

INSTALLATION INSTRUCTIONS:

- A. The drawing main view, sections F-F & B-B shows the configuration of the aircraft for regular flight, without the camera installed.
When the camera is installed, the -11 cover plates are removed and the -15 deflector angle is installed on the bottom of the fuselage in place of the -11 cover plate, and the -17 (optional) camera mounting plate is installed in the floor over the baggage area as shown in sections C-C, D-D, & E-E.
- B. The -17 camera mounting plate may have any number of holes drilled into for the mounting of the camera and accessories provide 2D edge distance and 4D on center spacing minimums.
- C. Weight of camera and equipment may not exceed the allowable weight of the baggage compartment.

- D. The baggage retainer net must be installed when the camera and accessories are installed.

This drawing has been prepared for a specific alteration to TN based on information supplied to Aviation Engineering Consultants of USA, LLC (AECUSA-LLC) by the person responsible for arranging the alteration or his agent. The use of the data on any other aircraft or component may lead to an unsafe alteration and therefore the data is not to be used for any other purpose than for which it was originally supplied without the written approval of AECUSA-LLC.

Fastener Hole & Countersink Size

Fastener	Hole Size	Countersink Size
(LZ) NAS1097AD4	Ø.128/.134	100°xØ.175/.185
(LZ) NAS1097AD3	Ø.098/.106	100°xØ.126/.136
MS20470AD4	Ø.128/.134	-
MS20470AD5	Ø.161/.166	-

SYM	FASTENER
+	Existing Fastener Location - Not Used
⬅	Added Fastener Location - Install MS20470AD4
⬆	Baggage Net Tie Down Location
⬇	Existing Fastener Location - Install MS20470AD4
⬅⬆	Install NAS1097AD4

QTY	UNIT	PART NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPECIFICATION	STOCK SIZE	ITEM NO.
80		AN526C1032	SCREW			13
80		MS21059L03	NUT PLATE			12
	AR	-21	FILLER			11
	20	-19	ANGLE ASBY			10
	AR	-17	CAMERA MOUNTING PLATE			9
	1	-15	DEFLECTOR ANGLE			8
	4	-13	PLACARD			7
	4	-11	COVER PLATE			6
	4	-09	SHROUD			5
	1	-07	DOUBLER - SKIN			4
	1	-05	DOUBLER - FLOOR			3
1	40	-03	ANGLE		.063X1X1	2
	-	-01	CAMERA PORT INSTALLATION			1

PARTS LIST

Project No. XX

DIMENSIONS ARE IN INCHES
TOLERANCES:
.X= ±.1, .XX= ±.03
.XXX= ±.015
ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, LLC, and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, LLC



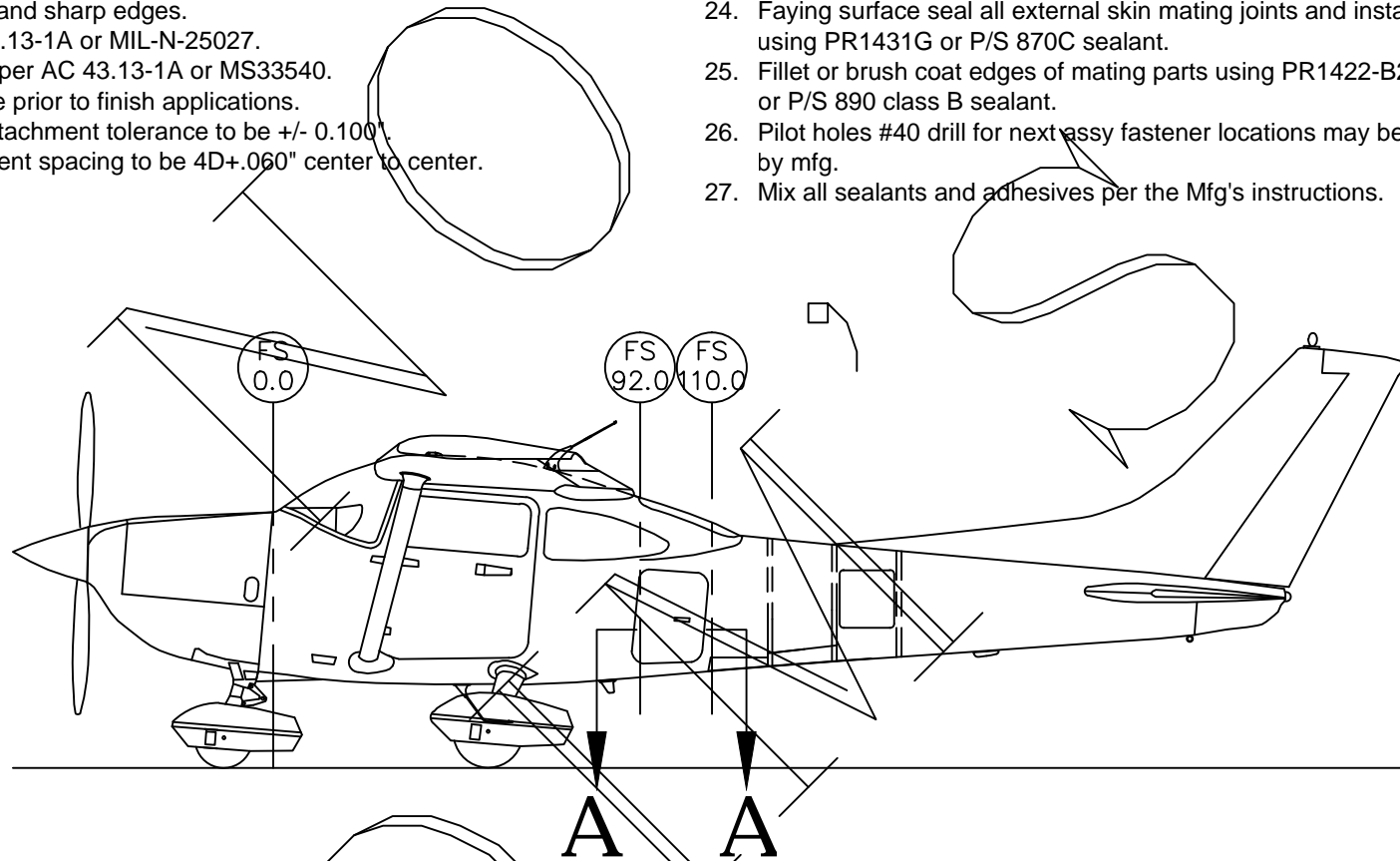
AVIATION ENGINEERING CONSULTANTS OF USA, LLC
Cape Coral, FL
800-977-1992

TITLE: DUAL CAMERA PORT INST - CESSNA 182

GENERAL NOTES

(UNLESS OTHERWISE SPECIFIED)

1. 10 EVEN SPACES AROUND HOLE. ORIENTATION IS NOT CRITICAL. ADJUST ORIENTATION TO AVOID EXISTING FEATURES.
2. 10 EVEN SPACES AROUND HOLE. ORIENTATION IS CRITICAL.
3. Fabricate per AC 43.13.
4. Assembly shop practice per AC 43.13.
5. All bend radii R .25.
6. All bend relief's R .16.
7. Flange corner radii are to be R .25.
8. Alodine all aluminum parts per Mil-C-5541.
9. Epoxy prime per Mil-P-23377.
10. Surface finish of parts to be 125 microinches
11. Fastener symbols per NAS 523.
12. Remove all burrs and sharp edges.
13. Torque per AC 43.13-1A or MIL-N-25027.
14. Install safety wire per AC 43.13-1A or MS33540.
15. All dimensions are prior to finish applications.
16. Equally spaced attachment tolerance to be +/- 0.100"
17. Minimum attachment spacing to be 4D+.060" center to center.
18. Attachments located from part edge 2D+.060" for details, 2D minimum on assembly, 2D from joggles and adjacent structure.
19. Identify per MIL-STD-130 using rubber stamp or and written with indelible ink. Small assemblies may be tagged.
20. Symbols + between end fastener symbols indicate identical fasteners equally spaced.
21. Install solid rivets per AC 43.13-1A. Install all other fasteners per manufacturer's instructions.
22. Free flanges angular tolerance +/- 5 degrees (flanges not attached at next assy).
23. Restrained flanges angular tolerance +/- 1.5 degrees (flanges attached at next assy).
24. Faying surface seal all external skin mating joints and install fasteners wet using PR1431G or P/S 870C sealant.
25. Fillet or brush coat edges of mating parts using PR1422-B2, CS3204 class B, or P/S 890 class B sealant.
26. Pilot holes #40 drill for next assy fastener locations may be added or deleted by mfg.
27. Mix all sealants and adhesives per the Mfg's instructions.



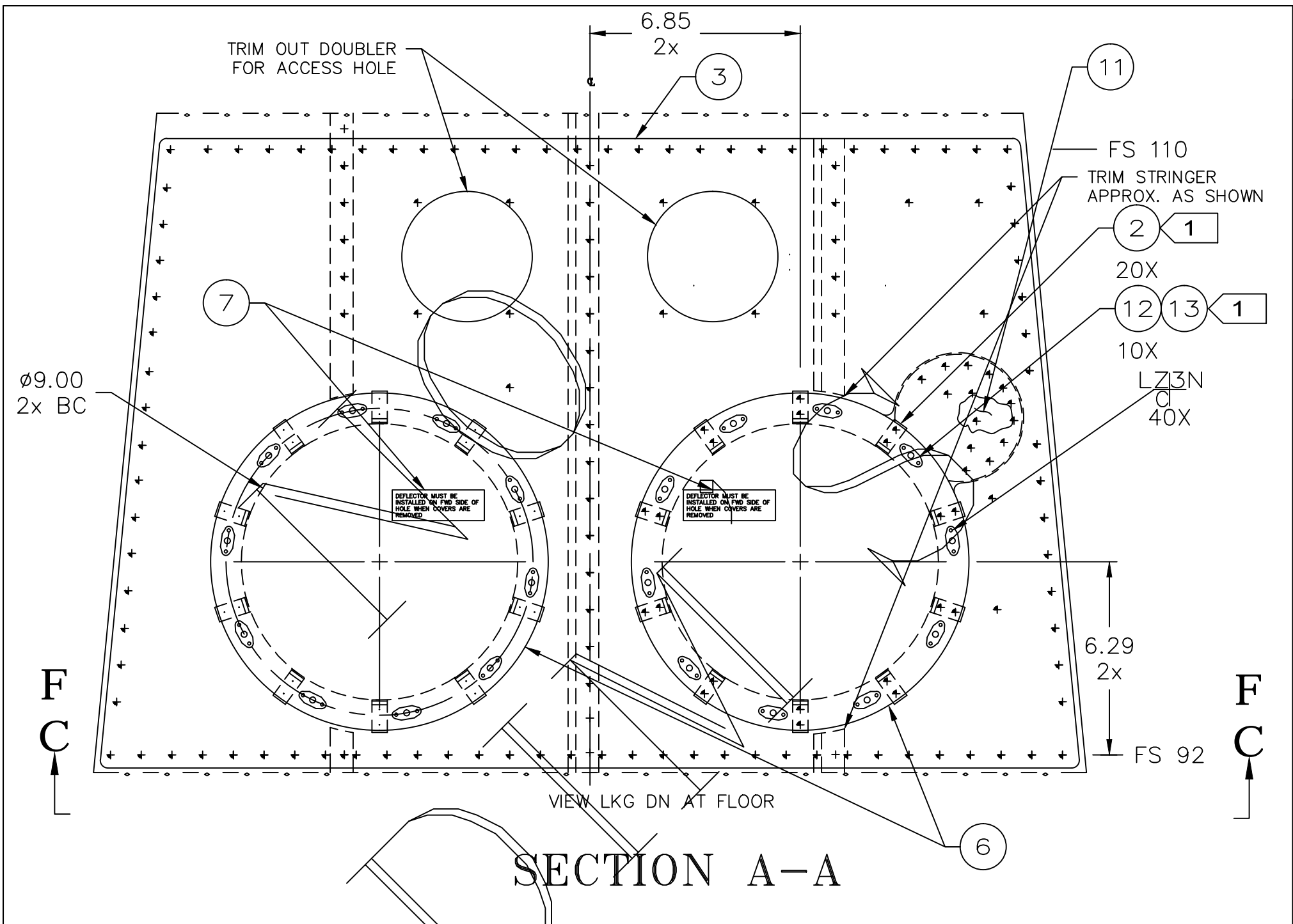
-01 CAMERA PORT INSTALLATION

DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX= ±.03
 .XXX= ±.015
 ANGLES ±0°-30°

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

AVIATION ENGINEERING CONSULTANTS OF USA, LLC
 Cape Coral, FL
 800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182
DWG. No. 00-1500-07-01-Tn
Rev. - SHEET 2

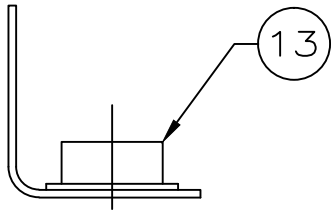


DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX = ±.03
 .XXX = ±.015
 ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

AVIATION ENGINEERING CONSULTANTS OF USA, LLC
 Cape Coral, FL
 800-977-1992

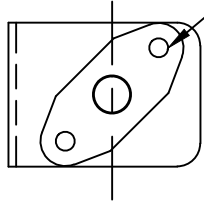
TITLE DUAL CAMERA PORT INST - CESSNA 182
 DWG. No. 00-1500-07-01-Tn
 Rev. - SHEET 3



13

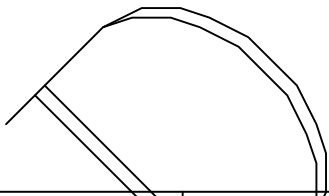
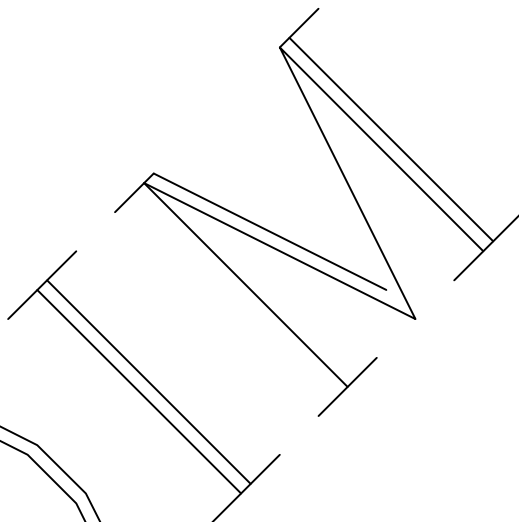
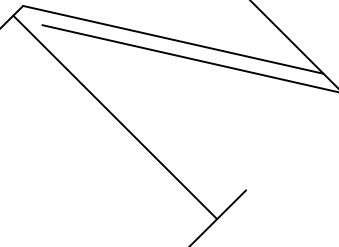
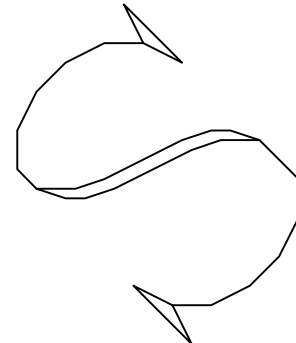
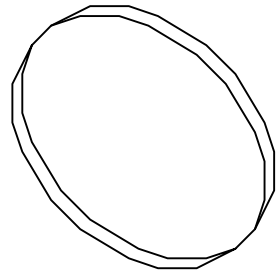
DEFLECTOR MUST BE
INSTALLED ON FWD SIDE OF
HOLE WHEN COVERS ARE
REMOVED

