21

AIR CONDITIONING

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AIR CONDITIONING

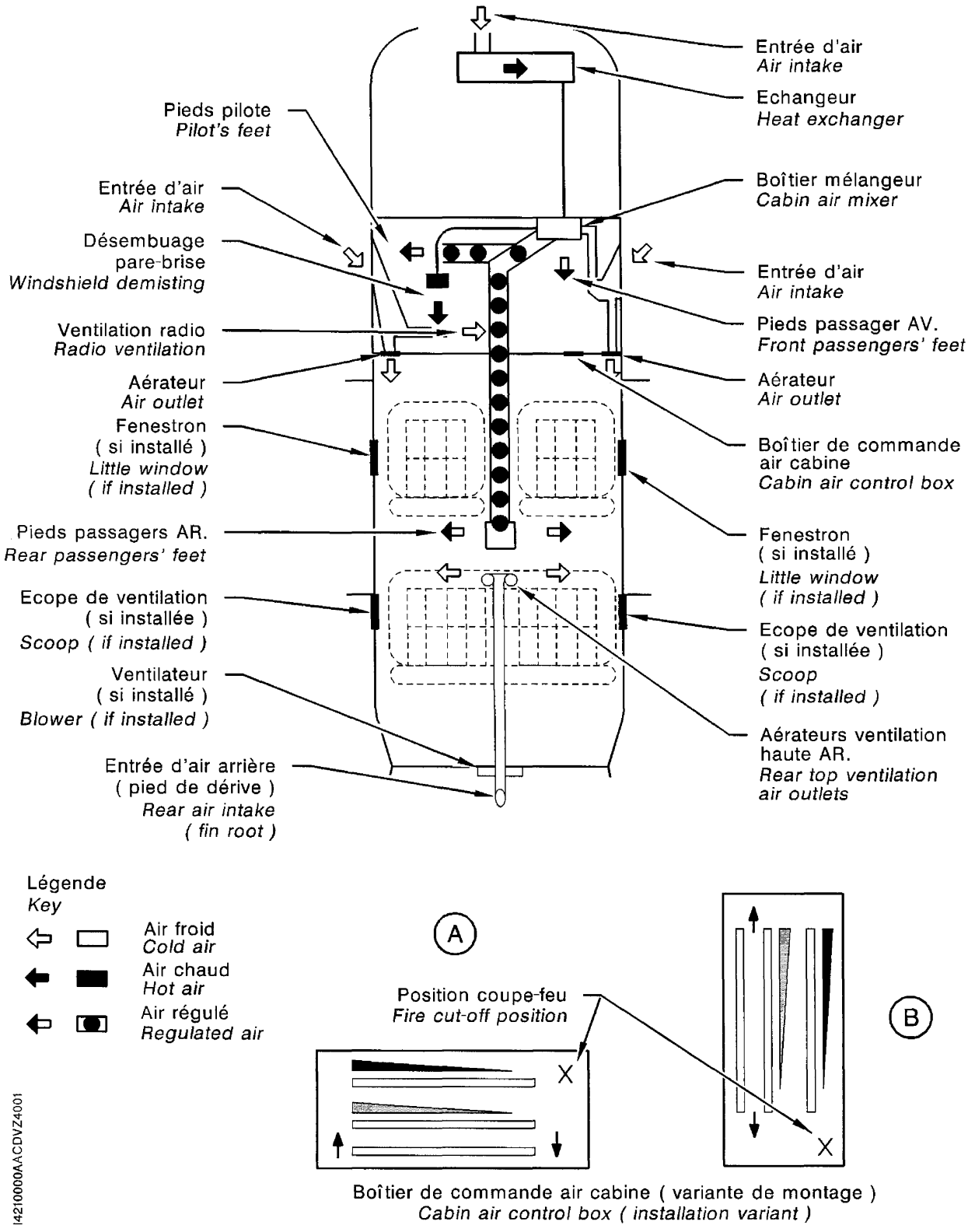
DESCRIPTION AND OPERATION

1. GENERAL (Figures 1, 1A and 1B)

The air conditioning system consists of the sub-systems which allow intake, regulation and temperature control of the volume of air which enters the cabin.

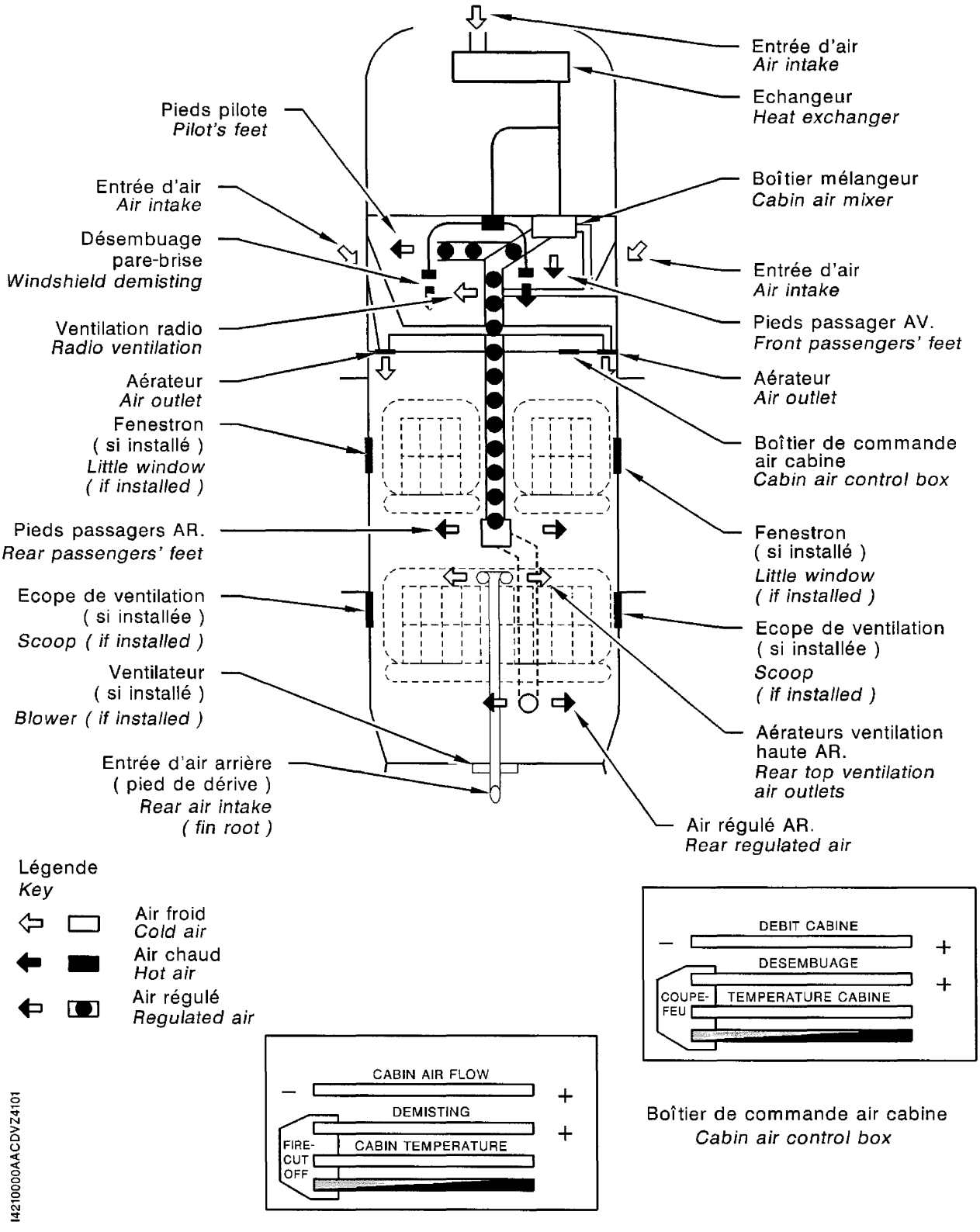
The system consists of :

- distribution - refer to 21-20-00,
- heating - refer to 21-40-00.



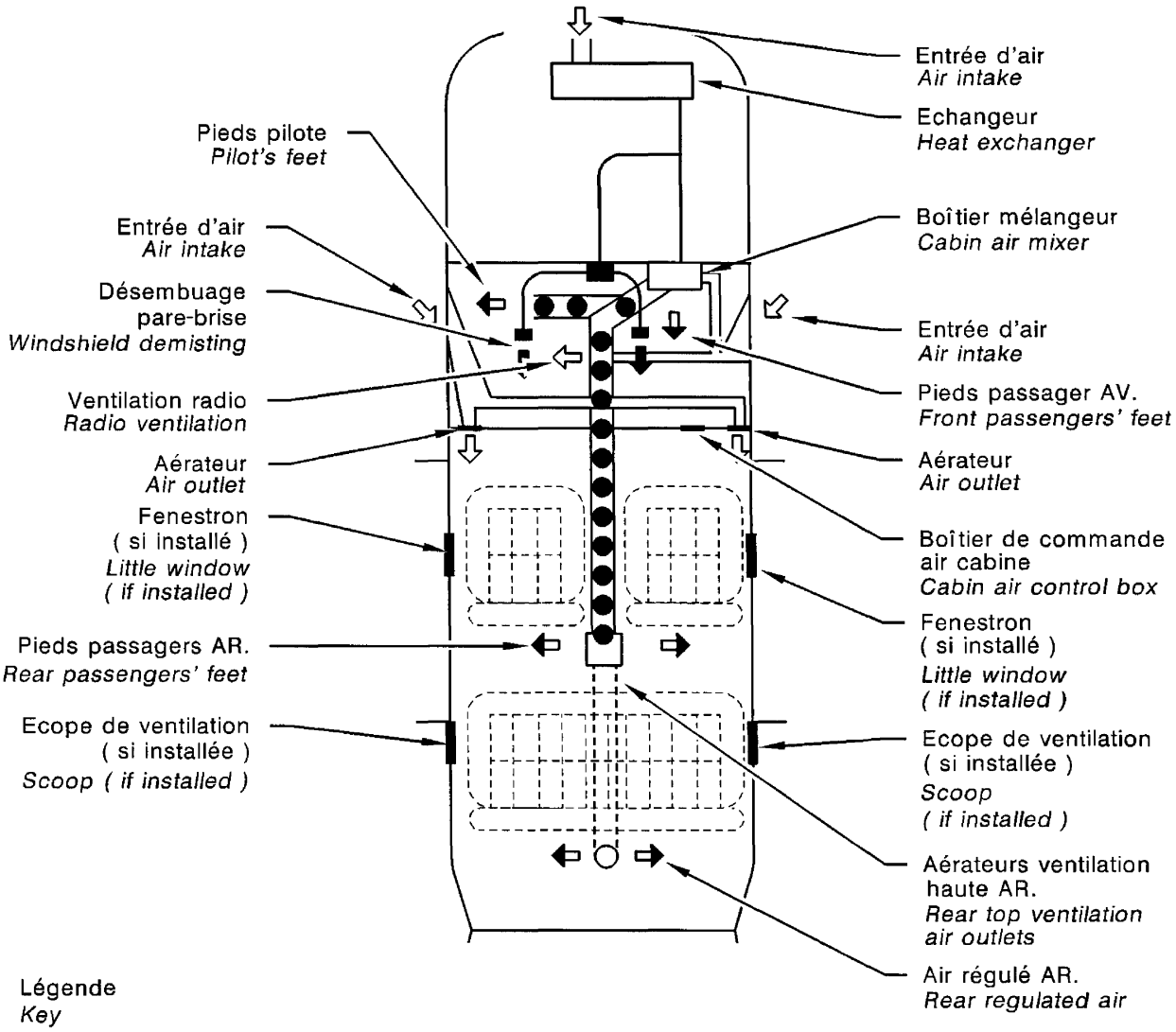
Boîtier de commande air cabine (variante de montage)
Cabin air control box (installation variant)

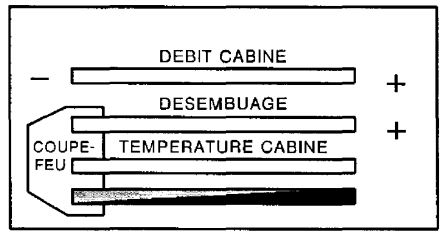
Air conditioning - Description and operation
Figure 1 - S / N 1 - 584



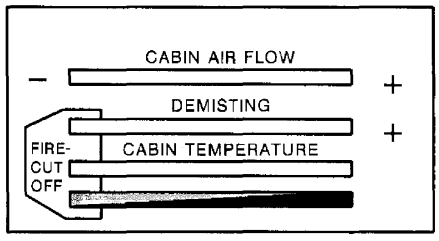
Boîtier de commande air cabine
Cabin air control box

Air conditioning - Description and operation
Figure 1A - S / N 585 - 764, 766 - 878, 2000 - 9999





Boîtier de commande air cabine
Cabin air control box



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Air conditioning - Description and operation
Figure 1B - S / N 765, 879 - 1999

AIR CONDITIONING

MAINTENANCE PRACTICES

1. SERVICING - AIR CONDITIONING

A. Tools and consumable materials

- Oil (TB 03-900)
- Clean lintfree cloths

B. Air regulation system maintenance procedure

NOTE 1 : The air regulation system is very simple and requires neither servicing nor adjustment.

NOTE 2 : In case of a "rough point" in the controls, simply lubricate sheathed controls and hinges with oil for satisfactory operation.

1) Check condition of the cabin air mixer located on the firewall.

2) Through baggage compartment bottom door 242, check the blower (if installed) for correct operation by means of the switch. Check the blower air intake for clogging and condition of attachments.

3) Check connection between fire cut-off flap and clapper located under cabin air mixer distribution box inlet.

4) Inspect the hoses for condition, replace if necessary.

NOTE : If new hose(s) is (are) installed, no traces of release grease (silicone) must remain inside the hose(s). Any traces must be removed with a clean lintfree cloth.

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DISTRIBUTION

DESCRIPTION AND OPERATION

1. GENERAL

The distribution system allows intake and distribution of the air tapped from the atmosphere.

The system consists of :

- the air intakes,
- the distribution hoses and air outlets,
- the radio ventilation (if installed),
- the B13 radio fan (option),
- the B17 cabin blower (option).

It also uses the control box - refer to 21-40-00.

2. LOCATION

COMPONENT	QTY	AREA	ACCESS DOOR	REFERENCE
Air intakes	4	130 / 210 / 310	/	21-20-00
Distribution hoses and air outlets	/	100 / 200	131 / 211L / 211R	21-20-00
Radio ventilation (if installed)	1	250	211L	21-20-00
B13 radio fan (option)	1	250	211L / 251L	21-20-00
B17 cabin blower (option)	1	220	242	21-20-00

3. DESCRIPTION

A. Air intakes (Figures 1, 2, 3 and 3A)

The air intake, which supplies the cabin air mixer through the heat exchanger, is located on the lower cowling, on the L.H. side under the propeller spinner dome.

