



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 453
 Component
Left Final Drive
 Fluid
TRC RED-TAC 80W90 (3 QTS)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil 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		TR05934478	---	---
Sample Date		Client Info		01 Aug 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		802	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>750	380	---	---
Chromium	ppm	ASTM D5185m	>9	4	---	---
Nickel	ppm	ASTM D5185m	>10	1	---	---
Titanium	ppm	ASTM D5185m		7	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>40	▲ 62	---	---
Lead	ppm	ASTM D5185m	>15	0	---	---
Copper	ppm	ASTM D5185m	>40	4	---	---
Tin	ppm	ASTM D5185m	>10	0	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

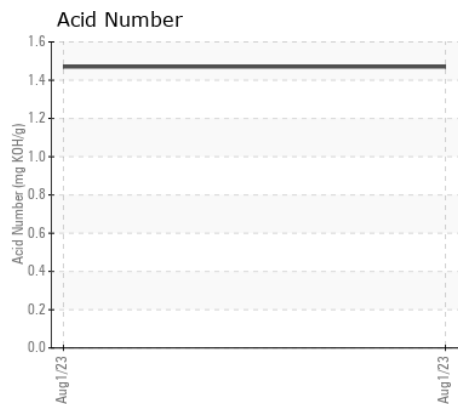
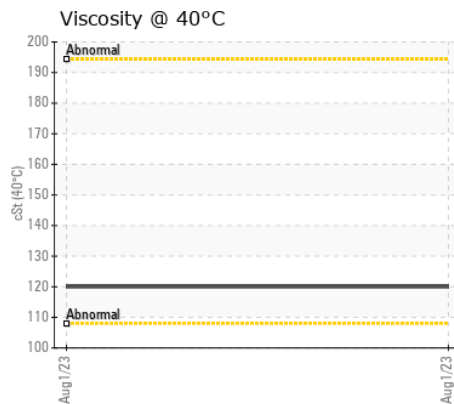
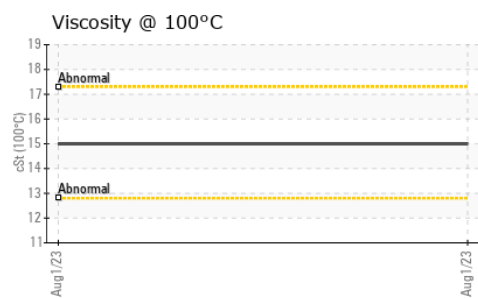
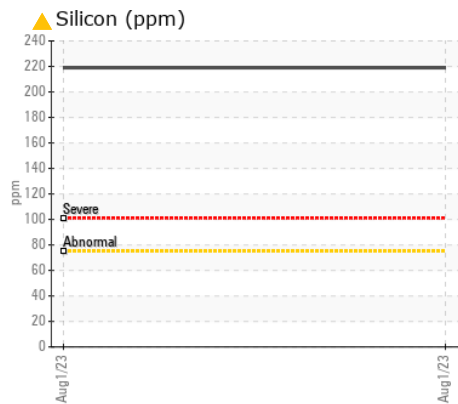
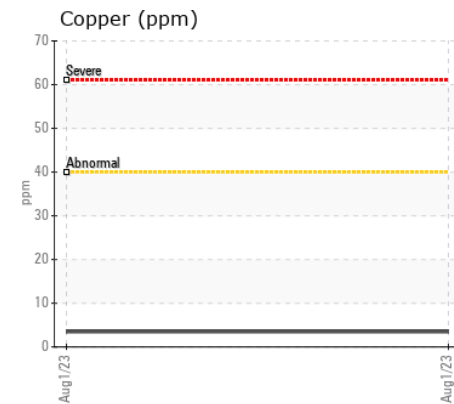
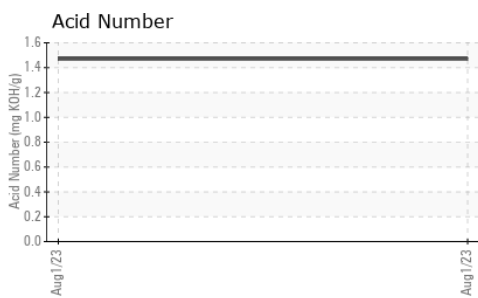
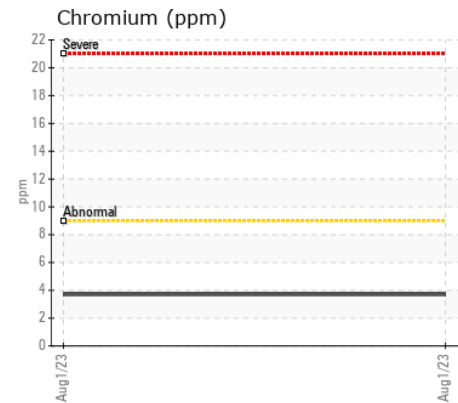
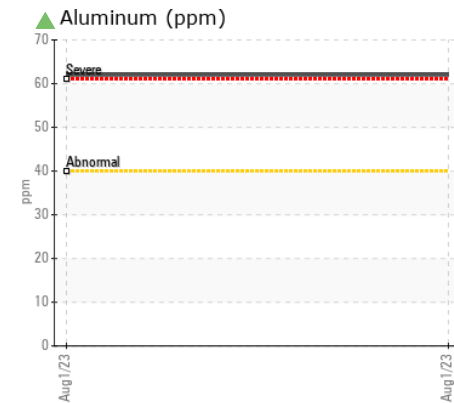
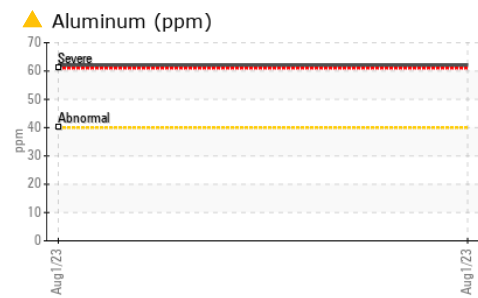
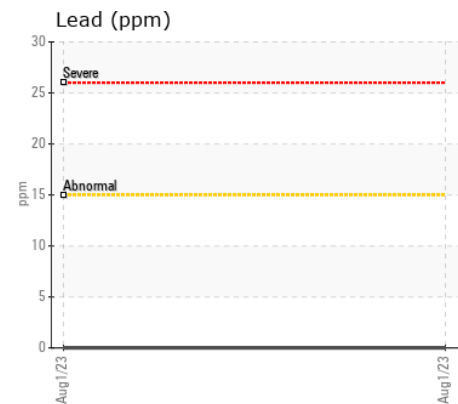
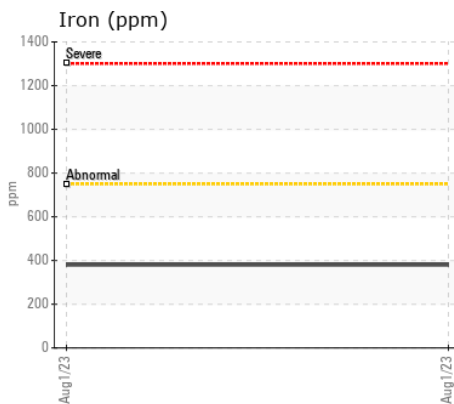
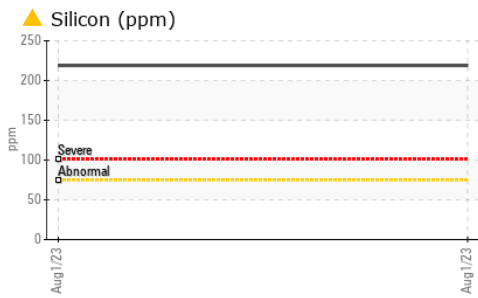
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>75	▲ 219	---	---
Potassium	ppm	ASTM D5185m	>20	7	---	---
Water		WC Method	>0.075	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.075	NEG	---	---

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>51	7	---	---
Boron	ppm	ASTM D5185m		271	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		117	---	---
Manganese	ppm	ASTM D5185m		4	---	---
Magnesium	ppm	ASTM D5185m		26	---	---
Calcium	ppm	ASTM D5185m		25	---	---
Phosphorus	ppm	ASTM D5185m		909	---	---
Zinc	ppm	ASTM D5185m		5	---	---
Sulfur	ppm	ASTM D5185m		19832	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		1.47	---	---
Visc @ 40°C	cSt	ASTM D445		120	---	---
Visc @ 100°C	cSt	ASTM D445		15.0	---	---
Viscosity Index (VI)	Scale	ASTM D2270		128	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05934478
Lab Number : 05934478
Unique Number : 10619749
Test Package : MOB 2 (Additional Tests: KV100, VI)

Received : 24 Aug 2023
Tested : 25 Aug 2023
Diagnosed : 27 Aug 2023 - Don Baldrige

BIGHORN LOGGING CORP
 13820 NW MAIN ST
 BANKS, OR
 US 97106
 Contact: JEFF WARREN

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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F: