

DATA ITEM DESCRIPTION

Title: Transportability Report

Number: DI-PACK-80880D

Approval: 20120301

AMSC Number: 9422

Limitation:

DTIC Applicable: No

GIDEP Applicable: No

Office of Primary Responsibility: MT

Applicable Forms:

Use/Relationship: The Transportability Report will be used to obtain essential information from MATDEV for evaluating the transportation limitations and restrictions of Department of Defense equipment that qualifies as a transportability problem item.

1. Information acquired through this report will include dimensional and weight characteristics of the item or system, test results of physical transportability testing performed on the equipment, and when available, computer aided design (CAD) models of the equipment to support structural, kinematic, and dynamic analyses of the transportation environment, and results of any CAD structural, kinematic, or dynamic analyses performed by the contractor.
2. This Data Item Description (DID) contains information on the format and data content for the work task described by paragraph 4.5 of MIL-STD-1366E and is applicable to acquisition of military systems and equipment that qualify as transportability problem items. This DID can be tailored to program requirements with approval of the service transportability agent. The applicable service transportability agents are as follows:

Army – SDDCTEA, 1 Solider Way, Building 1900W, Scott AFB, IL 62225-5006, usarmy.scott.sddc.mbx.tea-dpe@mail.mil

Air Force – ASC/ENFC (ATTLA), 2145 Monahan Way, WPAFB, OH 45433-7017, ATTLA@wpafb.af.mil

Navy – Naval Operational Logistics Support Center, Code 433, 1837 Morris Street, Suite 600, Norfolk, VA 23511-3492, debra.williams2@navy.mil, or keith.boylan@navy.mil

Marine Corps – CG, MARCORSSYSCOM, ATTN: SIAT/Transportability, 2200 Lester Street, Quantico, VA 22134-6050, MCSCTransportability@usmc.mil
3. During acquisition programs this DID should be applied at least 90 days prior to each major milestone decision review.
4. This DID supersedes DI-PACK-80880C.

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Requirements:

1. Reference documents. The applicable issue of documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be cited in the current issue of the Department of Defense Index of Specifications and Standards (DODISS) at the time of the solicitation.
2. Format. The Transportability Report shall be in the format shown below in paragraph 3 of this document.
3. Content. The Transportability Report shall include the following:
 - (1) Title. TRANSPORTABILITY REPORT
 - (2) Points of contact: State contractor name, location, phone number, and email address. State the name, title, organization, and department of individual preparing the transportability report.
 - (3) Date of Transportability report.
 - (4) Official nomenclature.
 - (5) National stock number (if known).
 - (6) Line Item Number (if known).
 - (7) Brief description.
 - (a) List the transportability requirements from the requirements document and provide the source for the requirements (e.g. list the Capabilities Production Document, CPD).
 - (b) State the intended use of the item.
 - (c) List whether the item is commercial, modified commercial, non-developmental, developmental, procurement, or modified equipment.
 - (d) Specify type of military units that will use or transport the item.
 - (e) State whether the item is for worldwide use or for a specific theater of operations.
 - (f) Planned quantity of the item. State item acquisition quantity by fiscal year.
 - (g) State if any special equipment (such as railcars or trailers) or materials handling equipment (MHE) will be required to move/transport the item.

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(8) Transportability Requirements

(a) Documents

1. Send copy of JMSNS, ROC, LR, LOA, CPD, CDD, specification or other requirements documents.
2. Send copy of system specification.

(b) Highway

1. State if item is self-propelled, towed, or transported by truck or semitrailer.
2. Give model numbers or required transporter(s) (e.g. M1088, M80).

(c) Rail

1. State if item will require rail transport in CONUS and/or oversea areas.
2. State foreign country where rail transport is required.

(d) Ocean and Waterways

1. State if item will be shipped overseas in volume (unit) movements.
2. State if on-deck storage is permissible.
3. State type(s) of ship(s) (i.e., Breakbulk, Container, Roll-on/Roll-off, LASH, SEABEE) required.

(e) Lighterage. State if item is used in logistics-over-the-shore (LOTS) environment.

(f) Intermodal containers. List the size (i.e. 20, 40, or 45 ft) or the ANSI/ISO designation of containers in which transport is required.

(h) Helicopters.

1. Specify the model number(s) of cargo helicopter(s) required.
2. State if internal and/or external airlift is required. (Current Army utility/cargo helicopters are the UH-60 and CH-47.) (Current Marine Corps helicopters are CH-46 and CH-53.)

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3. Give the helicopter mission requirements (time and distance of mission, atmospheric condition requirements, 95°F, 4000 ft, 59°F at sea level, and so forth).
 - (i) Fixed wing aircraft. State the type(s) of aircraft transport required. (Current Air Force aircraft are C-130, C-17, and C-5). (Current Civil Reserve Air Fleet are B-707, B-747, DC-8, and DC-10.)
- (9) Transportation Data.

- (a) Hazardous materials. For each item classified as hazardous material, state:

1. The class of hazardous material as specified in: *Title 49, Code of Federal Regulations (49 CFR), Parts 105-180, HazMat Transportation; AFMAN 24-204, Preparing Hazardous Materials for Military Air Shipments; International Civil Aviation Reorganization, Technical Instructions for the Safe Transport of Dangerous Good by Air; International Maritime Organization (IMO), International Maritime Dangerous Good (IMDG) Code; or the United Nation's Recommendation on the Transportation of Dangerous Goods.*
2. DOT proper shipping name.
3. Net explosive weight (DOT class 1, division 1.1, 1.2, or 1.3 explosives only).
4. Venting requirements.
5. Grounding requirements.

- (b) Sectionalization and Reduction. State if the item can be sectionalized, folded, or reduced for transport and provide the following information:

1. Time and personnel required to disassemble at port of embarkation and reassemble at port of debarkation (time: in work and clock hours).
2. Special equipment, tools or software required for sectionalization or reduction (for example, cranes, forklifts, wrecker trucks, pallets, nitrogen, hand tools, calibration equipment, fixtures, or height management system software).

All of the data that is required by this DID for the operational equipment, must also be provided for each component(s) or subassembly that exceeds the criteria for a "transportability problem item" (see paragraph 4.4 of **MIL-STD-1366**). For each component(s) or subassembly not exceeding the criteria for a "transportability problem item," provide only the length, width, height and

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weight of each sectionalized component.

- (c) Modeling and simulation (when available). Provide engineering drawings or computer aided design (CAD) models of the equipment to support structural, kinematic, and dynamic analyses of the transportation environment, or provide results of CAD transportation analyses performed by the contractor. Dimensions for length, width, height, and location of center of gravity in all three directions are required (Figure 1).
- (d) Transportability tests. A copy of test report(s) (or test plan and scheduled date(s) if not completed) shall be included as a part of this report, when available.
- (e) Speed requirements. State self-propelled or towed speed limits.
- (f) Shipping data plate. A paper copy of shipping data plate that will be secured to the vehicle shall be included with this report, when available (see **MIL-STD-209**).
- (g) Crew Size. State number of soldiers required for a crew. Crew weights for up to a five-soldier crew can be found in Table 1.

Table 1. Crew Weights from MIL-STD-1366

Total Crew Weight	Without Body Armor (lb, kg)	With Body Armor¹ (lb, kg)
Single-Solider Crew	334, 151.5	363, 164.7
Two-Solider Crew	640, 290.3	698, 313.6
Three-Solider Crew	936, 424.6	1023, 464.0
Four-Solider Crew	1,220, 553.4	1,336, 606.0
Five-Solider Crew	1,504, 682.2	1679 ² , 761.6

¹ For a single through four-soldier crew, 29 pounds of body armor is added for each soldier.
² For a five-soldier crew, 116 pounds (4 x 29) is added for crew members' armor, plus 59 pounds is added for the gunner's armor (Cupola Protection Ensemble).

- (h) Photographs. Provide electronic or hardcopy photographs of equipment.

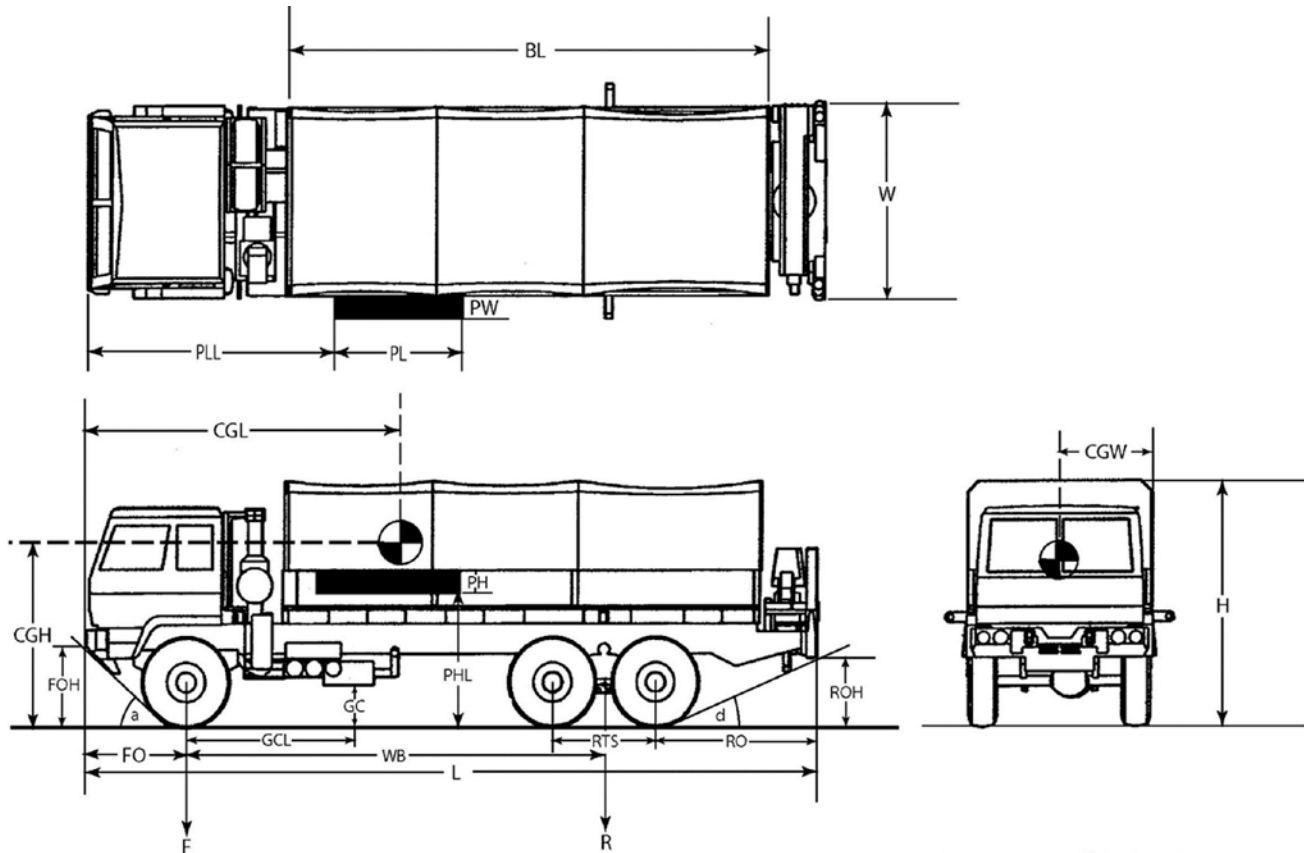
(i) Dimensional and Weight Data Tables. The data in the tables below shall be provided for all configurations of the equipment. As a minimum, one data table shall be provided for the fully operational configuration (including gross weight, fuel, lubricants, water, crew, Basic Issue Item (BII) equipment, and so forth), and one data table shall be provided for the shipping (reduced or sectionalized) configuration. If there are different reduced shipping configurations for various transportation assets and modes, a different data table shall be provided for each different shipping configuration.

1. Weight. State curb weight and maximum gross weight, and any other intermediate weights for special configurations required to meet specific

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transport requirements (i.e. fixed-wing air transport or helicopter transport).

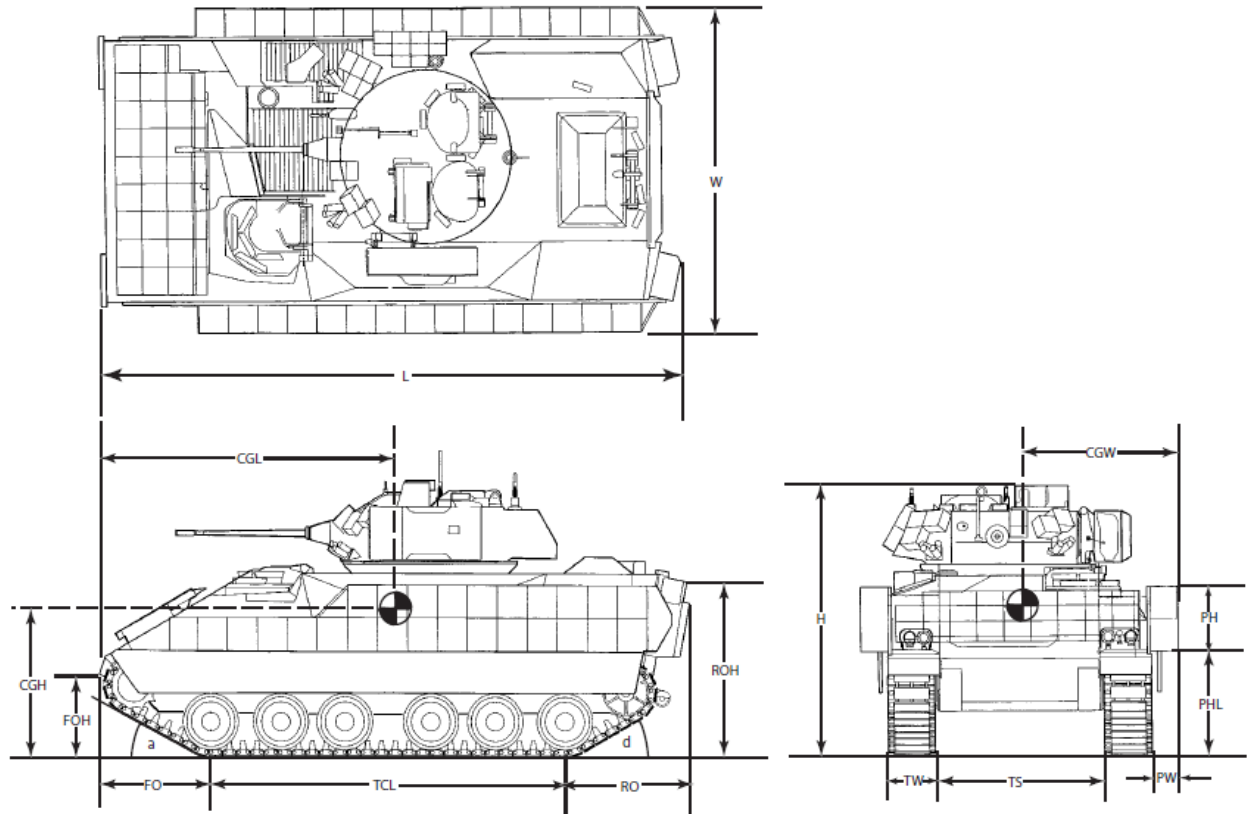
- Drawings (required if CAD models are not provided (see (c))). Indicate top, plane, side, and end view configurations on each drawing. Hardcopy or electronic files are acceptable. Drawings must include all data as shown in Figures 1, 2, or 3.



a - Angle of Approach	FO - Front Overhang	PHL - Projection Height Location
BL - Body Length	FOH - Front Overhang Height	PL - Projection Length
CGH - Center of Gravity Height	H - Height	PLL - Projection Length Location
CGL - Center of Gravity Length	GC - Ground Clearance	PW - Projection Width
CGW - Center of Gravity Width	GCL - Ground Clearance Location	R - Rear Axle Load
d - Angle of Departure	L - Length	RO - Rear Overhang
F - Front Axle Load	PH - Projection Height	ROH - Rear Overhang Height
RTS - Rear Tire Separation	W - Overall Width	WB - Wheel Base

Figure 1 – Wheeled Vehicle Dimensions

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a - Angle of Approach
 CGH - Center of Gravity Height
 CGL - Center of Gravity Length
 CGW - Center of Gravity Width
 d - Angle of Departure
 EH - Edge Height

FO - Front Overhang
 FOH - Front Overhang Height
 H - Height
 L - Length
 PH - Projection Height
 PHL - Projection Height Location

PW - Projection Width
 RO - Rear Overhang
 ROH - Rear Overhang Height
 TCL - Track Center Line
 TS - Track Separation
 TW - Track Width
 W - Width

Figure 2 – Tracked Vehicle Dimensions

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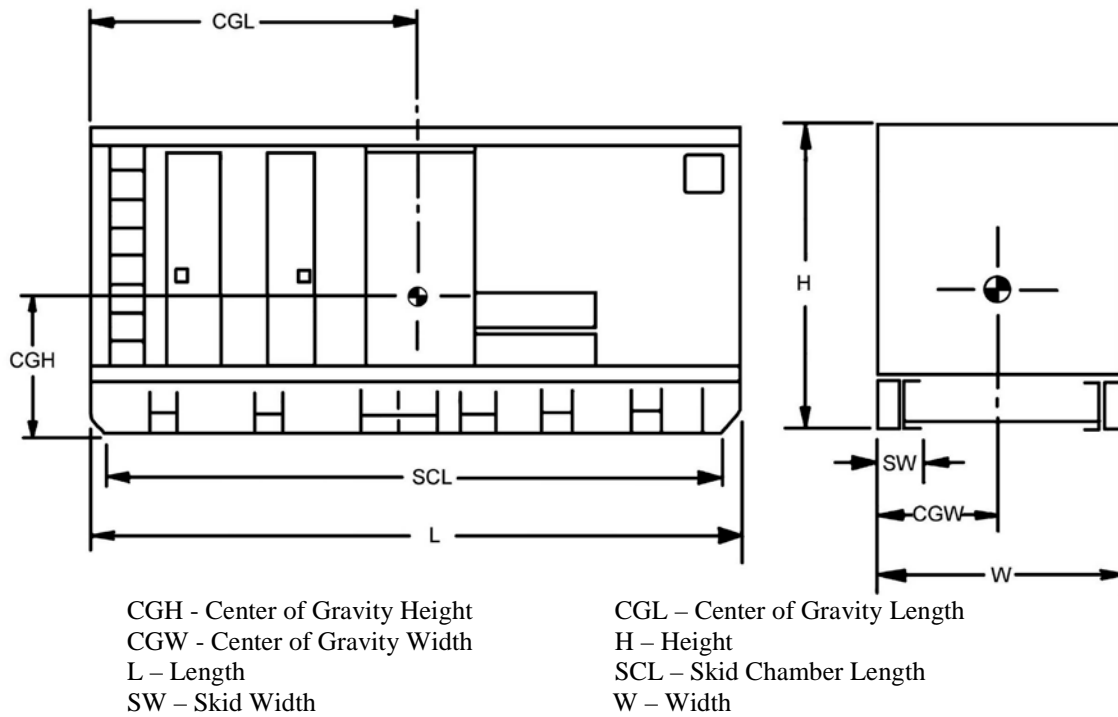
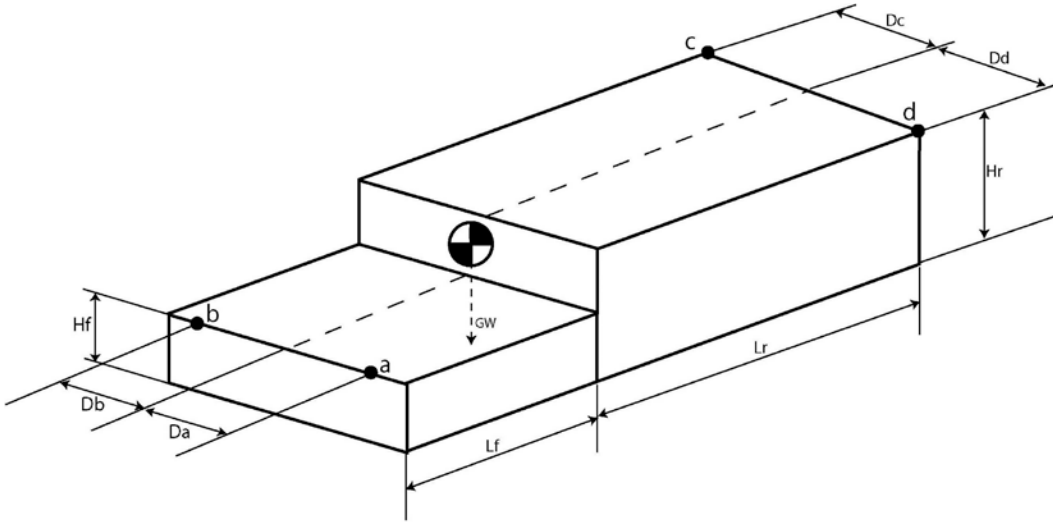


Figure 3 – Skid-Mounted Item Dimensions

(j) Lift and tiedown provisions (see MIL-STD-209).

1. State the number, location, and strength (yield and ultimate) of lift (including aerial recovery), equipment tiedown, multipurpose, cargo tiedown, and supplemental air transport tiedown provisions for the item and major components removed for transport.
2. Provide the dimensional location of the lift, equipment tiedown, multipurpose, and supplemental air transport tiedown provisions (with respect to the CG) as shown in Figure 4.

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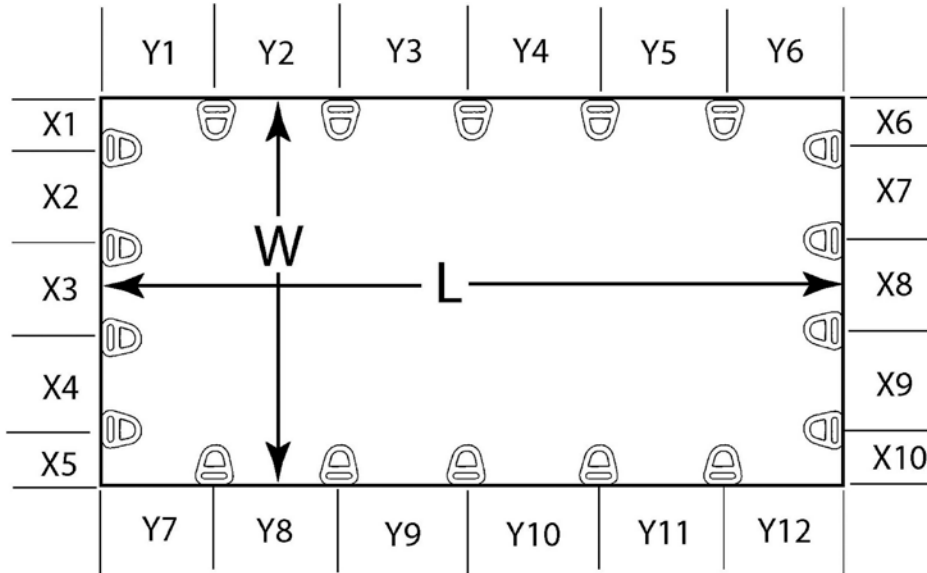


Da - Lateral distance from provision a to the CG
 Db - Lateral distance from provision b to the CG
 Dc - Lateral distance from provision c to the CG
 Dd - Lateral distance from provision d to the CG
 Gross Weight

Hf - Height of front provisions
 Hr - Height of rear provisions
 Lf - Longitudinal distance between front provisions and the CG
 Lr - Longitudinal distance between the rear provisions and the CG
 GW - Gross Weight

Figure 4 – Dimensions Defining the Location of the Lift and Tiedown Provisions

3. Provide the dimensional location of the cargo tiedown provisions with respect to the center of the cargo area, as shown in Figure 5.

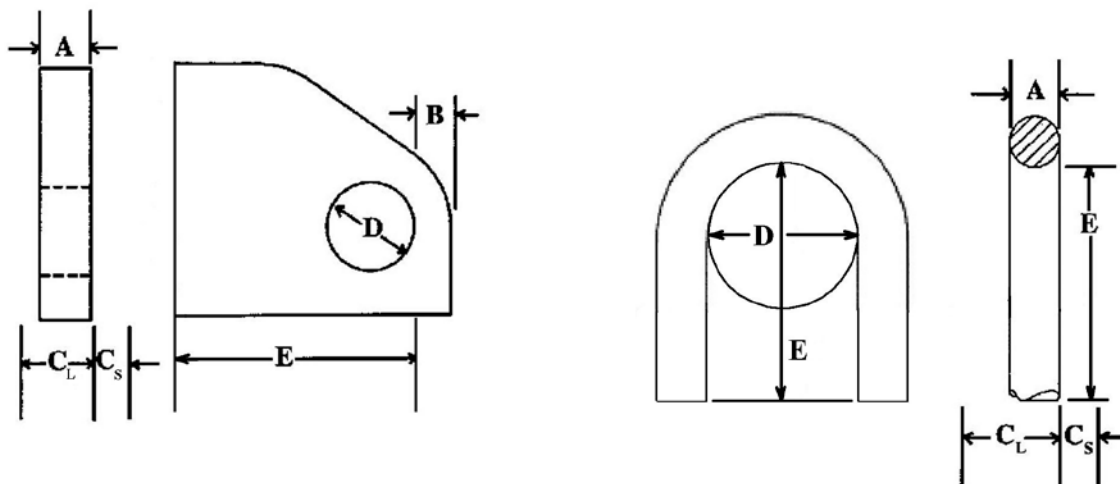


X1-10 - Distance between provisions on front and rear of cargo bed
 Y1-12 - Distance between provisions on left and right side of cargo bed
 W - Width of cargo bed
 L - Length of cargo bed

Figure 5 – Dimensions to Determine Location of Cargo Tiedown Provisions

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4. Provide the dimensions A, B, D, E, C_L , and C_S for each lift, equipment tiedown, multipurpose, and higher strength cargo tiedown provisions, as shown in Figure 6.



C_L and C_S are the dimensions between one side of the provision and the nearest interference or obstruction. Either side of the provision may be used as the datum from which to measure C_L and C_S . E is the dimension between the outer edge of D and the nearest interference or obstruction.

Figure 6 – Lift and Tiedown Provision Dimensions

5. Provide the dimensions A and B for the cargo tiedown provisions, as shown in figure 7.

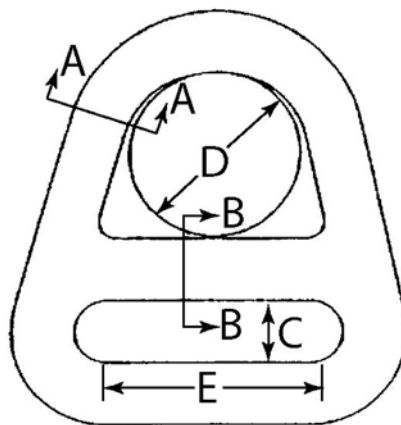


Figure 7 – Cargo Tiedown Dimensions

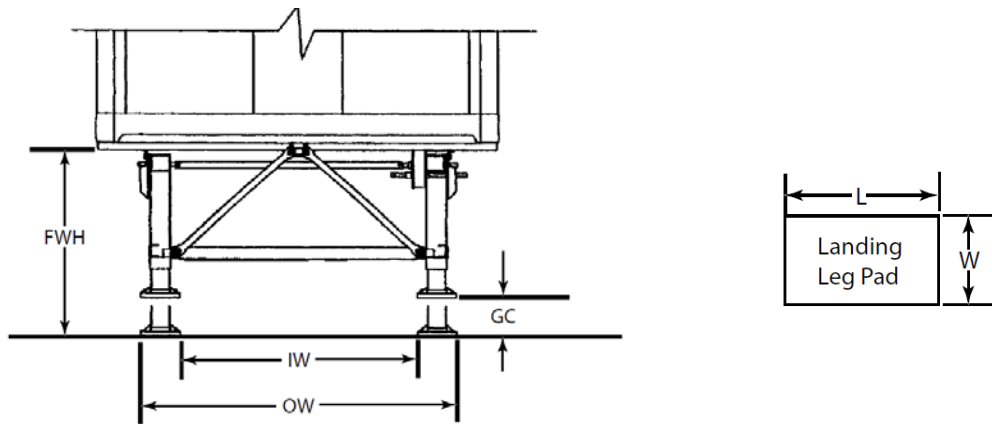
6. Provide the opening size of the supplemental air transport tiedown provision.

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7. Identify the location of hardpoint lift provisions provided for aerial recovery (if required).
- (k) Projections. State the dimensions and locations of any significant projections (for example, environmental control units, ladders, protruding tiedown provisions, antennas, shelters, and so forth). See Figures 1, 2, and 3.
- (l) Additional information required for **wheeled** vehicles.
1. Weight ratings. Specify the gross vehicle weight rating (GVWR).
 2. Tires. State the number, size(s), load rating(s), locations, and inflation pressure of tires.
 3. Axle loads. State the axle load, for each axle, for the following configurations:
 - a. Vehicle at curb weight.
 - b. Vehicle at maximum gross weight. (For cargo vehicles, assume a uniform load on the cargo bed.)
 - c. Intermediate weights for special configurations required to meet specific transport requirements (i.e. fixed-wing air transport or helicopter transport).
 4. Maximum axle load ratings. State maximum axle loads for each axle.
 - a. State the tracking width of each axle (Figure 10).
 5. Kingpin/lunette and fifth wheel/pintle ratings and loads (as applicable).
 - a. State the kingpin/lunette and fifth wheel/pintle ratings and actual loads.
 - b. State distance between first axle and kingpin/lunette, and height of kingpin/lunette.
 - c. State distance between last axle and fifth wheel/pintle, and height of fifth wheel/pintle.
 - d. For trailers, state the required prime movers. For truck-tractors, state the trailer to be towed.
 6. Landing legs (as applicable).

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- a. State rating for landing legs.
- b. State axle loads and landing leg load, when trailer is resting on landing legs. State distance between landing legs and kingpin/lunette.
- c. Provide dimensions of landing legs as shown in Figure 8.



FHW – Fifth Wheel Height

IW – Inside Width

L- Length of Landing Leg Pad

GC- Ground Clearance

OW- Outside Width

W- Width of Landing Leg Pad

Figure 8 – Landing Leg Dimensions

7. Suspension type and ratings. State type and load ratings for each suspension.
8. Crest Angle. State the angle (in degrees) connecting two horizontal surfaces that the vehicle can pass (crest) without interference (Figure 9).

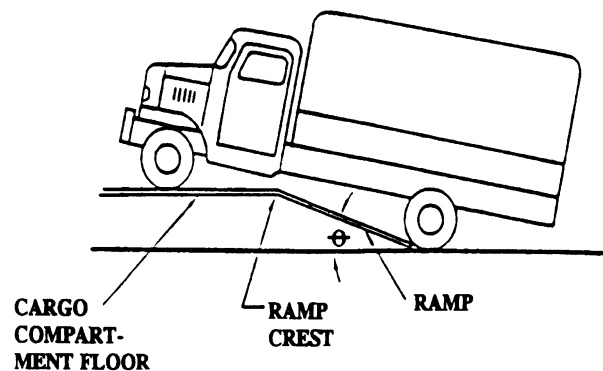
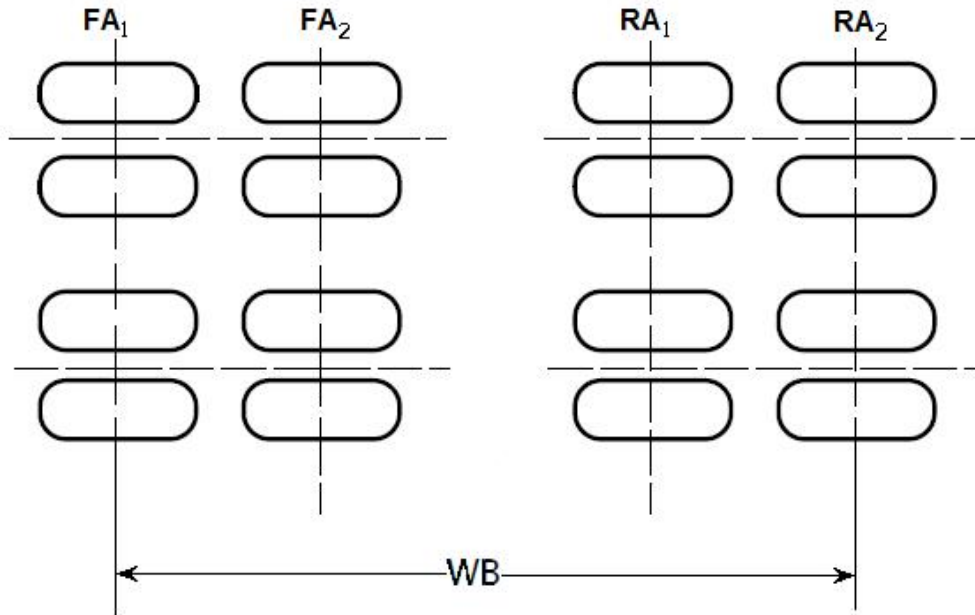


Figure 9 - Ramp Crest Angle

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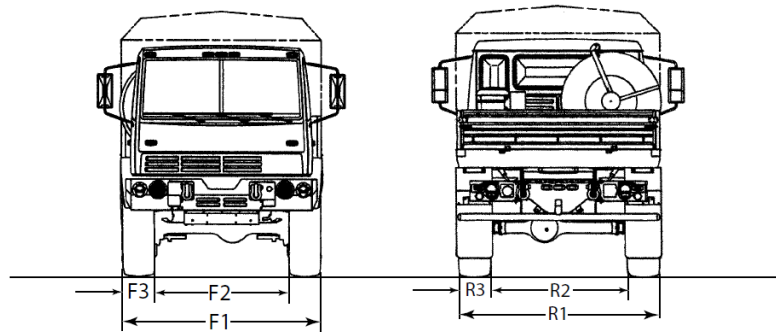
9. Tire footprint area. State the locations and dimensions of all tire footprint areas actually in contact with the ground in the fully loaded condition (Figure 10).

10. Axle tracking width. State the tracking width of each axle (Figure 11).



FA - Front Axle
RA - Rear Axle
WB - Wheel Base

Figure 10 - Tire Footprint Locations and Dimensions



F1 - Outside Distance
F2 - Inside Distance
F3 - Tire Width

R1 - Outside Width
R2 - Inside Distance
R3 - Rear Tire Width

Figure 11 – Axle Tracking Width

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11. Vehicle turning diameter. State the vehicle turning diameter for the following:

- a. Wall-to-wall.
- b. Curb-to-curb.

(m) Additional information required for **tracked** vehicles.

1. Road Wheels. State number of road wheels and road wheel axle spacing.
2. Track pads. State the area and number of track shoe pads actually in contact with the ground (Figure 12).
3. Ground Pressure. Specify the ground pressure created by the heaviest pad (pounds per square inch). State the weight supported by each road wheel.

(n) Additional information required for **skid-mounted** equipment.

1. Number of skids.
2. Dimensions of all skid areas actually in contact with the ground.
3. Ground Pressure. Specify ground pressure created by each skid (pounds per square inch).

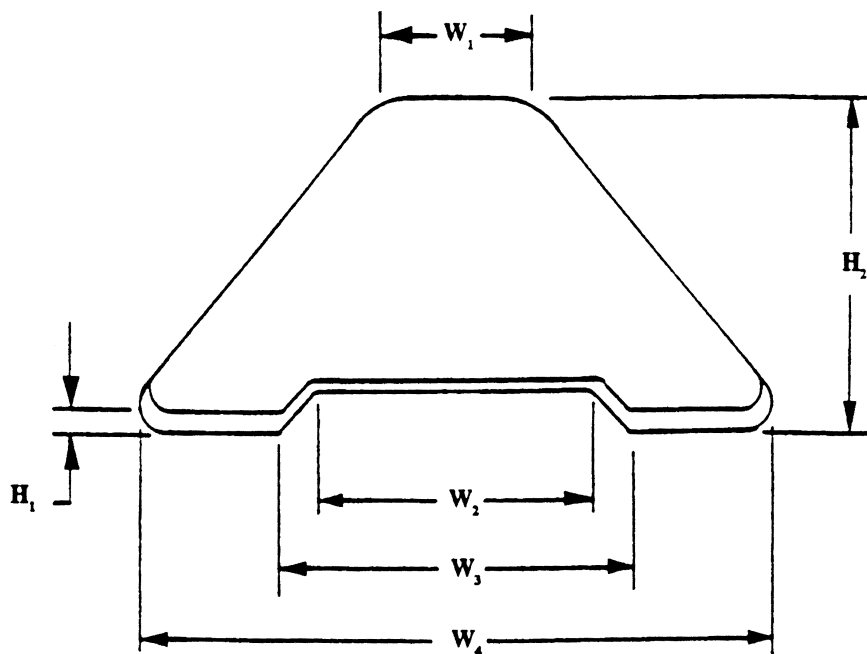


Figure 12 - Track Shoe Pad Dimensions (footprint data)

4. End of DI-PACK-80880D.