



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
KENWORTH 51
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (7 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0005151	RW0004458	RW0003732
Sample Date		Client Info		02 May 2024	16 May 2023	15 Aug 2022
Machine Age	hrs	Client Info		6462	6166	5911
Oil Age	hrs	Client Info		296	255	223
Filter Age	hrs	Client Info		296	255	223
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	6	5	5
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	<1	<1	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

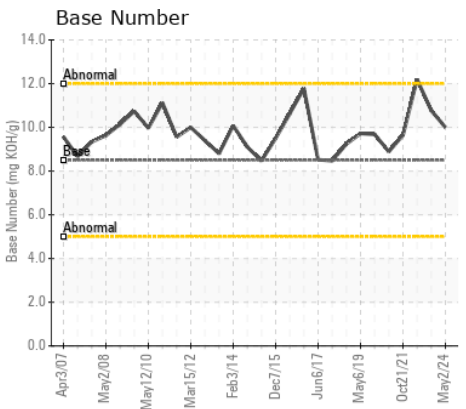
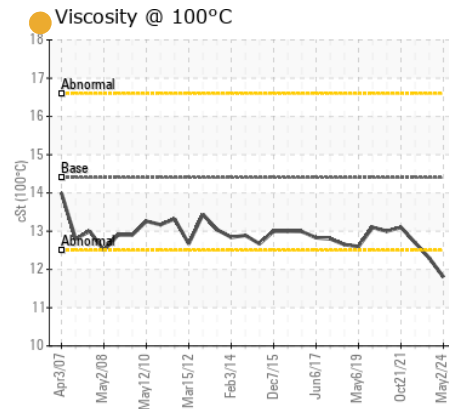
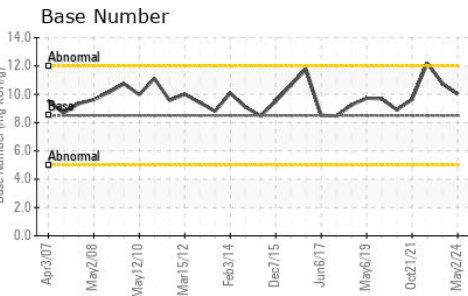
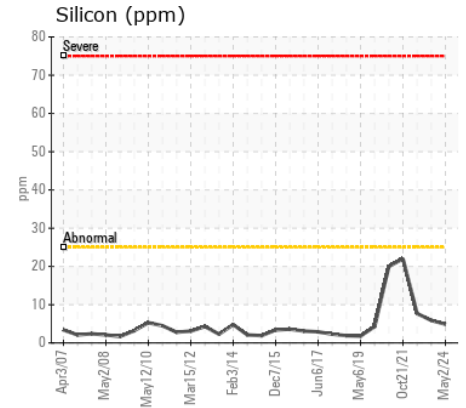
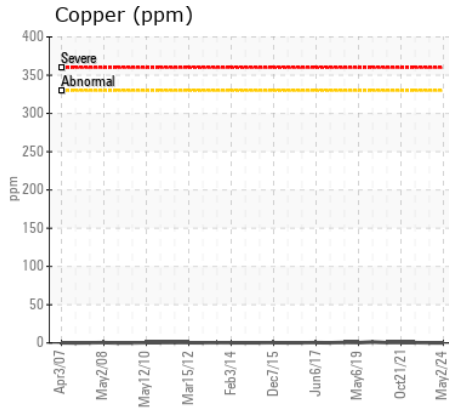
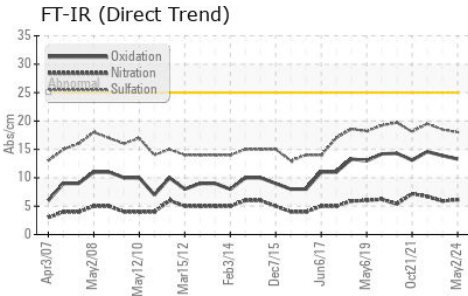
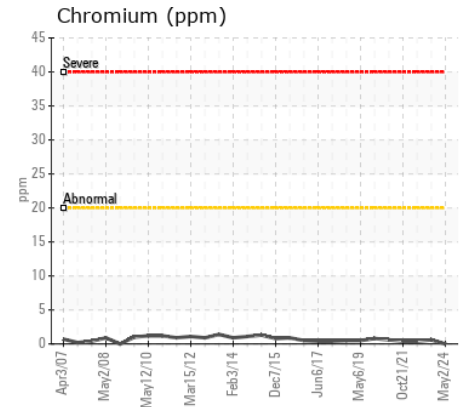
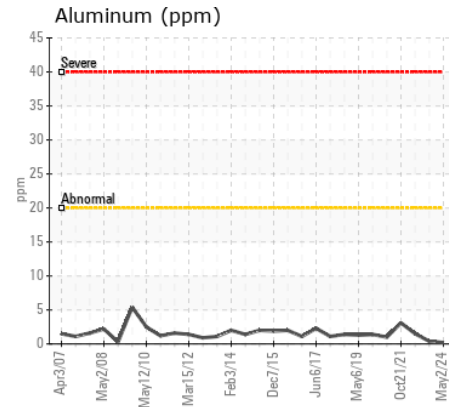
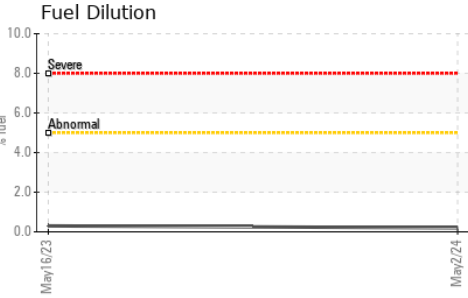
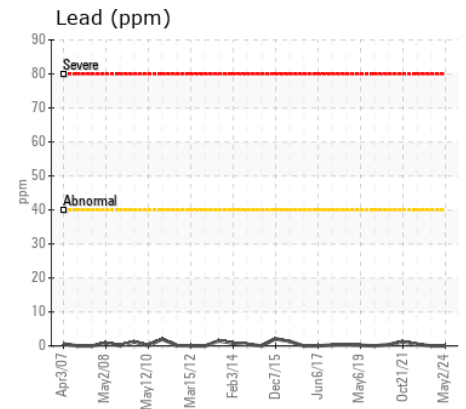
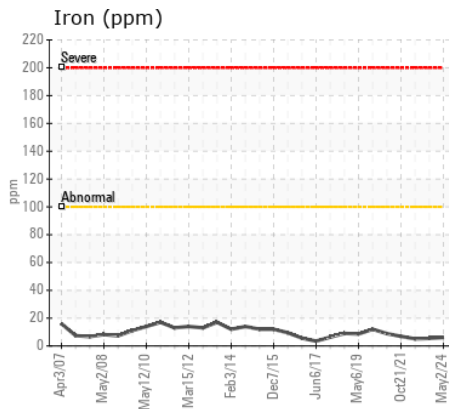
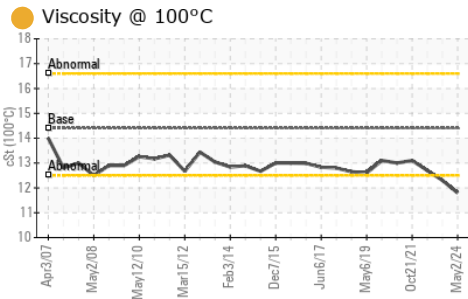
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	8
Potassium	ppm	ASTM D5185m	>20	0	0	0
Fuel	%	ASTM D3524	>5	0.2	0.3	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.1	5.9	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	18.5	19.5
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	2	1	0
Boron	ppm	ASTM D5185m	250	13	7	19
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	67	61	64
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	927	961	866
Calcium	ppm	ASTM D5185m	3000	1184	1081	1261
Phosphorus	ppm	ASTM D5185m	1150	1152	1057	1083
Zinc	ppm	ASTM D5185m	1350	1258	1263	1307
Sulfur	ppm	ASTM D5185m	4250	3697	3808	3506
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	13.9	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.00	10.77	12.2
Visc @ 100°C	cSt	ASTM D445	14.4	11.8	12.3	12.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0005151
Lab Number : 06176210
Unique Number : 11022263
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 10 May 2024
Tested : 15 May 2024
Diagnosed : 15 May 2024 - Sean Felton

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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