



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE

Machine Id
KENWORTH NO UNIT TR02625584

Component
Diesel Engine

Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02625584	---	---
Sample Date		Client Info		18 Mar 2024	---	---
Machine Age	mls	Client Info		498636	---	---
Oil Age	mls	Client Info		5000	---	---
Filter Age	mls	Client Info		5000	---	---
Oil Changed		Client Info		Not Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				SEVERE	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>165	10	---	---
Chromium	ppm	ASTM D5185(m)	>5	0	---	---
Nickel	ppm	ASTM D5185(m)	>4	0	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	3	---	---
Lead	ppm	ASTM D5185(m)	>150	3	---	---
Copper	ppm	ASTM D5185(m)	>90	<1	---	---
Tin	ppm	ASTM D5185(m)	>5	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---

CONTAMINATION

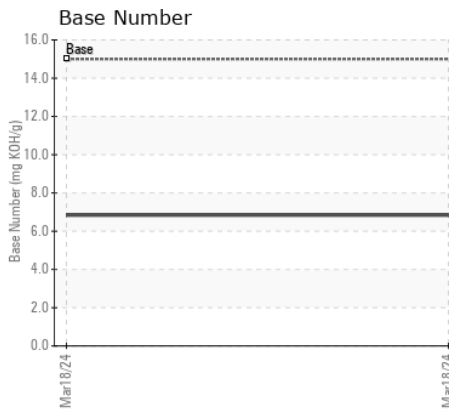
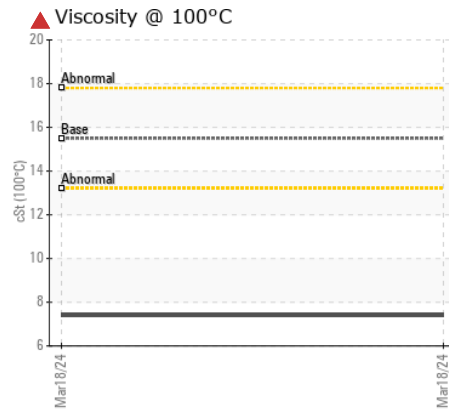
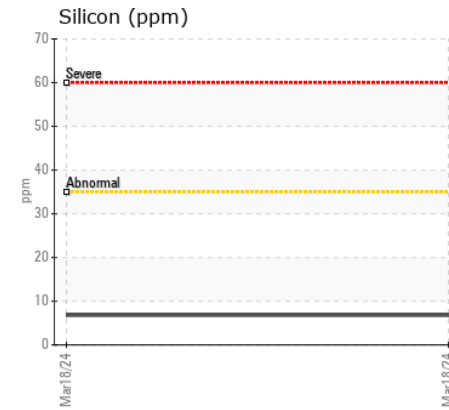
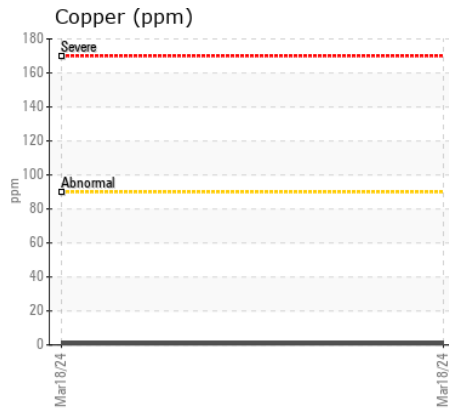
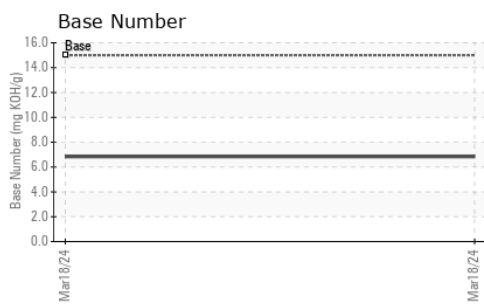
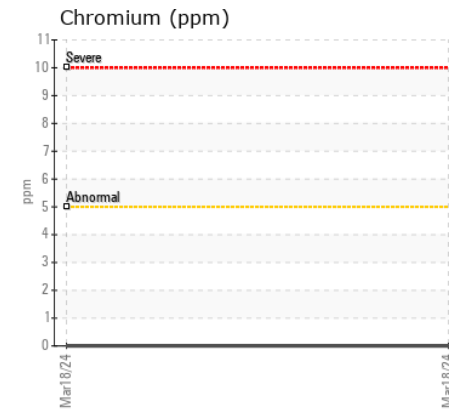
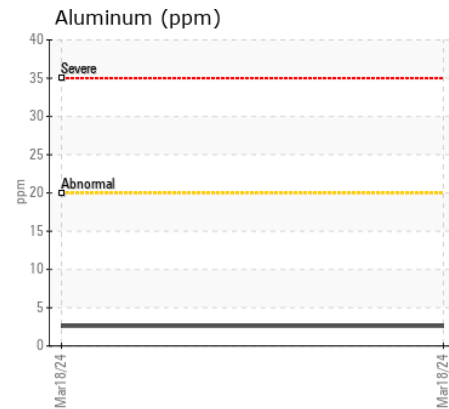
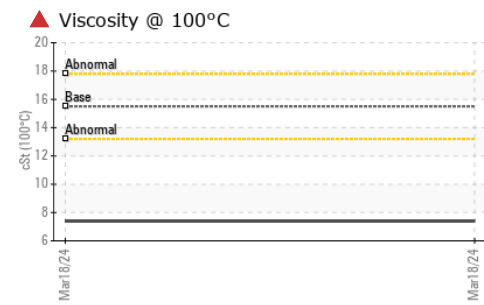
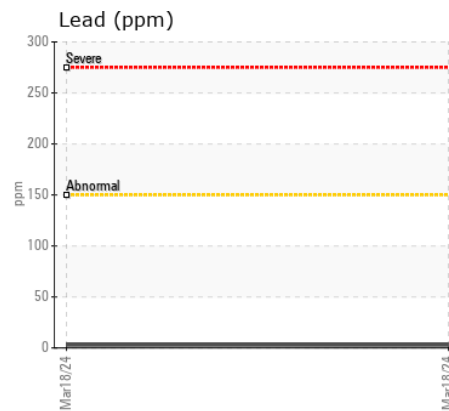
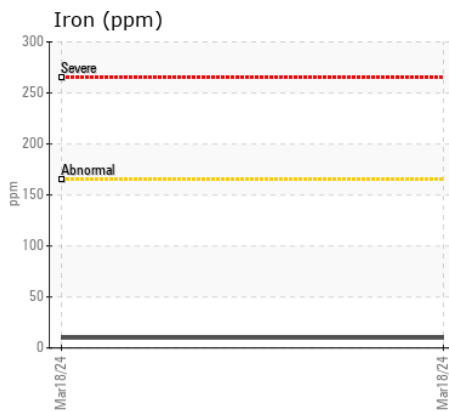
