



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

RUBBER TRIM SEAL - REPAIR

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to repair the rubber trim seals of the main door, baggage door, service door, and passenger-cabin escape hatch.
- B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
52-00-04-300-801-A	RUBBER TRIM SEAL - REPAIR	ALL

TASK 52-00-04-300-801-A
EFFECTIVITY: ALL
2. RUBBER TRIM SEAL - REPAIR
A. General

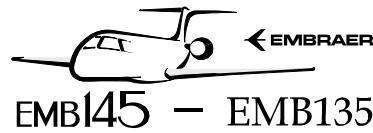
- (1) This task gives the instructions to repair the rubber trim seals of the main door, baggage door, service door, and passenger-cabin escape hatch.

B. References

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM TASK 21-31-00-860-801-A/200	PROCEDURE TO PRESSURIZE THE AIRCRAFT FOR MAINTENANCE
AMM TASK 21-31-00-860-802-A/200	PROCEDURE TO DEPRESSURIZE THE AIRCRAFT FOR MAINTENANCE
AMM TASK 52-00-00-910-801-A/200	MAIN-DOOR - SUPPORTING
AMM TASK 52-10-04-000-801-A/400	MAIN-DOOR RUBBER TRIM SEAL - REMOVAL
AMM TASK 52-10-04-400-801-A/400	MAIN-DOOR RUBBER TRIM SEAL - INSTALLATION
AMM TASK 52-18-04-000-801-A/400	SIDE-HINGED MAIN-DOOR RUBBER TRIM SEAL - REMOVAL
AMM TASK 52-18-04-400-801-A/400	SIDE-HINGED MAIN-DOOR RUBBER TRIM SEAL - INSTALLATION
AMM TASK 52-21-00-000-801-A/400	PASSENGER-CABIN ESCAPE HATCHES - REMOVAL
AMM TASK 52-21-00-400-801-A/400	PASSENGER-CABIN ESCAPE HATCHES - INSTALLATION
AMM TASK 52-21-01-000-801-A/400	PASSENGER-CABIN ESCAPE-HATCH RUBBER TRIM SEAL - REMOVAL
AMM TASK 52-21-01-400-801-A/400	PASSENGER-CABIN ESCAPE-HATCH RUBBER TRIM SEAL - INSTALLATION
AMM TASK 52-30-01-000-801-A/400	BAGGAGE DOOR - REMOVAL
AMM TASK 52-30-01-400-801-A/400	BAGGAGE DOOR - INSTALLATION
AMM TASK 52-30-02-000-801-A/400	BAGGAGE-DOOR RUBBER-TRIM SEAL - REMOVAL
AMM TASK 52-30-02-400-801-A/400	BAGGAGE-DOOR RUBBER-TRIM SEAL - INSTALLATION
AMM TASK 52-43-04-000-801-A/400	SERVICE-DOOR RUBBER-TRIM SEAL - REMOVAL
AMM TASK 52-43-04-400-801-A/400	SERVICE-DOOR RUBBER-TRIM SEAL - INSTALLATION
ITEM GSE 217	JIG, PASSENGER DOOR SEAL REWORK
ITEM GSE 218	JIG, SERVICE DOOR SEAL REWORK
SRM 51-20-01-PR	-

C. Zones and Accesses

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
811		Airstairs door
811		Side-hinged main door



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(Continued)

ZONE	PANEL/DOOR	LOCATION
813		Baggage door
821		Service door
812		LH - Passenger-cabin escape hatch
822		RH - Passenger-cabin escape hatch

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the doors	
Commercially available	Acrylic spatula	To remove the rubber trim seal	
Commercially available	Cutter	To cut the rubber trim seal	
GSE 217	Jig-Rework - Passenger Door Seal	To hold the rubber trim seal	
GSE 218	Jig-Rework - Service Door Seal	To hold the rubber trim seal	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
TT-M-261	Methyl Ethyl Ketone (MEK)	AR
TT-I-735	Isopropyl Alcohol	AR
MIL-F-38249, TYPE I	Sealant RTV-157 (gray)	AR
Manufacturer - Dunlop U.K. - P/N PRF91/B452LG	Silicon rubber-impregnated Terylene cloth	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	In the workshop or on the aircraft, as applicable

I. Preparation

SUBTASK 841-002-A

- (1) To repair the main door, baggage door, or service door rubber trim seal, do as follows:
 - (a) Open the door on which the damaged rubber trim seal is installed (airstairs door or side-hinged main door or baggage door or service door, as applicable).

- (b) On aircraft with airstairs door installed, the door must be held on a bench. For this, do as [AMM TASK 52-00-00-910-801-A/200](#).
 - (c) If applicable, remove the baggage door ([AMM TASK 52-30-01-000-801-A/400](#)) and put the baggage door on a safe surface to prevent damage.
- (2) To repair the passenger-cabin escape hatch rubber trim seal, do as follows:
- (a) Remove the passenger-cabin escape hatch ([AMM TASK 52-21-00-000-801-A/400](#)), and put the door on a safe surface to prevent damage.

J. Rubber Trim Seal - Patch Repair ([Figure 801](#)) ([Figure 802](#)) ([Figure 805](#))

SUBTASK 350-002-A

WARNING: USE SEALANT OR SOLVENT IN WELL VENTILATED AREAS. PREVENT VAPOR INHALATION AND LONG SKIN CONTACT WITH THESE PRODUCTS.

- (1) The patch repair is applicable only to the main door, and service door rubber trim seal, and only in sections where the damage is a longitudinal tear of 40 mm (1.6 in) maximum or the damage is a transverse tear and does not get the rubber trim seal surface corners.
- NOTE:** In sections where the damage is different from that written above (holes, larger tears, etc.), repair the rubber trim seal with the insertion repair.
- (2) Remove the damaged rubber trim seal ([AMM TASK 52-10-04-000-801-A/400](#) or [AMM TASK 52-18-04-000-801-A/400](#) or [AMM TASK 52-43-04-000-801-A/400](#), as applicable).
- NOTE:** 1. Because the aircraft must be dispatched in a short time (less than the sealant curing time), you must remove the rubber trim seal ([AMM TASK 52-10-04-000-801-A/400](#) or [AMM TASK 52-18-04-000-801-A/400](#) or [AMM TASK 52-43-04-000-801-A/400](#), as applicable), replace it with a new one ([AMM TASK 52-10-04-400-801-A/400](#) or [AMM TASK 52-18-04-400-801-A/400](#) or [AMM TASK 52-43-04-400-801-A/400](#), as applicable), and then repair the old rubber trim seal on a bench.
2. For an easier work, you can use a template ([ITEM GSE 217](#) for the main-door rubber trim seal or [ITEM GSE 218](#) for the service-door rubber trim seal) to hold the rubber trim seal firmly on the bench ([Figure 805](#)).
- (3) Cut a piece of Terylene cloth 20 mm (0.8 in) longer than the damage on each side. The cloth must cover all the rubber trim seal section (DET. A or DET. B in [Figure 801](#), as applicable).

WARNING: BE CAREFUL WHEN YOU USE METHYL ETHYL KETONE (MEK) BECAUSE IT IS A HEALTH HAZARD (SKIN, EYES OR MOUTH). DO NOT BREATHE ITS FUMES. KEEP IT AWAY FROM SPARKS, FLAMES, OR SOURCES OF HEAT. PUT ON APPROVED PROTECTIVE CLOTHING, GOGGLES, AND GLOVES. ALWAYS OBEY THE MANUFACTURER'S HEALTH AND SAFETY PRECAUTIONS WHEN YOU USE MEK. IT IS POISONOUS AND FLAMMABLE.

- (4) Clean the damaged area and the adjacent surface with Isopropyl Alcohol or Methyl Ethyl Ketone (MEK).
 - (5) Apply RTV-157 sealant to the damaged area of the rubber trim seal surface which must be made stronger and to the patch (DET. C on [Figure 802](#)).
 - (a) Compress the rubber trim seal to show the damage internal surfaces (DET. C on [Figure 802](#)).
 - (b) Apply the sealant and put the surfaces back to normal slowly (DET. C on [Figure 802](#)).
 - (c) Use an acrylic spatula for the finish of the RTV-157 sealant (DET. D on [Figure 802](#)).
- NOTE:** For a better finish of the sealant, wet the fingers in a water-detergent solution and mold the sealant that is applied.

- (6) Bond the Terylene cloth to the repaired surface (DET. F on [Figure 802](#)).
- NOTE:** The surface of the Terylene cloth that you must bond to the repaired region is the silicon-rubber impregnated surface.

K. Rubber Trim Seal - Insertion Repair ([Figure 801](#)) ([Figure 803](#)) ([Figure 804](#)) ([Figure 805](#))

SUBTASK 350-003-A

WARNING: USE SEALANT OR SOLVENT IN WELL VENTILATED AREAS. PREVENT VAPOR INHALATION AND LONG SKIN CONTACT WITH THESE PRODUCTS.

