



**LE RÉSEAU DE CRÉATION  
ET D'ACCOMPAGNEMENT PÉDAGOGIQUES**

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# DOSSIER TECHNIQUE

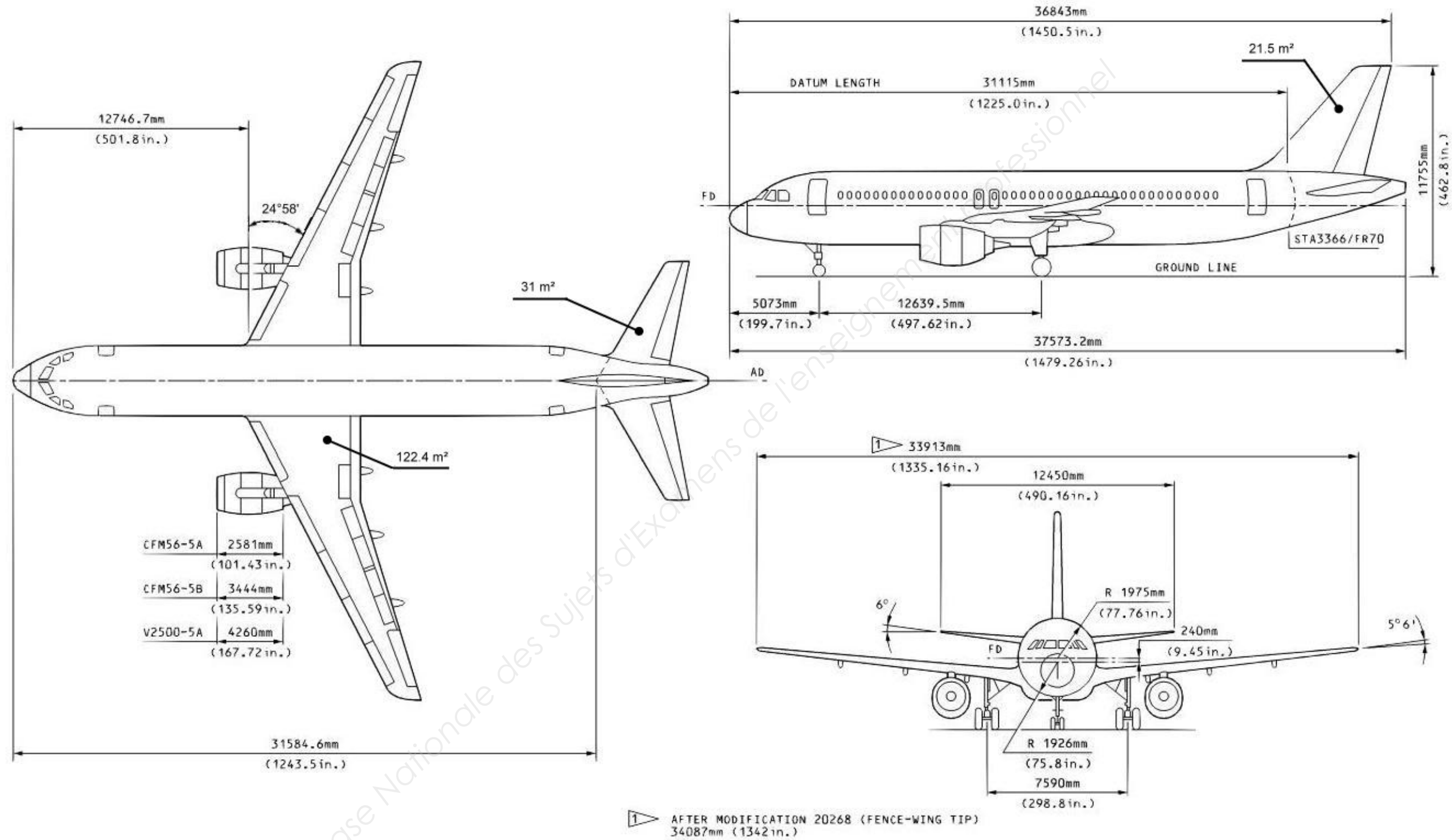
**BACCALAURÉAT PROFESSIONNEL AÉRONAUTIQUE**  
**OPTION : STRUCTURE**

**ÉPREUVE E2 (U2) – EXPLOITATION DE LA DOCUMENTATION TECHNIQUE**

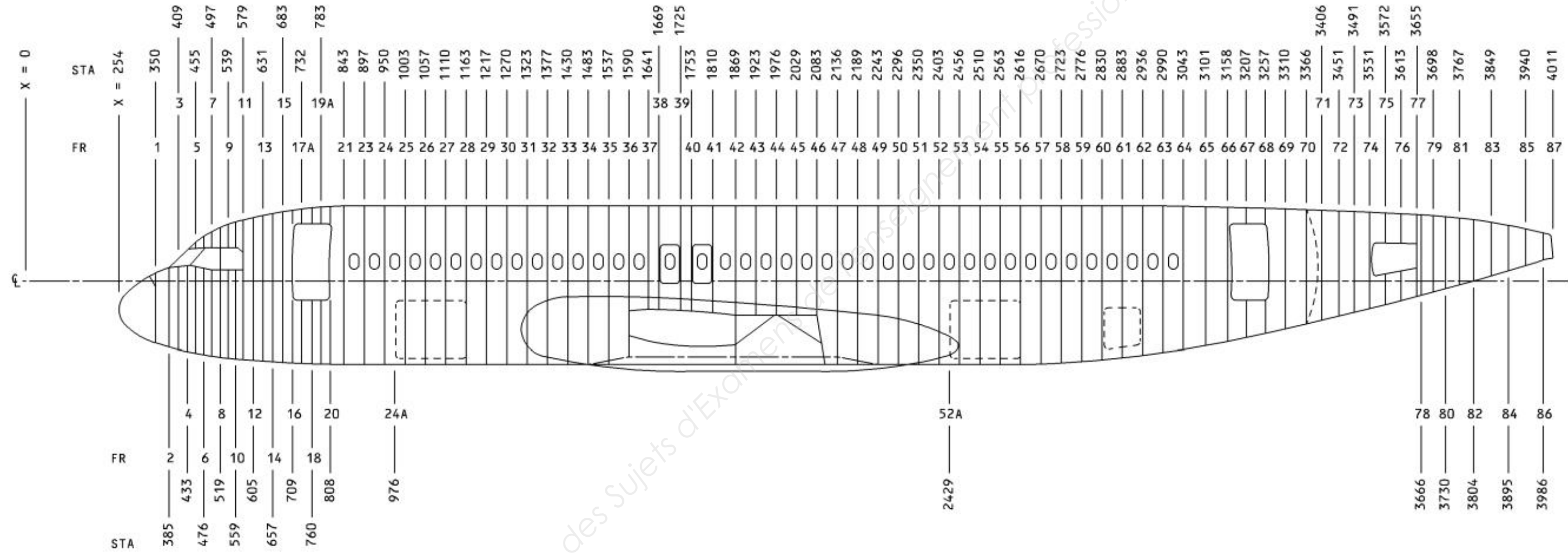
**CODE :1806-AER C U2**

Base Nationale des Sujets d'Examens de l'enseignement professionnel

BACCALAURÉAT PROFESSIONNEL AÉRONAUTIQUE OPTION : STRUCTURE	ÉPREUVE E2 (U2)– EXPLOITATION DE LA DOCUMENTATION TECHNIQUE	DOSSIER TECHNIQUE	Durée : 4 h	Coef. : 4	Session 2018	PAGE 1 / 15
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Major Aircraft Dimensions  
Figure 2



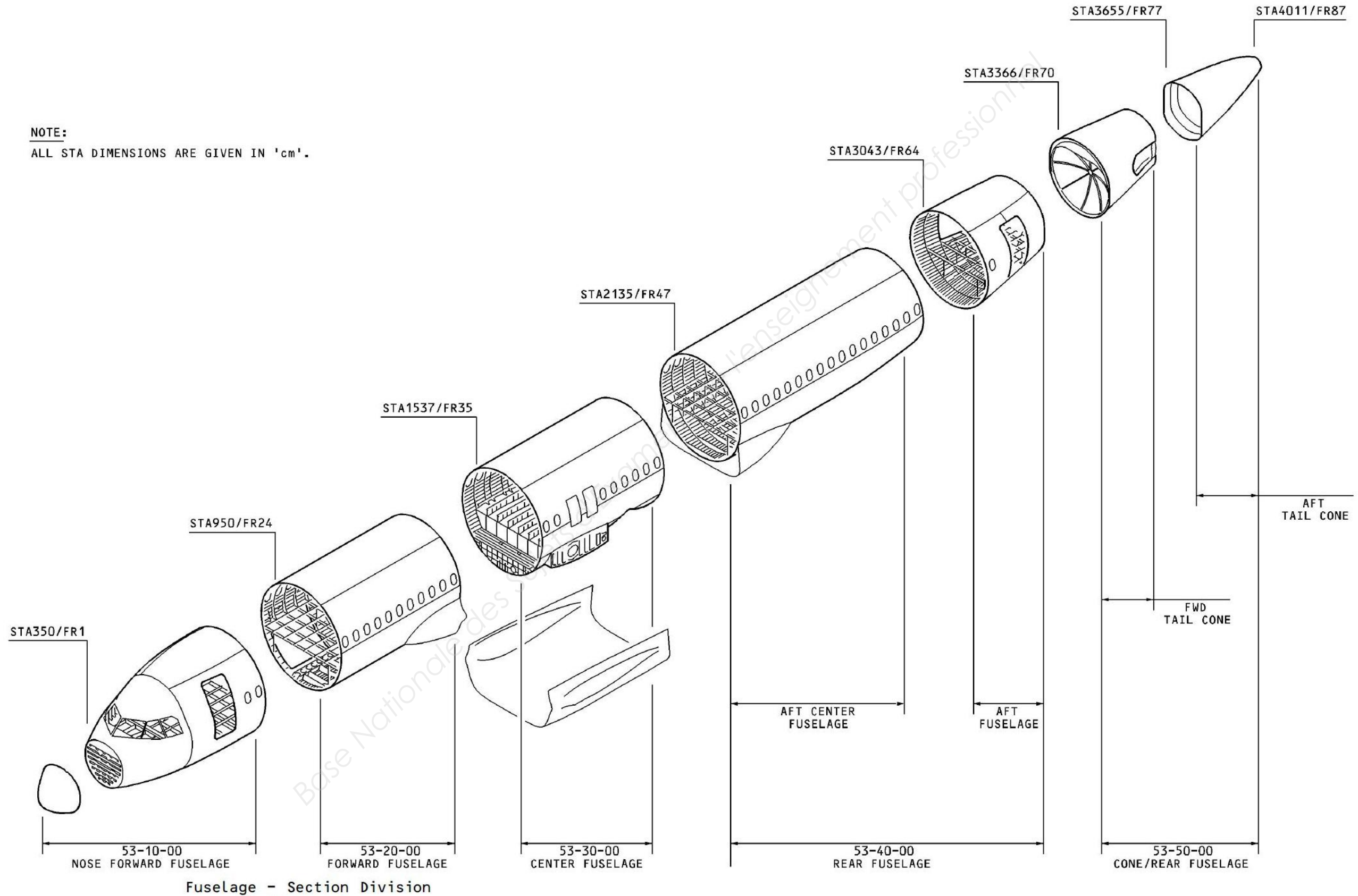
NOTE:  
ALL STA DIMENSIONS ARE GIVEN IN 'cm'.

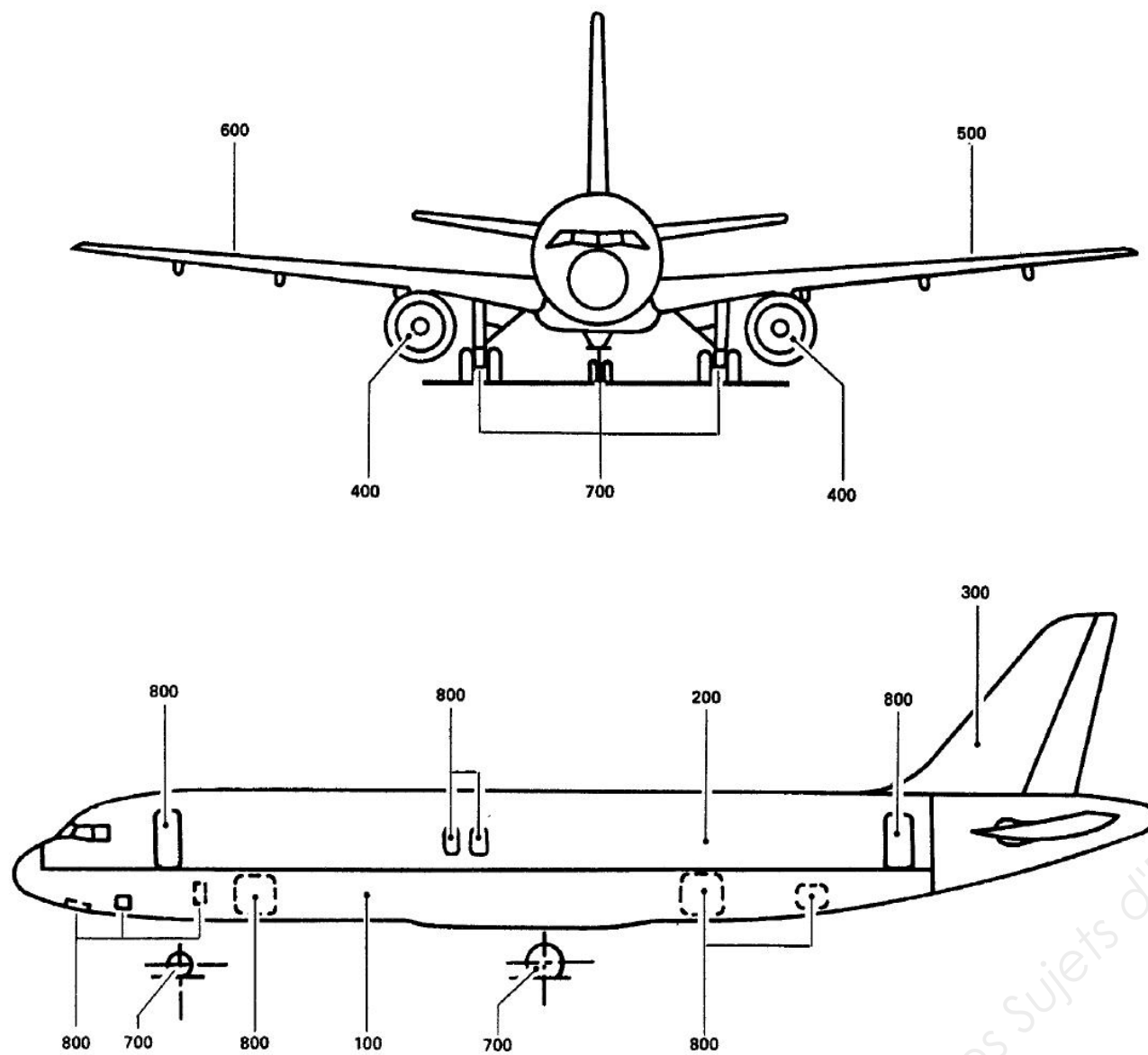
NS6 53 00 0 AEMF 02 0

Fuselage - Frame and Station Numbers

STRUCTURAL REPAIR MANUAL

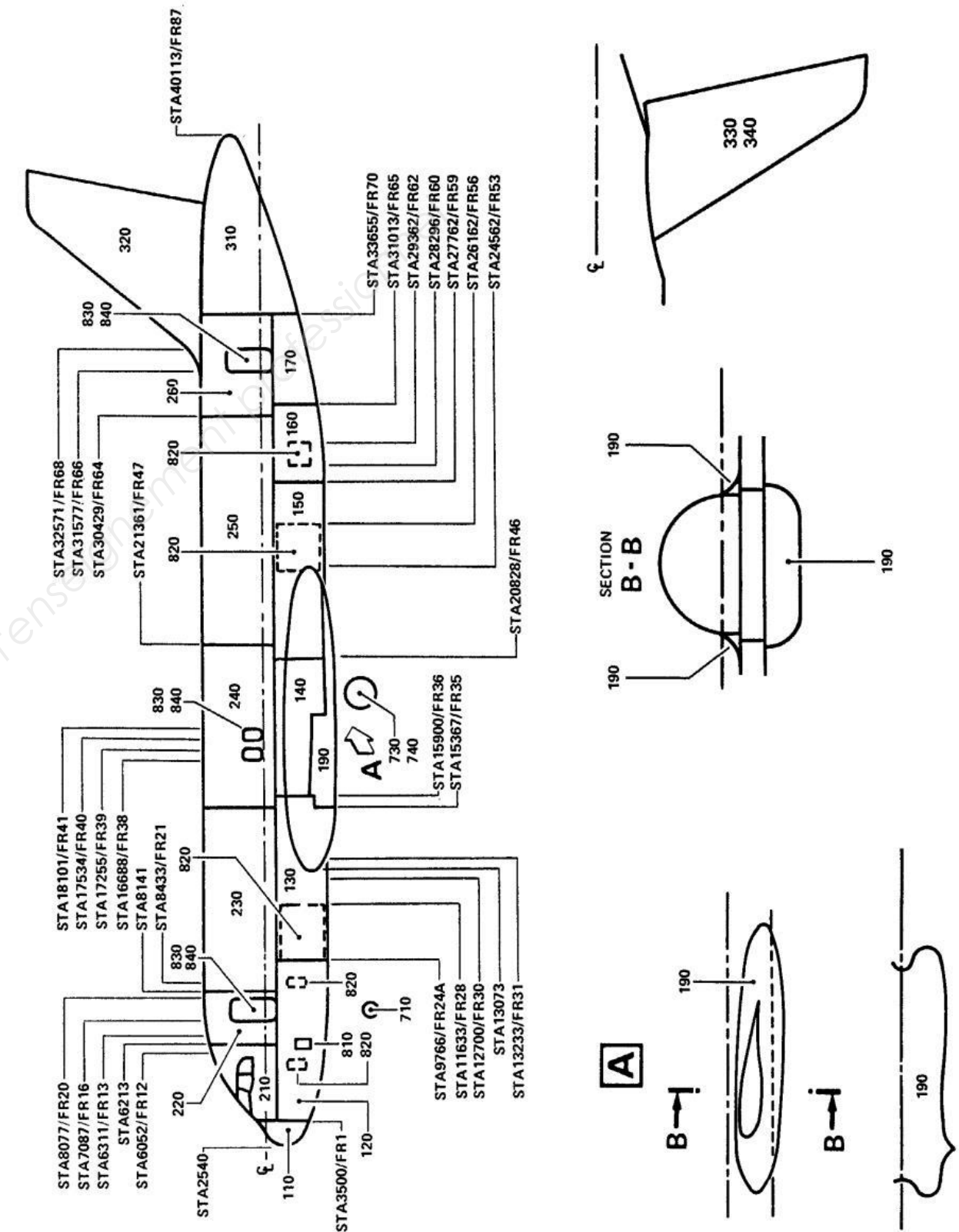
**NOTE:**  
ALL STA DIMENSIONS ARE GIVEN IN 'cm'.





Major Zones

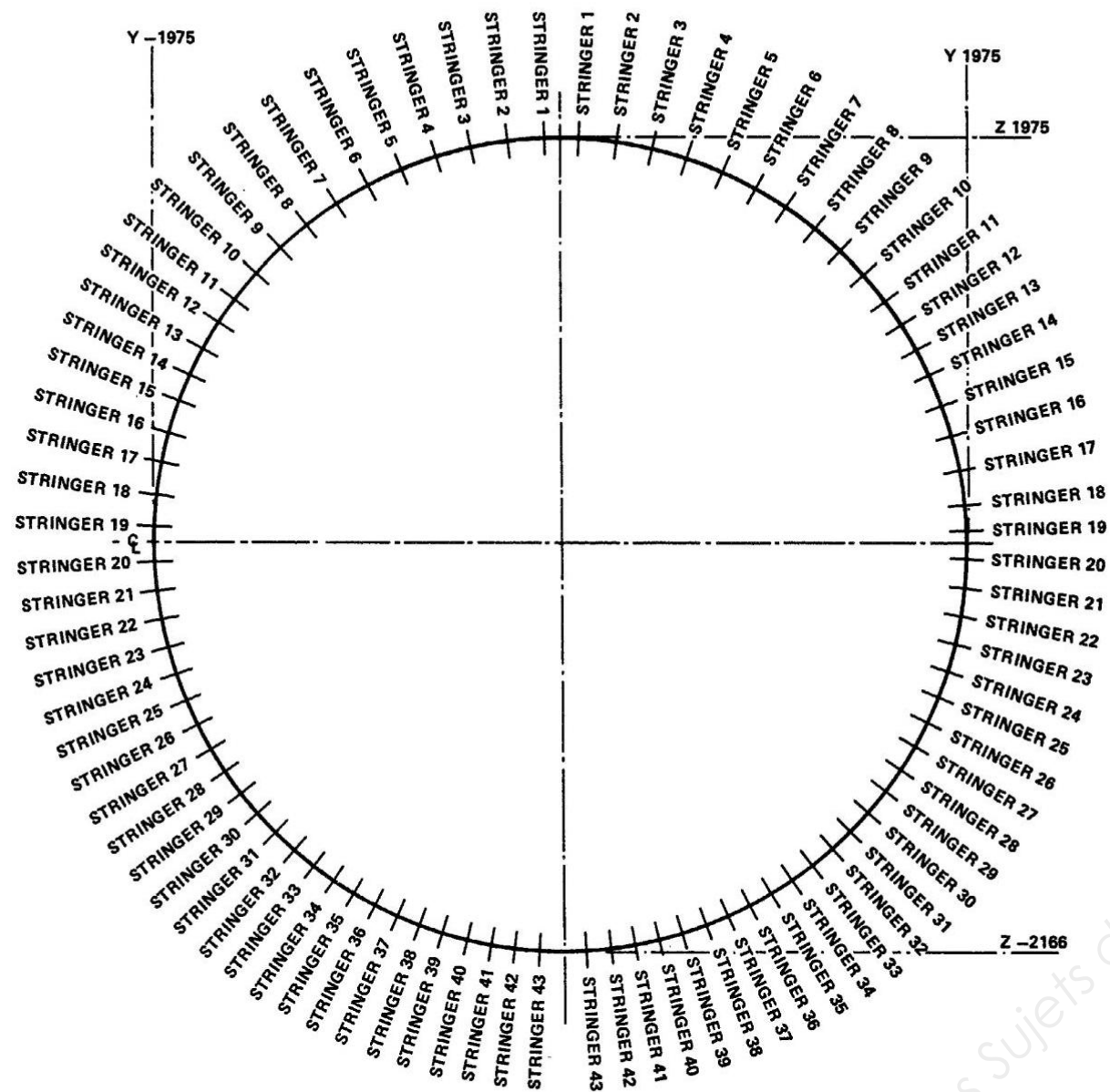
**06-20-00**



Major Sub-Zones - Fuselage and Vertical Stabilizer  
Figure 002

**06-20-00**

AIRCRAFT MAINTENANCE MANUAL



Typical Arrangement of Stringers on the Frames  
Figure 001

EFF : ALL

**06-30-00**

STRUCTURAL REPAIR MANUAL

ITEM	NOMENCLATURE	LOCATION
3	Upper Side Shell (Left)	STGR6-18, FR35-47
4	Emergency Exit Shell (Right)	FR37-FR42
5	Emergency Exit Shell (Left)	FR37-FR42
6	Lower Side Shell (Right)	STGR18-26, FR35-FR47
7	Lower Side Shell (Left)	STGR18-26, FR35-FR47
8	Forward Lower Side Shell (Right)	STGR25-30, FR35-FR36
9	Forward Lower Side Shell (Left)	STGR25-30, FR35-FR36
10	Rear Lower Side Shell (Right)	STGR26-36, FR42-FR47
11	Rear Lower Side Shell (Left)	STGR26-36, FR42-FR47

Fuselage - General Identification - Section 15/21

Table 3

ITEM	NOMENCLATURE	LOCATION
1	Upper Shell	STGR6-6, FR47-FR64
2	Upper Side Shell (Right)	STGR6-18, FR47-FR64
3	Upper Side Shell (Left)	STGR6-18, FR47-FR64
4	Forward Lower Side Shell (Right)	STGR18-41, FR47-FR51
5	Rear Cargo Door Shell - Front (Right)	STGR18-41, FR51-FR55
6	Rear Cargo Door Shell - Rear (Right)	STGR18-41, FR55-FR58
7	Rear Lower Side Shell (Right)	STGR18-32, FR58-FR64
8	Lower Side Shell (Left)	STGR18-32, FR47-FR64
9	Rear Lower Shell (Right)	STGR32-41, FR58-FR64
10	Lower Shell (Left)	STGR32-41, FR47-FR64
11	Forward Bulk Door Shell	STGR18-41, FR58-FR61
12	Rear Bulk Door Shell	STGR18-41, FR61-FR64

Fuselage - General Panel Identification - Section 16/17

Table 4

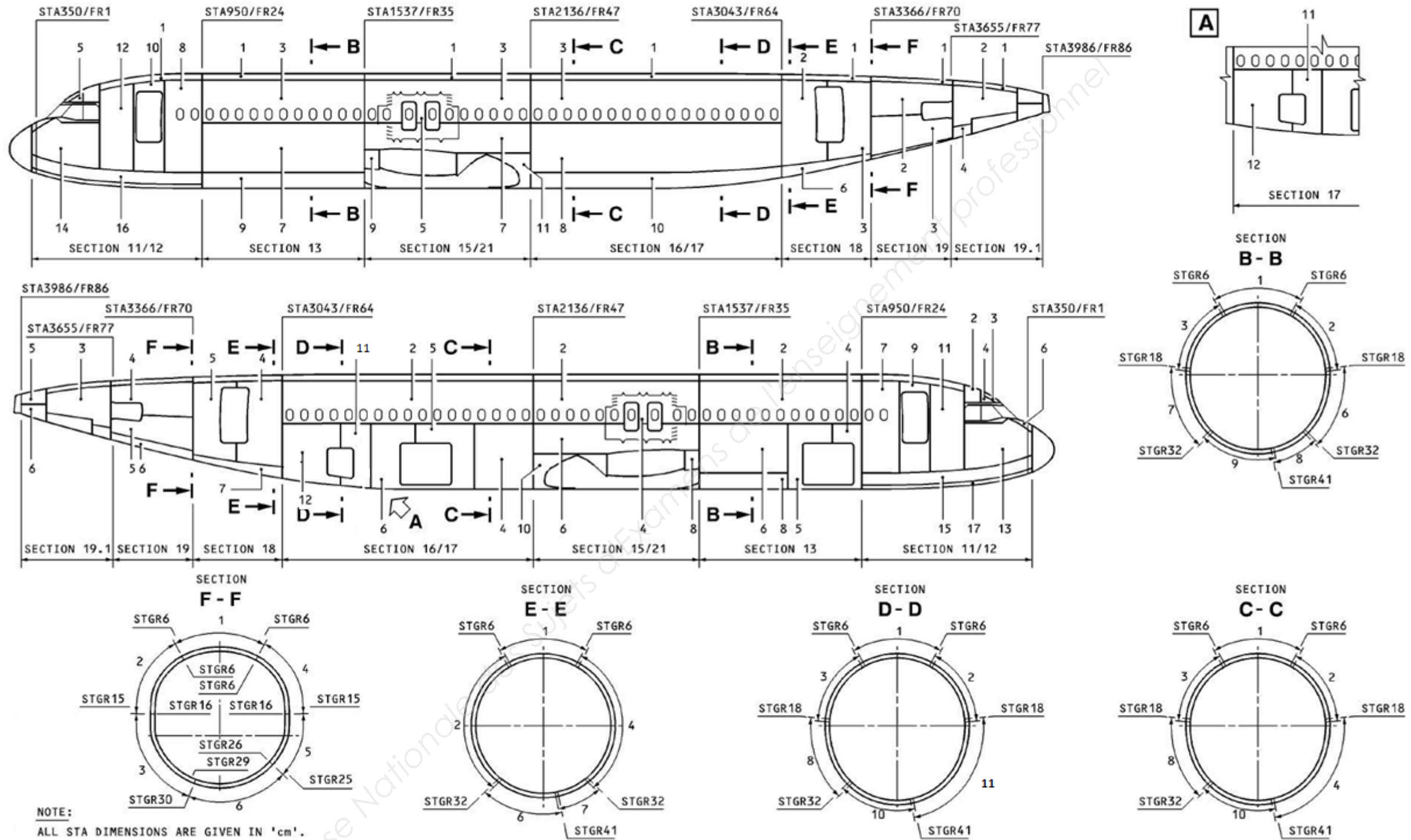
ITEM	NOMENCLATURE	LOCATION
1	Upper Shell	STGR6-6, FR64-FR70
2	Pax Door Shell Left Forward	STGR6-32, FR64-FR67
3	Pax Door Shell Left Rear	STGR6-32, FR67-FR70
4	Pax Door Shell Right Forward	STGR6-32, FR65-FR67
5	Pax Door Shell Right Rear	STGR6-32, FR67-FR70

