

Machine Id MACK RO-24 **Diesel Engine**

GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		WC0875534		
	Sample Date		Client Info		01 Jun 2024		
	Machine Age	hrs	Client Info		17908		
	Oil Age	hrs	Client Info		600		
	Filter Age	hrs	Client Info		600		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185m		18		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m		0		
	Titanium	ppm	ASTM D5185m	>2	<1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m		14		
	Lead	ppm	ASTM D5185m		0		
	Copper	ppm	ASTM D5185m		5		
	Tin	ppm	ASTM D5185m	>15	0		
	Vanadium	ppm	ASTM D5185m		<1		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	4		
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	22		
	Fuel		WC Method	>3.0	<1.0		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>4	0.8		
	Nitration	Abs/cm	*ASTM D7624	>20	7.9		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water		*Visual	>0.2	NEG		
FLUID CONDITION							
	Sodium	ppm	ASTM D5185m		4		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		10		
	Barium	ppm	ASTM D5185m	00	0		
	Molybdenum	ppm	ASTM D5185m	66	63		
	Manganese	ppm	ASTM D5185m	1000	<1		
	Magnesium	ppm	ASTM D5185m		953		
	Calcium	ppm	ASTM D5185m		1370		
	Phosphorus	ppm	ASTM D5185m		1140		
	Zinc	ppm	ASTM D5185m	1270	1387		
	Sulfur	ppm	ASTM D5185m		4066		
	Oxidation Base Number (BN)	Abs/.1mm	*ASTM D7414		13.8 8.0		

Visc @ 100°C cSt

ASTM D445 15.5

13.8



OAKRIDGE WASTE Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WC0875534 Received : 28 Jun 2024 307 WHITE ST Ø. Lab Number : 06223189 Tested : 28 Jun 2024 DANBURY, CT Unique Number : 11101386 Diagnosed : 28 Jun 2024 - Wes Davis US 06810 Test Package : MOB 1 (Additional Tests: TBN) Contact: CHRIS CONTI Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. chris.conti@oakridgewaste.com T: * - 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:

Contact/Location: CHRIS CONTI - OAKDANCT Page 2 of 2