



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### FUSELAGE SKIN POCKETS (CORROSION LOSS)

##### 1. Purpose

- A. To perform an eddy current inspection to detect corrosion in machined pockets on the inner surface of the fuselage skin from BS 1131 to BS 1307, between stringers S-39L and S-39R.

NOTE: Corrosion may occur if leveling compound in machined pockets is disbonded from skin, exposing skin to moisture.

- B. Service Bulletin reference: 767-53-0023

##### 2. Equipment

- A. Instrument -- Any eddy current instrument that will satisfy the requirements of this procedure is acceptable. The following equipment was used during the development of this procedure.

(1) MIZ-10A or MIZ-10B, Zetec Incorporated

- B. Probe -- This procedure uses two straight shielded flat surface probes.

(1) OD 0.375-inch (0.95 cm), active probe diameter 0.218-inch (0.55 cm), usable at 7 kHz; SPO 1391; Nortec Incorporated.

(2) OD 0.50-inch (1.27 cm), active probe diameter 0.312-inch (0.79 cm), usable at 3 kHz; SPO 565A; Nortec Incorporated

- C. Reference Standard -- manufacture two reference standards; one from 0.063-inch (0.16 cm) and one from 0.10-inch (0.25 cm) thick aluminum sheet per Figure 1.

NOTE: A step wedge or taper gage matching thickness requirements of Figure 1 may be used.

##### 3. Preparation for Inspection

- A. Wipe inspection surface clean (see Figure 2). Rough paint should be smoothed by light sanding.

##### 4. Instrument Calibration

- A. Calibrate instrument for inspecting fuselage skin thickness of 0.056-inch (0.142 cm) to 0.080-inch (0.20 cm). Use reference standard 604A (see Figure 1) and probe per Paragraph 2.B.(1).

(1) Set instrument frequency to 7 kHz and connect probe to instrument.

(2) Place probe on full sheet thickness of reference standard and balance instrument per manufacturer's instructions.

(3) Adjust for liftoff per manufacturer's instructions to obtain the same response when probe is on bare aluminum surface as when probe is lifted off the part by 0.006 inch (0.015 cm) (approximately the thickness of two sheets of paper).

(4) Place probe on reference standard at location of 20 percent reduction in thickness. Adjust instrument sensitivity to obtain a difference in meter response of 30 percent of full scale between the full sheet thickness and the location of 20 percent reduction in thickness.

(5) Move probe from full sheet thickness of reference standard to 10, 20, 30 and 40 percent reductions in thickness and note instrument responses.

- B. Calibrate instrument for inspecting fuselage skin thickness of 0.080-inch (0.20 cm) and thicker. Use reference standard 604B (see Figure 1) and probe per Paragraph 2.B.(2).

(1) Set instrument frequency to 3 kHz and connect probe to instrument.

(2) Calibrate instrument per Paragraph 4.A.(2) thru Paragraph 4.A.(5).

EFFECTIVITY  
ALL; 767-200

**PART 6 53-60-01**

D634T301

Page 1  
May 15/2006

**NONDESTRUCTIVE TEST MANUAL****5. Inspection Procedure**

- A. Identify airplane milled skin configuration and inspection figure (Figure 3 or Figure 4).

NOTE: Airplanes will have one of two milled skin thickness configurations in the inspection area (see Figure 3 and Figure 4).

- (1) Calibrate instrument per Paragraph 4.A.
- (2) Locate inspection pocket between BS 1175 and BS 1197 per Figure 4.
- (3) Place probe approximately 6.0 inches forward of BS 1197 on airplane centerline.
- (4) Reposition instrument meter needle to approximately 50 percent of full scale with meter position control.
- (5) Scan probe in forward direction the full length of the pocket.
  - (a) If instrument meter needle moves downscale 20 percent or more of full scale from approximately the middle of the pocket forward, inspect airplane per Figure 3.
  - (b) If instrument meter needle moves downscale less than 20 percent of full scale when probe is scanned along length of pocket, inspect airplane per Figure 4.
- (6) Repeat Paragraph 5.A.(2) thru Paragraph 5.A.(5) between BS 1197 and BS 1219 to confirm milled skin configuration.

- B. Inspect skin panels 0.056-inch (0.142 cm) to 0.080-inch (0.20 cm) thick for inner surface corrosion.

- (1) Identify areas of skin panel thickness between 0.056-inch (0.142 cm) and 0.080-inch (0.20 cm) per Figure 3 or Figure 4.
- (2) Calibrate instrument per Paragraph 4.A.
- (3) Establish airplane baseline response. Select an inspection area thickness of 0.056-inch (0.142 cm). Place probe at several points within this area to assure baseline is established on corrosion free area.

NOTE: Minor adjustment to meter position control may be required to adjust for thickness difference between reference standard and fuselage skin. Do not change instrument sensitivity when establishing the airplane baseline response.

- (4) Slowly scan 0.056-inch (0.142 cm) to 0.080-inch (0.20 cm) thick inspection area starting with 0.056-inch (0.142 cm) thickness. Scan in an inboard/outboard direction. Index probe 0.25-inch (0.63 cm) in a forward or aft direction between each scan until the entire pocket or section, for which the instrument was calibrated, is inspected. See Figure 3 or Figure 4 for typical inspection area coverage.

NOTE: A nonconductive straight edge may be used to maintain uniform probe indexing.

NOTE: Check instrument null, lift-off and sensitivity on reference standard before and after inspecting each pocket.

- (5) Repeat scanning pattern in all inspection areas 0.056-inch (0.142 cm) to 0.080-inch (0.20 cm) thick.
- (6) Note all areas of metal thinning 20 percent or more of panel baseline thickness.

- C. Inspect skin panels 0.080-inch (0.20 cm) thick and thicker for inner surface corrosion.

- (1) Identify areas of skin panel thickness greater than 0.080-inch (0.20 cm) per Figure 3 or Figure 4.
- (2) Calibrate instrument per Paragraph 4.B.
- (3) Inspect per Paragraph 5.B.(3) thru Paragraph 5.B.(6) except establish airplane baseline response on 0.10-inch (0.25 cm) thick fuselage skin area and scan 0.080-inch (0.20 cm) thick and thicker inspection areas.



767

## NONDESTRUCTIVE TEST MANUAL

### 6. Inspection Results

- A. Any upscale meter response 30 percent or more of full meter scale, not attributable to known skin thickness change, should be considered evidence of material loss (20 percent or more) due to corrosion and investigated further per Paragraph 6.C.

NOTE: Corrosion indications are normally characterized by rapid meter movement over a short interval due to intergranular corrosion and pitting.

NOTE: Sudden upscale movement greater than 30 percent should be compared with the reference standard response to reduced thickness.

- B. The following conditions, not related to material loss due to corrosion, may give an upscale meter response of 30 percent or more.

- (1) Reduction in machined skin thickness - scanning from a thicker skin section into a thinner section, instrument response should be slow and gradual. Verified known reduction in material thickness are shown in Figure 3 and Figure 4.

NOTE: Thinning due to machine milling usually will be indicated by a straight line pattern.

- (2) Blemish areas that have been blended or reworked on the outer surface - place straight edge on surface to note depression in skin.
- (3) Scanning too close to a fastener.

- C. Further investigation of a suspected corrosion area should be performed in the following manner.

- (1) Compare thickness of adjacent area and suspected corrosion area with an ultrasonic thickness gage.

NOTE: Measured ultrasonic thickness should be less than the required panel thickness at the inspection location or no reading will be indicated due to excessive sound scatter by corrosion.

- (2) Perform visual inspection from inside the airplane. Leveling compound on the interior surface of the skin may have to be removed to perform the visual inspection.

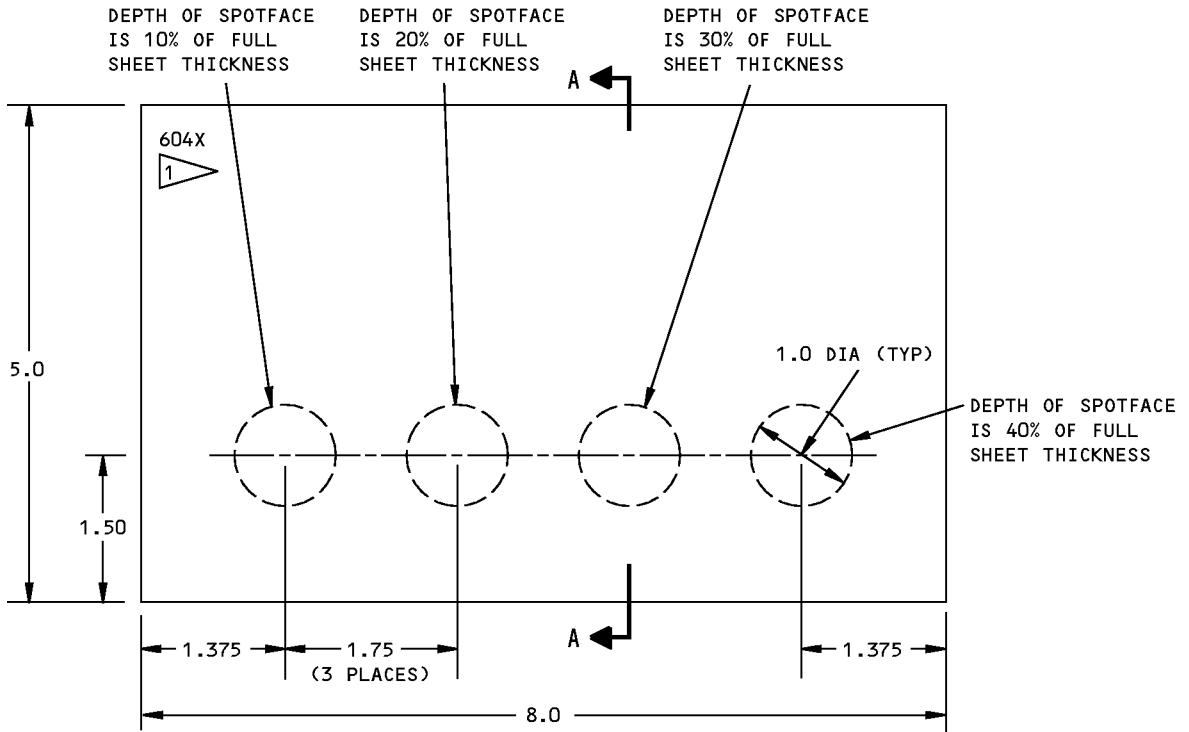
EFFECTIVITY  
ALL; 767-200

D634T301

**PART 6 53-60-01**

Page 3  
May 15/2006

NONDESTRUCTIVE TEST MANUAL

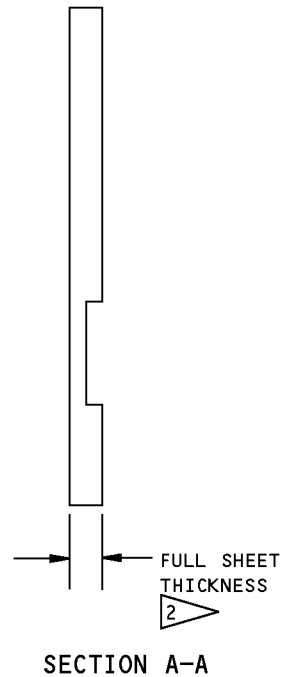


NOTES

- ALL DIMENSIONS ARE IN INCHES
- MATERIAL: CLAD 2024-T3 OR CLAD 2024-T4 SHEET (OPTIONAL: NONCLAD SHEET)
- TOLERANCE: X.X  $\pm 0.05$   
X.XX  $\pm 0.01$   
X.XXX  $\pm 0.005$

1 ETCH OR STEEL STAMP WITH 604A OR 604B

2 THICKNESS: 0.063 - REFERENCE STANDARD 604A  
0.100 - REFERENCE STANDARD 604B

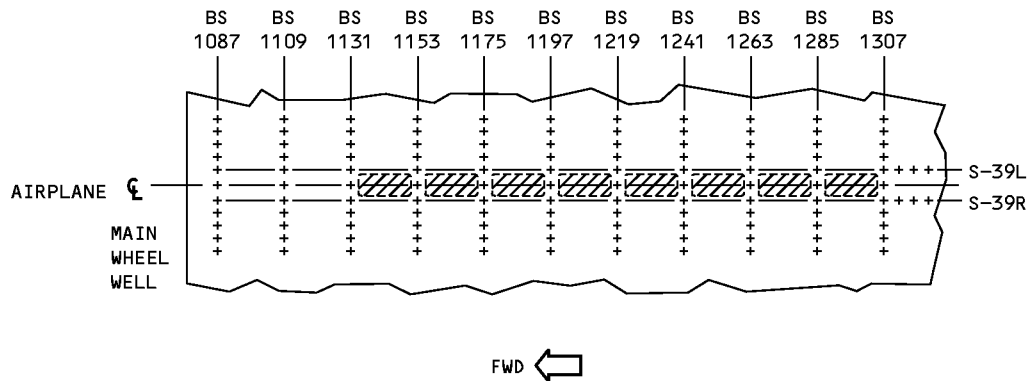
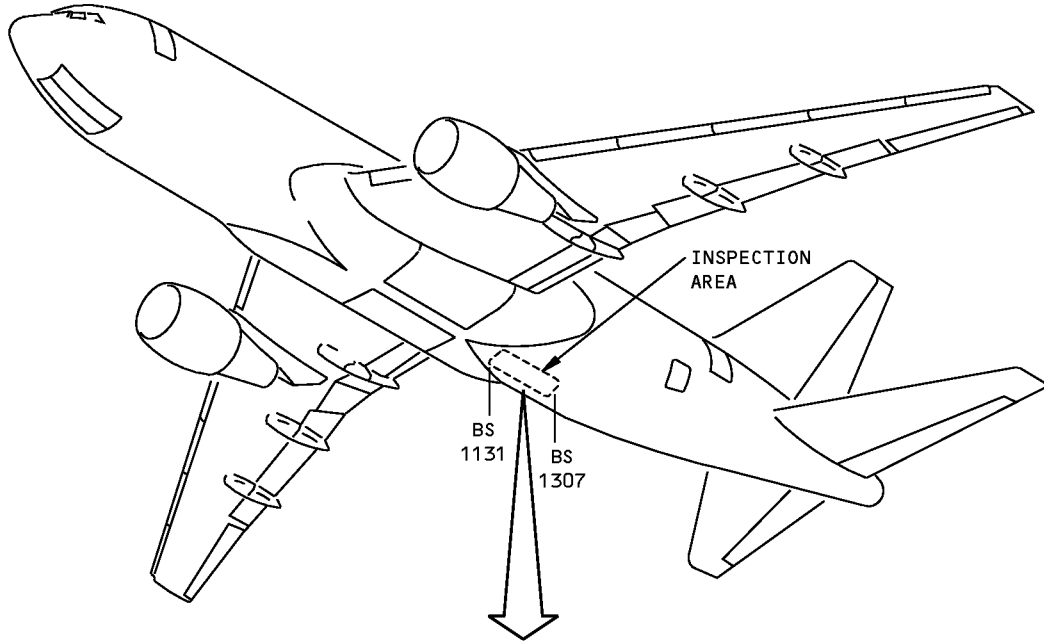


Skin Corrosion Reference Standard  
Figure 1

EFFECTIVITY  
ALL; 767-200

PART 6 53-60-01

**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTES**

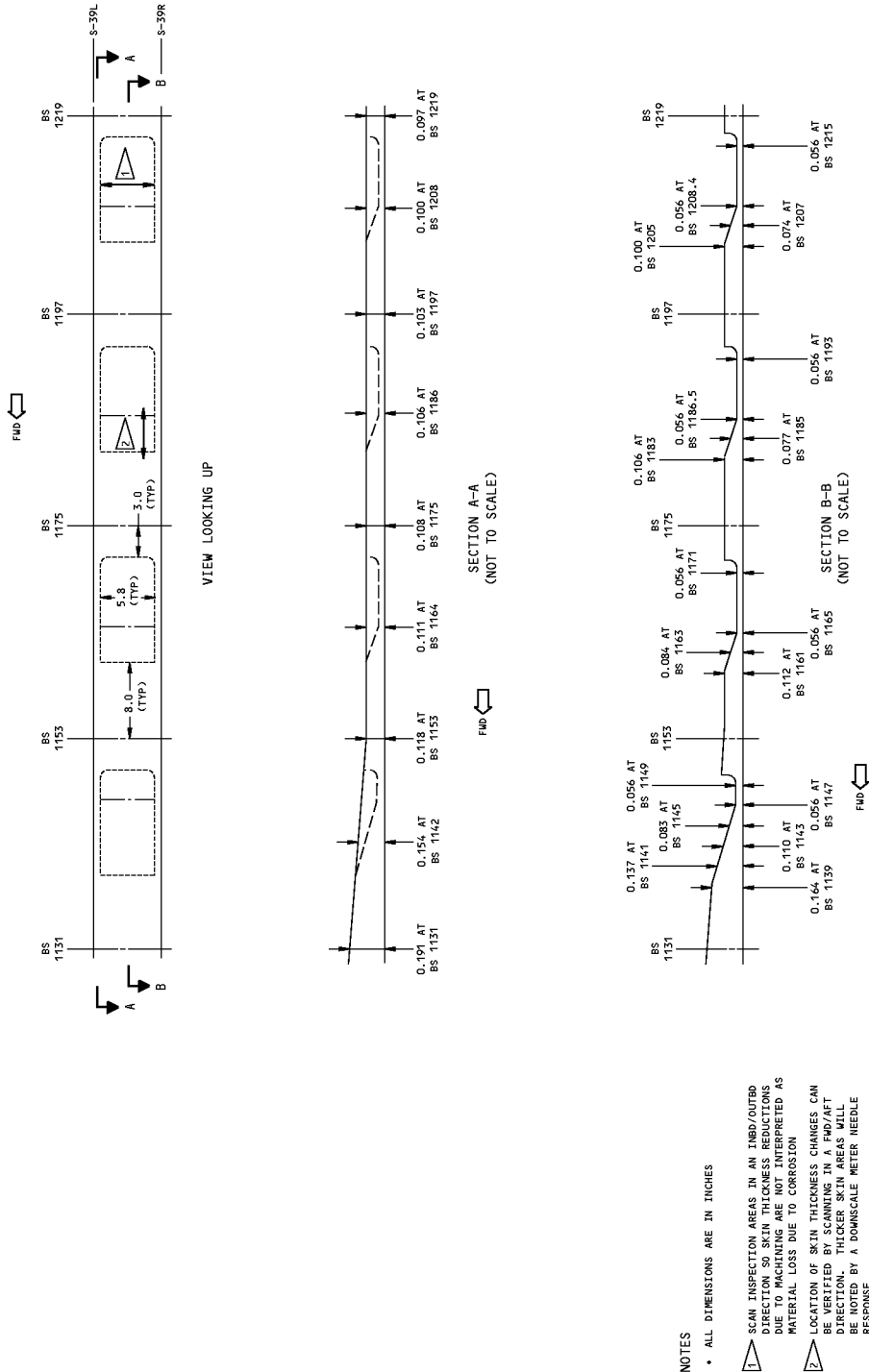
- VIEW LOOKING UP
- CONFIGURATION OF MACHINED POCKETS CAN CHANGE WITH FUSELAGE SKIN PANELS. DETERMINE LOCATIONS OF POCKETS PER FIG. 3
- /// INSPECTION AREA - INSPECT ON EXTERNAL SURFACE FOR CORROSION IN INTERNAL MACHINED POCKETS OF FUSELAGE SKIN FROM BS 1131 TO BS 1307, BETWEEN S-39L AND S-39R

**Fuselage Skin Pockets  
Figure 2**

EFFECTIVITY  
ALL; 767-200

**PART 6 53-60-01**

# 767 NONDESTRUCTIVE TEST MANUAL



**Skin Pocket Inspection Configuration 1  
Figure 3 (Sheet 1 of 2)**

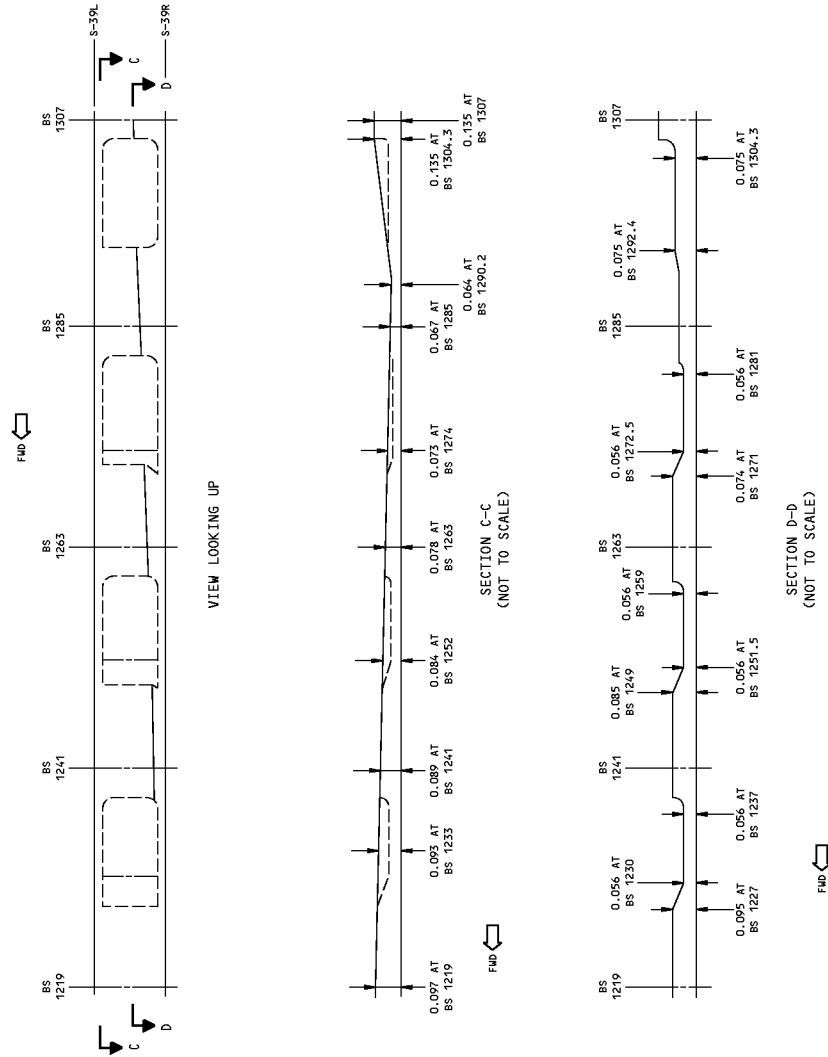
**EFFECTIVITY**  
ALL; 767-200

PART 6    53-60-01

Page 6  
May 15/2006

D634T301

# 767 NONDESTRUCTIVE TEST MANUAL



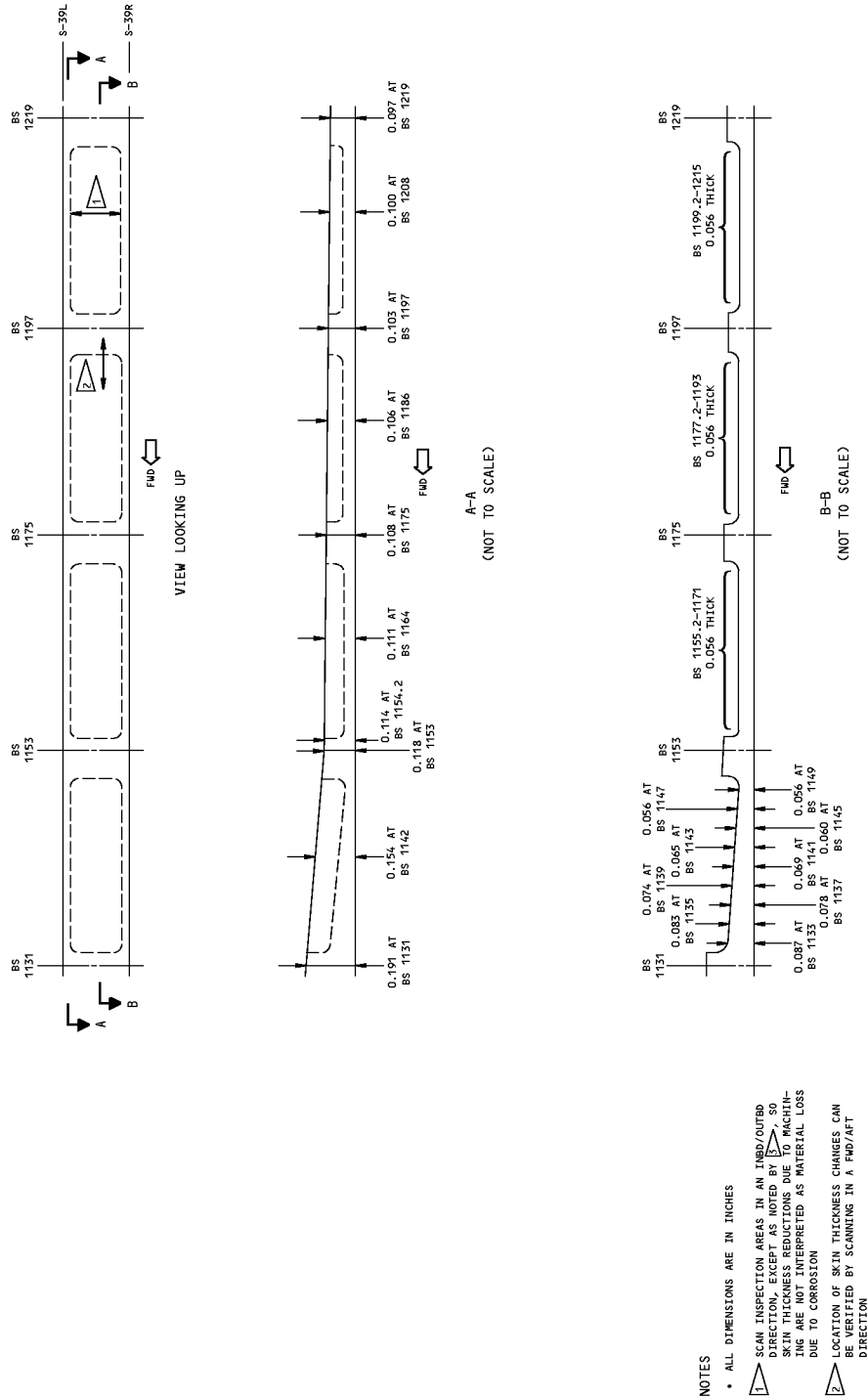
NOTES  
• ALL DIMENSIONS ARE IN INCHES

**Skin Pocket Inspection Configuration 1**  
**Figure 3 (Sheet 2 of 2)**

**EFFECTIVITY**  
**ALL; 767-200**

**PART 6 53-60-01**

D634T301

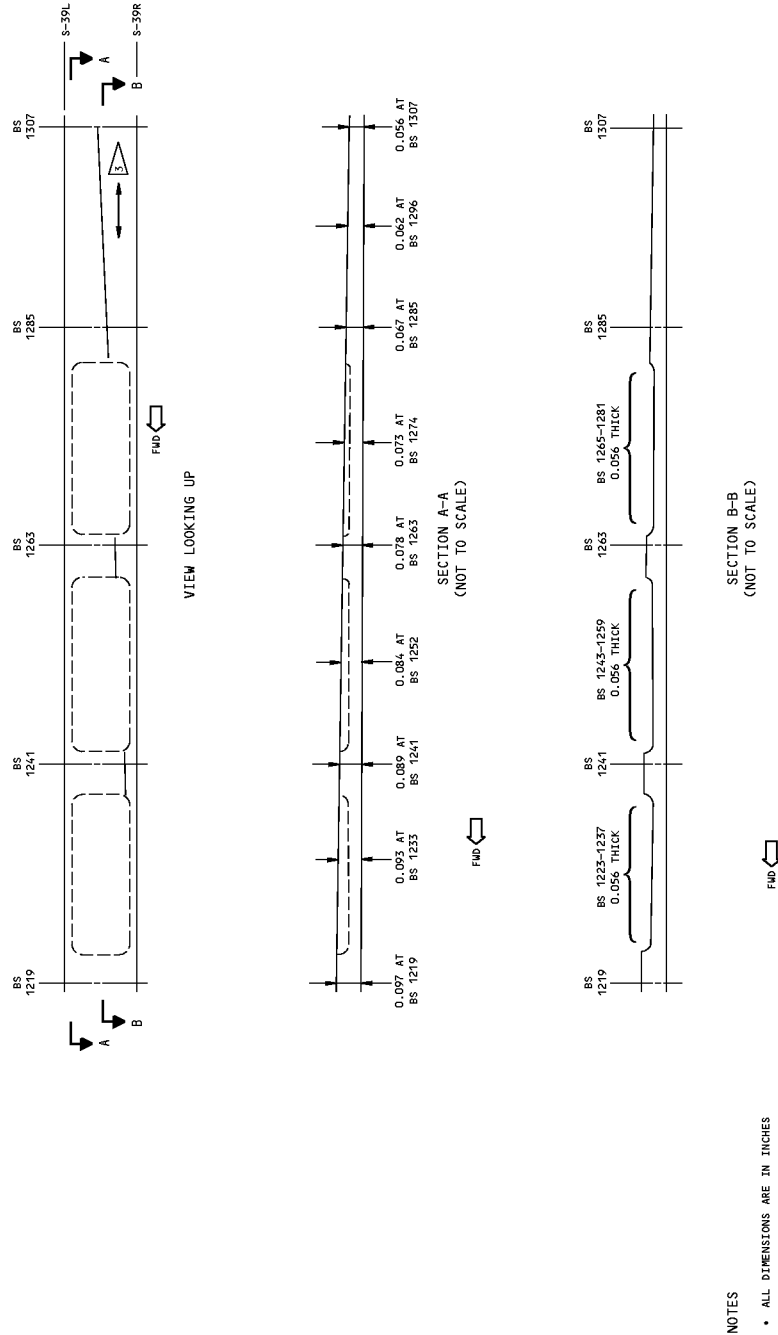


Skin Pocket Inspection Configuration 2  
Figure 4 (Sheet 1 of 2)

EFFECTIVITY  
ALL; 767-200

D634T301





Skin Pocket Inspection Configuration 2  
Figure 4 (Sheet 2 of 2)

EFFECTIVITY  
ALL; 767-200

**PART 6 53-60-01**



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### INNER CHORD AND STRAP AT THE EDGE FRAMES OF THE BULK CARGO DOOR

##### 1. Purpose

- A. To examine the inner chord and the strap at the edge frames of the bulk cargo door for cracks. See Figure 1 for the inspection locations.
- B. To examine the inner chord and the strap for cracks that extend out from the head or the collar of the fastener by 0.10 inch (2.5 mm) or more.
- C. MPD Appendix B DTR Check Form Reference:
  - (1) ITEM 53-60-I10A

##### 2. Equipment

NOTE: Refer to Part 1, 51-01-00 for data about the equipment manufacturers.

- A. Instrument - All eddy current instruments are permitted for use if they:
  - (1) Can satisfactorily do the calibration instructions specified in this procedure. The instruments specified below were used to prepare this procedure:
    - (a) NDT-19, Nortec/Staveley Inc.
    - (b) Locator UH, Hocking Instruments
- B. Probe - A shielded, right angle, pencil probe (as shown in Part 6, 51-00-01, Figure 1, or Part 6, 51-00-19, Figure 1) was used to prepare this procedure. The pencil probe has the dimensions: Diameter = 0.125 inch (3.18 mm), A = 0.5 inch (12.7 mm), B = 0.625 inch (15.88 mm), C = 4.0 inch (101.6 mm). The pencil probe specified below was used to prepare this procedure:
  - (1) MP 905-50B/5DF, NDT Engineering Corp.
- C. Reference Standard - Use reference standard 188A as shown in Part 6, 51-00-01 or Part 6, 51-00-19.

##### 3. Prepare for the Inspection

- A. Remove the interior trim panels and the insulation as necessary to get access to the inner chord and the strap. See Figure 1.
- B. Clean the inspection area and remove loose paint.

##### 4. Instrument Calibration

- A. Calibrate the instrument as specified in par. 4 of Part 6, 51-00-01 or Part 6, 51-00-19.

##### 5. Inspection Procedure

- A. Move the probe around the collars and heads of the inspection fasteners shown in Figure 1 to examine the inner chords and the straps for cracks.
- B. Identify all the locations that give a signal that is equal to or more than the signal you got from the reference standard notch.
- C. At regular intervals during the inspection, do a check of the instrument calibration. If the signal from the notch in the reference standard has changed 10 percent (or more) from the signal you got during calibration, do the calibration and inspection again for all of the fasteners examined since the last calibration test.

##### 6. Inspection Results

- A. Fast instrument signals that occur as the probe is moved a short distance are indications of possible cracks. More inspection at these areas is necessary.
- B. Refer to par. 6 in Part 6, 51-00-01 or Part 6, 51-00-19 for more "Inspection Result" instructions.

