



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2104
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL 10W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0897823	WC0897897	WC0897926
Sample Date		Client Info		04 Jun 2024	09 May 2024	15 Apr 2024
Machine Age	mls	Client Info		0	30	0
Oil Age	mls	Client Info		0	30	0
Filter Age	mls	Client Info		0	30	0
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	5	3
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	<1	3	2
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	<1	1	0
Tin	ppm	ASTM D5185m	>15	0	1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

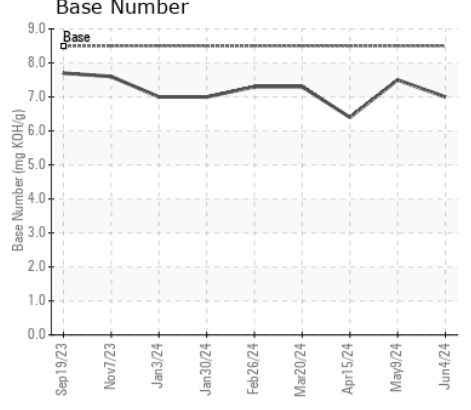
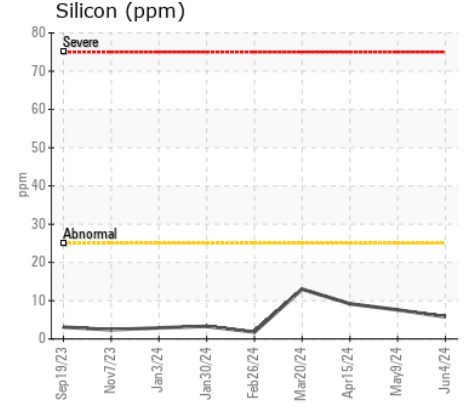
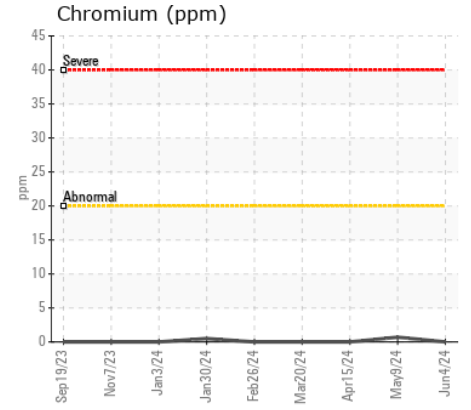
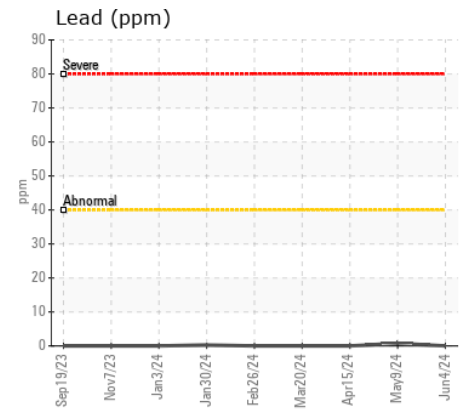
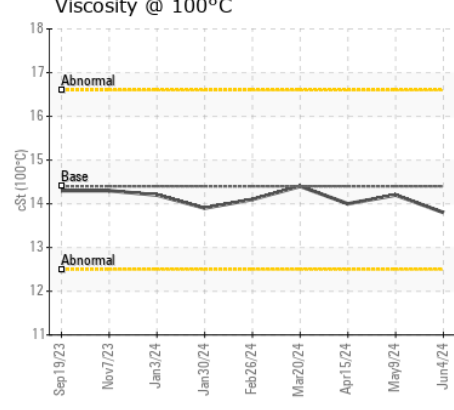
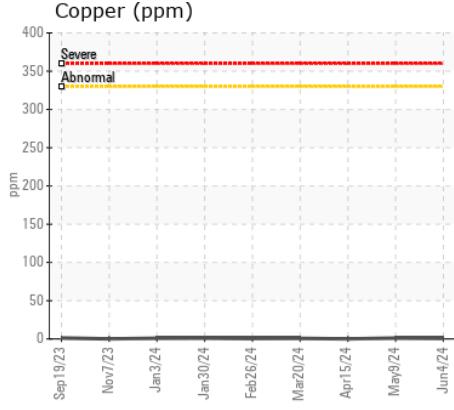
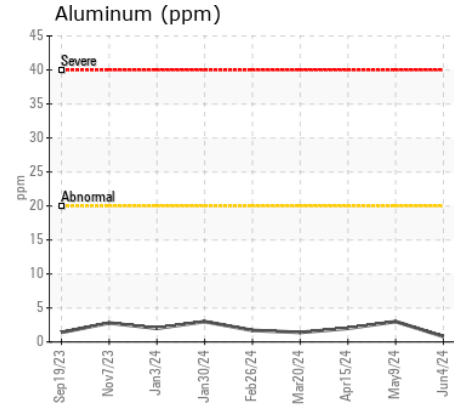
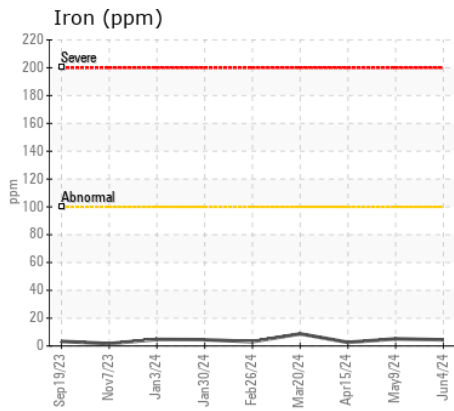
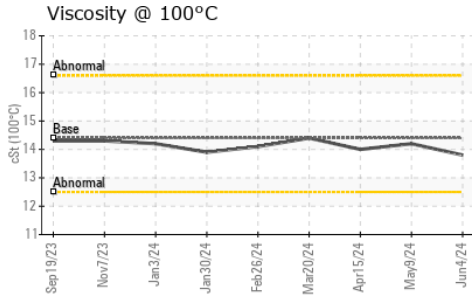
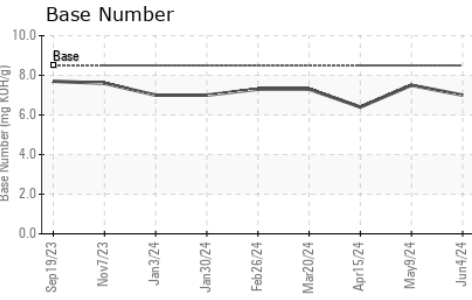
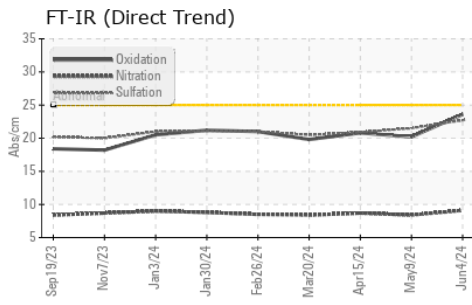
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	9
Potassium	ppm	ASTM D5185m	>20	3	3	4
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	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.1	8.4	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	21.5	20.9
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		9	3	6
Boron	ppm	ASTM D5185m	250	0	0	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	59	60	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	1006	973	918
Calcium	ppm	ASTM D5185m	3000	1137	1107	1089
Phosphorus	ppm	ASTM D5185m	1150	1064	1107	1024
Zinc	ppm	ASTM D5185m	1350	1332	1268	1256
Sulfur	ppm	ASTM D5185m	4250	3623	3647	3587
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.6	20.2	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.0	7.5	6.4
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	14.2	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0897823
Lab Number : 06219127
Unique Number : 11097324
Test Package : MOB 1 (Additional Tests: TBN)

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 26 Jun 2024 - Jonathan Hester

GO DURHAM - RAPT
 1903 FAYETTEVILLE ST
 DURHAM, NC
 US 27701
 Contact: Robert Iosiniecki
 Robert.iosiniecki@ratpdev.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)