**ON A/C ALL

56–00–00–001

WINDOWS, GENERAL

Introduction

The flight compartment windows give the flight crew an adequate, unobstructed view outside the aircraft under all flight and weather conditions. The windows are structural elements which are able to withstand pressurization forces and impact from a bird strike.

The passenger compartment windows give the passengers a view outside the aircraft. The windows are able to withstand pressurization forces and insulate the passengers from the extreme temperatures outside the aircraft.

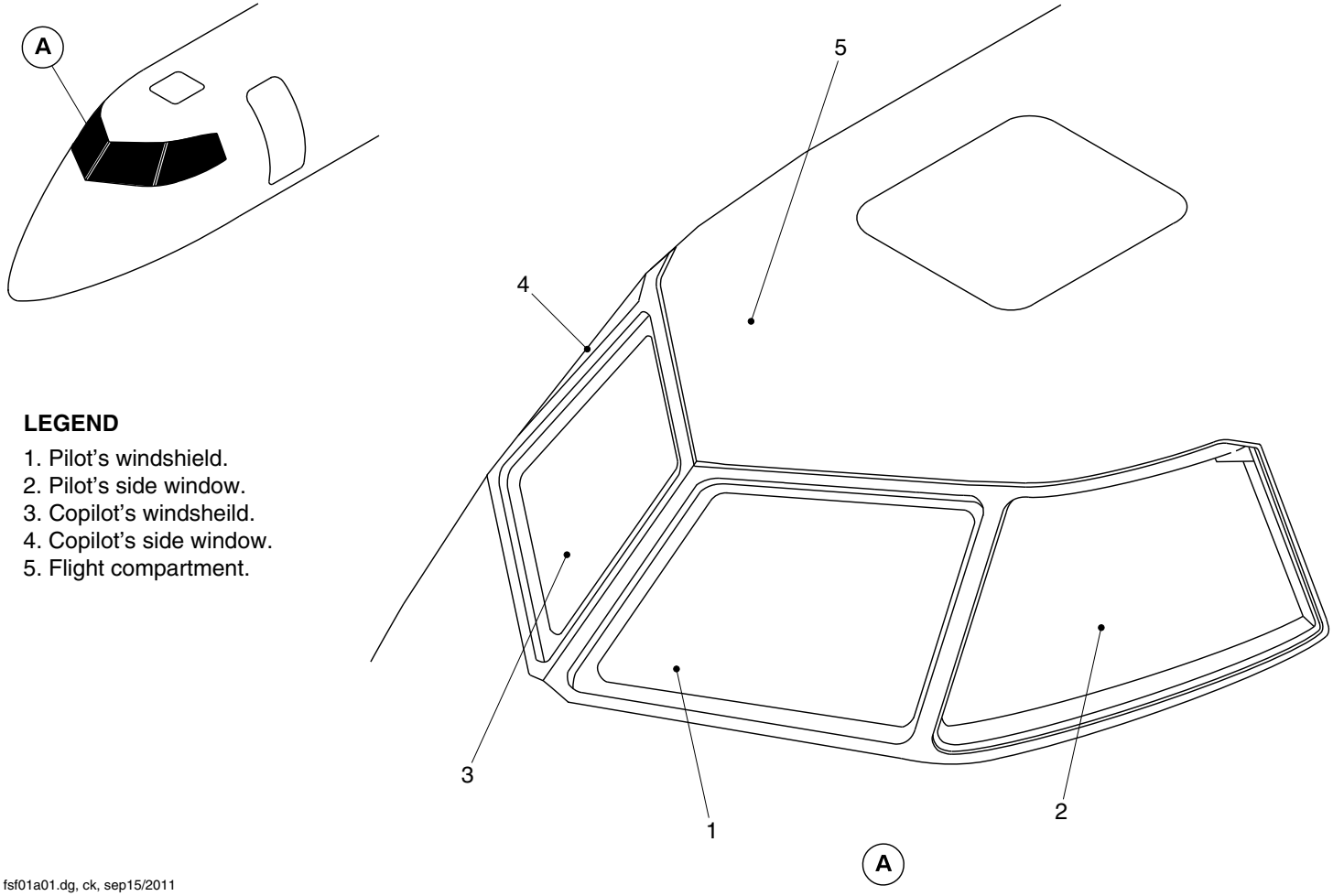
General Description

Refer to Figures 1 and 2.

The flight compartment has a pilot's windshield and side window, and a copilot's windshield and side window. The passenger compartment has 29 window assemblies on the left side and 26 window assemblies on the right side. On aircraft with ModSum 4–190561 incorporated, additional 3 window assemblies are installed on the right side in lieu of type II/III emergency exit. One window assembly is installed in the emergency exit door, aft passenger door, and aft service door.

Detailed Description

Each passenger compartment has an outer and inner acrylic panel separated around the peripheral edge by a polycarbonate spacer and a neoprene gasket, bonded to the outer panel. The assembly is put on a silicone rubber seal, and is installed in an aluminum alloy window frame by eight retaining clips that are bolted to the frame. The space between the panels is vented to the passenger compartment ambient by two holes in the inner panel.



LEGEND

1. Pilot's windshield.
2. Pilot's side window.
3. Copilot's windsheild.
4. Copilot's side window.
5. Flight compartment.

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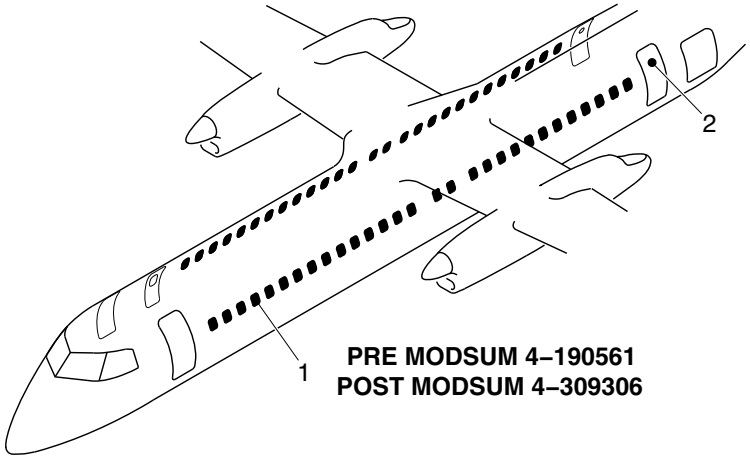
Flight Compartment Windows
Figure 1