ALL

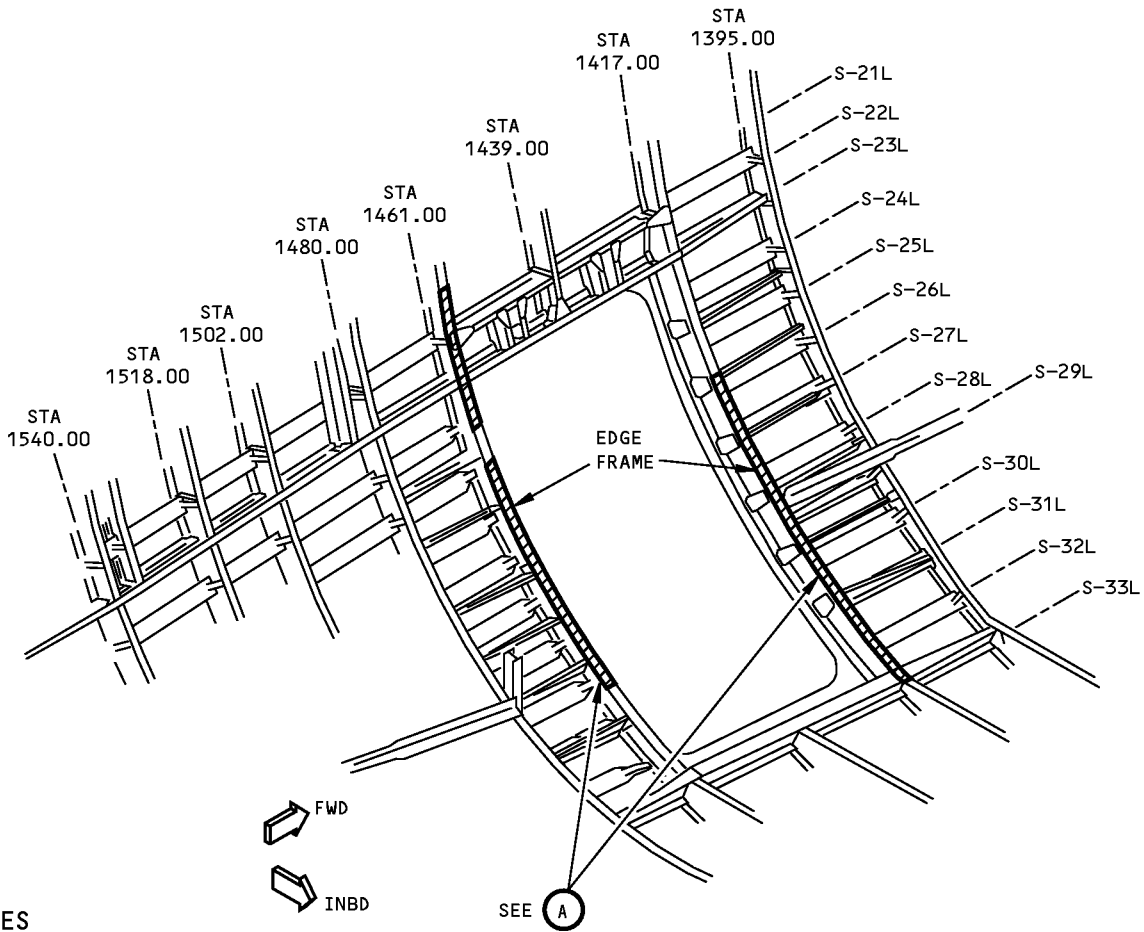
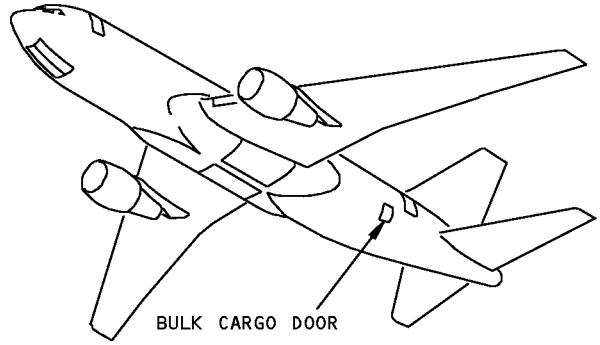
EFFECTIVITY

# PART 6 53-60-02


D634T301

Page 1  
May 15/2006

**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTES**

 = INSPECTION AREA

**Inner Chord and Strap Inspection Areas  
Figure 1 (Sheet 1 of 2)**

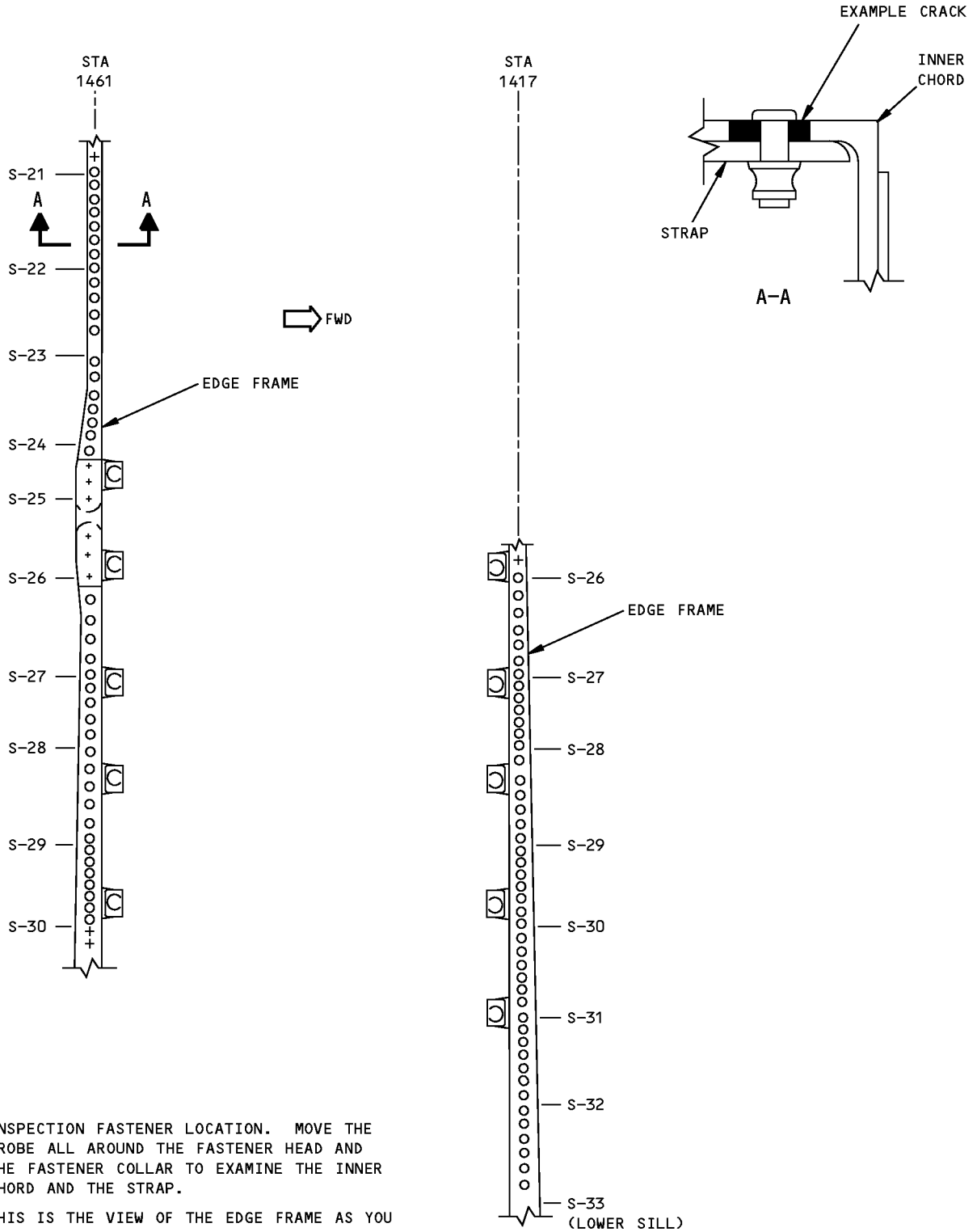
EFFECTIVITY
ALL

**PART 6 53-60-02**

Page 2  
May 15/2006

D634T301

NONDESTRUCTIVE TEST MANUAL



NOTES

- = INSPECTION FASTENER LOCATION. MOVE THE PROBE ALL AROUND THE FASTENER HEAD AND THE FASTENER COLLAR TO EXAMINE THE INNER CHORD AND THE STRAP.
- THIS IS THE VIEW OF THE EDGE FRAME AS YOU LOOK OUTBOARD.

Inner Chord and Strap Inspection Areas  
Figure 1 (Sheet 2 of 2)

EFFECTIVITY
ALL

PART 6 53-60-02



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### FUSELAGE - INNER AND FAILSAFE CHORDS IN THE UPPER MAIN SILL OF THE AFT PASSENGER/SERVICE DOORS

##### **1. Purpose**

- A. Use this high frequency eddy current procedure to examine the inner and failsafe chords that are in the upper main sill of the aft passenger and service doors for cracks.
- B. The inspections are done at the upper sill locations, between Door Station (DS) 911 and BS 1540.
- C. Figure 1 shows the inspection locations.
- D. This high frequency eddy current procedure can use a meter instrument or an impedance plane display instrument.
- E. MPD Appendix B DTR Check Form Reference:
  - (1) ITEM 53-60-I14F

##### **2. Equipment**

- A. General
    - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
    - (2) Refer to Part 1, 51-01-00, for data about the equipment manufacturers.
  - B. Instrument
    - (1) Use an instrument that operates at a frequency of 500 kHz.
    - (2) A Hocking Locator was used to help prepare this procedure.
  - C. Probe
    - (1) Use a shielded pencil probe that:
      - (a) Operates at a frequency of 500 kHz.
      - (b) Operates as specified in Part 6, 51-00-01, par. 2.B.
- NOTE:** You can use a straight probe or a right angled pencil probe to do this inspection.
- D. Reference Standard
    - (1) Refer to Part 6, 51-00-01, for data about the reference standard used for the surface inspection of aluminum.

##### **3. Preparation for Inspection**

- A. The aft doors must be closed or removed to do this inspection.
- B. Remove the interior trim and insulation to get access to the inspection areas.
- C. Remove the Velcro tape that is on the failsafe chord.  
**NOTE:** The Velcro tape must be replaced after this inspection.
- D. Remove sealant, dirt and grease from around the inspection surfaces.

##### **4. Instrument Calibration**

- A. Refer to Part 6, 51-00-01, for the instrument calibration procedure of meter display instruments.
- B. Refer to Part 6, 51-00-19, par. 4., for the equipment calibration procedure of impedance plane display instruments.

ALL

EFFECTIVITY

**PART 6 53-60-03**

D634T301

Page 1  
May 15/2006



767

## NONDESTRUCTIVE TEST MANUAL

### 5. Inspection Procedure

- A. Find the inspection locations on the left, aft passenger door at the upper sill above and below the sill. See Figure 1.
- B. Examine the inner chord. Do a 360-degree scan around all of the Detail A and B fasteners shown in Figure 1.
- C. Identify the Detail A fastener locations of the failsafe chord and do a scan along the edge of the failsafe chord. See Figure 1, Detail A.
- D. Identify the Detail B fastener locations of the failsafe chord and do a scan around the fasteners to examine the failsafe chord. See Figure 1, Detail B.
- E. Do Paragraph 5.A. thru Paragraph 5.D. on the right side of the airplane for the aft service door.

### 6. Inspection Results

- A. Refer to Part 6, 51-00-01, par. 6., to make an analysis of the inspection results that can occur with a meter display instrument.
- B. Refer to Part 6, 51-00-19, par. 6., to make an analysis of the inspection results that can occur with an impedance plane instrument.

ALL

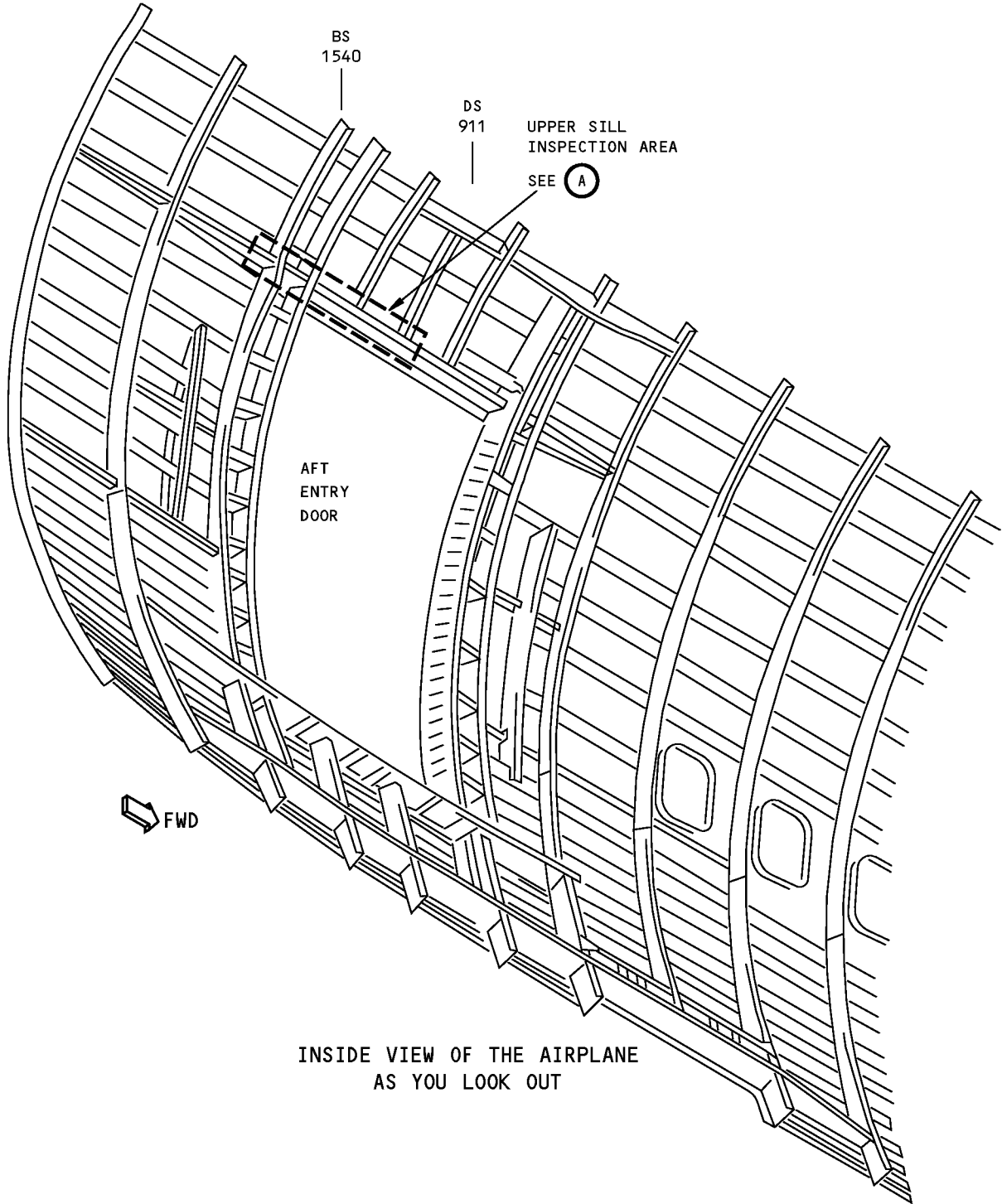
EFFECTIVITY

D634T301

**PART 6 53-60-03**

Page 2  
May 15/2006

**767  
NONDESTRUCTIVE TEST MANUAL**



INSIDE VIEW OF THE AIRPLANE  
AS YOU LOOK OUT

**NOTES**

- THE LEFT SIDE OF THE AIRPLANE IS SHOWN,  
THE RIGHT SIDE IS ALMOST THE SAME.

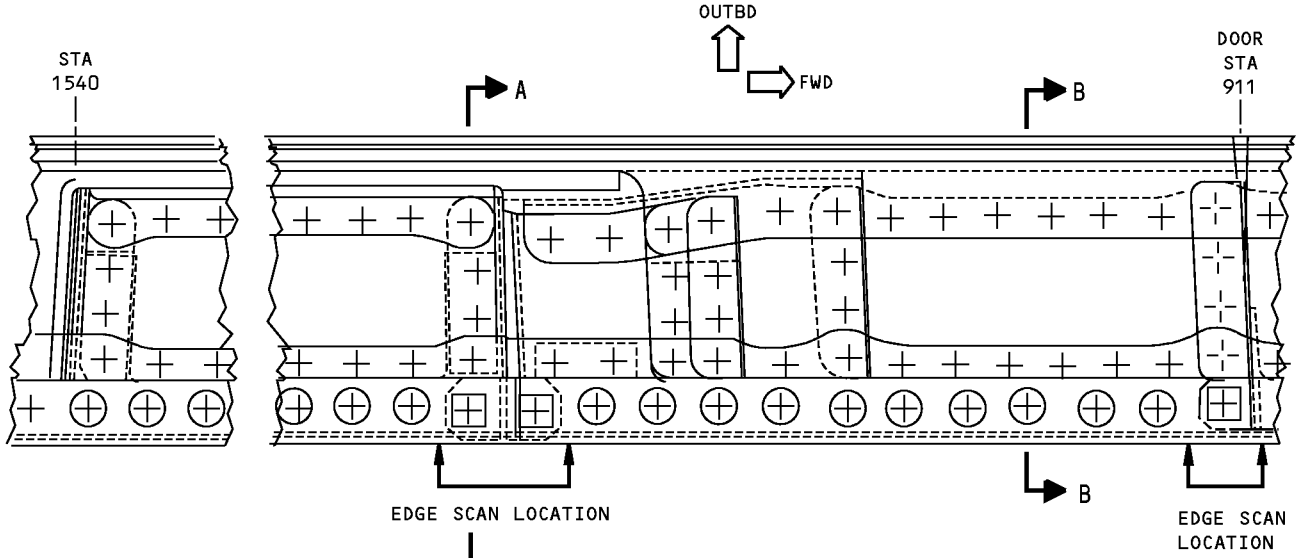
**Inspection Locations  
Figure 1 (Sheet 1 of 2)**

	EFFECTIVITY
ALL	

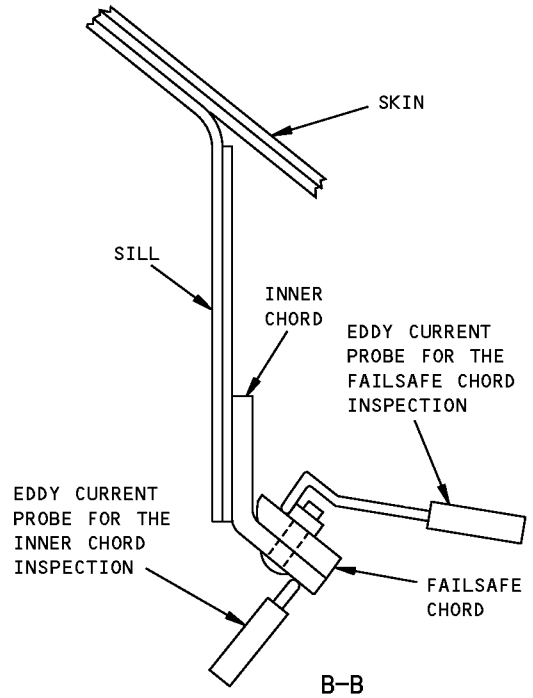
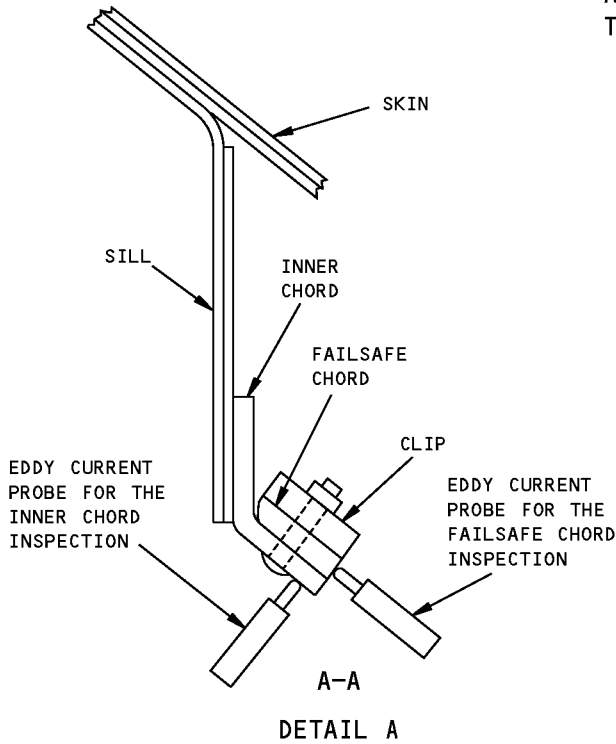
**PART 6 53-60-03**

D634T301



**NONDESTRUCTIVE TEST MANUAL**



THIS VIEW LOOKS UP AT A 45° ANGLE AT THE INSPECTION AREA



**NOTES**

-  DETAIL A FASTENERS
-  DETAIL B FASTENERS

**Inspection Locations  
Figure 1 (Sheet 2 of 2)**

EFFECTIVITY
ALL

**PART 6 53-60-03**





767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### EDGE FRAMES OF THE CUTOUTS FOR THE AFT PASSENGER/SERVICE DOORS

##### 1. Purpose

- A. To examine the fail safe strap and inner chord on the edge frames of the aft passenger and service doors for cracks. The inspection areas are:
  - (1) DOOR STA 876.3 - stringers S-9 to S-12 and stringers S-17 to S-23.
  - (2) DOOR STA 923.7 - stringers S-8 to S-13 and stringers S-21 to S-23.
- B. You can use an impedance plane display or a meter display instrument to do this inspection.
- C. MPD Appendix B DTR Check Form Reference:
  - (1) ITEM 53-60-I14E

##### 2. Equipment

- A. General
  - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
  - (2) Refer to Part 1, 51-01-00 for data about the equipment manufacturers.
- B. Instrument
  - (1) Use an eddy current instrument that:
    - (a) Has an impedance plane display or a meter display.
    - (b) Operates at a frequency range of 50 kHz to 500 kHz.
  - (2) The instruments that follow were used to help prepare this procedure.
    - (a) Locator UH; Hocking, Inc.
    - (b) NDT 19e; Staveley
    - (c) Phasec 2200; Hocking, Inc.
- C. Probes
  - (1) A shielded, right-angle surface probe with a flexible copper shaft of approximately 0.125 inch (3.2 mm) diameter that has a probe drop of 0.5 inches (7.4 mm) is recommended. Other probes designs can be used if a satisfactory inspection can be done.
  - (2) For data about probe selection, refer to Part 6, 51-00-01, par. 2.B. (meter display instruments) or Part 6, 51-00-19, par. 2.C. (impedance plane display instruments).
  - (3) The probe that follows was used to help prepare this procedure.
    - (a) MP 905-50FX; NDT Engineering Corp
- D. Reference Standards
  - (1) For data about reference standard selection, refer to Part 6, 51-00-01, par. 2.C. (meter display instruments) or Part 6, 51-00-19, par. 2.D. (impedance plane display instruments).

##### 3. Preparation for Inspection

- A. Get access to the inspection area. Remove all necessary door trim and insulation blankets.
- B. Remove loose paint, dirt, and sealant from the surface of the inspection area. If necessary, clean the surface of the inspection areas with an approved cleaner.

##### 4. Instrument Calibration

- A. For instruments with a meter display, calibrate the equipment as specified in the calibration instructions given in Part 6, 51-00-01, par. 4., "Instrument Calibration".

ALL

EFFECTIVITY

# PART 6 53-60-04

D634T301

Page 1  
May 15/2006



767

## NONDESTRUCTIVE TEST MANUAL

- B. For instruments with an impedance plane display, calibrate the equipment as specified in the calibration instructions given in Part 6, 51-00-19, par. 4., "Instrument Calibration."

### 5. Inspection Procedure

- A. Make a scan of the inspection areas shown in Figure 1.
- (1) For instruments with a meter display, refer to Part 6, 51-00-01, par. 5., for the inspection procedure.
  - (2) For instruments with an impedance plane display, refer to Part 6, 51-00-19, par. 5., for the inspection procedure.
  - (3) Examine the two edge frames on the aft passenger door and the aft service door.
    - (a) The inspection areas at door station 876.3 are from stringers S-9 to S-12 and stringers S-17 to S-23.
    - (b) The inspection areas at door station 923.7 are from stringers S-8 to S-13 and stringers S-21 to S-23.

### 6. Inspection Results

- A. For instruments with a meter display, refer to Part 6, 51-00-01, par. 6., to make an analysis of indications that occur during the inspection.
- B. For instruments with an impedance plane display, refer to Part 6, 51-00-19, par. 6., to make an analysis of indications that occur during the inspection.
- C. Compare the signals that occur during the inspection on the airplane to the signal you get from the notch in the reference standard.
- D. Do one of the procedures that follow to make sure a signal is the result of a crack:
- (1) Remove the surface finish and do a visual inspection with 10 power (or higher) magnification and sufficient light.
  - (2) Remove the fastener and do an eddy current inspection of the open hole as specified in Part 6, 51-00-04 (meter display instruments), Part 6, 51-00-11 (impedance plane display), or Part 6, 51-00-16 (rotary scanner).

ALL

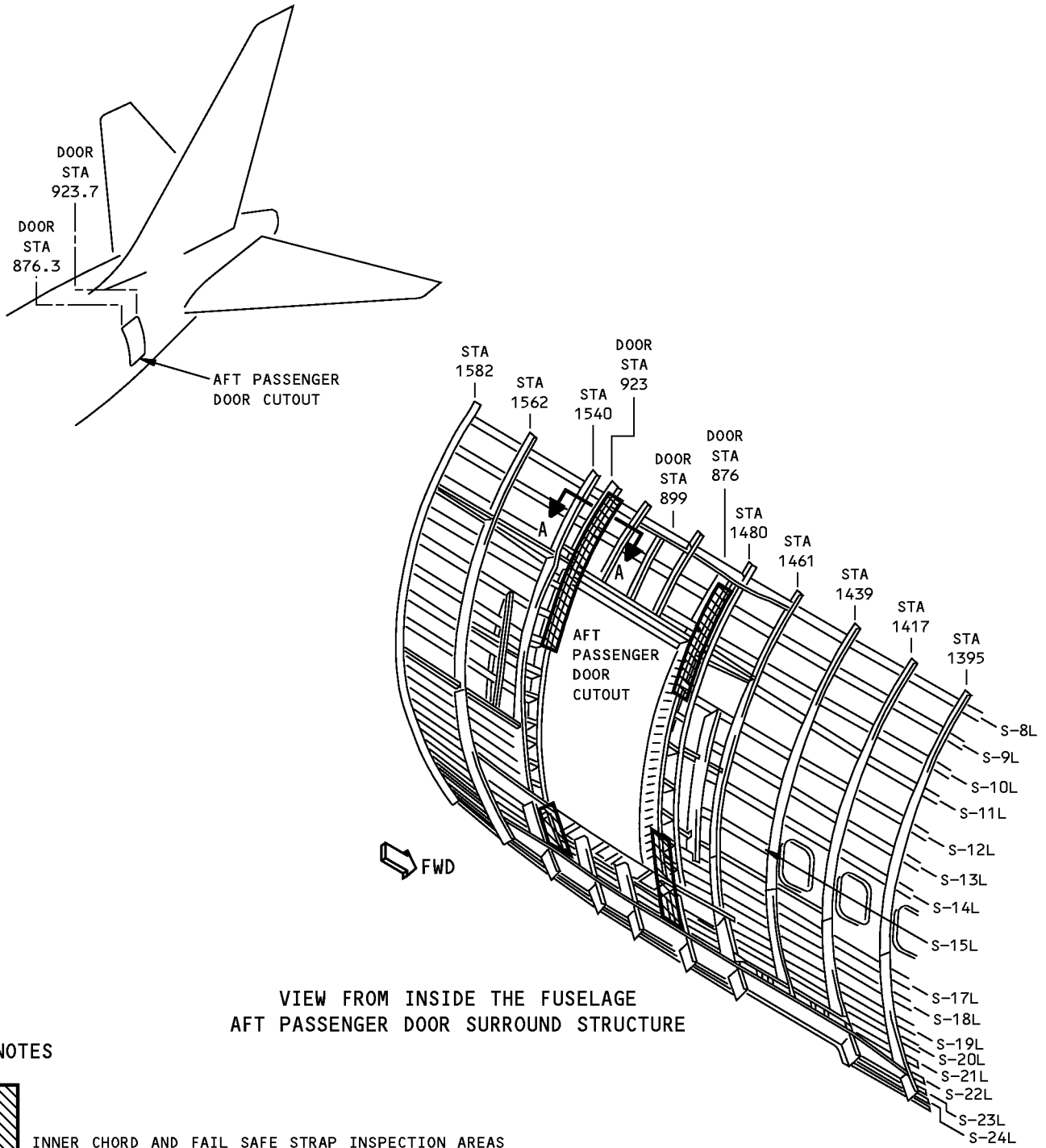
EFFECTIVITY

D634T301

**PART 6 53-60-04**

Page 2  
May 15/2006

**767  
NONDESTRUCTIVE TEST MANUAL**



**VIEW FROM INSIDE THE FUSELAGE  
AFT PASSENGER DOOR SURROUND STRUCTURE**

**NOTES**



INNER CHORD AND FAIL SAFE STRAP INSPECTION AREAS

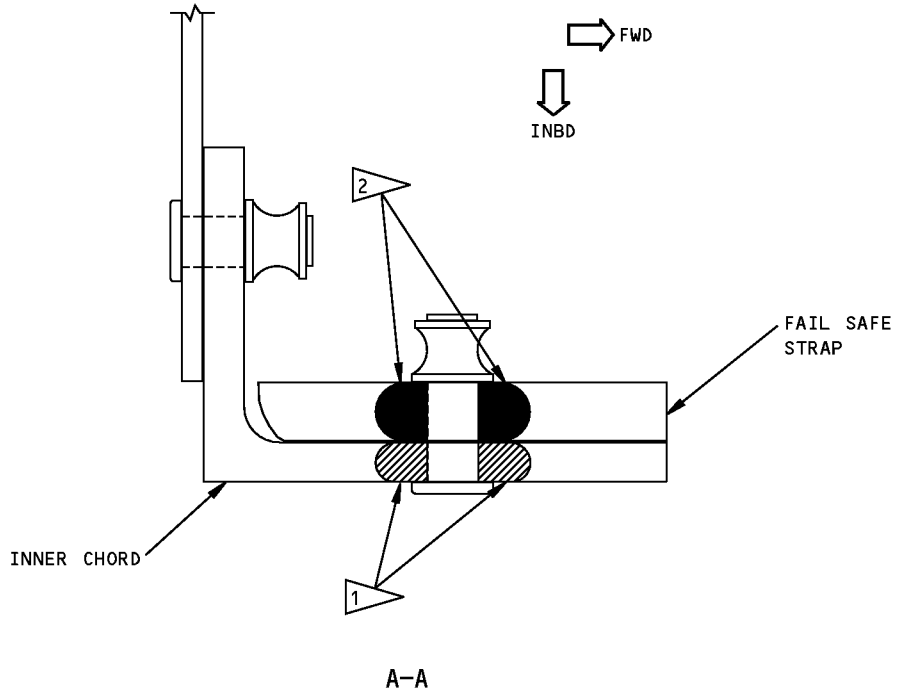
- THE AFT PASSENGER DOOR OF THE AIRPLANE IS SHOWN, THE AFT SERVICE DOOR IS OPPOSITE

**Inspection Areas  
Figure 1 (Sheet 1 of 2)**

	EFFECTIVITY
ALL	

**PART 6 53-60-04**


**767  
NONDESTRUCTIVE TEST MANUAL**





**NOTES**

- DOOR STA 923.7 IS SHOWN; DOOR STA 876.3 IS OPPOSITE

 FAIL SAFE STRAP INSPECTION AREA

 INNER CHORD INSPECTION AREA

-  EXAMINE THE INNER CHORD AROUND ALL THE FASTENERS IN THE INSPECTION AREAS.
-  EXAMINE THE FAIL SAFE STRAP AROUND ALL THE FASTENERS IN THE INSPECTION AREAS.

**Inspection Areas  
Figure 1 (Sheet 2 of 2)**

	EFFECTIVITY	
ALL		

**PART 6 53-60-04**



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### EDGE FRAMES OF THE AFT MAIN CARGO DOOR CUTOUT

##### 1. Purpose

- A. Use this procedure to examine the inner chord and fail-safe strap of the forward and aft edge frames at the aft main cargo door cutout for surface cracks around the fasteners and at the edge of parts. Figure 1 identifies the locations to be examined.
- B. The inspection areas of the forward and aft edge frames are at BS 1270 and 1346, from S-23R to S-29R.
- C. MPD DTR Check Form Reference:
  - (1) Item 53-60-106B

##### 2. Equipment

- A. General
  - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
  - (2) Refer to Part 1, 51-01-00, for more data about eddy current inspections.
- B. Instrument
  - (1) Use an eddy current instrument that:
    - (a) Has a impedance plane display.
    - (b) Operates between 50 and 500 kHz.
  - (2) The instruments that follow were used to help prepare this procedure.
    - (a) NDT 19e; Nortec/Staveley, Inc. (Olympus)
    - (b) Phasec 2200; Hocking (GE)
- C. Probes
  - (1) Two shielded pencil probes are necessary to do this inspection; one right-angle probe and one blade probe. Use a probe that has the dimensions that follow. Refer to Part 6, 51-00-01, Fig. 1, for probe dimension details. Other probes can be used if they can be calibrated as specified in Paragraph 4. and can access the inspection areas given in Figure 1.
    - (a) Right-angle probe:
      - 1) Dimension "A" must not be less than 0.63 inch (16 mm).
      - 2) Dimension "D" must not be more than 0.13 inch (3.0 mm).
      - 3) Dimension "alpha" must be 90°.
    - (b) Blade probe:
      - 1) Dimension "C1" must not be less than 4.0 inches (102 mm).
      - 2) The thickness of the blade must not be more than 0.080 inch (2.03 mm).
      - 3) The probe must have only one active surface and must be shielded on the opposite face to prevent interference signals from adjacent material.
  - (2) The probes that follow were used to help prepare this procedure.
    - (a) Right-angle probe: MP907-60; NDT Engineering Corp.
    - (b) Blade probe: NEC-1058; NDT Engineering Corp.
- D. Reference Standards

ALL

EFFECTIVITY

D634T301

**PART 6 53-60-05**

Page 1  
Sep 15/2006



767

## NONDESTRUCTIVE TEST MANUAL

- (1) Use reference standard 188A as identified in Part 6, 51-00-19, to do an inspection around rivet and fastener heads that are not flush, collars, and the tail end of rivets.
- (2) Use reference standard 126 as identified in Part 6, 51-00-19, to do an inspection at the edge of a part.

### 3. Preparation for Inspection

- A. Open the main cargo door to get access to the inspection area.
- B. Remove the interior wall panels and insulation blankets from the inspection areas shown in Figure 1.

