



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

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06211967	TR06077839	TR05861431
Sample Date		Client Info		16 Jun 2024	01 Feb 2024	30 May 2023
Machine Age	mls	Client Info		27867	0	0
Oil Age	mls	Client Info		8000	0	0
Filter Age	mls	Client Info		8000	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	37	11	26
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	9	5	5
Lead	ppm	ASTM D5185m	>50	<1	<1	0
Copper	ppm	ASTM D5185m	>155	6	2	1
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

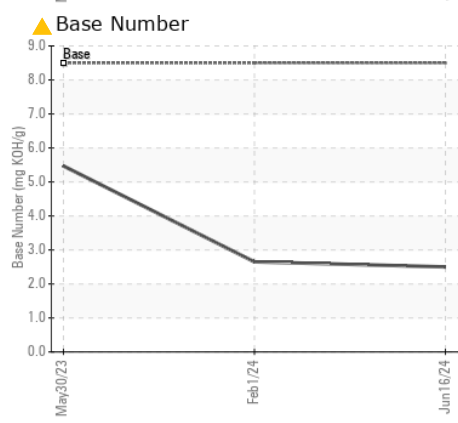
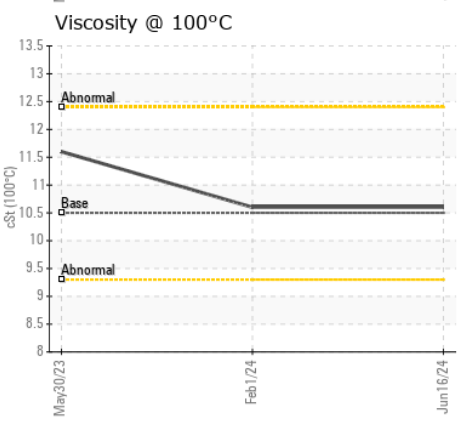
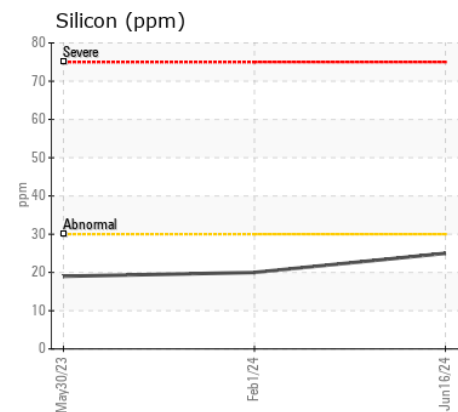
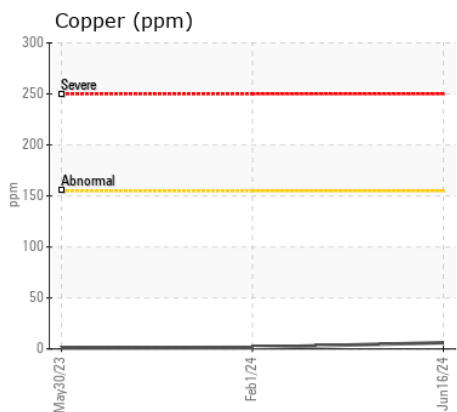
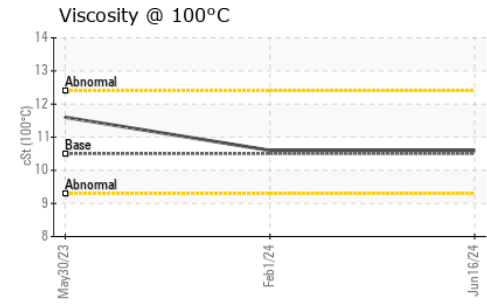
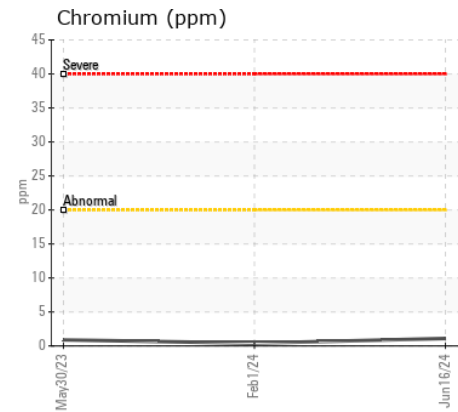
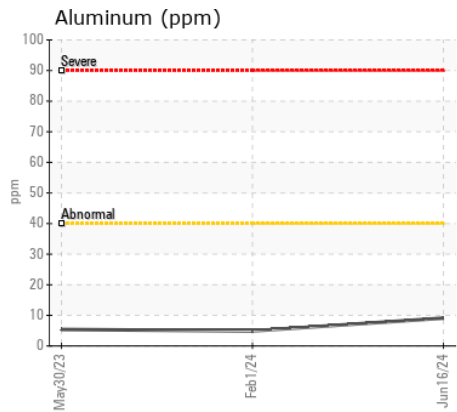
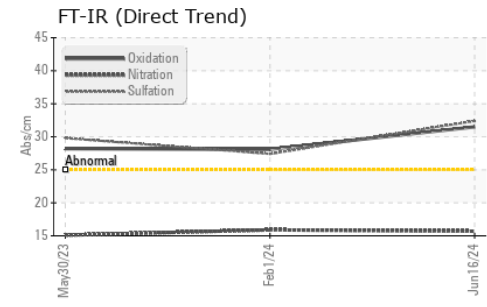
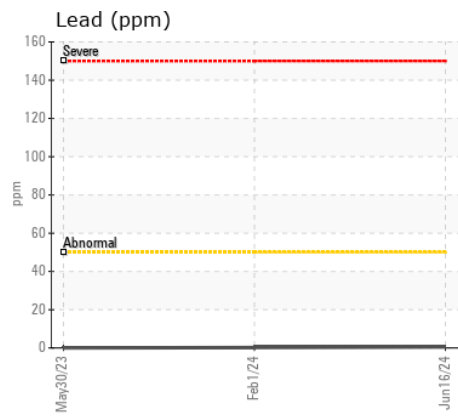
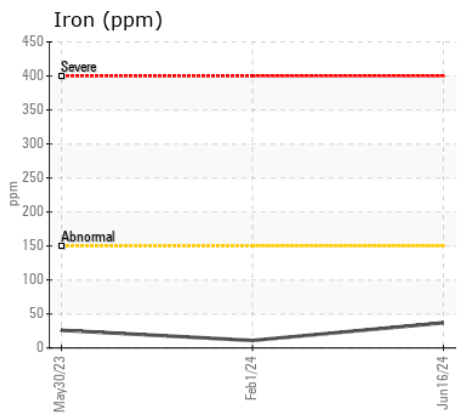
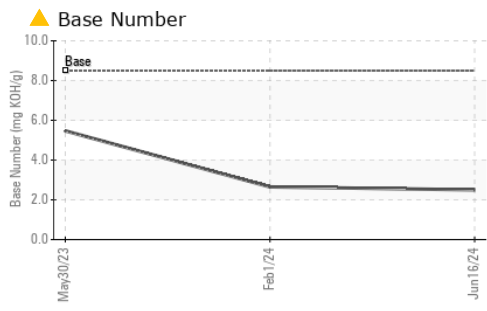
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	25	20	19
Potassium	ppm	ASTM D5185m	>20	5	4	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	15.7	15.9	15.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.4	27.4	29.8
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 level is low.

Sodium	ppm	ASTM D5185m	>400	9	<1	6
Boron	ppm	ASTM D5185m		28	13	31
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m	400	45	246	241
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m	600	356	394	467
Calcium	ppm	ASTM D5185m	1500	1195	1216	1445
Phosphorus	ppm	ASTM D5185m	800	570	575	701
Zinc	ppm	ASTM D5185m	900	682	701	847
Sulfur	ppm	ASTM D5185m		2969	1893	2679
Oxidation	Abs/.1mm	*ASTM D7414	>25	31.5	28.1	28.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ 2.50	▲ 2.65	5.47
Visc @ 100°C	cSt	ASTM D445	10.5	10.6	10.6	11.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06211967
Lab Number : 06211967
Unique Number : 11084831
Test Package : MOB 2
Received : 17 Jun 2024
Tested : 18 Jun 2024
Diagnosed : 19 Jun 2024 - Sean Felton

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

Certificate L2367
 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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