



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
TERRAGATOR TG8400B 477

Component
Diesel Engine

Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06211974	TR06077836	TR05879063
Sample Date		Client Info		10 Jun 2024	24 Jan 2024	15 Jun 2023
Machine Age	hrs	Client Info		3265	3200	0
Oil Age	hrs	Client Info		500	400	400
Filter Age	hrs	Client Info		300	400	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	28	7	6
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	5	3	1
Lead	ppm	ASTM D5185m	>40	11	1	<1
Copper	ppm	ASTM D5185m	>330	41	43	19
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

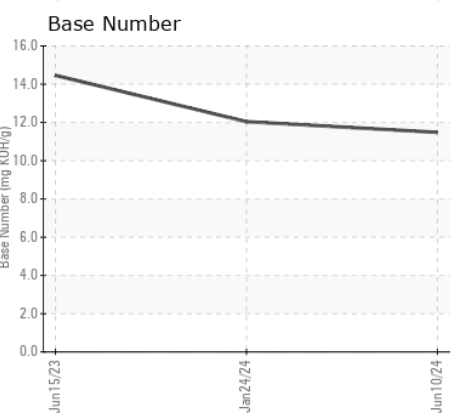
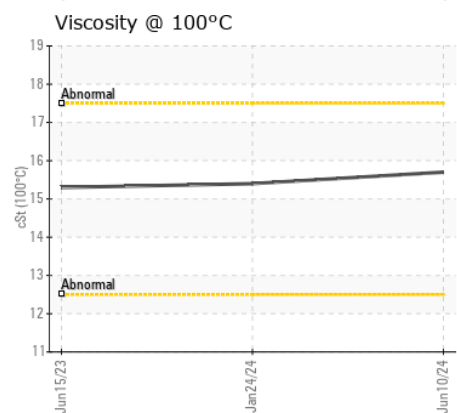
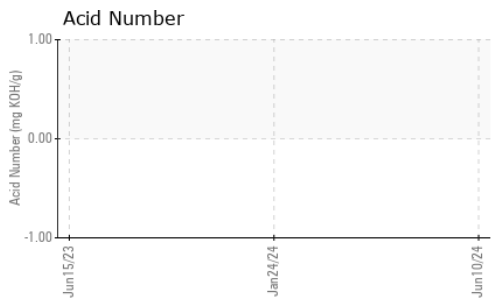
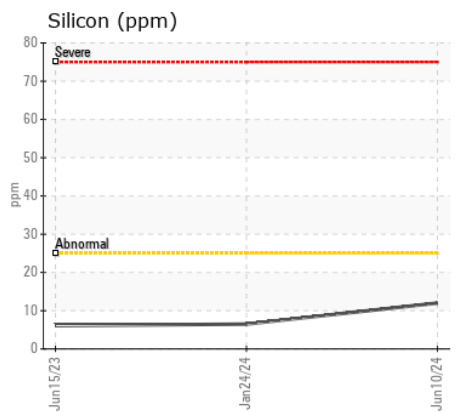
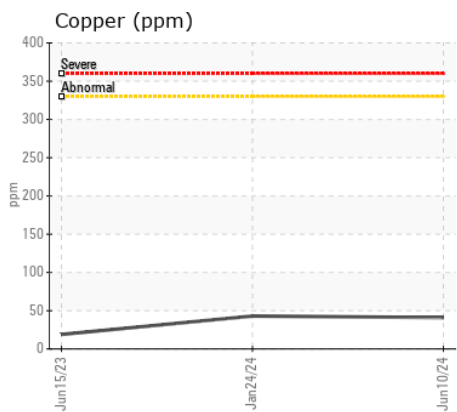
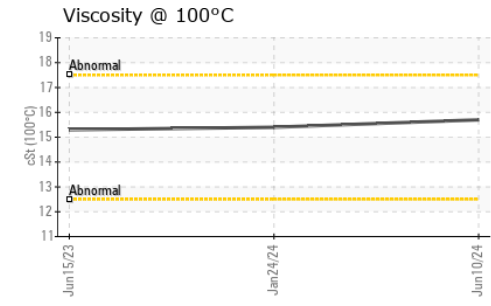
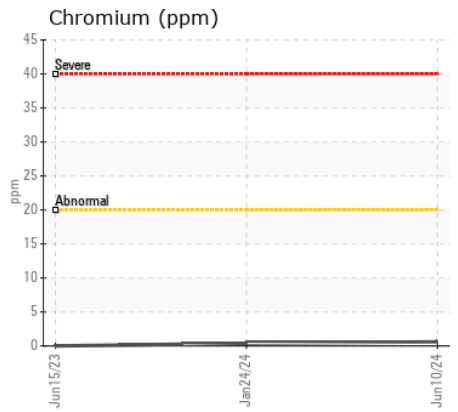
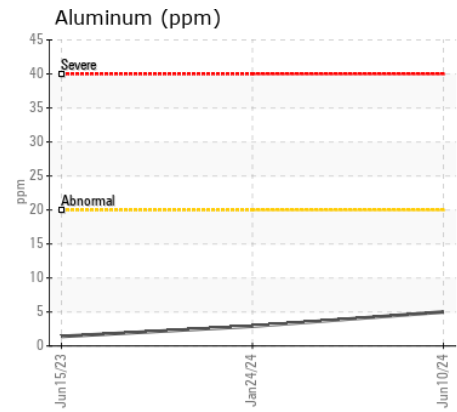
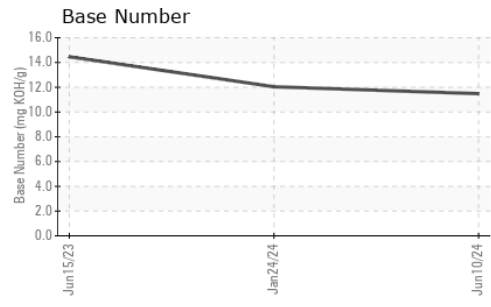
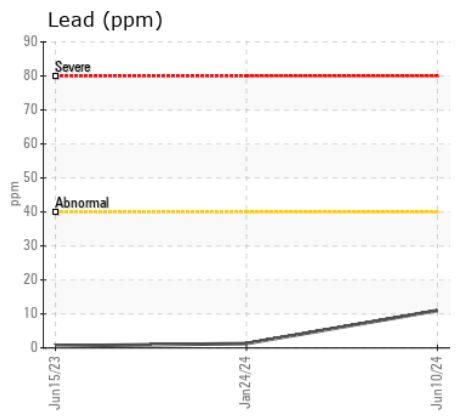
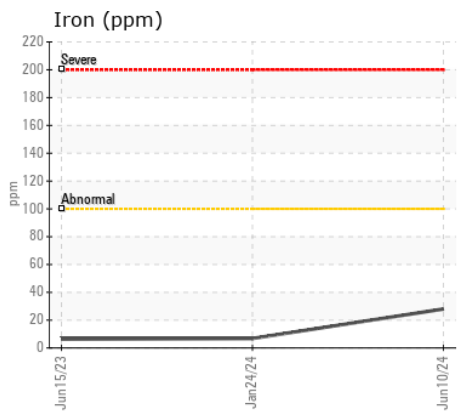
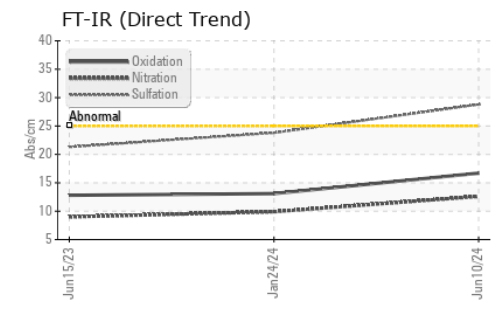
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	12	6	6
Potassium	ppm	ASTM D5185m	>20	3	7	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	12.6	9.9	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.8	23.8	21.3
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 result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	0	0
Boron	ppm	ASTM D5185m		10	17	10
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		120	122	120
Manganese	ppm	ASTM D5185m		1	0	<1
Magnesium	ppm	ASTM D5185m		65	53	52
Calcium	ppm	ASTM D5185m		5264	4634	4809
Phosphorus	ppm	ASTM D5185m		1067	929	943
Zinc	ppm	ASTM D5185m		1242	1115	1103
Sulfur	ppm	ASTM D5185m		5238	4434	4421
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	13.1	12.8
Base Number (BN)	mg KOH/g	ASTM D2896		11.48	12.04	14.46
Visc @ 100°C	cSt	ASTM D445		15.7	15.4	15.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06211974 **Received** : 17 Jun 2024
Lab Number : 06211974 **Tested** : 19 Jun 2024
Unique Number : 11084838 **Diagnosed** : 19 Jun 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: TAN Man)

WALLOWA COUNTY GRAIN GROWERS
 911 S RIVER ST
 ENTERPRISE, OR
 US 97828
 Contact: RON GROGAN

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: