TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
2011 BLUE BIRD BUS 2
Component
Front Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC SYN BLEND 15W40 (26 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

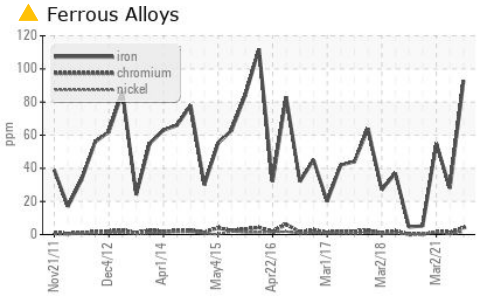
CONTAMINATION

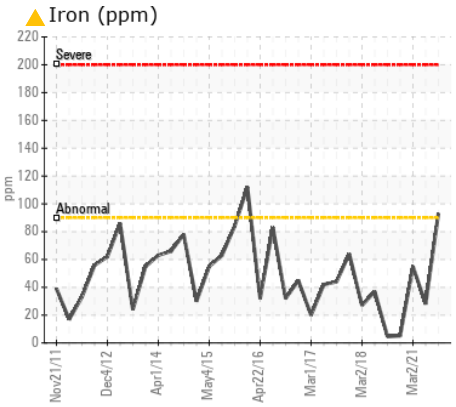
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

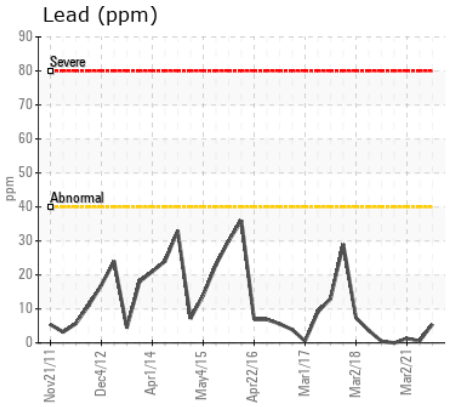
FLUID CONDITION

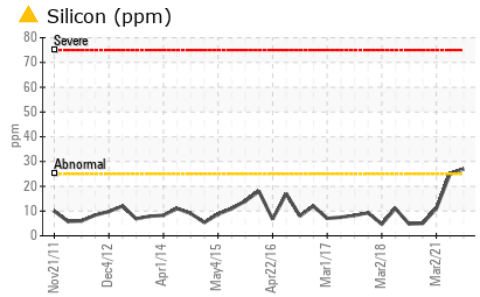
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

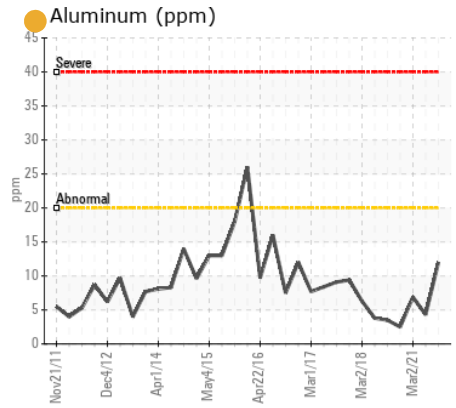
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06100306	TR05413745	TR05216496
Sample Date		Client Info		07 Feb 2024	01 Nov 2021	02 Mar 2021
Machine Age	mls	Client Info		232795	215525	210636
Oil Age	mls	Client Info		21310	4070	4838
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	MARGINAL
Iron	ppm	ASTM D5185m	>90	▲ 93	28	55
Chromium	ppm	ASTM D5185m	>20	4	1	2
Nickel	ppm	ASTM D5185m	>2	2	<1	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	1
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	● 12	4	7
Lead	ppm	ASTM D5185m	>40	6	<1	1
Copper	ppm	ASTM D5185m	>330	8	3	2
Tin	ppm	ASTM D5185m	>15	2	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 27	25	11
Potassium	ppm	ASTM D5185m	>20	30	11	29
Fuel		WC Method	>3.0	<1.0	<1.0	▲ 1.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	2.4	0.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	19.8	11.3	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	35.4	21.6	24
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
Sodium	ppm	ASTM D5185m		23	11	26
Boron	ppm	ASTM D5185m		7	0	<1
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		153	143	132
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		25	16	20
Calcium	ppm	ASTM D5185m	2300	4817	4734	4676
Phosphorus	ppm	ASTM D5185m		981	989	858
Zinc	ppm	ASTM D5185m	1200	1230	1091	965
Sulfur	ppm	ASTM D5185m		4453	3636	3302
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.4	13	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	11.42	13.5	12.8
Visc @ 100°C	cSt	ASTM D445	15.5	17.1	15.9	15.2

