FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 2002 CAMRY.

Applicable models: MCV30 Series
ACV30 Series

For service specifications and repair procedures of the above models other than those listed in this manual, refer to the following manuals;

Manual Name	Pub. No.
● 2002 CAMRY Repair Manual	
Volume 1	RM881U1
Volume 2	RM881U2
● 2002 CAMRY New Car Features	NCF208U

All information in this manual is based on the latest product information at the time of publication. However, specifications and procedures are subject to change without notice.

TOYOTA MOTOR CORPORATION

cardiagn.com

NOTICE

When handling supplemental restraint system components (removal, installation or inspection, etc.), always follow the direction given in the repair manuals listed above to prevent accidents and supplemental restraint system malfunction.

A INTRODUCTION

This manual consists of the following 13 sections:

No.	Section	Description
A	INDEX	Index of the contents of this manual.
	INTRODUCTION	Brief explanation of each section.
B	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
C	TROUBLE–SHOOTING	Describes the basic inspection procedures for electrical circuits.
D	ABBREVIATIONS	Defines the abbreviations used in this manual.
E	GLOSSARY OF TERMS AND SYMBOLS	Defines the symbols and functions of major parts.
F	RELAY LOCATIONS	Shows position of the Electronic Control Unit, Relays, Relay Block, etc. This section is closely related to the system circuit.
G	ELECTRICAL WIRING ROUTING	Describes position of Parts Connectors, Splice points, Ground points, etc. This section is closely related to the system circuit.
H	INDEX	Index of the system circuits.
	SYSTEM CIRCUITS	Electrical circuits of each system are shown from the power supply through ground points. Wiring connections and their positions are shown and classified by code according to the connection method. (Refer to the section, "How to use this manual"). The "System Outline" and "Service Hints" useful for troubleshooting are also contained in this section.
I	GROUND POINT	Shows ground positions of all parts described in this manual.
J	POWER SOURCE (Current Flow Chart)	Describes power distribution from the power supply to various electrical loads.
K	CONNECTOR LIST	Describes the form of the connectors for the parts appeared in this book. This section is closely related to the system circuit.
L	PART NUMBER OF CONNECTORS	Indicates the part number of the connectors used in this manual.
M	OVERALL ELECTRICAL WIRING DIAGRAM	Provides circuit diagrams showing the circuit connections.

cardiagn.com

This manual provides information on the electrical circuits installed on vehicles by dividing them into a circuit for each system.

The actual wiring of each system circuit is shown from the point where the power source is received from the battery as far as each ground point. (All circuit diagrams are shown with the switches in the OFF position.)

When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand the circuit operation.

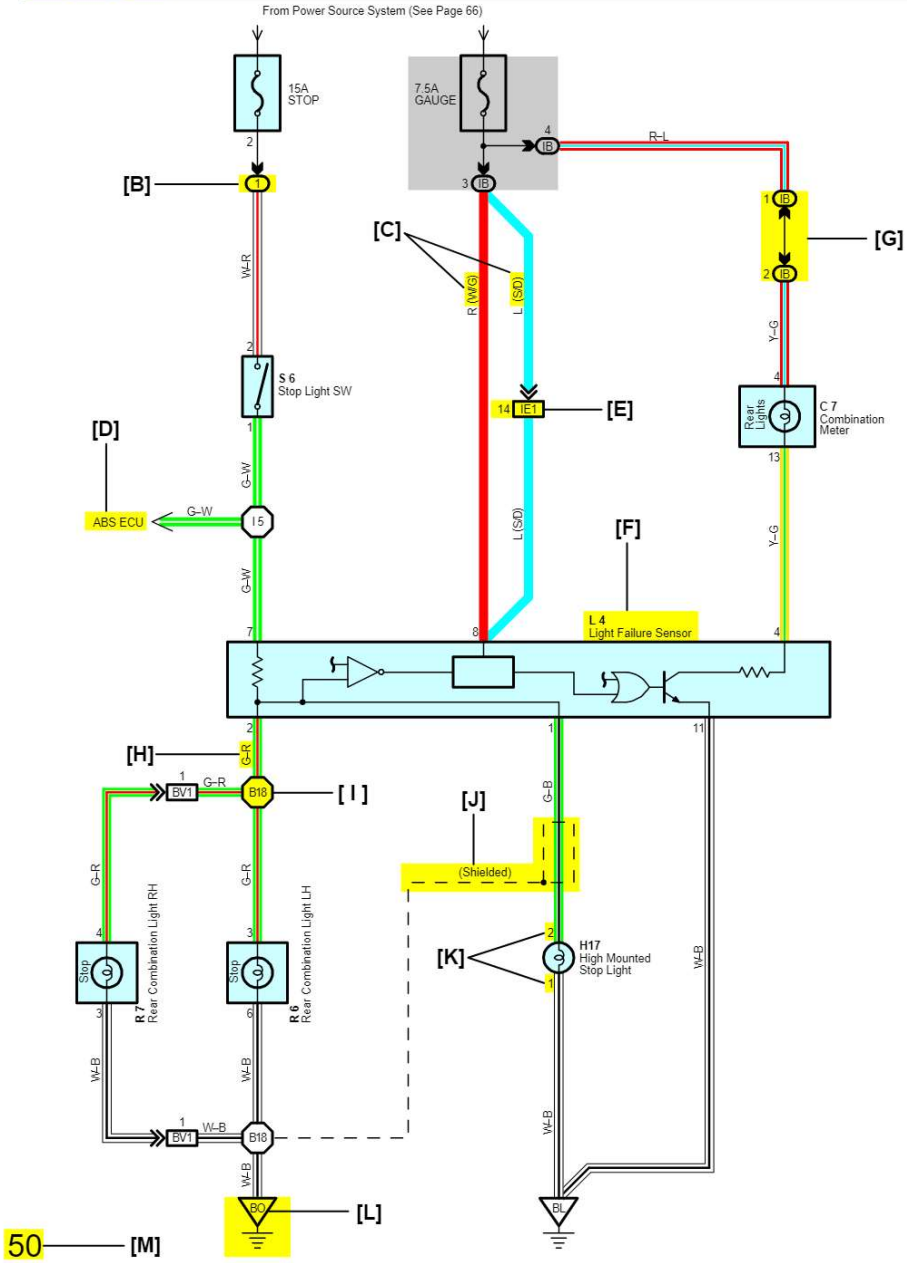
When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wiring Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors, splice points, and ground points of each system circuit. Internal wiring for each junction block is also provided for better understanding of connection within a junction block.
Wiring related to each system is indicated in each system circuit by arrows (from__, to__). When overall connections are required, see the Overall Electrical Wiring Diagram at the end of this manual.

cardiagn.com

[A]

* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

Stop Light



cardiagn.com

[A] : System Title

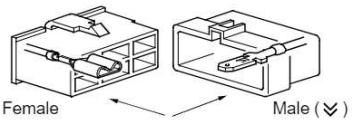
[B] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

Example: (1) Indicates Relay Block No.1

[C] : ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.

[D] : Indicates related system.

[E] : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (⩔).
Outside numerals are pin numbers.



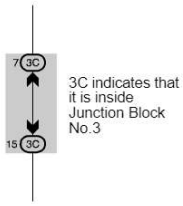
The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

When more than one code has the first and second letters in common, followed by numbers (e.g, IH1, IH2), this indicates the same type of wiring harness and wiring harness connector.

[F] : Represents a part (all parts are shown in sky blue). The code is the same as the code used in parts position.

[G] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

Example:



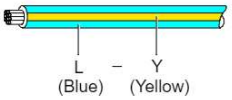
[H] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

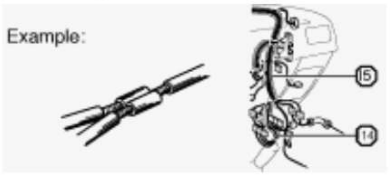
B	= Black	W	= White	BR	= Brown
L	= Blue	V	= Violet	SB	= Sky Blue
R	= Red	G	= Green	LG	= Light Green
P	= Pink	Y	= Yellow	GR	= Gray
O	= Orange				

The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

Example: L – Y



[I] : Indicates a wiring Splice Point (Codes are "E" for the Engine Room, "I" for the Instrument Panel, and "B" for the Body).



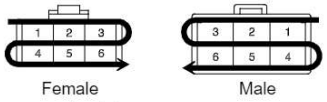
The Location of splice Point I 5 is indicated by the shaded section.

[J] : Indicates a shielded cable.



[K] : Indicates the pin number of the connector.
The numbering system is different for female and male connectors.

Example:



[L] : Indicates a ground point.

The first letter of the code for each ground point(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

[M] : Page No.

cardiagn.com

[N] **System Outline**

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW.
When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

Stop Light Disconnection Warning

When the ignition SW is turned on and the brake pedal is pressed (Stop light SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.
As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

[O] **Service Hints**

S6 Stop Light SW

2–1 : Closed with the brake pedal depressed

L4 Light Failure Sensor

1, 2, 7–Ground : Approx. **12** volts with the stop light SW on
4, 8–Ground : Approx. **12** volts with the ignition SW at **ON** position
11–Ground : Always continuity

[P] **: Parts Location**

Code	See Page	Code	See Page	Code	See Page
C7	34	L4	36	R7	37
H17	36	R6	37	S6	35

[Q] **: Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
1	18	R/B No.1 (Instrument Panel Brace LH)

[R] **: Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
IB	20	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
3C	22	Instrument Panel Wire and J/B No.3 (Instrument Panel Brace LH)

[S] **: Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	42	Floor Wire and Instrument Panel Wire (Left Kick Panel)
BV1	50	Luggage Room Wire and Floor Wire (Luggage Room Left)

[T] **: Ground Points**

Code	See Page	Ground Points Location
BL	50	Under the Left Center Pillar
BO	50	Back Panel Center

[U] **: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	44	Cowl Wire	B18	50	Luggage Room Wire

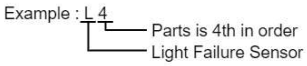
cardiagn.com

[N] : Explains the system outline.

[O] : Indicates values or explains the function for reference during troubleshooting.

[P] : Indicates the reference page showing the position on the vehicle of the parts in the system circuit.

Example : Part "L4" (Light Failure Sensor) is on page 36 of the manual.
* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.



[Q] : Indicates the reference page showing the position on the vehicle of Relay Block Connectors in the system circuit.

Example : Connector "1" is described on page 18 of this manual and is installed on the left side of the instrument panel.

[R] : Indicates the reference page showing the position on the vehicle of J/B and Wire Harness in the system circuit.

Example : Connector "3C" connects the Instrument Panel Wire and J/B No.3. It is described on page 22 of this manual, and is installed on the instrument panel left side.

[S] : Indicates the reference page describing the wiring harness and wiring harness connector (the female wiring harness is shown first, followed by the male wiring harness).

Example : Connector "IE1" connects the floor wire (female) and Instrument panel wire (male). It is described on page 42 of this manual, and is installed on the left side kick panel.

[T] : Indicates the reference page showing the position of the ground points on the vehicle.

Example : Ground point "BO" is described on page 50 of this manual and is installed on the back panel center.

[U] : Indicates the reference page showing the position of the splice points on the vehicle.

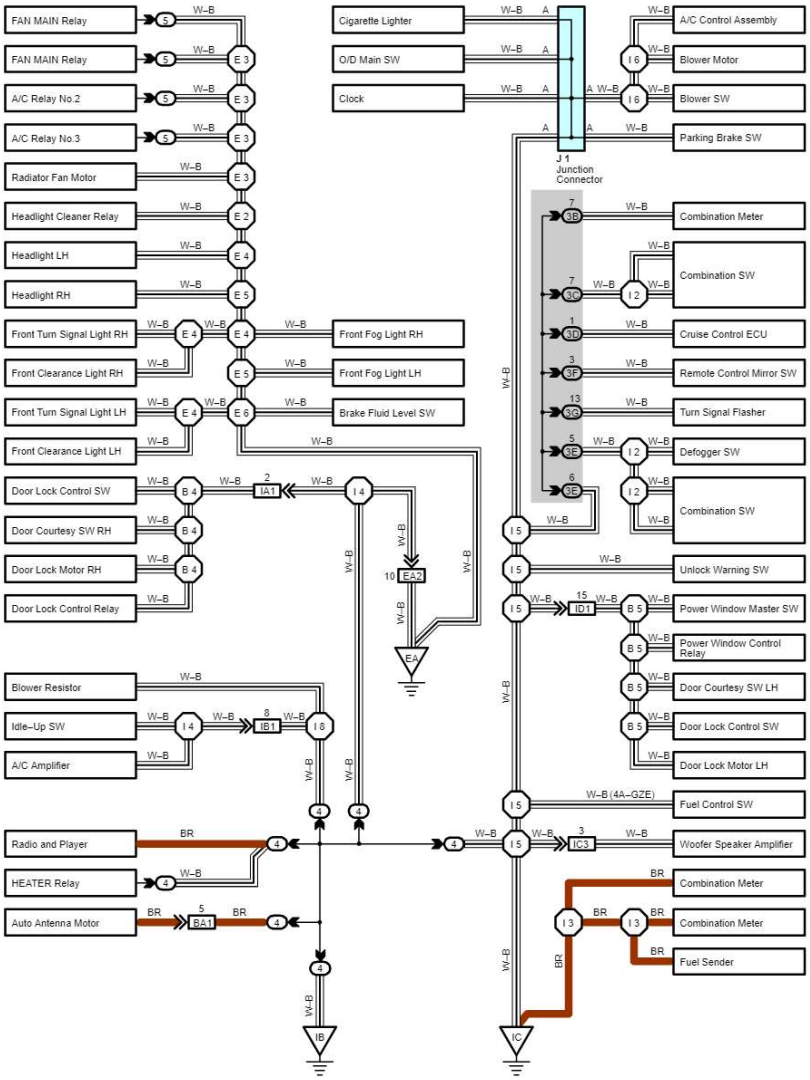
Example : Splice point "I5" is on the Cowl Wire Harness and is described on page 44 of this manual.

cardiagn.com

B HOW TO USE THIS MANUAL

The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points (EA , IB and IC shown below) can also be checked this way.

I GROUND POINT



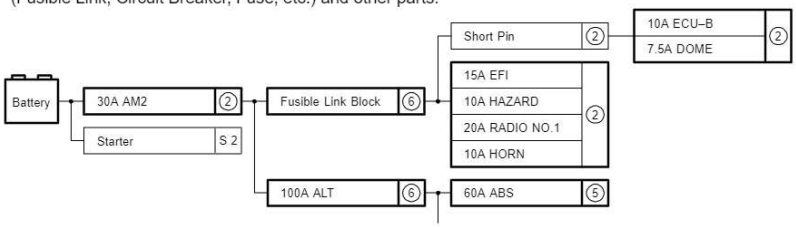
* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

cardiagn.com

The ”Current Flow Chart” section, describes which parts each power source (fuses, fusible links, and circuit breakers) transmits current to. In the Power Source circuit diagram, the conditions when battery power is supplied to each system are explained. Since all System Circuit diagrams start from the power source, the power source system must be fully understood.

J POWER SOURCE (Current Flow Chart)

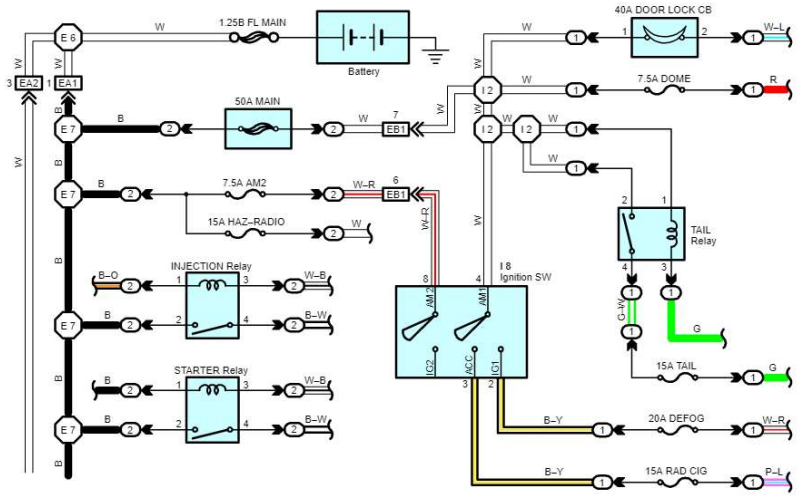
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.



Engine Room R/B (See Page 20)

Fuse		System	Page
20A	STOP	ABS ABS and Traction Control Cruise Control Electronically Controlled Transmission Multiplex Communication System	194 187 180 166 210
10A	DOME	Cigarette Lighter Combination Meter Headlight Interior Light Key Reminder and Seat Belt Warning Light Auto Turn Off	214 230 112 122

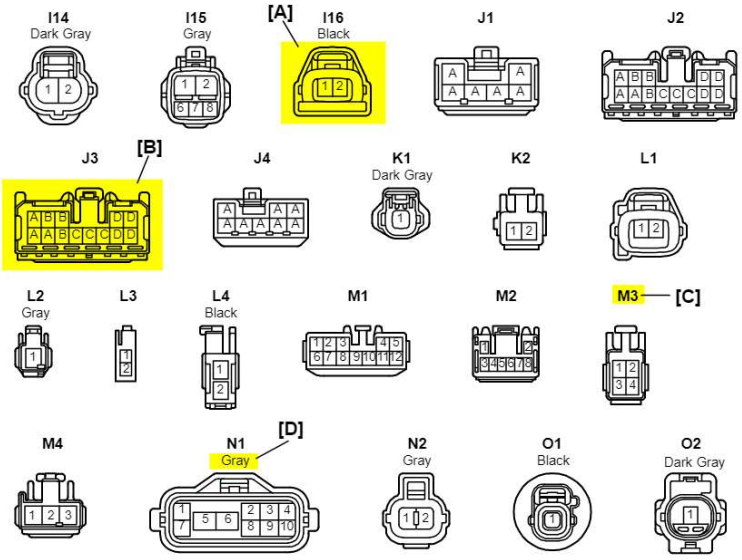
Power Source



* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

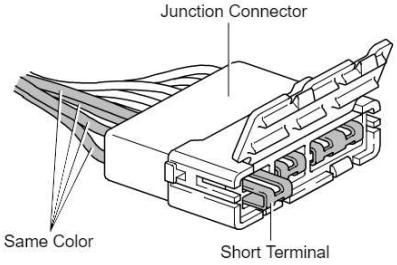
cardiagn.com

K CONNECTOR LIST



[A] : Indicates connector to be connected to a part. (The numeral indicates the pin No.)

[B] : Junction Connector
Indicates a connector which is connected to a short terminal.



Junction connector in this manual include a short terminal which is connected to a number of wire harnesses. Always perform inspection with the short terminal installed. (When installing the wire harnesses, the harnesses can be connected to any position within the short terminal grouping. Accordingly, in other vehicles, the same position in the short terminal may be connected to a wire harness from a different part.)
Wire harness sharing the same short terminal grouping have the same color.

[C] : Parts Code
The first letter of the code is taken from the first letter of part, and the numbers indicates its order in parts which start with the same letter.

[D] : Connector Color
Connectors not indicated are milky white in color.

cardiagn.com

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number
A 1	A/C Ambient Temp. Sensor	90980–11070
A 2	A/C Condenser Fan Motor	90980–11237
A 3	A/C Condenser Fan Relay	90980–10940
A 4	A/C Condenser Fan Resistor	90980–10928
A 5	A/C Magnetic Clutch	90980–11271
A 6	A/T Oil Temp. Sensor	90980–11413
A 7	ABS Actuator	90980–11151
A 8	ABS Actuator	90980–11009
A 9	ABS Speed Sensor Front LH	90980–10941
A10	ABS Speed Sensor Front RH	90980–11002
A11	Airbag Sensor Front LH	90980–11856
A12	Airbag Sensor Front RH	
A13	[illegible]	90980–11194
[illegible]	[illegible]	90980–[illegible]

Code	Part Name	Part Number
D 4	Diode (Courtesy)	90980–11608
D 5	Diode (Interior Light)	90980–10962
D 6	Diode (Moon Roof)	90980–11608
D 7	Door Lock Control Relay	90980–10848
D 8	Door Lock Control SW LH	90980–11148
D 9	Door Lock Control SW RH	
D10	Door Courtesy SW LH	90980–11097
D11	Door Courtesy SW RH	
D12	Door Courtesy SW Front LH	90980–11156
D13	Door Courtesy SW Front RH	
D14	Door Courtesy SW Rear LH	
D15	Door Courtesy SW Rear RH	
D16	[illegible] and Unlock SW LH	90980–11170
[illegible]	[illegible] RH	

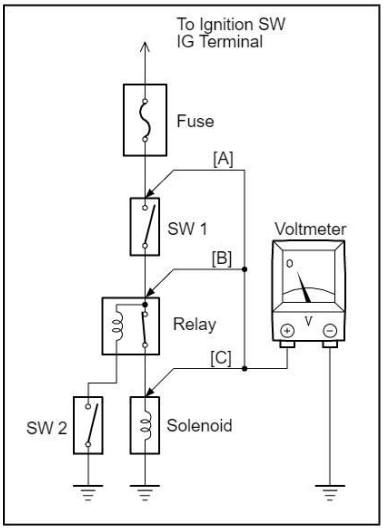
[A] : Part Code

[B] : Part Name

[C] : Part Number
Toyota Part Number are indicated.

Not all of the above part numbers of the connector are established for the supply. In case of ordering a connector or terminal with wire, please confirm in advance if there is supply for it using “Parts Catalog News” (published by Parts Engineering Administration Dept.).

cardiagn.com

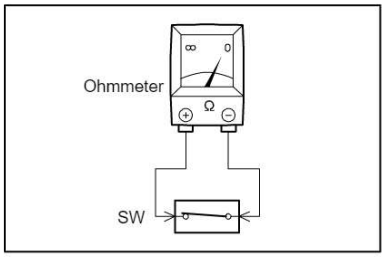


VOLTAGE CHECK

(a) Establish conditions in which voltage is present at the check point.

Example:
[A] – Ignition SW on
[B] – Ignition SW and SW 1 on
[C] – Ignition SW, SW 1 and Relay on (SW 2 off)

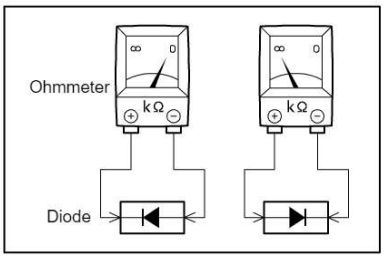
(b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.
This check can be done with a test light instead of a voltmeter.



CONTINUITY AND RESISTANCE CHECK

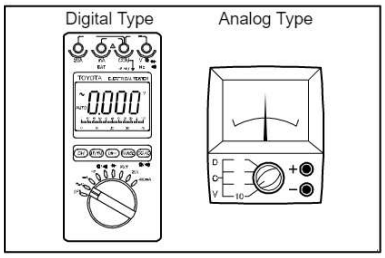
(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

(b) Contact the two leads of an ohmmeter to each of the check points.

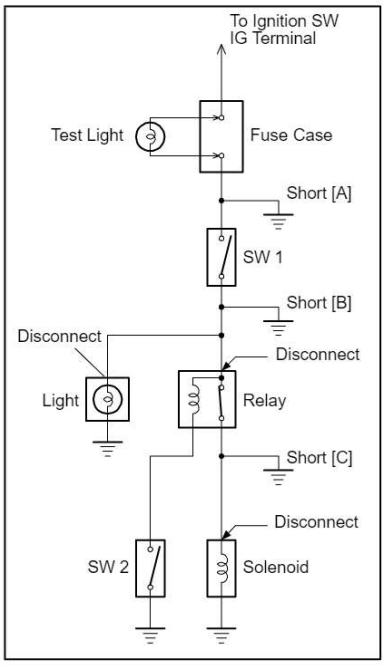


If the circuit has diodes, reverse the two leads and check again.
When contacting the negative lead to the diode positive side and the positive lead to the negative side, there should be continuity.
When contacting the two leads in reverse, there should be no continuity.

(c) Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) for troubleshooting of the electrical circuit.



cardiagn.com



FINDING A SHORT CIRCUIT

(a) Remove the blown fuse and disconnect all loads of the fuse.

(b) Connect a test light in place of the fuse.

(c) Establish conditions in which the test light comes on.

Example:
[A] – Ignition SW on
[B] – Ignition SW and SW 1 on
[C] – Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or Disconnect SW 2)

(d) Disconnect and reconnect the connectors while watching the test light.
The short lies between the connector where the test light stays lit and the connector where the light goes out.

(e) Find the exact location of the short by lightly shaking the problem wire along the body.

CAUTION:

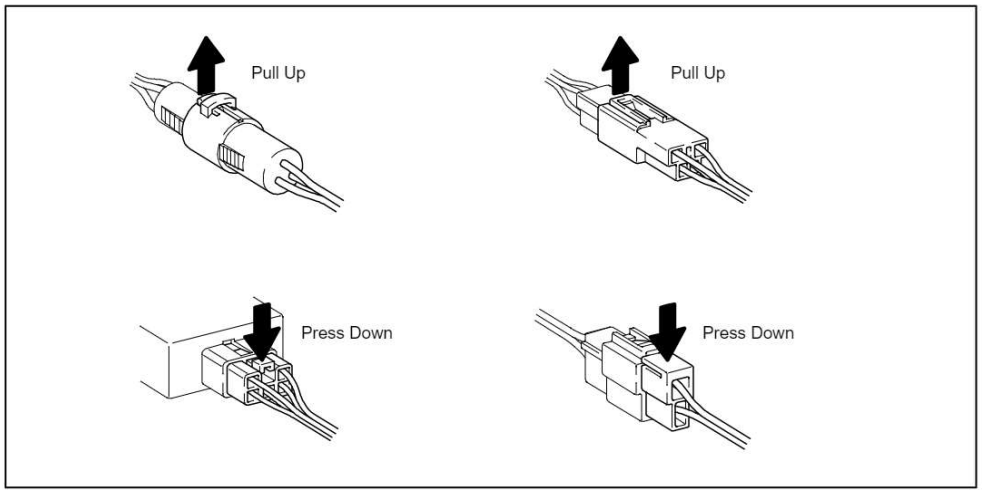
(a) Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)

(b) When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).

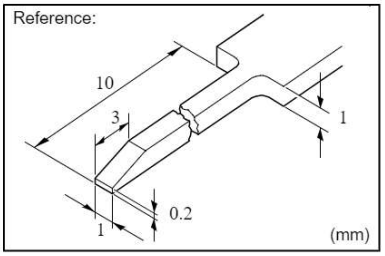
DISCONNECTION OF MALE AND FEMALE CONNECTORS

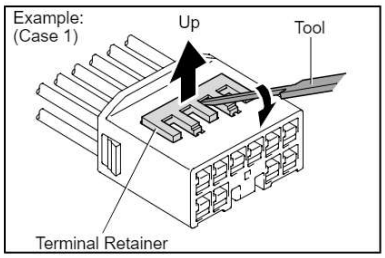
To pull apart the connectors, pull on the connector itself, not the wire harness.

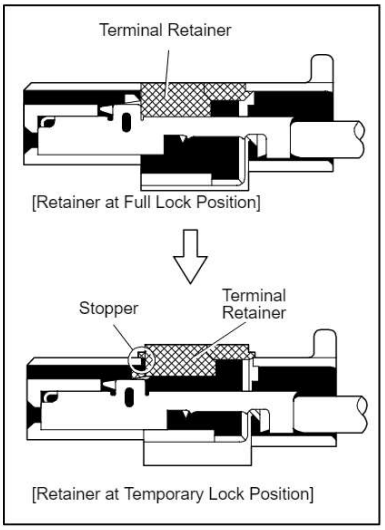
HINT : Check to see what kind of connector you are disconnecting before pulling apart.

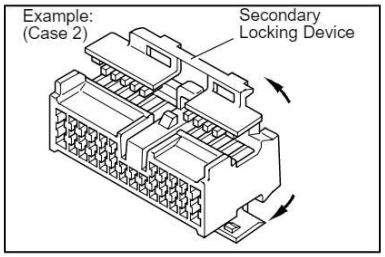


cardiagn.com









HOW TO REPLACE TERMINAL (with terminal retainer or secondary locking device)

1. PREPARE THE SPECIAL TOOL

   HINT : To remove the terminal from the connector, please construct and use the special tool or like object shown on the left.

2. DISCONNECT CONNECTOR

3. DISENGAGE THE SECONDARY LOCKING DEVICE OR TERMINAL RETAINER.

   (a) Locking device must be disengaged before the terminal locking clip can be released and the terminal removed from the connector.

   (b) Use a special tool or the terminal pick to unlock the secondary locking device or terminal retainer.

   NOTICE:
   Do not remove the terminal retainer from connector body.

   [A] For Non–Waterproof Type Connector

   HINT : The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

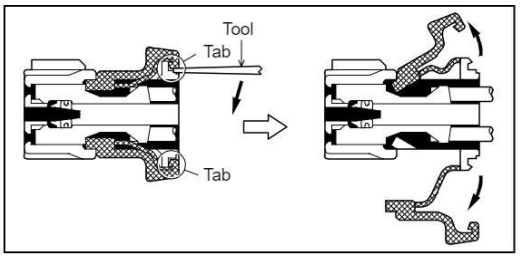
   "Case 1"

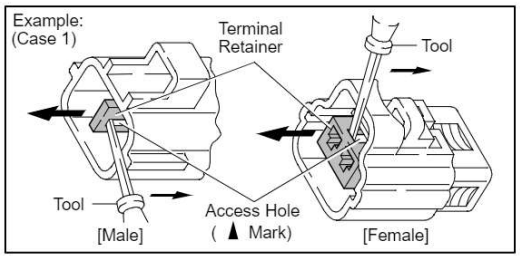
   Raise the terminal retainer up to the temporary lock position.

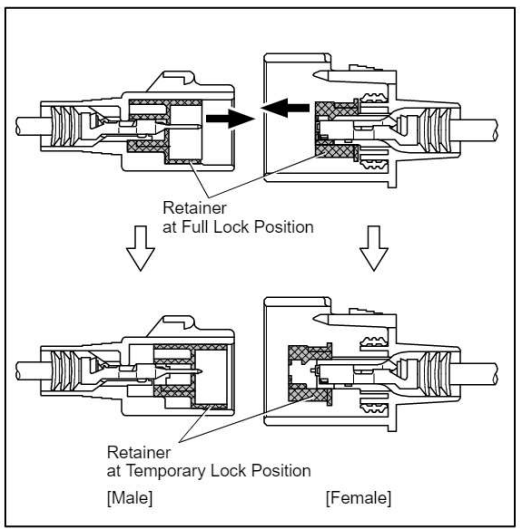
   "Case 2"

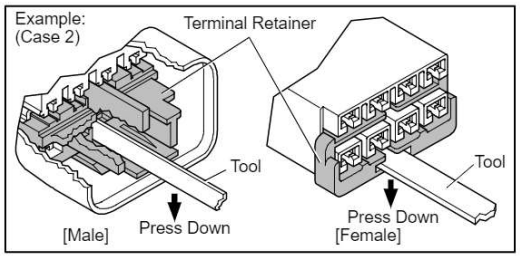
   Open the secondary locking device.

cardiagn.com









[B] For Waterproof Type Connector

HINT : Terminal retainer color is different according to connector body.

Example:

Terminal Retainer	: Connector Body
Black or White	: Gray
Black or White	: Dark Gray
Gray or White	: Black

"Case 1"

Type where terminal retainer is pulled up to the temporary lock position (Pull Type).

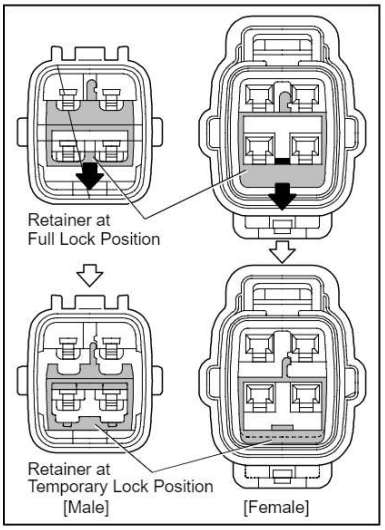
Insert the special tool into the terminal retainer access hole (▲Mark) and pull the terminal retainer up to the temporary lock position.

HINT : The needle insertion position varies according to the connector's shape (Number of terminals etc.), so check the position before inserting it.

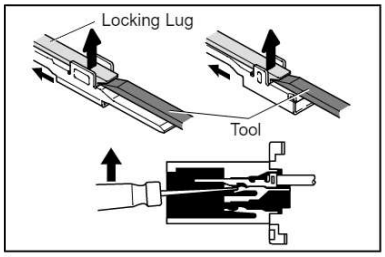
"Case 2"

Type which cannot be pulled as far as Power Lock insert the tool straight into the access hole of terminal retainer as shown.

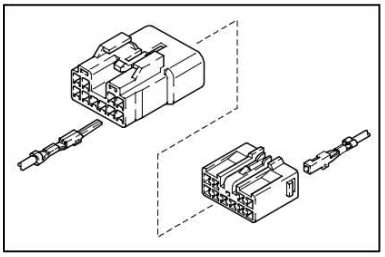
cardiagn.com



Push the terminal retainer down to the temporary lock position.



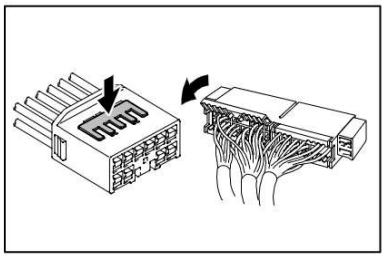
(c) Release the locking lug from terminal and pull the terminal out from rear.



4. INSTALL TERMINAL TO CONNECTOR

(a) Insert the terminal.

HINT:
1. Make sure the terminal is positioned correctly.
2. Insert the terminal until the locking lug locks firmly.
3. Insert the terminal with terminal retainer in the temporary lock position.



(b) Push the secondary locking device or terminal retainer in to the full lock position.

5. CONNECT CONNECTOR

cardiagn.com

ABBREVIATIONS

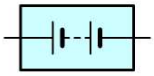
The following abbreviations are used in this manual.

A/C	=	Air Conditioning
A/T	=	Automatic Transaxle
ABS	=	Anti–Lock Brake System
ACIS	=	Acoustic Control Induction System
AICV	=	Air Intake Control Valve
BA	=	Brake Assist
COMB.	=	Combination
ECT	=	Electronically Controlled Transmission
ECU	=	Electronic Control Unit
EGR	=	Exhaust Gas Recirculation
ESA	=	Electronic Spark Advance
EVAP	=	Evaporative Emission
FL	=	Fusible Link
J/B	=	Junction Block
LH	=	Left–Hand
M/T	=	Manual Transaxle
MPX	=	Multiplex
O/D	=	Overdrive
R/B	=	Relay Block
RH	=	Right–Hand
SFI	=	Sequential Multiport Fuel Injection
SRS	=	Supplemental Restraint System
SW	=	Switch
TEMP.	=	Temperature
TRAC	=	Traction Control
TVIP	=	TOYOTA Vehicle Intrusion Protection
VSC	=	Vehicle Skid Control
VSV	=	Vacuum Switching Valve
VVT	=	Variable Valve Timing
w/	=	With
w/o	=	Without

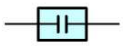
* The titles given inside the components are the names of the terminals (terminal codes) and are not treated as being abbreviations.

cardiagn.com

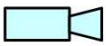
E GLOSSARY OF TERMS AND SYMBOLS



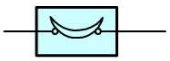
BATTERY
Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.



CAPACITOR (Condenser)
A small holding unit for temporary storage of electrical voltage.



CIGARETTE LIGHTER
An electric resistance heating element.



CIRCUIT BREAKER
Basically a reusable fuse, a circuit breaker will heat and open if too much current flows through it. Some units automatically reset when cool, others must be manually reset.



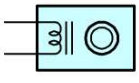
DIODE
A semiconductor which allows current flow in only one direction.



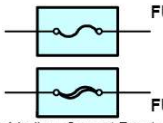
DIODE, ZENER
A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.



PHOTODIODE
The photodiode is a semiconductor which controls the current flow according to the amount of light.



DISTRIBUTOR, IIA
Channels high–voltage current from the ignition coil to the individual spark plugs.



(for Medium Current Fuse)

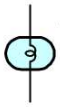
(for High Current Fuse or Fusible Link)

FUSE
A thin metal strip which burns through when too much current flows through it, thereby stopping current flow and protecting a circuit from damage.

FUSIBLE LINK
A heavy–gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the crosssection surface area of the wires.



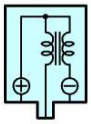
GROUND
The point at which wiring attaches to the Body, thereby providing a return path for an electrical circuit; without a ground, current cannot flow.



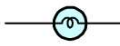
HEADLIGHTS
Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament



HORN
An electric device which sounds a loud audible signal.



IGNITION COIL
Converts low–voltage DC current into high–voltage ignition current for firing the spark plugs.



LIGHT
Current flow through a filament causes the filament to heat up and emit light.



LED (LIGHT EMITTING DIODE)
Upon current flow, these diodes emit light without producing the heat of a comparable light.



METER, ANALOG
Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.

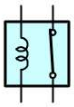


METER, DIGITAL
Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.

MOTOR
A power unit which converts electrical energy into mechanical energy, especially rotary motion.

cardiagn.com

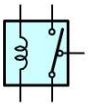
RELAY
Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.



1. NORMALLY CLOSED



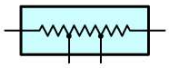
2. NORMALLY OPEN



RELAY, DOUBLE THROW
A relay which passes current through one set of contacts or the other.



RESISTOR
An electrical component with a fixed resistance, placed in a circuit to reduce voltage to a specific value.



RESISTOR, TAPPED
A resistor which supplies two or more different non adjustable resistance values.



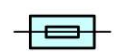
RESISTOR, VARIABLE or RHEOSTAT
A controllable resistor with a variable rate of resistance.
Also called a potentiometer or rheostat.



SENSOR (Thermistor)
A resistor which varies its resistance with temperature.

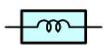


SENSOR, SPEED
Uses magnetic impulses to open and close a switch to create a signal for activation of other components.



(Reed Switch Type)

SHORT PIN
Used to provide an unbroken connection within a junction block.

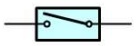


SOLENOID
An electromagnetic coil which forms a magnetic field when current flows, to move a plunger, etc.

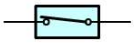
SPEAKER
An electromechanical device which creates sound waves from current flow.



SWITCH, MANUAL
Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.

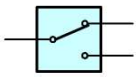


1. NORMALLY OPEN

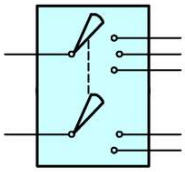


2. NORMALLY CLOSED

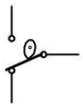
SWITCH, DOUBLE THROW
A switch which continuously passes current through one set of contacts or the other.



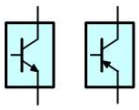
SWITCH, IGNITION
A key operated switch with several positions which allows various circuits, particularly the primary ignition circuit, to become operational.



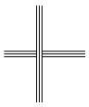
SWITCH, WIPER PARK
Automatically returns wipers to the stop position when the wiper switch is turned off.



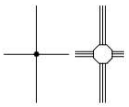
TRANSISTOR
A solidstate device typically used as an electronic relay; stops or passes current depending on the voltage applied at "base".



WIRES



(1) NOT CONNECTED



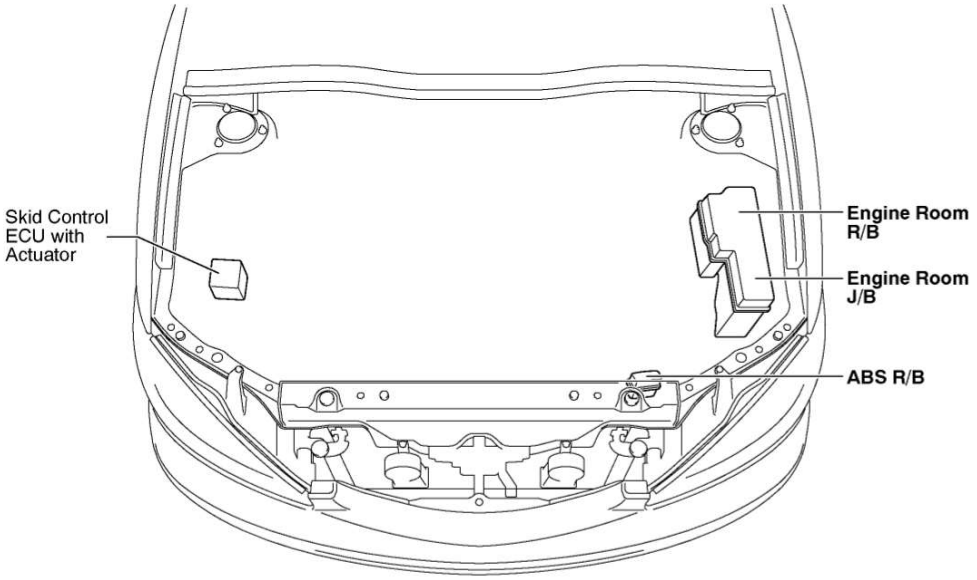
(2) SPLICED

Wires are always drawn as straight lines on wiring diagrams.
Crossed wires (1) without a black dot at the junction are not joined;
crossed wires (2) with a black dot or octagonal ( ) mark at the junction are spliced (joined) connections.

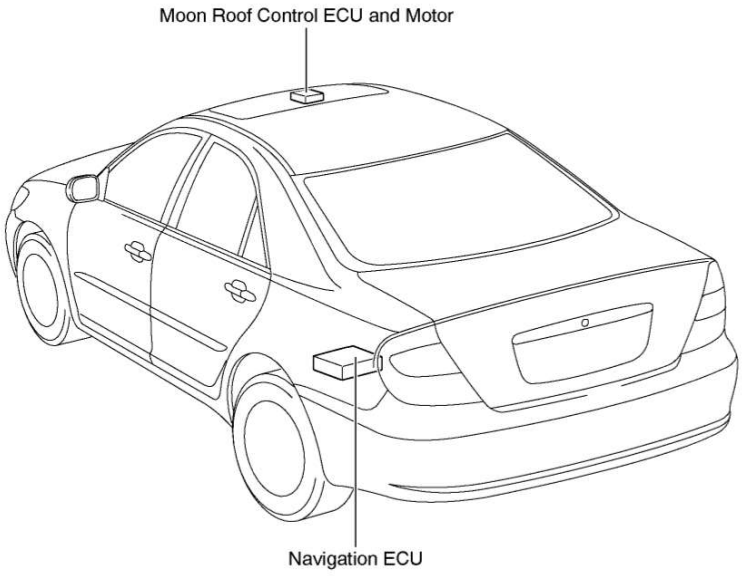
cardiagn.com

F RELAY LOCATIONS

[Engine Compartment]

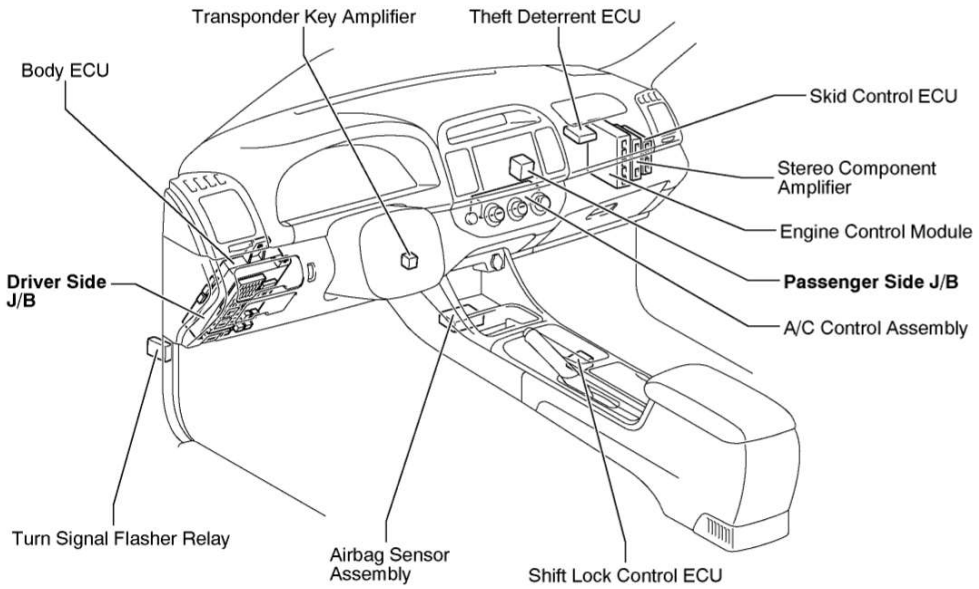


[Body]



cardiagn.com

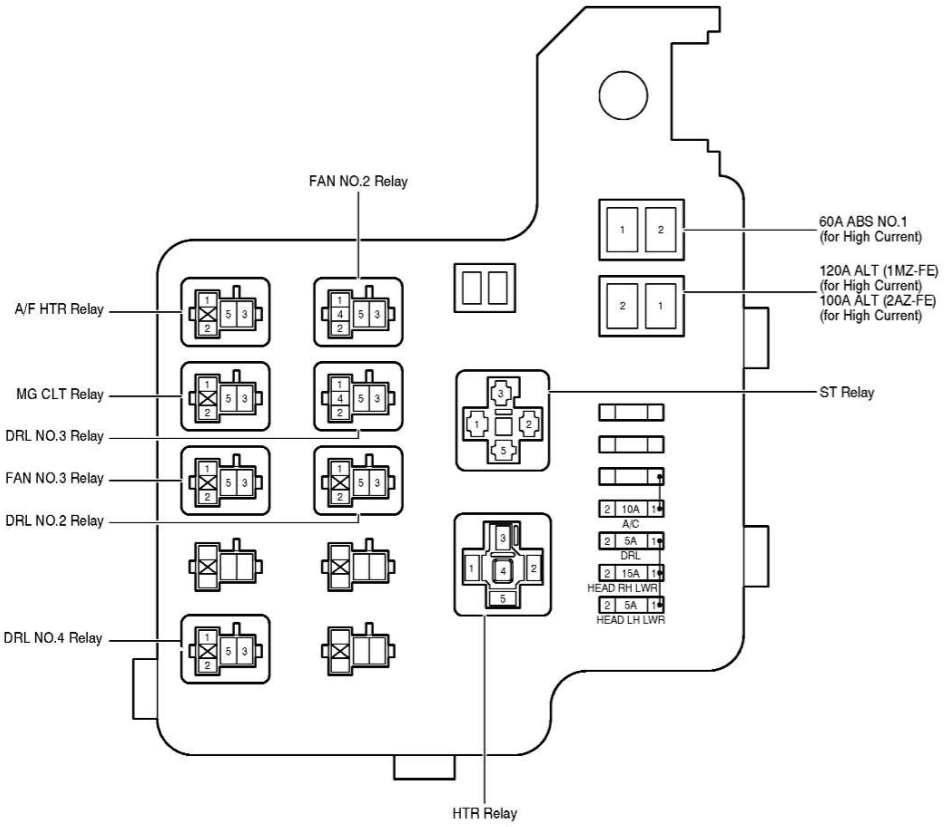
[Instrument Panel]



cardiagn.com

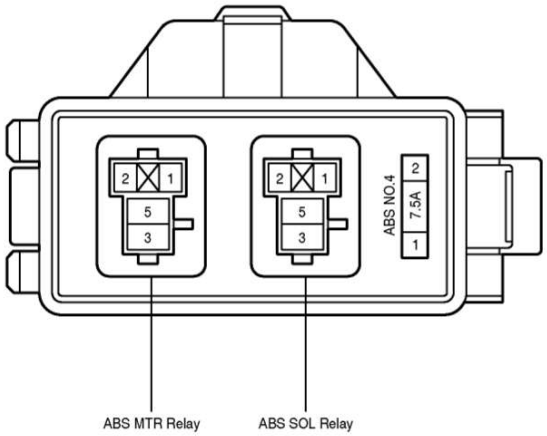
F RELAY LOCATIONS

① : Engine Room R/B	Engine Compartment Left (See Page 20)



cardiagn.com

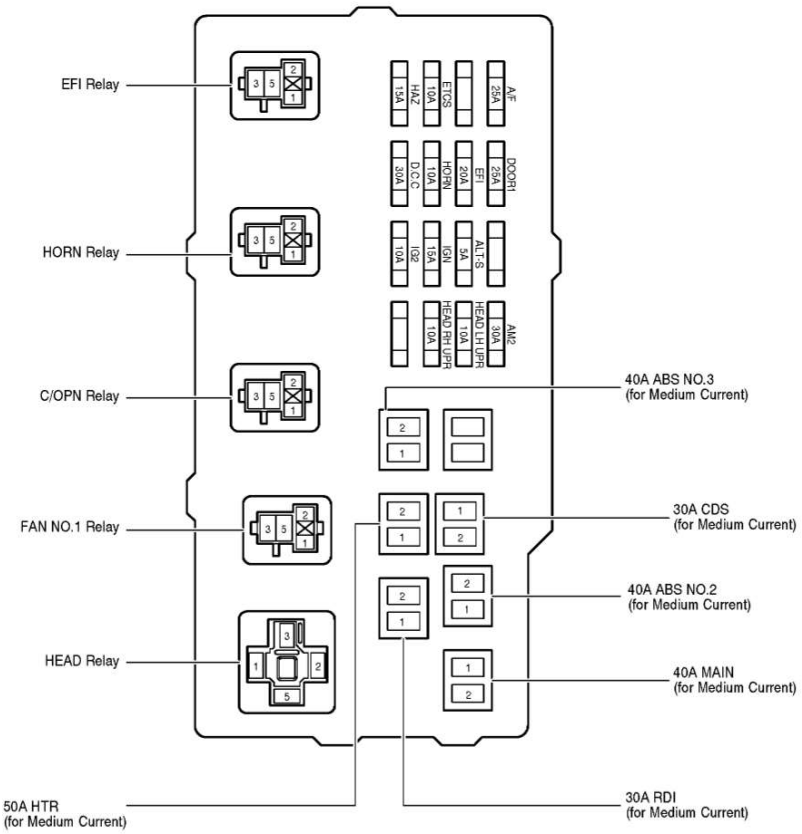
① : ABS R/B	Radiator Side Support LH (See Page 20)



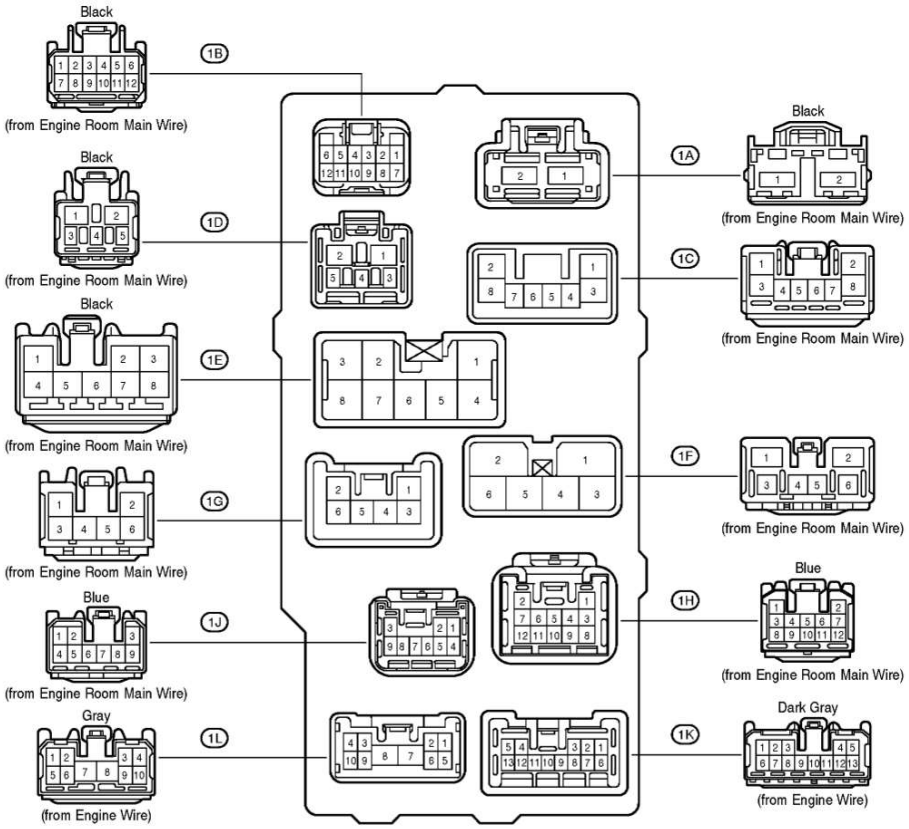
cardiagn.com

F RELAY LOCATIONS

: Engine Room J/B	Engine Compartment Left (See Page 20)

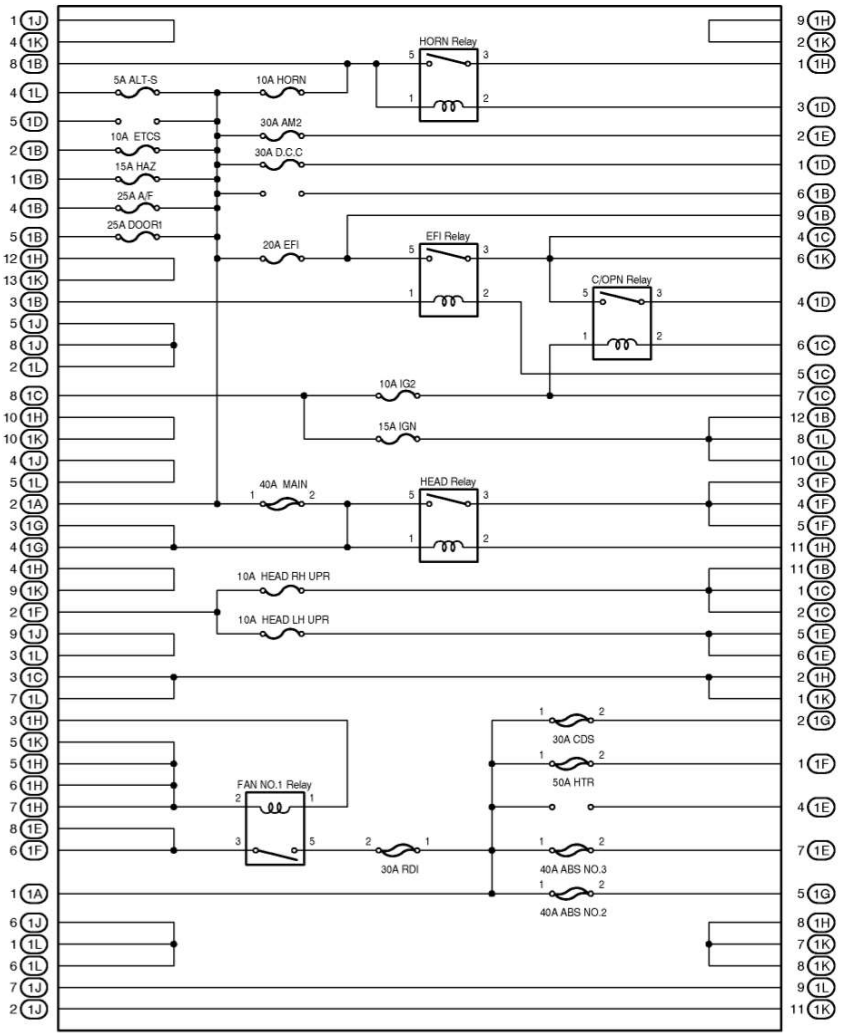


cardiagn.com



cardiagn.com

[Engine Room J/B Inner Circuit]

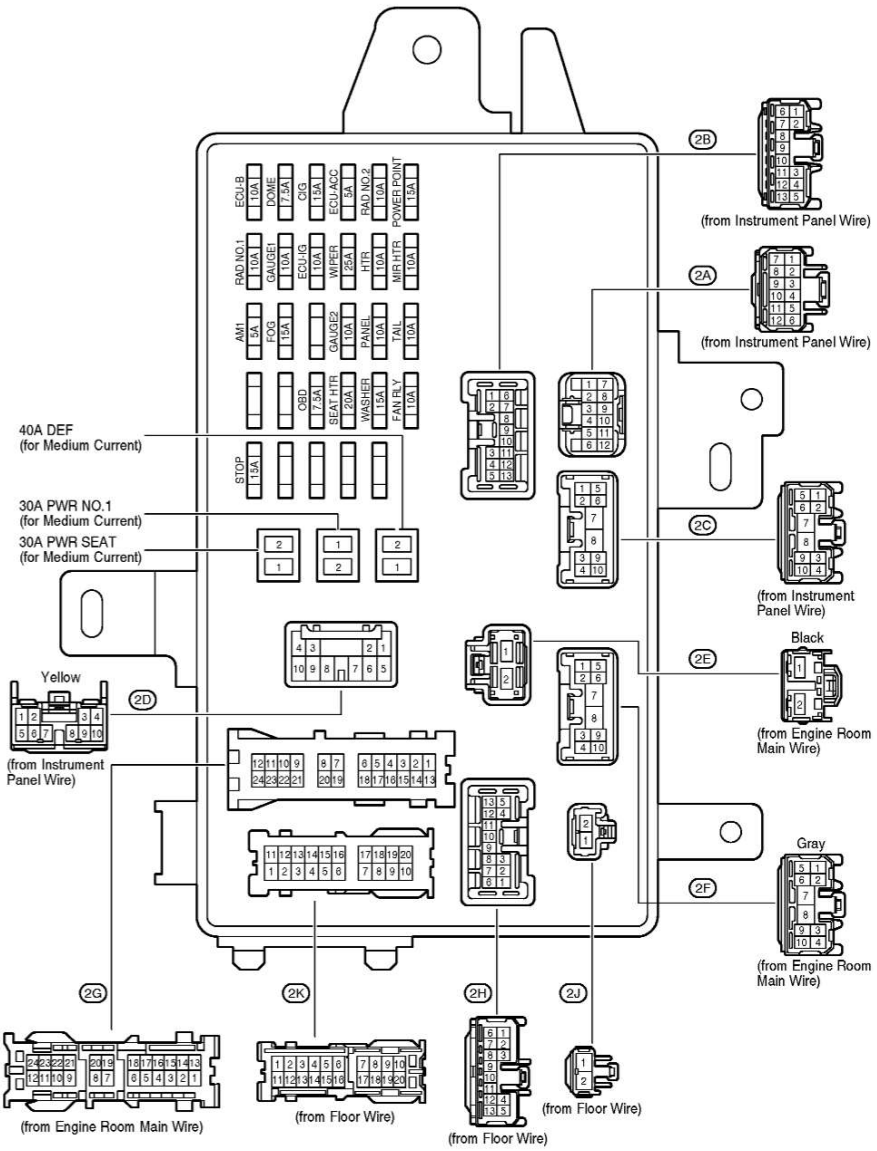


cardiagn.com

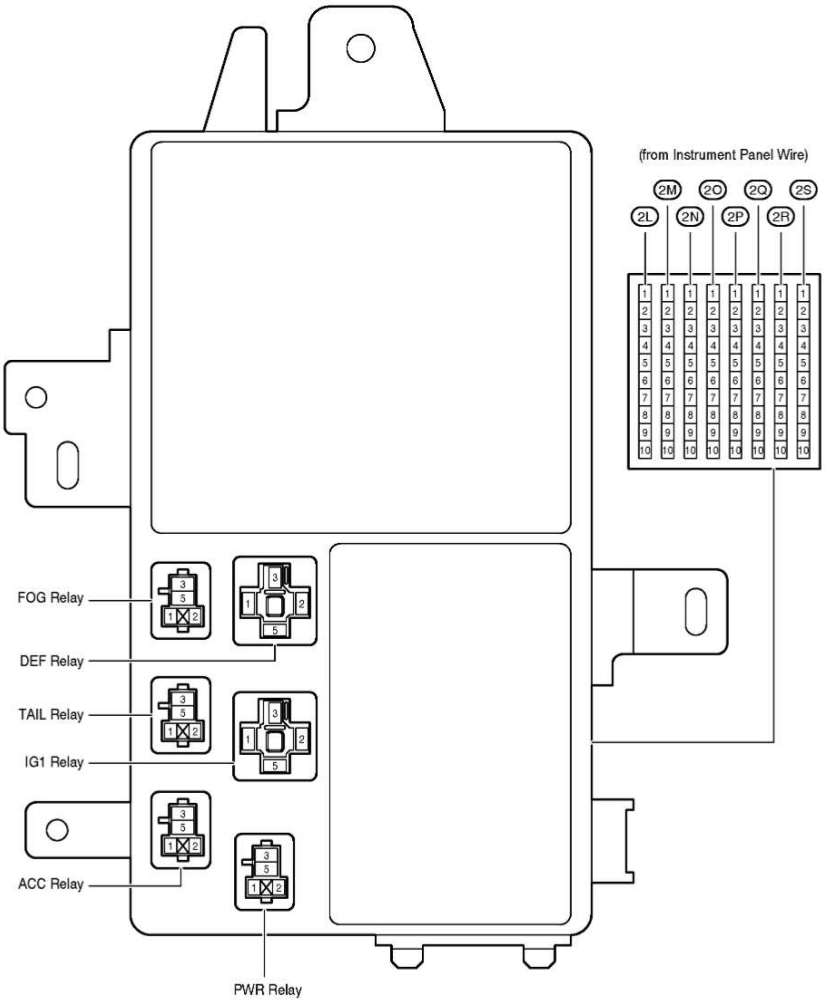
cardiagn.com

F RELAY LOCATIONS

: Driver Side J/B	Lower Finish Panel (See Page 21)



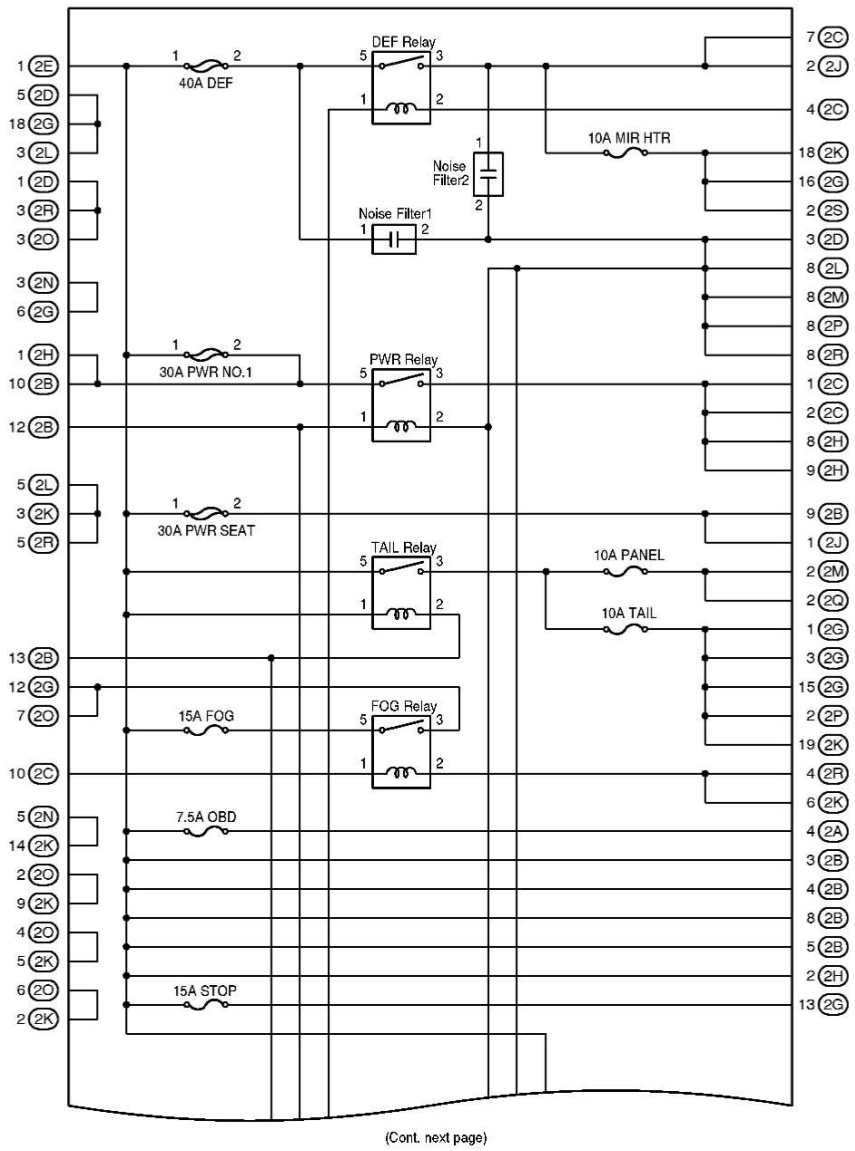
cardiagn.com



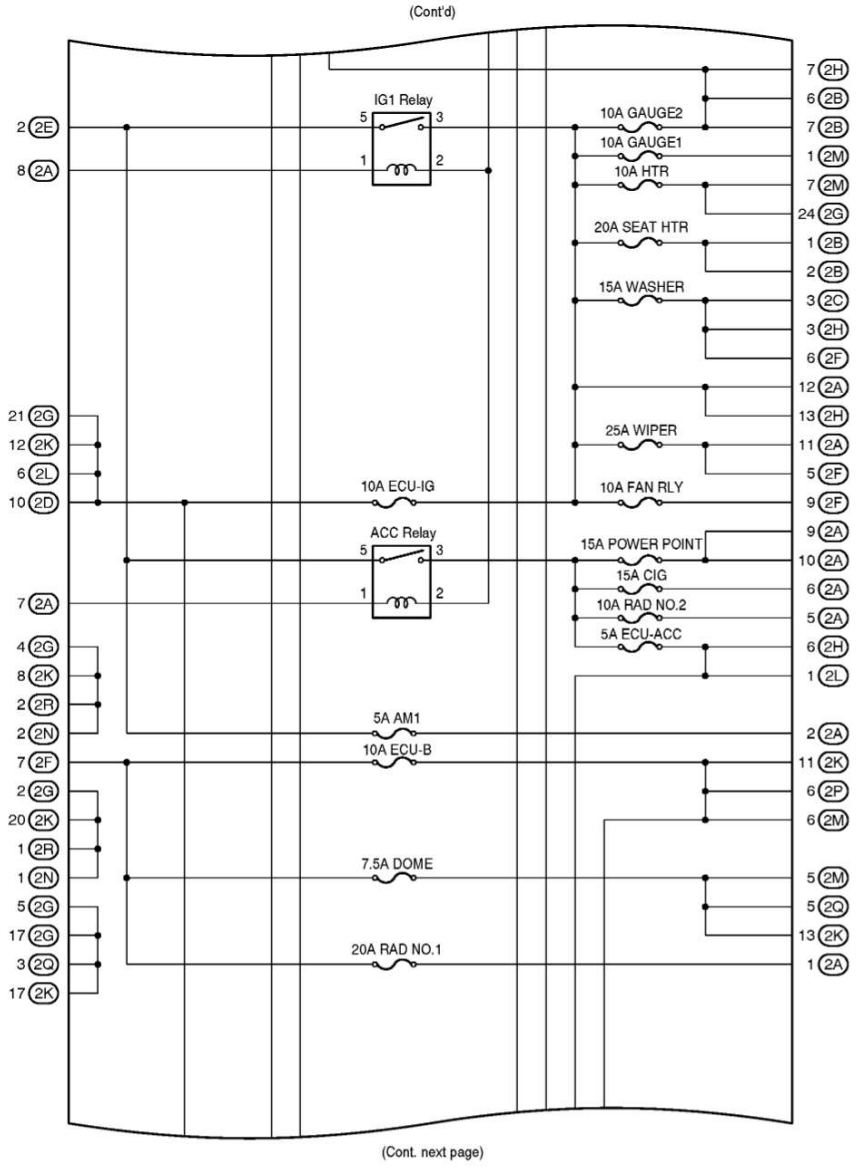
cardiagn.com

F RELAY LOCATIONS

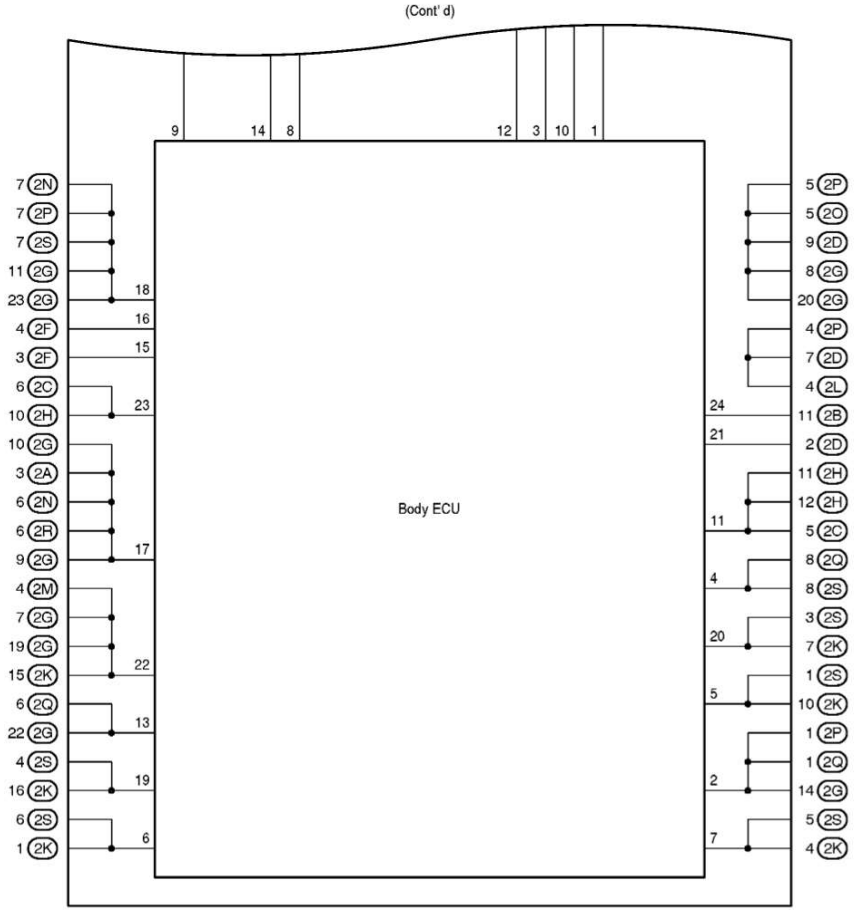
[Driver Side J/B Inner Circuit]



cardiagn.com



cardiagn.com

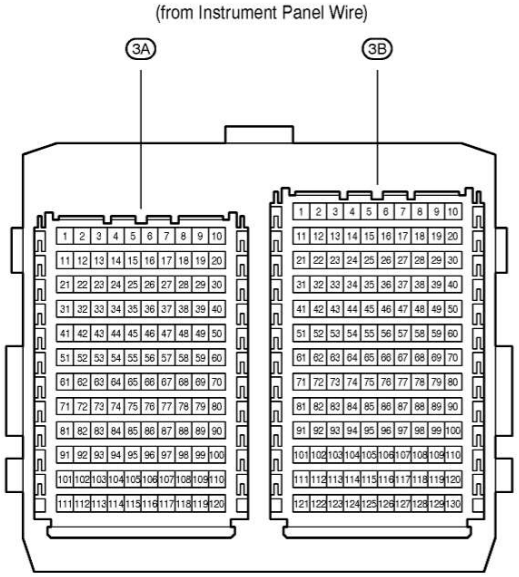


cardiagn.com

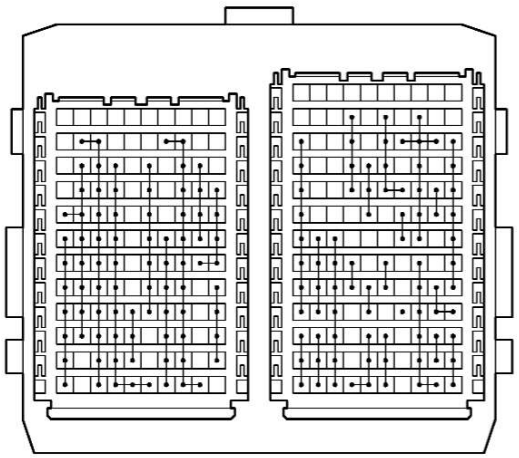
cardiagn.com

: Passenger Side J/B	Instrument Panel Brace RH (See Page 21)

(TMC Made Automatic A/C)

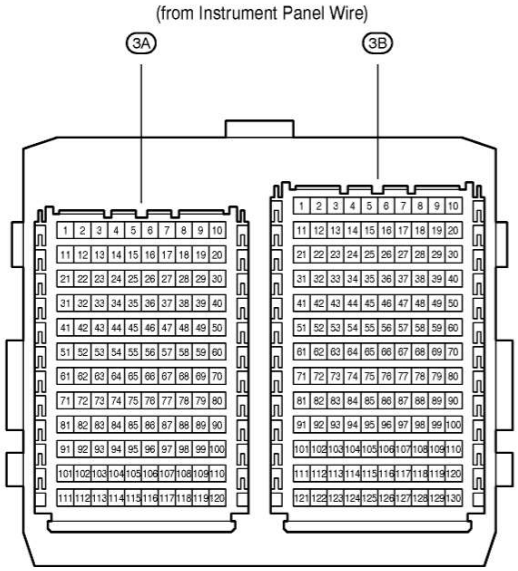


Short Terminal Grouping

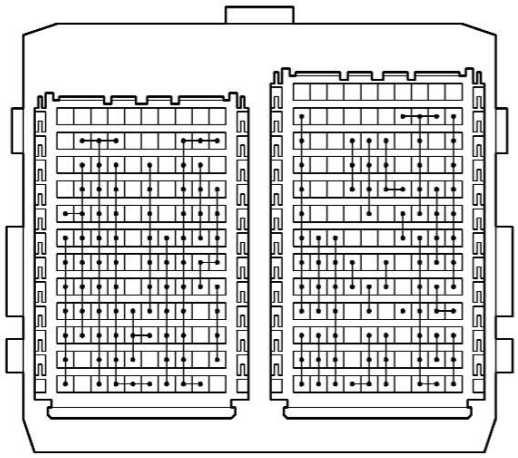


cardiagn.com

(TMMK Made Automatic A/C)

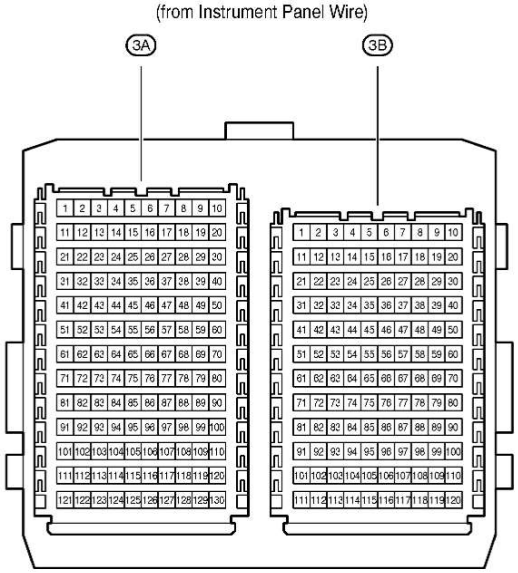


Short Terminal Grouping

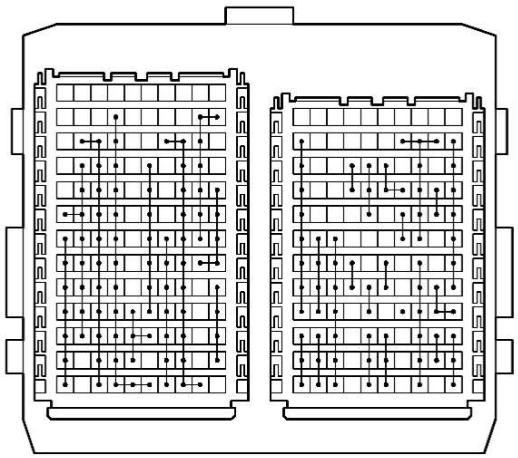


cardiagn.com

(TMC Made Manual A/C)

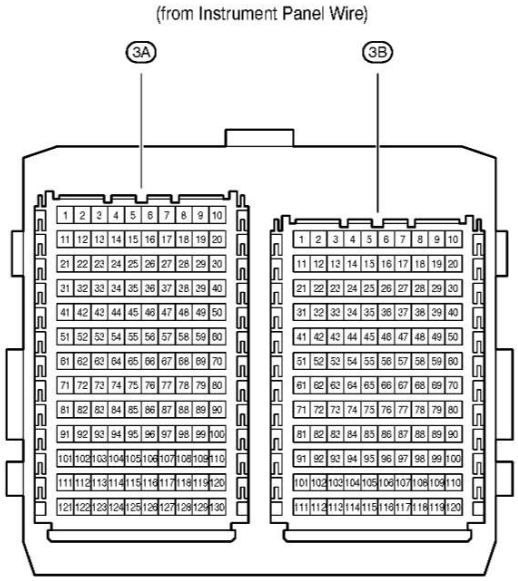


Short Terminal Grouping

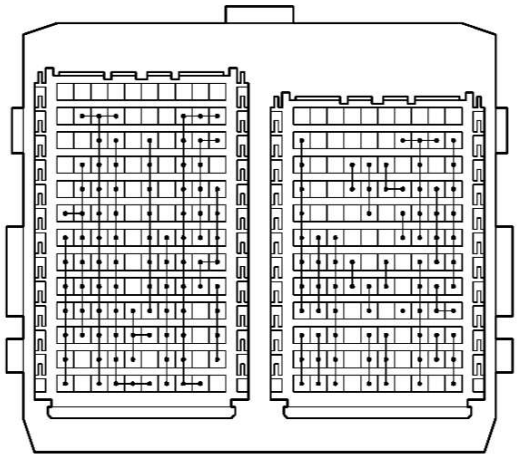


cardiagn.com

(TMMK Made Manual A/C)



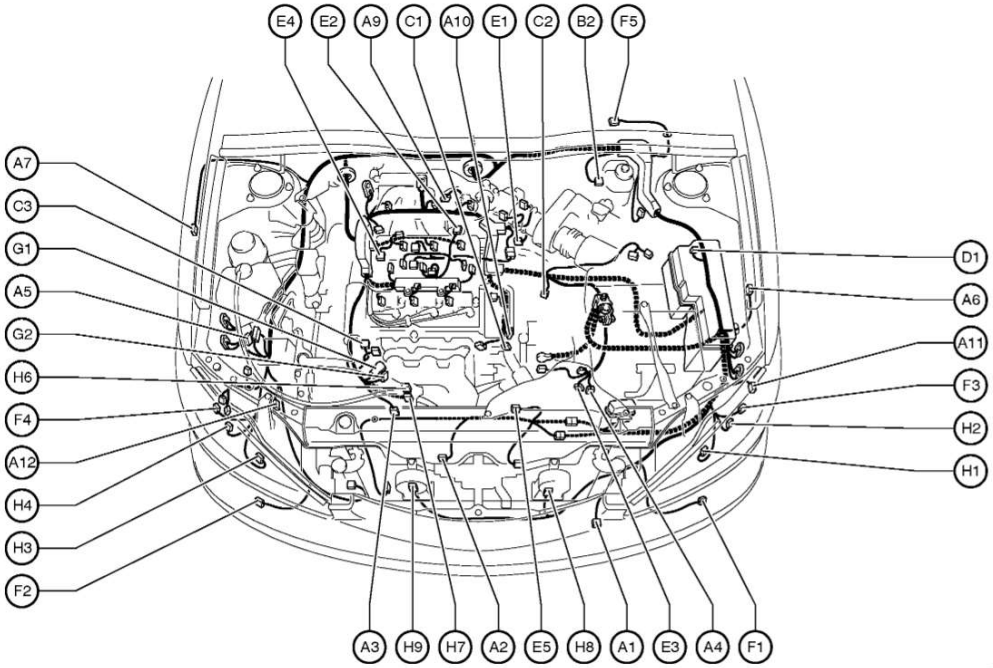
Short Terminal Grouping



cardiagn.com

Position of Parts in Engine Compartment

[1MZ–FE]



A 1 A/C Ambient Temp. Sensor
A 2 A/C Condenser Fan Motor
A 3 A/C Lock Sensor
A/C Magnetic Clutch
A 4 A/T Indicator Light SW
Back–Up Light SW
Park/Neutral Position SW
A 5 ABS & BA & TRAC & VSC Actuator
A 6 ABS Speed Sensor Front LH
A 7 ABS Speed Sensor Front RH
A 9 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
A10 Air Fuel Ratio Sensor (Bank 2 Sensor 1)
A11 Airbag Sensor Front LH
A12 Airbag Sensor Front RH

B 2 Brake Fluid Level Warning SW

C 1 Camshaft Position Sensor
C 2 Counter Gear Speed Sensor
C 3 Crankshaft Position Sensor

D 1 Diode (A/C No.1)

E 1 EGR Gas Temp. Sensor
E 2 EGR Valve Position Sensor
E 3 Electronically Controlled Transmission Solenoid
E 4 Engine Coolant Temp. Sensor
E 5 Engine Hood Courtesy SW

F 1 Front Fog Light LH
F 2 Front Fog Light RH
F 3 Front Parking Light LH
Front Turn Signal Light LH
F 4 Front Parking Light RH
Front Turn Signal Light RH
F 5 Front Wiper Motor

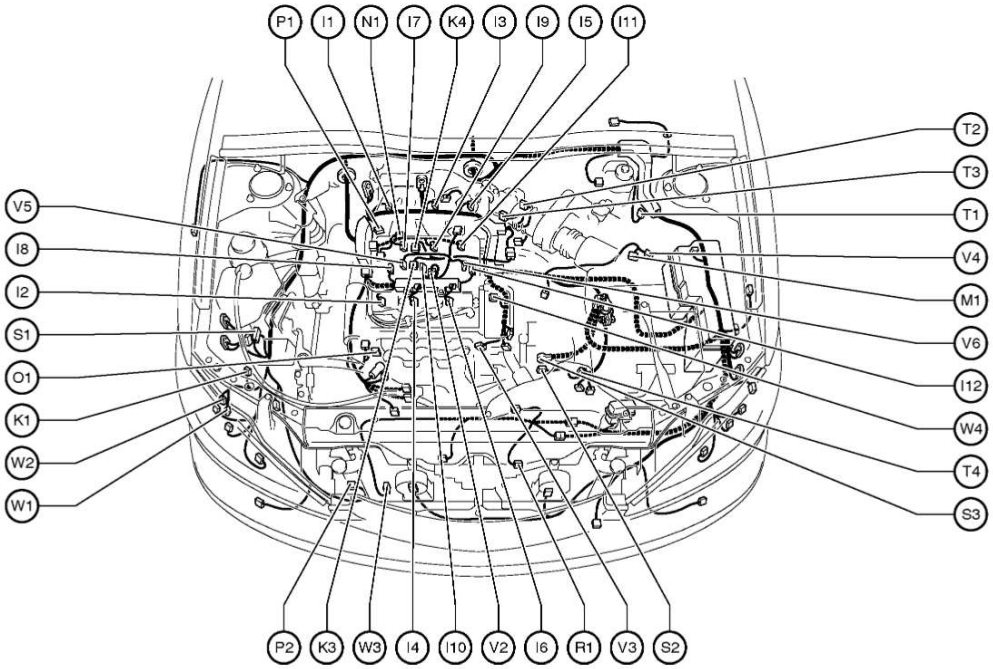
G 1 Generator
G 2 Generator

H 1 Headlight LH (High)
H 2 Headlight LH (Low)
H 3 Headlight RH (High)
H 4 Headlight RH (Low)
H 6 Heated Oxygen Sensor (Bank 1 Sensor 2)
H 7 Heated Oxygen Sensor (Bank 2 Sensor 2)
H 8 Horn (High)
H 9 Horn (Low)

cardiagn.com

Position of Parts in Engine Compartment

[1MZ–FE]



I 1 Ignition Coil and Igniter No.1
I 2 Ignition Coil and Igniter No.2
I 3 Ignition Coil and Igniter No.3
I 4 Ignition Coil and Igniter No.4
I 5 Ignition Coil and Igniter No.5
I 6 Ignition Coil and Igniter No.6
I 7 Injector No.1
I 8 Injector No.2
I 9 Injector No.3
I 10 Injector No.4
I 11 Injector No.5
I 12 Injector No.6

K 1 Keyless Buzzer
K 3 Knock Sensor No.1
K 4 Knock Sensor No.2

M 1 Mass Air Flow Meter

N 1 Noise Filter (Ignition)

O 1 Oil Pressure Sensor

P 1 Power Steering Oil Pressure SW
P 2 Pressure SW

R 1 Radiator Fan Motor

S 1 Skid Control ECU with Actuator
S 2 Starter
S 3 Starter

T 1 Theft Deterrent Horn
T 2 Throttle Control Motor
T 3 Throttle Position Sensor
T 4 Turbine Speed Sensor

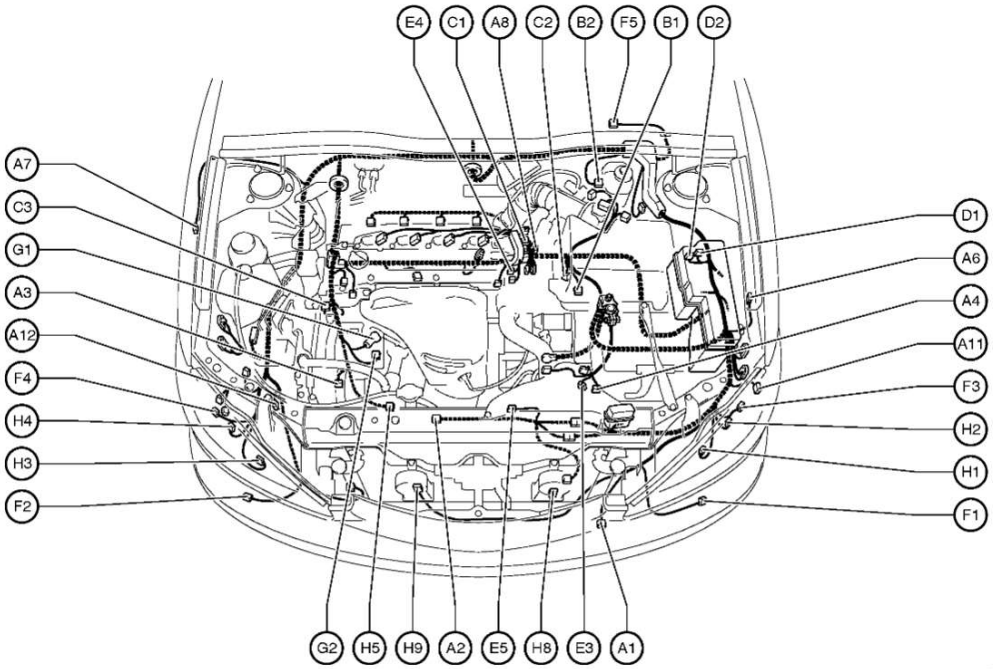
V 2 VSV (ACIS)
V 3 VSV (AICV)
V 4 VSV (Canister Closed Valve)
V 5 VSV (EGR)
V 6 VSV (EVAP)

W 1 Washer Level Sensor
W 2 Washer Motor
W 3 Water Temp. SW No.1
W 4 Water Temp. SW No.2

cardiagn.com

Position of Parts in Engine Compartment

[2AZ–FE]



A 1 A/C Ambient Temp. Sensor
A 2 A/C Condenser Fan Motor
A 3 A/C Lock Sensor
A/C Magnetic Clutch
A 4 A/T Indicator Light SW
Back–Up Light SW
Park/Neutral Position SW
A 6 ABS Speed Sensor Front LH
A 7 ABS Speed Sensor Front RH
A 8 Air Fuel Ratio Sensor
A 11 Airbag Sensor Front LH
A 12 Airbag Sensor Front RH

B 1 Back–Up Light SW
B 2 Brake Fluid Level Warning SW

C 1 Camshaft Position Sensor
C 2 Counter Gear Speed Sensor
C 3 Crankshaft Position Sensor

D 1 Diode (A/C No.1)
D 2 Diode (A/C No.2)

E 3 Electronically Controlled Transmission Solenoid
E 4 Engine Coolant Temp. Sensor
E 5 Engine Hood Courtesy SW

F 1 Front Fog Light LH
F 2 Front Fog Light RH
F 3 Front Parking Light LH
Front Turn Signal Light LH
F 4 Front Parking Light RH
Front Turn Signal Light RH
F 5 Front Wiper Motor

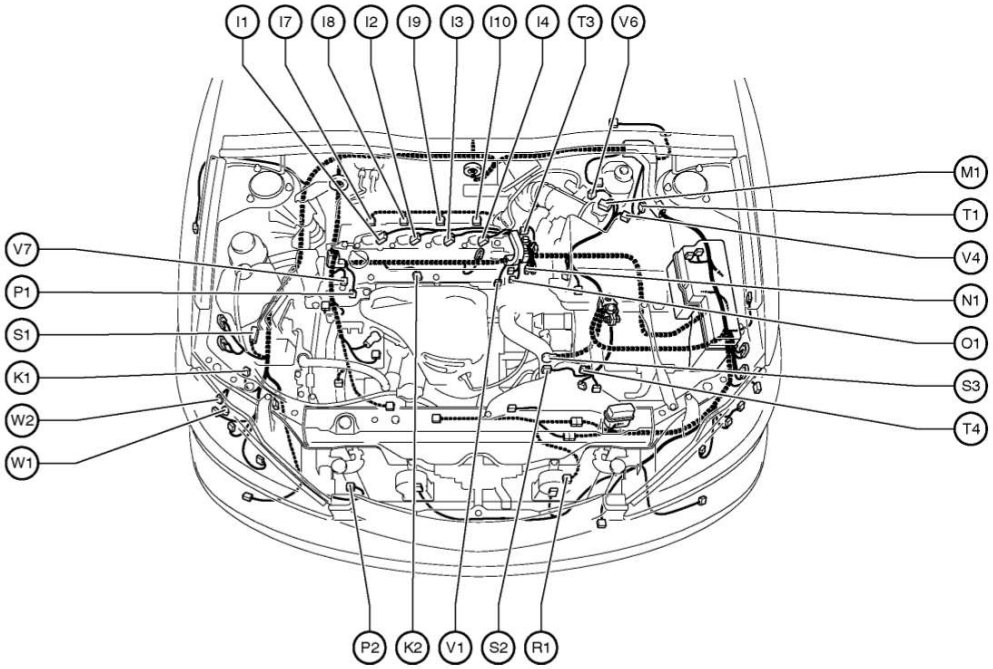
G 1 Generator
G 2 Generator

H 1 Headlight LH (High)
H 2 Headlight LH (Low)
H 3 Headlight RH (High)
H 4 Headlight RH (Low)
H 5 Heated Oxygen Sensor
H 8 Horn (High)
H 9 Horn (Low)

cardiagn.com

Position of Parts in Engine Compartment

[2AZ–FE]



I 1 Ignition Coil and Igniter No.1
I 2 Ignition Coil and Igniter No.2
I 3 Ignition Coil and Igniter No.3
I 4 Ignition Coil and Igniter No.4
I 7 Injector No.1
I 8 Injector No.2
I 9 Injector No.3
I 10 Injector No.4

K 1 Keyless Buzzer
K 2 Knock Sensor

M 1 Mass Air Flow Meter

N 1 Noise Filter (Ignition)

O 1 Oil Pressure Sensor

P 1 Power Steering Oil Pressure SW
P 2 Pressure SW

R 1 Radiator Fan Motor

S 1 Skid Control ECU with Actuator
S 2 Starter
S 3 Starter

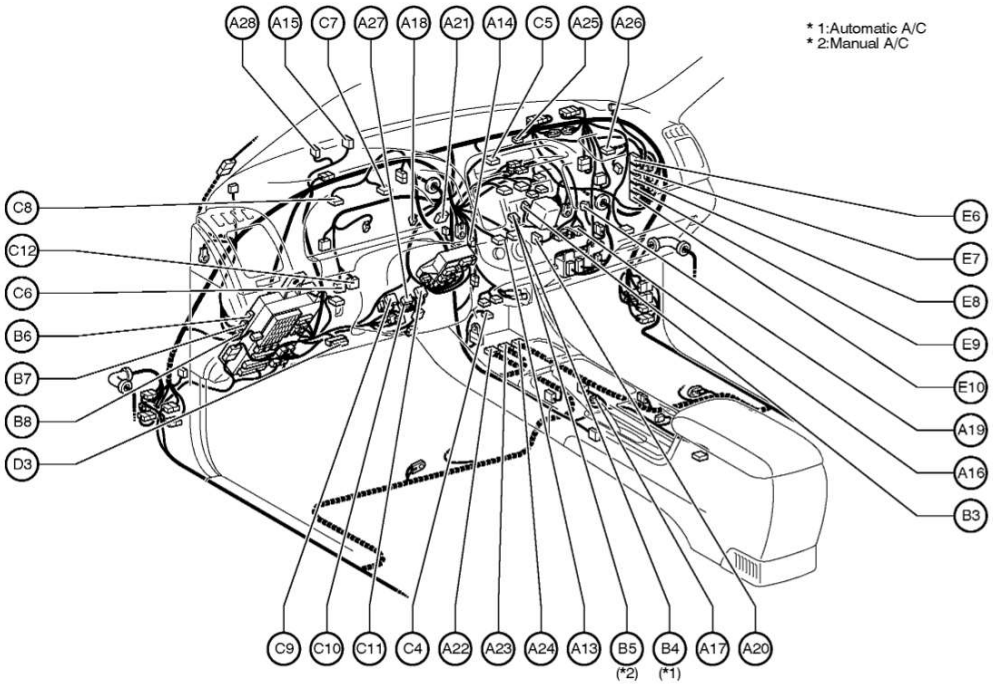
T 1 Theft Deterrent Horn
T 3 Throttle Position Sensor
T 4 Turbine Speed Sensor

V 1 Vehicle Speed Sensor (Combination Meter)
V 4 VSV (Canister Closed Valve)
V 6 VSV (EVAP)
V 7 VVT Solenoid

W 1 Washer Level Sensor
W 2 Washer Motor

cardiagn.com

Position of Parts in Instrument Panel



A13 A/C Control Assembly
A14 A/C Room Temp. Sensor
A15 A/C Solar Sensor
A16 A/C Thermistor
A17 A/T Shift Lever Illumination
O/D Main SW
A18 Accelerator Position Sensor
A19 Air Inlet Control Servo Motor
A20 Air Mix Control Servo Motor
A21 Air Vent Mode Servo Motor
A22 Airbag Sensor Assembly
A23 Airbag Sensor Assembly
A24 Airbag Sensor Assembly
A25 Airbag Squib (Front Passenger Airbag Assembly)
A26 Airbag Squib (Front Passenger Airbag Assembly)
A27 Airbag Squib (Steering Wheel Pad)
A28 Automatic Light Control Sensor

B 3 Blower Motor
B 4 Blower Motor Controller
B 5 Blower Resistor
B 6 Body ECU
B 7 Body ECU
B 8 Body ECU

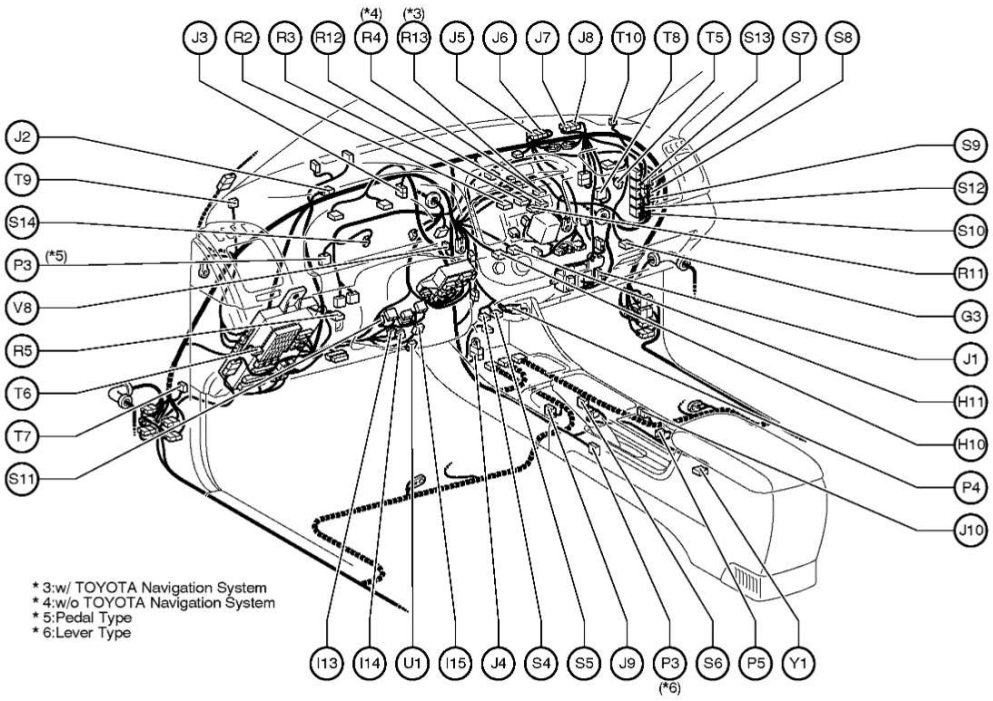
C 4 Cigarette Lighter
Cigarette Lighter Illumination
C 5 Clock
C 6 Clutch Start SW
C 7 Combination Meter
C 8 Combination Meter
C 9 Combination SW
C10 Combination SW
C11 Combination SW
C12 Cruise Control Clutch SW

D 3 Data Link Connector 3

E 6 Engine Control Module
E 7 Engine Control Module
E 8 Engine Control Module
E 9 Engine Control Module
E10 Engine Control Module

cardiagn.com

Position of Parts in Instrument Panel



G 3 Glove Box Light and SW

H10 Heater Control SW
H11 Heater Control SW

I 13 Ignition Key Cylinder Light
I 14 Ignition Key Cylinder Light
Transponder Key Amplifier
I 15 Ignition SW

J 1 Junction Connector
J 2 Junction Connector
J 3 Junction Connector
J 4 Junction Connector
J 5 Junction Connector
J 6 Junction Connector
J 7 Junction Connector
J 8 Junction Connector
J 9 Junction Connector
J 10 Junction Connector

P 3 Parking Brake SW
P 4 Power Outlet (Front)
P 5 Power Outlet (Rear)

R 2 Radio and Player
R 3 Radio and Player
R 4 Radio and Player
R 5 Rheostat
R 11 Radio and Player with Display
R 12 Radio and Player with Display
R 13 Radio and Player with Display

S 4 Seat Heater SW (Driver's Seat)
S 5 Seat Heater SW (Front Passenger's Seat)
S 6 Shift Lock Control ECU
S 7 Skid Control ECU
S 8 Skid Control ECU
S 9 Skid Control ECU
S 10 Skid Control ECU
S 11 Steering Sensor
S 12 Stereo Component Amplifier
S 13 Stereo Component Amplifier
S 14 Stop Light SW

T 5 Theft Deterrent ECU
T 6 TRAC OFF SW
T 7 Turn Signal Flasher Relay
T 8 TVIP ECU
T 9 Tweeter LH
T 10 Tweeter RH

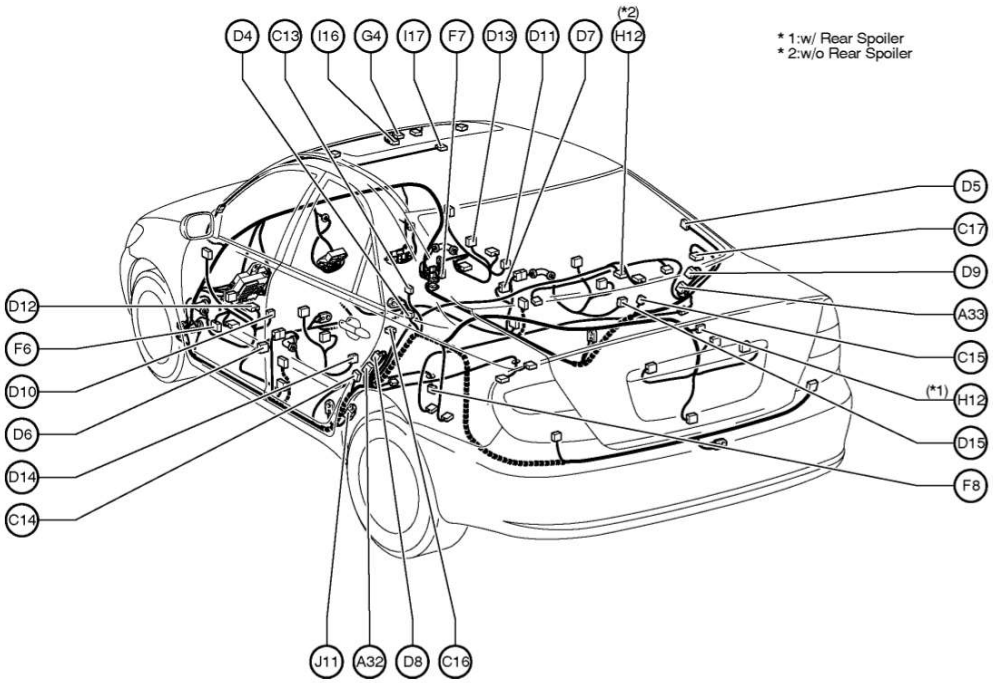
U 1 Unlock Warning SW

V 8 VSC Warning Buzzer

Y 1 Yaw Rate Sensor

cardiagn.com

Position of Parts in Body



A32 ABS Speed Sensor Rear LH
A33 ABS Speed Sensor Rear RH

C13 Choke Coil
C14 Curtain Shield Airbag Sensor LH
C15 Curtain Shield Airbag Sensor RH
C16 Curtain Shield Airbag Squib LH
C17 Curtain Shield Airbag Squib RH

D 4 Diode
D 5 Door Control Receiver
D 6 Door Courtesy SW Front LH
D 7 Door Courtesy SW Front RH
D 8 Door Courtesy SW Rear LH
D 9 Door Courtesy SW Rear RH
D10 Door Key Lock and Unlock SW Front LH
Door Lock Motor Front LH
Door Unlock Detection SW Front LH
D11 Door Key Lock and Unlock SW Front RH
Door Lock Motor Front RH
Door Unlock Detection SW Front RH
D12 Door Lock Control SW Front LH
Power Window Master SW
D13 Door Lock Control SW RH
D14 Door Lock Motor Rear LH
Door Unlock Detection SW Rear LH
D15 Door Lock Motor Rear RH
Door Unlock Detection SW Rear RH

F 6 Front Door Speaker LH
F 7 Front Door Speaker RH
F 8 Fuel Pump
Fuel Sender

G 4 Garage Door Opener
Moon Roof Control SW
Personal Light

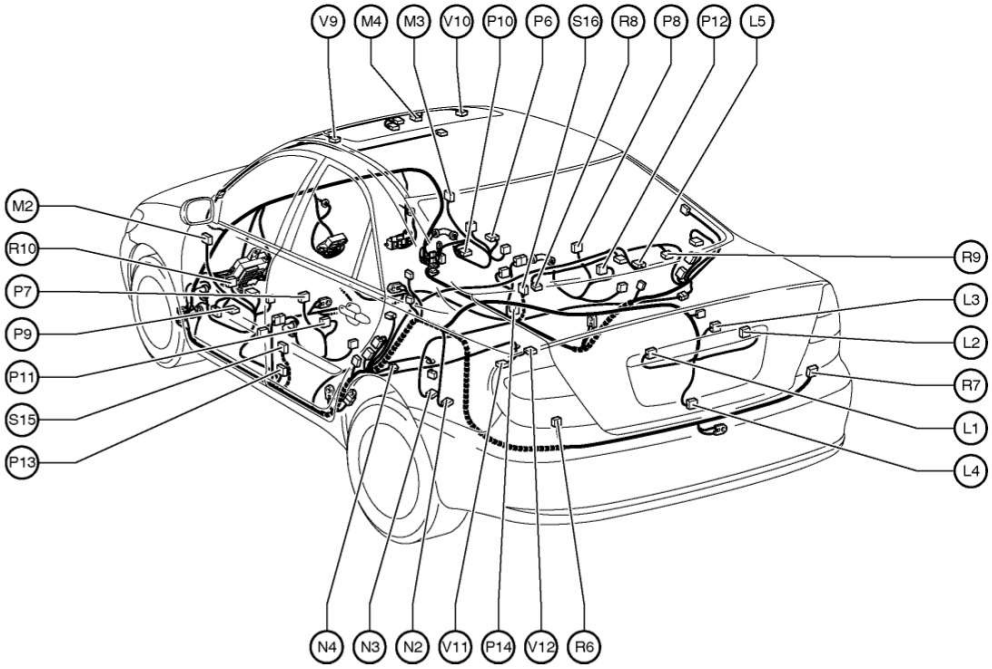
H12 High Mounted Stop Light

I 16 Inner Mirror
I 17 Interior Light

J 11 Junction Connector

cardiagn.com

Position of Parts in Body



L 1 License Plate Light LH
L 2 License Plate Light RH
L 3 Luggage Compartment Door Key Unlock SW
L 4 Luggage Compartment Door Opener Motor
Luggage Compartment Light SW
L 5 Luggage Compartment Light

M 2 Mirror Heater LH
Remote Control Mirror LH
M 3 Mirror Heater RH
Remote Control Mirror RH
M 4 Moon Roof Control ECU and Motor

N 2 Navigation ECU
N 3 Navigation ECU
N 4 Noise Filter

P 6 Power Window Control SW Front RH
P 7 Power Window Control SW Rear LH
P 8 Power Window Control SW Rear RH
P 9 Power Window Motor Front LH
P10 Power Window Motor Front RH
P11 Power Window Motor Rear LH
P12 Power Window Motor Rear RH
P13 Pretensioner LH
P14 Pretensioner RH

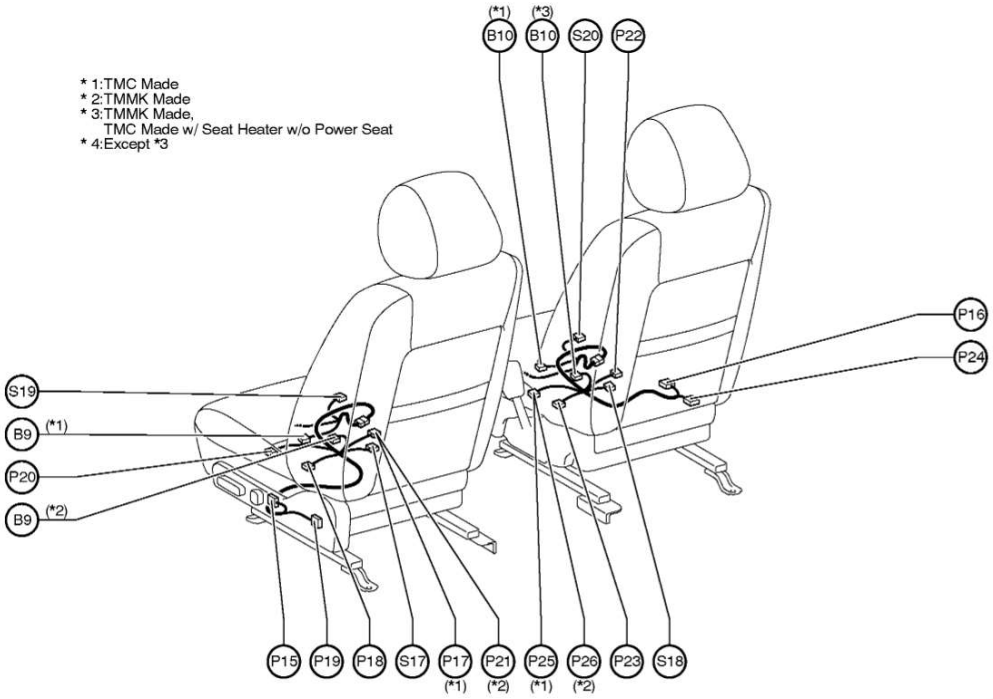
R 6 Rear Combination Light LH
R 7 Rear Combination Light RH
R 8 Rear Speaker LH
R 9 Rear Speaker RH
R10 Remote Control Mirror SW

S15 Side Airbag Sensor LH
S16 Side Airbag Sensor RH

V 9 Vanity Light LH
V10 Vanity Light RH
V11 Vapor Pressure Sensor
V12 VSV (Pressure Switching Valve)

cardiagn.com

Position of Parts in Seat



B 9 Buckle SW LH
B10 Buckle SW RH
Occupant Detection Sensor

P15 Power Seat Control SW (Driver's Seat)
P16 Power Seat Control SW (Front Passenger's Seat)
P17 Power Seat Motor (Driver's Seat Front Vertical Control)
P18 Power Seat Motor (Driver's Seat Lifter Control)
P19 Power Seat Motor (Driver's Seat Reclining Control)
P20 Power Seat Motor (Driver's Seat Slide Control)
P21 Power Seat Motor (Driver's Seat)
P22 Power Seat Motor
(Front Passenger's Seat Front Vertical Control)
P23 Power Seat Motor
(Front Passenger's Seat Lifter Control)
P24 Power Seat Motor
(Front Passenger's Seat Reclining Control)
P25 Power Seat Motor
(Front Passenger's Seat Slide Control)
P26 Power Seat Motor (Front Passenger's Seat)

S17 Seat Heater LH
S18 Seat Heater RH
S19 Side Airbag Squib LH
S20 Side Airbag Squib RH

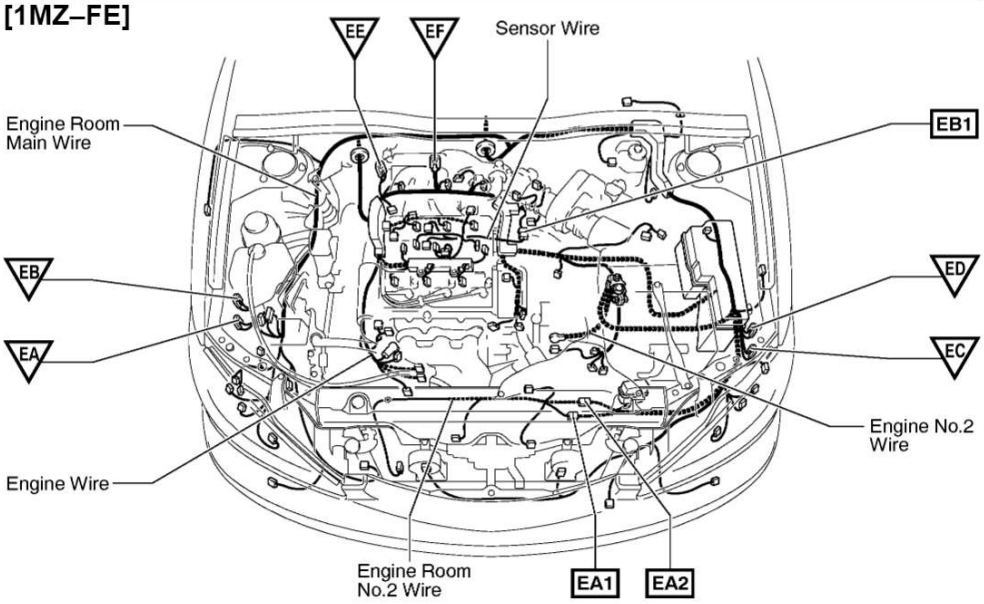
cardiagn.com

cardiagn.com

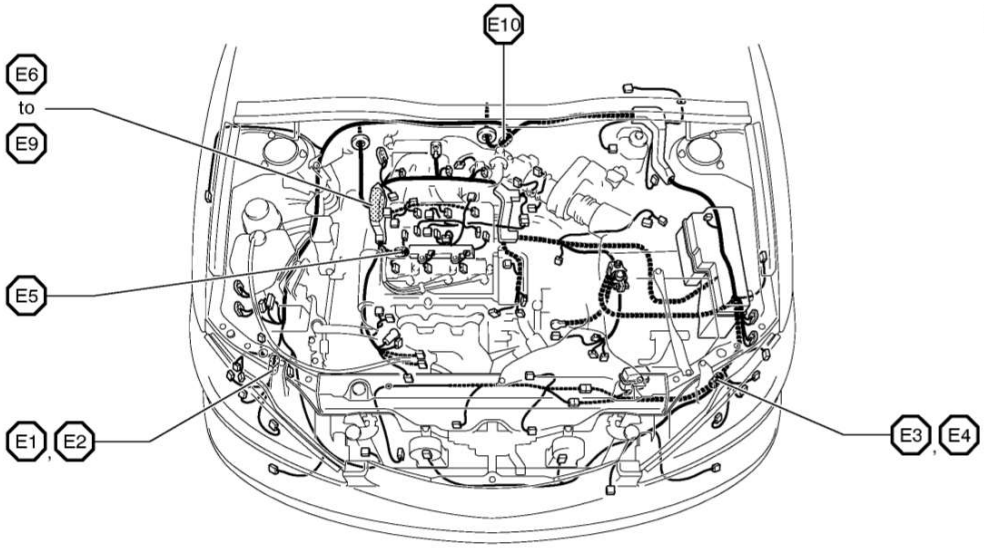
▭ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

