CHAPTER

55

STABILIZER

CHAPTER 55
STABILIZER

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

55-EFFECTIVE PAGES

CHAPTER 55
STABILIZER

55-CONTENTS

PART NUMBER: C55002-1

NAME: PUNCH SET - HORIZONTAL STABILIZER CENTER SECTION HINGE PIN REMOVAL

AIRPLANE MAINTENANCE: YES

AMM 27-41-31

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C55002-1 punch set is used on all 737 airplanes except 737-100 and -200 airplanes.

C55002 is used along with a customer-furnished dynamic shock loading device to remove the hinge pins.

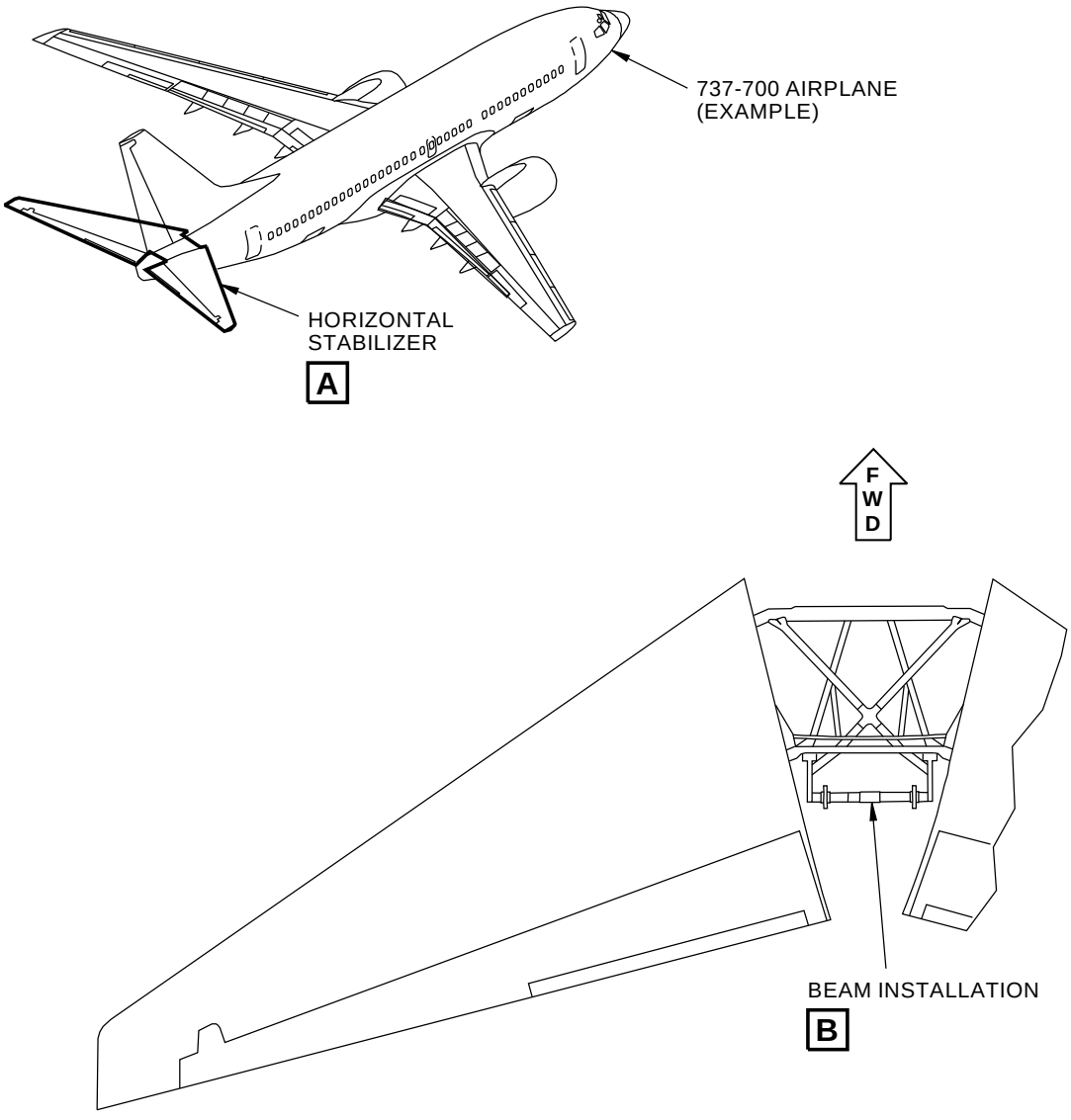
Refer to AMM 27-41-31 and the current C55002 drawing for complete usage instructions.

