WEAR CONTAMINATION **FLUID CONDITION**

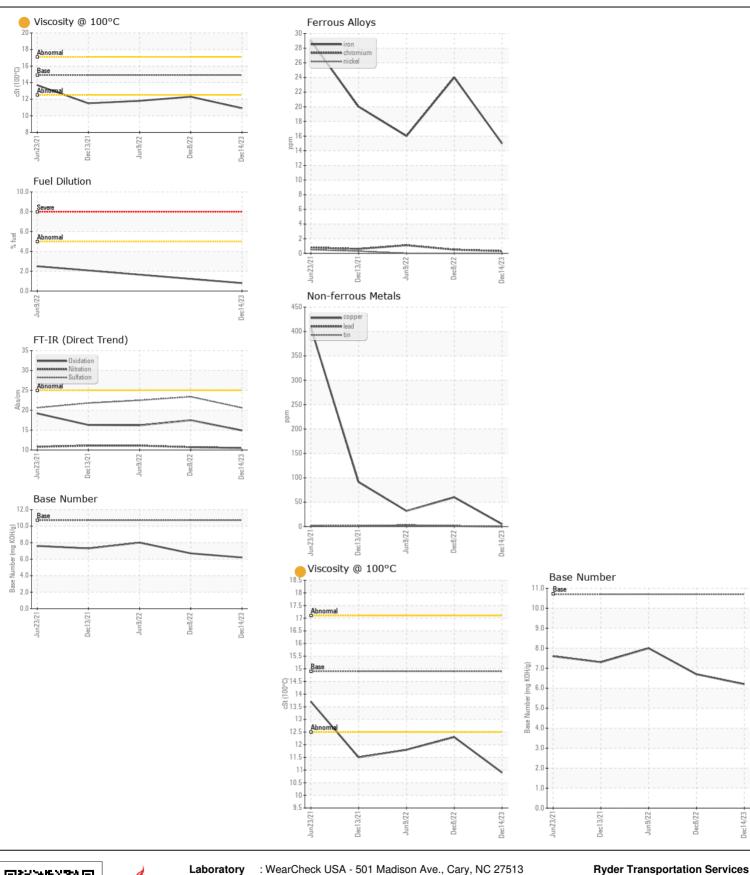
NORMAL NORMAL ATTENTION

Machine Id

390303-2124355

Component
Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		RY0123396	RY0123245	RY012318
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Date		Client Info		14 Dec 2023	08 Dec 2022	09 Jun 202
	Machine Age	mls	Client Info		6000	0	0
	Oil Age	mls	Client Info		0	6000	6000
	Filter Age	mls	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				ATTENTION	ATTENTION	ATTENTIO
WEAR	Iron	nnm	ASTM D5185m	. 100	45	24	16
WEAR	Chromium	ppm	ASTM D5185m		15 <1	<1 <1	1
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	0
	Titanium	ppm	ASTM D5185m	>4	0	0	<1
	Silver	ppm		. 2	-		
	Aluminum	ppm	ASTM D5185m ASTM D5185m		<1 9	0 17	<1 17
	Lead	ppm	ASTM D5185m		0	17	2
	Copper	ppm	ASTM D5185m		5	60	32
	Tin	ppm	ASTM D5185m		<1	<1	1
	Vanadium	ppm	ASTM D5185m	710	0	<1	<1
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	7	8	8
Fuel content negligible. There is no indication of any contemination in	Potassium	ppm	ASTM D5185m	>20	13	36	34
Fuel content negligible. There is no indication of any contamination in the oil.	Fuel	%	ASTM D3524		0.8	<1.0	<u>2.5</u>
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844		0.6	0.7	0.5
	Nitration	Abs/cm	*ASTM D7624		10.5	10.7	11.1
	Sulfation	Abs/.1mm	*ASTM D7415		20.6	23.4	22.5
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORM
	Odor	scalar	*Visual	NORML	NORML	NORML	NORM
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m		3	1	5
	Boron	ppm	ASTM D5185m		64	111	92
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		36	78	45
	Manganese	ppm	ASTM D5185m		<1	1	2
	Magnesium	ppm	ASTM D5185m		559	501	585
	Calcium	ppm	ASTM D5185m		1199	1428	1341
	Phosphorus	ppm	ASTM D5185m	760	708	759	642
	Zinc	ppm	ASTM D5185m	830	830	979	793
	Sulfur	ppm	ASTM D5185m	2770	3025	2979	2926
	Oxidation	Abs/.1mm	*ASTM D7414		14.9	17.5	16.2
	Base Number (BN)	mg KOH/g	ASTM D2896	10.7	6.2	6.7	8.0
	Visc @ 100°C	cSt	ASTM D445	440	10.9	12.3	11.8







Certificate L2367

Laboratory Sample No.

Lab Number : 06187313 Unique Number : 11044065

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : RY0123396

Received : 22 May 2024 **Tested**

: 28 May 2024

: 28 May 2024 - Jonathan Hester Diagnosed Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

Contact: ANTHONY INGRAM anthonyingram@creamoland.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)

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MIAMI, FL

US 33138

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