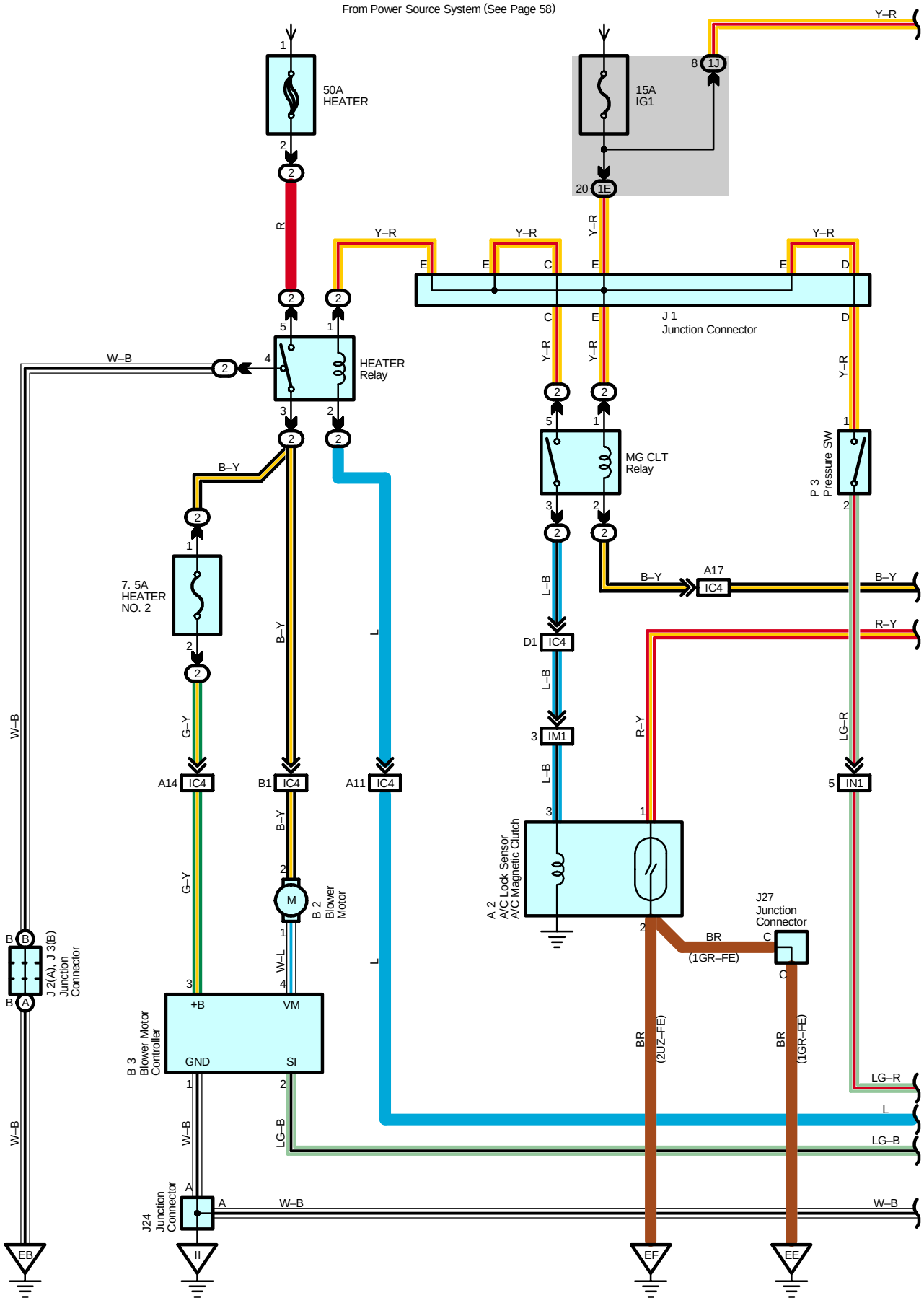
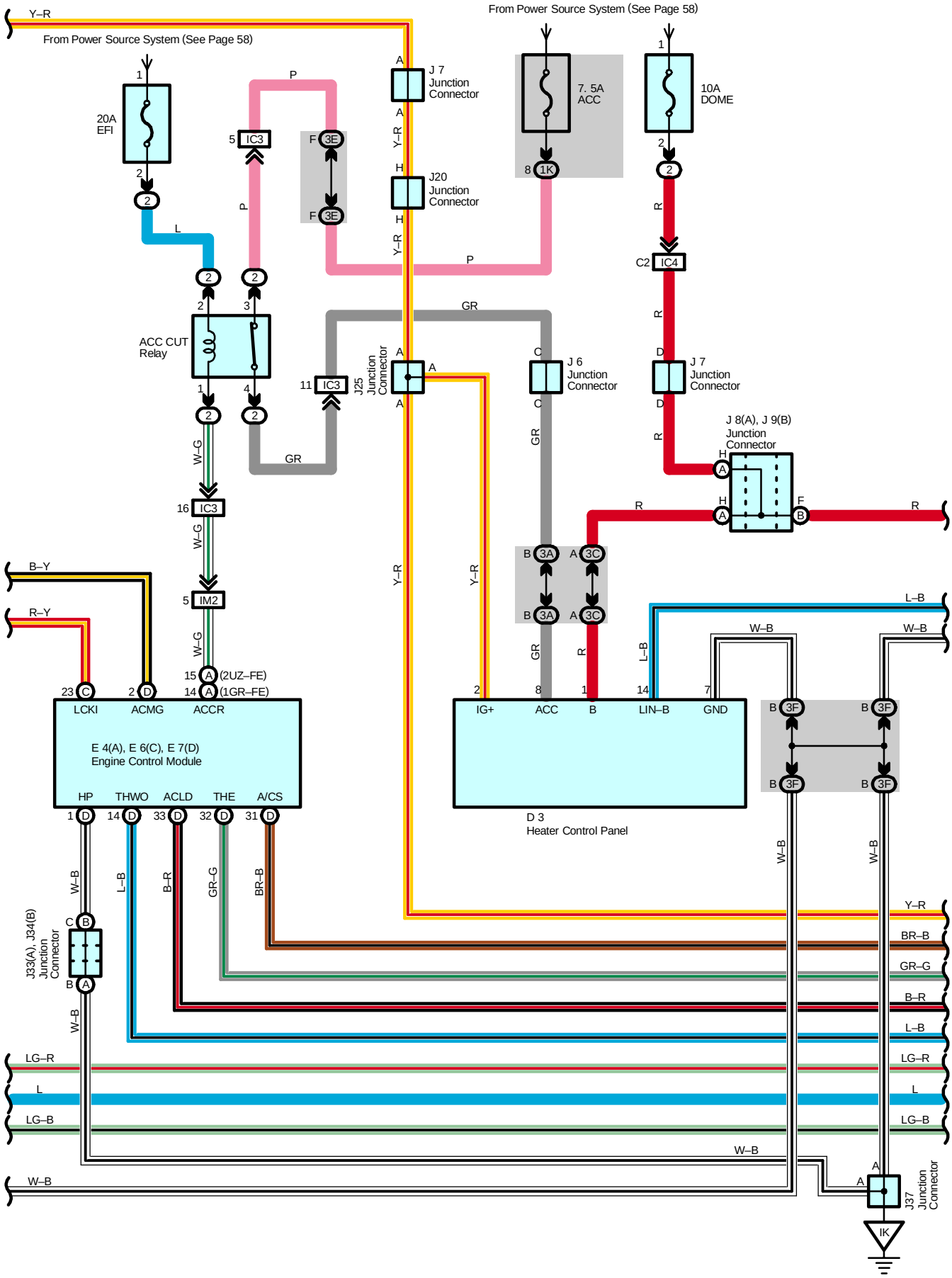
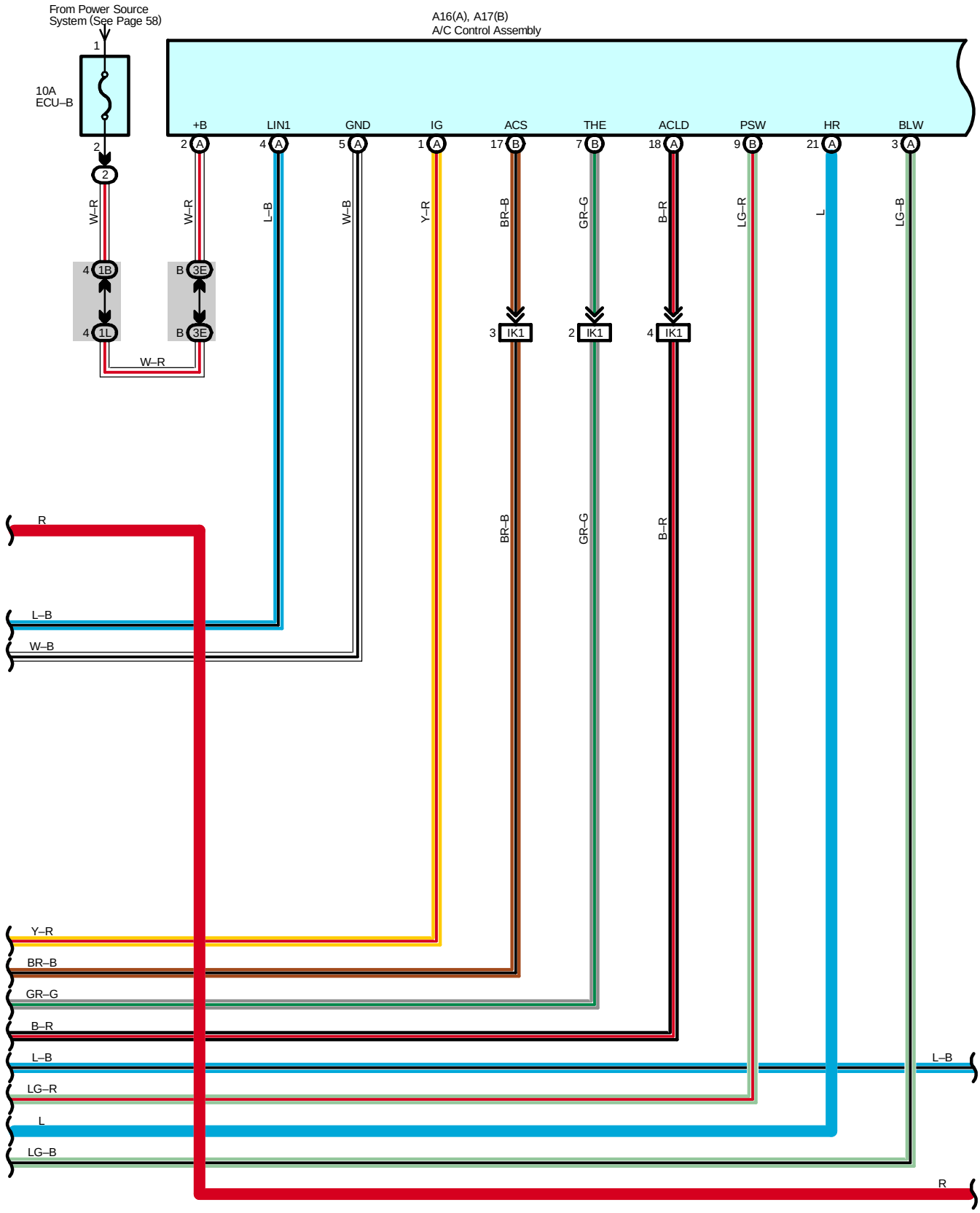
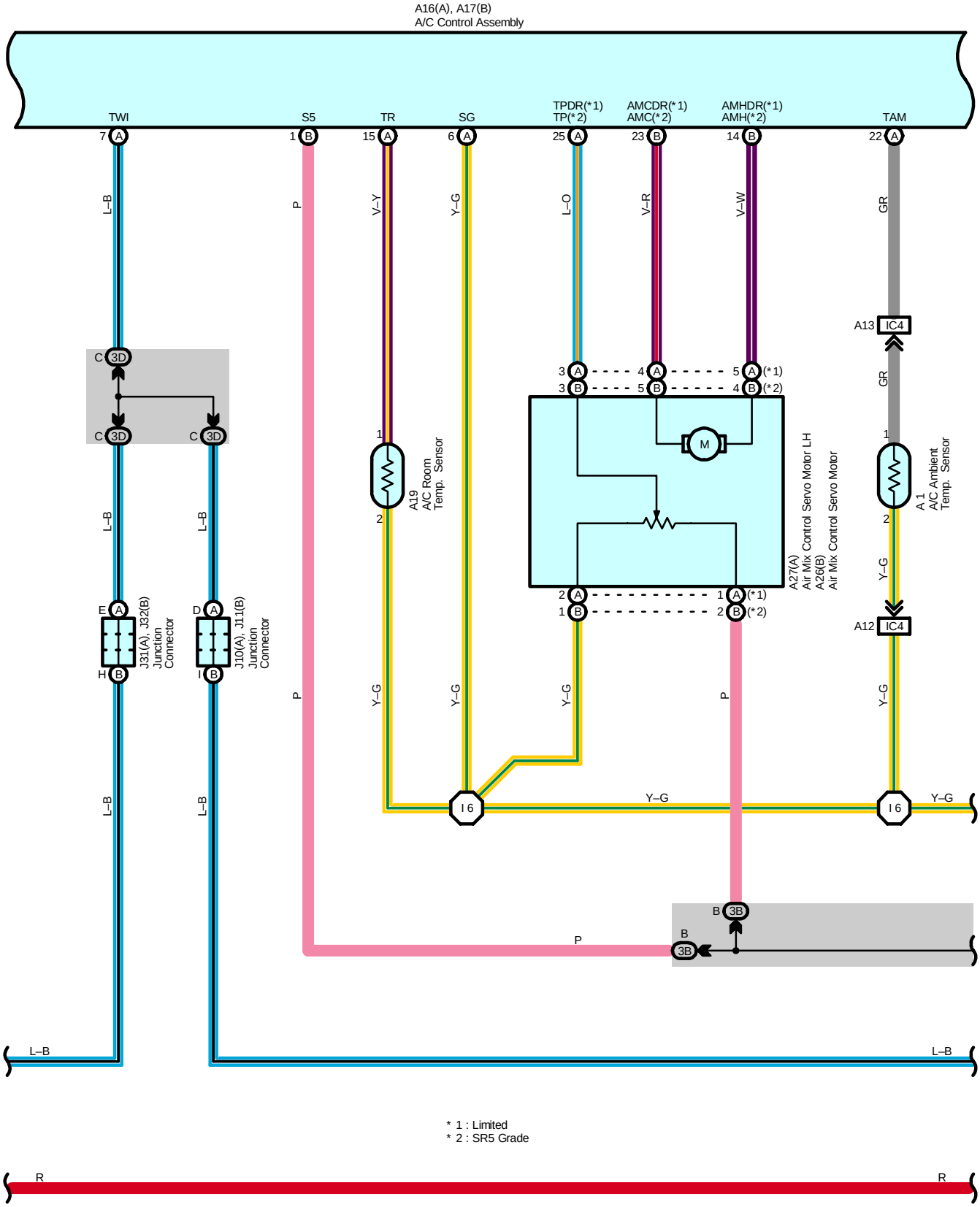
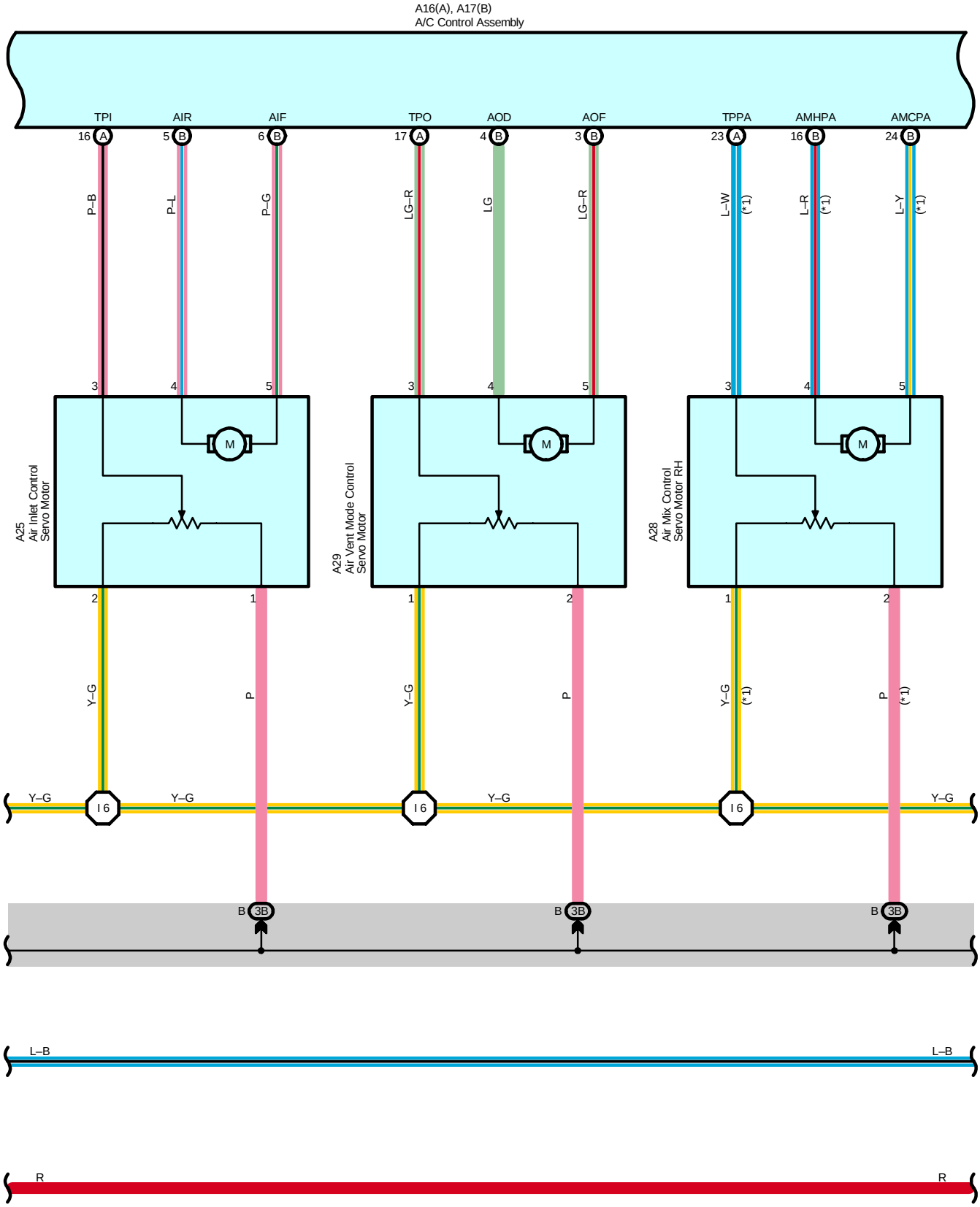

