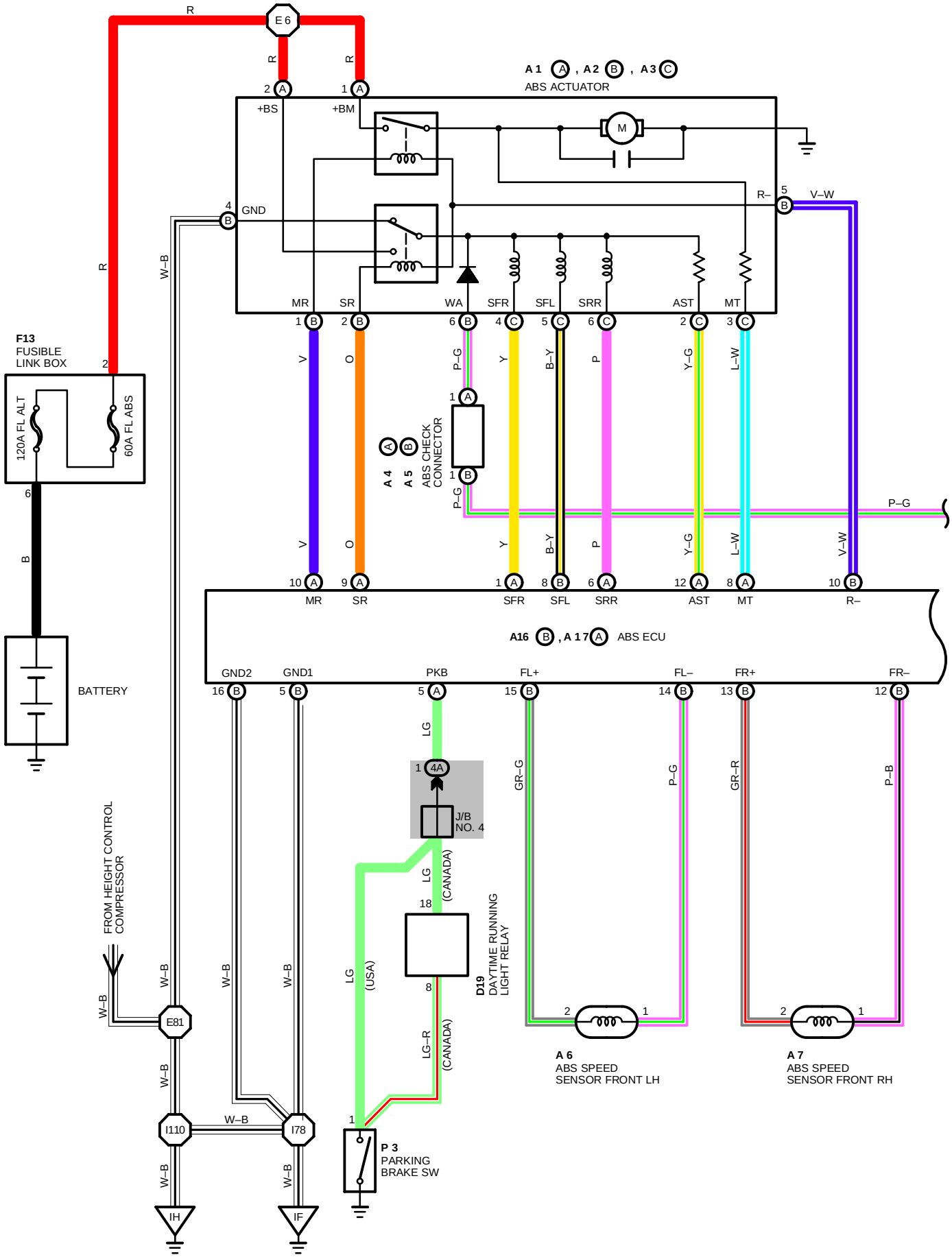
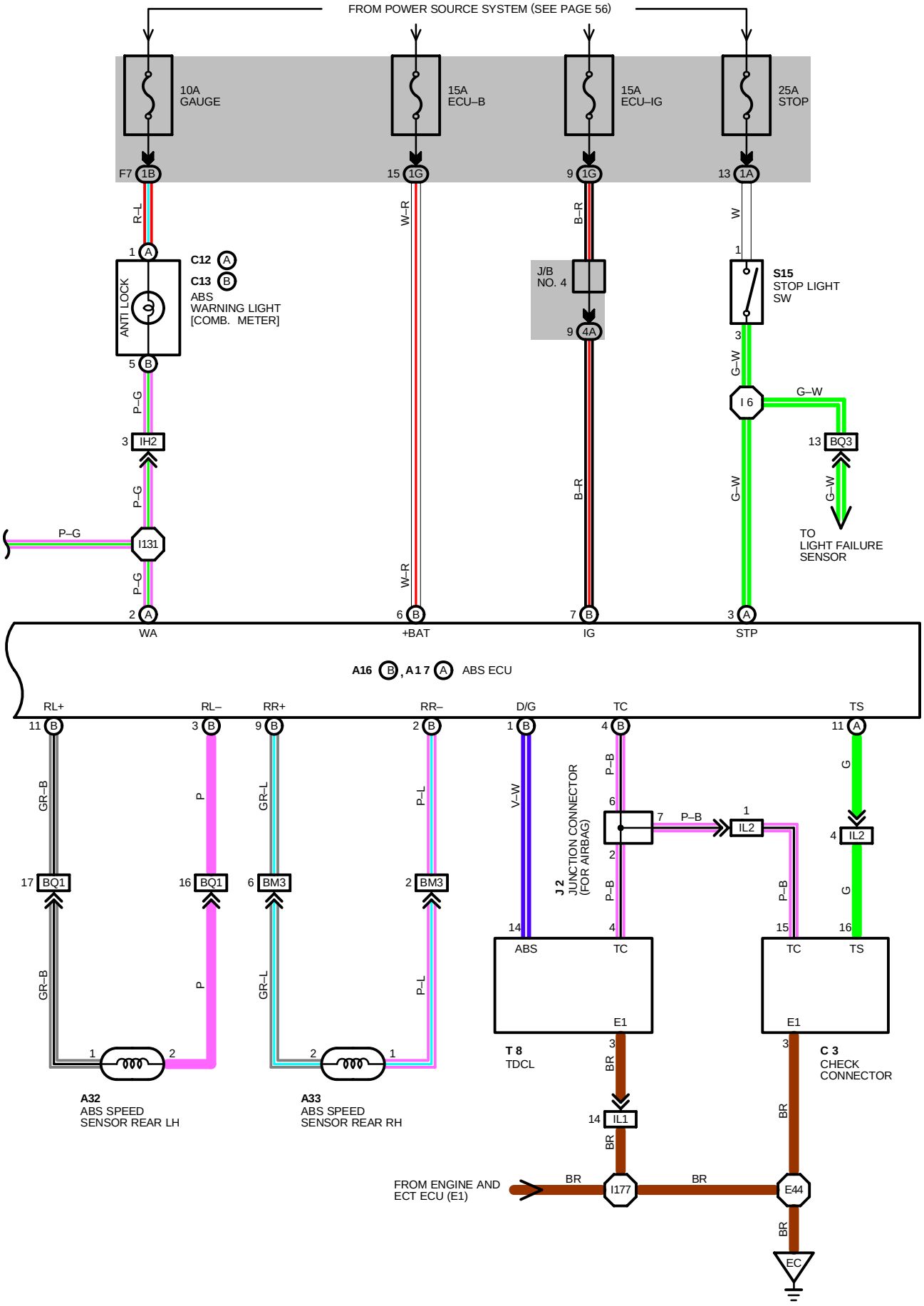

A1 A , A2 B , A3 C
ABS ACTUATOR
+BS
+BM
GND
M
R–
V–W
MR
SR
WA
SFR
SFL
SRR
AST
MT
F13
FUSIBLE
LINK BOX
120A FL ALT
60A FL ABS
BATTERY
ABS CHECK
CONNECTOR
A4 A5
P–G
V
O
Y
B–Y
P
Y–G
L–W
V–W
A16 B , A17 A ABS ECU
GND2
GND1
PKB
FL+
FL–
FR+
FR–
LG
GR–G
GR–R
P–B
4A
J/B
NO. 4
(CANADA)
(USA)
LG–R
D19
DAYTIME RUNNING
LIGHT RELAY
A6
ABS SPEED
SENSOR FRONT LH
A7
ABS SPEED
SENSOR FRONT RH
P3
PARKING
BRAKE SW
FROM HEIGHT CONTROL
COMPRESSOR
W–B
E6
E81
I110
I78
IH
IF


FROM POWER SOURCE SYSTEM (SEE PAGE 56)
10A GAUGE
15A ECU–B
15A ECU–IG
25A STOP
F7 1B
15 1G
9 1G
13 1A
R–L
W–R
B–R
W
1 A
C12 A
C13 B
ABS WARNING LIGHT [COMB. METER]
ANTI LOCK
5 B
P–G
3 IH2
P–G
P–G
I131
P–G
2 A
WA
6 B
+BAT
7 B
IG
J/B NO. 4
9 4A
B–R
1
S15
STOP LIGHT SW
3
G–W
I 6
G–W
13 BQ3
G–W
TO LIGHT FAILURE SENSOR
3 A
STP
A16 B, A17 A ABS ECU
RL+
RL–
RR+
RR–
D/G
TC
TS
11 B
3 B
9 B
2 B
1 B
4 B
11 A
GR–B
P
GR–L
P–L
V–W
P–B
G
17 BQ1
16 BQ1
6 BM3
2 BM3
J 2 JUNCTION CONNECTOR (FOR AIRBAG)
6
7
P–B
1
IL2
4 IL2
G
2
P–B
4
14
15
16
ABS
TC
TC
TS
E1
E1
T 8 TDCL
3
BR
C 3 CHECK CONNECTOR
14 IL1
BR
BR
FROM ENGINE AND ECT ECU (E1)
BR
I177
BR
E44
BR
EC
1
2
A32 ABS SPEED SENSOR REAR LH
A33 ABS SPEED SENSOR REAR RH

ABS (ANTI–LOCK BRAKE SYSTEM)

SYSTEM OUTLINE

THIS SYSTEM CONTROLS THE RESPECTIVE BRAKE FLUID PRESSURES ACTING ON THE DISC BRAKE CYLINDERS OF THE RIGHT FRONT WHEEL, LEFT FRONT WHEEL AND REAR WHEELS WHEN THE BRAKES ARE APPLIED IN A PANIC STOP SO THAT THE WHEELS DO NOT LOCK. THIS RESULTS IN IMPROVED DIRECTIONAL STABILITY AND STEERABILITY DURING PANIC BRAKING.

1. INPUT SIGNALS

(1) SPEED SENSOR SIGNAL

THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO **TERMINALS FL+**, **FR+**, **RL+** AND **RR+** OF THE ABS ECU.

(2) STOP LIGHT SW SIGNAL

A SIGNAL IS INPUT TO **TERMINAL STP** OF THE ABS ECU WHEN BRAKE PEDAL IS OPERATED.

(3) PARKING BRAKE SW SIGNAL

A SIGNAL IS INPUT TO **TERMINAL PKB** OF THE ABS ECU WHEN THE PARKING BRAKE IS OPERATED.

2. SYSTEM OPERATION

DURING SUDDEN BRAKING, THE ABS ECU WHICH HAS SIGNALS INPUT FROM EACH SENSOR CONTROLS THE CURRENT FLOWING TO THE SOLENOID INSIDE THE ACTUATOR AND LETS THE HYDRAULIC PRESSURE ACTING ON EACH WHEEL CYLINDER ESCAPE TO THE RESERVOIR. THE PUMP INSIDE THE ACTUATOR IS ALSO OPERATING AT THIS TIME AND IT RETURNS THE BRAKE FLUID FROM THE RESERVOIR TO THE MASTER CYLINDER, THUS PREVENTING LOCKING OF THE VEHICLE WHEELS.

IF THE ECU JUDGES THAT THE HYDRAULIC PRESSURE ACTING ON THE WHEEL CYLINDER IS INSUFFICIENT, THE CURRENT ACTING ON SOLENOID IS CONTROLLED AND THE HYDRAULIC PRESSURE IS INCREASED.

HOLDING THE HYDRAULIC PRESSURE IS CONTROLLED BY THE COMPUTER, BY REPEATED PRESSURE REDUCTION, HOLDING AND INCREASE ARE REPEATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

SERVICE HINTS

A 1 (A), A 2 (B), A 3 (C) ABS ACTUATOR
(A) 1, (A) 2–GROUND : ALWAYS APPROX. **12** VOLTS
(B) 4–GROUND : ALWAYS CONTINUITY
(C) 1, (C) 5, (C) 4, (C) 6–GROUND : APPROX. **1.15**Ω (IGNITION SW OFF)
(C) 2–GROUND : APPROX. **5**Ω (IGNITION SW OFF)

A 6, A 7, A32, A33 ABS SPEED SENSOR FRONT LH, RH, REAR LH, RH
1–2 : APPROX. **1.0**KΩ (**20**°C, **68**°F)

A16 (B), A17 (A) ABS ECU
(B) 7 –GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON
(B) 5, (B) 16 –GROUND : ALWAYS CONTINUITY
(B) 6 –GROUND : ALWAYS APPROX. **12** VOLTS
(A) 1, (B) 8, (A) 6 –GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON
(A) 5 –GROUND : CONTINUITY WITH PARKING BRAKE PEDAL DEPRESSED
(A) 3 –GROUND : APPROX. **12** VOLTS WITH STOP LIGHT SW ON

P 3 PARKING BRAKE SW
1–GROUND : CLOSED WITH PARKING BRAKE PEDAL DEPRESSED

S15 STOP LIGHT SW
1–3 : CLOSED WITH BRAKE PEDAL DEPRESSED

○ : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE	SEE PAGE
A 1	A	24	**A16**	B	26	**D19**	26
A 2	B	24	**A17**	A	26	**F13**	24
A 3	C	24	**A32**		28	**J 2**	27
A 4	A	24	**A33**		28	**P 3**	27
A 5	B	24	**C 3**		24	**S15**	27
A 6		24	**C12**	A	26	**T 8**	27
A 7		24	**C13**	B	26		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO.1 (LEFT SIDE OF STEERING COLUMN TUBE)
1B	18	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT SIDE OF STEERING COLUMN TUBE)
1G	18	COWL WIRE AND J/B NO.1 (LEFT SIDE OF STEERING COLUMN TUBE)
4A	23	COWL WIRE AND J/B NO.4 (BEHIND THE COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IH2	34	INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND GLOVE BOX)
IL1	36	ENGINE WIRE AND COWL WIRE (UNDER THE GLOVE BOX)
IL2		
BM3	38	COWL WIRE AND FLOOR NO.1 WIRE (RIGHT KICK PANEL)
BQ1	38	COWL WIRE AND FLOOR NO.2 WIRE (LEFT KICK PANEL)
BQ3		

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EC	32	REAR SIDE OF CYLINDER HEAD RH
IF	34	INSTRUMENT PANEL BRACE LH
IH	34	RIGHT KICK PANEL

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 6	32	ENGINE ROOM MAIN WIRE	**I 78**	36	COWL WIRE
E 44	32	ENGINE WIRE	**I110**		
E 81	32	COWL WIRE	**I131**		
I 6	36		**I177**	36	ENGINE WIRE