WEAR CONTAMINATION FLUID CONDITION

NORMAL SEVERE ATTENTION

FREIGHTLINER 131

Test UOM Method Limit/Abn Current History1 History2 History2 History2 History2 History2 History2 History2 History3 History3 History3 History4 History4	Diesel Engine							
Test	SHELL ROTELLA T5 10W30 (CJ4) (GAL)							
Sample Number Sample Number Client Into P0000506		Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Date Machine Age Cilient Info 1580235 Machine Age Kms Cilient Info 1580235 Machine Age Kms Cilient Info 1580235 Machine Age Kms Cilient Info 8000 Cilindary Cilient I							·	
All component wear rates are normal. Machine Age Mms Client Info 8000	•	•						
Control Cont	already been done. We advise that you flush the component thoroughly before re-filling with oil. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to		kms					
Filter Age		ū						
Oil Changed Cilent Info Not Changed Cilent Info Sample Status SEVERE Cilent Info Severe Cilent Info Severe Cilent Info		•						
Filter Changed Cilient Info Not Changed Cilient Info SEVERE Component wear rates are normal. Iron ppm ASTM D5155m > 2 Component SSEVERE Component Component SSEVERE Component Compon		_	14110					
Name		-				_		
All component wear rates are normal. Chromium ppm ASTM D5185 m >5 2 Nickel ppm ASTM D5185 m >2 -1 Titanium ppm ASTM D5185 m >2 -1 Silver ppm ASTM D5185 m >3 0 Silver ppm ASTM D5185 m >3 0 Aluminum ppm ASTM D5185 m >3 0 Copper ppm ASTM D5185 m >3 0 Copper ppm ASTM D5185 m >5 0 Copper ppm ASTM D5185 m >5 0 Tin ppm ASTM D5185 m >5 0 Vanadium ppm ASTM D5185 m >5 0 Tin ppm ASTM D5185 m >6 0 Test for glycol is positive. There is a high concentration of glycol present in the oil. Puls Puls Puls Puls Fuel WC Method >5 <1.0 Water WC Method >5 <1.0 Water WC Method >0.2 NEG Glycol % ASTM D7922* A 0.135 Soot % % ASTM D7824* >3 0.6 Sulfation Abs/rm ASTM D7824* >3 0.6 Sulfation Abs/rm ASTM D7824* >0 11.4 Sulfation Abs/rm ASTM D7825 m >0 0 Sulfation Abs/rm A		_						
All component wear rates are normal. Chromium ppm ASTM D5185 m >5 2 Nickel ppm ASTM D5185 m >2 -1 Titanium ppm ASTM D5185 m >2 -1 Silver ppm ASTM D5185 m >3 0 Silver ppm ASTM D5185 m >3 0 Aluminum ppm ASTM D5185 m >3 0 Copper ppm ASTM D5185 m >3 0 Copper ppm ASTM D5185 m >5 0 Copper ppm ASTM D5185 m >5 0 Tin ppm ASTM D5185 m >5 0 Vanadium ppm ASTM D5185 m >5 0 Tin ppm ASTM D5185 m >6 0 Test for glycol is positive. There is a high concentration of glycol present in the oil. Puls Puls Puls Puls Fuel WC Method >5 <1.0 Water WC Method >5 <1.0 Water WC Method >0.2 NEG Glycol % ASTM D7922* A 0.135 Soot % % ASTM D7824* >3 0.6 Sulfation Abs/rm ASTM D7824* >3 0.6 Sulfation Abs/rm ASTM D7824* >0 11.4 Sulfation Abs/rm ASTM D7825 m >0 0 Sulfation Abs/rm A	WEAD			40TH DE (05/)				
Nickel				, ,				
Titanium ppm ASTM D5185/m 3 0								
Silver				, ,	>2			
Aluminum ppm ASTM D5185(m) >30 6				, ,				
Lead ppm ASTM D5185/m) >30 0						-		
Copper ppm ASTM D5185/m >150 3 Tin ppm ASTM D5185/m >5 0 Vanadium ppm ASTM D5185/m >20 6 Test for glycol is positive. There is a high concentration of glycol present in the oil. Test for glycol is positive. There is a high concentration of glycol present in the oil. Test for glycol is positive. There is a high concentration of glycol present in the oil. Potassium ppm ASTM D5185/m >20 6 Fuel WC Method >5 <1.0 Glycol % ASTM D5185/m >20 NEG Glycol % ASTM D7844* >3 0.6 Soot % ASTM D7844* >3 0.6 Sulfation Abs/cm ASTM D7824* >20 11.4 Sulfation Abs/cm ASTM D7824* >0.2 NEG Emulsified Water scalar Visual* >0.2 NEG The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Manganese ppm ASTM D5185/m 0 0 0 Molybdenum ppm ASTM D5185/m 73 Calcium ppm ASTM D5185/m 32 Calcium ppm ASTM D5185/m 32 Calcium ppm ASTM D5185/m 948 Zinc ppm ASTM D5185/m 948 Sulfur ppm ASTM D5185/m 948 ASTM D5185/m 948 Sulfur ppm ASTM D5185/m 941				, ,		-		
Tin ppm ASTM D5185(m) >5 0				, ,		-		
Vanadium ppm ASTM D5185(m) 0			ppm	, ,				
Silicon ppm ASTM D5185(m) >20 6				, ,	>5	-		
Potassium ppm ASTM D5185(m) >20 A 430		Vanadium	ppm	ASTM D5185(m)		0		
Fuel	CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>20	6		
Fuel WC Method S	0, 1	Potassium	ppm	ASTM D5185(m)	>20	430		
Glycol		Fuel		WC Method	>5	<1.0		
Soot %		Water		WC Method	>0.2	NEG		
Nitration Abs/cm ASTM D7624* >20 11.4 Sulfation Abs/.1mm ASTM D7415* >30 22.9 Emulsified Water scalar Visual* >0.2 NEG NEG -		Glycol	%	ASTM D7922*		▲ 0.135		
Sulfation Abs/.1mm ASTM D7415* >30 22.9		Soot %	%	ASTM D7844*	>3	0.6		
Emulsified Water scalar Visual* >0.2 NEG		Nitration	Abs/cm	ASTM D7624*	>20	11.4		
Sodium ppm ASTM D5185(m) D535 D535		Sulfation	Abs/.1mm	ASTM D7415*	>30	22.9		
Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Boron ppm ASTM D5185(m) 0 0 0		Emulsified Water	scalar	Visual*	>0.2	NEG		
Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Boron ppm ASTM D5185(m) 0 0 0	FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		535		
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 73 Magnesium ppm ASTM D5185(m) 32 Calcium ppm ASTM D5185(m) 32 Phosphorus ppm ASTM D5185(m) 948 Zinc ppm ASTM D5185(m) 948 Sulfur ppm ASTM D5185(m) 1086 Sulfur ppm ASTM D5185(m) 2911	Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of					20		
Contaminants. Manganese ppm ASTM D5185(m)		Barium	ppm		0	0		
Manganese ppm ASTM D5185(m) <1 Magnesium ppm ASTM D5185(m) 32 Calcium ppm ASTM D5185(m) 2069 Phosphorus ppm ASTM D5185(m) 948 Zinc ppm ASTM D5185(m) 1086 Sulfur ppm ASTM D5185(m) 2911		Molybdenum	ppm	ASTM D5185(m)		73		
Calcium ppm ASTM D5185(m) 2069 Phosphorus ppm ASTM D5185(m) 948 Zinc ppm ASTM D5185(m) 1086 Sulfur ppm ASTM D5185(m) 2911				, ,		<1		
Phosphorus ppm ASTM D5185(m) 948 Zinc ppm ASTM D5185(m) 1086 Sulfur ppm ASTM D5185(m) 2911		Magnesium	ppm	ASTM D5185(m)		32		
Phosphorus ppm ASTM D5185(m) 948 Zinc ppm ASTM D5185(m) 1086 Sulfur ppm ASTM D5185(m) 2911		Calcium	ppm	ASTM D5185(m)		2069		
Zinc ppm ASTM D5185(m) 1086 Sulfur ppm ASTM D5185(m) 2911		Phosphorus	ppm	ASTM D5185(m)		948		
		Zinc	ppm	ASTM D5185(m)		1086		
Oxidation		Sulfur	ppm	ASTM D5185(m)		2911		
		Oxidation	Abs/.1mm	ASTM D7414*	>25	17.0		

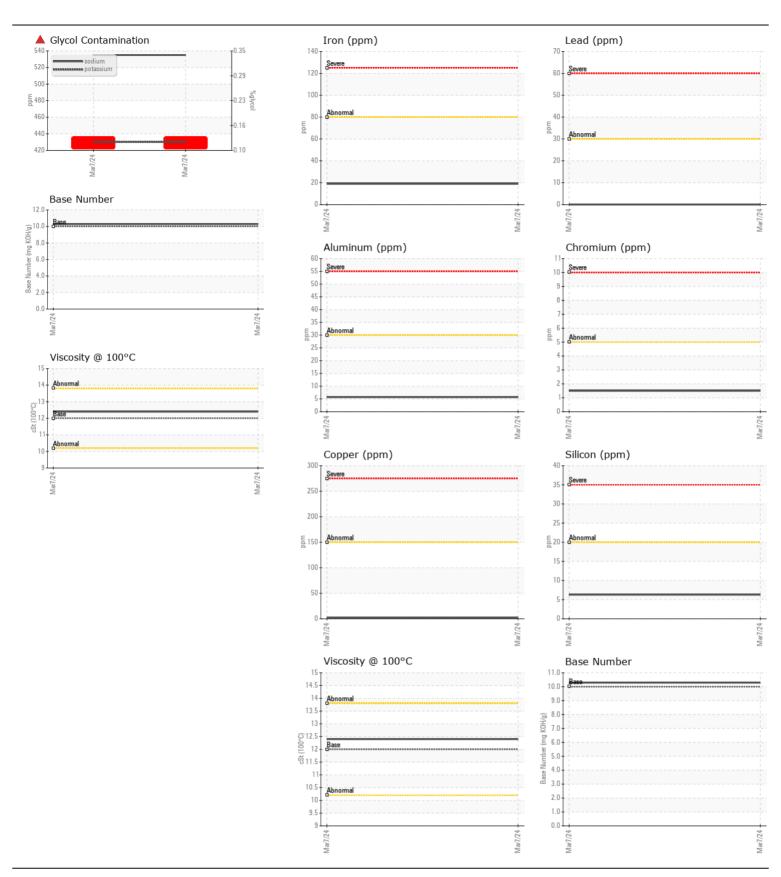
10.29

12.4

Base Number (BN) mg KOH/g ASTM D2896* 10.0

ASTM D7279(m) 12.0

Visc @ 100°C cSt





CALA ISO 17025:2017 Accredited

Laboratory

Laboratory Sample No.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Lab Number : 02620720

: PP0000506

Unique Number : 5737830 Diagnosed Test Package : MOB 2 (Additional Tests: Glycol)

Received

Tested

: 08 Mar 2024

: 11 Mar 2024

: 11 Mar 2024 - Wes Davis

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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