



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
BLUE BIRD 4
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC SYNTHETIC 5W30 (--- QTS)

RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06077839	TR05861431	---
Sample Date		Client Info		01 Feb 2024	30 May 2023	---
Machine Age	mls	Client Info		0	0	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	11	26	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>40	5	5	---
Lead	ppm	ASTM D5185m	>50	<1	0	---
Copper	ppm	ASTM D5185m	>155	2	1	---
Tin	ppm	ASTM D5185m	>10	0	<1	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

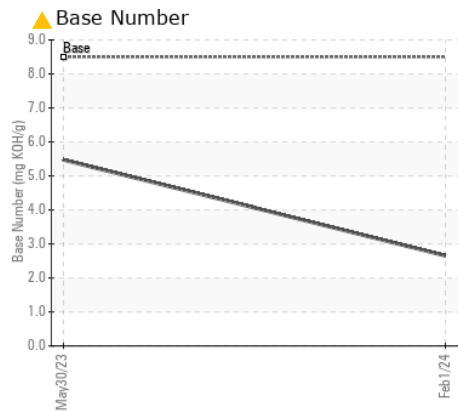
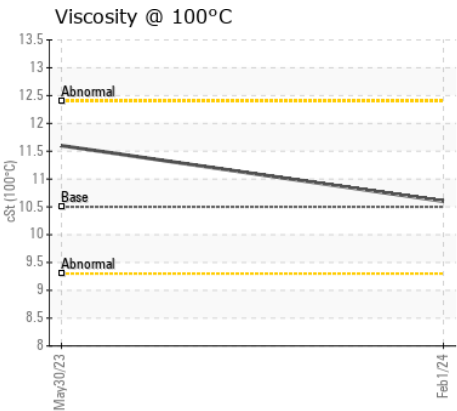
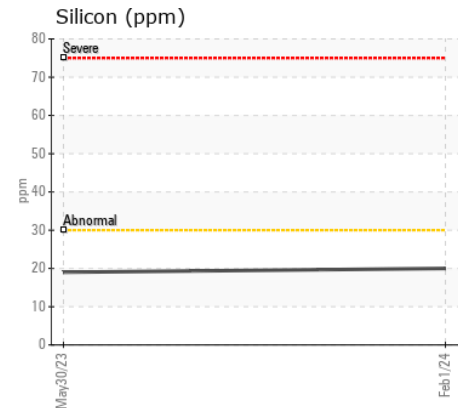
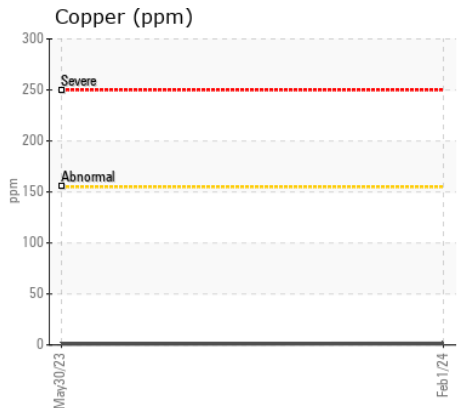
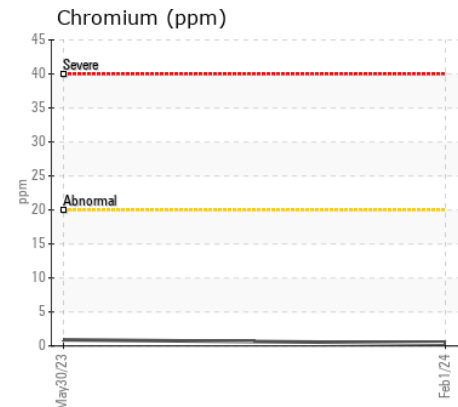
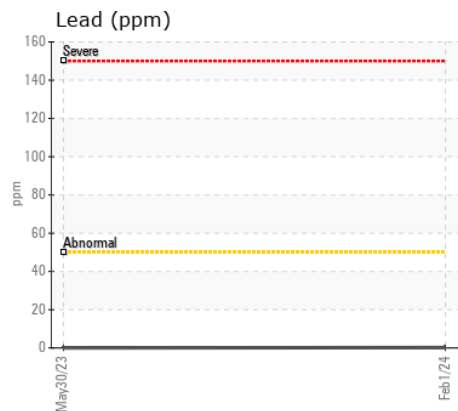
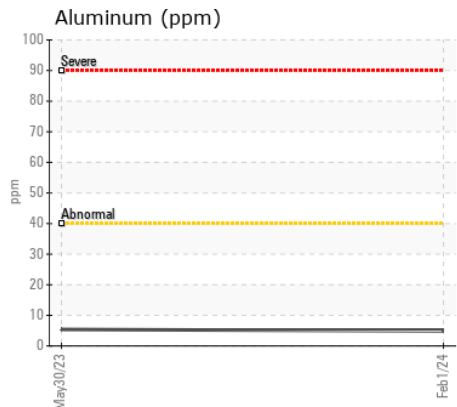
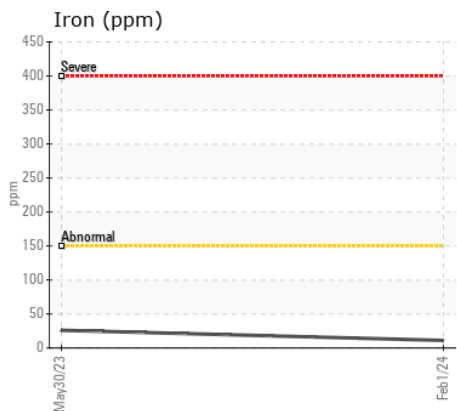
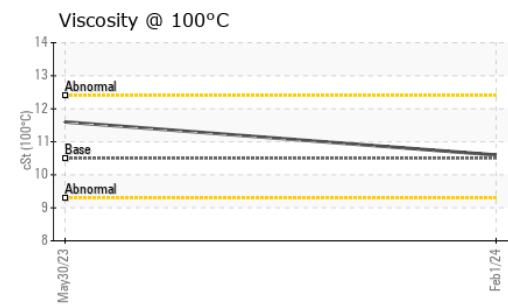
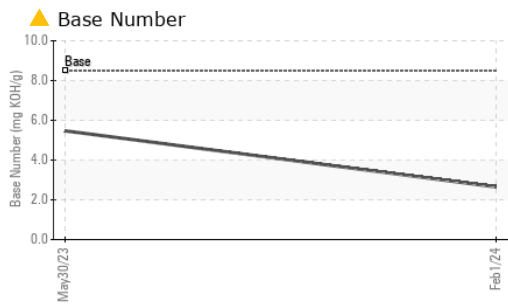
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	20	19	---
Potassium	ppm	ASTM D5185m	>20	4	3	---
Fuel		WC Method	>4.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	15.9	15.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.4	29.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The BN level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>400	<1	6	---
Boron	ppm	ASTM D5185m		13	31	---
Barium	ppm	ASTM D5185m		1	0	---
Molybdenum	ppm	ASTM D5185m	400	246	241	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	600	394	467	---
Calcium	ppm	ASTM D5185m	1500	1216	1445	---
Phosphorus	ppm	ASTM D5185m	800	575	701	---
Zinc	ppm	ASTM D5185m	900	701	847	---
Sulfur	ppm	ASTM D5185m		1893	2679	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.1	28.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ 2.65	5.47	---
Visc @ 100°C	cSt	ASTM D445	10.5	10.6	11.6	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06077839 **Received** : 01 Feb 2024
Lab Number : 06077839 **Diagnosed** : 05 Feb 2024
Unique Number : 10859930 **Diagnostician** : Jonathan Hester
Test Package : MOB 2

BUCHANAN COMMUNITY SCHOOLS
 401 W CHICAGO
 BUCHANAN, MI
 US 49107
 Contact: BOB MCCALL

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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