The NACA air intakes, located on the sides of the fuselage between the firewall and frame C1, supply fresh air to the pilot and front passenger air outlets, the radio rack and the cabin air mixer :

- the L.H. NACA air intake supplies the L.H. air outlet and the radio rack,
- the R.H. NACA air intake supplies the R.H. air outlet and the cabin air mixer.

The rear air intake, located at the root of the vertical stabilizer, supplies fresh air to both rear air outlets located on the upper duct.

As an option, a little window can be installed on the access doors to improve ventilation for the pilot and the front passenger, as well as a movable scoop on the rear transparent panels for the rear passengers.

B. Distribution hoses and air outlets (Figures 1 and 2)

Distribution is ensured by flexible, reinforced hoses.

The air outlets enable each passenger to adjust and direct the desired air flow for his / her own comfort.

C. Radio ventilation (if installed) (Figures 1 and 2)

The air, at outside temperature, coming from the L.H. NACA air intake, supplies the diffuser secured to the L.H. side of the radio rack.

D. B13 radio fan (option) (Figure 1)

In order to improve the cooling of the radio rack equipment, a fan can be installed to accelerate the air circulation in the central pedestal console.

The air, at outside temperature, coming from the L.H. NACA air intake, circulates through the fan to the diffuser secured to the L.H. side of the radio rack.

The fan is secured to a support secured to the firewall, on cabin side.

An S129 thermostatic contact starts the fan as soon as the temperature reaches 113°F (45°C).

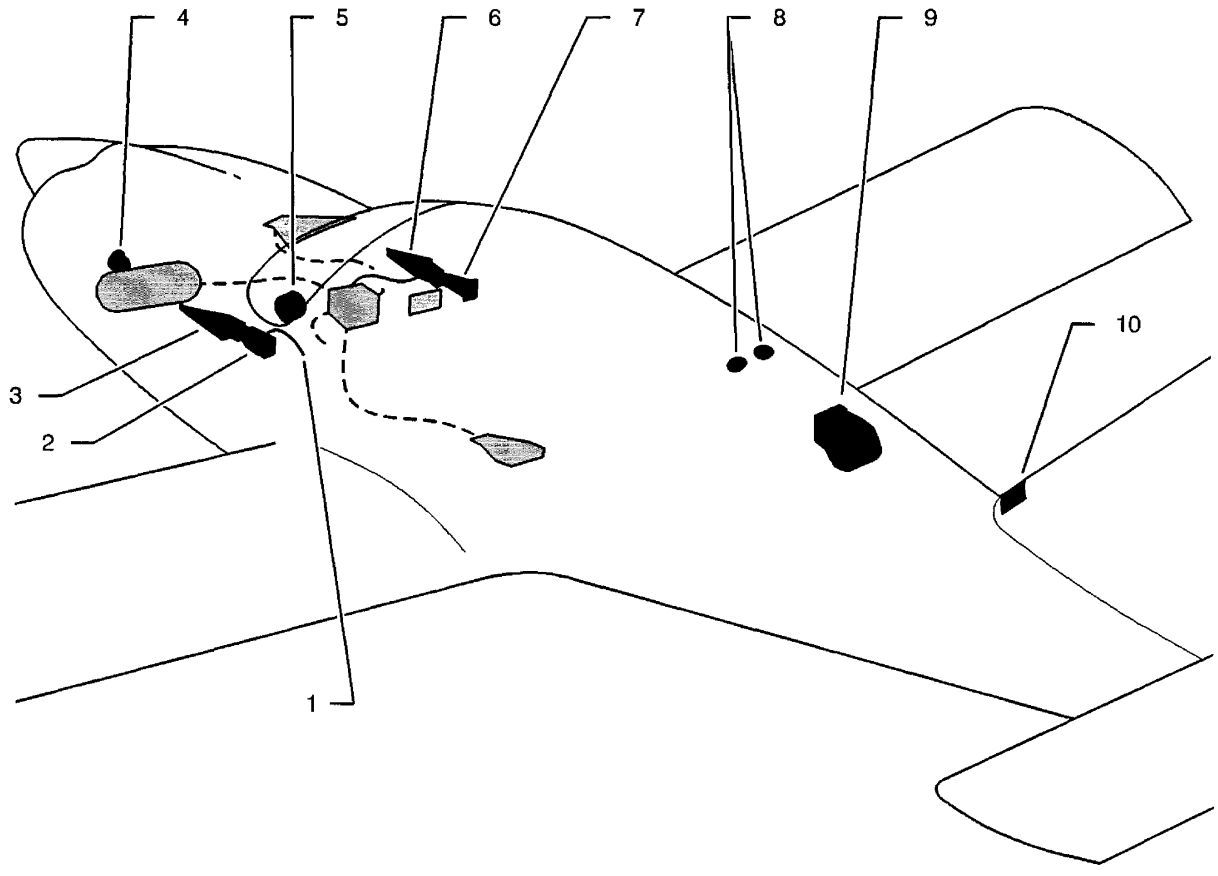
The fan is electrically supplied by "BUS 3" bar and protected by a circuit breaker located in PL1 circuit breaker panel.

E. B17 cabin blower (option) (Figures 1, 3 and 3A)

A blower, secured to the rear face of frame C6 and tapping outside air at the root of the vertical stabilizer, accelerates the cool air flow to the rear passengers. The blower ON/OFF switch is located on the overhead panel, forward of the air outlets.

The blower is electrically supplied by "BUS 2" bar and protected by "CB111" circuit breaker located in PL1 circuit breaker panel.

1 - Radio ventilation (if installed)
2 - L.H. front air outlet
3 - L.H. NACA air intake
4 - Front air intake
5 - B13 radio fan (option)
6 - R.H. NACA air intake
7 - R.H. front air outlet
8 - Rear air outlets
9 - B17 cabin blower (option)
10 - Rear air intake



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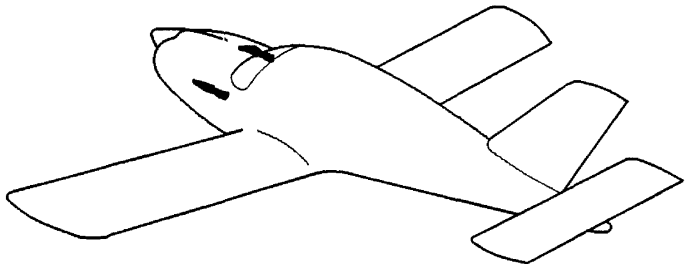
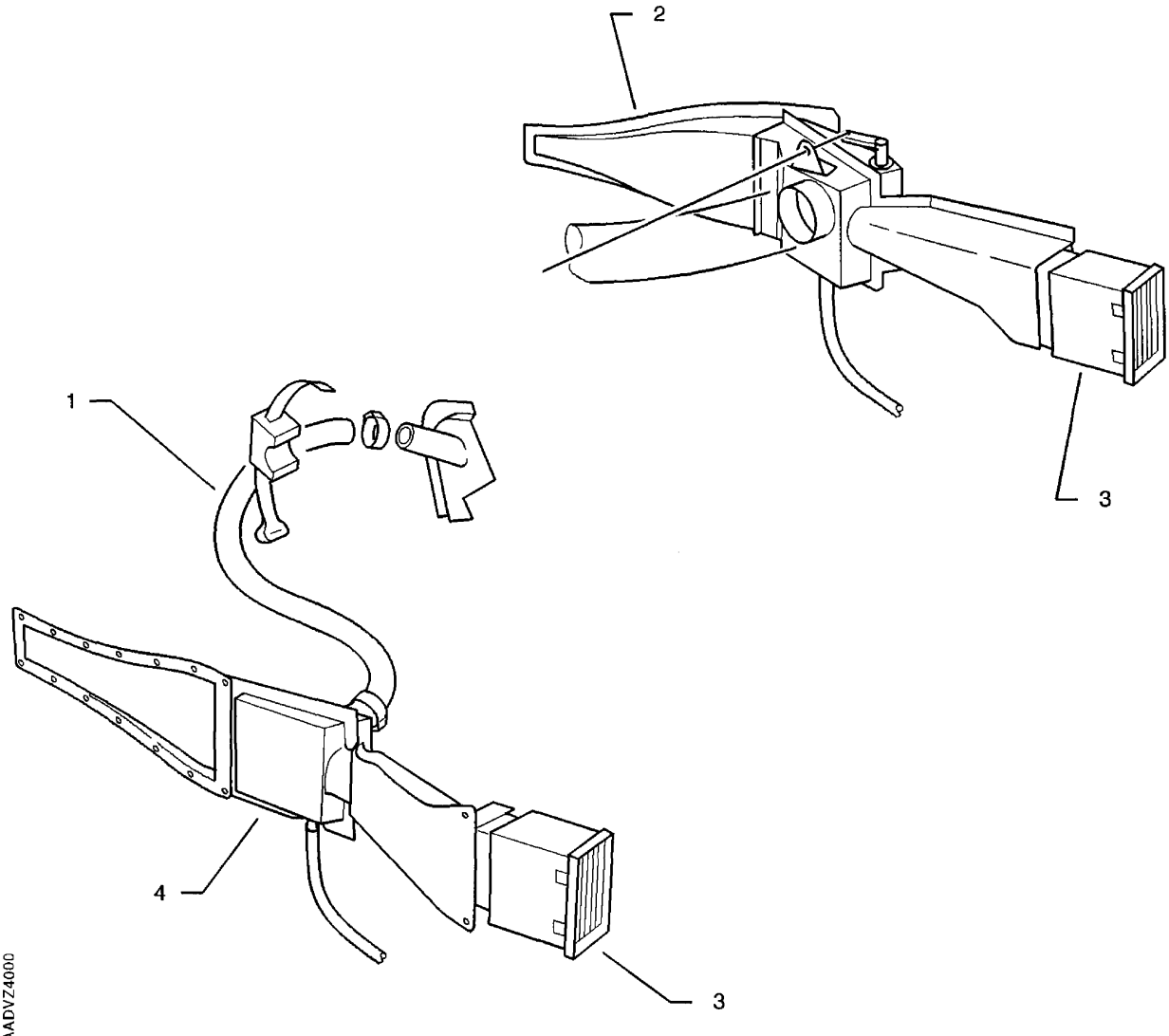
Distribution - Description and operation
Figure 1

1 - Radio ventilation (if installed)
2 - R.H. NACA air intake
3 - Front air outlets
4 - L.H. NACA air intake





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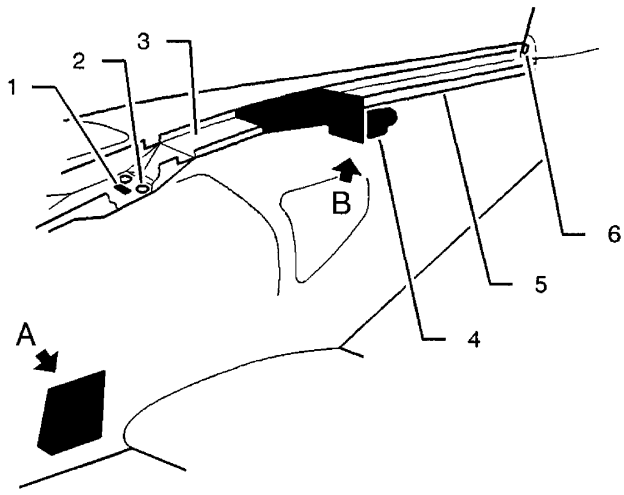
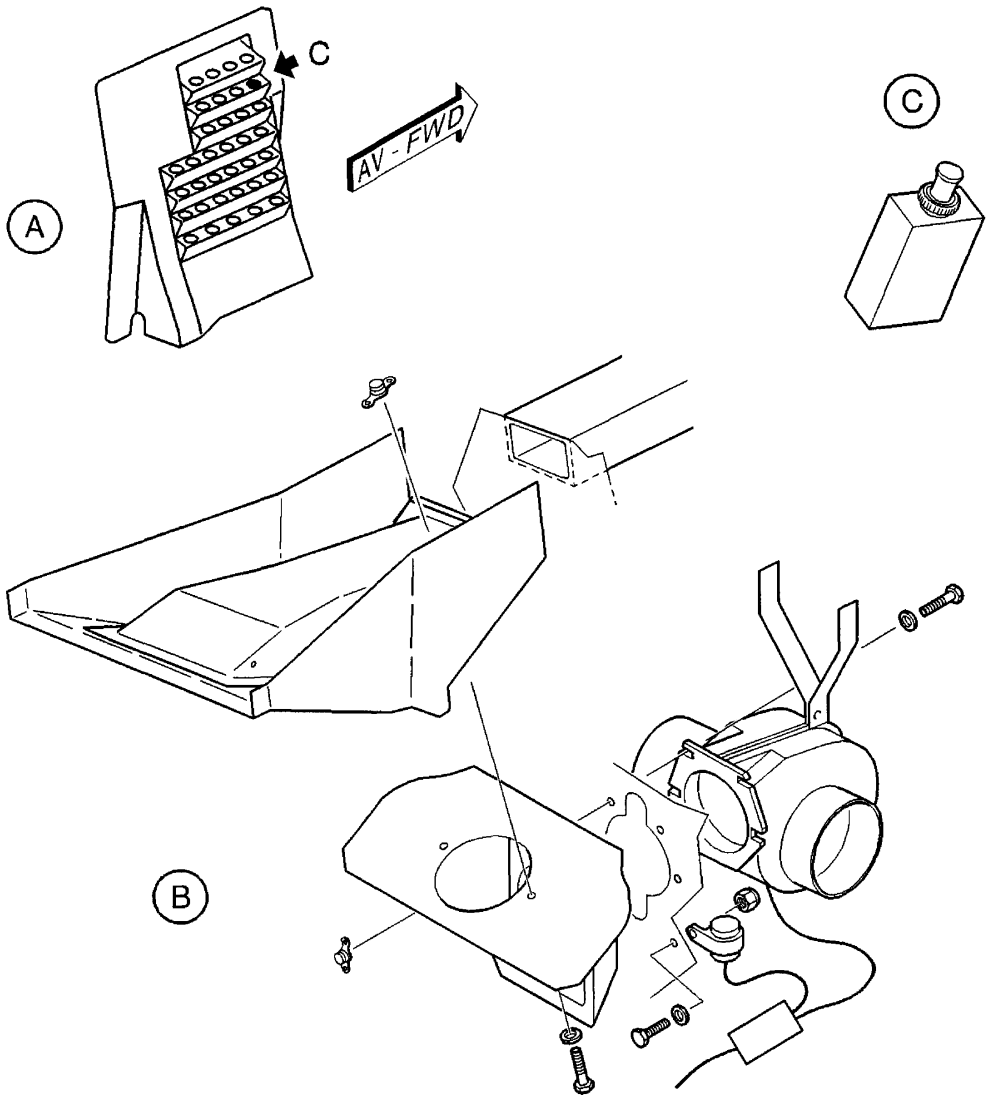
Distribution - Air intakes, front air outlets and radio ventilation
Figure 2

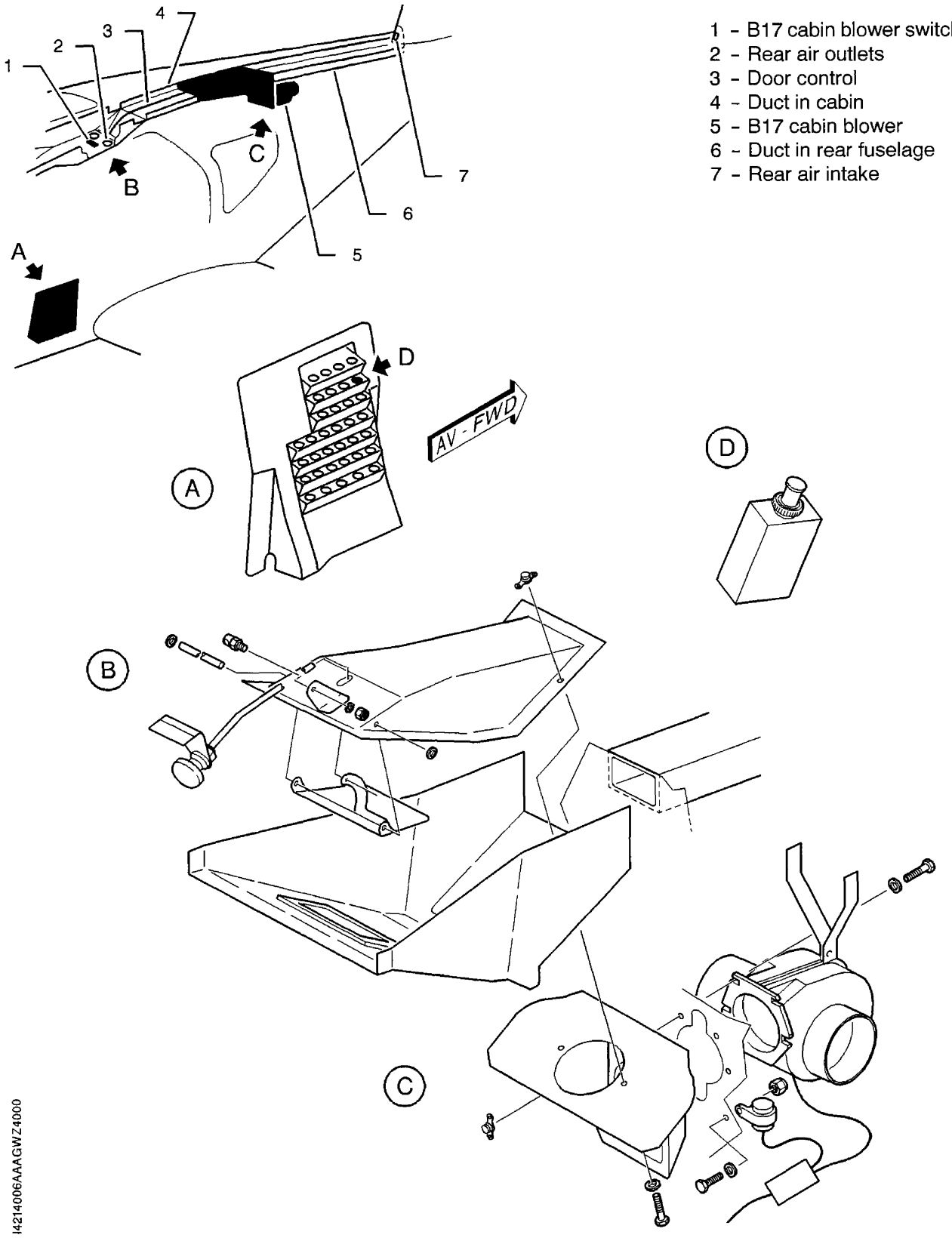


1 - B17 cabin blower switch
2 - Rear air outlets
3 - Duct in cabin
4 - B17 cabin blower
5 - Duct in rear fuselage
6 - Rear air intake



Distribution - B17 cabin blower (option)
Figure 3 - S / N 1 - 399, 480 - 584

AAAA
Validity : S / N 1 - 584



1 - B17 cabin blower switch
2 - Rear air outlets
3 - Door control
4 - Duct in cabin
5 - B17 cabin blower
6 - Duct in rear fuselage
7 - Rear air intake

Distribution - B17 cabin blower (option)
Figure 3A - S / N 400 - 479

DISTRIBUTION

DESCRIPTION AND OPERATION

1. GENERAL

The distribution system allows intake and distribution of the air tapped from the atmosphere.

The system consists of :

- the air intakes,
- the distribution hoses and air outlets,
- the radio ventilation,
- the B13 radio fan (option),

S / N 585 - 764, 766 - 878, 2000 - 9999

- the B17 cabin blower (option).

S / N 585 - 9999

It also uses the control box - refer to 21-40-00.

2. LOCATION

COMPONENT	QTY	AREA	ACCESS DOOR	REFERENCE
Air intakes	4	130 / 210 / 310	/	21-20-00
Distribution hoses and air outlets	/	100 / 200	131 / 211L / 211R	21-20-00
Radio ventilation	1	250	211L	21-20-00
B13 radio fan (option)	1	250	211L / 251L	21-20-00
B17 cabin blower (option)	1	220	242	21-20-00

3. DESCRIPTION

A. Air intakes (Figures 1, 2, 3 and 3A)

The air intake, which supplies the cabin air mixer and the demisting system through the heat exchanger, is located on the lower cowling, on the L.H. side under the propeller spinner dome.

The NACA air intakes, located on the sides of the fuselage between the firewall and frame C1, supply fresh air to the pilot and front passenger air outlets, the radio rack and the cabin air mixer :

- the L.H. NACA air intake supplies the L.H. and R.H. air outlets,
- the R.H. NACA air intake supplies the radio rack and the cabin air mixer.

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The rear air intake, located at the root of the vertical stabilizer, supplies fresh air to both rear air outlets located on the upper duct.

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As an option, a little window can be installed on the access doors to improve ventilation for the pilot and the front passenger, as well as a movable scoop on the rear transparent panels for the rear passengers.

B. Distribution hoses and air outlets (Figures 1 and 2)

Distribution is ensured by flexible, reinforced hoses.

The air outlets enable each passenger to adjust and direct the desired air flow for his / her own comfort.

C. Radio ventilation (Figures 1 and 2)

The air, at outside temperature, coming from the R.H. NACA air intake, supplies the diffuser secured to the L.H. side of the radio rack.

D. B13 radio fan (option) (Figure 1)

In order to improve the cooling of the radio rack equipment, a fan can be installed to accelerate the air circulation in the central pedestal console.

In the first version of the option, the air, at outside temperature, coming from the R.H. NACA air intake, circulates through the fan to the diffuser secured to the L.H. side of the radio rack.

In the latest version, the ambient air is sucked by the fan which supplies the diffuser secured to the L.H. side of the radio rack.

Pre-MOD. 151

The fan is secured to a support secured to the firewall, on cabin side, or to the central pedestal console.

If installed, an S129 thermostatic contact starts the fan as soon as the temperature reaches 113°F (45°C).

Post-MOD. 151

The fan is secured to the central pedestal console. It operates as soon as the aircraft is energized.

14-Volt aircraft

The fan is electrically supplied by "BUS 3" bar and protected by a circuit breaker located in PL1 circuit breaker panel.

28-Volt aircraft

The fan is electrically supplied by "BUS 3" bar and protected by a fuse located in PL3 fuse panel.

E. B17 cabin blower (option) (Figures 1, 3 and 3A)

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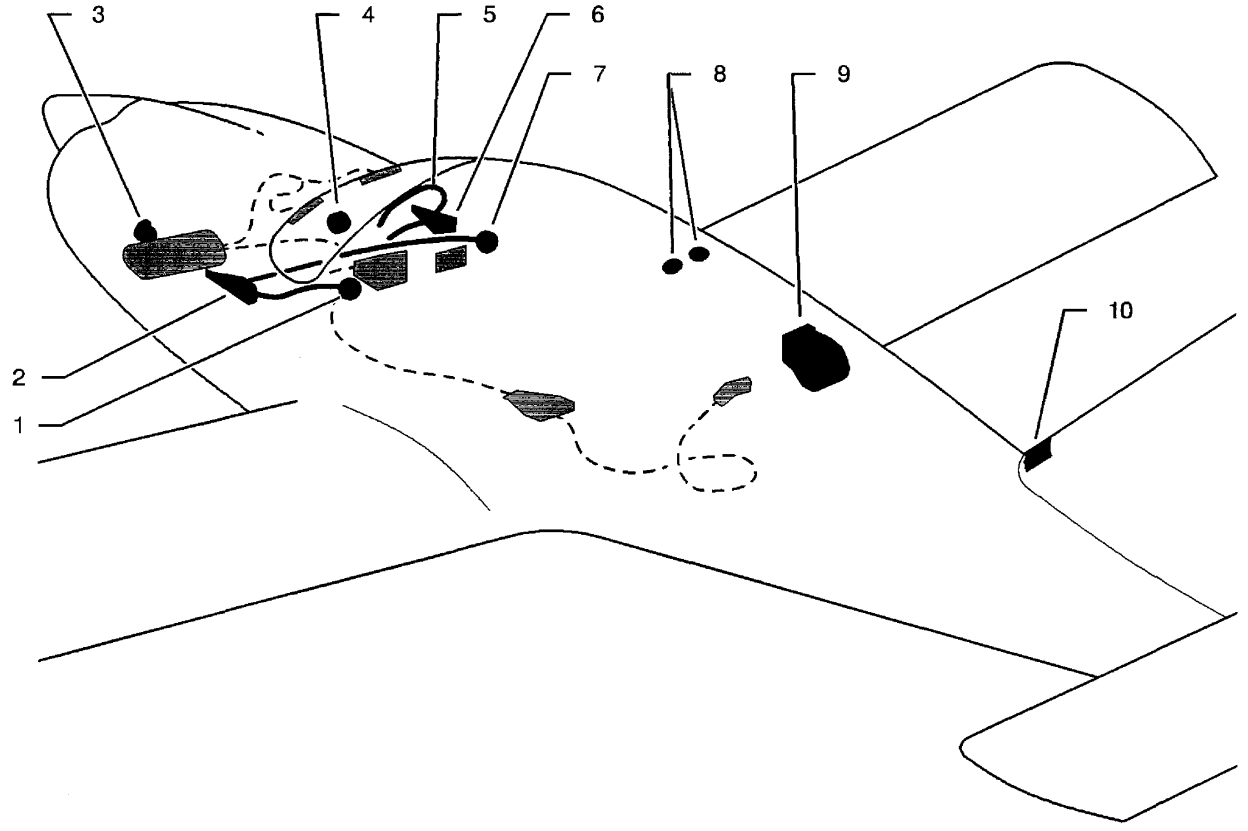
A blower, secured to the rear face of frame C6 and tapping outside air at the root of the vertical stabilizer, accelerates the cool air flow to the rear passengers. The blower ON/OFF switch is located on the overhead panel, forward of the air outlets.

The blower is electrically supplied by "BUS 2" bar and protected by "CB111" circuit breaker located in PL1 circuit breaker panel.

1 - L.H. front air outlet
2 - L.H. NACA air intake
3 - Front air intake
4 - B13 radio fan (option)
5 - Radio ventilation
6 - R.H. NACA air intake
7 - R.H. front air outlet
8 - Rear air outlets (if installed)
9 - B17 cabin blower (option)
10 - Rear air intake (if installed)



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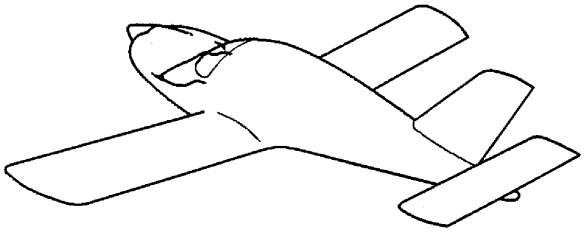
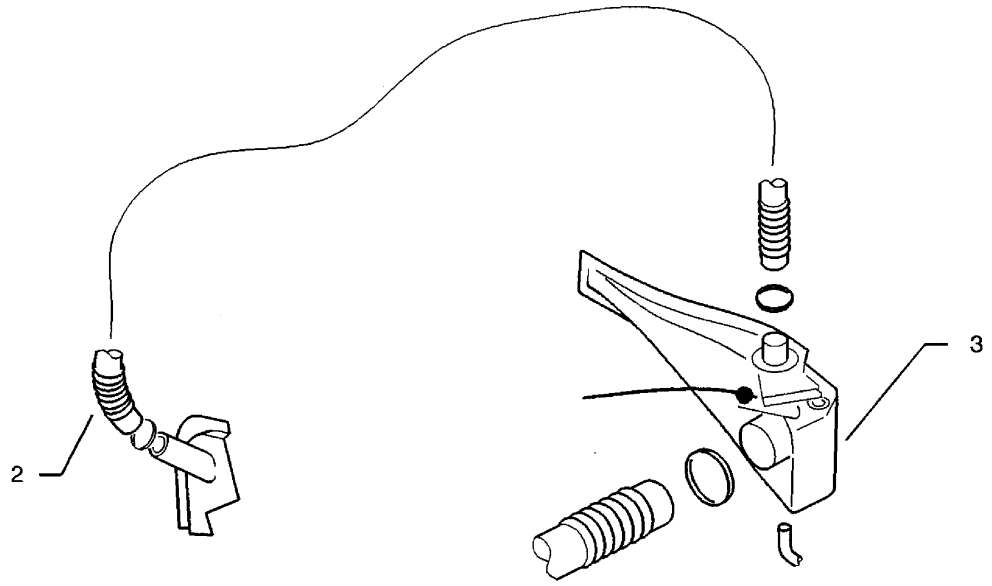
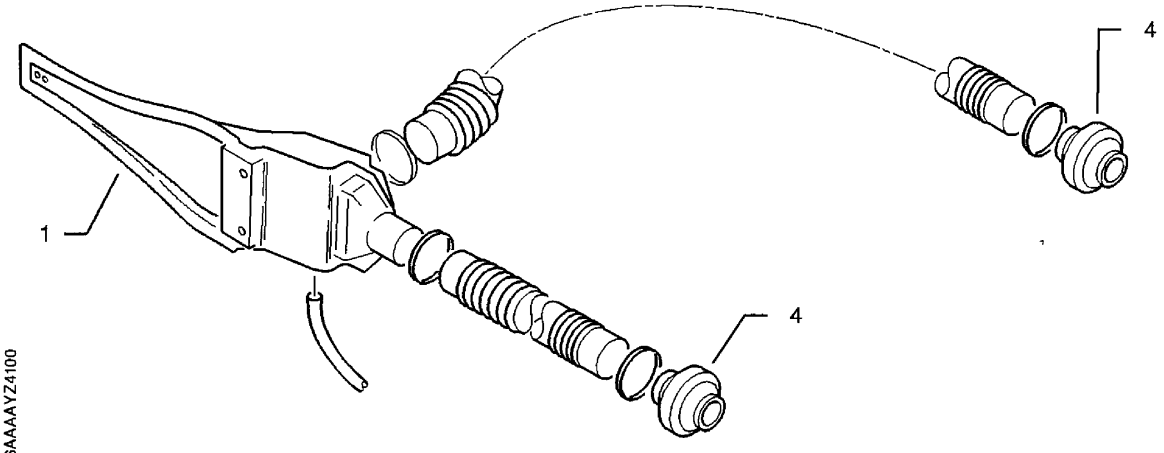
Distribution - Description and operation
Figure 1