[1MZ–FE]

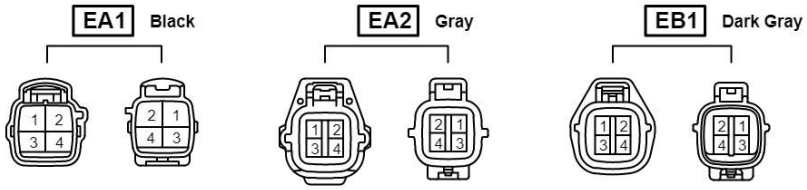


○ : Location of Splice Points



cardiagn.com

Connector Joining Wire Harness and Wire Harness



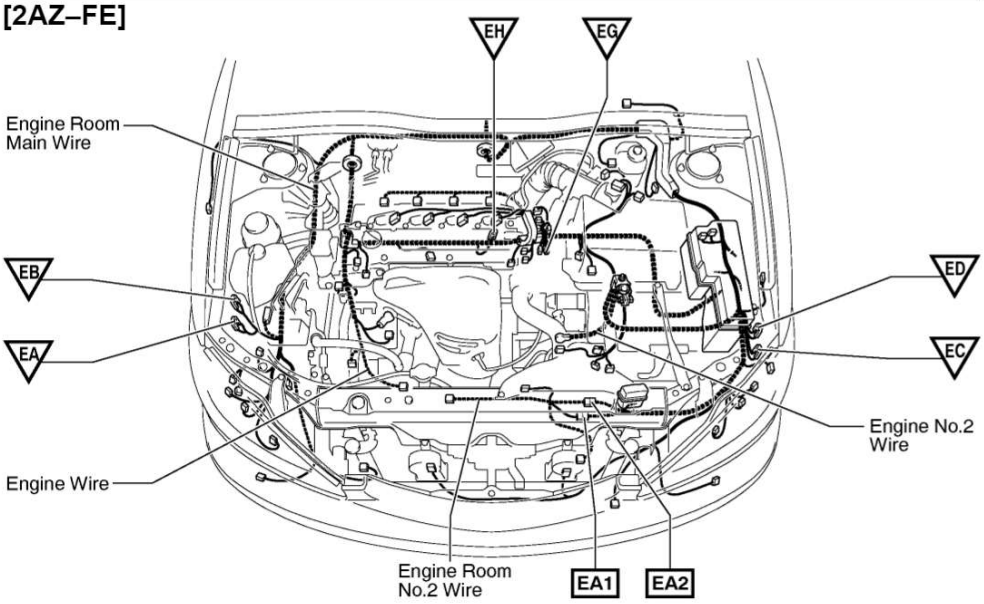
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Supprot LH)
EA2	
EB1	Engine Wire and Sensor Wire (Left Back of Cylinder Head)

cardiagn.com

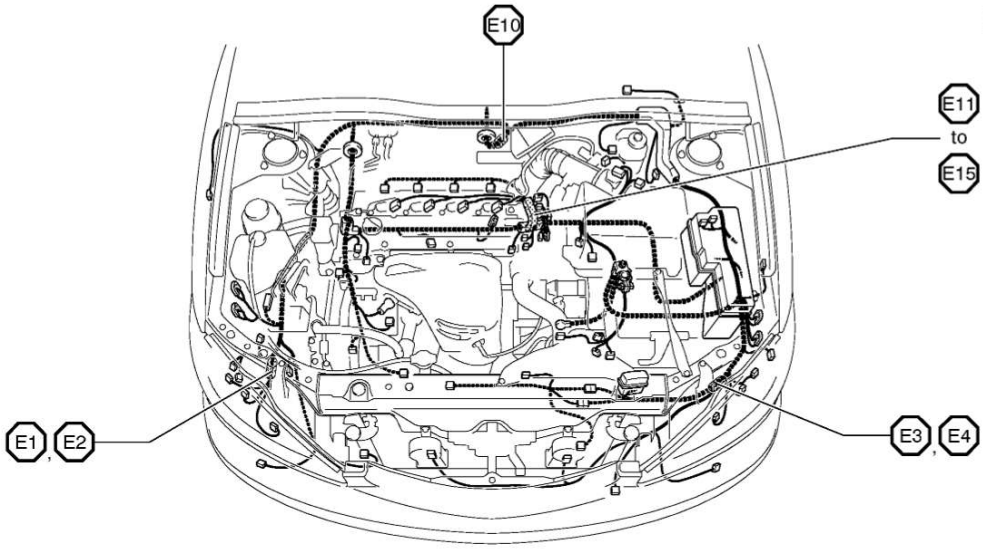
▭ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

[2AZ–FE]

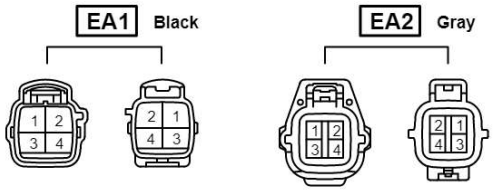


◯ : Location of Splice Points



cardiagn.com

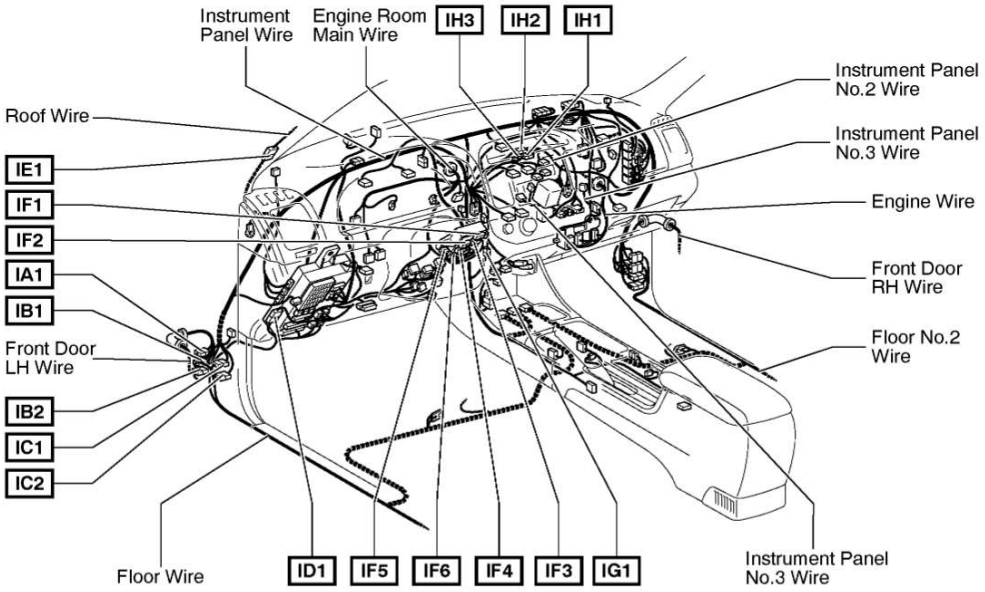
Connector Joining Wire Harness and Wire Harness



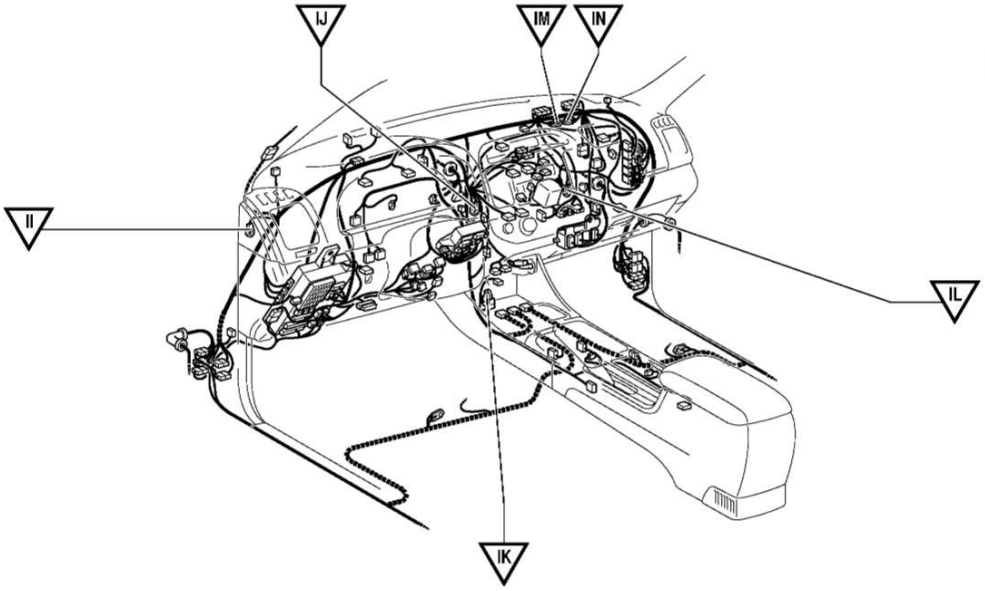
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
EA2	

cardiagn.com

▭ : Location of Connector Joining Wire Harness and Wire Harness

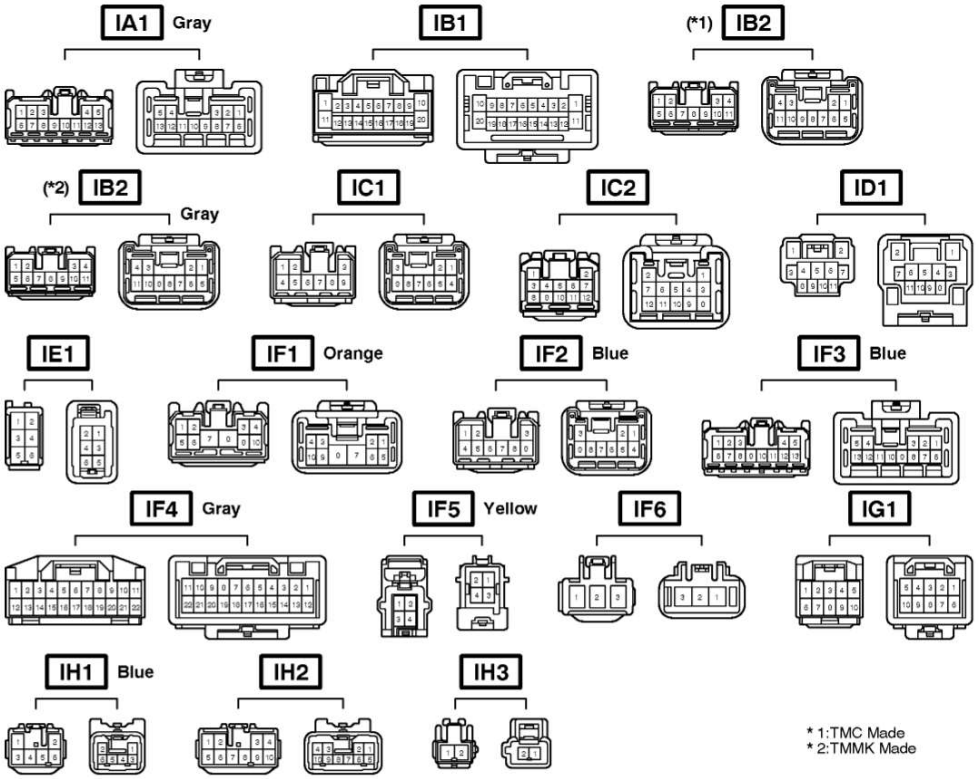


▽ : Location of Ground Points



cardiagn.com

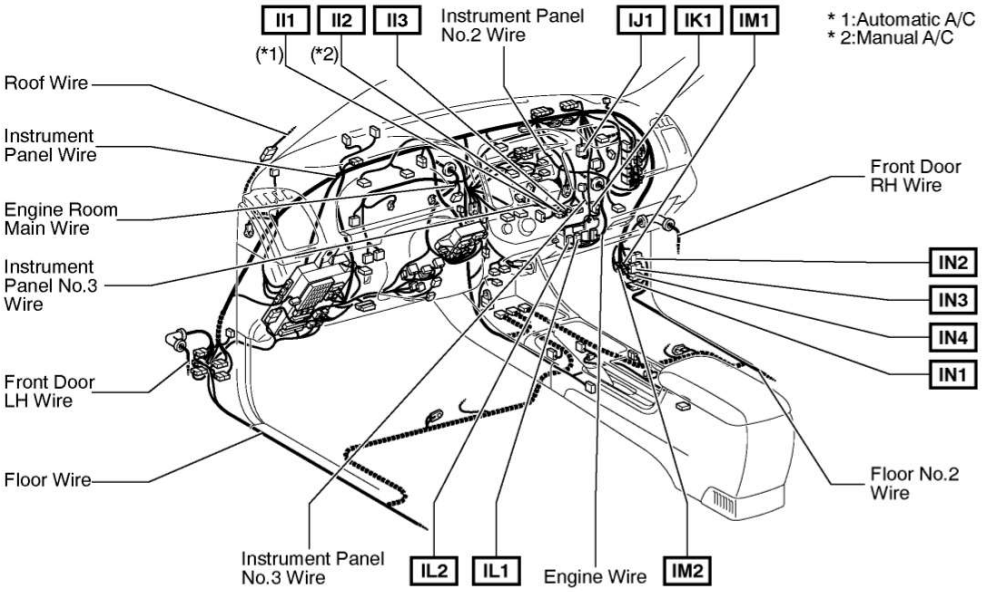
Connector Joining Wire Harness and Wire Harness



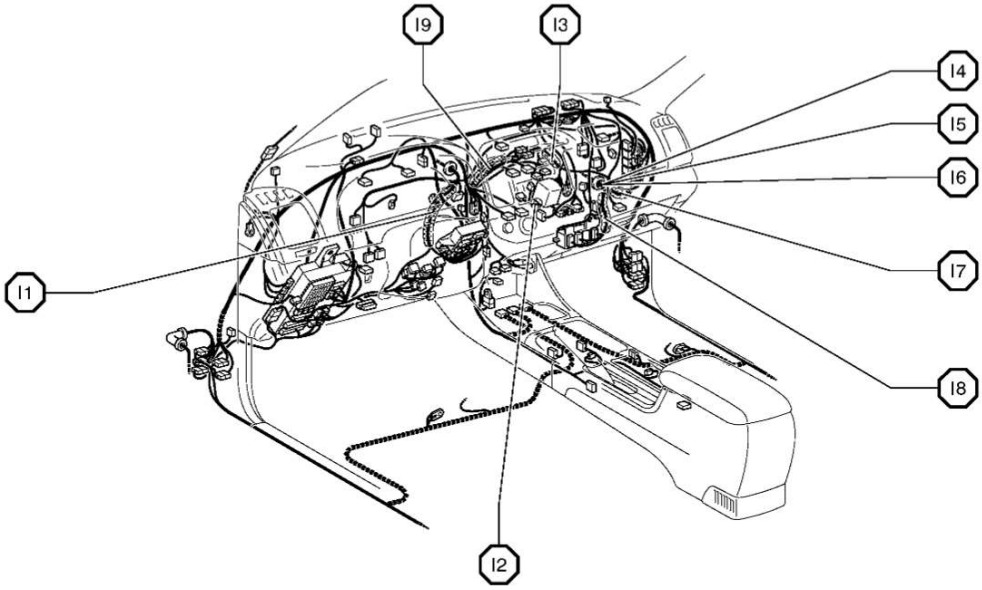
Code	Joining Wire Harness and Wire Harness (Connector Location)
IA1	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2	
IC1	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IC2	
ID1	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IE1	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IF1	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF2	
IF3	
IF4	
IF5	
IF6	
IG1	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
IH1	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2	
IH3	

cardiagn.com

▭ : Location of Connector Joining Wire Harness and Wire Harness

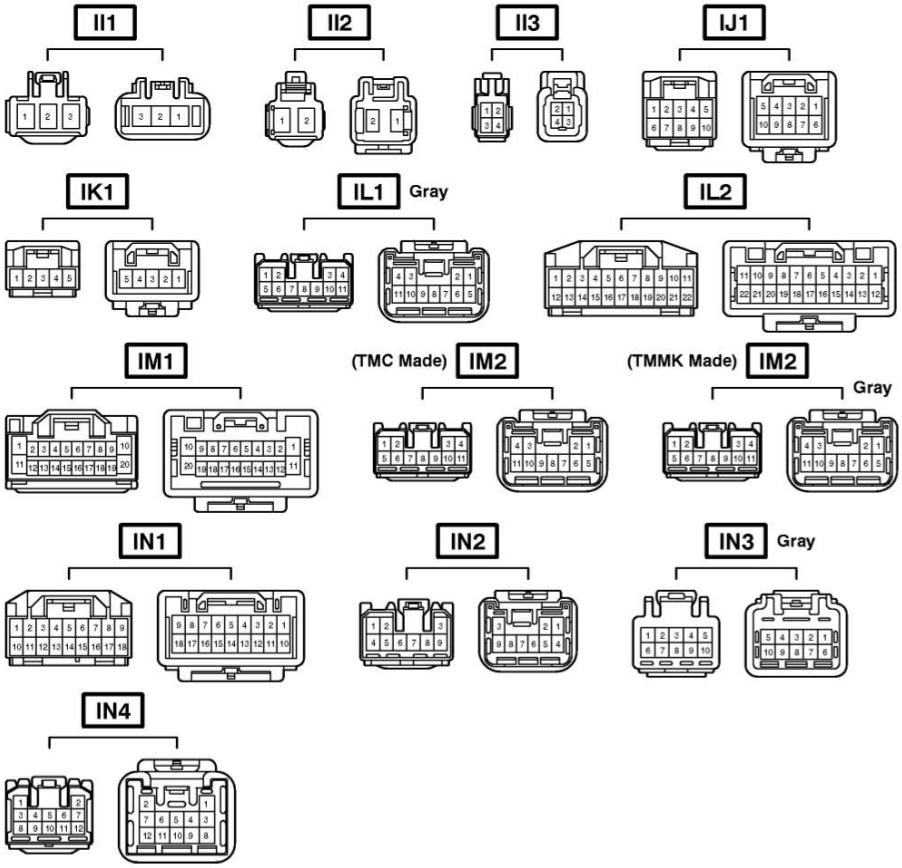


○ : Location of Splice Points



cardiagn.com

Connector Joining Wire Harness and Wire Harness

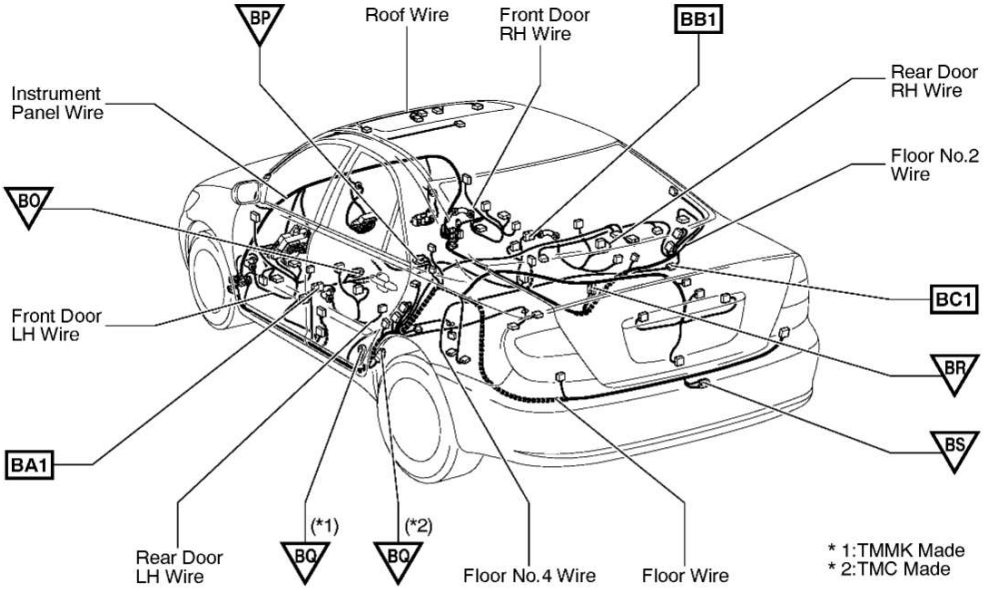


Code	Joining Wire Harness and Wire Harness (Connector Location)
II1	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II2	
II3	
IJ1	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
IL1	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2	
IM1	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2	
IN1	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN2	
IN3	
IN4	

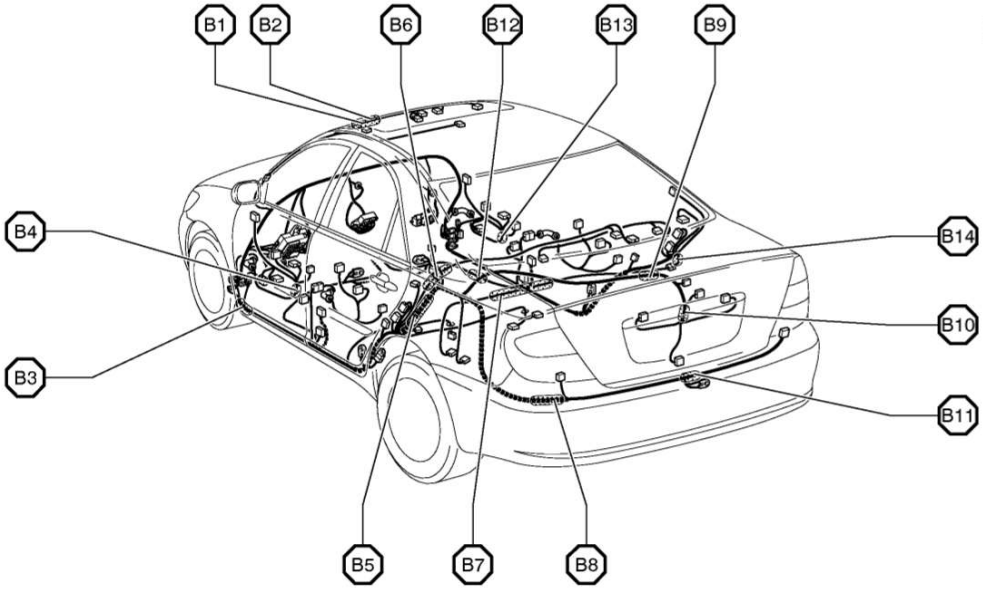
cardiagn.com

▭ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

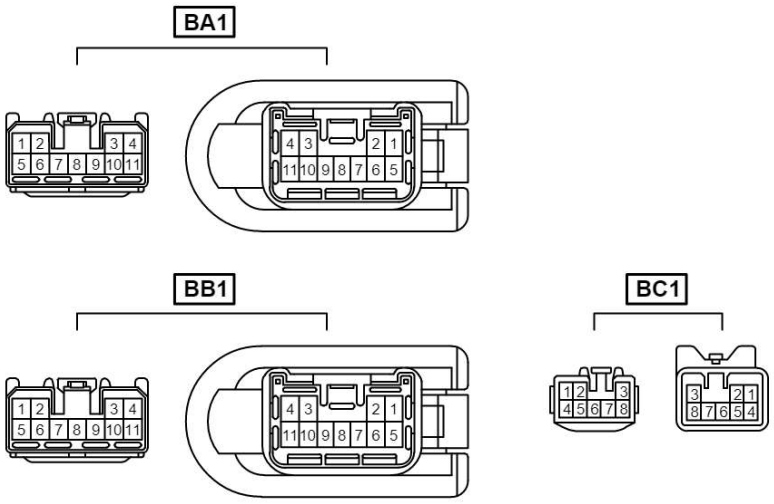


⬡ : Location of Splice Points



cardiagn.com

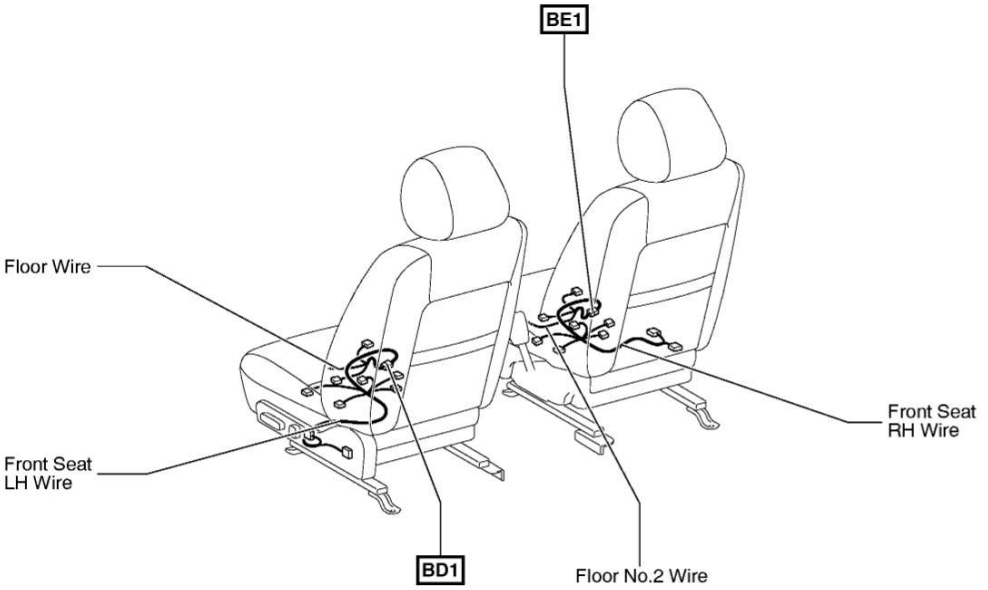
Connector Joining Wire Harness and Wire Harness



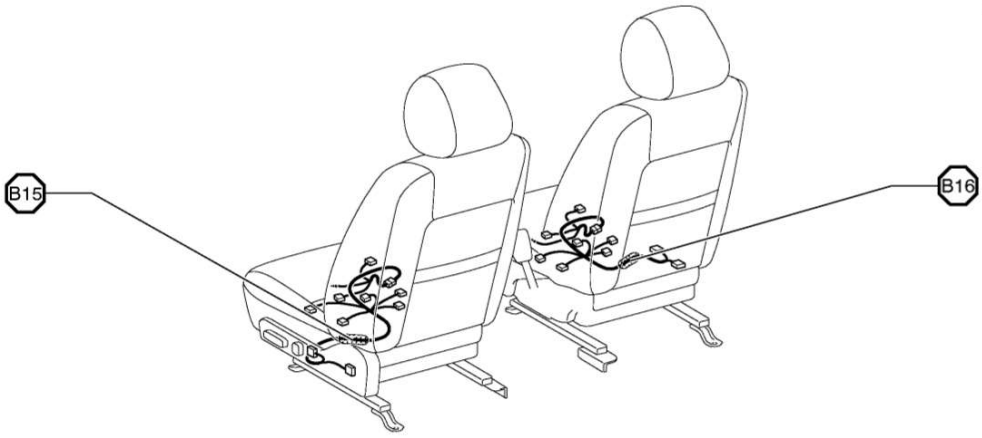
Code	Joining Wire Harness and Wire Harness (Connector Location)
BA1	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)
BC1	Floor No.4 Wire and Floor No.2 Wire (Behind the Rear Passenger's Seat RH)

cardiagn.com

▭ : Location of Connector Joining Wire Harness and Wire Harness

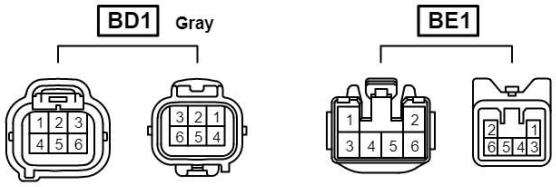


⬡ : Location of Splice Points



cardiagn.com

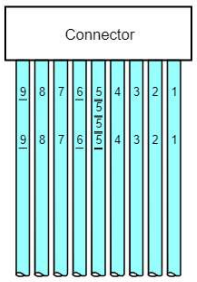
Connector Joining Wire Harness and Wire Harness



Code	Joining Wire Harness and Wire Harness (Connector Location)
BD1	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

cardiagn.com

HINT

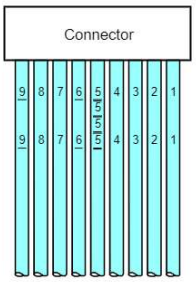


There are two types of wire harness for the instrument panel on CARMY.

Type A : The wire harness that uses the color–coded wire.
Type B : The wire harness that uses the same colored wire. (Not color–coded)

In case of using the same colored wires, each terminal number is printed on the wire as shown in the illustration on the left in order to distinguish each wiring.
Be sure to connect the terminal to the same place as indicated by the terminal number printed on the wire after disconnecting the terminal from the connector.

cardiagn.com

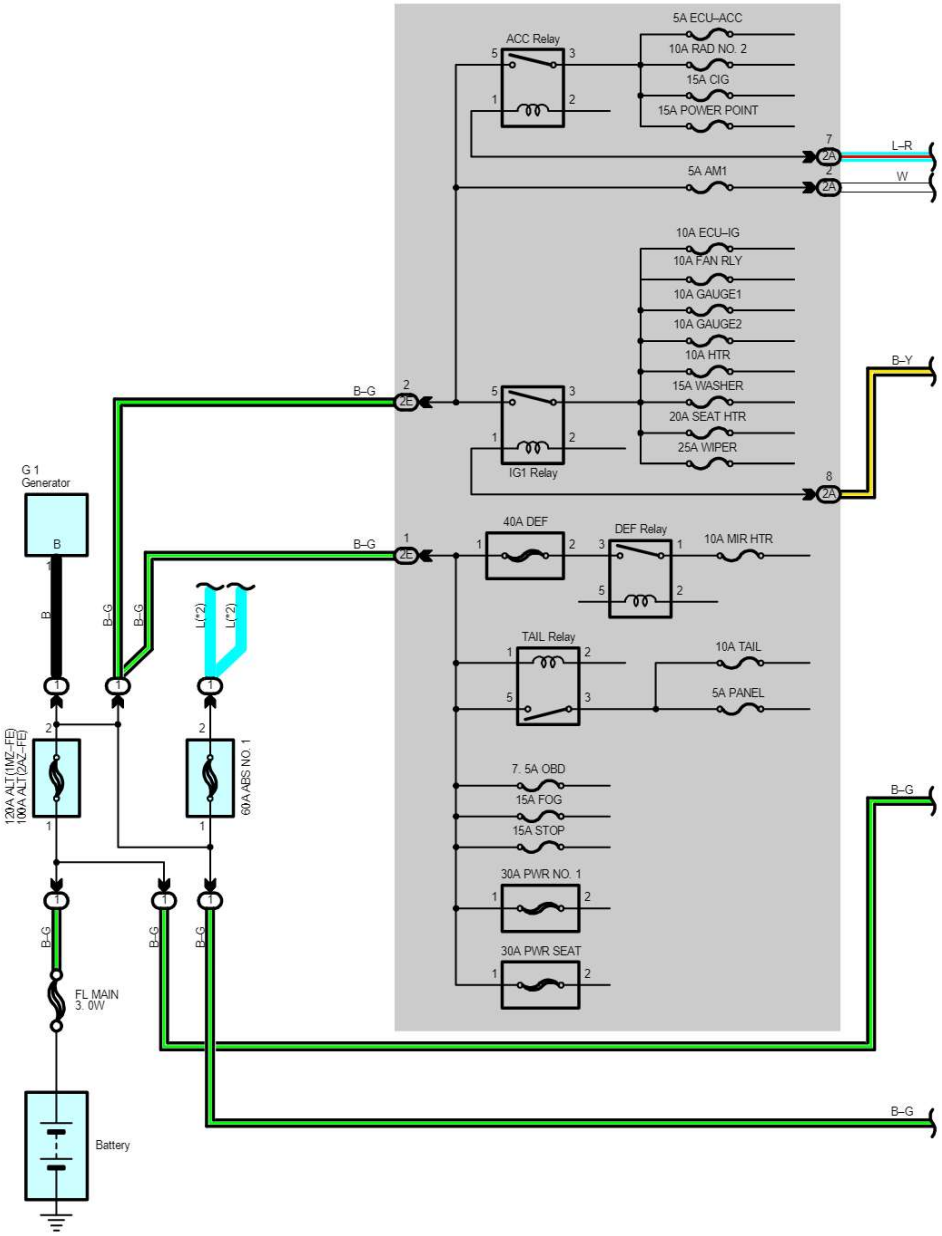


There are two types of wire harness for the instrument panel on CARMY.

Type A : The wire harness that uses the color–coded wire.
Type B : The wire harness that uses the same colored wire. (Not color–coded)

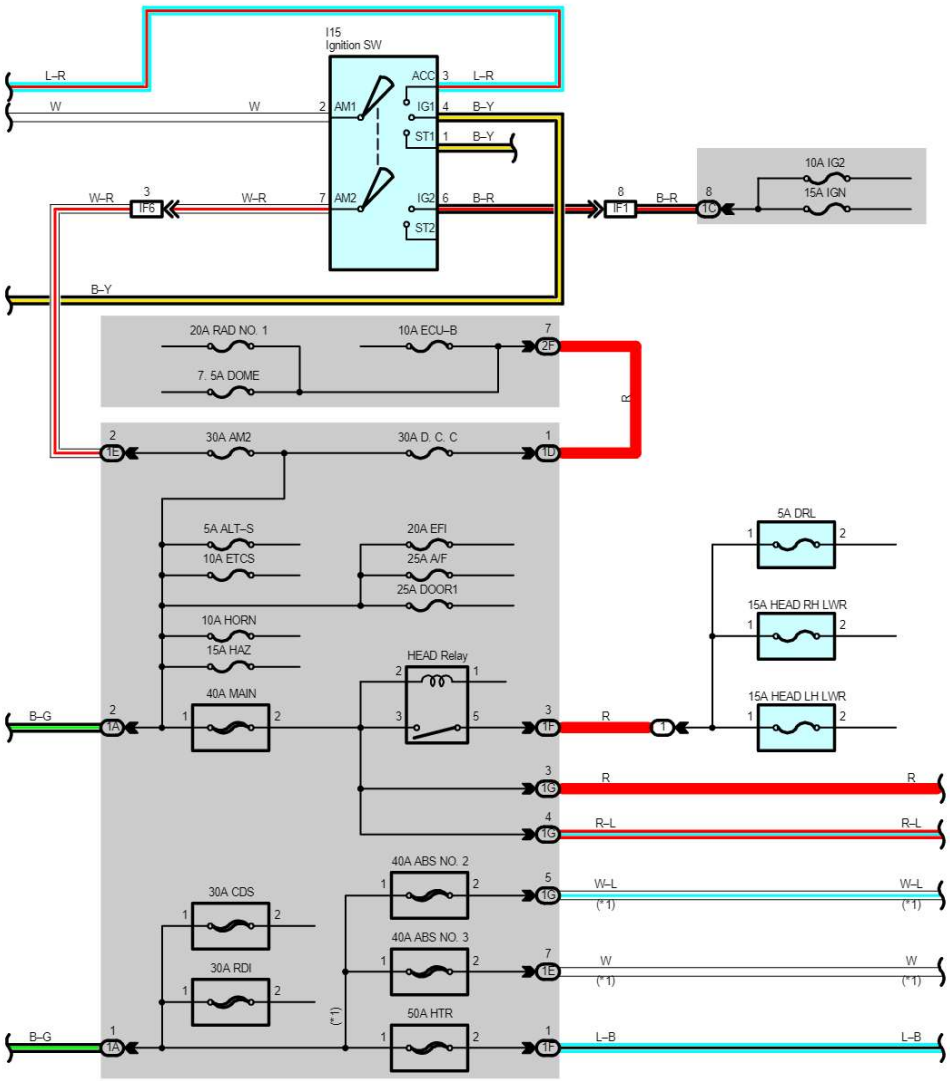
In case of using the same colored wires, each terminal number is printed on the wire as shown in the illustration on the left in order to distinguish each wiring.
Be sure to connect the terminal to the same place as indicated by the terminal number printed on the wire after disconnecting the terminal from the connector.

cardiagn.com



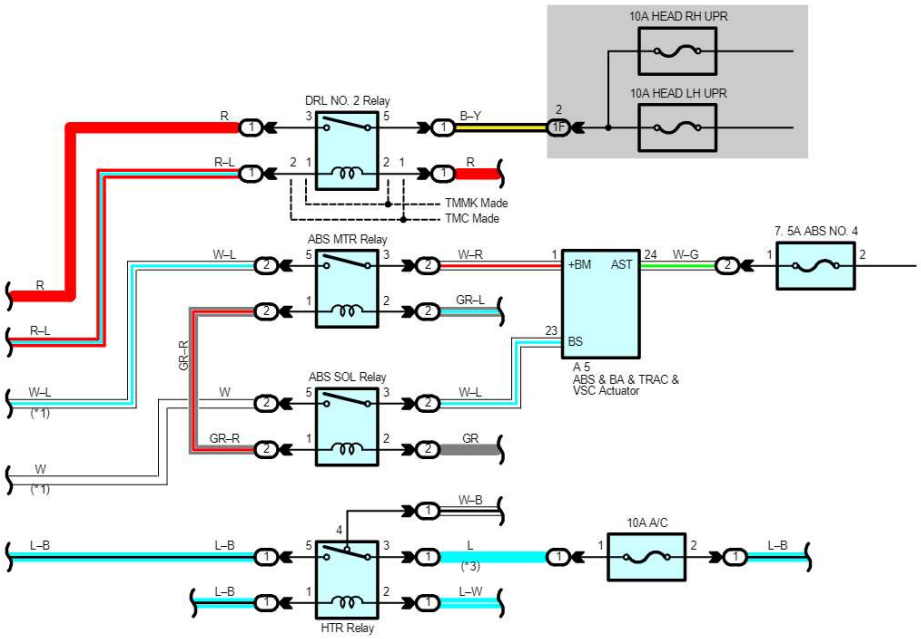
cardiagn.com

* 1 : w/ VSC
* 2 : w/o VSC, w/ ABS



cardiagn.com

* 1 : w/ VSC
* 3 : Manual A/C



cardiagn.com

Service Hints

I15 Ignition SW

2–3 : Closed with the ignition SW at ACC or ON position
2–4 : Closed with the ignition SW at ON or ST position
2–1 : Closed with the ignition SW at ST position
7–6 : Closed with the ignition SW at ON or ST position
7–8 : Closed with the ignition SW at ST position

TAIL Relay

5–3 : Closed with the light control SW at HEAD or TAIL position

HEAD Relay

5–3 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position
Closed with the engine running and parking brake released (Parking brake SW off)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A5	38 (1MZ–FE)	G1	40 (2AZ–FE)		
G1	38 (1MZ–FE)	I15	43		

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
2	23	ABS R/B (Radiator Side Support LH)

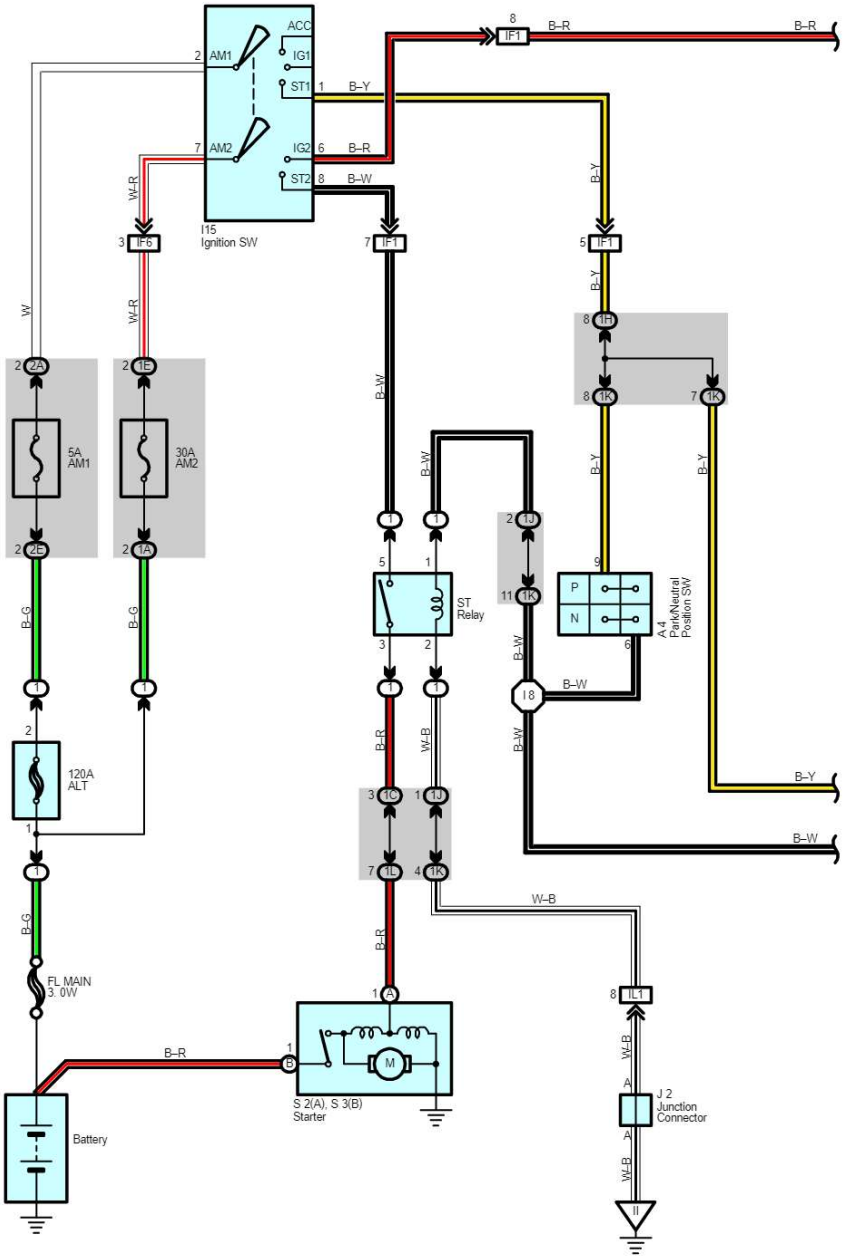
⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1D		
1E		
1F		
1G		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		

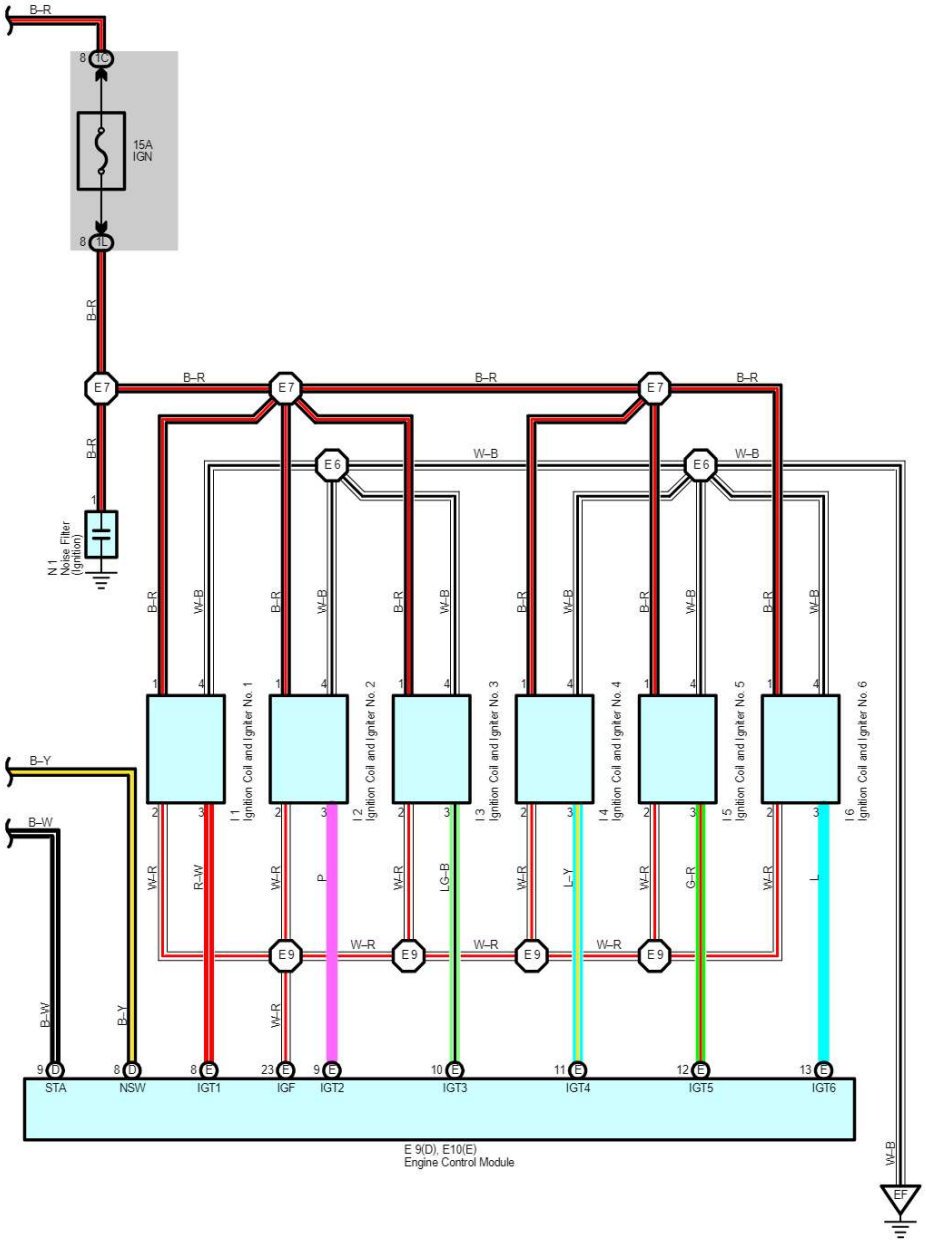
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		

cardiagn.com



cardiagn.com



cardiagn.com

Service Hints

I15 Ignition SW

2–1 : Closed with the ignition SW at ST position
7–6 : Closed with the ignition SW at ON or ST position
7–8 : Closed with the ignition SW at ST position

A4 Park/Neutral Position SW

9–6 : Closed with the A/T shift lever in P or N position

S2 (A), S3 (B) Starter

Point closed with the Park/Neutral position SW at P or N position and the ignition SW at ST position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	I3	39 (1MZ–FE)	J2	43
E9 D	42	I4	39 (1MZ–FE)	N1	39 (1MZ–FE)
E10 E	42	I5	39 (1MZ–FE)	S2 A	39 (1MZ–FE)
I1	39 (1MZ–FE)	I6	39 (1MZ–FE)	S3 B	39 (1MZ–FE)
I2	39 (1MZ–FE)	I15	43		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

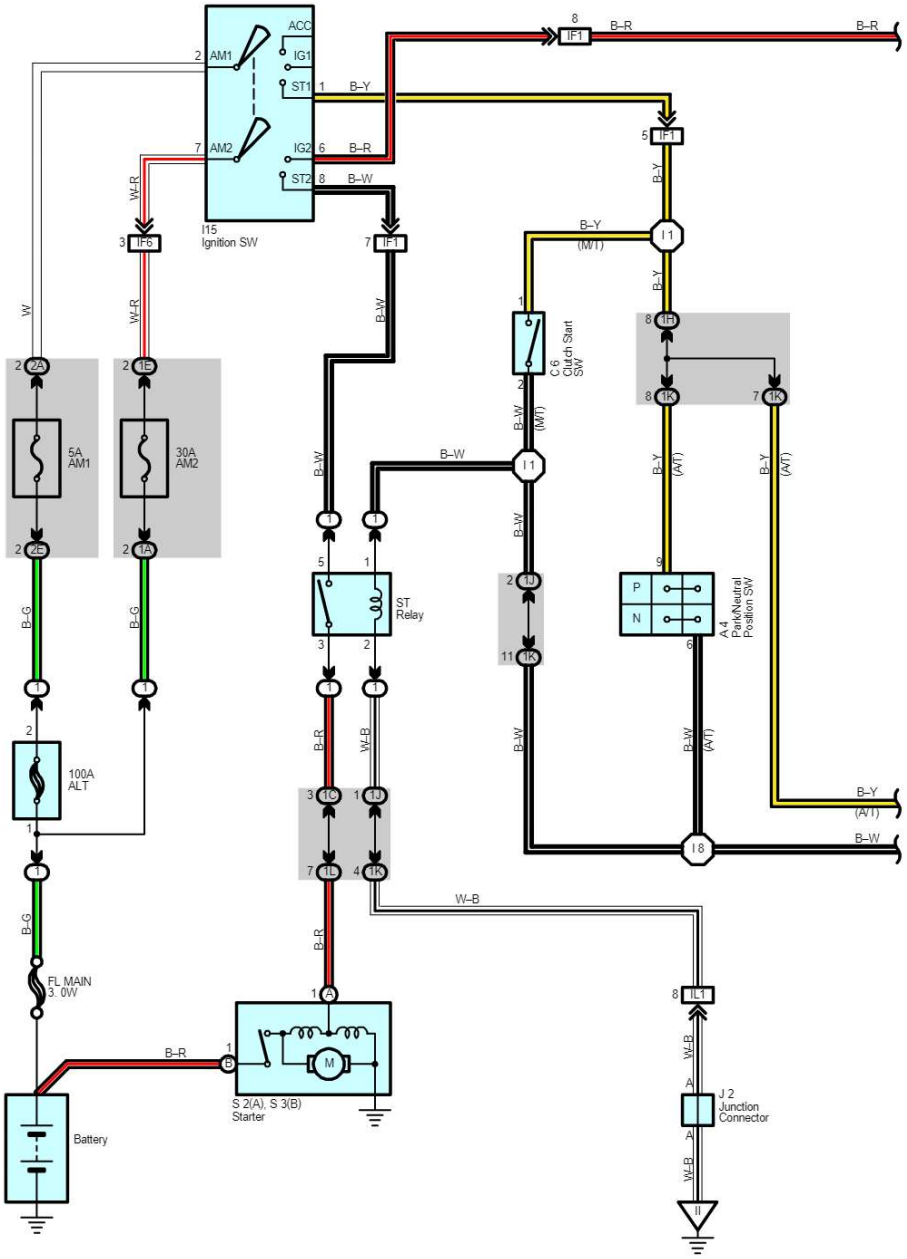
Code	See Page	Ground Points Location
EF	48 (1MZ–FE)	Rear Side of Surge Tank
II	52	Cowl Side Panel LH

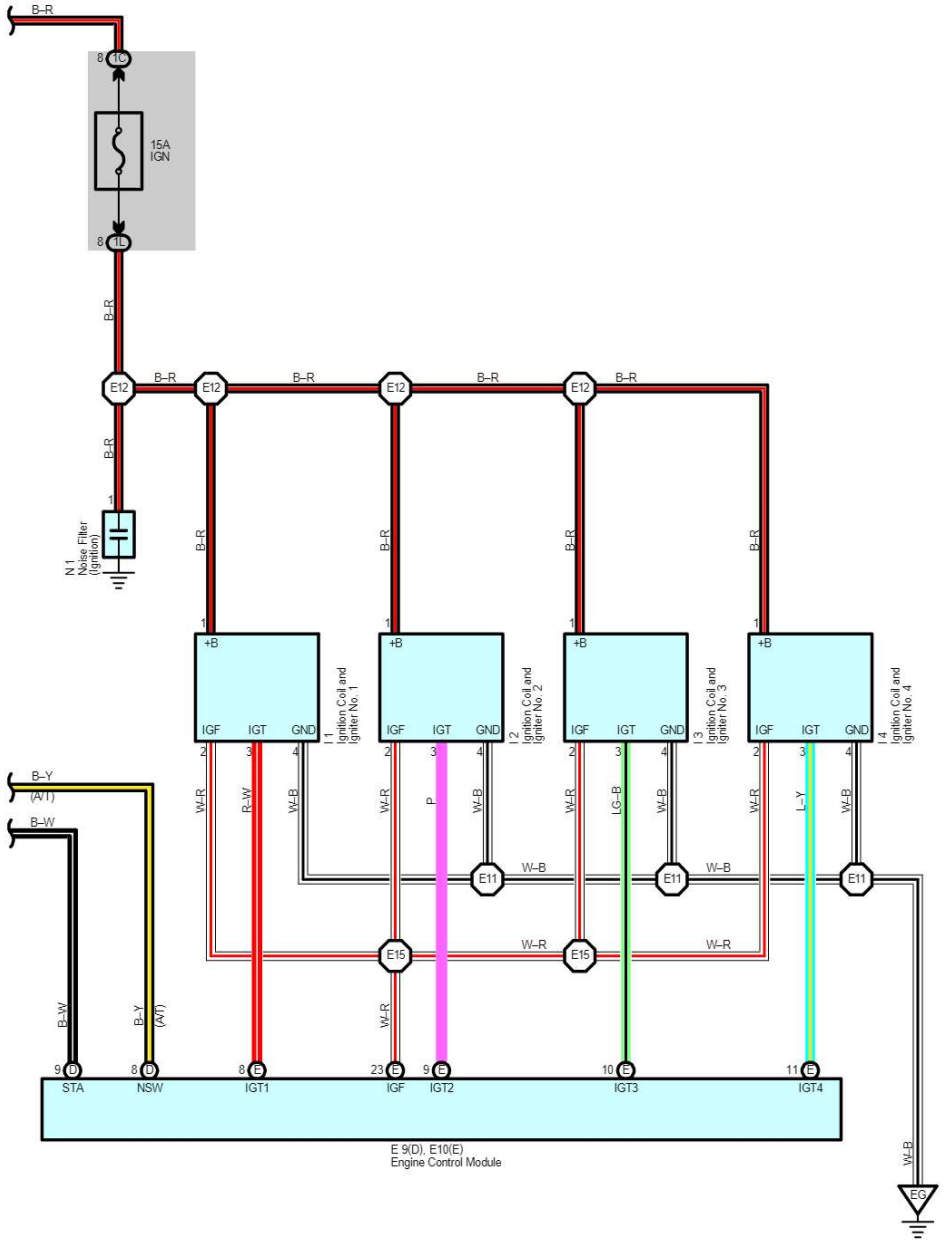
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	48 (1MZ–FE)	Engine Wire	E9	48 (1MZ–FE)	Engine Wire
E7			I8	54	

cardiagn.com

cardiagn.com


ACC
AM1
IG1
ST1
AM2
IG2
ST2
I15
Ignition SW
IF1
IF6
B–R
B–Y
B–W
W–R
W
B–G
W–B
5A
AM1
30A
AM2
100A
ALT
FL MAIN
3. 0W
Battery
S 2(A), S 3(B)
Starter
ST
Relay
C 6
Clutch Start
SW
(M/T)
(A/T)
A 4
Park/Neutral
Position SW
P
N
I1
I8
IL1
J 2
Junction
Connector
cardiagn.com



cardiagn.com

Service Hints

I15 Ignition SW

2–1 : Closed with the ignition SW at ST position
7–6 : Closed with the ignition SW at ON or ST position
7–8 : Closed with the ignition SW at ST position

A4 Park/Neutral Position SW (A/T)

9–6 : Closed with the A/T shift lever in P or N position

S2 (A), S3 (B) Starter

Point closed with the Park/Neutral position SW at P or N position and the ignition SW at ST position (A/T)
Point closed with the clutch start SW on and the ignition SW at ST position (M/T)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	40 (2AZ–FE)	I2	41 (2AZ–FE)	N1	41 (2AZ–FE)
C6	42	I3	41 (2AZ–FE)	S2 A	41 (2AZ–FE)
E9 D	42	I4	41 (2AZ–FE)	S3 B	41 (2AZ–FE)
E10 E	42	I15	43		
I1	41 (2AZ–FE)	J2	43		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

▭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

▽ : Ground Points

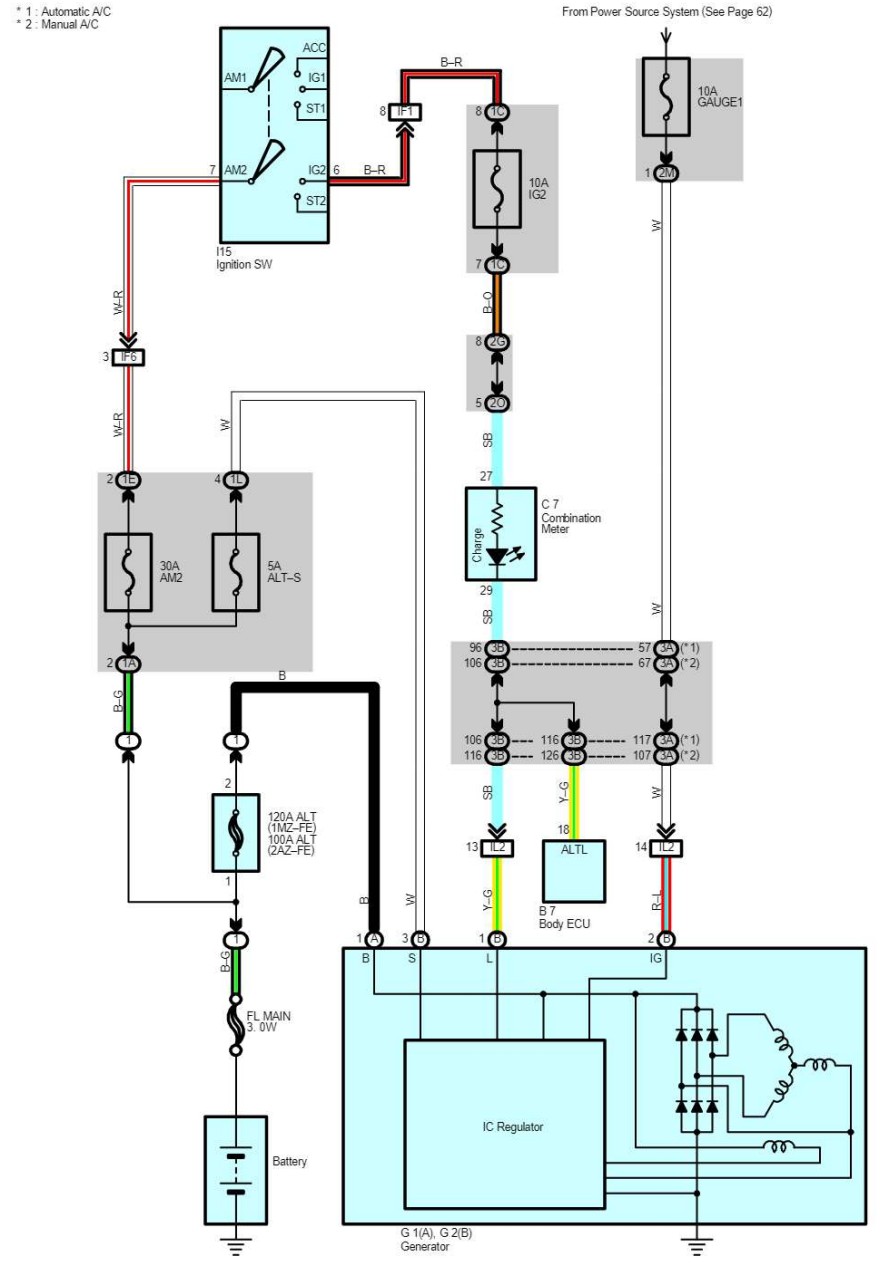
Code	See Page	Ground Points Location
EG	50 (2AZ–FE)	Left Side of Cylinder Head
II	52	Cowl Side Panel LH

⬡ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E11	50 (2AZ–FE)	Engine Wire	I1	54	Engine Room Main Wire
E12			I8	54	Engine Wire
E15					

cardiagn.com

cardiagn.com



cardiagn.com

Service Hints

G2 (B) Generator

(B) 3–Ground : 13.9–15.1 volts with the engine running at 2000 rpm and 25°C (77°F)
13.5–14.3 volts with the engine running at 5000 rpm and 115°C (239°F)

(B) 1–Ground : 0–4 volts with the ignition SW at ON position and the engine not running

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
B7		42	G1	A	40 (2AZ–FE)	I15	43
C7		42	G2	B	38 (1MZ–FE)		
G1	A	38 (1MZ–FE)			40 (2AZ–FE)		

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : Junction Block and Wire Harness Connector

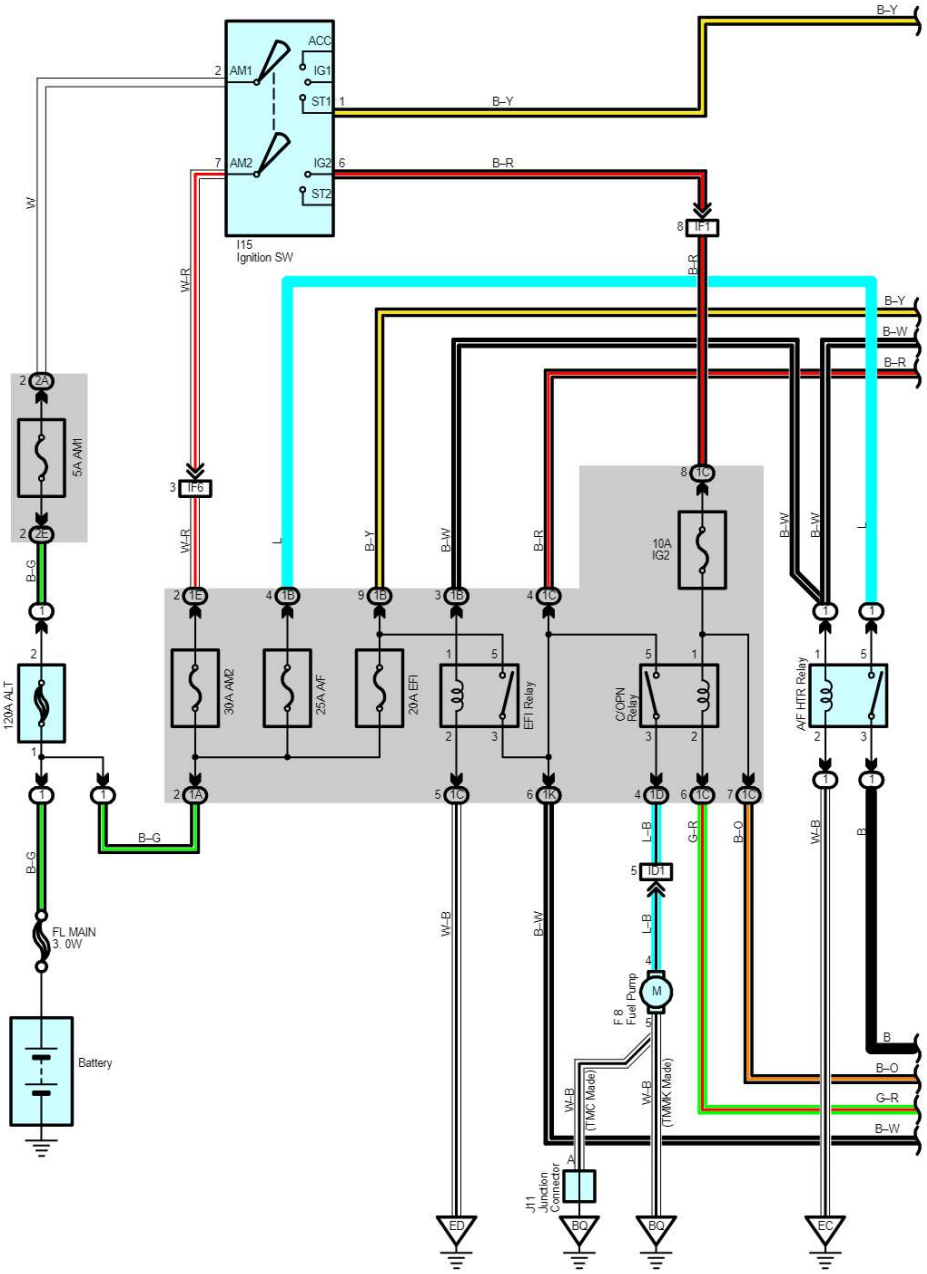
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1L	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2O		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

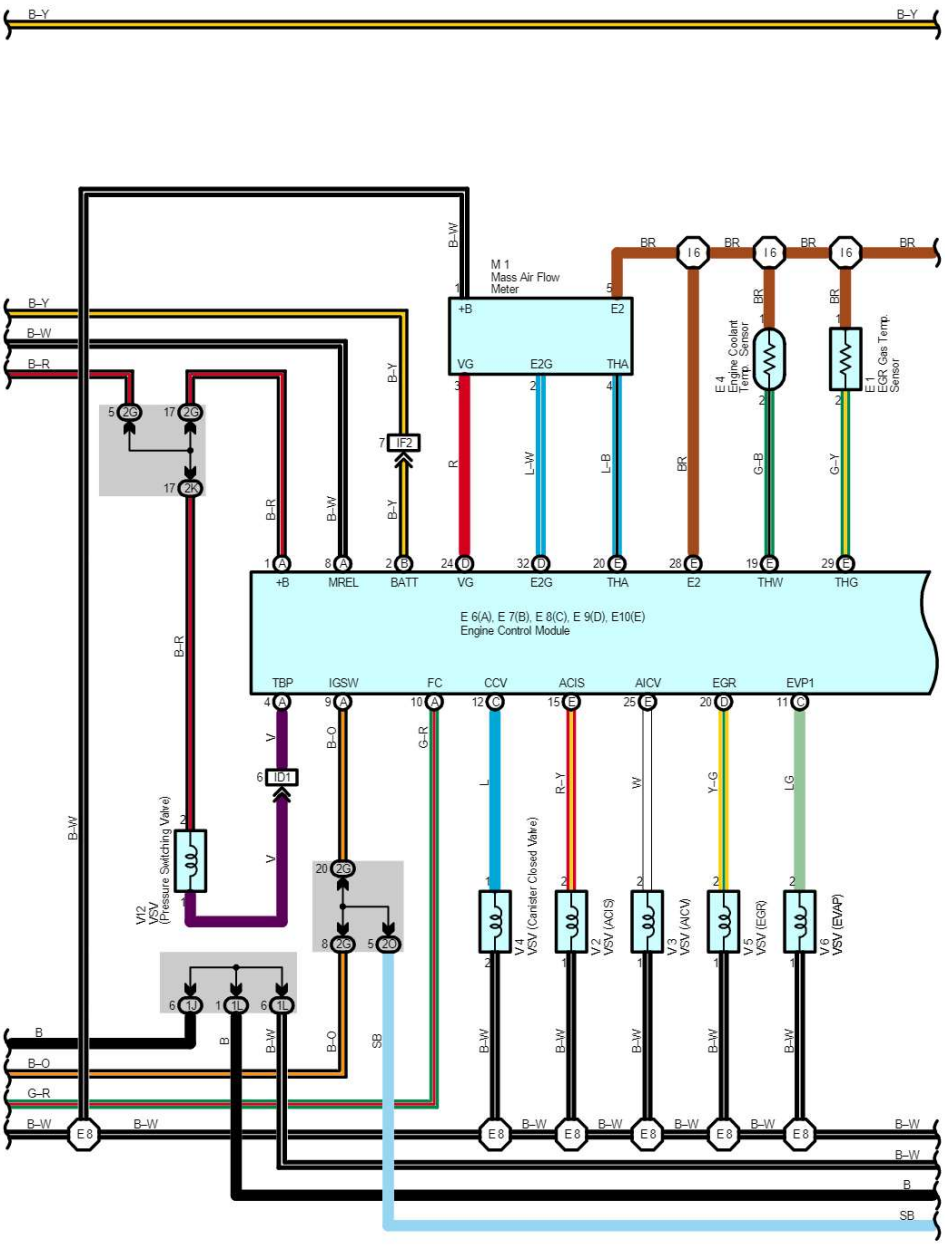
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL2	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

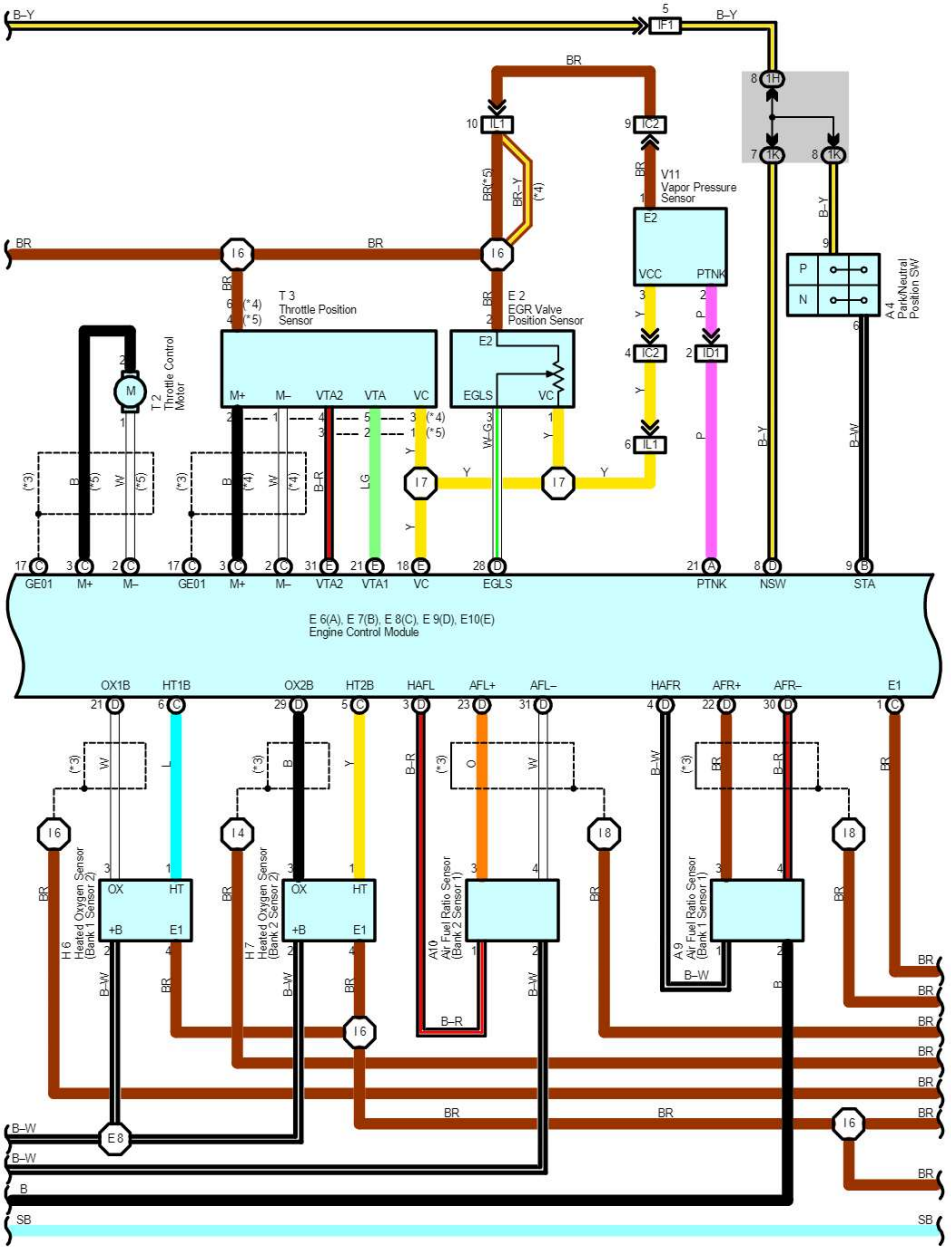
cardiagn.com



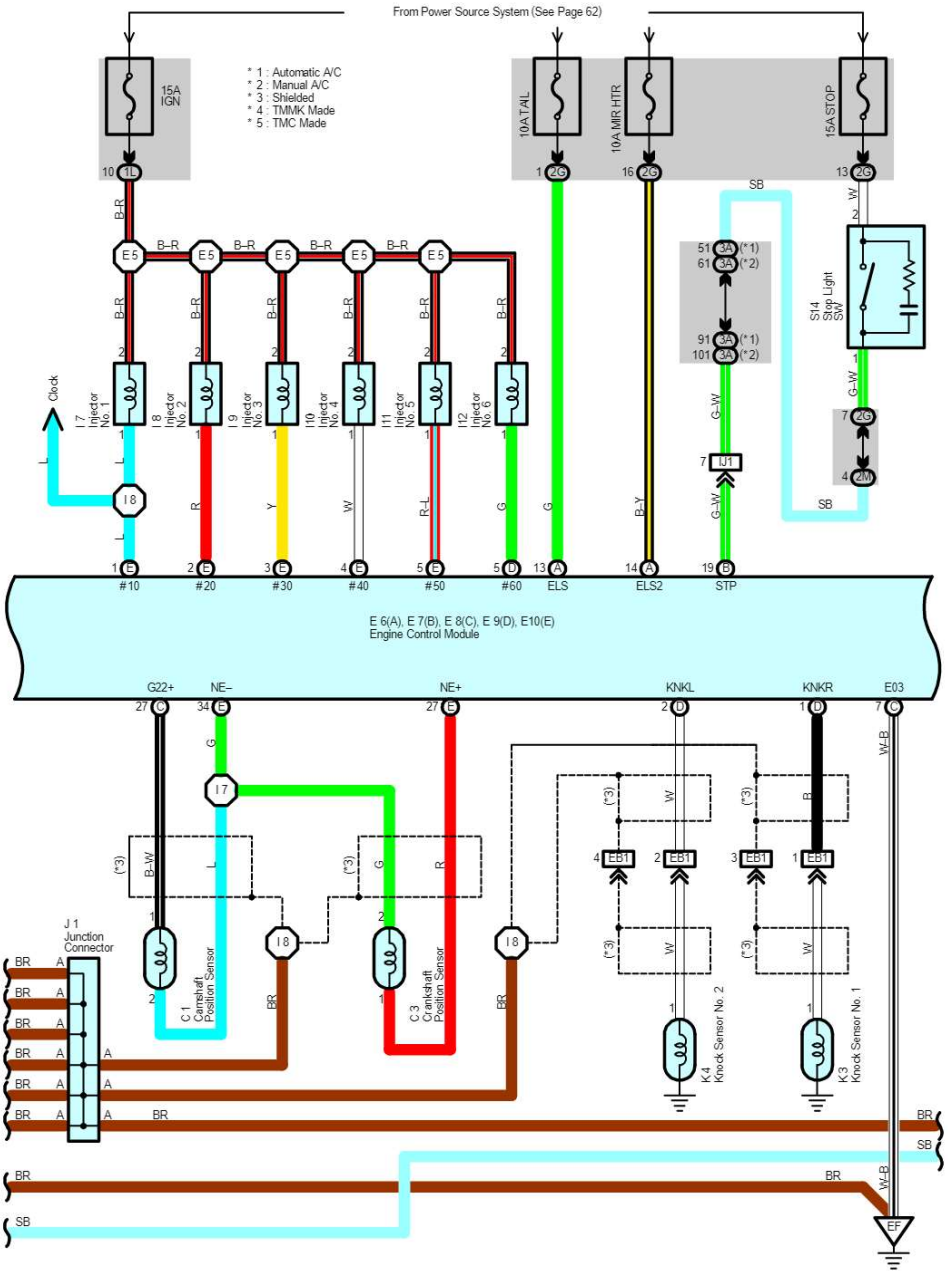
cardiagn.com



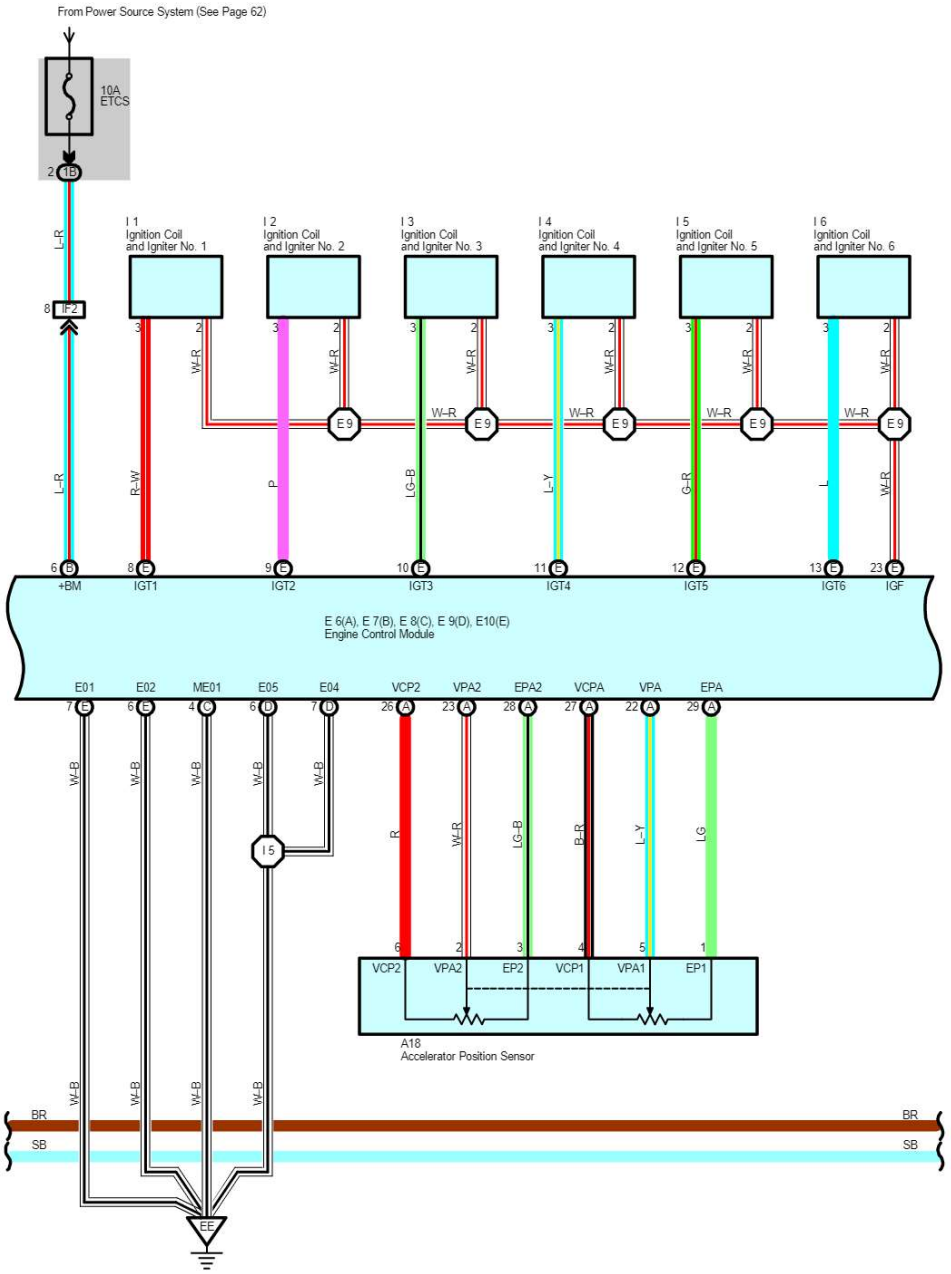
cardiagn.com



cardiagn.com

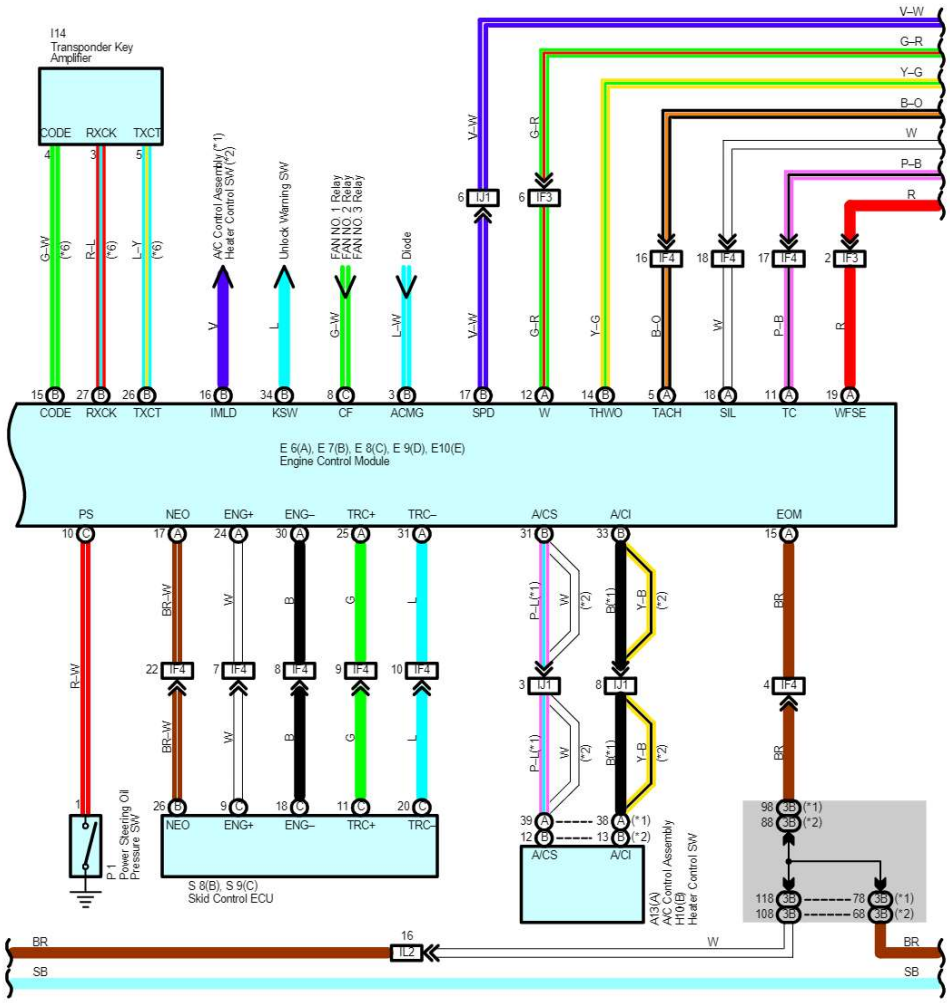


cardiagn.com

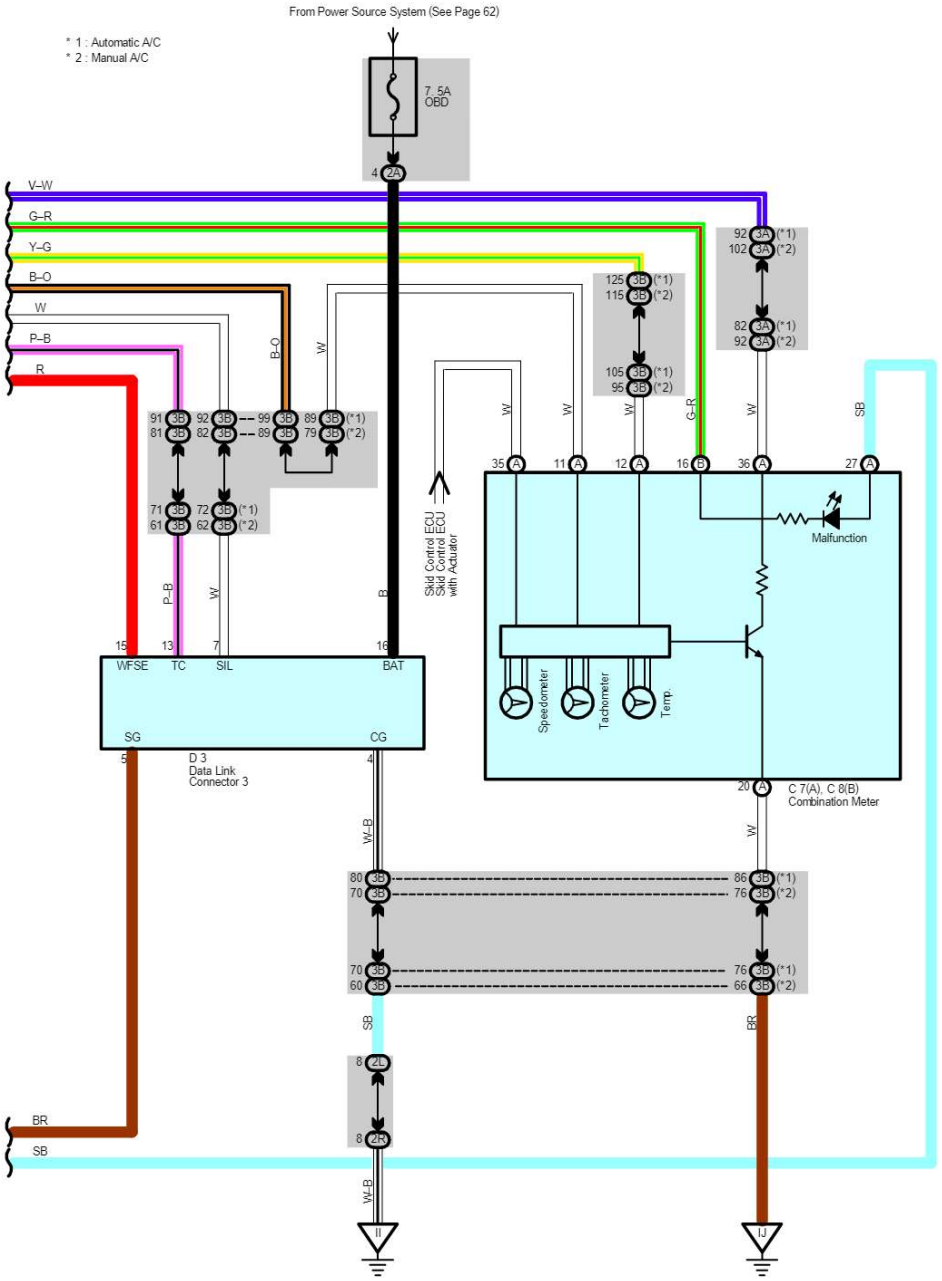


cardiagn.com

* 1 : Automatic A/C
* 2 : Manual A/C
* 6 : w/ Engine Immobiliser System



cardiagn.com



cardiagn.com

System Outline

This system utilizes an engine control module and maintains overall control of the engine, transmission and so on. An outline of the engine control is explained here.

1. Input Signals

(1) Engine coolant temp. signal circuit
The engine coolant temp. sensor detects the engine coolant temp. and has a built–in thermistor with a resistance which varies according to the water temp. is input into TERMINAL THW of the engine control module as a control signal.

(2) Intake air temp. signal circuit
The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp., which is input as a control signal into TERMINAL THA of the engine control module.

(3) Oxygen sensor signal circuit
The oxygen density in the exhaust gases is detected and input as a control signal into TERMINALS OX1B and OX2B of the engine control module. To maintain stable detection performance by the heated oxygen sensor, a heater is used for warming the sensor. The heater is also controlled by the engine control module (HT1B and HT2B).

(4) RPM signal circuit
Camshaft position and crankshaft position are detected by the camshaft position sensor and crankshaft position sensor. The camshaft position is input as a control signal to TERMINAL G22+ of the engine control module, and the engine RPM is input into TERMINAL NE+.

(5) Throttle signal circuit
The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINAL VTA1 of the engine control module.

(6) Vehicle speed signal circuit
The vehicle speed sensor, detects the vehicle speed and input to ABS speed sensor of the skid control ECU, from skid control ECU to TERMINAL SPD of the engine control module, Via combinatio meter.

(7) Park/Neutral position SW signal circuit (A/T)
The Park/Neutral position SW detects whether the shift position is in neutral, parking or not, and inputs a control signal into TERMINAL NSW of the engine control module.

(8) A/C SW signal circuit
The A/C control assembly (Automatic A/C) or heater control SW (Manual A/C) inputs the A/C operations into TERMINAL A/CS of the engine control module as a control signal.

(9) Battery signal circuit
Voltage is always supplies to TERMINAL BATT of the engine control module.
If you turn on the ignition SW, the current goes from TERMINAL MREL of the engine control module to the EFI relay and put on the relay, and the voltage related to the engine control module operation is supplied to TERMINAL +B of the engine control module through the EFI relay.

(10) Intake air volume signal circuit
Intake air volume is detected by the mass air flow meter and a signal is input into TERMINAL VG of the engine control module as a control signal.

(11) Starter signal circuit
To confirm whether the engine is cranking, the voltage applied to the starter motor during cranking is detected and the signal is input into TERMINAL STA of the engine control module as a control signal.

(12) Engine knock signal circuit
Engine knocking is detected by the knock sensor No.1 and No.2, then the signals are input into TERMINALS KNKR and KNKL of the engine control module as a control signal.

(13) Air fuel ratio signal circuit
The air fuel ratio is detected and input as a control signal into TERMINALS AFL+, AFR+ of the engine control module.

cardiagn.com

2. Control System

- SFI system
  The SFI system monitors the engine condition through the signals, which are input from each sensor to engine control module. The best fuel injection volume is decided based on this data and the program memorized by the engine control module, and the control signal is output to TERMINALS #10, #20, #30, #40, #50 and #60 of the engine control module to operate the injector (Inject the fuel). The SFI system produces control of fuel injection operation by the engine control module in response to the driving conditions.
- ESA system
  The ESA system monitors the engine condition through the signals, which are input to the engine control module from each sensor. The best ignition timing is decided according to this data and the memorized data in the engine control module, and the control signal is output to TERMINALS IGT1, IGT2 and IGT3. This signal controls the igniter to provide the best ignition timing for the driving conditions.
- Heated oxygen sensor heater control system
  The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emissions is low), and warms up the heated oxygen sensor to improve detection performance of the sensor.
  The engine control module evaluates the signals from each sensor, current is output to TERMINALS HT1B and HT2B, controlling the heater.
- Air fuel ratio sensor heater control system
  The air fuel ratio sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the air fuel ratio sensor to improve detection performance of the sensor.
  The engine control module evaluates the signals from each sensor, current is output to TERMINALS HAFR and HAFL, controlling the heater.
- EGR control system
  The EGR control system detects the signals from each sensor, and outputs current to TERMINAL EGR to control the VSV (EGR).
  The EGR valve position sensor is mounted on the EGR valve. this sensor converts the EGR valve opening height into a voltage and sends it to the engine control module as the EGR valve position signal.
- ACIS
  ACIS includes a valve in the bulkhead separating the surge tank into two parts. This valve is opened and closed in accordance with the driving conditions to control the intake manifold length in two stages for increased engine output in all ranges from low to high speeds.
  The engine control module judges the engine speed by the signals from each sensor and outputs current to the TERMINAL ACIS to control the VSV (ACIS).

3. Diagnosis System

With the diagnosis system, when there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory.

4. Fail–Safe System

When a malfunction occurs in any systems, if there is a possibility of engine trouble being caused by continued control based on the signals from that system, the fail–safe system either controls the system by using data (Standard values) recorded in the engine control module memory or else stops the engine.

cardiagn.com

Service Hints

E4 Engine Coolant Temp. Sensor

1–2 : Approx. 15.04 kΩ (–20°C, –4°F)
Approx. 5.74 kΩ (0°C, 32°F)
Approx. 2.45 kΩ (20°C, 68°F)
Approx. 1.15 kΩ (40°C, 104°F)
Approx. 0.584 kΩ (60°C, 140°F)
Approx. 0.318 kΩ (80°C, 176°F)

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

Voltage at engine control module wiring connector
BATT–E1 : Always 9.0–14.0 volts
+B–E1 : 9.0–14.0 volts (Ignition SW at ON position)
VC–E2 : Always 4.5–5.5 volts (Ignition SW at ON position)
VTA1–E2 : 0.3–0.8 volts (Ignition SW on and throttle valve fully closed)
: 3.2–4.9 volts (Ignition SW on and throttle valve fully open)
VG–E2G : 1.1–1.5 volts (Engine idling and A/C SW OFF position)
THA–E2 : 0.5–3.4 volts (Engine idling and intake air temp. 20˚C, 68˚F)
THW–E2 : 0.2–1.0 volts (Engine idling and engine coolant temp. 80˚C, 176˚F)
IGF–E1 : 4.5–5.5 volts (Ignition SW at ON position)
Pulse generation (Engine idling)
G22+–NE– : Pulse generation (Engine idling)
NE+–NE– : Pulse generation (Engine idling)
NSW–E1 : 9.0–14.0 volts (Ignition SW on and other shift position in P or N position)
Below 3.0 volts (Ignition SW on and shift position in P or N position)
SPD–E1 : Pulse generation (Ignition SW on and rotate driving wheel slowly)
W–E1 : Below 3.0 volts
A/CI–E1 : Below 2.0 volts (Engine idling and A/C SW on)
9.0–14.0 volts (A/C SW off)
A/CS–E1 : 9.0–14.0 volts (Engine idling and A/C SW on)
Below 2.0 volts (A/C SW off)
ACIS–E01 : 9.0–14.0 volts (Ignition SW at ON position)
STA–E1 : 6.0 volts or more (Engine cranking)
ELS–E1 : 7.5–14.0 volts (Taillight SW at ON position)
0–1.5 volts (Taillight SW at OFF position)
ELS2–E1 : 7.5–14.0 volts (Defogger SW at ON position)
0–1.5 volts (Defogger SW at OFF position)
FC–E1 : 9.0–14.0 volts (Ignition SW at ON position)
0–3.0 volts (Engine idling)
EVP1–E01 : 9.0–14.0 volts (Ignition SW at ON position)
CF–E1 : 9.0–14.0 volts (Electric cooling fan is operating on high speed)
0–2.0 volts (Electric cooling fan is operating on low speed or off)
TACH–E1 : Pulse generation (Engine idling)
TBP–E1 : 9.0–14.0 volts (Ignition SW on and disconnect the vacuum hose from the vapor pressure sensor)
PTNK–E1 : 3.0–3.6 volts (Ignition SW at ON position)
1.3–2.1 volts (Ignition SW on and apply vacuum 2.0 kpa (15.0 mmHg, 0.6 in.Hg)
STP–E1 : 7.5–14.0 volts (Ignition SW on and brake pedal depressed)
Below 1.5 volts (Ignition SW on and brake pedal released)
SIL–E1 : Pulse generation (During transmission)
KNKL, KNKR–E1 : Pulse generation (Engine idling)
HT1B, HT2B–E03 : 9.0–14.0 volts (Ignition SW at ON position)
0–3.0 volts (Engine idling)
OX1B, OX2B–E1 : Pulse generation (Maintain engine speed at 2500 rpm for two minutes after warning up)
IGT1, IGT2, IGT3–E1 : Pulse generation (Engine idling)
#10, #20, #30, #40, #50, #60–E01 : 9.0–14.0 volts (Ignition SW at ON position)
Pulse generation (Engine idling)

I7, I8, I9, I10, I11, I12 Injector

2–1 : Approx. 13.8 Ω

C/OPN Relay

3–5 : Closed with starter running

EFI Relay

3–5 : Closed with ignition SW at ON or ST position

cardiagn.com

○ : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	F8	44	J1	43
A9	38 (1MZ–FE)	H6	38 (1MZ–FE)	J11	44
A10	38 (1MZ–FE)	H7	38 (1MZ–FE)	K3	39 (1MZ–FE)
A13 A	42	H10 B	43	K4	39 (1MZ–FE)
A18	42	I1	39 (1MZ–FE)	M1	39 (1MZ–FE)
C1	38 (1MZ–FE)	I2	39 (1MZ–FE)	P1	39 (1MZ–FE)
C3	38 (1MZ–FE)	I3	39 (1MZ–FE)	S8 B	43
C7 A	42	I4	39 (1MZ–FE)	S9 C	43
C8 B	42	I5	39 (1MZ–FE)	S14	43
D3	42	I6	39 (1MZ–FE)	T2	39 (1MZ–FE)
E1	38 (1MZ–FE)	I7	39 (1MZ–FE)	T3	39 (1MZ–FE)
E2	38 (1MZ–FE)	I8	39 (1MZ–FE)	V2	39 (1MZ–FE)
E4	38 (1MZ–FE)	I9	39 (1MZ–FE)	V3	39 (1MZ–FE)
E6 A	42	I10	39 (1MZ–FE)	V4	39 (1MZ–FE)
E7 B	42	I11	39 (1MZ–FE)	V5	39 (1MZ–FE)
E8 C	42	I12	39 (1MZ–FE)	V6	39 (1MZ–FE)
E9 D	42	I14	43	V11	45
E10 E	42	I15	43	V12	45

⬭ : **Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1B		
1C		
1D		
1E		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

cardiagn.com

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	48 (1MZ–FE)	Engine Wire and Sensor Wire (Left Bank of Cylinder Head)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
ID1	52	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF2		
IF3		
IF4		
IF6		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

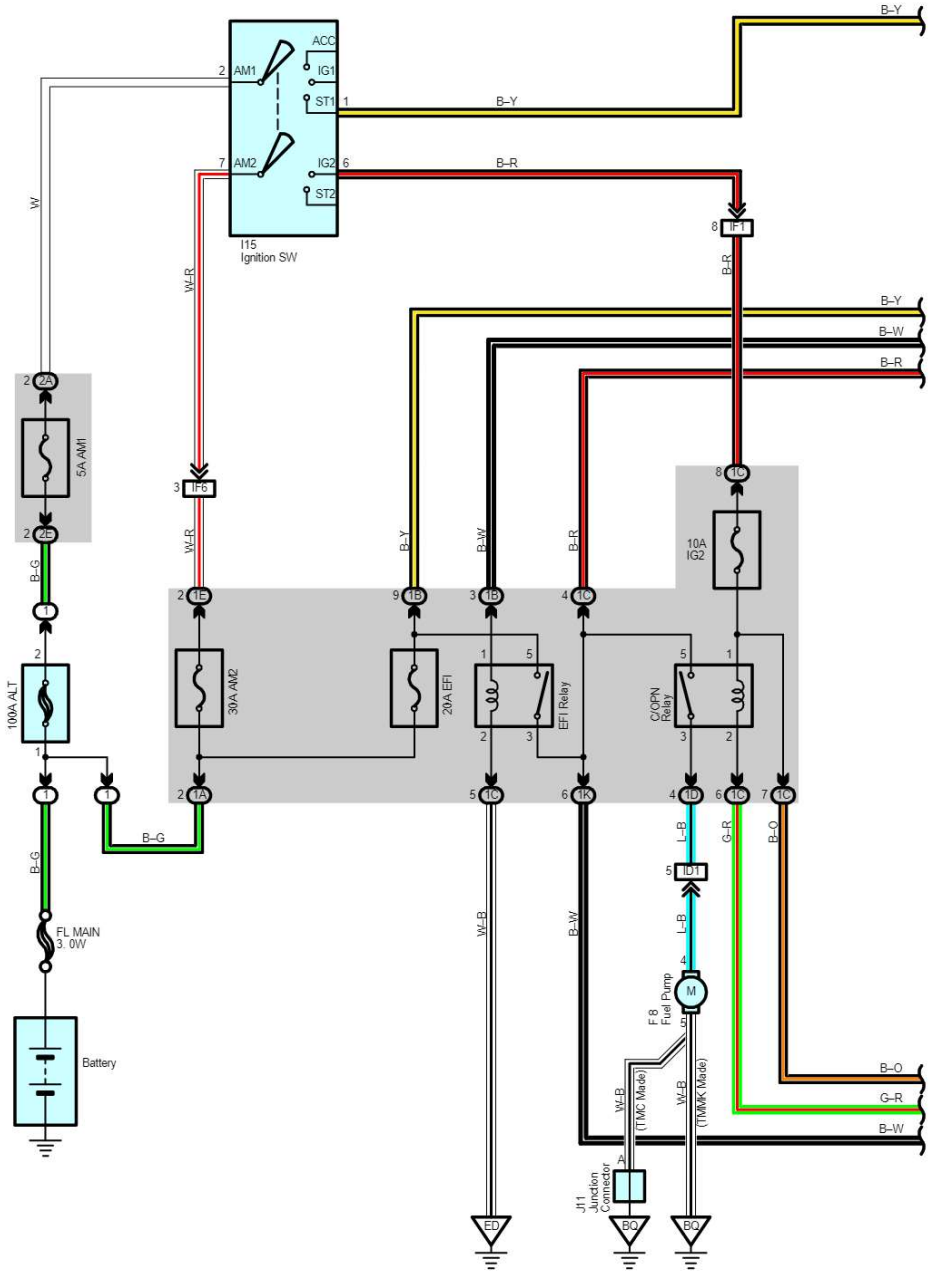
: **Ground Points**

Code	See Page	Ground Points Location
EC	48 (1MZ–FE)	Left Fender
ED		
EE	48 (1MZ–FE)	Surge Tank RH
EF	48 (1MZ–FE)	Rear Side of Surge Tank
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
BQ	56	Front Side of Rear Quarter Wheel House LH

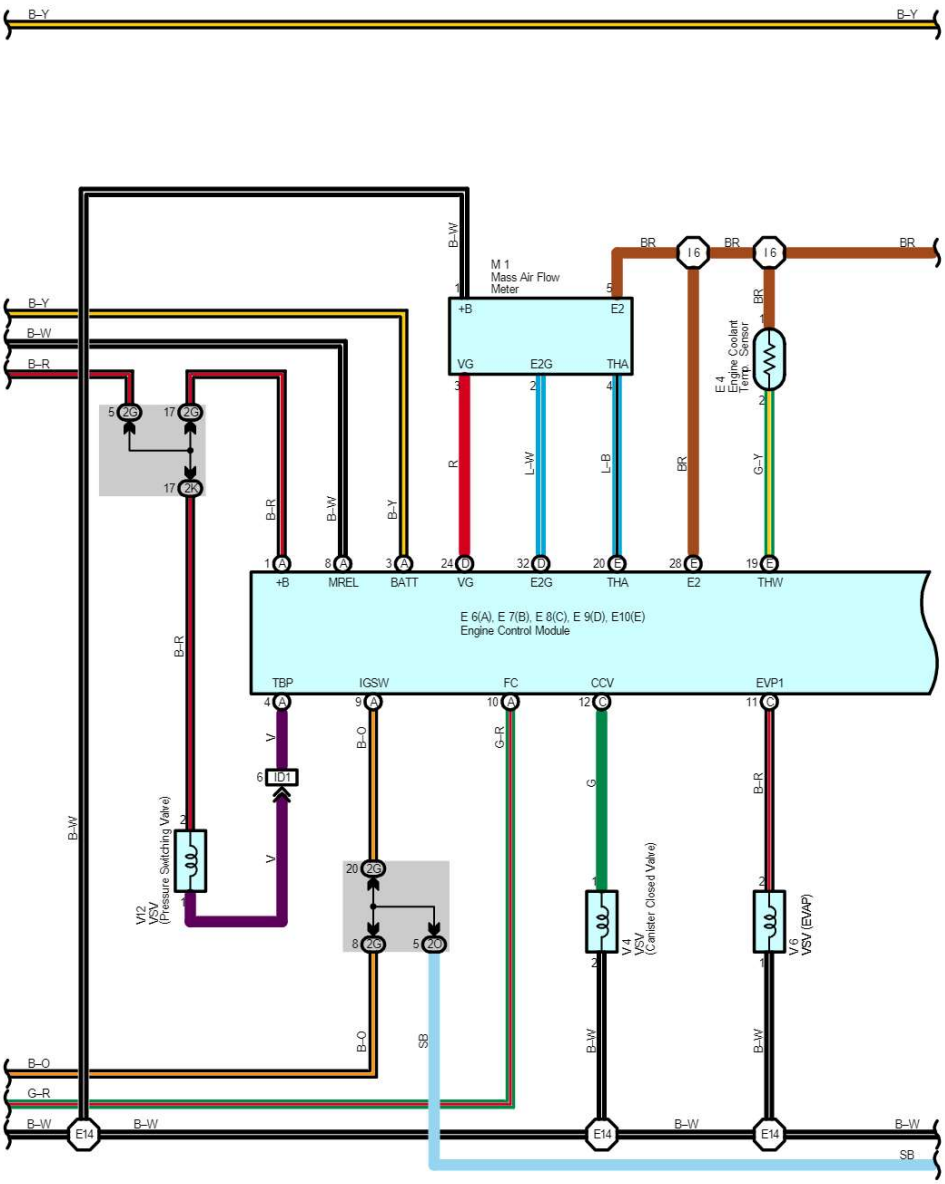
: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	48 (1MZ–FE)	Engine Wire	I5	54	Engine Wire
E8			I6		
E9			I7		
I4	54		I8		

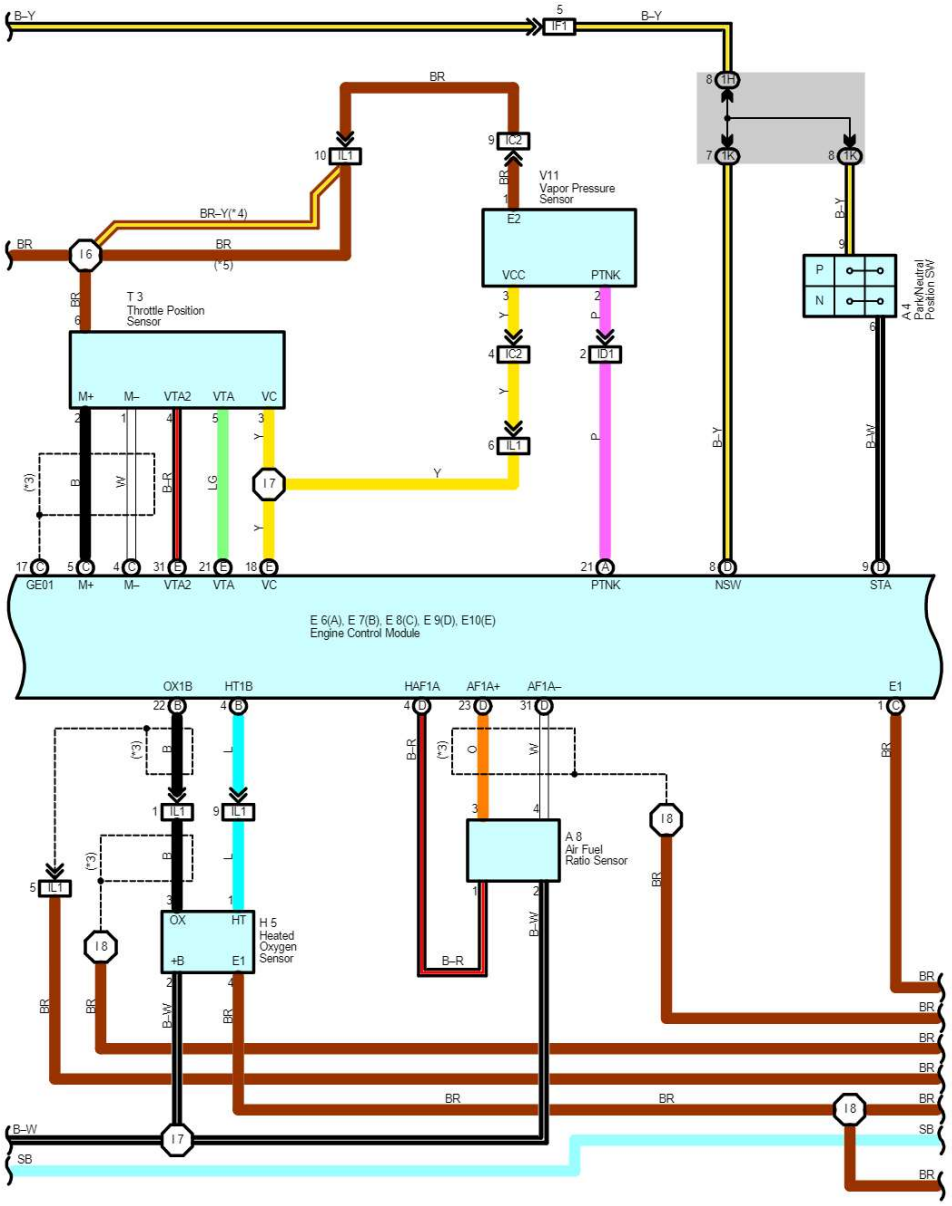
cardiagn.com



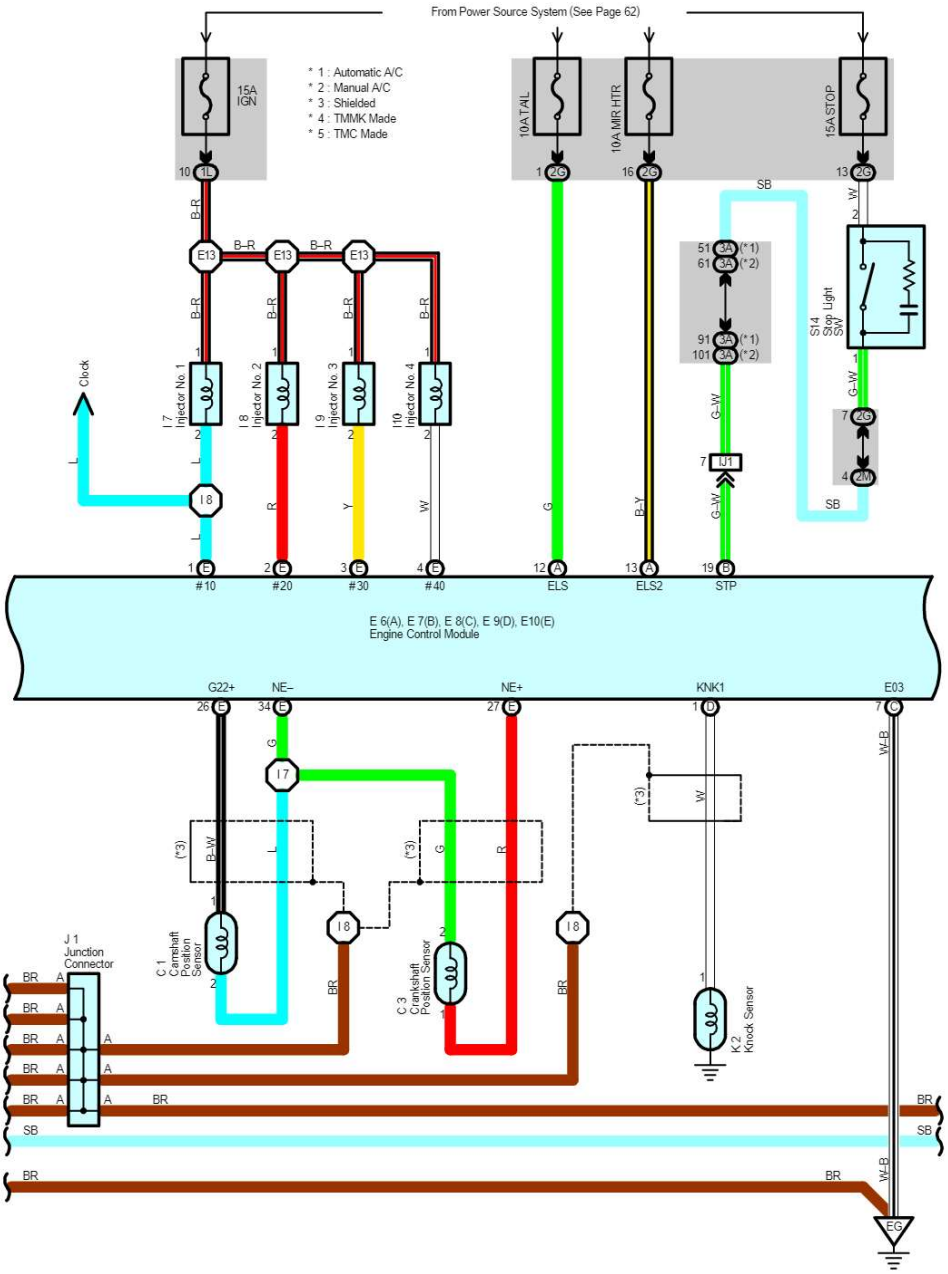
cardiagn.com



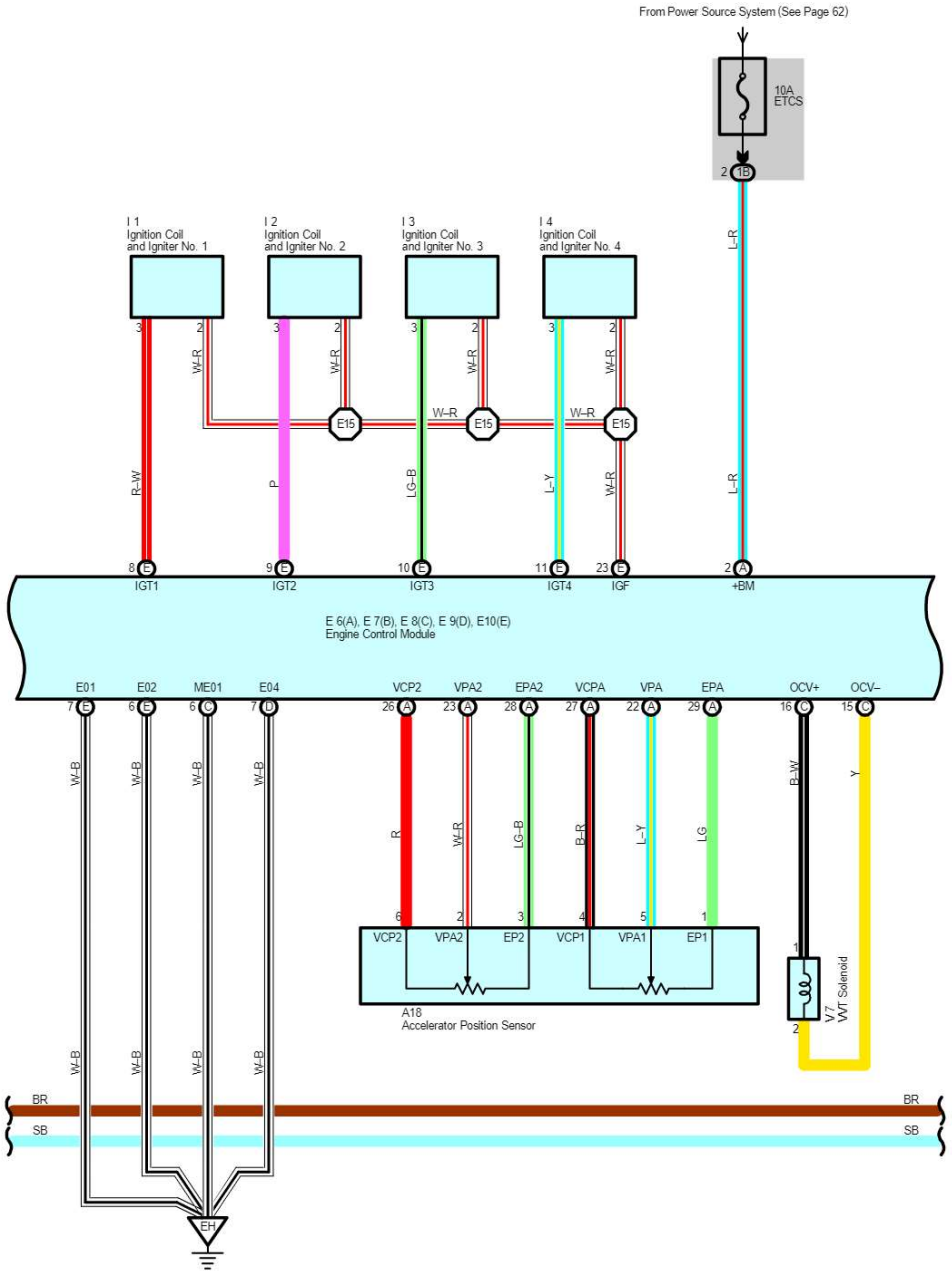
cardiagn.com



cardiagn.com

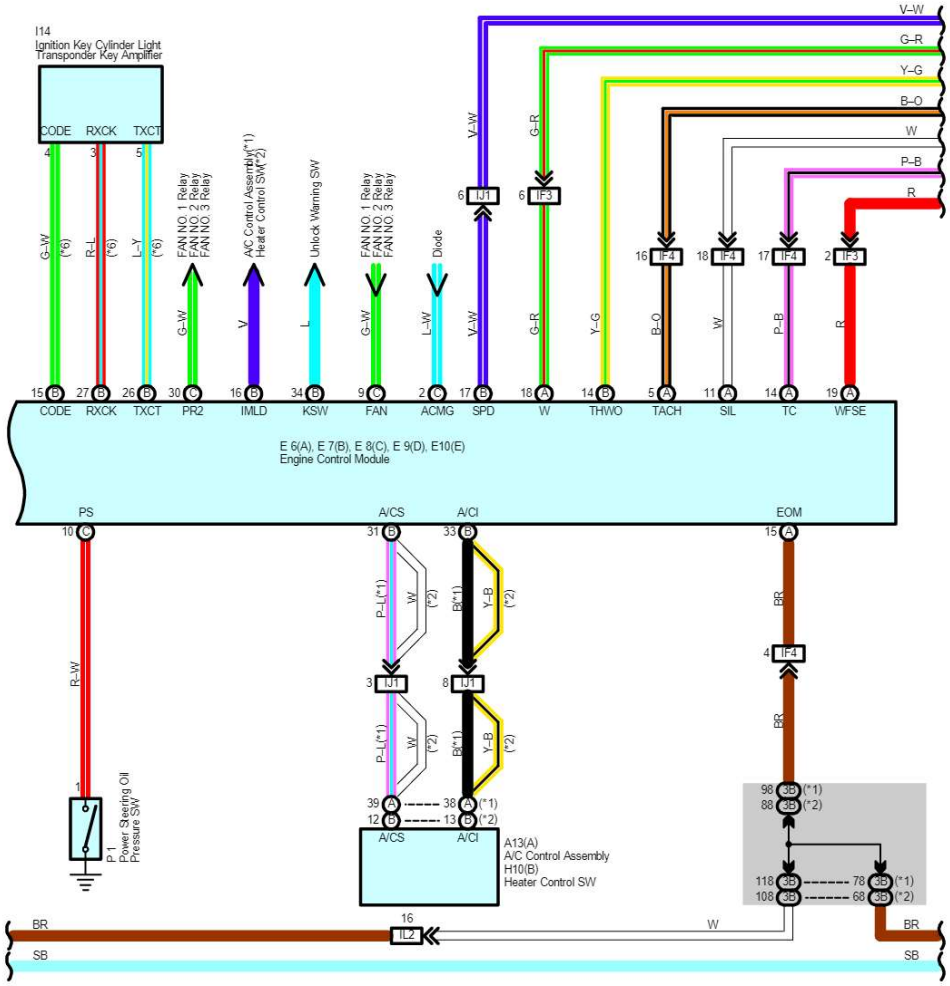


cardiagn.com

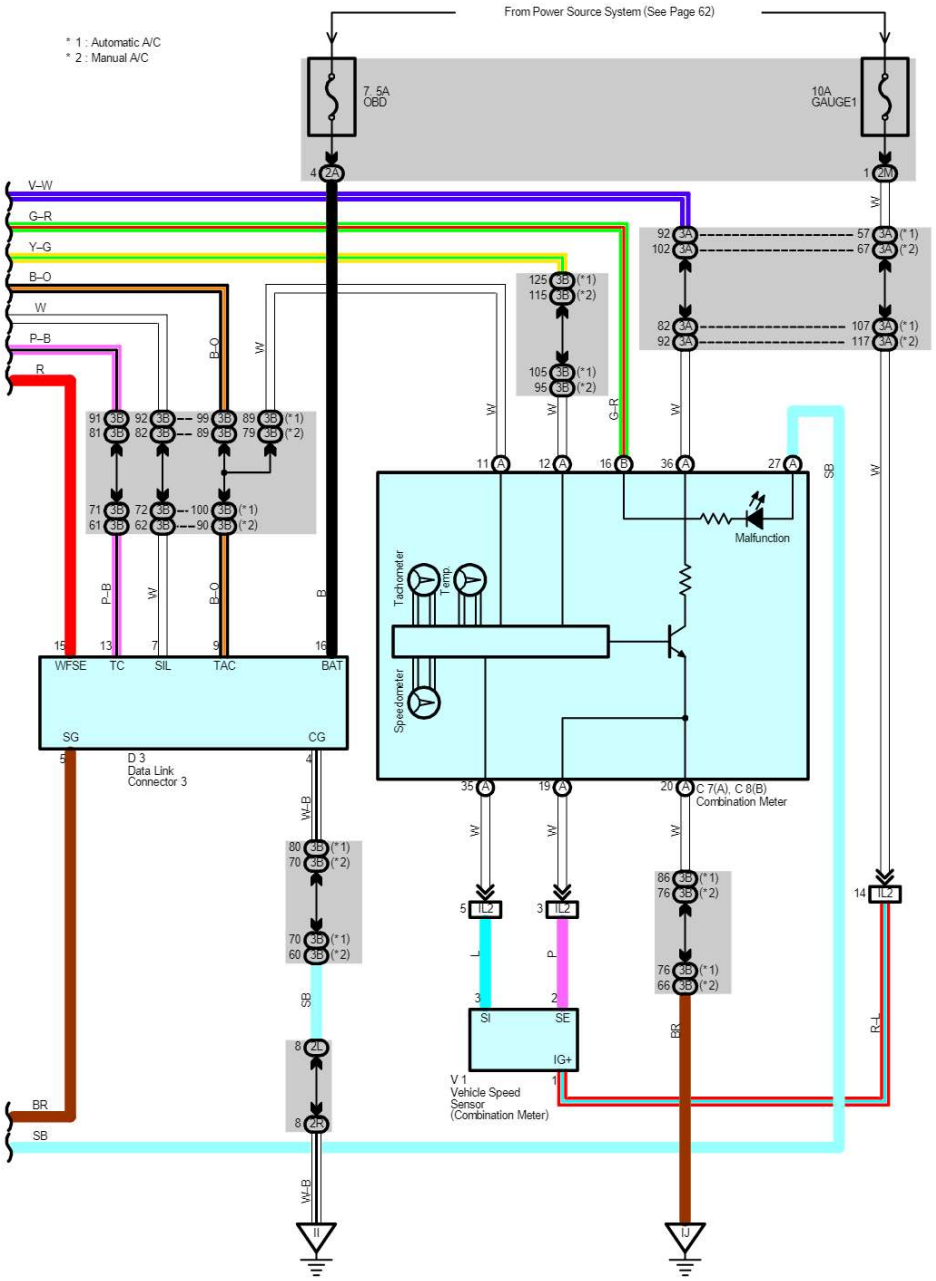


cardiagn.com

* 1 : Automatic A/C
* 2 : Manual A/C
* 6 : w/ Engine Immobiliser System



cardiagn.com



cardiagn.com

System Outline

The engine control system utilizes a microcomputer and maintains overall control of the engine, transaxle etc. An outline of the engine control is given here.

1. Input Signals

(1) Engine coolant temp. signal circuit

The engine coolant temp. sensor detects the engine coolant temp. and has a built–in thermistor with a resistance, which varies according to the engine coolant temp.. The engine coolant temp. which is input into TERMINAL THW of the engine control module as a control signal.

(2) Intake air temp. signal circuit

The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp. which is input as a control signal to TERMINAL THA of the engine control module.

(3) Oxygen density signal circuit

The oxygen density in the exhaust emission is detected by the heated oxygen sensor and input as a control signal to TERMINAL OX1B of the engine control module.

(4) RPM signal circuit

Camshaft position and crankshaft position are detected by the camshaft position sensor and crankshaft position sensor. Camshaft position is input as a control signal to TERMINAL G22+ of the engine control module, and engine RPM is input into TERMINAL NE+.

(5) Throttle position signal circuit

The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINAL VTA of the engine control module.

(6) Vehicle speed circuit

The vehicle speed sensor detects the vehicle speed and inputs a control signal to TERMINAL SPD of the engine control module.

(7) Battery signal circuit

Voltage is constantly applied to TERMINAL BATT of the engine control module. With the ignition SW turned on, the voltage for engine control module start–up power supply is applied to TERMINAL +B of the engine control module via the EFI relay.

(8) A/C SW signal circuit

The A/C control assembly (Automatic A/C) or heater control SW (Manual A/C) inputs the A/C operations into TERMINAL A/CS of the engine control module.

(9) Stop light SW signal circuit

The stop light SW is used to detect whether the vehicle is braking or not and the signal is input into TERMINAL STP of the engine control module as a control signal.

(10) Starter signal circuit

To confirm whether the engine is cranking, the voltage is applied to the starter motor during cranking is detected and the signal is input into TERMINAL STA of the engine control module as a control signal.

(11) Engine knock signal circuit

Engine knocking is detected by knock sensor and the signal is input into TERMINAL KNK1 as a control signal.

(12) Air fuel ratio signal system

The air fuel ratio is detected and input as a control signal into TERMINAL AF1A+ of the engine control module.

cardiagn.com

2. Control System

- SFI system
  The SFI system monitors the engine condition through the signals input from each sensor to the engine control module. And the control signal is output to TERMINALS #10, #20, #30, #40 of the engine control module to operate the injector (Inject the fuel). The SFI system controls the fuel injection operation by the engine control module in response to the driving conditions.
- ESA system
  The ESA system monitors the engine condition through the signals input to the engine control module from each sensor. The best ignition timing is decided according to this data and the memorized data in the engine control module and the control signal is output to TERMINALS IGT1, IGT2, IGT3, IGT4. This signal controls the igniter to provide the best ignition timing for the driving conditions.
- Heated oxygen sensor heater control system
  The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emissions is low), and warms up the heated oxygen sensor to improve detection performance of the sensor. The engine control module evaluates the signals from each sensor, and outputs current to TERMINAL HT1B to control the heater.

3. Diagnosis System

With the diagnosis system, when there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory. The malfunctioning system can be found by reading the code displayed by the malfunction indicator lamp.

4. Fail–Safe System

When a malfunction has occurred in any system, if there is a possibility of engine trouble being caused by continued control based on the signals from that system, the fail–safe system either controls the system by using data (Standard values) recorded in the engine control module memory or else stops the engine.

cardiagn.com

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

BATT–E1 : Always 9.0–14.0 volts
VC–E2 : 4.5–5.5 volts (Ignition SW at ON position)
VTA–E2 : 0.3–1.0 volts (Ignition SW on and throttle valve fully closed)
3.2–4.9 volts (Ignition SW on and throttle valve fully open)
VG–E2G : 1.1–1.5 volts (Engine idling and A/C SW off)
THA–E2 : 0.5–3.4 volts (Engine idling and intake air temp. 20˚C, 68˚F)
THW–E2 : 0.2–1.0 volts (Engine idling and coolant temp. 80˚C, 176˚F)
IGF–E1 : 4.5–5.5 volts (Ignition SW at ON position)
Pulse generation (Engine idling)
SIL–E1 : Pulse generation (During transmission)
TACH–E1 : Pulse generation (Engine idling)
STA–E1 : 6.0 volts or more (Engine cranking)
FC–E01 : 9.0–14.0 volts (Ignition SW at ON position)
SPD–E1 : Pulse generation (Ignition SW on and rotate driving wheel slowly)
W–E01 : Below 3.0 volts (Ignition SW at ON position)
NSW–E1 : 9.0–14.0 volts (Ignition SW on and other shift position in P or N position)
0–3.0 volts (Ignition SW on and shift position in P or N position)
EVP1–E01 : 9.0–14.0 volts (Ignition SW at ON position)
STP–E1 : 7.5–14.0 volts (Ignition SW on and brake pedal depressed)
Below 1.5 volts (Ignition SW on and brake pedal released)
KNK1–E1 : Pulse generation (Engine idling)
PSW–E1 : 9.0–14.0 volts (Ignition SW at ON position)
HAF1A–E04 : Below **3.0** volts (Engine idling)
IGSW–E1 : 9.0–14.0 volts (Ignition SW at ON position)
MREL–E1 : 9.0–14.0 volts (Ignition SW at ON position)
G22+, NE+ –NE– : Pulse generation (Engine idling)
OCV+ –OCV– : Pulse generation (Ignition SW at ON position)
HT1B–E1 : 9.0–14.0 volts (Engine idling)
Below 3.0 volts (Ignition SW at ON position)
AF1A+ –E1 : 3.3 volts (Ignition SW at ON position)
AF1A– –E1 : 3.0 volts (Ignition SW at ON position)
OX1B–E1 : Pulse generation (Maintain engine speed at 2500 rpm for 90 sec. after warming up)
IGT1, IGT2, IGT3, IGT4–E1 : Pulse generation (Engine idling)
#10, #20, #30, #40–E01 : 9.0–14.0 volts (Ignition SW at ON position)
Pulse generation (Engine idling)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	40 (2AZ–FE)	E10 E	42	J1	43
A8	40 (2AZ–FE)	F8	44	J11	44
A13 A	42	H5	40 (2AZ–FE)	K2	41 (2AZ–FE)
A18	42	H10 B	43	M1	41 (2AZ–FE)
C1	40 (2AZ–FE)	I1	41 (2AZ–FE)	P1	41 (2AZ–FE)
C3	40 (2AZ–FE)	I2	41 (2AZ–FE)	S14	43
C7 A	42	I3	41 (2AZ–FE)	T3	41 (2AZ–FE)
C8 B	42	I4	41 (2AZ–FE)	V1	41 (2AZ–FE)
D3	42	I7	41 (2AZ–FE)	V4	41 (2AZ–FE)
E4	40 (2AZ–FE)	I8	41 (2AZ–FE)	V6	41 (2AZ–FE)
E6 A	42	I9	41 (2AZ–FE)	V7	41 (2AZ–FE)
E7 B	42	I10	41 (2AZ–FE)	V11	45
E8 C	42	I14	43	V12	45
E9 D	42	I15	43		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

cardiagn.com

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1B		
1C		
1D		
1E		
1H		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
ID1	52	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF4		
IF6		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: **Ground Points**

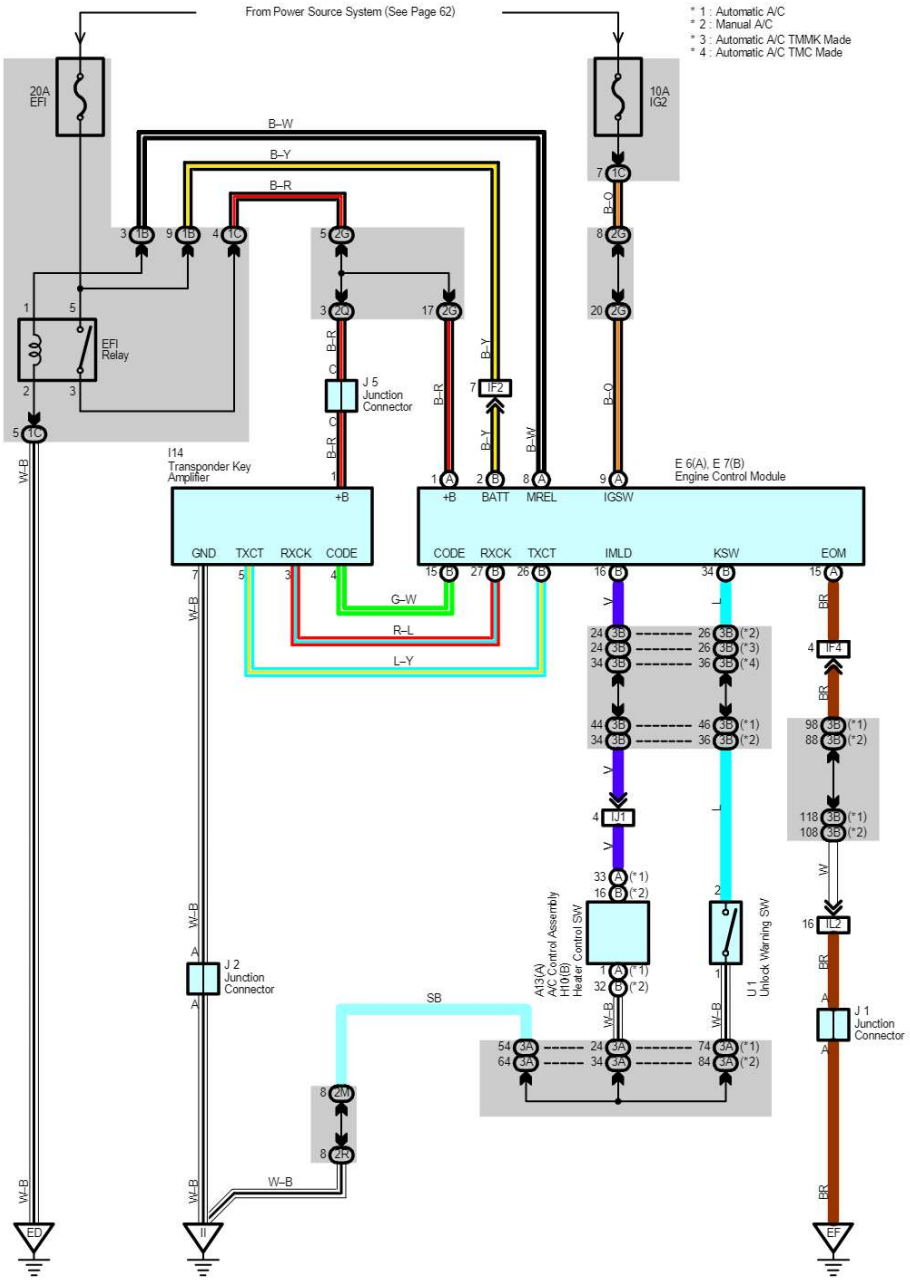
Code	See Page	Ground Points Location
ED	50 (2AZ–FE)	Left Fender
EG	50 (2AZ–FE)	Left Side of Cylinder Head
EH	50 (2AZ–FE)	Intake Side of Cylinder Block
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
BQ	56	Front Side of Rear Quarter Wheel House LH

: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E13	50 (2AZ–FE)	Engine Wire	I6	54	Engine Wire
E14			I7		
E15			I8		

cardiagn.com

cardiagn.com



cardiagn.com

Service Hints

E6 (A), E7 (B) Engine Control Module

BATT–Ground : Always approx. 12 volts
IGSW–Ground : Approx. 12 volts with ignition SW at ON or ST position
EOM–Ground : Always continuity
KSW–Ground : Continuity with the key in cylinder

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
A13	A	42	H10	B	43	J2	43
E6	A	42	I14		43	J5	43
E7	B	42	J1		43	U1	43

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

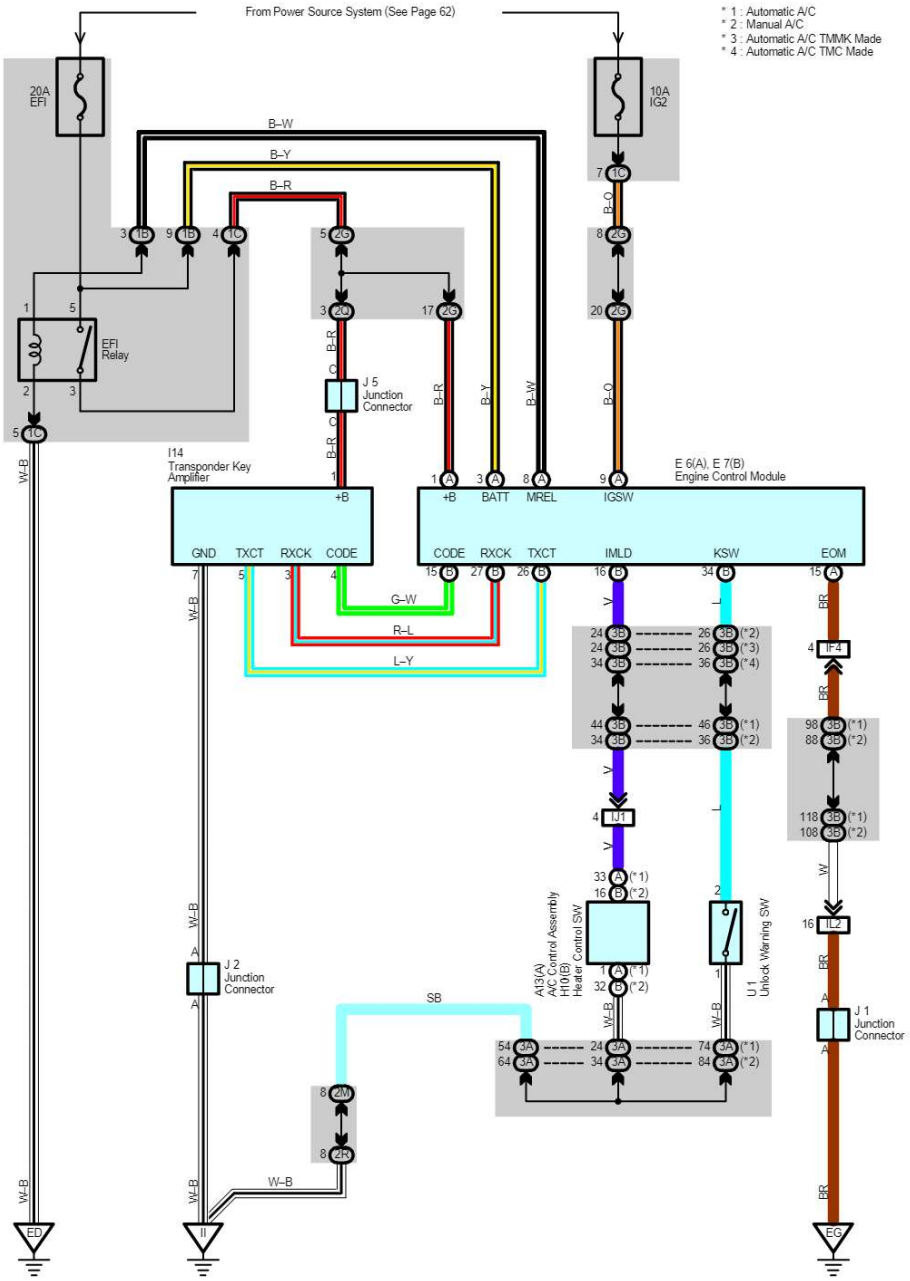
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL2	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

▽ : Ground Points

Code	See Page	Ground Points Location
ED	48 (1MZ–FE)	Left Fender
EF	48 (1MZ–FE)	Rear Side of Surge Tank
II	52	Cowl Side Panel LH

cardiagn.com



cardiagn.com

Service Hints

E6 (A), E7 (B) Engine Control Module

BATT–Ground : Always approx. 12 volts
IGSW–Ground : Approx. 12 volts with ignition SW at ON or ST position
EOM–Ground : Always continuity
KSW–Ground : Continuity with the key in cylinder

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
A13	A	42	H10	B	43	J2	43
E6	A	42	I14		43	J5	43
E7	B	42	J1		43	U1	43

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

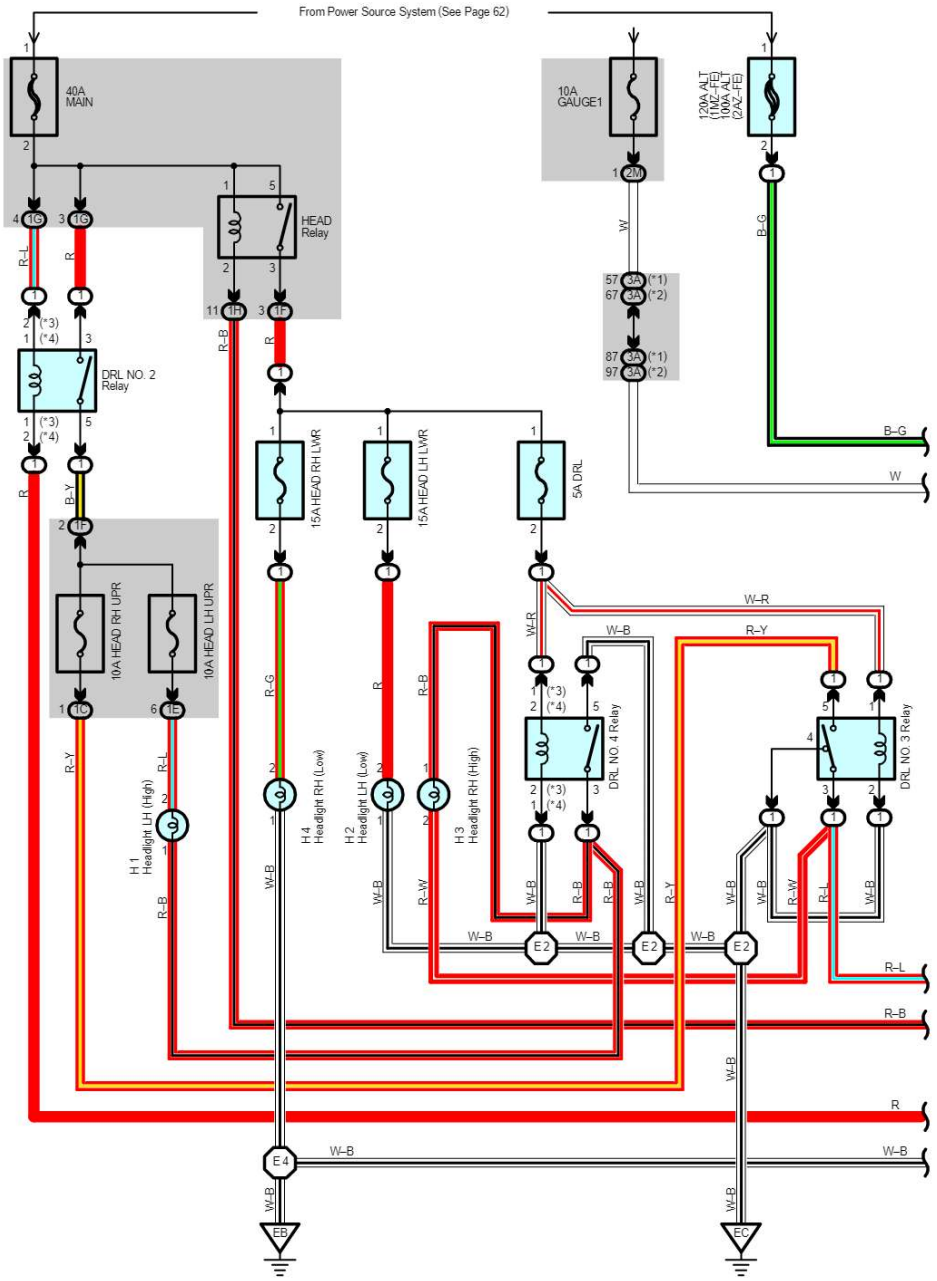
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF4	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL2	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

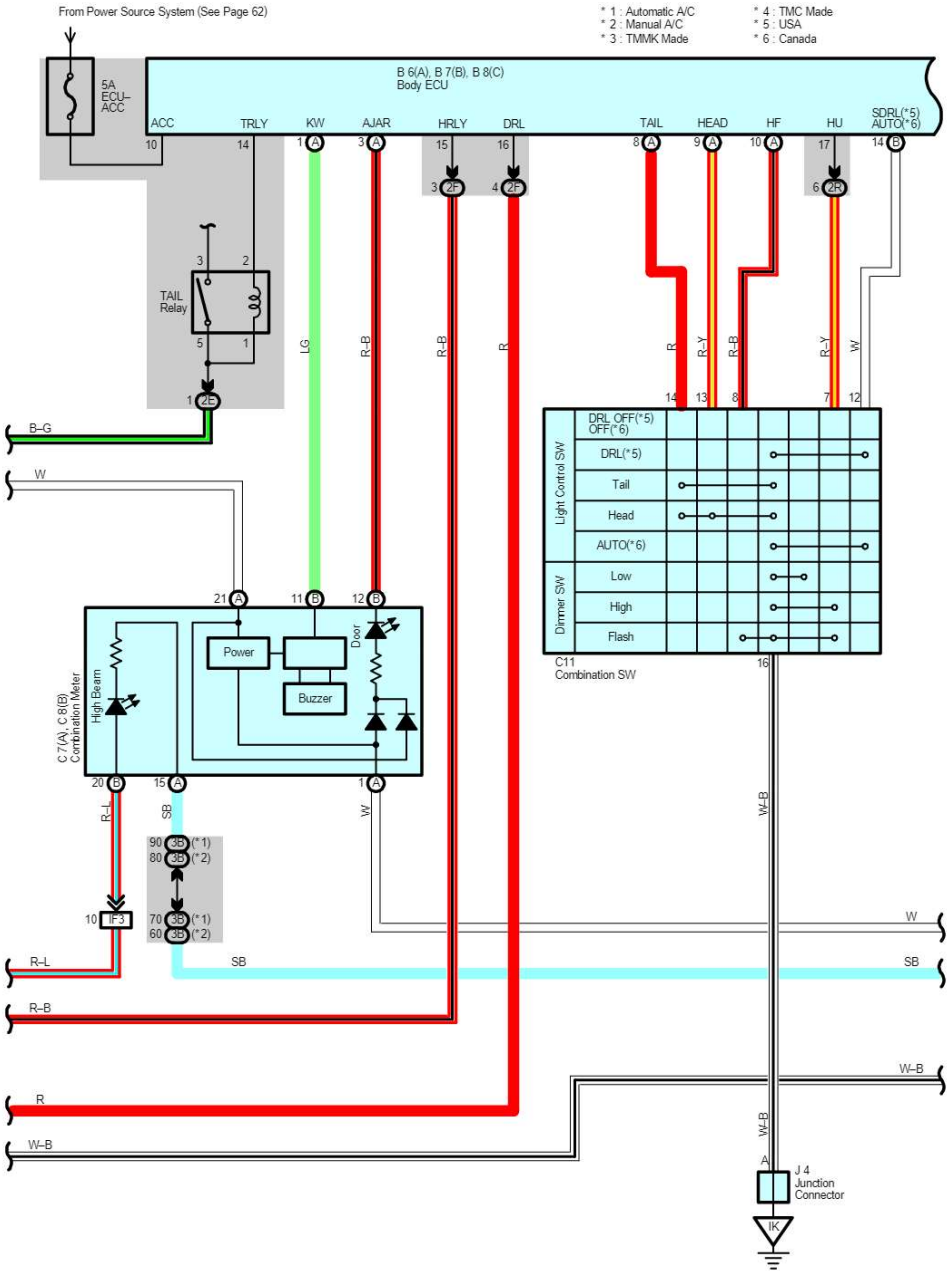
▽ : Ground Points

Code	See Page	Ground Points Location
ED	50 (2AZ–FE)	Left Fender
EG	50 (2AZ–FE)	Left Side of Cylinder Head
II	52	Cowl Side Panel LH

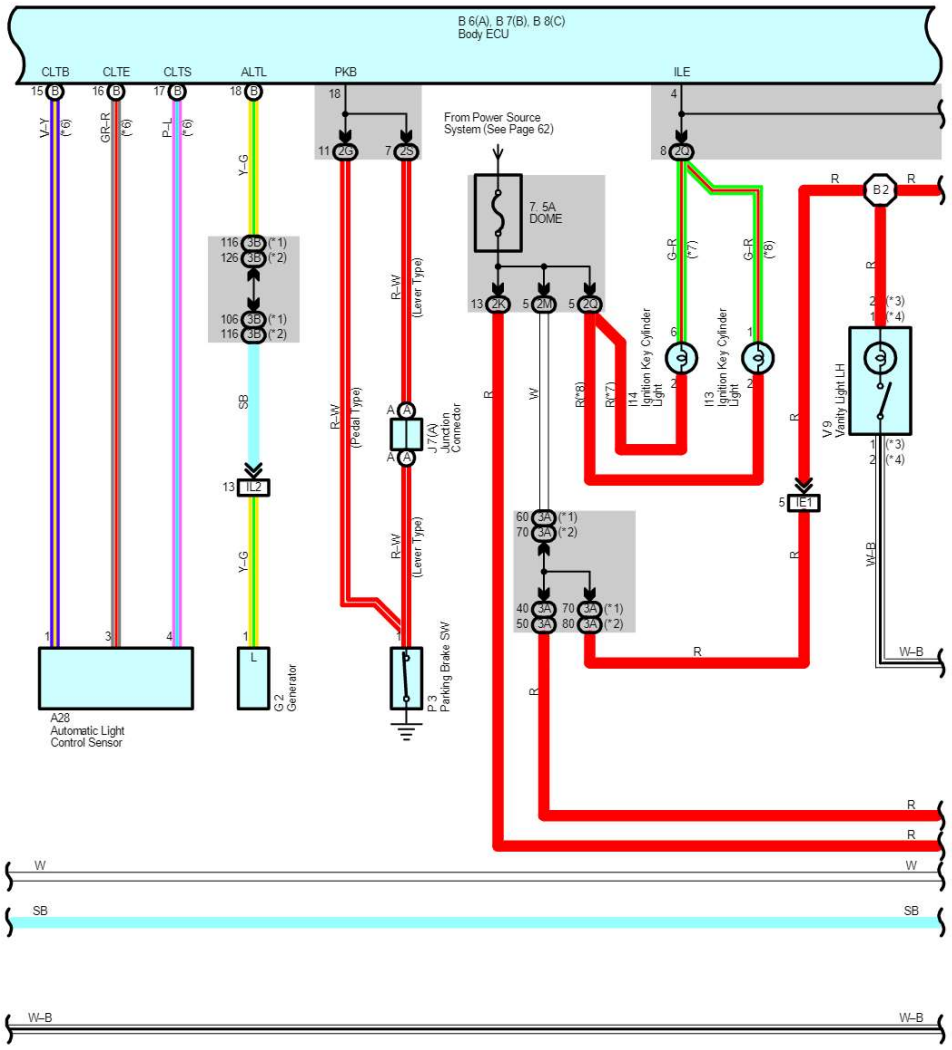
cardiagn.com



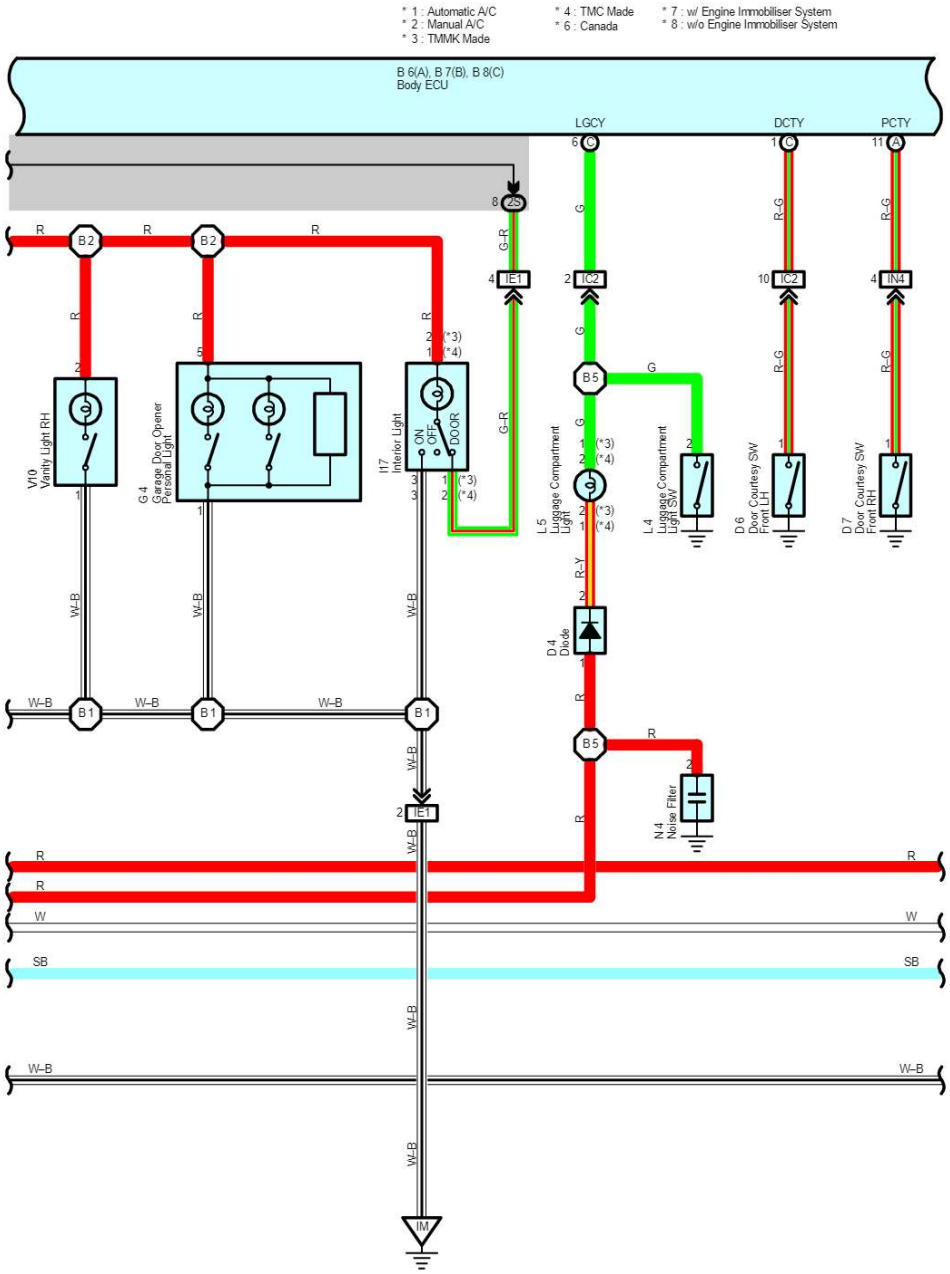
cardiagn.com



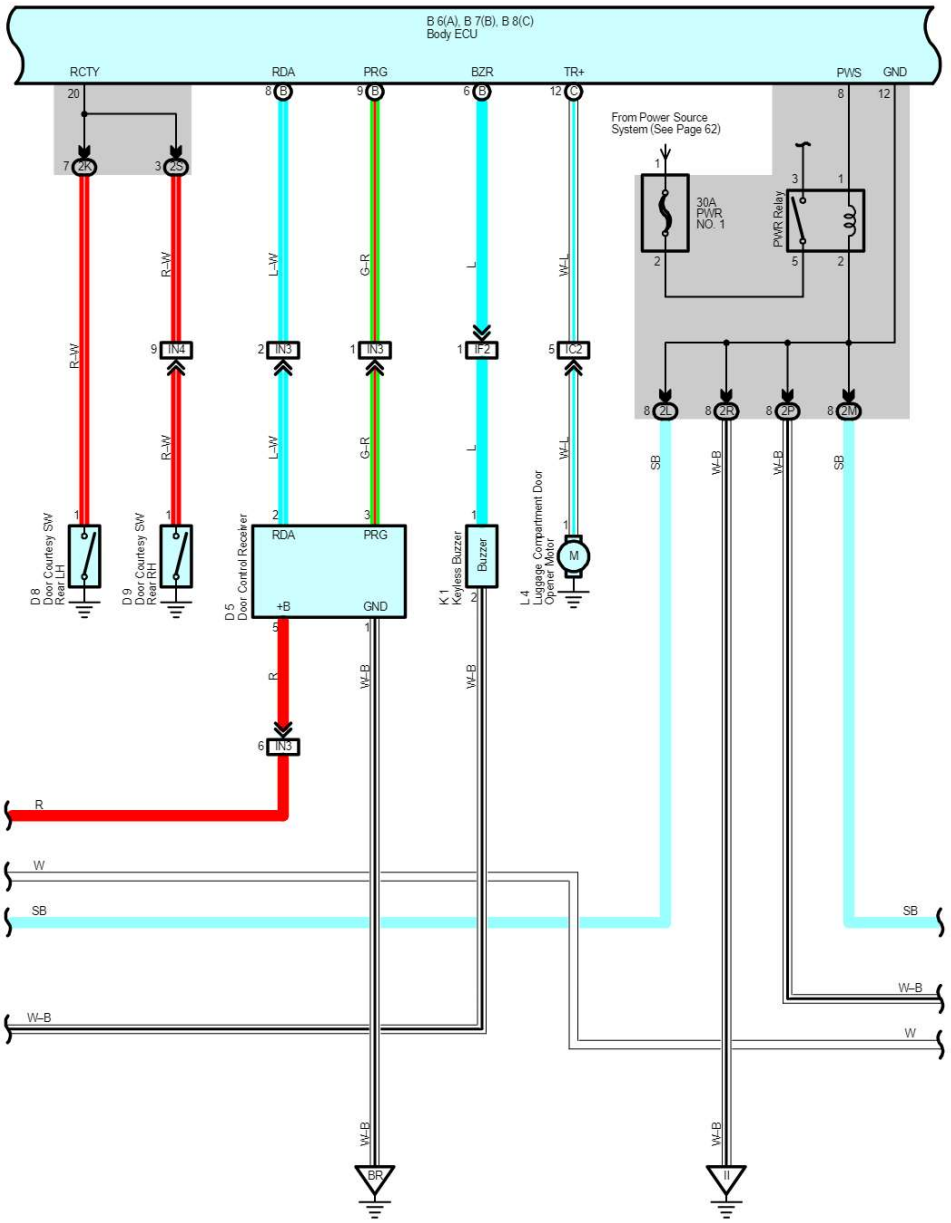
cardiagn.com



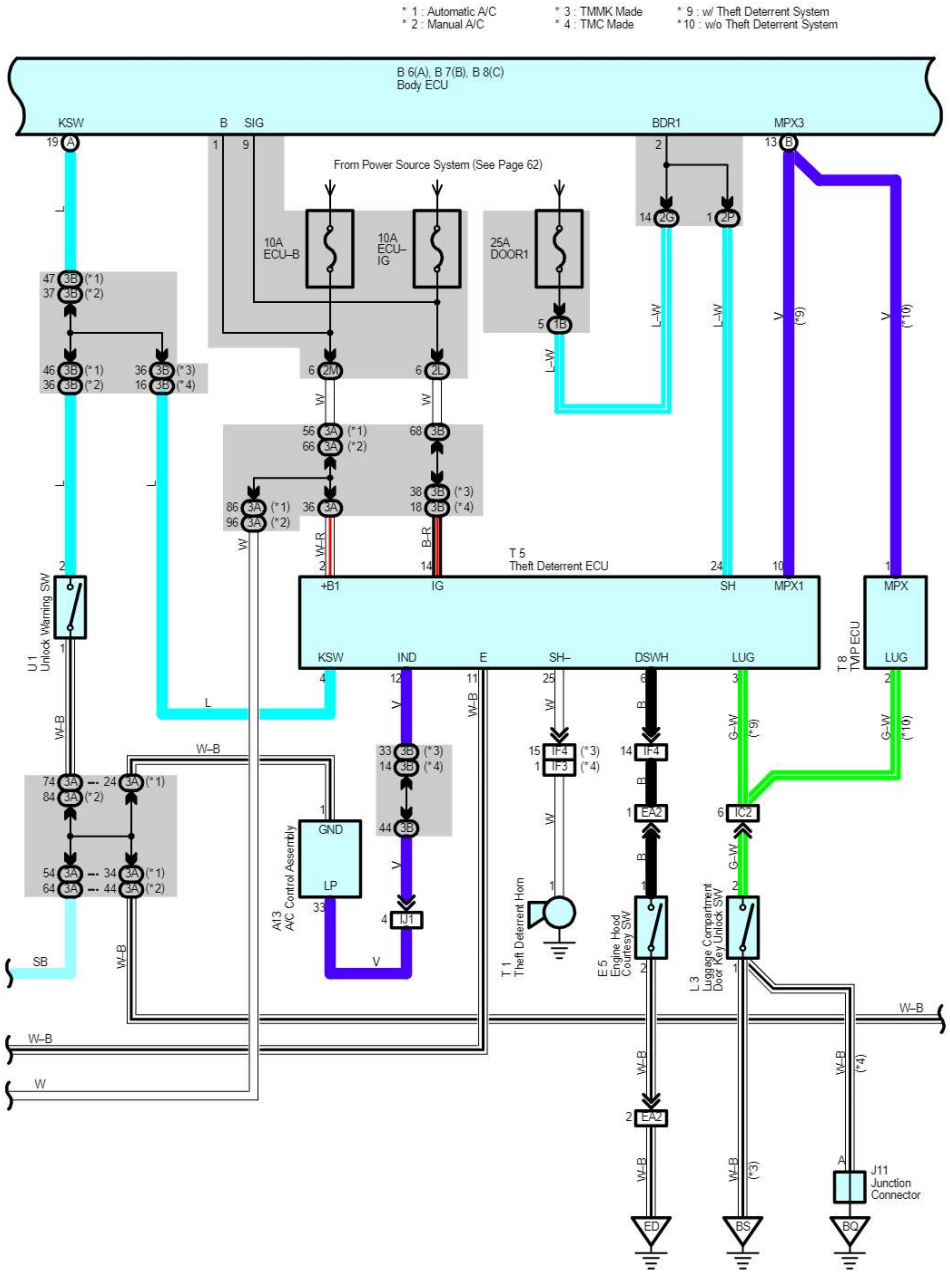
cardiagn.com



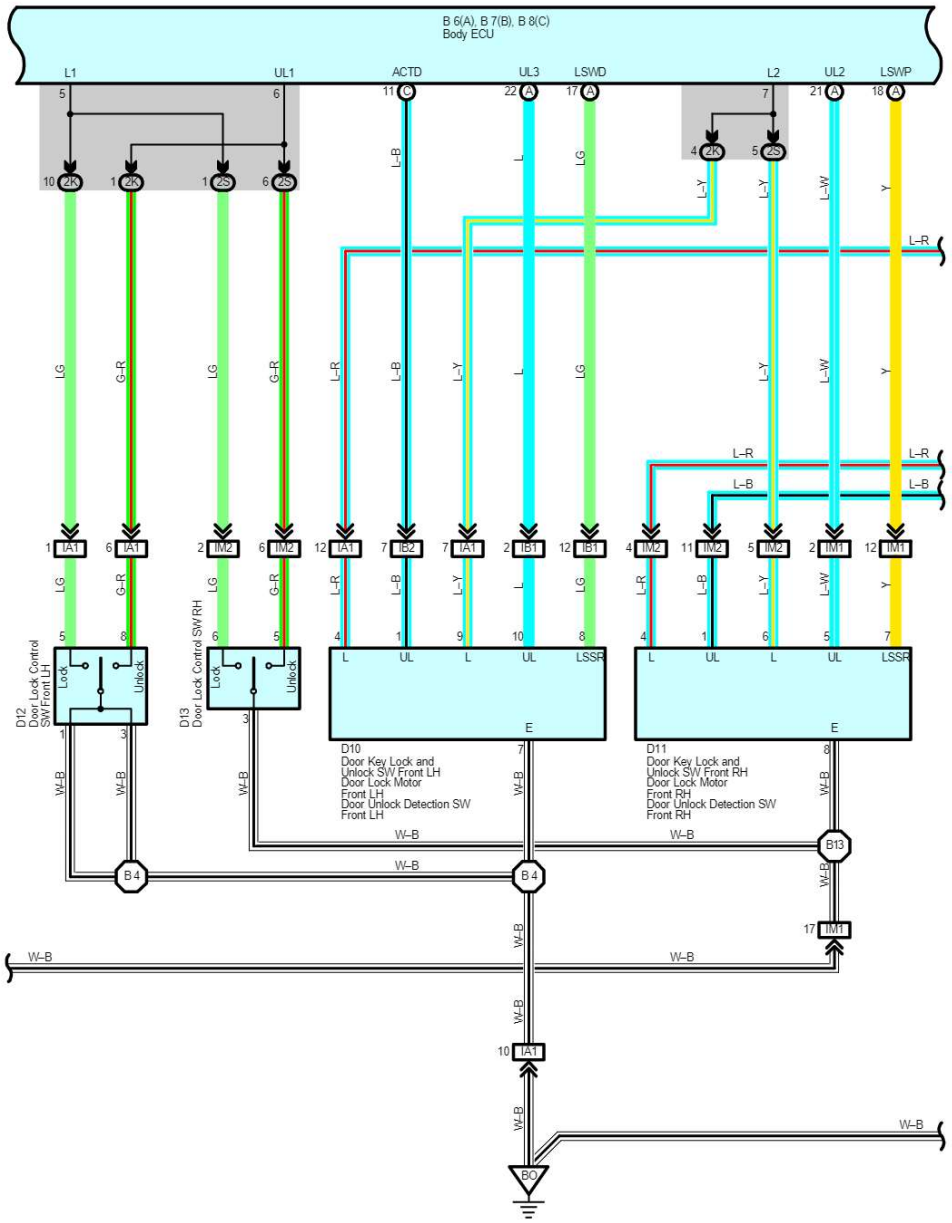
cardiagn.com



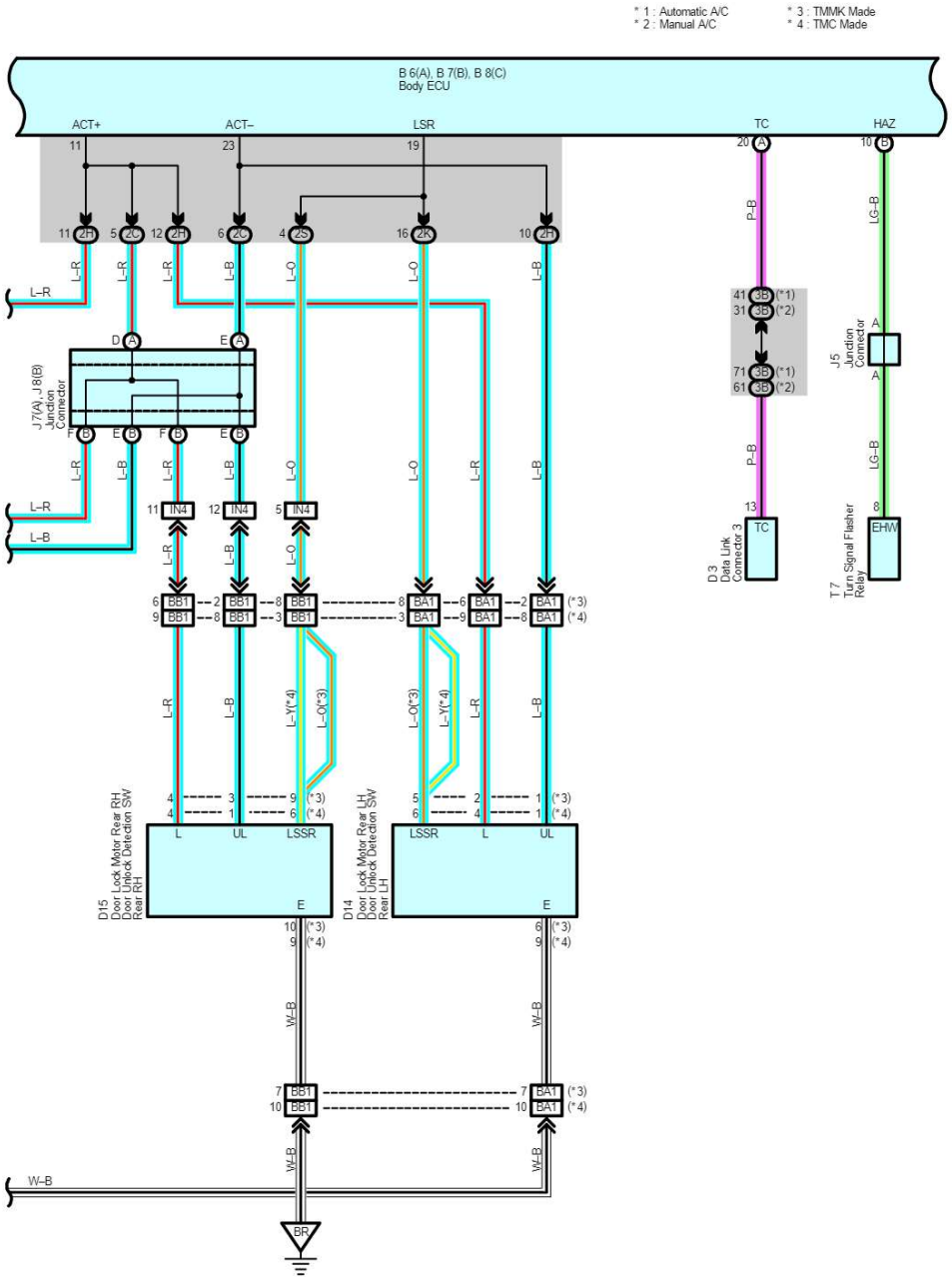
cardiagn.com



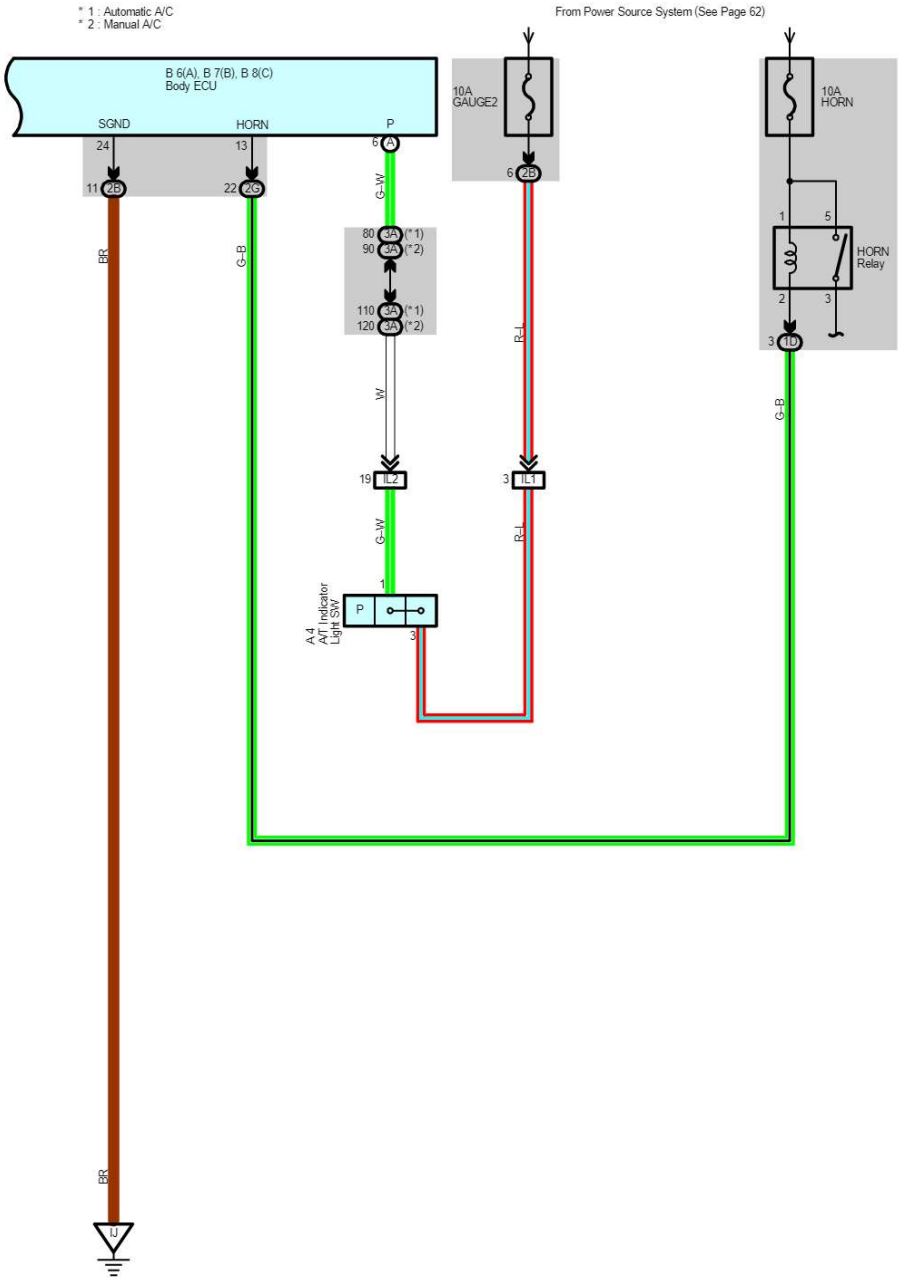
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

System Outline

The multiplex communication system communicates among the body ECU, theft deterrent ECU and controls the following systems according to the signals from respective sensors or switches.

Multiplex Communication System Includes Following Systems

- **Automatic Light Control**
- **Door Lock Control**
- **Headlight**
- **Interior Light**
- **Key Reminder**
- **Light Auto Turn Off**
- **Theft Deterrent**
- **Wireless Door Lock Control**

Service Hints

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position
12, 24–Ground : Always continuity
1–Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	D13	44	J5	43
	40 (2AZ–FE)	D14	44	J7 A	43
A13	42	D15	44	J8 B	43
A28	42	E5	38 (1MZ–FE)	J11	44
B6 A	42		40 (2AZ–FE)	K1	39 (1MZ–FE)
B7 B	42	G2	38 (1MZ–FE)		41 (2AZ–FE)
B8 C	42		40 (2AZ–FE)	L3	45
C7 A	42	G4	44	L4	45
C8 B	42	H1	38 (1MZ–FE)	L5	45
C11	42		40 (2AZ–FE)	N4	45
D3	42	H2	38 (1MZ–FE)	P3	43
D4	44		40 (2AZ–FE)	T1	39 (1MZ–FE)
D5	44	H3	38 (1MZ–FE)		41 (2AZ–FE)
D6	44		40 (2AZ–FE)	T5	43
D7	44	H4	38 (1MZ–FE)	T7	43
D8	44		40 (2AZ–FE)	T8	43
D9	44	I13	43	U1	43
D10	44	I14	43	V9	45
D11	44	I17	44	V10	45
D12	44	J4	43		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

cardiagn.com

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1D		
1E		
1F		
1G		
1H		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2C		
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		
2G		
2H	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2K		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2P		
2Q		
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	48 (1MZ–FE)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	50 (2AZ–FE)	
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE1	52	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF4		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN3	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN4		
BA1	56	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	56	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

cardiagn.com

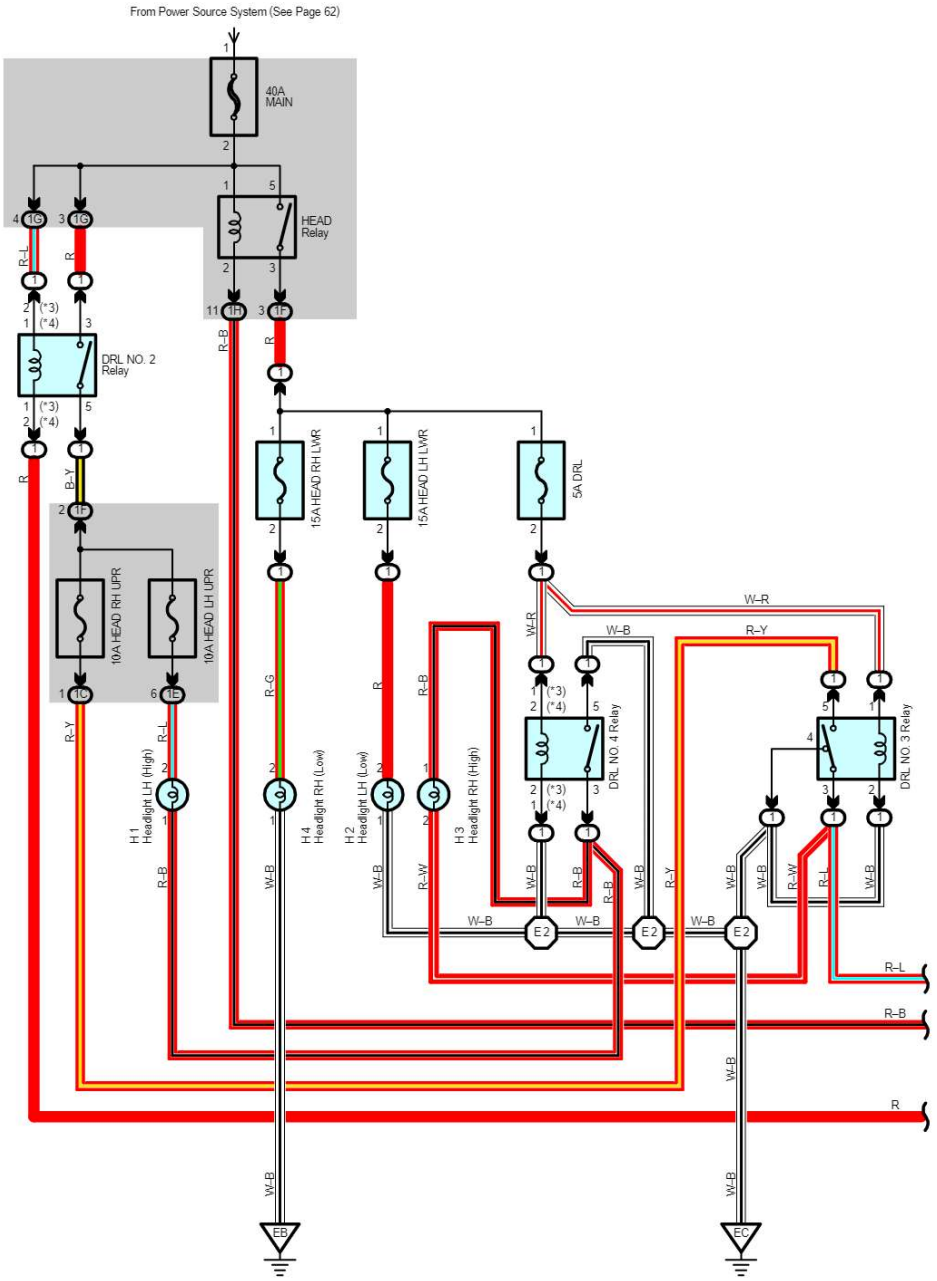
: **Ground Points**

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
ED	48 (1MZ–FE)	
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
IK		
IM	52	Instrument Panel Reinforcement RH
BO	56	Under the Driver's Seat
BQ	56	Front Side of Rear Quarter Wheel House LH
BR	56	Front Side of Rear Quarter Wheel House RH
BS	56	Lower Back Panel Center

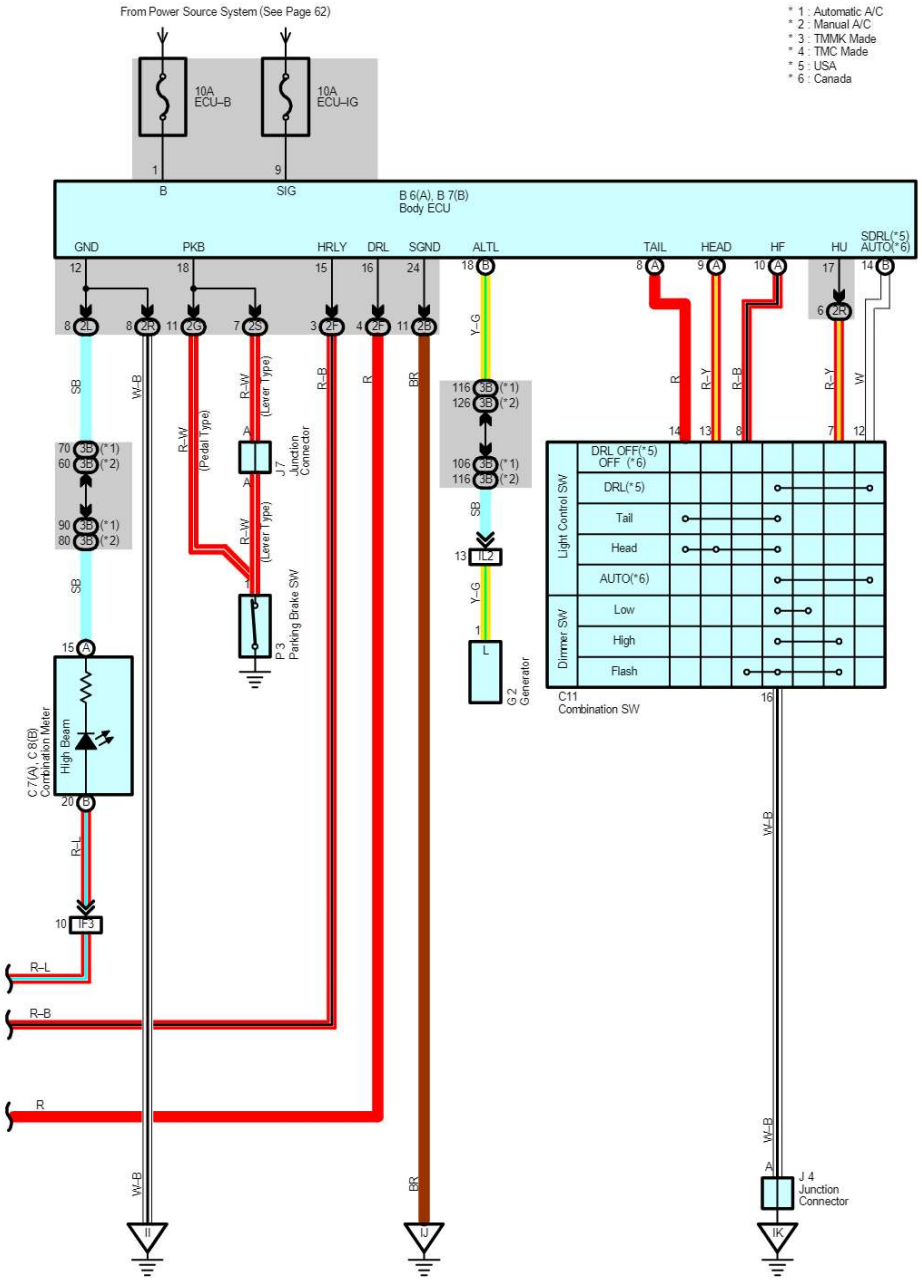
: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	48 (1MZ–FE)	Engine Room Main Wire	B2	56	Roof Wire
	50 (2AZ–FE)		B4	56	Front Door LH Wire
E4	48 (1MZ–FE)		B5	56	Floor Wire
	50 (2AZ–FE)		B13	56	Front Door RH Wire
B1	56	Roof Wire			

cardiagn.com



cardiagn.com



cardiagn.com

Headlight

System Outline

Daytime Running Light Operation

When the engine is started, a signal from the generator is input into TERMINAL (B) 18 of the body ECU. At this time, if the parking brake pedal is depressed (Parking brake SW ON), the body ECU is not activated, and the daytime running light system does not operate.

When the parking brake pedal or parking lever is released (Parking brake SW OFF), a signal is input into TERMINAL 18 of the body ECU. This activates the body ECU and the headlight turns on.

Service Hints

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position

12, 24–Ground : Always continuity

1–Ground : Always approx. 12 volts

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B6	A	42	G2	40 (2AZ–FE)	H3	40 (2AZ–FE)
B7	B	42	H1	38 (1MZ–FE)	H4	38 (1MZ–FE)
C7	A	42		40 (2AZ–FE)		40 (2AZ–FE)
C8	B	42	H2	38 (1MZ–FE)	J4	43
C11		42		40 (2AZ–FE)	J7	43
G2		38 (1MZ–FE)	H3	38 (1MZ–FE)	P3	43

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1E		
1F		
1G		
1H		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
2S		
3B	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IL2	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

cardiagn.com

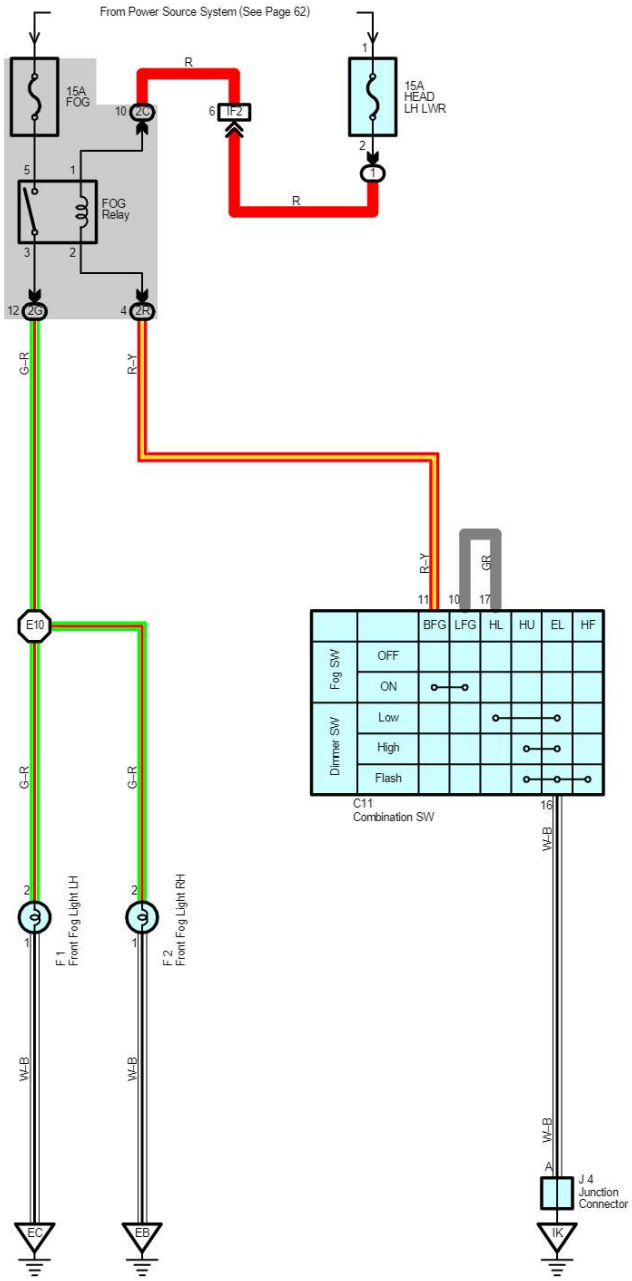
: **Ground Points**

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
IK	52	

: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	48 (1MZ–FE)	Engine Room Main Wire	E2	50 (2AZ–FE)	Engine Room Main Wire

cardiagn.com



cardiagn.com

Service Hints

FOG Relay

5–3 : Closed with the light control SW at HEAD position, dimmer SW at LOW position and fog SW on

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C11	42	F1	40 (2AZ–FE)	F2	40 (2AZ–FE)
F1	38 (1MZ–FE)	F2	38 (1MZ–FE)	J4	43

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2C	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

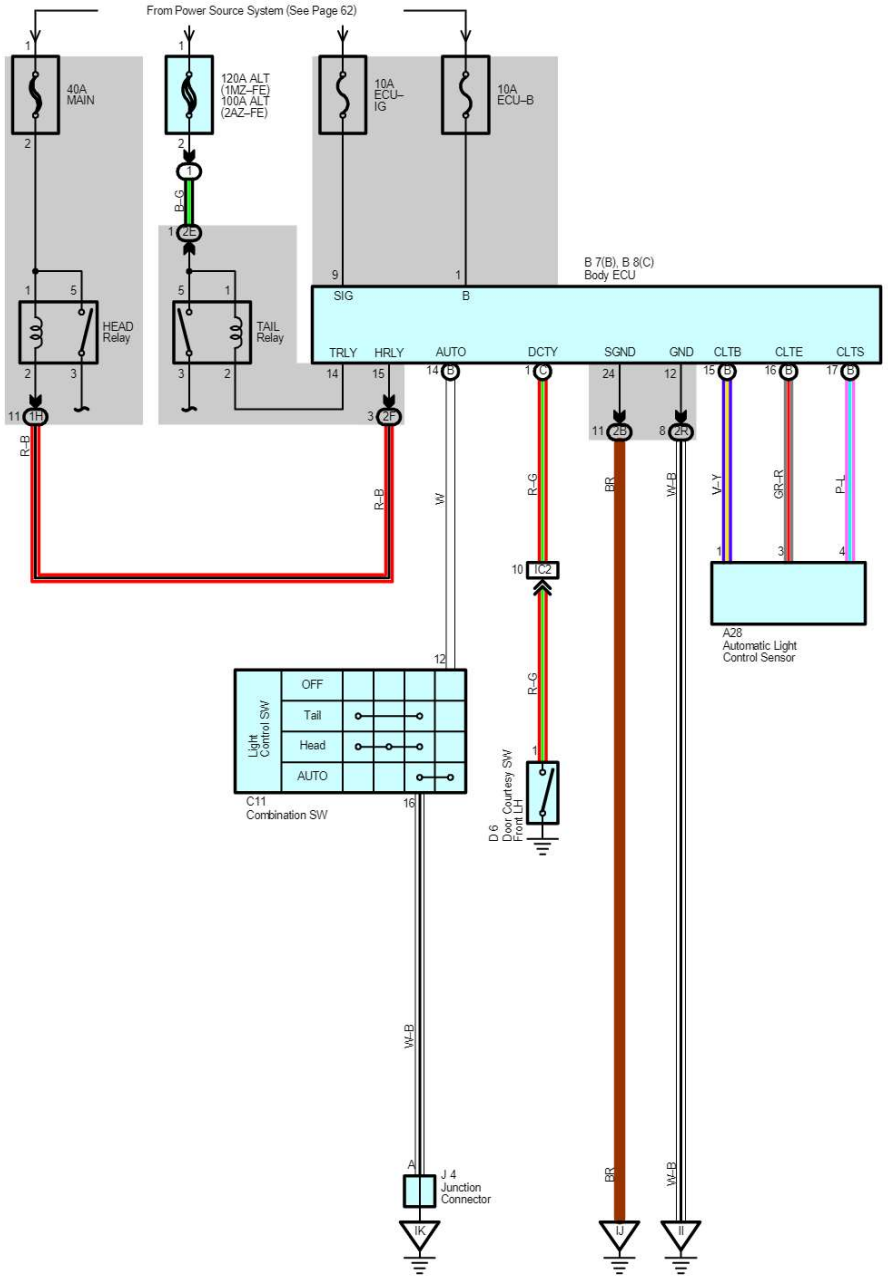
: Ground Points

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
IK	52	Instrument Panel Brace LH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E10	48 (1MZ–FE)	Engine Room Main Wire	E10	50 (2AZ–FE)	Engine Room Main Wire

cardiagn.com



cardiagn.com

System Outline

The automatic light control system works when the light control SW is turned to AUTO. The automatic light control sensor detects the brightness around the vehicle. By this function, the system automatically turns the taillight and headlight on if the brightness is below the regular level and turns the taillight and headlight off when the surroundings become brighter than the regular level.

Service Hints

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position
12, 24–Ground : Always continuity
1–Ground : Always approx. 12 volts

D6 Door Courtesy SW Front LH

1–Ground : Driver's door open

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A28	42	B8 C	42	D6	44
B7 B	42	C11	42	J4	43

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1H	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

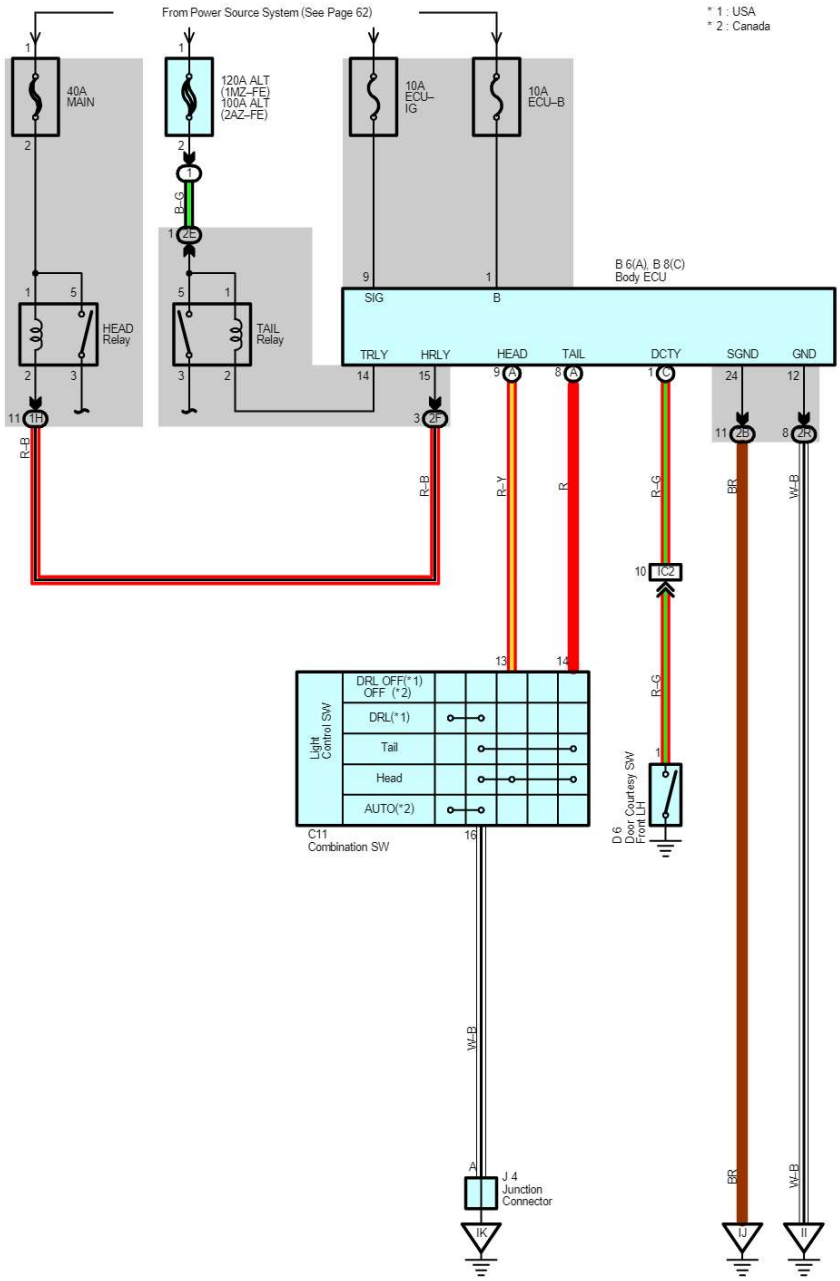
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
IK		

cardiagn.com

Light Auto Turn Off



cardiagn.com

System Outline

1. Normal Lighting Operation

<Turn taillight on>
With the light control SW turned to TAIL position, a signal is input into TERMINAL (A) 8 of the body ECU. Due to this signal, the current flowing to TERMINAL 14 of the ECU flows to TERMINAL (A) 8 to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND, and TAIL relay causes taillights to turn on.

<Turn headlight on>
With the light control SW turned to HEAD position, a signal is input into TERMINALS (A) 8 and (A) 9 of the body ECU. Due to this signal, the current flowing to TERMINAL 15 of the ECU flows to TERMINAL (A) 9 to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND in the headlight circuit, and causes taillight and HEAD relay to turn the lights on. The taillight circuit is same as above.

2. Light Auto Turn Off Operation

With light on and ignition SW turned off (Input signal goes to TERMINAL 9 of the ECU), when the driver's door is opened (Input signal goes to TERMINAL (C) 1 of the ECU), the body ECU operates and the current is cut off which flows from TERMINAL 14 of the ECU to TERMINAL (A) 8 In taillight circuit and from TERMINAL 15 to TERMINAL (A) 9 in headlight circuit.
As a result, all lights are turned off automatically.

Service Hints

TAIL Relay

5–3 : Closed with the light control SW at HEAD or TAIL position

HEAD Relay

5–3 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position
Closed with the engine running and parking brake released (Parking brake SW off)

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position
12, 24–Ground : Always continuity
1–Ground : Always approx. 12 volts

D6 Door Courtesy SW Front LH

1–Ground : Closed with the driver door open

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B6	A	42	C11	42	J4	43
B8	C	42	D6	44		

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1H	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)

cardiagn.com

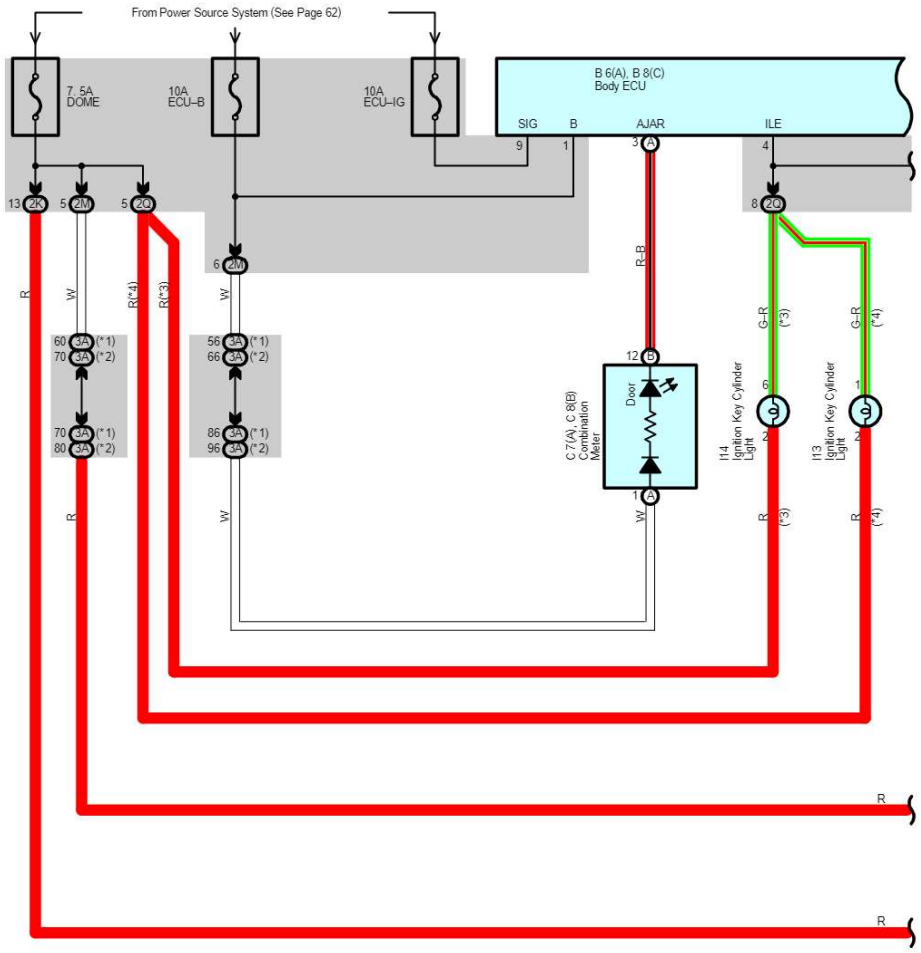
Light Auto Turn Off

▽ : **Ground Points**

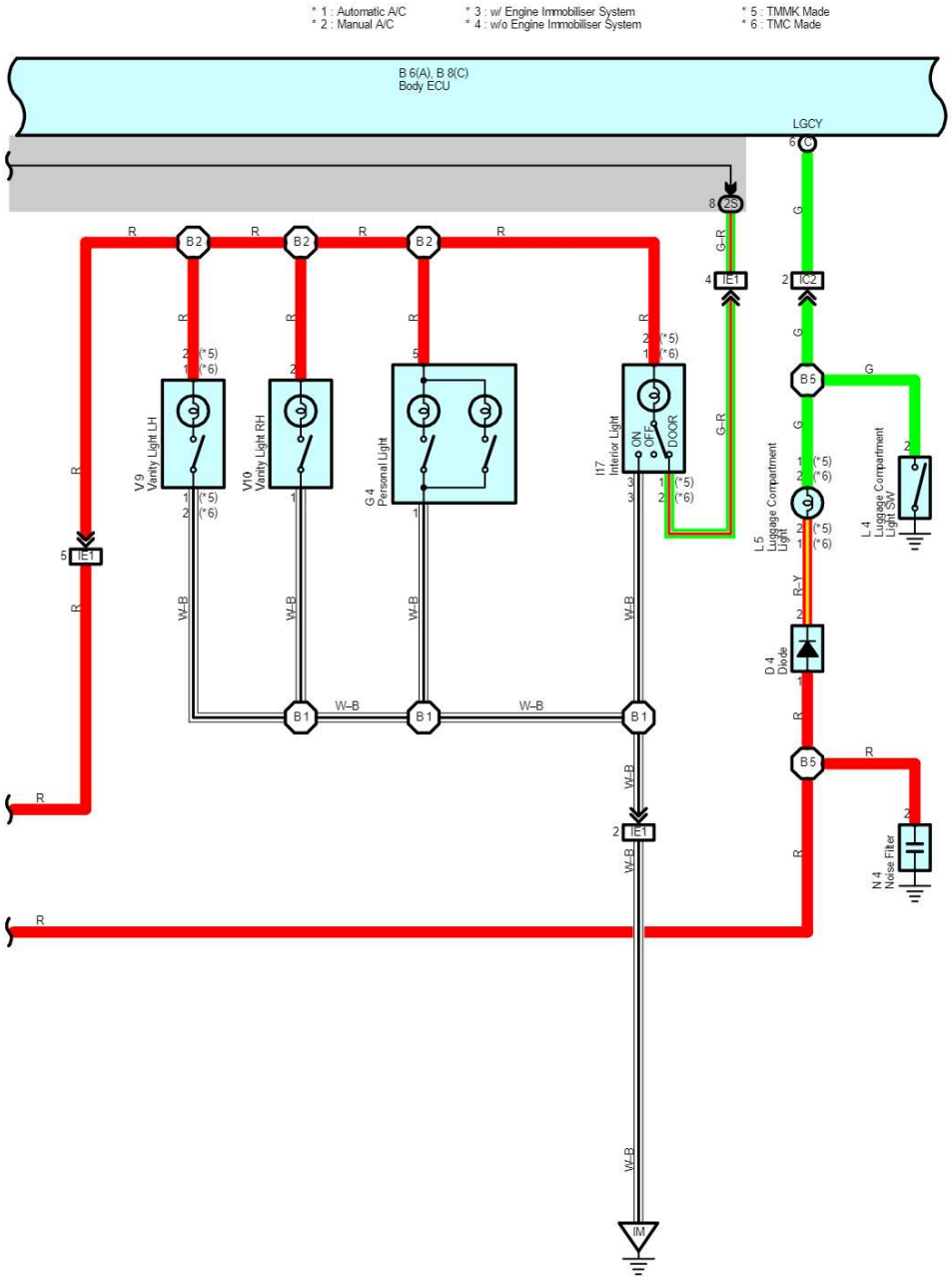
Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
IK		

cardiagn.com

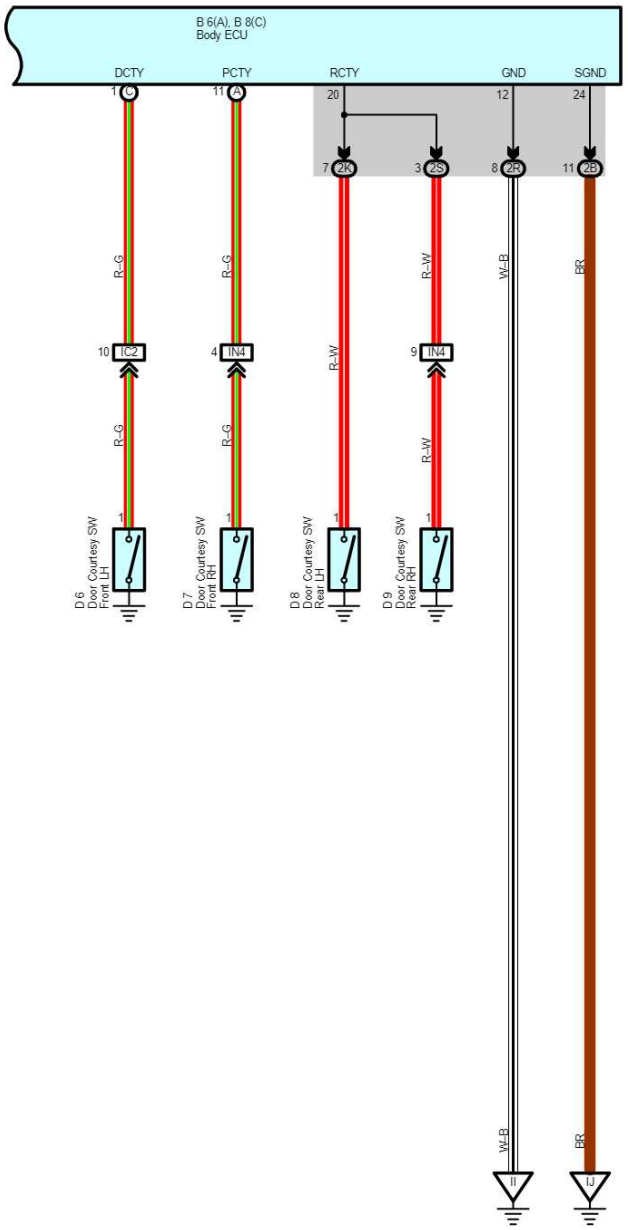
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

Service Hints

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position
12, 24–Ground : Always continuity
1–Ground : Always approx. 12 volts

D6, D7, D8, D9 Door Courtesy SW Front LH, RH, Rear LH, RH

1–Ground : Closed with each of the door

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B6	A	42	D7	44	I17	44
B8	C	42	D8	44	L4	45
C7	A	42	D9	44	L5	45
C8	B	42	G4	44	N4	45
D4		44	I13	43	V9	45
D6		44	I14	43	V10	45

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE1	52	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IN4	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

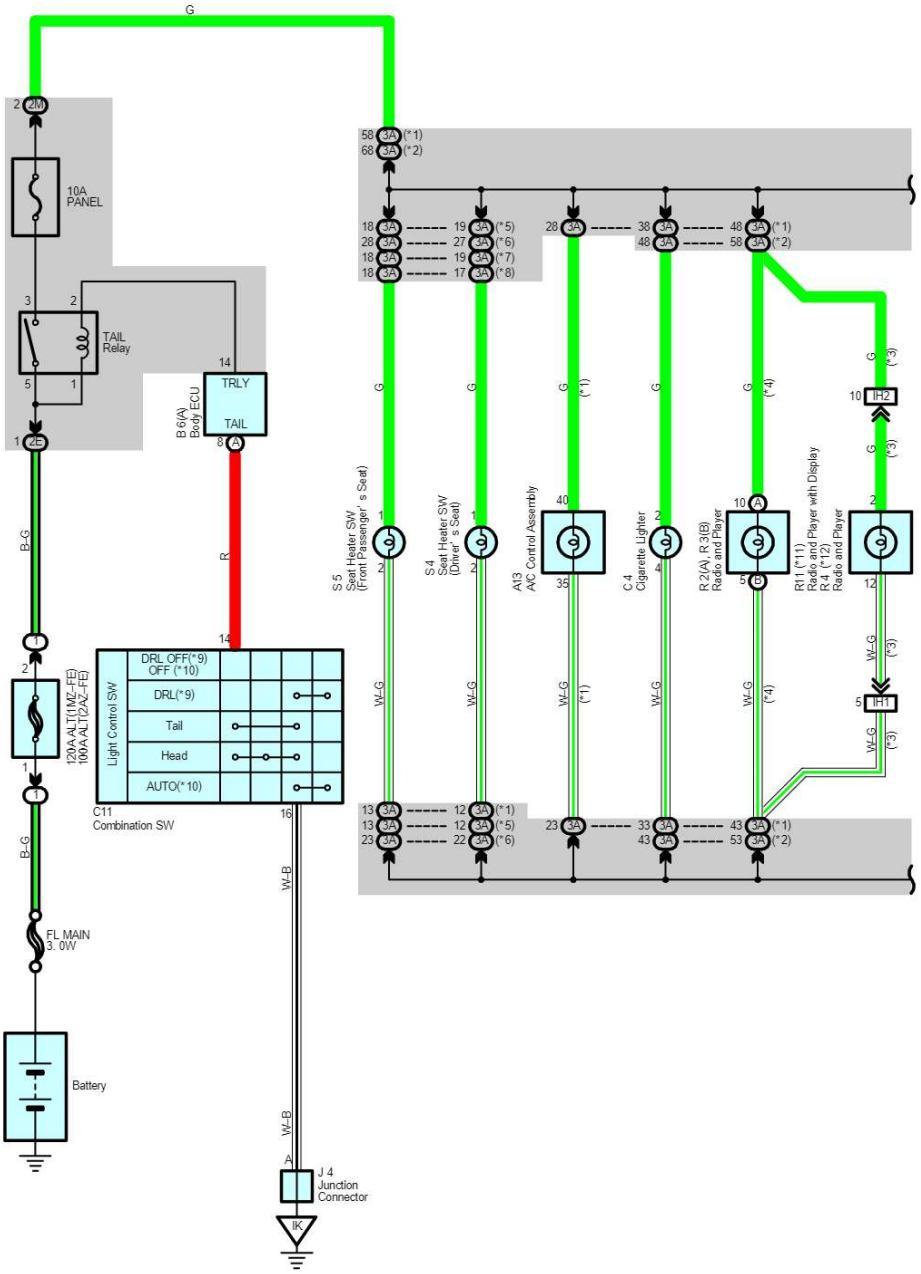
▽ : Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
IM	52	Instrument Panel Reinforcement RH

⯃ : Splice Points

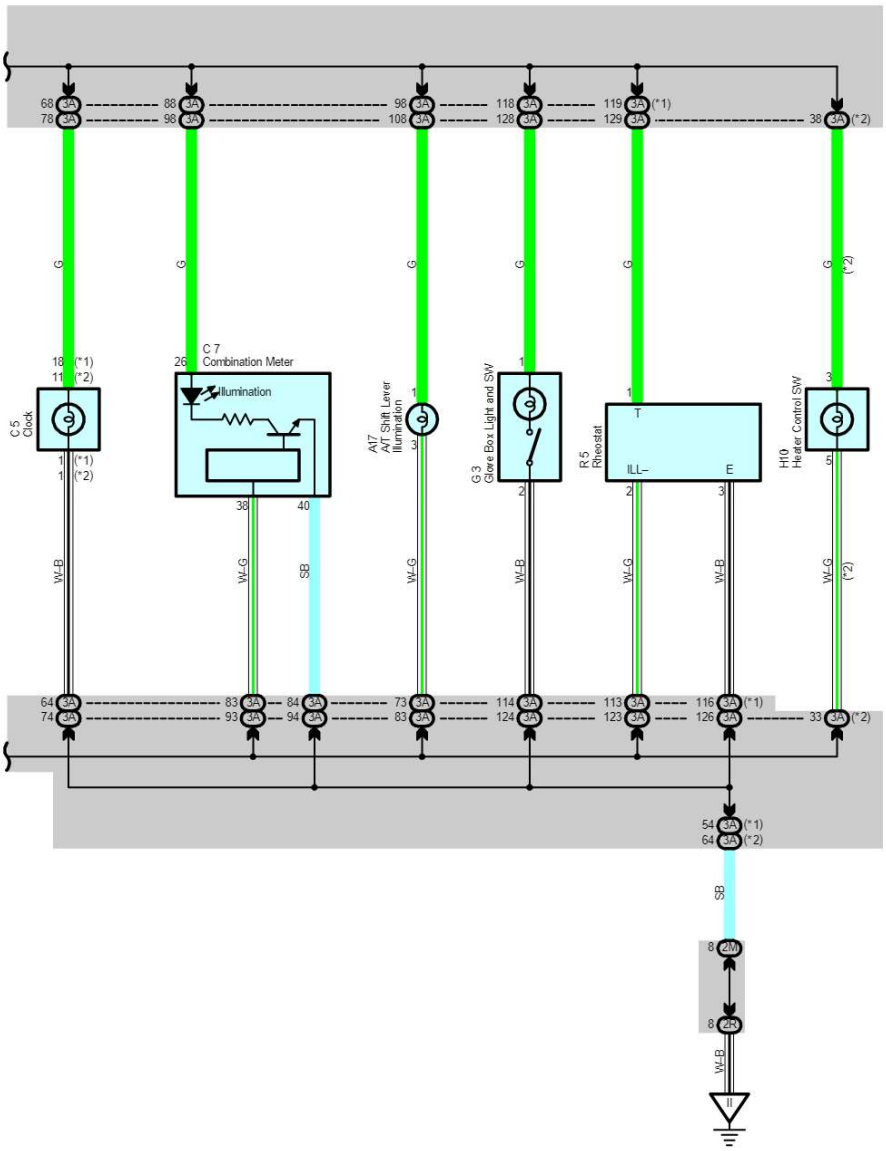
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	56	Roof Wire	B5	56	Floor Wire
B2					

cardiagn.com



cardiagn.com

* 1 : Automatic A/C
* 2 : Manual A/C
* 3 : Separate Type Amplifier
* 4 : Built–In Type Amplifier
* 5 : Manual A/C TMMK Made
* 6 : Manual A/C TMC Made
* 7 : Automatic A/C TMMK Made
* 8 : Automatic A/C TMC Made
* 9 : USA
*10 : Canada
*11 : w/ TOYOTA Navigation System
*12 : w/o TOYOTA Navigation System



cardiagn.com

Service Hints

TAIL Relay

5–3 : Closed with the light control SW at TAIL or HEAD position

C11 Combination SW

14–16 : Closed with the light control SW at TAIL or HEAD position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A13	42	C7	42	R3 B	43
A17	42	C11	42	R4	43
A31	42	G3	43	R5	43
B6 A	42	H10	43	S4	43
C4	42	J4	43	S5	43
C5	42	R2 A	43		

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

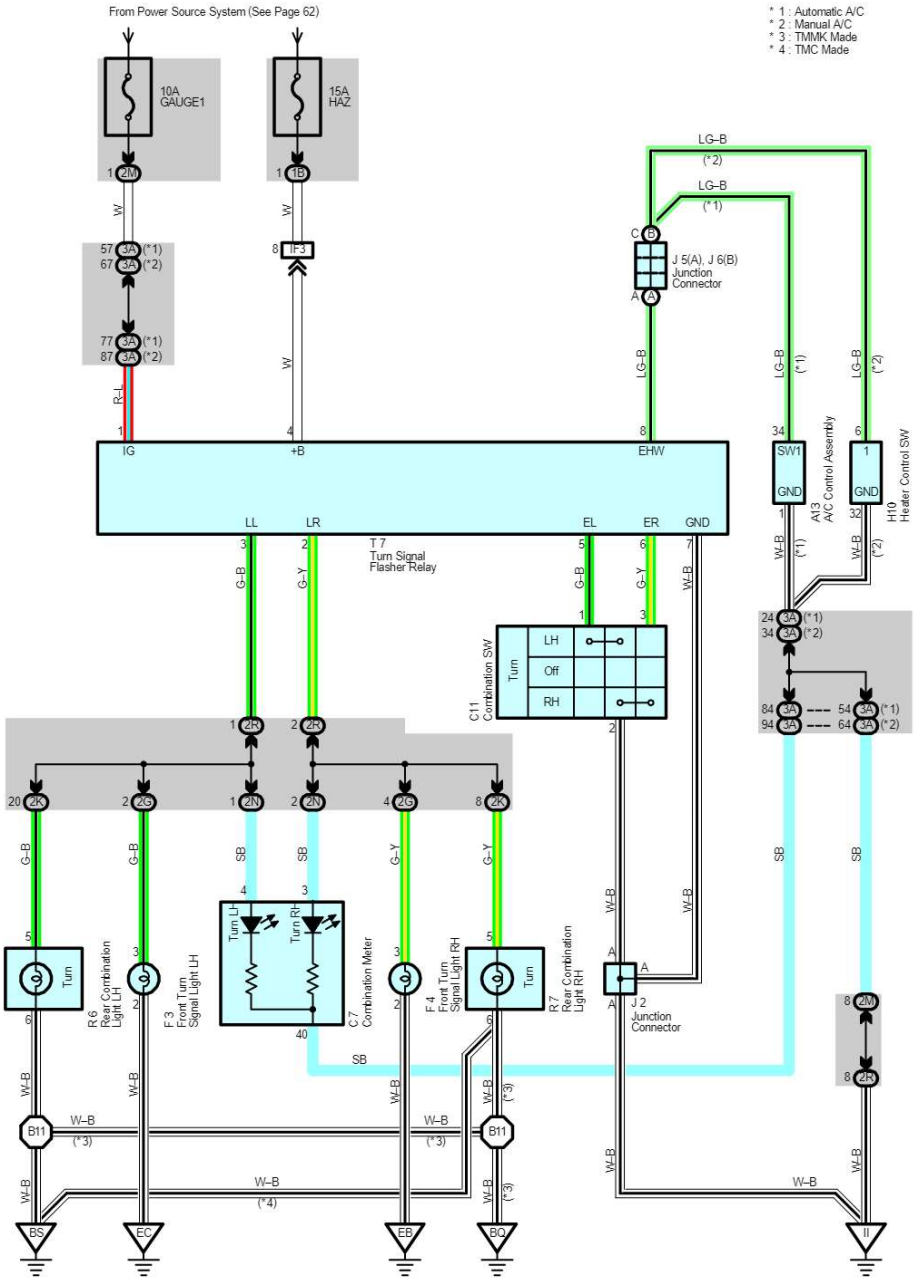
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	52	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2		

▽ : Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IK	52	Instrument Panel Brace LH

cardiagn.com

cardiagn.com



cardiagn.com

Service Hints

T7 Turn Signal Flasher Relay

1–Ground : Approx. 12 volts with ignition SW at ON or ST position
4–Ground : Always approx. 12 volts
7–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A13	42	F4	38 (1MZ–FE)	J6 B	43
C7	42		40 (2AZ–FE)	R6	45
C11	42	H10	43	R7	45
F3	38 (1MZ–FE)	J2	43	T7	43
	40 (2AZ–FE)	J5 A	43		

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2N		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

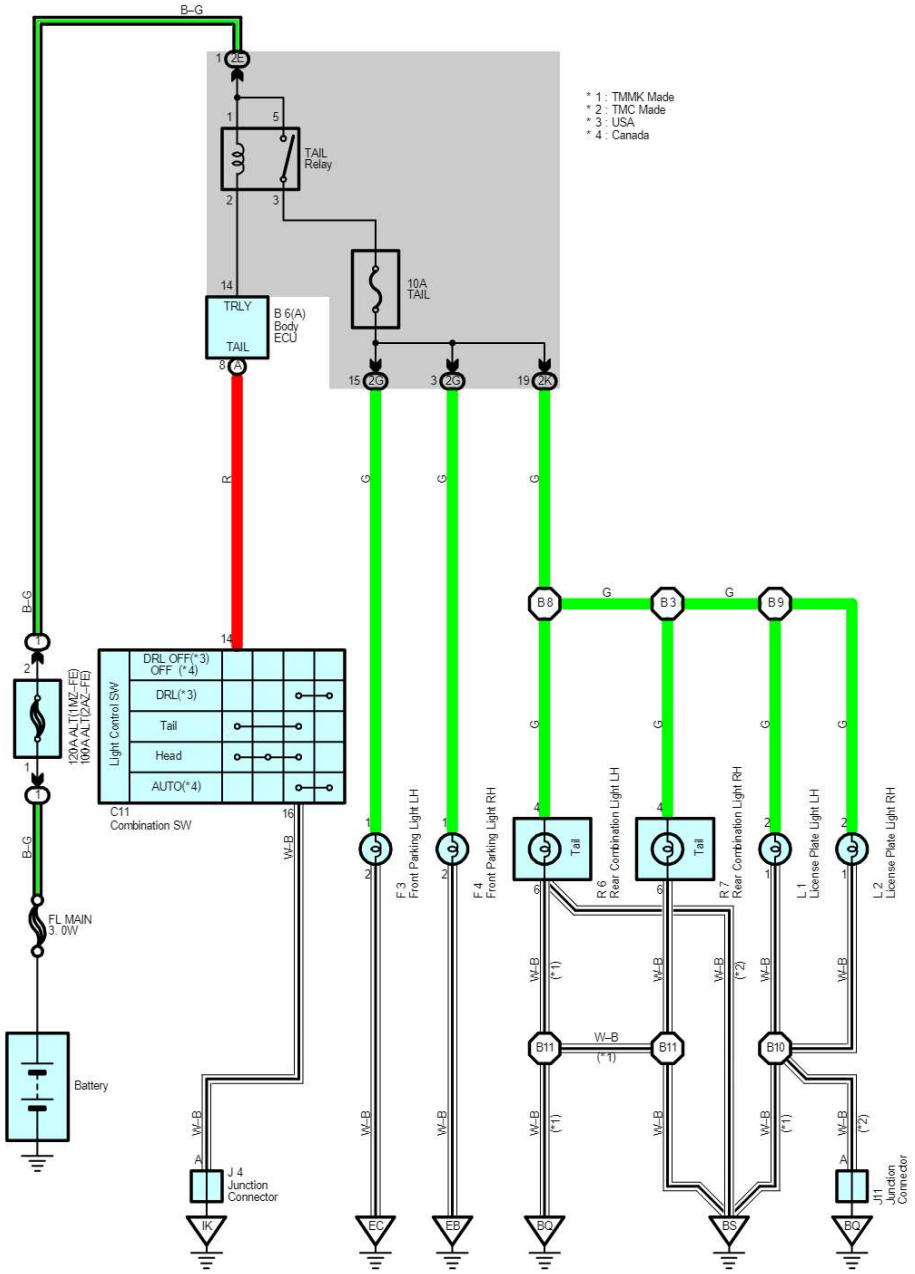
▽ : Ground Points

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH
BQ	56	Front Side of Rear Quarter Wheel House LH
BS	56	Lower Back Panel Center

⯃ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B11	56	Floor Wire			

cardiagn.com



cardiagn.com

Service Hints

TAIL Relay

5–3 : Closed with the light control SW at TAIL or HEAD position

C11 Combination SW

14–16 : Closed with the light control SW at TAIL or HEAD position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
B6 A	42	F4	38 (1MZ–FE)	L1	45
C11	42		40 (2AZ–FE)	L2	45
F3	38 (1MZ–FE)	J4	43	R6	45
	40 (2AZ–FE)	J11	44	R7	45

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

: Ground Points

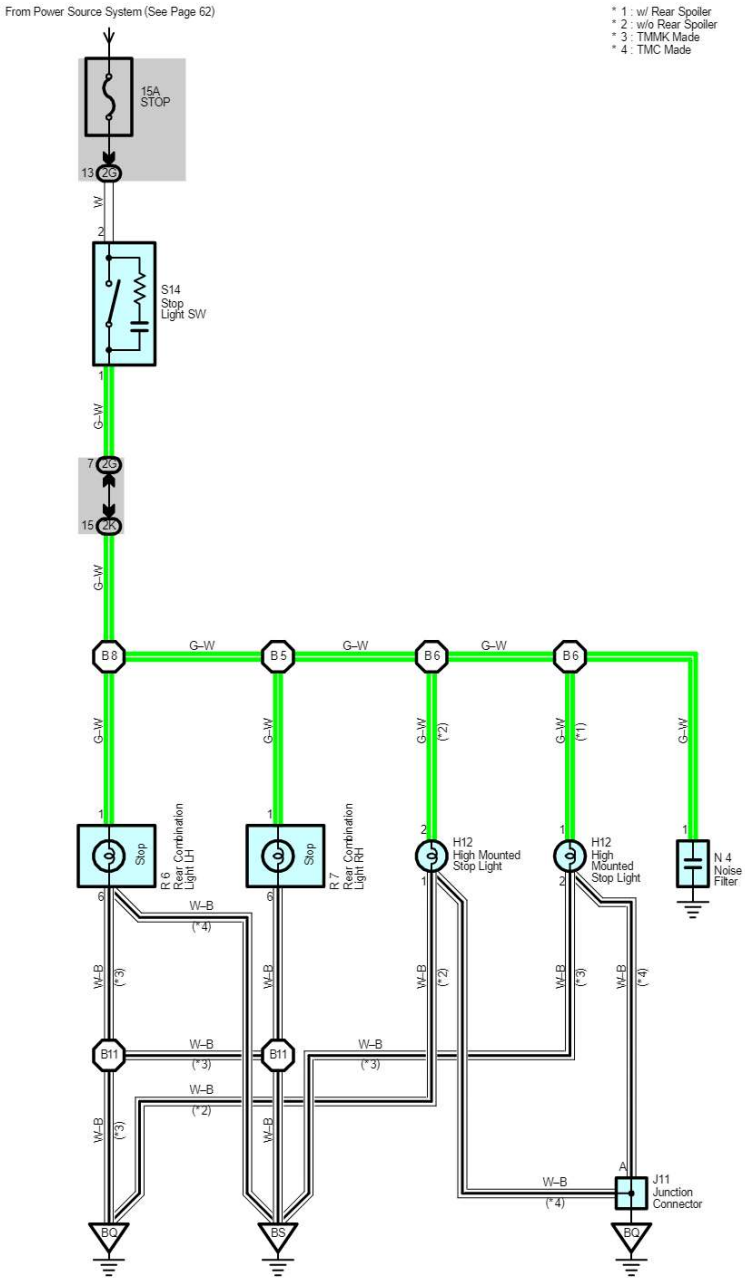
Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
IK	52	Instrument Panel Brace LH
BQ	56	Front Side of Rear Quarter Wheel House LH
BS	56	Lower Back Panel Center

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	56	Floor Wire	B10	56	Floor Wire
B8			B11		
B9					

cardiagn.com

Stop Light



cardiagn.com

Service Hints

S14 Stop Light SW

2–1 : Closed with the brake pedal depressed

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
H12	44	N4	45	R7	45
J11	44	R6	45	S14	43

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

▽ : Ground Points

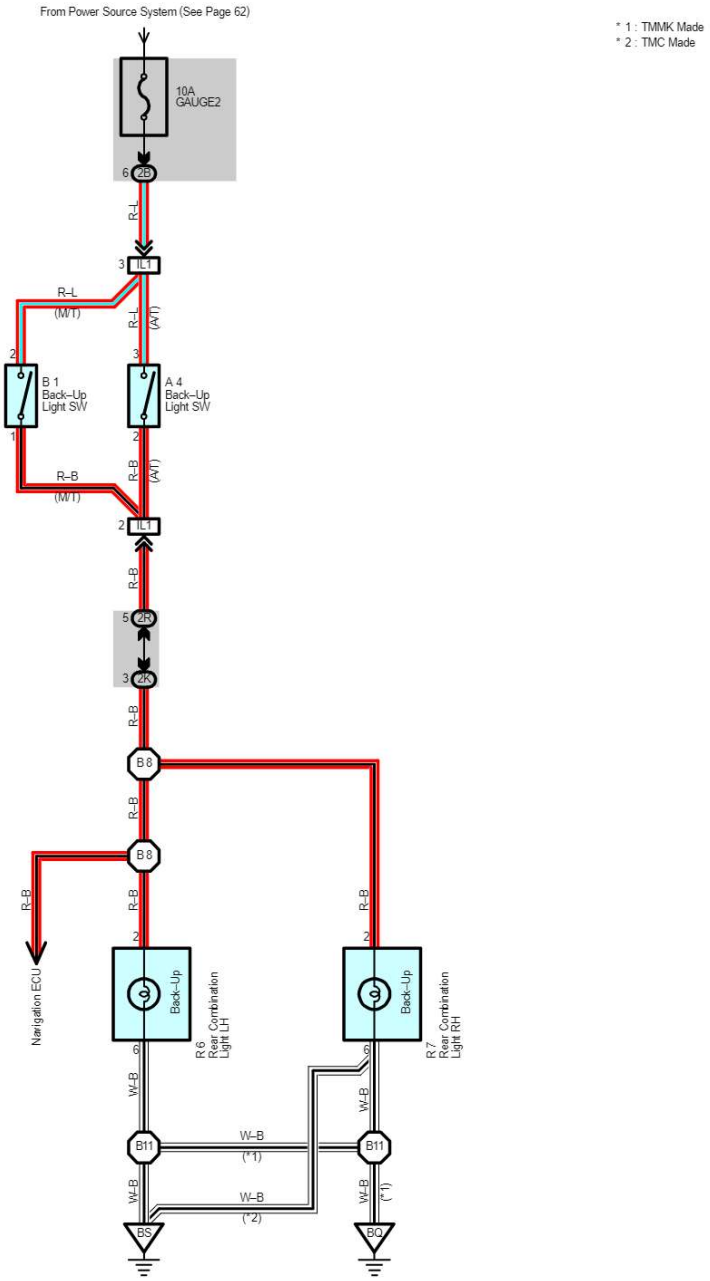
Code	See Page	Ground Points Location
BQ	56	Front Side of Rear Quarter Wheel House LH
BS	56	Lower Back Panel Center

⯃ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B5	56	Floor Wire	B8	56	Floor Wire
B6			B11		

cardiagn.com

Back–Up Light



cardiagn.com

Service Hints

B1 Back–Up Light SW (M/T)

1–2 : Closed with the shift lever at R position

A4 Back–Up Light SW (A/T)

3–2 : Closed with the shift lever at R position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	B1	40 (2AZ–FE)	R7	45
	40 (2AZ–FE)	R6	45		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

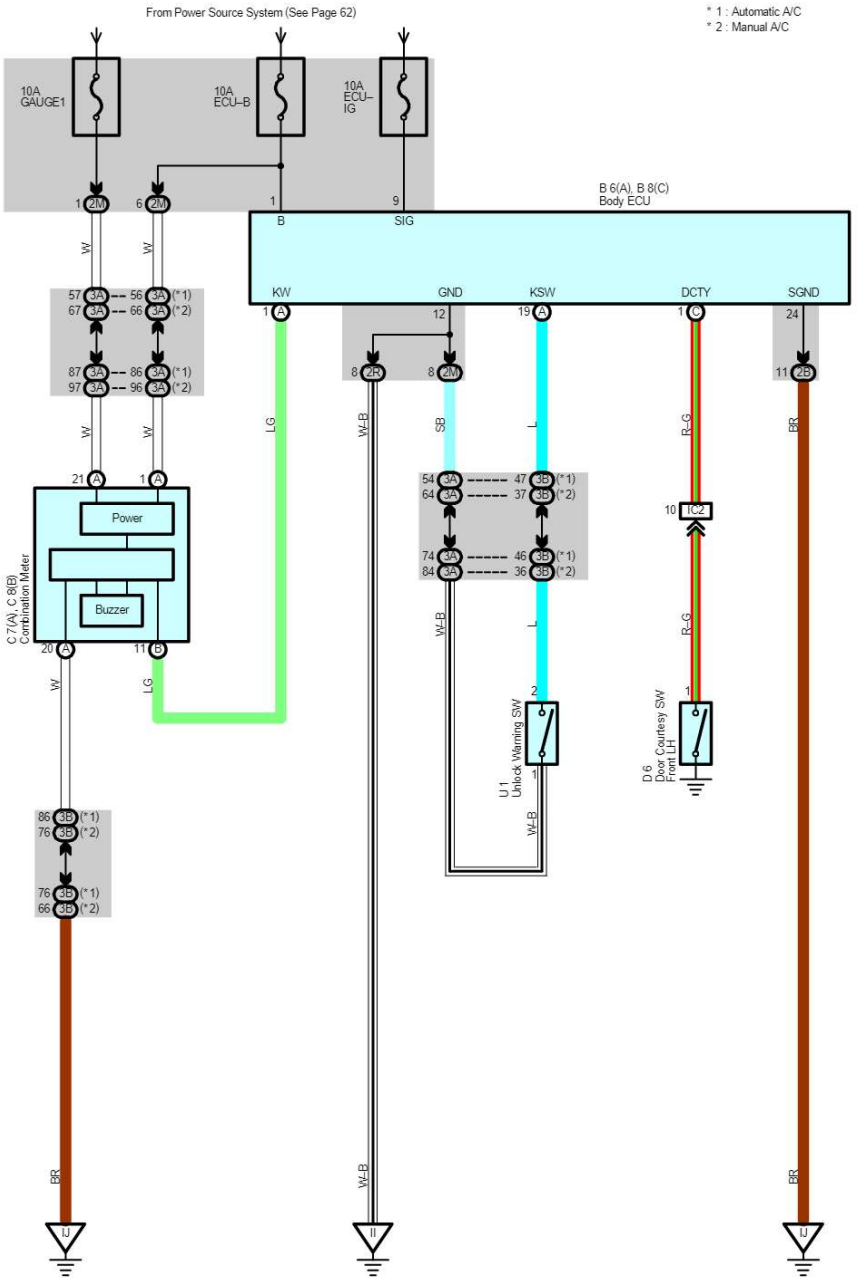
: Ground Points

Code	See Page	Ground Points Location
BQ	56	Front Side of Rear Quarter Wheel House LH
BS	56	Lower Back Panel Center

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B8	56	Floor Wire	B11	56	Floor Wire

cardiagn.com



cardiagn.com

System Outline

Key Reminder System

With the ignition key inserted in the key cylinder (Unlock warning SW on), the ignition SW still off and driver's door open (Door courtesy SW on), when a signal is input to TERMINAL (C) 1 of the body ECU, the body ECU operates, current flows from TERMINAL (A) 1 of the ECU to TERMINAL (B) 11 of the combination meter to GROUND and key reminder buzzer sounds.

