

AIR BAG RESTRAINT SYSTEM

1994 Toyota Celica

1994 ACCESSORIES/SAFETY EQUIPMENT
Toyota Air Bags

Celica

WARNING: To avoid injury from accidental air bag deployment, read and carefully follow all WARNINGS and SERVICE PRECAUTIONS.

DESCRIPTION & OPERATION

Supplemental Restraint System (SRS) consists of a steering wheel pad (contains air bag), passenger-side air bag (if equipped), center air bag sensor, spiral cable, left and right front air bag sensors, and an air bag warning light in the instrument cluster. See Figs. 4-7. Spiral cable completes the electrical circuit from the center air bag sensor to the steering wheel pad while allowing the steering wheel to be turned. Air bags deploy if center air bag sensor and front air bag sensors detect sufficient impact.

SYSTEM OPERATION CHECK

Turn ignition switch to ACC or ON position. Air bag warning light should come on for about 6 seconds, then go out. If air bag warning light does not operate as specified, go to DIAGNOSIS & TESTING.

SERVICE PRECAUTIONS

Observe the following precautions when servicing SRS:

- * Disable SRS before servicing any SRS or steering column component. Failure to do this could result in accidental air bag deployment and possible personal injury. See DISABLING & ACTIVATING AIR BAG SYSTEM.
- * When trouble shooting SRS, always check for diagnostic codes before disconnecting battery.
- * After turning ignition switch to LOCK position and disconnecting negative battery cable, wait at least 90 seconds before working on SRS. SRS is equipped with a back-up power source that may allow air bag to deploy until 90 seconds after disconnecting negative battery cable.
- * If vehicle was in a minor collision but air bags did not deploy, inspect front air bag sensors and steering wheel pad.
- * Never use air bag parts from another vehicle. Replace air bag parts with new parts.
- * Remove center air bag sensor and front air bag sensors if repairing the vehicle requires impacting (shocking) the vehicle.
- * Center air bag sensor contains mercury. After replacement, DO NOT destroy old part. When scrapping vehicle or replacing center air bag sensor, remove center air bag sensor and dispose of it as toxic waste.
- * Never disassemble and repair front air bag sensors, center air bag sensor or steering wheel pad.
- * Replace dropped, cracked, dented or otherwise damaged component.
- * DO NOT expose front air bag sensors, center air bag sensor or steering wheel pad directly to heat or flame.
- * When trouble shooting electrical circuits, use a volt/ohmmeter with high impedance (10 k/ohm minimum).

- * Information labels are attached to air bag components. Follow all notices on labels.
- * After work on SRS is completed, check air bag warning light to ensure system is functioning properly. See SYSTEM OPERATION CHECK.
- * Always wear safety glasses when servicing or handling an air bag.
- * When placing a live air bag on a bench or other surface, always face air bag and trim cover upward, away from surface. This will reduce motion of module if it is accidentally deployed.
- * After deployment, air bag surface may contain deposits of sodium hydroxide, which irritates skin. Always wear safety glasses, rubber gloves and long-sleeved shirt during clean-up. After clean-up, wash hands using mild soap and water.
- * Carry a live air bag module with trim cover (air bag) pointed away from your body to minimize injury in case of accidental deployment.
- * If SRS is not fully functional for any reason, vehicle should not be driven until system is repaired and again becomes operational. DO NOT remove bulbs, modules, sensors or other components or in any way disable system from operating normally. If SRS is not functional, park vehicle until it is repaired and functions properly.

DISABLING & ACTIVATING AIR BAG SYSTEM

WARNING: Back-up power supply maintains SRS voltage for about 90 seconds after battery is disconnected. After disabling SRS, wait at least 90 seconds before servicing SRS to prevent accidental air bag deployment and possible personal injury.

Disabling System

Turn ignition switch to LOCK position. Disconnect and shield negative battery cable. Wait at least 90 seconds before working on system. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. On vehicles equipped with passenger-side air bag, disconnect passenger-side air bag connector, accessible through finish plate in glove box. See Fig. 6.

Activating System

Reconnect passenger-side air bag connector (if equipped). See Fig. 6. Install steering wheel pad. Reconnect negative battery cable. Perform SYSTEM OPERATION CHECK.

DISPOSAL PROCEDURES

WARNING: Undeployed air bags contain substances that can cause illness or injury if improperly handled. Disposing of an undeployed air bag may violate federal, state and/or local laws. If scrapping vehicle, air bag must be deployed while still mounted in vehicle. DO NOT deploy air bags inside vehicle unless vehicle is to be scrapped. Wear gloves and safety glasses when handling air bag. Wrap deployed air bag in a sturdy plastic bag and dispose of it like any other part.

ON-VEHICLE DEPLOYMENT (SCRAPPED VEHICLES ONLY)

1) Before proceeding, follow service precautions. See SERVICE PRECAUTIONS. Disable SRS. See DISABLING & ACTIVATING AIR BAG SYSTEM. Ensure steering wheel, steering wheel pad and passenger-side air bag are not loose. If components are loose, deploy air bag(s) using OFF-VEHICLE DEPLOYMENT procedure.

2) If deploying steering wheel pad, disconnect spiral cable connector under steering column. If deploying passenger-side air bag, disconnect passenger-side air bag connector, accessible through glove box door finish plate. See Fig. 6. For either air bag, connect Deployment Tool (09082-00700) connector to air bag connector. Position deployment tool at least 33 feet from front of vehicle.

3) Close all doors and windows of vehicle. Connect deployment tool Red clip to positive battery terminal and Black clip to negative battery terminal. Ensure no one is inside or within 33 feet of vehicle. Press activation switch to deploy air bag. Because of heat, DO NOT touch air bag for at least 30 minutes after deployment.

OFF-VEHICLE DEPLOYMENT

Steering Wheel Pad

1) Before proceeding, see SERVICE PRECAUTIONS. Disable SRS. See DISABLING & ACTIVATING AIR BAG SYSTEM. Remove air bag. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION.

2) Install 4 bolts in holes provided in rear of steering wheel pad. Tighten bolts by hand until they become difficult to turn. DO NOT overtighten bolts. Wrap strong wire at least twice around bolts on left and right sides of steering wheel pad. See Fig. 2. Ensure no slack is present in wire. If slack is present, or wire is not strong enough, steering wheel pad may become loose due to shock when air bag is deployed.

3) Position steering wheel pad on rim of a scrap wheel and tire assembly with pad side facing upward. See Fig. 2. Securely tie steering wheel pad to wheel rim through lug nut holes. Place a large cardboard box (weighted at sides) or 3 scrap tires on top of steering wheel pad.

4) Connect Deployment Tool (09082-00700) to steering wheel pad connector. Position deployment tool at least 33 feet away from steering wheel pad. Press activation switch to deploy steering wheel pad. Because of heat, wait 30 minutes before handling steering wheel pad.

Passenger-Side Air Bag

1) Before proceeding, see SERVICE PRECAUTIONS. Disable SRS. See DISABLING & ACTIVATING AIR BAG SYSTEM. Remove passenger-side air bag. See PASSENGER-SIDE AIR BAG under REMOVAL & INSTALLATION.

2) Position passenger-side air bag inside a scrap tire with air bag trim cover facing inside. See Fig. 3. Secure passenger-side air bag to tire with wire. Place this tire between 4 other tires (top tire should have wheel installed). Securely tie all tires together with wire.

3) Connect Deployment Tool (09082-00700) to passenger-side air bag connector. Position deployment tool at least 33 feet away from passenger-side air bag. Press activation switch to deploy passenger-side air bag. Because of heat, wait 30 minutes before handling passenger-side air bag.

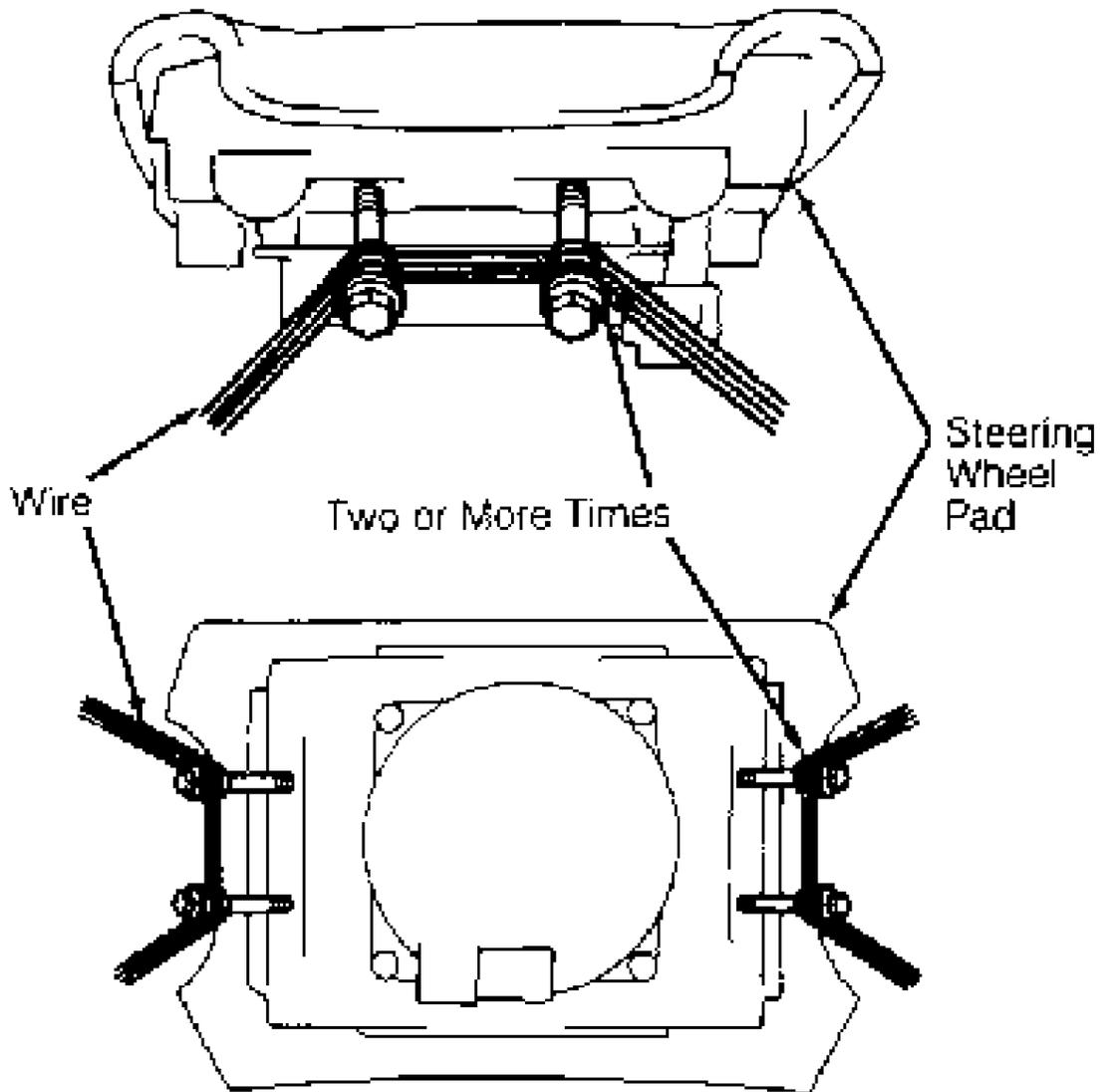


Fig. 1: Installing Wire Onto Steering Wheel Pad (Typical)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

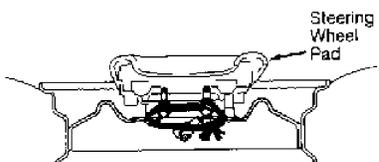


Fig. 2: Installing Steering Wheel Pad Onto Wheel Assembly
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

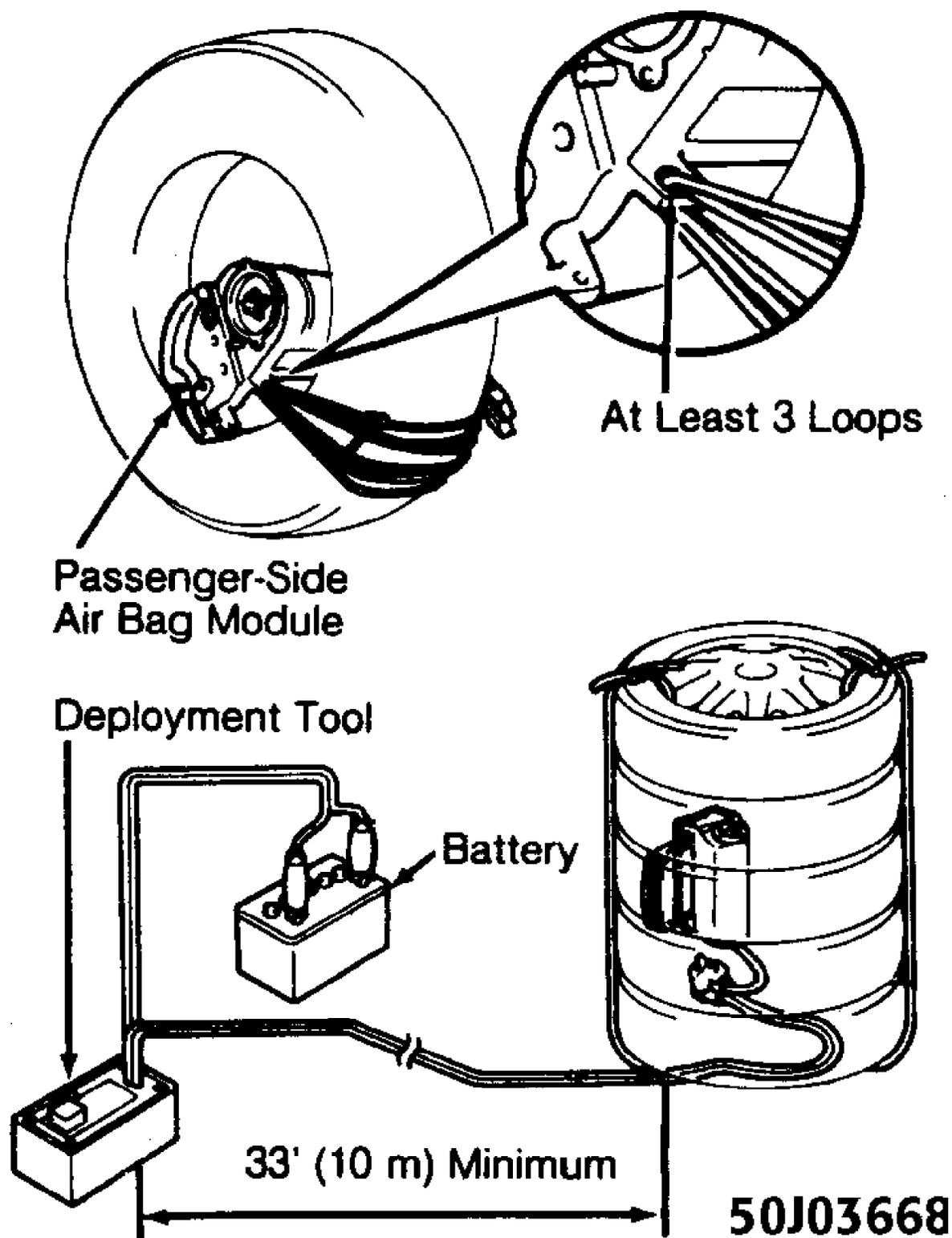


Fig. 3: Installing Passenger-Side Air Bag Onto Wheel Assembly
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

Remove air bag(s) and steering wheel for inspection. See REMOVAL & INSTALLATION. If air bag(s) deployed, replace air bag(s), center air bag sensor and both front air bag sensors. Whether air bag(s) deployed or not, replace components that are cut, cracked, deformed or otherwise damaged. Also, check the following:

Front Air Bag Sensors

Ensure sensor mounting (including vehicle sheet metal area) is restored to normal condition.

Spiral Cable

Ensure spiral cable is not deformed and connectors are okay.

Steering Wheel

If horn button contact plate is deformed, replace entire steering wheel.

Steering Wheel Pad (Air Bag)

Ensure clearance exists between steering wheel pad and steering wheel. Clearance must be uniform all the way around steering wheel pad.

Passenger-Side Air Bag

Check for damaged instrument panel, instrument panel reinforcement, glove box and glove box door. Ensure clearance exists between outer edge of passenger-side air bag and instrument panel. Clearance must be uniform all the way around passenger-side air bag.

Wire Harness & Connectors

If front air bag sensor connector is faulty, replace it using WIRE REPAIR procedure. If any other connector or part of wiring harness is faulty, replace harness.

REMOVAL & INSTALLATION

WARNING: Failure to follow air bag service precautions may result in air bag deployment and personal injury. See SERVICE PRECAUTIONS. After component replacement, perform a system operational check to ensure proper system operation. See SYSTEM OPERATION CHECK.

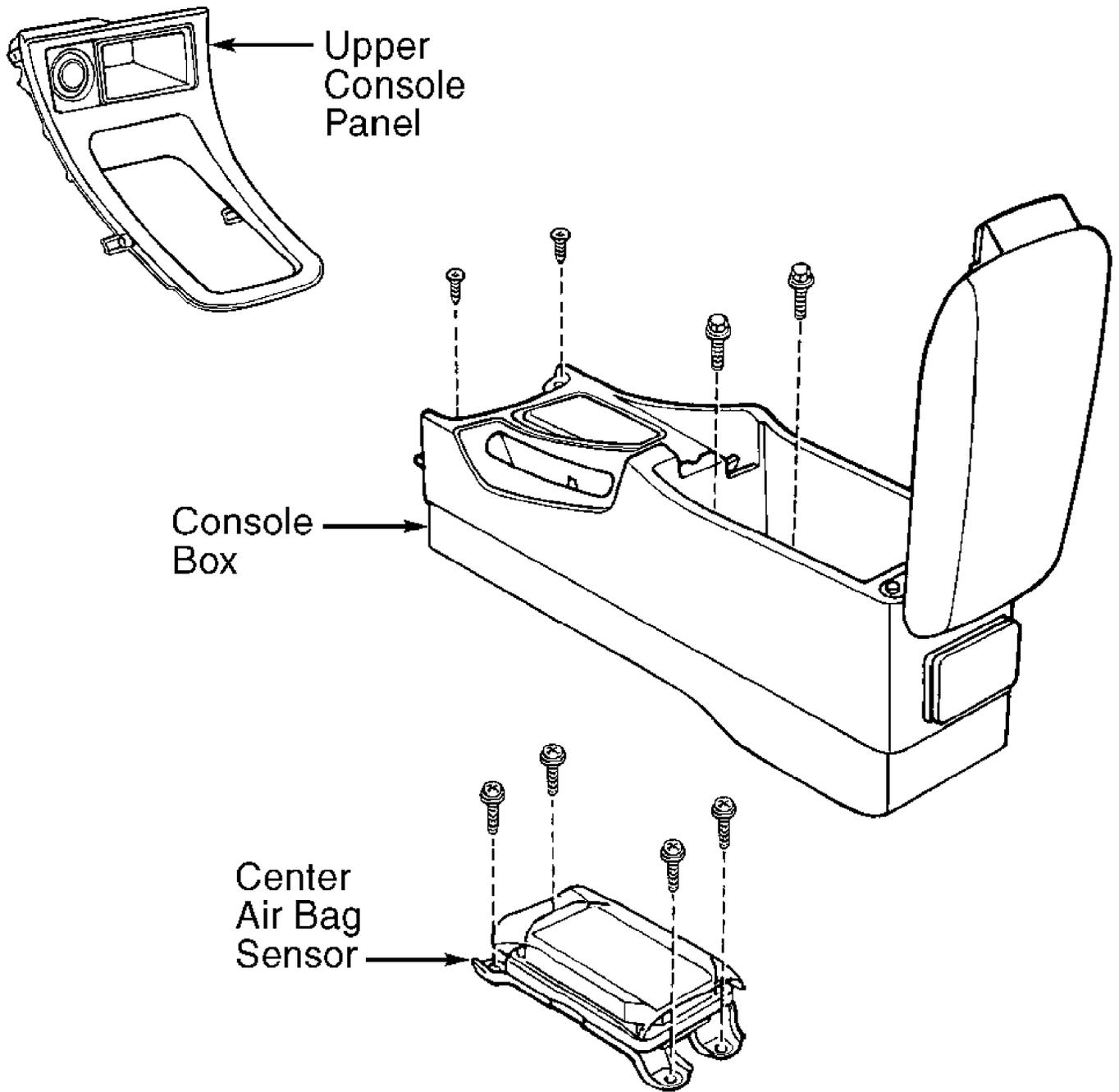
CENTER AIR BAG SENSOR

Removal

Before proceeding, see SERVICE PRECAUTIONS. Disable SRS. See DISABLING & ACTIVATING AIR BAG SYSTEM. Center air bag sensor is located under floor console. See Figs. 4-7. Remove floor console components as necessary. Disconnect center air bag sensor electrical connector. Remove 4 screws securing center air bag sensor to its mounting. Remove center air bag sensor.

Installation

To install, reverse removal procedure. Tighten center air bag sensor screws to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article. Activate SRS. Check AIR BAG warning light to ensure system is functioning properly. See SYSTEM OPERATION CHECK.



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Fig. 4: Removing Center Air Bag Sensor
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

FRONT AIR BAG SENSORS

Removal

1) Before proceeding, follow air bag service precautions. See SERVICE PRECAUTIONS. Disable SRS. See DISABLING & ACTIVATING AIR BAG SYSTEM.

