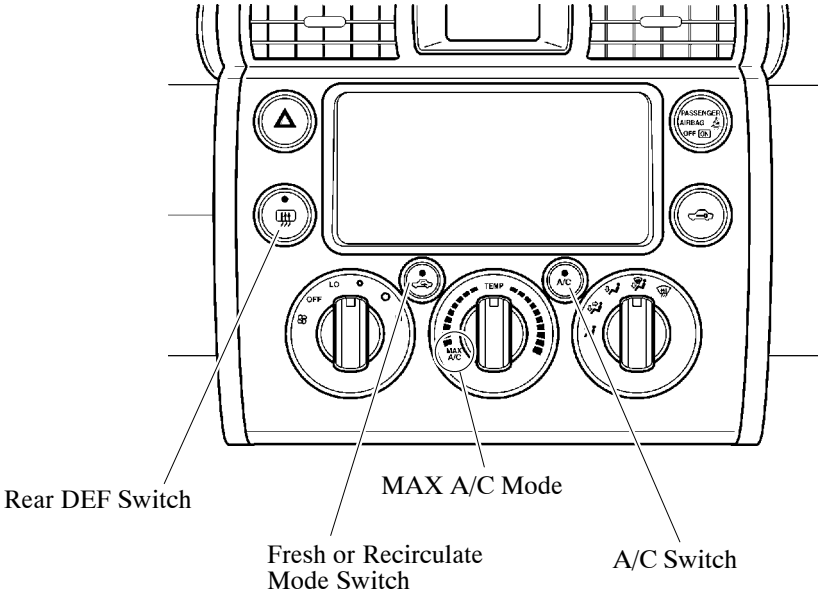
■CONSTRUCTION AND OPERATION

1. Air Conditioning Control Panel

- An electric manual A/C control panel is used.
- The control panel has large switches and knobs, improving ease of use and visibility.

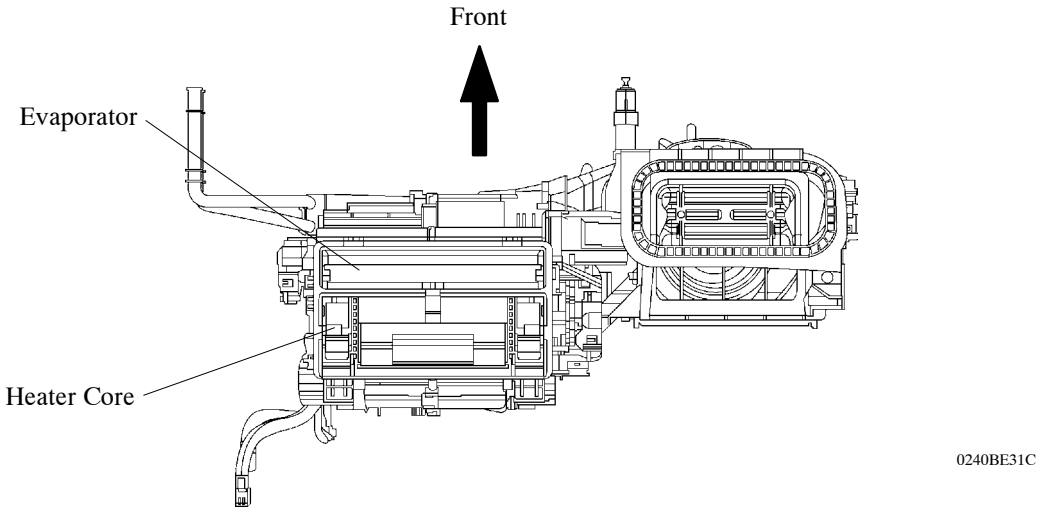


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2. Air Conditioning Unit

General

A semi-center location air conditioning unit, in which the evaporator and heater core are placed parallel to the firewall. As a result, the air conditioning unit has been made compact and lightweight.

