



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**GMC 6167**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC MOLY XL PRO-SPEC IV 15W40 (3 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06236298</b>	TR06066315	TR05923618
Sample Date		Client Info		<b>08 Jul 2024</b>	02 Jan 2024	01 Aug 2023
Machine Age	mls	Client Info		<b>193628</b>	188378	183236
Oil Age	mls	Client Info		<b>5000</b>	5000	5000
Filter Age	mls	Client Info		<b>5000</b>	5000	5000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>5</b>	4	5
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>7</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</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

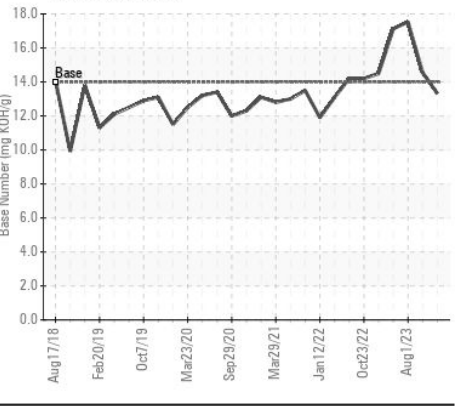
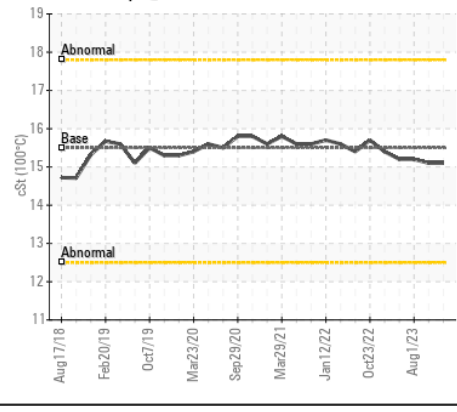
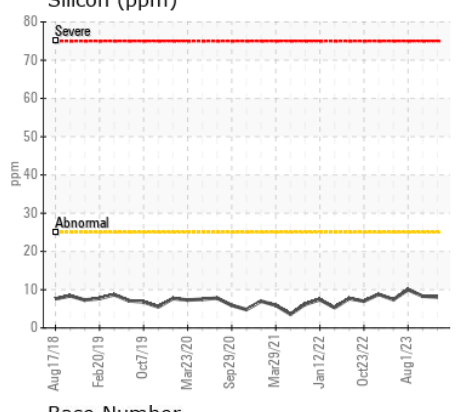
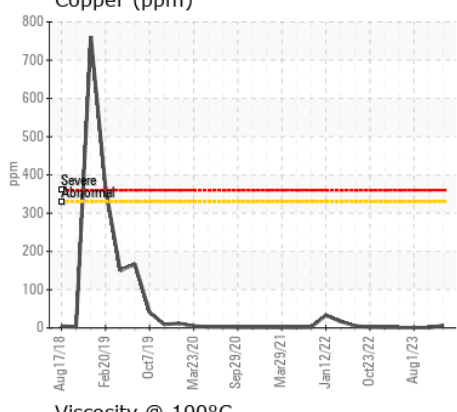
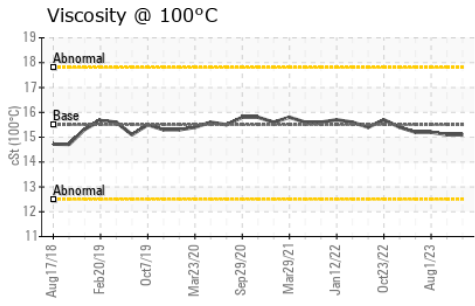
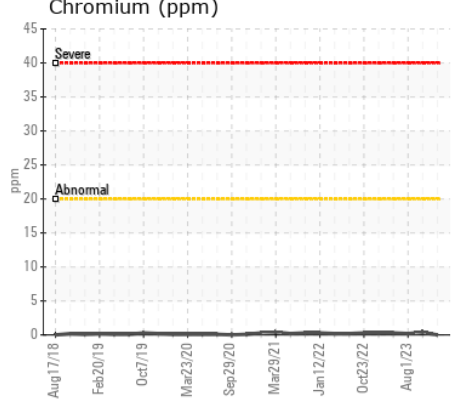
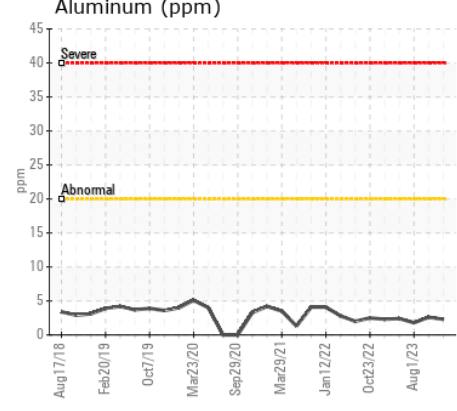
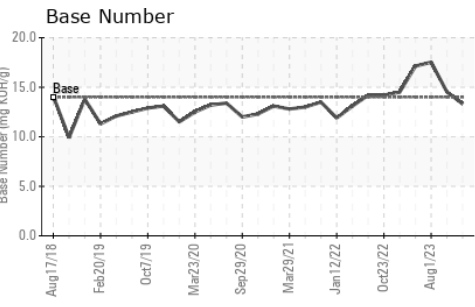
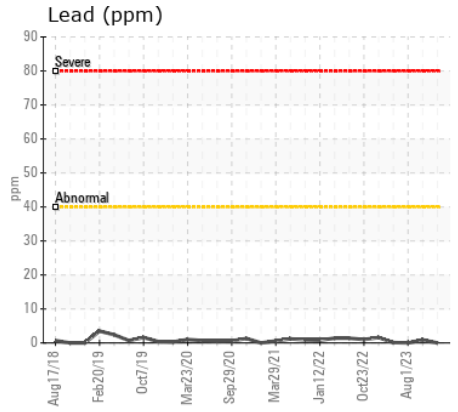
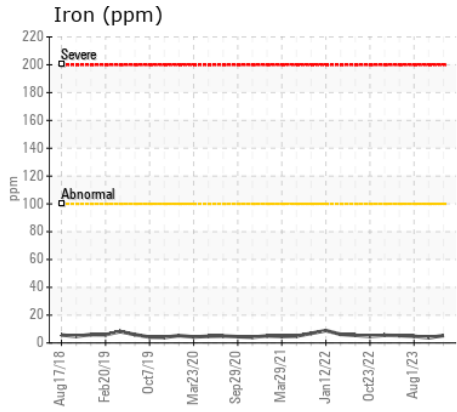
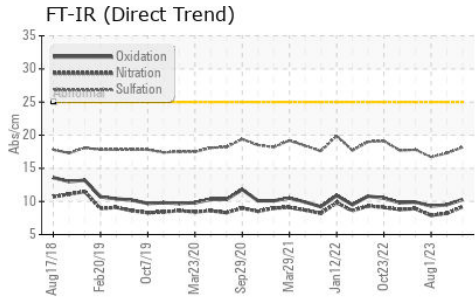
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	10
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	2
