

WEAR CONTAMINATION FLUID CONDITION

ABNORMAL NORMAL



Machine Id
5450
Component
Diesel Engine
Fluid

Test	Diesel Engine							
Test	{not provided} (GAL)							
Machine Age Miss Client Info Concentrate and the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Machine Age Miss Client Info Client Info Client Info Client Info Changed Changed Changed Client Info Changed Chang					11 2/41		 11: 1 - 2	
Sample Date Client Info Corporative action is recommended at this time. Resample at the next service interval to monitor. Sample Date Client Info Calaba Client Info Calaba Client Info Calaba Client Info Calaba C	Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next		UOM		Limit/Abn		-	,
Machine Age								
Coll Age			bro					
Filter Age brs Client Info Changed C		•						
Cichanged Cilont Info Changed Cilont Info Changed Cilont Info Changed Changed Cilont Info Changed Changed Cilont Info Changed Changed Cilont Info Changed Chan								
Filter Changed Sample Status		_	1115					
Name								
Iron		_		Olletti IIIIO		•		
Valve wear is indicated. All other component wear rates are normal. Chromitum ppm ASTM D8186m > 6		·						
Valve wear is indicated. All other component wear rates are normal. Nickel ppm ASTM 05185m > 2 < 1		Iron	ppm	ASTM D5185m	>120	97		
Nickel Sprim ASIM Dis Both 2 2 1 Silver ppm ASIM Dis Both 2 2 1 Silver ppm ASIM Dis Both 2 2 1 Aluminum ppm ASIM Dis Both 2 2 1 Aluminum ppm ASIM Dis Both 2 3 3 Lead ppm ASIM Dis Both 2 3 3 Copper ppm ASIM Dis Both 3 3 Tin ppm ASIM Dis Both 3 3 Vanadium ppm ASIM Dis Both 3 3 Vanadium ppm ASIM Dis Both 3 3 Vanadium ppm ASIM Dis Both 3 Valued NONE Valued NoNe NONE Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Valued None None Solidation Absim ASIM Dis Both None Sand/Dirt Scalar Visual None None Appearance Scalar Visual None None Debris Scalar Visual None None Appearance Scalar Visual None None Appearance Scalar Visual None None The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the cili is acceptable for the time in service. FLUID CONDITION Solidation Ppm ASIM Dis Both 11 Phosphorus Ppm ASIM Dis Both 929 ASIM Dis Both 929		Chromium	ppm	ASTM D5185m	>20	2		
Silver ppm ASTM D5185m >2 <1		Nickel	ppm	ASTM D5185m	>5	4 26		
Aluminum ppm ASTM D5185m >20 3		Titanium	ppm	ASTM D5185m	>2	<1		
Lead		Silver	ppm			<1		
Copper ppm ASTM 05185m >330 9 Tin ppm ASTM 05185m >15 3 Vanadium ppm ASTM 05185m >15 3 White Metal scalar *Visual NONE NONE White Metal scalar *Visual NONE NONE White Metal scalar *Visual NONE NONE Nitration Abs/cm ASTM 05185m 2-0 4-1.0 Nitration Abs/cm ASTM 05185m 2-0 12.3 Nitration Abs/cm ASTM 07624 2-0 12.3 None None None None None None None N		Aluminum	ppm	ASTM D5185m	>20	3		
Tin		Lead	ppm			0		
Vanadium Vanadium		Copper	ppm	ASTM D5185m	>330			
White Metal Scalar Visual NONE NON			ppm		>15			
Vellow Metal Scalar Visual NONE NONE CONTAMINATION There is no indication of any contamination in the oil. Potassium ppm ASTM 05185m >20 4 Potassium ppm ASTM 05185m >20 4 Water WC Method >0.2 NEG Glycol WC Method >0.2 NEG Solt Solt NSTM 07844 >4 1.5 Sulfation Abs/cm ASTM 07845 >30 >2.5 2 Sulfation Abs/cm ASSTM 07415 >30 >2.5 Sulfation Ass/mm ASTM 07415 >30 >2.5 Sulfation Scalar Visual NONE NONE NONE Appearance Scalar Visual NORM NOR								
Silicon ppm ASTM D5185m >25 10								
Potassium		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium	CONTAMINATION	Silicon	nnm	ASTM D5185m	>25	10		
Fuel WC Method Sa.0 <1.0	CONTAMINATION							
Water WC Method Solution	There is no indication of any contamination in the oil.		ррпп					
Glycol Soot %								
Soot %					7 0.2			
Nitration Abs/cm *ASTM D7624 >20 12.3 Sulfation Abs/.tmm *ASTM D7415 >30 25.2 Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORM NORM NORM NORM NORM NORM NORM Appearance scalar *Visual NORM		•	%	*ASTM D7844	>4			
Silt scalar *Visual NONE NONE Debris scalar *Visual NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NORML NORML Sand/Dirt Scalar *Visual NORML NORML Sand/Dirt Scalar *Visual NORML NORML Sand/Dirt Scalar *Visual NORML Sand/Dirt Scalar *Visual Sand/Dirt		Nitration	Abs/cm	*ASTM D7624	>20			
Debris Scalar *Visual NONE NORML		Sulfation	Abs/.1mm	*ASTM D7415	>30	25.2		
Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORM		Silt	scalar	*Visual	NONE	NONE		
Appearance Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual Solid NORML NO		Debris	scalar	*Visual	NONE	NONE		
Codor Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual >0.2 NEG		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >0.2 NEG		Appearance	scalar	*Visual	NORML	NORML		
Sodium ppm ASTM D5185m T Barium ppm ASTM D5185m T Molybdenum ppm ASTM D5185m T Manganese ppm ASTM D5185m T Calcium ppm ASTM D5185m T T T Manganese ppm ASTM D5185m T T T T Manganese ppm ASTM D5185m T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T		Odor	scalar	*Visual	NORML			
Boron ppm ASTM D5185m 7 Barium ppm ASTM D5185m 7 Molybdenum ppm ASTM D5185m 72 Manganese ppm ASTM D5185m 3 Magnesium ppm ASTM D5185m 929 Calcium ppm ASTM D5185m 1270 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184		Emulsified Water	scalar	*Visual	>0.2	NEG		
Boron ppm ASTM D5185m 7 Barium ppm ASTM D5185m 7 Molybdenum ppm ASTM D5185m 72 Manganese ppm ASTM D5185m 3 Magnesium ppm ASTM D5185m 929 Calcium ppm ASTM D5185m 1270 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184	ELUID CONDITION	Codium	nnm	ACTM DE10Em		11		
Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 72 Manganese ppm ASTM D5185m 3 Magnesium ppm ASTM D5185m 929 Calcium ppm ASTM D5185m 1270 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184	FLUID CONDITION							
Molybdenum ppm ASTM D5185m 72 Manganese ppm ASTM D5185m 929 Calcium ppm ASTM D5185m 929 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 955 Sulfur ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184	·							
Manganese ppm ASTM D5185m 3 Magnesium ppm ASTM D5185m 929 Calcium ppm ASTM D5185m 1270 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184								
Magnesium ppm ASTM D5185m 929 Calcium ppm ASTM D5185m 1270 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184		•						
Calcium ppm ASTM D5185m 1270 Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184		-						
Phosphorus ppm ASTM D5185m 955 Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184		•						
Zinc ppm ASTM D5185m 1234 Sulfur ppm ASTM D5185m 2184								
Sulfur ppm ASTM D5185m 2184		•						
		Oxidation			>25	23.6		

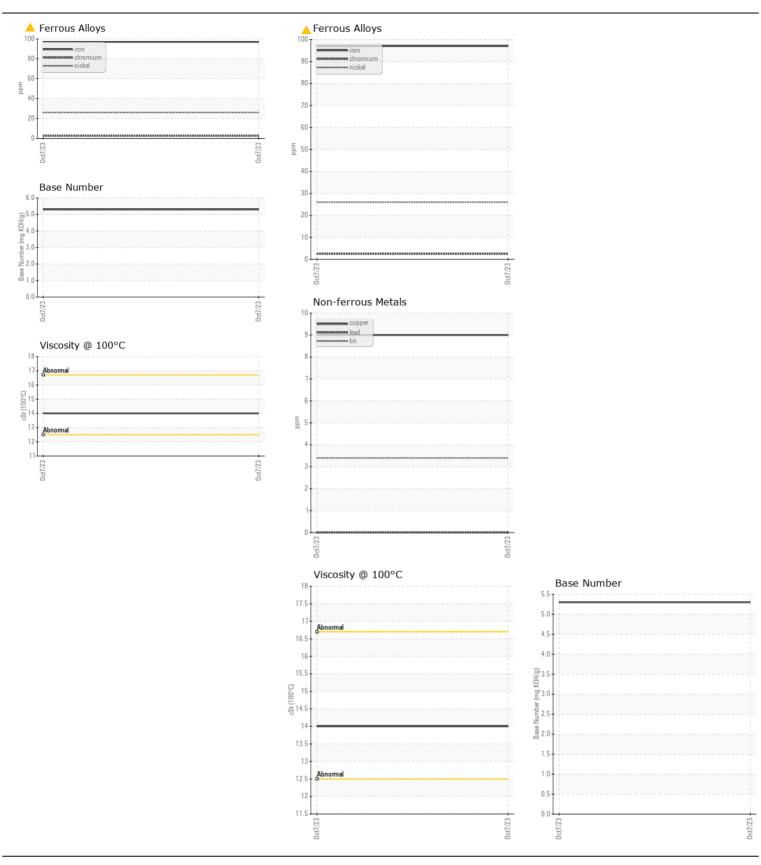
Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

5.3

14.0







Certificate L2367

Report Id: AVWCHA [WUSCAR] 06061801 (Generated: 01/18/2024 11:47:32) Rev: 1

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0847928 : 06061801

Recieved : 10833183

Diagnosed Test Package : CONST (Additional Tests: TBN)

: 16 Jan 2024 : 18 Jan 2024 Diagnostician : Don Baldridge Apple Valley Waste - Chambersburg Location 5436 Sunset Pike

Chambersburg, PA US 17202

Contact: Service Manager

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)

T: F: