



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
BELL B40E B93A640ET03408240
 Component
Diesel Engine
 Fluid
CHEVRON 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		BE0018927	BE0018926	BE0018925
Sample Date		Client Info		10 Apr 2024	31 Oct 2023	17 Jul 2023
Machine Age	hrs	Client Info		1781	939	490
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	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>79	16	7	13
Iron	ppm	ASTM D5185m	>100	21	19	43
Chromium	ppm	ASTM D5185m	>20	1	1	4
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	6	15
Lead	ppm	ASTM D5185m	>40	0	2	0
Copper	ppm	ASTM D5185m	>330	99	293	272
Tin	ppm	ASTM D5185m	>15	<1	<1	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

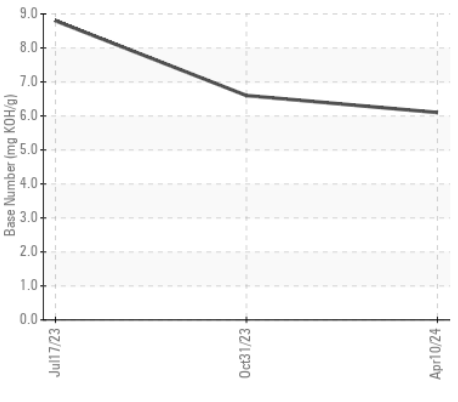
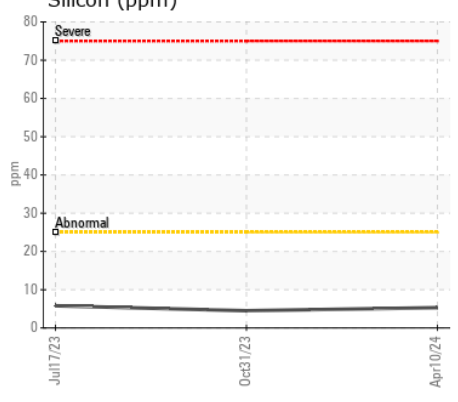
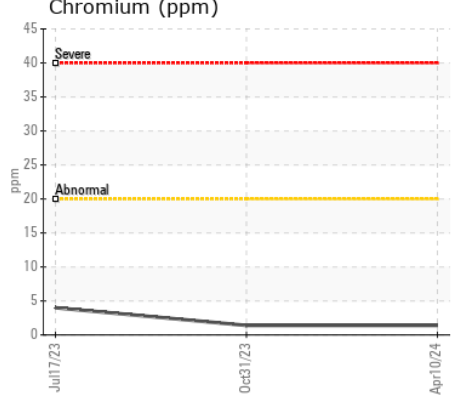
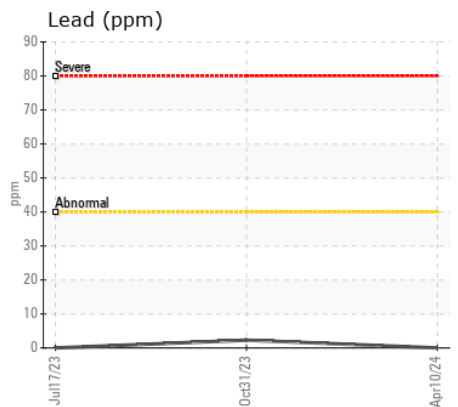
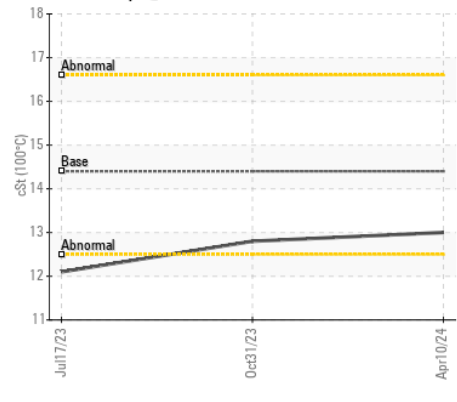
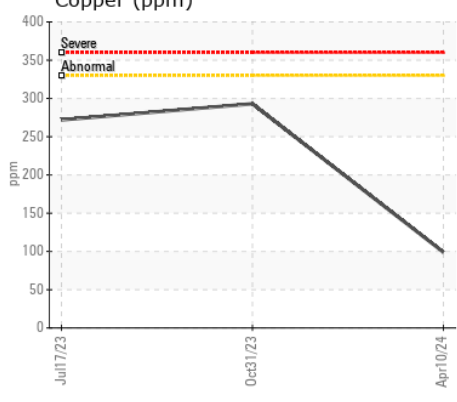
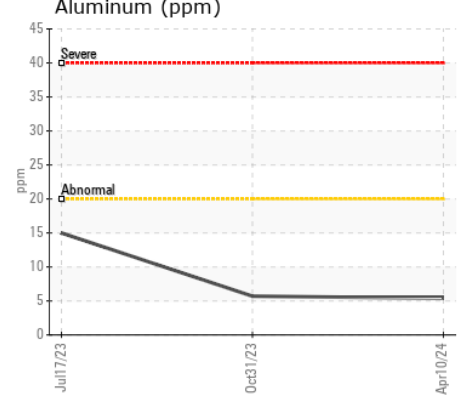
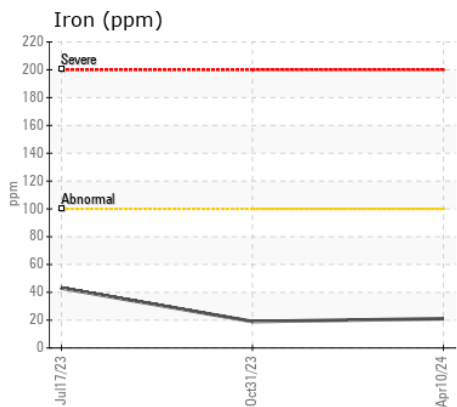
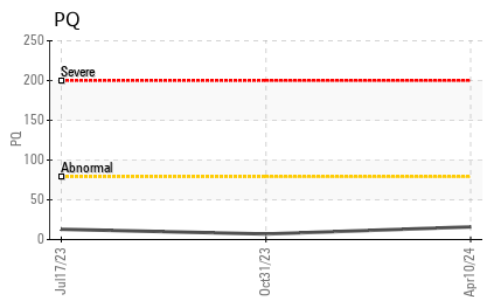
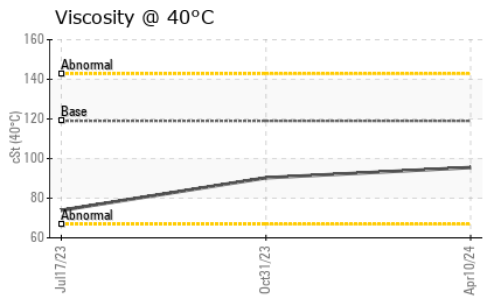
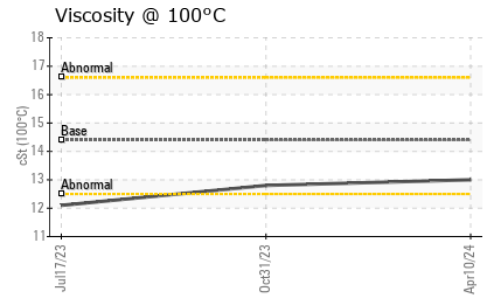
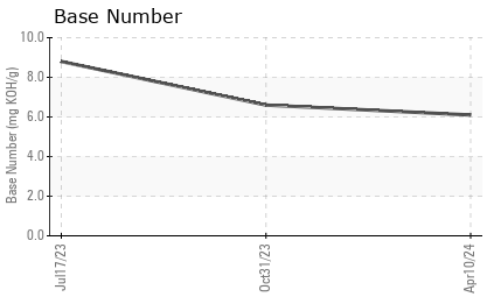
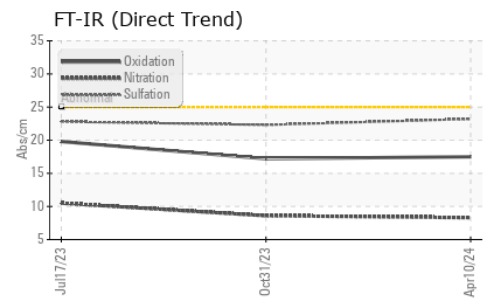
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	6
Potassium	ppm	ASTM D5185m	>20	3	2	5
Fuel		WC Method	>5	<1.0	<1.0	0.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.6	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	22.3	22.8
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	>50	<1	2	2
Boron	ppm	ASTM D5185m		242	196	59
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		77	72	16
Manganese	ppm	ASTM D5185m		<1	1	5
Magnesium	ppm	ASTM D5185m		453	339	142
Calcium	ppm	ASTM D5185m		1515	1469	2381
Phosphorus	ppm	ASTM D5185m		1022	759	707
Zinc	ppm	ASTM D5185m		1178	912	864
Sulfur	ppm	ASTM D5185m		2805	2136	2522
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	17.2	19.8
Base Number (BN)	mg KOH/g	ASTM D2896		6.1	6.6	8.8
Visc @ 40°C	cSt	ASTM D445	119	95.5	90.3	73.9
Visc @ 100°C	cSt	ASTM D445	14.4	13.0	12.8	12.1
Viscosity Index (VI)	Scale	ASTM D2270		133	139	160



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : BE0018927
Lab Number : 06148533
Unique Number : 10978611
Test Package : MOBCE
Received : 15 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 17 Apr 2024 - Don Baldrige

Highway Equipment Company
 22035 Perry Highway
 Zelienople, PA
 US 16063
 Contact: James Gibson
 jgibson@highway-equipment.com
 T: (800)222-8798
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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)