

TOYOTA

ELECTRICAL WIRING DIAGRAM

FR

AE86 series May, 1983

FOREWORD

This wiring diagram has been prepared to provide information on the electrical system of the TOYOTA COROLLA FR series.

All information in the 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

Name of your TOYOTA

COROLLA: except in Australia
SPRINTER: in Australia

TOYOTA COROLLA FR ELECTRICAL WIRING DIAGRAM

INTRODUCTION	A
TROUBLESHOOTING	B
POWER SOURCE	1
STARTING AND IGNITION SYSTEMS	2
CHARGING SYSTEM	3
EFI SYSTEM	4
CARBURETOR	5
OVERDRIVE	6
IDLE-UP	7
HEADLIGHTS	8
TURN SIGNAL AND HAZARD WARNING LIGHTS	9
TAILLIGHTS AND ILLUMINATION	10
INTERIOR LIGHTS	11
STOP LIGHTS	12
BACK-UP LIGHTS	13
REAR FOG LIGHTS	14
HEADLIGHT CLEANER	15
SEAT BELT WARNING	16
FRONT WIPERS AND WASHER	17
REAR WIPER AND WASHER	18
REAR WINDOW DEFOGGER	19
CIGARETTE LIGHTER AND CLOCK	20
RADIO AND HORN	21
COMBINATION METER	22
AIR CONDITIONER	23
SUN ROOF	24
GROUND POINTS	25
RELAY LOCATIONS	
ELECTRICAL WIRING ROUTING	
COMPLETE ELECTRICAL WIRING DIAGRAM	

© 1983 TOYOTA MOTOR CORPORATION

All rights reserved. This book may not be reproduced or copied, in whole or in part, without the written permission of Toyota Motor Corporation.

A INTRODUCTION

As shown in the index, the entire electrical system is composed of 25 systems, including the power source and ground points.

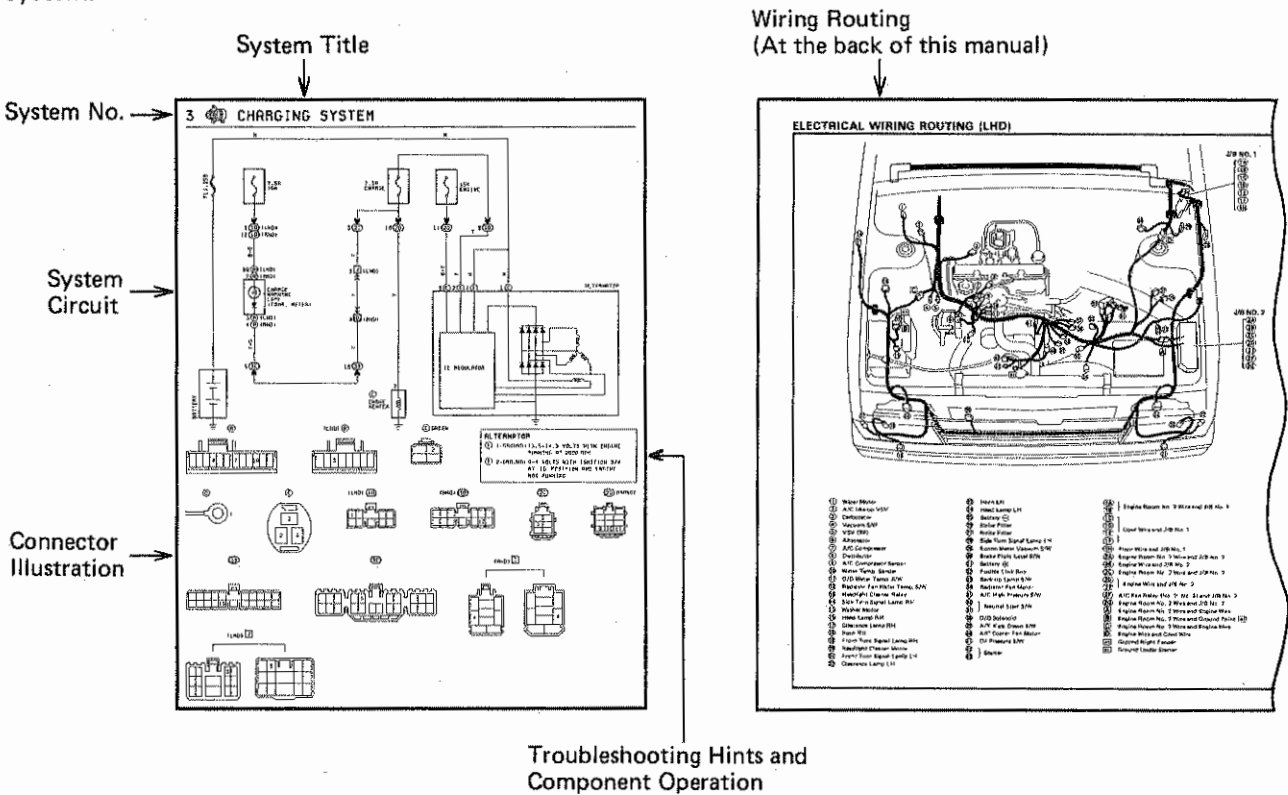
The power source illustrations show how battery power is distributed to each fuse and which loads in the system the fuses protect.

Most systems are drawn from the fuse location. Joining the power source with any system will result in the complete system.

All ground points are illustrated along with the relationship between component grounds.

The wiring routings and relay locations can be found at the back of this manual.

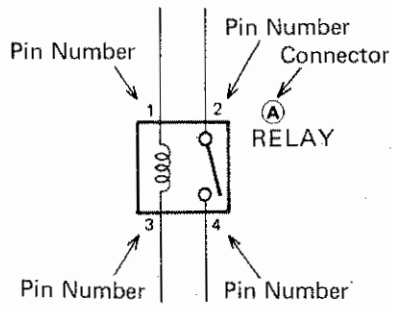
The circuit, connectors, troubleshooting hints and component operation are illustrated for each system.



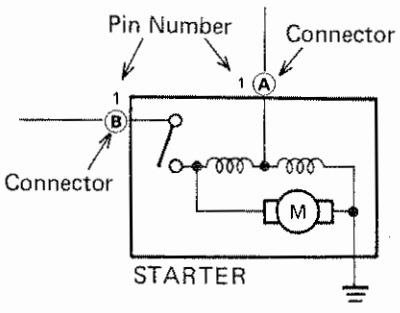
CONNECTORS

Connectors and connector pin numbers are indicated in each circuit. Wires and pins of the connectors are also clearly illustrated.

a. Connector to Component (A) (B) (C)

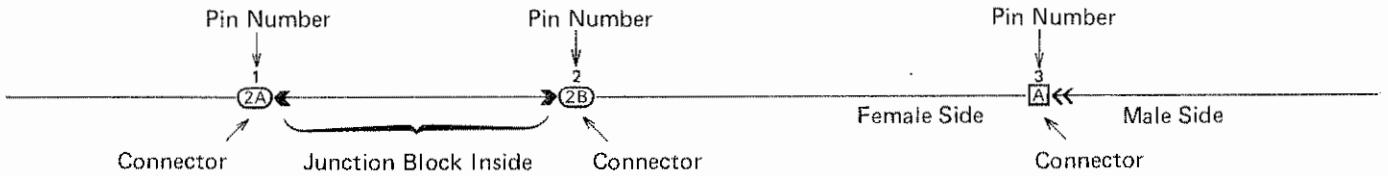


Single Connector to One Component



Multiple Connectors to One Component

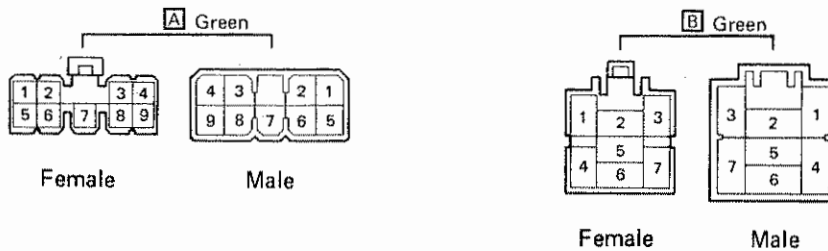
- b. Connector to Junction Block No. 1 (Cowl Side) (1A) (1B) (1J)
- Connector to Junction Block No. 2 (Engine Room) (2A) (2B) (2G)
- Connector to Junction Block No. 3 (Instrument Panel) (3A) (3B) (3F)
- Connector to Junction Block No. 4 (Cowl Side) (4A)
- Connector Joining Wire Harness and Wire Harness (A) (B) (C)



These connector locations can be found in the wiring routing at the back of this manual.

The connectors are illustrated in relation to the wiring side and not the component side, and these are seen from the open end. Connector colors are shown to assist in location.

Connector pins are numbered in each connector. Female connectors are numbered from left to right and from top to bottom. Male connectors are numbered from right to left and from top to bottom. (i.e., a male connector is numbered in relation to its female connector.)



WIRE COLOR

Wire colors are indicated by an alphabetical code.

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

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

Example: R-G indicates a Red wire with a Green stripe.

ABBREVIATIONS

The following abbreviations are used in this manual.

- | | |
|---------------------------------|--------------------------------|
| A/C = Air Conditioner | FL = Fusible Link |
| CB = Circuit Breaker | GEN = General |
| ECU = Electronic Control Unit | J/B = Junction Block |
| EFI = Electronic Fuel Injection | LHD = Left-hand Drive Vehicle |
| EUR = Europe | RHD = Right-hand Drive Vehicle |
| Ex. = Except | VSV = Vacuum Switching Valve |

TROUBLESHOOTING HINTS AND COMPONENT OPERATION

For assistance in understanding the system and help in repair, voltage, resistance or operation of each component is shown in the box.

B TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE

1. Determine what is wrong with the system.
2. First read the diagram so you understand the system. Refer to the component operation boxed within the system circuit.
3. Locate the cause of the problem.
 - a. Determine whether the problem is with the common circuit (power source or ground) or individual circuit.

Check other loads or switches which are in parallel with the problem component.

If they are normal, the problem lies within the particular system itself.

Refer to the POWER SOURCE or GROUND POINTS and check the related systems.

(NOTE: Each component is grounded at 2 or 3 points.)

If the related systems are normal, the common circuit (power source or ground points) is okay.

The problem lies within the individual system.
 - b. Locate the exact point of the problem by narrowing down the area with a voltmeter or test lamp.
4. Repair and re-check the circuit.

If any wiring was disconnected for troubleshooting, reconnect it and check the related circuits.

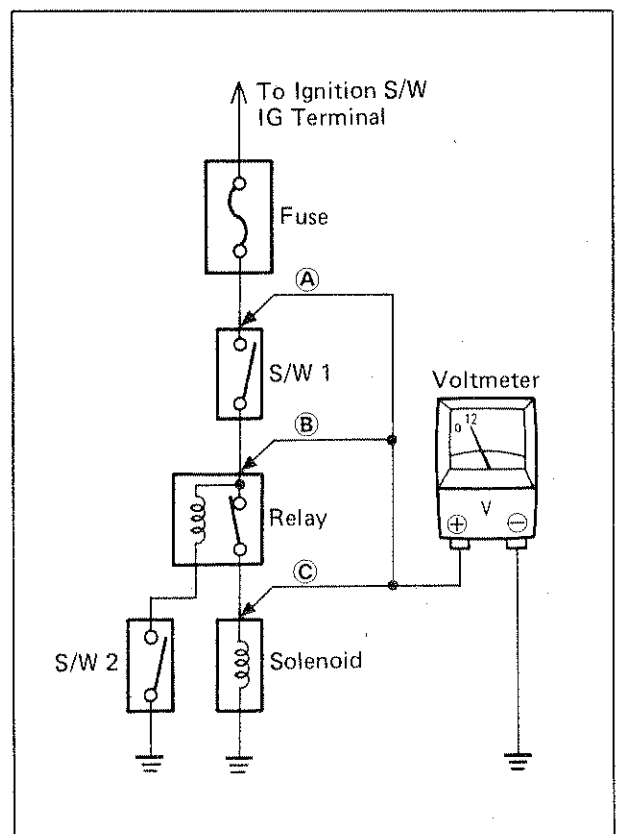
VOLTAGE CHECK

1. Establish conditions in which voltage is present at the check point.

(Refer to component operations.)

Example:

- Ⓐ — Ignition S/W on
 - Ⓑ — Ignition S/W and S/W 1 on
 - Ⓒ — Ignition S/W, S/W 1 and Relay on (S/W 2 off)
2. 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 lamp instead of a voltmeter.



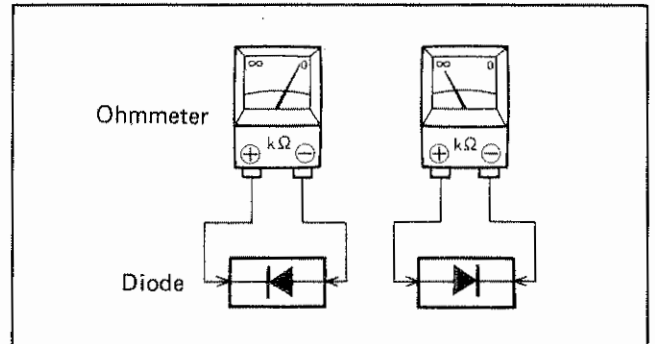
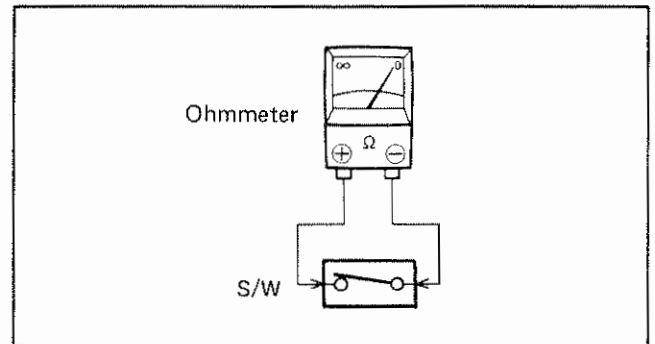
CONTINUITY AND RESISTANCE CHECK

1. Disconnect the battery terminal or wire so there is no voltage between the check points.
2. 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.



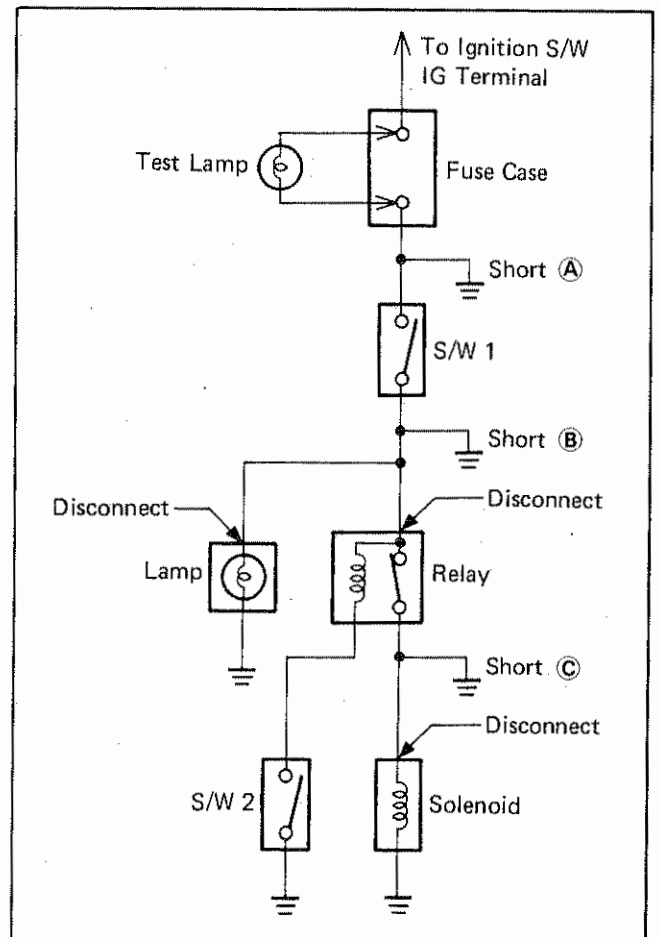
FINDING A SHORT CIRCUIT

1. Remove the blown fuse and disconnect all loads of the fuse.
2. Connect a test lamp in place of the fuse.
3. Establish conditions in which the test lamp comes on.

(Refer to component operations.)

Example:

- Ⓐ — Ignition S/W on
 - Ⓑ — Ignition S/W and S/W 1 on
 - Ⓒ — Ignition S/W, S/W 1 and Relay on (Connect the Relay) and S/W 2 off (or Disconnect S/W 2)
4. Disconnect and reconnect the connectors while watching the test lamp.
- The short lies between the connector where the test lamp stays lit and the connector where the lamp goes out.
5. Find the exact location of the short by lightly shaking the problem wire along the body.





POWER SOURCE (Power—Load Reference)

J/B No.1

Power		Load	System No.
7.5A	DOME	Digital Clock	20
		Interior Lamp, Map Lamp, Door Warning Lamp, Luggage Room Lamp	11
		Rear Fog Light Relay, Rear Fog Lamp	14
30A	ECU-IG	Sun Roof Motor	24
7.5A	RADIO NO. 2	Radio and Stereo Player	21
15A	CIG	Cigarette Lighter, Digital Clock	20
7.5A	TURN	Turn Signal Flasher, Turn Signal Lamp, Turn Signal S/W	9
7.5A	GAUGE	Combination Meter, Chime	22
		Back-up Light S/W, Back-up Lamp	13
		Overdrive Relay	6
		Defogger S/W, Defogger Relay	19
		Heater Relay	23
		Seat Belt Warning Relay, Seat Belt Warning Lamp	16
7.5A	IGN	Engine Main Relay	1
		Charge Warning Lamp	3
20A	WIPER	Washer Motor, Wiper Motor	17
		Rear Washer Motor, Rear Wiper Motor, Washer Valve	18
		Headlight Cleaner Relay (EUR LHD)	15
15A	STOP	Stop Light S/W, Stop Lamp	12
10A	RTR	Retract Control Relay	8
10A	TAIL LH (W. Germany)	Clearance Lamp LH, Taillamp LH	10
10A	TAIL RH (W. Germany)	Clearance Lamp, Taillamp, Licence Plate Lamp, Radio Lamp, Cigarette Lighter Lamp, Heater Control Lamp, Combination Meter Lamp, A/T Indicator Lamp, Overdrive S/W Lamp	10
		Digital Clock	20
		Headlight Cleaner Relay (EUR LHD)	15
15A	TAIL (Ex. W. Germany)	Clearance Lamp, Taillamp, Licence Plate Lamp, Radio Lamp, Cigarette Lighter Lamp, Heater Control Lamp, Combination Meter Lamp, A/T Indicator Lamp	10
		Digital Clock	20
		Headlight Cleaner Relay (EUR LHD)	15
30A	DEFOG CB (LHD)	Rear Window Defogger	19
20A	DEFOG CB (RHD)	Rear Window Defogger, Defogger S/W	19

J/B No.2

Power		Load	System No.
10A	HEAD LH (Ex. W. Germany)	Headlamp LH	8
10A	HEAD RH (Ex. W. Germany)	Headlamp RH	8
10A	HEAD LH-UPR (W. Germany)	Headlamp LH (Upper), High Beam Indicator Lamp	8
10A	HEAD RH-UPR (W. Germany)	Headlamp RH (Upper)	8
10A	HEAD LH-LWR (W. Germany)	Headlamp LH (Lower)	8
10A	HEAD RH-LWR (W. Germany)	Headlamp RH (Lower)	8
10A	ENGINE	Voltage Regulator	3
		Fuel Cut Solenoid	5
10A	RADIO NO. 1	Radio and Stereo Player	21
10A	HAZ-HORN	Horn	21
		Hazard S/W, Hazard Lamp	9
7.5A	CHARGE	Charge Warning Lamp	3
		Choke Heater	5
15A	EFI	EFI Main Relay	4
30A	FL RTR	Retract Relay	8

J/B No.4

10A	A/C	A/C S/W, A/C Amplifier	23
30A	HEATER CB	Heater Relay, Blower Motor	23

Fusible Link Box

60A	FL AM1	Engine Main Relay, Ignition S/W (AM1)	1
		Alternator	3
		Defogger Relay	19
		Headlight Cleaner Relay (EUR LHD)	15
		Taillight Relay	10
30A	FL AM2	Ignition S/W (AM2)	1

Fusible Link (Near the Battery)

FL 0.5G	Headlight Relay, Dimmer Relay (W. Germany)	8
---------	--	---

1-2



POWER SOURCE (LHD)