Fuselage - General Panel Identification - Section 18

Table 5

**53-00-00** Page 14

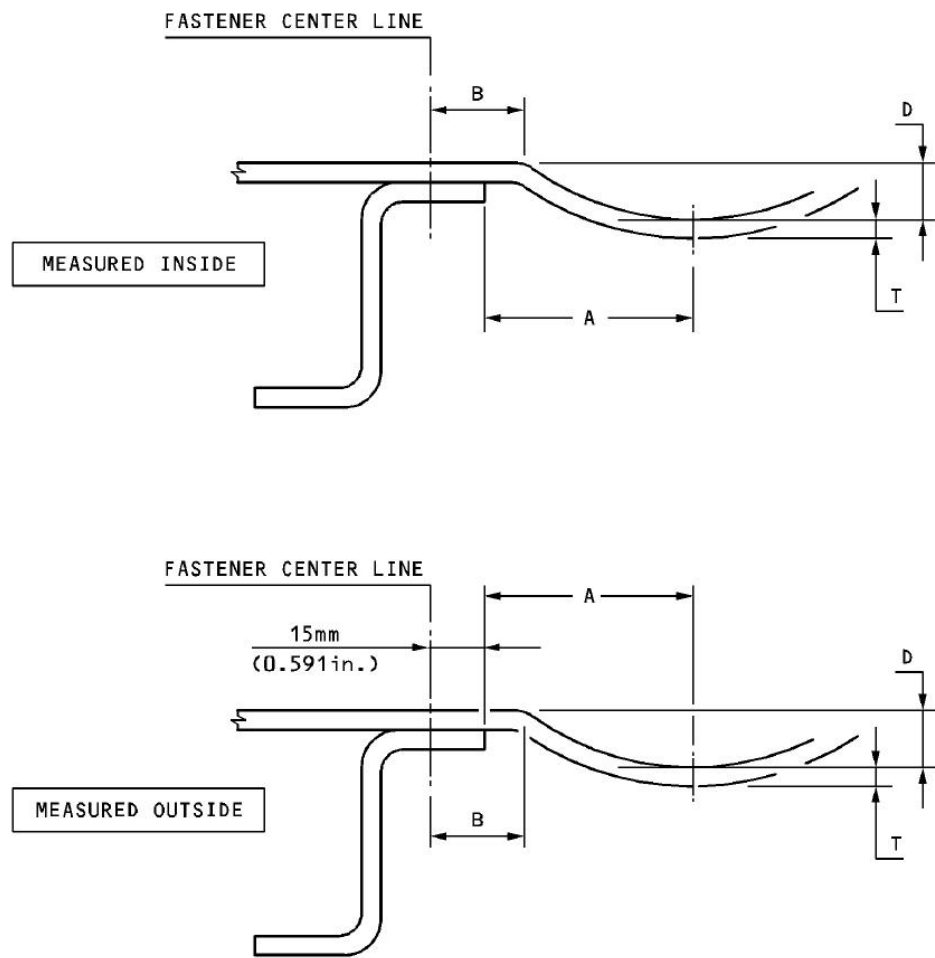
STRUCTURAL REPAIR MANUAL



Fuselage - Main panel and Section Configuration  
Figure 2

53-00-00

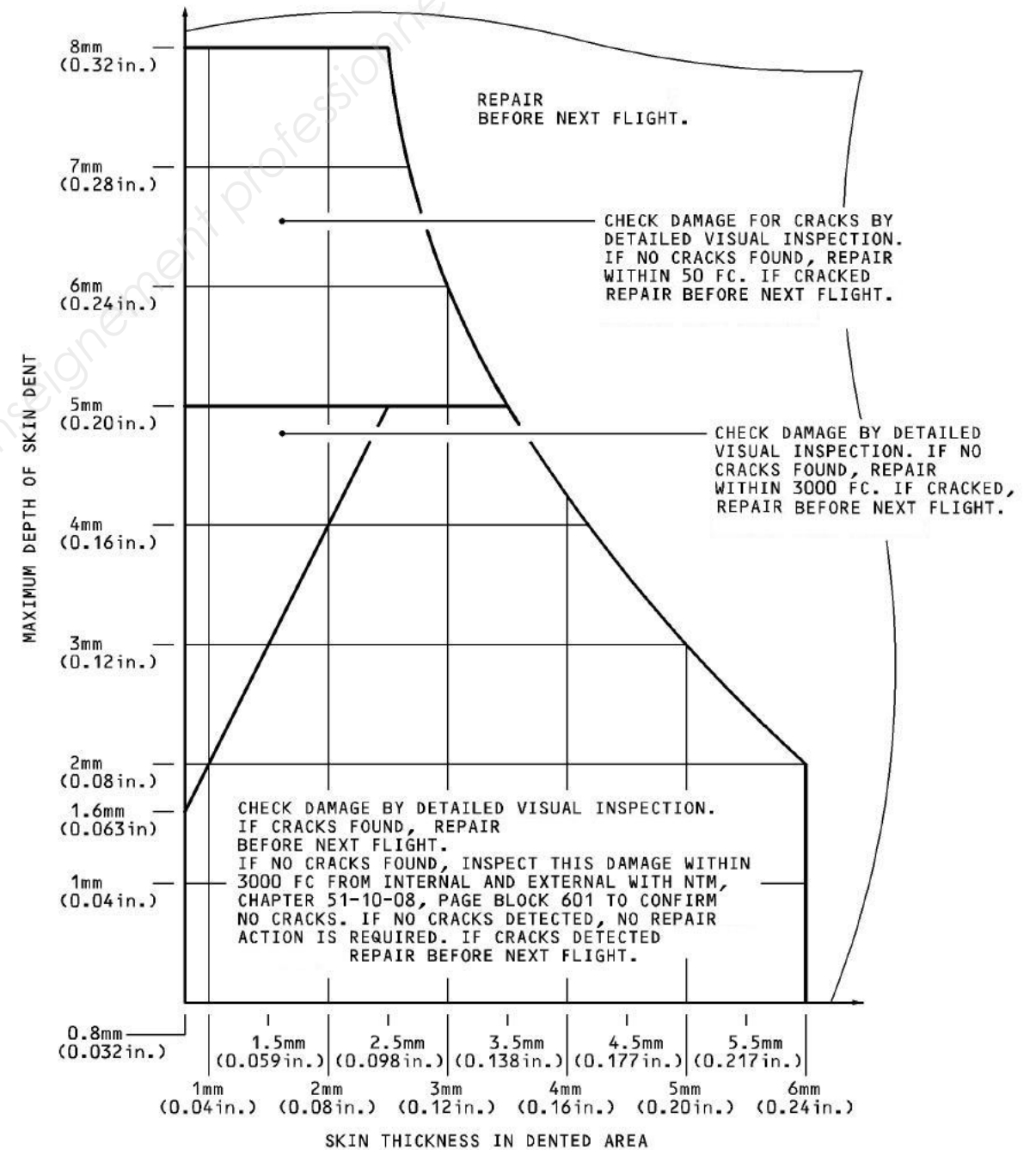




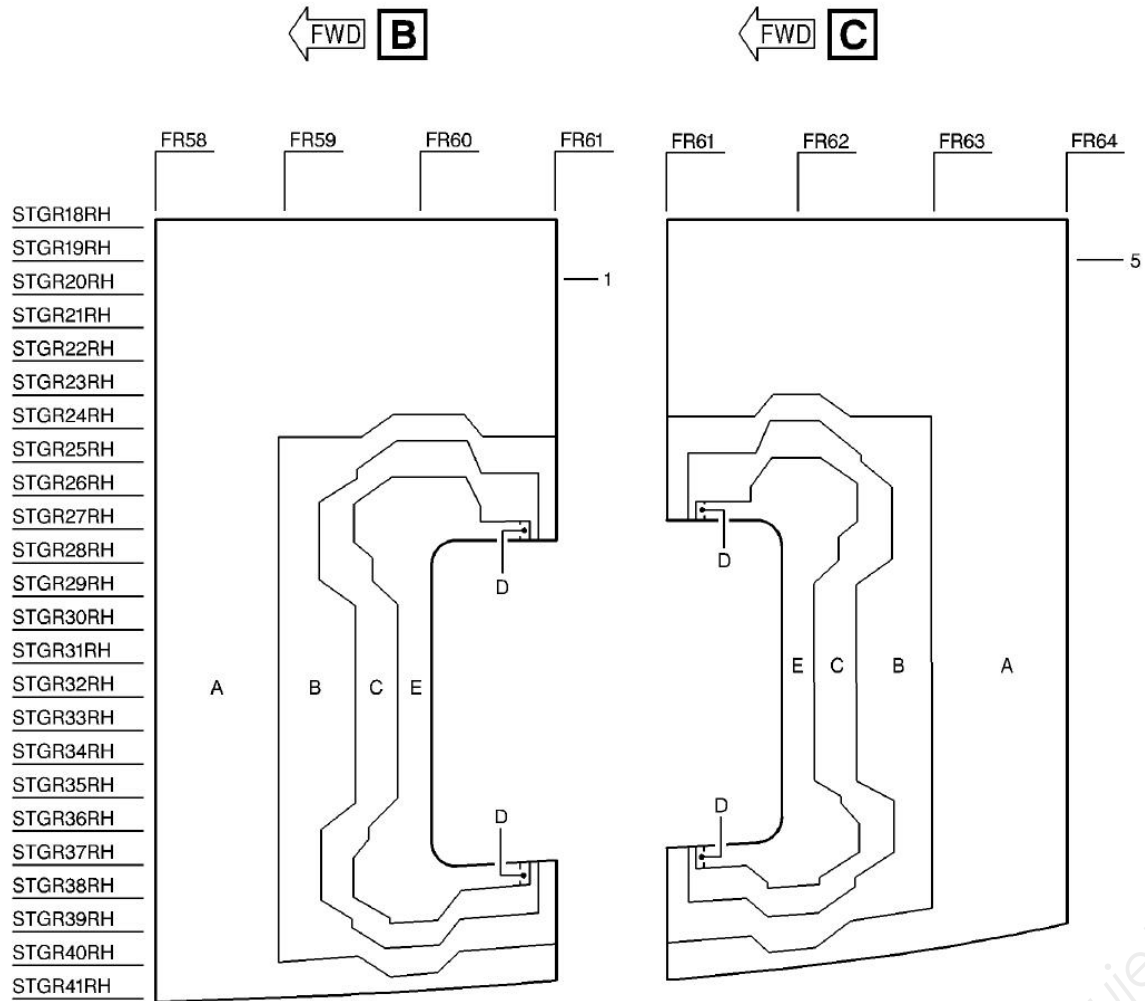
- T: IS THE SKIN THICKNESS IN DENTED AREA. IF DENT AFFECTS SEVERAL THICKNESSES, EACH OF THEM HAS TO BE CONSIDERED AND THE WORST LIMITATION HAS TO BE APPLIED.
- D: IS THE MAXIMUM DEPTH OF THE SKIN DENT.
- A: IS THE DISTANCE FROM THE LOCATION OF THE MAXIMUM DEPTH OF THE DENT TO THE EDGE OF ADJACENT STIFFENING MEMBER (SEE 'MEASURED INSIDE'), WHEN THE DISTANCE 'A' CANNOT BE MEASURED FROM INSIDE, USE THE METHOD AS FOLLOWS, (SEE 'MEASURED OUTSIDE').  
 -USE A DISTANCE OF 15mm (0.59in.) BACK FROM THE FASTENER ROW AS A REFERENCE POINT (15mm (0.59in.) IS AN AVERAGE EDGE MARGIN).  
 -MEASURE THE DISTANCE FROM THE CENTER OF THE DENT TO THE REFERENCE POINT TO GET THE DISTANCE 'A'.
- B: IS THE DISTANCE BETWEEN THE EDGE OF THE DENT AND ANY CUTOUT IN THE SKIN OR ANY FASTENER ROW.

Measurement of Allowable Dents in Skin  
Figure 102

NOTE: REQUIREMENT FOR THIS DIAGRAM IS  $D \leq 10\% A$  AND  $B \geq 15\text{mm (0.59in.)}$ . THIS DIAGRAM IS VALID ASSUMING INTERNAL STRUCTURE IS NOT AFFECTED. ONLY APPLICABLE BETWEEN FR47 THRU FR64.



Allowable Dents in Skin  
Diagram 103 (sheet 1)



NOMINAL SKIN THICKNESS	mm	in.
A	1.6	0.063
B	2.0	0.079
C	4.0	0.157
D	5.0	0.197
E	6.0	0.236

FR58-FR64, STGR18RH thru STGR41RH  
Skin Panel with Bulk-Cargo-Door before Modification 31020K7090E  
Figure 5 (sheet 2)

ITEM	NOMENCLATURE	SPECIFICATION AND/OR SECTION CODE	THICKNESS IN MM(IN.) AND/OR PARTNUMBER	I C	ACTION OR REPAIR	STATUS (MOD/PROP) SB/RC
1	Panel, skin	T42 ABS5043A060	D53475760204	03	PB101 PB201	A20449K0156A
1A	Panel, skin	T42 ABS5043A060	D53475760200		PB101 PB201	A20029K0024A
1B	Panel, skin	T42 ABS5043A060	D53475760202		PB101 PB201	A20029K0024AK
1C	Panel, skin	T42 ABS5043A060	D53475760206		PB101 PB201	A27585K5544E
5	Panel, skin	T42 ABS5043A060	D53475761204		PB101 PB201	A20449K0156A
5A	Panel, skin	T42 ABS5043A060	D53475761200		PB101 PB201	A20029K0024A
5B	Panel, skin	T42 ABS5043A060	D53475761206		PB101 PB201	A20029K0024CA
10	Crackstopper, assy		D53470440003		Replace	A20029K0024A
10A	Crackstopper, assy		D53470440007		Replace	A20449K0156B
15	Crackstopper, assy		D53470440005		Replace	A20029K0024A
15A	Crackstopper, assy		D53470440009		Replace	A20449K0156B
20	Strap, crossbutt	3.1364T351 LN9073-6	D53475780200			A20029K0024V
20A	Strap, crossbutt	3.1364T351 LN9073-6	D53475780206		A20449K0156A	
25	Strap, crossbutt	T351 ABS5044A025	D53475780204 2.5 (0.098)		A20449K0156C	
30	Strap, reinforcement	T42 ABS5044A025	D53475787206 2.5 (0.098)		A20449K0156C	
35	Strap, reinforcement	T42 ABS5044A020	D53475787202 2.0 (0.079)		A20029K0024A	
35A	Strap, reinforcement	T42 ABS5044A020	D53475787210 2.0 (0.079)		A20449K0156B	
40	Strap, crossbutt	3.1364T351 LN9073-6	D53475780202		A20449K0156C	
45	Strap, reinforcement	T42 ABS5044A020	D53475787200 2.0 (0.079)		A20029K0024A	

ASSY Dwg.: D53470009, D53475751, D53475755, D53475756

Key to Figure 5

3. Fuselage Allowable Damage Scheme

NOMENCLATURE	REFER TO
Machined Parts between STA1537 / FR35 and STA3666 / FR78	Chapter 53-00-00
Skin Plates	Chapter 53-00-11
Floor Structure, FR20 thru FR35 and FR47 thru FR65	Chapter 53-00-14
Seat Tracks, FR20 thru FR35 and FR47 thru FR65	Chapter 53-00-15
Window Frames	Chapter 53-00-29
Door Sealing Section, FWD and AFT Passenger/Crew Doors	Chapter 53-00-29
Skin Plates, FR1 thru FR24	Chapter 53-11-11
Skin Plates, FR24 thru FR35	Chapter 53-21-11
Emergency Exit Panel	Chapter 53-31-11
Skin Plates, FR35 thru FR47	Chapter 53-31-11
Floor Structure, FR36 thru FR46	Chapter 53-31-14
Seat Tracks, FR36 thru FR46	Chapter 53-31-15
Skin Plates, FR47 thru FR70	Chapter 53-41-11
Fairings	Chapter 53-45-00
Cone / Rear Fuselage	Chapter 53-50-00

Table 101

ITEM	DESCRIPTION	REFER TO DAMAGE CRITERIA TABLE 103		
		SCRATCHES	MARKS AND CORROSION	DENTS
-	Machined parts (not illustrated) <1>	A	NONE	NONE

Table 102

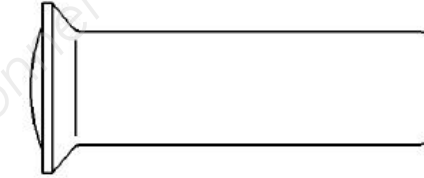
DAMAGE CODE	DESCRIPTION <1>
A	Compare the scratches in question with Diagram 101.

Table 103

<1> This allowable damage is not applicable after Modification 30975K7081 between FR70 thru FR77.

