

SYSTEM OUTLINE

1. HEATER BLOWER MOTOR OPERATION

THE CURRENT FLOWS CONSTANTLY FROM THE **FL HEATER** FUSE TO **TERMINAL 5** OF THE HEATER RELAY. WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FLOWS THROUGH **GAUGE** FUSE TO **TERMINAL 5** OF THE BLOWER SPEED CONTROL RELAY, AND TO **TERMINAL 3** OF THE HEATER RELAY → **TERMINAL 1** → **TERMINAL (A)1** OF THE HEATER CONTROL SW.

* LOW SPEED OPERATION

WHEN THE BLOWER SW (HEATER CONTROL SW) IS SET TO **LO** POSITION, THE CURRENT TO **TERMINAL (A)1** OF THE HEATER CONTROL SW FLOWS TO **TERMINAL (B)16** → **GROUND**, ACTIVATING THE HEATER RELAY ON. AS A RESULT, THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTORS → **TERMINAL 2** → **TERMINAL 1** OF THE BLOWER RESISTOR → **TERMINAL 4** → **GROUND**, CAUSING THE BLOWER MOTORS TO OPERATE AT LOW SPEED.

* HIGH SPEED OPERATION

WHEN THE BLOWER SW (HEATER CONTROL SW) IS SET TO **HI** POSITION, THE CURRENT TO **TERMINAL (A)1** OF THE HEATER CONTROL SW FLOWS TO **TERMINAL (B)16** → **GROUND**, ACTIVATING THE HEATER RELAY. AS A RESULT, THE CURRENT TO **TERMINAL 5** OF THE BLOWER SPEED CONTROL RELAY FLOWS TO **TERMINAL 7** → **TERMINAL (B)13** OF THE HEATER CONTROL SW → **TERMINAL (B)16** → **GROUND**, ACTIVATING THE BLOWER SPEED CONTROL RELAY. THIS CAUSES THE CURRENT TO FLOW FROM **TERMINAL 5** OF THE HEATER RELAY TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTORS → **TERMINAL 2** → **TERMINAL 4** OF THE BLOWER SPEED CONTROL RELAY → **TERMINAL 3** → **GROUND**, CAUSING THE BLOWER MOTORS TO OPERATE AT HIGH SPEED.

* MEDIUM SPEED OPERATION (OPERATION AT M1, M2)

WHEN THE BLOWER SW (HEATER CONTROL SW) IS SET TO **M1** POSITION, THE CURRENT TO **TERMINAL (A)1** OF THE HEATER CONTROL SW FLOWS TO **TERMINAL (B)16** → **GROUND**, ACTIVATING THE HEATER RELAY. AS A RESULT, THE CURRENT FROM **TERMINAL 5** OF THE BLOWER SPEED CONTROL RELAY TO **TERMINAL 6** → **TERMINAL (B)9** OF THE HEATER CONTROL SW → **TERMINAL (B)16** → **GROUND**, ACTIVATING THE BLOWER SPEED CONTROL RELAY. THIS CAUSES THE CURRENT FROM **TERMINAL 5** OF THE HEATER RELAY TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTORS → **TERMINAL 2** → **TERMINAL 1** OF THE BLOWER RESISTOR → **TERMINAL 2** → **TERMINAL 1** OF THE BLOWER SPEED CONTROL RELAY → **TERMINAL 3** → **GROUND**, CAUSING THE BLOWER MOTORS TO OPERATE AT MEDIUM LOW SPEED. WHEN THE BLOWER SW (HEATER CONTROL SW) IS SET TO **M2** POSITION, THE CURRENT TO **TERMINAL (A)1** OF THE HEATER CONTROL SW FLOWS TO **TERMINAL (B)16** → **GROUND**, ACTIVATING THE HEATER RELAY. AS A RESULT, THE CURRENT FLOWS FROM **TERMINAL 5** OF THE BLOWER SPEED CONTROL RELAY TO **TERMINAL 8** → **TERMINAL (B)10** OF THE HEATER CONTROL SW – **TERMINAL (B)16** → **GROUND**, ACTIVATING THE BLOWER SPEED CONTROL RELAY. THIS CAUSES THE CURRENT TO FLOW FROM **TERMINAL 5** OF THE HEATER RELAY TO **TERMINAL 4** → **TERMINAL 1** OF THE BLOWER MOTORS → **TERMINAL 2** → **TERMINAL 1** OF THE BLOWER RESISTOR → **TERMINAL 3** → **TERMINAL 2** OF THE BLOWER SPEED CONTROL RELAY → **TERMINAL 3** → **GROUND**, CAUSING THE BLOWER MOTOR TO OPERATE AT MEDIUM HI SPEED. THE CURRENT TO THE BLOWER MOTORS AT THIS TIME IS STRONGER THAN IT WAS FOR THE **M1** POSITION, SO THE BLOWER MOTORS OPERATES FASTER FOR M2 THAN IT DOES FOR M1.

2. OPERATION AIR INLET CONTROL SERVO MOTOR

(SWITCHING FROM FRESH TO RECIRC)

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS FROM **GAUGE** FUSE TO **TERMINAL 1** OF THE AIR INLET CONTROL SERVO MOTOR. WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE FRESH SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF THE AIR INLET CONTROL SERVO MOTOR TO **TERMINAL 3** → **TERMINAL (A)18** OF THE HEATER CONTROL SW → **TERMINAL (B)16** → **GROUND**, THIS CAUSES THE MOTOR TO ROTATE AND THE DAMPER TO MOVE TO THE RECIRC SIDE. WHEN IT IS IN THE RECIRC POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR, AND THE DAMPER STOPS AT THAT POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH THE IGNITION SW ON, WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE RECIRC SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF THE AIR INLET CONTROL SERVO MOTOR TO **TERMINAL 2** → **TERMINAL (A)19** OF THE HEATER CONTROL SW → **TERMINAL (B)16** → **GROUND**, THIS CAUSES THE MOTOR TO ROTATE AND DAMPER TO MOVE TO THE FRESH SIDE. WHEN IT IS IN THE **FRESH** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR, AND THE DAMPER STOPS AT THAT POSITION.

3. OPERATION OF AIR VENT MODE CONTROL SERVO MOTOR

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS FROM **GAUGE** FUSE TO **TERMINAL 5** OF THE AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 6** → **GROUND**, AND THE DAMPER MOVES TO THE POSITION OF THE MODE SELECTION SW ON THE CONTROL SW WHICH IS ON. WHEN THE FOOT SW OF THE HEATER CONTROL SW IS TURNED ON WITH THE **DEF** POSITION, A SIGNAL IS INPUT FROM **TERMINAL 7** OF THE AIR VENT MODE CONTROL SERVO MOTOR TO **TERMINAL (B)4** OF THE HEATER CONTROL SW. AS A RESULT, THE SERVO MOTOR OPERATES UNTIL THE DAMPER REACHES TO **DEF** POSITION. WHEN THIS OCCURS, THE SIGNAL TO THE HEATER CONTROL SW IS SHUT OFF AND ROTATION OF THE MOTOR STOPS. SWITCHING TO OTHER MOVEMENT IS CONTROLLED BY THE SERVO MOTOR ACCORDING TO THE FOLLOWING SIGNALS:

1. **FACE** POSITION, A SIGNAL INPUT FROM **TERMINAL 1** OF THE SERVO MOTOR TO **TERMINAL (B)14** OF THE HEATER CONTROL SW.
2. **BI-LEVEL** POSITION, A SIGNAL INPUT FROM **TERMINAL 2** OF THE SERVO MOTOR TO **TERMINAL (A)12** OF THE HEATER CONTROL SW.
3. **FOOT** POSITION, A SIGNAL INPUT FROM **TERMINAL 3** OF THE SERVO MOTOR TO **TERMINAL (A)7** OF THE HEATER CONTROL SW.
4. **FOOT/DEF** POSITION, A SIGNAL INPUT FROM **TERMINAL 4** OF THE SERVO MOTOR TO **TERMINAL (B)11** OF THE HEATER CONTROL SW.

4. AIR MIX CONTROL SERVO MOTOR

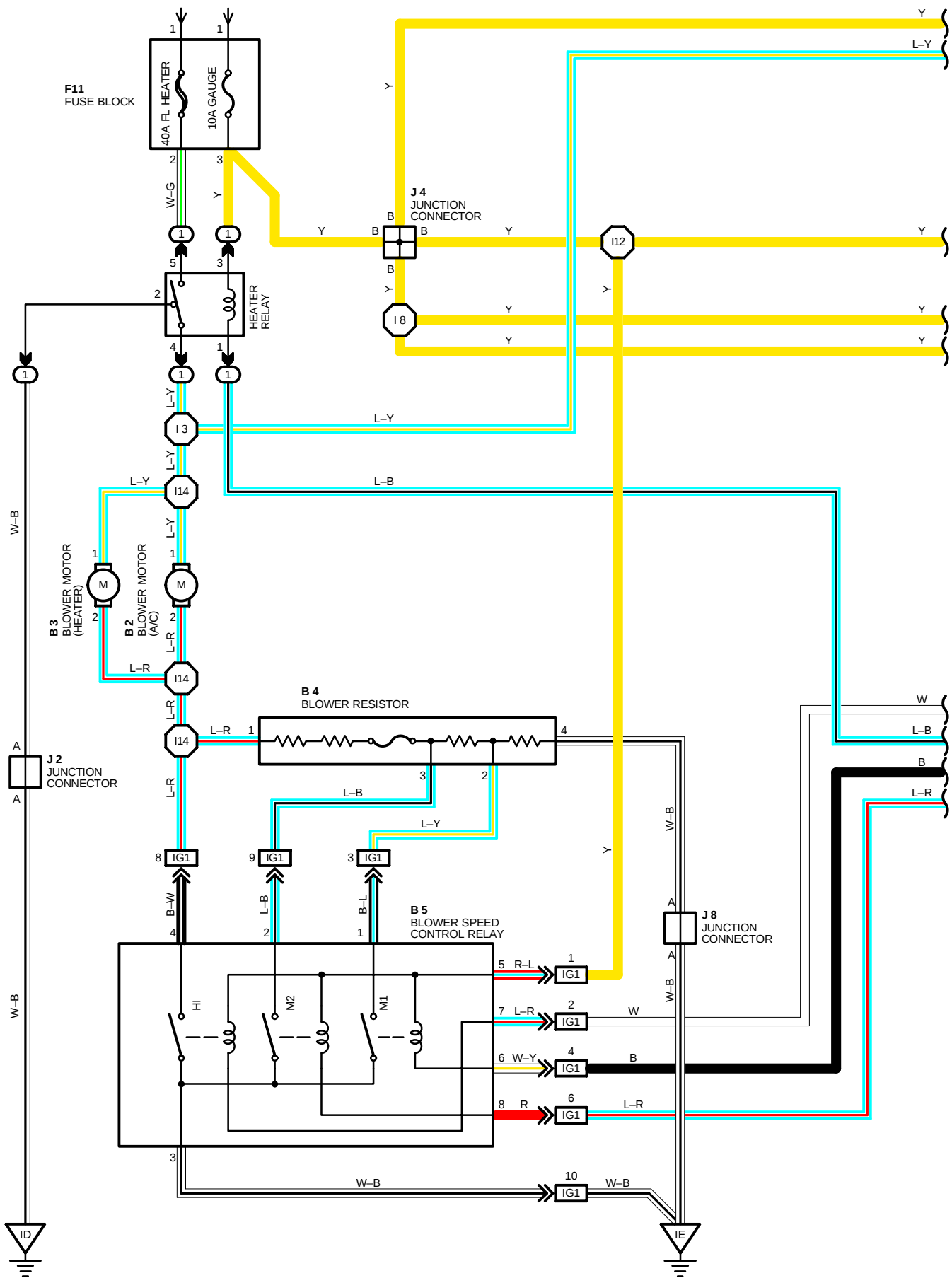
VOLTAGE IS APPLIED TO **TERMINALS 11** AND **12** OF THE A/C SYSTEM AMPLIFIER FROM THE TEMPERATURE CONTROL LEVER INSIDE THE HEATER CONTROL SW AND FROM THE POTENTIOMETER INSIDE THE AIR MIX CONTROL SERVO MOTOR. THIS VOLTAGE IS KEPT AT A FIXED LEVEL BY THE A/C SYSTEM AMPLIFIER. WHEN THE TEMPERATURE CONTROL LEVER OF THE HEATER CONTROL SW IS MOVED TO 'COOL', THE VOLTAGE APPLIED TO **TERMINAL 12** OF THE A/C SYSTEM AMPLIFIER FROM **TERMINAL (B)3** OF THE HEATER CONTROL SW CHANGES. AT THIS TIME, THE A/C SYSTEM AMPLIFIER COMPARES THE VOLTAGE FROM **TERMINAL 2** OF THE AIR MIX CONTROL SERVO MOTOR WITH THE VOLTAGE APPLIED TO **TERMINAL 11** OF THE A/C SYSTEM AMPLIFIER. THIS ACTIVATES THE A/C SYSTEM AMPLIFIER, SO THE CURRENT FLOWS FROM **TERMINAL 6** OF THE AMPLIFIER TO **TERMINAL 5** OF THE AIR MIX CONTROL SERVO MOTOR → **TERMINAL 4** → **TERMINAL 1** OF THE A/C SYSTEM AMPLIFIER, AND THE AIR MIX CONTROL SERVO MOTOR CHANGES TO THE 'COOL' SIDE. THEN WHEN THE VOLTAGE FROM THE POTENTIOMETER INSIDE THE SERVO MOTOR EQUALS, THE VOLTAGE FROM THE TEMPERATURE CONTROL LEVER INSIDE THE HEATER CONTROL SW, THE A/C SYSTEM AMPLIFIER CUTS OFF POWER TO THE MOTOR. WHEN THE TEMPERATURE CONTROL LEVER IS MOVED TO THE 'HOT' SIDE, THE A/C SYSTEM AMPLIFIER OPERATES THE SAME AS FOR 'COOL' OPERATION, SO THE CURRENT FLOWS FROM **TERMINAL 1** OF THE A/C SYSTEM AMPLIFIER TO **TERMINAL 4** OF THE AIR MIX CONTROL SERVO MOTOR → **TERMINAL 5** → **TERMINAL 6** OF THE A/C SYSTEM AMPLIFIER, CHANGING THE MOTOR TO THE 'HOT' SIDE. WHEN THE VOLTAGE OF THE POTENTIOMETER AND THE VOLTAGE OF THE TEMPERATURE CONTROL LEVEL ARE THE SAME, POWER TO THE MOTOR IS CUT OFF.

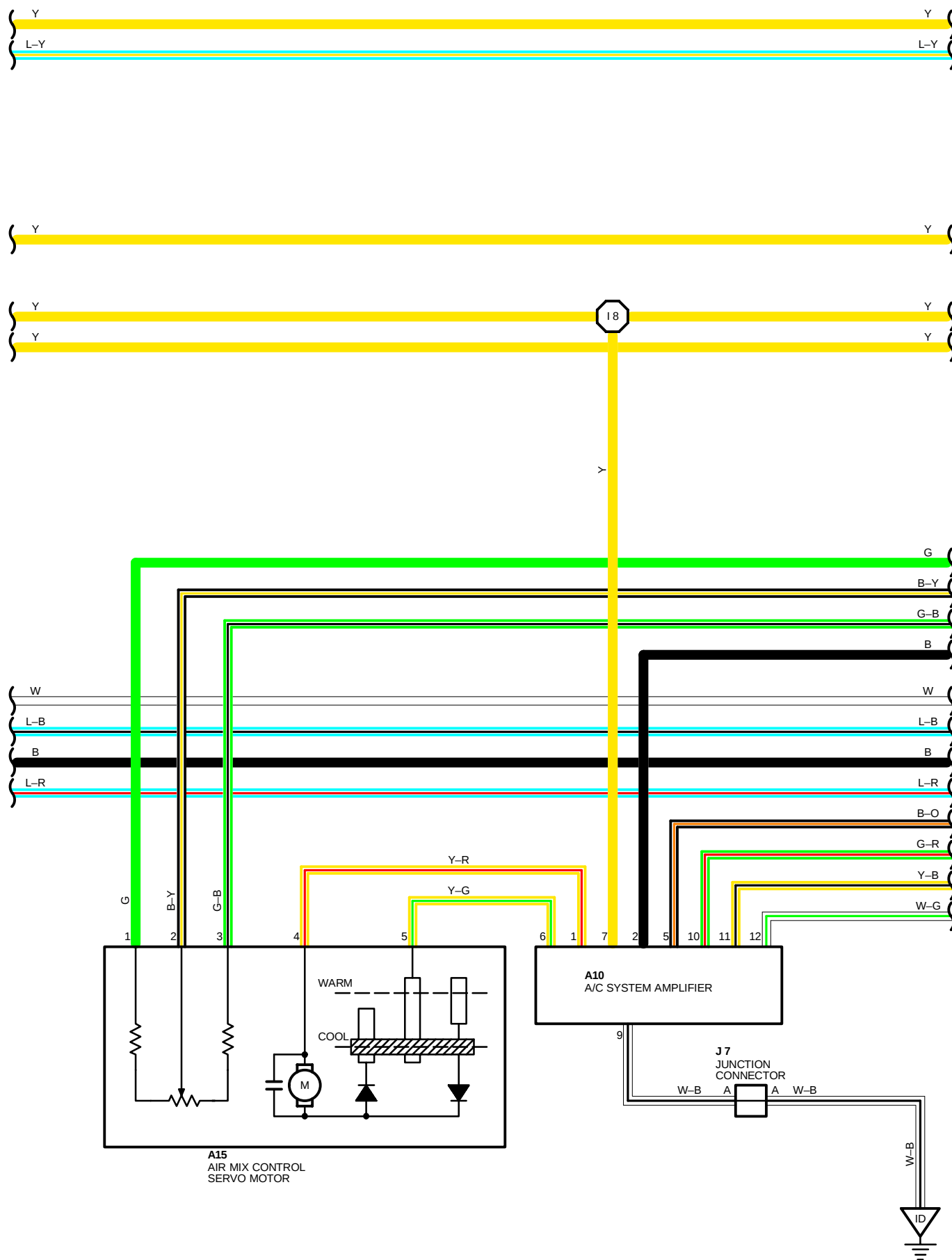
5. AIR CONDITIONING OPERATION

WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FROM THE **GAUGE** FUSE FLOWS THROUGH THE A/C PRESSURE SW TO **TERMINAL 3** OF THE A/C AMPLIFIER. IF THE HEATER CONTROL SW IS THEN TURNED ON, THE CURRENT FLOWS FROM THE **FL HEATER** FUSE THROUGH THE **A.C** FUSE TO **TERMINAL (B)17** OF THE HEATER CONTROL SW. WHEN THE A/C IS TURNED ON, THE CURRENT FLOWS FROM **TERMINAL (B)17** OF THE HEATER CONTROL SW TO **TERMINAL (B)6** → **TERMINAL 2** OF THE A/C AMPLIFIER, ACTIVATING THE A/C AMPLIFIER. THE CURRENT THEN FLOWS FROM **TERMINAL 7** OF THE A/C AMPLIFIER TO **TERMINAL 4** OF THE ENGINE COOLANT TEMP. RELAY → **TERMINAL 3** → **TERMINAL 1** OF A/C MAGNETIC CLUTCH → **GROUND**. THIS CAUSES THE COMPRESSOR TO START. WHEN THE ENGINE COOLANT TEMPERATURE IS APPROX. **108°C (226°F)**, THE WATER TEMP. SW (A/C) TURNED ON AND THE A/C CUT RELAY IS ACTIVATED. THIS TURNS THE COMPRESSOR OFF AND STOPS THE AIR CONDITIONING. THE AIR CONDITIONING ALSO TURNS OFF, IF A SIGNAL IS INPUT TO THE A/C AMPLIFIER THAT THE AIR OUTLET TEMPERATURE IS LOW (BELOW APPROX. **3°C**) OR THE REFRIGERANT PRESSURE IS ABNORMALLY LOW.

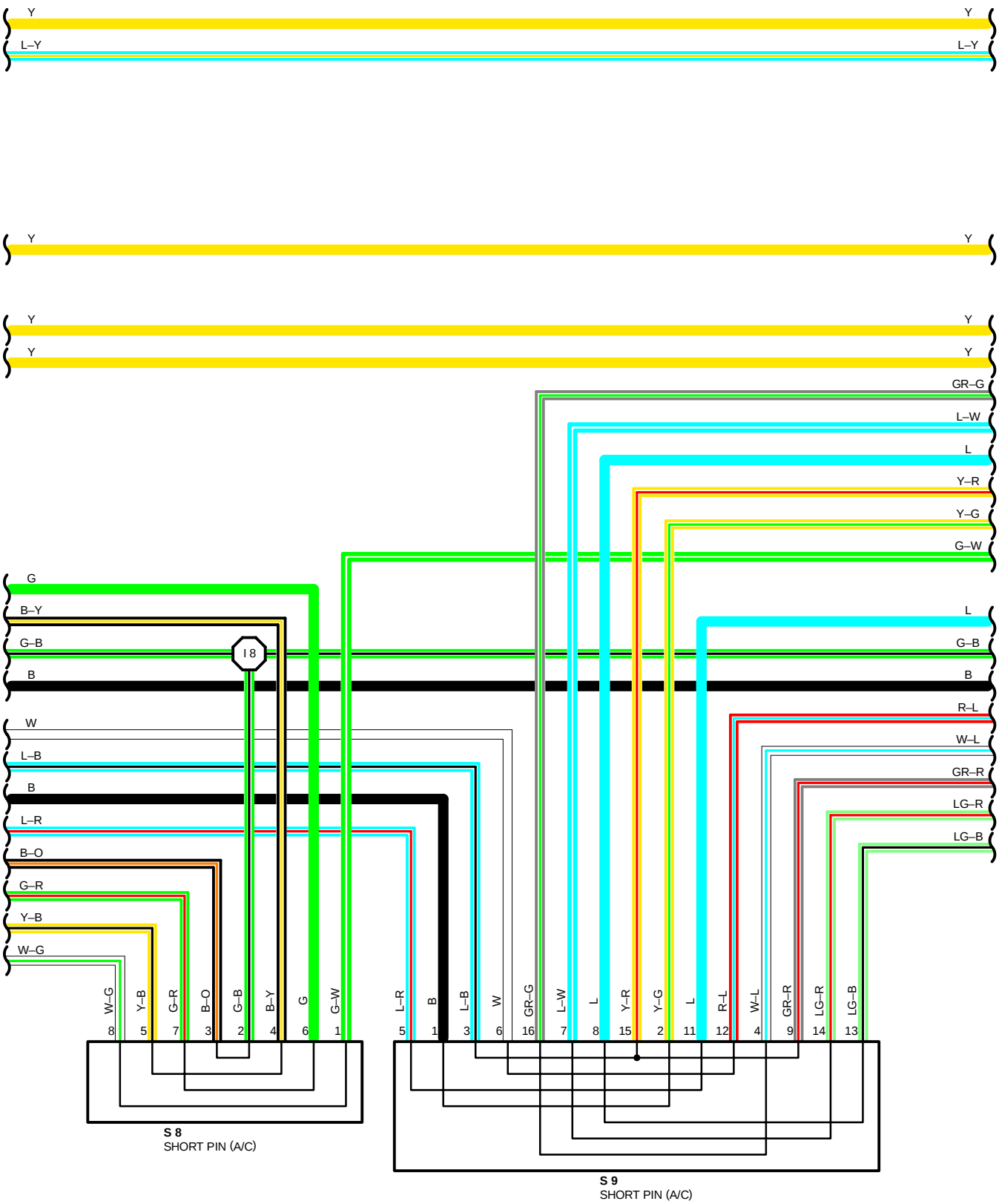
AIR CONDITIONING

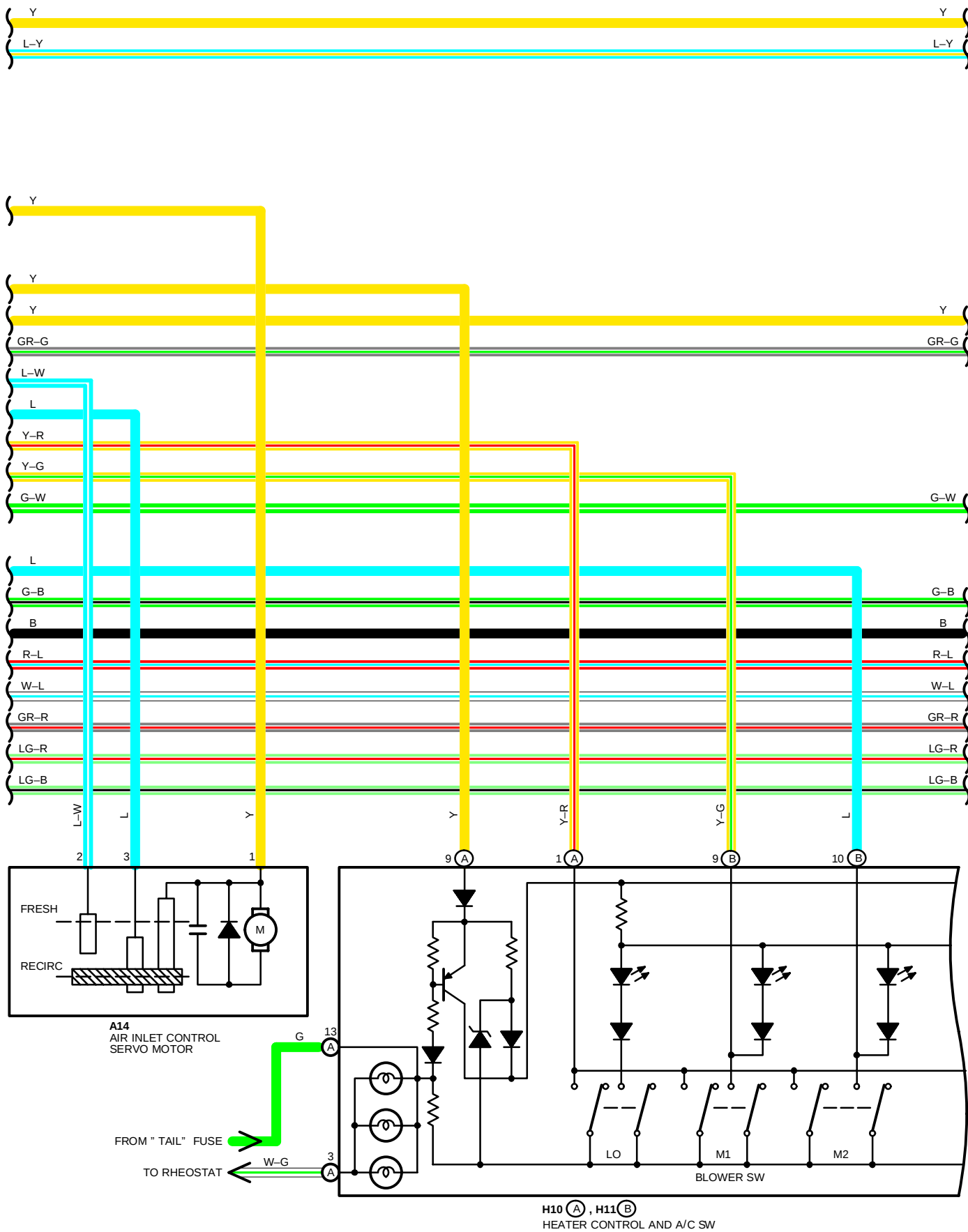
FROM POWER SOURCE SYSTEM (SEE PAGE 52)



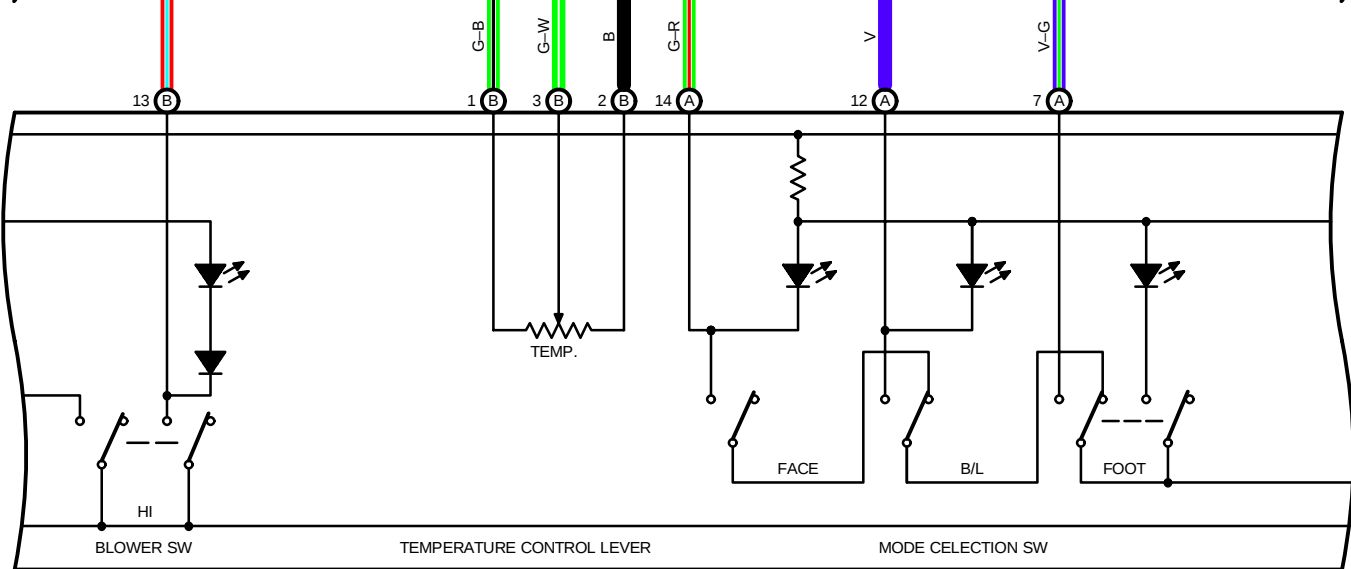
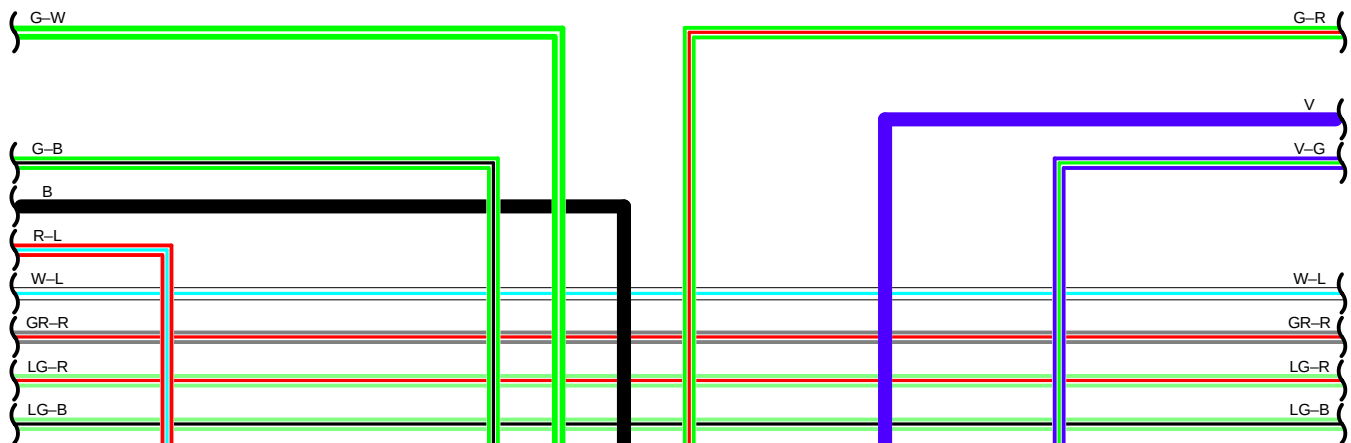


AIR CONDITIONING

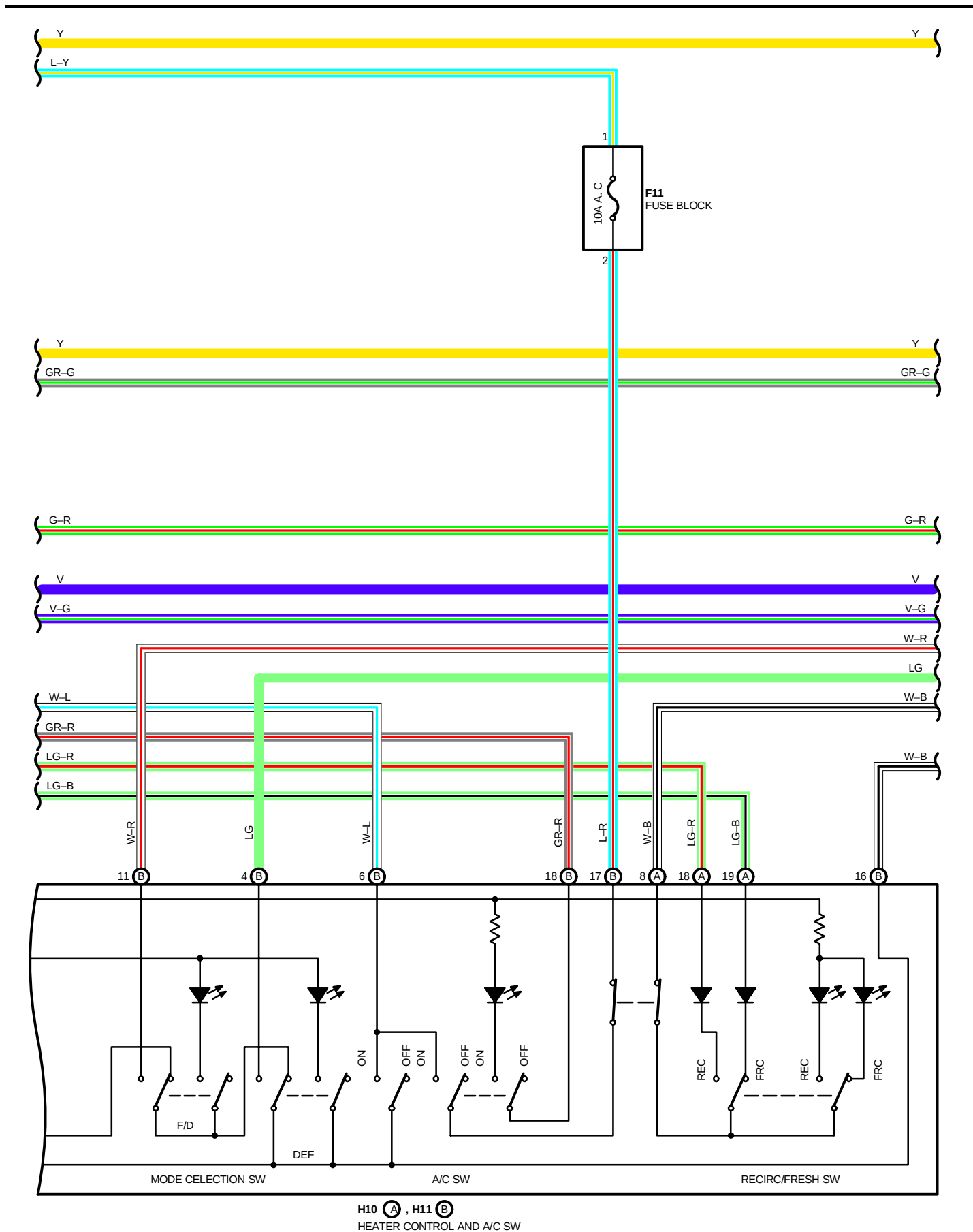




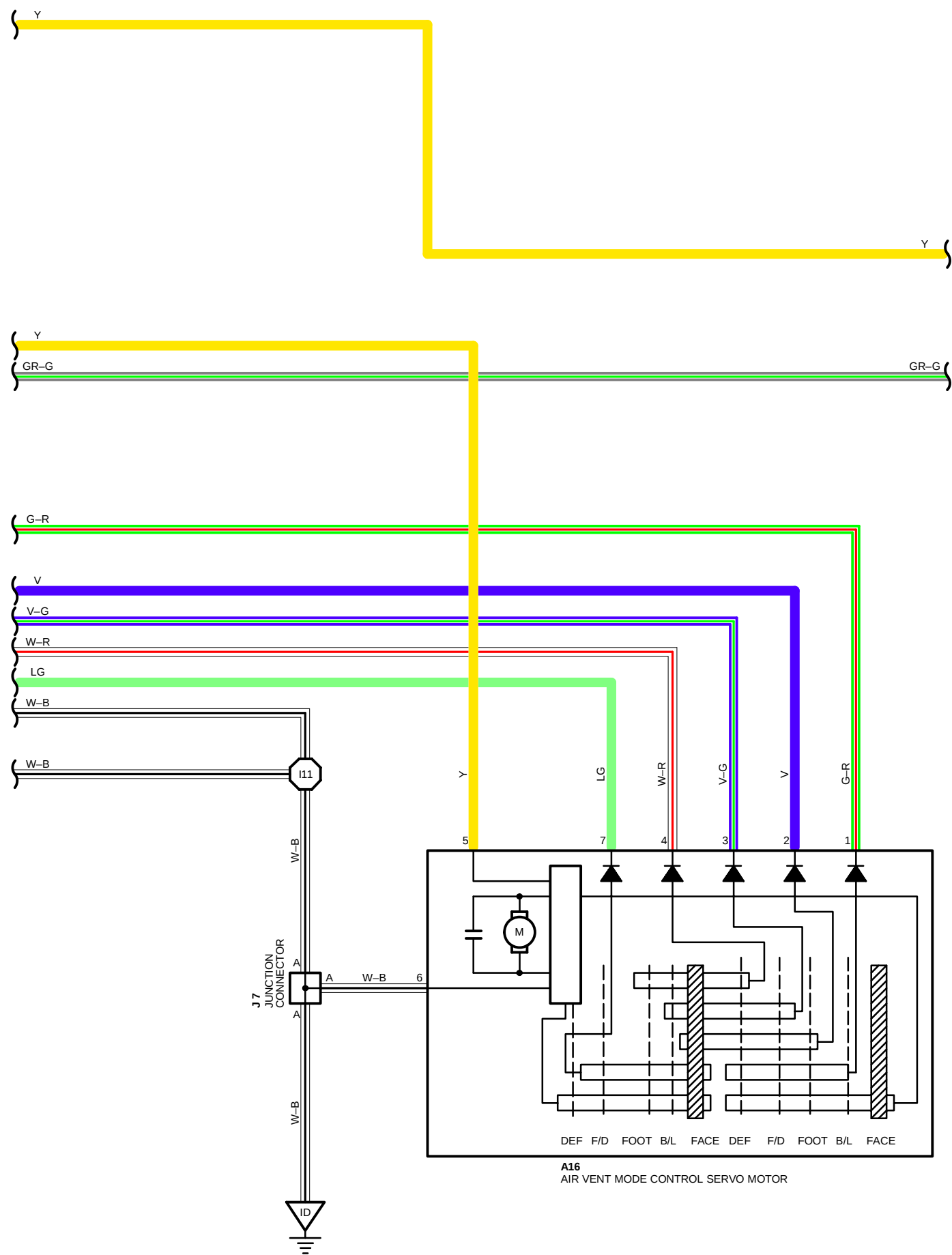
AIR CONDITIONING

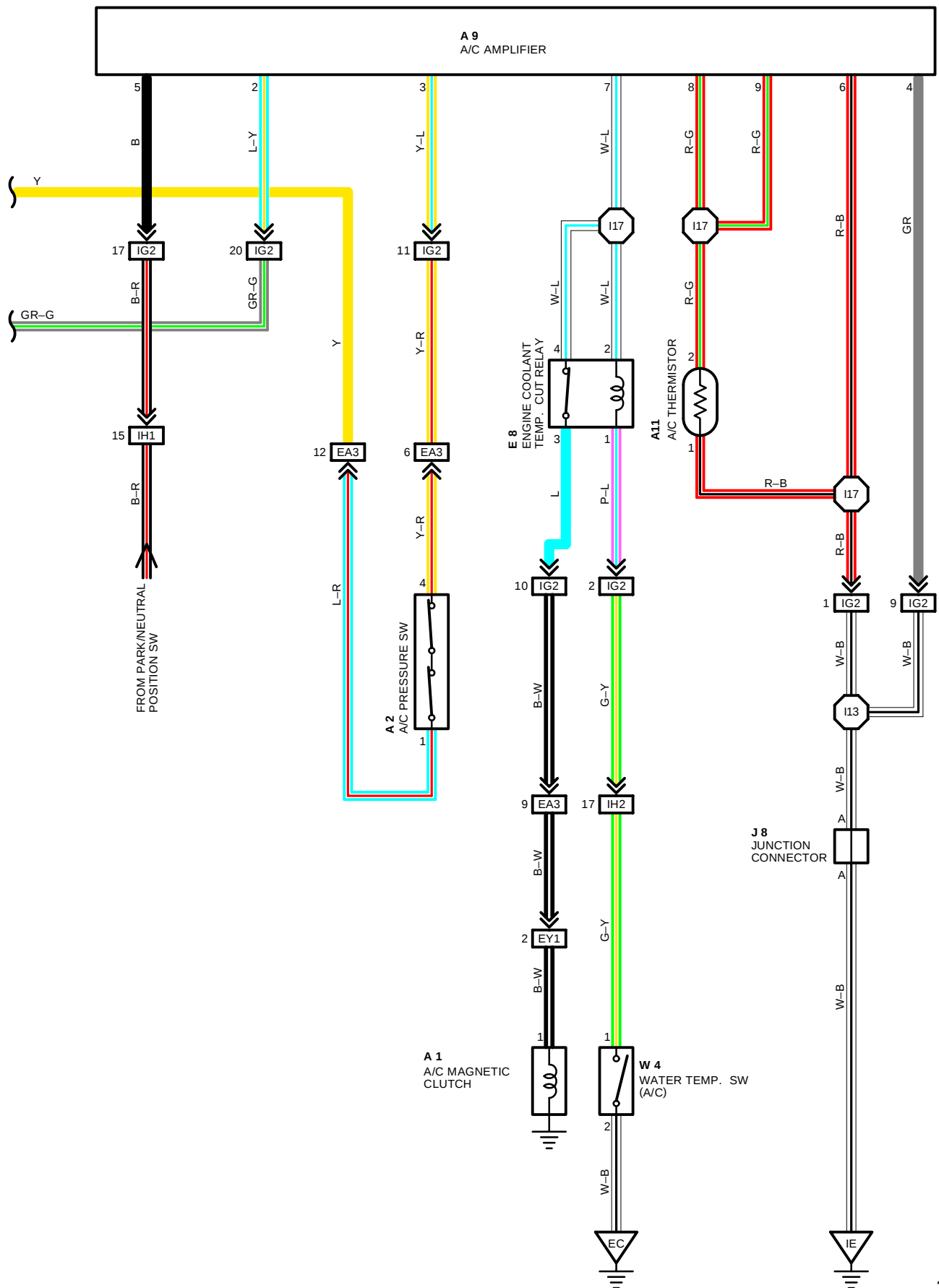


H10 (A) , H11 (B)
HEATER CONTROL AND A/C SW



AIR CONDITIONING





AIR CONDITIONING

SERVICE HINTS

A 1 A/C MAGNETIC CLUTCH

1 – GROUND: APPROX. 3.8Ω

A 2 A/C PRESSURE SW

1–4: OPEN WITH THE REFRIGERANT PRESSURE AT LESS THAN APPROX. 2.1 KG/CM² (30 PSI, 206 KPA)
OR MORE THAN APPROX. 27 KG/CM² (38 PSI, 2684 KPA)

A11 A/C THERMISTOR

2–1 : APPROX. 1.5 KΩ 25°C (77°F)

B 4 BLOWER RESISTOR

1–4 : 2.0 Ω

1–2 : 0.88 Ω

1–3 : 0.32 Ω

H10(A), H11(B) HEATER CONTROL SW

(A) 1, (A) 9 – GROUND: APPROX. 12 VOLTS WITH THE IGNITION SW AT **ON** POSITION

(A) 1 – GROUND: APPROX. 12 VOLTS WITH THE HEATER CONTROL SW AT **LOW** POSITION

(B) 9 – GROUND: APPROX. 12 VOLTS WITH THE HEATER CONTROL SW AT **MEDIUM LOW** POSITION

(B) 10 – GROUND: APPROX. 12 VOLTS WITH THE HEATER CONTROL SW AT **MEDIUM HIGH** POSITION

(B) 13 – GROUND: APPROX. 12 VOLTS WITH THE HEATER CONTROL SW AT **HIGH** POSITION

(A) 18 – GROUND: APPROX. 12 VOLTS WITH THE RECIRC SW AT **ON** POSITION