Service Hints

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position
12, 24–Ground : Always continuity
1–Ground : Always approx. 12 volts

D6 Door Courtesy SW Front LH

1–Ground : Closed with the driver door open

U1 Unlock Warning SW

1–2 : Closed with the ignition key in cylinder

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
B6	A	42	C7	A	42	D6	44
B8	C	42	C8	B	42	U1	43

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M	29	
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

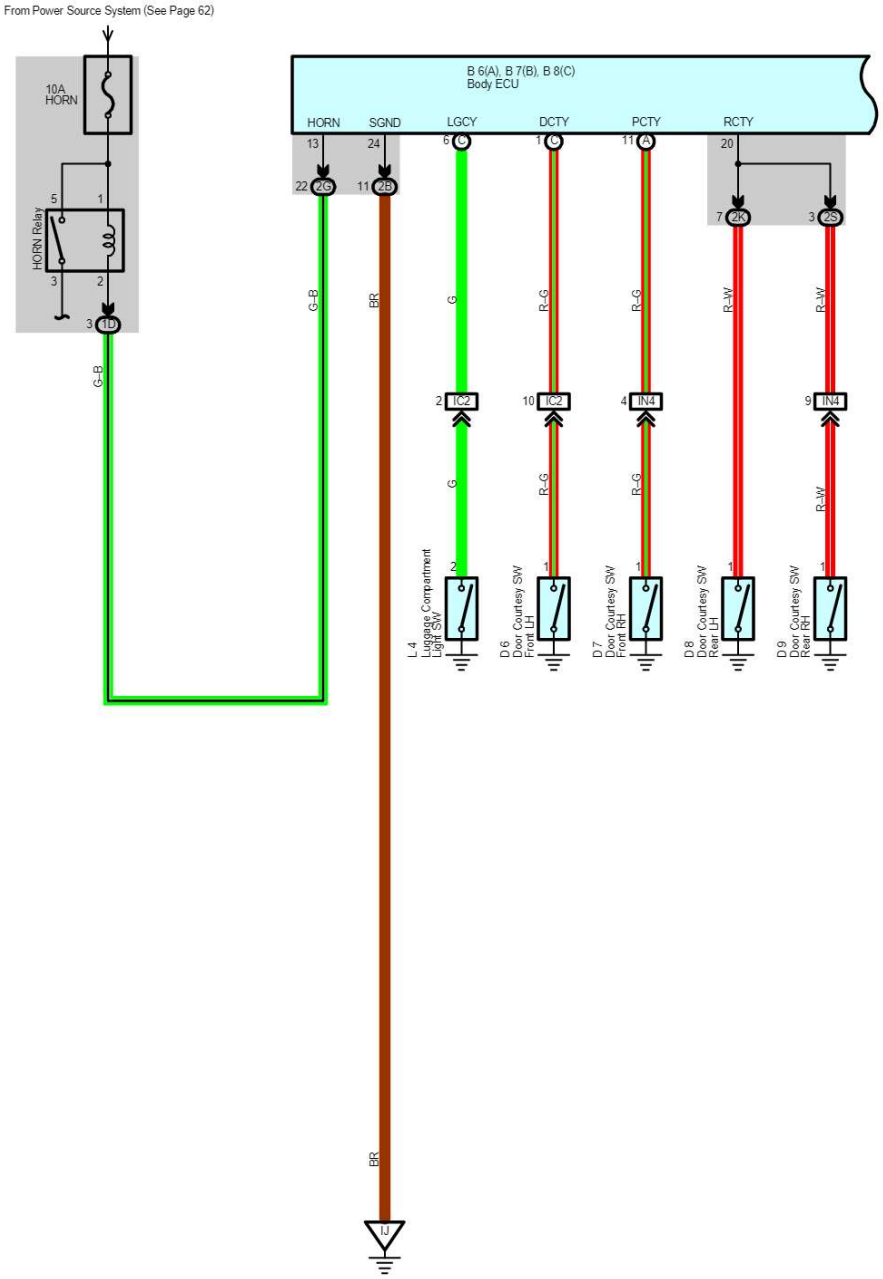
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)

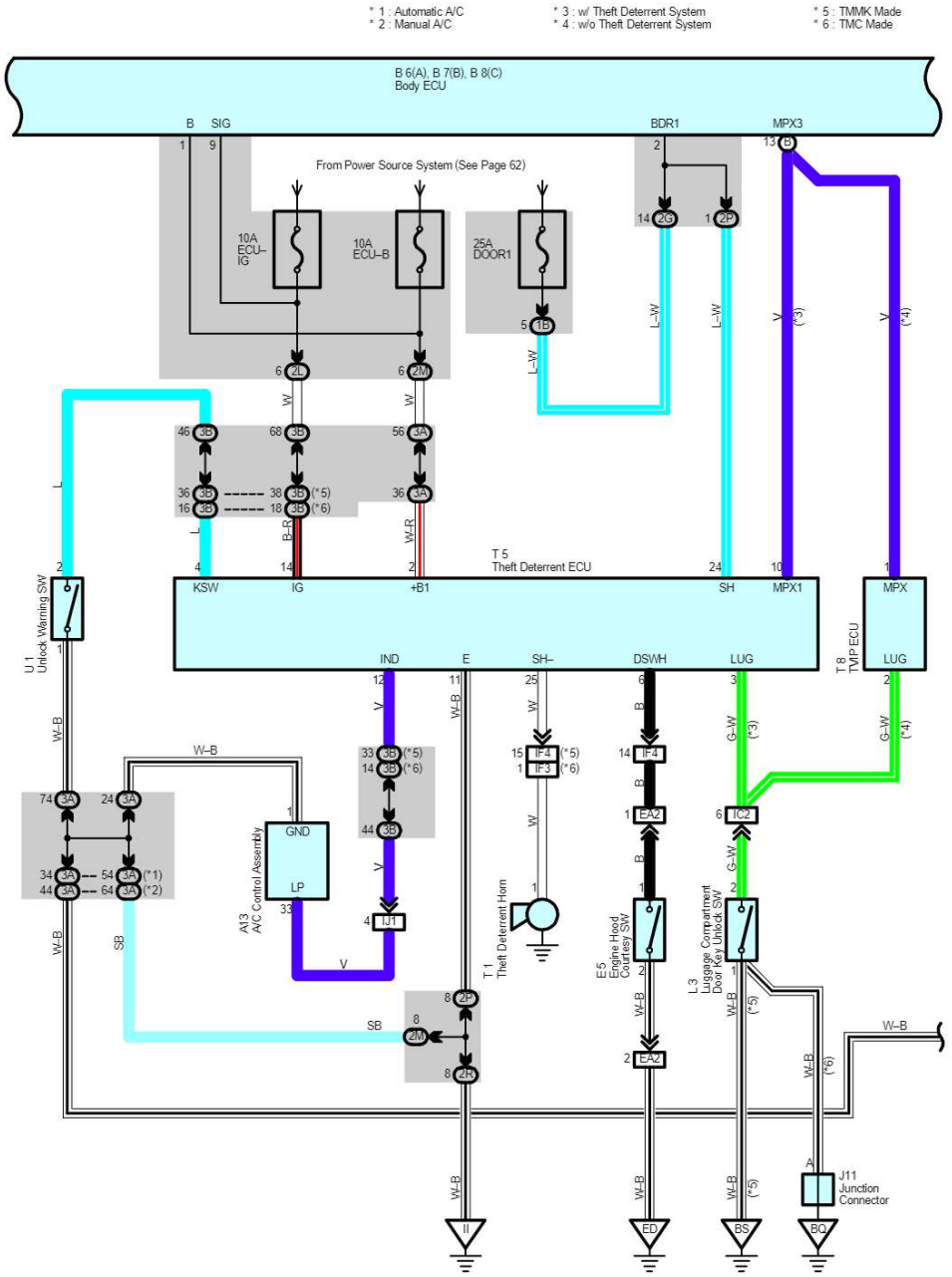
▽ : Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

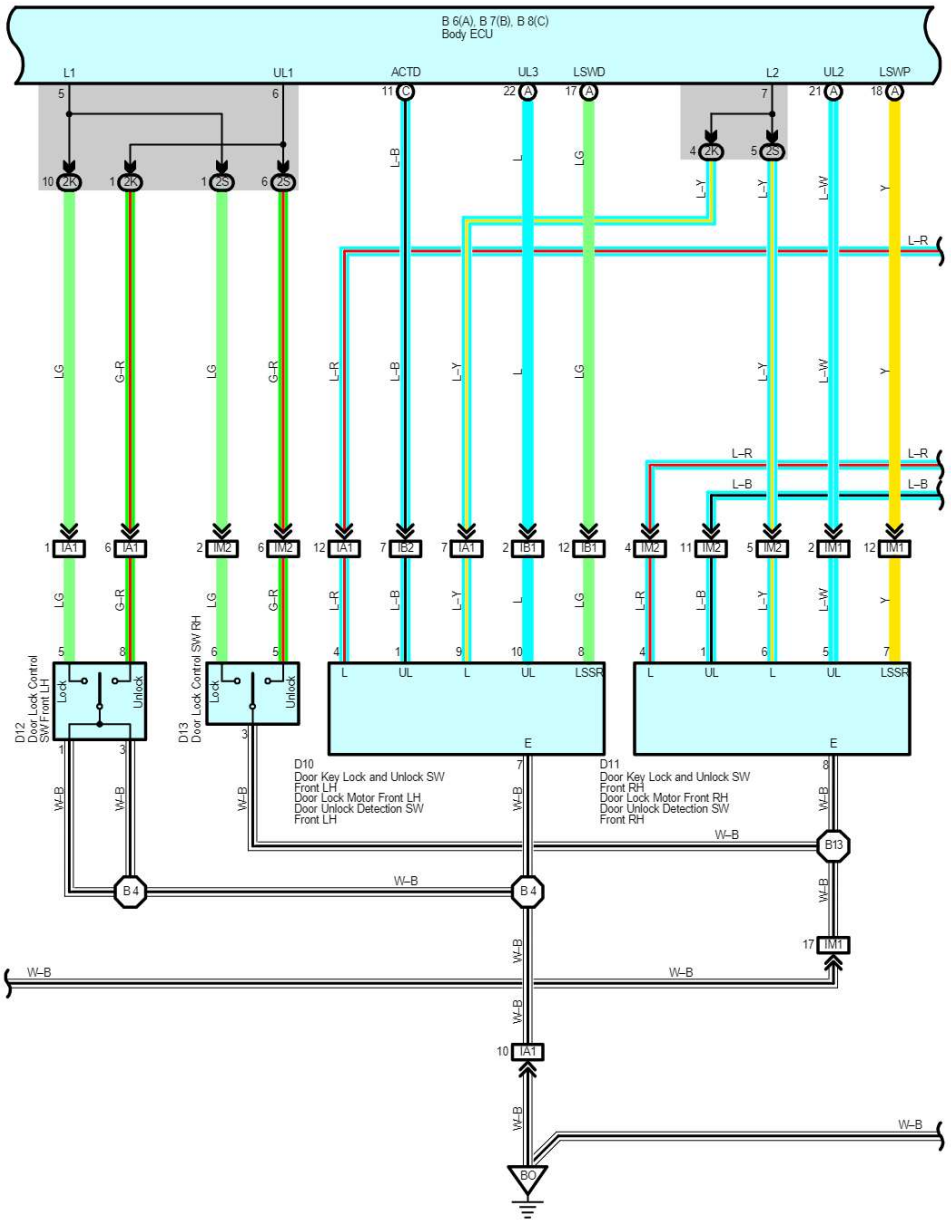
cardiagn.com



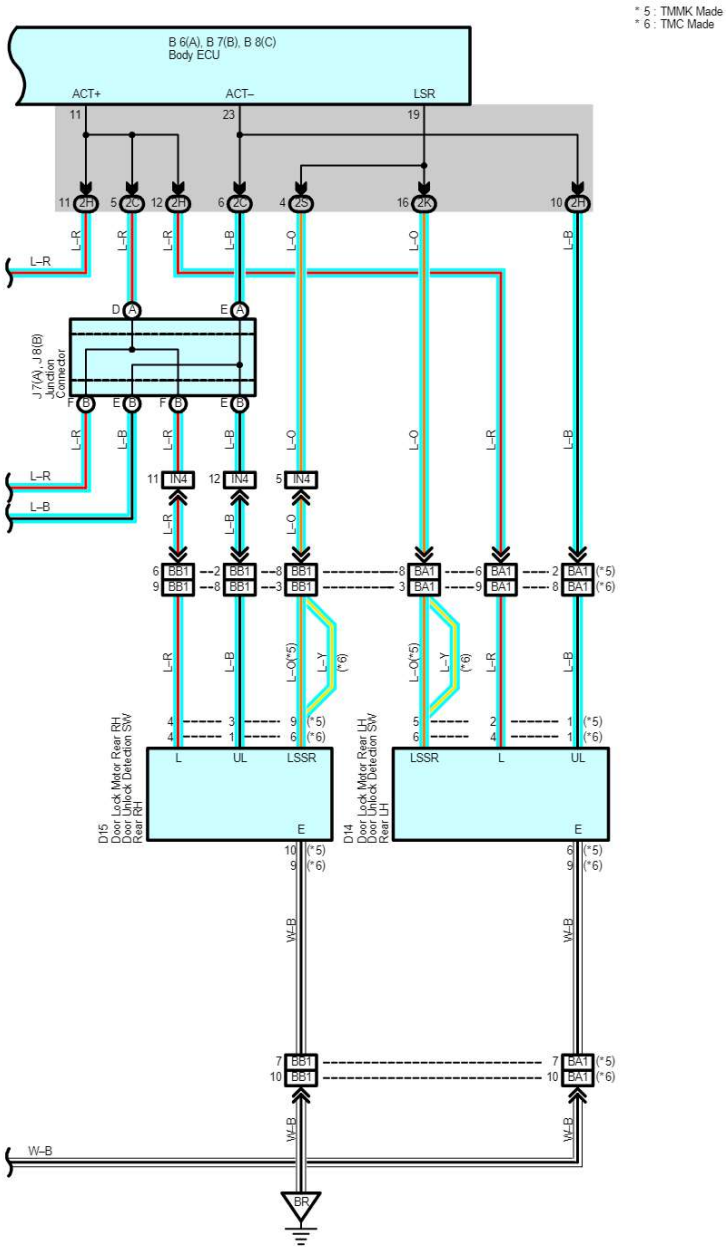
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

Theft Deterrent and Door Lock Control

System Outline

1. Manual Unlock Operation

When the door lock control SW of the driver's or passenger's side door is pushed to UNLOCK, the door lock will unlock.

2. Manual Lock Operation

When the door lock control SW of the driver's or passenger's side door is pushed to LOCK, the door lock will lock.

3. Door Key Unlock Operation

* Unlock operation from driver's side door

When the driver's side door is unlocked once using the ignition key, only the driver's side door is unlocked. If this operation is repeated within 3 seconds, all the other doors are unlocked.

* Unlock operation from front passenger's side door

When the front passenger's side door is unlocked using the ignition key, all the other doors are unlocked, too.

Service Hints

Body ECU

9–Ground : Approx. 12 volts with ignition SW at ON or ST position
24–Ground : Always continuity
1, 2–Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A13	42	D11	44	J11	44
B6 A	42	D12	44	L3	45
B7 B	42	D13	44	L4	45
B8 C	42	D14	44	T1	39 (1MZ–FE)
D6	44	D15	44		41 (2AZ–FE)
D7	44	E5	38 (1MZ–FE)	T5	43
D8	44		40 (2AZ–FE)	T8	43
D9	44	J7 A	43	U1	43
D10	44	J8 B	43		

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1D		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2C		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2K		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2P		
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

cardiagn.com

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	48 (1MZ–FE) 50 (2AZ–FE)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN4	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BA1	56	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	56	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

: **Ground Points**

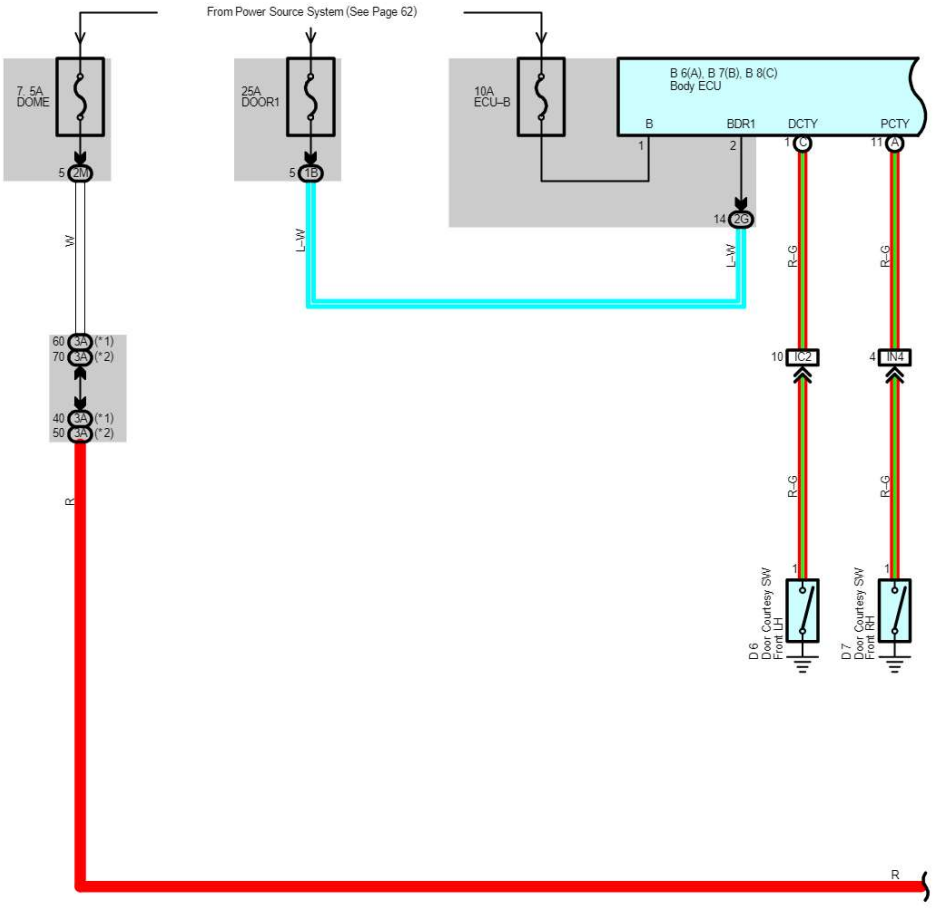
Code	See Page	Ground Points Location
ED	48 (1MZ–FE) 50 (2AZ–FE)	Left Fender
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
BO	56	Under the Driver's Seat
BQ	56	Front Side of Rear Quarter Wheel House LH
BR	56	Front Side of Rear Quarter Wheel House RH
BS	56	Lower Back Panel Center

: **Splice Points**

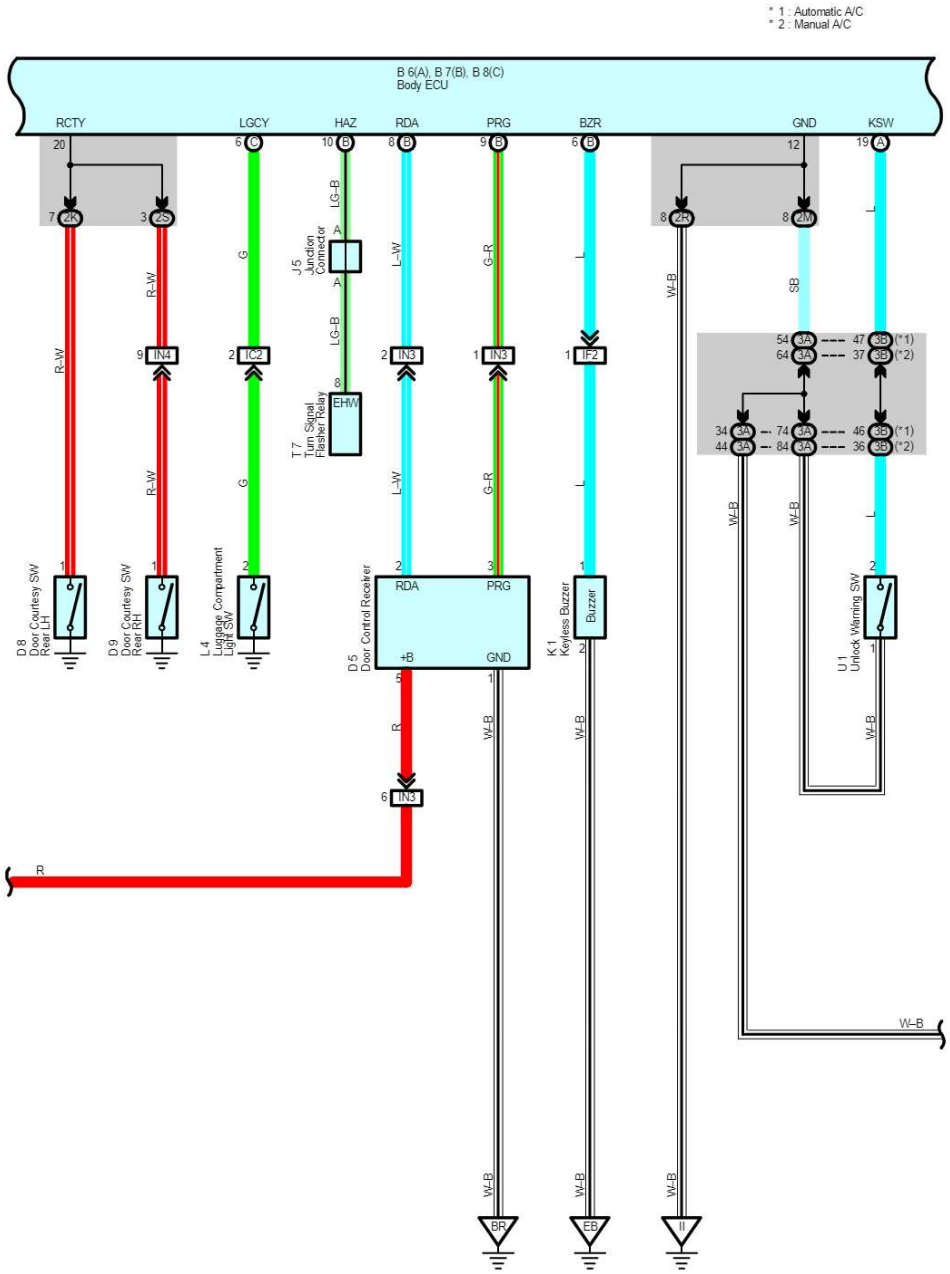
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	56	Front Door LH Wire	B13	56	Front Door RH Wire

cardiagn.com

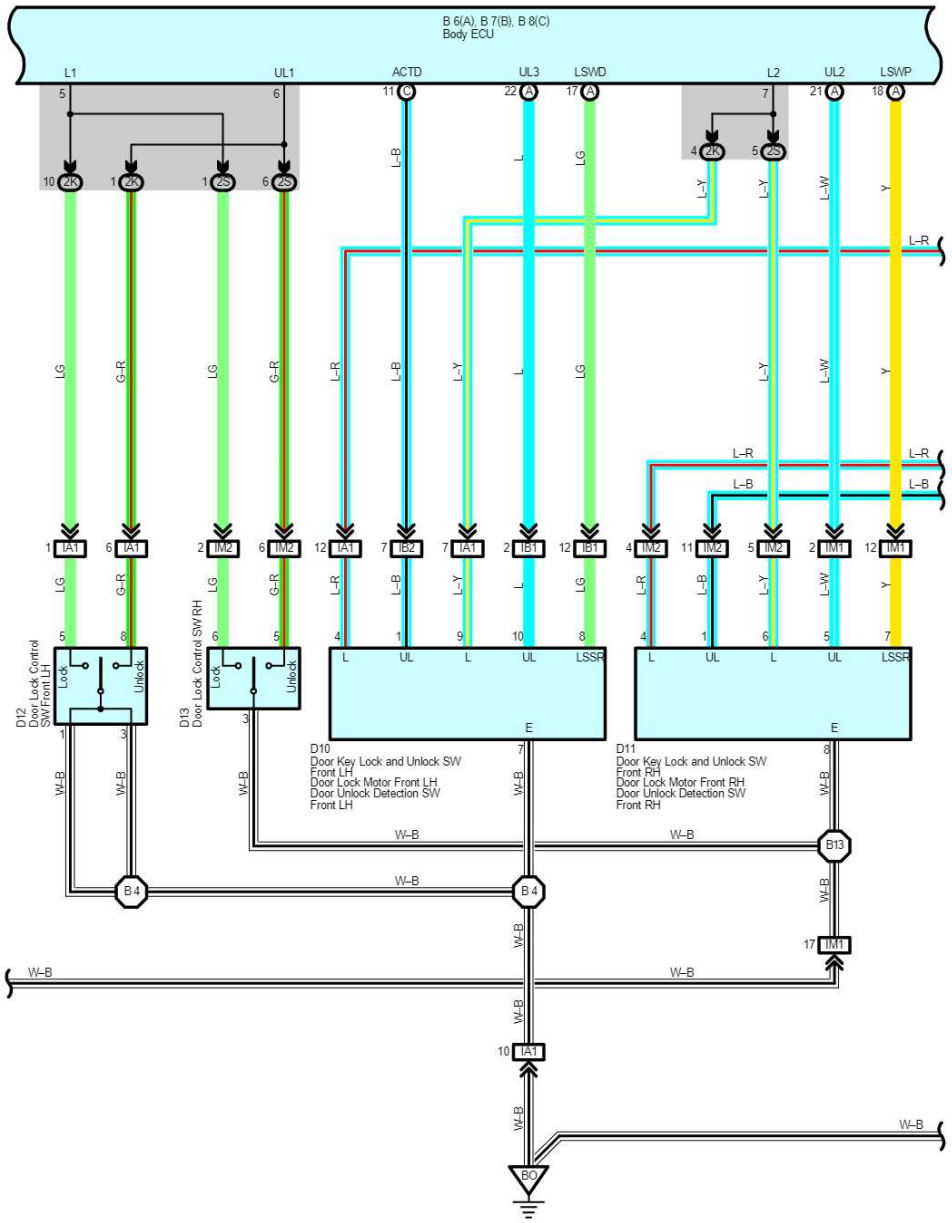
Wireless Door Lock Control



cardiagn.com

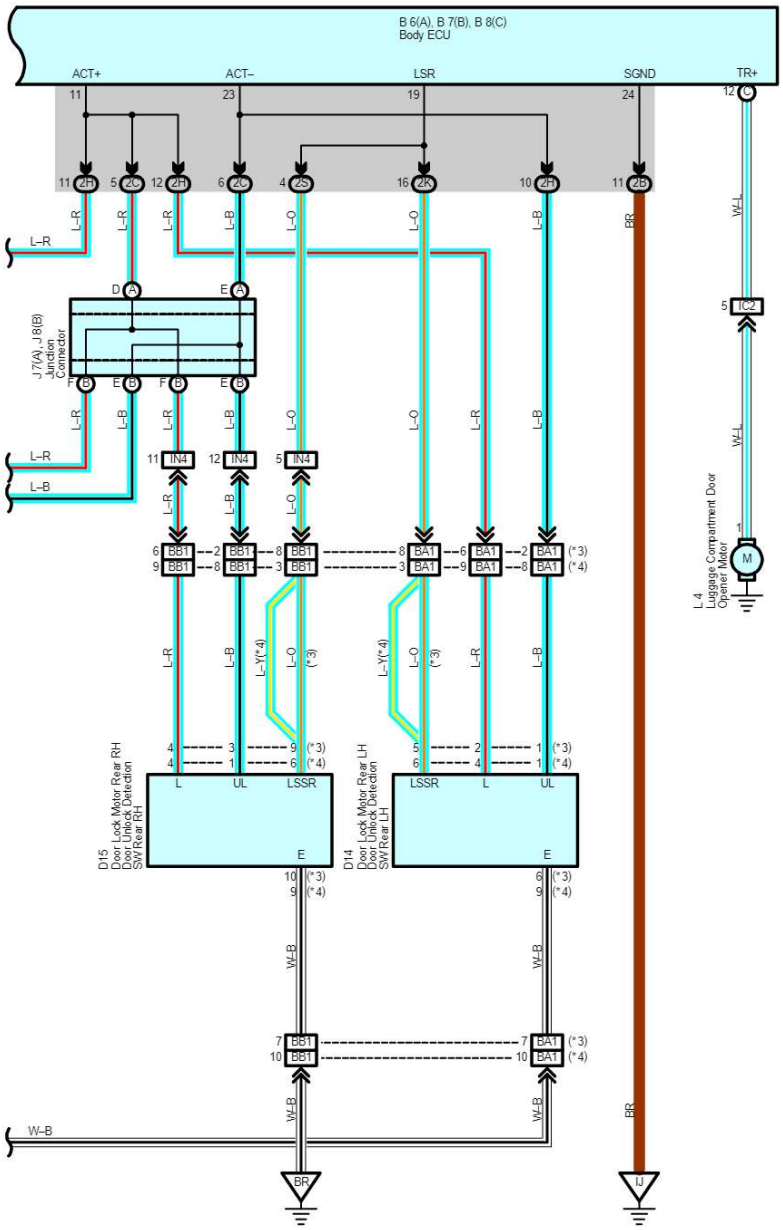


cardiagn.com



cardiagn.com

* 3 : TMMK Made
* 4 : TMC Made



cardiagn.com

Wireless Door Lock Control

System Outline

Door lock control (Lock and unlock) and panic control (Theft alarm and flash) is performed by remote control, without the ignition key inserted in the door key cylinder, using low–power electrical waves emitted by a transmitter.

1. Wireless Door Lock or Unlock Normal Operation

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, when the lock or unlock button (Transmitter) is pushed, the door control receiver receives the electrical waves from the transmitter, and sends a signal to the body ECU, causing it to operate.
As a result, the body ECU judges whether the door is locked or unlocked based on the signal from the door lock motor and door unlock detection SW, and sends a signal to switch the condition from lock to unlock or vice versa, causing the door lock motor to operate.

2. Visual Confirmation of Lock or Unlock

If all doors indicate that they are locked after the lock command, turn signal light will flash once. If any door indicates that it is open after the unlock command, turn signal light will flash twice.

3. Buzzer Sound Function

If all doors indicate that they are locked after the lock command, the keyless buzzer goes on once. If any door indicates that it is open after the unlock command, the keyless buzzer goes on twice.

4. Illuminated Entry Function

When the body ECU detects the unlock state after the unlock operation has been made, it turns on the lights, such as the ignition key cylinder light and interior light for approx. 15 sec. If all the doors are locked during this operation, lighting is cancelled and the lights immediately fade out.

5. Wireless Door Unlock Operation

Pushing the unlock button (Transmitter) once, driver's door is unlocked. Furthermore, pushing the button again within 3 seconds, the other doors are unlocked.

6. Automatic Lock Operation

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, after pushing the button (Transmitter) to unlock all the doors, if a door is not opened within 30 seconds, all the doors will be automatically relocked.

7. Wireless Control Stop Function

If a door is open (Door courtesy SW on), a signal is input from the door courtesy SW to the body ECU stopping wireless door lock or unlock.
If the ignition key is in the ignition key cylinder (Unlock warning SW on), the unlock warning SW inputs a signal to the body ECU stopping wireless door lock or unlock.

8. Repeat Function

If the door lock or unlock condition does not change after wireless door lock or unlock operation, 2 seconds later, the body ECU sends current again to the door lock motor.

9. Remote Panic Operation

Panic will function when doors are locked or unlocked, open or closed. When the panic button (Transmitter) is pushed once, theft alarm and horn sounds and turn signal light, headlights and taillight flash. Then, the panic or the unlock button (Transmitter) is pushed once more, sounding and flashing will stop. Panic will not function when ignition key is in ignition key cylinder.

Service Hints

D6, D7, D8, D9 Door Courtesy SW Front LH, RH, Rear LH, RH
1–Ground : Continuity with the door open

U1 Unlock Warning SW
2–1 : Continuity with the ignition key in the cylinder

D5 Door Control Receiver
5–Ground : Always approx. 12 volts
1–Ground : Always continuity

cardiagn.com

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B6 A	42	D10	44	J8 B	43
B7 B	42	D11	44	K1	39 (1MZ–FE)
B8 C	42	D12	44		41 (2AZ–FE)
D5	44	D13	44	L4	45
D6	44	D14	44	T7	43
D7	44	D15	44	U1	43
D8	44	J5	43		
D9	44	J7 A	43		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2C		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2K		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN3	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN4		
BA1	56	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	56	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

: Ground Points

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
BO	56	Under the Driver's Seat
BR	56	Front Side of Rear Quarter Wheel House RH

cardiagn.com

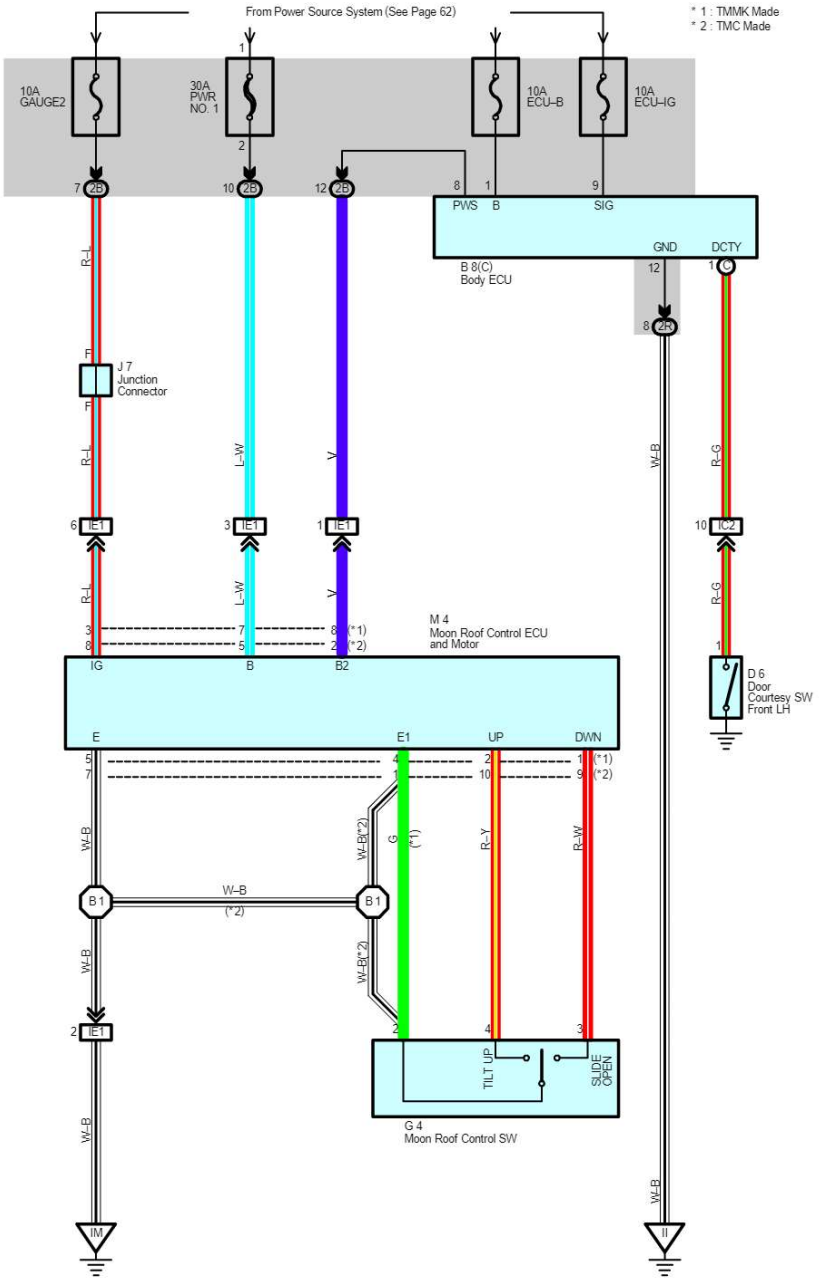
Wireless Door Lock Control

: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	56	Front Door LH Wire	B13	56	Front Door RH Wire

cardiagn.com

cardiagn.com



cardiagn.com

Service Hints

M4 Moon Roof Control ECU and Motor

3 (TMMK Made), 8 (TMC Made)–Ground : Approx. 12 volts with ignition SW at ON or ST position
7 (TMMK Made), 5 (TMC Made)–Ground : Always approx. 12 volts
5 (TMMK Made), 7 (TMC Made)–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
B8 C	42	G4	44	M4	45
D6	44	J7	43		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R	29	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE1	52	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)

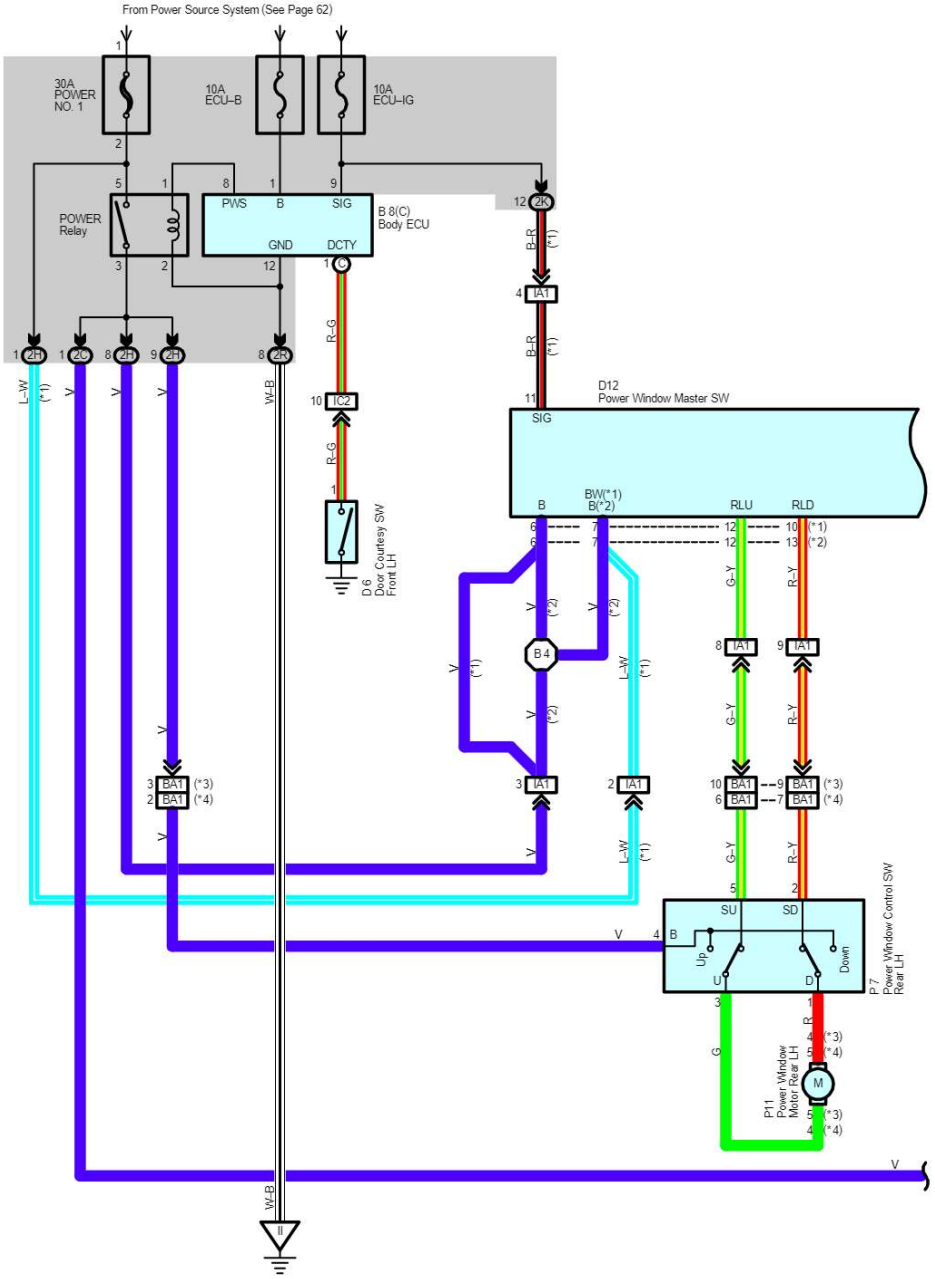
: Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IM	52	Instrument Panel Reinforcement RH

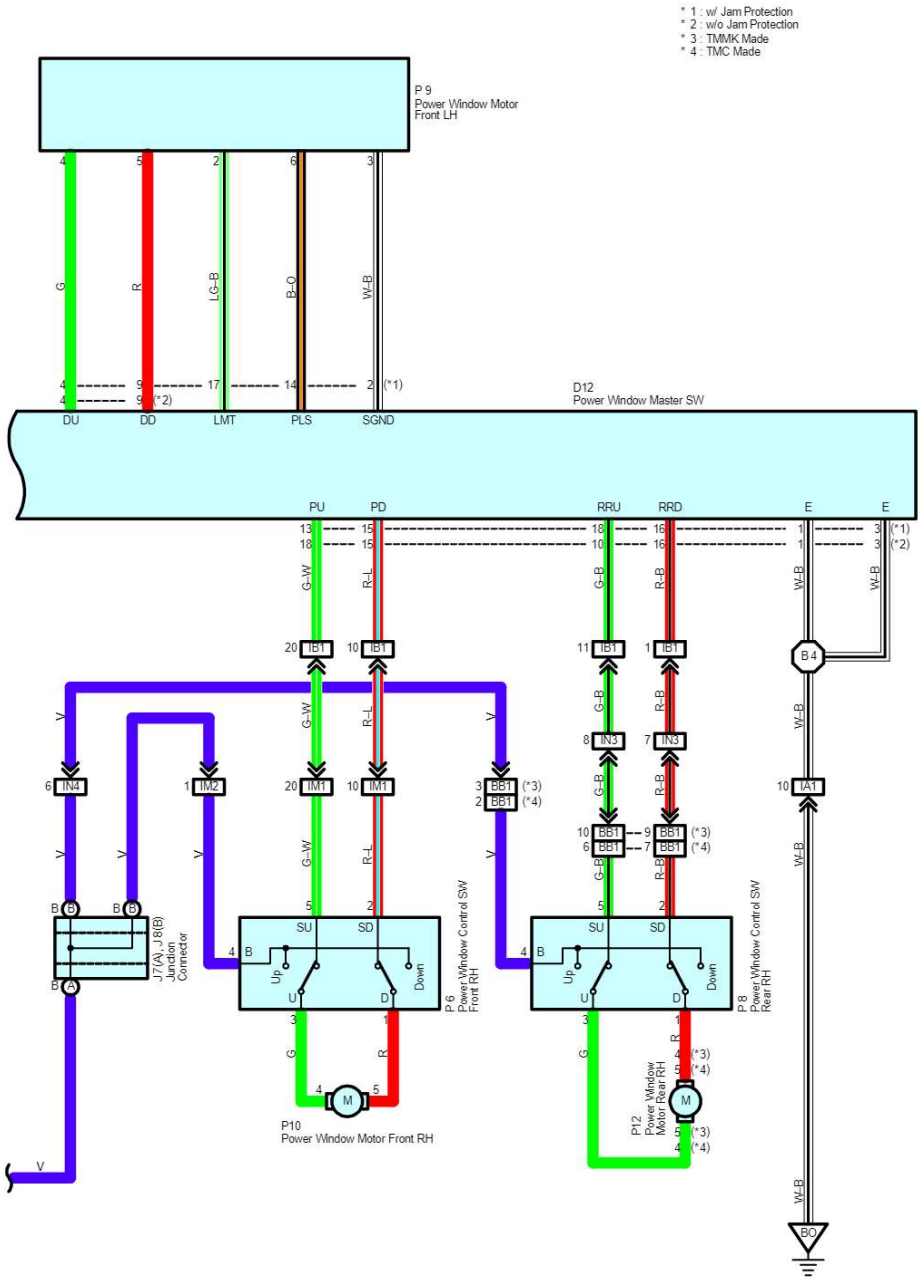
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	56	Roof Wire			

cardiagn.com



cardiagn.com



cardiagn.com

System Outline

1. Manual Operation (Driver's Window)

With the ignition SW turned on and with the power window master SW in UP position, the current flowing from TERMINAL B or BW of the power window master SW flows to TERMINAL DU of the master SW to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL DD of the master SW to TERMINAL E to GROUND and causes the power window motor to rotate in the up direction. The window ascends only while the SW is being pushed.

In down operation, the flow of current from TERMINAL B or BW of the power window master SW to TERMINAL DD of the master SW causes the flow of current from TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL DU of the master SW to TERMINAL E to GROUND, flowing in the opposite detection to manual up operation and causing the motor to rotate in reverse, lowering the window.

2. Auto Down Operation (Driver's Window)

When the driver's window SW is pushed strongly to the down side, the current flowing to TERMINAL B or BW of the power window master SW flows to the down contact point and auto down contact point of the driver's SW.

This activates the relay (Down side) inside the power window master SW and the hold circuit also turns on at the same time, so the relay (Down side) remains activated even when the SW is released.

Current flows at this time from TERMINAL B or BW of the power window master SW to TERMINAL DD to TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL DU of the power window master SW to TERMINAL E to GROUND, so the motor continues to operate until the driver's window is fully down.

When the driver's window finishes down operation and the hold circuit goes off, so the relay (Down side) also turns off. This stops the current flowing from TERMINAL B or BW of the power window master SW to TERMINAL DD is cut off, so the power window motor stops and auto down operation stops.

When the driver's SW is pulled to the up side during auto down operation, the hold circuit is turned off so the current flowing from TERMINAL B or BW of the power window master SW to TERMINAL DD is cut off and the power window motor stops. If the SW remains pulled up the relay (Up side) is activated, so current flows from TERMINAL B or BW of the power window master SW to TERMINAL DU to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL DD to TERMINAL E to GROUND, the power window motor rotates in the up direction and manual up operation occurs while the SW is pulled up.

3. Manual Operation (Front RH Window)

With the power window control SW front RH pulled to the up side, the current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 of the power window control SW to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL PD of the master SW to TERMINAL E to GROUND and causes the power window motor front RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 5 to TERMINAL 4, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the front RH window becomes open.

As a result, even if Open/Close operation of the front RH window is tried, the current from TERMINAL E of the power window master SW is not grounded and the motor does not rotate, so the front RH window can not be operated and window lock occurs.

4. Manual Operation (Rear LH, RH Window)

With the power window control SW rear LH, RH pulled to the up side, the current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 of the power control SW to TERMINAL 4 (TMMK Made), 5 (TMC Made) of the power window motor to TERMINAL 5 (TMMK Made), 4 (TMC Made) to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL RLD or RRD of the master SW to TERMINAL E to GROUND and causes the power window motor rear LH, RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 5 (TMMK Made), 4 (TMC Made) to TERMINAL 4 (TMMK Made), 5 (TMC Made), and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the rear LH, RH window becomes open.

As a result, even if Open/Close operation of the rear LH, RH window is tried, the current from TERMINAL E of the power window master SW is not grounded and the motor does not rotate, so the rear LH, RH window can not be operated and window lock occurs.

5. Key Off Power Window Operation

With the ignition SW turned from on to off, the body ECU operates and current flows from the ECU–B fuse to TERMINAL 1 of the body ECU to TERMINAL 8 to TERMINAL 2 of the power relay to TERMINAL 1 to GROUND for about 43 seconds. The same as normal operation, the current flows from the PWR NO.1 fuse to TERMINAL 3 of the power relay to TERMINAL 5 to TERMINAL B or BW of the power window master SW and TERMINAL 4 (Front RH, Rear LH, RH) of the power window control SW. As a result, for about 43 seconds after the ignition SW is turned off, the functioning of this ECU makes it possible to raise and lower the power window. Also, by opening the front doors (Door courtesy SW on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL (C) 1 of the body ECU. As a result, the POWER relay turned off, and up and down movement of the power window stops.

cardiagn.com

Service Hints

D12 Power Window Master SW

B, BW–Ground : Approx. 12 volts with the ignition SW at ON position or key off power window operation
E–Ground : Always continuity
DU–Ground : Approx. 12 volts with the ignition SW on and the master SW (Driver's window) at UP position
DD–Ground : Approx. 12 volts with the ignition SW on and the master SW (Driver's window) at DOWN or AUTO DOWN position

Window Lock SW

Open with the window lock SW at LOCK position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
B8 C	42	J8 B	43	P9	45
D6	44	P6	45	P10	45
D12	44	P7	45	P11	45
J7 A	43	P8	45	P12	45

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2C	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2K		
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN3	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN4		
BA1	56	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	56	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

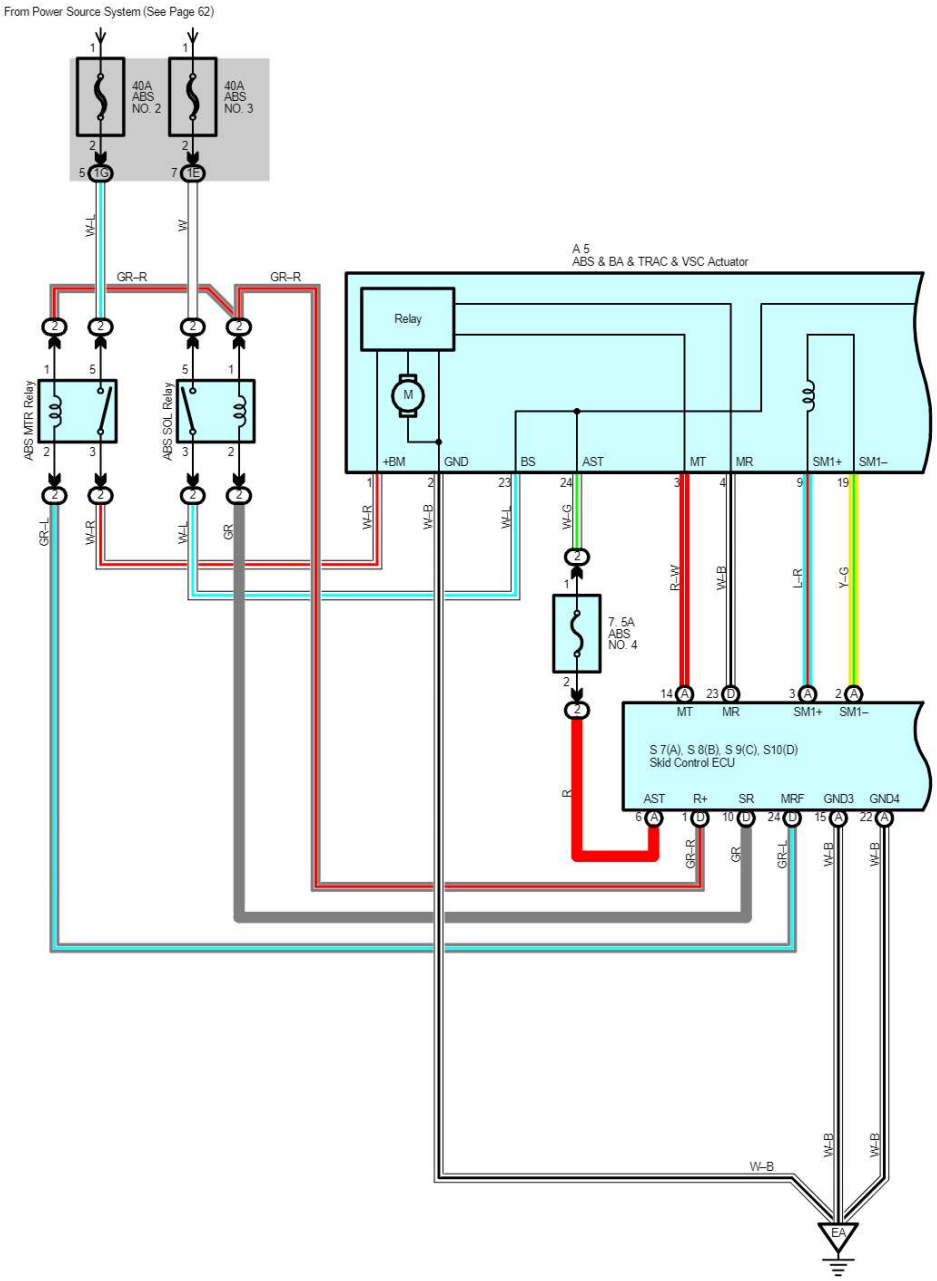
: Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
BO	56	Under the Driver's Seat

: Splice Points

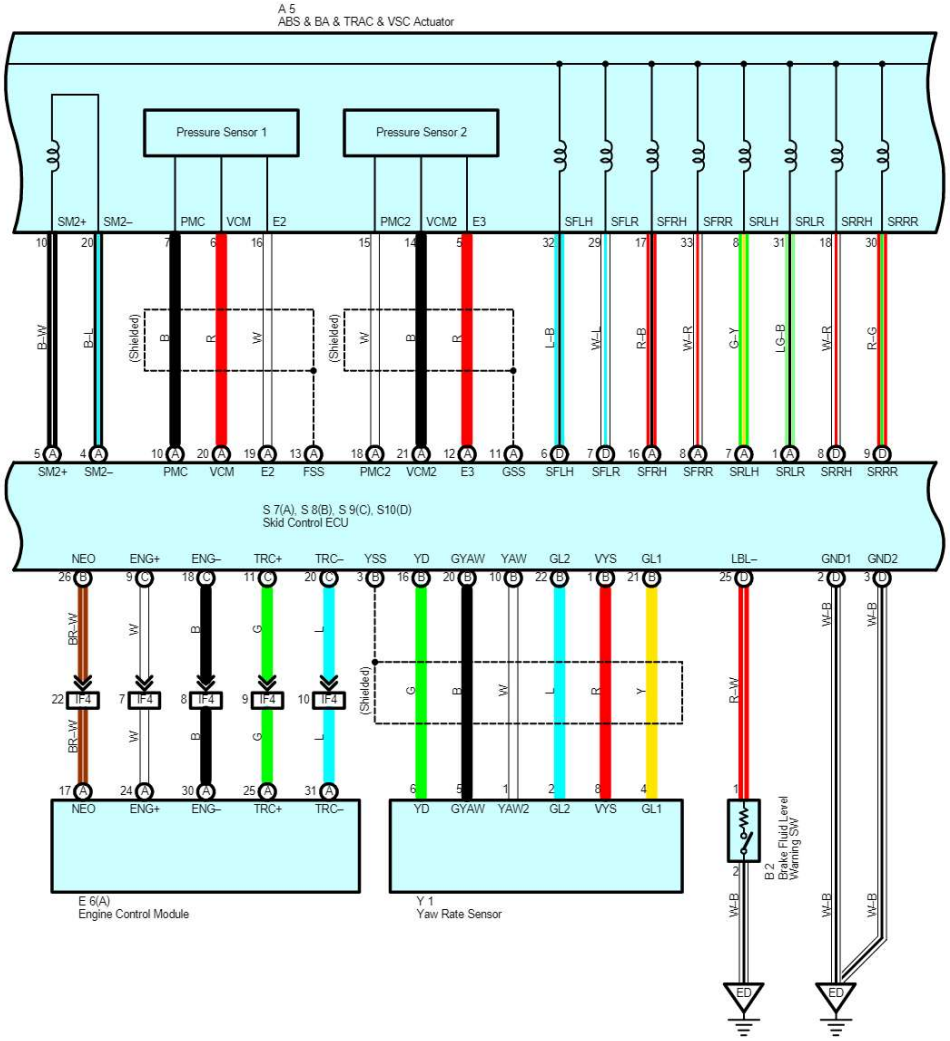
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	56	Front Door LH Wire			

cardiagn.com

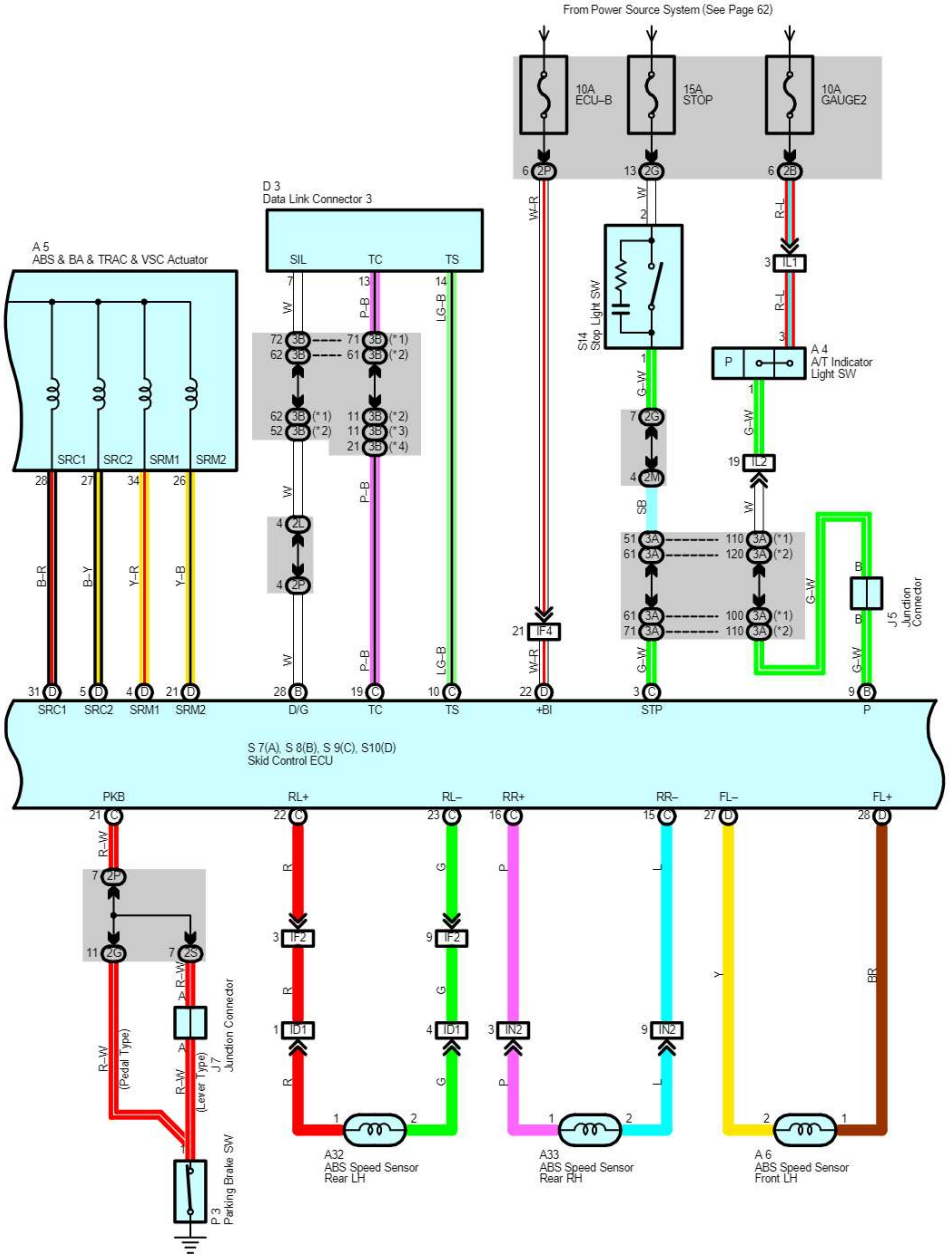


cardiagn.com

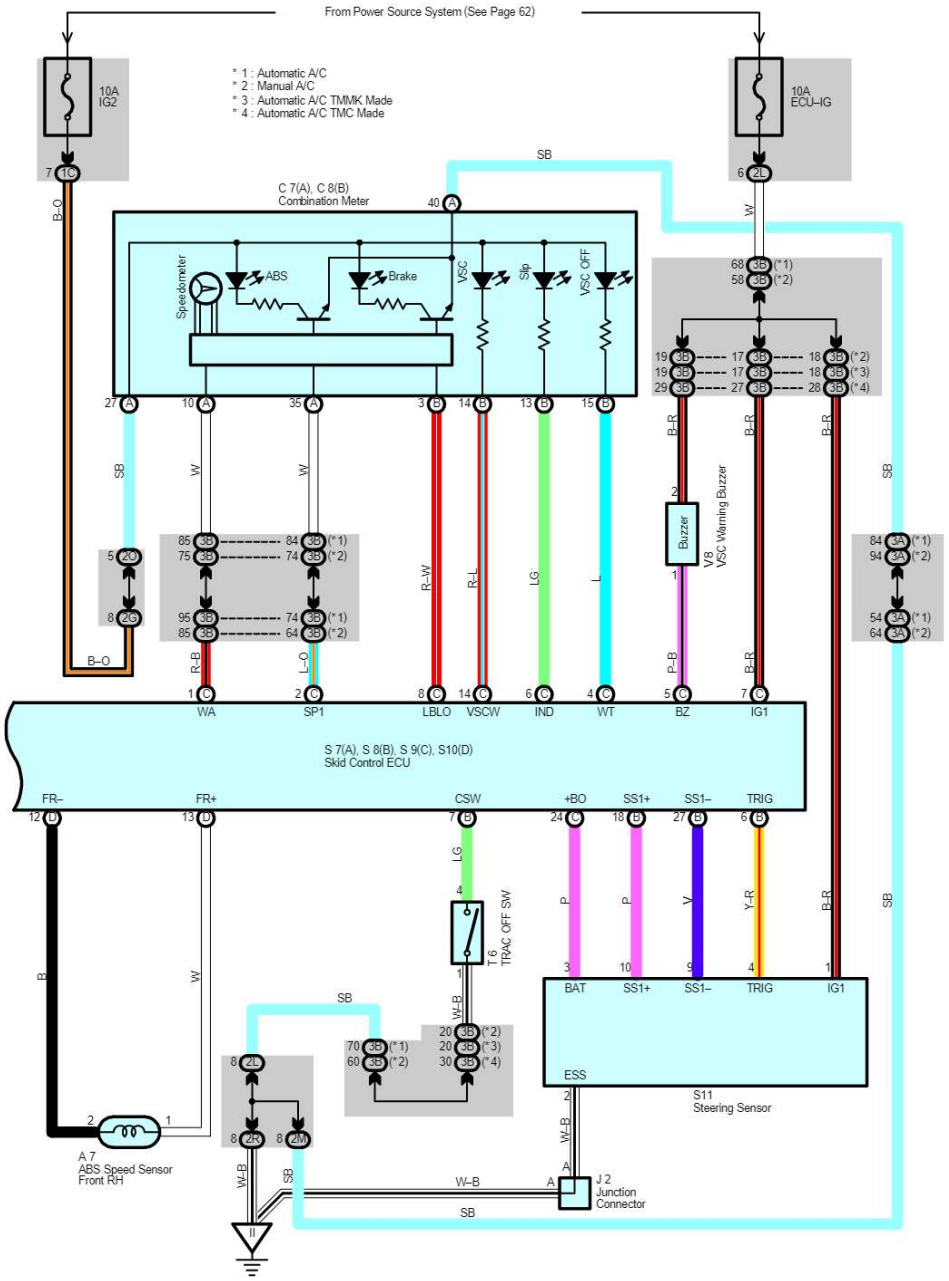
* 1 : Automatic A/C
* 2 : Manual A/C



cardiagn.com



cardiagn.com



cardiagn.com

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 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 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 TRAC function. After the engine is started, the TRAC system is stopped (turned off) and the VSC OFF indicator light lights up. When the traction control SW is pressed again, the TRAC system enters the stand–by mode. If the engine is stopped and restarted, the TRAC 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.
Engine control and electronically controlled transmission control
The strong braking force does not interfere with the braking force control of the VSC system by turning off the accel. and reducing changes in the driving torque at shift–down.
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, sensor signals, and/or actuators, the skid control ECU inhibits the brake actuator control and inputs the error signal to the engine control module. According to the error signal, the brake actuator turns off the solenoid and the engine control module rejects any electronically controlled throttle open request from the VSC system. As a result, the vehicle functions regardless of the ABS, TRAC, and VSC systems.

Service Hints

S7 (A), S9 (C), S10 (D) Skid Control ECU
(C) 7–Ground : Approx. 12 volts with ignition SW at ON or ST position
(D)22–Ground : Always approx. 12 volts
(A)15, (A) 22, (D) 2, (D) 3–Ground : Always continuity

cardiagn.com

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	C8 B	42	S8 B	43
A5	38 (1MZ–FE)	D3	42	S9 C	43
A6	38 (1MZ–FE)	E6 A	42	S10 D	43
A7	38 (1MZ–FE)	J2	43	S11	43
A32	44	J5	43	S14	43
A33	44	J7	43	T6	43
B2	38 (1MZ–FE)	P3	43	V8	43
C7 A	42	S7 A	43	Y1	43

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	23	ABS R/B (Radiator Side Support LH)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1E		
1G		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	52	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IN2	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

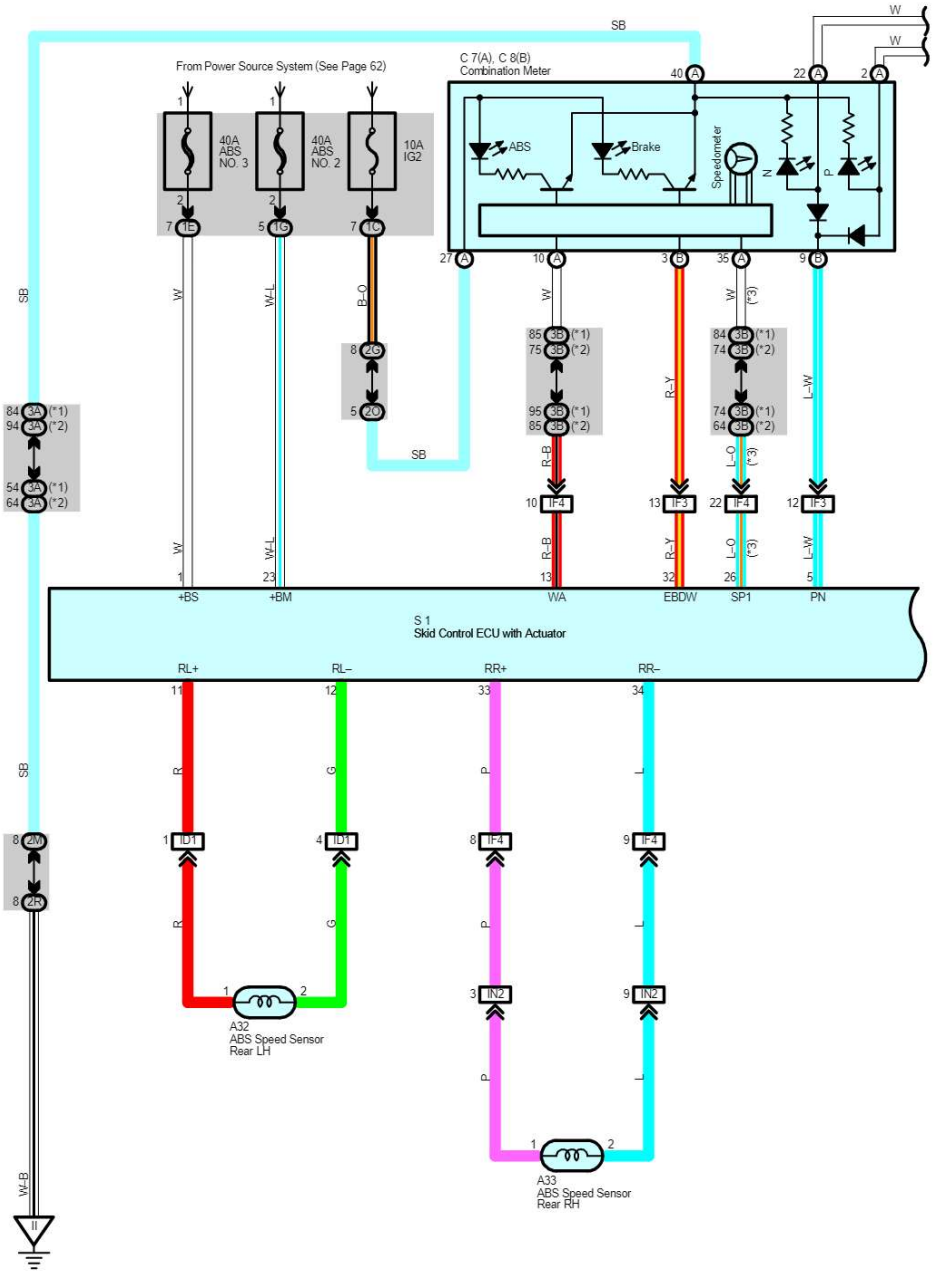
cardiagn.com

▽ : **Ground Points**

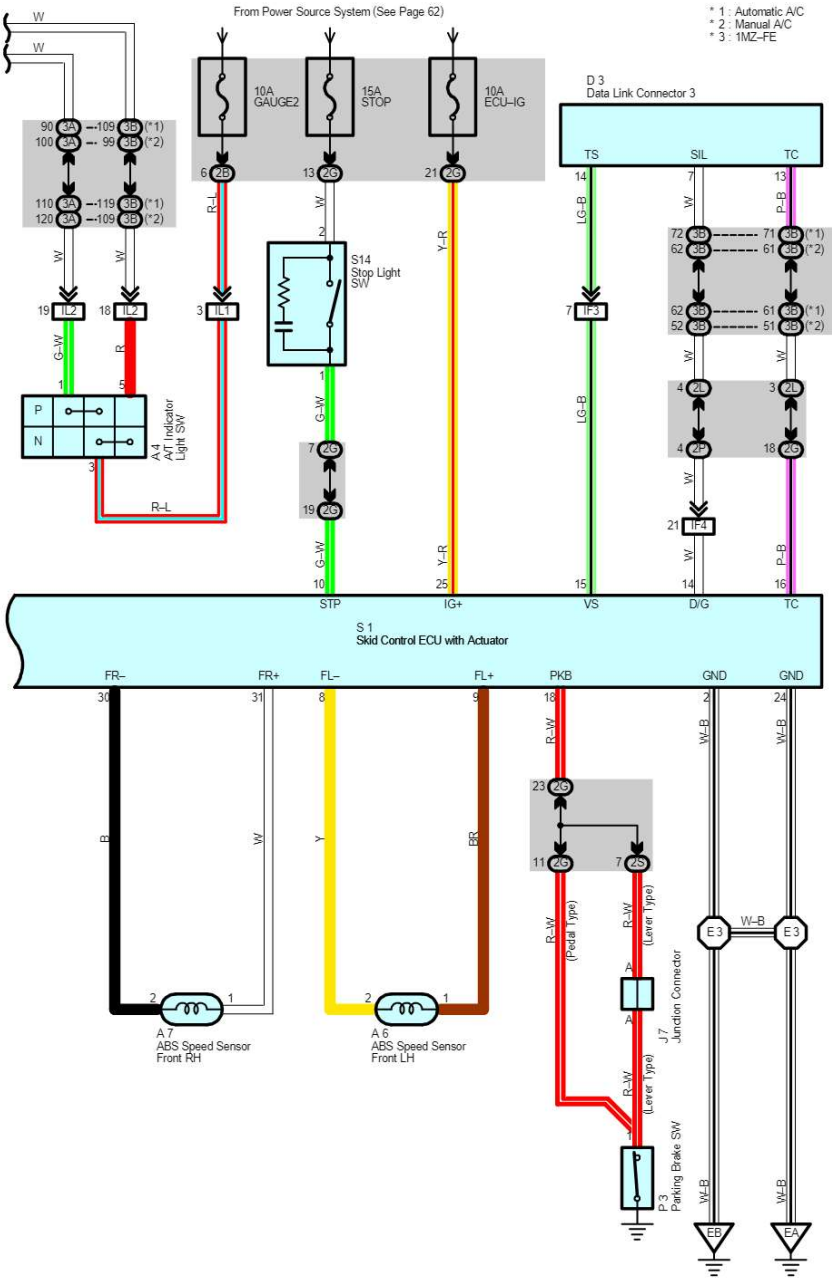
Code	See Page	Ground Points Location
EA	48 (1MZ–FE)	Right Fender
ED	48 (1MZ–FE)	Left Fender
II	52	Cowl Side Panel LH

cardiagn.com

cardiagn.com



cardiagn.com



cardiagn.com

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 9, 11, 31 and 33 of the skid control ECU with actuator.

(2) Stop light SW signal
A signal is input to TERMINAL 10 of the skid control ECU with actuator when the brake pedal is depressed.

2. System Operation

During sudden braking the skid control ECU with actuator has signals input from each sensor, which controls the current 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 skid control ECU with actuator judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current on the solenoid is controlled and the hydraulic pressure is increased. Holding of the hydraulic pressure is also controlled by the skid control ECU with actuator, by the same method as above. Pressure reduction, holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

Service Hints

A6, A7 ABS Speed Sensor Front LH, RH
2–1 : Approx. 1.6 kΩ

A32, A33 ABS Speed Sensor Rear LH, RH
2–1 : Approx. 1.6 kΩ

S1 Skid Control ECU with Actuator
2, 24–Ground : Always continuity
25–Ground : Approx. 12 volts with the ignition SW at ON position
10–Ground : Approx. 12 volts with the brake pedal depressed
1, 25–Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	A32	44	P3	43
	40 (2AZ–FE)	A33	44	S1	39 (1MZ–FE)
A6	38 (1MZ–FE)	C7 A	42		41 (2AZ–FE)
	40 (2AZ–FE)	C8 B	42	S14	43
A7	38 (1MZ–FE)	D3	42		
	40 (2AZ–FE)	J7	43		

cardiagn.com

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1E		
1G		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	36 (*2)	
3B	34 (*1)	
	36 (*2)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	52	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IN2	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

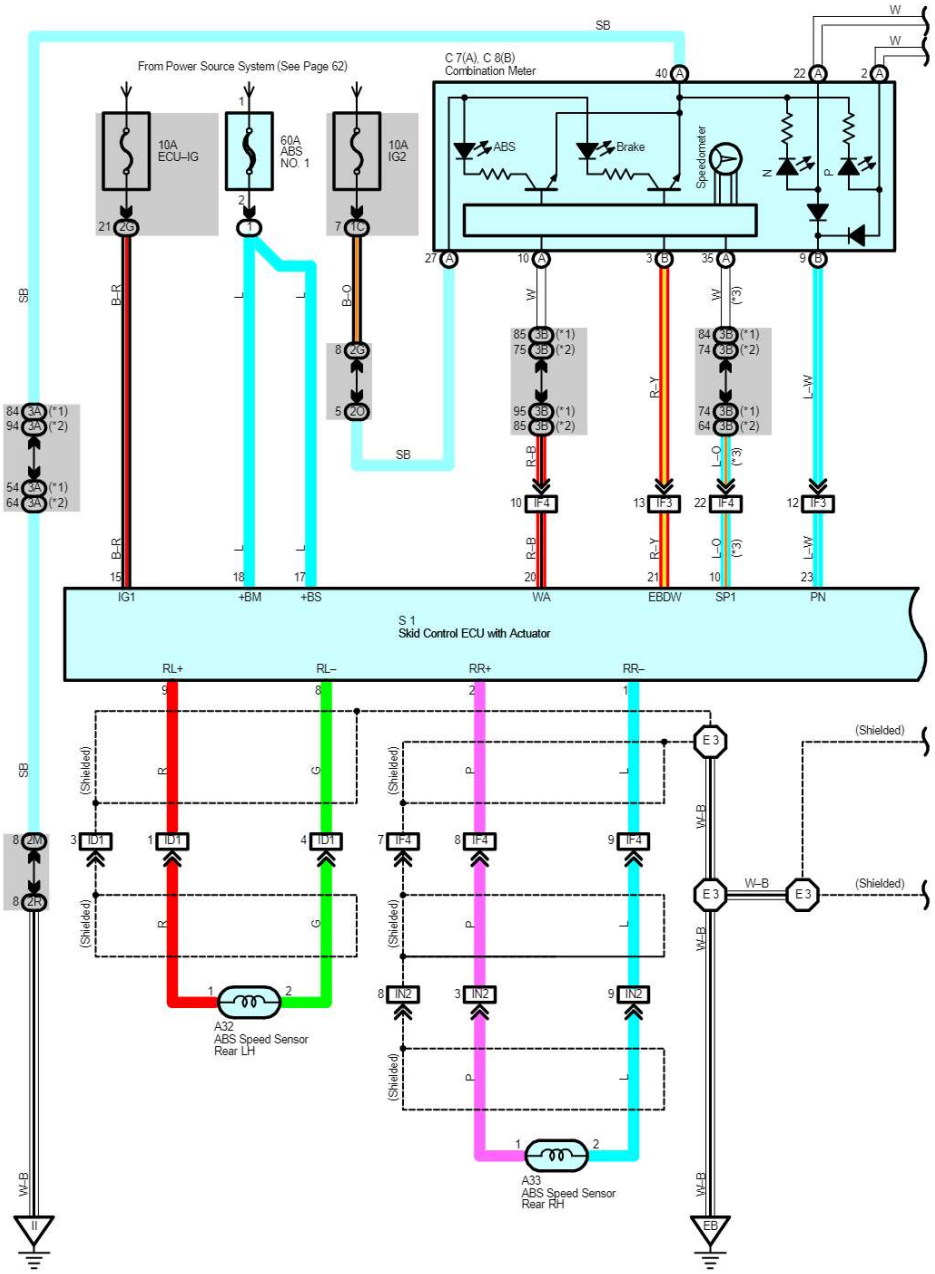
: **Ground Points**

Code	See Page	Ground Points Location
EA	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EB	48 (1MZ–FE)	
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH

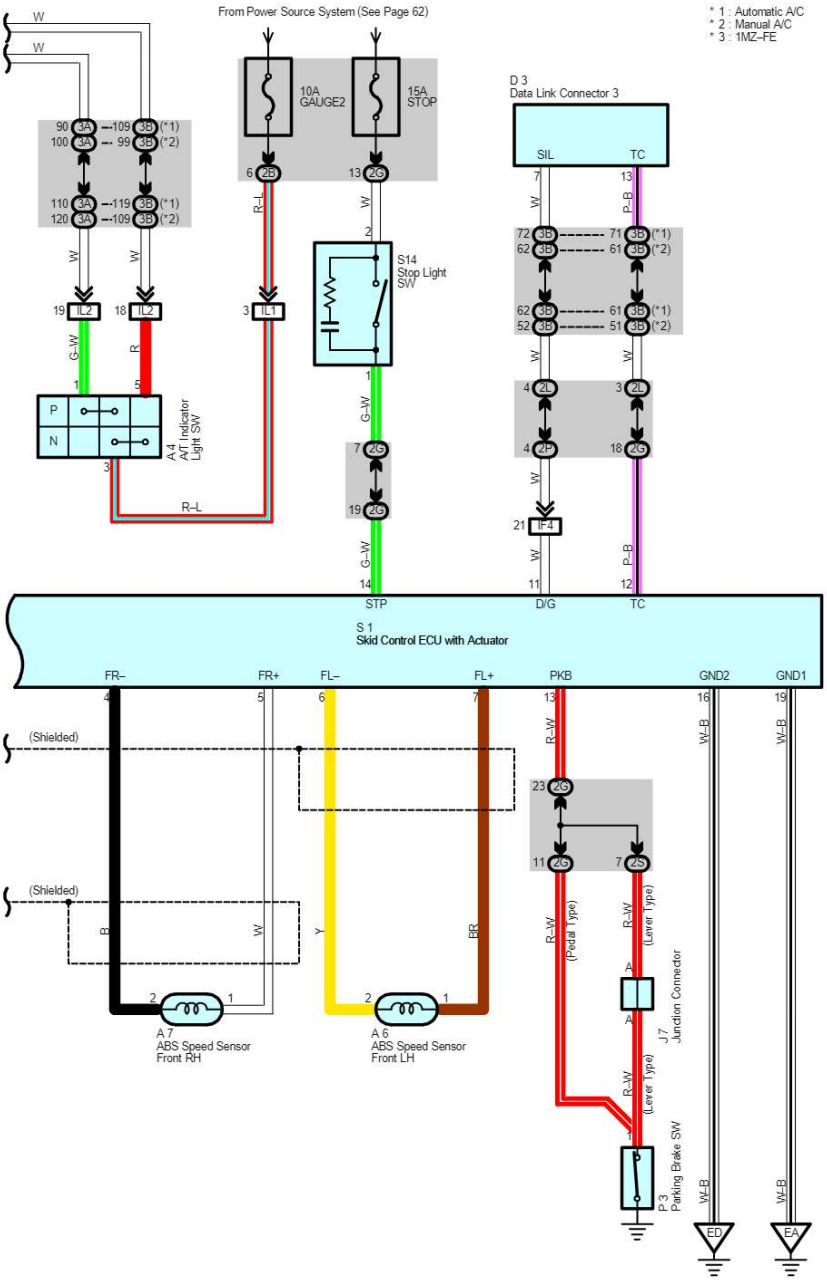
: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	48 (1MZ–FE)	Engine Room Main Wire	E3	50 (2AZ–FE)	Engine Room Main Wire

cardiagn.com



cardiagn.com



cardiagn.com

ABS (TMMK Made)

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 2, 5, 7 and 9 of the skid control ECU with actuator.

(2) Stop light SW signal
A signal is input to TERMINAL 14 of the skid control ECU with actuator when the brake pedal is depressed.

2. System Operation

During sudden braking the skid control ECU with actuator has signals input from each sensor, which controls the current 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 skid control ECU with actuator judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current on the solenoid is controlled and the hydraulic pressure is increased. Holding of the hydraulic pressure is also controlled by the skid control ECU with actuator, by the same method as above. Pressure reduction, holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

Service Hints

A6, A7 ABS Speed Sensor Front LH, RH
2–1 : Approx. 1.6 kΩ

A32, A33 ABS Speed Sensor Rear LH, RH
2–1 : Approx. 1.6 kΩ

S1 Skid Control ECU with Actuator
16, 19–Ground : Always continuity
15–Ground : Approx. 12 volts with the ignition SW at ON position
14–Ground : Approx. 12 volts with the brake pedal depressed
17, 18–Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (1MZ–FE)	A32	44	P3	43
	40 (2AZ–FE)	A33	44	S1	39 (1MZ–FE)
A6	38 (1MZ–FE)	C7 A	42		41 (2AZ–FE)
	40 (2AZ–FE)	C8 B	42	S14	43
A7	38 (1MZ–FE)	D3	42		
	40 (2AZ–FE)	J7	43		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

cardiagn.com

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
2S		
3A	35 (*3)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	37 (*4)	
3B	35 (*3)	
	37 (*4)	

* 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	52	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IN2	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

: **Ground Points**

Code	See Page	Ground Points Location
EA	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EB	48 (1MZ–FE)	
	50 (2AZ–FE)	
ED	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH

: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	48 (1MZ–FE)	Engine Room Main Wire	E3	50 (2AZ–FE)	Engine Room Main Wire

cardiagn.com

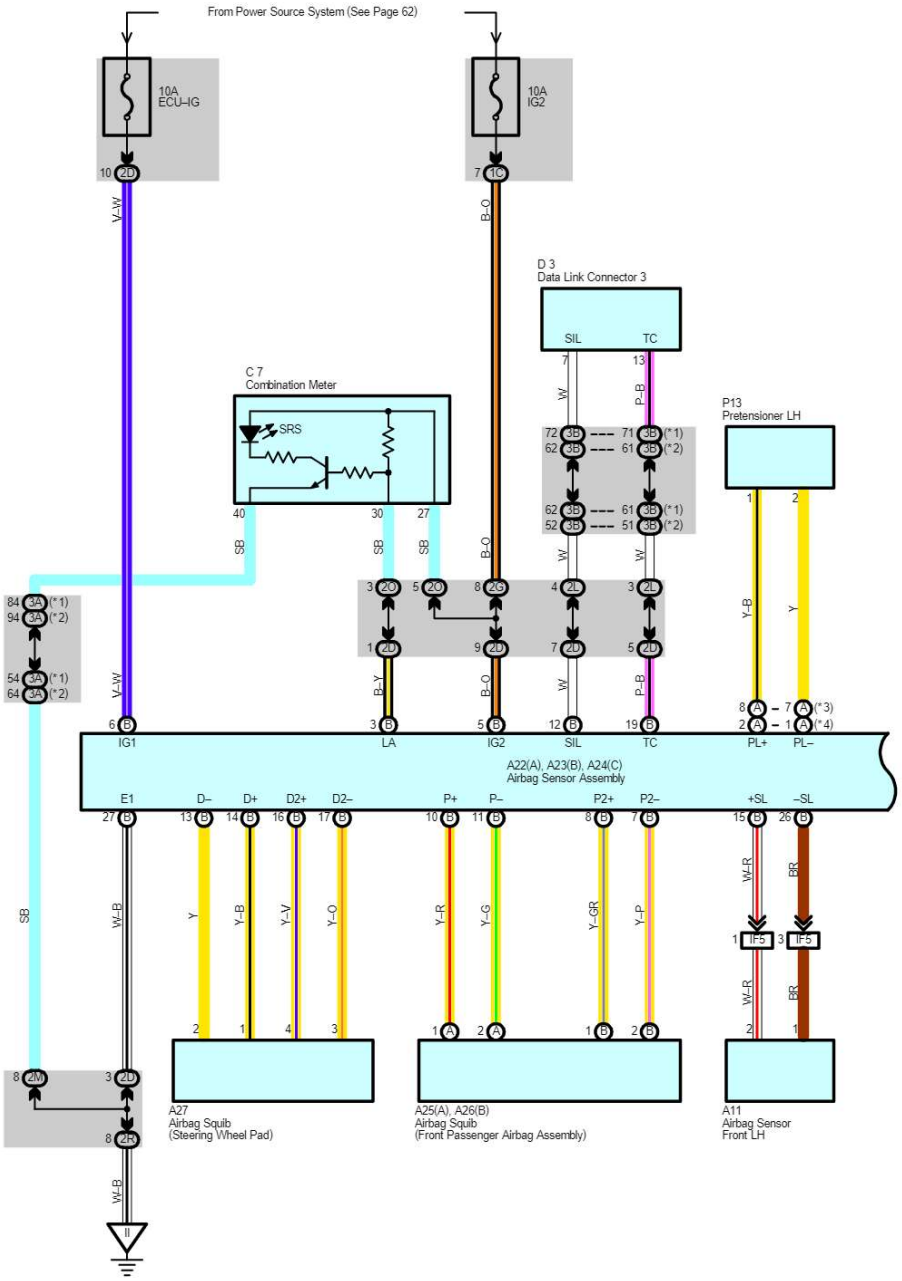
Memo

cardiagn.com

NOTICE: When inspecting or repairing the SRS, perform the operation in accordance with the following precautionary instructions and the procedure and precautions in the Repair Manual for the applicable model year.

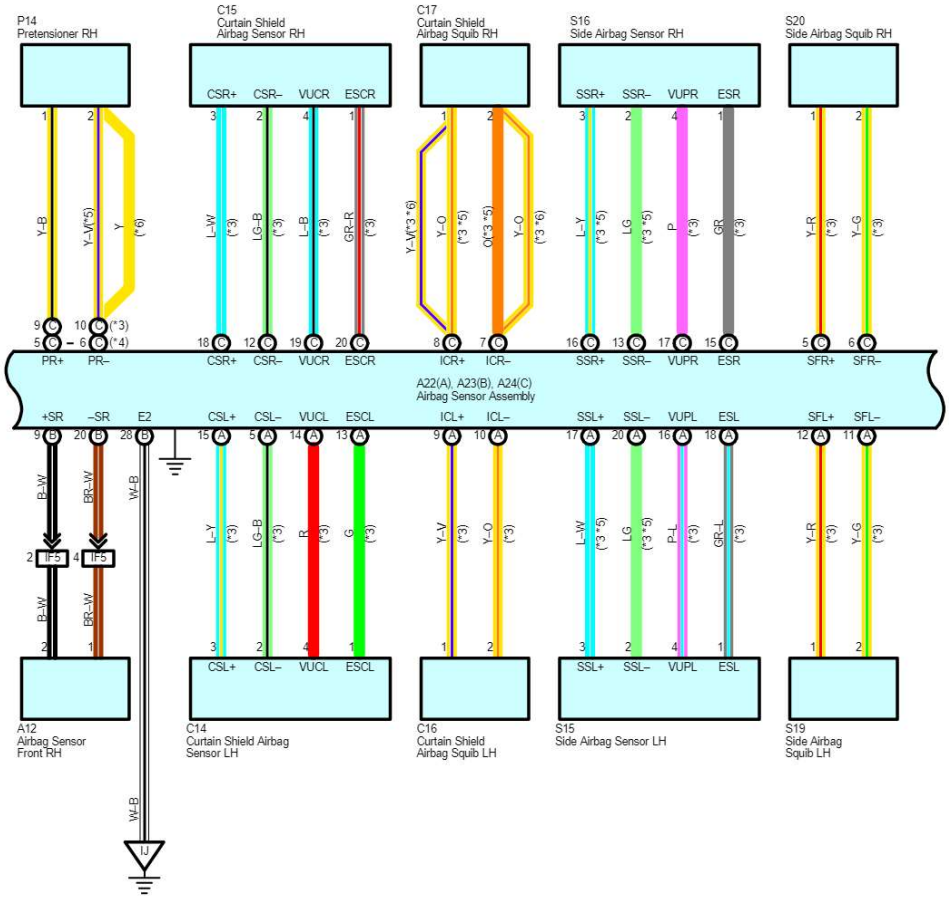
- Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery.
- **Work must be started after 90 seconds from when the ignition switch is turned to the "LOCK" position and the negative (–) terminal cable is disconnected from the battery.**
  (The SRS is equipped with a back–up power source so that if work is started within 90 seconds from disconnecting the negative (–) terminal cable of the battery, the SRS may be deployed.)
- When the negative (–) terminal cable is disconnected from the battery, the memory of the clock and audio system will be canceled. So before starting work, make a record of the contents memorized in the audio memory system. When work is finished, reset the audio systems as they were before and adjust the clock. This vehicle has power tilt and power telescopic steering, power seat and power outside rear view mirror which are all equipped with memory function. However, it is not possible to make a record of the memory contents. So when the work is finished, it will be necessary to explain this fact tot the customer, and ask the customer to adjust the features and reset the memory. To avoid erasing the memory in each memory system, never use a back–up power supply from outside the vehicle.
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Do not expose the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, curtain shield airbag sensor assembly, front airbag sensor assembly, seat belt pretensioner, airbag sensor assembly or side airbag sensor assembly directly to hot air or flames.
- Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, curtain shield airbag sensor assembly, front airbag sensor assembly, seat belt pretensioner, airbag sensor assembly and side airbag sensor assembly should be inspected.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, curtain shield airbag sensor assembly, front airbag sensor assembly, seat belt pretensioner, airbag sensor assembly or side airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, curtain shield airbag sensor assembly, front airbag sensor assembly, seat belt pretensioner, airbag sensor assembly or side airbag sensor assembly has been dropped, or if there are cracks, dents or other defects in the case, bracket or connector, replace them with new ones.
- Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) for troubleshooting the system's electrical circuits.
- Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
- After work on the SRS is completed, perform the SRS warning light check.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section of the Repair Manual.

cardiagn.com



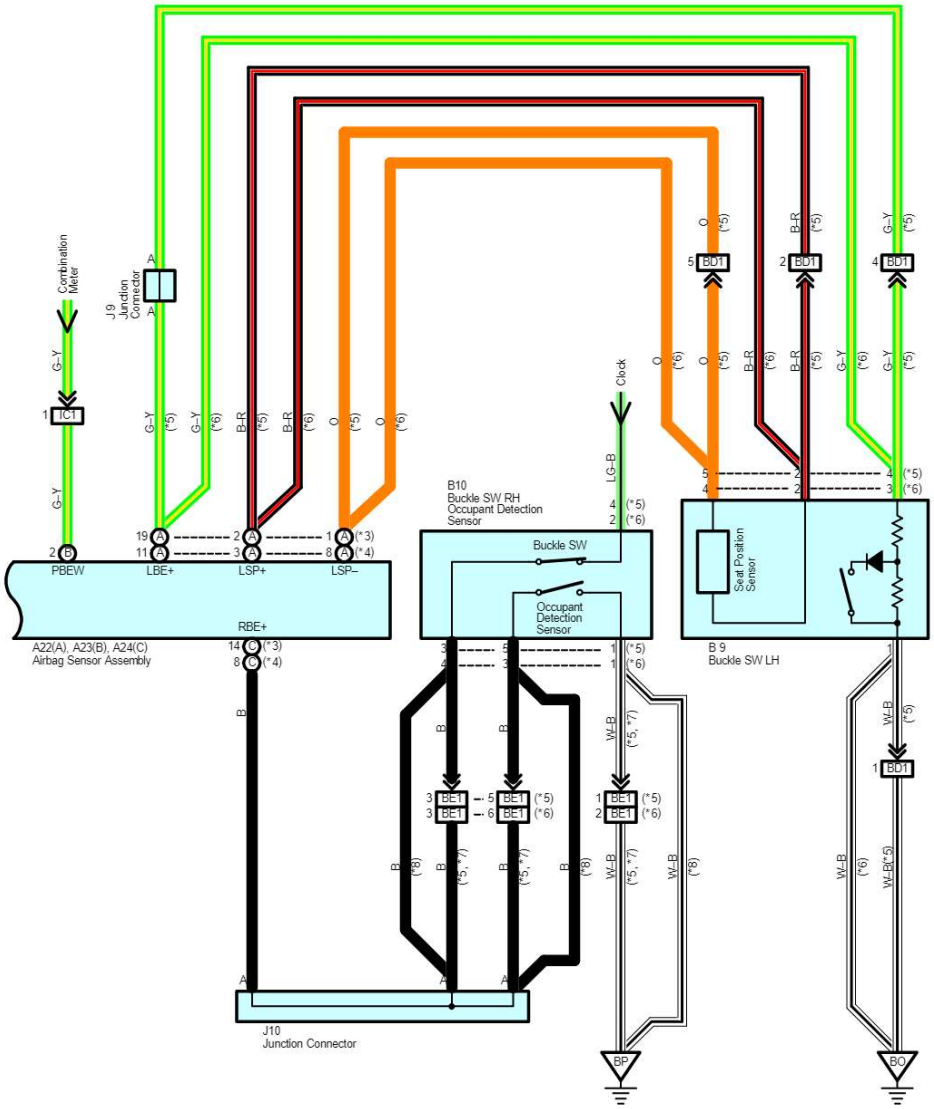
cardiagn.com

* 1 : Automatic A/C
* 2 : Manual A/C
* 3 : w/ Side Airbag
* 4 : w/o Side Airbag
* 5 : TMMK Made
* 6 : TMC Made



cardiagn.com

* 3 : w/ Side Airbag
* 4 : w/o Side Airbag
* 5 : TMMK Made
* 6 : TMC Made
* 7 : TMC Made w/o Power Seat w/ Seat Heater
* 8 : TMC Made Except *7



cardiagn.com

System Outline

The SRS is a driver and front passenger protection device which has a supplemental role to the seat belts.
When the ignition SW is turned to ON, the current from the ECU–IG fuse flows to TERMINAL (B) 6 of the airbag sensor assembly, and from the IG2 fuse to TERMINAL (B) 5 of the airbag sensor assembly.
If an accident occurs while driving, when the frontal impact exceeds a set level, the current from the ECU–IG or IG2 fuse flows to TERMINALS (B) 14, (B) 16, (B) 10, (B) 8, (C) 8 (w/ side airbag), (C) 2 (w/o side airbag) and (A) 9 (w/ side airbag), (A) 5 (w/o side airbag) of the airbag sensor assembly to the airbag squibs and the pretensioners to TERMINALS (B) 13, (B) 17, (B) 11, (B) 7, (C) 7 (w/ side airbag), (C) 1 (w/o side airbag) and (A) 10 (w/ side airbag), (A) 6 (w/o side airbag) of the airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, so that current flows to the airbag squibs and the pretensioners and causes them to operate.
When the side impact also exceeds a set level, the current from the ECU–IG or IG2 fuse flows to TERMINALS (A) 8, (C) 9, (A) 5 and (C) 12 of the airbag sensor assembly to the side airbag squibs and the curtain shield airbag squibs TERMINALS (A) 7, (C) 10, (A) 16 and (C) 11of the airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, causing side airbag squibs and curtain shield airbag squibs to operate.
The airbag stored inside the steering wheel pad is instantaneously expanded to soften the shock to the driver.
The airbag stored inside the passenger's instrument panel is instantaneously expanded to soften the shock to the front passenger.
Side airbags are instantaneously expanded to soften the shock of side to the driver and front passenger.
The curtain shield airbag can ease an impact on the head of the front and rear passengers and reduce risks of injury.
The pretensioners make sure of the seat belt restrainability.

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
A11		38 (1MZ–FE)	A27	42	J9	43
		40 (2AZ–FE)	B9	46	J10	43
A12		38 (1MZ–FE)	B10	46	P13	45
		40 (2AZ–FE)	C7	42	P14	45
A22	A	42	C14	44	S15	45
A23	B	42	C15	44	S16	45
A24	C	42	C16	44	S19	46
A25	A	42	C17	44	S20	46
A26	B	42	D3	42		

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2D	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

cardiagn.com

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

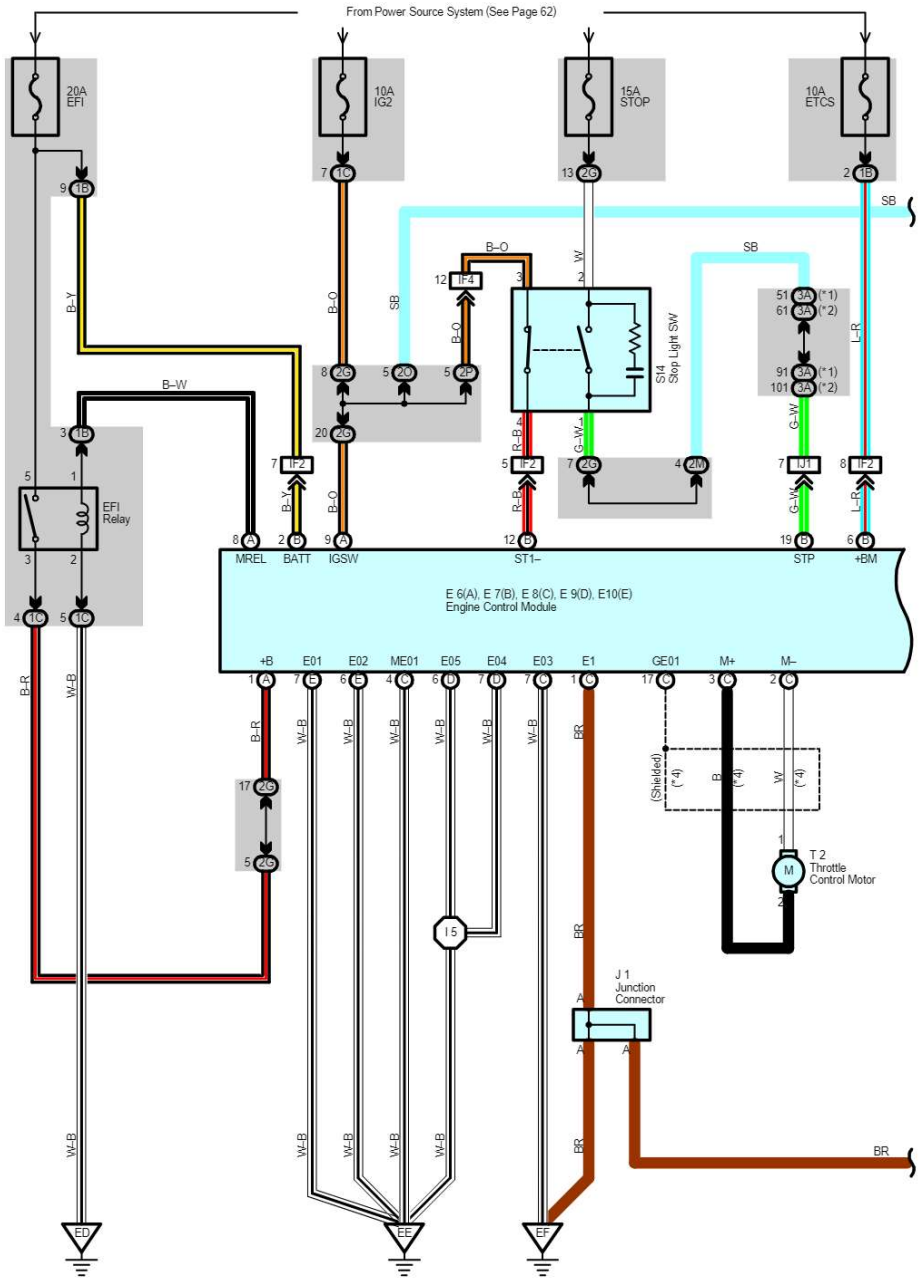
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF5	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
BD1	58	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	58	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

: **Ground Points**

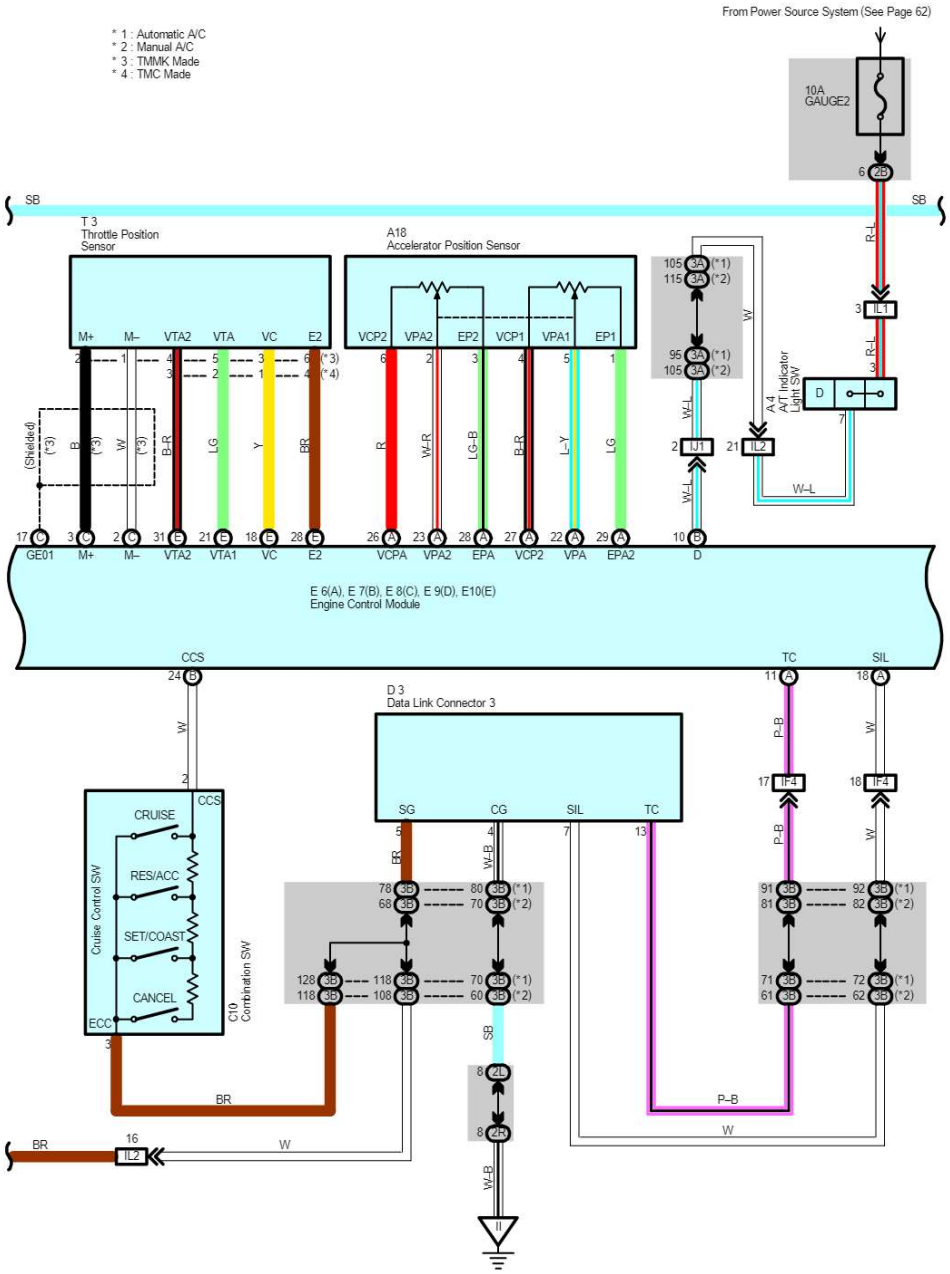
Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
BO	56	Under the Driver's Seat
BP	56	Under the Front Passenger's Seat

cardiagn.com

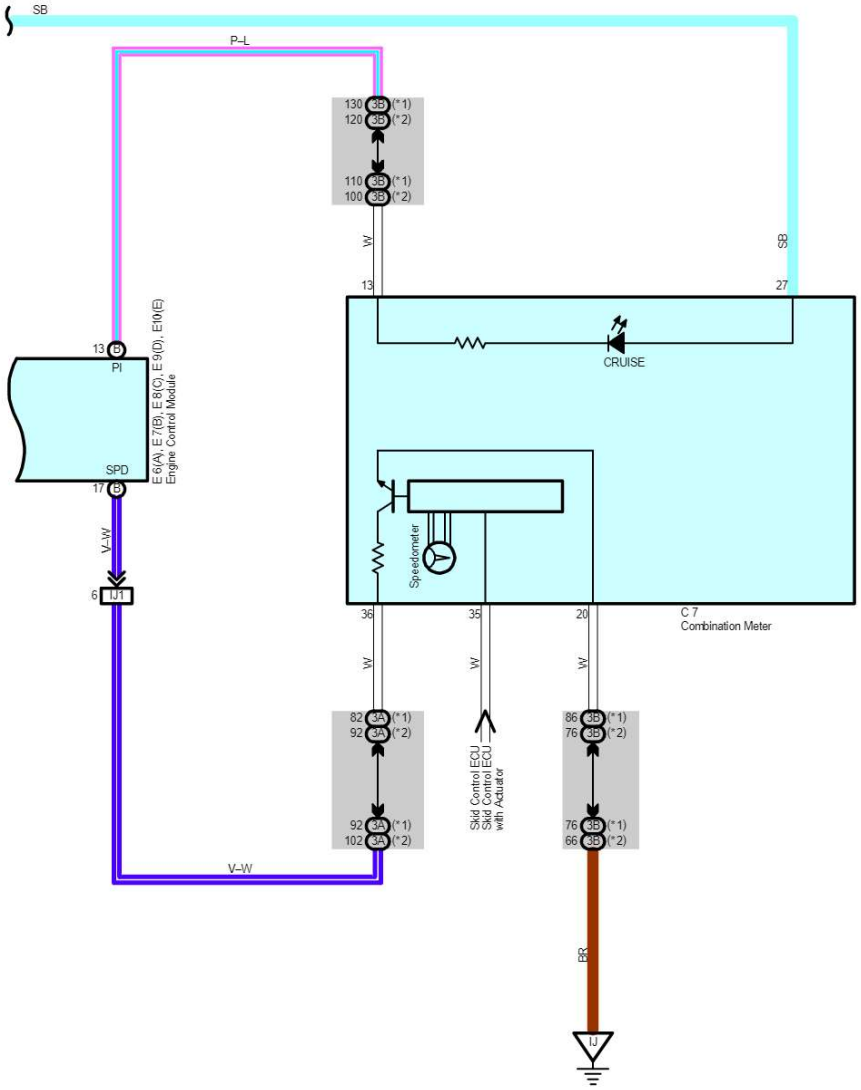
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

System Outline

The cruise control system is a constant vehicle speed controller in which control of the switch on the instrument panel makes it possible to automatically adjust the opening of the engine throttle valve without depressing of the accel. pedal.

