INCH-POUND

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DEPARTMENT OF DEFENSE
STANDARD PRACTICE

INSPECTION CRITERIA FOR INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO) CONTAINERS AND DEPARTMENT OF DEFENSE STANDARD FAMILY OF ISO SHELTERS

AMSC N/A FSC 8150 and FSC 5411

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

F O R E W O R D

1. This standard is approved for use by all Departments and Agencies of the Department of Defense (DOD).

2. This standard provides inspection criteria and procedures to be used when visually examining ISO compliant intermodal containers. It is important to maintain basic safety while handling and transporting large heavily laden ISO containers around the world. A container inspection program, therefore, helps ensure that no injury to person or damage to property occurs from a structural failure or deficiency. Following the criteria and procedures contained herein will enable personnel to identify containers that are serviceable and safe for loading and shipping.

3. This standard applies to the selection of any container meeting the ISO standards and certified under the provisions of the International Convention for Safe Containers (CSC). This standard applies to any ISO-configured container, shelter, or equipment that requires a CSC certification/recertification and a CSC safety data plate and are in FSC 5411, 8150, or in any other FSC. This standard is specifically used by worldwide civilian and military personnel responsible for inspecting and selecting serviceable ISO containers and shelters for shipment of DOD materiel.

4. This standard incorporates MIL-HDBK-138B entitled, GUIDE TO CONTAINER INSPECTION FOR COMMERCIAL AND MILITARY INTERMODAL CONTAINERS, which has been cancelled.

5. Certain portions of the criteria contained within this standard are segregated into three parts. The basic part of the criteria applies to containers used only for shipment of general cargoes. The second part provides additional criteria to be followed to qualify containers for shipment of United Nations (UN) Hazard Class 1 explosive materials. The third part provides additional criteria for Service-owned ISO-configured shelters.

6. This standard provides a variety of helpful illustrations. While some illustrations depict acceptable container repairs, it is not to be used as a standard for performing such repairs.

7. Comments, suggestions, or questions on this document should be addressed to: Defense Ammunition Center; 1 C Tree Road, ATTN: ATCL-ACE, McAlester OK 74501-9002; or emailed to: usarmy.mcalester.usamc.mbx.dac-det@mail.mil. For this standard, the above activity acts as Agent for the Preparing Activity U.S. Army ARDEC, ATTN: RDAR-EIQ-SE, Picatinny Arsenal, New Jersey 07806-5000, usarmy.picatinny.ardec.list.ardec-stdzn-branch@mail.mil, and is responsible for its technical content. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil.

CONTENTS

PARAGRAPH		PAGE
	FORWARD	ii
1.	SCOPE	1
1.1	Purpose	1
1.2	Applicability	1
1.3	Format	1
1.4	Objective	1
2.	APPLICABLE DOCUMENTS	2
2.1	General	2
2.2	Government documents	2
2.2.1	Specifications	2
2.2.2	Other Government documents, drawings, and publications	2
2.3	Non-Government publications	3
2.4	Order of precedence	4
3.	DEFINITIONS	5
3.1	General	5
3.2	Typical ISO containers	5
3.2.1	Typical end opening steel container	5
3.2.2	Typical end opening aluminum container	6
3.2.3	Typical end opening fiberglass reinforce plywood (FRP) container	7
3.2.4	Typical side opening container	8
3.2.5	Typical end and side opening container	8
3.2.6	Typical open top container	9
3.2.7	Typical flatrack container	11
3.2.8	Tactical ISO shelter	12
3.2.8.1	Army tactical ISO shelter	13
3.2.8.2	Marine Corps tactical ISO shelter	14
3.2.8.3	Navy tactical ISO shelter	15
3.2.9	BICON/TRICON/QUADCON container	17
3.3	Primary structural components	18
3.3.1	Corner fitting	18
3.3.2	Corner post	18
3.3.3	Door header	18
3.3.4	Door sill	18
3.3.5	Rear end frame	18
3.3.6	Top end rail	18
3.3.7	Bottom end rail	18
3.3.8	Front end frame	18
3.3.9	Top side rail	18
3.3.10	Bottom side rail	18

PARAGRAPH **PAGE**

3.3.11 Cross member 18
3.3.12 Understructure 18
3.3.13 Forklift pocket 18
3.3.14 Forklift pocket strap 19
3.3.15 Gooseneck tunnel 19
3.4 Walls, roof, and floor 21
3.4.1 FRP 21
3.4.2 Wall panel 2 1
3.4.3 Wall post 21
3.4.4 Wall beam 21
3.4.5 Marking panel 21
3.4.6 Lining 21
3.4.7 Lining shield 21
3.4.8 Kick plate 21
3.4.9 Ventilator 21
3.4.10 Roof panel 21
3.4.11 Roof bow 21
3.4.12 Roof beam 21
3.4.13 Roof reinforcement plate 21
3.4.14 Tarp 21
3.4.15 Transport Internationale des Routiers (TIR) cable 21
3.4.16 Flooring 22
3.4.17 Joint strip 22
3.4.18 Threshold plate 22
3.4.19 Steps 22
3.4.20 Sandwich panel 22
3.4.21 Striker plate 22
3.4.22 Sling pad 22
3.5 Door assembly 29
3.5.1 Door panel 29
3.5.2 J-bar 29
3.5.3 Hinge 29
3.5.4 Hinge pin 29
3.5.5 Locking bar 29
3.5.6 Locking bar mounting bracket 29
3.5.7 Cam 29
3.5.8 Cam retainer 29
3.5.9 Door locking handle 29
3.5.10 Door locking handle retainer 29
3.5.11 Anti-rack hardware 29
3.5.12 Customs catch 29
3.5.13 Door seal (gasket) 30
3.5.14 Rain gutter 30
3.5.15 3-point latch 30

PARAGRAPH **PAGE**

3.5.16 Chain bolt....30
3.5.17 Foot bolt....30
3.6 Special terminology....36
3.6.1 Container....36
3.6.2 Intermodal....36
3.6.3 MILSPEC VAN....36
3.6.4 Cargo restraint....36
3.6.4.1 Door post vertical retainer....36
3.6.4.2 Dunnage....36
3.6.4.3 Load bearing surface....36
3.6.4.4 Mechanical restraint system for MILSPEC VAN....36
3.6.4.5 Stanchion....36
3.6.4.6 Tiedown provision (lashing bar or ring)....36
3.6.4.7 Universal load retainer....36
3.6.4.8 Welded load retainer....37
3.6.5 Tare weight....37
3.6.6 Payload....37
3.6.7 Maximum gross weight....37
3.6.8 Shelter....37
3.6.9 Cam lock handle....37
3.6.10 Skids....37
3.6.11 International Maritime Dangerous Goods (IMDG) Code....37
3.6.12 Non IMDG....37
3.7 Conventions and markings....42
3.7.1 ISO (International Organization for Standardization)....42
3.7.2 ISO markings....42
3.7.3 CSC (International Convention for Safe Containers)....42
3.7.4 CSC safety approval plate....42
3.7.5 ACEP (Approved Continuous Examination Program)....42
3.7.6 TIR....42
3.7.7 TIR markings or plate....42
3.7.8 Manufacturer’s data plate....42
3.7.9 Consolidated data plate....42
3.7.10 Placard holder....43
3.8 Damage and repair....49
3.8.1 Patch....49
3.8.2 Splice....49
3.8.3 Gusset....49
3.8.4 Backup plate....49
3.8.5 Insert....49
3.8.6 Section (full profile)....49
3.8.7 Web....49
3.8.8 Flange....49
3.8.9 Hole....49

PARAGRAPH **PAGE**

3.8.10 Pinhole....49
3.8.11 Welder's hammer....49
3.8.12 Corrosive failure....49
3.8.13 Caulking....49
3.8.14 Undercoating....50
3.8.15 Overlap (lapped)....50
3.8.16 Delamination....50

4. GENERAL REQUIREMENTS 55
4.1 General....55
4.1.1 Regulatory mandates....55
4.1.2 Markings and data plates....55
4.1.3 Configuration....55
4.2 Primary structural components....57
4.2.1 Acceptable welding patterns....57
4.2.2 Acceptable splicing....57
4.2.3 Straightening....57
4.2.4 Major defects....57
4.2.4.1 General cargo container (non IMDG)....57
4.2.4.2 UN Hazard Class 1 container (IMDG)....58
4.2.5 Corner fittings....58
4.2.6 Corner posts....59
4.2.6.1 General cargo container (non IMDG)....59
4.2.6.2 UN Hazard Class 1 container (IMDG)....59
4.2.6.3 Army or Marine Corps shelter....59
4.2.6.4 Navy shelter....60
4.2.7 Door end frame....61
4.2.7.1 General cargo container (non IMDG)....61
4.2.7.2 UN Hazard Class 1 container (IMDG)....61
4.2.7.3 Army or Marine Corps shelter....61
4.2.7.4 Navy shelter....62
4.2.8 End frame (without door)....65
4.2.8.1 General cargo container (non IMDG)....65
4.2.8.2 UN Hazard Class 1 container (IMDG)....65
4.2.8.3 Army or Marine Corps shelter....65
4.2.8.4 Navy shelter....65
4.2.9 Side rails....69
4.2.9.1 General cargo container (non IMDG)....69
4.2.9.2 UN Hazard Class 1 container (IMDG)....69
4.2.9.3 Army or Marine Corps shelter....70
4.2.9.4 Navy shelter....70
4.2.10 Floor cross members....75
4.2.10.1 General cargo container (non IMDG)....75
4.2.10.2 UN Hazard Class 1 container (IMDG)....75

PARAGRAPH **PAGE**

4.2.10.3 Army or Marine Corps shelter 75
4.2.10.4 Navy shelter 75
4.2.11 Steel cross member juncture with steel side rail 76
4.2.12 Acceptable splicing on steel cross members 76
4.2.13 Cross member modifications 76
4.2.14 Gussets and end rail stiffeners 76
4.2.15 Structural integrity of understructure 76
4.2.16 Forklift pockets 81
4.2.16.1 General cargo container (non IMDG) 81
4.2.16.2 UN Hazard Class 1 container (IMDG) 81
4.2.16.3 Army, Marine Corps or Navy shelter 81
4.2.17 Special container hardware 83
4.2.17.1 Collapsible flatrack end wall 83
4.2.17.2 Open top swinging header 83
4.3 Non-structural components 85
4.3.1 Serviceability of panels 85
4.3.2 Acceptable patching 85
4.3.3 Side and end wall panels 85
4. 3.3.1 General cargo container (non IMDG) 85
4. 3.3.2 UN Hazard Class 1 container (IMDG) 85
4.3.4 Closed roof assembly 88
4.3.5 Removable cover (tarp) assembly 90
4.3.6 Serviceability of cover (tarp) assembly 90
4.3.7 General type door assembly 92
4.3.8 Ramp type door 92
4.3.9 Cargo restraint 98
4.3.9.1 Mechanical restraint system 98
4.3.9.2 Load bearing surface 98
4.3.9.3 Load retainers 98
4.3.9.4 Tiedown provision (lashing bars or rings) 98
4.3.9.5 Stanchion 98
4.3.10 Flooring 103
4.3.11 Acceptable wooden flooring repairs 103
4.3.12 Acceptable wooden floor gaps for enclosed containers 103
4.3.13 Structural integrity of floor structure 103
4.3.14 Miscellaneous components 106
4.3.14.1 Threshold plate 106
4.3.14.2 Lining and lining shield 106
4.3.14.3 Ventilator 106
4.3.14.4 Placard holder 106
4.3.14.5 Pop rivets 106
4.3.14.6 Door holder (tieback) 106
4.3.14.7 Installed equipment 106
4.3.14.8 Folding steps 106

PARAGRAPH **PAGE**

5. DETAILED REQUIREMENTS 108
5.1 Prerequisites 108
5.1.1 Container type 108
5.1.2 Inspector qualifications 108
5.1.3 Leased container 108
5.1.4 Judgment of criteria 108
5.2 Suggested tools and equipment 108
5.2.1 Long straight edge 108
5.2.2 Measuring tape (ruler) 108
5.2.3 Welder's hammer 108
5.2.4 Ladder 108
5.2.5 Inspection stands 109
5.2.6 Flashlight 109
5.2.7 Chalk 109
5.2.8 Feeler gauge 109
5.2.9 Depth gauge 109
5.2.10 Tap hammer 109
5.3 Recommended inspection sequence 112
5.3.1 Markings and data plates 112
5.3.2 Overall configuration 112
5.3.3 Door end(s) or side(s) 112
5.3.4 Exterior sides and ends 112
5.3.5 Roof (exterior) 112
5.3.6 Understructure 112
5.3.7 Interior 112
5.3.8 Light leak test 113
5.3.9 Pre-loading inspection vs. CSC reinspection 114
5.4 Documents 114
5.4.1 Inspection checklist 114
5.4.2 DD Form 2282 decal 114
5.4.2.1 Newly manufactured container 115
5.4.2.2 Subsequent to repair 115
5.4.2.3 Serviceable for general cargo 115
5.4.2.4 Serviceable for UN Hazard Class 1 (IMDG) 115
5.4.3 UN Hazard Class 1 (IMDG) declaration 115
5.4.4 Inspection report 115

6. NOTES 117
6.1 Intended use 117
6.2 Associated data item descriptions (DIDs) 117
6.3 Supersession 117
6.4 Subject term (key word) listing 117

FIGURE **PAGE**

1 Typical end opening steel container 5
2 Typical end opening aluminum container 6
3 Typical end opening FRP container 7
4 Typical side opening container 8
5 Typical 1/2 high open top container 9
6 Typical 2/3 high open top container 10
7 Typical flatrack container 11
8 Army tactical ISO shelter 13
9 Marine Corps tactical ISO shelter 14
10 Navy BMF ISO shelter 16
11 Navy SOMF-B (modified) ISO shelter 16
12 Typical TRICON container 17
13 Container understructure 19
14 Primary structural components 20
15 Typical steel container (exploded view) 23
16 Typical aluminum container (exploded view) 24
17 Fiberglass reinforced plywood (FRP) 25
18 Removable cover (tarp) assembly 25
19 Typical ISO shelter (exploded view) 26
20 Typical one-side expandable ISO shelter (exploded view) 27
21 Honeycomb sandwich panel 28
22 Foam and beam sandwich panel construction 28
23 Typical rear end door assembly 31
24 Door hardware 32
25 Typical shelter door assembly 33
26 Army/Marine 3-point latching system 34
27 Navy 3-point latching system 35
28 Mechanical restraint system for MILVAN 38
29 Cargo restraint system for end opening container 39
30 Cargo restraint system for side opening container 40
31 Restraint provisions for flatrack container 40
32 Load bearing surfaces in general cargo MILVAN 41
33 Cargo restraints for shelter 41
34 Typical door markings 44
35 Typical horizontal layout of ISO identification markings 45
36 Typical vertical layout of ISO identification markings 46
37 Typical format of CSC safety approval plate 47
38 Typical consolidated data plate 48
39 Typical welded patches on steel wall panels 51
40 Typical splices in rails 52
41 Typical reinforced door sill 53
42 Welder's hammer 53
43 Typical riveted patches on wall (aluminum, steel, or sandwich panel) 54

FIGURE **PAGE**

44 ISO dimensions and tolerances 56
45 Corner fitting 58
46 Corner post 60
47 Rear end frame 63
48 Splice limitations for door header and door sill....64
49 Front end frame 67
50 Splice limitations for end rails....68
51 Steel side rail 71
52 Aluminum side rail 71
53 Splice limitations for side rails 72
54 Examples of steel top side rail splices 73
55 Examples of steel bottom side rail splices 74
56 Steel cross member repair limitations 77
57 Dent and bend limitations for cross members 78
58 Unacceptable steel cross member damage requiring rail replacement....79
59 Typical cross member configuration (ISO shelters) 79
60 Gussets and end rail stiffeners on steel containers 80
61 Examples of forklift pocket damage 82
62 Examples of flatrack end wall damage 83
63 Swinging header damage 84
64 Acceptable wall patches (steel panel) 86
65 Acceptable wall, roof, and floor patches (sandwich or aluminum panel) 87
66 Roof assembly damage 88
67 Repaired roof assembly 89
68 Removable cover (tarp) assembly 91
69 Rear end door assembly damage 93
70 Patched door panel 94
71 TIR requirements for brackets 95
72 Customs catch on a steel door 95
73 Typical ISO shelter door assembly damage 96
74 Ramp type door damage 97
75 Mechanical restraint system damage 99
76 Load retainer damage 100
77 Damaged flatrack restraint provisions 101
78 Load bearing surfaces on a van 102
79 Wooden plank flooring damage 104
80 Sandwich panel flooring damage 104
81 Example of flooring repair 105
82 Container inspection stands 110
83 Combination depth/feeler gauge 110
84 Checking for protrusions 111
85 Tap hammer 111

FIGURE **PAGE**

86 Straightening flange 113
87 DD Form 2282 decal 116

TABLE

I Army tactical ISO shelters 13
II Marine Corps tactical ISO shelters 14
III Navy tactical ISO shelters 15
IV BICON/TRICON/QUADCON containers 17

APPENDIX A INSPECTION CHECKLISTS 119

A.1 SCOPE 119
A.1.1 Scope 119
A.2 DEFINITIONS 119
A.2.1 Major defect 119
A.2.2 Minor defect 119
A.3 CHECKLISTS 119
A.3.1 Inspection checklists 119

TABLE

A-I End opening container inspection checklist 120
A-II Flatrack container inspection checklist 122
A-III Mobile facility inspection checklist 124
A-IV Open-top container inspection checklist 127
A-V Side opening container inspection checklist 129
A-VI Tactical shelter inspection checklist 131

INDEX 134

CONCLUDING MATERIAL 140

1. SCOPE

1.1 Purpose. This standard provides inspection criteria and procedures to be used when visually examining intermodal freight containers. Following the criteria and procedures contained herein will enable personnel to identify containers that are serviceable and safe for loading and shipping.

NOTE!

This standard is not to be used for performing container repairs.

1.2 Applicability. This standard applies to any International Organization for Standardization (ISO) container or ISO-configured tactical shelter or equipment requiring inspection, certification, and periodic examination under the provisions of the International Convention for Safe Containers (CSC) detailed in 49 CFR 450-453. This standard applies to any ISO-configured container, shelter, or equipment that require a CSC certification/ re-certification and a CSC safety data plate and are in FSC 5411, 8150, or in any other FSC. This standard is specifically used worldwide by Department of Defense (DOD) civilian, contractor, and military personnel responsible for inspecting ISO-containers or ISO-configured tactical shelters or equipment being offered for shipment internationally in the Defense Transportation System (DTS).

1.3 Format. Certain portions of the criteria contained within this standard are segregated into two or more parts. The first part of the criteria applies to containers used for shipment of general cargoes. The remaining parts provide additional criteria to be followed to qualify containers for shipment of United Nations (UN) Hazard Class 1 (IMDG) explosive materials in accordance with IMDG requirements, and with Army, Marine Corps, or Navy shelters.

1.4 Objective. Inspecting personnel will use this standard to cause:

a. Inspection standardization among DOD agencies for selection of intermodal containers owned by the DOD.

b. Preparation of inspection reports that are properly annotated to reflect container condition and reason(s) for rejection; and

c. Compliance with international treaties and conventions and United States transportation law.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications. The following documents form a part of this standard to the extent specified herein. Unless otherwise specified, the editions are those in effect at the time of inspection.

COMMERCIAL ITEM DESCRIPTIONS

A-A-52029	Container, Cargo, Side-Opening
A-A-52032	Container, Cargo, End-Opening
A-A-52033	Container, Cargo, Open-Top, Half Height
A-A-59272	Container, Cargo, End and Side Opening

DOD SPECIFICATIONS

MIL-PRF-32349	Container, Cargo, Triple Container (TRICON) (WITHOUT CABINETS, DRAWERS, OR SHELVES)
MIL-PRF-32402	Container, Cargo, Triple Container 5 (TRICON 5)
MIL-PRF-32410	Container, Cargo, Double Container (BICON) Type 2

(Copies of these documents are available online at https://assist.dla.mil or from DLA Document Services, Bldg 4/D, 700 Robbins Ave, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following documents form a part of this standard to the extent specified herein. Unless otherwise specified, the editions are those in effect at the time of inspection.

DEFENSE AMMUNITION CENTER

AC200000210	MILVAN Repair and Inspection Stand
DA-116	Aft end load restraint in end-opening ISO containers using universal load retainers, door post vertical retainers, or welded load retainers

(Copies of these documents are available online at www3.dac.army.mil/det/order/draworder.html, searching by project number (DA-116) or

drawing number (AC200000210) or from the Defense Ammunition Center, 1 C Tree Road/ATCL-ACE, Bldg. 35, McAlester, OK 74501.)

DEPARTMENT OF DEFENSE

DTR 4500.9-R Part VI	Management and Control of Intermodal Containers and System 463L Equipment

(Copies of this document are available online at www.transcom.mil.)

DEPARTMENT OF TRANSPORTATION (DOT)

49 CFR	Code of Federal Regulations - Transportation

(Copies of these documents are available online at www.gpoaccess.gov or from the U.S. Government Printing Office, Mail Stop: IDCC, 732 N. Capitol Street, NW, Washington, DC 20401.)

2.3 Non-Government publications. The following documents form a part of this standard to the extent specified herein. Unless otherwise specified, the editions are those in effect at the time of inspection.

INTERNATIONAL MARITIME ORGANIZATION (IMO)

CSC	International Convention for Safe Containers
IMDG Code	International Maritime Dangerous Goods Code
TIR	Customs Convention - Transport Internationale des Routiers

(Copies of these documents are available online at www.imo.org or from the International Maritime Organization, 4 Albert Embankment, London, SE1 7SR, United Kingdom.)

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 668	Series 1 Freight Containers - Classification, Dimensions and Ratings
ISO 1161	Series 1 Freight Containers - Corner Fittings Specification
ISO 1496	Series 1 Freight Containers - Specification and Testing
ISO 6346	Freight Containers - Coding, Identification and Marking

(Copies of these documents are available online at www.iso.org/iso/home.html, or from the American National Standards Institute, 25 W. 43rd Street, New York, NY 10036.)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B30.1	Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries – Safety Standard for Cableways, Cranes,

Derricks, Hoists, Hooks, Jacks, and Slings

(Copies of this document are available online at www.ansi.org or from the American National Standards Institute, 25 W 43rd Street, 4th Floor New York, NY, 10036)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E1925	Specification for Engineering and Design Criteria for Rigid Wall Relocatable Structures.

(Copies of this document are available online at www2.astm.org or from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959)

2.4 Order of precedence. Unless otherwise noted herein, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. DEFINITIONS

3.1 General. The terms used throughout this standard are consistent with the following definitions.

3.2 Typical ISO containers.

3.2.1 Typical end opening steel container. Refer to Figure 1. The most common type of freight container is the general purpose dry cargo type. This container completely encloses its contents by permanent steel structures and provides cargo loading access through end opening doors.

Typical end opening steel containers can be 10, 20, 40, or 45 feet long by 8, 8-1/2, or 9 1/2 feet high. The standard width of an ISO container is 8 feet. The walls of a typical steel container are usually constructed of corrugated sheet steel panels that are welded to the main structural steel top and bottom side rails and end frames. The end frames are fitted with standard corner fittings (steel castings) at all eight corners that are welded to the four corner posts, top and bottom side and front rails, and rear door sill and header. The roof is usually constructed of either flat or corrugated sheet steel panels welded to the top side and end rails and door header and may have roof bows for support. The doors are usually either shaped steel frame with steel panels or plymetal (steel faced wood) panels fitted with locking and anti-rack hardware and weather-proof seals (gaskets). The flooring may be soft or hard laminated woods, planking, plywood, or composition material either screwed or bolted to the floor cross members. The floor cross members may be box, C, Z, or I shaped steel beams bolted or welded to the bottom side rails. Some containers are configured with all-steel flooring or a combination of wood and steel.

An ISO freight container is primarily handled via connection with its internationally standard corner fittings; however, many steel containers are also provided with empty and/or loaded capacity forklift pockets to improve container handling versatility. Performance specifications for a typical 20 foot long end opening steel container are provided by commercial item description A-A-52032.

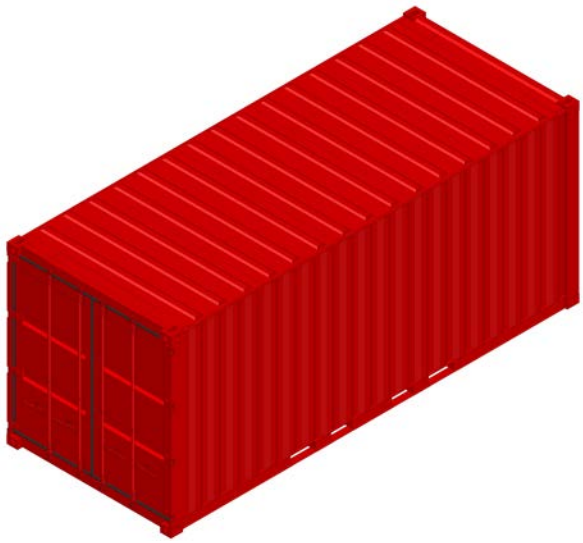


FIGURE 1. Typical end opening steel container

3.2.2 Typical end opening aluminum container. Refer to Figure 2. A typical end opening aluminum container, often referred to as aluminum/steel container, usually has steel end frames and structural steel or extruded aluminum side rails.

The end frames are fitted with standard corner fittings (steel castings) at all eight corners. The walls are constructed of either interior or exterior intermediate aluminum posts to which sheet aluminum is riveted or welded. The inside walls usually have a plywood liner either riveted to the intermediate posts or over the sheet aluminum. The door panels are either aluminum post and sheet construction or plymetal (metal faced wood) construction and are fitted with steel locking and anti-racking hardware and weather-proof seals (gaskets). Roof bows, that support the aluminum roof panels, are usually aluminum extrusions that are bolted, riveted, or welded to the top rails. The flooring may be soft or hard laminated woods, planking, or plywood either screwed or bolted to the floor cross members. The floor cross members may be box, C, Z, or I shaped beams of either steel or aluminum that are bolted, riveted, or welded to the bottom side rails.

The nominal dimensions and many construction details are otherwise similar to those of steel end opening containers.

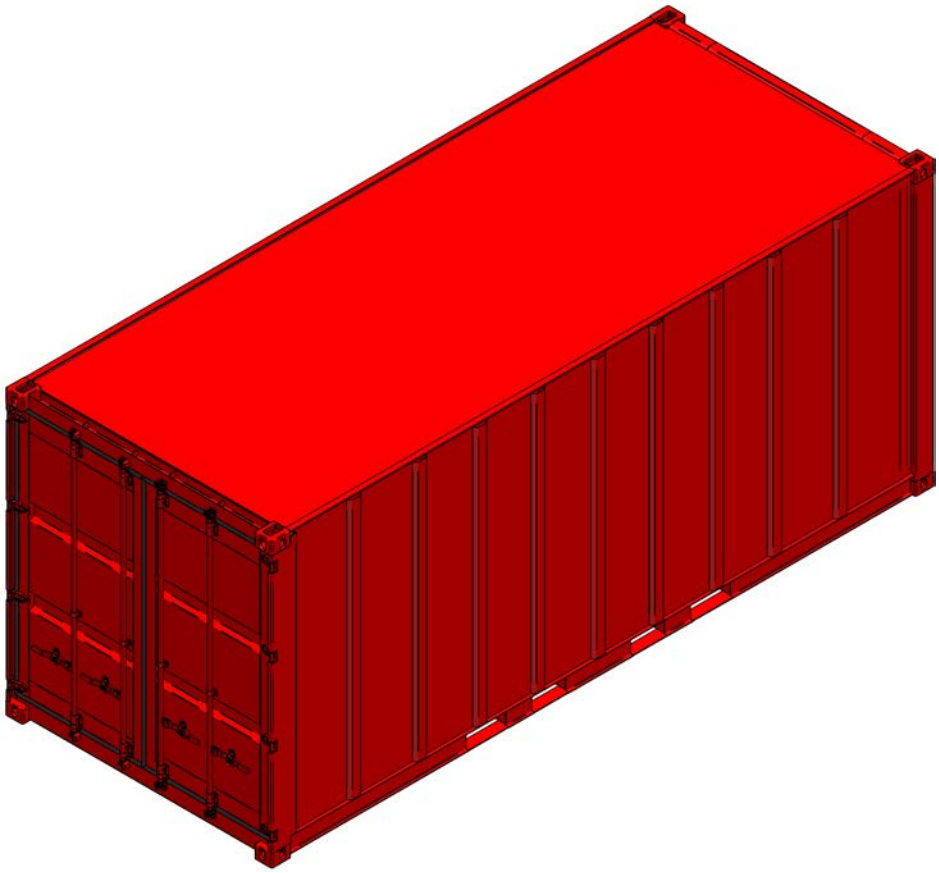


FIGURE 2. Typical end opening aluminum container

3.2.3. Typical end opening Fiberglass Reinforced Plywood (FRP) container. Refer to Figure 3. A typical end opening FRP container is usually constructed of structural steel framing; fitted with standard corner fittings (steel castings) at all eight corners; and has FRP panels on the side walls, front end wall, and roof.

Normally there are no roof bows used to support the roof panel. The FRP panels are usually imbedded in a mastic, to provide water tightness, and are riveted to the top and bottom rails and the corner posts. The door panels are also constructed of FRP and are fitted with steel locking and anti-rack hardware and weather-proof seals (gaskets). The flooring may be soft or hard laminated woods, planking, or plywood either screwed or bolted to the cross members. The floor cross members may be box, C, Z, or I shaped beams.

The nominal dimensions and many construction details are otherwise similar to those of steel end opening containers.

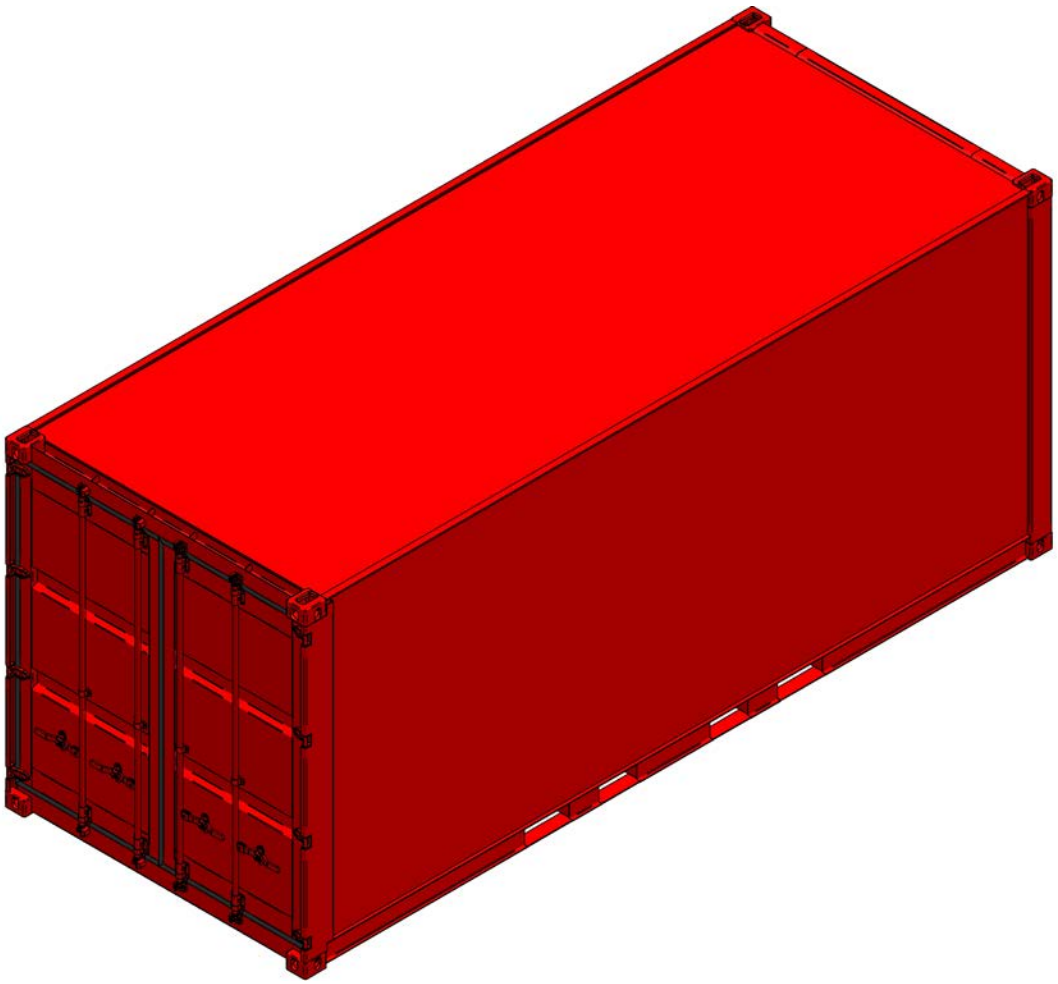


FIGURE 3. Typical end opening FRP container

3.2.4 Typical Side Opening Container. Refer to Figure 4. A side opening container is similar in many respects to a typical steel end opening container except there are doors on the side to provide access to the cargo space and the bottom side rails usually have a deeper profile. There may or may not be doors in the end frame of the container.

Typical side opening steel containers can be 20 or 40 feet long by 8½ or 9½ feet high. The standard width of an ISO container is 8 feet. Performance specifications for a typical 20 foot long side opening container are provided by commercial item description A-A-52029.

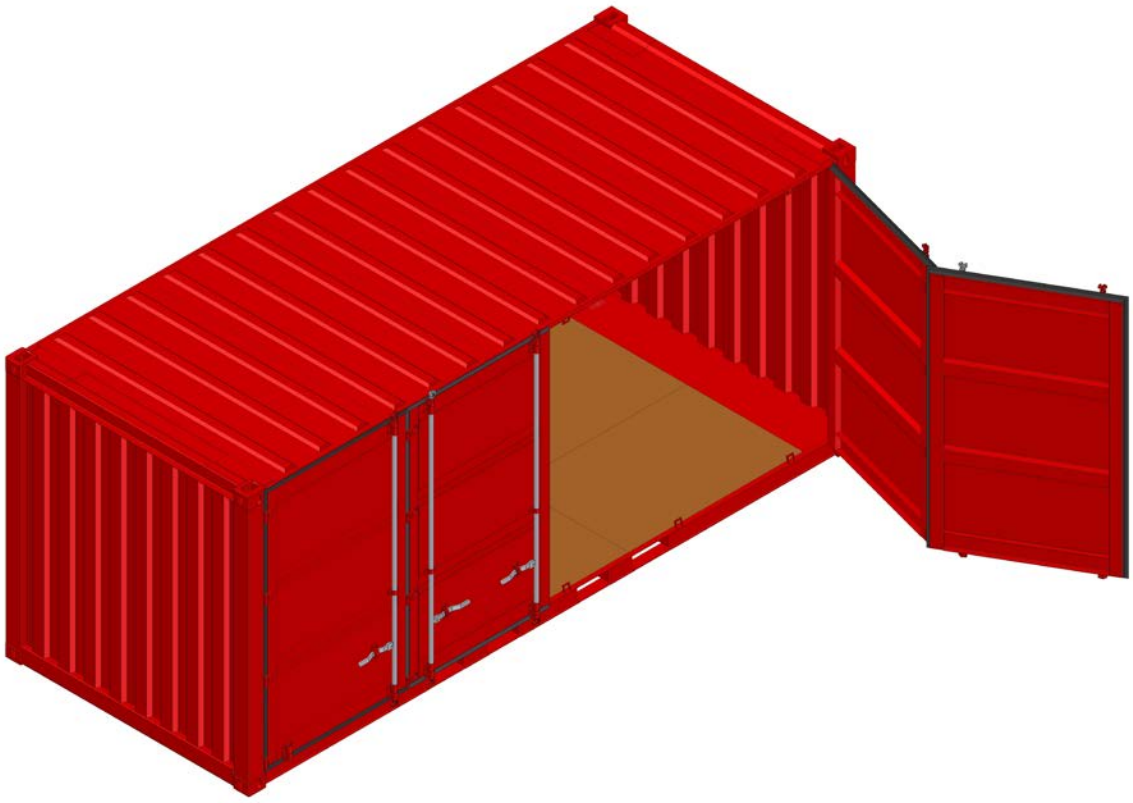


FIGURE 4. Typical side opening container

3.2.5 Typical End and Side Opening Container. An end and side opening container is an amalgam of a steel end opening container and a side opening container, and is available in three variations, doors opening on one end of the container, doors opening on both ends of the container, and doors opening on both ends of the container as well as a set of 8 ft by 8 ft doors on one side of the container. Typical end and side opening steel containers are 20 feet long by 8 feet high. The standard width of an ISO container is 8 feet.

Performance specifications for a typical end and side opening container are provided by commercial item description A-A-59272.

3.2.6 Typical open top container. Refer to Figures 5 and 6. An open top container is similar in all respects to a typical steel container except it has no rigid roof. Instead, it has a flexible or removable cover.

The removable cover (tarp) is usually made of canvas or reinforced vinyl material and is supported on movable or removable roof bows. The tarp has reinforced eyelets in the perimeter that fit (nest) over corresponding loops welded to the side panel, end panels, and door(s). The tarp is secured by a plastic sheathed wire rope threaded through the welded steel loops. An open top container may also have a movable or removable door header to facilitate access to the cargo. In some open top containers, the end door opens downward to function as a loading ramp. Some open top containers have all steel floors.

Three typical heights for open top containers are 4 ft – 3 in high (1/2 high), 5 ft – 8 in high (2/3 high), and 8 ft – 6 in high (full height). Typical open top containers can be 20 or 40 feet long. The standard width of an ISO container is 8 feet. Performance specifications for a typical half-high open top container are provided by commercial item description A-A-52033.

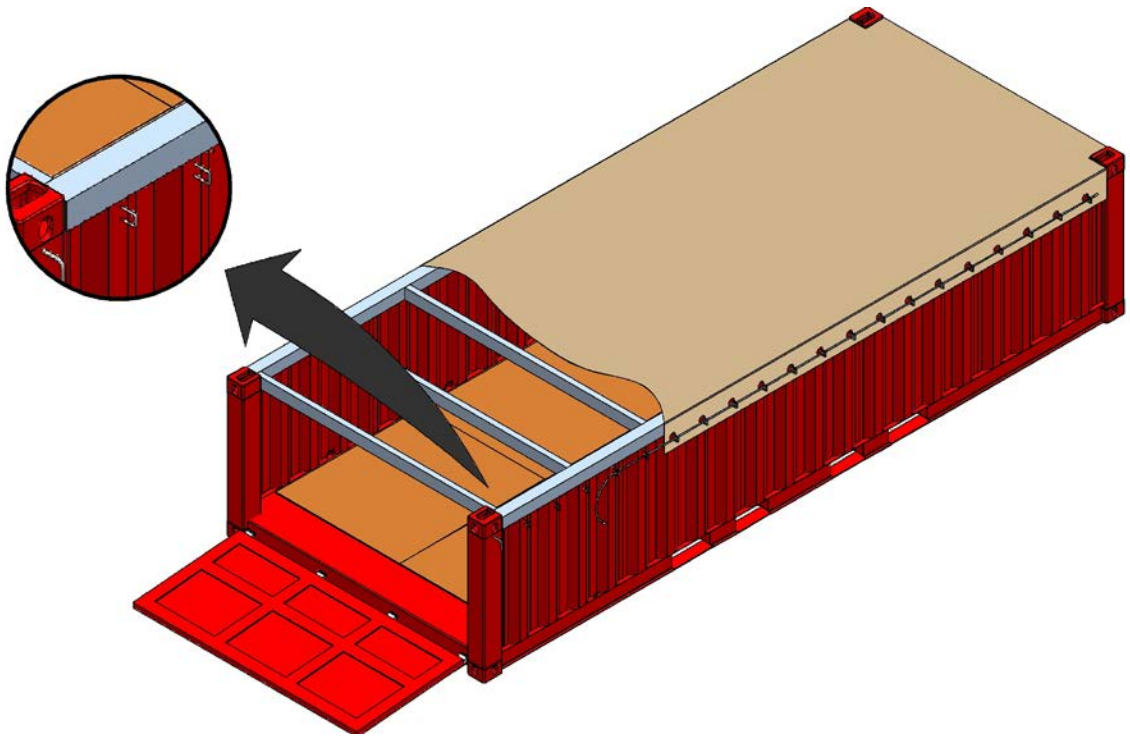


FIGURE 5. Typical 1/2 high open top container

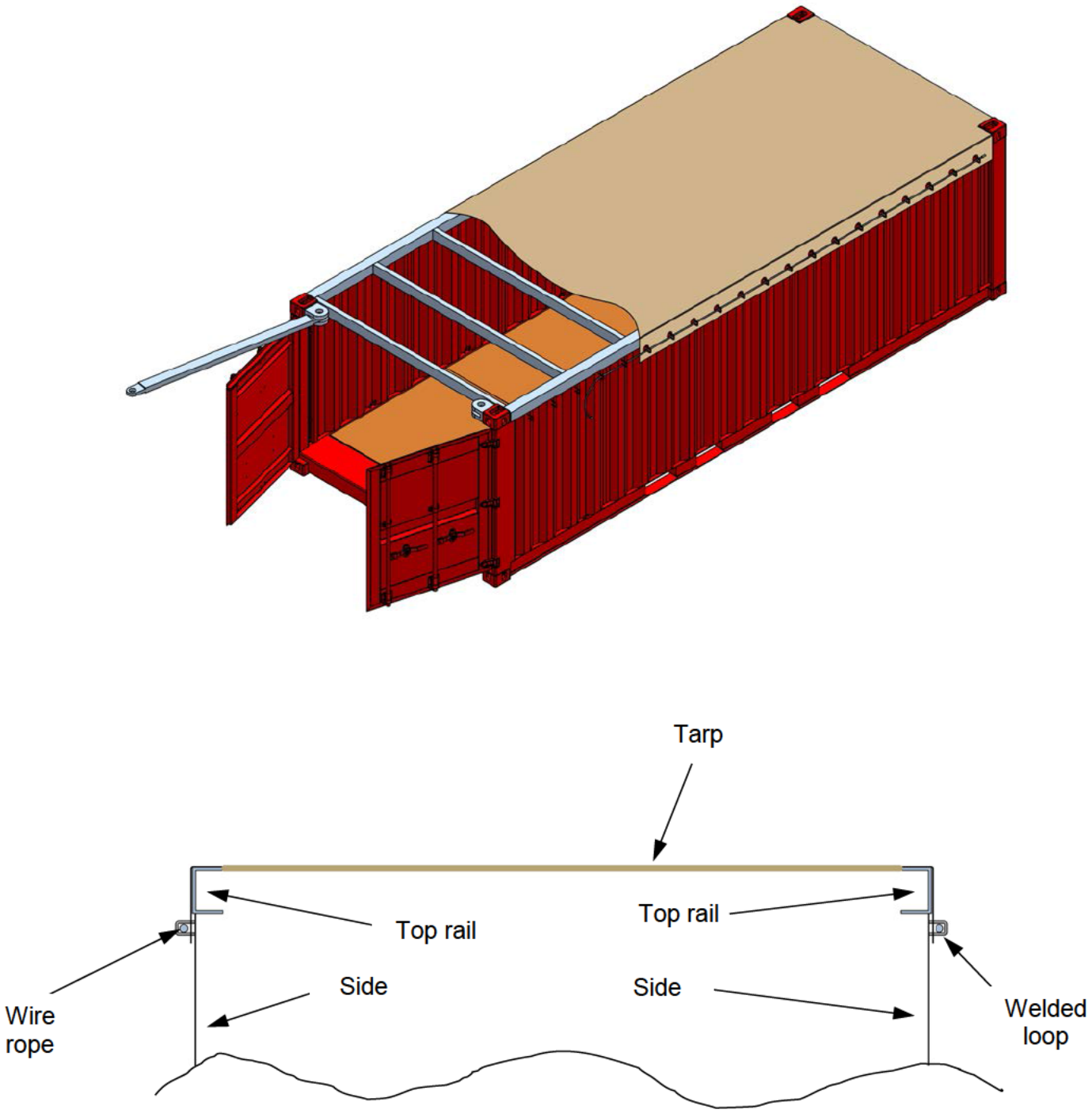


FIGURE 6. Typical 2/3 high open top container

3.2.7 Typical flatrack container. Refer to Figure 7. The nominal dimensions and many construction details of a flatrack container are similar to those of a typical steel container except it does not have rigid side walls or a roof structure.

A flatrack container is configured with eight internationally standard corner fittings, a substantial platform (understructure), and two end wall assemblies that may either be of fixed construction or folding design. Flatracks used to ship ammunition have paneled end walls. Components of the flatrack container such as the bottom rails of the platform and the corner posts of the end wall assemblies are of a heavier construction than the corresponding components of a closed type container. Stake pockets (stanchions) and cargo tiedown provisions are usually provided along the side rails to facilitate blocking and bracing of cargo. The flooring is usually either soft or hard wood planking that is specially treated and either screwed or bolted to the cross members. The planking may be intentionally configured with gaps between boards to allow drainage.

A flatrack container does not provide weather protection. Typical flatrack containers can be 20 or 40 feet long by 8, 8½, or 9½ feet high. The standard width of an ISO container is 8 feet.

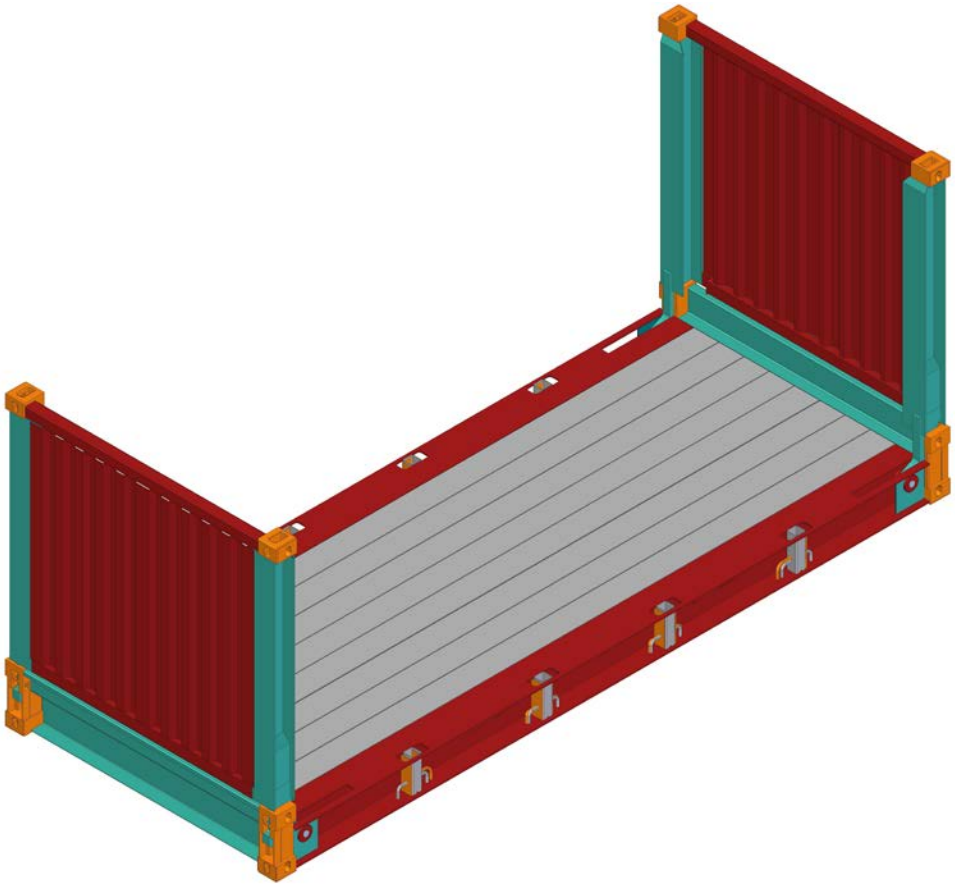


FIGURE 7. Typical flatrack container

3.2.8 Tactical ISO shelter. Tactical ISO shelters are lightweight, shipping containers transportable via land, sea and air. Most shelters are integrated with electrical service and installed equipment. Upon arrival at their destination, these shelters can be unpacked and serve as modular, live-in/work-in facilities, which can be joined together (complexed) with other shelters. The applications range from deployable kitchens to command and control centers. Like freight containers, all tactical ISO shelters are equipped with ISO 1161 corner fittings, structural frame, end and/or side doors, forklift pockets, wall, floor and roof panels.

The shelters are 8 ft W x 8 ft H and either 10 ft or 20 ft L, in accordance with ISO 668, with gross weights of up to 20,000 pounds. The shelter walls, floor and roof are constructed of a “sandwich panel” consisting of a thin aluminum inner and outer skin, separated by either a “foam-beam” or “honeycomb” core construction. All tactical ISO shelters are in the Federal Supply Class (FSC) 5411, and are designed in accordance with the applicable American National Standards Institute (ANSI)/ISO standards and ASTM E1925.

There are three different basic structural design groups (families) of tactical ISO Shelters: Army, Marine Corps, and Navy. Within each of these groups, there are several standard configurations. Although there are several different National Stock Number (NSN) items within this shelter family, the basic structural design of the shelters, within a given group is the same. There are a total of 18 NSN items for the standard tactical ISO shelter configuration. This section provides descriptive information intended to help identify the types of tactical ISO shelters.

The United States Air Force employs both Army and Navy approved tactical shelters to support their steady-state and deployment shelter requirements. Therefore, Air Force activities use the inspection criteria in this standard for the shelters in their possession, in accordance with the Service guidelines prescribed by the Army or Navy, respectively.

3.2.8.1 Army tactical ISO shelter. Refer to Figure 8. The Army tactical ISO shelters are constructed of an aluminum structural frame, with eight flanged corner fittings (steel castings) bolted to the frame at each corner.

Although there are six different configurations of Army tactical ISO shelters, the basic structural design is the same. The shelters can either be non-expandable, 1-side expandable, or 2-side expandable. The walls, floor and roof are sandwiched panels constructed of aluminum with paper-honeycomb core, which are bolted to the structural frame. The floor cross members and forklift pockets are aluminum, welded to the structural aluminum base frame. There is a 3 ft wide personnel door on one end and a set of double 3 ft cargo doors on the opposite end. The doors are constructed of the same aluminum-honeycomb sandwich panel as the walls, floor, and roof, and use a 3 point latch, located on the door interior. There is anti-rack hardware located at both end doors.

The shelters are 8 ft high by 8 ft wide by 20 ft long structures, with a gross weight of up to 15,000 pounds. Table I lists the configurations of Army tactical ISO shelters.

TABLE I. Army tactical ISO shelters

SHELTER CONFIGURATION		NSNs
Non-expandable	S-781/G (60 amp service)	5411-01-136-9837
	S-782/G (100 amp service)	5411-01-294-6390
One-side expandable	S-783/G (60 amp service)	5411-01-124-1377
	S-784G (100 amp service)	5411-01-295-3433
Two-side expandable	S-785/G (60 amp service)	5411-01-136-9838
	S-786/G (100 amp service)	5411-01-294-9866

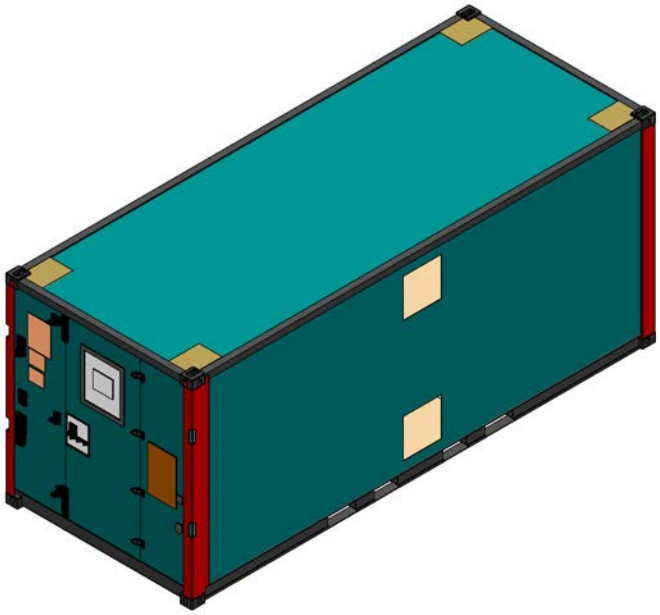


FIGURE 8. Army tactical ISO shelter

3.2.8.2 Marine Corps tactical ISO shelter. Refer to Figure 9. The Marine Corps tactical ISO shelters are constructed with an aluminum structural frame, with eight flanged corner fittings (steel castings) bolted to the frame at each corner.

Although there are five different NSN items within this shelter family, the basic structural design of these shelters is the same. The walls, floor and roof are sandwiched panels constructed of aluminum with paper-honeycomb core, which are riveted to the structural frame. There are non-expandable 10 ft and 20 ft shelters and a 20 ft knock-down type. The floor cross members and forklift pockets are formed sheet aluminum, welded to the structural aluminum base frame. There is a 3-1/2 ft wide personnel door on each end. The doors are constructed of the same aluminum-honeycomb sandwich panel as the walls, floor, and roof, and use a 3 point latch, located on the door interior. All shelters, except the electromagnetic interference (EMI) shielded shelters have removable side and end walls. Four knock-down shelters in the storage mode can be stacked and shipped in the transport mode. The shelters are 8 ft high by 8 ft wide by 10 ft and 20 ft long structures, with gross weight of up to 15,000 pounds. Table II lists the configurations of Marine Corps tactical ISO shelters.

TABLE II. Marine Corps tactical ISO shelters

SHELTER CONFIGURATION		NSNs
10 ft Non-Expandable	General Purpose	5411-01-287-4341
	EMI Shielded	5411-01-206-6079
20 ft Non-Expandable	General Purpose	5411-01-209-3451
	EMI Shielded	5411-01-206-6078
20 ft Knock-down	General Purpose	5411-01-206-6077

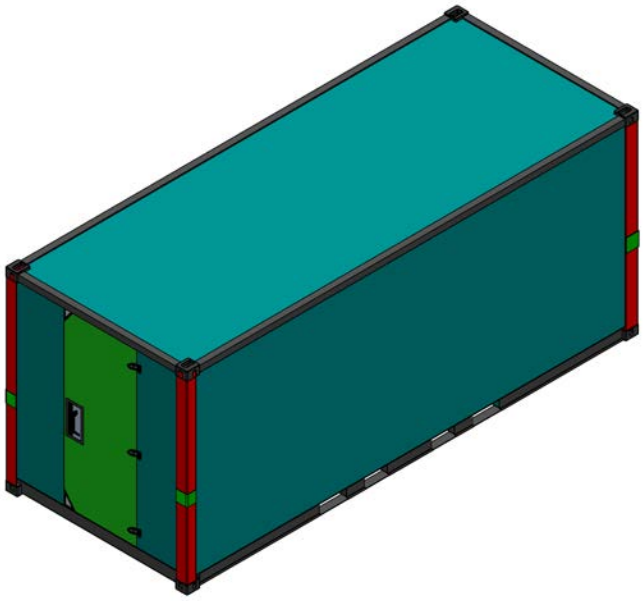


FIGURE 9. Marine Corps tactical ISO shelter

3.2.8.3 Navy tactical ISO shelter. Refer to Figures 10 and 11. The Navy ISO shelters are constructed with a steel structural frame, with eight corner fittings (steel castings) welded to the frame at each corner.

Although there are seven different NSN items within this shelter family, the basic structural design of these shelters is the same, and are all non-expandable 20 ft. The walls, floor and roof are sandwiched panels constructed of aluminum with structural foam core, which are riveted to the structural frame. Within these panels there are tubular aluminum frame members, spaced every 22 inch on center. The floor cross members and forklift pockets are formed sheet steel, welded to the structural steel base frame. The Basic Mobile Facility (BMF), Integrated Unit Mobile Facility (INU), Side Opening Mobile Facility (SOMF-A) shelters are equipped with a 4 ft wide door on each end. The SOMF-C is equipped with a 4 ft door on only one end. The SOMF-B is equipped with a 3-1/2 ft door on the side and the modified SOMF-B has an additional set of 80 in high double doors on one end. The doors are constructed of the same foam and beam sandwich panel as the walls, floor, and roof, and use a 3-point latch, located on the door interior. All shelters in the standard configuration, (except the SOMF-C) can have up to three power entry (waterfall) panels, located on the sidewall.

The SOMF-A and B shelters have one fixed sidewall and one removable sidewall. The fixed sidewall has two 4 ft removable panels. The SOMF-C has two removable sidewalls. The BMF shelters have two fixed sidewalls. One of the sidewalls has one 4 ft global removable panel. The INU shelters also have two fixed sidewalls. One of the sidewalls has two 4 ft removable panels and the other side has only one. All shelters have three removable, full-length skids, 2.56 in high, mounted to the base frame.

The shelters are 8 ft high by 8 ft wide by 20 ft long structures, with a gross weight of up to 20,000 pounds. Table III lists the different types of Navy tactical ISO shelters.

TABLE III. Navy tactical ISO shelters

SHELTER TYPE		NSNs
Basic Mobile Facility (BMF)	BMF-A	5411-01-355-4322
	BMF-B	5411-01-355-4323
Side Opening Mobile Facility (SOMF)	SOMF-A	5411-01-355-4320
	SOMF-B	5411-01-355-4321
	SOMF-B, Modified	5411-01-355-4319
	SOMF-C	5411-01-355-6566
Integration Unit Mobile Facility (INU)	INU	5411-01-355-4318

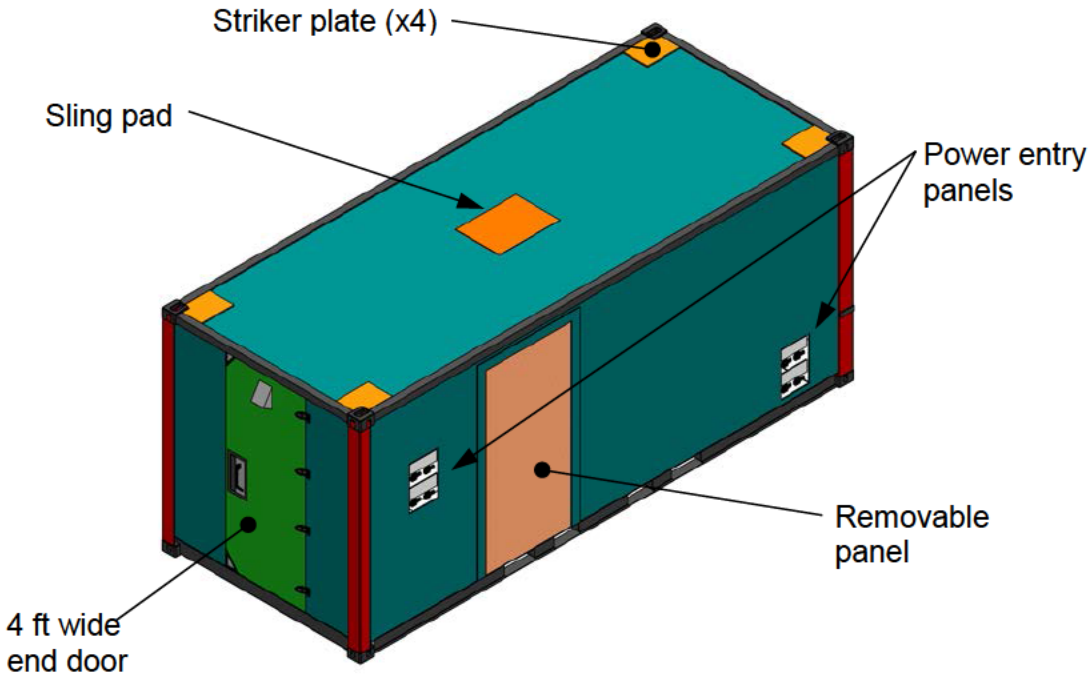


FIGURE 10. Navy BMF ISO shelter

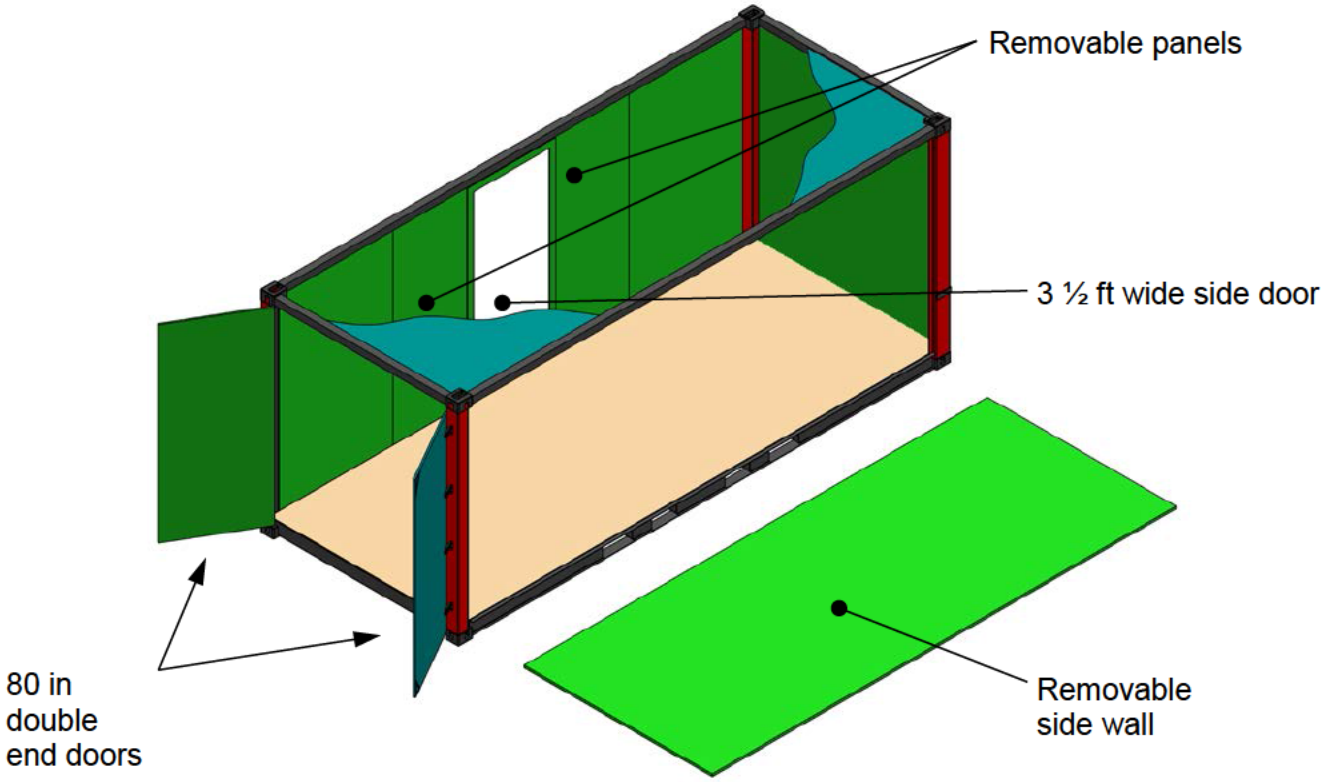


FIGURE 11. Navy SOMF-B (modified) ISO shelter

3.2.9 BICON/TRICON/QUADCON container. Refer to Figure 12. The BICON/ TRICON/QUADCON containers are similar to a typical steel container except for overall dimensions. This container completely encloses its contents by permanent steel structures and provides cargo loading access through end or side opening doors. The containers may be assembled in various combinations to form 20 foot equivalent ISO containers. Table IV lists characteristics of each type of container. Performance specifications for a BICON, TRICON, and TRICON V containers are provided by government item descriptions MIL-PRF-32410, MIL-PRF-32349, and MIL-PRF-32402, respectively.

TABLE IV. BICON/TRICON/QUADCON containers

Container	Length		Width		Height		Gross Weight	Double Doors
	FT	IN	FT	IN	FT	IN	LBS	(Orientation)
BICON	9	9-3/4	8	0	8	0	22,865	Two (width)
TRICON Type 1	6	5-1/2	8	0	8	0	12,300	One (length)
TRICON Type 2	6	5-1/2	8	0	8	0	12,100	Two (length)
TRICON 5	6	5-1/2	8	0	8	0	12,100	Two (width)
QUADCON 1	4	9-3/8	8	0	6	10	9,436	Two (length)
QUADCON 2	4	9-3/8	8	0	8	0	10,754	Two (length)

. **FIGURE 12. Typical TRICON container**

3.3 Primary structural components. On some ISO shelters, some of the primary structural components may be concealed within the wall, roof, and floor panels. The areas where the adjacent panels join are to be thoroughly inspected, and are to meet the criteria for the wall beams and roof beams. The following sub-paragraphs define the primary structural components of ISO containers and ISO shelters. Refer to Figure 14 unless otherwise specified.

3.3.1 Corner fitting. Internationally standard fitting (casting) located at the eight corners of the container structure to provide means of handling, stacking and securing containers. Specifications are defined in ISO 1161. Refer to Figure 20.

3.3.2 Corner post. Vertical structural member located at the four corners of the container and to which the corner fittings are joined. Refer to Figures 20 and 29.

3.3.3 Door header. Lateral structural member situated over the door opening and joined to the corner fittings in the door end frame.

3.3.4 Door sill. Lateral structural member at the bottom of the door opening and joined to the corner fittings in the door end frame. Refer to Figure 41.

3.3.5 Rear end frame. The structural assembly at the rear (door end) of the container consisting of the door sill and header joined at the rear corner fittings to the rear corner posts to form the door opening. Refer to Figures 15, 16 and 19.

3.3.6 Top end rail. Lateral structural member situated at the top edge of the front end (opposite the door end) of the container and joined to the corner fittings.

3.3.7 Bottom end rail. Lateral structural member situated at the bottom edge of the front end (opposite the door end) of the container and joined to the corner fittings.

3.3.8 Front end frame. The structural assembly at the front end (opposite the door end) of the container consisting of top and bottom end rails joined at the front corner fittings to the front corner posts. Refer to Figures 15, 16 and 19.

3.3.9 Top side rail. Longitudinal structural member situated at the top edge of each side of the container and joined to the corner fittings of the end frames. Refer to Figures 15, 19 and 40.

3.3.10 Bottom side rail. Longitudinal structural member situated at the bottom edge of each side of the container and joined to the corner fittings to form a part of the understructure. Refer to Figures 19, 39 and 40.

3.3.11 Cross member. Lateral structural member attached to the bottom side rails that supports the flooring. Refer to Figures 15, 16, 19 and 40.

3.3.12 Understructure. An assembly consisting of bottom side and end rails, door sill (when applicable), cross members and forklift pockets. Refer to Figure 20.

3.3.13 Forklift pocket. Reinforced tunnel (installed in pairs) situated transversely across the understructure and providing openings in the bottom side rails at ISO prescribed positions to enable either empty capacity or empty and loaded capacity container handling by forklift equipment. Refer to Figures 15, 16 and 19.

3.3.14 Forklift pocket strap. The plate welded to the bottom of each forklift pocket opening or part of bottom side rail. The forklift pocket strap is a component of the forklift pocket.

3.3.15 Gooseneck tunnel. Recessed area in the forward portion of the understructure to accommodate transport by a gooseneck chassis. This feature is more common in 40 foot and longer containers. Refer to Figure 13.

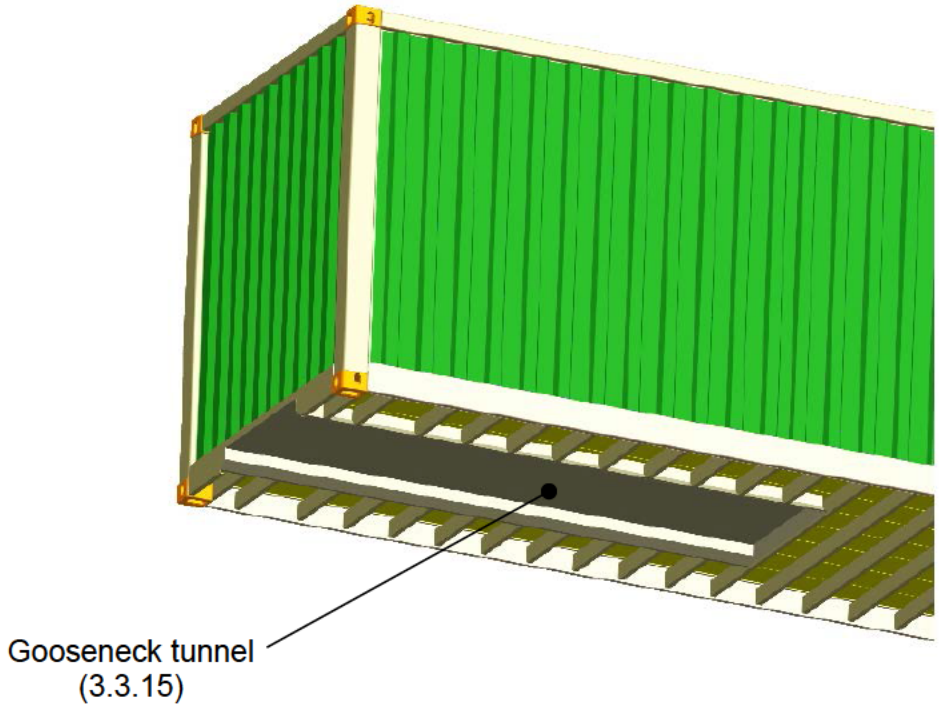


FIGURE 13. Container understructure

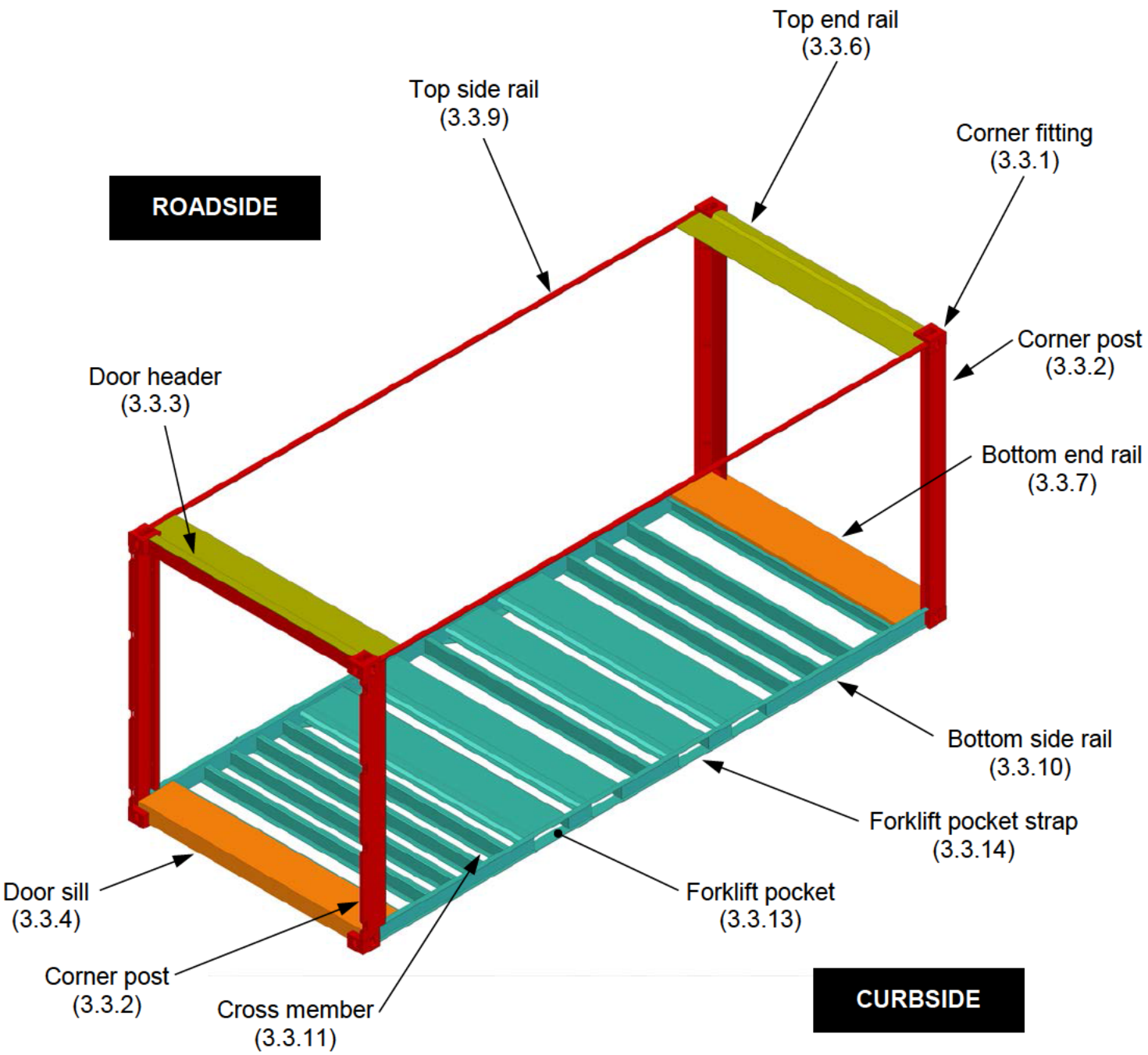


FIGURE 14. Primary structural components

3.4 Walls, roof, and floor. Refer to Figures 15 through 22.

3.4.1 Fiberglass reinforced plywood (FRP). A material constructed of laminates of fiberglass, polyester resins, and plywood, also known as sandwich panel.

3.4.2 Wall panel. Refer to Figures 29, 39 and 40. Corrugated or flat sheet steel, a riveted or bonded aluminum sheet and wall post assembly, FRP, foam and beam, aluminum, or honeycomb material that forms the side wall or end wall.

3.4.3 Wall post. Interior or exterior intermediate vertical component to which sheet aluminum or steel is riveted or welded to form a wall panel.

3.4.4 Wall beam. Encapsulated vertical component to which sheet aluminum or steel is bonded to form a wall panel. This is found in foam and beam panels.

3.4.5 Marking panel. A side wall panel of a corrugated steel configured with a flat portion used for the display of markings and placards.

3.4.6 Lining. Plywood or other like material attached to the interior side and end wall to protect the walls and/or cargo and facilitate loading operations.

3.4.7 Lining shield. A strip of thin metal installed at the bottom of the interior walls to protect the lower portion of the lining from damage by materials handling equipment during loading or unloading operations.

3.4.8 Kick plate. A common name for a lining shield installed on the lower portion of the interior front end wall.

3.4.9 Ventilator. Two or more devices permanently attached to the side or end wall panel that provides openings for the exchange of air (but not water) between the outside and the container interior.

3.4.10 Roof panel. Corrugated or flat sheet steel, sheet aluminum, FRP, or foam and beam and aluminum honeycomb panel that forms the top closure of the container.

3.4.11 Roof bow. Lateral non-structural member attached to the top side rails and supporting the underside of the roof panel. Roof bows used with removable cover (tarp) assembly are unattached. Not all container designs require roof bows.

3.4.12 Roof beam. Encapsulated horizontal component to which sheet aluminum or steel is bonded to form a roof panel.

3.4.13 Roof reinforcement plate. An additional metal plate on the interior or exterior of the roof panel adjacent to the top corner fittings that provides protection of the roof panel or top rail components from misaligned handling equipment.

3.4.14 Tarp. Jargon for “tarpaulin”, a waterproof and flexible fabric used for covering the top of an open top container, also referred to as a “tilt” in some countries.

3.4.15 Transport Internationale des Routiers (TIR) cable. Plastic sheathed wire rope that is designed in accordance with TIR customs convention (see 3.7.6) and is threaded through the welded loops on the sides, end panels and door panels of an open top

container to secure the tarp.

3.4.16 Flooring. Refer to Figures 33 and 41. Material that is supported by the cross members and bottom rails to form a load bearing surface for the cargo. The flooring is usually constructed of laminated wood planks, plywood sheets, or other composition material and is screwed or bolted to the cross members. Some containers have welded steel or aluminum flooring, sandwich panels or a combination of metal and wood.

3.4.17 Joint strip. A formed steel or aluminum strip (usually hat-shaped section) installed between joints of the plywood sheet flooring or joints of the plywood sheet lining to help integrate and support the edges of the plywood.

3.4.18 Threshold plate. Plate forward of the door sill to protect the entrance area of the container floor. This plate is commonly referred to as a crash plate.

3.4.19 Steps. Folding steps are found on some ISO shelters and are used to gain access to the roof. They are folded up prior to transporting shelter.

3.4.20 Sandwich panel. A type of fixed or removable panel construction used in ISO shelters consisting of a thin inner and outer sheet aluminum skin, bonded or fastened to a core constructed of either honeycomb or structural foam and aluminum beams.

3.4.21 Striker plate. An additional metal plate on the exterior of the roof panel adjacent to the top corner fittings that provides protection to the roof panel or top rail components from misaligned handling equipment.

3.4.22 Sling pad. An additional metal plate on the exterior of the roof panel located in the center of the roof panel that provides protection to the panel from lowered handling equipment.

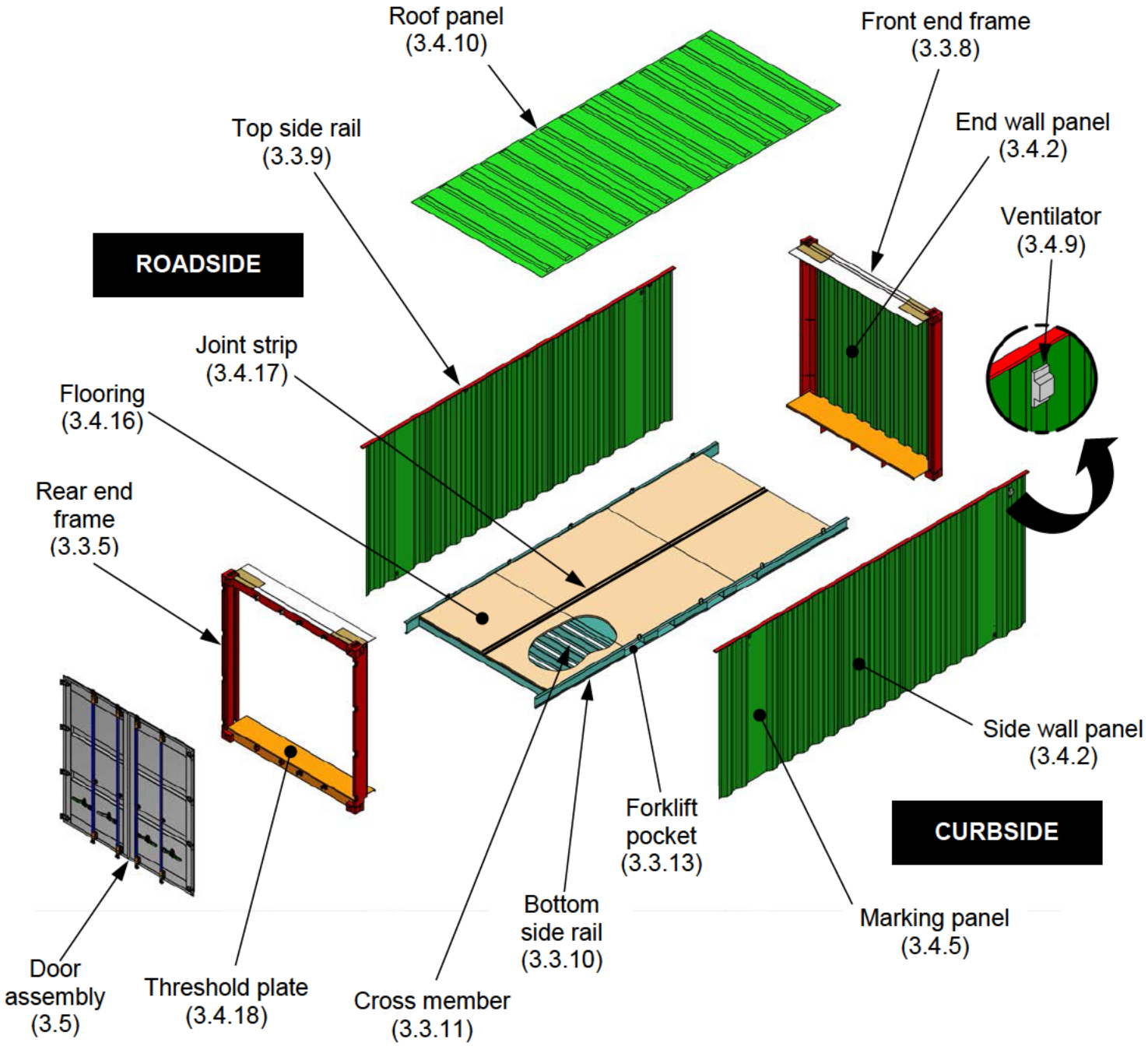


FIGURE 15. Typical steel container (exploded view)

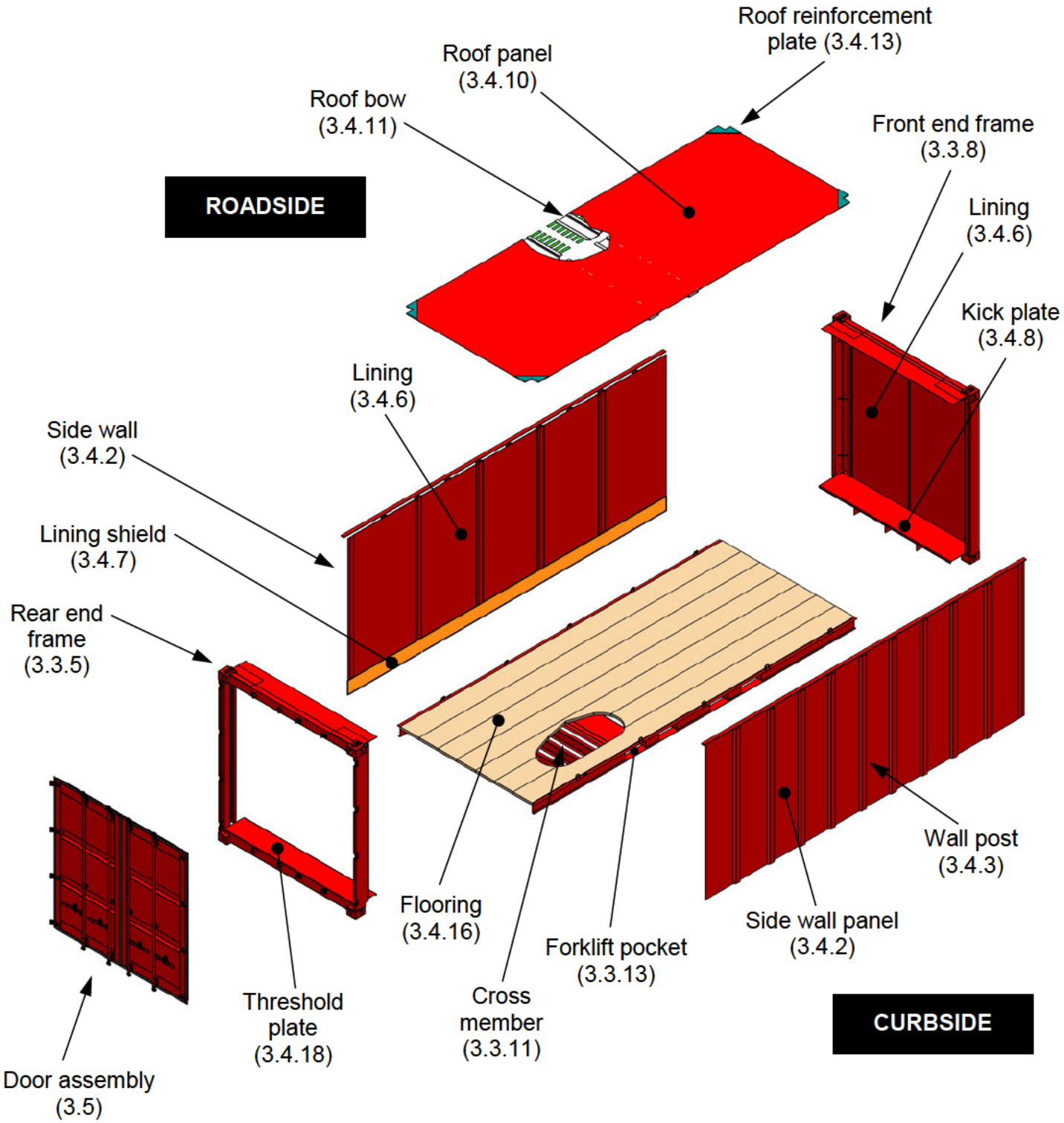


FIGURE 16. Typical aluminum container (exploded view)

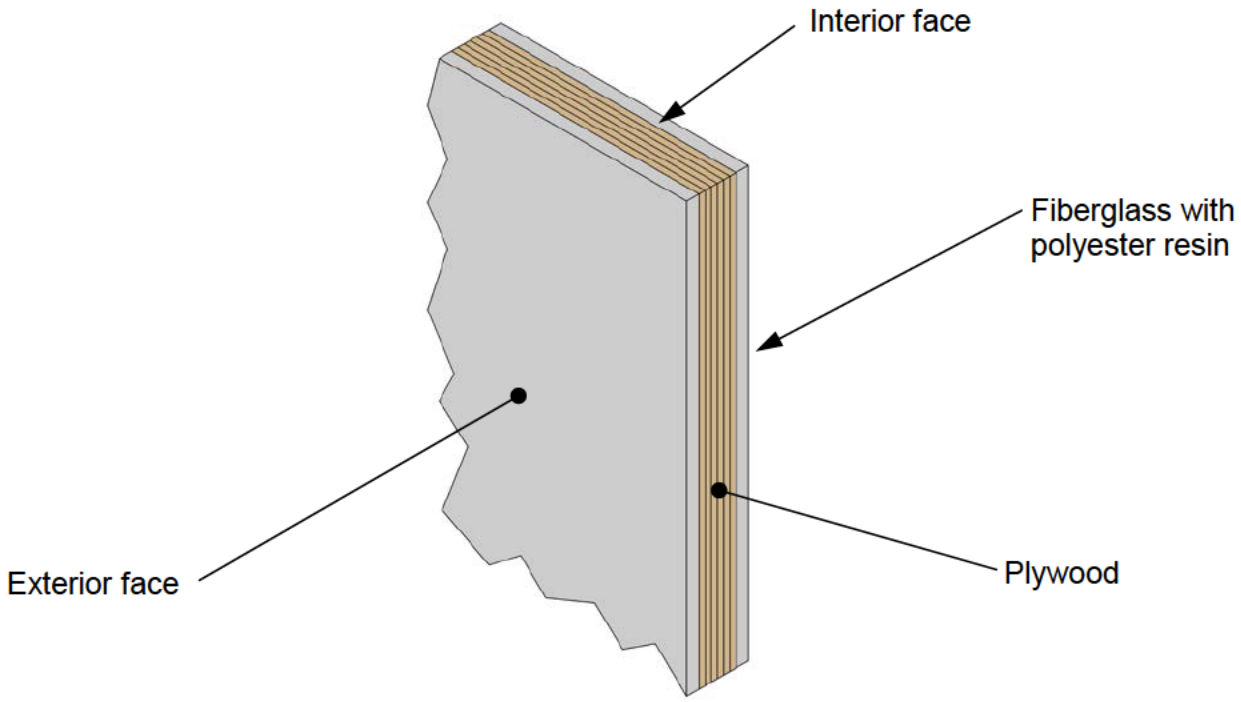


FIGURE 17. Fiberglass reinforced plywood (FRP)

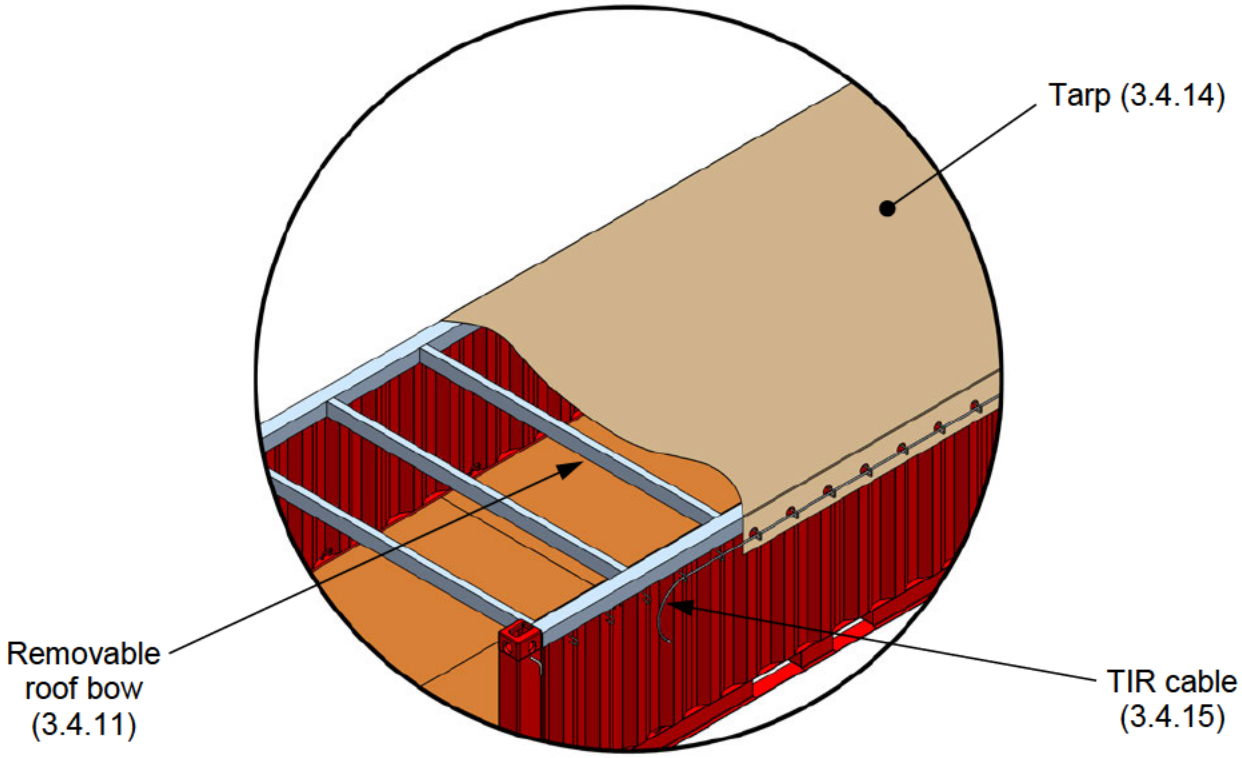


FIGURE 18. Removable cover (tarp) assembly

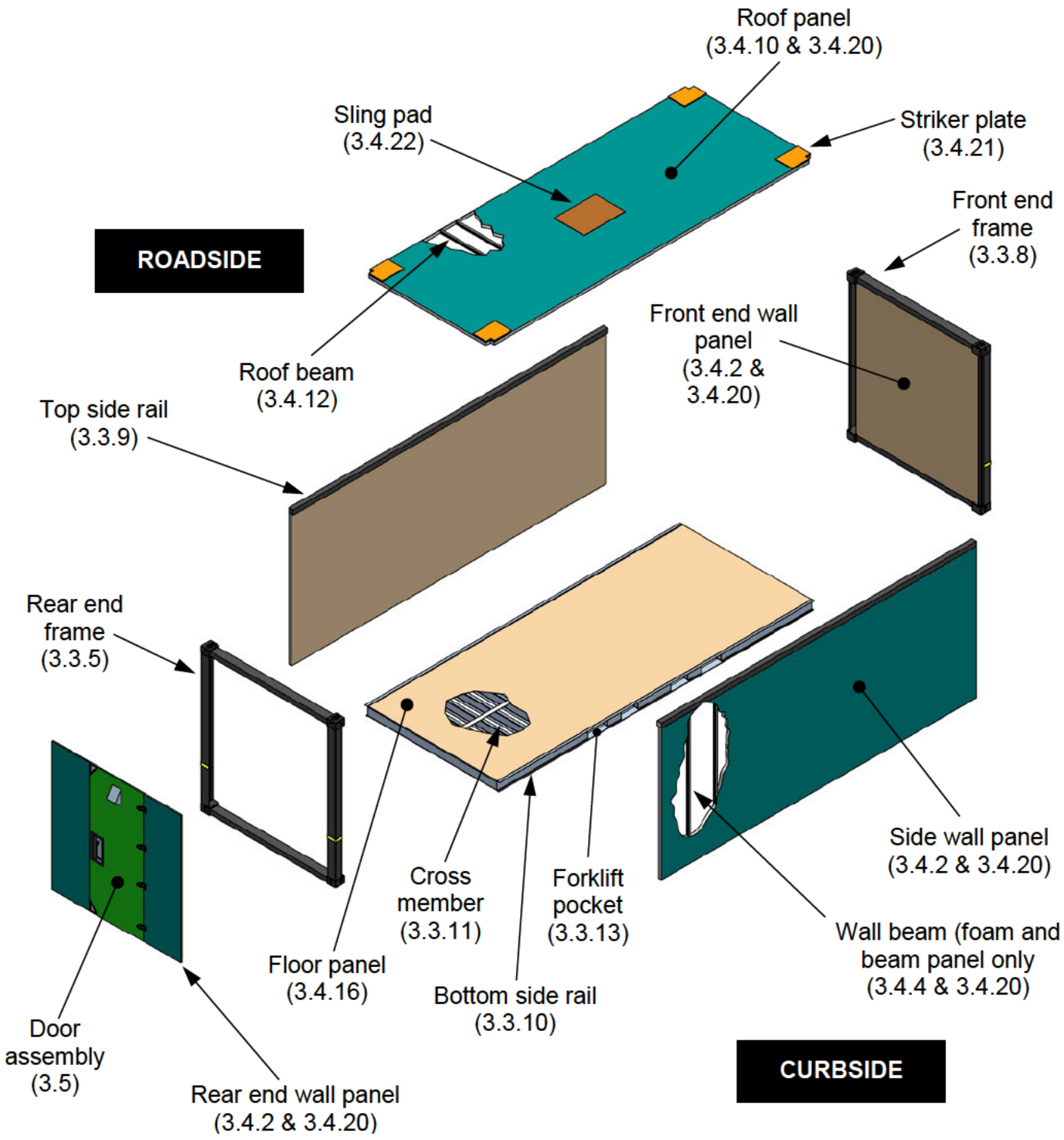


FIGURE 19. Typical ISO shelter (exploded view)

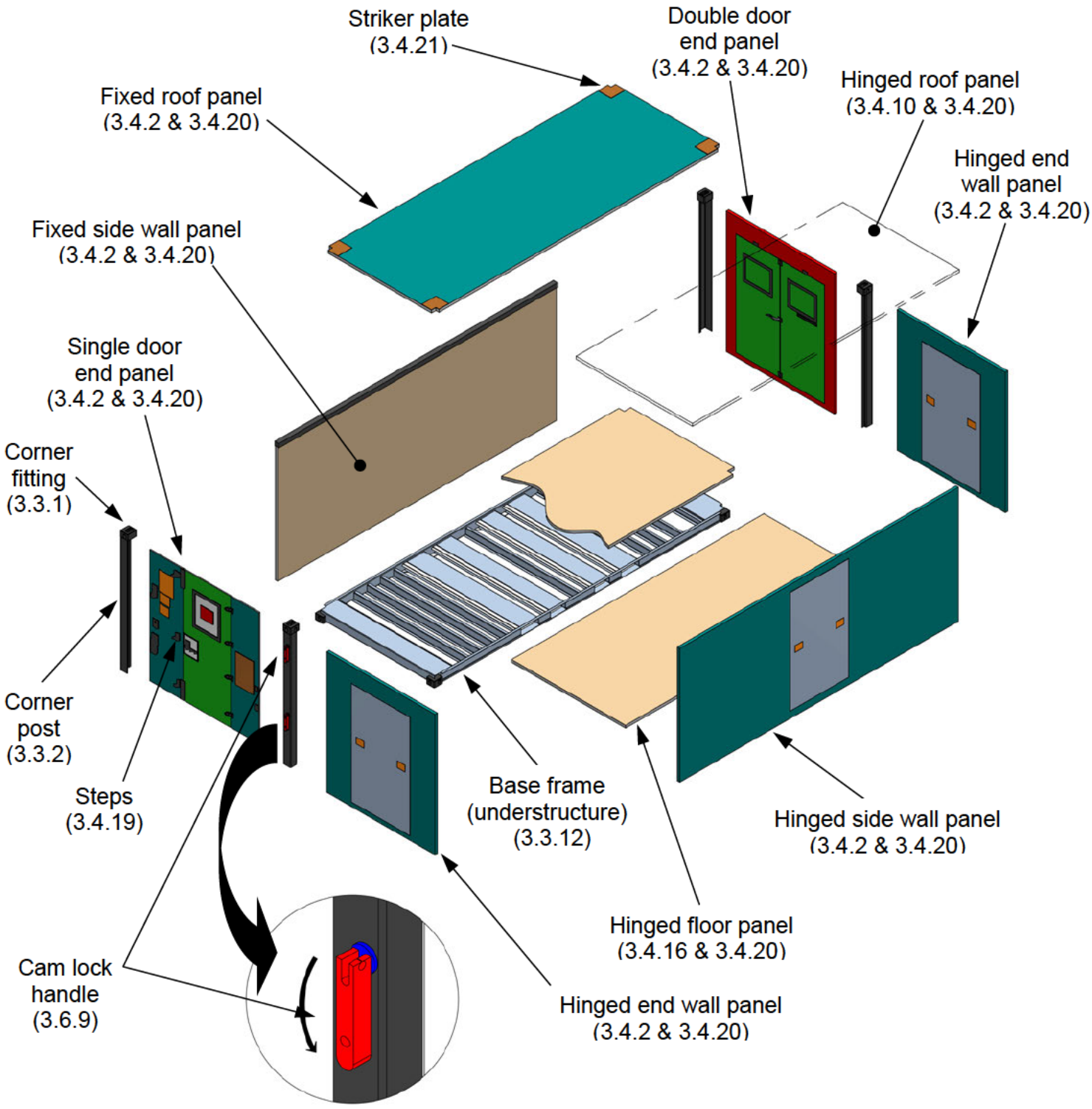


FIGURE 20. Typical one-side expandable ISO shelter (exploded view)

NOTE: Hinged panels are those which will be enclosed inside the container during transport and storage.

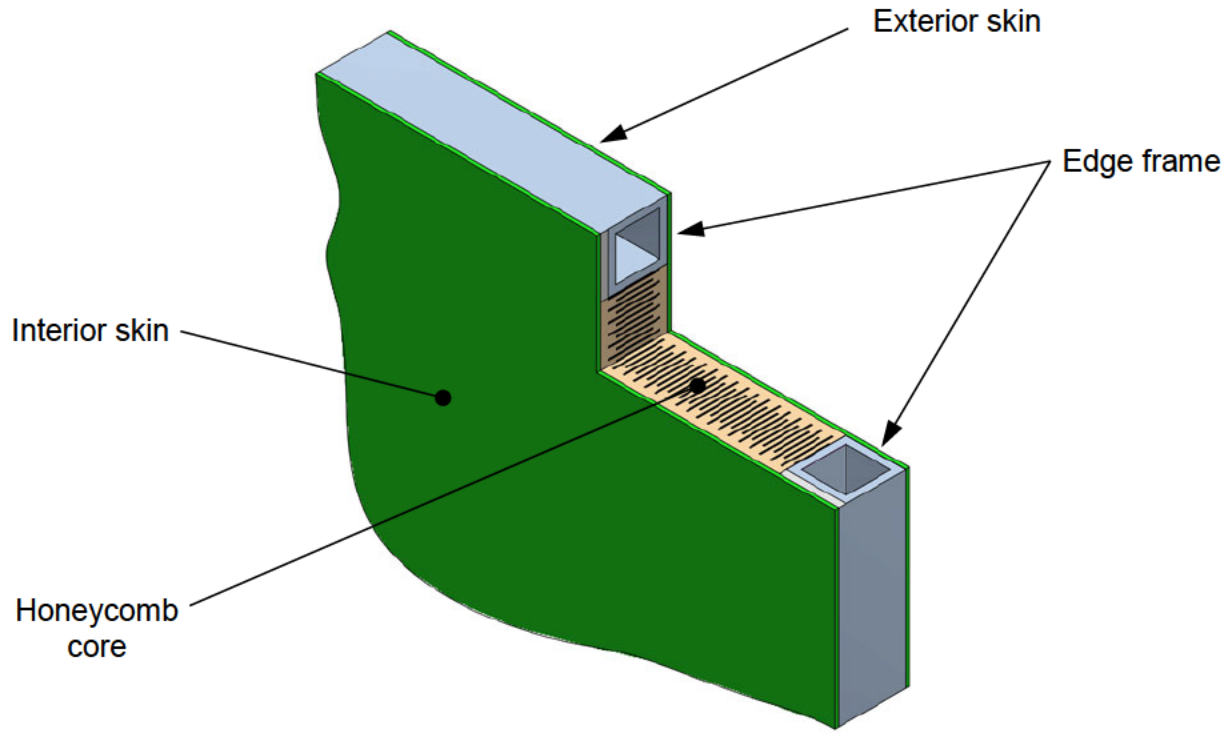


FIGURE 21. Honeycomb sandwich panel

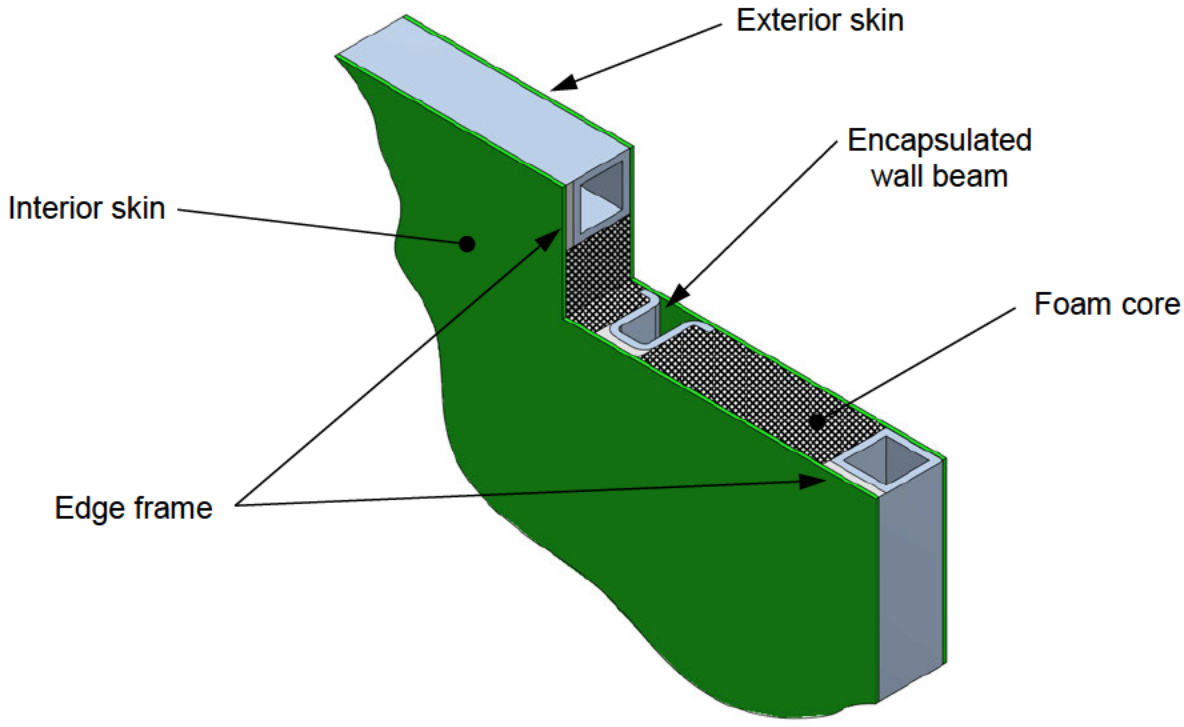


FIGURE 22. Foam and beam sandwich panel construction

3.5 Door assembly. Refer to Figures 15, 16, 19, and 23 through 27.

3.5.1 Door panel. Refer to Figure 29. Corrugated or flat sheet steel, plymetal (metal faced wood) material, aluminum sheet and post assembly, sandwich panel, or FRP panel that forms either a portion or all of a door.

3.5.2 J-bar. Refer to Figure 29. The portion of the exterior edge of the corner post structure in a doorway frame that encircles and supports the door hinges.

3.5.3 Hinge. Refer to Figure 29. Hardware comprised of a blade permanently joined to the door and a lug integral to the corner post structure. A series of hinges enables the door to rotate open or closed.

3.5.4 Hinge pin. Hinge component that attaches the two components of the hinge and provides a line of rotation. A hinge pin may be surrounded with a bushing to reduce friction and resist corrosion. A weld may be affixed to the hinge pin to prevent pilferage by removing the hinge pin and door without breaking the custom seal. This is a TIR requirement.

3.5.5 Locking bar. Vertical rod of the door assembly with cam locks fitted at each end. When rotated, it engages the cam retainers on the doorway frame. On some open top containers' ramp type doors, this rod may be placed horizontally.

3.5.6 Locking bar mounting bracket. One of the brackets that hold the locking bars in place on the door assembly.

3.5.7 Cam. Fitting on each end of a locking bar that has offset protrusions. Through lever type action, it engages a cam retainer to secure the door to the doorway frame.

3.5.8 Cam retainer. Female component (retainer) located on the sill and header of the rear end frame or top and bottom side rails of a side opening container. It engages and retains the cam of a locking bar.

3.5.9 Door locking handle. Handle attached to the door locking bar that rotates the bar (rod) when opening or closing (locking) the container door.

3.5.10 Door locking handle retainer. Fixed or pivoting hardware to hold the locking handle in the closed position and provide a means to place a lock and/or security seal on the door(s).

3.5.11 Anti-rack hardware. Hardware attached to the doors and doorway frame to provide resistance against transverse twisting (racking) of the container. It consists of locking bars, locking bar mounting brackets, cams, cam retainers, locking handles, handle retainers and other support brackets.

3.5.12 Customs catch. Rod or plate permanently affixed near center edge of outer door to preclude inner door opening without opening the outer door. Customs catch is only required if door design does not provide a metal overlap as defined by the TIR convention.

3.5.13 Door seal (gasket). Refer to Figure 29. Flexible plastic, rubber or synthetic rubber attached to the door edges with a retaining strip and fasteners to provide a water proof seal between doors and between the doors and the door frame.

3.5.14 Rain gutter. The structure attached to the door header on some containers to divert water away from the doorway frame.

3.5.15 3-point latch. A latch system used on ISO shelter doors that secures the door to the doorway frame using three roller cams.

3.5.16 Chain bolt. A spring-loaded bolt used to lock upper portion of one of the double doors on an ISO Shelter.

3.5.17 Foot bolt. A spring-loaded bolt used to lock lower portion of one of the double doors on an ISO Shelter.

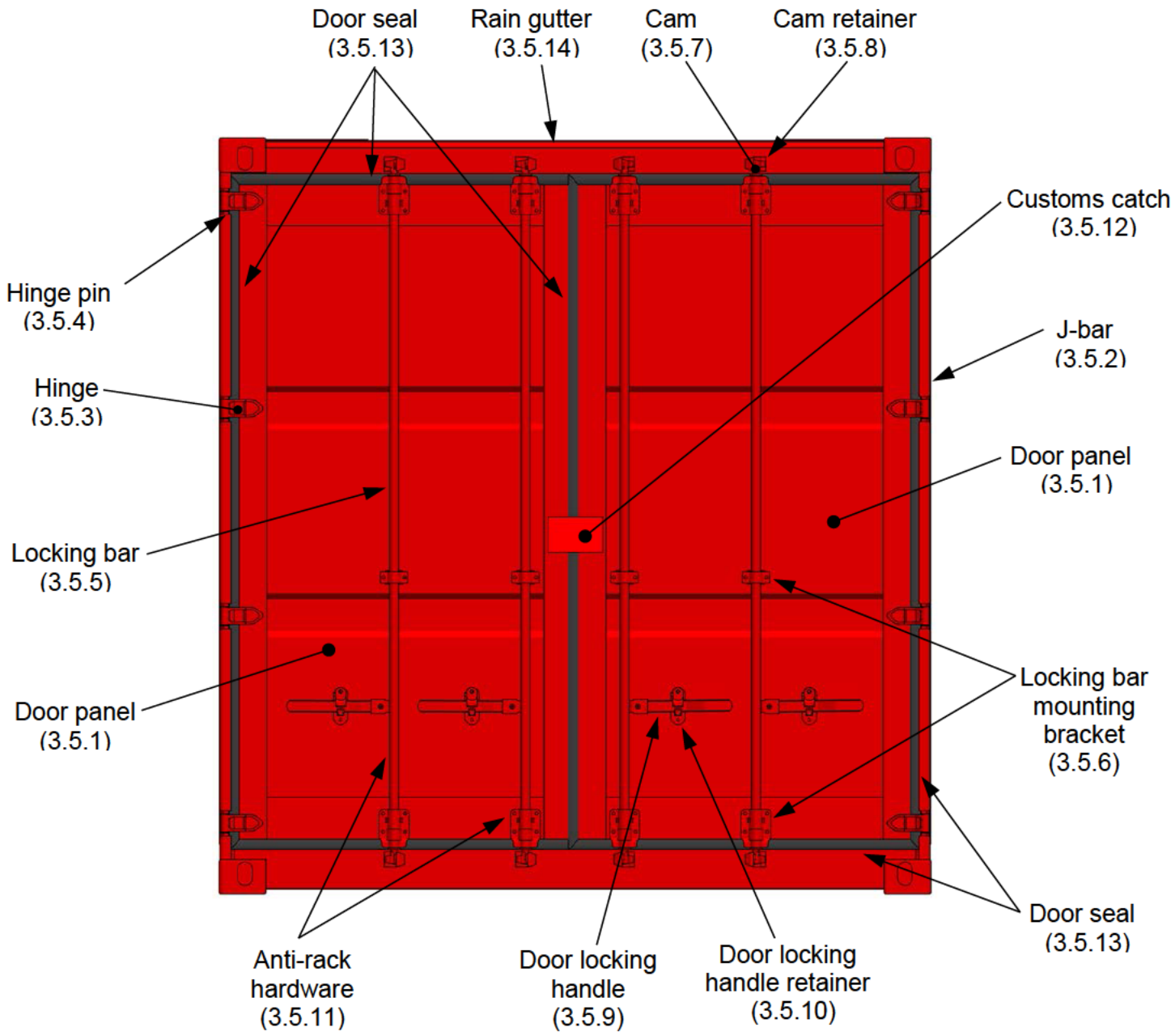


FIGURE 23. Typical rear end door assembly

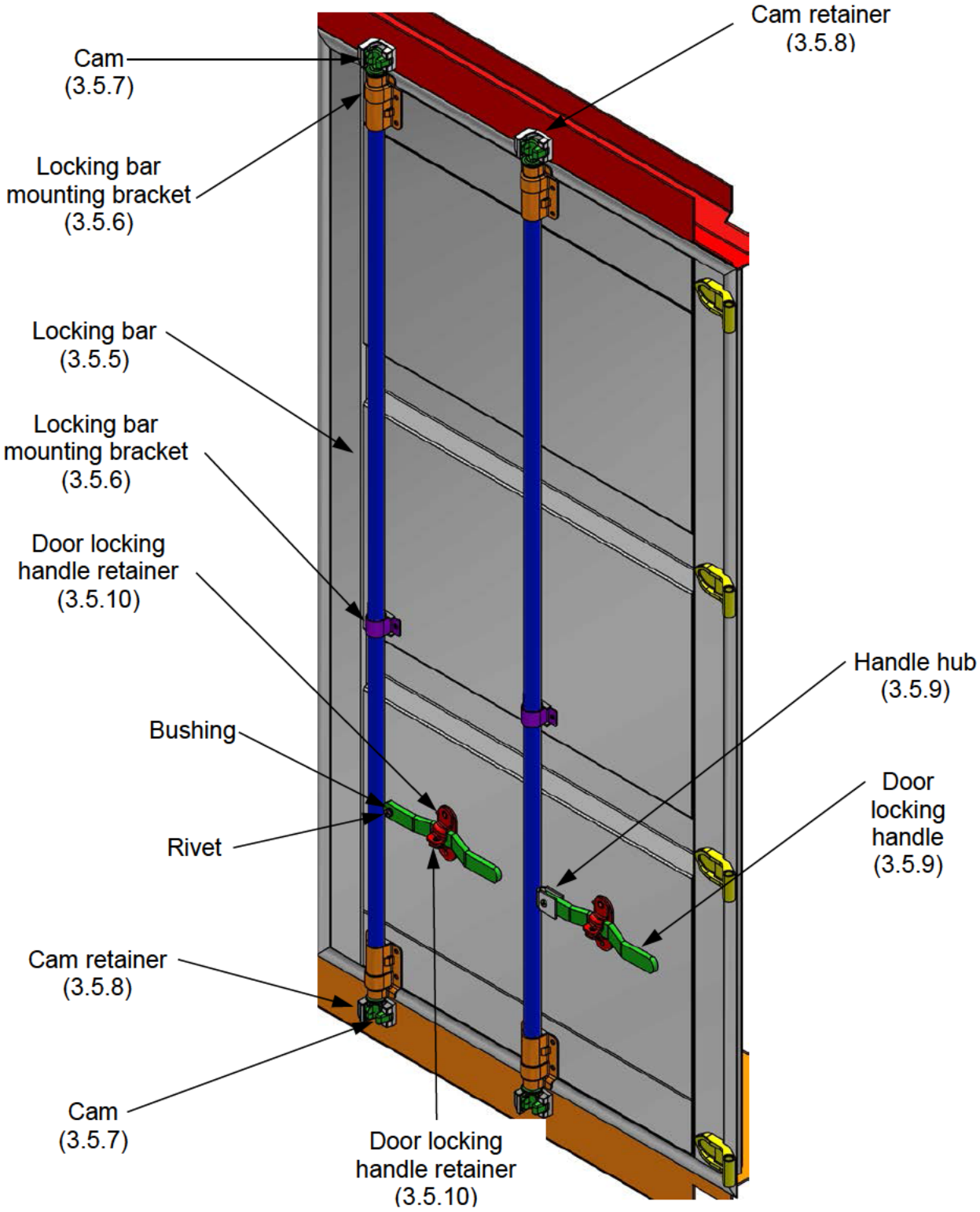


FIGURE 24. Door hardware

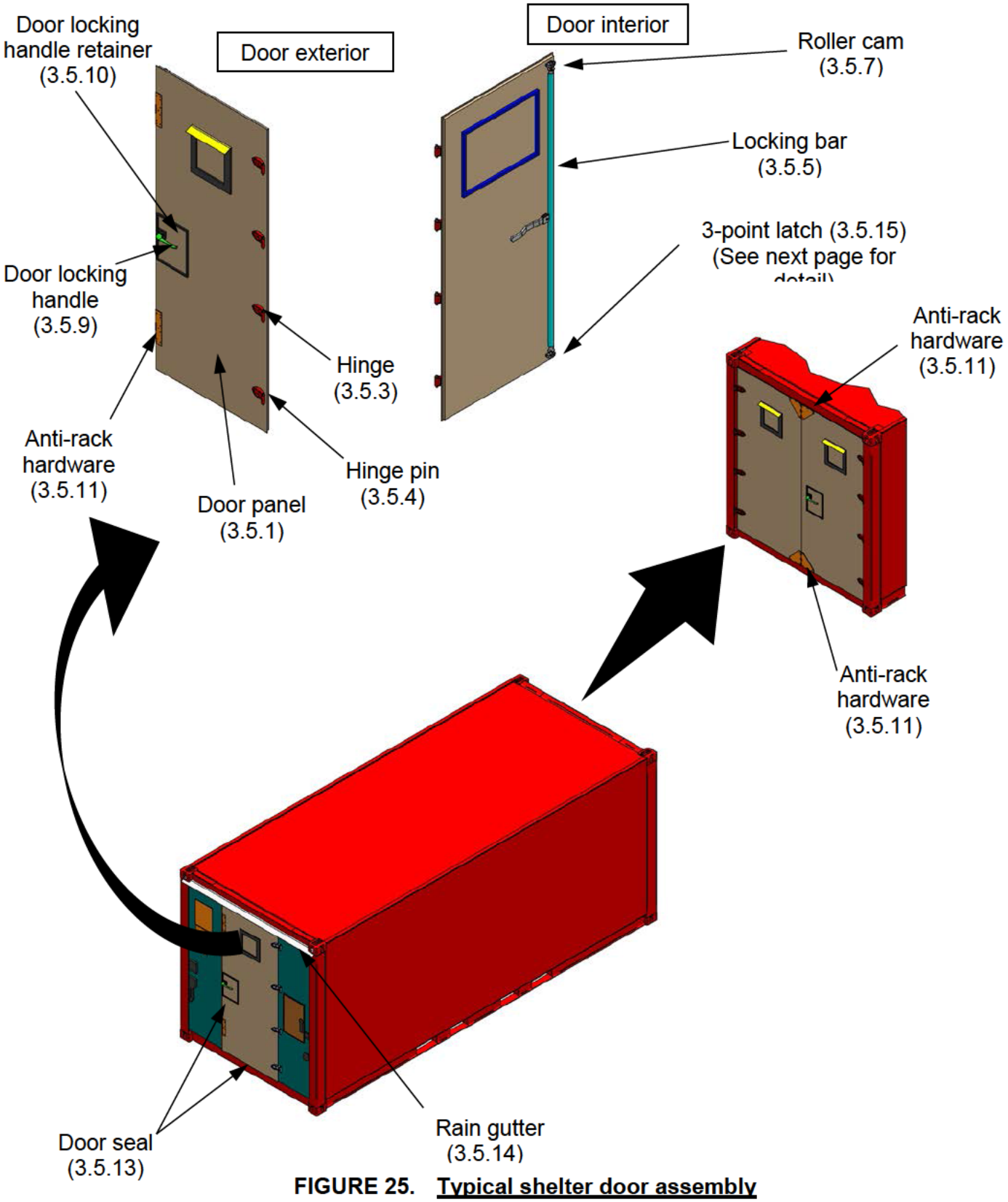


FIGURE 25. **Typical shelter door assembly**

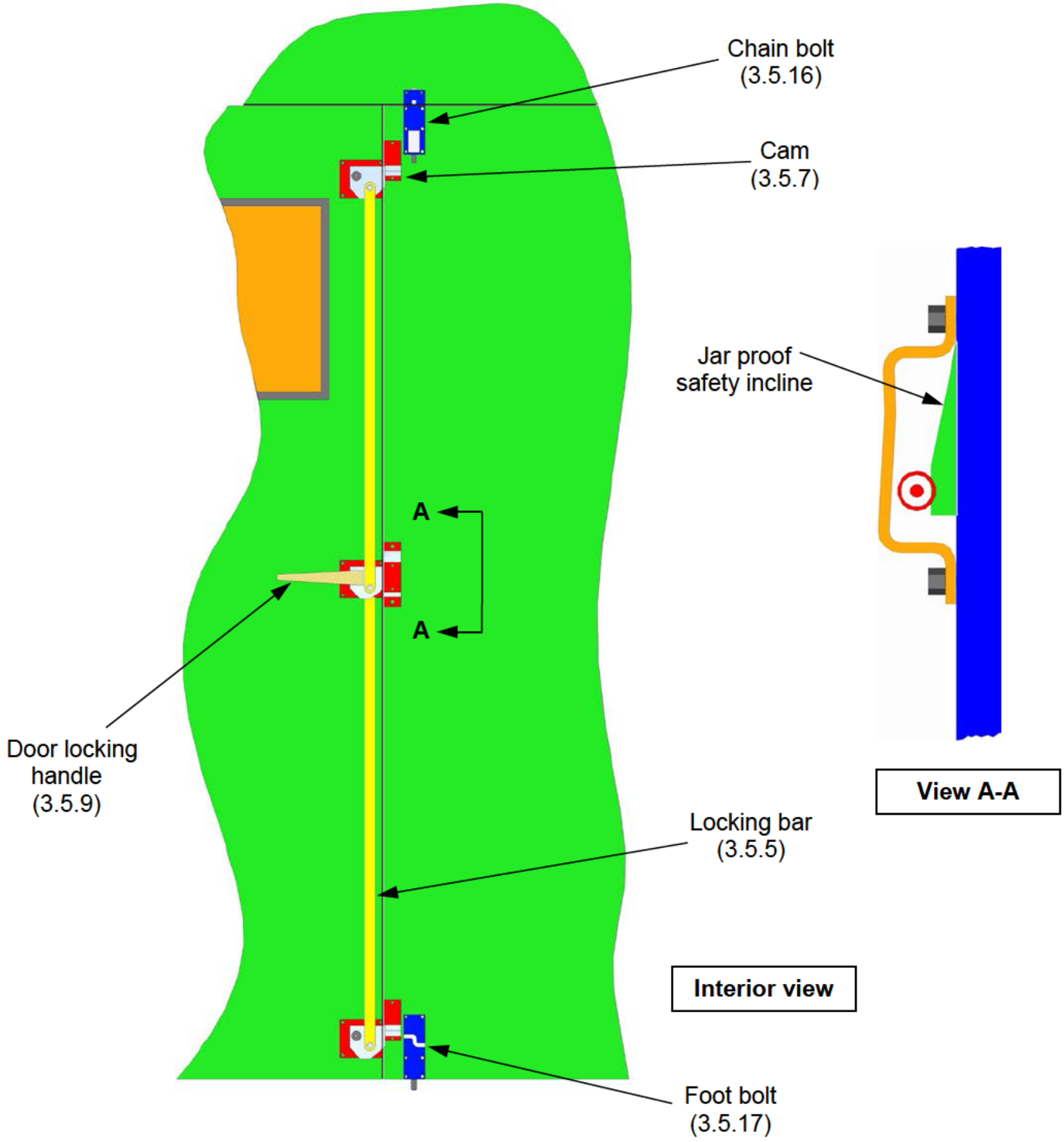


FIGURE 26. Army/Marine 3-point latching system

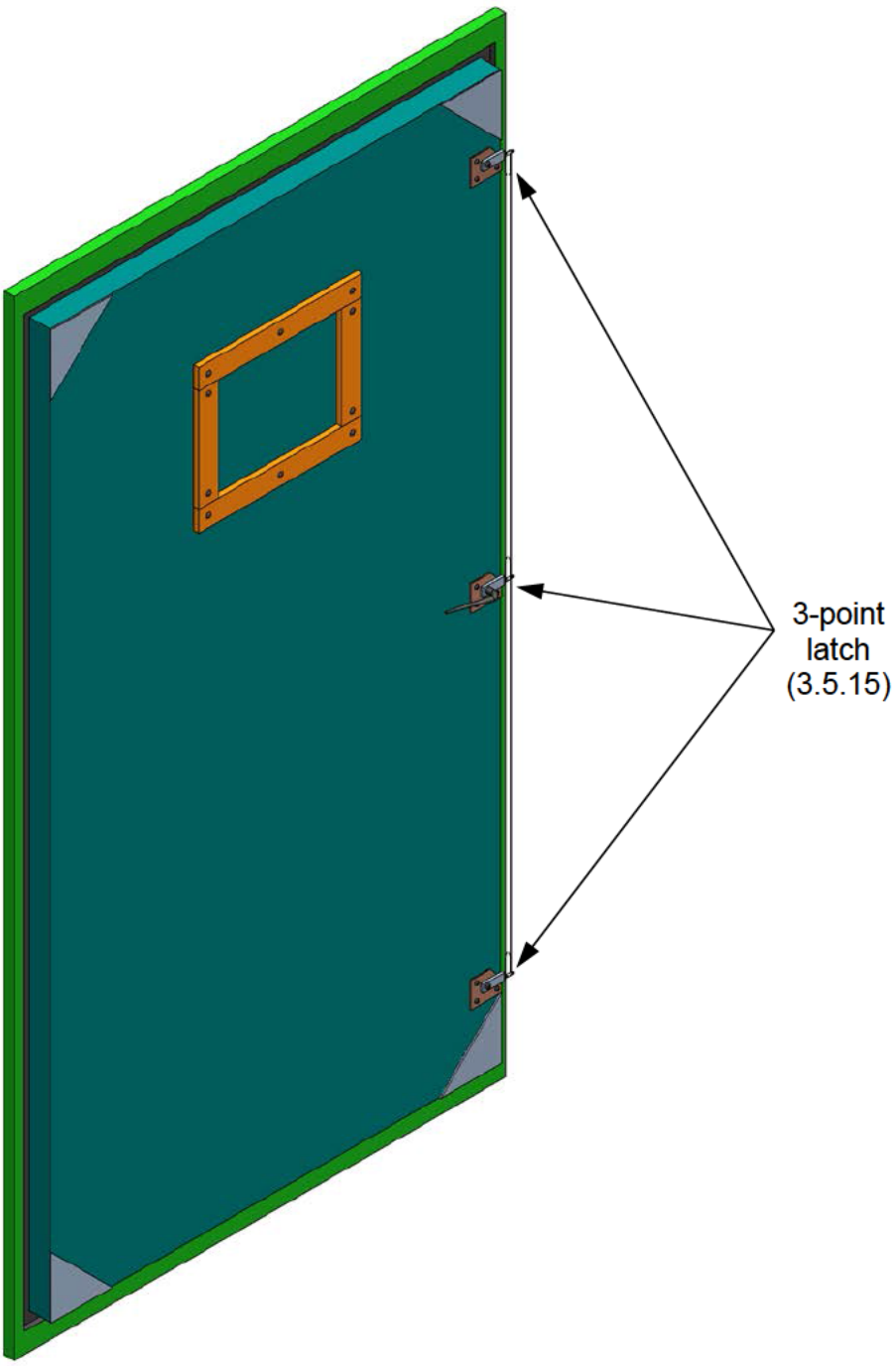


FIGURE 27. Navy 3-point latching system

3.6 Special terminology. Refer to Figures 28 through 33.

3.6.1 Container. An article of transport equipment that meets ANSI/ISO standards that is designed to be transported by various modes of transportation. These containers are also designed to facilitate and optimize the carriage of goods by one or more modes of transportation without intermediate handling of the contents and equipped with features permitting ready handling and transfer from one mode to another. For the purpose of this standard, the term container is assumed to be an ISO type container, shelter, MILSPEC VAN, flatrack, BICON, TRICON, QUADCON, or other structures which comply with CSC requirements.

3.6.2 Intermodal. Type of international freight system that permits transshipping among sea, highway, rail, and air modes of transportation through use of ANSI/ISO containers, line-haul assets, and handling equipment.

3.6.3 MILSPEC VAN. A military-owned demountable cargo container also referred to as a MILVAN. A MILSPEC VAN is an ISO standard 1496 series 1 intermodal freight container with nominal dimensions of 8 feet wide by 20 feet long. A MILSPEC VAN can be either a Type I (8 feet high with plywood liner), Type II (8 feet high with mechanical restraint system), Type III (8-1/2 feet high with plywood liner), or Type IV (8-1/2 feet high with mechanical restraint system).

3.6.4 Cargo restraint. Restraint fixtures or material that facilitate cargo securement within the container during handling and transport.

3.6.4.1 Door post vertical retainer. Restraint pieces constructed from structural steel tubing and plates IAW DAC drawing DA-116. Installed two per end opening container to interface with container corner posts to transfer the dynamic cargo load from the container doors onto the corner posts.

3.6.4.2 Dunnage. Additional restraint materials installed around cargo to prevent shifting and/or damage of the cargo items during shipment. Dunnage may also refer to material installed under container during storage.

3.6.4.3 Load bearing surface. A smooth rigid interior surface on the primary structure of the container capable of withstanding dynamic loads imposed by accelerated weight of cargo during container handling and transport.

3.6.4.4 Mechanical restraint system for MILSPEC VAN. A type of cargo restraint which consists of eight slotted horizontal rails intermittently spaced and welded on each side wall of the container, a pair of slotted vertical rails welded to the door end corner posts and 25 independent shoring beam assemblies with end fittings that interlock into the slots of the rails.

3.6.4.5 Stanchion. A rectangular provision (tube) on flatrack side rails that acts as a stake pocket for a side blocking stake or dunnage assembly.

3.6.4.6 Tiedown provision (lashing bar or ring). Provision or fitting for attachment of straps or other cargo restraint devices.

3.6.4.7 Universal load retainer. Restraint pieces constructed from structural steel

sheets IAW DAC drawing DA-116. Installed in pairs (2, 4 or 6) in end opening containers to interface with container corner posts to transfer the dynamic cargo load from the container doors onto the corner posts.

3.6.4.8 Welded load retainer. A device or fixture welded to the door corner post that provides a strong load bearing surface for cargo restraint dunnage. Many of the DOD-owned end opening containers are equipped with a pair of these.

3.6.5 Tare weight. Refer to Figure 33. Weight of the empty container or shelter as manufactured.

3.6.6 Payload. Refer to Figure 34. Maximum allowable weight of the contents (cargo) of a container including any additional required load blocking materials (dunnage), not normally assigned or attached to a container.

3.6.7 Maximum gross weight. Refer to Figure 34. Total permitted gross loaded weight of a container including the tare weight plus the maximum allowable payload.

3.6.8 Shelter. An ISO container which provides live-in or work-in capability. A shelter is inspected with the same criteria as a general cargo container.

3.6.9 Cam lock handle. Refer to Figure 20. Handles located on the corner posts of expandable ISO shelters. They are used to secure folding panels while shelter is in transport mode. Two handles per corner post. A one side expandable ISO shelter will have them on two corner posts. A two side expandable ISO shelter has them on all four corner posts.

3.6.10 Skids. Navy ISO Shelters have three removable, full length skids, 2.56 in (65mm) high, mounted to the base frame. These are used to keep the bottom of the shelter off the ground allowing air to circulate to prevent moisture damage. They can be removed when transporting shelter.

3.6.11 IMDG. The IMO's IMDG Code contains specific inspection criteria for structural serviceability of containers carrying UN Hazard Class 1 (ammunition and explosives) materials (IMDG Para 7.1.2). In this standard, use of the term "IMDG" indicates that information or criteria which applies to containers for carrying ammunition and explosives.

3.6.12 Non IMDG. In this standard, use of the term "non-IMDG" indicates that information or criteria which applies to shelters and to containers that will carry hazardous materials other than UN Hazard Class 1 and all non-hazardous materials. The IMDG Code provides NO inspection criteria for these containers, thus the term "non-IMDG".

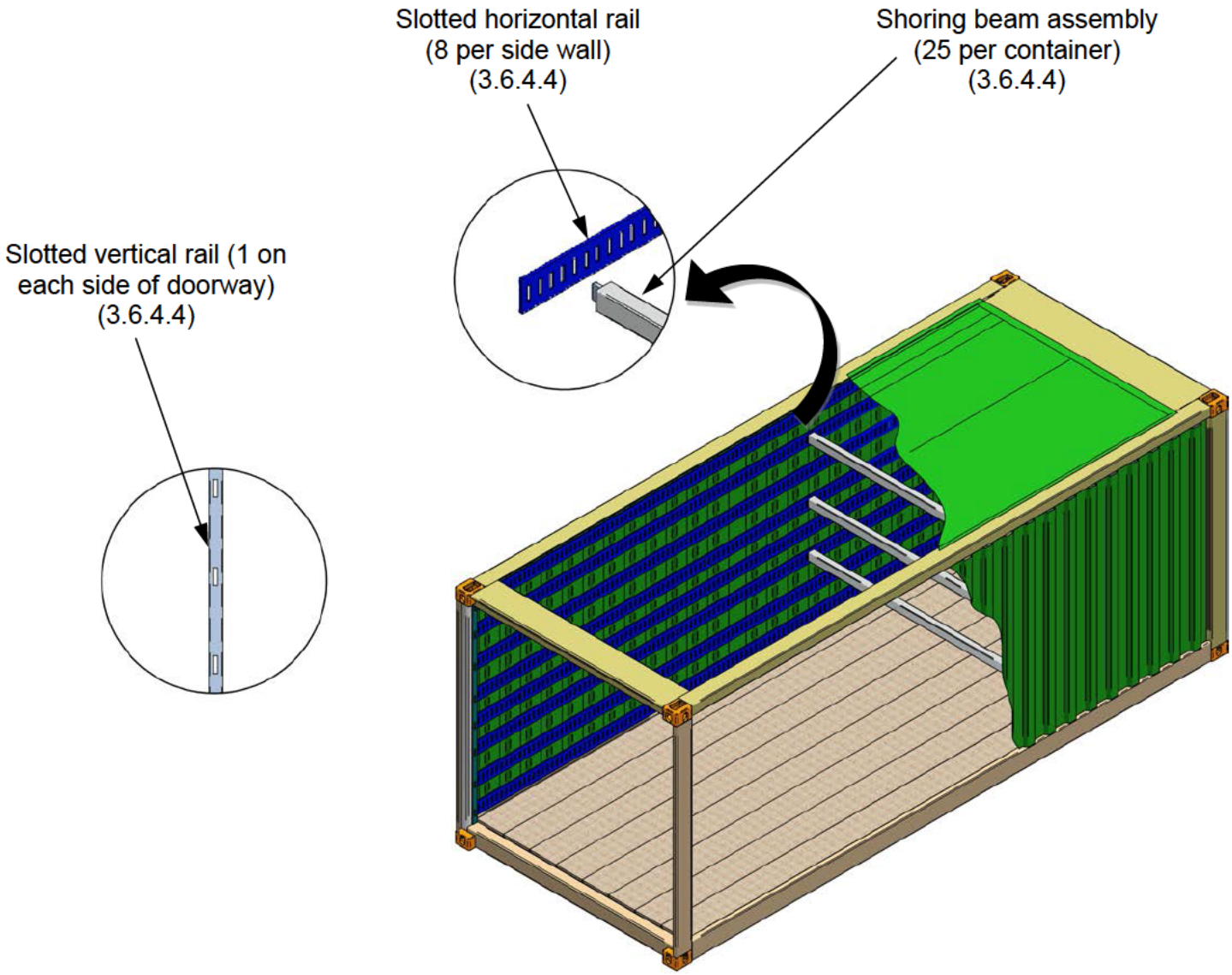


FIGURE 28. Mechanical restraint system for MILVAN

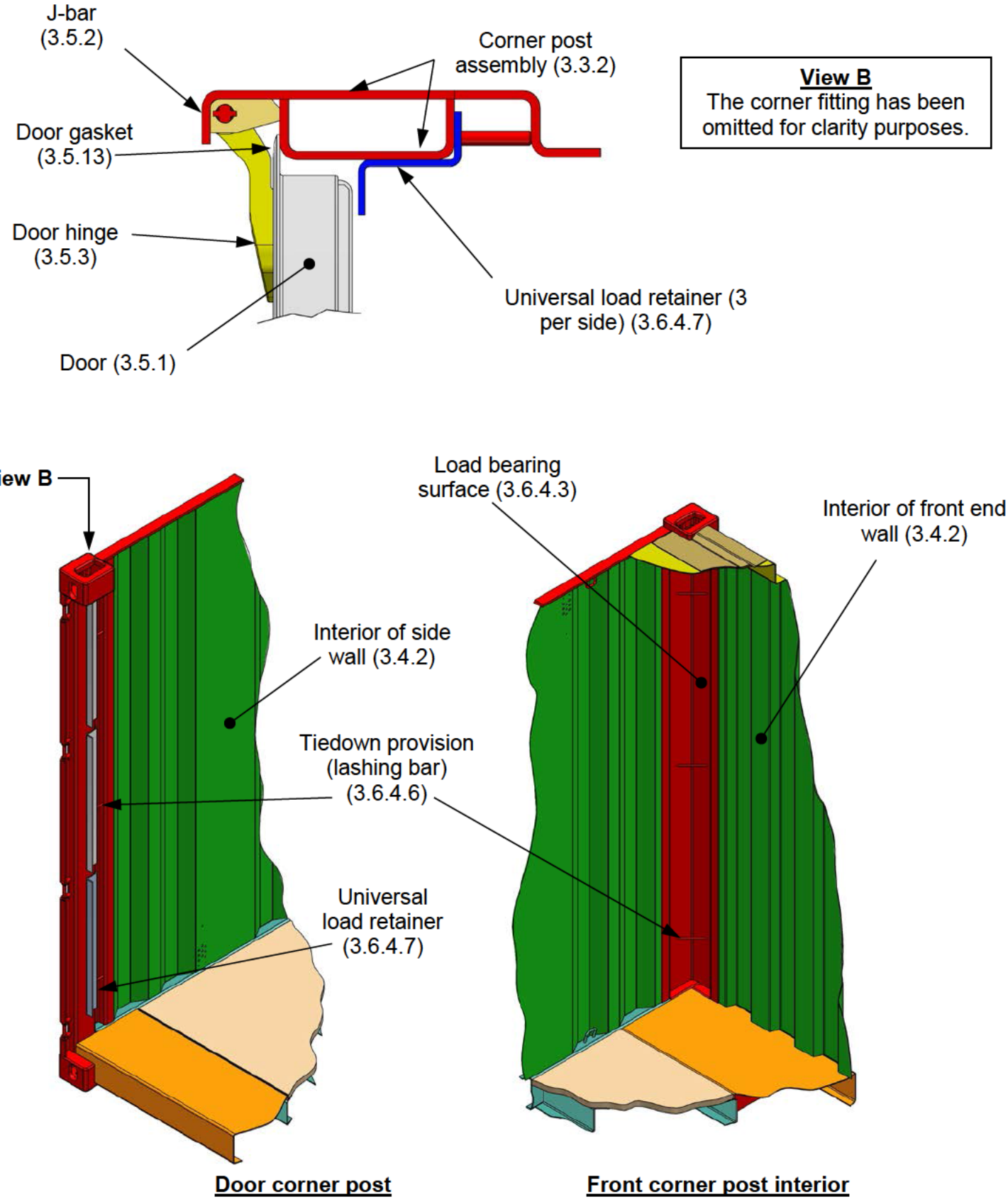


FIGURE 29. Cargo restraint system for end opening container

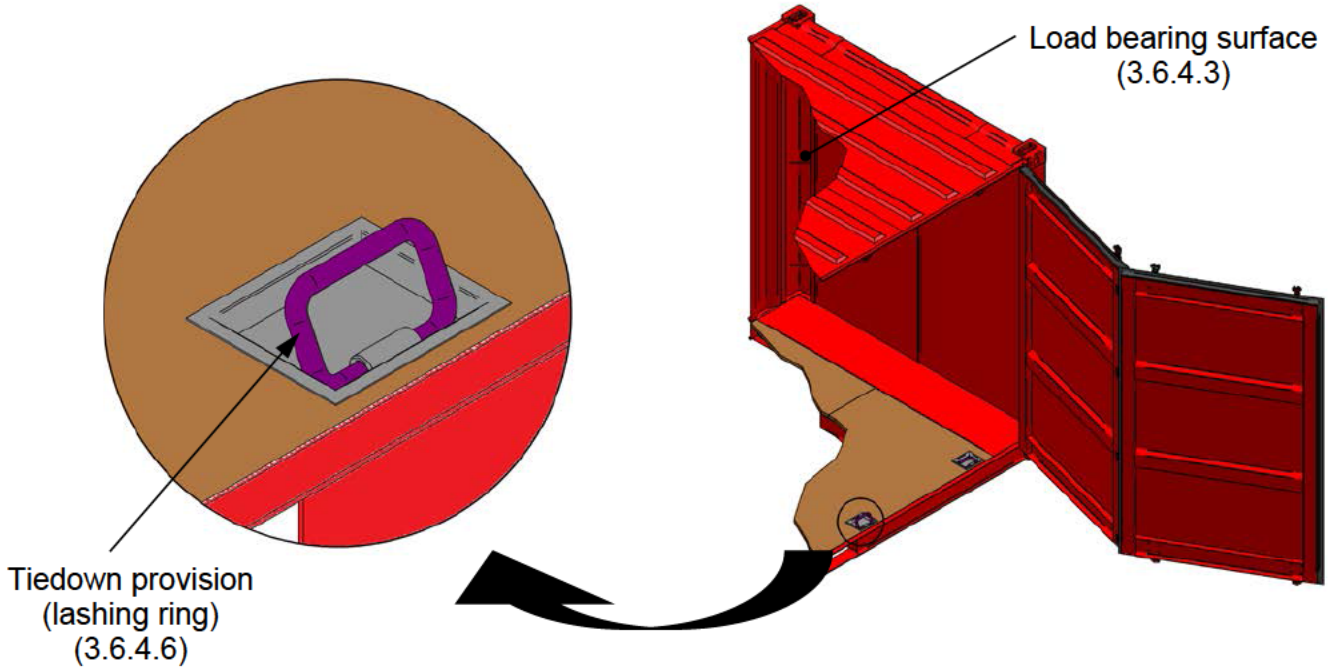


FIGURE 30. Cargo restraint system for side opening container

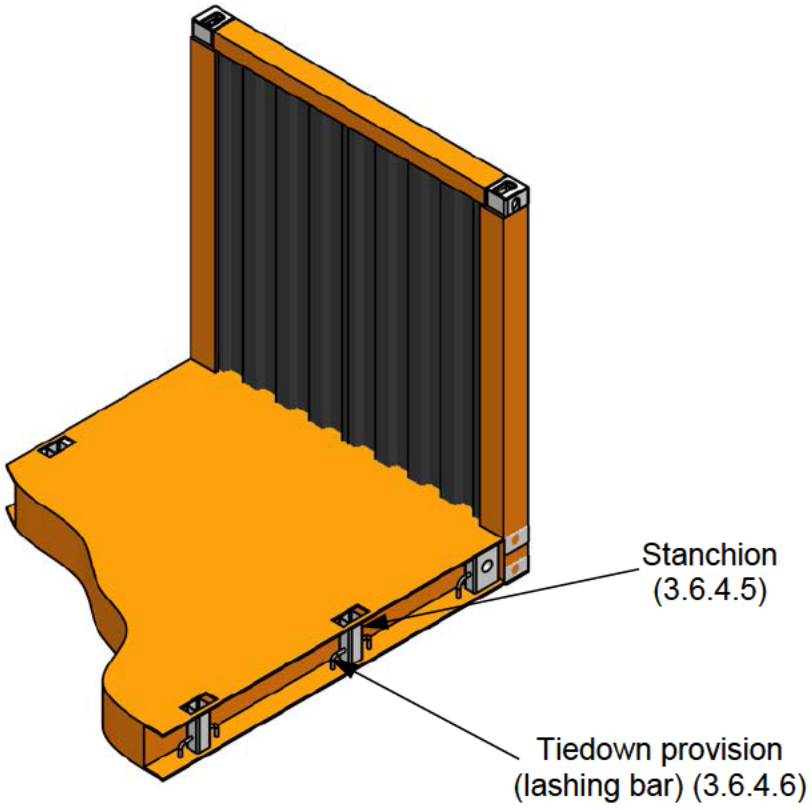


FIGURE 31. Restraint provision for flatrack container

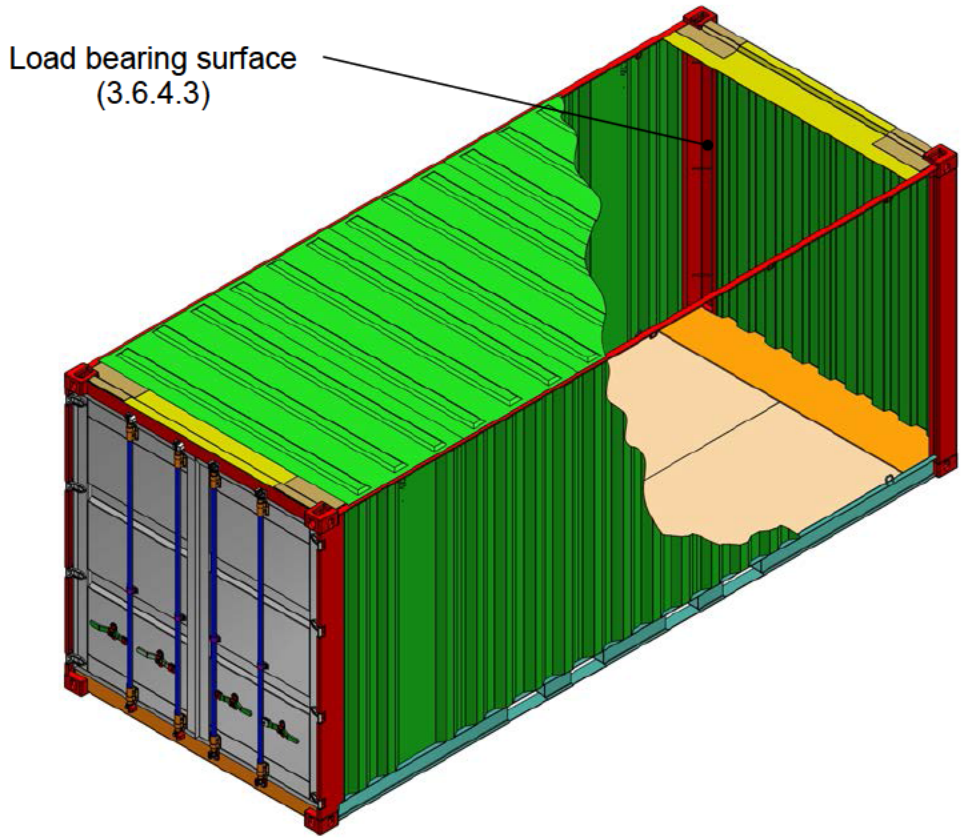


FIGURE 32. Load bearing surfaces in general cargo MILVAN

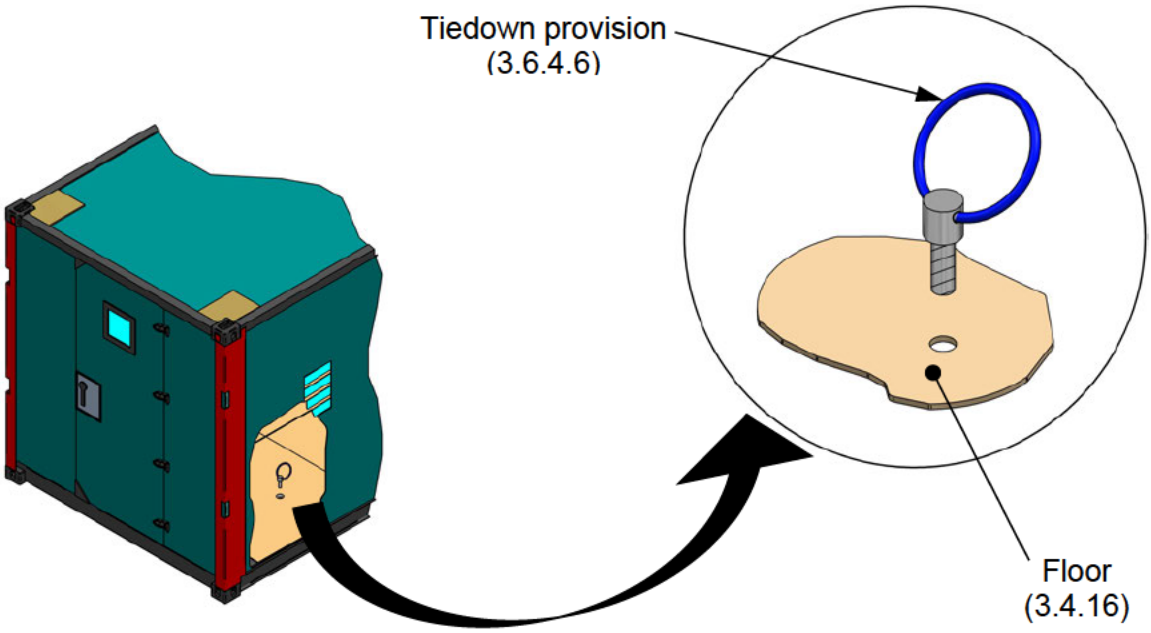


FIGURE 33. Cargo restraints for shelter

3.7 Conventions and markings. Refer to Figures 34 through 38.

3.7.1 ISO. An international organization composed of various national organizations that prescribes standards. The organization is headquartered in Geneva, Switzerland and includes technical committees (TCs) such as ISO TC 104 for technical work involving intermodal freight containers.

3.7.2 ISO markings. Numbers, letters and symbols placed on a container in conformance to ISO 6346 to identify such items as the ISO number [consisting of a three letter owner code, a single letter equipment category identifier, a six numeral serial number, and a single numeral check digit], container size, type, gross weight, tare weight, Net (Payload) and cubic capacity. Mandatory ISO markings are Identification Marks - ISO Number and the size type code and Operational Marks - Max Gross and TARE. Optional Marks are NET (Payload) and CUBE CAPACITY. See DTR 4500.9, Part VI Section 603 for DOD ownership codes.

3.7.3 CSC. An international treaty requiring structural safety approval on all ISO containers moving in international transport. In addition, periodic inspections at specified intervals are required to ensure continued safe condition. United States compliance with CSC is mandated by 49 CFR Parts 450 to 453 and Public Law 95-208.

3.7.4 CSC safety approval plate. A durable data plate required by CSC to indicate CSC certification by a nationally approved testing agency. The required format of the CSC Plate is depicted in Figure 37. The information on the plate is inscribed in at least the English or French language.

3.7.5 ACEP (Approved Continuous Examination Program). The alternative program to periodic examinations of containers. An ACEP marking/decal on the container indicates the date that this method of examination was initially approved by the US Coast Guard, and not the date of the next required re-inspection. The elements of an ACEP are identified in 49 CFR parts 452.7 and 452.9. If a container is under an ACEP program, the ACEP marking/decal is placed as close as practicable to the safety approval plate. One possible location to find an ACEP marking/decal is the area delineated in Figure 37 by the number 10.

3.7.6 TIR. An international customs convention providing transport approval under regulation of customs authorities of different nations. TIR approval usually permits sealed containers to cross international borders without inspection.

3.7.7 TIR markings or plate. Markings or data plate identifying that container design has been certified to meet TIR requirements.

3.7.8 Manufacturer's data plate. A plate affixed to the container identifying manufacturer, date of manufacture, and other pertinent container design data.

3.7.9 Consolidated data plate. A single plate affixed to the container that consolidates all container data and approval information, without violating individual data format requirements.

3.7.10 Placard holder. Fixture used to display placards that identify hazardous material classification of cargo being shipped.

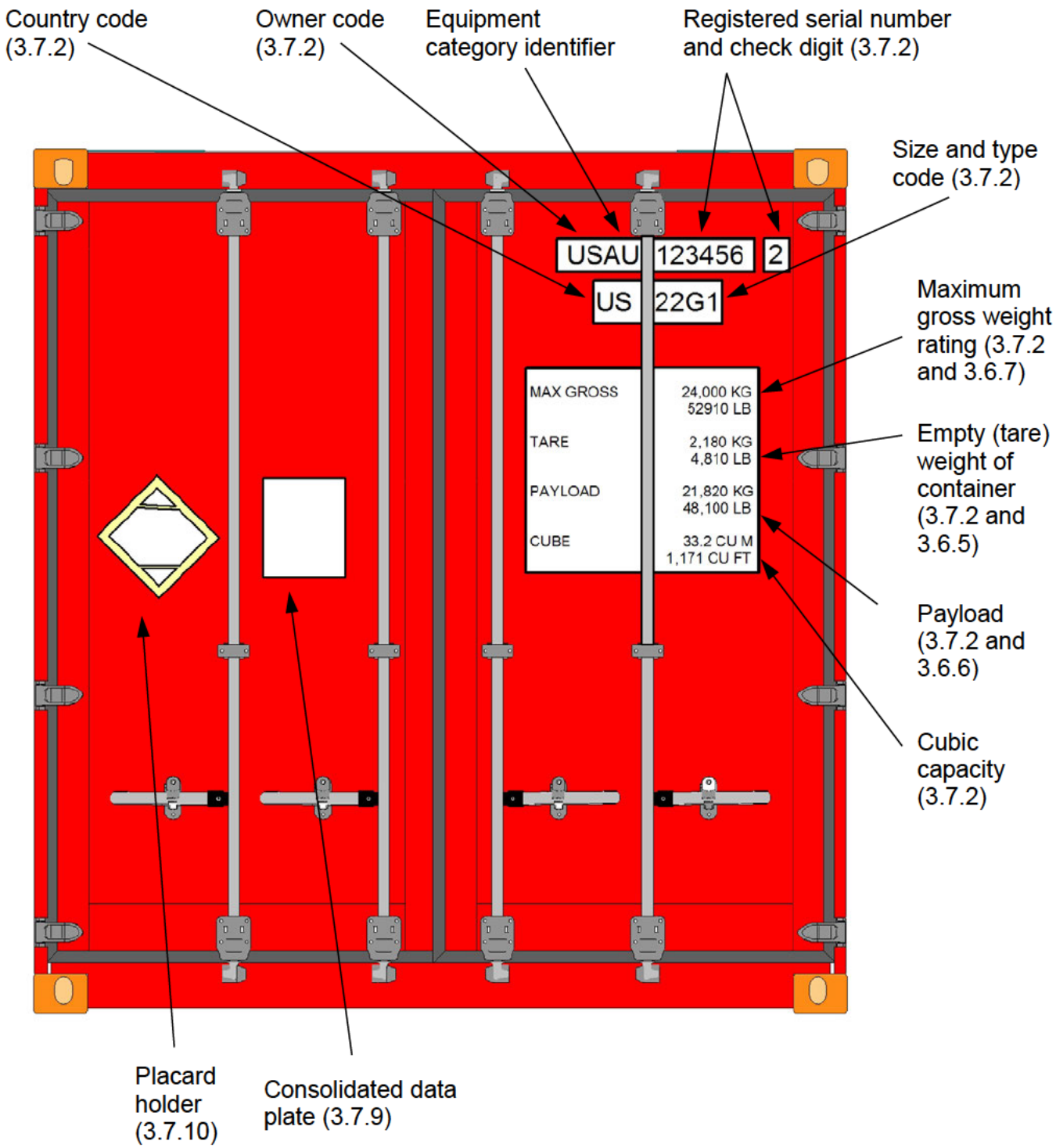


FIGURE 34. Typical door markings

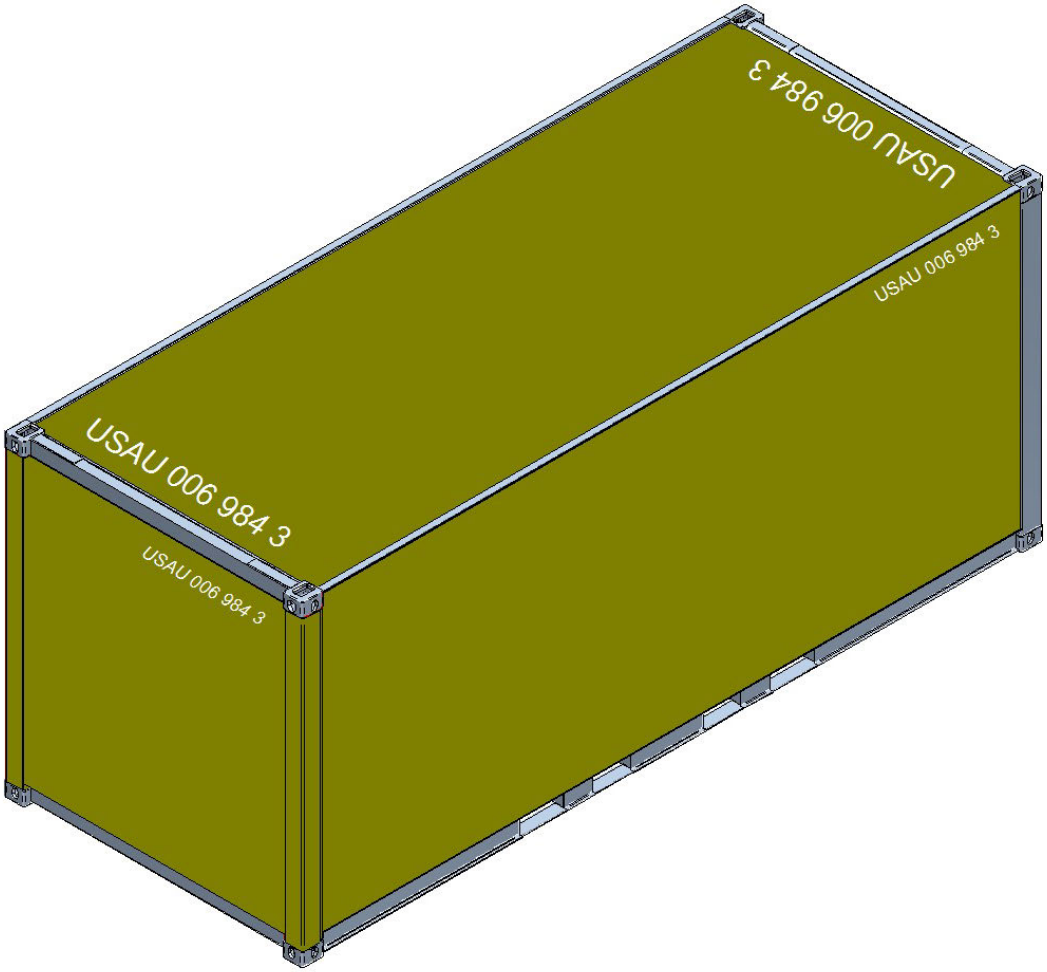


FIGURE 35. Typical horizontal layout of ISO identification markings

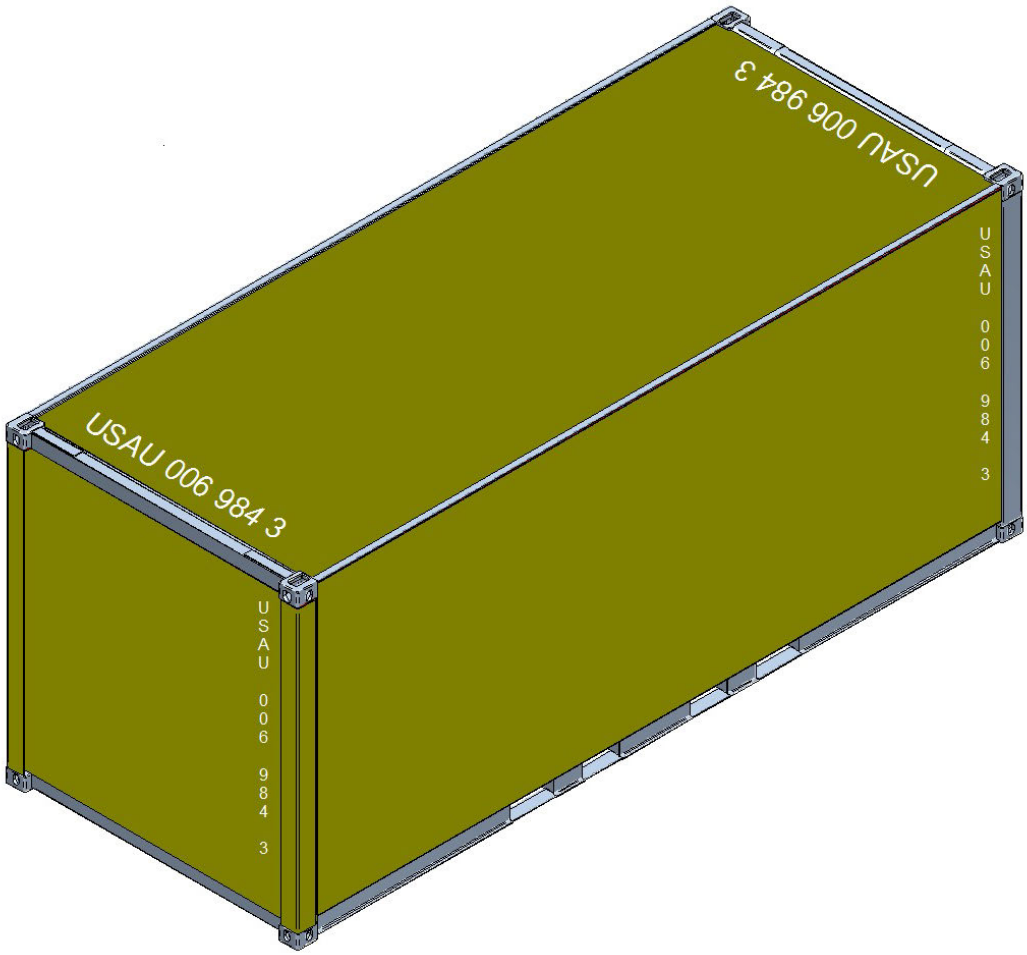
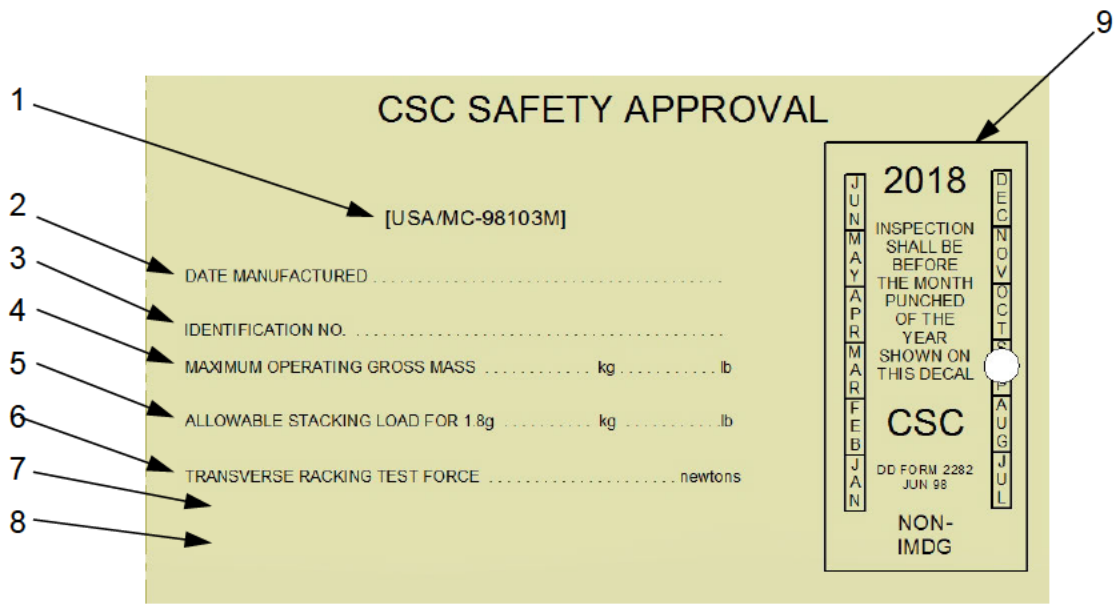


FIGURE 36. Typical vertical layout of ISO identification markings



(Typical shown)

REQUIRED LINES OF INFORMATION:

1. Alphanumeric reference code similar to example shown above indicating country of approval and reference number for approval.

2. Date (month and year) of manufacture.

3. Manufacturer's identification number or the ISO identification number (i.e., owner code, serial number and check digit) assigned to the container.

4. Maximum operating gross mass (kilograms and pounds).

5. Allowable stacking load (kilograms and pounds) container can support when subjected to 1.8 times the force of gravity.

6. Transverse racking test force (newtons).

7. End wall strength expressed in kilograms and pounds or as fraction of the permissible payload (P). This is only required to be marked on the CSC plate if end walls are designed to withstand a load of less than or greater than 0.4P.

8. Side wall strength expressed in kilograms and pounds or as fraction of the permissible payload (P). This is only required to be marked on the CSC plate if side walls are designed to withstand a load of less than or greater than 0.6P.

9. Alternate location on CSC plate for application of DD Form 2282 decal.

FIGURE 37. Typical format of CSC safety approval plate

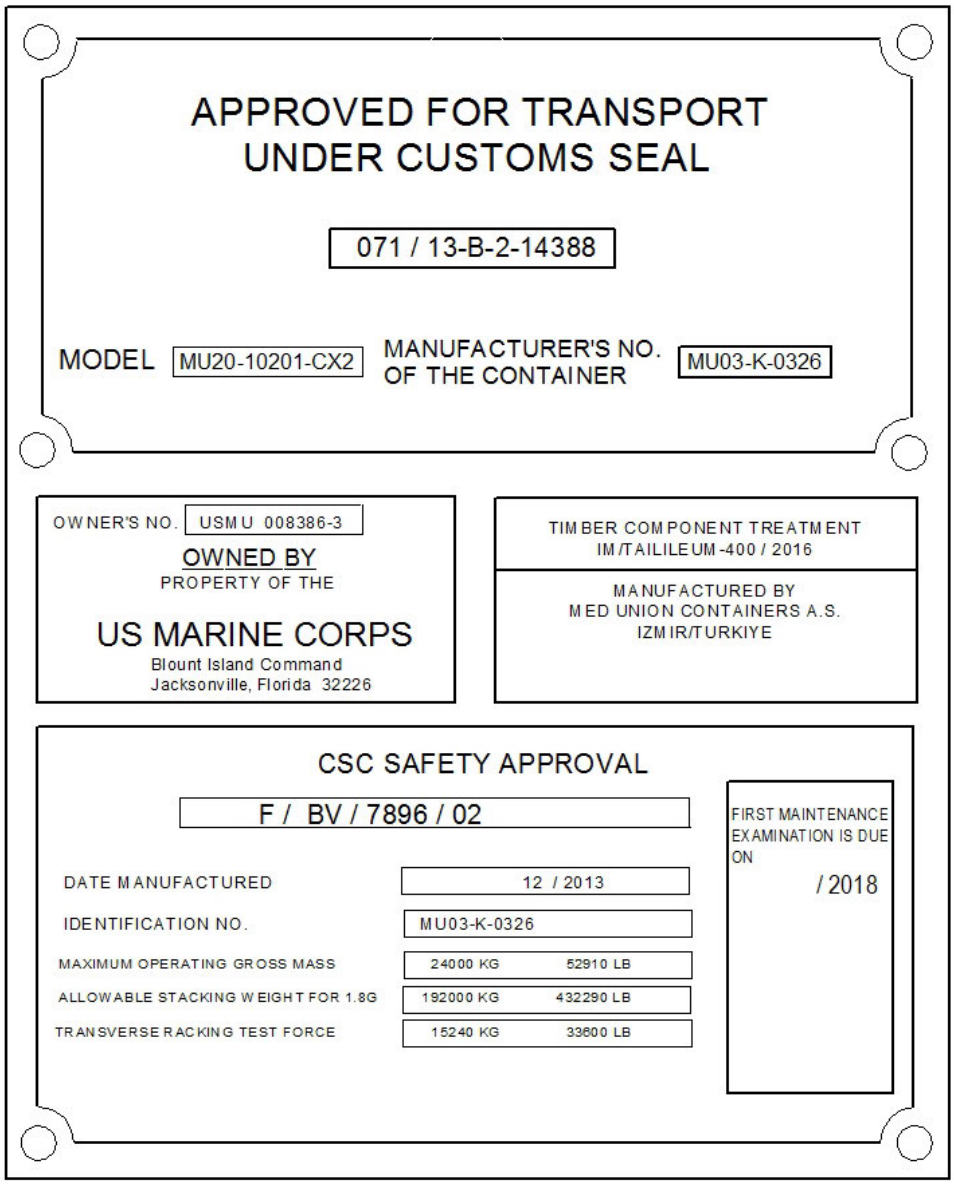


FIGURE 38. Typical consolidated data plate

3.8 Damage and repair. Refer to Figures 39 through 43.

3.8.1 Patch. Any repair of a wall, roof, or door panel that adds or replaces material without complete replacement of the panel. An acceptable patch is of permanent design, of similar material and configuration, and weatherproof. Patch is a generic repair term, which for the purposes of this inspection criteria, is reserved exclusively for repairs on non-structural components such as wall, roof, or door panels. A patch may be either an insert or overlapping type of repair.

3.8.2 Splice. Any repair of a primary (main) structural component (member) that replaces material without complete replacement of the member. Gussets, backup plates or other reinforcement (protector) plates are not to be construed as splices. Splice is a regulatory repair term, which for the purposes of this inspection criteria, is reserved exclusively for repairs on components of the primary structure where allowed. A splice may be either an insert or section type of repair for steel components and overlap only for aluminum.

3.8.3 Gusset. Reinforcement plate attached to or between adjacent components to reinforce the structure and provide added resistance to handling damage.

3.8.4 Backup plate. A reinforcement (doubler) plate may be installed on the backside of a structural component and is usually located behind a splice. It is not installed on the exterior of any component's profile. The backup plate serves to stiffen and strengthen the component.

3.8.5 Insert. A specific type of repair in which replacement material is fitted flush with the original component and only a partial profile of the component's cross section is replaced.

3.8.6 Section (full profile). A specific type of repair in which replacement material is fitted flush with the original component and the entire profile of the component's cross section is replaced.

3.8.7 Web. The vertical portion between the upper and lower flanges of a cross member or rail.

3.8.8 Flange. The wide portion at the top or bottom of a cross member or rail. A flange usually projects at a right angle to the web.

3.8.9 Hole. A penetrating puncture through any part of the container.

3.8.10 Pinhole. A pinhole typically results from a tiny skip or porosity in a weld and usually is only detected during a light leak test.

3.8.11 Welder's hammer. A hammer with a chisel shaped head used to tap on a welded joint and/or surface of a steel structural component to ascertain the strength and integrity.

3.8.12 Corrosive failure. Corrosion is unacceptable if primary or non-primary structural members can be punctured by striking the area lightly with a welder's hammer.

3.8.13 Caulking. A sealant compound used to provide water tightness around patches

in panels, around riveted seams, in holes of pop rivets, in joints between dissimilar metals, in gaps between floor board edges, and in gaps where the floor boards adjoin the interior container walls.

3.8.14 Undercoating. Bituminous material or other waterproof coating brushed or sprayed on the entire underside of the container, to protect all the metal understructure against corrosion and to waterproof the wooden flooring.

3.8.15 Overlap (lapped). A specific type of repair in which replacement material is extended over a portion of the undamaged area of the original component and changes the profile of the component's cross section.

3.8.16 Delamination. A failure in which the panel separates into constituent layers, as evidenced by bulging and waviness of the surface. This type of failure applies to sandwich panels, FRP, plywood, and plymetal.

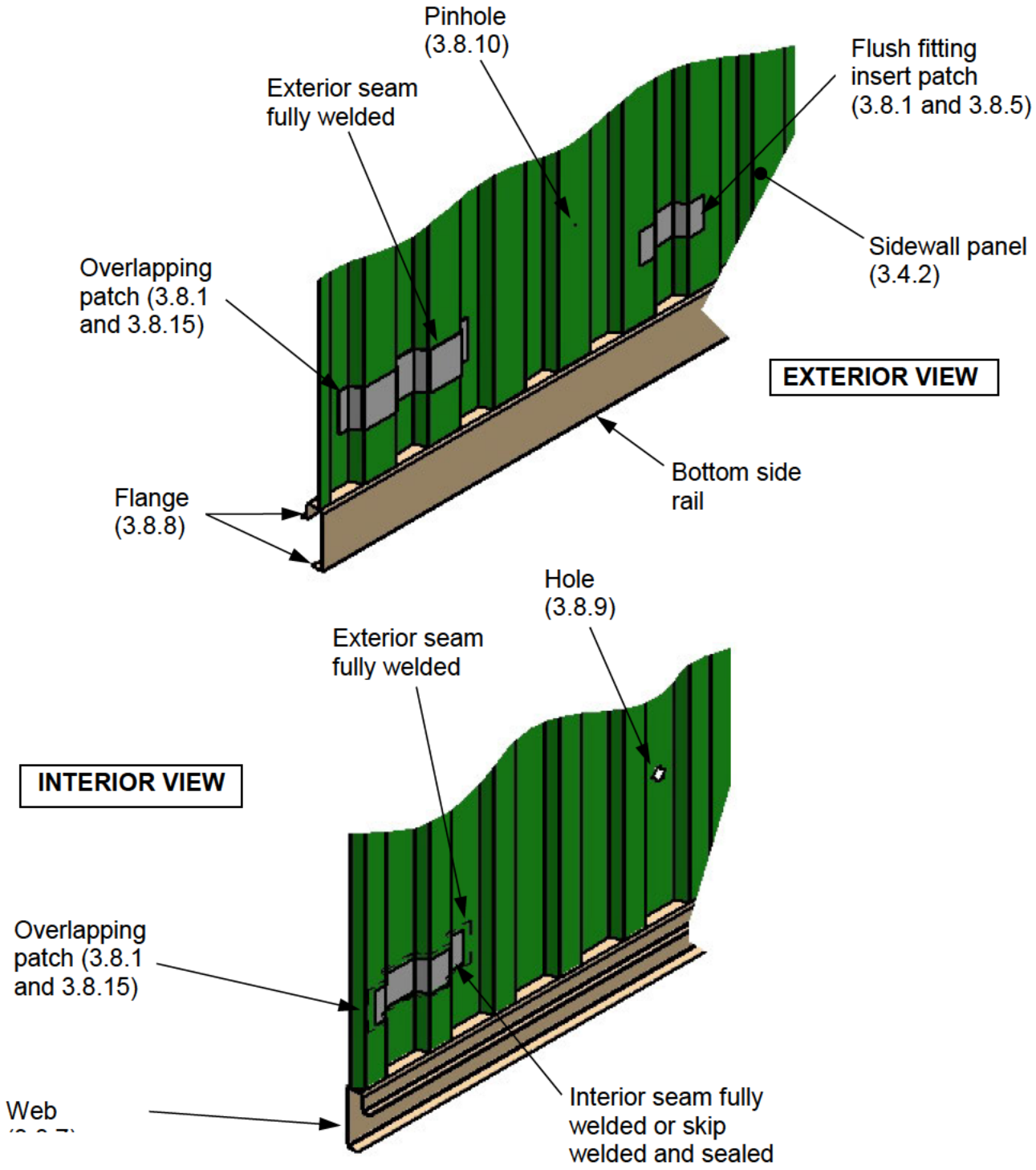
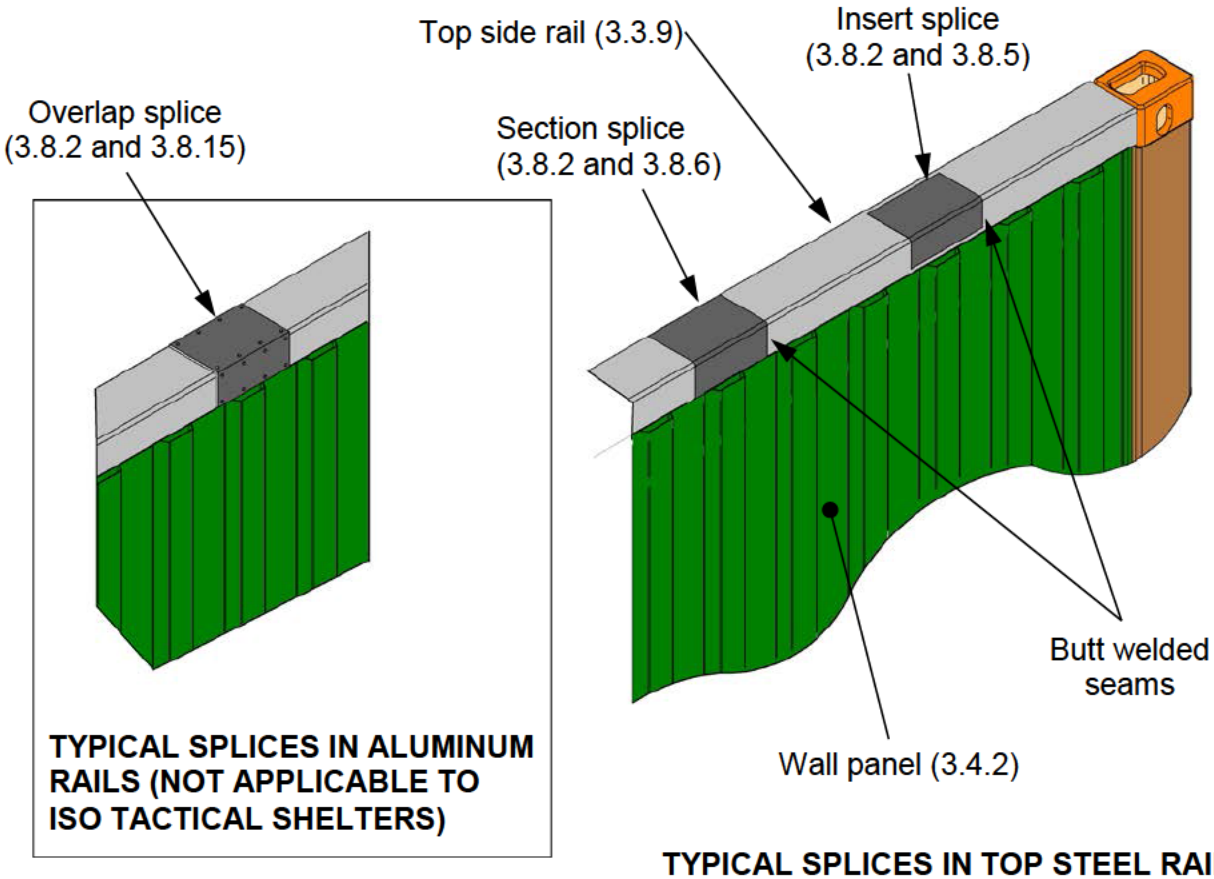


FIGURE 39. Typical welded patches on steel wall panels



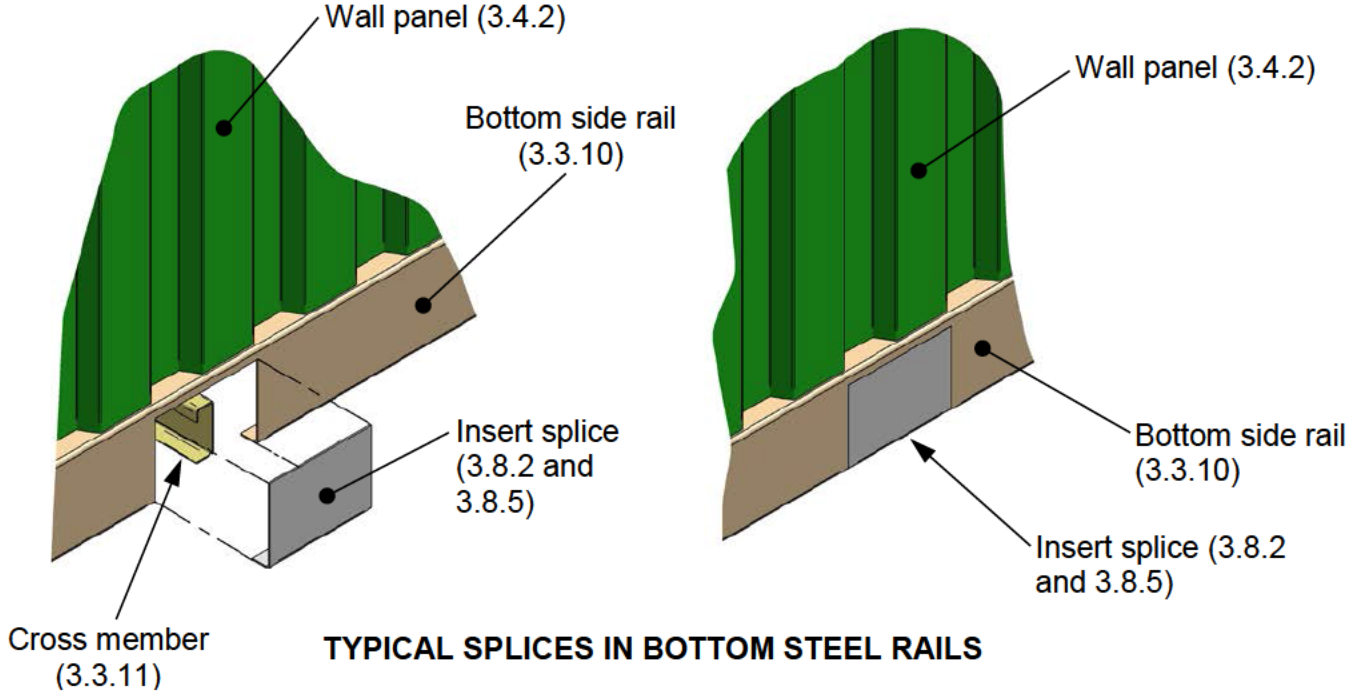


FIGURE 40. Typical splices in rails

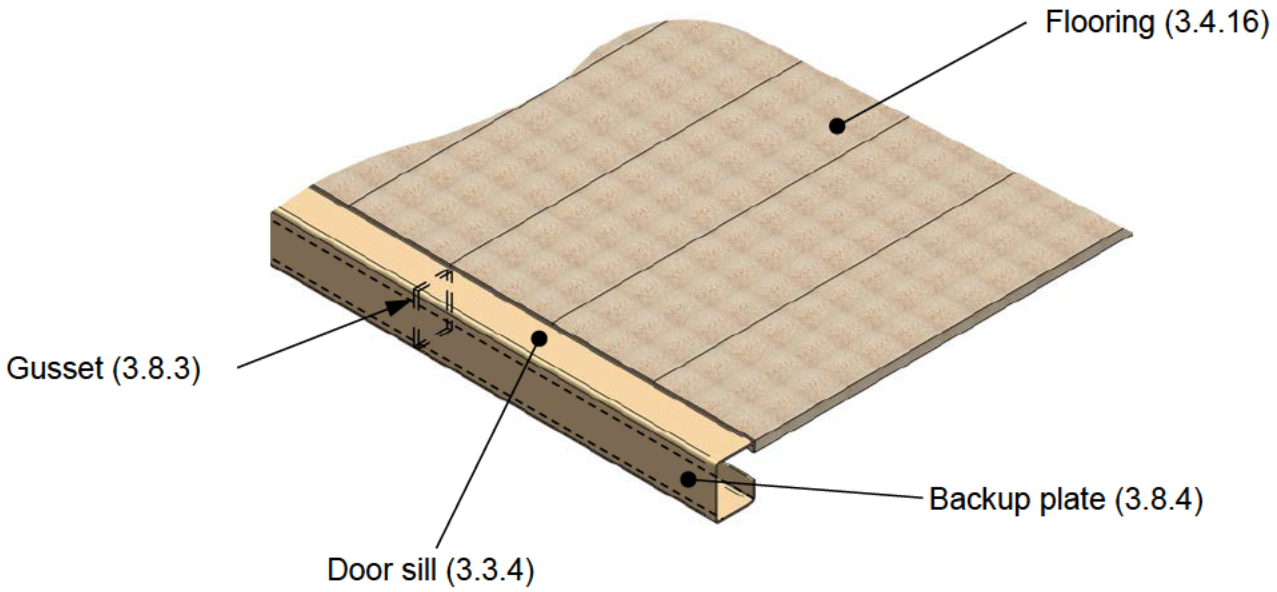
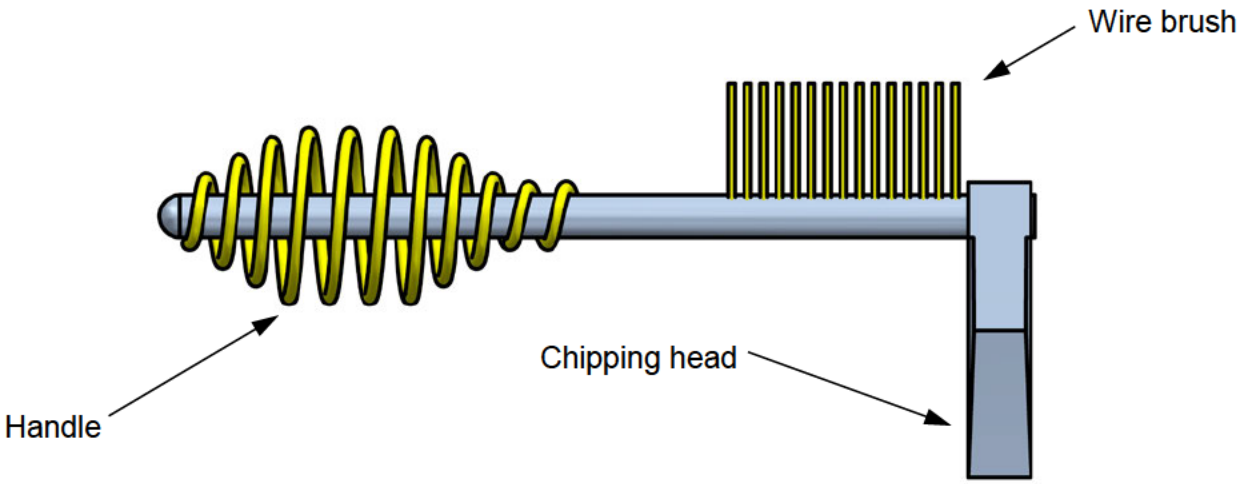


FIGURE 41. Typical reinforced door sill



Note: Welder's hammer is defined in paragraph 3.8.11 and identified by National Stock Number 5120-00-240-3096.

FIGURE 42. Welder's hammer

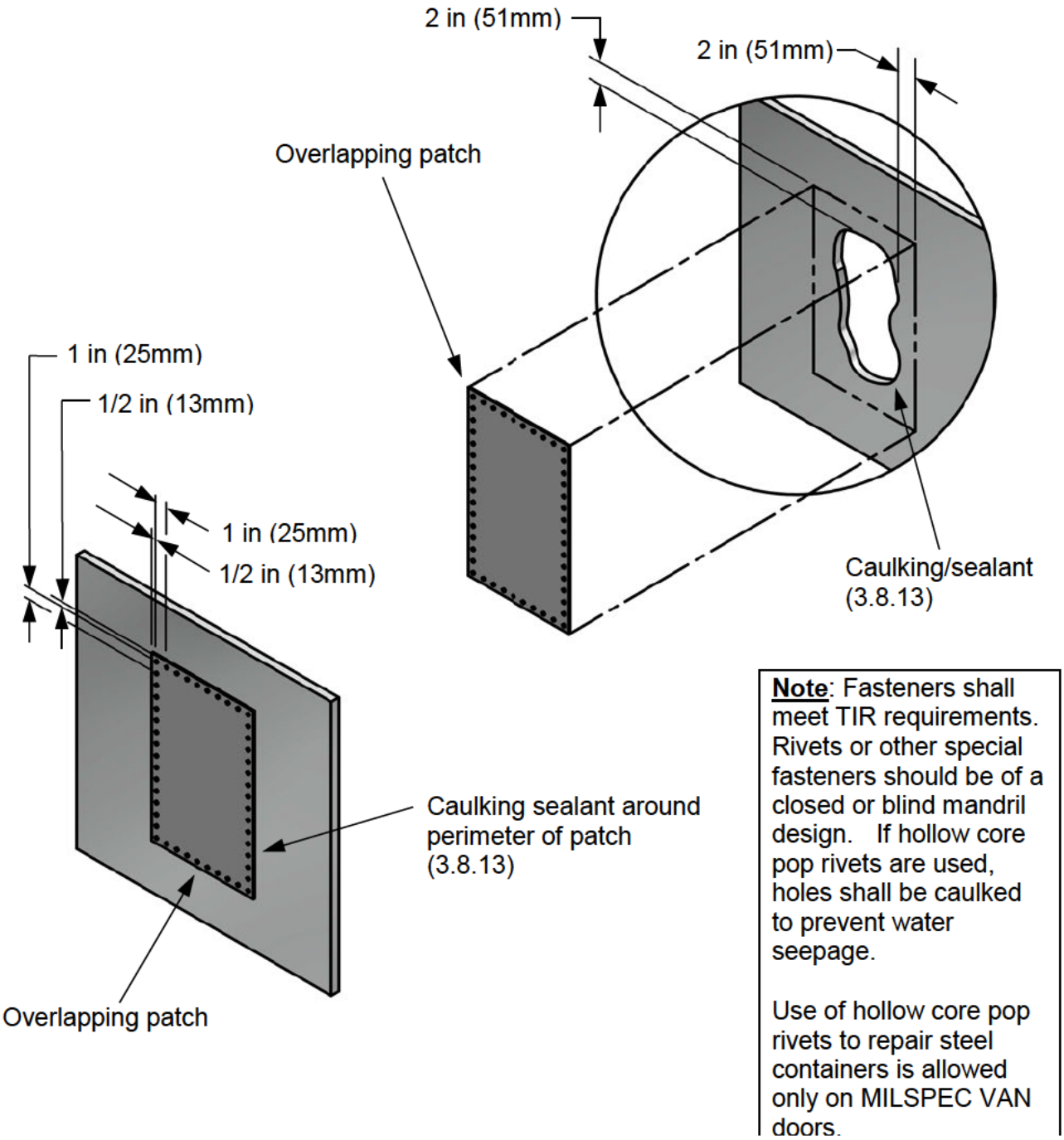


FIGURE 43. Typical riveted patches on wall (aluminum, steel, or sandwich panel)

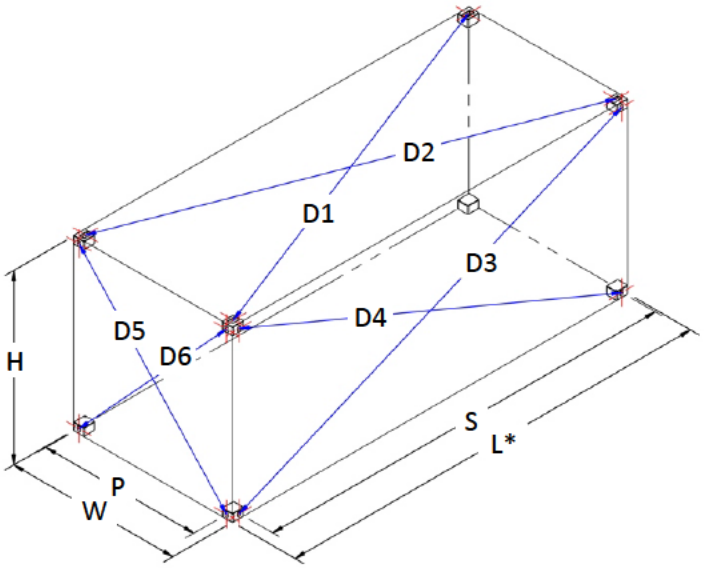
4. GENERAL REQUIREMENTS

4.1 General.

4.1.1 Regulatory mandates. An intermodal container may not be offered for the carriage of any type of cargo unless the container is structurally serviceable as evidenced by a CSC Safety Approval Plate and verified by a detailed visual examination. The CSC Safety Approval Plate and the visual examination shall conform to the mandates of 49 CFR, parts 451 and 452. Furthermore, before a container is loaded with UN Hazard Class 1 (IMDG) (explosive) materials, it shall meet specific structural serviceability requirements as prescribed by the IMDG Code and mandated by 49 CFR part 176.172. If a container has any safety related deficiency or damage that could place any person in danger, it will not be used.

4.1.2 Markings and data plates. A container shall bear legible ISO markings conforming to ISO Standard 6346. A container shall also bear a legible CSC Safety Approval Plate or a Consolidated Data Plate marked in accordance with CSC format requirements. Mandatory ISO operational markings (i.e., maximum gross weight and tare weight) shall appear on at least one location such as on the door, as depicted in Figure 34. Mandatory ISO identification markings (i.e., owner code, serial number and check digit) shall be located on all four sides, and top as depicted in Figures 35 and 36. The CSC Safety Approval Plate may be securely affixed at a readily visible place on the container, where it is not easily damaged. All maximum gross weight markings on the container shall be consistent with the maximum gross weight on the CSC Safety Approval Plate.

4.1.3 Configuration. Any distortion of the overall configuration great enough to preclude proper engagement of handling/lifting equipment, mounting and securing on chassis, vehicle, or aircraft pallet, or insertion into the cell of a ship is unacceptable. No part of the container may protrude beyond the outside surfaces of the corner fittings. The external dimensions shall be within the tolerances prescribed by ISO Standard 668 as depicted in Figure 44.



SPECIAL NOTE FOR FLATRACKS ONLY: In accordance with ISO Standard 1496 part 5, an additional tolerance of +/-3/8 in (+/-10mm) is allowed for the top external length L of flatrack containers. For example, the maximum permitted overall top dimension of a nominal 20 foot flatrack is 19 ft - 10-7/8 in (6067mm) when empty and the minimum permitted overall top dimension is 19 ft - 9-7/8 in (6042mm) when loaded to rated capacity.

External Dimensions and Tolerances in Millimeters and Feet and Inches

Nominal Length FT	L (External Length) *					S					K1 MAX.	
	MM	+/-	FT	IN	+/-	MM	+/-	FT	IN	+/-	MM	IN
40	12192	+0 -10	40	0	+0 -3/8	11986	+6 -6	39	3-7/8	+1/4 - 1/4	19	3/4
30	9125	+0 -10	29	11-1/4	+0 -3/8	8919	+6 -6	29	3-1/8	+1/4 - 1/4	16	5/8
20	6058	+0 -6	19	10-1/2	+0 -1/4	5853	+5 -5	19	2-7/16	+3/16 -3/16	13	1/2
10	2991	+0 -5	9	9-3/4	+0 -3/16	2787	+4 -4	9	1-23/32	+5/32 -5/32	10	3/8
	W (External Width)					P					K2 MAX.	
	MM	+/-	FT	IN	+/-	MM	+/-	FT	IN	+/-	MM	IN
All Lengths	2438	+0 -5	8	0	+0 -3/16	2260	+4 -4	7	4-31/32	+5/32 -5/32	10	3/8

Nominal Height FT	H (Overall Height)				
	MM	+/-	FT	IN	+/-
9-1/2	2896	+0 -5	9	6	+0 -3/16
8-1/2	2591	+0 -5	8	6	+0 -3/16
8	2438	+0 -5	8	0	+0 -3/16
5-2/3	1727	+0 -5	5	8	+0 -3/16
4-1/4	1295	+0 -5	4	3	+0 -3/16

S = LENGTH BETWEEN CENTERS OF CORNER FITTING APERTURES
P = WIDTH BETWEEN CENTERS OF CORNER FITTING APERTURES
D = DISTANCE BETWEEN CENTERS OF APERTURES OF DIAGONALLY OPPOSITE CORNER FITTINGS
K1 = DIFFERENCE BETWEEN D1 AND D2 OR D3 AND D4
K2 = DIFFERENCE BETWEEN D5 AND D6

FIGURE 44. ISO dimensions and tolerances

4.2 Primary structural components. An intermodal container with any major defect in any component of its primary structure is unacceptable. For purposes of these criteria, primary (main) structural components (members) include: corner fittings, corner posts, door sill and header, top and bottom end rails, top and bottom side rails, floor cross members, and forklift pockets. On some ISO shelters, some of the primary structural components may be concealed within the wall, roof, and floor panels. The areas where the adjacent panels joins shall be thoroughly inspected, and shall meet the criteria of for the wall beams and roof beams.

4.2.1 Acceptable welding patterns. Containers are originally deemed suitable for use if they have been given CSC certification by such agencies as Marine Container Equipment Certification Corp., American Bureau of Shipping, Germanischer Lloyd, Bureau Veritas, Registro Italiano Navale, Nippon Kaiji Kyokai, Lloyds Register of Industrial Services, Det Norske Veritas, Polish Register of Shipping, et al. These international agencies are highly reputable and bear the liability that the container is manufactured in accordance with ISO and CSC requirements. Welding patterns conforming to the original manufacturer's design are, therefore, acceptable. Only abnormal welding patterns due to damage and/or improper repair are cause for rejection. Typically, a juncture between structural members at a corner fitting is welded continuously on the exterior surface of the container. Rails and headers formed from tubular steel are typically welded all around the juncture (exterior and interior). Since welding patterns may vary depending on design and manufacture, inspection should be directed at looking for broken junctures or welded repairs that are not consistent with other corresponding welds of that container.

4.2.2 Acceptable splicing. For purposes of these criteria, a splice is any repair of a primary structural member that replaces material without complete replacement of the member. Areas repaired by straightening and/or bead welding are not to be construed as splices. Gussets, backup plates or other reinforcement (protector) plates are not to be construed as splices. An acceptable splice on steel rails is butt-welded, flush-fitting and restores the original size and cross-sectional profile of the repaired component. On aluminum rails, splice may overlap the damaged area (overlapped or lapped splice) and will be riveted. An acceptable splice is a minimum of 6 in (152mm) long. Both inserts and section (full profile) are acceptable types of splices, but not in all cases. Read inspection criteria of the component for specific splicing allowances. If a splice would end within 12 in (305mm) of another weld, such as at the juncture with the corner fitting, it shall be extended to that weld. Backup plates installed on the backside of a splice are permissible if the backup plate extends a minimum of 6 in (152mm) beyond each end of the splice.

4.2.3 Straightening. Straightening is an acceptable means of repair for certain structural components. Repairs shall be made IAW applicable repair manuals.

4.2.4 Major defects.

4.2.4.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, a major defect includes:

a. A crack, break, cut, tear, puncture, or corrosive failure in any primary structural component;

b. A missing, cracked, or broken weld at the juncture between any primary structural

components;

c. A loose or missing fastener at the juncture between any primary structural components;

d. Any deformation such as a dent, bend or bow in any primary structural component that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

e. An improper splice (e.g. less than 6 in long) in any primary structural component; or

f. Any damage to or degradation within a structural component which could place any person in danger during subsequent handling, stacking, or transport of the intermodal container.

4.2.4.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping IMDG UN Hazard Class 1 (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also:

A dent or bend in any primary structural component that is greater than 3/4 in (19mm) in depth, regardless of length.

4.2.5 Corner fitting. Refer to Figure 45. Corner fittings (IMDG or non IMDG) shall not be distorted or cracked and shall not have any worn, broken or gouged apertures that would prevent engagement or safe use of transport securement devices or container lifting devices. No repairs may be performed on a corner fitting.

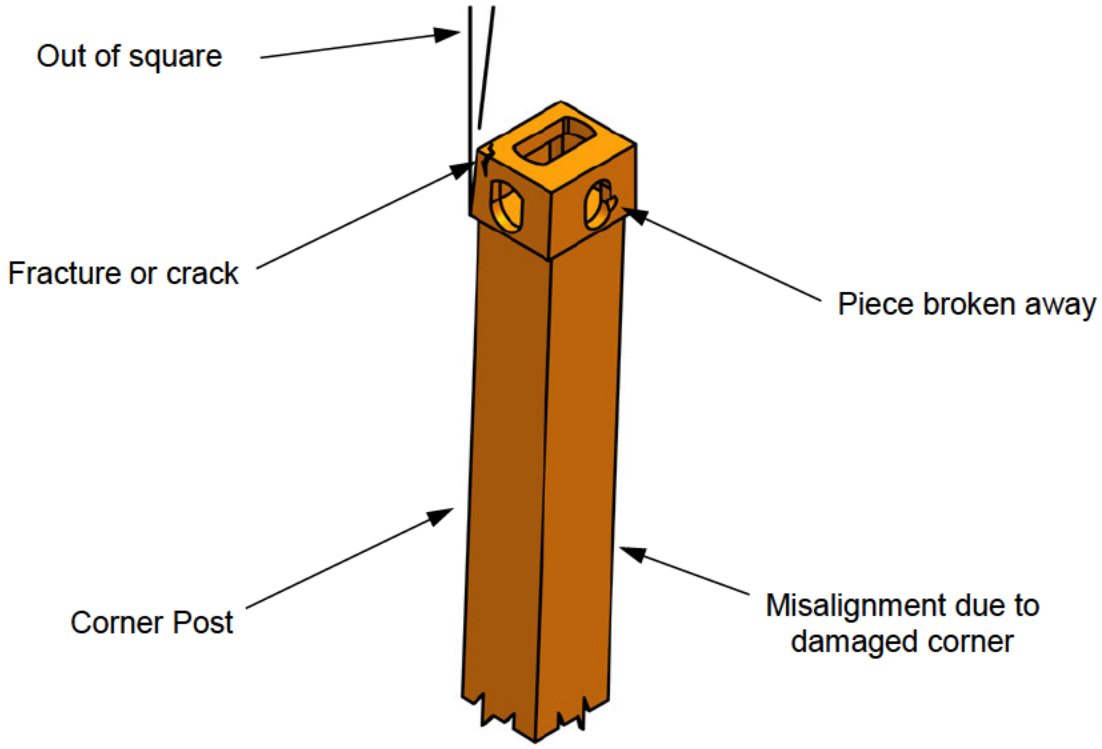


FIGURE 45. Corner fitting

4.2.6 Corner post. Refer to Figure 46. A container is unacceptable if a corner post has any major defect.

4.2.6.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo, a major defect includes:

a. A dent or bend that is greater than 1 in (25mm) in depth, regardless of length;

b. Two or more dents on a corner post greater than 9/16 in (14mm);

c. A crack, break, cut, tear, puncture, or corrosive failure;

d. A defective, cracked, or broken weld at the juncture with a corner fitting;

e. A loose or missing fastener at the juncture with a corner fitting (aluminum frame);

f. Any deformation such as a dent, bend or bow that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

g. More than two splices or an improper splice (refer to 4.2.2). A splice shall not extend through or across more than 1/2 the cross-sectional profile of the post;

h. Any splice in a steel corner post other than a butt welded insert or full profile splice;

i. Any splice on an aluminum corner post other than an overlap riveted splice;

j. Any splice to a square profile forward corner post that extends through more than one formed edge;

k. Any splice on an inner profile of a rear corner post; or

l. Any deformation to a rear corner post that interferes with door function.

4.2.6.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping IMDG UN Hazard Class 1 (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also:

a. A dent or bend that is greater than 3/4 in (19mm) in depth, regardless of length; or

b. Any splice.

4.2.6.3 Army or Marine Corps shelter. A major defect for an Army or Marine Corps shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend that is greater than 1/4 in (6mm) in depth, regardless of length;

b. Any splice on an aluminum corner post other than an riveted welded lap splice;

c. A missing cam lock handle on Army Shelter corner posts. A damaged cam lock handle which no longer performs its intended function of securing the folding panels or damage which causes the cam lock handle to exceed ISO external dimensions (see figure 44).

4.2.6.4 Navy shelter. A major defect for Navy shelter includes any of the defects listed above for a general cargo container and also a dent or bend that is greater than 1 in (25mm) in depth, regardless of length.

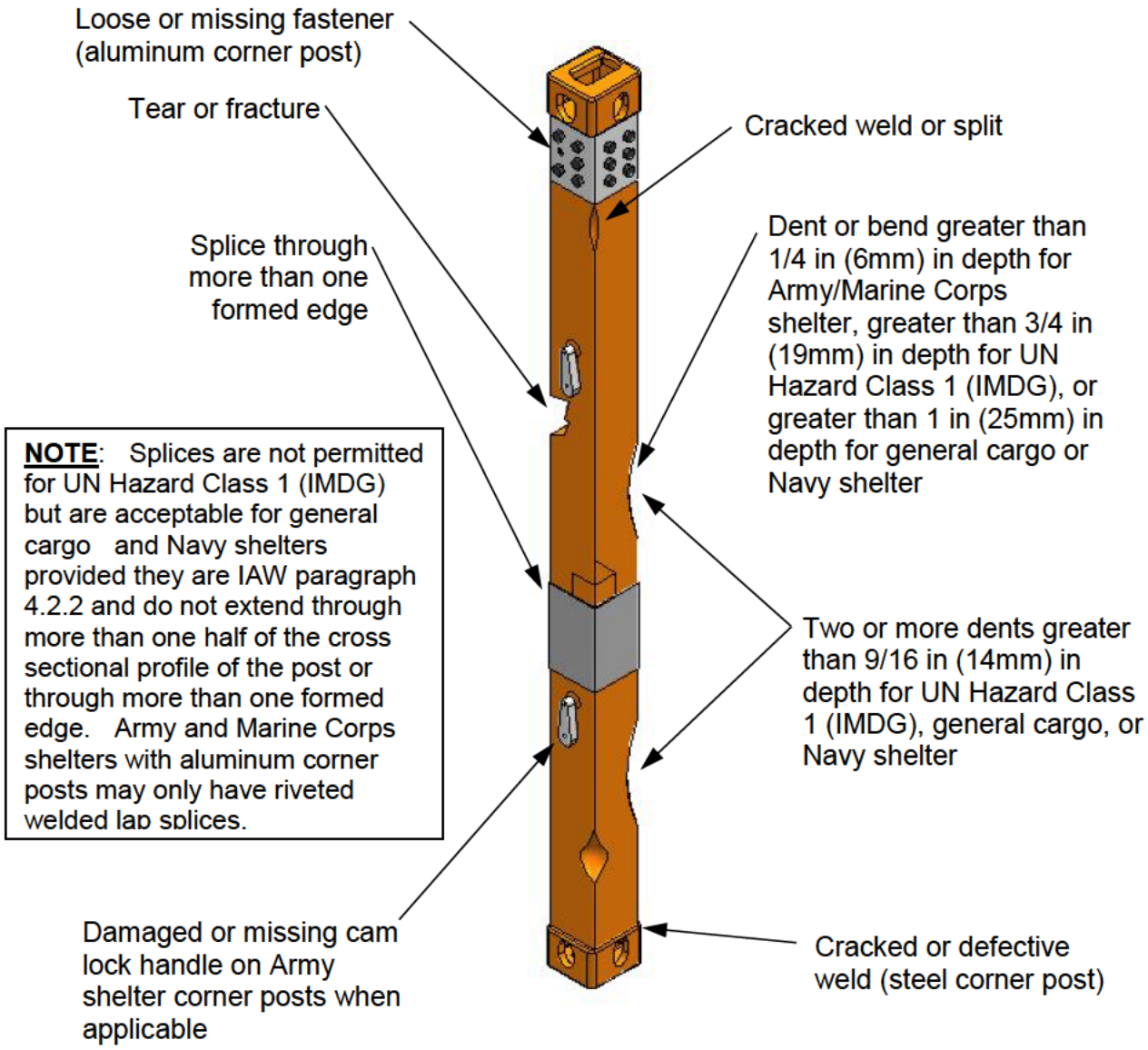


FIGURE 46. Corner post

4.2.7 Door end frame. Refer to Figures 47 and 48. A container is unacceptable if a rear end frame has any major defect.

4.2.7.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, a major defect includes:

a. A dent or bend in the door header that is greater than 1-3/8 in (35mm) in depth, regardless of length;

b. A dent or bend in the door sill that is greater than 2 in (51mm) in depth, regardless of length;

c. A crack, break, cut, tear, puncture, or corrosive failure in either the door header, or the door sill;

e. A missing, cracked, or broken weld at the juncture between any primary structural components;

f. A loose or missing fastener at the juncture between any primary structural components;

g. Any deformation such as a dent, bend or bow in any primary structural component that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

h. An improper splice (refer to 4.2.2) in door sill or door header;

i. Any splice in a steel rail other than a butt welded insert or full profile splice;

j. Any splice on an aluminum rail other than an overlap riveted splice;

k. Any splice which interferes with the locking of the anti-rack hardware or the sealing of the door gasket;

l. Any deformation which restricts proper operation of the door;

m. Any deformation that prevents a watertight seal.

4.2.7.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping UN Class 1 (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in the door header or the door sill that is greater than 3/4 in (19mm) in depth, regardless of length;

b. More than one splice in a door header; or

c. Any splice in a door sill.

4.2.7.3 Army or Marine Corps shelter. A major defect for an Army or Marine Corps shelter includes any of the defects listed above for a general cargo container and also:

a. A crack, break, cut, tear, puncture, or corrosive failure in either the top or bottom end rails;

b. An improper splice (see 4.2.2) in top or bottom end rails;

c. Any splice on an aluminum rail other than an overlap riveted splice;

4.2.7.4 Navy shelter. A major defect for a Navy shelter includes any of the defects listed above for a general cargo container and also:

a. A crack, break, cut, tear, puncture, or corrosive failure in either the top or bottom end rails;

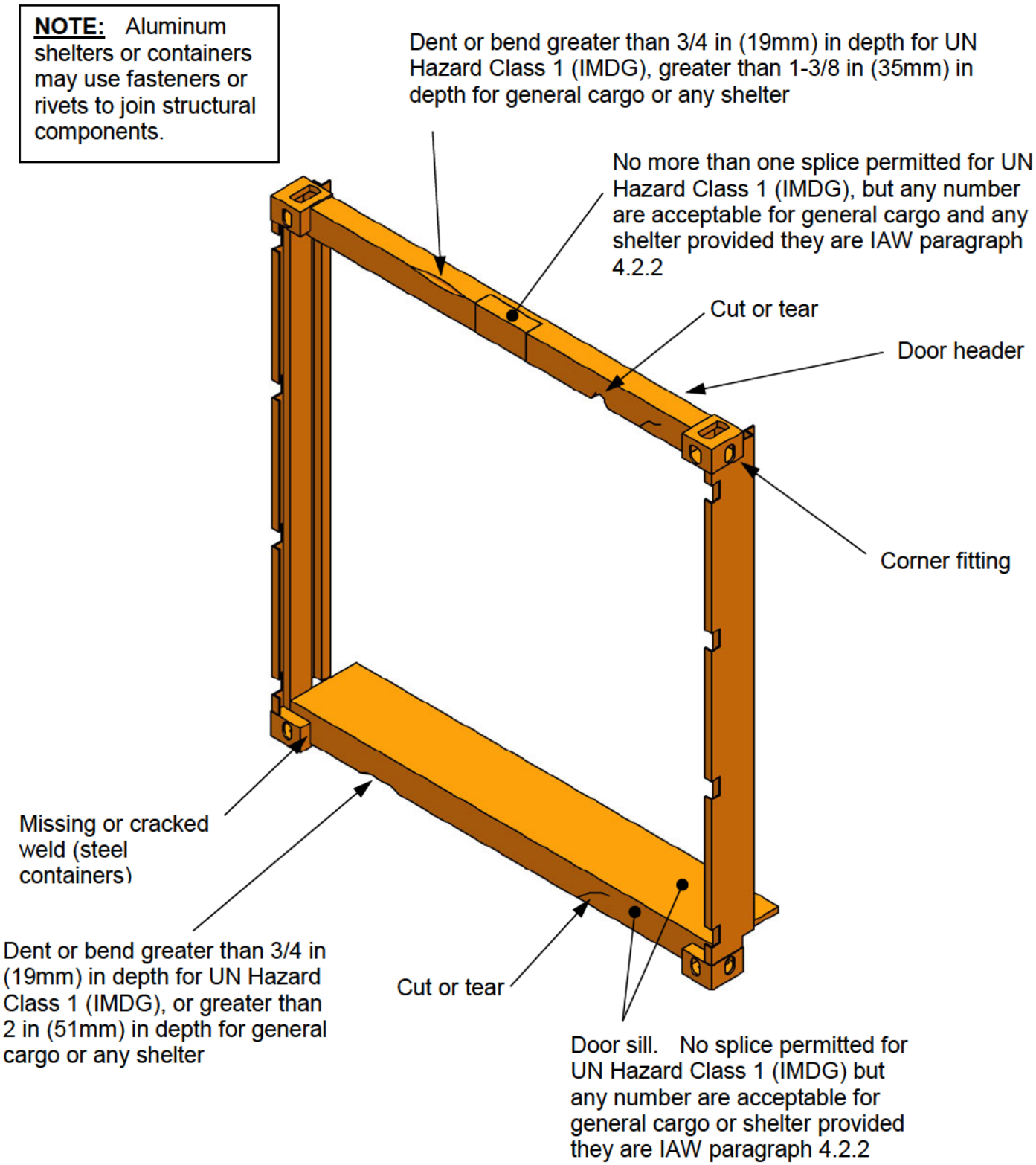
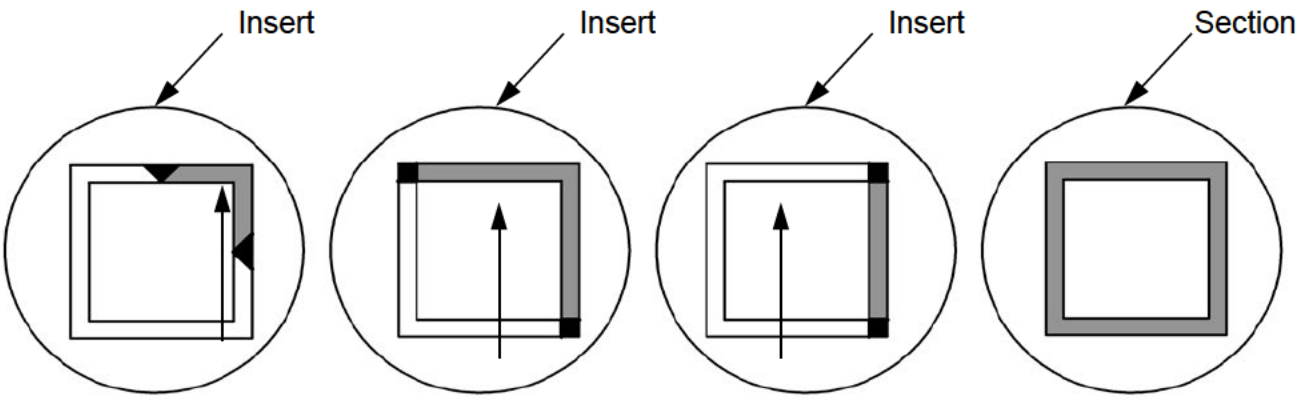
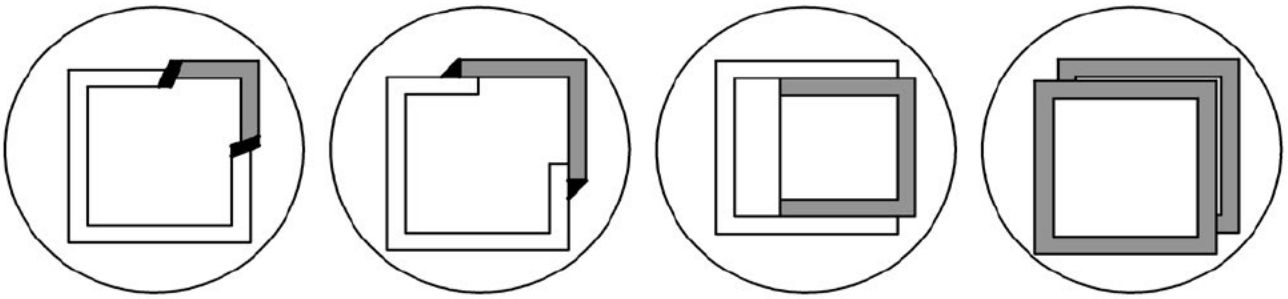


FIGURE 47. Rear end frame

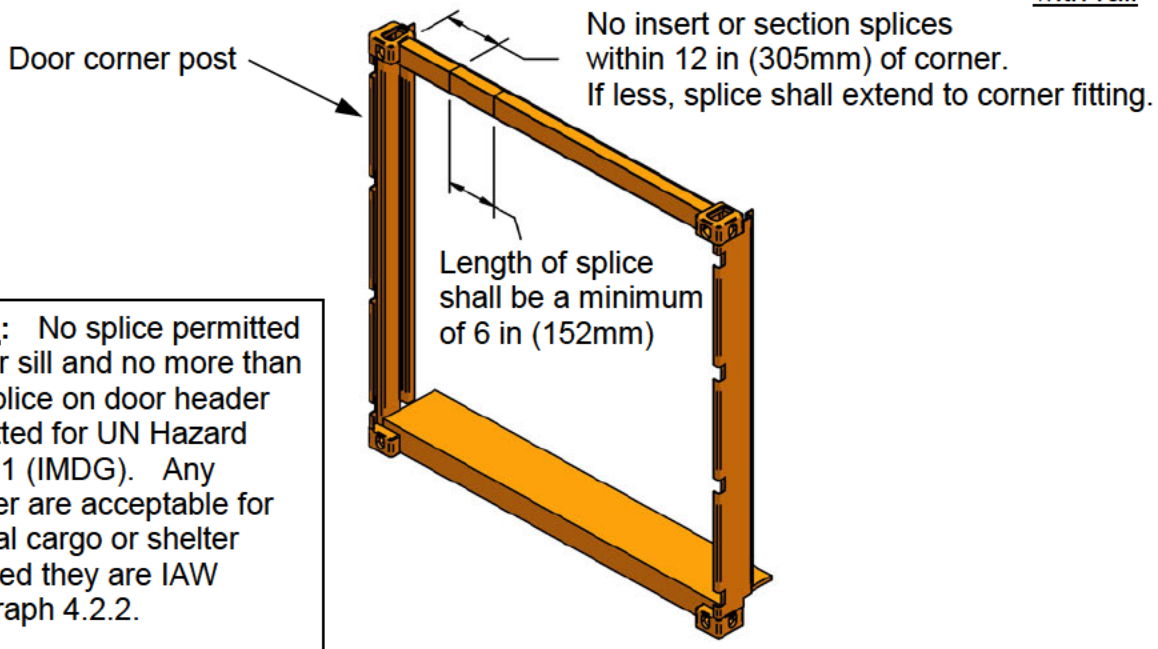


Examples of Acceptable Header and Door Sill (non IMDG) Splices



Improper Splices-Inserts not flush with remaining rail

Section not in line with rail



NOTE: No splice permitted in door sill and no more than one splice on door header permitted for UN Hazard Class 1 (IMDG). Any number are acceptable for general cargo or shelter provided they are IAW paragraph 4.2.2.

FIGURE 48. Splice limitations for door header and sill

4.2.8 End frame (without door). Refer to Figures 49 and 50. A container is unacceptable if an end frame has any major defect.

4.2.8.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, a major defect includes:

a. A dent or bend in the top end rail that is greater than 1-1/4 in (32mm) in depth, regardless of length;

b. A dent or bend in the bottom end rail that is greater than 1-9/16 in (40mm) in depth, regardless of length;

c. A crack, break, cut, tear, puncture, or corrosive failure in either the top end rail or the bottom end rail;

d. A missing, cracked, or broken weld at the juncture between primary structural components;

e. A loose or missing fastener at the juncture between primary structural components;

f. Any deformation such as a dent, bend or bow in any primary structural component that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

g. Any splice in a steel rail other than a butt welded insert or full profile splice;

h. An improper splice in top or bottom end rail; or

i. Any splice on an aluminum rail other than an overlap riveted splice.

4.2.8.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping UN Hazard Class1 (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in a top or bottom end rail that is greater than 3/4 in (19mm) in depth, regardless of length; or

b. More than one splice in a top or bottom end rail.

4.2.8.3 Army or Marine Corps shelter. A major defect for an Army or Marine Corps shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in a top or bottom end rail greater than 1 in (25mm) in depth, regardless of length;

b. A loose or missing fastener at the juncture between any primary structural components;

c. Any splice which interferes with the locking of the anti-rack hardware or the sealing of the door gasket.

4.2.8.4 Navy shelter. A major defect for a Navy shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in a top end rail greater than 1-5/16 in (33mm) in depth, regardless of length;

b. A loose or missing fastener at the juncture between any primary structural components;

c. Any splice which interferes with the locking of the anti-rack hardware or the sealing of the door gasket.

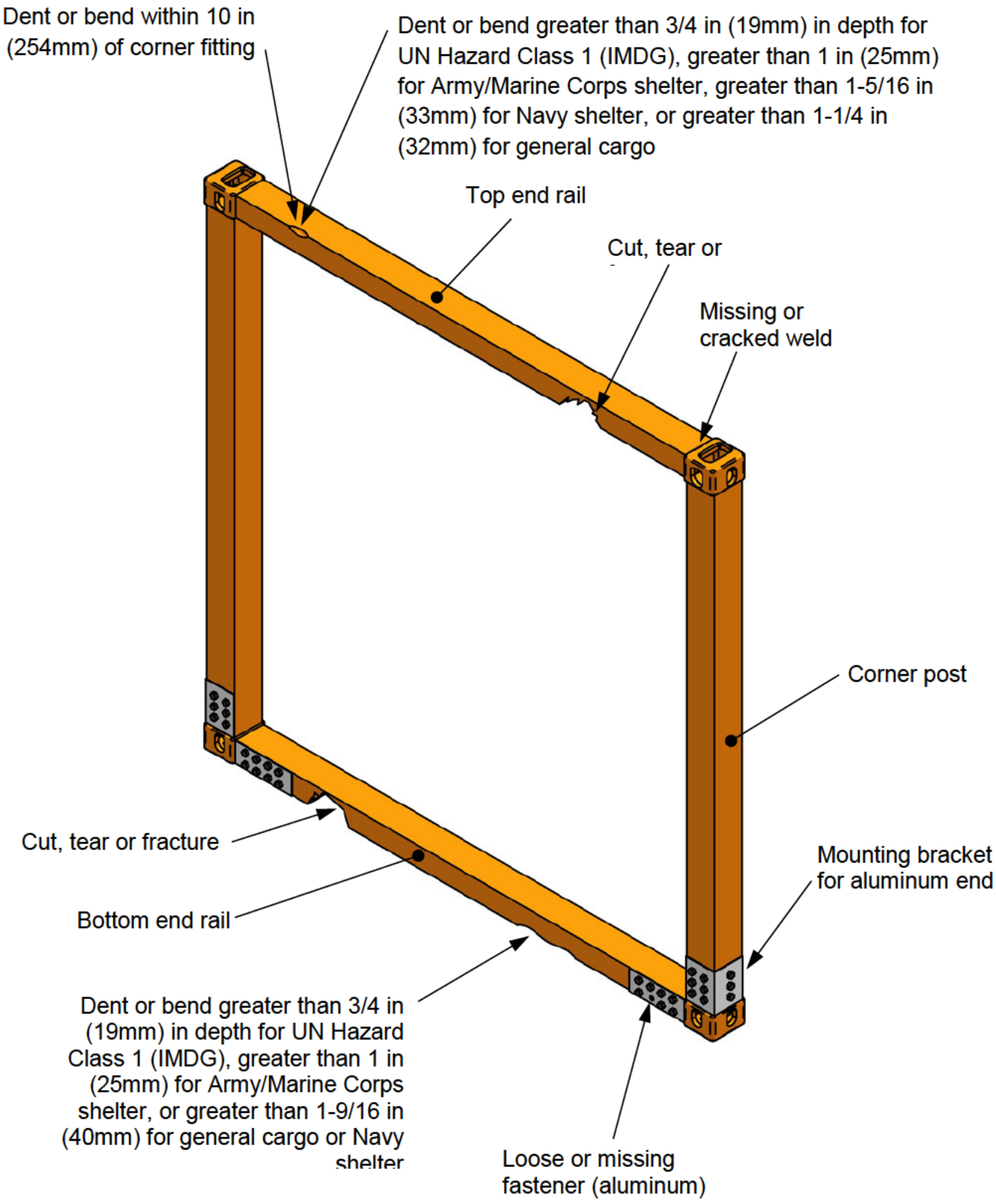
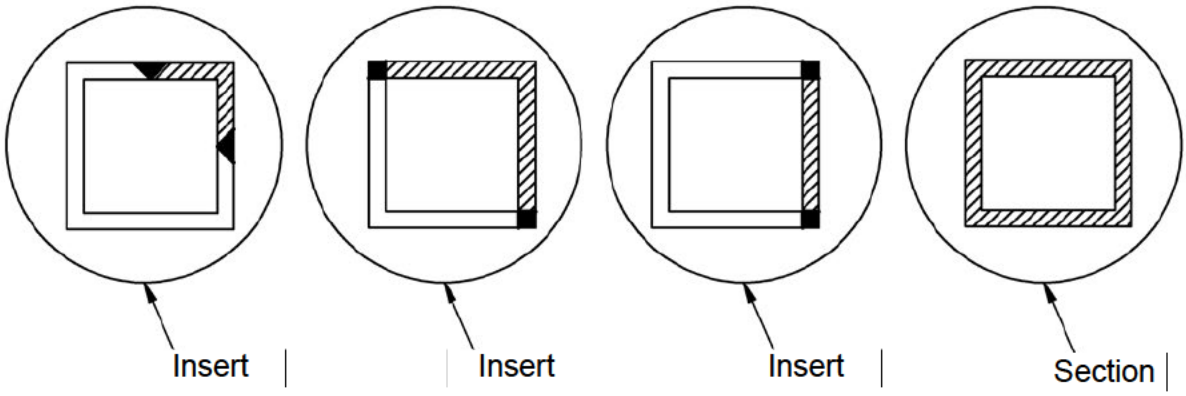
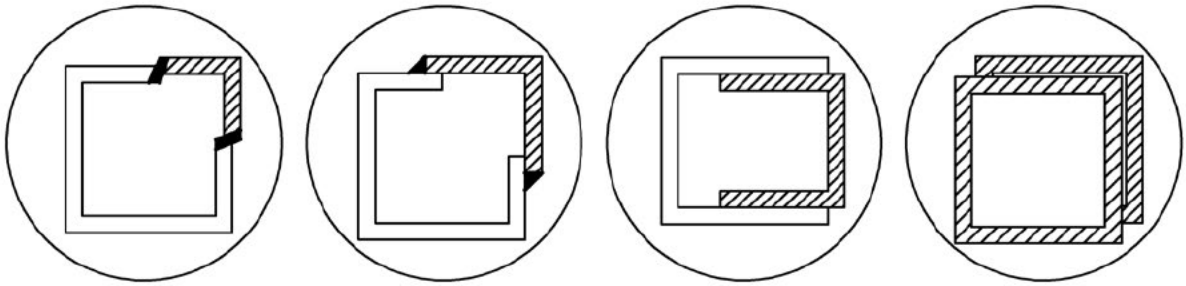


FIGURE 49. Front end frame



Examples of Acceptable End Rail Splices



Improper Splices—Inserts Not Flush With Remaining Rail

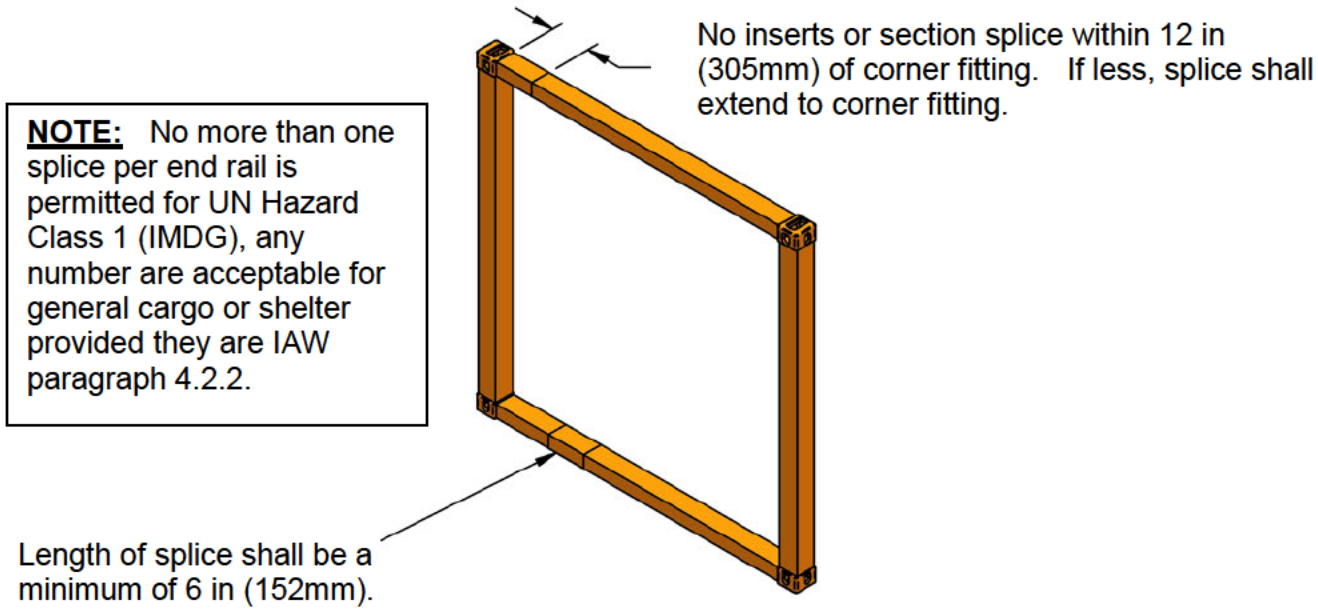


FIGURE 50. Splice limitations for end rails

4.2.9 Side rails. Refer to Figures 51 through 55. A container is unacceptable if a side rail has any major defect.

4.2.9.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, a major defect includes:

a. A dent or bend in any top side rail that is greater than 1-1/4 in (32mm) in depth, regardless of length;

b. A dent or bend in any flat-bar top side rail that is greater than 1 in (25mm) in depth, regardless of length;

c. A dent or bend in any bottom side rail web that is greater than 2 in (51mm) in depth, regardless of length;

d. A dent or bend in the web of any bottom side rail that is within 10 in (254mm) of a corner fitting that is greater than 3/4 inch (19mm) in depth, regardless of length;

e. A crack, break, cut, tear, puncture, or corrosive failure in any side rail;

f. A missing, cracked, or broken weld at the juncture with other primary structural components;

g. A loose or missing fastener at the juncture with other primary structural components;

h. Any deformation such as a dent, bend or bow that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

i. An improper splice (refer to 4.2.2) in any side rail;

j. Any splice in a steel rail other than a butt welded insert or full profile splice;

k. Any splice on an aluminum rail other than an overlap riveted splice; or

l. Any splice which interferes with the proper operation of side doors (includes operation of anti-rack hardware and gasket).

4.2.9.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping UN Hazard Class 1 (IMDG) (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in any side rail that is greater than 3/4 in (19mm) in depth, regardless of length; or

b. More than two splices in any one top or bottom side rail. (For purposes of these criteria, the door header and door sill of a side opening container are considered to be side rails. Splices on these components shall not interfere with the proper operation of the side doors.)

Note: On ISO shelters with expandable or removable side walls or removable panels, repairs to side rails shall not interfere with the proper operation of these features. This is not a CSC requirement unless it is the only way to enter/exit the shelter (i.e. Navy SOMF-B shelter side door).

4.2.9.3 Army or Marine Corps shelter. A major defect for an Army or Marine Corps shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in any top or bottom side rail that is greater than 3/4 in (19mm) in depth, regardless of length;

b. Any splice on an aluminum rail other than an riveted or welded overlap splice.

4.2.9.4 Navy shelter. A major defect for a Navy shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in any top side rail that is greater than 13/16 in (21mm) in depth, regardless of length;

b. A dent or bend in any bottom side rail that is greater than 1-5/8 in (41mm) in depth, regardless of length;

c. Any splice in a steel rail other than a butt welded insert or full profile splice or overlap riveted splice.

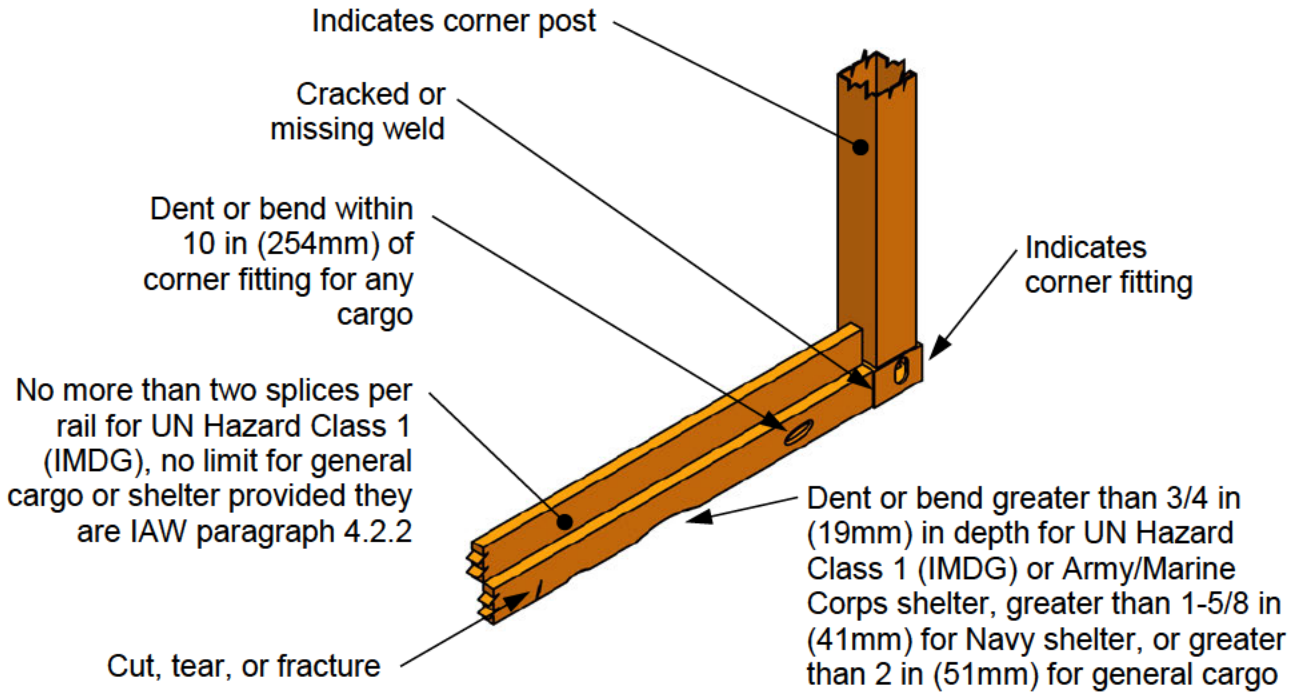


FIGURE 51. Steel side rail

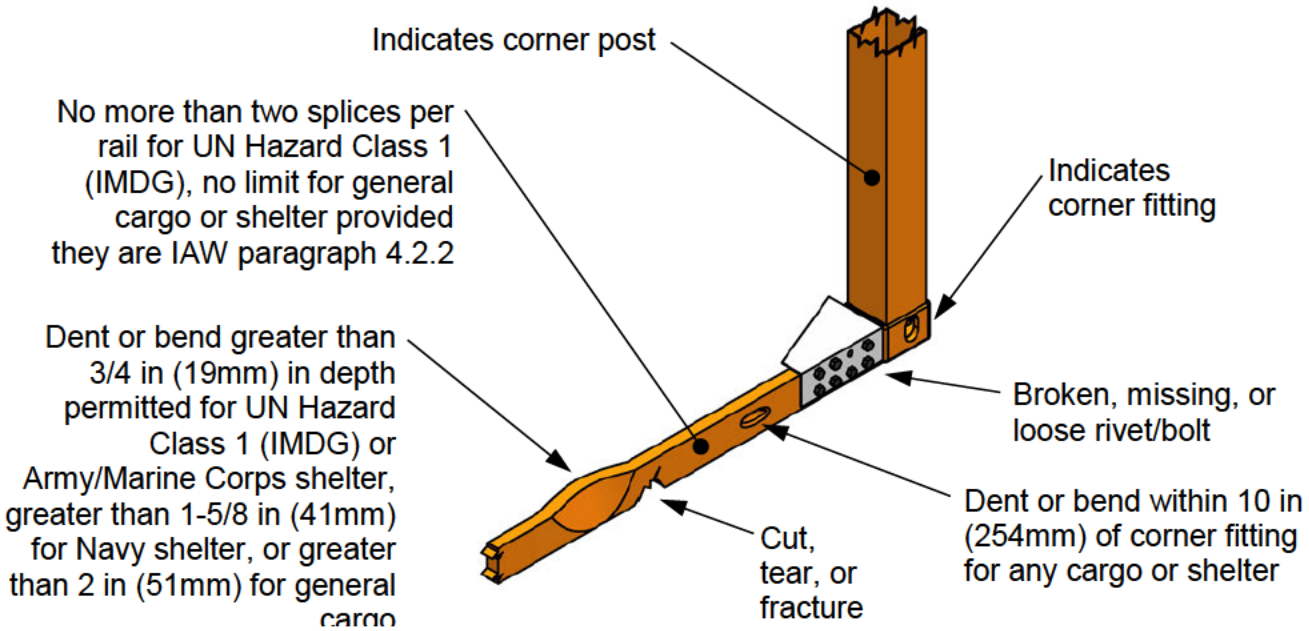


FIGURE 52. Aluminum side rail

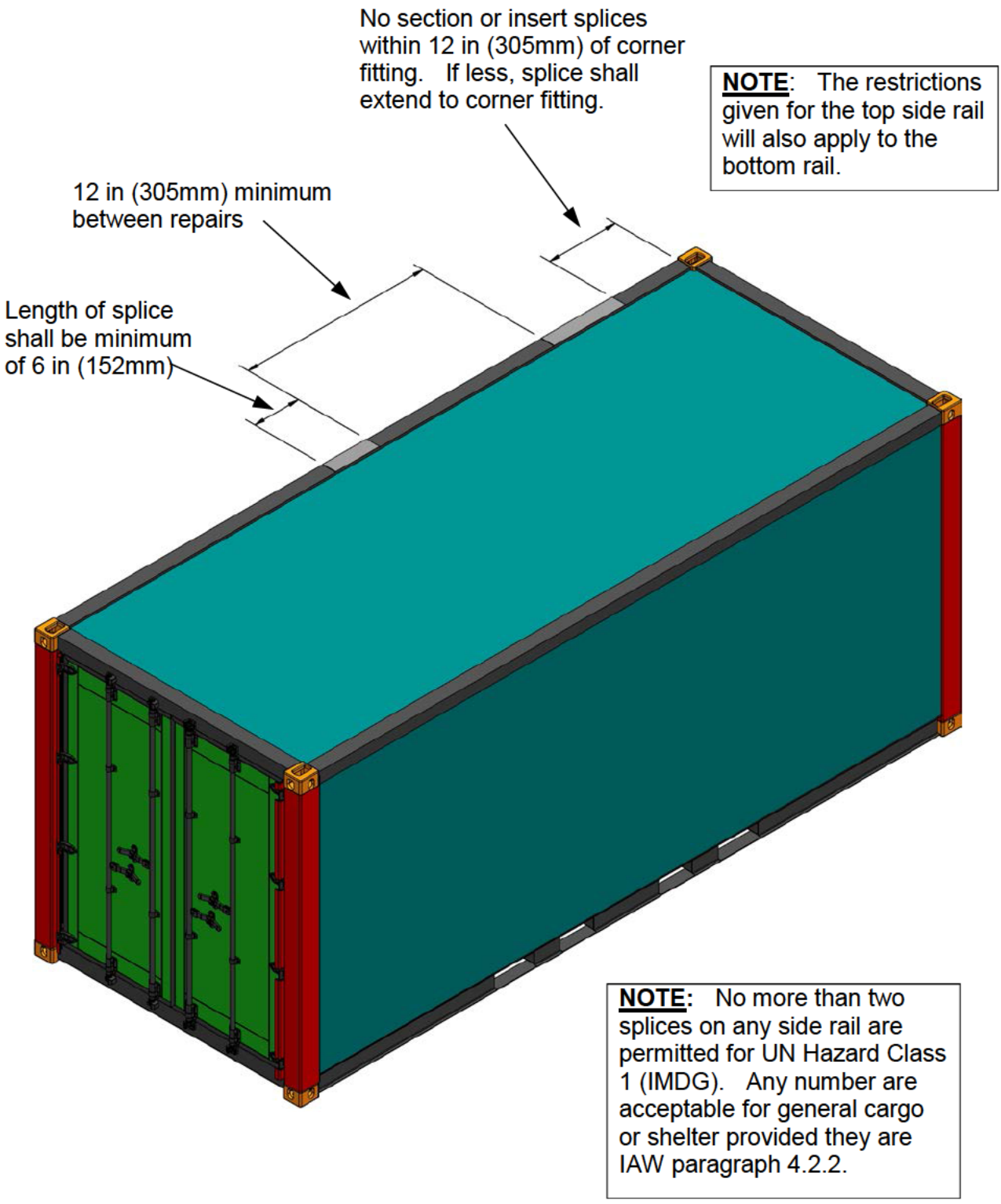
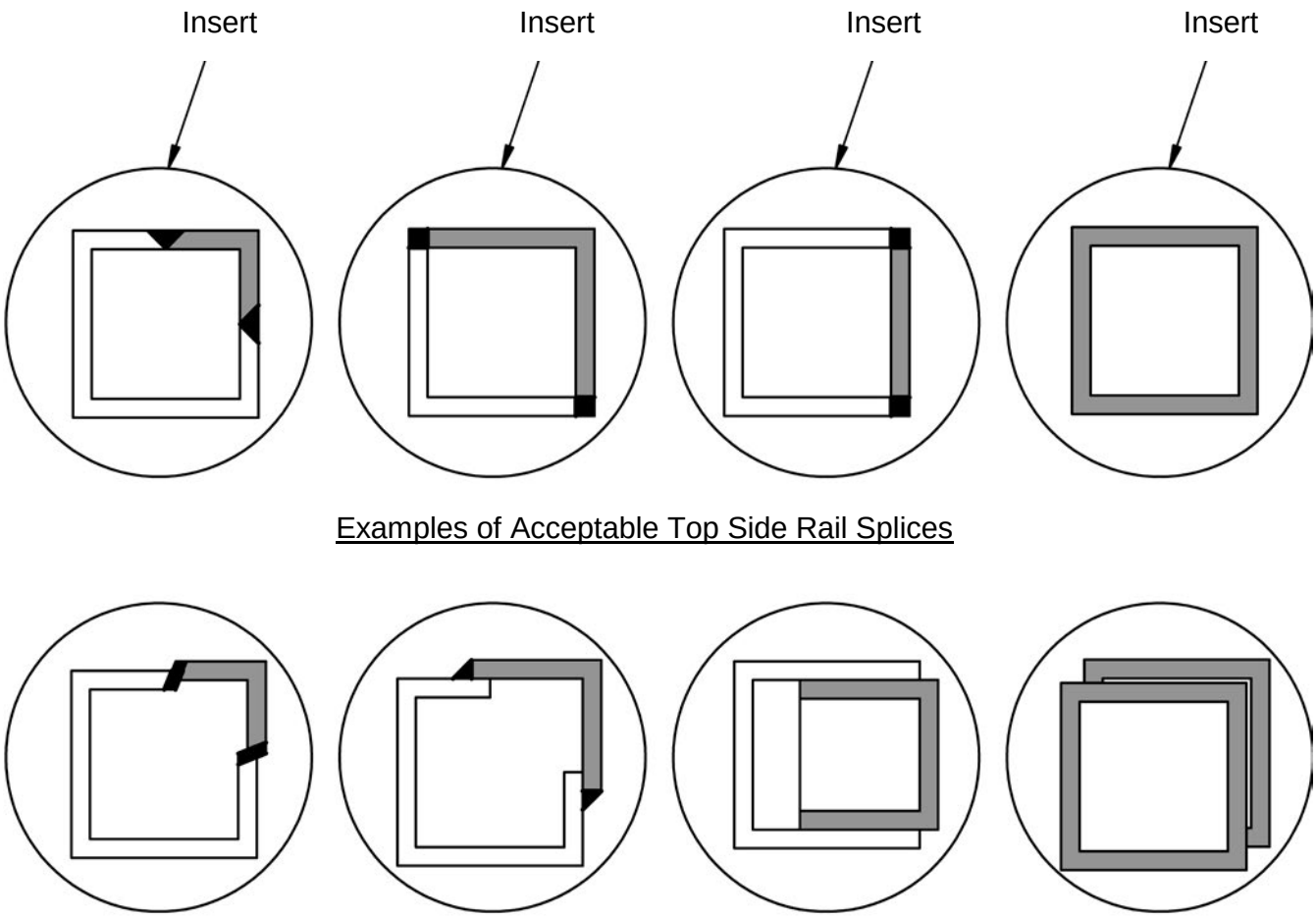


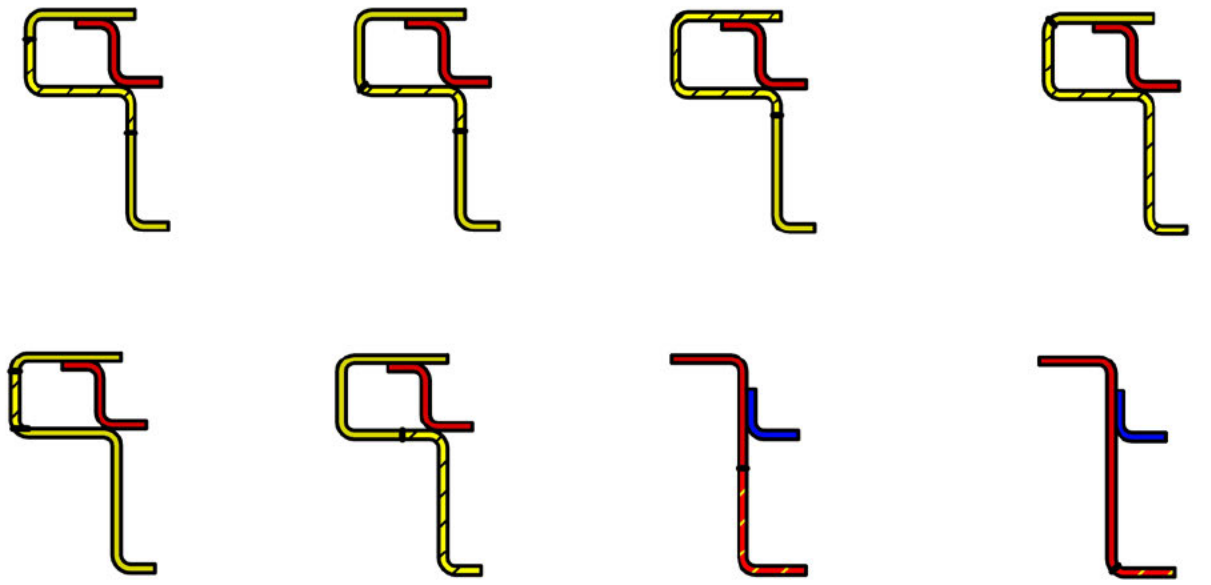
FIGURE 53. Splice limitations for side rails



Examples of Acceptable Top Side Rail Splices

Improper Splices – Inserts Not Flush With Remaining Rail

FIGURE 54. Examples of steel top side rail splices



NOTE: Figures depict cross sectional profiles of bottom side rails. All examples shown are acceptable insert splices. Full profile section splices are also acceptable.

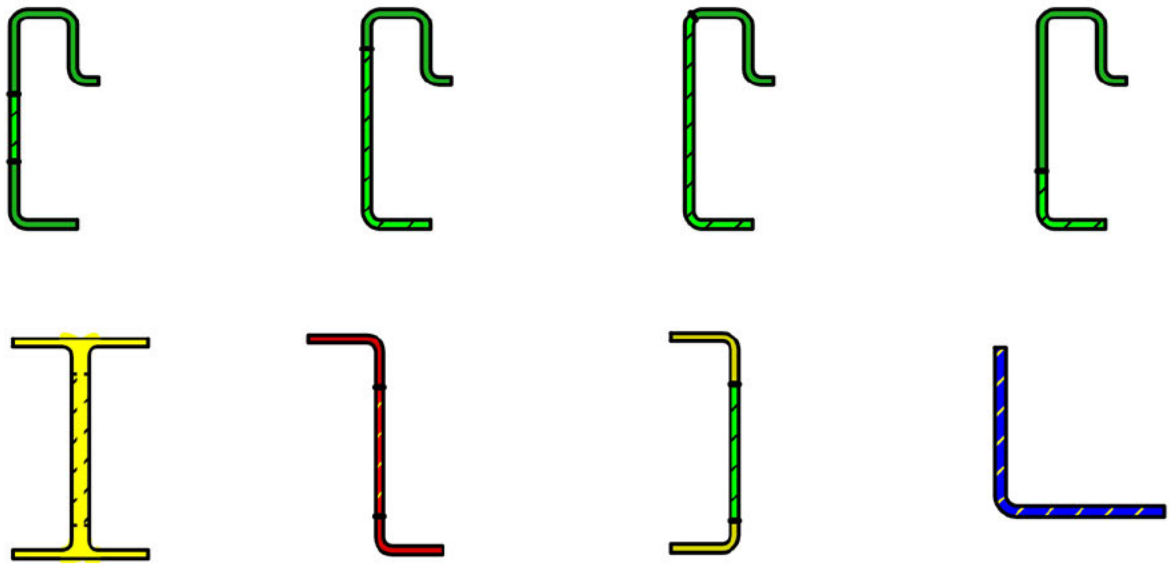


FIGURE 55. Examples of steel bottom side rail splices

4.2.10 Floor cross members. Refer to Figures 56 through 60. Floor cross members are considered to be a part of the primary structure and a container is unacceptable if any floor cross member has any major defect.

4.2.10.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, a major defect includes:

a. A dent or bend in the web of any floor cross member that is greater than 2 in (51mm) in depth, regardless of length;

b. A dent or bend in the bottom flange of any floor cross member that is greater than 1-9/16 inch (40mm) in depth, regardless of length;

c. A dent or bend in the top flange of any floor cross member that is greater than 2 in (51mm) in depth, regardless of length;

d. A crack, break, cut, tear, puncture, or corrosive failure in any floor cross member;

e. A missing, cracked, or broken weld at the juncture with the bottom side rail;

f. A loose or missing fastener at the juncture with the bottom side rail;

g. Any deformation such as a dent, bend or bow that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

h. More than two splices;

i. Any full profile splices, except for those of hot rolled profiles such as I-beams;

j. Any splice in a steel cross member other than a butt welded insert;

k. Any splice on an aluminum cross member other than an overlap riveted splice; or

l. A separation between the top of a cross member and underside of the flooring that is greater than 3/8 in (10mm) at point of attachment.

4.2.10.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping UN Hazard Class 1 (IMDG) (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in any floor cross member that is greater than 3/4 in (19mm) in depth, regardless of length; or

4.2.10.3 Army or Marine Corps shelter. A major defect for an Army or Marine Corps shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in the web of any floor cross member that is greater than 1/2 in (13mm) depth, regardless of length;

b. Any splice on an aluminum cross member other than an welded overlap splice;

4.2.10.4 Navy shelter. A major defect for a Navy shelter includes any of the defects listed above for a general cargo container and also:

a. A dent or bend in the web of any floor cross member that is greater than 1 in (25mm) in depth, regardless of length;

b. A dent or bend in the bottom flange of any floor cross member that is greater than 1-5/8 in (41mm) in depth, regardless of length;

Note: Above criteria also applies to gooseneck tunnel components if present.

4.2.11 Steel cross member juncture with steel side rail. Welding patterns conforming to the original manufacturer's design are acceptable. Only abnormal welding patterns due to damage and/or improper repair are cause for rejection. Typically, the juncture between a cross member and a side rail is welded continuously on one side of the joint. Since welding patterns may vary depending on design and manufacture, inspection should be directed at looking for broken junctures or welded repairs that are not consistent with other corresponding welds of that container.

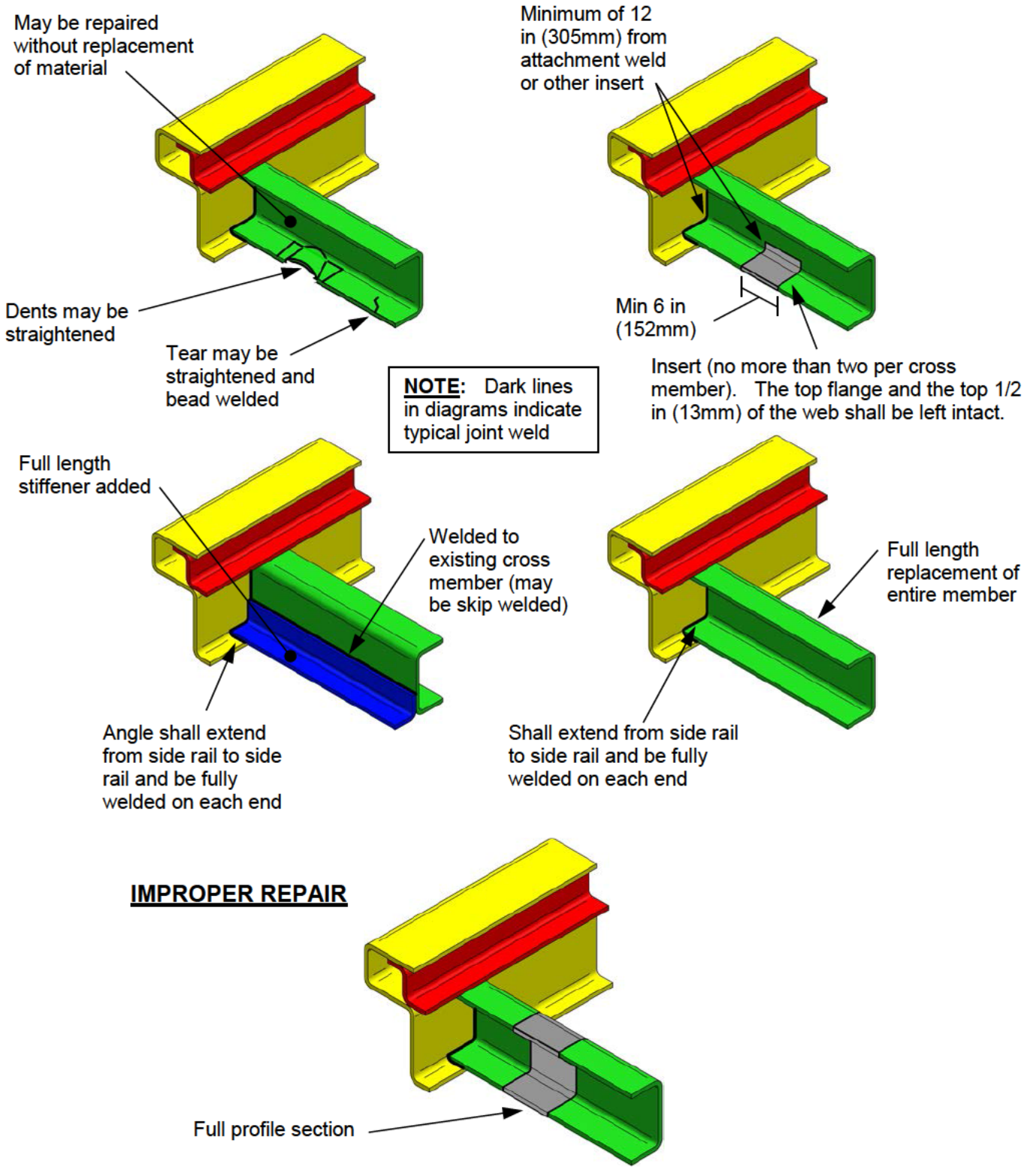
4.2.12 Acceptable splicing on steel cross members. A maximum of two splices per floor cross member is permissible. An acceptable splice is a minimum of 6 in (152mm) long and is a butt-welded insert. If a splice would end within 12 in (305mm) of another weld, such as at the juncture with the bottom side rail, it shall be extended to that weld. An acceptable splice restores the original size and cross-sectional profile of the cross member. The top flange of the cross member securing it to the floor and a minimum of 1/2 in (13mm) of the vertical web shall be left intact. A section through the complete profile is not permitted.

4.2.13 Cross member modifications. When many of the older MILSPEC VANs were overhauled, the middle 17 cross members were strengthened with full length angle stiffeners. Subsequent cross member upgrades were also accomplished with a heavier (7 gauge) cross member replacement. Any combination of these modifications on the same container is acceptable provided other limitations are adhered to and all of the middle 17 cross members have been upgraded with either a stiffener or a 7 gauge cross member. Any number of full length angle stiffeners are also permissible on other types of containers, but not required. Each stiffener shall extend the full length of the cross member, be fully welded to the bottom side rails on each end, and not protrude beneath the surface of the lower edge of the bottom side rails.

4.2.14 Gussets and end rail stiffeners. There are no specific dent or bend limitations for gussets and end rail stiffeners. Dents and bends not affecting the structural integrity of the container are permissible. A container is unacceptable if any weld is broken, if there are any loose or missing fasteners, or a gusset or stiffener is missing, broken, cut, torn or punctured. Refer to Figure 60.

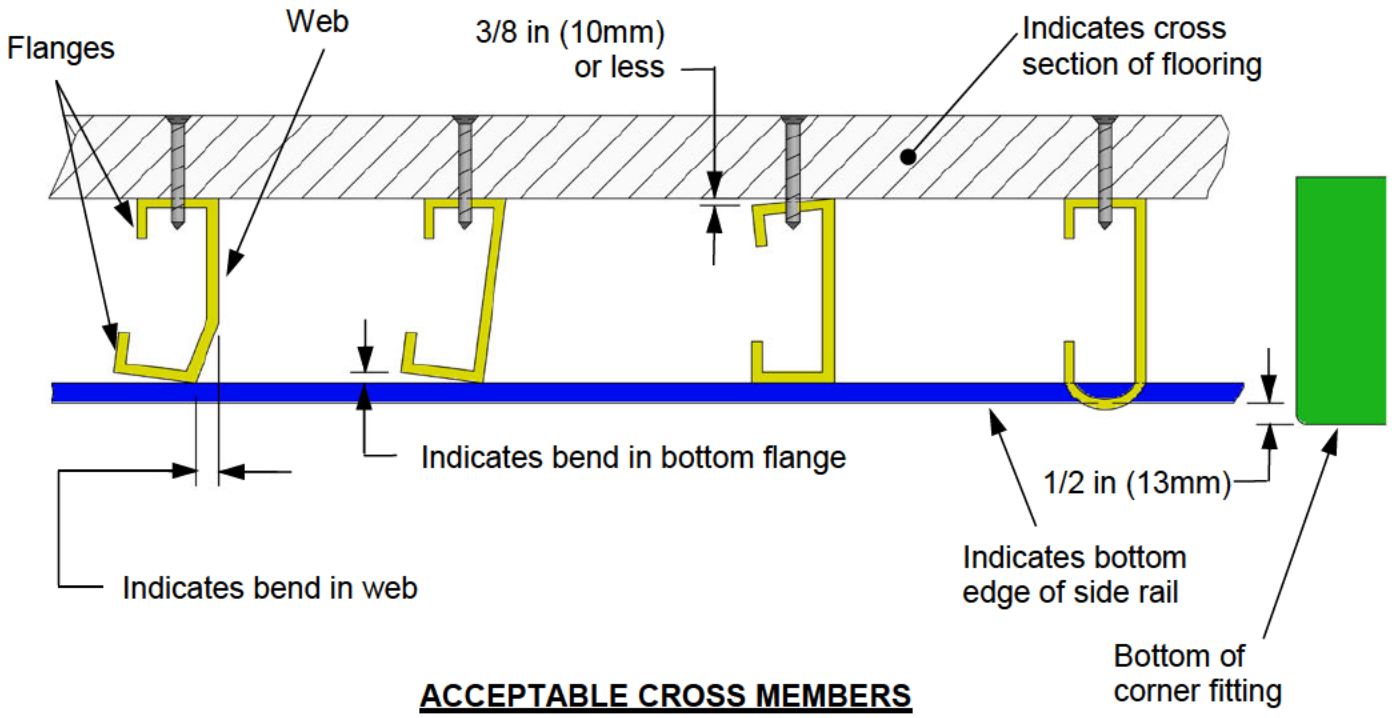
4.2.15 Structural integrity of understructure. Slightly oxidized (rusted), twisted, bent, dented, or bowed floor cross members are not a cause for rejection provided criteria of paragraph 4.2.10 is met, welds are not broken, and in the judgment of the inspector, the structural integrity of the container has not been reduced beyond safe limits. If the strength of the floor is in doubt, the dynamic floor weight test specified in Annex II of the International CSC should be conducted to ascertain that: the understructure does not deflect more than 1/4 in (6mm) below the bottom surfaces of the bottom corner fittings; no component is permanently deformed; and no component or weld fails.

ACCEPTABLE REPAIRS



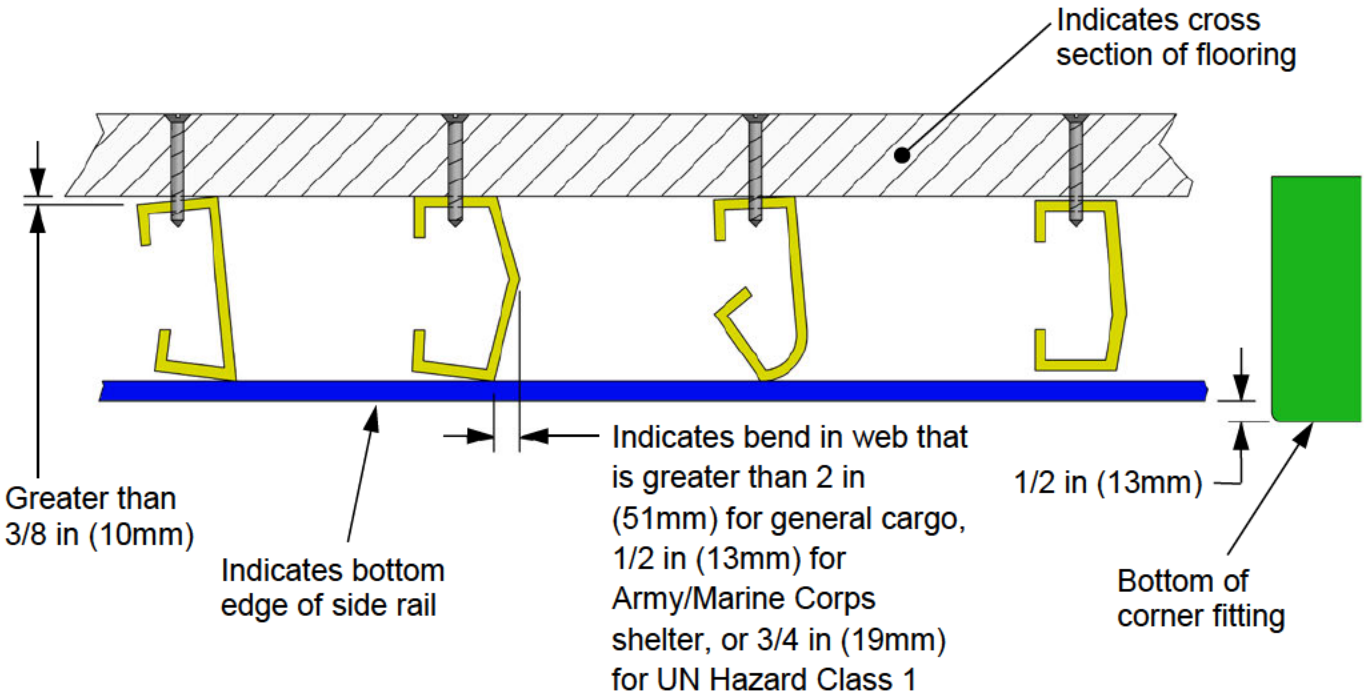
IMPROPER REPAIR

FIGURE 56. Steel cross member repair limitations



ACCEPTABLE CROSS MEMBERS

Note: Criteria of paragraph 4.2.10 shall be met and cross member shall not protrude beneath the bottom surfaces of the bottom corner fittings



UNACCEPTABLE CROSS MEMBERS

FIGURE 57. Dent and bend limitations for cross members

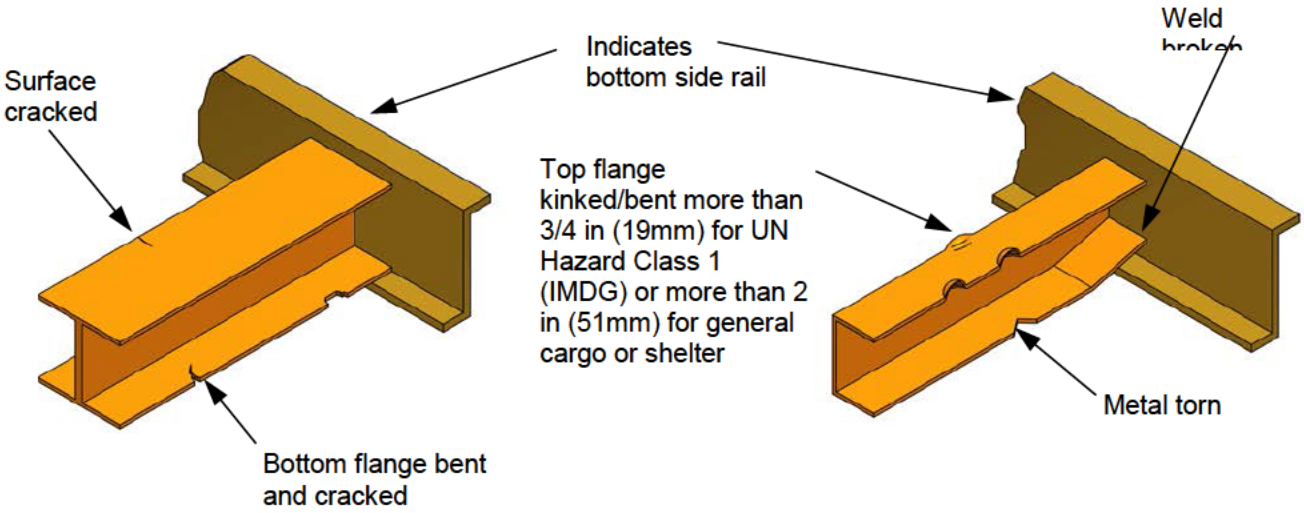


FIGURE 58. Unacceptable steel cross member damage requiring rail replacement

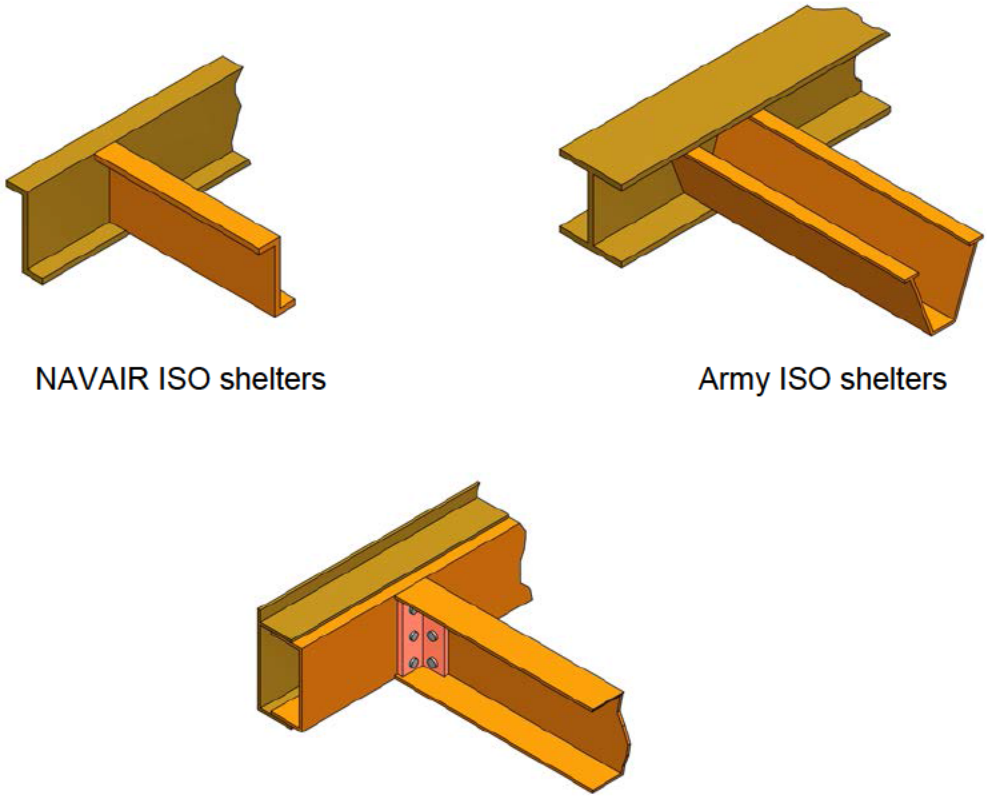


FIGURE 59. Typical cross member configuration (ISO shelters)

NOTE: There are no specific dent or bend limitations for gussets and stiffeners. Welds shall not be broken and components shall not be missing, broken, cut, torn, or punctured.

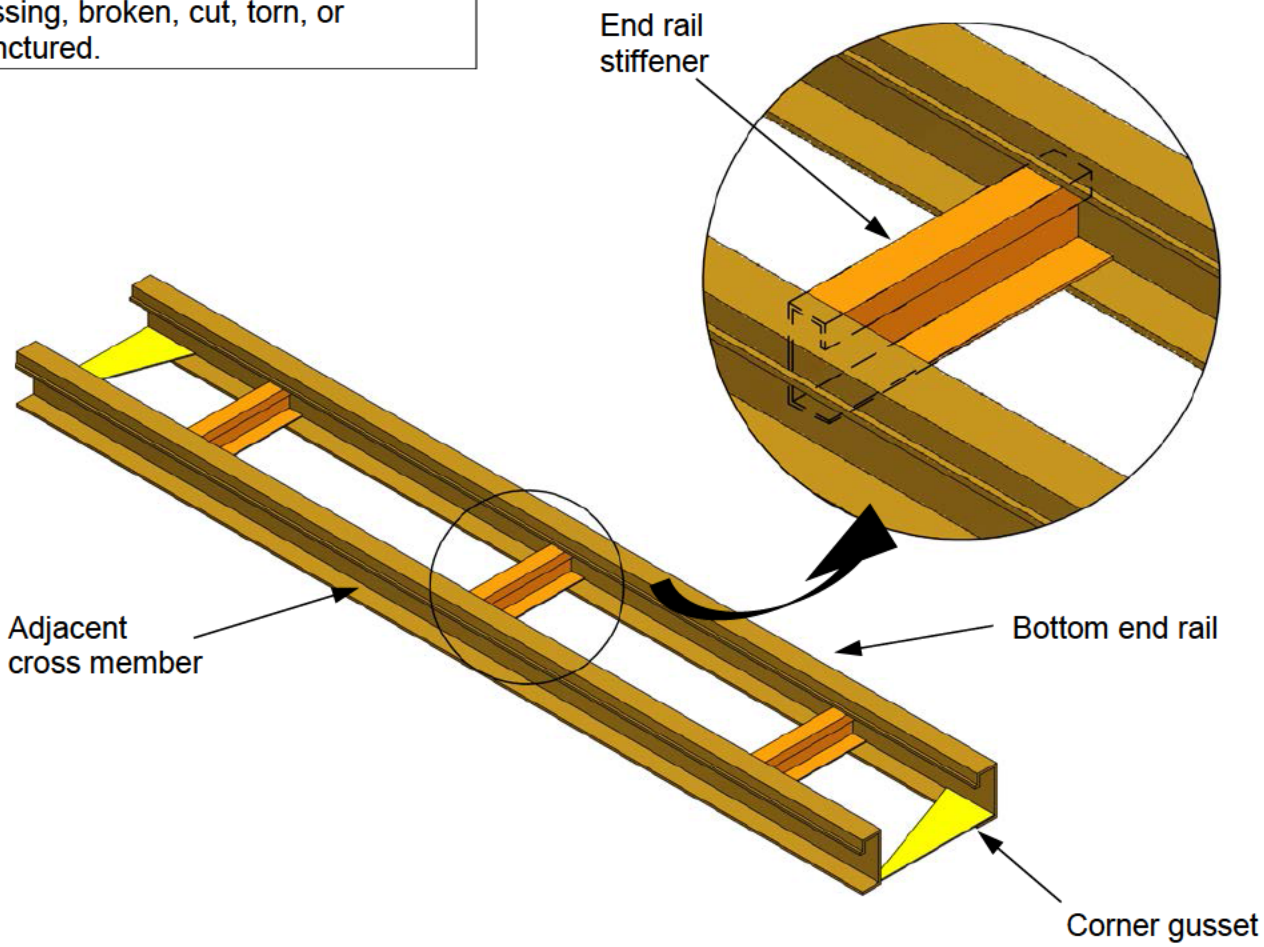


FIGURE 60. Gussets and end rail stiffeners on steel

4.2.16 Forklift pocket. Refer to Figure 61. Forklift pockets are considered by DOD to be a part of the primary structure and a container is unacceptable if a forklift pocket has any major defect.

4.2.16.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, a major defect includes:

a. A dent or bend in the side of the forklift pocket that is greater than 2 in (51mm) in depth, regardless of length;

b. A dent or bend in any tunnel plate or forklift pocket strap that is greater than 2 in (51mm) in depth, regardless of length; or

c. A crack, break, cut, tear, puncture, or corrosive failure in any component forming the forklift pocket;

d. A missing, cracked, or broken weld at the juncture with the bottom side rail;

e. A loose or missing fastener at the juncture with the bottom side rail;

f. Any deformation such as a dent, bend or bow which prevents use of fork tines or that is in excess of ISO external dimensional tolerances as depicted in Figure 44;

g. More than two splices or an improper splice in any cross member forming the side of a forklift pocket; any full profile splice.

h. Any splice in a steel rail other than a butt welded insert splice;

i. Any splice on an aluminum rail other than an overlap riveted splice;

j. Any splice in a forklift pocket strap; or

k. Any damage or degradation (such as a broken strap) that would prevent safe handling by forklift equipment and could place any person in danger during subsequent handling, stacking, or transport of the intermodal container.

4.2.16.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping UN Hazard Class 1 (IMDG) (explosive) items, a major defect includes any of the defects listed above for a general cargo container and also a dent or bend in any component of the forklift pocket that is greater than 3/4 in (19mm) in depth, regardless of length.

4.2.16.3 Army, Marine Corps or Navy shelter. A major defect for an Army, Marine Corps or Navy shelter includes any of the defects listed above for a general cargo container and also a dent or bend in the side of the forklift pocket that is greater than 1 in (25mm) in depth, regardless of length.

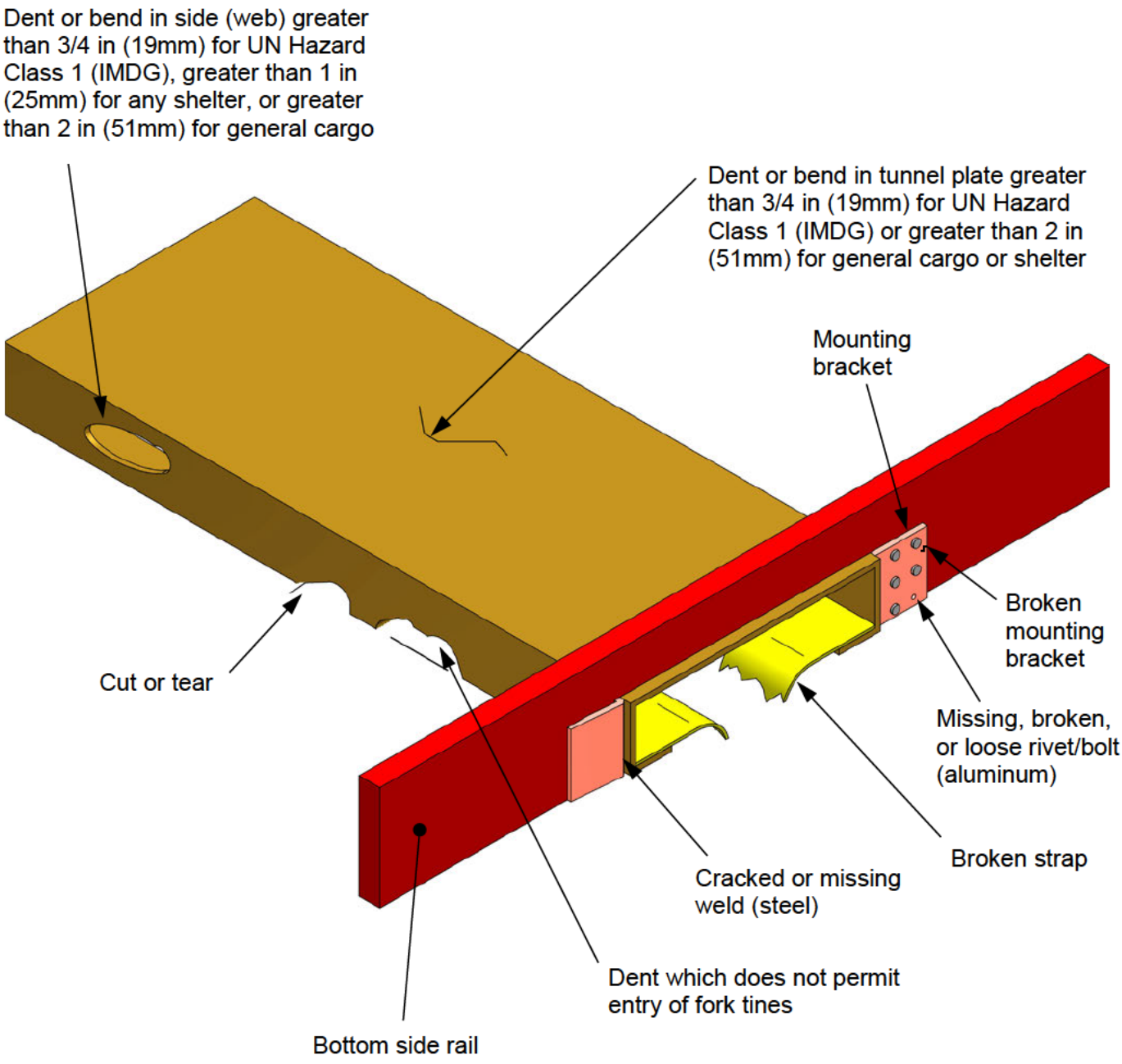


FIGURE 61. Examples of forklift pocket damage

4.2.17 Special container hardware. Refer to Figures 62 and 63.

4.2.17.1 Collapsible flatrack end wall. The end wall locking hardware for collapsible type flatracks shall not be seized, twisted, broken, missing or otherwise inoperative. Any twist, dent or bend that renders the folding end wall inoperable is cause for rejection.

4.2.17.2 Open-top swinging header. Header pins shall not be seized, twisted, broken, missing, or otherwise inoperative. Any twist, dent or bend that renders the header inoperable is cause for rejection. If the container is to be used for shipping general cargo, or is any type of shelter, the header may have any number of proper splices but shall not have any dents or bends greater than 1-3/8 in (35mm) in depth, regardless of length. If the container is to be used for shipping UN Hazard Class 1 (IMDG) (explosive) items, the header shall not have more than one splice and shall not have any dents or bends greater than 3/4 in (19mm) in depth, regardless of length. Splices may not interfere with the operation of anti-rack hardware.

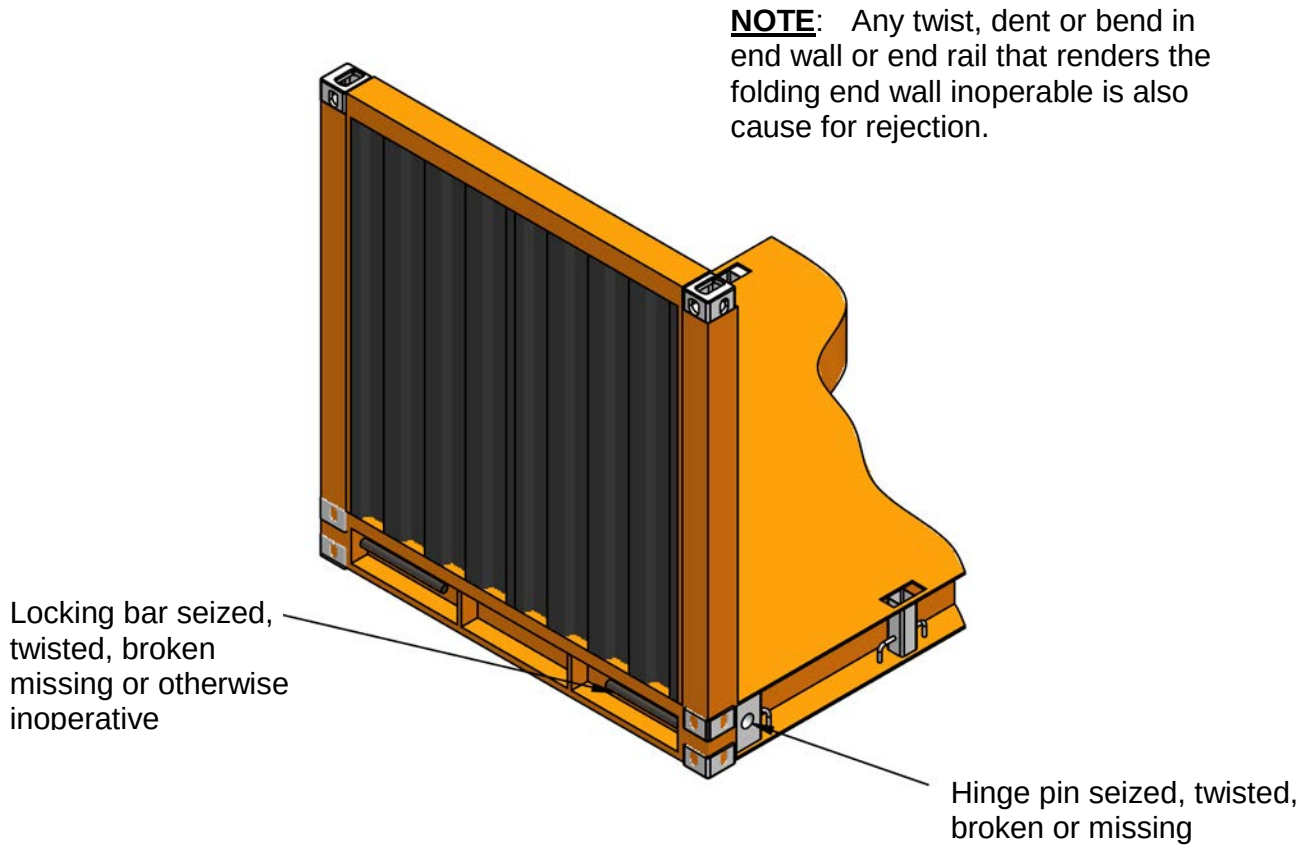


FIGURE 62. Examples of flatrack end wall damage

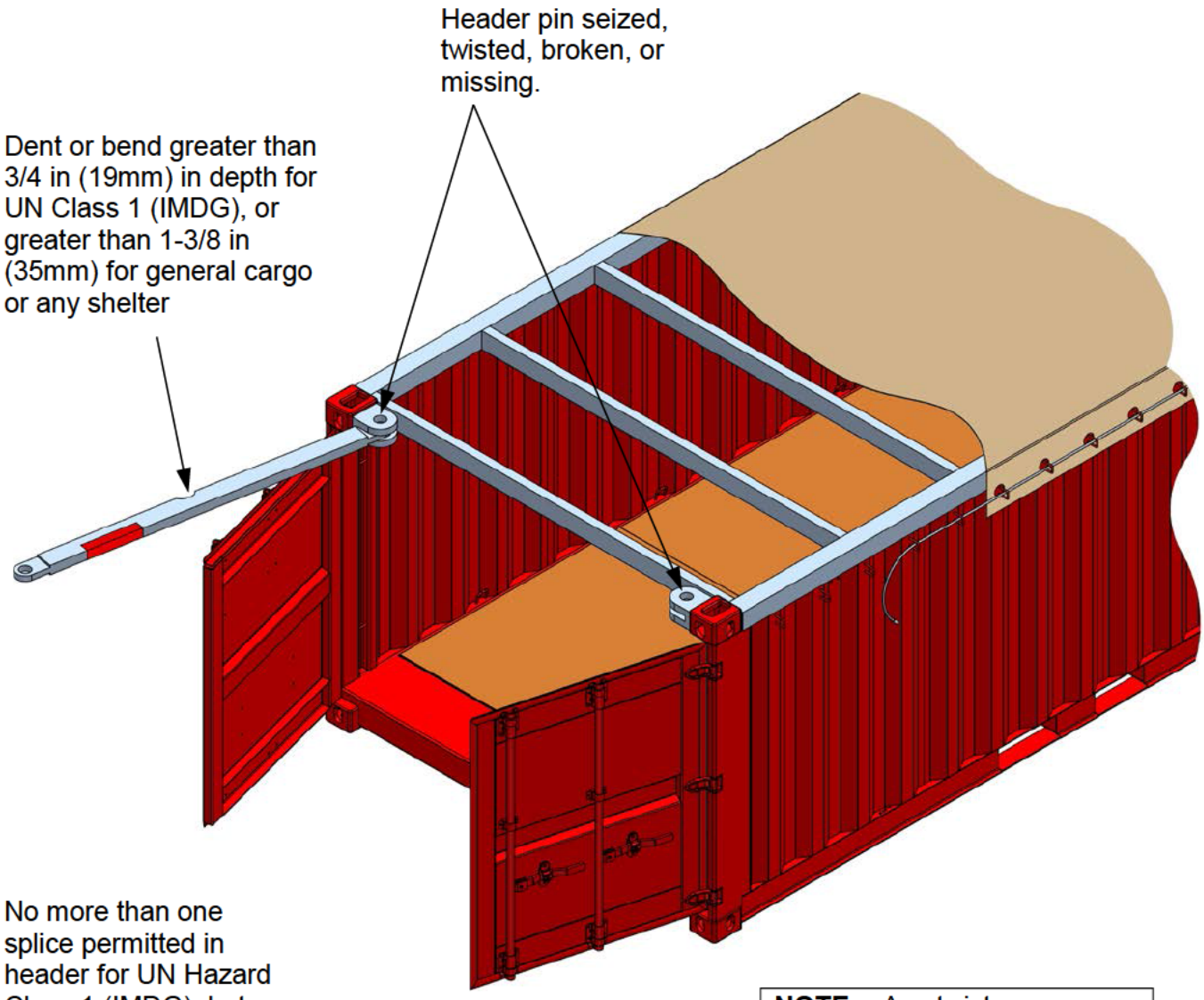


FIGURE 63. Swinging header damage

4.3 Non-structural components. For purposes of this criteria, non-structural components are items such as wall, roof, and door panels or hardware that are not otherwise specifically identified as primary (main) structural components (members).

4.3.1 Serviceability of panels. Normal wear including oxidation (rust), slight dents and scratches, and other damage that does not affect serviceability or the structural integrity of the container is permissible. Pinhole light leaks or porosity in seam welds between panels or in edge welds around perimeter of wall, or roof panels and pin hole light leaks around door panels are permissible.

4.3.2 Acceptable patching. See Figures 64, 65, 67 and 70. Repairs (patches) in wall, roof, or door panels are permissible and may either be an overlapping lap-welded type, an overlapping buck-riveted type, or inserted butt-welded type of repair. Lap-welded patches should overlap existing panel by at least 1/2 in (13mm). Riveted patches should overlap existing panel by at least 2 in (51mm). Butt-welded patches should be flush fitting. All repairs on corrugated sections shall be neatly made, have a similar cross sectional profile, and not affect the structural integrity of the container. All repairs, regardless of size, shall be of a permanent nature and shall seal against the ingress of water. Rivets or other special fasteners used for affixing patches to panels should be of a closed or blind mandril design. Use of hollow core pop rivets for repair of steel containers shall be limited to doors of MILSPEC VANs and shall be caulked to prevent water seepage. There is no limit on the number of patches on a wall, roof, or door panel, provided the structural integrity of the container is not impaired. Patches shall not overlap other patches.

Note: Small holes and tears in steel walls may be repaired with bead welding.

4.3.3 Side and end wall panels. A container is unacceptable for shipping any kind of cargo if a wall panel has any of the following deficiencies:

4.3.3.1 General cargo container (non IMDG). If the container is to be used for shipping general cargo or is a shelter, deficiencies includes:

a. Any hole, tear, puncture, or corrosive failure in the panel, regardless of the material of construction;

b. Any broken weld at juncture with main structural rail or corner post;

c. Loose or missing fastener in aluminum, sandwich, or FRP panel that is separated by less than 48 in (1219mm) in any direction from another loose or missing fastener;

d. Inward bulging or denting of the panel that reduces cargo space by more than 2 in (51mm) in any direction or that impedes cargo loading;

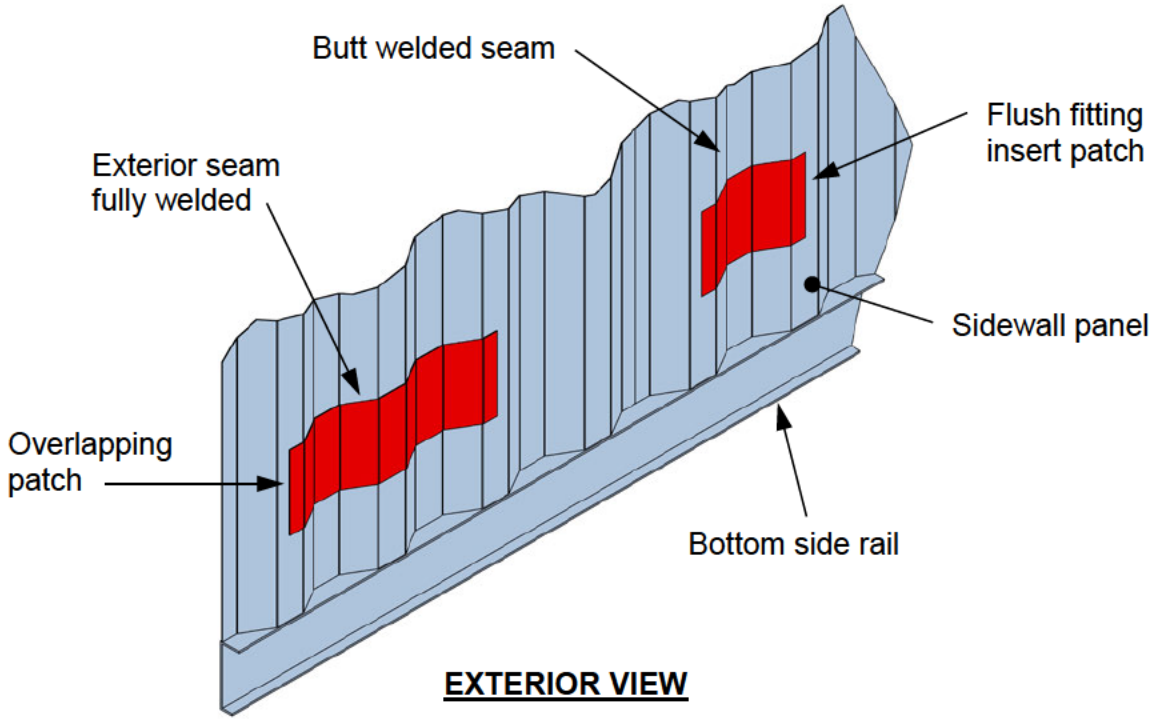
e. Outward bulging of the panel that extends beyond the outside surfaces of the corner fittings;

f. Delamination of the panel that is greater than 5 in (127mm) in diameter; or

g. Any missing or loose parts or fasteners.

4.3.3.2 UN Hazard Class 1 container (IMDG). If the container is to be used for shipping

UN Hazard Class 1 (IMDG) (explosive) items, deficiencies includes any of the defects listed above for a general cargo container and also inward bulging or denting of the panel that reduces cargo space by more than 1-1/2 in (38mm) in any direction or that impedes cargo loading.



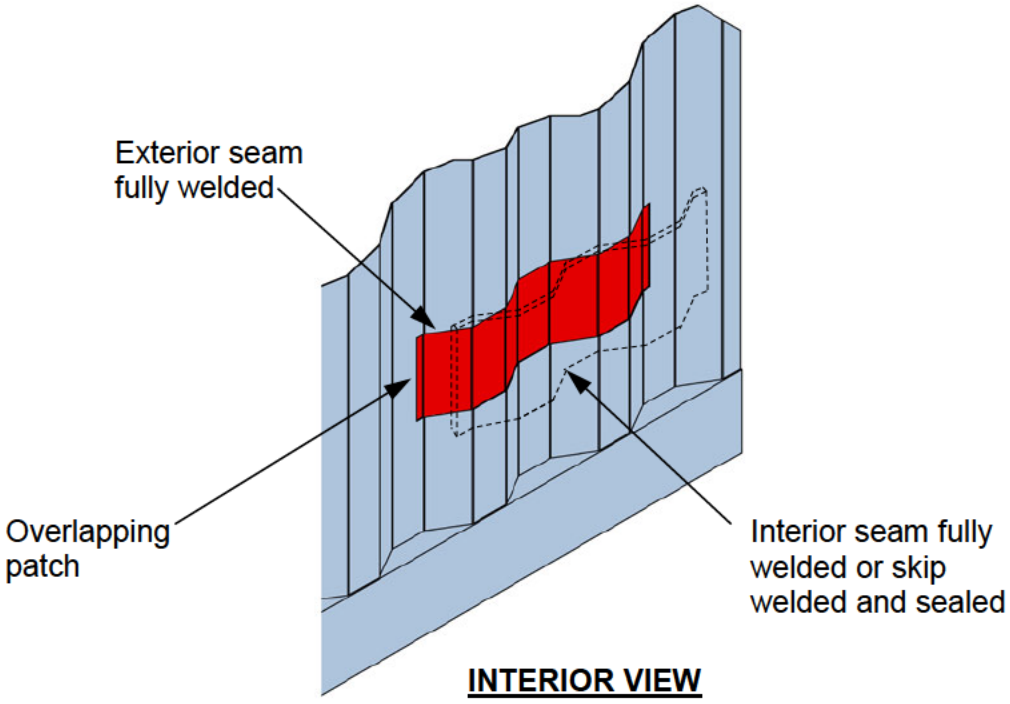


FIGURE 64. Acceptable wall patches (steel panel)

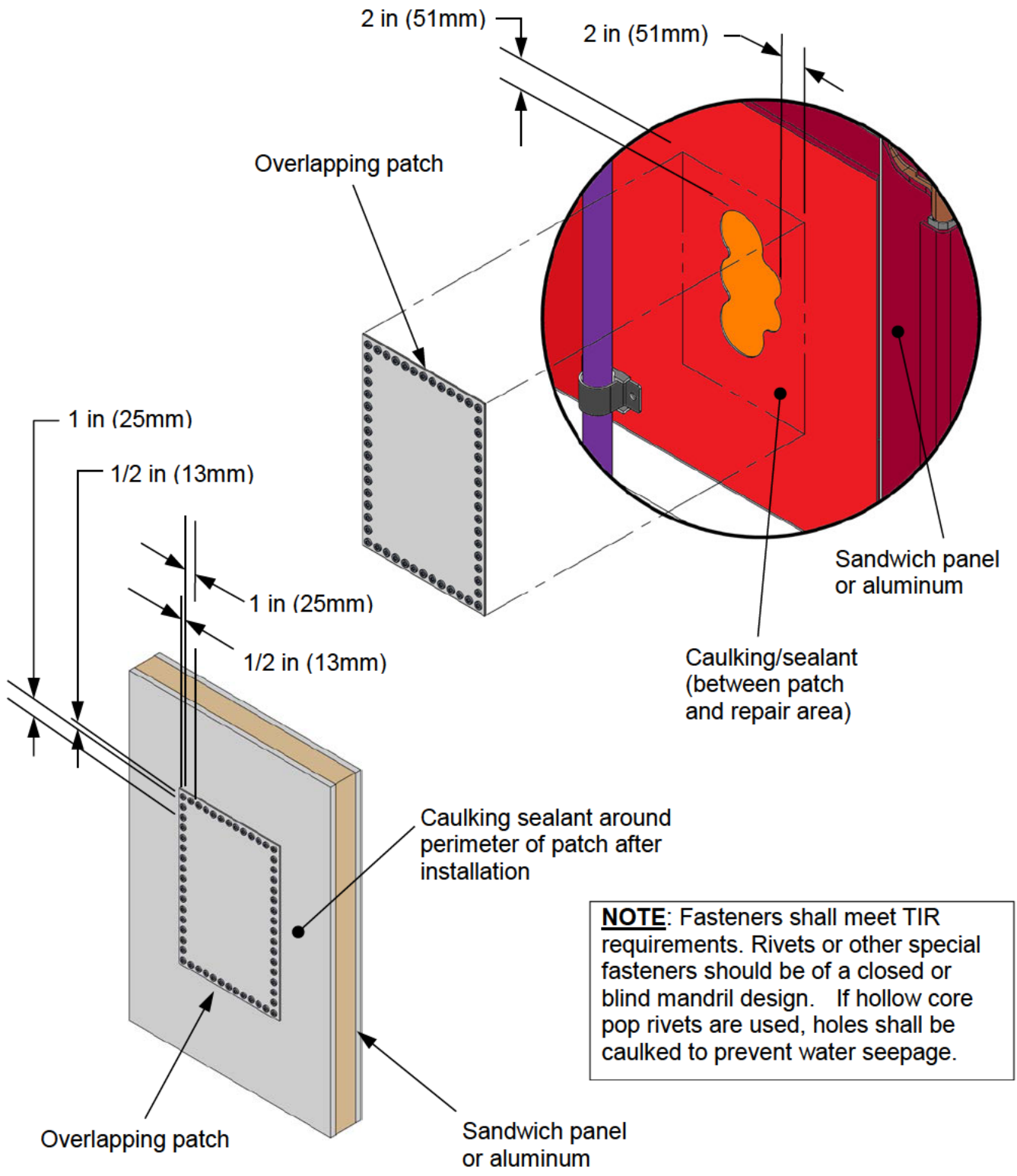


FIGURE 65. Acceptable wall, roof and floor patches (sandwich or aluminum panel)

4.3.4 Closed roof assembly. Refer to Figures 66 and 67. A container is unacceptable for shipping any kind of cargo if a roof assembly has any of the following deficiencies:

a. Any hole, tear, puncture, or corrosive failure in a panel, regardless of the material of construction;

b. Any broken weld at juncture with top rail or corner fitting;

c. Loose or missing fastener in aluminum, sandwich or FRP panel that is separated by less than 48 in (1219mm) in any direction from another loose or missing fastener;

d. Inward bulging or denting of a panel, corner protection plate, or header extension plate that reduces cargo space by more than 2 in (51mm) or that restricts cargo loading;

e. Outward bulging of a panel that extends beyond the top surface of the top corner fittings;

f. Any roof bow or beam missing, cut, broken, or has a weld or bracket torn loose from the top side rail; or

g. Delamination of the panel that is greater than 5 in (127mm) in diameter.

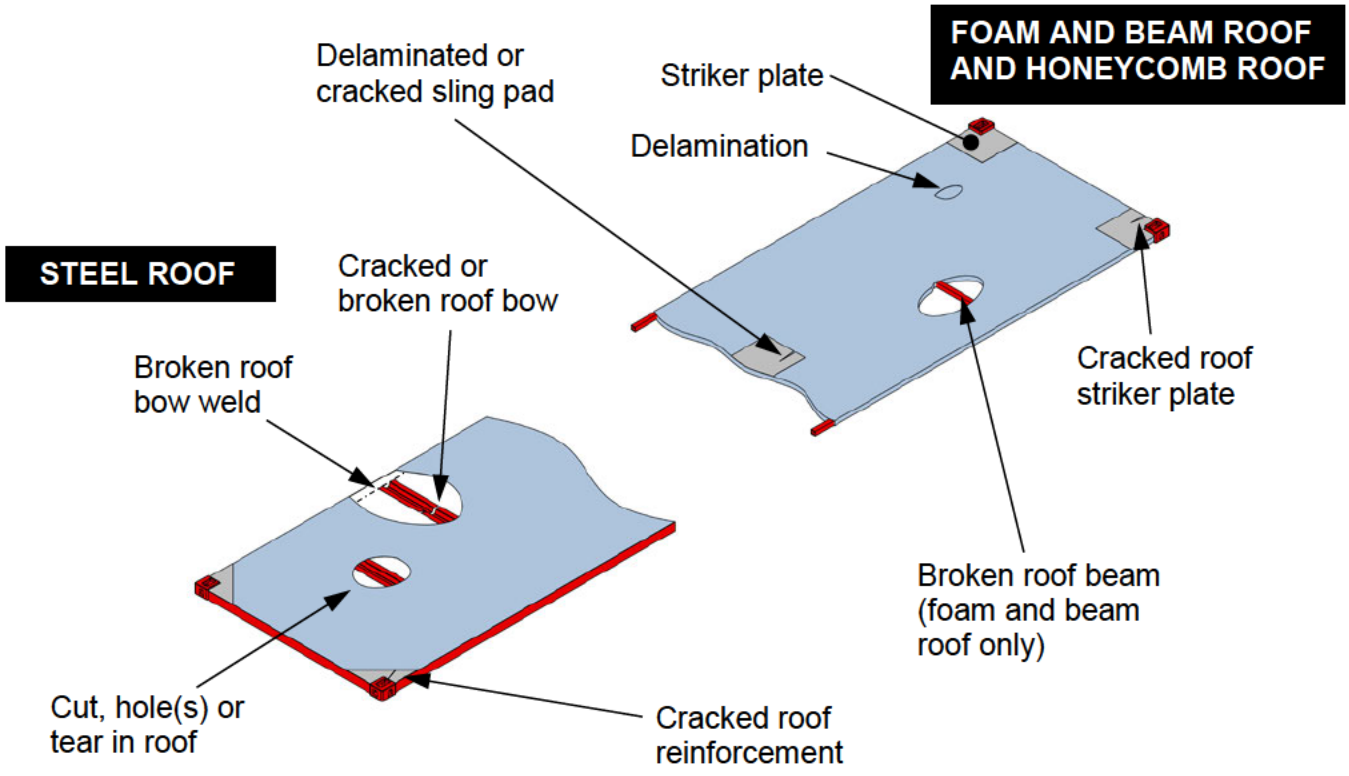
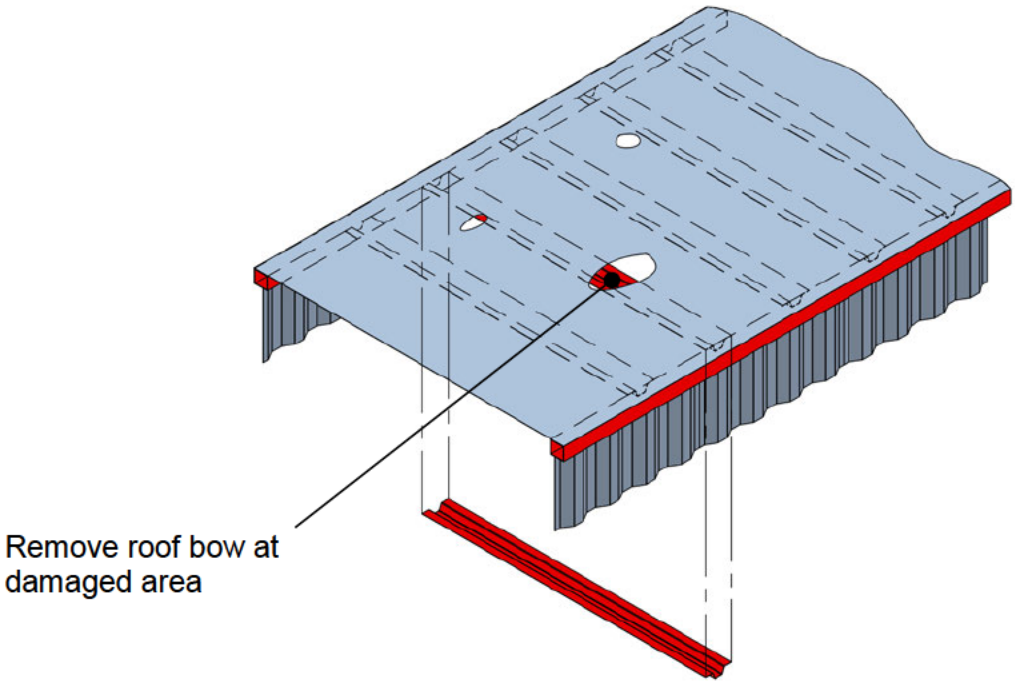
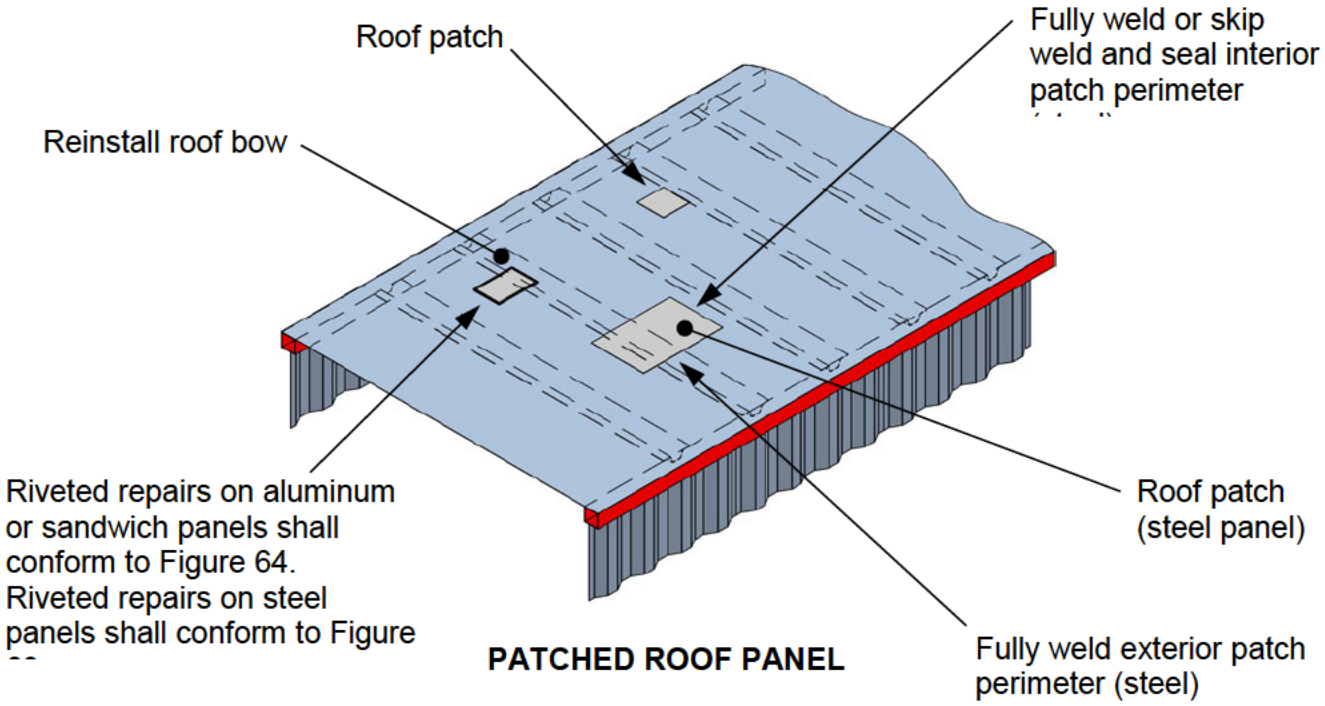


FIGURE 66. Roof assembly damage damaged roof panel



DAMAGED ROOF PANEL



PATCHED ROOF PANEL

NOTE: Any repairs or patches shall be of a permanent nature (such as welding or riveting).

FIGURE 67. Repaired roof assembly

4.3.5 Removable cover (tarp) assembly. Refer to Figure 68. Removable roof bows, tarp and TIR cable are used with an open top container. They shall be inspected to ensure serviceability and weatherproof integrity when installed on the container. A container is unacceptable for shipping any kind of cargo if any of the following deficiencies are evident:

a. A roof bow is missing or is damaged and cannot be installed properly;

b. Any hole or tear in the tarp;

c. Tarp does not prevent seepage of water;

d. Tarp cannot be affixed to the upper portion of the container with a TIR customs approved sealing technique;

e. Reinforced eyelets in perimeter of tarp not fitting (nesting) correctly over corresponding loops welded on the side panels, end panels, and doors;

f. Welded loops missing, broken, or deformed so TIR cable (plastic sheathed wire rope) cannot be threaded through all of them;

g. TIR cable damaged beyond use; or

h. Terminal on the end of the TIR cable unusable or missing.

4.3.6 Serviceability of cover (tarp) assembly. Neatly made repairs (patches) in the tarp are permissible provided they are of similar material and seal against the penetration of water. All repairs, regardless of size, shall be of a permanent nature such as a heat-sealed vinyl patch. Patches shall not overlap other patches. Cracked or missing sections of the plastic sheathing on the TIR cable are acceptable provided the wire rope core is not broken and the cable can be properly installed.

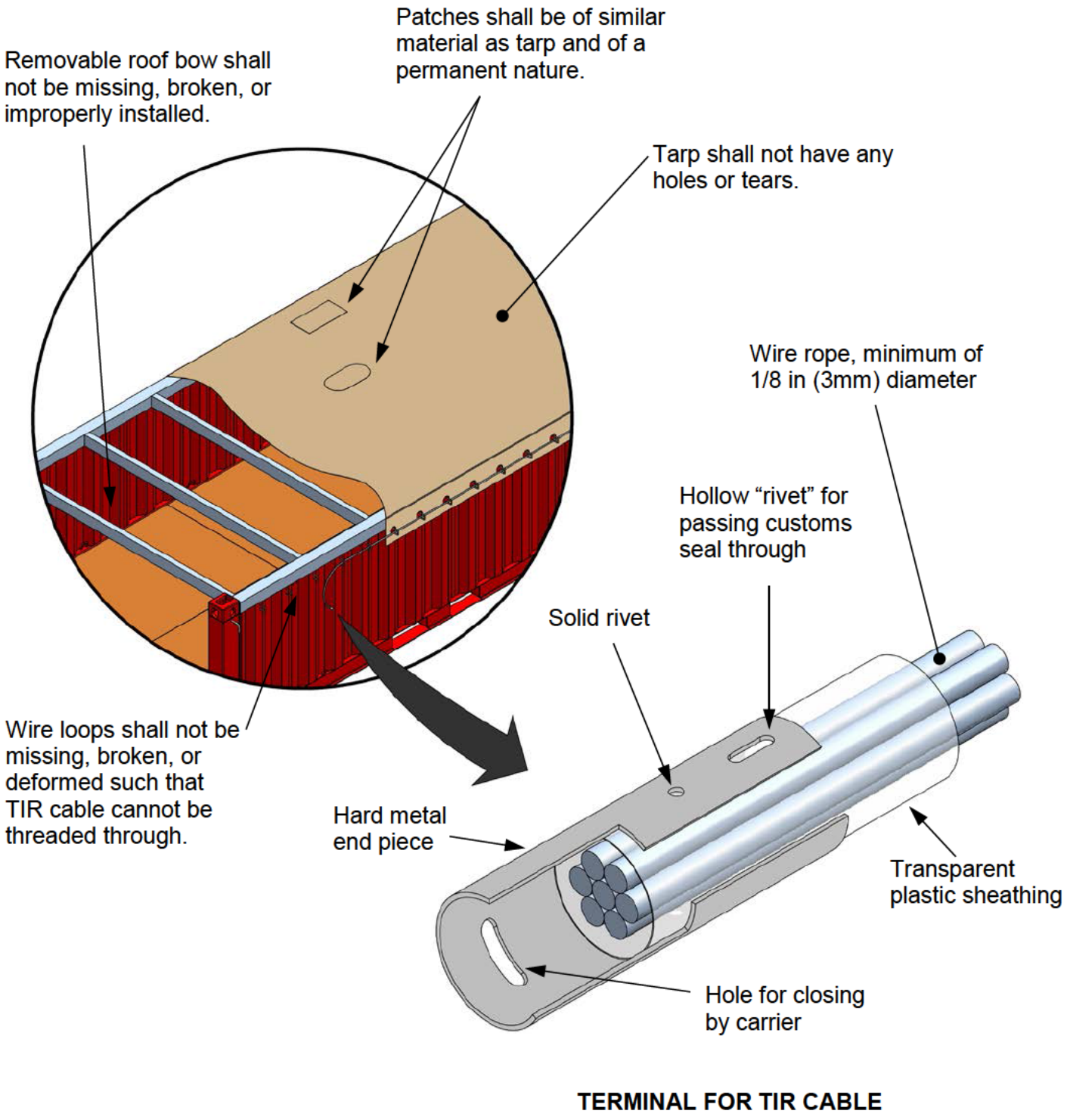


FIGURE 68. Removable cover (tarp) assembly

4.3.7 General type door assembly. Refer to Figures 69 through 73. A container is unacceptable for shipping any kind of cargo if a door assembly has any of the following deficiencies:

a. Any hole, tear, puncture, or corrosive failure in a door panel, regardless of the material of construction;

b. Inward bulging or delamination of a door panel that reduces cargo space by more than 1-1/2 in (40mm) or that restricts cargo loading;

c. Outward bulging or delamination of a door panel that causes any portion of the door assembly to extend beyond the outside surfaces of the corner fittings;

d. Any seized, twisted, broken, missing, or otherwise inoperative door hardware including hinges, hinge pins, locking bars, locking bar mounting brackets, cams, cam retainers, handles, and handle retainers;

e. Broken or defective welds, loose or missing fasteners on anti-rack hardware;

f. Less than two hinge assemblies per door, including bolts and hinge pins, welded or otherwise affixed in such a manner to preclude removal or dismantling of the door without leaving obvious traces;

g. Top and bottom mounting brackets or handle retainers not of a tamper-evident design;

h. Customs catch broken or missing; or

i. Door gasket missing, torn, or severely deformed.

4.3.8 Ramp type door. Refer to Figure 74. The criteria described for general type door assembly (refer to paragraph 4.3.7) also applies to ramp type doors. All special hardware, including locking bolts, safety catches and chains shall not be seized, twisted, broken, missing, or otherwise inoperative. Any twist, dent, bend or other damage that restricts proper door operation is cause for rejection.

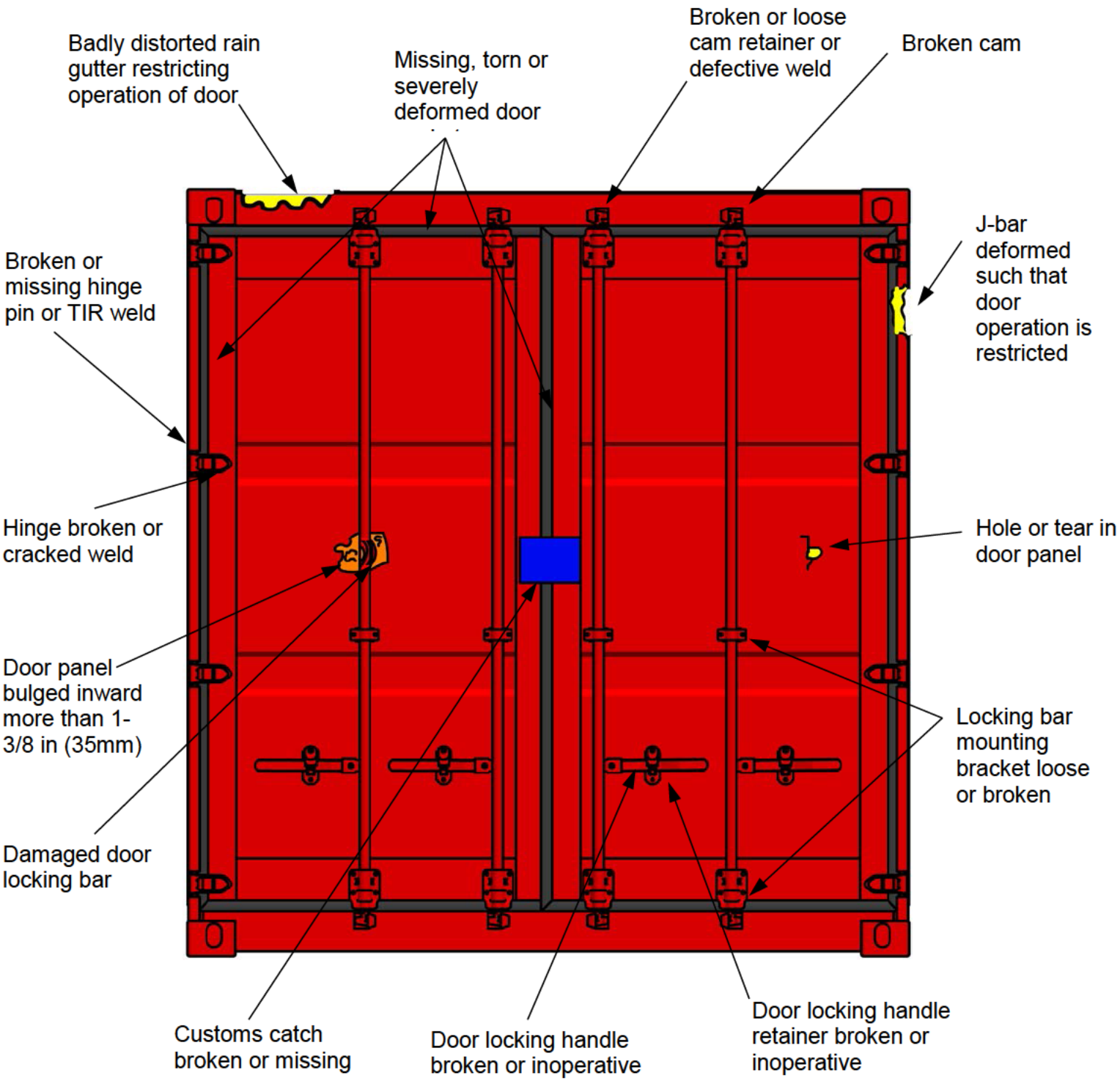
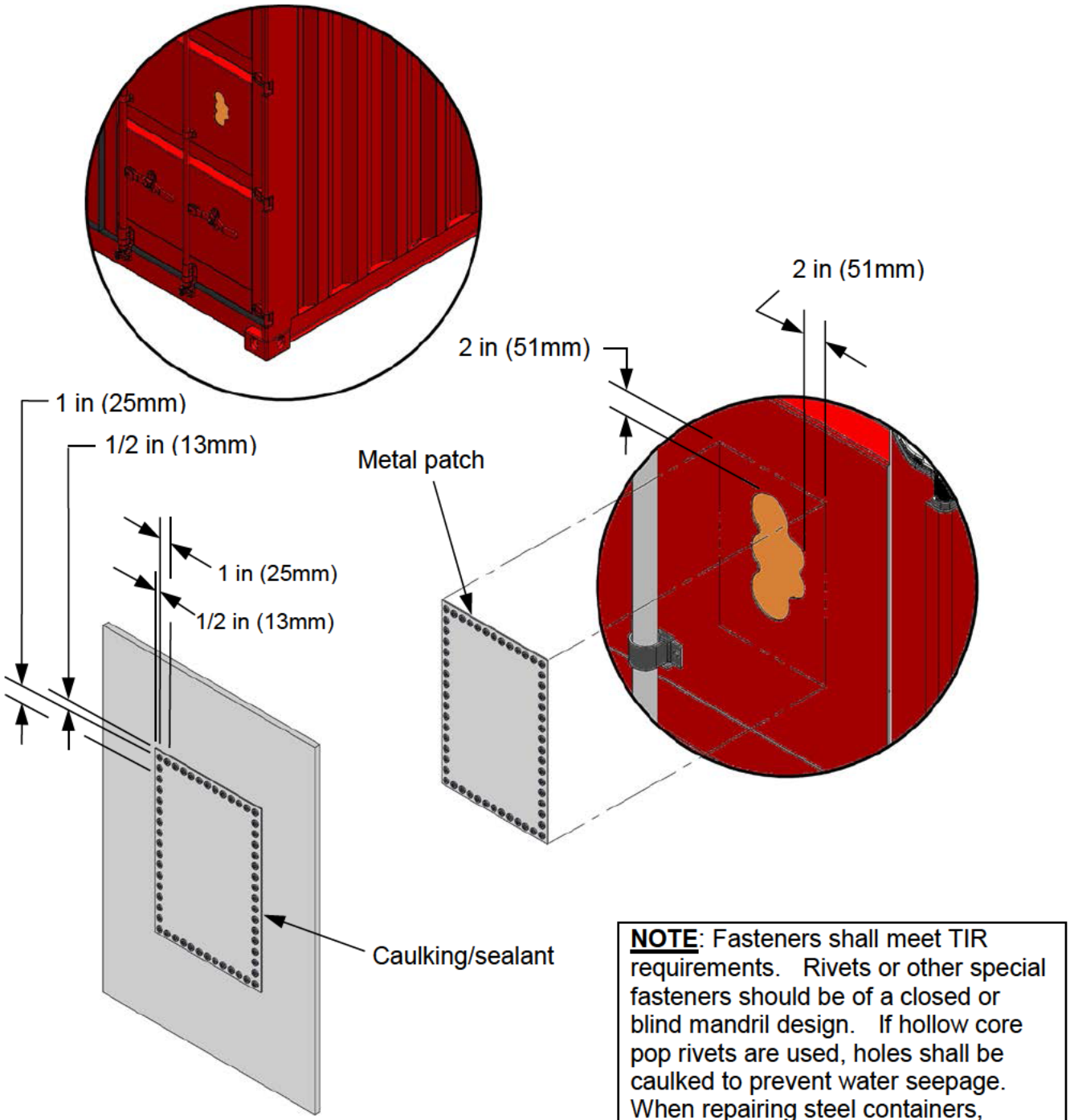


FIGURE 69. Rear end door assembly damage



NOTE: Fasteners shall meet TIR requirements. Rivets or other special fasteners should be of a closed or blind mandril design. If hollow core pop rivets are used, holes shall be caulked to prevent water seepage. When repairing steel containers, hollow core pop rivets may be used only on MILSPEC VAN doors.

FIGURE 70. Patched door panel

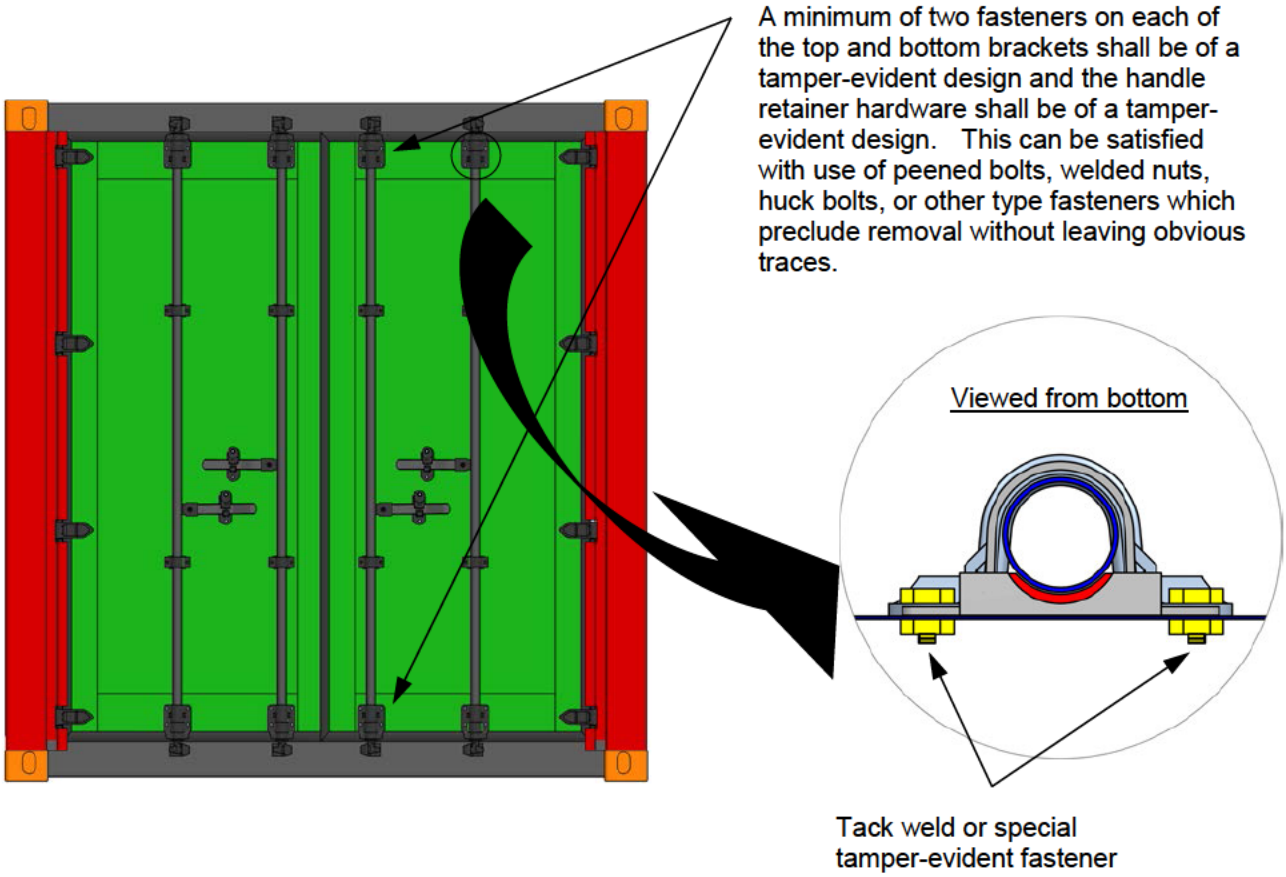


FIGURE 71. TIR requirements for brackets

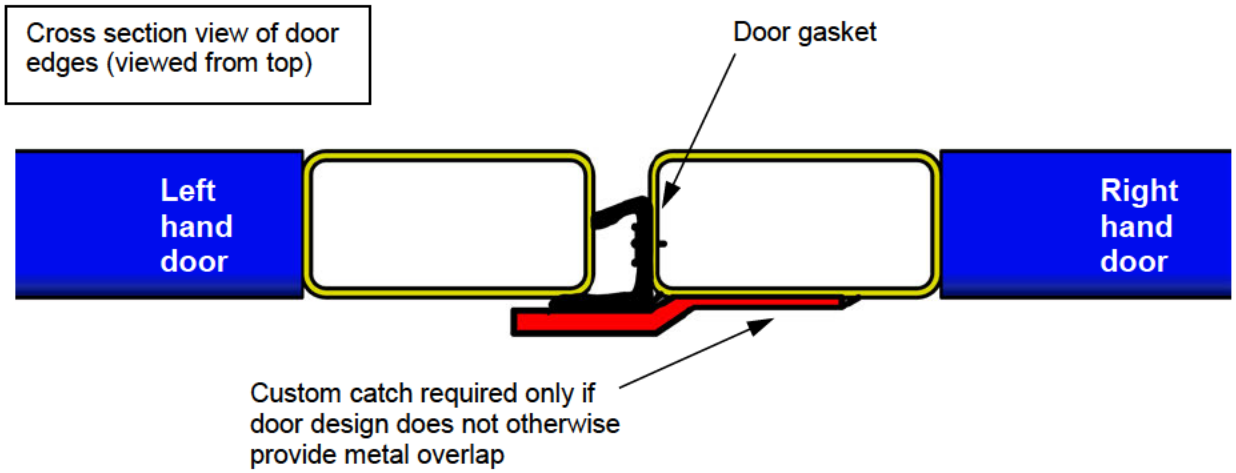
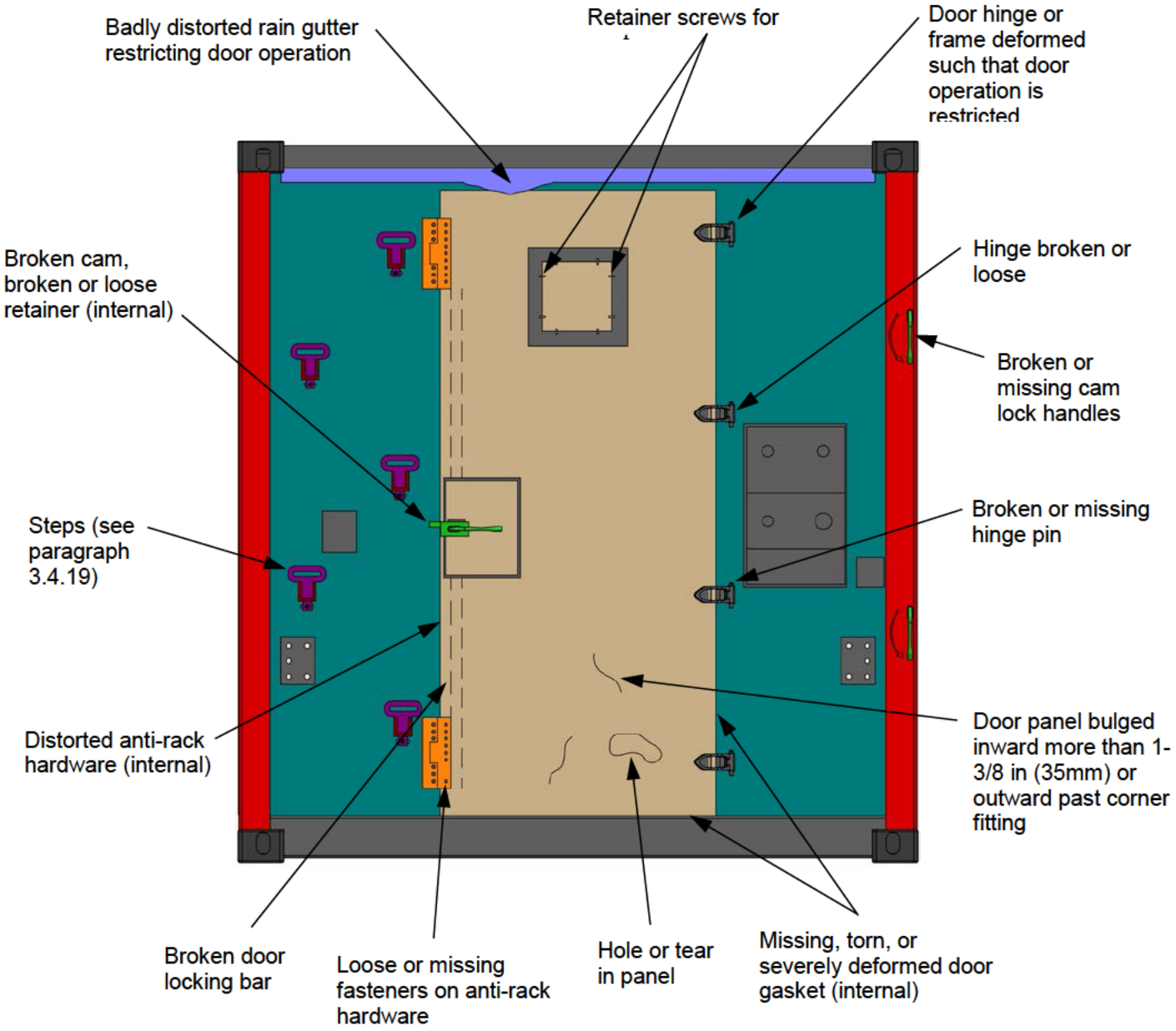
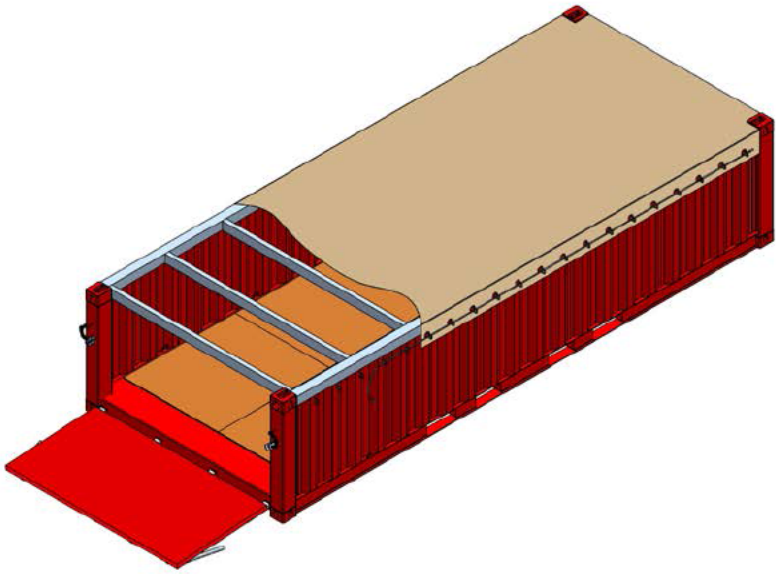


FIGURE 72. Customs catch on a steel door



NOTE: For internal door locking hardware, see Figures 25 and 26.

FIGURE 73. Typical ISO shelter door assembly damage



NOTE: Refer to paragraph 4.3.7 and figure 68 for identification of other types of door damage

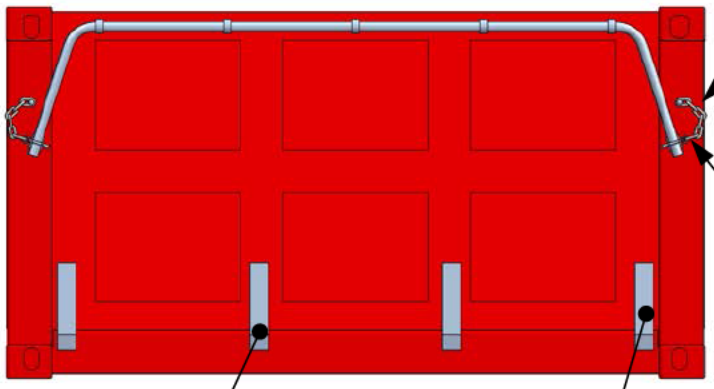


FIGURE 74. Ramp type door damage

4.3.9 Cargo restraint. Refer to Figures 75 through 78. The cargo restraint system or fixtures, when present and necessary for cargo securement, shall be in working order. Containers without a cargo restraint system will be configured so as to provide sufficient load bearing surfaces for safe support of dunnage materials.

4.3.9.1 Mechanical restraint system. The mechanical restraint system used in an end opening container shall be in working order if required for cargo securement. Horizontal or vertical rails shall not be bent or distorted, shall not have cracked or suspect welds, and shall not have crushed or gouged slots. Horizontal or vertical rails that have crushed or gouged slots are not cause for rejection of the container as long as the damaged slots are not required for securing the cargo and the structural integrity of the rail is not otherwise impaired. Shoring beam assemblies that are broken, bent, or have an inoperable locking mechanism on either end shall be rejected for use.

4.3.9.2 Load bearing surface. Containers without a cargo restraint system will be so configured as to provide sufficient load bearing surfaces for safe support of dunnage materials. Surfaces on the primary structure of the container such as the interior faces of the corner posts shall be smooth and free of protrusions.

4.3.9.3 Load retainers. Special load retainers such as a structural angle welded to each door corner post of an end opening container shall be inspected to ensure serviceability. A missing, cracked, or broken weld at the juncture between the load retainer and the container structure is unacceptable. A dent or bend in the retainer that is greater than 3/4 in (19mm) in depth, regardless of length, is also unacceptable. Load retainer shall have no cracks, breaks, cuts, tears, punctures, or corrosive failures.

4.3.9.4 Tiedown provision (lashing bar or ring). Provisions or fittings used for attachment of straps or other cargo restraint devices shall be in working order. Tiedown provisions that are deformed or broken are not cause for rejection of the container as long as the damaged tiedown provisions are not required for securing the cargo, cargo space is not reduced by more than 2 in (51mm) in any direction, and the structural integrity of the container is not otherwise impaired.

4.3.9.5 Stanchion. A missing, cracked, or broken weld at the juncture between a stanchion (stake pocket) and the flatrack structure is unacceptable. Severe deformation of a stanchion that would restrict installation of a stake is also cause for rejection.

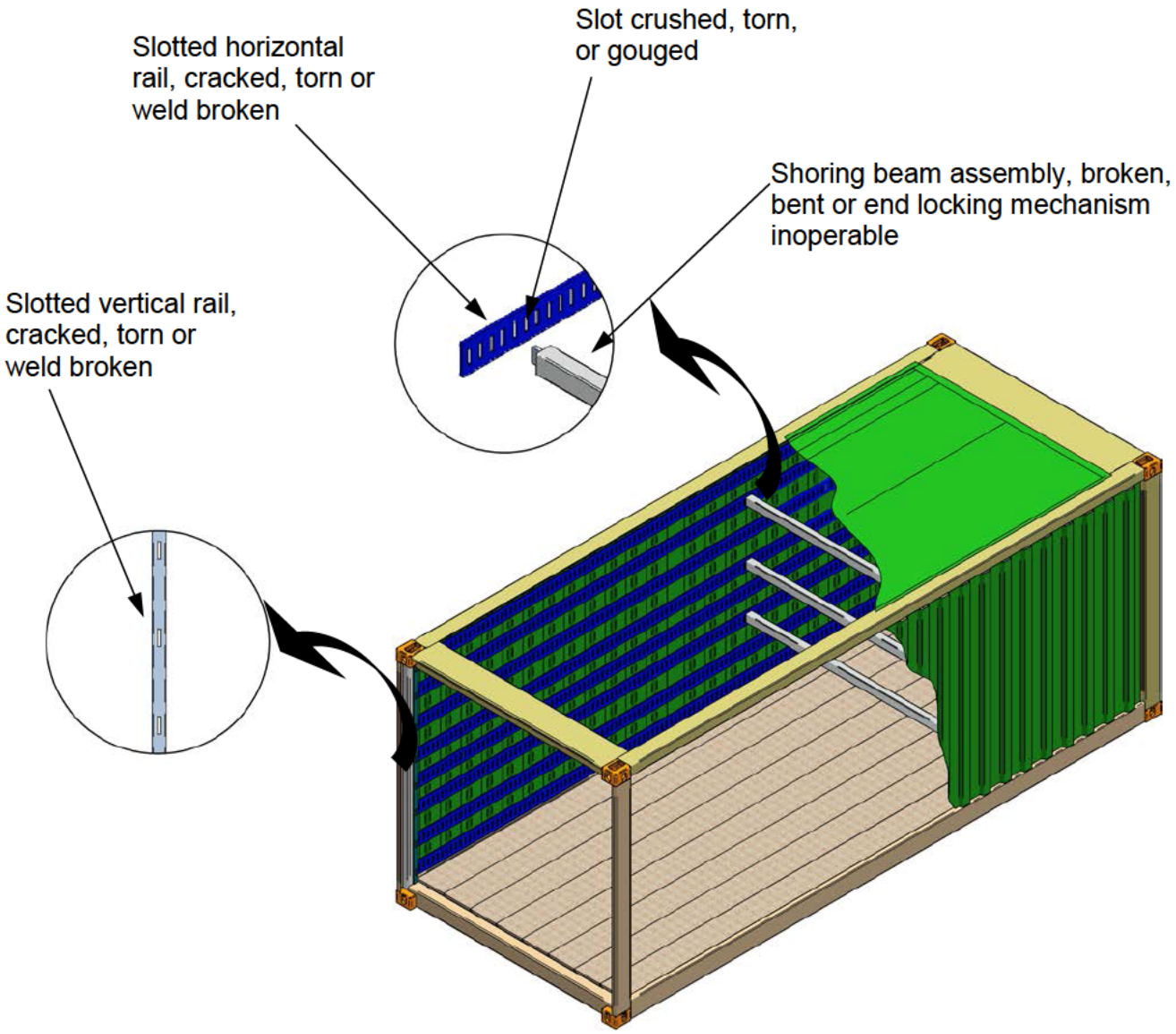


FIGURE 75. Mechanical restraint system damage

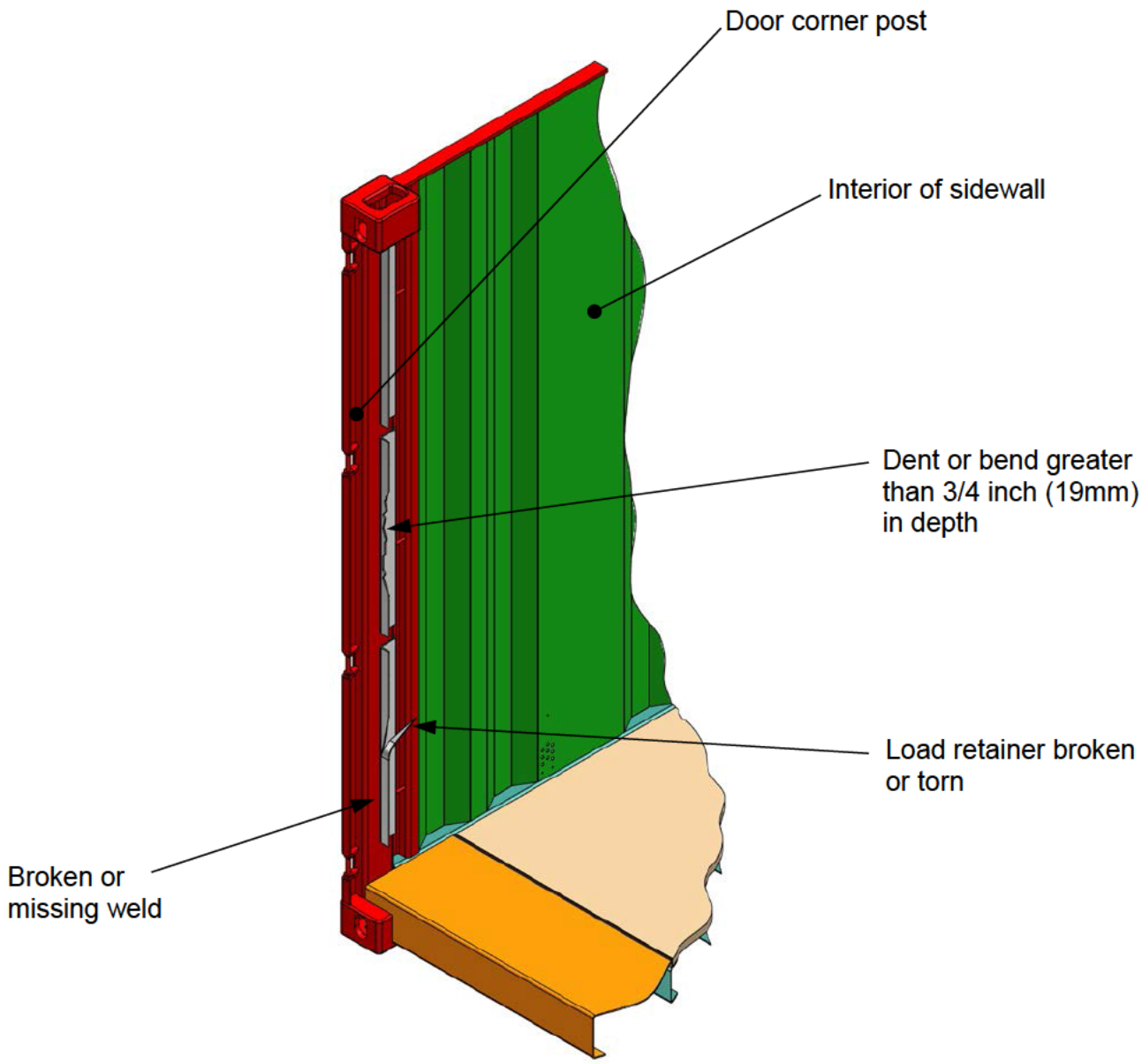


FIGURE 76. Load retainer damage

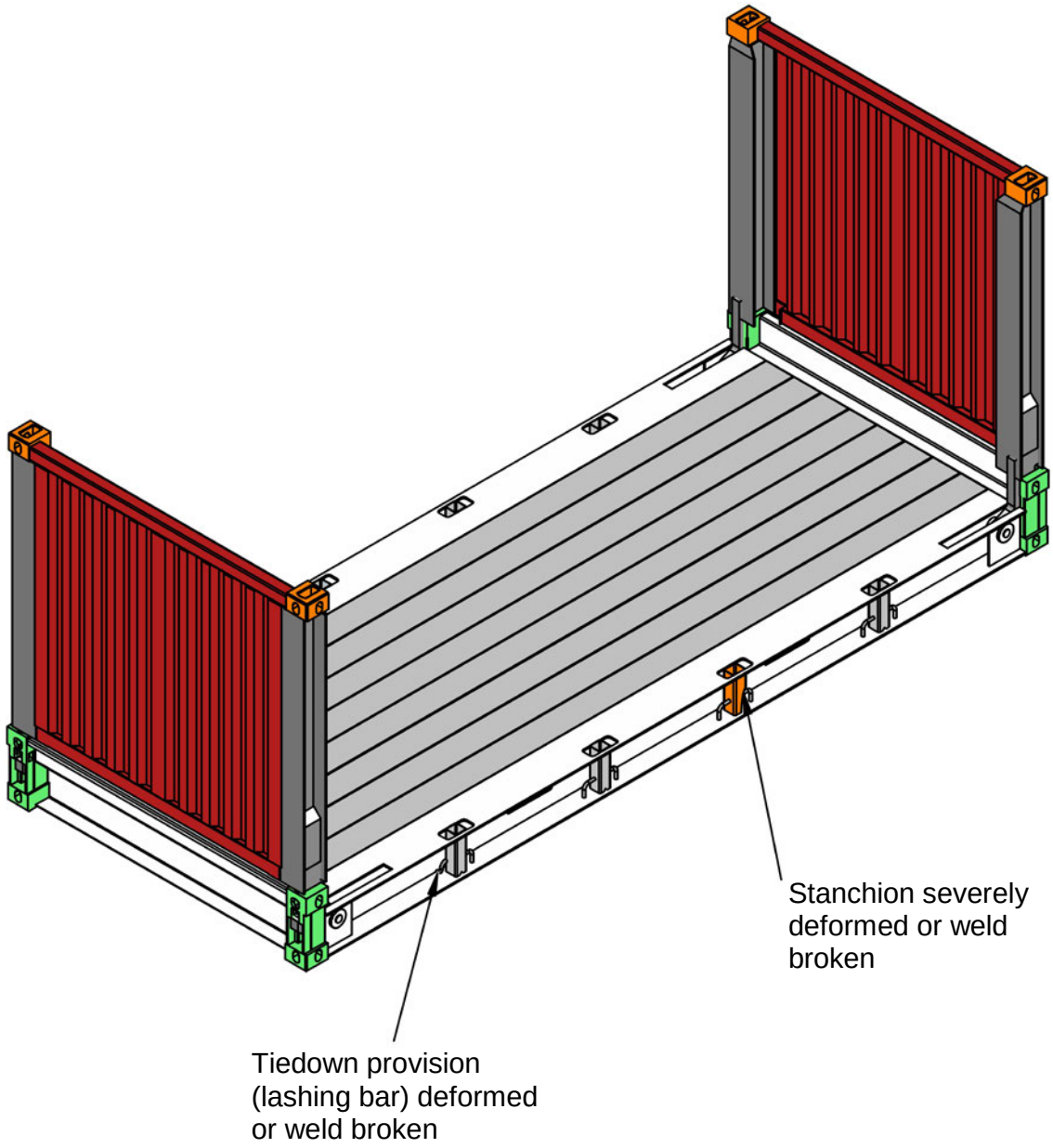


FIGURE 77. Damaged flatrack restraint provisions

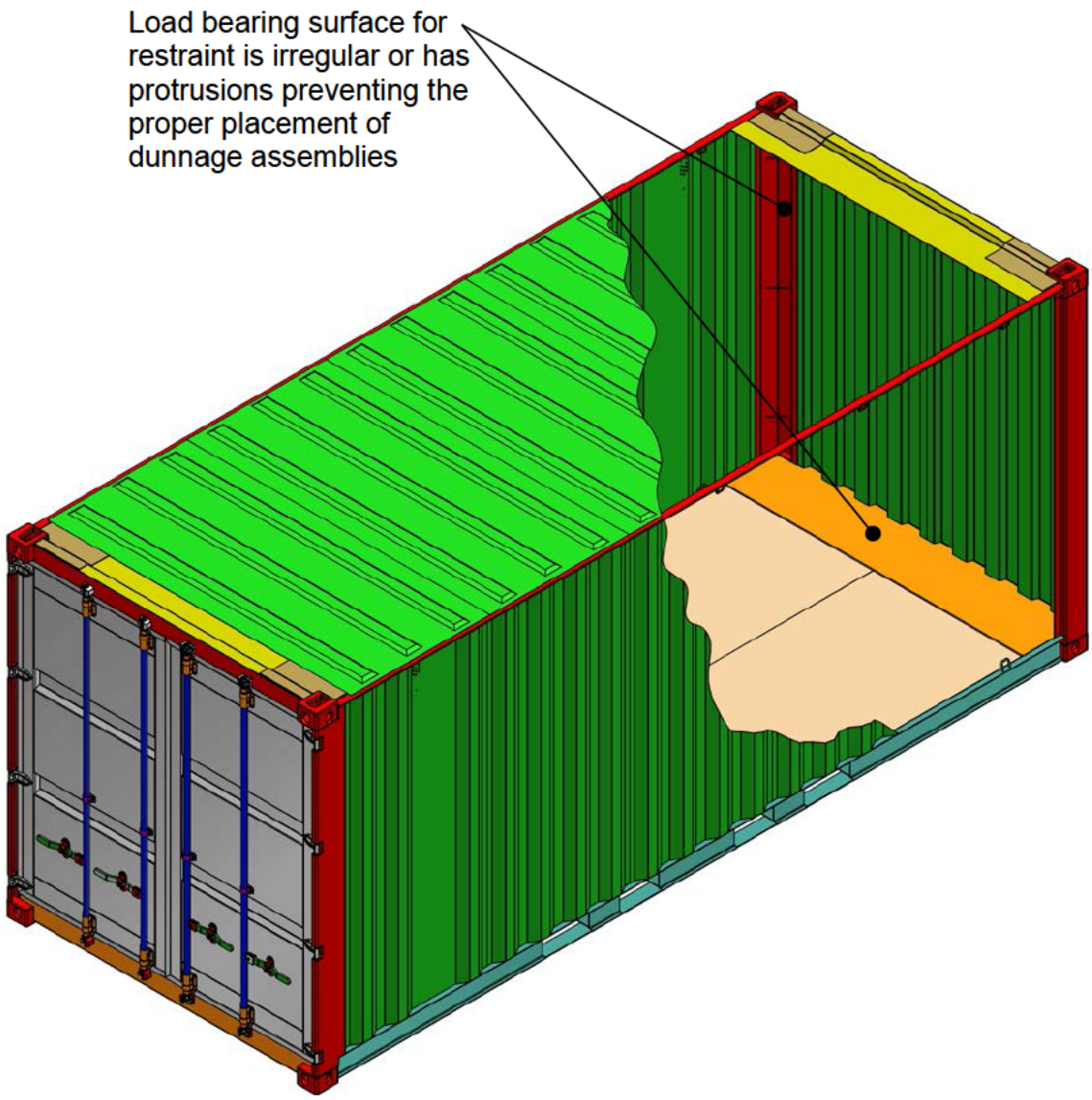


FIGURE 78. Load bearing surfaces on a van

4.3.10 Flooring. Refer to Figures 79 and 80. A container is unacceptable for shipping any kind of cargo if the flooring has any of the following deficiencies:

a. Any protrusion, dent or delamination that protrudes above the top surface of the adjacent flooring or fork pocket by more than 3/16 in (5mm);

b. Any floor fastener that is not countersunk or flush with the surface of the flooring;

c. Any loose or missing floor fastener;

d. Floor not free of debris or residue from a previous cargo;

e. Flooring soaked with hazardous or flammable liquid;

f. Floor contains one or more rotted or broken boards;

g. Any light leaks between floor boards;

h. Any cracked or split floor boards that allow light leaks;

i. One or more cracked, splintered, warped, stained, or delaminated boards that impairs either the safe loading of cargo or the structural integrity of the container; or

j. Any hole, tear, puncture, or corrosive failure that permits light leak.

4.3.11 Acceptable wooden flooring repairs. Refer to Figure 81. Only one partial length replacement board section per container length and no more than three partial length replacement board sections throughout the entire container floor are permissible. Partial length replacement board sections shall span at least four cross members and be of similar material, similar size, and configuration as the rest of the flooring. Laterally adjacent repaired sections shall not have joints on the same cross member. Both ends of each joint shall be adequately supported by and securely fastened to the top surface of a cross member. If the top surface (flange) of the cross member is too narrow, such as a “C” shaped type cross member, a structural angle shall be added to provide an adequate support surface. The added angle shall be sized to extend beneath the adjacent floor board on each side of the repaired section.

4.3.12 Acceptable wooden floor gaps for enclosed containers. A container is unacceptable if there is any excessive gap around the perimeter of the flooring or between the floor boards. If a 1 in by 1/16 in thick feeler gage can be easily inserted vertically through a gap to the underside of the container, the gap is considered excessive. Narrow gaps less than 1/2 in wide, however, are permissible if sealed with caulking. Any opening in the floor is unacceptable. An opening which will hold caulking can be caulked. Any larger openings would require floor repair.

4.3.13 Structural integrity of floor structure. If the strength of the floor is in doubt, the dynamic floor weight test specified in Annex II of the International CSC should be conducted to ascertain that: the understructure will not deflect more than 1/4 in (6mm) below the bottom surfaces of the bottom corner fittings; no component will be permanently deformed; and no component or weld will fail.

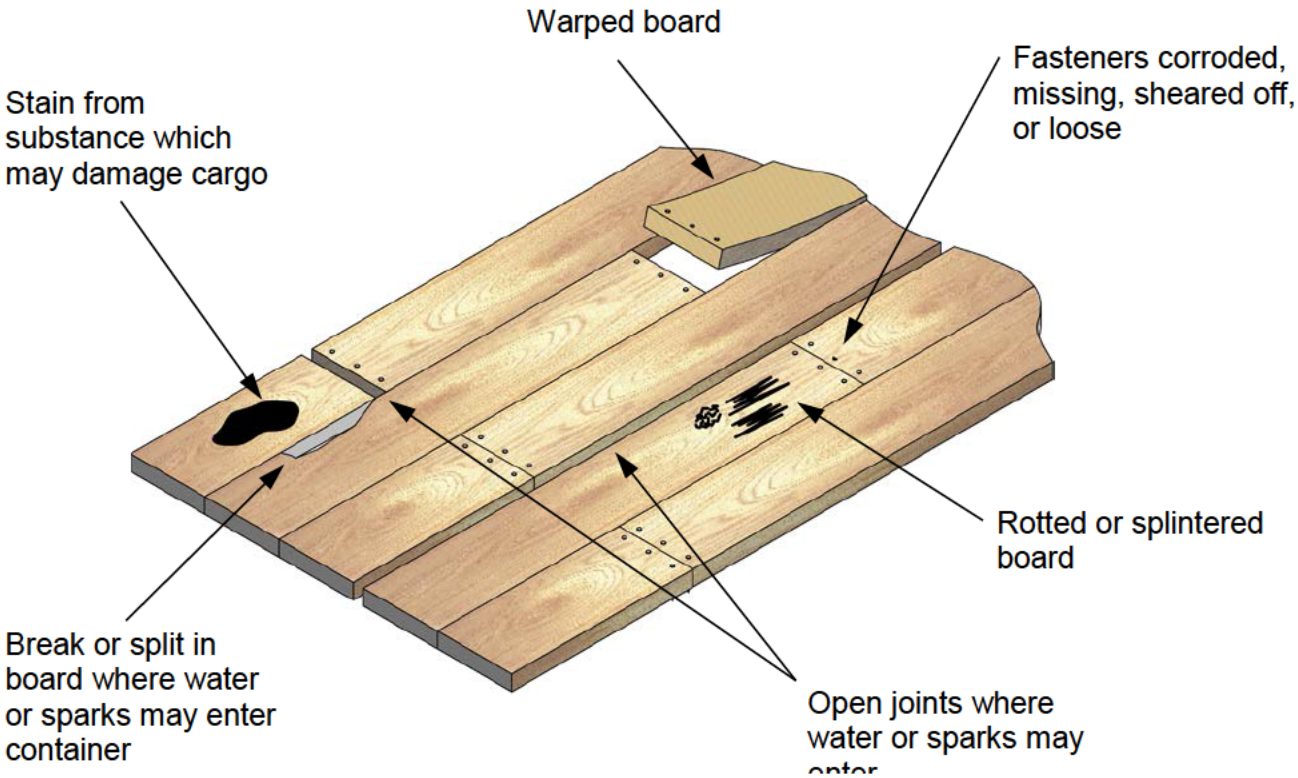


FIGURE 79. Wooden plank flooring damage

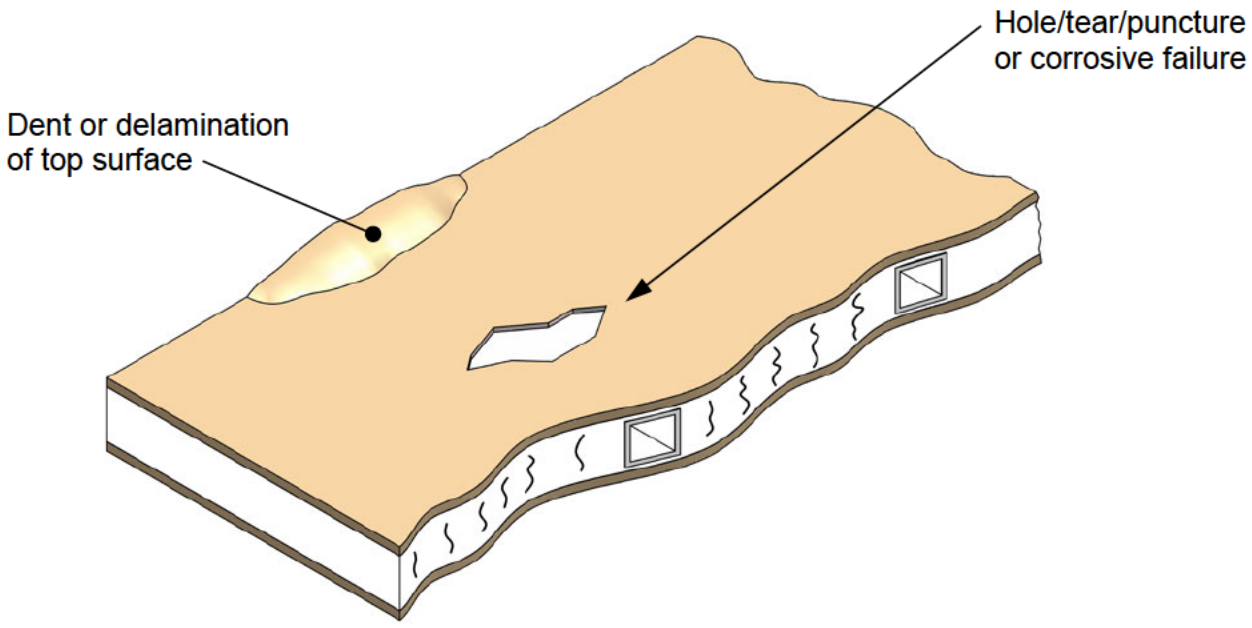
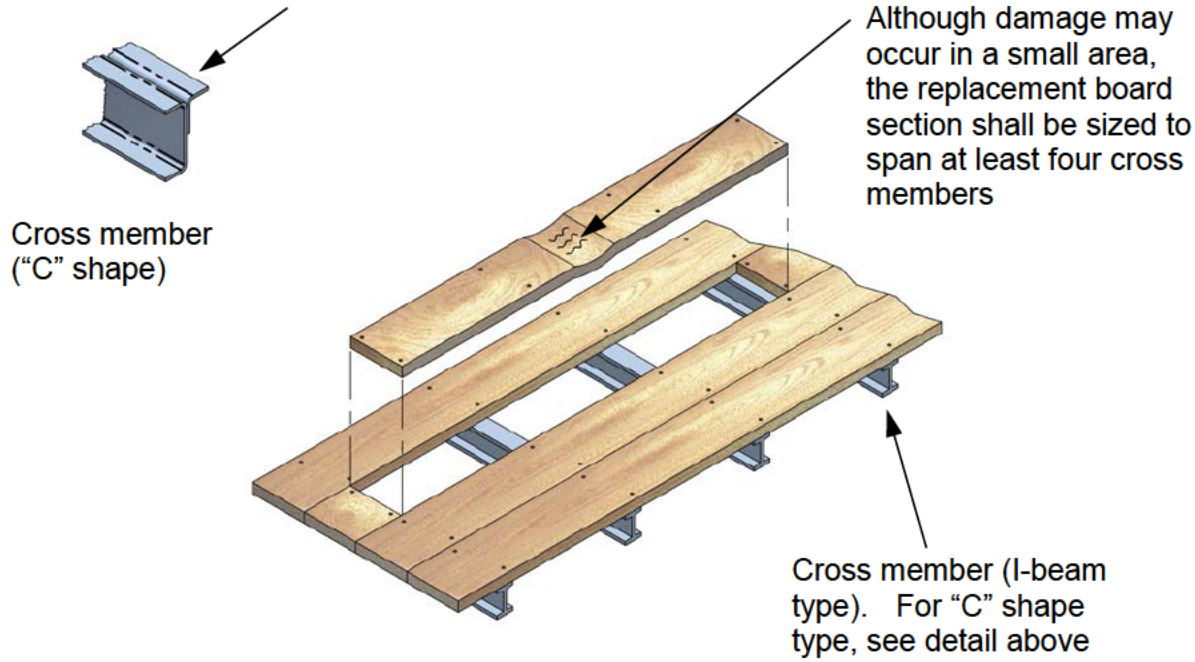


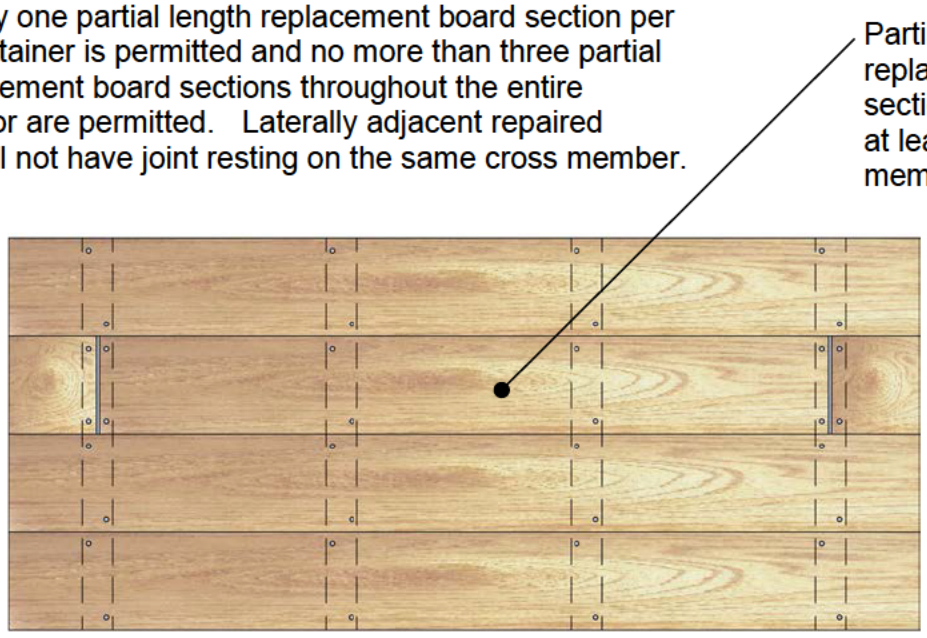
FIGURE 80. Sandwich panel flooring damage

Structural angle shall be welded to narrow “C” shaped cross member under each end of replacement board section to provide an adequate surface for attachment. Angle shall be sized to extend beyond and be attached to adjacent floor board on each side of repaired section.



REMOVAL OF DAMAGED BOARD

NOTE: Only one partial length replacement board section per length of container is permitted and no more than three partial length replacement board sections throughout the entire container floor are permitted. Laterally adjacent repaired sections shall not have joint resting on the same cross member.



FINISHED REPAIR

FIGURE 81. Example of flooring repair

4.3.14 Miscellaneous components. The following miscellaneous components affect the serviceability of a container for shipping any kind of cargo as follows:

4.3.14.1 Threshold plate. Presence of this plate is not mandatory. If present, the threshold plate shall be safely fastened to the floor. Any plate damage that would impair the safe loading or unloading of cargo is cause for rejection.

4.3.14.2 Lining and lining shield. Presence of interior wall lining is not mandatory. If present, it shall be safely fastened to the walls. Cut, torn, cracked or broken lining, or missing or loose fasteners shall be repaired. Surface of wall lining shall be free from protrusions or any other damage that would impair the safe loading or unloading of cargo. Full height wall liners with holes greater than 3/8 in (10mm) shall be repaired. Normal wear including dents, abrasions, and small punctures that does not affect serviceability is permissible.

4.3.14.3 Ventilator. Presence of ventilator or ventilators is not mandatory. If present, each shall be securely fastened to a wall panel. Diffused or reflected light passing through a ventilator is permissible but ventilator should not permit direct ingress of water. Cracks or breaks in ventilators greater than 3/8 in (10mm) shall be repaired. Light leak around ventilator is cause for rejection.

4.3.14.4 Placard holder. Presence of placard holder or holders is not mandatory. If present, each shall be securely fastened to a wall or door panel. Damage including dents, bends, or crumpling is permissible provided placards may be properly installed elsewhere on container and the damaged holder does not preclude proper handling and securement of the container onto a vehicle or into the cell of a ship.

4.3.14.5 Pop rivets. If hollow core pop rivets are used for affixing data plates, placard holders, ventilators, etc.; any open holes through center of such pop rivets shall be caulked to prevent water seepage. Hollow core pop rivets shall never be used for repair of steel panels except on the MILSPEC VAN doors.

4.3.14.6 Door holder (tieback). Presence of door holder or tieback is not mandatory. If present and damaged, the damaged holder shall not preclude proper handling and securement of container onto a vehicle or into a ship's cell.

4.3.14.7 Installed equipment. Many ISO shelters and some containers are equipped with installed equipment fastened to the structure. Prior to acceptance of a container or a shelter an inspection of the equipment's attachment points and shipping braces/brackets shall be performed to ensure all items are securely fastened to the shelter or container, to prevent movement during handling and shipment. Damage such as holes, tears, broken welds to containers walls or floors at attachment points are cause for rejection. Fasteners and threaded inserts shall be inspected and loose, missing, damaged, stripped or pulled fasteners and threaded inserts shall be replaced.

4.3.14.8 Folding steps. Damage to steps is permissible so long as the damage has not resulted in damage to the wall panel (see 3.4.2) or exceeded external dimensions. Damage shall not be such that the steps cannot be stowed properly within ISO external dimensions.

Note: Navy type ISO Shelters are equipped with three longitudinal skids, fastened to

the undercarriage of the shelter. These skids are used to keep the shelter off the ground for circulation of air and to prevent moisture damage. These skids are removable and are not considered a component of the container, and therefore, are not subject to CSC inspection.

5. DETAILED REQUIREMENTS

5.1 Prerequisites.

5.1.1 Container type. The container type offered for service shall be of suitable size, style, and configuration for its intended use. Container size and capacity shall be acceptable for the shape and weight of commodity to be shipped. Container size and configuration shall be compatible with handling and transportation equipment to be utilized. Style of container shall meet approval of countries involved with shipment. Style of container shall provide proper degree of security required for commodity to be shipped.

5.1.2 Inspector qualifications.

The CSC re-inspection shall be performed by certified personnel. DOD personnel may be certified by completing AMMO-43 Intermodal Dry Cargo Container/CSC Re-inspection Course using one of the following options: attending the class (8A-F60/551-F52) conducted by the Defense Ammunition Center; completing the web based training (8A-F62/551-F54 (DL)) at www.dactces.org; or completing the web based training (NOSSA-CSCCR-AMMO43-1.0) at www.nko.navy.mil. DOD inspectors shall be re-certified every 48 months.

Serviceability (pre-loading) inspection need not be performed by a certified inspector but inspector shall be experienced in detection of structural damage. For example, personnel are considered to be qualified if they have at one time received formal training and are experienced in the detection of structural damage.

5.1.3 Leased container. Inspection of a commercially owned container shall be conducted jointly by a Government contracted inspector and the lessor/owner's representatives before the start of the lease and again when the container is turned in. This ensures that only serviceable containers are accepted for use and the U.S. Government is only billed for damages resulting from the Government's use.

5.1.4 Judgment of criteria. The container inspection criteria will be met through a visual examination and, except where tolerances are provided, acceptance of the container will be based on the judgment of the inspector. Any unacceptable deficiencies disclosed by the examination shall be corrected before the container may be used for shipment.

5.2 Suggested tools and equipment.

5.2.1 Long straight edge. A tautly drawn wire, string, or other form of a long straight edge is needed to determine whether any portion of the container (e.g., a panel or a rail) protrudes past the outside surfaces of the corner fittings. Refer to Figure 84 for typical methods of checking for protrusions.

5.2.2 Measuring tape (ruler). A measuring tape (ruler) is required to check dimensional tolerances and container alignment.

5.2.3 Welder's hammer. A welder's hammer (NSN 5120-00-240-3096 or equivalent) is helpful in determining the strength of welds or steel structural components. Refer to Figure 42.

5.2.4 Ladder. A ladder or other safe means for accessing the top of the container is recommended.

5.2.5 Inspection stands. Figure 82 depicts the implementation of container inspection stands. Inspection stands provide a safe means for supporting the empty container to enable proper viewing of the container understructure. Engineering drawings that provide information for the construction of container inspection stands can be obtained by sending a request to Defense Ammunition Center; 1 C Tree Road, ATTN: ATCL-ACE, McAlester OK 74501-9002; email usarmy.mcalester.usamc.mbx.dac-det@mail.mil; DSN 956-8927, commercial (918) 420-8927. Please specify drawing number AC200000210. A copy of this document is also available online at www3.dac.army.mil.

The container inspection stands are used in pairs to support a MILVAN or other 20 foot long international shipping container at an elevated level for the repair or inspection of the container's underside. The stands are set up with the support ends 15 feet apart so that the container, when on the stands, will overhang 2 to 3 feet at either end. The length of the support beam is to insure a clear view of the underside of the container without interference of the support bracing. It is intended that the containers will be resting on its side rails between the tie-together plates. Longer or shorter containers may also be inspected using container inspection stands by moving the stands, keeping the 2 to 3 foot overhand on either end. The container inspection stand weight limit must not be exceeded.

Note: DOD personnel should also refer to service specific safety guidelines about "Working Under a Suspended Load" as well as Technical Bulletin 43-0142 which provides guidance for the "Safety Inspection and Testing of Devices". American Society of Mechanical Engineers (ASME) standard B30.1 for "Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries – Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings" is also applicable.

5.2.6 Flashlight. A flashlight improves visual acuity, especially during examination of the interior or the recesses of the understructure.

5.2.7 Chalk. Marking (circling) location of defects with chalk as they are discovered facilitates preparation of inspection report and helps maintenance personnel locate areas to be repaired.

5.2.8 Feeler gauge. Excessive gaps in flooring may be determined by use of a 1 in wide by 1/16 in thick feeler gauge. Any suitable strip of metal may be used. Refer to Figure 83 for an example of a device that functions as either a feeler gauge or a depth gauge.

5.2.9 Depth gauge. A device with a straight edge and a point enables inspector to check depth of dents against a designated limit. Refer to Figure 83 for an example of a depth gauge.

5.2.10 Tap hammer. A specially made hammer is helpful in detecting delamination in ISO shelter sandwich panels. The hammer is lightly tapped in the area of the suspected delamination. A dull, hollow sound indicates a delamination. Refer to Figure 85 for the recommended construction of a tap hammer.

Note: A coin may also be used in lieu of the tap hammer.

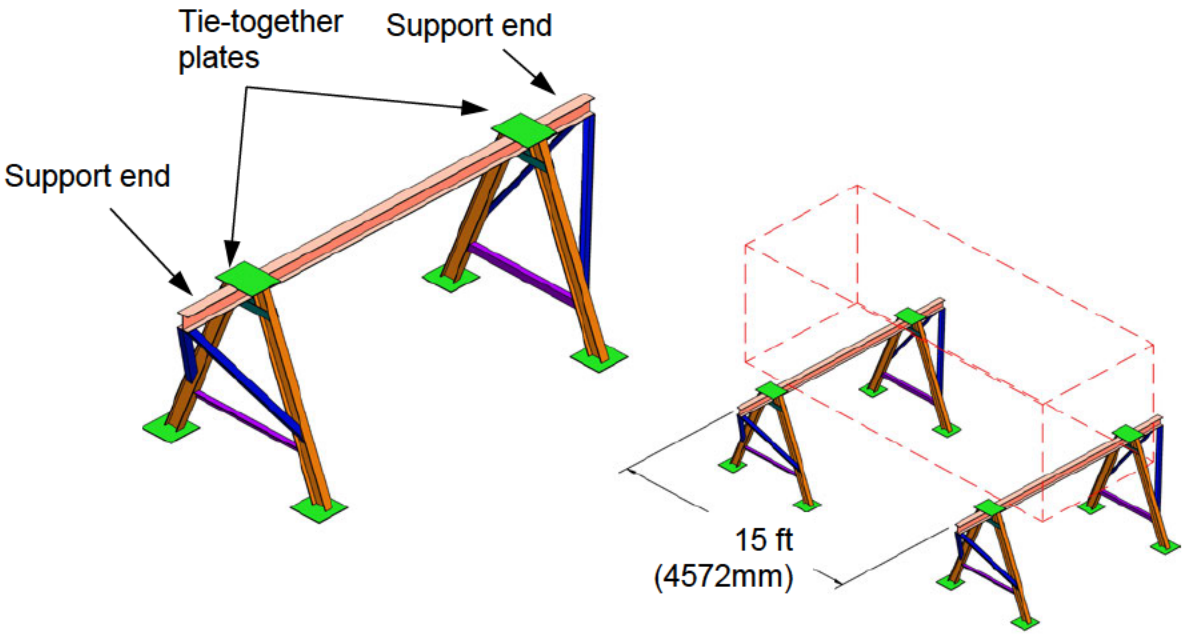


FIGURE 82. Container inspection stands

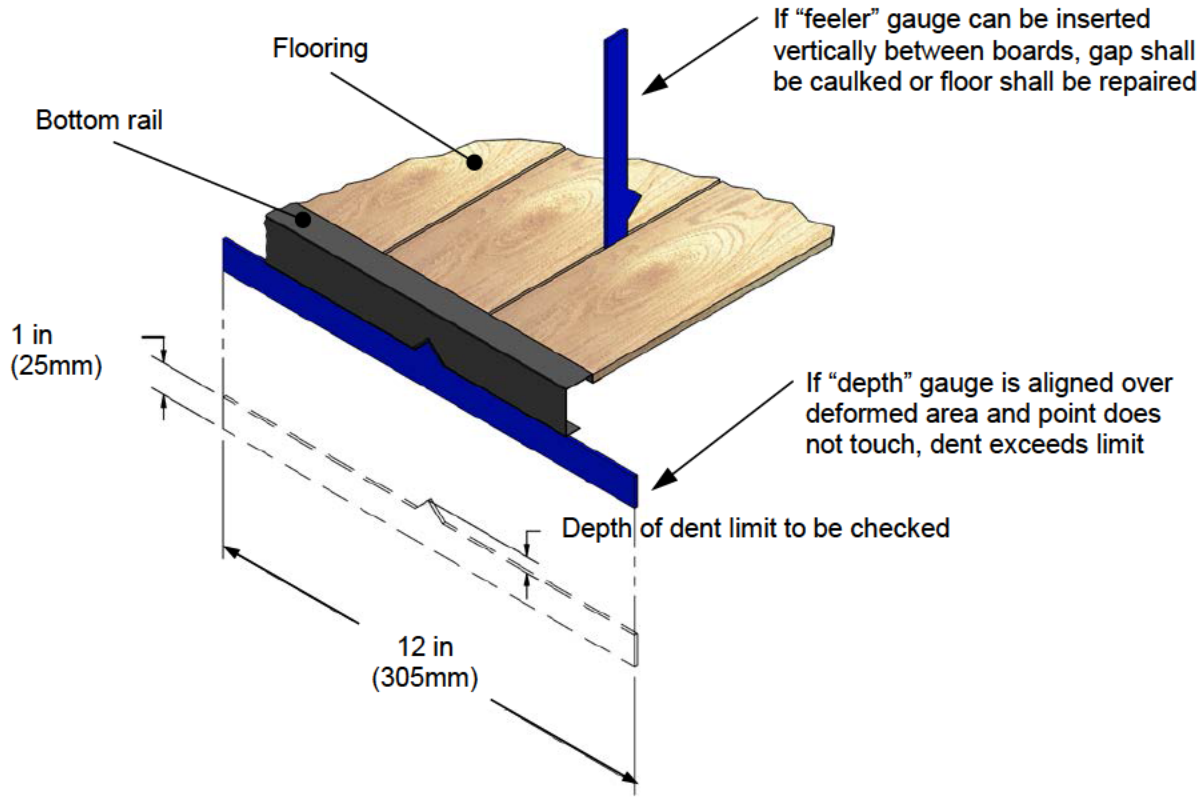


FIGURE 83. Combination depth/feeler gauge

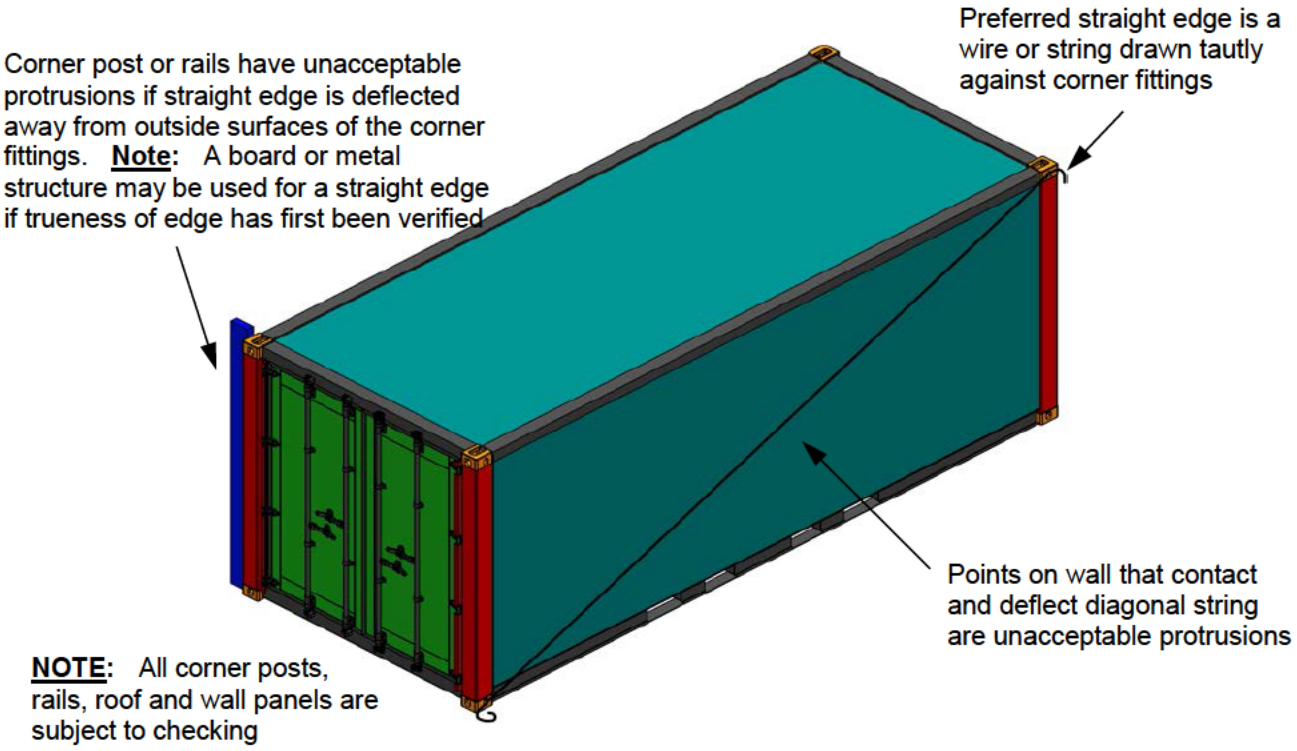


FIGURE 84. Checking for protrusions

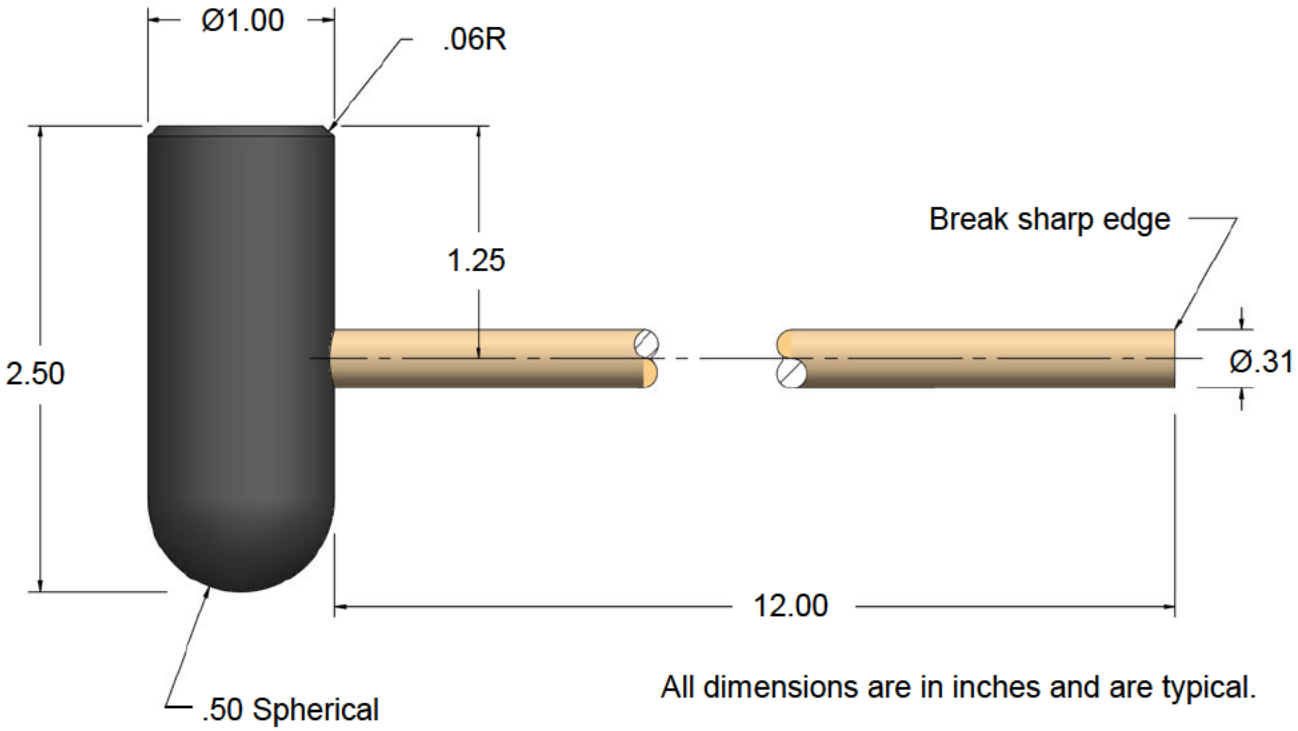


FIGURE 85. Tap hammer

5.3 Recommended inspection sequence. Inspection shall be performed on the container while empty. Configured freight containers and shelters may be inspected with permanently fastened equipment, i.e., cabinets, tables, shelves, racks, etc., in place. Although any sequence of inspection is permissible, the sequence of inspection contained herein is recommended and coincides with the checklists provided in this standard. A complete examination shall be performed prior to acceptance. Even if cause for rejection is identified, a complete inspection of DOD owned containers shall be performed so a complete report of container condition can be provided in accordance with paragraph 5.4.4 below.

5.3.1 Markings and data plates. Check for ISO numbers, required weight markings and appropriate data plates. Annotate container's ISO number on inspection checklist.

5.3.2 Overall configuration. Check for any distortion of the overall configuration great enough to preclude proper engagement of handling/lifting equipment, mounting and securing on chassis or vehicle, or insertion into the cell of a ship. If container alignment is in question, use a measuring tape to check dimensional tolerances in accordance with Figure 44. Using a suitable straight edge, check for any protrusions beyond the outside surfaces of the corner fittings. Refer to Figure 84.

5.3.3. Door end(s) or side(s). Examine the door end or side of the container. Check main structural components of door frame for defects. Check condition and operation of doors and door hardware. Check ISO number for legibility and to assure it matches number annotated on inspection checklist.

5.3.4 Exterior sides and ends. Proceed to examine the container exterior on all remaining sides and ends for any defects on main structural components or unacceptable damage on wall panels. Check ISO number for legibility and to assure it matches number annotated on inspection checklist.

5.3.5 Roof (exterior). Obtain access to the roof and inspect the corner fitting apertures (openings), reinforcement plates, top side and end rails, door header, and roof panels for defects. Check ISO numbers for legibility and to assure they match the number annotated on the inspection checklist.

5.3.6 Understructure. Position the container on inspection stands to enable safe viewing of the container understructure. Examine the corner fitting apertures, side and end rails, sill, cross members, and forklift tunnels for defects. Excessive dents or bends in flanges of cross members or rails may be mechanically straightened back within prescribed limits by use of a large pipe wrench or adjustable wrench. This straightening should, if possible, be performed as directed by the inspector as he/she sees fit. Refer to Figure 86.

5.3.7 Interior. Enter the container and check condition of walls, roof and flooring. If present, also examine condition of cargo restraint system. In containers with wall linings, examine linings closely for any safety hazards. Also check for signs of water leaks since lined walls cannot be checked for light leaks. In containers or shelters with installed equipment, inspect the equipment mounting.

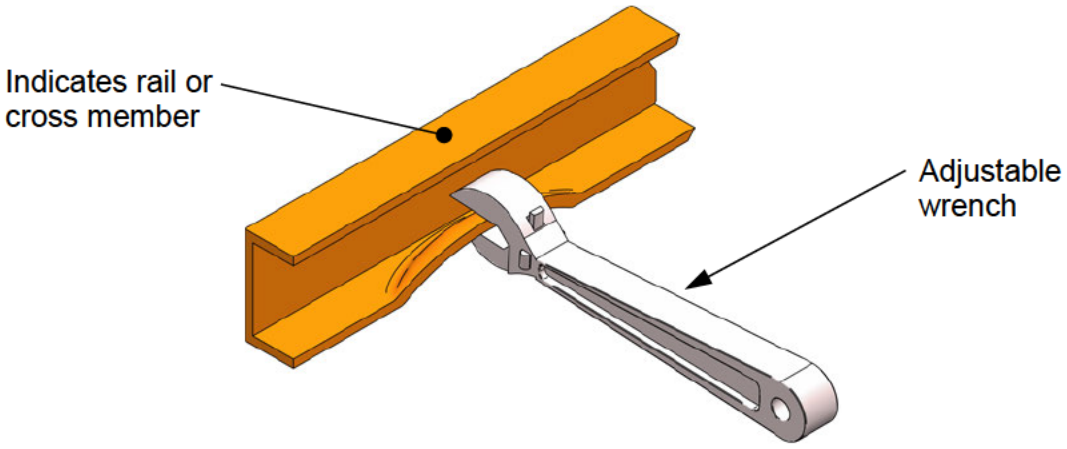


FIGURE 86. Straightening flange

5.3.8 Light leak test. Remain in container, have assistant close the door(s), and mark areas permitting direct (not diffused) light penetration. Re-open doors and re-examine the suspect areas from both the inside and the outside to determine their affect on the structural serviceability of the container. Keep in mind that neither CSC, IMDG Code, nor 49 CFR state that light leaks are cause for rejection. A light leak test only serves as a tool to help spot certain types of defects or deficiencies. **Note:** A light leak check will not detect a breach in either the inner or outer skin in a sandwich panel. Causes for light leaks, therefore, are categorized into the following five types for purposes of clarifying the structural serviceability of container:

a. A light leak through a weld joint between main structural members indicates possibility of defective weld juncture. Further inspection of joint shall be conducted to ascertain if joint is defective.

b. A light leak through a seam weld in a wall, roof, or door panel or around perimeter of such panels indicates skip or porosity in weld, or loose or missing panel attachment fasteners. This typically is a pinhole light leak and does not degrade the main structural integrity of the container. Caulking may be applied in many cases to preclude any water seepage. Caulking should, if possible, be performed as directed by the inspector as they see fit. **Note:** The guidance of this sub-paragraph only refers to weld seams and perimeter welding and does not refer to holes or tears in wall, roof, or door panels which shall be repaired by affixing a permanent repair (patch or bead welding) to the panel.

c. Light leaks around door gaskets indicate possibility of water seepage. If gasket is not damaged (torn, missing, or severely deformed), gasket is most likely providing same weather tight integrity as when container was manufactured. Inspector should be looking for damaged gaskets that no longer provide reasonable weather-proof integrity. A pinhole light leak is not a cause for rejection.

d. Light leaks around floor boards indicate possibility of water seepage or entrance of sparks when transported on open frame conveyance. Only light leaks due to damaged boards or excessive gaps should be cause for rejection. Excessive gaps may be determined by use of a 1 in wide by 1/16 in thick feeler gauge. If the feeler gauge can be easily inserted “vertically” through the gap to the underside of the container, the gap is considered excessive. Caulking may be used to seal narrow gaps (i.e., less than 1/2 in wide). Wider gaps shall be repaired by replacing deficient boards or panels with similar materials.

e. Diffused (reflected) light through components such as ventilators or lashing rings is not cause for rejection. Any indication of a steady penetration of water or lack of reasonable weather-proof integrity will be the only cause for rejection.

5.3.9 Pre-loading inspection.

a. A container is unacceptable for loading with any type of cargo if the DD Form 2282 decal has expired or indicates it will expire within 60 days. A CSC reinspection shall be performed and the container certified as acceptable by a certified inspector before the container may be used. Only certified inspectors will apply new DD Form 2282 decals.

b. If the container is to be stuffed and the DD Form 2282 decal is current, a container remains unacceptable for loading until a preload inspection is first performed. A pre-loading or serviceability inspection shall be conducted to assure that there has been no obvious damage to the container since the decal was applied.

c. When required, the pre-loading inspection need not be performed by a certified inspector; however, the person performing inspection shall be experienced in detection of structural damage.

5.4 Documents.

5.4.1 Inspection checklist. A container inspection checklist shall be used to ensure complete examination and to identify level of acceptance or reason(s) for rejection. Appendix A contains required checklists for containers described in this standard, i.e. end opening, side opening, open-top, flatrack containers, and mobile facilities and ISO shelters. The checklists provided are for specific types of container however they can be adapted to fit any type container, such as using the end opening container checklist to inspect a QUADCON. Match the container to be inspected as closely as possible to one of the checklists furnished in Appendix A. All deficiencies found during inspection should be clearly annotated on the checklist and acceptance or rejection shall be indicated. Level of acceptance should be annotated as either “serviceable for IMDG (UN Hazard Class 1)” or “serviceable for General Cargo (Non-IMDG only)”. Be sure to sign and date the checklist. Ensure DD Form 2282 decal on container is appropriate. Forward a copy of the proper inspection report to the appropriate container control office.

5.4.2 DD Form 2282 decal. After a CSC reinspection is performed by a certified inspector and the container is found acceptable, the inspector will apply a DD Form 2282 decal to the CSC Safety Approval Plate. Decals are issued by the Army Intermodal and Distribution Platform Management Office (AIDPMO) and may be requested at

SDDC/AIDPMO, Bldg. 1900W, 1 Soldier Way, Scott AFB, IL 62225, or usarmy.scott.sddc.mbx.g3-aidpmo-maintenance@mail.mil. The following data shall be submitted with a request for decals: name; unit DODAAC; unit mailing address; POC email address; POC phone number; and number of CSC decals required. Specific requirements for applying the decals are as follows:

5.4.2.1 Newly manufactured container. The decal is not required on a new container since the first CSC re-inspection due date is already inscribed on the CSC plate. A CSC recertification inspection is not required until the fifth year from manufacturer date or after a major structural repair.

5.4.2.2 Subsequent to repair. Each subsequent CSC examination remains current for a maximum interval of 30 months. A new decal is not mandatory following minor (organizational level – under $300) repairs as long as the existing DD Form 2282 decal has not expired or is not due to expire within 60 days. A complete CSC reinspection and application of a new decal is required after depot level maintenance is performed. The new decal will indicate a CSC reinspection due date (month and year) at 30 months from the month of current inspection and acceptance.

5.4.2.3 Serviceable for general cargo. Containers not meeting serviceability requirements prescribed for the shipment of UN Hazard Class 1 (IMDG) explosive materials, but still complying with basic criteria for shelters and general cargoes, will be marked with DD Form 2282 decal displaying only “NON-IMDG” portion of the decal. Refer to Figure 87. Marking a container in this manner indicates container is only acceptable for shipment of general cargoes and cannot be used for UN Hazard Class 1 (IMDG) (explosive) items.

5.4.2.4 Serviceable for UN Hazard Class 1 (IMDG). Containers complying with basic criteria for general cargoes and meeting all the serviceability requirements prescribed for the shipment of UN Hazard Class 1 (IMDG) materials, will be marked with a DD Form 2282 decal displaying both “IMDG” portion and “NON-IMDG” portion of the decal. Refer to Figure 87. Marking a container in this manner indicates container is acceptable for shipment of all items including ammunition and explosives.

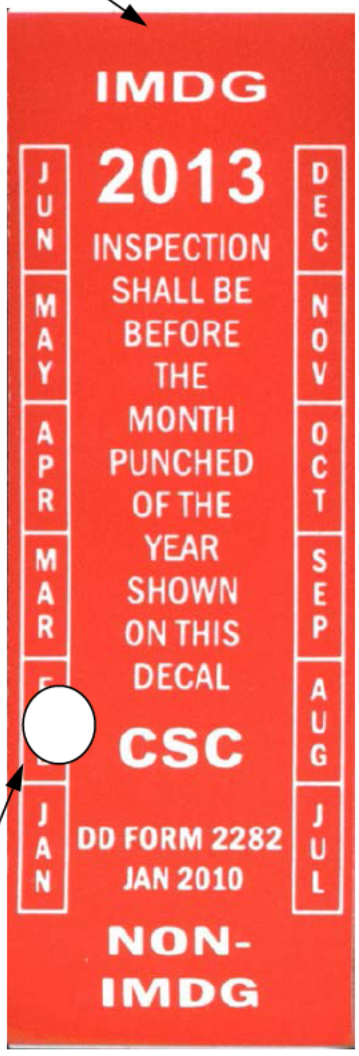
5.4.3 UN Hazard Class 1 (IMDG) declaration. All container shipments of UN Hazard Class 1 (IMDG) materials except those in Division 1.4 being transported partially or totally by vessel, shall be accompanied by a certificate declaring that the freight container is structurally serviceable as defined in 49 CFR paragraph 176.172 and loaded in accordance with IMDG Code paragraph 5.4.2.1. The recommended format for this certificate contained in DD Form 2890, “DOD MULTIMODAL DANGEROUS GOODS DECLARATION”. Alternatively, local installations may electronically generate their own forms provided the format is similar and all information required per 49 CFR and IMDG Code is clearly described on the certificate.

5.4.4 Inspection report. Inspection of DOD owned containers shall be reported on the proper Service form such as the DA Form 2404, “Equipment Inspection and Maintenance Worksheet” and “ISO Container Inspection Checklist”. Per the DTR 4500.9 Part VI, Chapter 604, a copy of the inspection report shall be completed and uploaded into the Army Container Asset Management System (ACAMS) or the Service or agency designated system. Centralized control of this documentation is important since the law (49 CFR, Para

452.3(b)) requires that the most recent container inspection report be maintained and made available to the Coast Guard upon request.

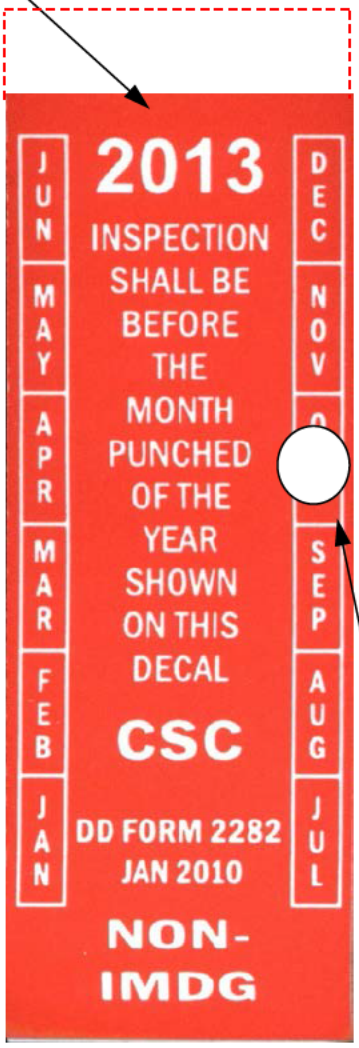
Notes: 1. To improve clarity, decals are shown larger than actual size.
2. Decals are to be removed completely from containers failing the applicable inspection criteria

Decal with top "IMDG" portion remaining indicates container is serviceable for shipment of all items including UN Hazard Class 1 (IMDG) items (ammunition and explosives).



Punch hole indicates that CSC reinspection is due before Feb 2013

Decal with top "IMDG" portion removed (or cut off) indicates container is only serviceable for shipment of general cargoes and cannot be used for UN Hazard Class 1 (IMDG) items.



Punch hole indicates that CSC reinspection is due before Oct 2013

FIGURE 87. DD FORM 2282 decal

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory).

6.1 Intended use. The inspection criteria covered by this standard are intended for use when visually examining intermodal freight containers. The criteria and procedures contained herein will enable personnel to identify containers that are serviceable and safe for loading and shipping.

6.2 Associated data item descriptions (DIDs). This standard has been assigned an Acquisition Management Systems Control number authorizing it as the source document for the following DIDs. When it is necessary to obtain the data, the applicable DIDs must be listed on the Contract Data Requirements List (DD Form 1423).

DID Number	DID Title
xxxxxx	

The above DIDs were current as of the date of this standard. The ASSIST database should be researched at https://assist.dla.mil to ensure that only current and approved DIDs are cited on the DD Form 1423.

6.3 Supersession. This standard replaces MIL-HDBK-138, GUIDE TO CONTAINER INSPECTION FOR COMMERCIAL AND MILITARY INTERMODAL CONTAINERS, which has been cancelled.

6.4 Subject term (key word) listing

Ammunition
Anti-rack hardware
Bottom end rail
Bottom side rail
Cargo
Corner fitting
Corner post
Cross member
CSC
Door header
Door sill
Expandable
Flooring
Forklift pocket
Forklift pocket strap
Freight
Front end frame
Gooseneck tunnel
IMDG
ISO
Load bearing surface

Mechanical restraint system
MILVAN
Non-expandable
Non IMDG
Platform
Rear end frame
Reinspection decals
Rigid
Top end rail
Top side rail
Understructure
Wall

INSPECTION CHECKLISTS

A.1 SCOPE

A.1.1 Scope. This appendix is comprised of six checklists for use in inspecting ISO containers. This appendix is a mandatory part of the standard. The information contained herein is intended for compliance.

A.2 DEFINITIONS

A.2.1 Major defect. Any defect that is equal to or exceeds the major defect definitions delineated in section 4. A major defect may be either a non-IMDG major defect or an IMDG major defect. Major defects are to be annotated in the ISO Container Inspection Checklists that follow under “Defects” within the “CSC” column. All DOD containers will be inspected to IMDG standards first. If a container does not meet IMDG standards, it will then be evaluated to determine if it can meet the non-IMDG criteria.

A.2.2 Minor defect. Any defect that does not exceed either the non-IMDG or the IMDG defects delineated in section 4. Minor defects are to be annotated in the ISO Container Inspection Checklists that follow under “Defects” within the “Minor” column, and are not solely cause for failure of the container, regardless of their number.

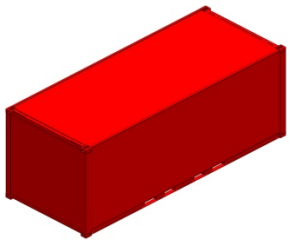
A.3 CHECKLISTS

A.3.1 Inspection checklists. Tables A-I through A-VI depict six different types of inspection checklists, including end opening, flatrack, open-top and side opening container checklists, as well as mobile facility and tactical shelter inspection checklists. These checklists are mandatory for use to document container inspection, and are to be completed and forwarded as detailed in paragraph 5.4.1. For containers not specifically identified in a checklist, a combination of checklist may be utilized, for example, side and end opening containers will be inspected using both Table A-I and A-V.

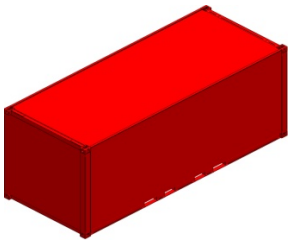
ISO Number:		Date of Inspection:	
Type of Container: **END OPENING CONTAINER**	(Circle One) Pass Fail	(Circle One) IMDG & non IMDG Non IMDG ONLY	New Decal Installed New Expiration Date Month Year
Installation/Activity:		Inspected By:	

EXTERIOR

DOORS			**ROADSIDE**			**FRONT**			**CURBSIDE**		
Component	Defects		Component	Defects		Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC		Minor	CSC
CSC PLATE			ISO NUMBER			ISO NUMBER			ISO NUMBER		
STENCILS			CORNER FITTINGS			CORNER FITTINGS			CORNER FITTINGS		
ISO NUMBERS			CORNER POSTS			CORNER POSTS			CORNER POSTS		
CORNER POSTS			TOP SIDE RAIL			TOP END RAIL			TOP SIDE RAIL		
CORNER FITTINGS			BOTTOM SIDE RAIL			BOTTOM END RAIL			BOTTOM SIDE RAIL		
DOOR HEADER			FORKLIFT POCKETS			PANEL			FORKLIFT POCKETS		
DOOR SILL			PANEL			PLACARD HOLDER			PANEL		
DOOR PANELS			PLACARD HOLDER						PLACARD HOLDER		
DOOR LINING											
DOOR GASKETS											
RODS											
ROD RETAINERS											
CAMS											
CAM RETAINERS											
J-BARS											
RAIN GUTTERING											
PLACARD HOLDER											



(CIRCLE DEFECTS)



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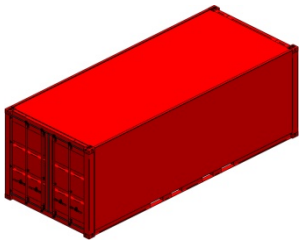
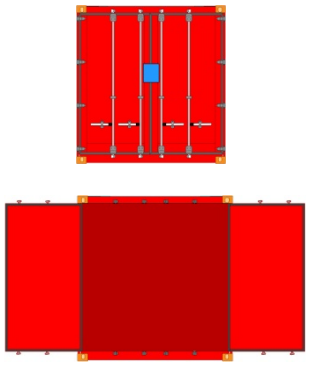


(CIRCLE DEFECTS)



(CIRCLE DEFECTS)

REMARKS:

TABLE A-I. <u>End opening container inspection checklist</u>

TABLE A-I (continued)

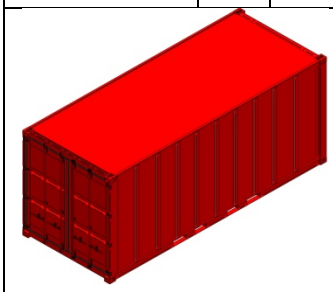
ISO Number:

END OPENING CONTAINER (continued)

EXTERIOR

ROOF

Component	Defects	
	Minor	CSC
ISO NUMBERS		
CORNER FITTINGS		
TOP END RAIL		
DOOR HEADER		
TOP SIDE RIALS		
ROOF PANEL		

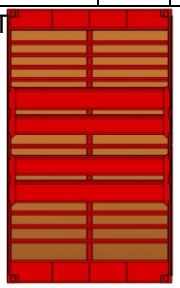


(CIRCLE DEFECTS)

BOTTOM

Component	Defects	
	Minor	CSC
CORNER FITTINGS		
BOTTOM END RAIL		
BOTTOM SIDE RAIL		
DOOR SILL		
CROSSMEMBERS		
FORKLIFT TUNNELS		

FRONT



REAR

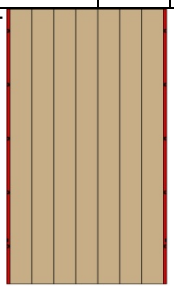
(CIRCLE DEFECTS)

INTERIOR

FLOOR

Component	Defects	
	Minor	CSC
FLOORING		
FLOOR FASTENERS		
THRESHOLD PLATE		
TIE-DOWN DEVICES		
LIGHT LEAKS		

FRONT



REAR

(CIRCLE DEFECTS)

ROOF

Component	Defects	
	Minor	CSC
ROOF PANEL		
ROOF BOWS		
LIGHT LEAKS		

FRONT

REAR

(CIRCLE DEFECTS)

INTERIOR

ROADSIDE

Component	Defects	
	Minor	CSC
PLYWOOD LINING		
KICK PLATE		
VERTICAL RAIL		
HORIZONTAL RAIL		
LIGHT LEAKS		

FRONT

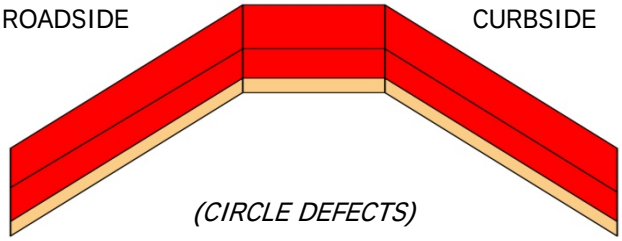
Component	Defects	
	Minor	CSC
PLYWOOD LINING		
KICK PLATE		
LOAD BEARING SURFACES		
LIGHT LEAKS		

CURBSIDE

Component	Defects	
	Minor	CSC
PLYWOOD LINING		
KICK PLATE		
VERTICAL RAIL		
HORIZONTAL RAILS		
LIGHT LEAKS		

FRONT

ROADSIDE CURBSIDE



(CIRCLE DEFECTS)

REMARKS:

ISO Number:		Date of Inspection:	
Type of Container: **FLATRACK CONTAINER**	(Circle One) Pass Fail	(Circle One) IMDG & non IMDG non IMDG	New Decal Installed New Expiration Date Month Year
Installation/Activity:		Inspected By:	

END A			**SIDE A**		
Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC
SAFETY APPROVAL PLATE			SIDE RAIL		
ISO NUMBERS			STANCHIONS		
STENCILS			TIE DOWN PROVISIONS		
CORNER FITTINGS			FORKLIFT POCKETS		
CORNER POSTS					
TOP END RAIL					
PANEL					
WALL POSTS					
LOCKING HARDWARE					

(CIRCLE DEFECTS)

REMARKS:

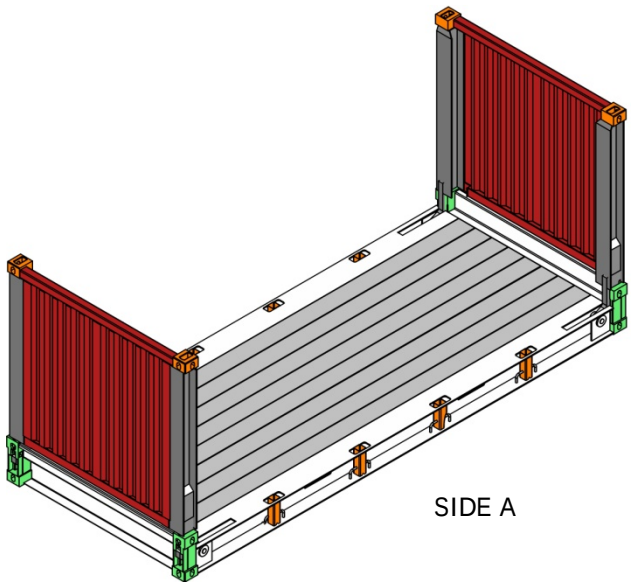
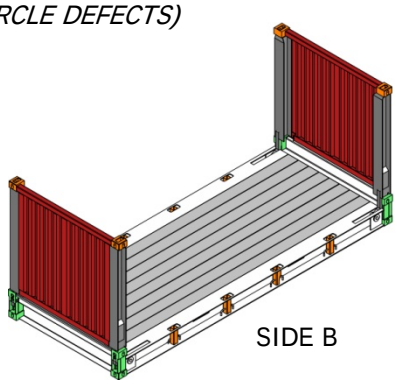


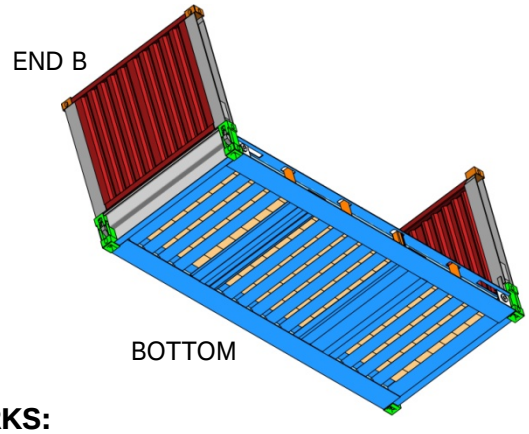
TABLE A-II. Flatrack container inspection checklist

TABLE A-II (continued)

ISO Number:						**FLATRACK CONTAINER (continued)**		
END B			**SIDE B**			**BOTTOM**		
Component	Defects		Components	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC
CORNER FITTINGS			SIDE RAIL			CORNER FITTINGS		
CORNER POSTS			FORKLIFT POCKETS			BOTTOM SIDE RAILS		
TOP END RAIL			STANCHIONS			BOTTOM END RAILS		
BOTTOM END RAIL			TIE DOWN PROVISIONS			CROSSMEMBERS		
PANEL						FORKLIFT TUNNELS		
WALL POSTS								
LOCKING HARDWARE								

(CIRCLE DEFECTS)





CARGO SPACE		
Component	Defects	
	Minor	CSC
FLOORING		
FLOOR FASTENERS		

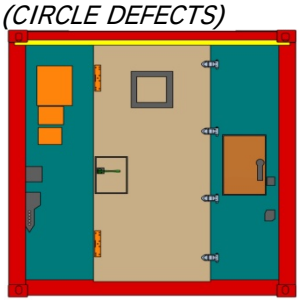
REMARKS:

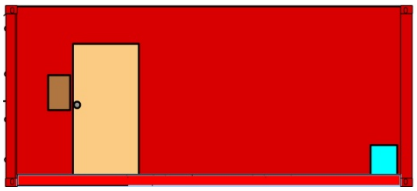
ISO Number:		Date of Inspection:	
Type of Container: **MOBILE FACILITY**	Inspect this container to non IMDG standards only.	(Circle One) Pass Fail	New Decal Installed New Expiration Date Month Year
Installation/Activity:		Inspected By:	

Power input connections are located on the front end of the MF. The ECU and CSC plate are located on the left side of a standard satellite MF.

FRONT			**RIGHT SIDE**			**LEFT SIDE**		
Component	Defects		Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC
ISO CORNER			ISO CORNER			ISO CORNER		
CORNER POSTS			CORNER POST			CORNER POST		
TOP END RAIL			TOP SIDE RAIL			TOP SIDE RAIL		
BOTTOM END RAIL			BOTTOM SIDE RAIL			BOTTOM SIDE RAIL		
RIVETS			RIVETS			RAIL		
MF SKIN			MF SKIN			MF SKIN		
DOOR/PLUGS			DOOR/PLUGS			DOOR/PLUGS		
STENCIL			STENCIL			STENCIL		
			FORKLIFT POCKETS			FORKLIFT POCKETS		
						CSC PLATE		

(CIRCLE DEFECTS)





(1) MAF MCN: _____
REMARKS:

TABLE A-III. Mobile facility inspection checklist

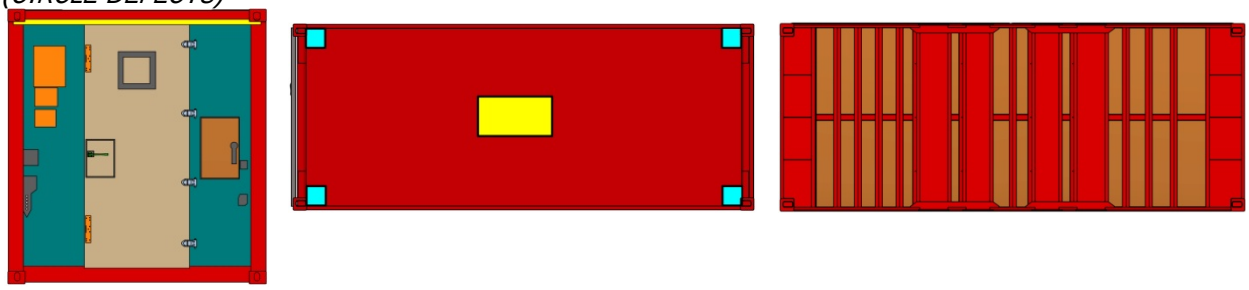
TABLE A-III (continued)

ISO Number:	TEC	**MOBILE FACILITY (continued)**

Power input connections are located on the front end of the MF. The ECU and CSC plate are located on the left side of a standard satellite MF.

REAR			**TOP**			**BOTTOM**		
Component	Defects		Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC
ISO CORNER			ISO CORNER			ISO CORNER		
CORNER POSTS			TOP RAIL, FRONT			CROSS MEMBERS		
TOP END RAIL			TOP RAIL, REAR			FORKLIFT POCKETS		
BOTTOM END RAIL			TOP SIDE RAIL, LEFT			BOTTOM SIDE RAIL, LEFT		
RIVETS			TOP SIDE RAIL, RIGHT			BOTTOM SIDE RAIL, RIGHT		
MF SKIN			RIVETS			BOTTOM END RAIL, FRONT		
DOOR/PLUGS			MF SKIN			BOTTOM END RAIL, REAR		
STENCIL			DOUBLER PLATES			FLOOR		
			SLING PAD					

(CIRCLE DEFECTS)



REMARKS:

TABLE A-III (continued)

ISO Number:	TEC	**MOBILE FACILITY (continued)**

Power input connections are located on the front end of the MF. The ECU and CSC plate are located on the left side of a standard satellite MF.

INTERIOR

CEILING

Component	Defects	
	Minor	CSC
SKIN		
LIGHT LEAKS		
LIGHTS		
AIRE DUCT		

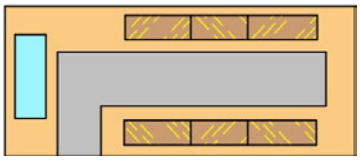
FLOOR

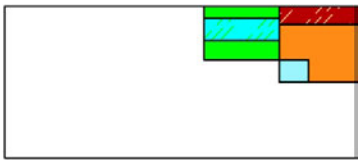
Component	Defects	
	Minor	CSC
MATTING		
RIVNUTS		
ECU RAILS		

WALLS

Component	Defects	
	Minor	CSC
SKIN		
ELEC. RACEWAYS		
RAILS		
MOLES		
CIRCUIT BREAKER BOX		
ECU PLENUM		

(CIRCLE DEFECTS)

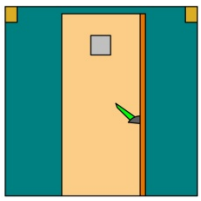




DOORS

Component	Defects	
	Minor	CSC
SKIN		
LIGHT LEAKS		
HANDLE		
EMERG THUMB SCREW		
BOLTS		
HARDWARE		

FRONT



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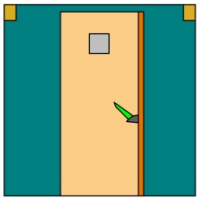


RIGHT SIDE

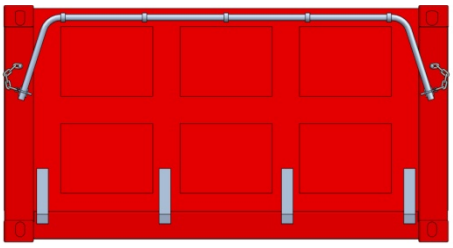
REMARKS:

ISO Number:		Date of Inspection:	
Type of Container: **OPEN-TOP CONTAINER**	(Circle One) Pass Fail	(Circle One) IMDG & non IMDG Non IMDG ONLY	New Decal Installed New Expiration Date Month Year
Installation/ Activity:		Inspected By:	

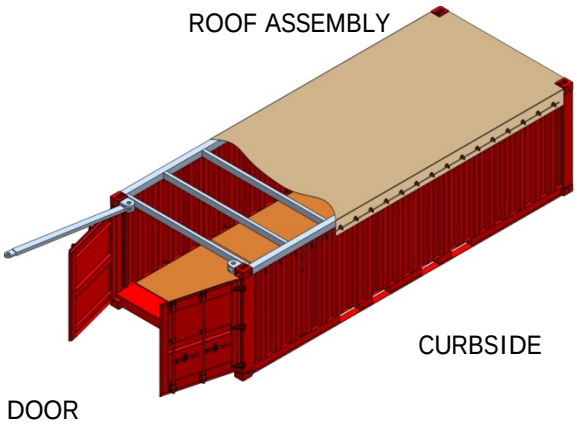
DOORS			**CURBSIDE**			**ROOF ASSEMBLY**		
Component	Defects		Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC
SAFETY APPROVAL PLATS			ISO NUMBER			CORNER FITTINGS		
STENCILS			CORNER FITTINGS			TOP END RAIL		
ISO NUMBERS			CORNER POSTS			TOP SIDE RAIL		
CORNER FITTINGS			TOP SIDE RAIL			ROOF BOWS		
CORNER POSTS			BOTTOM SIDE RAIL			TARP		
SWINGING HEADER			FORKLIFT POCKETS			TIR CABLE		
SWINGING HEADER HARDWARE			PANEL					
SAFETY CHAINS			METAL LOOPS					
DOOR SILL			PLACARD HOLDER					
DOOR PANELS								
RODS								
CAMS								
CAM RETAINERS								
DOOR GASKETS								
J-BAR								
METAL LOOPS								
PLACARD HOLDERS								

(CIRCLE DEFECTS)

RAMP TYPE DOOR



ROOF ASSEMBLY



CURBSIDE

SWINGING DOOR

REMARKS:

TABLE A-IV. Open-top container inspection checklist

TABLE A-IV (continued)

ISO Number:

OPEN-TOP CONTAINER (continued)

FRONT

Component	Defects	
	Minor	CSC
ISO NUMBER		
CORNER FITTINGS		
CORNER POSTS		
TOP END RAIL		
BOTTOM END RAIL		
PANEL		
METAL LOOPS		
PLACARD HOLDER		

ROADSIDE

Component	Defects	
	Minor	CSC
ISO NUMBER		
CORNER FITTINGS		
CORNER POSTS		
TOP SIDE RAIL		
BOTTOM SIDE RAIL		
FORKLIFT POCKETS		
PANEL		
METAL LOOPS		
PLACARD HOLDER		

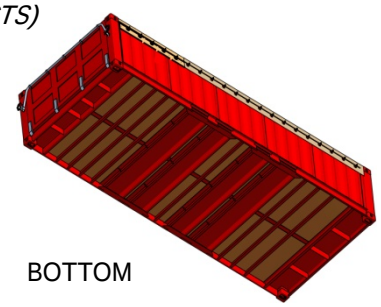
BOTTOM

Component	Defect	
	Minor	CSC
CORNER FITTINGS		
BOTTOM SIDE RAIL		
BOTTOM END RAIL		
DOOR SILL		
CROSS MEMBER		
FORKLIFT TUNNEL		
FLOORING		

(CIRCLE DEFECTS)

ROADSIDE

FRONT



BOTTOM

REMARKS:

INTERIOR

Component	Defects	
	Minor	CSC
FLOORING		
FLOOR FASTENERS		

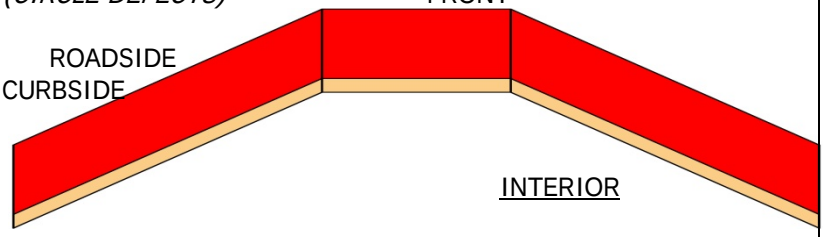
Component	Defects	
	Minor	CSC
WALL PANEL		
LOAD-BEARING SURFACE		
LIGHT LEAKS		

(CIRCLE DEFECTS)

FRONT

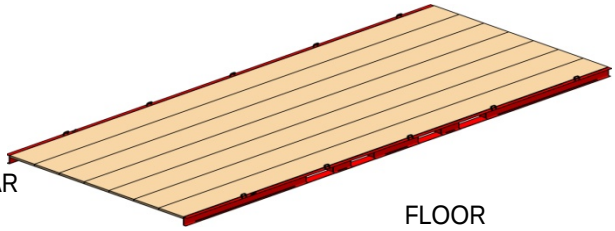
ROADSIDE

CURBSIDE



INTERIOR

FRONT



REAR

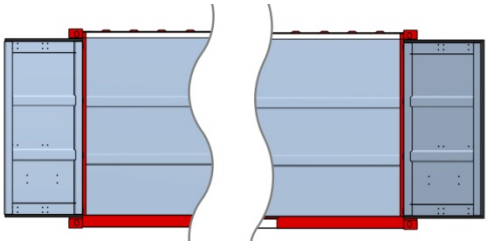
FLOOR

ISO Number:		Date of Inspection:	
Type of Container: **SIDE OPENING CONTAINER**	Circle One: Pass Fail	Circle One: IMDG & non IMDG Non IMDG only	New Decal Installed New Expiration Date Month Year
Installation/Activity:		Inspected By:	

DOORS			**LEFT END**			**EXTERIOR ROOF**		
Component	Defects		Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC
CSC PLATE			ISO NUMBER			ISO NUMBER		
STENCILS			TOP END RAIL			TOP SIDE RAILS		
ISO NUMBERS			BOTTOM END RAIL			TOP END RAILS		
CORNER POSTS			CORNER POSTS			CORNER FITTINGS		
CORNER FITTINGS			CORNER FITTINGS			ROOF PANEL		
TOP SIDE RAIL			PANEL					
BOTTOM SIDE RAIL			PLACARD HOLDER					
DOOR PANELS								
ROD RETAINERS								
CAMS								
CAM RETAINERS								
HANDLES								
HANDLE RETAINERS								
J-BARS								
PLACARD HOLDER								

REMARKS:

(CIRCLE DEFECTS)



OPEN DOORS

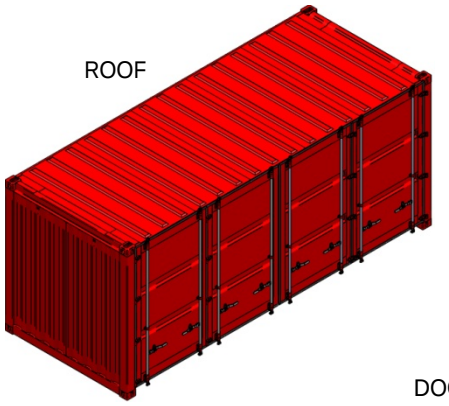


TABLE A-V. Side opening container inspection checklist

TABLE A-V (continued)

ISO Number:	**SIDE OPENING CONTAINER (continued)**

RIGHT END

Component	Defects	
	Minor	CSC
ISO NUMBER		
TOP END RAIL		
BOTTOM END RAIL		
CORNER POSTS		
CORNER FITTINGS		
PANEL		
PLACARD HOLDER		

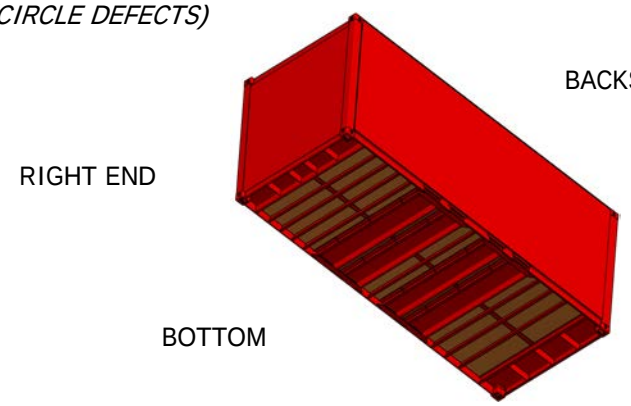
BOTTOM

Component	Defects	
	Minor	CSC
CORNER FITTINGS		
BOTTOM END RAILS		
BOTTOM SIDE RAILS		
CROSSMEMBERS		
FORKLIFT TUNNELS		

BACKSIDE

Component	Defects	
	Minor	CSC
ISO NUMBER		
TOP SIDE RAIL		
BOTTOM SIDE RAIL		
FORKLIFT POCKETS		
CORNER POSTS		
CORNER FITTINGS		
PANEL		
PLACARD HOLDER		

(CIRCLE DEFECTS)

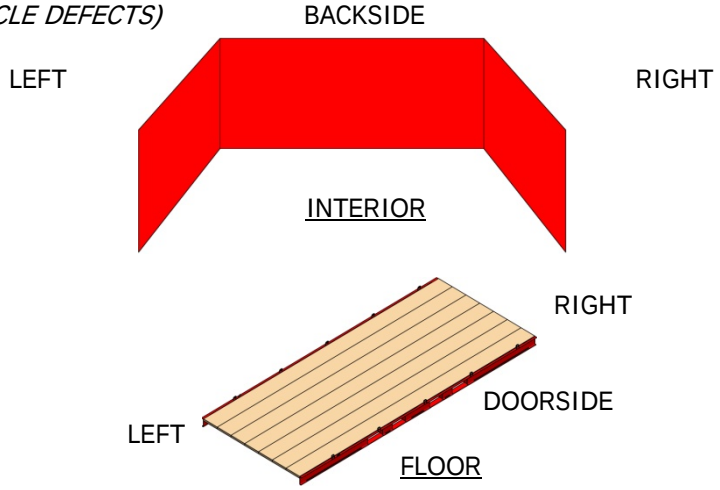


REMARKS:

INTERIOR

Component	Defects			Defects	
	Minor	CSC		Minor	CSC
FLOORING			WALL PANELS		
FLOOR FASTENERS			LOAD-BEARING SURFACES		
ROOF PANEL			TIE-DOWN DEVICES		
ROOF BOWS			LIGHT LEAKS		

(CIRCLE DEFECTS)



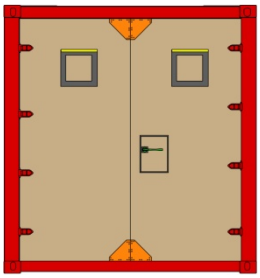
ISO Number:		Date of Inspection:	
Type of Container: **TACTICAL SHELTER**	Inspect this container to non IMDG standards only.	(Circle One) Pass Fail	New Decal Installed New Expiration Date Month Year
Installation/Activity:		Inspected By:	

DOORS/ENDS			**ROADSIDE**			**BOTTOM**		
Component	Defects		Component	Defects		Component	Defects	
	Minor	CSC		Minor	CSC		Minor	CSC
SAFETY APPROVAL PLATE			ISO NUMBER			CORNER FITTINGS		
STENCILS			CORNER FITTINGS			FRONT DOOR SILL		
ISO NUMBERS			CORNER POSTS			REAR DOOR SILL		
CORNER FITTINGS			TOP SIDE RAIL			BOTTOM SIDE RAILS		
CORNER POSTS			BOTTOM SIDE RAIL			CROSSMEMBERS		
CAM LOCKS FOR SIDE PANELS			FORKLIFT POCKETS			FORKLIFT TUNNELS		
DOOR HEADER			PANEL					
DOOR SILL								
HINGES								
RODS								
ROD RETAINERS								
CAMS								
CAM RETAINERS								
HANDLES								
HANDLE RETAINERS								
DOOR GASKETS								
FOLDING STEPS								

REMARKS:

(CIRCLE DEFECTS)

REAR DOORS



EXTERIOR

INTERIOR

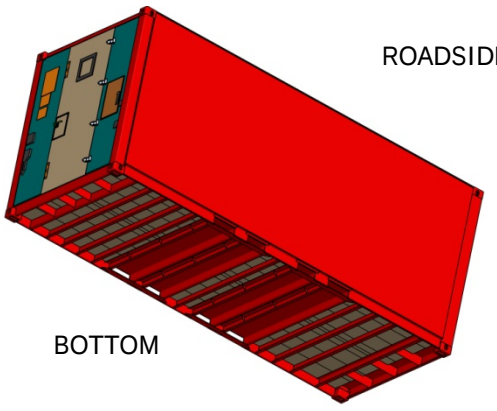


TABLE A-VI. Tactical shelter inspection checklist

TABLE A-VI (continued)

ISO Number:

TACTICAL SHELTER (continued)

EXTERIOR

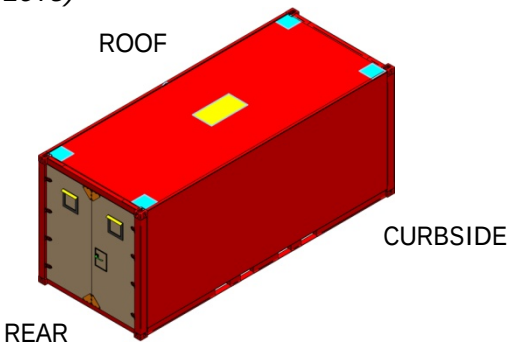
CURBSIDE

Component	Defects	
	Minor	CSC
ISO NUMBER		
CORNER FITTINGS		
CORNER POSTS		
TOP SIDE RAIL		
BOTTOM SIDE RAIL		
FORKLIFT POCKETS		
PANEL		

ROOF

Component	Defects	
	Minor	CSC
ISO NUMBER		
CORNER FITTINGS		
REAR DOOR HEADER		
FRONT DOOR HEADER		
TOP SIDE RAILS		
PANEL		
STRIKER PLATES		
SLING PAD		

(CIRCLE DEFECTS)

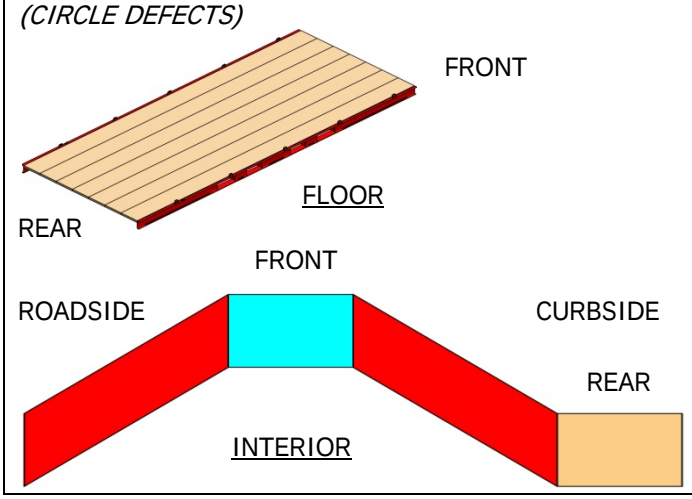


INTERIOR

Component	Defects	
	Minor	CSC
FLOORING		
FLOOR FASTENERS		
WALL PANELS		
ROOF PANEL		

Component	Defects	
	Minor	CSC
DOOR LININGS		
INNER DOOR HANDLES		
LIGHT LEAKS		

(CIRCLE DEFECTS)



INTERIOR

REMARKS:

INDEX

	PARAGRAPH	PAGE
3-point latch	3.5.16	30
Acceptable patching	4.3.2	85
Acceptable splicing	4.2.2	57
Acceptable splicing on steel cross members	4.2.12	76
Acceptable welding patterns	4.2.1	57
Acceptable wooden floor gaps for enclosed containers	4.3.12	103
Acceptable wooden flooring repairs	4.3.11	103
ACEP (Approved Continuous Examination Program)	3.7.5	42
Anti-rack hardware	3.5.12	29
Applicability	1.2	1
Applicable documents	2	2
Army, Marine Corps or Navy shelter	4.2.16.3	81
Army or Marine Corps shelter	4.2.6.3	59
	4.2.7.3	61
	4.2.8.3	65
	4.2.9.3	70
	4.2.10.3	75
Army tactical ISO shelter	3.2.8.1	13
Associated data item descriptions (DIDs)	6.2	117
Backup plate	3.8.4	49
BICON container	3.2.9	17
Bottom end rail	3.3.7	18
Bottom side rail	3.3.10	18
Cam	3.5.8	29
Cam lock handle	3.6.9	37
Cam retainer	3.5.9	29
Cargo restraint	3.6.4	36
	4.3.9	98
Caulking	3.8.13	49
Chain bolt	3.5.17	30
Chalk	5.2.7	109
Closed roof assembly	4.3.4	88
Collapsible flatrack end wall	4.2.17.1	83
Configuration	4.1.3	55
Consolidated data plate	3.7.9	42
Container	3.6.1	36
Container type	5.1.1	108
Conventions and markings	3.7	42
Corner fitting	3.3.1	18
	4.2.5	58

	PARAGRAPH	PAGE
Corner post	3.3.2	18
	4.2.6	59
Corrosive failure	3.8.12	49
Cross member	3.3.11	18
Cross member modifications	4.2.13	75
CSC (International Convention for Safe Containers)	3.7.3	42
CSC safety approval plate	3.7.4	42
Customs catch	3.5.13	29
Damage and repair	3.8	49
DD Form 2282 decal	5.4.2	114
Definitions	3	5
Delamination	3.8.16	50
Depth gauge	5.2.9	109
Detailed requirements	5	108
Documents	5.4	114
Door assembly	3.5	29
Door end frame	4.2.7	61
Door end(s) or side(s)	5.3.3	112
Door header	3.3.3	18
Door holder (tieback)	4.3.14.6	106
Door locking handle	3.5.10	29
Door locking handle retainer	3.5.11	29
Door panel	3.5.1	29
Door post vertical retainer	3.6.4.1	36
Door seal (gasket)	3.5.14	30
Door sill	3.3.4	18
Dunnage	3.6.4.2	36
End frame (without door)	4.2.8	65
Exterior sides and ends	5.3.4	112
Feeler gauge	5.2.8	109
Fiberglass reinforced plywood (FRP)	3.4.1	21
Flange	3.8.8	49
Flashlight	5.2.6	109
Floor cross members	4.2.10	75
Flooring	3.4.16	22
	4.3.10	103
Folding steps	4.3.14.8	106
Foot bolt	3.5.18	30
Forklift pocket	3.3.13	18
	4.2.16	81
Forklift pocket strap	3.3.14	19
Format	1.3	1
Front end frame	3.3.8	18

	PARAGRAPH	PAGE
General	2.1	2
	3.1	5
	4.1	55
General cargo container (non IMDG)	4.2.4.1	57
	4.2.6.1	59
	4.2.7.1	61
	4.2.8.1	65
	4.2.9.1	69
	4.2.10.1	75
	4.2.16.1	81
General requirements	4	55
General type door assembly	4.3.7	92
Gooseneck tunnel	3.3.15	19
Government documents	2.2	2
Gusset	3.8.3	49
Gussets and end rail stiffeners	4.2.14	76
Hinge	3.5.3	29
Hinge pin	3.5.4	29
Hinge pin weld	3.5.5	29
Hole	3.8.9	49
IMDG	3.6.11	37
Insert	3.8.5	49
Inspection checklist	5.4.1	114
Inspection report	5.4.4	115
Inspection stands	5.2.5	109
Inspector qualifications	5.1.2	108
Installed equipment	4.3.14.7	106
Intended use	6.1	117
Interior	5.3.7	112
Intermodal	3.6.2	36
ISO (International Organization for Standardization)	3.7.1	42
ISO markings	3.7.2	42
J-bar	3.5.2	29
Joint strip	3.4.17	22
Judgment of criteria	5.1.4	108
Kick plate	3.4.8	21
Ladder	5.2.4	109
Leased container	5.1.3	108
Light leak test	5.3.8	113
Lining	3.4.6	21
Lining and lining shield	4.3.14.2	106
Lining shield	3.4.7	21

	PARAGRAPH	PAGE
Load bearing surface	3.6.4.3	36
	4.3.9.2	98
Load retainers	4.3.9.3	98
Locking bar	3.5.6	29
Locking bar mounting bracket	3.5.7	29
Long straight edge	5.2.1	108
Major defects	4.2.4	57
Manufacturer's data plate	3.7.8	42
Marine Corps tactical ISO shelter	3.2.8.2	14
Marking panel	3.4.5	21
Markings and data plates	4.1.2	55
	5.3.1	112
Maximum gross weight	3.6.7	37
Measuring tape (ruler)	5.2.2	108
Mechanical restraint system	4.3.9.1	98
Mechanical restraint system for MILSPEC VAN	3.6.4.4	36
MILSPEC VAN	3.6.3	36
Miscellaneous components	4.3.14	106
Navy shelter	4.2.6.4	60
	4.2.7.4	62
	4.2.8.4	65
	4.2.9.4	70
	4.2.10.4	75
Navy tactical ISO shelter	3.2.8.3	15
Newly manufactured container	5.4.2.1	115
Non IMDG	3.6.12	37
Non-Government publications	2.3	3
Non-structural components	4.3	85
Notes	6	117
Objective	1.4	1
Open-top swinging header	4.2.17.2	83
Order of precedence	2.4	4
Other Government documents, drawings, and publications	2.2.2	2
Overall configuration	5.3.2	112
Overlap (lapped)	3.8.15	50
Patch	3.8.1	49
Payload	3.6.6	37
Pinhole	3.8.10	49
Placard holder	3.7.10	43
	4.3.14.4	106
Pop rivets	4.3.14.5	106
Pre-loading inspection vs. CSC reinspection	5.3.9	114
Prerequisites	5.1	108

	PARAGRAPH	PAGE
Primary structural components	3.3	18
	4.2	57
Purpose	1.1	1
QUADCON container	3.2.9	17
Rain gutter	3.5.15	30
Ramp type door	4.3.8	92
Rear end frame	3.3.5	18
Recommended inspection sequence	5.3	112
Regulatory mandates	4.1.1	55
Removable cover (tarp) assembly	4.3.5	90
Roof (exterior)	5.3.5	112
Roof beam	3.4.12	21
Roof bow	3.4.11	21
Roof panel	3.4.10	21
Roof reinforcement plate	3.4.13	21
Sandwich panel	3.4.20	23
Scope	1	1
Section (full profile)	3.8.6	49
Serviceability of cover (tarp) assembly	4.3.6	90
Serviceability of panels	4.3.1	85
Serviceable for general cargo	5.4.2.3	115
Serviceable for UN Hazard Class 1 (IMDG)	5.4.2.4	115
Shelter	3.6.8	37
Side and end wall panels	4.3.3	85
Side rails	4.2.9	69
Skids	3.6.10	37
Sling pad	3.4.22	22
Special container hardware	4.2.17	83
Special terminology	3.6	36
Specifications	2.2.1	2
Splice	3.8.2	49
Stanchion	3.6.4.5	36
	4.3.9.5	98
Steel cross member juncture with steel side rail	4.2.11	76
Steps	3.4.19	22
Straightening	4.2.3	57
Striker plate	3.4.21	22
Structural integrity of floor structure	4.3.13	103
Structural integrity of understructure	4.2.15	76
Subject term (key word) listing	6.4	117
Subsequent to repair	5.4.2.2	115
Suggested tools and equipment	5.2	108
Supersession	6.3	117

	PARAGRAPH	PAGE
Tactical ISO shelter	3.2.8	12
Tap hammer	5.2.10	109
Tare weight	3.6.5	37
Tarp	3.4.14	21
Threshold plate	3.4.18	22
	4.3.14.1	106
Tiedown provision (lashing bar or ring)	3.6.4.6	36
	4.3.9.4	98
TIR (Transport Internationale des Routiers)	3.7.6	42
TIR cable	3.4.15	21
TIR markings or plate	3.7.7	42
Top end rail	3.3.6	18
Top side rail	3.3.9	18
TRICON container	3.2.9	17
Typical end and side opening container	3.2.5	8
Typical end opening aluminum container	3.2.2	6
Typical end opening fiberglass reinforced plywood (FRP) container	3.2.3	7
Typical end opening steel container	3.2.1	5
Typical flatrack container	3.2.7	11
Typical ISO containers	3.2	5
Typical open top container	3.2.6	9
Typical side opening container	3.2.4	8
UN Hazard Class 1 (IMDG) declaration	5.4.3	115
UN Hazard Class 1 container (IMDG)	4.2.4.2	58
	4.2.6.2	59
	4.2.7.2	61
	4.2.8.2	65
	4.2.9.2	69
	4.2.10.2	75
	4.2.16.2	81
Undercoating	3.8.14	50
Understructure	3.3.12	18
	5.3.6	112
Universal load retainer	3.6.4.7	36
Ventilator	3.4.9	21
	4.3.14.3	106
Wall beam	3.4.4	21
Wall panel	3.4.2	21
Wall post	3.4.3	21
Walls, roof, and floor	3.4	21
Web	3.8.7	49
Welded load retainer	3.6.4.8	36

	PARAGRAPH	PAGE
Welder’s hammer	3.8.11	49
	5.2.3	108

CONCLUDING MATERIAL

Custodians:
Army – AR
Navy – SH
Air Force – 69
DLA – DH

Preparing activity:
Army – AR
(Project 8150-2016-002)

Review activities:
Army – AV, GL, MI, MT, SM
Navy – AS, CG, MC, OS, SA
Air Force – 03, 06, 16, 11, 99
DLA – CT, DM, GS, IS, PS, SS
GSA - FAS
Other – FGI, MP

Agent:
U.S. Army Defense Ammunition Center

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