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>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	8.2	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.2</b>	17.3	16.7
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>	2	3
Boron	ppm	ASTM D5185m		<b>0</b>	0	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>139</b>	129	129
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>20</b>	30	19
Calcium	ppm	ASTM D5185m	1300	<b>4529</b>	4180	4588
Phosphorus	ppm	ASTM D5185m		<b>992</b>	943	949
Zinc	ppm	ASTM D5185m	1300	<b>1143</b>	1087	1102
Sulfur	ppm	ASTM D5185m		<b>5400</b>	4520	5475
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.3</b>	9.5	9.3
Base Number (BN)	mg KOH/g	ASTM D2896	14	<b>13.32</b>	14.54	17.53
Visc @ 100°C	cSt	ASTM D445	15.5	<b>15.1</b>	15.1	15.2



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06236298  
**Lab Number** : 06236298  
**Unique Number** : 11125132  
**Test Package** : MOB 2  
**Received** : 15 Jul 2024  
**Tested** : 16 Jul 2024  
**Diagnosed** : 16 Jul 2024 - Wes Davis

**MITCHELL EXCAVATING - BODI MITCHELL**  
 200 SOUTH 1455 WEST  
 LINDON, UT  
 US 84042  
 Contact: JOHN AAGARD

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: (801)796-3698  
 F: