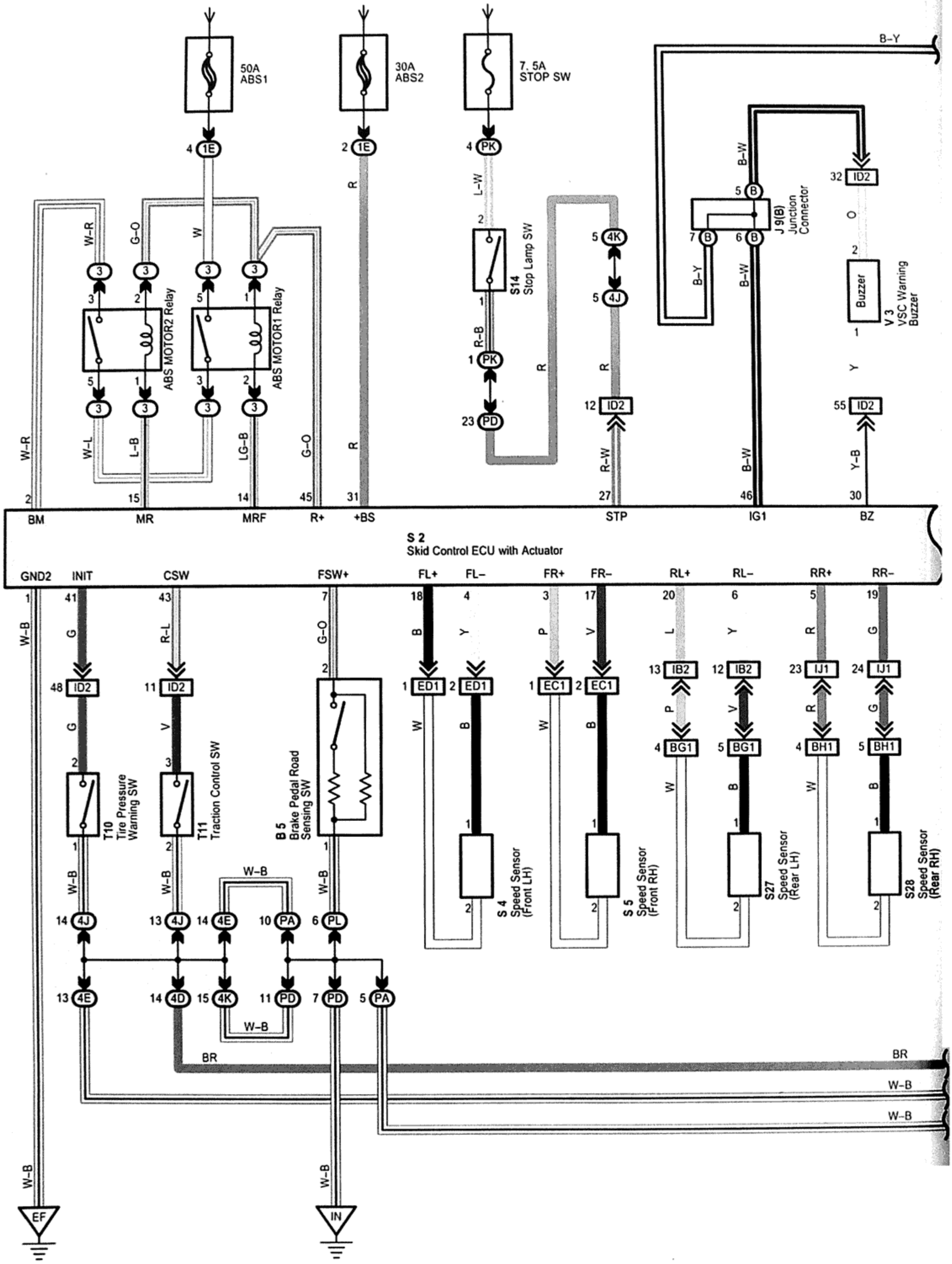
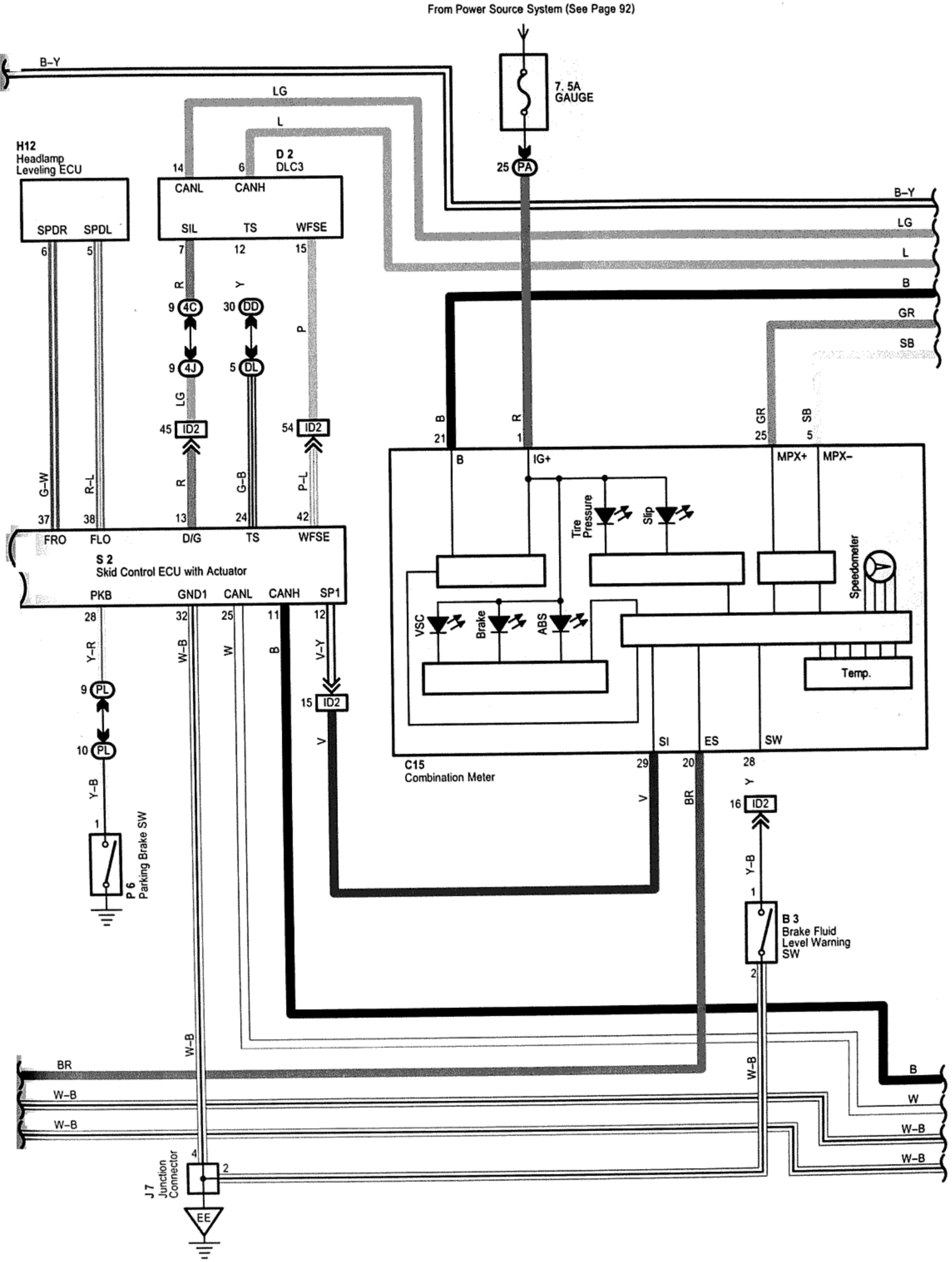
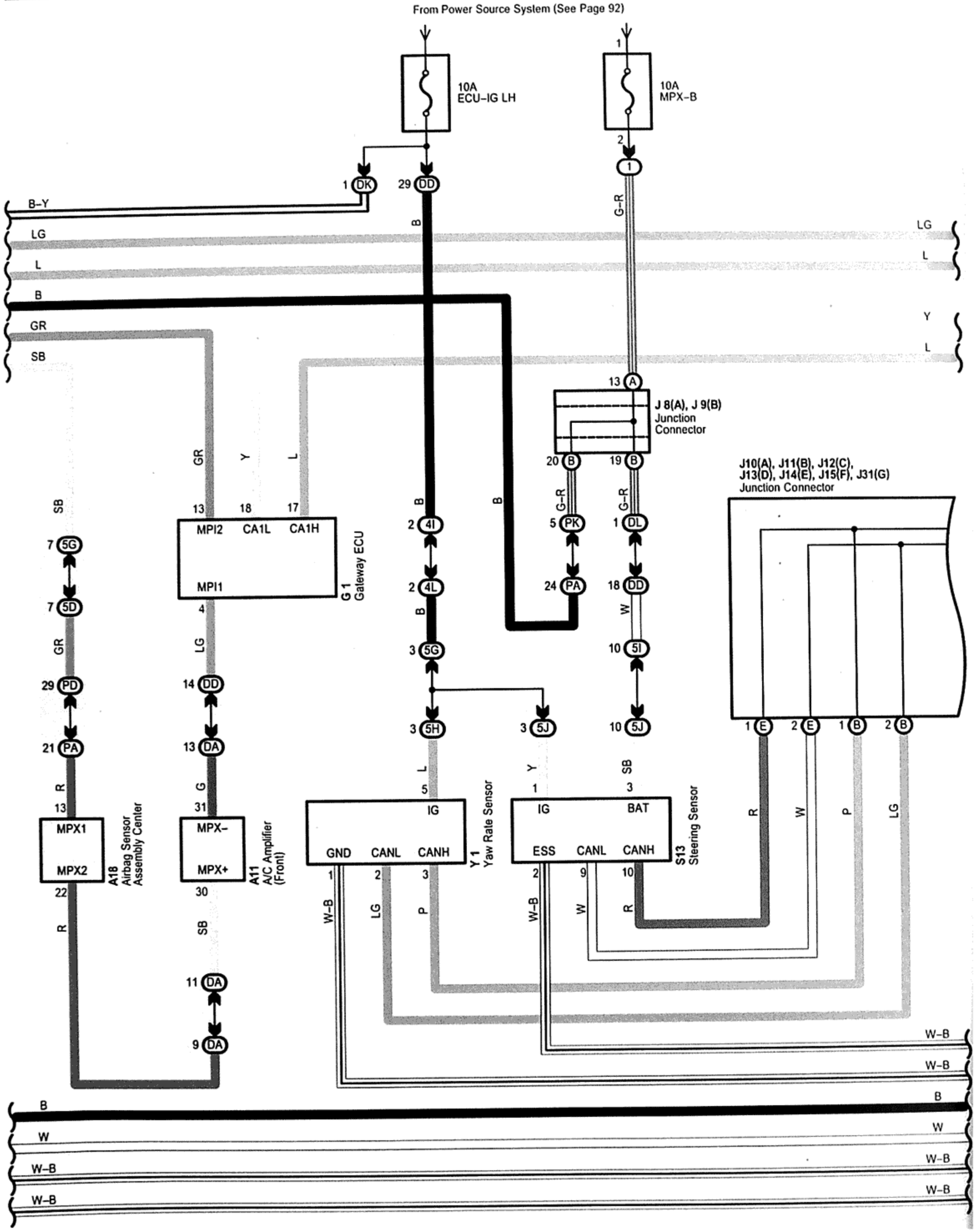
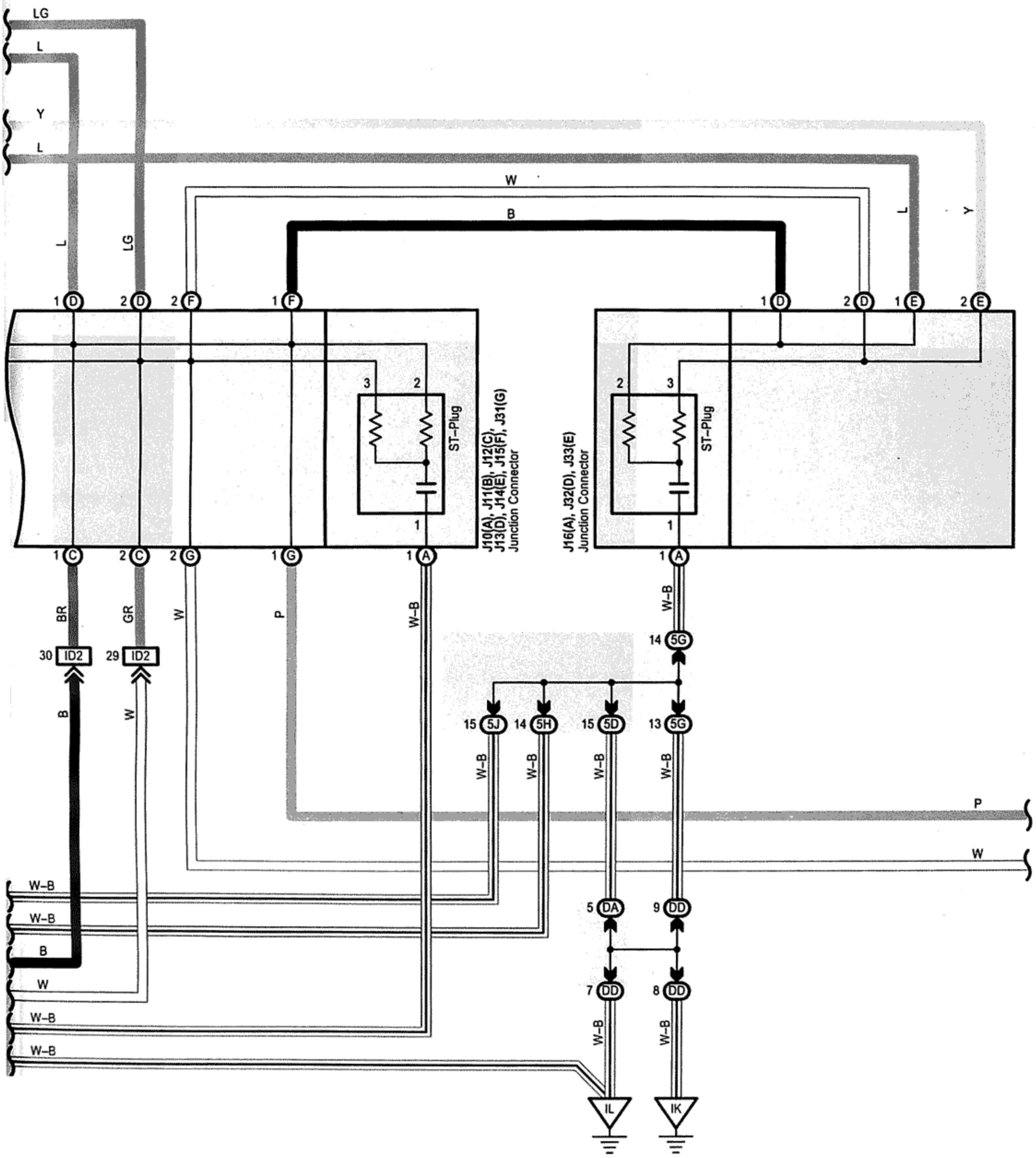
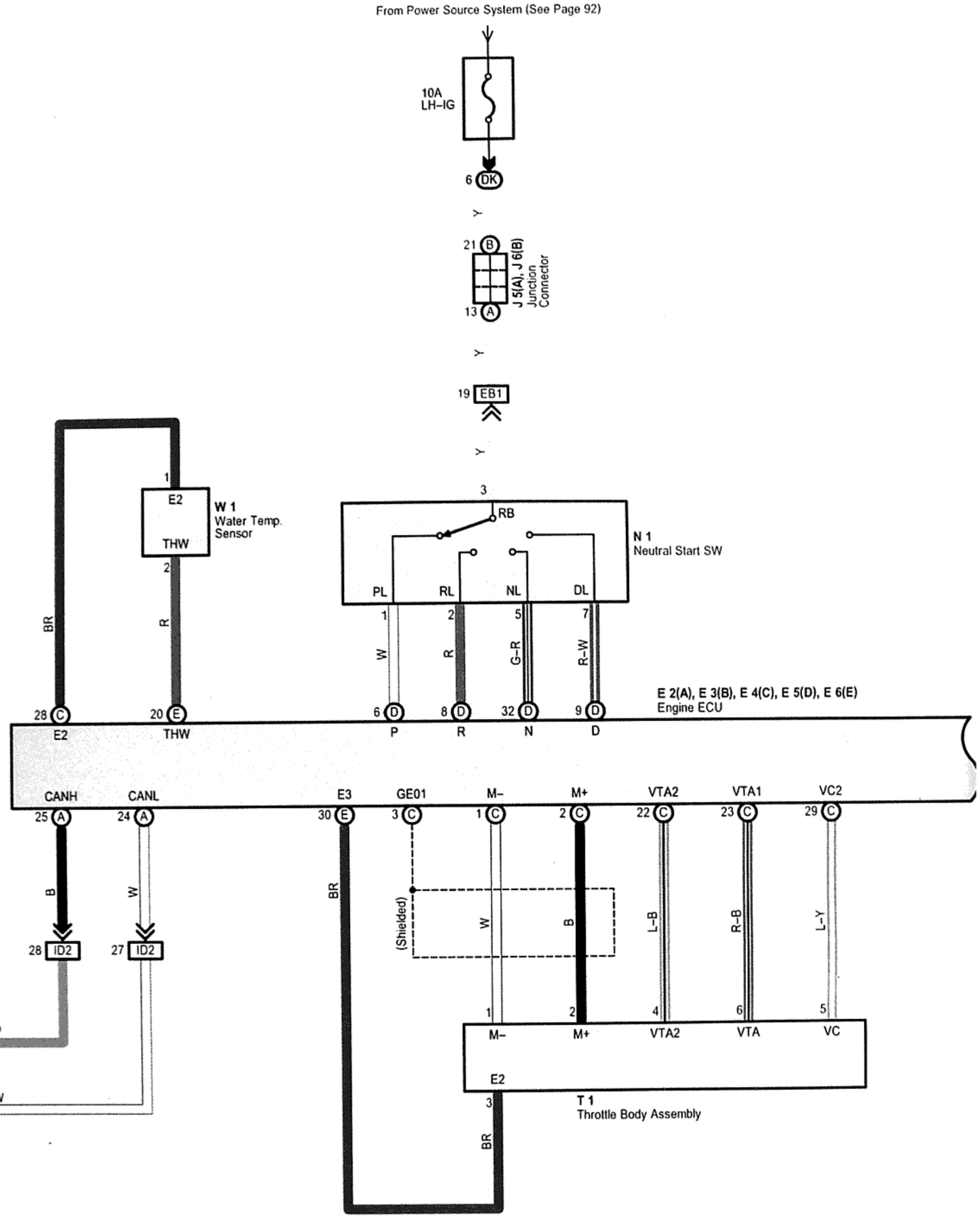

From Power Source System (See Page 92)
50A ABS1
30A ABS2
7.5A STOP SW
B-Y
B-W
32 ID2
5 B
J 9(B) Junction Connector
7 B
6 B
B-Y
B-W
O
2
Buzzer
1
V 3 VSC Warning Buzzer
4 1E
2 1E
4 PK
L-W
2
S14 Stop Lamp SW
1
R-B
1 PK
23 PD
R
5 4K
5 4J
R
12 ID2
R-W
27
B-W
46
Y
55 ID2
Y-B
30
W-R
G-O
W
R
3
2
5
1
ABS MOTOR2 Relay
ABS MOTOR1 Relay
W-L
L-B
LG-B
G-O
R
15
14
45
31
BM
MR
MRF
R+
+BS
STP
IG1
BZ
S 2
Skid Control ECU with Actuator
GND2
INIT
CSW
FSW+
FL+
FL-
FR+
FR-
RL+
RL-
RR+
RR-
W-B
G
R-L
48 ID2
11 ID2
G
V
2
3
T10 Tire Pressure Warning SW
T11 Traction Control SW
B 5 Brake Pedal Road Sensing SW
1
2
W-B
14 4J
13 4J
14 4E
10 PA
6 PL
13 4E
14 4D
15 4K
11 PD
7 PD
5 PA
W-B
BR
B
Y
P
V
L
Y
R
G
1 ED1
2 ED1
W
B
1
2
S 4 Speed Sensor (Front LH)
1 EC1
2 EC1
S 5 Speed Sensor (Front RH)
13 IB2
12 IB2
23 IJ1
24 IJ1
4 BG1
5 BG1
4 BH1
5 BH1
S27 Speed Sensor (Rear LH)
S28 Speed Sensor (Rear RH)
BR
W-B
W-B
W-B
W-B
EF
IN

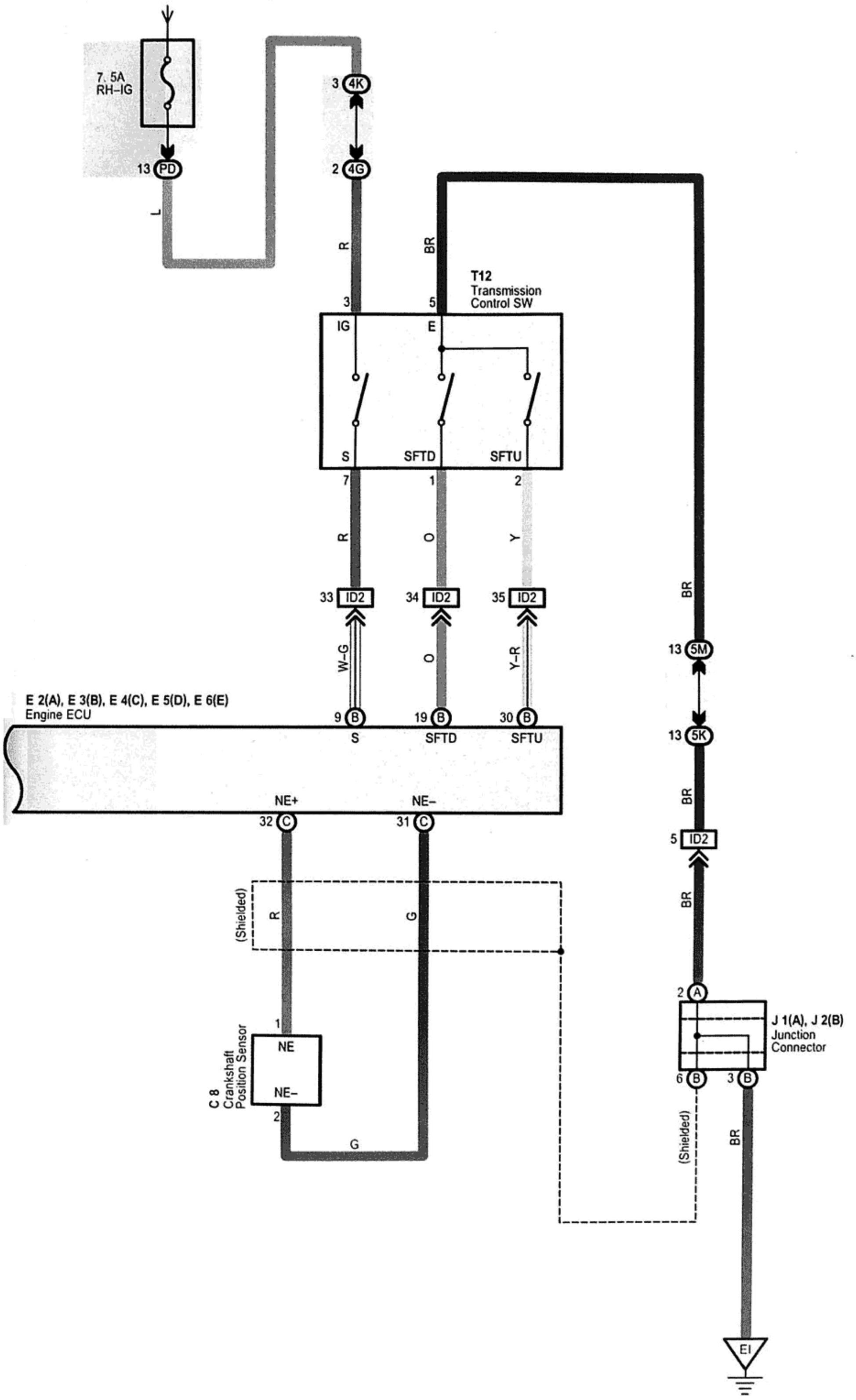

From Power Source System (See Page 92)
B–Y
7. 5A
GAUGE
25 PA
LG
L
H12
Headlamp
Leveling ECU
SPDR
SPDL
6
5
14
6
D 2
DLC3
CANL
CANH
SIL
TS
WFSE
7
12
15
R
Y
P
9 4C
30 DD
9 4J
5 DL
LG
45 ID2
54 ID2
G–W
R–L
R
G–B
P–L
37
38
13
24
42
FRO
FLO
D/G
TS
WFSE
S 2
Skid Control ECU with Actuator
PKB
GND1
CANL
CANH
SP1
28
32
25
11
12
Y–R
W–B
W
B
V–Y
9 PL
15 ID2
10 PL
Y–B
1
P 6
Parking Brake SW
V
B–Y
LG
L
B
GR
SB
B
21
R
1
GR
25
SB
5
B
IG+
MPX+
MPX–
Tire
Pressure
Slip
VSC
Brake
ABS
Speedometer
Temp.
SI
ES
SW
C15
Combination Meter
29
20
28
V
BR
Y
16 ID2
Y–B
1
B 3
Brake Fluid
Level Warning
SW
2
W–B
BR
W–B
W–B
B
W
W–B
W–B
J 7
Junction
Connector
4
2
EE


From Power Source System (See Page 92)
10A
ECU-IG LH
10A
MPX-B
1
2
1 DK
29 DD
B-Y
LG
L
B
GR
SB
B
G-R
LG
L
Y
L
13 A
J 8(A), J 9(B)
Junction
Connector
20 B
19 B
G-R
G-R
5 PK
1 DL
24 PA
18 DD
W
10 5I
J10(A), J11(B), J12(C),
J13(D), J14(E), J15(F), J31(G)
Junction Connector
1 E
2 E
1 B
2 B
R
W
P
LG
SB
13
18
17
MPI2
CA1L
CA1H
MPI1
G 1
Gateway ECU
2 4I
2 4L
B
3 5G
3 5H
3 5J
10 5J
L
5
Y
1
SB
3
IG
GND
CANL
CANH
Y 1
Yaw Rate Sensor
IG
BAT
ESS
CANL
CANH
S13
Steering Sensor
1
2
3
W-B
LG
P
2
9
10
W-B
W
R
7 5G
7 5D
GR
29 PD
21 PA
R
13
MPX1
MPX2
A18
Airbag Sensor
Assembly Center
22
R
4
LG
14 DD
13 DA
G
31
MPX-
MPX+
A11
A/C Amplifier
(Front)
30
SB
11 DA
9 DA
W-B
W-B
B
W
W-B
W-B


LG
L
Y
L
W
B
L
LG
L
Y
1 D
2 D
2 F
1 F
1 D
2 D
1 E
2 E
3
2
1
ST–Plug
J10(A), J11(B), J12(C),
J13(D), J14(E), J15(F), J31(G)
Junction Connector
2
3
1
ST–Plug
J16(A), J32(D), J33(E)
Junction Connector
1 C
2 C
2 G
1 G
1 A
1 A
BR
GR
W
P
W–B
W–B
30 ID2
29 ID2
14 5G
B
W
15 5J
14 5H
15 5D
13 5G
W–B
W–B
W–B
W–B
P
W
W–B
W–B
B
W
W–B
W–B
5 DA
9 DD
7 DD
8 DD
W–B
W–B
IL
IK


From Power Source System (See Page 92)
10A
LH-IG
6 DK
Y
21 B
13 A
J 5(A), J 6(B)
Junction
Connector
Y
19 EB1
Y
1
E2
THW
2
W 1
Water Temp.
Sensor
3
RB
PL
RL
NL
DL
N 1
Neutral Start SW
1
2
5
7
W
R
G-R
R-W
BR
R
28 C
E2
20 E
THW
6 D
P
8 D
R
32 D
N
9 D
D
E 2(A), E 3(B), E 4(C), E 5(D), E 6(E)
Engine ECU
CANH
CANL
E3
GE01
M-
M+
VTA2
VTA1
VC2
25 A
24 A
30 E
3 C
1 C
2 C
22 C
23 C
29 C
B
W
BR
(Shielded)
W
B
L-B
R-B
L-Y
28 ID2
27 ID2
1
2
4
6
5
M-
M+
VTA2
VTA
VC
P
W
E2
3
BR
T 1
Throttle Body Assembly

From Power Source System (See Page 92)



System Outline

1. ABS Operation

If the brake pedal is depressed suddenly, the ABS controls the hydraulic pressure of the wheel cylinders for all the four wheels to automatically avoid wheel locking and ensure the directional and steering stability of the vehicle. If the brake pedal is depressed suddenly, the skid control ECU with actuator controls the solenoids in the actuators using the signals from the sensors to move the brake fluid to the reservoir in order to release the braking pressure applied to the wheel cylinder. If the skid control ECU with actuator detects that the fluid pressure in the wheel cylinder is insufficient, the ECU controls the solenoids in the actuators to increase the braking pressure.

2. Traction Control Operation

The traction control system controls the engine torque, the hydraulic pressure of the driving wheel cylinders, slipping of the wheels which may occur at start or acceleration of the vehicle, to ensure an optimal driving power and vehicle stability corresponding to the road conditions.

3. VSC Operation

Unexpected road conditions, vehicle speed, emergency situation, and any other external factors may cause large under– or over–steering of the vehicle. If this occurs, the VSC system automatically controls the engine power and wheel brakes to reduce the under– or over–steering.

To reduce large over–steering :

If the VSC system determines that the over–steering is large, it activates the brakes for the outer turning wheels depending on the degree of the over–steering to produce the moment toward the outside of the vehicle and reduce the over–steering.

To reduce large under–steering :

If the VSC system determines that the under–steering is large, it controls the engine power and activates the rear wheel brakes to reduce the under–steering.

Traction control SW

The traction control SW is used to stop the VSC function. After the engine is started, the VSC system is stopped (turned off) and the TRC OFF indicator light lights up. When the traction control SW is pressed again, the VSC system enters the stand–by mode. If the engine is stopped and restarted, the VSC system enters the stand–by mode regardless of the traction control SW.

4. Mutual System Control

To efficiently operate the VSC system at its optimal level, the VSC system and other control systems are mutually controlled while the VSC system is being operated.

Engine throttle control

The engine power does not interfere with the VSC brake control by controlling the opening of the throttle and reducing the engine output.

VSC system operation indication

The slip indicator light flashes and the buzzer sounds intermittently to warn the driver that the current road is slippery, while the VSC system is being operated.

5. Fail Safe Function

If an error occurs in the skid control ECU with actuator, sensor signals, and/or actuators, the skid control ECU with actuator inhibits the brake actuator control and inputs the error signal to the engine ECU. According to the error signal, the brake actuator turns off the solenoid and the engine ECU rejects any electronically controlled throttle open request from the VSC system. As a result, the vehicle functions regardless of the BA, TRC and VSC systems.

Service Hints

S2 Skid Control ECU with Actuator

46–Ground : Approx. 12 volts with the ignition SW at ON position (Ignition SW type) or with the power SW at IG ON position (Power SW type)
31–Ground : Always approx. 12 volts
1, 32–Ground : Always continuity

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
A11		66	J5	A	64	P6	68
A18		66	J6	B	64	S2	65
B3		62	J7		64	S4	65
B5		66	J8	A	68	S5	65
C8		62	J9	B	68	S13	69
C15		66	J10	A	58, 68	S14	69
D2		67	J11	B	58, 68	S27	73
E2	A	63	J12	C	58, 68	S28	73
E3	B	63	J13	D	58, 68	T1	65
E4	C	63	J14	E	58, 68	T10	69
E5	D	63	J15	F	58, 68	T11	69
E6	E	63	J16	A	60, 68	T12	69
G1		67	J31	G	58, 68	V3	69
H12		67	J32	D	60, 68	W1	65
J1	A	64	J33	E	60, 68	Y1	69
J2	B	64	N1		64		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B No.1 (Near the Front Right Suspention Tower)
3	31	Engine Room R/B No.3 (Near the Front Left Suspention Tower)

▭ : Junction Block and Wire Harness Connector

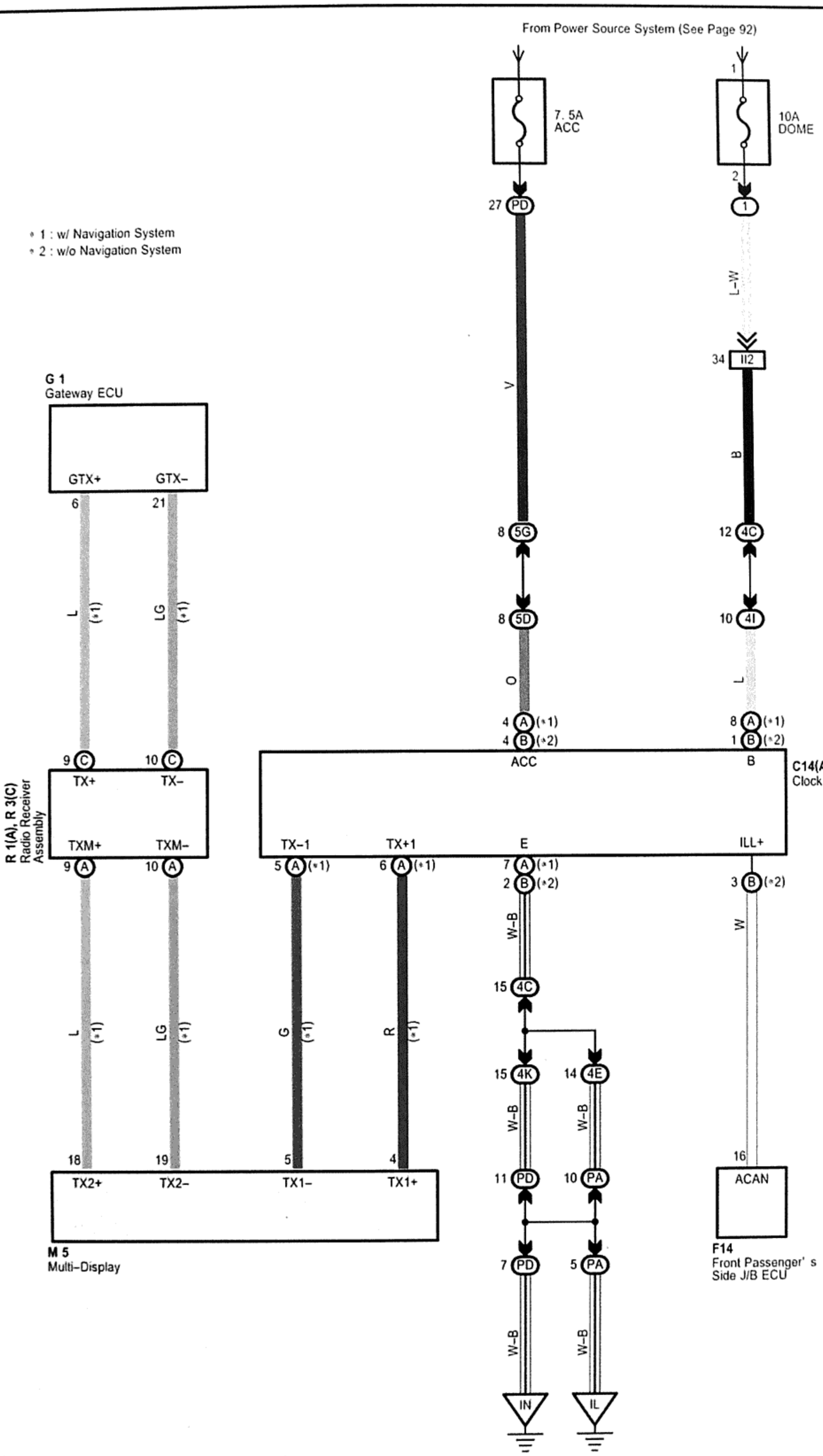
Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	23	Engine Room Main Wire and Engine Room J/B No.1 (Near the Front Right Suspention Tower)
4C	44	Instrument Panel Wire and Center J/B RH (Right Side of the Instrument Panel Reinforcement)
4D		
4E		
4G		
4I		
4J		
4K		
5D	48	Instrument Panel Wire and Center J/B LH (Right Side of the Instrument Panel Reinforcement)
5G		
5H		
5I		
5J		
5K		
5M		
DA	33	Instrument Panel Wire and Driver Side J/B (Cowl Side Left)
DD		
DK	34	Engine Room Main Wire and Driver Side J/B (Cowl Side Left)
DL		
PA	39	Instrument Panel Wire and Front Passenger's Side J/B (Cowl Side Right)
PD		
PK	40	Engine Room Main Wire and Front Passenger's Side J/B (Cowl Side Right)
PL		

□ : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	76	Engine Room Main Wire and Engine Wire (Inside of the ECU Box)
EC1	76	Skid Control Sensor Wire and Engine Room Main Wire (Engine Compartment Right)
ED1	76	Skid Control Sensor Wire and Engine Room Main Wire (Engine Compartment Left)
IB2	78	Engine Room Main Wire and Floor No.2 Wire (Left Cowl Side Panel)
ID2	78	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IJ1	80	Engine Room Main Wire and Floor Wire (Right Kick Panel)
BG1	84	Skid Control Sensor Rear LH Wire and Floor No.2 Wire (Wheel House Rear LH)
BH1	84	Skid Control Sensor Wire and Floor Wire (Wheel House Rear RH)

▽ : **Ground Points**

Code	See Page	Ground Points Location
EE	76	Rear Side of the Front Left Fender Apron
EF		
EI	76	Left Side of Cylinder Head
IK	78	Cowl Side Panel LH
IL	78	Left Side of Shift Lever
IN	78	Cowl Side Panel RH



- 1 : w/ Navigation System
- 2 : w/o Navigation System

Service Hints

C14 (A) Clock (w/ Navigation System)

(A) 4–Ground : Approx. 12 volts with the ignition SW at ON or ACC position (Ignition SW type) or with the power SW at IG ON or ACC ON position (Power SW type)
(A) 8–Ground : Always approx. 12 volts
(A) 7–Ground : Always continuity

C14 (B) Clock (w/o Navigation System)

(B) 4–Ground : Approx. 12 volts with the ignition SW at ON or ACC position (Ignition SW type) or with the power SW at IG ON or ACC ON position (Power SW type)
(B) 1–Ground : Always approx. 12 volts
(B) 2–Ground : Always continuity

: Parts Location

Code		See Page	Code		See Page	Code		See Page
C14	A	66	G1		67	R3	C	68
	B	66	M5		68			
F14		67	R1	A	68			

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B No.1 (Near the Front Right Suspention Tower)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
4C	44	Instrument Panel Wire and Center J/B RH (Right Side of the Instrument Panel Reinforcement)
4E		
4I		
4K		
5D	48	Instrument Panel Wire and Center J/B LH (Right Side of the Instrument Panel Reinforcement)
5G		
PA	39	Instrument Panel Wire and Front Passenger's Side J/B (Cowl Side Right)
PD		

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
II2	80	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
IL	78	Left Side of Shift Lever
IN	78	Cowl Side Panel RH