REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-MP, 4300Goodfellow Blvd., St. Louis, MO 63120-1798. You may so submit your recommended changes by E-mil directly to <mpmr%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electron 2028 may be found at the back of this manual immediately receding the hard copy 2028.

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*This manual supersedes TM 55-500, dated 18 MAY 1992 including all changes.
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</table>
1-1. Purpose and Scope.
   a. This manual is published to provide a ready reference to those concerned with U.S. Army marine transportation activities. It gives the principal characteristics, capabilities, limitations, designs, classification, and primary functions of harbor craft, landing craft and amphibians.

   b. This text is not intended to take the place of manuals covering specific items of equipment. All designs contained in the inventory are not listed for reasons of quantity, obsolescence, and usage.

   c. The material in this manual is applicable to nuclear and non-nuclear warfare.

   d. Uses of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to the Commander, U.S. Army Aviation and Troop Command, 4300 Goodfellow Blvd., ATTN: AMSAT-I-WMP, St. Louis, MO 63120-1798.

1-2. Classification of Army Watercraft Equipment.

   All Army watercraft are divided into classes based upon size and use. U.S. Army Regulations 56-9 sets forth the policy and responsibilities concerning the licensing and certification of Army military personnel for these watercraft.

   a. Class A vessels are self-propelled and 65 feet or over in length.

   b. Class B vessels are self-propelled and under 65 feet in length.

   c. Class C vessels are all floating equipment which is not self-propelled, such as cranes, dry, and liquid cargo barges. This class is divided into two parts: Class C-1 non propelled watercraft having berthing facilities and/or machinery on board: Class C-2 non propelled watercraft having neither berthing facilities nor machinery.

1-3. Limitations.

   The information contained in this text on Army Watercraft equipment is current at the time of publication. Because of policies and techniques under study, design modifications are being made periodically and proposed functions of the craft may be altered. Where precise data are required, the "as-built" drawings, modifications, technical manuals and/or current-experience operating data pertaining to the particular item of equipment should be obtained.
CHAPTER 2
U. S. ARMY WATERCRAFT EQUIPMENT

Section I. GENERAL

2-1. Mission.

The mission of harbor craft, landing craft and amphibious units is to provide:

a. Water transport for the movement of personnel and cargo between ship and shore and on inland waterways.

b. Watercraft and other floating equipment to support terminal operations within a port or beach complex.

c. Lighterage for movement of cargo and personnel from ships lying off-shore to transfer-segregation areas beyond the beach lines in amphibious and logistics over the shore (LOTS) operations.

2-2. Description of Equipment.


(1) Passenger and cargo, utility, and picket boats. Passengers and cargo boats and utility boats move limited amounts of cargo or small groups of personnel between ship and shore, or between two shore points. They are self-propelled and are capable of moderate speeds. Picket boats are used for command and inspection and for routine patrol missions in harbors and adjacent waters. They are capable of fairly high speeds and can make short trips to sea.

(2) Harbor tugs. Harbor tugs berth and un-berth large ships and move barges in harbors and adjacent waters. The predominant characteristics of harbor tugs are maneuverability, power, ample stability, and good cruising range. Limited Fire-fighting equipment is provided on all harbor tugs.

(3) Cargo vessels. Cargo vessels transport dry and liquid cargo. They have on-board machinery for propulsion of the vessel, and are equipped with gear suitable for loading and discharging the cargo they are designed to carry:

(4) Non-propelled barges and conversion kits. Non-propelled barges are of the dry or liquid cargo type. Liquid cargo barges have installed machinery for their purpose.: Dry cargo barges may be of hold, deck, or enclosed- deck types and may be used as nesting barges, work boats; or cargo lighters. Conversion kits for certain deck barge designs convert these vessels to covered barges for the protection of cargo.

(5) Floating cranes. Floating cranes are non- propelled vessels used in the loading and unloading of heavy lifts usually beyond the capacity of the ship’s cargo handling gear. Also, floating cranes may be used in salvage, dredging, and pile-driving operations.

(6) Floating repair shops. Floating repair shops are non-propelled vessels equipped and used for limited depot maintenance and repair of floating craft and amphibians.

(7) Self-elevating barge piers. Self- elevating barges contain jacks, caissons, and the machinery for elevating themselves above water to form working platforms. Depending upon hydrographic conditions at the erection site, barges may be employed as single piers butted against a beach or as finger, marginal, T-head, or L-head piers.

b. Landing Craft. Landing craft are designed to beach, unload or load on the beach, and retract. Loading or discharging landing craft At de beach is expedited by the use of bow ramps. Landing craft are used in tactical and logistical operations, and for lighterage or utility work within harbors.

2-1
c. Amphibious Lighters.

(1) Amphibious lighters are used to:

(a) Transport troops, equipment, and supplies from ships offshore to inland dumps and transfer points in tactical and logistical operations.

(b) Supply outposts located on nearby islands, or points inaccessible by land from the principal supply points.

(c) Evacuate casualties and prisoners sites directly to ships.

(d) Transfer material from inland sites directly to ships.

(2) Amphibious lighters can traverse soft sand or rough terrain and can, operate on hard smooth surfaces at relatively high speeds. The larger models have ramps similar to landing craft to expedite loading or discharge.

Section II. KEY TO REFERENCE DATA

2-3. Design Number and Specifications.

Adopted types of U.S. Army watercraft equipment have design number. More detailed information than that included in this text is contained in individual specifications.

2-4 Designation Prefixes.

Each item of harbor craft, landing craft, and amphibious equipment in the U.S. Army is identified by a hull number with a prefix consisting of one or more letters. The following is a list of prefixes with a brief description of the equipment they identify.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>Barge, dry cargo, non-propelled.</td>
</tr>
<tr>
<td>BCDK</td>
<td>Conversion kit, barge, deck enclosure.</td>
</tr>
<tr>
<td>BD</td>
<td>Crane, floating, 100 ton</td>
</tr>
<tr>
<td>BG</td>
<td>Barge, liquid cargo, non-propelled, all sizes.</td>
</tr>
<tr>
<td>BK</td>
<td>Barge, dry cargo, non-propelled, knockdown.</td>
</tr>
<tr>
<td>BPL</td>
<td>Pier, barge type, self-elevating.</td>
</tr>
<tr>
<td>FMS</td>
<td>Repair shop, floating, marine repair, non-propelled, all sizes.</td>
</tr>
<tr>
<td>HLS</td>
<td>Heavy Lift Ship</td>
</tr>
<tr>
<td>J</td>
<td>Boat, work and inspection, small, 50 feet and under.</td>
</tr>
<tr>
<td>LARC</td>
<td>Lighter, amphibious, resupply, cargo.</td>
</tr>
<tr>
<td>LCM</td>
<td>Landing craft, mechanized.</td>
</tr>
<tr>
<td>LCU</td>
<td>Landing craft, utility.</td>
</tr>
<tr>
<td>LSV</td>
<td>Logistic support vessel.</td>
</tr>
<tr>
<td>LT</td>
<td>Tug, large, 100 feet and over.</td>
</tr>
<tr>
<td>Q</td>
<td>Boat, work and inspection, large, over 50 feet.</td>
</tr>
<tr>
<td>ST</td>
<td>Tug, small, under 100 feet</td>
</tr>
<tr>
<td>T</td>
<td>Freight and supply vessel, small, under 100 feet</td>
</tr>
<tr>
<td>BEB</td>
<td>Boat, Bridge Erection</td>
</tr>
<tr>
<td>SLWT</td>
<td>Side Loadable Warping Tug</td>
</tr>
<tr>
<td>ROWPU</td>
<td>Reverse Osmosis Water Purification Unit</td>
</tr>
<tr>
<td>MCS</td>
<td>Modular Causeway System</td>
</tr>
<tr>
<td>RO/RO</td>
<td>Rob-On / Roll-Off Discharge Facility</td>
</tr>
<tr>
<td>FC</td>
<td>Floating Causeway</td>
</tr>
<tr>
<td>CF</td>
<td>Causeway Ferry</td>
</tr>
</tbody>
</table>
2-5. Description of Terms.

a. Displacement Ton. A unit of weight of sea water approximately equal to a long-ton, used in computing the displacement of watercraft, and equal to 35 cubic feet.

b. Displacement Tonnage, Light. The weight of a ship in long tons excluding cargo, passengers, fuel, water, stores, dunnage, and other items necessary for use on a voyage.

c. Displacement Tonnage, Loaded. The weight of a watercraft in long ton, including cargo, passengers, fuel, water, stores, dunnage, and other items necessary for use on a voyage. It may also be defined as the total weight of the water displaced by the watercraft when in the above condition.

d. Deadweight Tonnage. The carrying capacity of a watercraft in long tons. It represents the difference between displacement tonnage, light, and the maximum displacement tonnage, loaded, Slowed by law.

e. Gross Ton. A unit of internal capacity used for ascertaining the legal or registered tonnage of watercraft; 100 cubic feet (2.8317 cubic meters).

f. Gross Tonnage. The entire internal cubic capacity of a watercraft expressed in gross tons, except certain spaces which are exempt, such as (1) peak and other tanks for water ballast, and (2) space above the upper-most continuous deck, such as open forecastle, bridge, and poop, certain light and air spaces, domes of skylights, condensers, anchor gear, steering gear, wheelhouse, galley, and passenger cabins.

g. Measurement Ton. A unit of volume for cargo computed at 40 cubic feet. Also called a freight ton, stevedore ton, or ship ton.

h. Net Tonnage. The tonnage most frequently used for the calculation of tonnage taxes and the assessment of charges for wharfage and other port dues. Net tonnage is the gross tonnage after deduction for space occupied by crew, machinery, fuel, and navigation of the watercraft. Also called net register tonnage.

2-6. Computation Formulas.

a. Fuel Consumption. The following equation is used in this text for computing the approximate hourly fuel consumption when other data is not available: 0.41 pounds of diesel fuel (pounds consumed per brake horsepower per hour) is multiplied by the total rated horsepower of the watercraft propulsion engine(s) plus the rated horsepower of one main generator engine. This figure is divided by 7.2 pounds (weight of 1 gallon of diesel fuel). Approximate hourly fuel consumption

\[
gal = \frac{0.41 \text{ lb} \times \text{rated hp}}{7.2 \text{ lb}}.
\]

b. Running Time. The following equation is used in this text for computing the approximate hours of running time: fuel tank capacity 90 percent full) divided by fuel consumption per hour.

\[
\text{Running time (hr)} = \frac{0.90 \times \text{fuel tank capacity (gal)}}{\text{fuel consumption (gal per hr)}}
\]

c. Cruising Range. The following equation is used in this text for computing cruising range: running time multiplied by the rated speed. Cruising range (nautical miles) = running time (hr) X speed (knots). Cruising range (statute miles) = running time (hr X speed (statute miles).

d. Cylindrical Tank Computations. The contents of a vertical or horizontal tank with plane ends may be determined by the following formulas where "D" is the diameter and "L" is the length in inches:

\[
C = \pi \frac{D^2L}{4} = 0.0034 \frac{D^2L}{231} \text{ gallons per inch}
\]

\[
C = \pi \frac{D^2L}{4} = 0.0004545 \frac{D^2L}{1728} \text{ cubic feet per in.}
\]

In computing the capacity of a tank with dished (convex) heads add 2/3 of the depth measurement of each head to the straight side length to obtain an approximate equivalent length of a tank with plane ends. The table below is used for determining the gallons or cubic feet in increments of inches.
<table>
<thead>
<tr>
<th>Percent of depth</th>
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SECTION I. PROPELLING UNIT
PURPOSE: To propel barges and boats.
TRANSPORTABILITY: Can be shipped via modes of transportation.

ADMINISTRATION INFORMATION

DESIGNATION-
NSN - 2010-00-278-0793
ULN - P78995
COST - $132,132 (June 1993)

PRINCIPAL CHARACTERISTICS

OPERATION DIMENSIONS AND WEIGHT
Overall length - 211 in.
Overall width - 64 in.
Overall height - 84 in.
Weight - 15750 lb
Depth - 128 in.

SHIPPING DIMENSIONS:
Chassis:
Overall length - 168 5/8 in.
Overall width - 64 in.
Overall height - (without wind dodger) 76 1/2 in.
Outboard:
Overall length - 152 in.
Overall width - 53 in.
Overall height - 42 in.
Weight - (total) 15,750 lb

Propelling Unit:
Model - Harbormaster OAC (TC)

Capacities:
Fuel tank, engine - 155 gal.
Average operating time for fuel tank - 20 hours
Crankcase, engine - 31qt
Reverse gear - 3.75 qt
Thruster assembly - 64qt

Engine:
Type - Diesel
Number of cylinders - 6
Crankshaft rotation (looking at aft end of engine forward) - Counterclockwise

Power Takeoff Assembly:
Model number - PTA-3811

3-2
Hydraulic Marine Gear:
  Oil Strainer
    Type - Re-usable element
  Starter:
    Volts - 24
  Generator:
    Volts - 24
  Generator Regulator:
    Volts - 24
    Amps - 20
    Ground- Positive
  Oil Filter:
    Type - S2
    Quantity - 2

Batteries:
  Quantity - 4
  Voltage per battery - 6 volts
  Length- 16 1/4 in.
  Width - 7 1/8 in.
  Height - 7 1/4 in.

Fuel tank - 119 gal.
Hydraulic tank - 92 qt
Crankcase - 39 qt
Reverse gear housing - 8 qt
Swing joint - 160 qt
Propelling Unit, Design 9002
PROPELLING UNIT, OUTBOARD, DESIGN NAV-165

PURPOSE: To propel barges and boats.
TRANSPORTABILITY Can be shipped via all modes of transportation.

ADMINISTRATION INFORMATION

DESIGNATION -
NSN - 2010-00-410-4442
LIN - P78995
COST - $132,132 (June 1993)

TYPE CLASSIFICATION
SPECIFICATION NO.

PRINCIPAL CHARACTERISTICS

OPERATION DIMENSIONS AND WEIGHT
Overall length - 203 in.
Overall width - 63 in.
Overall height (less thruster assembly) - 71 5/8 in.
Weight -
Depth adjustment - 30 in.

Propelling Unit:
Nomenclature - Propelling Unit, Outboard Diesel, 165 hp
Model - NAV-165

Reverse Gear
Model - 5HD-200
Part number - 681111-5
Ratio: D to D

Thruster:
Model - SRP 154
Weight - 2600 lb
Dimensions - 143 - 1/4 in. length
Torque - 1050 ft.

Propeller:
Pitch - 23 degrees
Number of blades - 3
Diameter - 37 in.
Rotation - Right hand
Weight - 150 lb
Outboard Propelling Unit, Design NAV-165
PROPELLING UNIT, OUTBOARD, DESIGN (Thrustmaster)

PURPOSE: To propel barges and boats.
TRANSPORTABILITY: Can be shipped via all modes of transportation.

ADMINISTRATION INFORMATION

DESIGNATION -
NSN - 2010-01-251-2227
LIN - P78995
COST - $76,500 (June 1993)

TYPE CLASSIFICATION
SPECIFICATION NO.

PRINCIPAL CHARACTERISTICS

OPERATION DIMENSIONS AND WEIGHT
- Overall length - 16 ft. 2 in. (m)
- Overall width - 5 ft. 9 in. (m)
- Overall height - 14 ft. 3 in. (m)
- Weight - 11,700 lbs. (kg)
- Depth adjustment - 30 in.

Propelling Unit:
- Nomenclature - Propelling Unit Outboard Diesel, 165 hp
- Model - Thrustmaster

Hydraulic System:
- Maximum propulsion pressure - 4000 psi
- Maximum charge pressure - 200 psi
- Maximum steering pressure - 2000 psi
- Maximum suction filter vacuum - 5 in. of mercury
- Maximum discharge filter pressure - 15 psi

Propeller
- Pitch 32 degrees
- Number of blades - 4
- Diameter - 48 m.

Engine:
- Model number - 3208 DIT
- Type - diesel
- Number of cylinders - 8
- Crankshaft rotation - clockwise

Capacities:
- Fuel tank, engine - 150 gal.
- Crankcase, engine - 16 qts.
- Coolant - 58 qts.
- Thruster hydraulic system - 55 gal.
Propelling Unit, Outboard, Design (Thrustmaster)
Section II. HARBOR CRAFT
PURPOSE: To transport limited quantities of liquid or light, dry cargo out harbors and other inland waters. Secondary functions include use as a work barge or a small boat float.

TRANSPORTABILITY Can be sectionalized for shipment by rail marine transportation.

