



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK CV713 87

Component
Diesel Engine

Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (40 QTS)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06099321	TR05784639	---
Sample Date		Client Info		08 Feb 2024	20 Feb 2023	---
Machine Age	hrs	Client Info		26702	25466	---
Oil Age	hrs	Client Info		611	459	---
Filter Age	hrs	Client Info		611	459	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	36	32	---
Chromium	ppm	ASTM D5185m	>20	2	2	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m	>2	<1	<1	---
Silver	ppm	ASTM D5185m	>2	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	1	2	---
Lead	ppm	ASTM D5185m	>40	3	4	---
Copper	ppm	ASTM D5185m	>330	53	52	---
Tin	ppm	ASTM D5185m	>15	4	4	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

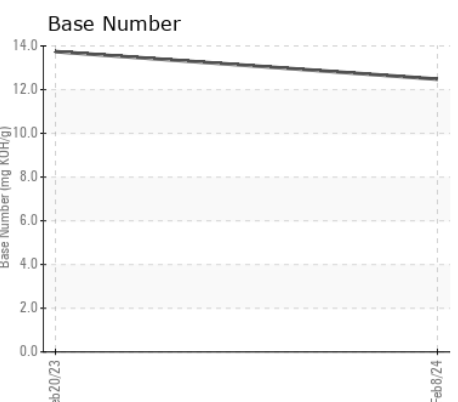
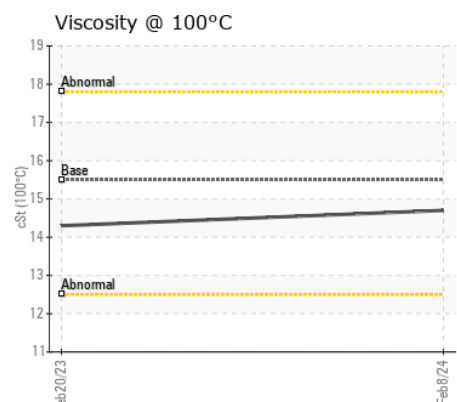
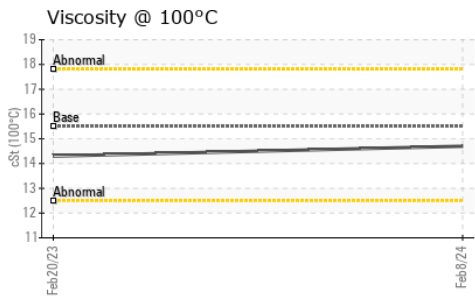
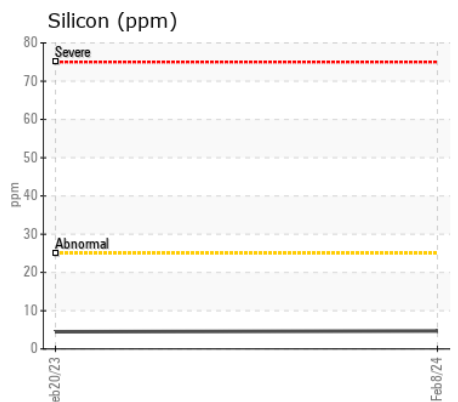
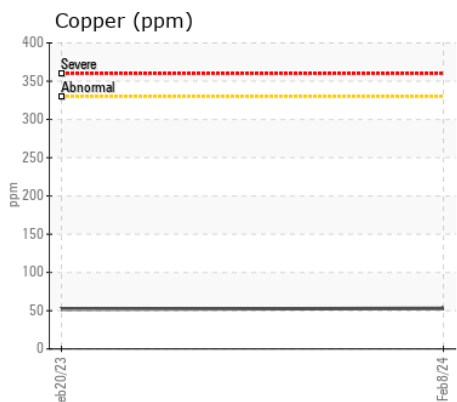
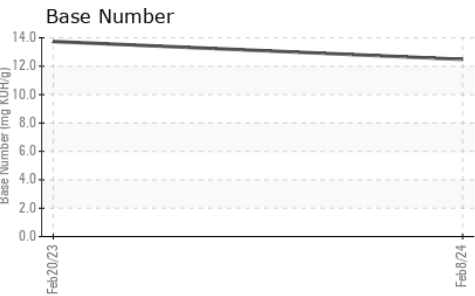
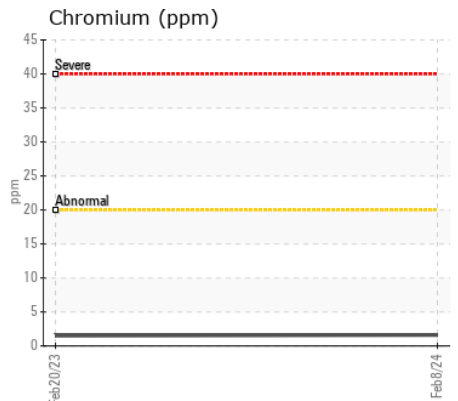
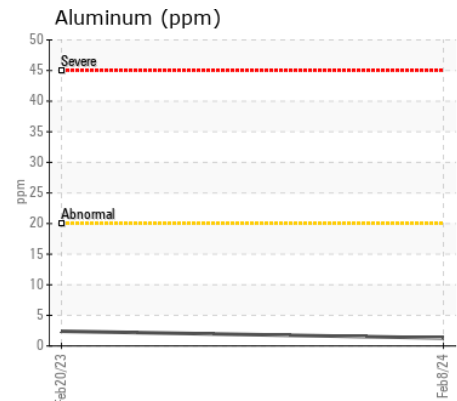
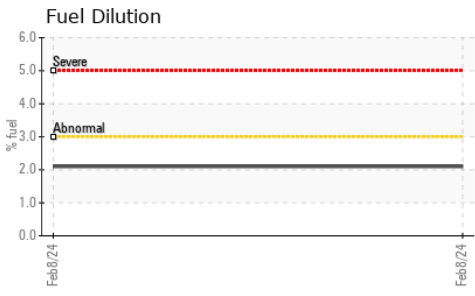
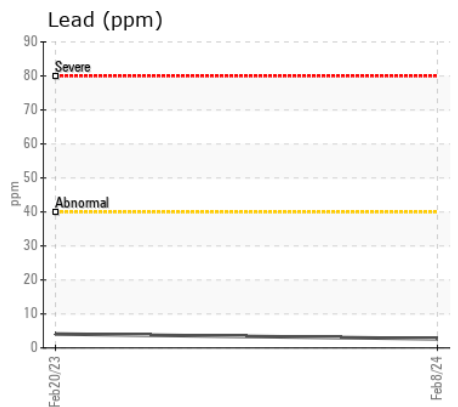
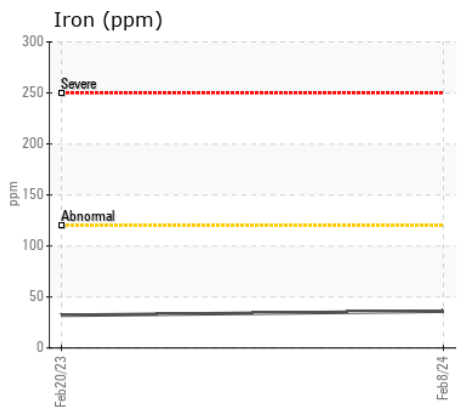
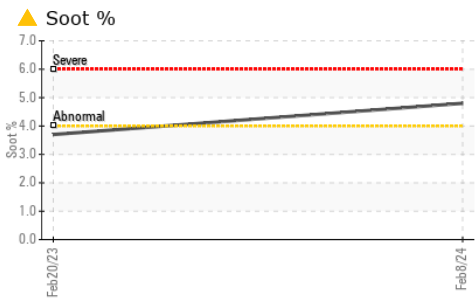