L73N
Ø
2X



-13 PLACARD
.125" TEXT

-3 ANGLE
BR .12



DIMENSIONS ARE IN INCHES
TOLERANCES:
.XX = ±.03
.XXX = ±.015
ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

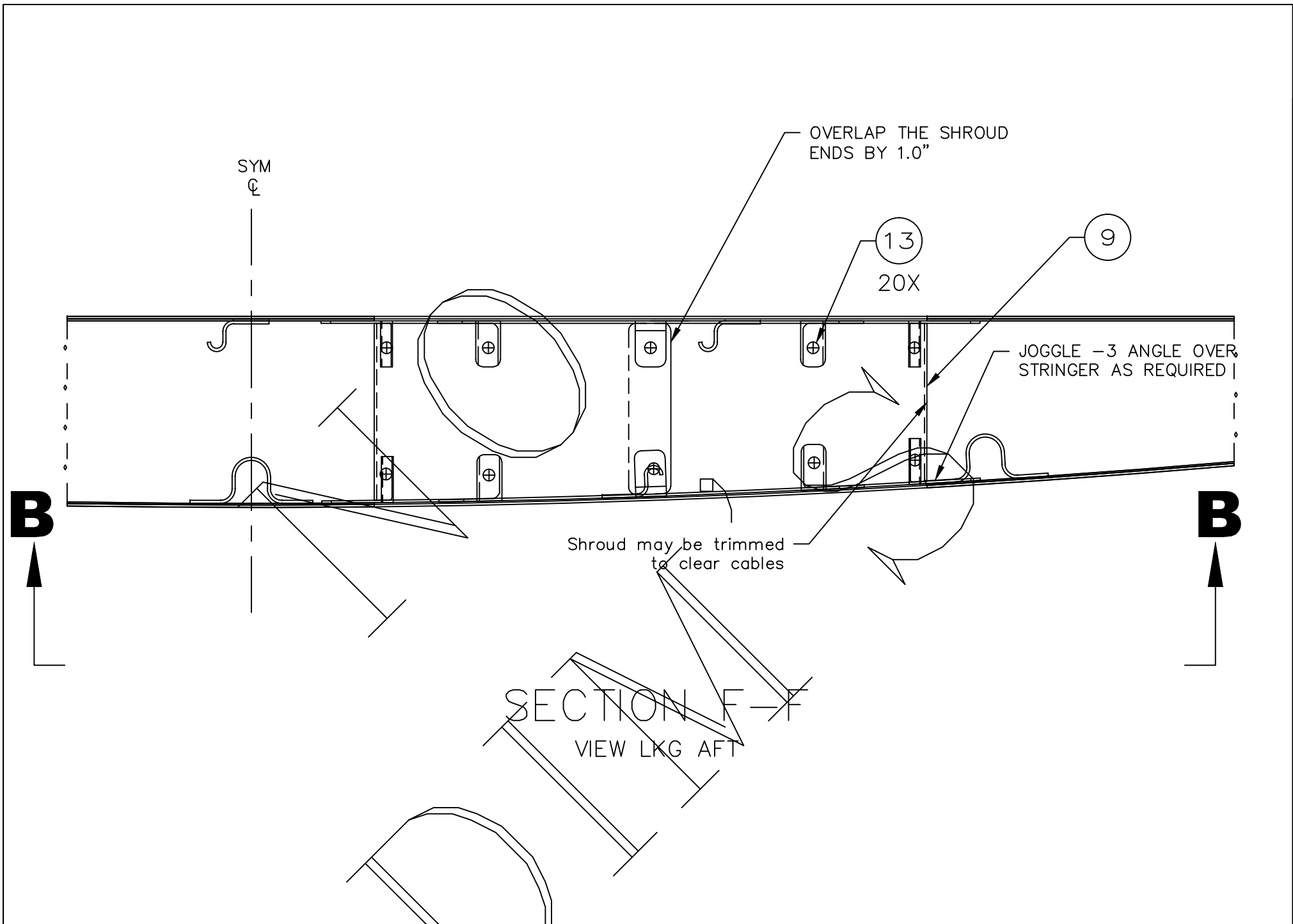


AVIATION ENGINEERING
CONSULTANTS of USA, LLC
Cape Coral, FL
800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182

DWG. No. 00-1500-07-01-Tn

Rev. - SHEET 4



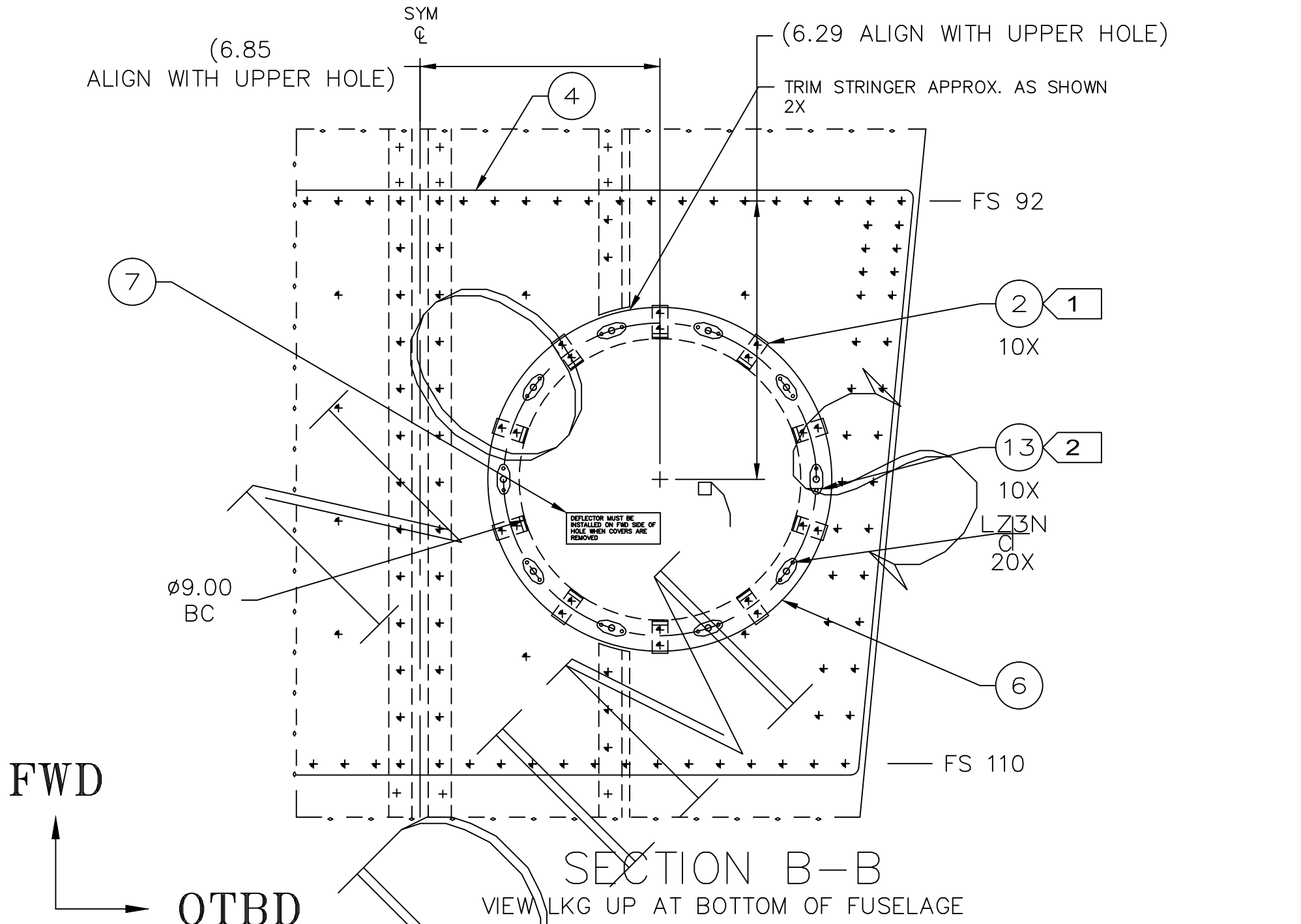
DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX = ±.03
 .XXX = ±.015
 ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

AE
 AVIATION ENGINEERING
 CONSULTANTS OF USA, LLC
 Cape Coral, FL
 800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182
 DWG. No. 00-1500-07-01-Tn

Rev. - SHEET 5



DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX = ± 0.03
 .XXX = ± 0.015
 ANGLES $\pm 0^\circ - 30'$

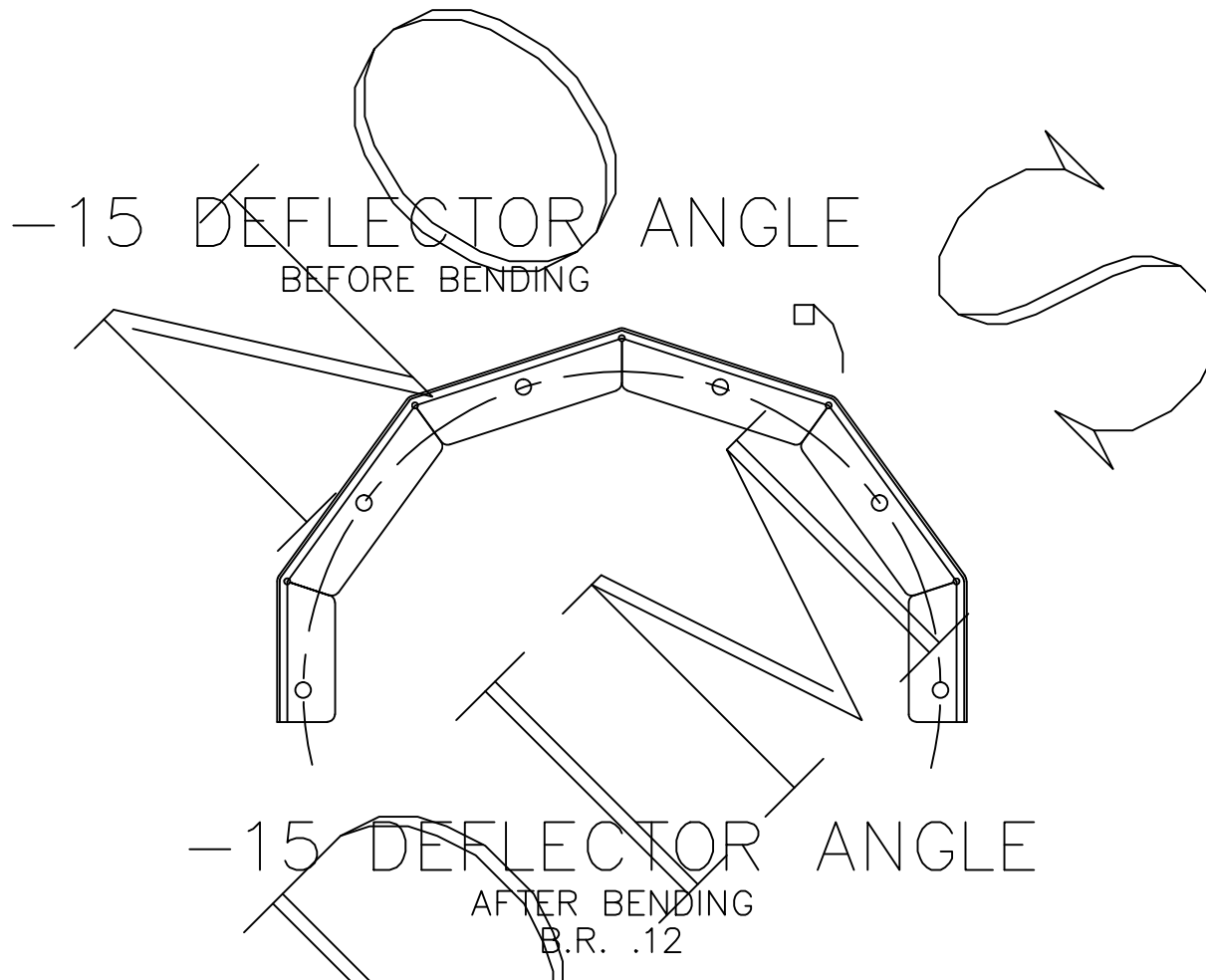
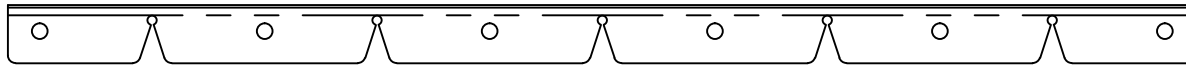
NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

AVIATION ENGINEERING CONSULTANTS OF USA, LLC
 Cape Coral, FL
 800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182

DWG. No. 00-1500-07-01-Tn

Rev. - SHEET 6



-15 DEFLECTOR ANGLE
BEFORE BENDING

-15 DEFLECTOR ANGLE
AFTER BENDING
B.R. .12

DIMENSIONS ARE IN INCHES
TOLERANCES:
.XX = ±.03
.XXX = ±.015
ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

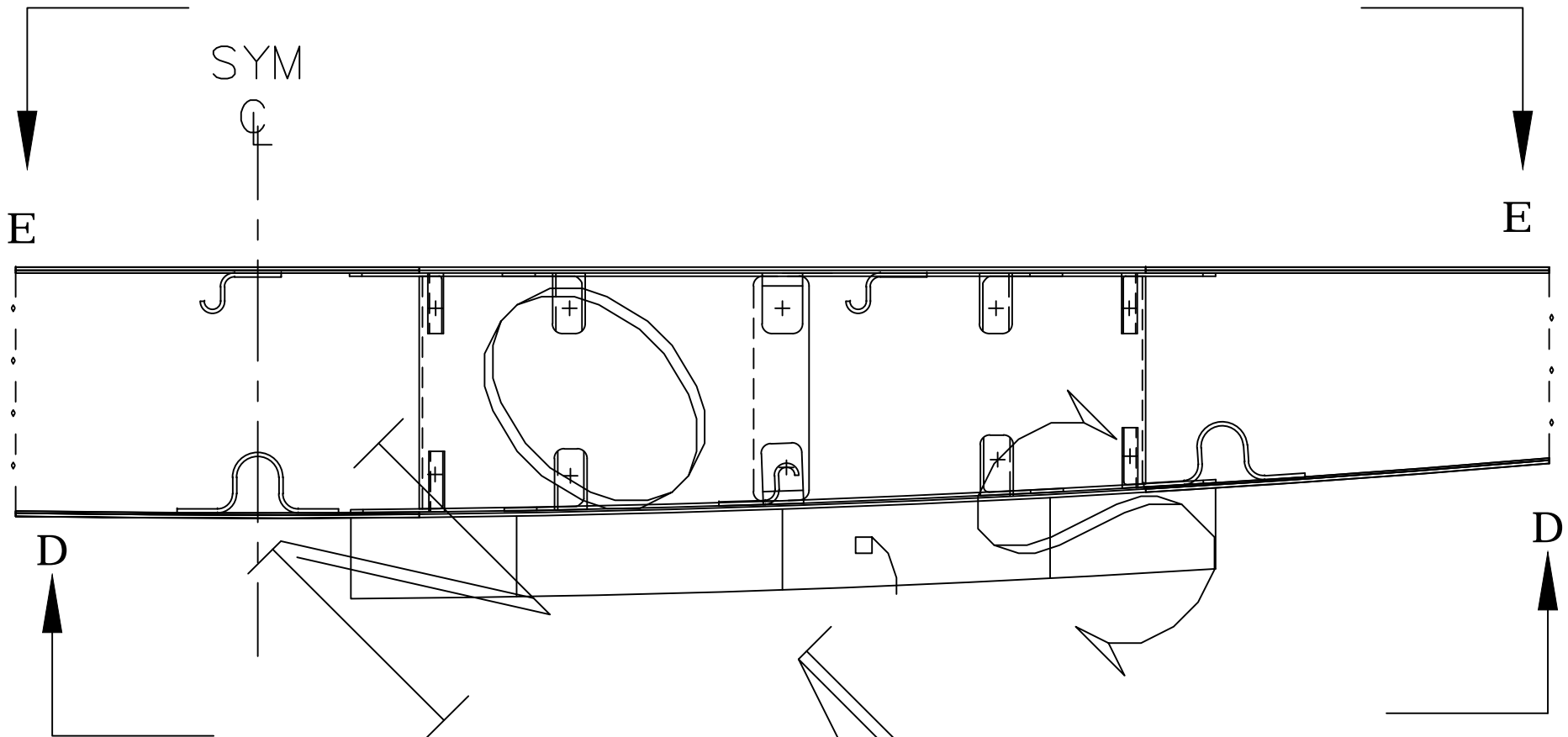


AVIATION ENGINEERING
CONSULTANTS of USA, LLC
Cape Coral, FL
800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182

DWG. No.00-1500-07-01-Tn

Rev. - SHEET 7



SECTION C-C
 VIEW LKG AFT
 SHOWING DEFLECTOR ANGLE INSTALLED

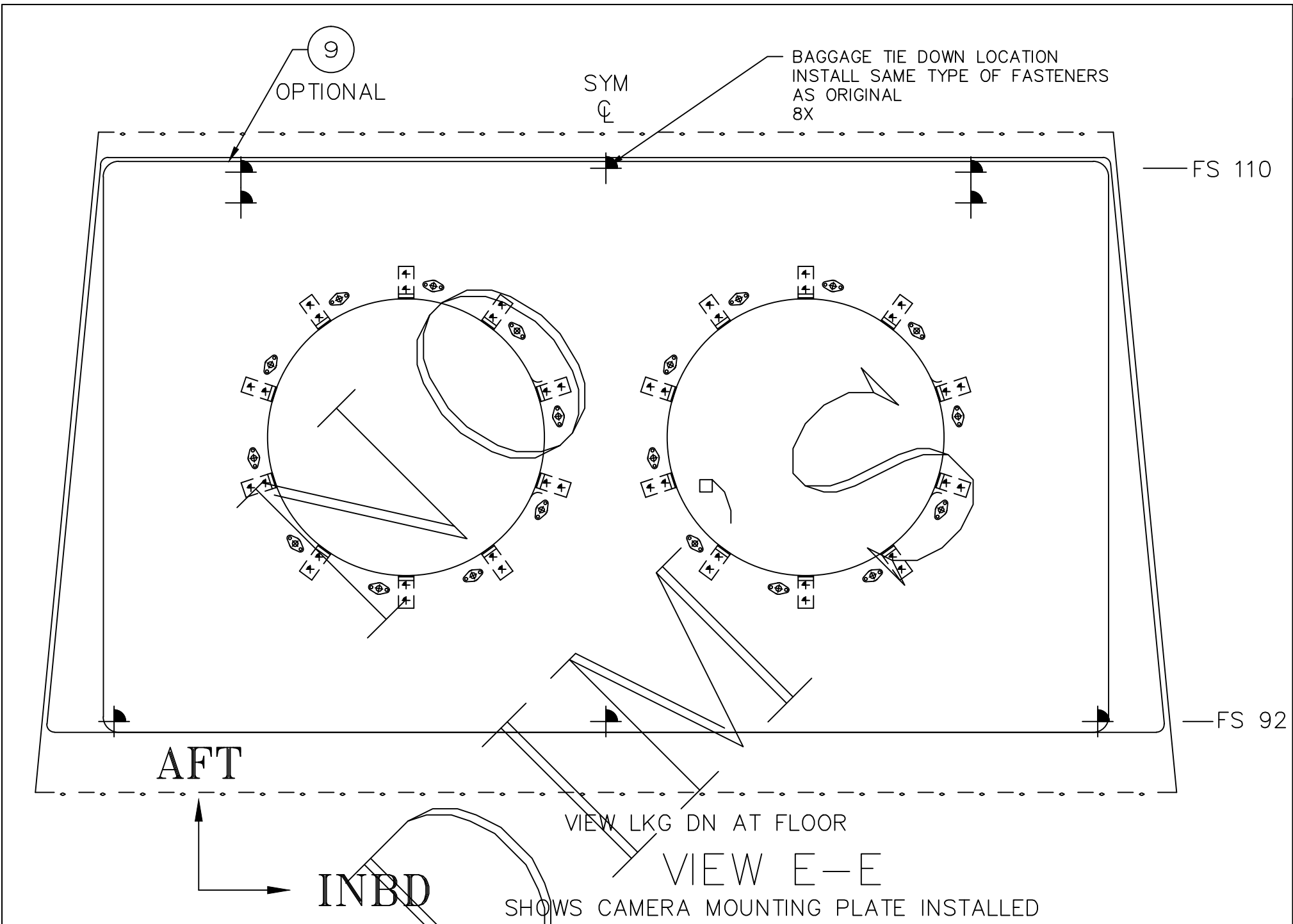
DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX = ±.03
 .XXX = ±.015
 ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.



AVIATION ENGINEERING
 CONSULTANTS OF USA, LLC
 Cape Coral, FL
 800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182	
DWG. No. 00-1500-07-01-Tn	Rev. - SHEET 8

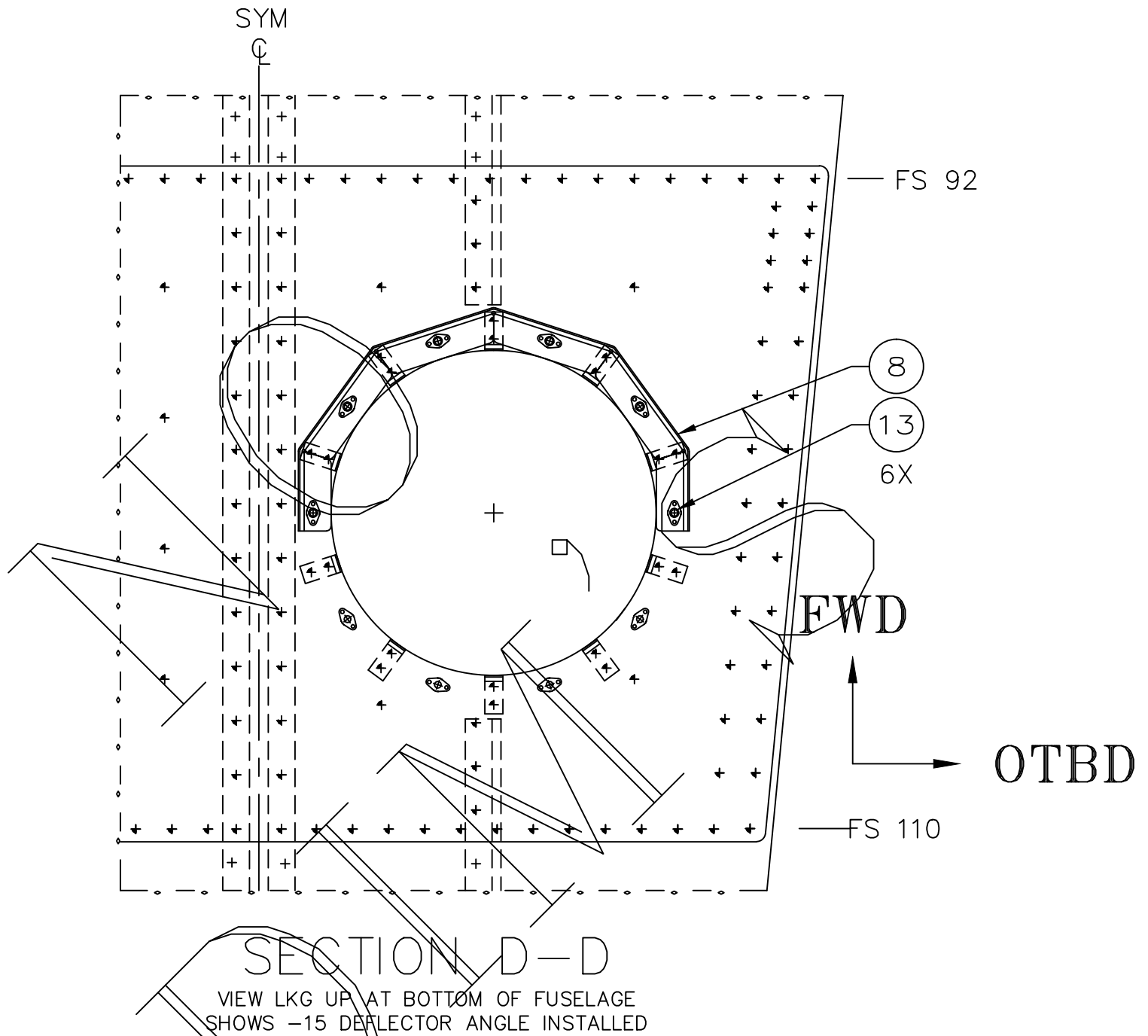


DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX = ±.03
 .XXX = ±.015
 ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

