



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

**54E**

Component

**Diesel Engine**

Fluid

**TRC PRO-SPEC IV XP SYN BLEND SAE 10W30 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06149602</b>	TR05760179	TR05687411
Sample Date		Client Info		<b>21 Mar 2024</b>	06 Feb 2023	12 Oct 2022
Machine Age	mls	Client Info		<b>35784</b>	0	7001
Oil Age	mls	Client Info		<b>0</b>	5000	0
Filter Age	mls	Client Info		<b>0</b>	5000	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>90	<b>23</b>	65	39
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	6	6
Lead	ppm	ASTM D5185m	>40	<b>0</b>	3	0
Copper	ppm	ASTM D5185m	>330	<b>3</b>	48	48
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	<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

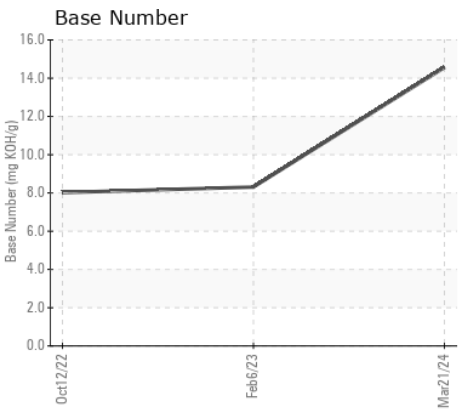
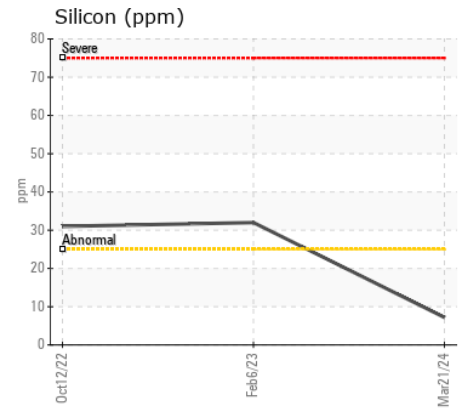
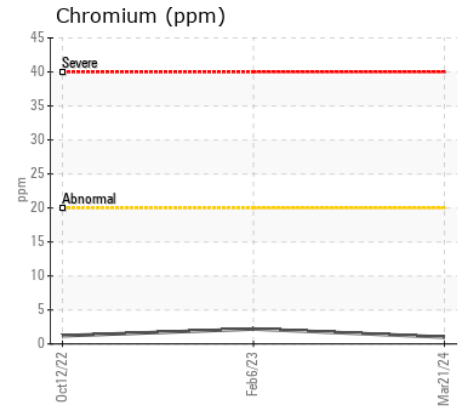
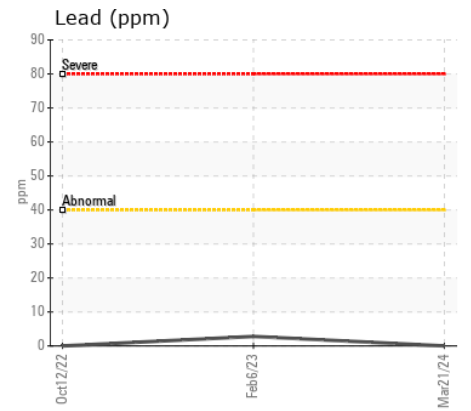
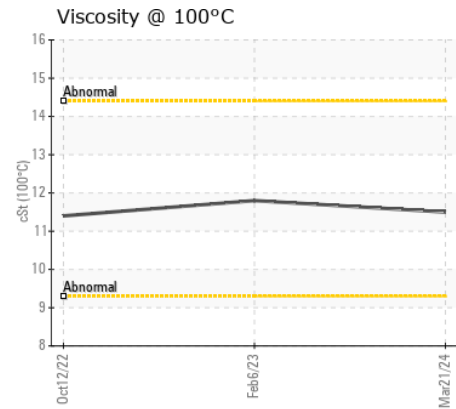
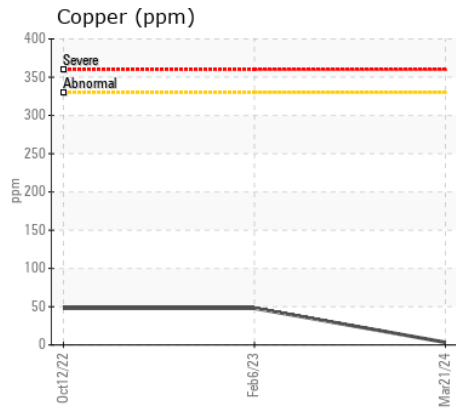
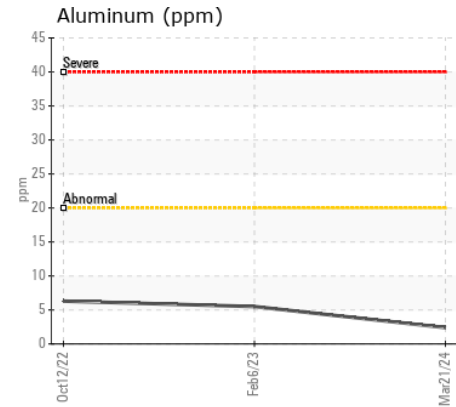
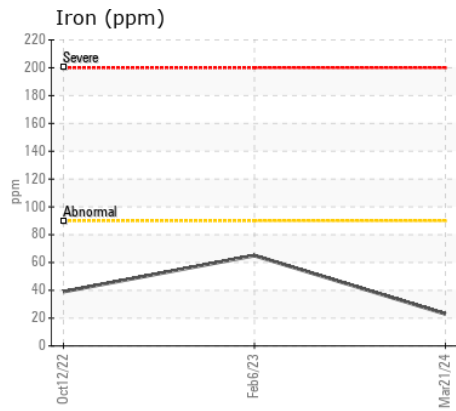
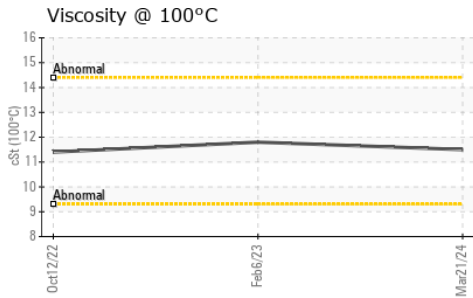
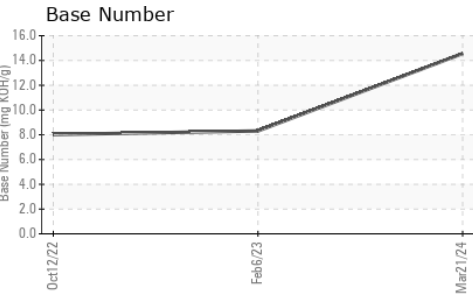
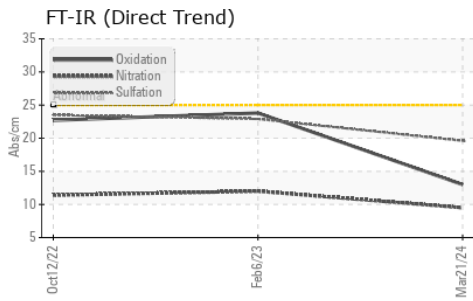
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	▲ 32	▲ 31
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	3
