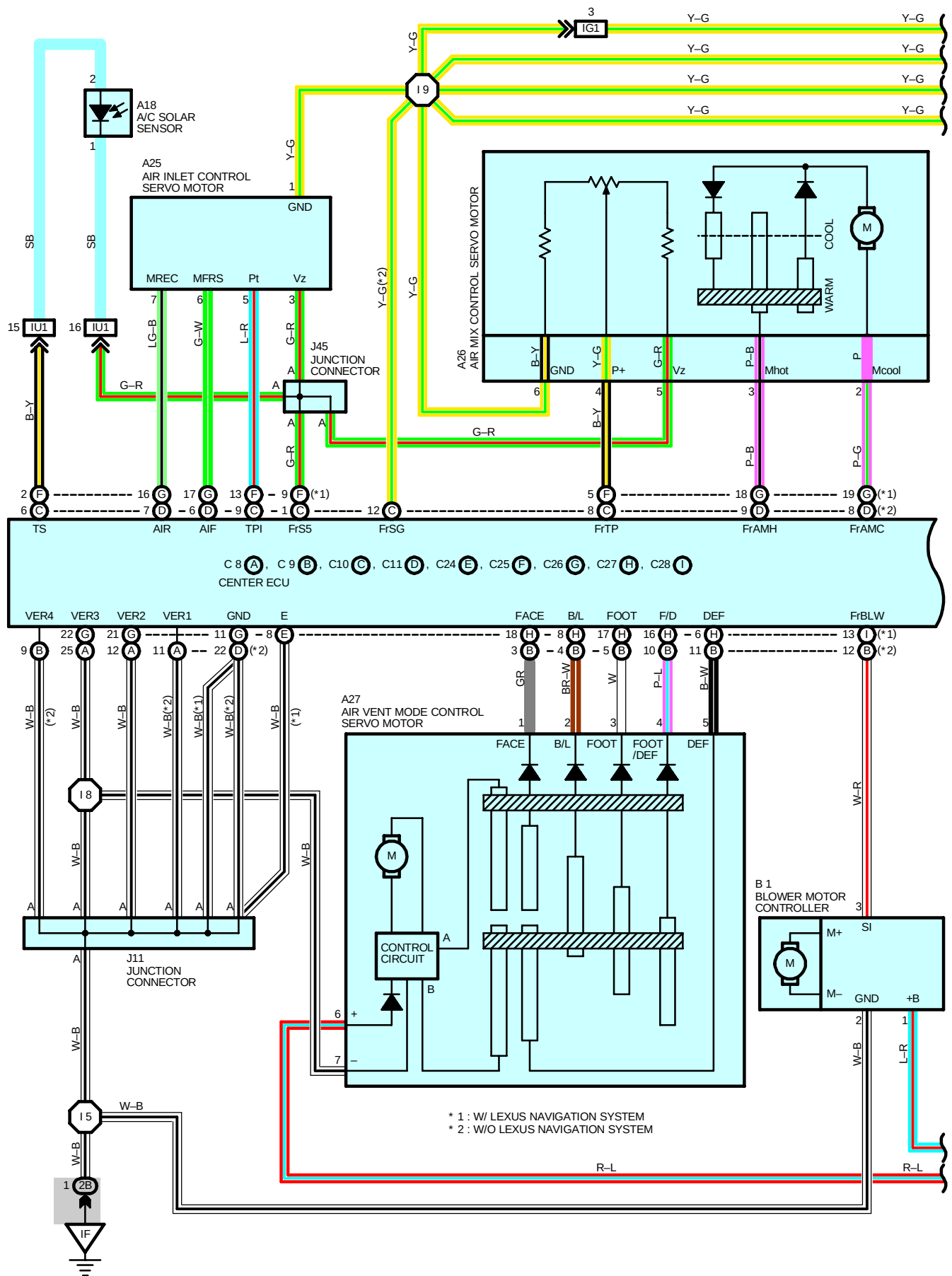