C55002-1 consists of:

C55002-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	PUNCH	C55002-2
1	PUNCH	C55002-3
1	STORAGE BOX	

WEIGHT: 2 lbs (0.9 kg)

DIMENSIONS: 2 x 2 x 12 inches (51 x 51 x 305 mm)

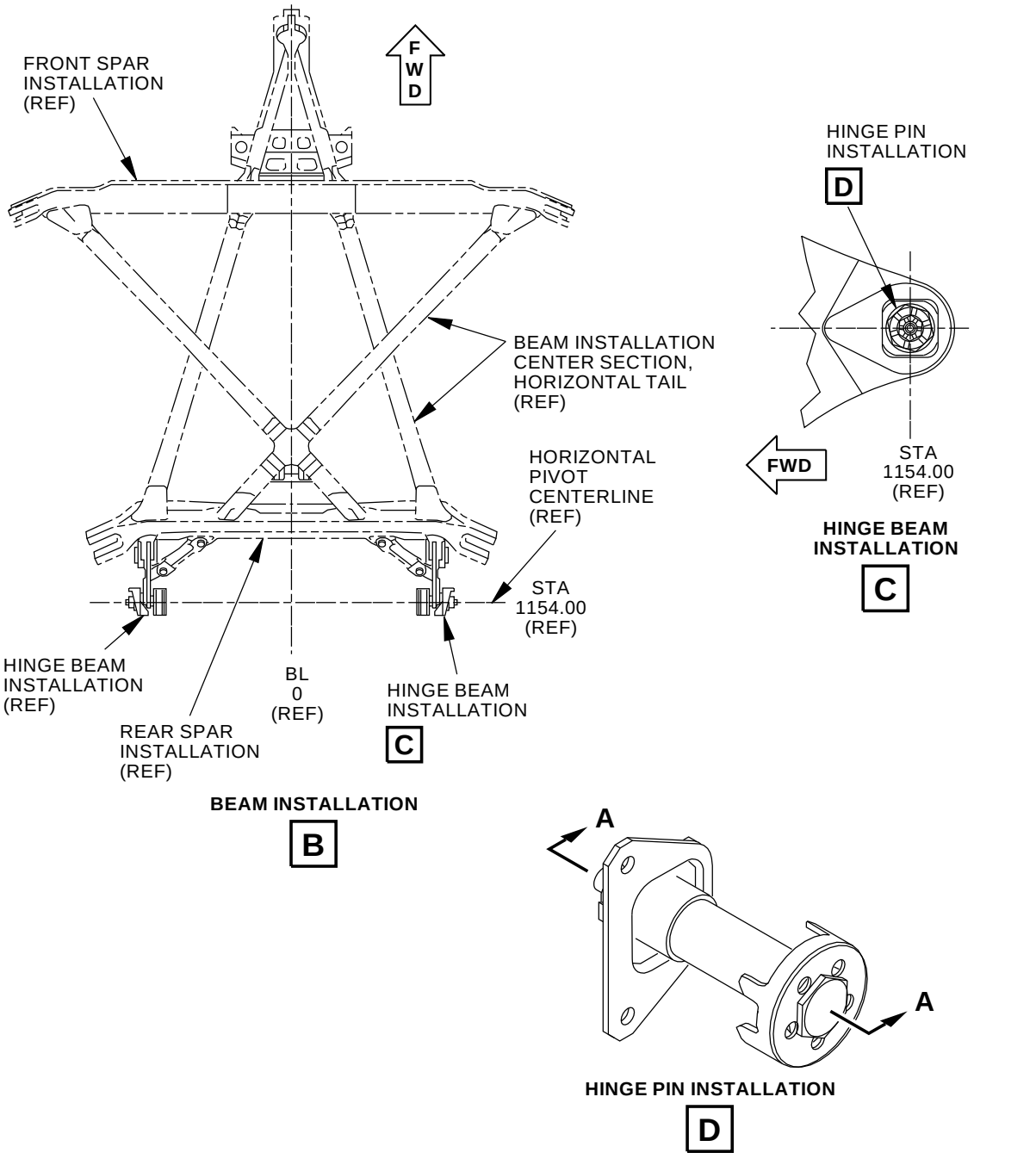


HORIZONTAL STABILIZER

A

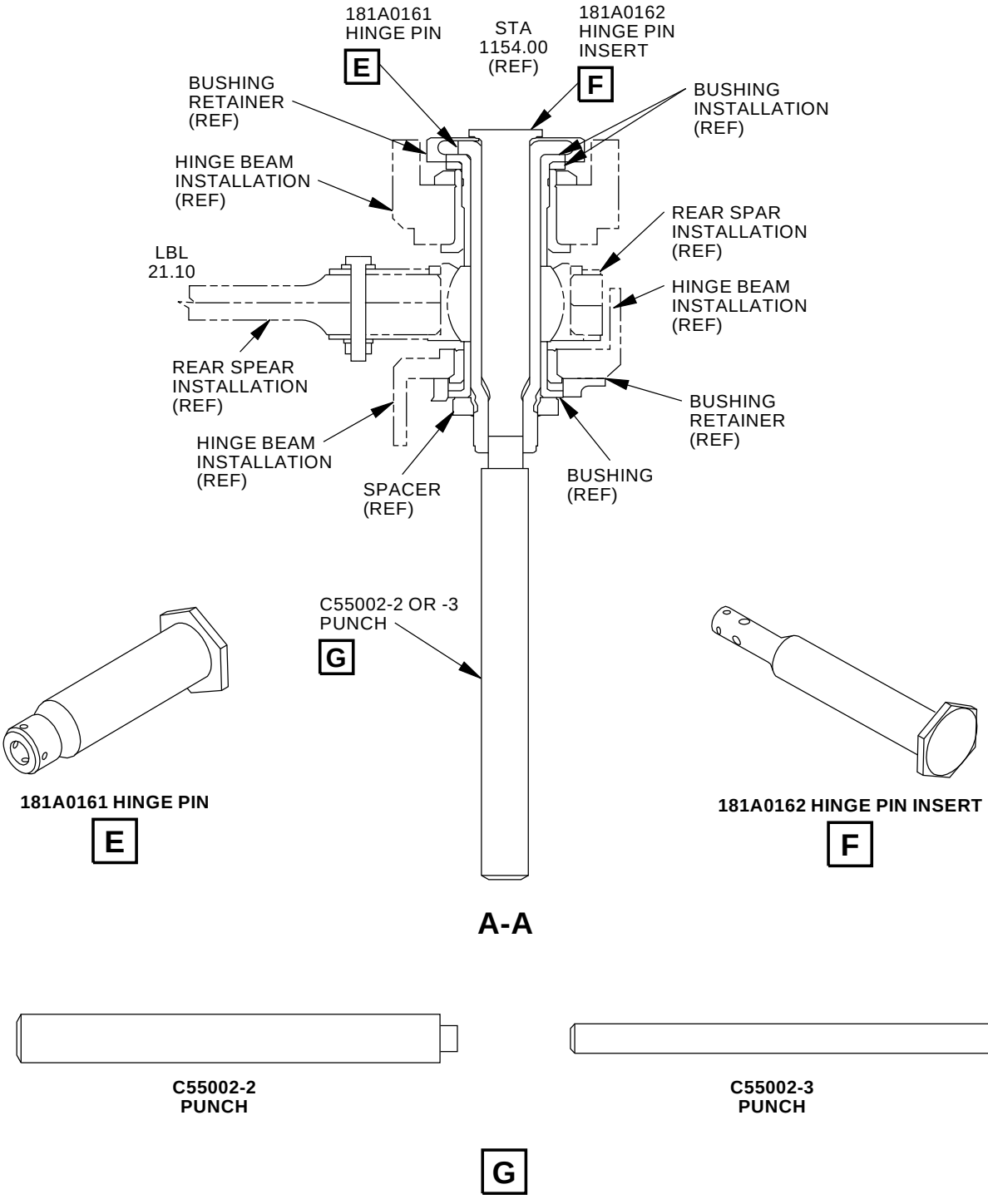
H51657 S0006832119_V3

Horizontal Stabilizer Center Section Hinge Pin Removal Punch Set
Figure 1 (Sheet 1 of 3)



H51682 S0006832120_V4

Horizontal Stabilizer Center Section Hinge Pin Removal Punch Set
Figure 1 (Sheet 2 of 3)



H51817 S0006832121_V4

Horizontal Stabilizer Center Section Hinge Pin Removal Punch Set
Figure 1 (Sheet 3 of 3)

PART NUMBER: C55009-1

NAME: ALIGNMENT TOOL - FIN INSTALLATION

AIRPLANE MAINTENANCE: YES

AMM 55-30-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C55009-1 alignment tool is used on all 737 airplanes, except 737-100 thru -500 airplanes.

C55009 is used to align the vertical fin rear spar mounting holes to facilitate bolt installation.

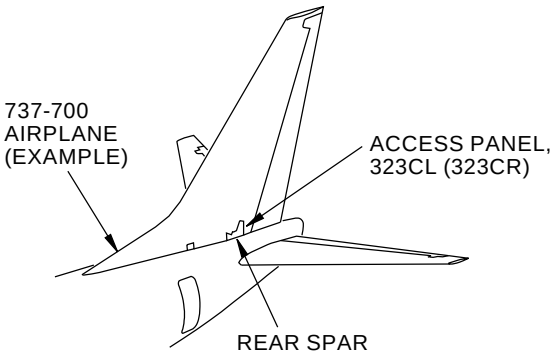
Refer to AMM 55-30-00 and the current C55009 drawing for complete usage instructions.

C55009-1 consists of:

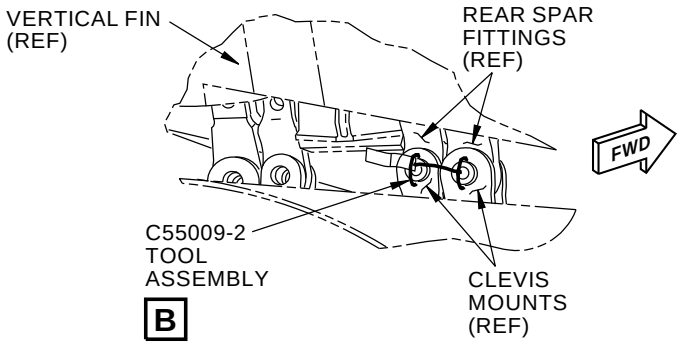
C55009-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	TOOL ASSEMBLY	C55009-2
1	STORAGE BOX	

WEIGHT: 4 lbs (1.8 kg)

DIMENSIONS: 3 x 6 x 6 inches (76 x 152 x 152 mm)

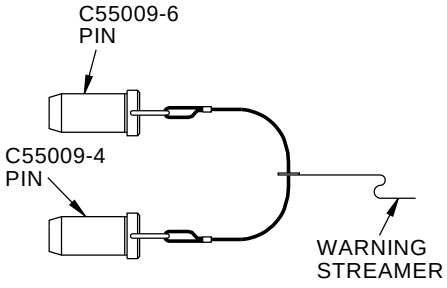


VERTICAL FIN
(LEFT SIDE IS SHOWN,
RIGHT SIDE IS EQUIVALENT)



REAR SPAR FITTING

A



C55009-2
TOOL ASSEMBLY

B

L41425 S0006832123_V4

Fin Installation Alignment Tool
Figure 1

PART NUMBER: C27039-1

NAME: SPANNER WRENCH - HINGE BEARING, HORIZONTAL STABILIZER

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

CMM 55-10-06, CMM 55-10-07

USAGE & DESCRIPTION: The C27039-1 spanner wrench is used during component maintenance on all 737 airplanes except 737-100 and -200 airplanes.

C27039 is used to remove or install the 69-73076 nut-bearing retainer on the 65C25170 horizontal tail center section assembly.

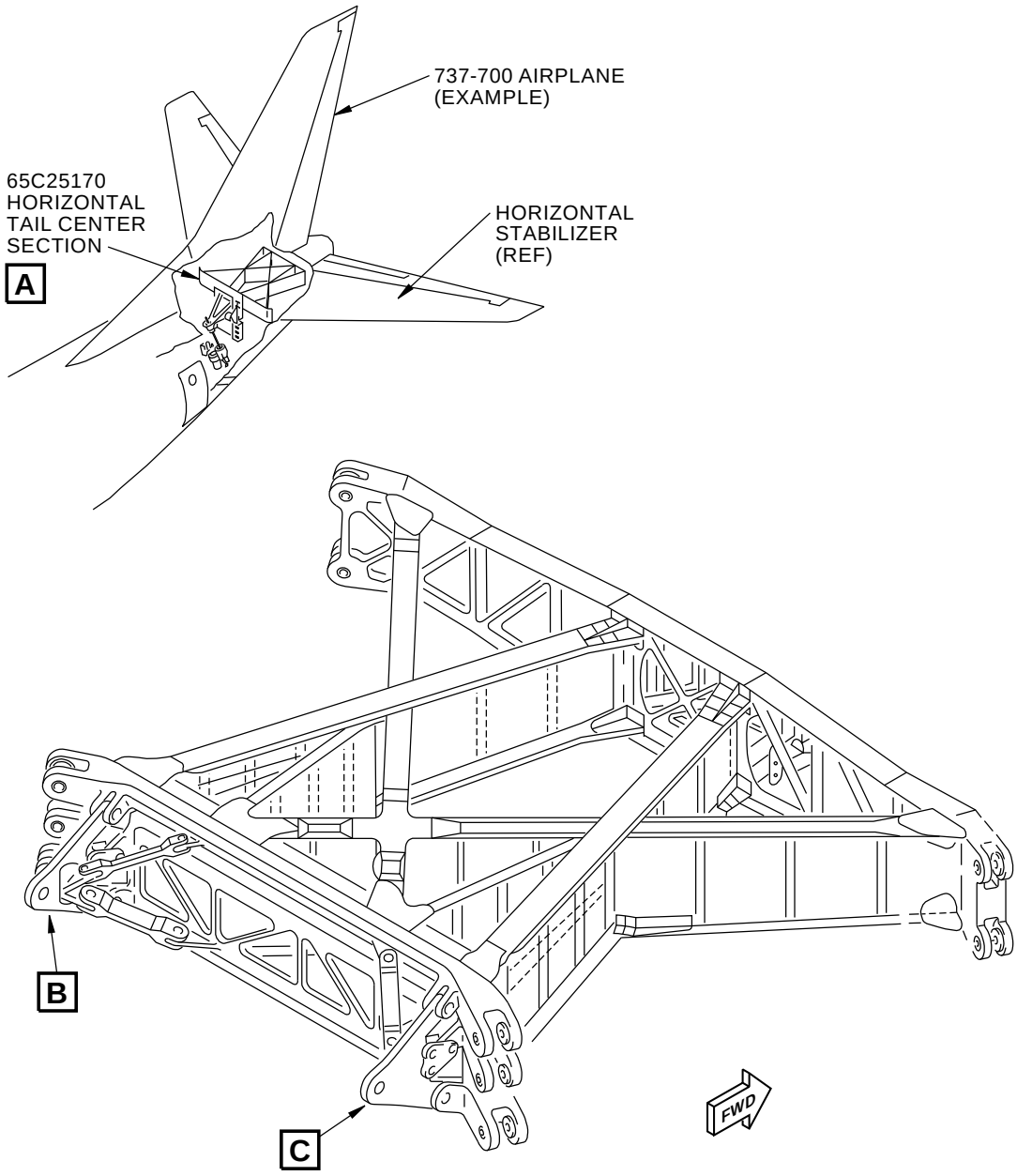
Refer to CMM 55-10-06, CMM 55-10-07 and the current C27039 drawing for complete usage instructions.

C27039-1 consists of:

C27039-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SPANNER WRENCH	C27039-2
1	STORAGE BOX	

WEIGHT: 0.2 lbs (0.09 kg)

DIMENSIONS: 1 x 1 x 3 inches (25 x 25 x 76 mm)

