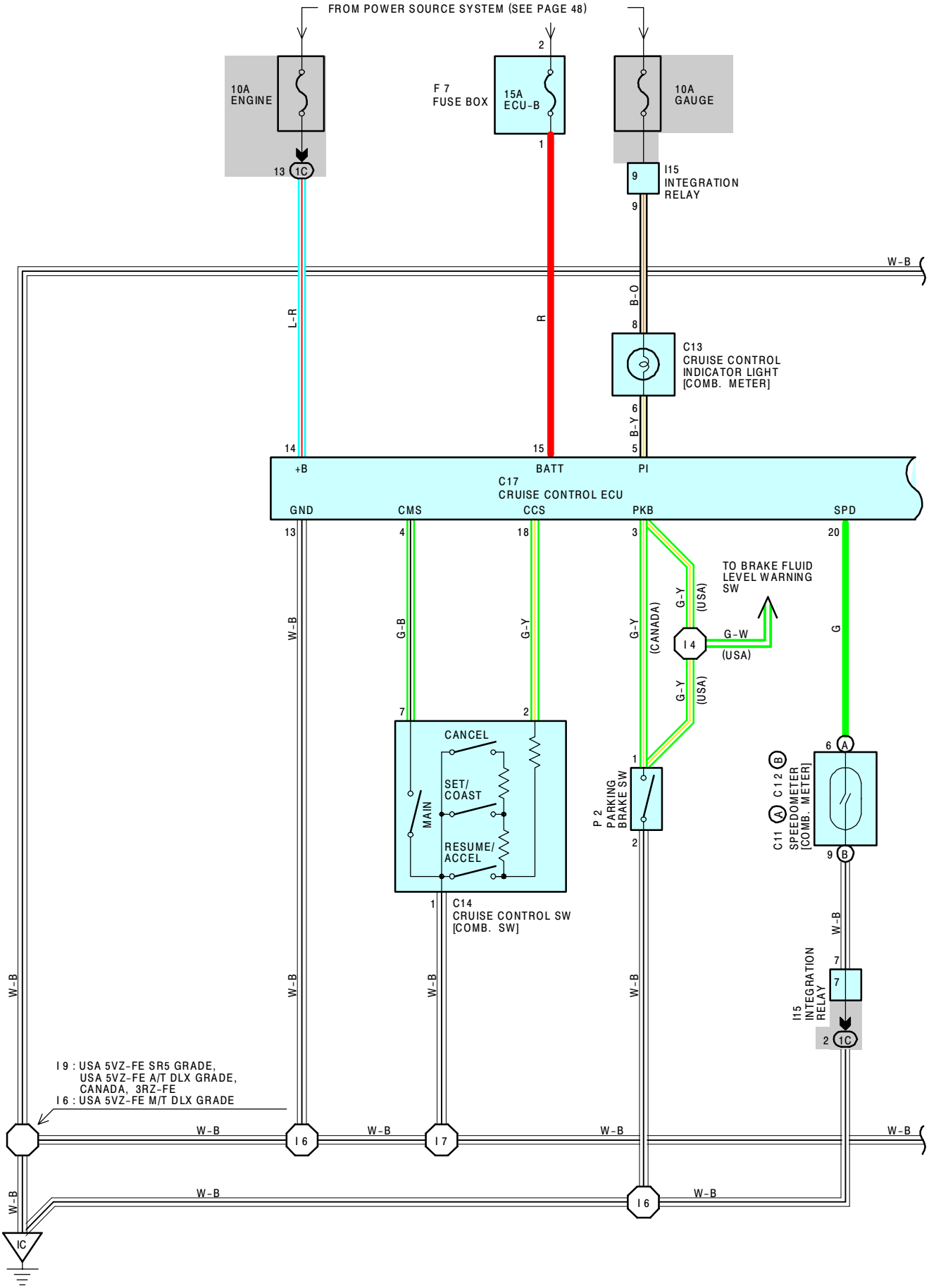
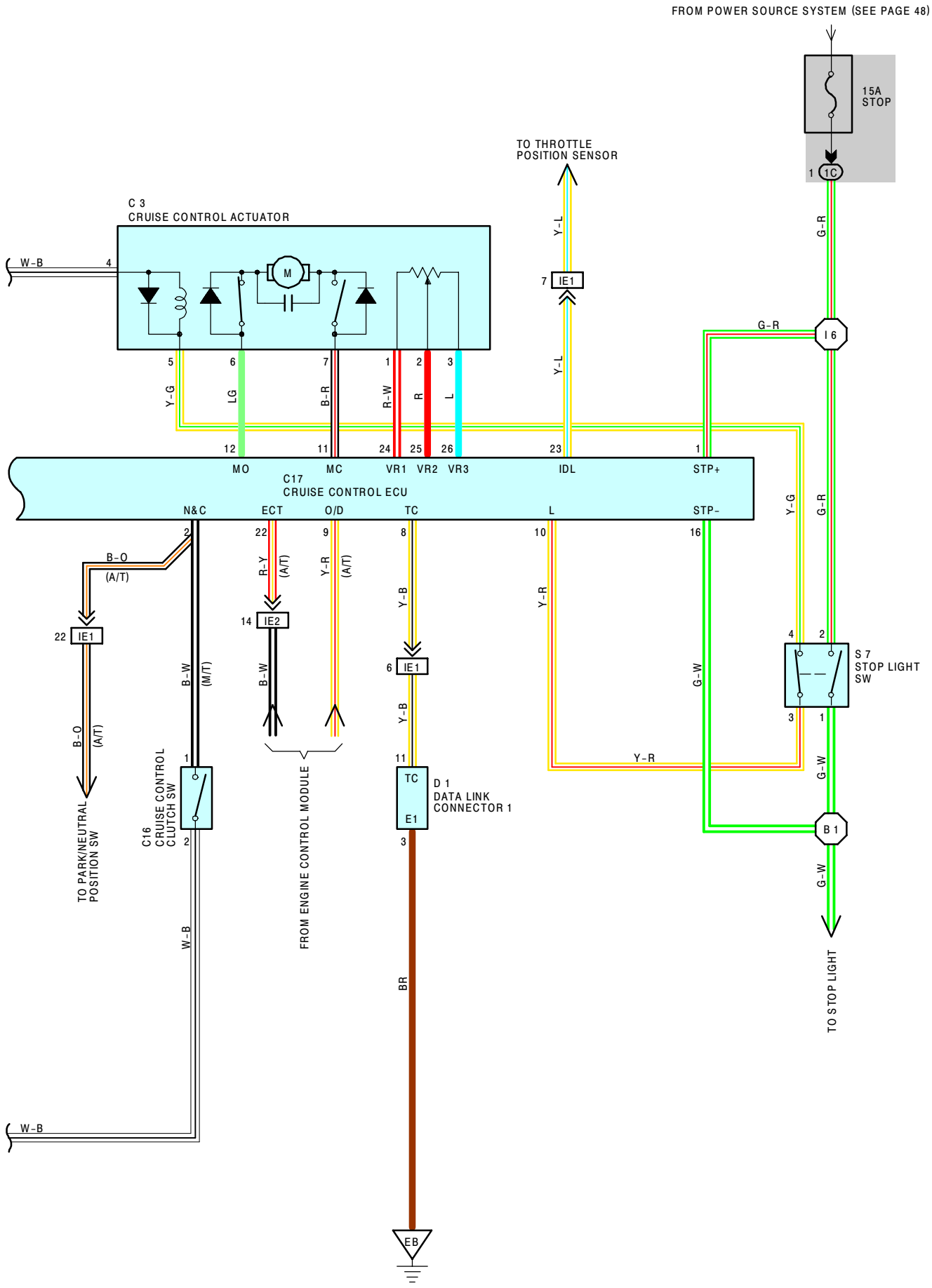

FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A ENGINE
F 7 FUSE BOX
15A ECU-B
10A GAUGE
I15 INTEGRATION RELAY
W-B
L-R
R
B-O
B-Y
C13 CRUISE CONTROL INDICATOR LIGHT [COMB. METER]
+B
BATT
PI
C17 CRUISE CONTROL ECU
GND
CMS
CCS
PKB
SPD
TO BRAKE FLUID LEVEL WARNING SW
G-Y (USA)
G-W (USA)
G-Y (CANADA)
G
G-B
CANCEL
SET/ COAST
MAIN
RESUME/ ACCEL
C14 CRUISE CONTROL SW [COMB. SW]
P 2 PARKING BRAKE SW
C11 C12 SPEEDOMETER [COMB. METER]
I15 INTEGRATION RELAY
I9 : USA 5VZ-FE SR5 GRADE, USA 5VZ-FE A/T DLX GRADE, CANADA, 3RZ-FE
I6 : USA 5VZ-FE M/T DLX GRADE
I6
I7
IC


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A
STOP
1C
TO THROTTLE
POSITION SENSOR
C 3
CRUISE CONTROL ACTUATOR
W-B
M
Y-L
IE1
G-R
I 6
Y-G
LG
B-R
R-W
R
L
MO
MC
VR1
VR2
VR3
IDL
STP+
C17
CRUISE CONTROL ECU
N&C
ECT
O/D
TC
L
STP-
B-O
(A/T)
R-Y
Y-B
Y-R
B-W
(M/T)
IE2
S 7
STOP LIGHT
SW
G-W
C16
CRUISE CONTROL
CLUTCH SW
TO PARK/NEUTRAL
POSITION SW
FROM ENGINE CONTROL MODULE
D 1
DATA LINK
CONNECTOR 1
TC
E1
BR
B 1
TO STOP LIGHT
EB

SYSTEM OUTLINE

CURRENT IS APPLIED AT ALL TIMES THROUGH THE **STOP** FUSE TO **TERMINAL 1** OF THE CRUISE CONTROL ECU AND **TERMINAL 2** OF THE STOP LIGHT SW.

WITH THE IGNITION SW TURNED TO ON, THE CURRENT FLOWS THROUGH THE **GAUGE** FUSE TO **TERMINAL 8** OF THE CRUISE CONTROL INDICATOR LIGHT [COMB. METER]. THE CURRENT THROUGH THE **ENGINE** FUSE FLOWS TO **TERMINAL 14** OF THE CRUISE CONTROL ECU. WHEN THE IGNITION SW IS ON AND THE CRUISE CONTROL MAIN SW [COMB. SW] IS TURNED ON, A SIGNAL IS INPUT FROM **TERMINAL 7** OF THE CRUISE CONTROL MAIN SW [COMB. SW] TO **TERMINAL 4** OF THE CRUISE CONTROL ECU. AS A RESULT, THE CRUISE CONTROL ECU FUNCTIONS AND THE CURRENT TO **TERMINAL 14** OF THE CRUISE CONTROL ECU TO **TERMINAL 13** → **GROUND**, AND THE CRUISE CONTROL SYSTEM IS IN A CONDITION READY FOR OPERATION.

AT THE SAME TIME, THE CURRENT THROUGH THE **GAUGE** FUSE FLOWS FROM **TERMINAL 8** OF THE CRUISE CONTROL INDICATOR LIGHT [COMB. METER] TO **TERMINAL 6** → **TERMINAL 5** OF THE CRUISE CONTROL ECU → **TERMINAL 13** → **GROUND**, CAUSING THE CRUISE CONTROL INDICATOR LIGHT TO LIGHT UP, INDICATING THAT THE CRUISE CONTROL IS READY FOR OPERATION.

1. SET OPERATION

WHEN THE CRUISE CONTROL MAIN SWITCH [COMB. SW] IS TURNED ON AND THE SET SWITCH [COMB. SW] IS PUSHED WITH THE VEHICLE SPEED WITHIN THE SET LIMIT (APPROX. **40** KM/H, **25** MPH TO **200** KM/H, **124** MPH), A SIGNAL IS INPUT TO **TERMINAL 18** OF THE CRUISE CONTROL ECU AND THE VEHICLE SPEED AT THE TIME THE SET SWITCH IS RELEASED IS MEMORIZED IN THE ECU AS THE SET SPEED.

2. SET SPEED CONTROL

DURING CRUISE CONTROL DRIVING, THE ECU COMPARES THE SET SPEED MEMORIZED IN THE ECU WITH THE ACTUAL VEHICLE SPEED INPUT INTO **TERMINAL 20** OF THE CRUISE CONTROL ECU FROM THE SPEEDOMETER [COMB. METER], AND CONTROLS THE CRUISE CONTROL ACTUATOR TO MAINTAIN THE SET SPEED.

WHEN THE ACTUAL VEHICLE SPEED IS LOWER THAN THE SET SPEED, THE ECU CAUSES THE CURRENT TO THE CRUISE CONTROL ACTUATOR TO FLOW FROM **TERMINAL 12** OF THE CRUISE CONTROL ECU → **TERMINAL 6** OF THE CRUISE CONTROL ACTUATOR → **TERMINAL 7** → **TERMINAL 11** OF THE CRUISE CONTROL ECU. AS A RESULT, THE MOTOR IN THE CRUISE CONTROL ACTUATOR IS ROTATED TO OPEN THE THROTTLE VALVE AND THE THROTTLE CABLE IS PULLED TO INCREASE THE VEHICLE SPEED.

WHEN THE ACTUAL DRIVING VEHICLE SPEED IS HIGHER THAN THE SET SPEED, THE CURRENT TO CRUISE CONTROL ACTUATOR FLOWS FROM **TERMINAL 11** OF THE ECU → **TERMINAL 7** OF THE CRUISE CONTROL ACTUATOR → **TERMINAL 6** → **TERMINAL 12** OF THE CRUISE CONTROL ECU. THIS CAUSES THE MOTOR IN THE CRUISE CONTROL ACTUATOR TO ROTATE TO CLOSE THE THROTTLE VALVE AND RETURN THE THROTTLE CABLE TO DECREASE THE VEHICLE SPEED.

3. COAST CONTROL

DURING THE CRUISE CONTROL DRIVING, WHILE THE COAST SWITCH IS ON, THE CRUISE CONTROL ACTUATOR RETURNS THE THROTTLE CABLE TO CLOSE THE THROTTLE VALVE AND DECREASE THE DRIVING SPEED. THE VEHICLE SPEED WHEN THE COAST SWITCH IS TURNED OFF IS MEMORIZED AND THE VEHICLE CONTINUES AT THE NEW SET SPEED.

4. ACCEL CONTROL

DURING CRUISE CONTROL DRIVING, WHILE THE ACCEL SWITCH IS TURNED ON, THE CRUISE CONTROL ACTUATOR PULLS THE THROTTLE CABLE TO OPEN THE THROTTLE VALVE AND INCREASE THE DRIVING SPEED.

THE VEHICLE SPEED WHEN THE ACCEL SWITCH IS TURNED OFF IS MEMORIZED AND THE VEHICLE CONTINUES AT THE NEW SET SPEED.

5. RESUME CONTROL

UNLESS THE VEHICLE SPEED FALLS BELOW THE MINIMUM SPEED LIMIT (APPROX. **36** KM/H, **23** MPH) AFTER CANCELING THE SET SPEED BY THE CANCEL SWITCH, PUSHING THE RESUME SWITCH WILL CAUSE THE VEHICLE TO RESUME THE VEHICLE SPEED SET BEFORE CANCELLATION.

6. MANUAL CANCEL MECHANISM

IF ANY OF THE FOLLOWING OPERATIONS OCCURS DURING CRUISE CONTROL OPERATION, THE MAGNETIC CLUTCH OF THE ACTUATOR TURNS OFF AND THE MOTOR ROTATES TO CLOSE THE THROTTLE VALVE AND THE CRUISE CONTROL IS RELEASED.

- PLACING THE SHIFT LEVER IN EXCEPT “D” POSITION (PARK/NEUTRAL POSITION SW ON). “SIGNAL INPUT TO **TERMINAL 2** OF THE ECU” (A/T)
- DEPRESSING THE CLUTCH PEDAL (CLUTCH SW ON). “SIGNAL INPUT TO **TERMINAL 2** OF THE ECU” (M/T)
- DEPRESSING THE BRAKE PEDAL (STOP LIGHT SWITCH ON). “SIGNAL INPUT TO **TERMINAL 16** OF THE ECU”
- PULLING THE PARKING BRAKE LEVER (PARKING BRAKE SWITCH ON). “SIGNAL INPUT TO **TERMINAL 3** OF THE ECU”
- PUSHING THE CANCEL SWITCH (CANCEL SWITCH ON). “SIGNAL INPUT TO **TERMINAL 18** OF THE ECU”

7. AUTO CANCEL FUNCTION OPERATE

A) IF ANY OF THE FOLLOWING OPERATE CONDITIONS OCCURS DURING CRUISE CONTROL OPERATION, THE SET SPEED IS ERASED, CURRENT FLOW TO MAGNETIC CLUTCH IS STOPPED AND THE CRUISE CONTROL IS RELEASED. (MAIN SWITCH TURNS OFF).

WHEN THIS OCCURS, THE IGNITION SWITCH MUST BE TURNED OFF ONCE BEFORE THE MAIN SWITCH WILL TURN ON.

- OVER CURRENT TO TRANSISTOR DRIVING MOTOR AND/OR SAFETY MAGNETIC CLUTCH.
- CURRENT TO CONTROL THE THROTTLE VALVE IN MOTOR BECOMES ALWAYS “ON”.
- OPEN CIRCUIT IN MAGNETIC CLUTCH.
- MOMENTARY INTERRUPTION OF VEHICLE SPEED SIGNAL.
- SHORT CIRCUIT IN CRUISE CONTROL SWITCH.
- MOTOR DOES NOT OPERATE DESPITE THE MOTOR DRIVE SIGNAL BEING OUTPUT.

B) IF ANY OF THE FOLLOWING CONDITIONS OCCURS DURING CRUISE CONTROL OPERATION, THE SET SPEED IS ERASED AND THE CRUISE CONTROL IS RELEASED. (THE POWER OF MAGNETIC CLUTCH IS CUT OFF UNTIL THE SET SWITCH IS “ON” AGAIN.)

- WHEN THE VEHICLE SPEED FALLS BELOW THE MINIMUM SPEED LIMIT, APPROX. **40** KM/H (**25** MPH).
- WHEN THE VEHICLE SPEED FALLS MORE THAN **16** KM/H (**10** MPH) BELOW THE SET SPEED, E.G. ON AN UPWARD SLOPE.
- WHEN POWER TO THE CRUISE CONTROL SYSTEM IS MOMENTARILY CUT OFF.

C) IF ANY OF THE FOLLOWING CONDITIONS OCCURS DURING CRUISE CONTROL OPERATION, THE CRUISE CONTROL IS RELEASED. BUT IN THIS CASE, THE SET SPEED IS NOT ERASED. IF THE VEHICLE SPEED IS MORE THAN THE MINIMUM SPEED LIMIT (APPROX. **40** KM/H **25** MPH) CRUISE CONTROL OPERATION IS POSSIBLE USING “SET” OR “RESUME” ON THE CONTROL SWITCH.

- OPEN CIRCUIT FOR **TERMINAL 10** OF CRUISE CONTROL ECU AND **TERMINAL 3** OF STOP LIGHT SW.

8. AUTOMATIC TRANSMISSION CONTROL FUNCTION

- IN OVERDRIVE, IF THE VEHICLE SPEED BECOMES LOWER THAN THE OVERDRIVE CUT SPEED (SET SPEED MINIMUM APPROX. **4** KM/H, **2.5** MPH) DURING CRUISE CONTROL OPERATION, SUCH AS DRIVING UP A HILL, THE OVERDRIVE IS RELEASED AND THE POWER INCREASED TO PREVENT A REDUCTION IN VEHICLE SPEED.
- AFTER RELEASING THE OVERDRIVE, VEHICLE SPEED BECOMES HIGHER THAN THE OVERDRIVE RETURN SPEED (SET SPEED MINIMUM APPROX. **2** KM/H, **1.2** MPH) AND THE ECU JUDGES BY THE SIGNALS FROM POTENTIOMETER OF THE ACTUATOR THAT THE UPWARD SLOPE HAS FINISHED, OVERDRIVE IS RESUMED AFTER APPROXIMATELY **6** SECONDS.

SERVICE HINTS

C17 CRUISE CONTROL ECU (DISCONNECT THE ECU CONNECTOR)

13-GROUND : ALWAYS CONTINUITY
15-GROUND : APPROX. **12** VOLTS WITH THE IGNITION SW AT **ON** POSITION
20-GROUND : **4** PULSE WITH **1** ROTATION OF THE ROTOR SHAFT
4-GROUND : CONTINUITY WITH MAIN SW ON
1-GROUND : ALWAYS APPROX. **12** VOLTS
16-GROUND : APPROX. **12** VOLTS WITH BRAKE PEDAL DEPRESSED (ONE OF THE CANCEL SW)
2-GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ST** POSITION AND CLUTCH PEDAL DEPRESSED (M/T)
APPROX. **12** VOLTS WITH IGNITION SW AT **ST** POSITION AND SHIFT LEVER IN **N** OR **P** RANGE (A/T)
3-GROUND : CONTINUITY WITH PARKING LEVER PULL UP, (ONE OF THE CANCEL SW) OR BRAKE LEVEL WARNING SW ON

C14 CRUISE CONTROL SW [COMB. SW]

1-7 : CLOSED WITH MAIN SW ON
1-2 : APPROX. **68** Ω WITH RESUME/ACCEL SW ON
: APPROX. **198** Ω WITH SET/COAST SW ON
: APPROX. **418** Ω WITH CANCEL SW ON

C 3 CRUISE CONTROL ACTUATOR

1-3 : APPROX. **2** KΩ
5-4 : APPROX. **38.5** Ω

P 2 PARKING BRAKE SW

1-GROUND : CONTINUITY WITH PARKING BRAKE LEVER PULL UP
2-GROUND : ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 3		22	**C14**	26	**F 7**	27
C11	A	26	**C16**	26	**I15**	27
C12	B	26	**C17**	26	**P 2**	27
C13		26	**D 1**	22	**S 7**	27

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1C	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE1	34	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IE2		

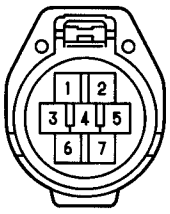
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	30 (5VZ-FE)	NEAR THE THROTTLE BODY
IC	34	LEFT KICK PANEL

⯃ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 4	34	COWL WIRE	**I 9**	34	COWL WIRE
I 6			**B 1**	36	COWL WIRE
I 7					

C 3 GRAY



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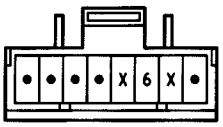

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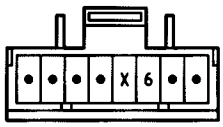

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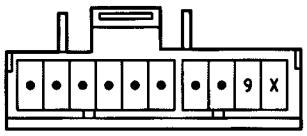

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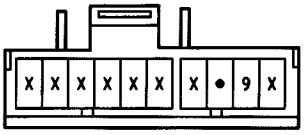

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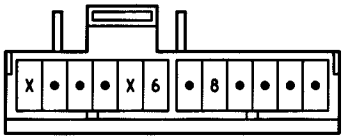

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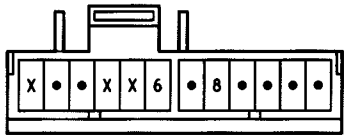

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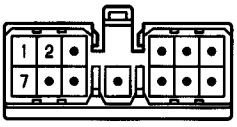

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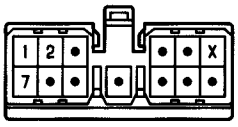

C16 GRAY

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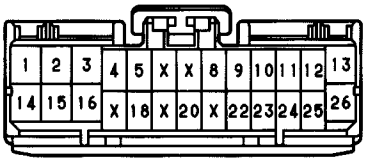

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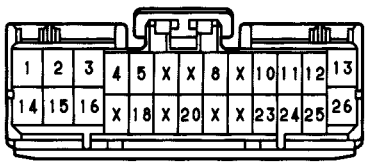
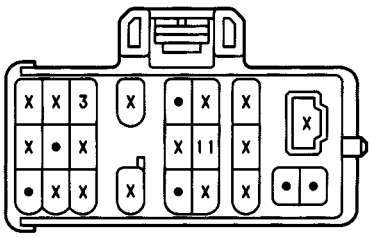


D 1 BLACK



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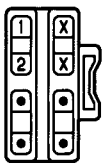

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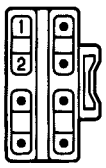

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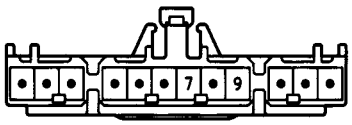

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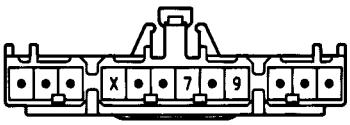
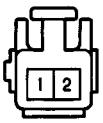


P 2



S 7