
Visc @ 100°C	cSt	ASTM D445	14.9	14.3	13.0	14.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0720150 **Received** : 08 Jan 2024
Lab Number : 06054695 **Diagnosed** : 10 Jan 2024
Unique Number : 10820644 **Diagnostician** : Sean Felton
Test Package : FLEET

DILLON TRANSPORTATION
 974 TN WALTZ PARKWAY
 ASHLAND CITY, TN
 US 37015
 Contact: MASON NICHOLSON
 M.NICHOLSON@DILLONTRANSPORTATION.COM
 T: (615)792-5099
 F: (615)469-4200

Certificate L2367
 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)