



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK TANKER-4
 Component
Diesel Engine
 Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (56 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06213673	TR03303443	TR03057524
Sample Date		Client Info		06 Jun 2024	04 Jun 2013	03 Apr 2012
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		8000	1057	2248
Filter Age	mls	Client Info		8000	0	2248
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Moderate concentration of visible metal present. All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	13	25	14
Chromium	ppm	ASTM D5185m	>20	0	<1	1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	1	2
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	▲ MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

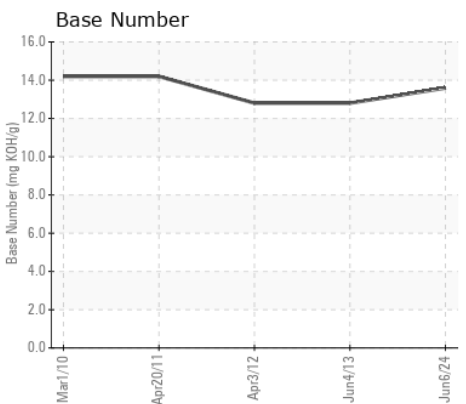
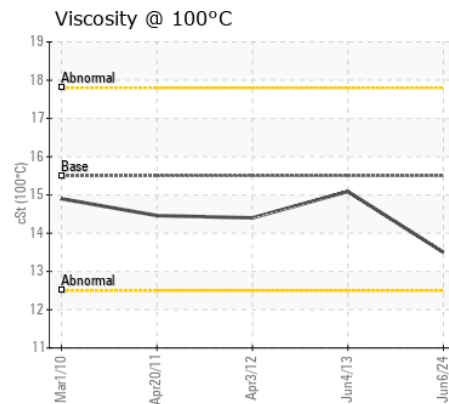
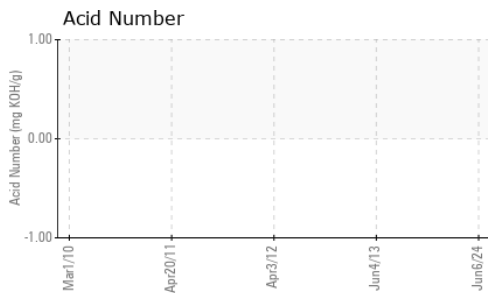
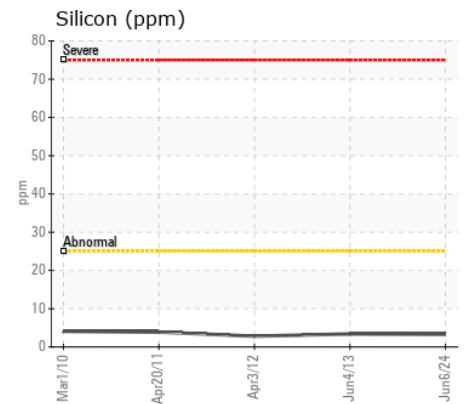
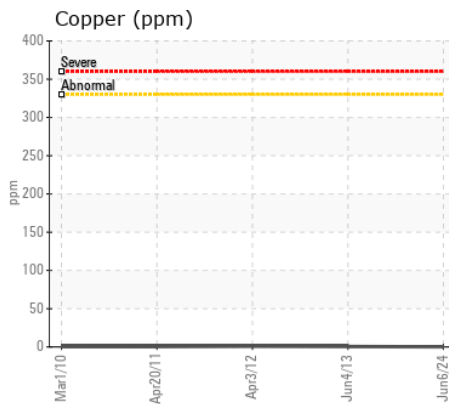
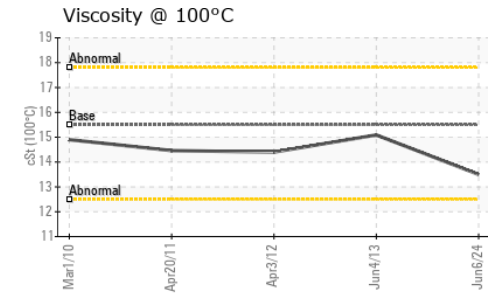
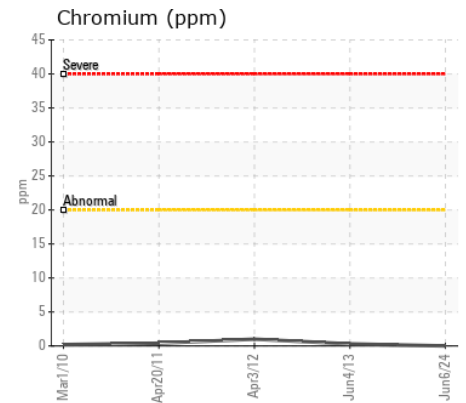
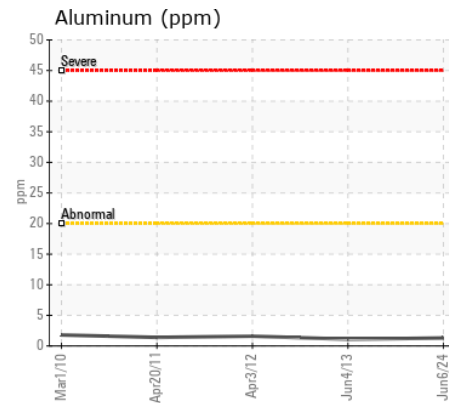
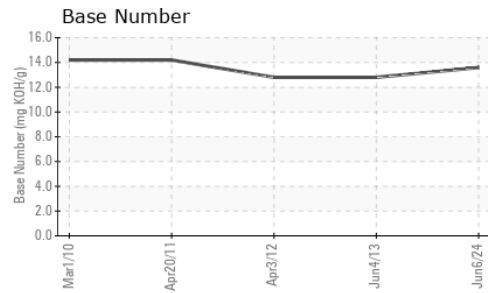
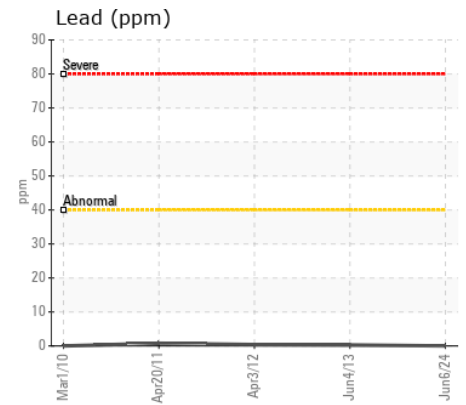
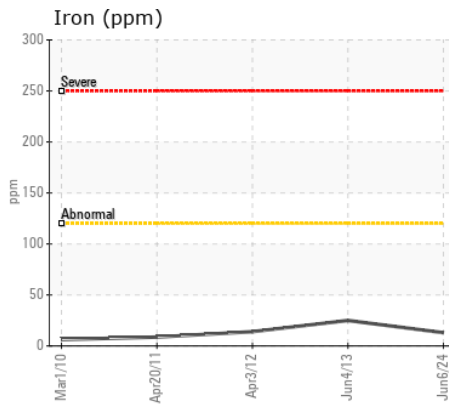
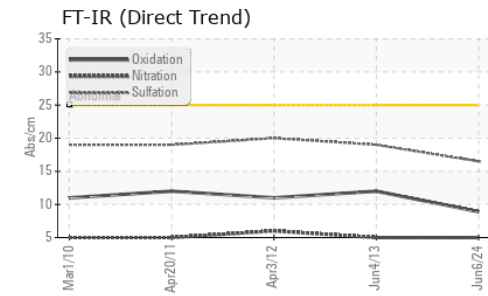
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	3	3
Potassium	ppm	ASTM D5185m	>20	<1	3	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.5	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	5.0	5.	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.5	19.	20.
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		2	4	3
Boron	ppm	ASTM D5185m		0	<1	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		29	<1	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		35	11	18
Calcium	ppm	ASTM D5185m		5200	4152	4432
Phosphorus	ppm	ASTM D5185m		1038	1196	1235
Zinc	ppm	ASTM D5185m		1215	1240	1272
Sulfur	ppm	ASTM D5185m		5368	6697	4544
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.9	12.	11.
Base Number (BN)	mg KOH/g	ASTM D2896		13.59	12.8	12.8
Visc @ 100°C	cSt	ASTM D445	15.5	13.5	15.09	14.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06213673
Lab Number : 06213673
Unique Number : 11086537
Test Package : MOB 2 (Additional Tests: TAN Man)

Received : 18 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 2024 - Sean Felton

CITY OF CANYON
 301 16TH STREET
 CANYON, TX
 US 79015
 Contact: MIKE LEWIS

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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