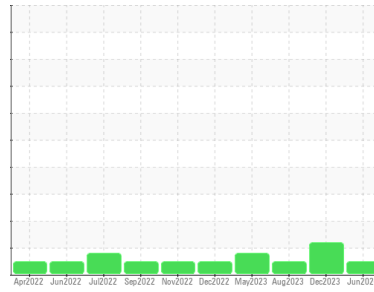




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

2305

Component

Diesel Engine

Fluid

ROYAL PURPLE MOTOR OIL 15W40 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0720100	WC0720150	WC0720144
Sample Date	Client Info		17 Jun 2024	28 Dec 2023	25 Aug 2023
Machine Age	mls	Client Info	477109	426428	372490
Oil Age	mls	Client Info	50000	100000	50000
Oil Changed	Client Info		Not Changed	Changed	Not Changed
Sample Status			NORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	35	84	42
Chromium	ppm	ASTM D5185m >20	<1	2	2
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	<1	<1	0
Aluminum	ppm	ASTM D5185m >20	9	18	18
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	27	15	54
Tin	ppm	ASTM D5185m >15	1	1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	0	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 100	3	5	6
Manganese	ppm	ASTM D5185m	1	1	1
Magnesium	ppm	ASTM D5185m 60	57	118	116
Calcium	ppm	ASTM D5185m 3050	2518	2577	2386
Phosphorus	ppm	ASTM D5185m 1050	995	1060	895
Zinc	ppm	ASTM D5185m 1200	1143	1304	1109
Sulfur	ppm	ASTM D5185m 12500	3821	3538	3603

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	14	8
Sodium	ppm	ASTM D5185m	6	4	3
Potassium	ppm	ASTM D5185m >20	20	40	34

INFRA-RED

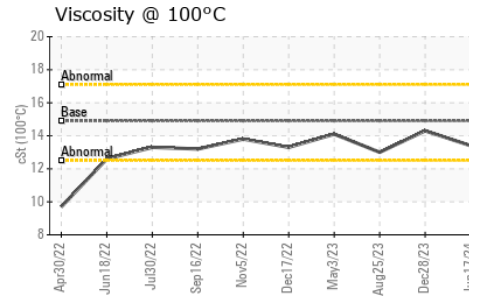
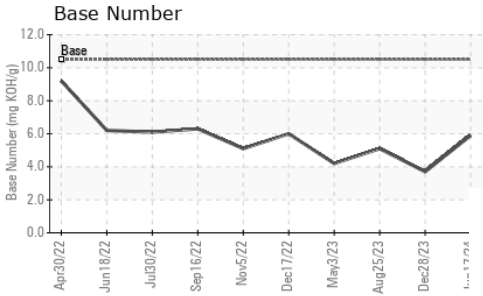
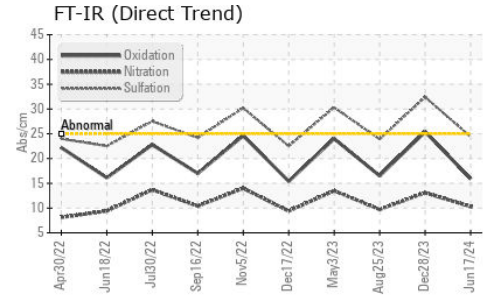
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.3	2.1	1.1
Nitration	Abs/cm	*ASTM D7624 >20	10.3	13.1	9.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	24.4	32.4	23.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.9	25.4	16.5
Base Number (BN)	mg KOH/g	ASTM D2896 10.5	5.9	▲ 3.7	5.1



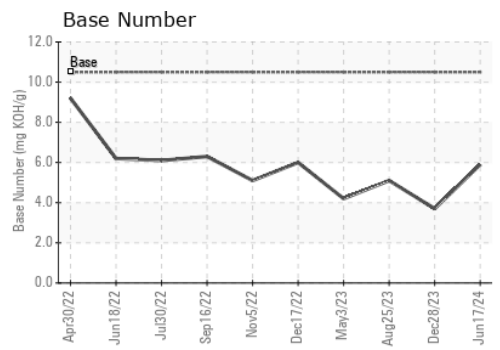
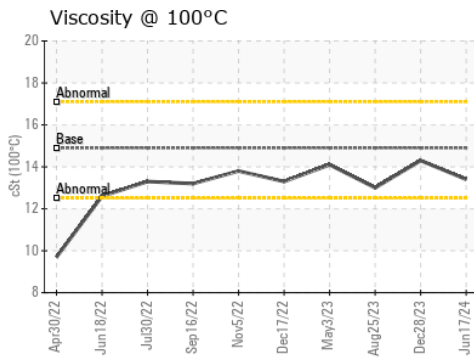
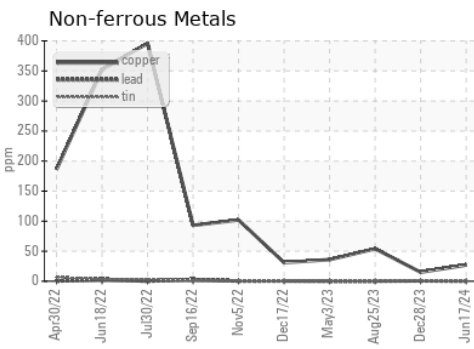
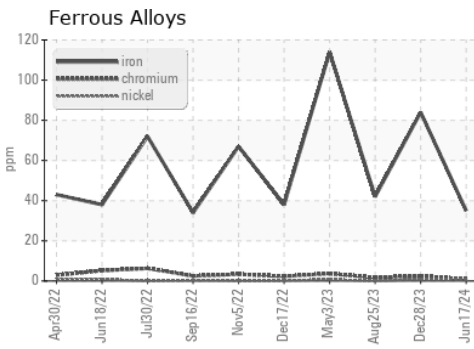
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.9	13.4	14.3

GRAPHS



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

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)