AVIATION ENGINEERING CONSULTANTS OF USA, LLC
 Cape Coral, FL
 800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182
 DWG. No. 00-1500-07-01-Tn
 Rev. - SHEET 9



DIMENSIONS ARE IN INCHES
TOLERANCES:
.XX = ±.03
.XXX = ±.015
ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.

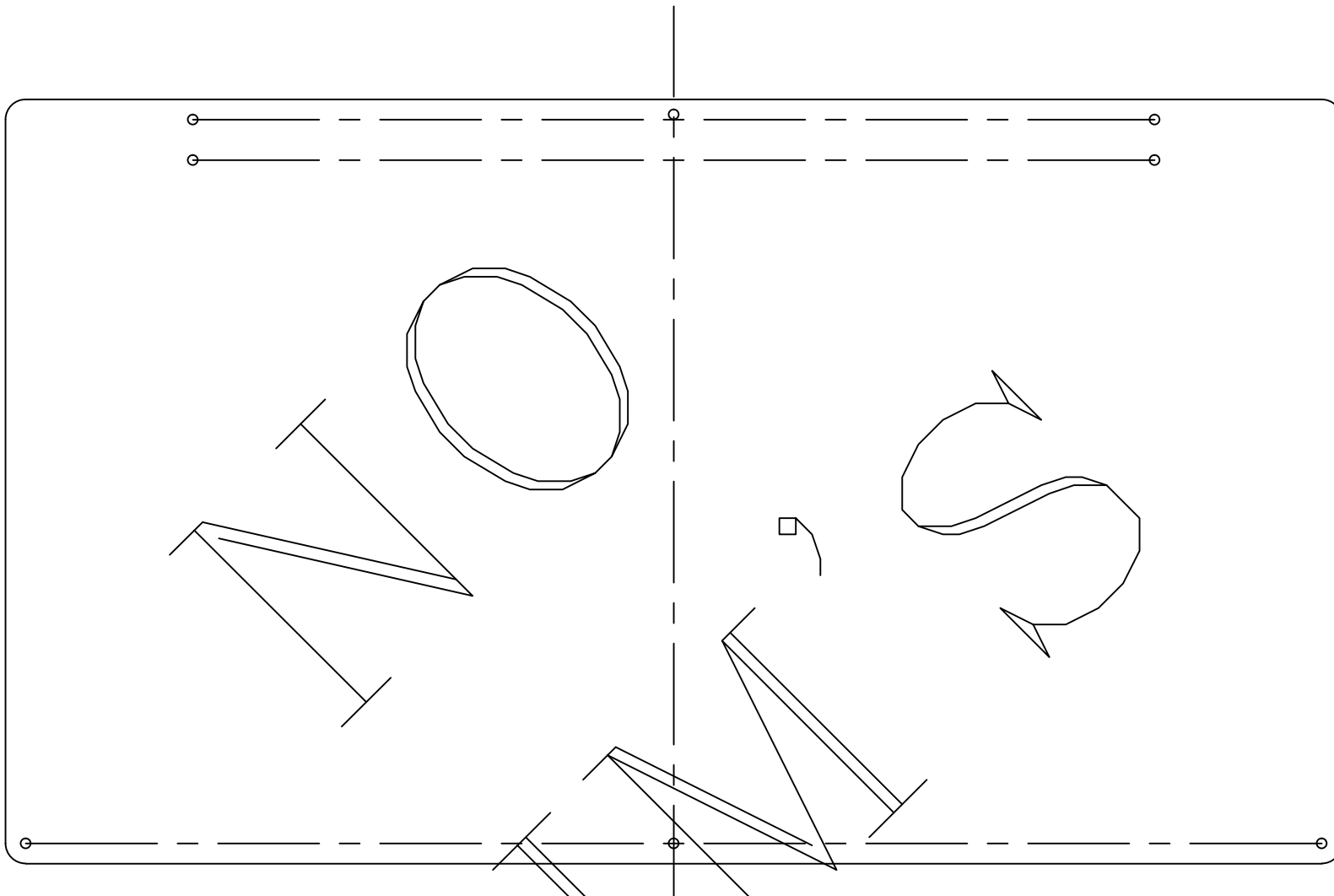


AVIATION ENGINEERING
CONSULTANTS OF USA, LLC
Cape Coral, FL
800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182

DWG. No. 00-1500-07-01-Tn

Rev. - SHEET 10



-17 CAMERA MOUNT PLATE

DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX = ±.03
 .XXX = ±.015
 ANGLES ±0°-30'

NOTICE - This drawing is the property of Aviation Engineering Consultants of USA, Inc., and any disclosure of its contents to others is given in confidence. It must not be reproduced or copied in whole or in part or used in any way except with specific approval and permission of the General Manager of Aviation Engineering Consultants of USA, Inc.



AVIATION ENGINEERING
 CONSULTANTS of USA, LLC
 Cape Coral, FL
 800-977-1992

TITLE DUAL CAMERA PORT INST - CESSNA 182

DWG. No.00-1500-07-01-Tn

Rev. - SHEET 11