Fuel		WC Method	>3.0	<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	>6	<b>0.4</b>	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	12.0	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	22.9	23.5
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>3</b>	7	6
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	46	41
Barium	ppm	ASTM D5185m		<b>0</b>	6	4
Molybdenum	ppm	ASTM D5185m		<b>4</b>	52	49
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	6	6
Magnesium	ppm	ASTM D5185m		<b>60</b>	769	817
Calcium	ppm	ASTM D5185m		<b>3932</b>	1407	1218
Phosphorus	ppm	ASTM D5185m		<b>853</b>	690	704
Zinc	ppm	ASTM D5185m		<b>982</b>	911	842
Sulfur	ppm	ASTM D5185m		<b>4479</b>	2364	2552
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.0</b>	23.8	22.7
Base Number (BN)	mg KOH/g	ASTM D2896		<b>14.56</b>	8.31	8.02
Visc @ 100°C	cSt	ASTM D445		<b>11.5</b>	11.8	11.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : TR06149602  
 Lab Number : 06149602  
 Unique Number : 10979680  
 Test Package : MOB 2

Received : 15 Apr 2024  
 Tested : 16 Apr 2024  
 Diagnosed : 16 Apr 2024 - Wes Davis

**WELD COUNTY SCHOOL DISTRICT**  
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 WINDSOR, CO  
 US 80550  
 Contact: JAMES WEST  
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 T: (720)425-9923  
 F: x:

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)