WEAR CONTAMINATION **FLUID CONDITION**

NORMAL NORMAL NORMAL

NO UNIT PC0036764

Component Diesel Engine

ECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History
Resample at the next service interval to monitor.	Sample Number		Client Info		PC0036764		
	Sample Date		Client Info		13 Feb 2024		
	Machine Age	hrs	Client Info		0		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
	Filter Changed		Client Info		N/A		
	Sample Status				NORMAL		
/EAD	lua		ACTM DE10E/	100			
/EAR	Iron	ppm	ASTM D5185(m)		6		
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)		<1		
	Nickel	ppm	ASTM D5185(m)	>4	0		
	Titanium	ppm	ASTM D5185(m)		0		
	Silver	ppm	ASTM D5185(m)		0		
	Aluminum	ppm	ASTM D5185(m)		2		
	Lead	ppm	ASTM D5185(m)		2		
	Copper	ppm	ASTM D5185(m)		9		
	Tin	ppm	ASTM D5185(m)	>15	3		
	Vanadium	ppm	ASTM D5185(m)		0		
ONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	5		
here is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	1		
There is no indication of any contamination in the oil.	Fuel		WC Method	>5	<1.0		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	ASTM D7844*	>3	0		
	Nitration	Abs/cm	ASTM D7624*	>20	8.5		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	14.4		
	Emulsified Water	scalar	Visual*	>0.2	NEG		
LUID CONDITION	0 "		AOTH D5405()				
LUID CONDITION	Sodium	ppm	ASTM D5185(m)		1		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		6		
	Barium	ppm	ASTM D5185(m)		0		
	Molybdenum	ppm	ASTM D5185(m)		3		
	Manganese	ppm	ASTM D5185(m)		0		
	Magnesium	ppm	ASTM D5185(m)		64		
	Calcium	ppm	ASTM D5185(m)		5088		
	Phosphorus	ppm	ASTM D5185(m)		886		
	Zinc	ppm	ASTM D5185(m)		997		
	Sulfur	ppm	ASTM D5185(m)		9792		
	Oxidation		ASTM D7414*	>25	8.0		
	11: (1000	cSt	ASTM D7279(m)		121		
	Visc @ 40°C Visc @ 100°C	cSt	ASTM D7279(m)	10 -	13.0		





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

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

: PC0036764 Lab Number : 02616624 Unique Number : 5733734

Received **Tested** Diagnosed : 20 Feb 2024

: 20 Feb 2024

: 20 Feb 2024 - Wes Davis

Test Package : MOB 1 (Additional Tests: KV40, VI) 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.

THUNDER BAY TUG

600-100 MAIN ST THUNDER BAY, ON **CA P7B 6R9** Contact: Service Manager

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T: F: