

UIN 013C95A

Bearing

Unit No.	ELF-09
Unit:	
Make	
Model	
Serial No.	DD-064-000-336
Site	Ss El Faro
Compartment:	
Name	Stern Tube Shaft Bearing Oil System
Make	Waukesha
Model	
Serial No.	
Capacity:	gal

Customer:	
SEA STAR LINES LLC	
8710 Longshore Way Blount Island	
Jacksonville FL 32226	
USA	

DIAGNOSIS

All wear rates normal. Silicon level (dirt/sealant material) satisfactory. Water content acceptable. TAN above recommended limit. Viscosity within specified operating range.

Action: Check for higher than typical operating temperature. Resample at a reduced service interval to further monitor.

ANALYST: Jon.Sowers

LEGEND				
Abnormal	Severe	Abnormal	Caution	Normal

DATE SAMPLED	19-Apr-15	04-Jan-14	13-Oct-10	29-Apr-10	30-Oct-09	20-Jul-09
DATE RECEIVED	04-May-15	10-Jan-14	20-Oct-10	04-May-10	12-Nov-09	01-Oct-09
DATE REPORTED	07-May-15	14-Jan-14	21-Oct-10	10-May-10	13-Nov-09	05-Oct-09
LAB NO.	42020662668	42020476919	42020076323	42020021755	42009093976	42009081022
SIF NO.	15965437	14717770	102373110063	102373110015	92253200072	92253200071
TIME ON UNIT	Hrs					
TIME ON OIL	Hrs					
OIL BRAND	Chevron	Chevron	Chevron	Chevron	Chevron	Chevron
OIL TYPE	GST Oil	GST Oil	GST Oil	GST Oil	GST Oil	GST Oil
OIL GRADE	ISO 100	ISO 100	ISO 100	ISO 100	ISO 100	ISO 100
OIL ADDED						
FILTER	Not Applicable					
OIL CHANGED	Not Changed	Not Changed	Not Changed	Not Changed	Not Provided	Not Provided
WO NUMBER						
Metals (ppm)						
Iron (Fe)	4	12	1	5	1	1
Chromium (Cr)	<1	2	<1	<1	<1	<1
Lead (Pb)	<1	38	<1	<1	<1	<1
Copper (Cu)	<1	7	<1	1	<1	<1
Tin (Sn)	4	154	<1	<1	1	<1
Aluminium (Al)	2	128	<1	<1	1	<1
Nickel (Ni)	<1	13	<1	<1	<1	<1
Silver (Ag)	<1	<1	<1	<1	<1	<1
Titanium (Ti)	<1	<1	<1	<1	<1	<1
Vanadium (V)	<1	2	<1	<1	<1	<1
Contaminants (ppm)						
Silicon (Si)	<1	12	<1	<1	1	1
Sodium (Na)	11	53	<1	7	<1	<1
Potassium (K)	8	48	<5	<5	<5	<5
Water (%)	<0.05	<0.05	<0.05	0.17	<0.05	<0.05
Additives (ppm)						
Magnesium (Mg)	<1	117	<1	1	<1	<1
Calcium (Ca)	3	140	3	2	<1	<1
Barium (Ba)	<1	2	<1	<1	<1	<1
Phosphorus (P)	5	174	<1	<1	<1	1
Zinc (Zn)	6	156	3	2	2	2
Molybdenum (Mo)	<1	1	<1	<1	<1	<1
Boron (B)	<5	39	<5	<5	<5	<5
Physical Tests						
Viscosity (cSt 40C)	81.3	81.2	95.2	95.1	95.4	92.1
Solids (%)	<0.1	<0.1	<0.1	<0.1		
Physical / Chemical						
Acid Number (mgKOH/g)	3.81	4.33	0.10	0.13	0.05	0.06



(800) LUBE-808



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U.S. Laboratories

- | | |
|--|---|
| Atlanta, Georgia - 420
3121 Presidential Drive
Atlanta, GA 30340
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6180 Halle Dr. Suite D
Valley View, OH 44125
800.726.5400 |
| Kansas City, Kansas - 430
935 Sunshine Road
Kansas City, KS 66115
800.332.8055 | Phoenix, Arizona - 440
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Phoenix, AZ 85017
800.445.7930 |
| Portland, Oregon - 401
4943 NW Front Avenue
Portland, OR 97210
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Sparks, NV 89431
800.524.7848 |

