



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
BLUE BIRD 238
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (19 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0004493	RW0004206	RW0003869
Sample Date		Client Info		08 Jan 2024	05 Jan 2023	06 May 2022
Machine Age	mls	Client Info		120000	96000	84136
Oil Age	mls	Client Info		12000	12000	12000
Filter Age	mls	Client Info		12000	12000	12000
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.

Iron	ppm	ASTM D5185m	>90	28	30	21
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	6	5
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	10	2	1
Tin	ppm	ASTM D5185m	>15	0	<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

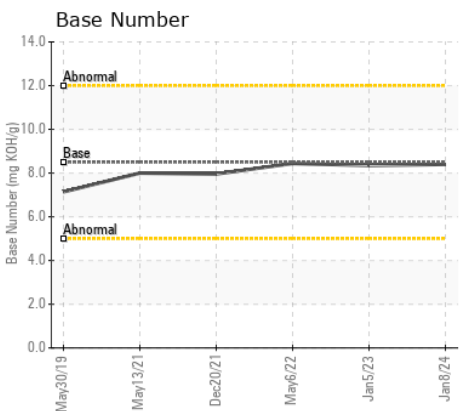
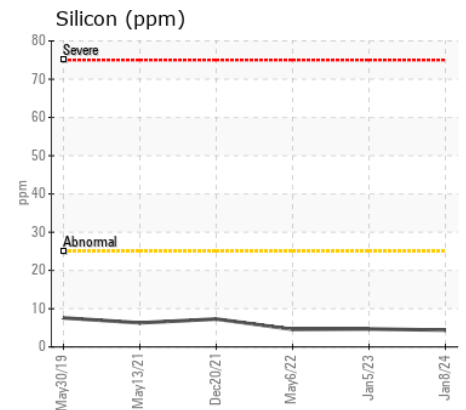
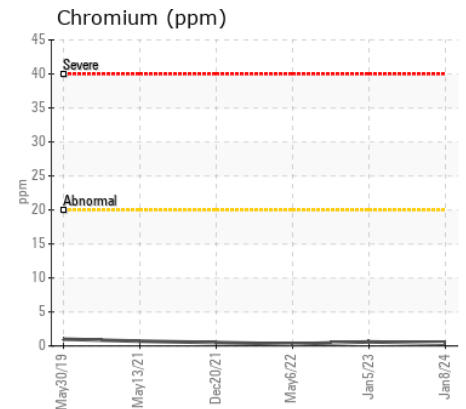
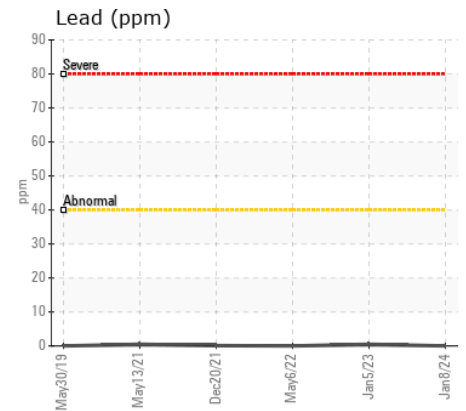
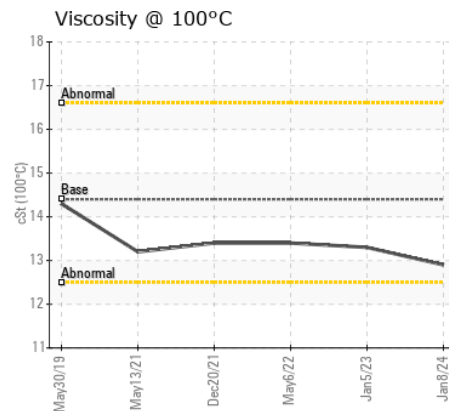
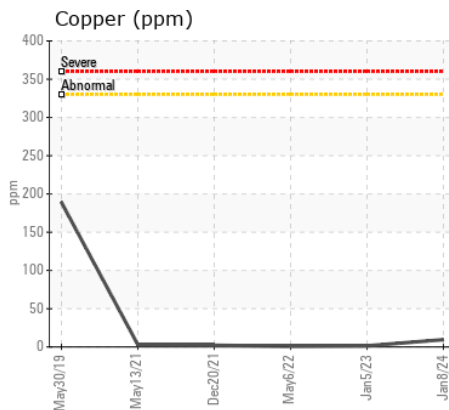
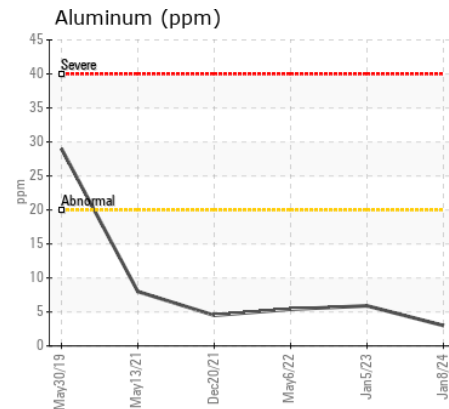
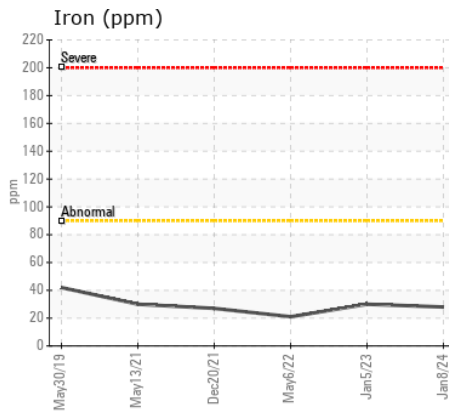
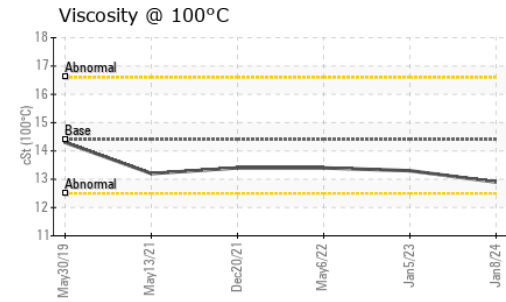
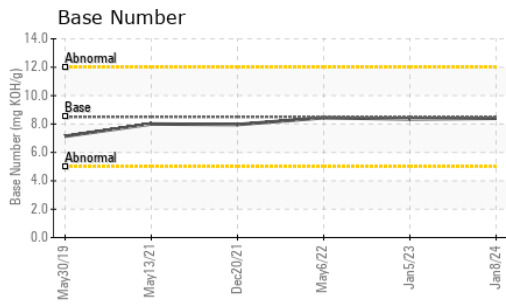
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	5
Potassium	ppm	ASTM D5185m	>20	4	5	2
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	0.4	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.8	11.4	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	21.5	20.0
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	1	2
Boron	ppm	ASTM D5185m	250	8	4	9
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	57	63	59
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	943	939	951
Calcium	ppm	ASTM D5185m	3000	1243	1258	1149
Phosphorus	ppm	ASTM D5185m	1150	1046	1002	1070
Zinc	ppm	ASTM D5185m	1350	1292	1342	1252
Sulfur	ppm	ASTM D5185m	4250	3194	3259	2690
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	18.5	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.40	8.35	8.44
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.3	13.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0004493 **Received** : 17 Jan 2024
Lab Number : 06063797 **Diagnosed** : 19 Jan 2024
Unique Number : 10835179 **Diagnostician** : Wes Davis
Test Package : MOB 2

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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)