



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
GMC K1500
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC MULTI VISC 5W30 (6 QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05958242	TR05717570	---
Sample Date		Client Info		17 Sep 2023	11 Dec 2022	---
Machine Age	mls	Client Info		100005	98137	---
Oil Age	mls	Client Info		5993	4255	---
Filter Age	mls	Client Info		5993	4255	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	22	18	---
Chromium	ppm	ASTM D5185m	>20	1	2	---
Nickel	ppm	ASTM D5185m	>5	1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>40	3	2	---
Lead	ppm	ASTM D5185m	>50	13	9	---
Copper	ppm	ASTM D5185m	>155	3	2	---
Tin	ppm	ASTM D5185m	>10	4	4	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

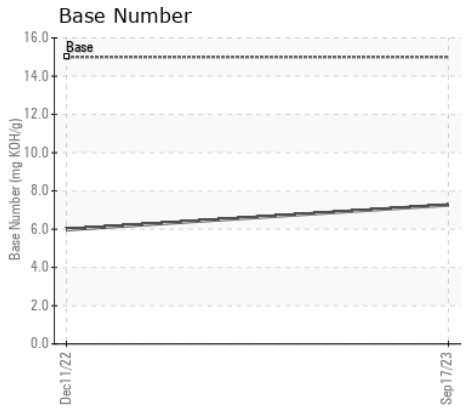
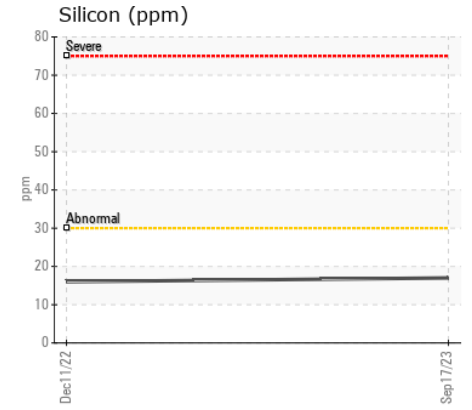
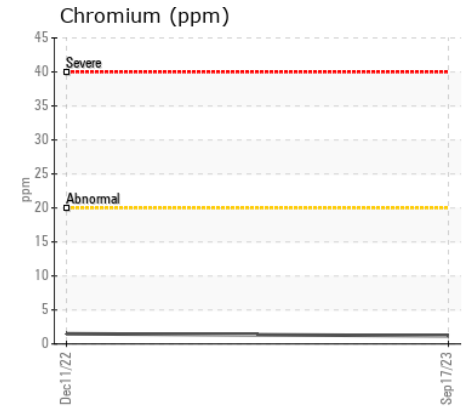
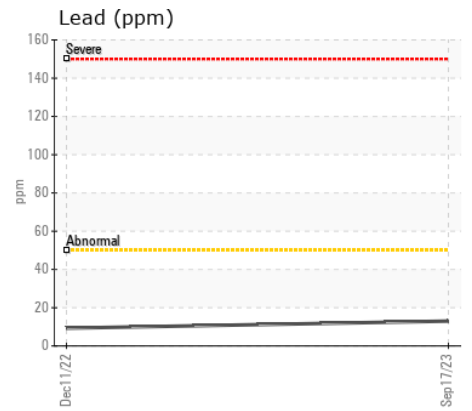
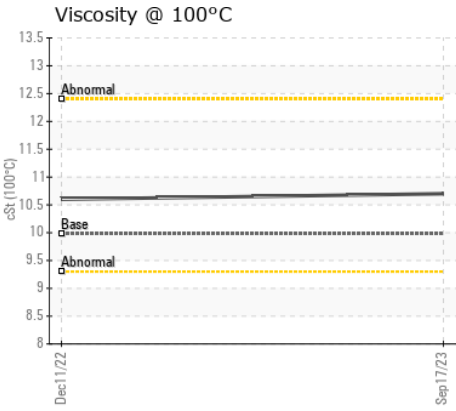
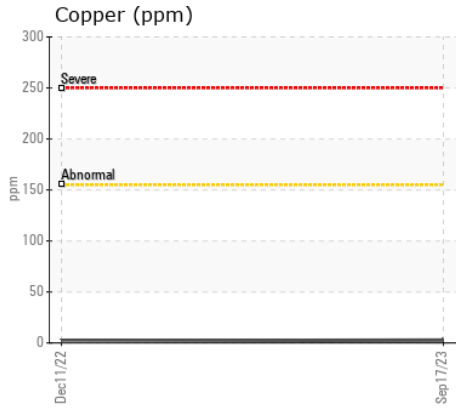
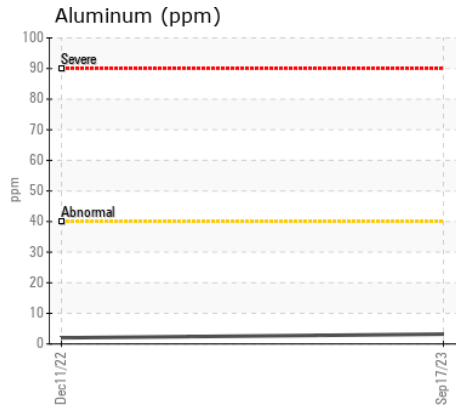
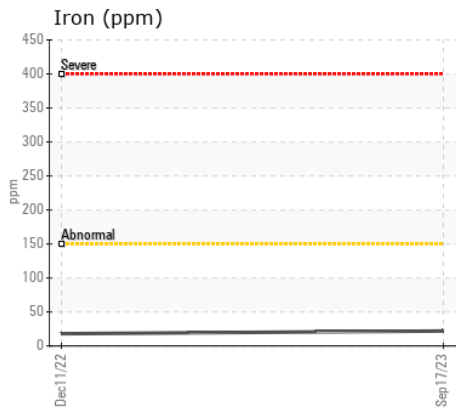
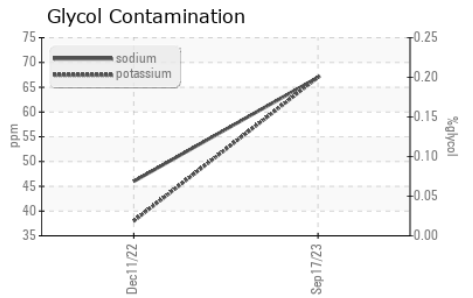
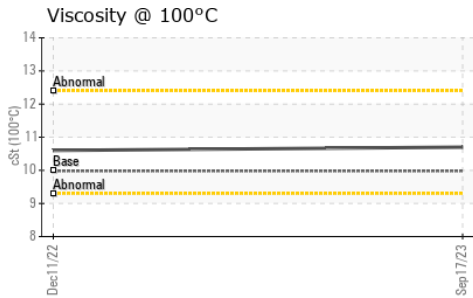
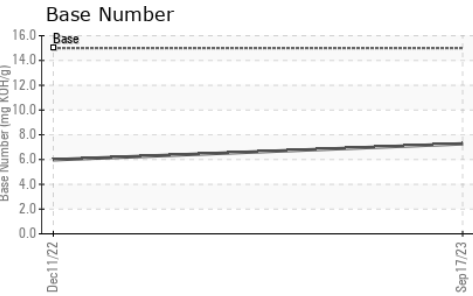
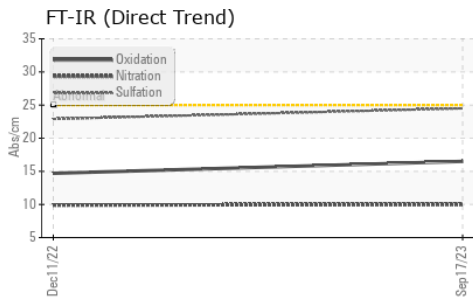
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>30	17	16	---
Potassium	ppm	ASTM D5185m	>20	▲ 67	38	---
Fuel		WC Method	>4.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol	%	*ASTM D2982		NEG	NEG	---
Soot %	%	*ASTM D7844		0	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	10.0	9.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	22.9	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>400	▲ 67	46	---
Boron	ppm	ASTM D5185m		33	18	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		273	263	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		501	499	---
Calcium	ppm	ASTM D5185m	4200	1510	1534	---
Phosphorus	ppm	ASTM D5185m	800	713	732	---
Zinc	ppm	ASTM D5185m	800	933	941	---
Sulfur	ppm	ASTM D5185m		2654	2489	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	14.7	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	7.27	5.98	---
Visc @ 100°C	cSt	ASTM D445	9.98	10.7	10.6	---



Certificate L2367

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

Sample No. : TR05958242

Lab Number : 05958242

Unique Number : 10659455

Test Package : MOB 2 (Additional Tests: Glycol)

Received : 21 Sep 2023

Tested : 25 Sep 2023

Diagnosed : 25 Sep 2023 - Jonathan Hester

TORQUE KING 4X4 - JESSE GUARINO

7095 COMMERCIAL AVE

BILLINGS, MT

US 59101

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: