WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

Area [180577]

MTU SAINT-ANTOINE NURSING

Right Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

Sample Number Client Info WA0021209 Sample Date Client Info 16 Feb 2024 Machine Age hrs Client Info 32 Filter Age hrs Client Info 32 Filter Age hrs Client Info 32 Filter Changed Client Info 32 Clinqued Client Info Changed Sample Status Sample Status NORMAL Etal levels are typical for a new component breaking in. Portion Port ASTM D5(85)m > 100 2 Retail levels are typical for a new component breaking in. Nickel port ASTM D5(85)m > 4 0 Titanium port ASTM D5(85)m > 3 0 Copper port ASTM D5(85)m > 3 0 Copper	DIESEL ENGINE OIL SAE 15W40 (GAL)							
Sample Date Client Info 256	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Date Client Info 15 Feb.2024	Resample at the next service interval to monitor.	Sample Number		Client Info		WA0021209		
Oil Age		Sample Date		Client Info		16 Feb 2024		
Filter Age		Machine Age	hrs	Client Info		256		
Client Info		Oil Age	hrs	Client Info		32		
Filter Changed Cilent Info Cilent		Filter Age	hrs	Client Info		32		
		Oil Changed		Client Info		Changed		
Iron		Filter Changed		Client Info		Changed		
Chromium Ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >4 0 Titanium ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >20 1 Tin ppm ASTM D5185m >15 0 Tin ppm ASTM D5185m >15 0 Tin ppm ASTM D5185m >15 0 Vanadium ppm ASTM D5185m >25 2 ONTAMINATION Silicon ppm ASTM D5185m >20 1 ONTAMINATION Potassium ppm ASTM D5185m >20 1 Water WC Method >5 <1.0 Water WC Method >5 <1.0 Giycol WC Method >5 <1.0 Soot % % ASTM D784* >3 0 Soot % % ASTM D784* >3 0 Sulfation Abs/tma ASTM D784* >0 16.4 LUID CONDITION Ppm ASTM D5185m >0 >0 Magnesium ppm ASTM D5185m 10 0 Magnesium ppm ASTM D5185m 10 0 Aluminum Ppm ASTM D5185m 450 216 Aluminum Ppm ASTM D5185m 10 0 Aluminum Ppm ASTM D5185m 10 0 Aluminum Ppm ASTM D5185m 450 216 Aluminum Ppm ASTM D		Sample Status				NORMAL		
Chromium Chromium Chromium Porm ASTM D5185m 3-20 0 Nickel Porm ASTM D5185m 3-4 0 0 Titanium Porm ASTM D5185m 3-4 0 0 Silver Porm ASTM D5185m 3-3 0 Aluminum Porm ASTM D5185m 3-20 1 Aluminum Porm ASTM D5185m 3-20 1 Copper Porm ASTM D5185m 3-40 Tin Porm ASTM D5185m 3-5 0 Vanadium Porm ASTM D5185m 3-5 2 ONTAMINATION Silicon Porm ASTM D5185m 3-20 1 Potassium Porm ASTM D5185m 3-20 1 Water WC Method 5-5 -1-0 Water WC Method 5-5 -1-0 Glycol WC Method So NEG Solidation Abs/tm ASTM D7445 3-3 0 Sulfation Abs/tm ASTM D7445 3-3 0 LUID CONDITION Sodium Porm ASTM D5185m 3-15 1 Magnesium Porm ASTM D5185m 10 0 Magnesium Porm ASTM D5185m 10 0 Magnesium Porm ASTM D5185m 10 0 Magnesium Porm ASTM D5185m 150 908 ASTM D5185m 150 908 Magnesium Porm ASTM D5185m 150 908 Phosphorus Porm ASTM D5185m 150 908 ASTM D5185m 150 908 ASTM D5185m Porm Porm ASTM D5185m 150 908 Magnesium Porm ASTM D5185m 150 908 ASTM D5185m 150 908 Magnesium Porm ASTM D5185m 150 908 Magnesium Porm ASTM D5185m 150 908 Magnesium Porm ASTM D518	WEAR	Iron	ppm	ASTM D5185(m)	>100	2		
Nickel ppm ASTM D5185/m 3-4 0 Titanium ppm ASTM D5185/m 3-3 0 Aluminum ppm ASTM D5185/m 3-3 0 Aluminum ppm ASTM D5185/m 3-20 1 Aluminum ppm ASTM D5185/m 3-20 1 Copper ppm ASTM D5185/m 3-30 1 Copper ppm ASTM D5185/m 3-30 1 Tin ppm ASTM D5185/m 3-15 0 Vanadium ppm ASTM D5185/m 3-15 0 Vanadium ppm ASTM D5185/m 3-15 0 Vanadium ppm ASTM D5185/m 3-25 2 3 DONTAMINATION Silicon ppm ASTM D5185/m 3-25 2 3 Fuel WC Method 5-5 -1.0 3 Water WC Method 5-5 -1.0 3 Water WC Method 5-5 -1.0 3 Glycol WC Method 5-5 -1.0 3 Sulfation Abs/m ASTM D5185/m 3-0 0 3 Sulfation Abs/m ASSTM D5185/m 3-0 0 3 Sulfation Abs/m ASSTM D5185/m 3-0 0 3 DONDITION Be condition of the oil is acceptable for the time in service. Boron ppm ASTM D5185/m 5-0 6 3 Molybdenum ppm ASTM D5185/m 5-0 6 3 Molybdenum ppm ASTM D5185/m 10 0 3 Manganesse ppm ASTM D5185/m 10 0 3 Mangan	Metal levels are typical for a new component breaking in.	Chromium		ASTM D5185(m)	>20	0		
Titanium ppm ASTM D6185(m) -3 0		Nickel				0		
Silver ppm ASTM D5185/m >3 0		Titanium				0		
Aluminum ppm ASTM D5185 m >20 1					>3			
Lead		Aluminum			>20			
Tin		Lead	ppm	ASTM D5185(m)	>40	<1		
Vanadium ppm ASTM D5185(m) 0		Copper	ppm	ASTM D5185(m)	>330	1		
Silicon ppm ASTM D5185(m) >25 2		Tin	ppm	ASTM D5185(m)	>15	0		
Potassium ppm ASTM D5185(m) >20 1		Vanadium	ppm	ASTM D5185(m)		0		
Potassium ppm ASTM D5185(m) >20 1	CONTAMINATION							
Fuel	CONTAMINATION			. ,				
Water WC Method So.2 NEG So.2 So.2 NEG So	There is no indication of any contamination in the oil.		ppm					
Glycol								
Soot %					>0.2			
Nitration Abs/cm ASTM D7624* >20 5.1		-	0/		0			
Sulfation Abs/.1mm Abs/.1mm								
Emulsified Water scalar Visual* >0.2 NEG								
Sodium ppm ASTM D5185(m) >158 1								
Boron ppm ASTM D5185(m) 250 6 Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 16 Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 450 216 Calcium ppm ASTM D5185(m) 3000 1951 Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8	ELUID CONDITION							
Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 16 Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 450 216 Calcium ppm ASTM D5185(m) 3000 1951 Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8	FLUID CONDITION			, ,				
Molybdenum ppm ASTM D5185(m) 100 16 Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 450 216 Calcium ppm ASTM D5185(m) 3000 1951 Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8	The condition of the oil is acceptable for the time in service.							
Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 450 216 Calcium ppm ASTM D5185(m) 3000 1951 Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8								
Magnesium ppm ASTM D5185(m) 450 216 Calcium ppm ASTM D5185(m) 3000 1951 Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8		•			100			
Calcium ppm ASTM D5185(m) 3000 1951 Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8		-			450			
Phosphorus ppm ASTM D5185(m) 1150 908 Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8								
Zinc ppm ASTM D5185(m) 1350 991 Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8								
Sulfur ppm ASTM D5185(m) 4250 3048 Oxidation Abs/.1mm ASTM D7414* >25 9.8								
Oxidation Abs/.1mm ASTM D7414* >25 9.8								
visc @ 100°C CST ASIM D/2/9(m) 14.4 14.5								
		visc @ 100°C	CST	ASTM D/2/9(m)	14.4	14.5		





ISO 17025:2017
Accredited
Laboratory

 Laboratory
 : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

 Sample No.
 : WA0021209
 Received
 : 23 Feb 2024

 Lab Number
 : 02617590
 Tested
 : 23 Feb 2024

Unique Number : 5734700 Diagnosed : 23 Feb 2024 - Wes Davis
Test Package : MOB 1

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.

Wajax Power Systems 485 VENTURE DR MONCTON, NB CA E1H 2P4 Contact: Doug Balser dbalser@wajax.com T: (506)855-5371

F: (506)870-4448