



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
BELL B93A631EE03010094
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

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		BE0009126	BE0009122	BE0009121
Sample Date		Client Info		10 Jun 2024	14 Dec 2023	30 May 2023
Machine Age	hrs	Client Info		2028	1480	990
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>79	11	16	14
Iron	ppm	ASTM D5185m	>100	10	10	20
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	7	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	3	4	9
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

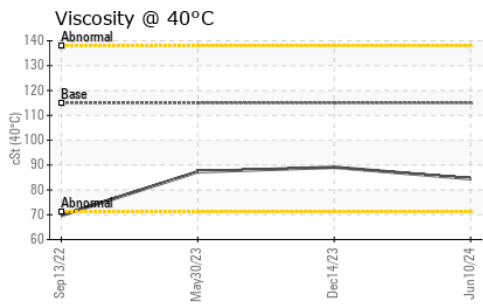
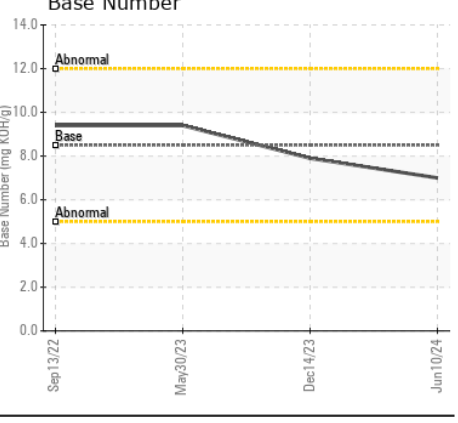
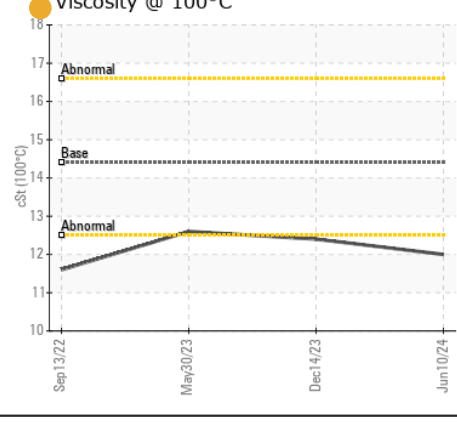
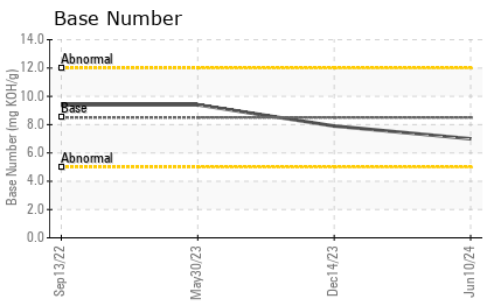
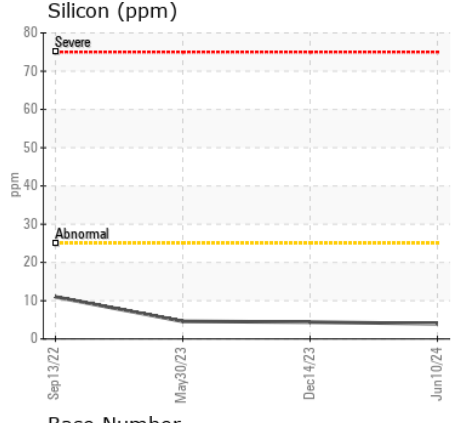
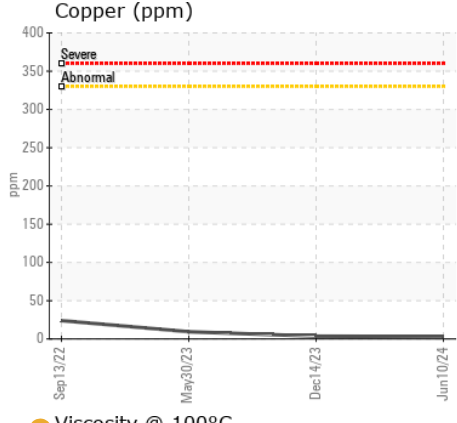
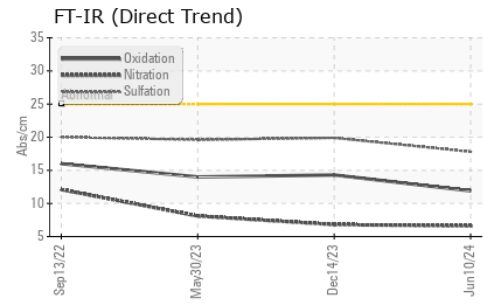
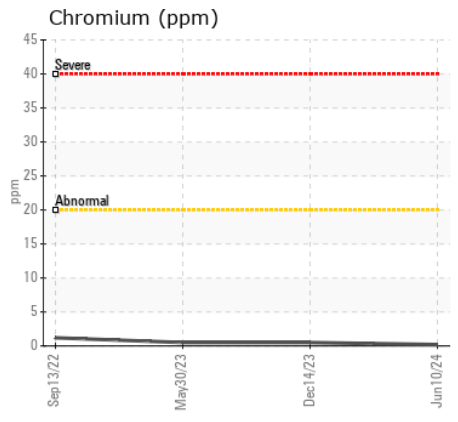
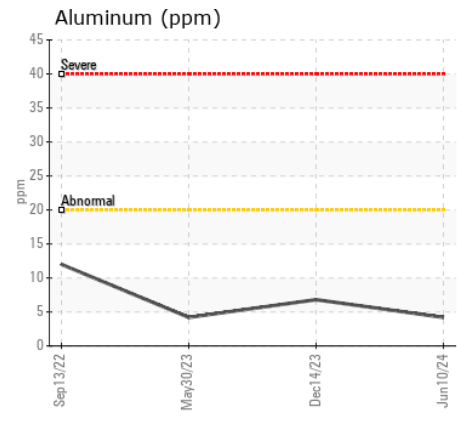
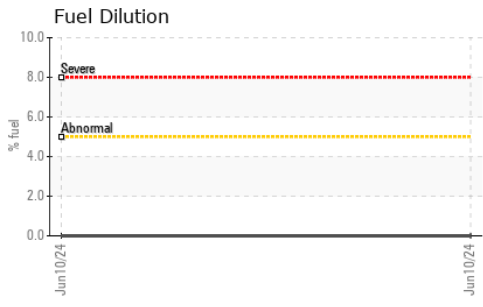
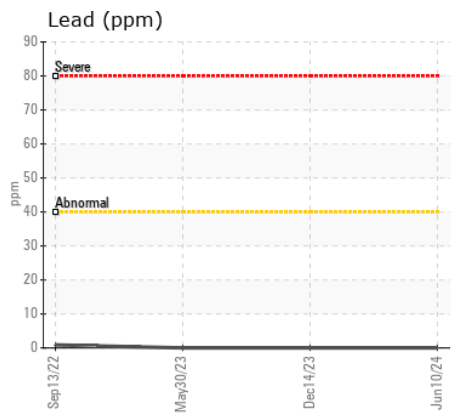
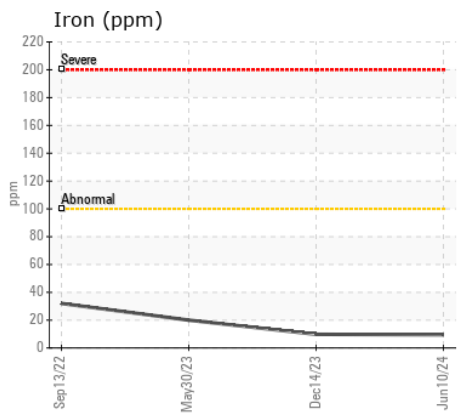
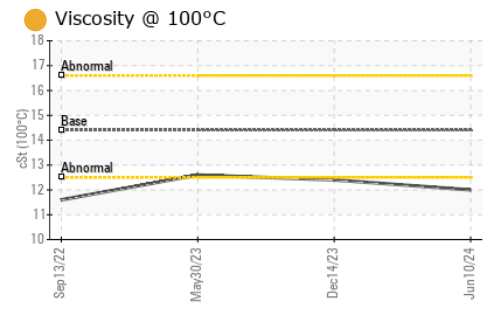
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	4	5
Potassium	ppm	ASTM D5185m	>20	5	8	4
Fuel	%	ASTM D3524	>5	0.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	6.6	6.8	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	19.9	19.6
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	2	1	0
Boron	ppm	ASTM D5185m	250	19	79	37
Barium	ppm	ASTM D5185m	10	0	<1	0
Molybdenum	ppm	ASTM D5185m	100	46	70	64
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m	450	301	444	446
Calcium	ppm	ASTM D5185m	3000	1660	1483	1713
Phosphorus	ppm	ASTM D5185m	1150	891	870	919
Zinc	ppm	ASTM D5185m	1350	1074	1042	1099
Sulfur	ppm	ASTM D5185m	4250	3396	2736	3229
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.9	14.3	14.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.0	7.9	9.4
Visc @ 40°C	cSt	ASTM D445	115	84.5	89.1	87.3
Visc @ 100°C	cSt	ASTM D445	14.4	12.0	12.4	12.6
Viscosity Index (VI)	Scale	ASTM D2270	126	135	134	141



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : BE0009126 **Received** : 17 Jun 2024
Lab Number : 06211477 **Tested** : 20 Jun 2024
Unique Number : 11084341 **Diagnosed** : 20 Jun 2024 - Jonathan Hester
Test Package : MOBCE (Additional Tests: FuelDilution, PercentFuel)

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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)