



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CUMMINS KTA 38 M1
 Component
Diesel Engine
 Fluid
CHEVRON 15W40 (35 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0011775	KLMFA22481	KLMFA22471
Sample Date		Client Info		08 Jul 2024	09 Aug 2023	16 Jun 2023
Machine Age	hrs	Client Info		250	23221	771
Oil Age	hrs	Client Info		250	0	771
Filter Age	hrs	Client Info		250	250	771
Oil Changed		Client Info		Not Changd	N/A	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>90	4	13	4
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	1
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<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.

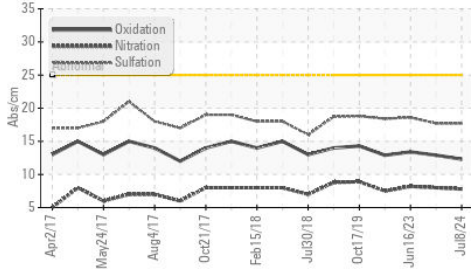
Silicon	ppm	ASTM D5185m	>25	6	11	9
Potassium	ppm	ASTM D5185m	>20	2	4	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.8	8.0	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.7	17.7	18.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER	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

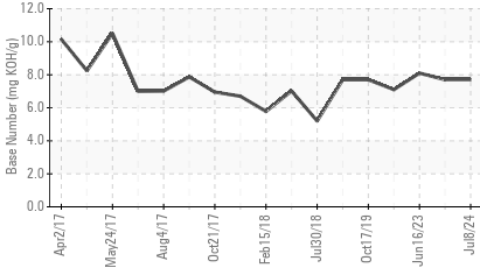
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>50	1	30	0
Boron	ppm	ASTM D5185m		54	96	89
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	6	7
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		551	773	676
Calcium	ppm	ASTM D5185m		1866	1462	1328
Phosphorus	ppm	ASTM D5185m		859	725	742
Zinc	ppm	ASTM D5185m		936	902	863
Sulfur	ppm	ASTM D5185m		4016	3664	3435
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.3	12.9	13.4
Base Number (BN)	mg KOH/g	ASTM D2896		7.7	7.7	8.1
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.1	12.9

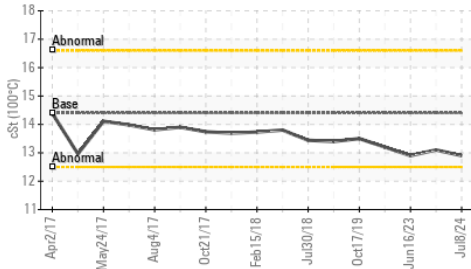
FT-IR (Direct Trend)



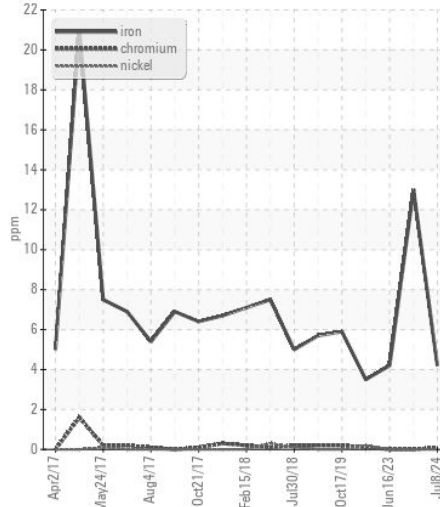
Base Number



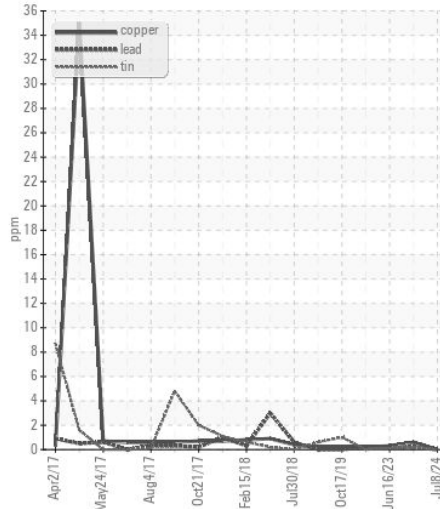
Viscosity @ 100°C



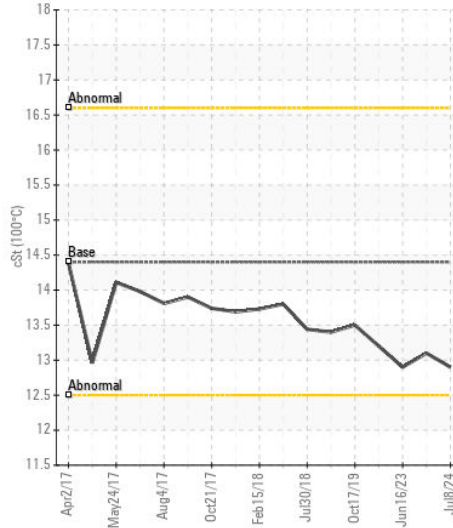
Ferrous Alloys



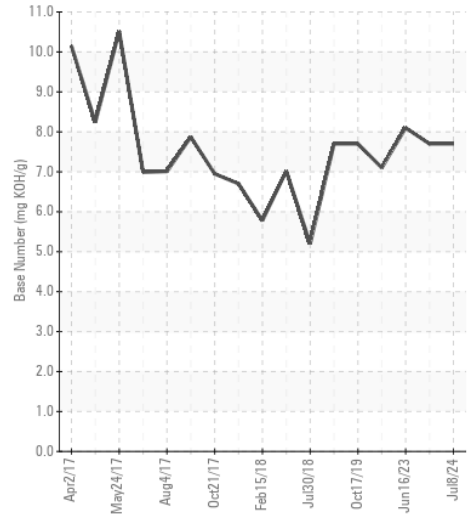
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KL0011775

Lab Number : 06237444

Unique Number : 11126278

Test Package : FLEET

Received : 15 Jul 2024

Tested : 16 Jul 2024

Diagnosed : 16 Jul 2024 - Wes Davis

FISHING VESSEL EXCALIBUR II

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NEWPORT, OR

US 97365

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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)