



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

**78**

Component

**Rear Diesel Engine**

Fluid

**TRC MOLY XL PRO-SPEC III SYNTHETIC15W40 (39 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR0000753</b>	TR0000325	TR0000228
Sample Date		Client Info		<b>10 Apr 2023</b>	14 Dec 2021	22 Sep 2021
Machine Age	hrs	Client Info		<b>22307</b>	19148	19804
Oil Age	hrs	Client Info		<b>2</b>	1	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>N/A</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>74</b>	42	7
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	8	1
Lead	ppm	ASTM D5185m	>40	<b>25</b>	4	1
Copper	ppm	ASTM D5185m	>330	<b>21</b>	25	5
Tin	ppm	ASTM D5185m	>15	<b>3</b>	5	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

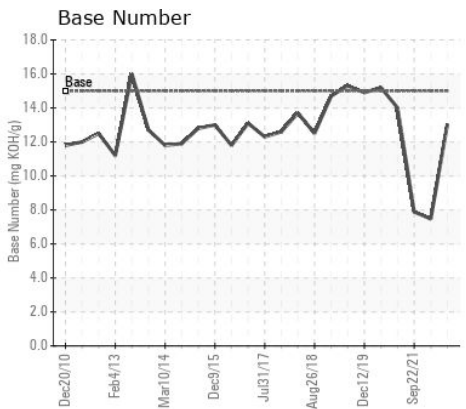
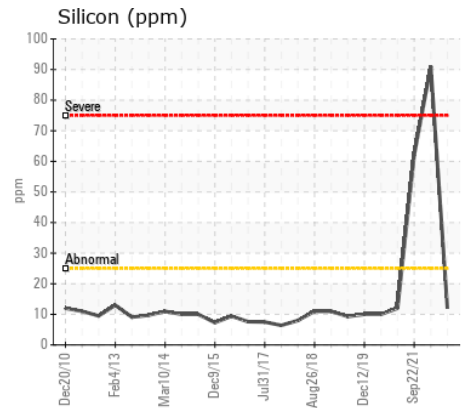
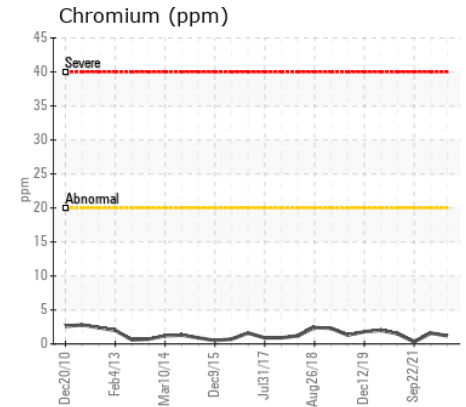
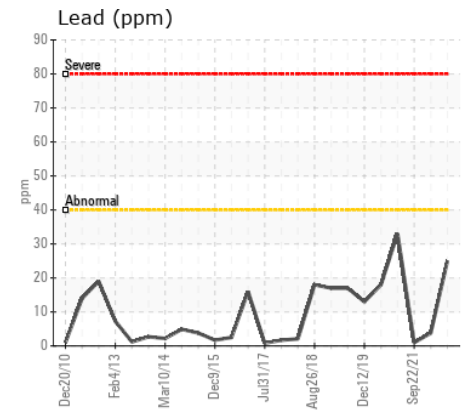
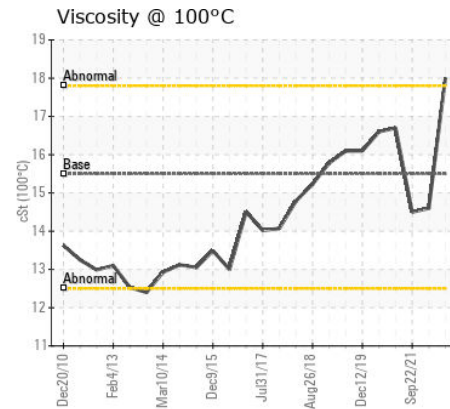
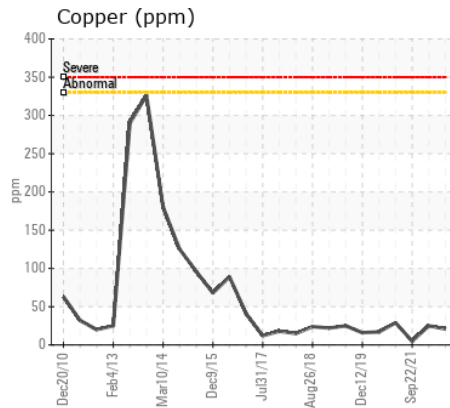
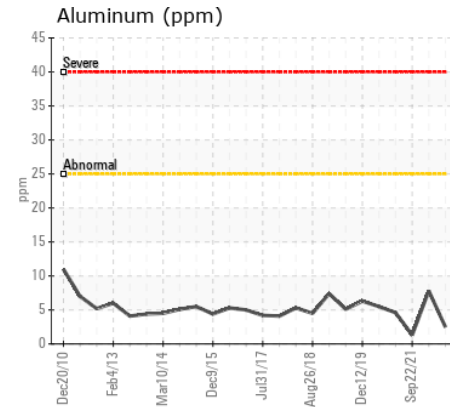
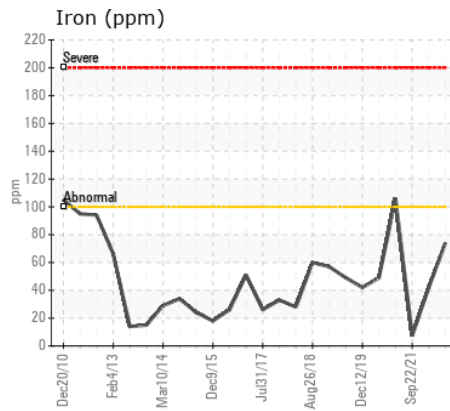
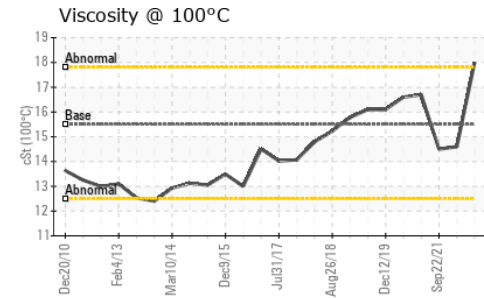
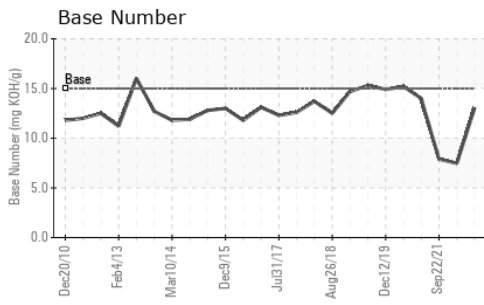
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>12</b>	▲ 91	▲ 62
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	8	4
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>15.2</b>	9.8	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>27.6</b>	22.2	19.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>6</b>	36	29
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	43	109
Barium	ppm	ASTM D5185m		<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m		<b>111</b>	29	2
Manganese	ppm	ASTM D5185m		<b>1</b>	2	<1
Magnesium	ppm	ASTM D5185m		<b>51</b>	593	657
Calcium	ppm	ASTM D5185m	4500	<b>4851</b>	2083	1321
Phosphorus	ppm	ASTM D5185m		<b>944</b>	1074	1019
Zinc	ppm	ASTM D5185m	1400	<b>1218</b>	1178	1106
Sulfur	ppm	ASTM D5185m		<b>4637</b>	3282	3294
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.6</b>	15.7	13
Base Number (BN)	mg KOH/g	ASTM D2896	15	<b>13.04</b>	7.47	7.89
Visc @ 100°C	cSt	ASTM D445	15.5	<b>18.0</b>	14.6	14.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TR0000753

Lab Number : 05818331

Unique Number : 10426414

Test Package : MOB 2

Received : 12 Apr 2023

Tested : 14 Apr 2023

Diagnosed : 15 Apr 2023 - Don Baldrige

S S CONCRETE MATERIALS LLC

P.O. BOX 23283

BULLHEAD CITY, AZ

US 86439

Contact: MARK OPHEIM

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)

T:

F: (928)754-1991