

**CHAPTER**

**21**

**ENVIROMENTAL  
SYSTEMS**



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EFFECTIVITY: All

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## GENERAL

The airplane is equipped with controlled cockpit heating and venting.

The cockpit heating is coupled to heat exchangers of engine exhaust silences. Heating of the passenger compartment (optional) is coupled to heat exchanger of left exhaust silencer.

Venting of the fwd cockpit section is ensured through the control flap port in the shield of instrument panel. Venting of passenger compartment is made through the controlled flap ports in fuselage sides.

Compounding operation if venting in cockpit ensured cooling windows.

# HEATING

## DESCRIPTION AND OPERATION

Cockpit is heated by hot air. Ambient air (Fig. 21 - 1, item 1) enters through the port in bottom part of engine covers into the heat exchangers of exhaust silencers (2, 3). The air is warmed up in the heat exchangers and led through hoses to heat controller (4).

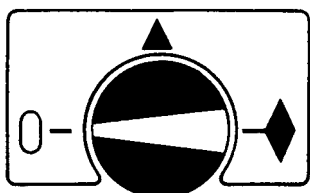
From the heat controller (4) the hot air flows accordance with the turning slide valve into the cockpit or is flows under the airplane (7).

Z 143 L airplane : the turning slide valve is controlled by by chain (9) from the shaft of heating and venting controller (8).

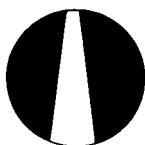
Z 143 LSi airplane: the turning slide valve is contolled by heating and venting controller (8).

The heat and venting controller (8) is located under the instrument panel.

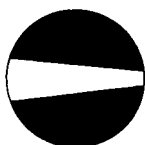
*Positions of heating and venting controls:*



- heating is closed; hot air is led overboard under the airplane



- hot air flows through ports (5) in fwd part of sliding canopy



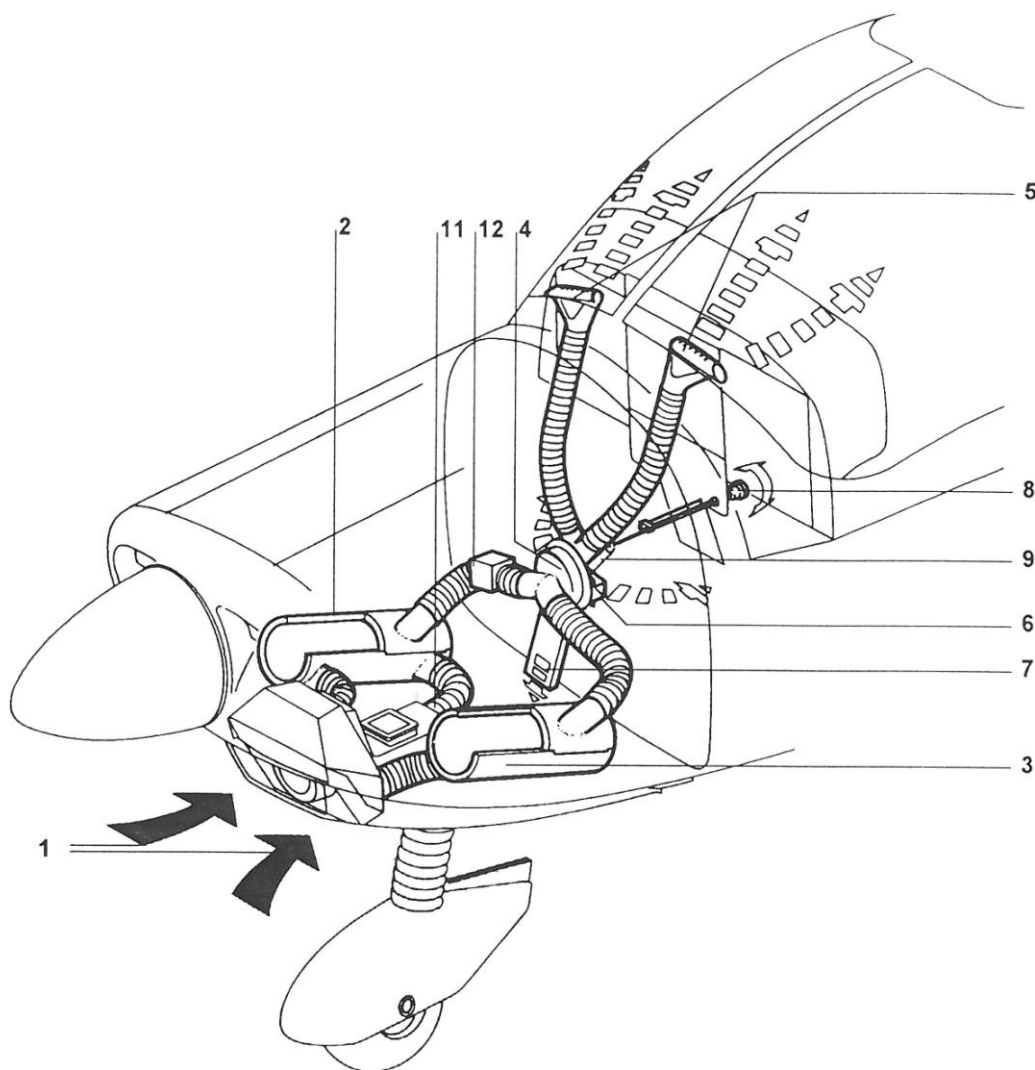
- hot air flows through ports (5) in fwd part of sliding canopy and through deflector (6) to pilot's legs



- hot air flows through deflector (6) to pilot's legs

The heat and venting controlled may be turned round without stops according to need. Suitable turning and pulling the controller enables setting of intensity and range of heating and venting of cockpit fwd section (Section 21-50-00).

**EFFECTIVITY: All**



- 1 ... ambient air entry
- 2 ... heat exchanger of right exhaust silencer
- 3 ... heat exchanger of left exhaust silencer
- 4 ... heating controller
- 5 ... outlet port
- 6 ... deflector
- 7 ... outlet of hot air overboard (heating closed)
- 8 ... heating and venting controller
- 9 ... chain

For information only:

- 11 ... entrance of hot air for carburetor heating
- 12 ... non-return flap

*Fig. 21-1 Cockpit Heating of Z 143 L airplane*

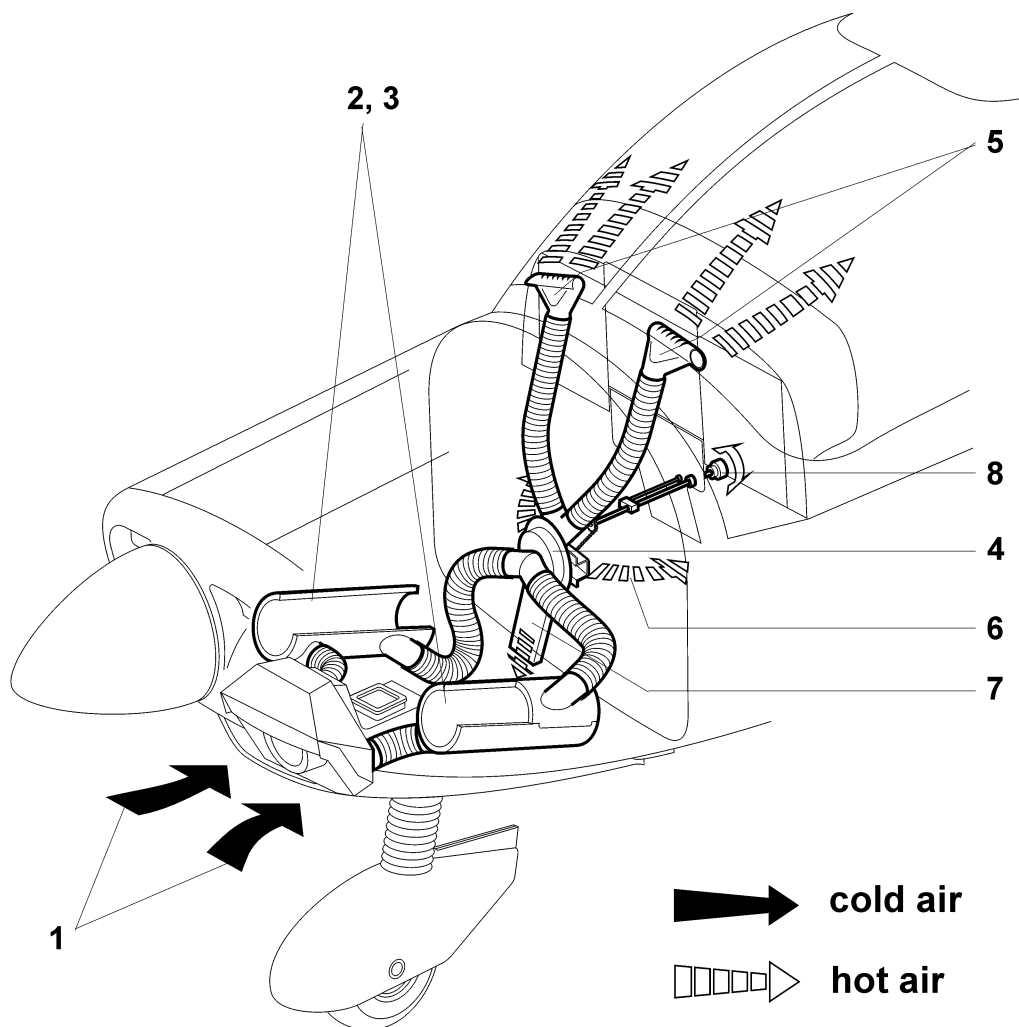


Fig. 21-1A Cockpit Heating of Z 143 LSi airplane



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**EFFECTIVITY: All**

**21-40-00**

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## **MAINTENANCE**

### **APPROVED REPAIRS**

#### **REPAIRS OF COCKPIT HEATING**

##### **CAUTION**

IN CASE THE SMELL OF EXHAUST GAS IS DETECTED IN FLIGHT IT IS NECESSARY TO CHECK ENGINE EXHAUSTS (section 78-10-00) AND TO REMOVE DETECTED FAULTS.