### 4. Instrument Calibration

- A. Calibrate the equipment as specified in the calibration instructions of Part 6, 51-00-19, par. 4. Use the reference standards that follow for these inspections.
  - (1) Use reference standard 188A to do an inspection around the tail end of rivets, collars, and fastener heads that are not flush. Be sure to use the correct fastener in the reference standard during calibration. Use the steel fastener to do an inspection around steel fasteners and the aluminum fastener to do an inspection around aluminum fasteners.
  - (2) Use reference standard 126 to calibrate the instrument for an inspection at the edge of a part.

### 5. Inspection Procedure

- A. Examine the inner chord and fail-safe strap for cracks in the inspection areas identified in Figure 1.

### 6. Inspection Results

- A. Refer to Part 6, 51-00-19, par. 6 to make an analysis of indications identified during the inspection.

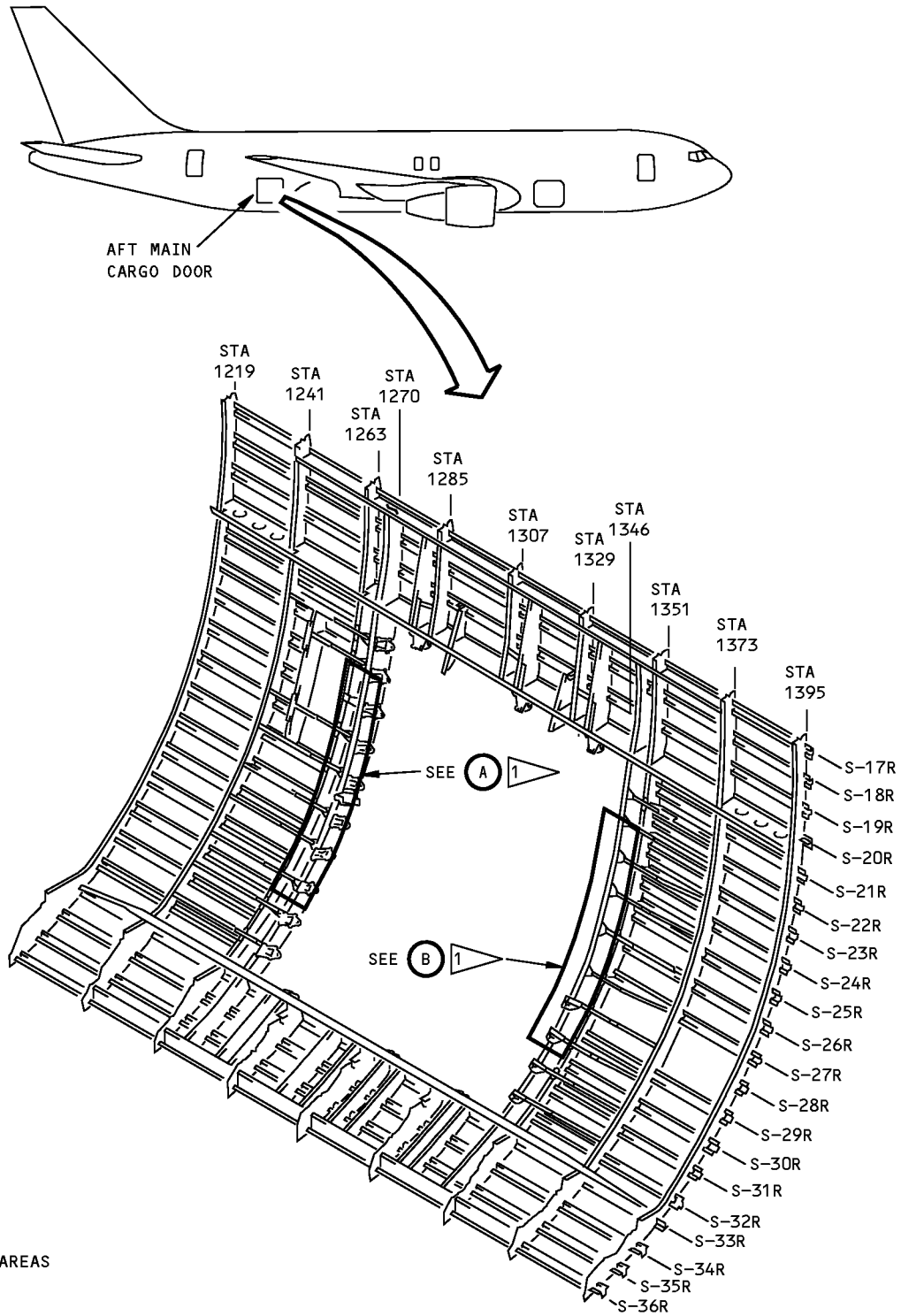
ALL	EFFECTIVITY
-----	-------------

D634T301

**PART 6 53-60-05**

Page 2  
Sep 15/2006

**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTES**

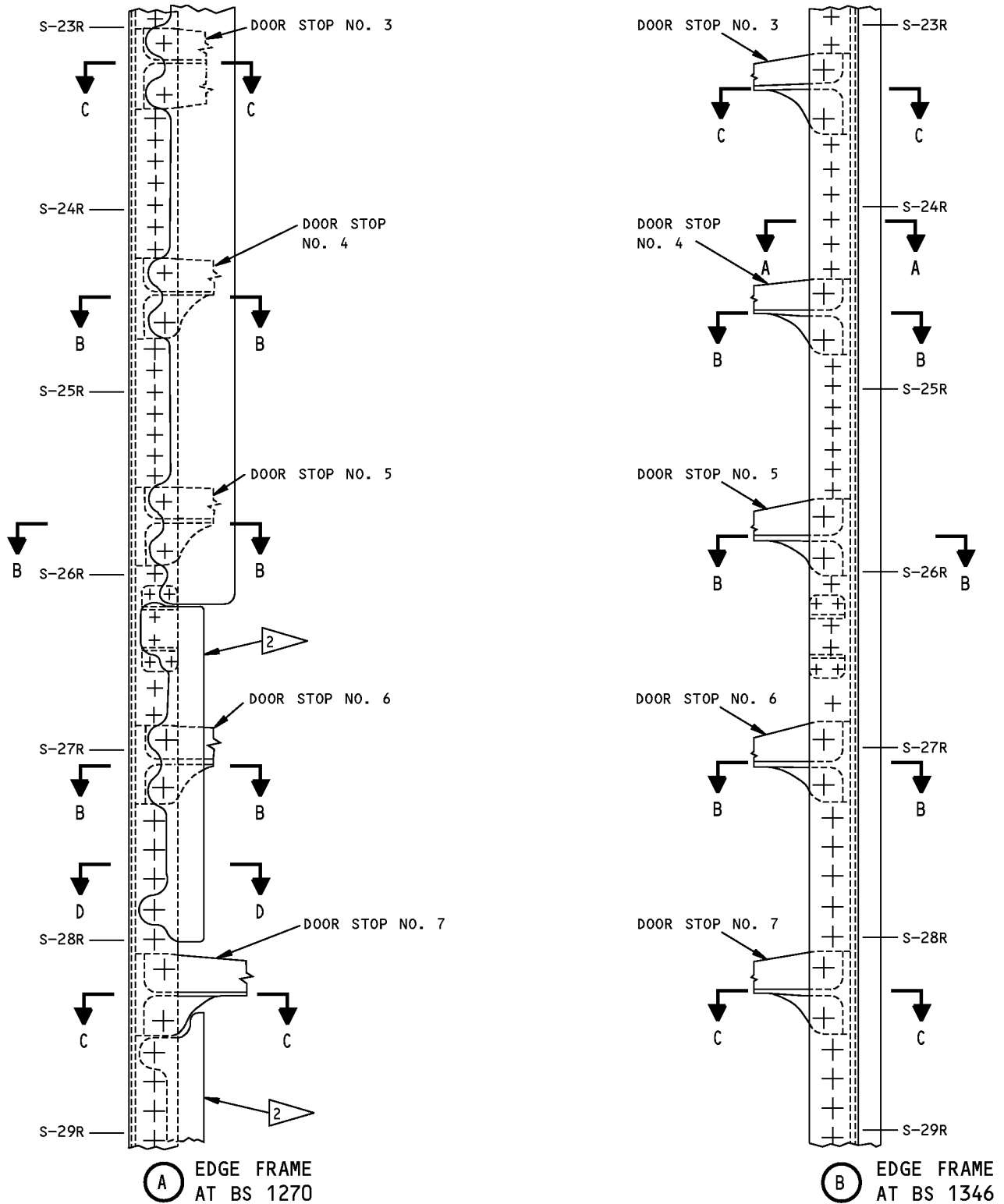
☐ INSPECTION AREAS

**Aft Main Cargo Door Inspection Locations  
Figure 1 (Sheet 1 of 3)**

	EFFECTIVITY
ALL	

**PART 6 53-60-05**

**NONDESTRUCTIVE TEST MANUAL**



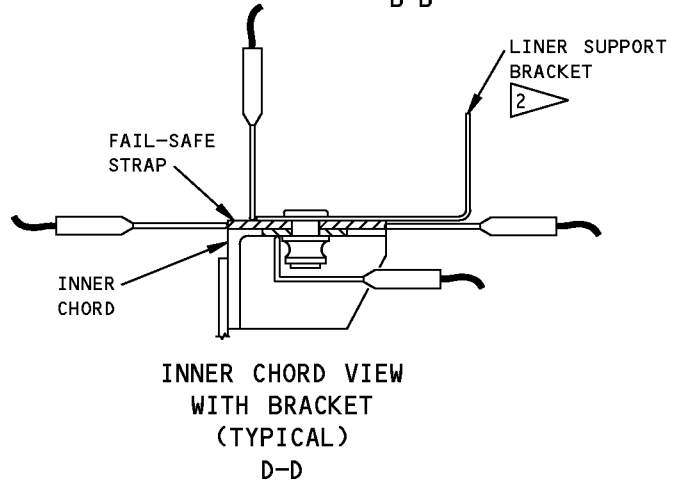
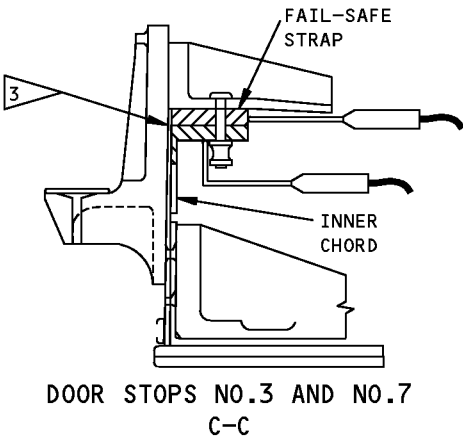
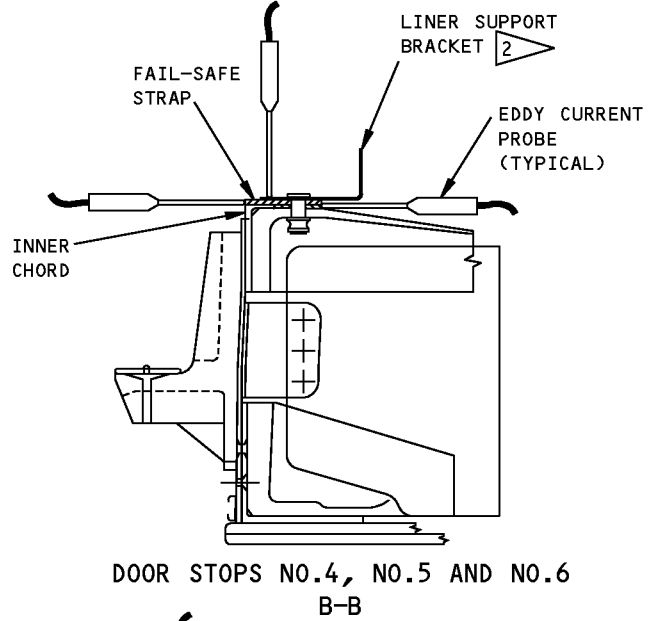
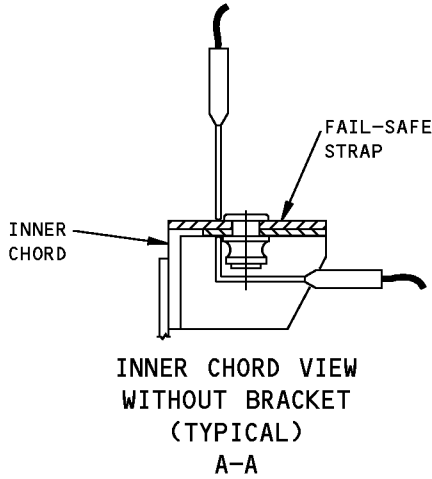
**Aft Main Cargo Door Inspection Locations  
Figure 1 (Sheet 2 of 3)**

	EFFECTIVITY
ALL	

**PART 6 53-60-05**



**NONDESTRUCTIVE TEST MANUAL**



**NOTES**

- THESE INSPECTIONS ARE DONE ON THE AFT MAIN CARGO DOOR ONLY.
- THESE ARE CROSS SECTION VIEWS OF THE INNER CHORD OF THE EDGE FRAMES THAT MUST BE EXAMINED. THESE ARE BASIC CONFIGURATIONS. THE CONFIGURATION OF THE EDGE FRAME ON YOUR AIRPLANE CAN BE DIFFERENT THAN SHOWN HERE. EXAMINE THE FAIL-SAFE STRAP AND INNER CHORD FOR CRACKS AT THE FASTENER LOCATIONS IDENTIFIED IN VIEWS A AND B. REFER TO MPD DTR CHECK FORM ITEM 53-60-106B FOR MORE DATA.

 POSSIBLE CRACK LOCATIONS

- 1 THIS INSPECTION AREA IS IDENTIFIED IN MPD, DTR CHECK FORM ITEM 53-60-106B.
- 2 THE LINER SUPPORT BRACKETS, PART NUMBERS 453T1559-12 AND -16, MUST BE REMOVED FOR THIS INSPECTION. DO AN OPEN-HOLE EDDY CURRENT INSPECTION (PART 6, 51-00-16) AT ALL LOCATIONS WHERE FASTENERS ARE REMOVED. AT OTHER BRACKET LOCATIONS, DO AN INSPECTION AS SHOWN HERE (EDGE OF PART INSPECTION).
- 3 USE THE BLADE PROBE TO EXAMINE THE FAIL-SAFE STRAP AND INNER CHORD AT LOCATIONS THAT HAVE THIS GAP. THE ACCESS CAN PREVENT A FULL INSPECTION IN THIS AREA. IT IS ONLY NECESSARY TO EXAMINE WHAT YOU CAN ACCESS.

**Aft Main Cargo Door Inspection Locations  
Figure 1 (Sheet 3 of 3)**

EFFECTIVITY
ALL

**PART 6 53-60-05**



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### UPPER SILL OF THE FORWARD AND AFT MAIN CARGO DOORS

##### **1. Purpose**

- A. Use this procedure to examine the inner chord and fail-safe strap of the upper sill at the cutouts for the main cargo door for surface cracks around the fasteners. The fasteners to be examined are identified in Figure 1 and Figure 2. Figure 3 gives inspection details.
- B. This procedure examines the upper main sill from BS 522 to BS 544 (forward main cargo door) and BS 1346 to BS 1395 (aft main cargo door).
- C. Use an impedance plane display instrument to do this inspection.
- D. MPD DTR Check Form Reference:
  - (1) Item 53-60-I06D
  - (2) Item 53-30-I14D

##### **2. Equipment**

- A. General
  - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
  - (2) Refer to Part 1, 51-01-00, for more data about eddy current inspection.
- B. Instrument
  - (1) Use an eddy current instrument that:
    - (a) Has an impedance plane display.
    - (b) Operates between 50 to 500 kHz.
  - (2) The instruments that follow were used to help prepare this procedure.
    - (a) NDT 19e; Nortec/Staveley, Inc.
    - (b) Phasec 2200; Hocking
- C. Probes
  - (1) Use a straight or right-angle probe with an outside diameter of approximately 0.13 inch (3.2 mm) or less. For right-angle probes, a probe drop of 0.5 inch (13 mm) is recommended so that the probe does not hit the collar during the scan around each collar.
  - (2) The probes that follow were used to help prepare this procedure.
    - (a) MP-905-30; NDT Engineering Corp.
    - (b) MP-20; NDT Engineering Corp.
- D. Reference Standards
  - (1) Use reference standard NDT1048 as identified in Part 6, 51-00-19, Fig. 5 to examine flush-head-rivets.
  - (2) Use reference standard 188A as identified in Part 6, 51-00-19, Fig. 6 to examine the tail end of rivets and protruding-head fasteners.

##### **3. Preparation for Inspection**

- A. Open the main cargo door to get access to the inspection area.
- B. Remove the wall liner and insulation blankets from the inspection areas shown in Figure 1 and Figure 2.

ALL

EFFECTIVITY

D634T301

**PART 6 53-60-06**

Page 1  
Sep 15/2006



767

## NONDESTRUCTIVE TEST MANUAL

- C. Remove unwanted material from around the fasteners to get access to the inspection surfaces. See Figure 1 and Figure 2 for the fastener locations where this inspection is necessary.

### 4. Instrument Calibration

- A. Calibrate the equipment as specified in the calibration instructions of Part 6, 51-00-19, par. 4.
  - (1) To examine flush-head fasteners, use reference standard NDT1048 and the aluminum rivet in the reference standard.
  - (2) To examine the tail end of rivets and protruding-head fasteners, use reference standard 188A and the aluminum rivet in the reference standard.

