



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
TRUCK - URBAN
Machine Id
FREIGHTLINER 71

Component
Diesel Engine
Fluid
SHELL Rotella T5 15W-40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample
Comment: Revised hour meter reading)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0003198	PE0001942	PE0002244
Sample Date		Client Info		30 Jan 2024	25 Oct 2023	21 Jul 2023
Machine Age	hrs	Client Info		9281	5613	5122
Oil Age	hrs	Client Info		490	491	532
Filter Age	hrs	Client Info		490	491	532
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	14	16	17
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	7	10	8
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	1	2	1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

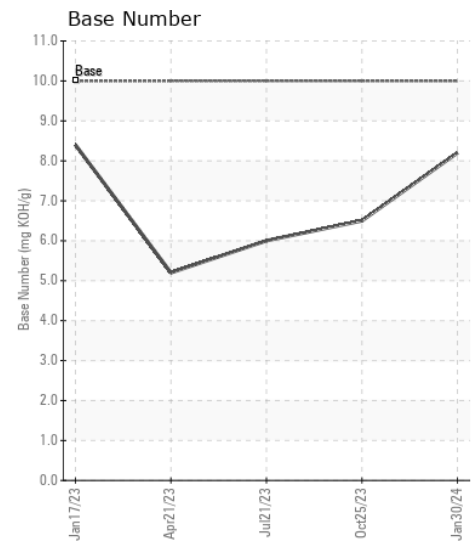
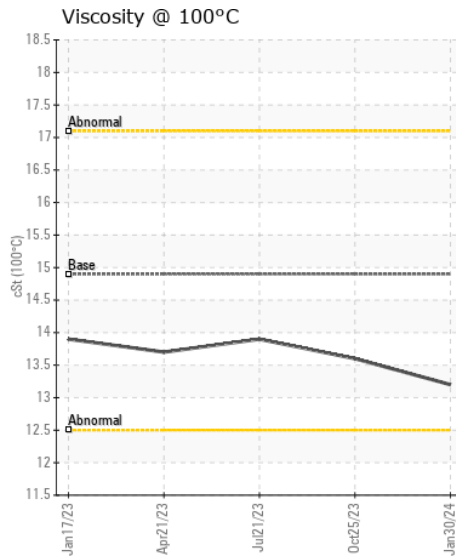
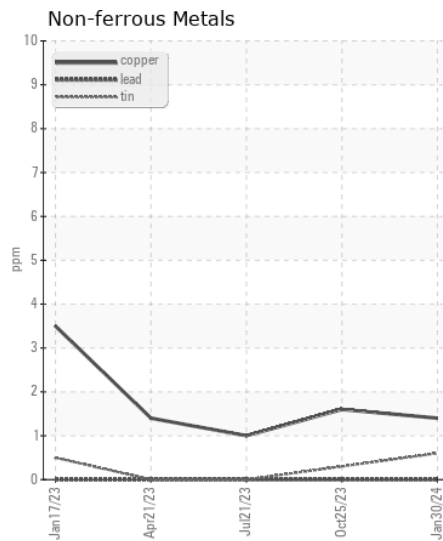
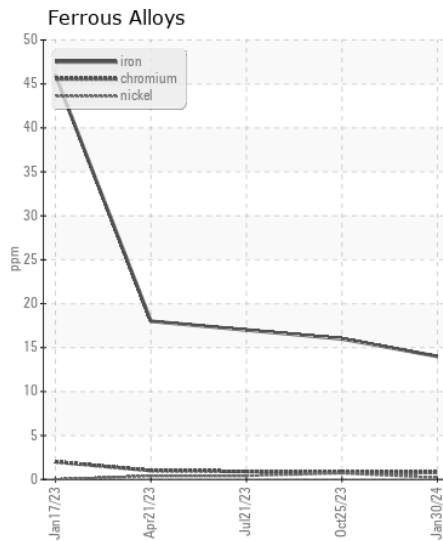
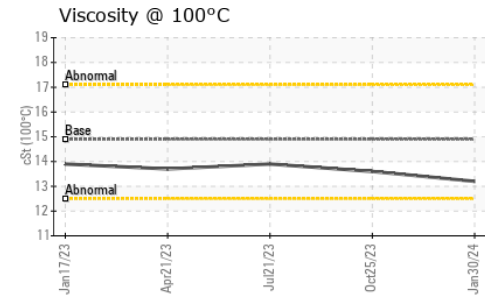
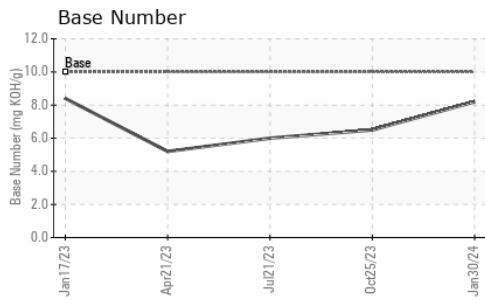
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	5	6	6
Potassium	ppm	ASTM D5185m	>20	14	15	29
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.1	10.4	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	24.4	22.8
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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		18	4	5
Boron	ppm	ASTM D5185m		20	162	22
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		70	83	89
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		882	344	113
Calcium	ppm	ASTM D5185m		1189	1417	2207
Phosphorus	ppm	ASTM D5185m		1097	1045	1098
Zinc	ppm	ASTM D5185m		1308	1228	1329
Sulfur	ppm	ASTM D5185m		3221	3087	4453
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	19.9	18.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.2	6.5	6.0
Visc @ 100°C	cSt	ASTM D445	14.9	13.2	13.6	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003198
Lab Number : 06089406
Unique Number : 10876851
Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

Received : 14 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 16 Feb 2024 - Don Baldrige

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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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