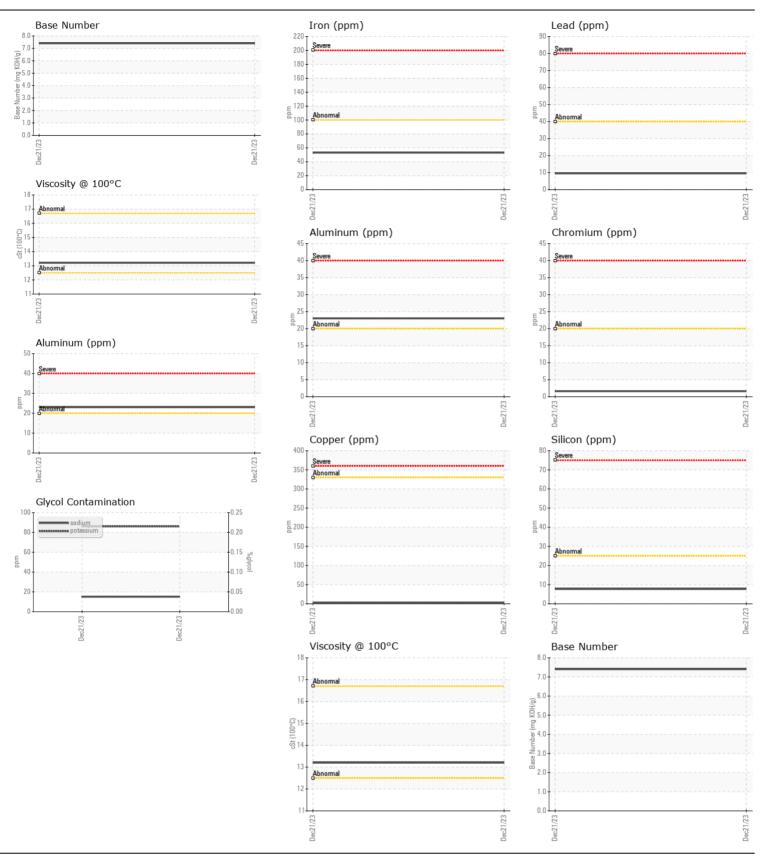
WEAR CONTAMINATION **FLUID CONDITION**

NORMAL NORMAL NORMAL

Machine Id PETERRII T 511001

Test UCM Method Umrike Current History1 History2 H	PETERBILT 511001							
Test	Diesel Engine							
Company Comp								
Company Comp	RECOMMENDATION	Taet	IIOM	Method	Limit/Δhn	Current	Hietory1	Hietory2
Sample Date Client Info 2 10e.2023	RECOMMENDATION		UCIVI		LIIIIUADII			
Machine Ago mis Client Info 0 0	Oil and filter change at the time of sampling has been noted. No	•						
Note Part	•		mls					
Filter Age	service interval to monitor.	•						
Oil Changed Cilent Info Changed Change								
Filter Changed Sample Status		•	11110			-		
VEAR								
Iron						_		
All component wear rates are normal. Chromium ppm ASTM DSIBS 4 4 -1 -1 -1 -1 -1 -1								
Nicke	WEAR	Iron	ppm	ASTM D5185m	>100	53		
Note Sprin ASTM D5185m 20	All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	2		
Silver ppm ASTM D5186m >20 23		Nickel	ppm	ASTM D5185m	>4	<1		
Aluminum ppm ASTM D5185m >20 23		Titanium	ppm	ASTM D5185m		0		
Lead ppm ASTM DS185m >40 10		Silver	ppm	ASTM D5185m	>3	<1		
Copper		Aluminum	ppm	ASTM D5185m	>20			
Tin		Lead	ppm	ASTM D5185m	>40	10		
Vanadium ppm ASTM D5185m NONE NONE White Metal scalar Visual NONE NONE NONE Water Visual None None			ppm	ASTM D5185m	>330			
White Metal Scalar Visual NONE NON		Tin	ppm		>15	2		
Vellow Metal Scalar Visual NONE NO			ppm			0		
CONTAMINATION			scalar			NONE		
Potassium ppm ASTM 05185m >0 86		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM 05185m >0 86	Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Cilioon	nnm	ACTM DE10Em	- 25			
Flevaled aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil. Fuel			• • • • • • • • • • • • • • • • • • • •					
Water WC Method 20.2 NEG 1.4 1			ppiii					
Glycol % *ASTM D2982 NEG Soot % % *ASTM D7844 > 3 1.4 Sulfation Abs/.tmm *ASTM D7844 > 3 1.4 Sulfation Abs/.tmm *ASTM D7844 > 3 1.4 Sulfation Abs/.tmm *ASTM D7845 > 30 23.8 Sulfation Abs/.tmm *ASTM D785 > 30 23.8 Sulfation Abs/.tmm *ASTM D785 > 30 23.8 Sulfation Abs/.tmm *ASTM D785 > 30 23.8 Sulfation Abs/.tmm *ASTM D585 > 350 23.8 Sulfation Abs/.tmm *ASTM D585 > 3519 Sulfation Abs/.tmm ASTM D585 3519 Sulfation Abs/.tmm ASTM D585 3519 Sulfation Abs/.tmm ASTM D585 3519 Sulfation Abs/.tmm ASTM D2896 7.4 Sulfation Abs/.tmm ASTM D2896 7.4 Sulfation Abs/.tmm ASTM D2896 7.4 Sulfation Abs/.tmm ASTM D2896 7.4								
Soot %			0/2		<i>></i> 0.2			
Nitration		,			~3			
Sulfation Abs/.1mm *ASTM D7415 >30 23.8								
Silt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Scalar *Visual NONE NONE Scalar *Visual NORML NORML Scalar *Visual NORML Scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual NORML Sca								
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NORML Scalar *Visual NORML Scalar *Visual NORML Scalar *Visual NORML NORML NORML Scalar *Visual NORML Scalar								
Sand/Dirt Scalar *Visual NONE NORML Appearance Scalar *Visual NORML NORML								
Appearance								
Codor Scalar *Visual NORML NORML Fmulsified Water Scalar *Visual Scalar *Visual *Scalar *Scalar *Visual *Scalar *Scalar *Visual *Scalar *Scalar *Visual *Scalar *Scala		_						
Emulsified Water scalar *Visual >0.2 NEG		• •			NORML			
Boron ppm ASTM D5185m 14 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 52 Manganese ppm ASTM D5185m 52 Magnesium ppm ASTM D5185m 467 Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4					>0.2			
Boron ppm ASTM D5185m 14 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 52 Manganese ppm ASTM D5185m 52 Magnesium ppm ASTM D5185m 467 Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4								
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service. Barium ppm ASTM D5185m 52 Molybdenum ppm ASTM D5185m 52 Manganese ppm ASTM D5185m 467 Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4	FLUID CONDITION	Sodium	ppm					
oil. The condition of the oil is acceptable for the time in service. Molybdenum ppm ASTM D5185m 52 Manganese ppm ASTM D5185m 467 Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4	The RN result indicates that there is suitable alkalinity remaining in the		ppm					
Molybdenum ppm ASIM D5185m 52 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 467 Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4	· · · · · · · · · · · · · · · · · · ·		ppm					
Magnesium ppm ASTM D5185m 467 Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4		-	ppm					
Calcium ppm ASTM D5185m 1841 Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4			ppm					
Phosphorus ppm ASTM D5185m 1141 Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4		•						
Zinc ppm ASTM D5185m 1370 Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4								
Sulfur ppm ASTM D5185m 3519 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4								
Oxidation Abs/.1mm *ASTM D7414 >25 20.4 Base Number (BN) mg KOH/g ASTM D2896 7.4								
Base Number (BN) mg KOH/g ASTM D2896 7.4					0.5			
					>25			
VISC @ 100°C CST ASTM D445 13.2								
		visc @ 100°C	CSI	ASTM D445		13.2		





Certificate L2367

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

: 10820495

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCAM18725 Recieved : 06054546

: 08 Jan 2024 Diagnosed : 10 Jan 2024 Diagnostician : Sean Felton

Test Package : MOB 1 (Additional Tests: Glycol, TBN)

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)

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