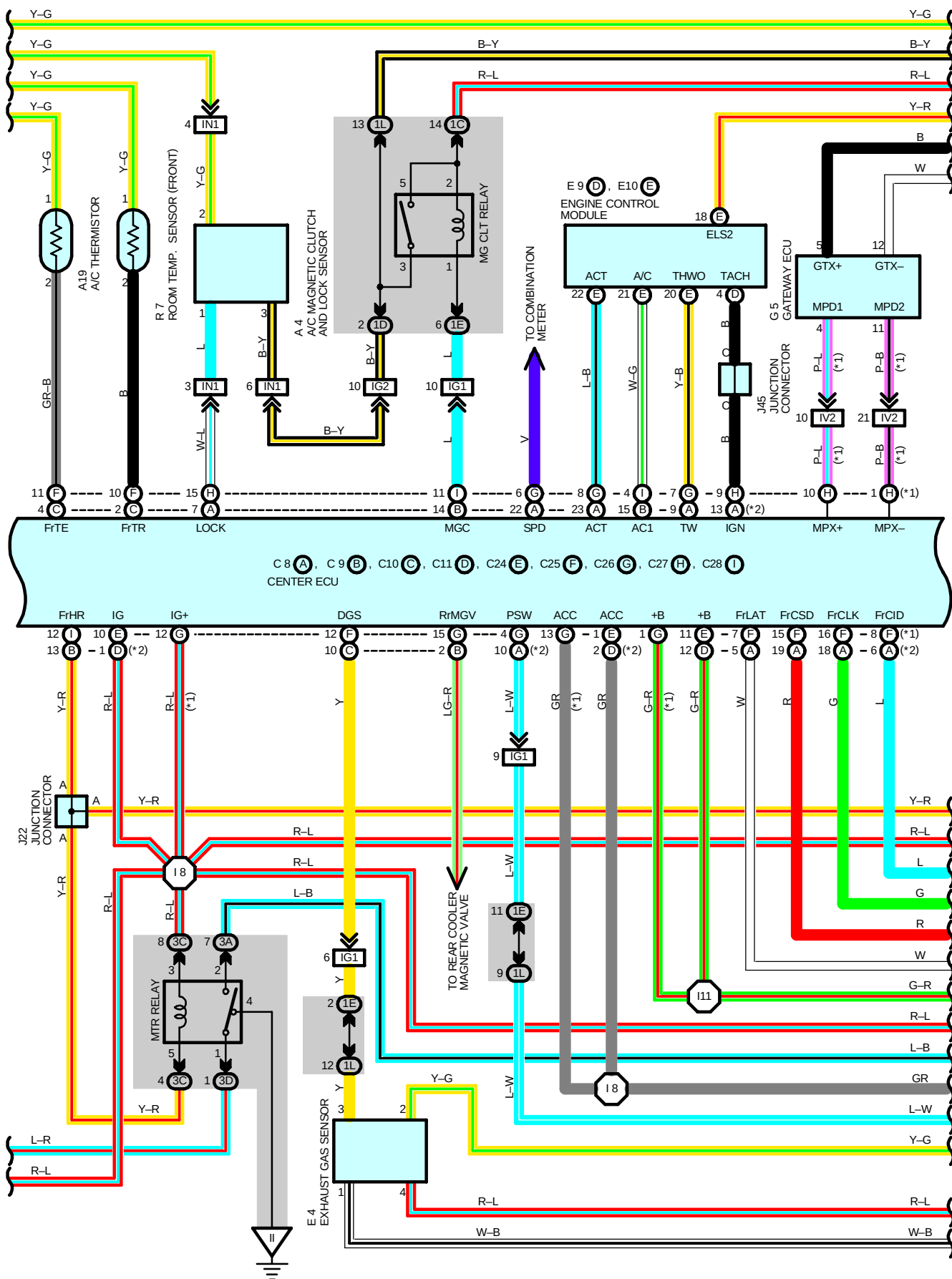
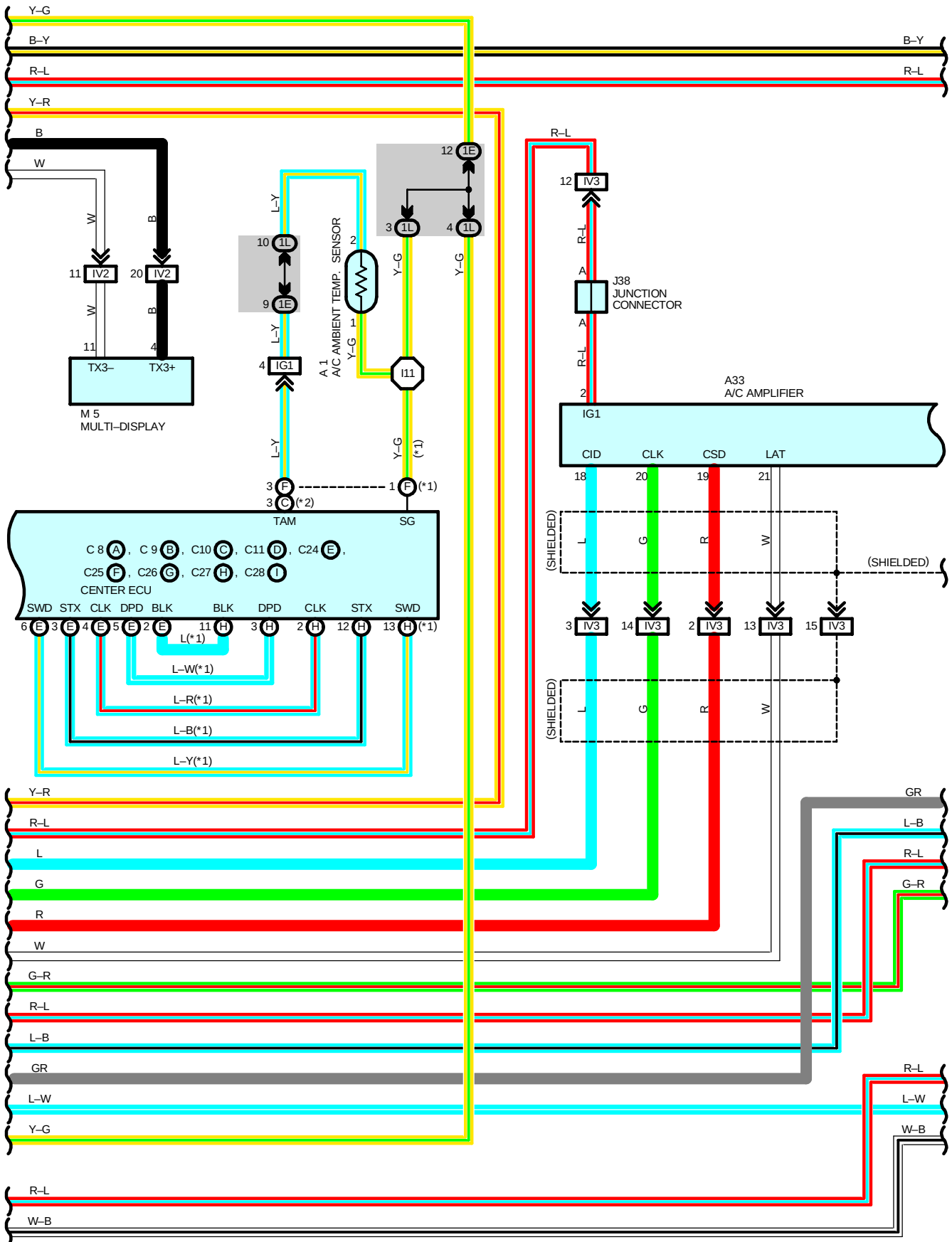


