



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KENWORTH 1952
 Component
Diesel Engine
 Fluid
VALVOLINE PREMIUM BLUE GEN2 SAE 10W30 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0837736	WC0837781	WC0694162
Sample Date		Client Info		12 Apr 2024	15 Nov 2023	19 Jul 2023
Machine Age	mls	Client Info		712754	673789	636823
Oil Age	mls	Client Info		40000	36966	30000
Filter Age	mls	Client Info		40000	36966	30000
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	>165	45	36	23
Chromium	ppm	ASTM D5185m	>5	2	3	1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>150	4	3	3
Copper	ppm	ASTM D5185m	>90	1	1	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
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.

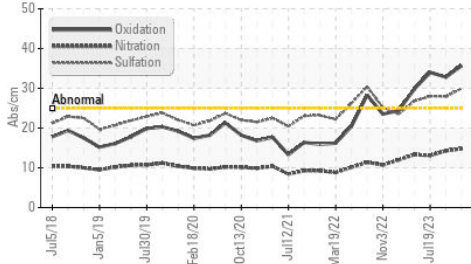
Silicon	ppm	ASTM D5185m	>35	9	11	8
Potassium	ppm	ASTM D5185m	>20	7	4	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	0.8	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	14.8	14.3	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.0	27.9	28.0
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

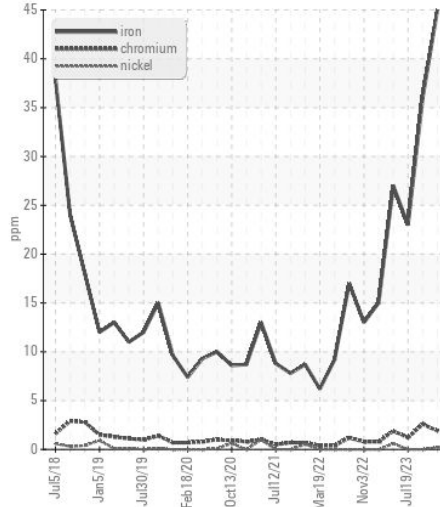
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		7	4	4
Boron	ppm	ASTM D5185m		24	14	20
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		52	51	61
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		779	831	794
Calcium	ppm	ASTM D5185m		1241	1260	1277
Phosphorus	ppm	ASTM D5185m	800	800	693	670
Zinc	ppm	ASTM D5185m	890	924	966	874
Sulfur	ppm	ASTM D5185m		2628	2217	2588
Oxidation	Abs/.1mm	*ASTM D7414	>25	35.7	32.8	34.0
Base Number (BN)	mg KOH/g	ASTM D2896	11	3.0	3.1	3.7
Visc @ 100°C	cSt	ASTM D445	12.0	11.3	11.7	11.2

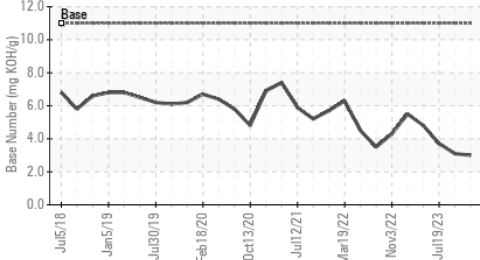
FT-IR (Direct Trend)



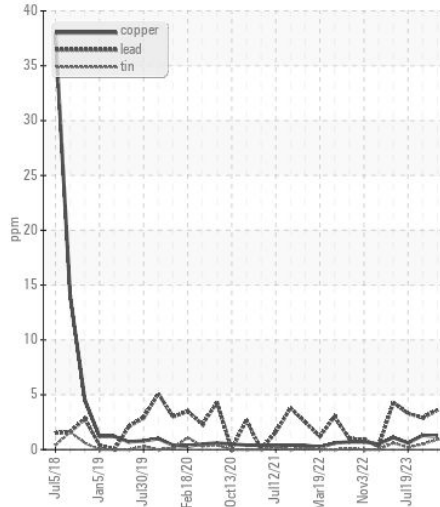
Ferrous Alloys



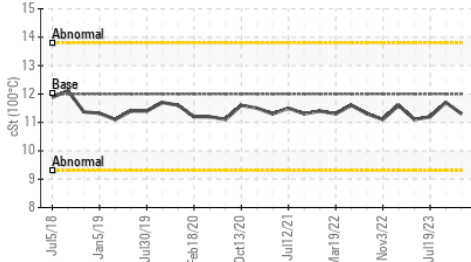
Base Number



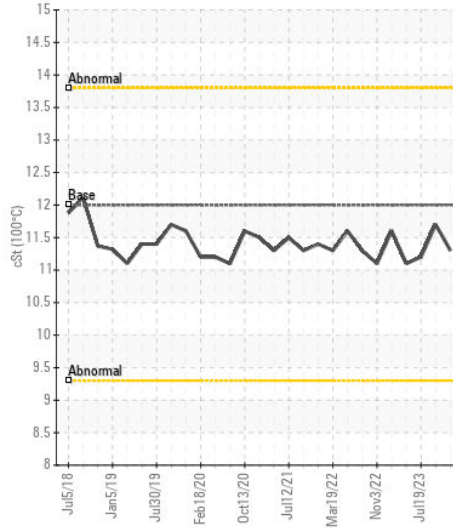
Non-ferrous Metals



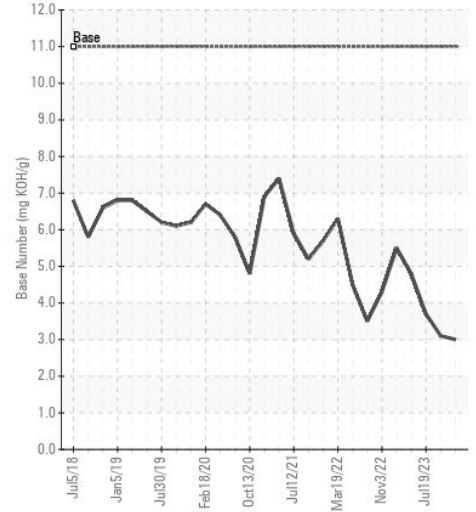
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0837736
Lab Number : 06231986
Unique Number : 11115479
Test Package : FLEET

Received : 10 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 11 Jul 2024 - Don Baldridge

LIBERTY LINEHAUL WEST INC
 1501 CHAPIN ROAD
 MONTEBELLO, CA
 US 90640

Contact: GREG DUBUQUE
 greg@libertylinehaulwest.com

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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