



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KENWORTH 3028
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 XLE 10W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0933571	WC0831755	WC0515293
Sample Date		Client Info		25 Jun 2024	08 Sep 2023	22 Sep 2022
Machine Age	mls	Client Info		329640	290530	213000
Oil Age	mls	Client Info		39110	37076	213000
Filter Age	mls	Client Info		39110	37076	213000
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	24	23	27
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	10	8	8
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<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

CONTAMINATION

There is no indication of any contamination in the oil.

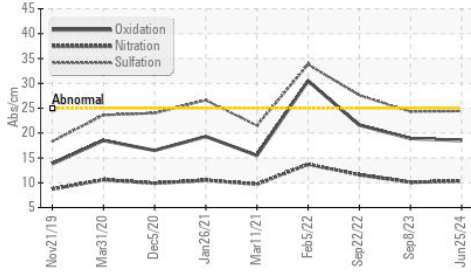
Silicon	ppm	ASTM D5185m	>25	13	8	7
Potassium	ppm	ASTM D5185m	>20	13	11	12
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.7	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.3	10.1	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	24.3	27.6
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

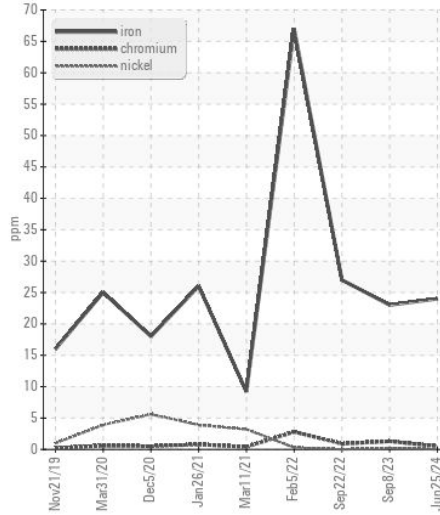
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	5	2
Boron	ppm	ASTM D5185m		4	18	17
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		2	3	6
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		751	850	697
Calcium	ppm	ASTM D5185m	2900	1469	1614	1409
Phosphorus	ppm	ASTM D5185m	1100	790	784	729
Zinc	ppm	ASTM D5185m	1200	890	922	857
Sulfur	ppm	ASTM D5185m	4000	3548	3705	3219
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	18.9	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.3	5.6	5.0	5.9
Visc @ 100°C	cSt	ASTM D445	11.9	12.1	12.0	11.9

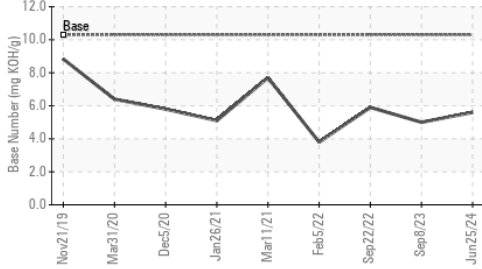
FT-IR (Direct Trend)



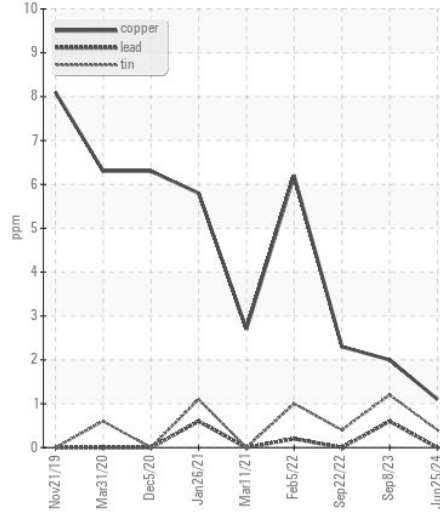
Ferrous Alloys



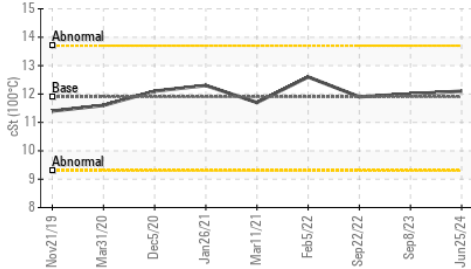
Base Number



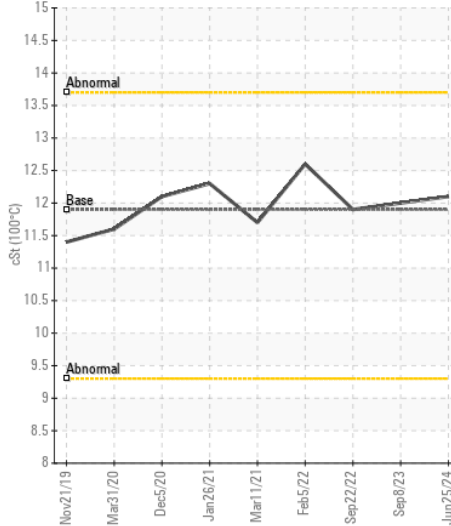
Non-ferrous Metals



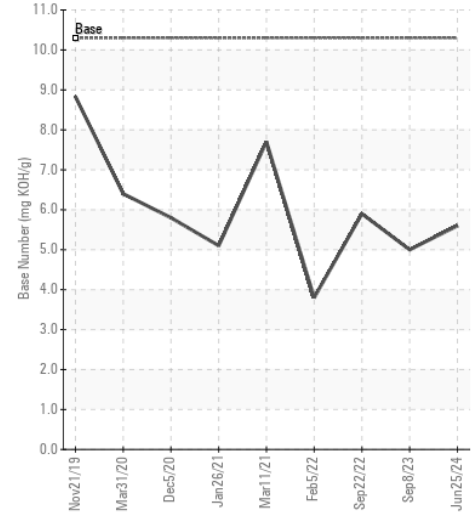
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0933571 **Received** : 15 Jul 2024
Lab Number : 06237278 **Tested** : 17 Jul 2024
Unique Number : 11126112 **Diagnosed** : 17 Jul 2024 - Wes Davis
Test Package : FLEET

LTI/MILKY WAY - SEATTLE
 6110 WEST MARGINAL WAY SW
 SEATTLE, WA
 US 98106
 Contact: TIM TURNBULL
 tturnbul@lynden.com
 T: (206)892-2600
 F:

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)