

TECHNICAL BULLETIN

Bell Helicopter **TEXTRON**

A Division of Textron Canada Ltd.

NO. 407-98-11

DATE 10-16-98

PAGE NO. 1 of 9

DATE
REV.

12, 800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4

MODELS AFFECTED: 407

SUBJECT: LITTER DOOR SEAL INSTALLATION,
MODIFICATION OF.

HELICOPTERS AFFECTED: 407, Serial Numbers 53000 through
53169.

[Helicopters Serial Numbers 53170
and subsequent will have the intent
of this bulletin completed before
delivery.]

COMPLIANCE: At the decision of the operator.

DESCRIPTION:

Field reports show that the litter door seal installation will not keep water out in bad weather conditions. This technical bulletin gives the instructions to install a better seal.

APPROVAL:

The engineering design aspects of this Technical Bulletin are Transport Canada approved.

MANPOWER:

Approximately 4.0 man-hours are necessary to complete this Bulletin. The man-hours are based on hands-on time and can change due to the personnel and facilities available.

7851 60541

MATERIAL:**Required Material:**

The material that follows is necessary to complete this Bulletin and can be procured through your Bell Helicopter Textron Supply Center.

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
407-030-657-101	SEAL	1
407-030-650-119	PAD (NOTE 1)	1
120-199-2	SEAL	5 FEET
NAS9307M-4-01	RIVET (NOTE 2)	1

NOTE:

1. As an alternative, make from 110-070-6, 1 (0.3 m) foot long.
2. As alternatives, rivet P/N CR3523-4-01 or M7885/4-4-01 can be used.

Consumable Material:

The material that follows is necessary to complete this Bulletin, but this material is consumable (bench stock) material and does not require ordering depending on the operators consumable material stock levels. This material can be obtained through your Bell Helicopter Textron Supply Center.

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>REFERENCE NO.</u>
299-947-152TICL1 1OZ	ADHESIVE 1OZ (NOTE 1)	C-307
MILS81733TY II-2 4OZ	SEALANT	C-392
NO.4 SILICONE	COMPOUND (LUBRICANT)	C-018
TT-N-95,TYII 1GAL	NAPHTHA	C-301
P-P-101	180 GRIT SANDPAPER	C-423
METHYL ETHYL KETONE	SOLVENT (NOTE 2)	C-309

NOTES:

1. Dapcotac 3300
2. Where you cannot use MEK, use RHO SOLV756.

- NOTE -

The "C" REFERENCE NO. above is a cross reference to the consumable list found in the Standard Practices Manual.

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-407-MM-5, rev.4- 16 December 1996:

Chapter 52, Doors and Windows.

BHT-407-IPB, rev.3- 16 December 1996:

Chapter 52, Doors and Windows.

PUBLICATIONS AFFECTED:

BHT-407-MM-5, rev.4- 16 December 1996:

Chapter 52, Doors and Windows.

BHT-407-IPB, rev.3- 16 December 1996:

Chapter 52, Doors and Windows.

ACCOMPLISHMENT INSTRUCTIONS:

1. Remove the left passenger door (Chapter 52). Keep the door for subsequent installation.
2. Remove the inner plastic panel installed on the litter door (Chapter 25).
3. Remove the seal (3, Figure 1) from the aft vertical edge of the litter door (2).

- NOTE -

Double-sided tape was used before to hold the seal to the litter door.