There is an abnormal amount of solids and carbon present in the oil. Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	5	4	---
Potassium	ppm	ASTM D5185m	>20	2	2	---
Fuel	%	ASTM D3524	>3.0	2.1	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>4	▲ 4.8	3.7	---
Nitration	Abs/cm	*ASTM D7624	>20	10.9	9.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.6	25.5	---
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. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		0	3	---
Boron	ppm	ASTM D5185m		<1	1	---
Barium	ppm	ASTM D5185m		5	0	---
Molybdenum	ppm	ASTM D5185m		32	1	---
Manganese	ppm	ASTM D5185m		<1	2	---
Magnesium	ppm	ASTM D5185m		85	69	---
Calcium	ppm	ASTM D5185m		3914	4756	---
Phosphorus	ppm	ASTM D5185m		787	956	---
Zinc	ppm	ASTM D5185m		998	1185	---
Sulfur	ppm	ASTM D5185m		3707	4868	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.6	11.3	---
Base Number (BN)	mg KOH/g	ASTM D2896		12.48	13.74	---
Visc @ 100°C	cSt	ASTM D445	15.5	14.7	14.3	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06099321 **Received** : 23 Feb 2024
Lab Number : 06099321 **Tested** : 28 Feb 2024
Unique Number : 10897551 **Diagnosed** : 28 Feb 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

HUTH READY MIX AND SUPPLY CO
 501 5TH ST NW
 MASSILLON, OH
 US 44647
 Contact: JIM FITZGERALD

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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F: