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ARTICLE BEGINNING

1999-2000 ACCESSORIES & EQUIPMENT Lexus Power Door Locks, Trunk Lid & Fuel Door

RX300

DESCRIPTION

POWER DOOR LOCKS

All doors can be locked and unlocked from either front door using control switch or door key. When you unlock driver's door with door key, if you turn key once, only driver's door will unlock. If you turn key twice within 3 seconds, all doors will unlock.

KEY CONFINEMENT PREVENTION SYSTEM

If driver leaves key in ignition, opens door, then tries to lock doors using control switch (on door panel), system will not allow doors to be locked. This prevents key from being locked inside vehicle.

OPERATION

POWER DOOR LOCKS

Door Key Switch (Door Key Lock & Unlock Switch) This switch is part of door key cylinder. When lock cylinder is turned to LOCK or UNLOCK position, contacts inside this switch close.

Door Lock Control Switch All doors can be locked and unlocked using control switch on driver's side or passenger's side.

Door Lock Motors Each door contains a door lock motor (an electric actuator) that locks and unlocks door. Door lock motor assembly contains a door unlock detection switch and a door open detection switch.

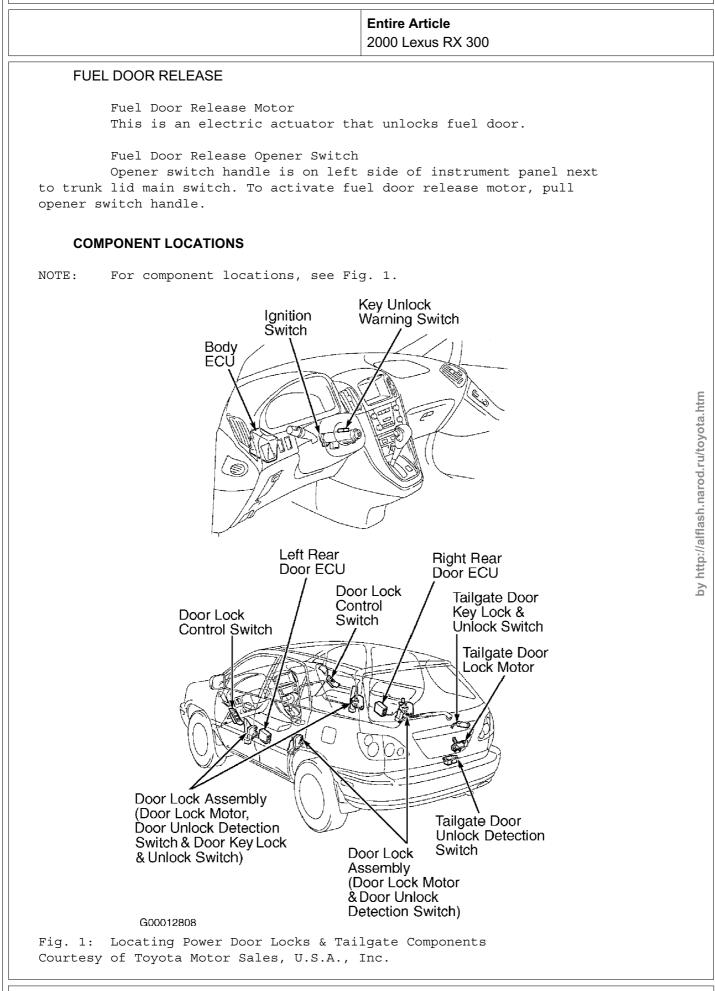
Door Unlock Detection Switch This switch is part of door lock motor assembly. When door is unlocked, switch is closed. When door is locked, switch is open.

Key Unlock Warning Switch

This switch is part of ignition switch. When key is in ignition, switch is closed. If system senses that switch is closed, it prevents door locks from being operated if driver's door is open (key confinement prevention system).

Front & Rear Door ECUs Front and rear door ECUs supply power to door lock motors based on inputs from various switches. http://alflash.narod.ru/toyota.htm

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TROUBLE SHOOTING

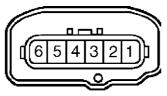
NOTE: See TROUBLE SHOOTING in BODY CONTROL SYSTEMS - RX300 article.

COMPONENT TESTS

NOTE: For additional testing, see BODY CONTROL SYSTEMS - RX300 article.

DRIVER'S DOOR LOCK MOTOR

Disconnect driver's door lock motor 6-pin connector. See Fig. 2. Connect battery positive voltage to connector terminal No. 1 and negative battery voltage to connector terminal No. 2. Door lock link should move to UNLOCK position. Reverse polarity and check if door lock link moves to LOCK position. Replace door lock assembly as necessary.



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Fig. 2: Identifying 6-Pin Connector Terminals Courtesy of Toyota Motor Sales, U.S.A., Inc.

DRIVER'S DOOR KEY LOCK & UNLOCK SWITCH

Disconnect driver's door key lock and unlock switch 6-pin connector. See Fig. 2. Put switch in LOCK position. Check continuity between switch terminals No. 3 and 5. Continuity should be present. Put switch in UNLOCK position. Check continuity between switch terminals No. 3 and 6. Continuity should be present. With switch in OFF position, no continuity should be present between any terminals. Replace switch as necessary.

DRIVER'S DOOR POSITIVE TEMPERATURE COEFFICIENT (PTC) THERMISTOR

Disconnect driver's door lock 6-pin connector. See Fig. 2. Connect negative battery voltage to lock terminal No. 2. Connect positive battery voltage to ammeter. Connect ammeter negative probe to terminal No. 1. Current should change from about 3.2 amps to less than .5 amps within 20-70 seconds. Disconnect leads. About one minute later, connect positive battery voltage to switch terminal No. 2, and connect negative battery voltage to switch terminal No. 1. Door lock should move to LOCK position. If lock does not operate as specified, replace door lock assembly.

FRONT DOOR UNLOCK DETECTION SWITCH

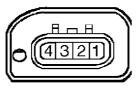
Disconnect front door unlock detection switch 6-pin connector. See Fig. 2. Put switch in OFF (door set to lock) position.

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No continuity should be present between any terminals. Put switch in ON (door set to unlock) position. Continuity should be present between switch terminals No. 3 and 4. Replace switch as necessary.

LEFT REAR DOOR LOCK MOTOR

Disconnect left rear door lock motor 4-pin connector. See Fig. 3. Connect battery positive voltage to connector terminal No. 1 and negative battery voltage to connector terminal No. 2. Door lock link should move to UNLOCK position. Reverse polarity and check if door lock link moves to LOCK position. Replace door lock assembly as necessary.



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Fig. 3: Identifying 4-Pin Connector Terminals Courtesy of Toyota Motor Sales, U.S.A., Inc.

LEFT REAR DOOR POSITIVE TEMPERATURE COEFFICIENT (PTC) THERMISTOR

Disconnect left rear door lock 4-pin connector. See Fig. 3. Connect negative battery voltage to lock terminal No. 2. Connect positive battery voltage to ammeter. Connect ammeter negative probe to terminal No. 1. Current should change from about 3.2 amps to less than .5 amps within 20-70 seconds. Disconnect leads. About one minute later, connect positive battery voltage to switch terminal No. 2, and connect negative battery voltage to switch terminal No. 1. Door lock should move to LOCK position. If lock does not operate as specified, replace door lock assembly.

PASSENGER'S DOOR KEY LOCK & UNLOCK SWITCH

Disconnect passenger's door key lock and unlock switch 6-pin connector. See Fig. 2. Put switch in LOCK position. Check continuity between switch terminals No. 2 and 4. Continuity should be present. Put switch in UNLOCK position. Check continuity between switch terminals No. 1 and 4. Continuity should be present. With switch in OFF position, no continuity should be present between any terminals. Replace switch as necessary.

PASSENGER'S DOOR LOCK MOTOR

Disconnect passenger's door lock motor 6-pin connector. See Fig. 2. Connect battery positive voltage to connector terminal No. 5 and negative battery voltage to connector terminal No. 6. Door lock link should move to UNLOCK position. Reverse polarity and check if door lock link moves to LOCK position. Replace door lock assembly as necessary.

PASSENGER'S DOOR POSITIVE TEMPERATURE COEFFICIENT (PTC) THERMISTOR

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Disconnect passenger's front door lock 6-pin connector. See Fig. 2. Connect negative battery voltage to lock terminal No. 6. Connect positive battery voltage to ammeter. Connect ammeter negative probe to terminal No. 5. Current should change from about 3.2 amps to less than .5 amps within 20-70 seconds. Disconnect leads. About one minute later, connect positive battery voltage to switch terminal No. 6, and connect negative battery voltage to switch terminal No. 5. Door lock should move to LOCK position. If lock does not operate as specified, replace door lock assembly.

REAR DOOR UNLOCK DETECTION SWITCH

Disconnect rear door unlock detection switch 4-pin connector. See Fig. 3. Put switch in OFF (door set to lock) position. No continuity should be present between any terminals. Put switch in ON (door set to unlock) position. Continuity should be present between switch terminals No. 1 and 2 (left side) or terminals No. 3 and 4 (right side). Replace switch as necessary.

RIGHT REAR DOOR LOCK MOTOR

Disconnect right rear door lock motor 4-pin connector. See Fig. 3. Connect battery positive voltage to connector terminal No. 3 and negative battery voltage to connector terminal No. 4. Door lock link should move to UNLOCK position. Reverse polarity and check if door lock link moves to LOCK position. Replace door lock assembly as necessary.

RIGHT REAR DOOR POSITIVE TEMPERATURE COEFFICIENT (PTC) THERMISTOR

Disconnect right rear door lock 4-pin connector. See Fig. 3. Connect negative battery voltage to lock terminal No. 4. Connect positive battery voltage to ammeter. Connect ammeter negative probe to terminal No. 3. Current should change from about 3.2 amps to less than .5 amps within 20-70 seconds. Disconnect leads. About one minute later, connect positive battery voltage to switch terminal No. 4, and connect negative battery voltage to switch terminal No. 3. Door lock should move to LOCK position. If lock does not operate as specified, replace door lock assembly.

TAILGATE DOOR KEY LOCK & UNLOCK SWITCH

Disconnect tailgate door key lock and unlock switch 3-pin connector. See Fig. 4. Put switch in LOCK position. Check continuity between switch terminals No. 1 and 2. Continuity should be present. Put switch in UNLOCK position. Check continuity between switch terminals No. 1 and 3. Continuity should be present. With switch in OFF position, no continuity should be present between any terminals. Replace switch as necessary.

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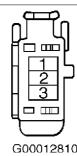


Fig. 4: Identifying 3-Pin Connector Terminals Courtesy of Toyota Motor Sales, U.S.A., Inc.

TAILGATE DOOR LOCK MOTOR

Disconnect tailgate door lock motor 4-pin connector. See Fig. 3. Connect battery positive voltage to connector terminal No. 3 and negative battery voltage to connector terminal No. 2. Door lock link should move to UNLOCK position. Reverse polarity and check if door lock link moves to LOCK position. Replace door lock assembly as necessary.

TAILGATE DOOR UNLOCK DETECTION SWITCH

Disconnect rear door unlock detection switch 4-pin connector. See Fig. 3. Put switch in OFF (door set to lock) position. No continuity should be present between any terminals. Put switch in ON (door set to unlock) position. Continuity should be present between switch terminals No. 1 and 4. Replace switch as necessary.

TAILGATE POSITIVE TEMPERATURE COEFFICIENT (PTC) THERMISTOR

Disconnect tailgate door lock 4-pin connector. See Fig. 3. Connect negative battery voltage to lock terminal No. 2. Connect positive battery voltage to ammeter. Connect ammeter negative probe to terminal No. 3. Current should change from about 3.2 amps to less than .5 amps within 20-70 seconds. Disconnect leads. About one minute later, connect positive battery voltage to switch terminal No. 2, and connect negative battery voltage to switch terminal No. 3. Door lock should move to LOCK position. If lock does not operate as specified, replace door lock assembly.

REMOVAL & INSTALLATION

DOOR LOCK MOTOR

Removal & Installation Remove door trim panel and service hole cover. Disconnect electrical connectors. Remove door lock motor assembly. To install, reverse removal procedure.

DOOR LOCK CONTROL SWITCH

Removal & Installation Using a screwdriver with a protected (taped) tip, push in on clip at front outside edge of switch panel. Push switch panel forward by http://alflash.narod.ru/toyota.htm

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and remove it from armrest base. Disconnect electrical connectors. To install, reverse removal procedure.

WIRING DIAGRAMS

NOTE: For power door lock system wiring diagram, see WIRING DIAGRAMS in REMOTE KEYLESS ENTRY SYSTEMS - RX300 article.

END OF ARTICLE