

AIR CONDITIONING

■ DESCRIPTION

1. General

The air conditioning system in the Land Cruiser has the following features:

- The front heater and the front-and-rear heater are provided as standard or optional equipment as described in the following table.
- Four types of air conditioners are provided as standard or optional equipment as described in the following table. The rear air conditioner adopts a construction in which the rear heater and the rear cooler are separate.
- A viscous type power heater that improves heating performance is provided as optional equipment for the cold area specification model with 1HD-FTE engine for Europe.
- An easy-to-use rotary switch type front heater control panel is used.
- A rotary switch type rear heater control panel is used on models with rear heater or front and rear manual air conditioner.
- A slide switch type rear cooler control panel is used on models with front and rear manual air conditioner.
- A push button type rear heater control panel has been adopted on the models with the front and rear automatic air conditioner.
- A 3-flow level type heater unit, which features lower air flow resistance, is used.
- The construction of the evaporator, heater core, and blower fan has been changed.
- A sub-cool condenser, which cools the refrigerant twice, has been adopted.

► Availability (Heater) ◀

●: Standard ○: Option

Destination Type	Europe	Australia	G.C.C. Countries	General Countries
Front Heater	—	●	●	●
Front and Rear Heater	●	○	—	○

► Availability (Air Conditioner) ◀

●: Standard ○: Option

Destination Type	Europe	Australia	G.C.C. Countries	General Countries
Front Manual Air Conditioner	—	○*1	○*1, 2	○
Front and Rear Manual Air Conditioner	—	—	○*1	○*3
Front Automatic Air Conditioner	○	●*3	●*3	—
Front and Rear Automatic Air Conditioner	—	○*3	○*3	—

*1: GX Grade Model

*2: STD Grade Model

*3: VX Grade Model

2. Performance and Specifications

Front Heater and Front Air Conditioner

1) Models for Europe (LHD) and General Countries (LHD)

► Performance ◀

Model Item		New	Previous
Heater	Heat Output W (Kcal/h)	4850 (4170) 5000 (4300)* ¹	4680 (4020) 4750 (4090)* ¹
	Air Flow Volume m ³ /h	290* ¹ , 300	←
	Power Consumption W	140	←
Air Conditioner	Heat Output W (Kcal/h)	6100 (5250)* ^{2, 3} 5860 (5040)* ⁵	5810 (5000)* ^{3, 4} 5580 (4800)* ⁶
	Air Flow Volume m ³ /h	520	←
	Power Consumption W	260	215

► Specifications ◀

Model Item			New	Previous
Ventilation and Heater	Heater Core	Type	Multi-Flow Type	Dimpled Tube Type
		Size W x H x L mm (in.)	216.9 x 140 x 27 (8.5 x 5.5 x 1.1) 216.9 x 140 x 46* ¹ (8.5 x 5.5 x 1.8)	155.7 x 200 x 36 (6.1 x 7.9 x 1.4) 155.7 x 200 x 58* ¹ (6.1 x 7.9 x 2.3)
		Fin Pitch mm (in.)	1.8 (0.07)	←
	Blower	Motor Type	S80FS12	S70F13T
		Fan Size Dia. x H mm (in.)	158 x 80 (6.2 x 3.1)	150 x 65 (5.9 x 2.6)
Air Conditioner	Condenser	Type	Multi-Flow Type (Sub-Cool Type)	3-Passage Flow Type
		Size W x H x L mm (in.)	444.8 x 570 x 16 (17.5 x 22.4 x 0.6) 359.3 x 670 x 16* ^{7, 9} (14.1 x 26.4 x 0.6) 520.8 x 650 x 16* ⁸ (20.5 x 25.6 x 0.6)	362.8 x 706 x 22 (14.3 x 27.8 x 0.9)
		Fin Pitch mm (in.)	3.2 (0.13)	4.5 (0.18)
		Fin Pitch mm (in.)	3.5 (0.14)	←
	Evaporator	Type	Drawn Cup Type	←
		Size W x H x L mm (in.)	266.2 x 255 x 90 (10.5 x 10.0 x 3.5)	279 x 260 x 105 (11.0 x 10.2 x 4.1)
		Fin Pitch mm (in.)	3.5 (0.14)	←
	Compressor	Type	10PA15* ^{5, 7} , 10PA17, 10PA20* ²	10PA15* ^{6, 7} , 10PA17, 10PA20* ^{3, 4, 8}

