

AA-5 SERIES
MAINTENANCE MANUAL

CHAPTER 21

AIR CONDITIONING

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AIR CONDITIONING - DESCRIPTION/OPERATION

1. General

Air conditioning, as applicable to this aircraft, is defined as any method used to maintain a desired level of heating, ventilating, or controlling the air within the occupied areas of the aircraft. The system consists of the components and associated controls used for heating and ventilating the aircraft cabin. The system is a completely mechanical system and is manually controlled. The cabin heat control is a push-pull type control located in the lower center of the instrument panel. Each air vent has an individual control. The air vent control for the forward cabin area is a push-pull type control located at the lower corners of the instrument panel adjacent to the louvered outlets. A rear air vent system is available as an optional installation.

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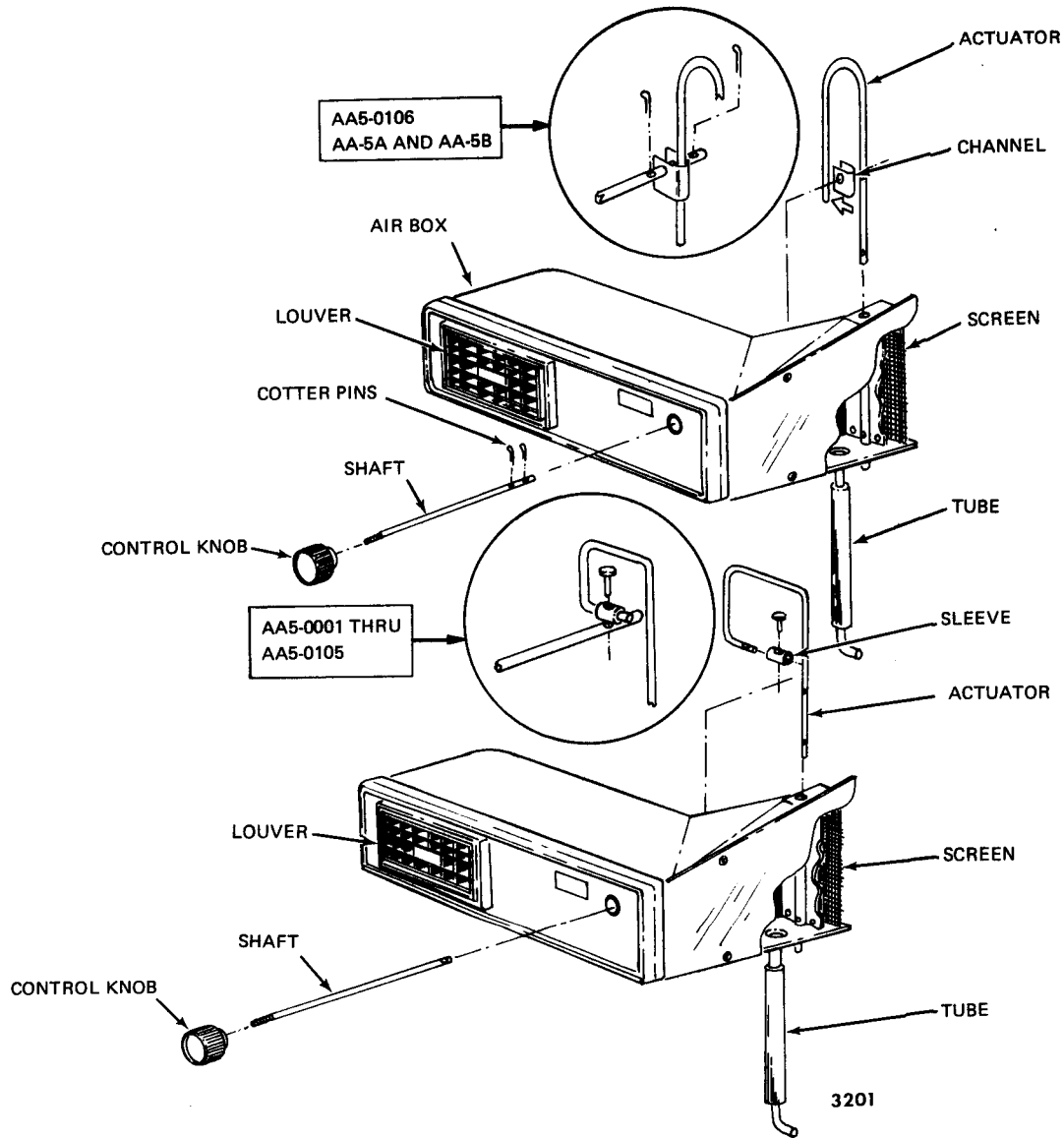
VENTILATION SYSTEM - DESCRIPTION/OPERATION

