

# **JULIEN BOURGEIOUS**

### **NO UNIT WA0021676 Starboard Diesel Engine**

{not provided} (--- GAL)

REC	/IEIN	DAI	IUN	

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Visc @ 100°C cSt

Viscosity Index (VI) Scale ASTM D2270\*

ASTM D7279(m)

#### WEAR

All component wear rates are normal.

## CONTAMINATION

There is no indication of any contamination in the oil.

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#### **FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WA0021676		
Sample Date		Client Info		25 Jun 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Filter Changed		Client Info		N/A		
Sample Status				NORMAL		
Iron	ppm	ASTM D5185(m)	>80	37		
Chromium	ppm	ASTM D5185(m)	>6	<1		
Nickel	ppm	ASTM D5185(m)	>2	<1		
Titanium	ppm	ASTM D5185(m)	>2	0		
Silver	ppm	ASTM D5185(m)	>2	<1		
Aluminum	ppm	ASTM D5185(m)	>20	18		
Lead	ppm	ASTM D5185(m)	>95	0		
Copper	ppm	ASTM D5185(m)	>85	<1		
Tin	ppm	ASTM D5185(m)	>9	0		
Vanadium	ppm	ASTM D5185(m)		0		
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Silicon	ppm	ASTM D5185(m)	>25	4		
Potassium	ppm	ASTM D5185(m)	>20	2		
Fuel		WC Method	>4.0	<1.0		
Water		WC Method	>0.1	NEG		
Glycol		WC Method		NEG		
Soot %	%	ASTM D7844*		0		
Nitration	Abs/cm	ASTM D7624*	>20	4.3		
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.4		
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*	>0.1	NEG		
Caaliuma				00		
Sodium	ppm	ASTM D5185(m)		20 2		
Boron	ppm	ASTM D5185(m)		-		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		55		
Manganese	ppm	ASTM D5185(m)		<1		
Magnesium	ppm	ASTM D5185(m)		924		
Calcium	ppm	ASTM D5185(m)		988		
Phosphorus	ppm	ASTM D5185(m)		965		
Zinc	ppm	ASTM D5185(m)		1143		
Sulfur	ppm	ASTM D5185(m)		2724		
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.4		
Visc @ 40°C	cSt	ASTM D7279(m)		102		

13.8

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