

## MIXERS Machine Id

## [MIXERS] M210 Component Diesel Engine

KENDALL 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		LP0001554	LP0001224	LP000043
	Sample Date		Client Info		15 May 2024	15 Dec 2023	20 Sep 202
	Machine Age	hrs	Client Info		13047	12403	1159
	Oil Age	hrs	Client Info		600	600	600
	Filter Age	hrs	Client Info		600	600	600
	Oil Changed		Client Info		Changed	Changed	Changeo
	Filter Changed		Client Info		Changed	Changed	Changeo
	Sample Status				NORMAL	NORMAL	NORMA
WEAR	Iron	ppm	ASTM D5185m	>100	10	6	11
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
	Nickel	ppm	ASTM D5185m	>4	0	0	0
	Titanium	ppm	ASTM D5185m		1	1	1
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m	>20	3	3	2
	Lead	ppm	ASTM D5185m	>40	2	<1	2
	Copper	ppm	ASTM D5185m	>330	3	8	27
	Tin	ppm	ASTM D5185m	>15	1	<1	<1
	Vanadium	ppm	ASTM D5185m		0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	13	14	25
	Potassium	ppm	ASTM D5185m		0	5	2
There is no indication of any contamination in the oil.	Fuel		WC Method		<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.4	0.4	0.4
	Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.1	10.5
	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	20.2	20.7
	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	8	10
	Boron	ppm	ASTM D5185m	6.3	54	47	32
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	0	<1
	Molybdenum	ppm	ASTM D5185m		90	83	85
	Manganese	ppm	ASTM D5185m		<1	<1	<1
	Magnesium	ppm	ASTM D5185m	277	119	145	174
	Calcium	ppm	ASTM D5185m		2175	2087	2071
	Phosphorus	ppm	ASTM D5185m		1058	1023	988
	Zinc	ppm	ASTM D5185m		1255	1246	1217
	Sulfur	ppm	ASTM D5185m		4057	3495	3570
	Oxidation	Abs/.1mm	*ASTM D7414		16.7	16.3	16.7
	Base Number (BN)		ASTM D2896	-	5.7	9.29	9.57
		- 01			10.5	10.4	10.1

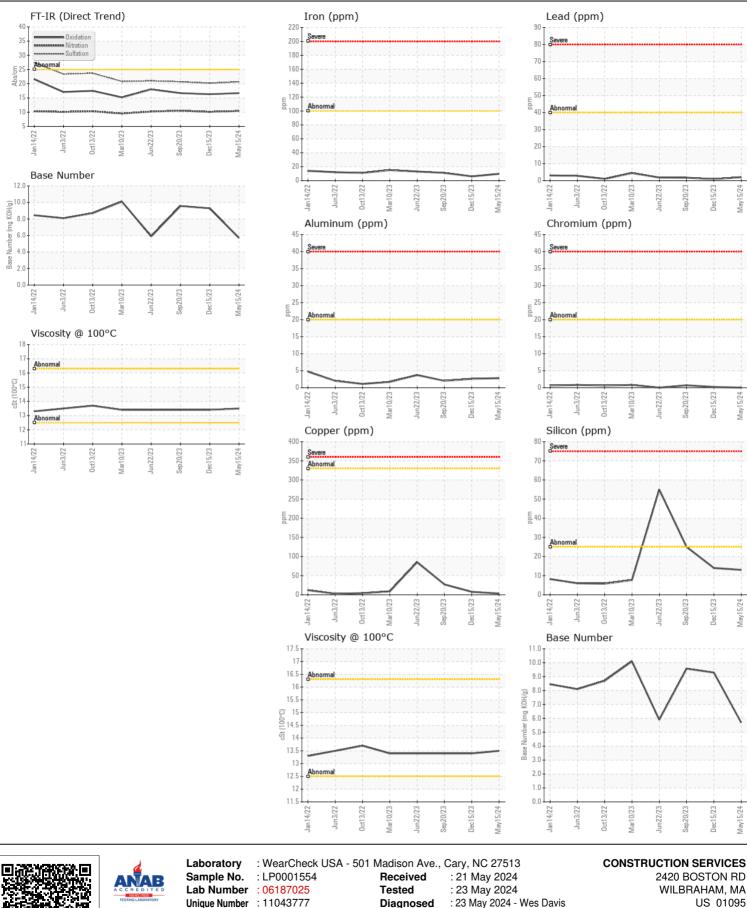
Visc @ 100°C cSt

ASTM D445

13.4

13.4

13.5



Vertificate L2367
Unique Number
: 11043777
Diagnosed
: 23 May 2024 - Wes Davis

Certificate L2367
Test Package
: MOB 2
Office
: 23 May 2024 - Wes Davis
Office
Off

WILBRAHAM, MA US 01095 Contact: Michael Dupuis mdupuis@cs-ma.us T: (413)733-6331 012) F:

Submitted By: Michael Dupuis Page 2 of 2