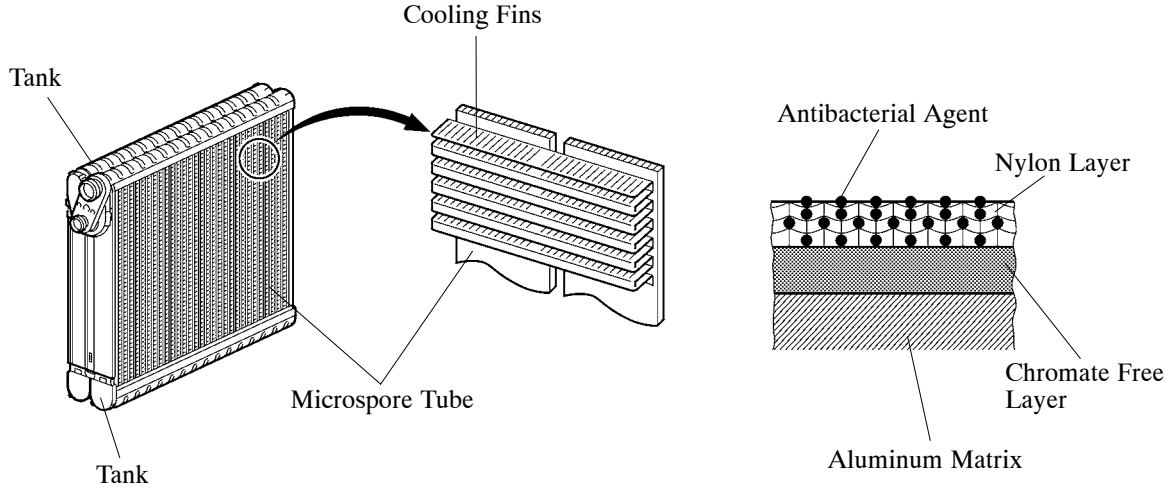


Evaporator

- A RS (Revolutionary super-slim Structure) evaporator is used.
- By placing the tanks at the top and the bottom of the evaporator unit and adopting a microspore tube construction, the following effects have been realized:

a) The heat exchanging efficiency has been improved.
b) The temperature distribution has been made more uniform.
c) The evaporator has been made thinner.

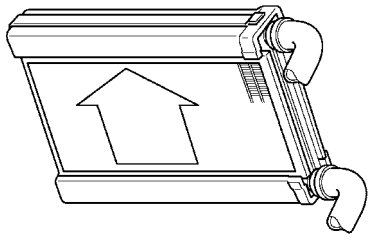
- The evaporator body has been coated with a type of resin that contains an antibacterial agent in order to minimize the source of foul odor and the propagation of bacteria. The substrate below this coating consists of a chromate-free layer to help protect the environment.



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Heater Core

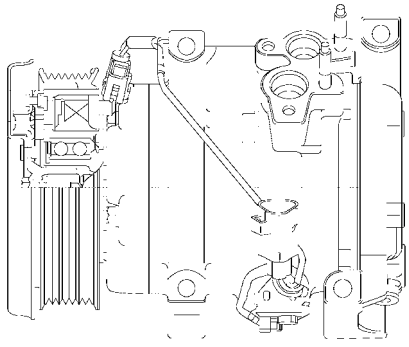
A compact, lightweight, and highly efficient straight flow (full-path flow) aluminum heater core is used.



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3. Compressor

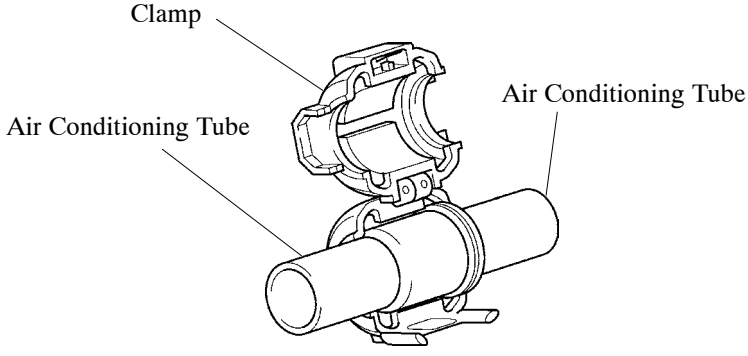
A compact, lightweight, and low-noise swash plate type compressor is used.



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4. Quick Joint

A clamp type quick joint is adopted. As a result, the ease of service operations has been improved.



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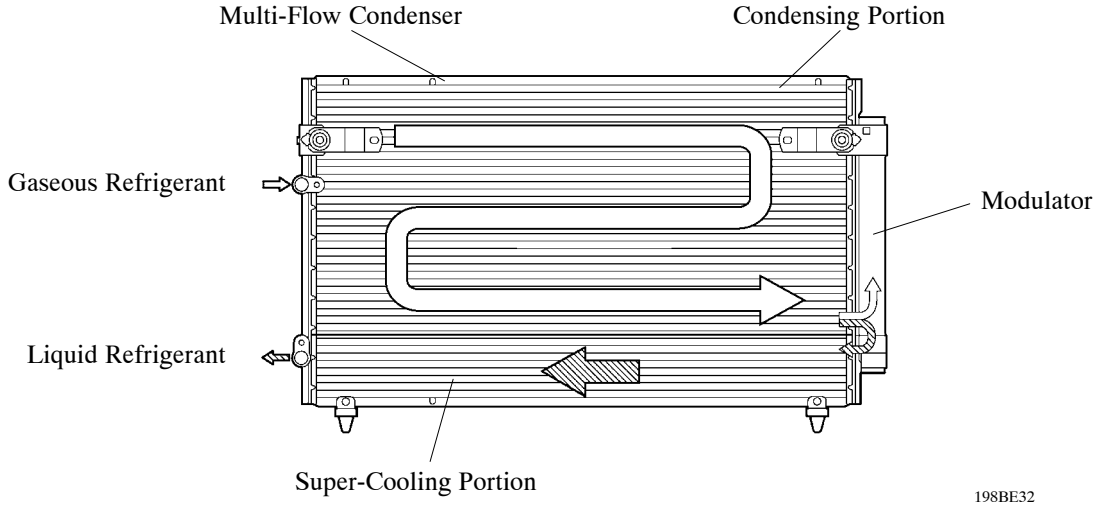
5. Condenser

General

The condenser a multi-flow condenser consisting of two cooling portions (a condensing portion and a super-cooling portion), and a gas-liquid separator (modulator) all integrated together. This condenser uses a sub-cool type cooling cycle to improve heat-exchange efficiency.

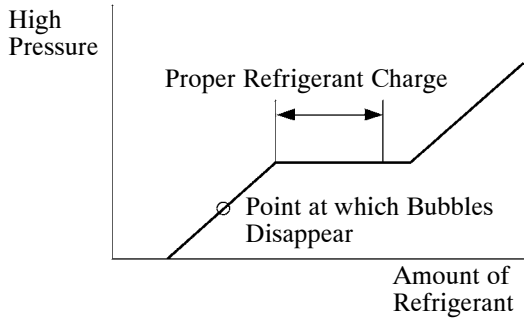
Sub-Cool Cycle

In the sub-cool cycle, after the refrigerant passes through the condensing portion of the condenser, both the liquid refrigerant and the gaseous refrigerant that could not be liquefied, are cooled again in the super-cooling portion. Thus, the refrigerant is sent to the evaporator in an almost completely liquefied state.



NOTE: When charging the A/C system, the point at which the air bubbles disappear from view in the refrigerant of the sub-cool cycle is lower than the point at which the proper amount of refrigerant would be present. Therefore, if the system is recharged with refrigerant based on the point at which the air bubbles disappear, the amount of refrigerant would be insufficient. As a result, the cooling performance of the system would be affected. If the system is overcharged with refrigerant, this will also lead to reduced performance.

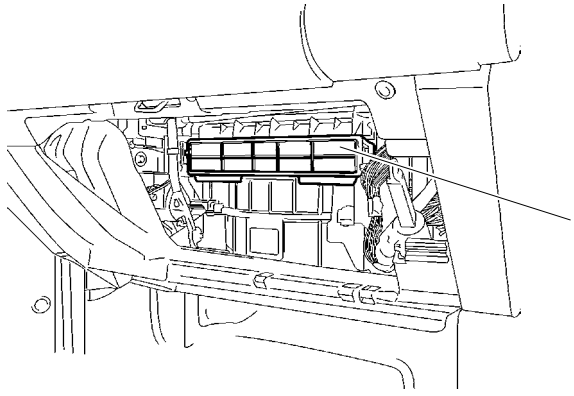
For the proper method of verifying the amount of the refrigerant and to recharge the system with refrigerant, see the 2007 FJ Cruiser Repair Manual (Pub. No. RM0240U).



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6. Clean Air Filter

A clean air filter that excels at removing dust is standard equipment.
This filter, which cleans the air in the cabin, is made of polyester. Thus, it can be disposed of easily as a combustible material, a feature that is friendly to the environment.
When it is necessary to change this filter, this can be done easily by releasing the clip that attaches the damper to the door, then releasing the stoppers that retain the top of the glove compartment door to the instrument panel. This makes it possible to open the filter door and take out the filter from inside, thus excellent serviceability has been realized.



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Service Tip

The clean air filter should be changed every 30,000 miles. The need for filter replacement may vary depending on vehicle usage or conditions (environment).

■AIR CONDITIONING CONTROL

Control	Outline
MAX A/C Control	• The operation panel has the MAX A/C mode position to improve cooling performance under high load. • When the MAX A/C mode position is selected, the operation mode is changed to the Max. cooling mode (the A/C compressor is turned on and the air inlet mode is changed to RECIRC mode) without performing complicated panel operations.
DEF Logic Control	• Due to the adoption of the DEF logic control, fogging of the windshield is minimized, improving visibility. • The DEF logic control automatically changes the air inlet mode to the FRESH mode under any of the following conditions: 1) The DEF mode or FOOT/DEF mode is selected. 2) The RECIRC mode is selected and the A/C turns on when the outside temperature is low (when fogging up of windows tends to occur: outside temperature 10°C or less and 3 min. or more). 3) The ignition switch is turned on when the outside temperature is low (when fogging up of windows tends to occur).
Rear DEF Control	• The rear window defogger timer control minimizes fogging of the rear window. It operates according to the ambient temperature and vehicle speed. • Usually, a 15 min. timer operates after the Rr DEF switch is turned on. When the ambient temperature is 0 °C or less and vehicle speed is 37 mph (60 km/h) or more, a maximum of 240 min. (included 15 min.) timer operates according to the ambient temperature.