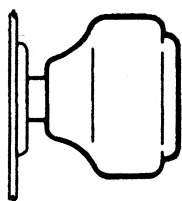
Fault	Remedy
1) Burning through, tearing, or other defect of hose.	Replace defective hose.
2) Improper hose coupling.	Tighten the released sleeves of hose ends.
3) Corrosion.	Remove corrosion by emery paper.

# VENTING OF FWD COCKPIT SECTION

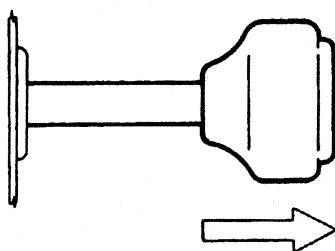
## DESCRIPTION AND OPERATION

The fresh air entrance (Fig. 21-2, item 1) into the fwd cockpit compartment is controlled by control flap (2) located in instrument panel shield. The flap (2) is controlled by shaft of heating and venting controller (3) via string. The heating and venting controller (3) is located under the instrument panel.

*Position of the heating and venting controller:*

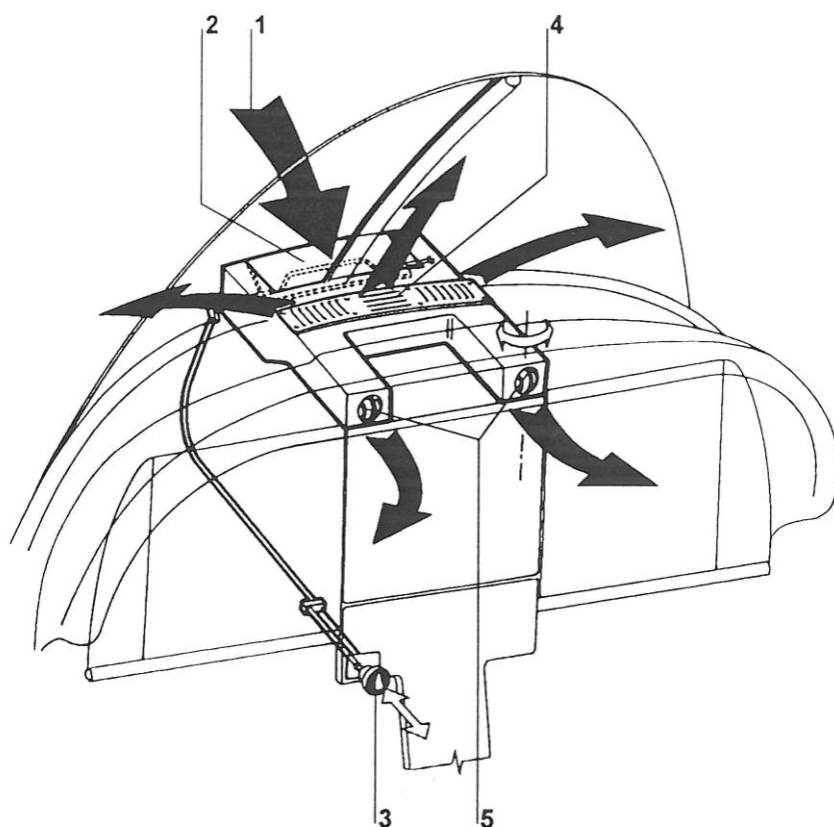


- Venting is shut.



- Flap (2) is getting opened - fresh air flows through grip (4) in the fwd part of sliding cockpit canopy and via resettable flap (5) to pilots.

**EFFECTIVITY:** All



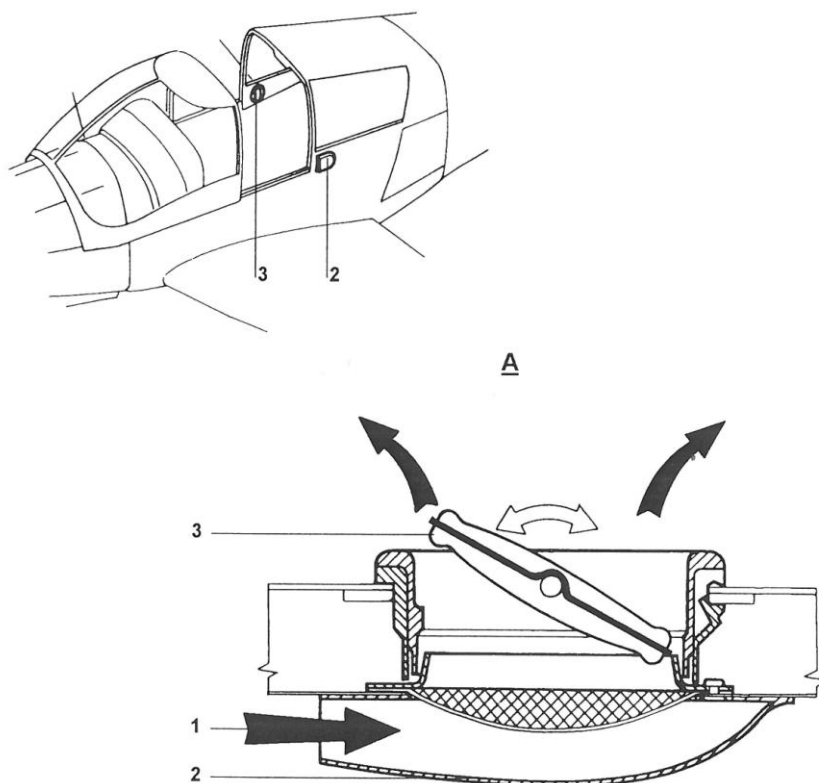
- 1 ... fresh air entry
- 2 ... flap
- 3 ... venting and heating controller
- 4 ... grid
- 5 ... resettable flap

*Fig. 21-2 Venting of Fwd Cockpit Compartment*

# VENTING OF PASSENGER COMPARTMENT

## DESCRIPTION AND OPERATION

Fresh air (Fig. 21-3, item 1) enters the passenger compartment through air ports (2) for passengers in fuselage sides. The fresh air flow may be controlled by resettable flaps (3).



A ... venting section

1 ... fresh air entry

2 ... air intake port

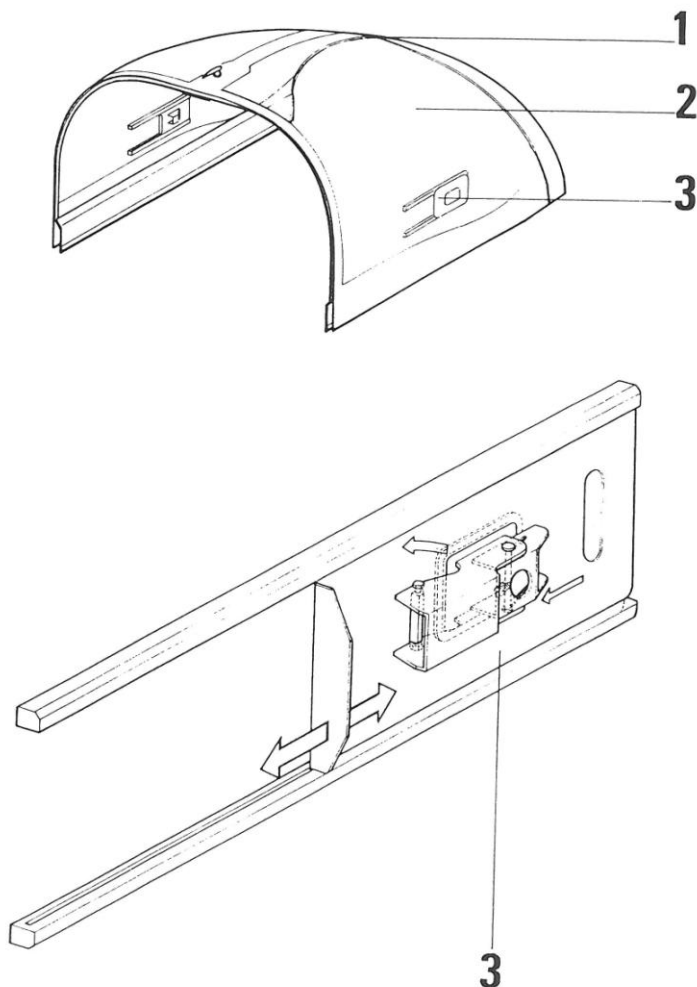
3 ... flap

*Fig. 21-3 Venting of Passenger Compartment*

# COOLING WINDOWS

## DESCRIPTION AND OPERATION

Standard venting betrays into this chapter is completion by two sliding cooling windows with the detachable air door. Cooling windows is located on the both side cockpit's glass of sliding canopy.



- 1 ... sliding canopy
- 2 ... canopy glazing
- 3 ... cooling window with air door

*Fig. 21-4 Cooling windows*