



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
604150 KENWORTH T880
 Component
Diesel Engine
 Fluid
SHELL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0910267	WC0783600	WC0653651
Sample Date		Client Info		17 Jun 2024	11 Jan 2024	23 Jul 2022
Machine Age	hrs	Client Info		5862	5448	3725
Oil Age	hrs	Client Info		450	450	650
Filter Age	hrs	Client Info		450	450	650
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	>90	29	38	74
Chromium	ppm	ASTM D5185m	>20	1	2	3
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	8	9	20
Lead	ppm	ASTM D5185m	>40	1	4	7
Copper	ppm	ASTM D5185m	>330	1	<1	4
Tin	ppm	ASTM D5185m	>15	0	<1	1
Vanadium	ppm	ASTM D5185m		<1	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.

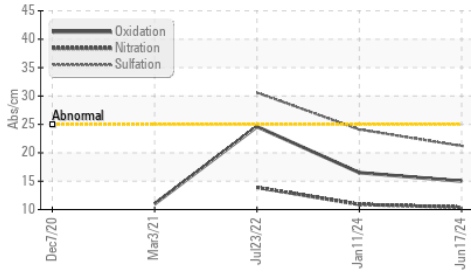
Silicon	ppm	ASTM D5185m	>25	5	6	9
Potassium	ppm	ASTM D5185m	>20	6	7	20
Chlorine	ppm	ASTM D5185m		---	---	---
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.5	0.7	1.4
Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.9	13.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	24.1	30.6
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

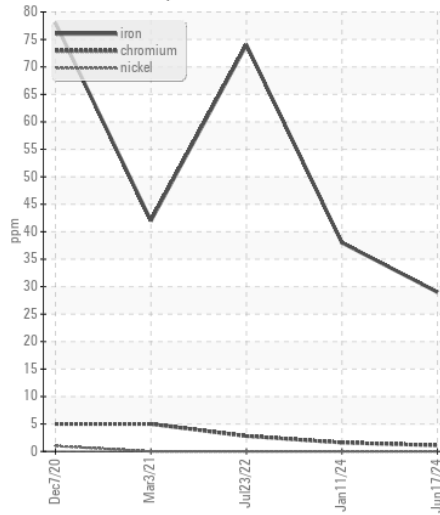
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>150	1	2	3
Boron	ppm	ASTM D5185m		25	18	20
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		64	64	94
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		57	89	64
Calcium	ppm	ASTM D5185m		2375	2154	2271
Phosphorus	ppm	ASTM D5185m		1027	937	1032
Zinc	ppm	ASTM D5185m		1314	1195	1278
Sulfur	ppm	ASTM D5185m		4373	3545	3941
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	16.5	24.6
Base Number (BN)	mg KOH/g	ASTM D2896		5.0	4.3	6.3
Visc @ 100°C	cSt	ASTM D445		12.4	12.6	14.0

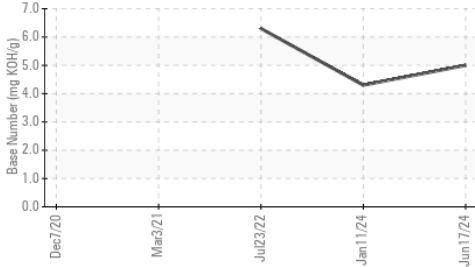
FT-IR (Direct Trend)



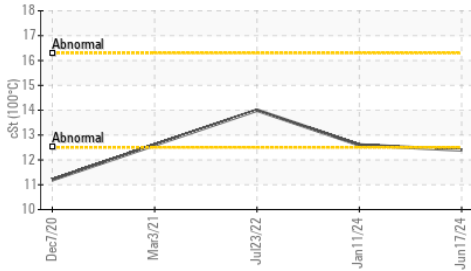
Ferrous Alloys



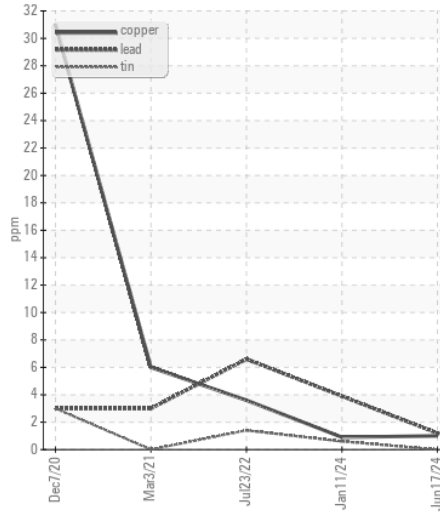
Base Number



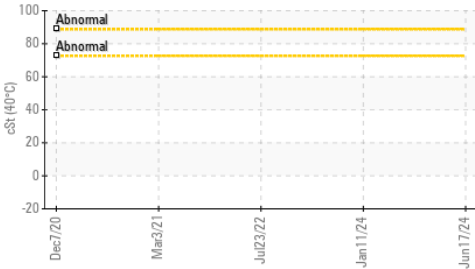
Viscosity @ 100°C



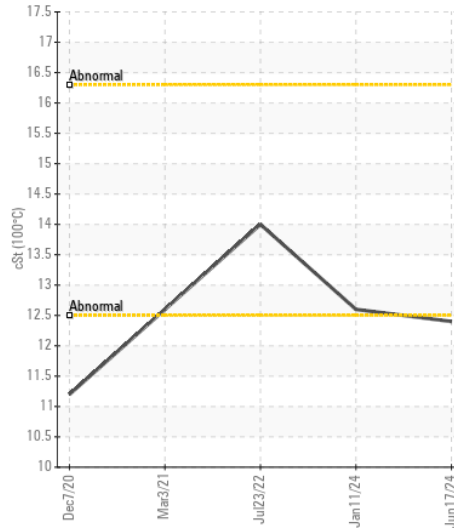
Non-ferrous Metals



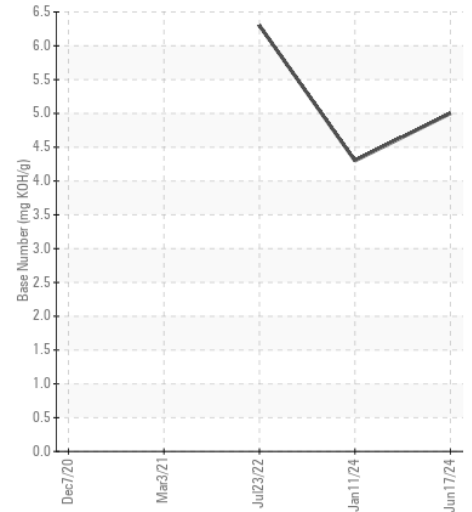
Viscosity @ 40°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0910267 **Received** : 28 Jun 2024
Lab Number : 06223306 **Tested** : 01 Jul 2024
Unique Number : 11101503 **Diagnosed** : 01 Jul 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: KV40)

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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