



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MANITEX/PETERBILT C5022
 Component
Front Diesel Engine
 Fluid
SHELL ROTELLA T4 15W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0909754	WC0831985	WC0801704
Sample Date		Client Info		23 May 2024	07 Sep 2023	07 Jun 2023
Machine Age	hrs	Client Info		10940	0	10114
Oil Age	hrs	Client Info		250	0	250
Filter Age	hrs	Client Info		250	0	250
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	7	7	7
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	3	0
Lead	ppm	ASTM D5185m	>45	<1	<1	<1
Copper	ppm	ASTM D5185m	>85	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

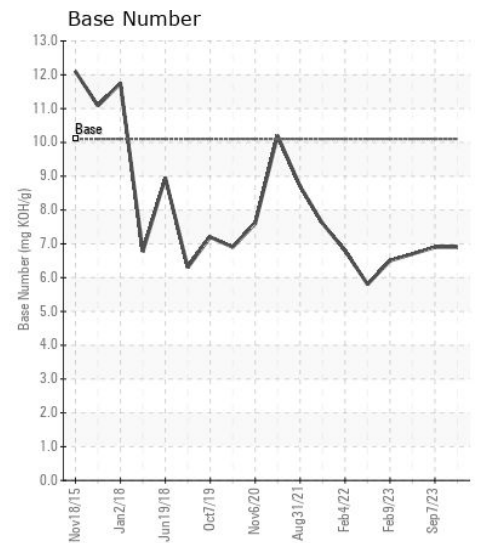
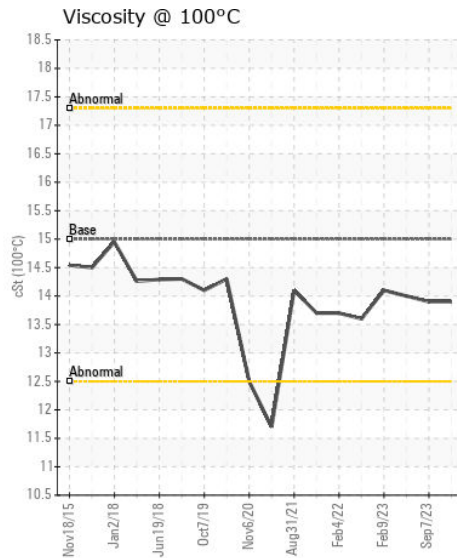
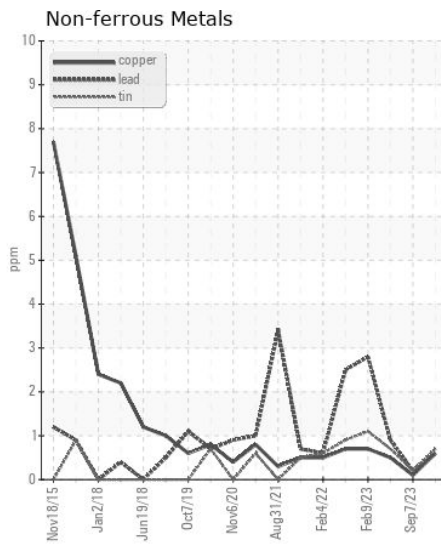
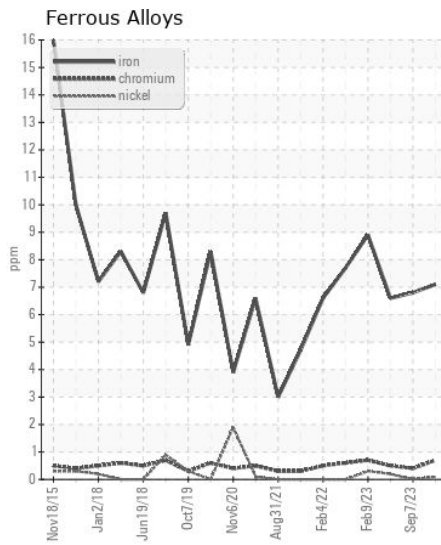
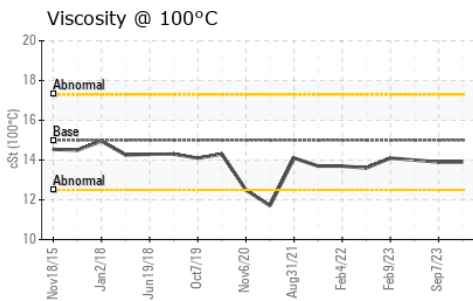
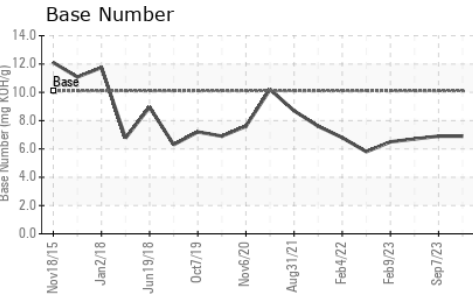
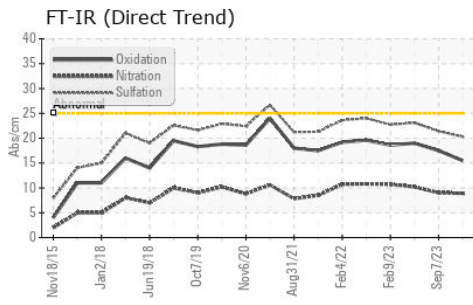
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	5	6	4
Potassium	ppm	ASTM D5185m	>20	14	12	9
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	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.9	9.0	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	21.4	23.1
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		1	2	0
Boron	ppm	ASTM D5185m		96	155	115
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		12	20	16
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		48	89	62
Calcium	ppm	ASTM D5185m		2189	2529	2201
Phosphorus	ppm	ASTM D5185m		1053	1134	995
Zinc	ppm	ASTM D5185m		1222	1420	1205
Sulfur	ppm	ASTM D5185m		3982	4755	3522
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	17.5	19.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.9	6.9	6.7
Visc @ 100°C	cSt	ASTM D445	15	13.9	13.9	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0909754
Lab Number : 06197375
Unique Number : 11059498
Test Package : FLEET

Received : 03 Jun 2024
Tested : 04 Jun 2024
Diagnosed : 04 Jun 2024 - Wes Davis

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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)