



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 310
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (24 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0870829	WCM1193236	WCM1139280
Sample Date		Client Info		14 Nov 2023	18 Jun 2010	08 Oct 2009
Machine Age	mls	Client Info		204397	64429	54293
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	12	87	48
Chromium	ppm	ASTM D5185m	>20	<1	3	1
Nickel	ppm	ASTM D5185m	>2	0	1	2
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	6	4
Lead	ppm	ASTM D5185m	>40	0	8	3
Copper	ppm	ASTM D5185m	>330	2	4	3
Tin	ppm	ASTM D5185m	>15	0	0	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

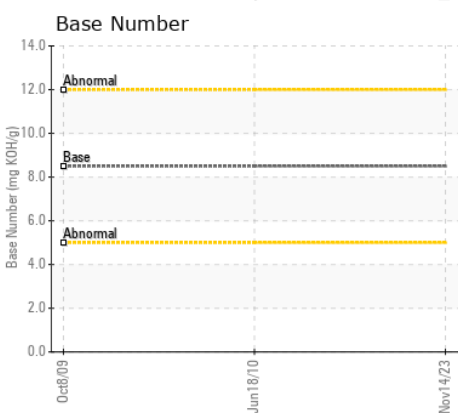
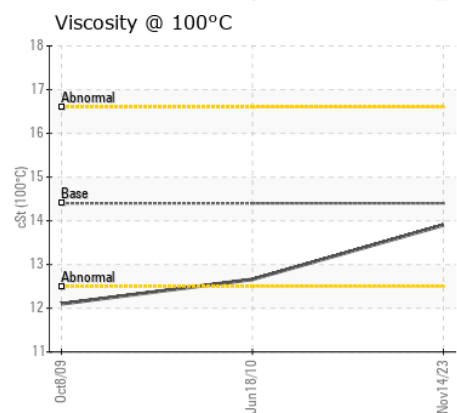
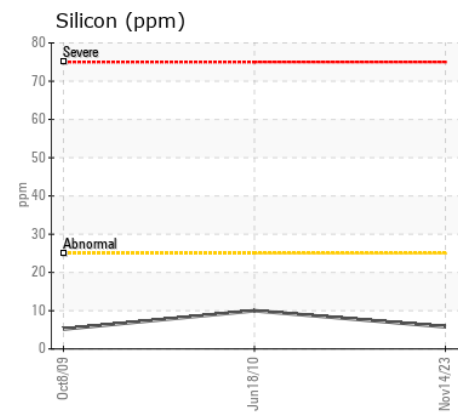
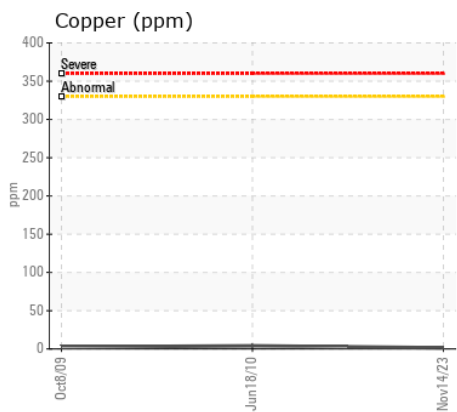
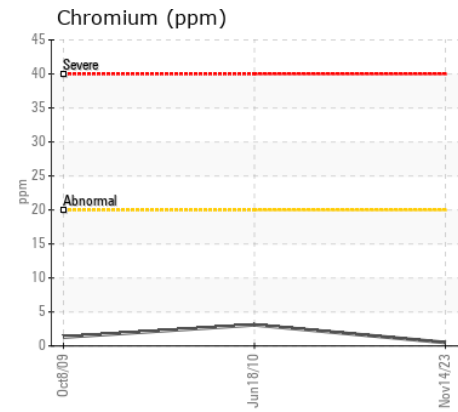
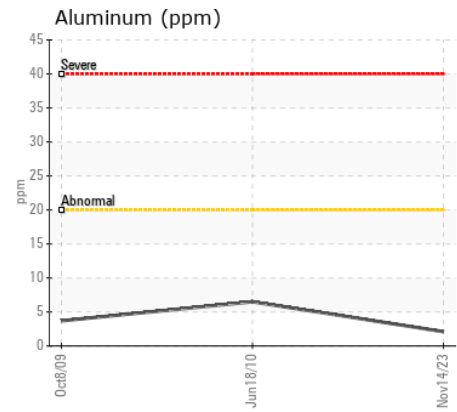
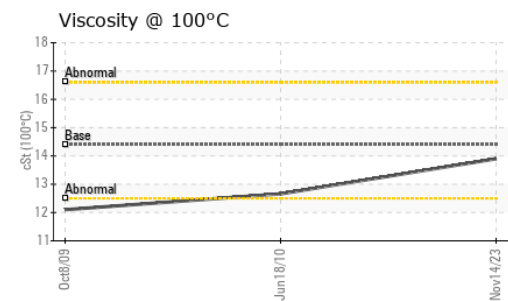
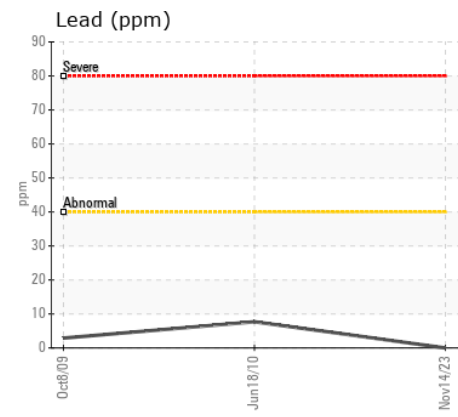
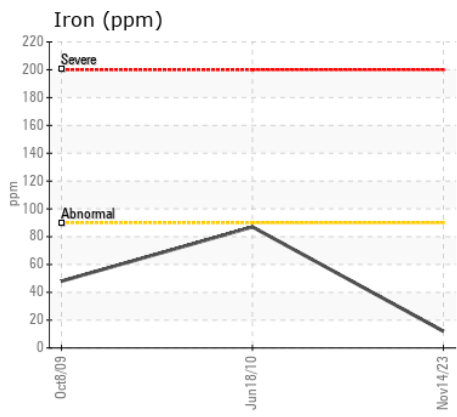
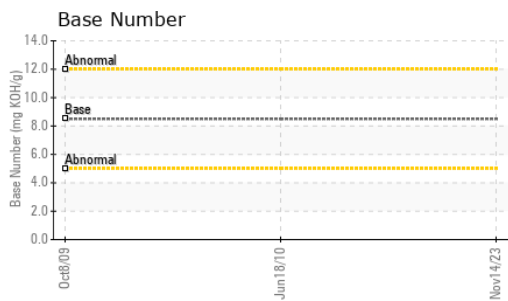
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	10	5
Potassium	ppm	ASTM D5185m	>20	<1	▲ 58	37
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.3	1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	9.3	8.	7.
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	20.	19.
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	>158	2	27	17
Boron	ppm	ASTM D5185m	250	28	4	13
Barium	ppm	ASTM D5185m	10	0	0	<1
Molybdenum	ppm	ASTM D5185m	100	79	11	18
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	174	77	296
Calcium	ppm	ASTM D5185m	3000	2026	2327	1968
Phosphorus	ppm	ASTM D5185m	1150	1035	1028	1068
Zinc	ppm	ASTM D5185m	1350	1225	1236	1120
Sulfur	ppm	ASTM D5185m	4250	3537	3682	4363
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	15.	12.
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.2	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.9	12.66	▲ 12.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870829 **Received** : 16 Jan 2024
Lab Number : 06061711 **Diagnosed** : 17 Jan 2024
Unique Number : 10833093 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

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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)