



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KENWORTH M-156

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0003329	PE0003277	PE0002390
Sample Date		Client Info		01 May 2024	15 Mar 2024	07 Nov 2023
Machine Age	hrs	Client Info		2410	1880	0
Oil Age	hrs	Client Info		530	530	9626
Filter Age	hrs	Client Info		530	530	9626
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	MARGINAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	17	31	61
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>2	<1	2	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	7	13	16
Lead	ppm	ASTM D5185m	>40	1	3	2
Copper	ppm	ASTM D5185m	>330	3	9	40
Tin	ppm	ASTM D5185m	>15	1	2	3
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

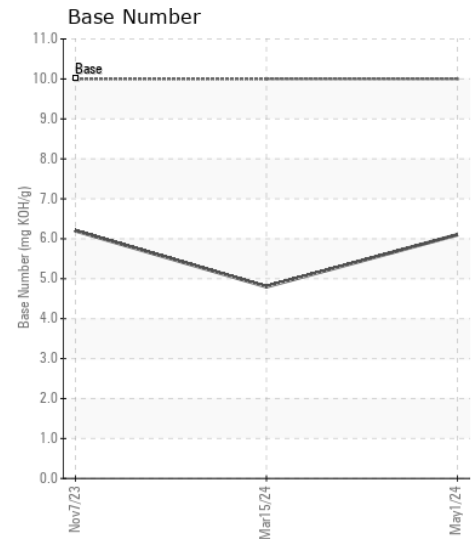
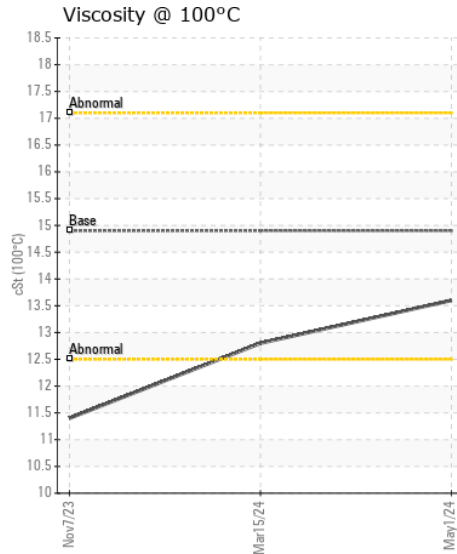
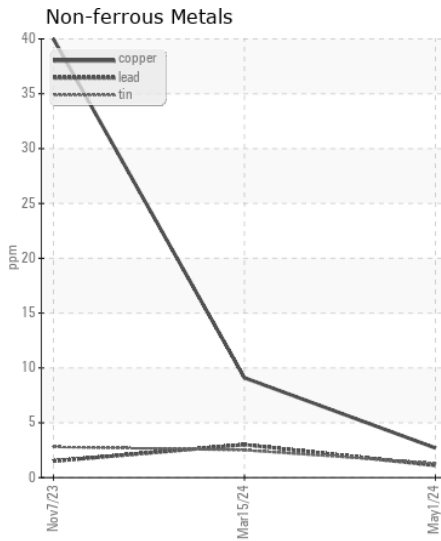
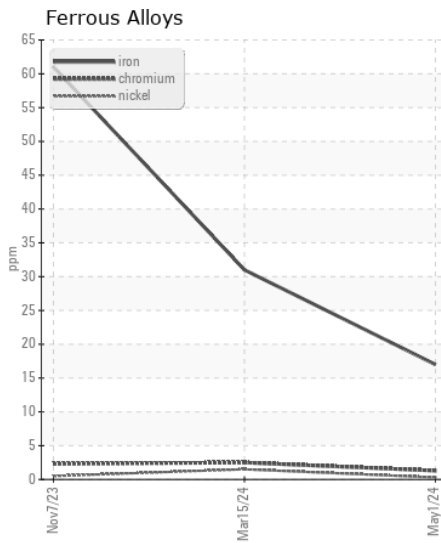
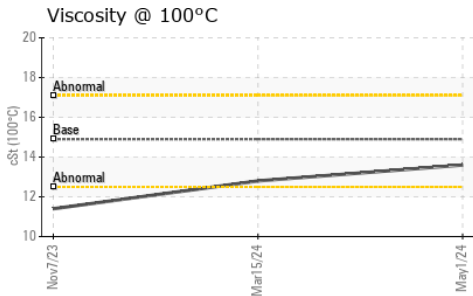
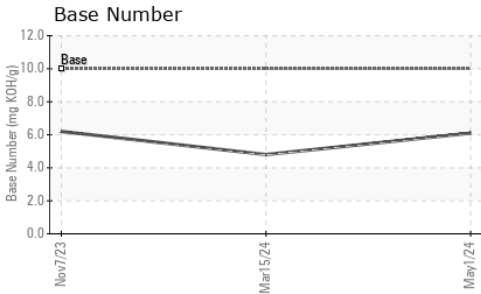
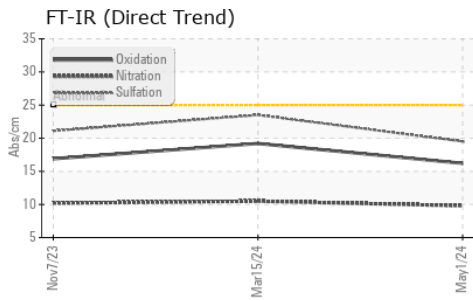
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	12	▲ 45
Potassium	ppm	ASTM D5185m	>20	13	40	58
Fuel		WC Method	>3.0	<1.0	▲ 2.2	▲ 2.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.8	10.5	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	23.5	21.1
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	4	5
Boron	ppm	ASTM D5185m		64	34	49
Barium	ppm	ASTM D5185m		0	<1	3
Molybdenum	ppm	ASTM D5185m		114	82	13
Manganese	ppm	ASTM D5185m		<1	2	6
Magnesium	ppm	ASTM D5185m		29	79	748
Calcium	ppm	ASTM D5185m		2835	2149	1308
Phosphorus	ppm	ASTM D5185m		1295	1093	719
Zinc	ppm	ASTM D5185m		1556	1188	864
Sulfur	ppm	ASTM D5185m		4846	4154	2833
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	19.2	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	6.1	4.8	6.2
Visc @ 100°C	cSt	ASTM D445	14.9	13.6	12.8	▲ 11.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003329 **Received** : 14 May 2024
Lab Number : 06178578 **Tested** : 15 May 2024
Unique Number : 11029904 **Diagnosed** : 16 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

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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