*¹: Cold Area Specification Models

*²: 2UZ-FE Engine Model

*³: 1FZ-FE Engine Model

*⁴: 1FZ-F Engine Model

*⁵: 1HD-FTE, 1HD-T and 1HZ Engines Model

*⁶: 1HD-FT, 1HD-T and 1HZ Engines Model

*⁷: Models with Front Air Conditioner

*⁸: Models with Front and Rear Air Conditioner

*⁹: Models with Rigid Axle Front Suspension

2) Models for Europe (RHD), Australia and General Countries (RHD)

► Performance ◀

Model Item		New	Previous
Heater	Heat Output W (Kcal/h)	4850 (4170) 5000 (4300)* ¹	4680 (4020) 4750 (4090)* ¹
	Air Flow Volume m ³ /h	290* ¹ , 300	←
	Power Consumption W	140	←
Air Conditioner	Heat Output W (Kcal/h)	6100 (5250)* ^{2, 3} 5860 (5040)* ⁵	5810 (5000)* ^{3, 4} 5580 (4800)* ⁶
	Air Flow Volume m ³ /h	520	←
	Power Consumption W	260	215

► Specifications ◀

Model Item		New	Previous
Ventilation and Heater	Type	Multi-Flow Type	Dimpled Tube Type
	Size W x H x L mm (in.)	169.7 x 180 x 27 (6.7 x 7.1 x 1.1) 169.7 x 180 x 46* ¹ (6.7 x 7.1 x 1.8)	155.7 x 200 x 36 (6.1 x 7.9 x 1.4) 155.7 x 200 x 58* ¹ (6.1 x 7.9 x 2.3)
	Fin Pitch mm (in.)	1.8 (0.07)	←
	Motor Type	S80FS12T	S70F14T
	Fan Size Dia. x H mm (in.)	160 x 41 + 142 x 46 (6.3 x 1.6 + 5.6 x 1.8)	150 x 65 (5.9 x 2.6)
Air Conditioner	Type	Multi-Flow Type (Sub-Cool Type)	3-Passage Flow Type
	Size W x H x L mm (in.)	444.8 x 570 x 16 (17.5 x 22.4 x 0.6) 359.3 x 670 x 16* ^{7, 9} (14.1 x 26.4 x 0.6) 520.8 x 650 x 16* ⁸ (20.5 x 25.6 x 0.6)	362.8 x 706 x 22 (14.3 x 27.8 x 0.9)
	Fin Pitch mm (in.)	3.2 (0.13)	4.5 (0.18)
	Type	Drawn Cup Type	←
	Size W x H x L mm (in.)	266.2 x 255 x 90 (10.5 x 10.0 x 3.5)	279 x 260 x 105 (11.0 x 10.2 x 4.1)
	Fin Pitch mm (in.)	3.5 (0.14)	←
	Type	10PA15* ^{5, 7} , 10PA17, 10PA20* ²	10PA15* ^{6, 7} , 10PA17, 10PA20* ^{3, 4, 8}

*1: Cold Area Specification Models

*2: 2UZ-FE Engine Model

*3: 1FZ-FE Engine Model

*4: 1FZ-F Engine Model

*5: 1HD-FTE, 1HD-T and 1HZ Engines Model

*6: 1HD-FT, 1HD-T and 1HZ Engines Model

*7: Models with Front Air Conditioner

*8: Models with Front and Rear Air Conditioner

*9: Models with Rigid Axle Front Suspension

3) Models for G.C.C. Countries

► Performance ◀

Model Item		New	Previous
Heater	Heat Output W (Kcal/h)	4800 (4130) 5150 (4430)* ¹	4500 (3870) 5150 (4430)* ¹
	Air Flow Volume m ³ /h	340* ¹ , 350	←
	Power Consumption W	195* ¹ , 200	←
Air Conditioner	Heat Output W (Kcal/h)	6600 (5680)	6510 (5600)* ^{5, 7} 6280 (5400)* ⁶
	Air Flow Volume m ³ /h	580	610
	Power Consumption W	270	←

► Specifications ◀

Model Item			New	Previous
Ventilation and Heater	Heater Core	Type	Multi-Flow Type	Dimpled Tube Type
		Size W x H x L mm (in.)	216.9 x 140 x 21 (8.5 x 5.5 x 0.8) 216.9 x 140 x 27* ¹ (8.5 x 5.5 x 1.1)	155.7 x 200 x 27 (6.1 x 7.9 x 1.1) 155.7 x 200 x 36* ¹ (6.1 x 7.9 x 1.4)
		Fin Pitch mm (in.)	1.8 (0.07)	←
	Blower	Motor Type	S80F11.5T	←
		Fan Size Dia. x H mm (in.)	158 x 80 (6.2 x 3.1)	150 x 85 (5.9 x 3.3)
Air Conditioner	Condenser	Type	Multi-Flow Type (Sub-Cool Type)	3-Passage Flow Type
		Size W x H x L mm (in.)	359.3 x 670 x 16* ² (14.1 x 26.4 x 0.6) 520.8 x 650 x 16 (20.5 x 25.6 x 0.6)	362.8 x 706 x 22* ⁴ (14.3 x 27.8 x 0.9) 362.8 x 706 x 32* ³ (14.3 x 27.8 x 1.3)
		Fin Pitch mm (in.)	3.2 (0.13)	4.0 (0.16)* ³ , 4.5 (0.18)* ⁴
	Evaporator	Type	Drawn Cup Type	←
		Size W x H x L mm (in.)	266.2 x 255 x 90 (10.5 x 10.0 x 3.5)	279 x 260 x 105 (11.0 x 10.2 x 4.1)
		Fin Pitch mm (in.)	3.5 (0.14)	←
	Compressor	Type	10PA15* ^{4, 6} , 10PA17* ^{3, 6} , 10PA20* ^{4, 5} , 10PA20	10PA15* ^{4, 6} , 10PA17, 10PA20* ^{3, 5, 7}

*¹: Models with Automatic Air Conditioner*²: Models with Front Air Conditioner and Rigid Axle Suspension*³: Models with Front and Rear Air Conditioner*⁴: Models with Front Air Conditioner*⁵: 1FZ-FE Engine Model*⁶: 1HZ Engine Model*⁷: 1FZ-F Engine Model

Rear Air Conditioner (Rear Heater and Rear Cooler)

► Performance of Rear Heater and Rear Cooler ◀

Model Item		New	Previous
Rear Heater	Heat Output W (Kcal/h)	2100 (1800)	1860 (1600)
	Air Flow Volume m ³ /h	110	←
	Power Consumption W	40	50
Rear Cooler	Heat Output W (Kcal/h)	3170 (2730)	—
	Air Flow Volume m ³ /h	285	—
	Power Consumption W	170	—

► Specifications of Rear Heater and Rear Cooler ◀

Model Item			New	Previous
Rear Heater	Heater Core	Type	U-turn Flow Type	Flat Tube Type
		Size W x H x L mm (in.)	140 x 105.3 x 27 (5.5 x 4.1 x 1.1)	120 x 92.7 x 36 (4.7 x 3.6 x 1.4)
		Fin Pitch mm (in.)	1.8 (0.07)	2.8 (0.11)
	Blower	Motor Type	S50FS	50F23T
		Fan Size Dia. x H mm (in.)	120 x 75 (4.7 x 3.0)	115.3 x 65 (4.5 x 2.6)
Rear Cooler	Evaporator	Type	Drawn Cup Type	—
		Size W x H x L mm (in.)	159 x 200 x 90 (6.3 x 7.9 x 3.5)	—
		Fin Pitch mm (in.)	4.5 (0.18)	—
	Blower	Motor Type	S70F12T	—
		Fan Size Dia. x H mm (in.)	135 x 70 (5.3 x 2.8)	—