



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

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

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06210387</b>	TR05854047	---
Sample Date		Client Info		<b>13 Jun 2024</b>	22 May 2023	---
Machine Age	mls	Client Info		<b>0</b>	0	---
Oil Age	mls	Client Info		<b>0</b>	0	---
Filter Age	mls	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>16</b>	18	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	2	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

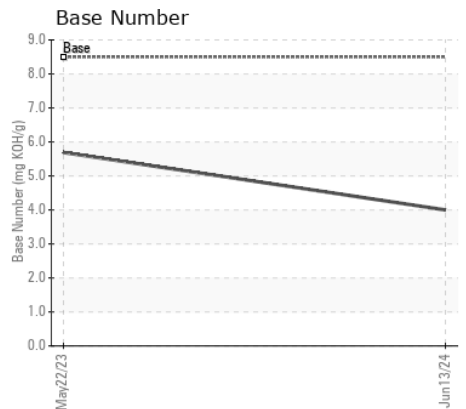
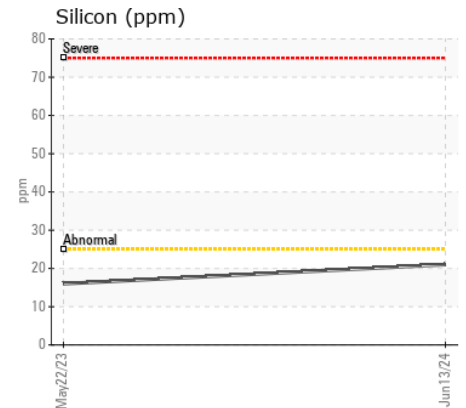
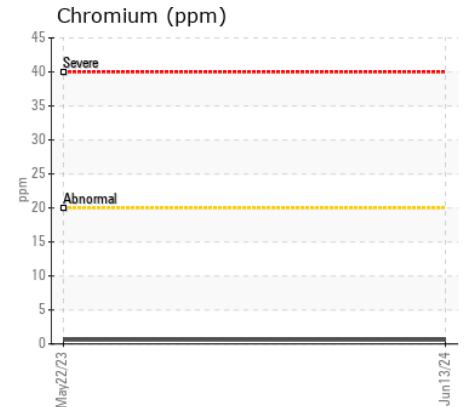
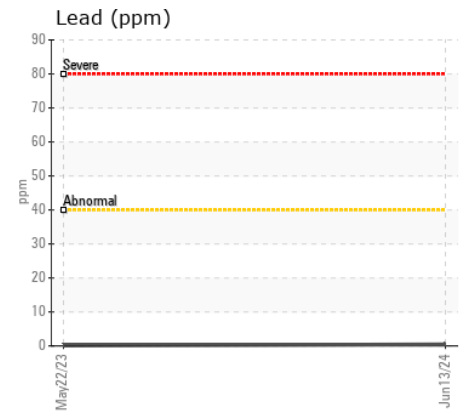
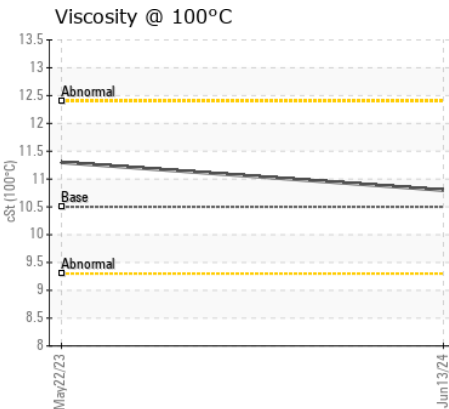
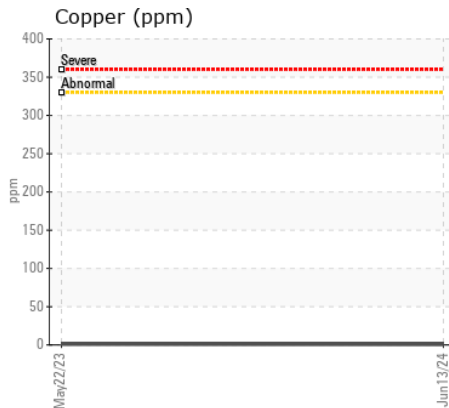
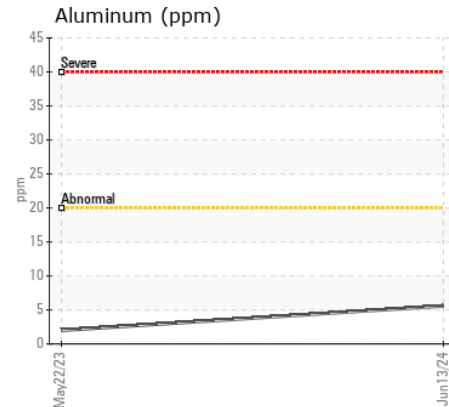
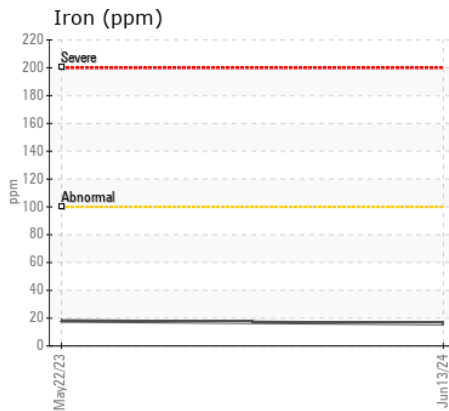
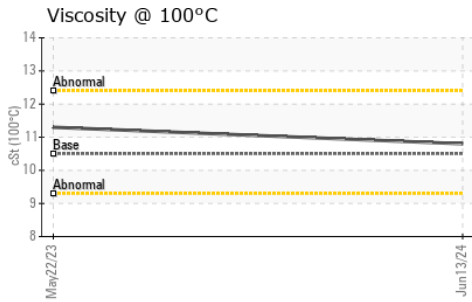
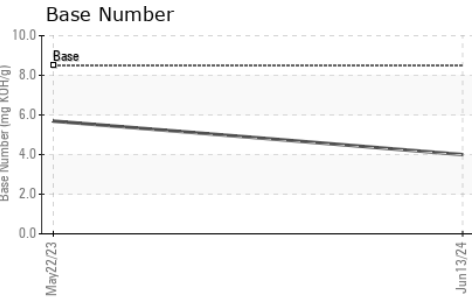
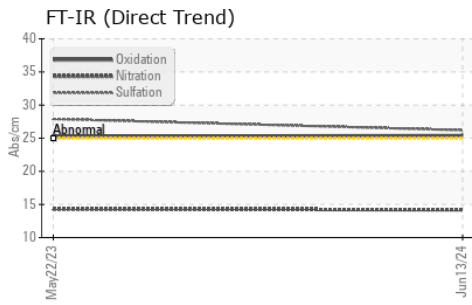
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>21</b>	16	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>14.2</b>	14.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.2</b>	27.9	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>4</b>	3	---
Boron	ppm	ASTM D5185m		<b>19</b>	21	---
Barium	ppm	ASTM D5185m		<b>1</b>	0	---
Molybdenum	ppm	ASTM D5185m	400	<b>270</b>	272	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	600	<b>450</b>	432	---
Calcium	ppm	ASTM D5185m	1500	<b>1266</b>	1425	---
Phosphorus	ppm	ASTM D5185m	800	<b>619</b>	649	---
Zinc	ppm	ASTM D5185m	900	<b>788</b>	831	---
Sulfur	ppm	ASTM D5185m		<b>1947</b>	2289	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.4</b>	25.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>4.00</b>	5.69	---
Visc @ 100°C	cSt	ASTM D445	10.5	<b>10.8</b>	11.3	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06210387  
**Lab Number** : 06210387  
**Unique Number** : 11083251  
**Test Package** : MOB 2  
**Received** : 14 Jun 2024  
**Tested** : 17 Jun 2024  
**Diagnosed** : 18 Jun 2024 - Don Baldrige

**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)

T:  
F: