

HVAC

Air Conditioning (Preparation) - Sienna

HEATING / AIR CONDITIONING

SST

SST

	09985-00270	Magnetic Clutch Stopper	
	09985-20010	Set, Air Conditioner Service Tool	
	(09985-02010)	Gauge, Refrigerant Charging	
	(09985-02050)	Hose, Refrigerant Charging	
	(09985-02060)	Hose, Refrigerant Charging	
	(09985-02070)	Hose, Refrigerant Charging	
	(09985-02080)	Hose Packing, Refrigerant Charging	
	(09985-02090)	Coupler, Quick	
	(09985-02110)	Coupler, Quick	
	(09985-02130)	Valve, Refrigerant Drum Service	
	(09985-02140)	Valve Packing Refrigerant Drum Service	
	(09985-02150)	Joint, T	

RECOMMENDED TOOLS

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	09012-2C530	Deep Socket Wrench 27mm	
	09013-1C530	"TORX" Socket Wrench E-type E8	
	09013-7C120	Straight Hexagon 14mm	
	09013-7C400	Wrench Set	
	09061-1C110	Clip Remover 10mm	
	09080-1C110	Toyota Electrical Tester Set	
	09080-2C100	Test Lead Set	
	95146-00180	Halogen Leak Detector DENSO Part No.	

EQUIPMENT

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Vinyl tape	
Protective tape	
Battery	
Service wire harness	
Ohmmeter	
Voltmeter	
Snap ring expander	
Dial indicator or dial indicator with magnetic base	
Torque wrench	

LUBRICANT**LUBRICANT**

Item	Capacity	Classification
Compressor oil	-	ND-OIL8 or equivalent
When replacing cooler evaporator sub-assembly	40 cc (1.35 fl. oz.)	ND-OIL8 or equivalent
When replacing cooler condenser assembly	40 cc (1.35 fl. oz.)	ND-OIL8 or equivalent

HVAC

Air Conditioning (Service Specifications) - Sienna

HEATING / AIR CONDITIONING

SERVICE DATA

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Refrigerant charge volume	750 to 810 g (26.5 to 28.6 oz.)
Magnetic clutch clearance	0.25 to 0.60 mm (0.0098 to 0.0236 in.)
PTC heater relay	3 - 5: 10 kohms or higher (Battery voltage not applied) 3 - 5: Below 1 ohms (Battery voltage applied to terminals 1 and 2)
No. 2 PTC heater relay	3 - 5: 10 kohms or higher (Battery voltage not applied) 3 - 5: Below 1 ohms (Battery voltage applied to terminals 1 and 2)
Magnet-clutch relay	3 - 5: 10 kohms or higher (Battery voltage not applied) 3 - 5: Below 1 ohms (Battery voltage applied to terminals 1 and 2)

FOR 2GR-FE

Idling speed A/C switch off	600 to 700 RPM
Idling speed A/C switch on (A/C Lo --> Hi)	700 --> 800 RPM

FOR 1AR-FE

Idling speed A/C switch off	600 to 700 RPM
Idling speed A/C switch on (A/C Lo --> Hi)	680 --> 800 RPM

TORQUE SPECIFICATIONS

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Part tightened	N*m	kgf*cm	ft.*lbf
Cooler expansion valve x No. 1 cooler evaporator sub-assembly	3.5	36	31 in.*lbf
Air conditioning unit x Instrument panel	9.8	100	87 in.*lbf

reinforcement			
Instrument panel reinforcement x Body	27	275	20
Instrument panel reinforcement x Brake pedal support assembly	19	189	14
Instrument panel reinforcement x Floor panel	9.8	100	87 in.*lbf
Instrument panel wire x Instrument panel reinforcement	8.5	87	75 in.*lbf
No. 1 air duct sub-assembly x Body	9.8	100	87 in.*lbf
No. 2 instrument panel brace sub-assembly x Ground wire	8.5	87	75 in.*lbf
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Front door panel sub-assembly x Front door upper hinge	26	265	19
Front door panel sub-assembly x Front door lower hinge	26	265	19
Front door check assembly LH x Body	29	296	21
Air conditioning tube and accessory assembly x Air conditioning unit	5.4	55	48 in.*lbf
Rear cooling unit expansion valve x Rear evaporator sub-assembly	3.5	36	31 in.*lbf
Air conditioning tube and accessory x Rear cooling unit expansion valve	3.1	32	27 in.*lbf
Air conditioning tube and accessory x Rear cooling unit assembly	5.4	55	48 in.*lbf
Rear cooling unit assembly x Body	5.4	55	48 in.*lbf
No. 3 air conditioning accessory x Air conditioning tube and accessory	3.5	36	31 in.*lbf
Belt outer anchor bracket sub-assembly RH x Body	40	408	30
Magnet clutch hub x W/ pulley compressor assembly	18	184	13
Stud bolt x Engine	10	102	7
Bracket x W/ pulley compressor assembly	8.4	85	74 in.*lbf
W/ pulley compressor assembly x Engine	25	250	18
Suction hose sub-assembly x W/ pulley compressor assembly	5.4	55	48 in.*lbf
Discharge hose sub-assembly x W/ pulley compressor assembly	5.4	55	48 in.*lbf
Cap x Cooler condenser assembly	2.9	30	26 in.*lbf
Bracket x No. 2 radiator assembly	6.0	61	53 in.*lbf
Cooler refrigerant liquid pipe A x Cooler condenser assembly	5.4	55	48 in.*lbf

Discharge hose sub-assembly x Cooler condenser assembly	5.4	55	48 in.*lbf
Rear No. 2 seat outer belt assembly x Body	42	428	31
Air conditioner pressure sensor x Air conditioner tube and accessory assembly	11	110	8
Negative battery terminal x Battery	5.4	55	48 in.*lbf