



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KENWORTH 97
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0005288	RW0005468	RW0005014
Sample Date		Client Info		22 May 2024	06 Apr 2024	01 Feb 2024
Machine Age	hrs	Client Info		4757	4456	4146
Oil Age	hrs	Client Info		301	310	227
Filter Age	hrs	Client Info		301	310	227
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	>100	14	14	5
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	2	2
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

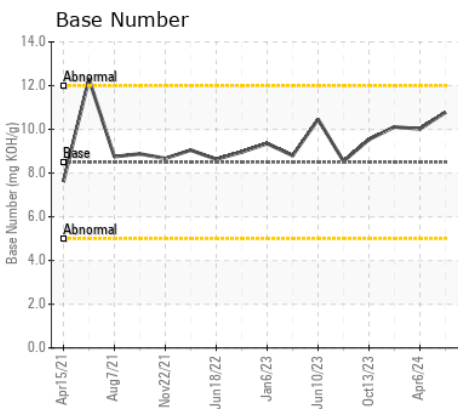
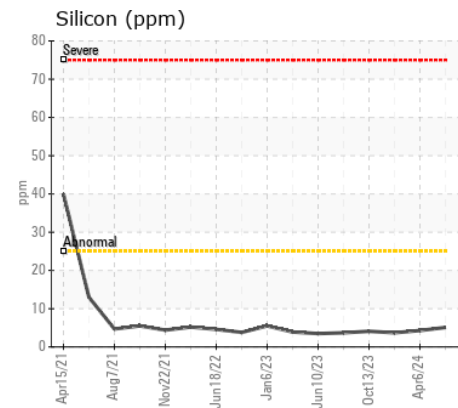
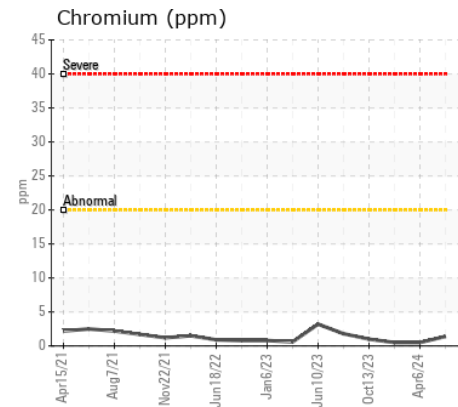
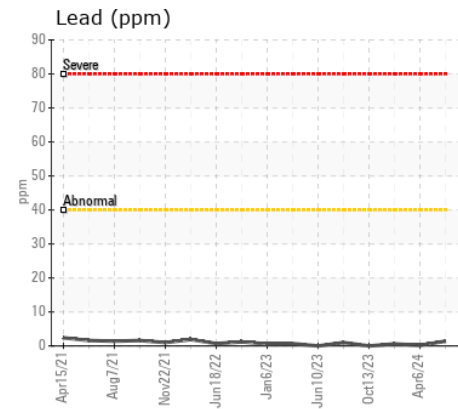
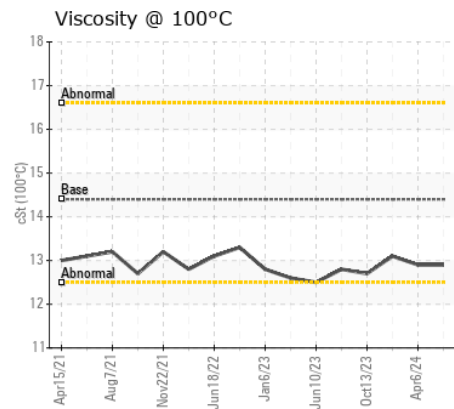
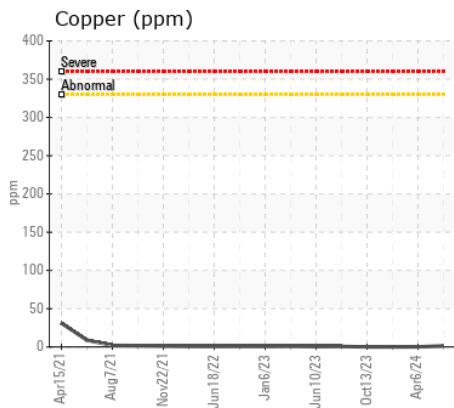
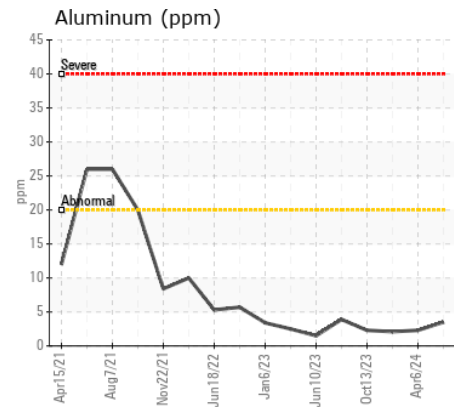
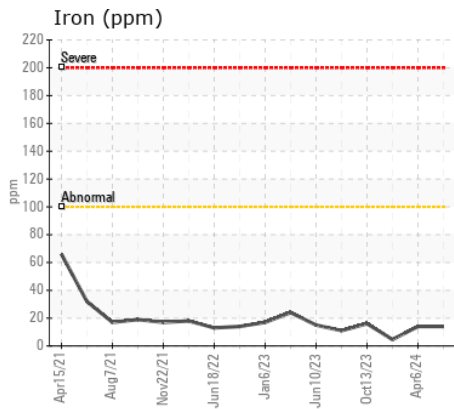
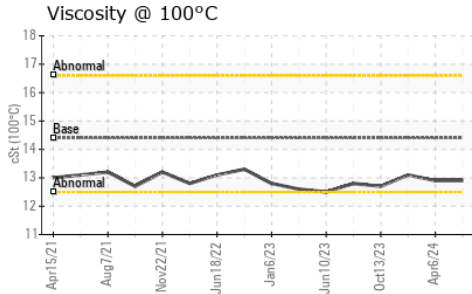
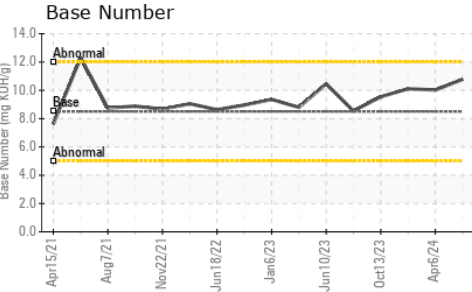
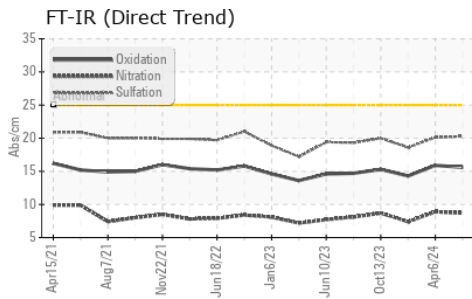
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	4
Potassium	ppm	ASTM D5185m	>20	6	4	0
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	0.4	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.7	8.9	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	20.1	18.6
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	>158	2	2	0
Boron	ppm	ASTM D5185m	250	8	8	<1
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	59	68	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	836	1121	926
Calcium	ppm	ASTM D5185m	3000	1113	1432	1052
Phosphorus	ppm	ASTM D5185m	1150	906	1281	971
Zinc	ppm	ASTM D5185m	1350	1120	1563	1263
Sulfur	ppm	ASTM D5185m	4250	2911	4589	3031
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	15.9	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.78	10.02	10.11
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.9	13.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0005288
Lab Number : 06193008
Unique Number : 11049760
Test Package : MOB 2

Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Wes Davis

HALLACK CONTRACTING, INC.
 4223 W POLK
 HART, MI
 US 49420

Contact: DAN HALLACK KARL BUTCHER
 shop@hallackcontracting.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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