CONDENSER FAN AND FRONT AIR CONDITIONING

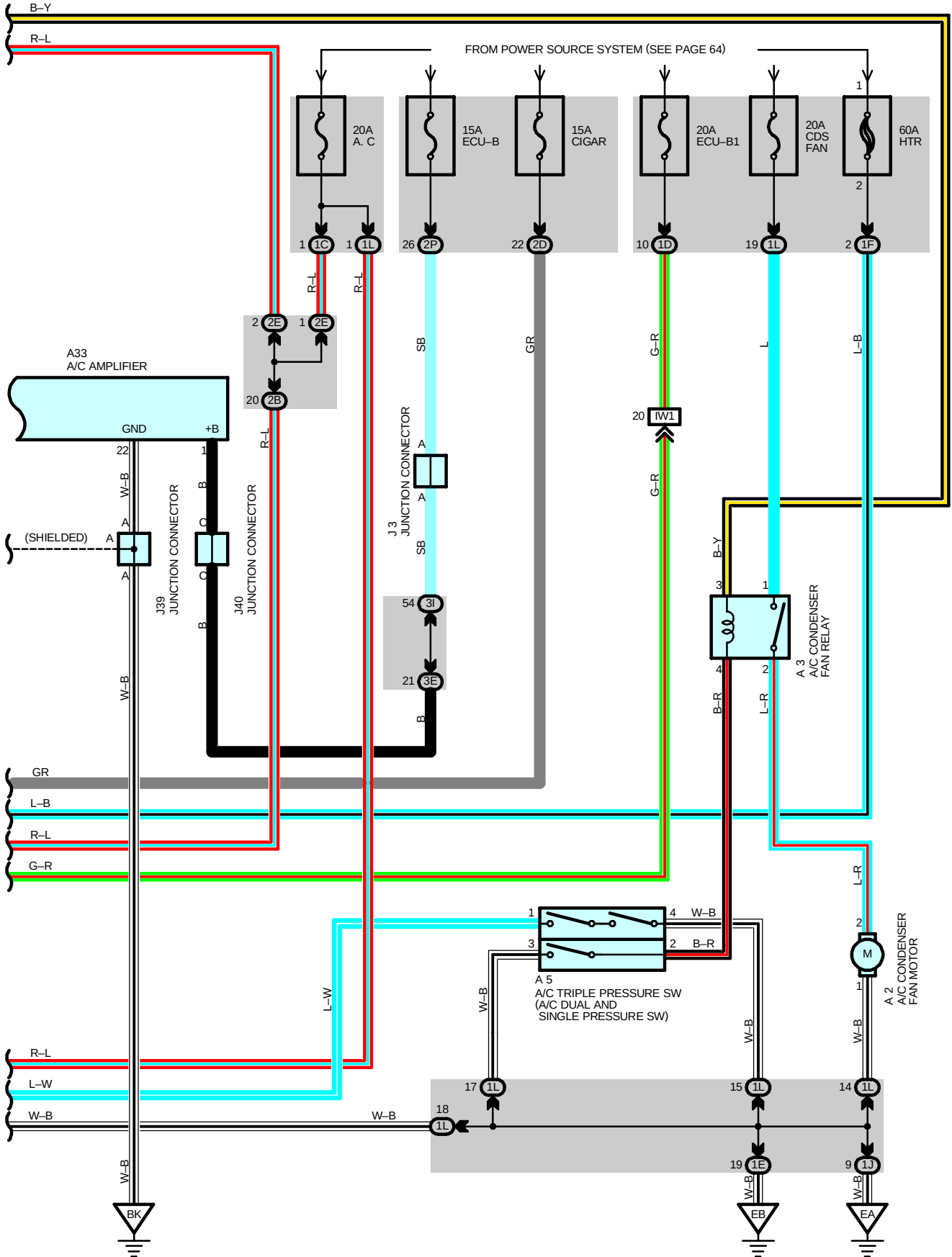




CONDENSER FAN AND FRONT AIR CONDITIONING



- * 1 : W/ LEXUS NAVIGATION SYSTEM
- * 2 : W/O LEXUS NAVIGATION SYSTEM



CONDENSER FAN AND FRONT AIR CONDITIONING

SYSTEM OUTLINE

1. HEATER BLOWER OPERATION

Manual operation

When the blower speed is set at any speed by the blower control SW, the center ECU sends a signal to the blower motor controller, and controls the blower motor speed.

Auto operation

When the auto SW is operated, the center ECU sends signals to the blower motor controller, according to the signals from respective sensors, commands from the temperature SW etc., and controls the blower motor automatically.

2. AIR INLET CONTROL SERVO MOTOR CONTROL

When the FRESH/RECIRC select SW is switched to RECIRC, the motor in the air inlet control servo motor rotates to move the damper to the RECIRC side. The damper position is recognized by the center ECU TERMINAL TPI, and rotates the motor until the damper reaches its position.

When the FRESH/RECIRC select SW is switched to FRESH, the motor in the air inlet control servo motor rotates to move the damper to the FRESH side. The damper position is recognized by the center ECU TERMINAL TPI, and rotates the motor until the damper reaches its position.

When the FRESH/RECIRC select SW is set to auto, the exhaust gas sensor in the engine room detects the ingredient of the exhaust emission, and switches the FRESH/RECIRC mode automatically.

3. AIR VENT MODE CONTROL SERVO MOTOR

When the mode select SW in the center ECU is pushed, a signal is sent from the center ECU, and activates the air vent mode control servo motor. This causes the servo motor to rotate to the position selected using the mode select SW (FACE, BI-LEVEL, FOOT, FOOT/DEF, DEF), and moves the damper.

4. AIR MIX CONTROL SERVO MOTOR

When the temperature control SW in the center ECU is pushed, a signal is sent from the center ECU, and activates the air mix control servo motor. The motor and damper is moved until it reaches the temperature set by the temperature control SW.

5. AIR CONDITIONING OPERATION

The center ECU receives various signals, i. e., the engine RPM from the crankshaft position sensor, outlet temperature from the A/C ambient temp. sensor, coolant temperature from the engine coolant temp. sensor, and the lock signal from the A/C compressor, etc. When the engine is started and the A/C SW is turned on, a signal is sent to the center ECU. As a result, the magnetic clutch is turned on and operates the compressor.

In addition, when the engine control module detects that the magnetic clutch is on and the A/C compressor is operating, it controls the engine in the direction to avoid lowering the engine RPM during A/C operation.

When any of the following signals are sent to the center ECU, the A/C is turned off.

- * Coolant temp. is high.
- * Outlet air temp. is low.
- * Large difference between the engine speed and compressor speed.
- * The refrigerant pressure is abnormally high or low.

6. CONDENSER FAN MOTOR OPERATION

When the A/C is operating and the A/C single pressure SW is on, the current flows from the A.C fuse to MG CLT relay TERMINAL 5 to TERMINAL 3 to A/C condenser fan relay TERMINAL 3 to TERMINAL 4 to A/C single pressure SW TERMINAL 2 to TERMINAL 3 to GROUND, and turns on the A/C condenser fan relay. As a result, the current flows from the CDS FAN fuse to A/C condenser fan relay TERMINAL 1 to TERMINAL 2 to A/C condenser fan motor TERMINAL 2 to TERMINAL 1 to GROUND, and operates the A/C condenser fan motor.

SERVICE HINTS

C8 (A), C9 (B), C11 (D), C24 (E), C25 (F), C26 (G) CENTER ECU

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

+B-GROUND : Always approx. **12** volts

AIF-GROUND : Approx. **12** volts with FRESH select SW on

AIR-GROUND : Approx. **12** volts with RECIRC select SW on

VER1, VER2, VER3, VER4, GND, E-GROUND : Always continuity

A5 A/C TRIPLE PRESSURE SW (A/C DUAL AND SINGLE PRESSURE SW)

1-4 : Open with the refrigerant pressure at less than approx. **2.0** kgf/cm² (**196.1** kpa, **28.4** psi) or more than approx. **32.0** kgf/cm² (**3138.1** kpa, **455** psi)

2-3 : Open below approx. **12.5** kgf/cm² (**1225** kpa, **178** psi)

: Closed above approx. **15.5** kgf/cm² (**1520** kpa, **220** psi)

○ : PARTS LOCATION

Code	See Page	Code		See Page	Code	See Page
A1	38	C8	A	40	G5	40
A2	38	C9	B	40	J3	41
A3	38	C10	C	40	J11	41
A4	38	C11	D	40	J22	41
A5	38	C24	E	40	J38	42
A18	40	C25	F	40	J39	42
A19	40	C26	G	40	J40	42
A25	40	C27	H	40	J45	41
A26	40	C28	I	40	M5	41
A27	40	E4		38	R7	41
A33	42	E9	D	40		
B1	40	E10	E	40		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1F		
1J	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1L		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3D		
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IV2	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IV3		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH
BK	56	Front Side Under the Front Passenger's Seat

CONDENSER FAN AND FRONT AIR CONDITIONING



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire	I9	50	Console Box Wire
I8			I11	50	Dash Wire