AD NUMBER
AD479143

NEW LIMITATION CHANGE

TO
Approved for public release, distribution unlimited

FROM
Distribution authorized to U.S. Gov’t. agencies and their contractors; Administrative/Operational Use; JUN 1963. Other requests shall be referred to U.S. Army Tank-Automotive Center, Warren, MI.

AUTHORITY
USATACOM ltr, 3 Jun 1983

THIS PAGE IS UNCLASSIFIED
RAVE-II
REMOTE AREA VEHICLE EVALUATION

Tomahawk Hills, Pontiac, Michigan
13 June 1963

SYSTEMS CONCEPT BRANCH
SYSTEMS REQUIREMENTS & CONCEPT DIVISION
RESEARCH & ENGINEERING DIRECTORATE
ARMY TANK - AUTOMOTIVE CENTER

Best Available Copy
RAVE II

REMOTE AREA VEHICLE EVALUATION

Prepared by
Mr. R. R. Gay
Lt. M. Kovia

Project Direction by
P. T. Garland

Reviewed by
H. L. Hayter

U. S. ARMY TANK AUTOMOTIVE CENTER
RESEARCH & ENGINEERING DIRECTORATE

13 JUNE 1963
INTRODUCTION

OPERATION RAVE II was Phase I of a review meeting on development of a 1/4 ton mechanical load carrying device. Both industry and Government personnel participated in this phase at Tomahawk Hills and Galloway Lake, Pontiac, Michigan on 13 June 1963.

Phase II on 14 June 1963 consisted of a review meeting at ATAC in which only representatives of various Government agencies participated to discuss present and future developments necessary to meet the SDR requirements for the device.

It is hoped that consolidation of essential data of vehicles which participated will help everyone concerned to develop more mobile ground equipment for our fighting men.

PURPOSE

The purpose of RAVE II was to bring together for a limited evaluation, vehicles of commercial and military design responsive to logistical support of small fighting units in remote areas. Assembling the equipment into one area and operating over identical terrain provided the Department of Defense technical personnel an opportunity to see the equipment operating over natural obstacles.

For manufacturers of the equipment, RAVE II provided an opportunity to demonstrate some of the capabilities of their vehicles to personnel of various Government agencies in one place at one time.

To add realism, no rehearsals or "dry runs" of RAVE II were conducted. Much of the terrain over which the vehicles operated had not been disturbed by man for considerable periods of time. Many of the vehicles were at Tomahawk Hills for the first time and many of the drivers had never driven vehicles in this particular area before.

The beach at Galloway Lake was also in its natural condition. All vehicles were "on their own" as no ramps were provided for water entry or exit.
BACKGROUND

With the rebirth of special warfare in the last few years, the role of the individual soldier and of squad sized units has been re-emphasized. Most guerilla type fighting has been, is presently, and will most likely continue to occur in remote areas of the world. The terrain encountered may be tropical grasslands and canopy areas, or rugged mountains, inland waterways, swamps, mud flats and rice paddies. Other adverse terrain conditions are frequently encountered and must be crossed to accomplish the mission of the unit.

Logistical problems in remote areas multiply over those encountered in more favorable terrain. The individual soldier and the squad may have to be self-sustaining for days without resupply in remote areas. Food, ammunition, weapons, and other supplies must be taken along. As in the past, each individual soldier must carry his share of the load. With present and future high rate of fire weapons, the quantity of ammunition required has increased considerably over requirements of few years ago. With this extra burden, the mobility and range of the individual is considerably decreased. To gain superiority over the enemy in warfare in remote areas, the individual must be able to move faster than the opponent, be better equipped, and have a firepower advantage.

In order to obtain superiority over the enemy, the individual soldier must be relieved as a burden carrier. A machine must be developed to do the work for the soldier. Such a vehicle should be mobile, floatable and easy to operate by the individual. It must be an aid to the individual, not a burden. In addition to general characteristics of low cost, effectiveness, durability, reliability and lightweight the vehicle should specifically have:

a. High payload/vehicle weight ratio.

b. Minimum signature (sound, odor, sight).

c. Floating capability with payload.

d. Compact dimensions.

e. Controls requiring minimum physical effort from operator.

f. Maximum mobility to traverse narrow jungle trails, rain forest, savannah, swamps, marshland, and rough rocky mountain slopes of 60% grade.
DESCRIPTION OF TEST COURSE

Area A - This area consisted of four main obstacles: a 50% uphill grade approximately 10 feet long; a dry bare earth ditch of 4 foot depth; a grass covered ditch of 4 foot depth; and a washed out trail which was severely rutted. The ruts contained some water, but provided a relatively firm footing underneath.
Area B - This course was laid out over a marshy area such that the footing became progressively wetter from entrance to exit. At the start of the demonstration, the entire area was heavily covered with vegetation and sufficiently wide that each driver could select his own route.

Area C - This area was an attempt to simulate a South East Asian design rice paddy and dike. The area was very wet with approximately 8 inches of water over very soft mud. In the middle of this was a wooden structure constructed to simulate a rice paddy dike. This was 24" high with a 60% approach and departure and 12" flat on top. The material was unpainted douglas fir.
Galloway Lake - The approach to the water is over a grassy area with a steep drop from 12" above to 12" below the water level. The mud bottom then dropped away gradually to floating depth.
MULE (LIVE ANIMAL)

MANUFACTURER:

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>FUEL CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>650 lbs.</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>400 lbs.</td>
</tr>
</tbody>
</table>

DIMENSIONS (Est.)

| Length          | 84 in.            |
| Width           | 24 in.            |
| Height          | 72 in.            |
| Ground Clearance| 30 in.            |

<table>
<thead>
<tr>
<th>BRAKES</th>
<th>ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSMISSION</td>
<td></td>
</tr>
<tr>
<td>AXLES</td>
<td></td>
</tr>
<tr>
<td>SUSPENSION</td>
<td></td>
</tr>
<tr>
<td>TIRES</td>
<td></td>
</tr>
</tbody>
</table>

| MAXIMUM SPEED   | 10 mph            |
| MINIMUM SPEED   | 0                  |
| RETAIL PRICE    | $200.00           |

PERFORMANCE

Due to late arrival, the mule did not participate in area A. He successfully completed areas B and C with 150 lb. payload. This mule was operated at a reduced payload because of his age (30 years) and physical condition. The mule was demonstrated, without payload, swimming in the lake at approximately 3 miles per hour. The mule completed all of the courses without operator's assistance.
**MAN-POWERED CARRIER**

**MANUFACTURER:** U. S. Forest Service, Missoula, Montana

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>FUEL CAPACITY</th>
<th>BRAKES</th>
<th>ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>35 lbs.</td>
<td>None</td>
<td>Hand Type on Hub</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>150 lbs.</td>
<td>Man-powered</td>
<td>Solid</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>TRANSMISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>82 in.</td>
<td>None</td>
</tr>
<tr>
<td>Width</td>
<td>21.75 in.</td>
<td>Solid</td>
</tr>
<tr>
<td>Height</td>
<td>23 in.</td>
<td>None</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>7 in.</td>
<td>Solid</td>
</tr>
<tr>
<td>TREAD</td>
<td>N/A</td>
<td>Solid</td>
</tr>
<tr>
<td><strong>TIRE</strong></td>
<td>4.80/4.00x8</td>
<td>Walking speed</td>
</tr>
</tbody>
</table>

**PERFORMANCE**

Vehicle successfully completed area A with a 100 lb. payload and considerable operator effort. Vehicle did not participate in any of the other areas.
BURRITO SCOOTER

MANUFACTURER: Pak Jak Sales and Service, Paradise, California

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th></th>
<th>FUEL CAPACITY</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>103 lbs.</td>
<td>3 qt.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Payload</td>
<td>100 lbs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ driver</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th></th>
<th>PUMP CAPACITY</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>53 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>21 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>33 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>8.5 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TREAD</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANGLE OF APPROACH</td>
<td>90°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANGLE OF DEPARTURE</td>
<td>60°</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BRAKES</th>
<th></th>
<th>TRANSMISSION</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>On jack shaft,</td>
<td></td>
<td>Salsbury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>self energizing</td>
<td></td>
<td>torque converter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGINE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 HP, 1 cyl.,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 cycle, air-cooled</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AXLES</th>
<th></th>
<th>SUSPENSION</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rigid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIRES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.80x8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAXIMUM SPEED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MINIMUM SPEED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RETAIL PRICE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$260.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PERFORMANCE

Vehicle successfully completed areas A and B with rated payload. Some assistance was required by the operator. Vehicle did not participate in the other areas.
MANUFACTURER: Bonham Corporation, Provo, Utah

WEIGHTS
- Curb Weight: 125 lbs.
- Rated Payload: 100 lbs. + driver

DIMENSIONS
- Length: 59 in.
- Width: 13 in.
- Height: 27 in.
- Ground Clearance: 8 in.

TRANSMISSION
- Automatic, Variable speed

AXLES
- Solid

SUSPENSION
- Front - telescopic
- Rear - none

TIRES
- 4.00x8

FUEL CAPACITY
- 3 qt.

ENGINE
- Briggs & Stratton 4 cycle, 1 cyl., air cooled, 6 HP

BRAKES
- Friction Type
- Front and Rear

PERFORMANCE

Vehicle was audible at approximately 150 feet. Vehicle successfully completed areas A and B with rated payload. Some assistance was required by the operator. Vehicle did not participate in the other areas.
MANUFACTURER: Nethercutt Industrial Corporation, Sylmar, California

WEIGHTS
Curb Weight 190 lbs.
Rated Payload 150 lbs. + driver

DIMENSIONS
Length 77 in.
Width 28 in.
Height 41 in.
Ground Clearance 15 in.
TREAD 7 in.

AXLES
Solid

ANGLE OF APPROACH 90°
ANGLE OF DEPARTURE 90°
FUEL CAPACITY 11 gal.

ENGINE
West Bend, 2 cycle, 8.2 cu. in., 1 cyl.

TRANSMISSION
Albion 3-speeds ft & rear wheel dr

TIRES
6.70x15 2-ply implement

MAXIMUM SPEED 25 mph
MINIMUM SPEED 0.5 mph

RETAIL PRICE $695.00

PERFORMANCE
Vehicle successfully completed areas A, B and C with rated payload. Some assistance was required by the operator particularly in area C where the vehicle was manhandled by the operator. Vehicle did not participate in the other areas.
NETHERCUTT TRAILBREAKER

MANUFACTURER: Nethercutt Industrial Corporation, Sylmar, California

WEIGHTS
Curb Weight 190 lbs.
Rated Payload 150 lbs.
+ driver

WEIGHTS

BRAKES
80mm brake

Curb Weight 190 lbs.
Rated Payload 150 lbs.
+ driver

ENGINE
West Bend, 2 cycle,
8.2 cu. in., 1 cyl.

DIMENSIONS
Length 77 in.
Width 28 in.
Height 41 in.
Ground Clearance 15 in.

TRANSMISSION
Albion 3-speeds
ft & rear wheel dr

AXLES
Motorcycle type

HEIGHT
Rigid

SUSPENSION
6.70x 15 2-ply

TIRES
Implement

FUEL CAPACITY 11 gal.

ANGLE OF APPROACH 90°

MAXIMUM SPEED 25 mph

ANGLE OF DEPARTURE 90°

MINIMUM SPEED 0.5 mph

RETAIL PRICE $695.00

PERFORMANCE

Vehicle successfully completed areas A, B and C with no payload. Some assistance was required by the operator particularly in area C where the vehicle was manhandled by the operator. Vehicle was demonstrated floating in the lake, however, the engine stalled during this operation. Vehicle did not participate in sound level demonstration.
PAK JAK SCOOTER (STANDARD)

MANUFACTURER: Pak Jak Sales & Service, Paradise, California

WEIGHTS
- Curb Weight: 170 lbs.
- Rated Payload: 200 lbs.
  + driver

DIMENSIONS
- Length: 75 in.
- Width: 21 in.
- Height: 33 in.
- Ground Clearance: 9 in.

TREAD: N/A

ANGLE OF APPROACH: 90°
ANGLE OF DEPARTURE: 60°

FUEL CAPACITY: 3 qt.

BRAKES: One on first jack shaft
- Self energizing

ENGINE: 3 HP, 1 cyl., 4 cycle, air cooled

TRANSMISSION: Salsbury Torque converter

AXLES: Solid

SUSPENSION: Rigid

TIRES: 4.80F, 6.70x15 R

MAXIMUM SPEED: 18 mph
MINIMUM SPEED: 2 mph

RETAIL PRICE: $448.00

PERFORMANCE

Vehicle successfully completed areas A and B with minor assistance by the operator. Rated payload was carried. Vehicle did not participate in other areas.
**PAK JAK SCOOTER (MODIFIED)**

**MANUFACTURER:** Pak Jak Sales & Service, Paradise, California

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>Self energizing on jack shaft</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>190 lbs.</td>
</tr>
<tr>
<td>+ driver</td>
<td>200 lbs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>3 HP, 1 cyl., 4 cycle, air cooled</td>
</tr>
<tr>
<td>Width</td>
<td>Salsbury, torque converter</td>
</tr>
<tr>
<td>Height</td>
<td>Rigid</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>13x21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TREAD</th>
<th>MAXIMUM SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>14 mph</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANGLE OF APPROACH</th>
<th>MINIMUM SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>90°</td>
<td>2 mph</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANGLE OF DEPARTURE</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>90°</td>
<td>Not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUEL CAPACITY</th>
<th>PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 qt.</td>
<td></td>
</tr>
</tbody>
</table>

Vehicle successfully completed areas A, B and C; however, in area C considerable assistance was required from the operator. Rated payload was carried. Vehicle did not participate in sound level or lake demonstrations.
TOTE GOTE LOADSTAR VI SCOOTER W/TRAILER

MANUFACTURER: Bonham Corporation, Provo, Utah

WEIGHTS
- Curb Weight (inc tlr) 310 lbs.
- Rated Payload 400 lbs.

ENGINE
- Briggs & Stratton
- 6 HP, 4 cycle, 1 cyl.
- Air cooled

DIMENSIONS
- Length 61 in.
- Width 30.5 in.
- Height 36.5 in.
- Ground Clearance 8 in.

TRANSMISSION
- Automatic

AXLES
- Variable Speed

SUSPENSION
- Solid

TIRES
- Front - telescoping
- 5.70/5.00x8

TREAD
- N/A

MAXIMUM SPEED
- 20 mph

MINIMUM SPEED
- 1 mph

ANGLE OF APPROACH
- 90°

ANGLE OF DEPARTURE
- 60°

RETAIL PRICE
- 1 gal. (TOTAL) $647.00

FUEL CAPACITY

BRAKES
- Rear-Friction

PERFORMANCE

Vehicle successfully completed the rise and the first ditch, however, vehicle was not capable of climbing out of the grassy ditch and had considerable difficulty in negotiating the washed out trail. In area B it completed the first half of the marsh but by-passed the wetter area. Vehicle carried rated payload plus 2 men. Vehicle did not participate in other areas.
**POWERED EQUIPMENT CARRIER, 2 X 2**

**MANUFACTURER:** U. S. Forest Service, Missoula, Montana

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
<th>ENGINE</th>
<th>TRANSMISSION</th>
<th>AXLES</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th>FUEL CAPACITY</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>240 lbs.</td>
<td>Internal expanding on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Payload</td>
<td>350 lbs.</td>
<td>jack shaft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>115 in.</td>
<td></td>
<td>Borg Warner T-92,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>30.5 in.</td>
<td></td>
<td>3 speed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>42 in.</td>
<td></td>
<td>Solid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>9 in.</td>
<td></td>
<td>Rigid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TREAD</td>
<td>N/A</td>
<td></td>
<td>6.90/6.00 x 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANGLE OF APPROACH</td>
<td>31°</td>
<td></td>
<td>4.2 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANGLE OF DEPARTURE</td>
<td>22°</td>
<td></td>
<td>0.5 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL CAPACITY</td>
<td>6 gal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**

Vehicle completed the first rise successfully, however, considerable difficulty was experienced with the engine and the throttle could not be controlled properly. Two additional men were required to complete area A. Rated payload was carried. Vehicle did not participate in any other area.
MANUFACTURER: H. L. Diehl Company, South Willington, Connecticut

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
<th>ENGINE</th>
<th>TRANSMISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>None</td>
<td>4 HP</td>
<td>Belt clutch and gear transmission</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>1000 lbs.</td>
<td>Briggs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stratton</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>AXLES</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>78 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>30 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>40 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>15 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TREAD</td>
<td>28 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANGLE OF APPROACH</th>
<th>MAXIMUM SPEED</th>
<th>MINIMUM SPEED</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>90°</td>
<td>4.5 mph</td>
<td>0.5 mph</td>
<td>Not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUEL CAPACITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3 qts.</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**

Vehicle required the assistance of the driver and 2 other men to negotiate the first rise in area A. The unit was withdrawn at this point. Vehicle carried 500 lbs. payload.
BUTTERFLY 3-WHEELED SCOOTER

MANUFACTURER: Pak Jak Sales & Service, Paradise, California

WEIGHTS
- Curb Weight: 322 lbs.
- Rated Payload: 400 lbs. + driver

DIMENSIONS
- Length: 84 in.
- Width: 53 in.
- Height: 36 in.
- Ground Clearance: 7.5 in.
- Tread: 40 in.
- Angle of Approach: 90°
- Angle of Departure: 60°
- Fuel Capacity: 1 gal.

BRAKES
- 2 Brakes on jack shafts
- Self energizing

ENGINE
- Tecumseh, 6 HP, 1 cyl., 4 cycle
- Salsbury torque converter

TRANSMISSION
- Salsbury

AXLES
- Solid

TIRES
- 13x21 plastic

PERFORMANCE

Vehicle successfully completed areas A and B. In area C the engine stalled when the vehicle tipped up to negotiate the dike due to the engine intake being submerged. Vehicle carried rated payload. Vehicle did not participate in sound level or lake demonstrations.

A-12
TRANSPORTER, 2 MAN, CANADIAN JIGER

MANUFACTURER: Jiger Corporation, Ltd., Rexdale, Ontario

WEIGHTS
- Curb Weight: 295 lbs.
- Rated Payload: 300 lbs.

DIMENSIONS
- Length: 75.5 in.
- Width: 50 in.
- Height: 39 in.
- Ground Clearance: 8 in.
- Tread: 40 in.

AXLES
- Six tubular, all driven

SUSPENSION
- Rigid

TIRES
- Low Pressure
- Tubeless

ENGINE
- Two single-cylinder
- 2-stroke, air cooled
- 5.7 HP each, 5.9 cu.in.

TRANSMISSION
- Belt, 3-reduction,
- variable speed pulleys

AXLES
- Six tubular, all driven

SUSPENSION
- Rigid

TIRES
- Low Pressure
- Tubeless

ANGLE OF APPROACH
- 51°

ANGLE OF DEPARTURE
- 48°

FUEL CAPACITY
- 7.5 gal.

BRAKES
- Disk-type, self-energized for steering, lever and cam for stopping

PERFORMANCE

Vehicle was audible at approximately 150 feet in the sound level demonstration. It successfully completed areas A, B and C, however, on the bare ditch, the rutted trail in Area A, and on the dike in area C, the operator was required to dismount and assist the vehicle. Vehicle was successfully operated in the lake. Vehicle carried operator and payload totalling 300 lbs.

RETAIL PRICE
- $895.00
TERRA GATOR

MANUFACTURER: Andy Stewart, Inc., South El Monte, California

WEIGHTS
- Curb Weight: 565 lbs.
- Rated Payload: 1000 lbs.

ENGINE
- 10 HP Kohler, air cooled
- 1 cyl., 4 cycle

DIMENSIONS
- Length: 72 in.
- Width: 48 in.
- Height: 33 in.
- Ground Clearance: 8.5 in.
- Tread: 36 or 39 in.

AXLES
- 3 Solid

SUSPENSION
- Solid

TIRES
- 16x12 or 16x15

MAXIMUM SPEED
- 18 mph

MINIMUM SPEED
- 1/8 mph

FUEL CAPACITY
- 3 gal.

RETAIL PRICE
- $1395.00

PERFORMANCE

Production of this vehicle was not completed in time to participate in the demonstration.
**MANUFACTURER:** Fabrique National D'Armes De Guerre, Herstal Lez Liege, Belgium

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th></th>
<th>BRAKES</th>
<th></th>
<th>DIMENSIONS</th>
<th></th>
<th>ENGINE</th>
<th></th>
<th>TRANSMISSION</th>
<th></th>
<th>AXLES</th>
<th></th>
<th>SUSPENSION</th>
<th></th>
<th>TIRES</th>
<th></th>
<th>FUEL CAPACITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>350 lbs.</td>
<td>Mechanically operated acting on rear wheels</td>
<td></td>
<td>Length</td>
<td>72 in.</td>
<td>2 cylinder - 2 cycle air cooled, 15 cu in.</td>
<td></td>
<td>Ground Clearance</td>
<td>6.25 in.</td>
<td>Automotive type with differential, rear</td>
<td></td>
<td>FUEL CAPACITY</td>
<td>2.25 gal.</td>
<td>Tires</td>
<td>Lypso 22 x 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Payload</td>
<td>700 lbs.</td>
<td>Forward</td>
<td></td>
<td>Width</td>
<td>64 in.</td>
<td>15 HP @ 5400 RPM</td>
<td></td>
<td>TREAD (Rear)</td>
<td>51 in.</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Height</td>
<td>34.5 in.</td>
<td></td>
<td></td>
<td>ANGLE OF APPROACH</td>
<td>90°</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ANGLE OF DEPARTURE</td>
<td>90°</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**

The vehicle successfully completed the rise and ditches in area A, however, it was immobilized in the ruts of the trail due to lack of ground clearance. In area B it successfully completed the first half of the course, however, it became immobilized in the wetter portion of the marsh. Vehicle carried rated payload. The AS-24 did not participate in the other areas.
AMPHIBIOUS SUPPLY PLATFORM (ASP)

MANUFACTURER: Jered Industries, Birmingham, Michigan

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>475 lbs.</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>500 lbs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>71 in.</td>
</tr>
<tr>
<td>Width</td>
<td>39 in.</td>
</tr>
<tr>
<td>Height (Deck)</td>
<td>27.5 in.</td>
</tr>
<tr>
<td>Height (Controls)</td>
<td>38.5 in.</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>10.5 in.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BRAKES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Wheel Hydrostatic</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kohler KT-161</td>
<td></td>
</tr>
<tr>
<td>air cooled, 7 HP</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRANSMISSION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salsbury - Mechanical</td>
<td></td>
</tr>
<tr>
<td>torque converter</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AXLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None - Hydrostatic</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUSPENSION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive to wheels</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIRES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAXIMUM SPEED</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mph (land)</td>
<td></td>
</tr>
<tr>
<td>2 mph (water)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MINIMUM SPEED</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mph (land)</td>
<td></td>
</tr>
<tr>
<td>0 mph (water)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RETAIL PRICE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**

The ASP was audible at approximately 135 feet. It successfully completed area A with the exception of the washed out trail which it by-passed. In area B it experienced no difficulty. In area C it had insufficient traction to climb the dike and was forced to withdraw. In the lake area it experienced no difficulty. Vehicle carried rated payload.
**TURTLE**

**MANUFACTURER:** Studebaker Corporation, South Bend, Indiana

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
<th>ENGINE</th>
<th>TRANSMISSION</th>
<th>AXLES</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th>FUEL CAPACITY</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>Hydraulic</td>
<td>Kohler-8 HP-4 cycle</td>
<td>Hydrostatic</td>
<td>(1) Vertical Movement</td>
<td>Ft-Rigid Rear-articulated</td>
<td>27x10-12 and 9.50x8</td>
<td>3.6 gal.</td>
<td>$995.00</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>355.9 lbs.</td>
<td>1 cylinder, air cooled</td>
<td>22° turn angle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500-750 lbs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Length</th>
<th>72 in.</th>
<th>TRANSMISSION</th>
<th>LENGTH</th>
<th>36 in.</th>
<th>AXLES</th>
<th>HEIGHT</th>
<th>39 in.</th>
<th>SUSPENSION</th>
<th>TREAD</th>
<th>24 in.</th>
<th>MAXIMUM SPEED</th>
<th>MINIMUM SPEED</th>
<th>FUEL CAPACITY</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>36 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 mph</td>
<td>0.5 mph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>39 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>11 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TREAD</td>
<td>24 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**

The vehicle did not participate in the sound level demonstration. It successfully completed area A with the exception of the washed out trail, which was blocked. In area B it experienced no difficulty. In area C it had insufficient traction to climb the wooden dike and withdrew. In the lake area it experienced no difficulty. The vehicle was demonstrated without payload in areas A and C. Loads equivalent to 350 pounds were transported in area B and the lake.
CENTIPEDE

MANUFACTURER: Designed by Ted Duke, Billings, Montana
FURNISHED BY: Jered Industries, Birmingham, Michigan

WEIGHTS
- Curb Weight: 680 lbs.
- Rated Payload: 400 lbs. + driver

DIMENSIONS
- Length: 68 in.
- Width: 30 in.
- Height-Adjustable: 19-29 in.
- Ground clearance: 2-12 in.

TREAD: 28 in.
ANGLE OF APPROACH: 90°
ANGLE OF DEPARTURE: 90°
FUEL CAPACITY: 6 gal.

BRAKES
- Friction segment - in Vee pulleys

ENGINE
- Briggs & Stratton air-cooled, 1 cyl., 4-cycle, 6 HP

TRANSMISSION
- Warner T-92, 3-speed fwd., 1-speed reverse

AXLES
- Chain drive each wheel

SUSPENSION
- Arm and compression spring

TIRES
- 3.50 x 10

MAXIMUM SPEED
- 12 mph

MINIMUM SPEED
- 1 mph

RETAIL PRICE
- Not available

PERFORMANCE

This vehicle participated only in the first portion of area A which it successfully completed. Carried rated payload. This vehicle was particularly noteworthy because of the driver controls which are remotely located approximately six feet on "umbilical cord". This allowed the operator to maintain complete control even when the vehicle was pitching violently.
HUSKY DUCK (AMPHIBIOUS, 6X6)

MANUFACTURER: Neuman & Bennetts, Inc., Berkeley, California

WEIGHTS
- Curb Weight 700 lbs.
- Rated Payload 450 lbs. + driver

ENGINE
- 9 HP Air-cooled
  - 1 cylinder, 4 cycle

TRANSMISSION
- Torque Converters

AXLES
- Six Solid

DIMENSIONS
- Length 96 in.
- Width 48 in.
- Height 30 in.
- Ground Clearance 8 in.

TIRES
- 22 x 12 Plastic

TREAD
- 12 in.

MAXIMUM SPEED 11 mph
MINIMUM SPEED 2 mph

RETAIL PRICE $1500.00

PERFORMANCE

The vehicle did not participate in the sound level demonstration. It completed all other obstacles, however, in both the bare and grassy ditches of area A and on the dike in area C 2 additional men were required to push the vehicle over the obstacles. For this demonstration a payload of 150 lbs. was carried.
ESTATE TRACTOR

MANUFACTURER: FMC Corporation, Bolens Division, Port Washington, Wisconsin

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
<th>ENGINE</th>
<th>TRANSMISSION</th>
<th>AXLES</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th>MAXIMUM SPEED</th>
<th>MINIMUM SPEED</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight 530 lbs.</td>
<td>Rear wheels braked by clutch pedal operates</td>
<td>7.25 HP, 4-cycle, single cyl., Wisconsin</td>
<td>3-speeds fwd., 1 rev., 2-speed range input.</td>
<td>Automotive type. Controlled differential</td>
<td>Pivoting front</td>
<td></td>
<td></td>
<td></td>
<td>$675.00</td>
</tr>
<tr>
<td>Rated Payload 250 lbs. + driver</td>
<td>brake on transmission power shaft</td>
<td>air-cooled</td>
<td></td>
<td>action</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| DIMENSIONS                    |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| Length 62 in.                 |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| Width 34 in.                  |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| Height 40 in.                 |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| Ground Clearance 7 in.        |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| TREAD 26 in.                  |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| ANGLE OF APPROACH 90°         |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| ANGLE OF DEPARTURE 90°        |                                             |                                            |                                           |                                         |                           |                               |               |               |              |
| FUEL CAPACITY 1.25 gal.       |                                             |                                            |                                           |                                         |                           |                               |               |               |              |

PERFORMANCE

This vehicle did not participate in the sound level demonstration. It successfully completed all of area A and the first half of area B. In the wetter portion of area B it became immobilized. Vehicle carried the rated payload distributed in various places on the axles and frame. It did not participate in any other areas.
MANUFACTURER: Trail Mate Corporation of Alaska, Anchorage, Alaska

WEIGHTS

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>850 lbs.</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>800 lbs. + driver</td>
</tr>
</tbody>
</table>

ENGINE

- Hydraulic Disc
- 2 each 6 HP
- Briggs & Stratton
- 4 cycle, 1 cylinder

TRANSMISSION

- Belt-Variable
- Torque converter

AXLES

- 8 - Solid
- None

SUSPENSION

- None

TIRES

- 16x15 Terra Tires

MAXIMUM SPEED

- 16 mph

MINIMUM SPEED

- 1 mph

RETAIL PRICE

- $2630.00

PERFORMANCE

The vehicle did not participate in the sound level demonstration. It completed area A, however, the assistance of 2 additional men was required to negotiate exit from the bare and grassy ditches. It experienced no difficulty in area B, however, in area C it was unable to climb the dike and withdrew. It was operated in the lake with no difficulty. Rated payload was carried, plus 138 lbs. additional in area A and lake. It was operated with driver both mounted and dismounted.
MANUFACTURER: Ford Motor Company, Dearborn, Michigan

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
<th>ENGINE</th>
<th>TRANSMISSION</th>
<th>AXLES</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th>MAXIMUM SPEED</th>
<th>MINIMUM SPEED</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>2325 lbs.</td>
<td>Hydraulic</td>
<td>4 cylinder, 4 cycle</td>
<td>4 speeds forward</td>
<td>2 - independent</td>
<td>7.00 x 16</td>
<td>65 mph</td>
<td>2 mph</td>
<td>$2680.00</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>800 lbs.</td>
<td></td>
<td>71 HP, 141.5 cu in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Length</th>
<th>132 in.</th>
<th>TRANSMISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>62.25 in.</td>
<td>4 speeds forward</td>
</tr>
<tr>
<td>Height</td>
<td>71 in.</td>
<td>1 reverse, manual</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>8.8 in.</td>
<td>2 - independent</td>
</tr>
</tbody>
</table>

**AXLES**

<table>
<thead>
<tr>
<th>TREAD</th>
<th>53 in.</th>
<th>SUSPENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIRES</td>
<td>7.00 x 16</td>
<td>4 wheel independent</td>
</tr>
</tbody>
</table>

**ANGLE OF APPROACH**

<table>
<thead>
<tr>
<th>FUEL CAPACITY</th>
<th>17.7 gal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM SPEED</td>
<td>65 mph</td>
</tr>
<tr>
<td>MINIMUM SPEED</td>
<td>2 mph</td>
</tr>
<tr>
<td>RETAIL PRICE</td>
<td>$2680.00</td>
</tr>
</tbody>
</table>

**PERFORMANCE**

Vehicle was audible at approximately 140 feet. It successfully completed area A and the first half of area B. It became immobilized in the wetter portion of area B. The vehicle did not participate in area C or in the lake. Vehicle carried rated payload.
TRUCK, UTILITY, 1/4 TON, 4x4, M151 (MODIFIED)

MANUFACTURER: Ford Motor Company, Dearborn, Michigan

WEIGHTS
- Curb Weight: 2390 lbs.
- Rated Payload: 800 lbs.

DIMENSIONS
- Length: 132 in.
- Width: 62.25 in.
- Height: 72 in.
- Ground Clearance: 9.8 in.
- Tread: 53 in.

BRAKES
- Duo-serve single
- Hydraulic actuation

ENGINE
- 4 cylinder, 4 cycle
- 71 HP, 141.5 cu in.

TRANSMISSION
- 4 speed forward
- 1 reverse, manual
- 2 - independent
- 4 wheel independent

AXLES

SUSPENSION

TIRES
- Agricultural 9.5/9.0-16
- 65 mph
- 2 mph
- $2660.00

FUEL CAPACITY: 17.7 gal.

PERFORMANCE

This vehicle successfully completed areas A and B but did not participate in any of the other areas. Vehicle carried rated payload.
CARRIER, LIGHT WEAPONS, INFANTRY, 1/2 TON, 4X4, M274 (MULE) (STANDARD)

MANUFACTURER: Kaiser Jeep Corporation, Toledo, Ohio

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>925 lbs.</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>1000 lbs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>118.25 in.</td>
</tr>
<tr>
<td>Width</td>
<td>49.75 in.</td>
</tr>
<tr>
<td>Height</td>
<td>49.12 in.</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>8.5 in.</td>
</tr>
<tr>
<td>TREAD</td>
<td>40.5 in.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRANSMISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANGLE OF APPROACH</td>
</tr>
<tr>
<td>ANGLE OF DEPARTURE</td>
</tr>
<tr>
<td>FUEL CAPACITY</td>
</tr>
<tr>
<td>AXLES</td>
</tr>
<tr>
<td>SUSPENSION</td>
</tr>
<tr>
<td>TIRES</td>
</tr>
<tr>
<td>MAXIMUM SPEED</td>
</tr>
<tr>
<td>MINIMUM SPEED</td>
</tr>
<tr>
<td>RETAIL PRICE</td>
</tr>
</tbody>
</table>

PERFORMANCE

This vehicle was audible at approximately 140 feet. It successfully completed area A up to the washed out trail where it became immobilized in the ruts. In area B, it was immobilized in the wetter portion of the course after successfully completing the first half. Vehicle carried the rated payload. It did not participate in area C or the lake.
CARRIER, LIGHT WEAPONS, INFANTRY, 1/2 TON, 4X4, M274 (MULE) (MODIFIED)

MANUFACTURER: Kaiser Jeep Corporation, Toledo, Ohio

WEIGHTS
- Curb Weight: 1145 lbs.
- Rated Payload: 1000 lbs.

DIMENSIONS
- Length: 118.25 in.
- Width: 58.75 in.
- Height: 49.12 in.
- Ground Clearance: 9.5 in.

ENGINE
- Air-cooled 4 cyl., 4 stroke, horizontally opposed 15 cu in.
- HP @ 3200 RPM 53.5

TRANSMISSION
- 3 speeds forward, 1 reverse, 2 speed transfer

AXLES
- Spiral bevel

SUSPENSION
- None

TIRES
- Terra Tires 24X12 - 10R

FUEL CAPACITY
- 8 gal.

BRAKES
- Internal expanding drum on drive shaft

TREAD
- 49.5 in.

ANGLE OF APPROACH
- 40°

ANGLE OF DEPARTURE
- 34°

MAXIMUM SPEED
- 25 mph

MINIMUM SPEED
- 2 mph

RETAIL PRICE
- $4500.00

PERFORMANCE

This vehicle successfully completed area A, however, it by-passed the washed out trail due to interference from Vehicle No. 24. In area B, it completed the first half of the course but was immobilized in the wetter portion. Carried rated payload. Did not participate in other areas.

A-25
TRUCK, CARGO, 3/4 TON, 6x6, XM408 (MODIFIED)

MANUFACTURER: Ford Motor Company, Dearborn, Michigan

WEIGHTS
- Curb Weight: 2890 lbs.
- Rated Payload: 1500 lbs.

DIMENSIONS
- Length: 161.5 in.
- Width: 63 in.
- Height: 76 in.
- Ground Clearance: 53 in.
- Tread: 53 in.
- Angle of Approach: 62°
- Angle of Departure: 42°

FUEL CAPACITY: 17.7 gal.

BRAKES: Hydraulic internal expanding
ENGINE: 4 cylinder, 71 HP, 41.5 cu in., 4 stroke
TRANSMISSION: 4 speed forward
AXLES: Wheel drive shafts
SUSPENSION: Cardan type universal
TIRES: Ft-independent coil Spring bogie
MAXIMUM SPEED: 9.50-9.00x16
MINIMUM SPEED: 64 mph
SUSPENSION: 2 mph
RETAIL PRICE: $4000.00

PERFORMANCE

Special tire modifications were not completed in time to participate in the demonstration.
POWER TRACK 10C*

MANUFACTURER: Arrow Manufacturing Company, Denver, Colorado
*Now manufactured by: Power-Track Corporation, Denver, Colorado

WEIGHTS
- Curb Weight: 430 lbs.
- Rated Payload: 500 lbs. + driver

DIMENSIONS
- Length: 90 in.
- Width: 38 in.
- Height: 34.5 in.
- Ground Clearance: 4 in.
- TREAD: 22 in.
- ANGLE OF APPROACH: 10°
- ANGLE OF DEPARTURE: 10°
- FUEL CAPACITY: 1 gal.

BRAKES
- Bendix automatic

ENGINE
- 7 HP - OMC, 1 cylinder
- 4 cycle, air-cooled

TRANSMISSION
- Dura-matic

AXLES
- 2

SUSPENSION
- Rigid

TIRES
- 4.10/3.50x6 Rubber tracks

MAXIMUM SPEED
- 12 mph

MINIMUM SPEED
- Not available

RETAIL PRICE
- $875.00

PERFORMANCE
This vehicle completed the first rise in area A but was unable to negotiate the first ditch due to track slippage. It did not participate in any other portion of the course. Vehicle was carrying a 150 lb. payload plus driver.
POWER TRACK 20C*

MANUFACTURER: Arrow Manufacturing Company, Denver, Colorado
*Now manufactured by: Power-Track Corporation, Denver, Colorado

WEIGHTS
- Curb Weight: 490 lbs.
- Rated Payload: 700 lbs.
  + driver

ENGINE
- 9 HP OMC

TRANSMISSION
- Dura-matic

AXLES
- 2

SUSPENSION
- Rigid

TIRES
- Rubber Tracks

MAXIMUM SPEED
- 12 mph

MINIMUM SPEED
- Not available

RETAIL PRICE
- $1275.00

DIMENSIONS
- Length: 90 in.
- Width: 38 in.
- Height: 31.5 in.
- Ground Clearance: 4 in.
- Tread: 28 in.

ANGLE OF APPROACH
- 10°

ANGLE OF DEPARTURE
- 10°

FUEL CAPACITY
- 1.25 gal.

PERFORMANCE

This vehicle required assistance to negotiate the first rise due to track slippage and withdrew from the course at this point. Vehicle carried 150 lbs plus driver.
CARRIER, CARGO, AMPHIBIOUS, ARTICULATED,
CL-70 (CANADIAN RAT)

MANUFACTURER: Canadair Ltd., Montreal, Quebec

WEIGHTS

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>1500 lbs.</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>1000 lbs.</td>
</tr>
</tbody>
</table>

DIMENSIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>157 in.</td>
</tr>
<tr>
<td>Width</td>
<td>48 in.</td>
</tr>
<tr>
<td>Height</td>
<td>61 in.</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>4.5 in.</td>
</tr>
</tbody>
</table>

TREAD               | 23.5 in. |

ANGLE OF APPROACH    | 90°      |

ANGLE OF DEPARTURE   | 90°      |

FUEL CAPACITY        | 18 gal.  |

WEIGHTS BRAKES

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No service brakes</td>
<td></td>
</tr>
<tr>
<td>Parking brake ratchet</td>
<td></td>
</tr>
<tr>
<td>Control disc caliper</td>
<td></td>
</tr>
</tbody>
</table>

ENGINE

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volkswagon 4 cylinder</td>
<td></td>
</tr>
<tr>
<td>Air-cooled, horizontally</td>
<td></td>
</tr>
<tr>
<td>opposed 4 stroke 36 HP</td>
<td></td>
</tr>
</tbody>
</table>

TRANSMISSION

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>York Gears Ltd.</td>
<td></td>
</tr>
<tr>
<td>4 speed fwd., 1 reverse</td>
<td></td>
</tr>
</tbody>
</table>

AXLES

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiral bevel</td>
<td></td>
</tr>
</tbody>
</table>

TIRES

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.40/3.00x5 (std)</td>
<td></td>
</tr>
<tr>
<td>4.00x6 (opt); band track</td>
<td></td>
</tr>
<tr>
<td>23 mph (land)-</td>
<td></td>
</tr>
<tr>
<td>2 mph (water)</td>
<td></td>
</tr>
</tbody>
</table>

MAXIMUM SPEED

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 mph</td>
<td></td>
</tr>
<tr>
<td>2 mph</td>
<td></td>
</tr>
</tbody>
</table>

MINIMUM SPEED

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 mph</td>
<td></td>
</tr>
</tbody>
</table>

RETAIL PRICE

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available</td>
<td></td>
</tr>
</tbody>
</table>

PERFORMANCE

This vehicle did not participate in the sound level demonstration. Vehicle successfully completed all test obstacles except the dike in area C. After climbing the dike vehicle broke the drive shaft between units and lost power to the trailer section. It required assistance over dyke but was able to continue out of remainder of the course by power provided by the front unit. Carried rated payload.
THIOKOL MODEL 1401

MANUFACTURER: Thiokol Chemical Corporation, Logan, Utah

WEIGHTS
Curb Weight 1435 lbs.
Rated Payload 1000 lbs.
+ driver & passenger

BRAKES
Integral with planetary differential

ENGINE
OMC Mdl #218, 18 HP

TRANSMISSION
3-speed belt torque converter and 4-speed fwd
and 1 reverse gear box

DIMENSIONS
Length 107 in.
Width 62 in.
Height 48 in.
Ground Clearance 5½ in.
TREAD (Est) 42 in.
ANGLE OF APPROACH 58°
ANGLE OF DEPARTURE 79°
FUEL CAPACITY 8 gal.

AXLES
Planetary controlled

SUSPENSION
Half elliptic leaf spring

TIRES
4.80x8 Idler Tires

MAXIMUM SPEED 15 mph
MINIMUM SPEED 0.6 mph
RETAIL PRICE $3395

PERFORMANCE

This vehicle successfully completed areas A and B. However, in area C it was unable to climb the dike due to loss of traction. Carried rated payload. Vehicle did not participate in sound level or lake demonstrations.
VIPER
(VEHICLE, INFANTRY, PONTOON EQUIPPED, RECONNAISSANCE)

MANUFACTURER: Jered Industries, Birmingham, Michigan

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BRAKES</th>
<th>ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Weight</td>
<td>3000 lbs.</td>
<td>In transmission</td>
</tr>
<tr>
<td>Rated Payload</td>
<td>1000 lbs.</td>
<td>Chevrolet Corvair 80 HP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>TRANSMISSION</th>
<th>AXLES</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th>MAXIMUM SPEED</th>
<th>MINIMUM SPEED</th>
<th>FUEL CAPACITY</th>
<th>RETAIL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>144 in.</td>
<td>Warner T-92, 3-speed</td>
<td>Chain drive each wheel</td>
<td>16x15 Terra Tire</td>
<td>20(land) - 6(water) mph</td>
<td>1(land) mph</td>
<td>40 gal.</td>
<td>Not available</td>
</tr>
<tr>
<td>Width</td>
<td>84 in.</td>
<td>fwd and 1 reverse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>55 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>22 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TREAD</td>
<td>69 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANGLE OF APPROACH</td>
<td>81°</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANGLE OF DEPARTURE</td>
<td>60°</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL CAPACITY</td>
<td>40 gal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PERFORMANCE

This vehicle was not completed in time for the demonstration.
THIOKOL MODEL 1301

MANUFACTURER: Thiokol Chemical Corporation, Logan, Utah

WEIGHTS
- Curb Weight: 2980 lbs.
- Rated Payload: 1000 lbs. + driver

DIMENSIONS
- Length: 15.7 in.
- Width: 77.5 in.
- Height: 63 in.
- Ground Clearance: 12 in.
- TREAD: 51.4 in.
- ANGLE OF APPROACH: 45°
- ANGLE OF DEPARTURE: 34°
- FUEL CAPACITY: 18 gal.

TRANSMISSION
- 4-speed forward
- 1 reverse

AXLES
- Planetary controlled differential with 6.166:1 ratio

SUSPENSION
- Trailing arm with torsion springs

TIRES
- 4.50x12 Idler Tires

MAXIMUM SPEED
- 35 mph

MINIMUM SPEED
- 3.7 mph

RETAIL PRICE
- $7680

PERFORMANCE

This vehicle did not participate in sound level demonstration. It successfully completed areas A and B; however, it could not negotiate area C due to loss of traction. It successfully swam in the lake demonstration. Rated payload was carried.
THIOKOL MODEL 1101

MANUFACTURER: Thiokol Chemical Corporation, Logan, Utah

WEIGHTS
Curb Weight 2850 lbs.
Rated Payload 1000 lbs. + driver & passenger

DIMENSIONS
Length 133.5 in.
Width 77.4 in.
Height 79.75 in.
Ground Clearance 13 in.
Tread 51.4 in.
Angle of Approach 47°
Angle of Departure 32°
Fuel Capacity 18 gal.

BRAKES
Integral with planetary differential

ENGINE
Ford 170 cu in., 101 HP
6 cyli., water cooled
4 cycle, in line
4 speed fwd., 1 reverse

TRANSMISSION
4 speed fwd., 1 reverse

AXLES
Planetary controlled differential-6.166:1 ratio

SUSPENSION
Trailing arm w/torsion spring

TIRES
4.50x12 Idler Tires

MAXIMUM SPEED
35 mph

MINIMUM SPEED
3.7 mph

RETAIL PRICE
$6550

PERFORMANCE
This vehicle successfully completed areas A and B. However, in area C it was unable to climb the dike due to loss of traction. Carried rated payload. Vehicle did not participate in sound level or lake demonstrations.
GOLF CART

MANUFACTURER: Outboard Marine Corporation, Waukegan, Illinois

WEIGHTS
- Curb Weight: 825 lbs.
- Rated Payload: 500 lbs.

DIMENSIONS
- Length: 96.25 in.
- Width: 45.6 in.
- Height: 46.25 in.
- Ground Clearance: 5 in.
- Tread: 37 in.
- Angle of Approach: 90°
- Angle of Departure: 40°
- Fuel Capacity: 4.5 gal.

BRAKES
- Drive shaft

ENGINE
- OMC 18 HP, 4 cycle, 2 cylinder

TRANSMISSION
- Forward and reverse

AXLES
- Worm gear

SUSPENSION
- Spring and rubber

TIRES
- 8.00x6, 9.50x8 or Terra 12 in.

MAXIMUM SPEED
- 12 mph

MINIMUM SPEED
- 2 mph

RETAIL PRICE
- Not available

PERFORMANCE

This vehicle was presented only for sound level evaluation and was audible at approximately 100 feet.
MANUFACTURER: Aluma-Craft, Minneapolis, Minnesota
SUPPLIED BY: Outboard Marine Corporation, Waukegan, Illinois

WEIGHTS
- Curb Weight: 167 lbs.
- Rated Payload: 1000 lbs.

ENGINE
- Outboard, Marine, 18 HP

TRANSMISSION

DIMENSIONS
- Length: 14 ft.
- Width: 56 in.
- Height: 26 in.
- Wheel Base

AXLES

SUSPENSION

TREAD

TIRES

ANGLE OF APPROACH

ANGLE OF DEPARTURE

FUEL CAPACITY

MAXIMUM SPEED

MINIMUM SPEED

RETAIL PRICE

Not available

PERFORMANCE

This vehicle was presented only for sound level demonstration. The noise of the engine was less than the noise of the waves slapping the boat therefore audibility distance could not be measured.
THIOKOL MYTE

MANUFACTURER: Thiokol Chemical Corporation, Logan, Utah

WEIGHTS
- Curb Weight: 607 lbs.
- Rated Payload: 400 lbs. + driver

ENGINE
- Two Continental 2A016, 5-1/4 HP each

TRANSMISSION
- Automatic belt torque converter and reversing gear

DIMENSIONS
- Length: 68.5 in.
- Width: 48 in.
- Height: 40 in.
- Ground Clearance: 6.25 in.

AXLES
- Differential action by varying engine speeds

SUSPENSION
- Solid axles

TIRES
- 4.10x6 Idler Tires

TREAD
- 32 in.

ANGLE OF APPROACH
- 90°

ANGLE OF DEPARTURE
- 90°

FUEL CAPACITY
- 3 gal.

PERFORMANCE

Vehicle did not participate due to mechanical damage caused in transit to test site.
MANUFACTURER: Thiokol Chemical Company, Logan, Utah

WEIGHTS
- Curb Weight: 750 lbs.
- Rated Payload: 200 lbs.
- + driver

ENGINE
- OMC Model #100, 9HP
- 1 cylinder, 4 cycle

TRANSMISSION
- Variable belt drive
- with reversing gear

DIMENSIONS
- Length: 92.5 in.
- Width: 48 in.
- Height: 37 in.
- Ground Clearance: 6 in.
- Tread: 32 in.
- Angle of Approach: 53°
- Angle of Departure: 88°
- Fuel Capacity: 3 gal.

Brakes
- Bendix 6x1-1/4

AXLES
- Drive only driven by manually controlled variable speed sheaves

SUSPENSION
- Swing axle

TIRES
- 4.10x6 Idler Tires

MAXIMUM SPEED: 10 mph
MINIMUM SPEED: 1.7 mph

RETAIL PRICE: Not available

PERFORMANCE

This floating vehicle was presented for exhibition only and did not actively participate in the demonstration.