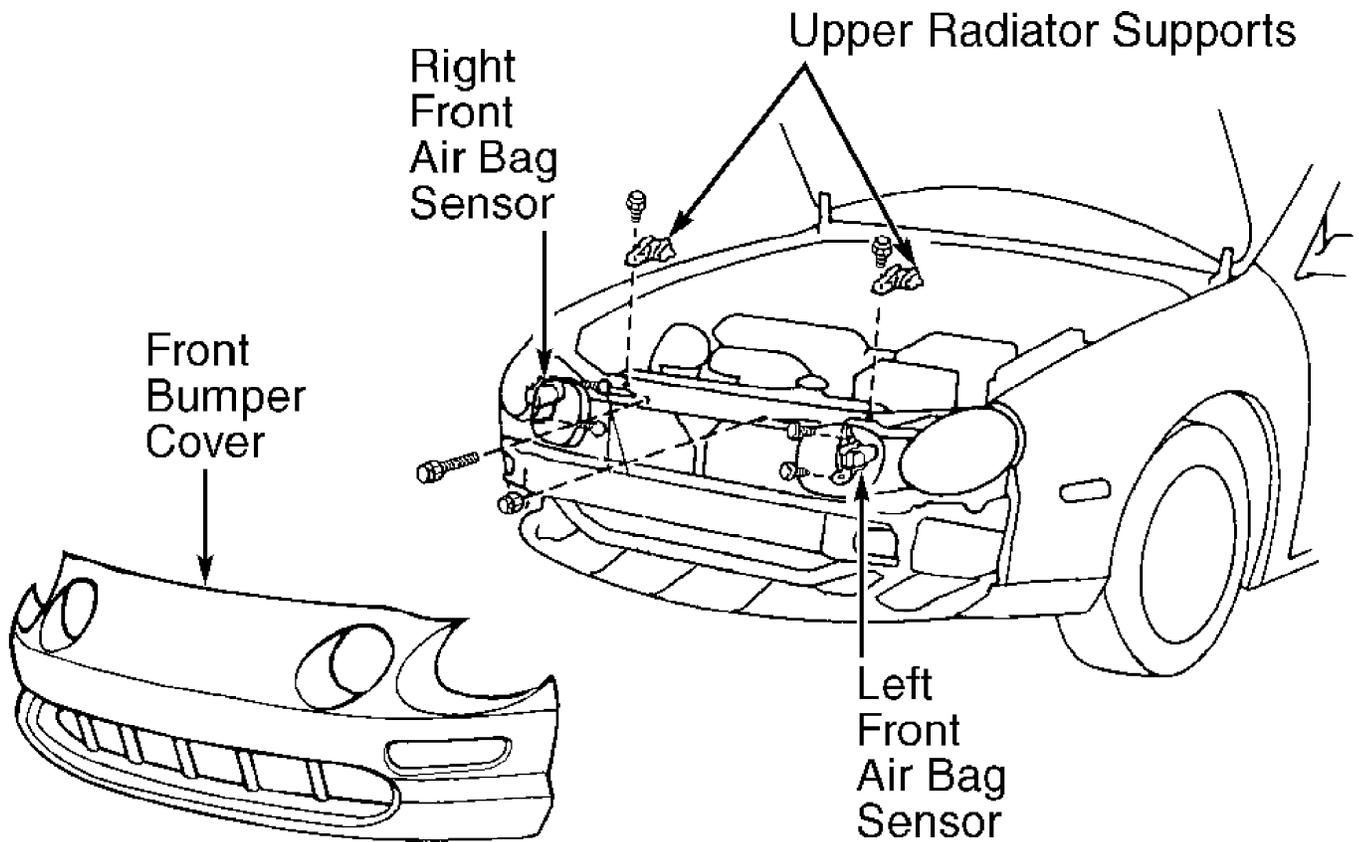
2) Remove the following components, then go to next step:

* Celica - Front bumper cover, upper radiator support and condenser bolt and nut. See Fig. 5.

3) Disconnect front air bag sensor electrical connector. Remove front air bag sensor mounting bolts and/or nuts. Remove front air bag sensor.

Installation

To install, reverse removal procedure. Ensure arrow marks on front air bag sensors face front of vehicle. Tighten front air bag sensor mounting bolts/nuts to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article. Activate SRS. Check AIR BAG warning light to ensure system is functioning properly. See SYSTEM OPERATION CHECK.



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Fig. 5: Removing Front Air Bag Sensors
Courtesy of Toyota Motor Sales, U.S.A., Inc.

PASSENGER-SIDE AIR BAG

NOTE: On Celica, the instrument panel must be removed to remove the passenger-side air bag.

Removal

1) Before proceeding, see SERVICE PRECAUTIONS. Disable SRS. See DISABLING & ACTIVATING AIR BAG SYSTEM. Disconnect passenger-side air bag connector, accessible through glove box door finish plate. See Fig. 6.

2) Remove components No. 1-21. See Fig. 6. Remove radio. Disconnect cable end from air mix (temperature) door lever on left

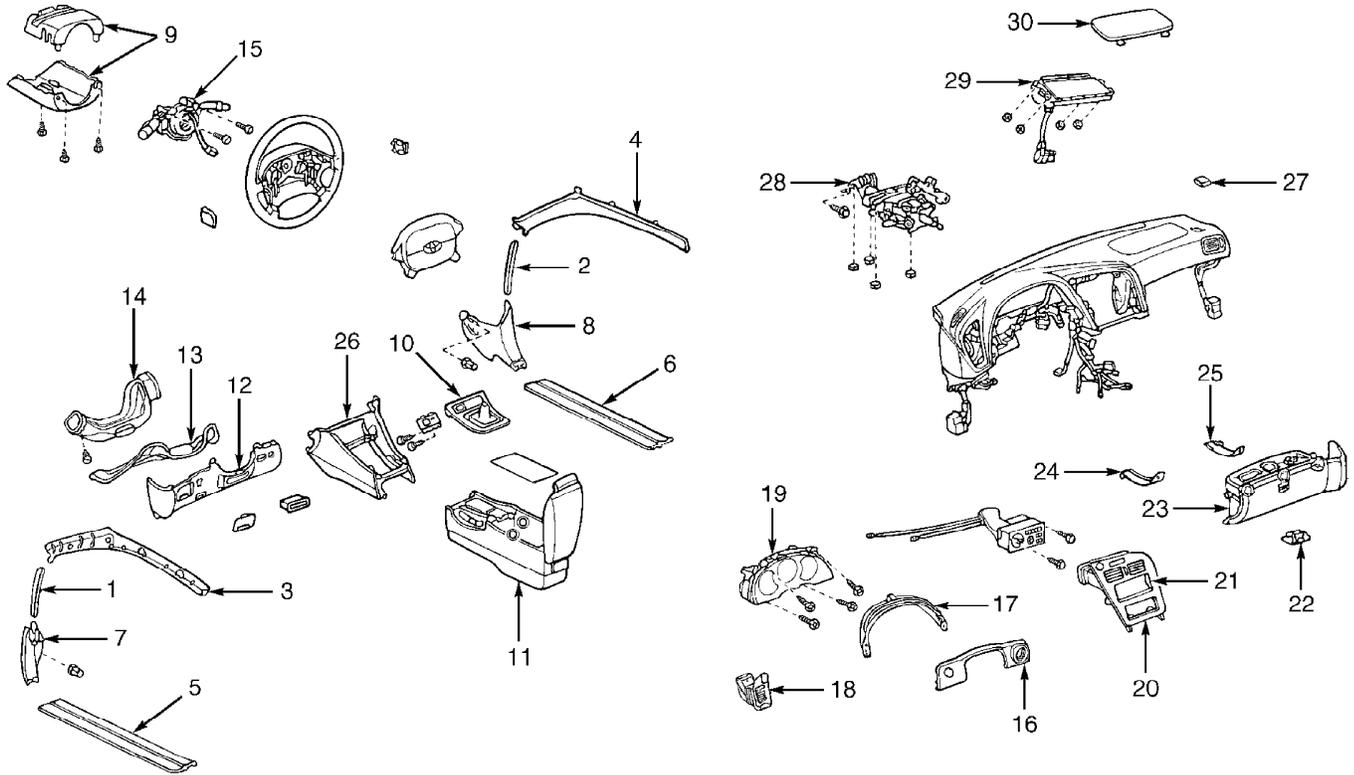
side of heater case. Disconnect cable end from heater water valve in engine compartment. Remove 2 screws and A/C-heater control panel.

3) Remove components No. 22-28. See Fig. 6. Disconnect electrical harness connectors. Remove 2 nuts and 7 bolts securing instrument panel. Remove instrument panel. Remove components from instrument panel as necessary for access to passenger-side air bag.

4) Remove 3 bolts and 4 nuts securing passenger-side air bag. Remove passenger-side air bag. Remove 2 screws securing passenger-side air bag door. Remove passenger-side air bag door.

Installation

To install, reverse removal procedure. Tighten fasteners to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article. Activate SRS. Check air bag warning light to ensure system is functioning properly. See SYSTEM OPERATION CHECK.



- | | | |
|---------------------------------------|--|---------------------------------|
| 1. Front Pillar Lower Garnish (Left) | 11. Console Box | 21. Radio |
| 2. Front Pillar Lower Garnish (Right) | 12. Lower No. 1 Finish Panel | 22. Glove Box Door Finish Plate |
| 3. Front Pillar Garnish (Left) | 13. Finish Panel | 23. Glove Box |
| 4. Front Pillar Garnish (Right) | 14. Heater-To-Register Duct No. 2 | 24. Lower Pad Insert (Left) |
| 5. Front Door Scuff Plate (Left) | 15. Combination Switch & Spiral Spring | 25. Lower Pad Insert (Right) |
| 6. Front Door Scuff Plate (Right) | 16. Lower Cluster Finish Panel | 26. Lower Center Finish Panel |
| 7. Cowl Side Trim Board (Left) | 17. Cluster Finish Panel | 27. Side Defroster Nozzle No. 2 |
| 8. Cowl Side Trim Board (Right) | 18. Register No. 1 | 28. Steering Column |
| 9. Steering Column Cover | 19. Instrument Cluster | 29. Passenger-Side Air Bag |
| 10. Upper Console Panel | 20. Center Cluster Finish Panel | 30. Door |

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Fig. 6: Removing Passenger-Side Air Bag
Courtesy of Toyota Motor Sales, U.S.A., Inc.

STEERING WHEEL PAD & SPIRAL CABLE

Removal

1) Before proceeding, see SERVICE PRECAUTIONS. Turn ignition

switch to LOCK position. Disconnect and shield negative battery cable. Wait at least 90 seconds. On vehicles with passenger-side air bag, disconnect passenger-side air bag connector, accessible through finish plate in glove box. See Fig. 6.

2) Ensure front wheels are in straight-ahead position. Remove covers from sides of steering wheel for access to steering wheel pad Torx screws. Loosen Torx screws until groove along screw circumference catches on screw case. See Fig. 7.

3) Pull steering wheel pad from steering wheel and disconnect steering wheel pad connector. See Fig. 8. Place steering wheel pad on a flat surface with pad cover facing up. Remove steering wheel nut. Mark steering wheel in relation to steering shaft for installation reference. Remove steering wheel with a puller.

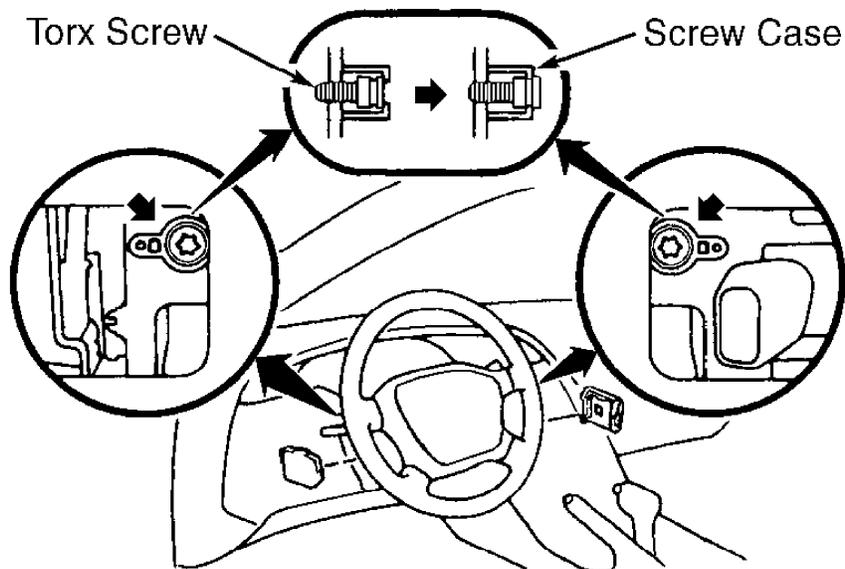
4) Remove steering column covers. Disconnect spiral cable lower connector. Remove screws securing spiral cable to combination switch (headlight/turn signal/wiper switch). Remove spiral cable.

