

CHAPTER 32

PUMPS, TANKS AND PIPING SYSTEMS
(PLATES VI-A & VI-B)

32-1 PUMPS:-

The following is a list of the pumps furnished each vessel; it covers only the pumps not attached to the engines, hydraulic couplings, distilling plant and boiler.

- (a) Two Fire and Flushing pumps, motor driven, centrifugal, delivering 200 g.p.m. against a discharge pressure of 100 p.s.i.
Location:- Engine room, compartment B-1, in-board, port and starboard side, between frames 19 and 21.
- (b) One Ballast pump, motor driven, centrifugal, rated at 1500 g.p.m. of salt water against a discharge pressure of 25 p.s.i.
Location:- Engine room, compartment B-1, port side, between frames 19 and 20.
- (c) Two Fresh Water pumps with vacuum priming, motor driven, centrifugal, rated at 25 g.p.m. against a discharge pressure of 40 p.s.i.
Location:- Engine room, compartment B-1, port side, between frames 24 and 25.
- (d) Two Portable Submersible pumps, motor driven, centrifugal, rated at 200 g.p.m. against a discharge pressure of 10 p.s.i.
Location:- One in General Stores, compartment A-211-5AC, forward side of Bhd. 27 and one in Galley Stores, compartment A-104EL on aft side of Bhd. 17.
- (e) Two Portable Handybilly pumps, gasoline engine driven, rotary, rated at 60 g.p.m. against a discharge pressure of 100 p.s.i.
Location:-
One is located on the Superstructure Deck aft of frame 18, port side.

One is located on the Main Deck Aft of frame 31, starboard side.

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32-1 PUMPS:-

Twenty liquid foam charges are stowed in the passage C-101AT; 10 for each pump. Handybilly nozzles and pick-up tubes for both pumps are stowed near the handybilly at frame 31, Main Deck.

Two ten-foot lengths of 2" hose and one ten-foot length of 1-1/2" hose is stowed near each pump.

- (f) One Drain Booster pump, motor driven, centrifugal, rated at 5 g.p.m. against a discharge pressure of 25 p.s.i.

Location:- In shaft alley aft of frame 24, starboard side.

- (g) Three Bilge Drainage eductors, actuated by water from fire main, rated at 150 g.p.m. at 100 p.s.i. with a back pressure of 15 p.s.i.

Location:-

(1) - Void space A-203V, Hold, fr. 7-8 port side.

(2) - Engine room B-1, Hold, fr. 23, port and starboard sides.

- (h) One Diesel Fuel Oil Transfer pump, motor driven, rotary, rated at 50 g.p.m. against a discharge pressure of 40 p.s.i.

Location:- Engine room, compartment B-1, starboard side, between frames 19 and 20.

- (i) One Fresh Water pump, priming pump, horizontal vacuum, motor driven, rated at 6 g.p.m. against a discharge pressure of 14.7 p.s.i.

Location:- Engine room, compartment B-1, port side, between frames 24 and 25.

See PLATES VI-A & VI-B for further details on pump locations.

32-2 TANKS:-

The TABLES following give the capacities and locations of the various tanks as indicated.

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32-2

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C-9

C-9

COM

B-9

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A-90

A-90

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A-90

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TABLE 32-1

32-2 (a) FRESH WATER TANKS

FRESH WATER TANKS - FULL CAPACITY			
COMPT.	LOCATION	GALLONS	TONS F.W. AT 269.3 GALS. = 36 CU. FT.
C-901W	Fr. 25-26Ø	2601	9.66
C-902W	Fr. 26-27Ø	2178	8.09
	TOTAL	4779	17.75

TABLE 32-2

(b) RESERVE FEED WATER TANKS

RESERVE FEED WATER TANKS - FULL CAPACITY			
COMPT.	LOCATION	GALLONS	TONS F.W. AT 269.3 GALS. = 36 CU. FT.
B-907W	Fr. 24-25S	626	2.32

TABLE 32-3

(c) DIESEL OIL TANKS

DIESEL OIL TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS AT 314 GALS. = 41.98 CU. FT.
A-902F	Fr. 11-14Ø	4751	15.13
A-903F	Fr. 11-14S	4530	14.43
A-904F	Fr. 11-14P	4530	14.43
A-905F	Fr. 14-17Ø	5014	15.97

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TABLE 32-3 (cont'd.)

32-2 (c) DIESEL OIL TANKS

DIESEL OIL TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS AT 314 GALS. = 41.98 CU. FT.
A-906F	Fr. 14-17P	5105	16.26
A-907F	Fr. 14-17S	5105	16.26
A-908F	Fr. 17-18Ø	1727	5.50
A-909F	Fr. 17-19S	3408	10.85
A-910F	Fr. 17-19P	3408	10.85
C-203F	Fr. 27-29Ø	9135	29.09
	TOTAL	46713	148.77

TABLE 32-4

(a) DIESEL OIL SETTLING TANKS

DIESEL OIL SETTLING TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS AT 314 GALS. = 41.98 CU. FT.
A-212F	Fr. 18-19Ø	2036	6.48
A-214F	Fr. 18-19P	2036	6.48
	TOTAL	4072	12.96

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TABLE 32-5

32-2 (e) CLEAN DIESEL OIL TANKS

CLEAN DIESEL OIL TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS AT 314 GALS. = 41.98 CU. FT.
B-906F	Fr. 24-25P	595	1.90

TABLE 32-6

(f) DIESEL OIL SERVICE TANKS

DIESEL OIL SERVICE TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS AT 314 GALS. = 41.98 CU. FT.
B-1-1	Fr. 22-23S	450	1.43
B-1-2	Fr. 22-23P	450	1.43
Diesel Gen. D.O. Service Tank	Fr. 21-22P	100	.32
Boiler F.O. Ser- vice Tank	Fr. 24-25S	75	.24
	TOTAL	1075	3.42

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TABLE 32-7

32-2 (g) BALLAST TANKS

BALLAST TANKS - FULL CAPACITY			
COMPT.	LOCATION	GALLONS	TONS S.W. AT 261.8 GALS. = 35 CU. FT.
A-205W	Fr. 9-11Ø	12356	47.20
A-206W	Fr. 9-11P	11937	45.60
A-207W	Fr. 9-11S	11937	45.60
A-902F	Fr. 11-14Ø	5001	19.10
A-903F	Fr. 11-14S	4768	18.21
A-904F	Fr. 11-14P	4768	18.21
A-905F	Fr. 14-17Ø	5278	20.16
A-906F	Fr. 14-17P	5374	20.53
A-907F	Fr. 14-17S	5374	20.53
	TOTAL	66793	255.14

TABLE 32-8

(h) LUBRICATING OIL TANKS

LUBRICATING OIL TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS AT 290.9 GALS. = 38.9 CU. FT.
A-213LUB	Fr. 18-19S	2036	6.99
A-215LUB	Fr. 18-19S	721	2.48
	TOTAL	2757	9.47

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TABLE 32-9A

32-2 (i) LUBRICATING OIL SUMP TANKS

LUBRICATING OIL SUMP TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS L.O. AT 290.9 GALS.= 38.9 CU. FT.
B-902LUB	Fr. 21-23P	770	2.64 *
B-903LUB	Fr. 21-23S	770	2.64 *
	TOTAL	1540	5.28

* Used for Fairbanks-Morse engines only.

TABLE 32-9B

LUBRICATING OIL SUMP TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS L.O. AT 290.9 GALS.= 38.9 CU. FT.
B-902LUB	Fr. 23-24P	323	1.11 *
B-903LUB	Fr. 23-24S	323	1.11 *
	TOTAL	646	2.22

* Used for General Motors engines only.

TABLE 32-10

(j) LUBRICATING OIL HYDR. COUPLING SUMP TANKS

LUBRICATING OIL HYDR. COUPLING SUMP TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS L.O. AT 290.9 GALS.= 38.9 CU. FT.
B-904LUB	Fr. 23-24P	210	0.72 *

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TABLE 32-10 (cont'd.)

32-2 (j) LUBRICATING OIL HYDR. COUPLING SUMP TANKS

LUBRICATING OIL HYD. COUPLING SUMP TANKS - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS L.O. AT 290.9 GALS.= 38.9 CU. FT.
B-905LUB	Fr. 23-24S	210	0.72 *
	TOTAL	420	1.44

* Used for Fairbanks-Morse engines only.

TABLE 32-11

(k) SLUDGE TANK

SLUDGE TANK - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS L.O. AT 290.9 GALS.= 38.9 CU. FT.
B-901B	Fr. 22-23S	33.5	.12

TABLE 32-12

(l) IMPURE OIL LEAKAGE TANK

IMPURE OIL LEAKAGE TANK - 95% CAPACITY			
COMPT.	LOCATION	GALLONS	TONS L.O. AT 290.9 GALS.= 38.9 CU. FT.
B-908F	Fr. 22-23P	33.5	.12 *

* Used for Fairbanks-Morse engines only.

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13. 1

32-3

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TABLE 32-13

32-2 (m) TANK CAPACITIES

TANK CAPACITIES - RECAPITULATION		
TITLE	GALLONS	TONS
1. Fresh Water	4779	17.75 at full capacity
2. Reserve Feed Water	626	2.32 " " "
3. Diesel Oil	46713	148.77 at 95% capacity
4. Diesel Oil Settling	4072	12.96 " " "
5. Clean Diesel Oil	595	1.90 " " "
6. Diesel Oil Service	1075	3.42 " " "
7. Ballast	66793	255.14 at full capacity
8. Lubricating Oil	2757	9.45 at 95% capacity
9. Lub. Oil Sump-A	1540	5.28 " " "
10. Lub. Oil Sump-B	646	2.22 " " "
11. Lub.Oil Hydr.Coup.Sump	420	1.44 " " "
12. Sludge Tank	33.5	.12 " " "
13. Impure Oil Leakage Tank	33.5	.12 " " "

32-3 PIPING SYSTEMS:-

A list of the various PIPING SYSTEMS follows:

- (a) Diesel Oil System - - - - -Chapter 33
- (b) Fire, Sprinkling, and Drainage System -Chapter 34
- (c) Flushing System - - - - -Chapter 35
- (d) Ballast System - - - - -Chapter 36
- (e) Fresh Water System - - - - -Chapter 37
- (f) Compressed Air System - - - - -Chapter 38

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