**NOTE:** For the effectivity of the given Modification refer to Chapter 53-50-00 Page Block 001.

PAS et PINCE pour rivets sur réparation métallique



STANDARDS CONCERNED:  
ASNA2049, ASNA2051, MBBN4477, NAS1097 (F0N2.6325), VFN15203

Rivet (solid)

B. Rivet Hole Pitch and Edge Distance

(1) The rivet hole pitch values are from the centre of one rivet hole to the centre of the next rivet hole. The pitch values are quoted in terms of the rivet nominal shank diameter 'D'. For example, factor 4.0 x 'D' =pitch

(2) The recommended hole pitch values are:

- Pressure tight joint - 4D to 5D
- Nonpressure tight joints - 4D minimum

**NOTE:** When otherwise specified by specific repair instructions then the repair instructions take precedence.

(3) The edge distance values are from the centre of the rivet hole to the nearest edge of the component. The edge distance values are quoted interms of the rivet nominal shank diameter 'D' (Refer to

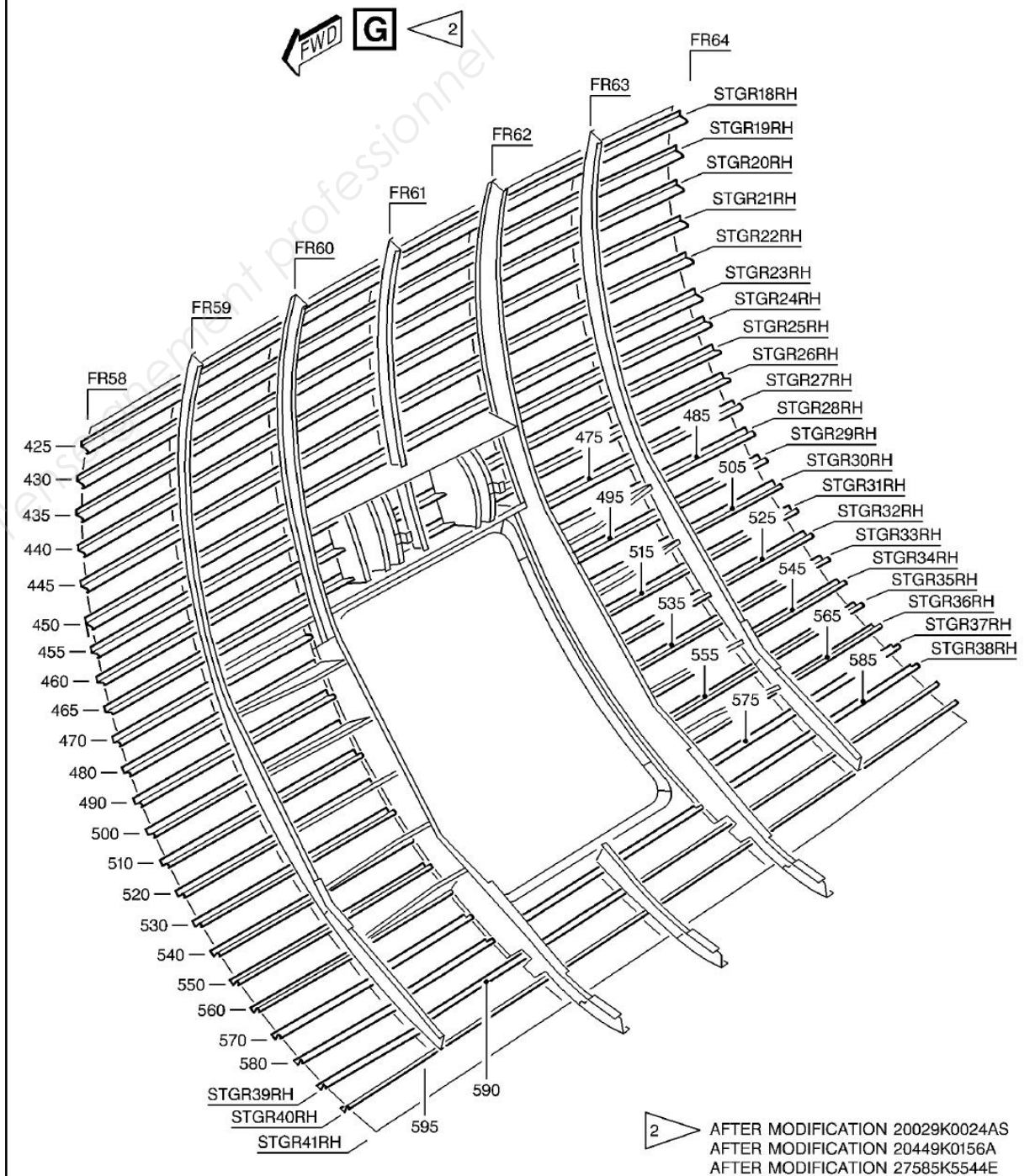
(4) The recommended edge values for metallic joints are 2D minimum.

**NOTE:** In general cases for the installation in skin, sheet metalde-tails, members, shear webs etc. with a thickness of 1.2 mm (0.0472 in.) and thicker, edge distance 'E' = 2D. When the thick-ness is less than 1.2 mm (0.0472 in.), edge distance 'E' = 2.5D

1. Identification Scheme

ITEM	NOMENCLATURE	REFER TO
-	FR47-FR64, STGR6LH thru STGR14RH Stringer	Figure 1
-	FR47-FR51, STGR18RH thru STGR40RH, Stringer, before modification 31020K7090E	Figure 2 (sheet 1 and 2)
-	FR51-FR58, STGR18RH thru STGR40RH, Stringer, before modification 31020K7090E	Figure 2 (sheet 3)
-	FR58-FR64, STGR18RH thru STGR40RH, Stringer, before modification 31020K7090E	Figure 2 (sheet 4 and 5)
-	FR47-FR64, STGR18RH, Stringer, before modification 31020K7090E	Figure 2 (sheet 6)
-	FR47-FR64, STGR18RH thru STGR40RH, Stringer, after modification 31020K7090E	Figure 3
-	FR47-FR56, STGR41RH thru STGR32LH Stringer	Figure 4 (sheet 1 and 3)
-	FR57-FR64, STGR41RH thru STGR32LH Stringer	Figure 4 (sheet 2 and 4)
-	FR47-FR55, STGR18LH thru STGR31LH Stringer	Figure 5 (sheet 1)
-	FR55-FR64, STGR18LH thru STGR31LH Stringer	Figure 5 (sheet 2)
-	FR47-FR64, STGR18LH Stringer	Figure 5 (sheet 3)
-	FR47-FR64, STGR6LH thru STGR14LH Stringer	Figure 6
-	FR64-FR70, STGR6 thru STGR32 Stringer	Figure 7
-	FR47-FR56, STGR41RH thru STGR32LH Connecting Sections	Figure 8 (sheet 1)
-	FR57-FR64, STGR41RH thru STGR32LH Connecting Sections	Figure 8 (sheet 2)
-	FR51, STGR18RH thru STGR41RH Connecting Sections	Figure 9 (sheet 1)
-	FR58, STGR18RH thru STGR41RH Connecting Sections	Figure 9 (sheet 2)
-	FR64, STGR6LH thru STGR18RH Connecting Sections	Figure 10 (sheet 1)
-	FR64, STGR18RH thru STGR32LH Connecting Sections	Figure 10 (sheet 2)
-	FR64, STGR6LH thru STGR32LH Connecting Sections	Figure 10 (sheet 3)

NOTE: Refer to Chapter 53-40-00 Page Block 001, where you can find the Modification/Service Bulletin List.



FR58-FR64, STGR18RH thru STGR40RH, Stringer, before modification 31020K7090E  
Figure 2 (sheet 5)

## STRUCTURAL REPAIR MANUAL

ITEM	NOMENCLATURE	SPECIFICATION AND/OR SECTION CODE	THICKNESS IN MM(IN.) AND/OR PARTNUMBER	I C	ACTION OR REPAIR	STATUS (MOD/PROP) SB/RC
415A	Stringer	T62 DAN50B-09	D53470417230	03	PB201	A27585K5544N
420	Stringer	T62 DAN50B-09	D53470417214		PB201	A20003K0002BN
420A	Stringer	T62 DAN50B-09	D53470417232	03	PB201	A27585K5544N
425	Stringer	3.4364T62	D53471071204 made from D53070013			A20449K0156
425A	Stringer	3.4364T62	D53471071202 made from D53070013			A20029K0024Q A22768K2736H
430	Stringer	T62 DAN50B-13	D53475767214		PB201	A20449K0156A
430A	Stringer	T62 DAN50B-13	D53475767200		PB201	A20029K0024A
430B	Stringer	T62 DAN50B-13	D53475767226	01	PB201	A20029K0024AK
430C	Stringer	T62 DAN50B-13	D53475767238	03	PB201	A27585K5544E
435	Stringer	T62 DAN50B-13	D53475767216		PB201	A20449K0156A
435A	Stringer	T62 DAN50B-13	D53475767202		PB201	A20029K0024A
435B	Stringer	T62 DAN50B-13	D53475767228	01	PB201	A20029K0024AK
435C	Stringer	T62 DAN50B-13	D53475767240	03	PB201	A27585K5544E
440	Stringer	T62 DAN50-13	D53475767218		PB201	A20449K0156A
440A	Stringer	T62 DAN50B-13	D53475767204		PB201	A20029K0024A
440B	Stringer	T62 DAN50B-13	D53475767230	01	PB201	A20029K0024AK
440C	Stringer	T62 DAN50B-13	D53475767242	03	PB201	A27585K5544E
445	Stringer	T62 DAN50B-13	D53475767220		PB201	A20449K0156A
445A	Stringer	T62 DAN50B-13	D53475767206		PB201	A20029K0024A

ASSY Dwg.: D53470009, D53470150, D53470339, D53475755, D53475756

Key to Figure 2

53-41-13 Page 23

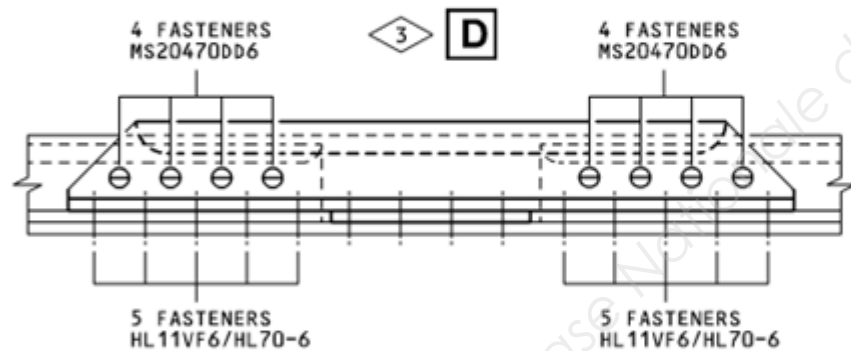
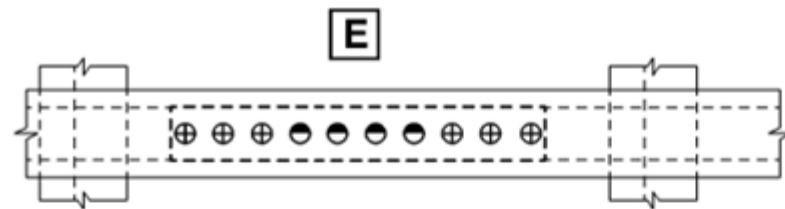
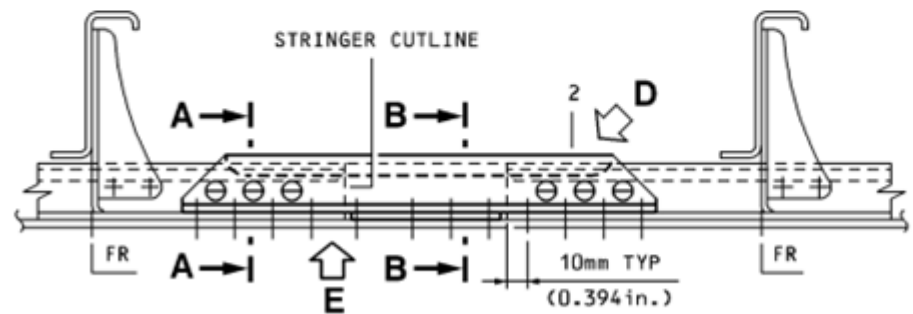
## STRUCTURAL REPAIR MANUAL

ITEM	NOMENCLATURE	SPECIFICATION AND/OR SECTION CODE	THICKNESS IN MM(IN.) AND/OR PARTNUMBER	I C	ACTION OR REPAIR	STATUS (MOD/PROP) SB/RC
445B	Stringer	T62 DAN50B-13	D53475767232	01	PB201	A20029K0024AK
445C	Stringer	T62 DAN50B-13	D53475767244	03	PB201	A27585K5544E
450	Stringer	3.4364T73	D53475768202 made from D53070017			A20449K0156A
450A	Stringer	3.4364T73	D53475768200 made from D53070017		PB201	A20029K0024V
455	Stringer	T62 DAN50B-11	D53475767222		PB201	A20449K0156A
455A	Stringer	T62 DAN50B-11	D53475767208		PB201	A20029K0024A
455B	Stringer	T62 DAN50B-13	D53475767234	01	PB201	A20029K0024AK
455C	Stringer	T62 DAN50B-11	D53475767246	03	PB201	A27585K5544E
460	Stringer	T7351 DAN26H40	D53475769210			A20449K0156A
460A	Stringer	T7351 DAN26H40	D53475769204			A20029K0024A
460B	Stringer	T7351 DAN26H40	D53475769216	01	PB201	A20029K0024AK
460C	Stringer	T7351 DAN26H40	D53475769222	03		A27585K5544E
465	Stringer	T7351 DAN26H40	D53475769206			A20449K0156A
465A	Stringer	T7351 DAN26H40	D53475769200			A20029K0024A
465B	Stringer	T7351 DAN26H40	D53475769212	01	PB201	A20029K0024AK
465C	Stringer	T7351 DAN26H40	D53475769218	03		A27585K5544E
470	Stringer	T62 DAN50B-13	D53475770252		PB201	A20449K0156A
470A	Stringer	T62 DAN50B-13	D53475770200		PB201	A20029K0024AS
470B	Stringer	T62 DAN50B-13	D53475770300	03	PB201	A27585K5544E

ASSY Dwg.: D53475755, D53475756

Key to Figure 2

53-41-13 Page 24

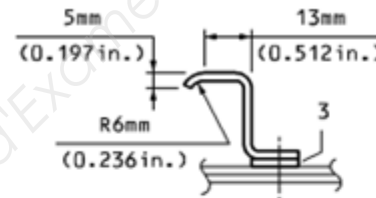


Stringer Repair  
Figure 201

SECTION  
A - A  
EXAMPLE



SECTION  
B - B



REPAIR MATERIAL			
ITEM	NOMENCLATURE	QTY	MATERIAL / REMARKS
1	STRINGER	AR	SAME AS ORIGINAL
2	COUPLING	AR	REFER TO TABLE OF STRINGER/COUPLING <span style="border: 1px solid black; padding: 0 2px;">1</span>
3	FILLER	AR	3.1364T3 OR US EQUIVALENT CLAD 2024T3 THICKNESS AS ORIGINAL STRINGER
FASTENER SYMBOL			
+	REFERENCE ONLY		
●	MS20470DD5 OR NAS1242DD5		
●	NAS1097DD6		
⊖	MS20470DD5 FOR STRINGER THICKNESS LESS THAN 1.6mm (0.054 in.) MS20470DD6 FOR STRINGER THICKNESS 1.6mm (0.054 in.) AND THICKER		
⊕	HL11VF6/HL70-6		

TABLE OF STRINGER / COUPLING			
STRINGER / DIMENSION mm	<span style="border: 1px solid black; padding: 0 2px;">2</span>	COUPLING	<span style="border: 1px solid black; padding: 0 2px;">1</span>
DAN 2	28 x 22 x 1.0	A539-86113	DAN2001T79511
DAN 2	28 x 22 x 1.2	A539-85113	XL3-1364T3
DAN 2	28 x 22 x 1.4	A539-85114	XL3-1364T3
DAN 2	28 x 22 x 1.6	A539-86219	DAN2001T79511
DAN 2	28 x 22 x 1.8	A539-86212	DAN2001T79511
DAN 2	30 x 22 x 1.6	A539-86219	DAN2001T79511
ABS0245	28 x 22 x 1.8	A539-86212	DAN2001T79511
DAN50-08	28 x 23 x 2.0	A539-86212	DAN2001T79511
DAN50-09	28 x 25 x 2.8	A539-86217	DAN2001T79511
DAN50-10	28 x 24 x 2.4	A539-86218	DAN2001T79511
DAN50-11	28 x 23 x 1.8	A539-86212	DAN2001T79511
DAN50-12	30 x 25 x 3.0	DAN 51-3.4364T73511-6	
DAN50-13	28 x 22 x 1.6	A539-86219	DAN2001T79511
ASNA2212	28 x 22 x 1.6	A539-86219	DAN2001T79511
ASNA2214	28 x 22 x 1.4	A539-86219	DAN2001T79511
ASNA2215	27.6 x 21.6 x 1.6	A539-86219	DAN2001T79511
ASNA2457	27.6 x 22 x 2.2	A539-86218	DAN2001T79511

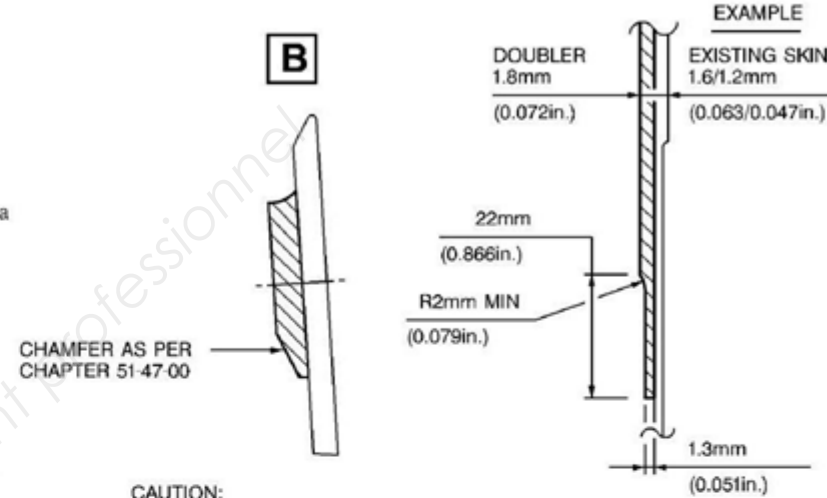
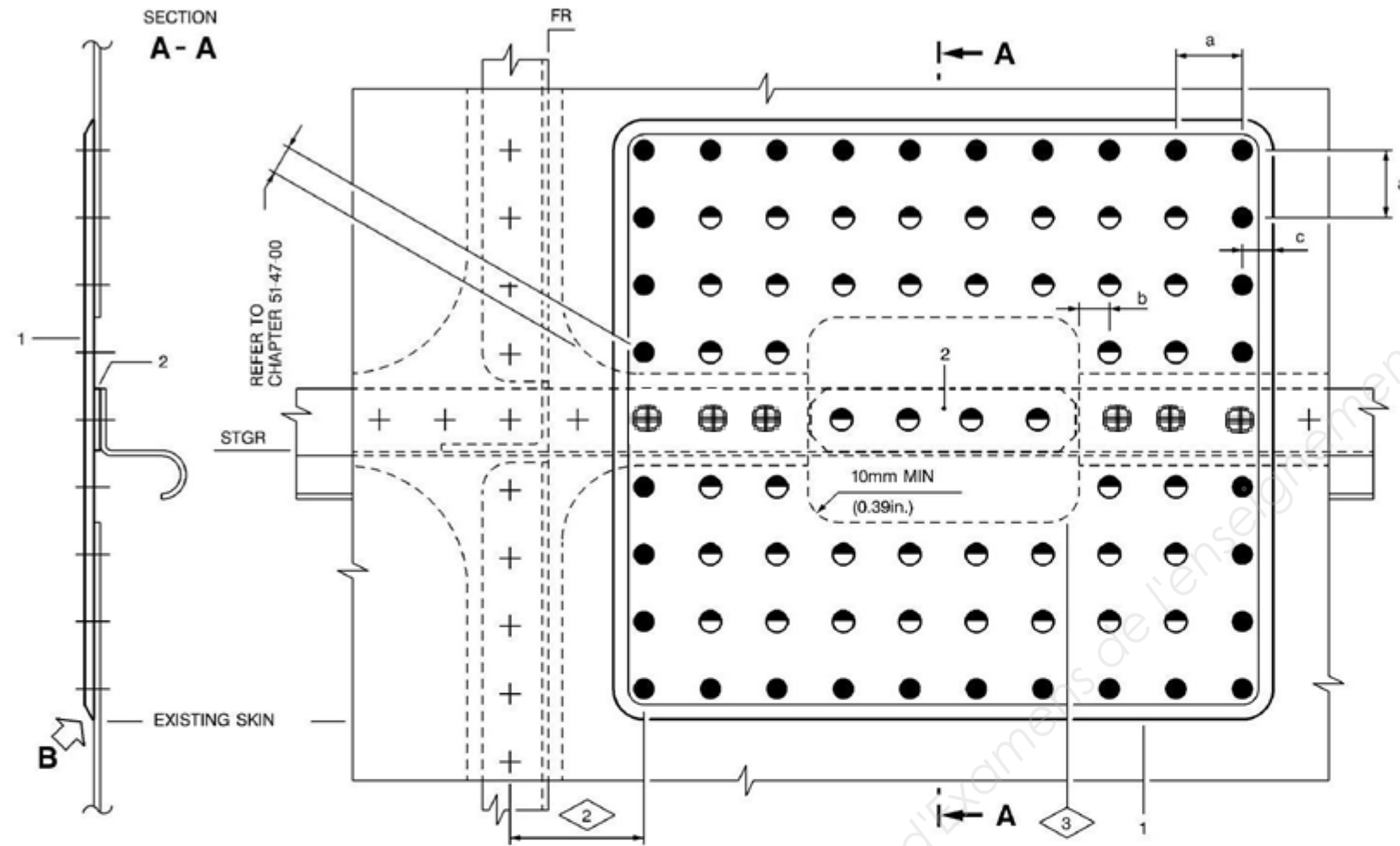
NOTE: THIS REPAIR IS APPLICABLE BETWEEN FR1 AND FR87.

USE TRANSITION FIT FOR HI-LOK FASTENER INSTALLATION (REF.51-44-11).

1 ALTERNATIVE:  
FOR ALL LISTED FORMED SHEET METAL STRINGERS (DAN 2), A COUPLING CAN BE FORMED FROM 3.1364.4 (CLAD 2024T4/T42) ONE GAGE THICKER THAN EXISTING STRINGER PROFILE AND WITH SAME DIMENSION OF GIVEN COUPLING SECTION.

2 FOR IDENTIFICATION OF EXISTING SPRINGER REFER TO RELEVANT IDENTIFICATION PAGE BLOCK.

3 ONLY APPLICABLE FOR STRINGER DAN 50-09 AND DAN50-12.



**CAUTION:**

- THIS REPAIR MAY REQUIRES AN INSPECTION AT 20000 FC IF CARRIED OUT ABOVE WINDOW LINE. FOLLOW THE INSTRUCTIONS GIVEN IN PARAGRAPH 4.A.
- THERE MUST BE A MINIMUM DISTANCE OF FOUR FASTENER SPACINGS BETWEEN THE OUTER ROWS OF ADJACENT REPAIRS.
- THERE MUST BE A MINIMUM DISTANCE OF THREE FASTENER SPACINGS BETWEEN THE OUTER ROW OF THE DOUBLER TO THE FIRST FASTENER ROW OF A LONGITUDINAL OR CIRCUMFERENTIAL JOINT. IN CASE THIS DISTANCE CANNOT BE MAINTAINED, REFER TO THE INSTRUCTIONS FOR THE RELEVANT SRM JOINT REPAIR SCHEME.

**NOTE:**

- THESE REPAIRS ARE APPLICABLE FOR DAMAGE TO THE SKIN WHERE THE SKIN THICKNESS IS BETWEEN 1.2mm (0.047in.) AND 2.2mm (0.087in.) AND ARE EFFECTIVE AS FOLLOWS:  
-FROM FR 1 THRU FR87
- IF THE DOUBLER THICKNESS AT RUNOUT (LONGITUDINAL AND/OR CIRCUMFERENTIAL DIRECTION) IS MORE THAN 0.4mm (0.016in.) GREATER THAN EXISTING SKIN, THE DOUBLER HAS TO BE PROVIDED WITH A STEP OF 1.3mm (0.051in.) FOR DIMENSION REFER TO EXAMPLE.
- FILL EXISTING COUNTERSINKS IN FUSELAGE SKIN WITH COUNTERSUNK REPAIR WASHERS, (REFER TO CHAPTER 51-71-15).

ITEM	NOMENCLATURE	MATERIAL	REPAIR MATERIAL								
			1.2mm (0.047in.)	1.4mm (0.055in.)	1.45mm (0.057in.)	>1.45mm (0.057in.)	1.65mm (0.065in.)	>1.65mm (0.065in.)	2.0mm (0.080in.)	>2.0mm (0.080in.)	2.2mm (0.087in.)
1	DOUBLER	CLAD2024T3	1.4mm (0.056in.)	1.6mm (0.063in.)	1.8mm (0.071in.)	2.0mm (0.080in.)	2.2mm (0.090in.)				
2	FILLER	CLAD2024T3	SAME THICKNESS AS EXISTING SKIN								
<b>FASTENER SYMBOLS</b>											
+	REFERENCE ONLY										
●	NAS1097DD5	1	⊕	HL 11VF6/HL70-6							
●	NAS1097DD5	1	⊕	NAS1097DD6							
PITCH a			ACCORDING TO EXISTING PITCH OR REFER TO CHAPTER 51-47-00								
MARGIN b			10mm (0.390in.)								
MARGIN c			REFER TO CHAPTER 51-47-00								

- 1 IN THE AREA ENCLOSED BY BELLY FAIRING UNIVERSAL FASTENER MS20470DD MAY BE USED.
- 2 THE DOUBLER MUST NOT END ABOVE A STRINGER OR FRAME. EXTEND THE DOUBLER IF NECESSARY BY ONE FASTENER ROW AFTER THE FRAME OR STRINGER.
- 3 CUTOUT IN SKIN IS LIMITED TO A LENGTH OF HALF A FRAME BAY AND A WIDTH OF ONE STRINGER BAY.
- 4 REFERENCE FOR THE SKIN THICKNESS IS THE MAXIMUM THICKNESS OF THE CHEMICALLY MILLED POCKETS AROUND THE DAMAGE, (REFER TO FIGURE 201).
- 5 THE mm (in.) CONVERSION FOR THE DOUBLER THICKNESS CORRESPONDS TO THE US STANDARD ALUMINUM SHEET METAL GAGE AND IS NOT NECESSARILY THE EXACT CONVERSION.

Skin at Stringer - External Repair  
Figure 204

# Forme et dimensions de la tête du rivet plein

	Tête ronde TR NF E 27-153		Tête goutte de suif TGS NF E 27-152		Tête fraisée 90° TF NF E 27-154		Tête plate TP ou TC NF E 27-151	
Ø D	Ø tête	H tête	Ø tête	H tête	Ø tête	H tête	Ø tête	H tête
2	3.5	1.5	4	1	4	1	4	1
2.5	4.5	2	5	1.25	5	1.25	5	1.25
3	5.5	2.5	6	1.5	6	1.5	6	1.5
4	7	3	8	2	8	2	8	2
5	9	4	10	2.5	10	2.5	10	2.5
6	11	4.5	12	3	12	3	12	3
7	12	5	14	3.5	14	3.5	14	3.5
8	14	5.5	16	4	16	4	1	4
10	17	7	20	5	20	5	20	5
12	21	8	24	6	24	6	24	6
14	24	10	28	7	28	7	28	7
16	28	11	32	8	32	8	32	8
18	31	12	36	9	36	9	36	9

## GLOSSAIRE

Overall = dimensions hors-tout

Wheel base = voie

Track = empattement

Référence = datum

Dihedral = dièdre

A crack = une crique

A dent = un enfoncement

Width = longueur

Length = longueur

Thickness = épaisseur