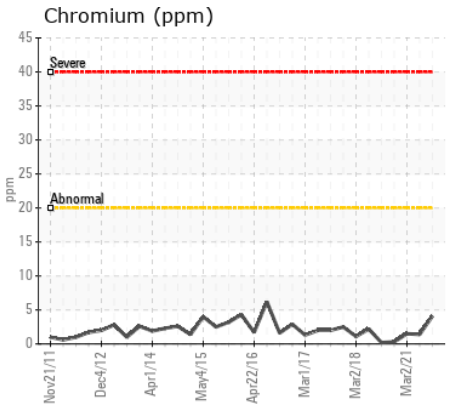


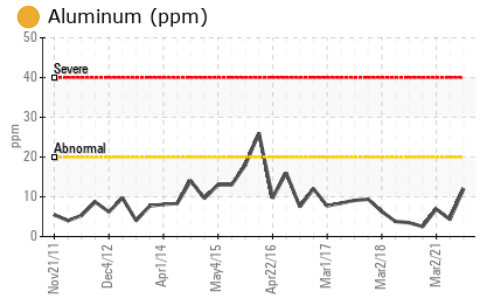


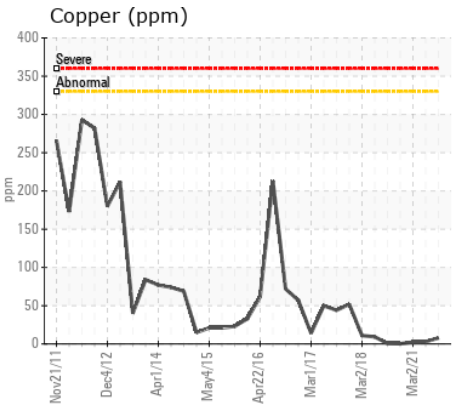


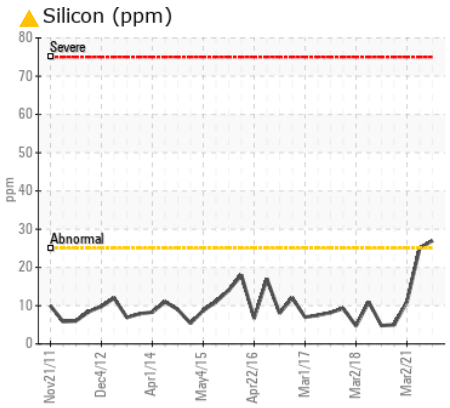


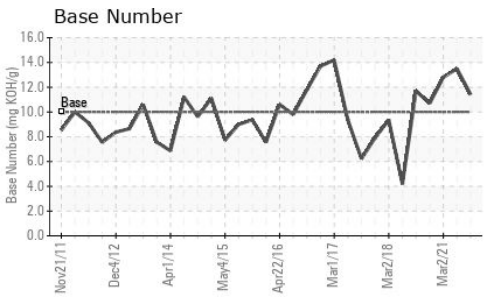


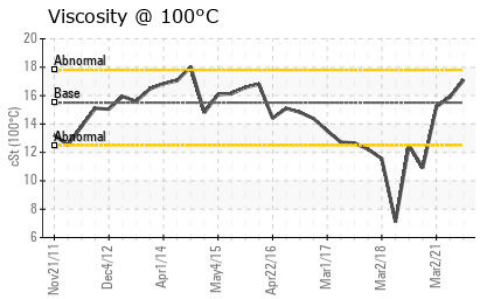


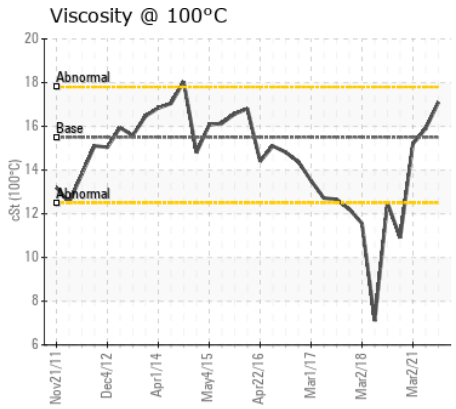


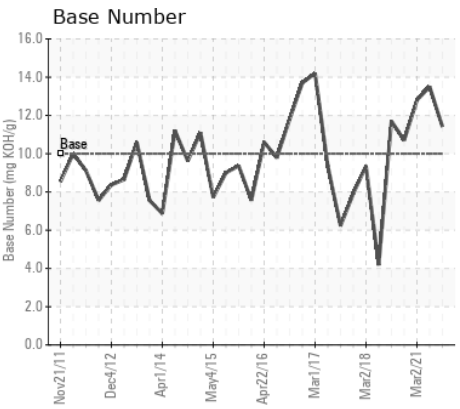












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06100306
Lab Number : 06100306
Unique Number : 10898536
Test Package : MOB 2

Received : 26 Feb 2024
Tested : 27 Feb 2024
Diagnosed : 28 Feb 2024 - Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-827-0711.
** - 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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