NOTE: It may be necessary to remove combination switch and spiral cable as an assembly, and then separate components.

WARNING: During installation, if spiral cable mating marks are not properly aligned, steering wheel may not turn completely, or flat cable inside spiral cable may be severed, disabling SRS system.

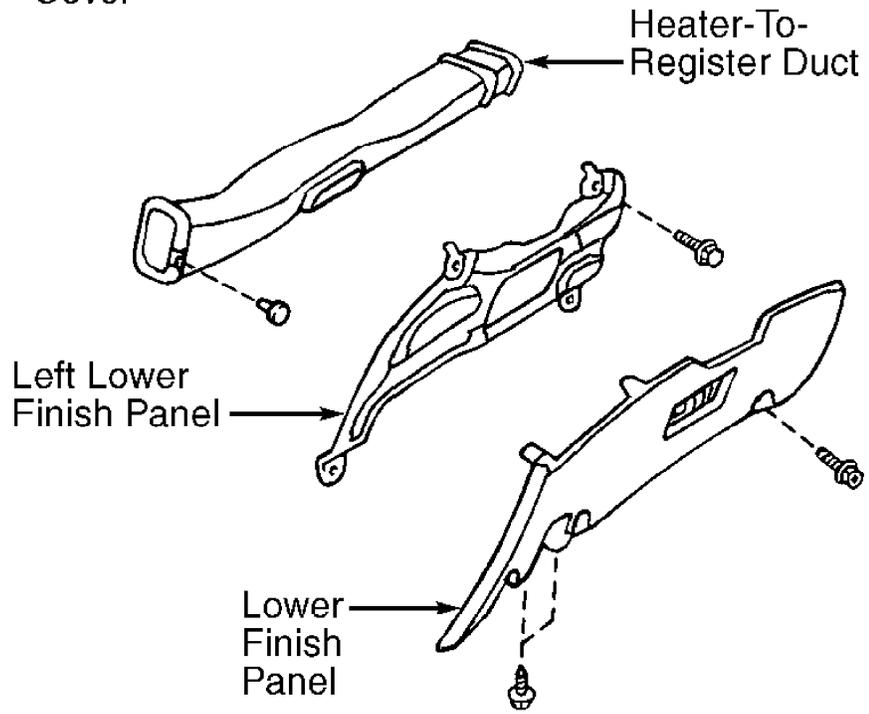
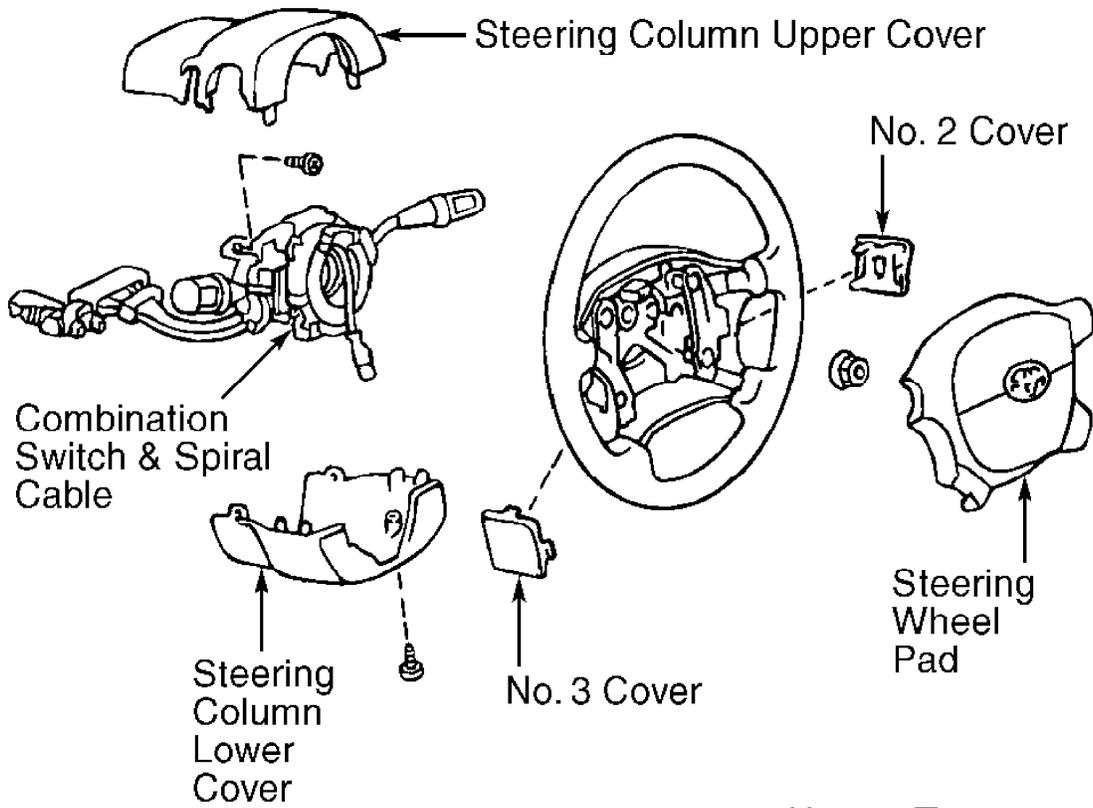
Installation

To install, reverse removal procedure. Before installing spiral cable, ensure front wheels are in straight-ahead position and spiral cable is properly aligned. See SPIRAL CABLE under ADJUSTMENTS. Tighten steering wheel nut and steering wheel pad screws to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article. After installation, reconnect passenger-side air bag connector (if equipped). Reconnect negative battery cable. Perform SYSTEM OPERATION CHECK.



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Fig. 7: Loosening Steering Wheel Pad Torx Screws (Typical)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

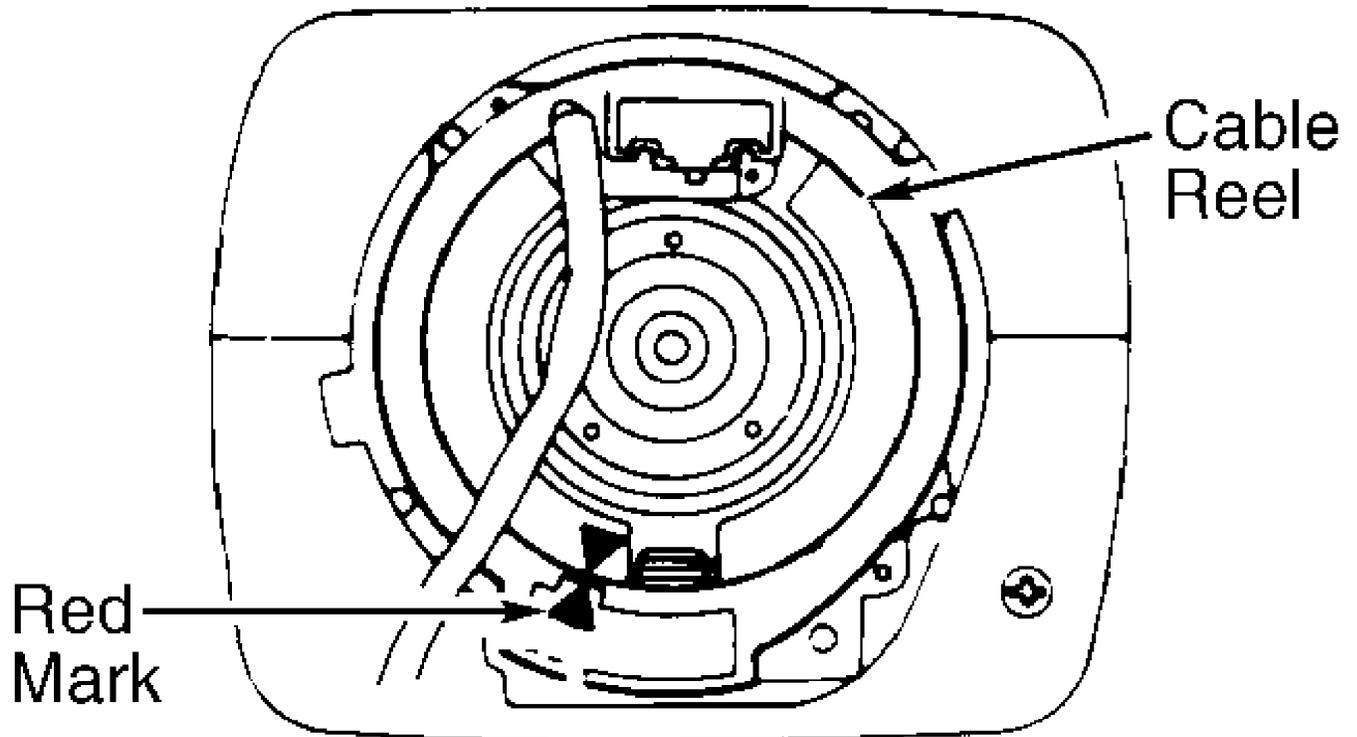


93175554
 Fig. 8: Removing Steering Column Components (Similar)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

ADJUSTMENTS

SPIRAL CABLE

Ensure front wheels are in straight-ahead position. Turn spiral cable counterclockwise until it becomes difficult to turn. Turn spiral cable clockwise about 3 turns to align Red mating marks. See Fig. 9. Install steering wheel.



92G24394

Fig. 9: Aligning Spiral Cable
Courtesy of Toyota Motor Sales, U.S.A., Inc.

WIRE REPAIR

WARNING: Except for a damaged front air bag sensor connector, no other part of the harness can be repaired. If wiring harness is damaged, replace complete wiring harness. Use the following procedure to replace front air bag sensor connector by splicing a new connector into the harness.

1) Obtain 2 Pressure-Contact Sleeves (82988-24010 or 82999-12020). See Fig. 10. Remove cover from rear end of front air bag sensor connector. Cut off connector, cutting wires as close to connector as possible. Carefully strip .31-.43" (8-11 mm) of insulation from end of each wire. DO NOT damage wire. If wire is damaged, strip wire ends again.

2) Insert stripped wire ends into pressure-contact sleeve, with overlap junction inside of pressure-contact sleeve. See Fig. 10. Position middle of sleeve in Blue crimping section of Crimper (169060). Squeeze crimper until 2 protrusions on section of crimper marked CLOSE HERE contact each other.

3) Pull wires to ensure a secure crimp. Crimp both ends of

pressure-contact sleeve using crimper at INS position. See Fig. 10. Thoroughly wrap silicon tape around sleeve for protection. Wrap vinyl tape around corrugated tubes to secure them to wires.

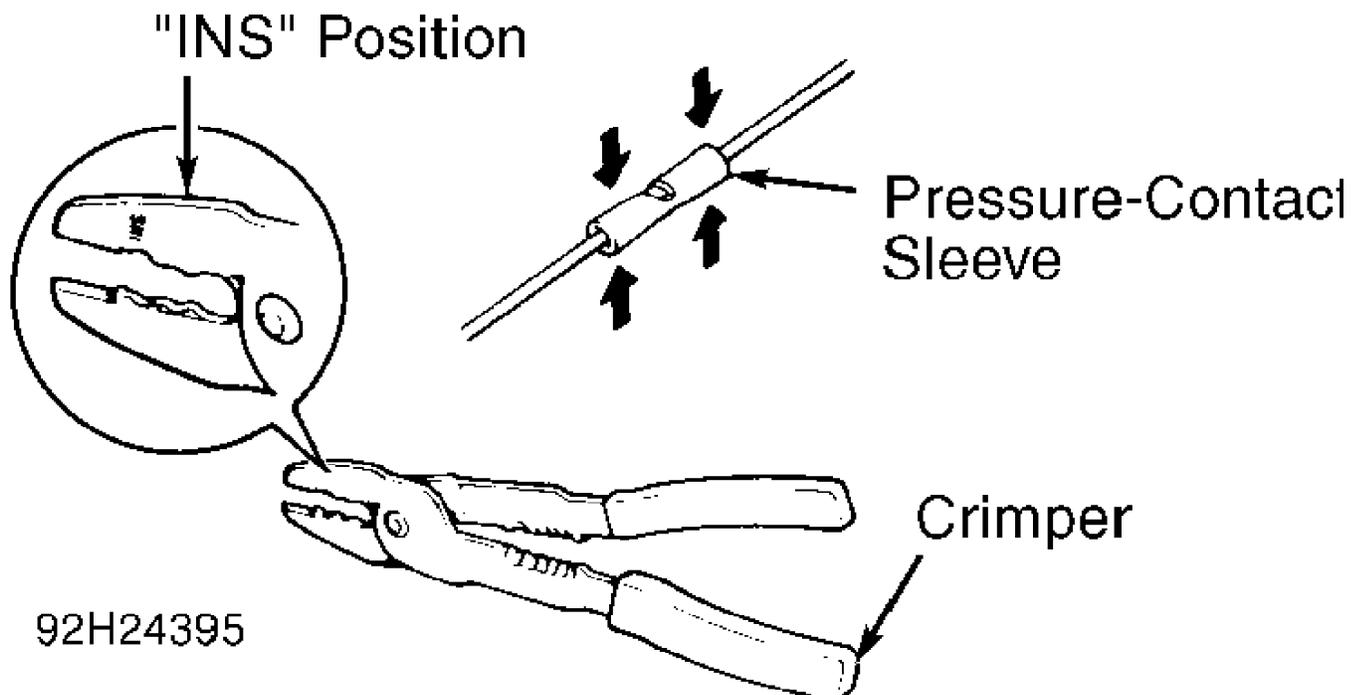


Fig. 10: Crimping Pressure-Contact Sleeve
Courtesy of Toyota Motor Sales, U.S.A., Inc.

SELF-DIAGNOSTIC SYSTEM

AIR BAG WARNING LIGHT CHECK

Turn ignition switch to ACC or ON position. If air bag warning light comes on then goes out after about 6 seconds, system is okay at this time. If air bag warning light comes on and stays on (or flashes), diagnostic code is stored in center air bag sensor. Go to RETRIEVING CODES. If air bag warning light responds in any other way, go to DIAGNOSIS & TESTING.

RETRIEVING CODES

CAUTION: If jumper wire is incorrectly connected across terminals of Data Link Connector (DLC), system may be damaged. Use Diagnosis Check Wiring (09843-18020) when connecting jumper wire between terminals of DLC.

1) Turn ignition switch to ACC or ON position. Wait about 20 seconds. Connect jumper wire between terminals Tc and E1 of Data Link Connector (DLC). See DATA LINK CONNECTOR (DLC) LOCATION table. See Figs. 11 and 12.

2) If air bag warning light does not flash codes, go to CODE(S) NOT DISPLAYED under DIAGNOSIS & TESTING. If air bag warning light flashes continuously at a rate of 2 times per second, source voltage is low. Go to NO CODES, SOURCE VOLTAGE DROP under TROUBLE SHOOTING.

3) If air bag warning light flashes codes, count number of flashes to determine code(s) that are set. For example, Code 12 is:

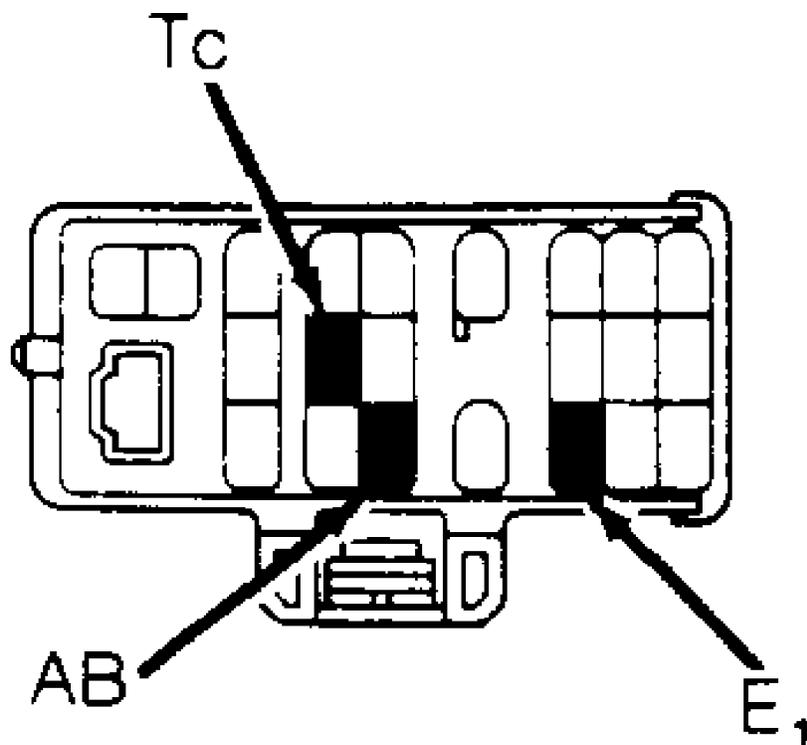
FLASH, pause, FLASH, FLASH. If more than one code is displayed, a 2.5-second pause will occur between each code. Lowest numbered codes will be displayed followed by higher numbered codes.

4) After all codes are displayed, a 4-second pause will occur and codes will be repeated. See INTERPRETING CODES. See appropriate CODE under TROUBLE SHOOTING. After servicing, clear codes. See CLEARING CODES.

NOTE: If code(s) other than those listed under INTERPRETING CODES are displayed, replace center air bag sensor. If air bag warning light does not function as described, go to CODE(S) NOT DISPLAYED or CODE(S) CONTINUOUSLY DISPLAYED under DIAGNOSIS & TESTING.

DATA LINK CONNECTOR (DLC) LOCATION TABLE

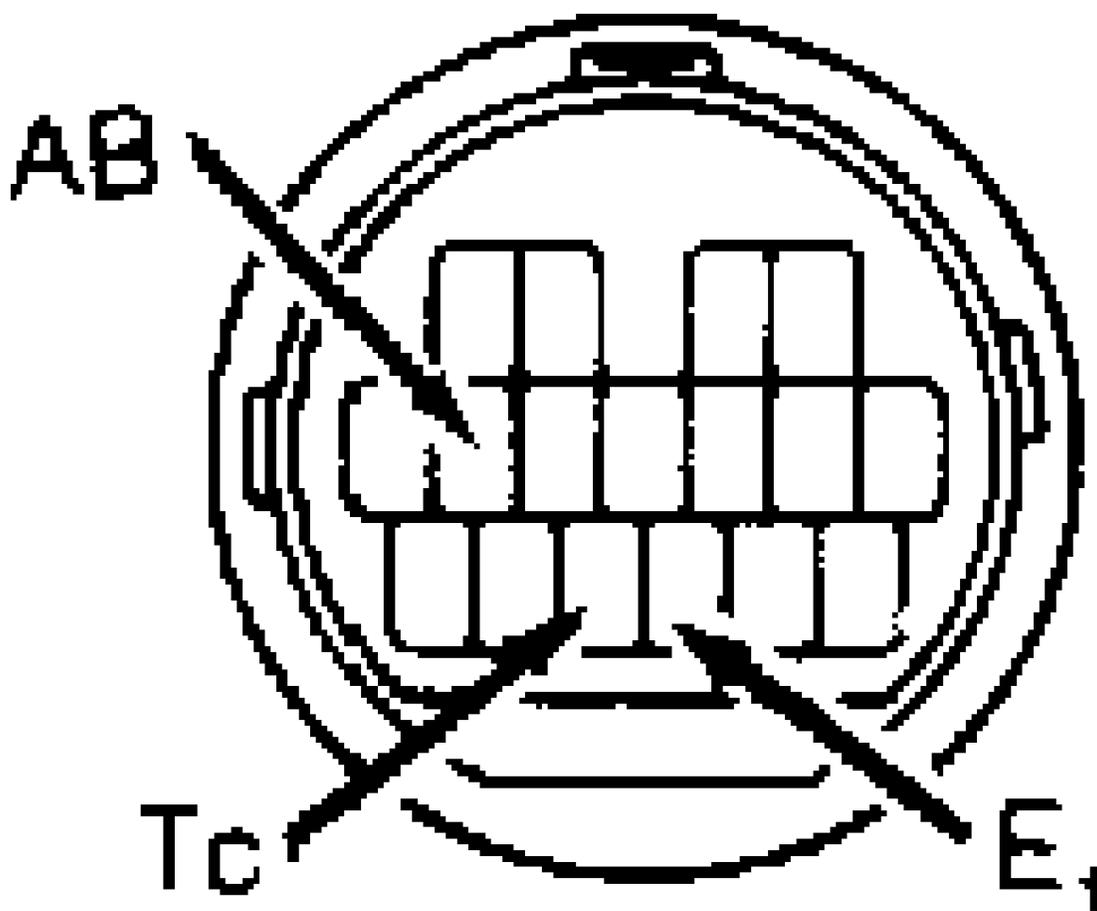
Application	Location
Celica	Left Rear Corner Of Engine Compartment



DLC NO. 1 (EXCEPT MR2)

93C75509

Fig. 11: Data Link Connector (DLC) No. 1
Courtesy Of Toyota Motor Sales, U.S.A., Inc.



DLC NO. 2

91A12872

Fig. 12: Data Link Connector (DLC) No. 2
 Courtesy Of Toyota Motor Sales, U.S.A., Inc.

INTERPRETING CODES

NOTE: Faults that may have caused the code to set are listed after each code. If code(s) other than those listed below are displayed, replace center air bag sensor.

Air Bag Warning Light Is Off
 System is okay.

Air Bag Warning Light Flashes Quickly (2 Times Per Second)

Indicates source voltage is too low. If source voltage is too low, a voltage increase circuit in the center air bag sensor increases voltage to normal. This condition does not set a code and the fault is not recorded in the center air bag sensor. About 10 seconds after source voltage returns to normal, air bag warning light goes out.

Code 11

Short to ground in circuit between center air bag sensor and either air bag; faulty air bag; short to ground in circuit between front air bag sensor and center air bag sensor; faulty front air bag sensor; +S and -S circuits between front air bag sensor and center air bag sensor are shorted together; faulty spiral cable; faulty center air bag sensor.

Code 12

Short to battery voltage in circuit between center air bag sensor and either air bag; faulty air bag; short to battery voltage in +S circuit between front air bag sensor and center air bag sensor; open circuit between front air bag sensor and center air bag sensor; faulty spiral cable; faulty center air bag sensor.

Code 13

Circuits between steering wheel pad and center air bag sensor are shorted together; faulty steering wheel pad; faulty spiral cable; faulty center air bag sensor.

Code 14

Open circuit between steering wheel pad and center air bag sensor; faulty steering wheel pad; faulty spiral cable; faulty center air bag sensor.

Code 15

Open +S or -S circuit between front air bag sensor and center air bag sensor; short to battery voltage in +S circuit between front air bag sensor and center air bag sensor; faulty front air bag sensor; faulty electrical connection detection mechanism in front air bag sensor connector; faulty center air bag sensor.

Code 24

Center air bag sensor connector is partially connected (detected by electrical connection check mechanism in center air bag sensor); faulty electrical connection check mechanism; faulty center air bag sensor.

Code 31

Faulty center air bag sensor.

Code 53

Circuits between passenger-side air bag and center air bag sensor are shorted together; faulty passenger-side air bag; faulty center air bag sensor.

Code 54

Open circuit between passenger-side air bag and center air bag sensor; faulty passenger-side air bag; faulty center air bag sensor.

CLEARING CODES

1) At DLC, connect a jumper wire to terminal Tc. See Figs. 11 and 12. Connect another jumper wire to terminal AB. Turn ignition switch to ACC or ON position. Wait about 6 seconds.

2) Starting with terminal Tc, apply body ground alternately to terminal Tc and terminal AB twice each, in cycles of 1/2 to 1 1/2 seconds (sequence is: Tc, AB, Tc, AB). Finally, keep applying body ground to terminal Tc until air bag warning light flashes quickly, indicating codes are cleared.

NOTE: When alternately connecting jumper probes to terminals, simultaneously release one probe from one terminal while connecting other probe to other terminal. If time interval between probings exceeds 0.2 second, codes will not clear.

DIAGNOSIS & TESTING

WARNING: Failure to follow air bag service precautions may result in air bag deployment and personal injury. See SERVICE PRECAUTIONS. After component replacement, perform system operational check to ensure proper system operation. See SYSTEM OPERATION CHECK.

WARNING: Some test procedures involve checking resistance across "spiral cable upper connector" or "passenger-side air bag connector". In each case, "connector" refers to the half of the connector that leads to the wiring harness, NOT the half of the connector that leads to the air bag. If resistance is measured across the half of the connector that leads to the air bag, the air bag may accidentally deploy.

CAUTION: Ensure ignition switch is in LOCK position before disconnecting or connecting negative battery cable. If ignition switch is in ACC or ON position when negative battery cable is disconnected or connected, center air bag sensor may be damaged. To prevent damage to connector terminals, DO NOT probe the terminal ends. Instead, backprobe the terminals (probe the terminal where the wire enters the harness connector).

NOTE: Spiral cable "upper" connector is connected to steering wheel pad. Spiral cable "lower" connector is located under steering column.

AIR BAG WARNING LIGHT DOES NOT COME ON AT ALL

1) Check SRS-WRN fuse. If fuse is faulty, replace fuse and go to step 5). If fuse is okay, disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag connector, accessible through finish panel in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. Reconnect negative battery cable. Turn ignition switch to ACC or ON position. Measure voltage between body ground and terminal LA of center air bag sensor connector (harness side). See Figs. 16.

3) If battery voltage is not present, repair air bag warning light circuit. If battery voltage is present, disconnect negative battery cable. Reconnect center air bag sensor connector. Reconnect negative battery cable. Turn ignition switch to ACC or ON position. Turn ignition off. Wait at least 6 seconds. Turn ignition switch to ON position.

4) If air bag warning light comes on, go to next step. If air bag warning light does not come on, check for poor connection at terminal LA. If connection is okay, check for faulty electrical connection check mechanism in center air bag sensor connector. See

Fig. 16. If mechanism is faulty, replace harness. If mechanism is okay, replace center air bag sensor.

5) Recheck SRS fuse. If fuse is faulty, repair air bag warning light circuit. If fuse is okay, check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

AIR BAG WARNING LIGHT STAYS ON WITH IGNITION OFF

1) Turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Go to next step.

2) Disconnect center air bag sensor connector(s). Reconnect negative battery cable. If air bag warning light is off, replace center air bag sensor. If air bag warning light is still on, repair air bag warning light circuit or AB circuit leading to DLC. See Figs. 11 and 12.

AIR BAG WARNING LIGHT INTERMITTENT

If air bag warning light comes on intermittently, perform the following tests to simulate driving conditions. If problem cannot be found, replace all components including wiring harness.

- * Wiggle-test wiring harness.
- * Apply heat to components with a hair dryer.
- * Spray water onto entire vehicle (not directly onto electrical components) to simulate humidity.

CODE(S) NOT DISPLAYED

NOTE: Use the following procedure if code(s) are not displayed or air bag warning light stays on when jumper wire is connected between terminals Tc and E1 of DLC.

1) Turn ignition switch from LOCK to ACC or ON position. If air bag warning light does not come on, repair air bag warning light circuit. If air bag warning light comes on, measure voltage between terminals Tc and E1 of DLC. See Figs. 11 and 12. If battery voltage is present, go to step 3).

2) If battery voltage is not present, measure voltage between body ground and terminal Tc of DLC. If battery voltage is present, repair harness between body ground and terminal E1 of DLC. If battery voltage is not present, go to next step.

3) Connect a jumper wire between body ground and terminal Tc of center air bag sensor connector. See Fig. 16. If air bag warning light does not come on, replace center air bag sensor. If air bag warning light comes on, repair wiring harness between center air bag sensor and DLC.

CODE(S) CONTINUOUSLY DISPLAYED

NOTE: Use the following procedure if code(s) are displayed without connecting jumper wire between terminals Tc and E1 of DLC.

1) Turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag harness connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. Measure resistance between body ground and terminal Tc of center air bag sensor connector. See Fig. 16. If resistance is infinite ohms, replace center air bag sensor. If resistance is not infinite ohms, replace

harness.

RELEASING SHORTING BAR SPRING

NOTE: Perform this procedure only if you were sent here from TROUBLE SHOOTING.

1) The air bag squib circuit consists of the circuit between the center air bag sensor and the air bag. If voltage is accidentally applied across the squib circuit (as when testing, for example), the air bag may deploy.

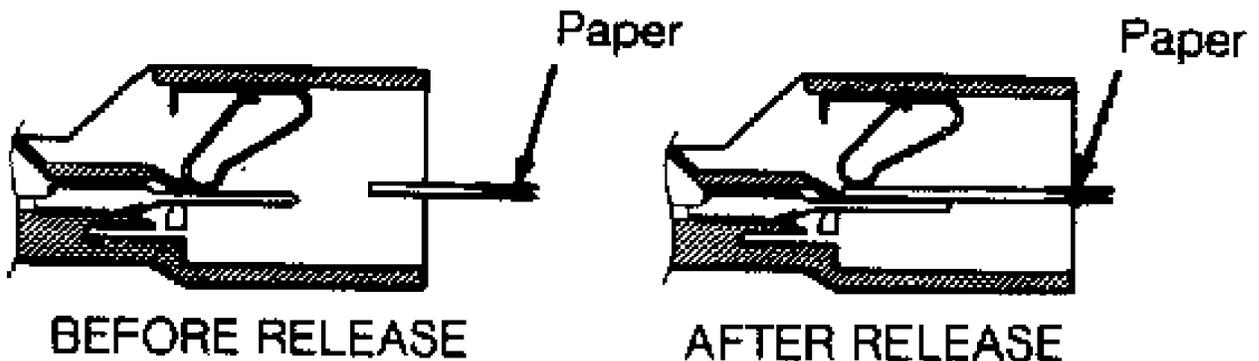
2) To prevent accidental deployment, some squib circuit connectors contain a spring-loaded shorting bar. When the squib circuit connector is disconnected, the shorting bar automatically shorts the squib circuit positive and negative circuits together. This prevents deployment if voltage is accidentally applied across the circuits.

3) When the connector halves are attached, the shorting bar is in the released position (no continuity exists across the shorting bar). When the connector is disconnected, the shorting bar is engaged (continuity exists across the shorting bar).

4) Some testing procedures require the shorting bar to be in the released position with the connector disconnected (this is opposite of its normal position). To hold the shorting bar in the released position, obtain a piece of paper that is the same thickness as the male terminal blade that slides under the shorting bar spring when the connector is connected. See Fig. 13.

WARNING: Paper must not be thicker than male terminal. If paper is thicker, connector terminal may be damaged, possible resulting in system fault.

5) With the squib circuit connector disconnected, insert paper into female terminal, sliding it under shorting bar spring. This lifts the spring, breaking the circuit and allowing the test procedure to be performed as specified.

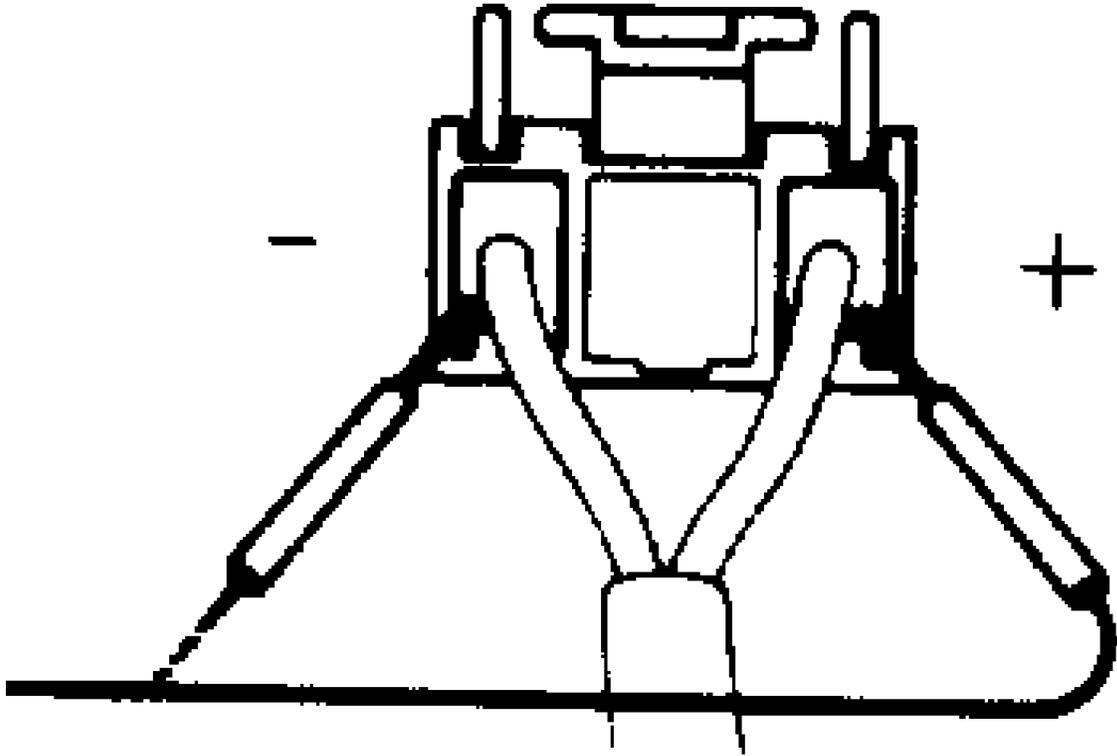


93E75527

Fig. 13: Releasing Shorting Bar Spring
Courtesy of Toyota Motor Sales, U.S.A., Inc.

IDENTIFYING CONNECTOR TERMINALS

NOTE: To identify terminals of center air bag sensor connector, see Fig. 16.



93J75548

Fig. 14: Terminal ID Of Spiral Cable Upper Connector & Passenger-Side Air Bag Connector
Courtesy of Toyota Motor Sales, U.S.A., Inc.