ADMINISTRATION INFORMATION

DESIGNATION - BK
NSN- 1930-00-302-3910
LIN - B31334
COST - $6,995 (June 1993)
TYPE CLASSIFICATION - STD-B
SPECIFICATION NO. - MIL-B-10775

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:

Construction - This barge is of welded steel construction and consists of two coupled longitudinal sections giving the following dimensions:
- Length, overall: 45 ft. 9 in. (139 meters)
- Beam, molded: 18 ft. (5.5 m)
- Depth, molded: 3 ft. (92 cm)

Displacement:
- Light: 13 long tons (13.2 t.)
- Loaded: 33 long tons (33.5 t.)

Draft:
- Light:
  - Forward: 8 in. (20.3 cm)
  - Mean: 8 in. (20.3 cm)
  - Aft: 8 in. (20.3 cm)

- Loaded:
  - Forward: 8 in. (20.3 cm)
  - Mean: 1 ft. 8 in. (50.8 cm)
  - Aft: 1 ft. 8 in. (50.8 cm)

Freeboard, mean:
- Light: 2 ft. 4 in. (71.1 cm)
- Loaded: 1 ft. 4 in. (40.6 cm)

Capacity:
- Deck: 20 long tons (20.32 t)
- Liquid: 225 barrels (35772L)
Barge, Deck or Liquid Cargo, Non-propelled, Knockdown, Design 218E

3-11
PURPOSE: To transport wheeled and tracked vehicles and general cargo in harbors and in and waters.
TRANSPORTABILITY: Can be towed to overseas destination.

ADMINISTRATION INFORMATION

DESIGNATION - BOC
NSN - 1930-00-375-2962
LIN - B30923
COST - $77,800 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-B-10527

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel. This barge is equipped with two skegs aft, making it suitable for towing with a minimum of yawing.
  Length, overall - 142 t. (43.3 meters)
  Beam, molded - 58 ft. (17.6 m)
  Depth, molded - 12 ft. (3.6 m)
Displacement:
  Light - 1132 long tons (1150 t)
  Loaded - 760 long tons (721 t)
Draft:
  Light:
    Forward - 2 t. 4 in. (71.1 cm)
    Mean - 2 ft. 4 in. (71.1 cm)
    Aft - 2 ft 4 in. (71.1 cm)
  Loaded:
    Forward - 8 ft (2.4 m)
    Mean - 8 ft. (2.4 m)
    Aft - 8 ft. (2.4 m)
Freeboard, mean:
  Light - 8 ft.2 in(2.4 m)
  Loaded - 2 ft. 6 in (76.2 cm)
Capacity:
  Cargo deck - 585 long tons (594.4 t)
Anchors:
  Number - 2
  Type - 300 (136.2 kg) "Danforth"
Anchor Cables:
  Number - 2
  Type - 50 fathoms (9L1.44 m); 1 in. (25.4 mm) steel
Barge, Deck Cargo, Non-propelled, Ocean Towing, 585 Tons, Design 231A
BARGE, DECK OR LIQUID CARGO, NON-PROPELLED
DESIGN 231B

PURPOSE: To transport liquid general cargo or wheeled and tracked vehicles in harbors and inland waterways.
TRANSPORTABILITY: Can be towed to overseas destination.

ADMINISTRATION INFORMATION

DESIGNATION - BG
NSN - 1930-00-375-2972
LIN - B31197
COST - $335,580 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MILB-10122

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel. This barge is equipped with two skegs aft, thereby improving its towing capabilities by the reduction of yawing. Barge designs 231-A and 231-B have similar hull dimensions.
- Length, overall - 120 ft (36.6 meters)
- Beam, molded - 33 ft (10 m)
- Depth, molded - 10 ft 6 in. (3.2 m)
Displacement:
- Light - 185 long tons (188 t)
- Loaded - 763 long tons (775.2 t)
Draft:
- Light:
  - Forward - 2 ft 3 in. (68.5 cm)
  - Mean - 2 ft 6 in. (76.2 cm)
  - Aft - 2 ft 9 in. (83.8 cm)
- Loaded:
  - Forward - 7 ft 6 in. (22 m)
  - Mean - 8 ft 24 m)
  - Aft - 8 ft 6 in. (25 m)
Freeboard, mean:
- Light - 8 ft 2 in. (2.4 m)
- Loaded - 2 ft 6 in. (76.2 cm)
Capacity, cargo:
- Deck - 578 long tons (587.2 t)
- Liquid - 4,160 barrels (rated)
  - Cargo tank No. 1 Stbd - 28,233 gals. (106,861.9 L)
  - Cargo tank No. 2 Port - 28,233 gals. (106,861.9 L)
  - Cargo tank No. 3 Stbd - 37,742 gals. (142,853.5 L)
  - Cargo tank No. 4 Port - 37,742 gals. (142,853.5 L)
Cargo tank No. 5 Stbd - 28,233 gals. (106,861 L)
Cargo tank No.6 Port - 28,233 gals. (106,861.9 L)
Total Capacity - 188,416 gals. (713,154.5 L)

Cargo pump - (1):
   - Type of drive - diesel
   - Capacity - 1,000 gallons per minute (3785 L per minute) (hulls BG 6087 through BG 6090)
   - Capacity - 1,050 gallons per minute (3974.2 L per minute) (all other hull numbers)
   - Size:
     - Suction - 8 in. (20.3 cm)
     - Discharge - 8 in. (20.3 cm)

Engine - (1):
   - Type - diesel
   - Horsepower - Three designs which vary according hull number:
     - 77.8 hp @ 1200 rpm; 80 hp @ 1200 rpm; and 115 hp @ 1400 rpm;

Anchors - (2):
   - Type - 300 lb (136.2 kg) "Danforth"

Anchor Cables - (2):
   - Type - 50 fathoms (91.44 m); 1 in. (25.4 m) steel

Safety equipment:
   - Fire-fighting equipment:
     - Two 15 lb (6.8 kg) CO₂ cylinders
     - One 2-1/2 gal. (9.5 L) foam extinguisher
     - One 2-3/4 lb (1.2 kg) monobromotrifluoromethane charge hand extinguisher or equivalent
BARGE, LIQUID CARGO, NON-PROPELLED
DESIGN 231C

PURPOSE: To transport liquid for offshore, river, and intercoastal waterway service.
TRANSPORTABILITY: Can be towed to overseas destination.

ADMINISTRATION INFORMATION

DESIGNATION - BG
NSN - 1930-01-313-9472
LIN - B31197
COST - $335,580 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-B-10122

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel. This barge is equipped with two skegs aft, thereby improving its towing capabilities by the reduction of yawing. Barge designs 231-A and 231-B have similar hull dimensions.
- Length, overall: 120 ft. (36.6 meters)
- Beam, molded: 33 ft. (10 m)
- Depth, molded: 10 ft. 6 in. (32 m)

Displacement:
- Light: 185 long tons (188.0 t.)
- Loaded: 763 long tons (775.2 t.)

Draft:
- Light:
  - Forward: 2 ft. 3 in. (68.5 cm)
  - Mean: 2 ft 6 in. (76.2 cm)
  - Aft: 2 ft 9 in. (83.8 cm)
- Loaded:
  - Forward: 7 ft. 6 in. (2.2 m)
  - Mean: 8 ft. (2.4 m)
  - Aft: 8 ft 6 in. (2.5 m)

Freeboard, mean:
- Light: 8 ft. 2 in. (2.4 m)
- Loaded: 2 ft 6 in. (76.2 cm)

Capacity, cargo:
- Deck: 578 long tons (587.2 t)
- Liquid: 160 barrels (rated)

Cargo tank No. 1 Stbd - 28,233 gals. (106,861 L)
Cargo tank No. 2 Port - 28,233 gals. (106,861 L)
Cargo tank No. 3 Stbd - 37,742 gals. (142,853.5 L)
Cargo tank No. 4 Port - 37,742 gals. (142,853.5 L)
Cargo tank No. 5 Stbd - 28,233 gals. (106,861 L)
Cargo tank No. 6 Port - 28,233 gals. (106,861 L)
Total Capacity - 188,416 gals. (713,154.5 L)
Cargo pumps:
   Number - 1
   Type of drive - diesel
   Capacity - 1,050 gallons per minute (3974.2 L per minute)
   Size:
       Suction - 8 in. (20.3 cm)
       Discharge - 8 in. (20.3 cm)

Engine:
   Number - 1
   Type - diesel
   Horsepower - 120 hp @ 1890 rpm

Anchors:
   Number - 2
   Type - 300 lb (136.2 kg) "Danforth"

Anchor Cables:
   Number - 2
   Type - 50 fathoms (91.44 m); 1 in. (25.4 mm) steel

Safety equipment:
   Fire-fighting equipment:
       Two 15 lb (6.8 kg) CO₂ cylinders
       One 2-1/2 gal. (9.5 L) foam extinguisher
       One 2-3/4 b (1.2 kg) monobromotrifluoromethane charge hand extinguisher or equivalent
CONVERSION KIT, BARGE, DECK ENCLOSURE

PURPOSE: To convert the 110 ft. and 120 ft. steel deck cargo barge, design 231A into covered barges to protect cargo.

TRANSPORTABILITY: Can be shipped in a knocked-down condition.

ADMINISTRATIVE INFORMATION

DESIGNATION - BCDK
NSN - 1930-01-263-0143 231A with deck enclosure
NSN - 1935-00-392-2985 231A conversion kit, deck enclosure
LIN - B31197
COST - $471,282 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-C-13766 (TC)

PRINCIPAL CHARACTERISTICS

This demountable deckhouse kit consists of 35 sections or panels with coamings, bolts, nuts, gaskets, and miscellaneous parts. The sections form a watertight transverse bulkhead forward and to watertight longitudinal side bulkheads. The deckhouse top contains one large central hatch and four small hatches, one near each corner. Each side bulkhead contains two sliding doors. There is one watertight door in the forward bulkhead and a double siding door in the aft bulkhead.

HULL AND ACCOMMODATIONS DATA:

Construction - Steel.
  Length, - 92 ft. (28 meters)
  Width - 27 ft. (8.2m)
  Height, centerline of deckhouse - 13 ft. (3.9 m)
  Weight - 60.5 short tons (54.9 t)

Capacity:
  Covered deck area - 2,300 ft.²; 27,000 ft.³ (213.9 m²; 756 m³)
  Cargo hatches - (5):
    Hatch openings:
      One 16 ft. by 20 ft. (4.8 m by 6.1 m)
      Four 9 ft. 5-7/8 in. by 6 ft. 8-3/4 in. (2.8 m by 2 m)
  Cargo doors - (5):
    Door openings - 10 ft. by 9.5 ft. (3 m by 2.9 m)
CRANE, BARGE, 60 - TON, DESIGN 413D

PURPOSE: To load and discharge heavy-ft cargo that is beyond the capacity of ship’s gear. 
TRANSPORTABILITY: Can be towed to overseas destinations.

ADMINISTRATION INFORMATION

DESIGNATION - BD  
NSN - 1935-00-264-6220  
LIN - F35953  
COST - $708,845 (June 1993)  
TYPE CLASSIFICATION - STD-A  
SPECIFICATION NO. - MIL -C-10309

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel.  
   Length, overall - 142 ft. (43.3 meters)  
   Beam, molded - 58 t. (17.6 m)  
   Depth, molded - 12 (3.6 m)  
Displacement:  
   Light - 1132 long tons (1150 t.)  
Draft without lift:  
   Mean - 3 ft. 5 in. (1 m)  
Draft with ballast and load:  
   Mean - 5 ft. 1 in. (1.5 m)  
Freeboard without lift:  
   Mean - 8fL 7 in. (.6 m)  
Capacity:  
   Fuel - 1,350 gal. (5073 L)  
   Lube oil - 60 gal. (227 L)  
   Fresh water - 600 gal. (2271 L)  
Anchors:  
   Number - 3  
   Type:  
      One 750 lb (340 kg) steel "Danforth"  
      Two 500 lb (227 kg) steel "Danforth"  
Anchor Cables:  
   Number - 2  
   Type:  
      One 58.33 fathoms (106.7 m); 1-1/4 in. (31.8 mm) steel  
      One 50 fathoms (91.4 m); 7/8 in. (22.2 mm) steel  
Cargo handling equipment:
Crane:

Boom length - 82 ft. 6 in. (25 m)
Main block:
  Capacity - 60 long tons (61.017 kg) @ 73-foot (22.2 m) radius
  Speed - 22-1/2 ft (6.8 m) per min
Auxiliary:
  Capacity - 15 long tons (15.2 t) @ 100-foot (30.5 m) radius
  Speed - 60 ft (18.3 m) per min.
Operating range - 360 degrees
Rotating speed - 0.4 rpm'

Hoist:

Drive - gear
Number of drums - 3
Size of drums - 23-5/8 in. by 4 ft. 3 in. (60 cm by 1.3 m)
Drum line pull:
  Main hoist - 134,000 lb (61,017 kg)
  Boom luffing - 134,000 lb (61,177 kg)
  Auxiliary hoist - 33,600 lb (15,254 kg)
Clutch operation - air
Brake operation - mechanical and magnetic
Wire rope:
  Type - improved plow steel
  Main block - 6 ft. x 19 ft. (1.83 m x 5.79 m), 1-1/8 in. (28.6 mm) dia., 1,330 ft. (405.6 m)
  Auxiliary - 6 ft. x 19 ft. (1.83 m x 5.79 m), 7/8 in. (22.23 mm) dia., 730 ft. (222.6 m)
  Luffing hoist - 6 ft. x 19 ft. (1.83 m x 5.79 m), 1-1/8 in. (28.6 mm) dia., 1,400 ft. (427 m)

Generators:

Main:
  Crane service:
    Number - 1
    Current - dc
    Output - 150 kw
    Voltage - varies according to hull number
      240
      120/240

Engine:

Number - 1
Type - diesel
Horsepower - varies according to hull number
  257 hp @ 600 rpm
  240 hp @ 600 rpm

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Auxiliary:

Vessel service:
Number - 1
Current - dc
Output - varies according to hull number
   (a) 5 kw
   (b) 10 kw
   (c) 25 kw
Voltage - varies according to hull number
   (a) 240
   (b) 120/240
   (c) 120/240

Engine:
Number - 1
Type - diesel
Horsepower - varies according to hull number
   (a) 10 hp @ 1200 rpm
   (b) 16 hp @ 1200 rpm
   (c) 20 hp @ 1200 rpm
   (d) 42 hp @ 1200 rpm

Safety equipment:
Fire-fighting equipment:
   One 50 lb (22.7 kg) CO₂ cylinders
   Eight 15 lb (6.8 kg) CO₂ cylinders
   One 2-1/2 gal. (9.5 L) foam extinguisher
   Six 2-3/4 lb (1.2 kg) monobromotrifluoromethane charge hand extinguisher or equivalent
Crane, Barge, 60-Ton, Design 413D

3-22
CRANE, BARGE, 100 - TON, DESIGN 264B

PURPOSE: To load and discharge heavy-lift cargo that is beyond the capacity of ship's gear. TRANSPORTABILITY: Can be towed to overseas destinations.