From Power Source System (See Page 58)
50A HEATER
15A IG1
HEATER Relay
MG CLT Relay
J 1 Junction Connector
P 3 Pressure SW
7. 5A HEATER NO. 2
A 2 A/C Lock Sensor A/C Magnetic Clutch
B 2 Blower Motor
B 3 Blower Motor Controller
J2(A), J 3(B) Junction Connector
J24 Junction Connector
J27 Junction Connector
+B
VM
GND
SI
EB
II
EF
EE

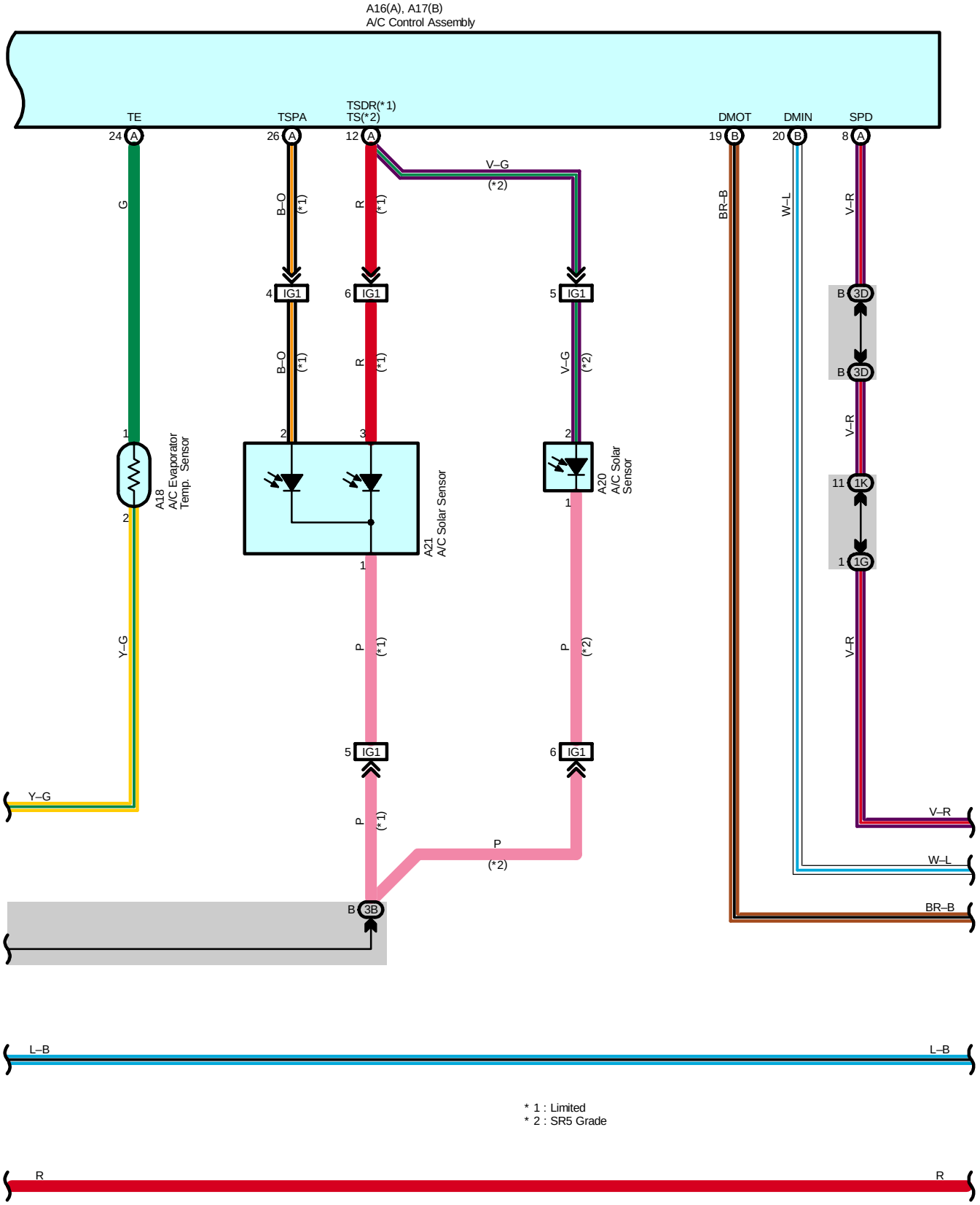

Y–R
From Power Source System (See Page 58)
From Power Source System (See Page 58)
20A EFI
J 7 Junction Connector
7. 5A ACC
10A DOME
J20 Junction Connector
IC3
IC4
IM2
ACC CUT Relay
J25 Junction Connector
J 6 Junction Connector
J 7 Junction Connector
J 8(A), J 9(B) Junction Connector
E 4(A), E 6(C), E 7(D) Engine Control Module
LCKI
ACMG
ACCR
HP
THWO
ACLD
THE
A/CS
(2UZ–FE)
(1GR–FE)
D 3 Heater Control Panel
IG+
ACC
B
LIN–B
GND
J33(A), J34(B) Junction Connector
J37 Junction Connector
P
L
GR
W–G
R
B–Y
R–Y
L–B
W–B
B–R
GR–G
BR–B
LG–R
LG–B