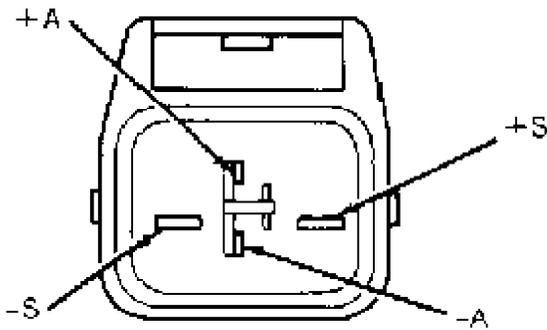
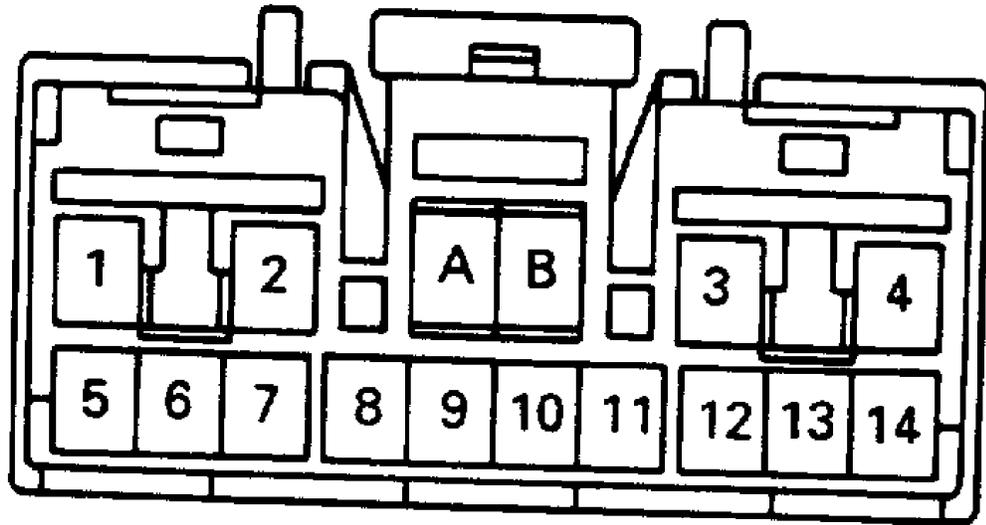


Fig. 15: Identifying Front Air Bag Sensor Connector Terminals
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Terminal	Circuit
"A" (L ₁)	Shorting Bar
"B" (L ₂)	Shorting Bar
1 (P ₋)	Squib "-" Passenger-Side
2 (P ₊)	Squib "+" Passenger-Side
3 (D ₊)	Squib "+" Driver-Side
4 (D ₋)	Squib "-" Driver-Side
5 (E ₁)	Ground
6 (E ₂)	Ground
7 (T _c)	Diagnosis
8 (+S)	Right Front Sensor "+"
9 (-SR)	Right Front Sensor "-"
10 (-SL)	Left Front Sensor "-"
11 (+SL)	Left Front Sensor "+"
12 (LA)	Air Bag Warning Light
13 (IG ₂)	Power Source (IGN Fuse)
14 (Acc)	Power Source (CIG Fuse)

93A75531

Fig. 16: Identifying Center Air Bag Sensor Connector Terminals
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

NORMAL CODE, SOURCE VOLTAGE DROP

1) Turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Disconnect center air bag sensor connector. Reconnect negative battery cable. Turn ignition switch to ON position (engine off).

2) Turn on electrical accessories (defogger, wipers, headlights, blower motor, etc.). Measure voltage between body ground and terminal IG2 or ACC of center air bag sensor connector. See Fig. 16. About 6.0-11.5 volts should be present. Turn electrical accessories off.

3) Turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Reconnect center air bag sensor connector. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM.

4) Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ON position. Turn on electrical accessories again. If air bag warning light goes out after about 10 seconds, repair battery and charging system. If air bag warning light does not go out, check for code(s). If code is displayed, go to appropriate CODE under TROUBLE SHOOTING. If a normal code is displayed, replace center air bag sensor.

CODE 11

NOTE: During testing, if codes other than Code 11 are displayed, disregard them.

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag harness connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. At center air bag sensor connector, measure resistance between terminals +SR and -SR, and terminals +SL and -SL. See Fig. 16. If resistance is not 755-885 ohms, go to step 14).

3) If resistance is 755-885 ohms, measure resistance between body ground and terminals +SR and +SL of center air bag sensor connector. If resistance is not infinite, replace harness between center air bag sensor and front air bag sensor (or repair front air bag sensor connector; see WIRE REPAIR).

4) If resistance is infinite, measure resistance between body ground and each terminal of spiral cable upper connector. If resistance is not infinite, go to step 16). If resistance is infinite:

- * Go to next step (with passenger-side air bag)
- * Go to step 6) (without passenger-side air bag).

5) Measure resistance between body ground and each terminal of passenger-side air bag connector. If resistance is infinite, go to next step. If resistance is not infinite, replace harness between center air bag sensor and passenger-side air bag.

6) Reconnect center air bag sensor connector. Connect jumper wire between terminals of spiral cable upper connector. Connect jumper wire between terminals of passenger-side air bag connector (if equipped). Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

7) Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See

Figs. 11 and 12. If Code 11 is displayed, replace center air bag sensor.

8) If Code 11 is not displayed, turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Reconnect spiral cable upper connector (steering wheel pad). Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

9) Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 11 is displayed, replace steering wheel pad.

10) If Code 11 is not displayed:

- * Go to next step (with passenger-side air bag)
- * Go to step 14) (without passenger-side air bag).

11) Turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 20 seconds. Reconnect passenger-side air bag connector. Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

12) Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12.

13) If Code 11 is displayed, replace passenger-side air bag. If Code 11 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

14) Disconnect left front air bag sensor connector. At left front air bag sensor connector (connector half that leads to front air bag sensor), measure resistance between terminals +S and +A (755-885 ohms), +S and -S (infinite ohms), and -S and -A (less than one ohm). See Fig. 15. Repeat procedure on right front air bag sensor.

15) If resistance is not as specified, replace front air bag sensor. If resistance is as specified, replace harness between center air bag sensor and front air bag sensor (or repair front air bag sensor connector; see WIRE REPAIR).

16) Disconnect spiral cable lower connector. Measure resistance between body ground and each terminal of spiral cable upper connector. If resistance is infinite, replace harness between center air bag sensor and spiral cable. If resistance is not infinite, replace spiral cable.

CODE 12

NOTE: During testing, if codes other than Code 12 are displayed, disregard them.

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag harness connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. At center air bag sensor connector, measure resistance between terminals +SR and -SR, and between terminals +SL and -SL. See Fig. 16. If resistance is not 755-885 ohms, go to CODE 15.

3) If resistance is 755-885 ohms, reconnect negative battery cable. Turn ignition switch to ON position. Measure voltage between body ground and terminals +SR and +SL of center air bag sensor

connector. If more than 0.1 volt is present, replace harness between center air bag sensor and front air bag sensor (or repair front air bag sensor connector; see WIRE REPAIR).

4) If less than 0.1 volt is present, measure voltage between body ground and positive (+) terminal of spiral cable upper connector. See Fig. 14. If any voltage is present, go to step 13). If no voltage is present:

- * Go to next step (with passenger-side air bag)
- * Go to step 6) (without passenger-side air bag).

5) Measure voltage between body ground and positive (+) terminal of passenger-side air bag connector. See Fig. 14. If any voltage is present, replace harness between center air bag sensor and passenger-side air bag. If no voltage is present, go to next step.

6) Turn ignition switch to LOCK position. Disconnect negative battery cable. Reconnect center air bag sensor connector. Connect a jumper wire between terminals of spiral cable upper connector. Connect a jumper wire between terminals of passenger-side air bag connector (if equipped). Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

7) Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12.

8) If Code 12 is displayed, replace center air bag sensor. If Code 12 is not displayed, turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Reconnect spiral cable upper connector (steering wheel pad).

9) Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

10) Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 12 is displayed, replace steering wheel pad. If Code 12 is not displayed, turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Reconnect passenger-side air bag connector.

11) Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

12) Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 12 is displayed, replace passenger-side air bag. If Code 12 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

13) Turn ignition switch to LOCK position. Disconnect spiral cable lower connector. Turn ignition switch to ON position. Measure voltage between body ground and positive (+) terminal of spiral cable upper connector. See Fig. 14. If any voltage is present, replace spiral cable. If no voltage is present, replace harness between center air bag sensor and spiral cable.

CODE 13

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag

connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

2) Measure resistance between terminals of spiral cable upper connector. If resistance is less than 1000 ohms, go to step 7). If resistance is 1000 ohms or more, connect a jumper wire between terminals of spiral cable upper connector. Connect a jumper wire between terminals of passenger-side air bag connector (if equipped).

3) Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds.

4) Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 13 is displayed, replace center air bag sensor. If Code 13 is not displayed, turn ignition switch to LOCK position.

5) Disconnect negative battery cable. Wait at least 90 seconds. Reconnect spiral cable upper connector (steering wheel pad). Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM.

6) Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 13 is displayed, replace steering wheel pad. If Code 13 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

7) Disconnect spiral cable lower connector. Release shorting bar spring in spiral cable lower connector. See RELEASING SHORTING BAR SPRING under DIAGNOSIS & TESTING. Measure resistance between terminals of spiral cable upper connector. If resistance is not infinite, replace spiral cable.

8) If resistance is infinite, disconnect center air bag sensor connector. Release shorting bar spring in center air bag sensor connector. See RELEASING SHORTING BAR SPRING under DIAGNOSIS & TESTING.

9) Measure resistance between terminals of spiral cable lower connector (connector half that leads to center air bag sensor). If resistance is not infinite, replace harness between center air bag sensor and spiral cable.

10) If resistance is infinite, reconnect center air bag sensor connector. Measure resistance between terminals of spiral cable lower connector (connector half that leads to center air bag sensor). If resistance is less than 1000 ohms, replace center air bag sensor. If resistance is 1000 ohms or more, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

CODE 14

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. Measure resistance between terminals of spiral cable upper connector. If resistance is less than one ohm, go to step 5). If resistance is one or more ohm, disconnect spiral cable lower connector.

3) Measure resistance between terminals of spiral cable upper connector. If resistance is one or more ohm, replace spiral cable. If

resistance is less than one ohm, measure resistance between terminals of spiral cable lower connector (connector half that leads to center air bag sensor).

4) If resistance is less than one ohm, go to next step. If resistance is one ohm or more, replace harness between center air bag sensor and spiral cable.

5) Reconnect center air bag sensor connector. Reconnect spiral cable lower connector. Connect a jumper wire between terminals of spiral cable upper connector. Connect a jumper wire between terminals of passenger-side air bag connector (if equipped). Reconnect negative battery cable. Wait at least 2 seconds.

6) Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

7) Connect a jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 14 is displayed, replace center air bag sensor. If Code 14 is not displayed, turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds.

8) Reconnect spiral cable upper connector (steering wheel pad). Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds.

9) Turn ignition switch to ACC or ON position. Wait at least 20 seconds. If Code 14 is displayed, replace steering wheel pad. If Code 14 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

CODE 15

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. At center air bag sensor connector, measure resistance between terminals +SR and -SR, and between terminals +SL and -SL. See Fig. 16. If resistance is not 755-885 ohms, go to step 8).

3) If resistance is 755-885 ohms:

* Go to step 5).

4) Reconnect negative battery cable. Turn ignition switch to ON position. Measure voltage between body ground and terminals +SR and +SL of center air bag sensor connector. If voltage is one volt or more, replace harness between center air bag sensor and front air bag sensor (or repair front air bag sensor connector; see WIRE REPAIR). If voltage is less than one volt, go to next step.

