

UNASSIGNED [104695]

46490605

Starboard Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 15W40. Please confirm.

WEAR

All component wear rates are normal.

CONTAMINATION

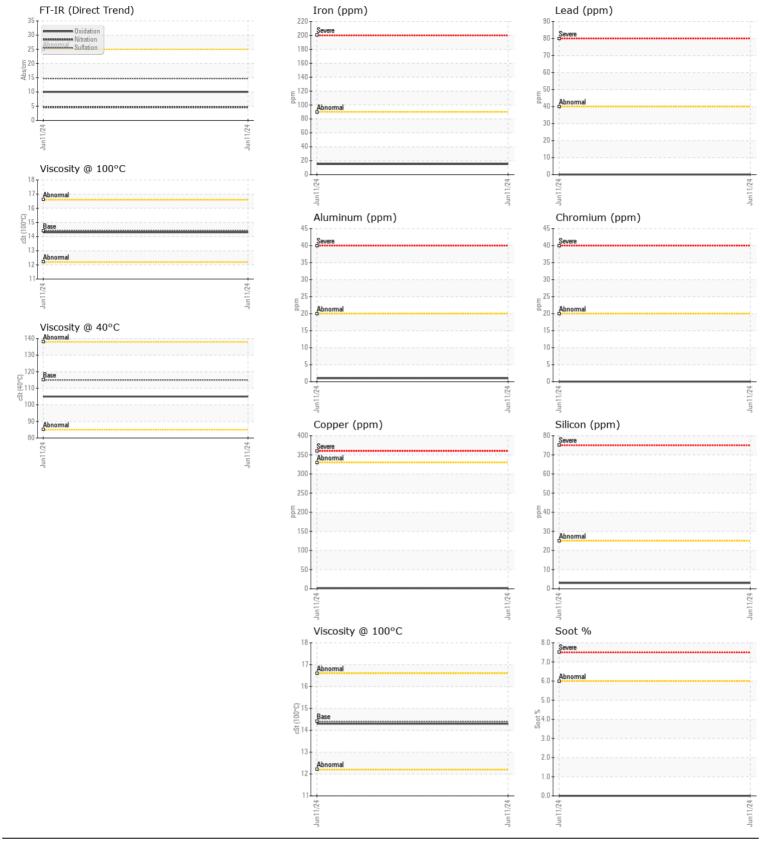
There is no indication of any contamination in the oil.

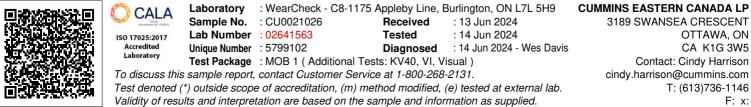
FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		CU0021026		
Sample Date		Client Info		11 Jun 2024		
Machine Age	hrs	Client Info		1087		
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)	>90	15		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>2	<1		
Titanium	ppm	ASTM D5185(m)	>2	0		
Silver	ppm	ASTM D5185(m)	>2	0		
Aluminum	ppm	ASTM D5185(m)	>20	1		
Lead	ppm	ASTM D5185(m)	>40	0		
Copper	ppm	ASTM D5185(m)	>330	2		
Tin	ppm	ASTM D5185(m)	>15	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	3		
Potassium	ppm	ASTM D5185(m)	>20	0		
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
Soot %	%	ASTM D7844*	>6	0		
Nitration	Abs/cm	ASTM D7624*	>20	4.6		
Sulfation	Abs/.1mm	ASTM D7415*	>30	14.7		
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		
Codium			. 150	4		
Sodium	ppm	ASTM D5185(m)	>158	1		
Boron	ppm	ASTM D5185(m)	250	15		
Barium	ppm	ASTM D5185(m)	10	0		
Molybdenum	ppm	ASTM D5185(m)	100	61		
Manganese	ppm	ASTM D5185(m)	450	<1		
Magnesium	ppm	ASTM D5185(m)	450	906		
Calcium	ppm	ASTM D5185(m)	3000	1156		
Phosphorus	ppm	ASTM D5185(m)	1150	1039		
Zinc	ppm	ASTM D5185(m)	1350	1210		
Sulfur	ppm	ASTM D5185(m)	4250	2675		
Oxidation	Abs/.1mm	ASTM D7414*	>25	10.0		
Visc @ 40°C	cSt	ASTM D7279(m)	115	105		
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.3		
Viscosity Index (VI)	Scale	ASTM D2270*	126	139		

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL





Contact/Location: Cindy Harrison - CUMOTT Page 2 of 2