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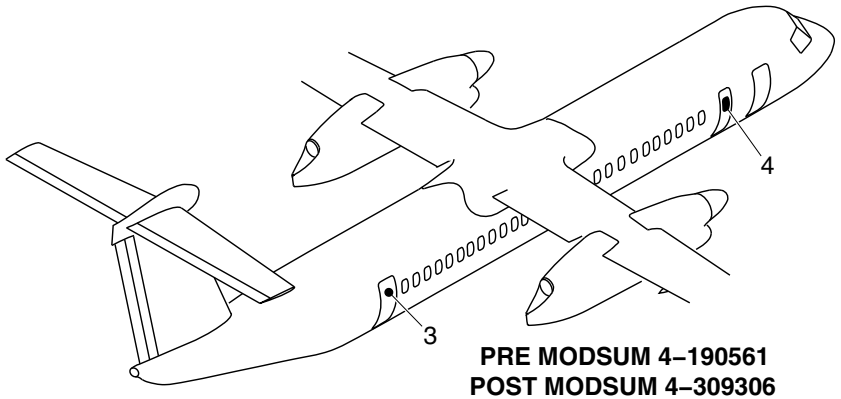

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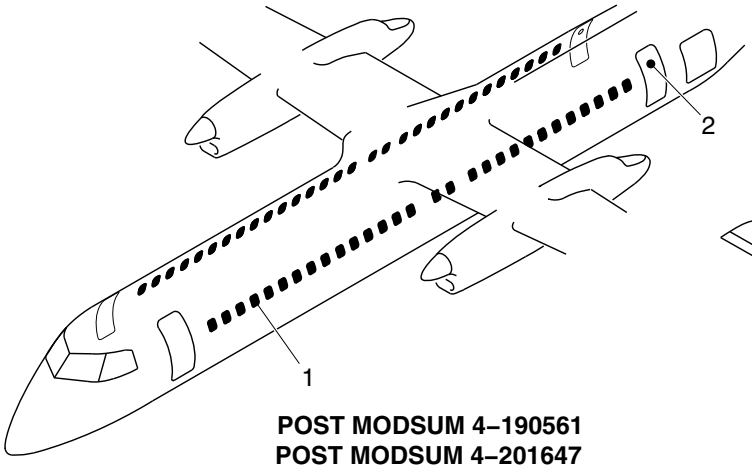
LEGEND

1. Passenger window.
2. Aft passenger door window.
3. Aft service door window.
4. Emergency exit window.



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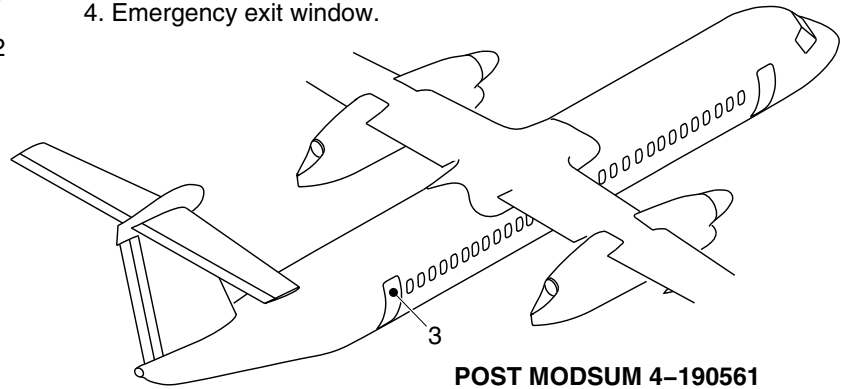

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Passenger Compartment Windows
Figure 2

**ON A/C ALL

56–10–00–001

FLIGHT COMPARTMENT

Introduction

The flight compartment windows give the flight crew an adequate, unobstructed view outside the aircraft under all flight and weather conditions. The windows are structural elements which are able to withstand pressurization forces and impact from a bird strike.

General Description

The windows in the flight compartment consist of a pilot's windshield and side window and a copilot's windshield and side window. The windshields are a fail–safe glass design with an anti–ice heating system powered by the 115 Vac electrical system. The side windows are a fail–safe acrylic design. Only the pilot's side window has 115 Vac anti–ice heating.

Detailed Description

Refer to Figures 1 , 2 and 3.

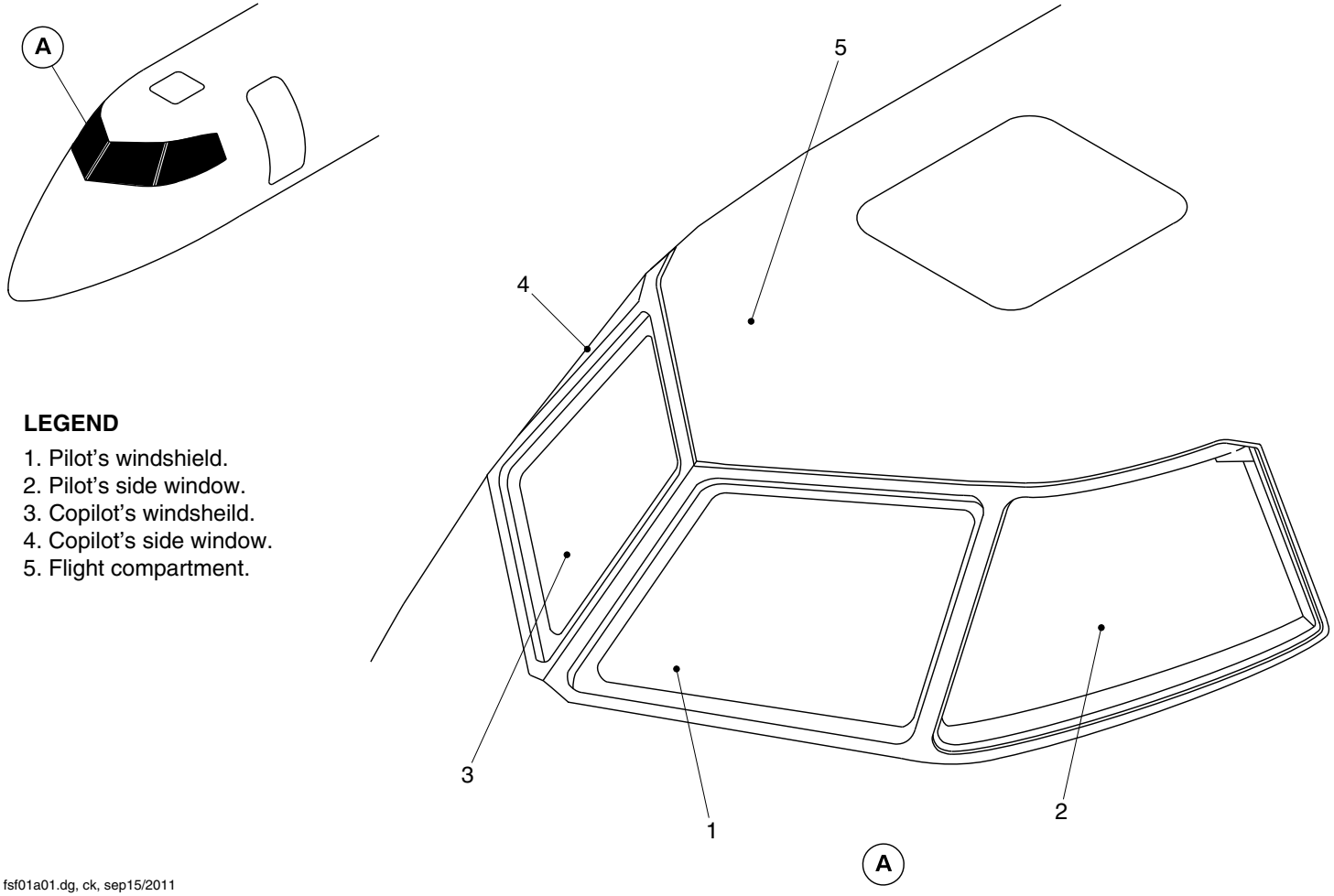
The flight compartment has two main windshields, one for the pilot and one for the copilot. Each windshield has a 0.120 in. (3.05 mm) thermally tempered glass outer faceply coated on the inside with a conductive, metallic film which supplies heating for anti–ice purposes. The heating film extends up to 0.25 in. (6.35 mm) from the edge of the faceply and covers most of the windshield area except for the extreme forward section. A heating element terminal block is located near the top of the faceply on the inboard side. Two urethane faceply interlayers are adjacent to the outer glass faceply. Three temperature sensors are imbedded in the interlayer immediately next to the glass faceply (refer to SDS 30–41–00).

The main structural elements of the windshield are two chemically strengthened glass mainplies. The outer mainply has a thickness of 0.230 in. (5.84 mm) while the inner mainply has a thickness of 0.180 in. (4.57 mm). The two mainplies are separated by a vinyl interlayer. A molded, silicone rubber gasket is bonded around the edge of the windshield and serves as a weather and pressure seal. The windshield is secured to the airframe by three external, aluminum alloy retainers with bolts. The rear edge of the window is secured by the side window retainer.

The copilot's side window has two structural stretched acrylic mainplies 0.38 and 0.31 in. (9.65 and 7.87 mm) thickness, laminated together with a vinyl interlayer. There is a polysulfide weather seal and a molded rubber pressure seal around the edge of the window. The window is retained by aluminum retainers and bolts.

The pilot's side window is similar to the copilot's side window but has an outer, non–structural, acrylic faceply of 0.1 in. (2.54 mm) thickness. The faceply is coated on the inside with a conductive, metallic film which supplies heating for anti–ice purposes.

The heating element terminal block is made of Diallyl Phthalate. It has connections for three temperature sensors and located near the top of the faceply on the inboard side. It has eight connections, in that two pairs of connections are used for normal and overheat sensors. One pair for the power supply to the heaters. The fourth pair of connections are installed with a spare sensor. Only the forward part of the pilots side window is heated (refer to SDS 30–41–00).



LEGEND

1. Pilot's windshield.
2. Pilot's side window.
3. Copilot's windsheild.
4. Copilot's side window.
5. Flight compartment.

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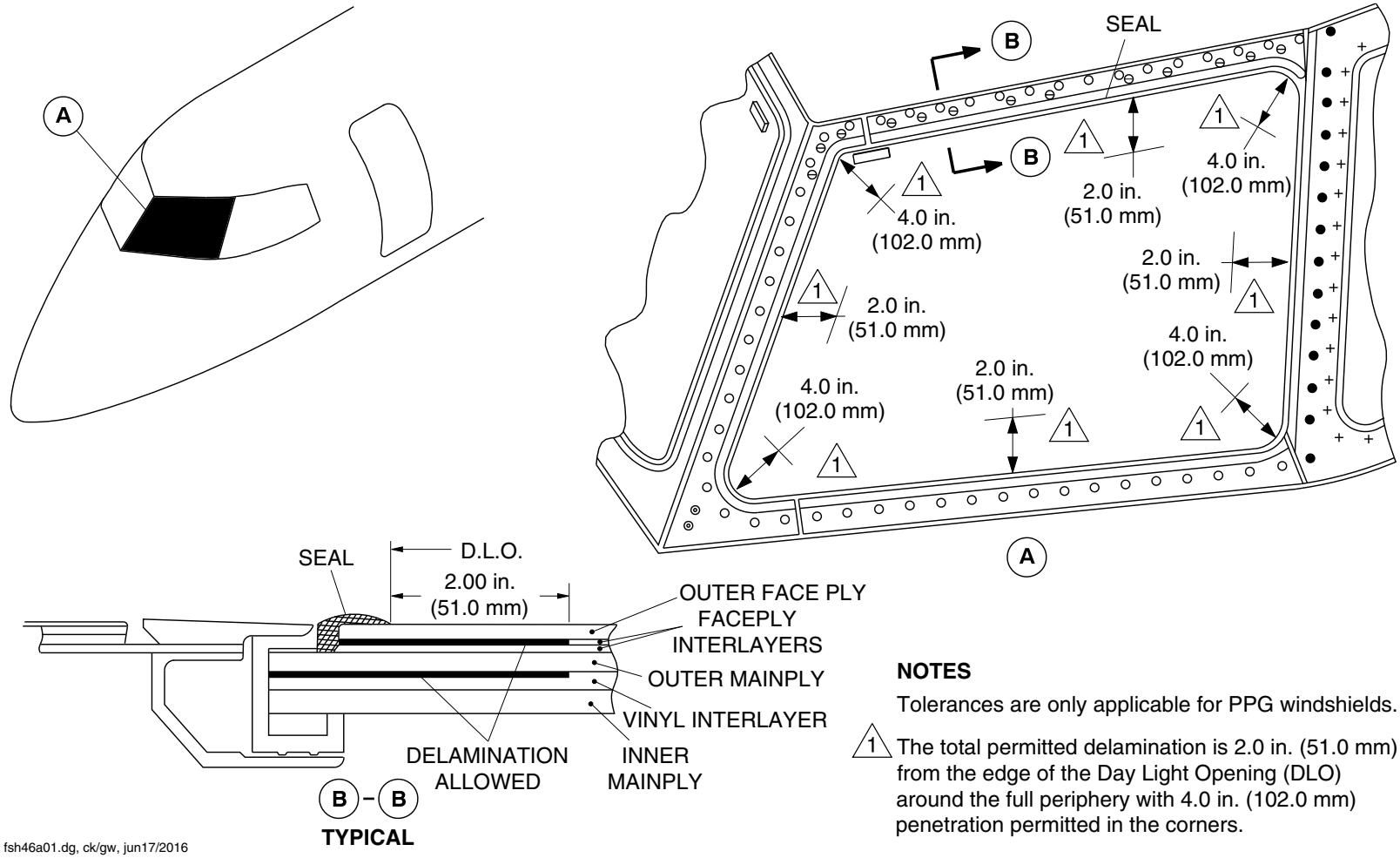
Flight Compartment Windows
Figure 1

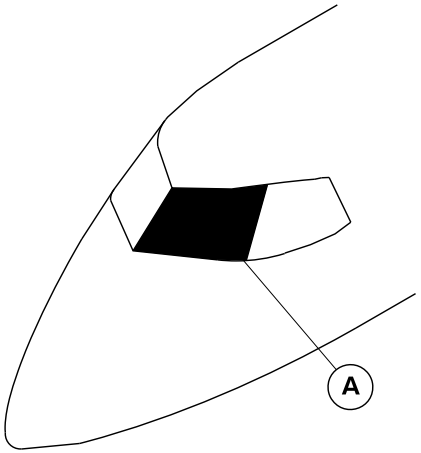


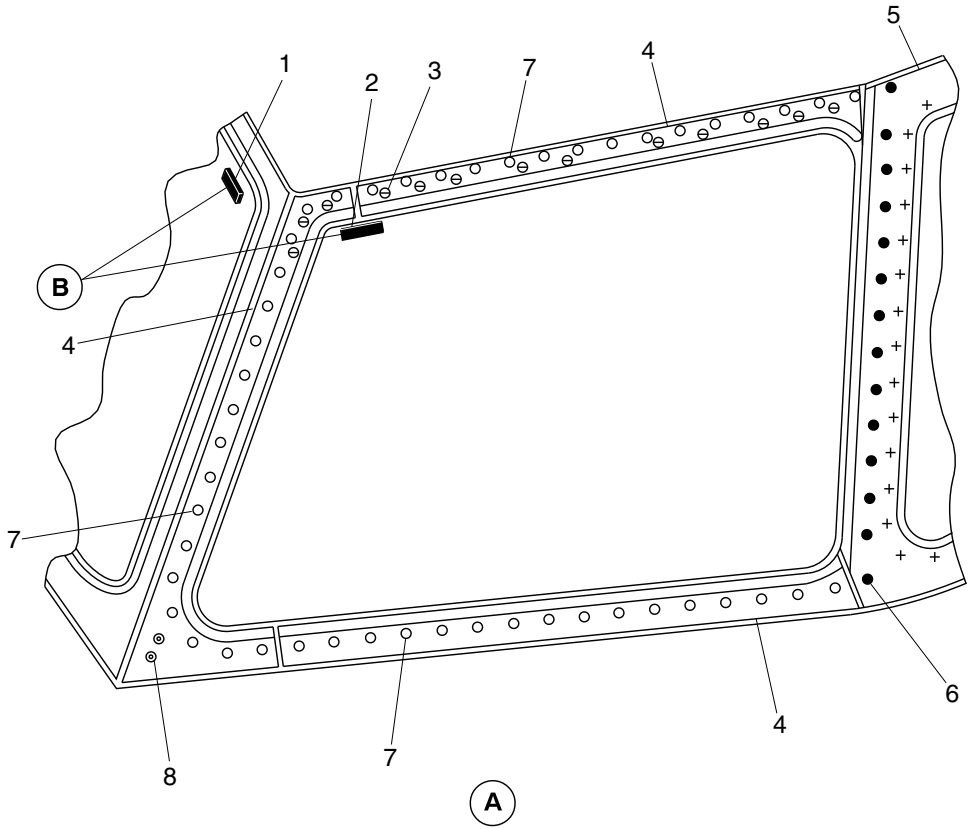
NOTES

Tolerances are only applicable for PPG windshields.

1 The total permitted delamination is 2.0 in. (51.0 mm) from the edge of the Day Light Opening (DLO) around the full periphery with 4.0 in. (102.0 mm) penetration permitted in the corners.

Pilot's Windshield Cross–Section
Figure 2





LEGEND

1. Terminal block.
2. Terminal block.
3. Bolt.
4. Retainer.
5. Side window retainer.
6. Bolt.
7. Bolt.
8. Bolt.

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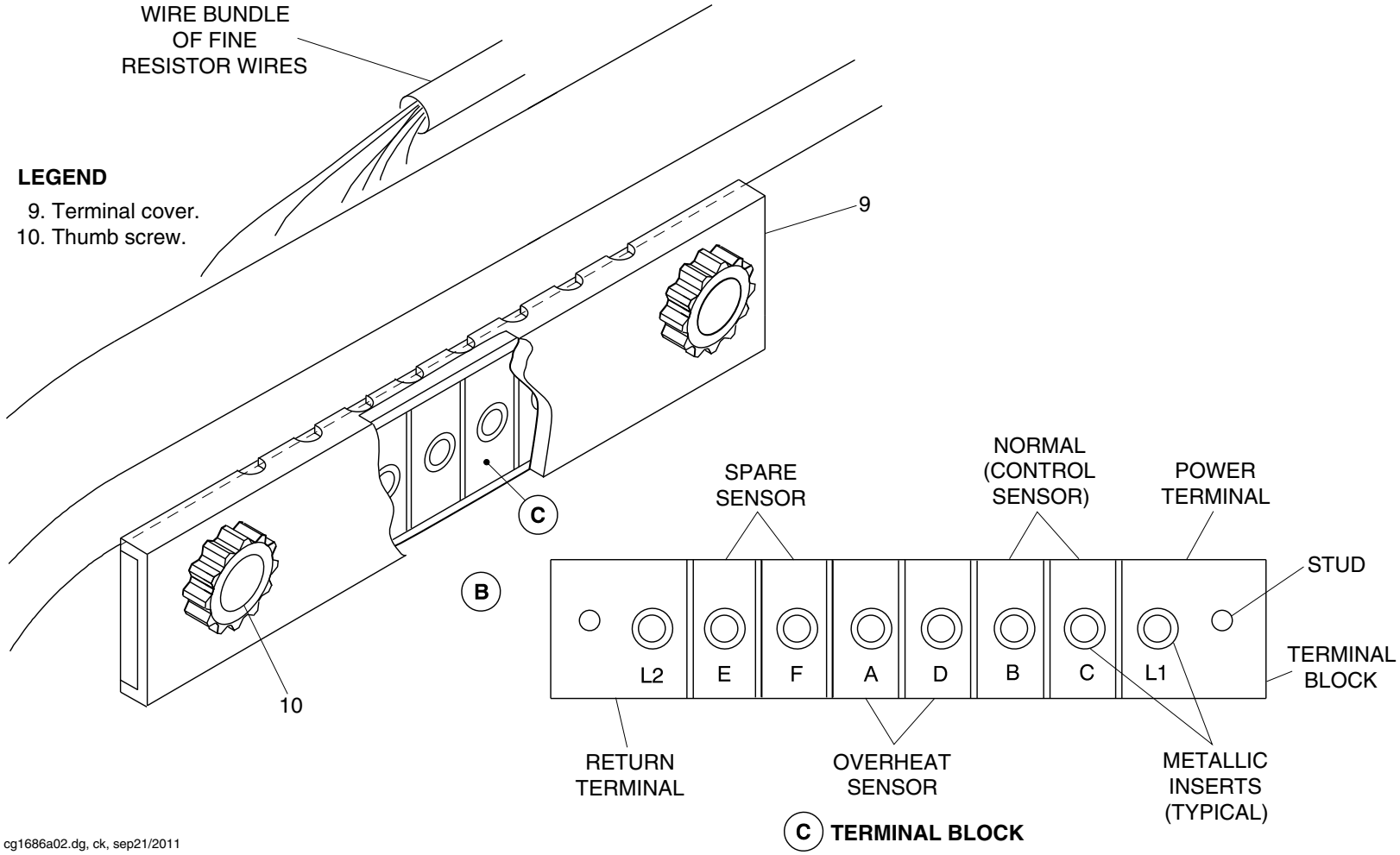
Windshield – Detail
Figure 3 (Sheet 1 of 2)



Windshield – Detail
Figure 3 (Sheet 2 of 2)

**ON A/C ALL

56–20–00–001

PASSENGER COMPARTMENT

Introduction

The passenger compartment windows give the passengers a view outside the aircraft. The windows are able to withstand pressurization forces and insulate the passengers from the extreme temperatures outside the aircraft.

General Description

Refer to Figure 1.

There are 29 window assemblies installed in the left side of the passenger compartment and 26 window assemblies installed in the right side of the passenger compartment. On aircraft with ModSum 4–190561 incorporated, additional 3 window assemblies are installed in lieu of type II/III emergency exit door. A window assembly is installed in the emergency exit door, aft passenger door, and aft service door.

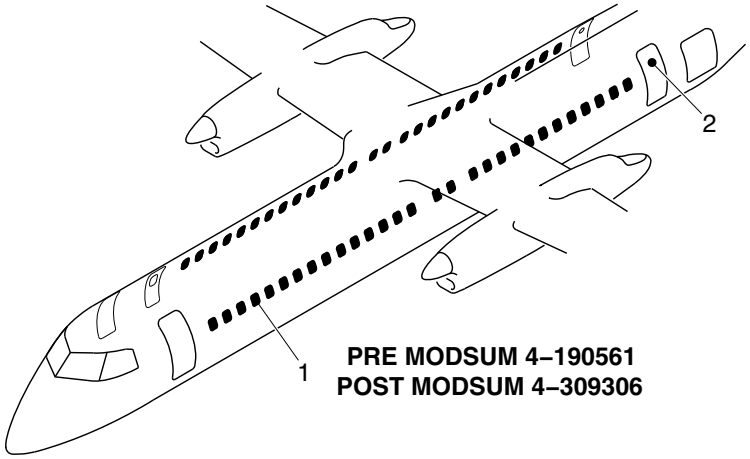
Detailed Description

Refer to Figures 2 and 3.

Each passenger compartment window has an outer and inner acrylic panel separated around the edge by a polycarbonate spacer and a neoprene gasket bonded to the outer panel. The assembly is fitted with a silicone rubber seal and installed in an aluminum alloy window frame by eight retaining clips that are bolted to the frame. The space between the panels is vented to the passenger compartment ambient air by two holes in the inner panel. The window in the emergency exit door is of similar construction.

Refer to Figures 4 and 5.

The window in the aft passenger door has an outer and inner acrylic panel separated around the edge by a polycarbonate spacer and a neoprene gasket. The gasket is bonded to the outer panel. The assembly is fitted with a silicone rubber seal and installed in an aluminum alloy window frame by four retaining clips that are bolted to the frame. The space between the panels is vented to the passenger compartment ambient air by two holes in the inner panel. The window in the aft service door is of similar construction.



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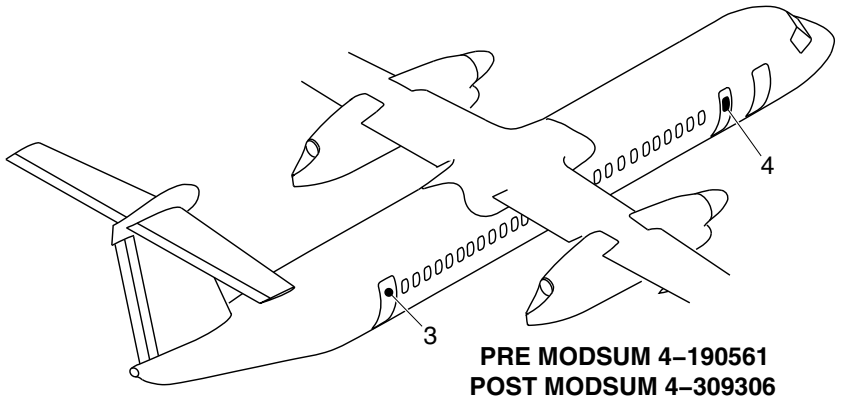

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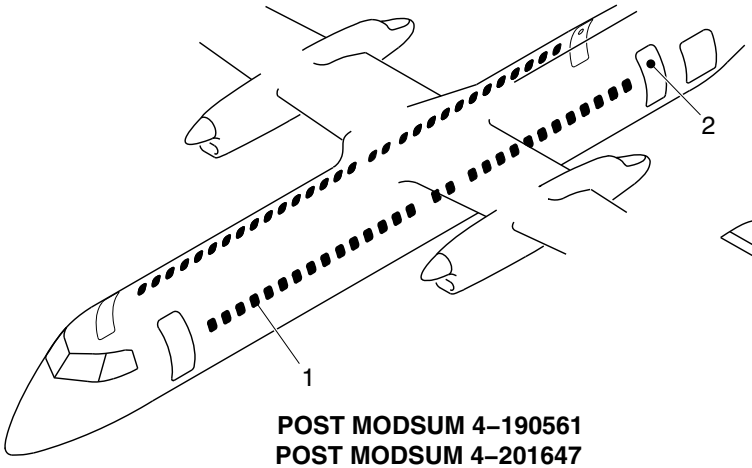
LEGEND

1. Passenger window.
2. Aft passenger door window.
3. Aft service door window.
4. Emergency exit window.



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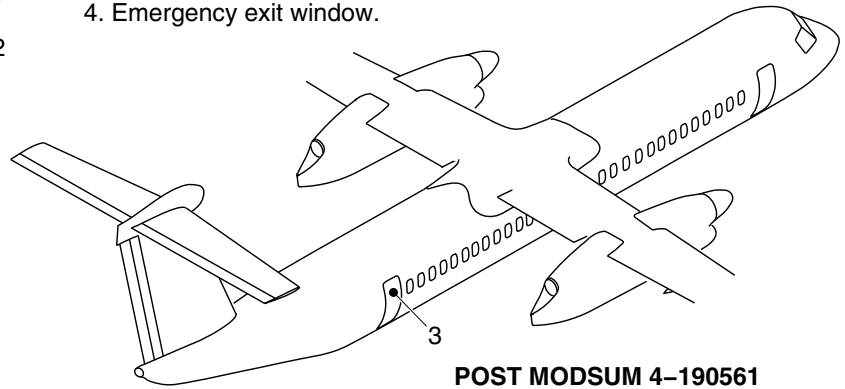

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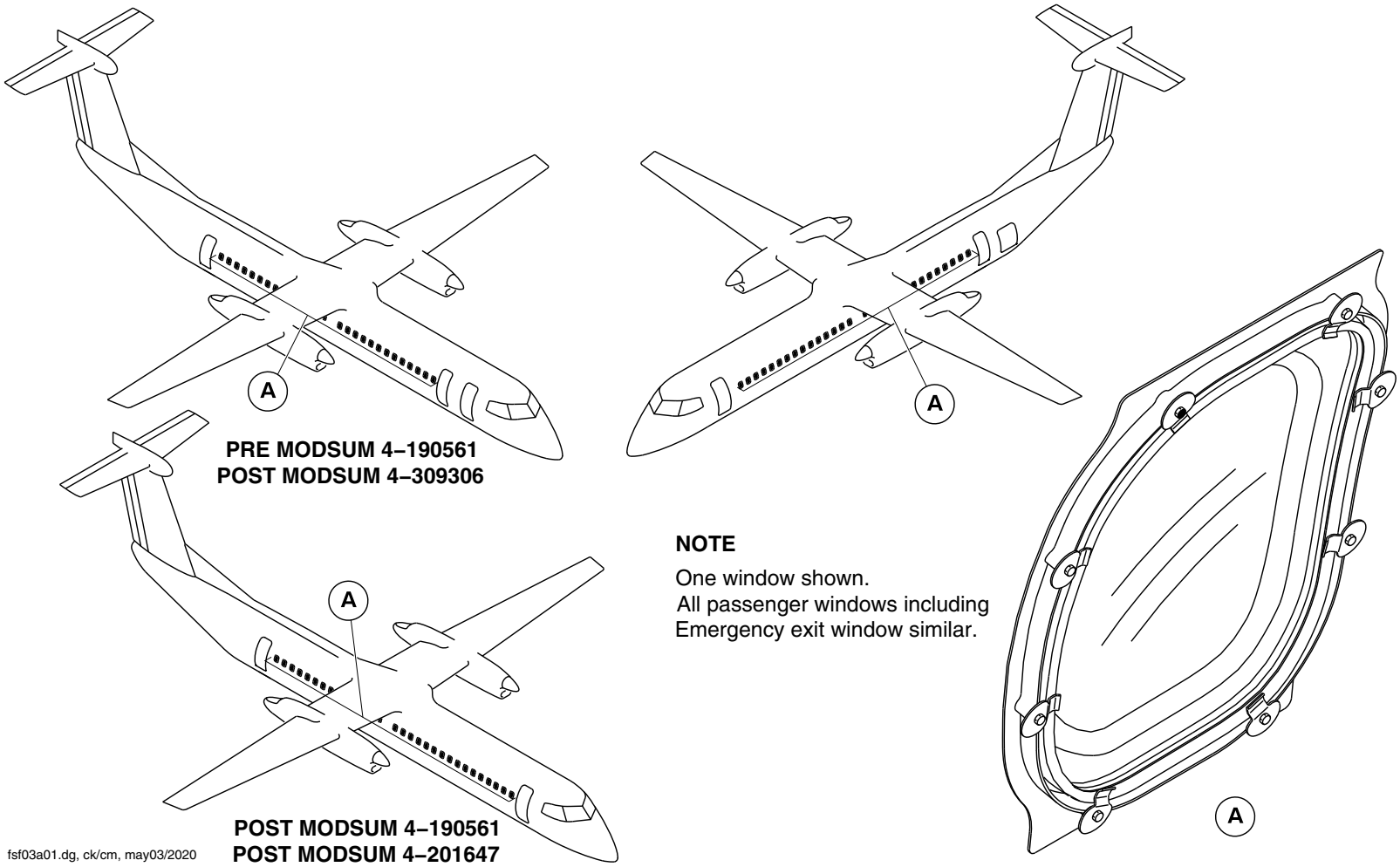
Passenger Compartment Windows
Figure 1



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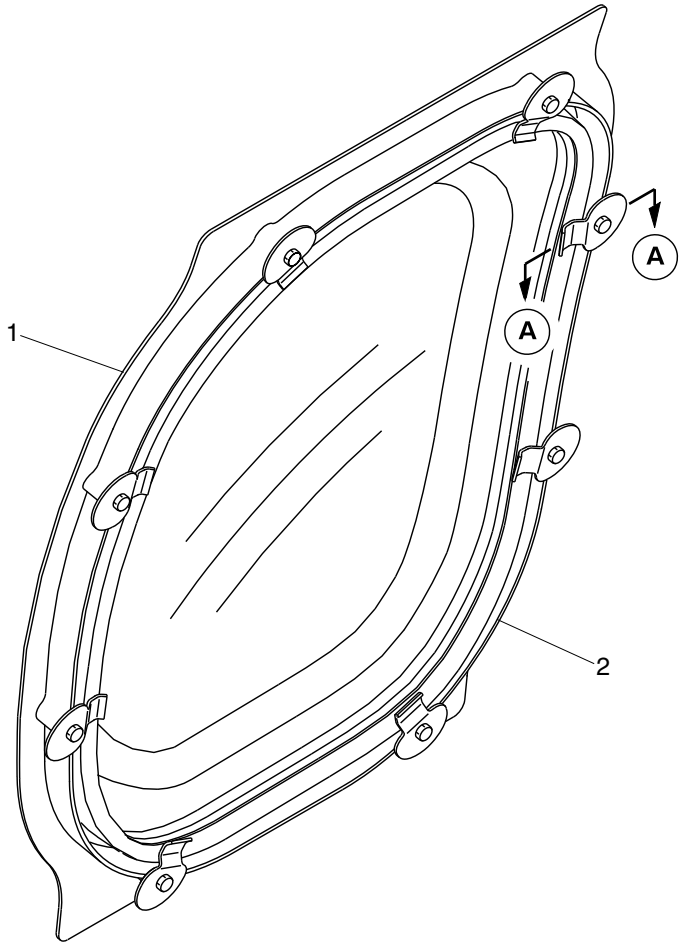
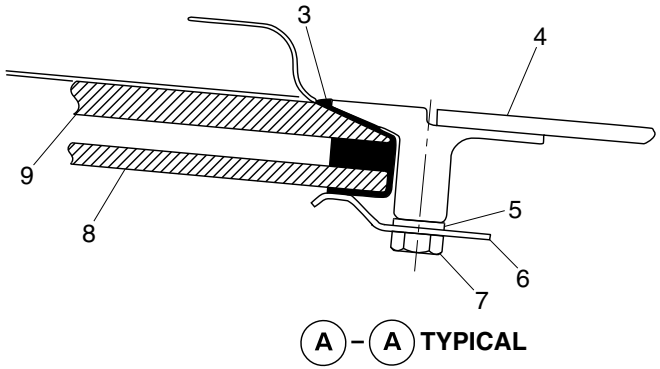
Passenger Compartment Windows Locator
Figure 2



LEGEND

1. Window frame.
2. Window assembly.
3. Molded seal.
4. Fuselage seal.
5. Washer.
6. Retaining clip.
7. Bolt.
8. Inner pane.
9. Outer pane.



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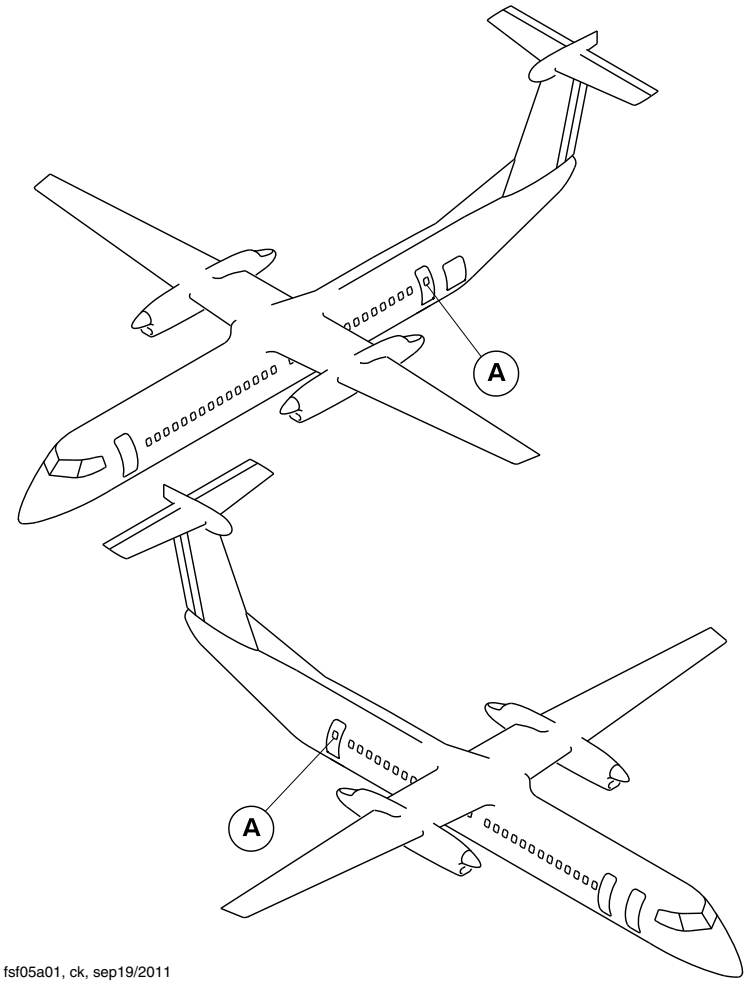
Passenger Compartment Windows Detail
Figure 3



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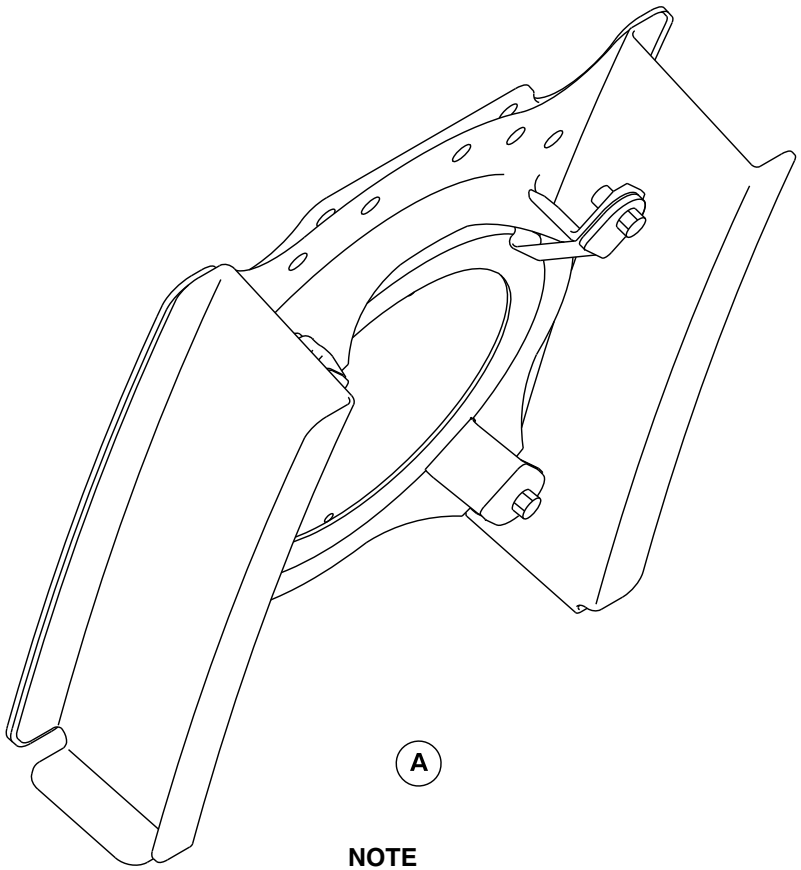
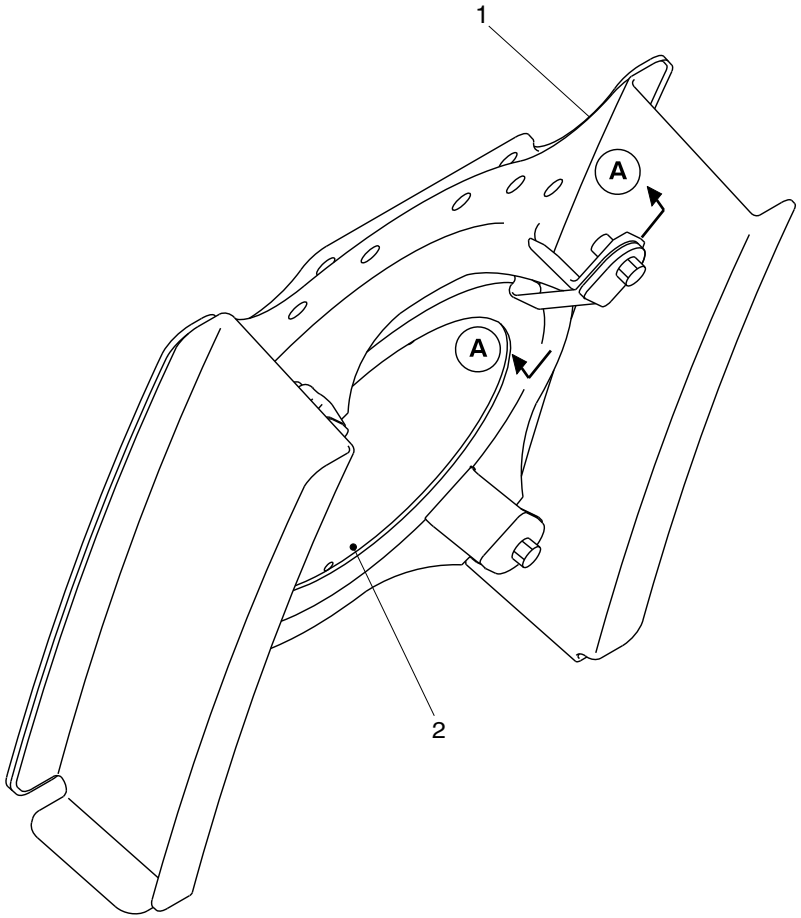


NOTE

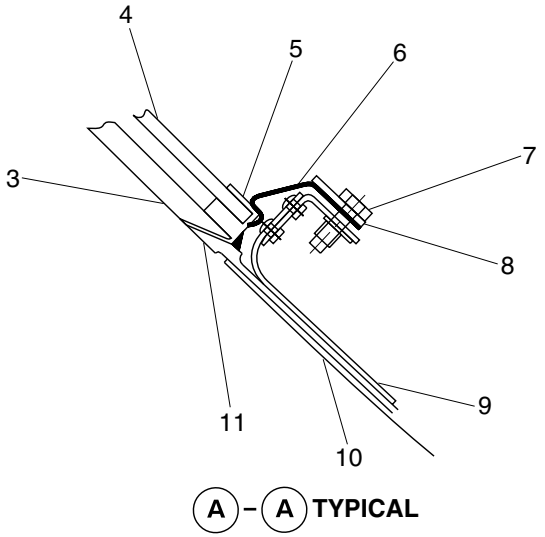
Aft passenger door window and
Aft service door window both similar.

Passenger Compartment Door Windows Locator
Figure 4



LEGEND

1. Window frame.
2. Window.
3. Outer pane.
4. Inner pane.
5. Molded seal.
6. Spring clip.
7. Bolt.
8. Washer.
9. Window frame.
10. Door skin.
11. Doubler.



(A) – (A) TYPICAL

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Passenger Compartment Door Windows Detail
Figure 5

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