WEAR CONTAMINATION FLUID CONDITION **ABNORMAL ABNORMAL NORMAL**

Machine Id

INTERANTIONAL 441462

Front Diesel Engine

DECOMMENDATION							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		IL0033856		
	Sample Date		Client Info		12 Jun 2024		
	Machine Age	hrs	Client Info		13303		
	Oil Age	hrs	Client Info		13303		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
	Filter Changed		Client Info		N/A		
	Sample Status				ABNORMAL		
WEAR	Iron	ppm	ASTM D5185m	>90	<u> </u>		
WEAT	Chromium	ppm	ASTM D5185m		2		
Cylinder, crank, or cam shaft wear is indicated.	Nickel		ASTM D5185m		<1		
	Titanium	ppm	ASTM D5185m		0		
		ppm					
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m		<u>11</u>		
	Lead	ppm	ASTM D5185m		0		
	Copper	ppm	ASTM D5185m		23		
	Tin	ppm	ASTM D5185m	>15	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	2 9		
	Potassium	ppm	ASTM D5185m	>20	13		
Fuel content negligible. Elemental levels of silicon (Si) and aluminum (AI) indicate alumina-silicate (coarse dirt) ingress.	Fuel	%	ASTM D3524	>3.0	1.4		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>6	1		
	Nitration	Abs/cm	*ASTM D7624	>20	13.4		
	Sulfation	Abs/.1mm	*ASTM D7415		25.7		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
			*Visual	NORML	NORML		
	Appearance Odor	scalar scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		8		
I EOID CONDITION	Boron	ppm	ASTM D5185m		21		
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		5		
	Molybdenum	ppm	ASTM D5185m		48		
	Manganese		ASTM D5185m		8		
	_	ppm	ASTM D5185m				
	Magnesium	ppm			819		
	Calcium	ppm	ASTM D5185m		1252		
	Phosphorus	ppm	ASTM D5185m		734		
	Zinc	ppm	ASTM D5185m		888		
	Sulfur	ppm	ASTM D5185m		2647		
	Oxidation	Abs/.1mm	*ASTM D7414	>25	25.8		
	Base Number (BN)	mg KOH/g	ASTM D2896		5.0		
	Visc @ 100°C	cSt	ASTM D445		11.8		





Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : IL0033856 Lab Number : 06212833

Unique Number: 11085697

Received **Tested** Diagnosed

: 17 Jun 2024 : 25 Jun 2024

: 25 Jun 2024 - Sean Felton Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

RUSH TRUCK LEASING - CHARLOTTE IDEALEASE 1333 AMERON DR CHARLOTTE, NC

US 28206 Contact: JERRY DIXON dixonj@rushenterprises.com

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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)