WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

Machine Id UNIMOG

Component Diesel Engine

Resample at the next service interval to monitor.	CASTROL EDGE 5W40 (GAL)							
Resample at the next service interval to monitor. Sample Number Client Into Cl	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Date Client Info S80000		Sample Number		Client Info		CU0020700		
Oli Age		Sample Date		Client Info		26 Jul 2023		
Filter Age		Machine Age	kms	Client Info		80000		
Dil Changed Client Info NA NA NA NA NA NA NA N		Oil Age	kms	Client Info		1000		
Filter Changed Sample Status		Filter Age	kms	Client Info		1000		
Normal N		Oil Changed		Client Info		N/A		
Iron		Filter Changed		Client Info		N/A		
Chromium ppm ASTMOSIBS > 0 < 1 Nickel ppm ASTMOSIBS > 0 Titanium ppm ASTMOSIBS > 0 Silver ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Copper ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS > 0 Copper ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS 0 Tin ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS > 0		Sample Status				NORMAL		
Chromium ppm ASTMOSIBS > 0 < 1 Nickel ppm ASTMOSIBS > 0 Titanium ppm ASTMOSIBS > 0 Silver ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Aluminum ppm ASTMOSIBS > 0 Copper ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS > 0 Copper ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS 0 Tin ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS > 0 Tin ppm ASTMOSIBS > 0	WEAR	Iron	nnm	ASTM D5185(m)	>100	12		
Nickel ppm ASTM D6185m 3-4 <1 Titanium ppm ASTM D6185m 3-3 0 Sliver ppm ASTM D6185m 3-3 0 Auminum ppm ASTM D6185m 3-3 0 Auminum ppm ASTM D6185m 3-30 2 Copper ppm ASTM D6185m 3-30 2 Copper ppm ASTM D6185m 3-30 2 Tin ppm ASTM D6185m 3-30 2 Tin ppm ASTM D6185m 3-30 2 Tin ppm ASTM D6185m 3-50 1-5 <1 Tin ppm ASTM D6185m 3-50 2 Tin ppm ASTM D6185m 3-50 3-50 Tin ppm ASTM D6185m 3-50				, ,				
Titanium ppm ASTM D5185(m) 3 0								
Silver ppm ASTM D585(m) >3 0 Aluminum ppm ASTM D585(m) >20 1 Lead ppm ASTM D585(m) >40 <1 Copper ppm ASTM D585(m) >300 2 Tin ppm ASTM D585(m) >300 2 Tin ppm ASTM D585(m) >300 2 Tin ppm ASTM D585(m) >50 Vanadium ppm ASTM D585(m) >25 7 There is no indication of any contamination in the oil. Potassium ppm ASTM D585(m) >20 2 Fuel WC Method >5 <1.0 Water WC Method >5 <1.0 Glycol WC Method >0.2 NEG Glycol WC Method >0.2 NEG Soot % % (ASTM D7844 >3 0 Soot % % (ASTM D7844 >3 0 Sulfation Abs/tm ASTM D7824 >20 7.7 FLUID CONDITION Sodium ppm ASTM D585(m) 4 The condition of the oil is acceptable for the time in service. Boron ppm ASTM D585(m) 4 Manganese ppm ASTM D585(m) 4 Manganese ppm ASTM D585(m) 21 Manganese ppm ASTM D585(m) 2240 ASTM D585(m) 2240 Calcium ppm ASTM D585(m) 2340 Calcium ppm ASTM D585(m) 234				. ,				
Aluminum ppm ASTM D5185 m >20 1					>3			
Lead		Aluminum				1		
Tin		Lead	ppm			<1		
Vanadium ppm ASTM D5185(m) 0		Copper	ppm	ASTM D5185(m)	>330	2		
Silicon ppm ASTM D5185(m) >25 7		Tin	ppm	ASTM D5185(m)	>15	<1		
Potassium Pota		Vanadium	ppm	ASTM D5185(m)		0		
Potassium Pota	CONTAMINATION	0.00		AOTM DE40E()	05			
FLUID CONDITION The condition of the oil is acceptable for the time in service. Fuel Water Wic Method Soot % Mitration Abs/cm Abs/cm Abs/m AsTM D7642* >20 7.7 Sulfation Abs/lmm AsTM D7642* >20 7.7 NEG NEG NEG	CONTAMINATION			. ,				
Water WC Method NEG	There is no indication of any contamination in the oil.		ppm					
Glycol								
Soot %					>0.2			
Nitration Abs/cm ASTM D7624* >20 7.7		-	0/2		\3			
Sulfation Abs/.1mm ASTM D7415* >30 14.4								
Emulsified Water scalar Visual* >0.2 NEG								
Boron ppm ASTM D5185(m) 62 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 4 Manganese ppm ASTM D5185(m) 21 Calcium ppm ASTM D5185(m) 2240 Phosphorus ppm ASTM D5185(m) 2240 Phosphorus ppm ASTM D5185(m) 3885 Zinc ppm ASTM D5185(m) 934 Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/:1mm ASTM D7414* >25 8.6								
Boron ppm ASTM D5185(m) 62 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 4 Magnesium ppm ASTM D5185(m) 21 Calcium ppm ASTM D5185(m) 2240 Phosphorus ppm ASTM D5185(m) 2240 Zinc ppm ASTM D5185(m) 934 Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/.1mm ASTM D7414* >25 8.6	FLUID CONDITION	Sodium	nnm	ASTM D5185(m)		4		
Barium ppm ASTM D5185(m) Q	The condition of the oil is acceptable for the time in service.							
Molybdenum ppm ASTM D5185(m) 4 Manganese ppm ASTM D5185(m) <1								
Manganese ppm ASTM D5185(m) <1 Magnesium ppm ASTM D5185(m) 21 Calcium ppm ASTM D5185(m) 2240 Phosphorus ppm ASTM D5185(m) 885 Zinc ppm ASTM D5185(m) 934 Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/.1mm ASTM D7414* >25 8.6								
Magnesium ppm ASTM D5185(m) 21 Calcium ppm ASTM D5185(m) 2240 Phosphorus ppm ASTM D5185(m) 885 Zinc ppm ASTM D5185(m) 934 Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/.1mm ASTM D7414* >25 8.6		-		. ,				
Calcium ppm ASTM D5185(m) 2240 Phosphorus ppm ASTM D5185(m) 885 Zinc ppm ASTM D5185(m) 934 Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/.1mm ASTM D7414* >25 8.6		-						
Phosphorus ppm ASTM D5185(m) 885 Zinc ppm ASTM D5185(m) 934 Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/.1mm ASTM D7414* >25 8.6				, ,				
Sulfur ppm ASTM D5185(m) 2080 Oxidation Abs/.1mm ASTM D7414* >25 8.6		Phosphorus						
Oxidation Abs/.1mm ASTM D7414* >25 8.6		Zinc	ppm	ASTM D5185(m)		934		
		Sulfur	ppm	ASTM D5185(m)		2080		
Visc @ 100°C		Oxidation	Abs/.1mm	ASTM D7414*	>25	8.6		
		Visc @ 100°C	cSt	ASTM D7279(m)	13.4	13.4		





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : CU0020700 Lab Number : 02573387 Unique Number : 5618438 Test Package : MOB 1

Received **Tested**

: 01 Aug 2023 : 01 Aug 2023

Diagnosed

: 01 Aug 2023 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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