- (1) If the insertion repair will be made to the main door or service door rubber trim seal, do step (2) and, if the insertion repair will be done to the baggage door or passenger-cabin escape hatch rubber trim seal, do step (3).
- (2) Insertion repair to the main door, and service-door rubber trim seal.
 - (a) Remove the damaged rubber trim seal ([AMM TASK 52-10-04-000-801-A/400](#) or [AMM TASK 52-18-04-000-801-A/400](#) or [AMM TASK 52-43-04-000-801-A/400](#), as applicable).

NOTE: 1. Because the aircraft must be dispatched in a short time (less than the sealant curing time), you must remove the rubber trim seal ([AMM TASK 52-10-04-000-801-A/400](#)), replace it with a new one ([AMM TASK 52-10-04-400-801-A/400](#)), and then repair the old rubber trim seal on a bench.
2. For an easier work, you can use a template ([ITEM GSE 217](#) for the main door rubber trim seal or [ITEM GSE 218](#) for the service-door rubber trim seal) to hold the rubber trim seal firmly on the bench ([Figure 805](#)).
 - (b) Cut the damaged area of the rubber trim seal at 90 degrees and remove the damaged area (DET. A in [Figure 803](#)).

WARNING: BE CAREFUL WHEN YOU USE METHYL ETHYL KETONE (MEK) BECAUSE IT IS A HEALTH HAZARD (SKIN, EYES OR MOUTH). DO NOT BREATHE ITS FUMES. KEEP IT AWAY FROM SPARKS, FLAMES, OR SOURCES OF HEAT. PUT ON APPROVED PROTECTIVE CLOTHING, GOGGLES, AND GLOVES. ALWAYS OBEY THE MANUFACTURER'S HEALTH AND SAFETY PRECAUTIONS WHEN YOU USE MEK. IT IS POISONOUS AND FLAMMABLE.

- (c) Clean all surfaces to be bonded with Isopropyl Alcohol or Methyl Ethyl Ketone (MEK).
- (d) Apply RTV-157 sealant to the rubber trim seal surfaces and to the repair (DET. B on [Figure 803](#)).
- (e) Use an acrylic spatula for the finish of the RTV-157 sealant (DET. C on [Figure 803](#)).

NOTE: For a better finish of the sealant, wet the fingers in a water-detergent solution and mold the sealant that is applied.

- (f) Make the repaired section stronger with RTV-157 sealant and a layer of Terylene cloth of approximately 20 mm (0.8 in) in width, on each side, away from the edges of the damaged area (DET. D on [Figure 803](#)).

NOTE: The surface of the Terylene cloth that you must bond to the repaired area is the silicon rubber-impregnated surface.

- (3) Insertion repair for the baggage door, and passenger-cabin escape hatch rubber trim seal.
 - (a) The repair is permitted if the damage is smaller than 76.2 mm (3 in).

NOTE: If the damage is larger than 76.2 mm (3 in), you must remove the rubber trim seal ([AMM TASK 52-21-01-000-801-A/400](#) or [AMM TASK 52-30-02-000-801-A/400](#)), replace it with a new one ([AMM TASK 52-21-01-400-801-A/400](#) or [AMM TASK 52-30-02-400-801-A/400](#)).

- (b) Cut the damaged area of the rubber trim seal at 90 degrees and remove the damaged area (DET. B on [Figure 804](#) or on [Figure 805](#), as applicable).

NOTE: Be careful to prevent damage to the door structure.

- (c) With an acrylic spatula, remove the old sealant from the door.

WARNING: BE CAREFUL WHEN YOU USE METHYL ETHYL KETONE (MEK) BECAUSE IT IS A HEALTH HAZARD (SKIN, EYES OR MOUTH). DO NOT BREATHE ITS FUMES. KEEP IT AWAY FROM SPARKS, FLAMES, OR SOURCES OF HEAT. PUT ON APPROVED PROTECTIVE CLOTHING, GOGGLES, AND GLOVES. ALWAYS OBEY THE MANUFACTURER'S HEALTH AND SAFETY PRECAUTIONS WHEN YOU USE MEK. IT IS POISONOUS AND FLAMMABLE.

- (d) Clean all surfaces to be bonded with Isopropyl Alcohol or Methyl Ethyl Ketone (MEK).

- (e) Cut a rubber trim seal piece of the same size of the old (removed) rubber trim seal piece.

- (f) Apply sealant RTV-157 to the new rubber trim seal surfaces to be bonded (DET. C on [Figure 804](#) or [Figure 805](#), as applicable).

- (g) Install the rubber trim seal to the door.