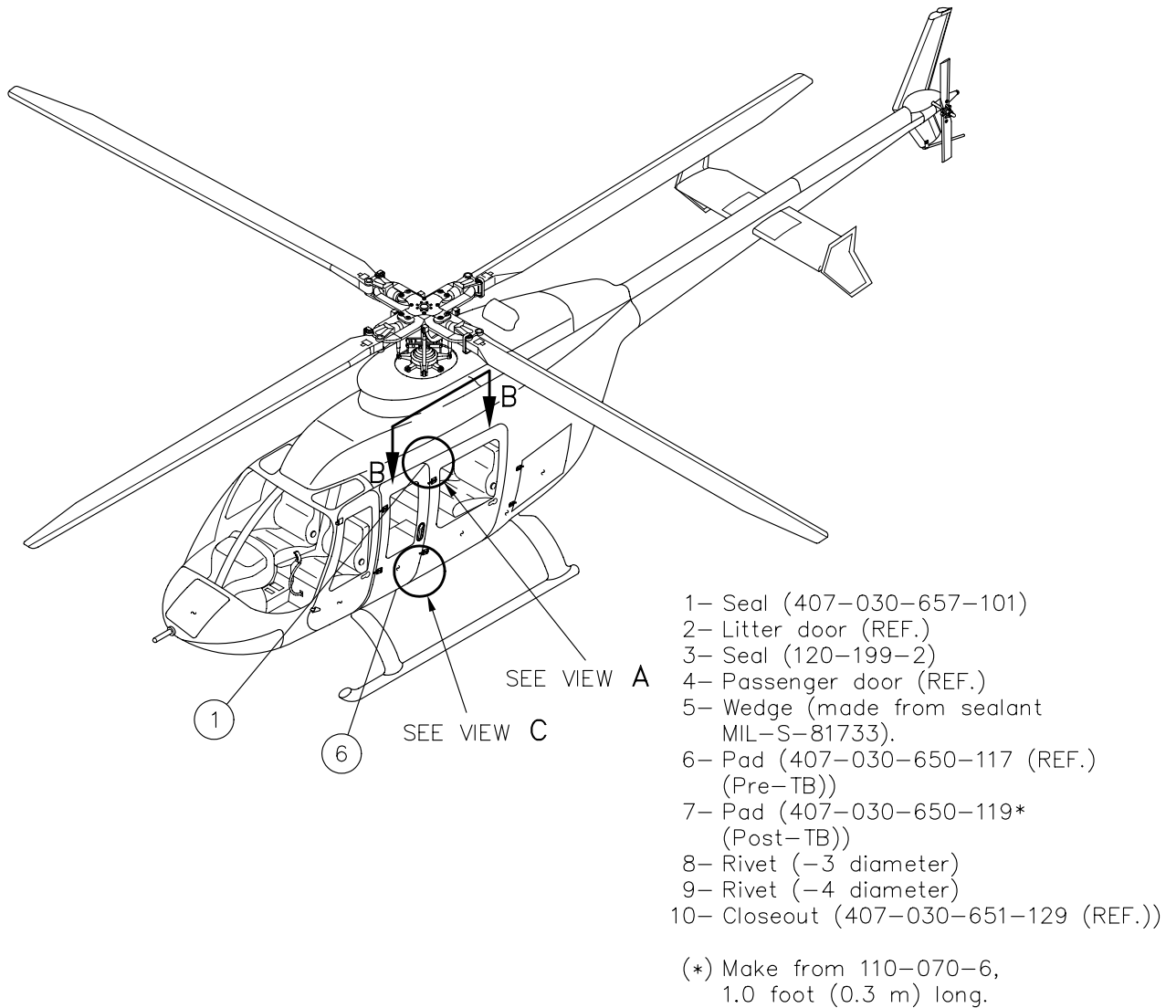
4. Use solvent (C-309) to remove the adhesive or tape from the litter door.
5. Use a plastic scraper to remove the sealant wedges from the surfaces of the litter door (2) and the passenger door (4). Use solvent (C-309) to remove the remaining sealant from the door surfaces.
6. Remove the five rivets [four rivets (8) and one rivet (9)] that attach the stainless steel closeout (10) on the top aft corner of the litter door (2).
7. Remove and discard the closeout. If it is necessary to help loosen the adhesive bond, use a heat source of less than 225°F (107°C). You can use a heat lamp.
8. Use abrasive paper (C-423) to remove the remaining adhesive from the top aft corner of the litter door (2). Make sure that you do not remove the structural material.
9. Clean the surface of the litter door with a clean cloth made moist with solvent (C-309).
10. Seal the four open holes (where the rivets (8) were removed in Step 6) with sealant (C-392). Let the sealant dry for 24 hours at approximately 68°F (20°C).
11. Install a rivet P/N NAS9307M-4-01 in the open hole where you removed the rivet (9) in Step 6. Install the rivet wet with sealant.
12. Carefully cut the remaining unwanted tabs from the injection mold process of the new seal (1).
13. Prepare the surfaces of the new seal (1) and the litter door (2), then bond as follows:
 - a. Use abrasive paper (C-423) to make the surfaces of the seal (1) and the litter door (2) rough.

- b. Rub the door and the seal with a cloth made moist with solvent (C-309) to remove the sanding residue. Keep the seal and the door clean of contamination until you bond them.
 - c. Mix 100 parts of A and 5 parts of B of adhesive (C-307) by weight. The pot life of the adhesive is short. Only mix as much as you can use in 15 to 20 minutes.
 - d. Use a brush to apply the adhesive (C-307) to the surfaces of the seal (1) and door (2). Let the adhesive air dry for 15 to 30 minutes to remove the solvents and to let the adhesive become tacky.
 - e. Put the seal (1) in position on the litter door (2). If it is necessary to put the seal in position again, remove it and bond it again.
14. Cut the top end of the seal (3) at an angle to align the new seal (1) as shown on View A. Make sure that the seal (3) is lower than the bottom of the litter door (View C). Do not cut the lower part of the seal at this time.
 15. Prepare the surfaces of the seal (3) and the door (2).
 16. Cut the lower end of the seal (3) (View C).
 17. Use a fine-cut file or abrasive paper (C-423) to make a radius of 0.125 inch (3.175 mm) on the top inboard part of the forward edge of the passenger door (4, Detail D, View B-B). Make the radius 2.5 inches (63.5 mm) long. Make a smooth change to the edge of the passenger door (4) that does not have a radius. This procedure will help the seal (1) keep its shape when you close the passenger door (4).
 18. At the forward edge of the new seal (1) on the litter door (2), use the sealant (C-392) to make a wedge (5). This will give a continuous surface that will give support to the seal (3, View C).
 19. At the aft edge of the new seal (1), use the sealant (C-392) to make another wedge on the passenger door (4). The wedge (5) on the passenger door (4) can be made approximately 0.100 inch (0.254 mm) longer than required to permit a decrease in the length of the seal (1) when it is open to colder temperatures (View C).

20. At the bottom of the aft corner of the litter door, remove the rubber pad (Initial configuration, View Y-Y).
21. Use abrasive paper (C-423) to remove the remaining adhesive from the bottom aft corner of the litter door (2). Make sure that you do not remove the structural material.
22. Prepare the surfaces of the new pad (7) and the door (2). Then bond the pad as in Step 13.
23. Finish the areas you worked on, as required.
24. Install the inner plastic panel removed in Step 2. Make sure that the plastic does not touch the upper seal (1) (View A, Installation of the panel). Trim the panel if necessary to get a clearance of 0.050 to 0.100 inch (1.27 to 2.54 mm).
25. Apply a thin layer of lubricant compound (C-018) to faying surfaces that follow:
 - the seal with the passenger door (Detail D),
 - the new seal (1) with the seal (3) on upper door frame, and
 - the new pad (7) with the airframe.

Apply the compound again after each 25 hours of operation, as required.

26. Put the helicopter back to flight configuration.
27. Make an entry in the helicopter historical record to show that this Technical Bulletin is completed.
28. Make an entry in the Record of Technical Bulletins in the Maintenance Manual and in the Illustrated Parts Breakdown.



NOTES:

- 1 Seal the gap with adhesive (C-307). Cure the seal with the passenger door in position to make sure that the seal (3) touches the passenger door (4) correctly.
- 2 Make radius on the edge of the passenger door that touches the seal (1). Make radius of 0.125 inch (3.175 mm) x 2.5 inches (63.5 mm) long.
- 3 Apply lubricant compound No. 4 (C-018) to the faying surface of the seal (1) with passenger door (4). Apply again as required.
- 4 The sealant wedge on the passenger door can extend forward 0.10 inch (2.54 mm) more than required to touch the seal (1).
- 5 Put the rivet NAS9307M-4-01, wet with sealant, in the hole.

Figure 1. Litter door seal - Installation (Sheet 1 of 3)

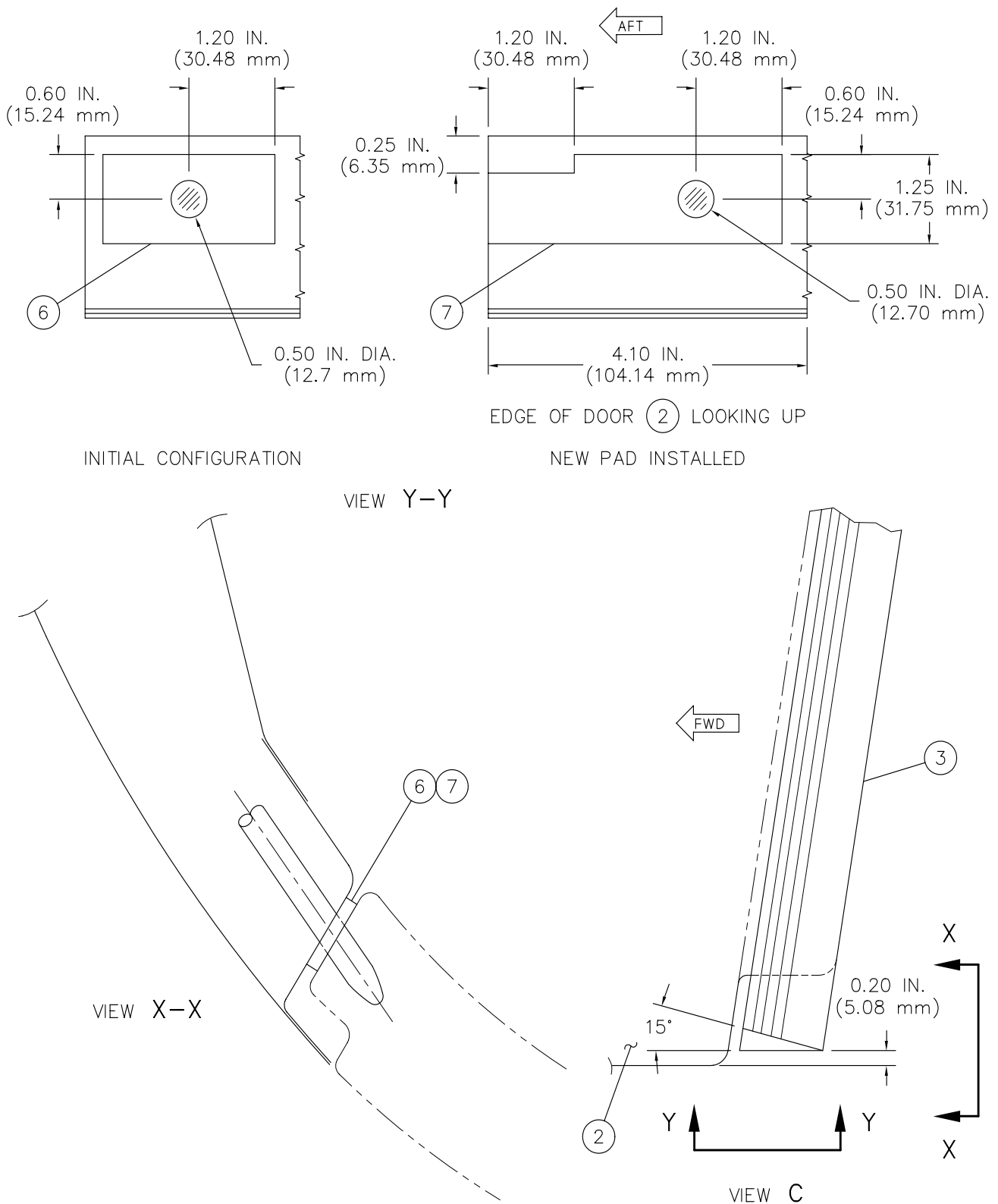


Figure 1. Litter door seal - Installation (Sheet 2)