1 - L.H. NACA air intake
2 - Radio ventilation
3 - R.H. NACA air intake
4 - Front air outlets





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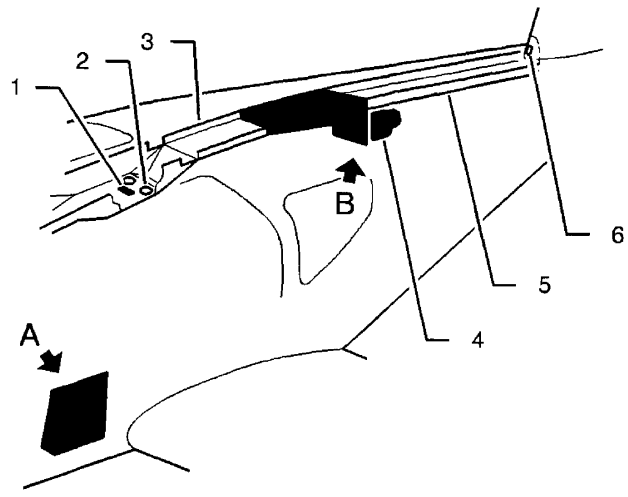
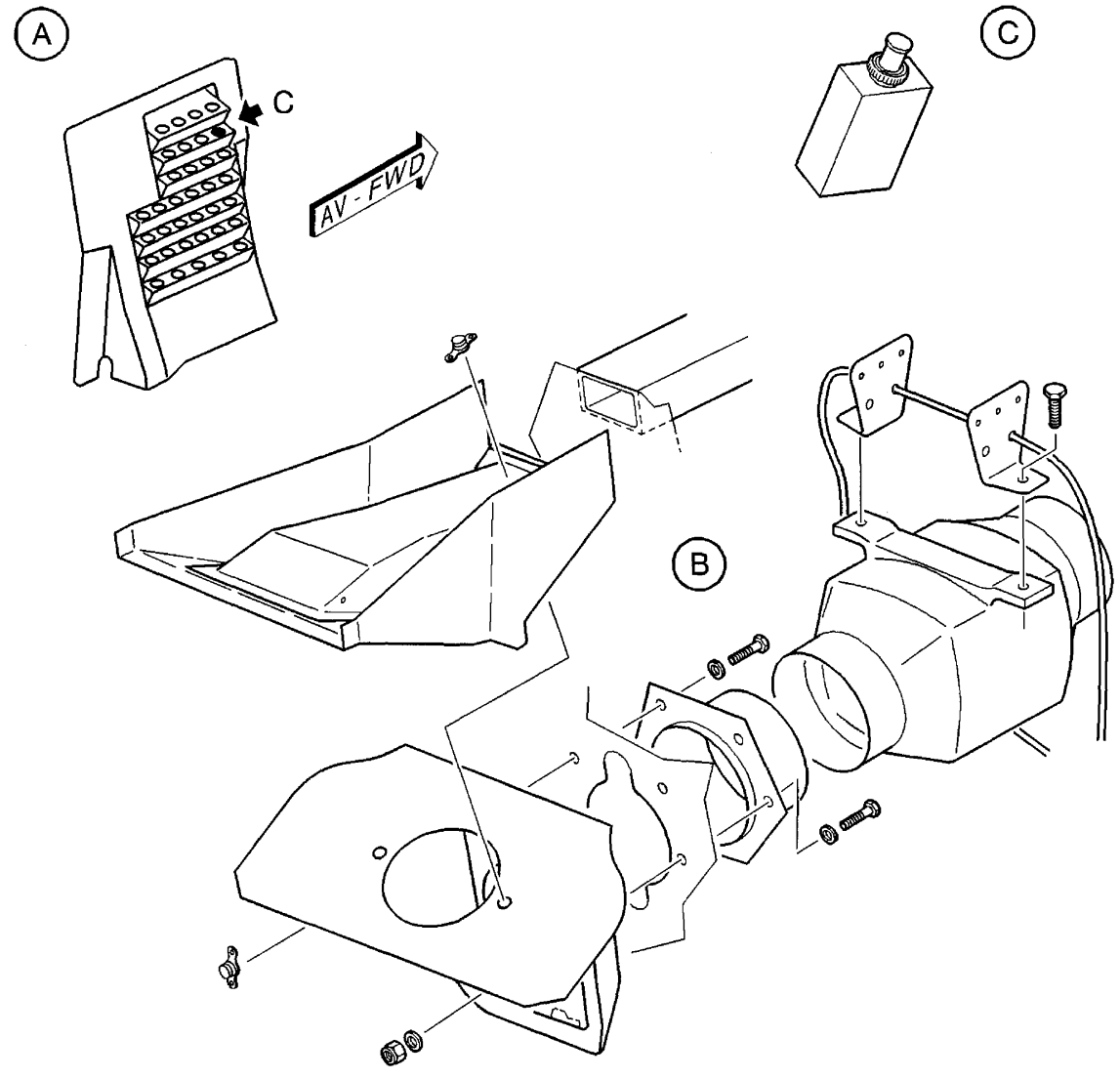
Distribution - Air intakes, front air outlets and radio ventilation
Figure 2



1 - B17 cabin blower switch
2 - Rear air outlets
3 - Duct in cabin
4 - B17 cabin blower
5 - Duct in rear fuselage
6 - Rear air intake



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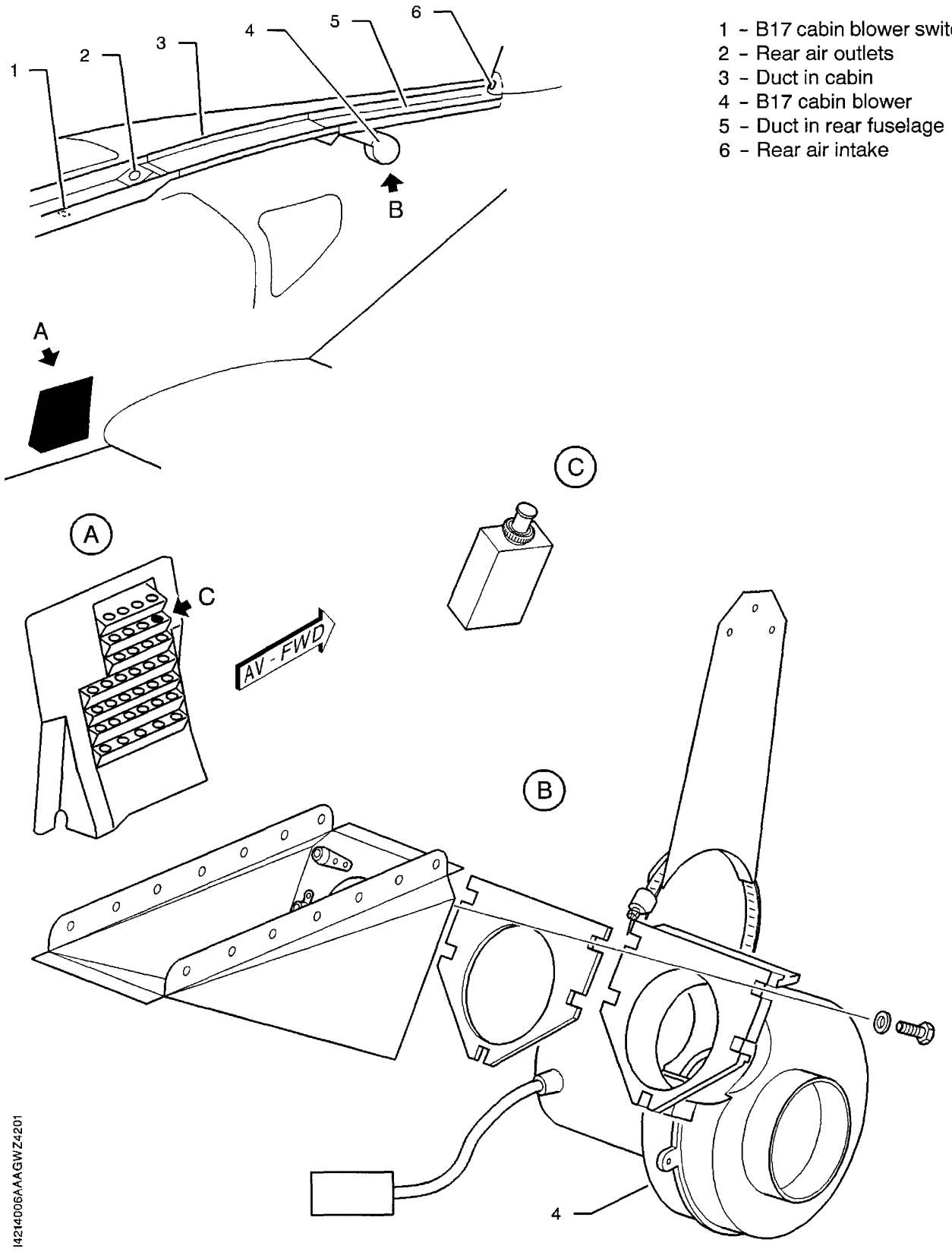
Distribution - B17 cabin blower (option)
Figure 3 - S / N 585 - 764, 766 - 878



1 - B17 cabin blower switch
2 - Rear air outlets
3 - Duct in cabin
4 - B17 cabin blower
5 - Duct in rear fuselage
6 - Rear air intake

Distribution - B17 cabin blower (option)
Figure 3A - S / N 2000 - 9999

HEATING

DESCRIPTION AND OPERATION

1. GENERAL

Heating allows air regulation using the air systems from the heat exchanger and the fresh air intakes.

Temperature is controlled by the cold air / hot air ratio.

The heating system consists of :

- the heat exchanger,
- the cabin air mixer,
- the control box,
- the distribution hoses and the diffusers.

2. LOCATION

COMPONENT	QTY	AREA	ACCESS DOOR	REFERENCE
Heat exchanger	1	100	131	21-40-01
Cabin air mixer	1	100	131	21-40-02
Control box	1	230	254R	21-40-00
Distribution hoses and diffusers	/	100 / 200	131 / 211 / 235 / 236	21-40-00

3. DESCRIPTION

A. Heat exchanger (Figure 2)

The heat exchanger, installed on the exhaust pipe, heats the air coming from the air intake located on the left, under the propeller spinner dome.

B. Cabin air mixer (Figure 3)

The cabin air mixer mixes the hot air coming from the heat exchanger with the cold air coming from the R.H. NACA air intake.

Hot air / cold air adjustment is ensured, for hot air, by a fire cut-off shutter integrated into the cabin air mixer, and, for cold air, by the R.H. NACA air intake shutter.

Both shutters are controlled from the cabin via a control panel located on the R.H. side of the instrument panel strip.

The cabin air mixer is located aft of the firewall, at front passenger feet level.

C. Control box (Figures 3 and 4)

The control box is equipped with three knobs which make it possible to adjust the flow and temperature of the air entering the cabin.

The knobs control the opening of the different shutters via sheathed control cables.

S / N 1 - 274

The control box, installed in vertical position, is located on the R.H. instrument panel strip.

S / N 275 - 584

The control box, installed in horizontal position, is located on the R.H. instrument panel strip.

D. Distribution hoses and diffusers (Figures 1 and 3)

Regulated air distribution is ensured by flexible, reinforced hoses.

For the demisting function, a diffuser is installed at the bottom of the windshield and supplied by a hose connected to the cabin air mixer.

For the heating function, a diffuser (supplied by a hose) is installed between the rear passengers, at floor level. A deflector is integrated into the cabin air mixer for the front passenger feet, and a hose is directed towards the pilot feet. Both hoses are connected to the cabin air mixer.

4. OPERATION

A. Air regulation (Figure 3)

The cabin air mixer is supplied with hot air coming from the exchanger and with cold air coming from the R.H. NACA air intake.

S / N 1 - 274

Regulation is obtained by moving the R.H. knob (hot air) and the central knob (cold air).

The air mixed in the cabin air mixer is distributed in the cabin to the pilot feet and to the front and rear passengers feet.

The diffused air flow can be adjusted using the L.H. knob which controls a shutter inside the cabin air mixer.

S / N 275 - 584

Regulation is obtained by moving the upper knob (hot air) and the central knob (cold air).

The air mixed in the cabin air mixer is distributed in the cabin to the pilot feet and to the front and rear passengers feet.

The diffused air flow can be adjusted using the lower knob which controls a shutter inside the cabin air mixer.

B. Control box (Figures 3 and 4)

Hot air flow knob (A) controls the hot air flow coming from the cabin air mixer.

Cold air flow knob (B) controls the cold air flow coming from the R.H. NACA air intake.

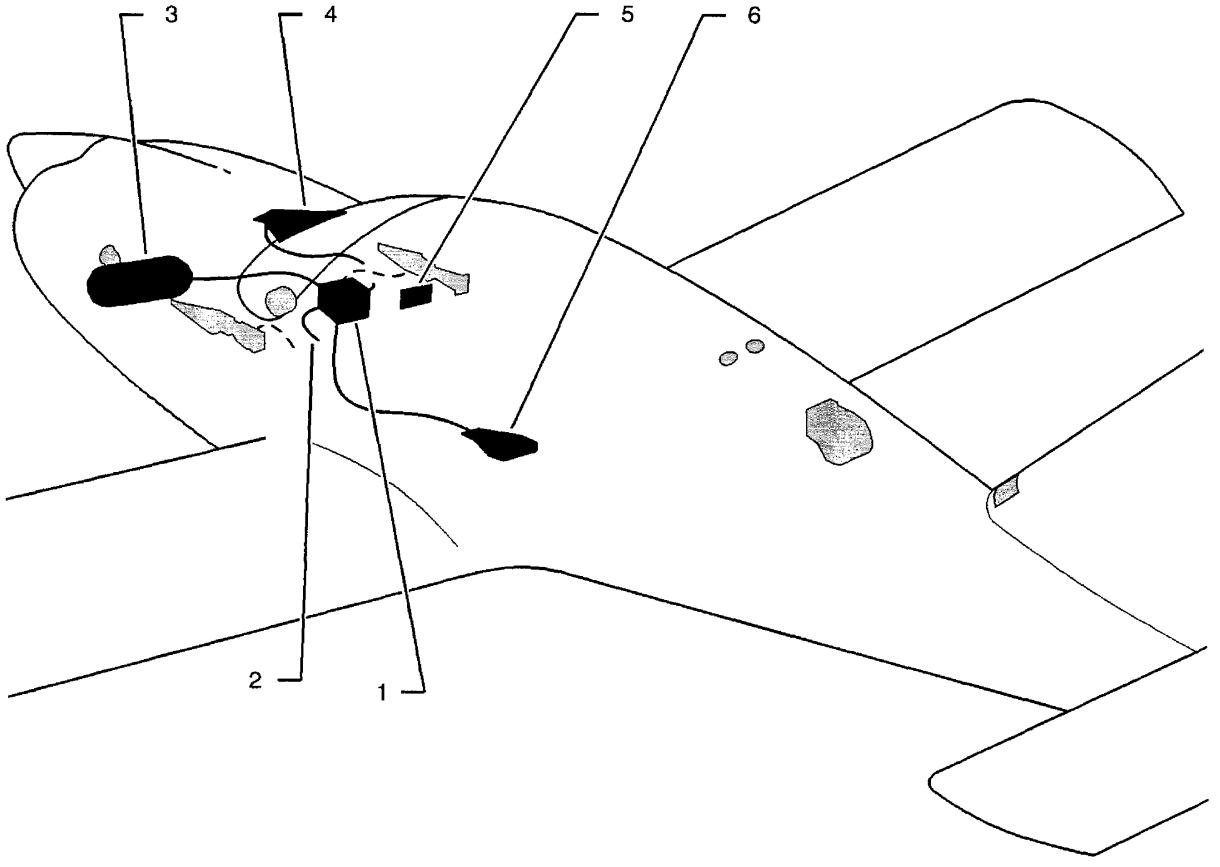
S / N 1 - 274

Regulated air flow knob (C) controls the regulated air flow to the front and rear passengers (knob in lower position) and to the windshield (knob in upper position).

S / N 275 - 584

Regulated air flow knob (C) controls the regulated air flow to the front and rear passengers (knob in R.H. position) and to the windshield (knob in L.H. position).

1 - Cabin air mixer
2 - Pilot diffuser (feet)
3 - Heat exchanger
4 - Windshield demisting diffuser
5 - Control box
6 - Rear passengers diffuser (feet)



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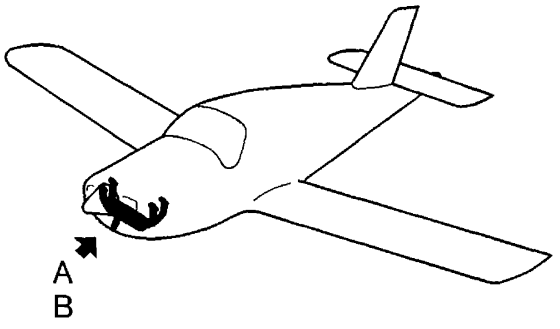
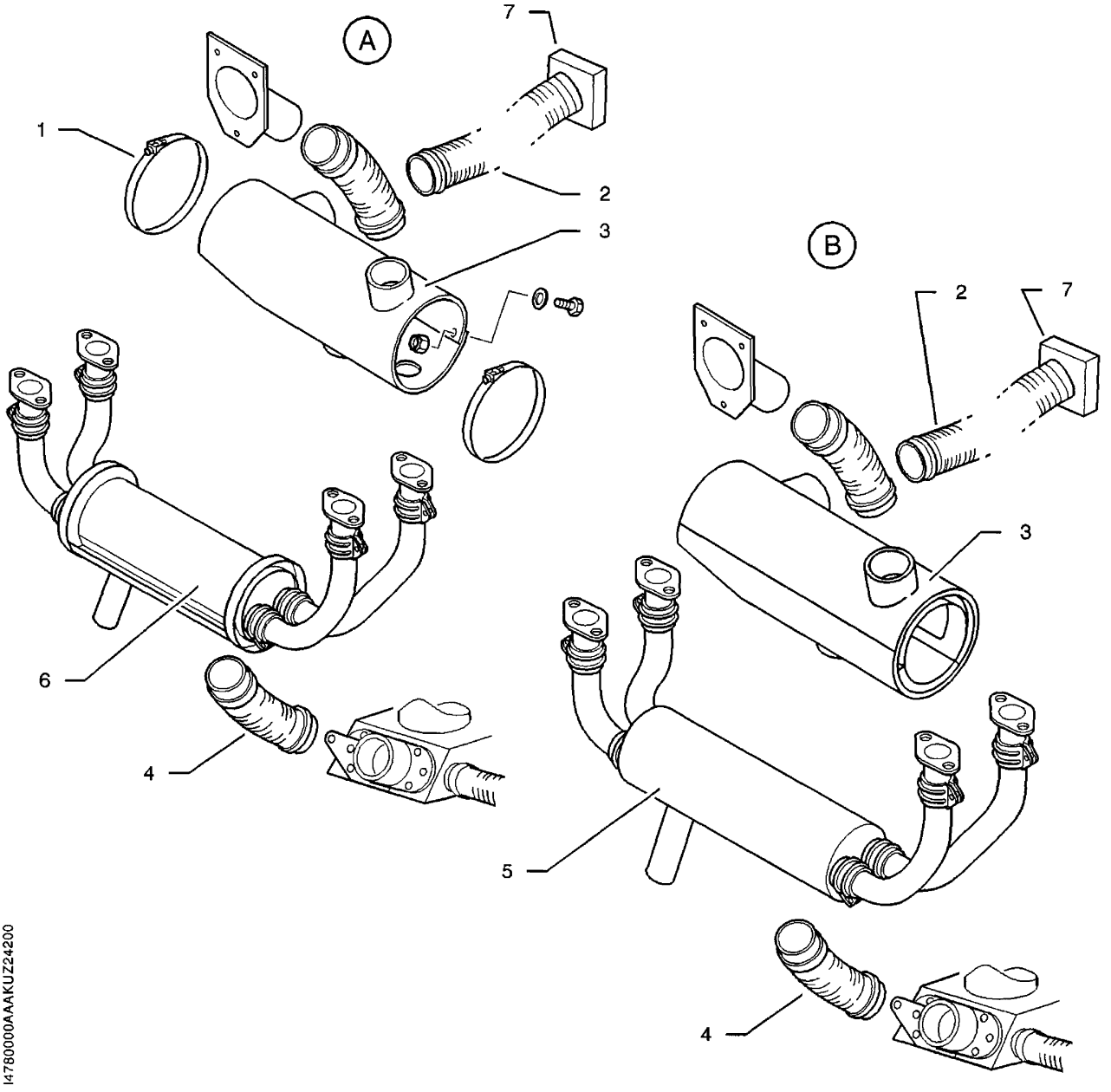
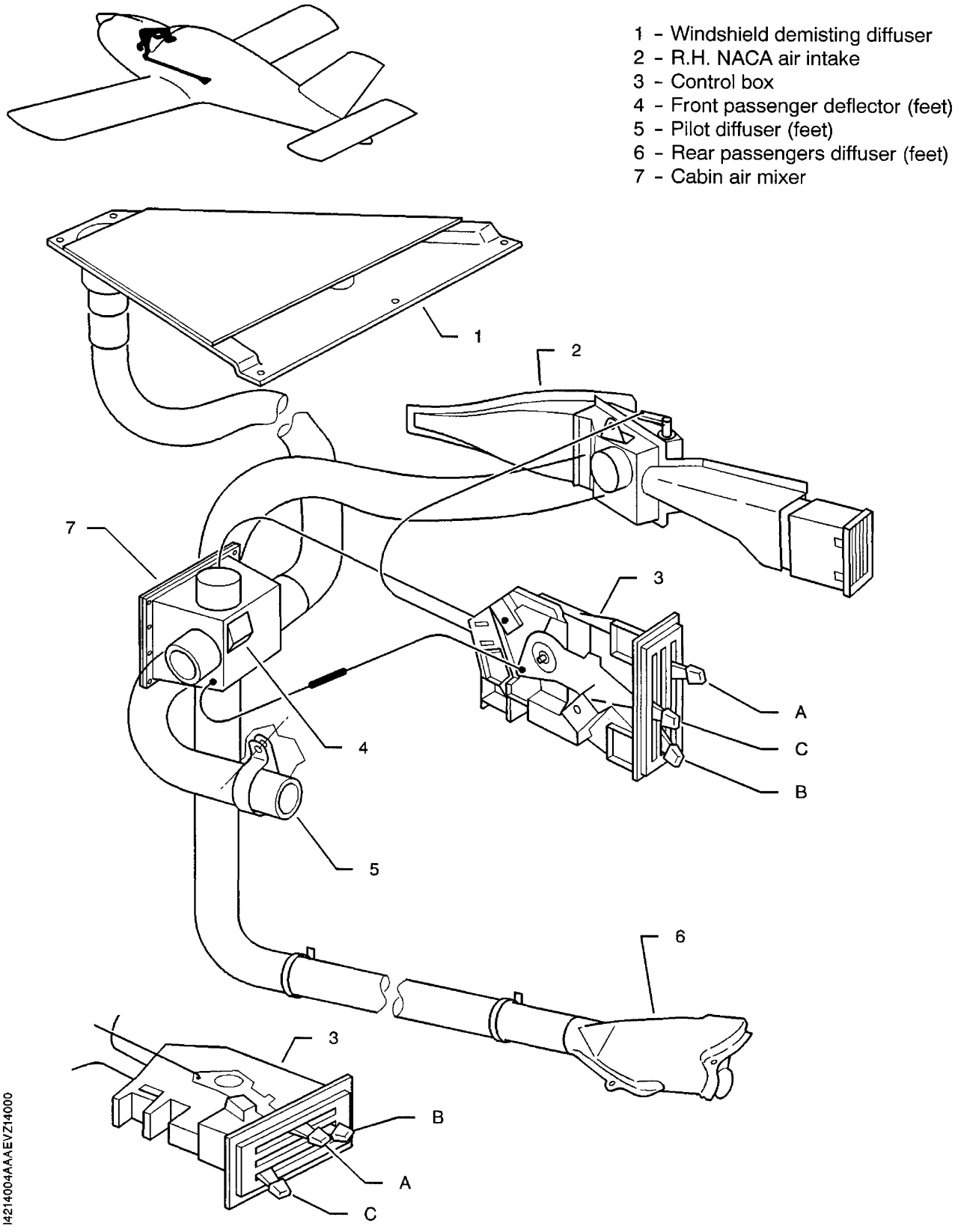
Heating - Description and operation
Figure 1



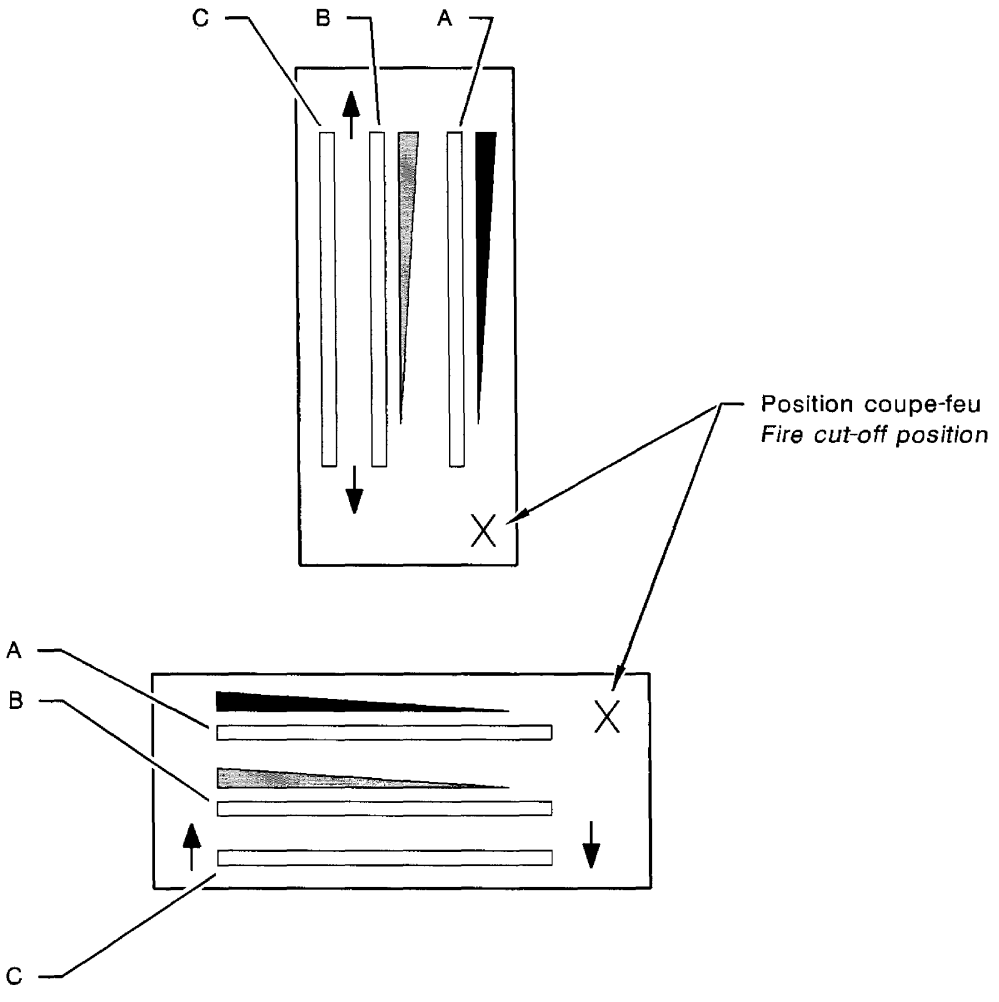
1 - Clamp
2 - Hose
3 - Heat exchanger
4 - Hose
5 - Exhaust pipe (S / N 375 - 584)
6 - Exhaust pipe (S / N 1 - 374)
7 - Front box



Heating - Heat exchanger
Figure 2



Air regulation - Description and operation
Figure 3



Heating - Control box
Figure 4

HEATING

DESCRIPTION AND OPERATION

1. GENERAL

Heating allows air regulation using the air systems from the heat exchanger and the fresh air intakes.

Temperature is controlled by the cold air / hot air ratio.

The heating system consists of :

- the heat exchanger,
- the cabin air mixer,
- the demisting box,
- the control box,
- the distribution hoses and the diffusers.

2. LOCATION

COMPONENT	QTY	AREA	ACCESS DOOR	REFERENCE
Heat exchanger	1	100	131	21-40-01
Cabin air mixer	1	100	131	21-40-02
Demisting box	1	250	211L / 211R	21-40-00
Control box	1	230	254R	21-40-00
Distribution hoses and diffusers	/	100 / 200	131 / 211 / 218 / 219 / 235 / 236	21-40-00

3. DESCRIPTION

A. Heat exchanger (Figure 2)

The heat exchanger, installed on the exhaust pipe, heats the air coming from the air intake located on the left, under the propeller spinner dome.

B. Cabin air mixer (Figure 5)

The cabin air mixer mixes the hot air coming from the heat exchanger with the cold air coming from the R.H. NACA air intake.

Hot air / cold air adjustment is ensured by a fire cut-off shutter controlled from the cabin via the control box located on the R.H. side of the instrument panel strip.

The cabin air mixer is located aft of the firewall, at front passenger feet level.

C. Demisting box (Figure 3)

The demisting box can be shut off by a fire cut-off shutter and allows hot air distribution onto the windshield via two diffusers.

This box is supplied with hot air via a hose connected to the heat exchanger.

The air flow is adjusted using the "DEMISTING" knob on the control box.

The demisting box is located at the top, on the rear face of the firewall.

D. Control box (Figure 4)

The control box is equipped with three knobs ("DEMISTING", "CABIN TEMPERATURE" and "CABIN AIR FLOW") which make it possible to adjust the flow and temperature of the air entering the cabin.

The knobs control the opening of the different shutters via sheathed control cables.

The control box is located on the R.H. instrument panel strip.

E. Distribution hoses and diffusers (Figure 1)

Regulated air distribution is ensured by flexible, reinforced hoses.

Diffusers are installed between the rear passengers, at floor level, and behind the rear bench, at head level. A deflector is secured to the cabin air mixer outlet for the front passenger feet, and a hose is directed towards the pilot feet.

4. OPERATION

A. Air regulation (Figure 5)

The cabin air mixer is supplied with hot air coming from the heat exchanger and with cold air coming from the R.H. NACA air intake.

Regulation is obtained by moving the "CABIN TEMPERATURE" knob which simultaneously controls the cabin air mixer and the R.H. NACA air intake.

The air mixed in the cabin air mixer is distributed in the cabin to the pilot feet, the front and rear passengers feet and to the upper section of the rear bench backrest.

The diffused air flow can be adjusted using the "CABIN AIR FLOW" knob which controls a shutter at the cabin air mixer outlet, in the distribution box.

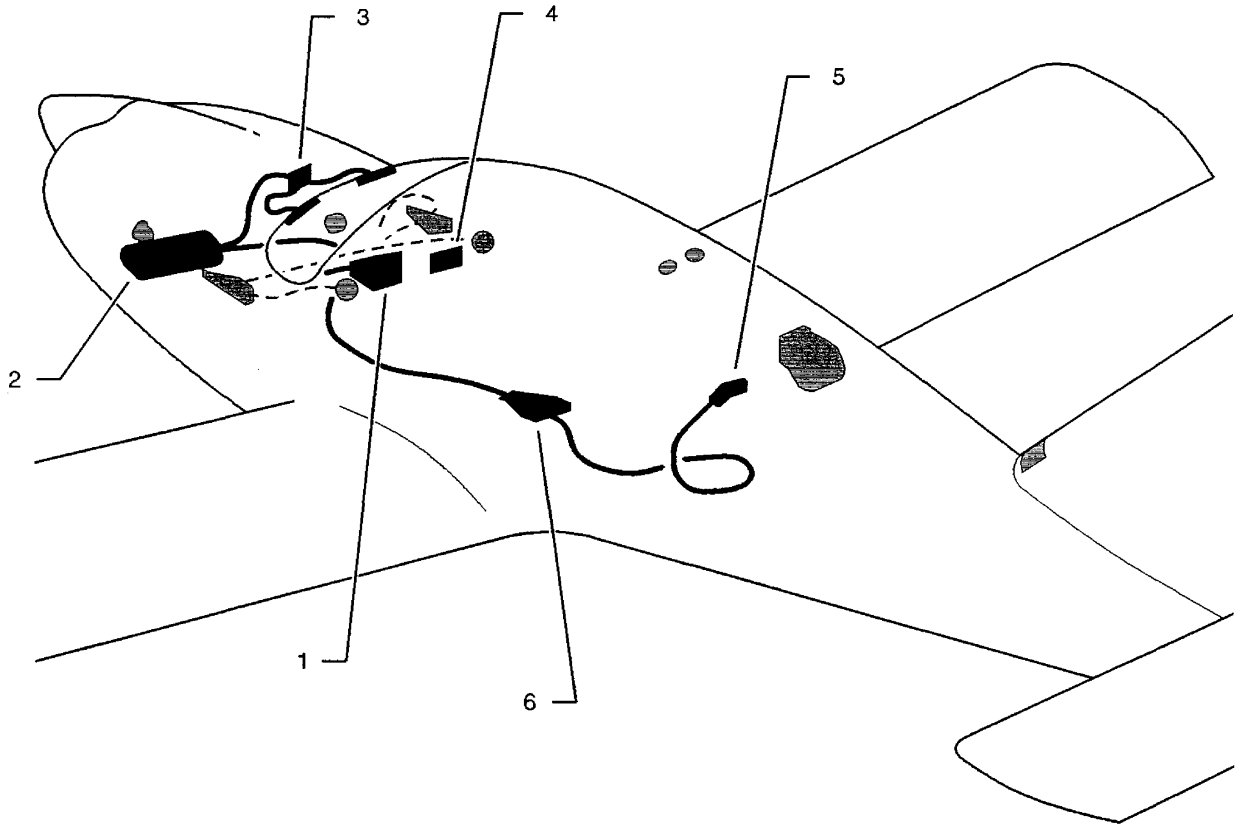
B. Control box (Figures 4 and 5)

"CABIN TEMPERATURE" knob (A) controls through **a1** the hot air intake coming from hot air intake box (1), and through **a2** the cold air intake coming from R.H. NACA air intake (3) to cabin air mixer (2).

"DEMISTING" knob (B) controls through **b** the hot air intake coming from demisting box (10) to the windshield diffusers.

"CABIN AIR FLOW" knob (C) controls through **c** the quantity of air sent to the diffusers and the deflector.

1 - Cabin air mixer
2 - Heat exchanger
3 - Demisting box
4 - Control box
5 - Rear passengers diffuser (head)
6 - Rear passengers diffuser (feet)



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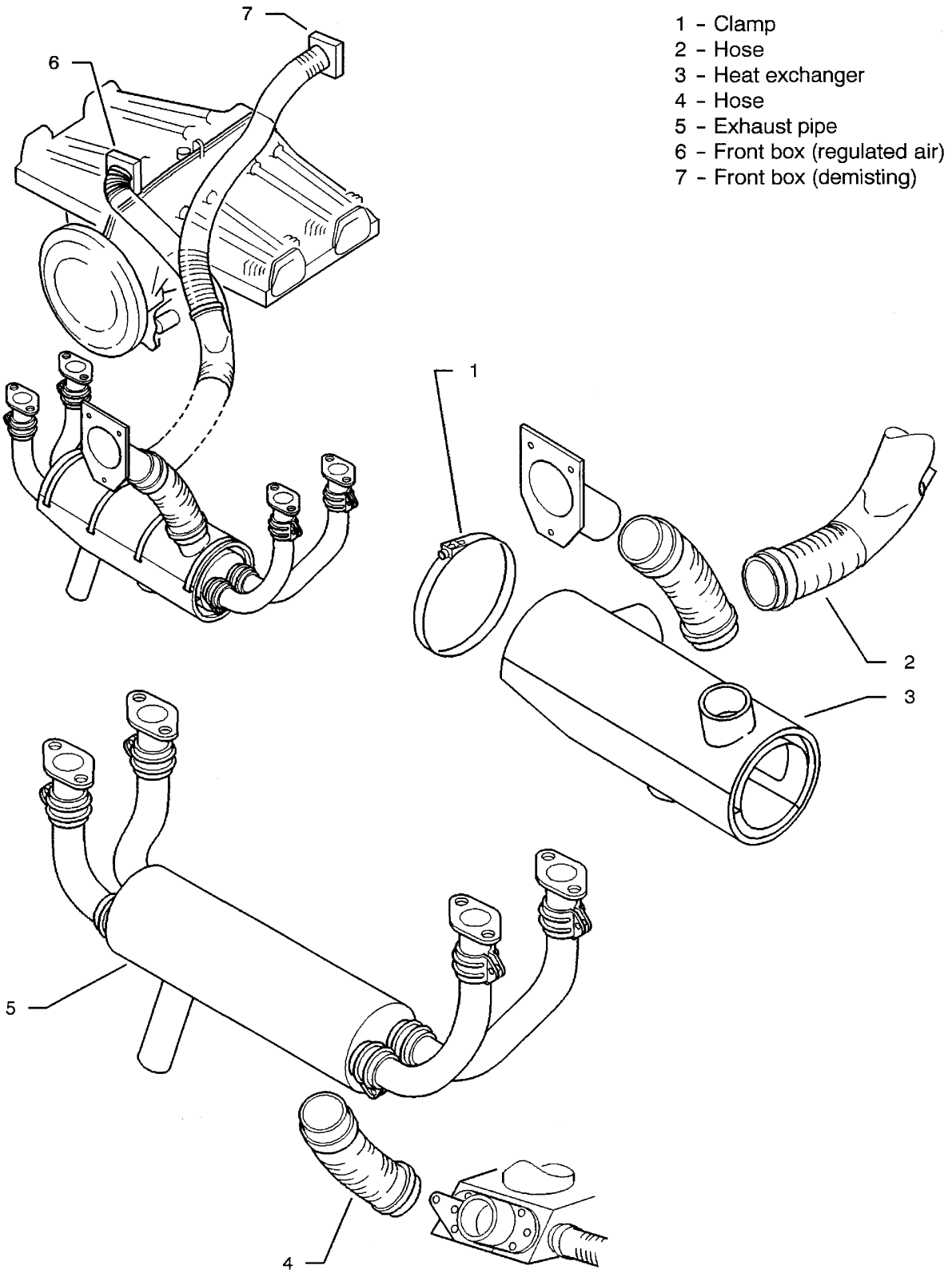
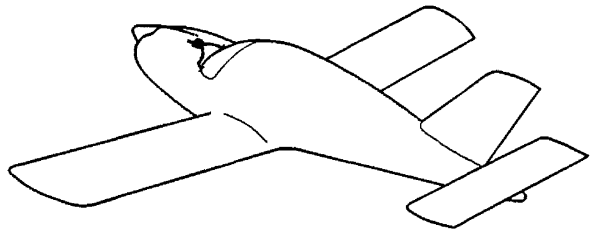
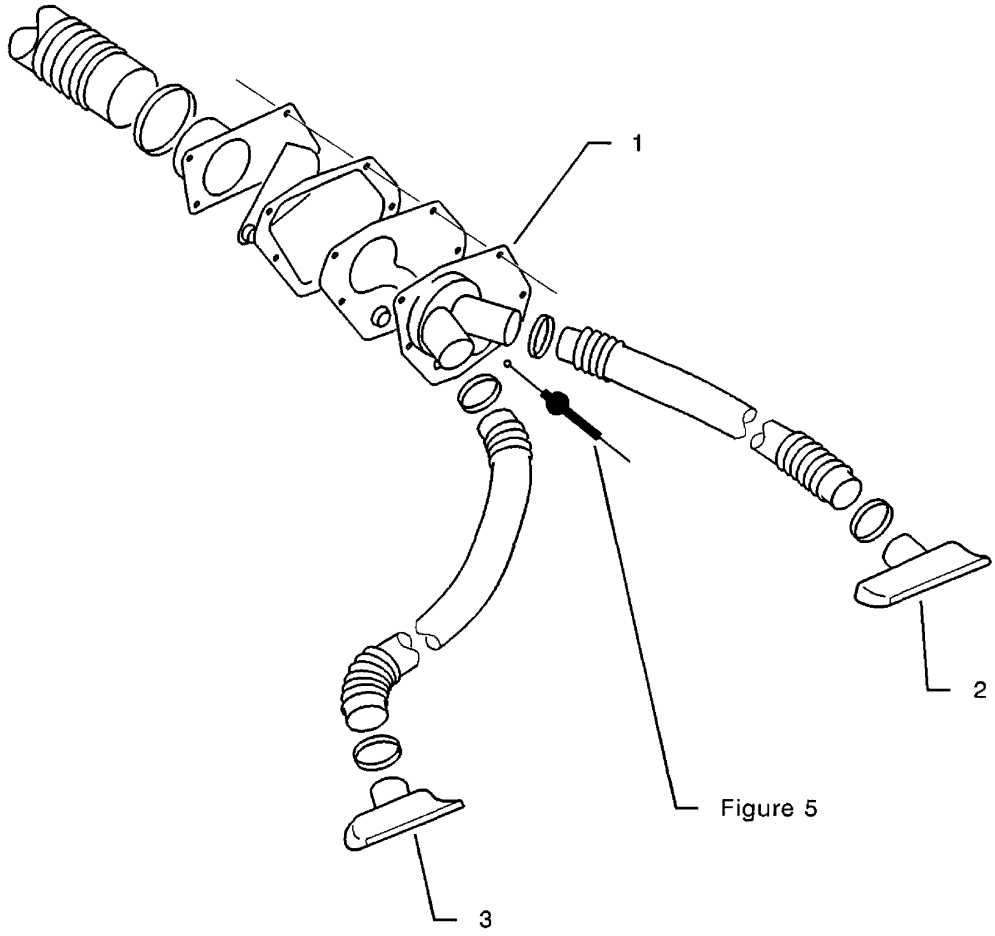
Heating - Description and operation
Figure 1



Heating - Heat exchanger
Figure 2



1 - Demisting box
2 - R.H. windshield diffuser
3 - L.H. windshield diffuser



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Heating - Demisting box
Figure 3

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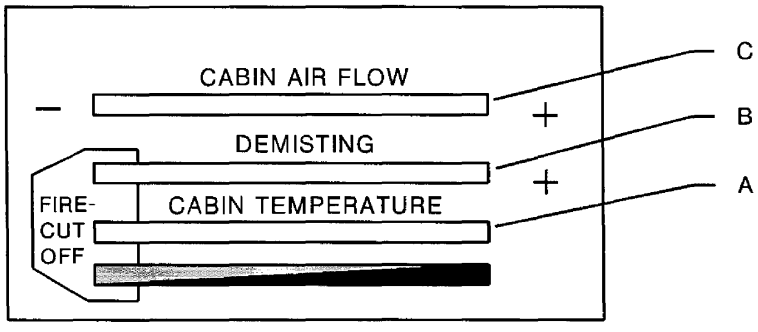
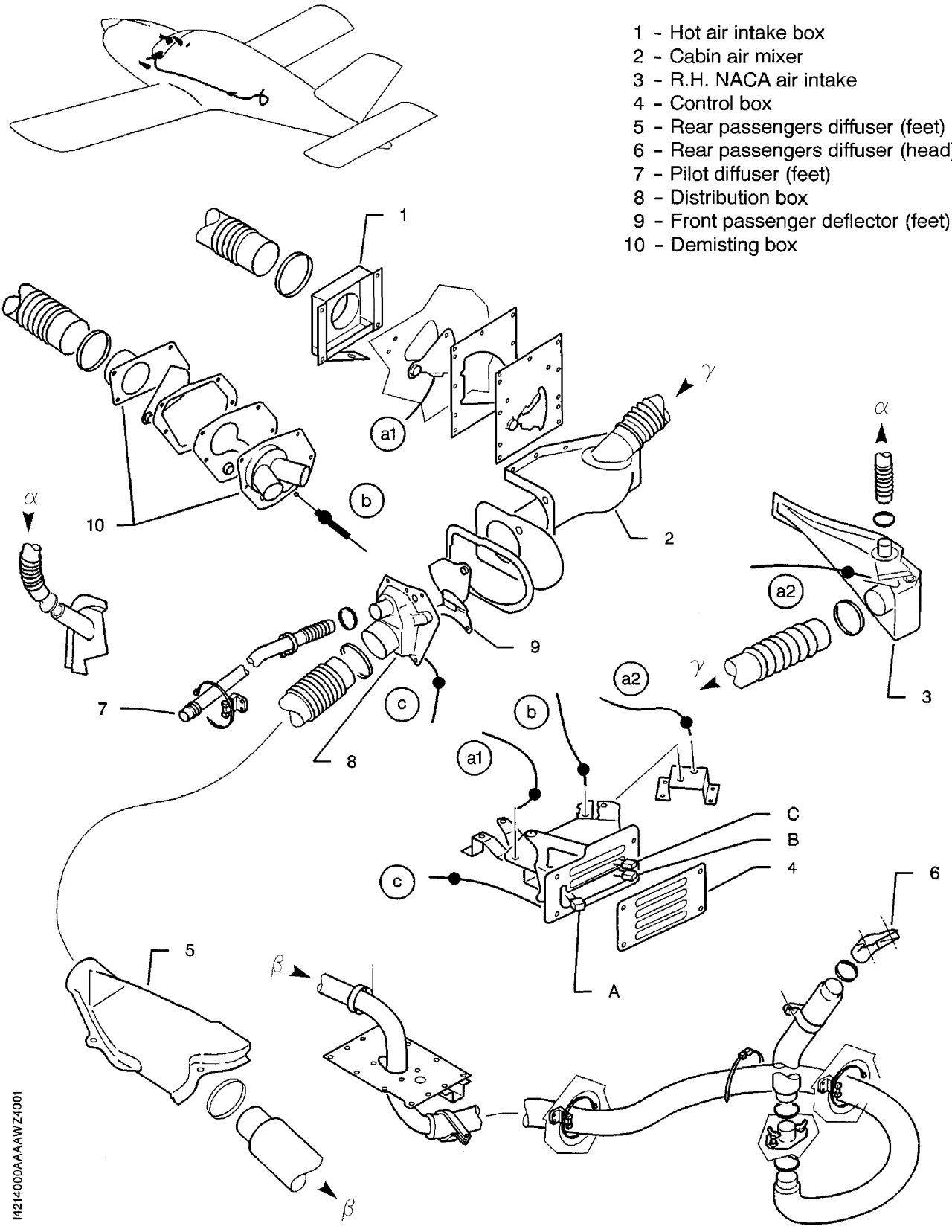


Heating - Control box
Figure 4



Air regulation - Description and operation
Figure 5

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HEAT EXCHANGER

MAINTENANCE PRACTICES

1. SERVICING

None

2. REMOVAL / INSTALLATION - HEAT EXCHANGER (Figure 201)

A. Tools and consumable materials

- Stainless steel lockwire dia. 0.032 in (0.8 mm)

B. Removal of the heat exchanger

WARNING : PRIOR TO ANY OPERATION, ENSURE THAT THE ENGINE, EXHAUST PIPE AND MANIFOLDS ARE COLD. IF NOT, TAKE NECESSARY PRECAUTIONS TO AVOID SEVERE BURNS.

NOTE : Heat exchanger (2), Detail B, is a variant of heat exchanger (2), Detail A.

1) Remove the engine cowlings - refer to 71-10-01.
2) Remove the exhaust assembly - refer to 78-00-00.
3) On a table or a workbench, cut the lockwire then remove clamps (1).
4) Remove bolts (4), retain washers (3) - see Detail A.
5) Remove heat exchanger (2) from exhaust pipe (5).

C. Installation of the heat exchanger

1) Inspect the heat exchanger for condition. Replace any defective part.
2) Position heat exchanger (2) on exhaust pipe (5).
3) Install and tighten clamps (1).
4) Install bolts (4) and washers (3) - see Detail A.
5) Lockwire clamp (1) screws.
6) Install the exhaust assembly - refer to 78-00-00.
7) Make sure all the tools and materials are removed and the work area is clean and free from debris.
8) Install the engine cowlings - refer to 71-10-01.

3. ADJUSTMENT / TEST

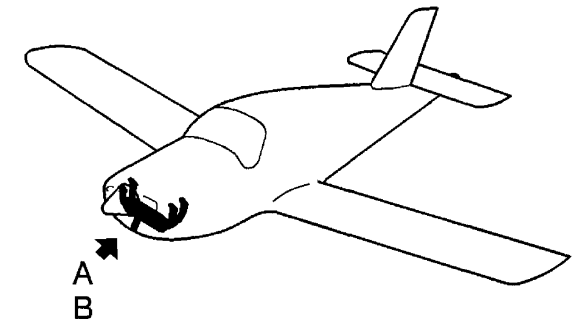
None

4. INSPECTION / CHECK

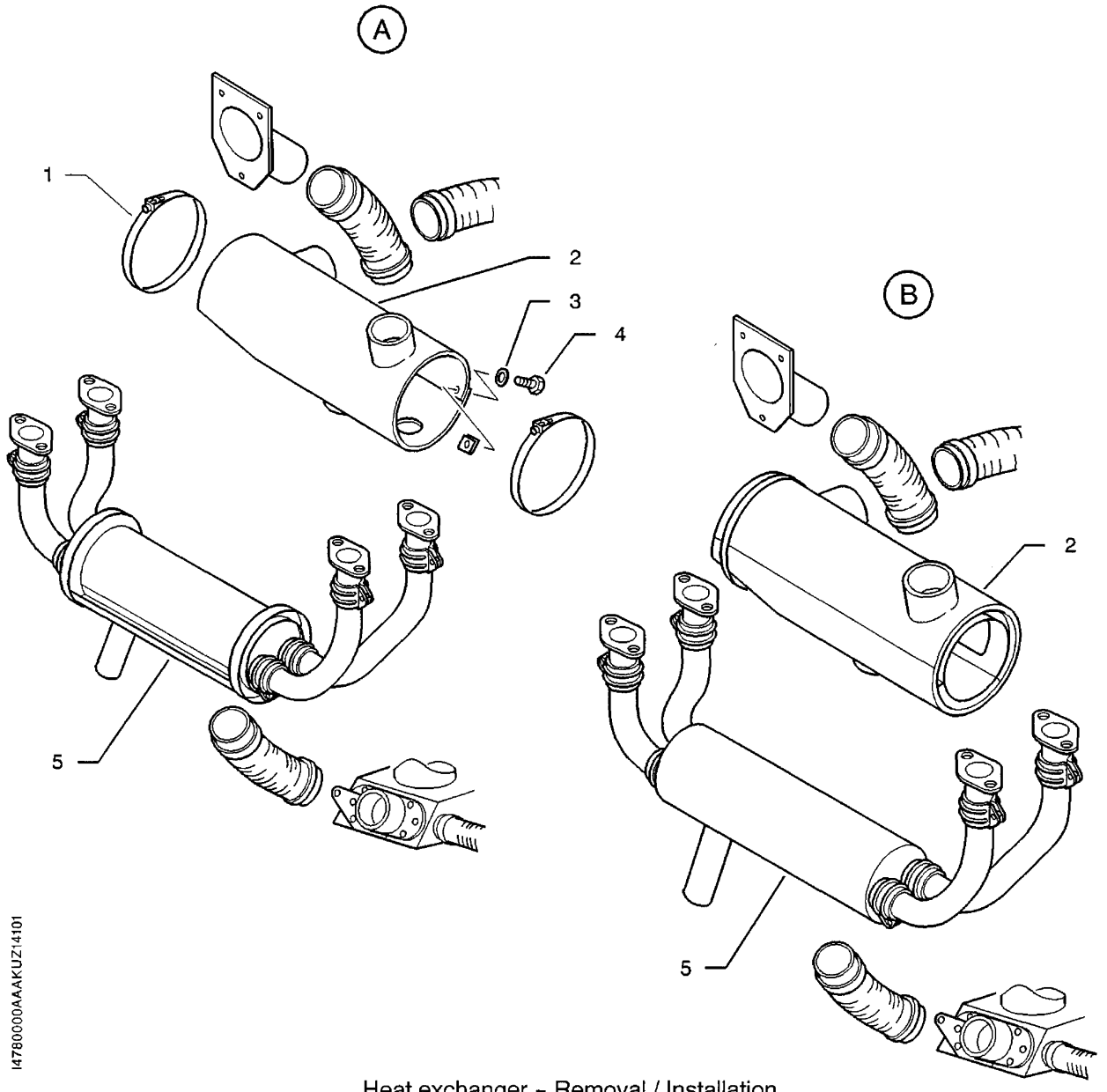
None

5. CLEANING / PAINTING

None



1 - Clamp
2 - Heat exchanger
3 - Washer
4 - Bolt
5 - Exhaust pipe



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Heat exchanger - Removal / Installation
Figure 201

6. REPAIR - HEAT EXCHANGER (Figure 202)

A. Tools and consumable materials

- Abrasive disc [thickness 0.06 in (1.5 mm)]

B. Heat exchanger repair

Two forms of damage should be considered :

Case No. 1 : inner surface deformed but not cracked.

Case No. 2 : inner surface deformed and cracked.

1) Case No. 1 repair

   a) Straighten out the inner surface.

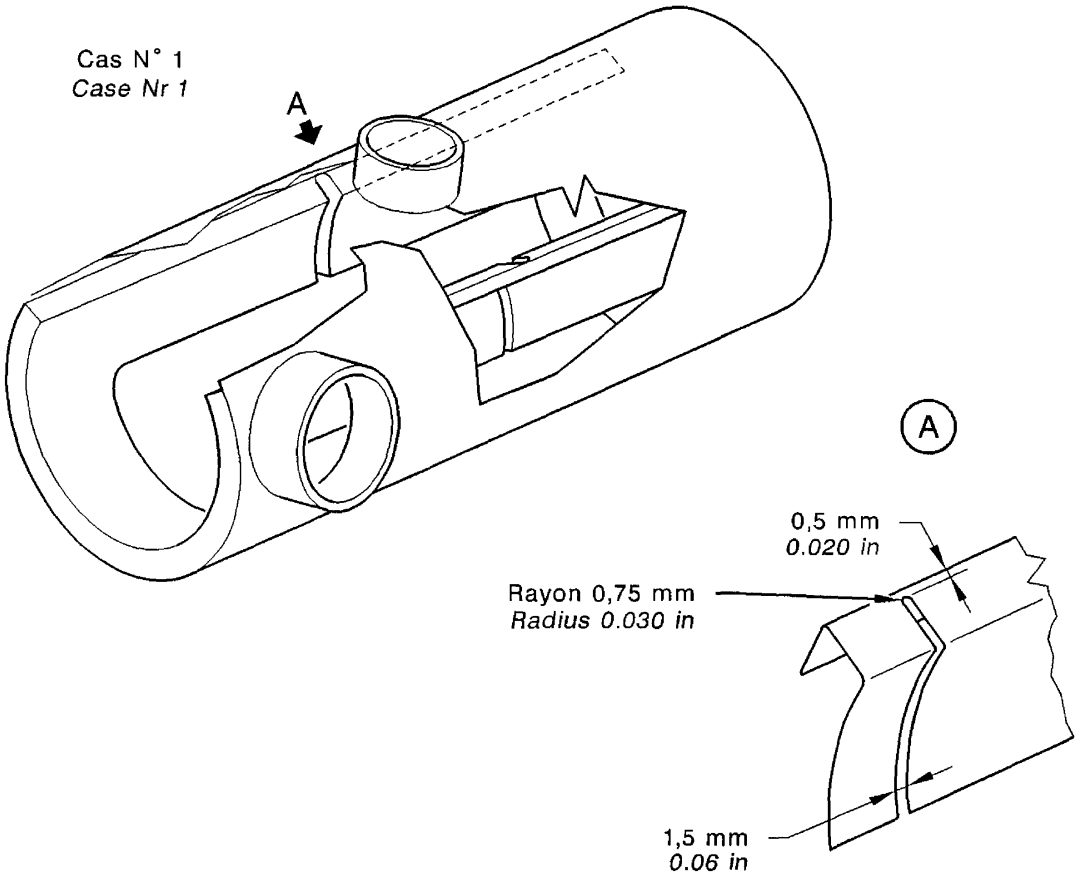
   b) Using an abrasive disc, cut two diametrically opposite grooves, 0.06 in (1.5 mm) wide, in the middle of the heat exchanger on the inner surface. The grooves must have a rounded end with a 0.03 in (0.75 mm) radius and stop at 0.02 in (0.5 mm) from the outer surface, without damaging the inner surface on the outer surface, which may cause crack initiation.

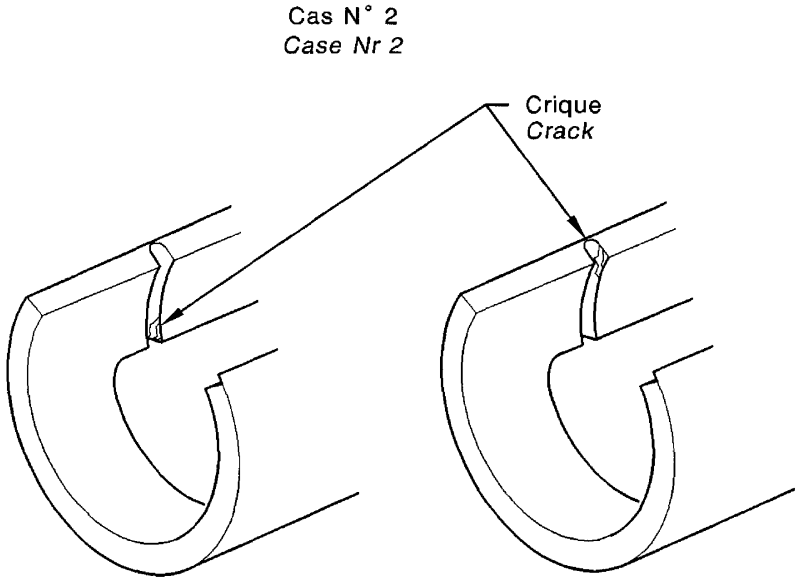
2) Case No. 2 repair

   a) Straighten out the inner surface.

   b) Using an abrasive disc, confirm the crack(s) by cutting one or several grooves 0.06 in (1.5 mm) wide. The latter should be indentical to those in case No. 1.

      NOTE : If cracks are too numerous or excessive in size, the heat exchanger must be discarded.





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Heat exchanger - Repair
Figure 202

CABIN AIR MIXER

MAINTENANCE PRACTICES

1. SERVICING

None

2. REMOVAL / INSTALLATION - CABIN AIR MIXER (Figure 201)

A. Tools and consumable materials

- Clean lintfree cloths
- Oil (TB 03-900)

B. Removal of the cabin air mixer

1) Remove the engine cowlings - refer to 71-10-01.
2) Remove the R.H. instrument panel (if installed).
3) Remove the closing plate of the R.H. panel.
4) Remove the attachments of cables (5) and (7) on control box (6).
5) Disconnect cables (5) and (7) from control box (6).
6) Remove protector (8) from cable (7).
7) Disconnect, on cabin air mixer (9) side, regulated air distribution hoses (2), (11) and (10) of windshield diffuser (1), rear bench diffuser (12) and pilot seat. Retain clamps (13).
8) Disconnect, on cabin air mixer (9) side, hose (3) of R.H. NACA air intake (4). Retain clamp (13).
9) Remove the 3 upper attachment bolts (16), the 4 side attachment bolts (19) on cabin side. Retain washers (21), discard nuts (22).
10) Hold cabin air mixer (9). Remove both upper bolts (17). Retain thickness washers (14) and washers (21). Discard nuts (22).
11) Disengage the box equipped with shutter (20) and cables (5) and (7). Discard seal (15).

C. Installation of the cabin air mixer

1) Before installation, inspect the hoses for condition. Replace if necessary.

NOTE : If new hose(s) is (are) installed, no traces of release grease (silicone) must remain inside the hose(s). Any traces must be removed with a clean lintfree cloth.

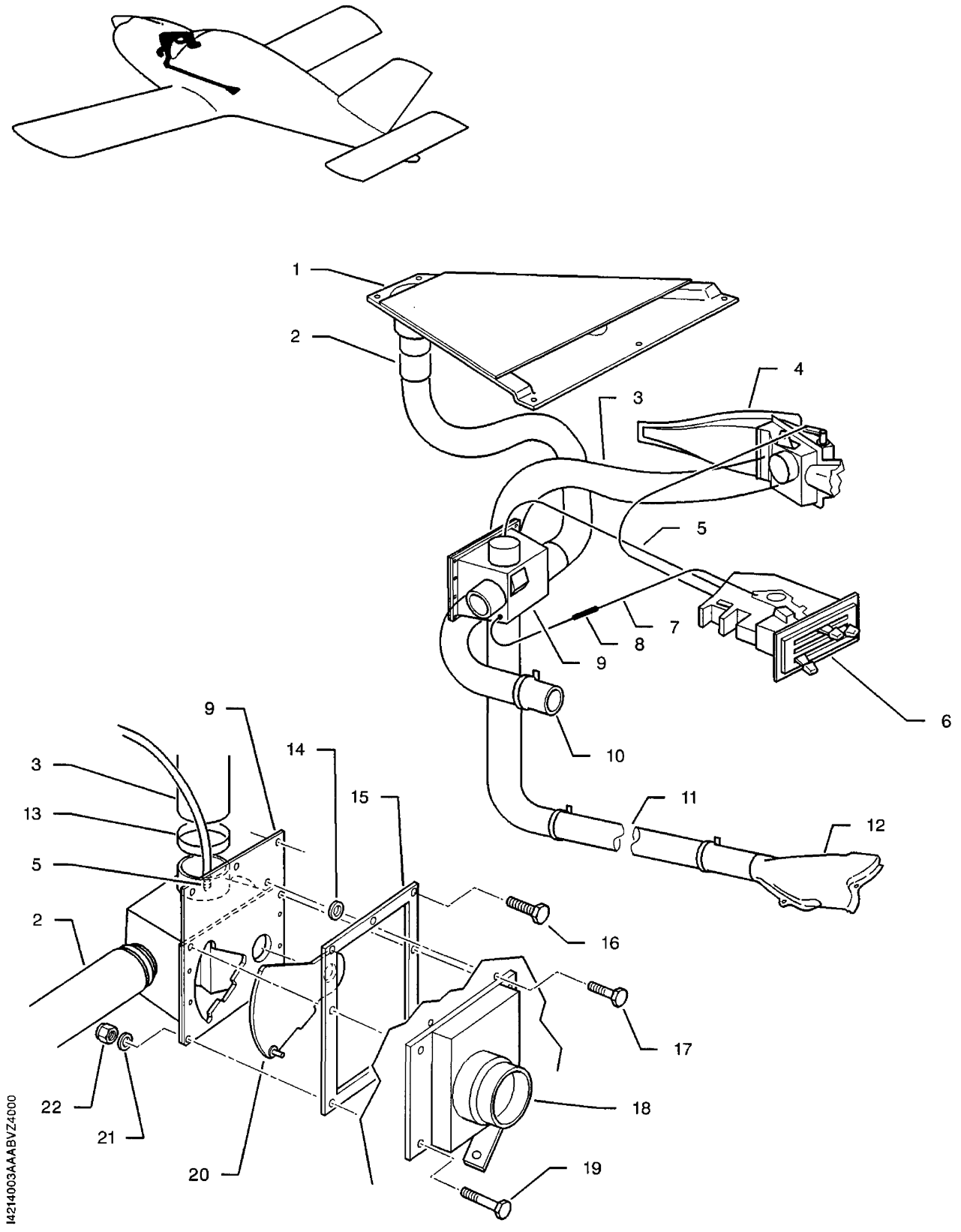
CAUTION : DO NOT FORGET THICKNESS WASHERS (14) BETWEEN CABIN AIR MIXER (9) AND FIREWALL (18). MAKE SURE SHUTTER (20) IS CORRECTLY POSITIONED.

2) Position cabin air mixer (9) with new seal (15) on firewall (18). Secure with 2 upper bolts (17), thickness washers (14), washers (21) and new nuts (22).
3) Complete the assembly with 3 upper attachment bolts (16), 4 side attachment bolts (19), washers (21) and new nuts (22), on cabin side.
4) Coat cables (5) and (7) with oil (TB 03-900).
5) Reconnect cables (5) and (7). Maneuver control box (6) levers several times and check cabin air mixer (9) flaps for correct travel.

6) Connect, on cabin air mixer (9) side, hose (3) of R.H. NACA air intake (4). Install clamp (13).
7) Connect, on cabin air mixer (9) side, regulated air distribution hoses (2), (11) and (10) of windshield diffuser (1), rear bench diffuser (12) and pilot seat with clamps (13).
8) Install protector (8) on cable (7).
9) Install cables (5) and (7) attachments on control box (6).
10) Install the closing plate of the R.H. panel.
11) Make sure all the tools and materials are removed and the work area is clean and free from debris.
12) Install the R.H. instrument panel (if installed).
13) Check the R.H. instrument panel equipment once installed.
14) Check for leaks during run-up.
15) Install the engine cowlings - refer to 71-10-01.

1 - Diffuser
2 - Hose
3 - Hose
4 - R.H. NACA air intake
5 - Cable
6 - Control box
7 - Cable
8 - Protector
9 - Cabin air mixer
10 - Hose
11 - Hose
12 - Diffuser
13 - Clamp
14 - Thickness washer
15 - Seal
16 - Bolt
17 - Bolt
18 - Firewall
19 - Bolt
20 - Shutter
21 - Washer
22 - Nut

Cabin air mixer - Removal / Installation
Key to Figure 201



Cabin air mixer - Removal / Installation
Figure 201

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CABIN AIR MIXER

MAINTENANCE PRACTICES

1. SERVICING

None

2. REMOVAL / INSTALLATION - CABIN AIR MIXER (Figure 201)

A. Tools and consumable materials

- Sealant (TB 09-904)
- Oil (TB 03-900)
- Blanking caps and plugs
- Clean lintfree cloths

B. Removal of the cabin air mixer

1) Remove the engine cowlings - refer to 71-10-01.
2) Disconnect hoses (14) and (13) on distribution box (10) side. Retain clamps (15) and (12) and blank off.
3) Disconnect hose (1) on cabin air mixer (3) side, retain clamp (2) and blank off.
4) Remove the cabin air mixer by unscrewing the 12 attachment bolts (4) from the firewall and the 5 attachment bolts (16) from the cabin air mixer and the distribution box on the central pedestal console. Retain washers (5) and (17) and discard nuts (6) and (18).
5) Retain shim (8), plate (7), airflow shutter (19) and deflector (9).
6) Disconnect cable (11) (if necessary) from distribution box (10).
7) Clean the excess sealant (TB 09-904) from the firewall. The sealant is used to seal the cabin air mixer.

C. Installation of the cabin air mixer

1) Inspect the hoses for condition. Replace when necessary.

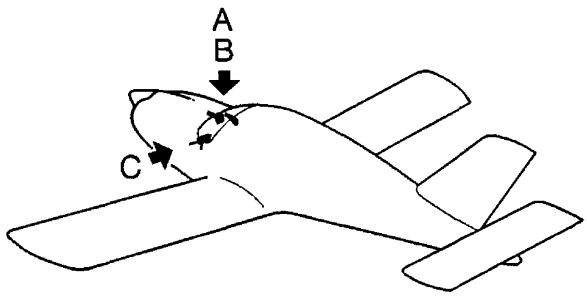
   NOTE : If new hose(s) is (are) installed, no traces of release grease (silicone) must remain inside the hose(s). Any traces must be removed with a clean lintfree cloth.

2) Coat the contact surface of cabin air mixer (3) on the firewall with sealant (TB 09-904).
3) Position cabin air mixer (3).
4) Secure the cabin air mixer to the firewall using the 12 bolts (4), washers (5) and new nuts (6).
5) Position plate (7), airflow shutter (19), shim (8), deflector (9) and distributon box (10).
6) Coat cable (11) of distribution box (10) with oil (TB 03-900) and connect it to airflow shutter (19).
7) Secure distribution box (10) to the central pedestal console with the 5 bolts (16), washers (17) and new nuts (18).
8) Connect hose (1) to cabin air mixer (3) and secure with clamp (2).
9) Connect hoses (13) and (14) to distribution box (10) and secure with clamps (12) and (15).
10) Ensure that air conditioning controls move freely.

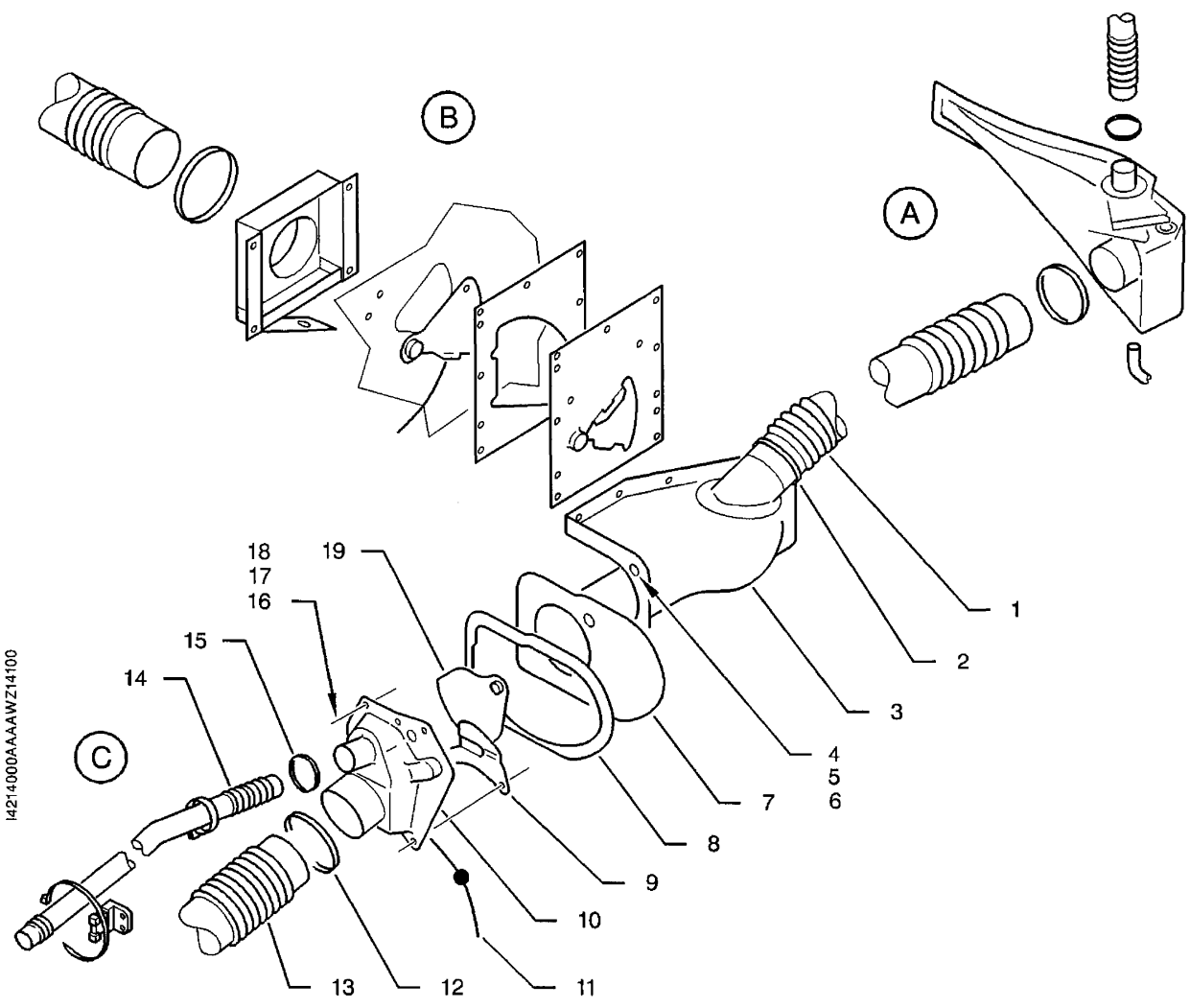
11) Make sure all the tools and materials are removed and the work area is clean and free from debris.

12) Install the engine cowlings - refer to 71-10-01.

13) Check for leaks during run-up.



1 - Hose
2 - Clamp
3 - Cabin air mixer
4 - Bolt
5 - Washer
6 - Nut
7 - Plate
8 - Shim
9 - Deflector
10 - Distribution box
11 - Cable
12 - Clamp
13 - Hose
14 - Hose
15 - Clamp
16 - Bolt
17 - Washer
18 - Nut
19 - Airflow shutter



Cabin air mixer - Removal / Installation
Figure 201

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