

# ANTI-THEFT SYSTEM & DOOR LOCKS - POWER

1998 Toyota Supra

1998 ACCESSORIES & EQUIPMENT  
Toyota - Anti-Theft & Power Door Locks

Supra

## \* PLEASE READ THIS FIRST \*

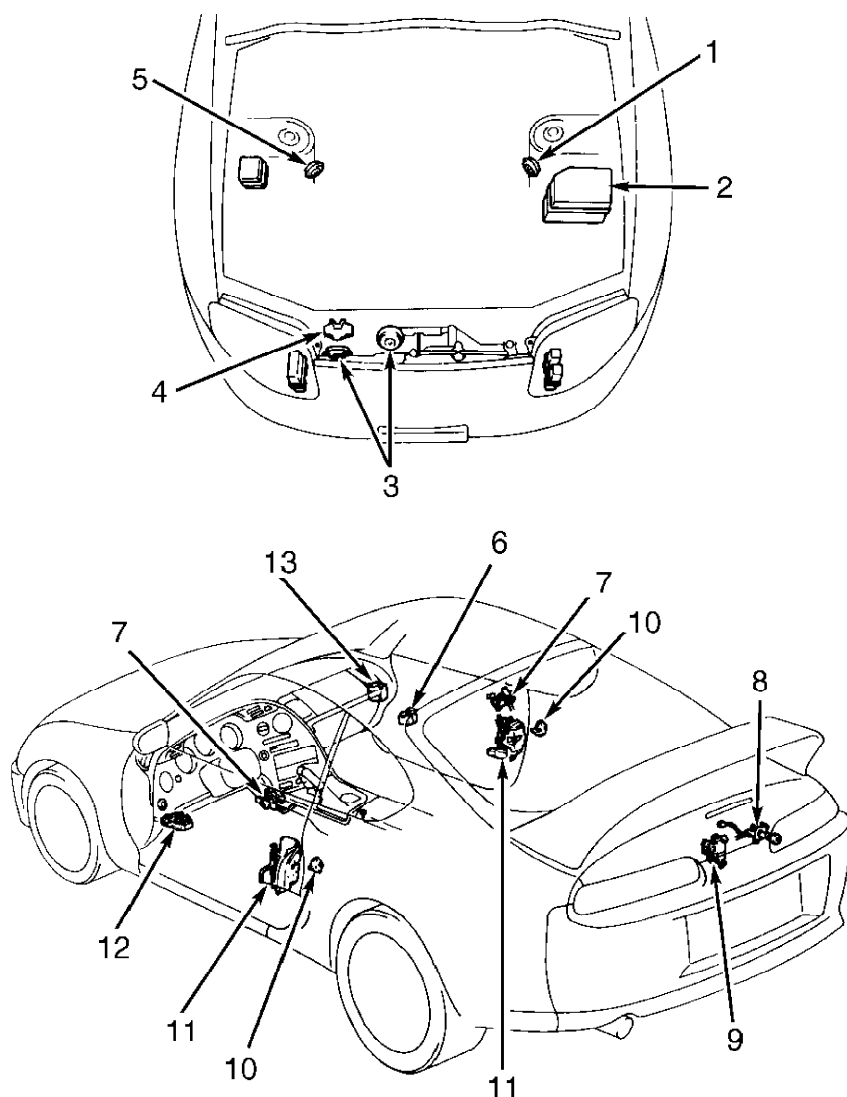
**WARNING:** Deactivate air bag system before performing any service operation. See AIR BAG RESTRAINT SYSTEMS article. DO NOT apply electrical power to any component on steering column without first deactivating air bag system. Air bag may deploy.

## DESCRIPTION

**NOTE:** Anti-theft system may also be referred to as theft deterrent system. Anti-theft system and power door lock system are an integrated system that uses an anti-theft system and door lock control Electronic Control Unit (ECU) for controlling each system.

Anti-theft system is designed to sound the horns, flash headlights and taillights for one minute, and interrupt starter circuit if driver's door, passenger's door or rear (luggage compartment) door is opened without using ignition key, hood is opened, or if battery is disconnected and reconnected when the vehicle is locked. Anti-theft system will also lock any door not previously locked. Power door lock system allows locking of the doors by use of door lock control switch on each door.

Anti-theft and power door lock system consists of standard horns, anti-theft system horn, hood courtesy switch, anti-theft system and door lock control Electronic Control Unit (ECU), SECURITY indicator light, ignition switch with key unlock warning switch, door lock motor assemblies with door unlock detection switches, door courtesy switches, door key lock and unlock switches, door lock control switches, rear door lock assembly with rear door courtesy switch, and rear door key and unlock switch. See Fig. 1.



- |                                       |  |
|---------------------------------------|--|
| 1. Anti-Theft System Horn (Non-Turbo) | 9. Rear Door Lock Assembly With Rear Door Courtesy Switch      |
| 2. Engine Compartment Fuse/Relay Box  | 10. Door Courtesy Switch                                       |
| 3. Standard Horn                      | 11. Door Lock Motor Assembly With Door Unlock Detection Switch |
| 4. Hood Courtesy Switch               | 12. Door Lock Control Switch & Power Window Master Switch      |
| 5. Anti-Theft System Horn (Turbo)     | 13. Anti-Theft System & Door Lock Control ECU                  |
| 6. Door Lock Control Switch           |  |
| 7. Door Key Lock & Unlock Switch      |  |
| 8. Rear Door Key Lock & Unlock Switch |  |

98E11100

Fig. 1: Locating Anti-Theft & Power Door Lock System Components  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

## OPERATION

### Anti-Theft System

Anti-theft system sets when ignition key is removed from ignition, passengers are removed, hood is closed, and driver's door, passenger's door and rear (luggage compartment) door are closed and locked. There is a 30-second preparation time period while doors are locked before system is set. SECURITY indicator light will come on when hood is closed and driver's door, passenger's door and rear door are closed and locked. The SECURITY indicator light is located on the top set of indicator lights on the upper area of instrument panel, just to the left of engine coolant and fuel gauge assembly. When SECURITY indicator light is on steady, driver's door, passenger's door or the rear door may be opened without ignition key. After 30 seconds, the anti-theft system will automatically set and SECURITY indicator light will flash.

When anti-theft system is set and SECURITY indicator light is flashing, ignition key must be used to open driver's door, passenger's door or the rear door. When anti-theft system is set, rear door may be opened with the key without activating or cancelling anti-theft system. While rear door is open and anti-theft system is interrupted, driver's door, passenger's door and hood may be opened. However, if battery is disconnected and then reconnected, the anti-theft system is activated. To resume anti-theft system setting after opening the rear door, hood must be closed, driver's door, passenger's door and rear door must be closed with the key removed from the rear door. Anti-theft system will be reset after 2 seconds. If SECURITY indicator light is off, anti-theft system is inactive and driver's door, passenger's door, rear door or hood may be opened without activating the anti-theft system.

If driver's door, passenger's door or rear door is opened without using ignition key, hood is opened, or if battery is disconnected and reconnected when the vehicle is locked, anti-theft system will sound the horns, flash headlights and taillights for one minute, and interrupt starter circuit. Anti-theft system will also lock any door not previously locked. If all doors are not locked at once, anti-theft system will repeat the door locking operation every 2 seconds during the one-minute alarm interval. After one minute, the alarm will automatically stop and starter interrupt will remain on. Anti-theft system alarm may be stopped by turning ignition switch from LOCK to ON position, although starter interrupt will remain on. Stopping the alarm in this manner will keep anti-theft system from being reactivated when driver's door, passenger's door, rear door or hood is opened. Anti-theft system and starter interrupt operation may be cancelled by unlocking driver's door or passenger's door by using the key.

### Power Door Lock System

Power door lock system uses a door lock control switch on driver's door and passenger's door which allows the operator to lock each door by using the switch. When operating door lock control switch, the switch provides an input signal to anti-theft system and door lock control Electronic Control Unit (ECU). Anti-theft system and door lock control ECU then operates door lock motor to lock the door. Doors may also be locked by using key in the door key and unlock switch on each door. Doors may not be locked if the key is in the ignition, as the key unlock warning switch is turned on.

When anti-theft system is set, the doors cannot be locked or unlocked by using the door lock control switch. The doors may not be locked if the key is in the ignition. This prevents the keys from being locked in the vehicle and the doors being shut and locked from outside the vehicle. When unlocking the driver's door by using the key, turning the key to unlock position (toward rear of vehicle) once will unlock only the driver's door and twice will unlock both doors

simultaneously.

## **TROUBLE SHOOTING**

### **POWER DOOR LOCK SYSTEM**

NOTE: Doors may not be locked if the ignition key is in the ignition.

If power door lock system does not operate properly, determine under what conditions that power door lock system does not operate or malfunctions and then perform specified test listed under SYSTEM TESTS. See POWER DOOR LOCK SYSTEM TROUBLE SHOOTING SYMPTOMS.

### **POWER DOOR LOCK SYSTEM TROUBLE SHOOTING SYMPTOMS**

NOTE: If more than one circuit is to be inspected, perform test on each circuit in the order listed.

Entire Power Door Lock System Inoperative  
Inspect the following circuits:

- \* Anti-Theft System & Door Lock Control ECU Power Source Circuit. Go to TEST NO. 13.
- \* Actuator Power Source Circuit. Go to TEST NO. 14.
- \* Door Lock Motor Circuit. Go to TEST NO. 15.
- \* Anti-Theft System & Door Lock Control ECU. To test wiring harness, see PIN VOLTAGE TESTS.

All Or Some Doors Are Not Locked & Unlocked When Using Door Lock Control Switch Or By Using Key  
Inspect the following circuits:

- \* Door Lock Control Switch Circuit. Go to TEST NO. 16.
- \* Door Key & Unlock Switch Circuit. Go to TEST NO. 17.
- \* Door Lock Motor Circuit. Go to TEST NO. 15.
- \* Anti-Theft System & Door Lock Control ECU. To test wiring harness, see PIN VOLTAGE TESTS.

Doors Cannot Be Locked Using Door Lock Control Switch, But Lock Properly Using Key  
Inspect the following circuits:

- \* Door Lock Control Switch Circuit. Go to TEST NO. 16.
- \* Key Unlock Warning Switch Circuit. Go to TEST NO. 18.
- \* Door Courtesy Switch Circuit. Go to TEST NO. 11.
- \* Anti-Theft System & Door Lock Control ECU. To test wiring harness, see PIN VOLTAGE TESTS.

Doors Cannot Be Locked Or Unlocked Using Key, But Lock & Unlock Properly Using Door Lock Control Switch  
Inspect the following circuits:

- \* Door Key & Unlock Switch Circuit. Go to TEST NO. 17.
- \* Anti-Theft System & Door Lock Control ECU. To test wiring harness, see PIN VOLTAGE TESTS.

Doors Lock With Key In Ignition, But Doors Lock & Unlock Properly Using Key  
Inspect the following circuits:

- \* Key Unlock Warning Switch Circuit. Go to TEST NO. 18.

- \* Door Unlock Detection Switch Circuit. Go to TEST NO. 10.
- \* Anti-Theft System & Door Lock Control ECU. To test wiring harness, see PIN VOLTAGE TESTS.

## ANTI-THEFT SYSTEM

**NOTE:** Before trouble shooting anti-theft system, ensure power door lock system operates properly and then perform anti-theft system preliminary inspection to ensure proper operation of anti-theft system.

### ANTI-THEFT SYSTEM PRELIMINARY INSPECTION

1) Remove ignition key from ignition. Ensure hood is closed and all doors and rear door are closed and unlocked. Use ignition key to lock either driver's door or passenger's door. This will lock the remaining door.

2) After 30 seconds, anti-theft system will automatically set and SECURITY indicator light will flash. SECURITY indicator light is located on the top set of indicator lights on the upper area of instrument panel, just to the left of engine coolant and fuel gauge assembly.

3) If any door is opened without using ignition key, hood is opened, or if battery is disconnected and reconnected when the vehicle is locked, anti-theft system will sound the horns, flash headlights and taillights for one minute, and interrupt starter circuit. Anti-theft system will also lock any door not previously locked.

4) Anti-theft system operation may be cancelled by unlocking driver's door or passenger's door, or by turning ignition from LOCK to ON position. Anti-theft system operation may also be interrupted by opening the rear door with the key. While rear door is open, anti-theft system is interrupted. When rear door is closed, anti-theft system operation should reset.

5) If anti-theft system is not operating properly, determine under what conditions that system does not operate or malfunctions and then perform specified test listed under SYSTEM TESTS. See ANTI-THEFT SYSTEM TROUBLE SHOOTING SYMPTOMS.

### ANTI-THEFT SYSTEM TROUBLE SHOOTING SYMPTOMS

**NOTE:** If more than one circuit is to be inspected, perform test on each circuit in the order listed.

Anti-Theft System Cannot Be Set  
Inspect the following circuits:

- \* SECURITY Indicator Light Circuit. Go to TEST NO. 1.
- \* Rear Door Key Lock & Unlock Switch Circuit. Go to TEST NO. 8.
- \* Rear Door Courtesy Switch Circuit. Go to TEST NO. 9.
- \* Door Courtesy Switch Circuit. Go to TEST NO. 11.
- \* Hood Courtesy Switch Circuit. Go to TEST NO. 12.

SECURITY Indicator Light Does Not Flash When Anti-Theft System Is Set  
Inspect the following circuit:

- \* SECURITY Indicator Light Circuit. Go to TEST NO. 1.

When Anti-Theft System Is Set, System Does Not Operate When Rear Door Is Opened By Other Than The Key  
Inspect the following circuit:

- \* Rear Door Courtesy Switch Circuit. Go to TEST NO. 9.

When Anti-Theft System Is Set, System Does Not Operate When Hood Is Opened

Inspect the following circuit:

- \* Hood Courtesy Switch Circuit. Go to TEST NO. 12.

When Anti-Theft System Is In Warning Operation, Standard Horns Do Not Operate

Inspect the following circuit:

- \* Horn Relay Circuit. Go to TEST NO. 3.

When Anti-Theft System Is In Warning Operation, Anti-Theft System Horn Does Not Operate

Inspect the following circuit:

- \* Anti-Theft System Horn Circuit. Go to TEST NO. 4.

When Anti-Theft System Is In Warning Operation, Headlights Do Not Flash

Inspect the following circuit:

- \* Headlight Relay Circuit. Go to TEST NO. 5.

When Anti-Theft System Is In Warning Operation, Taillights Do Not Flash

Inspect the following circuit:

- \* Taillight Relay Circuit. Go to TEST NO. 6.

When Anti-Theft System Is In Warning Operation, Starter Operation Is Not Interrupted

Inspect the following circuit:

- \* Starter Relay Circuit. Go to TEST NO. 2.

When Anti-Theft System Is Set, System Does Not Cancel When Ignition Switch Is In ACC Or ON Position

Inspect the following circuit:

- \* Ignition Switch Circuit. Go to TEST NO. 7.

When Anti-Theft System Is Set, System Still Operates When Rear Door Is Opened With The Key

Inspect the following circuit:

- \* Rear Door Key Lock & Unlock Switch Circuit. Go to TEST NO. 8.

Anti-Theft System Remains Set When Door Is Opened

Inspect the following circuit:

- \* Door Courtesy Switch Circuit. Go to TEST NO. 11.

Standard Horns Operate When Anti-Theft System Is Not Set

Inspect the following circuit:

- \* Horn Relay Circuit. Go to TEST NO. 3.

Anti-Theft System Horn Operates When Anti-Theft System Is Not Set

Inspect the following circuit:

- \* Anti-Theft System Horn Circuit. Go to TEST NO. 4.

Headlights Stay On When Anti-Theft System Is Not Set  
Inspect the following circuit:

- \* Headlight Relay Circuit. Go to TEST NO. 5.

Taillights Stay On When Anti-Theft System Is Not Set  
Inspect the following circuit:

- \* Taillight Relay Circuit. Go to TEST NO. 6.

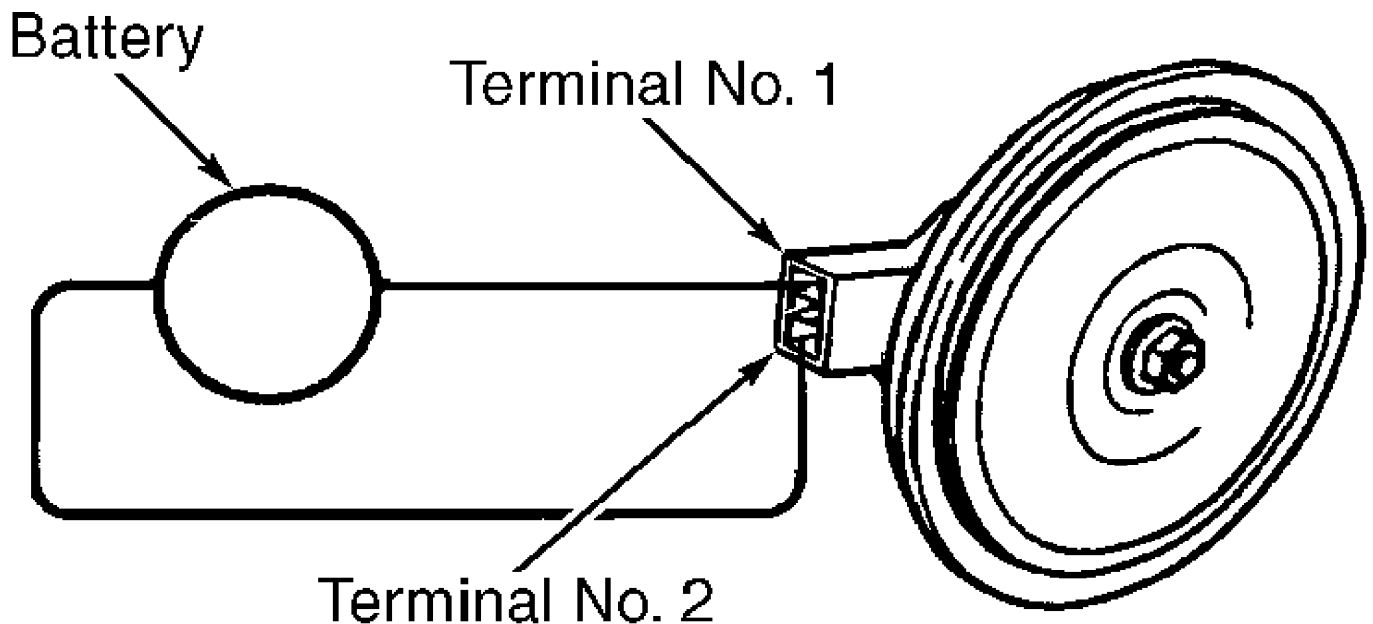
## COMPONENT TESTS

### ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ELECTRONIC CONTROL UNIT (ECU)

Individual component testing information is not available.  
For testing of wiring harness with anti-theft system and door lock control ECU, see PIN VOLTAGE TESTS.

### ANTI-THEFT SYSTEM HORN

Disconnect electrical connector at anti-theft system horn.  
See Fig. 1. Connect positive battery terminal to terminal No. 1 on anti-theft system horn. See Fig. 2. Momentarily connect negative battery terminal to terminal No. 2 on anti-theft system horn. Replace anti-theft system horn if horn fails to operate.



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Fig. 2: Testing Anti-Theft System Horn  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

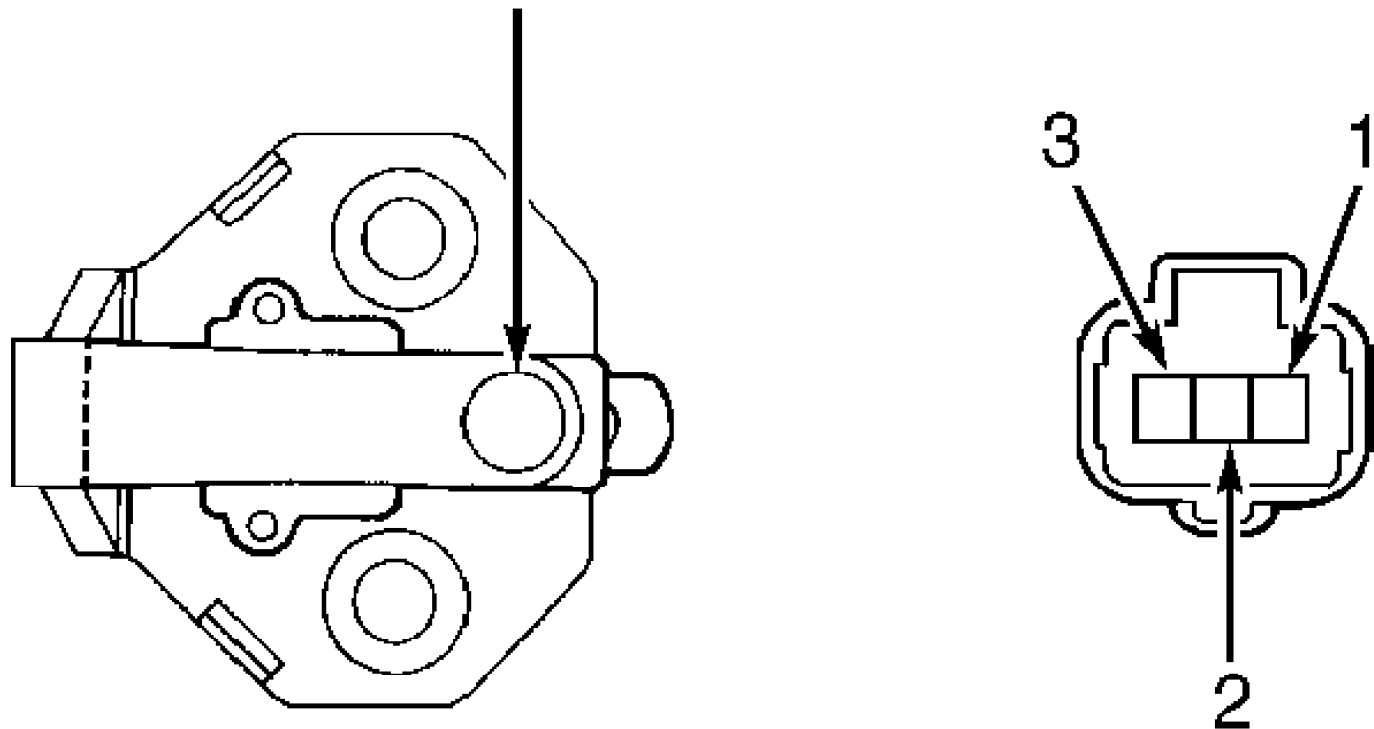
### DOOR COURTESY SWITCH

1) Disconnect electrical connector for door courtesy switch.  
See Fig. 1. Connect ohmmeter between body of door courtesy switch and

electrical terminal. See Fig. 3.

2) Using ohmmeter, check that continuity exists between terminals No. 1, 2 and 3 with pin on door courtesy switch released to the ON position. See Fig. 3. Check that no continuity exists between any terminal with pin on door courtesy switch depressed to the OFF position. Replace door courtesy switch if defective.

# Door Courtesy Switch



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Fig. 3: Testing Door Courtesy Switch  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

## DOOR KEY LOCK & UNLOCK SWITCH

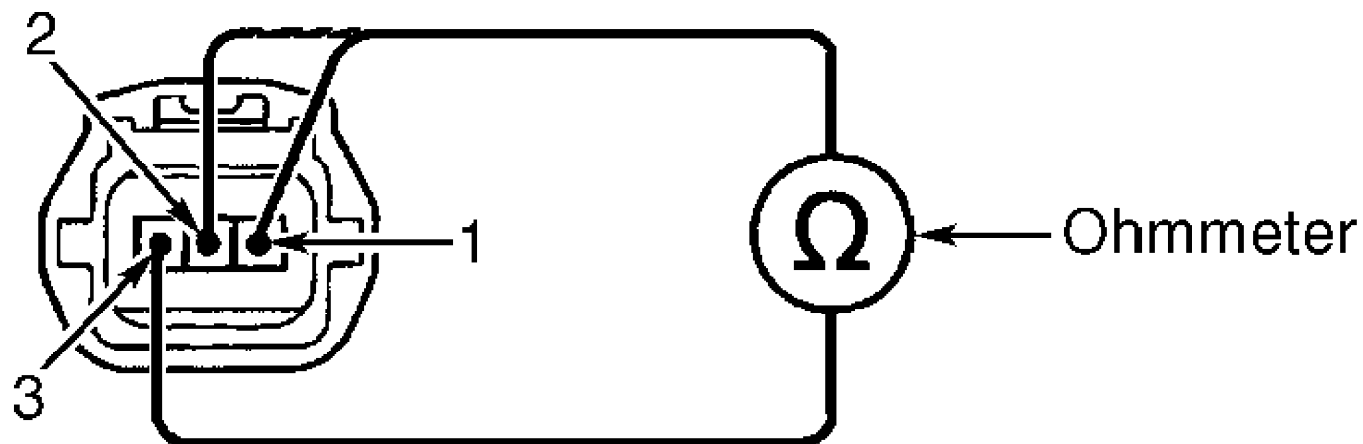
- 1) Remove door trim panel and service hole cover. Disconnect electrical connector for door key lock and unlock switch. See Fig. 1.
- 2) Using ohmmeter, check that continuity is as specified between indicated terminals in relation to switch position. See Fig. 4 . See DOOR KEY LOCK & UNLOCK SWITCH CONTINUITY table. Replace door key lock and unlock switch if defective.

DOOR KEY LOCK & UNLOCK SWITCH CONTINUITY TABLE

Switch Position	Terminals No.	Specification
LOCK	2 & 3	Continuity
OFF	(1)	(1)
UNLOCK	1 & 3	Continuity

(1) - There should be no continuity between any terminals.





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Fig. 4: Identifying Door Key Lock & Unlock Switch Terminals  
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

#### DOOR LOCK CONTROL SWITCH

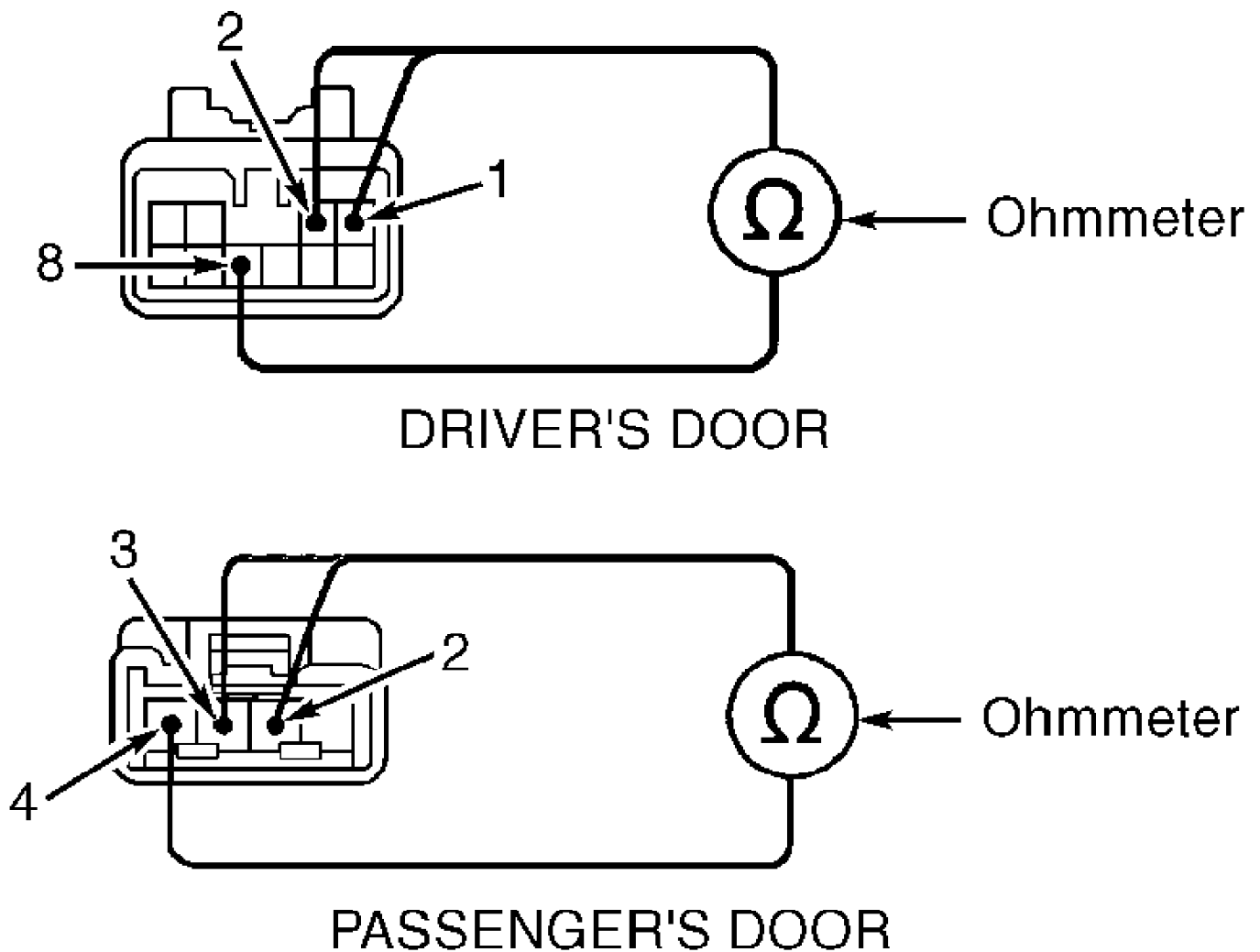
1) Remove door trim panel and service hole cover. Disconnect electrical connector for door lock control switch. See Fig. 1.

2) Using ohmmeter, check that continuity is as specified between indicated terminals in relation to switch position. See Fig. 5. See DOOR LOCK CONTROL SWITCH CONTINUITY table. Replace door key lock control switch if defective.

#### DOOR LOCK CONTROL SWITCH CONTINUITY TABLE

Switch Position	Terminals No.	Specification
Driver's Door		
LOCK	2 & 8	Continuity
OFF	(1)	(1)
UNLOCK	1 & 8	Continuity
Passenger's Door		
LOCK	3 & 4	Continuity
OFF	(1)	(1)
UNLOCK	2 & 4	Continuity

(1) - There should be no continuity between any terminals.



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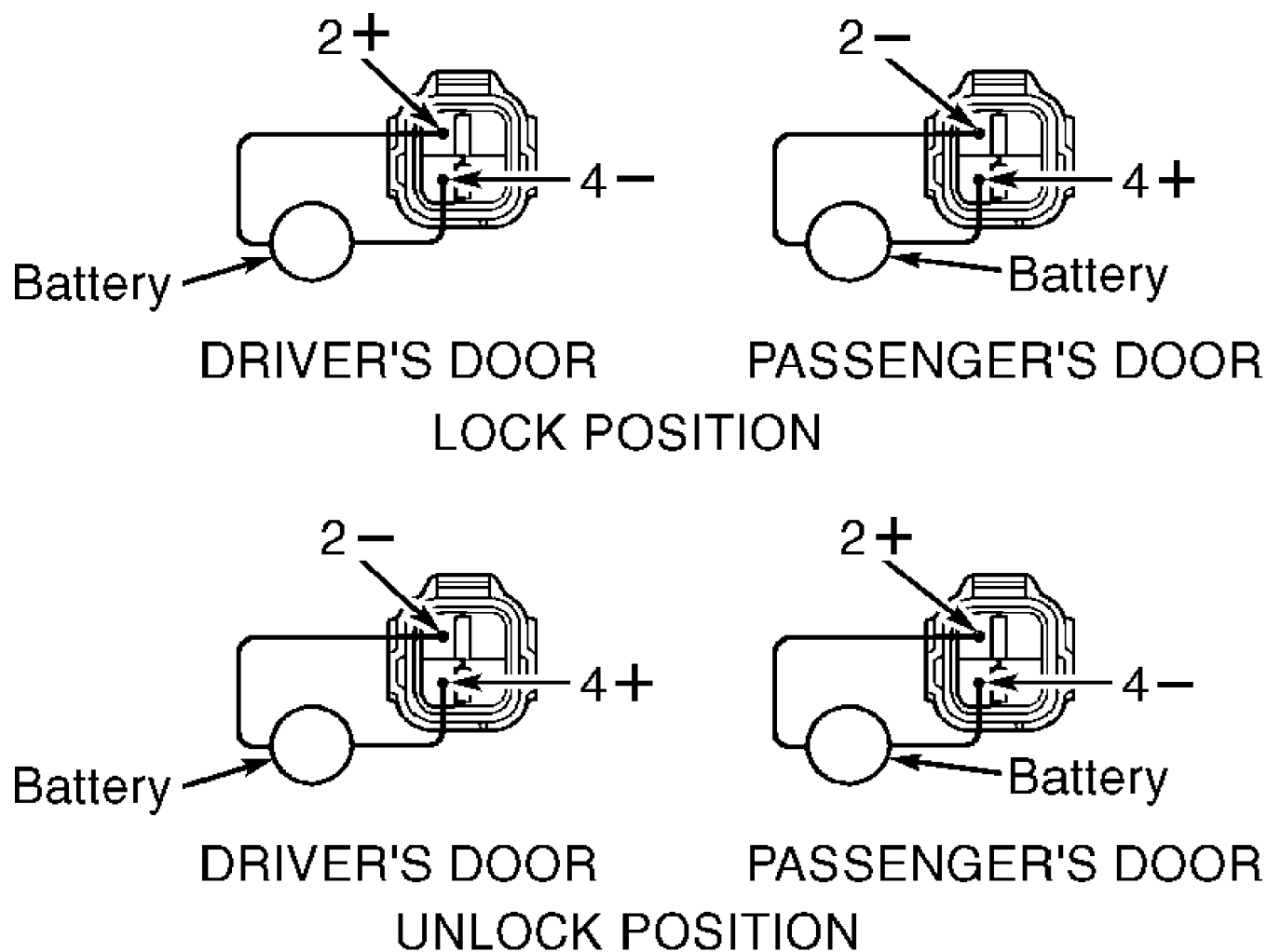
Fig. 5: Identifying Door Lock Control Switch Terminals  
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

#### DOOR LOCK MOTOR

1) Remove door trim panel and service hole cover. Disconnect Gray 4-pin electrical connector for door lock motor and door unlock detection switch. See Fig. 1.

**CAUTION:** DO NOT apply battery voltage to door lock motor for more than 2 seconds, or door lock motor may be damaged.

2) Apply battery voltage to door lock motor by connecting battery positive and negative terminals to proper terminals on door lock motor. See Fig. 6. Check that door lock motor operates and moves to lock and unlock position. Disconnect battery. Replace door lock motor if defective.



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Fig. 6: Testing Door Lock Motor

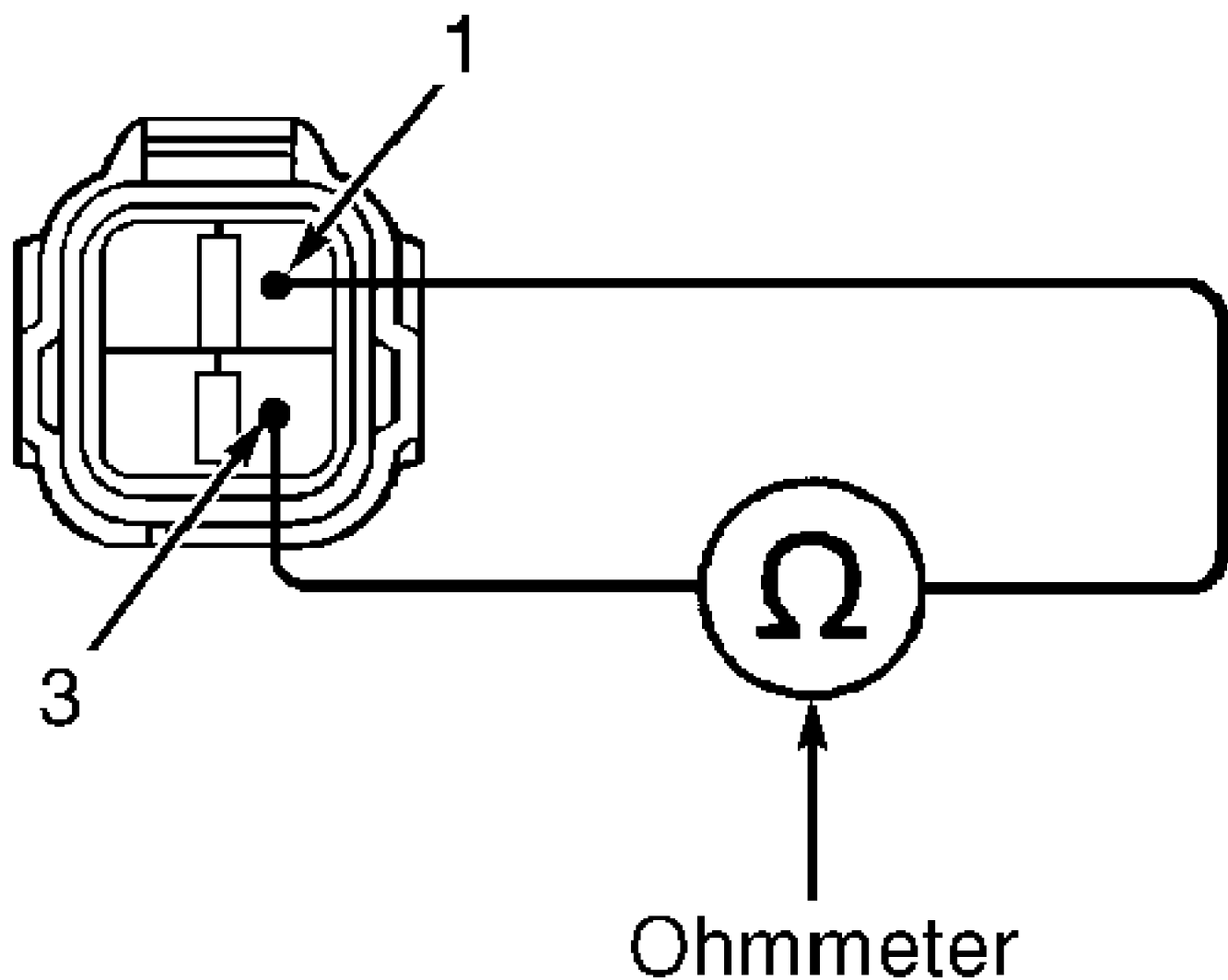
Courtesy of Toyota Motor Sales, U.S.A., Inc.

#### DOOR UNLOCK DETECTION SWITCH

1) Remove door trim panel and service hole cover. Disconnect Gray 4-pin electrical connector for door lock motor and door unlock detection switch. See Fig. 1.

2) Connect ohmmeter between terminals No. 1 and 3 on the electrical connector for door lock motor and door unlock detection switch. See Fig. 7.

3) Check that no continuity exists in LOCK position and continuity exists in UNLOCK position by moving the door lock knob on the door. Replace door unlock detection switch if defective.



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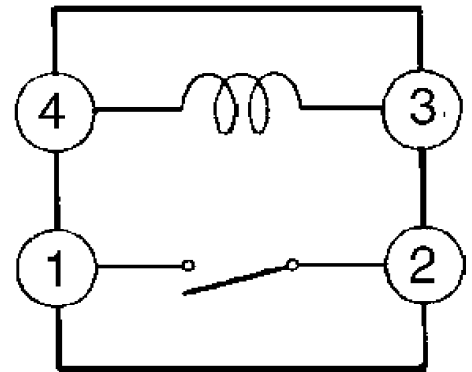
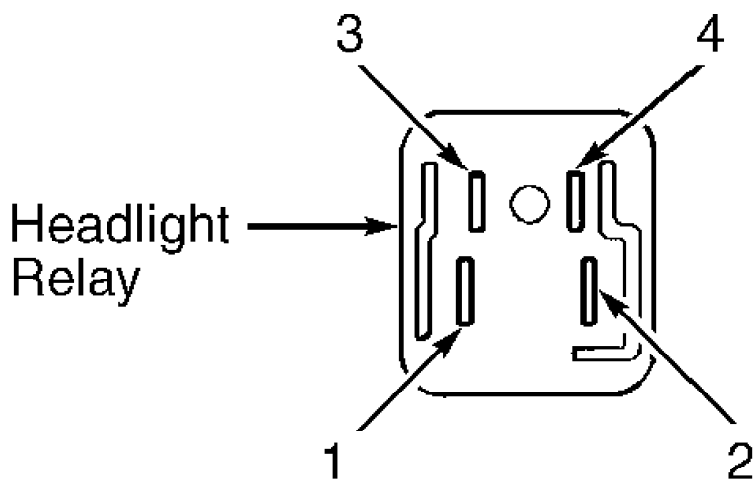
Fig. 7: Testing Door Unlock Detection Switch  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

#### HEADLIGHT RELAY

NOTE: Headlight relay may also be referred to as headlight control relay.

1) Remove headlight relay from engine compartment fuse/relay box. See Fig. 1. Note terminal identification on headlight relay. See Fig. 8.

2) Using ohmmeter, check that continuity exists between terminals No. 3 and 4 on headlight relay. Apply battery voltage and ground to terminals No. 3 and 4 on headlight relay. Using ohmmeter, check that continuity exists between terminals No. 1 and 2 on headlight relay. Replace headlight relay if defective.



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Fig. 8: Identifying Headlight Relay Terminals  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

## HOOD COURTESY SWITCH

1) Hood courtesy switch is located on the hood lock assembly. See Fig. 1. Remove hood lock assembly from the body. Disconnect electrical connector for hood courtesy switch. Connect ohmmeter between both electrical terminals on hood courtesy switch.

2) Check that no continuity exists between both electrical terminals on hood courtesy switch when hood lock assembly is in LOCK position. Check that continuity exists between both electrical terminals on hood courtesy switch when hood lock assembly is in UNLOCK position. Replace hood courtesy switch if defective.

## HORN RELAY

Horn relay is located in engine compartment fuse/relay box. See Fig. 1. Testing information is not available. It may be necessary to consult wiring diagram for horn relay testing. See WIRING DIAGRAMS.

## IGNITION SWITCH

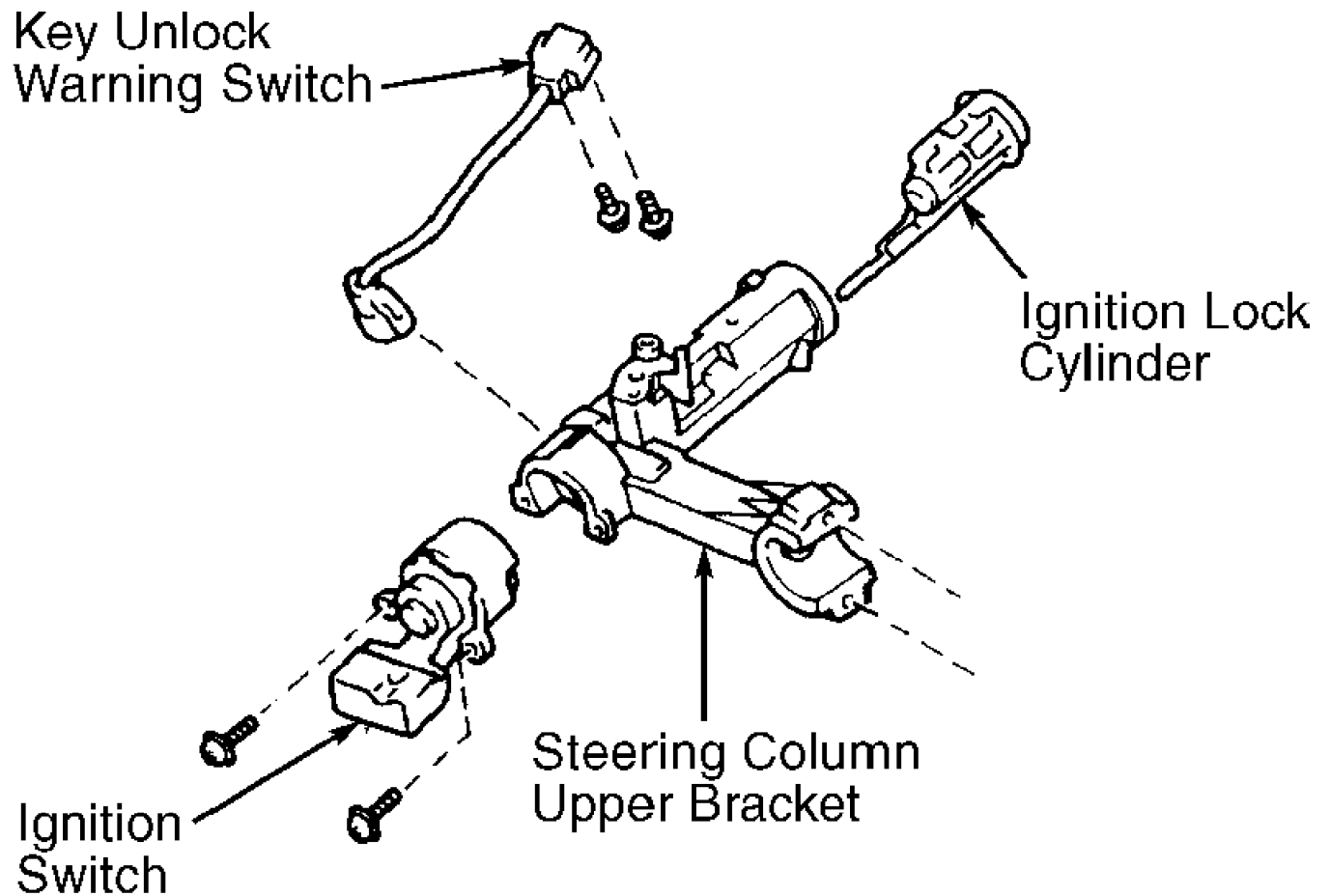
1) Disconnect electrical connector from ignition switch on the steering column upper bracket. See Fig. 9. Note ignition switch electrical terminal identification and ignition lock cylinder positions. See Fig. 10.

2) Using ohmmeter, check that continuity is as specified between indicated ignition switch electrical terminals in relation to ignition lock cylinder position. See IGNITION SWITCH CONTINUITY table. Replace ignition switch if defective.

### IGNITION SWITCH CONTINUITY TABLE

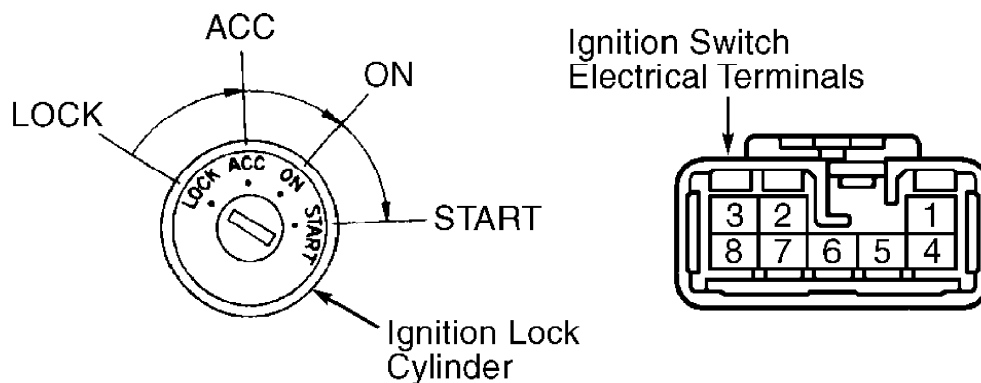
Lock Cylinder Position	Ignition Switch Terminals No.	Specification
LOCK	(1)	(1)
ACC	5 & 7	Continuity
ON	2 & 3; 4, 5 & 7	Continuity
START	1, 2 & 3; 4, 7 & 8	Continuity

(1) - There should be no continuity between any terminals.



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Fig. 9: Locating Ignition Switch & Key Unlock Warning Switch  
 Courtesy of Toyota Motor Sales, U.S.A., Inc.



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Fig. 10: Identifying Ignition Switch Electrical Terminals & Ignition Lock Cylinder Positions  
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

KEY UNLOCK WARNING SWITCH

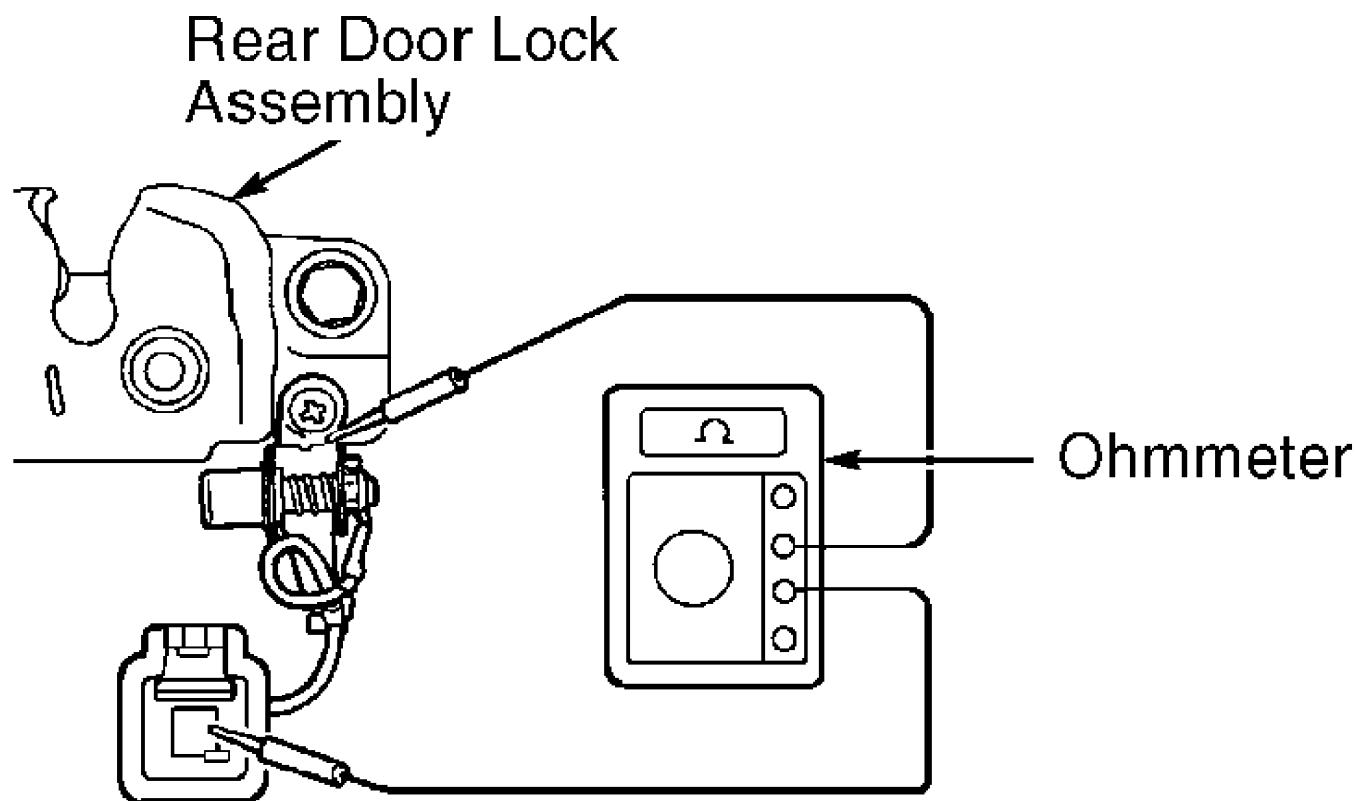
1) Disconnect electrical connector for key unlock warning switch. Key unlock warning switch is located near the ignition switch and contains a 2-pin electrical connector. See Fig. 9.

2) Connect ohmmeter between electrical terminals on key unlock warning switch. Check that no continuity exists with ignition key removed from ignition lock cylinder. Check that continuity exists with ignition key installed in ignition lock cylinder. Replace key unlock warning switch if defective.

### REAR DOOR COURTESY SWITCH

1) Disconnect Gray 1-pin electrical connector for rear door courtesy switch which is located on the rear door lock assembly. See Fig. 1.

2) Connect ohmmeter between electrical terminal and body of rear door lock assembly. See Fig. 11. Check that continuity exists when pin on rear door courtesy switch is released to ON position. Check that no continuity exists when pin on rear door courtesy switch is depressed to OFF position. Replace rear door courtesy switch if defective.



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Fig. 11: Testing Rear Door Courtesy Switch  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

### REAR DOOR KEY LOCK & UNLOCK SWITCH

1) Disconnect 2-pin electrical connector for rear door key and unlock switch. See Fig. 1.

2) Using ohmmeter, check that continuity exists between both electrical terminals on rear door key and unlock switch when key is turned to unlock position. Check that no continuity exists between both electrical terminals on rear door key and unlock switch when key is not turned and is in the normal position. Replace rear door key lock and unlock switch if defective.

## SECURITY INDICATOR LIGHT

For testing of SECURITY indicator light, see TEST NO. 1 under SYSTEM TESTS.

## STANDARD HORN

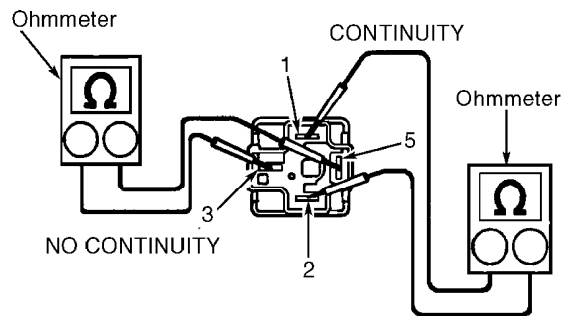
Testing information is not available.

## STARTER RELAY

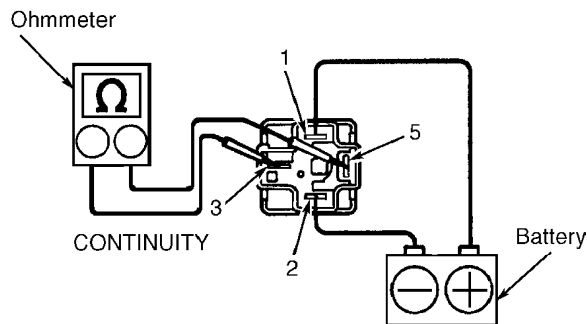
1) Remove starter relay from engine compartment fuse/relay box. See Fig. 1.

2) To check starter relay continuity, using ohmmeter, ensure continuity is as specified between indicated terminals. See Fig. 12. If continuity is as specified, go to next step. If continuity is not as specified, replace starter relay.

3) To check starter relay operation, connect battery voltage and ground to specified terminals on starter relay. See Fig. 12. Using ohmmeter, ensure continuity exists between specified terminals. If continuity is not as specified, replace starter relay.



CHECKING CONTINUITY



CHECKING OPERATION

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Fig. 12: Testing Starter Relay  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

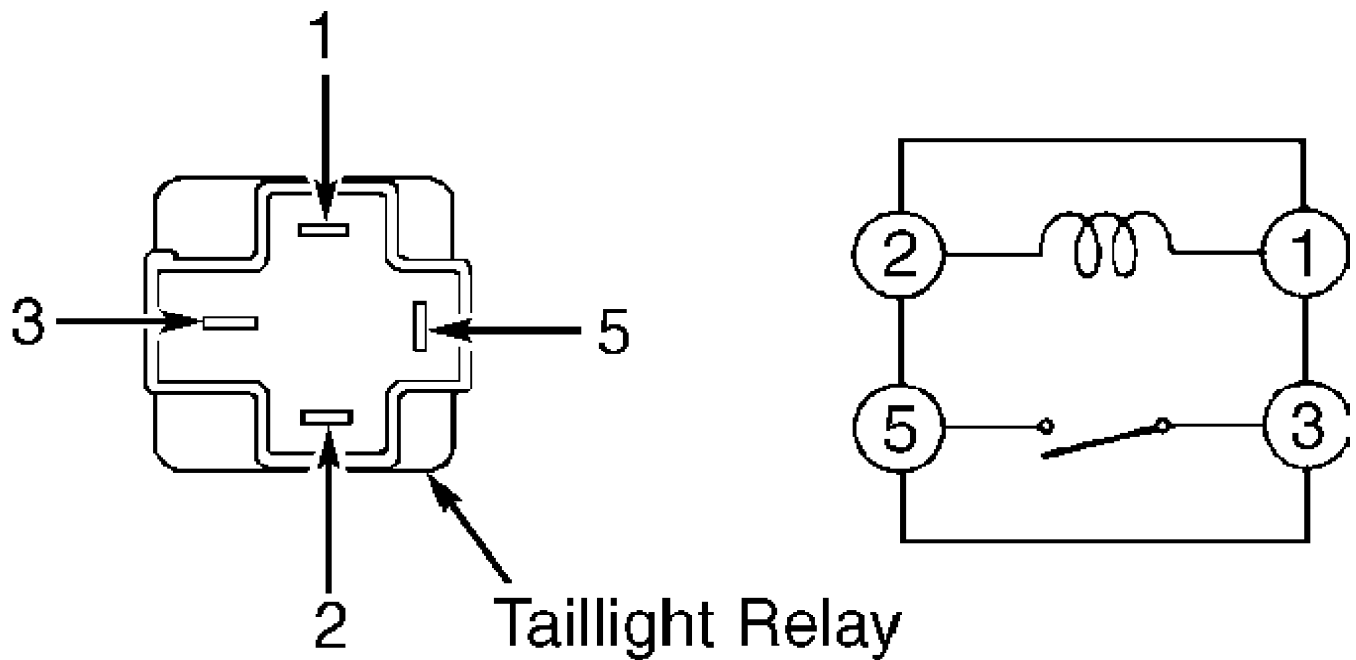
## TAILLIGHT RELAY



NOTE: Taillight relay may also be referred to as taillight control relay.

1) Remove taillight relay from instrument panel fuse/relay box located at driver's side of instrument panel, near driver's side kick panel. Note terminal identification on taillight relay. See Fig. 13.

2) Using ohmmeter, check that continuity exists between terminals No. 1 and 2 on taillight relay. Apply battery voltage and ground to terminals No. 1 and 2 on taillight relay. Using ohmmeter, check that continuity exists between terminals No. 3 and 5 on taillight relay. Replace taillight relay if defective.



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Fig. 13: Identifying Taillight Relay Terminals  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

## SYSTEM TESTS

\* PLEASE READ THIS FIRST \*

NOTE: Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1. Manufacturer states instrument panel removal may be required for access to anti-theft system and door lock control ECU. If necessary to remove instrument panel, see ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION.

### TEST NO. 1

1) Check SECURITY Indicator Light  
Remove screws and cluster finish panel from instrument panel.  
See Fig. 14. Disconnect electrical connector at indicator light

assembly. See Fig. 14. Indicator light assembly contains the SECURITY indicator light, CHECK engine light and several other indicator lights.

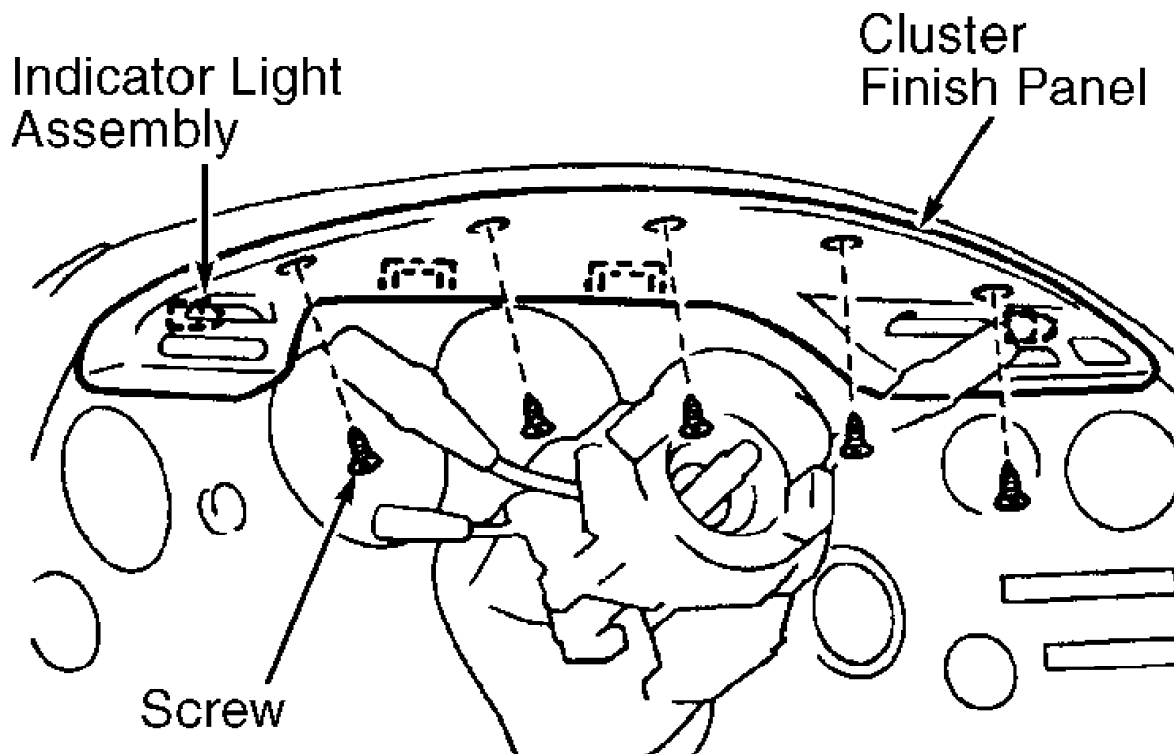
2) Note location of terminals No. 9 and 10 on rear indicator light assembly. See Fig. 15. These are the terminals for the SECURITY indicator light. Connect positive battery terminal to terminal No. 10 and negative battery terminal to terminal No. 9 on rear of indicator light assembly. See Fig. 15.

3) Note if SECURITY indicator light illuminates. Disconnect battery. If SECURITY indicator light illuminates, go to next step. If SECURITY indicator light does not illuminate, replace indicator light assembly.

4) Check SECURITY Indicator Light Wiring

Check for defective connectors and White/Blue wire between anti-theft system and door lock control Electronic Control Unit (ECU) and SECURITY indicator light. Also, check for defective connectors and White/Black wire between SECURITY indicator light and body ground. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1. If connectors and wiring are okay, go to next step. If connectors or wiring are defective, repair as necessary.

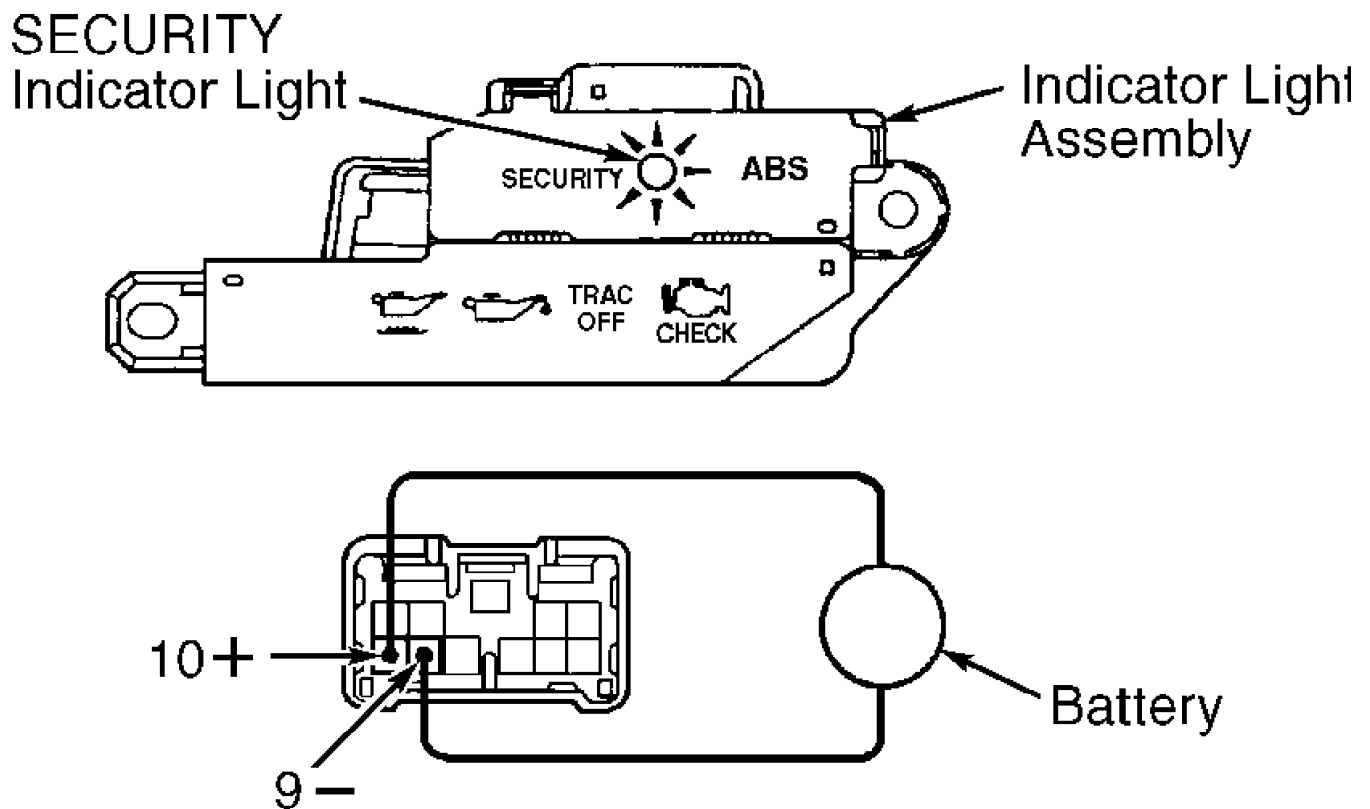
5) Replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. Check system operation. If anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING.



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Fig. 14: Removing Cluster Finish Panel & Locating Indicator Light Assembly

Courtesy of Toyota Motor Sales, U.S.A., Inc.



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Fig. 15: Testing SECURITY Indicator Light  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

## TEST NO. 2

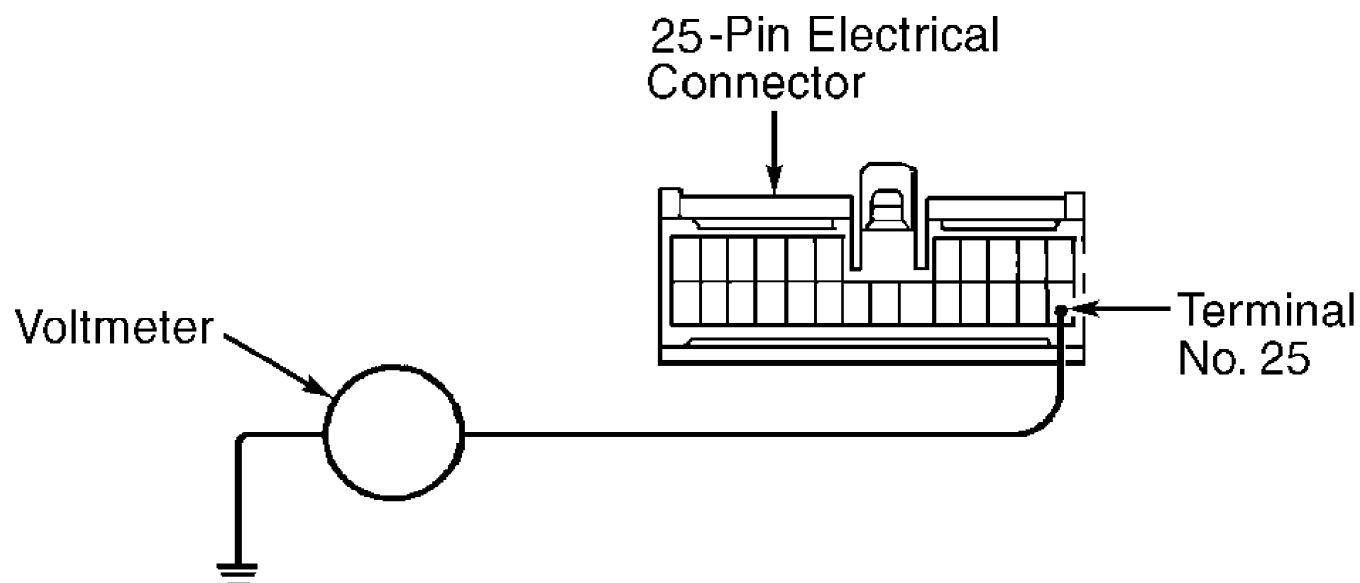
- 1) Check Voltage At Terminal No. 25 At Anti-Theft System & Door Lock Control Electronic Control Unit (ECU)

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

- 2) Ensure ignition is off. Disconnect electrical connectors at anti-theft system and door lock control ECU. Using voltmeter, check voltage between ground and terminal No. 25 (Blue/Orange wire) with ignition switch in START position. See Fig. 16. This is the Blue/Orange wire between anti-theft system and door lock ECU and starter relay. See WIRING DIAGRAMS.

- 3) Voltage should be 10-14 volts. If voltage is not within specification, go to next step. If voltage is within specification, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION.

- 4) Check for defective connectors and Blue/Orange wire between anti-theft system and door lock ECU and starter relay. See WIRING DIAGRAMS. Starter relay is located in engine compartment fuse/relay box. See Fig. 1. Repair connectors or wiring as necessary. If necessary to check starter relay, see STARTER RELAY under COMPONENT TESTS.



9811112

Fig. 16: Checking Voltage At Terminal No. 25 At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

### TEST NO. 3

**NOTE:** Test procedure is based on the assumption that the standard horns operate properly using the horn pad on the steering wheel, but will not operate with anti-theft system.

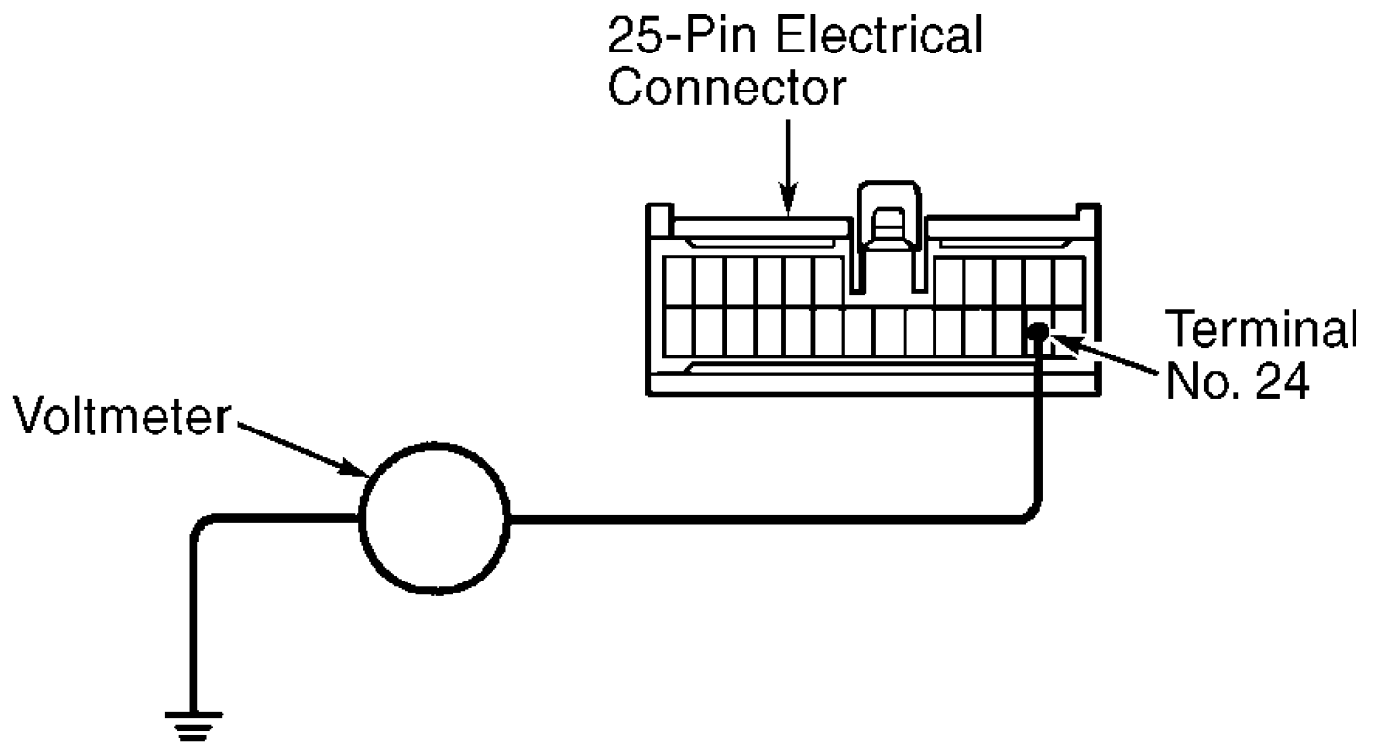
1) Check Voltage At Terminal No. 24 At Anti-Theft System & Door Lock Control Electronic Control Unit (ECU)

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

2) Ensure ignition is off. Disconnect electrical connectors at anti-theft system and door lock control ECU. Using voltmeter, check voltage between ground and terminal No. 24 (Blue/Red wire). See Fig. 17. This is the Blue/Red wire between horn relay and anti-theft system and door lock control ECU. See WIRING DIAGRAMS.

3) Voltage should be 10-14 volts. If voltage is not within specification, go to next step. If voltage is within specification, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION.

4) Check for defective connectors and Blue/Red wire between anti-theft system and door lock control ECU and horn relay. See WIRING DIAGRAMS. Horn relay is located in engine compartment fuse/relay. See Fig. 1. Repair connectors or wiring as necessary.



98J11113

Fig. 17: Checking Voltage At Terminal No. 24 At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

#### TEST NO. 4

##### 1) Check Voltage At Anti-Theft System Horn

Ensure ignition is off. Disconnect electrical connector at anti-theft system horn. See Fig. 1. It may be necessary to remove anti-theft system horn for access to electrical connector.

2) Using voltmeter, check voltage between ground and terminal No. 1 (White wire) on electrical connector for anti-theft system horn. Voltage should be 10-14 volts. If voltage is okay, go to next step. If voltage is not within specification, check and repair defective connectors or White wire between HAZ-HORN fuse and anti-theft system horn. See WIRING DIAGRAMS. HAZ-HORN fuse is located in engine compartment fuse/relay box. See Fig. 1.

##### 3) Check Anti-Theft System Horn

Check anti-theft system horn operation. See ANTI-THEFT SYSTEM HORN under COMPONENT TESTS. If anti-theft system horn operates, go to next step. Replace anti-theft system horn if horn fails to operate.

##### 4) Check Anti-Theft System Horn Wiring

Check for defective connectors and Pink/Black wire between anti-theft system horn and anti-theft system and door lock control Electronic Control Unit (ECU). See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

5) If wiring and connectors are okay, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. If connectors or wiring are defective, repair as

necessary.

## TEST NO. 5

**NOTE:** Test procedure is based on the assumption that the headlights operate properly using the headlight switch, but will not operate with anti-theft system. Headlight relay may also be referred to as head-light control relay.

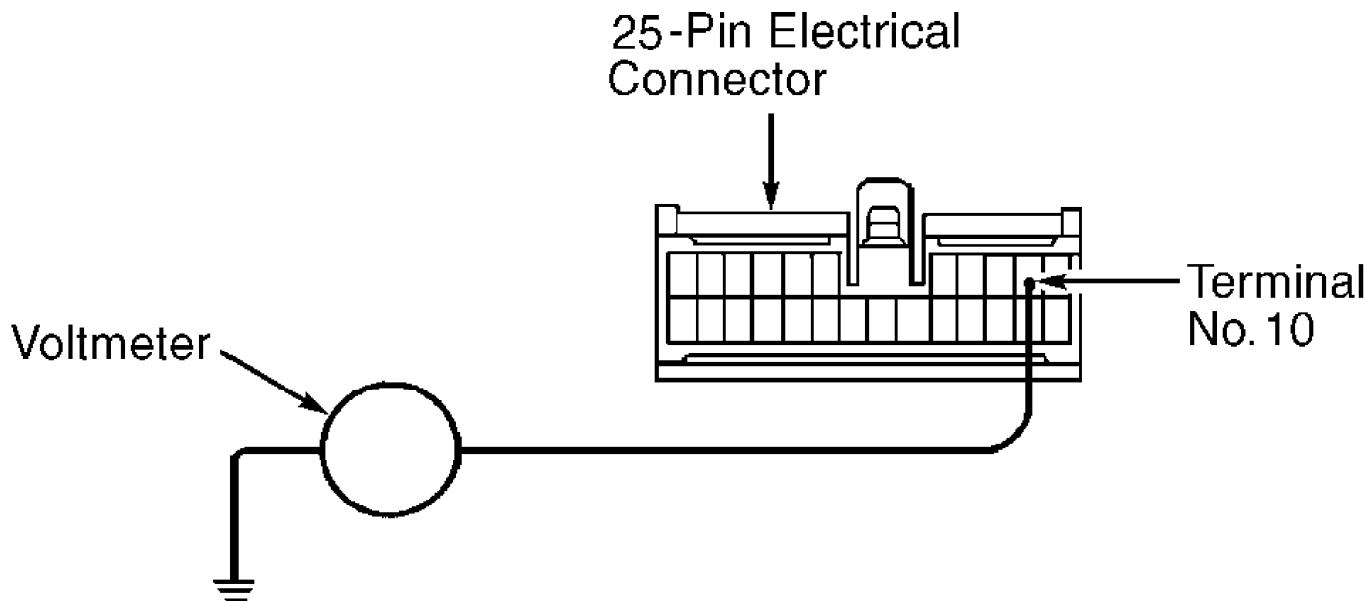
1) Check Voltage At Terminal No. 10 At Anti-Theft System & Door Lock Control Electronic Control Unit (ECU)

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

2) Ensure ignition is off. Disconnect electrical connectors at anti-theft system and door lock control ECU. Using voltmeter, check voltage between ground and terminal No. 10 (Red/Yellow wire). See Fig. 18. This is the Red/Yellow wire between headlight relay and anti-theft system and door lock control ECU. See WIRING DIAGRAMS.

3) Voltage should be 10-14 volts. If voltage is not within specification, go to next step. If voltage is within specification, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION.

4) Check for defective connectors and Red/Yellow wire between anti-theft system and door lock control ECU and headlight relay. See WIRING DIAGRAMS. Headlight relay is located in engine compartment fuse/relay. See Fig. 1. Repair connectors or wiring as necessary.



98A11114

Fig. 18: Checking Voltage At Terminal No. 10 At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

## TEST NO. 6

**NOTE:** Test procedure is based on the assumption that the taillights operate properly using the headlight switch, but will not operate with anti-theft system. Taillight relay may

also be referred to as taillight control relay.

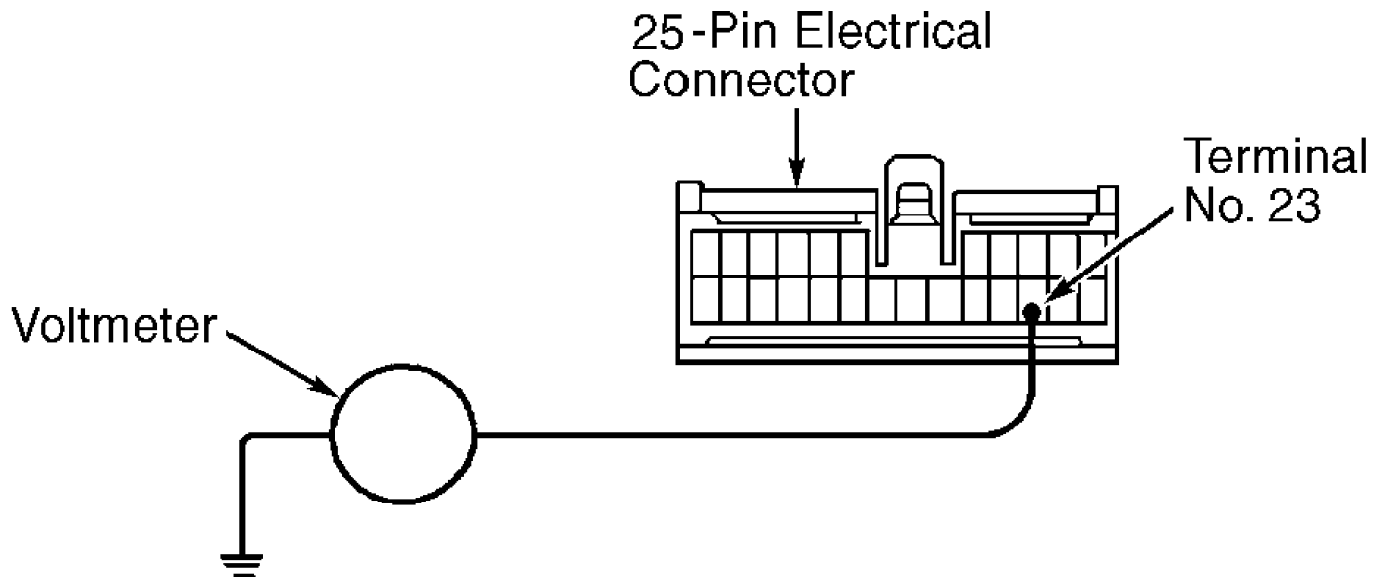
- 1) Check Voltage At Terminal No. 23 At Anti-Theft System & Door Lock Control Electronic Control Unit (ECU)

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

- 2) Ensure ignition is off. Disconnect electrical connectors at anti-theft system and door lock control ECU. Using voltmeter, check voltage between ground and terminal No. 23 (Green/White wire). See Fig. 19. This is the Green/White wire between taillight relay and anti-theft system and door lock control ECU. See WIRING DIAGRAMS.

- 3) Voltage should be 10-14 volts. If voltage is not within specification, go to next step. If voltage is within specification, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION.

- 4) Check for defective connectors and Green/White wire between anti-theft system and door lock control ECU and taillight relay. See WIRING DIAGRAMS. Taillight relay is located in instrument panel fuse/relay box located at driver's side of instrument panel, near the driver's side kick panel. Repair connectors or wiring as necessary.



98B11115

Fig. 19: Checking Voltage At Terminal No. 23 At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

## TEST NO. 7

- 1) Check CIG & ECU-IG Fuses

Remove CIG and ECU-IG fuses from instrument panel fuse/relay box located at driver's side of instrument panel, near driver's side kick panel.

- 2) Using ohmmeter, ensure continuity exists across each fuse. If fuses are okay, go to next step. If any fuse is blown, check for short circuit in appropriate wiring circuit to the fuse and anti-theft system and door lock Electronic Control Unit (ECU). Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical

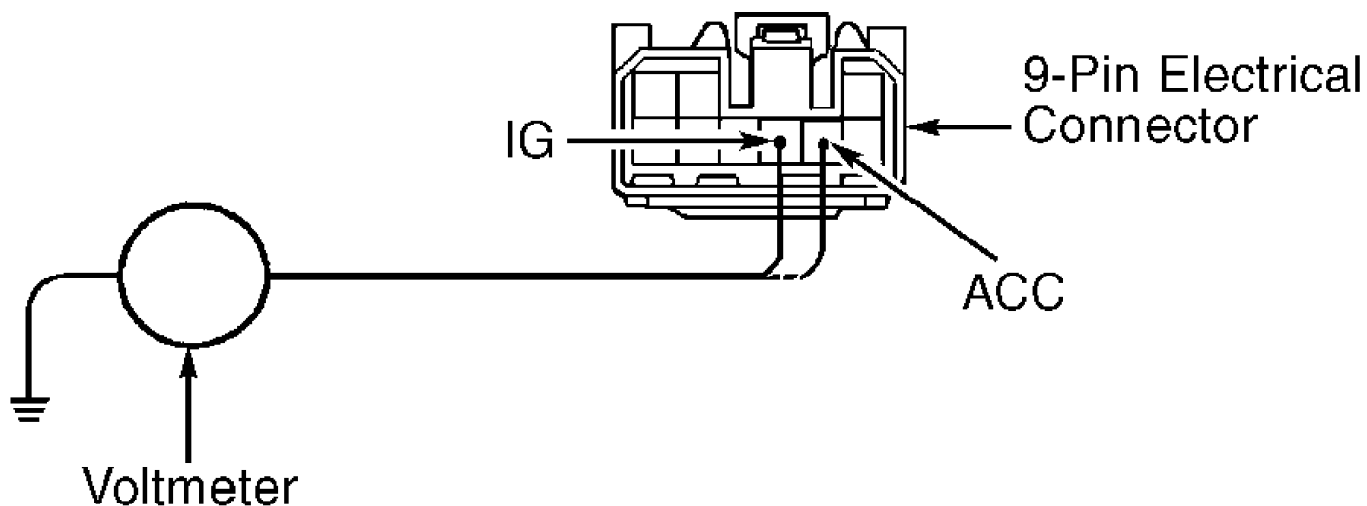
connectors. See Fig. 1. Replace fuse and repair wiring as necessary.

3) Check Voltage At Terminal IG & ACC At Anti-Theft System & Door Lock Control ECU

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

4) Ensure ignition is off. Disconnect electrical connectors at anti-theft system and door lock control ECU. Turn ignition on. Using voltmeter, check voltage between ground and terminals IG (Black/Red wire) and ACC (Blue/Red wire). See Fig. 20.

5) Voltage should be 10-14 volts. If voltage is within specification, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. If voltage is not within specification, check for defective connectors and Black/Red or Blue/Red wire between anti-theft system and door lock control ECU and the battery. See WIRING DIAGRAMS. If necessary to check ignition switch, see IGNITION SWITCH under COMPONENT TESTS.



98G07641

Fig. 20: Checking Voltage At Terminal IG & ACC At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

## TEST NO. 8

1) Check Voltage At Rear Door Key Lock & Unlock Switch

Remove trim panel access to rear door key and unlock switch.

See Fig. 1. Connect voltmeter between ground and terminal No. 1 (Blue wire) on electrical connector at rear door key lock and unlock switch.

2) Turn ignition on. Note voltage when key is not turned, and then when key is turned to unlock position. Battery voltage should exist when key is not turned. No voltage should exist when key is turned to unlock position. If voltage is as specified, go to next step. If voltage is not as specified, go to step 4).

3) Replace anti-theft system and door lock ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. Check system operation. If anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING.

4) Check Rear Door Key Lock & Unlock Switch

Check rear door key lock and unlock switch operation. See



REAR DOOR KEY LOCK & UNLOCK SWITCH under COMPONENT TESTS. If rear door key lock and unlock switch operates properly, go to next step. Replace rear door key lock and unlock switch if defective.

5) Check Rear Door Key Lock & Unlock Switch Wiring

Check for defective connectors and Blue wire between rear door key lock and unlock switch and anti-theft system and door lock ECU. Also, check for defective connectors and White/Black wire between rear door key lock and unlock switch and body ground. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

6) If connectors and wiring are okay, replace anti-theft system and door lock ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. Check system operation. If anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## TEST NO. 9

1) Check Rear Door Courtesy Light Operation

Luggage compartment light operation is controlled by rear door courtesy switch located on the rear door lock assembly. Check that luggage compartment light comes on when rear door is opened and pin on rear door courtesy switch is released to ON position, and goes off when rear door is closed and pin on rear door courtesy switch is depressed to OFF position.

2) If luggage compartment light operates properly, go to next step. If luggage compartment light does not operate properly, check rear door courtesy switch. See REAR DOOR COURTESY SWITCH under COMPONENT TESTS. If rear door courtesy switch is defective, replace rear door courtesy switch. If rear door courtesy switch is okay, check wiring circuit for rear door courtesy switch and luggage compartment light. See ILLUMINATION/INTERIOR LIGHTS article.

3) Check Rear Door Courtesy Switch Wiring

Check for defective connectors and Light Green wire between rear door courtesy switch and anti-theft system and door lock control Electronic Control Unit (ECU). See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind the passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

4) If connectors and wiring are okay, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. Check system operation. If anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## TEST NO. 10

1) Check Door Unlock Detection Switch Operation

Check door unlock detection switch operation. See DOOR UNLOCK DETECTION SWITCH under COMPONENT TESTS. If door unlock detection switch operates properly, go to next step. If door unlock detection switch is defective, replace door unlock detection switch.

2) Check Door Unlock Detection Switch Wiring

Check for defective connectors and appropriate wire between anti-theft system and door lock control Electronic Control Unit (ECU) and appropriate door unlock detection switch. Also, check for defective connectors and White/Black wire between body ground and appropriate door unlock detection switch. See WIRING DIAGRAMS. Anti-

theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

3) If connectors and wiring are okay, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. Check system operation. If anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## TEST NO. 11

### 1) Check Door Open Warning Light Operation

Check that open door warning light on the instrument panel comes on anytime any door is opened and goes off when all doors are closed.

2) If open door warning light operates properly, go to next step. If open door warning light does not operate properly, check door courtesy switch. See DOOR COURTESY SWITCH under COMPONENT TESTS. If door courtesy switch is defective, replace door courtesy switch. If door courtesy switch is okay, check wiring circuit and connectors for open door warning light. See ILLUMINATION/INTERIOR LIGHTS article.

### 3) Check Door Courtesy Switch Wiring

Check for defective connectors and appropriate wire between door courtesy switch and anti-theft system and door lock control Electronic Control Unit (ECU). See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

4) If connectors and wiring are okay, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. Check system operation. If anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## TEST NO. 12

### 1) Check Hood Courtesy Switch

Check hood courtesy switch operation. See HOOD COURTESY SWITCH under COMPONENT TESTS. If hood courtesy switch operates properly, go to next step. If hood courtesy switch is defective, replace hood courtesy switch.

### 2) Check Hood Courtesy Switch Wiring

Check for defective connectors and Gray wire between anti-theft system and door lock control Electronic Control Unit (ECU) and hood courtesy switch. Also, check for defective connectors and White/Black wire between body ground and hood courtesy switch. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

3) If connectors and wiring are okay, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. If connectors or wiring are defective, repair as necessary.

## TEST NO. 13

### 1) Check DOME Fuse

Remove DOME fuse from engine compartment fuse/relay box near

the battery. See Fig. 1.

2) Using ohmmeter, ensure continuity exists across fuse. If fuse is okay, go to next step. If fuse is blown, check for short circuit in wiring circuit to fuse and anti-theft system and door lock control Electronic Control Unit (ECU). See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1. Replace fuse and repair wiring as necessary.

3) Check Voltage At Terminal +B1 At Anti-Theft System & Door Lock Control ECU

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

4) Ensure ignition is off. Disconnect the electrical connectors at anti-theft system ECU. Using voltmeter, check voltage between terminals "E" (White/Black wire) and +B1 (Red wire). See Fig. 21.

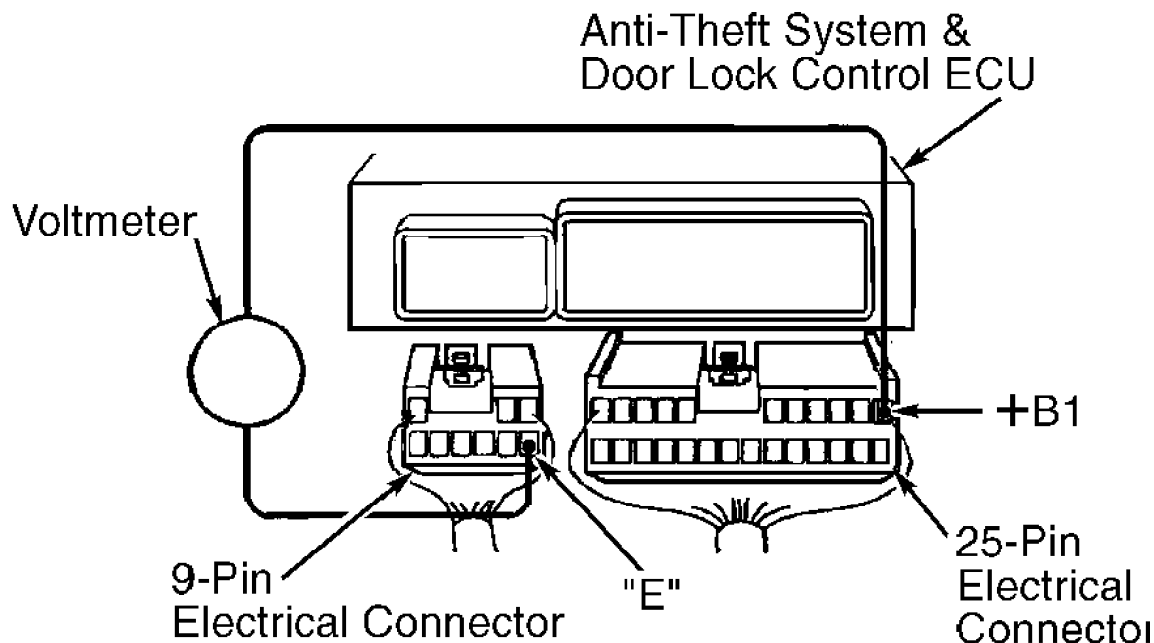
5) Voltage should be 10-14 volts. If voltage is not within specification, go to next step. If voltage is within specification and anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING.

6) Check Ground Circuit Wiring

Check for defective connectors and White/Black wire between body ground and terminal "E" on anti-theft system and door lock control ECU. If no defective connectors or wire exists and body ground is okay, go to next step. If connectors, wire or body ground are defective, repair as necessary.

7) Check Power Circuit Wiring

Check for defective connectors and Red wire between battery, DOME fuse and terminal +B1 at anti-theft system and door lock control ECU. See WIRING DIAGRAMS. Repair connectors or wire if defective.



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Fig. 21: Checking Voltage At Terminals "E" & +B1 At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

1) Check POWER Fuse

Remove POWER fuse from engine compartment fuse/relay box near the battery. See Fig. 1.

2) Using ohmmeter, ensure continuity exists across the fuse.

If fuse is okay, go to next step. If fuse is blown, check for short circuit in wiring circuit to POWER fuse, DOOR fuse, ALT fuse and anti-theft system and door lock control Electronic Control Unit (ECU). See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1. DOOR fuse is located in instrument panel fuse/relay box at driver's side of instrument panel, near driver's side kick panel. ALT fuse is located in engine compartment fuse/relay box. It may also be necessary to check door lock motor circuit, as this circuit receives voltage from anti-theft system and door lock control ECU. If door lock motor circuit is shorted, this may cause the POWER fuse to blow. See WIRING DIAGRAMS. If necessary to check door lock motor circuit, perform TEST NO. 15 under SYSTEM TESTS. Replace fuse and repair appropriate wiring as necessary.

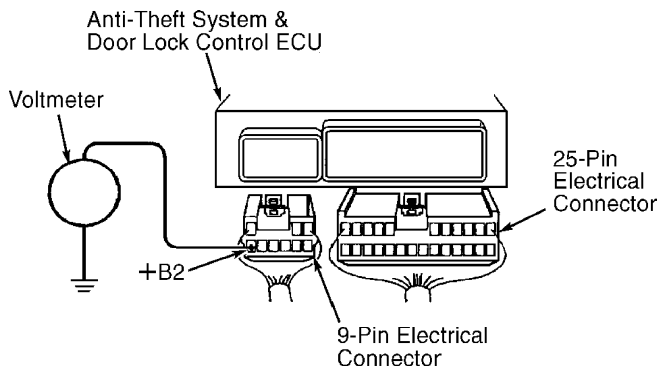
3) Check Voltage At Terminal +B2 At Anti-Theft System & Door Lock Control ECU

Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

4) Ensure ignition is off. Disconnect the electrical connectors at anti-theft system ECU. Using voltmeter, check voltage ground and +B2 (Blue/White wire). See Fig. 22.

5) Voltage should be 10-14 volts. If voltage is not within specification, go to next step. If voltage is within specification and anti-theft system still cannot be set, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING.

6) Check for defective connectors, Blue/White wire, DOOR fuse and ALT fuse between battery and anti-theft system and door lock control ECU. See WIRING DIAGRAMS. DOOR fuse is located in instrument panel fuse/relay box at driver's side of instrument panel, near driver's side kick panel. ALT fuse is located in engine compartment fuse/relay box. It may also be necessary to check door lock motor circuit, as this circuit receives voltage from anti-theft system and door lock control ECU. If door lock motor circuit is shorted, this may cause the POWER fuse to blow. See WIRING DIAGRAMS. If necessary to check door lock motor circuit, perform TEST NO. 15 under SYSTEM TESTS. Replace fuses and repair wiring or connectors as necessary.



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Fig. 22: Checking Voltage At Terminal +B2 At Anti-Theft System & Door Lock Control ECU

Courtesy of Toyota Motor Sales, U.S.A., Inc.

1) Check Door Lock Motor Operating Sound

Listen for operating sound at door lock motor on the door that is suspected to be malfunctioning when door lock control switch is moved from UNLOCK to LOCK position. If operating sound at door lock motor does not exist, go to next step. If operating sound exists, check for defective lock assembly.

2) Check Door Lock Motor Operation

Check operation of door lock motor. See DOOR LOCK MOTOR under COMPONENT TESTS. If door lock motor operates properly, go to next step. If door lock motor is defective, replace door lock motor.

3) Check Door Lock Motor Wiring

Check for defective connectors and appropriate wire between anti-theft system and door lock control Electronic Control Unit (ECU) and door lock motor. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

4) If connectors and wiring are okay, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## TEST NO. 16

1) Check Door Lock Control Switch

Remove door trim panel. Turn ignition on. Using voltmeter, check voltage between ground and terminals No. 1 and 2 on driver's door lock control switch, or terminals No. 1 and 3 on passenger's door lock control switch. See Fig. 23. Ensure voltage is within specification in relation to position of door lock control switch. See DOOR LOCK CONTROL SWITCH VOLTAGE table. If voltage is within specification, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If voltage is not within specification, go to next step.

### DOOR LOCK CONTROL SWITCH VOLTAGE TABLE

Switch Position & Terminals	Specification
LOCK	
Driver's Door	
Terminal No. 1 .....	8-10 Volts
Terminal No. 2 .....	Less Than 1 Volt
Passenger's Door	
Terminal No. 1 .....	8-10 Volts
Terminal No. 3 .....	Less Than 1 Volt
UNLOCK	
Driver's Door	
Terminal No. 1 .....	Less Than 1 Volt
Terminal No. 2 .....	8-10 Volts
Passenger's Door	
Terminal No. 1 .....	Less Than 1 Volt
Terminal No. 3 .....	8-10 Volts
OFF	
Driver's Door	
Terminals No. 1 & 2 .....	8-10 Volts
Passenger's Door	
Terminals No. 1 & 3 .....	8-10 Volts

2) Check Door Lock Control Switch

Check operation of door lock control switch. See

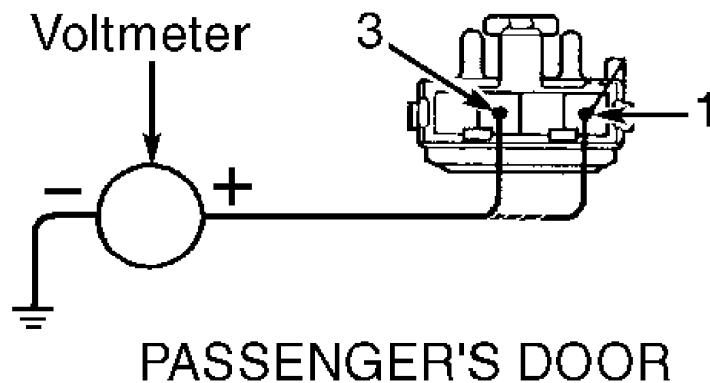
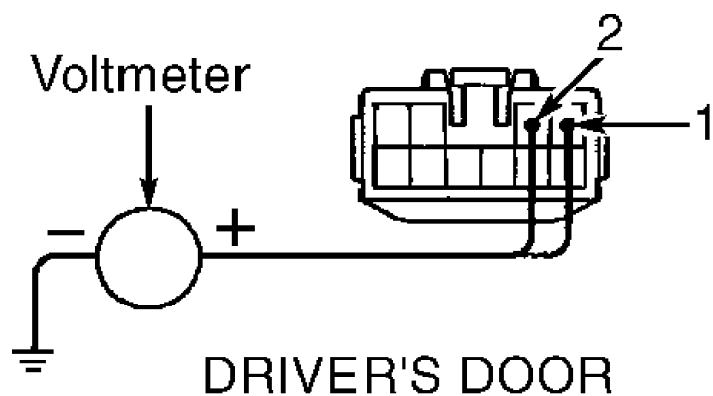
DOOR LOCK CONTROL SWITCH under COMPONENT TESTS. If door lock control switch operates properly, go to next step. If door lock control switch is defective, replace door lock control switch.

3) Check Door Lock Control Switch Wiring

Check for defective connectors and appropriate wire between door lock control switch and anti-theft system and door lock control Electronic Control Unit (ECU). Also, check for defective connectors and White/Black wire between door lock control switch and body ground. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

NOTE: Anti-theft system and door lock control ECU is considered to be defective when lock and/or unlock operation on both the driver's and passenger's doors cannot be performed when using door lock control switch.

4) If connectors and wiring are okay, replace anti-theft system and door lock control ECU. See ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU under REMOVAL & INSTALLATION. If connectors or wiring are defective, repair as necessary.



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Fig. 23: Checking Voltage At Door Lock Control Switch  
Courtesy of Toyota Motor Sales, U.S.A., Inc.

1) Check Door Key Lock & Unlock Switch Operation

Check door key lock and unlock switch operation. See DOOR KEY LOCK & UNLOCK SWITCH under COMPONENT TESTS. If door key lock and unlock switch operates properly, go to next step. If door key lock and unlock switch is defective, replace door key lock and unlock switch.

2) Check Door Key Lock & Unlock Switch Wiring

Check for defective connectors and wire between anti-theft system and door lock control Electronic Control Unit (ECU) and door key lock and unlock switch. Also, check for defective connectors and White/Black wire between body ground and door key lock and unlock switch. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

3) If connectors and wiring are okay, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## TEST NO. 18

1) Check Key Unlock Warning Switch

Disconnect electrical connector for key unlock warning switch. Key unlock warning switch is located near the ignition switch and contains a 2-pin electrical connector. See Fig. 9.

2) Connect ohmmeter between electrical terminals on key unlock warning switch. Check that no continuity exists with ignition key removed from ignition lock cylinder. Check that continuity exists with ignition key installed in ignition lock cylinder.

3) If key unlock warning switch operates properly, go to next step. If key unlock warning switch is defective, replace key unlock warning switch.

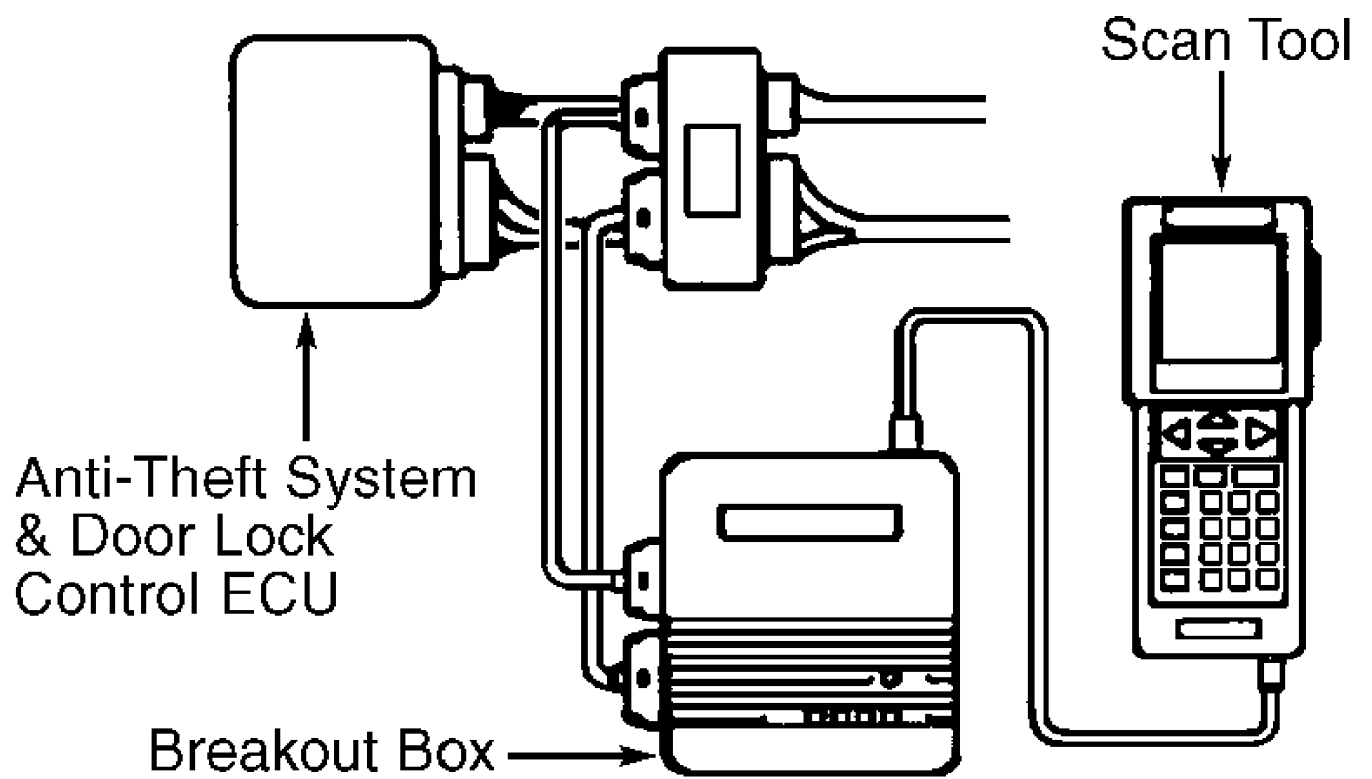
4) Check Key Unlock Warning Switch Wiring

Check for defective connectors and Yellow wire between anti-theft system and door lock control Electronic Control Unit (ECU) and key unlock warning switch. Also, check for defective connectors and White/Black wire between body ground and key unlock warning switch. See WIRING DIAGRAMS. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

5) If connectors and wiring are okay, go to the next test listed. See appropriate TROUBLE SHOOTING SYMPTOMS section under TROUBLE SHOOTING. If connectors or wiring are defective, repair as necessary.

## PIN VOLTAGE TESTS

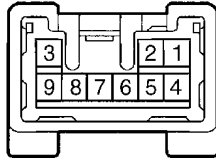
NOTE: Manufacturer recommends using Toyota breakout box and scan tool when performing pin voltage tests by connecting breakout box to anti-theft system and door lock control Electronic Control Unit (ECU) and following screen displays on scan tool. See Fig. 24. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1. Ensure pin voltage values are within specification. See Figs. 25 and 26.



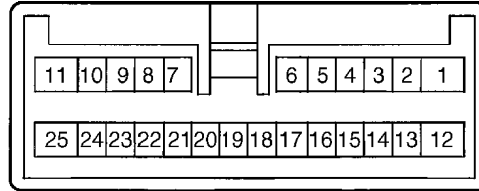
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Fig. 24: Connecting Breakout Box & Scan Tool  
Courtesy of Toyota Motor Sales, U.S.A., Inc.





T7 OR CONNECTOR "A"



T8 OR CONNECTOR "B"

Symbols (Terminal No.)	Wiring Color	Condition	STD Value
+B2 ↔ Ground (T7-9 ↔ Ground)	L-W ↔ Ground	Always.	10 – 14 V
ACT <sup>-</sup> ↔ ACT <sup>+</sup> (T7-2 ↔ T7-3)	L-Y ↔ L-R	Ignition switch is turned to "OFF" position.	Below 50 Ω
PRLY ↔ Ground (T7-6 ↔ Ground)	Y ↔ Ground	Ignition switch is turned to "ON" position.	10 – 14 V
IG ↔ Ground (T7-7 ↔ Ground)	B-R ↔ Ground	Ignition switch is turned to "ON" position.	10 – 14 V
ACC ↔ E (T7-8 ↔ T7-4)	L-R ↔ W-B	Ignition switch is turned to "ACC" position.	10 – 14 V
+B1 ↔ Ground (T8-1 ↔ Ground)	R ↔ Ground	Always.	10 – 14 V
DSWL ↔ E (T8-4 ↔ T7-4)	LG ↔ W-B	Luggage compartment door courtesy switch ON (door opened).	Below 1 Ω
		Luggage compartment door courtesy switch OFF (door closed).	1 MΩ or higher
L1 ↔ E (T8-5 ↔ T7-4)	R-W ↔ W-B	Door lock control switch LOCK position.	Below 1 Ω
		Door lock control switch UNLOCK position.	1 MΩ or higher
UL3 ↔ E (T8-6 ↔ T7-4)	G ↔ W-B	Door key lock and unlock switch UNLOCK position.	Below 1 Ω
		Door key lock and unlock switch LOCK position.	1 MΩ or higher
DSWD ↔ E (T8-7 ↔ T7-4)	R-B ↔ W-B	Door open detection switch (driver's) ON (door opened).	Below 1 Ω
		Door open detection switch (driver's) OFF (door closed).	1 MΩ or higher
UL1 ↔ E (T8-8 ↔ T7-4)	G-R ↔ W-B	Door lock control switch UNLOCK position.	Below 1 Ω
		Door lock control switch LOCK position.	1 MΩ or higher
LUG ↔ E (T8-9 ↔ T7-4)	L ↔ W-B	Luggage compartment door key lock and unlock switch ON.	Below 1 Ω
		Luggage compartment door key lock and unlock switch OFF.	1 MΩ or higher
HEAD ↔ E (T8-10 ↔ T7-4)	R-Y ↔ W-B	Light control switch other than "HEAD" position.	10 – 14 V
SH ↔ E (T8-11 ↔ T7-4)	P-B ↔ W-B	Always.	10 – 14 V
IND ↔ Ground (T8-12 ↔ Ground)	W-L ↔ Ground	Always.	Below 270 Ω
DSWH ↔ E (T8-14 ↔ T7-4)	GR ↔ W-B	Engine hood courtesy switch ON (hood opened).	Below 1 Ω
		Engine hood courtesy switch OFF (hood closed).	1 MΩ or higher
LSWD ↔ E (T8-15 ↔ T7-4)	L-W ↔ W-B	Door unlock detection switch ON (door opened).	Below 1 Ω
		Door unlock detection switch OFF (door closed).	1 MΩ or higher
UL2 ↔ E (T8-16 ↔ T7-4)	W ↔ W-B	Door key lock and unlock switch UNLOCK position.	Below 1 Ω
		Door key lock and unlock switch LOCK position.	1 MΩ or higher
DSWP ↔ E (T8-19 ↔ T7-4)	R-L ↔ W-B	Door open detection switch (passenger's) ON (door opened).	Below 1 Ω
		Door open detection switch (passenger's) OFF (door closed).	1 MΩ or higher
KSW ↔ E (T8-20 ↔ T7-4)	Y ↔ W-B	Key unlock warning switch ON.	Below 1 Ω
		Key unlock warning switch OFF.	1 MΩ or higher

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Fig. 25: Anti-Theft System & Door Lock Control ECU Pin Voltage Values  
(1 Of 2)

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminal No.)	Wiring Color	Condition	STD Value
LSWP ↔ E (T8-21 ↔ T7-4)	G-B ↔ W-B	Door unlock detection switch ON (door opened).	Below 1 Ω
		Door unlock detection switch OFF (door closed).	1 MΩ or higher
L2 ↔ E (T8-22 ↔ T7-4)	G-Y ↔ W-B	Door key lock and unlock switch LOCK position.	Below 1 Ω
		Door key lock and unlock switch UNLOCK position.	1 MΩ or higher
TAIL ↔ E (T8-23 ↔ T7-4)	G-W ↔ W-B	Light control switch "TAIL" position.	10 – 14 V
HORN ↔ E (T8-24 ↔ T7-4)	L-R ↔ W-B	Horn switch OFF.	10 – 14 V
SRLY ↔ Ground (T8-25 ↔ Ground)	L-O ↔ Ground	Ignition switch is turned to "ST" position. (When park/neutral position switch "P" position.)	10 – 14 V

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Fig. 26: Anti-Theft System & Door Lock Control ECU Pin Voltage Values  
(2 Of 2)

Courtesy of Toyota Motor Sales, U.S.A., Inc.

## REMOVAL & INSTALLATION

### ANTI-THEFT SYSTEM & DOOR LOCK CONTROL ECU

**WARNING:** Deactivate air bag system before performing any service operation. See AIR BAG RESTRAINT SYSTEMS article.

#### Removal

1) Manufacturer states instrument panel removal may be required for access to anti-theft system and door lock control ECU. Anti-theft system and door lock control ECU is located behind passenger's side of instrument panel and uses Orange 9-pin and 25-pin electrical connectors. See Fig. 1.

2) If necessary to remove instrument panel, remove steering wheel pad (air bag module) and steering wheel. See AIR BAG RESTRAINT SYSTEMS article. Remove grip handles and trim panels from pillars at both sides of the windshield.

3) Remove driver's side foot rest from floor panel. Foot rest is located near driver's side kick panel. Remove scuff plates from driver's side and passenger's side door opening. Remove upper and lower steering column covers. These are the covers that fit around the combination switch on the steering column.

4) Remove console upper panel by prying at the 5 clips. See Fig. 27. Remove screw and parking brake lever cover by prying at the 3 clips. See Fig. 27. Remove center console box.

5) Remove screws and finish panel from below driver's side of steering column by prying at the 3 clips. See Fig. 27. Remove remaining lower finish panel from bottom of driver's side of instrument panel.

6) Remove screws and cluster finish panel from instrument panel. See Fig. 14. Disconnect electrical connectors and remove cluster finish panel. Remove instrument cluster center finish panel and then instrument cluster left finish panel by prying at the 4 clips. See Fig. 28.

7) Remove instrument cluster right finish panel by prying at the 8 clips. See Fig. 28. This is the panel around the stereo assembly. Remove instrument cluster from instrument panel. Remove heater duct from driver's side of instrument panel. Remove combination switch assembly from steering column.

8) Remove stereo assembly. From inside glove box, disconnect electrical connector for passenger's side air bag assembly. Remove glove box assembly. Remove support braces from instrument panel. These support braces are located on inside of instrument panel, near the glove box area. Remove air duct from air outlets near glove box area

on instrument panel.

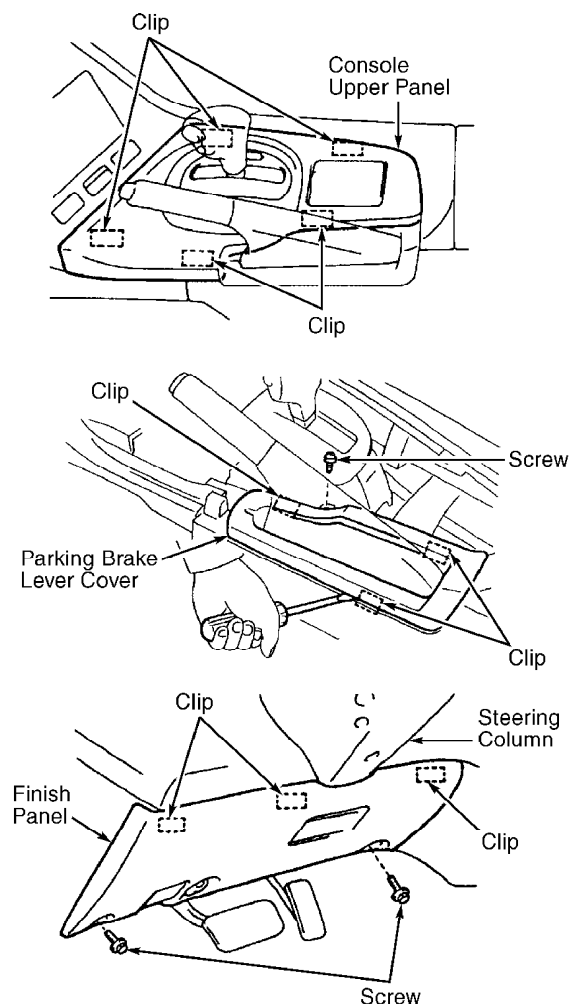
9) Remove instrument panel support bracket from passenger's side upper area on instrument panel, behind air ducts and glove box area. Remove passenger's side air bag assembly from instrument panel. See AIR BAG RESTRAINT SYSTEMS article for proper servicing procedures.

10) Remove parking brake lever assembly. Remove side defroster outlet from passenger's side of instrument panel. Remove steering column nuts. Disconnect necessary electrical connectors for removal of instrument panel.

11) Remove bolts/nuts, screws and instrument panel. See Fig. 28. Remove remaining support braces from instrument panel. Remove instrument panel. Remove retaining bolts and anti-theft system and door lock control ECU.

#### Installation

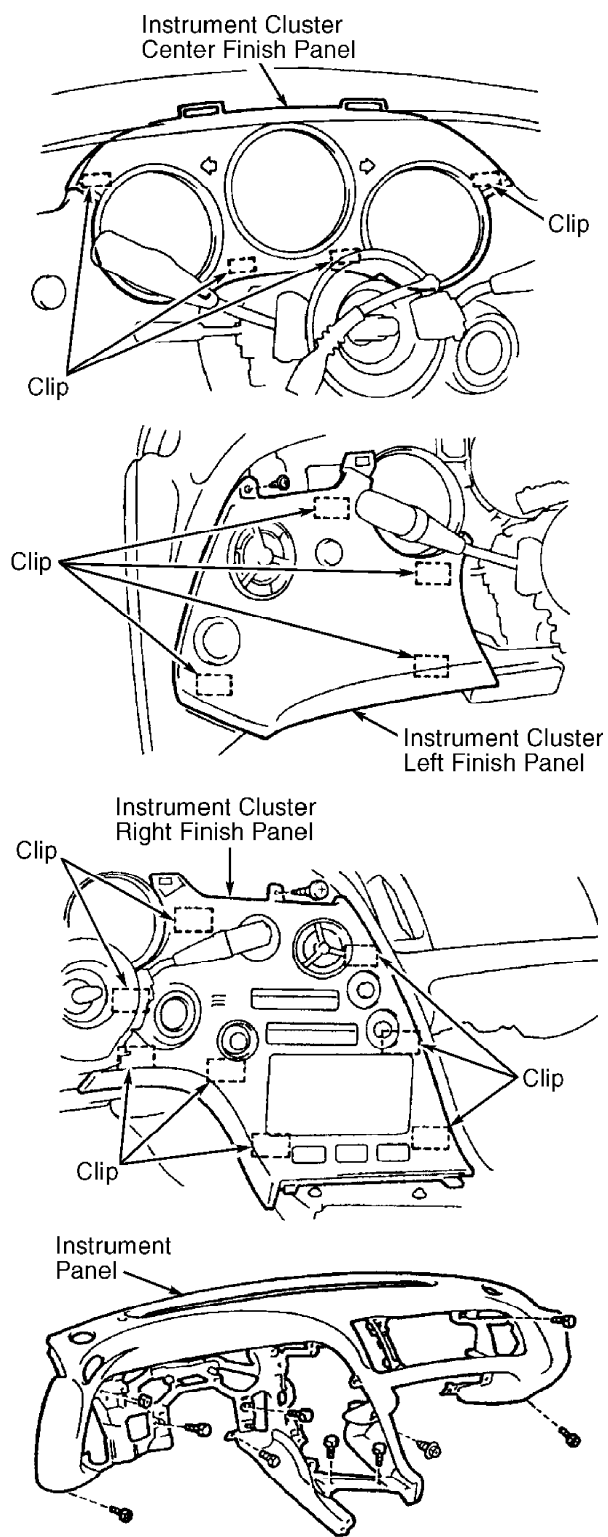
To install, reverse removal procedure. Ensure proper procedure is followed when installing passenger's side air bag assembly, steering wheel and steering wheel pad (air bag module). See AIR BAG RESTRAINT SYSTEMS article.



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Fig. 27: Removing Console Upper Panel, Parking Brake Lever Cover & Finish Panel

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Fig. 28: Removing Instrument Cluster Center Finish Panel, Left & Right Panels & Instrument Panel  
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

## WIRING DIAGRAMS

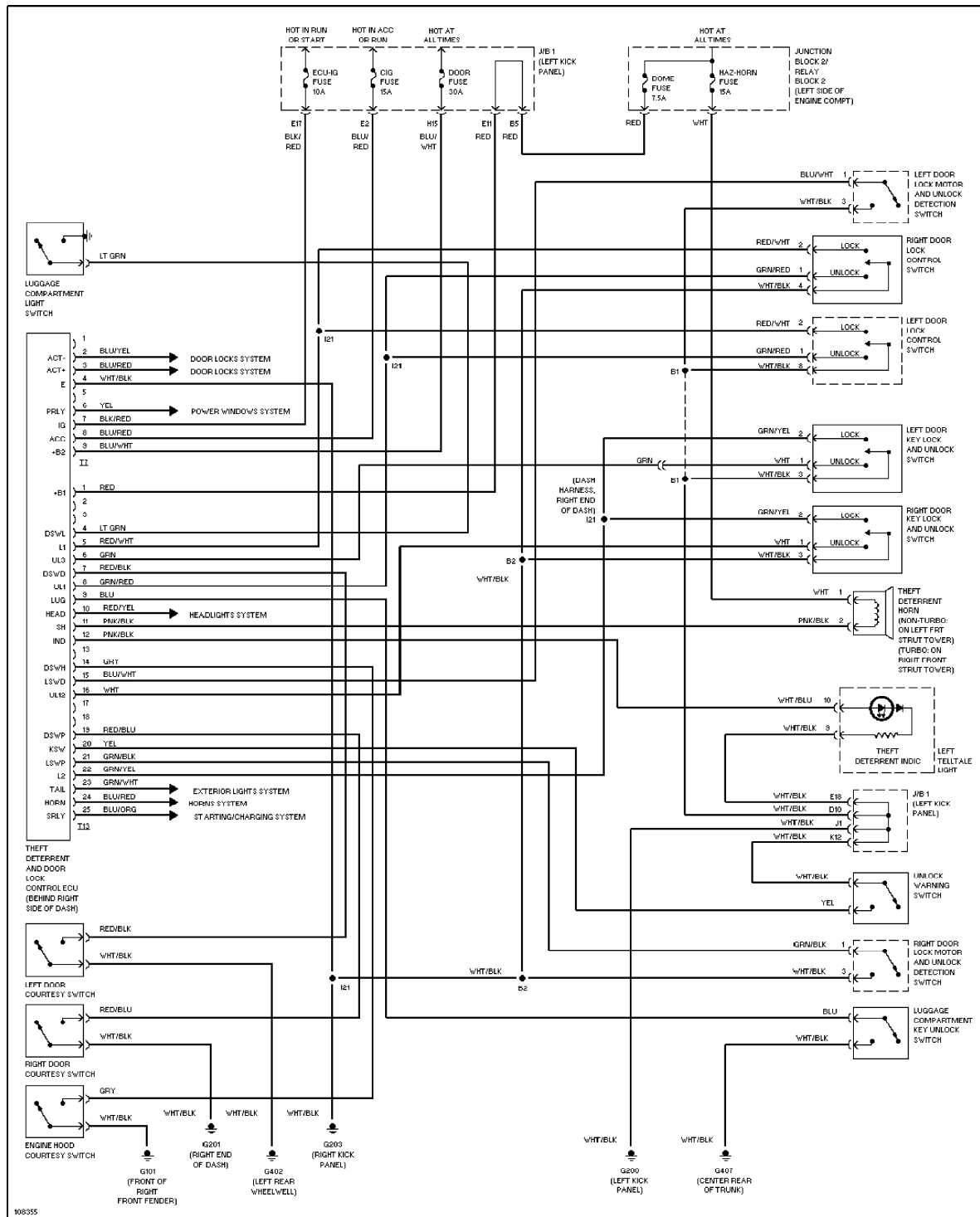


Fig. 29: Anti-Theft System Wiring Diagram

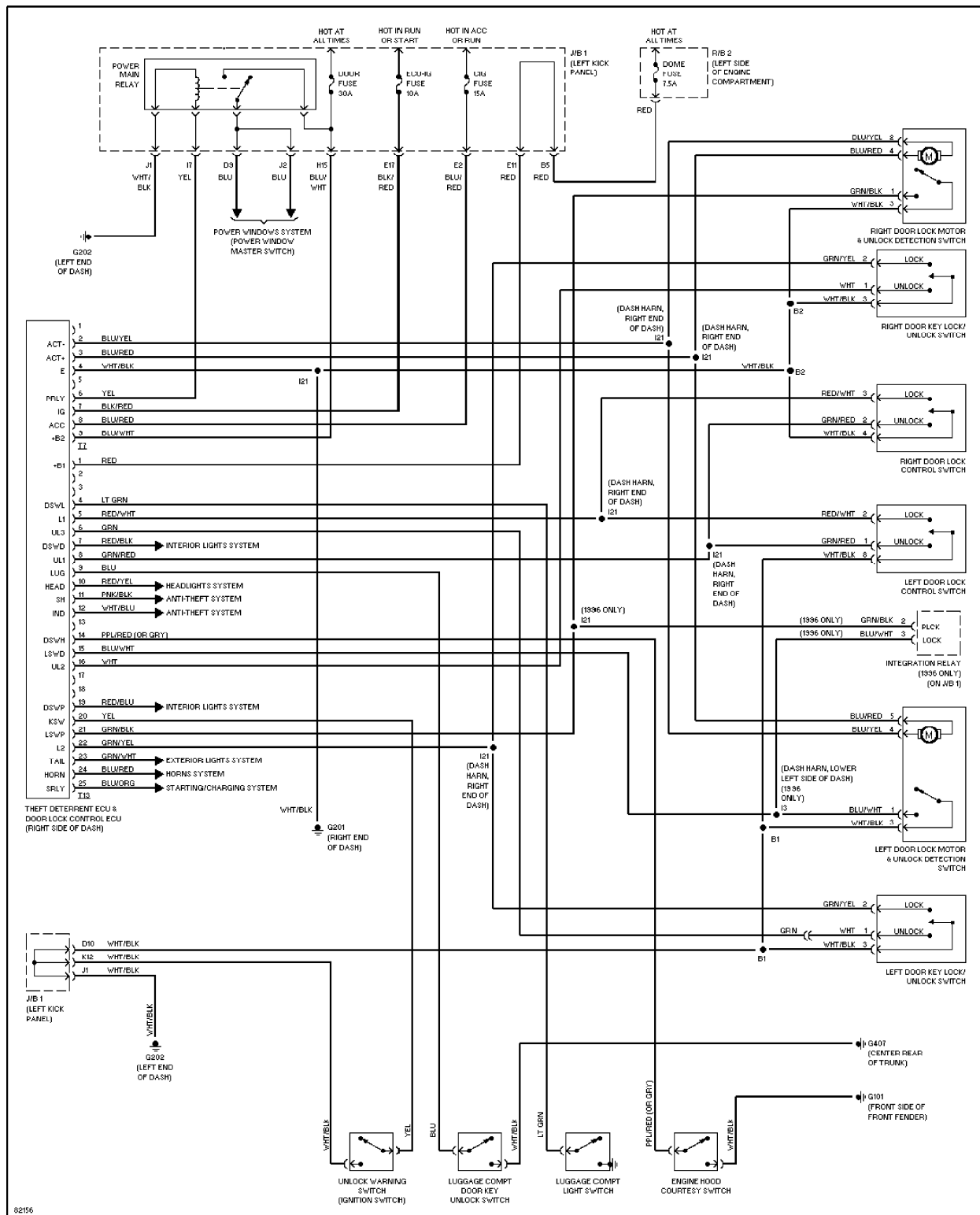


Fig. 30: Power Door Lock System Wiring Diagram