



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE

Machine Id
GMC SIERRA 3500 1258
 Component
Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC IV 15W40 (10 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06236296	TR06128049	TR06023952
Sample Date		Client Info		08 Jul 2024	20 Mar 2024	21 Nov 2023
Machine Age	mls	Client Info		137091	131544	125743
Oil Age	mls	Client Info		5000	5000	5000
Filter Age	mls	Client Info		5000	5000	5000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	21	17	13
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	3	5	3
Lead	ppm	ASTM D5185m	>40	2	2	<1
Copper	ppm	ASTM D5185m	>330	1	2	<1
Tin	ppm	ASTM D5185m	>15	0	1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

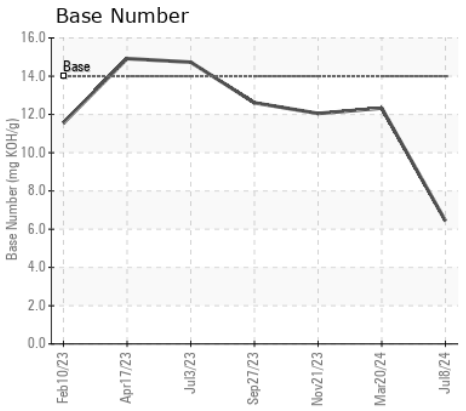
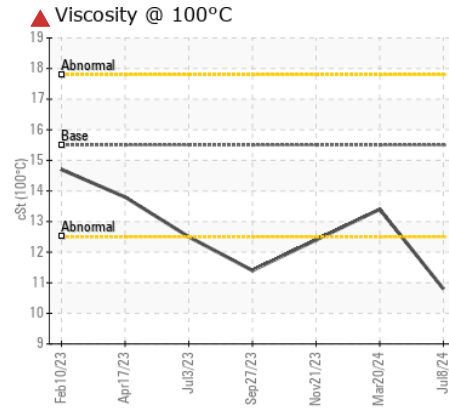
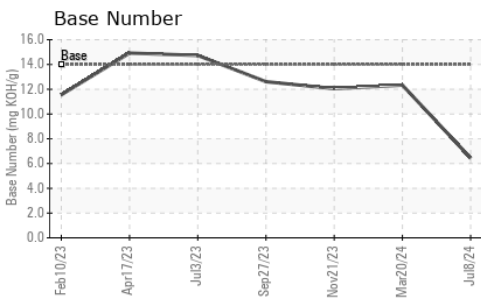
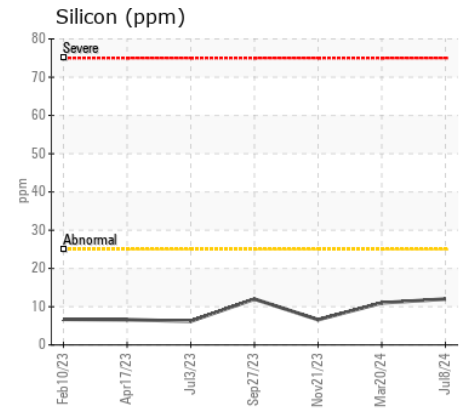
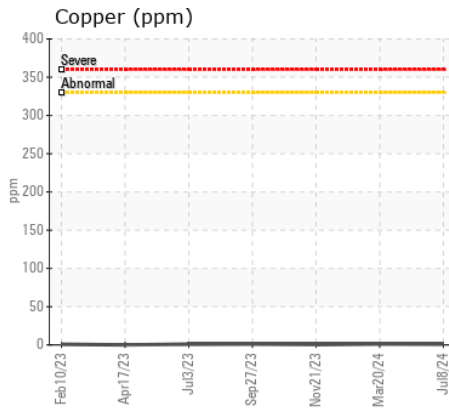
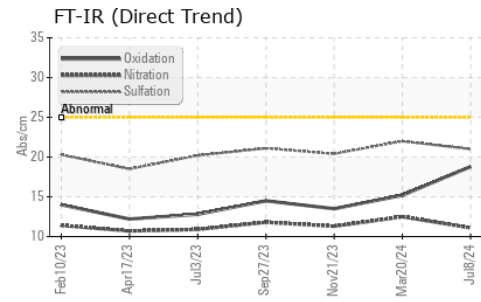
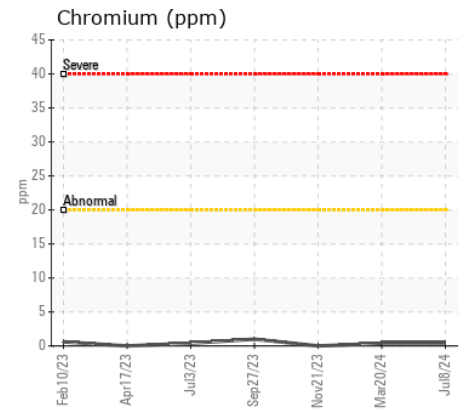
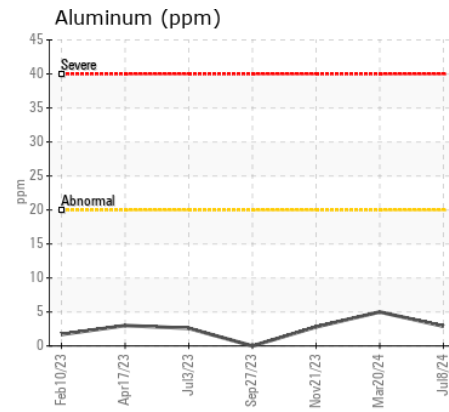
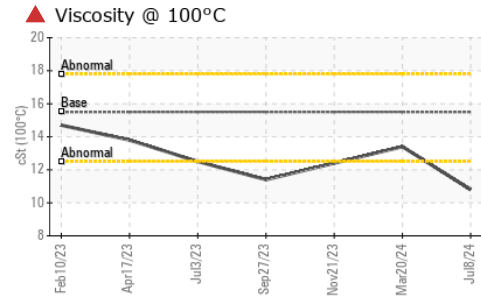
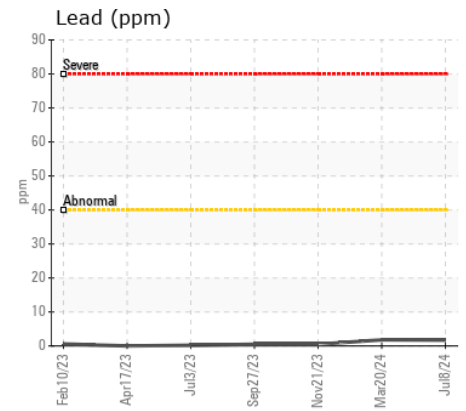
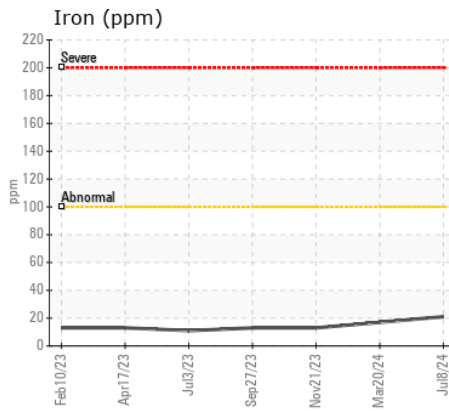
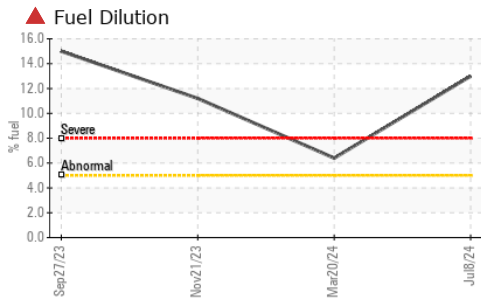
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	12	11	7
Potassium	ppm	ASTM D5185m	>20	1	5	2
Fuel	%	ASTM D3524	>5	▲ 13.0	▲ 6.4	▲ 11.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	11.1	12.5	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	22.0	20.4
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. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		5	3	1
Boron	ppm	ASTM D5185m		28	5	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		70	134	118
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		553	22	19
Calcium	ppm	ASTM D5185m	1300	1679	4214	3867
Phosphorus	ppm	ASTM D5185m		717	964	885
Zinc	ppm	ASTM D5185m	1300	836	1097	1118
Sulfur	ppm	ASTM D5185m		2853	5211	4155
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8	15.2	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	14	6.44	12.33	12.05
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 10.8	13.4	▲ 12.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06236296
Lab Number : 06236296
Unique Number : 11125130
Test Package : MOB 2 (Additional Tests: PercentFuel)

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)

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