TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
GMC GMC 2500
Component
Gasoline Engine
Fluid
TRC PRO-SPEC III SAE 10W30 (6 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

CONTAMINATION

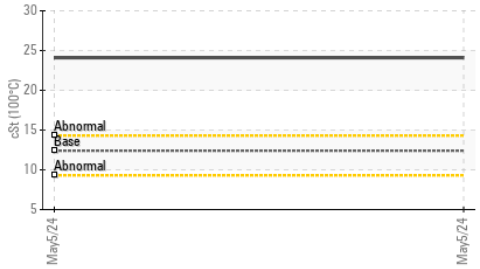
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

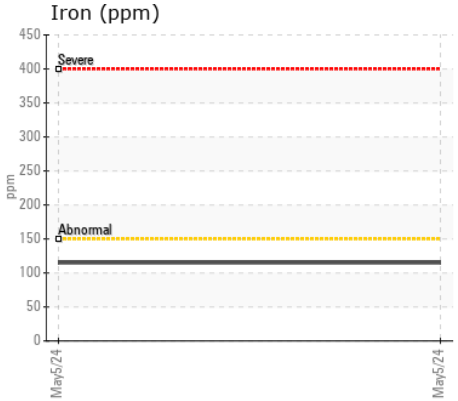
The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06219929	---	---
Sample Date		Client Info		05 May 2024	---	---
Machine Age	mls	Client Info		233000	---	---
Oil Age	mls	Client Info		10000	---	---
Filter Age	mls	Client Info		10000	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185m	>150	115	---	---
Chromium	ppm	ASTM D5185m	>20	6	---	---
Nickel	ppm	ASTM D5185m	>5	3	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>40	▲ 74	---	---
Lead	ppm	ASTM D5185m	>50	10	---	---
Copper	ppm	ASTM D5185m	>155	16	---	---
Tin	ppm	ASTM D5185m	>10	11	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>30	▲ 39	---	---
Potassium	ppm	ASTM D5185m	>20	5	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	20.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	35.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m	>400	8	---	---
Boron	ppm	ASTM D5185m		2	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		8	---	---
Manganese	ppm	ASTM D5185m		2	---	---
Magnesium	ppm	ASTM D5185m		26	---	---
Calcium	ppm	ASTM D5185m	4500	4609	---	---
Phosphorus	ppm	ASTM D5185m		928	---	---
Zinc	ppm	ASTM D5185m	1400	1182	---	---
Sulfur	ppm	ASTM D5185m		5098	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	8.52	---	---
Visc @ 100°C	cSt	ASTM D445	12.4	▲ 24.1	---	---

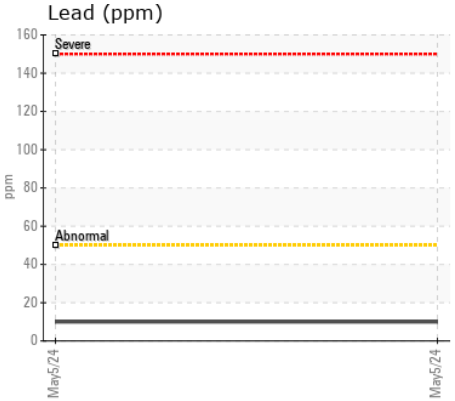
Viscosity @ 100°C



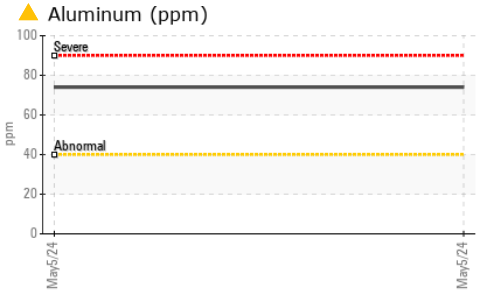
Iron (ppm)



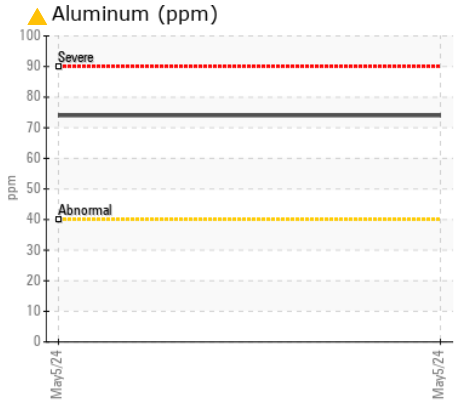
Lead (ppm)



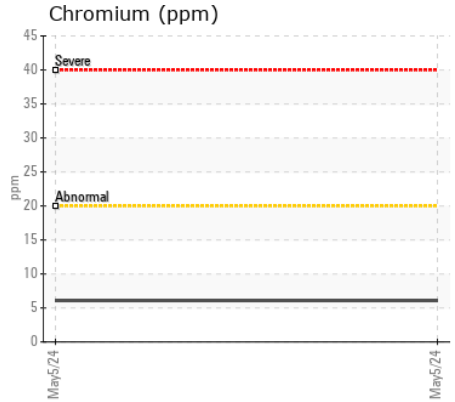
Aluminum (ppm)



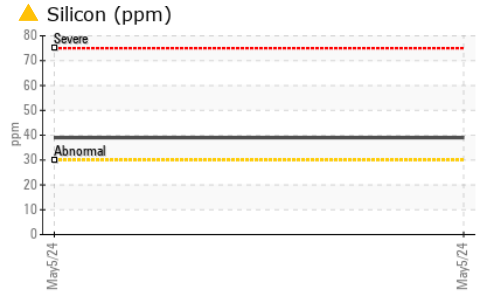
Aluminum (ppm)



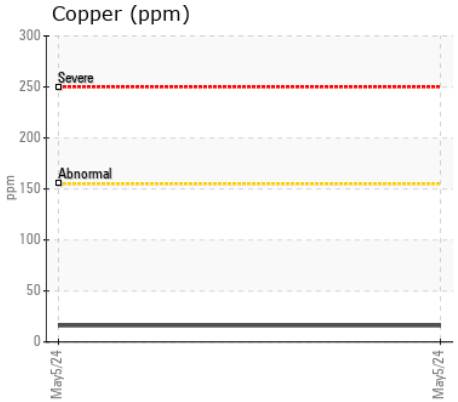
Chromium (ppm)



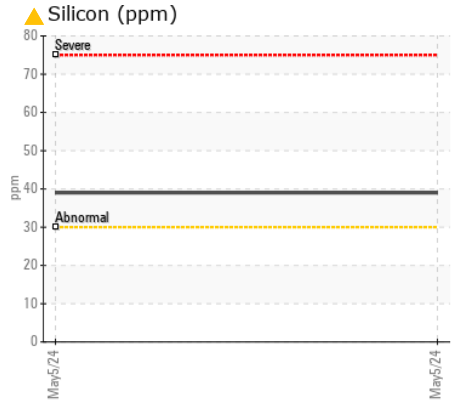
Silicon (ppm)



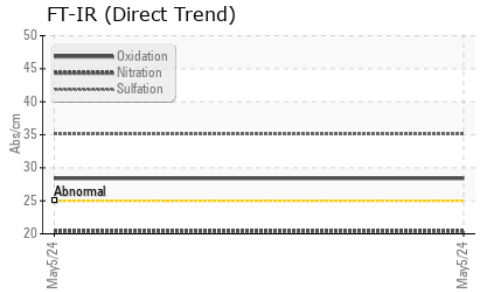
Copper (ppm)



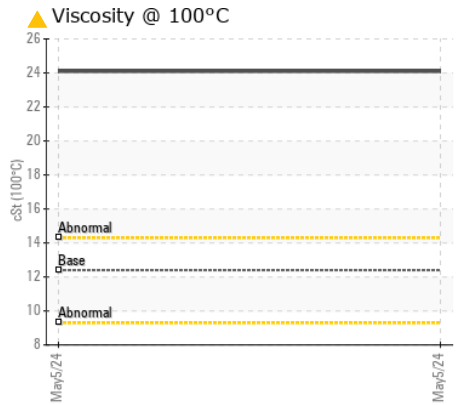
Silicon (ppm)



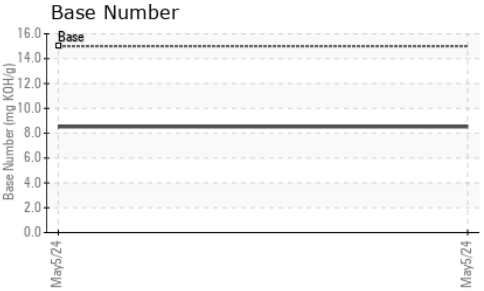
FT-IR (Direct Trend)



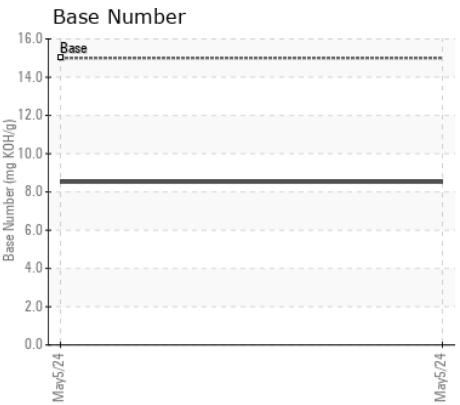
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06219929
Lab Number : 06219929
Unique Number : 11098126
Test Package : MOB 2

Received : 25 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 28 Jun 2024 - Jonathan Hester

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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T:
F: