WEAR CONTAMINATION FLUID CONDITION

NORMAL

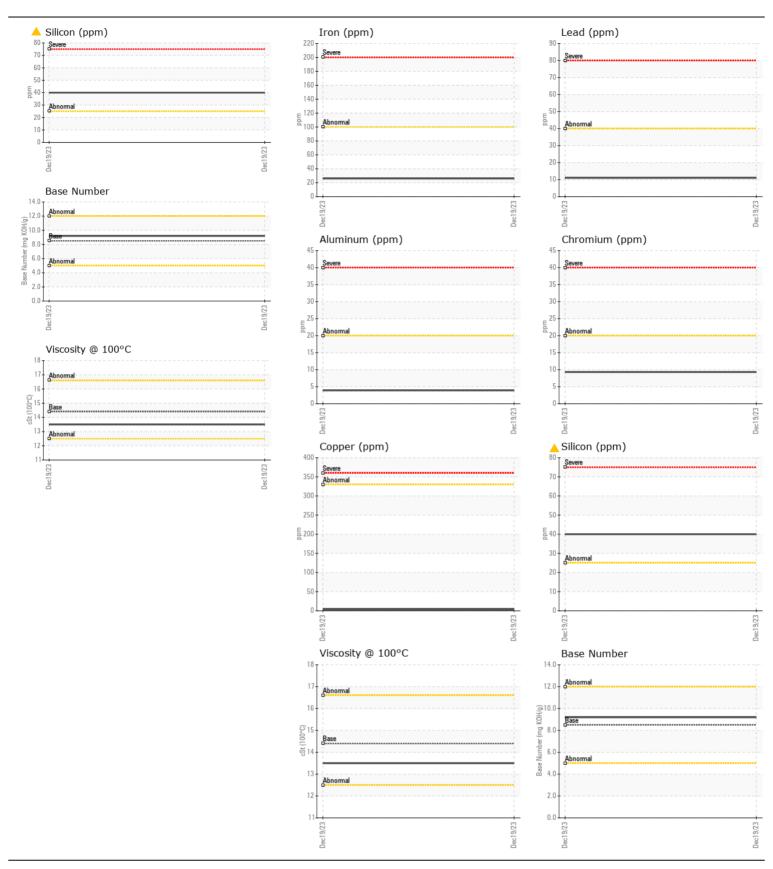
ABNORMAL

NORMAL

Machine Id **11760**

Diesel Engine

Test	Diesel Engine							
Sample Number Client Info Docosses Control Info 19 bec 2023 Client Info 250 Client Info Changed Changed Client Info Changed Chang	DIESEL ENGINE OIL SAE 15W40 (GAL)							
Sample Date Client Info 19 Dec 2023	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		,	History2
Samp								
Pilter Age hrs Client Info 250			In one					
Filter Age		•						
Oil Changed Cilent Info Changed Changed Chent Info Changed Cha								
Filter Changed Sample Status Schanged Sample Status Sample		_	nrs					
Name		_						
Iron				Client into		_		
All component wear rates are normal. Chromium ppm ASTM D5185m >20 9 Nickel ppm ASTM D5185m >4 0 Titanium ppm ASTM D5185m >3 0 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >3 0 Lead ppm ASTM D5185m >3 0 Tin ppm ASTM D5185m >40 11 Vanadium ppm ASTM D5185m >15 <1 Vanadium ppm ASTM D5185m >15 <1 Valued ppm ASTM D5185m >20 <1 Valued ppm ASTM D5185m >1 <2 Valued ppm ASTM								
Chromium ppm ASTM D5185m 20 9	WEAR	Iron	mqq	ASTM D5185m	>100	26		
All component wear rates are normal. Nickel ppm ASTM D5185m <1								
Titanium ppm ASTM D5185m 3 0 Sliver ppm ASTM D5185m 3 0 Aluminum ppm ASTM D5185m 3 0 Lead ppm ASTM D5185m 3 0 Lead ppm ASTM D5185m 3 0 Copper ppm ASTM D5185m 3 0 Vanadium ppm ASTM D5185m 3 4 Vanadium ppm ASTM D5185m 3 4 Vanadium ppm ASTM D5185m 3 4 Vanadium ppm ASTM D5185m 0 1 Valow Metal scalar Visual NONE NONE Vellow Metal scalar Visual NONE NONE Vellow Metal scalar Visual NONE NONE Vellow Metal scalar Visual NONE NONE Vanadium ppm ASTM D5185m 220 41 Vellow Metal scalar Visual NONE NONE Visual NONE NONE Valer WC Method 5 4.1 Valer WC Meth	All component wear rates are normal.							
Silver		Titanium		ASTM D5185m		<1		
Aluminum					>3			
Lead ppm ASTM D5185m >40 11		Aluminum				4		
Copper		Lead		ASTM D5185m	>40	11		
Tin		Copper		ASTM D5185m	>330	4		
Vanadium Vanadium		Tin	ppm	ASTM D5185m	>15	<1		
Yellow Metal scalar *Visual NONE NONE		Vanadium		ASTM D5185m		<1		
Silicon ppm ASTM D5185m >25 A 40		White Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM D5185m >20 <1		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM D5185m >20 <1								
Fuel WC Method >5 <1.0	CONTAMINATION	Silicon	ppm					
Water	Elemental level of silicon (Si) above normal.		ppm			<1		
Glycol								
Soot %					>0.2	NEG		
Nitration		-						
Sulfation Abs/.tmm *ASTM D7415 >30 21.0								
Silt scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NORML NOR								
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NONE Scalar *Visual NORML NORML NORML NORML Scalar *Visual NORML NOR								
Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NOR								
Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NO								
Codor Scalar *Visual NORML NORML Fmulsified Water Scalar *Visual Scalar *Visual * Scalar * Visual * Scalar								
Emulsified Water scalar *Visual >0.2 NEG FLUID CONDITION 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.		• •						
Sodium ppm ASTM D5185m >158 6 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.								
Boron ppm ASTM D5185m 250 35			Scalar	visuai	>0.2	NEG		
Boron ppm ASTM D5185m 250 35	FI UID CONDITION	Sodium	maa	ASTM D5185m	>158	6		
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 10 0 Molybdenum ppm ASTM D5185m 100 39 Magnesium ppm ASTM D5185m 450 535 Magnesium ppm ASTM D5185m 450 535 Phosphorus ppm ASTM D5185m 1150 904 Zinc ppm ASTM D5185m 1350 1094 Sulfur ppm ASTM D5185m 1350 2908 Sulfur ppm ASTM D5185m 4250 2908 Sulfur ppm ASTM D5185m 4250 2908								
Molybdenum ppm ASTM D5185m 100 39 Manganese ppm ASTM D5185m <1	, ,							
Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 450 535 Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1150 904 Zinc ppm ASTM D5185m 1350 1094 Sulfur ppm ASTM D5185m 4250 2908								
Magnesium ppm ASTM D5185m 450 535 Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1150 904 Zinc ppm ASTM D5185m 1350 1094 Sulfur ppm ASTM D5185m 4250 2908		•						
Calcium ppm ASTM D5185m 3000 1831 Phosphorus ppm ASTM D5185m 1150 904 Zinc ppm ASTM D5185m 1350 1094 Sulfur ppm ASTM D5185m 4250 2908		_			450			
Phosphorus ppm ASTM D5185m 1150 904 Zinc ppm ASTM D5185m 1350 1094 Sulfur ppm ASTM D5185m 4250 2908		•						
Zinc ppm ASTM D5185m 1350 1094 Sulfur ppm ASTM D5185m 4250 2908		Phosphorus		ASTM D5185m	1150	904		
Sulfur ppm ASTM D5185m 4250 2908		Zinc		ASTM D5185m	1350	1094		
				ASTM D5185m	4250	2908		
Oxidation		Oxidation	Abs/.1mm			20.1		
Base Number (BN) mg KOH/g ASTM D2896 8.5 9.2		Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.2		
Virgo C 10000 - OL - AOTA DATE 14.4 - 10.5								







Certificate L2367

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

: DC0032891 : 06056505 : 10822454

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 10 Jan 2024 Diagnosed

: 11 Jan 2024 Diagnostician : Don Baldridge Test Package : MOB 1 (Additional Tests: TBN)

14900 SOUTHLAWN LN ROCKVILLE, MD US 20850 Contact: JAMIE FORESTER

FRANCIS O DAY

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: