

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area JULIEN BOURGEIOUS Machine Id NO UNIT WA0021676

Starboard Diesel Engine Fluid {not provided} (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORM	IATION	method	limit/base	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		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0		
Water		WC Method	>0.1	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
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		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		2		
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		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4		
Sodium	ppm	ASTM D5185(m)		20		
Potassium	ppm	ASTM D5185(m)	>20	2		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0		
Nitration	Abs/cm	ASTM D7624*	>20	4.3		
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.4		



35

30

25

Jun25/24

140 Abnormal

70

140 - Abnorma

Abnormal 70 +2/52unf

FT-IR (Direct Trend)

Oxidation

litration

Sulfatio

Viscosity @ 40°C

Viscosity @ 40°C

OIL ANALYSIS REPORT

	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	ASTM D7414*	>25	13.4		
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
	Precipitate	scalar	Visual*	NONE	NONE		
5/24 -	Silt	scalar	Visual*	NONE	NONE		
Jun25/24	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		
	Free Water	scalar	Visual*		NEG		
	FLUID PROPER	TIES	method	limit/base	current	history1	history2
-	Visc @ 40°C	cSt	ASTM D7279(m)		102		
5/24 -	Visc @ 100°C	cSt	ASTM D7279(m)		13.8		
Jun 25/24	Viscosity Index (VI)	Scale	ASTM D2270*		136		
	GRAPHS						
	Iron (ppm)			20	Lead (ppm)		
	100			15			
				튭 10	0 - Abnormal		
	50				0		
	0				24		
	Jun 25/24			Jun25/24	Jun25/24		
V C J	Aluminum (ppm)				Chromium (pr	om)	
c	40 Severe			1	5 Severe		
	30 - Abnormal			_1	0		
	ā 20 - 9			- Mdd	5 - Abnormal		
	10-						
	2/24			5/24 -	5/24		
	Jun25/24			Jun25/24	Jun25/24		
	Copper (ppm)				Silicon (ppm)		
	200 Severe			6	°		
	150			4 8	0 - Severe		
	톱 100 - Abnormal			±2	Abnormal 0		
	0				o L		
	Jun 25/24			Jun25/24	Jun25/24		
	寻 Viscosity @ 100°0	~		μĻ	∃ Soot %		
	¹⁸ Abnormal			15.			
	ç 16			_{>2} 10.	Severe		
	(j. 16 00) 14 37 12 4 Abnormal			3º10.	Abnormal		
	104			.0.			
	Jun25/24			Jun25/24	Jun25/24		

 Line Hasses
 Validity of results and interpretation are based on the sample and information as supplied.

 Report Id: DDCDAR [WCAMIS] 02644202 (Generated: 06/27/2024 07:05:28) Rev: 1
 Column 1

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Contact/Location: Danelle Hoffman - DDCDAR

dhoffman@wajax.com

T: (902)468-6200

F: (902)468-3325