ADMINISTRATION INFORMATION

DESIGNATION - BD
NSN - 1935-00-264-6219
LIN - F36090
COST - $8,000,104 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-C-10776

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel
Length, overall- 140 ft. (42.7 metres)
Beam, molded - 70 ft. (21.3 m)
Depth, molded - 12 ft. 6 in. (3.8 m)
Displacement, full load - 1,630 long tons 1656 t)
Draft, full load:
Mean - 6 ft. 3-1/4 in. (1.9 m)
Freeboard, full load:
Mean - 6 ft. 2-3/4 in. (1.9 m)
Capacity:
Fuel - 15,000 gal. (56,775 L)
Lube oil- 110 gal. (416L)
Fresh water - 200 gal. (757 L)
Anchors:
Number- 2
Type- 4,200 lb (1907 kg) stockless
One 750 lb (340 kg) steel "Danforth"
Two 500 lb (227 kg) steel "Danforth"
Anchor Chains:
Number - 2
Type - 30 fathoms (54.9m), 1-1/2 in. (38.1 mm)
Cargo handling equipment:
Crane:
  Boom length - 123 ft. 6 in. 7.6 m)
  Main block:
    Capacity - 89 long tons (90.4 t) @ 80 ft: (24.4 m) radius
    Capacity - 75 long tons (76.2 t) @ 104 ft 6 in. (31.8 m) radius
    Speed - 14 ft (4.2 m) per min.
  Auxiliary:
    Capacity - 15 long tons (15.2 t) @ 122 ft. 6 in. (37.3 m) radius
    Speed - 79 ft (24.1 m) per min.
    Reach below waterline - 25 ft. (7.6 m)
  Operating range - 360 degrees
  Rotating speed - 0.333 rpm

Hoist:
  Drive - gear
  Number of drums - 4
  Size of drums:
    Main (2) - 51 in. by 98-7/8 in. (1.3 m by 2.4 m)
    Boom luffing (1) - 75 in. by 90-7/8 in. (1.9 m by 2.2 m)
    Auxiliary (1) - 36 in. by 89-1/4 in. (92 cm by 2.2 m)
  Drumline pull:
    Main hoist - 16,150 b each (7,332 kg)
    Boom luffing - 49,000 lb 2,246 kg) for two ropes
    Auxiliary hoist - 9,065 lb (4115.5 kg)

Wire rope:
  Type - improved plow steel
  Main block - 6 f. x 37 ft. (1.8 m x 11.2 m), 1-1/8 in. (28.6 mm) dia., 2,30 ft. (771.6 m)
  Boom luffing (2) - 6 ft. x 30 ft. (1.8 m x 9.1 m), 1-1 in. (31.8 mm) dia., 1,050 ft. (320 m)
  Auxiliary - 6 ft. x 37 ft. (1.8 m x 11.2 m), 78 in. (22.2 mm) dia., 1,100 ft. (320 m)

Generators:
  Main:
    Crane service:
      Number - 2
      Current - dc
      Output - 125 kw
      Voltage - 240
    Engine:
      Number - 2
      Type - diesel
      Horsepower - 200 bhp @ 514 rpm each
Generators: (Continued)
Auxiliary:
  Vessel service:
    Number - 2
    Current - 3 phase ac
    Output - 50 kva
    Voltage - 120/208
Engine:
  Number - 2
  Type - diesel
  Horsepower - 70 bhp @ 1,200 rpm
Safety equipment:
  Fire-fighting equipment:
    One 525 lb (238 kg) fixed CO₂ system consisting of seven 75 lb (34 kg) CO₂ cylinders
    Four 15 lb (6.8 kg) CO₂ extinguishers
    One 2-1/2 gal. (9.5 L) foam extinguisher
    Six 2-3/4 lb (1.2 kg) monobromotrifluoromethane charge hand extinguisher or equivalent
    One soda-acid
Crane, Barge, 100-Ton, Design 264B

3-26
BARGE, DECK CARGO, NON-PROPELLED, SECTIONALIZED, NESTING, DESIGN 7001

PURPOSE: To transport wheel and tracked vehicles and general cargo in harbors and other inland waters. TRANSPORTABILITY: Can be sectionalized, and nested for shipment by rail or marine transportation.

ADMINISTRATION INFORMATION

DESIGNATION - BK
NSN - 1930-00-375-2967
LIN - B31060
COST - $24,230 (May 1992)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-B-3596A

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - This steel barge consists of eight coupled transverse sections giving the following dimensions:
   Length, overall - 81 ft. (24.7 meters)
   Beam: Barge is tender because of its narrow beam, especially at the bottom. molded -
       Top - 22 ft. (6.7 m)
       Bottom - 17 ft. (5.2 m)
   Depth, molded - 7 ft. (2 m)
Displacement:
   Light - 51.3 long tons (52.1 t)
   Loaded - 181.3 long tons (184.2 t)
Draft:
   Light:
       Forward - 1 ft. 6 in. (45.7 cm)
       Mean - 1 ft. 6 in. (45.7 cm)
       Aft - 1 ft. 6 in. (45.7 cm)
   Loaded:
       Forward - 4 ft. 9 in. (114.3 cm)
       Mean - 4 ft 9 in. (1143 cm)
       Aft - 4 ft. 9 in. (114.3 cm)
Freeboard, mean:
   Light - 5 ft. 6 in. (1.6 m)
   Loaded - 2 ft. 3 in. (68.5 cm)
Capacity:
   Deck area - 1,782 ft² (165.7 m²)
   Cargo:
       Deck - 180 long tons (182.9 t)
Shipping: the eight barge sections, when nested, form the following groups:

Group 1 - Three pontoons nested - 10 ft. 6 in. x 7 ft. x 22 ft. (3.2 m x 2 m x 6.7 m)
Group 2 - Three pontoons nested - 10 ft. 6 in. x 7 ft. x 22 ft. (3.2 m x 2 m x 6.7 m)
Group 3 - Two rake-end pontoons nested - 10 ft. 6 in. x 7 ft. x 22 ft. (3.2 m x 2 m x 6.7 m)
Group 4 - deck frames - 10 ft. 6 in. x 4 ft. x 21 ft. (3.2 m x 1.2 m x 6.4 m)

Total - 7,820 ft³ (221.4 m³)
PURPOSE: To transport wheel and tracked vehicles and general cargo in harbors and inland waters.
TRANSPORTABILITY: Can be towed to overseas destinations.

ADMINISTRATION INFORMATION

DESIGNATION - BC
NSN - 1930-00-375-2961
LIN - B30786
COST - $58,778 (May 1992)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-B-10586

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel. This barge is particularly suited for transporting vehicles due to its flush deck without fore and aft sheer. It is built without skegs, making it easy to operate at port terminals where piers are in close proximity to one another.
- Length, overall: 110 ft (33.5 meters)
- Beam, molded: 32 ft (9.7 m)
- Depth, molded: 9 ft (2.7 m)

Displacement:
- Light: 120 long tons (121.9 t)
- Loaded: 690 long tons (701 t)

Drat:
- Light:
  - Forward: 1 ft 8 in. (50.8 cm)
  - Mean: 1 ft 8 in. (50.8 cm)
  - Aft: 1 ft 8 in. (50.8 cm)
- Loaded:
  - Forward: 7 ft 4 in. (2.2 m)
  - Mean: 7 ft 6 in. (2.2 m)
  - Aft: 7 ft 8 in. (2.3 m)

Freeboard, mean:
- Light: 7 ft 4 in. (2.2 m)
- Loaded: 1 ft 6 in. (45.7 cm)

Capacity, Cargo, Deck: 570 long tons (579.1 t)

Anchors:
- Number: 2
- Type: 300 b (136.2 kg) "Danforth"

Anchor Cables:
- Number: 2
- Type: 50 fathoms (91.44 m); 7/8 in. (22.2 mm) steel
Barge, Deck Cargo, Non-propelled, Harbors and Inland Waterways, Design 7005

3-30
PIER, BARGE TYPE, SELF-ELEVATING, NON-PROPELLED, STEEL, 300 ft. Long, 80 ft. Wide, (91.5 m Long, 24.4 m Wide) DESIGN 7029

PURPOSE: To provide either a temporary or a semipermanent pier at locations where shore-side facilities are nonexistent.

TRANSPORTABILITY: Can be towed to overseas destinations.

ADMINISTRATION INFORMATION

DESIGNATION - BPL
NSN - 1945-00-999-7899
LIN - N90785
COST - $813,810 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-B-10586

PRINCIPAL CHARACTERISTICS

HULL AND ELEVATING MECHANISM DATA:
Construction - Steel.
- Length, overall - 300 ft. (91.5 meters)
- Beam, molded - 80 ft. (24.4 m)
- Depth, molded - 13 ft. (3.9 m)

Caissons:
- Number - 10
- Length - 60 ft. vice 140 ft. (183.3 m vice 42.7 m)
- Diameter - 5 ft. 11 in. (1.8 m) outside diameter

Air jack, Pneumatic, Type "D" (Not interchangeable with type "A"
- Number - 10
- Height - 10 ft. 6 in. (3.2 m)
- Width - 9 ft. 7-1/2 in. (2.9 m)

Accessory Equipment:
Air Compressors:
- Number - 2
  - Type - Reciprocating, 2 stage
  - Type of drive - diesel engine
  - Capacity (each) - 350 psi, 425 ft.³ per minute (24.6 kg/cm², 11.9 m³/min.)
Pier, Barge Type, Self-Elevating, Non-propelled, Steel, 300 ft. Long, Design 7029
BARGE, WATER PURIFICATION, NON-PROPELLED

PURPOSE: To provide drinking water, converted from sea water or brackish water for a rapid deployment force in a forward area.

TRANSPORTABILITY: Vessel is not suitable for ocean towing. It should be deck loaded on a larger vessel for transportation to an overseas destination.

ADMINISTRATION INFORMATION

DESIGNATION - ROWPU
NSN - 1930-01-234-2165
COST - $5,262,715 (May 1992)

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - A design 231 barge with steel frame equipment house containing two complete 150,000 GPD reverse osmosis water purification units (ROWPU). Below deck are drinking water storage tanks, a chlorination unit, auxiliary generators, and spare ROWPU engines.

- Length, overall: 120 ft. (36.6 meters)
- Beam, molded: 33 ft. (10 m)
- Depth, molded: 10.5 ft. (3.2 m)

Displacement:
- Light: 420 tons (463 t)
- Loaded: 505 tons (513 t)

Generators (primary) - 1
- Current: ac
- Output: 155 kw
- Voltage: 440 Vac

Engine, generator (primary) - 2
- Type: diesel turbo charged, 6-cylinder
- Horsepower: 300 hp @ 1200 rpm

Generators (auxiliary) - 1
- Current: ac
- Output: 20 kw
- Voltage: 440 Vac

Engine, generator (auxiliary) - 2
- Type: diesel, 4-cylinder
- Horsepower: 72 h @ 2500 rpm
TM 55-500

Tank capacities -
- Drinking water tanks (4) 15,000 gallons (56,775 L) total
- Water reserve tank 250 gallons (946 L)
- Fuel oil tanks (2) 7,200 gallons (27,252 L) total
- Fuel oil day tank 320 gallons (1,211 L)
- Sludge tank 250 gallons (946 L)
- Ballast tank 10,000 gallons (37,850 L) - Fwd void # 1

Life saving equipment:
- Eight-person liferaft (2)
- Lifesaving ring (4)
- Life Vest (24)

Fire Fighting Equipment:
- Halon 1301 system
- CO₂ hose/reel units (2)
- Smoke detector system
- CO₂ extinguishers, 15 lbs (17)
- Dry chemical extinguisher 10 lbs (5)

Dayroom:
- Berthing, 9 person

Winch, shore:
- Type - Double drum
- Capacity - 40,000 lbs
- Engine - 4 cylinder
- Horsepower - 152 hp @ 2100 rpm

Anchors - Four 1000 lbs

Anchor winch, electrical

Barge, Water Purification, Non-propelled
WORKBOAT, LIFESAVING AND FIREFIGHTING

PURPOSE: To transport light cargo and troops ship to shore, ship to ship and utility work.
TRANSPORTABILITY: The workboat is carried as deck cargo on board the 300 thousand gallon Reverse Osmosis Water Purification Unit (ROWPU) Barge.

ADMINISTRATIVE INFORMATION

DESIGNATION - Workboat, Lifesaving and Firefighting
NSN - 1940-01-303-5752
LIN -
COST - $30,374 (June 1993)

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed - 30 knots (48 km/hr)
Cruising range - 70 nautical miles (113 km)
Main propulsion engine:
   Number - 1
   Type - 6 cylinder turbocharged diesel
   Horsepower - 55 hp @3600 rpm
   Fuel consumption - 16.6 gal. (63 L) per hour
Propeller - Stainless steel, 3-blade 19-in. pitch, 16-in. diameter, right hand rotation

Hull and Accommodations Data:
Construction - Aluminum
   Overall length - 26 ft.
   Overall width -
   Overall height -
   Weight -
   Displacement - 2700 lbs
   Draft - 1.3 ft.
Capacity:
   Fuel - 50 gal. (189 L)
   Passengers - 5-6
   Crew - 1-2
Anchor:
   Number - 1
   Type - S
Anchor line:
   Depth - 396 fathoms (75 ft.)
Firefighting equipment:
   Halon, automatic, 70 ft.³ (1.96 m³)
Workboat, Lifesaving and Firefighting

3-36
BRIDGE ERECTION BOAT

PURPOSE: Transportable, hydrojet propelled, aluminum hull boat designed to maneuver components of floating bridges. This boat can also be used to propel rafts, support diving operations, assist in maritime construction projects, serve as a troop and cargo carrier, and patrol inland waters.

TRANSPORTABILITY: Cradled and truck mounted.

ADMINISTRATIVE INFORMATION

DESIGNATION - BEB
NSN- 1940-01-105-5728
LIN - B25476
COST - $154,530 (June 1993)

MOBILITY AND ENGINE DATA:
Speed - 22 mph (40 km/hr)
Cruising range - 154 miles (248 km)
Main propulsion engine:
   Number - 2
   Type - 6 cylinder turbocharged diesel
   Horsepower - 215 hp @2500 rpm (each)
   Fuel consumption - 10.8 gal. (40.9 L) per hour @ 2400 rpm
Propelling unit:
   Description - hydrojet
Hull and Accommodations Data:
Construction - Aluminum
   Overall length - 27 ft. 2in. (8.3 m)
   Displacement - 8800 lbs (4000 kg)
   Draft - 2 ft. 2 in. (66 cm)
Capacity:
   Fuel - 75 gal. (284 L)
   Passengers - 12
   Crew - 3
Anchor:
   Number - 1
   Type - 24 lb "Danforth"
Anchor line:
   Depth - 100 ft.
Firefighting equipment:
   Two Halon, automatic, 70 ft.\(^3\) (1.96 m\(^3\))
   One 5 lb. (2.3 kg) CO\(_2\)
Bridge Erection Boat
BOAT, PICKET, DESIGN 4002

PURPOSE: To serve as a patrol or command and inspection boat in harbors and inland waters.

TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNATION - Q
NSN - 1940-00-268-9955
LIN - B84267
COST - $142,482 (June 1993)
CTA 50-942
Type classification - STD-A
Specification No. - MIL-B-11790

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed - 14 knots (26 km/hr)
Cruising range - 468 nautical miles (867 km)
Man propulsion engines:
   Number - 2
   Type - diesel
   Horsepower - 200 bhp @ 1600 rpm (each)
   Fuel consumption - 24.2 gal. (91.6 L) pr hour

Propellers:
   Number - 2
   Description - bronze, 3-blade, 25 in. (63.5 cm) pitch, 34 in. (86.4 cm) diameter

Generator, vessel service:
   Number - 1
   Current - dc
   Output - 10 kw
   Voltage - varies according to hull number
      120

Engine:
   Number - 1
   Type - diesel
   Horsepower - Two designs which vary according to hull number:
      25 hp @ 1450 rpm
      18.8 hp @ 1450 rpm

Hull and Accommodations Data:
Construction - Wood
   Overall length - 64 ft. 11 in. (19.8 m)
   Beam, molded - 15 ft. 11 in. (4.8 m)
   Beam, extreme - 16 ft. 5-1/2 in. (5 m)
Depth, molded - 8 ft. 3 in. (2.5 m)
Displacement:
  Light - 31 long tons (31.5 t)
  Loaded - 37.4 long tons (38 t)
Draft:
  Light:
    Forward - 3 ft. 11 in. (1.2 m)
    Mean - 4 ft. 4 in. (1.3 m)
    Aft - 4 ft. 9 in. (1.4 m)
  Loaded:
    Forward - 3 ft. 10 in. (1.1 m)
    Mean - 4 ft. 10 in. (1.5 m)
    Aft - 5 ft. 10 in. (1.8 m)
Freeboard:
  Light - 3 ft. 11 in. (1.2 m)
  Loaded - 3 ft. 5 in. (1 m)
Capacity:
  Fuel - 900 gal. (3,407 L)
  Fresh water - 400 gal. (1,514 L)
  Cargo - 4 long tons (4.1 t)
  Passengers - 5
  Crew - 6
Anchors:
  Number - 2
  Type:
    One 100 lb (45.4 kg) stockless
    One 75 lb (34 kg) stockless
Anchor line:
  Number - 2
  Type - 40 fathoms (73.2 m), 5 in. (12.7 cm) manila
Safety Equipment:
  Firefighting equipment:
    Two 50 lb (22.7 kg) fixed CO2 systems
    Five 15 lb (6.8 kg) CO2 extinguishers
    Two 2-3/4 lb (1.2 kg) monobromotrifluoromethane extinguishers
Lifeboat
  Number - 1
  Type - 110-person, balsa
Boat:
  Number - 1
  Type - 10-foot dinghy
BOAT, PICKET, DESIGN 4003

PURPOSE: To serve as a patrol or command and inspection boat in harbors and inland waters.

TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNATION - J
NSN - 1940-00-267-1099
LIN - B84130
COST - $40,951 (May 1992)
Type classification - STD-A
Specification No. - MIL-B-11746

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
   Light - 15 knots (27.8 km/hr)
   Loaded - 14 knots (25.9 km/hr)

Cruising range:
   Light - 266 nautical miles (492.6 km)
   Loaded - 200 nautical miles (370.4 km)

Main propulsion engines:
   Number - 2
   Type - diesel
   Horsepower - 165 bhp @ 1800 rpm (each)
   Fuel consumption - 19 gal. (72 L) per hour

Propellers:
   Number - 2
   Description - bronze, 3-blade, 28-in (1 cm) pitch, 28-in. (71.1 cm) diameter

Generator, vessel service:
   Number - 1
   Current - dc
   Output - 2.5 kw
   Voltage - 24 to 30

Engine:
   Number - 1
   Type - diesel
   Horsepower - 5.5 hp @ 1800 rpm

Hull and Accommodations Data:
Construction - Steel
   Overall length - 46 ft. 4-1/2 in. (14.1 m)
   Beam, amidships, molded - 12 ft. 3 in. (3.7 m)
   Depth, amidships, molded - 6 ft. 3-7/8 in. (1.9 m)
Displacement:
  Light - 10 long tons (10.2 t)
  Loaded - 12 long tons (12.2 t)

Draft:
  Light:
    Forward - 1 ft 2 in. (36 cm)
    Mean - 1 ft 7-1/2 in. (49 cm)
    Aft - 2 ft 1 in. (76 cm)
  Loaded:
    Forward - 1 ft 4 in. (40.6 cm)
    Mean - 2 ft 1 in. (76.3 cm)
    Aft - 2 ft 9 in. (83.8 cm)

Freeboard, mean:
  Light - 4 ft 8-3/8 in. (1.4 m)
  Loaded - 4 ft 3-3/8 in. (1.3 m)

Capacity:
  Fuel - 370 gal. (1,400 L)
  Potable water - 50 gal. (169 L)
  Passengers - 3
  Crew - 4

Anchor:
  Number - 1
  Type - 50 lb (22.7 kg) “Danforth”

Anchor line:
  Number - 1
  Type - 15 fathoms (27.4 m), 3-3/4 in. (9.5 cm) manila

Safety Equipment:
  Firefighting equipment:
    Two 15 lb (6.8 kg) fixed CO₂ systems
    Two 2-3/4 lb (1.2 kg) monobromotrifluomethe extinguishers

Lifeboat:
  Number - 1
  Type - Lifeboat, Inflatable, 7-person
Boat, Picket, Design 403
BOAT, PICKET

PURPOSE: To serve as a patrol or command and inspection boat in harbors and inland waters.

TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNAION - J
NSN - 1940-01-300-5306
LIN - B84927
COST - $94,760 (June 1993)

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
- Light - 25 knots (km/hr)
- Loaded - 18 knot (m/hr)

Cruising range - 46 hours

Main propulsion engine:
- Number - 1
- Type - Diesel, turbo
- Horsepower - 200 hp
- Fuel consumption - 3 g. (11.4 L) per hour

Propellers:
- Number - 1

Hull and Accommodations Data:

Construction - Composite - foam core
- Overall length - 26 ft. 6 in. (8 m)
- Beam, amidships, molded - 8 ft. 6 in. (2.6 m)

Capacity:
- Fuel - 140 gal. (530 L)
- Passenger - 15
Boat, Picket
BOAT, PASSENGER AND CARGO, DESIGN 2001

PURPOSE: To serve as a utility boat to transport passengers and cargo in harbors and inland waters.

TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNATION - T
NSN - 1940-00-268-9952
LIN - B83993
COST - $134,647 (June 1993)
CTA 50-909
Type classification - STD-A
Specification No. - MH-B-10863A

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
  Light - 10.5 knots (19.4 km/hr)
  Loaded - 7 knots (13 km/hr)

Cruising range:
  Light - 725 nautical miles (1342 km)
  Loaded - 635 nautical miles (1176 km)

Main propulsion engine:
  Number - 1
  Type - diesel
  Horsepower - 300 bhp @ 1200 rpm
  Fuel consumption - 8.2 gal (68.8 L) per hour

Propeller:
  Number - 1
  Description - Manganese bronze, 3-blade, 32-in. (81.3 cm) pitch, 46-in. (1.2 m) diameter

Generator, vessel service:
  Number - 1
  Current - d
  Output - 5 kw
  Voltage - 120
  Engine:
    Number - 1
    Type - diesel
    Horsepower - 20 hp @ 1200 rpm

Hull and Accommodations Data:

Construction - Steel
  Overall length - 65 ft. 6-3/4 in. (20 m)
  Beam, molded - 17 ft. 8 in. (5.3 m)
  Depth, molded - 8 ft. 9-7/8 in. (2.6 m)
Boat, Passenger and Cargo, Design 2001
BOAT, 65 FT., PASSENGER, DESIGN 6013

PURPOSE: To transport passengers.
TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNATION-
NSN - 1930-00-651-5686
LIN - H38924
COST - $800,000 (June 1993)
CTA 50-909

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
  Loaded - 11 knots (km/hr)
Cruising range:
Main propulsion engines:
  Number - 2
  Type- diesel
  Horsepower - 165 bhp @ 1800 rpm
Propellers:
  Number - 2
Hull and Accommodations Data:
Construction - Steel
  Overall length - 65 ft. 6 in. (20 m)
  Beam, molded - 23 ft. (7 m)
  Depth, molded - 7 ft. 3 in. (2.2 m)
Draft:
  Loaded - 5 ft. (1.5 m)
Capacity:
  Passengers - 150
Boat, 65ft., Passenger, Design 6013
HIGH SPEED FERRY PASSENGER

PURPOSE: To serve as a ferry boat to transport passengers in waters to sea state 3.

TRANSPORTABILITY: Can be deck loaded on larger vessel for transportation overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNATION - HSPF
NSN - 1940-01-229-1264
COST - $1,700,000 (June 1993)

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
  Loaded - 25 knots (46 km/hr)
Cruising range - 200 nautical miles (371 km)
Passenger capacity - 236
Main propulsion engines:
  Number - 2
  Type - diesel
  Horsepower - 990 hp each
  Fuel capacity - 1,400 gallons (5,300 L)
  Fuel consumption - 85 gallons (322 L) per hour

Propeller:
  Number - 2
  Description - Manganese bronze, 5 blade, 40 in. (1 m) diameter

Generator, vessel service:
  Number - 2
  Current - ac
  Output - 5 kw
  Voltage - 208
  Engine:
    Number - 2
    Type - diesel

Hull and Accommodations Data:
Construction - Aluminum catamaran hull
  Overall length - 75 ft. 6 in. (75.5 m)
  Beam, molded - 28 ft. 6 in. (8.7 m)
  Depth, molded - 7 ft. 3 in. (2.2 m)
  Draft - 5 ft. 6 in. (1.7 m)
High Speed Ferry, Passenger

3-52
REPAIR SHOP, FLOATING, MARINE EQUIPMENT,
NON-PROPELLED, DESIGN 7011

PURPOSE:  To repair floating craft and amphibious equipment in harbors and inland waters. Due to the mission and function, these vessels were modified to suit mission they now accomplish.

TRANSPORTABILITY: Can be towed to overseas destinations.

ADMINISTRATIVE INFORMATION

DESIGNATION - FMS
NSN - 1935-00-375-3000
LIN - R76483
TA - 55-56
COST - $608,785 (June 1993)
TYPE CLASSIFICATION - STD-A
SPECIFICATION NO. - MIL-R-11798

PRINCIPAL CHARACTERISTICS

HULL AND ACCOMMODATIONS DATA:
Construction - Steel.
  Length, overall- 210 ft. 5 in.  (64.2 meters)
  Beam, molded - 40 ft.  (12.2 m)
  Depth, molded - 15 ft.  (4.6 m)
Displacement:
  Light - 1,160 long tons (1,179 t.)
  Loaded - 1,525 long tons (1,549 t.)
Draft:
  Light:
    Forward - 5 t 8 in. (1.7 m)
    Mean - 5 ft. 11 in. (1.8 m)
    Aft- 6 ft 1 in. (19 m)
  Loaded:
    Forward - 7 t 5 in. (2.3 m)
    Mean - 7 ft. 7 in. (2.3 m)
    Aft - 7 t 9 in. (2.4 m)
Freeboard, mean:
  Light - 9 ft. 1 in. (2.7 m)
  Loaded - 7 ft. 5 in. (2.3 m)
Generators:
  Number - 4
  Current - ac
  Output - 100 kw
  Voltage - 230
Engine:

3-53
Number- 4
Type - diesel
Horsepower - 150 bhp @ 1,200 rpm

Fuel consumption- 34 gal. (129 L) per hour

Evaporator:
- Number - 1
- Type - Thermocompression
- Capacity - 2,000 gal. (7570 L) per day

Capacity:
- Fuel - 52,000 gal. (196,820 L)
- Lube oil - 600 gal. (2271 L)
- Potable water - 15,000 gal. (56,775 L)
- Fresh water - 26,000 gal. (98,410 L)

Hatches:
- Main deck house top (2):
  - Location - Frames 33 to 41
  - Size - 16 ft. (4.8 m) long by 8 ft. (2.4 m) wide
  - Location - Frames 68 to 74
  - Size - 12 ft. (3.6 m) long by 8 ft. (2.4 m) wide
- Main deck (3):
  - Location - Frames 33 to 41
  - Size - 16 ft (4.8 m) long by 8 ft. (2.4 m) wide
  - Location - Frames 51 to 57
  - Size - 12 ft. (3.6 m) long by 8 ft. (2.4 m) wide
  - Location - Frames 68 to 74
  - Size - 12 ft. (3.6 m) long by 8 ft. (2.4 m) wide

Crane:
- Boom length - 40 t (12.2 m)
- Block:
  - Capacity - 8.9 long tons (9.0 t) @ 12- to 35-foot (3.6- to 10.6- m) radius
  - Speed:
    - Single line - 15,000 lb (6,810 kg) load - 100 t. (30.5 m) per mi.
    - Four parts - 20,000 lb (9,080 kg) load - 25 ft. (.6 m) per min.
- Operating range - 360 degrees
- Rotating speed - 1.5 rpm
- Monorail Trolley system:
  - Hoists (4) capacities:
    - Three - 3 short tons 2.7 t
    - One - 5 short tons 4.5 t
Repair shops:
- Battery
- Blacksmith
- Carpentry
- Electrical
- Engine
- Fuel injector
- Machine
- Paint
- Pipefitting
- Radar and radio
- Refrigeration
- Sheet metal
- Shipfitting
- Welding

Anchors:
- Number - 5
- Type:
  - Two 4000 lb (1816 kg) bower, stockless
  - One 4000 lb (1816 kg) pare, stockless
  - One 15,00 lb (681 kg) stream, stockless
  - One 750 lb (340 kg) kedge, stockless

Anchor Chains:
- Number - 2
- Type - 105 fathoms (192 m); 1-1/2 in. (3.8 cm) steel

Safety equipment:
- Fire-fighting equipment:
  - One 850 lb (386 kg) CO₂ system consisting of seventeen 50 lb (22.7 kg) CO₂ cylinders
  - One 50 lb (22.7 k) CO₂ system consisting of one 50 0 (22.7 kg) CO₂ cylinder
  - Forty 15 b (6.8 kg) CO₂ extinguishers

Lifeboats:
- Number - 2
  - Type - 30-person, 24 ft. (7.3 m) aluminum

Lifeboats:
- Number - 4
  - Type - Inflatable 15 person, NSN 1940-00-204-3894
Repair Shop, Floating, Marine Equipment, Non-propelled, Design 7011

3-56
PUSH, 600 HORSEPOWER, 100 TON, DESIGN 3004

PURPOSE: To move non-propelled barges in harbors and inland waters. Secondary functions include general utility uses, firefighting, salvage and assisting in the docking and undocking of barge vessels.

TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

DESIGNATION - ST
NSN - 1925-00267-1099
ULN - X70909
COST - $316,988 (June 1993)
Type classification - STD-A
Specification No. - MIMT-10920B

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
  - Light - 12 knots (2.2 km/hr)
  - Loaded with tow - variable
Cruising range - Light - 1,700 nautical miles (3148 km)
Main propulsion engine:
  - Number - 1
  - Type - diesel
  - Horsepower - 600 bhp @ 750 rpm
Bollard pull - 17,500 lbs (7745 kg)
Fuel consumption - 36.4 gal. (138 L) per hour
Propeller:
  - Number - 1
  - Description - Manganese bronze, right hand rotation, 4-blade, 60 in. (1.5 m) pitch, 72 in. (1.8 m) diameter
Generators, min vessel service:
  - Number - 2
  - Current - d
  - Output - Two designated ratings which vary according to generators installed
    - (a) 10 kw
    - (b) 20 kw
Voltage - 12w125
Engines:
  - Number - 2
  - Type - diesel
  - Horsepower - Three designed ratings which vary according to engines installed
    - (a) 18.8 hp @ 1,450 rpm
    - (b) 25 hp @ 1,450 rpm
    - (c) 34 hp @ 1,200 rpm
Hull and Accommodations Data:

Construction - Steel
- Overall length - 70 ft 11-1/2 in. (21.6 m)
- Beam, molded - 19 ft 6 in. (5.9 m)
- Depth, molded - 9 ft. 7-3/4 in. (2.8 m)
- Displacement:
  - Light - 100 long tons (102 t)
  - Loaded - 122 long tons (124 t)

Draft:
- Light:
  - Forward - 6 ft 2 in. (1.8 m)
  - Mean - 6 ft 9 in. (2 m)
  - Aft - 7 ft 4 in. (2.2 m)
- Loaded:
  - Forward - 6 ft 8 in. (2 m)
  - Mean - 7 ft 4-1/2 in. (2.2 m)
  - Aft - 8 ft 3 in. (2.5 m)

Freeboard, mean:
- Light - 2 ft. 11 in. (89 m)
- Loaded - 2 ft. 3 in. (69 cm)

Capacity:
- Fuel - 5,844 g. (22,119 L)
- Potable water - 900 gal. (3407)
- Crew accommodations - 6

Anchors:
- Number - 2
- Type:
  - One 300 lb (136 kg) lightweight
  - One 200 lb (91 kg) lightweight

Anchor chain:
- Number - 1
- Type - 75 fathoms (137 m), 5/8 in. (16 mm) wrought iron

Safety Equipment:
- Firefighting equipment:
  - One 50 lb (22.7 kg) fired CO2 system
  - Four 15 lb (6.8 kg) CO2 extinguishers
  - Two 5 lb (23 kg) C2 extinguishers
  - One 2-1/2 gal. (9.5 L) soda-acid extinguisher
  - One fire pump, 500 g l per min. at 100 psi (189i min at 7 kg/cm2)

Lifeboat (1) - type - Inflatable, 15-person, NSN 1940-00-204-3894

3-58
Tug, 600 hp, 100 Ton, Design 3004

3-59
TUG, 1200 HORSEPOWER, DESIGN 3006

PURPOSE: To berth and un-berth large vessels and for heavy towing within harbor areas. Secondary functions include general utility uses, fighting, and salvage operations. May perform limited offshore towing between terminals.

TRANSPORTABILITY: Capable of moving overseas destination under its own power.

ADMINISTRATIVE INFORMATION

DESIGNATION - LT
NSN - 1925-00-375-3003
LIN - X71046
COST - $560,389 (May 1992)
Type classification - STD-A
Specification No. - MIL-T-10862A

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
- Light - 12.75 knots (23.6 k/hr)
- Loaded with tow - variable

Cruising rage:
- Light - 3,323 nautical miles (6154 km)

Main propulsion engine:
- Number - 1
- Type - diesel
- Horsepower - 1200 bhp 300 rpm

Bollard pull - 27,500 lbs (12,485 kg)

Fuel consumption - 73 gal. (276 L) per hour

Propeller:
- Number - 1
- Description - Two designs which vary according to hull numbers:
  - LT1936 through LT1977 and LT2202 - Manganese bronze, 3-blade, 2,060 lbs (935 kg), 7 ft 8 in. (2.2 m) diameter, 62 in. (1.5 m) pitch
  - LT2075 through LT2096 - Manganese bronze, 3-blade, 2,485 lbs (1128 kg), 7 ft 8 in. (2.2 m) diameter, 54 in. (1.3 m) pitch

Generators, main vessel service:
- Number - 2
- Current - dc
- Output - 40 kw
- Voltage - 120

Engines:
- Number - 2
- Type of drive - diesel
- Horsepower - Two designed ratings which vary according to engines installed
  - 60 hp @ 1,200 rpm and 80 hp @ 1,200 rpm

3-60
Hull and Accommodations Data:

Construction - Steel

Overall length - 107 ft. (32.6 m)
Beam, molded - 26 ft. 6 in. (8 m)
Depth, molded - 14 ft 10 in. (4.5 m)

Displacement:
Light - 295 long tons (300 t)
Loaded - 390 long tons (396 t)

Draft:
Light:
Forward - 6 ft. 2 in. (1.8 m)
Mean - 8 ft. 10 in. (2.6 m)
Aft - 11 ft. 6 in. (3.5 m)

Loaded:
Forward - 9 ft 5 in. (2.8 m)
Mean - 10 ft. 9 in. 1/2 in. (3.2 m)
Aft - 12 ft. 2 in. (3.7 m)

Freeboard, mean:
Light - 6 ft. (1.8 m)
Loaded - 4 ft. (1.2 m)

Capacity:
Fuel - 21,464 g. (80,37 L)
Potable water - 2356 gal (10431 L)
Seawater ballast:
Fore peak - 2,903
Aft peak - 5,493
Crew accommodations - 16

Anchors (6):
Type:
One 300 lb (136 kg) “Danforth”
One 800 lb (kg) marine fluked

Anchor chains (2):
Type - 105 fathoms (192 m), 1 in. (25.4 mm) wrought iron and one 90 ft. (27.5 m)

Safety Equipment:
Firefighting equipment:
One 600 b (272 kg) fixed C02 system consisting of 12 50 lb (22.7 kg) cylinders
Four 15 lb (6.8 kg) CO2 extinguishers
Two 5 lb (2.3 kg) CO2 extinguishers
One fire pump, 300 gal. per pmi. at 100psi (1135 L/min at 7 kg/cm2)

Lifeboats (2) - Type - Inflatable, 15-person, NSN 1940-00-204-3894
Tug, 1200 hp, Design 3006

3-62
TUG, 200 HORSEPOWER, DESIGN 320

PURPOSE: To move small non-propelled craft in harbors and inland waters. Other functions include general utility uses and firefighting.

TRANSPORTABILITY: Can be deck loaded on a larger vessel for transportation to overseas destination.

ADMINISTRATIVE INFORMATION

Designation - ST
NSN- 1925-00375-3001
LIN - X70772
COST - $75,684 (June 1993)
CTA - 50-909
Type classification - STD-A
Specification No. - MIL-T-10774A

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
- Light - 10 knot (185 km/hr)
- Loaded with tow - variable

Cruising range:
- Light - 702 nautical miles (1300 km)
- Loaded - Tow rope pull:

<table>
<thead>
<tr>
<th>Speed (knots)</th>
<th>Pull (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (0 km/hr.)</td>
<td>5450 (2472 kg)</td>
</tr>
<tr>
<td>4 (7.4 km/hr.)</td>
<td>4500 (2041 kg)</td>
</tr>
<tr>
<td>5 (9.3 km/hr.)</td>
<td>4225 (1916 kg)</td>
</tr>
<tr>
<td>6 (11.1 km/hr.)</td>
<td>3800 (1724 kg)</td>
</tr>
<tr>
<td>7 (13 km/hr.)</td>
<td>3060 (1388 kg)</td>
</tr>
</tbody>
</table>

Main propulsion engine:
- Number - 1
- Type - diesel
- Horsepower - 200 bhp @ 900 rpm
- Fuel consumption - 10.25 gal. (38.8 L) per hour

Propeller:
- Number - 1
- Description - 44 in. (1.1 m) diameter, 36 i. (92 cm) pitch

Generator, min vessel service:
- Number - 1
- Current - dc
- Output - 2 kw
- Voltage - 120
Engine:
   Number - 1
   Type of drive - diesel
   Horsepower - 10 hp  1,200rpm

Hull and Accommodations Data:

Construction- Steel
   Overall length - 45 ft.  2-1/4 in.  (13.8 m)
   Beam, molded - 12 ft.  9-3/4 in.  (3.9 m)
   Depth, molded - 7 ft 9-3/8 in.  (2.3 m)
   Displacement:
      Light - 25.2 long tons (25.6 t)
      Loaded - 28.75 long tons (29.2 t)

Draft:
   Light:
      Forward - 3 ft.  6 in.  (1 m)
      Mean - 4 ft.  4 in.  (1.3 m)
      Aft - 5 ft.  1 in.  (1.5 m)
   Loaded:
      Forward - 4 ft.  (1.2 m)
      Mean - 5 ft.  (1.5 m)
      Aft - 6 ft.  2 in.  (1.8 m)

Freeboard, mean:
   Light - 3 ft 6 in.  (1 m)
   Loaded - 2 ft.  10 in.  (86 cm)

Capacity:
   Fuel - 800 gal.  C3028 L)
   Lube oil - 110 gal.  (416 L)
   Potable water - 50 gal.  (189 L)
   Crew accommodations - space for 4 berths

Anchor (1):
   Type - 85 lb (38.6 kg) "Danforth" Mark II

Anchor chain (1):
   Type - 25 fathoms (45.7 m), 3/8 in.  (9.5 mm ) BBB (cit9ed ink)

Safety Equipment:

Firefighting equipment:
   One 75 lb (34 kg) CO2 cylinder
   Three 15 lb (6.8 kg) CO2 extinguishers
   One 5  b (2.3 kg) C2 extinguishers
   One 2-1/2 gal.  (9.5 L) soda-acid extinguisher
   One fire pump, 50 gal.  p  min.  at 100 psi (189 la min at 7 kgcm2)

Lifeboat (1) - Type - 5-person, balsa

3-64
Tug, 200 hp, Design 320 (Sheet 1 of 2)

3-65
Inboard Profile

Tug, 200 hp, Design 320 (Sheet 2 of 2)

3-66
PURPOSE: To tow drive-on, drive-off barges.

TRANSPORTABILITY:

ADMINISTRATIVE INFORMATION

DESIGNATION- ST
NSN - 1925-00-651-5685
LIN - 70772
COST - $40,100 (June 1993)
Type classification - STD-A

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed - 12 knots
Main propulsion engines:
  Number - 2
  Type - diesel
  Horsepower - 450 shaft
Fuel consumption - 10.25 gal. (38.8 L) per hour
Propellers:
  Numbers - 2
  Description - Bronze, 38in. (97 cm) diameter, 28 in. (71 cm) pitch
Generator, main vessel service:
  Number 1
  Current - dc
  Output - 2 kw
  Voltage - 120
Engine:
  Number - 1
  Type of drive - diesel
  Horsepower - 10 hp 1,200 rpm

Hull and Accommodations Data:
Construction - Steel
  Overall length - 50 ft (15.3 m)
  Beam, molded - 13 ft. 4 in. (4 m)
  Depth - 3ft 8 in. (1. m)
Capacity:
  Fuel - 1,280 gal. (4,845 L)
  Anchor - 65 b (29.5 kg)
Tug, River, 50 ft., Shallow Draft, Design 3013

3-68
TUG, LARGE, INLAND AND COASTAL - 128 ft.

PURPOSE: This large tug (LT) is used for coastal and ocean towing and docking and undocking operations with large ocean vessels.

TRANSPORTABILITY:

ADMINISTRATIVE INFORMATION

DESIGNATION - LT
NSN - 1925-01-247-7 110
LIN - T68330
COST - $1,250,000 (June 1993)
CTA - 50-909
Type classification - Standard 7/13/87
Specification No. - Circular of requirements (COR) Army Large Tug (LT) 20 January 1987

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
- Light - 13.5 knot (25 km/hr)
- Loaded - 12 knots (22 km/hr)

Cruising range:
- Light - 5000 nautical miles (9,265 km)

Main propulsion engines:
- Number - 2
- Type - EMID 645F7B
- Horsepower - 2550 bhp @ 900 rpm

Bollard pull - 58 LT

Fuel consumption - 168 gal. (636 L) per hour

Propellers:
- Number - 2
- Description - Bronze, fixed pitch, 11 ft. (3.4 m) diameter

Generators:
- Number - 2 3408 0-TA-JW
- Current - ac
- Output - 275 kw
- Voltage - 120

Engines:
- Number - 2
- Type of drive - diesel - Caterpillar

3-69
Hull and Accommodations Data:

Construction -
  Overall length - 128 ft. 4 in. (39 m)
  Beam, molded - 36 ft. (11 m)
  Depth, molded - 10 ft 10 in. (3.3 m)

Displacement:
  Light - 786 long tons (799 t)
  Loaded - 1057 long tons (1074 t)

Draft:
  Light:
    Aft - 14 ft. 4 in. (.4 m)
  Loaded:
    Aft - 16 ft. 10 in. (.1 m)

Freeboard, mean:
  Light - 5 ft. 10 in. (1.8 m)
  Loaded - 3 ft. (92 cm)

Capacity:
  Fuel - 68,478 gal. (259,189 L)
  Lube oil - 2495 gal. (9,444 L)
  Sea water ballast:
    Aft peak - 21,272 gal. (80,515 L)
  Crew accommodations --5 officers, 15 crew

Anchors (2):
  Type - 85 lb (38.6 kg) "Danforth" Mark N

Safety Equipment:
  Firefighting equipment:
    Aurora 413 2 x 2-1/2 x 9

Lifeboats
  Number - 2
  Type - 25 man
Inland and Coastal Large Tug - 128 ft.

3-71
PURPOSE: Used as an anchor handling vessel, tug, and supply vessel.

TRANSPORTABILITY:

ADMINISTRATIVE INFORMATION

DESIGNATION -
NSN - 1925-01-323-2586
LIN- N/A
COST - $250,000 (June 1993)

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
   About 15 knots (28 km/hr)
Main propulsion engines:
   Number - 2
   Type - 2430 bhp Alpha diesel, 18V 23HV,
   Horsepower - 5000 bhp @ 2500 rpm
Tug, Anchor Handling / Tug Supply Vessel

3-73
Section III. LANDING CRAFT

3-74
LANDING CRAFT, MECHANIZED, 73 FT 8 IN., LCM-8, MOD-0

PURPOSE: Transport cargo, troops and vehicles from ship-to-shore, shore-to-shore, or in retrograde movements. May be utilized for lighterage and utility work in harbors.
TRANSPORTABILITY: Can be carried to overseas destination as deck cargo aboard large vessels.

ADMINISTRATIVE INFORMATION

DESIGNATION - LCM MARK VIII, MOD 0
NSN- 1905-00-267-1097
LIN - T68330
COST - $174,650 (May 1992)
TA - 50-941
Type classification - STD-A
Specification - Navy

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
- Light - 11 knots (20.4 km/hr)
- Loaded - 9 knots (16.7 km/hr)

Cruising range:
- Light - 332 nautical miles (615 km)
- Loaded - 271 nautical miles (502 km)

Main propulsion engines:
- Number - 2, twin bank engines
- Type - diesel
- Horsepower - 300 bhp @ 1800 rpm each bank

Fuel consumption - 21.5 gal. (81.4 L) per hour

Propellers:
- Number - 2
- Description - Manganese bronze, 3-blade, 34 in. (86 cm) diameter, 24 in. (61 cm) pitch

Generators, battery charging:

NOTE

Some LCM-8s have 70 amp alternators. All 28.5 vdc generators are to be replaced by the alternator.
- Number - 2
- Current - d
- Output - 500 watts
- Voltage - 28.5
- Type of drive - belt - main engine

3-75
Hull and Accommodations Data:

Construction - Steel

Overall length - 73 t. 8 in. (22.5 m)
Beam, overall - 20 ft. 11-3/4 in. (6.4 m)
Depth, molded - 9 ft 5 in. (2.9 m)

Displacement:
Light - 57.8 long tons (58.7 t)
Loaded - 111.4 long tons (113.2 t)

Draft:
Light:
Forward - 3 ft. (92 cm)
Mean - 3 ft. 3 in. (1 m)
Aft - 3 ft. 6 in. (1.1 m)

Loaded:
Mean - 4 ft. 6 in. (1.4 m)

Freeboard, mean:
Light - 6 ft. 1 in. (1.8 m)
Loaded - 5 ft. 4 in. (1.6 m)

Capacity:
Fuel - 684 g. (3272 L)
Cargo - 53.5 long tons (54.4 t)

Cargo space:
Length - 42 ft 9 in. (13 m)
Width - 14 ft. 6 in. (.4 m)
Height - 4 ft. 3 in. (1.4 m)

Ramp opening - 14 ft. 6 in. (4.4 m)
Passengers - 200, combat-equipped
Crew - 5

Anchor:
Number - 1
Type - 70 lb (34 kg) "Danforth" Mark IT

Anchor line:
Number - 1
Type - 75 fathoms 137.2 m), 3 in. (8 cm) circumference nylon

Safety Equipment:
Firefighting equipment:
Four 15 lb (6.8 kg) C2 extinguishers
LANDING CRAFT, MECHANIZED, 74 FT., LCM-8, MOD-1

PURPOSE: Transport cargo, troops and vehicles from ship-to-shore, shore-to-shore, or in retrograde movement. May be utilized for lighterage and utility work in harbors.
TRANSPORTABILITY: Can be carried to overseas destination as deck cargo aboard large vessels.

ADMINISTRATIVE INFORMATION

DESIGNATION - LCM MARK VIII, MOD 1
NSN- 1905-00-935-6057
LIN - T36739
COST - $162,612 (May 1992)
TA - 50-941
Type classification - STD-A
Specification - Navy

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
  Light - 11 knots (20.4 km/hr)
  Loaded - 9 knots (16.7 km/hr)
Cruising range:
  Light - 332 nautical miles (615 km)
  Loaded - 271 nautical miles (502 km)
Main propulsion engines:
  Number - 2, twin bank engines
  Type - diesel
  Horsepower - 300 bhp @1800 rpm each bank
Starting:
  Two - 24 vdc electric
  Two hydraulic (3000 psi)
Fuel consumption - 21.5 gal. (81.4 L) per hour
Propellers:
  Number - 2
  Description - Manganese bronze, 3-blade, 34in (86 cm) diameter, 24 in. (61 cm) pitch
Alternators
  Number - 2
  Current - ac rectified to dc
  Output - 70 amps
  Voltage - 24
  Type of drive - belt - main engine
Hull and Accommodations Data:
Construction Steel
  Overall length - 74 ft. (22.6 m)
  Beam, overall - 21 ft. 0-5/8 in. (6.4 m)
  Depth, molded - 9 ft 5 in. (2.8 m)
  Displacement:
    Light - 57.8 long tons (58.7 t)
    Loaded - 111.4 long tons (113.2 t)
  Draft:
    Light:
      Mean - 4 ft 6 in. (1 m)
    Loaded:
      Mean - 5 ft 3 in. (1.6 m)
  Freeboard, mean:
    Light - 6 ft 1 in. (1.8 m)
    Loaded - 5 ft 4 in. (1.6 m)
Capacity:
  Fuel - 684 gal. (3272 L)
  Cargo - 53.5 long tons (54.4 t)
Cargo space:
  Length - 42 ft. 9 in. (13 m)
  Width - 14 ft. 6 in. (4.4 m)
  Height - 4 ft. 3 in. (1.4 m)
Ramp opening - 14 ft. 6 in. (4.4 m)
Passengers - 200, combat-equipped
Crew - 5
Anchor:
  Number - 1
  Type - 70 lb (34 kg) "Danforth" Mark II
Anchor line:
  Number - 1
  Type - 75 fathoms 137.2 m), 3 in. (8 cm) circumference nylon
Safety Equipment:
  Firefighting equipment:
    Four 15 lb (6.8 kg) C02 extinguishers
LANDING CRAFT, MECHANIZED, 74 FT (22 SSN), LCM-8, MOD-1 (SLEP)

PURPOSE: Transport cargo, troops and vehicles from ship-to-shore, shore-to-shore, or in retrograde movement. May be utilized for lighterage and utility work in harbors. (SLEP)

TRANSPORTABILITY: Can be carried to overseas destination as deck cargo aboard large vessels.

ADMINISTRATIVE INFORMATION

DESIGNATION - LCM MARK VIII, MOD 1
NSN- 1905-01-284-247
COST - $162,612 (May 1992)
TA - 50-941
Type classification - STD-A
Specification - Navy

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
- Loaded - 9 knots (16.7 km/hr)
Cruising range:
- Loaded - 271 nautical miles (502 km)
Main propulsion engines:
- Number - 2
  - Type - diesel, 2 cycle, (V127 1)
  - Horsepower - 400 shaft horsepower @ 2100 rpm each engine
Starting:
  - Two - 24 vdc electric
  - Two hydraulic (3000 psi)
Fuel consumption - 26 gal. (98 L) per hour
Propellers:
- Number - 2
  - Description - Manganese bronze, 3-blade, 34 in. (86 cm) diameter, 24 in. (61 cm) pitch
Alternators
- Number - 2
  - Current - ac rectified to dc
  - Output - 70 amps
  - Voltage2- 24
Type of drive - belt - main engine
Hull and Accommodations Data:
Construction - Steel
  Overall length - 74 ft. (22.6 m)
  Beam, overall - 21 ft. 0-5/8 in. (6.4 m)
  Depth, molded - 9 ft 5 in. (2.8 m)
Displacement:
  Light - 58.8 long tons (59.8 t)
  Loaded - 116 long tons (118 t)
Draft:
  Loaded:
    Mean - 4 ft. 6 in. (1.4 m)
  Freeboard, mean:
    Loaded - 4 ft. 10 in. (1.5 m)
Capacity:
  Fuel - 684 g. (3272 L)
  Cargo - 53.5 long tons (54.4 t)
Cargo space:
  Length - 42 ft. 9 in. (13 m)
  Width - 14 ft. 6 in. (4.4 m)
  Height - 4 ft. 3 in. (1.4 m)
Ramp opening - 14 ft. 6 in. (4.4 m)
Passengers - 200, combat-equipped
Crew - 6
Anchor:
  Number - 1
  Type - 70 lb (34 kg) "Danforth" Mark II
Anchor line:
  Number - 1
  Type - 75 fathoms 137.2 m), 3 in (8 cm) circumference nylon
Safety Equipment:
  Firefighting equipment:
    Four 15 lb (6.8 kg) CO₂ extinguishers
Landing Craft, Mechanized, 74 ft., LCM-8 (Sheet 1 of 2)
LANDING CRAFT, UTILITY, 135 FT. (41 M), LCU-1667 & 1671 CLASS

PURPOSE: To transport cargo, troops and vehicles from ship-to-shore, shore-to-shore, or in retrograde movements. May be utilized for lighterage and utility work in harbors.

TRANSPORTABILITY: Can be deck-loaded on LS, commercial bulk carriers, heavy lift ships, or carried in the well deck of an LSD. Under ideal conditions, it can operate under its own power for limited distances.

ADMINISTRATIVE INFORMATION

DESIGNATION - LCU 1600
NSN - LCU 1667 Class - 1905-00-168-5764
- LCU 1671 Class - 1905-01-009-1056
LIN - L36876
COST - LCU 1667 Class - $1,390,625 (June 1993)
- LCU 1671 Class - $1,30,000 (June 1993)
CTA - 50-909
Type classification - STD-A
Specification - Navy

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:
Speed:
  Light - 11 knots (20.4 km/hr)
  Loaded - 11 knots (20.4 km/hr)
Cruising range:
  Light - 1200 nautical miles (2222 km)
  Loaded - 1200 nautical miles (2222 km)
Main propulsion engines:
  Number - 2
  Type - 2 cycle diesel, (7122-7000) (12V71)
  Horsepower - 425 shaft horsepower @ 2300 rpm (each engine)
Fuel consumption - 26 gal. (98.4 L) per hour
Propellers:
  Number - 2 - One right-hand and one left-hand
  Description - Manganese bronze, 4-blade, 48 in. (1.2 m) diameter, 42 in. (1 m) pitch, 395 lbs. (179 kg)
Generators:
  Number - 2
  Current - ac
  Output - 40 kw
  Voltage - 420C25 V
  Type drive - diesel (1033-7005)
  Horsepower - 86 @ 1800 rpm

3-83
Hull and Accommodations Data:

Construction - Steel
- Overall length: 135 ft. 1-5/16 in. (41.2 m)
- Length between perpendiculars: 134 ft. (4.8 m)
- Beam, molded: 29 ft. 9-1/8 in. (.1 m)
- Depth, molded to vehicle deck (No camber, no sheer): 8 ft (2.4 m)

Displacement:
- Light: 204.7 long tons (207.9 t)
- Loaded: 390 long tons (396.2 t)
- Landing condition: 375.7 long tons (381.7 t)

Draft:
- Light: (Above bottom of keel at perpendiculars)
  - Forward: 3 ft. 6 in. (1.1 m)
  - Mean: 4 ft. 6 in. (1.4 m)
  - Aft: 5 ft. 6 in. (1.7 m)
- Loaded: (Above bottom of keel at perpendiculars)
  - Forward: 3 ft. 11-3/4 in. (1.2 m)
  - Mean: 6 ft. 7-12 in. (2 m)
  - Aft: 6 ft. 7-1/2 in. (2 m)

Capacity:
- Fuel: (95% full) 3290 ga. (12,453 L)
- Potable water: 3598 ga. (13,618 L)
- Lube oil: 199 gal. (753 L)
- Sewage holding tank: 500 ga. (1893 L)
- Cargo - Bulk: 184 long tons (187 t)

Cargo space:
- Length: 105 ft. (32 m)
- Width: (at narrowest point) 17 ft. (5.1 m)

Ramp opening:
- Bow: 15 ft. 1 in. (4.6 m)
- Stern gate: 19 ft. (5.8 m)

Crew:
- Enlisted men: 12
- Officers: 2

Anchors:
- Number: 2 (One spare)
- Type: 1500 lb (681 kg) “Danforth” stern

Anchor cable:
- Number: 1
- Type: 150 fathoms (274.3 m), 1-1/4 in. (32 cm), 6 ft X 37 ft. (1.8 m x 11.3 m) improved plow steel
Anchor winch:
  Number - 1
  Winch speed range - 9 ft. per minute @ 35,000 lbs. (4,830 m/kg) torque
  Type drive - diesel thru torque converter
    Engine - 2 cycle diesel (1044-7000)
    Horsepower - 115 @ 1800 rpm
Safety Equipment:
  Firefighting equipment:
    Twelve 2-34 lb (1.2 kg) portable dry chemical type
    For 20 lb (9.1 kg) portable dry chemical type
    Fixed Halon system, (6 lbs. (31.3 kg) p bottle):
      fwd engine room - 2
      aft engine room - 2
      flammable liquid store room - 1
    Foam liquid in cans - 12
    Portable gasoline engine driven pump - 1
    Fire pump, electric driven (440 vac, 30 hp) 125 psi (8.8 kg/cm²) discharge - 2
  Liferaft, inflatable, 15-man - 2

3-85
Landing Craft, Utility, 135 ft., LCU-1667 & -1671 Class

3-86
PURPOSE: The LCU is designed to transport cargo from ships off-shore to shore and to transport cargo to areas that cannot be reached by ocean go vessels. The LCU can carry rolling stock (trucks, tanks, and other vehicles) and dry cargo. The vessel can operate in coastal waters and on the open ocean. It can beach and retract itself on remote coastlines and undeveloped port areas. Because of its shallow draft, the LCU can carry cargo from deep drafted ships to shore in ports or areas too shallow for larger ships. The LCU is also capable of deploying overseas under its own power.

TRANSPORTABILITY: Can be deck-loaded on LS, commercial bulk carriers, heavy lift ships, or carried in the well deck of an LSD. Can be deployed to overseas destinations under its own power.

ADMINISTRATIVE INFORMATION

DESIGNATION - LCU 2000
NSN- 1905-01-154-1191
LIN - L36989
COST - $5,000,000 (May 1992)
CTA - 50-909
Type classification - STD-A
Specification - Navy

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Speed:
- Light - 12 knots (km/hr)
- Loaded - 10 knots (km/hr)

Cruising range - 4500 nautical miles (km)

Main propulsion engines:
- Number - 2
- Type - turbo charged diesel, Cummins V16
- Horsepower - 1250 (each engine)

Fuel consumption - 26 gal. (98.4 L) per hour

Propellers:
- Number - 2

Generators:
- Number - 3
- Current - 60 Hz
- Output - 250 kw (2), and 40kw (1)
- Voltage - 240 Vac
- Type drive - diesel engine driven
Hull and Accommodations Data:

Construction - Steel
  Overall length - 174 ft. (53 m)
  Beam - 42 ft. (12.8 m)
Displacement:
  Light - 575 long tons (584 t)
  Loaded - 1,087 long tons (1,104 t)
Draft:
  Mean - 8 t. (2.4 m)
  Loaded - 8.85 ft. (2.7 m)

Capacity:
  Fuel - 92244 gal. (349,144 L)
  Potable water - 4,618 gal. (17,479 L)
  Lube oil - 444 gal. (1681 L)
  Cargo - Bulk - 350 short tons (356 t)

Cargo space:
  Length - 100 ft. (30.5 m)
  Width - 38 ft. (11.6 m)

Ramp opening:
  Bow - 16 ft. (4.9 m) wide by 22 ft. (6.7 m) long

Crew:
  Enlisted men - 11
  Officers - 2

Anchors - 3
  Type - 2000 lb (kg) "Danforth" (1) and 1700 lb (kg) "Danforth" (2)

Anchor cables - 3
  Type - 6 - 7 shot each

Anchor winch - 3
  Type - elect. drive/hydraulic operated

Safety Equipment:

Firefighting equipment:
  Fire pumps - 3 - select (2) and diesel driven (1)
  Fire stations (hoses water/foam) - 3
  Fixed Halon system, (lbs. (kg) per bottle):
    engine room - 1
    paint locker - 1

Rescue equipment:
  Rescue/work boat - 1
  Liferaft, inflatable, 15-man - 1

3-88
Landing Craft, Utility 174 ft., LCU-2000 Class

3-89
LOGISTIC SUPPORT VESSEL (LSV)

PURPOSE: The LCU is designed to transport DRY cargo in ocean, coastal, and inland waters.
TRANSPORTABILITY: Can be deployed to overseas destinations under its own power.

ADMINISTRATIVE INFORMATION

DESIGNATION - LSV
NSN - 1915-01-153-8801
LIN - V00426
COST - $10,000,000 (June 1993)
CTA - 50-909
Type classification - STD-A
Specification - ARMY (NDI)

PRINCIPAL CHARACTERISTICS
MOBILITY AND ENGINE DATA:
Speed:
  Light - 11.6 knot (249 km/hr)
  Loaded - 12 knots (22 km/hr)
Cruising range:
  Design - 5500 nautical miles (10,192 km)
  Maximum - 8,350 nautical miles (15,473 km)
Main propulsion engines:
  Number - 2
  Type - V16 (DTA) diesel engines(EMD) 16-645E6
Propellers:
  Number - 2
Generators (Ship Service):
  Number - 2
  Current - 60 Hz
  Output - 250 kw
  Voltage - 440 Vac
  Type drive - diesel engine driven
Generators, Emergency:
  Number - 1
  Current - 60 Hz, 3 phase
  Output - 90 kw
  Voltage - 440 Vac
  Type drive - diesel engine driven
Hull and Accommodations Data:
Construction - Steel
   Overall length - 272.75 ft. (83.2 m)
   Length between perpendicul ars - 256 ft. (78 m)
   Beam, molded - 60 ft. (18.3 m)
   Depth, molded to vehicle deck 16 ft. 6 in. (5 m)
   Displacement - 4,199 long tons (4,266 t)
Draft:
   Light:  
        Mean - 5.75 ft (1.75 m)
   Loaded:  
        Mean - 12 ft. (3.7 m)

Capacity:
   Fuel - 167,680 gal. (634,669 L)
   Potable water - 33,000 gal. (124,905 L)
   Cargo - Bulk - 2000 short tons (2032 t)

Cargo space - 10,684 sq. ft. (994 sq. m)

Ramp opening:
   Bow - 26 ft. (.9 m) wide

Crew:
   Enlisted men - 23
   Officers - 6

Anchors - 3
   Type - 4,369 lb (kg) "Danforth" stem

Anchor cables - 3
   Type - drum with 1200 ft. wire rope (stem)

Anchor winch - 3
   Type drive - hydraulically powered

Safety Equipment:
   Firefighting equipment:
      Fire pumps, electric driven - 2; portable gasoline engine driven pumps - 2
      Fire stations (hoses water/foam) - 3
      Fixed Halon system, (lbs. (kg) per bottle):  
         gen. room - 1; fwd engine room - 1; aft engine room - 1
         bow thruster room - 1; flammable liquid storeroom - 1
      Foam quid/water fire stations - 5

Rescue equipment:
   Rescue/work boat - 1
   Liferaft, inflatable, 25-man - 4
Logistics Support Vessel (LSV)

3-92
Section IV. AMPHIBIOUS LIGHTERS

3-93
Lighter, Amphibious, Self-propelled, Diesel, 60-Ton, LARC-LX, Design 2303

PURPOSE: To transport wheeled and tacked vehicles and general cargo from ship to beach and inland transfer points.

TRANSPORTABILITY: Can be deck-loaded on a larger vessel or carried in the well deck of an LSD for transportation to overseas destinations.

ADMINISTRATIVE INFORMATION

DESIGNATION - LARC
NSN - 1930-00-392-2981
LIN - L67508
COST - $390,000 (June 1993)
CTA - 50-909
Type classification - STD-A
Specification - MIL-L-58017

PRINCIPAL CHARACTERISTICS

MOBILITY AND ENGINE DATA:

Land Operation:
- Forward speed, empty - 15.2 miles/hr (24.5 km/hr)
- 60-ton (61 t) load - 14 miles/hr (22.5 km/hr)
- 100-ton (101.6 t) load - 12.75 miles/hr (20.5 km/hr)
- Reverse speed - 60-ton (61 t) load - 5 miles/hr (8 km/hr)

Water Operation:
- Forward speed, empty - 6.52 knots (12.1 km/hr)
- 60-ton (61 t) load - 6.08 knots (11.3 km/hr)
- 100-ton (101.6 t) load - 5.65 knots (10.5 km/hr)

Cruising range with 60-ton (61 t) load:
- Land - 150 statute miles (241.4 km)
- Water - 75 nautical miles (138.9 km)

Gradability - 40 percent

Turing radius (on land) (minimum) - 75 ft. (22.8 m)

Ground clearance, with 60-ton (61 t) load:
- To bottom plating - 2 ft. 11 in. (89 cm)
- To base of wheel column - 2 ft. 1/2 in. (62.2 cm)

Tires (4):
- Weight - 3000 lbs. (1362 kg) each
- Type - tubeless, 48 ply, nylon
- Diameter - 9.5 ft. (2.8 m)

Freeboard:
- Light:
  - Forward - 7 ft. (2.1 m)
  - Aft - 5 ft. 9 in. (1.7 m)
Loaded - 60-ton (61 t):
  Forward - 5 ft. (1.5 m)
  Aft - 4 ft. 6 in. (1.3 m)

Capacity:
  Fuel - 600 gal. (2271 L)
  Hydraulic oil - 300 gal. (1135.5 L)
  Lube oil - 60 g. (227 L)
  Air, main and start - 21.4 cu. ft. (total) 150 psi (.6 cu. m (total) 10.5 kg/m)

Cargo:
  Normal - 60 short tons (54.4 t)
  Emergency - 100 short tons (90.7 t)

Personnel:
  Passengers:
    Normal - 125
    Emergency - 200
  Crew - 4

Cargo space:
  Length (frame 3 to frame 14, plus 1 ft. 3/8 in. (31.4 cm)) - 37 ft. 5/8 in. (11.2 m)
  Width:
    Between battens - 13 ft. 8 in. (4.1 m)
    Without battens - 14 ft. (4.2 m)
  Height:
    Forward - 6 ft. 4 in. (19 m)
    Aft - 4 ft. 6-1/2 in. (1.3 m)
  Cubage (to deck level) - approximately 2,800 cu. ft. (78.4 cu. m)

Ramp opening, width - 14.5 ft. (4.3 m)

Anchor:
  Hulls 5 through 18 - 70 lb (31.7 kg) "Danforth"
  Hulls 10 through 48 - 70 lb (31.7 kg) "Danforth"

Anchor line (1):
  Type - 380 ft. (115.8 m) of 5/8 in. (16 mm) wire

Anchor winch (1):
  Line pull - 23,000 lbs. (10,442 kg)

Safety Equipment:
  Firefighting equipment:
    Two 15 lb (6.8 kg) CO2 extinguishers
    One 5 lb (2.3 kg) CO2 extinguisher
  Liferaft (1):
    Type - 7 person, inflatable

Wheels - four, each with independent drive
  Weight of wheel and rim assembly - 2,675 lbs. (1,214 kg)
Wheel track (front and re) - 23.5 ft. (7.1 m)
Wheelbase - 28.5 ft. (8.6 m)

Starting - power steering all wheels, selective front and rear

Main propulsion engines (4):
  Type - diesel
  Horsepower - 165 hp @ 2,100 rpm each

Fuel consumption - 38 gal. (143 L) per hour

Propellers (2):
  Description - Manganese bronze, 4 blade, 48 in. (1.2 m) diameter, 30 in. (76.2 cm) pitch

Generators (2):
  Current - dc
  Windings - shunt
  Volts - 24
  Amps - 40
  Rotation - clockwise
  Type of dive - bet

Hull and Accommodations Data:

Construction - Steel

Length:
  Overall - 62 ft. 6-11/16 in. (19 m)
  Waterline with 60 ton load - 57 ft. 7 in. (17.5 m)

Width:
  Overall - 26 ft. 7 in. (8.1 m)
  Waterline - 25 ft. 9 in. (7.8 m)

Height:
  Overall - 19 ft. 5 in. (5.9 m)
  Reduced for shipping - 15 ft. 4 in. (4.6 m)

Weight:
  Dry - 194,000 lbs. (88,076 kg)
  Curb - 197,000 lbs. (89,438 kg)

Displacement, light - 87,956 long tons (89.4 t)

Draft (to bottom of wheels):
  Light:
    Forward - 6 ft. 2 in. (1.8 m)
    Mean - 6 ft. 8 in. (2 m)
    Aft - 7 ft. 5 in. (2.2 m)
  Loaded - 60 tons (61 t):
    Forward - 8 ft. 2 in. (2.5 m)
    Mean - 8 ft. 5 in. (2.5 m)
    Aft - 8 ft. 8 in. (2.6 m)
Lighter, Amphibious, Self-propelled, Diesel, 60Ton, LARLX, Design 03

3-97
Section V. CAUSEWAY SYSTEMS

3-98
PURPOSE: The RO/RO Discharge Platform Assembly is comprised of a floating platform, one platform fendering system, and one off-loading ramp. The RO/RO platform provides a means of off loading rolling stock from container shipping and to operate in a back-loading operation. The transportable ramp interfaces with the container ships and the platform. Two Side Loadable Warping Tugs are required to place and retrieve anchors.

TRANSPORTABILITY: Can be carried to overseas destinations assembled deck cargo.

ADMINISTRATIVE INFORMATION

DESIGNATION - RO-RO
NSN - 1945-01-219-2109
LIN - C14572
COST - $1,900,000 (June 1993)
Type classification - STD-A

PRINCIPAL CHARACTERISTICS

Construction - Steel

Causeway Section, Intermediate
  Number - 6
  Length - 80 ft. (24.4 m)
  Width - 24 ft. (7.3 m)
  Depth - 4 ft. (1.4 m)

Causeway, Combination Beach End and Sea End
  Number - 1
  Length - 85 ft. (26 m)
  Width - 24 ft. (7.3 m)
  Depth - 4.5 ft. (1.4 m)

Ramp, Calm Water
  Number - 1
  Length - 120 ft. (37 m)

RO/RO to Ship Fendering System
  Number - 1

Generator Sets - (2):
  Type - Diesel (MIL-STD-G-5289/2)
  Output - 10 kw

Safety Equipment:
  Firefighting equipment:
    One 15 lb. CO2 fire extinguisher
  Lifeboat:
    Number - 1
    Capacity - 5 man, Zodiak, Mk 1GT
    Outboard motor - 15 hp, OMC
Roll On / Roll Off Discharge Facility (RO/RO)

3-100
FLOATING CAUSEWAY SYSTEM

PURPOSE: Provides an in-the-water temporary pier to which Army Lighterage may directly discharge rolling stock in undeveloped beach areas. Used in conjunction with SLWT.

TRANSPORTABILITY: ISO compatible and certified for air delivery.

ADMINISTRATIVE INFORMATION
DESIGNATION - FC
NSN - 1945-01-218-7268
LIN - C14504
COST - $3,000,000 (June 1993)
Type classification - STD-B

PRINCIPAL CHARACTERISTICS

Construction - See:
   Length, overall - 1530 ft. (467 m)
   Beam, molded - 24 ft. (7.3 m)
   Depth, molded - 4.5 ft. (1.4 m)

Intermediate Sections:
   Number - 15
   Length - 80 ft. (24.4 m)
   Width - 24 ft. (7.3 m)
   Depth - 4.5 ft. (1.4 m)

Combination Beach End and Sea End Sections:
   Number - 1
   Length - 85 ft. 6 m)
   Width - 24 ft. (7.3 m)
   Depth - 4.5 ft. (1.4 m)

On-shore Mooring System:

On-shore Mooring Leg consists of the following components:
   4 ea. Snatch Block
   4 ea. 1" Master Link
   16 ea. Navmoor Anchor, 1000 lb.
   4 ea. Grip-hoist
   8 ea. 15' by 5/8" Wire Rope
   4 ea. 10' by 5/8" Wire Rope
   12 ea. 5' by 5/8" We Rope
   16 ea. 1-1/4" by 5" ID Ring
   32 ea. 1/2" Connecting Link
   16 ea. 1/2" by 16' Link Chain
   36 ea. 1" Anchor Shackle, Bolt Type
Off-shore Mooring Leg consists of the following components:

<table>
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<tr>
<th>Quantity</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 ea.</td>
<td>1&quot; Anchor Shackle, Bolt Type</td>
</tr>
<tr>
<td>192 ea.</td>
<td>3&quot; Detachable Connecting Link</td>
</tr>
<tr>
<td>192 ea.</td>
<td>1&quot; by 10' Stud Link Chain</td>
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<tr>
<td>144 ea.</td>
<td>24 &quot;Buoy</td>
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<tr>
<td>576 ea</td>
<td>15' by 1-1/4&quot; Wire Rope</td>
</tr>
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<td>288 ea.</td>
<td>150' by 1-1/4&quot; Wire Rope</td>
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<td>1632 ea.</td>
<td>1-1/2&quot; Anchor Shackle, Bolt Type</td>
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<tr>
<td>24 ea.</td>
<td>Navmoor Anchor, 2400 lb.</td>
</tr>
</tbody>
</table>

3-102
Floating Causeway System

3-103
MODULAR CAUSEWAY SECTION

PURPOSE: Provides an in-the-water temporary pier to which Army Lighterage may directly discharge rolling stock in undeveloped beach areas. Used in conjunction with SLWT.

TRANSPORTABILITY: ISO compatible and certified for air delivery.

ADMINISTRATIVE INFORMATION

DESIGNATION - MCS
NSN - 1945-01-276-3644
LIN- N/A
COST - $318,920 (June 1993)
Type classification - STD-B

PRINCIPAL CHARACTERISTICS

Hull and accommodations data
Construction - Steel
- Length, overall - 80 ft. (24.4 m)
- Beam, molded - 24 ft. (7.3 m)
- Depth, molded - 4.5 ft. (1.4 m)
Modular Causeway Section

3-105
SIDE LOADABLE WARPING TUG (SLWT)

PURPOSE: The Side Loadable Warping Tug (SLWT) consists of two each complete waterjet propulsion systems (one each port and one each starboard propulsion modules with a center service module. The propulsion and service modules are connected to a pontoon structure ten units long by three units wide and is equipped with a deck mounted winch, an "A" frame and a set anchor. The SLWT will perform near shore amphibious landing operations. It will set and remove anchors, position and tender causeway and associated equipment.

TRANSPORTABILITY: Can be deck-loaded on larger vessels for transportation to oversee destinations.

ADMINISTRATIVE INFORMATION

DESIGNATION - SLWT
NSN - 1945-01-218-4669
LIN - W41707
COST - $1,200,000 (June 1993)
Type classification - STD-A

PRINCIPAL CHARACTERISTICS

Hull and accommodations data
Construction - Steel
   Length, overall - 85 ft. (26 m)
   Beam, molded - 21 ft. (6.4 m)
   Depth, molded - 5 ft. (1.5 m)
Weight- 205,000 lbs. (93,070 kg)
Crew - 6

Main propulsion engine:
   Number -2
   Type - GM8V71TI diesel
   Horsepower - 450
   Fuel consumption - 23 gal. per hour

Propulsion unit:
   Number- 2
   Type - Hydrojet 30,000 gpm

Capacity:
   Fuel - 600 gal. 2,271 L
Cruising range - 10 hours @ 2100 rpm.
Firefighting equipment - Three 50 lb. (22.7 kg) CO2 modules
Side Lodable Warping Tug (SLWT)

3-107/(3-108 blank)
APPENDIX A
REFERENCES

1. Army Regulations (AR)
   AR 55-19   Marine Casualties
   AR 56-9   Water Craft
   AR 310-25 Dictionary of United States Army Terms
   AR 310-50 Authorized Abbreviations and Brevity Codes
   AR 715-15 Implementing Procedures for Army Single Department
   Procurement Assignments
   AR 750-1 Maintenance Concepts

2. Field Manuals (FM)
   FM 429-39 Marine Equipment Maintenance in the Army in the Field
   FM 55-15 Transportation Reference Data

3. Technical Manuals (TM)
   DA PAM 738-750 The Army Maintenance Management System
   TM 5-210 Military Floating Bridge Equipment
   TM 5-360 Port Construction and Rehabilitation
   TM 43-0139 Painting Instructions for Army Mate6il
   TM 55-2000-200-L List of Applicable Publications (LOAP) US Army
   Watercraft and Amphibians Excluding Communications
   and Electronic Equipment
   TM 55-375 Military Diving
   TM 55-501 Marine Crewman's Handbook
   TM 55-503 Marine Salvage and Hull Repair
   TM 55-509 Marine Engineman's Handbook
   TM 55-510 Amphibious Lighter Operator's Handbook
   TM 55-511 Operation of Floating Cranes
   TM 746-186 Procedures for Rapid Deployment, Redeployment, and
   Retrograde for Floating Equipment

   **LCM 8**

   TM 55-1905-202-12 Operation and Maintenance of: LCM (8), MOD-O,
   Landing Craft, Mechanized, Diesel, Steel, 69 feet,
   Design LCM (8), MOD-O, NSN 1905-00-267-1097

   TM 55-1905-217-12 Operation and Maintenance of: LCM (8), MOD-1,
   Landing Craft, Mechanized, Diesel, Steel, 69 feet,
   Design LCM (8), MOD-1, NSN 1905-00-935-6057

   A-1
### Landing Craft Utility 1600 Class (LCU-1600)

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<td>LO 55-1905-219-12</td>
<td>Lubrication Order</td>
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<tr>
<td>TM 55-1905-219-10-HR</td>
<td>Hand Receipt</td>
</tr>
<tr>
<td>TM 55-1905-219-14-1</td>
<td>Operator's, Organizational, Direct Support, and General Support Maintenance Manual</td>
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<tr>
<td>TM 55-1905-219-14-2</td>
<td>Operator's Mint., Chapter 2 (Continued)</td>
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<tr>
<td>TM 55-1905-219-14-3</td>
<td>Unit Maint., Chapter 3</td>
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<td>TM 55-1905-219-14-4</td>
<td>Unit Maint., Chapter 3 (Continued)</td>
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<td>TM 55-1905-219-14-5</td>
<td>Unit Maint., Chapter 3 (Continued)</td>
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<td>TM 55-1905-219-14-6</td>
<td>Unit Mint., Chapter 3 (Continued)</td>
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<td>TM 55-1905-219-14-7</td>
<td>Unit Maint., Chapter 3 (Continued)</td>
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<td>TM 55-1905-219-14-8</td>
<td>Chapter 4</td>
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<td>TM 55-1905-219-14-9</td>
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<td>TM 55-1905-219-14-10</td>
<td>Chapter 5 DS Maint.</td>
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<td>TM 55-1905-219-14-11</td>
<td>Chapter 5 DS Mint. (Continued) and Chapter 6 GS Mint.</td>
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<td>TM 55-1905-219-14-12</td>
<td>Appendix A thru F and Index</td>
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<tr>
<td>MWO 55-1905-219-50-1</td>
<td>Misc. Upgrade/Modernization</td>
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### Landing Craft Utility 1600 Class (LCU-600)

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<td>Operator's, Organizational, Direct Support, and General Support Maintenance Manual</td>
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<td>TM 55-1905-220-14-2</td>
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<td>Unit Maint., Chapter 3</td>
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<td>TM 55-1905-220-14-11</td>
<td>Chapter 5 DS Maint. (Continued) and Chapter 6 GS Mint.</td>
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LO 55-1905-223-12  Lubrication Order
TM 55-1905-223-SDC  Shipboard Damage Control
TM 55-1905-223-24-1  Main Propulsion Engine
TM 55-1905-223-24-2  Min Reduction Gear
TM 55-1905-223-24-3  Ship's Service Generator
TM 55-1905-223-24-4  Emergency Generator Set
TM 55-1905-223-24-5  Bowthruster Engine
TM 55-1905-223-24-6  Bowthruster Waterjet
TM 55-1905-223-24-7  Reverse Osmosis Watermaker
TM 55-1905-223-24-8  Nr Compressor
TM 55-1905-223-24-9  Steering Gear System
TM 55-1905-223-24-10  Bow Ramp Assembly
TM 55-1905-223-24-11  Marine Sanitation System
TM 55-1905-223-24-12  Fire Pump Subsystem
TM 55-1905-223-24-13  Bilge/Ballast Pump
TM 55-1905-223-24-14  Gyro and Magnetic Compass Systems
TM 55-1905-223-24-15  Bow Anchor Windlass Subsystem
TM 55-1905-223-24-16  Stern Anchor Winch
TM 55-1905-223-24-17  Environmental Control Subsystem
TM 55-1905-223-24-18-1  Basic Craft (Part I) - Unit Maintenance
TM 55-1905-223-24P-1  Repair Parts and Special Tools List - RPSTL
TM 55-1905-223-24P-2  Repair Parts and Special Tools List - RPSTL
TM 55-1905-223-24P-3  Repair Parts and Special Tools List - RPSTL
TM 55-1905-223-24P-4  Repair Parts and Special Tools List - RPSTL

Logistics Support Vessel (LSV)

LO 55-1915-200-12  Lubrication Order
TM 55-1915-200-SDC  Shipboard Damage Control
TM 55-1915-200-24&P-1  Repair Parts and Special Tools List (RPSTL)
TM 55-1915-200-24&P-2  Repair Parts and Special Tools List (RPSTL)
TM 55-1915-201-24  Main Engine, Model Number 16-645E6
TM 55-1915-201-24P  Main Engine, Model Number 16-645E6- RPSTL
TM 55-1915-202-24&P  Reverse Reduction Gearbox, Model No. WAV 630-2240
TM 55-1915-203-24-1  Generator Set Engine, 250 KW, Model No. 3406-B
TM 55-1915-203-24-2  Generator Set Engine, 250 KW, Model No. 3406-B
TM 55-1915-203-24P  Generator Set Engine, 250 KW, Model No. 3406-B-RPSTL
Generator Set Engine, 90 KW, Model No. 3304-B
Generator Set Engine, 90 KW, Model No. 3304-B - RPSTL
Bow Thruster Engine Set, Model No. 3306-B
Bow Thruster Engine Set, Model No. 3306-B - RPSTL
Bow Thruster, Model No. S-152-L
Water Purification System, Model No. SW-1000 Series IV
Environment Control System
Compressed Air System, Model No. QR-25-350
Electro-Hydraulic Steering System
Bow Anchor Windlass and Bow Ramp Winch System, Model No. FCWH-6
Stern Anchor Winch and Stern Ramp Winch System (Jigger), Model No. HAW-19.0
Magnetic Compass
Marine Sanitation Plant, P/N RF-1500-FP-CBPN-D
Fire Pump System, Model No. 344A-BF
Bilge/Ballast Pump System, Model No. 344A-1 BF/411
Gyrocompass, Model No. MARK 27, MOD 1
Transmission Unit and Power Transfer Units, Model No. MK 37, MOD E
Gyro-Pilot, Model No. SRP 680
Compass Repeaters, Model No. 1976158
Commissary Equipment
Lube Oil/Fuel Oil Purifier, Model No. MAB103B-24
Fire Fighting System, Model No. HALON 1301

**65 Foot Tug**
Organizational Maintenance Manual: Tug, Harbor Diesel, 600 HP Steel, 65-fot, Design 3004

**100 Foot Tug**
Operator and Organizational Maintenance Manual: Tug, Harbor, Diesel, 1,200 HP Steel, 100-Foot, Design 3006, Hull Number LT1936 through LT1977 and LT2202
Organizational Maintenance Manual: Tug, Harbor Diesel, 1,200 HP Steel, 100-Foot, Design 3006, Hull Numbers LT2075 through LT2096
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<td>Shipboard Damage Control</td>
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<tr>
<td>TM 55-1925-207-10-1</td>
<td>Operator Manual</td>
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<tr>
<td>TM 55-1925-207-24&amp;P-1</td>
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**TM 55-1930-202-12**
Operator and Organizational Maintenance Manual: Barge, Deck or Liquid Cargo, Non-Propelled, Steel, 578-Ton or 4,160 BBL, 120-Foot, Design 231B

**LARC-LX**

**TM 55-1930-203-10**
Operator's Manual: Lighter, Amphibious (LARC-LX), Self-Propelled, Diesel, Steel, 60-Ton, 61-Foot, Design 2303, Hulls 5 through 60, NSN 1930-00-392-2981

**60 Ton Crane**

**TM 55-1935-201-12**
Operation and Organizational Maintenance Manual: Crane, Floating, Revolving, 60-Ton Capacity, Design 413 and 413D

**Picket Boat**

**TM 55-1940-201-12**
Operator and Organizational Maintenance Manual: Boat, Picket, Design 4003, Hull Numbers J3741 through J3805

4. Technical Bulletins (TB)

**TB 5-360-1**
Self-Elevating Barge

**TB 5-4200-200-10**
Hand Potable Fire Extinguishers Approved for Army Users

**TB 34-9-62**
Barge, Deck Cargo, Non-propelled, Steel, Sectionalized, Nesting, 81-Foot, Design 7001

**TB 740-97-4**
Preservation of Vessels for Storage

**TB 43-002-26**

**TB 43-002-35**
Maintenance Expenditure Limits (MEL) for FSC Group 22; FSC Classes 2210, 2220, 2230

**TB 43-0117**
Watercraft Electronics Configuration Directory

**TB 43-0140**
Instructions for Preparation of Request for Disposition or Waiver (DA Form 3590) for USA ATCOM Equipment and USA ATCOM, Non-Developmental Item (NDI)

**TB 43-0141**
Safe Handling, Maintenance Storage and Disposal of Radioactive Commodities Managed by U.S. Army Troop Support and Aviation Materiel Readiness Command (Excluding Aircraft Components)

**TB 43-0142**
Safety Inspection and Testing of Lifting Devices

**TB 43-0143**
Handling, Storage, Shipping, and Disposal of Surge Voltage Protector Tubes (Spark Gap Tubes)

**TB 43-0144**
Painting of Watercraft

**TB 43-0153**
Water Supply Afloat

**TB 43-0154**
Maintenance Expenditure Limits (MEL) for Military Standard Engines (Military Design) and Outboard Motor
| TB 55-6-1 | Standard Characteristics (Dimensions, Weight and Cube) for Transportability of Military Vehicles and Equipment |
| TB 55-1900-201-12/1 | Application of Nonslip Walkway Compound; Harbor Tugs |
| TB 55-1900-201-45/1 | Guide to Army Watercraft Survey Inspections, Repair Procedures and Repair Specifications Preparation |
| TB 55-1900-202-12/1 | Watercraft Preventative Maintenance |
| TB 55-1900-202-12-2 | Time Between Overhaul (TBO) for all Maine Engines |
| TB 55-1900-204-24 | Arc Welding on Water-Borne Vessels |
| TB 55-1900-205-24 | Watercraft Information and Reporting System (WIRS) Data Collector for Configuration Control |
| TB 55-1900-206-14 | Control and Abatement of Pollution by Army Watercraft |
| TB 55-1900-207-24 | Treatment of Cooling Water in Maine Diesel Engines |
| TB 55-1900-231-15 | Prepositioned Watercraft: Preservation and Activation Procedures |
| TB 55-1900-232-10 | U.S. army Towing Manual |
| TB 55-1905-202-34/1 | Remote Magnetic Heading System (RMHS) Installation for: Vessel Design LCM-8 MOD-O FSN 1905-00-267-1097 |
| TB 55-1905-202-34/1 | Remote Magnetic Heading System (RMHS) Installation for: Vessel Design LCM-8 MOD-1 FSN 1905-00-95-6057 TB 55S-930-203-12B1 Installation of Ways, Stowing and Launching of BARC (LARC) from Cargo Vessels |
| TB 600-1 | Procedures for Selection, Training, Testing and Qualifying Operators of Equipment Systems, Excluding Selected Watercraft and Aircraft, Managed/Supported by US Army Troop Support and Aviation Materiel Readiness Command Standards for Overseas Shipment |
| TB 750-105 | Army Adopted Items of Material |

5. **Supply Bulletin (SB)**

55-111-H4 Headquarters and Headquarters Company, Transportation Terminal Command C

55-116-H2 Headquarters and Headquarters Detachment Transportation Terminal Battalion

55-117-G Transportation Terminal Service Company

55-118-H7 Transportation Terminal Transfer Company

55-128-G Transportation Medium Boat Company

55-129-G Transportation Heavy Boat Company

55-138 Transportation light Amphibian Company
7. Common Table of Allowances (CTA)

CTA 50-909  Field and Gison Furnishings and Equipment
CTA 50-970  Expendable Items

8. Environmental Protection Publications and Directives

AR 200-1  Environmental Protection and Enhancement
AR 500-60  Disaster Relief
DOD Directive 5100.50  Environmental Control
DOD Directive 5030.41  Implementation, of National Oil and Hazardous Substance Pollution Contingency Plan
Executive Order 11572  Prevention, Control and Abatement of Environmental Pollution at Federal Facilities
CG-123, Sub-chapter D  U.S. Coast Guard Rules and Regulations for Tank Vessels
33 USC 1161, Part 610, Sec. 11 (B)  Federal Water Pollution Control Act
33 USC 1161, Part 610, Sec. 311 J)  Federal Water Pollution Control Act Amendments of 1972
APPENDIX B
INTERRELATIONS OF MEASUREMENTS

LINEAR
1 Inch = 2.54 centimeters (cm)
1 Foot = 0.3048 meter
1 Yard = 0.9144 meter
1 Fathom = 6 Feet (ft)
1 Cable = 720 feet
1 Statute Mile = 5280 feet
 = 0.86897 nautical mile
 = 1.60934 kilometers (km)
1 Nautical Mile = 6076.11549 feet
 = 2025.37183 yards
 = 1.15078 statute mile
 = 1.852 kilometers
1 Meter = 100 centimeters
 = 39.37 inches (in)
 = 3.2808 feet
 = 1.09361 yards
 = 0.5468 fathoms
1 Kilometer = 3280.8399 feet
 = 1093.6133 yards
 = 0.062137 statute mile
 = 0.53996 nautical mile
 = 1000 meters

SURFACE AREA
1 Square Inch = 0.006944 square feet (ft²)
 = 6.452 square centimeters (cm²)
 = 0.000645 square meter (m²)
1 Square Foot = 144 square inches (in²)
 = 0.11111 square yard (yd²)
 = 0.0929 square meter (m²)
1 Square Yard = 1296 square inches (in²)
 = 9 square feet (ft²)
 = 0.83613 square meter (m²)
1 Square Statute Mile = 27,878.4 square feet (ft²)
 = 2.589988 square kilometers

B-1
1 Square Centimeter = 0.155 square inch (in^2)
1 Square Meter = 107639 square feet (ft^2) = 1.19599 square yards
1 Square Kilometer = 0.3861 square statute mile = 0.291553 square nautical mile

**VOLUME - CAPACITY**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cubic Inch</td>
<td>16.387 cubic centimeters (cm^3)</td>
</tr>
<tr>
<td></td>
<td>0.01639 liter (L)</td>
</tr>
<tr>
<td>1 Cubic Foot</td>
<td>1728 cubic inches (in^3)</td>
</tr>
<tr>
<td></td>
<td>7.4805 U.S. gallons (gal)</td>
</tr>
<tr>
<td></td>
<td>6.2288 Imperial gallons</td>
</tr>
<tr>
<td></td>
<td>0.17811 barrel (bbl)</td>
</tr>
<tr>
<td></td>
<td>28.317 liters</td>
</tr>
<tr>
<td></td>
<td>0.028312 cubic meter (m^3)</td>
</tr>
<tr>
<td>1 Cubic Yard</td>
<td>46,656 cubic inches (in)</td>
</tr>
<tr>
<td></td>
<td>27 cubic feet (ft^3)</td>
</tr>
<tr>
<td>1 Gallon (U.S.)</td>
<td>231 cubic inches (in^3)</td>
</tr>
<tr>
<td></td>
<td>0.133681 cubic feet (ft^3)</td>
</tr>
<tr>
<td></td>
<td>0.83267 Imperial gallon</td>
</tr>
<tr>
<td></td>
<td>0.023809 barrel</td>
</tr>
<tr>
<td></td>
<td>3.78533 liters</td>
</tr>
<tr>
<td>1 Imperial Gallon</td>
<td>277.42 cubic inches (in^3)</td>
</tr>
<tr>
<td></td>
<td>0.160544 cubic feet (ft^3)</td>
</tr>
<tr>
<td></td>
<td>1.20094 gallon (U.S.)</td>
</tr>
<tr>
<td></td>
<td>0.028594 barrel</td>
</tr>
<tr>
<td></td>
<td>4.54596 liters</td>
</tr>
<tr>
<td>1 Barrel</td>
<td>9702 cubic inches (in)</td>
</tr>
<tr>
<td></td>
<td>5.6146 cubic feet (ft^3)</td>
</tr>
<tr>
<td></td>
<td>42 gallons (U.S.)</td>
</tr>
<tr>
<td></td>
<td>34.9721 Imperial gallons</td>
</tr>
<tr>
<td></td>
<td>158.984 liters</td>
</tr>
<tr>
<td>1 Liter</td>
<td>61.026 cubic inches (in^3)</td>
</tr>
<tr>
<td></td>
<td>0.035316 cubic feet (ft^3)</td>
</tr>
<tr>
<td></td>
<td>0.264178 gallon (U.S.)</td>
</tr>
<tr>
<td></td>
<td>0.219975 Imperial gallon</td>
</tr>
<tr>
<td></td>
<td>0.028594 barrel</td>
</tr>
<tr>
<td>1 Cubic Meter</td>
<td>61,022.592 cubic inches (in^3)</td>
</tr>
<tr>
<td></td>
<td>35.315 cubic feet (ft^3)</td>
</tr>
<tr>
<td></td>
<td>264.17 gallons (U.S.)</td>
</tr>
<tr>
<td></td>
<td>219.97 Imperial gallons</td>
</tr>
<tr>
<td></td>
<td>6.2898 barrels</td>
</tr>
<tr>
<td>1 Register Ton</td>
<td>100 cubic feet (ft^3)</td>
</tr>
<tr>
<td></td>
<td>2.831685 cubic meters (m^3)</td>
</tr>
</tbody>
</table>
Measurement Ton

- = 40 cubic feet (ft³)
- = 1 freight ton
- = 1.13267 cubic meters (m³)

**VOLUME - WEIGHT**

1 Cubic Foot of Fresh Water = 62.428 pounds (max. density 4°C - 39.2°F)
1 Cubic Foot of Sea Water = 64 pounds
1 Cubic Foot of Ice = 56 pounds
1 Displacement Ton = 35 cubic feet of sea water
1 long ton

**WEIGHT**

1 Ounce = 437.5 grams
= 28.34952 grams
= 0.0625 pound
= 0.02835 kilogram

1 Pound = 0.45359 kilogram
1 Short Ton = 2000 pounds
= 0.892857 long ton
= 907.18474 kilograms
= 0.90718474 metric ton

1 Long Ton = 2240 pounds
= 1.12 short tons
= 1.0160469 kilograms
= 1.016047 metric ton

1 Kilogram = 2.20462 pounds
= 0.0011 short ton
= 0.00098 long ton

1 Metric Ton = 2.2046226 pounds
= 0.98421 long tons
= 1000 kilograms

**POWER EQUIVALENTS**

1 Foot-Pound Per Second (ft-lb/sec) = 1.3557 watts
= 0.00182 horsepower
= 0.1383 kilogram-meters per second
= 0.00184 metric horsepower

1 Watt = 0.00134 horsepower
= 0.7376 foot-pounds per second
= 0.02 kilogram-meters per second
= 0.00136 metric horsepower

1 Horsepower = 550 foot-pounds per second
= 745.65 watts
= 76.04 kilogram-meters per second
= 1.014 metric horsepower

B-3
### 1 Kilogram-Meter Per Second

- 7.233 foot-pounds per second
- 9.806 watts
- 0.01315 horsepower
- 0.01333 metric horsepower

### 1 Metric Horsepower

- 542.475 foot-pounds per second
- 735.448 watts
- 0.9863 horsepower
- 75 kilogram-meters per second

### PRESSURES

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<th>Unit</th>
<th>Conversion Factor</th>
</tr>
</thead>
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<tr>
<td>1 Pound Per Square Inch</td>
<td>2.30665 feet of water (column, max. density 40°C)</td>
</tr>
<tr>
<td></td>
<td>0.07031 kilograms per square centimeter (kg/cm²)</td>
</tr>
<tr>
<td>1 Foot of Water (Column)</td>
<td>0.43353 pounds per square inch (lbf/in²)</td>
</tr>
<tr>
<td></td>
<td>0.03048 kilograms per square centimeter</td>
</tr>
<tr>
<td>1 Kilogram Per Square Centimeter</td>
<td>14.2234 pounds per square inch (psi)</td>
</tr>
<tr>
<td></td>
<td>32.8083 feet of water (column, max. density 4°C)</td>
</tr>
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### SPEED

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<th>Unit</th>
<th>Conversion Factor</th>
</tr>
</thead>
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<tr>
<td>1 Foot Per Second</td>
<td>20 yards per minute</td>
</tr>
<tr>
<td></td>
<td>0.6818 statute miles per hour</td>
</tr>
<tr>
<td></td>
<td>0.5925 knot</td>
</tr>
<tr>
<td></td>
<td>0.3048 meter per second</td>
</tr>
<tr>
<td>1 Statute Mile Per Hour</td>
<td>88 feet per minute</td>
</tr>
<tr>
<td></td>
<td>29.333 yards per minute</td>
</tr>
<tr>
<td></td>
<td>0.86897 knots</td>
</tr>
<tr>
<td></td>
<td>0.44704 meter per second</td>
</tr>
<tr>
<td></td>
<td>1.6093 kilometer per hour</td>
</tr>
<tr>
<td>1 Knot</td>
<td>101.2686 feet per minute</td>
</tr>
<tr>
<td></td>
<td>33.7562 yards per minute</td>
</tr>
<tr>
<td></td>
<td>0.51444 meter per second</td>
</tr>
<tr>
<td></td>
<td>1.852 kilometer per hour</td>
</tr>
<tr>
<td>1 Meter Per Second</td>
<td>196.8504 feet per minute</td>
</tr>
<tr>
<td></td>
<td>65.6168 yards per minute</td>
</tr>
<tr>
<td></td>
<td>2.2369 statute miles per hour</td>
</tr>
<tr>
<td></td>
<td>1.9438 knots</td>
</tr>
<tr>
<td></td>
<td>3.6 kilometers per hour</td>
</tr>
<tr>
<td>1 Kilometer Per Hour</td>
<td>0.62137 statute miles per hour</td>
</tr>
<tr>
<td></td>
<td>0.53996 knots</td>
</tr>
<tr>
<td>Sound in Dry Air (60°F at Sea Level)</td>
<td>1116.99 feet per second</td>
</tr>
<tr>
<td>Sound in 3.485 Percent Sea Water (60°F)</td>
<td>4945.37 feet per second</td>
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By Order of the Secretary of the Army:

[Signature]

Official:
JOEL B. HUDSON
Administrative Assistant to the Secretary of the Army
02347

DENNIS J. REIMER
General, United States Army
Chief of Staff

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To: mpmt%avma28@st-louis-emh7.army.mil

Subject: DA Form 2028
1. From: Joe Smith
2. Unit home
3. Address: 400 Pad
4. City: Hometown
5. St MO
6. Zip: 777
7. Date Sent 19-OCT-9
9. Pub Title: TM
10. Publication Date: 04JUL-85
11. Change Number: 7
12. Submitter Rank: MSG
13. Submitter FName: Joe
14. Submitter MName: T
15. Submitter LName: Smith
16. Submitter Phone: 12-11234
17. Problem: 1
18. Page: 2
19. Paragraph
20. Line: 4
21. NSN: 5
22. Reference: 6
23. Figure: 7
24. Table: 8
25. Item: 9
26. Total 123
27. Text

This is the text for the problem below line 27.
**RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS**

**SOMETHING WRONG WITH PUBLICATION**

*THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.*

<table>
<thead>
<tr>
<th>FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)</th>
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<td>DATE SENT</td>
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<table>
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<th>PUBLICATION NUMBER</th>
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<table>
<thead>
<tr>
<th>BE EXACT</th>
<th>PIN-POINT WHERE IT IS</th>
<th>IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGE NO.</td>
<td></td>
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<tr>
<td>PARA-</td>
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</table>

<table>
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<th>PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER</th>
<th>SIGN HERE</th>
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<tbody>
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</table>

**DA FORM 1 JUL 79 2028-2**

**PREVIOUS EDITIONS ARE OBSOLETE.**

**P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.**
The Metric System and Equivalents

**Linear Measure**

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

**Liquid Measure**

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

**Square Measure**

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter = 100 sq. meters = 32.8 sq. feet
1 sq. hectometer = 100 sq. dekameters = 328.08 sq. feet
1 sq. kilometer = 100 sq. hectometers = 3,280.8 sq. feet

**Cubic Measure**

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet
1 cu. dekameter = 1000 cu. meters = 1,076.4 cu. feet
1 cu. hectometer = 1000 cu. dekameters = 32,808 cu. feet
1 cu. kilometer = 1000 cu. hectometers = 328,080 cu. feet

**Weights**

1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

**Decimal Equivalents**

- 1 centiliter = 10 milliters = .34 fl. ounce
- 1 deciliter = 10 centiliters = 3.38 fl. ounces
- 1 liter = 10 deciliters = 33.81 fl. ounces
- 1 dekaliter = 10 liters = 2.64 gallons
- 1 hectoliter = 10 dekaliters = 26.42 gallons
- 1 kiloliter = 10 hectoliters = 264.18 gallons

**Approximate Conversion Factors**

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<tr>
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<th>To</th>
<th>Multiply by</th>
<th>To change</th>
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Temperature (Exact)
| °F  | Fahrenheit temperature | 5/9 (after subtracting 32) | °C  | Celsius temperature |