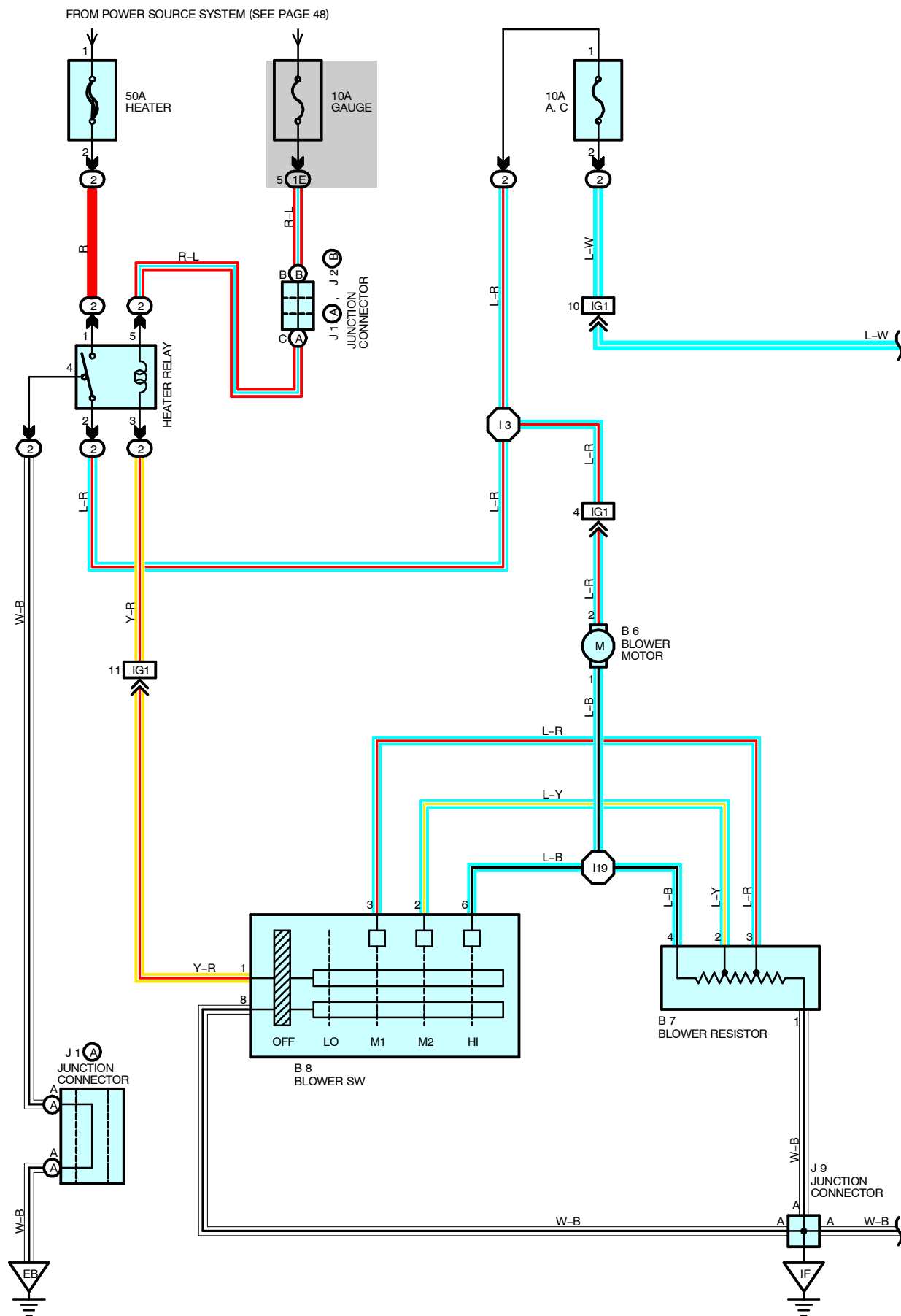
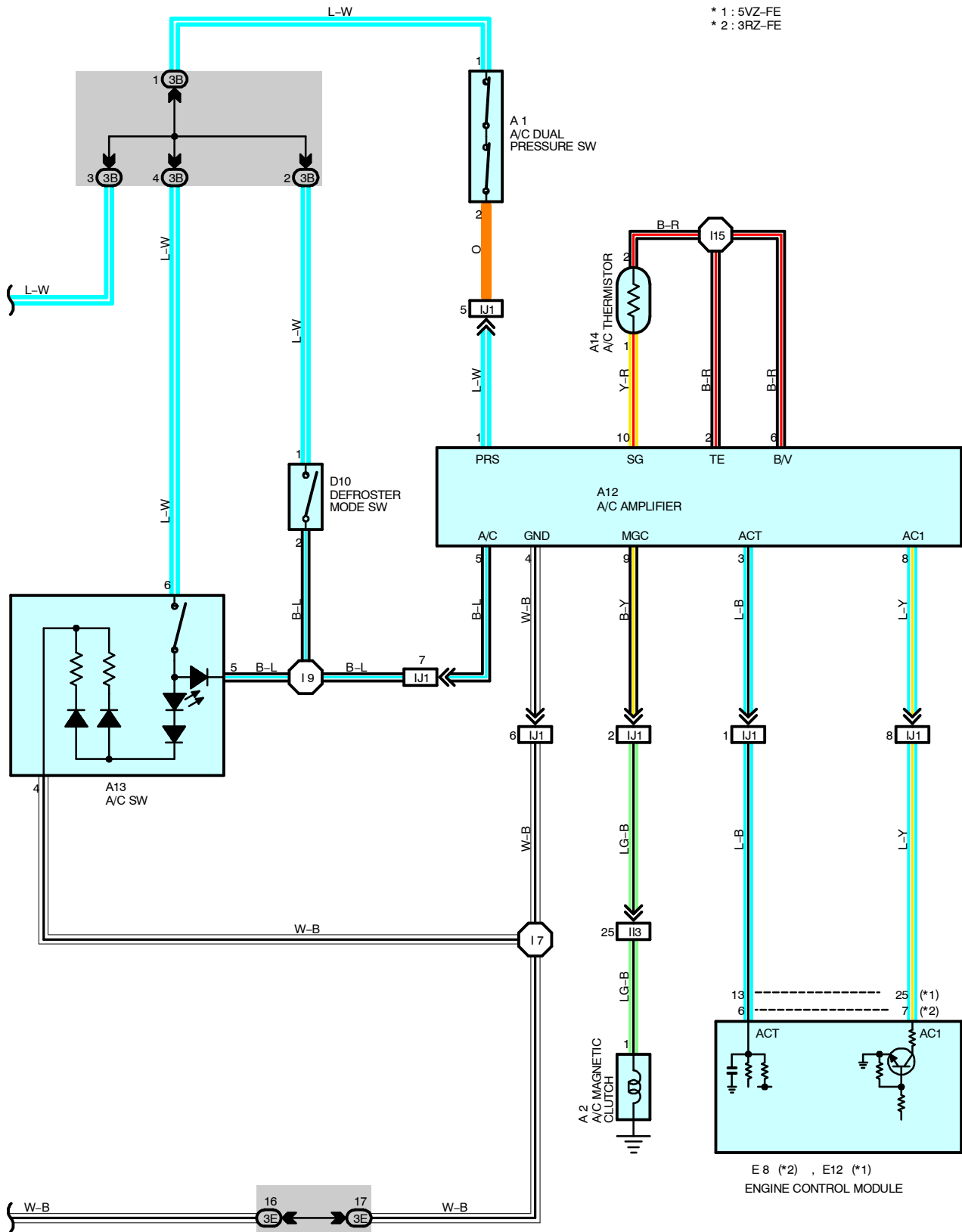