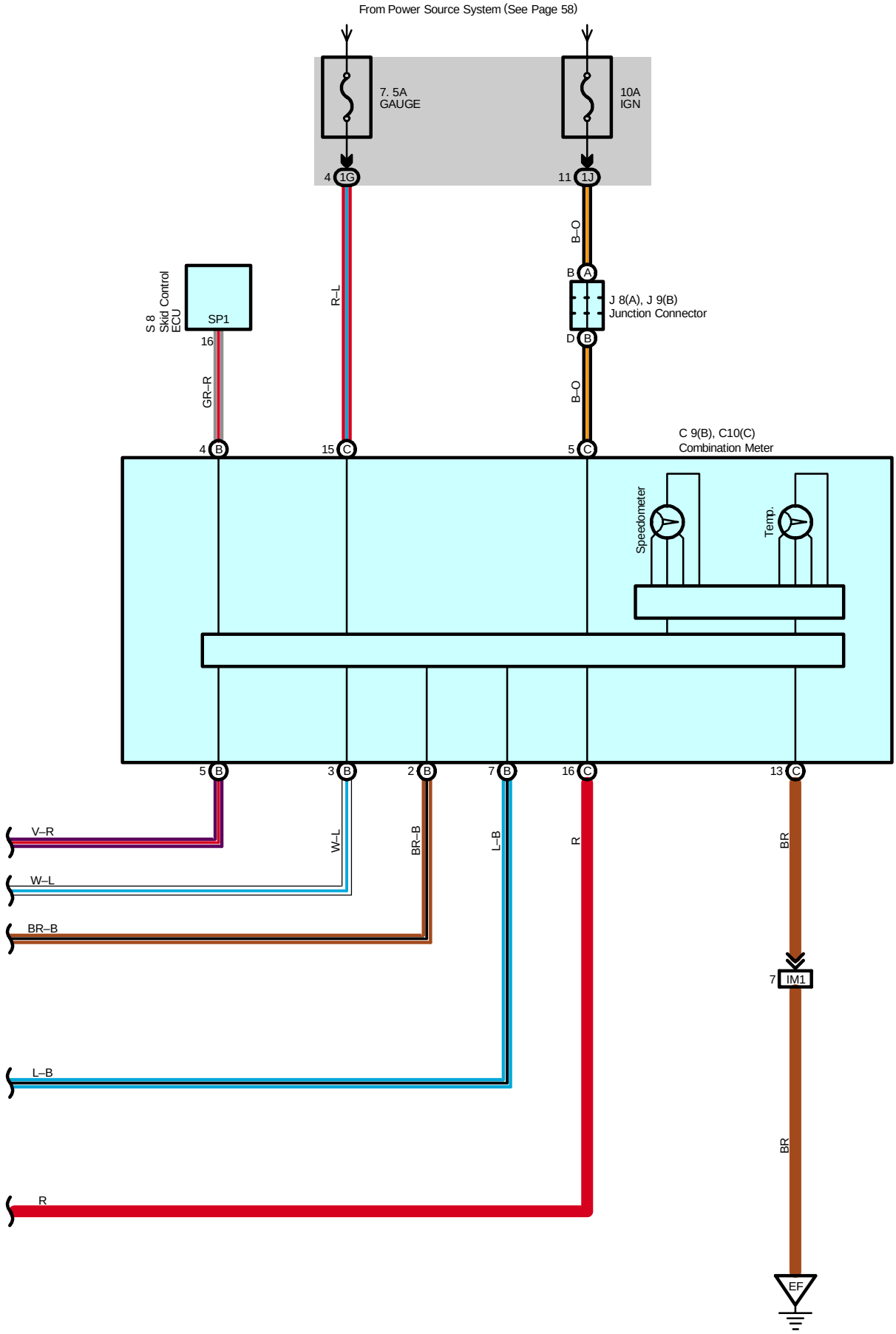

From Power Source System (See Page 58)
1
10A ECU–B
2
A16(A), A17(B)
A/C Control Assembly
+B
LIN1
GND
IG
ACS
THE
ACLD
PSW
HR
BLW
2 A
4 A
5 A
1 A
17 B
7 B
18 A
9 B
21 A
3 A
2
W–R
W–R
L–B
W–B
Y–R
BR–B
GR–G
B–R
LG–R
L
LG–B
4 1B
4 1L
B 3E
B 3E
W–R
3 IK1
2 IK1
4 IK1
R
L–B
W–B
BR–B
GR–G
B–R
Y–R
BR–B
GR–G
B–R
L–B
LG–R
L
LG–B
L–B
R



* 1 : Limited
* 2 : SR5 Grade


A16(A), A17(B)
A/C Control Assembly
TPI
AIR
AIF
TPO
AOD
AOF
TPPA
AMHPA
AMCPA
16 A
5 B
6 B
17 A
4 B
3 B
23 A
16 B
24 B
P–B
P–L
P–G
LG–R
LG
LG–R
L–W (*1)
L–R (*1)
L–Y (*1)
3
4
5
M
A25
Air Inlet Control
Servo Motor
A29
Air Vent Mode Control
Servo Motor
A28
Air Mix Control
Servo Motor RH
2
1
Y–G
P
(*1)
I 6
B 3B
L–B
R


A16(A), A17(B)
A/C Control Assembly
TE
TSPA
TSDR(*1)
TS(*2)
DMOT
DMIN
SPD
24 A
26 A
12 A