(A) 19 – GROUND: APPROX. 12 VOLTS WITH THE FRESH SW AT **ON** POSITION

(A) 14 – GROUND: APPROX. 12 VOLTS WITH THE FACE SW AT **ON** POSITION

(A) 12 – GROUND: APPROX. 12 VOLTS WITH THE B/L SW AT **ON** POSITION

(A) 7 – GROUND: APPROX. 12 VOLTS WITH THE FOOT SW AT **ON** POSITION

(B) 4 – GROUND: APPROX. 12 VOLTS WITH THE DEF SW AT **ON** POSITION

(B) 11 – GROUND: APPROX. 12 VOLTS WITH THE FOOT/DEF SW AT **ON** POSITION

(A) 1, (B)18 – GROUND: APPROX. 12 VOLTS WITH THE A/C SW AT **ON** POSITION

(A) 8, (B)16 – GROUND: ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 1	22	B 2	24	J 2	25
A 2	22	B 3	24	J 4	25
A 9	24	B 4	24	J 7	25
A10	24	B 5	24	J 8	25
A11	24	E 8	24	S 8	25
A14	24	F11	25	S 9	25
A15	24	H10	A 25	W 4	23
A16	24	H11	B 25		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
1	20	R/B NO. 1 (LEFT KICK PANEL)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA3	30	COWL WIRE AND ENGINE ROOM MAIN WIRE (LEFT FENDER)
EY1	30	OIL PRESSURE SWITCH WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE AIR CLEANER)
IG1	32	COWL WIRE AND A/C SUB WIRE (BEHIND GLOVE BOX)
IG2		
IH1	32	ENGINE WIRE AND COWL WIRE (BEHIND GLOVE BOX)
IH2		