- (h) Use an acrylic spatula to remove the sealant excess (DET. D on [Figure 804](#) or [Figure 805](#), as applicable).

NOTE: For a better finish of the sealant, wet your fingers in a water-detergent solution and mold the sealant on the rubber trim seal.

- (i) Make the repaired section stronger with sealant RTV-157 and a layer of Terylene cloth of approximately 20 mm (0.8 in) in width, on each side, away from the edges of the damaged area (DET. E on [Figure 804](#) or [Figure 805](#), as applicable).

NOTE: The surface of the Terylene cloth that you must bond to the repaired area is the silicon rubber-impregnated surface.

- (j) When the sealant is cured, the aircraft can be dispatched.

NOTE: The sealant curing time changes with the environmental conditions. Refer to SRM 51-20-01-PR.

L. Follow-on

SUBTASK 842-002-A

- (1) For repair made to the main door, baggage door, or service door rubber trim seal, do as follows:

- (a) If applicable, install the baggage door ([AMM TASK 52-30-01-400-801-A/400](#)).

- (b) On aircraft with airstairs door installed, do as follows:

- 1 Remove the main door from the bench. For this, do as [AMM TASK 52-00-00-910-801-A/200](#).

- (c) Close the door (airstairs or side-hinged main door or baggage door or service door, as applicable).

- (2) For repair made to the passenger-cabin escape hatch rubber trim seal, do as follows:

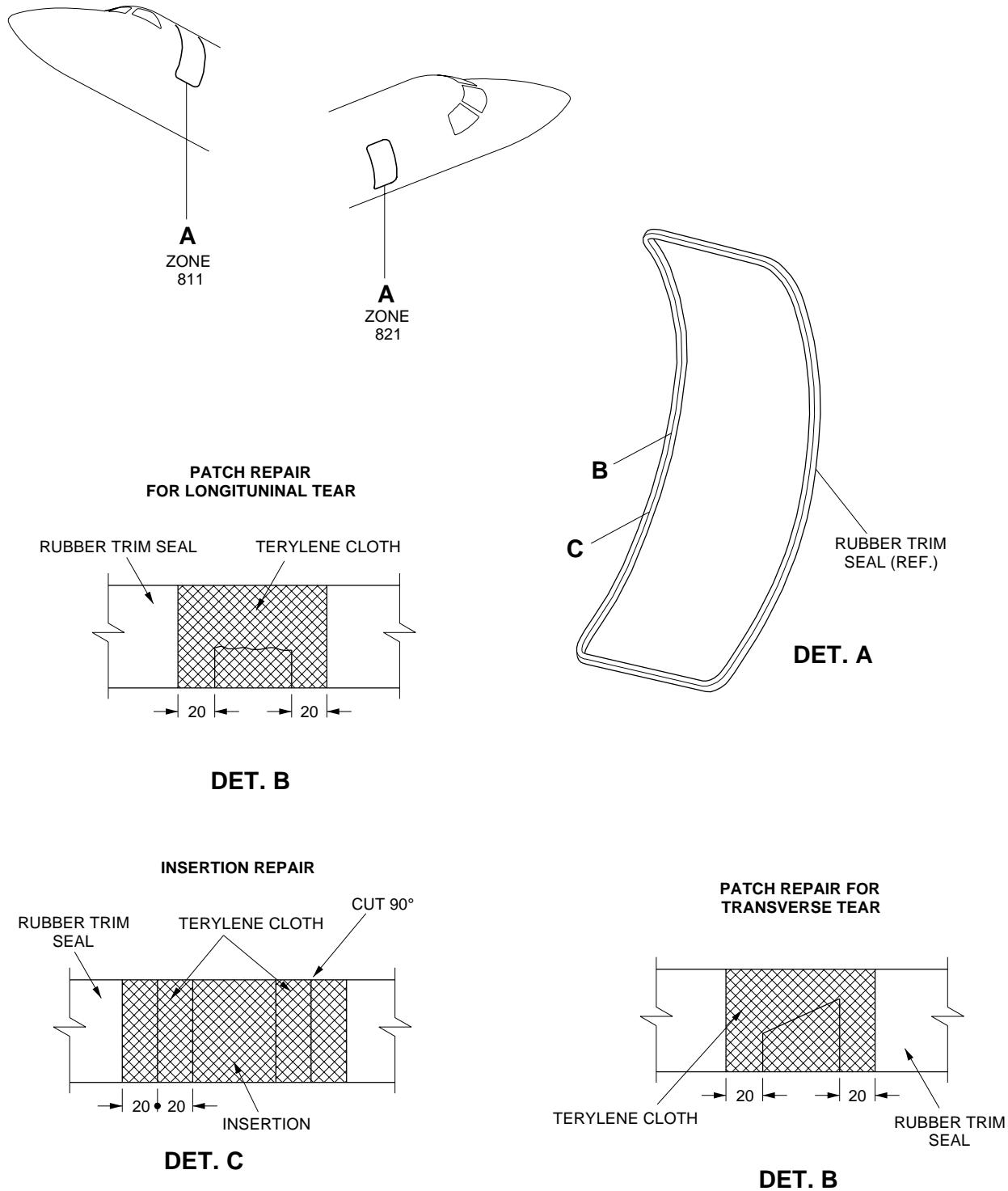
- (a) Install the passenger-cabin escape hatch ([AMM TASK 52-21-00-400-801-A/400](#)).

- (3) Pressurize the aircraft ([AMM TASK 21-31-00-860-801-A/200](#)).

- (4) Make sure that there is no air leakage through the door contours. If leakage occurs, find its specific location. When the leakage is related to the door rubber seal, remove and install the rubber seal again in this region to remove the leakage. After this, do the functional test again.

- (5) Depressurize the aircraft ([AMM TASK 21-31-00-860-802-A/200](#)).

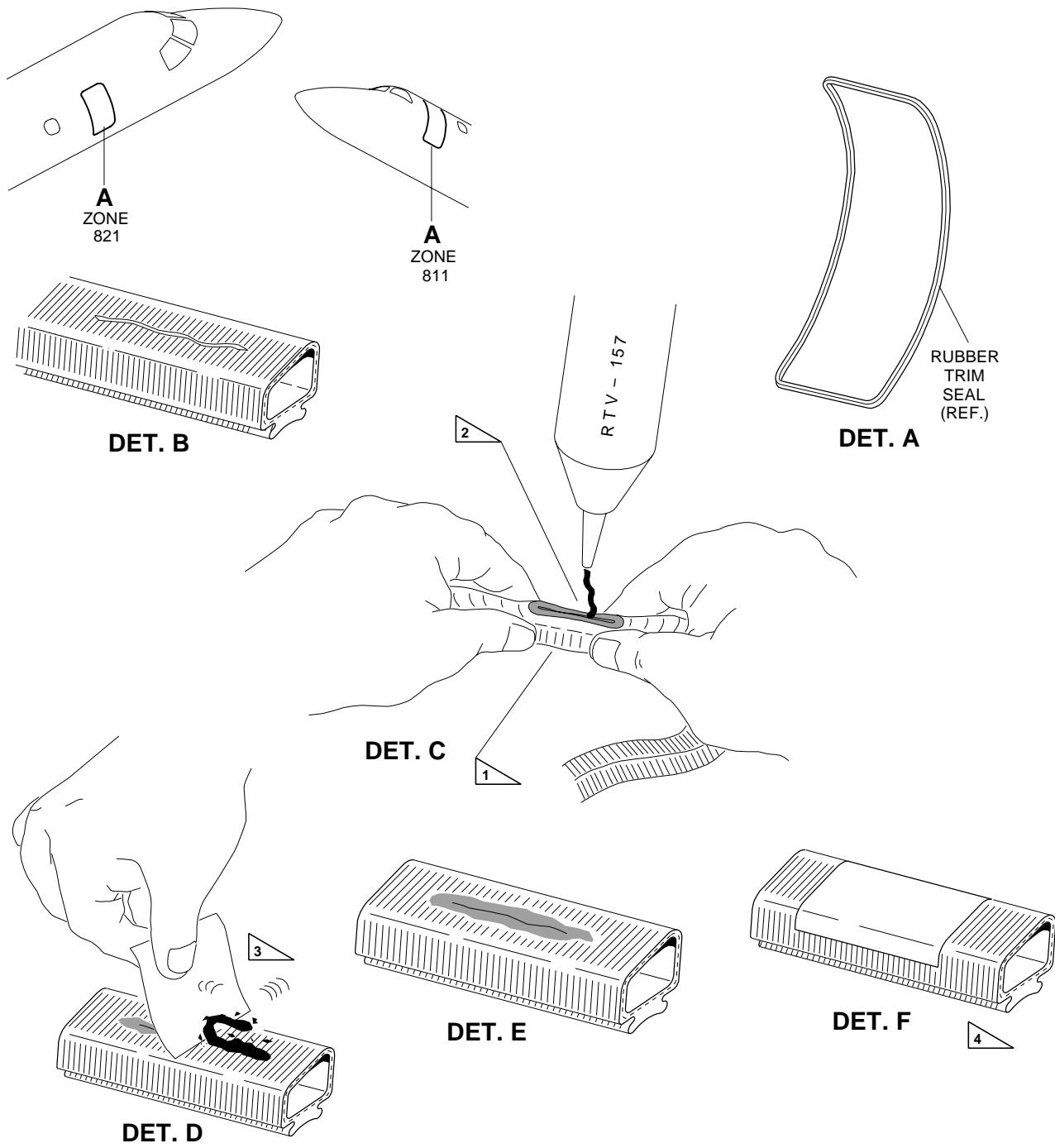
EFFECTIVITY: ALL
Rubber Trim Seal - Repair
Figure 801



DIMENSION IN mm

EM145AMM520245B.DGN

EFFECTIVITY: ALL
Rubber Trim Seal - Patch Repair
Figure 802



1 COMPRESS THE RUBBER TRIM SEAL TO SHOW THE DAMAGE INTERNAL SURFACES.

2 APPLY THE "RTV 157" SEALANT.

3 WITH A PLASTIC SPATULA, DO THE FINISH OF THE "RTV 157" REPAIR.

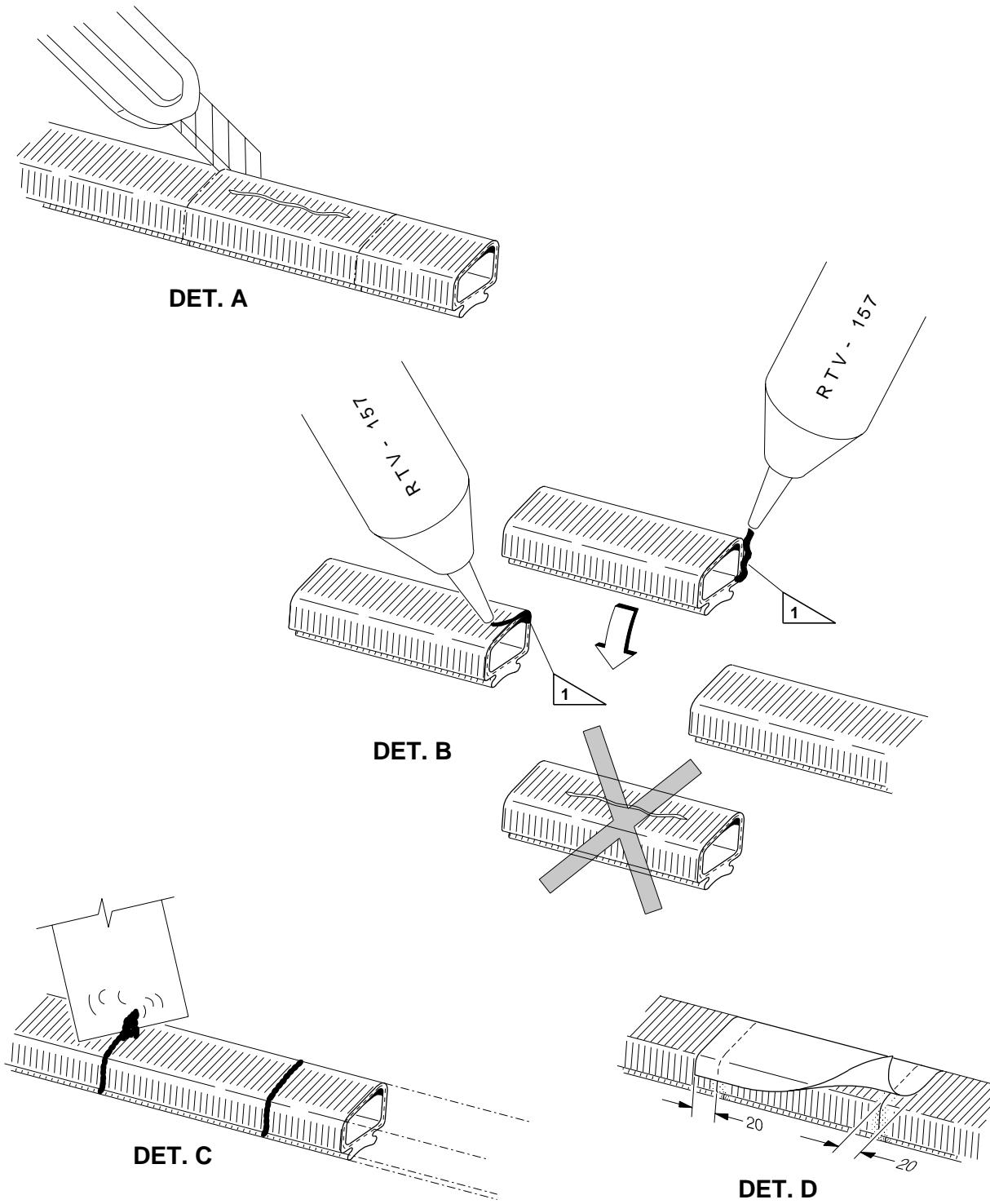
4 BOND THE PATH TO THE REPAIRED SURFACE.

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EFFECTIVITY: ALL

Rubber Trim Seal - Insertion Repair

Figure 803



DIMENSION IN mm

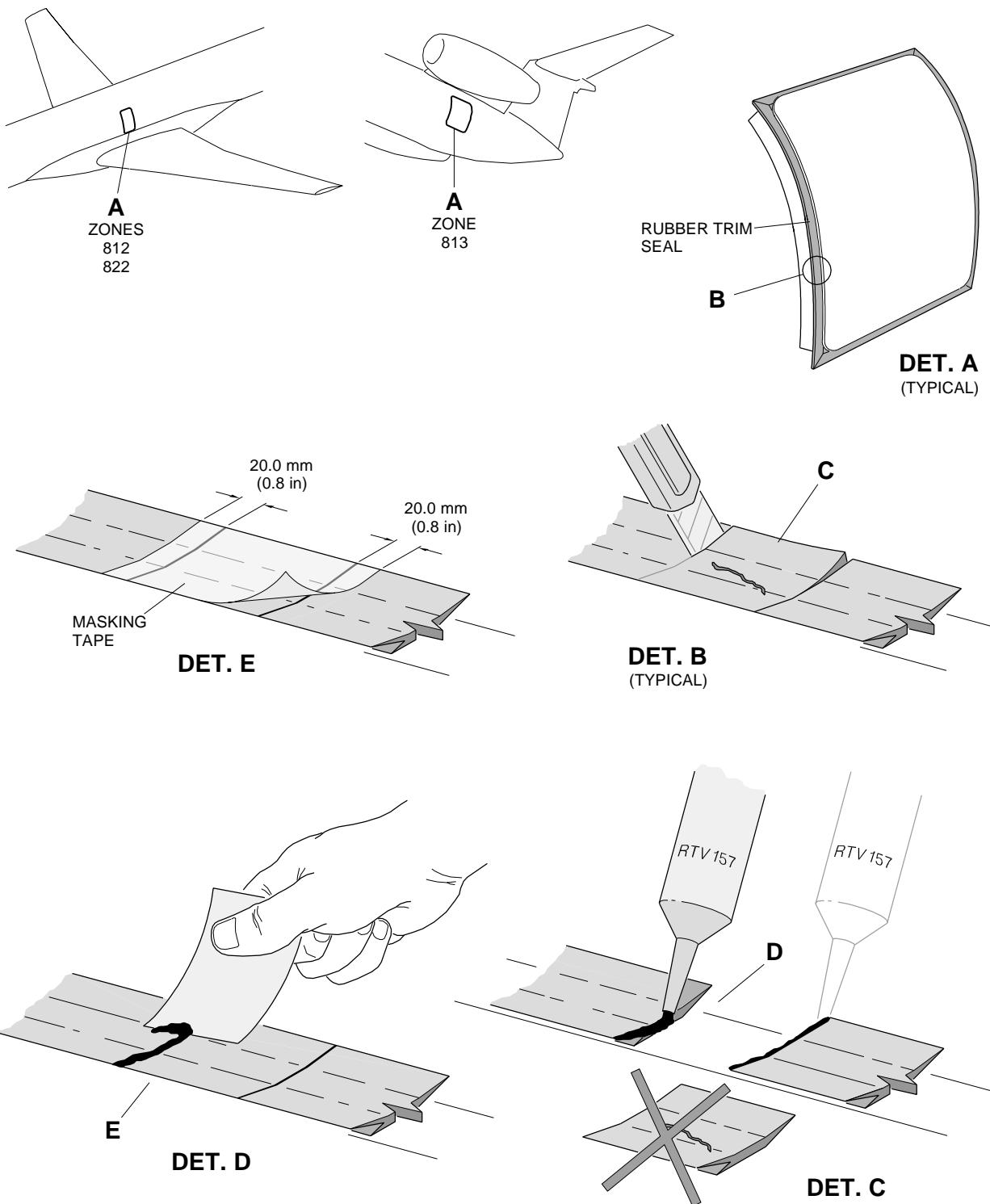


APPLY "RTV 157" SEALANT TO THE RUBBER TRIM SEAL SURFACES AND TO THE REPAIR.

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EFFECTIVITY: ALL

Baggage Door and Passenger-Cabin Escape Hatch - Insertion Repair
Figure 804

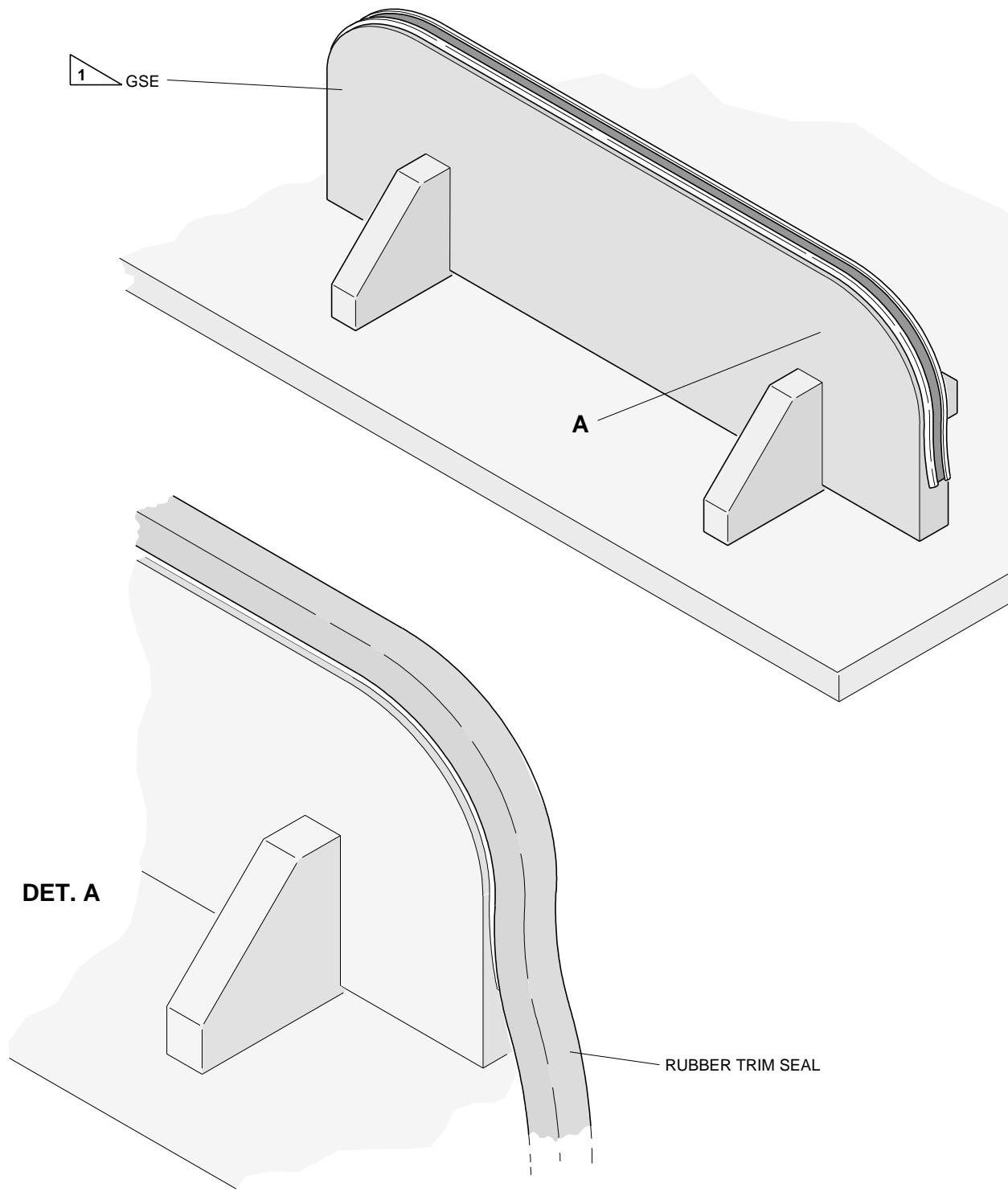


EM145AMM520416A.DGN

EFFECTIVITY: ALL

Rubber Trim Seal - Jig-Rework

Figure 805



1 GSE 217 APPLICABLE TO MAIN DOOR OR GSE 218 APPLICABLE TO SERVICE DOOR.

145AMM520391.MCE A