1. General

Forward cabin area ventilation is provided by two ventilators, (Figure 1) one in each side of the fuselage. The ventilators are controlled by manually adjustable valves for quantity of air. The flow of fresh air in the cabin can be regulated in the desired direction by movable louvers located in the air vent outlets.

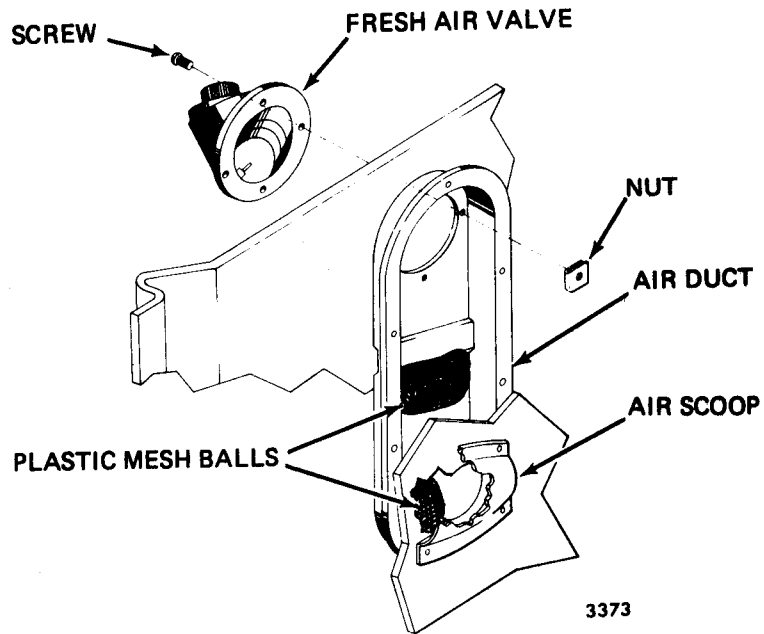
Ventilation for the rear seat area of the cabin is furnished as an optional installation. The air vents for the rear cabin area are located on each side of the fuselage at the rear seat location (Figure 2). The flow of air inside the cabin can be regulated or shut off completely by rotating the knurled ring on the outlet valve.

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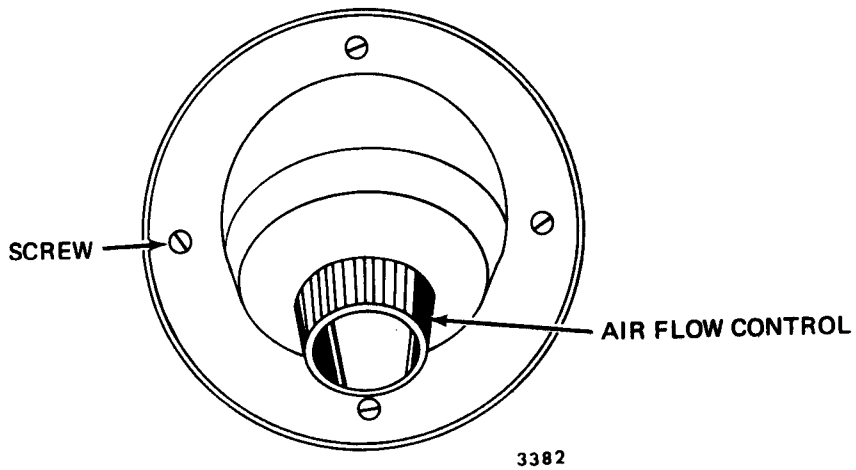


Forward Cabin Area Air Vent System
Figure 1

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OUTSIDE AIR SCOOP



OUTLET VALVE

Rear Cabin Area Air Vent System
Figure 2

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HEATING SYSTEM - DESCRIPTION/OPERATION

1. General

The cabin heating system is basically a controlled air flow in which air passes over the muffler core and is ducted into the cockpit. The amount of heated air is regulated by a valve mounted through the firewall. Cool air picked up by the nose cowl inlet serves two purposes, that of cooling the muffler, and providing heated air for comfort.

A Y-adapter in the engine compartment mixes a stream of cold air with the hot air from the heat exchanger to provide good heat distribution and flow. The valve mounted through the firewall is used to regulate the warm air by either ducting it overboard or into the cabin as desired. The amount the push-pull control is moved determines the amount of heat ducted into the cabin.

To provide for windshield defrosting, flexible ducts are connected to the valve and terminated just below the sliding doors located on the forward panel deck. Operation of the defroster is accomplished by pulling the push-pull control out and opening the sliding doors.

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HEATING SYSTEM – TROUBLESHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
Insufficient Heat.	Duct damaged or disconnected.	Replace or connect duct
	Loose control cable connection.	Tighten control cable connection.
	Air valve damaged.	Replace air valve.
Control hard to operate.	Control cable binding.	Check cable for proper routing and free the cable.
	Air valve sticking or binding	Lubricate valve stem bearing and free the valve.
Exhaust fumes in cabin.	Defective muffler	Inspect muffler and replace if defective.

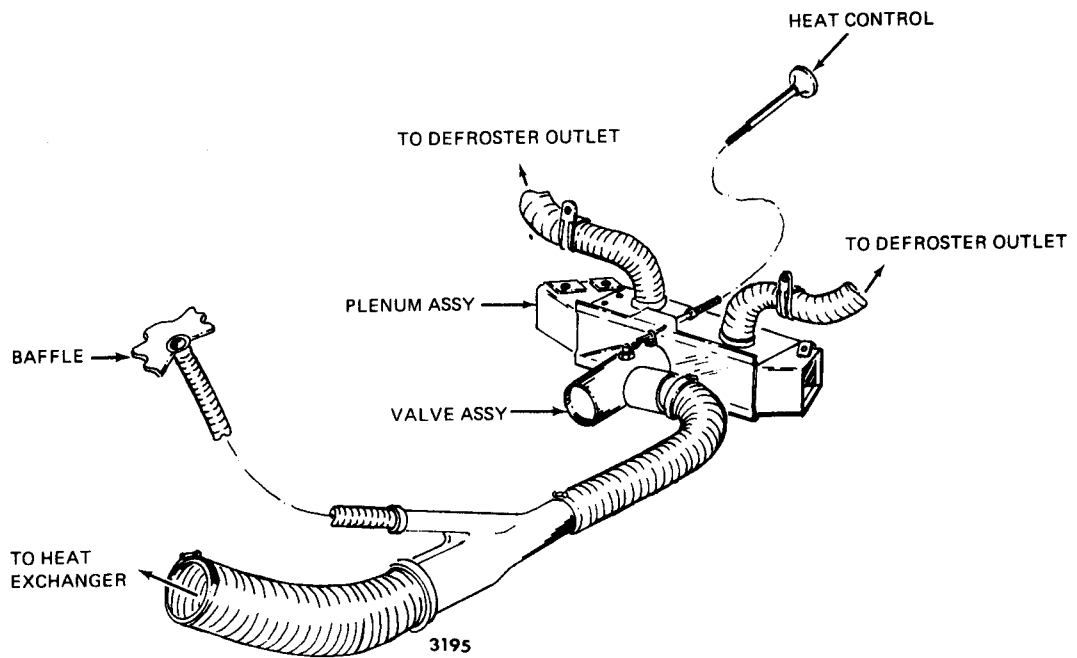
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HEATING SYSTEM — MAINTENANCE PRACTICES

1. **General**

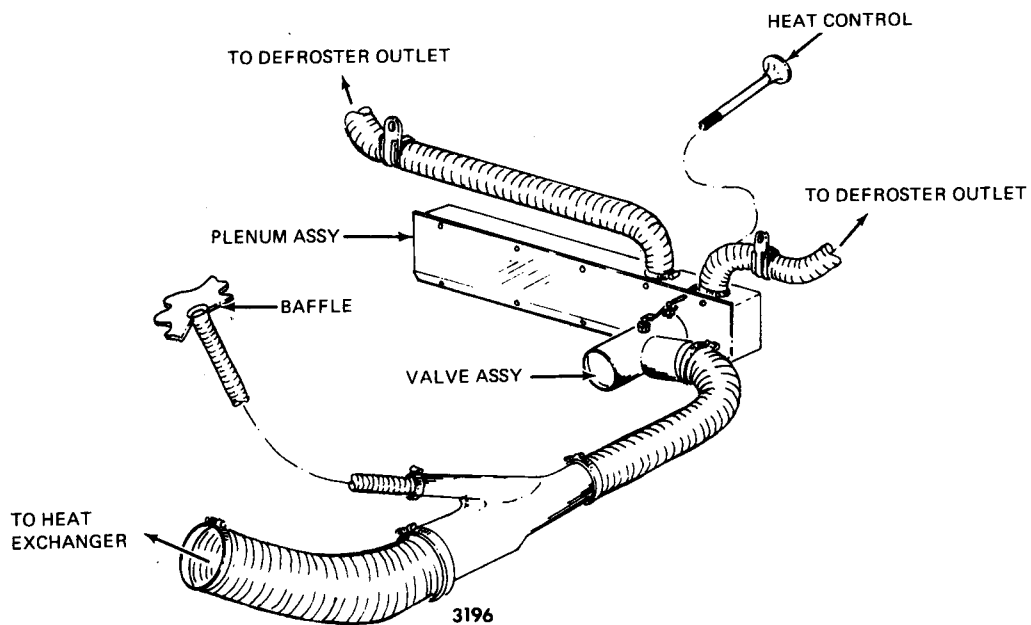
Maintenance of the Heating system (Figures 201, 202, and 203) will probably be confined to replacement of ducting when damaged. Ducts can be replaced by removing clamp and duct and installation of new ducts.

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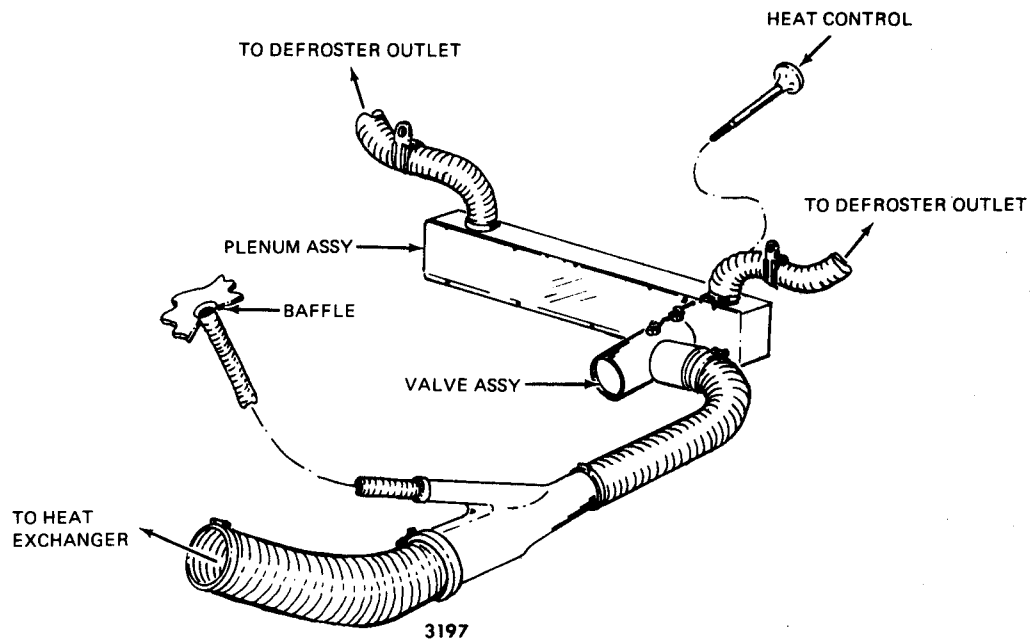
Heating System — AA5-0001 thru 0834, AA5A-0001 thru 0522
Figure 201

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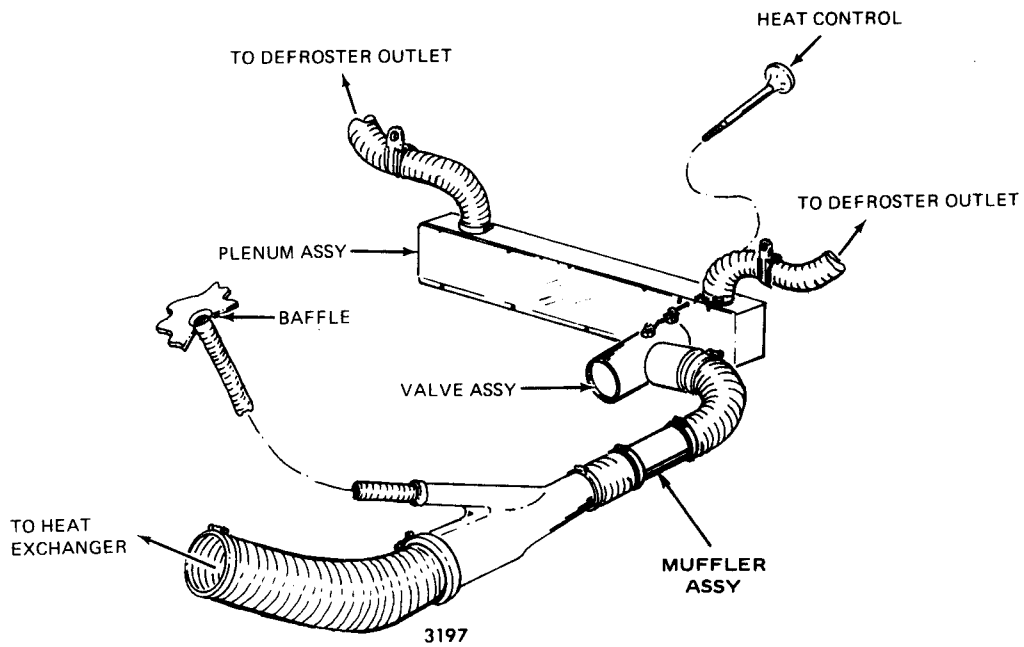
**Heating System — AA-5B 0001 thru 0280, 0283, and 0284
Figure 202**

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**Heating System — AA5B-0281, 0282 and 0285 thru 0399
Figure 203**

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Heating System — AA5A-0523 and Subsequent, AA5B-0400 and Subsequent
Figure 204