



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
BELL B45E B93A645EC03007723
 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		BE0005115	BE0005104	BE0005098
Sample Date		Client Info		15 Apr 2024	27 Dec 2023	21 Aug 2023
Machine Age	hrs	Client Info		4499	4043	3511
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	15	13	11
Iron	ppm	ASTM D5185m	>100	21	36	23
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	4	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	5	8	10
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

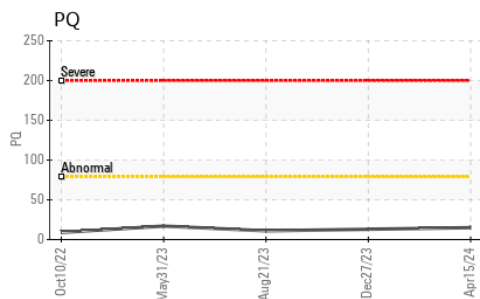
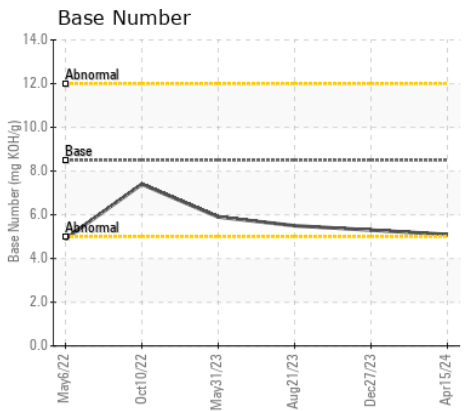
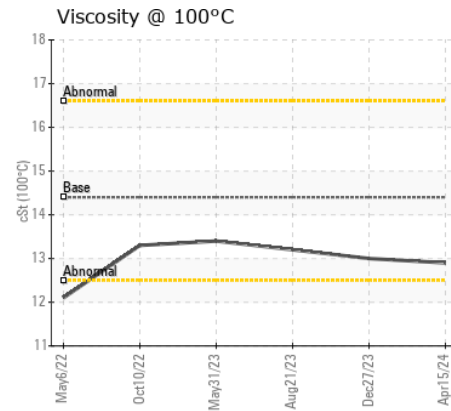
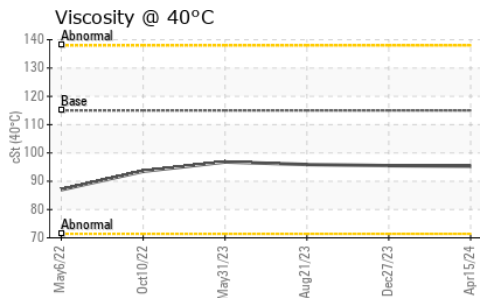
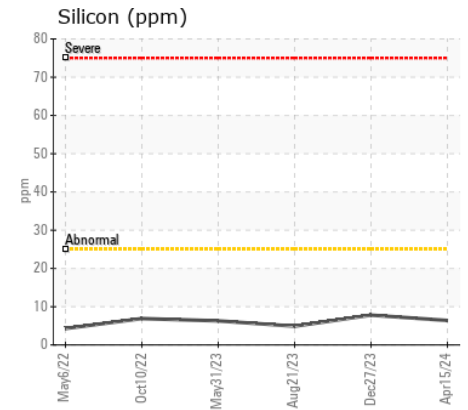
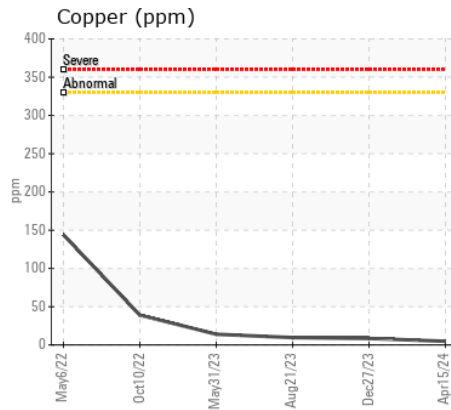
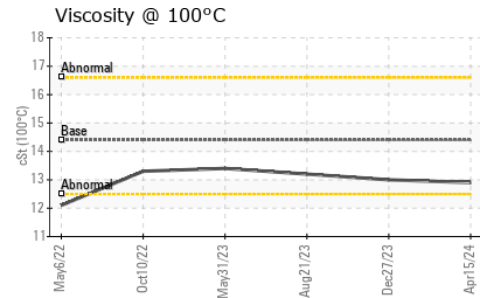
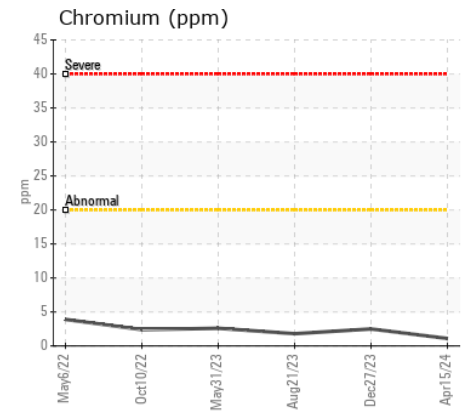
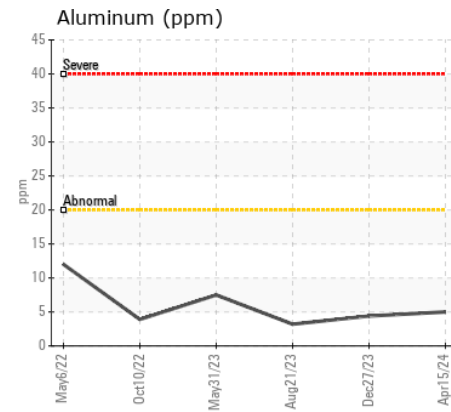
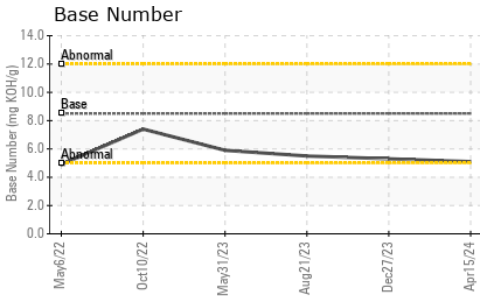
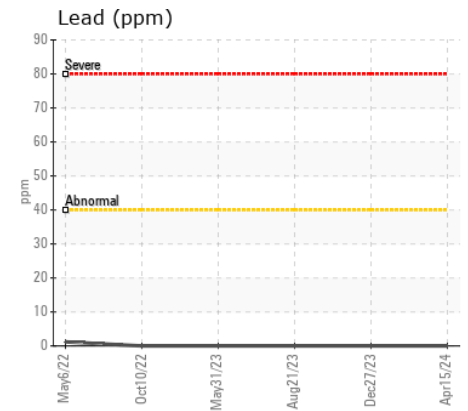
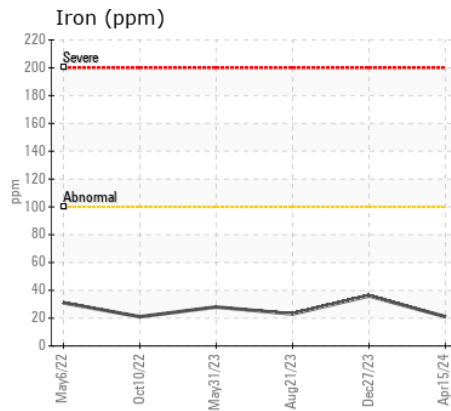
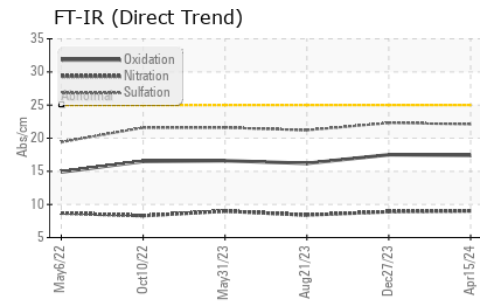
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	5
Potassium	ppm	ASTM D5185m	>20	6	6	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	0.8	1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	9.0	8.9	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	22.3	21.2
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	1
Boron	ppm	ASTM D5185m	250	18	3	0
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	53	58
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	450	431	365	396
Calcium	ppm	ASTM D5185m	3000	1534	1567	1802
Phosphorus	ppm	ASTM D5185m	1150	917	934	1028
Zinc	ppm	ASTM D5185m	1350	1115	1185	1302
Sulfur	ppm	ASTM D5185m	4250	2856	2489	3345
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	17.5	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.1	5.3	5.5
Visc @ 40°C	cSt	ASTM D445	115	95.3	95.5	95.9
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.0	13.2
Viscosity Index (VI)	Scale	ASTM D2270	126	132	133	136



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : BE0005115
Lab Number : 06156798
Unique Number : 10992221
Test Package : MOBCE

Four Seasons Equipment Inc.
 8111 Mills Road
 Houston, TX
 US 77064

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)

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