AIR CONDITIONING (MANUAL A/C)



* 1 : 5VZ-FE
* 2 : 3RZ-FE



E 8 (*2) , E12 (*1)
ENGINE CONTROL MODULE

AIR CONDITIONING (MANUAL A/C)

SYSTEM OUTLINE

1. BLOWER MOTOR OPERATION

With the ignition SW on, current from the GAUGE fuse flows to TERMINAL 5 of the HEATER relay to TERMINAL 3 to TERMINAL 1 of the blower SW.

* Low speed operation

When the blower SW is moved to LO position, the current flows to TERMINAL 1 of the blower SW to TERMINAL 8 to GROUND, causing the HEATER relay to come on. Then the current from HEATER fuse to TERMINAL 1 of the HEATER relay to TERMINAL 2 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 4 of the blower resistor to TERMINAL 1 to GROUND, causing the blower motor to rotate. At this time, the current flows against the full resistance of the blower resistor, so the motor turns slowly at low speed.

* Medium speed operation (Operation at speed M1, M2)

When the blower SW is moved to the M1 position, the current flows to TERMINAL 1 of the blower SW to TERMINAL 8 to GROUND, turning the HEATER relay to on. Then, the same as low speed operation, the current passing through the TERMINAL 2 of the HEATER relay flows to the TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 4 of the blower resistor to TERMINAL 3 to TERMINAL 3 of the blower SW to TERMINAL 8 to GROUND. At this time, the blower resistance of the blower resistor is less than at low speed, so the blower motor rotates at medium low speed.

When the blower SW is moved to M2 position, the current flowing through the blower motor flows from TERMINAL 4 of the blower resistor to TERMINAL 2 to TERMINAL 2 of the blower SW to TERMINAL 8 to GROUND. At this time, blower resistance of the blower resistor is less than at M1 position, so the blower motor rotates at medium high speed.

* High speed operation

When the blower SW is moved to HI position, the current flows to TERMINAL 1 of the blower SW to TERMINAL 8 to GROUND, turning the HEATER relay to on. Then, the same as medium speed operation, the current passing through the blower motor flows from TERMINAL 6 of the blower SW to TERMINAL 8 to GROUND, causing the blower motor to rotate at high speed.

2. AIR CONDITIONING OPERATION

When the blower SW is set to on, current from the HEATER fuse flows through the A.C fuse to TERMINAL 1 of the A/C dual pressure SW to TERMINAL 2 to TERMINAL 1 of the A/C amplifier. The engine speed signal from engine control Module and the evaporator temp. signal from the A/C thermistor are all supplied to the A/C amplifier. When the A/C SW is turned on, the A/C SW on signal is sent to activate the A/C amplifier. Current flows from the A/C amplifier to the magnetic clutch, turning the compressor on. The A/C operation is shut off when a signal indicating low evaporator temp., or abnormally high or low refrigerant pressure, is supplied while the engine high speed signal exists. When one of these signals is received, the amplifier shuts off the A/C operation.

SERVICE HINTS

A13 A/C SW

6-GROUND : Approx. **12** volts with ignition SW at **ON** position and blower SW on

4-GROUND : Always continuity

6-5 : Closed with A/C SW on

A1 A/C DUAL PRESSURE SW

1-2 : Open with refrigerant pressure at less than approx. **2.0** kgf/cm² (**28.4** psi, **196** kpa) or more than approx. **32** kgf/cm² (**455** psi, **3138** kpa)

HEATER RELAY [ENGINE ROOM R/B]

1-2 : Closed with ignition SW at **ON** position and blower SW on

1-GROUND : Always approx. **12** volts

5-GROUND : Approx. **12** volts with ignition SW at **ON** position

4-GROUND : Always continuity

B8 BLOWER SW

8-1 : Closed with blower SW at **LO** position

8-3, 1 : Closed with blower SW at **M1** position

8-2, 1 : Closed with blower SW at **M2** position

8-6, 1 : Closed with blower SW at **HI** position

A2 A/C MAGNETIC CLUTCH

1-GROUND : Approx. **3.7** Ω

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code		See Page
A1	26 (5VZ-FE)	A14	30	E12		31
	28 (3RZ-FE)	B6	30	J1	A	27 (5VZ-FE)
A2	26 (5VZ-FE)	B7	30			J2
	28 (3RZ-FE)	B8	30	27 (5VZ-FE)		
A12	30	D10	30	29 (3RZ-FE)		
A13	30	E8	31	J9		31

○ : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	20	Engine Room R/B (Engine Compartment Left)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	22	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3B	24	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

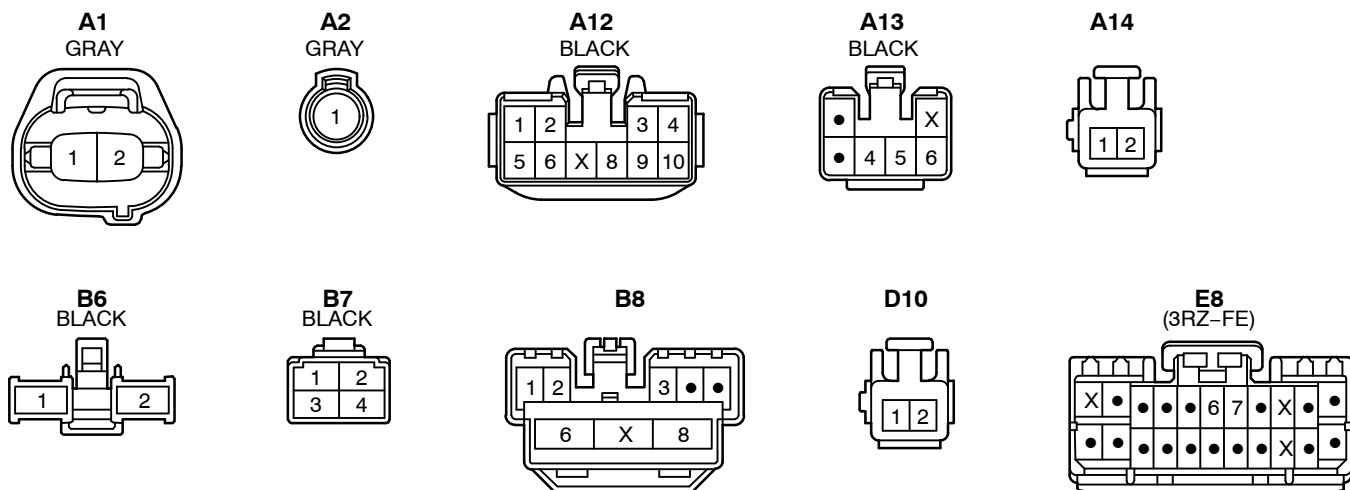
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	40	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II3	40	Engine Wire and Cowl Wire (on the Glove Box)
IJ1	40	Cowl Wire and A/C Sub Wire (Near the A/C Unit)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
EB	36 (5VZ-FE)	Front Left Fender
	38 (3RZ-FE)	
IF	40	Cowl Side Panel RH

○ : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	40	Engine Room Main Wire	I15	40	A/C Sub Wire
I7	40	Cowl Wire	I19	40	Cowl Wire
I9					



AIR CONDITIONING (MANUAL A/C)