1. Set Operation

When the cruise control main SW is turned on, the system starts preparations necessary for the cruise control and turns on the indicator light in the combination meter.

2. Set Speed Control

When the SET/COAST SW is operated with the cruise control SW turned on during travelling, the constant vehicle speed is controlled.

3. Coast Control

When the SET/COAST SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to decelerate the vehicle. Every time the SET/COAST SW is turned on instantaneously, the vehicle speed is decelerated approximately 1.6 km/h.

4. Accel Control

When the RES/ACC SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to accelerate the vehicle. Every time the RES/ACC SW is turned on instantaneously, the vehicle speed is accelerated approximately 1.6 km/h.

5. Resume Control

When the vehicle speed is within the low speed limit (Approximately 40 km/h, 25 mph) if the cruise control is cancelled, use of the RES/ACC SW accelerates the vehicle to the speed level used before canceling the cruise control.

6. Manual Cancel Mechanism

If any of the following signals is input during cruise control travelling, the cruise control is cancelled.

- The stop light SW is turned on.
- The CANCEL SW is turned on.
- The cruise control SW is turned off.

7. Auto Cancel Function

If any of the following conditions is encountered, the cruise control is automatically cancelled.

- The stop light SW wiring is faulty or short–circuited.
- The vehicle speed signal is faulty.
- The electronically controlled throttle malfunctions.

8. Overdrive Control Function

The overdrive control may be cancelled if the vehicle travels on the slope during cruise control travelling. After the overdrive control has been cancelled, if the vehicle speed exceeds the overdrive return speed (The set speed is 2 km/h, 1.2 mph) and it is decided that the slope is finished, the vehicle returns to the overdrive control mode again.

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

(A) 9–Ground : Approx. 12 volts with ignition SW at ON or ST position
(B) 2–Ground : Always approx. 12 volts
(C)1, (C) 4, (C) 7, (D) 6, (D) 7, (E) 6, (E) 7–Ground : Always continuity
(B)19–Ground : Approx. 12 volts with stop light SW at on
(B)24–Ground : Continuity with cruise control SW at on
Approx. 1540 Ω with CANSEL SW on in cruise control SW
Approx. 240 Ω with RES/ACC SW on in cruise control SW
Approx. 630 Ω with SET/COAST SW on in cruise control SW

C10 Combination SW

2–3 : Approx. 1540 Ω with CANSEL SW on
Approx. 240 Ω with RES/ACC SW on
Approx. 630 Ω with SET/COAST SW on

cardiagn.com

: Parts Location

Code	See Page	Code		See Page	Code	See Page
A4	38 (1MZ–FE)	E6	A	42	J1	43
A18	42	E7	B	42	S14	43
C7	42	E8	C	42	T2	39 (1MZ–FE)
C10	42	E9	D	42	T3	39 (1MZ–FE)
D3	42	E10	E	42		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

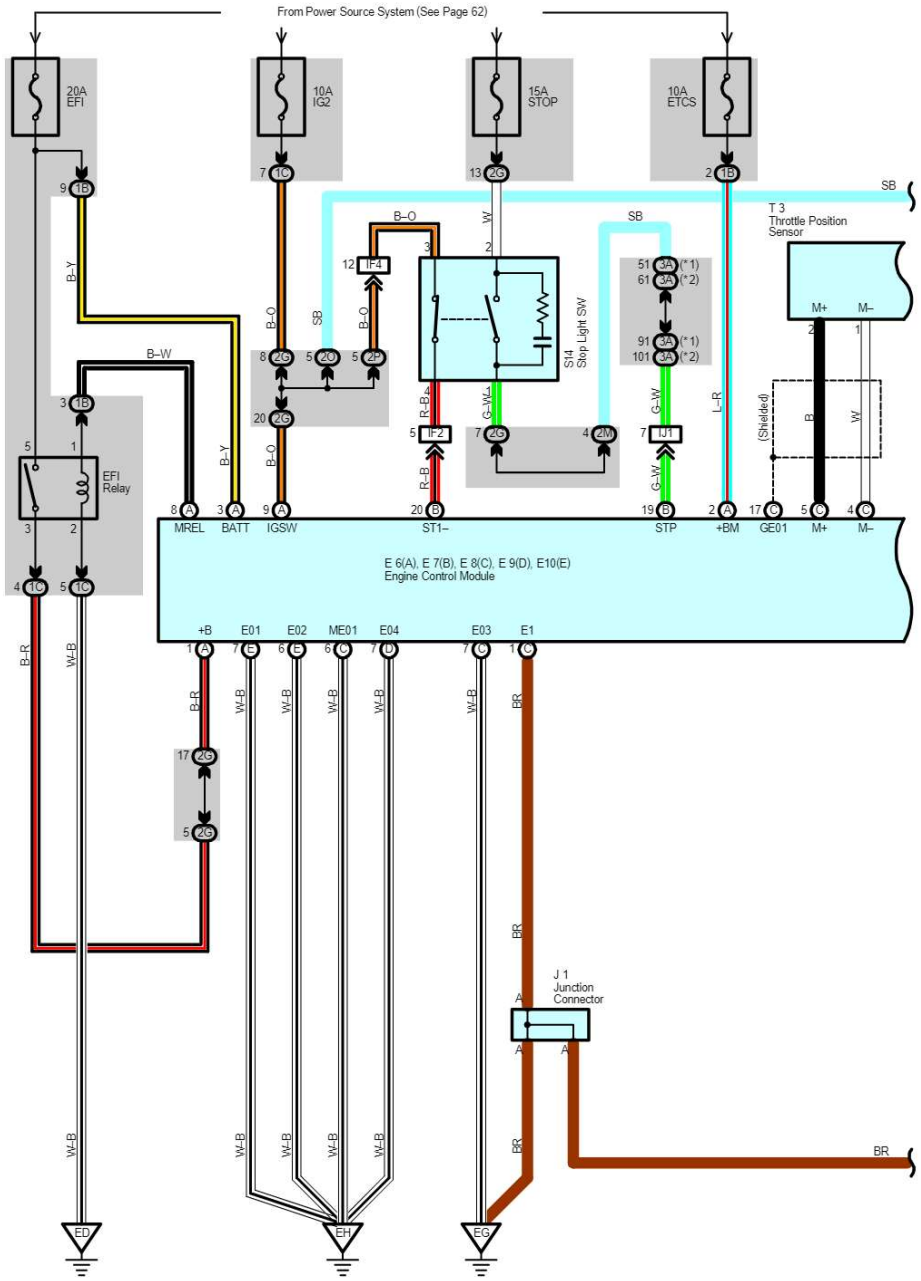
Code	See Page	Ground Points Location
ED	48 (1MZ–FE)	Left Fender
EE	48 (1MZ–FE)	Surge Tank RH
EF	48 (1MZ–FE)	Rear Side of Surge Tank
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

: Splice Points

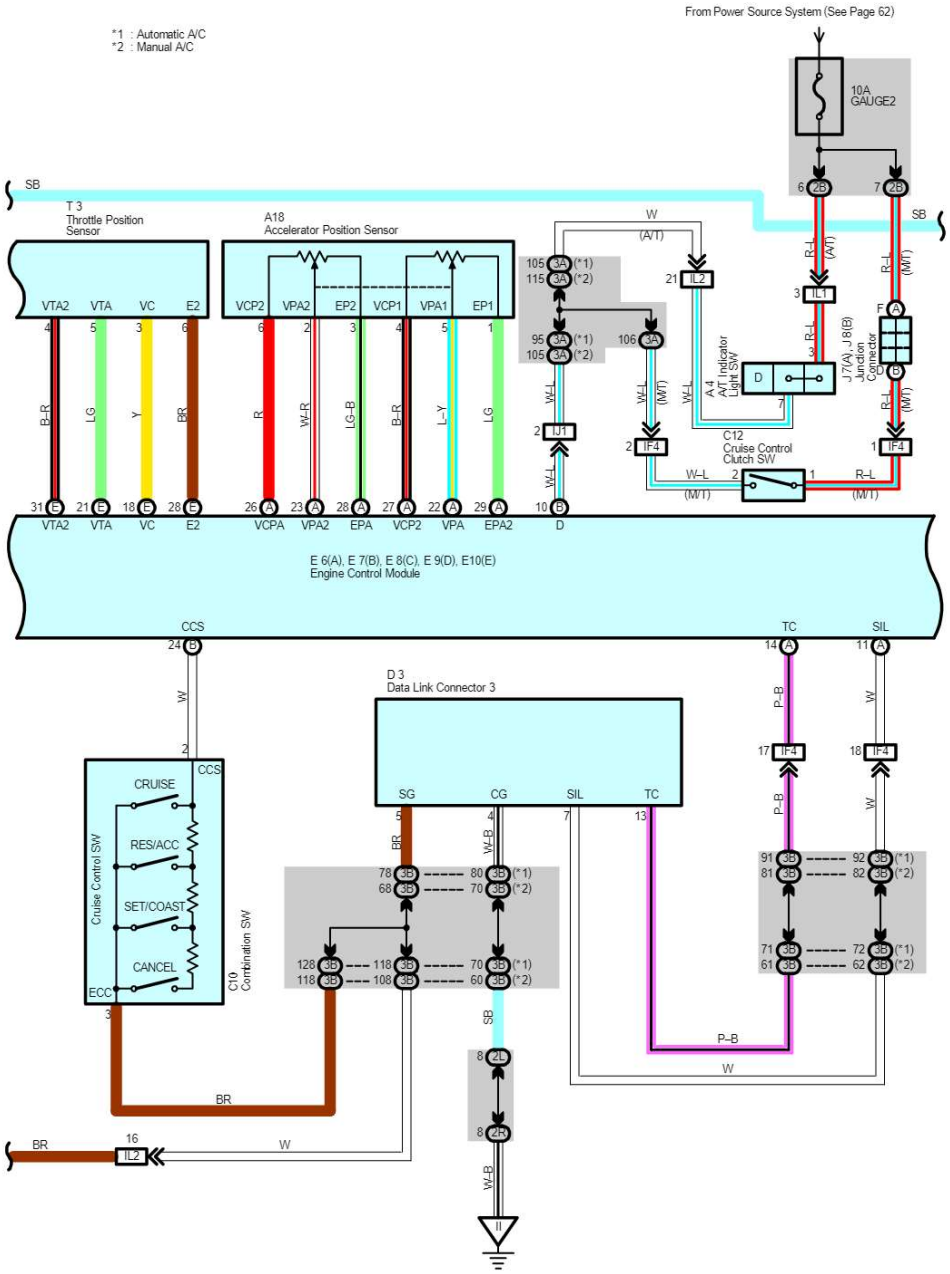
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	54	Engine Wire			

cardiagn.com

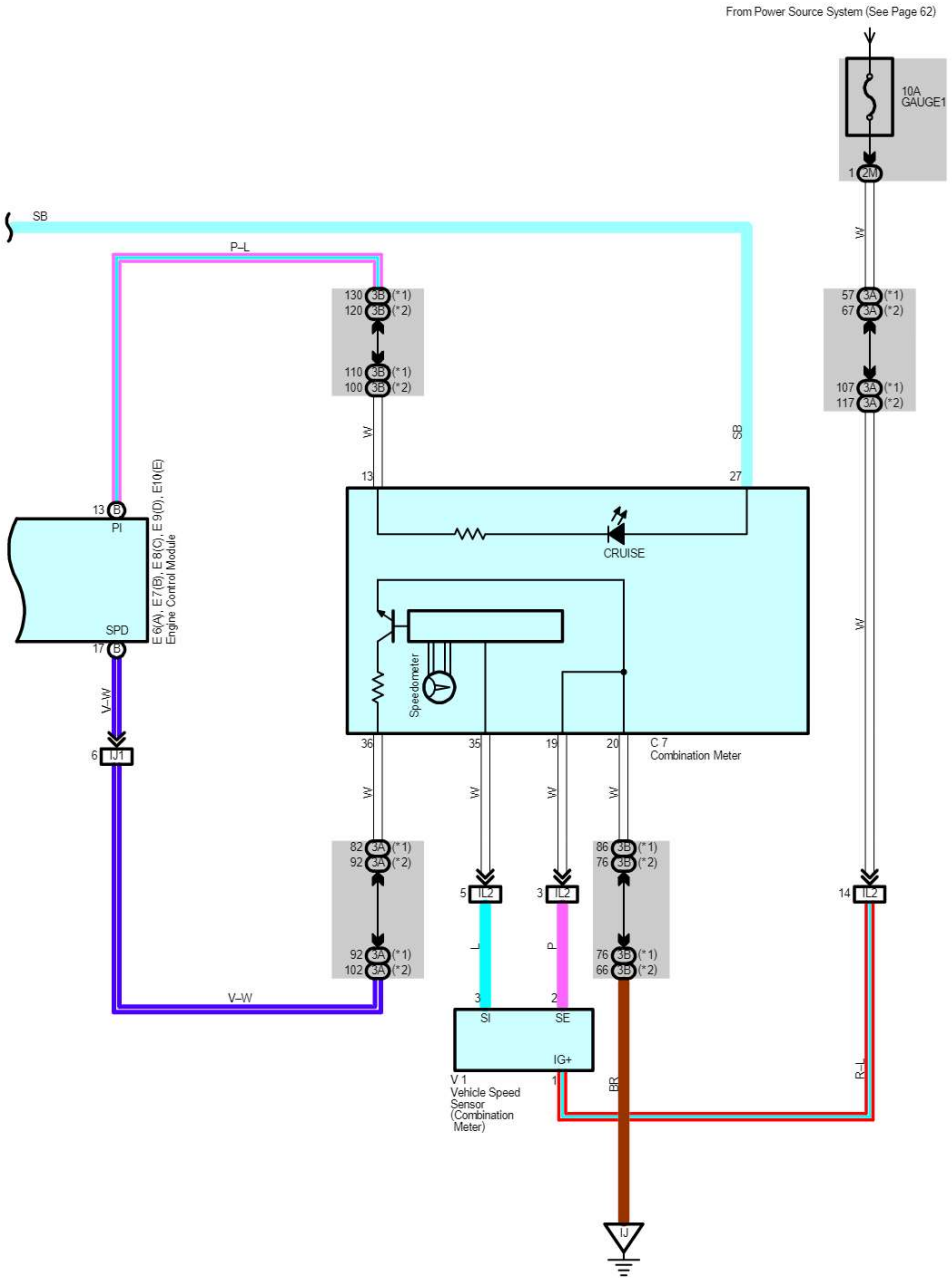
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

System Outline

The cruise control system is a constant vehicle speed controller in which control of the switch on the instrument panel makes it possible to automatically adjust the opening of the engine throttle valve without depressing of the accel. pedal.

1. Set Operation

When the cruise control main SW is turned on, the system starts preparations necessary for the cruise control and turns on the indicator light in the combination meter.

2. Set Speed Control

When the SET/COAST SW is operated with the cruise control SW turned on during travelling, the constant vehicle speed is controlled.

3. Coast Control

When the SET/COAST SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to decelerate the vehicle. Every time the SET/COAST SW is turned on instantaneously, the vehicle speed is decelerated approximately 1.6 km/h.

4. Accel Control

When the RES/ACC SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to accelerate the vehicle. Every time the RES/ACC SW is turned on instantaneously, the vehicle speed is accelerated approximately 1.6 km/h.

5. Resume Control

When the vehicle speed is within the low speed limit (Approximately 40 km/h, 25 mph) if the cruise control is cancelled, use of the RES/ACC SW accelerates the vehicle to the speed level used before canceling the cruise control.

6. Manual Cancel Mechanism

If any of the following signals is input during cruise control travelling, the cruise control is cancelled.

- The stop light SW is turned on.
- The CANCEL SW is turned on.
- The cruise control SW is turned off.

7. Auto Cancel Function

If any of the following conditions is encountered, the cruise control is automatically cancelled.

- The stop light SW wiring is faulty or short–circuited.
- The vehicle speed signal is faulty.
- The electronically controlled throttle malfunctions.

8. Overdrive Control Function

The overdrive control may be cancelled if the vehicle travels on the slope during cruise control travelling. After the overdrive control has been cancelled, if the vehicle speed exceeds the overdrive return speed (The set speed is 2 km/h, 1.2 mph) and it is decided that the slope is finished, the vehicle returns to the overdrive control mode again.

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

(A) 9–Ground : Approx. 12 volts with ignition SW at ON or ST position
(A) 3–Ground : Always approx. 12 volts
(C) 1, (C) 6, (C) 7, (D) 7, (E) 6, (E) 7–Ground : Always continuity
(B)19–Ground : Approx. 12 volts with stop light SW at on
(B)24–Ground : Continuity with cruise control main SW at on
Approx. 1540 Ω with CANSEL SW on in cruise control SW
Approx. 240 Ω with RES/ACC SW on in cruise control SW
Approx. 630 Ω with SET/COAST SW on in cruise control SW

C10 Combination SW

2–3 : Approx. 1540 Ω with CANSEL SW on
Approx. 240 Ω with RES/ACC SW on
Approx. 630 Ω with SET/COAST SW on

cardiagn.com

○ : Parts Location

Code	See Page	Code		See Page	Code		See Page
A4	40 (2AZ–FE)	E6	A	42	J7	A	43
A18	42	E7	B	42	J8	B	43
C7	42	E8	C	42	S14		43
C10	42	E9	D	42	T3		41 (2AZ–FE)
C12	42	E10	E	42	V1		41 (2AZ–FE)
D3	42	J1		43			

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

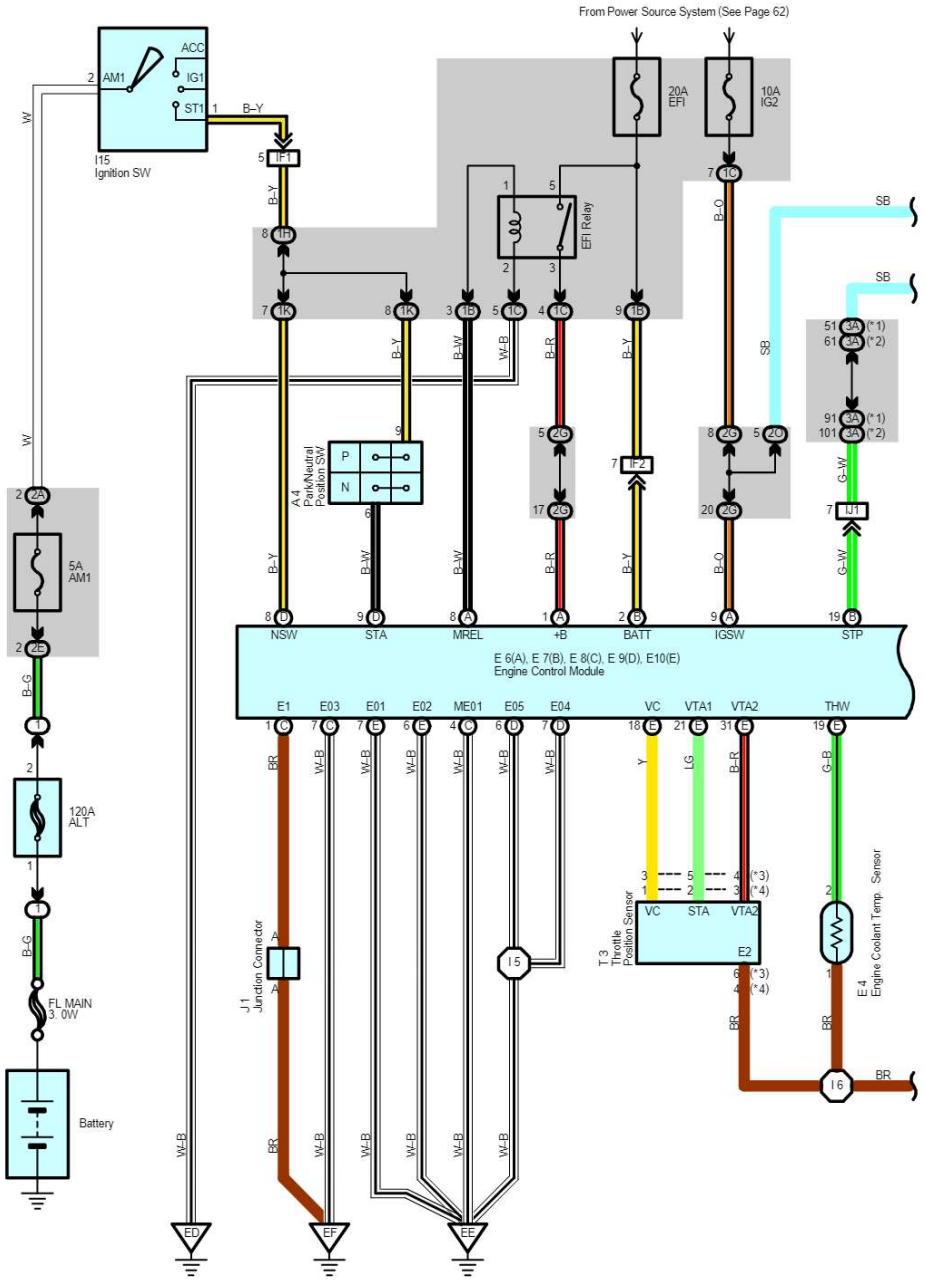
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

▽ : Ground Points

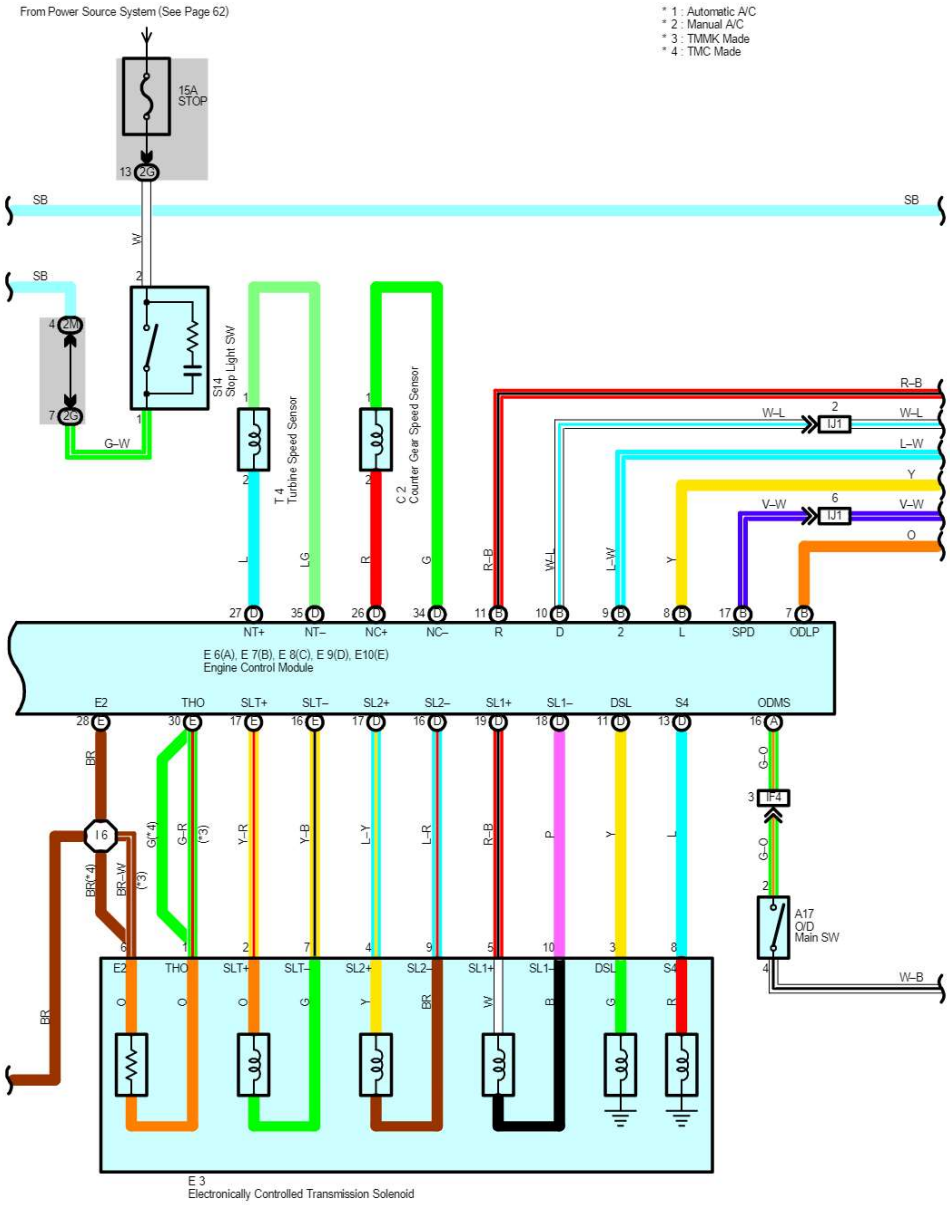
Code	See Page	Ground Points Location
ED	50 (2AZ–FE)	Left Fender
EG	50 (2AZ–FE)	Left Side of Cylinder Head
EH	50 (2AZ–FE)	Intake Side of Cylinder Block
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

cardiagn.com

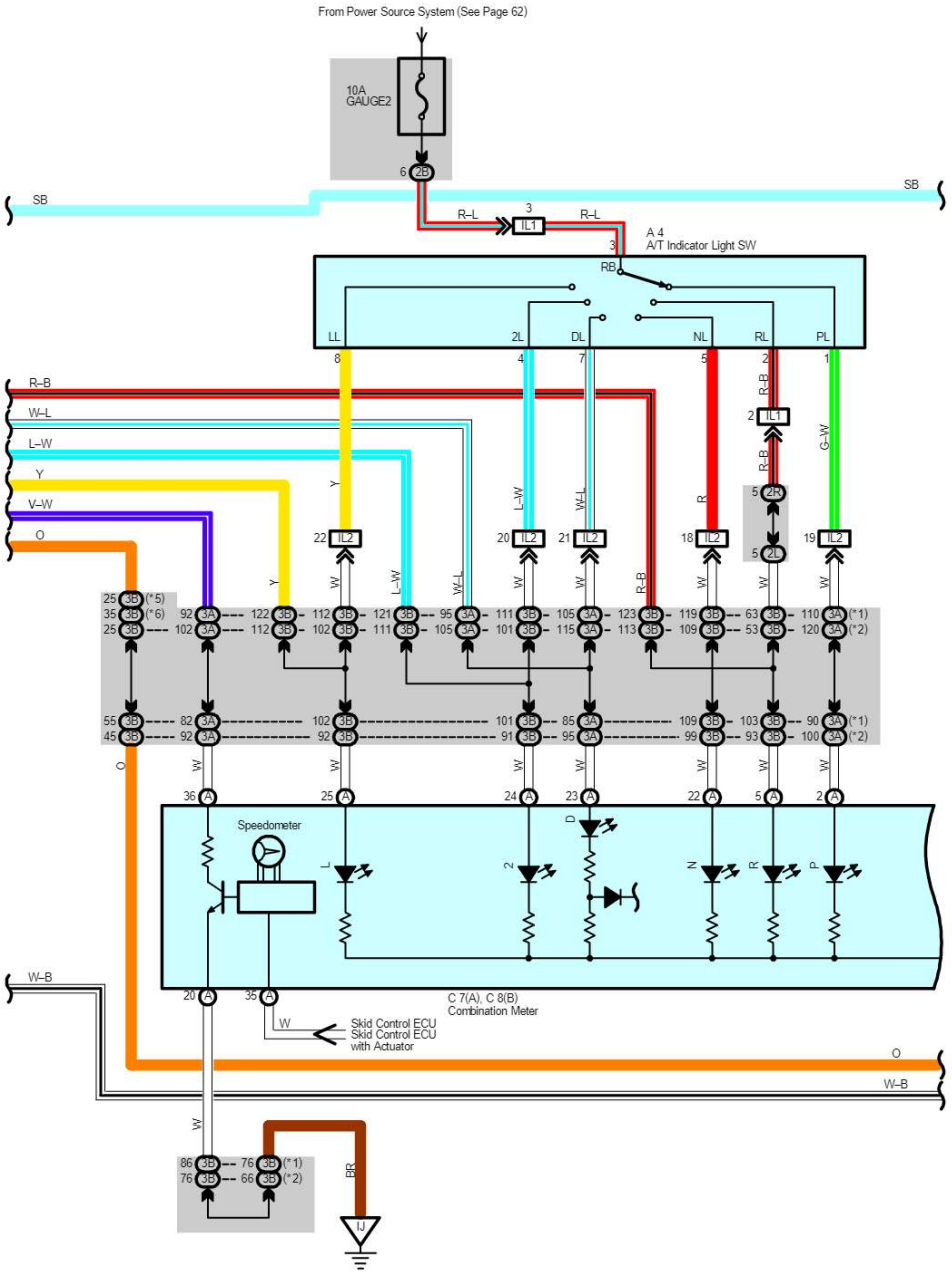
cardiagn.com



cardiagn.com

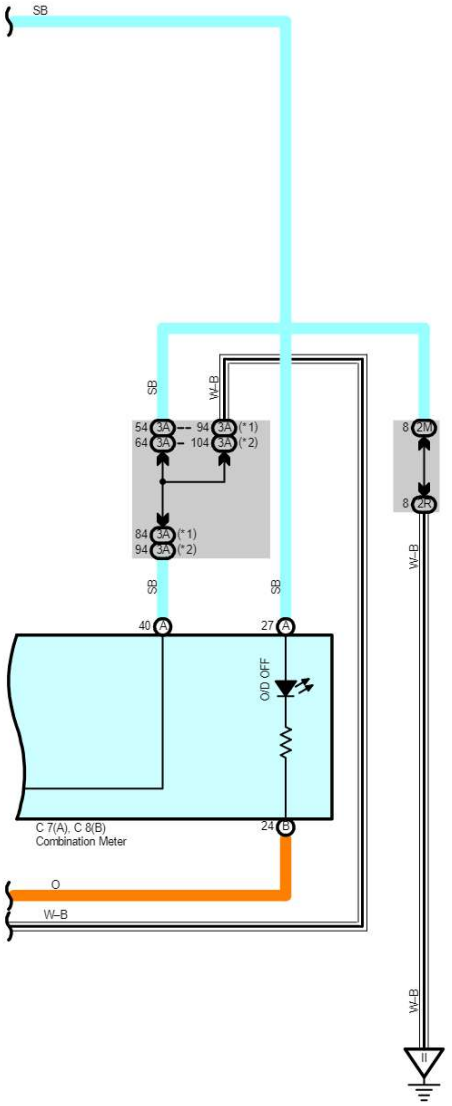


cardiagn.com



cardiagn.com

* 1 : Automatic A/C
* 2 : Manual A/C
* 5 : Automatic A/C TMMK Made
* 6 : Automatic A/C TMC Made



cardiagn.com

Electronically Controlled Transmission and A/T Indicator (1MZ–FE)

System Outline

Previous automatic transaxle have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock–up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure, throttle pressure, lock–up pressure and accumulator pressure etc. through the solenoid valve. The electronically controlled transmission is a system which precisely controls gear shift timing and lock–up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection for each gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. Gear Shift Operation

When driving, the engine warm up condition is input as a signal to TERMINAL THW of the engine control module from the engine coolant temp. sensor and the vehicle speed signal is input to TERMINAL SPD of the engine control module. At the same time, the throttle valve opening signal from the throttle position sensor is input to TERMINAL VTA of the engine control module as throttle angle signal.
Based on these signals, the engine control module selects the best shift position for the driving conditions and sends current to the electronically controlled transmission solenoid.

2. Lock–Up Operation

When each signal makes engine control module recognize that LOCK–UP condition is satisfied, the current flows from engine control module TERMINAL DSL to electronically controlled transmission solenoid TERMINAL DSL. At the same time, the current flows engine control module TERMINAL SL1+ to electroically controlled transmission solenoid TERMINAL SL1+ and from TERMINAL SL1– to engine control module TERMINAL SL1–. This works LOCK–UP solenoid to perform LOCK–UP operation.

3. Stop Light SW Circuit

If the brake pedal is depressed (Stop light SW on) when driving in lock–up condition, a signal is input to TERMINAL STP of the engine control module. The engine control module operates and cuts the current to the solenoid to release lock–up.

4. Overdrive Circuit

* O/D main SW on
  When the O/D main SW is turned on, a signal is input to TERMINAL ODMS of the engine control module and engine control module operation causes gear shift when the conditions for overdrive are met.
* O/D main SW off
  When the O/D main SW is turned off, a signal is input into TERMINAL ODMS of the engine control module, and turns on the O/D off indicator light. This activates the ECU, and the transmission system is controlled not to shift to overdrive.

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

L–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at L position)
2–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at 2 position)
R–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at R position)
D–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at D position)
ODMS–E1 : 10.0–14.0 volts (O/D main SW on)
Below 1.0 volts (O/D main SW off)
THO–E2 : Below 1.0 volts (Ignition SW on and AFT temperature 110 °C (230 °F)
SLT+ –SLT– :
10.0–14.0 volts (Ignition SW on)

A4 A/T Indicator Light SW

3–1 : Closed with shift lever in P position
3–2 : Closed with shift lever in R position
3–5 : Closed with shift lever in N position
3–7 : Closed with shift lever in D position
3–8 : Closed with shift lever in L position
3–4 : Closed with shift lever in 2 position

A17 O/D Main SW

2–4 : Closed with the O/D main SW off, open with the O/D main SW on

cardiagn.com

: Parts Location

Code		See Page	Code		See Page	Code	See Page
A4		38 (1MZ–FE)	E4		38 (1MZ–FE)	I15	43
A17		42	E6	A	42	J1	43
C2		38 (1MZ–FE)	E7	B	42	S14	43
C7	A	42	E8	C	42	T3	39 (1MZ–FE)
C8	B	42	E9	D	42	T4	39 (1MZ–FE)
E3		38 (1MZ–FE)	E10	E	42		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1H		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2B		
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF2		
IF4		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

Code	See Page	Ground Points Location
ED	48 (1MZ–FE)	Left Fender
EE	48 (1MZ–FE)	Surge Tank RH
EF	48 (1MZ–FE)	Rear Side of Surge Tank
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

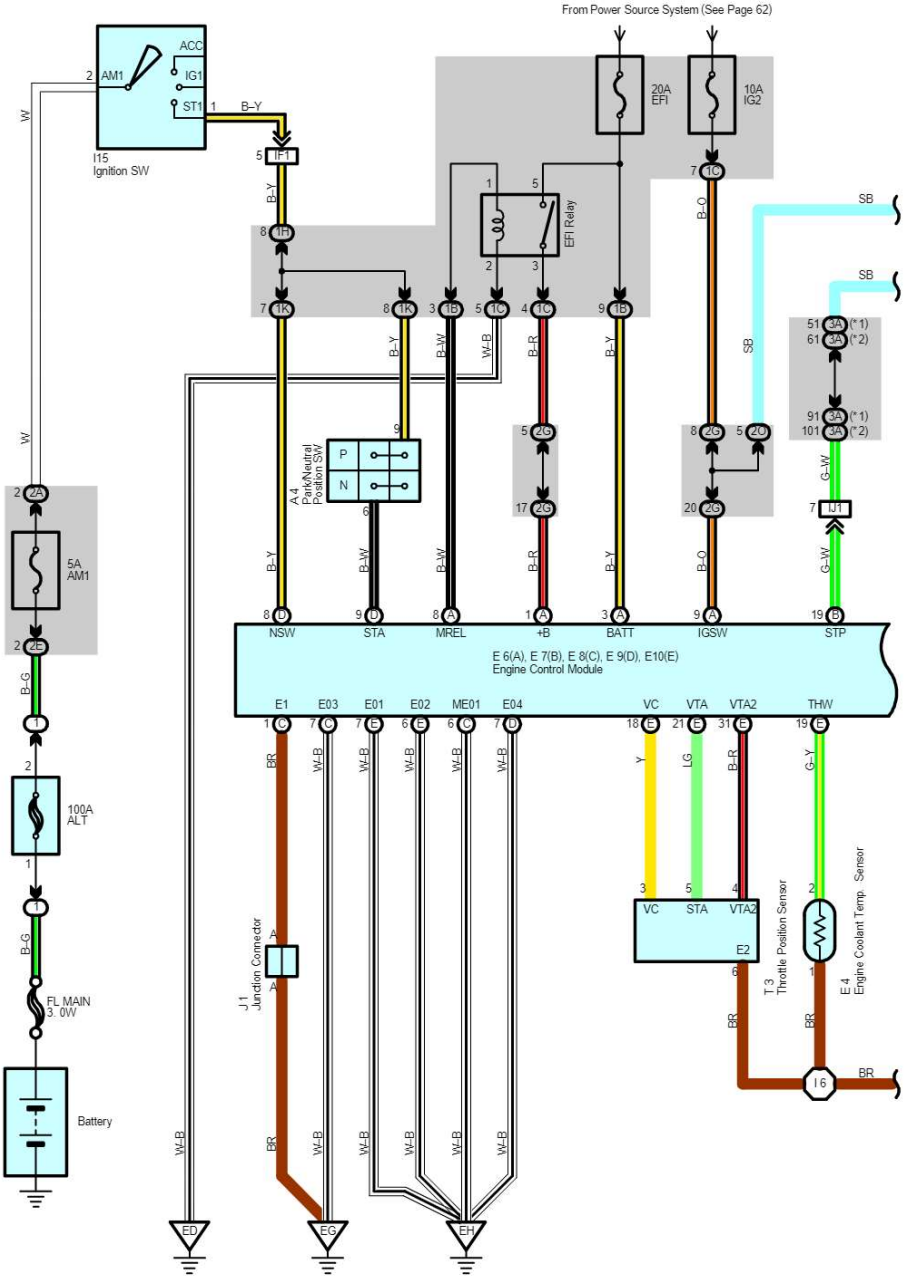
cardiagn.com

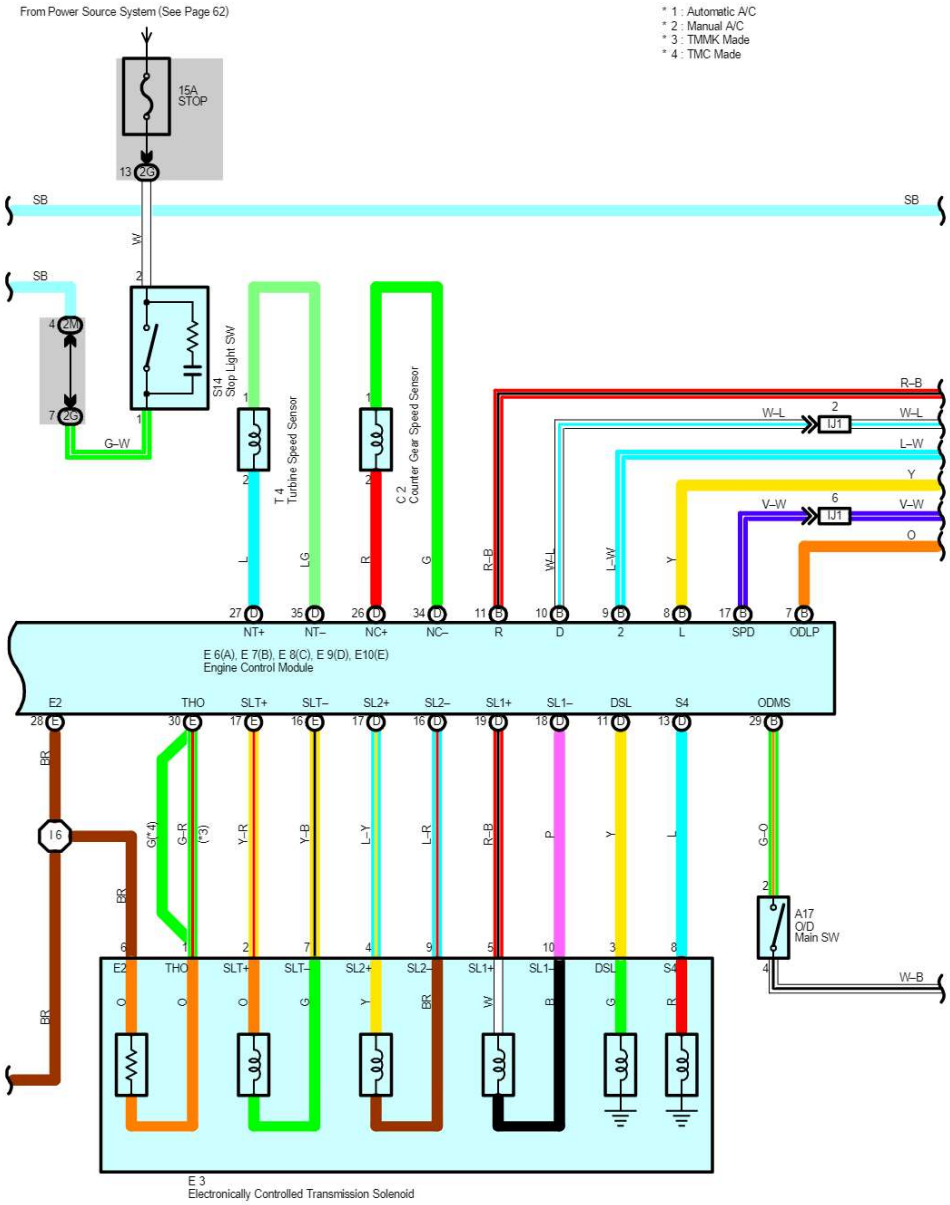
: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	54	Engine Wire	I6	54	Engine Wire

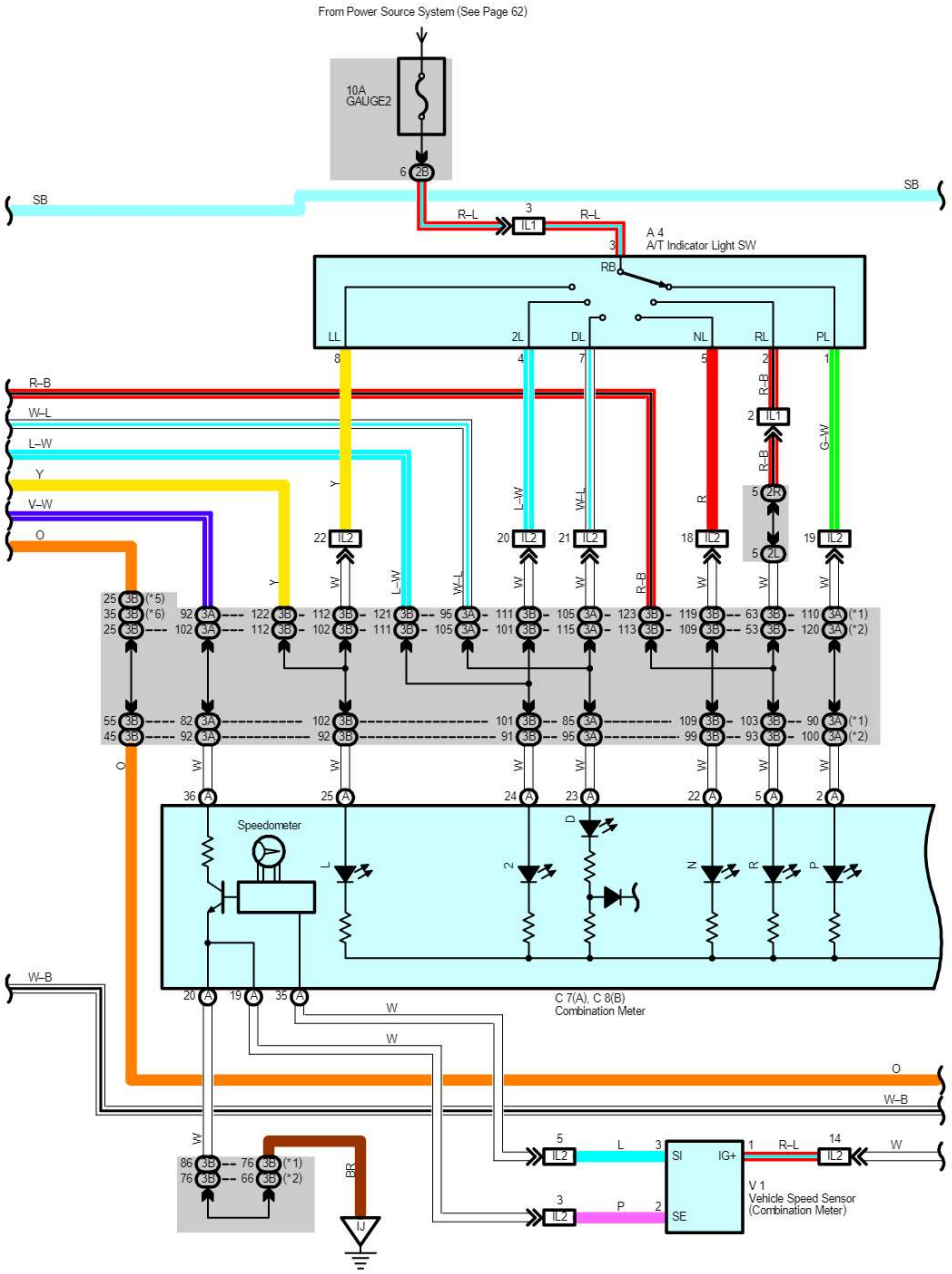
cardiagn.com

cardiagn.com

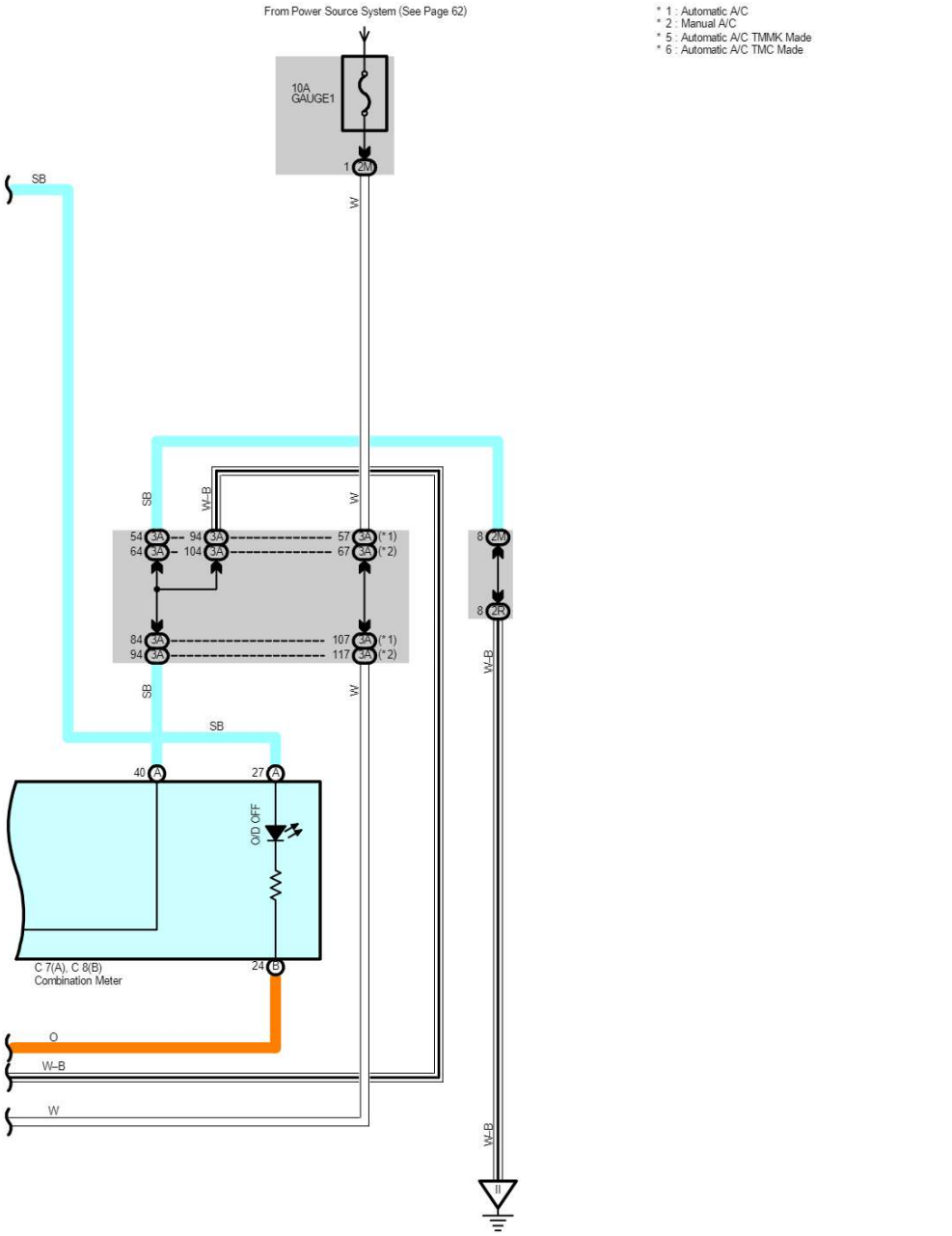

From Power Source System (See Page 62)
I15
Ignition SW
ACC
IG1
ST1
AM1
B–Y
20A
EFI
10A
IG2
EFI Relay
SB
5A
AM1
100A
ALT
FL MAIN
3. 0W
Battery
A 4
Park/Neutral
Position SW
P
N
NSW
STA
MREL
+B
BATT
IGSW
STP
E 6(A), E 7(B), E 8(C), E 9(D), E10(E)
Engine Control Module
E1
E03
E01
E02
ME01
E04
VC
VTA
VTA2
THW
J 1
Junction Connector
T 3
Throttle Position Sensor
E 4
Engine Coolant Temp. Sensor
E2
ED
EG
EH
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

Electronically Controlled Transmission and A/T Indicator (2AZ–FE)

System Outline

Previous automatic transaxle have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock–up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure, throttle pressure, lock–up pressure and accumulator pressure etc. through the solenoid valve. The electronically controlled transmission is a system which precisely controls gear shift timing and lock–up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection for each gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. Gear Shift Operation

When driving, the engine warm up condition is input as a signal to TERMINAL THW of the engine control module from the engine coolant temp. sensor and the vehicle speed signal is input to TERMINAL SPD of the engine control module. At the same time, the throttle valve opening signal from the throttle position sensor is input to TERMINAL VTA of the engine control module as throttle angle signal.
Based on these signals, the engine control module selects the best shift position for the driving conditions and sends current to the electronically controlled transmission solenoid.

2. Lock–Up Operation

When each signal makes engine control module recognize that LOCK–UP condition is satisfied, the current flows from engine control module TERMINAL DSL to electronically controlled transmission solenoid TERMINAL DSL. At the same time, the current flows engine control module TERMINAL SL1+ to electroically controlled transmission solenoid TERMINAL SL1+ and from TERMINAL SL1– to engine control module TERMINAL SL1–. This works LOCK–UP solenoid to perform LOCK–UP operation.

3. Stop Light SW Circuit

If the brake pedal is depressed (Stop light SW on) when driving in lock–up condition, a signal is input to TERMINAL STP of the engine control module. The engine control module operates and cuts the current to the solenoid to release lock–up.

4. Overdrive Circuit

* O/D main SW on
  When the O/D main SW is turned on, a signal is input to TERMINAL ODMS of the engine control module and engine control module operation causes gear shift when the conditions for overdrive are met.
* O/D main SW off
  When the O/D main SW is turned off, a signal is input into TERMINAL ODMS of the engine control module, and turns on the O/D off indicator light. This activates the ECU, and the transmission system is controlled not to shift to overdrive.

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

L–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at L position)
2–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at 2 position)
R–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at R position)
D–E1 : 10.0–14.0 volts (Ignition SW on and shift lever at D position)
ODMS–E1 : 10.0–14.0 volts (O/D main SW on)
Below 1.0 volts (O/D main SW off)
THO–E2 : Below 1.0 volts (Ignition SW on and AFT temperature 110 °C (230 °F)
SLT+ –SLT– :
10.0–14.0 volts (Ignition SW on)

A4 A/T Indicator Light SW

3–1 : Closed with shift lever in P position
3–2 : Closed with shift lever in R position
3–5 : Closed with shift lever in N position
3–7 : Closed with shift lever in D position
3–8 : Closed with shift lever in L position
3–4 : Closed with shift lever in 2 position

A17 O/D Main SW

2–4 : Closed with the O/D main SW off, open with the O/D main SW on

cardiagn.com

: Parts Location

Code		See Page	Code		See Page	Code	See Page
A4		40 (2AZ–FE)	E4		40 (2AZ–FE)	I15	43
A17		42	E6	A	42	J1	43
C2		40 (2AZ–FE)	E7	B	42	S14	43
C7	A	42	E8	C	42	T3	41 (2AZ–FE)
C8	B	42	E9	D	42	T4	41 (2AZ–FE)
E3		40 (2AZ–FE)	E10	E	42	V1	41 (2AZ–FE)

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1H		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2B		
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

Code	See Page	Ground Points Location
ED	50 (2AZ–FE)	Left Fender
EG	50 (2AZ–FE)	Left Side of Cylinder Head
EH	50 (2AZ–FE)	Intake Side of Cylinder Block
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

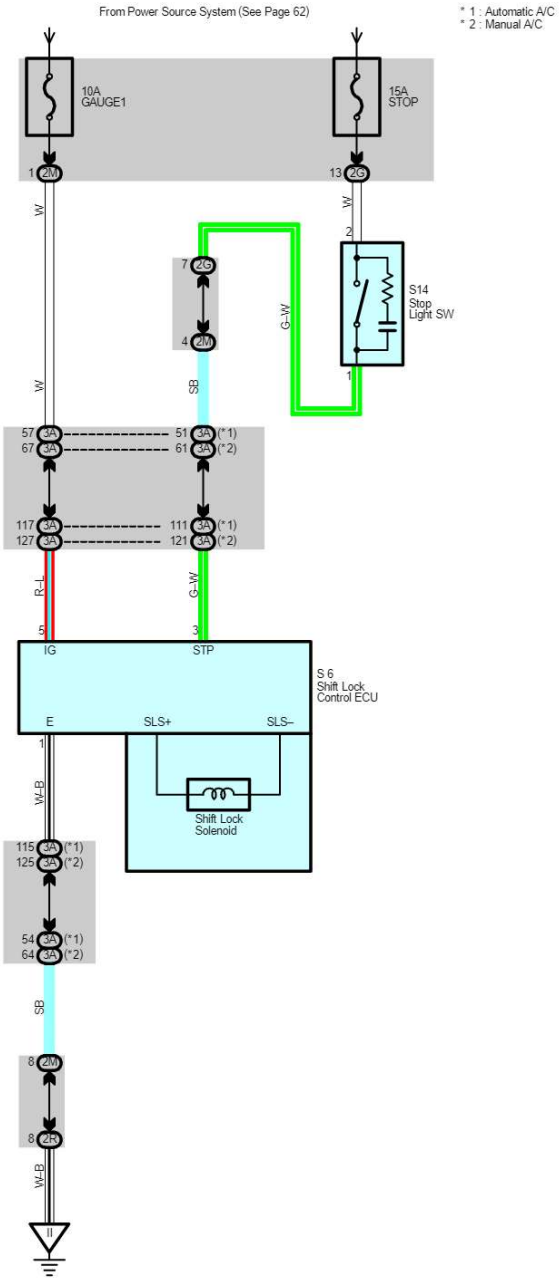
cardiagn.com

: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	54	Engine Wire			

cardiagn.com

cardiagn.com



cardiagn.com

System Outline

Shift Lock Mechanism

If the brake pedal is depressed with the ignition SW set at ON (The stop light SW is on), the shift lock control ECU is activated, allowing the driver to change the shift lever to a position other than the P position.

Service Hints

S6 Shift Lock Control ECU

5–Ground : Approx. 12 volts with ignition SW at ON or ST position
1–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
S6	43	S14	43		

: Junction Block and Wire Harness Connector

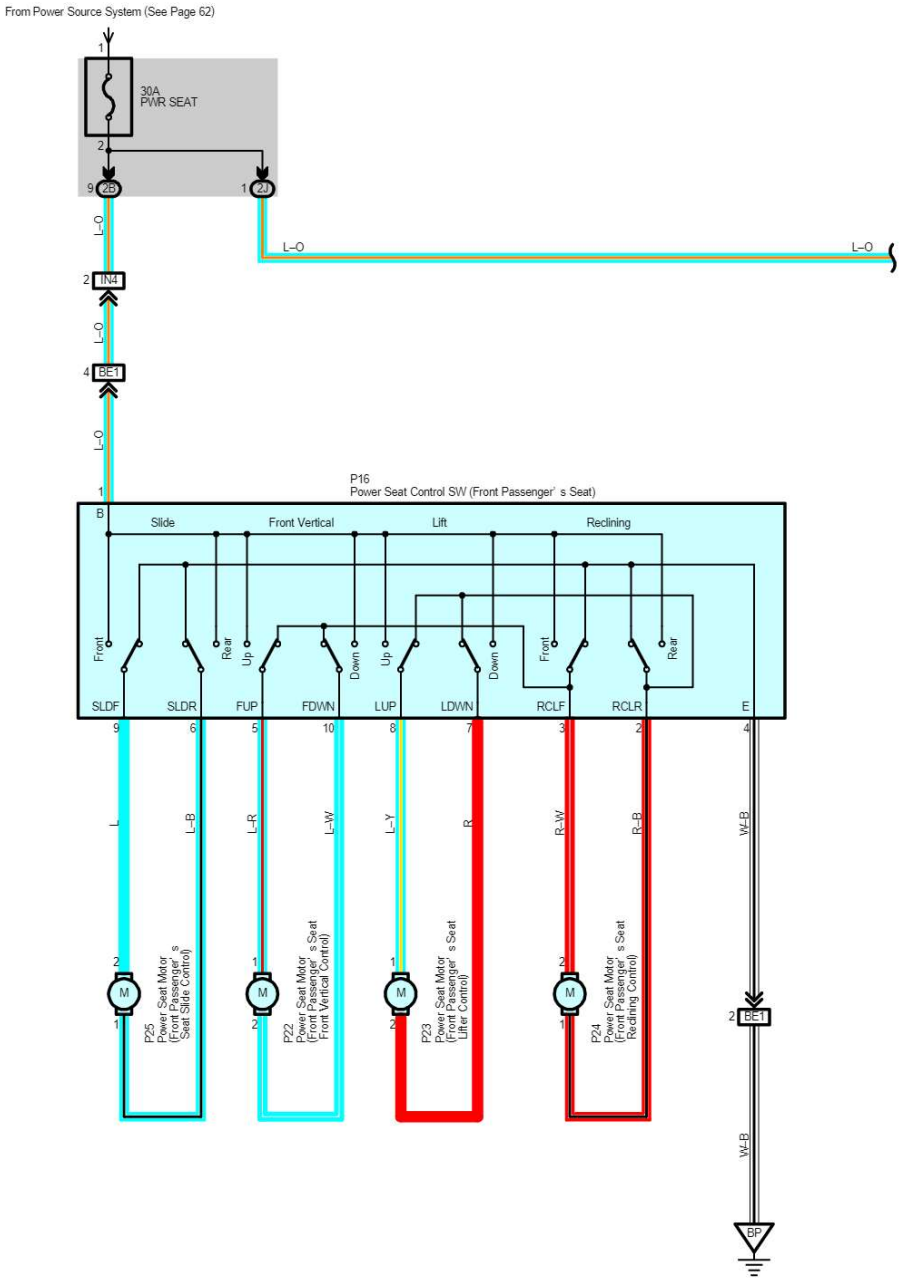
Code	See Page	Junction Block and Wire Harness (Connector Location)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

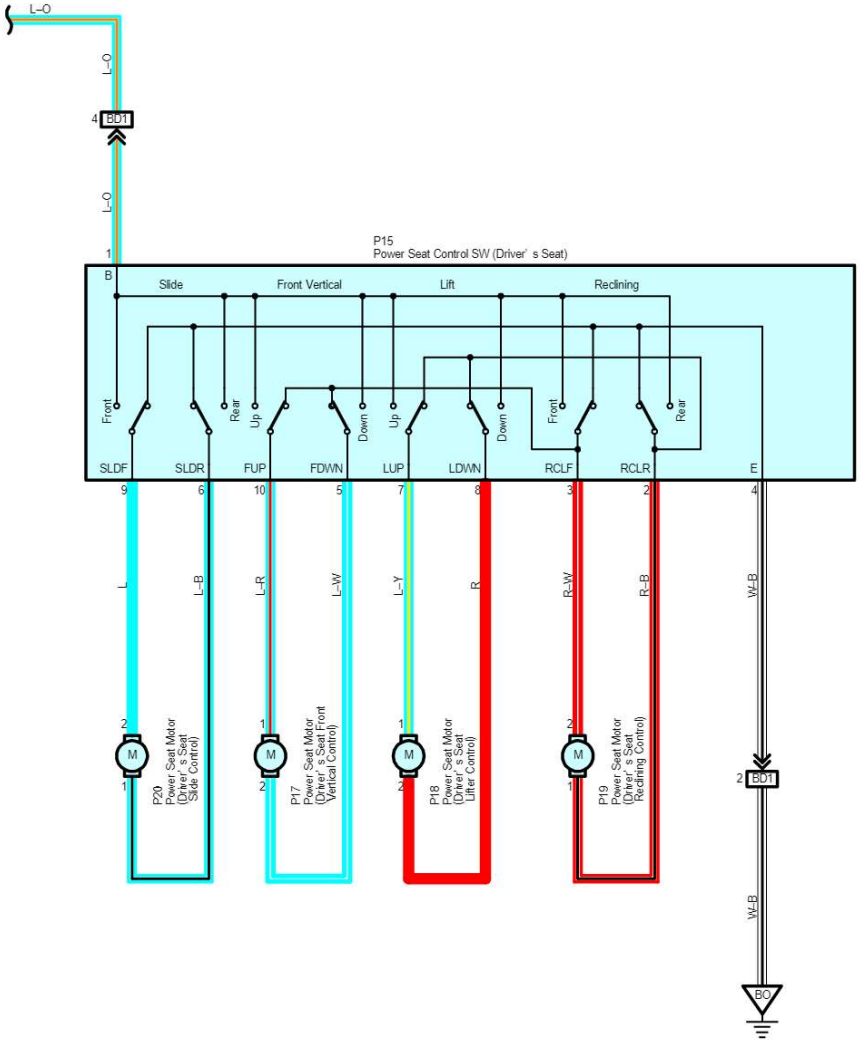
: Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH

cardiagn.com



cardiagn.com



cardiagn.com

Power Seat (TMC Made)

Service Hints

P15 Power Seat Control SW (Driver's Seat)

1–Ground : Always approx. 12 volts
4–Ground : Always continuity

P16 Power Seat Control SW (Front Passenger's Seat)

1–Ground : Always approx. 12 volts
4–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
P15	46	P19	46	P24	46
P16	46	P20	46	P25	46
P17	46	P22	46		
P18	46	P23	46		

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2J	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

▭ : Connector Joining Wire Harness and Wire Harness

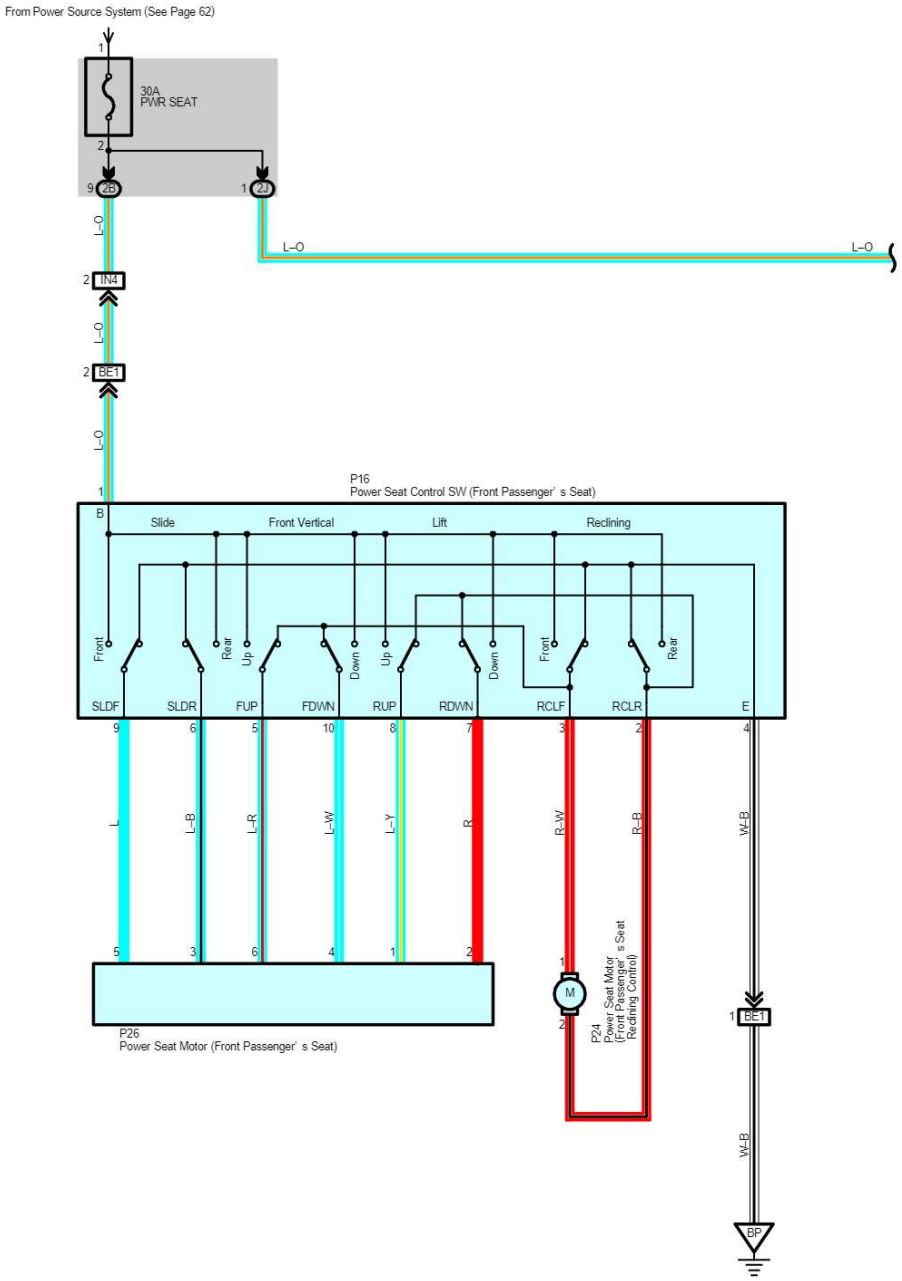
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IN4	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BD1	58	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	58	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

▽ : Ground Points

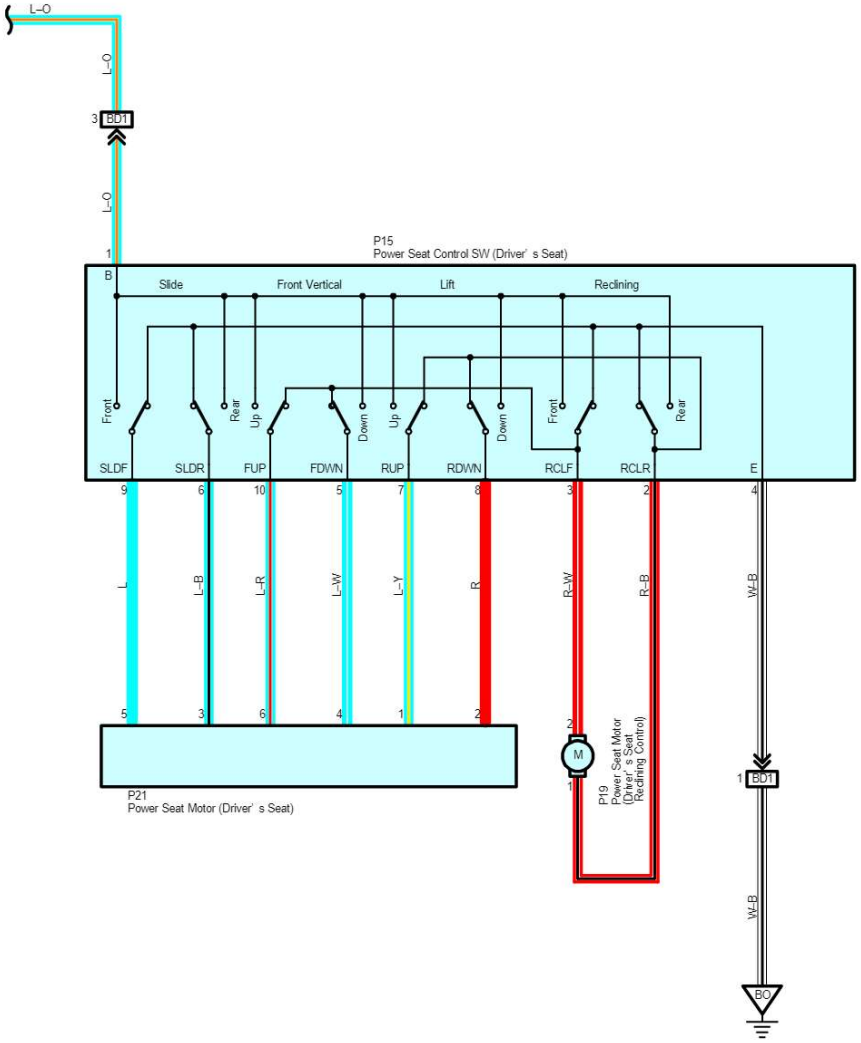
Code	See Page	Ground Points Location
BO	56	Under the Driver's Seat
BP	56	Under the Front Passenger's Seat

cardiagn.com

cardiagn.com



cardiagn.com



cardiagn.com

Power Seat (TMMK Made)

Service Hints

P15 Power Seat Control SW (Driver's Seat)

1–Ground : Always approx. 12 volts
4–Ground : Always continuity

P16 Power Seat Control SW (Front Passenger's Seat)

1–Ground : Always approx. 12 volts
4–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
P15	46	P19	46	P24	46
P16	46	P21	46	P26	46

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2J	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

▭ : Connector Joining Wire Harness and Wire Harness

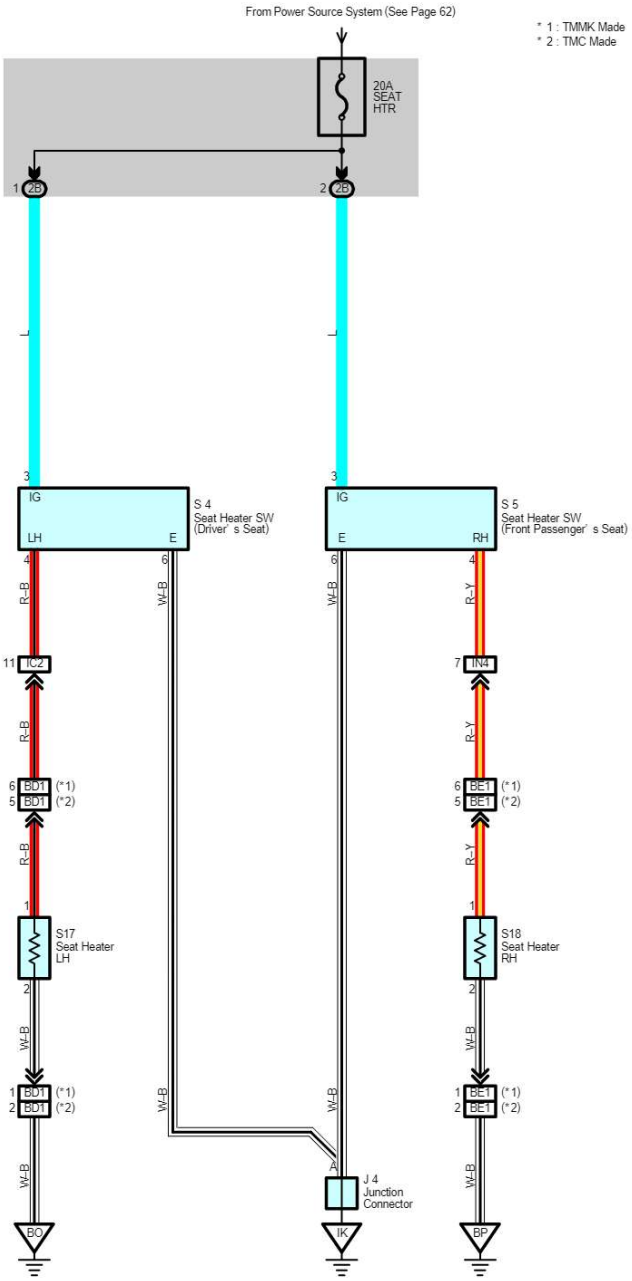
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IN4	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BD1	58	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	58	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

▽ : Ground Points

Code	See Page	Ground Points Location
BO	56	Under the Driver's Seat
BP	56	Under the Front Passenger's Seat

cardiagn.com

cardiagn.com



cardiagn.com

Service Hints

S4 Seat Heater SW (Driver's Seat)

3–Ground : Approx. 12 volts with ignition SW at ON or ST position
6–Ground : Always continuity

S5 Seat Heater SW (Front Passenger's Seat)

3–Ground : Approx. 12 volts with ignition SW at ON or ST position
6–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
J4	43	S5	43	S18	46
S4	43	S17	46		

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

▭ : Connector Joining Wire Harness and Wire Harness

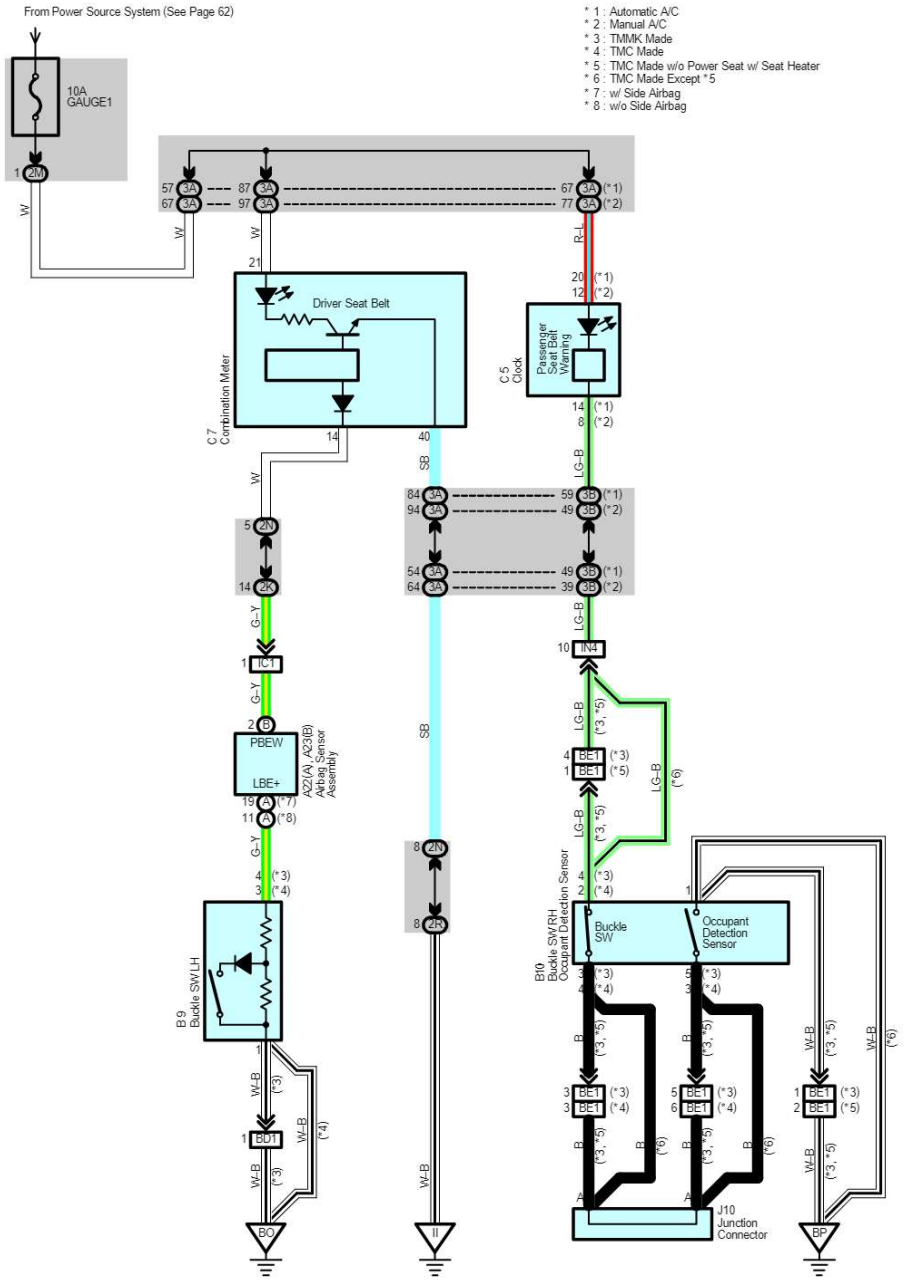
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IN4	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BD1	58	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	58	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

▽ : Ground Points

Code	See Page	Ground Points Location
IK	52	Instrument Panel Brace LH
BO	56	Under the Driver's Seat
BP	56	Under the Front Passenger's Seat

cardiagn.com

Seat Belt Warning



cardiagn.com

Service Hints

B9 Buckle SW LH

4 (TMMK Made), 3 (TMC Made)–1 : Closed with driver's seat belt in use

B10 Buckle SW RH

4 (TMMK Made), 2 (TMC Made)–1 : Closed with front passenger's seat belt in use

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
A22	A	42	B9	46	C5	42
A23	B	42	B10	46	C7	42

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2N		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

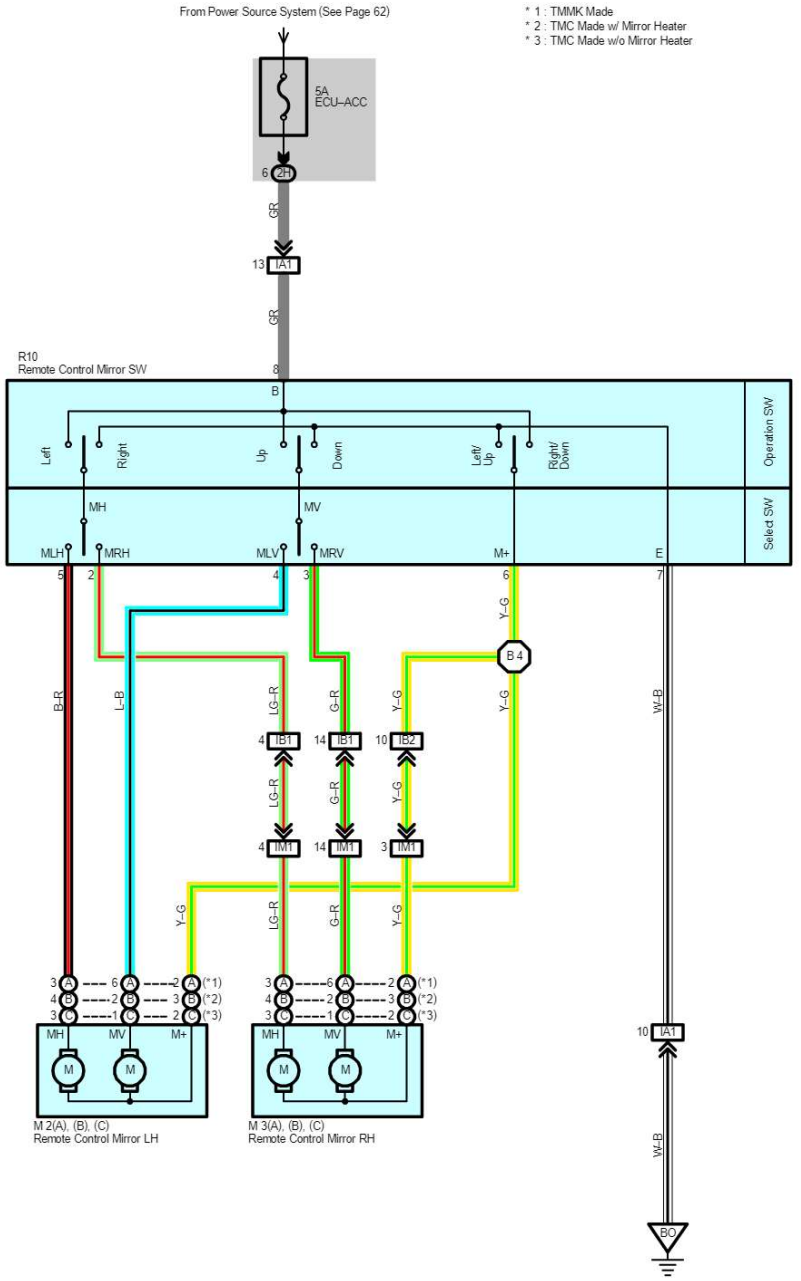
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IN4	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BD1	58	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	58	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

▽ : Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
BO	56	Under the Driver's Seat
BP	56	Under the Front Passenger's Seat

cardiagn.com



cardiagn.com

Service Hints

R10 Remote Control Mirror SW

8–Ground : Approx. 12 volts with ignition SW at ACC or ON position
7–Ground : Always continuity
8–6 : Continuity with the operation SW at DOWN or RIGHT position
6–7 : Continuity with the operation SW at UP or LEFT position

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
M2	A	45	M3	A	45	R10	45
	B	45		B	45		
	C	45		C	45		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2H	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

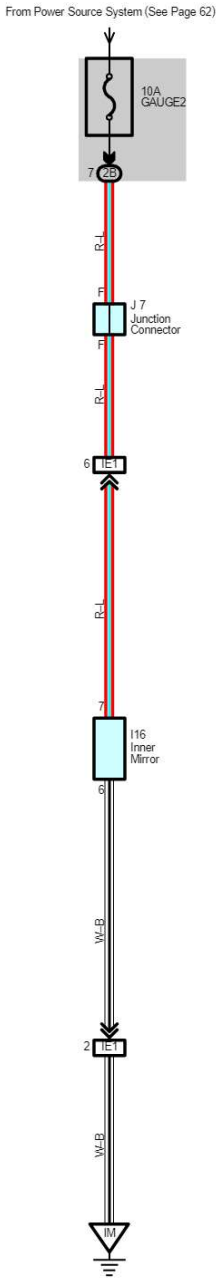
▽ : Ground Points

Code	See Page	Ground Points Location
BO	56	Under the Driver's Seat

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	56	Front Door LH Wire			

cardiagn.com



cardiagn.com

Service Hints

I16 Inner Mirror

7–Ground : Approx. 12 volts with ignition SW at ON or ST position
6–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
I16	44	J7	43		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

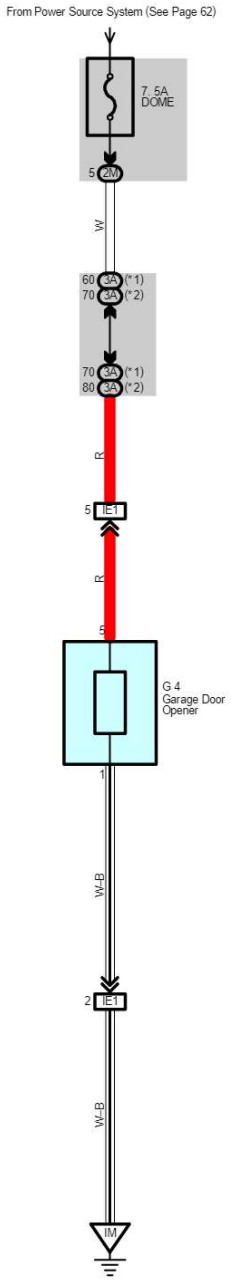
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	52	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)

: Ground Points

Code	See Page	Ground Points Location
IM	52	Instrument Panel Reinforcement RH

cardiagn.com



cardiagn.com

Service Hints

G4 Garage Door Opener

5–Ground : Always approx. 12 volts
1–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
G4	44				

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

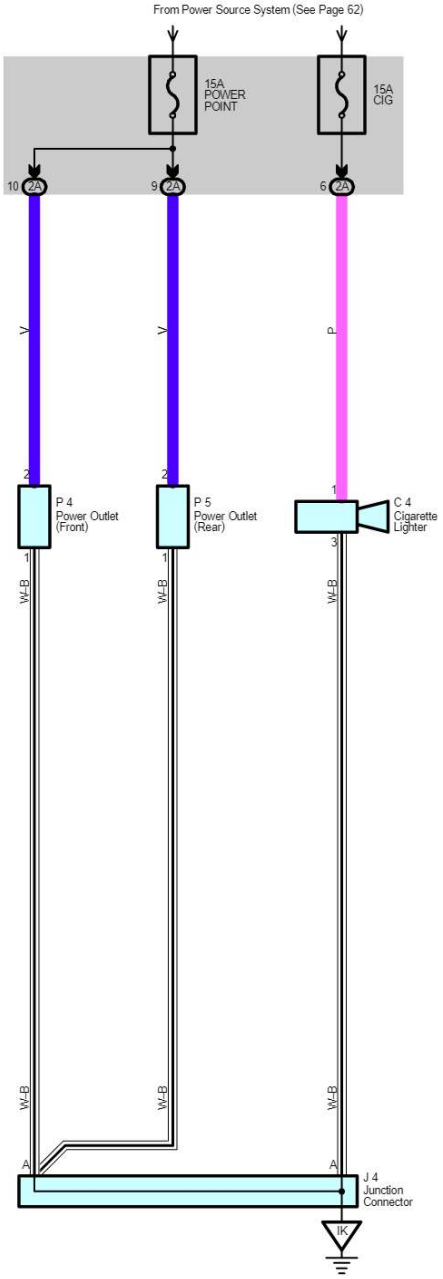
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	52	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)

▽ : Ground Points

Code	See Page	Ground Points Location
IM	52	Instrument Panel Reinforcement RH

cardiagn.com

Power Outlet and Cigarette Lighter



cardiagn.com

Service Hints

C4 Cigarette Lighter

1–Ground : Approx. 12 volts with ignition SW at ACC or ON position
3–Ground : Always continuity

P4 Power Outlet (Front)

2–Ground : Approx. 12 volts with ignition SW at ACC or ON position
1–Ground : Always continuity

P5 Power Outlet (Rear)

2–Ground : Approx. 12 volts with ignition SW at ACC or ON position
1–Ground : Always continuity

○ : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
C4	42	P4	43		
J4	43	P5	43		

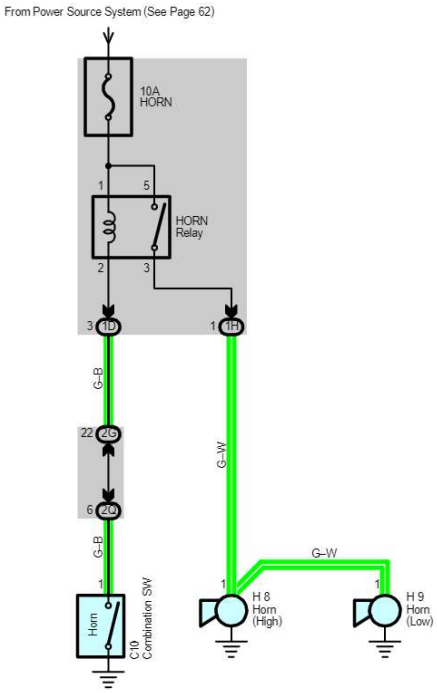
⬭ : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

▽ : **Ground Points**

Code	See Page	Ground Points Location
IK	52	Instrument Panel Brace LH

cardiagn.com



cardiagn.com

Service Hints

HORN Relay

5–3 : Closed with the horn SW on

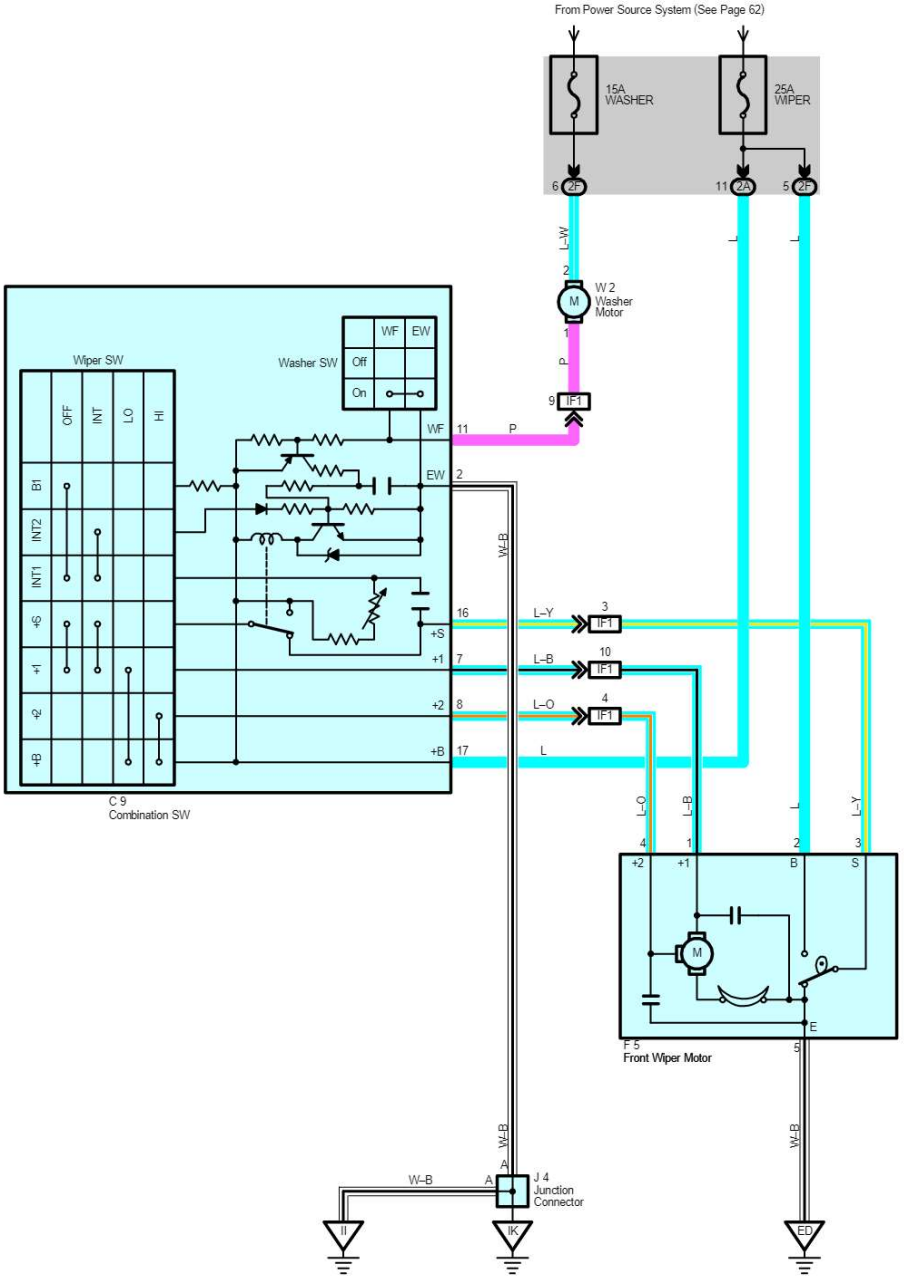
○ : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
C10	42	H8	40 (2AZ–FE)	H9	40 (2AZ–FE)
H8	38 (1MZ–FE)	H9	38 (1MZ–FE)		

⬭ : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2Q	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

cardiagn.com



cardiagn.com

System Outline

With the ignition SW turned on, the current flows to TERMINAL 17 of the wiper and washer SW and TERMINAL 2 of the front wiper motor through the WIPER fuse. The current flows to TERMINAL 2 of the washer motor through the WASHER fuse.

1. Low Speed Position

With the wiper and washer SW turned to LO position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND and causes the front wiper motor to run at low speed.

2. High Speed Position

With the wiper and washer SW turned to HI position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 8 to TERMINAL 3 of the front wiper motor to TERMINAL 4 to GROUND and causes the front wiper motor to run at high speed.

3. INT Position

With the wiper and washer SW turned to INT position, the wiper relay operates and current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 2 to GROUND. This activates the intermittent circuit and the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND and the wiper operates. Intermittent operation is controlled by a condenser charge and discharge function in the relay.

4. Washer Continuous Operation

With the wiper and washer SW pulled to WASHER position (Washer SW ON position), the current flows from the WASHER fuse to TERMINAL 2 of the washer motor to TERMINAL 1 to TERMINAL 11 of the wiper and washer SW to TERMINAL 2 to GROUND and causes the washer motor to run and the window washer to spray. Simultaneously, current flows from the WIPER fuse to TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND, causing the wiper to function.

Service Hints

C9 Combination SW

2–Ground : Always continuity
17–Ground : Approx. 12 volts with the ignition SW at ON position
7–Ground : Approx. 12 volts with the ignition SW on and the wiper and washer SW at LO position
Approx. 12 volts every approx. 1 to 10 seconds intermittently with the ignition SW on and the wiper and washer SW at INT position
16–Ground : Approx. 12 volts with the ignition SW on and unless the front wiper motor at STOP position
8–Ground : Approx. 12 volts with the ignition SW on and the wiper and washer SW at HI position

F5 Front Wiper Motor

1–2 : Closed unless the front wiper motor at STOP position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	42	F5	40 (2AZ–FE)	W2	39 (1MZ–FE)
F5	38 (1MZ–FE)	J4	43		41 (2AZ–FE)

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

cardiagn.com

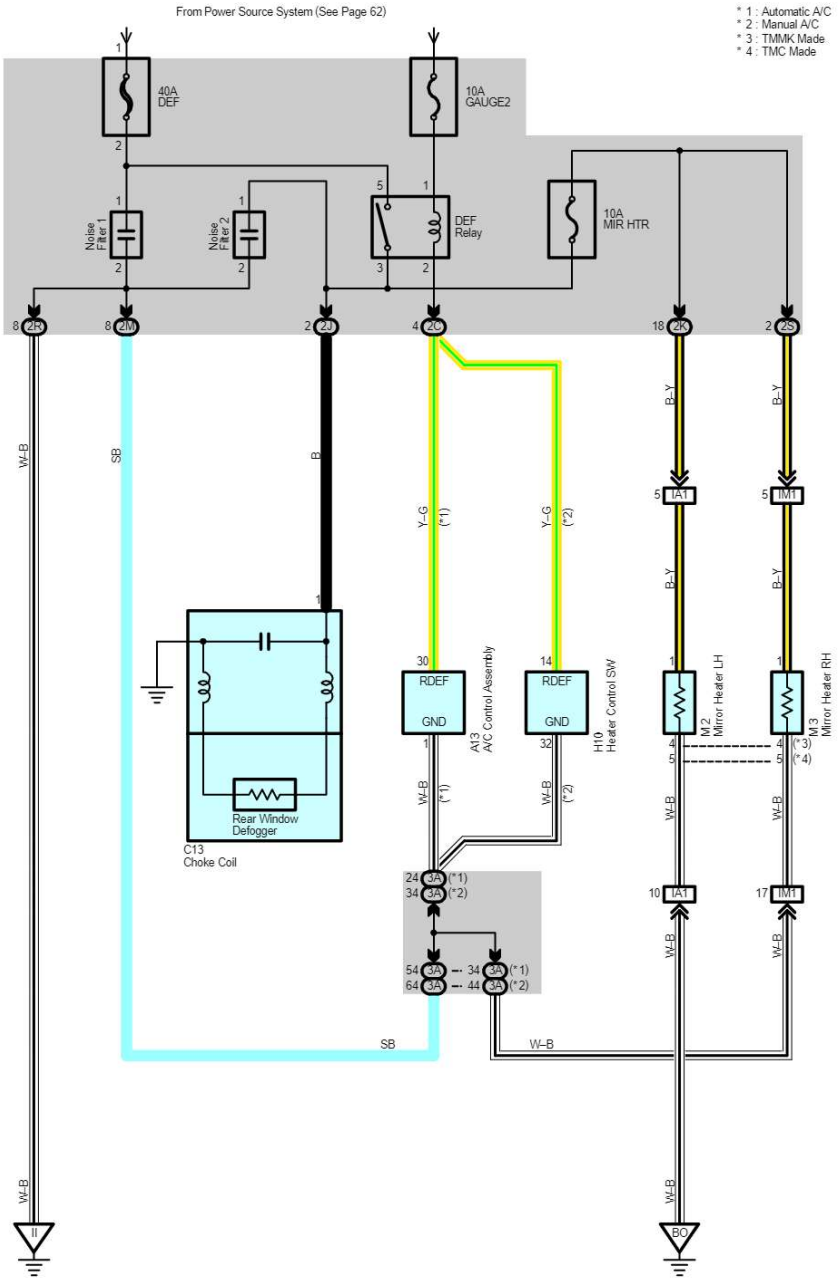
▽ : **Ground Points**

Code	See Page	Ground Points Location
ED	48 (1MZ–FE) 50 (2AZ–FE)	Left Fender
II	52	Cowl Side Panel LH
IK	52	Instrument Panel Brace LH

cardiagn.com

cardiagn.com

Rear Window Defogger and Mirror Heater



cardiagn.com

Service Hints

DEF Relay

5–3 : Closed with the ignition SW at on and rear window defogger SW (A/C control assembly), (Heater control SW) on

M2, M3 Mirror Heater LH, RH

1–Ground : Approx. 12 volts with the rear window defogger SW (A/C control assembly), (Heater control SW) on
4 (TMMK Made), 5 (TMC Made)–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A13	42	H10	43	M3	45
C13	44	M2	45		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2C	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2J	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2K		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

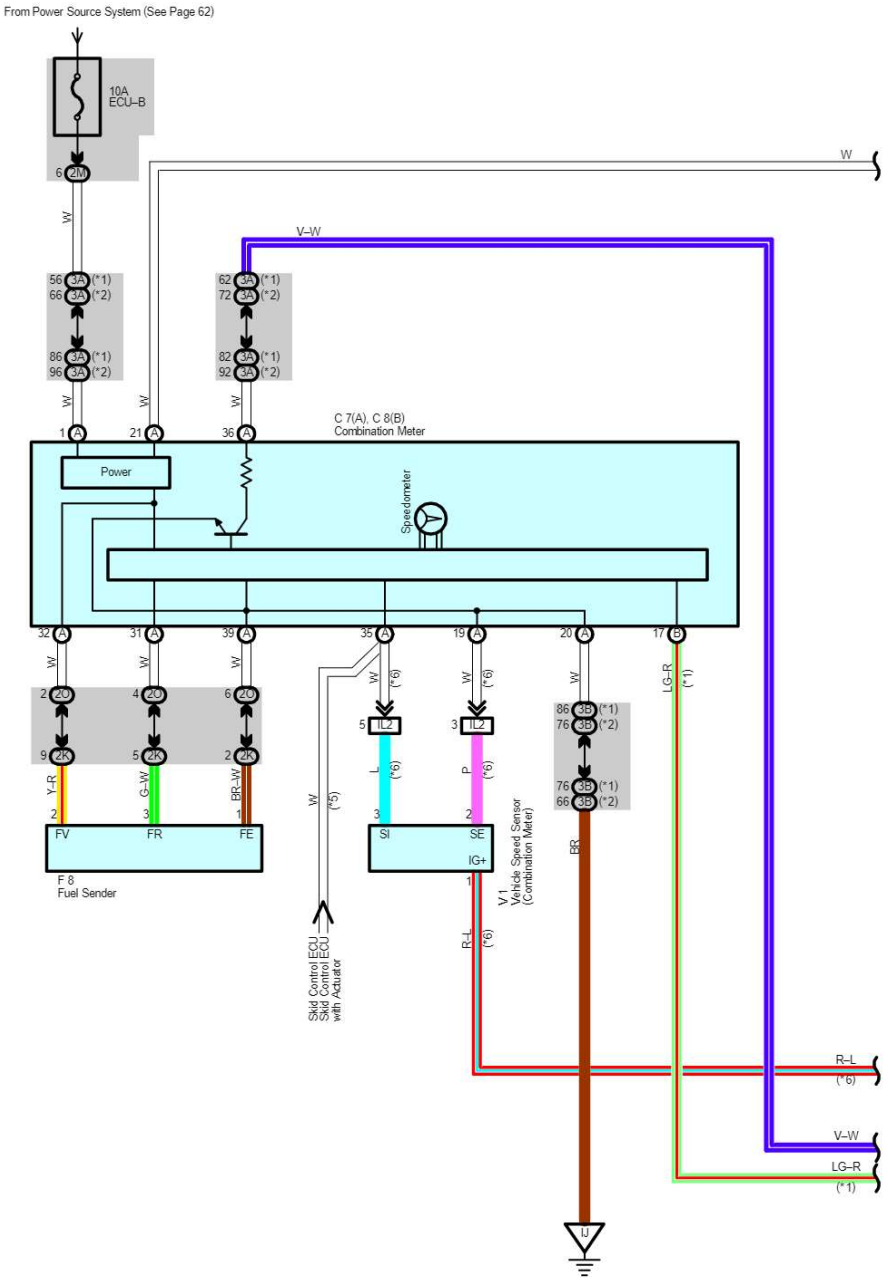
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

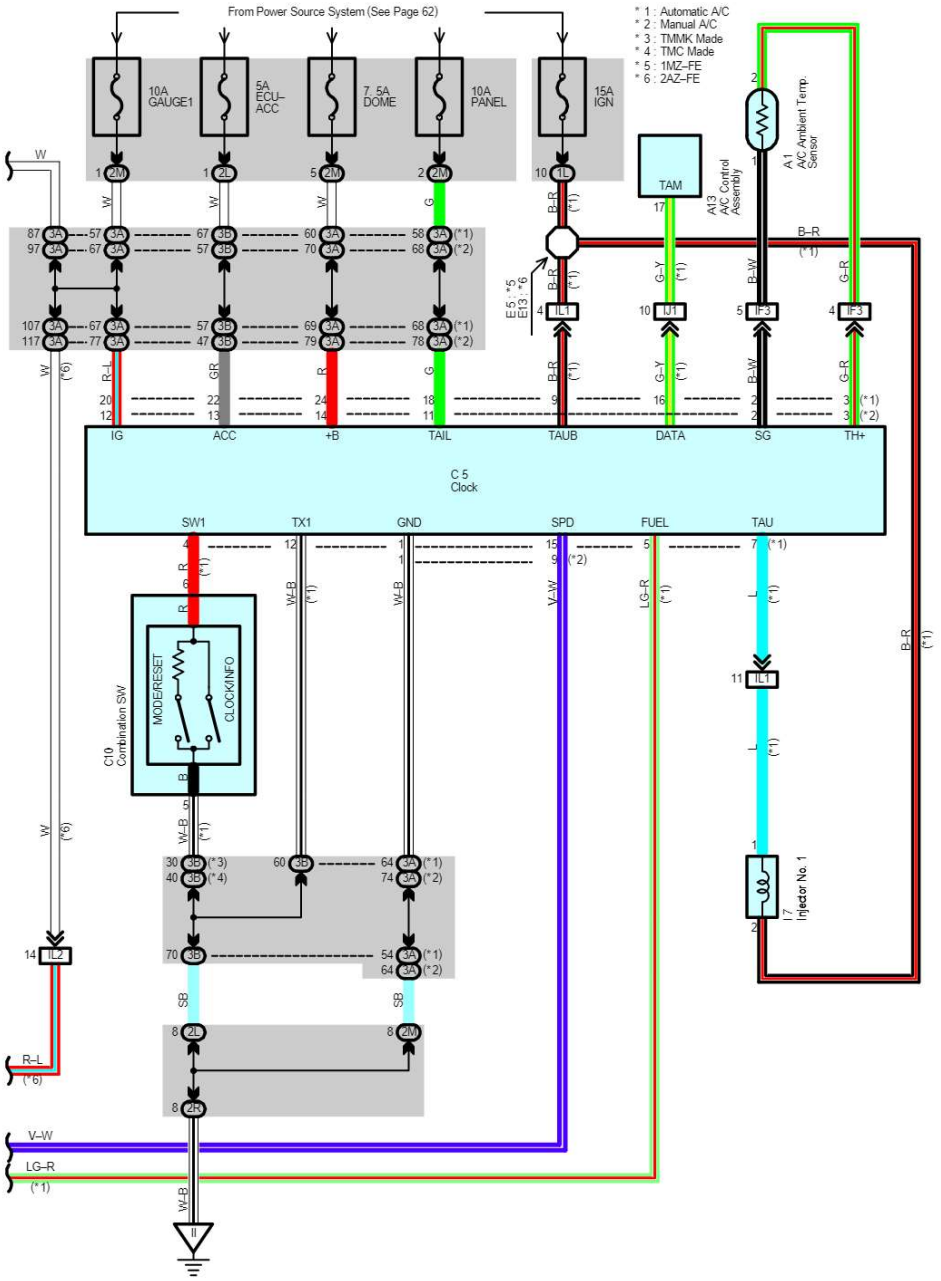
: Ground Points

Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
BO	56	Under the Driver's Seat

cardiagn.com



cardiagn.com



cardiagn.com

Clock

Service Hints

C5 Clock

20 (Automatic A/C), 12 (Manual A/C)–Ground : Approx. 12 volts with ignition SW at ON or ST position
22 (Automatic A/C), 13 (Manual A/C)–Ground : Approx. 12 volts with ignition SW at ACC or ON position
24 (Automatic A/C), 14 (Manual A/C)–Ground : Always approx. 12 volts
1 (Automatic A/C), 1 (Manual A/C)–Ground : Always continuity

: Parts Location

Code	See Page	Code		See Page	Code	See Page
A1	38 (1MZ–FE)	C7	A	42	I7	39 (1MZ–FE)
	40 (2AZ–FE)	C8	B	42		41 (2AZ–FE)
A13	42	C10		42	V1	41 (2AZ–FE)
C5	42	F8		44		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1L	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

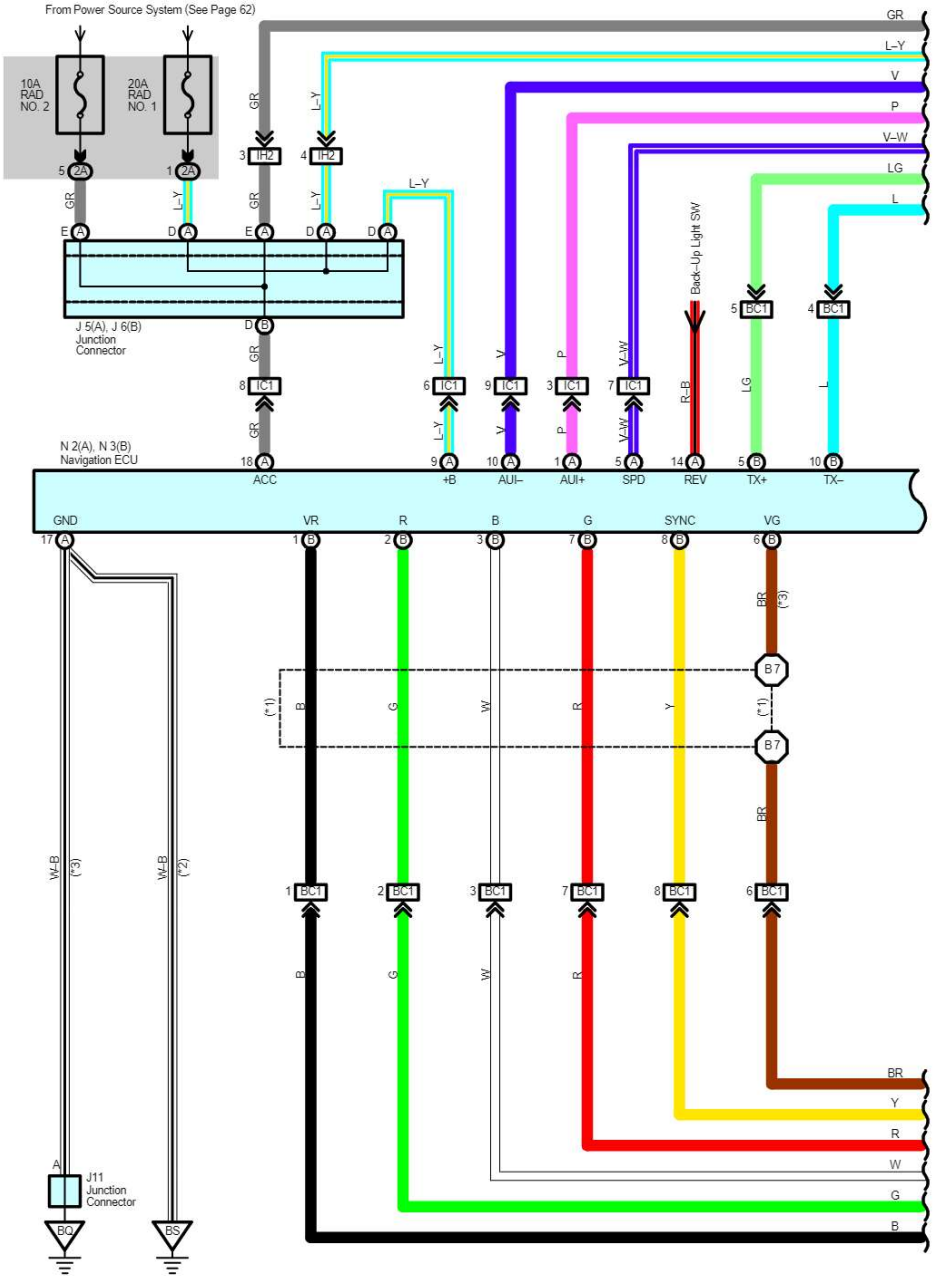
Code	See Page	Ground Points Location
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

: Splice Points

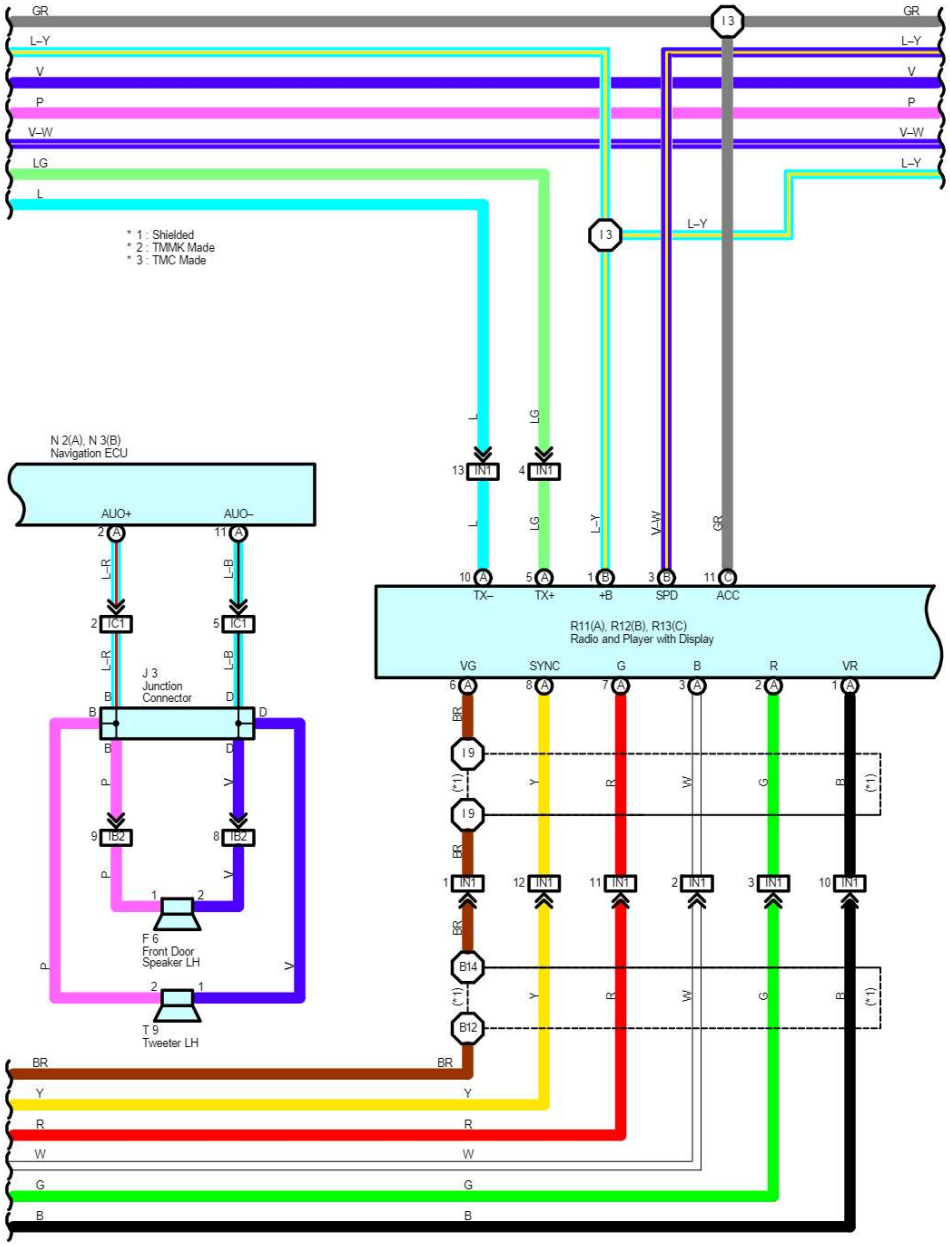
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	48 (1MZ–FE)	Engine Wire	E13	50 (2AZ–FE)	Engine Wire

cardiagn.com

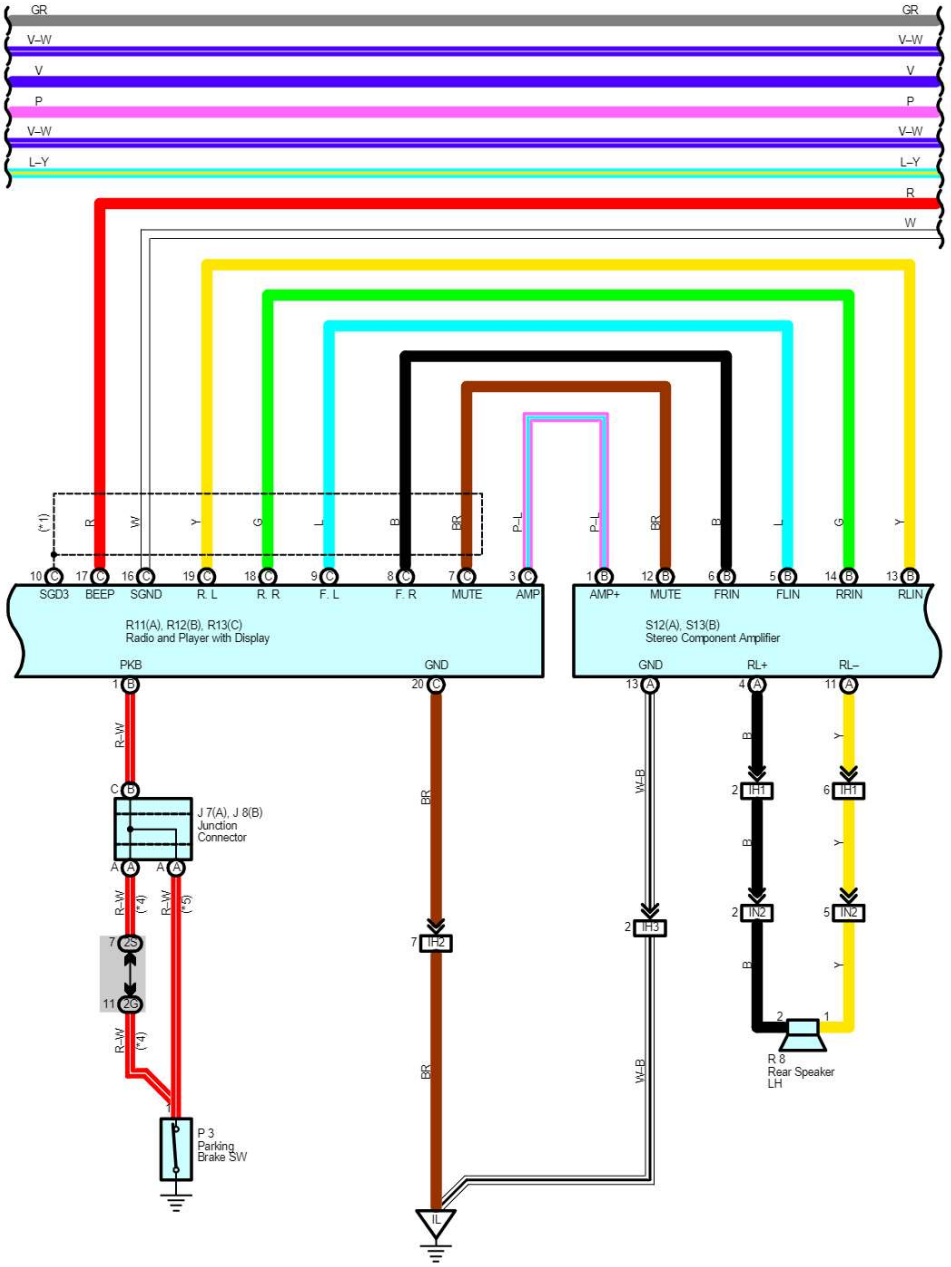
cardiagn.com



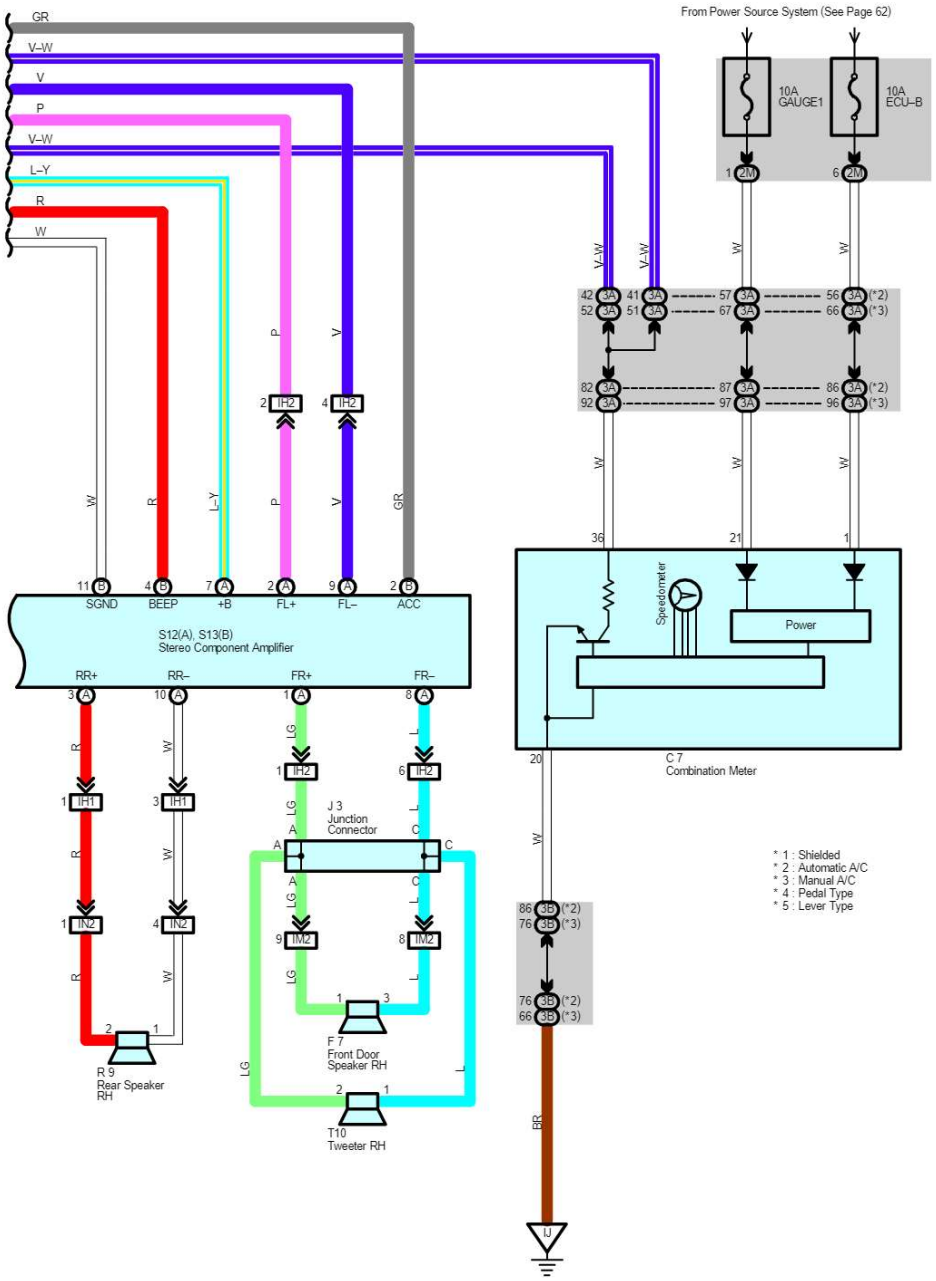
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

System Outline

The TOYOTA navigation system displays the operating status and instructions for the radio and player. Additionally, the navigation system precisely measures the current vehicle position, displays the map obtained from the map database on the screen, and informs the route to the destination shown on the map using voice guidance.

Service Hints

N2 (A) Navigation ECU

(A)18–Ground : Approx. 12 volts with ignition SW at ON or ACC position
(A) 9–Ground : Always approx. 12 volts
(A)17–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C7	42	J8 B	43	R11 A	42
F6	44	J11	44	R12 B	42
F7	44	N2 A	45	R13 C	42
J3	43	N3 B	45	S12 A	43
J5 A	43	P3	43	S13 B	43
J6 B	43	R8	45	T9	43
J7 A	43	R9	45	T10	43

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	52	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IH1	52	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2		
IH3		
IM2	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IN1	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN2		
BC1	56	Floor No.4 Wire and Floor No.2 Wire (Behind the Rear Passenger's Seat RH)

cardiagn.com

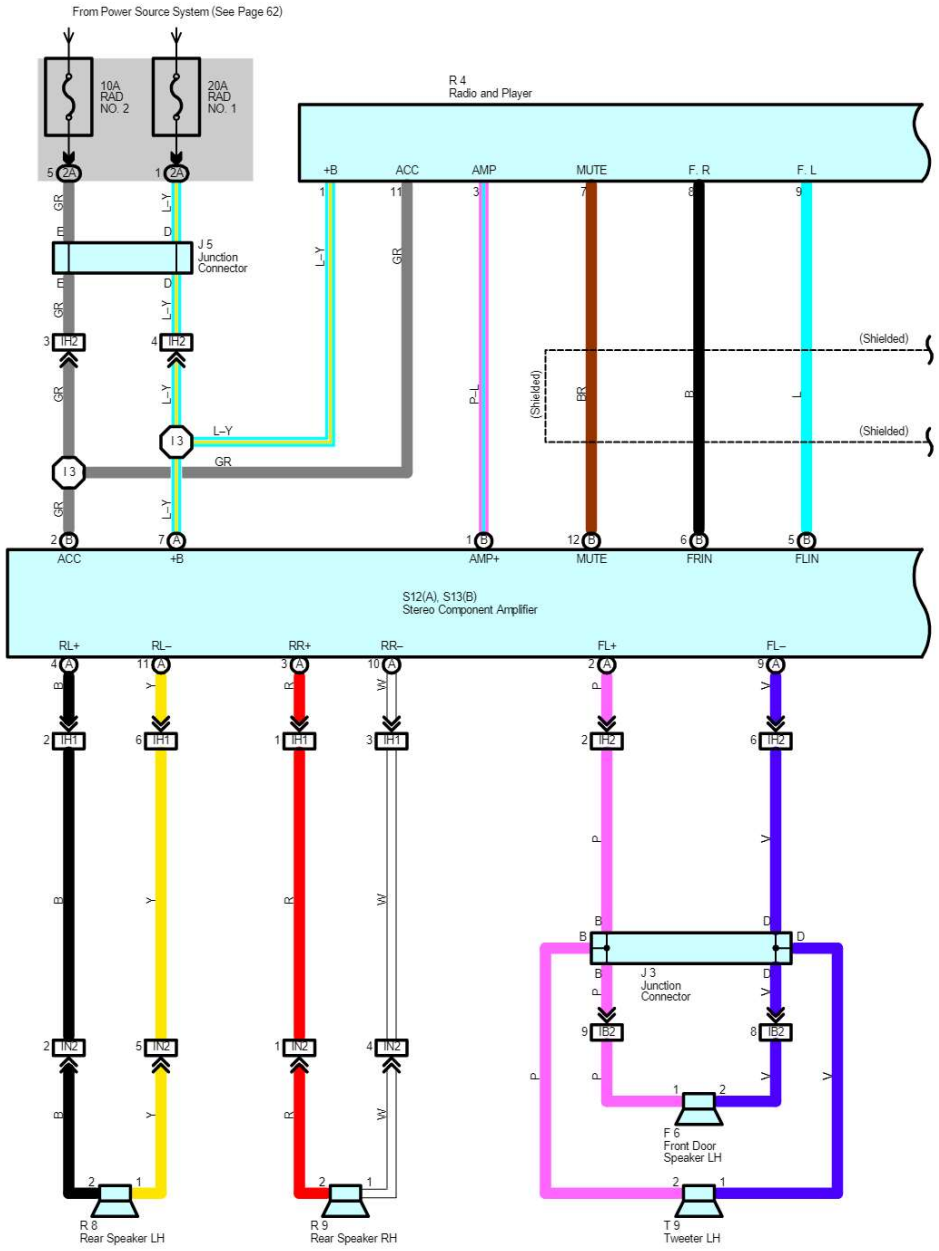
: **Ground Points**

Code	See Page	Ground Points Location
IJ	52	Instrument Panel Brace LH
IL	52	Instrument Panel Brace RH
BQ	56	Front Side of Rear Quarter Wheel House LH
BS	56	Lower Back Panel Center

: **Splice Points**

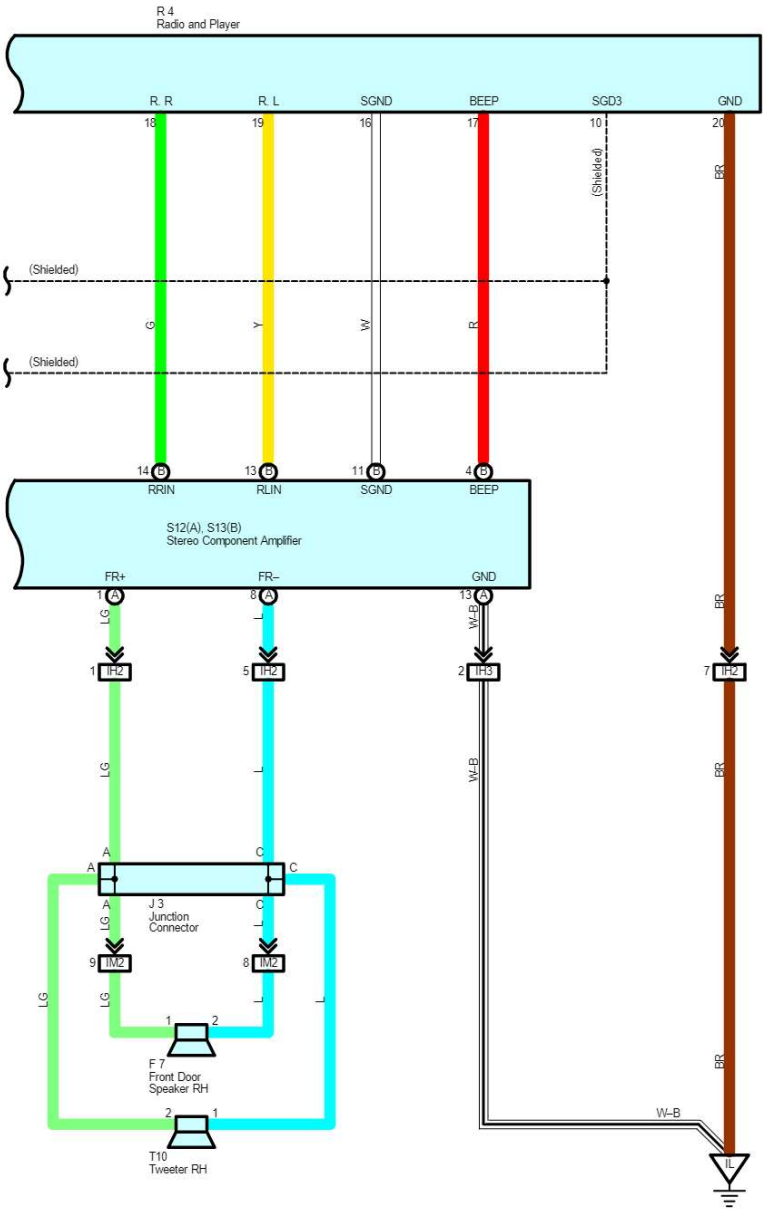
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	54	Instrument Panel No.2 Wire	B12	56	Floor No.2 Wire
I9	54	Instrument Panel Wire	B14		
B7	56	Floor No.4 Wire			

cardiagn.com



cardiagn.com

(Separate Type Amplifier w/o TOYOTA Navigation System)



cardiagn.com

Radio and Player
(Separate Type Amplifier w/o TOYOTA Navigation System)

Service Hints

R4 Radio and Player

11–Ground : Approx. 12 volts with ignition SW at ACC or ON position
1–Ground : Always approx. 12 volts
20–Ground : Always continuity

S12 (A), S13 (B) Stereo Component Amplifier

(B) 2–Ground : Approx. 12 volts with ignition SW at ACC or ON position
(A) 7–Ground : Always approx. 12 volts
(A)13–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
F6	44	R4	43	S13 B	43
F7	44	R8	45	T9	43
J3	43	R9	45	T10	43
J5	43	S12 A	43		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IH1	52	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2		
IH3		
IM2	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IN2	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

: Ground Points

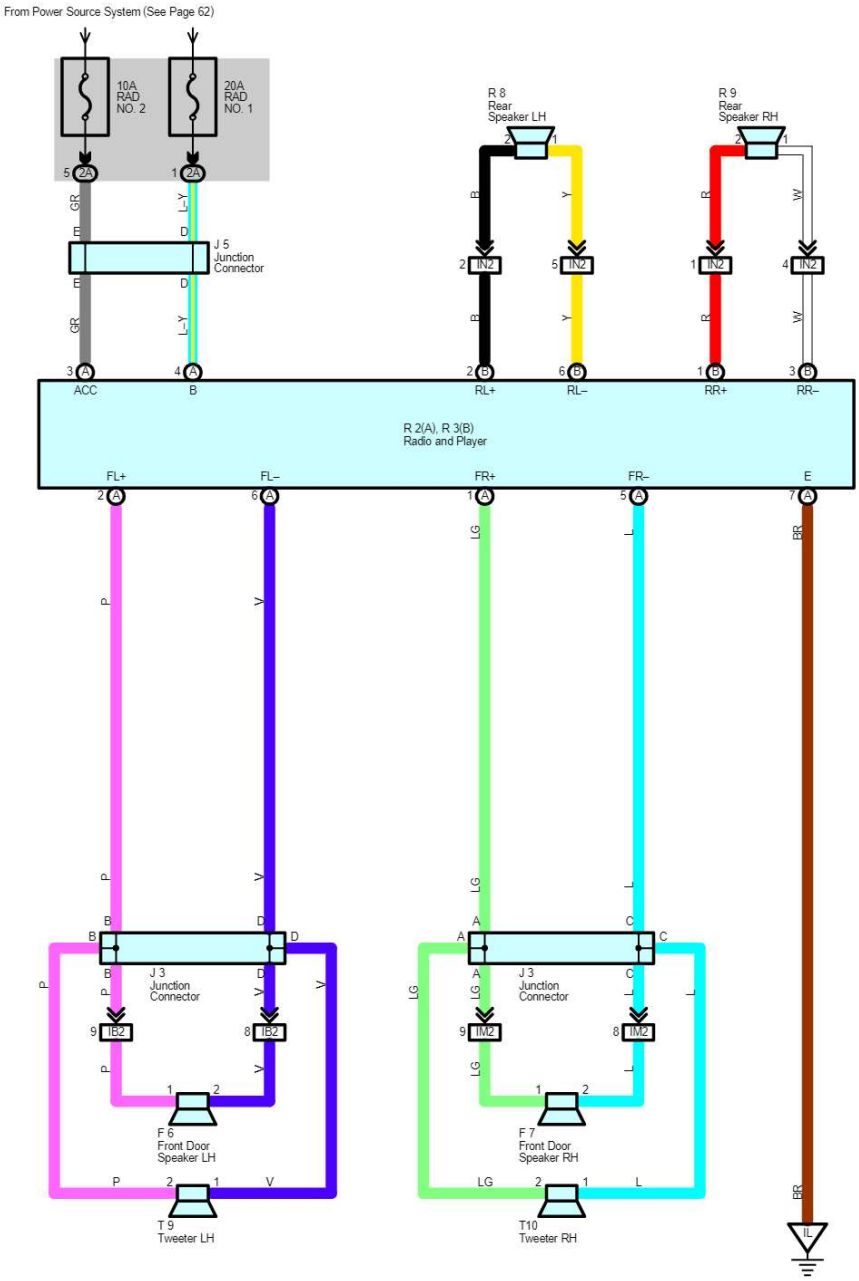
Code	See Page	Ground Points Location
IL	52	Instrument Panel Brace RH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	54	Instrument Panel No.2 Wire			

cardiagn.com

cardiagn.com



cardiagn.com

(Built–In Type Amplifier w/o TOYOTA Navigation System)

Service Hints

R2 (A) Radio and Player

(A) 3–Ground : Approx. 12 volts with ignition SW at ACC or ON position
(A) 4–Ground : Always approx. 12 volts
(A) 7–Ground : Always continuity

○ : Parts Location

Code	See Page	Code		See Page	Code	See Page
F6	44	R2	A	43	T9	43
F7	44	R3	B	43	T10	43
J3	43	R8		45		
J5	43	R9		45		

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

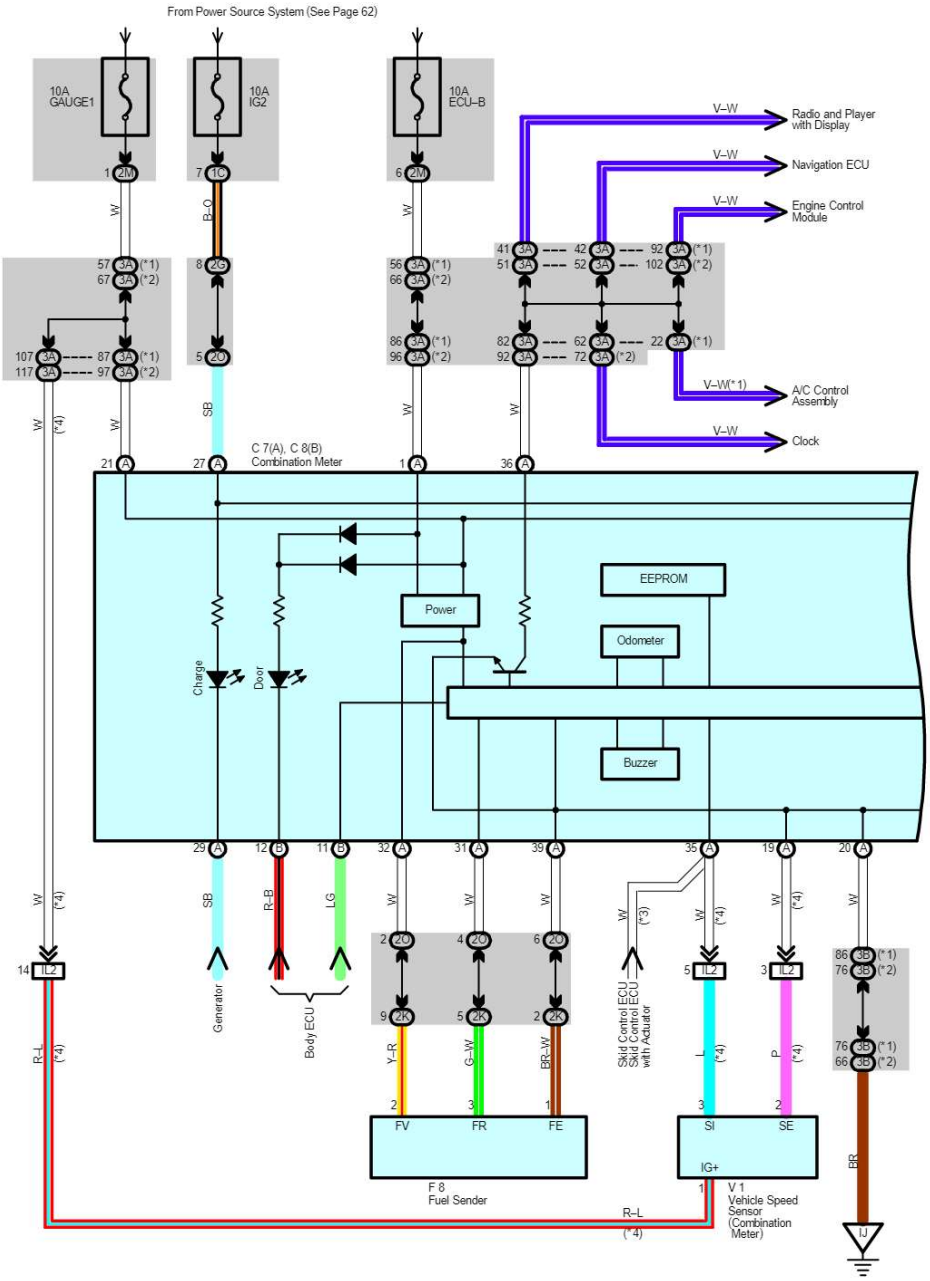
▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	52	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IM2	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IN2	54	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

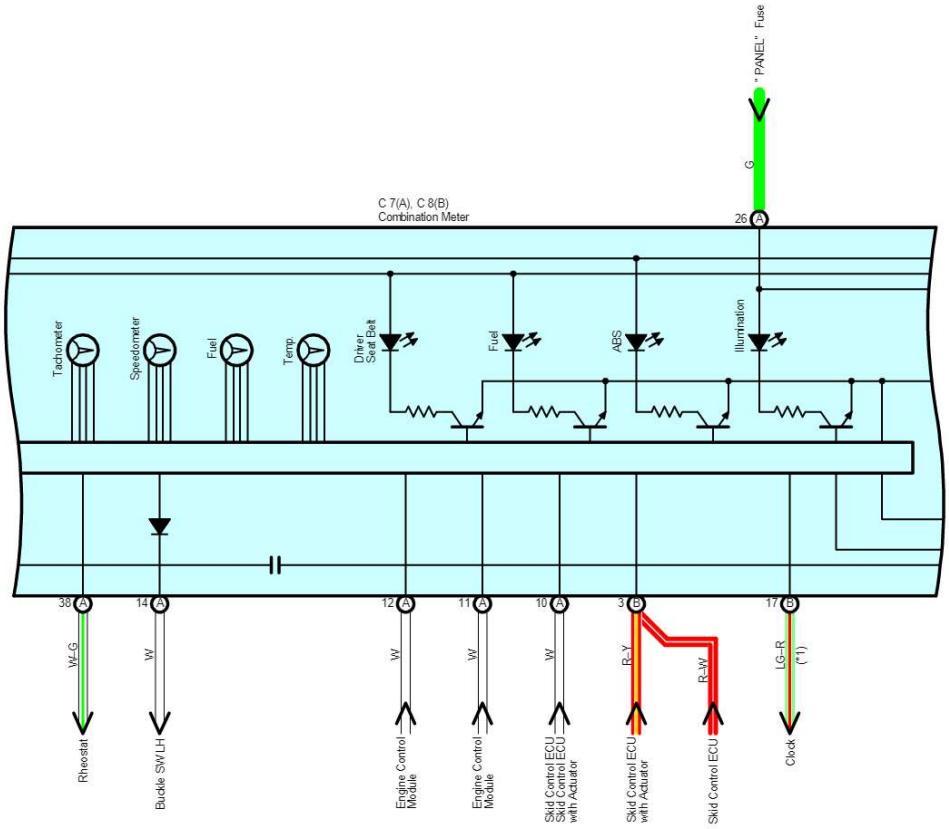
Code	See Page	Ground Points Location
IL	52	Instrument Panel Brace RH

cardiagn.com

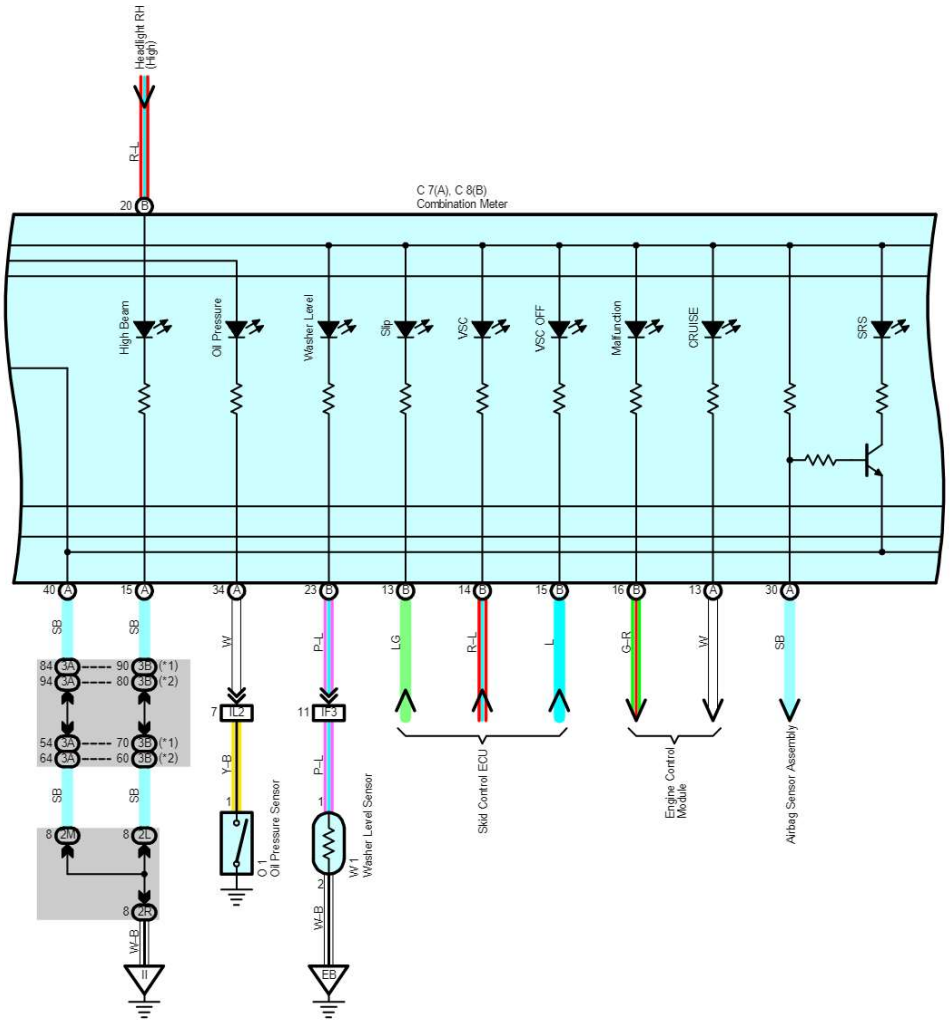


cardiagn.com

* 1 : Automatic A/C
* 2 : Manual A/C
* 3 : 1MZ–FE
* 4 : 2AZ–FE
* 5 : w/o VSC

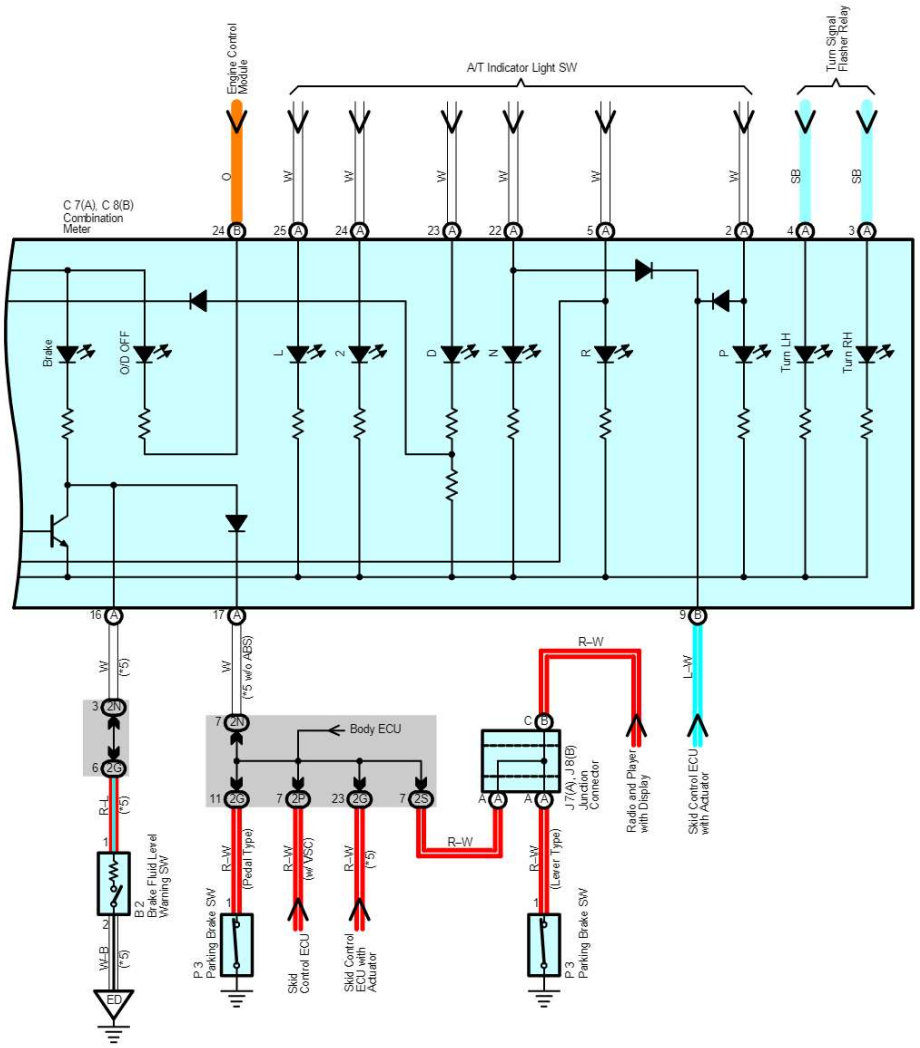


cardiagn.com



cardiagn.com

* 5 : w/o VSC



cardiagn.com

Combination Meter

Service Hints

B2 Brake Fluid Level Warning SW

1–2 : Closed with the float down

C7 (A) Combination Meter

(A) 21, (A) 27–Ground : Approx. 12 volts with ignition SW at ON or ST position
(A) 1–Ground : Always approx. 12 volts
(A)15, (A) 20, (A) 40–Ground : Always continuity

O1 Oil Pressure SW

1–Ground : Continuity with the oil pressure above approx. 20 kpa (2.8 psi, 0.2 kgf/cm^2)

P3 Parking Brake SW

1–Ground : Continuity with the parking brake pedal depressed (Pedal type)
Continuity with the parking brake lever pulled up (Lever type)

○ : **Parts Location**

Code		See Page	Code		See Page	Code	See Page
B2		38 (1MZ–FE)	J7	A	43	V1	41 (2AZ–FE)
		40 (2AZ–FE)	J8	B	43	W1	39 (1MZ–FE)
C7	A	42	O1		39 (1MZ–FE)		41 (2AZ–FE)
C8	B	42			41 (2AZ–FE)		
F8		44	P3		43		

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2N		
2O		
2P		
2R		
2S		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IL2	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

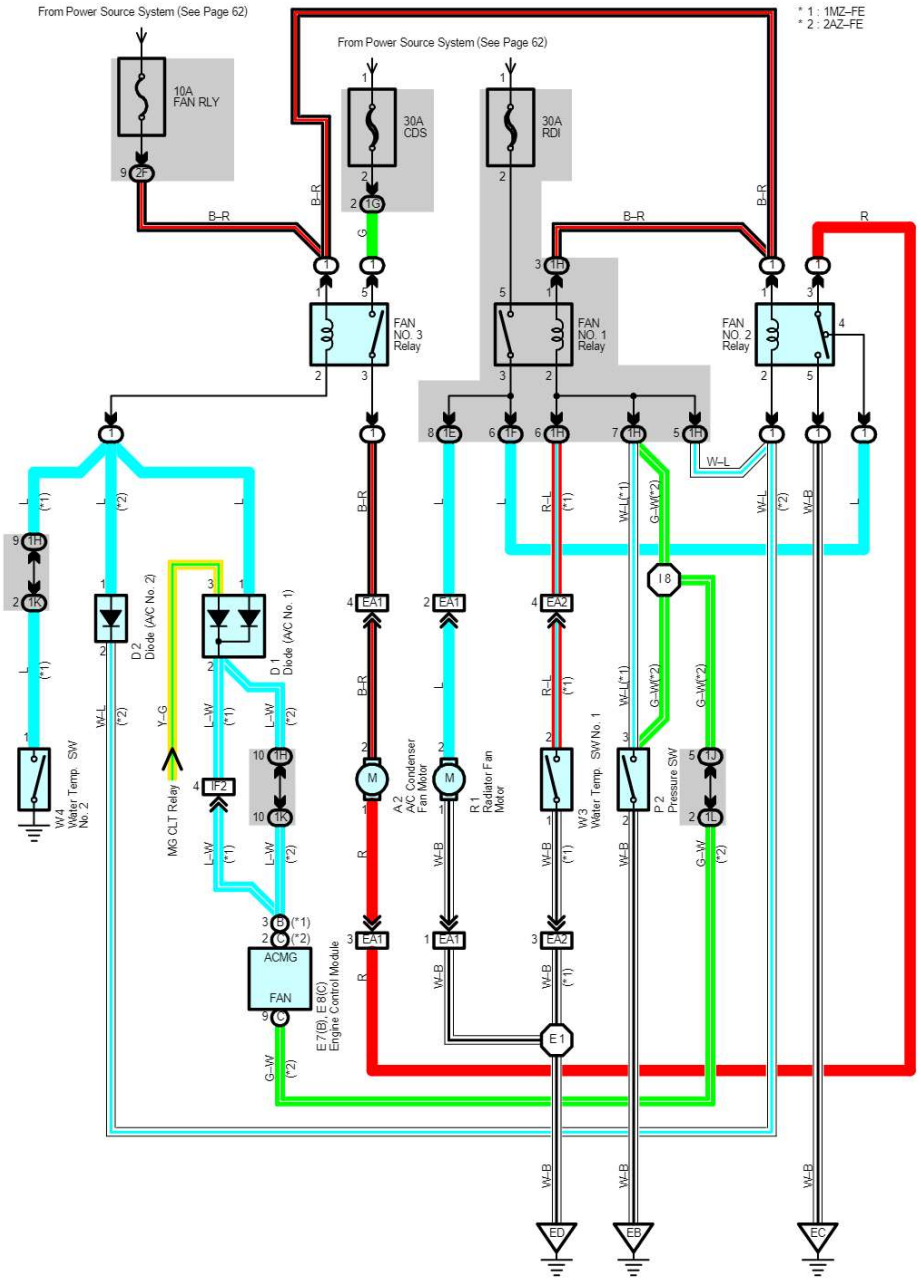
cardiagn.com

▽ : **Ground Points**

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
ED	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH

cardiagn.com

Radiator Fan and Condenser Fan



cardiagn.com

System Outline

Fan Motor Operation (1MZ–FE)

With the ignition SW turned on, the current through the FAN RLY fuse flows to the FAN NO.1 relay (Coil side), FAN NO.2 relay (Coil side) and FAN NO.3 relay (Coil side).

1. Low Speed Operation

Only when the A/C system is activated or the water temp. SW No.2 is turned on, the A/C condenser fan motor and the radiator fan motor rotates at low speed.

When the A/C system is activated, the current from FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode to TERMINAL 2 to TERMINAL (E) 3 of the engine control module causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows to TERMINAL 5 of the FAN NO.3 relay to TERMINAL 3 to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. As this flowing in series for the motors, the motors rotate at low speed.

When the water temp. SW No.2 is turned on, the current from FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the water temp. SW No.2 to GROUND, causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows the same route as above, rotating the motors at low speed.

2. High Speed Operation

With the pressure SW is turned on and/or the water temp. SW No.1 is turned on, the A/C condenser fan motor and the radiator fan motor rotate at high speed.

When the pressure SW is turned on, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL 3 of the pressure SW to TERMINAL 2 to GROUND, and the current through the FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the water termp. SW No.2 to GROUND. As a result, FAN NO.1, NO.2. and NO.3 relay is turned on. At the same time, the current from the RDI fuse flows to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND, and the current from the CDS fuse flows to FAN NO.3 relay (Point side) to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND.

As the current flowing in parallel for motors as above, the motors rotate at high speed.

When the water temp. SW No.1 is turned on, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL 2 of the water temp. SW No.1 to TERMINAL 1 to GROUND, and the current through the FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 2 of the diode to TERMINAL 1 to TERMINAL 2 of the water temp. SW No.1 to TERMINAL 1 to GROUND. As a result, FAN NO.1, NO.2 and NO.3 relay is turned on. At the same time, the current from the RDI fuse flows to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND, and the current from the CDS fuse flows to FAN NO.3 relay (Point side) to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND.

As the current flowing in parallel for motors as above, the motors rotate at high speed.

Fan Motor Operation (2AZ–FE)

With the ignition SW turned on, the current through the ECU–IG fuse flows to the FAN NO.1 relay (Coil side), FAN NO.2 relay (Coil side) and FAN NO.3 relay (Coil side).

1. Low Speed Operation

When the ignition SW is turned on and the A/C system is activated, the A/C condenser fan motor and the radiator fan motor rotates at low speed.

When the A/C system is activated, the current from FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode to TERMINAL 2 to TERMINAL (A) 2 of the engine control module causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows to TERMINAL 5 of the FAN NO.3 relay to TERMINAL 3 to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. As this flowing in series for the motors, the motors rotate at low speed.

cardiagn.com

2. High Speed Operation

When the pressure SW is turned on, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL 3 of the pressure SW to TERMINAL 2 to GROUND, and the current through the FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode to TERMINAL 2 to TERMINAL 3 of the pressure SW to TERMINAL 2 to GROUND. As a result, FAN NO.1, NO.2. and NO.3 relay is turned on. At the same time, the current from the RDI fuse flows to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND, and the current from the CDS fuse flows to FAN NO.3 relay (Point side) to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND.
As the current flowing in parallel for motors as above, the motors rotate at high speed.
When the engine coolant is too high, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL (A) 9 of the engine control module to GROUND, and the current through the FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode to TERMINAL 2 to TERMINAL (A) 9 of the engine control module to GROUND. As a result, FAN NO.1, NO.2 and NO.3 relay is turned on. At the same time, the current from the RDI fuse flows to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND, and the current from the CDS fuse flows to FAN NO.3 relay (Point side) to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND.
As the current flowing in parallel for motors as above, the motors rotate at high speed.

Service Hints

P2 Pressure SW

3–2 : Close above approx. 15.5 kgf/cm^2 (224 psi, 1520 kpa)
Open below approx. 12.5 kgf/cm^2 (181 psi, 1225 kpa)

W3 Water Temp. SW No.1

2–1 : Open above approx. 95°C (203° F)

W4 Water Temp. SW No.2

1–Ground : Open above approx. 90°C (194°F)

○ : Parts Location

Code	See Page	Code		See Page	Code	See Page
A2	38 (1MZ–FE)	E7	B	42	R1	41 (2AZ–FE)
	40 (2AZ–FE)	E8	C	42	W3	39 (1MZ–FE)
D1	38 (1MZ–FE)	P2		39 (1MZ–FE)	W4	39 (1MZ–FE)
	40 (2AZ–FE)			41 (2AZ–FE)		
D2	40 (2AZ–FE)	R1		39 (1MZ–FE)		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

▭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1F		
1G		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

cardiagn.com

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	48 (1MZ–FE)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	50 (2AZ–FE)	
EA2	48 (1MZ–FE)	
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

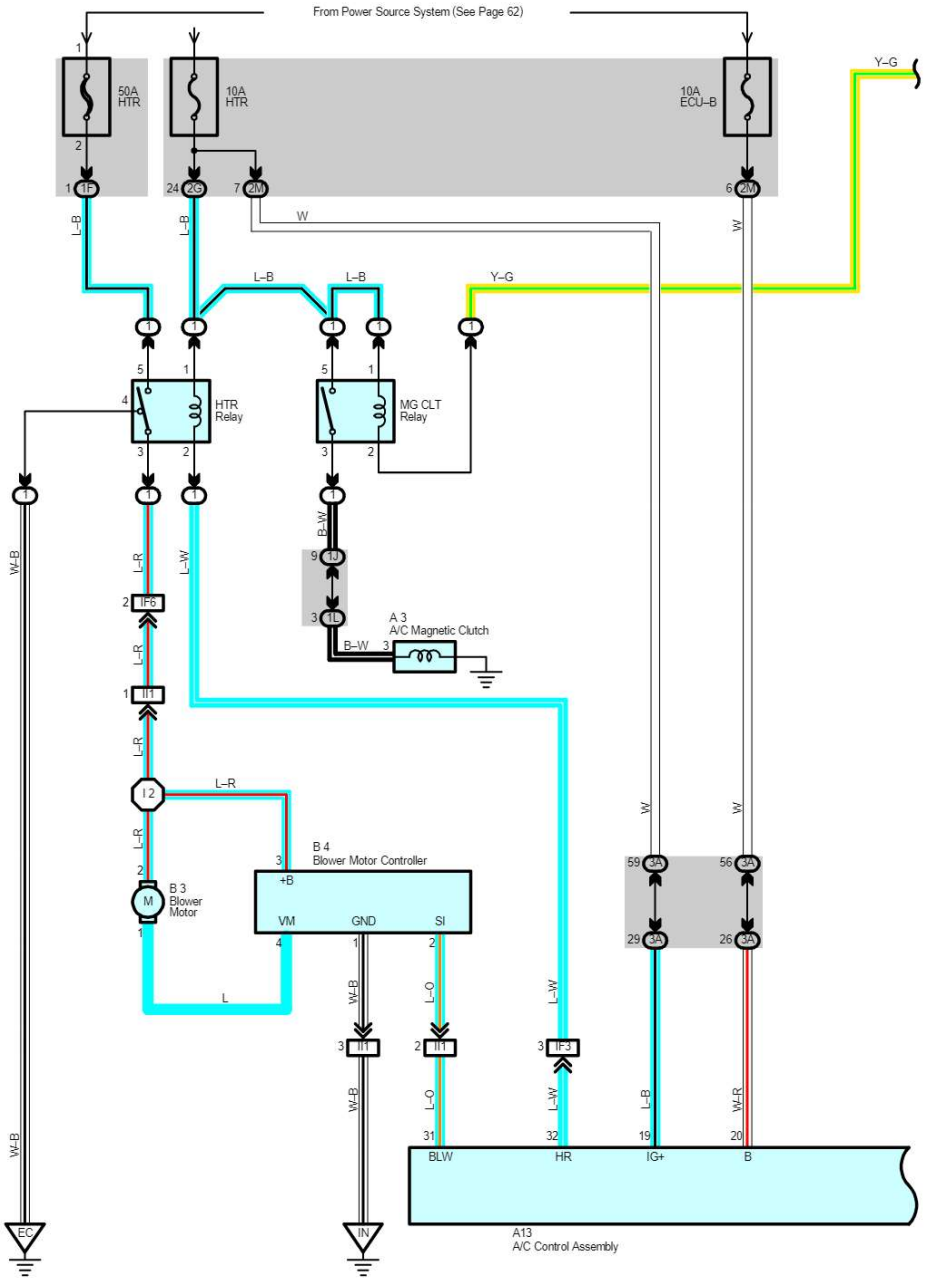
: **Ground Points**

Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
ED	48 (1MZ–FE)	
	50 (2AZ–FE)	

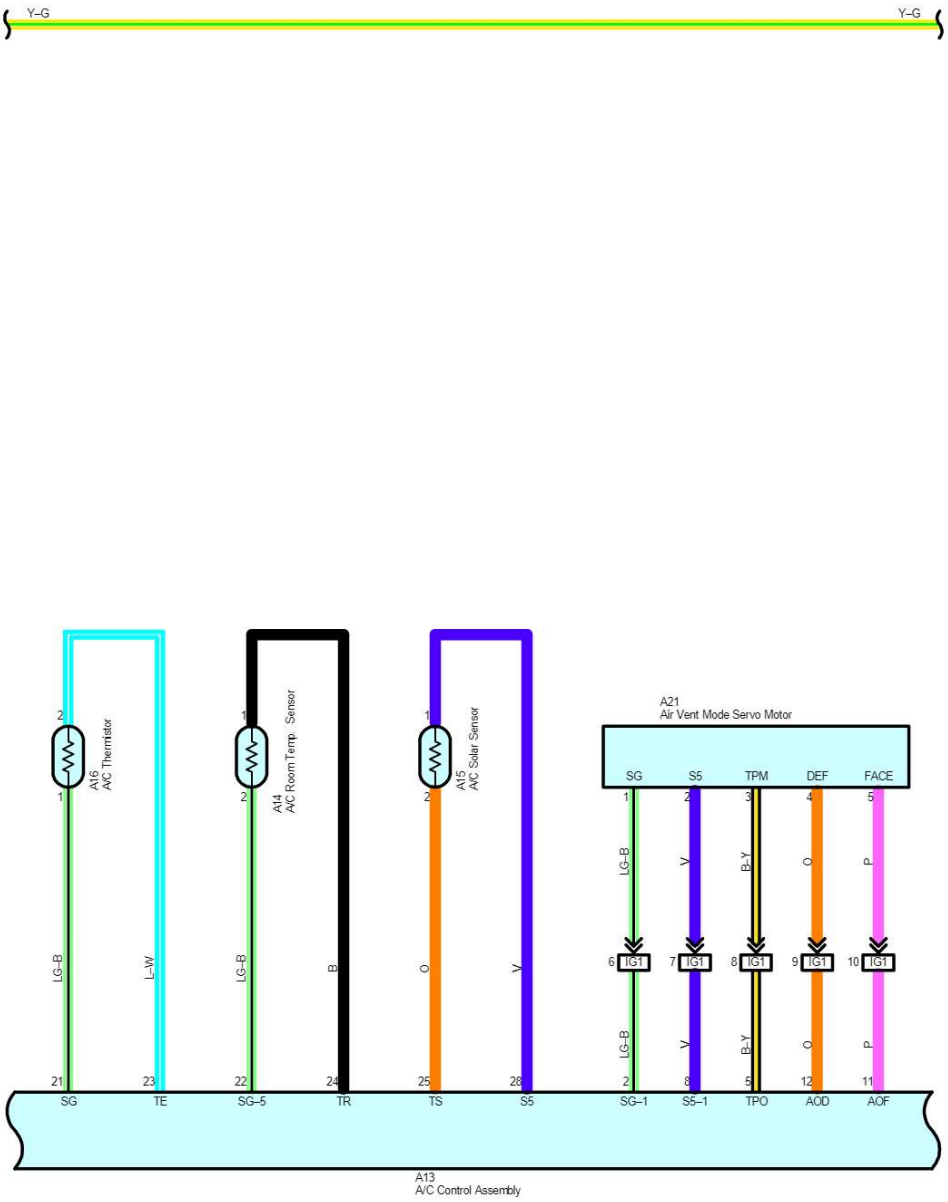
: **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	48 (1MZ–FE)	Engine Room Main Wire	I8	54	Engine Wire

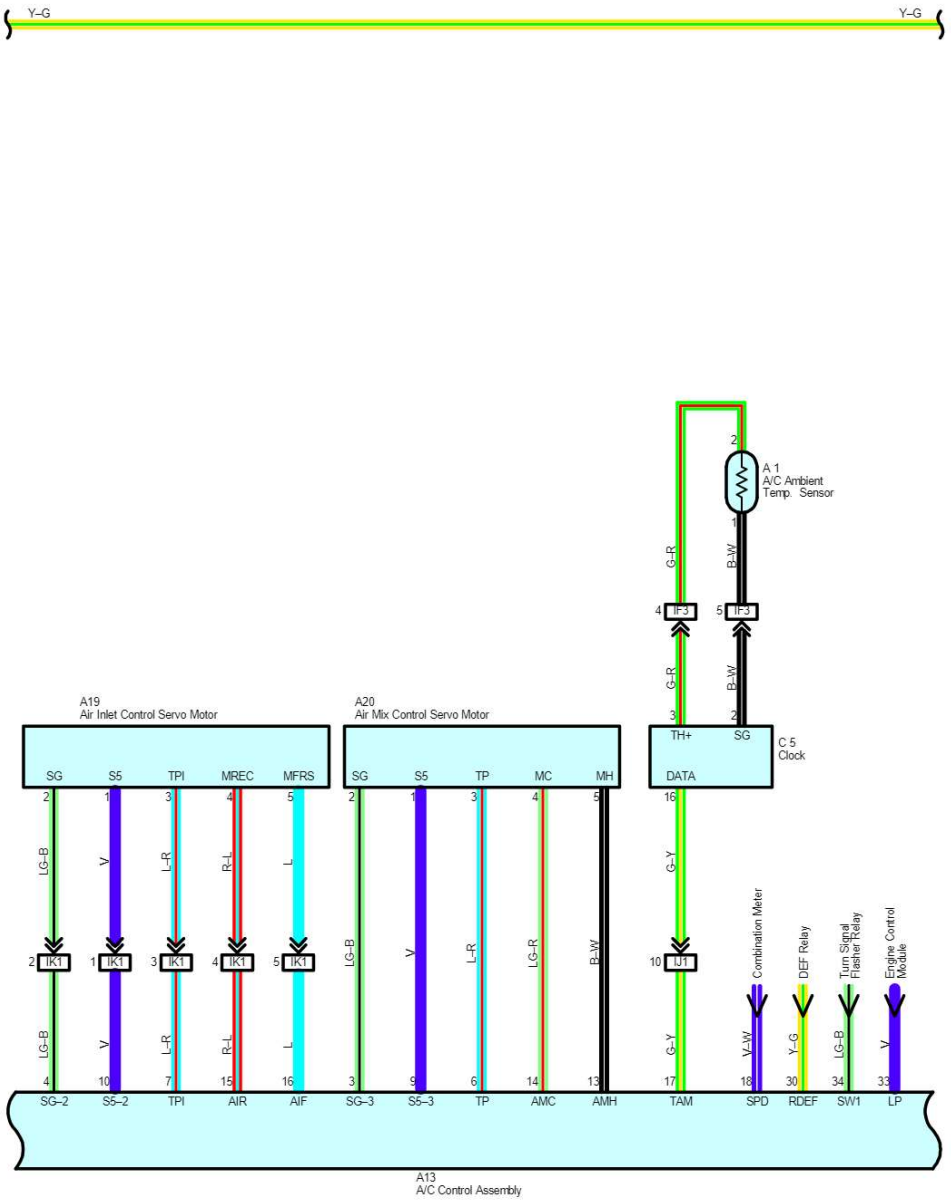
cardiagn.com



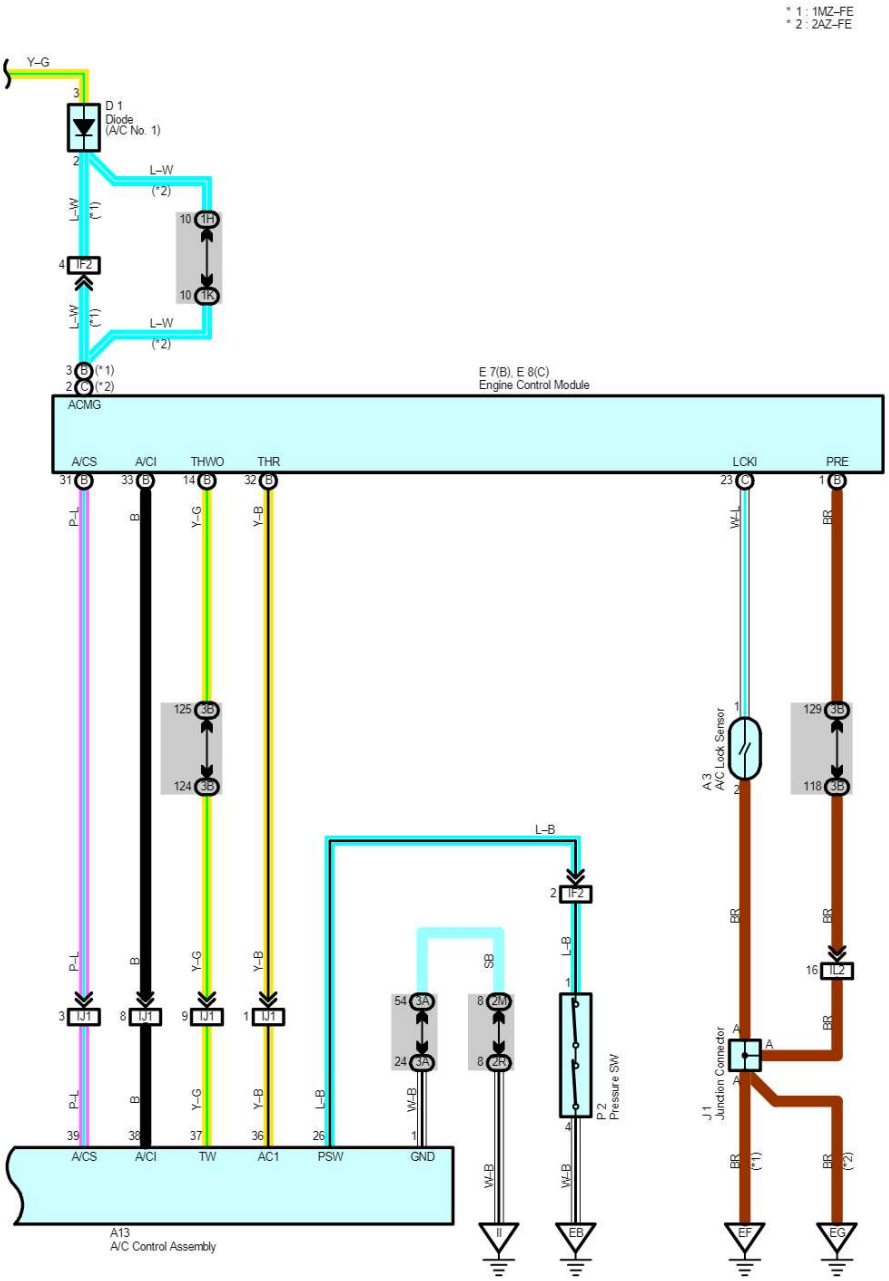
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

System Outline

1. Heater Blower Operation

Manual operation

When the blower speed is set to a certain level using the blower control SW, the A/C control assembly sends the signals to the blower control to control the blower motor speed.

Auto operation

When the auto SW is turned on, the A/C control assembly sends the signals from various sensors and temperature SW to the blower control to automatically control the blower motor speed.

2. Air Inlet Control Servo Motor Control

When the FRESH/RECIRC select SW is set to RECIRC, the motor in the air inlet control servo motor starts rotating to move the damper toward the RECIRC side. Since the damper position is detected by the TERMINAL TPI of the A/C control assembly, the motor is continuously rotated until the damper reaches its stop position.When the FRESH/RECIRC select SW is set to FRESH, the motor in the air inlet control servo motor starts rotating to move the damper toward the FRESH side. Since the damper position is detected by the TERMINAL TPI of the A/C control assembly, the motor is continuously rotated until the damper reaches its stop position.

3. Air Vent Mode Control Servo Motor Control

When the mode select SW is pushed, the ECU in the A/C control assembly activates the air vent mode control servo motor. This causes the servo motor to rotate to the position (FACE, BI–LEVEL, FOOT, FOOT/DEF, DEF) selected using the mode select SW, and moves the film damper.

4. Air Mix Control Servo Motor Control

When the temperature control SW is pressed, the ECU in the A/C control assembly sends a signal to the air mix control servo motor. This signal drives the motor to reach the temperature set by the temperature control SW, and moves the film damper.

5. Air Conditioning Operation

The A/C control assembly receives various signals, I.E., the engine RPM from the engine control module, out side air temperature signal from the A/C ambient temp. sensor, coolant temperature from the engine control module and the lock signal from the A/C compressor, etc.

When the engine is started and the A/C SW (A/C control assembly) is on, a signal is input to the A/C control assembly.

As a result, the ground circuit in A/C control assembly is closed and current flows from HTR (10A) fuse to TERMINAL 1 of the MG CLT relay to TERMINAL 3 of the diode to TERMINAL MGCL of the engine control module to TERMINAL PRE to GROUND, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.

At the same time, the engine control module. Detects the magnetic clutch is on and the A/C compressor operates.

If the A/C control assembly detects the following conditions, it stops the air conditioning:

- Evaporator outlet air is too low.
- There is a marked difference between the compressor speed and the engine speed.
- The refrigerant pressure is abnormally high or abnormally low.
- The engine speed is too low.
- Rapid acceleration occurs.

Service Hints

P2 Pressure SW

1–4 : Open with the refrigerant pressure at less than approx. 216 kpa (2.2 kgf/cm^2, 31 psi) or more than approx. 3138 kpa (32 kgf/cm^2, 455 psi)

A13 A/C Control Assembly

B–Ground : Always approx. 12 volts
IG–Ground : Approx. 12 volts with ignition SW at ON or ST position
AIF–Ground : Approx. 12 volts with FRESH SW on
AIR–Ground : Approx. 12 volts with RECIRC SW on
GND–Ground : Always continuity

cardiagn.com

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	38 (1MZ–FE)	A16	42	D1	38 (1MZ–FE)
	40 (2AZ–FE)	A19	42		40 (2AZ–FE)
A3	38 (1MZ–FE)	A20	42	E7 B	42
	40 (2AZ–FE)	A21	42	E8 C	42
A13	42	B3	42	J1	43
A14	42	B4	42	P2	39 (1MZ–FE)
A15	42	C5	42		41 (2AZ–FE)

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
3B	34 (*1)	
	35 (*3)	

* 1 : TMC Made Automatic A/C * 3 : TMMK Made Automatic A/C

▭ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF6		
IG1	52	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
II1	54	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	54	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
IL2	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

cardiagn.com

▽ : **Ground Points**

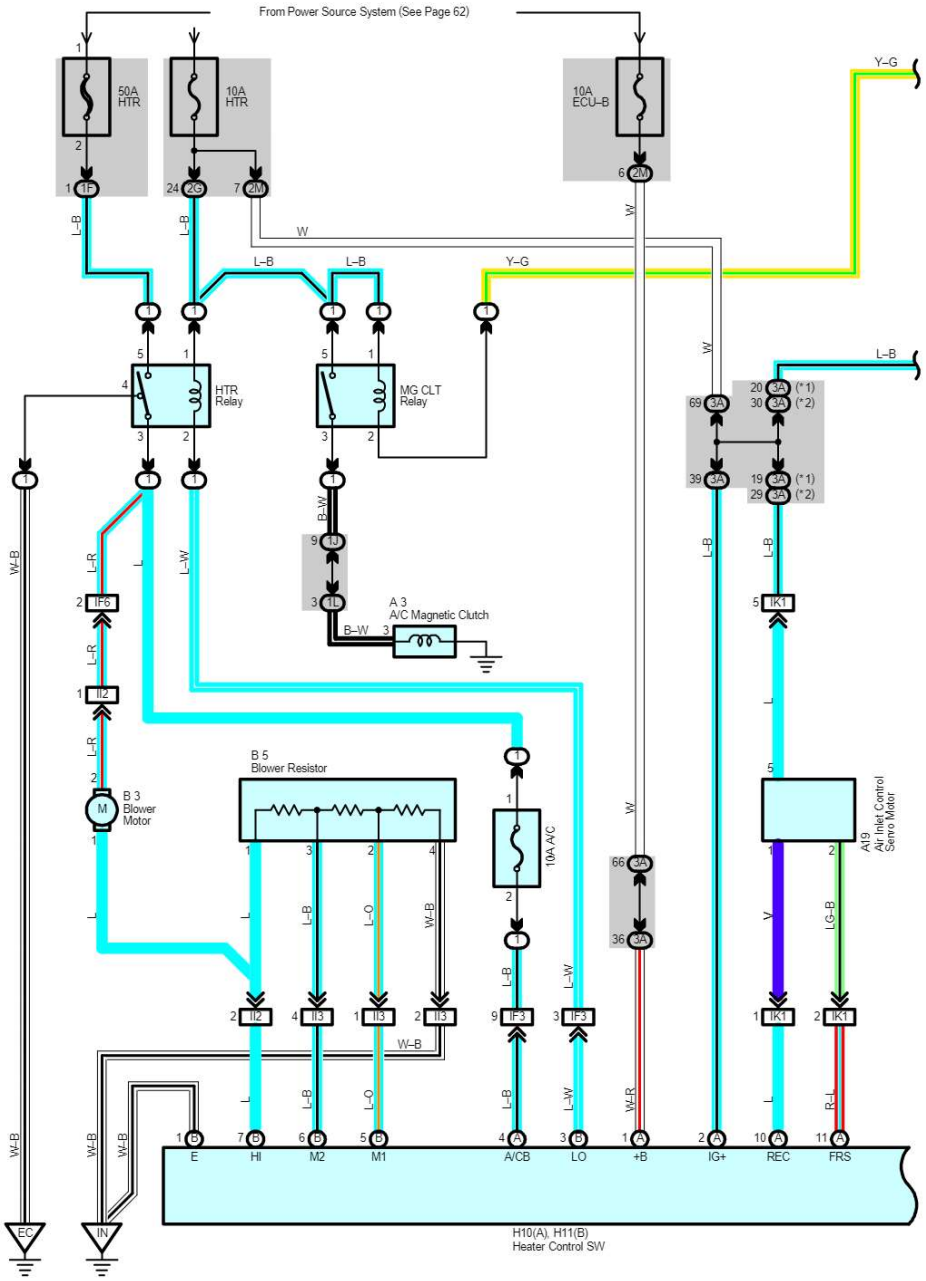
Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
EF	48 (1MZ–FE)	Rear Side of Surge Tank
EG	50 (2AZ–FE)	Left Side of Cylinder Head
II	52	Cowl Side Panel LH
IN	52	Instrument Panel Reinforcement RH

○ : **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	54	Instrument Panel No.3 Wire			

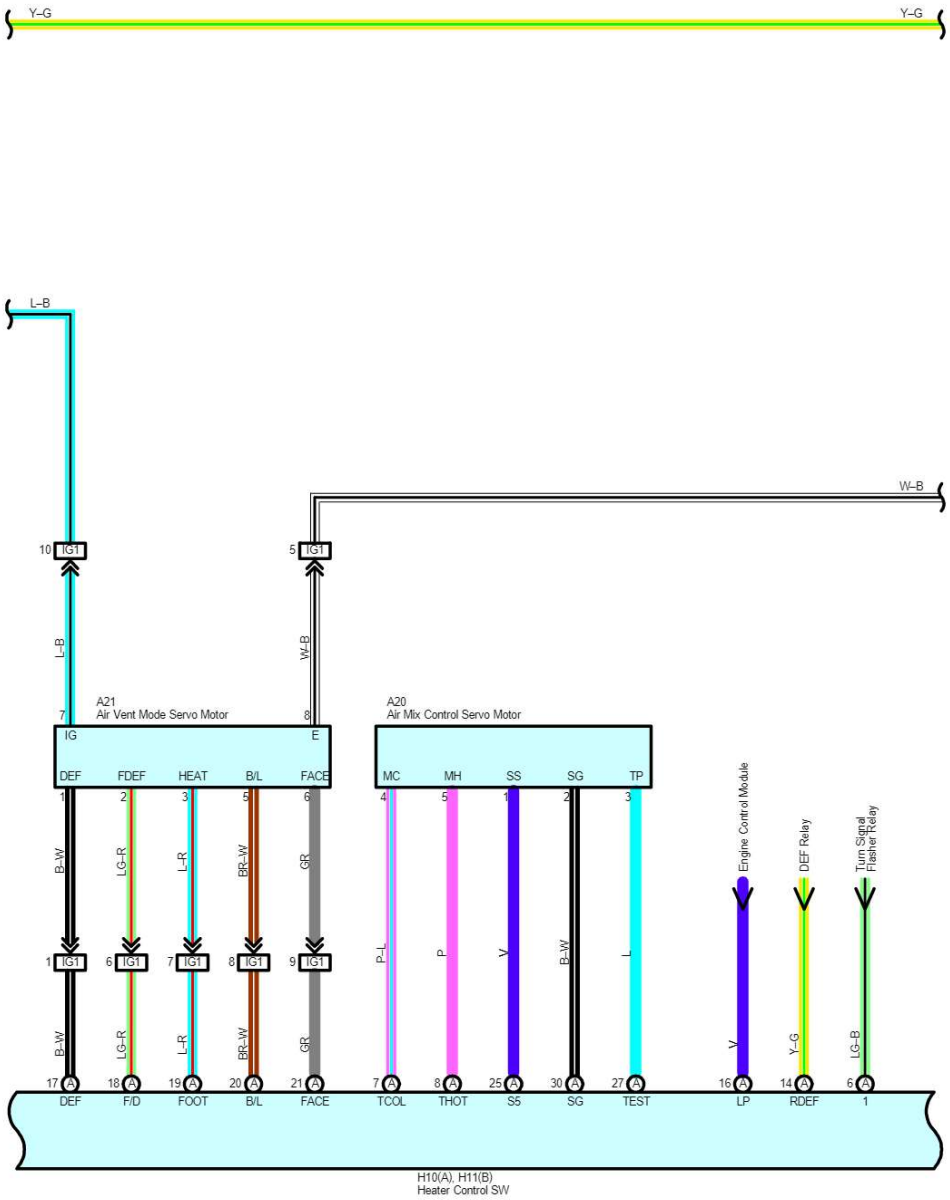
cardiagn.com

cardiagn.com

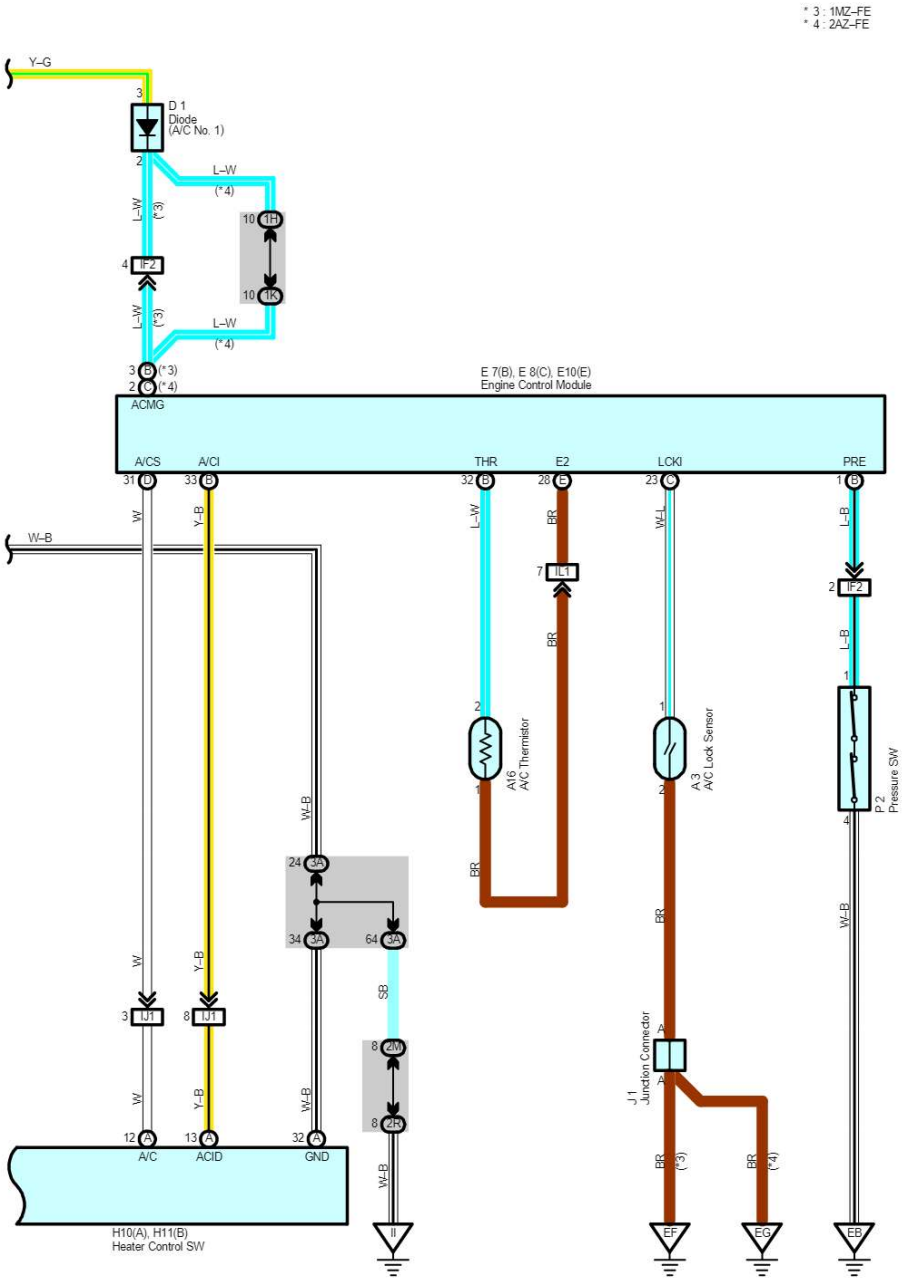


cardiagn.com

* 1 : TMC Made
* 2 : TMMK Made



cardiagn.com



cardiagn.com

System Outline

1. Heater Blower Motor Operation

* Low speed operation
When the heater control SW is moved to LO position, current flows to TERMINAL LO of the heater control SW to GROUND, activating the HTR relay. This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 1 of the blower resistor to TERMINAL 4 to GROUND, causing the blower motor to rotate at low speed.

* Medium speed operation (Operation at M1, M2)
When the blower SW is moved to M1 position, current flows to TERMINAL LO of the heater control SW to GROUND, turning the HTR relay to switch on. This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 1 of the blower resistor to TERMINAL 2 to TERMINAL (B) 5 of the heater control SW to GROUND. At this time, the blower resistance of the blower resistor is less than at low speed, so the blower motor rotates at medium low speed.
When the blower SW is moved to M2 position, current flows through the motor flows from TERMINAL 1 of the blower resistor to TERMINAL 3 to TERMINAL (B) 6 of the heater control SW to GROUND. At this time, resistance of the blower resistor is less than at M1 position, so the blower motor rotates at medium high speed.

* High speed operation
When the blower SW is moved to HIGH position, current flows to TERMINAL LO of the heater control SW to GROUND, turning the HTR relay to switch on.
This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL (B) 7 of the heater control SW to GROUND, causing the blower motor to rotate at high speed.

Service Hints

HTR Relay

1–2 : Closed with the ignition SW on and the heater control SW on

MG CLT Relay

5–3 : Closed with the ignition SW on, the heater control SW on and the A/C SW on or the heater control SW at DEF position

P2 Pressure SW

1–4 : Open with pressure 2.0 kgf/cm^2 (29 psi, 196 kpa) or above 32 kgf/cm^2 (464 psi, 3138 kpa)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A3	38 (1MZ–FE)	B3	42	E10 E	42
	40 (2AZ–FE)	B5	42	H10 A	43
A16	42	D1	38 (1MZ–FE)	H11 B	43
A19	42		40 (2AZ–FE)	J1	43
A20	42	E7 B	42	P2	39 (1MZ–FE)
A21	42	E8 C	42		41 (2AZ–FE)

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

cardiagn.com

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	36 (*2)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	37 (*4)	

* 2 : TMC Made Manual A/C * 4 : TMMK Made Manual A/C

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

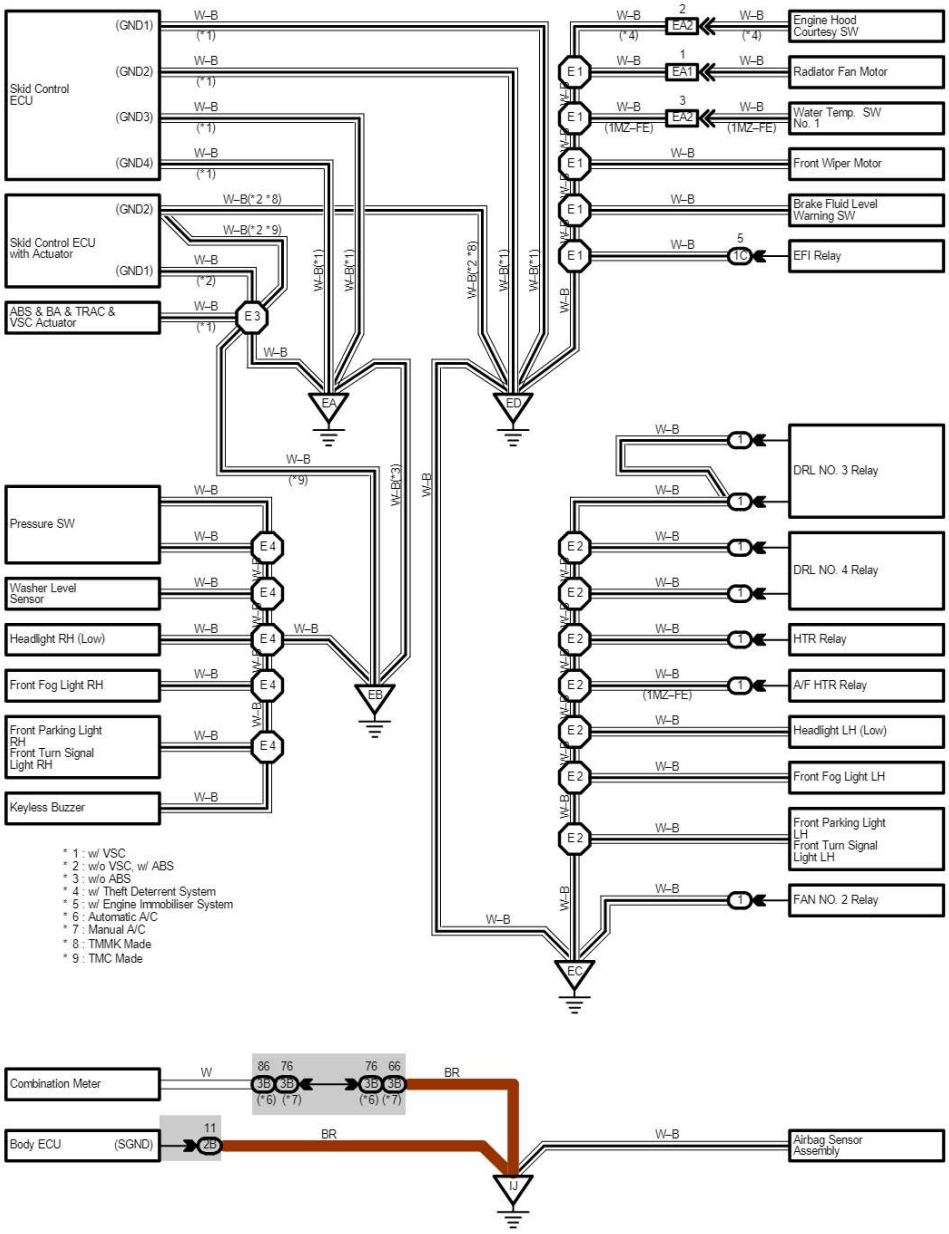
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF6		
IG1	52	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
II2	54	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II3		
IJ1	54	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	54	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: **Ground Points**

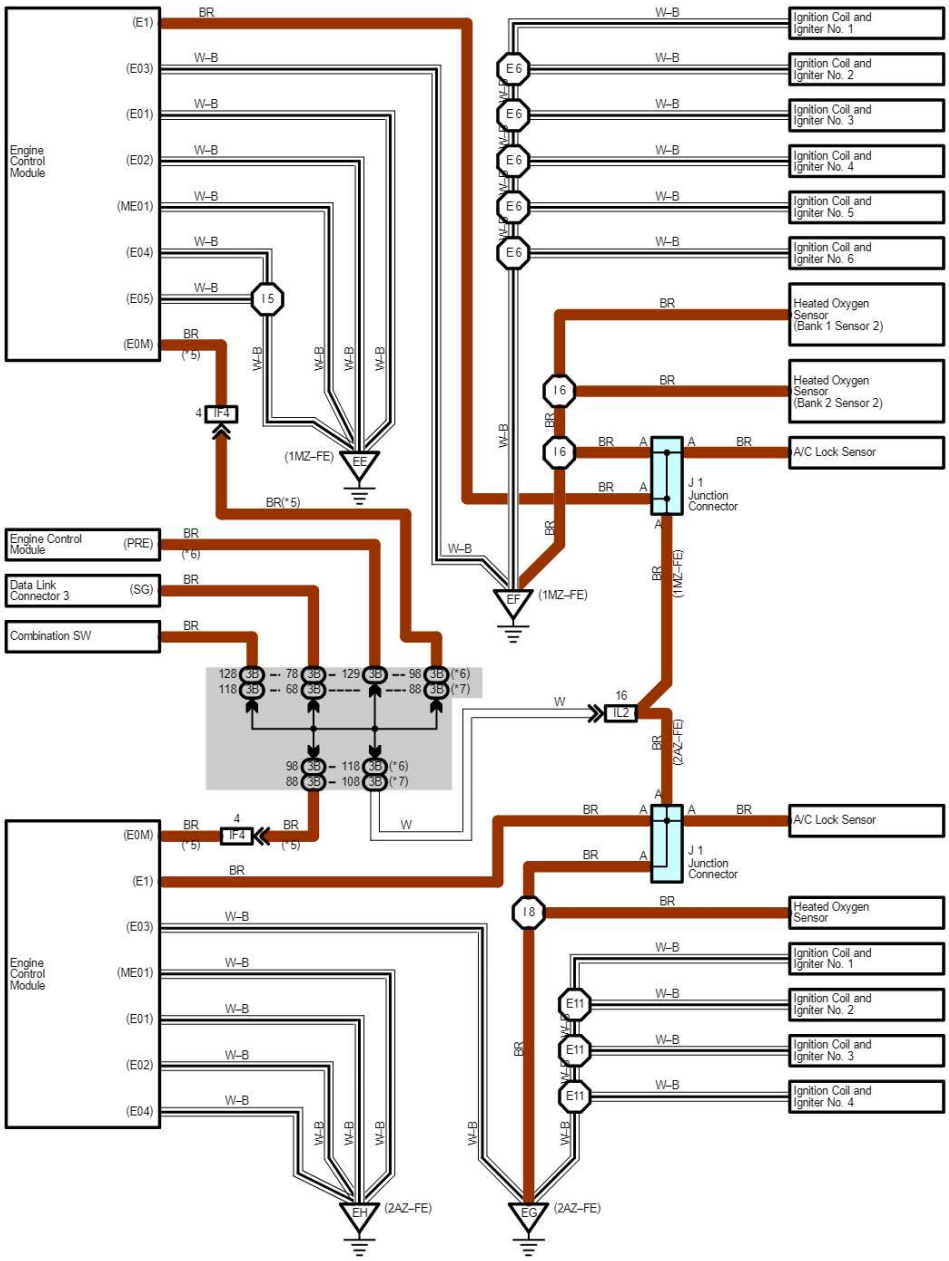
Code	See Page	Ground Points Location
EB	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
EF	48 (1MZ–FE)	Rear Side of Surge Tank
EG	50 (2AZ–FE)	Left Side of Cylinder Head
II	52	Cowl Side Panel LH
IN	52	Instrument Panel Reinforcement RH

cardiagn.com

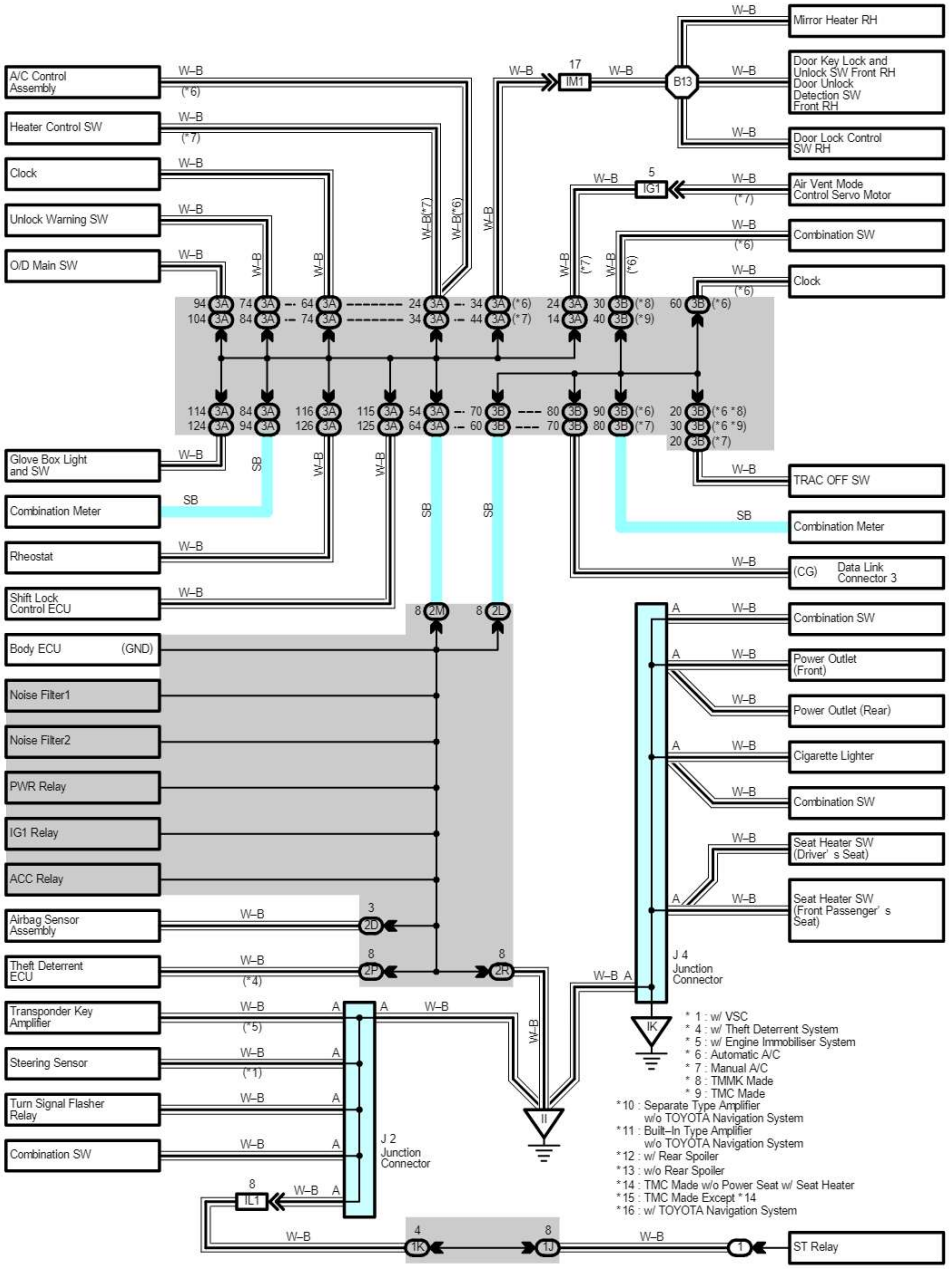
cardiagn.com



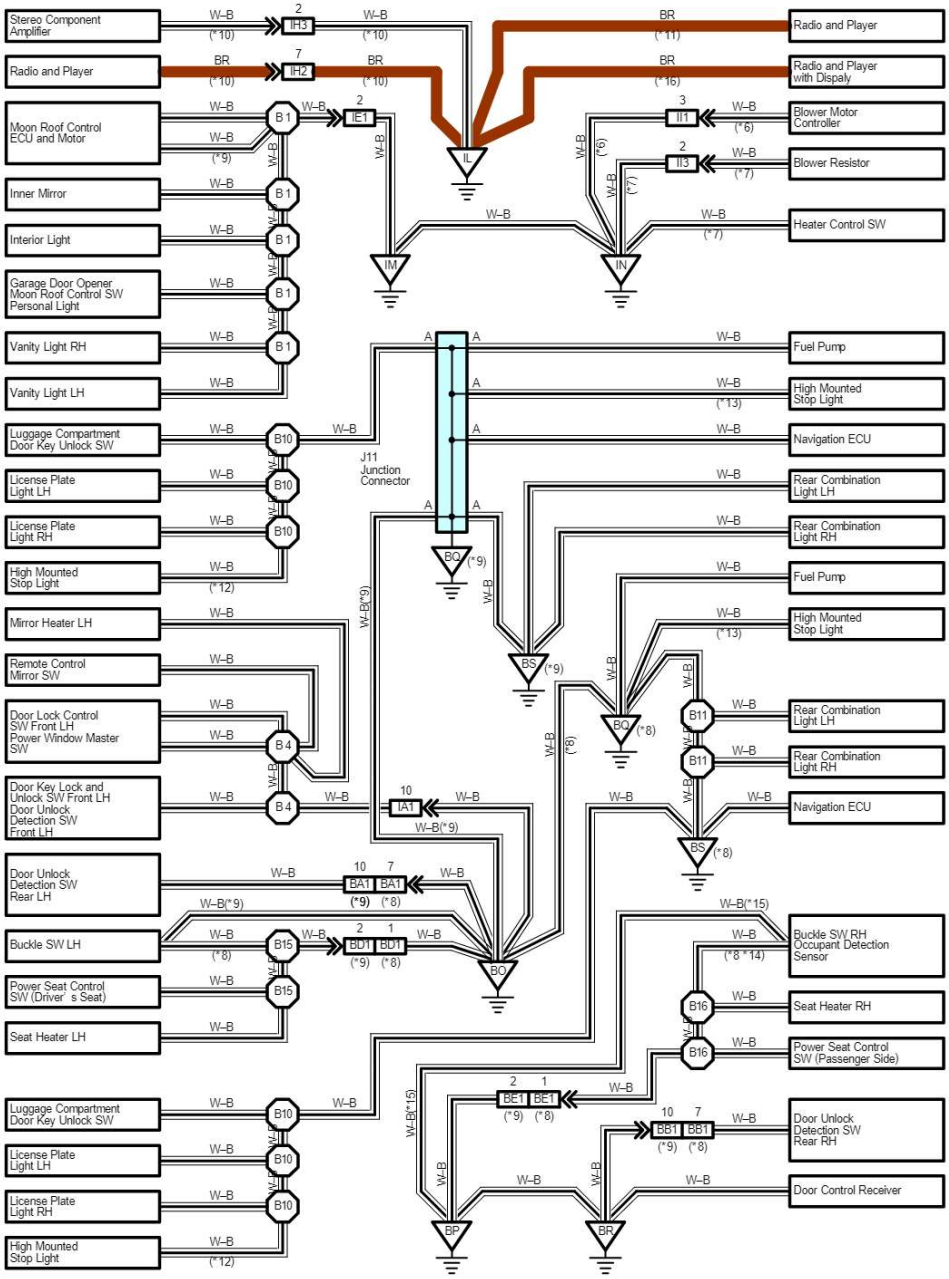
cardiagn.com



cardiagn.com



cardiagn.com



cardiagn.com

I GROUND POINT

○ : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
J1	43	J4	43		
J2	43	J11	44		

⬭ : **Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

⬭ : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2D		
2L	29	
2M		
2P		
2R		
3A	34 (*1)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (*3)	
	36 (*2)	
	37 (*4)	
3B	34 (*1)	
	35 (*3)	
	36 (*2)	
	37 (*4)	

* 1 : TMC Made Automatic A/C * 2 : TMC Made Manual A/C * 3 : TMMK Made Automatic A/C * 4 : TMMK Made Manual A/C

▭ : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	48 (1MZ–FE)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	50 (2AZ–FE)	
EA2	48 (1MZ–FE)	
	50 (2AZ–FE)	
IA1	52	Front Door LH Wire and Floor Wire (Left Kick Panel)
IE1	52	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IF4	52	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IG1	52	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
IH2	52	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH3		
II1	54	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II3		
IL1	54	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IM1	54	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	56	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	56	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)
BD1	58	Floor Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	58	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

cardiagn.com

▽ : **Ground Points**

Code	See Page	Ground Points Location
EA	48 (1MZ–FE)	Right Fender
	50 (2AZ–FE)	
EB	48 (1MZ–FE)	
	50 (2AZ–FE)	
EC	48 (1MZ–FE)	Left Fender
	50 (2AZ–FE)	
ED	48 (1MZ–FE)	
	50 (2AZ–FE)	
EE	48 (1MZ–FE)	Surge Tank RH
EF	48 (1MZ–FE)	Rear Side of Surge Tank
EG	50 (2AZ–FE)	Left Side of Cylinder Head
EH	50 (2AZ–FE)	Intake Side of Cylinder Block
II	52	Cowl Side Panel LH
IJ	52	Instrument Panel Brace LH
IK		
IL	52	Instrument Panel Brace RH
IM	52	Instrument Panel Reinforcement RH
IN		
BO	56	Under the Driver's Seat
BP	56	Under the Front Passenger's Seat
BQ	56	Front Side of Rear Quarter Wheel House LH
BR	56	Front Side of Rear Quarter Wheel House RH
BS	56	Lower Back Panel Center

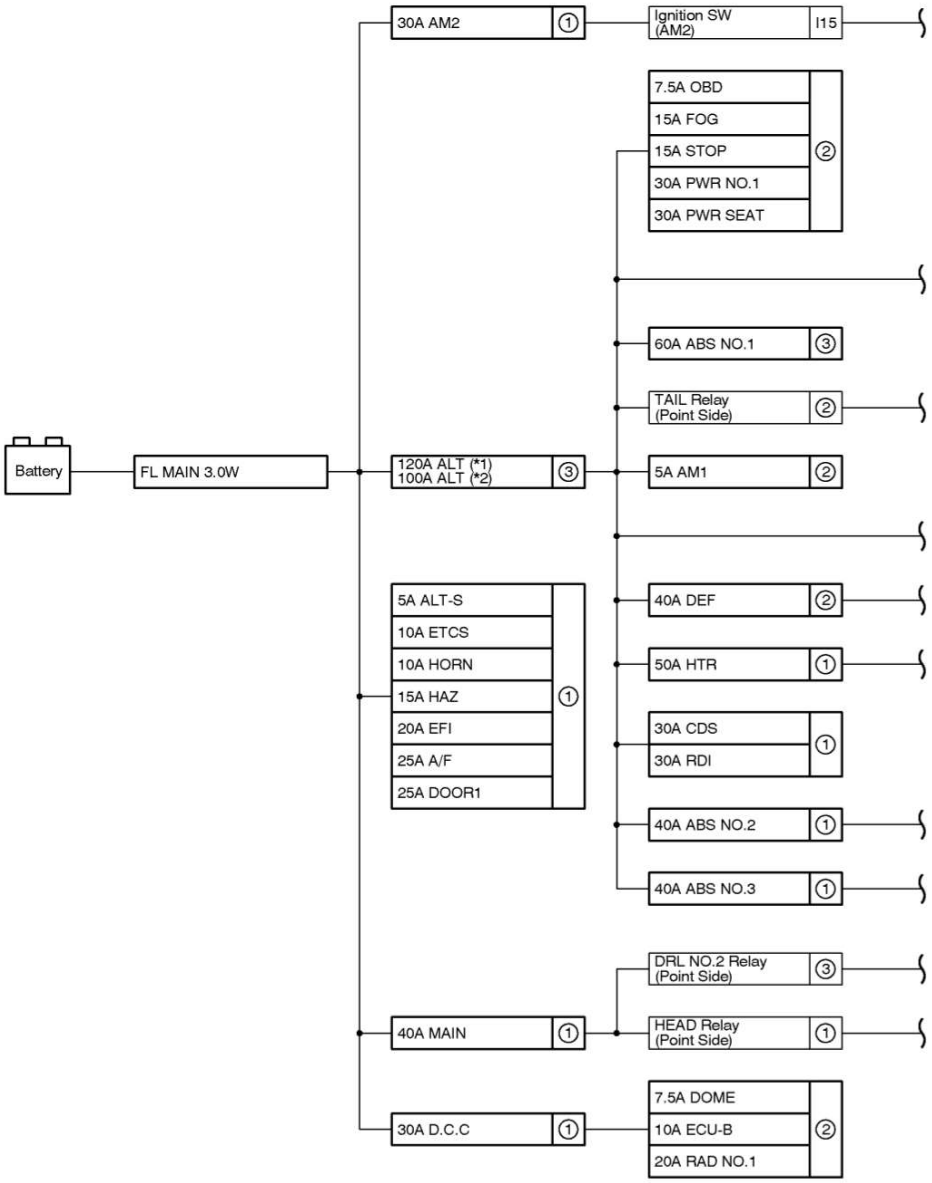
⬡ : **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	48 (1MZ–FE)	Engine Room Main Wire	I5	54	Engine Wire
	50 (2AZ–FE)		I6		
E2	48 (1MZ–FE)		I8		
	50 (2AZ–FE)		B1	56	Roof Wire
E3	48 (1MZ–FE)		B4	56	Front Door LH Wire
	50 (2AZ–FE)		B10	56	Floor Wire
E4	48 (1MZ–FE)		B11		
	50 (2AZ–FE)		B13	56	Front Door RH Wire
E6	48 (1MZ–FE)	Engine Wire	B15	58	Front Seat LH Wire
E11	50 (2AZ–FE)		B16	58	Front Seat RH Wire

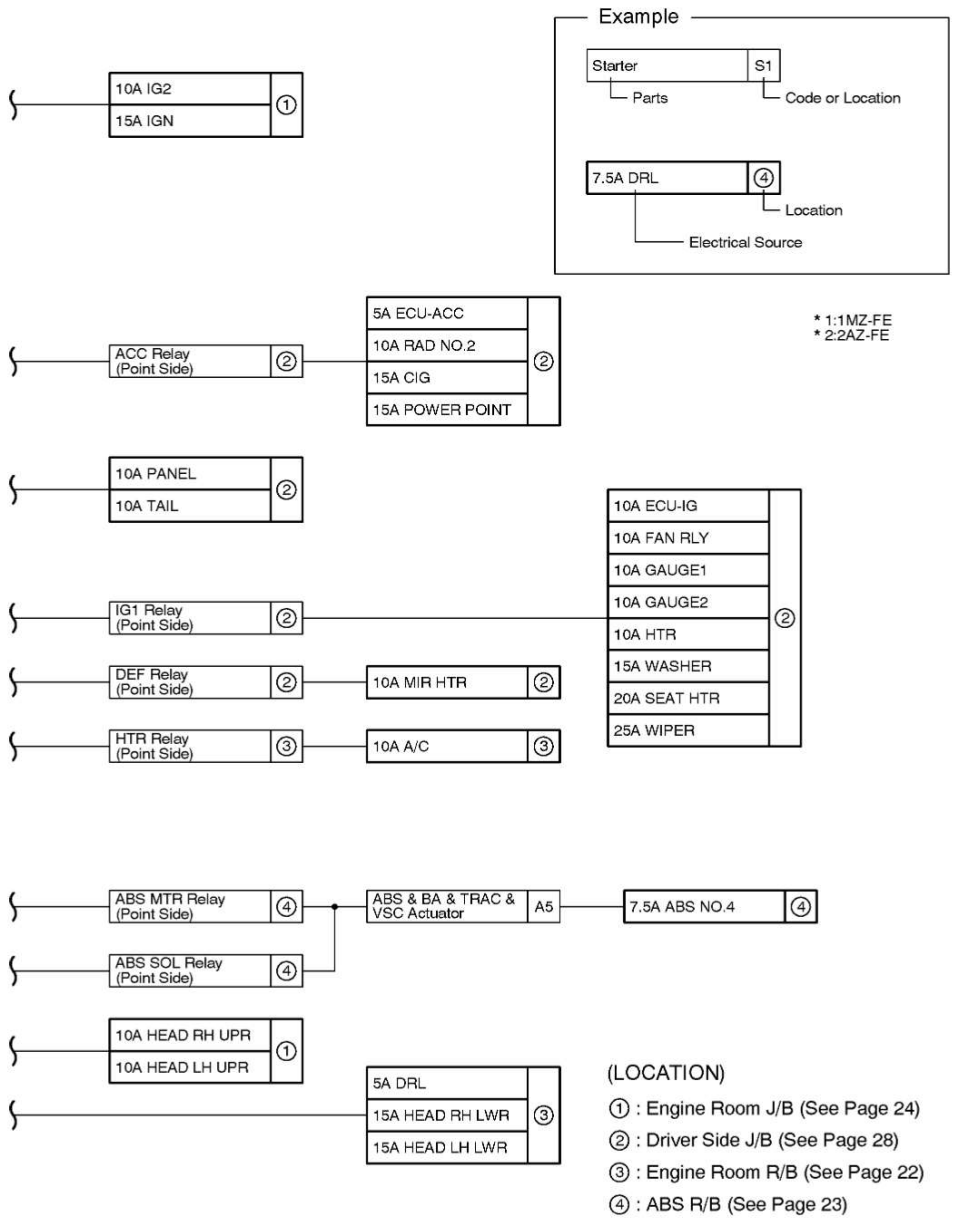
cardiagn.com

J POWER SOURCE (Current Flow Chart)

The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other Parts.



cardiagn.com



cardiagn.com

Engine Room J/B (See Page 24)

Fuse		System	Page
5A	ALT–S	Charging	74
10A	ETCS	Cruise Control (1MZ–FE)	190
		Cruise Control (2AZ–FE)	196
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
10A	HEAD LH UPR	Headlight	116
		Multiplex Communication System	104
10A	HEAD RH UPR	Headlight	116
		Multiplex Communication System	104
10A	HORN	Horn	240
		Multiplex Communication System	104
		Theft Deterrent and Door Lock Control	146
10A	IG2	ABS (TMC Made)	174
		ABS (TMMK Made)	178
		Charging	74
		Combination Meter	264
		Cruise Control (1MZ–FE)	190
		Cruise Control (2AZ–FE)	196
		Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	202
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Engine Immobiliser System (1MZ–FE)	100
		Engine Immobiliser System (2AZ–FE)	102
		SRS	183
		VSC	166
15A	HAZ	Turn Signal and Hazard Warning Light	136
15A	IGN	Clock	248
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Starting and ignition (1MZ–FE)	66
		Starting and ignition (2AZ–FE)	70
20A	EFI	Cruise Control (1MZ–FE)	190
		Cruise Control (2AZ–FE)	196
		Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	202
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Engine Immobiliser System (1MZ–FE)	100
		Engine Immobiliser System (2AZ–FE)	102
25A	A/F	Engine Control (1MZ–FE)	76

* These are the page numbers of the first page on which the related system is shown.

cardiagn.com

Fuse		System	Page
25A	DOOR1	Multiplex Communication System	104
		Theft Deterrent and Door Lock Control	146
		Wireless Door Lock Control	152
30A	AM2	Charging	74
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Starting and ignition (1MZ–FE)	66
		Starting and ignition (2AZ–FE)	70
30A	CDS	Radiator Fan and Condenser Fan	270
30A	RDI	Radiator Fan and Condenser Fan	270
40A	ABS NO.2	ABS (TMC Made)	174
		VSC	166
40A	ABS NO.3	ABS (TMC Made)	174
		VSC	166
40A	MAIN	Automatic Light Control	122
		Headlight	116
		Light Auto Turn Off	124
		Multiplex Communication System	104
50A	HTR	Automatic Air Conditioning	274
		Manual Air Conditioning	282

Driver Side J/B (See Page 28)

Fuse		System	Page
5A	AM1	Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	202
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Starting and ignition (1MZ–FE)	66
		Starting and ignition (2AZ–FE)	70
5A	ECU–ACC	Clock	248
		Multiplex Communication System	104
		Remote Control Mirror	232
7.5A	DOME	Clock	248
		Garage Door Opener	236
		Interior Light	128
		Multiplex Communication System	104
		Wireless Door Lock Control	152
7.5A	OBD	Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
10A	ECU–B	Automatic Air Conditioning	274
		Automatic Light Control	122
		Clock	248
		Combination Meter	264
		Headlight	116

* These are the page numbers of the first page on which the related system is shown.

cardiagn.com

J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
10A	ECU–B	Interior Light	128
		Key Reminder	144
		Light Auto Turn Off	124
		Manual Air Conditioning	282
		Moon Roof	160
		Multiplex Communication System	104
		Power Window	162
		Theft Deterrent and Door Lock Control	146
		VSC	166
		Wireless Door Lock Control	152
10A	ECU–IG	ABS (TMC Made)	174
		ABS (TMMK Made)	178
		Automatic Light Control	122
		Headlight	116
		Interior Light	128
		Key Reminder	144
		Light Auto Turn Off	124
		Moon Roof	160
		Multiplex Communication System	104
		Power Window	162
		SRS	183
		Theft Deterrent and Door Lock Control	146
		VSC	166
10A	FAN RLY	Radiator Fan and Condenser Fan	270
10A	GAUGE1	Charging	74
		Clock	248
		Combination Meter	264
		Cruise Control (2AZ–FE)	196
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210
		Engine Control (2AZ–FE)	88
		Key Reminder	144
		Multiplex Communication System	104
		Seat Belt Warning	230
		Shift Lock	218
		TOYOTA Navigation System, Radio and Player	252
		Turn Signal and Hazard Warning Light	136
10A	GAUGE2	ABS (TMC Made)	174
		ABS (TMMK Made)	178
		Automatic Glare–Resistant EC Mirror	234
		Back–Up Light	142
		Cruise Control (1MZ–FE)	190
		Cruise Control (2AZ–FE)	196
		Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	202
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210

* These are the page numbers of the first page on which the related system is shown.

cardiagn.com

Fuse		System	Page
10A	GAUGE2	Moon Roof	160
		Multiplex Communication System	104
		Rear Window Defogger and Mirror Heater	246
		TOYOTA Navigation System, Radio and Player	252
		VSC	166
10A	HTR	Automatic Air Conditioning	274
		Manual Air Conditioning	282
10A	MIR HTR	Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Rear Window Defogger and Mirror Heater	246
10A	PANEL	Clock	248
		Illumination	132
10A	RAD NO.2	Radio and Player (Built–In Type Amplifier w/o TOYOTA Navigation System)	262
		Radio and Player (Separate Type Amplifier w/o TOYOTA Navigation System)	258
		TOYOTA Navigation System, Radio and Player	252
10A	TAIL	Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Taillight	138
15A	CIG	Power Outlet and Cigarette Lighter	238
15A	FOG	Fog Light	120
15A	POWER POINT	Power Outlet and Cigarette Lighter	238
15A	STOP	ABS (TMC Made)	174
		ABS (TMMK Made)	178
		Cruise Control (1MZ–FE)	190
		Cruise Control (2AZ–FE)	196
		Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	202
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210
		Engine Control (1MZ–FE)	76
		Engine Control (2AZ–FE)	88
		Shift Lock	218
		Stop Light	140
		VSC	166
15A	WASHER	Wiper and Washer	242
20A	RAD NO.1	Radio and Player (Built–In Type Amplifier w/o TOYOTA Navigation System)	262
		Radio and Player (Separate Type Amplifier w/o TOYOTA Navigation System)	258
		TOYOTA Navigation System, Radio and Player	252
20A	SEAT HTR	Seat Heater	228
25A	WIPER	Wiper and Washer	242

* These are the page numbers of the first page on which the related system is shown.

cardiagn.com

J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
30A	PWR NO.1	Moon Roof	160
		Multiplex Communication System	104
		Power Window	162
30A	PWR SEAT	Power Seat (TMC Made)	220
		Power Seat (TMMK Made)	224
40A	DEF	Rear Window Defogger and Mirror Heater	246

Engine Room R/B (See Page 22)

Fuse		System	Page
5A	DRL	Headlight	116
		Multiplex Communication System	104
15A	HEAD LH LWR	Fog Light	120
		Headlight	116
		Multiplex Communication System	104
15A	HEAD RH LWR	Headlight	116
		Multiplex Communication System	104
60A	ABS NO.1	ABS (TMMK Made)	178
100A	ALT (2AZ–FE)	Automatic Light Control	122
		Charging	74
		Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	210
		Engine Control (2AZ–FE)	88
		Illumination	132
		Light Auto Turn Off	124
		Multiplex Communication System	104
		Starting and ignition (2AZ–FE)	70
		Taillight	138
120A	ALT (1MZ–FE)	Automatic Light Control	122
		Charging	74
		Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	202
		Engine Control (1MZ–FE)	76
		Illumination	132
		Light Auto Turn Off	124
		Multiplex Communication System	104
		Starting and ignition (1MZ–FE)	66
		Taillight	138

ABS R/B (See Page 23)

Fuse		System	Page
7.5A	ABS NO.4	VSC	166

* These are the page numbers of the first page on which the related system is shown.

cardiagn.com

cardiagn.com

K CONNECTOR LIST

*1 : TMC Made Automatic A/C

A 1
Black



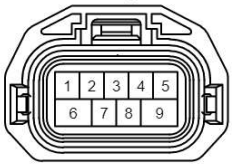
A 2
Gray



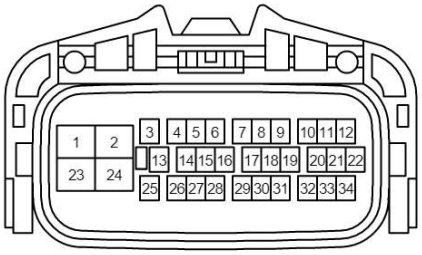
A 3
Gray



A 4
Gray



A 5
Black



A 6
Gray



A 7



A 8
Dark Gray



A 9
Dark Gray



A10
Dark Gray



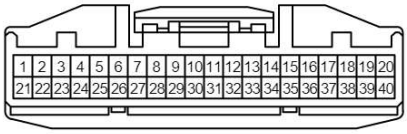
A11
Yellow



A12
Yellow



A13



A14
Black



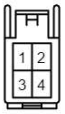
A15
Black



A16



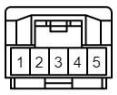
A17



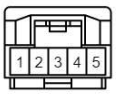
A18
Black



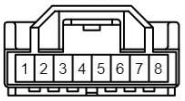
A19



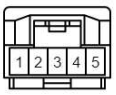
A20



A21
(Manual A/C)



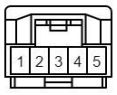
A21
(*1) Black



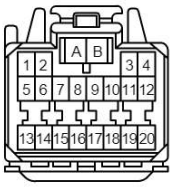
cardiagn.com

*2 : TMMK Made Automatic A/C
*3 : w/o Side Airbag

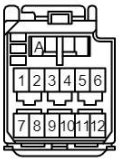
A21 (*2)



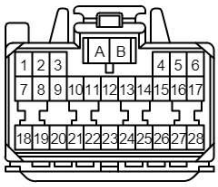
A22 (w/ Side Airbag) Yellow



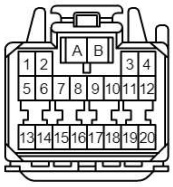
A22 (*3) Yellow



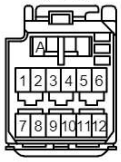
A23 Yellow



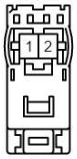
A24 (w/ Side Airbag) Yellow



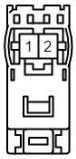
A24 (*3) Yellow



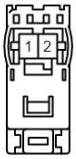
A25 (TMC Made) Black



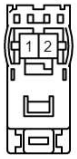
A25 (TMMK Made) Yellow



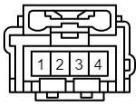
A26 (TMC Made) Orange



A26 (TMMK Made) Yellow



A27 Yellow



A28 Black



A32 Gray



A33 Gray



B 1 Gray



B 2 Gray



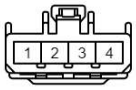
B 3 (Automatic A/C) Black



B 3 (Manual A/C)



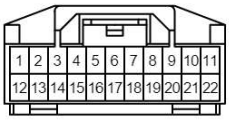
B 4 Black



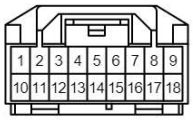
B 5 Black



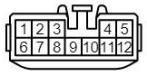
B 6



B 7



B 8



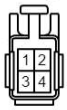
B 9 (TMC Made) Gray



B 9 (TMMK Made) Gray



B10 (TMC Made) Gray



B10 (TMMK Made)



C 1 Black



C 2 Black



cardiagn.com

K CONNECTOR LIST

C 3
(1MZ–FE) Black



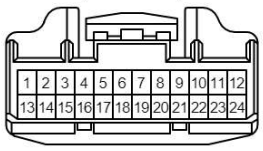
C 3
(2AZ–FE) Dark Gray



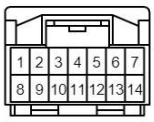
C 4



C 5
(Automatic A/C)



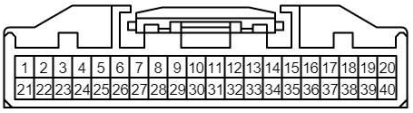
C 5
(Manual A/C)



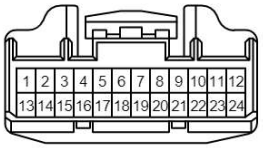
C 6
Black



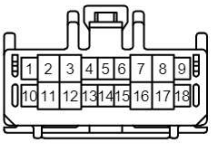
C 7



C 8



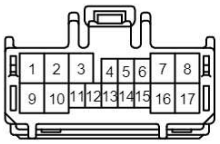
C 9
Black



C10
Black



C11



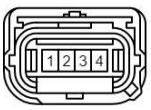
C12



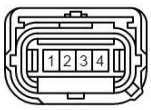
C13



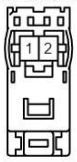
C14
Yellow



C15
Yellow



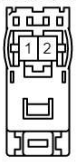
C16
(TMC Made) Black



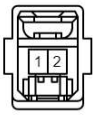
C16
(TMMK Made) Yellow



C17
(TMC Made) Black



C17
(TMMK Made) Yellow



D 1
Gray



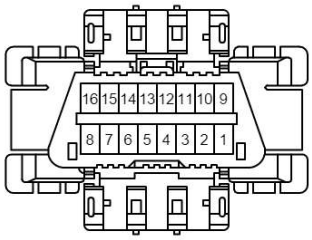
D 2
Black



cardiagn.com

*4 : TMC Made 2AZ–FE
*5 : 1MZ–FE,TMMK Made 2AZ–FE

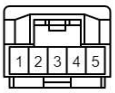
D 3



D 4
Black



D 5



D 6
(TMC Made) Black



D 6
(TMMK Made)



D 7
(TMC Made) Black



D 7
(TMMK Made)



D 8
(TMC Made) Black



D 8
(TMMK Made)



D 9
(TMC Made) Black



D 9
(TMMK Made)



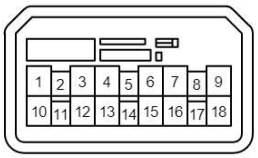
D10



D11



D12



D13
(TMC Made)



D13
(TMMK Made) Black



D14



D15



E 1
Dark Gray



E 2
Black



E 3
Gray



E 4
(*4) Dark Gray



E 4
(*5) Dark Gray



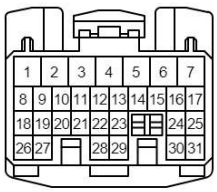
E 5
Black



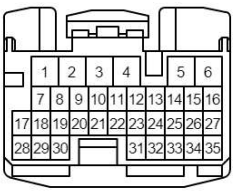
cardiagn.com

K CONNECTOR LIST

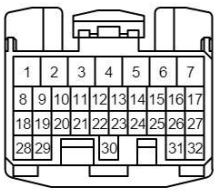
E 6



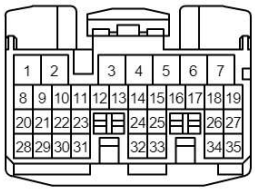
E 7



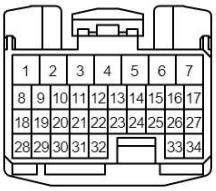
E 8



E 9



E10



F 1
Brown



F 2
Brown



F 3
Gray



F 4
Gray



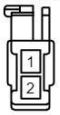
F 5
(TMC Made) Gray



F 5
(TMMK Made) Black



F 6
(TMC Made)



F 6
(TMMK Made)



F 7
(TMC Made)



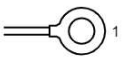
F 7
(TMMK Made)



F 8



G 1



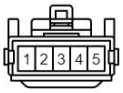
G 2
Black



G 3
Black



G 4



H 1
Black



H 2
Brown



H 3
Black



H 4
Brown



H 5
Dark Gray



H 6
Dark Gray



H 7
Black



H 8
Black



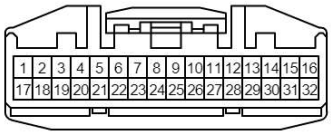
H 9
Black



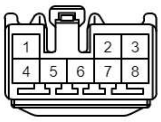
cardiagn.com

*4 : TMC Made 2AZ–FE
*6 : w/ Rear Spoiler
*7 : w/o Rear Spoiler
*8 : TMMK Made 2AZ–FE

H10



H11



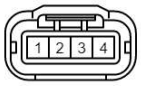
H12 (*6)



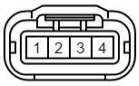
H12 (*7) Gray



I 1 Black



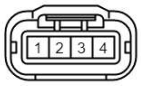
I 2 Black



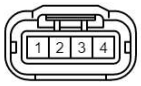
I 3 Black



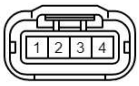
I 4 Black



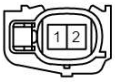
I 5 Black



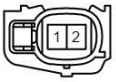
I 6 Black



I 7 (*4) Gray



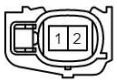
I 7 (*8) Blue



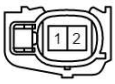
I 7 (1MZ–FE) Gray



I 8 (*4) Gray



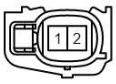
I 8 (*8) Blue



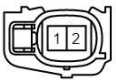
I 8 (1MZ–FE) Gray



I 9 (*4) Gray



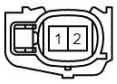
I 9 (*8) Blue



I 9 (1MZ–FE) Gray



I10 (*4) Gray



I10 (*8) Blue



I10 (1MZ–FE) Gray



I11 Gray



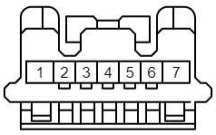
I12 Gray



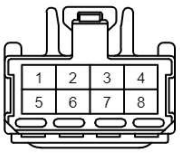
I13 Gray



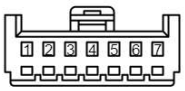
I14 Black



I15



I16 Black



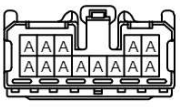
I17 (TMC Made)



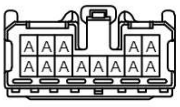
I17 (TMMK Made) Gray



J 1



J 2



J 3

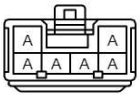


cardiagn.com

K CONNECTOR LIST

*9 : TMC Made w/ Mirror Heater
*10 : TMC Made w/o Mirror Heater

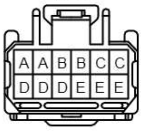
J 4



J 5
Black



J 6
Black



J 7



J 8



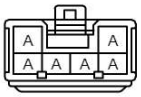
J 9
Black



J10
Black



J11



K 1
Black



K 2
Dark Gray



K 3
Dark Gray



K 4
Dark Gray



L 1
Gray



L 2
Gray



L 3



L 4
Black



L 5



M 1
Black



M 2
(*9)



M 2
(*10)



M 2
(TMMK Made)



M 3
(*9)



M 3
(*10)



M 3
(TMMK Made)



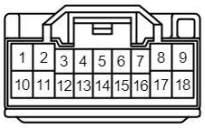
M 4



N 1
Gray



N 2



N 3



N 4



O 1
Gray



P 1
Black



P 2
Gray



P 3



P 4



P 5
(TMC Made)



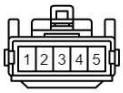
P 5
(TMMK Made)



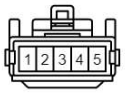
P 6
(TMC Made)



P 6
(TMMK Made)

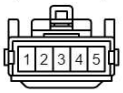


P 7
(TMC Made) Black

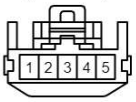


cardiagn.com

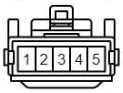
P 7
(TMMK Made)



P 8
(TMC Made)



P 8
(TMMK Made)



P 9
(TMC Made) Black



P 9
(TMMK Made) Black



P10
(TMC Made) Black



P10
(TMMK Made) Black



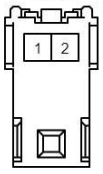
P11
Black



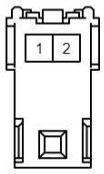
P12
Black



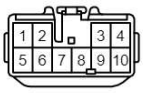
P13
Yellow



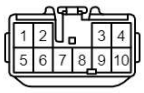
P14
Yellow



P15
Black



P16
Black



P17
Orange



P18
Blue



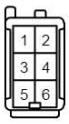
P19



P20



P21



P22
Orange



P23
Blue



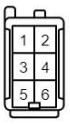
P24



P25



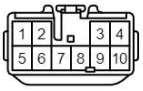
P26



R 1
Gray



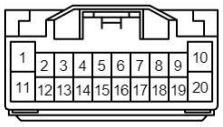
R 2



R 3
Blue



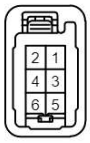
R 4



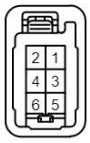
R 5



R 6



R 7



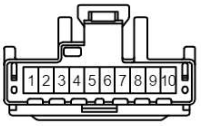
R 8



R 9



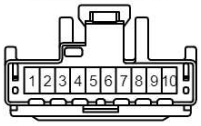
R10
(TMC Made)



cardiagn.com

K CONNECTOR LIST

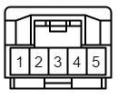
R10
(TMMK Made) Black



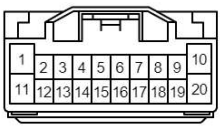
R11
Black



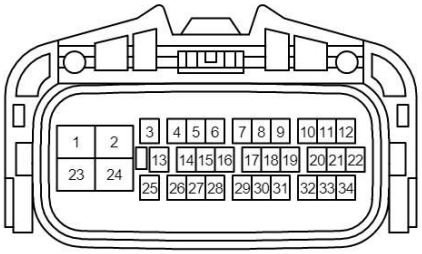
R12
Gray



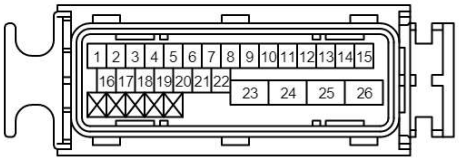
R13



S 1
(TMC Made) Black



S 1
(TMMK Made) Black



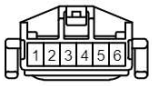
S 2
Black



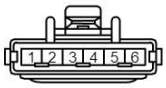
S 3



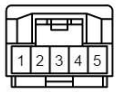
S 4
Black



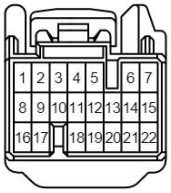
S 5
Blue



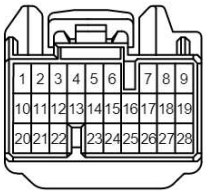
S 6



S 7
Black



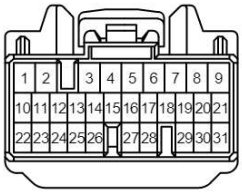
S 8
Black



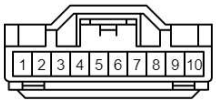
S 9
Black



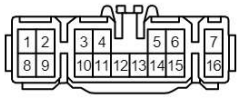
S10
Black



S11



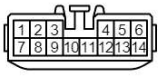
S12



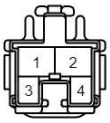
cardiagn.com

*11 : TMC Made 1MZ–FE
*12 : 2AZ–FE,TMMK Made 1MZ–FE

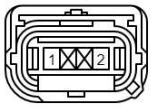
S13



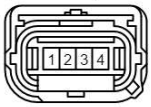
S14
Blue



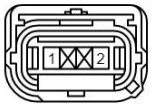
S15
(TMC Made) Yellow



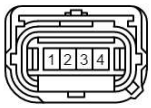
S15
(TMMK Made) Yellow



S16
(TMC Made) Yellow



S16
(TMMK Made) Yellow



S17



S18



S19
Yellow



S20
Yellow



T 1
Black



T 2
Black



T 3
(*11) Black



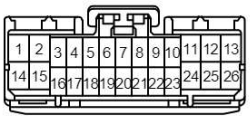
T 3
(*12) Black



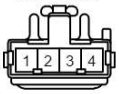
T 4
Black



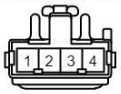
T 5



T 6
(TMC Made)



T 6
(TMMK Made) Black



T 7
Black



T 8



T 9



T10



U 1



V 1
Black



V 2
Brown



V 3
Blue



V 4
Black



V 5
Brown



V 6
(TMC Made) Black



V 6
(TMMK Made) Blue



V 7
Black



V 8
Black



V 9
(TMC Made) Blue



V 9
(TMMK Made)



V10
(TMC Made) Blue



cardiagn.com

K CONNECTOR LIST

V10
(TMMK Made)



V11
Black



V12
Blue



W 1
Black



W 2
Black



W 3
Gray



W 4
Gray



Y 1
Black



cardiagn.com

cardiagn.com

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number
A 1	A/C Ambient Temp. Sensor	90980–11070
A 2	A/C Condenser Fan Motor	90980–10928
A 3	A/C Lock Sensor	90980–11016
	A/C Magnetic Clutch	
A 4	A/T Indicator Light SW	90980–11784
	Back–Up Light SW	
	Park/Neutral Position SW	
A 5	ABS & BA & TRAC & VSC Actuator	90980–12020
A 6	ABS Speed Sensor Front LH	90980–11002
A 7	ABS Speed Sensor Front RH	
A 8	Air Fuel Ratio Sensor	90980–11178
A 9	Air Fuel Ratio Sensor (Bank 1 Sensor 1)	
A10	Air Fuel Ratio Sensor (Bank 2 Sensor 1)	
A11	Airbag Sensor Front LH	90980–11856
A12	Airbag Sensor Front RH	
A13	A/C Control Assembly	90980–12169
A14	A/C Room Temp. Sensor	90980–11918
A15	A/C Solar Sensor	
A16	A/C Thermistor	
A17	A/T Shift Lever Illumination	90980–12211
	O/D Main SW	
A18	Accelerator Position Sensor	90980–11144
A19	Air Inlet Control Servo Motor	90980–11909
A20	Air Mix Control Servo Motor	
A21	Air Vent Mode Servo Motor (Automatic A/C)	90980–11909
	Air Vent Mode Servo Motor (Manual A/C)	90980–11989
A22	Airbag Sensor Assembly (w/ Side Airbag)	82824–50160
	Airbag Sensor Assembly (w/o Side Airbag)	90980–11869
A23	Airbag Sensor Assembly	90980–11872
A24	Airbag Sensor Assembly (w/ Side Airbag)	82824–50150
	Airbag Sensor Assembly (w/o Side Airbag)	90980–11867
A25	Airbag Squib (Front Passenger Airbag Assembly)	90980–12219
A26	Airbag Squib (Front Passenger Airbag Assembly)	90980–12224
A27	Airbag Squib (Steering Wheel Pad)	90980–12160
A28	Automatic Light Control Sensor	90980–11107
A32	ABS Speed Sensor Rear LH	90980–11060
A33	ABS Speed Sensor Rear RH	
B 1	Back–Up Light SW	90980–11250
B 2	Brake Fluid Level Warning SW	90980–11207
B 3	Blower Motor	90980–10903
B 4	Blower Motor Controller	90980–11676
B 5	Blower Resistor	90980–11136
B 6	Body ECU	90980–11915
B 7	Body ECU	90980–11913

Code	Part Name	Part Number
B 8	Body ECU	90980–10803
B 9	Buckle SW LH (TMC Made)	90980–10942
	Buckle SW LH (TMMK Made)	90980–11034
B10	Buckle SW RH (TMC Made)	90980–10795
	Buckle SW RH (TMMK Made)	90980–10797
	Occupant Detection Sensor (TMC Made)	90980–10795
	Occupant Detection Sensor (TMMK Made)	90980–10797
C 1	Camshaft Position Sensor	90980–10947
C 2	Counter Gear Speed Sensor	90980–11156
C 3	Crankshaft Position Sensor	90980–10947
C 4	Cigarette Lighter	90980–11606
C 5	Clock (Automatic A/C)	90980–12200
	Clock (Manual A/C)	90980–11911
C 6	Clutch Start SW	90980–10825
C 7	Combination Meter	90980–12170
C 8	Combination Meter	90980–12200
C 9	Combination SW	90980–11594
C10	Combination SW	90980–12183
C11	Combination SW	90980–11672
C12	Cruise Control Clutch SW	90980–10906
C13	Choke Coil	90980–11259
C14	Curtain Shield Airbag Sensor LH	90980–12225
C15	Curtain Shield Airbag Sensor RH	
C16	Curtain Shield Airbag Squib LH (TMC Made)	90980–12219
	Curtain Shield Airbag Squib LH (TMMK Made)	90980–11884
C17	Curtain Shield Airbag Squib RH (TMC Made)	90980–12219
	Curtain Shield Airbag Squib RH (TMMK Made)	90980–11884
D 1	Diode (A/C No.1)	90980–11071
D 2	Diode (A/C No.2)	90980–10962
D 3	Data Link Connector 3	90980–11665
D 4	Diode	90980–10962
D 5	Door Control Receiver	90980–11909
D 6	Door Courtesy SW Front LH	90980–10871
D 7	Door Courtesy SW Front RH	
D 8	Door Courtesy SW Rear LH	
D 9	Door Courtesy SW Rear RH	
D10	Door Key Lock and Unlock SW Front LH	90980–12226
	Door Lock Motor Front LH	
	Door Unlock Detection SW Front LH	
D11	Door Key Lock and Unlock SW Front RH	
	Door Lock Motor Front RH	
	Door Unlock Detection SW Front RH	

Note: Not all of the above part numbers of the connector are established for the supply.

cardiagn.com

Code	Part Name	Part Number
D12	Door Lock Control SW Front LH	90980–12122
	Power Window Master SW	
D13	Door Lock Control SW RH (TMC Made)	82824–12270
	Door Lock Control SW RH (TMMK Made)	90980–10797
D14	Door Lock Motor Rear LH	90980–12226
	Door Unlock Detection SW Rear LH	
D15	Door Lock Motor Rear RH	
	Door Unlock Detection SW Rear RH	
E 1	EGR Gas Temp. Sensor	90980–10899
E 2	EGR Valve Position Sensor	90980–11143
E 3	Electronically Controlled Transmission Solenoid	90980–11658
E 4	Engine Coolant Temp. Sensor (TMC Made 2AZ–FE)	90980–11451
	Engine Coolant Temp. Sensor (1MZ–FE,TMMK Made 2AZ–FE)	90980–10737
E 5	Engine Hood Courtesy SW	90980–11003
E 6	Engine Control Module	90980–12142
E 7	Engine Control Module	90980–12146
E 8	Engine Control Module	90980–12143
E 9	Engine Control Module	90980–12145
E10	Engine Control Module	90980–12144
F 1	Front Fog Light LH	90980–11096
F 2	Front Fog Light RH	
F 3	Front Parking Light LH	90980–11020
	Front Turn Signal Light LH	
F 4	Front Parking Light RH	
	Front Turn Signal Light RH	
F 5	Front Wiper Motor	90980–11599
F 6	Front Door Speaker LH (TMC Made)	82824–12260
	Front Door Speaker LH (TMMK Made)	90980–10935
F 7	Front Door Speaker RH (TMC Made)	82824–12260
	Front Door Speaker RH (TMMK Made)	90980–10935
F 8	Fuel Pump	90980–11077
	Fuel Sender	
G 1	Generator	90980–09213
G 2	Generator	90980–11349
G 3	Glove Box Light and SW	90980–11098
G 4	Garage Door Opener	90980–10789
	Moon Roof Control SW	
	Personal Light	
H 1	Headlight LH (High)	90980–11095
H 2	Headlight LH (Low)	90980–11096
H 3	Headlight RH (High)	90980–11095
H 4	Headlight RH (Low)	90980–11096
H 5	Heated Oxygen Sensor	90980–11930
H 6	Heated Oxygen Sensor (Bank 1 Sensor 1)	90980–10869

Code	Part Name	Part Number
H 7	Heated Oxygen Sensor (Bank 2 Sensor 2)	90980–11028
H 8	Horn (High)	90980–10619
H 9	Horn (Low)	
H10	Heater Control SW	90980–12153
H11	Heater Control SW	90980–11686
H12	High Mounted Stop Light (w/ Rear Spoiler)	90980–11060
	High Mounted Stop Light (w/o Rear Spoiler)	90980–11148
I 1	Ignition Coil and Igniter No.1	90980–11885
I 2	Ignition Coil and Igniter No.2	
I 3	Ignition Coil and Igniter No.3	
I 4	Ignition Coil and Igniter No.4	
I 5	Ignition Coil and Igniter No.5	
I 6	Ignition Coil and Igniter No.6	
I 7	Injector No.1 (1MZ–FE)	90980–11153
	Injector No.1 (2AZ–FE)	90980–11875
I 8	Injector No.2 (1MZ–FE)	90980–11153
	Injector No.2 (2AZ–FE)	90980–11875
I 9	Injector No.3 (1MZ–FE)	90980–11153
	Injector No.3 (2AZ–FE)	90980–11875
I10	Injector No.4 (1MZ–FE)	90980–11153
	Injector No.4 (2AZ–FE)	90980–11875
I11	Injector No.5	90980–11153
I12	Injector No.6	
I13	Ignition Key Cylinder Light	90980–10679
I14	Ignition Key Cylinder Light	90980–12092
	Transponder Key Amplifier	
I15	Ignition SW	90980–11615
I16	Inner Mirror	90980–11794
I17	Interior Light	90980–10908
J 1	Junction Connector	90980–11542
J 2	Junction Connector	
J 3	Junction Connector	90980–10803
J 4	Junction Connector	90980–10976
J 5	Junction Connector	90980–11661
J 6	Junction Connector	
J 7	Junction Connector	
J 8	Junction Connector	
J 9	Junction Connector	90980–11398
J10	Junction Connector	
J11	Junction Connector	90980–10976
K 1	Keyless Buzzer	90980–11142
K 2	Knock Sensor	90980–11166
K 3	Knock Sensor No.1	
K 4	Knock Sensor No.2	
L 1	License Plate Light LH	90980–11148
L 2	License Plate Light RH	

cardiagn.com

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number
L 3	Luggage Compartment Door Key Unlock SW	90980–11060
L 4	Luggage Compartment Door Opener Motor	90980–10825
	Luggage Compartment Light SW	
L 5	Luggage Compartment Light	90980–11148
M 1	Mass Air Flow Meter	90980–11317
M 2	Mirror Heater LH (TMC Made w/ Mirror Heater)	90980–10558
	Mirror Heater LH (TMC Made w/o Mirror Heater)	90980–10395
	Mirror Heater LH (TMMK Made)	90980–11488
	Remote Control Mirror LH (TMC Made w/ Mirror Heater)	90980–10558
	Remote Control Mirror LH (TMC Made w/o Mirror Heater)	90980–10395
	Remote Control Mirror LH (TMMK Made)	90980–11488
M 3	Mirror Heater RH (TMC Made w/ Mirror Heater)	90980–10558
	Mirror Heater RH (TMC Made w/o Mirror Heater)	90980–10395
	Mirror Heater RH (TMMK Made)	90980–11488
	Remote Control Mirror RH (TMC Made w/ Mirror Heater)	90980–10558
	Remote Control Mirror RH (TMC Made w/o Mirror Heater)	90980–10395
	Remote Control Mirror RH (TMMK Made)	90980–11488
M 4	Moon Roof Control ECU and Motor	90980–10799
N 1	Noise Filter (Ignition)	90980–10843
N 2	Navigation ECU	90980–11973
N 3	Navigation ECU	90980–11923
N 4	Noise Filter	90980–10860
O 1	Oil Pressure Sensor	90980–11363
P 1	Power Steering Oil Pressure SW	90980–11428
P 2	Pressure SW	90980–10943
P 3	Parking Brake SW	90980–10871
P 4	Power Outlet (Front)	90980–10760
P 5	Power Outlet (Rear) (TMC Made)	90980–10860
	Power Outlet (Rear) (TMMK Made)	90980–10760
P 6	Power Window Control SW Front RH (TMC Made)	82824–12230
	Power Window Control SW Front RH (TMMK Made)	90980–10789
P 7	Power Window Control SW Rear LH	90980–10789
P 8	Power Window Control SW Rear RH (TMC Made)	82824–12230
	Power Window Control SW Rear RH (TMMK Made)	90980–10789
P 9	Power Window Motor Front LH (TMC Made)	82824–12270
	Power Window Motor Front LH (TMMK Made)	90980–10797

Code	Part Name	Part Number
P10	Power Window Motor Front RH (TMC Made)	82824–12270
	Power Window Motor Front RH (TMMK Made)	90980–10797
P11	Power Window Motor Rear LH	90980–10797
P12	Power Window Motor Rear RH	
P13	Pretensioner LH	90980–12138
P14	Pretensioner RH	
P15	Power Seat Control SW (Driver's Seat)	90980–10997
P16	Power Seat Control SW (Front Passenger's Seat)	
P17	Power Seat Motor (Driver's Seat Front Vertical Control)	90980–10825
P18	Power Seat Motor (Driver's Seat Lifter Control)	
P19	Power Seat Motor (Driver's Seat Reclining Control)	
P20	Power Seat Motor (Driver's Seat Slide Control)	
P21	Power Seat Motor (Driver's Seat)	90980–11011
P22	Power Seat Motor (Front Passenger's Seat Front Vertical Control)	90980–10825
P23	Power Seat Motor (Front Passenger's Seat Lifter Control)	
P24	Power Seat Motor (Front Passenger's Seat Reclining Control)	
P25	Power Seat Motor (Front Passenger's Seat Slide Control)	
P26	Power Seat Motor (Front Passenger's Seat)	90980–11011
R 1	Radiator Fan Motor	90980–10928
R 2	Radio and Player	90980–10997
R 3	Radio and Player	90980–10996
R 4	Radio and Player	90980–12038
R 5	Rheostat	90980–11296
R 6	Rear Combination Light LH	90980–11587
R 7	Rear Combination Light RH	
R 8	Rear Speaker LH	90980–11060
R 9	Rear Speaker RH	
R10	Remote Control Mirror SW	90980–11657
R11	Radio and Player with Display	90980–11923
R12	Radio and Player with Display	90980–11909
R13	Radio and Player with Display	90980–12038
S 1	Skid Control ECU with Actuator (TMC Made)	90980–12020
	Skid Control ECU with Actuator (TMMK Made)	90080–98273
S 2	Starter	90980–11400
S 3	Starter	90980–09463
S 4	Seat Heater SW (Driver's Seat)	90980–10964

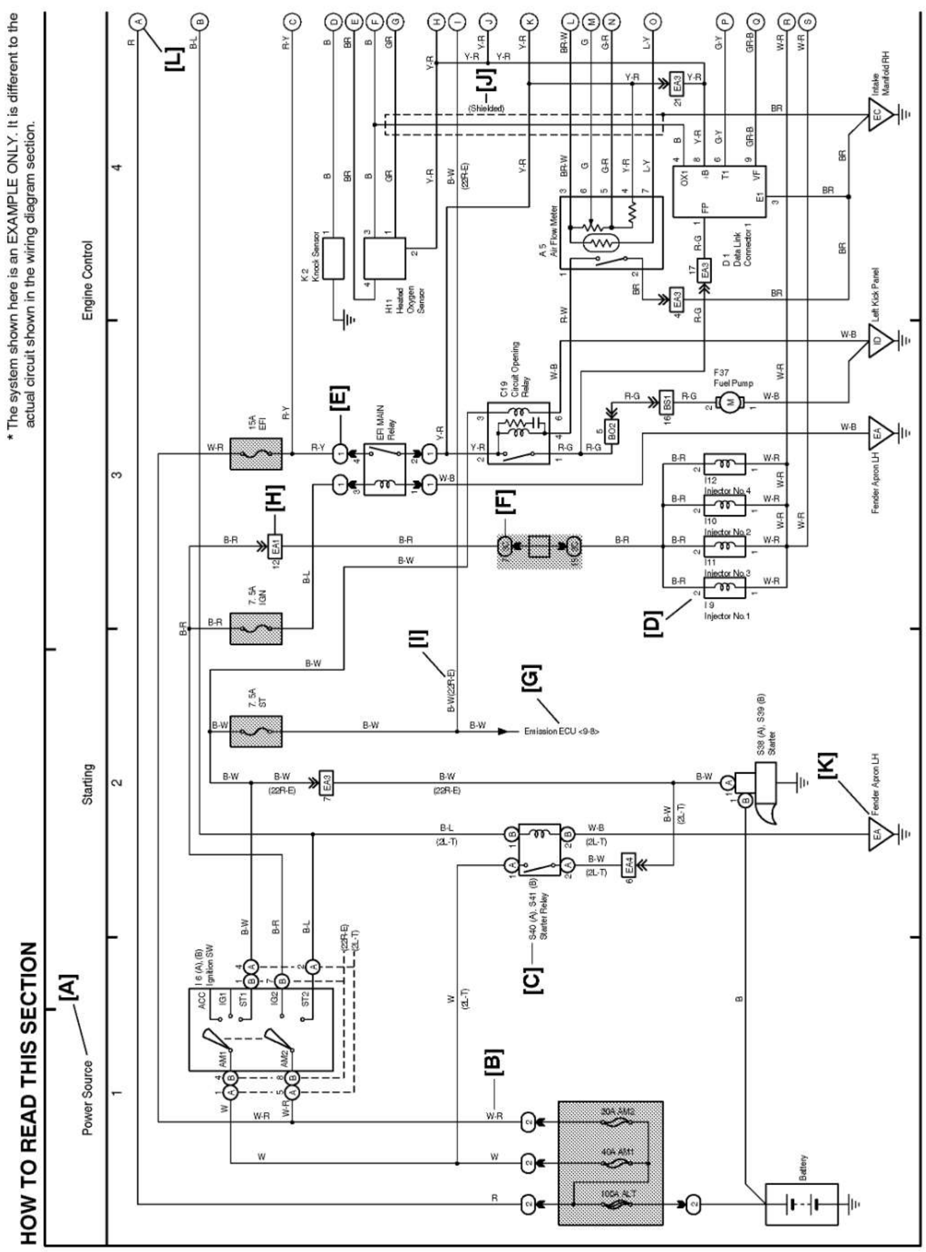
Note: Not all of the above part numbers of the connector are established for the supply.

cardiagn.com

Code	Part Name	Part Number
S 5	Seat Heater SW (Front Passenger's Seat)	90980–10933
S 6	Shift Lock Control ECU	90980–11909
S 7	Skid Control ECU	90980–11638
S 8	Skid Control ECU	90980–11637
S 9	Skid Control ECU	90980–11476
S10	Skid Control ECU	90980–11421
S11	Steering Sensor	90980–12162
S12	Stereo Component Amplifier	90980–10848
S13	Stereo Component Amplifier	90980–10807
S14	Stop Light SW	90980–11118
S15	Side Airbag Sensor LH (TMC Made)	90980–12241
	Side Airbag Sensor LH (TMMK Made)	90980–12225
S16	Side Airbag Sensor RH (TMC Made)	90980–12241
	Side Airbag Sensor RH (TMMK Made)	90980–12225
S17	Seat Heater LH	90980–10906
S18	Seat Heater RH	
S19	Side Airbag Squib LH	90980–11864
S20	Side Airbag Squib RH	
T 1	Theft Deterrent Horn	90980–10619
T 2	Throttle Control Motor	90980–11156
T 3	Throttle Position Sensor (TMC Made 1MZ–FE)	90980–10711
	Throttle Position Sensor (2AZ–FE,TMMK Made 1MZ–FE)	90980–11858
T 4	Turbine Speed Sensor	90980–11156

Code	Part Name	Part Number
T 5	Theft Deterrent ECU	90980–11423
T 6	TRAC OFF SW	90980–11013
T 7	Turn Signal Flasher Relay	90980–10799
T 8	TVIP ECU	90980–10860
T 9	Tweeter LH	
T10	Tweeter RH	
U 1	Unlock Warning SW	
V 1	Vehicle Speed Sensor (Combination Meter)	90980–11143
V 2	VSV (ACIS)	90980–11149
V 3	VSV (AICV)	90980–11156
V 4	VSV (Canister Closed Valve)	90980–11162
V 5	VSV (EGR)	90980–11149
V 6	VSV (EVAP)	90980–11156
V 7	VVT Solenoid	90980–11162
V 8	VSC Warning Buzzer	90980–10906
V 9	Vanity Light LH	90980–10621
V10	Vanity Light RH	
V11	Vapor Pressure Sensor	90980–11860
V12	VSV (Pressure Switching Valve)	90980–11859
W 1	Washer Level Sensor	90980–11068
W 2	Washer Motor	90980–10981
W 3	Water Temp. SW No.1	90980–11235
W 4	Water Temp. SW No.2	90980–11243
Y 1	Yaw Rate Sensor	90980–12080

cardiagn.com



cardiagn.com

[A] : System Title

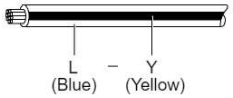
[B] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

B	= Black	W	= White	BR	= Brown
L	= Blue	V	= Violet	SB	= Sky Blue
R	= Red	G	= Green	LG	= Light Green
P	= Pink	Y	= Yellow	GR	= Gray
O	= Orange				

The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

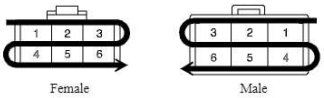
Example: L – Y



[C] : The position of the parts is the same as shown in the wiring diagram and wire routing.

[D] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example : Numbered in order from upper left to lower right / Numbered in order from upper right to lower left



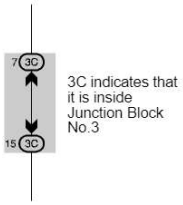
The numbering system for the overall wiring diagram is the same as above

[E] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example : (1) Indicates Relay Block No.1

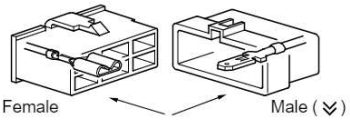
[F] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

Example:



[G] : Indicates related system.

[H] : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (»). Outside numerals are pin numbers.



[I] : ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.

[J] : Indicates a shielded cable.



[K] : Indicates and located on ground point.

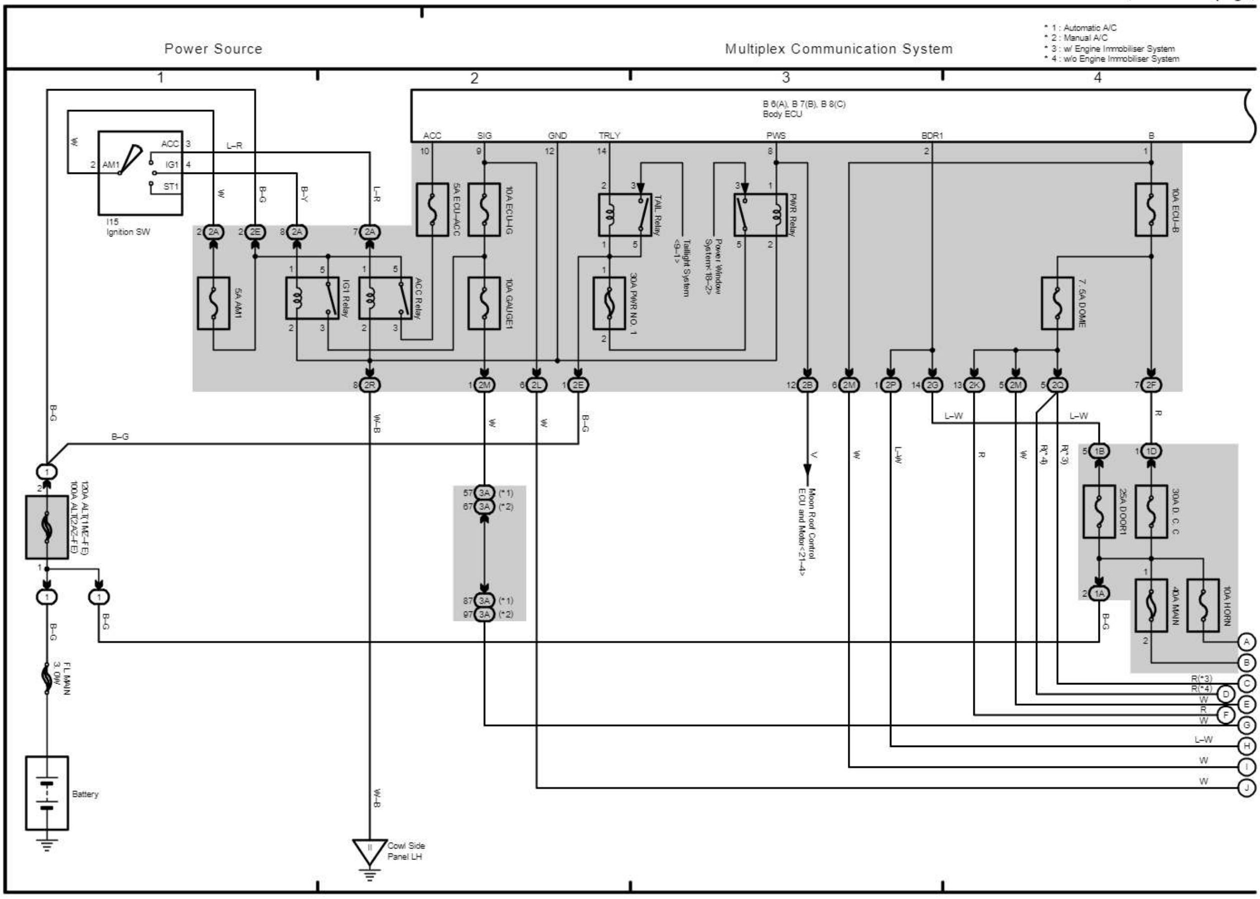
[L] : The same code occuring on the next page indicates that the wire harness is continuous.

cardiagn.com

SYSTEM INDEX

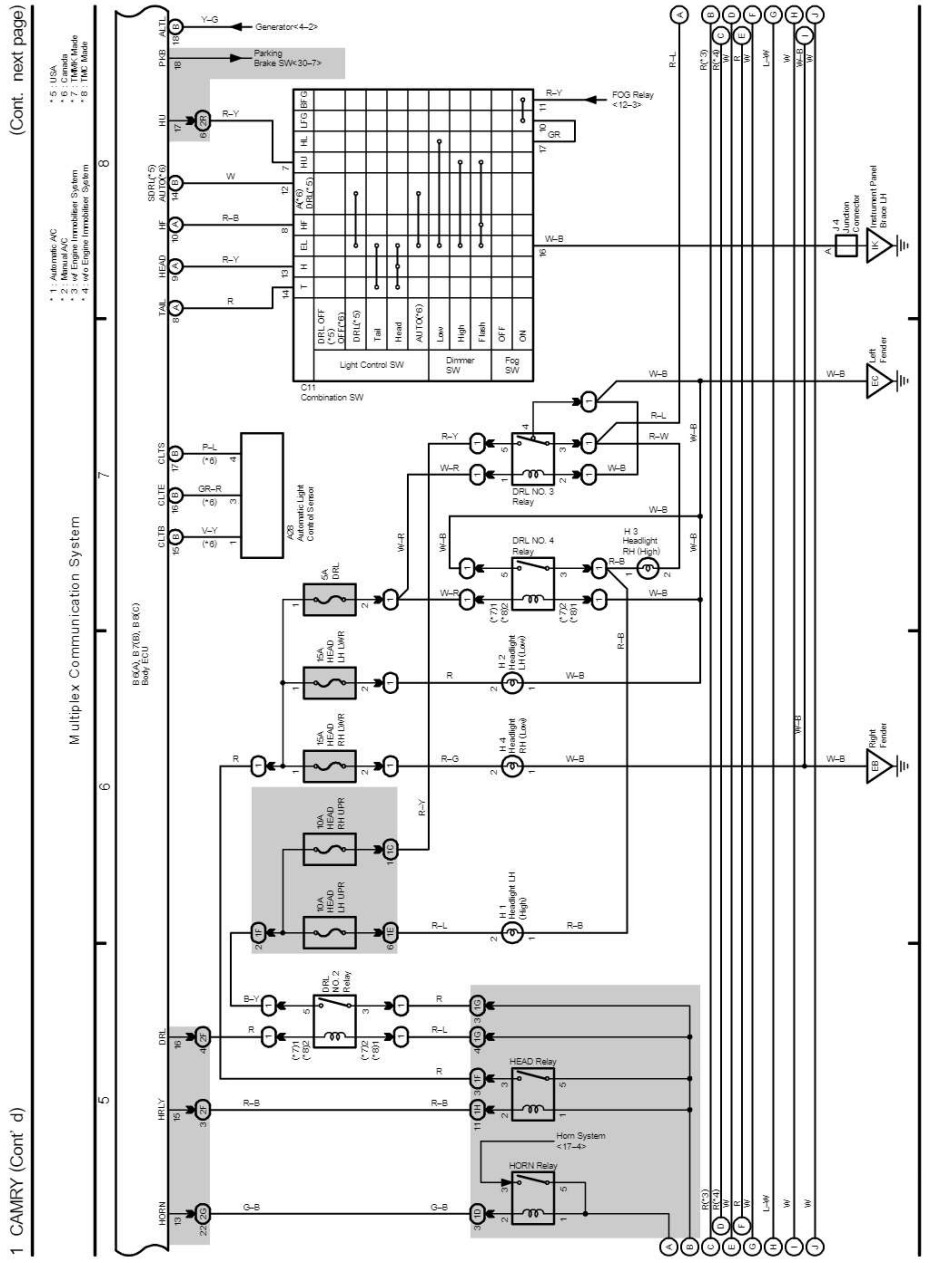
SYSTEMS	LOCATION
ABS (TMC Made)	14–3
ABS (TMMK Made)	15–3
Automatic Air Conditioning	32–3
Automatic Glare–Resistant EC Mirror	21–3
Back–Up Light	12–2
Charging	4–2
Cigarette Lighter	23–3
Clock	26–3
Combination Meter	30–2
Cruise Control (1MZ–FE)	5–14
Cruise Control (2AZ–FE)	6–11
Electronically Controlled Transmission and A/T Indicator (1MZ–FE)	7–2
Electronically Controlled Transmission and A/T Indicator (2AZ–FE)	8–2
Engine Control (1MZ–FE)	5–6
Engine Control (2AZ–FE)	6–4
Engine Immobiliser System (1MZ–FE)	5–3
Engine Immobiliser System (2AZ–FE)	6–2
Fog Light	12–4
Horn	17–4
Ignition (1MZ–FE)	2–2
Ignition (2AZ–FE)	3–2
Illumination	10–2
Manual Air Conditioning	33–3
Mirror Heater	20–4
Moon Roof	21–4
Multiplex Communication System	1–2
* Automatic Light Control	
* Door Lock Control	
* Garage Door Opener	
* Headlight	
* Interior Light	
* Key Reminder	
* Light Auto Turn Off	
* Theft Deterrent	
* Wireless Door Lock Control	
Power Outlet	23–3
Power Seat (TMC Made)	24–2
Power Seat (TMMK Made)	25–2
Power Window	18–3
Radiator Fan and Condenser Fan	31–2
Radio and Player (Built–in Type Amplifier w/o TOYOTA Navigation System)	29–3
Radio and Player (Separate Type Amplifier w/o TOYOTA Navigation System)	28–2
Radio and Player (w/ TOYOTA Navigation System)	27–3
Rear Window Defogger	20–3
Remote Control Mirror	19–3
Seat Belt Warning	17–2
Seat Heater	23–4
Shift Lock	23–3
SRS	16–3
Starting (1MZ–FE)	2–2
Starting (2AZ–FE)	3–2
Stop Light	9–4
Taillight	9–2
TOYOTA Navigation System	27–3
Turn Signal and Hazard Warning Light	11–3
VSC	13–3
Wiper and Washer	22–3

cardiagn.com

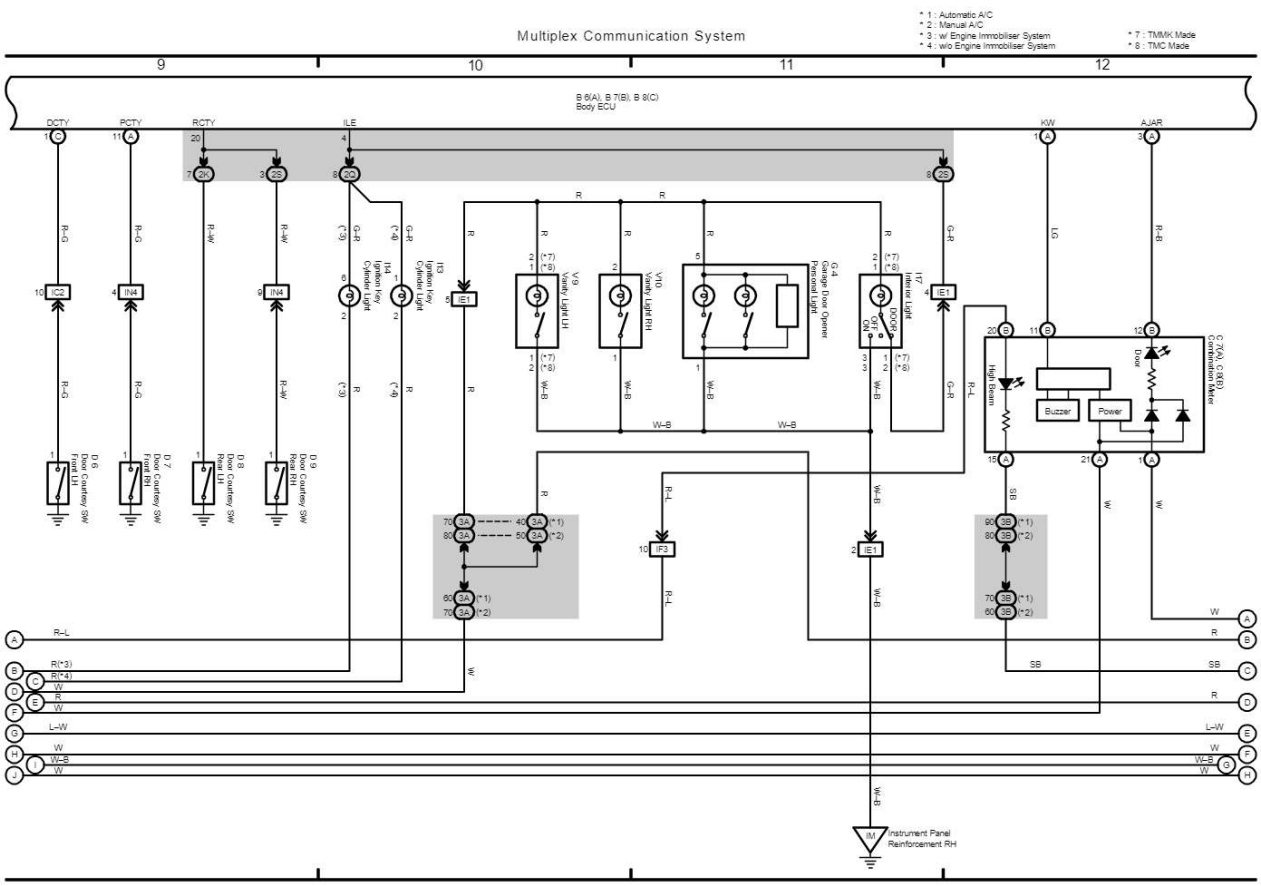


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

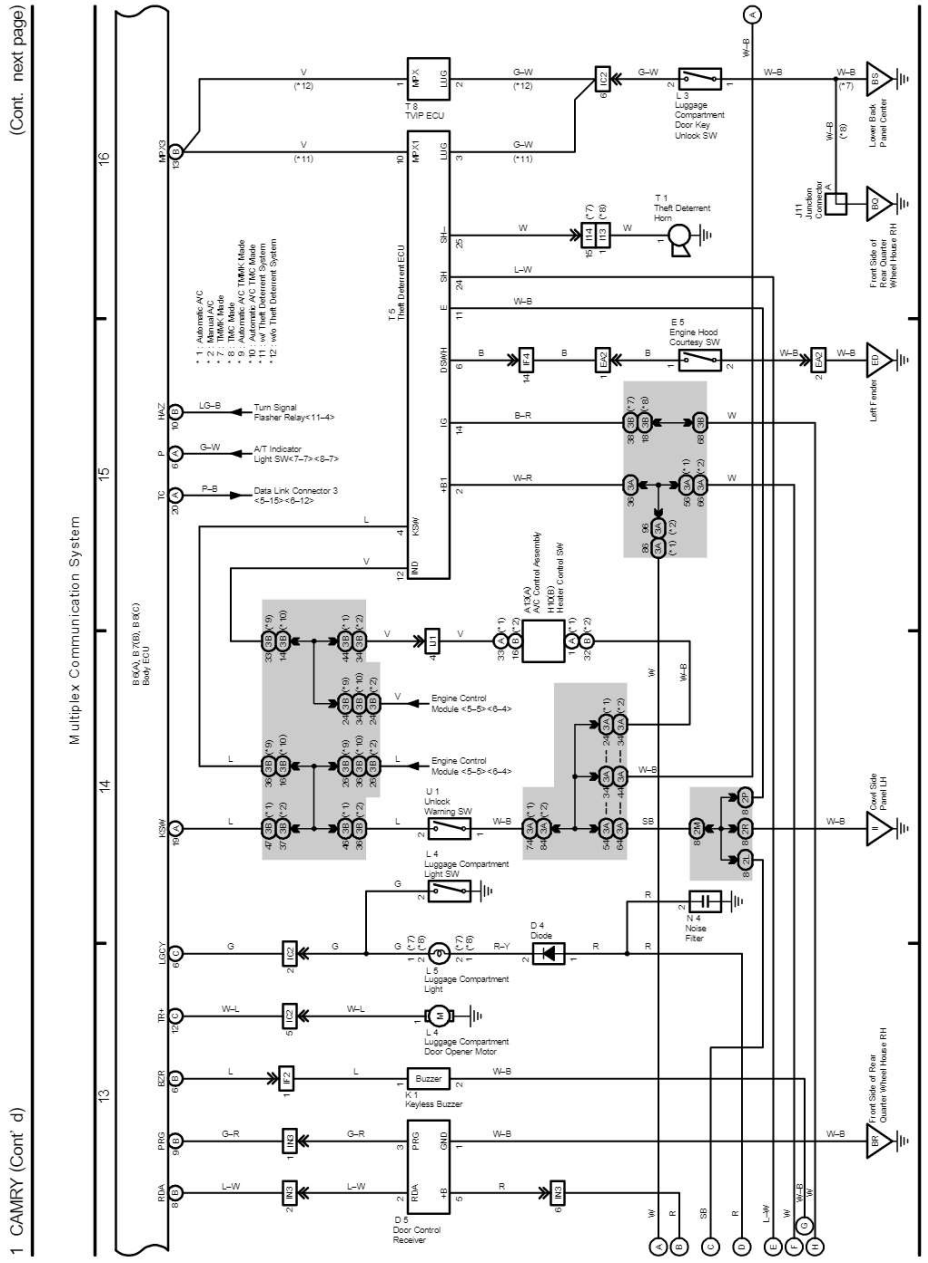


cardiagn.com

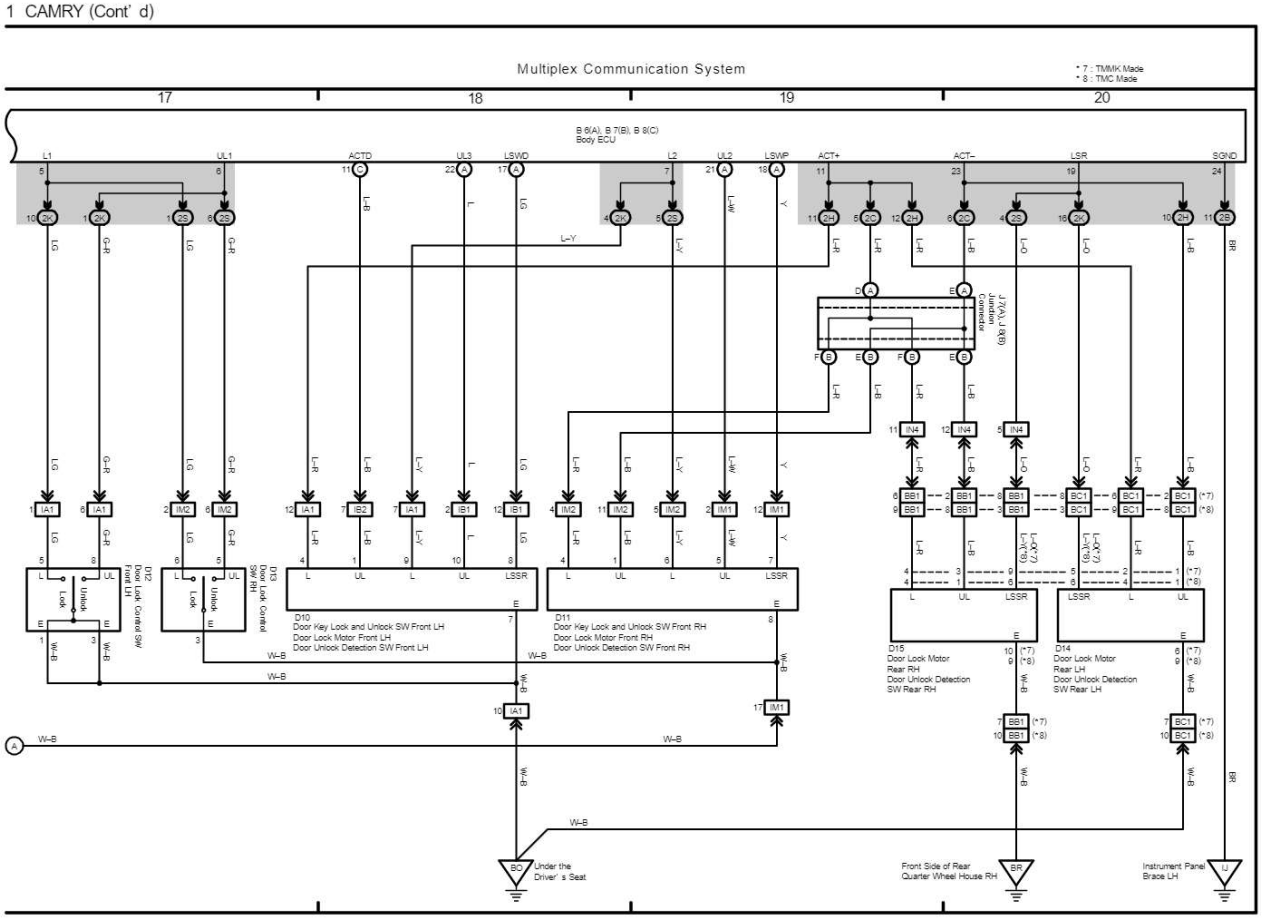


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

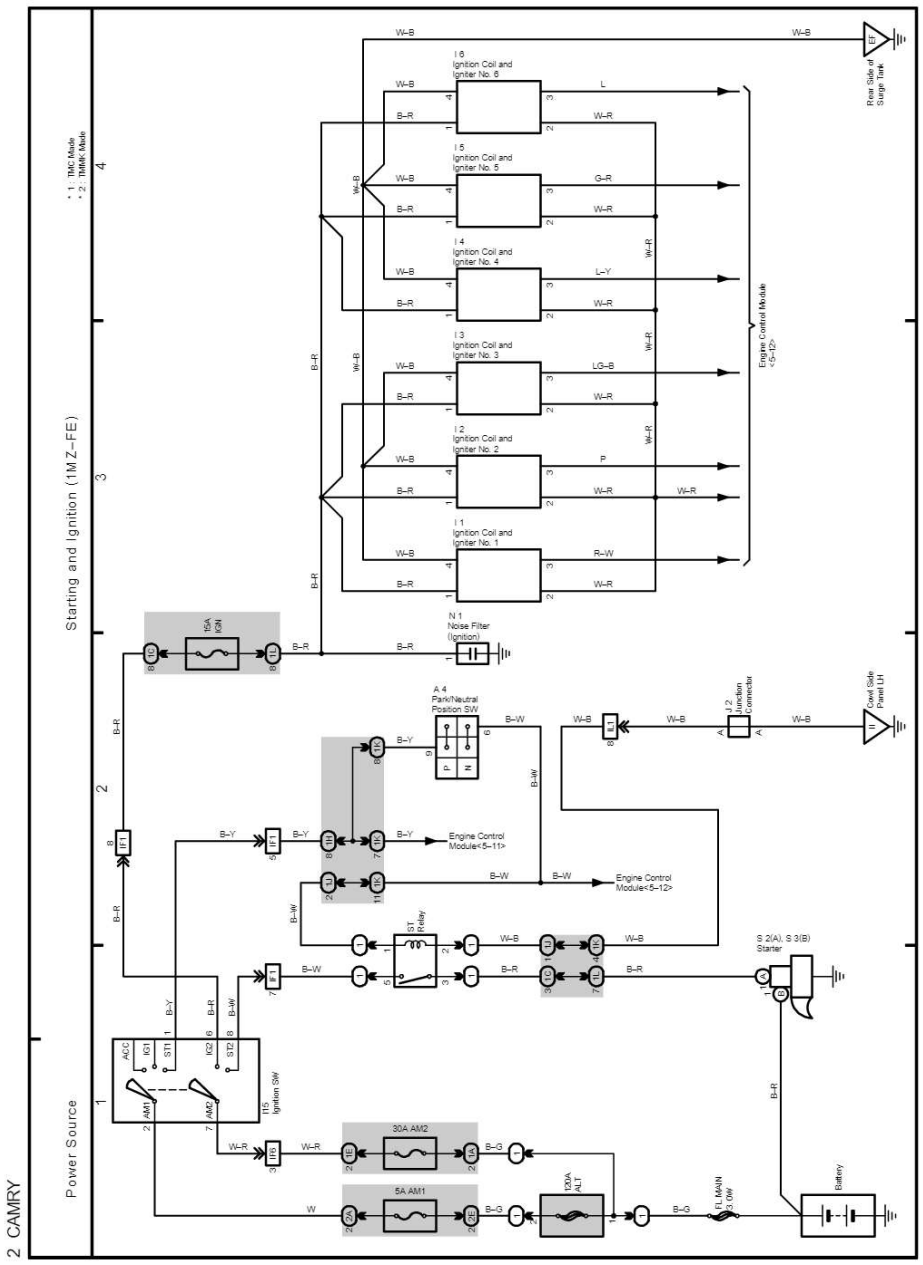


cardiagn.com

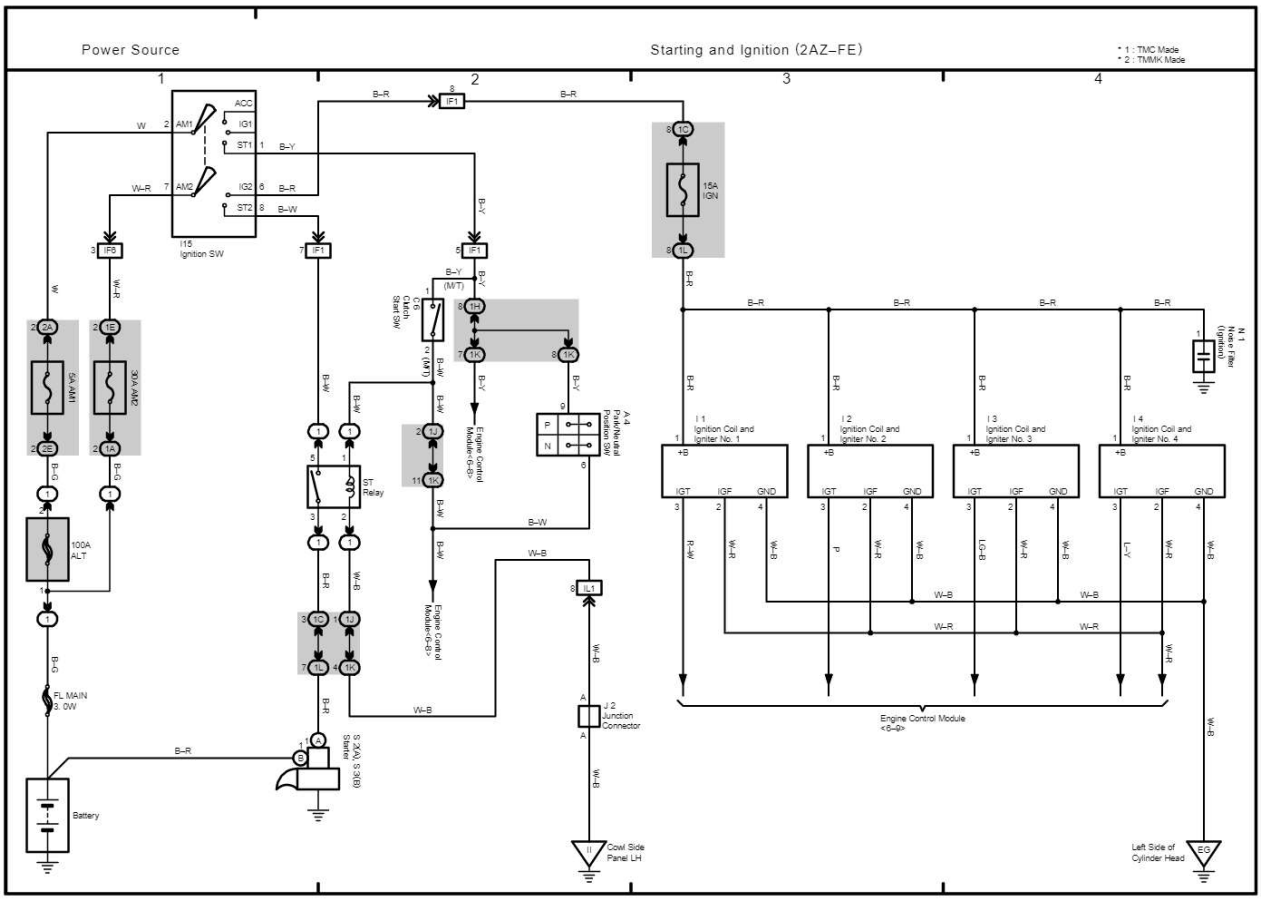


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

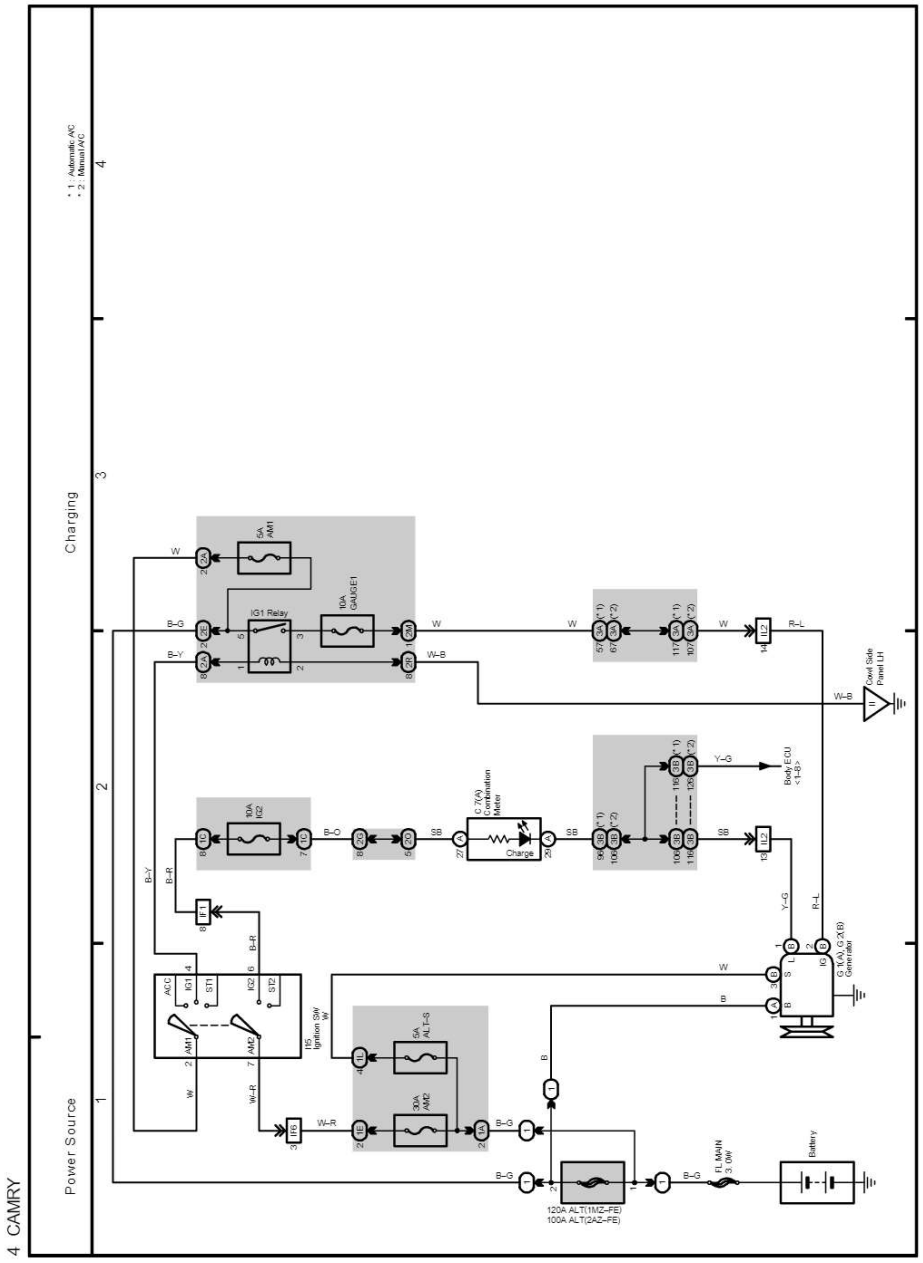


cardiagn.com



cardiagn.com

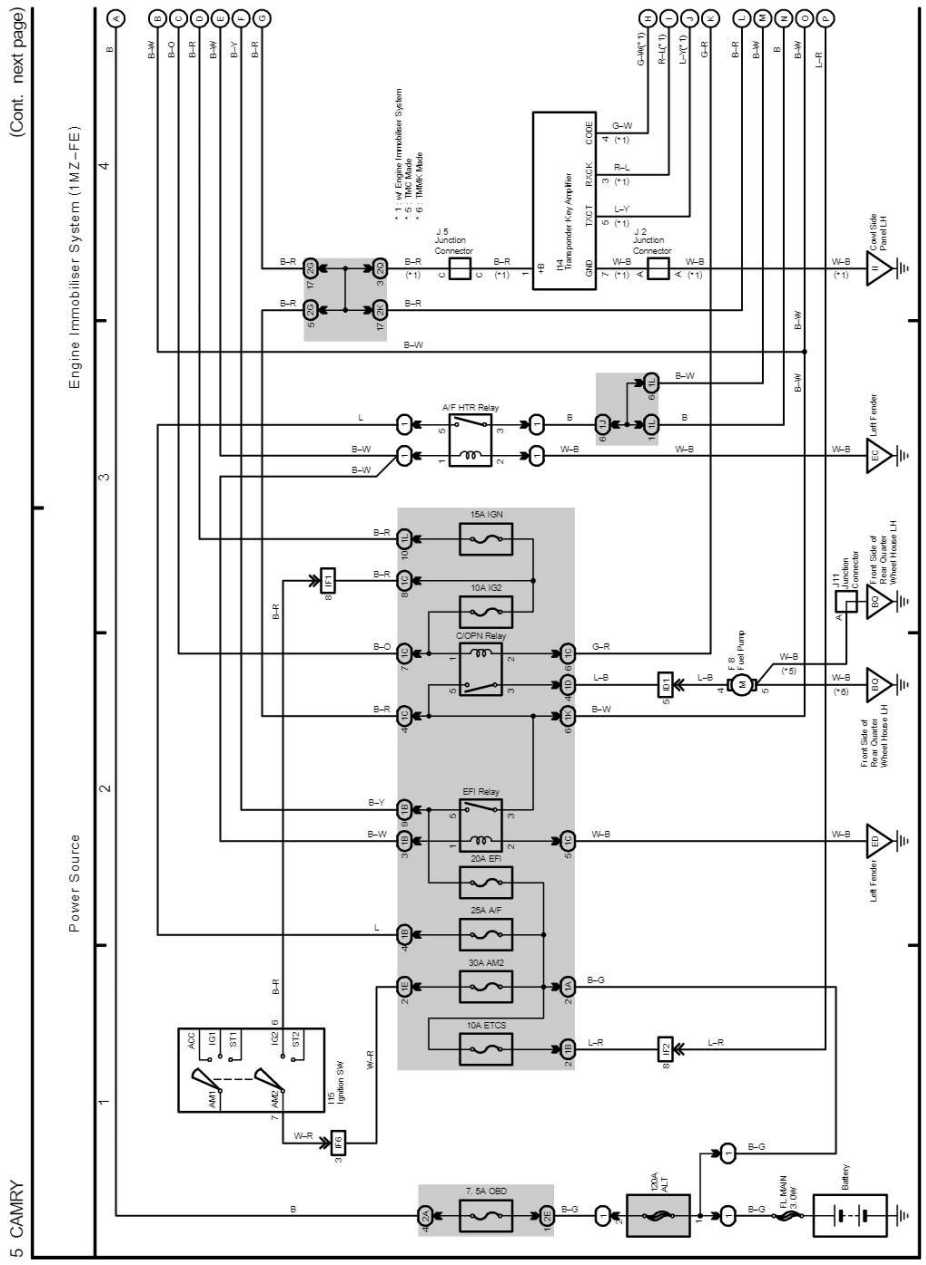
M OVERALL ELECTRICAL WIRING DIAGRAM

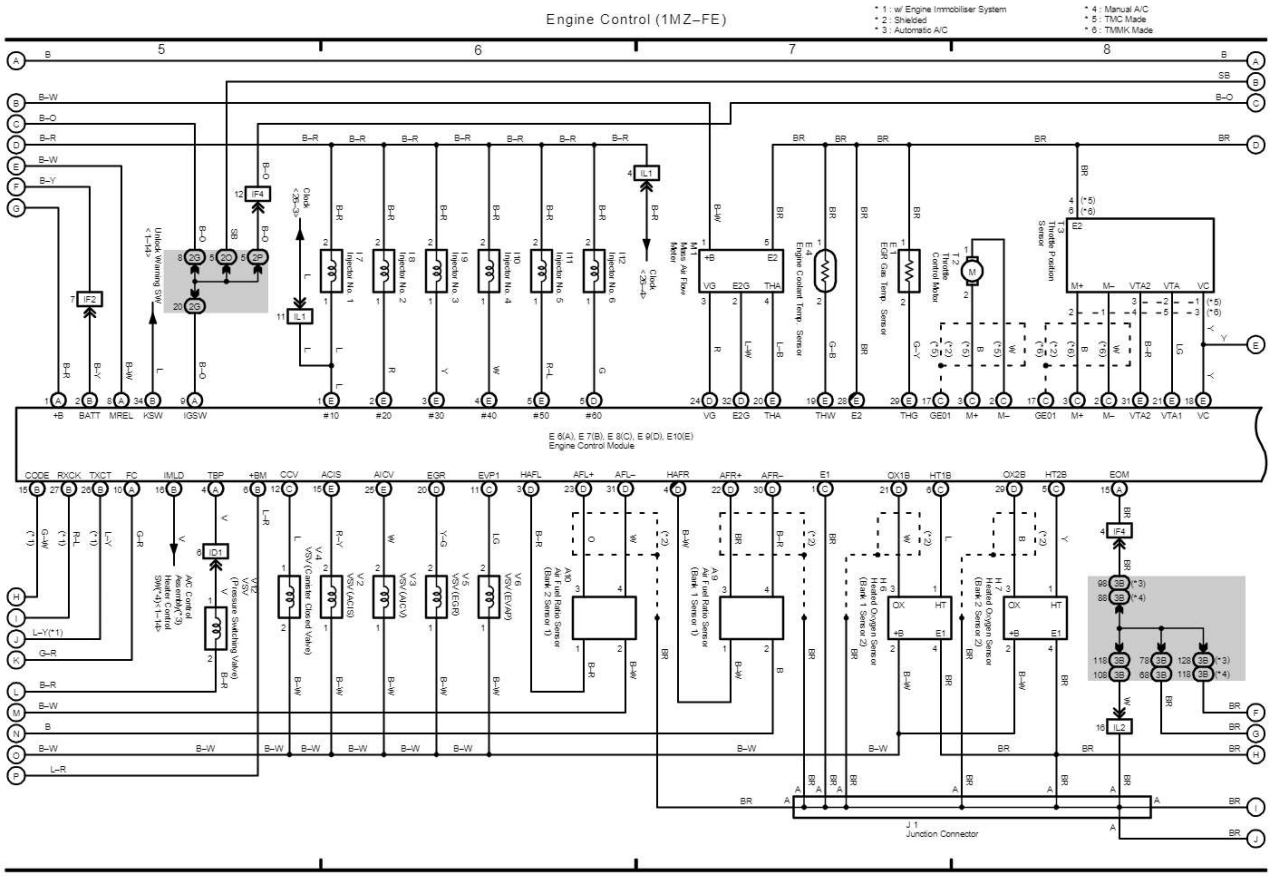


cardiagn.com

cardiagn.com

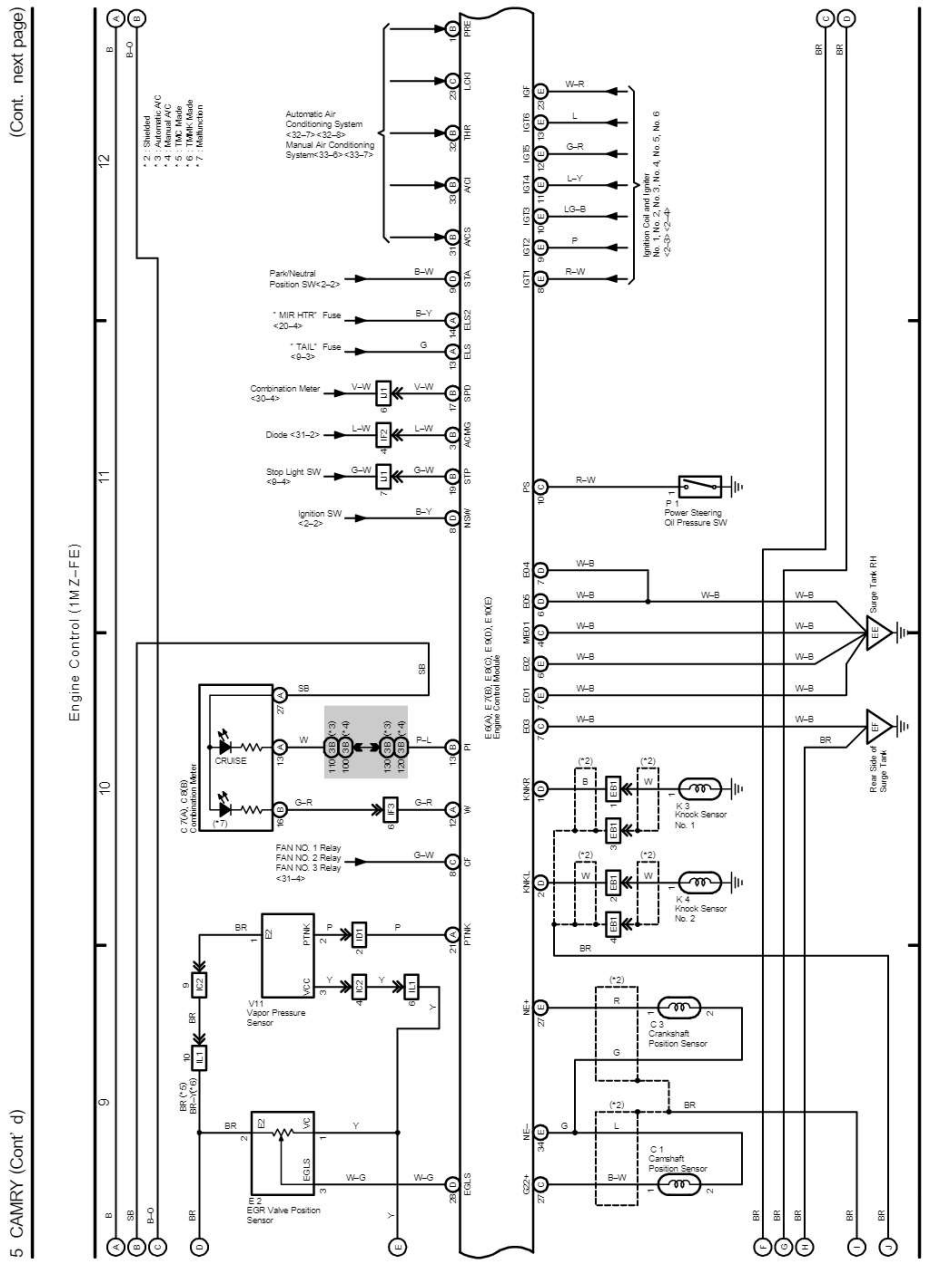
M OVERALL ELECTRICAL WIRING DIAGRAM



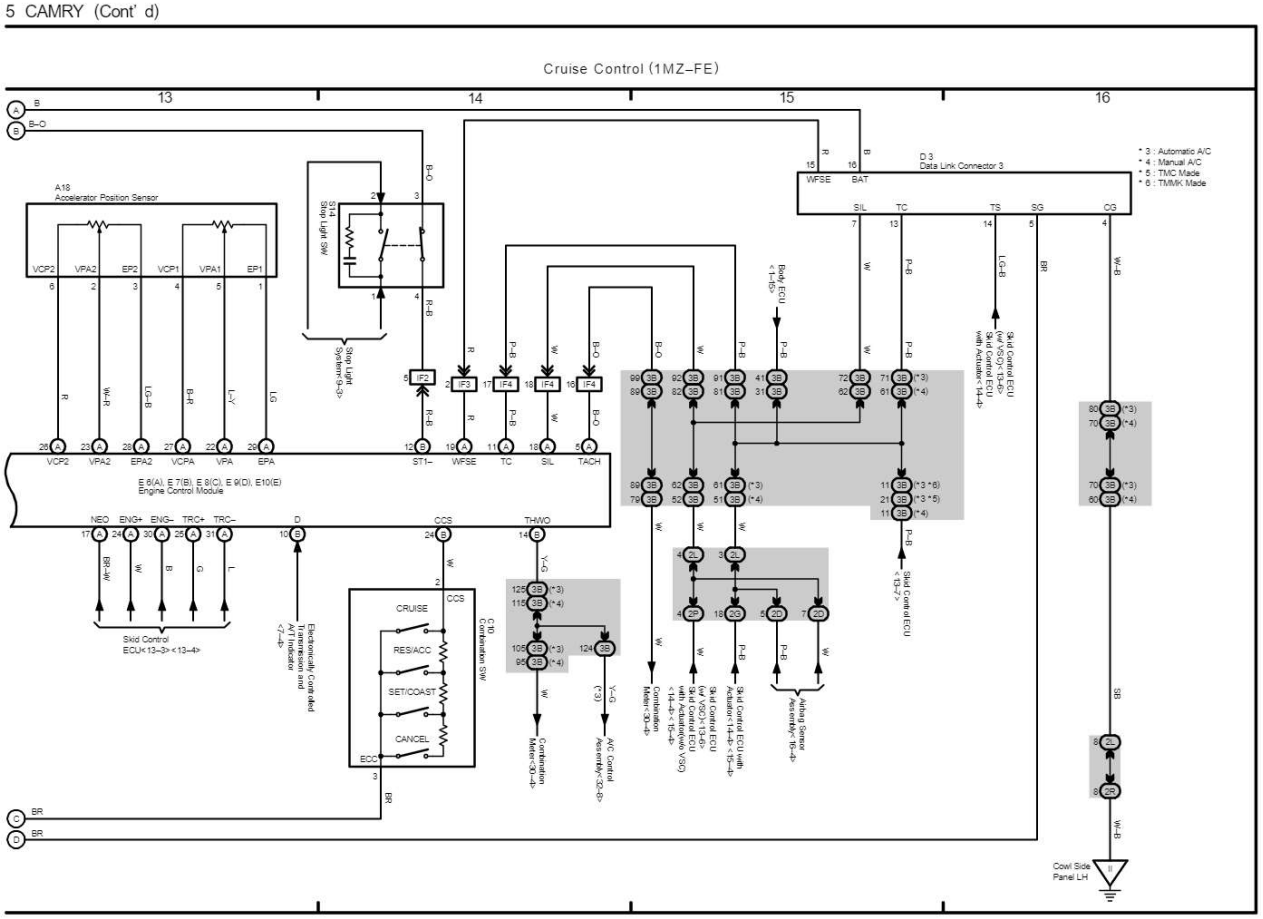


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

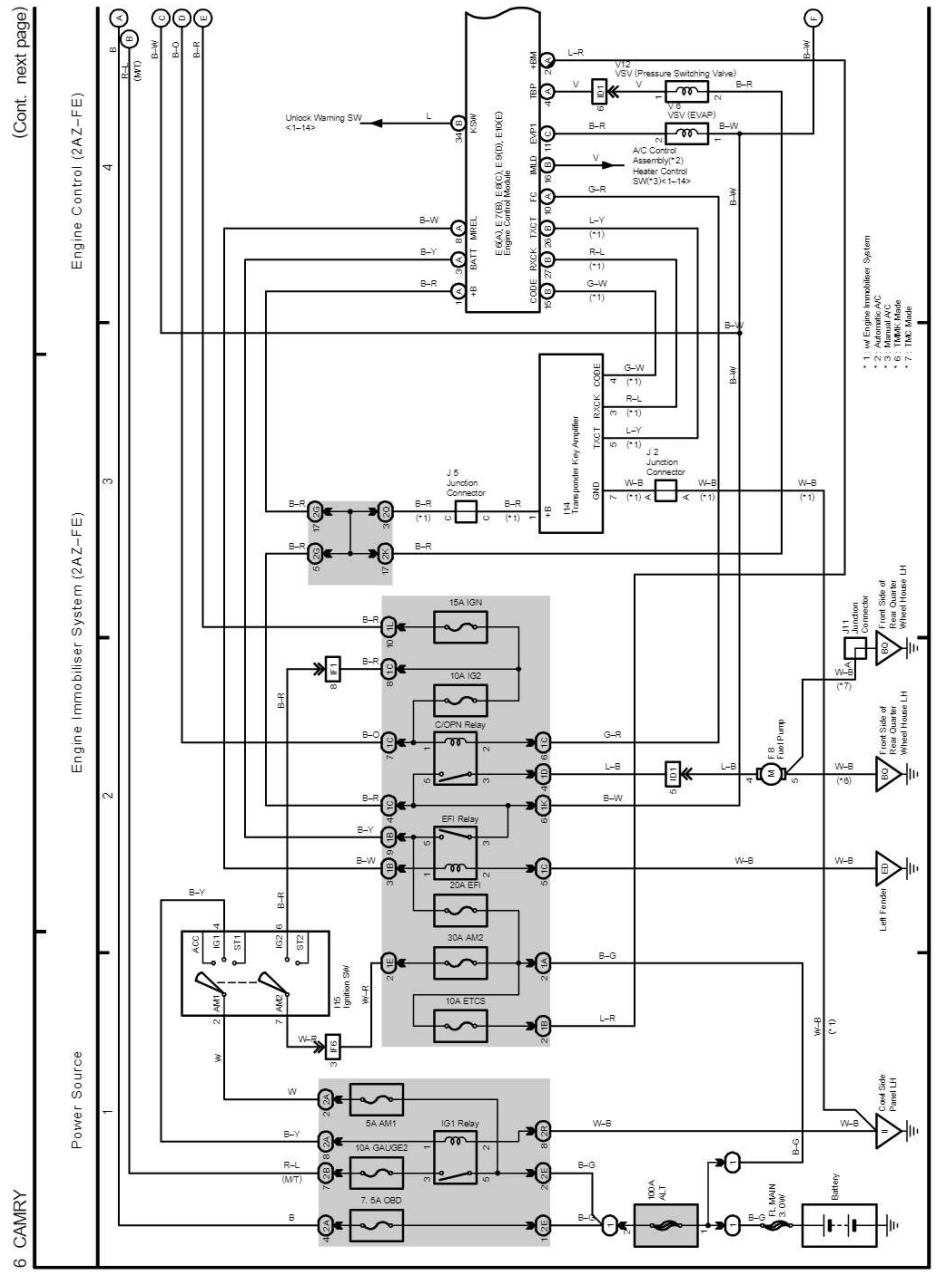


cardiagn.com



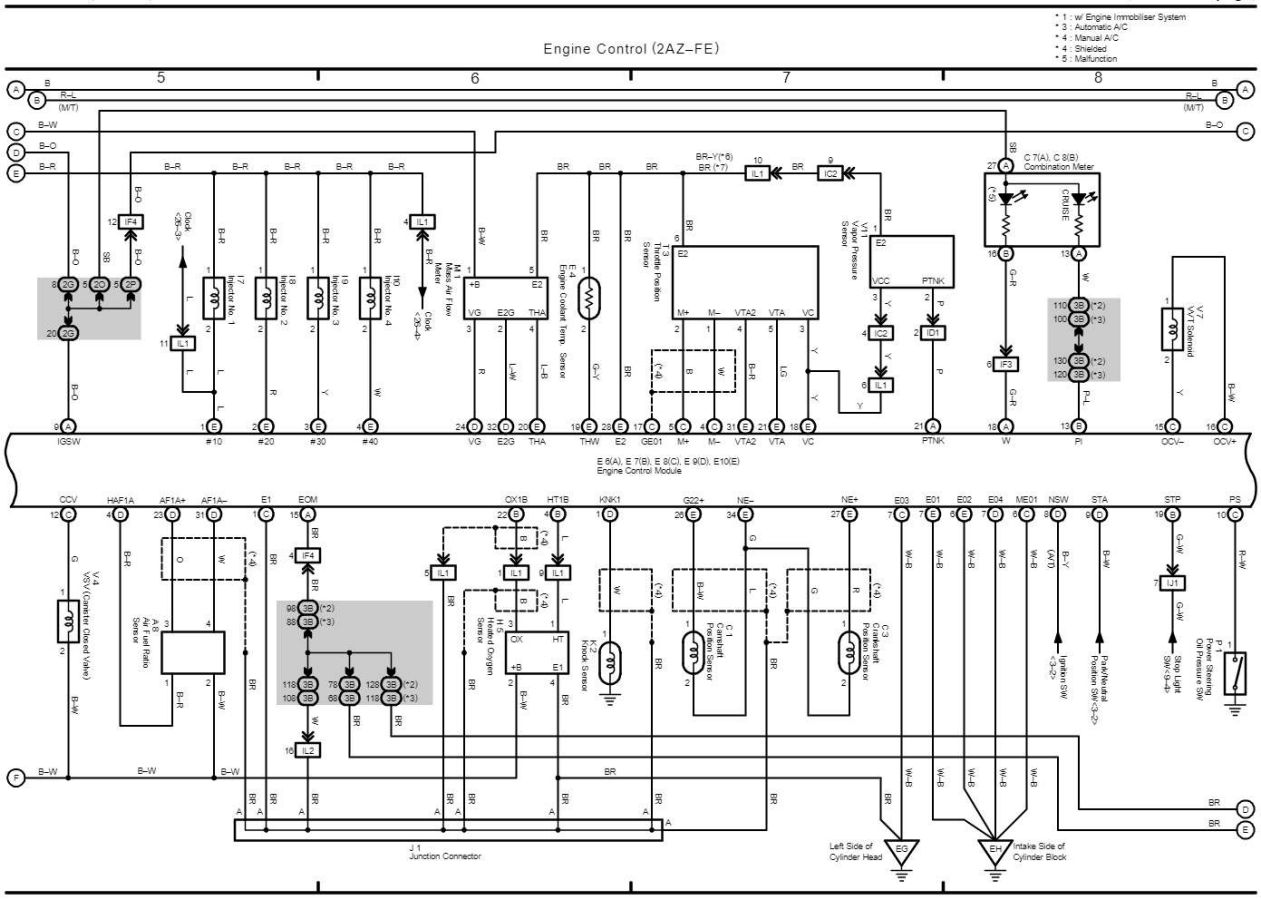
cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM



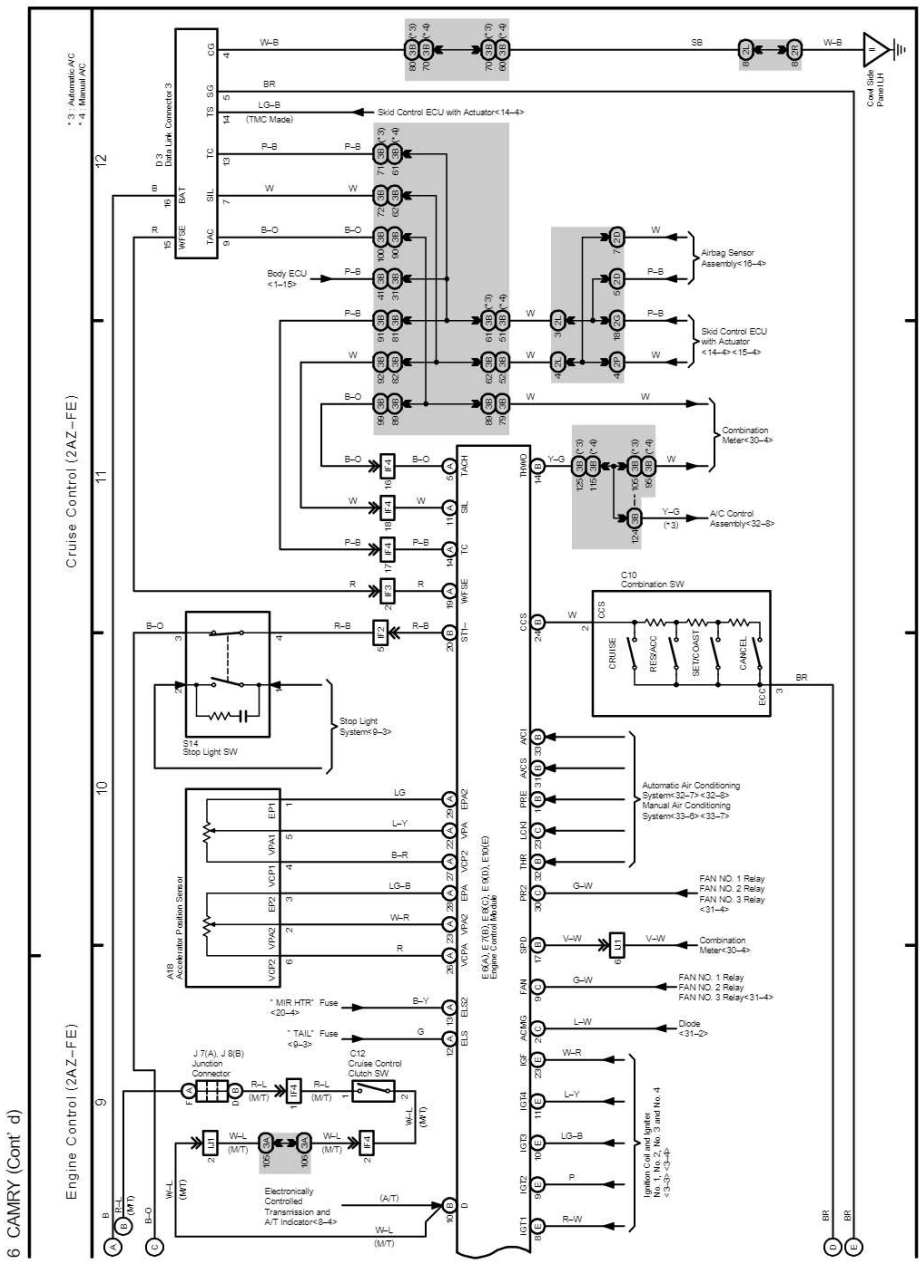
cardiagn.com

(Cont. next page)



cardiagn.com

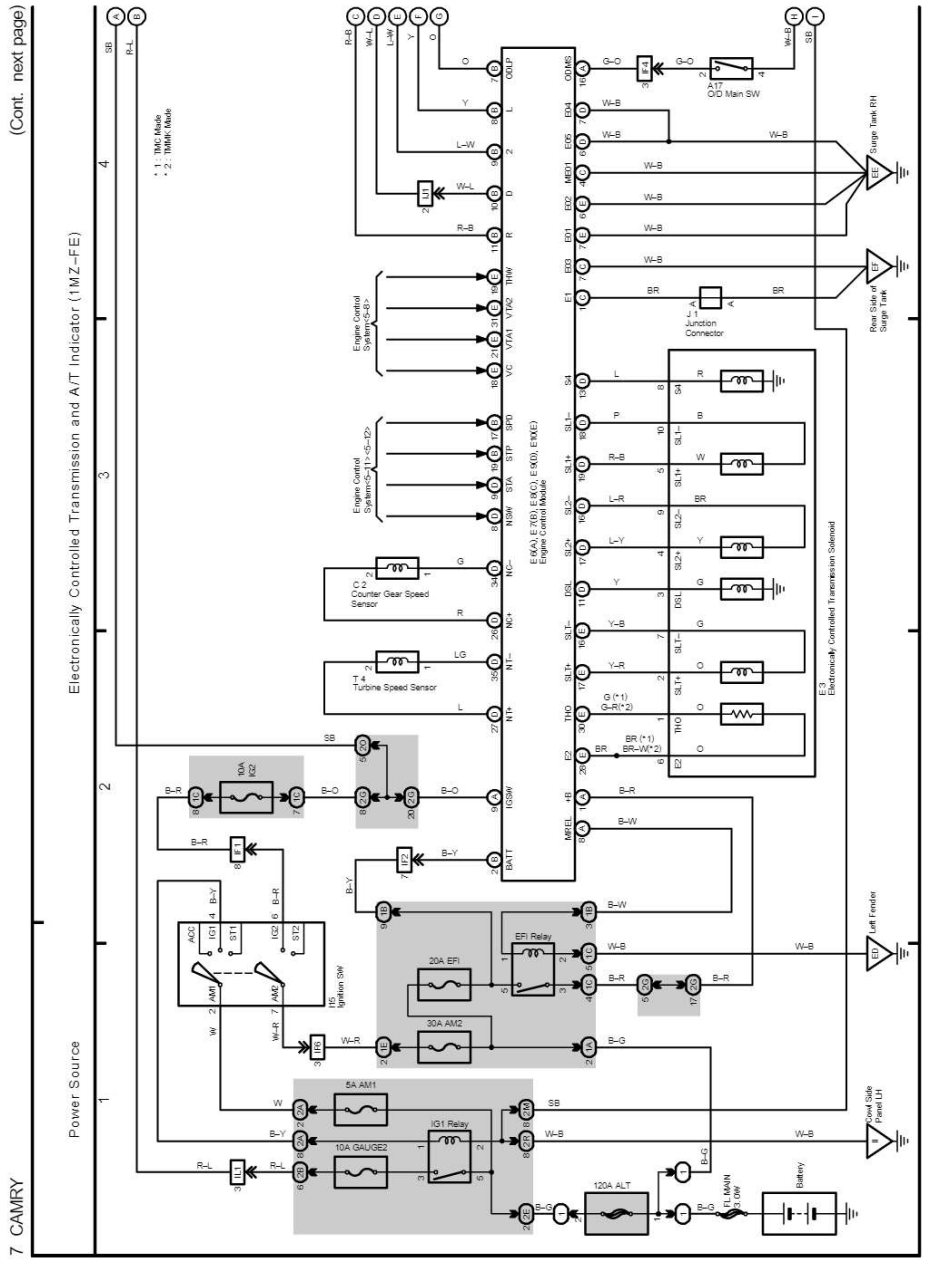
M OVERALL ELECTRICAL WIRING DIAGRAM



cardiagn.com

cardiagn.com

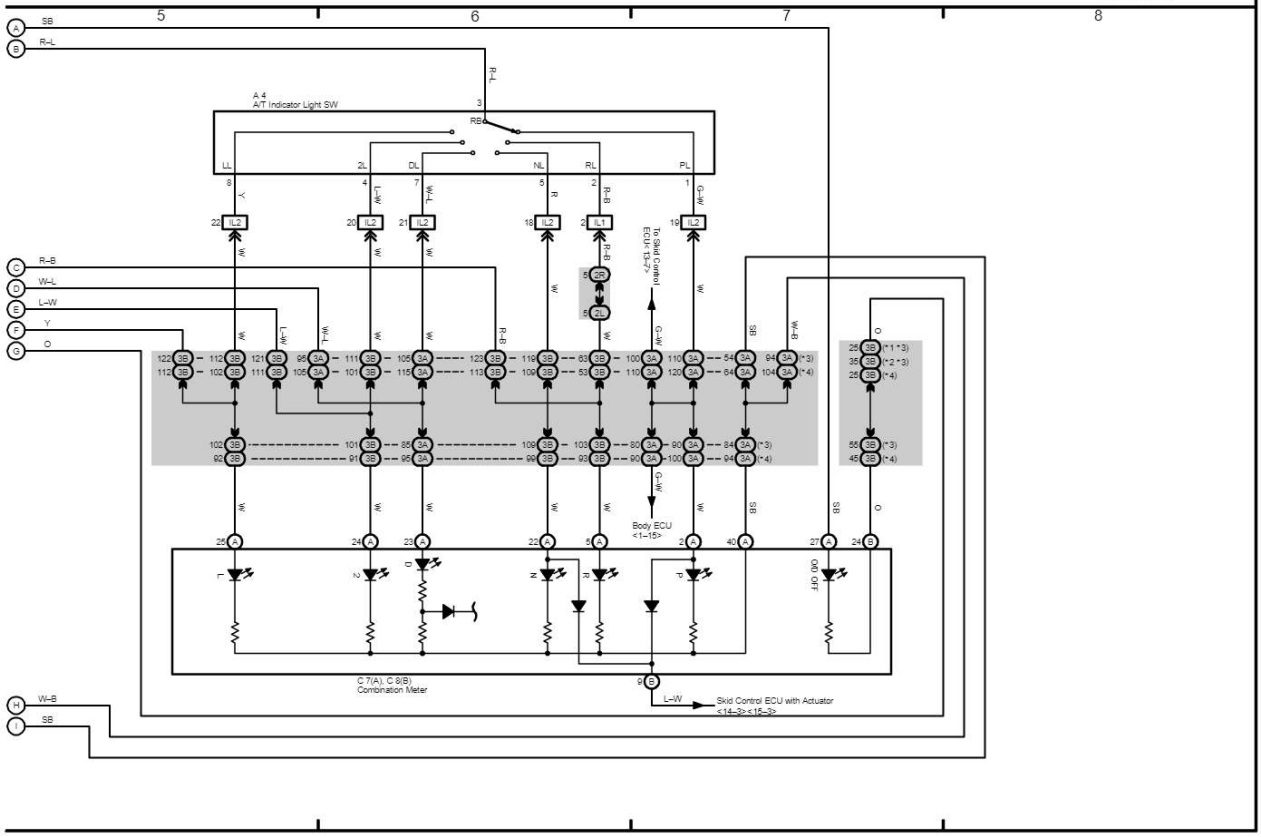
M OVERALL ELECTRICAL WIRING DIAGRAM



cardiagn.com

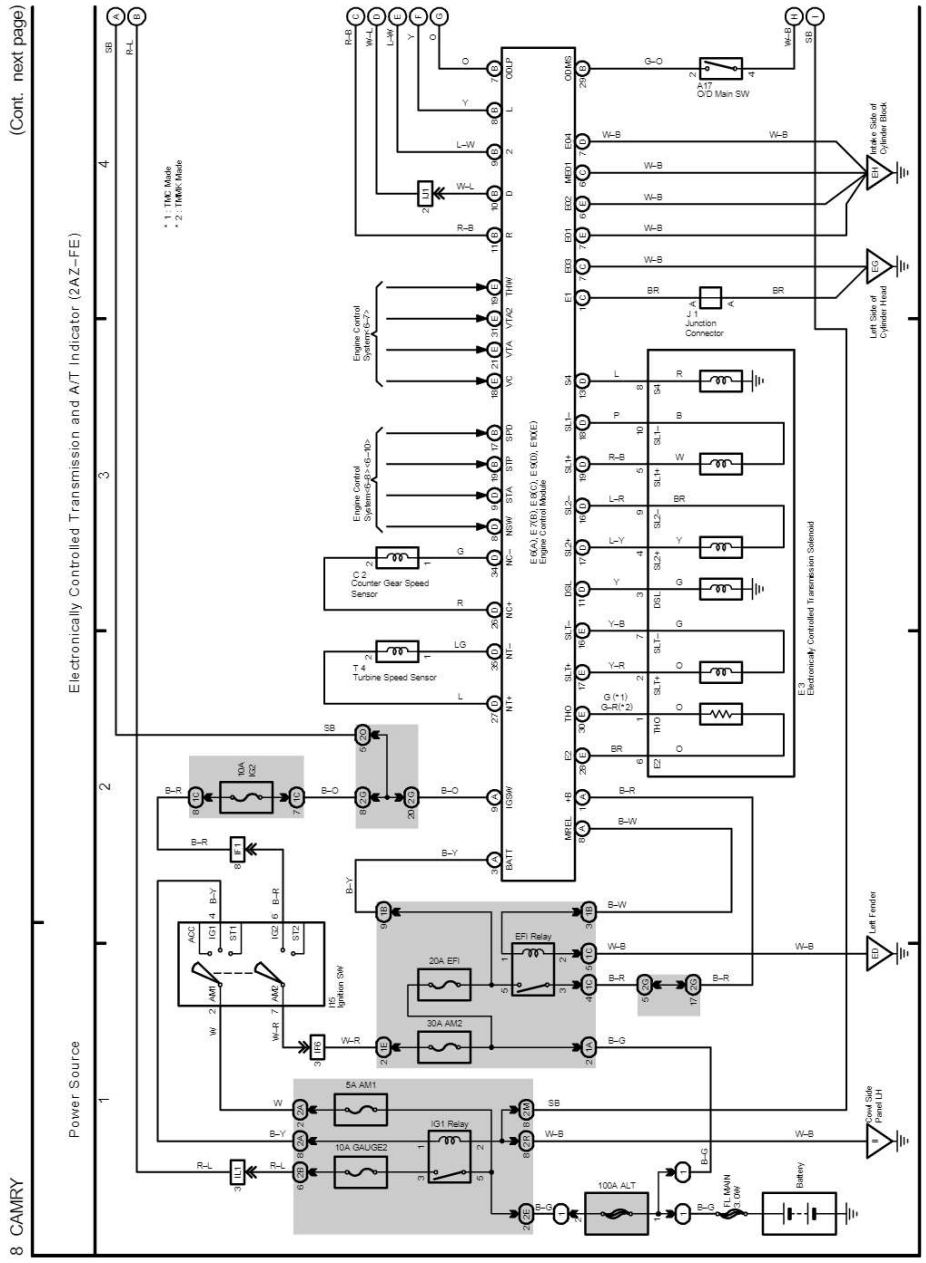
Electronically Controlled Transmission and A/T Indicator (1MZ–FE)

