



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
GMC 3500HD 2018 GMC

Component
Diesel Engine

Fluid
TRC MOLY XL PRO-SPEC III SYNTHETIC15W40 (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05807074	TR05703123	---
Sample Date		Client Info		03 Mar 2023	15 Nov 2022	---
Machine Age	mls	Client Info		84800	78000	---
Oil Age	mls	Client Info		6800	12000	---
Filter Age	mls	Client Info		6800	12000	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	27	47	---
Chromium	ppm	ASTM D5185m	>20	1	2	---
Nickel	ppm	ASTM D5185m	>4	0	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	6	13	---
Lead	ppm	ASTM D5185m	>40	<1	6	---
Copper	ppm	ASTM D5185m	>330	96	▲ 529	---
Tin	ppm	ASTM D5185m	>15	<1	1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

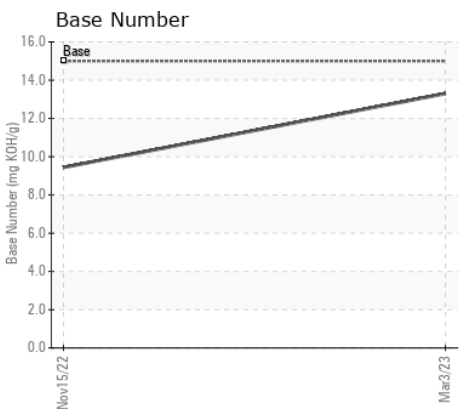
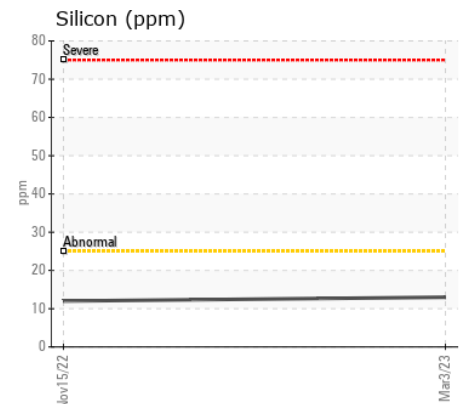
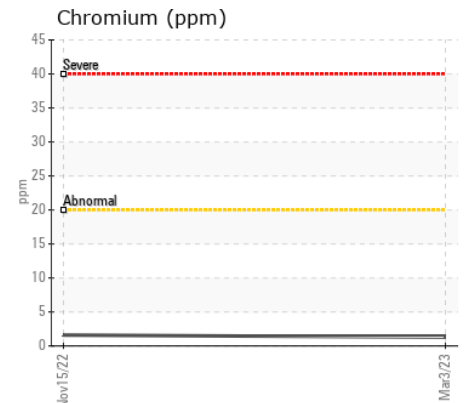
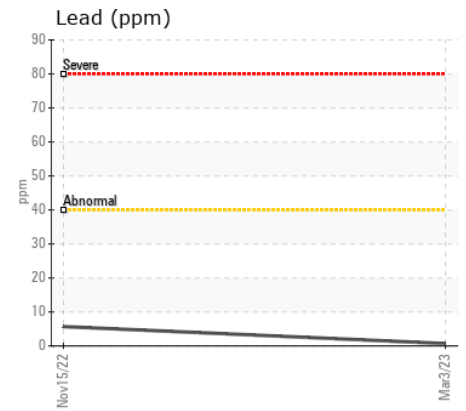
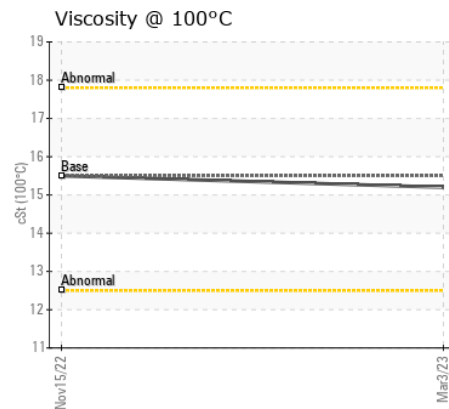
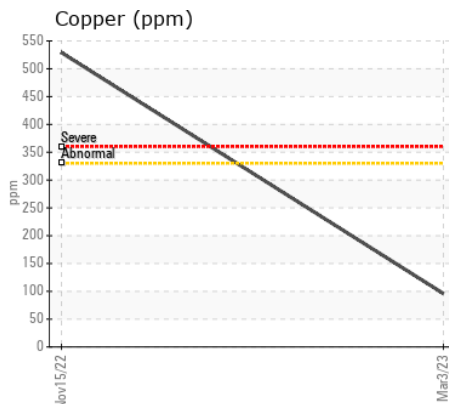
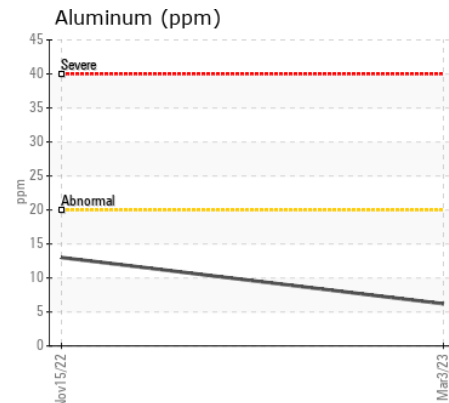
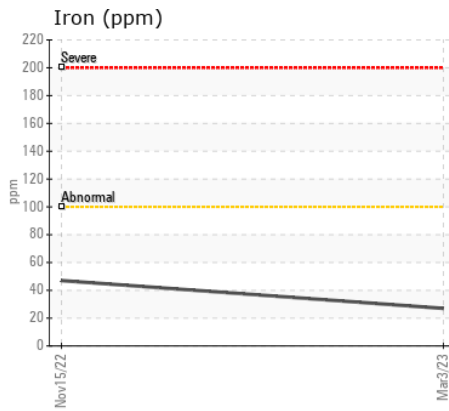
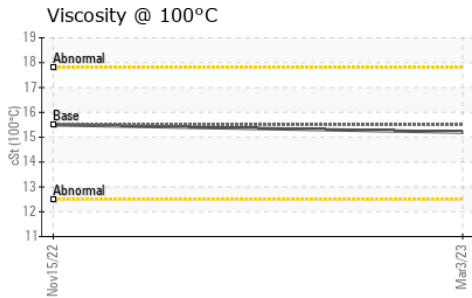
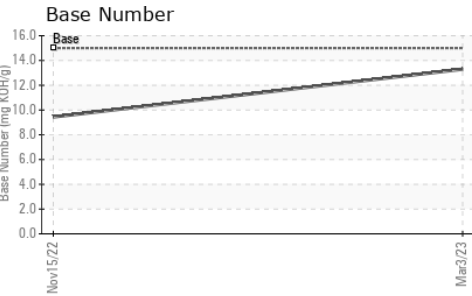
