



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MERCURY 87
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (5 QTS)

RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05989915	TR00684068	---
Sample Date		Client Info		22 Oct 2023	27 Nov 2003	---
Machine Age	mls	Client Info		13894	100275	---
Oil Age	mls	Client Info		1500	3625	---
Filter Age	mls	Client Info		1500	3625	---
Oil Changed		Client Info		Not Changd	Changed	---
Filter Changed		Client Info		Not Changd	Changed	---
Sample Status				SEVERE	ABNORMAL	---

WEAR

Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>150	13	4	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>5	0	<1	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>40	5	<1	---
Lead	ppm	ASTM D5185m	>50	▲ 836	17	---
Copper	ppm	ASTM D5185m	>155	8	1	---
Tin	ppm	ASTM D5185m	>10	▲ 16	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

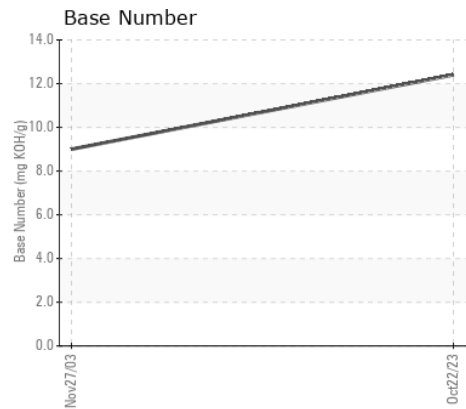
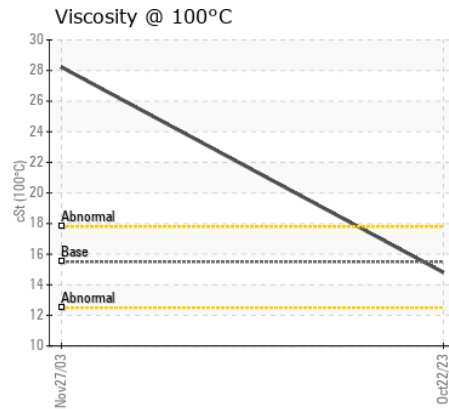
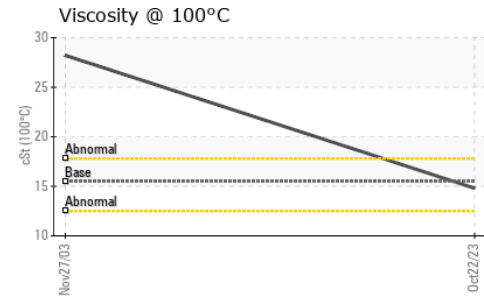
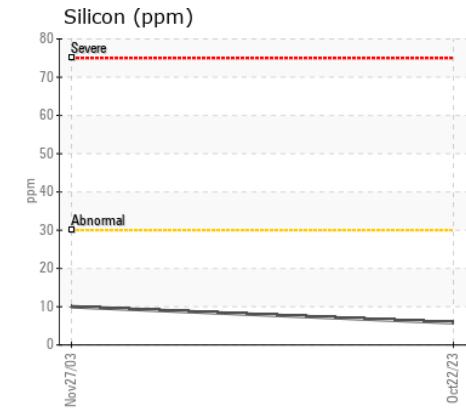
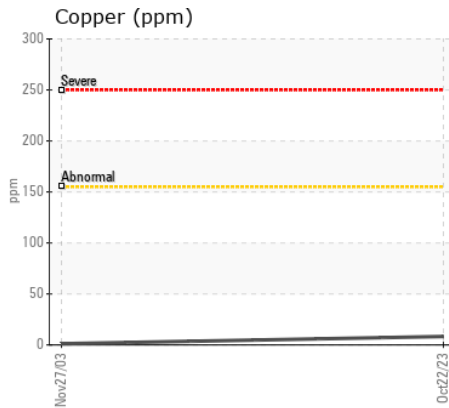
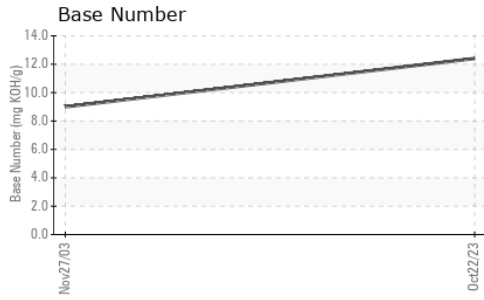
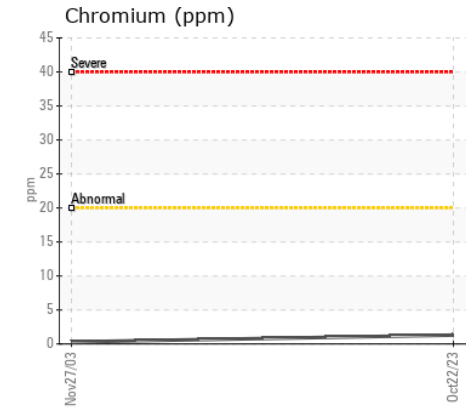
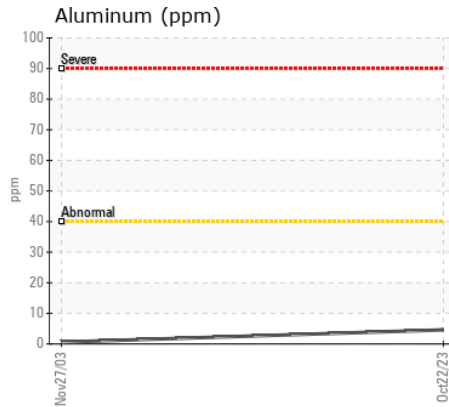
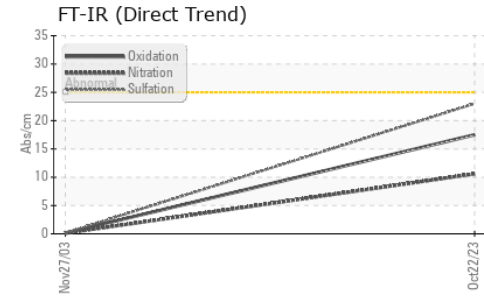
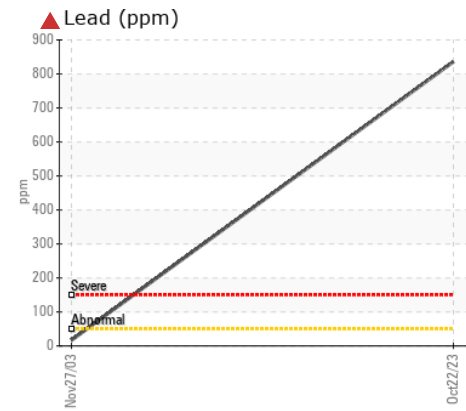
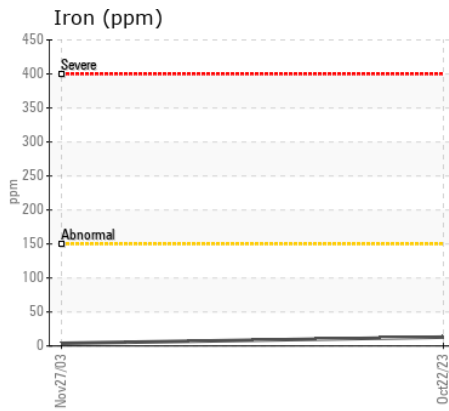
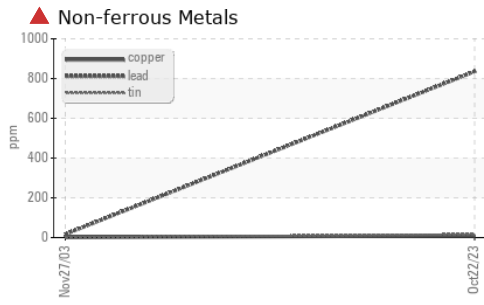
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	6	10	---
Potassium	ppm	ASTM D5185m	>20	2	0	---
Fuel		WC Method	>4.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0	0	---
Nitration	Abs/cm	*ASTM D7624	>20	10.6	0.10	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0	0.13	---
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	4	2	---
Boron	ppm	ASTM D5185m		<1	2	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		5	<1	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		58	110	---
Calcium	ppm	ASTM D5185m		4107	1682	---
Phosphorus	ppm	ASTM D5185m		1029	464	---
Zinc	ppm	ASTM D5185m		1512	496	---
Sulfur	ppm	ASTM D5185m		4777	2783	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	0.14	---
Base Number (BN)	mg KOH/g	ASTM D2896		12.40	9.00	---
Visc @ 100°C	cSt	ASTM D445	15.5	14.8	▲ 28.22	---



Certificate L2367

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

Sample No. : TR05989915

Lab Number : 05989915

Unique Number : 10712577

Test Package : MOB 2

Received : 25 Oct 2023

Tested : 26 Oct 2023

Diagnosed : 31 Oct 2023 - Jonathan Hester

JIM WHITLOW

P.O. BOX 366

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US 27258

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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)