* 1 : TMMK Made
* 2 : TMC Made
* 3 : Automatic A/C
* 4 : Manual A/C

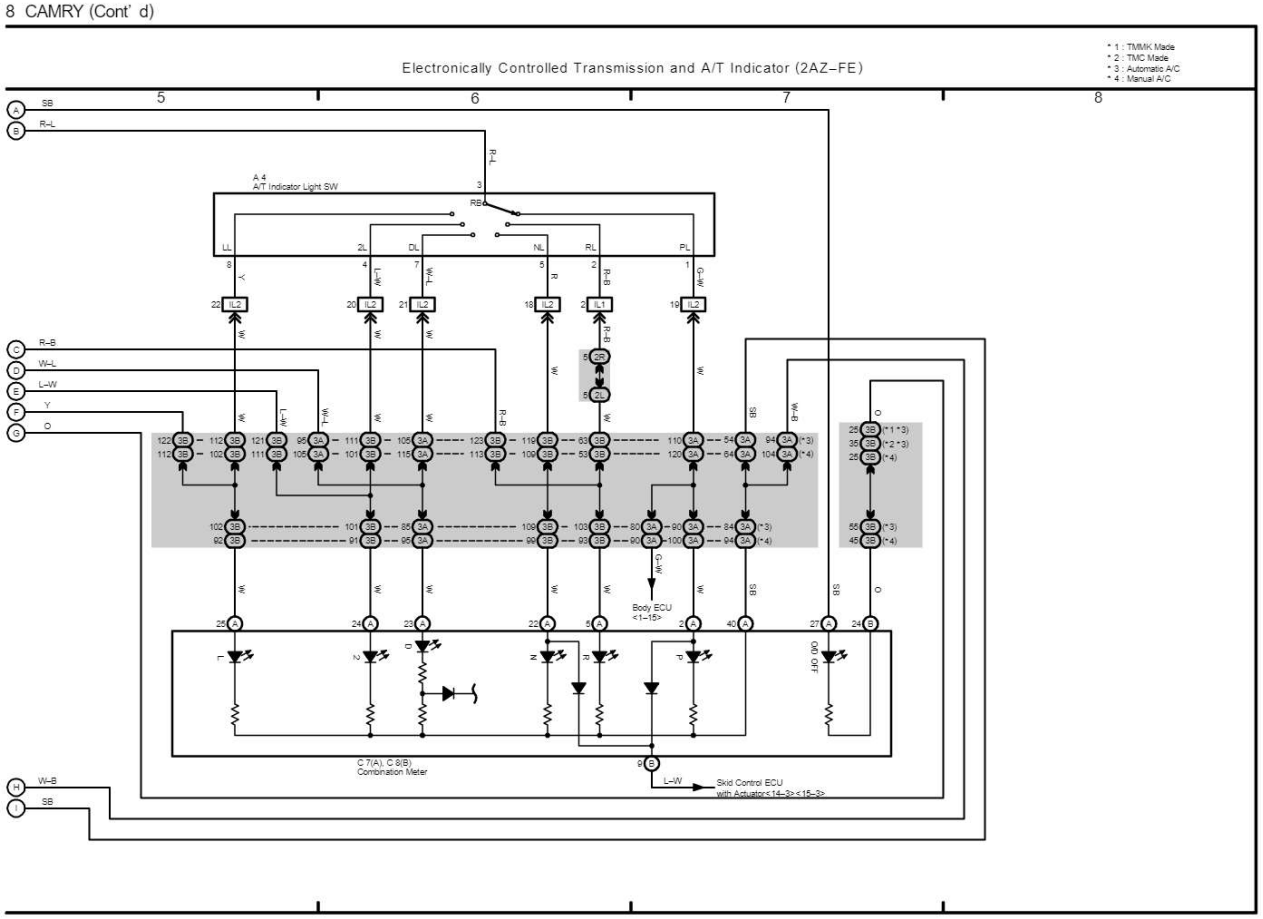


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

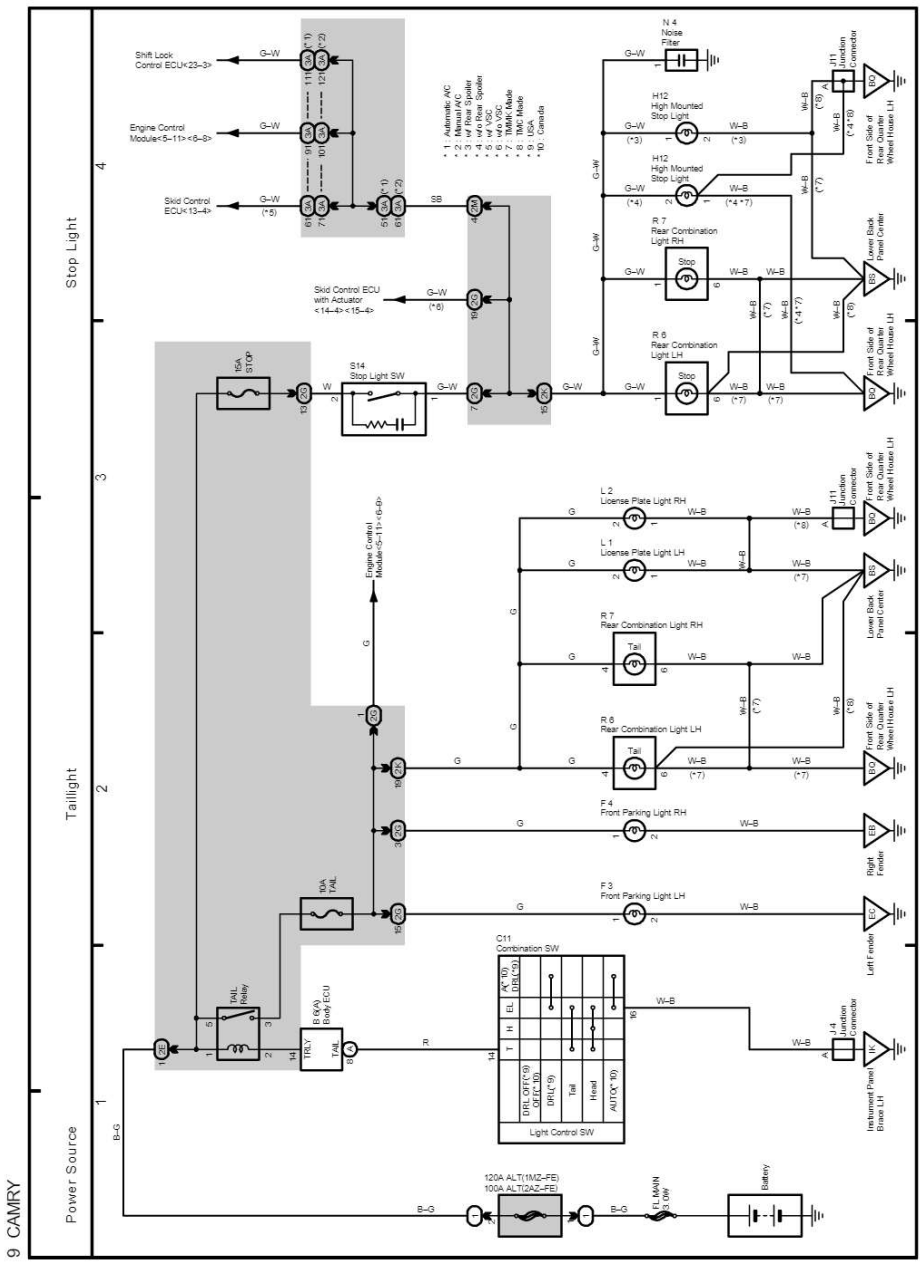


cardiagn.com

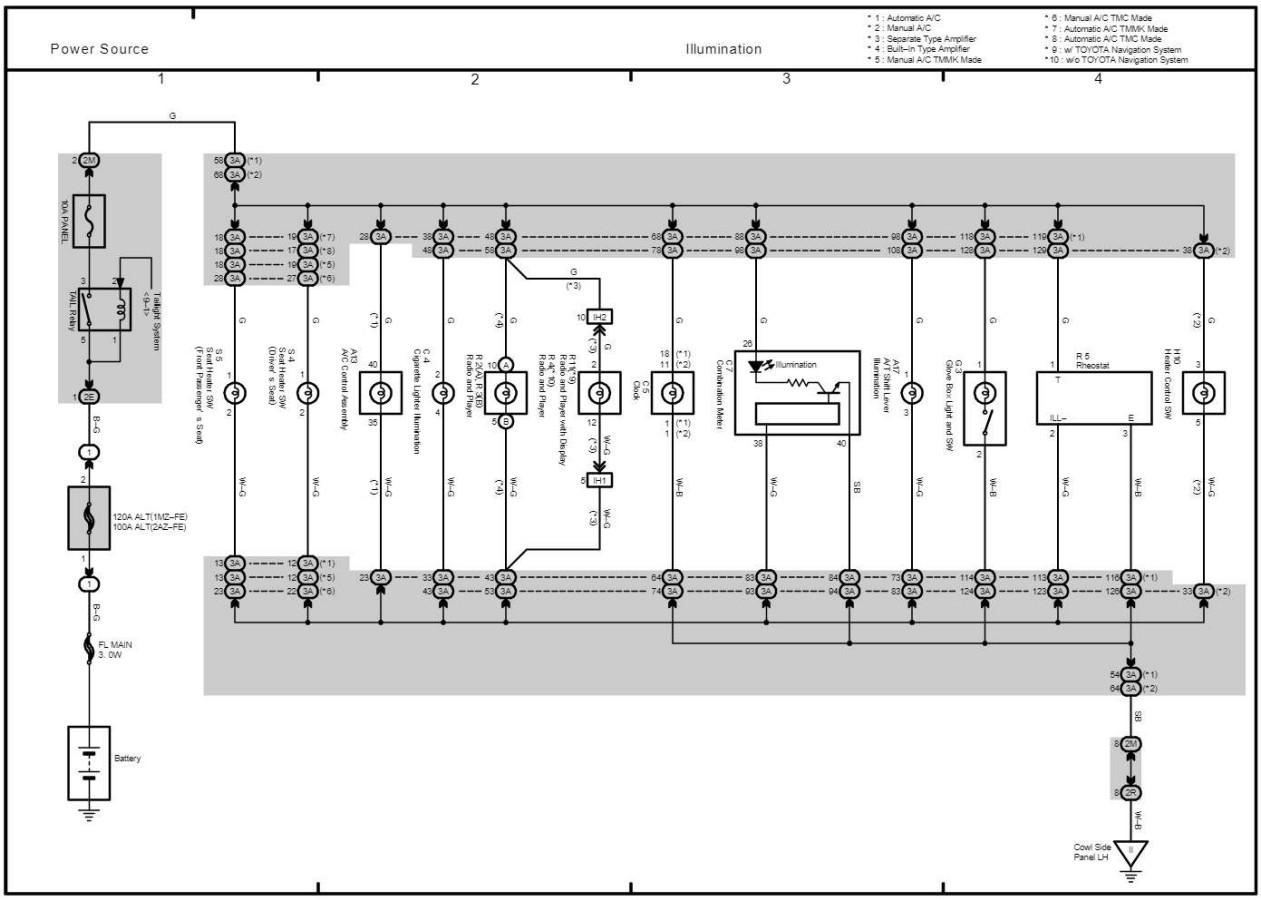


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

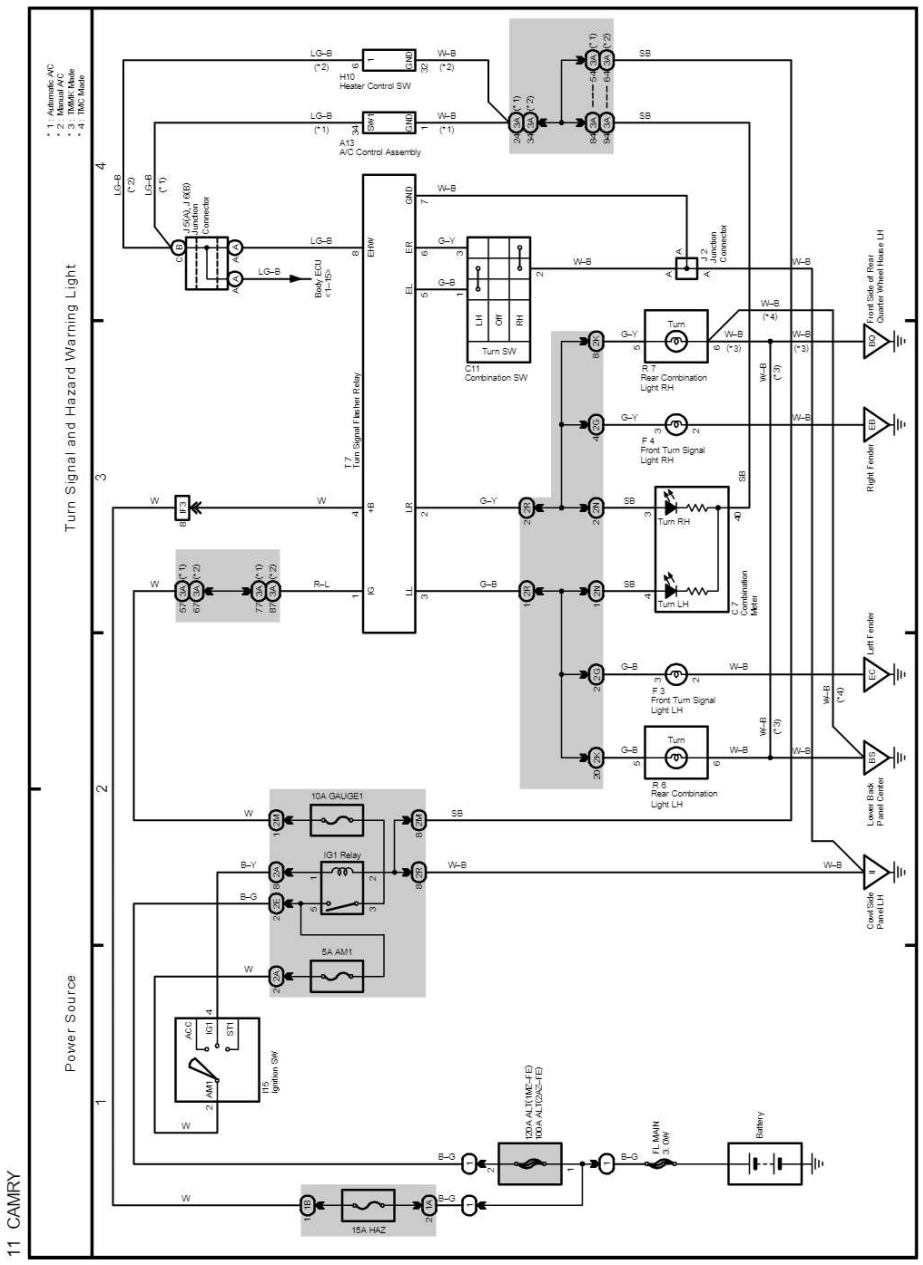


cardiagn.com

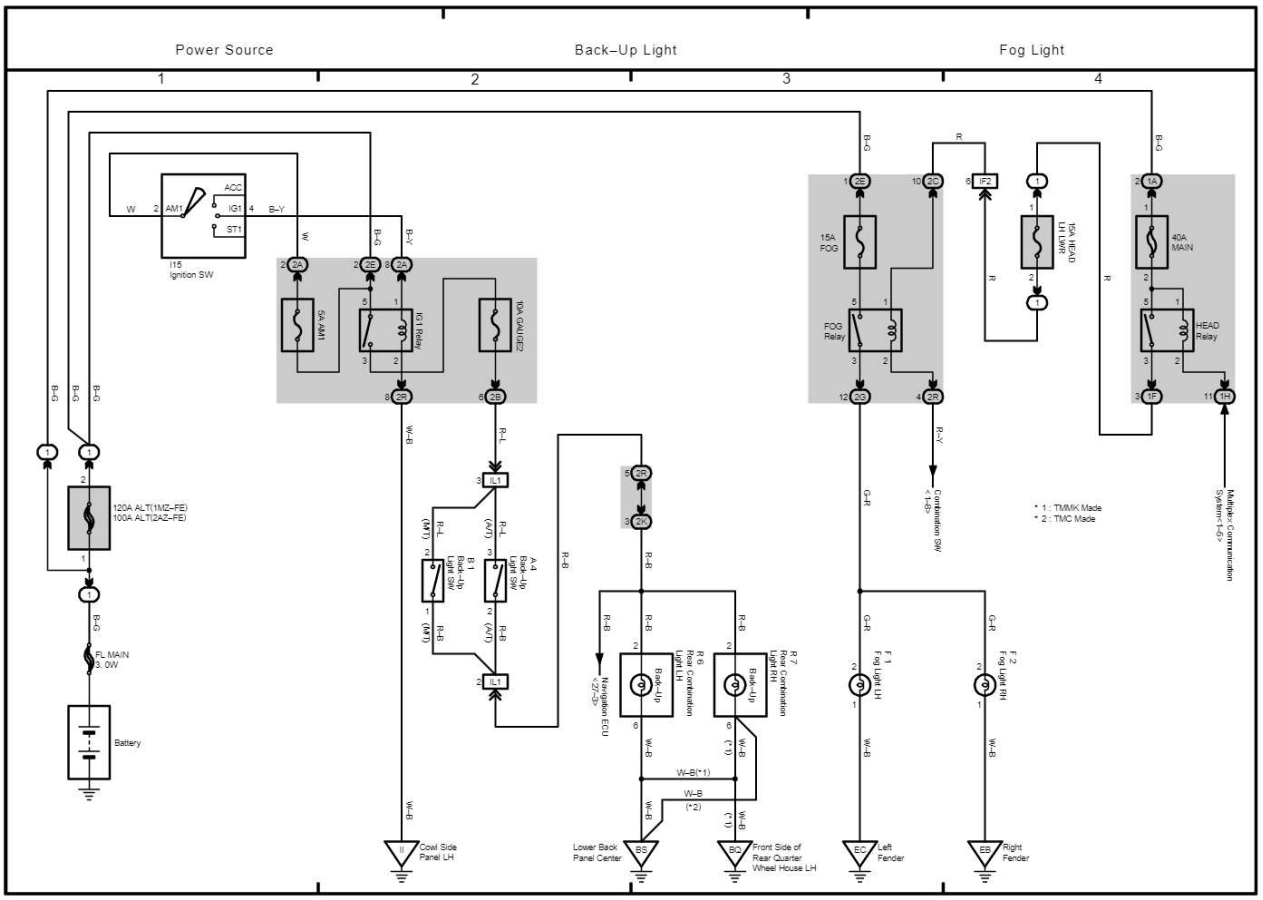


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

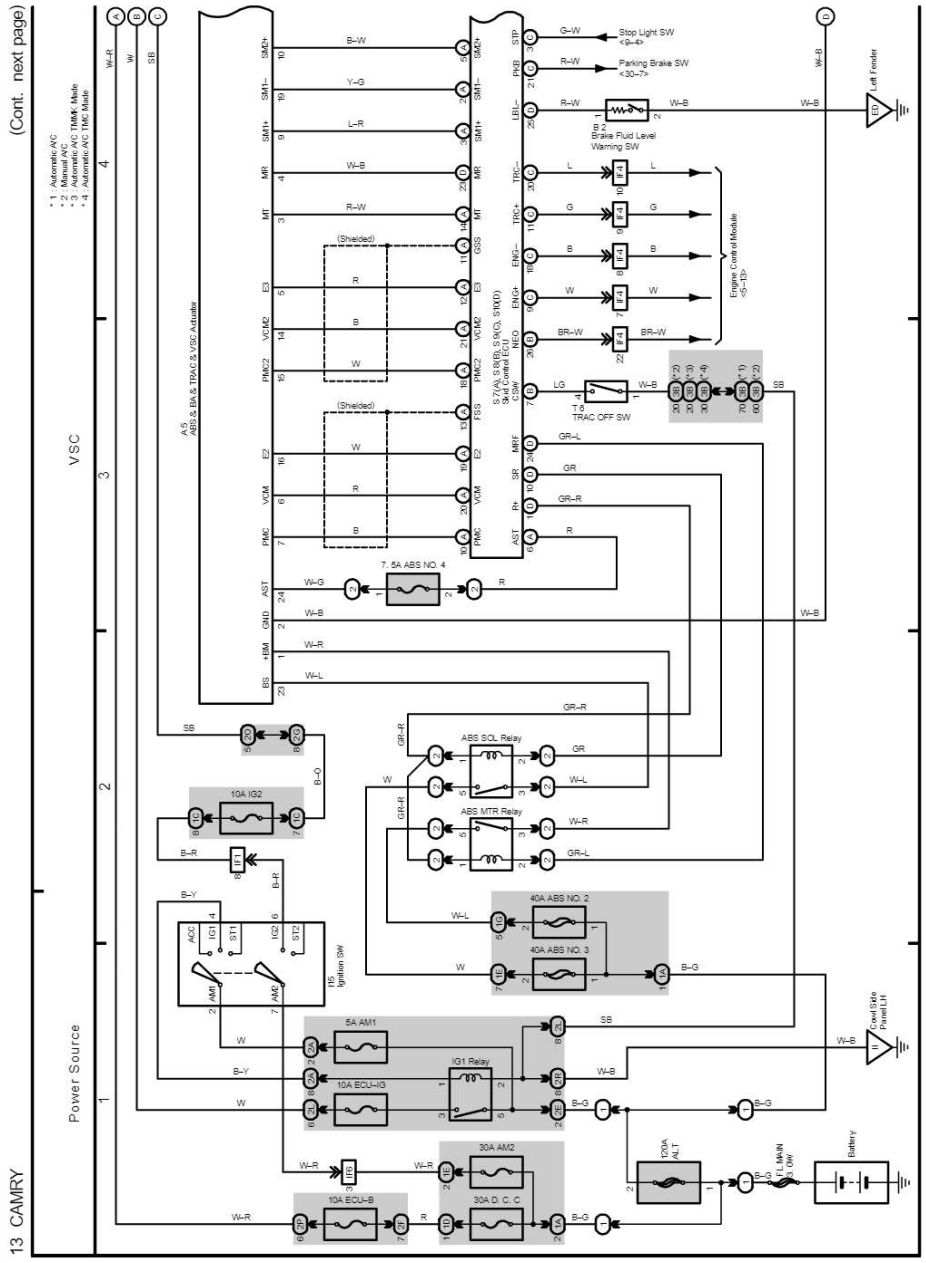


cardiagn.com

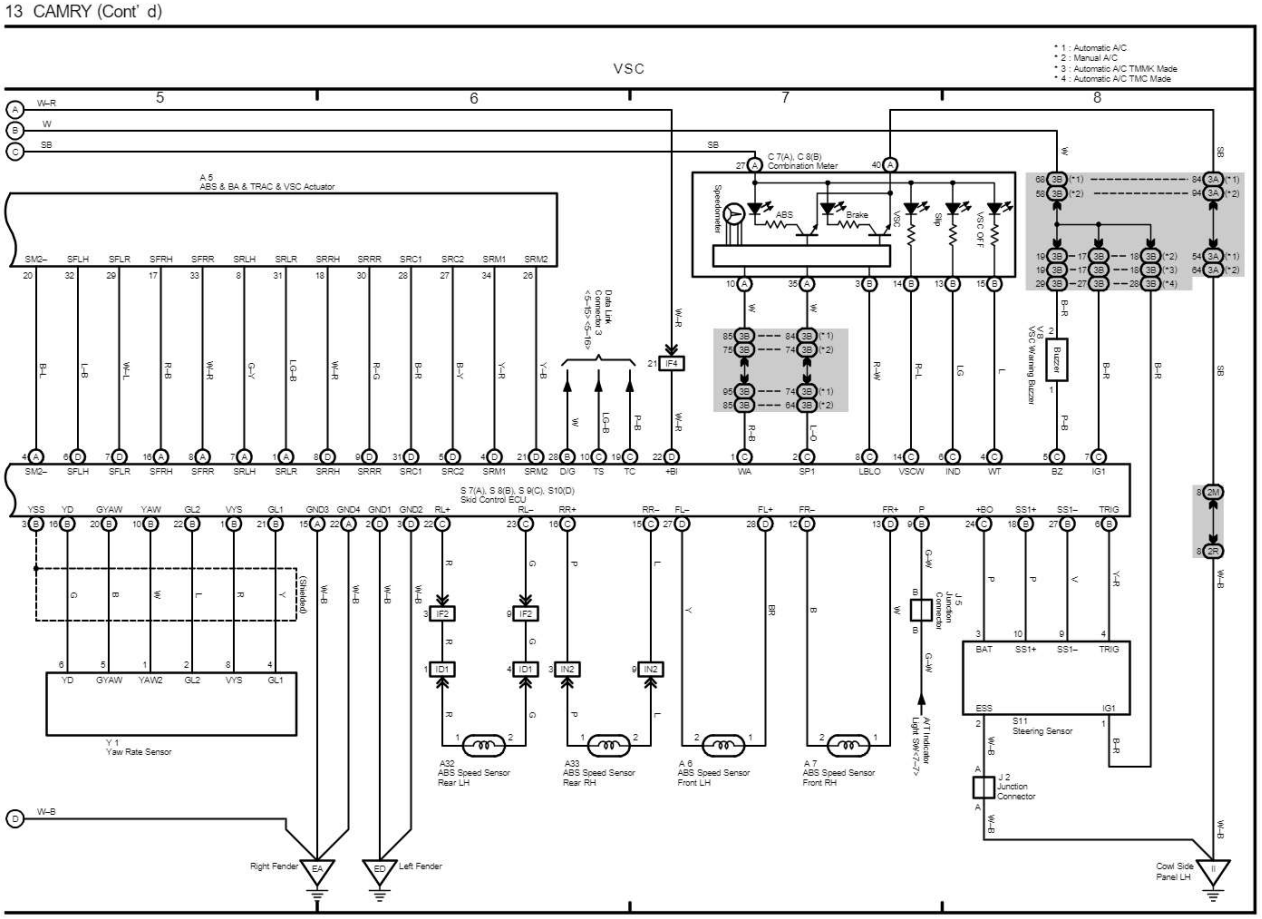


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

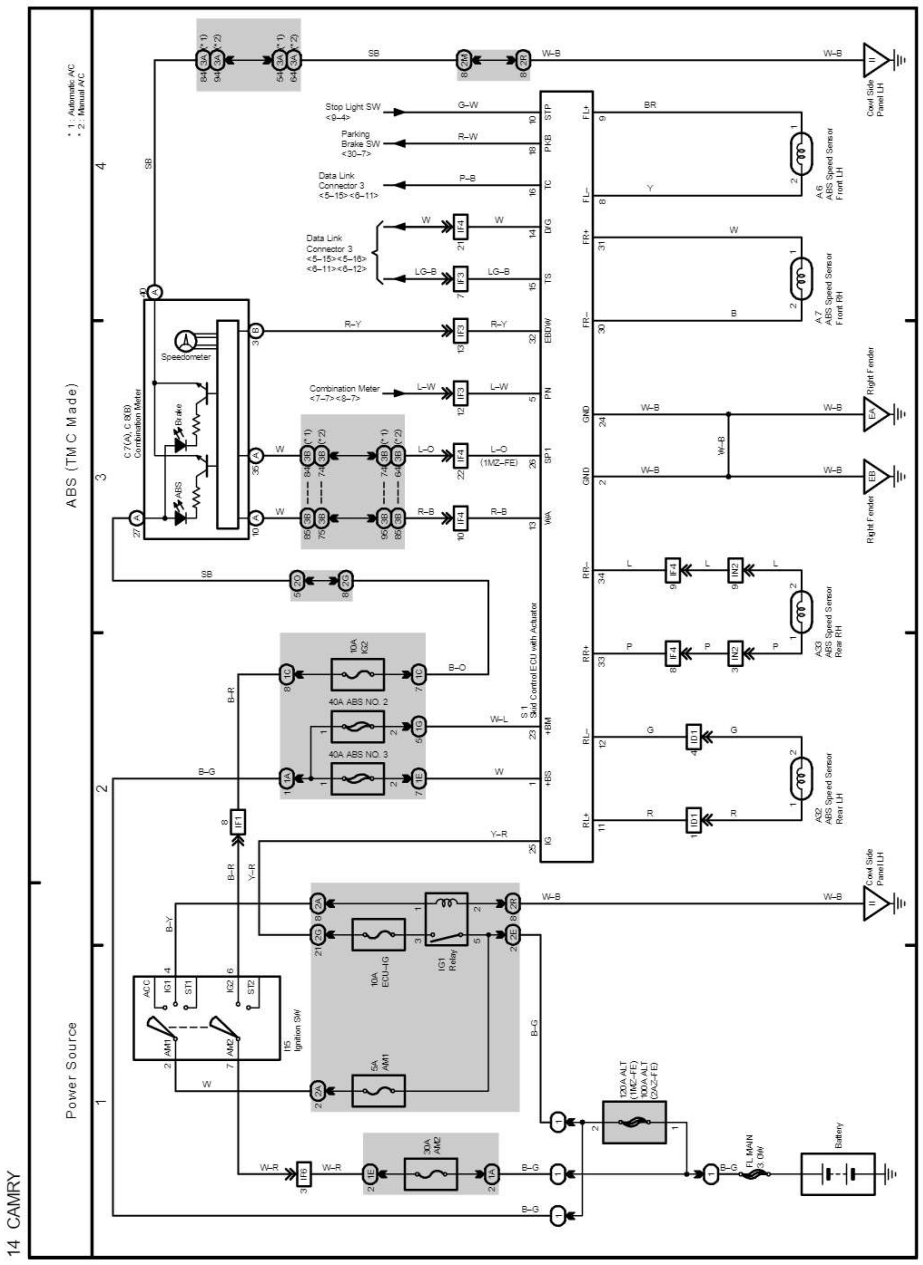


cardiagn.com

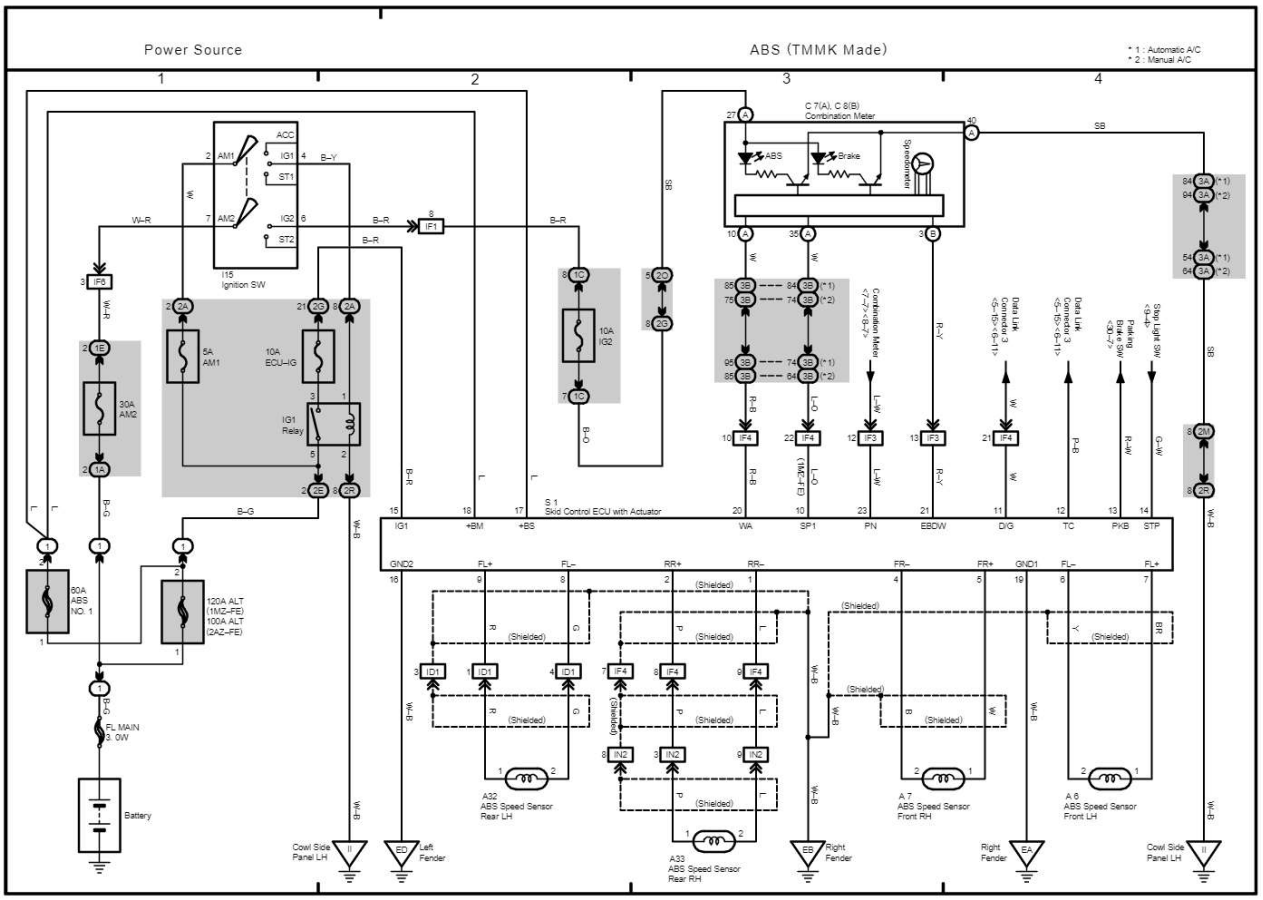


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

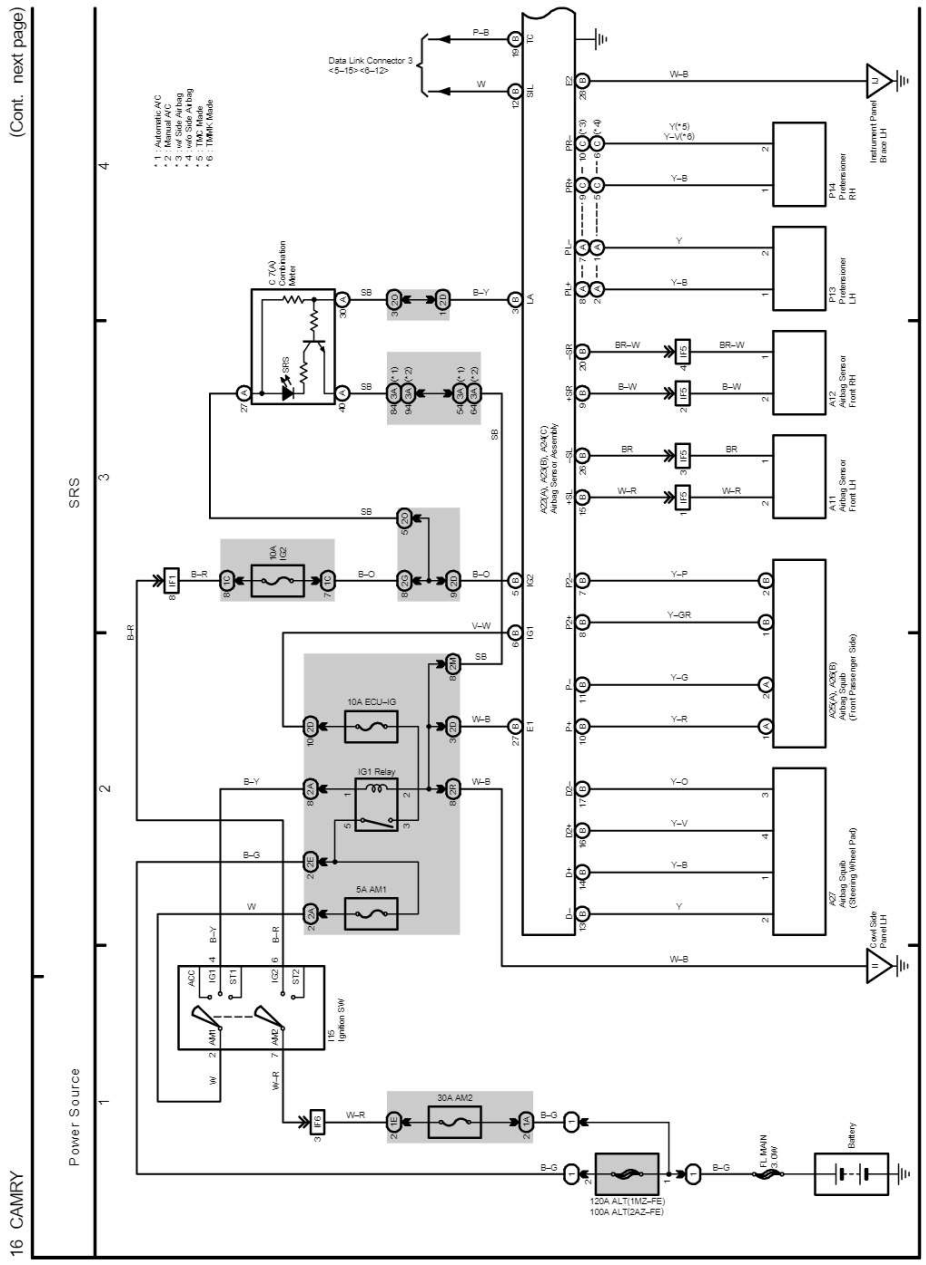


cardiagn.com

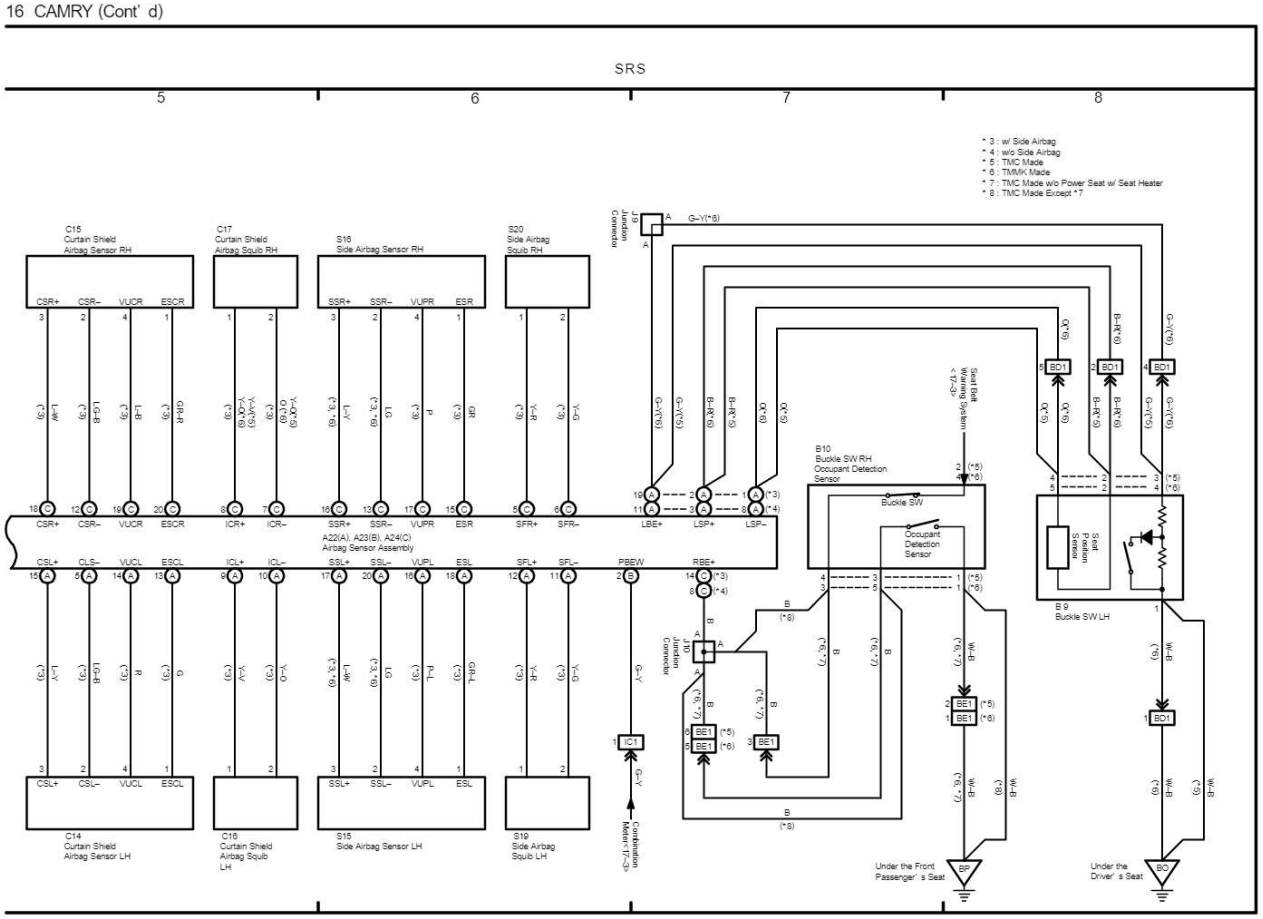


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

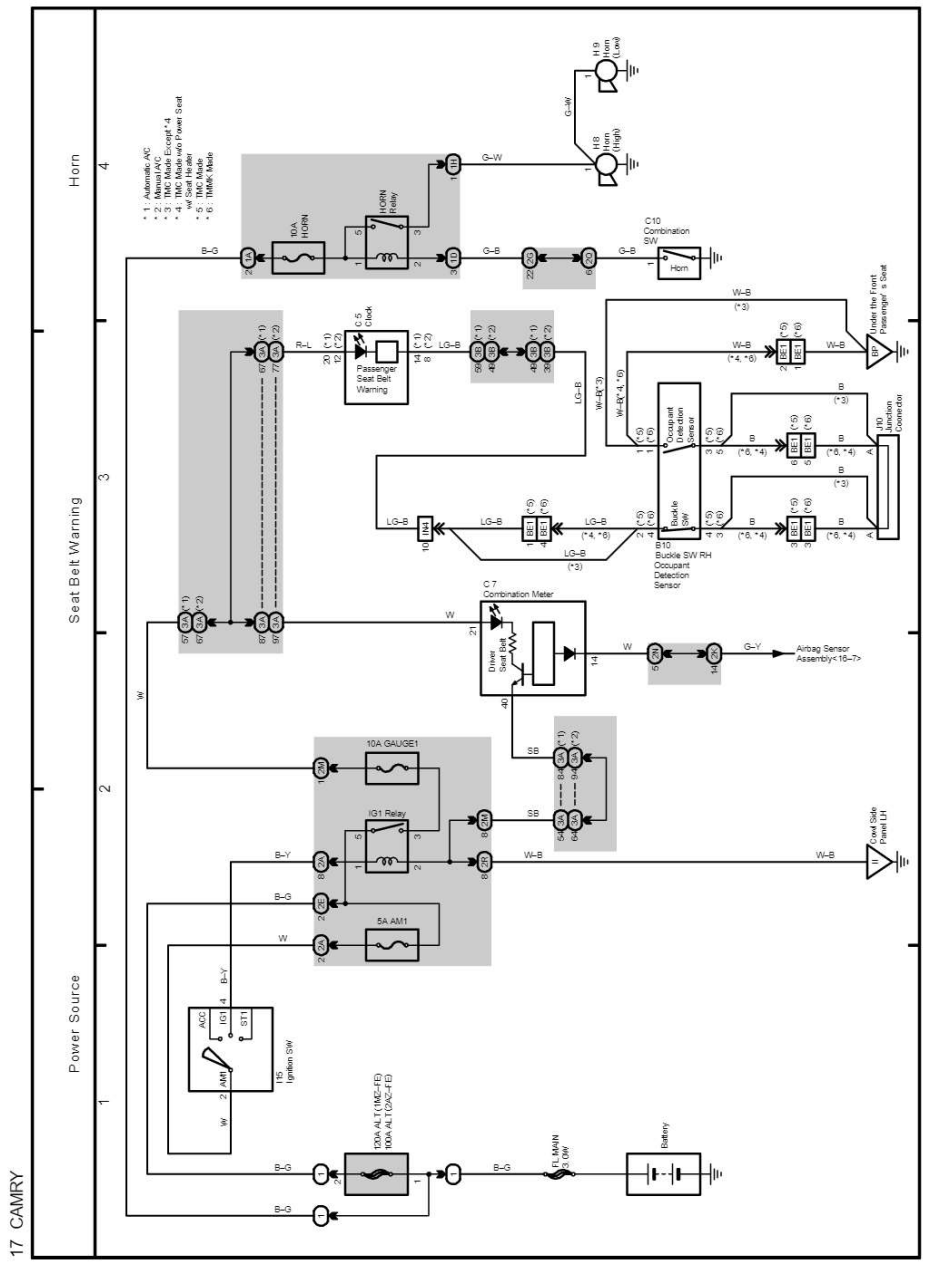


cardiagn.com



cardiagn.com

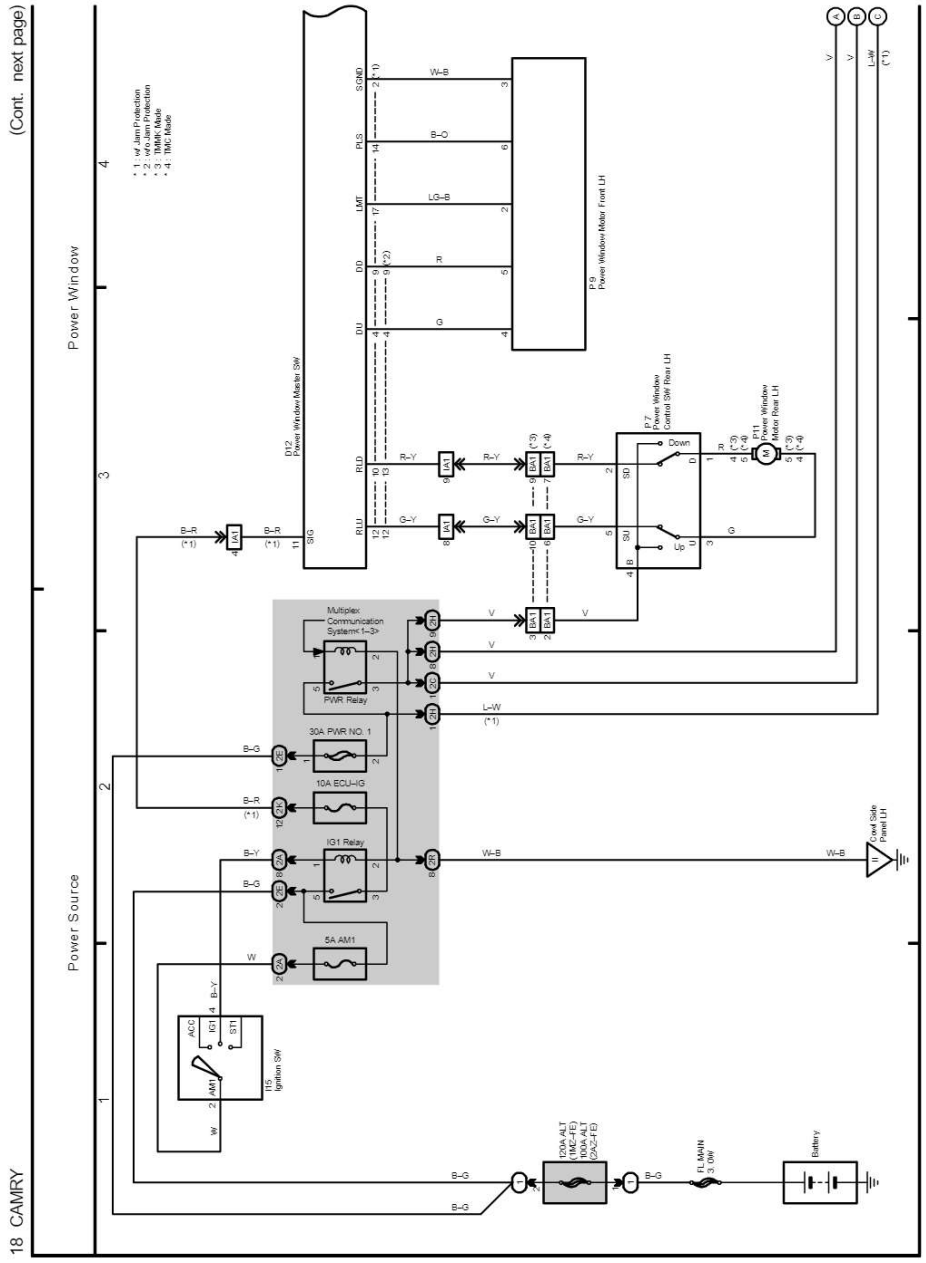
M OVERALL ELECTRICAL WIRING DIAGRAM



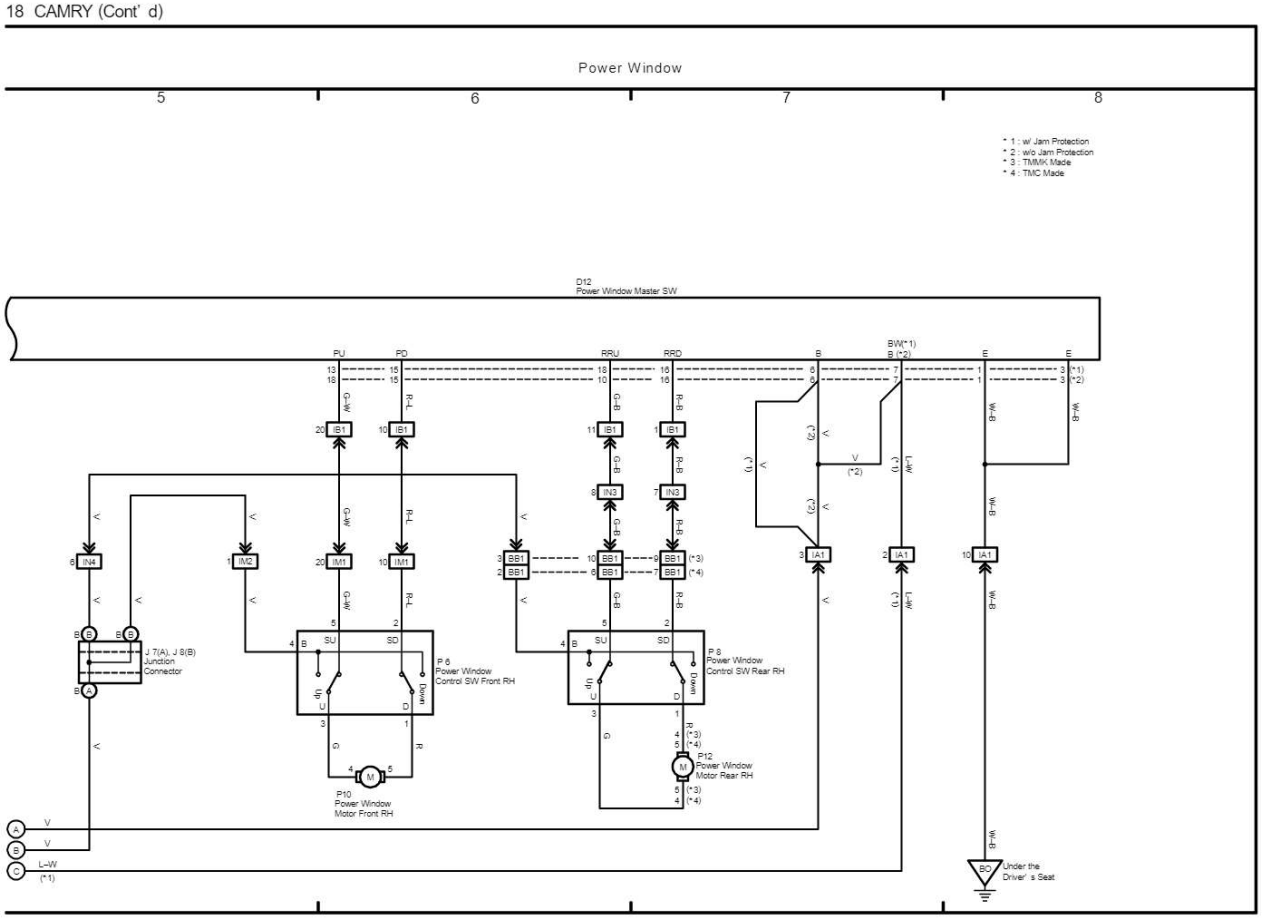
cardiagn.com

cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

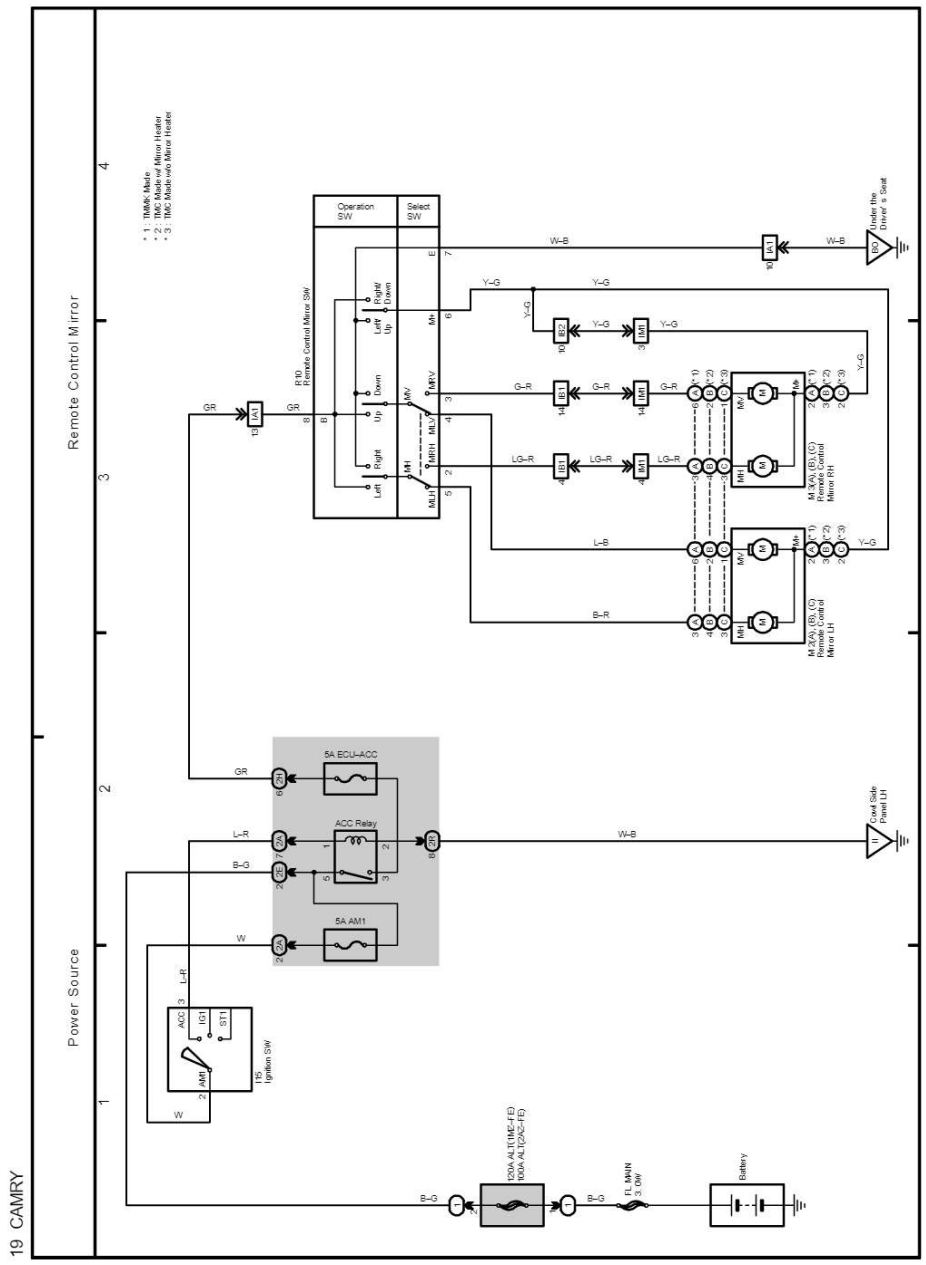


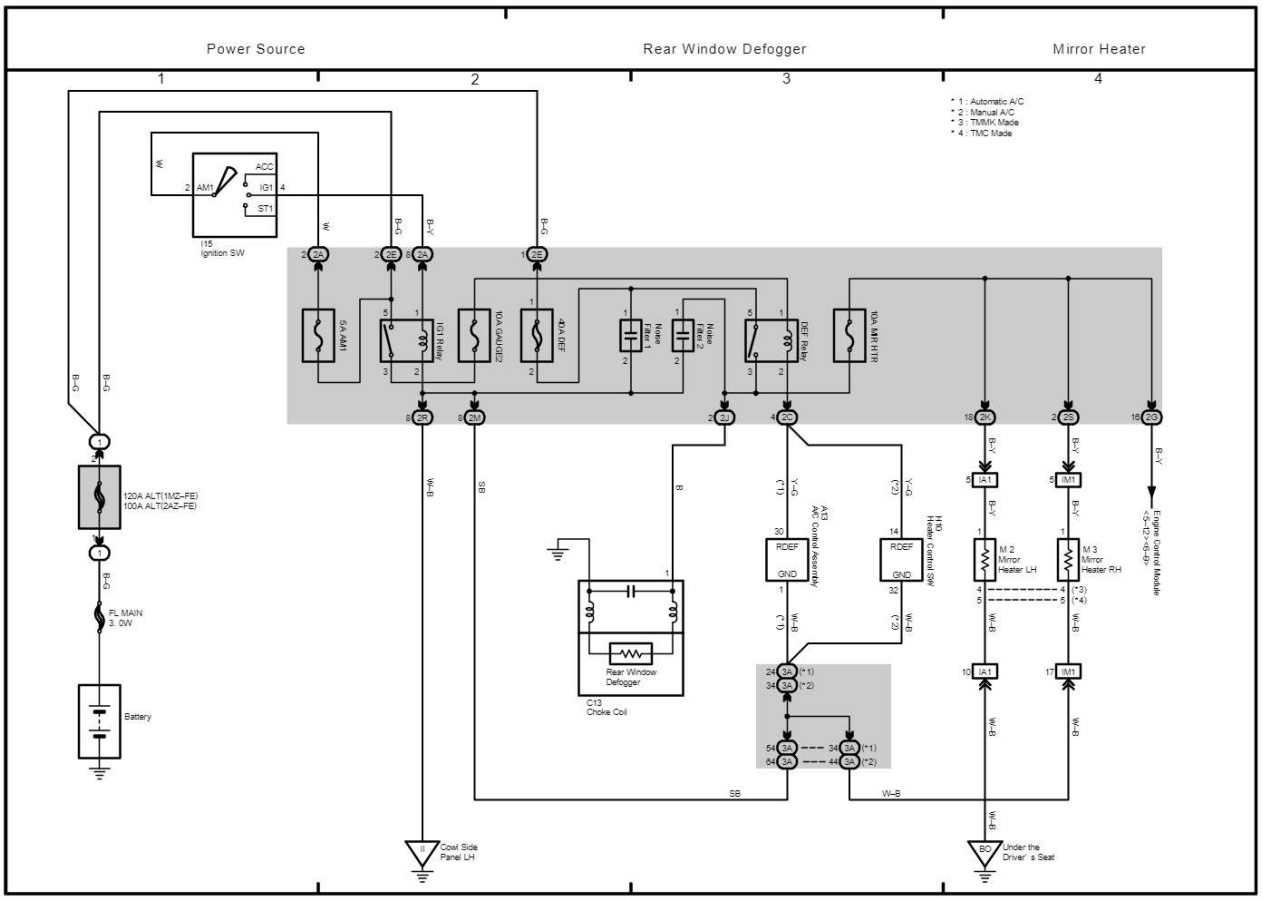
cardiagn.com



cardiagn.com

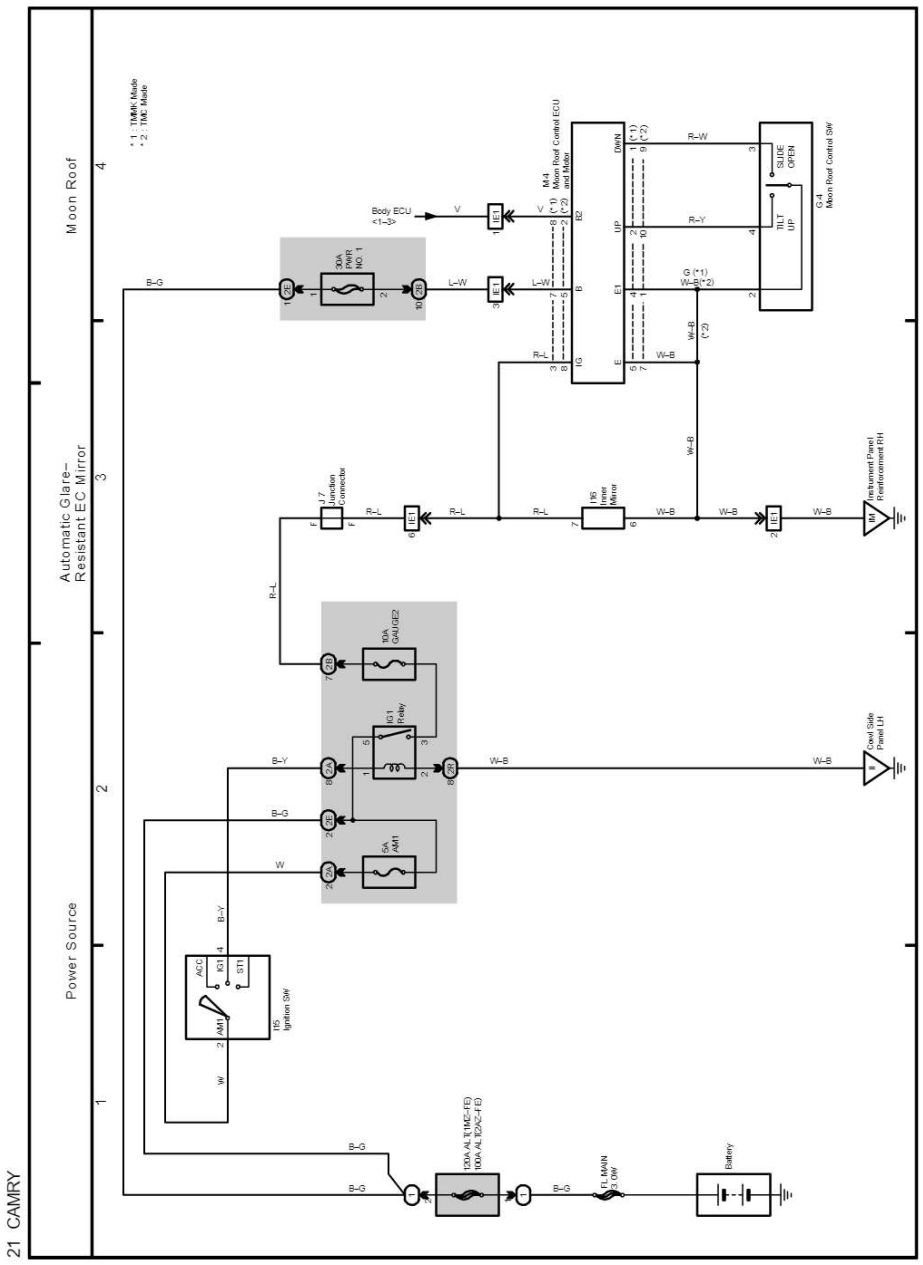
M OVERALL ELECTRICAL WIRING DIAGRAM



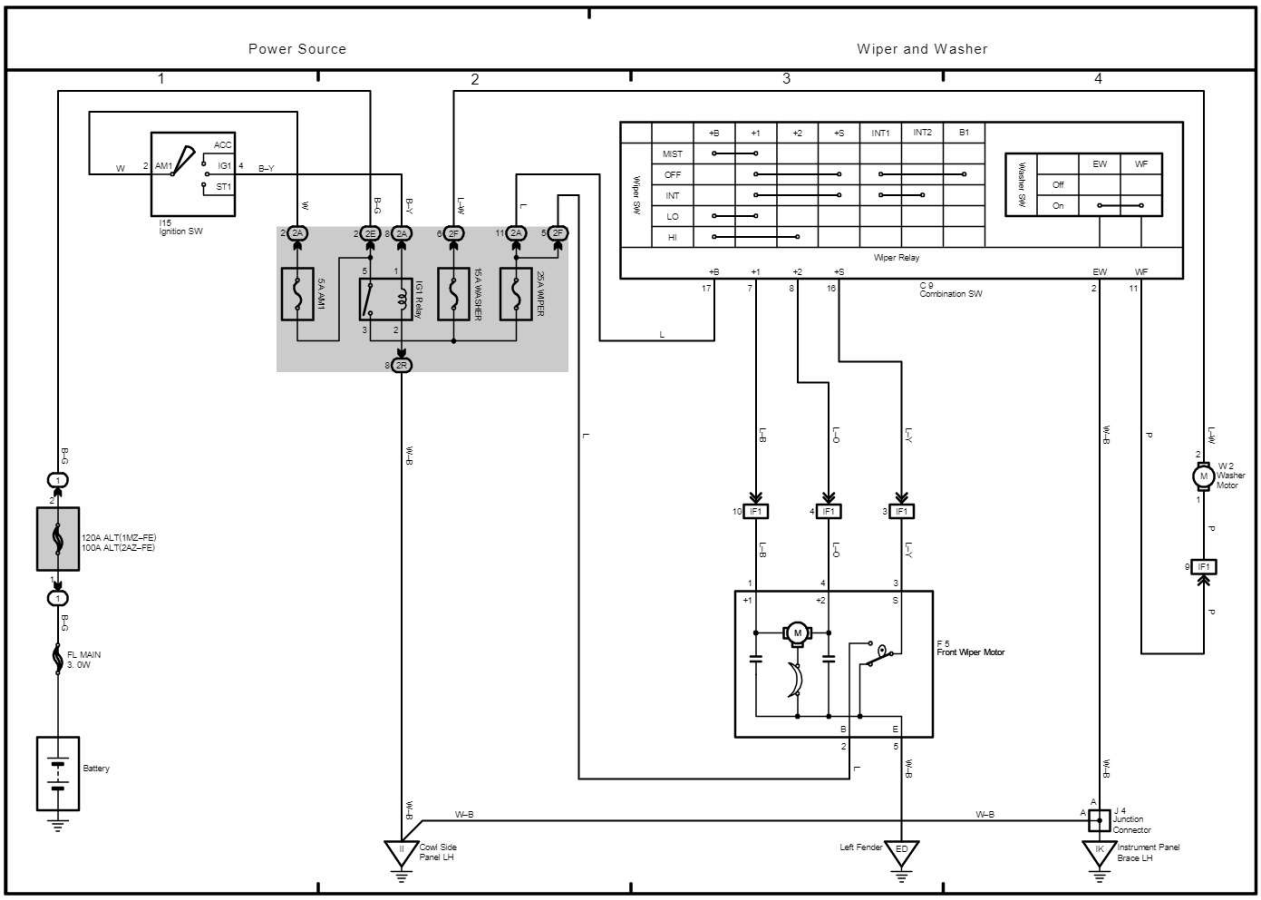


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

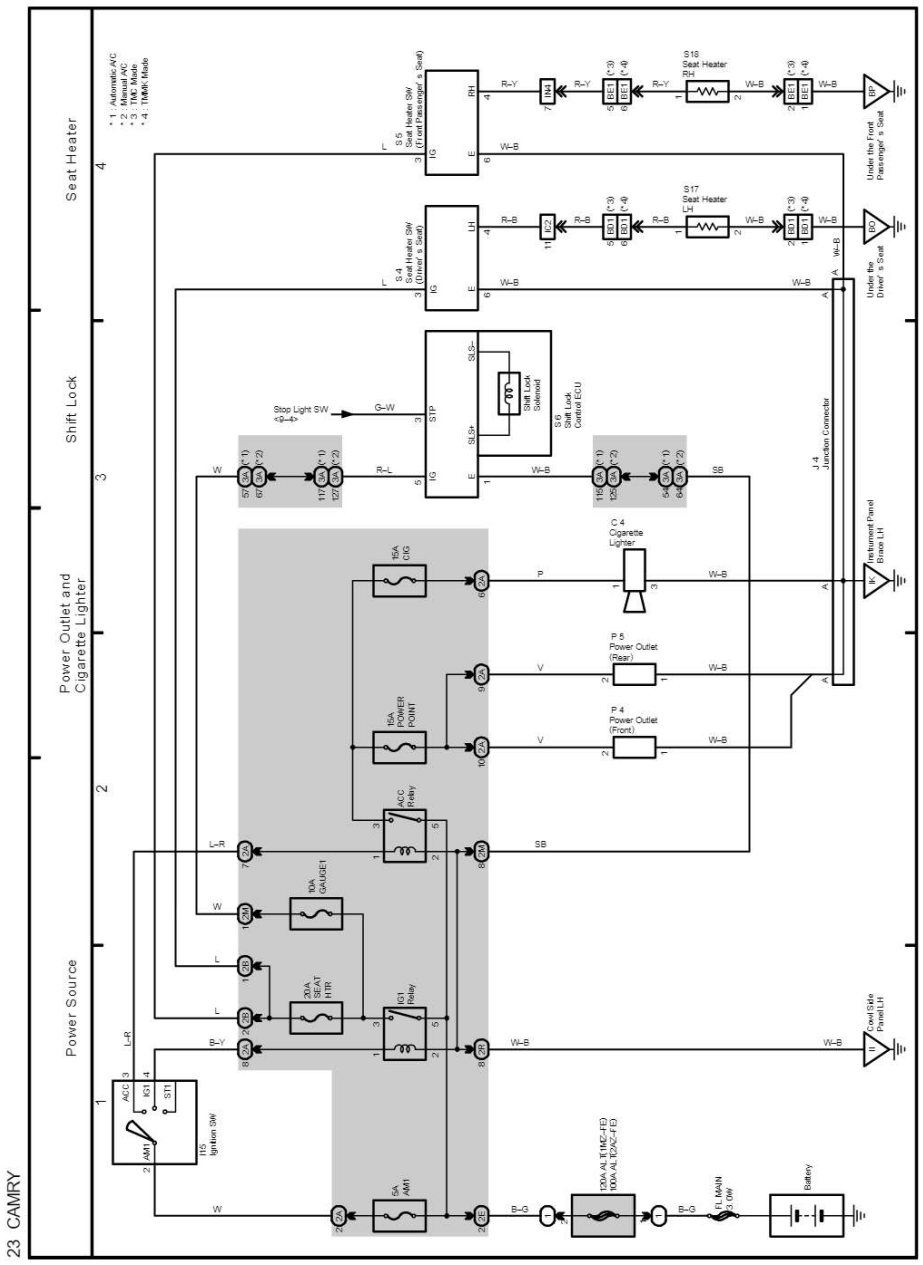


cardiagn.com

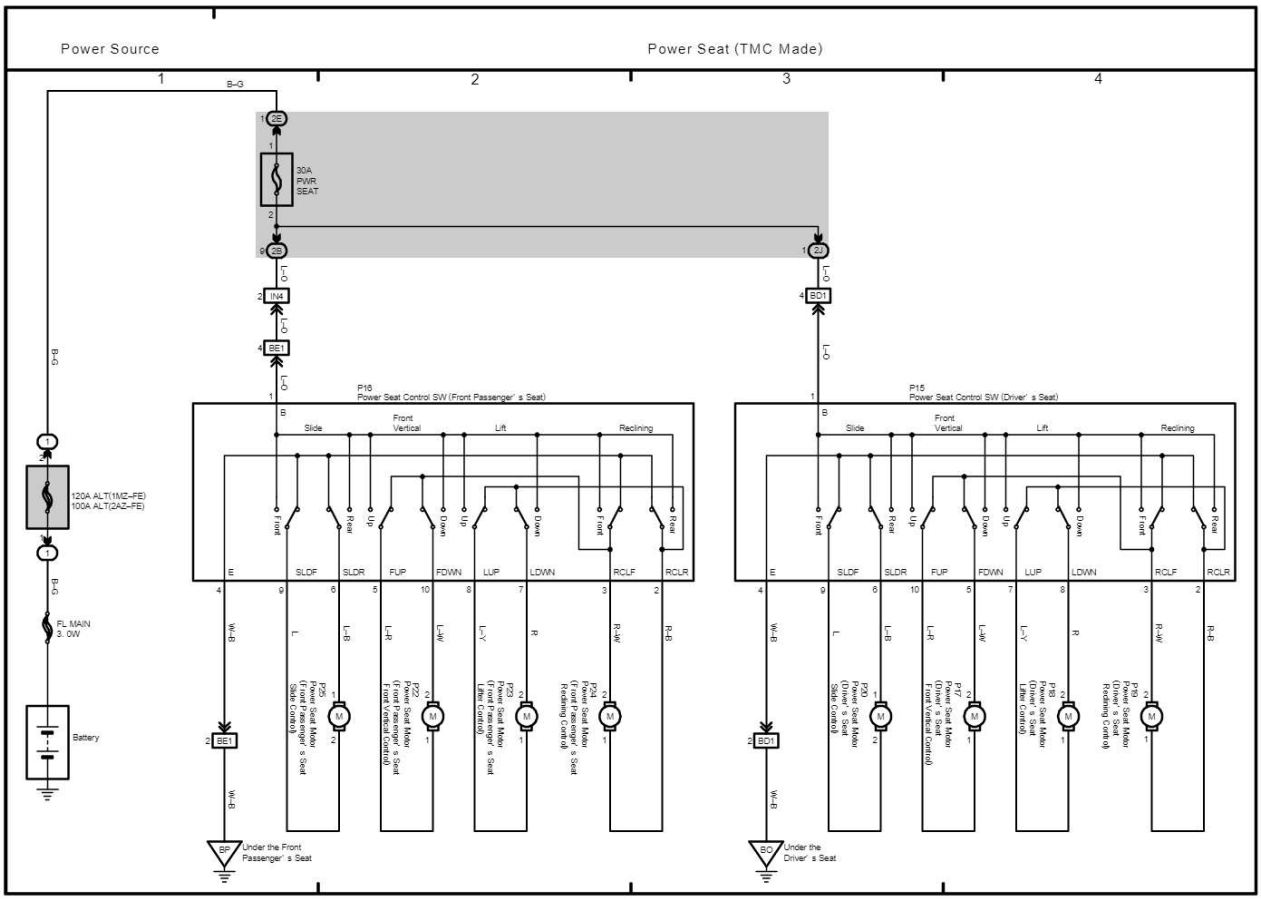


cardiagn.com

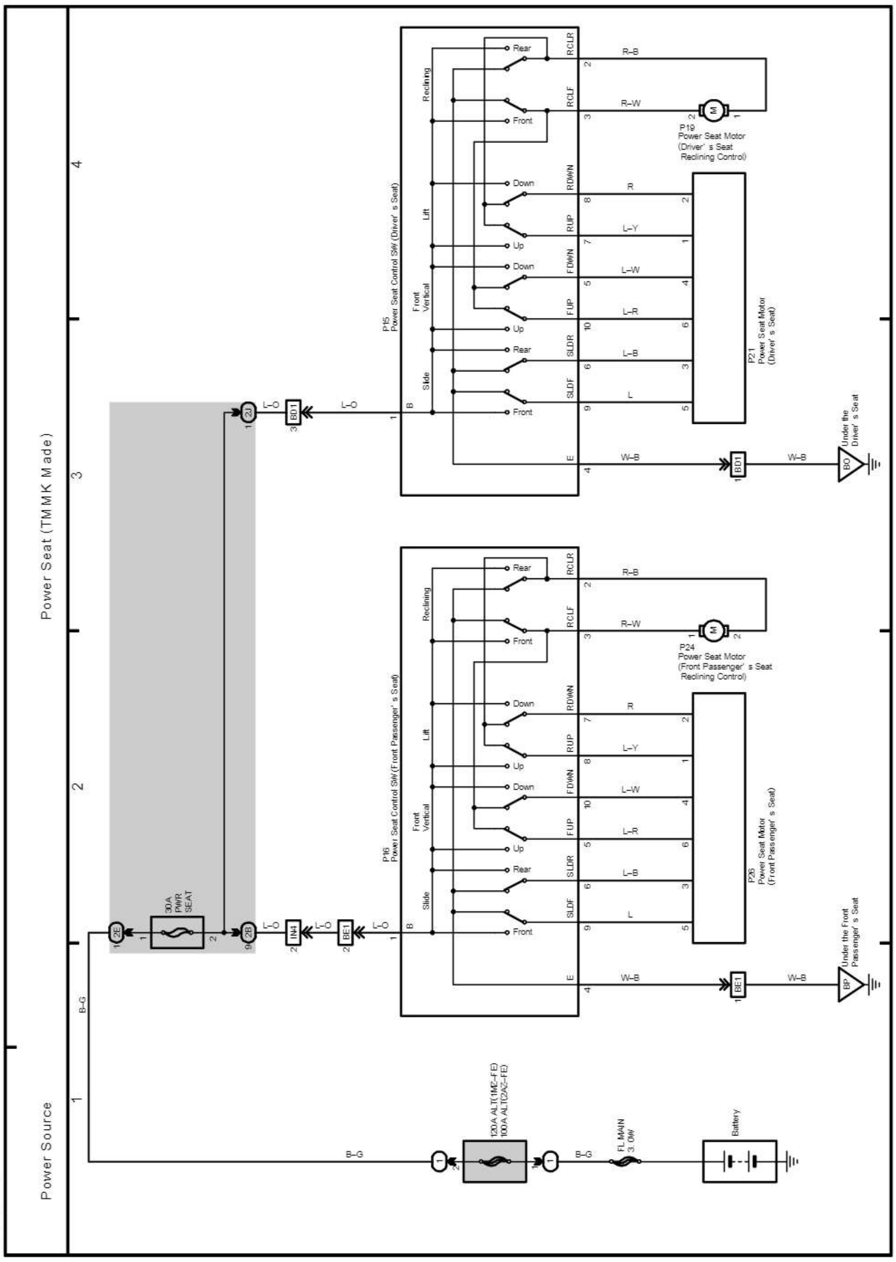
M OVERALL ELECTRICAL WIRING DIAGRAM



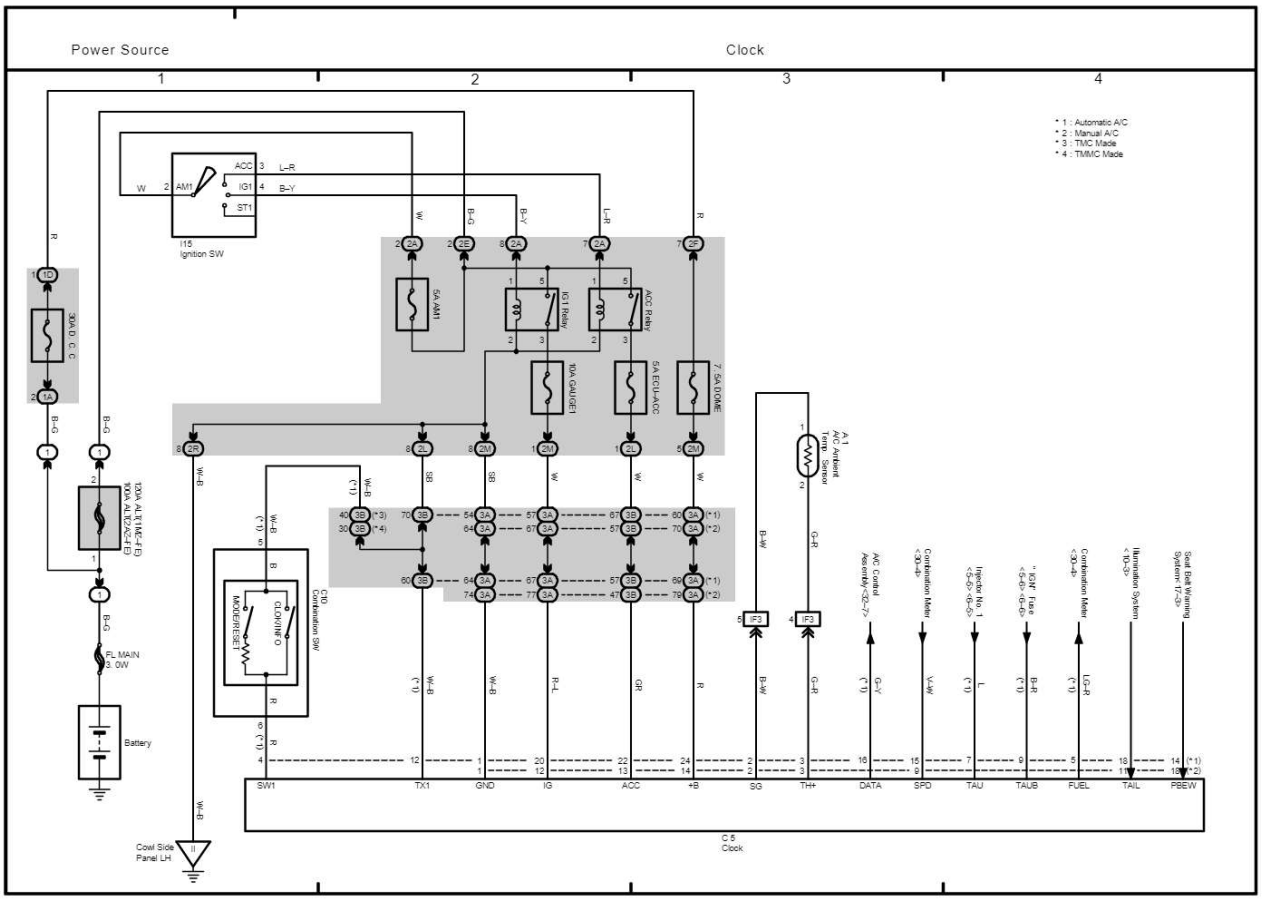
cardiagn.com



cardiagn.com

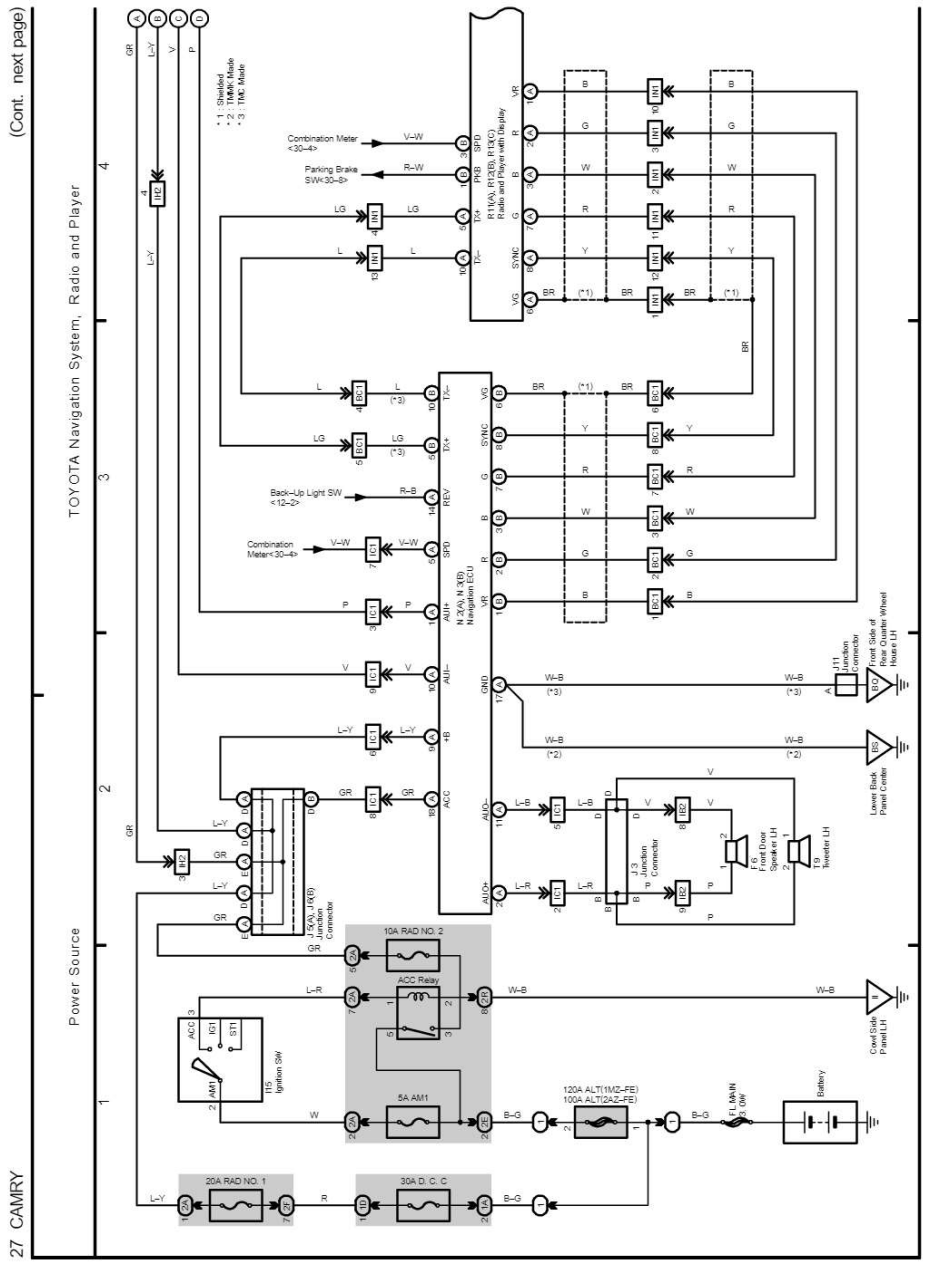


cardiagn.com

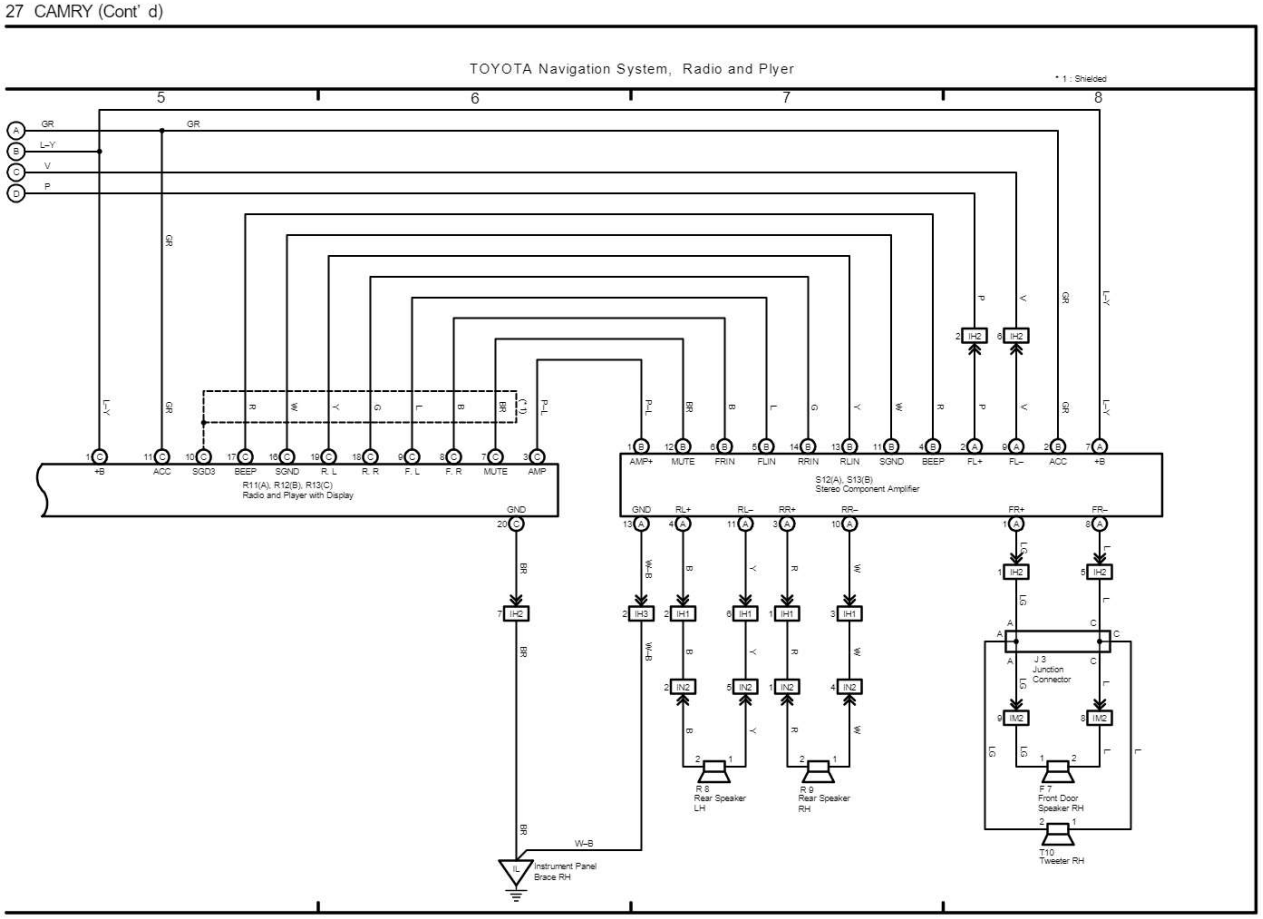


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

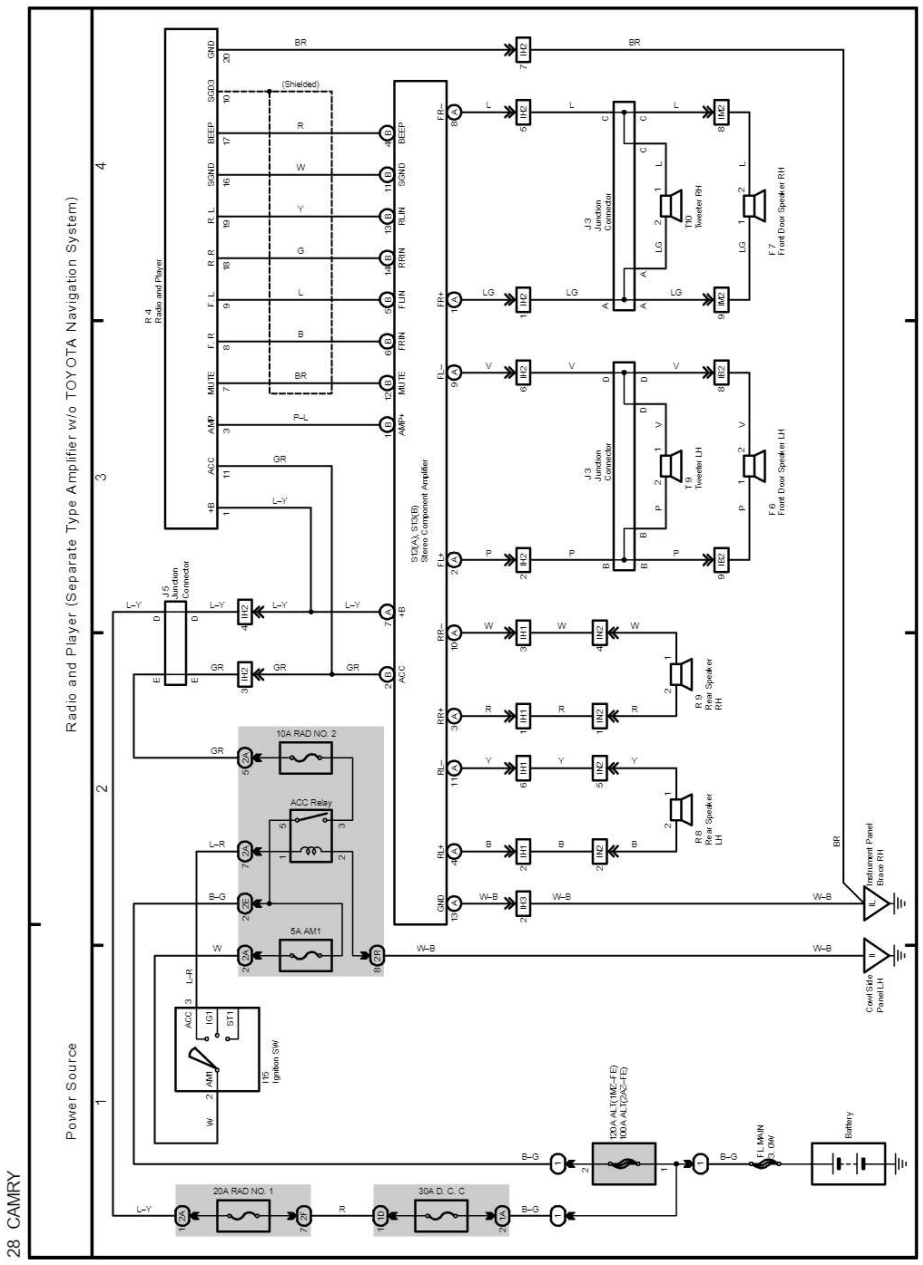


cardiagn.com

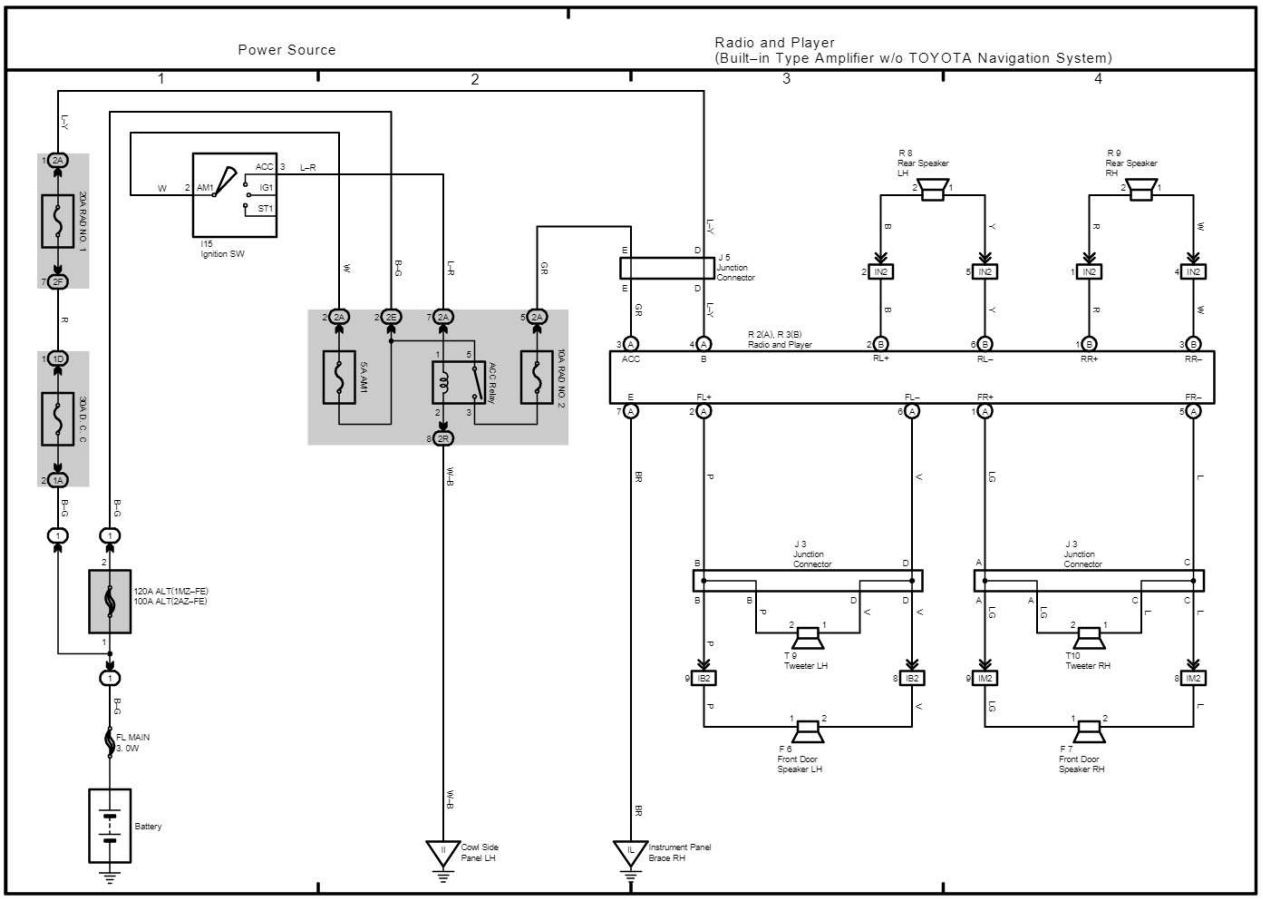


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

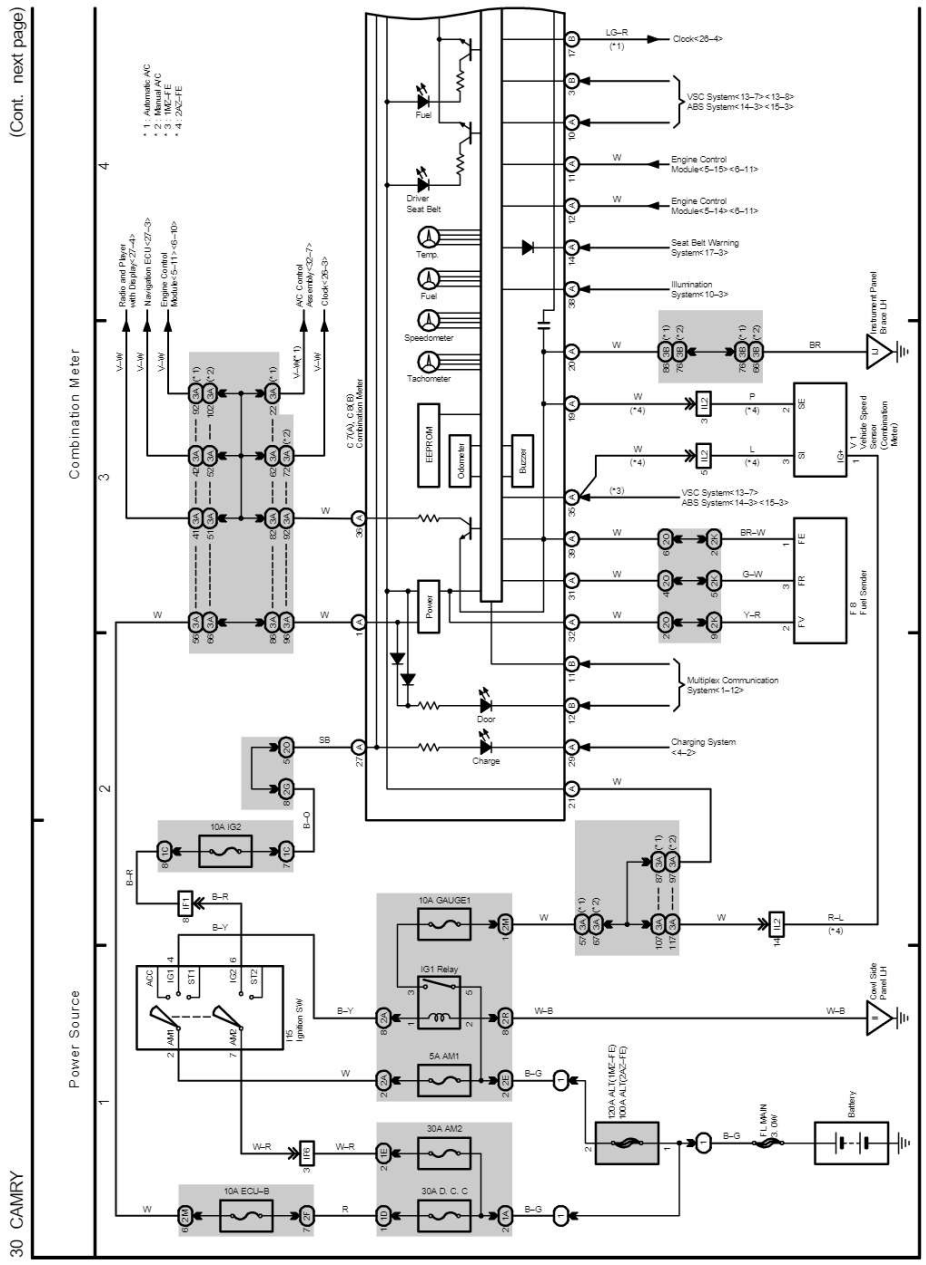


cardiagn.com

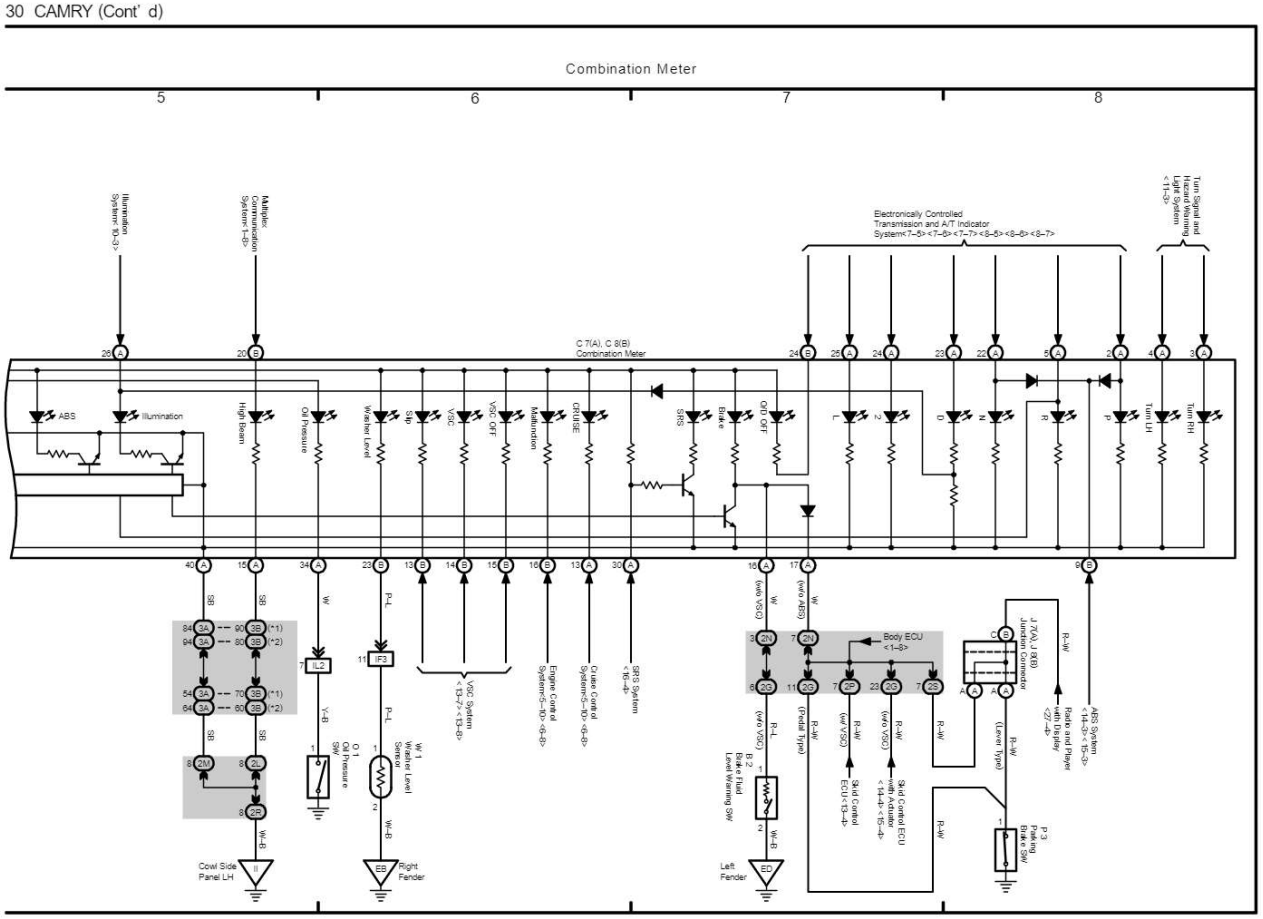


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

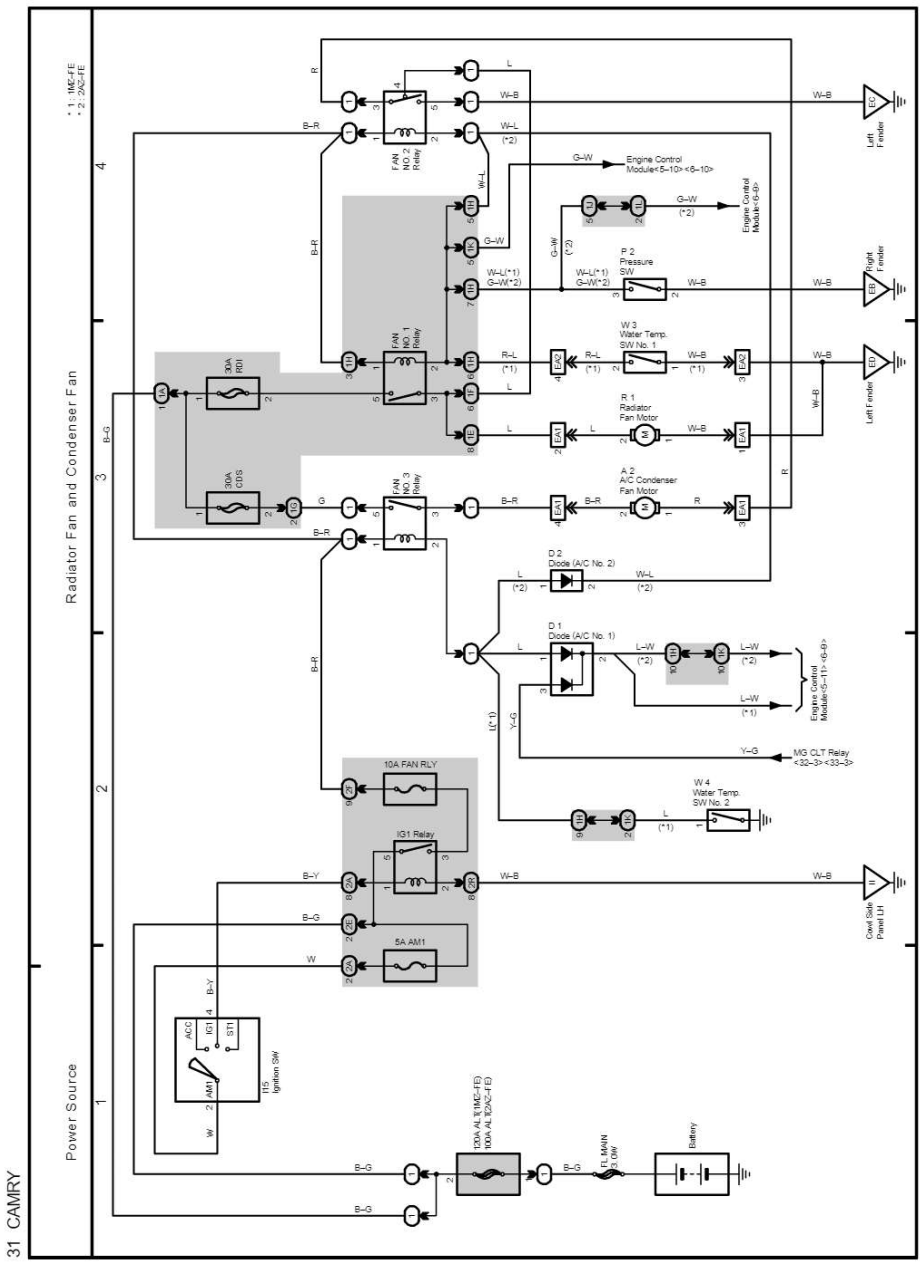


cardiagn.com



cardiagn.com

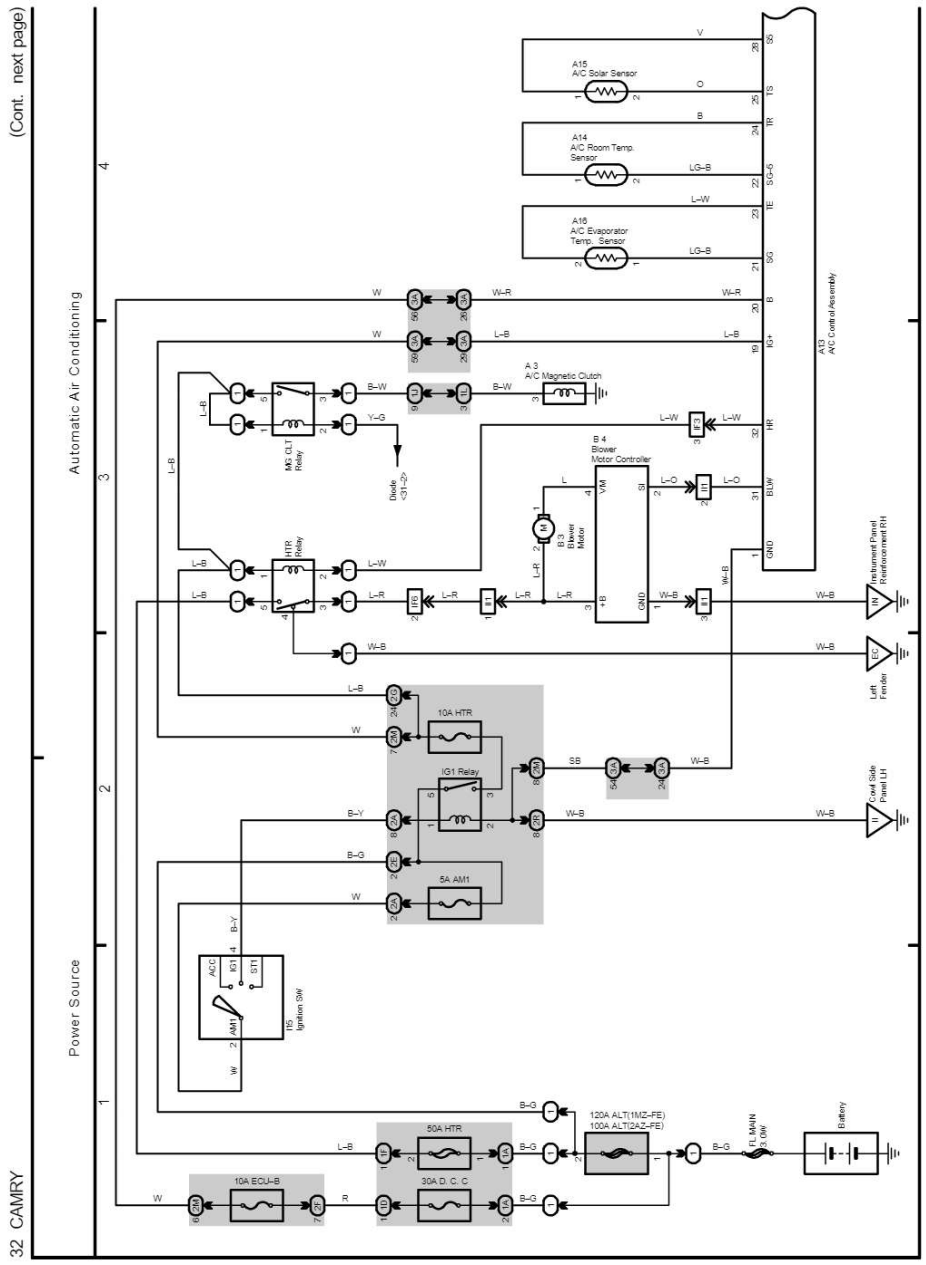
M OVERALL ELECTRICAL WIRING DIAGRAM



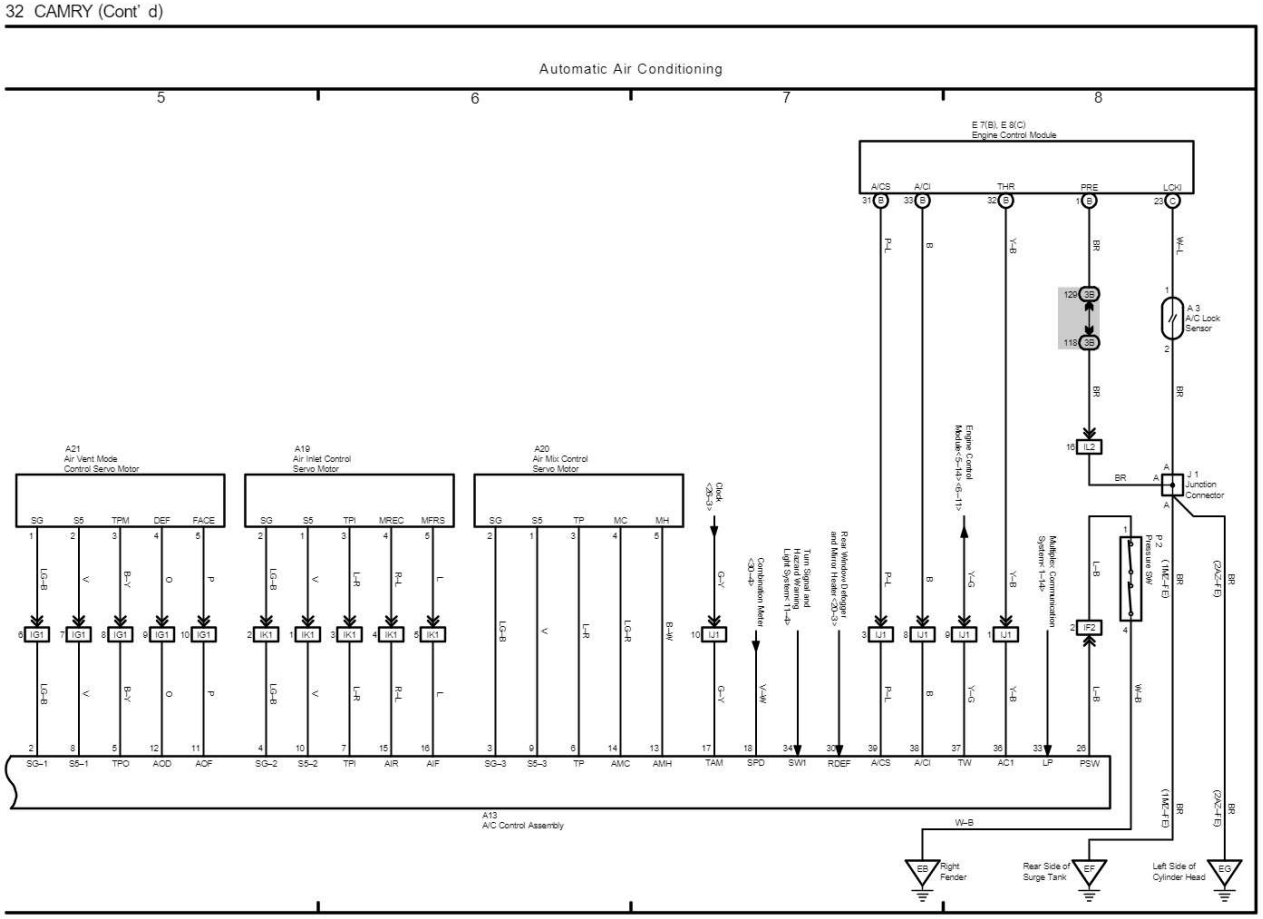
cardiagn.com

cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM

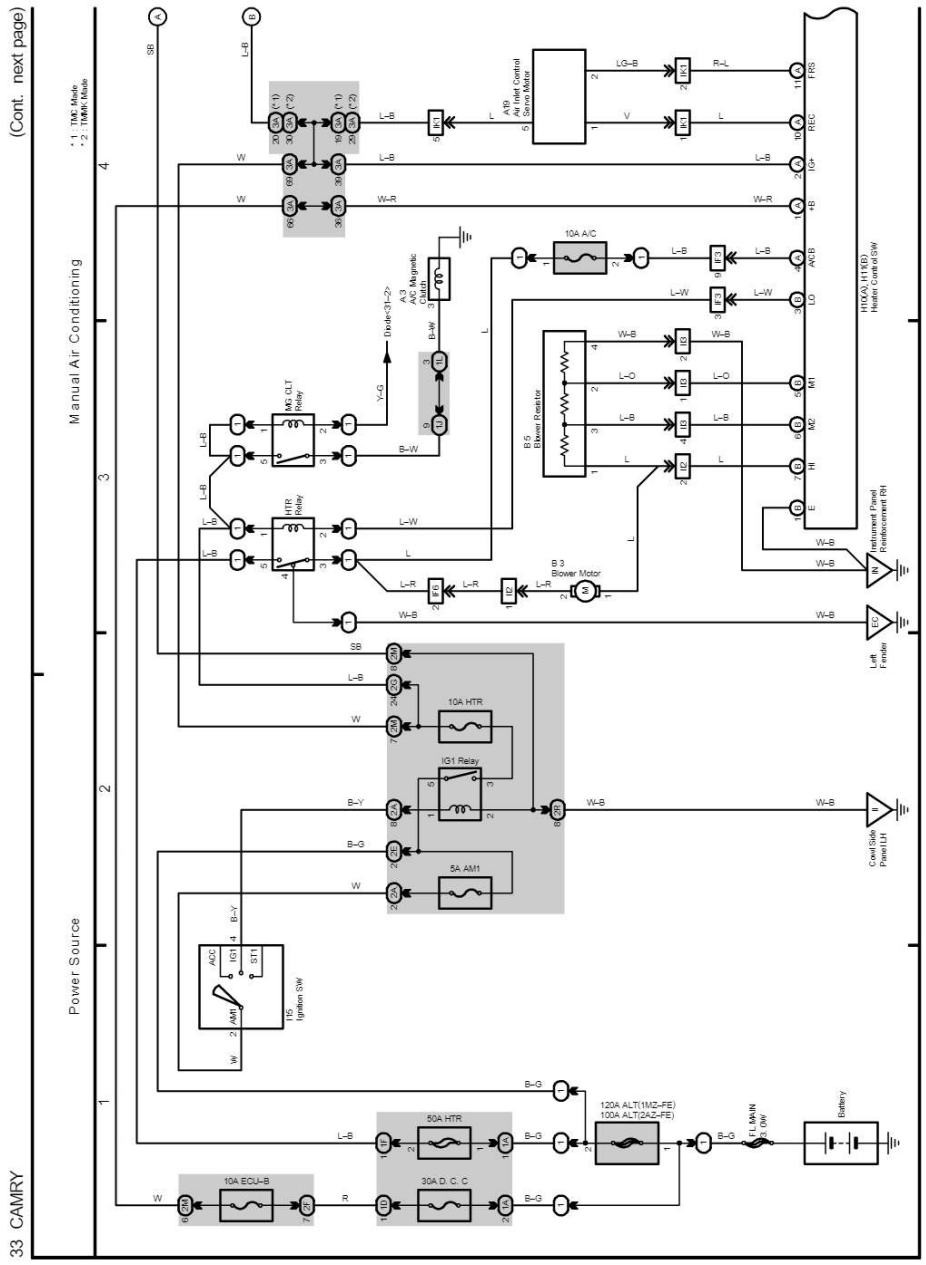


cardiagn.com

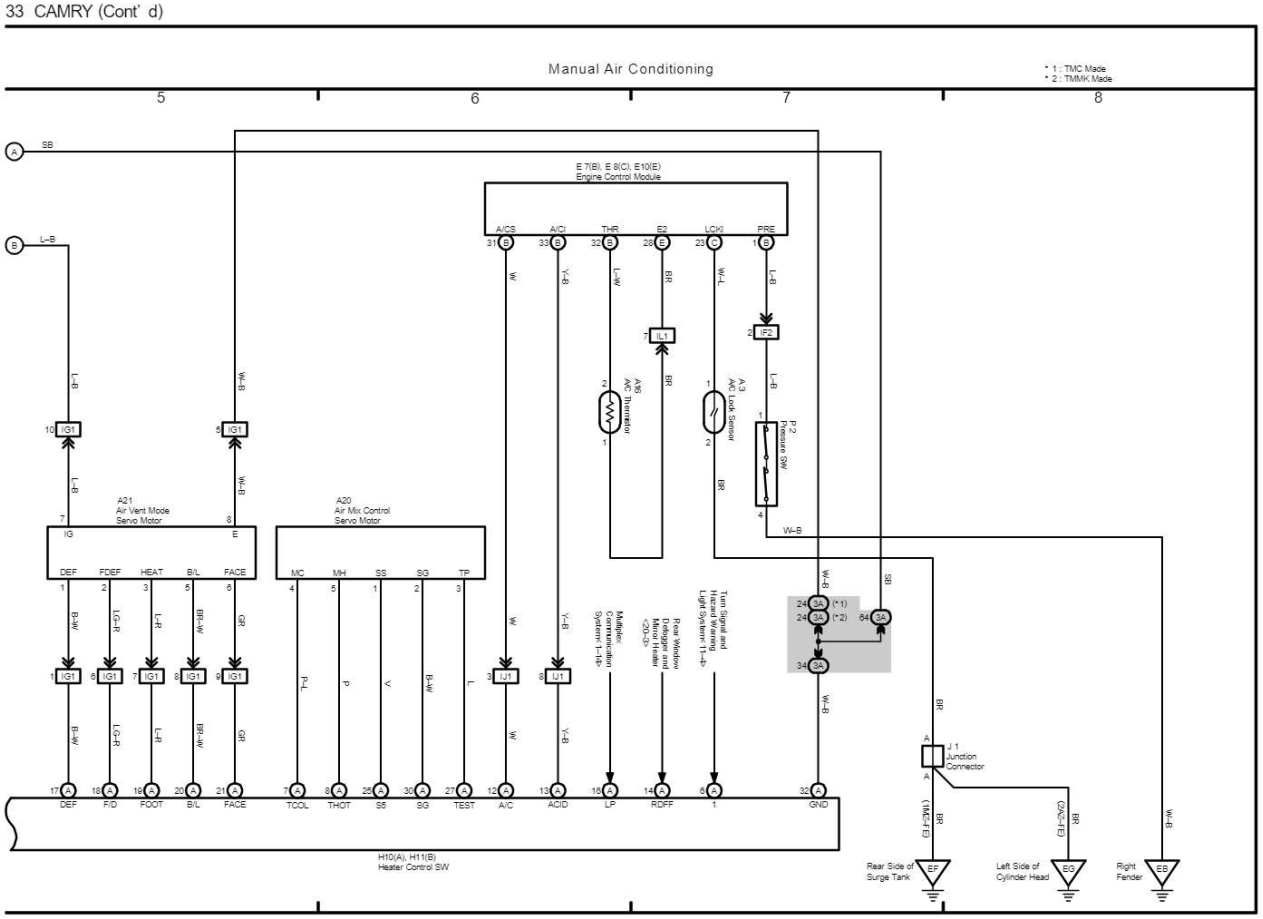


cardiagn.com

M OVERALL ELECTRICAL WIRING DIAGRAM



cardiagn.com



cardiagn.com