WEAR CONTAMINATION FLUID CONDITION

NORMAL SEVERE ABNORMAL

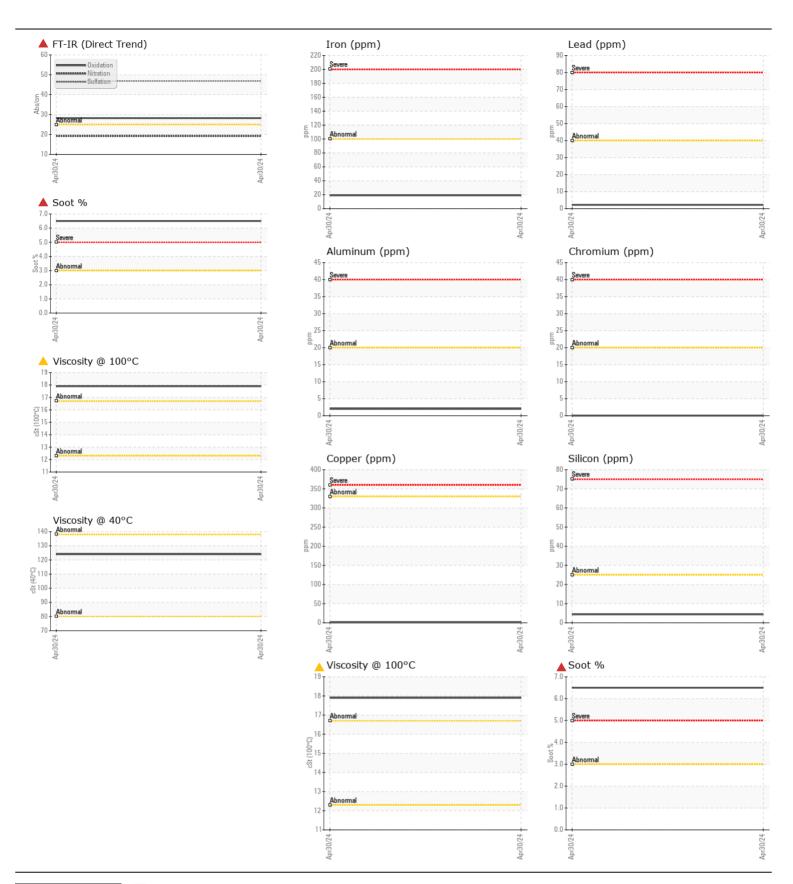
Machine Id

OR626

Component Diesel Engine

{not provided} (9 LTR)

Test	{not provided} (9 LTR)							
We advise that you check for faulty combustion, plugged air filters, or altercoolers. The oil change at the time of sampling has been noted. We recommend an early resample to monitor inscondition. Please specify the brand, type, and viscosity of the oil on your next sample. Machine Age hrs Client Info 0	RECOMMENDATION	Toet	LIOM	Method	Limit/Δhn	Current	History1	History2
We advise that you check for faulty combustion, plugged air litters, or aftercoolers. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. Cili Age Ins Cilient Info O	RECOMMENDATION		UOIVI		LIIIIII/ADII		,	
### Adaption Age hrs Client Info 0	aftercoolers. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please	•						
Oil Age hrs Client Info 0		·	hro					
Filter Age hrs Client Info Changed Client Info Changed Client Info Changed Changed Client Info Changed Client Info Changed Changed Client Info Changed C		•						
Oil Changed Client Info Changed Change								
Filter Changed Sample Status		•	IIIS					
NEAR								
Iron				Client Into				
All component wear rates are normal. Chromium ppm SIMDB(Sim) 20 0		Sample Status				SEVERE		
All component wear rates are normal. Chromium ppm SIMDB(Sim) 20 0	WEAR	Iron	nnm	ASTM D5185(m)	>100	19		
All component wear rates are normal. Nicke	WLAIT			. ,				
Titanium ppm ASIMDSISS(m) -3 0	All component wear rates are normal.			()				
Silver ppm ASTM (2585m) >20 0 Aluminum ppm ASTM (2585m) >20 2 Lead ppm ASTM (2585m) >20 2 Copper ppm ASTM (2585m) >40 2 Tin ppm ASTM (2585m) >15 0 Vanadium ppm ASTM (2585m) >15 0 Vanadium ppm ASTM (2585m) >15 0 Valuer Visual* NONE NONE Potassium ppm ASTM (2585m) >20 <1 Fuel WC Method >0 2 Water WC Method >0 2 Water WC Method >0 2 NEG Glycol WC Method >0 2 NEG Sulfation Abs/m ASTM (2585m) >20 <1 Debris scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE Appearance scalar Visual* NONE Appearance scalar Visual* NONE Appearance scalar Visual* NONE Debris scalar Visual* NONE Debris scalar Visual* NONE			• • • • • • • • • • • • • • • • • • • •	. ,	74			
Aluminum ppm ASTM DSISSim >20 2				1 /	. 2			
Lead			• • • • • • • • • • • • • • • • • • • •					
Copper								
Tin				()				
Vanadium Vanadium				()				
White Metal Yellow Metal Yell			• •	. ,	>15			
Silicon ppm ASTM 05185/m >25 4				()		-		
Silicon ppm ASTM DS185(m) >25 4						_		
Potassium ppm ASTM D5185(m) 20 <1 FLUID CONDITION The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants. Potassium ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 1932 Magnesium ppm ASTM D5185(m) 1932 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513		Yellow Metal	scalar	Visual*	NONE	NONE		
Potassium ppm ASTM D5185(m) 20 <1 FLUID CONDITION The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants. Potassium ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 1932 Magnesium ppm ASTM D5185(m) 1932 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513 Magnesium ppm ASTM D5185(m) 2513	CONTAMINATION	Cilioon	nnm	ACTM DE10E(m)	- 25	4		
Fuel WC Method Solids and carbon present in the oil. Water WC Method Solids Sol	CONTAININATION			. ,				
Water WC Method So.2 NEG	There is an abnormal amount of solids and carbon present in the oil.		ppm	()				
Glycol WC Method NEG Soot %								
Soot %					>0.2			
Nitration Abs/cm ASTM D7624" >20 19.2		•	0/		0			
Sulfation Abs/.fmm ASTM D7415* >30 46.9 Silt scalar Visual* NONE NONE NONE Sand/Dirt scalar Visual* NONE NONE NONE Sand/Dirt scalar Visual* NONE NONE NONE Appearance scalar Visual* NORML NORML NORML NORML Cdor scalar Visual* NORML NORML NORML NORML Emulsified Water scalar Visual* >0.2 NEG The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.								
Silt scalar Visual* NONE NONE NONE NONE Sand/Dirt scalar Visual* NONE NONE NONE Sand/Dirt scalar Visual* NONE NONE NONE Sand/Dirt scalar Visual* NORML								
Debris Scalar Visual* NONE NONE NONE Sand/Dirt Scalar Visual* NONE NORML NORM								
Sand/Dirt scalar Visual* NONE NORM NORML								
Appearance Odor scalar Visual* NORML NORML NORML Emulsified Water scalar Visual* NORML								
Odor Emulsified Water Scalar Visual* NORML						_		
Emulsified Water scalar Visual* >0.2 NEG		• •						
FLUID CONDITION The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants. Sodium ppm ASTM D5185(m) ppm A								
Boron ppm ASTM D5185(m) 12 Manganese ppm ASTM D5185(m) 5 Manganese ppm ASTM D5185(m) 5 Manganese ppm ASTM D5185(m) 124 Calcium ppm ASTM D5185(m) 1932 Phosphorus ppm ASTM D5185(m) 1932 Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9 17.9		Emulsified Water	scalar	Visual*	>0.2	NEG		
Boron ppm ASTM D5185(m) 12 Manganese ppm ASTM D5185(m) 5 Manganese ppm ASTM D5185(m) 5 Manganese ppm ASTM D5185(m) 124 Calcium ppm ASTM D5185(m) 1932 Phosphorus ppm ASTM D5185(m) 1932 Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9 17.9	ELUID CONDITION	Sodium	nnm	ΔSTM D5185(m)		2		
The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants. Barium ppm ASTM D5185(m) 5 Molybdenum ppm ASTM D5185(m) 5 Manganese ppm ASTM D5185(m) 124 Calcium ppm ASTM D5185(m) 1932 Phosphorus ppm ASTM D5185(m) 758 Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9	I LOID CONDITION			. ,				
due to the presence of contaminants. Molybdenum ppm ASTM D5185(m) 5 Manganese ppm ASTM D5185(m) 124 Magnesium ppm ASTM D5185(m) 1932 Calcium ppm ASTM D5185(m) 758 Phosphorus ppm ASTM D5185(m) 882 Zinc ppm ASTM D5185(m) 2513 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9				()				
Manganese ppm ASTM D5185(m) <1								
Magnesium ppm ASTM D5185(m) 124 Calcium ppm ASTM D5185(m) 1932 Phosphorus ppm ASTM D5185(m) 758 Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9		•						
Calcium ppm ASTM D5185(m) 1932 Phosphorus ppm ASTM D5185(m) 758 Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9		_						
Phosphorus ppm ASTM D5185(m) 758 Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9		•						
Zinc ppm ASTM D5185(m) 882 Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9								
Sulfur ppm ASTM D5185(m) 2513 Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) ▲ 17.9								
Oxidation Abs/.1mm ASTM D7414* >25 28.2 Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) 17.9								
Visc @ 40°C cSt ASTM D7279(m) 124 Visc @ 100°C cSt ASTM D7279(m) ▲ 17.9					05			
Visc @ 100°C cSt ASTM D7279(m)					>25			
viscosity Index (VI) Scale ASIM D22/0" 160				\ /				
		Viscosity Index (VI)	Scale	ASTM D2270*		160		





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: PC0088264 Lab Number : 02632509

Unique Number : 5773662

Received **Tested** Diagnosed Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

:01 May 2024

: 01 May 2024 - Wes Davis

:01 May 2024

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations 151 Ram Forest Rd, Stouffville, ON CA L4A 2G8 Contact: Bill Acton bacton@gipi.com

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.

T: F: