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TACTICAL MOBILITY STUDY FOR AMPHIBIOUS ASSAULT AND POST-ASSAULT IN THE MID-RANGE PERIOD (FY 1970-79) PROJECT NO. 30-68-08 FIRST INTERIM REPORT JUN 1970 (U) VOLUME III OF V

UNCLASSIFIED

DEVELOPMENT CENTER
MARINE CORPS DEVELOPMENT AND EDUCATION COMMAND
QUANTICO, VIRGINIA

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Opinions, conclusions, and recommendations contained in this report are those of this Center and are not to be construed as reflecting the view or endorsement of the Commandant of the Marine Corps.

Reference may be made to this report by government agencies in the same way as to published articles, that is, noting title, source, date, and project number.

Each transmittal outside the agencies of the U. S. Government must have prior approval of the Commandant of the Marine Corps (Cod.: AX).
The five volumes of this report present basic data for the Tactical Mobility Study. In general, these data define the operating characteristics of mobility and mobility support systems, the environments within which they will operate, and Marine Corps missions and concepts of operations.

Volume III provides the characteristics and performance data for ground vehicles considered by the Tactical Mobility Study. These vehicles have been treated in various categories: general purpose vehicles, special purpose/equipment vehicles, logistic support trailers, high mobility vehicles, and amphibious vehicles.

Blank spaces have been left in this volume where information was not available. Upon receipt of such information an addendum to this report will be published.
**TABLE OF CONTENTS**

**VOLUME I (S)**

Frontispiece ........................................... i
Abstract ............................................... ii
Table of Contents ...................................... iii
Purpose ............................................... 1
Background .......................................... 1
Discussion ........................................... 2
Future Reports ....................................... 6
Recommendation ...................................... 7
Methodology .......................................... Annex A
Marine Corps Roles, Missions, Concepts of Operations and Combat Tasks ........................................ Annex B
Threat ............................................... Annex C
Environmental Effects of Areas ....................... Annex D

**VOLUME II (U)**

Aircraft Characteristics and Descriptions ................. Annex E

**VOLUME III (U)**

Vehicle Characteristics and Descriptions .................. Annex F

**VOLUME IV (U)**

Support Equipment Characteristics and Descriptions .................. Annex G

**VOLUME V (C)**

Ships and Landing Craft Characteristics .................... Annex H
Glossary ............................................. Annex I
References .......................................... Annex J
Distribution ........................................... Annex K
ANNEX F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)

1. (U) PURPOSE. This annex provides the characteristics of and performance data for vehicles considered by the Tactical Mobility Study Panel as candidates for mid-range mobility systems mixes.

2. (U) GENERAL
   a. Vehicles. The vehicles presented in this annex are either currently available or likely to be available in the mid-range period. They are divided into five categories based on capability and mission. These vehicle categories are defined as: general purpose, special purpose/special equipment, logistical support trailers, high mobility and amphibious.
   b. Cut-off. The data presented in the appendices are current as of 1 September 1969.

APPENDICES:

1. General Purpose Vehicles
2. Special Purpose/Special Equipment Vehicles
3. Logistical Support Trailers
4. High Mobility Vehicles
5. Amphibious Vehicles
APPENDIX I (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)

1. (U) PURPOSE. This appendix provides the characteristics of and performance data for general purpose vehicles.

2. (U) GENERAL. General purpose vehicles are designed to perform routine missions, operating on highway and cross-country surfaces.

TABLES:

A. Truck, Utility, 1/4 Ton, 4x4, M151A1
B. Truck, Cargo, 1-1/4 Ton, 4x4, XM705
C. Truck, Cargo, 1-1/4 Ton, 4x4, M715
D. Truck, Cargo, 1-1/4 Ton, 4x4, Dodge Ram
E. Truck, Cargo, 2-1/2 Ton, 6x6, M35A2
F. Truck, Cargo, 2-1/2 Ton, 6x6, M36A2
G. Truck, Cargo, 5 Ton, 6x6, M54A2
H. Truck, Cargo, 5 Ton, 6x6, M55A2
I. Truck, Cargo, 10 Ton, 6x6, XM813A1
J. Truck, Cargo, 10 Ton, 6x6, M125
TAB A (Truck, Utility, 1/4 Ton, 4x4, M151A1) to Appendix 1 (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** The body and frame of this truck are integral all steel welded construction, providing space for four men and equipment including driver. Space is provided in and on the body for storage of normal OVE equipment. Four wheel drive is selected at the option of the driver. This vehicle is presently in the Marine Corp inventory and type classified Standard A.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 2,400 lbs

   b. Payload

      (1) Highway 1,200 lbs

      (2) Cross-country 800 lbs

   c. Towed load allowed

      (1) Highway 2,000 lbs

      (2) Cross-country 1,500 lbs

   d. Dimensions

      (1) Length 132.7 in.

      (2) Width 63 in.

      (3) Height 71 in.

      (4) Height, lowest operable 52.5 in.

      (5) Wheel base 85.0 in.

      (6) Tread C-C 53.0 in.

      (7) Ground clearance 10.3 in.

   e. Vehicle crew 1

   f. Passengers, including crew 4
g. Fuel
   (1) Capacity 17.7 gal
   (2) Type Gas

h. Electrical system 24 volt

i. Engine 4 cyl, 71 hp

j. Transmission 4 speed

k. Transfer 1 speed

l. Axles 2

m. Wheels 4 & spare

n. Tires
   (1) Size 7.00 x 16
   (2) Tread design NDCC

o. Ground pressure

p. Shipping dimensions 59 sq ft

3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius 18.52 ft

b. Speed (max permissible) 66 mph

c. Fuel consumption 19.1 mpg

d. Cruising range (highway w/o towed load) 300 miles

e. Fording depth
   (1) W/o kit 21 in.
   (2) W/kit 60 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%
g. Angle of approach
h. Angle of departure
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB B (Truck, Cargo, 1-1/4 Ton, 4x4, XM705) to Appendix 1 (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This vehicle is in the developmental stage as a replacement for the M37, 3/4 ton cargo truck. It is being considered for procurement by the Marine Corps.

2. (U) VEHICLE CHARACTERISTICS
   a. Net weight 6,000 lbs
   b. Payload
      (1) Highway 2,500 lbs
      (2) Cross-country
   c. Towed load allowed
      (1) Highway 3,000 lbs
      (2) Cross-country
   d. Dimensions
      (1) Length 199 in.
      (2) Width 84 in.
      (3) Height 96 in.
      (4) Height, lowest operable 72 in.
      (5) Wheelbase
      (6) Tread C-C
         (a) Front wheels
         (b) Rear wheels
      (7) Ground clearance 11.8 in.
      (8) Cargo body
         (a) Length 99 in.
         (b) Width 79.5 in.
e. Vehicle crew
f. Passengers, including crew
g. Fuel
   (1) Capacity
   (2) Type
h. Electrical system
i. Engine
j. Transmission
k. Transfer
l. Axles
m. Wheels
   (1) Size
   (2) Tread design
n. Tires
   (1) Size
   (2) Tread design
o. Ground pressure
p. Shipping dimensions
   (1) W/winch
   (2) W/o winch

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius
   b. Speed (max permissible)
   c. Fuel consumption
   d. Cruising range (highway w/o towed load)
e. Fording depth
   (1) W/o kit 20 in.
   (2) W/kit 60 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%

g. Angle of approach 60°

h. Angle of departure 45°
i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB C (Truck, Cargo, 1-1/4 Ton, 4x4, M715) to Appendix I (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CNC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This truck was designed primarily as an "on-road" vehicle with limited cross-country capability. It is mainly used in rear areas. The truck has an operational life of 12,000 miles. This vehicle will be organic to MAW. It is type classified Limited Production.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight
      (1) W/winch 6,000 lbs
      (2) W/o winch 5,500 lbs

   b. Payload
      (1) Highway 3,000 lbs
      (2) Cross-country 2,500 lbs

   c. Towed load allowed
      (1) Highway 4,450 lbs
      (2) Cross-country 4,200 lbs

   d. Dimensions
      (1) Length
         (a) W/winch 220-3/4 in.
         (b) W/o winch 209-3/4 in.
      (2) Width 85 in.
      (3) Height 95 in.
      (4) Height, lowest operable 59 in.
      (5) Wheelbase 126 in.
      (6) Tread C-C 67 in.
      (7) Ground clearance 10 in.
(8) Cargo body
   (a) Length 92.5 in.
   (b) Width 64 in.
   (c) Area 36 sq ft
   (d) Volume

   e. Vehicle crew 2
   f. Passengers, including crew 14

   g. Fuel
      (1) Capacity 28 gal
      (2) Type Gas

   h. Electrical system 24 volt

   i. Engine 6 cyl, 230 hp

   j. Transmission 4 speed

   k. Transfer 2 speed

   l. Axles 2

   m. Wheels 4 & spare

   n. Tires
      (1) Size 9.00 x 16
      (2) Tread design NDCC

   o. Ground pressure

   p. Shipping dimensions
      (1) W/Winch 130 sq ft
      (2) W/O winch 124 sq ft
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius 27-1/2 ft
b. Speed (max permissible) 55 mph
c. Fuel consumption 8 mpg
d. Cruising range (highway w/o towed load) 225 miles
e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 60 in.
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%
g. Angle of approach 45°
h. Angle of departure 25°
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB D (Truck, Cargo, 1-1/4 Ton, 4x4, Dodge Ram) to Appendix I (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to the First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This truck is presently not in the Marine Corps inventory nor has it been type classified by USATAC.

2. (U) **VEHICLE CHARACTERISTICS**
   a. Net weight 5,400 lbs
   b. Payload
      (1) Highway 4,000 lbs
      (2) Cross-country 2,500 lbs
   c. Towed load allowed
      (1) Highway
      (2) Cross-country 5,000 lbs
   d. Dimensions
      (1) Length 172 in.
      (2) Width 86 in.
      (3) Height 97 in.
      (4) Height, lowest operable 79 in.
      (5) Wheelbase 108 in.
      (6) Tread C-C 71 in.
      (7) Ground clearance
         (a) Standard tires 13.5 in.
         (b) High mobility tires 16.5 in.
   (8) Cargo body
      (a) Length 98 in.
      (b) Width 82 in.
(c) Area

56 sq ft

d) Volume

2

(e) Vehicle crew

2

(f) Passengers, including crew

14

g) Fuel

(gas)

(1) Capacity

(2) Type

(V8)

(h) Electrical system

(3 speed, automatic)

(i) Engine

(Single speed)

(j) Transmission

2

(k) Transfer

4

(l) Axles

(m) Wheels

(n) Tires

(1) Size

(a) Standard

9.00 x 2

(b) High mobility

16 x 20

(2) Tread design

(MDCC)

(o) Ground pressure

(1) Standard

10.7 psi

(2) High mobility

6.1 psi

(p) Shipping dimensions

102.7 sq ft

F-1-D-3
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius  
   50 ft

b. Speed (max permissible)  
   55 mph

c. Fuel consumption

d. Cruising range (highway w/o towed load)  
   307 miles

e. Fording  
   Swimmer

f. Gradeability
   (1) Forward slope  
      60%
   (2) Side slope  
      30%

g. Angle of approach  
   79°
h. Angle of departure  
   52°
i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB E (Truck, Cargo, 2-1/2 Ton, 6x6, M35A2C) to Appendix 1 (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** These trucks serve as prime movers for direct support artillery and as logistic support vehicles. The major difference between the vehicles is the dropsides on the A2C. Both vehicles are type classified Standard A and are presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight

   (1) M35A2C

   (a) W/Winch 14,160 lbs
   (b) W/o winch 13,660 lbs

   (2) M35A2

   (a) W/Winch 13,900 lbs
   (b) W/o winch 13,400 lbs

   b. Payload

   (1) Highway 10,000 lbs
   (2) Cross-country 5,000 lbs

   c. Towed load allowed

   (1) Highway 10,000 lbs
   (2) Cross-country 6,000 lbs

   d. Dimensions

   (1) Length

   (a) W/Winch 278-1/4 in.
   (b) W/o winch 264-1/4 in.

   (2) Width 96 in.

   (3) Height 114-11/16 in.

   (4) Height, lowest operable 81 in.
(5) Wheelbase
(6) Tread C-C
   (a) Front wheels
   (b) Rear wheels
(7) Ground clearance
(8) Cargo body
   (a) Length
   (b) Width
   (c) Area
   (d) Volume
e. Vehicle crew
f. Passengers, including crew
g. Fuel
   (1) Capacity
   (2) Type
h. Electrical system
i. Engine
j. Transmission
k. Transfer
l. Axles
m. Wheels
n. Tires
   (1) Size
   (2) Tread design

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154 in.
67-3/4 in.
70 in.
12-1/2 in.
147 in.
88 in.
85 sq ft
456 cu ft
2
16
50 gal
Multi-fuel
24 volt
6 cyl, 140 hp
5 speed
2 speed
3
10 & spare
9.00 x 20
NDCC
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   (1) W/winch 35-1/2 ft
   (2) W/o winch 34-1/2 ft

b. Speed (max permissible) 58 mph

c. Fuel consumption
   (1) Gasoline 9.3 mpg
   (2) Diesel 11.3 mpg

d. Cruising range (highway w/o towed load) 320 miles

e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 72 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%

g. Angle of approach
   (1) W/winch 38°
   (2) W/o winch 46°

h. Angle of departure 44°
i. Max vertical step climbing ability

f. Vehicle mobility index

k. Vehicle cone index
1. (U) GENERAL. This truck is a long bed version of the M35A2. This vehicle was designed for use in light antiaircraft missile battalions. It is in the Marine Corps inventory and was type classified Standard A.

2. (U) VEHICLE CHARACTERISTICS
   a. Net weight
      (1) W/Winch 15,110 lbs
      (2) W/o winch 14,610 lbs
   b. Payload
      (1) Highway 10,000 lbs
      (2) Cross-country 5,000 lbs
   c. Towed load allowed
      (1) Highway 10,000 lbs
      (2) Cross-country 6,000 lbs
   d. Dimensions
      (1) Length
         (a) W/Winch 343-1/2 in.
         (b) W/o winch 329-1/2 in.
      (2) Width 96 in.
      (3) Height 125-11/16 in.
      (4) Height, lowest operable 81 in.
      (5) Wheelbase 190 in.
      (6) Tread C-C
         (a) Front wheels 67-3/4 in.
         (b) Rear wheels 70 in.
(7) Ground clearance

12-1/2 in.

(8) Cargo body

(a) Length

210 in.

(b) Width

88 in.

(c) Area

120 sq ft

(d) Volume

630 cu ft

e. Vehicle crew

2

f. Passengers, including crew

* 

g. Fuel

(1) Capacity

50 gal

(2) Type

Multi-fuel

h. Electrical system

24 volt

i. Engine

6 cyl, 140 hp

j. Transmission

5 speed

k. Transfer

2 speed

l. Axles

3

m. Wheels

10 & spare

n. Tires

(1) Size

9.00 x 12

(2) Tread design

NDCC

o. Ground pressure

p. Shipping dimensions

(1) W/winch

229 sq ft

(2) W/o winch

219 sq ft

* This vehicle is not equipped with troop seats in cargo bed.

F-1-F-3
3. **OPERATIONAL CHARACTERISTICS**

a. Turning radius 45 ft

b. Speed (max permissible) 56 mph

c. Fuel consumption 6.4 mpg

d. Cruising range (highway w/o towed load) 320 miles

e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 72 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%

g. Angle of approach
   (1) W/winch 40°
   (2) W/o winch 48°

h. Angle of departure 29°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB G (Truck, Cargo, 5 Ton, 6x6, M54A2C) to Appendix 1 (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. These trucks are used not only to haul cargo and personnel, but also to tow artillery. The major difference between models is the drop sides on the cargo bed of the M54A2. Both vehicles are type classified Standard A and are presently in the Marine Corps inventory.

2. (U) VEHICLE CHARACTERISTICS

a. Net weight
   (1) W/winch 20,400 lbs
   (2) W/o winch 19,540 lbs

b. Payload
   (1) Highway 20,000 lbs
   (2) Cross-country 10,000 lbs

c. Towed load allowed
   (1) Highway 30,000 lbs
   (2) Cross-country 15,000 lbs

d. Dimensions
   (1) Length
      (a) W/winch 312-1/2 in.
      (b) W/o winch 297 in.
   (2) Width 97-3/4 in.
   (3) Height 117-1/2 in.
   (4) Height, lowest operable 85-1/2 in.
   (5) Wheelbase 179 in.
   (6) Tread C-C
      (a) Front wheels 74 in.
      (b) Rear wheels 72 in.
(7) Ground clearance
11-1/2 in.

(8) Cargo body
(a) Length
168 in.
(b) Width
88 in.
(c) Area
102 sq ft
(d) Volume
511 cu ft

e. Vehicle crew
2

f. Passengers, including crew
22
g. Fuel
(1) Capacity
78 gal
(2) Type
Multi-fuel

h. Electrical system
24 volt

i. Engine
6 cyl, 210 hp

j. Transmission
5 speed

k. Transfer
2 speed

l. Axles
3

m. Wheels
10 & spare

n. Tires
(1) Size
11.00 x 20
(2) Tread design
NDCC

o. Ground pressure
(1) Front tires
18.03 psi
(2) Rear tires
10.30 psi
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius 41 ft
b. Speed (max permissible) 53 mph
c. Fuel consumption 4.83 mpg
d. Cruising range (highway w/o towed load) 319 miles
e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 78 in.
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 20%
g. Angle of approach
   (1) W/ winch 37°
   (2) W/o winch 53°
h. Angle of departure 34-1/2°
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB H (Truck, Cargo, 5 Ton, 6x6, M55A2) to Appendix 1 (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This truck is type classified Standard A and is presently in the Marine Corps inventory.

2. (U) VEHICLE CHARACTERISTICS

   a. Net weight
      (1) W/winch 23,820 lbs
      (2) W/o winch 22,960 lbs

   b. Payload
      (1) Highway 20,400 lbs
      (2) Cross-country 10,400 lbs

   c. Towed load allowed
      (1) Highway 30,000 lbs
      (2) Cross-country 15,000 lbs

   d. Dimensions
      (1) Length
          (a) W/winch 388.6 in.
          (b) W/o winch 373.1 in.
      (2) Width 97.7 in.
      (3) Height 120.8 in.
      (4) Height, lowest operable 85.4 in.
      (5) Wheelbase 215 in.
      (6) Tread C-C
          (a) Front wheels 74 in.
          (b) Rear wheels 72 in.
      (7) Ground clearance 11 in.
(8) Cargo body
   (a) Length 244 in.
   (b) Width 88 in.
   (c) Area 149 sq ft
   (d) Volume 740.9 cu ft

   e. Vehicle crew 2
   f. Passengers, including crew 28
   g. Fuel
      (1) Capacity 78 gal
      (2) Type Multi-fuel
   h. Electrical system 24 volt
   i. Engine 6 cyl, 210 hp
   j. Transmission 5 speed
   k. Transfer 2 speed
   l. Axles 3
   m. Wheels 10 & spare
   n. Tires
      (1) Size 11.00 x 20
      (2) Tread design NDCC
   o. Ground pressure
   p. Shipping dimensions
      (1) W/winch 261 sq ft
      (2) W/o winch 251 sq ft
3. (U) **OPERATIONAL CHARACTERISTICS**

a. Turning radius 41.7 ft

b. Speed (max permissible) 53 mph

c. Fuel consumption 4.8 mpg

d. Cruising range (highway w/o towed load) 319 miles

e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 78 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 20%

g. Angle of approach
   (1) W/winch 37°
   (2) W/o winch 52-1/2°

h. Angle of departure 34-1/2°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB I (Truck, Cargo, 5 Ton, 6x6, XM813A1) to Appendix I (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This truck is a modification of the M54A2, 5 ton, 6x6 (Tab G). The modifications consist of a commercial diesel engine which alters its characteristics. The vehicle is presently undergoing evaluation as a candidate replacement for the M54A2.

2. (U) **VEHICLE CHARACTERISTICS**
   a. Net weight
   b. Payload
      (1) Highway 20,000 lbs
      (2) Cross-country 10,000 lbs
   c. Towed load allowed
      (1) Highway 30,000 lbs
      (2) Cross-country 15,000 lbs
   d. Dimensions
      (1) Length
         (a) W/winch 97.8 in.
         (b) W/o winch 179 in.
      (2) Width
      (3) Height
      (4) Height, lowest operable 85.5 in.
      (5) Wheelbase
      (6) Tread C-C
         (a) Front wheels 11.5 in.
         (b) Rear wheels
(8) Cargo body

(a) Length 168 in.
(b) Width 88 in.
(c) Area 102 sq ft
(d) Volume 511 cu ft

(e) Vehicle crew 2
(f) Passengers, including crew 22

(g) Fuel
   (1) Capacity 78 gal
   (2) Type Diesel

(h) Electrical system 24 volt

(i) Engine

(j) Transmission 5 speed

(k) Transfer 2 speed

(l) Axles 3

(m) Wheels 10 & spare

(n) Tires
   (1) Size 11.00 x 20
   (2) Tread design NDCC

(o) Ground pressure

(p) Shipping dimensions
   (1) W/withch
   (2) W/o winch
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   (1) W/ winch
   (2) W/o winch
b. Speed (max permissible)
c. Fuel consumption
d. Cruising range (highway w/o towed load)
e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 78 in.
f. Gradeability
   (1) Forward slope
   (2) Side slope
g. Angle of approach
   (1) W/ winch
   (2) W/o winch
h. Angle of departure
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
UNCLASSIFIED

TAB J (Truck, Cargo, 10 Ton, 6x6, M125) to Appendix I (General Purpose Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CRC Project No. 30-68-08 of 10 December 1968) (U)

PICTURE NOT AVAILABLE
1. (U) **GENERAL.** This truck is designed primarily to tow a 155mm gun or an 8 inch Howitzer. It is also used to transport cargo and personnel. This vehicle is type classified Standard A but is not presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 32,550 lbs

   b. Payload

      (1) Highway 30,000 lbs

      (2) Cross-country 20,000 lbs

   c. Towed load allowed

      (1) Highway 50,000 lbs

      (2) Cross-country 30,000 lbs

   d. Dimensions

      (1) Length 318-1/2 in.

      (2) Width 114 in.

      (3) Height 129-1/4 in.

      (4) Height, lowest operable 93 in.

      (5) Wheelbase 181-1/2 in.

      (6) Tread C-C

         (a) Front wheels 79 in.

         (b) Rear wheels 81-1/4 in.

      (7) Ground clearance 26 in.

      (8) Cargo body

         (a) Length 180 in.

         (b) Width 96 in.
UNCLASSIFIED

(c) Area
(d) Volume

(e) Vehicle crew
(f) Passengers, including crew

(g) Fuel
   (1) Capacity
   (2) Type

(h) Electrical system
(i) Engine

(j) Transmission
(k) Transfer
(l) Axles

(m) Wheels
(n) Tires
   (1) Size
   (2) Tread design

(o) Ground pressure

(p) Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS

(a) Turning radius
(b) Speed (max permissible)
(c) Fuel consumption
(d) Cruising range (highway w/o towed load)

123 sq ft
600 cu ft
2

110 gal
Gas

24 volt
V8, 297 hp
5 speed
2 speed
3

10 & spare

14.00 x 20
NDCC

252 sq ft

38 ft
42.6 mph
3 mpg
330 miles

F-1-J-3

UNCLASSIFIED
a. Fording depth
   (1) W/o kit  30 in.
   (2) W/kit  78 in.

f. Gradeability
   (1) Forward slope  60%
   (2) Side slope  30%

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
APPENDIX 2 (Special Purpose/Special Equipment Vehicles) to Annex F
(Vehicle Characteristics and Descriptions) to First Interim
Report on Tactical Mobility for Amphibious Assault and Post
Assault Operations in the Mid-Range Period (FY 1970-79)
(CMC Project No. 30-68-08 of 10 December 1968) (U)

1. (U) PURPOSE. This appendix provides the characteristics of and
performance data for special purpose/special equipment vehicles.

2. (U) GENERAL. A special purpose/special equipment vehicle is
designed to perform a specific function or mission.

TABLES:

A. Truck, Ambulance, 1/4 Ton, 4x4, M718
B. Truck, Ambulance, 1-1/4 Ton, 4x4, M725
C. Truck, Ambulance, 1-1/4 Ton, 6x6, M792
D. Truck, Ambulance, 1-1/4 Ton, 4x4, XM737
E. Truck, Fuel Servicing, 2-1/2 Ton, 1200 Gal, 6x6, M49A2C
F. Truck, Tank, Water, 2-1/2 Ton, 1000 Gal, 6x6, M50A2
G. Truck, Dump, 5 Ton, 6x6, M51A2
H. Truck, Wrecker, 5 Ton, 6x6, XM816A1
I. Truck, Dump, 5 Ton, 6x6, XM817A1
J. Truck, Tractor, 5 Ton, 6x6, M52A2
K. Truck, Tractor, 10 Ton, 6x6, M123A1C
L. Truck, Tractor, 22-1/2 Ton, 8x8, XM746
M. Truck, Wrecker, Crane, 2-1/2 Ton, 6x6 M108A2
N. Truck, wrecker, 5 Ton, 6x6, M543A2

F-2-1
TAB A (Truck, Ambulance, 1/4 Ton, 4x4, M718) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Operations in the Mid-Range Period (FY 1970-79) (CML Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This ambulance is type classified Standard A and is presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. **Net weight** 2,780 lbs

   b. **Gross weight** 3,680 lbs

   c. **Dimensions**
      - (1) **Length** 143 in.
      - (2) **Width** 71 in.
      - (3) **Height** 76.3 in.
      - (4) **Height lowest operable** 51.7 in.
      - (5) **Wheelbase** 85 in.
      - (6) **Tread C-C** 53 in.
      - (7) **Ground clearance** 8.3 in.

   d. **Vehicle crew**
      - 2

   e. **Passengers**
      - 1 litter & 3 seated patients, 2 litter & 2 seated patients, 3 litter patients

   f. **Fuel**
      - (1) **Capacity** 17.7
      - (2) **Type** Gas

   g. **Electrical system**
      - 24 volts

   h. **Engine**
      - 4 cyl, 71 hp

   i. **Transmission**
      - 4 speed

   j. **Transfer**
      - 1 speed

   k. **Axles**
      - 2

F-2-A-2

UNCLASSIFIED
1. Wheels
   4 & 1 spare

m. Tires
   (1) Size
      7.00 x 16
   (2) Tread design
      NDCC

n. Ground pressure

o. Shipping dimensions
   70.5 sq ft reducible to 65.5 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius
      18.52 ft
   b. Speed (max permissible)
      66 mph
   c. Fuel consumption
      19.1 mpg
   d. Cruising range
      300 miles
   e. Fording depth
      (1) W/kit
      66 in. or lowest litter
      (2) W/o kit
      21 in.
   f. Gradeability
      (1) Forward slope
      60%
      (2) Side slope
      30%
   g. Angle of approach
      67°
   h. Angle of departure
      88°
   i. Maximum vertical step climbing ability
   j. Mobility index
   k. Vehicle cone index

F-2-A-3
TAB B (Truck, Ambulance, 1-1/4 Ton, 4x4, M725) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CHC Project No. 30-68-08 of 10 December 1968) (U)
1. **(U) GENERAL.** This ambulance is type classified Standard B and is organic to Marine aviation units.

2. **(U) VEHICLE CHARACTERISTICS**
   a. Net weight
   b. Payload
      (1) Highway
      (2) Cross-country
   c. Dimensions
      (1) Length
      (2) Width
      (3) Height
      (4) Wheelbase
      (5) Tread C-C
      (6) Ground clearance
   d. Vehicle crew
   e. Passengers
   f. Fuel
      (1) Capacity
      (2) Type
   g. Electrical system
   h. Engine
   i. Transmission
   j. Transfer
   k. Axles
1. Wheels 4 & spare
   a. Tires
      (1) Size 9.00 x 16
      (2) Tread design NDCC
   n. Ground pressure
   o. Shipping dimensions 124 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius 27 ft
   b. Speed (max permissible) 60 mph
   c. Fuel consumption 4.5 mpg
   d. Cruising range (highway w/o towed load) 225 miles
   e. Fording depth
      (1) W/o kit 30 in.
      (2) W/kit Lowest litter
   f. Gradeability
      (1) Forward slope 60%
      (2) Side slope
   g. Angle of approach 15°
   h. Angle of departure 25°
   i. Max vertical step climbing ability
   j. Vehicle mobility index
   k. Vehicle cone index
TAB C (Truck, Ambulance, 1-1/2 Ton, 6x6, M792) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This ambulance is in the developmental stage and is a candidate replacement vehicle for the M43B1 3/4 ton ambulance.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight
      
      (1) W/ winch 6,412 lbs
      (2) W/o winch 6,200 lbs

   b. Payload 2,500 lbs

   c. Towed load allowed 5,380 lbs

   d. Dimensions
      
      (1) Length
         
         (a) W/ winch 229.75 in.
         (b) W/o winch 221.5 in.

      (2) Width 84 in.

      (3) Height 91 in.

      (4) Height lowest operable 64.1 in.

      (5) Wheelbase
         
         (a) Front wheels to interim 78.8 in.
         (b) Interim to rear wheels 84.4 in.

      (6) Tread C-C 71.3 in.

      (7) Ground clearance 15.0 in.

      (8) Cargo body
         
         (a) Length 84.75 in.
         (b) Width 74.5 in.
         (c) Area 36 sq ft

   e. Vehicle crew 2

   f. Passengers
g. Fuel
   (1) Capacity 43 gal
   (2) Type Diesel
h. Electrical system 24 volts
i. Engine 3 cyl, 103 hp
j. Transmission 4 speed
k. Transfer 2 speed
l. Axles 3
m. Wheels 6
n. Tires
   (1) Size 11.00 x 18
   (2) Tread design NDCC
o. Ground pressure
   (1) Front tires 6 psi
   (2) Interim tires 6.3 psi
   (3) Rear tires 6.3 psi
p. Shipping dimensions
   (1) W/winch 133 sq ft
   (2) W/o winch 126 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius 29 ft
   b. Speeds (max permissible)
      (1) On land 55 mph
      (2) Inland waters 2 mph
   c. Fuel consumption 6.6 mpg
d. Cruising range (w/o towed load) 610 miles

e. Fording Swimmer

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%

g. Angle of approach
   (1) W/ winch 57°
   (2) W/o winch 62.5°

h. Angle of departure 58°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB D (Truck, Ambulance, 1-1/4 Ton, 4x4, XM737) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This vehicle is in the developmental stage as a candidate replacement vehicle for the H43B1 3/4 ton ambulance. It may be procured by the Marine Corps.

2. (U) VEHICLE CHARACTERISTICS

   a. Net weight
      7,500 lbs
   b. Payload
      (1) Highway 1,700 lbs
      (2) Cross-country
   c. Dimensions
      (1) Length 199 in.
      (2) Width 84 in.
      (3) Height 100.4 in.
      (4) Wheelbase
      (5) Tread C-C
      (6) Ground clearance 11.8 in.
   d. Vehicle crew
      3
   e. Passengers
      4 litterers or 8 ambulatory patients
   f. Fuel
      (1) Capacity 50 gal
      (2) Type Gas
   g. Electrical system
      24 volt
   h. Engine
   i. Transmission
   j. Transfer
   k. Axles

F-2-D-2
I. Wheels
m. Tires
   (1) Size
   (2) Tread design
n. Ground pressure
o. Shipping dimensions
   (1) W/ winch
   (2) W/o winch

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius
   b. Speed (max permissible)
   c. Fuel consumption
   d. Cruising range (highway w/o towed load)
   e. Fording depth
      (1) W/o kit
      (2) W/kit
   f. Gradeability
      (1) Forward slope
      (2) Side slope
   g. Angle of approach
   h. Angle of departure
   i. Max vertical step climbing ability
   j. Vehicle mobility index
   k. Vehicle cone index

4 & spar c

112 sq ft

30 ft
60 mph
6 mpg
300 miles
20 in.
Lowest litter

F-2-D-3

UNCLASSIFIED
TAB E (Truck, Fuel Servicing, 2-1/2 Ton, 1200 Gal, 6x6, M49A2C) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This tanker is used to dispense fuel to those items of equipment isolated from established refueling facilities. It is type classified Standard A and is presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. **Net weight**
      
      (1) W/ winch  
      15,125 lbs
      
      (2) W/o winch  
      14,625 lbs

   b. **Payload**
      
      (1) Highway  
      1,200 gal
      
      (2) Cross-country  
      600 gal

   c. **Towed load allowed**
      
      (1) Highway  
      10,000 lbs
      
      (2) Cross-country  
      6,000 lbs

   d. **Dimensions**
      
      (1) **Length**
          
          (a) W/ winch  
          277 in.
          
          (b) W/o winch  
          263 in.
      
      (2) **Width**  
      96 in.

      (3) **Height**  
      98 in.

      (4) **Height, lowest operable**  
      92 in.

      (5) **Wheelbase**  
      154 in.

      (6) **Tread C-C**
          
          (a) Front tires  
          67-3/4 in.
          
          (b) Rear tires  
          70 in.
          
      (7) **Ground clearance**  
      12-7/8 in.
e. Vehicle crew  2
f. Fuel
    (1) Capacity  50 gal
    (2) Type     Multi-fuel
g. Electrical system  24 volts
h. Engine  6 cyl, 140 hp
i. Transmission  5 speed
j. Transfer  2 speed
k. Axles  3
l. Wheels  10 & spare
m. Tires
    (1) Size  9.00 x 20
    (2) Tread design NDCC
n. Ground pressure
o. Shipping dimensions
    (1) W/winch  185 sq ft
    (2) W/o winch 175 sq ft
3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius  36 ft
   b. Speed (max permissible)  56 mph
   c. Fuel consumption  6 mpg
d. Cruising range (highway w/o towed load)  320 miles
e. Fording depth
    (1) W/kit  72 in.
    (2) W/o kit 30 in.
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%
g. Angle of approach
   (1) W/winch 40°
   (2) W/o winch 48°
h. Angle of departure 40°
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB F (Truck, Tank, Water, 2-1/2 Ton, 1000 Gal, 6x6, M5042) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-98 of 10 December 1968) (U)
1. (U) **GENERAL.** This tanker is for transporting potable water. It is type classified Standard A and is presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**
   a. Net weight
      (1) W/winch 14,620 lbs
      (2) W/o winch 14,120 lbs
   b. Payload
      (1) Highway 8,333 lbs or 1,000 gal
      (2) Cross-country 3,330 lbs or 40% gal
   c. Towed load allowed
      (1) Highway 10,000 lbs
      (2) Cross-country 6,000 lbs
   d. Dimensions
      (1) Length
         (a) W/winch 277 in.
         (b) W/o winch 263 in.
      (2) Width 96 in.
      (3) Height 98 in.
      (4) Height, lowest operable 92 in.
      (5) Wheelbase 154 in.
      (6) Tread C-C
         (a) Front wheels 67-3/4 in.
         (b) Rear wheels 70 in.
(7) Ground clearance  
12-7/8 in.  

e. Vehicle crew  
2  

f. Fuel  
(1) Capacity  
50 gal  
(2) Type  
Multi-fuel  

g. Electrical system  
24 volt  

h. Engine  
6 cyl, 140 hp  

i. Transmission  
5 speed  

j. Transfer  
2 speed  

k. Axles  
3  

l. Wheels  
10 & spare  

m. Tires  
(1) Size  
9.00 x 20  
(2) Tread design  
NDCC  

n. Ground pressure  

o. Shipping dimensions  
(1) W/Winch  
170 sq ft  
(2) W/o Winch  
160 sq ft  

3. (U) OPERATIONAL CHARACTERISTICS  

a. Turning radius  
(1) W/Winch  
35-1/2 ft  
(2) W/o Winch  
34-1/2 ft  

b. Speed (max permissible)  
56 mph  

F-3-F-3
c. Fuel consumption 6 mpg.
d. Cruising range (highway w/o towed load) 377 miles
e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 72 in.
f. Gradesbility
   (1) Forward slope 60%
   (2) Side slope 40%
g. Angle of approach
   (1) W/withch 40°
   (2) W/o winch 48°
h. Angle of departure 40°
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB G (Truck, Dump, 5 Ton, 6x6, M51A2) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CHC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This truck is used to haul and dump earth, sand, gravel, etc., and to transport general cargo. It is type classified Standard A and presently in the Marine Corps inventory.

2. (U) VEHICLE CHARACTERISTICS
   a. Net weight
      (1) W/winch 22,700 lbs
      (2) W/o winch 21,920 lbs
   b. Payload
      (1) Highway 20,000 lbs
      (2) Cross-country 10,000 lbs
   c. Towed load allowed
      (1) Highway 30,000 lbs
      (2) Cross-country 15,000 lbs
   d. Dimensions
      (1) Length
         (a) W/winch 281-1/2 in.
         (b) W/o winch 266 in.
      (2) Width 97-3/4 in.
      (3) Height 110-1/2 in.
      (4) Wheelbase 167 in.
      (5) Tread C-C
         (a) Front tires 74 in.
         (b) Rear bogies 72 in.
      (6) Ground clearance 11-1/2 in.
      (7) Cargo body
         (a) Length 125 in.
         (b) Width 82 in.
(c) Height 23 in.
(d) Area 70.7 sq ft
(e) Volume 5 cu yd

(e) Volume 2

(f) Fuel
(1) Capacity 90 gal
(2) Type Multi-fuel

(g) Electrical system 24 volts
(h) Engine 6 cyl, 210 hp
(i) Transmission 5 speed
(j) Transfer 2 speed
(k) Axles 3
(l) Wheels 10 & spare
(m) Tires
(1) Size 11.00 x 20
(2) Tread design NDCC

(n) Ground pressure

(o) Shipping dimensions
(1) W/Winch 190 sq ft
(2) W/o winch 180 sq ft

3. (U) OPERATIONAL CHARACTERISTICS

(a) Turning radius
(1) W/Winch 39 ft 4 in.
(2) W/o winch 38 ft 8 in.

(b) Speed (max permissible) 54 mph

(c) Fuel consumption 5.3 mpg

(d) Cruising range (w/o towed load) 477 miles
e. Fording depth
   (1) W/kit 78 in.
   (2) W/o kit 30 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 47%

g. Angle of approach
   (1) W/winch 37°
   (2) W/o winch 52-1/2°

h. Angle of departure 69°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB H (Truck, Wrecker, 5 Ton, 6x6, XM816A1) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This wrecker is a modification of the M543A2, 5 ton, 6x6 (Tab N). The modification consists of a commercial diesel engine which alters its characteristics. This vehicle is presently undergoing evaluation as a candidate replacement for the M543A2.

2. (U) VEHICLE CHARACTERISTICS
   a. Net weight
   b. Payload (towed suspended, boom braced)
      (1) Highway 12,000 lbs
      (2) Cross-country 7,000 lbs
   c. Crane rated lift capacities
      (1) 10 ft radius
         (a) W/o outriggers 6,500 lbs
         (b) W/outriggers 10,000 lbs
         (c) W/boom supports 20,000 lbs
      (2) 15 ft radius
         (a) W/o outriggers 3,800 lbs
         (b) W/outriggers 5,000 lbs
      (3) 18 ft radius
         (a) W/o outriggers 3,000 lbs
         (b) W/outriggers 4,000 lbs
   d. Towed load allowed
      (1) Highway 30,000 lbs
      (2) Cross-country 20,000 lbs
e. Dimensions

(1) Length
   (a) W/withch 97.8 in.
   (b) W/o winch
(2) Width 97.8 in.
(3) Height 114 in.
(4) Height lower operable 106 in.
(5) Wheelbase 179 in.
(6) Tread C-C
   (a) Front wheels 74 in.
   (b) Rear wheels 72 in.
(7) Ground clearance 11-1/2 in.

f. Vehicle crew 2

g. Fuel
   (1) Capacity 110 gal
   (2) Type Diesel

h. Electrical system 24 volt

i. Engine 6 cyl

j. Transmission 5 speed

k. Transfer 2 speed

l. Axles 3

m. Wheels 10 & spare

n. Tires
   (1) Size 11.00 x 20
   (2) Tread design NDCC
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   (1) W/ winch
   (2) W/o winch

b. Speed (max permissible)

c. Fuel consumption

d. Cruising range (highway w/o towed load)

e. Fording depth
   (1) W/o kit
   30 in.
   (2) W/kit
   78 in.

f. Gradeability
   (1) Forward slope
   61%
   (2) Side slope

g. Angle of approach
   (1) W/ winch
   (2) W/o winch

h. Angle of departure
   34°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB I (Truck, Dump, 5 Ton, 6x6, XM817A1) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)

PICTURE NOT AVAILABLE
1. (U) **GENERAL.** This dump truck will replace the M51A2 (Tab G) if adopted. Generally the characteristics are the same with the major difference being a commercially designed diesel engine. The vehicle is presently undergoing evaluation.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight

   b. Payload

      (1) Highway 20,000 lbs
      (2) Cross-country 10,000 lbs

   c. Towed load allowed

      (1) Highway 30,000 lbs
      (2) Cross-country 15,000 lbs

   d. Dimensions

      (1) Length

         (a) W/winch

         (b) W/o winch

      (2) Width 97-3/4 in.
      (3) Height 110-1/2 in.
      (4) Height, lowest operable 100-1/2 in.
      (5) Wheelbase 167 in.
      (6) Tread C-C

         (a) Front wheels 74 in.
         (b) Rear wheels 72 in.
      (7) Ground clearance 11-1/2 in.
(8) Cargo body
   (a) Length 125 in.
   (b) Width 82 in.
   (c) Height 23 in.
   (d) Area 70.7 sq ft
   (e) Volume 5 cu yd

e. Vehicle crew 2
f. Fuel
   (1) Capacity 90 gal
   (2) Type Diesel

8. Electrical system 24 volt

h. Engine

i. Transmission 5 speed

j. Transfer 2 speed

k. Axles 3

l. Wheels 10 & spare

m. Tires
   (1) Size 11.00 x 20
   (2) Tread design NDCC

n. Ground pressure

o. Shipping dimensions
   (1) W/winch
   (2) W/o winch
3. (U) **OPERATIONAL CHARACTERISTICS**

a. Turning radius
   
   (1) W/Winch 39 ft 4 in.
   
   (2) W/o winch 38 ft 8 in.

b. Speed (max permissible) 54 mph

c. Fuel consumption

d. Cruising range (highway w/o towed load)

e. Fording depth
   
   (1) W/o kit 30 in.
   
   (2) W/kit 78 in.

f. Gradeability
   
   (1) Forward slope 60%
   
   (2) Side slope 47%

g. Angle of approach
   
   (1) W/Winch
   
   (2) W/o winch

h. Angle of departure 69°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
(8) Cargo body
   (a) Length 125 in.
   (b) Width 82 in.
   (c) Height 23 in.
   (d) Area 70.7 sq ft
   (e) Volume 5 cu yd

(e) Vehicle crew
   (f) Fuel
      (1) Capacity 90 gal
      (2) Type Diesel

(g) Electrical system
   h. Engine
   i. Transmission 5 speed
   j. Transfer 2 speed
   k. Axles 3
   l. Wheels 10 & spare

(m) Tires
   (1) Size 11.00 x 20
   (2) Tread design NDCC

(n) Ground pressure
   o. Shipping dimensions
      (1) W/with
      (2) W/o winch
3. (U) **OPERATIONAL CHARACTERISTICS**

a. Turning radius
   (1) W/winch 39 ft 4 in.
   (2) W/o winch 38 ft 8 in.

b. Speed (max permissible) 54 mph

c. Fuel consumption

d. Cruising range (highway w/o towed load)

e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 78 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 47%

g. Angle of approach
   (1) W/winch
   (2) W/o winch

h. Angle of departure 69°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
TAB J (Truck, Tractor, 5 Ton, 6x6, M52A2) to Appendix 2 (Special Purpose/ Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This truck was designed to tow semitrailers, is type classified Standard A, and is in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight
      
      (1) W/winch  18,700 lbs  
      (2) W/o winch  17,840 lbs  

   b. Payload, (fifth wheel)
      
      (1) Highway  25,000 lbs  
      (2) Cross-country  15,000 lbs  

   c. Payload semitrailer
      
      (1) Highway  55,000 lbs  
      (2) Cross-country  37,500 lbs  

   d. Dimensions
      
      (1) Length
          
          (a) W/winch  273-1/2 in.  
          (b) W/o winch  258 in.  
      (2) Width  97-3/4 in.  
      (3) Height  103-3/4 in.  
      (4) Height, lowest operable  85-1/2 in.  
      (5) Wheelbase  167 in.  
      (6) Tread C-C
          
          (a) Front tires  74 in.  
          (b) Rear bogies  72 in.  
      (7) Ground clearance  11-1/2 in.  

F-2-J-2
e. Vehicle crew 2
f. Fuel
   (1) Capacity 90 gal
   (2) Type Multi-fuel
g. Electrical system 24 volt
h. Engine 6 cyl, 210 hp
i. Transmission 5 speed
j. Transfer 2 speed
k. Axles 3
l. Wheels 10 & spare
m. Tires
   (1) Size 11.00 x 20
   (2) Tread design NDCC
n. Ground pressure

c. Shipping dimensions
   (1) W/ winch 185 sq ft
   (2) W/ o winch 175 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
a. Turning radius 37 ft 6 in.
b. Speed (max permissible) 53 mph
c. Fuel consumption 5.3 mpg
d. Cruising range (w/o towed load) 477 miles
e. Fording depth
   (1) W/ kit 78 in.
   (2) W/o kit 30 in.
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%

  g. Angle of approach
     (1) W/ winch 37°
     (2) W/o winch 52-1/2°

  h. Angle of departure 68°

  i. Max vertical step climbing ability

  j. Vehicle mobility index

  k. Vehicle cone index
TAB K (Truck, Tractor, 10 Ton, 6x6, M123A1C) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This tractor is a heavy duty vehicle designed for use with a special purpose semitrailer (Annex F, Appendix 3, Tab I) in combat vehicle recovery operations. It has a single midship winch and a low mounted fifth wheel. This vehicle has been type classified Standard A and is in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 32,250 lbs
   
   b. Payload
      (1) Highway 35,000 lbs
      (2) Cross-country 30,000 lbs
   
   c. Towed load allowed
      (1) Highway 120,000 lbs
      (2) Cross-country 80,000 lbs
   
   d. Dimensions
      (1) Length 288-7/8 in.
      (2) Width 114 in.
      (3) Height 111 in.
      (4) Height, lowest operable 90.5 in.
      (5) Wheelbase 181.5 in.
      (6) Tread C-C
         (a) Front tires 79 in.
         (b) Rear bogies 99-1/2 in.
   
   e. Vehicle crew 2
   
   f. Fuel
      (1) Ca city 166 gal
      (2) Type Diesel
   
   g. Electrical system 24 volt

   **UNCLASSIFIED**
h. Engine
   i. Transmission
   j. Transfer
   k. Axles
   l. Wheels
   m. Tires
      (1) Size
      (2) Tread design
   n. Ground pressure
   o. Shipping dimensions

3. (U) **OPERATIONAL CHARACTERISTICS**
   a. Turning radius
   b. Speed (max permissible)
   c. Fuel consumption
   d. Cruising range
   e. Fording depth
      (1) W/kit
      (2) W/o kit
   f. Gradeability
      (1) Forward slope
      (2) Side slope
   g. Angle of approach
   h. Angle of departure
   i. Max vertical step climbing ability
   j. Vehicle mobility index
   k. Vehicle cone index

UNCLASSIFIED

V8, 300 hp
10 speed
Integral with transmission
3
10 & spare
14.00 x 24
NDCC
228 sq ft
18 ft
44 mph
2 mpg
350 miles
78 in.
30 in.
60%
52°
75°

F-2-K-3
TAB L (Truck, Tractor, 22-1/2 Tons, XM746) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. **GENERAL.** This tractor was designed as the prime mover for the XM747, 52-1/2 ton lowbed trailer (Tab H, Appendix 3). It is anticipated that the tractor trailer combination will replace the present heavy equipment transporters. This vehicle is not presently in the Marine Corps inventory.

2. **VEHICLE CHARACTERISTICS**

   a. **Net weight**
      
      41,578 lbs

   b. **Payload (fifth wheel)**
      
      (1) Highway 52,000 lbs
      
      (2) Cross-country

   c. **Payload semitrailer**
      
      (1) Highway 180,092 lbs
      
      (2) Cross-country

   d. **Dimensions**
      
      (1) Length 332 in.
      
      (2) Width 121 in.
      
      (3) Height 112 in.
      
      (4) Height, lowest operable
      
      (5) Wheelbase
      
      (6) Tread C-C 101.5 in.
      
      (7) Ground clearance 12.12 in.

   e. **Vehicle crew**
      
      2

   f. **Passengers, including crew**
      
      4

   g. **Fuel**
      
      (1) Capacity 280 gal
      
      (2) Type Diesel


UNCLASSIFIED
h. Electrical system
  i. Engine
    V12, 700 hp
  j. Transmission
    5 speed
  k. Transfer
  l. Axles
    4
  m. Wheels
    8 & spare
  n. Tires
    (1) Size
      18.22 x 5.20
    (2) Tread design
      NDCC
  o. Ground pressure
  p. Shipping dimensions
    (1) W/Winch
    (2) W/O winch

3. (U) OPERATIONAL CHARACTERISTICS

  a. Turning radius
  b. Speed (max permissible)
    38 mph
  c. Fuel consumption
    1.14 mpg
  d. Cruising range (highway w/towed load)
    320 miles
  e. Fording depth
    (1) W/O kit
      48 in.
    (2) W/Kit
  f. Gradeability
    (1) Forward slope
    (2) Side slope
  g. Angle of approach
    35°
h. Angle of departure 27°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
(TAB M (Truck, Wrecker, Crane, 2-1/2 Ton, 6x6, M108A2) to Appendix 2 (Special Purpose/Special Equipment Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)

PICTURE NOT AVAILABLE

F-2-M-1

UNCLASSIFIED
1. (U) **GENERAL.** This wrecker is used to tow, salvage and recover disabled vehicles and equipment organic to the MAW. The vehicle has been type classified Standard A and is a Navy procured item.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight
      
      (1) W/o winch 19,375 lbs
      (2) W/ winch 19,785 lbs

   b. Payload (towed suspended, boom braced)
      
      (1) Highway 3,500 lbs
      (2) Cross-country 600 lbs

   c. Crane rated lift capacities
      
      (1) 17 ft 6 in. radius
         
         (a) W/o outriggers 2,000 lbs
         (b) W/outriggers 4,000 lbs
      
      (2) 5 ft radius
         
         (a) W/o outriggers 4,000 lbs
         (b) W/outriggers 5,000 lbs

   d. Towed load allowed
      
      (1) Highway 10,000 lbs
      (2) Cross-country 6,000 lbs

   e. Dimensions
      
      (1) Length
         
         (a) W/ winch 302-1/4 in.
         (b) W/o winch 288-3/5 in.
      
      (2) Width 96 in.

   F-2-M-2
(3) Height 99-1/2 in.
(4) Height, lowest operable 93 in.
(5) Wheelbase 154 in.
(6) Tread C-C
   (a) Front wheels 67-3/4 in.
   (b) Rear wheels 70 in.
(7) Ground clearance 12.5 in.
f. Vehicle crew 2

(8) Fuel
   (1) Capacity 50 gal
   (2) Type Multi-fuel

h. Electrical system 24 volt

i. Engine 6 cyl, 140 hp

j. Transmission 5 speed

k. Transfer 2 speed

l. Axles 3

m. Wheels 10 & spare

n. Tires
   (1) Size 9.00 x 20
   (2) Tread design NDCC

o. Ground pressure

p. Shipping dimensions
   (1) W/Winch 202 sq ft
   (2) W/o Winch 192 sq ft

F-2-M-3

UNCLASSIFIED
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   (1) W/winch 35-1/2 ft
   (2) W/o winch 34-1/2 ft

b. Speed (max permissible) 58 mph

c. Fuel consumption 6 mpg

d. Cruising range (highway w/o towed load) 320 miles

e. Fording depth
   (1) W/o kit 30 in.
   (2) W/kit 72 in.

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%

g. Angle of approach
   (1) W/winch 40°
   (2) W/o winch 48°

h. Angle of departure 40°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index
1. (U) **GENERAL.** This wrecker is used to tow, salvage and recover disabled medium weight vehicles and equipment. The vehicle has been type classified Standard A and is presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 3/4.4.0 lbs

   b. Payload (towed suspended, boom braced)
      
      (1) Highway 12,000 lbs
      
      (2) Cross-country 7,595 lbs

   c. Crane rated lift capacities
      
      (1) 10 ft radius
         
         (a) W/o outriggers 6,300 lbs
         
         (b) W/outriggers 10,000 lbs
         
         (c) W/boom supports 20,000 lbs

      (2) 15 ft radius
         
         (a) W/o outriggers 5,000 lbs
         
         (b) W/outriggers 3,800 lbs

      (3) 18 ft radius
         
         (a) W/o outriggers 4,000 lbs
         
         (b) W/outriggers 3,000 lbs

   d. Towed load allowed
      
      (1) Highway 30,000 lbs
      
      (2) Cross-country 15,000 lbs

   e. Dimensions
      
      (1) Length 23 - in.
      
      (2) Width 97.8 in.
(3) Height
(4) Height, lowest operable
(5) Wheelbase
(6) Tread C-C
   (a) Front tires
   (b) Rear bogies
(7) Ground clearance
   (a) Under axle
   (b) Under chassis
f. Vehicle crew
g. Passengers including crew
h. Fuel
   (1) Capacity
   (2) Type
i. Electrical system
j. Engine
k. Transmission
l. Transfer
m. Axles
n. Wheels
o. Tires
   (1) Size
   (2) Tread design

UNCLASSIFIED

114 in.
106 in.
179 in.
74 in.
72 in.
11-1/2 in.
20-1/2 in.
2
N/A
110 gal
Diesel, CIE & gas
24 volt
6 cyl, inline,
210 hp
5 forward speeds,
1 reverse speed
2 speeds, high &
tlow range
3
10 & spare
11.00 x 20

F-2-V-3
3. (U) **OPERATIONAL CHARACTERISTICS**

a. Turning radius 41 ft

b. Speed (max permissible) 52.5 mph

c. Fuel consumption 5.3 mpg

d. Cruising range 583 miles

e. Fording depth
   (1) W/kit 78 in.
   (2) W/o kit 30 in.

f. Gradeability
   (1) Forward slope 61.4%
   (2) Side slope

 g. Angle of approach 37°

h. Angle of departure 34°

i. Max vertical step climbing ability

j. Vehicle mobility index

k. Vehicle cone index

p. Ground pressure

q. Shipping dimensions 235 sq ft
APPENDIX 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 20 December 1968) (U)

1. (U) PURPOSE. This appendix provides the characteristics of and performance data for logistical support trailers.

2. (U) GENERAL. Logistical support trailers are not self-propelled but rely on a prime mover.

TABS:

A. Trailer, Cargo, 1/4 Ton, 2 Wheel, M416B1
B. Trailer, Cargo, 3/4 Ton, 2 Wheel, M101A1
C. Trailer, Cargo, 1-1/2 Ton, 2 Wheel, M105A2
D. Trailer, Tank, Water, 1-1/2 Ton, 400 Gal, 2 Wheel, M107A2
E. Semitrailer, Stake and Platform, 6 Ton, 2 Wheel, M118A1
F. Semitrailer, Stake and Platform, 12 Ton, 4 Wheel, M127A2C
G. Semitrailer, Lowbed, 25 Ton, 4 Wheel, M172A1
H. Semitrailer, Lowbed, Heavy Equipment, Transporter (HET) 52-1/2 Ton, 8 Wheel, XM747E2
I. Semitrailer, Lowbed (TRACK PORTER) 52-1/2 Ton, 16 Wheel, XM793
J. Semitrailer, Tank, Water, 2,000 Gal, 4 Wheel, M586
K. Semitrailer, Tank, Refueler, 5,000 Gal, 4 Wheel, M131A2
L. Dolly Trailer Converters, M197A1, M198A1, M199 and M354
TAB A (Trailer, Cargo, 1/4 Ton, 2 Wheel, M416B1) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. **GENERAL.** This trailer is used to haul general cargo. It is type classified Standard A and is in the Marine Corps inventory. The recommended prime mover is a 1/4 ton vehicle.

2. **VEHICLE CHARACTERISTICS**

   a. Net weight
      - 620 lbs
   
   b. Payload
      
      (1) Highway
      - 650 lbs
      
      (2) Cross-country
      - 500 lbs
   
   c. Payload (weight distribution)
      
      (1) Lunette eye
      
      (a) No load
      - 88 lbs
      
      (b) Cross-country
      - 83 lbs
      
      (c) Highway
      - 102 lbs
      
      (2) Axle
      
      (a) No load
      - 532 lbs
      
      (b) Cross-country
      - 1,037 lbs
      
      (c) Highway
      - 1,268 lbs
   
   d. Dimensions
      
      (1) Length
      - 108-1/2 in.
      
      (2) Width
      - 60-1/2 in.
      
      (3) Height
      - 43 in.
      
      (4) Tread C-C
      - 53 in.
      
      (5) Ground clearance
      - 13-3/8 in.
(6) Cargo body

(a) Length 72 in.
(b) Width 41 in.
(c) Height 18 in.
(d) Area 20.5 sq ft

(e) Axles 1
(f) Wheels 2
(g) Tires
   (1) Size 7.00 x 16
   (2) Tread design NDCC
(h) Ground pressure
(i) Shipping dimensions 45 sq ft

3. (J) OPERATIONAL CHARACTERISTICS

a. Maximum towing speed
   (1) Highway 50 mph
   (2) Cross-country 18 mph

b. Fording
   Floats w/1/4 ton load

c. Angle of departure 36°
UNCLASSIFIED

TAB B (Trailer, Cargo, 3/4 Ton, 2 Wheel, M101A1) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
I. (U) GENERAL. The trailer is used for hauling cargo on and off highways. It is presently in the Marine Corps and is type classified Standard A. The recommended prime mover is the 1-1/4 ton truck.

2. (U) VEHICLE CHARACTERISTICS

a. Net weight 1,340 lbs

b. Payload

(1) Highway 2,250 lbs
(2) Cross-country 1,500 lbs

c. Payload (weight distribution)

(1) Lunette eye
   (a) No load 99 lbs
   (b) Cross-country 172 lbs
   (c) Highway 197 lbs

(2) Axle
   (a) No load 1,225 lbs
   (b) Cross-country 2,640 lbs
   (c) Highway 3,360 lbs

d. Dimensions

(1) Length 147 in.
(2) Width 73-1/2 in.
(3) Height 83 in.
(4) Height, lowest operable 50 in.
(5) Tread C-C 62 in.
(6) Ground clearance 16-1/8 in.
(7) Cargo body

(a) Length

(b) Width

1 Inside body
2 Between wheel wells

(c) Height

1 Steel body
2 Wood side racks
3 W/bows

(d) Area

(e) Capacity

e. Axles
f. Wheels
g. Tires
(1) Size
(2) Tread design
h. Ground pressure
i. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS

a. Maximum towing speed

(1) Highway
(2) Cross-country

b. Forging depth

c. Angle of departure

94-1/4 in.
66 in.
45-1/2 in.
18 in.
33-3/4 in.
50 in.
35 sq ft
140 cu ft
1
2
9.00 x 16
NDCC
74 sq ft
50 mph
30 mph
30 in.
33°
TAB C (Trailer, Cargo, 1-1/2 Ton, 2 Wheel, M105A2) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This trailer is used to haul cargo on and off highways. It is presently in the Marine Corps inventory and is type classified Standard A. The recommended prime mover is a 2-1/2 ton truck.

2. (U) VEHICLE CHARACTERISTICS

   a. Net weight                     2,750 lbs

   b. Payload

      (1) Highway                      4,500 lbs
      (2) Cross-country                3,000 lbs

   c. Payload (weight distribution)

      (1) Lunette eye

         (a) No load                   233 lbs
         (b) Cross-country              368 lbs
         (c) Highway                    425 lbs

      (2) Axle

         (a) No load                   2,517 lbs
         (b) Cross-country              5,382 lbs
         (c) Highway                    6,815 lbs

   d. Dimensions

      (1) Length                      166-1/2 in.
      (2) Width                       88 in.
      (3) Height                      98 in.
      (4) Height, lowest operable     55 in.
      (5) Tread C-C                   67-3/8 in.
(6) Ground clearance
   (a) Amidships 30-1/4 in.
   (b) Under axle 16-1/8 in.

(7) Cargo body
   (a) Length 110 in.
   (b) Width
      1 Inside body 74 in.
      2 Between wheel wells 54 in.
   (c) Height
      1 Steel body 18 in.
      2 Wood side racks 45 in.
      3 W/bows 60 in.
   (d) Area 54 sq ft
   (e) Capacity 270 cu ft

e. Axles 1
f. Wheels 2
g. Tires
   (1) Size 9.00 x 20
   (2) Tread design NDCC
h. Ground pressure
i. Shipping dimensions 101.8 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Maximum towing speed
      (1) Highway 50 mph
      (2) Cross-country 20 mph
b. Fording depth

c. Angle of departure
TAB D (Trailer, Tank, Water, 1-1/2 Ton, 400 Gal, 2 Wheel, M107A2) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This trailer is used to transport, store and dispense potable water. It is presently in the Marine Corps inventory and is type classified Standard A or B. The recommended prime mover is a 2-1/2 ton truck.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 2,280 lbs

   b. Payload

      (1) Highway 5,500 lbs

      (2) Cross-country 3,000 lbs

   c. Payload (weight distribution)

      (1) Lunette eye

         (a) No load 270 lbs

         (b) Cross-country 270 lbs

         (c) Highways 270 lbs

      (2) Axle

         (a) No load 2,010 lbs

         (b) Cross-country 5,345 lbs

         (c) Highway 5,345 lbs

   d. Dimensions

      (1) Length 163-1/8 in.

      (2) Width 82-1/4 in.

      (3) Height 76-3/4 in.

      (4) Tread C-C 67-5/8 in.

   e. Electrical system 24 volt

   f. Axles 1

F-3-D-2
g. Wheels
h. Tires
   (1) Size
   (2) Tread design
i. Ground pressure
j. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS
   a. Speed (max permissible)
   b. Fording
   c. Angle of departure
   d. Vehicle mobility index
   e. Vehicle cone index
TAB E. (Semitrailer, Stake and Platform, 6 Ton, 2 Wheel, M118A1) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This semitrailer is a general cargo carrier intended for use on the highway or cross-country. It consists of a stake rack body with removable stakes mounted on a semitrailer chassis. This vehicle is type classified Standard A and presently in the Marine Corps inventory. The recommended prime mover is the 2-1/2 ton truck w/dolly trailer converter (Annex F, Appendix 3, Tab L).

2. (U) VEHICLE CHARACTERISTICS

   a. Net weight 7,100 lbs
   b. Payload
      (1) Highway 16,200 lbs
      (2) Cross-country 12,100 lbs
   c. Payload (weight distribution)
      (1) Fifth wheel
          (a) No load 2,350 lbs
          (b) Cross-country 7,500 lbs
          (c) Highway 9,380 lbs
      (2) Axle
          (a) No load 4,750 lbs
          (b) Cross-country 11,540 lbs
          (c) Highway 13,920 lbs
   d. Dimensions
      (1) Length 274-3/4 in.
      (2) Width 94-11/16 in.
      (3) Height 102-3/16 in.
      (4) Height, lowest operable, no load 55 in.
(5) Tread C-C
(6) Ground clearance
   (a) Under landing supports
   (b) Under axle
(7) Cargo body
   (a) Length
   (b) Width
   (c) Rack height
   (d) Area
   (e) Capacity
   e. Axles
   f. Wheels
   g. Tires
      (1) Size
      (2) Tread design
   h. Ground pressure
   i. Shipping dimensions
3. (U) OPERATIONAL CHARACTERISTICS
   a. Maximum towing speed
      (1) Highway
      (2) Cross-country
   b. Forging depth
   c. Angle of departure

F-3-E-3

UNCLASSIFIED
TAB F (Semitrailer, Stake and Platform, 12 Ton, 4 Wheel, M127A2C) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. **GENERAL.** This semitrailer is used to transport general cargo on highways and cross-country. It consists of a stake rack body with removable stakes mounted on a semitrailer chassis. This vehicle is type classified Standard A and is in the Marine Corps inventory. The recommended prime mover is a 5 ton tractor, however a 5 ton cargo truck with a dolly trailer converter can be the prime mover.

2. **VEHICLE CHARACTERISTICS**
   a. Net weight 14,240 lbs
   b. Payload
      (1) Highway 36,000 lbs
      (2) Cross-country 24,000 lbs
   c. Payload (weight distribution)
      (1) Fifth wheel
         (a) Cross-country 14,740 lbs
         (b) Highway 20,040 lbs
      (2) Axles
         (a) Cross-country 23,500 lbs
         (b) Highway 30,200 lbs
   d. Dimensions
      (1) Length 344-1/4 in.
      (2) Width 96 in.
      (3) Height 105-1/2 in.
      (4) Height lowest operable no load 57-1/2 in.
      (5) Tread C-C 72 in.
(6) Ground clearance
   (a) Under axle 17 in.
   (b) Under landing supports 15 in.

(7) Cargo body
   (a) Length 335-13/16 in.
   (b) Width 88-13/16 in.
   (c) Rack height 48 in.
   (d) Area
   (e) Capacity

e. Axles 2
f. Wheels 8 & spare
g. Tires
   (1) Size 11.00 x 20
   (2) Tread design NDCC

h. Ground pressure
i. Shipping dimensions 230 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Maximum towing speed
      (1) Highway 50 mph
      (2) Cross-country 50 mph
   b. Fording depth 55 in.
   c. Angle of departure 50°
TAB C (Semitrailer, Lowbed, 25 Ton, 4 Wheel, M172A1) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-75) (CNC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This lowbed is currently in the Marine Corps inventory and type classified Standard A. It is used as transport engineer equipment or tracked machinery. The recommended prime movers are either the M52A2, 5 ton tractor for loads to 15 tons or the M123A2 for loads to 25 tons.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 16,600 lbs

   b. Payload

      (1) Highway 60,000 lbs

      (2) Cross-country 50,000 lbs

   c. Payload (weight distribution)

      (1) Fifth wheel

         (a) Cross-country 24,394 lbs

         (b) Highway 25,588 lbs

      (2) Axles

         (a) Cross-country 41,606 lbs

         (b) Highway 51,012 lbs

   d. Dimensions

      (1) Length 411-1/4 in.

      (2) Width 115 in.

      (3) Height 68 in.

      (4) Tread C-C 82-7/16 in.

      (5) Ground clearance

         (a) Amidships 23-1/2 in.

         (b) Under axles 23/4 in.
3. (U) OPERATIONAL CHARACTERISTICS

a. Maximum towing speed

   (1) Highway 30 mph
   (2) Cross-country 10 mph

b. Fording depth 5 ft

c. Angle of departure 45°
T.B H (Semitrailer, Lowbed, Heavy Equipment, Transporter (HET) 52-1/2 Ton, 8 Wheel, M747E2) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CHC Project No. 30-68-08 of 10 December 1968) (U)
1. **GENERAL.** This trailer will be used for transporting heavy tracked, and wheeled vehicles from ports, railheads, depots and places of disablement to maintenance areas. The prime mover is the XM746 tractor (Tab J, Appendix 3).

2. **VEHICLE CHARACTERISTICS**
   
a. Net weight
   b. Payload
      (1) Highway 105,000 lbs
      (2) Cross-country
   c. Dimensions
      (1) Length 509.75 in.
      (2) Width 137 in.
      (3) Height 44 in.
      (4) Tread C-C
      (5) Ground clearance 15.02 in.
      (6) Cargo body
         (a) Length
         (b) Width
         (c) Area
   d. Axles
   e. Wheels 16 & 2 spares
   f. Tires
      (1) Size 19.5 x 15
      (2) Tread design NDCC
   g. Ground pressure
   h. Shipping dimensions
3. (U) OPERATIONAL CHARACTERISTICS
   
a. Maximum towing speed.
   (1) Highway
   (2) Cross-country

b. Fording depth

c. Angle of departure
UNCLASSIFIED

Table 4 (Carrier, Laidbed (TRACK PORTER) 52-1/2 Ton, 16 Wheel, XM793) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CNC Project No. 30-68-08 of 10 November 1968) (U)
1. (U) **GENERAL.** This tank transporter was designed to transport M60 series tanks over improved and secondary roads. At reduced performance, the trackporter can also transport the M88 recovery vehicle and the M103 tank. This semitrailer is unique in that it is comprised of forward and trial units suspended by four independent walking beam assemblies. The two trail units are connected by a center pivot which allows the semitrailer to articulate or flex freely. The present status is limited production. The prime mover is a 10 to 25 ton truck tractor.

2. (U) **VEHICLE CHARACTERISTICS**
   a. Net weight 17,220 lbs
   b. Payload 105,780 lbs
   c. Payload (weight distribution)
      (1) Fifth wheel 25,000 lbs
      (2) 1st Axle 25,000 lbs
      (3) 2nd Axle 25,000 lbs
      (4) 3rd Axle 24,000 lbs
      (5) 4th Axle 24,000 lbs
   d. Dimensions
      (1) Length 366-3/8 in.
      (2) Width 124 in.
      (3) Height 87 in.
      (4) Tread
         (a) Inner 24 in.
         (b) Outer 64 in.
      (5) Ground clearance 12 in.
e. Axles
f. Wheels
g. Tires
   (1) Size
   (2) Design
h. Ground pressure
i. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS
   a. Maximum towing speed
   b. Forcing depth
      Dependent on prime mover
   c. Angle of departure
      20°
TAB J (Semitrailer, Tank, Water, 2,000 Gal, 4 Wheel, M586) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility in Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CHC Project No. 30-68-08 of 10 December 1968) (U)

NO PICTURE AVAILABLE
1. (U) **GENERAL.** This trailer is used for storing and transporting potable water. It has a two-compartment aluminum tank with a heating system. This vehicle is type classified Standard A but is not presently in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 6,424 lbs

   b. Payload

   (1) Highway 16,600 lbs

   (2) Cross-country

   c. Payload (weight distribution)

   (1) Fifth wheel 9,690 lbs

   (2) Bogie 13,334 lbs

   d. Dimensions

   (1) Length 247.5 in.

   (2) Width 95 in.

   (3) Height 94.5 in.

   (4) Wheelbase 197 in.

   (5) Tread C-C 70 in.

   (6) Ground clearance 17 in.

   e. Electrical system 24 volt

   f. Axle 1

   g. Wheels 4 & spare

   h. Tires

   (1) Size 9.00 x 20

   (2) Tread design NDCC
i. Ground pressure
j. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS

a. Maximum towing speed
   (1) Highway 50 mph
   (2) Secondary 35 mph
   (3) Cross-country 10 mph

b. Fording depth 15 in.

c. Angle of departure
TAB K (Semitrailer, Tank, Refueler, 5,000 Gal, 4 Wheel, M131A2) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 16 December 1968) (U)
1. (U) **GENERAL.** These trailers are both in the Marine Corps inventory and type classified as Standard A. The M131A2 has a steel tank and is limited to motor fuel. The M131A4C has an aluminum tank and is used for aviation refueling. The recommended prime mover is a 5 ton tractor.

2. (U) **VEHICLE CHARACTERISTICS**

   a. **Net weight**

      (1) M131A2 12,400 lbs
      (2) M131A4C 13,850 lbs

   b. **Payload**

      (1) **Highway**

         (a) M131A2 30,500 lbs
         (b) M131A4C 35,250 lbs

      (2) **Cross-country**

         (a) M131A2 20,344 lbs
         (b) M131A4C 23,265 lbs

   c. **Payload (weight distribution)**

      (1) **Fifth wheel**

         (a) **No load**

            1 M131A2 3,500 lbs
            2 M131A4C 3,700 lbs

         (b) **Cross-country**

            1 M131A2 11,724 lbs
            2 M131A4C 13,795 lbs

         (c) **Highway**

            1 M131A2 16,700 lbs
            2 M131A4C 18,900 lbs

F-3-K-2
(2) Axle
   (a) No load
       1 M131A2  8,900 lbs
       2 M131A4C 10,150 lbs
   (b) Cross-country
       1 M131A2 21,020 lbs
       2 M131A4C 23,320 lbs
   (c) Highway
       1 M131A2 26,200 lbs
       2 M131A4C 30,200 lbs

d. Dimensions*
   (1) Length 381-11/16 in.
   (2) Width 96-3/4 in.
   (3) Height 107-5/8 in.
   (4) Tread C-C 72 in.
   (5) Ground clearance under legs 15-3/8 in.
   (6) Fuel tank capacity
       (4 1,250 gal compartments) 5,000 gal

e. Axles* 2
f. Wheels* 8 & spare
g. Tires*
   (1) Size 11.00 x 20
   (2) Tread design NDCC
h. Ground pressure*

*Figures are applicable to both M131A2 and M131A4C vehicles

F-3-K-3
3. (J) OPERATIONAL CHARACTERISTICS*

a. Maximum towing speed
   (1) Highway 50 mph
   (2) Cross-country 30 mph

b. Fording depth 24 in.

c. Angle of departure 72°
TAB L (Dolly Trailer Converters, M197A1, M198A1, M199 and M354) to Appendix 3 (Logistical Support Trailers) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. **GENERAL.** These converters vary in size and load capacity. They are designed to convert semitrailers to full trailers and are equipped with a lunette for attachment to the towing vehicle. The four dollies listed are type classified Standard A except for the M199 which is type classified Standard B and are in the Marine Corps inventory.

2. **VEHICLE CHARACTERISTICS**

   a. **Net weight**
      
      | Model  | Weight (lbs) |
      |--------|--------------|
      | M197A1 (6 ton) | 2,970 |
      | M198A1 (8 ton) | 3,500 |
      | M199 (18 ton) | 7,700 |
      | M354 (15 ton) | 6,100 |

   b. **Payload**
      
      | Type      | Model  | Payload (lbs) |
      |-----------|--------|---------------|
      | Highway   | (a) M197A1 | 12,000 |
      | (b) M198A1 | 16,000 |
      | (c) M199  | 36,000 |
      | (d) M354  | 30,000 |
      | Cross-country | (a) M197A1 | 12,000 |
      | (b) M198A1 | 16,000 |
      | (c) M199  | 24,000 |
      | (d) M354  | 30,000 |

   c. **Tires**
      
      | Size      | Model  |
      |-----------|--------|
      | (a) M197A1 | 9.00 x 20 |
      | (b) M198A1 | 11.00 x 20 |
(2) Type
   (a) M197A1
   (b) M198A1
   (c) M199
   (d) M354

(3) Quantity
   (a) M197A1 4
   (b) M198A1 4
   (c) M199 8
   (d) M354 8

(4) Tread C-C
   (a) M197A1 70 in.
   (b) M198A1 72 in.
   (c) M199 82 in.
   (d) M354 72 in.

D. Dimensions
(1) Length
   (a) M197A1 112 in.
   (b) M198A1 120 in.
   (c) M199 144 in.
   (d) M354 144-3/8 in.
(2) Width
(a) M197A1 92-5/8 in.
(b) M198A1 96-3/4 in.
(c) M199 114-3/4 in.
(d) M354 97-1/4 in.

(3) Height
(a) M197A1 51-7/8 in.
(b) M198A1 52 in.
(c) M199 59 in.
(d) M354 60 in.

(4) Ground clearance
(a) M197A1 17-1/2 in.
(b) M198A1 19 in.
(c) M199 19 in.
(d) M354 10-5/8 in.
APPENDIX 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)

1. (U) PURPOSE. This appendix provides characteristics of and performance data for high mobility vehicles.

2. (U) GENERAL. High mobility vehicles possess a high degree of mobility over various terrain features and may include a swimming capability. These vehicles are designed primarily for off-road operations.

TABS:

A. Truck, Platform, Utility, 1/2 Ton, 4x4, M274A5

B. Multipurpose, Airmobile, Combat Support, Vehicle (MACV), 1/2 Ton, 8x8

C. Amphibious, Infantry, Support, Vehicle (AISV), 1/2 Ton, Tracked

D. Truck, Cargo, Articulated, 1-1/4 Ton, 6x6, M561

E. Carrier, Utility, Articulated, 1 Ton, Tracked, XM571

F. Truck, Cargo, 5 Ton, 8x8, M656

G. Truck, Cargo, 8 Ton, 4x4, M520

H. Truck, Wrecker, 10 Ton, 4x4, M553

I. Truck, Fuel, Servicing, 2,500 Gal, 4x4, M559

J. Carrier, Cargo, Amphibious, 1-1/2 Ton, Tracked, M116

K. Carrier, Cargo, Soft Tire, 1-1/2 Ton, Tracked, XM759E1
TAB A (Truck, Platform Utility, 1/2 Ton, 4x4, M274A5) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1907-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This truck is a light weight cargo vehicle used to carry ammunition and supplies for the infantryman. It also serves as a weapon's platform mounting the 106mm recoiless rifle. The vehicle is highly mobile and maneuverable. It is type classified Standard A.

2. (U) VEHICLE CHARACTERISTICS
   a. Net weight 970 lbs
   b. Payload 1,000 lbs
   c. Dimensions
      (1) Length 118.25 in.
      (2) Width 49.75 in.
      (3) Height 49.12 in.
      (4) Height, lowest operable 28.62 in.
      (5) Wheelbase 57 in.
      (6) Tread C-C 40.5 in.
      (7) Ground clearance 8.5 in.
      (8) Cargo body
         (a) Length 96 in.
         (b) Width 46 in.
         (c) Area 25.5 sq ft
   d. Vehicle crew 1
   e. Fuel
      (1) Capacity 8.5 gal
      (2) Type Gas
   f. Electrical system Magneto
   g. Engine 2 cyl, 13.5 hp
h. Transmission 3 speed
i. Transfer 2 speed
j. Axles 2
k. Wheels 4
l. Tires
   (1) Size 7.50 x 10
   (2) Tread design NDCC
m. Ground pressure 5.9 psi
n. Shipping dimensions 40.8 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius 44.5 ft
   b. Speed (max permissible) 25 mph
   c. Fuel consumption 9.25 mpg
   d. Cruising range (highway w/o towed load) 78.6 miles
   e. Fording depth 18 in.
   f. Gradeability
      (1) Forward slope 60%
      (2) Side slope 40%
   g. Angle of approach 40°
   h. Angle of departure 34°
   i. Max vertical step climbing ability
   j. Mobility index
   k. Vehicle cone index
TAB B (Multipurpose, Airmobile, Combat Support, Vehicle (MACV), 1/2 Ton) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle is undergoing evaluation by the Marine Corps Development Center as a potential candidate for the 1/2 ton vehicle program.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 1,750 lbs
   
   b. Payload (including 2 man crew) 1,000 lbs
   
   c. Towed load allowed
   
   d. Dimensions
      (1) Length 96 in.
      (2) Width 60 in.
      (3) Height 40 in.
      (4) Height, lowest operable 46 in.
      (5) Tread C-C 6.5 in.
      (6) Ground clearance
      (7) Cargo body
         (a) Length 49 in.
         (b) Width 60 in.
         (c) Area 22 sq ft
   
   e. Vehicle crew 2
   
   f. Passengers, including crew
   
   g. Fuel
      (1) Capacity 10 gal
      (2) Type Gas
   
   h. Electrical system 12 volt
   
   i. Engine 4 cyl, 30 hp
   
   j. Transmission 2 Hydrostatic
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   Pivot (infinitely variable)

b. Speed (max permissible)
   (1) Land
   25 mph
   (2) Water
   2.5 mph

c. Fuel consumption
   10 rpg

d. Cruising range (highway w/o towed load)
   100 miles

e. Fording
   Swimmer

f. Gradeability
   (1) Forward slope
   70%
   (2) Side slope
   50%

g. Angle of approach

F-4-B-3
h. Angle of departure
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB C (Amphibious, Infantry, Support, Vehicle (AISV), 1/2 Ton, Tracked) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-62-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle is undergoing evaluation by the Marine Corps Development Center as a potential candidate for the 1/2 ton vehicle program.

2. (U) **VEHICLE CHARACTERISTICS**

a. Net weight
   - 3,000 lbs

b. Payload
   - 1,500 lbs

c. Towed load allowed

d. Dimensions
   - (1) Length: 130 in.
   - (2) Width: 70 in.
   - (3) Height: 80 in.
   - (4) Height, lowest operable: 48 in.
   - (5) Wheelbase: 70 in.
   - (6) Track C-C: 56 in.
   - (7) Ground clearance: 12 in.
   - (8) Cargo body
     - (a) Length: 68 in.
     - (b) Width: 70 in.
     - (c) Area: 35 sq ft

e. Vehicle crew
   - 1

f. Passengers, including crew

g. Fuel
   - (1) Capacity: 20 gal
   - (2) Type: Gas

F-4-C-2
h. Electrical system
i. Engine
j. Transmission
k. Axles
l. Wheels
m. Track
n. Ground pressure (1 in. penetration)
o. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   (1) Land
       10.5 ft
   (2) Water
       35 ft

b. Speeds (max permissible)
   (1) Land
       30 mph
   (2) Water
       4.5 mph

c. Fuel consumption
   (1) Land
       5 mpg
   (2) Water
       1 mph

d. Cruising range
   (1) Land
       100 miles @ 25 mph
   (2) Water
       20 miles

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F-4-C-3

UNCLASSIFIED
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%
g. Angle of approach 75°
h. Angle of departure 65°
i. Max vertical step climbing ability 1.5 ft
j. Mobility index 14
k. Vehicle cone index 12
TAB D (Truck, Cargo, Articulated, 1-1/4 Ton, 6x6, M561) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This truck is due for phasing into the Marine Corps inventory during the 3rd quarter of FY 70, as a replacement vehicle for the M37B1, 3/4 ton truck. It is a highly mobile, light duty vehicle utilizing a two-body design.

2. (U) VEHICLE CHARACTERISTICS
   a. Net weight
      (1) W/winch 6,412 lbs
      (2) W/o winch 6,200 lbs
   b. Payload 2,500 lbs
   c. Towed load allowed 5,380 lbs
   d. Dimensions
      (1) Length
         (a) W/winch 229.75 in.
         (b) W/o winch 221.5 in.
      (2) Width 84.0 in.
      (3) Height 91 in.
      (4) Height, lowest operable 64.1 in.
      (5) Wheelbase
         (a) Front wheels to interim 78.8 in.
         (b) Interim to rear wheel 84.4 in.
      (6) Tread C-C 71.3 in.
      (7) Ground clearance 15.0 in.
      (8) Cargo body
         (a) Length 84.75 in.
(b) Width
(c) Area

e. Vehicle crew
f. Passengers, including crew
g. Fuel
   (1) Capacity
   (2) Type
h. Electrical system
i. Engine
j. Transmission
k. Transfer
l. Axles
m. Wheels
n. Tires
   (1) Size
   (2) Tread design
o. Ground pressure
   (1) Front tires
   (2) Interim tires
   (3) Rear tires
p. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS
a. Turning radius
b. Speeds (max permissible)
   (1) On land
   (2) Inland waters

76.5 in.
36 sq ft

43 gal
Diesel
24 volt
3 cyl, 103 hp
4 speed
2 speed
3
6
11.00 x 18
NDCC
6 psi
6.3 psi
6.3 psi
133 sq ft reducible to 132 sq ft
29 ft
55 mph
2 mph

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c. Fuel consumption 6.6 mpg
d. Cruising range (w/o towed load) 610 miles
e. Foring Swimmer
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%
g. Angle of approach
   (1) W/winch 57°
   (2) W/o winch 62.5°
h. Angle of departure 58°
i. Maximum vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB E (Carrier, Utility, Articulated, 1 Ton, Tracked, XM571) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CNC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle will be used to transport men and supplies in all seasons over various types of difficult terrain. It is type classified Standard B. This vehicle is not in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight
      
      (1) Front unit 3,650 lbs
      (2) Rear unit 2,500 lbs

   b. Payload
      
      (1) Front unit 500 lbs
      (2) Rear unit 1,500 lbs

   c. Towed load allowed 1,500 lbs

   d. Dimensions
      
      (1) Length
         
         (a) Front unit 111.5 in.
         (b) Rear unit 125.5 in.
      
      (2) Width 64 in.

      (3) Height
         
         (a) Front unit 62.8 in.
         (b) Rear unit 48.5 in.
      
      (4) Height, lowest operable 62.8 in.

      (5) Track
         
         (a) Type Band
         (b) Width 18 in.
         (c) Centers 45.5 in.
(6) Ground clearance
12 in.

(7) Cargo body, rear unit
   (a) Length
   (b) Width
   (c) Area
      1 Front unit 12 sq ft
      2 Rear unit 40 sq ft

(e) Vehicle crew
2

(f) Passengers, including crew
   (1) W/1 rear unit 12
   (2) W/2 rear units 20

(g) Fuel
   (1) Capacity
      (a) Front unit 35 gal
      (b) Rear unit 30 gal
   (2) Type Gas

(h) Electrical system 24 volt

(i) Engine 6 cyl, 70 hp

(j) Transmission 4 speed

(k) Transfer High and low range

(l) Axles

(m) Road wheels 8 per unit

(n) Tires
   (1) Size 14 in. dia
   (2) Type Divided w/solid rubber tire
o. Ground pressure
   (1) No sinkage 2.25 psi
   (2) At 4 in. sinkage 1.74 psi

p. Shipping dimensions
   (1) Front unit 45.2 sq ft
   (2) Rear unit 50.1 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius
      (1) Land 50.5 ft
      (2) Water
   b. Speed (max permissible)
      (1) Land 32 mph
      (2) Water 3 mph
   c. Fuel consumption 5 mpg
   d. Cruising range (highway w/o towed load) 300 miles
   e. Fording Swimmer
   f. Gradeability
      (1) Forward slope 60%
      (2) Side slope 40%
   g. Angle of approach 64°
   h. Angle of departure 67°
   i. Max vertical step climbing ability 18 in.
   j. Vehicle mobility index
   k. Vehicle cone index

F-4-E-4
TAB F (Truck, Cargo, 5 Ton, 8x8, M656) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This truck is the first of a new generation of tactical vehicles. It has greater mobility than the present 5 ton vehicle. The vehicle is type classified Standard A and is undergoing evaluation by the Development Center, Quantico, Virginia.

2. (U) VEHICLE CHARACTERISTICS

a. Net weight
   (1) W/winch 17,300 lbs
   (2) W/o winch 16,150 lbs

b. Payload
   (1) Highway 20,000 lbs
   (2) Cross-country 10,000 lbs

c. Towed load allowed
   (1) Highway 13,000 lbs
   (2) Cross-country 13,000 lbs

d. Dimensions
   (1) Length
      (a) W/winch 299 in.
      (b) W/o winch 278 in.
   (2) Width 96 in.
   (3) Height 116 in.
   (4) Height, lowest operable 80 in.
   (5) Wheelbase 148 in.
   (6) Tread C-C 77.25 in.
   (7) Ground clearance 12 in.
(8) Cargo body
   (a) Length 180 in.
   (b) Width
   (c) Area 110 sq ft
   (d) Volume

   e. Vehicle crew 2
   f. Passengers, including crew 18
   g. Fuel
      (1) Capacity 80 gal
      (2) Type Multi-fuel
   h. Electrical system 24 volt
   i. Engine 6 cyl, 200 hp
   j. Transmission 6 speed
   k. Transfer 1 speed
   l. Axles 4
   m. Wheels 8 & spare
   n. Tires
      (1) Size 16.00 x 20
      (2) Tread design NDCC
   o. Ground pressure
   p. Shipping dimensions
      (1) W/winch 200 sq ft
      (2) W/o winch 186 sq ft

F-4-F-3
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius 42 ft
b. Speed (max permissible) 50 mph
c. Fuel consumption 4.1 mpg
d. Cruising range (highway w/o towed load) 310 miles
e. Fording Swimmer
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 40%
g. Angle of approach
   (1) W/winch 35°
   (2) W/o winch 55°
h. Angle of departure 64°
i. Max vertical step climbing ability 27 in.
j. Mobility index
k. Vehicle cone index
TAB G (Truck, Cargo, 8 Ton, 4x4, M520) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CINC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle is presently not in the Marine Corps inventory; however, it has been type classified Standard A.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight 24,780 lbs
   b. Payload 16,000 lbs
   c. Towed load allowed
   d. Dimensions
      (1) Length 384 in.
      (2) Width 108 in.
      (3) Height 121 in.
      (4) Height, lowest operable 97 in.
      (5) Wheelbase 235 in.
      (6) Tread C-C 86.8 in.
      (7) Ground clearance 24 in.
      (8) Cargo body
         (a) Length 196 in.
         (b) Width
            1 Between wheel wells 58 in.
            2 Of side doors 106 in.
         (c) Height 48 in.
         (d) Area
   e. Vehicle crew 2
   f. Passengers, including crew
   g. Fuel
      (1) Capacity 110 gal
      (2) Type. Diesel

---

F-4-C-2
h. Electrical system 24 volt
i. Engine 6 cyl, 213 hp
j. Transmission 6 speed power shift
k. Axles 2
l. Wheels 4
m. Tires
   (1) Size 18.00 x 33
   (2) Tread design NDCC
n. Ground pressure
o. Shipping dimensions 287 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
a. Turning radius 26.6 ft
b. Speed (max permissible) 30 mph
c. Fuel consumption 4 mpg
d. Cruising range (highway w/o towed load) 400 miles
e. Fording Swimmer
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%
g. Angle of approach 35°
h. Angle of departure 38°
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB H (Truck, Wrecker, 10 Ton, 4x4, M553) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CNC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle is presently not in the Marine Corps inventory; however, it has been type classified Standard A.

2. (U) **VEHICLE CHARACTERISTICS**

a. Net weight 38,650 lbs

b. Crane rated lift capacity

   (1) 20-3/4 ft radius 6,000 lbs
   (2) 16 ft radius 10,000 lbs
   (3) 11 ft radius 15,000 lbs
   (4) 6 ft radius 20,000 lbs

(c) Towed load allowed

d. Dimensions

   (1) Length 401 in.
   (2) Width 108 in.
   (3) Height 128 in.
   (4) Height, lowest operable 118 in.
   (5) Wheelbase 235 in.
   (6) Tread C-C 86.8 in.
   (7) Ground clearance 24 in.

e. Vehicle crew 2

f. Fuel

   (1) Capacity 110 gal
   (2) Type Diesel

g. Electrical system 24 volt

h. Engine 6 cyl, 213 hp

i. Transmission 6 speed power shift
j. Axles 4
k. Wheels 4 & 2 spares
l. Tires
   (1) Size 18.00 x 33
   (2) Tread design NDCC
m. Ground pressure
n. Shipping dimensions 289 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
a. Turning radius 26.6 ft
b. Speed (max permissible) 30 mph
c. Fuel consumption 4 mpg
d. Cruising range (highway w/o towed load) 400 miles
e. Fording Swimmer
f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%
g. Angle of approach 35°
h. Angle of departure 35°
i. Max vertical step climbing ability
j. Vehicle mobility index
k. Vehicle cone index
TAB I (Truck, Fuel, Servicing, 2,500 Gal, 4x4, M559) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle is presently not in the Marine Corps inventory; however, it has been type classified Standard A.

2. (u) **VEHICLE CHARACTERISTICS**

   a. Net weight 29,590 lbs
   b. Payload 2,500 gal
   c. Towed load allowed 20,000 lbs
   d. Dimensions
      (1) Length 391 in.
      (2) Width 108 in.
      (3) Height 133.9 in.
      (4) Height, lowest operable 99 in.
      (5) Wheelbase 235 in.
      (6) Tread C-C 86.8 in.
      (7) Ground clearance 24 in.
   e. Vehicle crew 2
   f. Fuel
      (1) Capacity 110 gal
      (2) Type Diesel
   g. Electrical system 24 volt
   h. Engine 6 cyl, 213 hp
   i. Transmission 6 speed power shift
   j. Axles 4
   k. Wheels 4
   l. Tires
      (1) Size 18.00 x 33
      (2) Tread design NDCC
m. Ground pressure
n. Shipping dimensions

3. (U) OPERATIONAL CHARACTERISTICS

   a. Turning radius 26.6 ft
   b. Speed (max permissible) 30 mph
   c. Fuel consumption 4 mpg
   d. Cruising range (highway w/o towed load) 400 miles
   e. Fording Swimmer
   f. Gradeability
      (1) Forward slope 60%
      (2) Side slope 30%
   g. Angle of approach 35°
   h. Angle of departure 35°
   i. Max vertical step climbing ability
   j. Vehicle mobility index
   k. Vehicle cone index
TAB J (Carrier, Cargo, Amphibious, 1-1/2 Ton, Tracked, M116) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** The carrier cargo, amphibious tracked M16A1 is the latest marginal terrain vehicle to enter the Marine Corps inventory and is type classified Standard A. The light weight, amphibious vehicle is designed to transport cargo or passengers over unimproved roads as well as in all seasonal conditions in arctic, temperate, and tropical zones.

2. (U) **VEHICLE CHARACTERISTICS**

   a. Net weight
      - 7,680 lbs

   b. Payload
      - 3,000 lbs

   c. Towed load allowed
      - 2,400 lbs

   d. Dimensions
      - (1) Length: 188-1/8 in., reducible to 181-1/8 in.
      - (2) Width: 82-1/8 in., reducible to 80 in.
      - (3) Height: 79-1/8 in., reducible to 63-1/4 in.
      - (4) Tread C-C: 58-1/2 in.
      - (5) Ground clearance: 15-1/2 in.

   e. Cargo body
      - (a) Length: 91 in.
      - (b) Width: 76 in.
      - (c) Height: 23 in.
      - (d) Area: 43 sq ft

   f. Vehicle crew
      - 1

   f. Passengers, including crew
      - 14
3. (U) OPERATIONAL CHARACTERISTICS
   
a. Turning radius                  Pivot to infinity
   
b. Speed (max permissible)
   (1) On land                      37 mph
   (2) On water                     4 mph
   
c. Fuel consumption
   (1) On land                      4 mpg
   (2) On water                     1/3 mpg
   
d. Cruising range (w/o towed load)
   (1) On land or hard surface      300 miles
   (2) On water (approximately)     22 miles

F-4-J-3
e. Fording

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 30%

g. Angle of approach

h. Angle of departure

i. Max vertical step climbing ability 18 in.
TAB K (Carrier, Cargo, Soft Tire, 1-1/2 Ton, Tracked, XM759E1) to Appendix 4 (High Mobility Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This vehicle is presently under evaluation and is a candidate replacement for the M116 (Tab J).

2. (U) **VEHICLE CHARACTERISTICS**
   
a. Net weight 8,700 lbs
   
b. Payload
      
      (1) Land 3,700 lbs
      
      (2) Water 3,700 lbs
   
c. Dimensions
      
      (1) Length 245-1/8 in.
      
      (2) Width 110 in.
      
      (3) Height 102-1/8 in.
      
      (4) Height, lowest operable
   
   (5) Track
      
      (a) Type Pneumatic
      
      (b) Length 276 in.
      
      (c) Width 21 in.
   
   (6) Ground clearance 30 in.
   
   (7) Cargo body
      
      (a) Length 119 in.
      
      (b) Width 46 in.
      
      (c) Height 47 in.
      
      (d) Area 36 sq ft
   
e. Vehicle crew 2
   
f. Passengers, including crew 16
g. Fuel
   (1) Capacity
   50 gal
   (2) Type
   Gas
h. Electrical system
i. Engine
   V8, 283 hp
j. Transmission
   Hydromatic 3 speed
k. Axles
   34
l. Wheels
   34
m. Tires
   (1) Size
   24 x 21 x 6
   (2) Tread design
   Smooth
n. Ground pressure
o. Shipping dimensions
   180 sq ft

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius
      (1) Land
      22 ft
      (2) Water
      30 ft
   b. Speed (max permissible)
      (1) Land
      40 mph
      (2) Water
      6.5 mph
c. Fuel consumption
   3.6 mpg
d. Cruising range
   (1) Land
   180 miles
   (2) Water
e. Fording

f. Gradeability
   (1) Forward slope 60%
   (2) Side slope 45%

g. Angle of approach

h. Angle of departure

i. Maximum vertical step climbing ability 36 in.

j. Vehicle mobility index

k. Vehicle cone index
1. **PURPOSE.** This appendix provides the characteristics of and performance data for amphibious vehicles.

2. **GENERAL.** An amphibious vehicle, either tracked or wheeled, is capable of operating in water, negotiating surf and on land without major modification.

**TABS:**

A. Lighter, Amphibious, Resupply, Cargo, LARC 5
B. Lighter, Amphibious, Resupply, Cargo, LARC 15
C. Lighter, Amphibious, Resupply, Cargo, LARC 30
D. Lighter, Amphibious, Resupply, Cargo, LARC 60
E. Dual, Utility, Cargo, Wheeled, DUKW
F. Landing Vehicle, Tracked, Personnel, LVTP5A1
G. Landing Vehicle, Tracked, Command, LVTP5A1 (CMD)
H. Landing Vehicle, Tracked, Recovery, LVTR1A1
I. Landing Vehicle, Tracked, Personnel, Experimental, LVTPX12
J. Landing Vehicle, Tracked, Command, Experimental, LVTCX2
K. Landing Vehicle, Tracked, Recovery, Experimental, LVTRX2
TAB A (Lighter, Amphibious, Resupply, Cargo, LARC 5) to Appendix 5
(Amphibious Vehicles) to Annex F (Vehicle Characteristics and
Descriptions) to First Interim Report on Tactical Mobility for
Amphibious Assault and Post Assault Operations in the Mid-Range
Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968)
(U)
1. (U) **GENERAL.** This 5-ton, self-propelled, amphibious lighter is designed for employment in a cargo carrying capacity during amphibious operations, river crossings and limited operations ashore. The vehicle has an all-welded aluminum marine hull with wheels, a self-bailing cargo deck and is capable of negotiating a ten foot surf. This vehicle is in current production, but is not in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERTISTICS**

   a. Net weight 20,950 lbs
   b. Payload 10,000 lbs
   c. Dimensions
      (1) Length 35 ft
      (2) Height (overall/reducible) 10 ft 2 in./7 ft 11 in.
      (3) Width 10 ft
      (4) Wheelbase 192 in.
      (5) Tread C-C 101 in.
      (6) Ground clearance 16 in.
      (7) Cargo space
         (a) Length 16 ft
         (b) Width 9 ft 8 in.
         (c) Height 29 in.
   d. Vehicle crew 2
   e. Passengers (normal/emergency) 0/19
   f. Fuel
      (1) Capacity 144 gal
      (2) Type Diesel
g. Electrical system
h. Engine
i. Transmission

j. Axles
k. Wheels
l. Ground pressure
m. Tires

3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius, land (maximum)
b. Land propulsion
c. Water propulsion
d. Speed, loaded (maximum)
   (1) Land
   (2) Water
e. Cruising range
   (1) Land (full load/no load)
   (2) Water (full load/no load)
f. Fuel consumption
g. Gradeability
   (1) Forward slope
   (2) Side slope
h. Angle of approach
i. Angle of departure

F-5-A-3

UNCLASSIFIED

24 volt
Cummins Diesel, V8, 300 hp
Borg-Warner, automatic

4
4
21.7 psi
18.00 x 25

36 ft 6 in.
Wheels
Propeller

30 mph
10 mph

200/259 miles
40/79 miles
3 mpg/ 14 gal per hr

UNCLASSIFIED
j. Vehicle cone index 68
k. Mobility index 93
l. Maximum vertical step climbing ability 19 in.
m. Draft, loaded (fwd/aft) 4 ft 1 in./4 ft 3 in.
n. Freeboard, loaded 10 in.
TAB B (Lighter, Amphibious, Resupply, Cargo, LARC 15) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report for Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This 15-ton, self-propelled, amphibious lighter is designed to be employed in a cargo carrying capacity during amphibious operations, river crossings and limited operations ashore. The vehicle has an all-welded aluminum marine hull with wheels, a self-bailing cargo deck and is capable of negotiating a ten foot surf. This vehicle is in current production, but is not in the Marine Corps inventory.

2. (U) VEHICLE CHARACTERISTICS
   
a. Net weight 45,200 lbs
   b. Payload 30,000 lbs
   
c. Dimensions
      (1) Length 45 ft
      (2) Height (overall/reducible) 15 ft 6 in./13 ft 8 in.
      (3) Width 14 ft 6 in.
      (4) Wheel base 20 ft 10-1/2 in.
      (5) Ground clearance
         (a) Hull to ground 29 in.
         (b) Propeller shroud to ground 16-1/2 in.
      (6) Cargo space
         (a) Length 24 ft
         (b) Width 13 ft 6 in.
         (c) Height 3 ft 2-1/2 in.
   
d. Vehicle crew 2
   e. Passengers (normal/emergency) 0/51
   
f. Fuel
      (1) Capacity 360 gal
      (2) Type Diesel

F-5-B-2
g. Electrical system 24 volt

h. Engines, 2 each
Cummins Diesel, V8, 300 hp

i. Transmission
Borg-Warner, automatic

j. Axles
4

k. Wheels
4

l. Tires 24.00 x 29

m. Ground pressure 30 psi

3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius (maximum)
   (1) Land 45 ft 8 in.
   (2) Water 35 ft

b. Land propulsion Wheels

c. Water propulsion Propeller

d. Speed, loaded (maximum)
   (1) Land 30 mph
   (2) Water 9 mph

e. Cruising range
   (1) Land (full load/no load) 260/200 miles
   (2) Water (full load/no load) 45/54 miles

f. Fuel consumption
   (1) Land 16 gal/hr
   (2) Water 28 gal/hr

g. Gradeability
   (1) Forward slope 60%
(2) Side slope 25%

(3) Stability (water) 65°

h. Angle of approach 22°
i. Angle of departure 22°
j. Vehicle cone index 170
k. Mobility index 310
l. Draft, loaded (fwd/aft) 4 ft 11 in. / 5 ft 6 in.
m. Freeboard, loaded 1 ft 3 in.
TAB C (Lighter, Amphibious, Resupply, Cargo, LARC 30) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This 30-ton, self-propelled, amphibious lighter is a design and development proposal which, if built, would complement the existing lighter family and be employed in a cargo carrying capacity during amphibious operations, river crossings and limited operations ashore.

2. (U) **VEHICLE CHARACTERISTICS**
   
a. Net weight 70,000 lbs
b. Payload 60,000 lbs
c. Dimensions
   - (1) Length 54 ft
   - (2) Height (lowest operable) 14 ft 6 in.
   - (3) Width 16 ft
   - (4) Wheel base 24 ft
   - (5) Ground clearance 2 ft 8 in.
   - (6) Cargo space
      - (a) Length 30 ft
      - (b) Width 13 ft 6 in.
d. Vehicle crew 2

e. Passengers (normal/emergency) 0/64

f. Fuel
   - (1) Capacity 360 gal
   - (2) Type Diesel

g. Electrical system 24 volt

h. Engines, 2 each GMC-8V71, Diesel, 335 hp

i. Transmission Torque converter

j. Axles 4
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius (maximum)
   (1) Land
       48 ft
   (2) Water
       15 ft

b. Land propulsion

   Wheels

c. Water propulsion

   One or more propellers

d. Speed, loaded (maximum)
   (1) Land
       30 mph
   (2) Water
       8 mph

e. Cruising range, loaded
   (1) Land
       265 miles
   (2) Water
       77 miles

f. Fuel consumption

   40 gal/hr

g. Gradeability
   (1) Forward slope
       40%
   (2) Side slope
       35%
   (3) Stability (water)
       45°

h. Angle of approach

   22°

i. Angle of departure

   22°

j. Freeboard, loaded

   1 ft 6 in.
TAB D (Lighter, Amphibious, Resupply, Cargo, LARC 60) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This 60-ton, steel, self-propelled, amphibious lighter is employed in a passenger and cargo carrying capacity during amphibious operations, river crossings, and limited operations ashore. It is capable of negotiating a ten foot surf. The LARC 60 is in the U.S. Army inventory, but is not in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**
   a. Net weight: 199,000 lbs
   b. Payload: 120,000 lbs
   c. Dimensions:
      (1) Length: 62 ft 6 in.
      (2) Height (overall/reducible): 19 ft 5 in./15 ft 4 in.
      (3) Width: 26 ft 7 in.
      (4) Wheel base: 28 ft 10-1/2 in.
      (5) Ground clearance: 2 ft 1-1/2 in.
      (6) Cargo space:
         (a) Length: 38 ft
         (b) Width: 13 ft 8 in.
         (c) Height: 5 ft 6 in.
   d. Vehicle crew: 4
   e. Passengers (normal/emergency): 0/200
   f. Fuel:
      (1) Capacity: 600 gal
      (2) Type: Diesel
   g. Electrical system: 24 volt
h. Engines, 4 each  
Diesel, 165 hp

i. Transmission, 1 each wheel  
Independent drive

j. Axles  
4

k. Wheels  
4

l. Tires  
36.00 x 41

m. Ground pressure  
42 psi

3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius, land (maximum)  
75 ft

b. Land propulsion  
Wheels

c. Water propulsion  
2 propellers

d. Speed, loaded (maximum)  
(1) Land  
14 mph  
(2) Water  
7 mph

e. Cruising range, loaded  
(1) Land  
150 miles  
(2) Water  
75 miles

f. Fuel consumption  
30 gal/hr

g. Gradeability  
40%

h. Angle of approach  
27°

i. Angle of departure  
27°

j. Maximum vertical step up capability  
30°

k. Draft, loaded  
8 ft 8 in.

l. Freeboard, loaded  
4 ft 5 in.
TAB E (Dual, Utility, Cargo, Wheeled, DUKW) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. **U** GENERAL. This 2-1/2-ton, 6 x 6, vehicle can be employed in a troop and cargo transport role during ship-to-shore movement and in subsequent operations ashore. It is capable of negotiating an eight foot surf. This vehicle is in the Marine Corps inventory, but is not currently operational.

2. **U** VEHICLE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Net weight</td>
<td>15,000 lbs</td>
</tr>
<tr>
<td>b. Payload</td>
<td>5,000 lbs</td>
</tr>
<tr>
<td>c. Dimensions</td>
<td></td>
</tr>
<tr>
<td>(1) Length</td>
<td>31 ft</td>
</tr>
<tr>
<td>(2) Height (overall/reducible)</td>
<td>9 ft 2-1/2 in./7 ft 8 in.</td>
</tr>
<tr>
<td>(3) Width</td>
<td>8 ft 2 in.</td>
</tr>
<tr>
<td>(4) Wheel base</td>
<td>13 ft 8 in.</td>
</tr>
<tr>
<td>(5) Tread C-C</td>
<td>5 ft 4 in.</td>
</tr>
<tr>
<td>(6) Ground clearance</td>
<td>11-1/2 in.</td>
</tr>
<tr>
<td>(7) Cargo space</td>
<td></td>
</tr>
<tr>
<td>(a) Length</td>
<td>24 ft 5 in.</td>
</tr>
<tr>
<td>(b) Width</td>
<td>6 ft 10 in.</td>
</tr>
<tr>
<td>(c) Height</td>
<td>2 ft 3 in.</td>
</tr>
<tr>
<td>d. Vehicle crew</td>
<td>2</td>
</tr>
<tr>
<td>e. Passengers (normal/emergency)</td>
<td>25/30</td>
</tr>
<tr>
<td>f. Fuel</td>
<td></td>
</tr>
<tr>
<td>(1) Capacity</td>
<td>40 gal</td>
</tr>
<tr>
<td>(2) Type</td>
<td>72-80 octane, gas</td>
</tr>
</tbody>
</table>
3. (U) **OPERATIONAL CHARACTERISTICS**

a. Turning radius (maximum)
   - (1) Land
   - (2) Water

b. Land propulsion

c. Water propulsion

d. Speed, loaded (maximum)
   - (1) Land
   - (2) Water

e. Cruising range, loaded
   - (1) Land
   - (2) Water

f. Fuel consumption
   - (1) Land
   - (2) Water

g. Gradeability

h. Angle of approach

i. Angle of departure (empty/loaded)

24 volt

GMC 270, V6, 91 hp

GMC, mechanical

4

4

11.00 x 18

36 ft

20 ft

Wheels

Propeller

50 mph

6 mph

240 miles

35 miles

5 gal/hr

7 gal/hr

60%

38°

25°/15°
j. Maximum vertical step climbing ability 11-1/2 in.
k. Draft, loaded (fwd/aft) 3 ft 6 in./4 ft 3 in.
l. Freeboard, loaded (fwd/aft) 24 in./16 in.
TAB F (Landing Vehicle, Tracked, Personnel, LVTP5A1) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (ChC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This armored, amphibious, assault personnel and cargo carrier can be employed to transport troops, equipment and cargo through a 15 foot surf to inland points as required. The vehicle operates on land or in water without modification. It is in the Marine Corps inventory.

2. (U) VEHICLE CHARACTERISTICS

a. Weight
   (1) Net
   65,700 lbs
   (2) Combat loaded (water/land)
   82,500 lbs / 88,500 lbs

b. Payload (water/land)
   12,000 lb / 18,000 lbs

c. Dimensions
   (1) Length
   29 ft 8 in.
   (2) Height (overall)
   9 ft 7 in.
   (3) Width
   11 ft 8-1/2 in.
   (4) Track effective length
   19 ft 4 in.
   (5) Track C-C
   11 ft 8 in.
   (6) Ground clearance
   11 in.
   (7) Cargo space
      (a) Length of cargo opening in top deck
      8 ft
      (b) Width of cargo opening in top deck
      7 ft
      (c) Length
      15 ft
      (d) Width (minimum)
      7 ft 3 in.
      (e) Height (minimum)
      5 ft 6 in.

d. Vehicle crew
   3
e. Passengers (maximum) 34

f. Fuel
   (1) Capacity 456 gal
   (2) Type 80 octane, gas

8. Electrical system 24 volt

h. Engine
   Continental, LV-1790-1 V-12, 810 hp

i. Transmission
   Allison Crossdrive, hydraulic torque converter

j. Running gear
   (1) Sprockets 17 teeth, 1 each side
   (2) Return idlers 5 pair per side
   (3) Track blocks Steel, 134 blocks per side
   (4) Wheels Dual, 9 per side

k. Ground pressure 9.3 psi

3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius (maximum)
   (1) Land pivot 27 ft
   (2) Water 70 ft

b. Land propulsion Track

c. Water propulsion Track

d. Speed, loaded (maximum)
   (1) Land 30 mph
   (2) Water 6 mph

F-5-F-3
e. Cruising range, loaded
   (1) Land 190 miles
   (2) Water 9.5 hrs/57 miles

f. Fuel consumption
   (1) Land 7 gal/mile
   (2) Water 47 gal/hr

g. Gradeability
   (1) Forward slope 70%
   (2) Side slope 60%

h. Angle of approach 75°
i. Angle of departure 35°
j. Vehicle cone index 55
k. Mobility index 65

l. Obstacle ability
   (1) Trench 12 ft
   (2) Vertical 3 ft

m. Draft, loaded 6 ft 2 in.
n. Freeboard loaded (fwd/aft) 25 in./18 in.
1. (U) **GENERAL.** This armored, amphibious, assault, command vehicle can be employed as a mobile command post, fire support coordination center, or observation post. It can accommodate additional communications equipment, field desks, chairs, map boards, and other required command post equipment. It can negotiate a 15 foot surf. The vehicle is in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS.** The LVTP5Al CMD vehicle has characteristics identical to those of the conventional LVTP5Al described in Tab F, except as set forth below:

   a. Passengers 12
   b. Cargo capacity Designed as a communications vehicle and does not normally transport cargo
   c. Weight
      (1) Net 67,200 lbs
      (2) Combat loaded 75,700 lbs
TAB H (Landing Vehicle, Tracked, Recovery, LVTRLAI) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) **GENERAL.** This armored, amphibious, recovery and maintenance vehicle is employed to retrieve and repair other amphibious vehicles during the conduct of amphibious or land operations. It is capable of negotiating a 15 foot surf. The vehicle is in the Marine Corps inventory.

2. (U) **VEHICLE CHARACTERISTICS**
   a. Weight
      (1) Net
         75,900 lbs
      (2) Combat loaded
         83,000 lbs
   b. Dimensions
      (1) Length
         31 ft 9 in.
      (2) Height (overall/reducible)
         18 ft 1 in./
            10 ft 10 in.
      (3) Width
         11 ft 5-1/2 in.
      (4) Track effective length
         19 ft 4 in.
      (5) Track C-C
         11 ft 8 in.
      (6) Ground clearance
         11 in.
      (7) Cargo space
         None
   c. Vehicle crew
      3
   d. Passengers (emergency only)
      10
   e. Fuel
      (1) Capacity
         456 gal
      (2) Type
         80 octane, gas
   f. Electrical system
      24 volt
   g. Engine
      Continental, LV-1790-1,
         V12, 810 hp

F-5-H-2
h. Transmission

i. Running gear
   (1) Sprockets
   (2) Return idlers
   (3) Track blocks
   (4) Wheels

j. Ground pressure

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius (maximum)
      (1) Land pivot
      (2) Water
   b. Land propulsion
   c. Water propulsion
   d. Speed (maximum)
      (1) Land
      (2) Water
   e. Cruising range
      (1) Land
      (2) Water (hours/miles)
   f. Fuel consumption
      (1) Land
      (2) Water

F-5-H-3
g. Gradeability
   (1) Forward slope 70%
   (2) Side slope 60%

h. Angle of approach 66°
i. Angle of departure 35°
j. Vehicle cone index 53
k. Mobility index 60

l. Obstacle ability
   (1) Trench 12 ft
   (2) Vertical 3 ft
m. Draft, loaded 6 ft 3 in.
n. Freeboard, loaded (fwd/aft) 28 in./16 in.
TAB II (Landing Vehicle, Tracked, Personnel, Experimental, LVTPX1) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the 500-Mile Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968)
1. (U) GENERAL. This armored, amphibious, assault personnel and cargo carrier can be employed to transport troops, equipment and cargo through a ten foot surf to inland points as required. It operates on land or in water without modification. This prototype vehicle is expected to be in the Marine Corps inventory in July 1970.

2. (U) VEHICLE CHARACTERISTICS

a. Weight
   (1) Net 38,650 lbs
   (2) Combat loaded 50,000 lbs

b. Payload 10,000 lbs

c. Dimensions
   (1) Length 26 ft
   (2) Height (overall/reducible) 10 ft 4 in./9 ft 7 in.
   (3) Width 10 ft 6 in.
   (4) Track effective length 12 ft 11 in.
   (5) Track C-C 10 ft
   (6) Ground clearance 16 in.
   (7) Cargo space
      (a) Length of cargo opening in top deck 9 ft
      (b) Width of cargo opening in top deck 5 ft
      (c) Length 14 ft
      (d) Width 6 ft
      (e) Height 5 ft 6 in.

d. Vehicle crew 3
3. (U) OPERATIONAL CHARACTERISTICS

a. Turning radius
   Turns within own length in water and on land

b. Land propulsion
   Track

c. Water propulsion (primary/secondary)
   Water jets/track

d. Speed, loaded (maximum)
   (1) Land
      40 mph
   (2) Water
      8 mph

e. Cruising range, loaded
   (1) Land
      300 miles
   (2) Water
      70 miles
f. Fuel consumption
   (1) Land  1.6 gal/mile
   (2) Water  26 gal/hr

g. Gradeability
   (1) Forward slope  60%
   (2) Side slope  60%

h. Angle of approach  39°
i. Angle of departure  37°
j. Vehicle cone index  47
k. Mobility index  49

l. Obstacle ability
   (1) Trench  8 ft
   (2) Vertical  3 ft

m. Draft, loaded  6 ft
n. Freeboard, loaded (fwd/aft)  10 in.
TAB J (Landing Vehicle, Tracked, Command, Experimental, LVTCX2) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. **GENERAL.** This armored, amphibious, assault, command vehicle can be employed as a mobile command post, fire support coordination center, or observation post. It can accommodate additional communications equipment, field desks, chairs, mapboards, and other required command post items. It operates on land or in water without modification and can negotiate a ten foot surf. This prototype vehicle is expected to be in the Marine Corps inventory in July 1970.

2. **VEHICLE CHARACTERISTICS.** The LVTCX2 has characteristics identical to those of the conventional LVTPX12 described in Tab I, except as set forth below:

   a. Passengers 10
   
   b. Cargo capacity Designed as a communications vehicle and does not normally transport cargo
   
   c. Weight (combat loaded) 44,500 lbs
TAB K (Landing Vehicle, Tracked, Recovery, Experimental, LVTRX2) to Appendix 5 (Amphibious Vehicles) to Annex F (Vehicle Characteristics and Descriptions) to First Interim Report on Tactical Mobility for Amphibious Assault and Post Assault Operations in the Mid-Range Period (FY 1970-79) (CMC Project No. 30-68-08 of 10 December 1968) (U)
1. (U) GENERAL. This armored, amphibious, recovery and maintenance vehicle is employed to retrieve and repair other amphibious vehicles during the conduct of amphibious or land operations. It operates on land or in water without major modification and can negotiate a ten foot surf. This prototype vehicle is expected to be in the Marine Corps inventory in July 1970.

2. (U) VEHICLE CHARACTERISTICS
   a. Weight (combat loaded) 52,000 lbs
   b. Dimensions
      (1) Length 26 ft 6 in.
      (2) Height (lowest operable) 10 ft 9 in.
      (3) Width 10 ft 6 in.
      (4) Track effective length 12 ft 11 in.
      (5) Track C-C 10 ft
      (6) Ground clearance 16 in.
      (7) Cargo space None
   c. Vehicle crew 5
   d. Passengers (emergency only) 5
   e. Fuel
      (1) Capacity 180 gal
      (2) Type Diesel
   f. Electrical system 24 volt
   g. Engine Detroit Diesel, 8V53T, V8, 40 hp
   h. Transmission FMC HS400, torque converter
i. Running gear
   (1) Sprockets
      11 teeth each, 1 each side
   (2) Return idlers
      1 each side
   (3) Track blocks
      Steel, 84 blocks per side
   (4) Wheels
      Dual, 6 per side
j. Ground pressure
   8.0 psi

3. (U) OPERATIONAL CHARACTERISTICS
   a. Turning radius
      Turns within own length in water and on land
   b. Land propulsion
      Track
   c. Water propulsion (primary/secondary)
      Water jets/track
d. Speed, loaded (maximum)
   (1) Land
      40 mph
   (2) Water
      8 mph
e. Cruising range, loaded
   (1) Land
      300 miles
   (2) Water
      70 miles
f. Fuel consumption
   (1) Land
      1.6 gal/mile
   (2) Water
      26 gal/hr
g. Gradeability
   (1) Forward slope
      60%
   (2) Side slope
      60%
h. Angle of approach
   40°
i. Angle of departure
   40°
j. Vehicle cone index 47

k. Mobility index 49

f. Obstacle ability

   (1) Trench 8 ft
   (2) Vertical 3 ft

m. Crane

   (1) Lift capability 9.5 tons
   (2) Reach capability 21.5 ft

n. Draft, loaded 6 ft

o. Freeboard, loaded (fwd/aft) 10 in.
**REPORT TITLE**

Tactical Mobility for Amphibious Assault and Post-Assault Operations in the Mid-Range Period (FY 1970-79)(U)

**AUTHOR(S)**

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**SPONSORING MILITARY ACTIVITY**

United States Marine Corps

**ABSTRACT**

Volume III provides the characteristics and performance data for ground vehicles considered by the Tactical Mobility study. These vehicles have been treated in various categories: general purpose vehicles, special purpose/equipment vehicles, logistic support trailers, high mobility vehicles, and amphibious vehicles.
Tactical Mobility; Amphibious Assault; Marine Corps Mid-Range Operational Roles, Missions and Concepts of Operations; Combat Tasks; Methodology; Threat; Description of Marine Division, Force Troop and Aircraft Wing Units