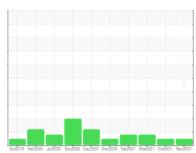


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



GUAY SON [CONHER] MAIN ENGINE

Bottom Diesel Engine

Xtra Rev SAE 15W40 (160 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

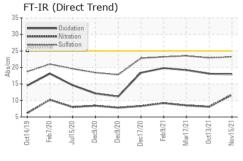
Fluid Condition

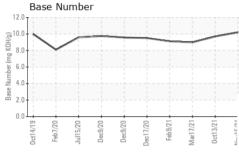
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

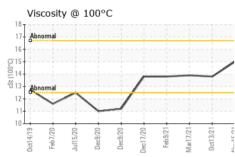
SAMPLE INFORMATION							
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 8683 8755 8103 Oil Age hrs Client Info 580 395 298 Oil Changed Client Info Not Changed Not Changed	Sample Number		Client Info		KL0007638	KL0007497	KL0006140
Oil Age hrs Client Info 580 395 298 Oil Changed Client Info Not Changd Changed Not Changed Sample Status Client Info Not Changd NoRMAL NoRMAL NoRMAL ATTENTION CONTAMINATION method limit/base current history1 history2 Euel WC Method >5 <1.0	Sample Date		Client Info		15 Nov 2021	13 Oct 2021	17 Mar 2021
Client Info Not Changed NormAL NormAL ATTENTION	Machine Age	hrs	Client Info		8683	8755	8103
Sample Status	Oil Age	hrs	Client Info		580	395	298
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Not Changd	Changed	Not Changd
Fuel	Sample Status				NORMAL	NORMAL	ATTENTION
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imitibase current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 10 18 6 Chromium ppm ASTM D5185m >20 <1	CONTAMINATION	1	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 10 18 6 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >4 <1 0 0 Titanium ppm ASTM D5185m 3 0 <1 0 Aluminum ppm ASTM D5185m >20 2 5 0 Aluminum ppm ASTM D5185m >40 2 2 <1 Aluminum ppm ASTM D5185m >40 2 2 <1 Copper ppm ASTM D5185m >40 2 2 <1 Antimony ppm ASTM D5185m 0 <1 0 0 Vanadium ppm ASTM D5185m 0 <1 0 0 Cadmium ppm ASTM D5185m 250 330 4	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	10	18	6
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver ppm ASTM D5185m >3 0 <1	Nickel	ppm	ASTM D5185m	>4	<1	0	0
Aluminum ppm ASTM D5185m >20 2 5 0 Lead ppm ASTM D5185m >40 2 2 <1 Copper ppm ASTM D5185m >330 2 8 <1 Tin ppm ASTM D5185m >15 1 2 <1 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 <1 0 0 Cadmium ppm ASTM D5185m 0 <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 330 424 Barium ppm ASTM D5185m 0 <1 <1 Molybdenum ppm ASTM D5185m 121 113 133 Magnesium ppm ASTM D5185m <1 <1 <1 <1 Magnes		ppm	ASTM D5185m		<1	<1	<1
Lead	Silver	ppm	ASTM D5185m	>3			
Copper ppm ASTM D5185m >330 2 8 <1	Aluminum	ppm	ASTM D5185m	>20			0
Tin	Lead	ppm	ASTM D5185m	>40			
Antimony ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 <1	• •	ppm	ASTM D5185m				
Vanadium ppm ASTM D5185m 0 <1		ppm	ASTM D5185m	>15			
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 330 424 Barium ppm ASTM D5185m 0 <1 <1 Molybdenum ppm ASTM D5185m 121 113 133 Manganese ppm ASTM D5185m <1 <1 <1 Magnesium ppm ASTM D5185m 588 524 585 Calcium ppm ASTM D5185m 1573 1479 1618 Phosphorus ppm ASTM D5185m 960 912 960 Zinc ppm ASTM D5185m 3109 2582 2811 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 1 <1 Sodium ppm ASTM D5185m >20	•	ppm	ASTM D5185m		-		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 330 424 Barium ppm ASTM D5185m 0 <1 <1 Molybdenum ppm ASTM D5185m 121 113 133 Manganese ppm ASTM D5185m <1 <1 <1 <1 Magnesium ppm ASTM D5185m 588 524 585 Calcium ppm ASTM D5185m 1573 1479 1618 Phosphorus ppm ASTM D5185m 960 912 960 1100 1100 1100 2811	Vanadium	ppm					
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 121 113 133 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		250	330	424
Manganese ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m		0	<1	<1
Magnesium ppm ASTM D5185m 588 524 585 Calcium ppm ASTM D5185m 1573 1479 1618 Phosphorus ppm ASTM D5185m 960 912 960 Zinc ppm ASTM D5185m 1101 1036 1100 Sulfur ppm ASTM D5185m 3109 2582 2811 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m 7 8 2 Potassium ppm ASTM D5185m >20 1 1 <1	Molybdenum	ppm	ASTM D5185m		121	113	133
Calcium ppm ASTM D5185m 1573 1479 1618 Phosphorus ppm ASTM D5185m 960 912 960 Zinc ppm ASTM D5185m 1101 1036 1100 Sulfur ppm ASTM D5185m 3109 2582 2811 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m 7 8 2 Potassium ppm ASTM D5185m >20 1 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2	•	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 960 912 960 Zinc ppm ASTM D5185m 1101 1036 1100 Sulfur ppm ASTM D5185m 3109 2582 2811 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m 7 8 2 Potassium ppm ASTM D5185m >20 1 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % "ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm "ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm "ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1		ppm				524	585
Zinc ppm ASTM D5185m 1101 1036 1100 Sulfur ppm ASTM D5185m 3109 2582 2811 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m >20 1 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % "ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm "ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm "ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm "ASTM D7414 >25 17.9 18.1 19.2		ppm					
Sulfur ppm ASTM D5185m 3109 2582 2811 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m 7 8 2 Potassium ppm ASTM D5185m >20 1 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2		ppm					
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m >20 1 1 <1	-	ppm			-		
Silicon ppm ASTM D5185m >25 11 18 5 Sodium ppm ASTM D5185m 7 8 2 Potassium ppm ASTM D5185m >20 1 1 <1					3109		
Sodium ppm ASTM D5185m 7 8 2 Potassium ppm ASTM D5185m >20 1 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2	CONTAMINANTS		method	limit/base	current		
Potassium ppm ASTM D5185m >20 1 1 <1		ppm	ASTM D5185m	>25			
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2		ppm					
Soot % % *ASTM D7844 >3 0.5 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2	Potassium	ppm	ASTM D5185m	>20	1	1	<1
Nitration Abs/cm *ASTM D7624 >20 11.7 8.1 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2	Soot %	%	*ASTM D7844	>3	0.5	0.2	0.1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 18.1 19.2	Nitration	Abs/cm	*ASTM D7624	>20	11.7	8.1	8.5
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	22.9	23.5
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 10.2 9.7 8.99	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	18.1	19.2
	Base Number (BN)	mg KOH/g	ASTM D2896		10.2	9.7	8.99



OIL ANALYSIS REPORT



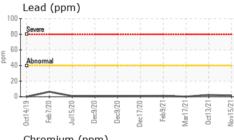


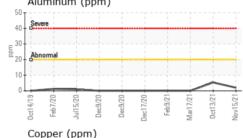


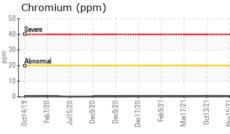
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
Free Water	scalar	*Visual		NEG	NEG	NEG

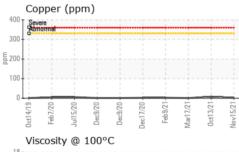
FLUID PROPERTIES		metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445		15.0	13.8	13.9

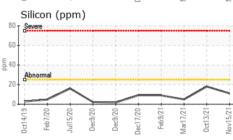
Severe								
Abnormal								
								_
-	0.	Dec9/20 -	Dec9/20	Dec17/20	Feb 9/21	Mar17/21	Oct13/21	Nov15/21
Oct14/19 Feb7/20	Jul15/20	5.0	5.0					

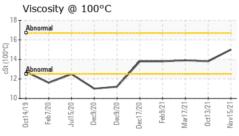


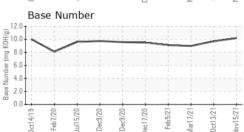
















Certificate 12367

Laboratory Sample No.

: KL0007638 Lab Number : 05417790 Unique Number : 9771981

Test Package : MOB1+

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

Tested : 09 Dec 2021 Diagnosed

: 10 Dec 2021 - Doug Bogart

: 08 Dec 2021

CONOR JUAREZ 348 HERMOSILLO, MX 83140 Contact: EDUARDO GARCIA

To discuss this sample report, contact Customer Service at 1-800-237-1369.

egarcia.comsa@gmail.com T: (526)622-1581 x:81 F: x:

* - 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)

Submitted By: EDUARDO GARCIA