

BRUCE A. CULVER, NAVAL ARCHITECT

TELEPHONE

Email

May 17, 2019
Dan Mattesen

Enclosed are two copies of the stability book for the Scandies Rose. It can carry pots up to the pilothouse windows as discussed without much difficulty. The light ship weight was a bit heavier than I expected – there may have been something in the holds that we missed, or it may have gained some weight over the years. The tankage is a little different between this boat and the Patricia Lee, and some things may be done differently than when I first did this. If you see anything that should be changed let me know and I'll revise it at no charge.

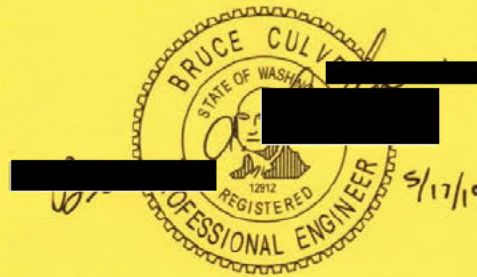
Sincerely,

Bruce A. Culver, P.E.

STABILITY BOOKLET

F/V SCANDIES ROSE

O.N. 602351



April 2019

BRUCE A. CULVER, P.E.
NAVAL ARCHITECT

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F/V SCANDIES ROSE
PRINCIPAL DIMENSIONS AND PARTICULARS

Length overall 130'-6"
Beam 34'-0"
Depth 14'-4"
Builder Bender Shipbuilding
Mobile, Alabama
1978
Owner Dan Mattesen
[REDACTED]
Official Number 602351

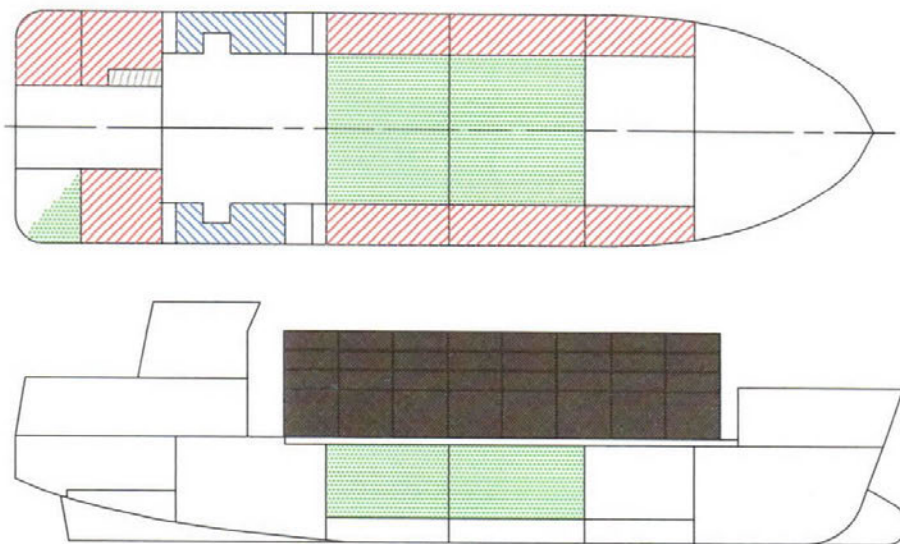
This report is based on an inclining done April 12, 2019 at Seattle, Washington

INSTRUCTIONS TO MASTER

F/V SCANDIES ROSE

1. Stability characteristics of this vessel are evaluated for compliance with 46CFR Subchapter C, paragraph 28
2. A total of (208) 835 pound crab pots can be carried on deck, The first tier on edge and the rest flat, Do not obscure vision from the pilothouse. This applies in icing or non-icing conditions. If all three Holds are flooded (168) pots can be carried, and forward wing tanks are to be empty.
3. Flooded holds must be filled or emptied. In a sheltered location or in port. Do not operate with a slack . Do not operate with a slack (partially filled) hold.
4. Freeboard is not to be less than six inches at any point.
5. Always determine the cause of any list before taking corrective action.
6. All gear carried on deck or in a hold must be firmly secured against shifting.
7. All doors, hatches, manholes, scuttles, etc., must be kept securely closed while at sea except when Actually in use.
8. Bilges must be kept pumped to minimum content at all times subject to pollution regulations.
9. Freeing ports must be kept clear and operable at all times.
10. Avoid accumulation of unnecessary weights such as spare parts, tools, gear and stores.
11. No modifications to the vessel, such as adding or removing ballast or other weights is to be performed without first determining their effect on stability.
12. The master of the vessel is responsible for maintaining watertight integrity at all times and to exercise prudent seamanship, giving consideration to the season of the year, weather, sea and ice conditions.

May 28, 2019



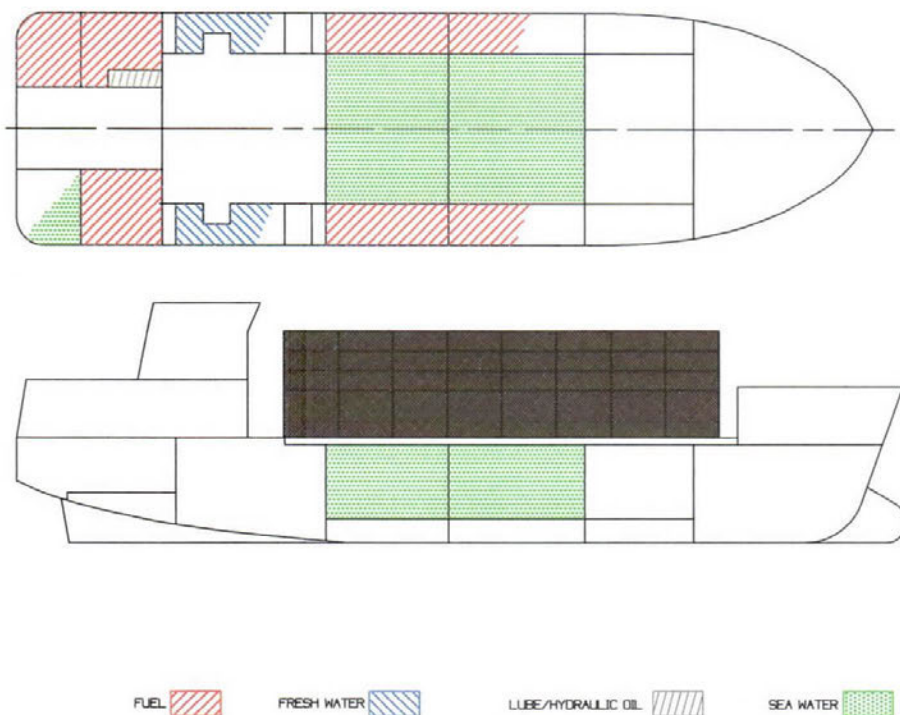
FUEL  FRESH WATER  LUBE/HYDRAULIC OIL  SEA WATER 

CONDITION #1

Max. Consumables, 208 Pots

Draft 13.09 feet, trim fwd. 0.34 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	15.23	Yes
Area 0 to 40 degrees, ft-degrees	16.92	23.89	Yes
Area 30 to 40 degrees, ft-degrees	5.64	8.66	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	.97	Yes
3. Heel angle at maximum righting arm	> 25 deg.	40	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	3.23	Yes
6. Weather Criteria			Yes

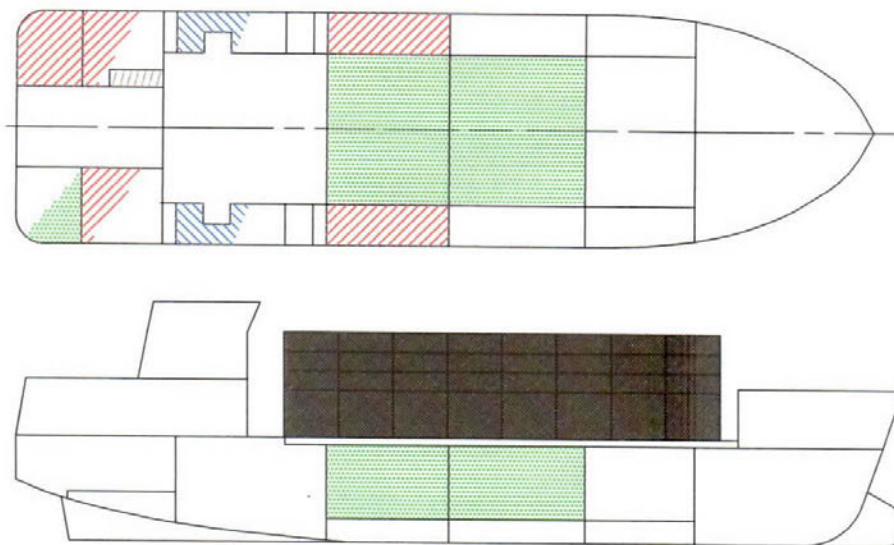





CONDITION #2

75% Consumables, 208 Pots

Draft 12.64 feet, trim fwd. 0.04 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	16.85	Yes
Area 0 to 40 degrees, ft-degrees	16.92	26.03	Yes
Area 30 to 40 degrees, ft-degrees	5.64	9.18	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	1.01	Yes
3. Heel angle at maximum righting arm	> 25 deg.	39	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	3.10	Yes
6. Weather Criteria			Yes



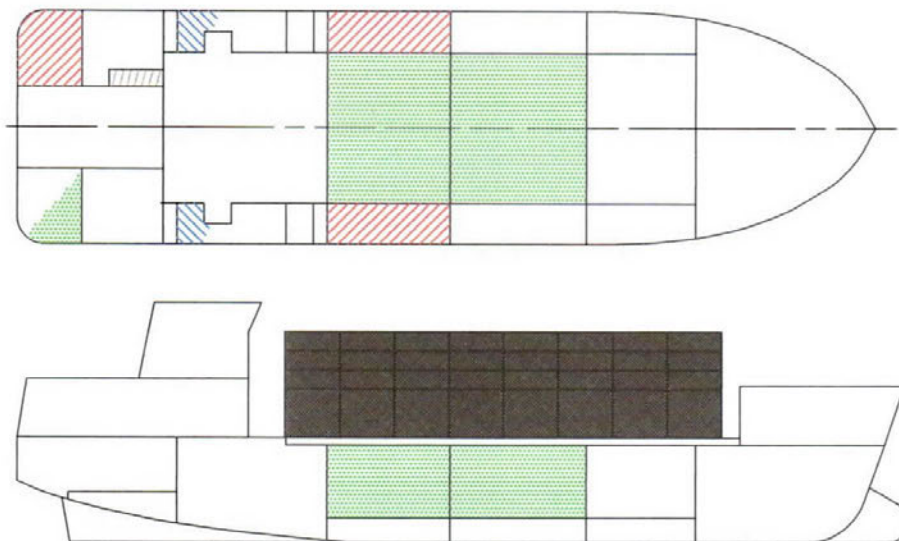
FUEL  FRESH WATER  LUBE/HYDRAULIC OIL  SEA WATER 

CONDITION #3

50%. Consumables, 208 Pots

Draft 12.52 feet, trim aft 0.49 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	16.71	Yes
Area 0 to 40 degrees, ft-degrees	16.92	25.73	Yes
Area 30 to 40 degrees, ft-degrees	5.64	9.02	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	.96	Yes
3. Heel angle at maximum righting arm	> 25 deg.	34	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	2.96	Yes
6. Weather Criteria			Yes



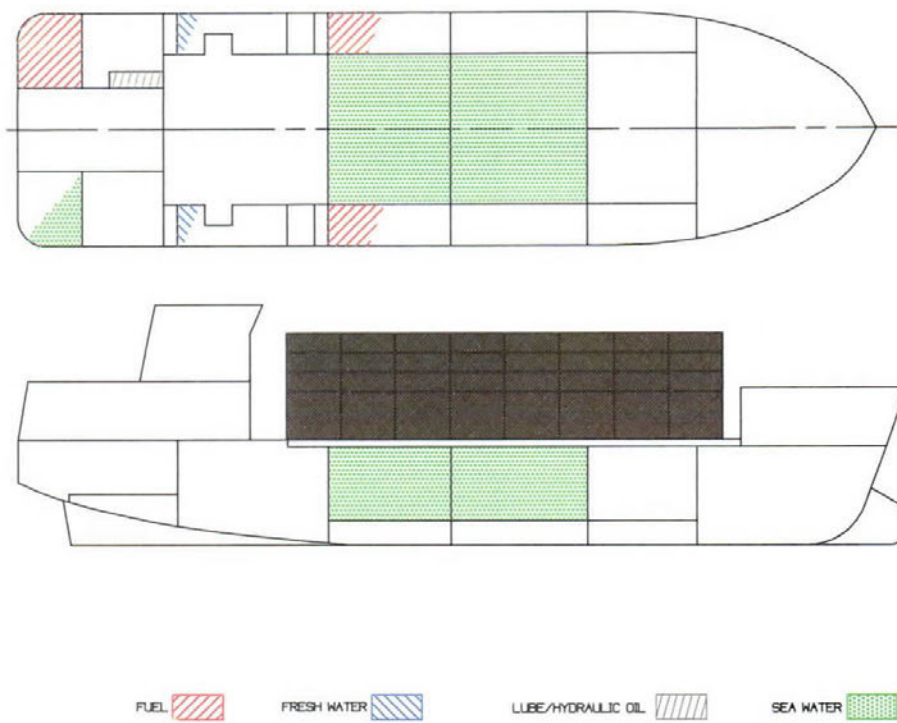
FUEL  FRESH WATER  LUBE/HYDRAULIC OIL  SEA WATER 

CONDITION #4

25% Consumables, 208 Pots

Draft 12.19 feet, trim fwd. 0.19 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	17.28	Yes
Area 0 to 40 degrees, ft-degrees	16.92	26.31	Yes
Area 30 to 40 degrees, ft-degrees	5.64	9.03	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	.98	Yes
3. Heel angle at maximum righting arm	> 25 deg.	39	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	2.92	Yes
6. Weather Criteria			Yes

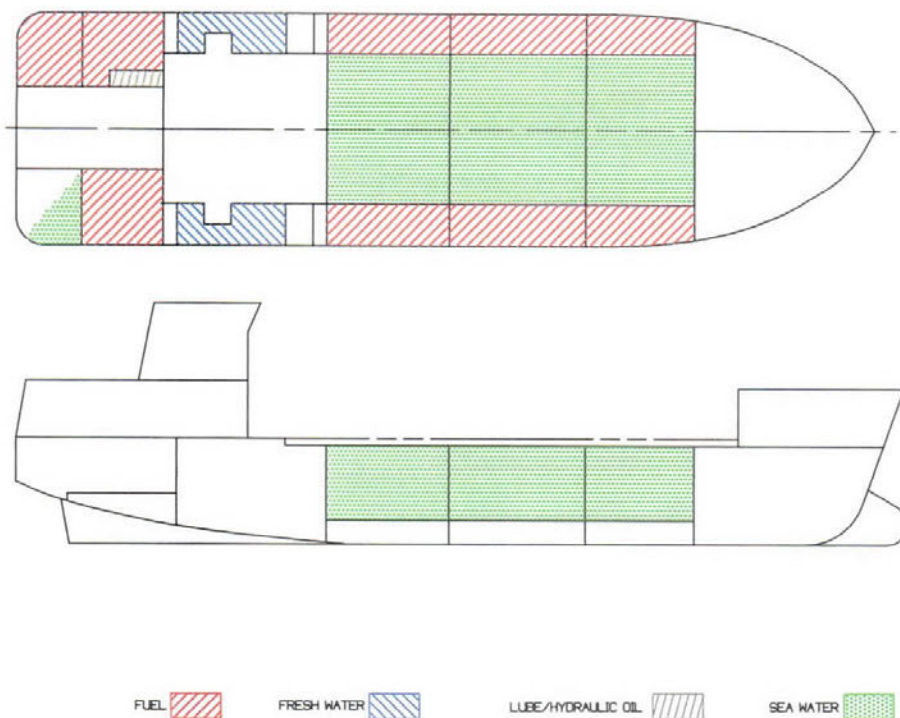


CONDITION #5

10%.Consumables, 208 Pots

Draft 11.89 feet, trim fwd. 0.32 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	17.34	Yes
Area 0 to 40 degrees, ft-degrees	16.92	26.10	Yes
Area 30 to 40 degrees, ft-degrees	5.64	8.76	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	.93	Yes
3. Heel angle at maximum righting arm	> 25 deg.	38	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	2.80	Yes
6. Weather Criteria			Yes



CONDITION #6

Max. Consumables, Tendering

Draft 13.77 feet, trim fwd. 0.87 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	18.46	Yes
Area 0 to 40 degrees, ft-degrees	16.92	31.37	Yes
Area 30 to 40 degrees, ft-degrees	5.64	12.91	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	1.46	Yes
3. Heel angle at maximum righting arm	> 25 deg.	44	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	4.34	Yes
6. Weather Criteria			Yes



FUEL  FRESH WATER  LUBE/HYDRAULIC OIL  SEA WATER 

CONDITION #7

75%.Consumables, Tendering

Draft 13.33 feet, trim fwd. 0.58 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	20.80	Yes
Area 0 to 40 degrees, ft-degrees	16.92	34.38	Yes
Area 30 to 40 degrees, ft-degrees	5.64	13.58	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	1.54	Yes
3. Heel angle at maximum righting arm	> 25 deg.	44	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	4.24	Yes
6. Weather Criteria			Yes

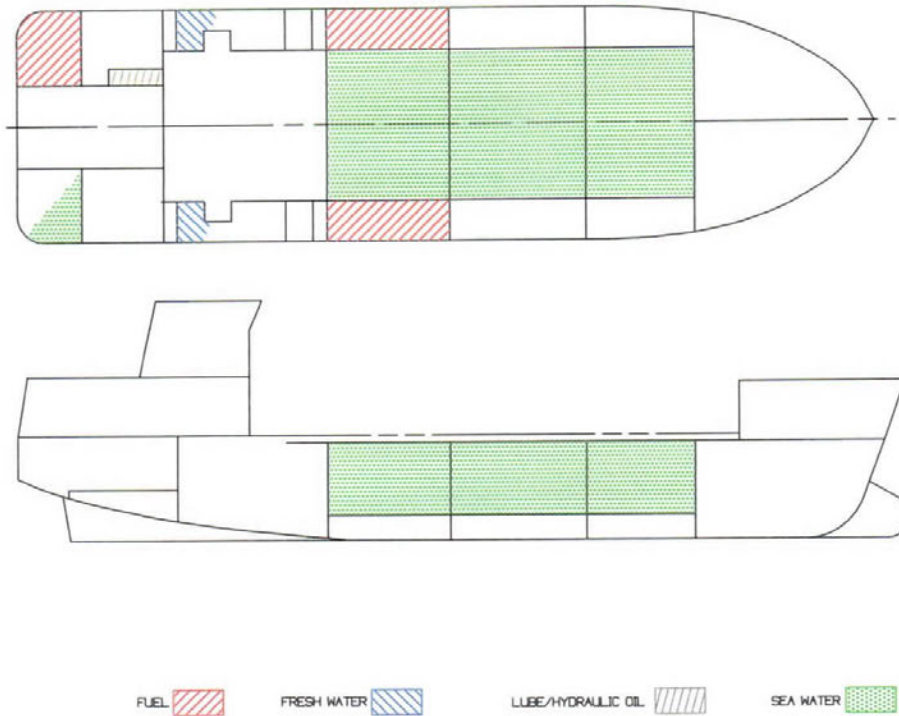


CONDITION #8

50%.Consumables, Tendering

Draft 12.80 feet, trim fwd. 1.04 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	22.56	Yes
Area 0 to 40 degrees, ft-degrees	16.92	36.54	Yes
Area 30 to 40 degrees, ft-degrees	5.64	13.98	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	1.60	Yes
3. Heel angle at maximum righting arm	> 25 deg.	43	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	4.19	Yes
6. Weather Criteria			Yes



CONDITION #9

25%.Consumables, Tendering

Draft 12.48 feet, trim fwd. 1.71 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	23.40	Yes
Area 0 to 40 degrees, ft-degrees	16.92	37.50	Yes
Area 30 to 40 degrees, ft-degrees	5.64	14.10	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	1.58	Yes
3. Heel angle at maximum righting arm	> 25 deg.	39	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	4.22	Yes
6. Weather Criteria			Yes



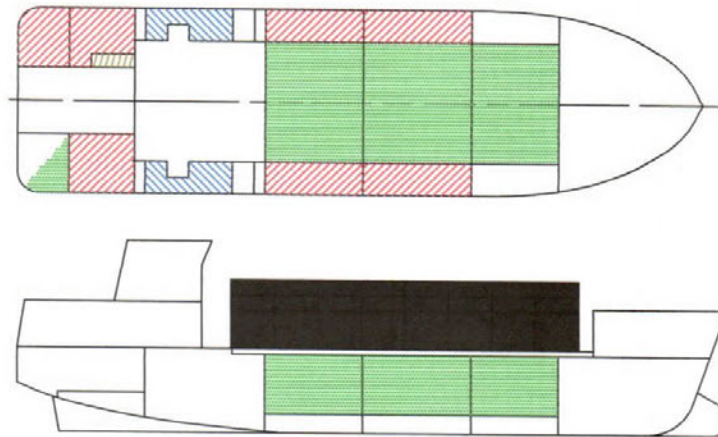
FUEL FRESH WATER LUBE/HYDRAULIC OIL SEA WATER

CONDITION #10

10%. Consumables, Tending

Draft 12.19 feet, trim fwd. 1.85 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	23.85	Yes
Area 0 to 40 degrees, ft-degrees	16.92	37.78	Yes
Area 30 to 40 degrees, ft-degrees	5.64	13.93	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	1.58	Yes
3. Heel angle at maximum righting arm	> 25 deg.	42	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	4.14	Yes
6. Weather Criteria			Yes



FUEL FRESH WATER LUBE/HYDRAULIC OIL SEA WATER

CONDITION #11
 Crabbing, 3 holds Flooded, 168 Pots
 Draft 13.71 feet, trim fwd. 2.18 degrees

Compliance with 46CFR, Part 28	Required	Actual	Meets Std.
1. Righting Energy Criteria			
Area 0 to 30 degrees, ft-degrees	10.34	10.38	Yes
Area 0 to 40 degrees, ft-degrees	16.92	18.37	Yes
Area 30 to 40 degrees, ft-degrees	5.64	7.99	Yes
2. Maximum Righting Arm at > 30 deg.	>.66 ft.	.88	Yes
3. Heel angle at maximum righting arm	> 25 deg.	42	Yes
4. Range of positive stability	> 50 deg.	>60	Yes
5. Metacentric Height	1.15	3.78	Yes
6. Weather Criteria			Yes

19-05-13 09:20:26
 GHS 6.44
 WING TANK #1 PORT

SCANDIES ROSE

TANK CHARACTERISTICS

No Trim, No Heel

Tank: FWDWING.P, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.000	1	0.00	22.73f	11.20p	2.71	2.2	39.39
0' 6	.003	8	0.03	23.36f	11.54p	2.90	7.3	1.46
0' 9	.010	28	0.09	24.28f	11.75p	3.10	11.1	2.34
1' 0	.022	62	0.20	24.74f	12.02p	3.28	14.5	2.62
1' 3	.040	112	0.36	25.34f	12.24p	3.46	17.2	2.23
1' 6	.063	179	0.58	26.03f	12.35p	3.63	20.0	1.88
1' 9	.091	258	0.83	26.56f	12.47p	3.80	20.3	1.58
2' 0	.122	346	1.12	27.02f	12.54p	3.96	18.9	1.26
2' 3	.156	442	1.43	27.41f	12.59p	4.11	17.5	1.05
2' 6	.191	542	1.76	27.71f	12.63p	4.26	15.0	0.89
2' 9	.227	644	2.09	27.94f	12.66p	4.40	13.0	0.77
3' 0	.264	748	2.42	28.11f	12.68p	4.54	11.3	0.69
3' 3	.301	853	2.76	28.24f	12.70p	4.67	10.1	0.62
3' 6	.338	959	3.11	28.34f	12.72p	4.81	9.1	0.57
3' 9	.376	1067	3.46	28.43f	12.73p	4.94	8.3	0.53
4' 0	.415	1176	3.81	28.50f	12.75p	5.08	7.6	0.50
4' 3	.454	1286	4.17	28.56f	12.76p	5.21	7.1	0.47
4' 6	.493	1398	4.53	28.62f	12.78p	5.35	6.6	0.45
4' 9	.533	1511	4.90	28.66f	12.79p	5.48	6.2	0.43
5' 0	.573	1625	5.27	28.70f	12.81p	5.62	5.8	0.41
5' 3	.614	1740	5.64	28.74f	12.82p	5.75	5.5	0.39
5' 6	.655	1857	6.02	28.78f	12.83p	5.89	5.2	0.38
5' 9	.697	1975	6.40	28.81f	12.85p	6.02	5.0	0.37
6' 0	.739	2095	6.79	28.83f	12.86p	6.16	4.7	0.36
6' 3	.782	2216	7.18	28.86f	12.87p	6.29	4.5	0.35
6' 6	.825	2338	7.58	28.88f	12.88p	6.43	4.3	0.34
6' 9	.868	2461	7.98	28.91f	12.90p	6.57	4.2	0.33
7' 0	.912	2586	8.38	28.93f	12.91p	6.70	4.0	0.33
7' 3	.957	2712	8.79	28.95f	12.92p	6.84	3.9	0.32
7' 6	1.000	2835	9.19	28.97f	12.93p	6.97		

Soundings in feet & inches.--Other distances in FEET.-----
 FWDWING.P Reference Point: Long.= 30.00f Trans.= 13.61p Vert.= 2.51
 (Zero Sounding is at the Reference Point.)

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SCANDIES ROSE

WING TANK #1 STARBOARD

TANK CHARACTERISTICS

No Trim, No Heel

Tank: FWDWING.S, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.000	1	0.00	22.73f	11.20s	2.71	2.2	39.39
0' 6	.003	8	0.03	23.36f	11.54s	2.90	7.3	1.46
0' 9	.010	28	0.09	24.28f	11.75s	3.10	11.1	2.34
1' 0	.022	62	0.20	24.74f	12.02s	3.28	14.5	2.62
1' 3	.040	112	0.36	25.34f	12.24s	3.46	17.2	2.23
1' 6	.063	179	0.58	26.03f	12.35s	3.63	20.0	1.88
1' 9	.091	258	0.83	26.56f	12.47s	3.80	20.3	1.58
2' 0	.122	346	1.12	27.02f	12.54s	3.96	18.9	1.26
2' 3	.156	442	1.43	27.41f	12.59s	4.11	17.5	1.05
2' 6	.191	542	1.76	27.71f	12.63s	4.26	15.0	0.89
2' 9	.227	644	2.09	27.94f	12.66s	4.40	13.0	0.77
3' 0	.264	748	2.42	28.11f	12.68s	4.54	11.3	0.69
3' 3	.301	853	2.76	28.24f	12.70s	4.67	10.1	0.62
3' 6	.338	959	3.11	28.34f	12.72s	4.81	9.1	0.57
3' 9	.376	1067	3.46	28.43f	12.73s	4.94	8.3	0.53
4' 0	.415	1176	3.81	28.50f	12.75s	5.08	7.6	0.50
4' 3	.454	1286	4.17	28.56f	12.76s	5.21	7.1	0.47
4' 6	.493	1398	4.53	28.62f	12.78s	5.35	6.6	0.45
4' 9	.533	1511	4.90	28.66f	12.79s	5.48	6.2	0.43
5' 0	.573	1625	5.27	28.70f	12.81s	5.62	5.8	0.41
5' 3	.614	1740	5.64	28.74f	12.82s	5.75	5.5	0.39
5' 6	.655	1857	6.02	28.78f	12.83s	5.89	5.2	0.38
5' 9	.697	1975	6.40	28.81f	12.85s	6.02	5.0	0.37
6' 0	.739	2095	6.79	28.83f	12.86s	6.16	4.7	0.36
6' 3	.782	2216	7.18	28.86f	12.87s	6.29	4.5	0.35
6' 6	.825	2338	7.58	28.88f	12.88s	6.43	4.3	0.34
6' 9	.868	2461	7.98	28.91f	12.90s	6.57	4.2	0.33
7' 0	.912	2586	8.38	28.93f	12.91s	6.70	4.0	0.33
7' 3	.957	2712	8.79	28.95f	12.92s	6.84	3.9	0.32
7' 6	1.000	2835	9.19	28.97f	12.93s	6.97		

Soundings in feet & inches.--Other distances in FEET.-----
 FWDWING.S Reference Point: Long.= 30.00f Trans.= 13.61s Vert.= 2.51
 (Zero Sounding is at the Reference Point.)

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 WING TANK #2 PORT

SCANDIES ROSE

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TANK CHARACTERISTICS
 No Trim, No Heel

Tank: MIDWING.P, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.001	9	0.03	5.59f	11.46p	1.52	93.7	2.06
0' 6	.009	53	0.17	6.91f	12.00p	1.70	67.2	4.18
0' 9	.024	146	0.47	7.81f	12.47p	1.88	47.5	6.13
1' 0	.045	274	0.89	8.28f	12.86p	2.04	38.5	4.49
1' 3	.068	420	1.36	8.79f	13.04p	2.20	36.5	3.21
1' 6	.094	580	1.88	9.27f	13.15p	2.34	34.0	2.51
1' 9	.123	756	2.45	9.71f	13.23p	2.49	29.5	2.05
2' 0	.152	939	3.04	10.04f	13.29p	2.63	25.5	1.71
2' 3	.183	1124	3.64	10.30f	13.34p	2.77	21.6	1.45
2' 6	.213	1311	4.25	10.48f	13.37p	2.90	18.6	1.26
2' 9	.243	1498	4.85	10.62f	13.39p	3.04	16.4	1.11
3' 0	.274	1686	5.46	10.73f	13.41p	3.17	14.6	1.00
3' 3	.305	1875	6.08	10.82f	13.43p	3.30	13.2	0.91
3' 6	.335	2064	6.69	10.90f	13.44p	3.43	12.0	0.83
3' 9	.366	2254	7.31	10.96f	13.46p	3.56	11.1	0.77
4' 0	.397	2446	7.93	11.02f	13.47p	3.69	10.3	0.72
4' 3	.428	2637	8.55	11.06f	13.48p	3.82	9.6	0.67
4' 6	.460	2830	9.17	11.10f	13.49p	3.95	8.9	0.64
4' 9	.491	3024	9.80	11.14f	13.50p	4.07	8.4	0.60
5' 0	.523	3218	10.43	11.18f	13.51p	4.20	7.9	0.57
5' 3	.554	3413	11.06	11.21f	13.52p	4.33	7.5	0.54
5' 6	.586	3609	11.70	11.23f	13.52p	4.46	7.1	0.52
5' 9	.618	3805	12.33	11.26f	13.53p	4.59	6.8	0.50
6' 0	.650	4003	12.97	11.28f	13.54p	4.72	6.5	0.48
6' 3	.682	4201	13.62	11.30f	13.55p	4.85	6.2	0.46
6' 6	.715	4400	14.26	11.32f	13.55p	4.98	6.0	0.45
6' 9	.747	4599	14.91	11.34f	13.56p	5.11	5.7	0.43
7' 0	.780	4800	15.56	11.36f	13.57p	5.24	5.5	0.42
7' 3	.812	5001	16.21	11.38f	13.57p	5.37	5.3	0.41
7' 6	.845	5203	16.86	11.39f	13.58p	5.50	5.1	0.39
7' 9	.878	5406	17.52	11.41f	13.59p	5.63	5.0	0.38
8' 0	.911	5609	18.18	11.42f	13.59p	5.76	4.8	0.37
8' 3	.944	5814	18.84	11.44f	13.60p	5.89	4.7	0.36
8' 6	.978	6019	19.51	11.45f	13.61p	6.02	4.5	0.36
8' 9	1.000	6155	19.95	11.46f	13.61p	6.10		

Soundings in feet & inches.--Other distances in FEET.
 MIDWING.P Reference Point: Long.= 12.00f Trans.= 13.90p Vert.= 1.33
 (Zero Sounding is at the Reference Point.)

