



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
BELL B45E B93A645EP03408183
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		BE0018055	BE0018051	BE0018050
Sample Date		Client Info		07 Feb 2024	18 Sep 2023	30 Jun 2023
Machine Age	hrs	Client Info		2016	1514	1020
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				NORMAL	SEVERE	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>79	21	22	14
Iron	ppm	ASTM D5185m	>100	71	217	11
Chromium	ppm	ASTM D5185m	>20	5	25	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	1	0
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	7	12	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	21	58	3
Tin	ppm	ASTM D5185m	>15	0	2	<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

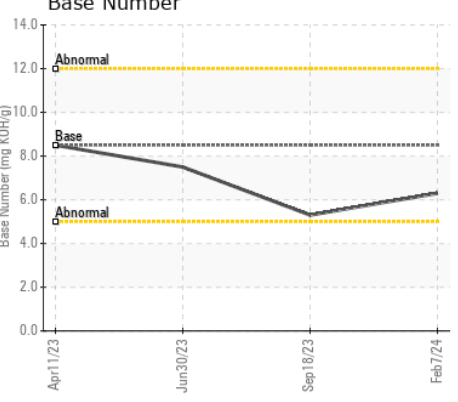
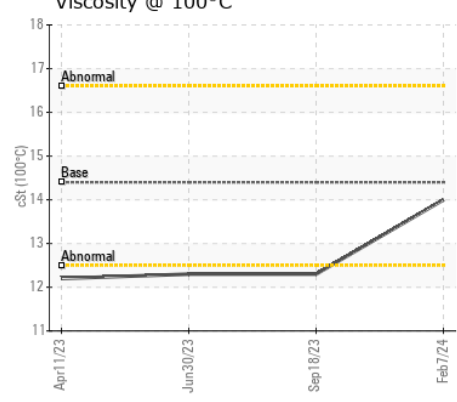
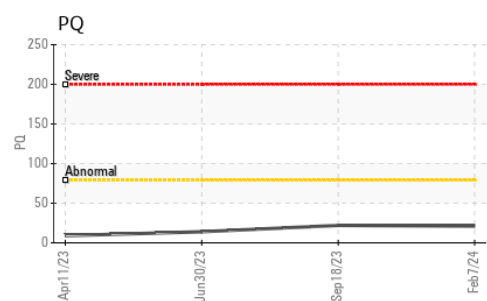
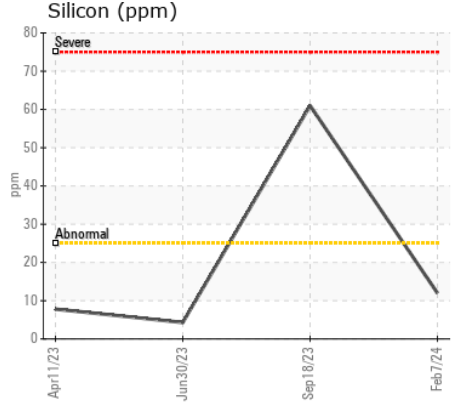
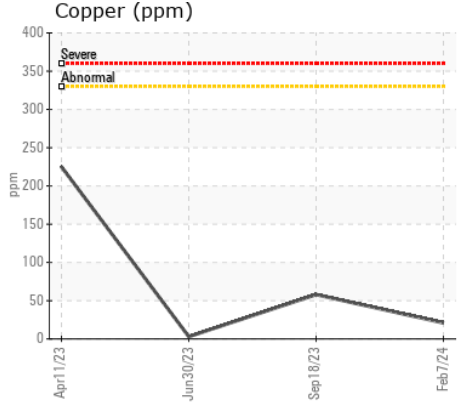
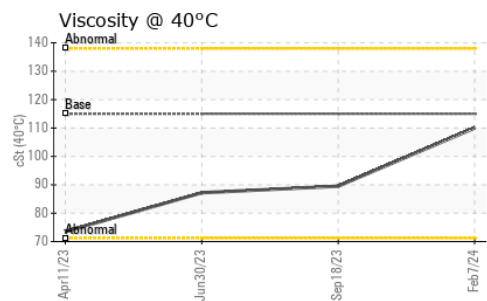
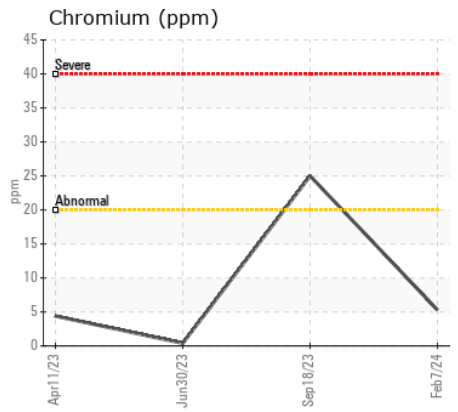
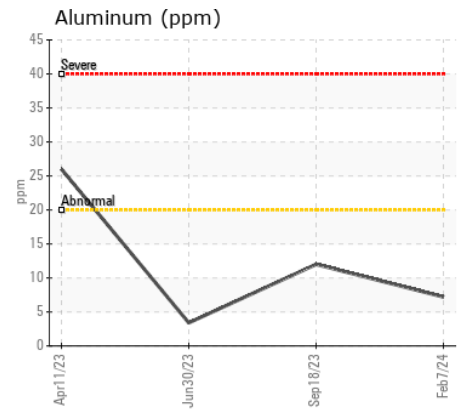
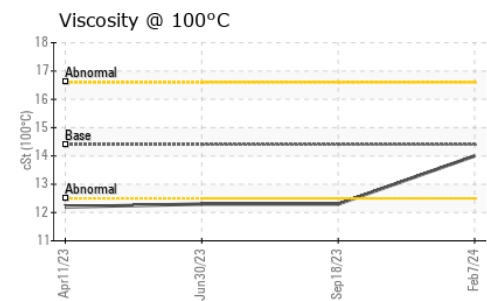
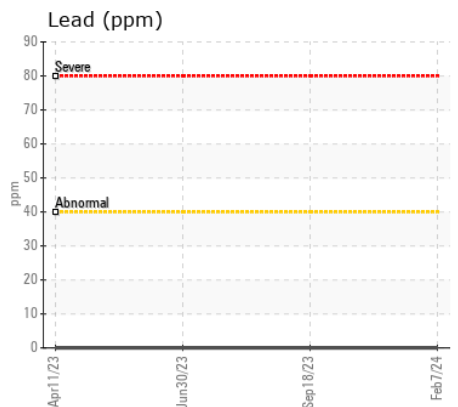
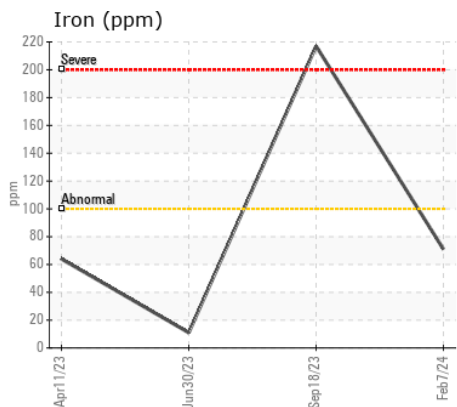
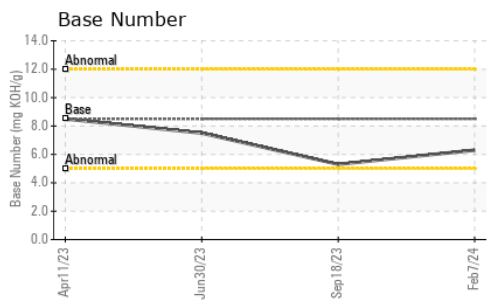
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	12	61	4