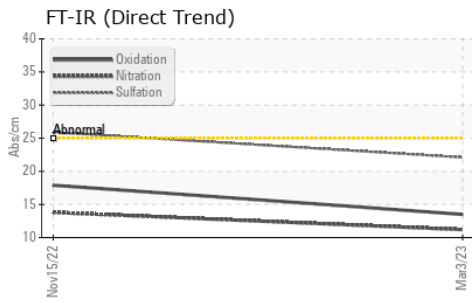
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	13	12	---
Potassium	ppm	ASTM D5185m	>20	4	11	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.7	1.1	---
Nitration	Abs/cm	*ASTM D7624	>20	11.2	13.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	25.9	---
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	3	---
Boron	ppm	ASTM D5185m		2	11	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		107	111	---
Manganese	ppm	ASTM D5185m		1	<1	---
Magnesium	ppm	ASTM D5185m		31	98	---
Calcium	ppm	ASTM D5185m	4500	4268	3940	---
Phosphorus	ppm	ASTM D5185m		814	876	---
Zinc	ppm	ASTM D5185m	1400	1012	1085	---
Sulfur	ppm	ASTM D5185m		4153	4072	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	17.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	13.30	9.44	---
Visc @ 100°C	cSt	ASTM D445	15.5	15.2	15.5	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05807074
Lab Number : 05807074
Unique Number : 10404603
Test Package : MOB 2
Received : 30 Mar 2023
Tested : 03 Apr 2023
Diagnosed : 03 Apr 2023 - Don Baldrige

WEST HILLS JV
 43667 LAKE RD E
 SPRAGUE, WA
 US 99032
 Contact: RON GROGAN

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: