WEAR CONTAMINATION FLUID CONDITION

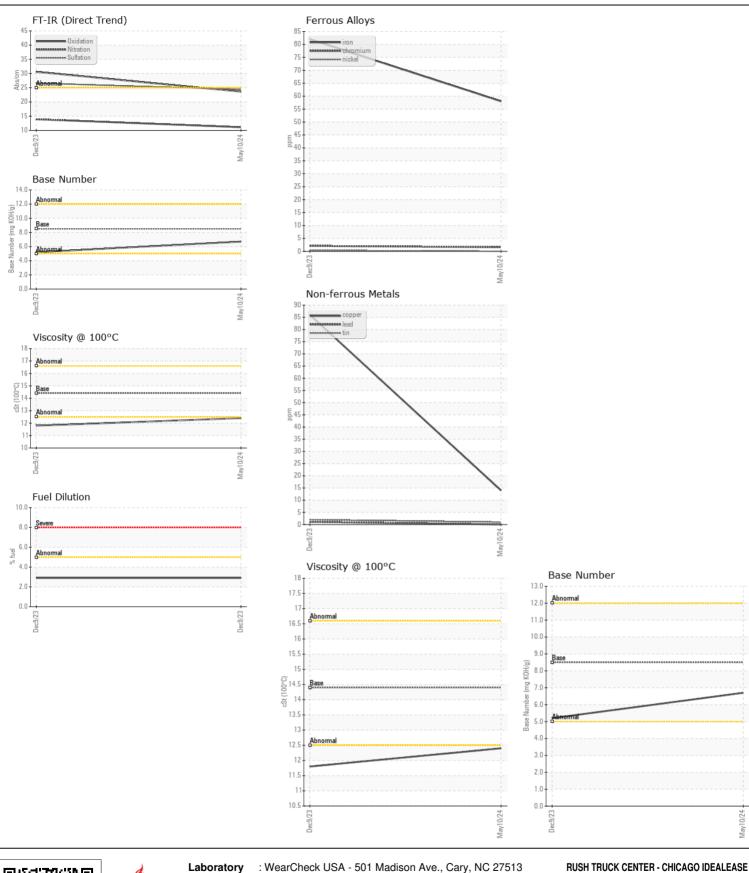
NORMAL NORMAL NORMAL

Machine Id

3387R

## Component Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
TEOOMINERDATION	Sample Number	COIVI	Client Info	LITTIU AUT	IL06214170	IL0034347	
No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Date		Client Info		10 May 2024	09 Dec 2023	
	Machine Age	mls	Client Info		27461	14438	
	Oil Age	mls	Client Info		13027	15000	
	Filter Age	mls	Client Info		0	15000	
	Oil Changed	11110	Client Info		N/A	Changed	
	Filter Changed		Client Info		N/A	Changed	
	Sample Status				NORMAL	ATTENTION	
WEAR	Iron	ppm	ASTM D5185m		58	82	
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185m		2	2	
	Nickel	ppm	ASTM D5185m	>4	0	<1	
	Titanium	ppm	ASTM D5185m		0	<1	
	Silver	ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m		5	6	
	Lead	ppm	ASTM D5185m	-	0	1	
	Copper	ppm	ASTM D5185m		14	86	
	Tin	ppm	ASTM D5185m	>15	1	2	
	Vanadium	ppm	ASTM D5185m		0	<1	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	9	28	
SOTTAIMITATION	Potassium	ppm	ASTM D5185m		11	8	
There is no indication of any contamination in the oil.	Fuel	%	ASTM D3524		<1.0	<u>^</u> 2.9	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.9	0.9	
	Nitration	Abs/cm	*ASTM D7624	>20	11.1	13.9	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	26.6	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	
TI LUD CONDITION				4=0			
FLUID CONDITION	Sodium	ppm	ASTM D5185m		3	9	
The BN result indicates that there is suitable alkalinity remaining in the	Boron	ppm	ASTM D5185m		6	23	
oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	5	
	Molybdenum	ppm	ASTM D5185m	100	58	48	
	Manganese	ppm	ASTM D5185m	450	2	6	
	Magnesium	ppm	ASTM D5185m		934	794	
	Calcium Phosphorus	ppm	ASTM D5185m		1090	1192	
		ppm	ASTM D5185m		972	692	
	Zinc	ppm		1350	1173	845	
	Sulfur Oxidation	ppm Abs/1mm	*ASTM D5185m		3328	2050	
	Base Number (BN)	Abs/.1mm			23.6 6.7	30.6 5.2	
	Dase Mulliper (BIV)	IIIU r\Un/0	49 I W D 2090	0.0	0.7	5.2	





Certificate L2367

Laboratory Sample No.

: IL06214170 **Lab Number** : 06214170

Unique Number : 11087034 Test Package: FLEET (Additional Tests: FuelDilution)

Received **Tested** 

: 18 Jun 2024 : 20 Jun 2024 Diagnosed : 20 Jun 2024 - Sean Felton

4655 SOUTH CENTRAL AVENUE CHICAGO, IL

Contact/Location: BRUCE VAUGHN - IDECHIIL

Contact: BRUCE VAUGHN VaughnB@RushEnterprises.com

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) F: (708)496-8818

US 60638