19 B
20 B
8 A
G
B–O (*1)
R (*1)
V–G (*2)
BR–B
W–L
V–R
4 IG1
6 IG1
5 IG1
B 3D
B 3D
1
2
2
3
2
1
A18
A/C Evaporator
Temp. Sensor
A21
A/C Solar Sensor
A20
A/C Solar
Sensor
11 1K
1 1G
Y–G
P (*1)
P (*2)
5 IG1
6 IG1
Y–G
P (*1)
P (*2)
V–R
W–L
BR–B
B 3B
L–B
L–B
* 1 : Limited
* 2 : SR5 Grade
R
R


From Power Source System (See Page 58)
7. 5A
GAUGE
10A
IGN
4 1G
11 1J
B–O
B A
J 8(A), J 9(B)
Junction Connector
D B
B–O
S 8
Skid Control
ECU
SP1
16
GR–R
R–L
4 B
15 C
5 C
C 9(B), C10(C)
Combination Meter
Speedometer
Temp.
5 B
3 B
2 B
7 B
16 C
13 C
V–R
W–L
BR–B
L–B
R
BR
7 IM1
BR
EF

System Outline

1. Heater Blower Operation

Manual operation

When the blower speed is set to a certain level using the blower control SW, the A/C control assembly sends the signals to the blower control to control the blower motor speed.

Auto operation

When the auto SW is pushed, the A/C control assembly sends the signals from various sensors and temperature SW to the blower control to automatically control the blower motor speed.

2. Air Inlet Control Servo Motor Control

When the FRESH/RECIRC select SW is set to RECIRC, the motor in the air inlet control servo motor starts rotating to move the damper toward the RECIRC side. Since the damper position is detected by the TERMINAL TPI of the A/C control assembly, the motor is continuously rotated until the damper reaches its stop position. When the FRESH/RECIRC select SW is set to FRESH, the motor in the air inlet control servo motor starts rotating to move the damper toward the FRESH side. Since the damper position is detected by the TERMINAL TPI of the A/C control assembly, the motor is continuously rotated until the damper reaches its stop position.

3. Air Vent Mode Control Servo Motor Control

When the mode select SW is pushed, the ECU in the A/C control assembly activates the air vent mode control servo motor. This causes the servo motor to rotate to the position (FACE, BI–LEVEL, FOOT, FOOT/DEF, DEF) selected using the mode select SW, and moves the damper.

4. Air Mix Control Servo Motor Control (Limited)

When the temperature control SW on the driver's side is pressed, the ECU in the A/C control assembly sends a signal to the air mix control servo motor on the driver's side. This signal drives the motor to reach the temperature set by the temperature control SW on the driver's side, and moves the damper. Passenger's side is operated as same as the driver's side.

5. Air Mix Control Servo Motor Control (SR5 Grade)

When the temperature control SW is pressed, the ECU in the A/C control assembly sends a signal to the air mix control servo motor. This signal drives the motor to reach the temperature set by the temperature control SW, and moves the film damper.

6. Air Conditioning Operation

The A/C control assembly receives various signals, I.E., the engine RPM from the engine control module, out side air temperature signal from the A/C ambient temp. sensor and coolant temperature from the engine control module, etc.

When the engine is started and the A/C SW (A/C control assembly) is on, a signal is input to the A/C control assembly.

As a result, the ground circuit in A/C control assembly is closed and current flows from IG1 fuse to TERMINAL 1 of the MG CLT relay to TERMINAL 2 to TERMINAL ACMG of the engine control module to TERMINAL HP to GROUND, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.

If the A/C control assembly detects the following conditions, it stops the air conditioning:

* Evaporator outlet air is too low.
* There is a marked difference between the compressor speed and the engine speed.
* The refrigerant pressure is abnormally high or abnormally low.
* The engine speed is too low.
* Rapid acceleration occurs.

Service Hints

P3 Pressure SW

1–2 : Open with the refrigerant pressure at less than approx. 216 kpa (2.2 kgf/cm^2, 31 psi) or more than approx. 3138 kpa (32 kgf/cm^2, 455 psi)

A16 (A) A/C Control Assembly

(A) 2–Ground : Always approx. 12 volts

(A) 1–Ground : Approx. 12 volts with ignition SW at ON or ST position

(A) 5–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	32 (2UZ–FE)	B3	36	J9 B	38
	34 (1GR–FE)	C9 B	37	J10 A	38
A2	32 (2UZ–FE)	C10 C	37	J11 B	38
	34 (1GR–FE)	D3	37	J20	38
A16 A	36	E4 A	37	J24	38
A17 B	36	E6 C	37	J25	38
A18	36	E7 D	37	J27	38
A19	36	J1	33 (2UZ–FE)	J31 A	38
A20	36		35 (1GR–FE)	J32 B	38
A21	36	J2 A	33 (2UZ–FE)	J33 A	38
A25	36		35 (1GR–FE)	J34 B	38
A26 B	36	J3 B	33 (2UZ–FE)	J37	38
A27 A	36		35 (1GR–FE)	P3	33 (2UZ–FE)
A28	36	J6	38		35 (1GR–FE)
A29	36	J7	38	S8	39
B2	36	J8 A	38		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3B		
3C		
3D		
3E		
3F		

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IG1	50	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IK1	50	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ–FE)	Front Left Fender
	46 (1GR–FE)	
EE	46 (1GR–FE)	Rear Side of Right Bank Cylinder Block
EF	44 (2UZ–FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR–FE)	
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	50	Instrument Panel Wire			