

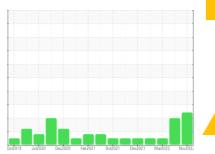
OIL ANALYSIS REPORT

GUAY SON [CONHER] MAIN ENGINE

Component

Bottom Diesel Engine

Xtra Rev SAE 15W40 (160 LTR)



Sample Rating Trend



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

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

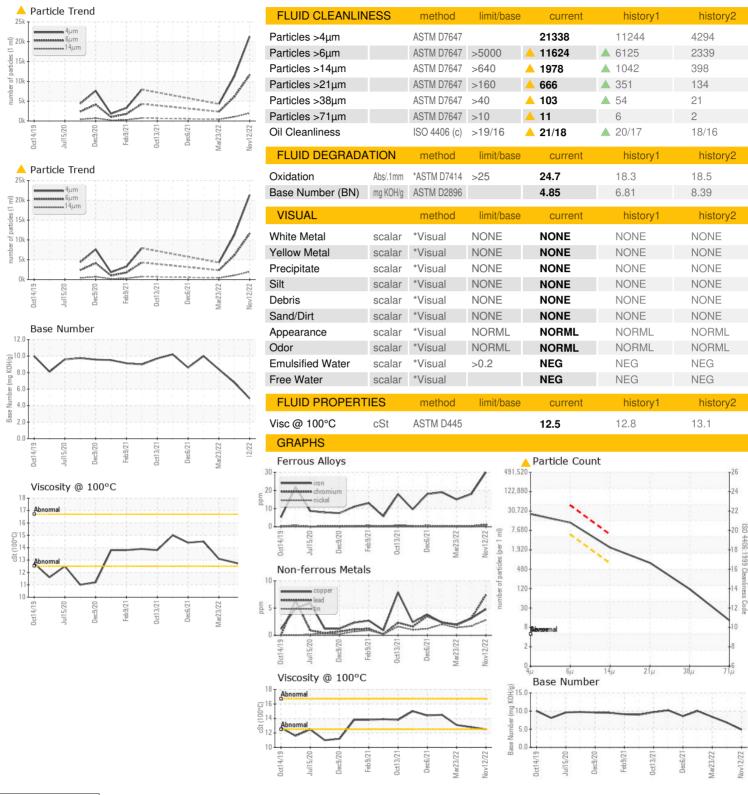
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION	0.11.151 == -		Oct2019 Ju	EUZU DBIZUZU FBDZUZ	.1 Oct2021 Dec2021 Mar20		
Sample Date Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 10850 10060 0 Oil Age hrs Client Info 790 233 0 Oil Changed Client Info Not Changd Not Changd N/A Sample Status BABNORMAL ATTENTION NORMAL CONTAMINATION method Ilmil/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG NEG WEAR METALS method limil/base current history1 history2 Iron ppm ASTM D5185m >20 1 <1 <1 Kohcel ppm ASTM D5185m >20 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Sample Number		Client Info		KL0011230	KL0010141	KL0009211
Oil Age hrs Client Info 790 233 0 Oil Changed Client Info Not Changd N/A N/A Sample Status Client Info Not Changd N/A N/A CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Sample Date		Client Info		12 Nov 2022	05 Oct 2022	23 Mar 2022
Oil Changed Sample Status	Machine Age	hrs	Client Info		10850	10060	0
Sample Status	Oil Age	hrs	Client Info		790	233	0
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 30 18 15 Chromium ppm ASTM D5185m >20 1 <1 <1 Nickel ppm ASTM D5185m >4 <1 0 0 Silver ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >20 2 2 2 Lead ppm ASTM D5185m >40 7 3 2 Lead ppm ASTM D5185m >15 3 2 1 Antimon	· ·		Client Info		Not Changd	Not Changd	N/A
Fuel	Sample Status				ABNORMAL	ATTENTION	NORMAL
Water Glycol WC Method >0.2 NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 30 18 15 Chromium ppm ASTM D5185m >20 1 <1 <1 Nickel ppm ASTM D5185m >4 <1 0 0 Titanium ppm ASTM D5185m >4 <1 0 0 Aluminum ppm ASTM D5185m 20 0 0 <1 Aluminum ppm ASTM D5185m >20 2 2 2 2 Lead ppm ASTM D5185m >40 7 3 2 2 Copper ppm ASTM D5185m >15 3 2 1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 </th <th>CONTAMINATION</th> <th>V</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINATION	V	method	limit/base	current	history1	history2
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 30 18 15 Chromium ppm ASTM D5185m >20 1 <1 <1 Nickel ppm ASTM D5185m >4 <1 0 0 Titanium ppm ASTM D5185m >3 0 0 <1 Alluminum ppm ASTM D5185m >3 0 0 <1 Alluminum ppm ASTM D5185m >20 2 2 2 Lead ppm ASTM D5185m >40 7 3 2 2 Lead ppm ASTM D5185m >15 3 2 1 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 <	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 30 18 15 Chromium ppm ASTM D5185m >20 1 <1 <1 Nickel ppm ASTM D5185m >4 <1 0 0 Titanium ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >3 0 0 <1 Aluminum ppm ASTM D5185m >20 2 2 2 Lead ppm ASTM D5185m >30 5 3 2 Copper ppm ASTM D5185m >33 2 1 Antimony ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 Cadmium ppm	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 1 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	30	18	15
Titanium ppm ASTM D5185m -1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Silver ppm ASTM D5185m >3 0 0 <1 Aluminum ppm ASTM D5185m >20 2 2 2 Lead ppm ASTM D5185m >20 7 3 2 Copper ppm ASTM D5185m >330 5 3 2 Tin ppm ASTM D5185m >15 3 2 1 Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 75 87 102	Nickel	ppm	ASTM D5185m	>4	<1	0	0
Aluminum ppm ASTM D5185m >20 2 2 2 Lead ppm ASTM D5185m >40 7 3 2 Copper ppm ASTM D5185m >330 5 3 2 Tin ppm ASTM D5185m Antimony ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m 3	Titanium	ppm	ASTM D5185m		<1	<1	<1
Lead ppm ASTM D5185m >40 7 3 2 Copper ppm ASTM D5185m >330 5 3 2 Tin ppm ASTM D5185m >15 3 2 1 Antimony ppm ASTM D5185m —— —— —— Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m<	Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper ppm ASTM D5185m >330 5 3 2 Tin ppm ASTM D5185m >15 3 2 1 Antimony ppm ASTM D5185m —— —— —— Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 330 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 <td< td=""><th>Aluminum</th><td>ppm</td><td>ASTM D5185m</td><td>>20</td><th>2</th><td>2</td><td>2</td></td<>	Aluminum	ppm	ASTM D5185m	>20	2	2	2
Tin ppm ASTM D5185m >15 3 2 1 Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m >25	Lead	ppm	ASTM D5185m	>40	7	3	2
Antimony ppm ASTM D5185m Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 116 172 271 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	5	3	2
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 116 172 271 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m <1 <1 <1 <1 Magnesium ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current histor	Tin	ppm	ASTM D5185m	>15	3	2	1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 116 172 271 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m <1	Antimony	ppm	ASTM D5185m				
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 116 172 271 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 116 172 271 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m <1 <1 <1 Magnesium ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m >20 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 75 87 102 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		116	172	271
Manganese ppm ASTM D5185m <1 <1 <1 Magnesium ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m >20 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 330 361 498 Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m 520 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Molybdenum	ppm	ASTM D5185m		75	87	102
Calcium ppm ASTM D5185m 1803 1659 1365 Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m >20 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 781 877 816 Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Magnesium	ppm	ASTM D5185m		330	361	498
Zinc ppm ASTM D5185m 933 1030 913 Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Calcium	ppm	ASTM D5185m		1803	1659	1365
Sulfur ppm ASTM D5185m 3439 3545 2523 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Phosphorus	ppm	ASTM D5185m		781	877	816
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Zinc	ppm	ASTM D5185m		933	1030	913
Silicon ppm ASTM D5185m >25 8 8 8 Sodium ppm ASTM D5185m 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Sulfur	ppm	ASTM D5185m		3439	3545	2523
Sodium ppm ASTM D5185m 6 2 3 Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	CONTAMINANTS	1	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 6 2 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Silicon	ppm	ASTM D5185m	>25	8	8	8
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Sodium	ppm	ASTM D5185m		6	2	3
Soot % % *ASTM D7844 >3 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	Potassium	ppm	ASTM D5185m	>20	6	2	0
Nitration Abs/cm *ASTM D7624 >20 13.0 10.1 8.8	INFRA-RED		method	limit/base	current	history1	history2
	Soot %	%	*ASTM D7844	>3	0.5	0.4	0.3
	Nitration	Abs/cm	*ASTM D7624	>20	13.0	10.1	8.8
	Sulfation	Abs/.1mm			26.1	22.6	22.3



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number**

: KL0011230 : 05703102 : 10232676

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 25 Nov 2022 Recieved Diagnosed

: 29 Nov 2022 Diagnostician : Jonathan Hester

Test Package : MOB 2 (Additional Tests: 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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