



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**GUAY SON [CONHER]**  
Machine Id  
**IBACO BM DAGIO I**  
Component  
**Auxiliary Power Unit Diesel Engine**  
Fluid  
**RALOY 15W40 (8 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample  
Comment: Fluid: Raloy 15W40 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0014516</b>	KL0013480	KL0013349
Sample Date		Client Info		<b>20 Mar 2024</b>	18 Jan 2024	01 Nov 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>240</b>	100	240
Filter Age	hrs	Client Info		<b>240</b>	100	240
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	30	40
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	5
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	29
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

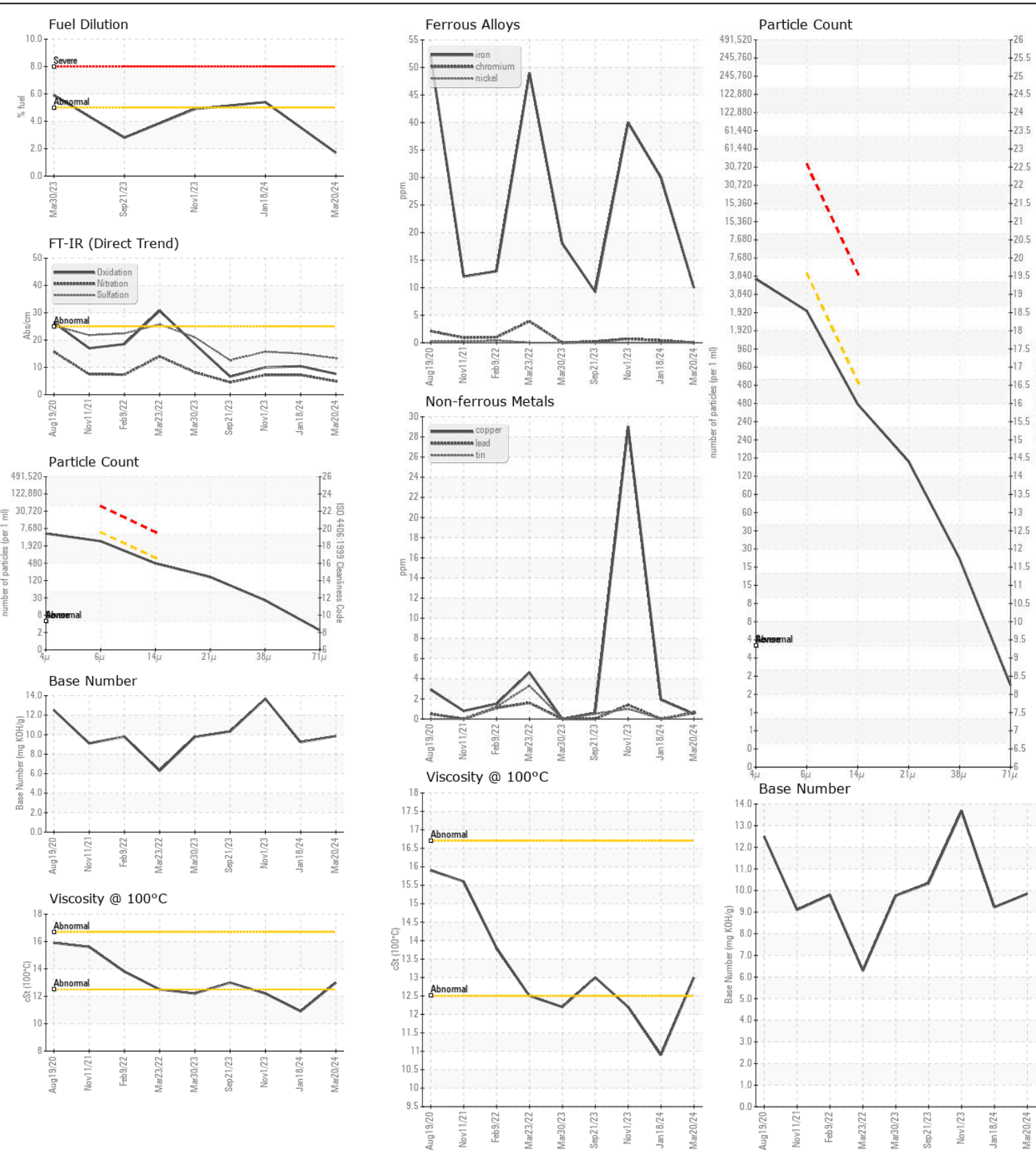
Fuel content negligible. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>25	<b>11</b>	14	18
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	3
Fuel	%	ASTM D3524	>5	<b>1.7</b>	▲ 5.4	▲ 4.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>4.9</b>	7.2	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>13.3</b>	15.0	15.7
Particles >4µm		ASTM D7647		<b>4489</b>	9100	45569
Particles >6µm		ASTM D7647	>5000	<b>2445</b>	4957	▲ 24824
Particles >14µm		ASTM D7647	>640	<b>416</b>	● 844	▲ 4225
Particles >21µm		ASTM D7647	>160	<b>140</b>	● 284	▲ 1423
Particles >38µm		ASTM D7647	>40	<b>22</b>	● 44	▲ 220
Particles >71µm		ASTM D7647	>10	<b>2</b>	4	▲ 22
Oil Cleanliness		ISO 4406 (c)	>19/16	<b>18/16</b>	● 19/17	▲ 22/19
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>0</b>	6	10
Boron	ppm	ASTM D5185m		<b>0</b>	2	52
Barium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>17</b>	6	13
Calcium	ppm	ASTM D5185m		<b>2803</b>	2496	3454
Phosphorus	ppm	ASTM D5185m		<b>1197</b>	1076	1066
Zinc	ppm	ASTM D5185m		<b>1371</b>	1186	1366
Sulfur	ppm	ASTM D5185m		<b>4156</b>	3543	3612
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>7.6</b>	10.4	10.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.85</b>	9.23	13.68
Visc @ 100°C	cSt	ASTM D445		<b>13.0</b>	▲ 10.9	▲ 12.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0014516 **Received** : 18 Apr 2024  
**Lab Number** : 06153322 **Tested** : 23 Apr 2024  
**Unique Number** : 10983400 **Diagnosed** : 23 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PercentFuel, PrtCount )

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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