Canadian Laboratories

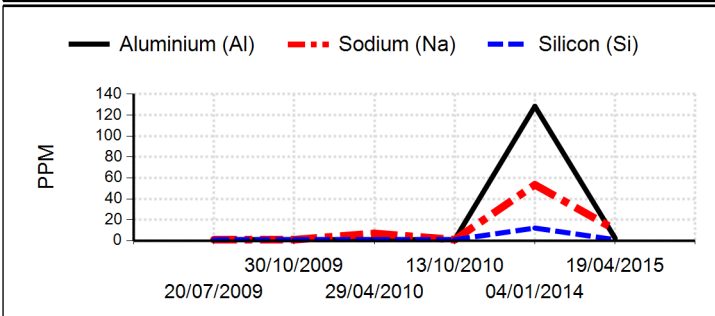
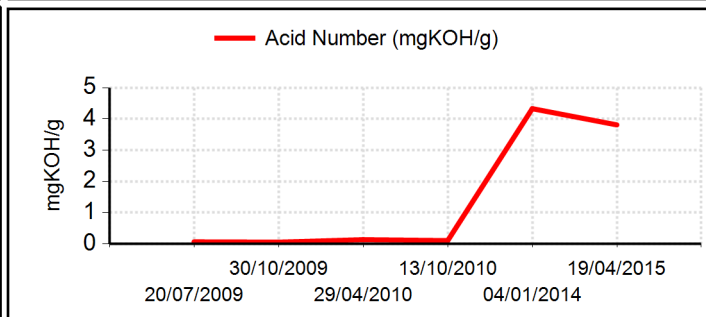
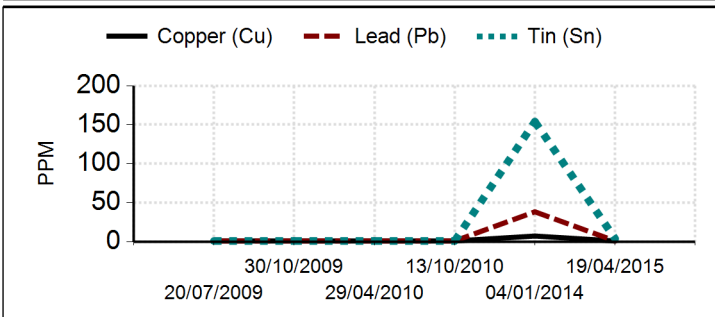
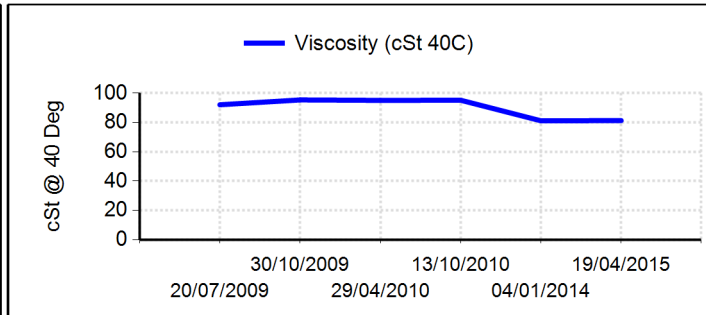
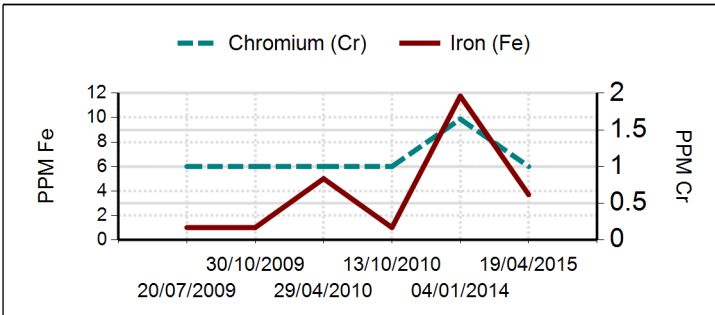
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| Burlington, Ontario - 450
1240 Burloak Drive, Unit 6
Burlington, ON L7L 6B3
877.732.9559 |
| Edmonton, Alberta - 402
10717-176 Street
Edmonton, AB T5S 1K1
888.489.0057 |

Sales & Marketing

- | |
|---|
| Houston, Texas
10450 Stancliff Road, Suite 210
Houston, TX 77099
877.835.8437 |
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Filter Image

Filter patch test is not performed Contact laboratory for more information

Since services are based on samples and information supplied by others, and since corrective actions, if any, are necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to ALS Tribology for the services. Reported recommendations are based on interpretations of the generated test results and historical data. Certain test results appearing in this report may have been tested at other ALS laboratories within the Tribology divisional network.

Sea Star Lines LLC
 Attn: Lee Peterson
 8710 Longshore Way Blount Island
 Jacksonville FL 32226
 USA