Potassium	ppm	ASTM D5185m	>20	3	7	2
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	0.6	0.8	0.3
Nitration	Abs/cm	*ASTM D7624	>20	11.3	8.8	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	20.0	18.7
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	<1	1	0
Boron	ppm	ASTM D5185m	250	145	<1	15
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	114	47	59
Manganese	ppm	ASTM D5185m		2	6	<1
Magnesium	ppm	ASTM D5185m	450	643	351	366
Calcium	ppm	ASTM D5185m	3000	1676	1540	1584
Phosphorus	ppm	ASTM D5185m	1150	841	886	899
Zinc	ppm	ASTM D5185m	1350	1017	1134	1050
Sulfur	ppm	ASTM D5185m	4250	2392	2651	2823
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.7	15.5	13.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.3	5.3	7.5
Visc @ 40°C	cSt	ASTM D445	115	110	89.5	87.2
Visc @ 100°C	cSt	ASTM D445	14.4	14.0	12.3	12.3
Viscosity Index (VI)	Scale	ASTM D2270	126	127	131	136



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : BE0018055 **Received** : 12 Feb 2024
Lab Number : 06085937 **Tested** : 13 Feb 2024
Unique Number : 10873382 **Diagnosed** : 13 Feb 2024 - Jonathan Hester
Test Package : MOBCE

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 US 27292
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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)