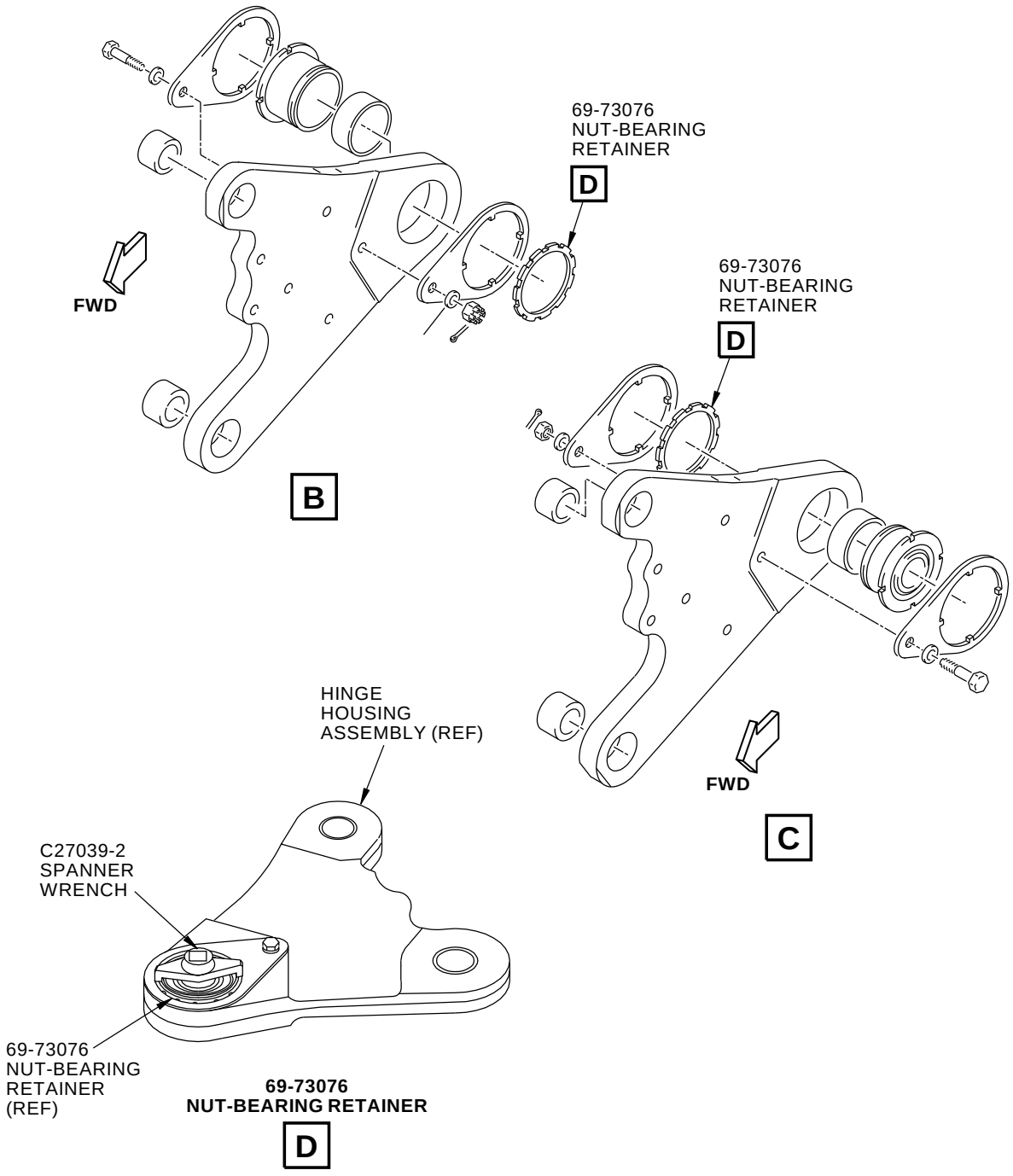


65C25170
HORIZONTAL TAIL CENTER SECTION

A

1570759 S0000292836_V2

Horizontal Stabilizer Hinge Bearing Spanner Wrench
Figure 1 (Sheet 1 of 2)



1570766 S0000292838_V2

Horizontal Stabilizer Hinge Bearing Spanner Wrench
Figure 1 (Sheet 2 of 2)

PART NUMBER: C55010-1, -33

NAME: SLING EQUIPMENT - VERTICAL FIN (CE)

AIRPLANE MAINTENANCE: YES

AMM 55-30-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C55010-1 or -33 (preferred) (CE qualified) sling equipment is used on all 737-600 thru -900 airplanes.

C55010 is used for removal or installation of the vertical fin. C55010 is also used for transferring the fin between the vertical and horizontal positions from either side of the fin.

Refer to the current C55010 drawing and AMM 55-30-00 for complete usage instructions.

C55010-1 and -33 consist of:

C55010-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SLING ASSEMBLY	C55010-2
1	LIFT FITTING 1	C55010-3
1	LIFT FITTING 1	C55010-4
1	LIFT FITTING 2	C55010-5
1	LIFT FITTING 2	C55010-6
1	LIFT FITTING 3	C55010-7
1	LIFT FITTING 3	C55010-8
50	SCREW	C55010-47
50	WASHER	C55010-46
4	SHACKLE	C55010-48
1	STORAGE BOX	

C55010-33		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SLING ASSEMBLY	C55010-34
1	LIFT FITTING 1	C55010-35
1	LIFT FITTING 1	C55010-36
1	LIFT FITTING 2	C55010-37
1	LIFT FITTING 2	C55010-38
1	LIFT FITTING 3	C55010-39
1	LIFT FITTING 3	C55010-40
50	SCREW	C55010-47
50	WASHER	C55010-46

(Continued)

C55010-33		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
4	SHACKLE	C55010-48
1	STORAGE BOX	

WEIGHT: C55010-1 or -33 - 90 lbs (40.9 kg)

DIMENSIONS: C55010-1 or -33 - 14 x 14 x 15 inches (357 x 357 x 381 mm)

NOTE: C55010-33 replaces C55010-1 for future procurement.