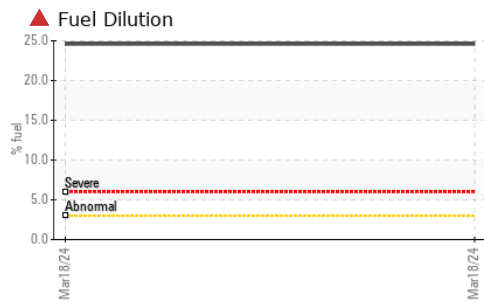
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>35	7	---	---
Potassium	ppm	ASTM D5185(m)	>20	1	---	---
Fuel	%	ASTM D7593*	>3.0	▲ 24.6	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*	>7.5	0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	9.2	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.6	---	---
Emulsified Water	scalar	Visual*	>0.2	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 D5185(m)		2	---	---
Boron	ppm	ASTM D5185(m)		37	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		155	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		91	---	---
Calcium	ppm	ASTM D5185(m)	4500	1534	---	---
Phosphorus	ppm	ASTM D5185(m)		751	---	---
Zinc	ppm	ASTM D5185(m)	1400	840	---	---
Sulfur	ppm	ASTM D5185(m)		2522	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	15	6.84	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	▲ 7.4	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02625584 **Received** : 01 Apr 2024
Lab Number : 02625584 **Tested** : 02 Apr 2024
Unique Number : 5750703 **Diagnosed** : 02 Apr 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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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)