OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
KENWORTH RB2060
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (44 QTS)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

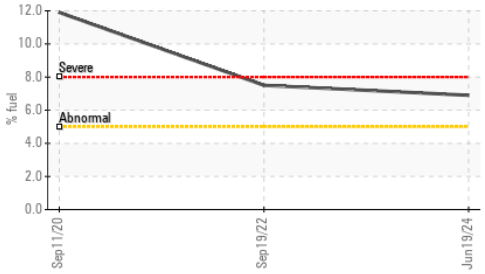
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

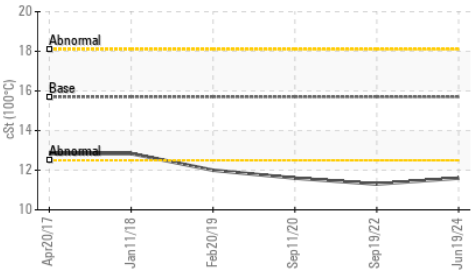
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0955673	WC0729237	WC0453429
Sample Date		Client Info		19 Jun 2024	19 Sep 2022	11 Sep 2020
Machine Age	mls	Client Info		59182	47183	33036
Oil Age	mls	Client Info		14999	14147	9155
Filter Age	mls	Client Info		14999	0	9155
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>100	17	24	26
Chromium	ppm	ASTM D5185m	>6	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	3	2	1
Lead	ppm	ASTM D5185m	>10	<1	3	2
Copper	ppm	ASTM D5185m	>150	5	8	9
Tin	ppm	ASTM D5185m	>4	<1	1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	17	▲ 72	6
Potassium	ppm	ASTM D5185m	>20	7	7	11
Fuel	%	ASTM D3524	>5	▲ 6.9	▲ 7.5	▲ 11.9
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	7.5	9.1	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	23.0	22.7
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
Sodium	ppm	ASTM D5185m		4	2	2
Boron	ppm	ASTM D5185m	316	119	113	137
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	24	5	3
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	148	52	27
Calcium	ppm	ASTM D5185m	2292	2002	2023	1984
Phosphorus	ppm	ASTM D5185m	1064	1006	877	876
Zinc	ppm	ASTM D5185m	1160	1179	1093	1043
Sulfur	ppm	ASTM D5185m	4996	3923	3689	2988
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	19.3	20.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.2	6.9	6.6
Visc @ 100°C	cSt	ASTM D445	15.7	▲ 11.6	▲ 11.3	▲ 11.6

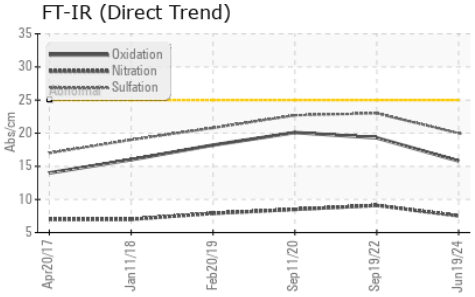
Fuel Dilution



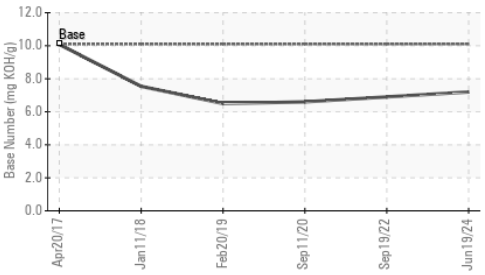
Viscosity @ 100°C



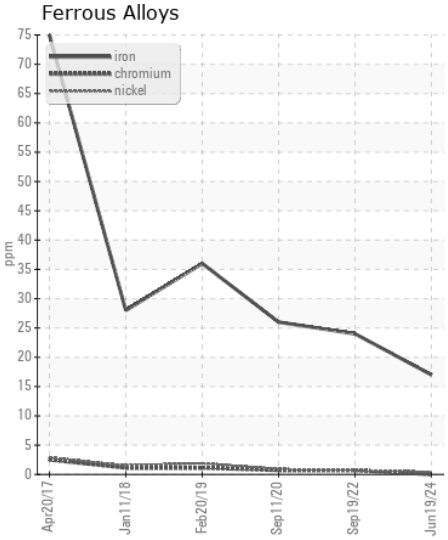
FT-IR (Direct Trend)



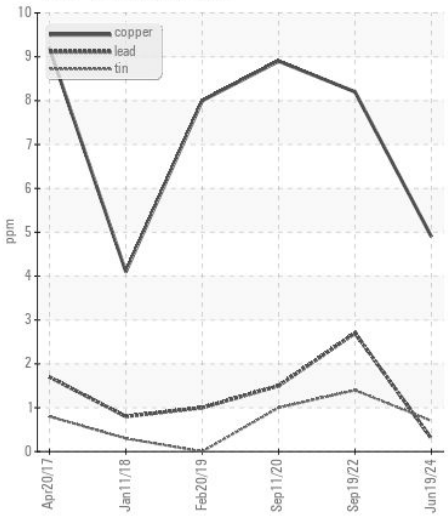
Base Number



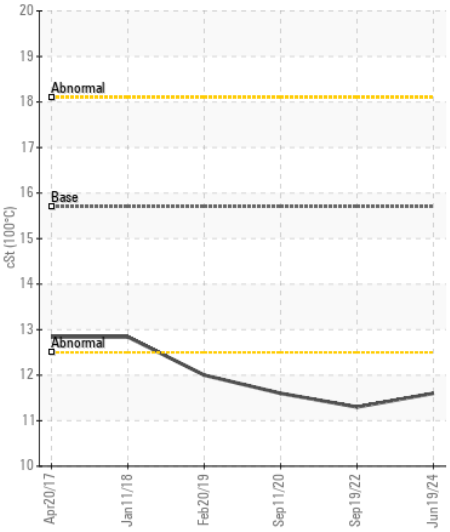
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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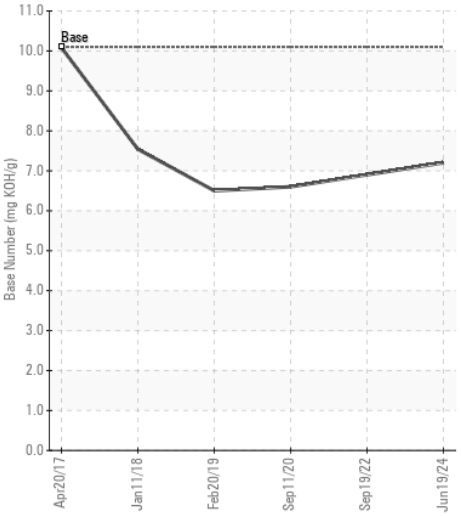

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0955673
Lab Number : 06217483
Unique Number : 11090347
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 21 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

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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