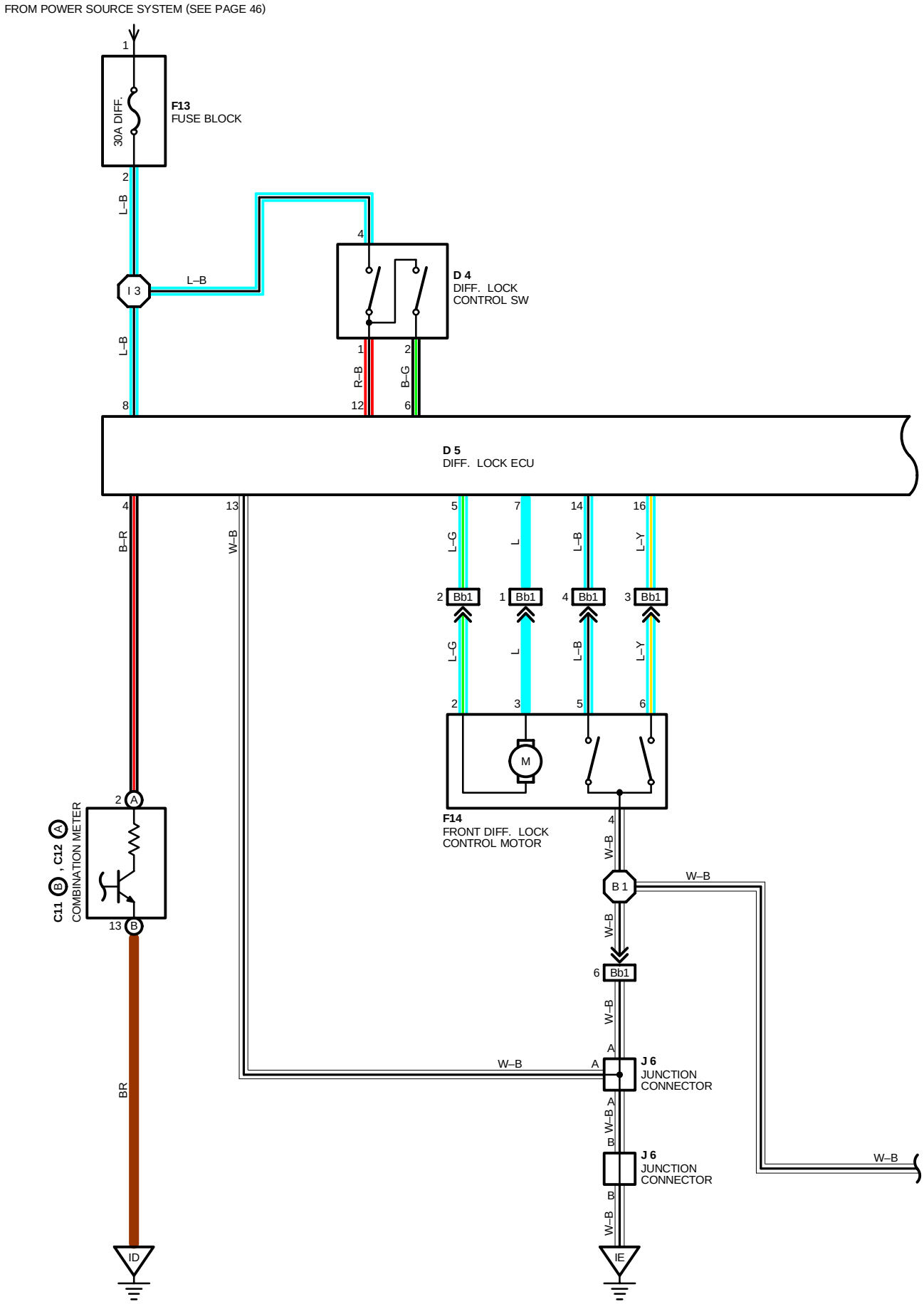
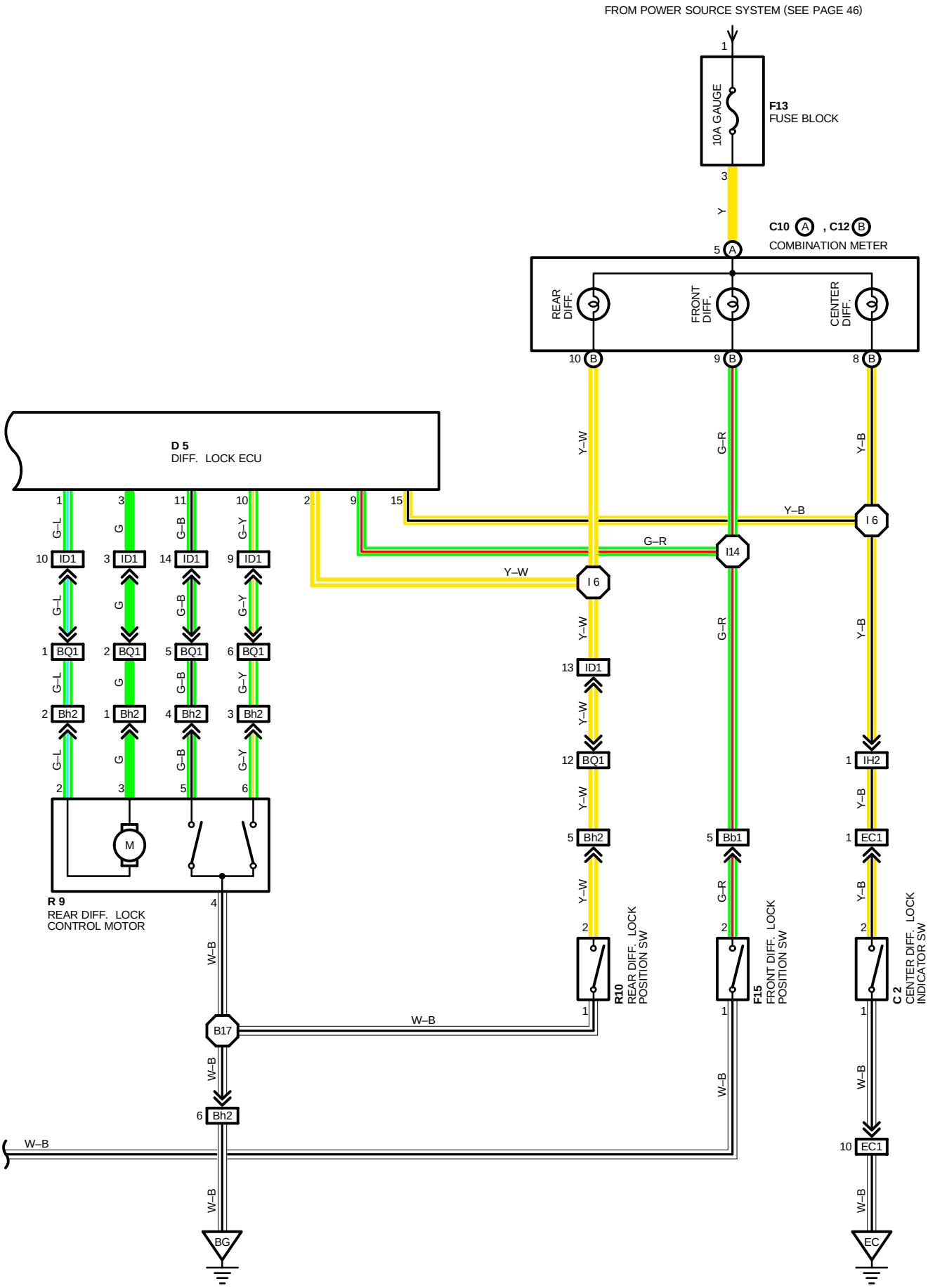
FRONT/REAR DIFFERENTIAL LOCK




FROM POWER SOURCE SYSTEM (SEE PAGE 46)
10A GAUGE
F13
FUSE BLOCK
C10 A , C12 B
COMBINATION METER
REAR DIFF.
FRONT DIFF.
CENTER DIFF.
D 5
DIFF. LOCK ECU
R 9
REAR DIFF. LOCK CONTROL MOTOR
R10
REAR DIFF. LOCK POSITION SW
F15
FRONT DIFF. LOCK POSITION SW
C 2
CENTER DIFF. LOCK INDICATOR SW
B17
BG
EC
Y
Y–W
G–R
Y–B
G–L
G
G–B
G–Y
W–B
ID1
BQ1
Bh2
I 6
I14
IH2
Bb1
EC1
M

FRONT/REAR DIFFERENTIAL LOCK

SYSTEM OUTLINE

THIS SYSTEM FREES OR LOCKS THE FRONT AND REAR DIFFERENTIALS ACCORDING TO THE POSITION OF THE DIFF. LOCK CONTROL SW. THE DIFFERENTIAL WILL LOCK ONLY WHEN THE CENTER DIFF. LOCK INDICATOR SW IS ON AND THE VEHICLE SPEED IS AT **8** KM/H (**5** MPH) OR LESS.

WHEN THE CENTER DIFF. LOCK INDICATOR SW IS OFF, DIFFERENTIAL LOCK DOES NOT OCCUR EVEN IF THE DIFF. LOCK CONTROL SW IS IN **RR** POSITION OR **FR•RR** POSITION.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **OFF** POSITION TO **RR** POSITION, THE CURRENT FLOWS TO **TERMINAL 12** OF THE DIFF. LOCK ECU. IF THE LIMIT SW ON THE LOCK SIDE INSIDE THE REAR DIFF. LOCK CONTROL MOTOR IS ON AT THIS TIME, UNTIL THE LIMIT SW IS TURNED OFF CURRENT FLOWS FROM THE **DIFF** FUSE → **TERMINAL 8** OF THE DIFF. LOCK ECU → **TERMINAL 3** → **TERMINAL 3** OF REAR DIFF. LOCK CONTROL MOTOR → **TERMINAL 2** → **TERMINAL 1** OF DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE REAR DIFF. LOCK CONTROL MOTOR AND LOCKS THE REAR DIFFERENTIAL. WHEN THE REAR DIFFERENTIAL LOCKS, THE REAR DIFF. **LOCK** POSITION SW TURNS ON AND LIGHTS UP THE REAR DIFF. LOCK INDICATOR LIGHT IN THE COMBINATION METER.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **RR** POSITION TO **FR•RR** POSITION, CURRENT FLOWS TO **TERMINAL 6** OF THE DIFF. LOCK ECU. IF THE LIMIT SW ON THE LOCK SIDE INSIDE THE FRONT DIFF. LOCK CONTROL MOTOR IS ON AT THIS TIME, UNTIL THE LIMIT SW IS TURNED OFF CURRENT FLOWS FROM THE **DIFF** FUSE → **TERMINAL 8** OF THE DIFF. LOCK ECU → **TERMINAL 7** → **TERMINAL 3** OF FRONT DIFF. LOCK CONTROL MOTOR → **TERMINAL 2** → **TERMINAL 5** OF DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE FRONT DIFF. LOCK CONTROL MOTOR AND LOCKS THE FRONT DIFFERENTIAL. WHEN THE FRONT DIFFERENTIAL LOCKS, THE FRONT DIFF. LOCK POSITION SW TURNS ON AND LIGHTS UP THE FRONT DIFF. LOCK INDICATOR LIGHT IN THE COMBINATION METER.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **FR•RR** POSITION TO **RR** POSITION, CURRENT FLOWS TO **TERMINAL 6** OF DIFF. LOCK ECU IS CUT OFF. IF THE LIMIT SW ON THE FREE SIDE INSIDE THE FRONT DIFF. LOCK CONTROL MOTOR IS ON AT THIS TIME, UNTIL THE LIMIT SW IS TURNED OFF CURRENT FLOWS FROM THE **DIFF** FUSE → **TERMINAL 8** OF DIFF. LOCK ECU → **TERMINAL 5** → **TERMINAL 2** OF FRONT DIFF. LOCK CONTROL MOTOR → **TERMINAL 3** → **TERMINAL 7** OF DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE FRONT DIFF. LOCK CONTROL MOTOR AND FREE THE FRONT DIFFERENTIAL. THIS TURNS OFF THE FRONT DIFF. **LOCK** POSITION SW AND THE FRONT DIFF. LOCK INDICATOR LIGHT INSIDE THE COMBINATION METER TURNS OFF.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **RR** POSITION TO **OFF** POSITION, THE CURRENT FLOW TO **TERMINAL 12** OF THE DIFF. LOCK ECU IS CUT OFF. IF THE LIMIT SW ON THE FREE SIDE INSIDE THE REAR DIFF. LOCK CONTROL MOTOR IS ON, UNTIL THE LIMIT SW IS TURNED OFF CURRENT FLOWS FROM THE **DIFF** FUSE → **TERMINAL 8** OF DIFF. LOCK ECU → **TERMINAL 1** → **TERMINAL 2** OF REAR DIFF. LOCK CONTROL MOTOR → **TERMINAL 3** → **TERMINAL 3** OF DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE REAR DIFF. LOCK CONTROL MOTOR AND FREES THE REAR DIFFERENTIAL. WHEN THE REAR DIFFERENTIAL IS FREE, THE REAR DIFF. **LOCK** POSITION SW TURNS OFF AND THE REAR DIFF. LOCK INDICATOR LIGHT IN THE COMBINATION METER TURNS OFF.

THE DIFF. LOCK INDICATOR LIGHT FLASHES WHEN:

* THE DIFF. LOCK CONTROL SW IS SWITCHED TO **RR** POSITION OR **FR•RR** POSITION DURING DIFFERENTIAL LOCK PROHIBITION CONDITIONS (VEHICLE SPEED ABOVE **8** KM/H (**5** MPH) OR CENTER DIFF. LOCK INDICATOR SW OFF).
* THE DIFF. **LOCK** POSITION SW IS TURNED OFF DURING OPERATION OF THE DIFF. LOCK CONTROL MOTOR.

SERVICE HINTS

D 4 DIFF. LOCK CONTROL SW

4–1 : CLOSED WITH DIFF. LOCK CONTROL SW AT "**RR**" POSITION OR "**FR•RR**" POSITION
4–2 : CLOSED WITH DIFF. LOCK CONTROL SW AT "**FR•RR**" POSITION

D 5 DIFF. LOCK ECU

(DISCONNECTED WIRING CONNECTOR FROM ECU)
13–GROUND : CONTINUITY
4–GROUND : PULSE GENERATION WITH VEHICLE MOVING
8–GROUND : **9–14** VOLTS WITH IGNITION SW ON
2–GROUND : ABOUT **0** VOLTS WITH REAR DIFF. LOCK INDICATOR LIGHT ON
: **9–14** VOLTS WITH REAR DIFF. LOCK INDICTOR LIGHT OFF
9–GROUND : ABOUT **0** VOLTS WITH FRONT DIFF. LOCK INDICATOR LIGHT ON
: **9–14** VOLTS WITH FRONT DIFF. LOCK INDICTOR LIGHT OFF
5–GROUND : ABOUT **0** VOLTS WITH 4WD INDICATOR LIGHT ON
: **9–14** VOLTS WITH 4WD INDICTOR LIGHT OFF

F14, R 9 FRONT, REAR DIFF. LOCK CONTROL MOTOR

2–3 : **0.3–100** Ω

: PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 2		22	**D 4**	23	**J 6**	23
C10	A	23	**D 5**	23	**R 9**	24
C11	B	23	**F13**	23	**R10**	24
C12	A	23	**F14**	24		
	B		**F15**	24		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EC1	26	ENGINE WIRE AND TRANSMISSION WIRE (NEAR THE STARTER)
ID1	28	COWL WIRE AND FLOOR NO. 1 WIRE (LEFT KICK PANEL)
IH2	28	ENGINE WIRE AND COWL WIRE (BEHIND GLOVE BOX)
BQ1	30	FLOOR NO. 3 WIRE AND FLOOR NO. 1 WIRE (LEFT QUARTER PANEL INNER)
Bb1	32	COWL WIRE AND FRAME WIRE (RIGHT FENDER)
Bh2	32	FLOOR NO. 3 WIRE AND FRAME WIRE (LEFT QUARTER PANEL INNER)

: GROUND POINTS

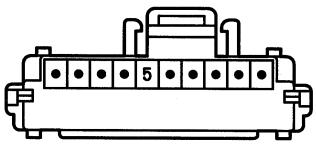
CODE	SEE PAGE	GROUND POINTS LOCATION
EC	26	AIR INTAKE CHAMBER
IE	28	RIGHT KICK PANEL
ID	28	LEFT KICK PANEL
BG	30	LOWER BACK PANEL CENTER

: SPLICE POINTS

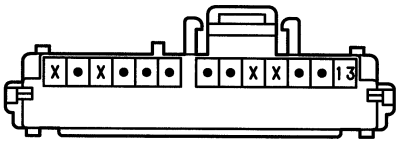
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 3	28	COWL WIRE	**B 1**	32	FRAME WIRE
I 6			**B17**	32	FRAME NO. 2 WIRE
I14					

C 2, F15, R10

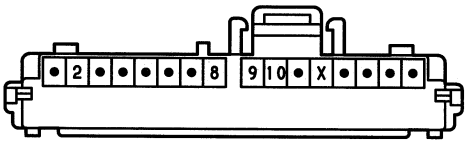
C10 (A) GRAY



C11 (B) BLUE

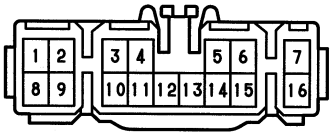


C12 (A), (B)



D 4

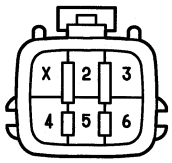
D 5 GRAY



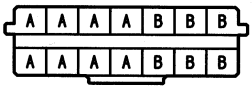
F13

(SEE PAGE 20)

F14, R 9



J 6



(HINT: SEE PAGE 7)