5) Turn ignition switch to LOCK position. Disconnect negative battery cable. Reconnect center air bag sensor connector. Connect a jumper wire between terminals of spiral cable upper connector. Connect a jumper wire between terminals of passenger-side air bag connector (if equipped).

6) Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

7) Connect jumper wire between terminals Tc and E1 of DLC.

See Figs. 11 and 12. If Code 15 is displayed, replace center air bag sensor. If Code 15 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

8) Disconnect left front air bag sensor connector. At left front air bag sensor connector (connector half that leads to front air bag sensor), measure resistance between terminals +S and +A (less than one ohm), +S and -S (infinite ohms), and -S and -A (755-885 ohms). See Fig. 15. Repeat procedure on right front air bag sensor. If resistances are not as specified, replace front air bag sensor.

9) If resistances are okay, disconnect center air bag sensor connector. At center air bag sensor connector, connect a jumper wire between terminals +SR and -SR, and another jumper wire between terminals +SL and -SL.

10) At front air bag sensor connector (connector half that leads to front air bag sensor), measure resistance between terminals +SR and -SR (right sensor), and between terminals +SL and -SL (left sensor).

11) If resistance is less than one ohm, replace front air bag sensor connector (see WIRE REPAIR). If resistance is one ohm or more, replace harness between center air bag sensor and front air bag sensor (or repair front air bag sensor connector; see WIRE REPAIR).

CODE 22

Air Bag Warning Light Inoperative

1) Remove and check ECU "B" fuse. If fuse is okay, go to next step. If fuse is blown, replace fuse. Turn ignition switch to ACC or ON position. If fuse blows again, repair circuit between fuse and air bag warning light. If fuse does not blow again, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

2) Check for partially connected center air bag sensor connector. Reconnect as necessary. If connector is fully connected, disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag connector (if equipped), accessible through finish plate in glove box. See Fig. 6.

3) Disconnect center air bag sensor connector. Reconnect negative battery cable. Turn ignition switch to ACC or ON position. Measure voltage between body ground and terminal LA of center air bag sensor connector. See Fig. 16. If battery voltage is not present, repair air bag warning light circuit.

4) If battery voltage is present, disconnect negative battery cable. Reconnect center air bag sensor connector. Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. If air bag warning light does not come on, go to next step. If air bag warning light comes on, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

5) Check for poor connection at terminal LA of center air bag sensor connector. If connection is okay, check for problem with electrical connection check mechanism in center air bag sensor connector. See Fig. 16. If mechanism is okay, replace center air bag sensor.

Air Bag Warning Light Illuminated

1) Turn ignition switch to LOCK position. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position.

2) Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 22 is displayed, replace center air bag sensor. If Code 22 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

CODE 24

1) Check for partially disconnected center air bag sensor connector. Reconnect as necessary. If connector is securely connected, disconnect negative battery cable. Wait at least 90 seconds. Disconnect center air bag sensor connector.

2) Check for deformed electrical connection check mechanism in center air bag sensor connector. See Fig. 16. If mechanism is deformed, replace harness. If mechanism looks okay, check continuity across mechanism pin. If there is no continuity, replace harness. If there is continuity, reconnect center air bag sensor connector.

3) Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds.

4) Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 24 is displayed, replace center air bag sensor. If Code 24 is not displayed, check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

CODE 31

1) If a code other than Code 31 is displayed at same time as Code 31, repair fault indicated by code other than Code 31 before using this procedure. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM.

2) Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

3) Repeat step 2) at least 5 times. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 31 is displayed, replace center air bag sensor. If Code 31 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

CODE 53

NOTE: During testing, if codes other than Code 53 are displayed, disregard them.

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag harness connector, accessible through finish plate in glove box. See Fig. 6.

2) Measure resistance between terminals of passenger-side air bag connector. If resistance is less than 1000 ohms, go to step 7). If resistance is 1000 ohms or more, connect a jumper wire between terminals of spiral cable upper connector. Connect a jumper wire between terminals of passenger-side air bag connector.

3) Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to LOCK position. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition

switch to LOCK position. Wait at least 20 seconds. Disconnect jumper wire from passenger-side air bag connector.

4) Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 53 is displayed, replace center air bag sensor. If Code 53 is not displayed, turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds.

5) Reconnect passenger-side air bag connector. Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to LOCK position. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM.

6) Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 53 is displayed, replace passenger-side air bag. If Code 53 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

7) Disconnect center air bag sensor connector. Release shorting bar spring in center air bag sensor connector. See RELEASING SHORTING BAR SPRING under DIAGNOSIS & TESTING. Measure resistance between terminals of passenger-side air bag connector.

8) If resistance is less than 1000 ohms, replace harness between center air bag sensor and passenger-side air bag (or repair front air bag sensor connector; see WIRE REPAIR). If resistance is 1000 ohms or more, reconnect center air bag sensor connector.

9) Measure resistance between terminals of passenger-side air bag connector. If resistance is less than 1000 ohms, replace center air bag sensor. If resistance is 1000 ohms or more, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

CODE 54

NOTE: During testing, if codes other than Code 54 are displayed, disregard them.

1) Disconnect negative battery cable. Wait at least 90 seconds. Remove steering wheel pad. See STEERING WHEEL PAD & SPIRAL CABLE under REMOVAL & INSTALLATION. Disconnect passenger-side air bag harness connector, accessible through finish plate in glove box. See Fig. 6.

2) Disconnect center air bag sensor connector. Measure resistance between terminals of passenger-side air bag connector. If resistance is one ohm or more, replace harness between center air bag sensor and passenger-side air bag. If resistance is less than one ohm, reconnect center air bag sensor connector.

3) Connect jumper wire between terminals of spiral cable upper connector. Connect jumper wire between terminals of passenger-side air bag connector. Reconnect negative battery cable. Wait at least 2 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

4) Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds. Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12.

5) If Code 54 is displayed, replace center air bag sensor. If Code 54 is not displayed, turn ignition switch to LOCK position. Disconnect negative battery cable. Wait at least 90 seconds. Reconnect passenger-side air bag connector. Reconnect negative battery cable. Wait at least 2 seconds.

6) Turn ignition switch to ACC or ON position. Wait at least

20 seconds. Clear codes. See CLEARING CODES under SELF-DIAGNOSTIC SYSTEM. Turn ignition switch to LOCK position. Wait at least 20 seconds. Turn ignition switch to ACC or ON position. Wait at least 20 seconds.

7) Connect jumper wire between terminals Tc and E1 of DLC. See Figs. 11 and 12. If Code 54 is displayed, replace passenger-side air bag. If Code 54 is not displayed, system is functioning properly at this time. Check for intermittent fault. See AIR BAG WARNING LIGHT INTERMITTENT under DIAGNOSIS & TESTING.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Center Air Bag Sensor Bolt	15 (20)
Front Air Bag Sensor Bolt/Nut	22 (30)
Passenger-Side Air Bag Bolt (Large Diameter)	15 (21)
Steering Wheel Nut	26 (35)

INCH Lbs. (N.m)

Passenger-Side Air Bag Nut	(1)
Steering Wheel Pad Torx Screw	78 (8.8)

(1) - Information is not available from manufacturer.

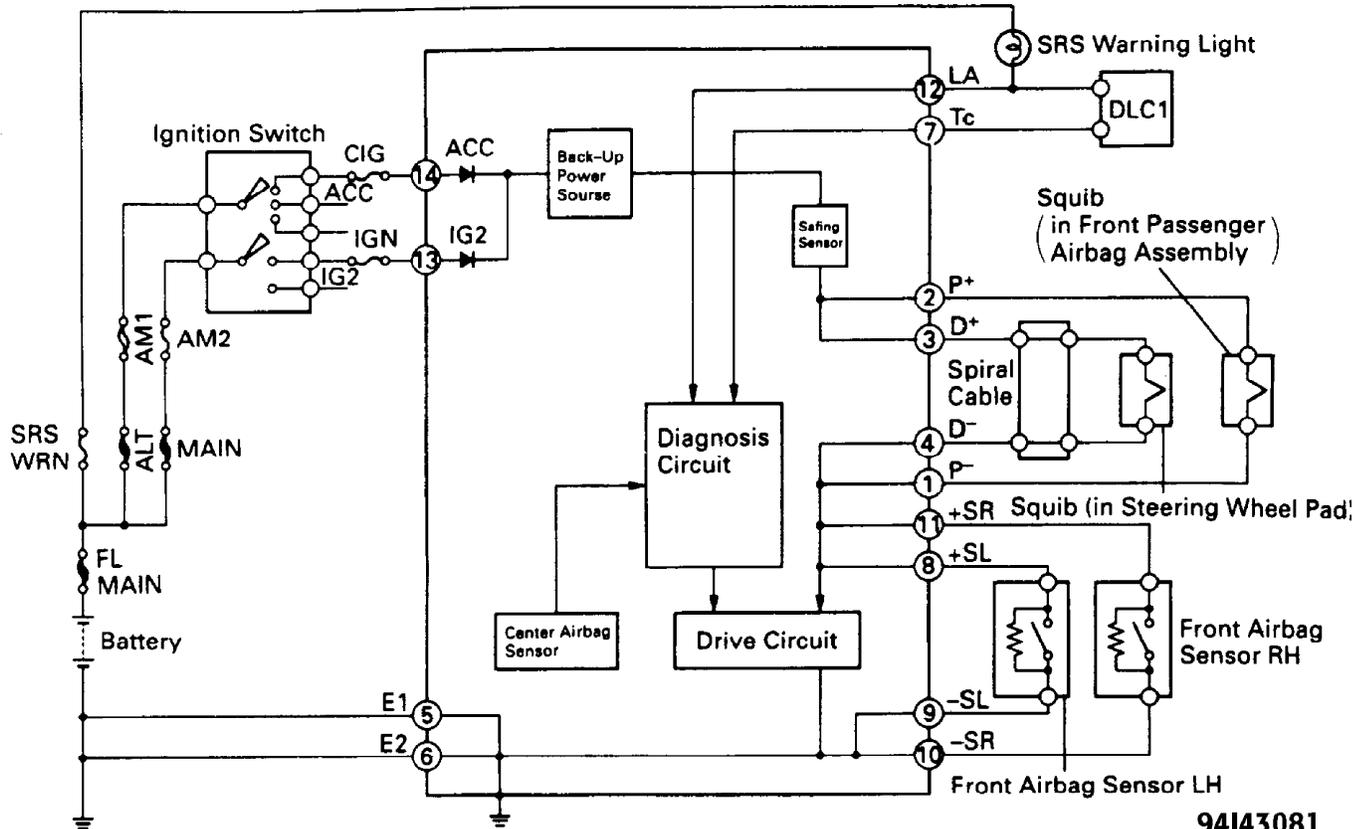
POST-COLLISION AIR BAG SAFETY INSPECTION

POST-COLLISION AIR BAG SAFETY INSPECTION TABLE

Replace After Deployment	<ul style="list-style-type: none"> * Air Bag Module(s) * Center Air Bag Sensor Assembly * Front Air Bag Sensors
Inspect & If Damaged, Replace Component (Even If Air Bag Did Not Deploy)	<ul style="list-style-type: none"> * Center Console Bracket Support * Instrument Panel * Instrument Panel Reinforcement * Spiral Cable * Steering Wheel * Wiring Harness & Connectors
Comments	<ul style="list-style-type: none"> * If any components are damaged or bent, they must be replaced. * Wiring for Front Air Bag Sensors can be repaired following manufacturer's instructions.

WIRING DIAGRAMS

NOTE: For wiring diagrams, see Fig. 17.



94I43081

Fig. 17: SRS Wiring Diagram
 Courtesy of Toyota Motor Sales, U.S.A., Inc.