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GHS 6.44

WING TANK #2 STARBOARD

SCANDIES ROSE

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TANK CHARACTERISTICS

No Trim, No Heel

Tank: MIDWING.S, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.001	9	0.03	5.59f	11.46s	1.52	93.7	2.06
0' 6	.009	53	0.17	6.91f	12.00s	1.70	67.2	4.18
0' 9	.024	146	0.47	7.81f	12.47s	1.88	47.5	6.13
1' 0	.045	274	0.89	8.28f	12.86s	2.04	38.5	4.49
1' 3	.068	420	1.36	8.79f	13.04s	2.20	36.5	3.21
1' 6	.094	580	1.88	9.27f	13.15s	2.34	34.0	2.51
1' 9	.123	756	2.45	9.71f	13.23s	2.49	29.5	2.05
2' 0	.152	939	3.04	10.04f	13.29s	2.63	25.5	1.71
2' 3	.183	1124	3.64	10.30f	13.34s	2.77	21.6	1.45
2' 6	.213	1311	4.25	10.48f	13.37s	2.90	18.6	1.26
2' 9	.243	1498	4.85	10.62f	13.39s	3.04	16.4	1.11
3' 0	.274	1686	5.46	10.73f	13.41s	3.17	14.6	1.00
3' 3	.305	1875	6.08	10.82f	13.43s	3.30	13.2	0.91
3' 6	.335	2064	6.69	10.90f	13.44s	3.43	12.0	0.83
3' 9	.366	2254	7.31	10.96f	13.46s	3.56	11.1	0.77
4' 0	.397	2446	7.93	11.02f	13.47s	3.69	10.3	0.72
4' 3	.428	2637	8.55	11.06f	13.48s	3.82	9.6	0.67
4' 6	.460	2830	9.17	11.10f	13.49s	3.95	8.9	0.64
4' 9	.491	3024	9.80	11.14f	13.50s	4.07	8.4	0.60
5' 0	.523	3218	10.43	11.18f	13.51s	4.20	7.9	0.57
5' 3	.554	3413	11.06	11.21f	13.52s	4.33	7.5	0.54
5' 6	.586	3609	11.70	11.23f	13.52s	4.46	7.1	0.52
5' 9	.618	3805	12.33	11.26f	13.53s	4.59	6.8	0.50
6' 0	.650	4003	12.97	11.28f	13.54s	4.72	6.5	0.48
6' 3	.682	4201	13.62	11.30f	13.55s	4.85	6.2	0.46
6' 6	.715	4400	14.26	11.32f	13.55s	4.98	6.0	0.45
6' 9	.747	4599	14.91	11.34f	13.56s	5.11	5.7	0.43
7' 0	.780	4800	15.56	11.36f	13.57s	5.24	5.5	0.42
7' 3	.812	5001	16.21	11.38f	13.57s	5.37	5.3	0.41
7' 6	.845	5203	16.86	11.39f	13.58s	5.50	5.1	0.39
7' 9	.878	5406	17.52	11.41f	13.59s	5.63	5.0	0.38
8' 0	.911	5609	18.18	11.42f	13.59s	5.76	4.8	0.37
8' 3	.944	5814	18.84	11.44f	13.60s	5.89	4.7	0.36
8' 6	.978	6019	19.51	11.45f	13.61s	6.02	4.5	0.36
8' 9	1.000	6155	19.95	11.46f	13.61s	6.10		

Soundings in feet & inches.--Other distances in FEET.-----
MIDWING.S Reference Point: Long.= 12.00f Trans.= 13.90s Vert.= 1.33
(Zero Sounding is at the Reference Point.)

19-05-13 09:20:26
 GHS 6.44
 WING TANK #3 PORT

SCANDIES ROSE

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TANK CHARACTERISTICS
 No Trim, No Heel

Tank: AFTWING.P, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.005	31	0.10	6.95a	11.65p	1.47	214.7	2.56
0' 6	.021	128	0.42	7.00a	12.30p	1.64	108.0	5.16
0' 9	.046	290	0.94	7.02a	12.95p	1.80	67.9	6.34
1' 0	.075	472	1.53	7.01a	13.26p	1.95	41.7	3.91
1' 3	.105	655	2.12	7.01a	13.40p	2.08	30.1	2.84
1' 6	.134	838	2.72	7.01a	13.48p	2.21	23.6	2.23
1' 9	.163	1022	3.31	7.01a	13.53p	2.34	19.4	1.84
2' 0	.193	1205	3.91	7.01a	13.57p	2.47	16.5	1.57
2' 3	.222	1390	4.50	7.01a	13.59p	2.59	14.3	1.37
2' 6	.252	1574	5.10	7.01a	13.62p	2.72	12.7	1.21
2' 9	.281	1759	5.70	7.01a	13.63p	2.85	11.4	1.09
3' 0	.311	1944	6.30	7.01a	13.65p	2.97	10.3	0.99
3' 3	.340	2130	6.90	7.01a	13.66p	3.10	9.4	0.91
3' 6	.370	2316	7.51	7.01a	13.67p	3.23	8.7	0.84
3' 9	.400	2502	8.11	7.01a	13.68p	3.35	8.0	0.78
4' 0	.430	2688	8.71	7.01a	13.69p	3.48	7.5	0.73
4' 3	.460	2875	9.32	7.01a	13.70p	3.61	7.0	0.69
4' 6	.489	3062	9.93	7.01a	13.71p	3.73	6.6	0.65
4' 9	.519	3250	10.53	7.01a	13.72p	3.86	6.2	0.62
5' 0	.549	3438	11.14	7.01a	13.72p	3.99	5.9	0.59
5' 3	.580	3626	11.75	7.01a	13.73p	4.11	5.6	0.56
5' 6	.610	3815	12.36	7.01a	13.73p	4.24	5.3	0.53
5' 9	.640	4004	12.98	7.01a	13.74p	4.37	5.1	0.51
6' 0	.670	4193	13.59	7.01a	13.74p	4.49	4.9	0.49
6' 3	.700	4382	14.20	7.01a	13.75p	4.62	4.7	0.47
6' 6	.731	4572	14.82	7.00a	13.75p	4.75	4.5	0.46
6' 9	.761	4763	15.44	7.00a	13.76p	4.87	4.3	0.44
7' 0	.792	4953	16.05	7.00a	13.76p	5.00	4.2	0.42
7' 3	.822	5144	16.67	7.00a	13.77p	5.13	4.0	0.41
7' 6	.853	5335	17.29	7.00a	13.77p	5.26	3.9	0.40
7' 9	.883	5527	17.91	7.00a	13.78p	5.38	3.7	0.39
8' 0	.914	5719	18.54	7.00a	13.78p	5.51	3.6	0.38
8' 3	.945	5911	19.16	7.00a	13.78p	5.64	3.5	0.37
8' 6	.976	6104	19.78	7.00a	13.79p	5.77	3.4	0.36
8' 9	1.000	6257	20.28	7.00a	13.79p	5.87		

Soundings in feet & inches.--Other distances in FEET.-----
 AFTWING.P Reference Point: Long.= 7.00a Trans.= 13.91p Vert.= 1.30
 (Zero Sounding is at the Reference Point.)

19-05-13 09:20:26
 GHS 6.44
 WING TANK #3 STARBOARD

SCANDIES ROSE

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TANK CHARACTERISTICS
 No Trim, No Heel

Tank: AFTWING.P, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.005	31	0.10	6.95a	11.65p	1.47	214.7	2.56
0' 6	.021	128	0.42	7.00a	12.30p	1.64	108.0	5.16
0' 9	.046	290	0.94	7.02a	12.95p	1.80	67.9	6.34
1' 0	.075	472	1.53	7.01a	13.26p	1.95	41.7	3.91
1' 3	.105	655	2.12	7.01a	13.40p	2.08	30.1	2.84
1' 6	.134	838	2.72	7.01a	13.48p	2.21	23.6	2.23
1' 9	.163	1022	3.31	7.01a	13.53p	2.34	19.4	1.84
2' 0	.193	1205	3.91	7.01a	13.57p	2.47	16.5	1.57
2' 3	.222	1390	4.50	7.01a	13.59p	2.59	14.3	1.37
2' 6	.252	1574	5.10	7.01a	13.62p	2.72	12.7	1.21
2' 9	.281	1759	5.70	7.01a	13.63p	2.85	11.4	1.09
3' 0	.311	1944	6.30	7.01a	13.65p	2.97	10.3	0.99
3' 3	.340	2130	6.90	7.01a	13.66p	3.10	9.4	0.91
3' 6	.370	2316	7.51	7.01a	13.67p	3.23	8.7	0.84
3' 9	.400	2502	8.11	7.01a	13.68p	3.35	8.0	0.78
4' 0	.430	2688	8.71	7.01a	13.69p	3.48	7.5	0.73
4' 3	.460	2875	9.32	7.01a	13.70p	3.61	7.0	0.69
4' 6	.489	3062	9.93	7.01a	13.71p	3.73	6.6	0.65
4' 9	.519	3250	10.53	7.01a	13.72p	3.86	6.2	0.62
5' 0	.549	3438	11.14	7.01a	13.72p	3.99	5.9	0.59
5' 3	.580	3626	11.75	7.01a	13.73p	4.11	5.6	0.56
5' 6	.610	3815	12.36	7.01a	13.73p	4.24	5.3	0.53
5' 9	.640	4004	12.98	7.01a	13.74p	4.37	5.1	0.51
6' 0	.670	4193	13.59	7.01a	13.74p	4.49	4.9	0.49
6' 3	.700	4382	14.20	7.01a	13.75p	4.62	4.7	0.47
6' 6	.731	4572	14.82	7.00a	13.75p	4.75	4.5	0.46
6' 9	.761	4763	15.44	7.00a	13.76p	4.87	4.3	0.44
7' 0	.792	4953	16.05	7.00a	13.76p	5.00	4.2	0.42
7' 3	.822	5144	16.67	7.00a	13.77p	5.13	4.0	0.41
7' 6	.853	5335	17.29	7.00a	13.77p	5.26	3.9	0.40
7' 9	.883	5527	17.91	7.00a	13.78p	5.38	3.7	0.39
8' 0	.914	5719	18.54	7.00a	13.78p	5.51	3.6	0.38
8' 3	.945	5911	19.16	7.00a	13.78p	5.64	3.5	0.37
8' 6	.976	6104	19.78	7.00a	13.79p	5.77	3.4	0.36
8' 9	1.000	6257	20.28	7.00a	13.79p	5.87		

Soundings in feet & inches.--Other distances in FEET.-----
 AFTWING.P Reference Point: Long.= 7.00a Trans.= 13.91p Vert.= 1.30
 (Zero Sounding is at the Reference Point.)

19-05-13 09:20:26
 GHS 6.44
 AFT FUEL TANK PORT

SCANDIES ROSE

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TANK CHARACTERISTICS
 No Trim, No Heel

Tank: AFTFUEL.P, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.000	1	0.00	0.00	0.00	0.00		
0' 6	.000	1	0.00	40.68a	7.64p	4.23	2.8	6.07
0' 9	.001	6	0.02	40.78a	8.06p	4.41	-0.2	3.29
1' 0	.002	15	0.05	40.83a	8.92p	4.60	-3.4	-2.34
1' 3	.006	36	0.12	41.19a	9.66p	4.80	1.2	2.65
1' 6	.012	73	0.24	41.63a	10.05p	5.00	6.2	8.23
1' 9	.022	130	0.42	42.09a	10.19p	5.20	7.0	9.83
2' 0	.035	212	0.69	42.57a	10.09p	5.40	5.0	8.48
2' 3	.048	288	0.93	42.72a	10.26p	5.57	4.4	5.59
2' 6	.061	368	1.19	42.90a	10.52p	5.73	7.4	5.27
2' 9	.078	470	1.52	43.26a	10.67p	5.90	8.8	5.28
3' 0	.097	590	1.91	43.61a	10.82p	6.07	9.5	5.09
3' 3	.121	732	2.37	43.98a	10.99p	6.24	9.4	5.03
3' 6	.147	890	2.88	44.31a	11.13p	6.41	8.5	4.26
3' 9	.174	1054	3.42	44.58a	11.21p	6.57	7.7	3.70
4' 0	.202	1225	3.97	44.81a	11.27p	6.72	7.1	3.39
4' 3	.231	1399	4.54	44.99a	11.33p	6.87	6.2	2.99
4' 6	.260	1574	5.10	45.13a	11.36p	7.01	5.5	2.68
4' 9	.289	1750	5.67	45.25a	11.39p	7.15	5.0	2.43
5' 0	.318	1926	6.24	45.34a	11.41p	7.28	4.6	2.22
5' 3	.347	2102	6.81	45.42a	11.42p	7.42	4.2	2.04
5' 6	.376	2278	7.38	45.49a	11.44p	7.55	3.9	1.90
5' 9	.406	2455	7.96	45.55a	11.45p	7.68	3.6	1.77
6' 0	.435	2633	8.53	45.60a	11.46p	7.82	3.4	1.66
6' 3	.464	2810	9.11	45.64a	11.47p	7.95	3.2	1.57
6' 6	.494	2989	9.69	45.68a	11.48p	8.08	3.0	1.48
6' 9	.523	3167	10.27	45.71a	11.49p	8.21	2.8	1.41
7' 0	.553	3346	10.85	45.74a	11.50p	8.34	2.7	1.34
7' 3	.582	3526	11.43	45.77a	11.50p	8.47	2.5	1.28
7' 6	.612	3705	12.01	45.80a	11.51p	8.60	2.4	1.22
7' 9	.642	3886	12.59	45.82a	11.52p	8.73	2.3	1.18
8' 0	.672	4066	13.18	45.84a	11.53p	8.86	2.2	1.13
8' 3	.702	4247	13.77	45.86a	11.53p	8.98	2.1	1.09
8' 6	.732	4429	14.35	45.88a	11.54p	9.11	2.0	1.05
8' 9	.762	4611	14.94	45.89a	11.55p	9.24	2.0	1.01
9' 0	.792	4793	15.53	45.91a	11.55p	9.37	1.9	0.98
9' 3	.822	4975	16.13	45.92a	11.56p	9.50	1.8	0.95
9' 6	.852	5159	16.72	45.94a	11.56p	9.63	1.8	0.92
9' 9	.882	5342	17.31	45.95a	11.57p	9.76	1.7	0.90
10' 0	.913	5526	17.91	45.96a	11.58p	9.89	1.7	0.87
10' 3	.943	5710	18.51	45.97a	11.58p	10.02	1.6	0.85
10' 6	.974	5895	19.11	45.98a	11.59p	10.15	1.6	0.83
10' 9	1.000	6054	19.62	46.00a	11.59p	10.26		

Soundings in feet & inches.--Other distances in FEET.-----

19-05-13 09:20:26

GHS 6.44

AFT FUEL TANK STARBOARD

SCANDIES ROSE

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TANK CHARACTERISTICS

No Trim, No Heel

Tank: AFTFUEL.S, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.000	1	0.00	40.34a	6.49s	3.96	0.5	1.18
0' 6	.001	7	0.02	40.68a	6.70s	4.17	0.9	2.37
0' 9	.003	20	0.06	40.85a	7.15s	4.35	1.7	4.55
1' 0	.006	43	0.14	41.11a	7.69s	4.53	2.5	6.93
1' 3	.011	83	0.27	41.45a	8.18s	4.73	3.1	9.07
1' 6	.019	145	0.47	41.82a	8.55s	4.93	4.9	9.59
1' 9	.031	231	0.75	42.21a	8.78s	5.13	5.3	9.60
2' 0	.046	345	1.12	42.61a	8.88s	5.33	4.3	8.19
2' 3	.060	451	1.46	42.76a	9.11s	5.49	4.7	6.52
2' 6	.076	568	1.84	42.95a	9.34s	5.65	6.2	5.78
2' 9	.095	707	2.29	43.23a	9.50s	5.81	7.0	5.49
3' 0	.116	864	2.80	43.51a	9.68s	5.98	7.6	5.32
3' 3	.140	1042	3.38	43.80a	9.86s	6.14	7.7	5.38
3' 6	.166	1237	4.01	44.07a	10.03s	6.30	7.1	4.72
3' 9	.193	1439	4.66	44.29a	10.14s	6.46	6.6	4.21
4' 0	.221	1646	5.34	44.48a	10.24s	6.61	6.1	3.92
4' 3	.249	1858	6.02	44.64a	10.32s	6.76	5.5	3.50
4' 6	.277	2069	6.71	44.77a	10.37s	6.90	4.9	3.16
4' 9	.306	2282	7.40	44.87a	10.42s	7.04	4.5	2.88
5' 0	.334	2494	8.08	44.96a	10.45s	7.17	4.1	2.65
5' 3	.363	2707	8.77	45.03a	10.49s	7.31	3.8	2.46
5' 6	.391	2921	9.47	45.10a	10.51s	7.44	3.5	2.29
5' 9	.420	3135	10.16	45.15a	10.54s	7.57	3.3	2.15
6' 0	.449	3349	10.85	45.20a	10.56s	7.71	3.1	2.02
6' 3	.477	3563	11.55	45.24a	10.58s	7.84	2.9	1.91
6' 6	.506	3778	12.25	45.28a	10.59s	7.97	2.7	1.81
6' 9	.535	3994	12.94	45.31a	10.61s	8.10	2.6	1.72
7' 0	.564	4210	13.64	45.34a	10.62s	8.23	2.5	1.64
7' 3	.593	4426	14.35	45.37a	10.64s	8.36	2.3	1.57
7' 6	.622	4643	15.05	45.39a	10.65s	8.49	2.2	1.51
7' 9	.651	4860	15.75	45.42a	10.66s	8.62	2.1	1.45
8' 0	.680	5077	16.46	45.44a	10.67s	8.75	2.1	1.39
8' 3	.709	5295	17.16	45.46a	10.68s	8.88	2.0	1.34
8' 6	.739	5513	17.87	45.47a	10.69s	9.01	1.9	1.30
8' 9	.768	5732	18.58	45.49a	10.70s	9.13	1.8	1.25
9' 0	.797	5951	19.29	45.51a	10.71s	9.26	1.8	1.21
9' 3	.827	6170	20.00	45.52a	10.72s	9.39	1.7	1.18
9' 6	.856	6390	20.71	45.53a	10.73s	9.52	1.6	1.14
9' 9	.886	6611	21.43	45.55a	10.74s	9.65	1.6	1.11
10' 0	.915	6831	22.14	45.56a	10.75s	9.78	1.5	1.08
10' 3	.945	7052	22.86	45.57a	10.76s	9.91	1.5	1.05
10' 6	.975	7274	23.58	45.58a	10.76s	10.04	1.5	1.03
10' 9	1.000	7464	24.19	45.59a	10.77s	10.15		

Soundings in feet & inches.--Other distances in FEET.-----

19-05-13 09:20:26
 GHS 6.44
 LUBE OIL TANK PORT

SCANDIES ROSE

TANK CHARACTERISTICS
 No Trim, No Heel

Tank: LUBEOIL.P, Contents: LUBE OIL at 0.924 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.001	1	0.00	40.34a	6.49p	3.96	0.5	1.17
0' 6	.004	6	0.02	40.68a	6.59p	4.16	0.7	0.79
0' 9	.010	14	0.05	40.88a	6.78p	4.33	2.0	0.87
1' 0	.020	28	0.10	41.27a	7.04p	4.50	3.4	1.21
1' 3	.034	48	0.16	41.65a	7.06p	4.67	3.4	0.78
1' 6	.051	72	0.25	42.01a	7.03p	4.85	3.4	0.56
1' 9	.072	101	0.35	42.37a	6.96p	5.03	3.1	0.42
2' 0	.094	133	0.46	42.66a	6.93p	5.20	3.2	0.34
2' 3	.116	164	0.56	42.83a	7.09p	5.35	4.6	0.43
2' 6	.142	200	0.69	43.04a	7.17p	5.50	3.9	0.38
2' 9	.168	237	0.82	43.19a	7.20p	5.64	3.3	0.32
3' 0	.194	274	0.94	43.30a	7.21p	5.77	2.9	0.28
3' 3	.220	311	1.07	43.38a	7.21p	5.90	2.5	0.25
3' 6	.247	348	1.20	43.45a	7.22p	6.03	2.3	0.22
3' 9	.273	384	1.32	43.50a	7.22p	6.16	2.0	0.20
4' 0	.299	421	1.45	43.55a	7.22p	6.29	1.9	0.18
4' 3	.325	458	1.58	43.58a	7.23p	6.42	1.7	0.17
4' 6	.351	495	1.70	43.61a	7.23p	6.54	1.6	0.16
4' 9	.377	532	1.83	43.64a	7.23p	6.67	1.5	0.14
5' 0	.403	569	1.96	43.66a	7.23p	6.80	1.4	0.13
5' 3	.430	606	2.08	43.68a	7.23p	6.93	1.3	0.13
5' 6	.456	642	2.21	43.70a	7.23p	7.05	1.2	0.12
5' 9	.482	679	2.34	43.72a	7.23p	7.18	1.2	0.11
6' 0	.508	716	2.46	43.73a	7.24p	7.30	1.1	0.11
6' 3	.534	753	2.59	43.75a	7.24p	7.43	1.0	0.10
6' 6	.560	790	2.72	43.76a	7.24p	7.56	1.0	0.10
6' 9	.586	827	2.85	43.77a	7.24p	7.68	1.0	0.09
7' 0	.613	863	2.97	43.78a	7.24p	7.81	0.9	0.09
7' 3	.639	900	3.10	43.79a	7.24p	7.93	0.9	0.09
7' 6	.665	937	3.23	43.80a	7.24p	8.06	0.8	0.08
7' 9	.691	974	3.35	43.80a	7.24p	8.18	0.8	0.08
8' 0	.717	1011	3.48	43.81a	7.24p	8.31	0.8	0.08
8' 3	.743	1048	3.61	43.82a	7.24p	8.44	0.8	0.07
8' 6	.769	1084	3.73	43.82a	7.24p	8.56	0.7	0.07
8' 9	.795	1121	3.86	43.83a	7.24p	8.69	0.7	0.07
9' 0	.822	1158	3.99	43.83a	7.24p	8.81	0.7	0.07
9' 3	.848	1195	4.11	43.84a	7.24p	8.94	0.7	0.06
9' 6	.874	1232	4.24	43.84a	7.24p	9.06	0.6	0.06
9' 9	.900	1269	4.37	43.85a	7.24p	9.19	0.6	0.06
10' 0	.926	1306	4.49	43.85a	7.24p	9.31	0.6	0.06
10' 3	.952	1342	4.62	43.86a	7.24p	9.44	0.6	0.06
10' 6	.978	1379	4.75	43.86a	7.24p	9.56	0.6	0.06
10' 9	1.000	1410	4.85	43.87a	7.24p	9.67		

Soundings in feet & inches.--Other distances in FEET.-----

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DAY TANK PORT

SCANDIES ROSE

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TANK CHARACTERISTICS

No Trim, No Heel

Tank: LUBEOIL.P, Contents: LUBE OIL at 0.924 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.001	1	0.00					
0' 6	.004	6	0.02	40.34a	6.49p	3.96	0.5	1.17
0' 9	.010	14	0.05	40.68a	6.59p	4.16	0.7	0.79
1' 0	.020	28	0.10	40.88a	6.78p	4.33	2.0	0.87
1' 3	.034	48	0.16	41.27a	7.04p	4.50	3.4	1.21
1' 6	.051	72	0.25	41.65a	7.06p	4.67	3.4	0.78
1' 9	.072	101	0.35	42.01a	7.03p	4.85	3.4	0.56
2' 0	.094	133	0.46	42.37a	6.96p	5.03	3.1	0.42
2' 3	.116	164	0.56	42.66a	6.93p	5.20	3.2	0.34
2' 6	.142	200	0.69	42.83a	7.09p	5.35	4.6	0.43
2' 9	.168	237	0.82	43.04a	7.17p	5.50	3.9	0.38
3' 0	.194	274	0.94	43.19a	7.20p	5.64	3.3	0.32
3' 3	.220	311	1.07	43.30a	7.21p	5.77	2.9	0.28
3' 6	.247	348	1.20	43.38a	7.21p	5.90	2.5	0.25
3' 9	.273	384	1.32	43.45a	7.22p	6.03	2.3	0.22
4' 0	.299	421	1.45	43.50a	7.22p	6.16	2.0	0.20
4' 3	.325	458	1.58	43.55a	7.22p	6.29	1.9	0.18
4' 6	.351	495	1.70	43.58a	7.23p	6.42	1.7	0.17
4' 9	.377	532	1.83	43.61a	7.23p	6.54	1.6	0.16
5' 0	.403	569	1.96	43.64a	7.23p	6.67	1.5	0.14
5' 3	.430	606	2.08	43.66a	7.23p	6.80	1.4	0.13
5' 6	.456	642	2.21	43.68a	7.23p	6.93	1.3	0.13
5' 9	.482	679	2.34	43.70a	7.23p	7.05	1.2	0.12
6' 0	.508	716	2.46	43.72a	7.23p	7.18	1.2	0.11
6' 3	.534	753	2.59	43.73a	7.24p	7.30	1.1	0.11
6' 6	.560	790	2.72	43.75a	7.24p	7.43	1.0	0.10
6' 9	.586	827	2.85	43.76a	7.24p	7.56	1.0	0.10
7' 0	.613	863	2.97	43.77a	7.24p	7.68	1.0	0.09
7' 3	.639	900	3.10	43.78a	7.24p	7.81	0.9	0.09
7' 6	.665	937	3.23	43.78a	7.24p	7.93	0.9	0.09
7' 9	.691	974	3.35	43.79a	7.24p	8.06	0.8	0.08
8' 0	.717	1011	3.48	43.80a	7.24p	8.18	0.8	0.08
8' 3	.743	1048	3.61	43.80a	7.24p	8.31	0.8	0.08
8' 6	.769	1084	3.73	43.81a	7.24p	8.44	0.8	0.07
8' 9	.795	1121	3.86	43.82a	7.24p	8.56	0.7	0.07
9' 0	.822	1158	3.99	43.82a	7.24p	8.69	0.7	0.07
9' 3	.848	1195	4.11	43.83a	7.24p	8.81	0.7	0.07
9' 6	.874	1232	4.24	43.84a	7.24p	8.94	0.7	0.06
9' 9	.900	1269	4.37	43.84a	7.24p	9.06	0.6	0.06
10' 0	.926	1306	4.49	43.85a	7.24p	9.19	0.6	0.06
10' 3	.952	1342	4.62	43.85a	7.24p	9.31	0.6	0.06
10' 6	.978	1379	4.75	43.86a	7.24p	9.44	0.6	0.06
10' 9	1.000	1410	4.85	43.86a	7.24p	9.56	0.6	0.06
				43.87a	7.24p	9.67		

Soundings in feet & inches.--Other distances in FEET.-----

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SCANDIES ROSE

SEWAGE TANK STARBOARD

TANK CHARACTERISTICS

No Trim, No Heel

Tank: SEWAGE.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 3	.000	1	0.00	52.40a	6.46s	6.75	0.7	1.12
0' 6	.002	8	0.03	52.81a	6.62s	6.96	1.3	2.26
0' 9	.006	21	0.08	52.98a	7.18s	7.13	2.5	4.64
1' 0	.013	49	0.19	53.33a	7.68s	7.32	3.4	6.75
1' 3	.026	96	0.37	53.74a	8.10s	7.52	4.2	8.42
1' 6	.045	166	0.63	54.18a	8.36s	7.72	6.3	8.43
1' 9	.072	264	1.01	54.64a	8.49s	7.92	5.3	8.05
2' 0	.097	359	1.37	54.79a	8.79s	8.08	5.2	6.05
2' 3	.125	461	1.76	54.94a	9.02s	8.23	5.0	4.95
2' 6	.156	574	2.19	55.09a	9.23s	8.39	4.8	4.37
2' 9	.189	696	2.66	55.24a	9.42s	8.54	4.5	4.14
3' 0	.225	828	3.16	55.38a	9.60s	8.69	4.0	3.89
3' 3	.261	962	3.67	55.50a	9.72s	8.83	3.5	3.39
3' 6	.298	1098	4.19	55.58a	9.79s	8.97	3.1	3.00
3' 9	.335	1234	4.71	55.66a	9.85s	9.10	2.8	2.70
4' 0	.372	1372	5.24	55.71a	9.89s	9.24	2.6	2.46
4' 3	.410	1510	5.77	55.77a	9.92s	9.37	2.4	2.26
4' 6	.448	1650	6.30	55.81a	9.95s	9.50	2.2	2.09
4' 9	.486	1790	6.84	55.85a	9.97s	9.64	2.0	1.95
5' 0	.524	1931	7.38	55.88a	9.99s	9.77	1.9	1.82
5' 3	.563	2074	7.92	55.92a	10.01s	9.90	1.8	1.72
5' 6	.602	2217	8.47	55.94a	10.02s	10.04	1.7	1.62
5' 9	.641	2362	9.02	55.97a	10.04s	10.17	1.6	1.54
6' 0	.680	2507	9.57	56.00a	10.05s	10.30	1.5	1.47
6' 3	.720	2654	10.13	56.02a	10.06s	10.44	1.4	1.40
6' 6	.760	2801	10.70	56.04a	10.07s	10.57	1.4	1.35
6' 9	.801	2949	11.26	56.06a	10.07s	10.70	1.3	1.29
7' 0	.841	3099	11.83	56.08a	10.08s	10.84	1.3	1.24
7' 3	.882	3249	12.41	56.10a	10.09s	10.97	1.2	1.20
7' 6	.923	3401	12.99	56.12a	10.09s	11.11	1.2	1.16
7' 9	.965	3554	13.57	56.14a	10.09s	11.24	1.1	1.12
8' 0	1.000	3684	14.07	56.16a	10.15s	11.36		

Soundings in feet & inches.--Other distances in FEET.-----
 SEWAGE.S Reference Point: Long.= 56.75a Trans.= 10.79s Vert.= 6.54
 (Zero Sounding is at the Reference Point.)

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SCANDIES ROSE

FRESH WATER TANK PORT

TANK CHARACTERISTICS

No Trim, No Heel

Tank: WATER.P, Contents: FRESH WATER at 1.000 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 6	.004	27	0.10	23.88a	12.25p	1.70	9.1	5.94
1' 0	.020	134	0.50	24.74a	12.71p	2.07	5.7	3.47
1' 6	.039	261	0.97	25.06a	13.07p	2.37	6.5	2.20
2' 0	.066	441	1.64	25.76a	13.40p	2.69	8.4	2.12
2' 6	.097	646	2.41	26.32a	13.49p	2.99	11.1	1.63
3' 0	.134	892	3.32	27.01a	13.64p	3.31	13.6	1.46
3' 6	.175	1165	4.34	27.59a	13.72p	3.61	11.2	1.16
4' 0	.216	1441	5.37	27.96a	13.76p	3.89	9.1	0.95
4' 6	.257	1719	6.40	28.21a	13.79p	4.17	7.6	0.81
5' 0	.299	1997	7.44	28.40a	13.81p	4.43	6.6	0.70
5' 6	.341	2277	8.48	28.54a	13.83p	4.70	5.8	0.62
6' 0	.383	2559	9.53	28.65a	13.84p	4.96	5.2	0.56
6' 6	.426	2841	10.59	28.74a	13.86p	5.22	4.7	0.51
7' 0	.468	3125	11.64	28.82a	13.87p	5.48	4.3	0.47
7' 6	.511	3410	12.71	28.88a	13.88p	5.74	3.9	0.44
8' 0	.554	3697	13.77	28.93a	13.89p	6.00	3.7	0.41
8' 6	.597	3985	14.85	28.98a	13.90p	6.26	3.4	0.38
9' 0	.640	4274	15.92	29.02a	13.91p	6.52	3.2	0.36
9' 6	.684	4565	17.01	29.05a	13.92p	6.78	3.0	0.34
10' 0	.727	4856	18.09	29.08a	13.92p	7.04	2.8	0.33
10' 6	.771	5150	19.18	29.11a	13.93p	7.30	2.7	0.31
11' 0	.815	5444	20.28	29.14a	13.94p	7.56	2.5	0.30
11' 6	.860	5740	21.38	29.16a	13.95p	7.81	2.4	0.29
12' 0	.904	6037	22.49	29.18a	13.96p	8.07	2.3	0.27
12' 6	.949	6335	23.60	29.20a	13.96p	8.33	2.2	0.26
13' 0	.994	6635	24.72	29.22a	13.97p	8.59	2.1	0.26
13' 6	1.000	6676	24.87	29.23a	13.97p	8.63		

Soundings in feet & inches.--Other distances in FEET.-----

WATER.P Reference Point: Long.= 30.00a Trans.= 14.00p Vert.= 1.33
(Zero Sounding is at the Reference Point.)

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SCANDIES ROSE

FRESH WATER TANK STARBOARD

TANK CHARACTERISTICS

No Trim, No Heel

Tank: WATER.S, Contents: FRESH WATER at 1.000 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 6	.004	27	0.10	23.88a	12.25s	1.70	9.1	5.94
1' 0	.020	134	0.50	24.74a	12.71s	2.07	5.7	3.47
1' 6	.039	261	0.97	25.06a	13.07s	2.37	6.5	2.20
2' 0	.066	441	1.64	25.76a	13.40s	2.69	8.4	2.12
2' 6	.097	646	2.41	26.32a	13.49s	2.99	11.1	1.63
3' 0	.134	892	3.32	27.01a	13.64s	3.31	13.6	1.46
3' 6	.175	1165	4.34	27.59a	13.72s	3.61	11.2	1.16
4' 0	.216	1441	5.37	27.96a	13.76s	3.89	9.1	0.95
4' 6	.257	1719	6.40	28.21a	13.79s	4.17	7.6	0.81
5' 0	.299	1997	7.44	28.40a	13.81s	4.43	6.6	0.70
5' 6	.341	2277	8.48	28.54a	13.83s	4.70	5.8	0.62
6' 0	.383	2559	9.53	28.65a	13.84s	4.96	5.2	0.56
6' 6	.426	2841	10.59	28.74a	13.86s	5.22	4.7	0.51
7' 0	.468	3125	11.64	28.82a	13.87s	5.48	4.3	0.47
7' 6	.511	3410	12.71	28.88a	13.88s	5.74	3.9	0.44
8' 0	.554	3697	13.77	28.93a	13.89s	6.00	3.7	0.41
8' 6	.597	3985	14.85	28.98a	13.90s	6.26	3.4	0.38
9' 0	.640	4274	15.92	29.02a	13.91s	6.52	3.2	0.36
9' 6	.684	4565	17.01	29.05a	13.92s	6.78	3.0	0.34
10' 0	.727	4856	18.09	29.08a	13.92s	7.04	2.8	0.33
10' 6	.771	5150	19.18	29.11a	13.93s	7.30	2.7	0.31
11' 0	.815	5444	20.28	29.14a	13.94s	7.56	2.5	0.30
11' 6	.860	5740	21.38	29.16a	13.95s	7.81	2.4	0.29
12' 0	.904	6037	22.49	29.18a	13.96s	8.07	2.3	0.27
12' 6	.949	6335	23.60	29.20a	13.96s	8.33	2.2	0.26
13' 0	.994	6635	24.72	29.22a	13.97s	8.59	2.1	0.26
13' 6	1.000	6676	24.87	29.23a	13.97s	8.63		

Soundings in feet & inches.--Other distances in FEET.-----

WATER.S Reference Point: Long.= 30.00a Trans.= 14.00s Vert.= 1.33

(Zero Sounding is at the Reference Point.)

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SCANDIES ROSE

DIRTY OIL TANK STARBOARD

TANK CHARACTERISTICS

No Trim, No Heel

Tank: DIRTYOIL.S, Contents: LUBE OIL at 0.924 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 6	.014	15	0.05	17.00a	12.37s	1.67	1.3	5.67
1' 0	.050	54	0.19	17.00a	13.29s	1.97	0.5	3.81
1' 6	.088	95	0.33	17.00a	13.49s	2.23	0.3	2.20
2' 0	.126	136	0.47	17.00a	13.58s	2.49	0.2	1.55
2' 6	.165	177	0.61	17.00a	13.63s	2.74	0.2	1.20
3' 0	.203	218	0.75	17.00a	13.66s	3.00	0.1	0.99
3' 6	.241	259	0.89	17.00a	13.68s	3.25	0.1	0.84
4' 0	.280	300	1.03	17.00a	13.70s	3.50	0.1	0.73
4' 6	.319	342	1.18	17.00a	13.71s	3.76	0.1	0.65
5' 0	.358	384	1.32	17.00a	13.73s	4.01	0.1	0.58
5' 6	.397	426	1.47	17.00a	13.74s	4.26	0.1	0.53
6' 0	.436	468	1.61	17.00a	13.75s	4.52	0.1	0.49
6' 6	.475	510	1.76	17.00a	13.76s	4.77	0.1	0.45
7' 0	.514	552	1.90	17.00a	13.77s	5.02	0.1	0.42
7' 6	.554	595	2.05	17.00a	13.77s	5.28	0.0	0.40
8' 0	.594	637	2.19	17.00a	13.78s	5.53	0.0	0.38
8' 6	.634	680	2.34	17.00a	13.79s	5.79	0.0	0.36
9' 0	.674	723	2.49	17.00a	13.80s	6.04	0.0	0.34
9' 6	.714	766	2.64	17.00a	13.80s	6.30	0.0	0.32
10' 0	.754	809	2.79	17.00a	13.81s	6.55	0.0	0.31
10' 6	.794	853	2.94	17.00a	13.82s	6.81	0.0	0.30
11' 0	.835	896	3.09	17.00a	13.83s	7.07	0.0	0.28
11' 6	.876	940	3.24	17.00a	13.83s	7.32	0.0	0.27
12' 0	.917	984	3.39	17.00a	13.84s	7.58	0.0	0.26
12' 6	.957	1028	3.54	17.00a	13.84s	7.84	0.0	0.26
13' 0	.999	1072	3.69	17.00a	13.85s	8.09	0.0	0.25
13' 6	1.000	1074	3.70	17.00a	13.85s	8.10		

Soundings in feet & inches.--Other distances in FEET.-----
 DIRTYOIL.S Reference Point: Long.= 17.00a Trans.= 14.00s Vert.= 1.33
 (Zero Sounding is at the Reference Point.)

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 DIRTY OIL TANK PORT

SCANDIES ROSE

TANK CHARACTERISTICS
 No Trim, No Heel

Tank: DIRTYOIL.P, Contents: LUBE OIL at 0.924 Specific Gravity

Snding	Load	Volume GALLONS	Weight LONG TONS	Center of Gravity			GML	GMT
				LCG	TCG	VCG		
0' 0	.000	0	0.00					
0' 6	.014	15	0.05	17.00a	12.37p	1.67	1.3	5.67
1' 0	.050	54	0.19	17.00a	13.29p	1.97	0.5	3.81
1' 6	.088	95	0.33	17.00a	13.49p	2.23	0.3	2.20
2' 0	.126	136	0.47	17.00a	13.58p	2.49	0.2	1.55
2' 6	.165	177	0.61	17.00a	13.63p	2.74	0.2	1.20
3' 0	.203	218	0.75	17.00a	13.66p	3.00	0.1	0.99
3' 6	.241	259	0.89	17.00a	13.68p	3.25	0.1	0.84
4' 0	.280	300	1.03	17.00a	13.70p	3.50	0.1	0.73
4' 6	.319	342	1.18	17.00a	13.71p	3.76	0.1	0.65
5' 0	.358	384	1.32	17.00a	13.73p	4.01	0.1	0.58
5' 6	.397	426	1.47	17.00a	13.74p	4.26	0.1	0.53
6' 0	.436	468	1.61	17.00a	13.75p	4.52	0.1	0.49
6' 6	.475	510	1.76	17.00a	13.76p	4.77	0.1	0.45
7' 0	.514	552	1.90	17.00a	13.77p	5.02	0.1	0.42
7' 6	.554	595	2.05	17.00a	13.77p	5.28	0.0	0.40
8' 0	.594	637	2.19	17.00a	13.78p	5.53	0.0	0.38
8' 6	.634	680	2.34	17.00a	13.79p	5.79	0.0	0.36
9' 0	.674	723	2.49	17.00a	13.80p	6.04	0.0	0.34
9' 6	.714	766	2.64	17.00a	13.80p	6.30	0.0	0.32
10' 0	.754	809	2.79	17.00a	13.81p	6.55	0.0	0.31
10' 6	.794	853	2.94	17.00a	13.82p	6.81	0.0	0.30
11' 0	.835	896	3.09	17.00a	13.83p	7.07	0.0	0.28
11' 6	.876	940	3.24	17.00a	13.83p	7.32	0.0	0.27
12' 0	.917	984	3.39	17.00a	13.84p	7.58	0.0	0.26
12' 6	.957	1028	3.54	17.00a	13.84p	7.84	0.0	0.26
13' 0	.999	1072	3.69	17.00a	13.85p	8.09	0.0	0.25
13' 6	1.000	1074	3.70	17.00a	13.85p	8.10		

Soundings in feet & inches.--Other distances in FEET.-----
 DIRTYOIL.P Reference Point: Long.= 17.00a Trans.= 14.00p Vert.= 1.33
 (Zero Sounding is at the Reference Point.)

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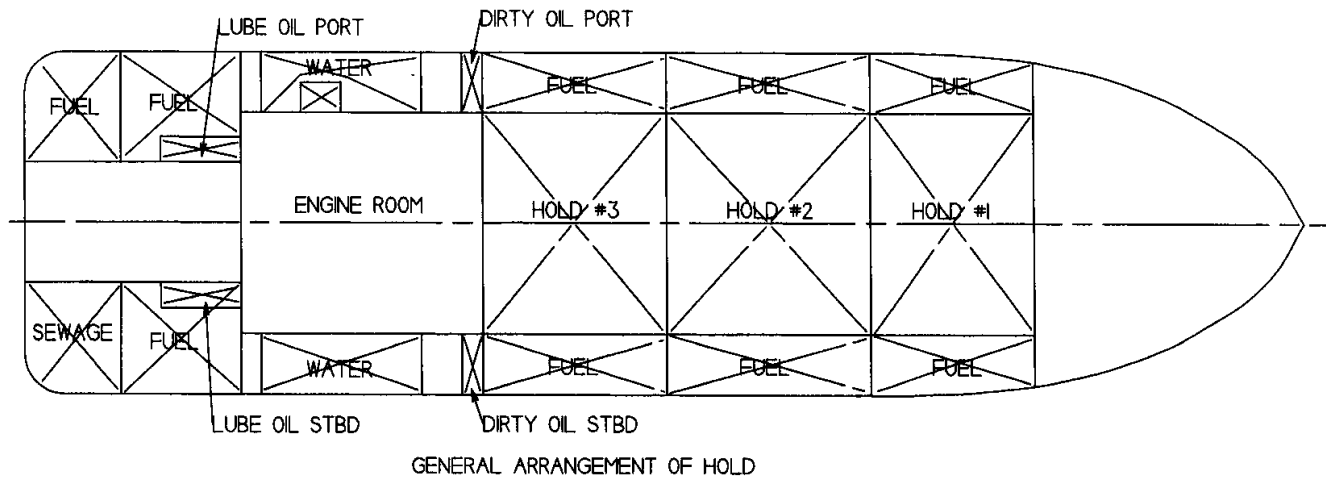
SCANDIES ROSE

HYDROSTATIC PROPERTIES
No Trim, No Heel, VCG = 0.00

LCF Draft	Displacement Weight (LT)	Buoyancy-Ctr.		Weight/ Inch	Moment/			
		LCB	VCB		LCF	Deg trim	KML	KMT
8.500	578.11	1.37a	5.20	8.28	4.82a	1738.24	172.3	19.08
8.750	603.08	1.51a	5.34	8.33	4.89a	1769.76	168.1	18.76
9.000	628.19	1.64a	5.48	8.38	4.96a	1802.13	164.4	18.49
9.250	653.46	1.77a	5.62	8.43	5.03a	1835.38	160.9	18.26
9.500	678.87	1.88a	5.76	8.48	5.06a	1866.42	157.5	18.05
10.000	729.99	2.09a	6.04	8.53	4.92a	1899.51	149.1	17.57
10.250	755.66	2.18a	6.18	8.55	4.86a	1915.72	145.2	17.37
10.500	781.28	2.27a	6.32	8.55	4.97a	1911.86	140.2	17.19
10.750	806.96	2.35a	6.46	8.58	4.92a	1927.17	136.8	17.04
11.000	832.70	2.43a	6.60	8.60	4.86a	1942.68	133.7	16.89
11.250	858.52	2.50a	6.73	8.62	4.81a	1958.42	130.7	16.77
11.500	884.40	2.57a	6.87	8.64	4.75a	1974.38	127.9	16.66
11.750	910.34	2.63a	7.01	8.67	4.69a	1990.55	125.3	16.56
12.000	936.36	2.68a	7.14	8.69	4.64a	2006.95	122.8	16.47
12.250	962.45	2.73a	7.28	8.71	4.58a	2023.57	120.5	16.40

Distances in FEET.-----Specific Gravity = 1.025.-----Moment in Ft-LT.
Draft is from Baseline.

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STABILITY

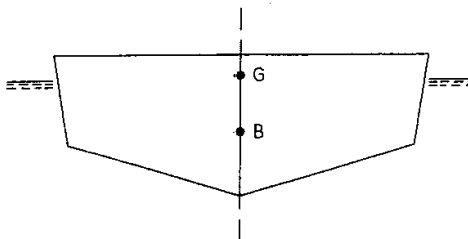


Figure 1
Boat at rest in calm water

B = Center of Bouyancy: this is the center of volume of the part of the hull that is under water.

G = Vertical center of gravity - the center of all weight in the boat.

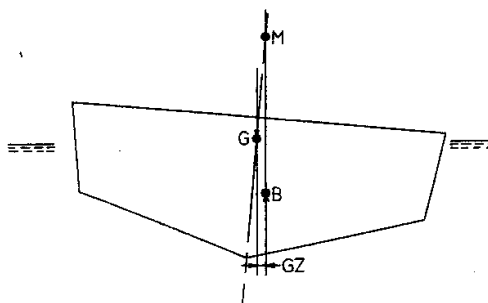


Figure 2
Boat rolling, but stable

APPENDIX A

When the boat heels over, the weight of the boat continues to exert a downward force through G. The center of buoyancy moves over to the side of the boat that is heeled down and the buoyancy of the hull exerts an upward force through B equal to the displacement of the boat. The force working down through G is exactly equal to the force working up through B. The point where the line of force through B crosses the centerline of the boat is called the metacenter (M). The distance from G to M is called the metacentric height or GM. In general, the greater the distance GM is the stiffer the boat will be. The distance between the lines of force through B and G is called the righting arm, usually designated GZ. As long as GM is greater than zero the two forces through G and B will try to rotate the hull back to an upright position. The boat is stable in this condition.

When the edge of the deck rolls under water the location of the center of buoyancy B starts moving back toward the original centerline as the boat heels over further. As soon as it moves far enough to get on the far side of the weight force working through, as in figure 3, the Gm drops to zero, the righting arm GZ becomes negative, and the boat will roll over until it becomes stable again upside down. The higher the center of gravity, G, is the sooner this will occur. Freeboard is important in that the deck edge will roll under sooner when freeboard is low. Ice formation or carrying a high, heavy deckload reduces stability by raising the center of gravity. Overloading reduces stability by decreasing freeboard.

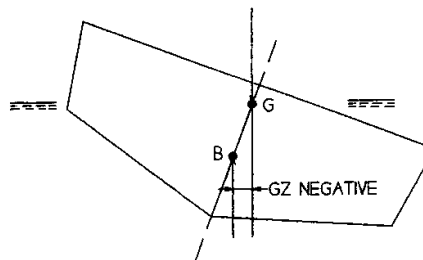


Figure 3
Boat is unstable

A partially filled (slack) tank, as in figure 4, permits water or fuel to slosh over to one side, reducing the effective GM. This effect is much more severe with a wide tank such as a fish hold than with a narrow one like a wing fuel tank. Flooded holds should be filled or emptied one at a time, in a sheltered location if possible. Never operate with flooded holds partially filled.

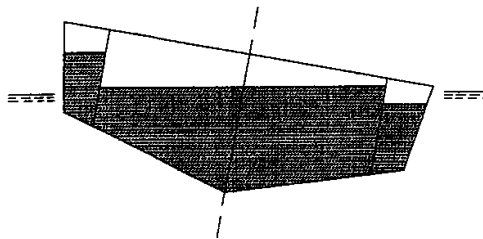


Figure 4
Boat with partially filled tanks

A boat running in a following sea loses stability when the crest of a wave passes through midships. This situation (see figures 5 and 6) is worst when the distance between wave crests is about equal to the length of the boat. This can occur in a sea that is only moderately rough. The boat may become unstable briefly as a wave crest passes along the hull, but ordinarily this situation will last such a short time that the boat will regain positive stability before anything happens. The worst cases is when the boat is running at about the same speed as the wave train, such that a crest may stay near midships for a significant period of time.

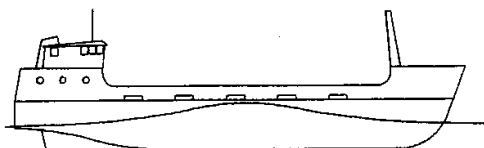


Figure 5

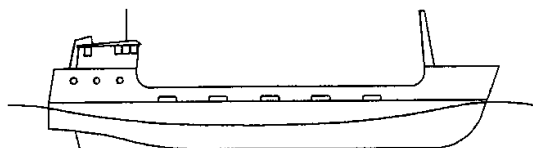


Figure 6

Wind heel can produce a dangerous condition, as in turning broadside to a strong wind in the trough of a rough sea.

Operation at extreme trim angles should be avoided. Excessive trim by the stern reduces minimum freeboard, making the boat unstable at a smaller heel angle than would otherwise be the case. Excessive trim by the bow tends to make the boat hard to steer and prone to broach when in a following sea.

Any cargo such as crab pots should be secured against shifting to one side. Any list should be minimized in loading or by burning fuel off the low side.