

## Machine Id FREIGHTLINER RL-44 Component Diesel Engine

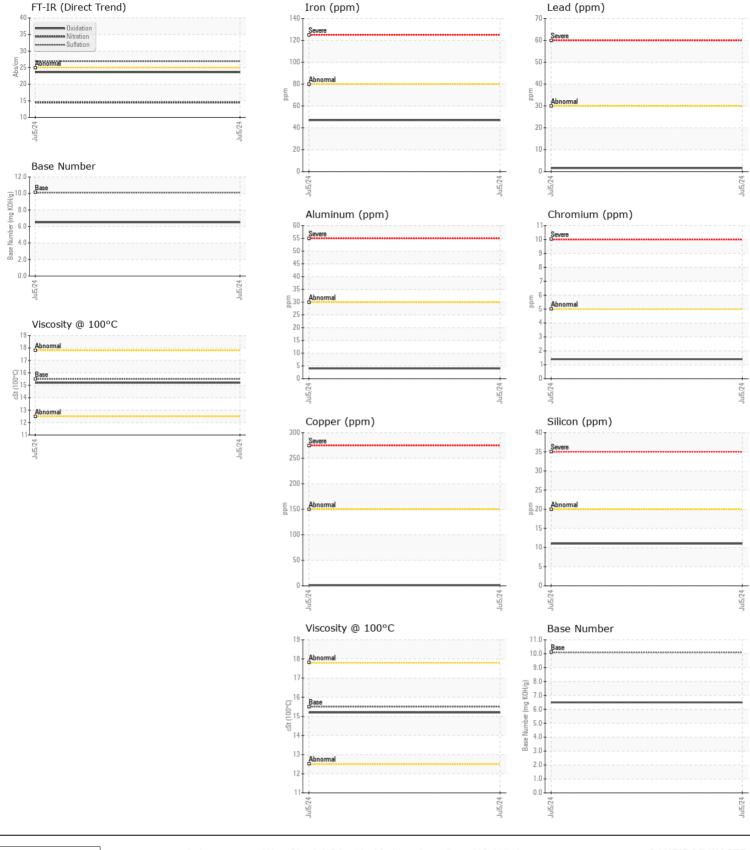
## GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)

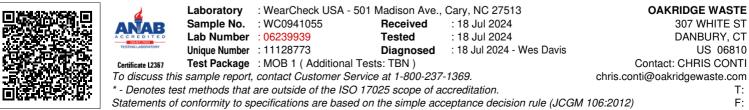
dibital tan 15W/40 SOF En S-S EX ( GAE)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		WC0941055		
	Sample Date		Client Info		05 Jul 2024		
	Machine Age	hrs	Client Info		8359		
	Oil Age	hrs	Client 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	>80	47		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185m	>5	1		
	Nickel	ppm	ASTM D5185m	>2	<1		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m	>3	0		
	Aluminum	ppm	ASTM D5185m	>30	4		
	Lead	ppm	ASTM D5185m	>30	2		
	Copper	ppm	ASTM D5185m		1		
	Tin	ppm	ASTM D5185m	>5	0		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION There is no indication of any contamination in the oil.	Silicon	ppm	ASTM D5185m	>20	11		
	Potassium	ppm	ASTM D5185m	>20	3		
	Fuel		WC Method	>5	<1.0		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	1.7		
	Nitration	Abs/cm	*ASTM D7624	>20	14.5		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	26.9		
	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	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		4		
	Boron	ppm	ASTM D5185m		5		
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		
	Molybdenum	ppm	ASTM D5185m	66	90		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m	1000	832		
	Calcium	ppm	ASTM D5185m		1213		
	Phosphorus	ppm	ASTM D5185m	1150	1002		
	Zinc	ppm	ASTM D5185m	1270	1153		
	Sulfur	ppm	ASTM D5185m		3110		
	Oxidation	Abs/.1mm	*ASTM D7414	>25	23.6		
	Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.5		
	Vice @ 100°C	0°t		155	15.0		

Visc @ 100°C cSt

ASTM D445 15.5

15.2





Submitted By: CHRIS CONTI Page 2 of 2