### 5. Inspection Procedure

- A. Examine the inner chord and fail-safe strap for cracks around the fasteners in the inspection areas identified in Figure 1 and Figure 2. See Figure 3 for inspection details.
  - (1) To examine flush head fasteners, calibrate the instrument as specified in Paragraph 4.A.(1).
  - (2) To examine the tail end of rivets and protruding-head fasteners, calibrate the instrument as specified in Paragraph 4.A.(2).

### 6. Inspection Results

- A. Refer to Part 6, 51-00-19, par. 6 to make an analysis of indications identified during the inspection.

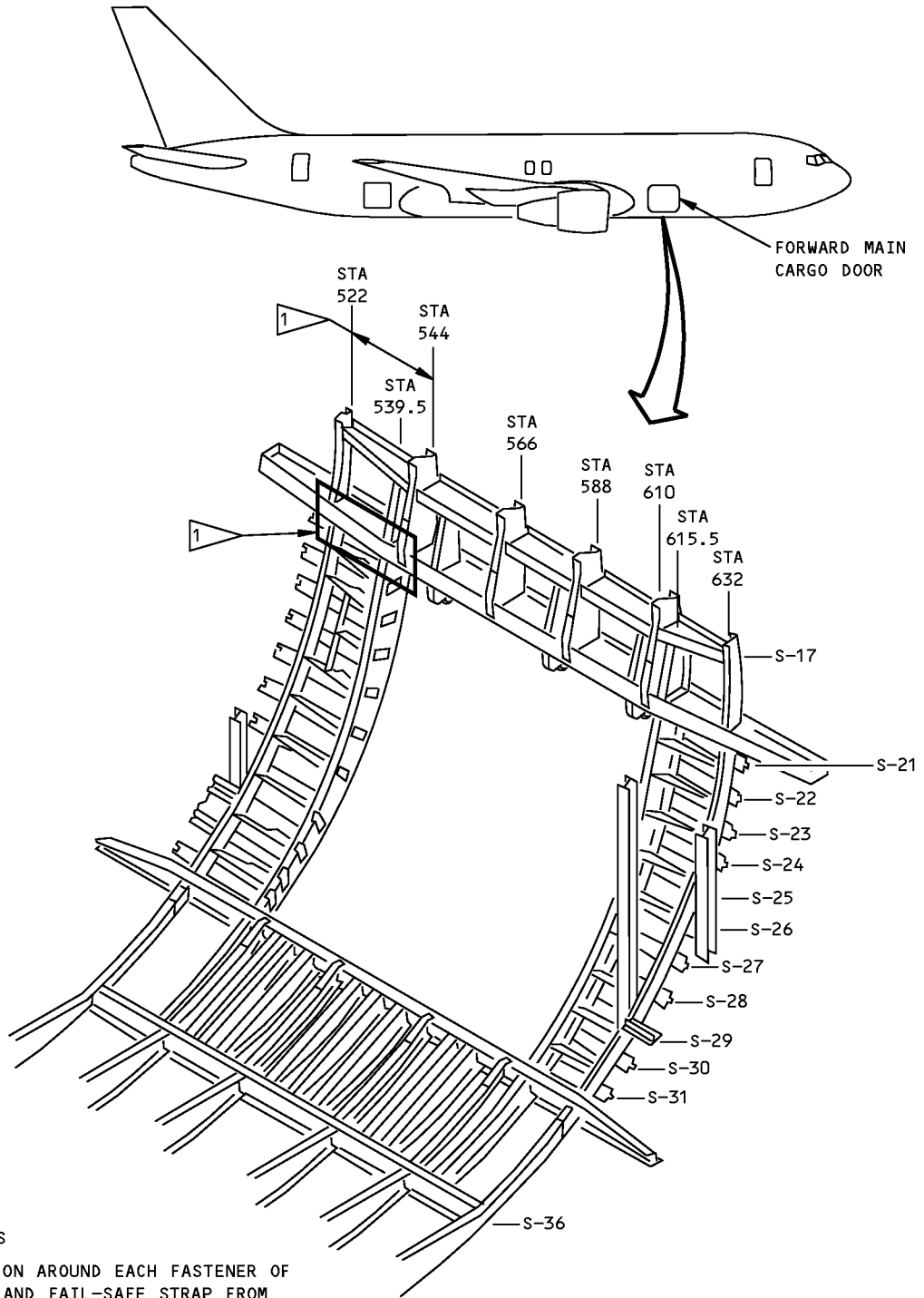
ALL	EFFECTIVITY
-----	-------------

**PART 6 53-60-06**

Page 2  
Sep 15/2006


D634T301

**NONDESTRUCTIVE TEST MANUAL**



**NOTES**

 INSPECTION AREAS

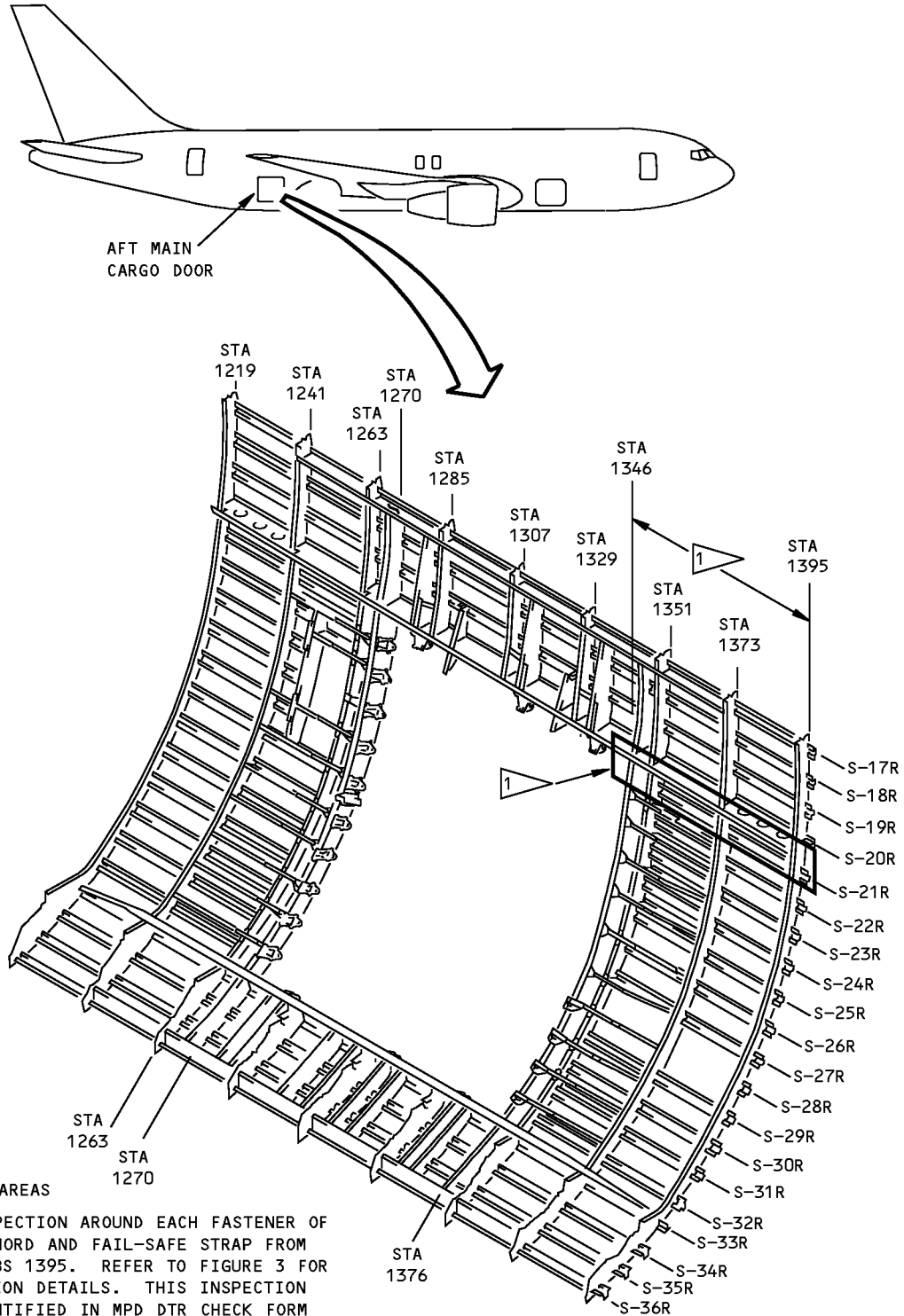
 MAKE AN INSPECTION AROUND EACH FASTENER OF THE INNER CHORD AND FAIL-SAFE STRAP FROM BS 522 TO BS 644. REFER TO FIGURE 3 FOR THE INSPECTION DETAILS. THIS INSPECTION AREA IS IDENTIFIED IN MPD DTR CHECK FORM ITEMS 53-60-I06D AND 53-30-I14D.

**Forward Main Cargo Door Inspection Locations  
Figure 1**

EFFECTIVITY
ALL


**PART 6 53-60-06**

**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTES**

 INSPECTION AREAS

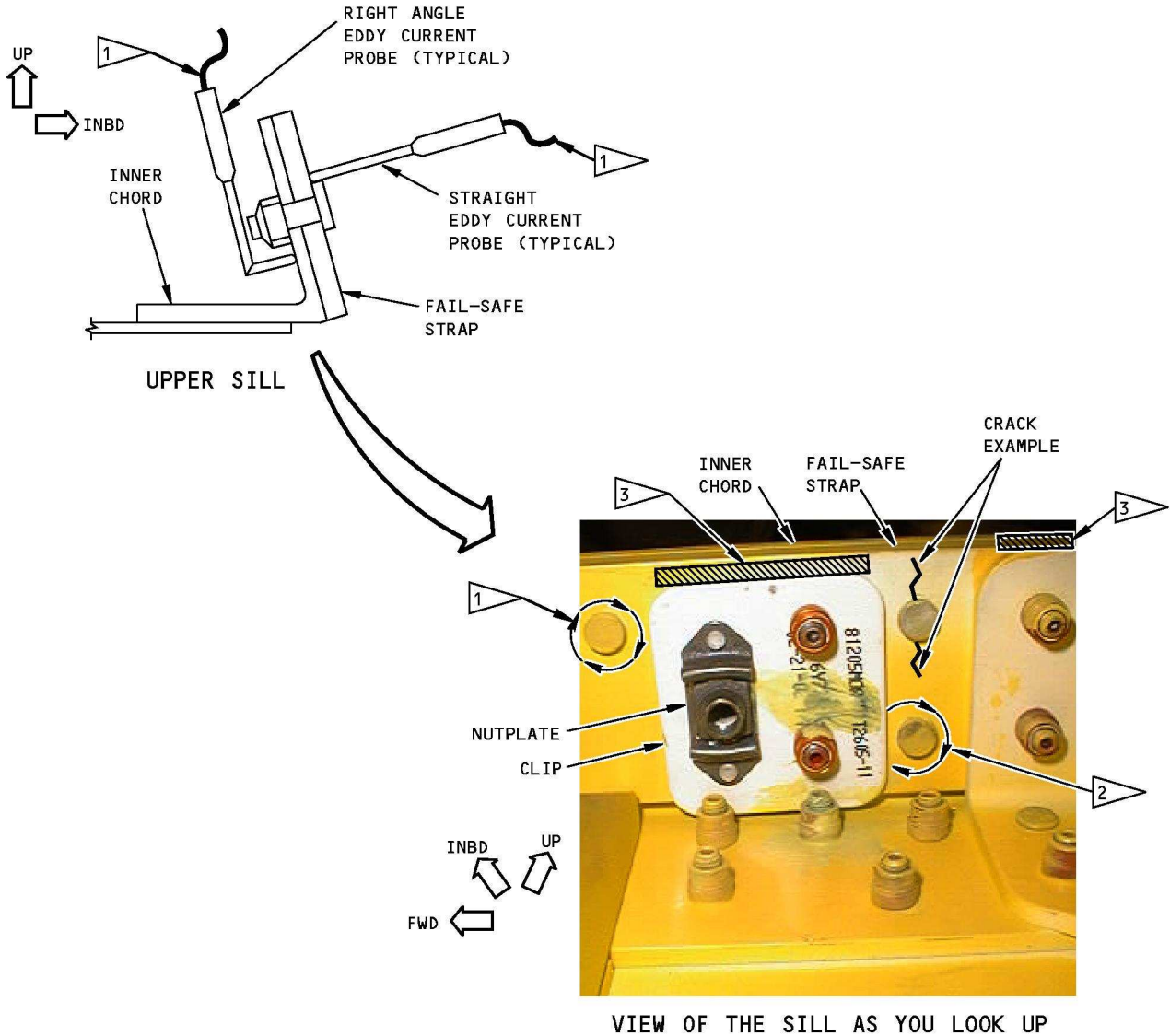
 MAKE AN INSPECTION AROUND EACH FASTENER OF THE INNER CHORD AND FAIL-SAFE STRAP FROM BS 1346 TO BS 1395. REFER TO FIGURE 3 FOR THE INSPECTION DETAILS. THIS INSPECTION AREA IS IDENTIFIED IN MPD DTR CHECK FORM ITEMS 53-60-I06D AND 53-30-I14D.

**Aft Main Cargo Door Inspection Locations  
Figure 2**

	EFFECTIVITY
ALL	

**PART 6 53-60-06**

**NONDESTRUCTIVE TEST MANUAL**



**VIEW OF THE SILL AS YOU LOOK UP**

**NOTES:**

- 1 MAKE A SCAN OF THE INNER CHORD AND FAIL-SAFE STRAP AT EACH FASTENER LOCATION IDENTIFIED IN FIGURES 1 AND 2.
- 2 IF ACCESS IS LIMITED, MAKE A SCAN AROUND AS MUCH OF THE FASTENER THAT YOU CAN ACCESS. IF AVAILABLE, USE A SMALLER DIAMETER PROBE TO EXAMINE THE LIMITED AREAS. SEE FLAGNOTE 3.
- 3 AT LOCATIONS WHERE THE INNER CHORD OR STRAP IS HIDDEN BY OTHER STRUCTURE, MAKE A SCAN ALONG THE EDGE OF THE STRUCTURE, OR, IF NECESSARY, ALONG THE EDGE OF THE INNER CHORD OR STRAP.

**Inspection Details  
Figure 3**

	EFFECTIVITY
ALL	

**PART 6 53-60-06**



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### LOWER SILL OF THE FORWARD AND AFT MAIN CARGO DOOR CUTOUTS

##### 1. Purpose

- A. Use this procedure to examine the inner chord and fail-safe strap of the lower sills at the cutouts for the main cargo doors for surface cracks around the fasteners. The fasteners to be examined are identified in Figure 1 and Figure 2. Figure 3 gives inspection details.
- B. This procedure examines the lower main sill from BS 610 to BS 632 (forward main cargo door) and from BS 1263 to BS 1270 (aft main cargo door).
- C. Use an impedance plane display instrument to do this inspection.
- D. MPD DTR Check Form Reference:
  - (1) ITEM 53-60-I06E
  - (2) ITEM 53-30-I14E

##### 2. Equipment

- A. General
  - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
  - (2) Refer to Part 1, 51-01-00, for more data about eddy current inspection.
- B. Instrument
  - (1) Use an eddy current instrument that:
    - (a) Has an impedance plane display.
    - (b) Operates between 50 to 500 kHz.
  - (2) The instruments that follow were used to help prepare this procedure.
    - (a) NDT 19e; Nortec/Staveley, Inc.
    - (b) Phasec 2200; Hocking
- C. Probes
  - (1) Use a straight or right-angle probe with an outside diameter of approximately 0.13 inch (3.2 mm) or less. For right-angle probes, a probe drop of 0.5 inch (13 mm) is recommended so that the probe does not hit the collar during the scan around each collar.
  - (2) The probes that follow were used to help prepare this procedure.
    - (a) MP-905-30; NDT Engineering Corp.
    - (b) MP-20; NDT Engineering Corp.
- D. Reference Standards
  - (1) Use reference standard NDT1048 as identified in Part 6, 51-00-19, Fig. 5 to examine flush-head-rivets.
  - (2) Use reference standard 188A as identified in Part 6, 51-00-19, Fig. 6 to examine the tail end of rivets and protruding-head fasteners.

##### 3. Preparation for Inspection

- A. Open the main cargo door to get access to the inspection area.
- B. Remove the wall liner and insulation blankets from the inspection areas shown in Figure 1 and Figure 2.

ALL

EFFECTIVITY

D634T301

**PART 6 53-60-07**

Page 1  
Aug 15/2008



767

## NONDESTRUCTIVE TEST MANUAL

- C. Remove unwanted material from around the fasteners to get access to the inspection surfaces. See Figure 1 and Figure 2 for the fastener locations where this inspection is necessary.

### 4. Instrument Calibration

- A. Calibrate the equipment as specified in the calibration instructions of Part 6, 51-00-19, par. 4.
  - (1) To examine flush-head fasteners, use reference standard NDT1048 and the aluminum rivet in the reference standard.
  - (2) To examine the tail end of rivets and protruding-head fasteners, use reference standard 188A and the aluminum rivet in the reference standard.

### 5. Inspection Procedure

- A. Examine the inner chord and fail-safe strap for cracks around the fasteners in the inspection areas identified in Figure 1 and Figure 2. See Figure 3 for inspection details.
  - (1) To examine flush head fasteners, calibrate the instrument as specified in Paragraph 4.A.(1).
  - (2) To examine the tail end of rivets and protruding-head fasteners, calibrate the instrument as specified in Paragraph 4.A.(2).

### 6. Inspection Results

- A. Refer to Part 6, 51-00-19, par. 6 to make an analysis of indications identified during the inspection.

ALL	EFFECTIVITY
-----	-------------

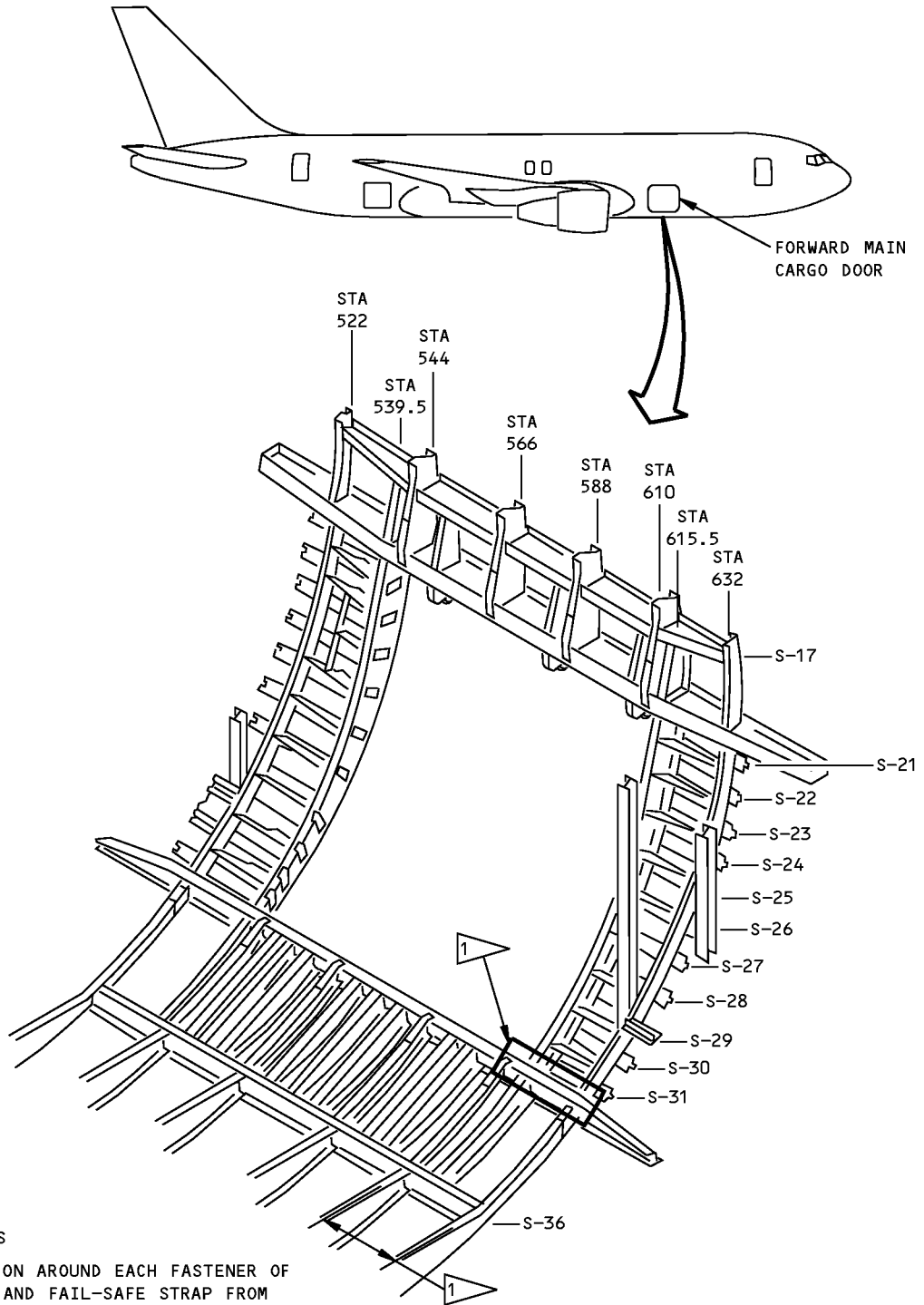
D634T301

**PART 6 53-60-07**

Page 2  
Sep 15/2006



**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTES**

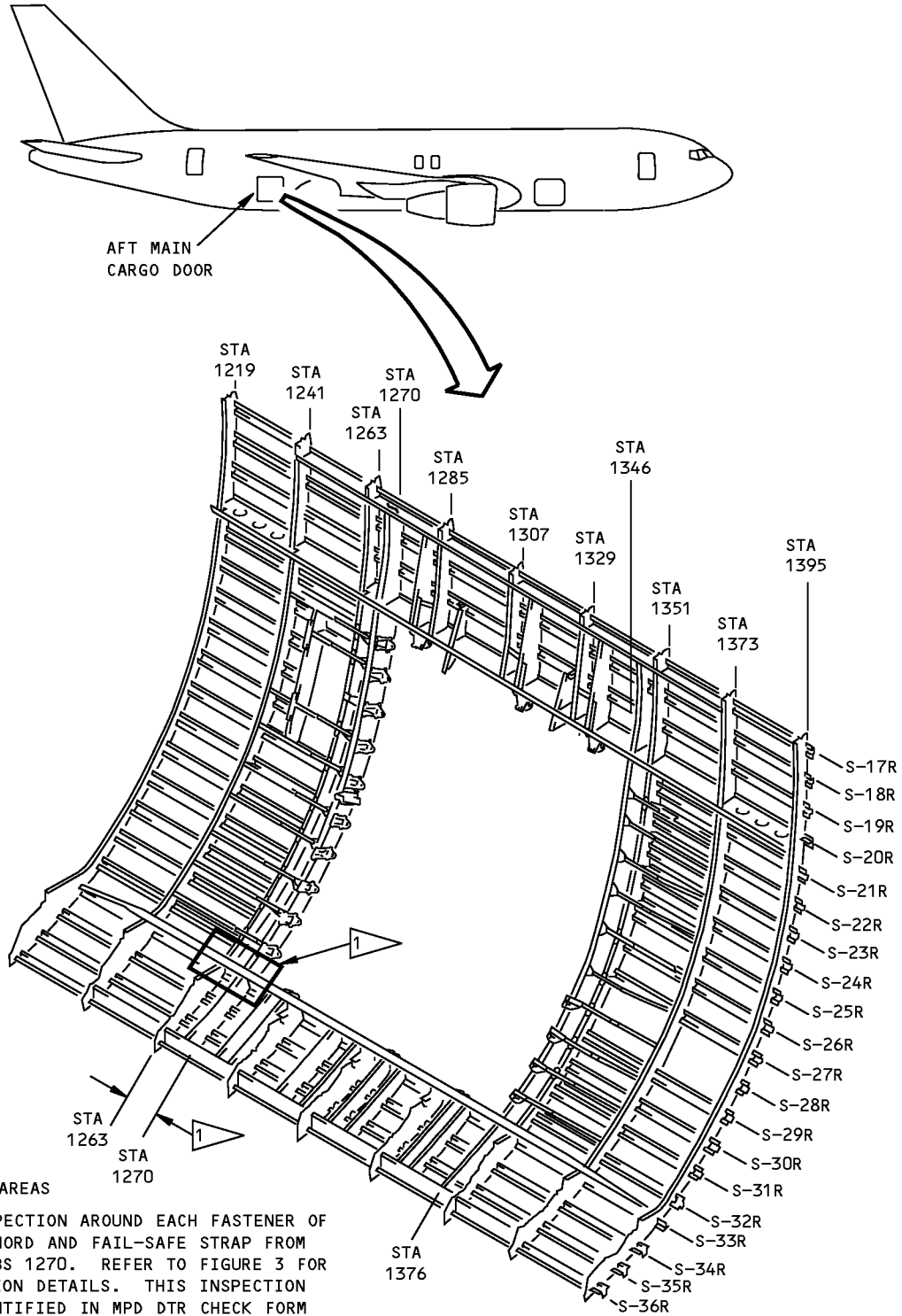
- INSPECTION AREAS
- MAKE AN INSPECTION AROUND EACH FASTENER OF THE INNER CHORD AND FAIL-SAFE STRAP FROM BS 610 TO BS 632. REFER TO FIGURE 3 FOR THE INSPECTION DETAILS. THIS INSPECTION AREA IS IDENTIFIED IN MPD DTR CHECK FORM ITEMS 53-30-I14E.

**Forward Main Cargo Door Inspection Locations  
Figure 1**

ALL	EFFECTIVITY
-----	-------------


**PART 6 53-60-07**

**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTES**

 INSPECTION AREAS

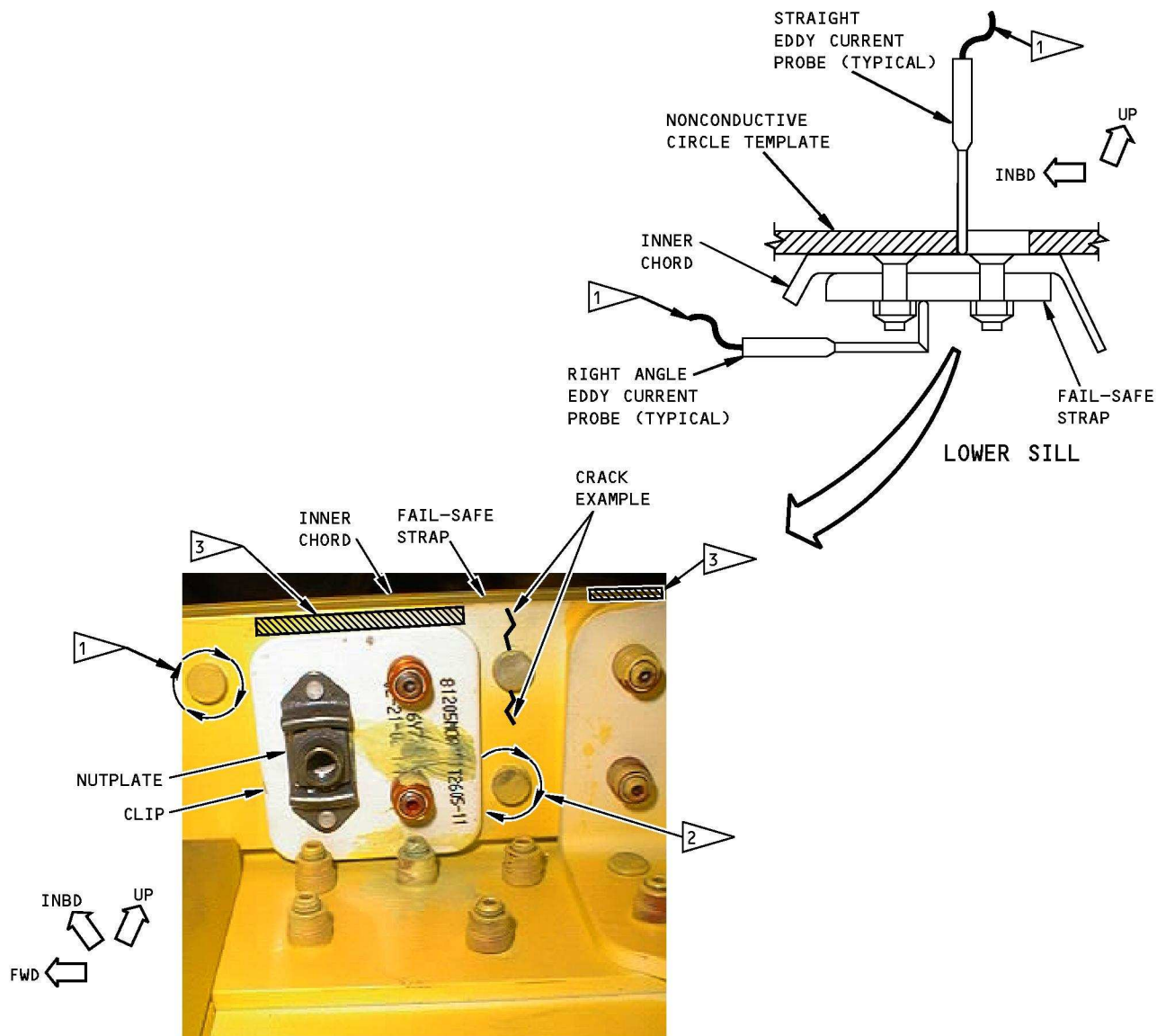
 MAKE AN INSPECTION AROUND EACH FASTENER OF THE INNER CHORD AND FAIL-SAFE STRAP FROM BS 1263 TO BS 1270. REFER TO FIGURE 3 FOR THE INSPECTION DETAILS. THIS INSPECTION AREA IS IDENTIFIED IN MPD DTR CHECK FORM ITEMS 53-60-I06E AND 53-30-I14E.

**Aft Main Cargo Door Inspection Locations  
Figure 2**

	EFFECTIVITY
ALL	

**PART 6 53-60-07**

**NONDESTRUCTIVE TEST MANUAL**



VIEW OF THE LOWER SILL AS YOU LOOK UP

**NOTES:**

- 1 MAKE A SCAN OF THE INNER CHORD AND FAIL-SAFE STRAP AT EACH FASTENER LOCATION IDENTIFIED IN FIGURES 1 AND 2.
- 2 IF ACCESS IS LIMITED, MAKE A SCAN AROUND AS MUCH OF THE FASTENER THAT YOU CAN ACCESS. IF AVAILABLE, USE A SMALLER DIAMETER PROBE TO EXAMINE THE LIMITED AREAS. SEE FLAGNOTE 3.
- 3 AT LOCATIONS WHERE THE INNER CHORD OR STRAP IS HIDDEN BY OTHER STRUCTURE, MAKE A SCAN ALONG THE EDGE OF THE STRUCTURE, OR, IF NECESSARY, ALONG THE EDGE OF THE INNER CHORD OR STRAP.

**Inspection Details  
Figure 3**

	EFFECTIVITY
ALL	

**PART 6 53-60-07**



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### EDGE FRAMES OF THE TYPE 1 DOOR CUTOUTS

##### 1. Purpose

- A. This inspection procedure uses surface eddy current to find surface cracks in the fail safe strap and inner chord of the edge frames at the Type 1 door cutouts.
- B. This inspection procedure examines the edge frames at BS 1153 and BS 1183.4 from stringers S-8 to S-13 and S-16 to S-23. See Figure 1 for the inspection areas.
- C. This procedure uses an impedance plane display instrument.
- D. MPD DTR Check Form Reference:
  - (1) ITEM 53-60-I27A

##### 2. Equipment

- A. General
  - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
  - (2) Refer to Part 1, 51-01-00, for data about the equipment manufacturers.
- B. Instrument
  - (1) Use an eddy current instrument that:
    - (a) Has an impedance plane display.
    - (b) Operates at a frequency range of 50 to 500 kHz.
  - (2) The instruments that follow were used to help prepare this procedure.
    - (a) Phasec 2200, Phasec 2 (impedance plane display); Hocking Krautkramer
    - (b) Nortec 19e, 1000, 2000 (impedance plane display); Staveley Instruments
- C. Probes
  - (1) A shielded, 0.125 inch (3.18 mm) diameter, right-angle pencil probe that has a drop of 0.5 inch (7.4 mm) is recommended for use. Other probe designs can be used if a satisfactory inspection can be done.
  - (2) The probe that follows was used to help prepare this procedure.
    - (a) MP905-50FX; NDT Engineering Corp.
- D. Reference Standard
  - (1) Use reference standard 188A as given in Part 6, 51-00-19, or an equivalent.

##### 3. Preparation for Inspection

- A. Identify all the inspection areas. See Figure 1.
- B. Remove interior panels and insulation blankets as necessary to get access to the inspection areas.
- C. Remove sealant, dirt, or grease from the inspection surfaces.

##### 4. Instrument Calibration

- A. Refer to Part 6, 51-00-19, par. 4, for the calibration instructions.

##### 5. Inspection Procedure

- A. Examine the inner chord and fail safe strap at the fastener locations of the edge frames identified in Figure 1. Do the inspection as follows:
  - (1) Refer to Part 6, 51-00-19, par. 5 for the inspection procedure.

ALL

EFFECTIVITY

D634T301

**PART 6 53-60-08**

Page 1  
Sep 15/2006



767

## NONDESTRUCTIVE TEST MANUAL

- (2) Do the inspection from inside the airplane.
- (3) Make sure to make a complete scan around each end of each fastener.
- (4) Keep the probe against the edge of the fastener head or collar during the scan.

### 6. Inspection Results

- A. Refer to Part 6, 51-00-19, par. 6 for data to help make an analysis of the inspection results.
- B. To make sure the signal is from a crack, remove the fastener and do an open hole inspection as specified in Part 6, 51-00-16.

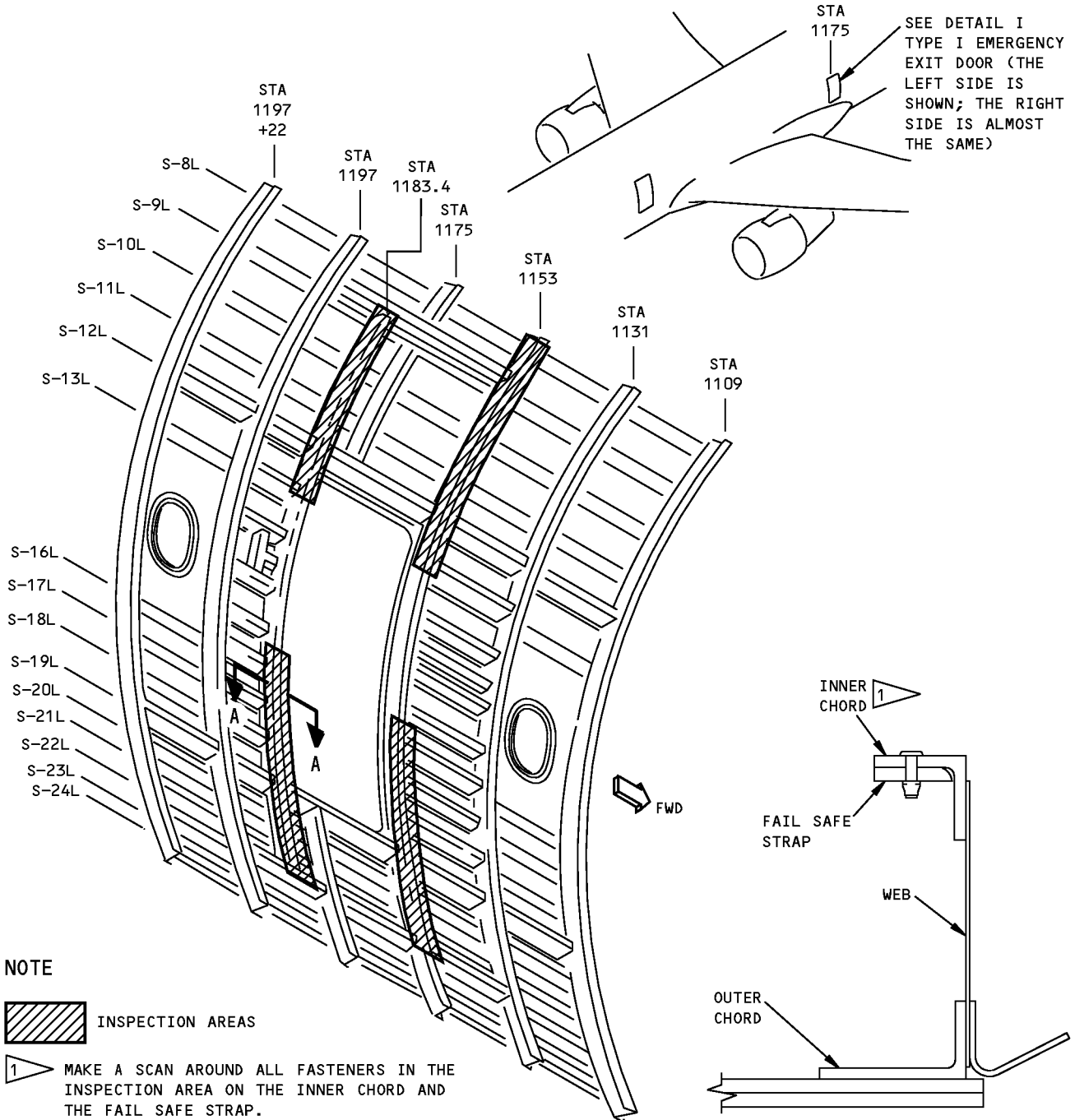
ALL EFFECTIVITY

D634T301

**PART 6 53-60-08**

Page 2  
Sep 15/2006

**767  
NONDESTRUCTIVE TEST MANUAL**



**NOTE**

INSPECTION AREAS

MAKE A SCAN AROUND ALL FASTENERS IN THE INSPECTION AREA ON THE INNER CHORD AND THE FAIL SAFE STRAP.

THE LEFT SIDE IS SHOWN;  
THE RIGHT SIDE IS OPPOSITE  
DETAIL I

**Inspection Details  
Figure 1**

EFFECTIVITY
ALL

**PART 6 53-60-08**



767

## NONDESTRUCTIVE TEST MANUAL

### PART 6 - EDDY CURRENT

#### UPPER AND LOWER SILLS OF THE TYPE 1 DOOR CUTOUTS

##### 1. Purpose

- A. This inspection procedure uses surface eddy current to find surface cracks in the upper and lower sills of the Type 1 door cutout.
- B. This inspection procedure examines the upper sill at stringer S-11 from BS 1131 to BS 1197 + 22 and the lower sill at stringer S-19 from BS 1131 to BS 1175. See Figure 1 for the inspection areas.
- C. An additional open hole eddy current inspection is necessary at four fasteners of the upper sill at BS 1131 and BS 1197. See Figure 2.
- D. This procedure uses an impedance plane display instrument and a rotary scanner.
- E. MPD DTR Check Form Reference:
  - (1) ITEM 53-60-I27B
  - (2) ITEM 53-60-I27C

##### 2. Equipment

- A. General
  - (1) Use inspection equipment that can be calibrated on the reference standard as specified in Paragraph 4.
  - (2) Refer to Part 1, 51-01-00, for data about the equipment manufacturers.
- B. Instrument
  - (1) Use an eddy current instrument that:
    - (a) Has an impedance plane display.
    - (b) Operates at a frequency range of 50 to 500 kHz.
  - (2) The instruments that follow were used to help prepare this procedure.
    - (a) Phasec 2200, Phasec 2; Hocking Krautkramer
    - (b) Nortec 19e, 1000, 2000; Staveley Instruments
- C. Probes
  - (1) For the surface inspection, a shielded, 0.125 inch (3.18 mm) diameter, right-angle pencil probe that has a drop of 0.5 inch (7.4 mm) and a flexible shaft is recommended for use. Other probe designs can be used if a satisfactory inspection can be done.
  - (2) For the open hole inspections, a probe that can examine a 0.312 inch (7.94 mm) diameter hole is necessary. Refer to Part 6, 51-00-16.
  - (3) The probes that follow were used to help prepare this procedure.
    - (a) Surface inspection: MP905-50FX; NDT Engineering Corp.
    - (b) Open hole inspection: BXU-16/20; NDT Engineering Corp.
- D. Reference Standard
  - (1) For the surface inspection, use reference standard 188A as given in Part 6, 51-00-19 or an equivalent.
  - (2) For the open hole inspection, use reference standard NDT1017 as given in Part 6, 51-00-16 or an equivalent.

##### 3. Preparation for Inspection

- A. Identify all the inspection areas. See Figure 1 and Figure 2.

ALL	EFFECTIVITY
-----	-------------

**PART 6 53-60-09**

D634T301

Page 1  
Sep 15/2006



767

## NONDESTRUCTIVE TEST MANUAL

- B. Remove interior panels and insulation blankets as necessary to get access to the inspection areas.
- C. Remove sealant, dirt, or grease from the inspection surfaces.
- D. For the four open hole locations shown in Figure 2, remove the fasteners and visually examine the holes. Refer to Part 6, 51-00-16.

### 4. Instrument Calibration

- A. For the surface inspections, refer to Part 6, 51-00-19, par. 4, for the calibration instructions.
- B. For the open hole inspections, refer to Part 6, 51-00-16, par. 4, for the calibration instructions.

### 5. Inspection Procedure

- A. At the upper sill, examine the inner chord and inner chord strap at the fastener locations identified in Figure 1. Do the inspection as follows:
  - (1) Refer to Part 6, 51-00-19, par. 5 for the inspection procedure.
  - (2) Make sure to make a scan around each end of each fastener as shown in Figure 1, flagnote 1.
  - (3) Keep the probe against the edge of the fastener head or collar during the scan.
- B. For the lower sill, examine the inner chord and inner chord strap at the fastener locations identified in Figure 1. Do the inspection as follows:
  - (1) Refer to Part 6, 51-00-19, par. 5 for the inspection procedure.
  - (2) Make a scan on the inner chord around the fasteners and along the edge of the inner chord as shown in Figure 1, flagnote 2.
- C. Examine the four open hole locations in the upper sill shown in Figure 2. Refer to Part 6, 51-00-16, par. 5 for the inspection procedure.

### 6. Inspection Results

- A. For the surface inspections, refer to Part 6, 51-00-19, par. 6 for data to help make an analysis of the inspection results.
- B. For the open hole inspections, refer to Part 6, 51-00-16, par. 6 for data to help make an analysis of the inspection results.

ALL

EFFECTIVITY

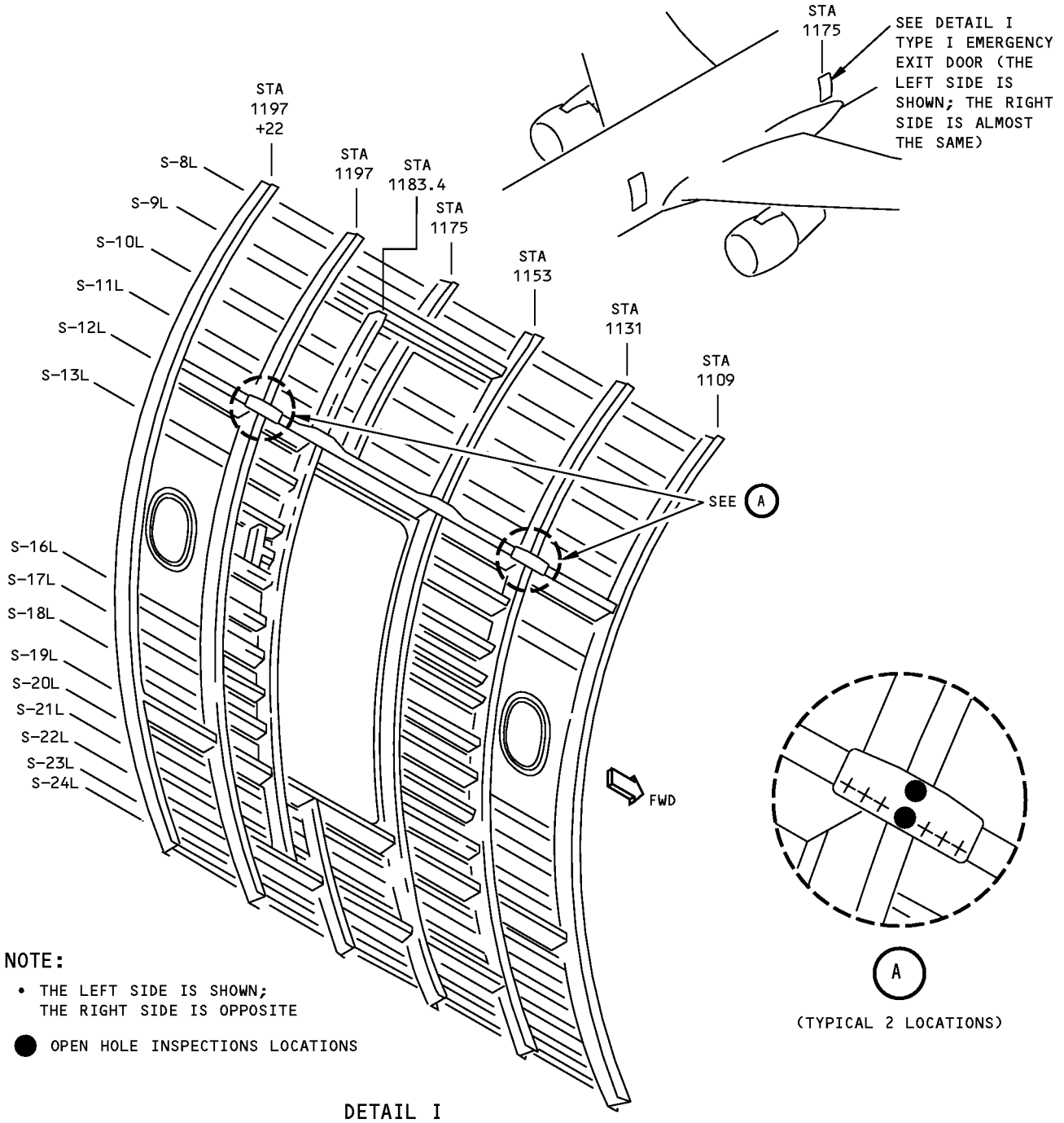
D634T301

**PART 6 53-60-09**

Page 2  
Sep 15/2006



**NONDESTRUCTIVE TEST MANUAL**



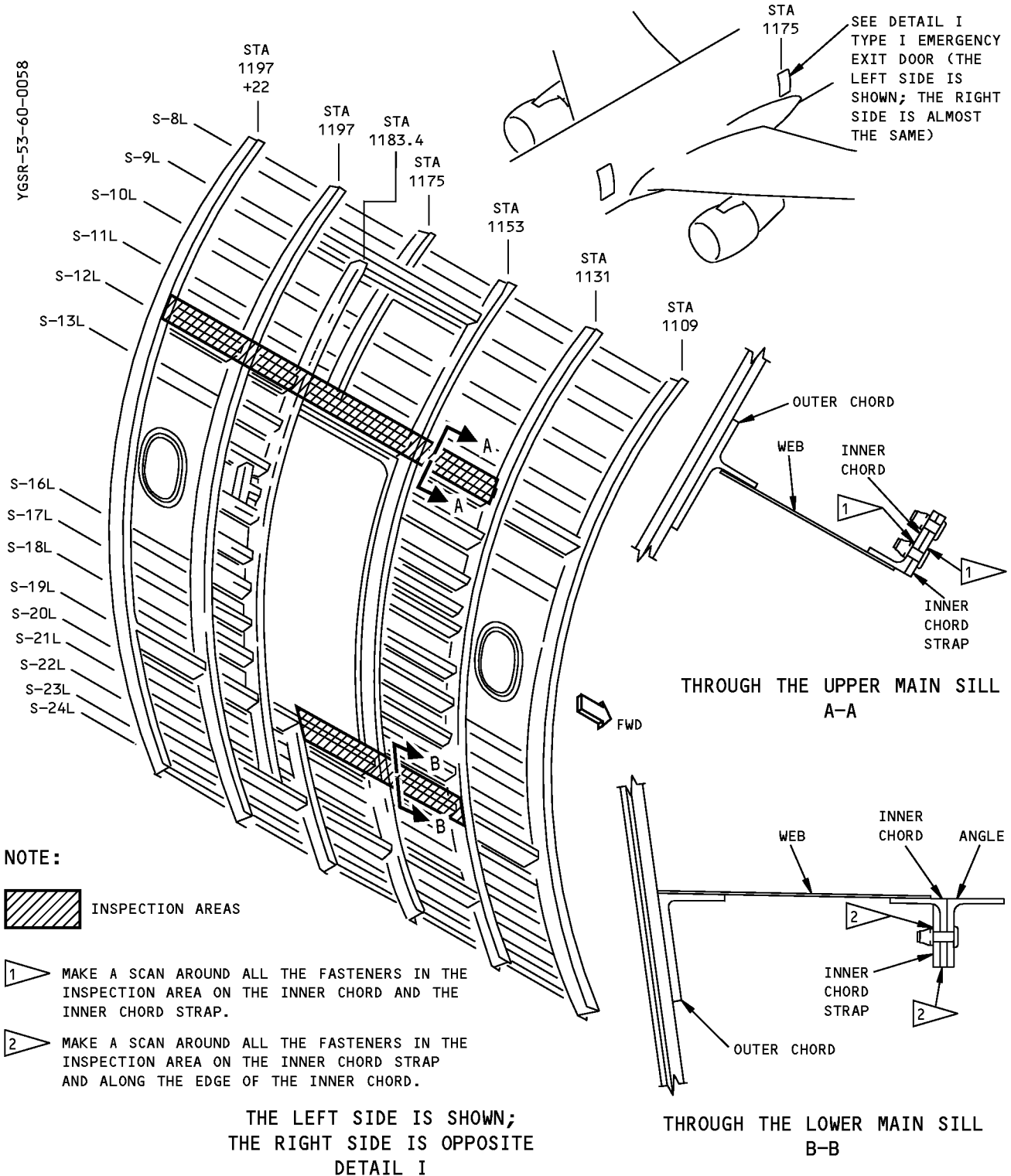
**Inspection Details - Surface Inspection  
Figure 1**

EFFECTIVITY
ALL

**PART 6 53-60-09**

**NONDESTRUCTIVE TEST MANUAL**

YGSR-53-60-0058



SEE DETAIL I  
TYPE I EMERGENCY  
EXIT DOOR (THE  
LEFT SIDE IS  
SHOWN; THE RIGHT  
SIDE IS ALMOST  
THE SAME)

**NOTE:**

INSPECTION AREAS

MAKE A SCAN AROUND ALL THE FASTENERS IN THE INSPECTION AREA ON THE INNER CHORD AND THE INNER CHORD STRAP.

MAKE A SCAN AROUND ALL THE FASTENERS IN THE INSPECTION AREA ON THE INNER CHORD STRAP AND ALONG THE EDGE OF THE INNER CHORD.

THE LEFT SIDE IS SHOWN;  
THE RIGHT SIDE IS OPPOSITE  
DETAIL I

**Inspection Details - Open Hole Inspection  
Figure 2**

EFFECTIVITY
ALL

**PART 6 53-60-09**