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EC	30	AIR INTAKE CHAMBER
ID	32	LEFT KICK PANEL
IE	32	RIGHT KICK PANEL

○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 3			I13	32	COWL WIRE
I 8			I14		
I11	32	COWL WIRE	I17	32	A/C SUB WIRE
I12					

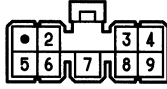
A 1 GRAY



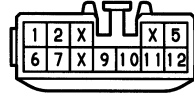
A 2 BLACK



A 9



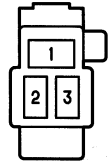
A10



A11



A14



A15



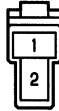
A16



B 2



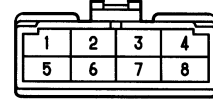
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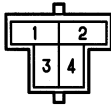
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B 5



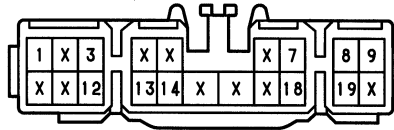
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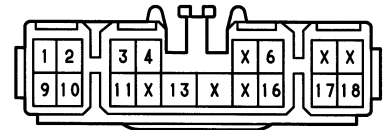
F11

(SEE PAGE 20)

H10 (A)



H11 (B) BLUE

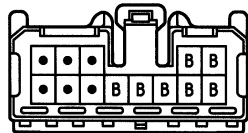


J 2 BLUE



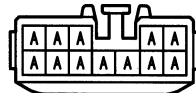
(HINT:SEE PAGE 7)

J 4 BLUE



(HINT:SEE PAGE 7)

J 7 BLUE



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J 8 BLUE

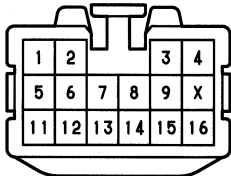


(HINT:SEE PAGE 7)

S 8



S 9



W 4 GRAY

