CHAPTER

07

LIFTING AND SHORING

CHAPTER 07
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A = Added, R = Revised, D = Deleted, O = Overflow

07-EFFECTIVE PAGES

CHAPTER 07
LIFTING AND SHORING

07-CONTENTS

PART NUMBER: F70244-17

NAME: SLING ASSEMBLY - LIFTING, FUSELAGE

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

ARD 3-20-3, ARD 3-30-11, ARD 4-30-4

USAGE & DESCRIPTION: The F70244-17 sling assembly is used on all 737 airplanes.

F70244 is used in conjunction with a customer-furnished crane. F70244 is used to lift the fuselage of a damaged airplane as part of a recovery operation. The sling should be positioned on the bulkhead at body station BL294. Caution should be exercised to insure that the sling does not slip fore or aft of the proper location. F70244 includes a spreader bar for attachment to a crane hook and a 12-inch (305 mm) wide nylon strap attached at each end with shackles and fittings. The nylon strap supports the belly of the airplane.

Refer to the 737 Airplane Recovery Document (ARD) 3-20-3, ARD 3-30-11, ARD 4-30-4 and the current F70244 drawing for complete usage instructions.

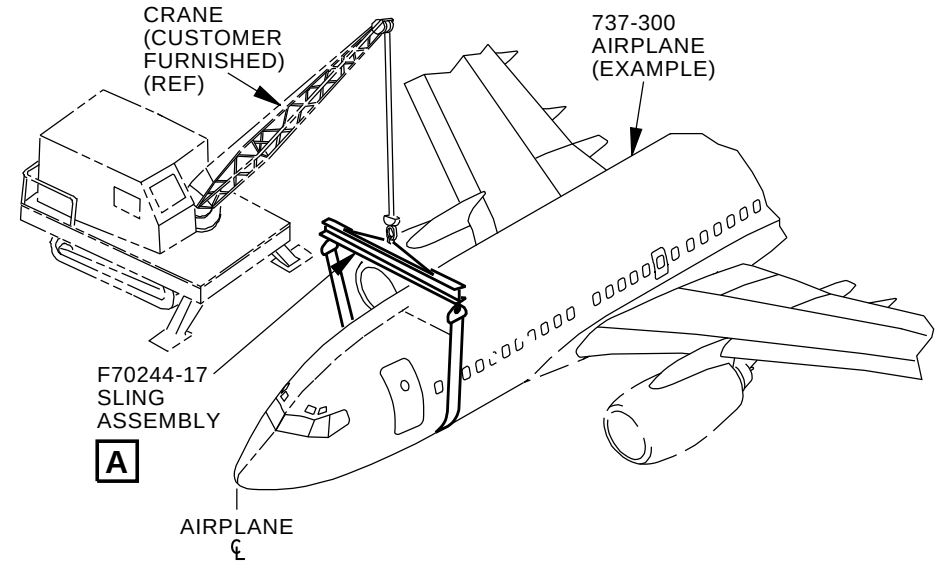
F70244-17 consists of:

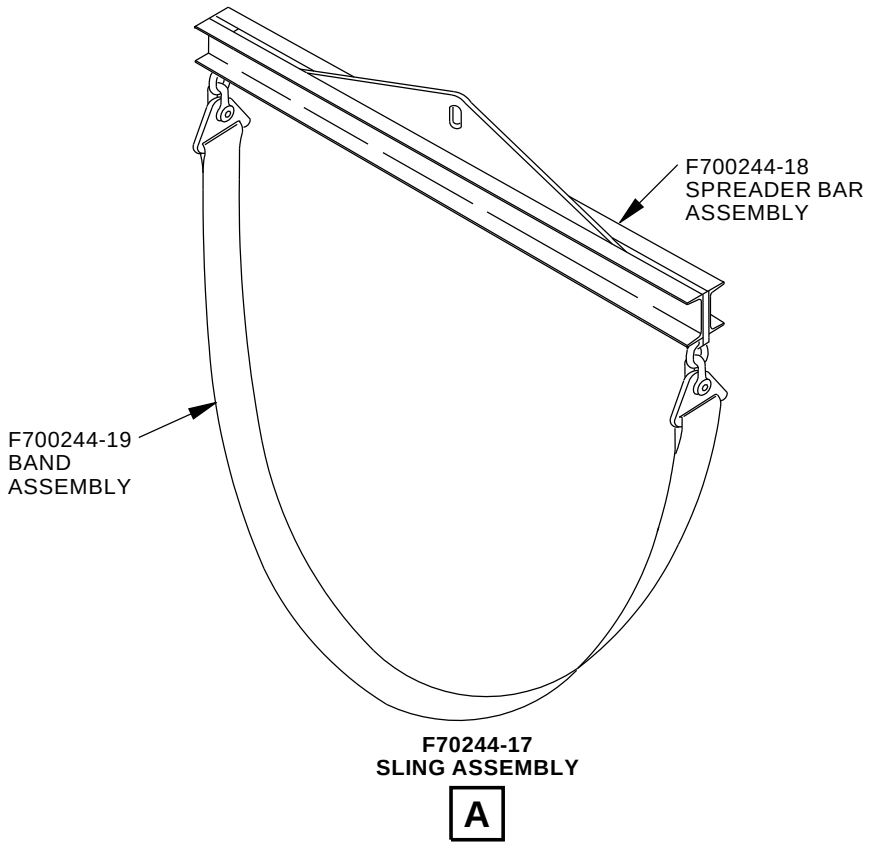
F70244-17		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SPREADER BAR ASSEMBLY	F70244-18
1	BAND ASSEMBLY	F70244-19

WEIGHT: 501 lbs (227 kg)

DIMENSIONS: 176 x 25 x 8 inches (4470 x 635 x 203 mm)

NOTE: C07012 replaces F70244 for future procurement.





G04106 S0006831322_V4

Fuselage Lifting Sling Assembly
Figure 1

PART NUMBER: F80240-1

NAME: RESTRAINT EQUIPMENT - PASSENGER WINDOW

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

737 ARD 3-20-1, 737 ARD 5-10-1

USAGE & DESCRIPTION: The F80240-1 restraint equipment is used on all 737-100 thru -800 airplanes.

F80240 is used in conjunction with customer-furnished restraining cables to restrain a 737 airplane during recovery operations.

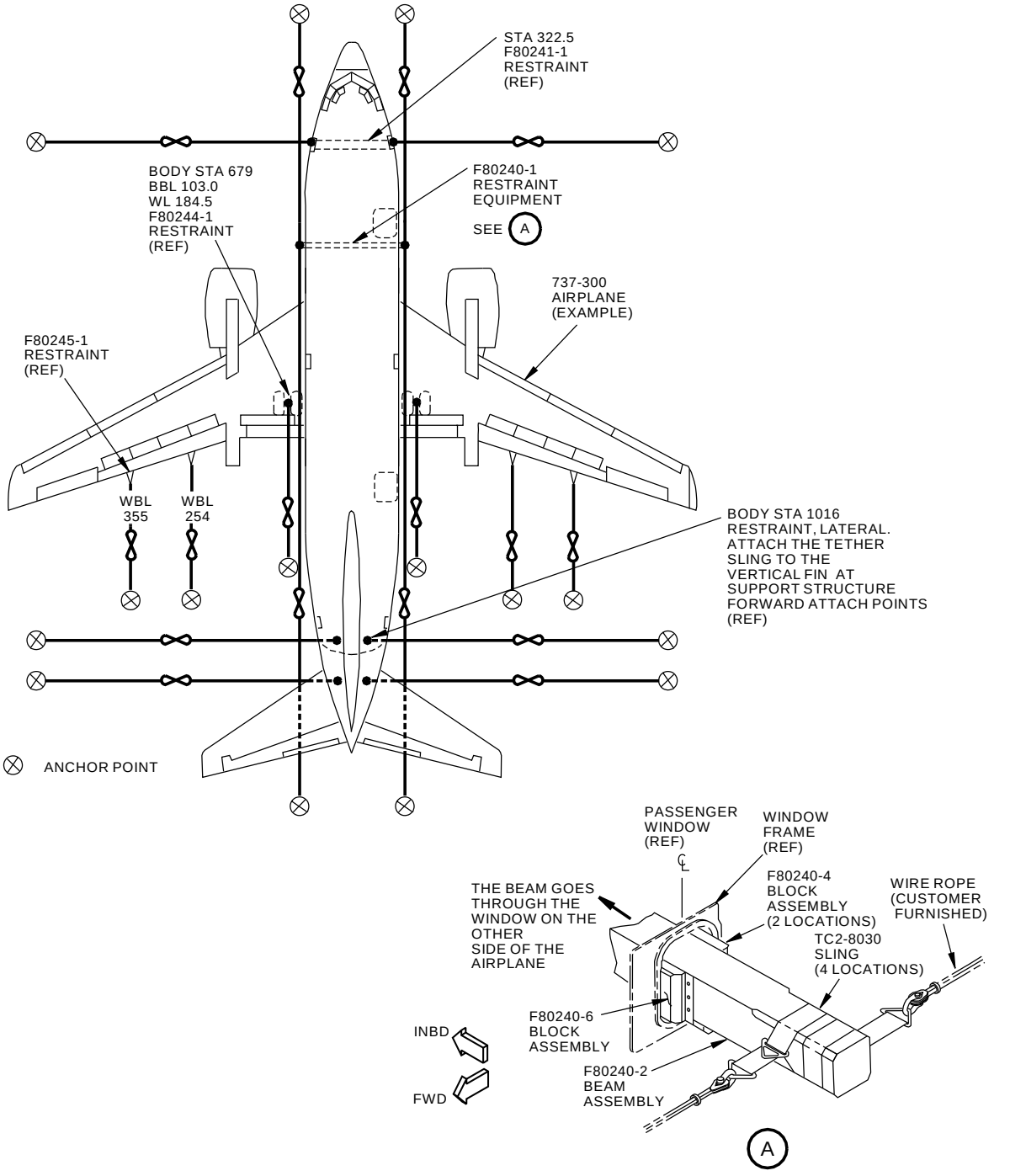
Refer to the 707, 727, 737 Airplane Recovery Document (D6-40146) 3-20-1; 737 Airplane Recovery Document (D626A004) 5-10-1 and the current F80240 drawing for complete usage instructions.

F80240-1 consists of an F80240-2 beam assembly (not in storage box) and:

F80240-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
2	BLOCK ASSEMBLY	F80240-4
2	BLOCK ASSEMBLY	F80240-6
24	SCREW	MS51861-67
4	SLING	TC2-803D
1	STORAGE BOX	

WEIGHT: F80240-2 beam assembly - 240 lbs (109 kg)
F80240 loose parts - 40 lbs (18 kg)

DIMENSIONS: F80240-2 beam assembly - 192 x 8 x 8 inches (4877 x 203 x 203 mm)
F80240 loose parts - 20 x 12 x 12 inches (508 x 305 x 305 mm)



F76554 S0006831324_V3

Passenger Window Restraint Equipment
Figure 1

PART NUMBER: F80241-1, -9

NAME: RESTRAINT - TETHERING, STA 322.5 FORWARD ENTRY AND FORWARD GALLEY DOORS

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

737 ARD 3-20-1, 737 ARD 3-20-3, 737 ARD 4-20-4, 737 ARD 4-30-4, 737 ARD 5-10-1

USAGE & DESCRIPTION: The F80241-1 (option) or F80241-9 (preferred) restraint is used on all 737 airplanes.

F80241 is used in conjunction with customer-furnished wire rope to restrain a 737 airplane during recovery operations. F80241 tethers the airplane through the forward entry and galley doors.

Refer to the 707, 727, 737 Airplane Recovery Document (D6-40146) 3-20-1,3-20-3 and 4-20-4; 737 Airplane Recovery Document (D626A004) 4-30-4, 5-10-1 and the current F80241 drawing for complete usage instructions.

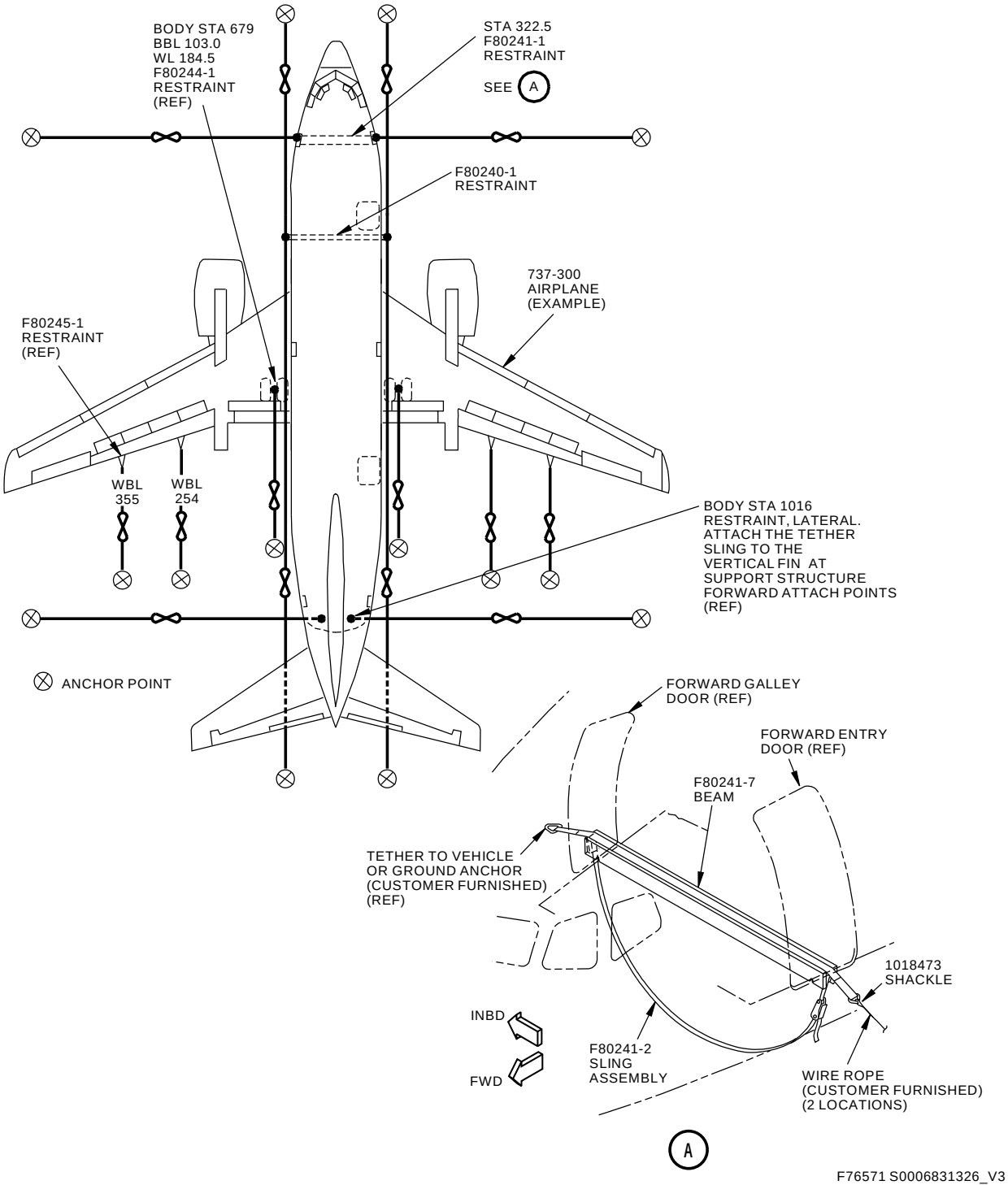
F80241-1 and -9 consist of

F80241-1 OR F80241-9		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SLING ASSEMBLY	F80241-2
1	BEAM	F80241-7
2	SHACKLE	1018473
1	STORAGE BOX	

WEIGHT: 170 lbs (77 kg)

DIMENSIONS: 8 x 12 x 144 inches (203 x 305 x 3658 mm)

NOTE: F80241-9 replaces F80241-1 for future procurement.



Forward Entry/Galley Doors (STA 322.5) Tethering Restraint
Figure 1

PART NUMBER: C07006-16

NAME: TETHERING FIXTURE - REAR SPAR VERTICAL FIN, AFT FITTING

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

737 ARD 5-10-1

USAGE & DESCRIPTION: The C07006-16 tethering fixture is used on 737-600 thru -900 airplanes.

C07006 is used in conjunction with customer-furnished hooks and cables and an overhead lift for placement. C07006 is used to restrain the airplane laterally after the aft vertical fin has been removed, during airplane recovery operations.

C07006-16 differs from C07006-1 by the proof load diagrams.

Refer to the 737 Airplane Recovery Document (D626A004) 5-10-1 and the current C07006 drawing for complete usage instructions.

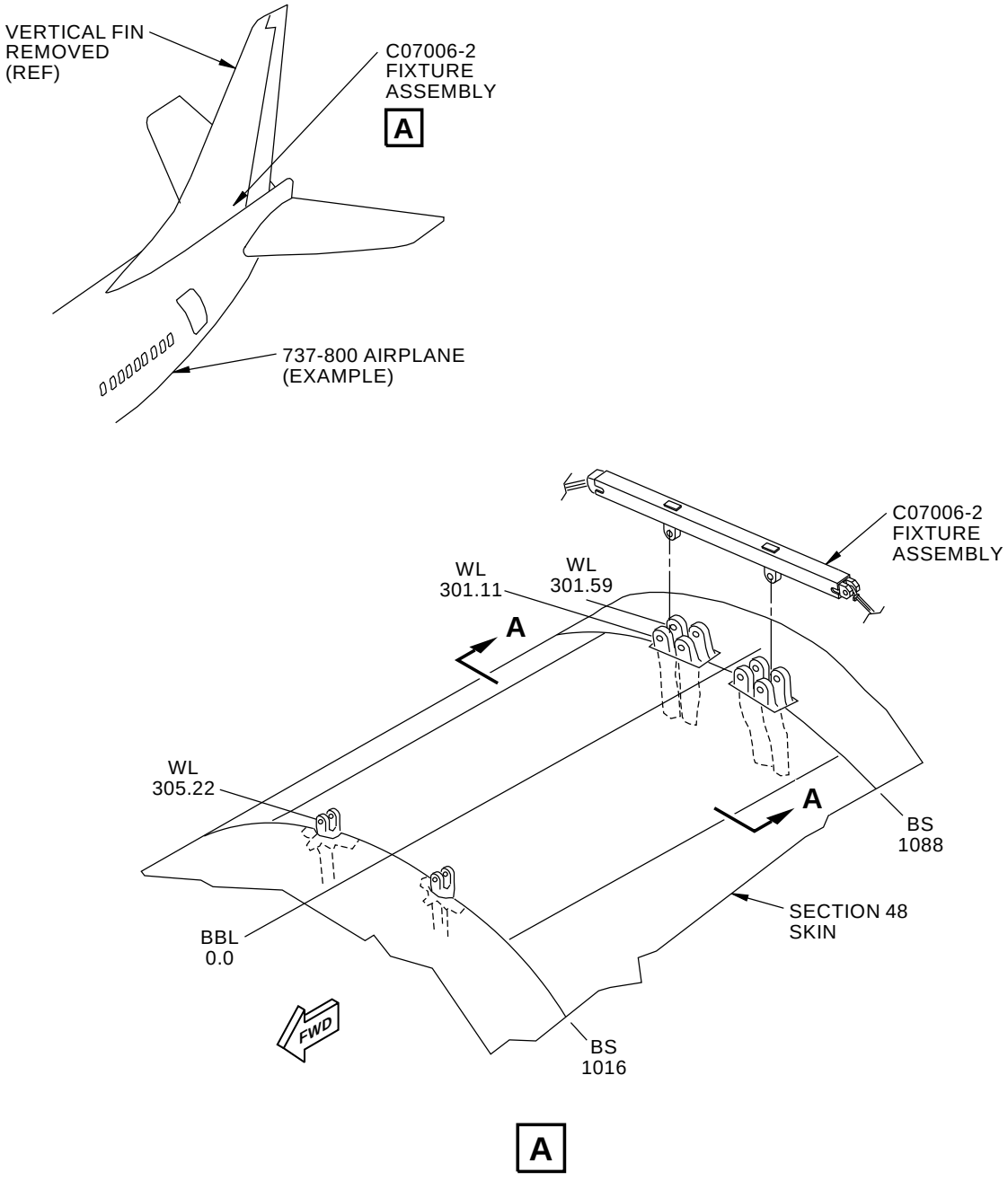
C07006-16 consists of:

C07006-16		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	FIXTURE ASSEMBLY	C07006-2
1	STORAGE BOX	

WEIGHT: 180 lbs (82 kg)

DIMENSIONS: 8 x 11 x 52 inches (203 x 279 x 1321 mm)

NOTE: C07006-16 supersedes C07006-1.



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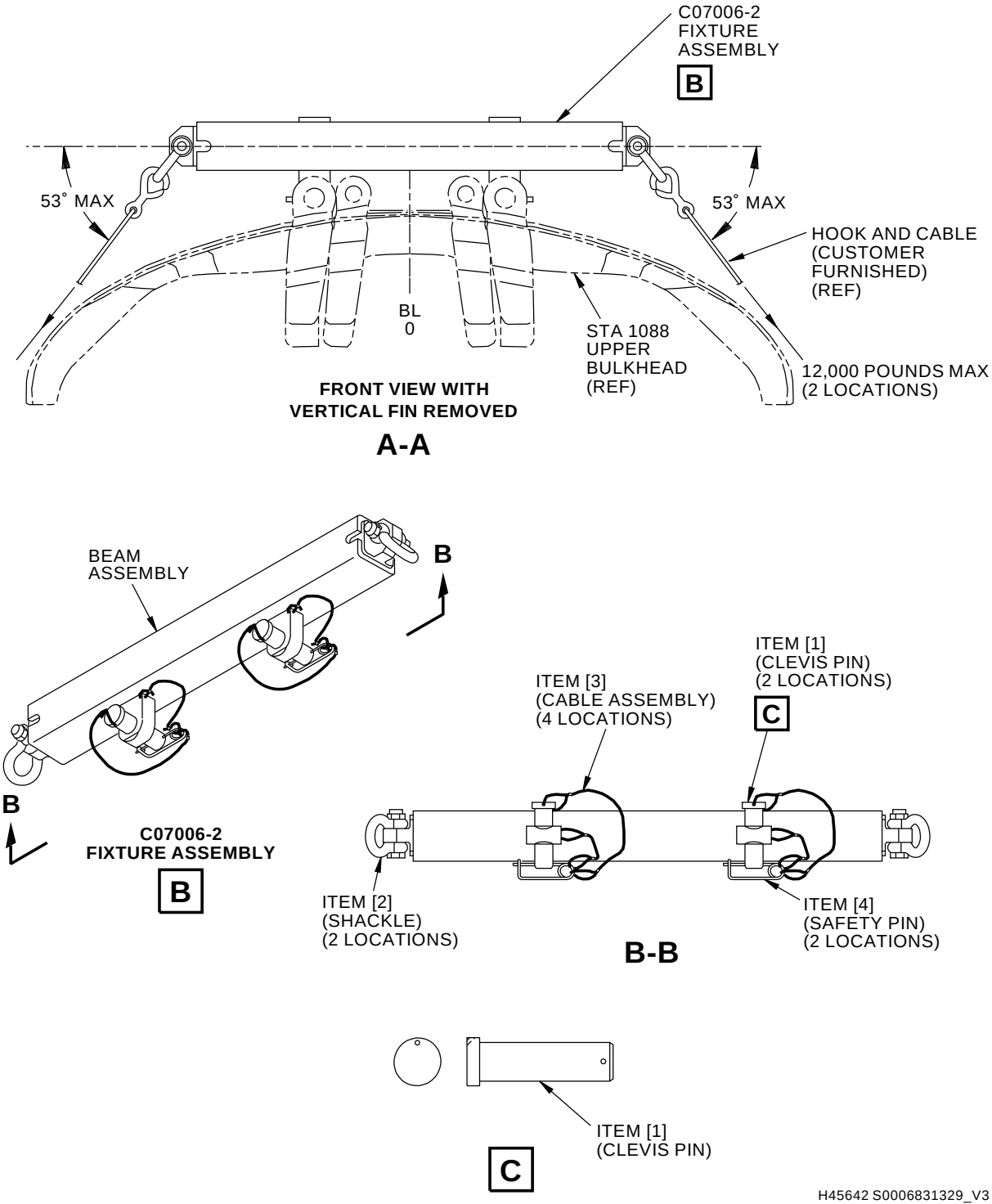
Aft Fitting Rear Spar Vertical Fin Tethering Fixture
Figure 1 (Sheet 1 of 2)



Aft Fitting Rear Spar Vertical Fin Tethering Fixture
Figure 1 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07006-8 (11-423)	CLEVIS PIN	0PXJ7
[2]	C07006-12 (G-2130-7/8)	SHACKLE	75535
[3]	C07006-11 (CL-23-KA-12.0-LR)	CABLE ASSEMBLY	99862
[4]	C07006-13 (25-07)	SAFETY PIN	0PXJ7

PART NUMBER: C07008-21, -28

NAME: RESTRAINT EQUIPMENT - OUTBOARD TRAILING EDGE FLAP TRACKS

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

737 ARD 5-10-1

USAGE & DESCRIPTION: The C07008-21 restraint equipment is used on 737-600, -700, -800 and -900 airplanes.

The C07008-28 restraint equipment is used on 737-900ER airplanes only.

C07008 is used in conjunction with customer-furnished hooks and cables. C07008 is used to restrain the airplane during 737 recovery operations. C07008 is designed to restrain up to 7400 lbs (3357 kg) at a maximum angle of up to 30 degrees in the forward direction and up to a maximum angle of 40 degrees in the aft direction.

Refer to the 737 Airplane Recovery Document (ARD), D626A004, 5-10-1 and the current C07008 drawing for complete usage instructions.

C07008-21 and -28 consist of:

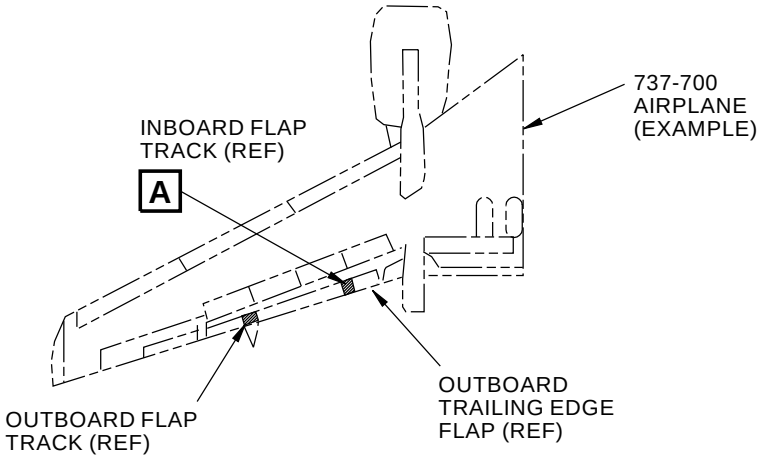
C07008-21		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
4	SHACKLE FITTING ASSEMBLY	C07008-3
2	INBOARD FITTING ASSEMBLY	C07008-22
2	OUTBOARD FITTING ASSEMBLY	C07008-23
1	STORAGE BOX	

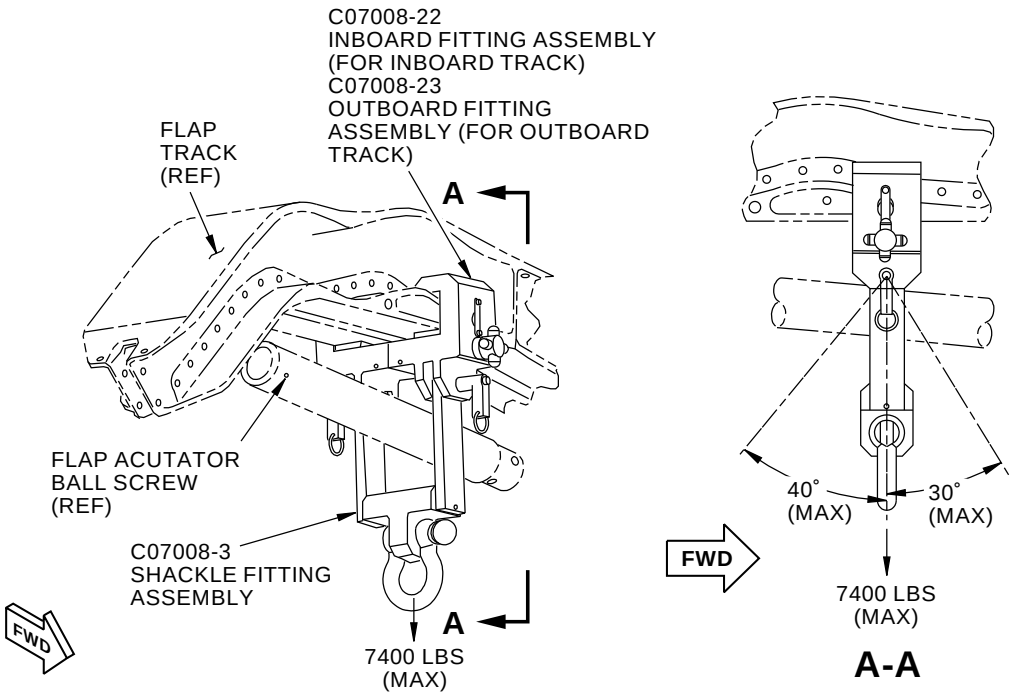
C07008-28		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
2	INBOARD TIE DOWN ASSEMBLY	C07008-30
4	OUTBOARD TIE DOWN ASSEMBLY	C07008-31
1	STORAGE BOX	

WEIGHT: C07008-21 - 106 lbs (48 kg)
C07008-28 - 242 lbs (110 kg)

DIMENSIONS: C07008-21 - 4 x 24 x 40 inches (102 x 610 x 1016 mm)
C07008-28 - 14 x 24 x 36 inches (356 x 610 x 914 mm)

NOTE: C07008-21 supersedes C07008-1.
C07008-28 supersedes C07008-21 for 737-900ER airplanes only.





INBOARD FLAP TRACK OF OUTBOARD TRAILING EDGE FLAP
(OUTBOARD FLAP IS EQUIVALENT)

A

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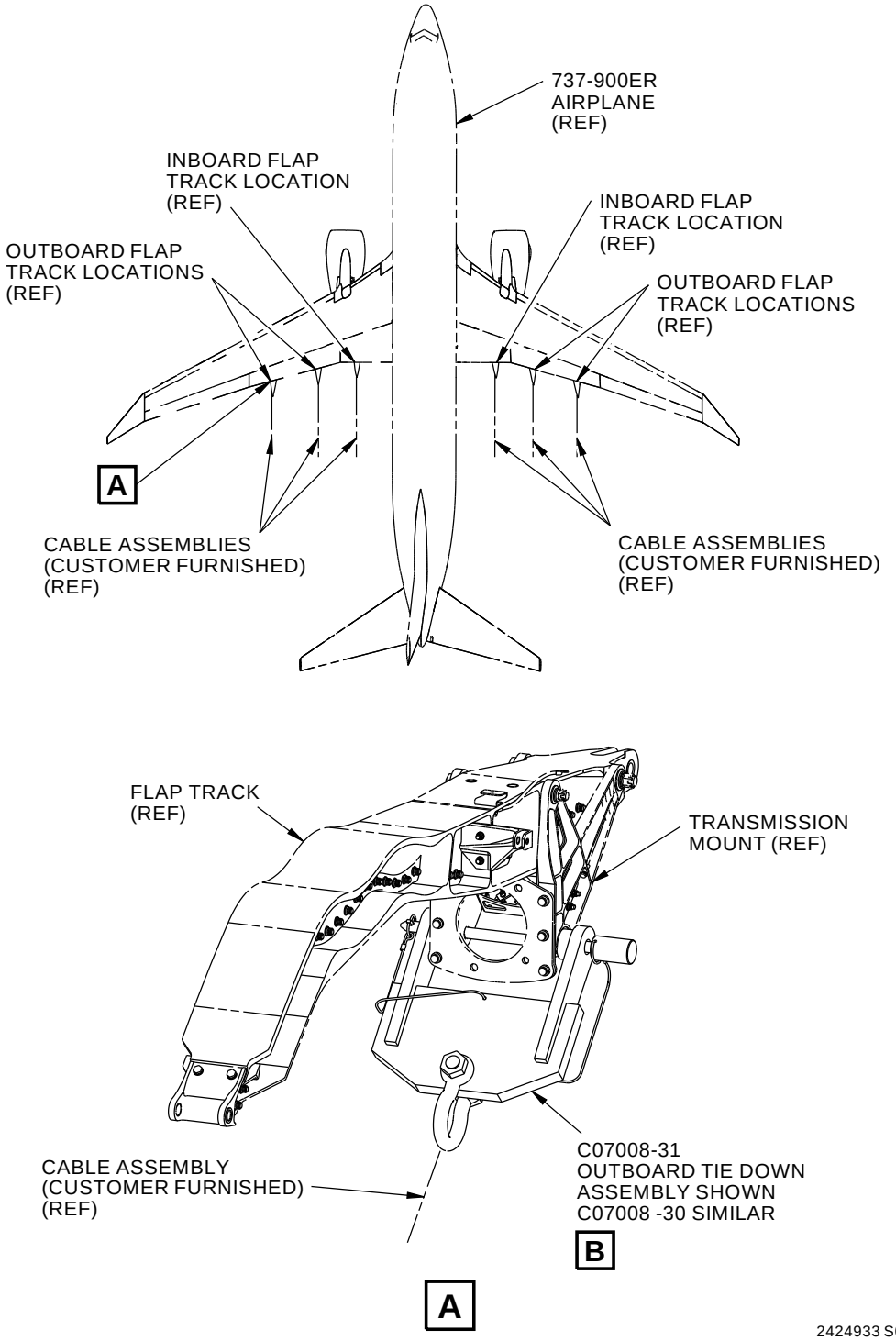
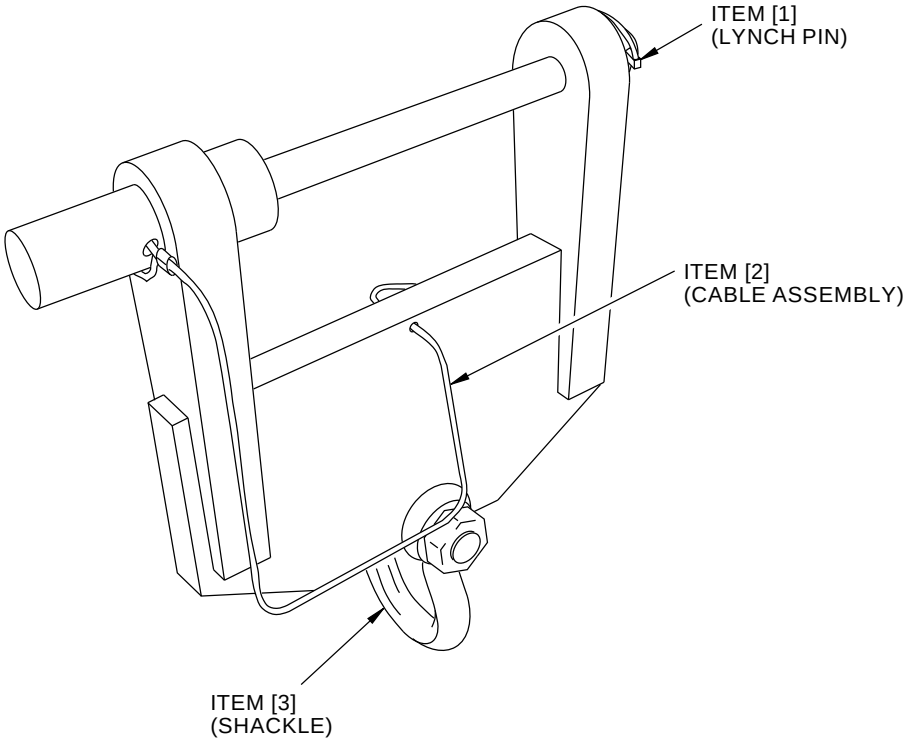
C07008-21 Outboard Trailing Edge Flap Track Restraint Equipment
Figure 1



C07008-28 Outboard Trailing Edge Flap Track Restraint Equipment
Figure 2 (Sheet 1 of 2)



C07008-31
OUTBOARD TIE DOWN ASSEMBLY
SHOWN C07008-30 SIMILAR

B

2424693 S0000560845_V1

C07008-28 Outboard Trailing Edge Flap Track Restraint Equipment
Figure 2 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07008-38 (63-001)	LYNCH PIN	ITW SHAKEPROOF GROUP 2000 INDUSTRIAL ROAD IRON RIDGE, WI 53035
[2]	C07008-39 (CL-21-KA-36.0-LR)	CABLE ASSEMBLY	99862
[3]	C07008-40 (G-2130)	SHACKLE	75535

PART NUMBER: C07010-1

NAME: SLING - TETHERING/LIFTING, AIRPLANE RECOVERY (CE)

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

ARD 03-30-3, ARD 03-30-11, ARD 05-10-1, C07010 Drawing

USAGE & DESCRIPTION: The C07010-1 (CE qualified) sling is used on all 737 airplanes, except 737-100 thru -500 airplanes.

C07010 is used in conjunction with a customer-furnished overhead lift. C07010 is used to lift or restrain the airplane between stations 294 and 420 during airplane recovery.

Refer to the 737 Airplane Recovery Document (ARD), ARD 03-30-3, ARD 03-30-11, ARD 05-10-1and the current C07010 drawing for complete usage instructions.

C07010-1 consists of:

C07010-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SLING ASSEMBLY	C07010-3
2	LOAD EQUALIZER ASSEMBLY	C07010-4
1	SPREADER BAR ASSEMBLY	C07010-5
3	WEB STRAP ASSEMBLY	C07010-6
1	STORAGE BOX	

WEIGHT: 1850 lbs (839 kg)

DIMENSIONS: 24 x 55 x 72 inches (610 x 1397 x 1829 mm)

DECLARATION OF CONFORMITY: C07010 requires a written Declaration of Conformity from the C07010 fabricator if it is to be used in the European Union. The design of C07010 meets the European requirements of Machinery Directive 2006/42/EC including its amendments. When used within the European Union, the fabricator of C07010 must also meet the requirements of that directive. At a minimum for the tool fabricator, this requires the retention of a technical file, a labeling of the equipment with the CE mark, and the completion of an EC Declaration of Conformity. If C07010 is to be used within the European Union and the Declaration of Conformity is missing, contact the fabricator of C07010 for a replacement Declaration of Conformity.

OPERATING INSTRUCTIONS: Refer to the currentC07010 drawing and ARD 03-30-3, ARD 03-30-11, ARD 05-10-1 procedures for detailed instructions on the use of this equipment. This equipment shall only be used in conjunction with Boeing maintenance procedures to maintain Boeing airplanes.

MAINTENANCE: General Cleaning: Basic care of the equipment includes cleaning the equipment of dirt, corrosives, or contaminants. Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent, clean the components and wipe dry with a clean cloth. Hang the components freely to dry, but away from excessive heat or steam.

Slings, Synthetic: Maintenance and inspection of synthetic shall be performed in accordance with ASME B-30.9, Chapter 9-5 and 9-6.

Slings, Chain: Maintenance and inspection of chain shall be performed in accordance with EN 1492-1, Section 6, Section Annex B and ASME B-30.9, Chapter 9-1.

Structural and Mechanical Lifting Devices, (spreader bar):

1. Maintenance shall be done based on the recommendations made by the lifter manufacturer or qualified person.
2. Before adjustments and repairs are started on a lifter, the following precautions shall be taken:
   - All courses of power shall be disconnected, locked out, and tagged "Out of Service".
   - A lifter removed from service for repair shall be tagged "Out of Service".
3. Only a qualified person shall perform adjustments and tests when required.
4. Replacement parts shall be at least equal to the original manufacturer’s specifications.
5. After adjustments and repairs have been made, the lifter shall not be returned to service until it has been inspected according to ASME B-30.20, para. 20-1.3.4.
6. Dated records of repairs and replacements shall be made.
7. Adjustments and repairs. Any hazardous conditions disclosed by the inspection requirements of ASME B-30.20, para. 20-1.3.1 shall be corrected before normal operations of the lifter is resumed. Adjustments and repairs shall be done under the direction of , or by, a qualified person.

PROOF LOAD: Proof load testing for the C07010-1 sling shall be performed per the current C07010 drawing proof load diagrams (example Figure 2) and:

- In conjunction with initial fabrication
- Subsequent to modification of this equipment (equipment shall only be modified in accordance with the C07010 drawing).
- After repair of load carrying components.
- After replacement of load carrying components (except for load carrying components such as shackles and hoist rings that carry their own certification).
- Continuing integrity/safety of the device to be assured by inspection.

INSPECTION: FREQUENT

General Inspection (before use):

1. Missing fasteners
2. Notes, Cautions and Warnings are legible
3. Usage placards are legible

Slings, General: Prior to use, all new, altered, modified or repaired slings shall be inspected by a designated person to verify compliance with the applicable provisions of EN 1492-1, Section 6, Section Annex B and ASME B-30.9

Slings, Webbing:

1. Visual inspection for damage shall be performed by the user or other designated person each day or shift the sling is used.
2. Slings shall not be returned to service until approved by a qualified person.
3. A written record of frequent inspections is not required.
4. Conditions detailed below and in EN 1492-1, Section 6, Section Annex B and ASME B-30.9, or conditions that may result in a hazard shall cause the sling to be removed from service.
   - Red warning yarns visible.
   - Acid or caustic burns.
   - Melting or charring of any part of the sling surface.
   - Snags, punctures, tears or cuts.
   - Broken or worn stitches in load bearing splices.
   - Excessive abrasive wear.
   - Knots in any part of the sling.
   - Discoloration and brittle or stiff areas on any part of the sling.
   - Distortion of fittings.
   - Missing or illegible sling tag.

Slings, Chain:

1. Visual inspection for damage shall be performed by the user or other designated person each day or shift the sling is used.
2. Conditions such as those listed in ASME B-30.9, para. 9-1.9.4 or any other conditions that may result in hazard shall cause the sling to be removed from service.
3. Slings shall not be returned to service until approved by a qualified person.

Structural and Mechanical Lifting Devices (spreader bars):

1. Visual Inspection by the operator before and during each lift of the device. Records are not required. Inspect for:

- Structural deformation, cracks or excessive wear of any parts of the lifting device.
- Loose or missing guards, fasteners, covers, stops or nameplates.
- All functional operational mechanisms and automatic hold and release mechanisms for misadjustments interfering with operation.

PERIODIC

Welding Inspection:

1. Magnetic particle or dye penetrant inspection for all welds, after all proof load tests.
2. Inspect and evaluate per GSE Welding Document A00001 Inspection Requirements Tables 1 & 2, and Acceptance Criteria Table 3.
3. Reject cracked or deformed parts.

Slings, General:

1. A complete inspection for damage to the sling shall be periodically performed by a designated person.
2. Each sling and component shall be examined individually, taking care to expose and examine all surfaces.
3. The sling shall be examined for the conditions noted in the frequent inspection and in ASME B-30.9 or any other conditions that may result in a hazard shall cause the sling to be removed from service.
4. Slings shall not be returned to service until approved by a qualified person.
5. A written record of the most recent periodic inspection shall be maintained and shall include the condition of the sling.

Slings, Synthetic: The straps shall be examined for the conditions noted in the frequent inspection and in ASME B-30.9 or any other conditions that may result in a hazard shall cause the sling to be removed from service.

Slings, Chain:

1. Each link and component shall be examined individually, taking care to expose and examine all surfaces, including the inner link surfaces.
2. Chain inspection shall be examined for conditions listed in ASME B-30.9, para. 9-1.9.4.
3. Deficiencies found during the inspection are analyzed and the chain shall not be used, if deficiencies are determined to be hazardous.

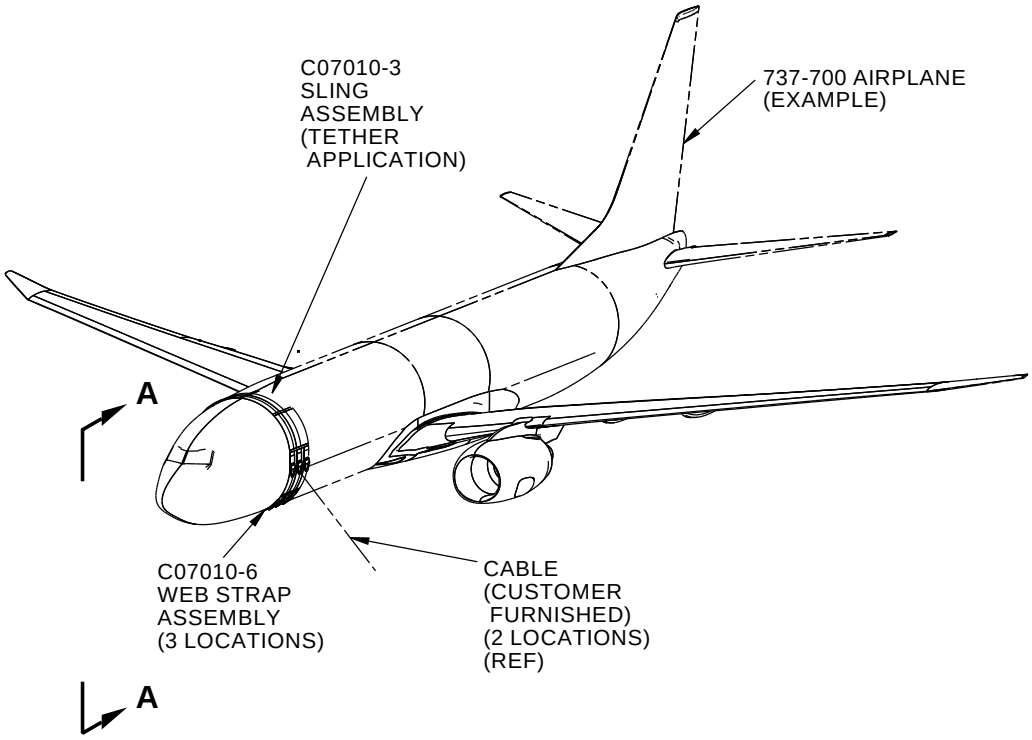
Structural and Mechanical Lifting Devices (spreader bar):

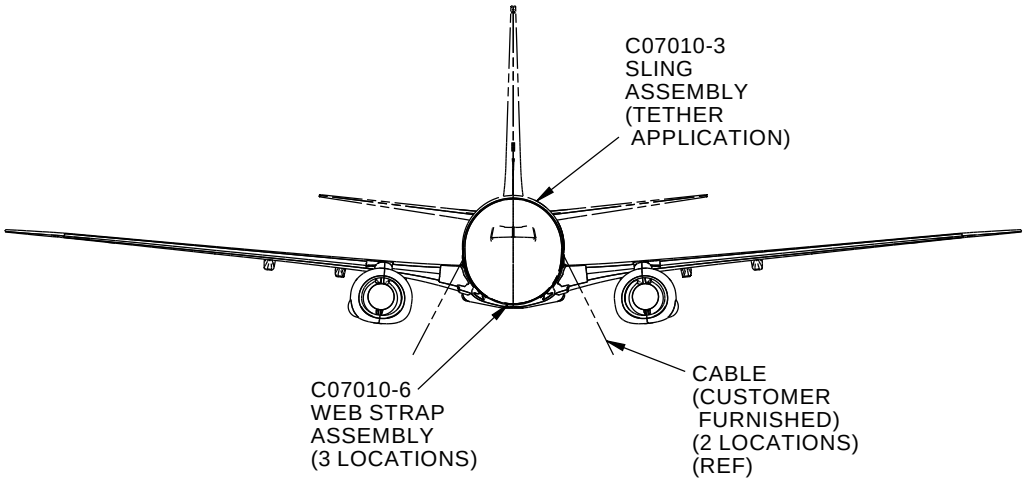
1. A written record of a visual inspection, by a qualified person is required.
2. Inspection is made of external conditions for a continuing evaluation of the following factors:

- Loose bolts or fasteners.
- Excessive wear of linkages and other mechanical parts.
- Excessive wear at hoist hooking points and load support clevises or pins.
- Deficiencies found during the inspection are analyzed and the lifting device shall not be used, if deficiencies are determined to be hazardous.
- The lifting device shall not be used until the hazardous deficiencies are corrected.

STORAGE: C07010 shall be stored clean, dry, and free of exposure to fumes or corrosive elements, indoors and in the furnished storage box.

DECOMMISSIONING: Part and assemblies of this equipment including, chain components, shall be permanently altered to prevent their unauthorized reuse. Recycling is the preferred manner of disposal for those materials where that option is available.





A-A

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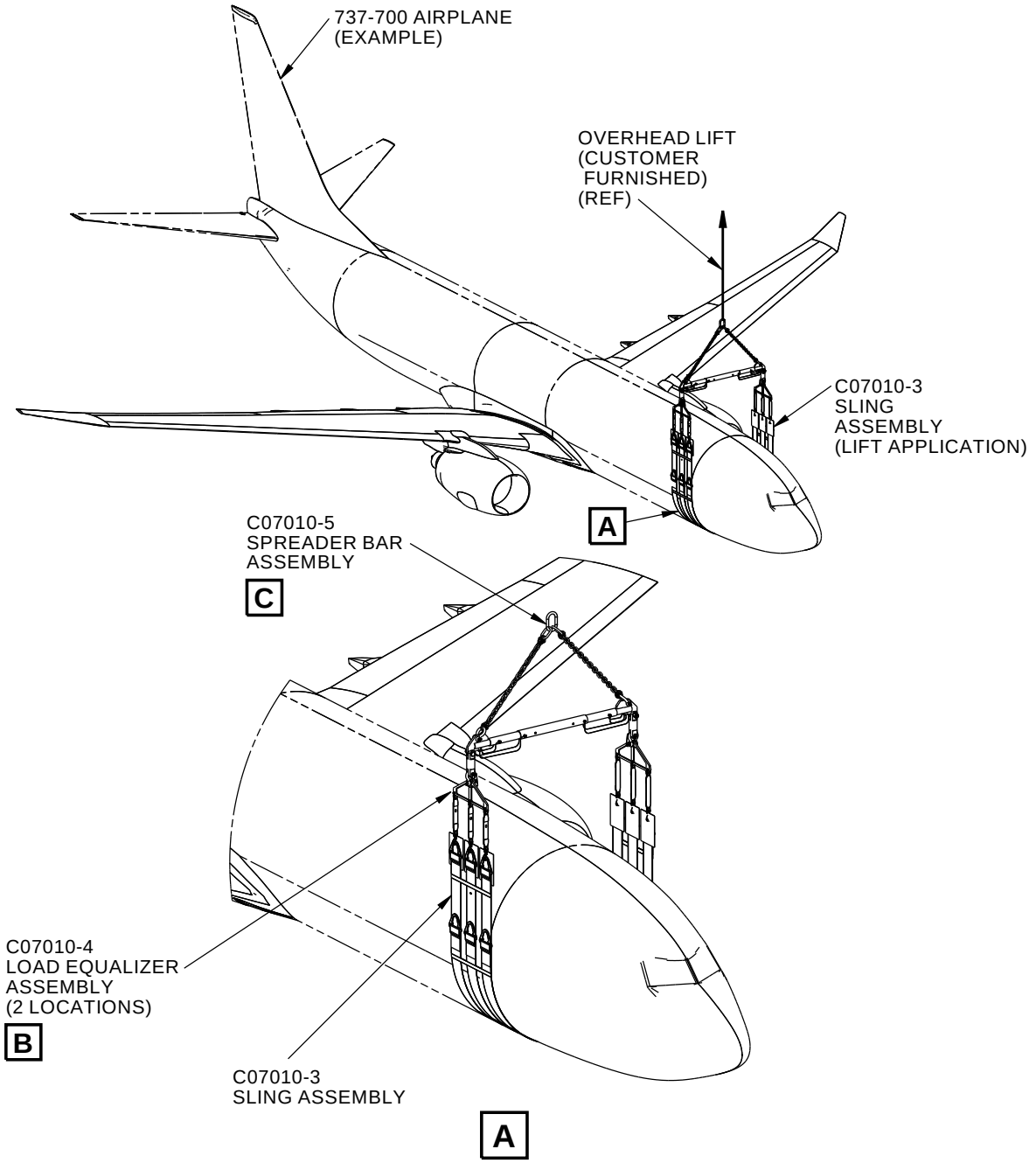
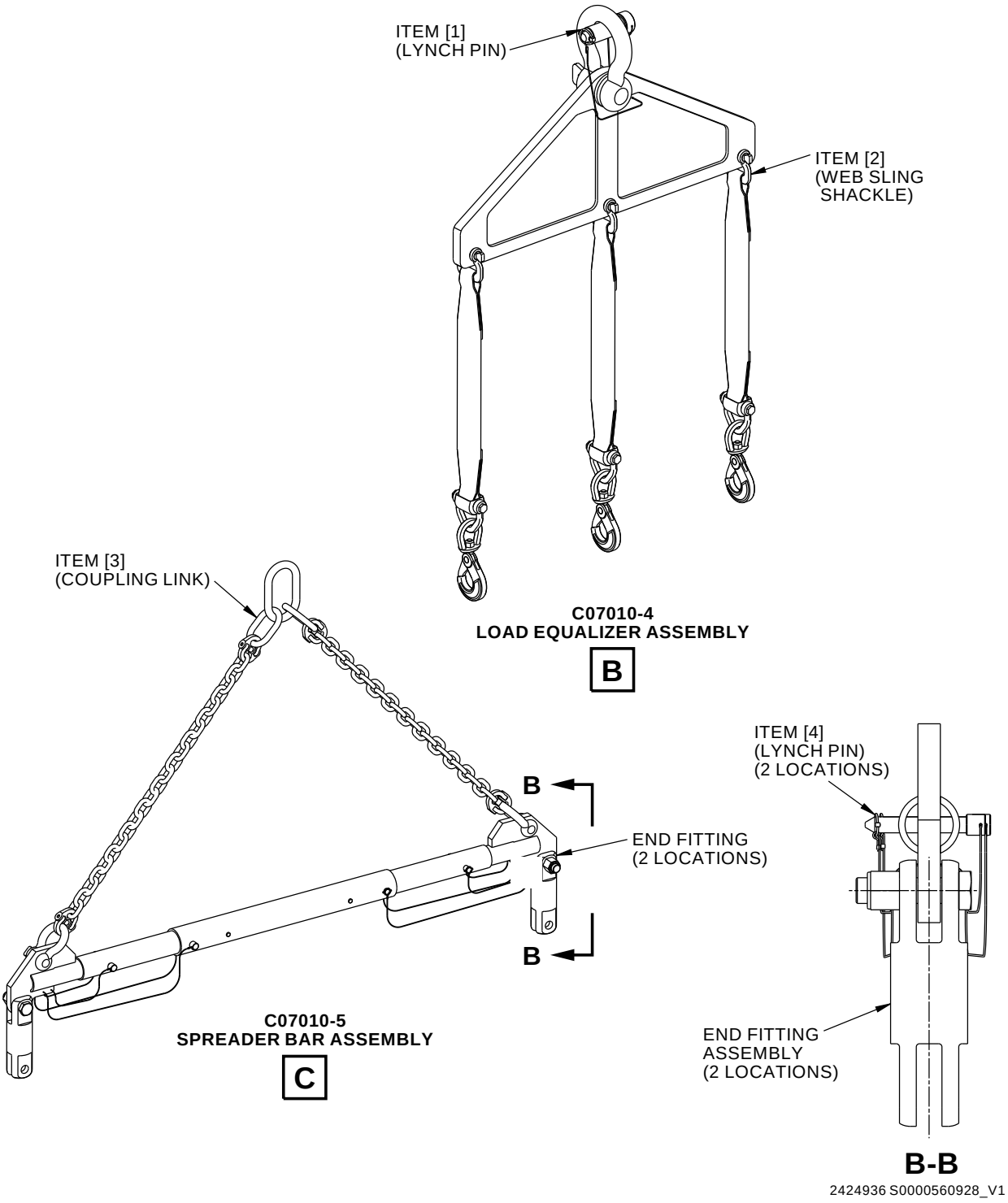
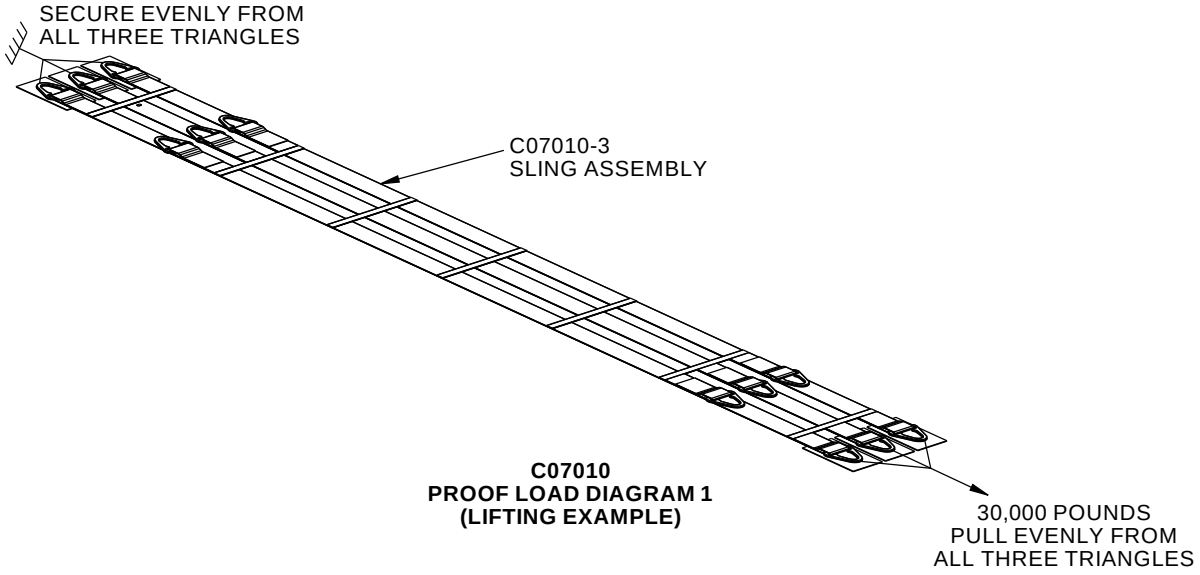
Airplane Recovery Tethering/Lifting Sling
Figure 1 (Sheet 1 of 3)



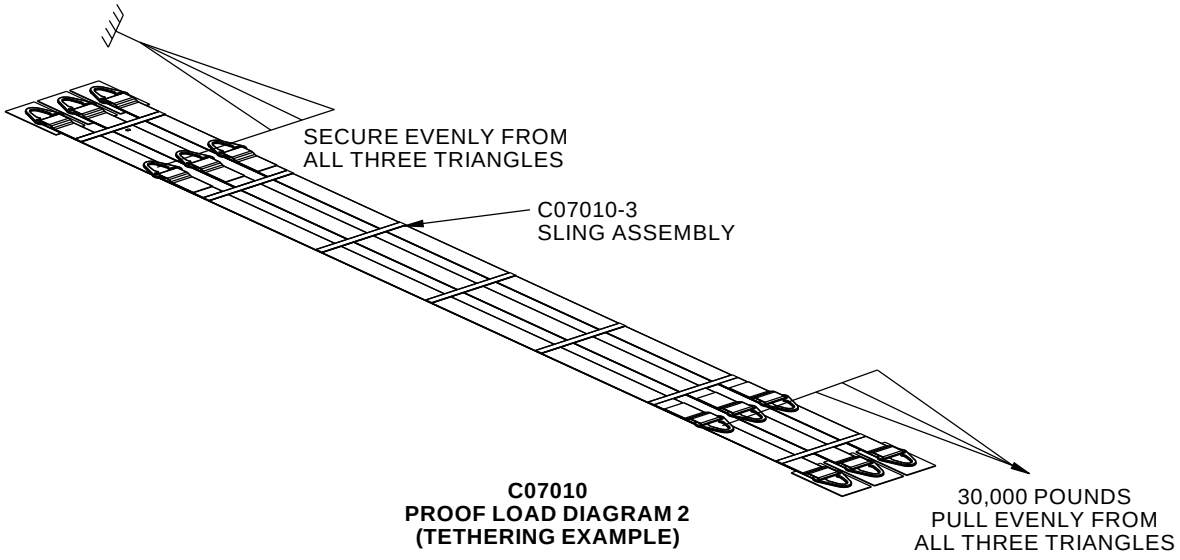
Airplane Recovery Tethering/Lifting Sling
Figure 1 (Sheet 2 of 3)



Airplane Recovery Tethering/Lifting Sling
Figure 1 (Sheet 3 of 3)



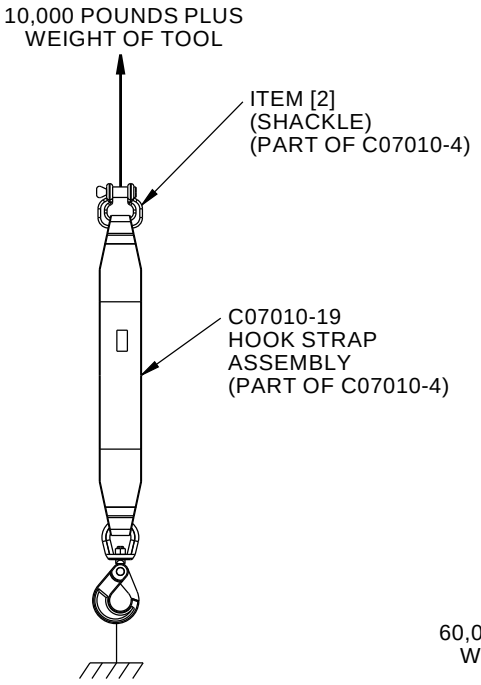
C07010
PROOF LOAD DIAGRAM 1
(LIFTING EXAMPLE)



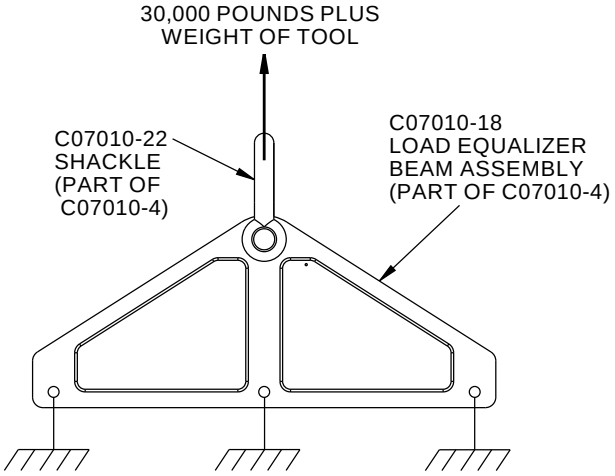
C07010
PROOF LOAD DIAGRAM 2
(TETHERING EXAMPLE)

2424950 S0000560929_V1

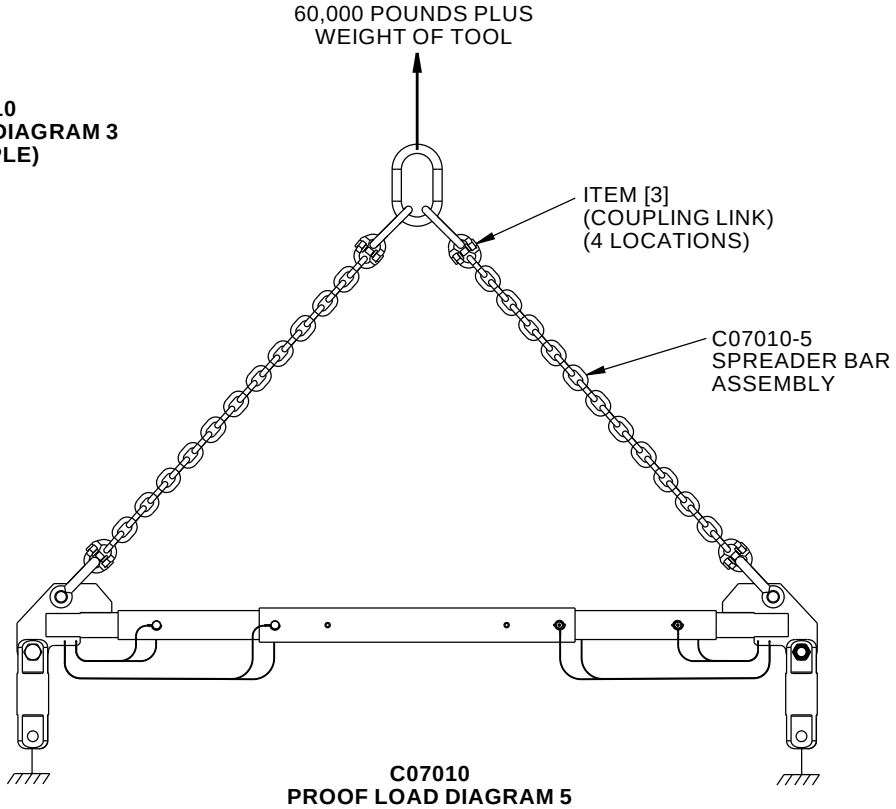
C07010 Proof Load Diagrams (Examples)
Figure 2 (Sheet 1 of 2)



C07010
PROOF LOAD DIAGRAM 3
(EXAMPLE)



C07010
PROOF LOAD DIAGRAM 4
(EXAMPLE)



C07010
PROOF LOAD DIAGRAM 5
(EXAMPLE)

2424958 S0000560930_V1

C07010 Proof Load Diagrams (Examples)
Figure 2 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07010-23	LYNCH PIN	ITW SHAKEPROOF GROUP 2000 INDUSTRIAL ROAD IRON RIDGE, WI 53035
[2]	C07010-21	PIN	75535
[3]	C07010-28	COUPLING LINK	75535
[4]	C07010-	LYNCH PIN	ITW SHAKEPROOF GROUP 2000 INDUSTRIAL ROAD IRON RIDGE, WI 53035

PART NUMBER: C07011-1

NAME: TETHER FITTING - FORWARD BODY JACK LOCATION

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

ARD 03-20-3

USAGE & DESCRIPTION: The C07011-1 tether fitting is used on all 737 airplanes except 737-100 thru -500 airplanes.

C07011 is used to restrain the 737 nose section at the forward body (jack point D) location to the ground or a recovery vehicle during airplane recovery.

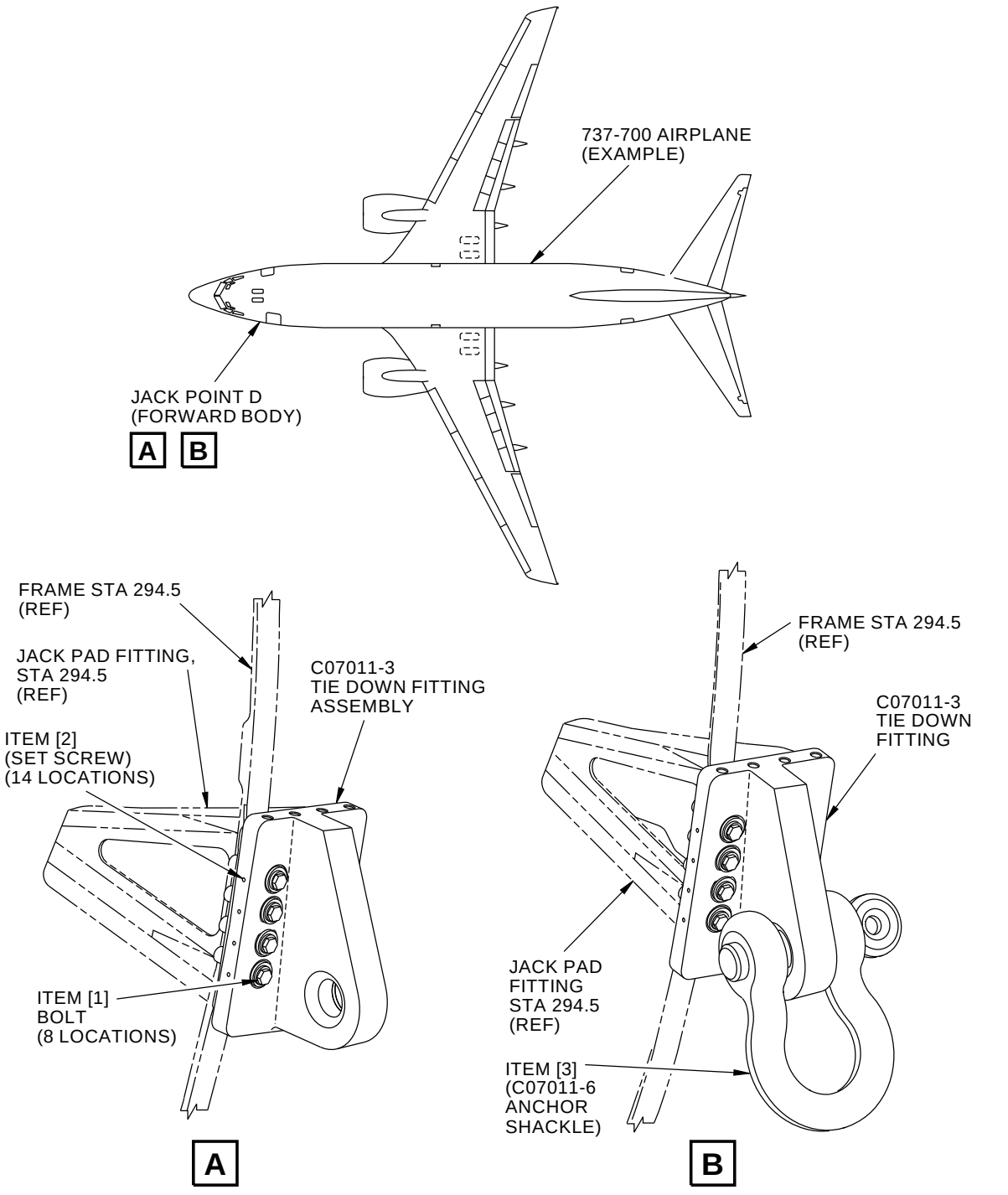
Refer to the 737 Airplane Recovery Document (ARD), ARD 03-20-3 and the current C07011 drawing for complete usage instructions.

C07011-1 consists of:

C07011-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	TIE DOWN FITTING ASSEMBLY	C07011-3
1	ANCHOR SHACKLE	C07011-6
1	STORAGE BOX	

WEIGHT: 41 lbs (19 kg)

DIMENSIONS: 6 x 6 x 9 inches (152 x 152 x 229 mm)



2425022 S0000560943_V1

Forward Body Jack Location Tether Fitting
Figure 1

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07011-11 (NAS6606-28)	BOLT	- - -
[2]	C07011-12	SET SCREW	- - -
[3]	C07011-6	ANCHOR SHACKLE	75535

PART NUMBER: C07013-1, -64

NAME: TAIL STAND - AFT FUSELAGE JACKING POINT

AIRPLANE MAINTENANCE: YES

AMM 07-11-08

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C07013-1 tail stand and C07013-64 winter base are used on all 737-800, -900 and -900ER airplanes.

C07013-1 is used in conjunction with C07013-64 to support the aft fuselage to prevent the front landing gear from reaching full extension during loading and unloading.

Refer to AMM 07-11-08 and the current C07013 drawing for complete usage instructions.

C07011-1 and -64 consist of:

C07013-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	BASE TUBE ASSEMBLY	C07013-2
1	UPPER END ASSEMBLY	C07013-3
1	CASTER SUPPORT ASSEMBLY	C07013-4

C07013-64		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	WINTER BASE ASSEMBLY	C07013-65
5	SCREW	C07013-66
1	STORAGE BOX	

WEIGHT: C07013-1 - 48 lbs (22 kg)
C07013-64 - 5 lbs (2 kg)

DIMENSIONS: C07013-1 - 12 x 19 x 124 inches (305 x 483 x 3150 mm)
C07013-64 - 2 x 13 x 13 inches (51 x 330 x 330 mm)

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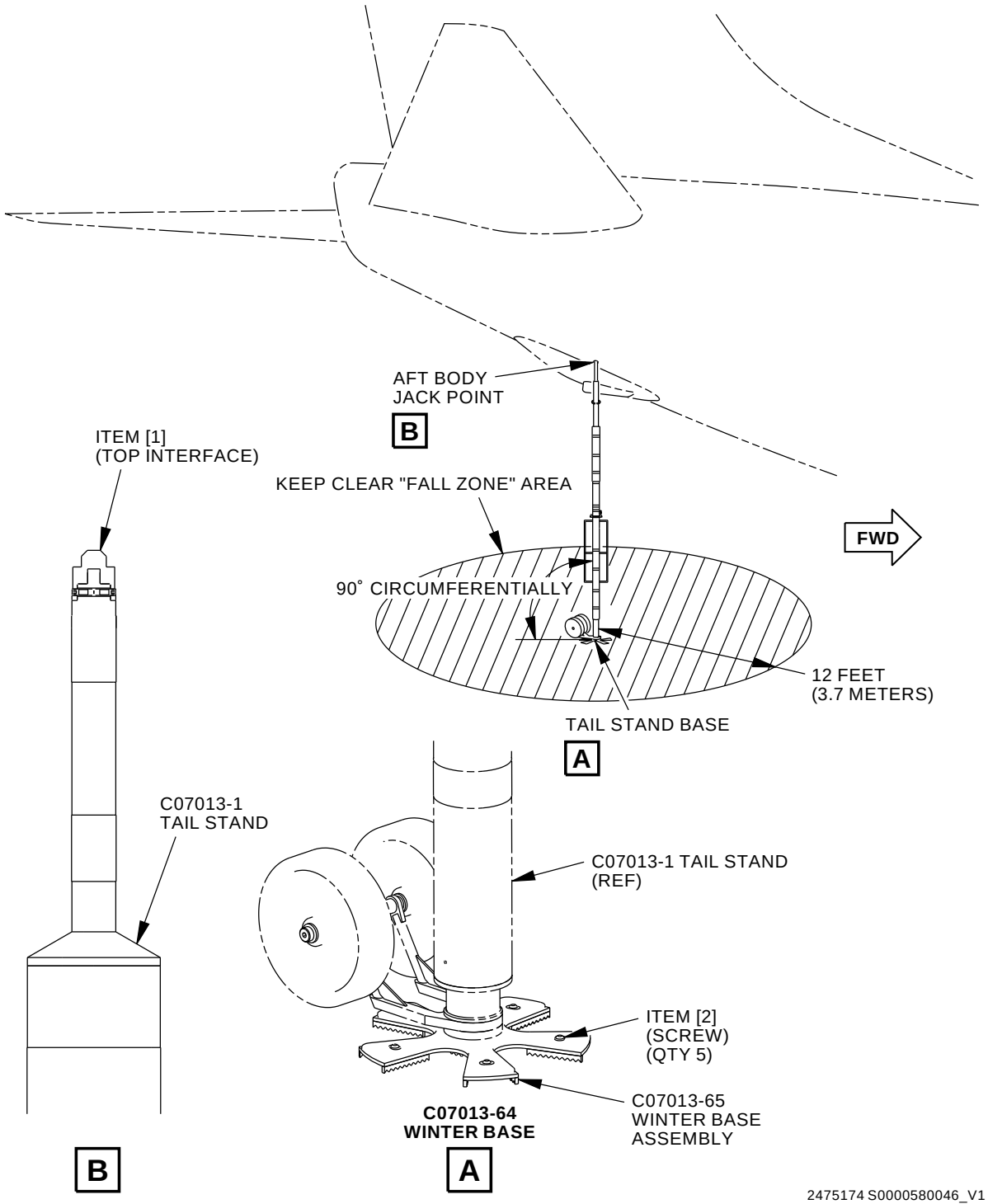

Tail Stand - AFT Fuselage Jacking Point
Figure 1

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07013-22	TOP INTERFACE, DIA 1.4 x 1.9	- - -
[2]	C07013-66	SCREW, .250-2B UNF-3A x .50 LG	

PART NUMBER: C07012-1

NAME: SLING EQUIPMENT - AIRCRAFT RECOVERY (CE)

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

ARD 03-30-3, ARD 03-30-11, ARD 05-10-1

USAGE & DESCRIPTION: The C07012-1 (CE qualified) sling is used on all 737 airplanes.

C07012 is used to lift and/or restrain the aircraft during airplane recovery. C07012 is used in conjunction with a customer-furnished lift.

Refer to the 737 Airplane Recovery Document (ARD), ARD 03-30-3, ARD 03-30-11, ARD 05-10-1 and the current C07012 drawing for complete usage instructions.

C07012-1 consists of:

C07012-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SLING ASSEMBLY	C07012-3
2	LOAD EQUALIZER ASSEMBLY	C07012-4
1	SPREADER BAR ASSEMBLY	C07012-5
3	WEB STRAP ASSEMBLY	C07012-6
1	STORAGE BOX	

WEIGHT: 1500 lbs (680 kg)

DIMENSIONS: 24 x 55 x 72 inches (610 x 1397 x 1829 mm)

NOTE: C07012 replaces F70244 for future procurement.

DECLARATION OF CONFORMITY: C07012 requires a written Declaration of Conformity from the C07012 fabricator if it is to be used in the European Union. The design of C07012 meets the European requirements of Machinery Directive 2006/42/EC including its amendments. When used within the European Union, the fabricator of C07012 must also meet the requirements of that directive. At a minimum for the tool fabricator, this requires the retention of a technical file, a labeling of the equipment with the CE mark, and the completion of an EC Declaration of Conformity. If C07012 is to be used within the European Union and the Declaration of Conformity is missing, contact the fabricator of C07012 for a replacement Declaration of Conformity.

OPERATING INSTRUCTIONS: Refer to the current C07012 drawing and ARD 03-30-3, ARD 03-30-11, ARD 05-10-1 procedures for detailed instructions on the use of this equipment. This equipment shall only be used in conjunction with Boeing maintenance procedures to maintain Boeing airplanes.

MAINTENANCE: General Cleaning: Basic care of the equipment includes cleaning the equipment of dirt, corrosives, or contaminants. Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent, clean the components and wipe dry with a clean cloth. Hang the components freely to dry, but away from excessive heat or steam.

Slings, Synthetic: Maintenance and inspection of synthetic shall be performed in accordance with ASME B-30.9, Chapter 9-5 and 9-6.

Slings, Chain: Maintenance and inspection of chain shall be performed in accordance with EN 1492-1, Section 6, Section Annex B and ASME B-30.9, Chapter 9-1.

Structural and Mechanical Lifting Devices, (spreader bar):

1. Maintenance shall be done based on the recommendations made by the lifter manufacturer or qualified person.
2. Before adjustments and repairs are started on a lifter, the following precautions shall be taken:
   - All courses of power shall be disconnected, locked out, and tagged "Out of Service".
   - A lifter removed from service for repair shall be tagged "Out of Service".
3. Only a qualified person shall perform adjustments and tests when required.
4. Replacement parts shall be at least equal to the original manufacturer’s specifications.
5. After adjustments and repairs have been made, the lifter shall not be returned to service until it has been inspected according to ASME B-30.20, para. 20-1.3.4.
6. Dated records of repairs and replacements shall be made.
7. Adjustments and repairs. Any hazardous conditions disclosed by the inspection requirements of ASME B-30.20, para. 20-1.3.1 shall be corrected before normal operations of the lifter is resumed. Adjustments and repairs shall be done under the direction of , or by, a qualified person.

PROOF LOAD: Proof load testing for the C07012-1 sling shall be performed per the current C07012 drawing proof load diagrams (example Figure 2) and:

- In conjunction with initial fabrication
- Subsequent to modification of this equipment (equipment shall only be modified in accordance with the C07012 drawing).
- After repair of load carrying components.
- After replacement of load carrying components (except for load carrying components such as shackles and hoist rings that carry their own certification).
- Continuing integrity/safety of the device to be assured by inspection.

INSPECTION: FREQUENT

General Inspection (before use):

1. Missing fasteners
2. Notes, Cautions and Warnings are legible
3. Usage placards are legible

Slings, General: Prior to use, all new, altered, modified or repaired slings shall be inspected by a designated person to verify compliance with the applicable provisions of EN 1492-1, Section 6, Section Annex B and ASME B-30.9

Slings, Webbing:

1. Visual inspection for damage shall be performed by the user or other designated person each day or shift the sling is used.
2. Slings shall not be returned to service until approved by a qualified person.
3. A written record of frequent inspections is not required.
4. Conditions detailed below and in EN 1492-1, Section 6, Section Annex B and ASME B-30.9, or conditions that may result in a hazard shall cause the sling to be removed from service.
   - Red warning yarns visible.
   - Acid or caustic burns.
   - Melting or charring of any part of the sling surface.
   - Snags, punctures, tears or cuts.
   - Broken or worn stitches in load bearing splices.
   - Excessive abrasive wear.
   - Knots in any part of the sling.
   - Discoloration and brittle or stiff areas on any part of the sling.
   - Distortion of fittings.
   - Missing or illegible sling tag.

Slings, Chain:

1. Visual inspection for damage shall be performed by the user or other designated person each day or shift the sling is used.
2. Conditions such as those listed in ASME B-30.9, para. 9-1.9.4 or any other conditions that may result in hazard shall cause the sling to be removed from service.
3. Slings shall not be returned to service until approved by a qualified person.

Structural and Mechanical Lifting Devices (spreader bars):

1. Visual Inspection by the operator before and during each lift of the device. Records are not required. Inspect for:

- Structural deformation, cracks or excessive wear of any parts of the lifting device.
- Loose or missing guards, fasteners, covers, stops or nameplates.
- All functional operational mechanisms and automatic hold and release mechanisms for misadjustments interfering with operation.

PERIODIC

Welding Inspection:

1. Magnetic particle or dye penetrant inspection for all welds, after all proof load tests.
2. Inspect and evaluate per GSE Welding Document A00001 Inspection Requirements Tables 1 & 2, and Acceptance Criteria Table 3.
3. Reject cracked or deformed parts.

Slings, General:

1. A complete inspection for damage to the sling shall be periodically performed by a designated person.
2. Each sling and component shall be examined individually, taking care to expose and examine all surfaces.
3. The sling shall be examined for the conditions noted in the frequent inspection and in ASME B-30.9 or any other conditions that may result in a hazard shall cause the sling to be removed from service.
4. Slings shall not be returned to service until approved by a qualified person.
5. A written record of the most recent periodic inspection shall be maintained and shall include the condition of the sling.

Slings, Synthetic: The straps shall be examined for the conditions noted in the frequent inspection and in ASME B-30.9 or any other conditions that may result in a hazard shall cause the sling to be removed from service.

Slings, Chain:

1. Each link and component shall be examined individually, taking care to expose and examine all surfaces, including the inner link surfaces.
2. Chain inspection shall be examined for conditions listed in ASME B-30.9, para. 9-1.9.4.
3. Deficiencies found during the inspection are analyzed and the chain shall not be used, if deficiencies are determined to be hazardous.

Structural and Mechanical Lifting Devices (spreader bar):

1. A written record of a visual inspection, by a qualified person is required.
2. Inspection is made of external conditions for a continuing evaluation of the following factors:

- Loose bolts or fasteners.
- Excessive wear of linkages and other mechanical parts.
- Excessive wear at hoist hooking points and load support clevises or pins.
- Deficiencies found during the inspection are analyzed and the lifting device shall not be used, if deficiencies are determined to be hazardous.
- The lifting device shall not be used until the hazardous deficiencies are corrected.

STORAGE: C07012 shall be stored clean, dry, and free of exposure to fumes or corrosive elements, indoors and in the furnished storage box.

DECOMMISSIONING: Part and assemblies of this equipment including, chain components, shall be permanently altered to prevent their unauthorized reuse. Recycling is the preferred manner of disposal for those materials where that option is available.

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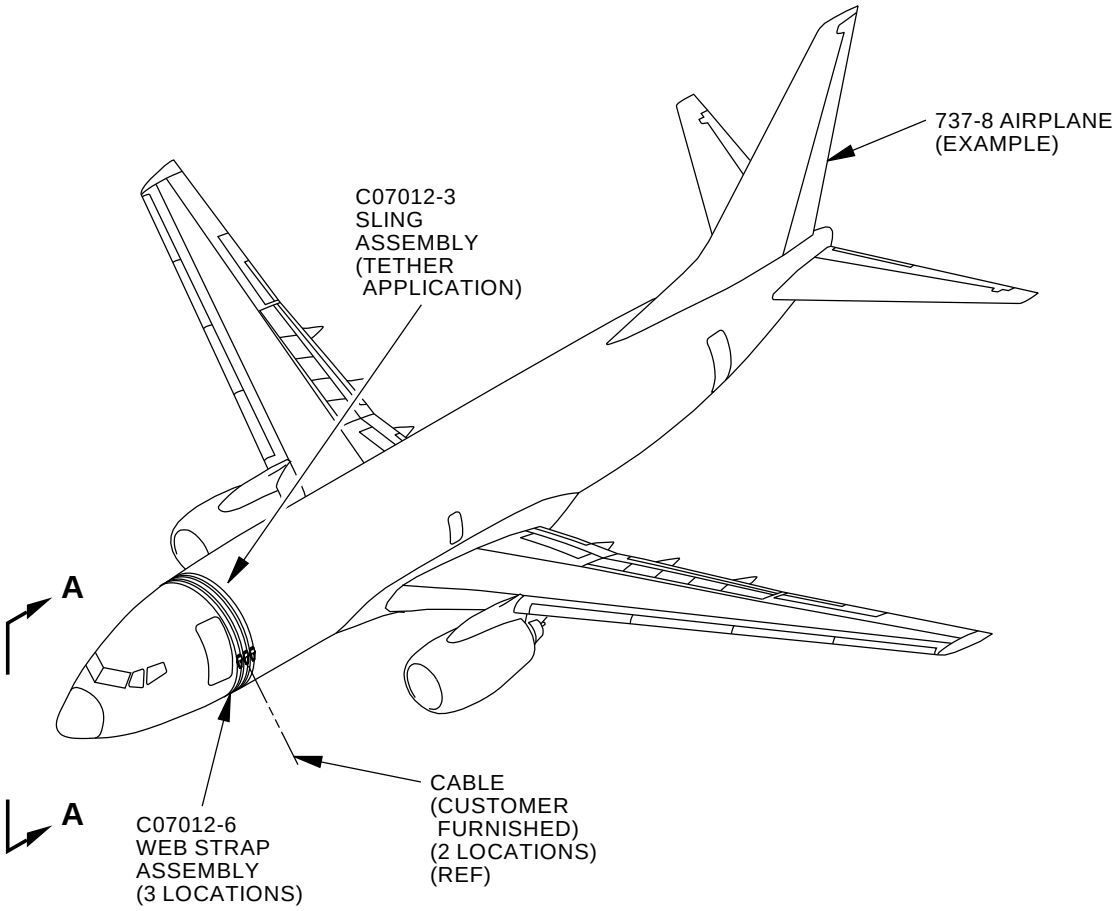

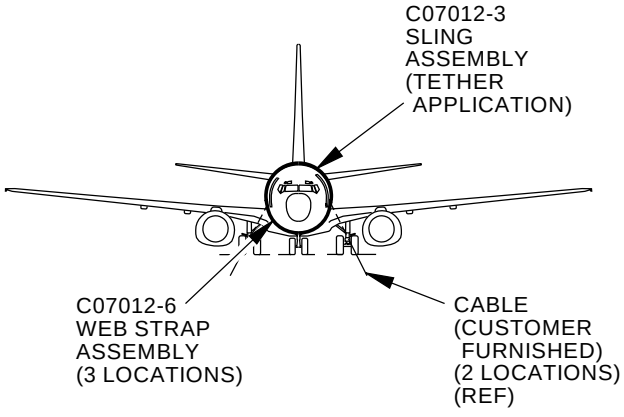

A-A

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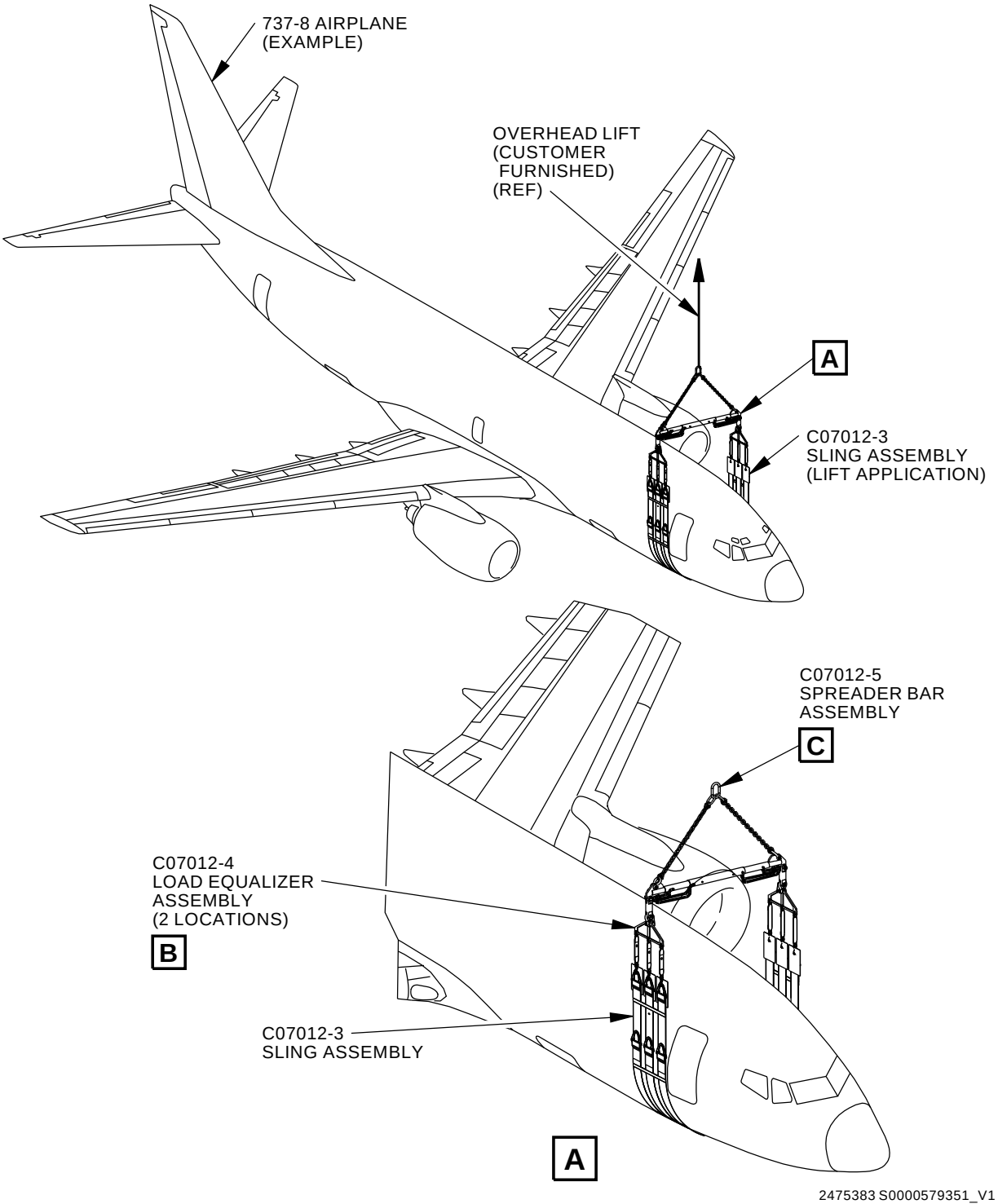
Sling Equipment - Aircraft Recovery
Figure 1 (Sheet 1 of 3)



Sling Equipment - Aircraft Recovery
Figure 1 (Sheet 2 of 3)

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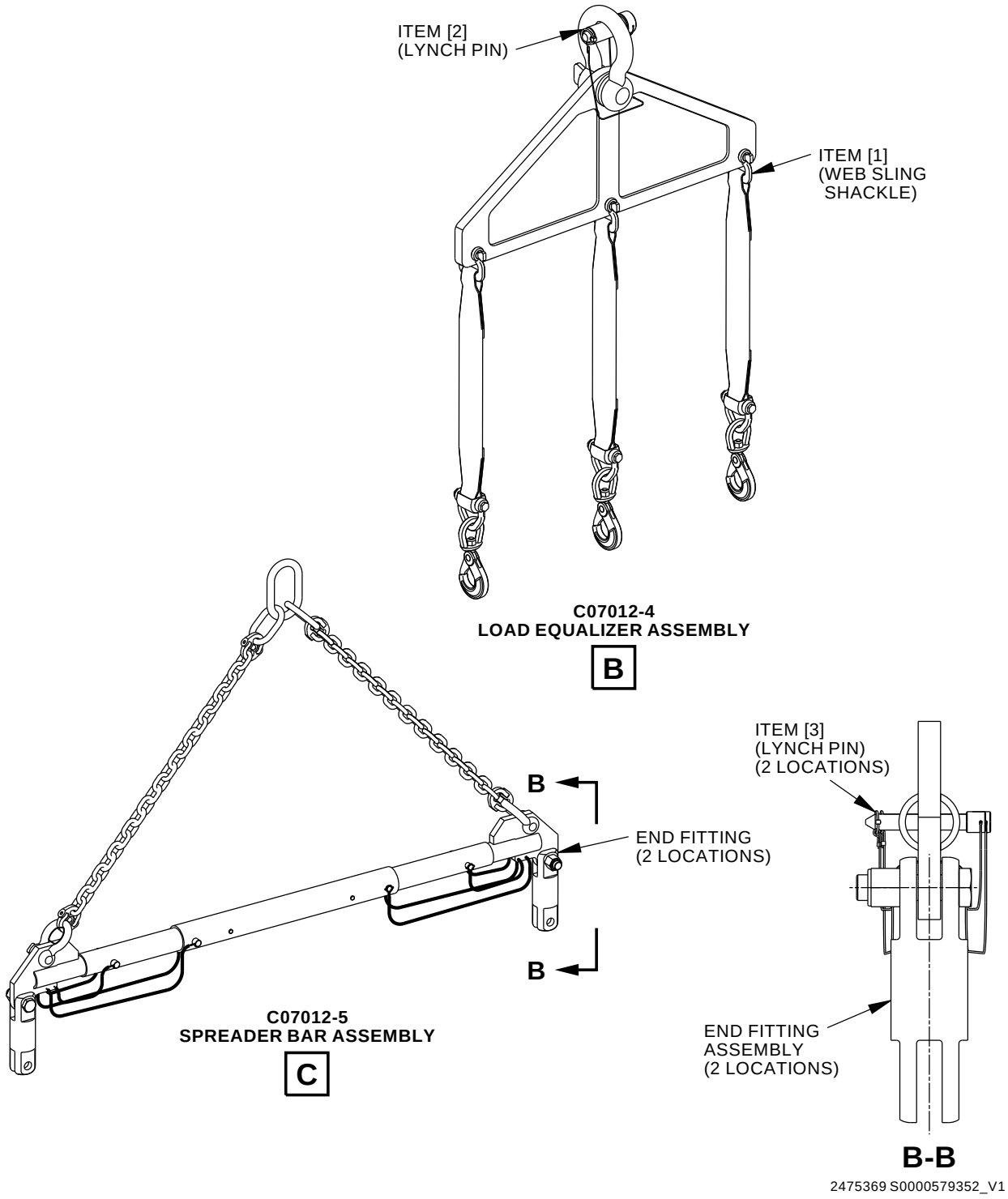
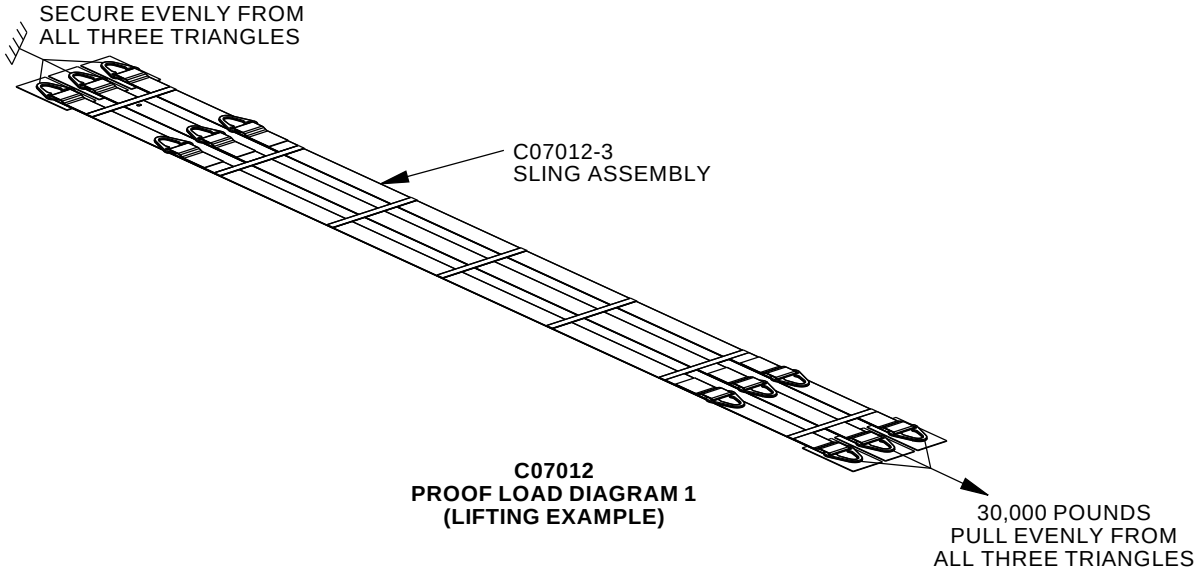
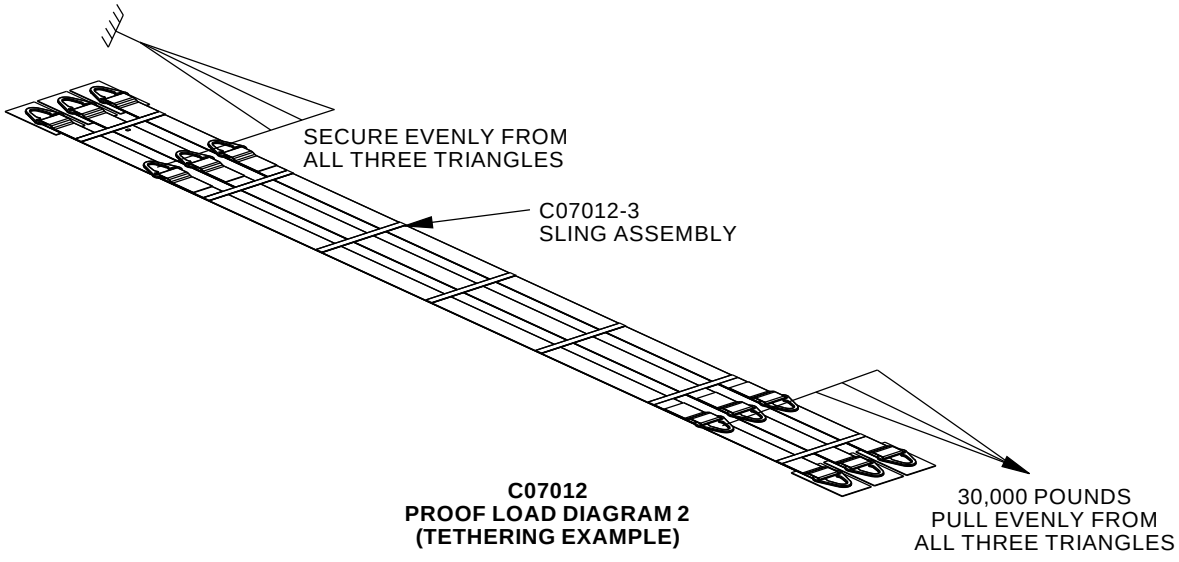


Sling Equipment - Aircraft Recovery
Figure 1 (Sheet 3 of 3)



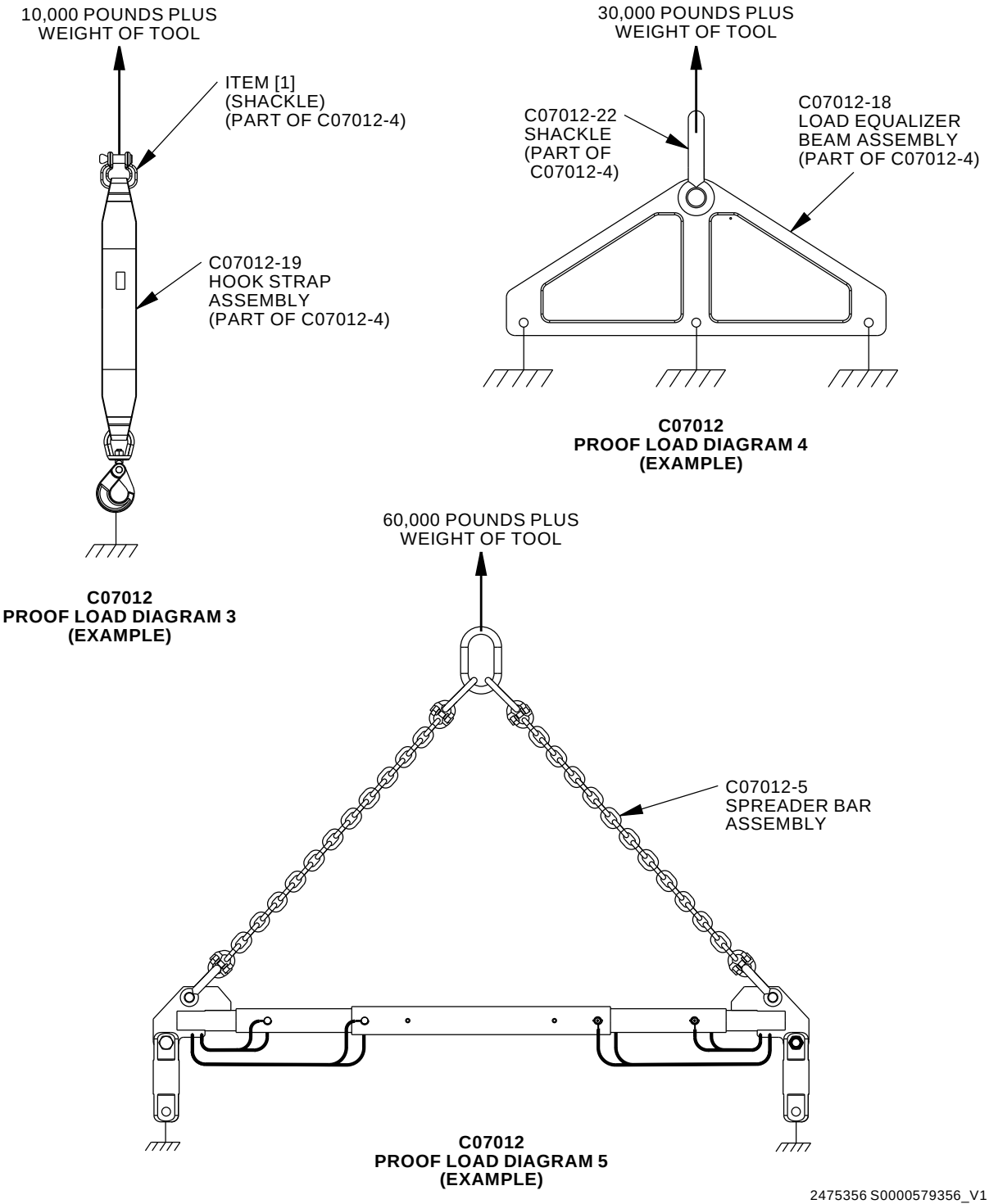
C07012
PROOF LOAD DIAGRAM 1
(LIFTING EXAMPLE)



C07012
PROOF LOAD DIAGRAM 2
(TETHERING EXAMPLE)

2475358 S0000579355_V1

C07012 Proof Load Diagrams (Examples)
Figure 2 (Sheet 1 of 2)



C07012
PROOF LOAD DIAGRAM 3
(EXAMPLE)

C07012
PROOF LOAD DIAGRAM 4
(EXAMPLE)

C07012
PROOF LOAD DIAGRAM 5
(EXAMPLE)

2475356 S0000579356_V1

C07012 Proof Load Diagrams (Examples)
Figure 2 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07012-21	WEB SLING SHACKLE	
[2]	C07012-23	LYNCH PIN	
[3]	C07012-48	LYNCH PIN	

PART NUMBER: C07002-1

NAME: FITTING - WING JACKING

AIRPLANE MAINTENANCE: YES

AMM 07-11-01

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C07002-1 fitting is used on all 737 airplanes except 737-100 thru -500 airplanes.

C07002 is used to provide jacking points on each wing. C07002 is bolted into place after removing the jack fitting cover plate (part number 112A2903-1) from the wing. The mounting point for the fitting is located at approximately BSTA 562, BBL 95 on each wing.

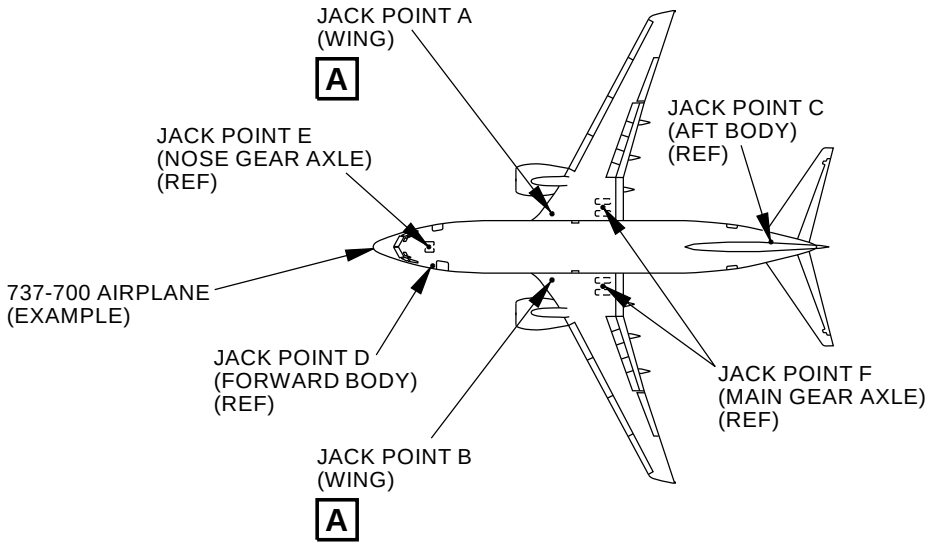
Refer to AMM 07-11-01 and the current C07002 drawing for complete usage instructions.

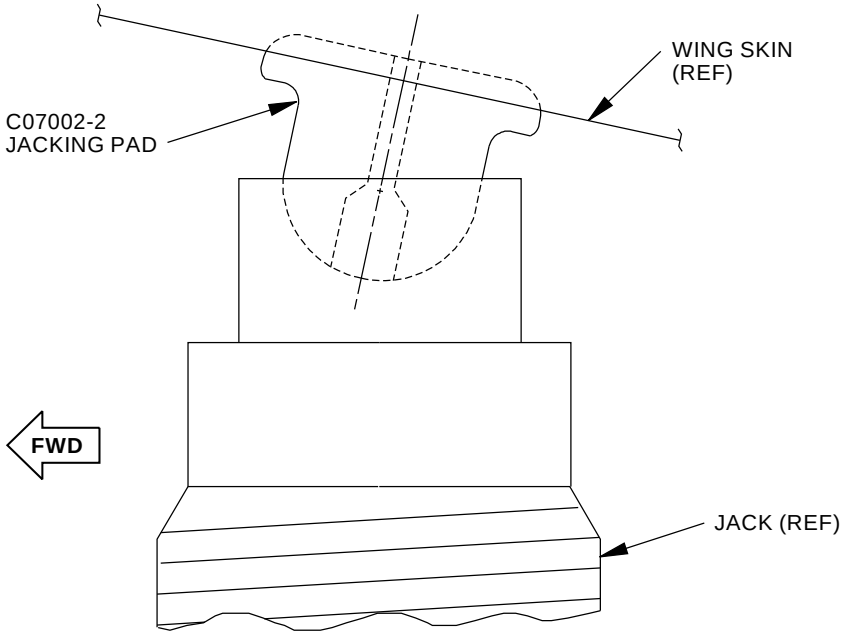
C07002-1 consists of:

C07002-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
2	FITTING ASSEMBLY	C07002-2
1	STORAGE BOX	

WEIGHT: 2 lbs (0.9 kg)

DIMENSIONS: 3 x 3 x 3 inches (76 x 76 x 76 mm)





PRIMARY JACKING POINT A OR B

A

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Wing Jacking Fitting
Figure 1

PART NUMBER: C07004-1

NAME: PAD - AIRCRAFT JACKING, AFT BODY

AIRPLANE MAINTENANCE: YES

AMM 07-11-01

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C07004-1 pad is used on all 737 airplanes except 737-100 thru -500 airplanes.

C07004 is screwed in to the aft body jack pad fitting (jacking point C) at approximately STA 1087, RBL 11 to permit jacking of the airplane.

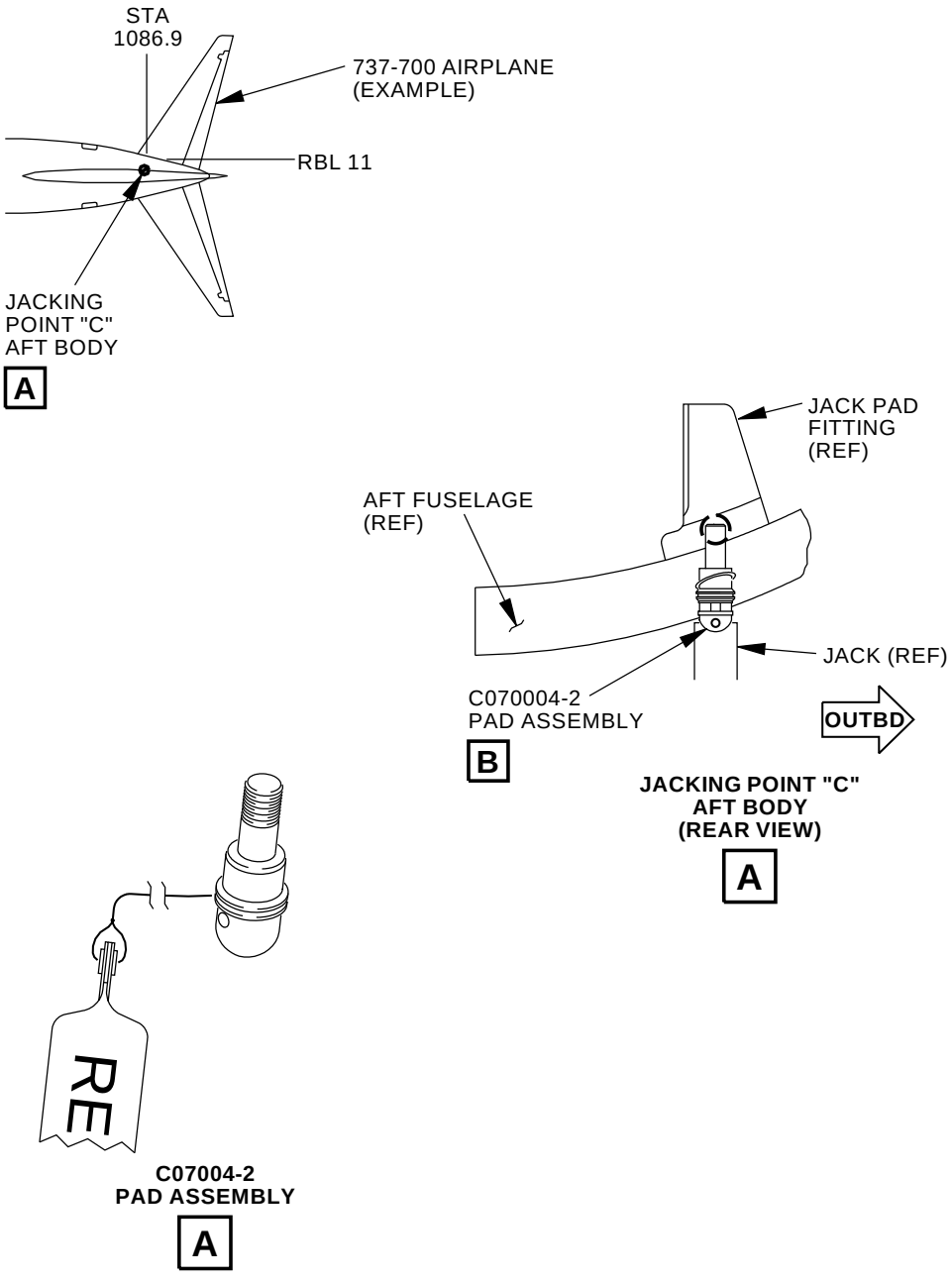
Refer to AMM 07-11-01 and the current C07004 drawing for complete usage instructions.

C07004-1 consists of:

C07004-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	PAD ASSEMBLY	C07004-2
1	STORAGE BOX	

WEIGHT: 2 lbs (0.9 kg)

DIMENSIONS: 2 x 3 x 5 inches (51 x 76 x 127 mm)



M52851 S0006831336_V3

Aft Body Aircraft Jacking Pad
Figure 1

PART NUMBER: C07007-19

NAME: JACK FITTING - FORWARD BODY STATION 294.5

AIRPLANE MAINTENANCE: YES

AMM 07-11-01, AMM 07-11-21

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C07007-19 jack fitting is used on all 737 airplanes except 737-100 thru -500.

C07007 is used in conjunction with a customer-furnished, tripod jack. C07007 is used to provide a point for jacking or leveling the nose of the airplane. C07007 is used at jack point “D” (STA 294.5, LBL 47.2, WL 170.5).

Refer to AMM 07-11-01, AMM 07-11-21 and the current C07007 drawing, for complete usage instructions.

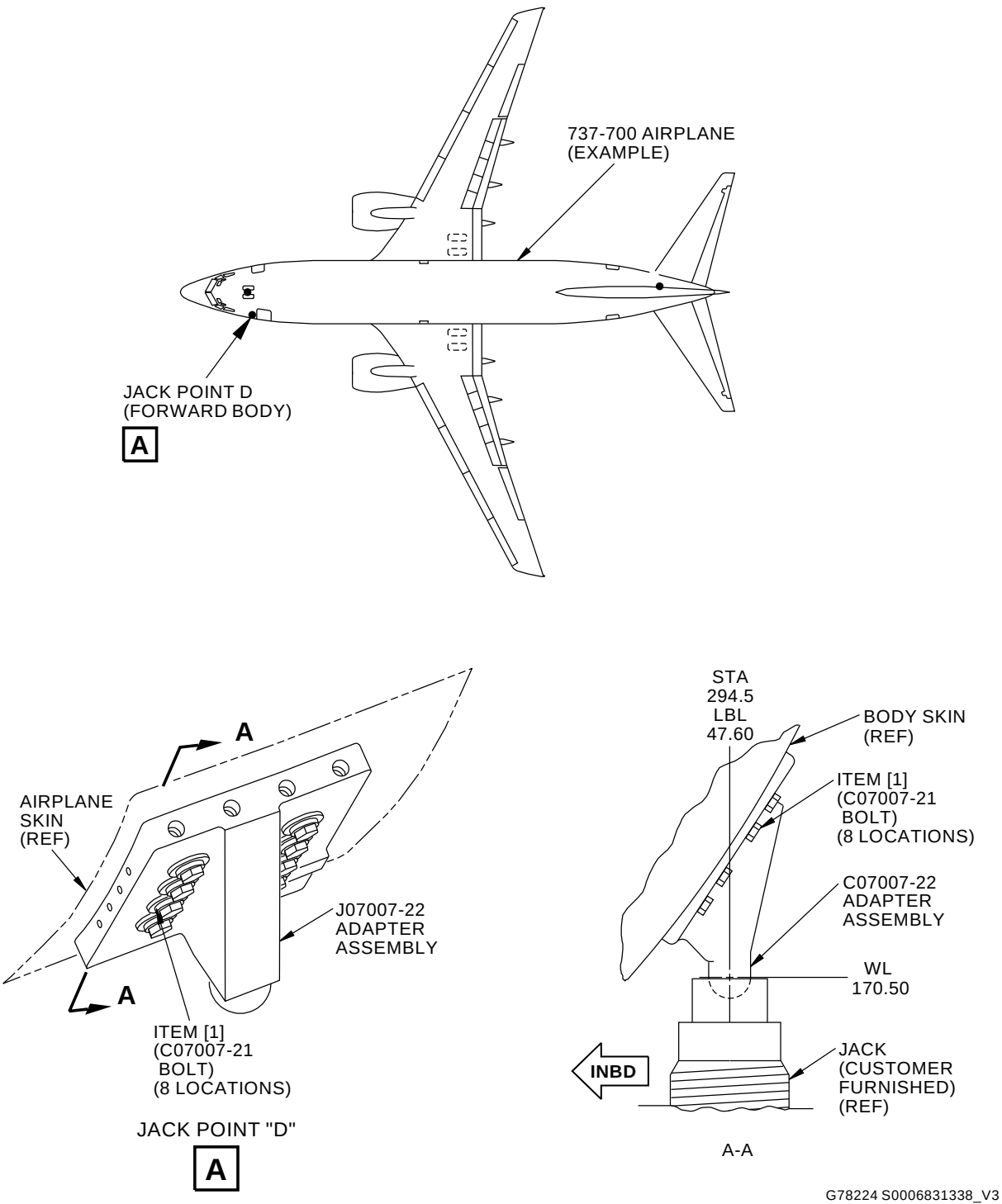
C07007-19 consists of:

C07007-19		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	ADAPTER ASSEMBLY	C07007-22
8	BOLT	C07007-21
1	STORAGE BOX	

WEIGHT: 15.6 lbs (7.1 kg)

DIMENSIONS: 4 x 6 x 15 inches (102 x 152 x 381 mm)

NOTE: C07007-19 supersedes C07007-1 and C07007-11.



Forward Body STA 294.5 Jack Fitting
Figure 1

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C07007-21	BOLT	- - -