



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 5101 EN 41 TR-159
 Component
Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06224696	TR06212593	TR05876322
Sample Date		Client Info		17 Jun 2024	28 May 2024	09 Jun 2023
Machine Age	hrs	Client Info		7465	7315	6740
Oil Age	hrs	Client Info		500	500	600
Filter Age	hrs	Client Info		500	500	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	47	12	41
Chromium	ppm	ASTM D5185m	>11	1	0	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	7	5	4
Lead	ppm	ASTM D5185m	>26	12	<1	4
Copper	ppm	ASTM D5185m	>26	2	4	2
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

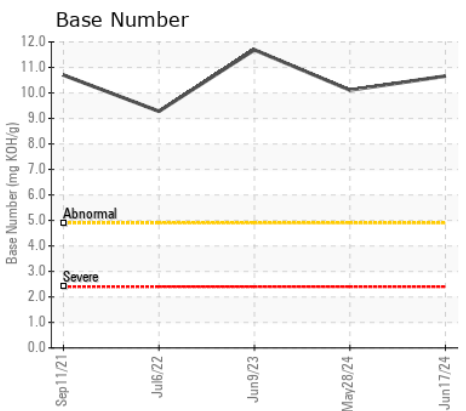
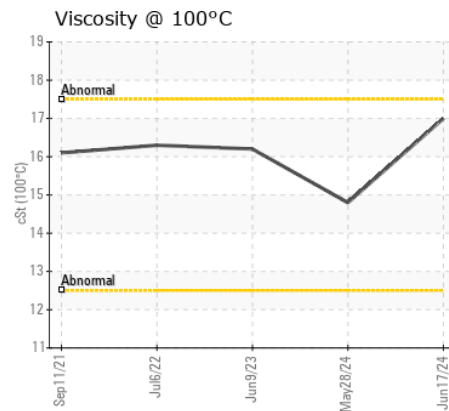
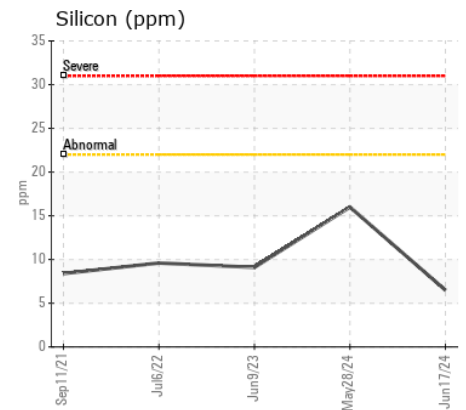
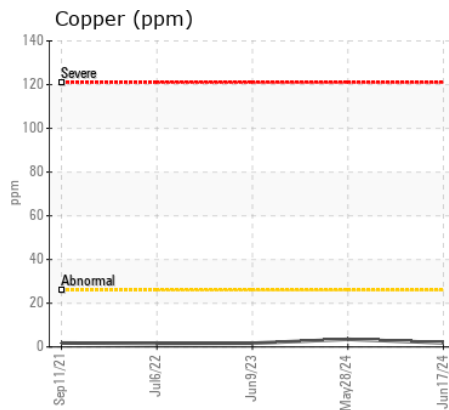
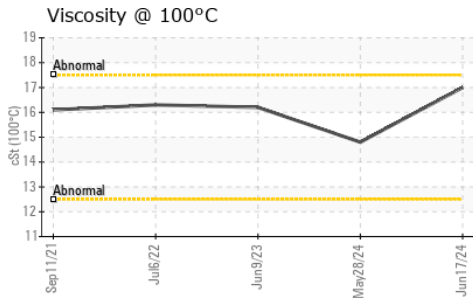
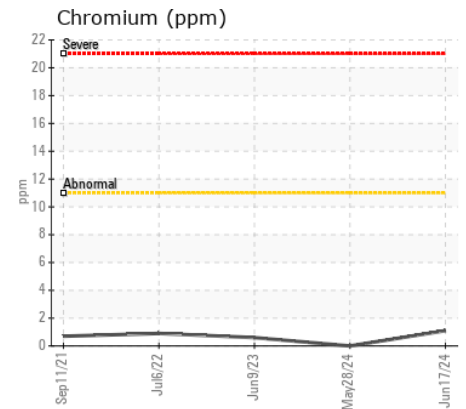
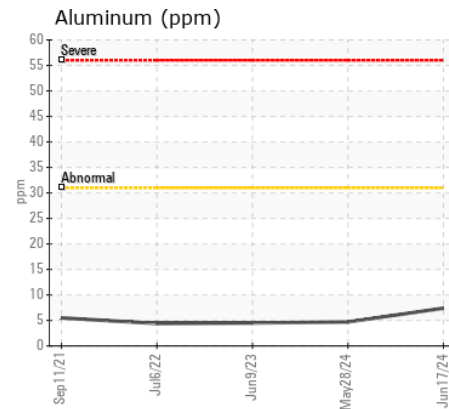
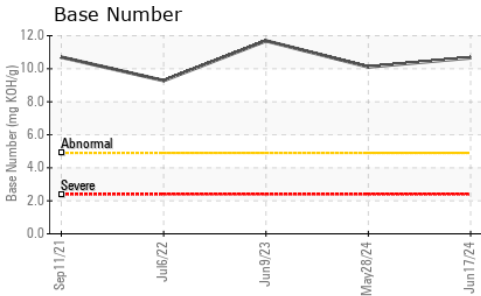
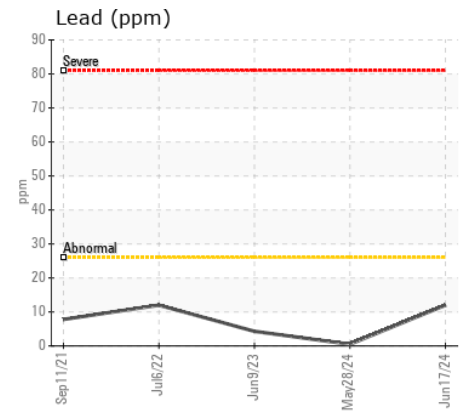
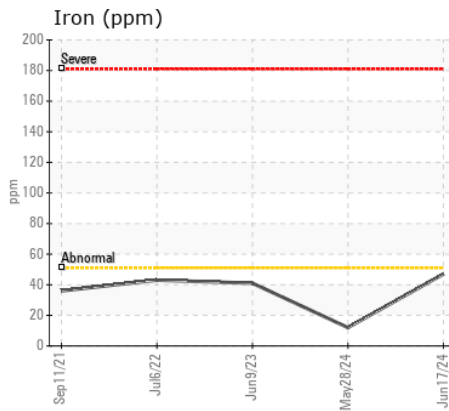
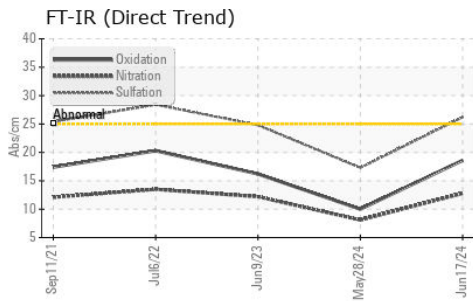
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	16	9
Potassium	ppm	ASTM D5185m	>20	4	4	3
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.2	0.6
Nitration	Abs/cm	*ASTM D7624	>20	12.8	8.1	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	17.3	24.8
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	>0.21	NEG	NEG	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	>31	5	4	0
Boron	ppm	ASTM D5185m		0	11	0
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		43	124	155
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		19	33	32
Calcium	ppm	ASTM D5185m		4742	4213	4526
Phosphorus	ppm	ASTM D5185m		976	989	908
Zinc	ppm	ASTM D5185m		1196	1113	1125
Sulfur	ppm	ASTM D5185m		4748	5161	4929
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	10.0	16.2
Base Number (BN)	mg KOH/g	ASTM D2896		10.66	10.11	11.69
Visc @ 100°C	cSt	ASTM D445		17.0	14.8	16.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06224696
Lab Number : 06224696
Unique Number : 11102893
Test Package : MOB 2
Received : 01 Jul 2024
Tested : 02 Jul 2024
Diagnosed : 02 Jul 2024 - Don Baldrige

CHERRY HILL FARMS
 PO BOX 308
 SANTAQUIN, UT
 US 84655
 Contact: JOHN AAGARD

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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