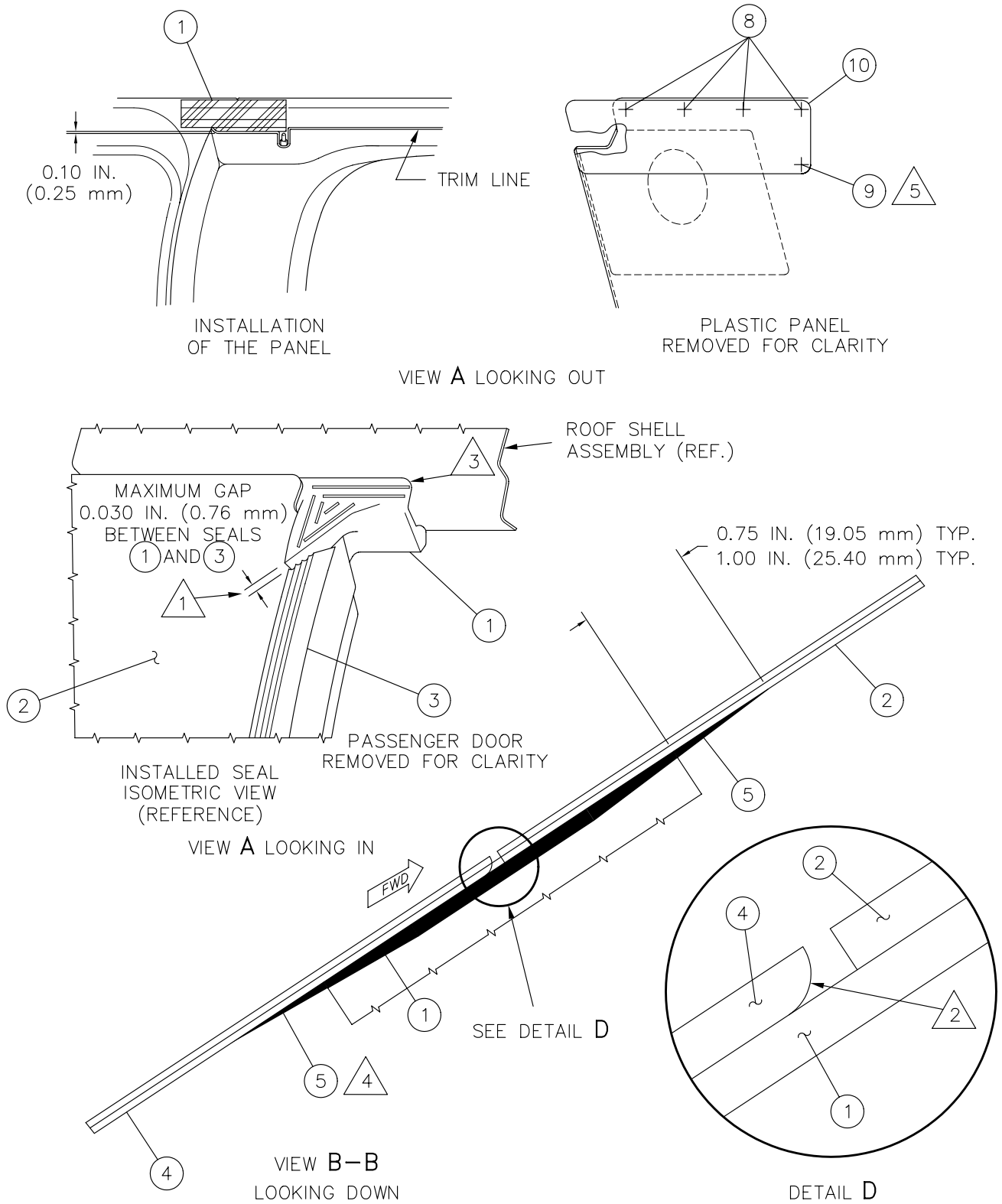


Figure 1. Litter door seal - Installation (Sheet 3)