

# HMMWV and JLTV Shelters

## *Lightweight Multipurpose Shelter*



Lightweight and versatile for many applications

Improved Electromagnetic Interference, water tightness and thermal impact performance

Design eliminates reliance on secondary treatments

First in the industry to achieve the DoD Environmental objective

### **Overview**

The S-788 Lightweight Multi-purpose Shelter produced by General Dynamics Mission Systems provides a versatile shelter for a broad range of uses.

The S-788 offers a lightweight shelter with improved Electromagnetic Interference, watertightness, and thermal and impact performance. The patented U-Panel construction has been improved by incorporating EMI-resistant enclosure panels; welded seams; one-piece, co-cured wheel wells and Nomex honeycomb core.

Our design eliminates reliance on secondary treatments, such as closeout angles, that have inherent EMI and moisture leak paths and are susceptible to deterioration when exposed to the rigors of the field.

We have replaced the 3/8-inch-cell WR-II kraft paper core with 1/4-inch-cell Nomex. The inherent toughness and resilience of the aramid-fiber Nomex core offers performance improvements not possible with the brittle paper core, such as resistance to denting and core damage, continued panel strength, and improved thermal insulation.

General Dynamics Mission Systems is the first in our industry to achieve the DoD Environmental objective eliminating the use of hexavalent chromium in panel processing. Our in-house panel bonding operations include clean and etch preparation of aluminum skins with an environmentally friendly process and non-hexavalent chromium based conversion coating or structural bonding primer in compliance. Skins are then bonded to the specified core to yield sandwich panels that are lightweight and high strength for a host of military rigid wall shelter applications.

Initially designed for the High Mobility Multipurpose Wheeled Vehicle and subsequently compatible with mounting on the Joint Lightweight Tactical Vehicle, the versatile design and integration capabilities of the LMS allow us to offer a variety of optional equipment, including full turn-key and specialized systems to meet customer requirements.

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## Shelter and Shelter Construction Methods

- EMI resistant panels – U.S. patent number 5,713,178
- European patent number 261,559
- German patent number P376298.4
- Canadian patent number 1,290,912
- U.S. patent number 4,787,181

## NSNs For HMMWV Shelters

- Type I, basic shelter, empty NSN 5411-01-357-3582
- Type II, basic with tunnel, CB and hatch NSN 5411-01-333-5941
- Type III, basic with tunnel NSN 5411-01-357-3583
- Type V, basic shelter, double rear doors



## Specifications

- **Military specification**
  - MIL-PRF-44408
- **Dimensions**
  - Exterior 84"W x 67.0"H x 102.0"L (2,134 x 1,702x2,591mm)
  - Interior 81.5"W x 64.5"H x 99.5"L (2,070 x 1,638x2,527mm)
- **Overall height on prime mover**
  - 102" (2,591 mm)
- **Standard equipment**
  - Includes access ladder, roof access steps, HMMWV mounting and pintle extension kits
- **Tare weight**
  - Bare shelter (type I) 585 lbs (265.4 kg)
  - Vehicle mounting kit 88 lbs (39.9 kg)
- **Shelter payload**
  - 3,330 lbs (1,510 kg)
- **Volume**
  - 285 Ft<sup>3</sup>
- **Floor area: (including wheel wells)**
  - 56 Ft<sup>2</sup>
- **Transportability**
  - Ground mobility MIL-M-8090, type V
  - Air transport Drive-on/back-off cargo aircraft
  - Rail impact Up to 8 mph
  - Floor loading 65 psf overall, 500 psf local
  - Helicopter lift MIL-STD-209H
- **Environmental**
  - Rain Up to 5" per hour
  - Storage Temperature -70°F To +160°F / -56.6°C To 71.1°C
  - Operating Temperature -65°F To +125°F / -53.8°C To 51.6°C
  - Humidity Up to 100 percent
  - Snow and ice 40 psf
  - Wind Up to 100 mph (160 kph) steady (120mph [193 kph] gusts)
- **Heat transfer (BTU/Hr-Ft<sup>2</sup>-°F)**
  - 0.42
- **EMI shielding**
  - Minimum of 60dB attenuation or electrical, magnetic and plane waves in frequency range of 150KHz to 10GHz
- **General information**
  - Honeycomb sandwich panel construction: the fabrication of the unit utilizes aluminum-facing sheets hot-bonded to honeycomb alternative foam and beam construction available
- **Increased Mission Capability**
  - Mounted internal air transport
  - Increased enclosure volume
  - Increased aircraft deployment efficiency
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  - Mounted internal air transport
  - Increased aircraft deployment efficiency

## GENERAL DYNAMICS

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