DECLARATION OF CONFORMITY: C55010 requires a written Declaration of Conformity from the C55010 fabricator if it is to be used in the European Union. The design of C55010 meets the European requirements of Machinery Directive 2006/42/EC including its amendments. When used within the European Union, the fabricator of C55010 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 C55010 is to be used within the European Union and the Declaration of Conformity is missing, contact the fabricator of C55010 for a replacement Declaration of Conformity.

OPERATING INSTRUCTIONS: Refer to the current C55010 drawing and the 737 Airplane Maintenance Manual procedures for detailed instructions on the use of this equipment. C55010 shall only be used in conjunction with Boeing 737 Airplane Maintenance Manual procedures for removal or installation of the vertical fin assembly on Boeing 737 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.

Structural and Mechanical Lifting Devices, (supporting lifters, spreader bars):

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-30.2, 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-30.2, para. 21-1.3.1 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.

1. Dated records of repairs and replacements shall be made.
2. Adjustments and repairs. Any hazardous conditions disclosed by the inspection requirements of ASME B-30.21, para. 21-1.3.1 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.

Swivel Hoist Rings: Maintenance shall be done based on the recommendations made by the hoist ring manufacturer or qualified person.

PROOF LOAD: Proof load testing for the C55010 sling equipment shall be performed per the current C55010 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 C55010 drawing)
- after repair of load carrying components
- after replacement of load carrying components.

Continuing integrity/safety of the device to be assured by inspection.

- 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.

Structural and Mechanical Lifting Devices (supporting lifters, 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.

Swivel Hoist Rings:

1. Visual inspection shall be performed by the user or other designated person each shift before the links, rings, and swivels are used. Semipermanent and inaccessible locations where frequent inspections are not feasible shall have periodic inspections performed. Specifically check to make sure that:
   - Body can rotate freely on bushing.
   - Bail can swivel freely on shoulder pins.
   - Shoulder pins are secure and undamaged.

2. Conditions as those listed in ASME B-30.26, para. 26-4.8.4, or any other condition that may result in a hazard, shall cause the hardware to be removed from service. Links, rings, and swivels shall not be returned to service until approved by a qualified person.
3. Written records are not required.

PERIODIC

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.

Structural and Mechanical Lifting Devices (supporting lifters, spreader bars):

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.

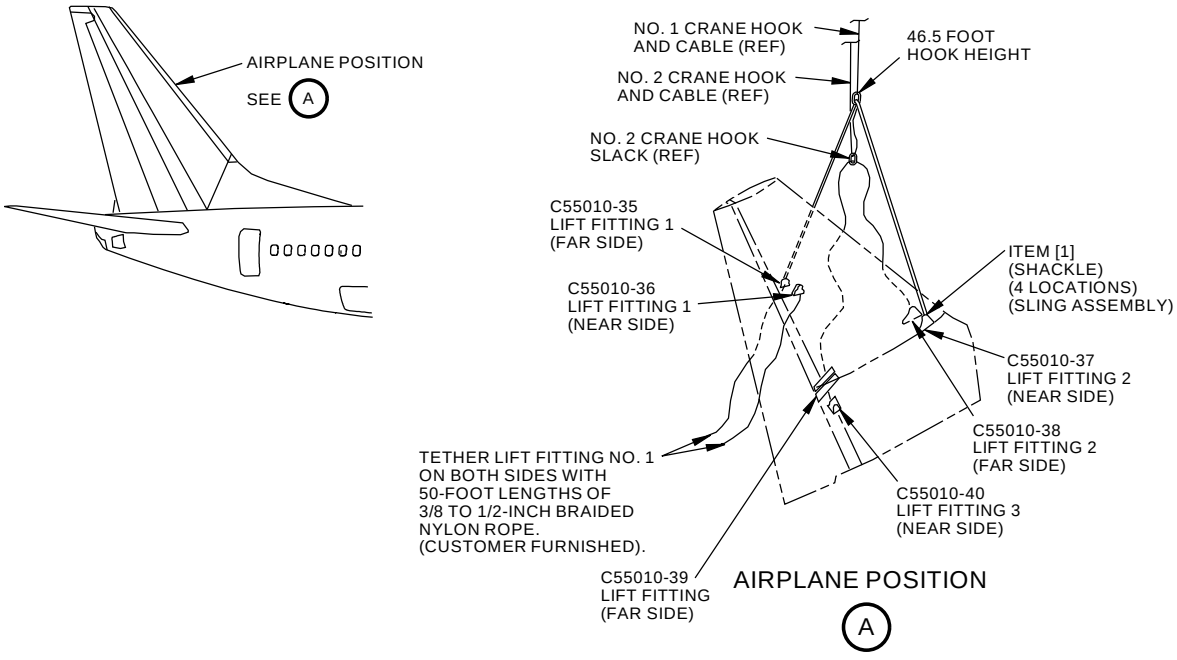
Swivel Hoist Rings:

1. A complete inspection of the links, rings, and swivels shall be performed by a designated person. The hardware shall be examined for conditions such as those listed in ASME B-30.26, para. 26-4.8.4 and a determination made as to whether they constitute a hazard.

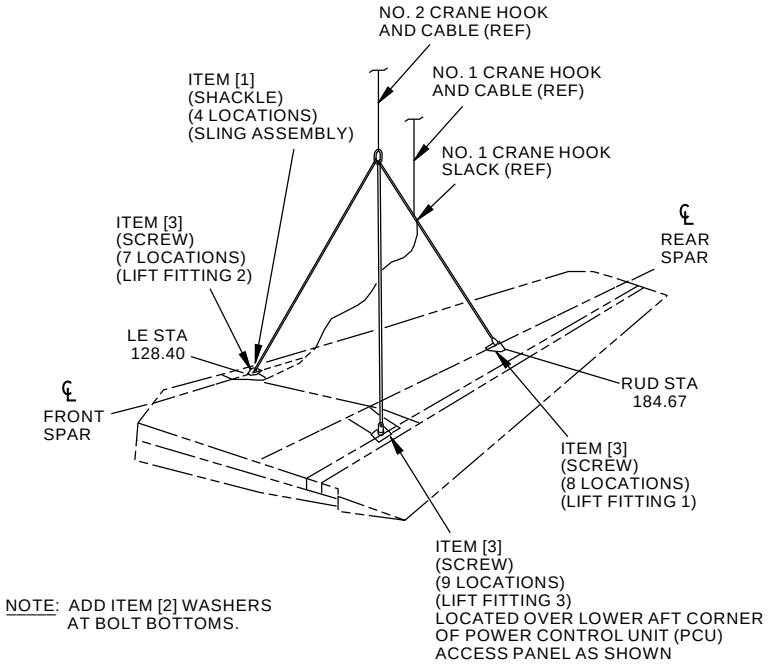
2. Period inspection interval shall not exceed one year. The frequency of periods inspection should be based on:
   - Frequency of use
   - Severity of service conditions
   - Experience gained on the service life of hardware used in similar circumstances
   - Guidelines for the time intervals are: Normal service – yearly; Severe service – monthly to quarterly; Special service – as recommended by a qualified person.
   - Written records are not required.

STORAGE: C55010 shall be stored clean, dry, free of exposure to fumes or corrosive elements, indoors and in the furnished storage box.

DECOMMISSIONING: Parts and assemblies of this equipment, including textile 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.



Vertical Fin Sling
Figure 1 (Sheet 1 of 2)

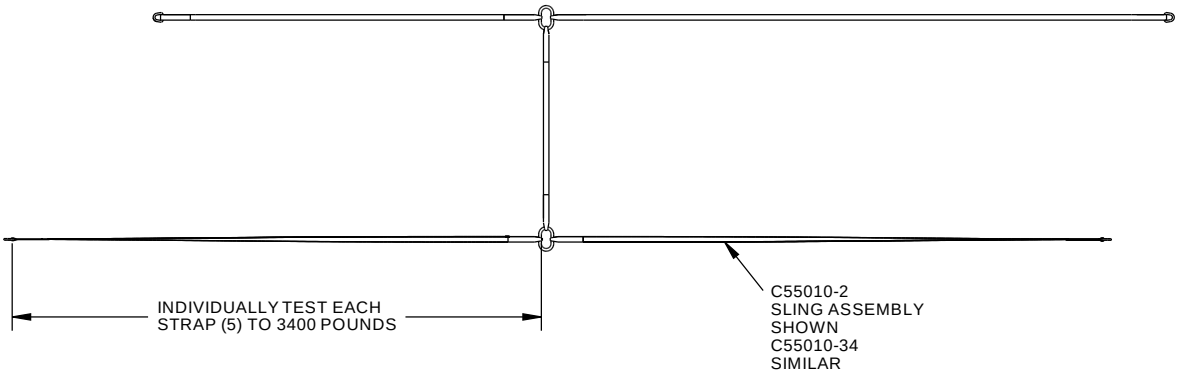


FLAT POSITION

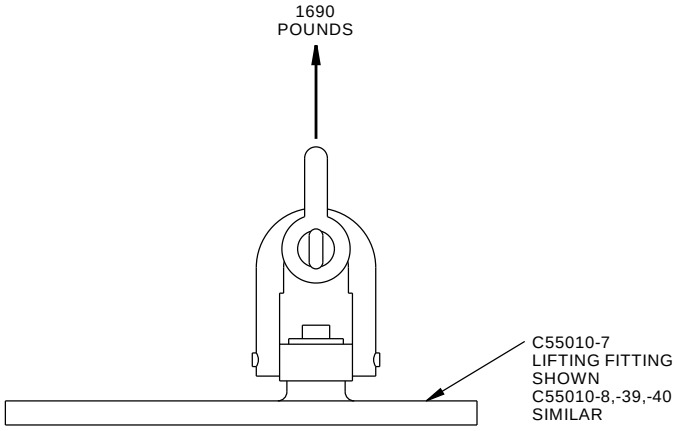
A

K38685 S0006832127_V3

Vertical Fin Sling
Figure 1 (Sheet 2 of 2)



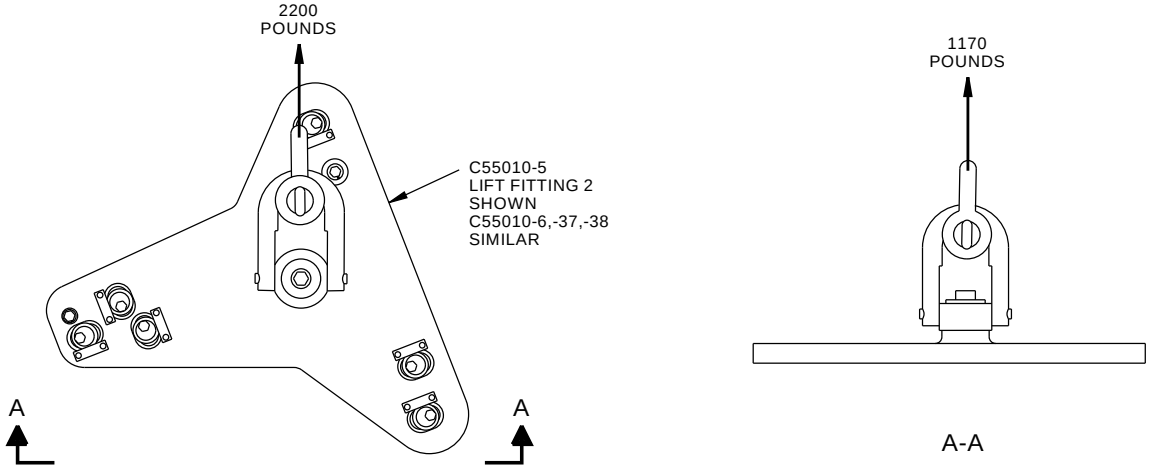
C55010-2,-34
PROOF LOAD DIAGRAM 1
(EXAMPLE)
SLING ASSEMBLY
WORKING LOAD IS 1700 POUNDS. PROOF TEST LOAD IS 2 TIMES THE WORKING LOAD. PROOF LOAD AT INITIAL FABRICATION AND AFTER MODIFICATION/REPAIR. AFTER PROOF LOAD TEST, STEEL STAMP PROOF LOAD TAG PER DRAWING F70308.



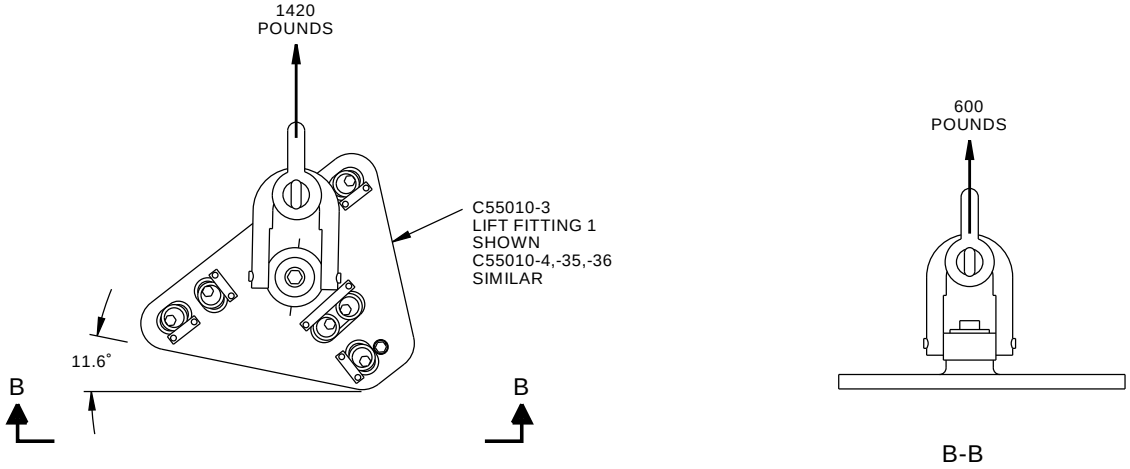
C55010-7,-8,-39,-40
PROOF LOAD DIAGRAM 2
(EXAMPLE)
LIFT FITTING 3
WORKING LOAD IS 845 POUNDS. PROOF TEST LOAD IS 2 TIMES THE WORKING LOAD. PROOF LOAD AT INITIAL FABRICATION AND AFTER MODIFICATION/REPAIR. AFTER PROOF LOAD TEST, STEEL STAMP PROOF LOAD TAG PER DRAWING F70308.

2339218 S0000532528_V1

C55010 Proof Load Diagram (Example)
Figure 2 (Sheet 1 of 2)



C55010-5,-6,-37,-38
PROOF LOAD DIAGRAM 3
(EXAMPLE)
LIFT FITTING 2
WORKING LOAD IS 1100 POUNDS. PROOF TEST LOAD IS 2 TIMES THE WORKING LOAD. PROOF LOAD AT INITIAL FABRICATION AND AFTER MODIFICATION/REPAIR. AFTER PROOF LOAD TEST, STEEL STAMP PROOF LOAD TAG PER DRAWING F70308.



C55010-3,-4,-35,-36
PROOF LOAD DIAGRAM 4
(EXAMPLE)
LIFT FITTING 1
WORKING LOAD IS 710 POUNDS. PROOF TEST LOAD IS 2 TIMES THE WORKING LOAD. PROOF LOAD AT INITIAL FABRICATION AND AFTER MODIFICATION/REPAIR. AFTER PROOF LOAD TEST, STEEL STAMP PROOF LOAD TAG PER DRAWING F70308.

2339274 S0000532529_V1

C55010 Proof Load Diagram (Example)
Figure 2 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C55010-48	SHACKLE	- - -
[2]	C55010-46	WASHER	- - -
[3]	C55010-47	SCREW	- - -