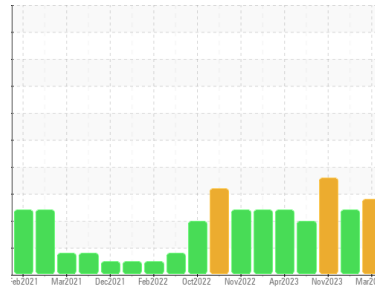




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**GUAY SON [CONHER]**  
 Machine Id  
**IBACO BM CHUYITO 28 MP**  
 Component  
**Diesel Engine**  
 Fluid  
**Xtra Rev 15W40 (160 LTR)**

### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. ( Customer Sample Comment: Fluid: Raloy 15W40 )

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of particulates present in the oil.

#### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>KL0014208</b>	KL0014140	KL0013375
Sample Date	Client Info			<b>20 Mar 2024</b>	06 Feb 2024	08 Nov 2023
Machine Age	hrs	Client Info		<b>17535</b>	16897	15710
Oil Age	hrs	Client Info		<b>913</b>	325	740
Oil Changed	Client Info			<b>Not Chngd</b>	Not Chngd	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>18</b>	6	13
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<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>1</b>	1	1
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	0	4
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

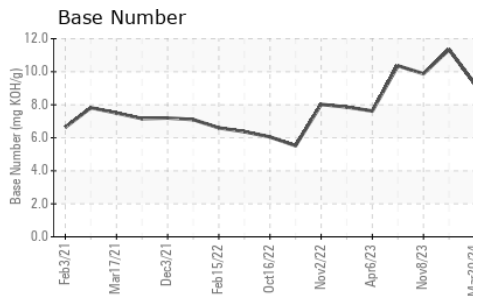
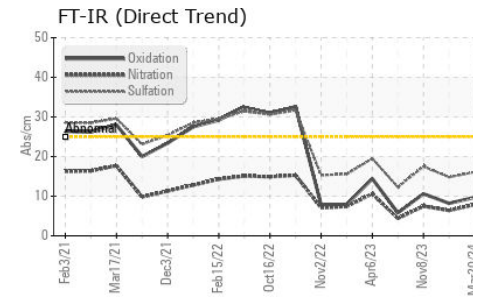
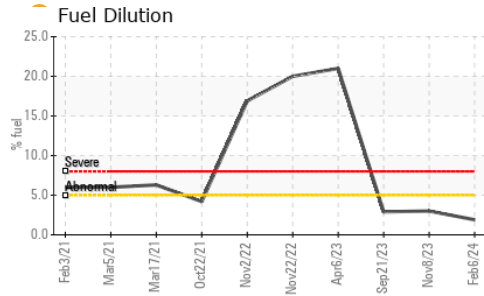
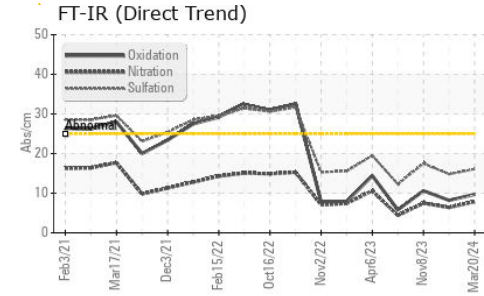
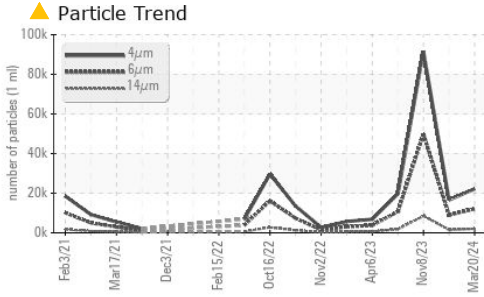
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	3	76
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>4</b>	2	17
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>10</b>	17	56
Calcium	ppm	ASTM D5185m		<b>2655</b>	2541	2420
Phosphorus	ppm	ASTM D5185m		<b>1119</b>	1087	1126
Zinc	ppm	ASTM D5185m		<b>1287</b>	1272	1301
Sulfur	ppm	ASTM D5185m		<b>3797</b>	3113	3480

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	9	7
Sodium	ppm	ASTM D5185m		<b>0</b>	0	1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	3
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	1.9	▲ 3.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	6.4	7.5
Sulfation	Abs.1mm	*ASTM D7415	>30	<b>16.1</b>	14.8	17.5



# OIL ANALYSIS REPORT



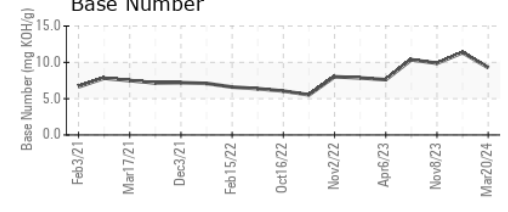
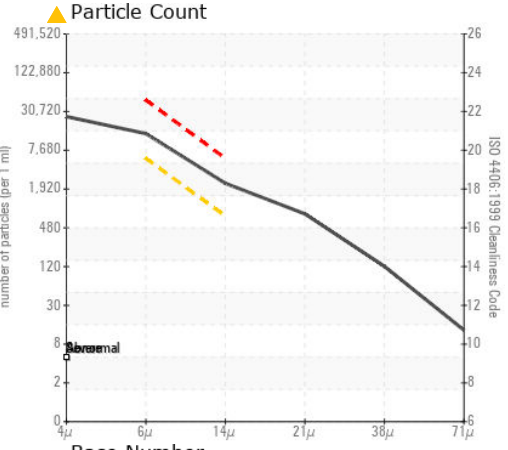
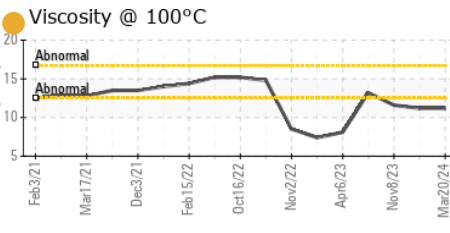
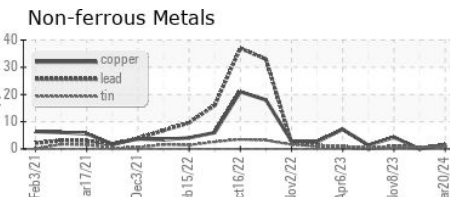
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>22202</b>	16573	91642
Particles >6µm	ASTM D7647	>5000	<b>▲ 12094</b>	▲ 9028	▲ 49923
Particles >14µm	ASTM D7647	>640	<b>▲ 2058</b>	▲ 1536	▲ 8496
Particles >21µm	ASTM D7647	>160	<b>▲ 693</b>	▲ 518	▲ 2862
Particles >38µm	ASTM D7647	>40	<b>▲ 107</b>	▲ 80	▲ 442
Particles >71µm	ASTM D7647	>10	<b>▲ 11</b>	8	▲ 45
Oil Cleanliness	ISO 4406 (c)	>19/16	<b>▲ 21/18</b>	▲ 20/18	▲ 23/20

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	*ASTM D7414	>25	<b>9.7</b>	8.2	10.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.28</b>	11.34	9.88

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>● 11.2</b>	● 11.2	▲ 11.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0014208  
**Lab Number** : 06153288  
**Unique Number** : 10983366  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel, PrtCount )

**Received** : 18 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 23 Apr 2024 - Don Baldrige

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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