



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MILLER MILLER 4315
 Component
Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC IV 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06210385	TR05802619	TR04475592
Sample Date		Client Info		09 Jun 2024	16 Mar 2023	12 May 2018
Machine Age	hrs	Client Info		2744	2485	1545
Oil Age	hrs	Client Info		646	387	660
Filter Age	hrs	Client Info		646	387	660
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	42	37	50
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>50	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>50	10	6	7
Lead	ppm	ASTM D5185m	>40	2	<1	6
Copper	ppm	ASTM D5185m	>330	18	5	7
Tin	ppm	ASTM D5185m	>15	2	<1	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

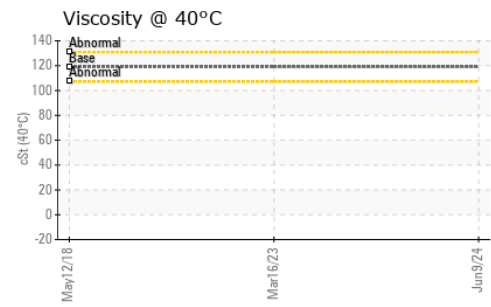
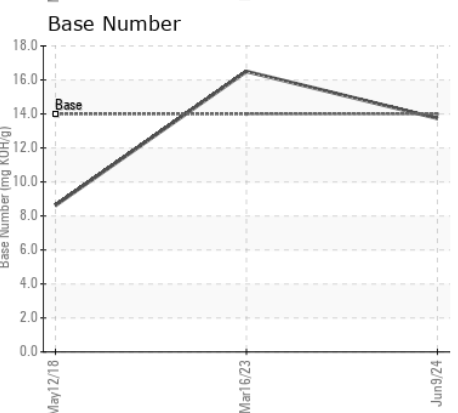
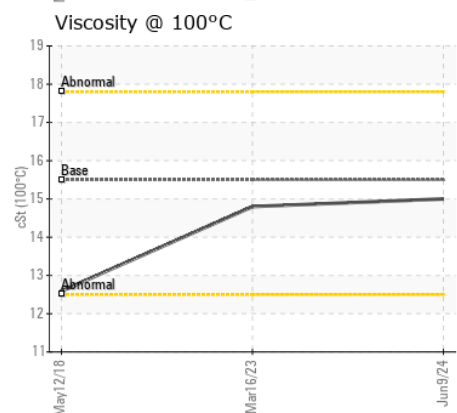
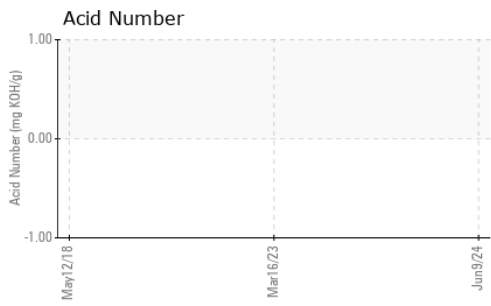
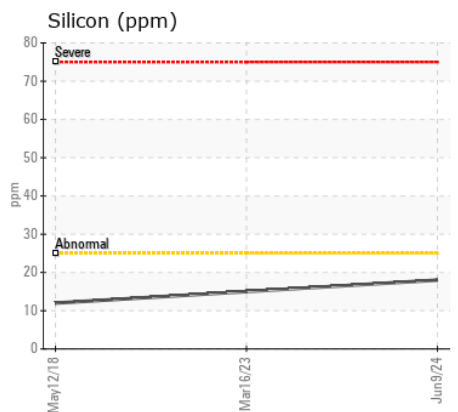
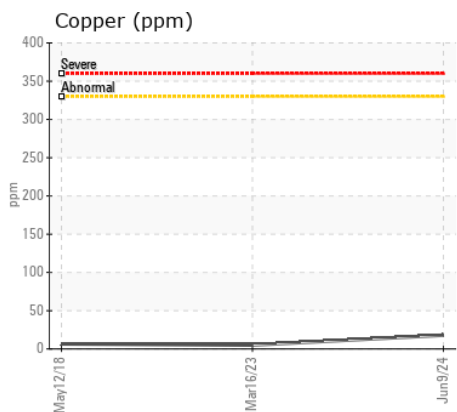
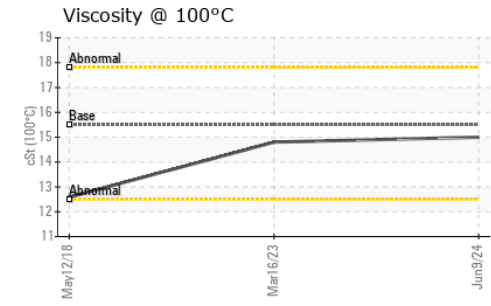
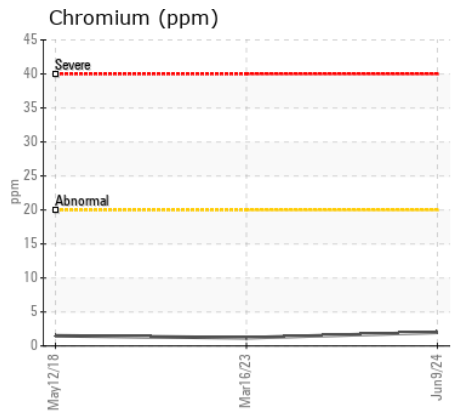
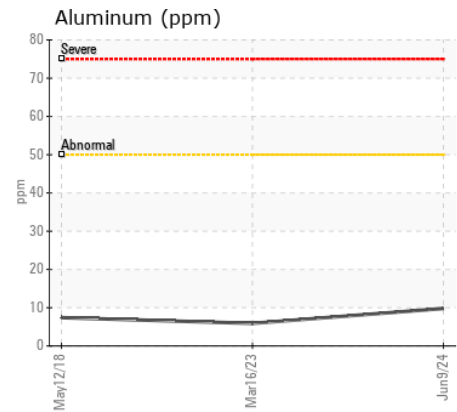
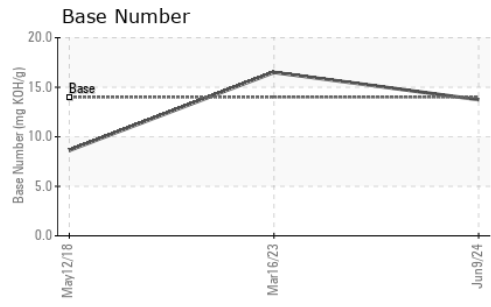
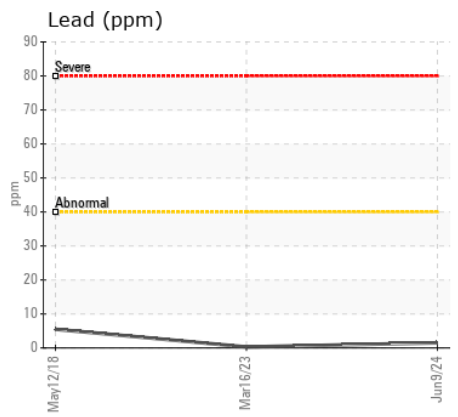
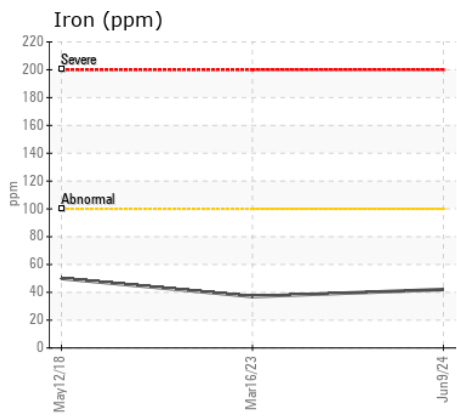
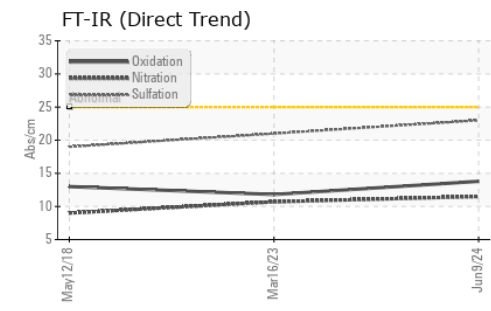
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	18	15	12
Potassium	ppm	ASTM D5185m	>20	4	4	0
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	1.2	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	11.5	10.7	9.
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0	21.0	19.
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 suitable for further service.

Sodium	ppm	ASTM D5185m		4	3	4
Boron	ppm	ASTM D5185m		<1	2	2
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		154	138	132
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		121	130	931
Calcium	ppm	ASTM D5185m	1300	4473	4168	1401
Phosphorus	ppm	ASTM D5185m		974	913	1067
Zinc	ppm	ASTM D5185m	1300	1194	1104	1281
Sulfur	ppm	ASTM D5185m		4279	4800	3185
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	11.8	13.
Base Number (BN)	mg KOH/g	ASTM D2896	14	13.74	16.50	8.62
Visc @ 100°C	cSt	ASTM D445	15.5	15.0	14.8	12.59



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06210385 **Received** : 14 Jun 2024
Lab Number : 06210385 **Tested** : 18 Jun 2024
Unique Number : 11083249 **Diagnosed** : 18 Jun 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: KV40, TAN Man)

BOB WALKER
 14925 SWAN CREEK ROAD
 HEMLOCK, MI
 US 48626
 Contact: JOHN HIGGINS

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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