

2001-02 AUTOMATIC TRANSMISSIONS

Shift Interlock Systems - Lexus & Toyota

DESCRIPTION & OPERATION

WARNING: Vehicle is equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See **AIR BAG DEACTIVATION PROCEDURES** article in **GENERAL INFORMATION**.

NOTE: Diagnosis and repair information is not available for Toyota Prius. Only wiring diagrams are provided. See **WIRING DIAGRAMS**.

INTRODUCTION

Transaxle/transmission is equipped with an electronically controlled shift interlock and key interlock system. See **COMPONENT LOCATIONS**. Shift interlock system prevents gearshift lever from being moved from Park unless brake pedal is depressed. In case of a malfunction, gearshift lever can be released by depressing shift interlock override button, located near gearshift lever under small plastic cover (if equipped). Key interlock system prevents ignition key from being moved from ACC to LOCK position on ignition switch unless gearshift lever is in Park position.

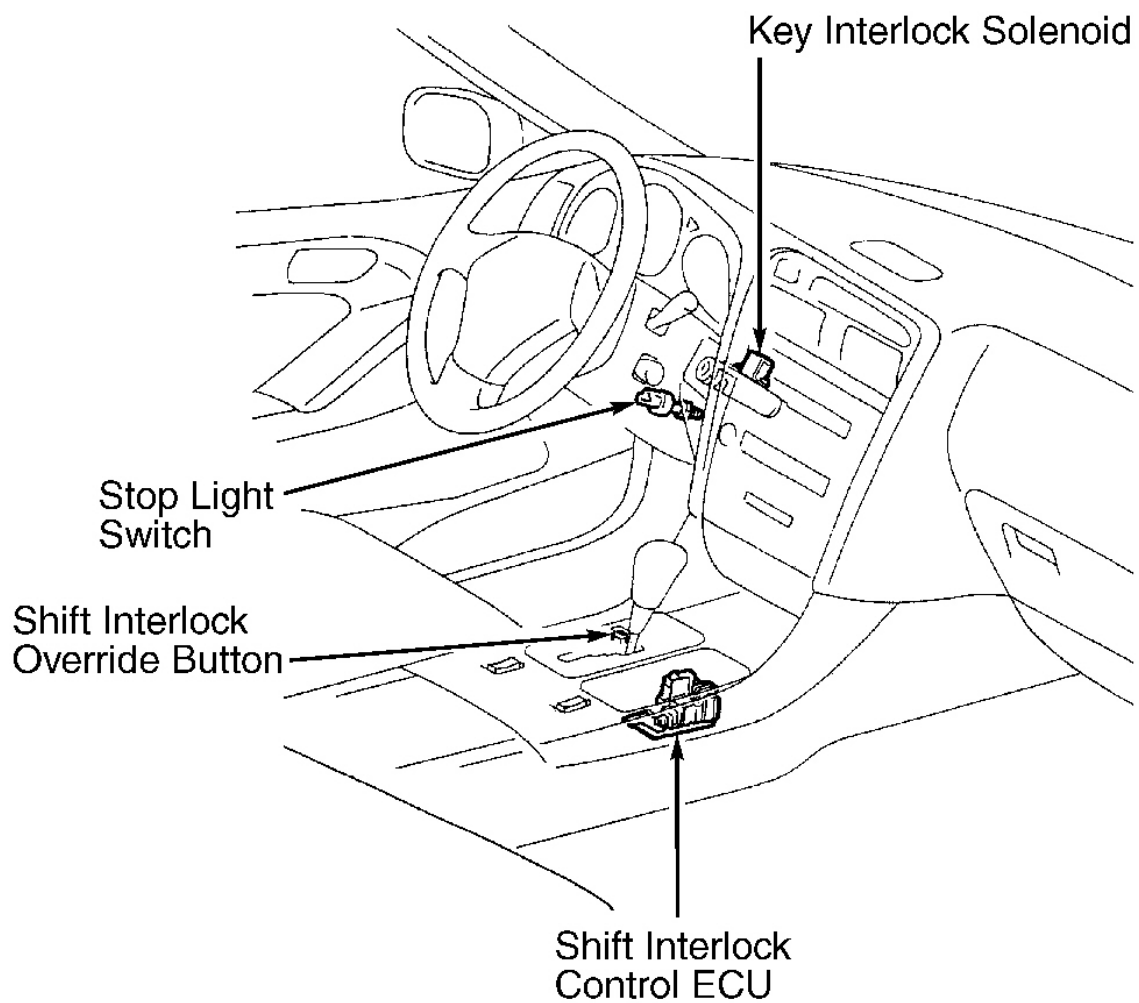
System consists of brakelight switch (also referred to as stop lamp switch), key interlock solenoid, shift interlock control Electronic Control Unit (ECU), shift interlock solenoid and shift interlock release button. All models may not be equipped with all components.

NOTE: Sequoia, Sienna and Tundra models are equipped with cable operated shift interlock system. See **SHIFT INTERLOCK SYSTEM OPERATION CHECK (CABLE OPERATED)** and **ADJUSTMENTS**.

SHIFT INTERLOCK SYSTEM

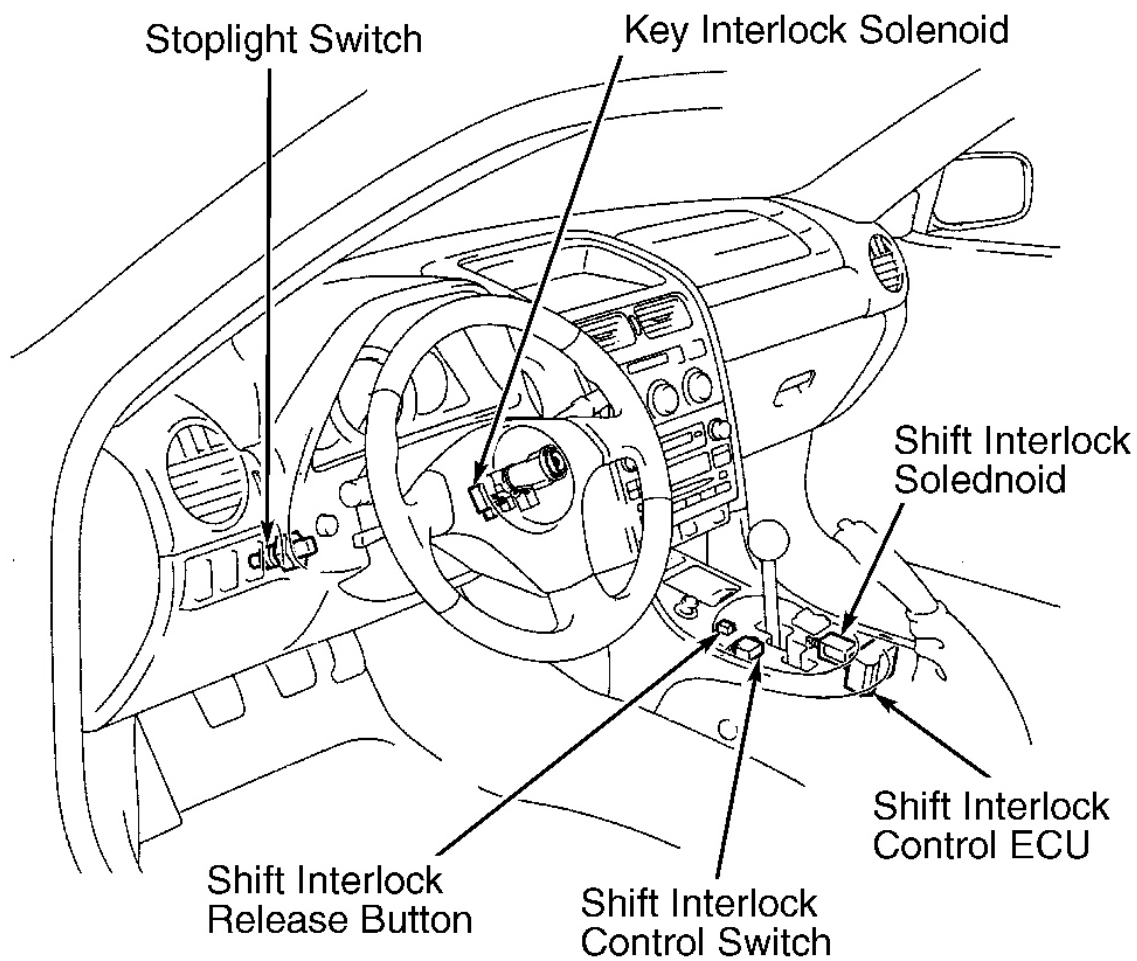
With ignition on and brake pedal depressed, an input signal is sent from brakelight switch to ECU. With gearshift lever in Park, an input signal from shift control switch is input to ECU, indicating gearshift lever is in Park. ECU then operates shift interlock solenoid, allowing gearshift lever movement from Park.

COMPONENT LOCATIONS



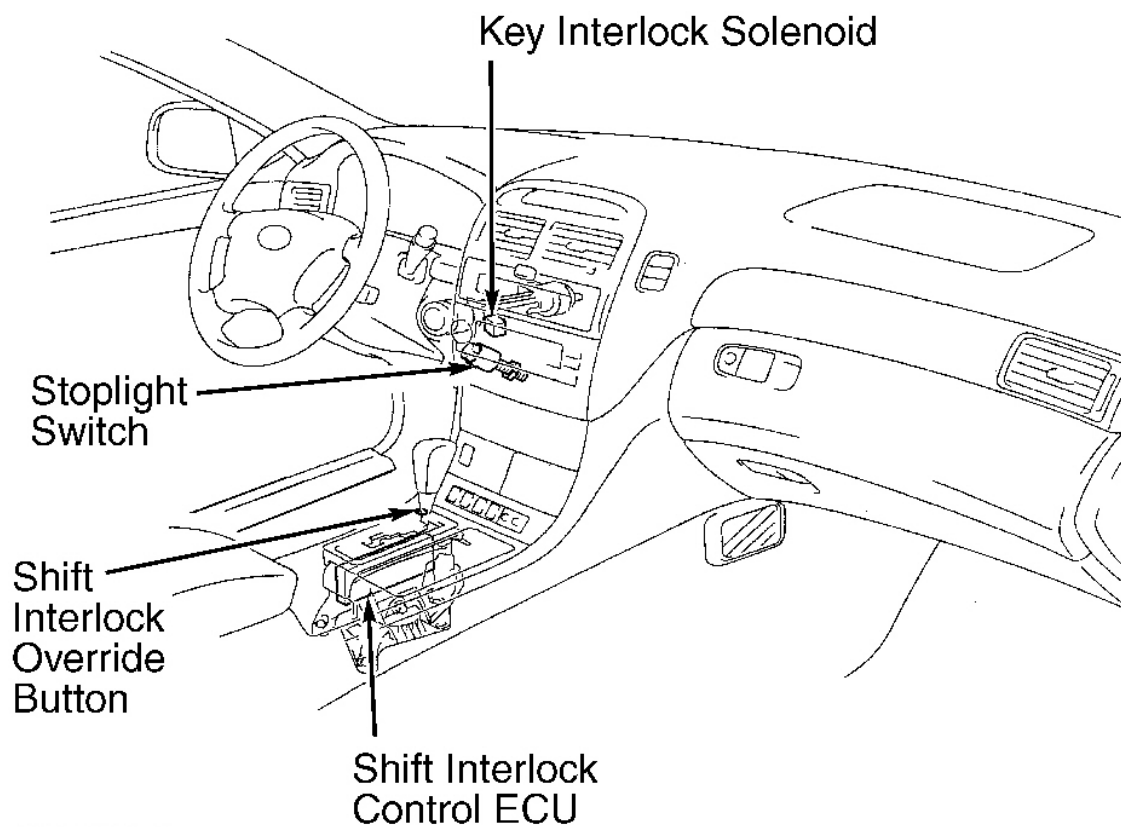
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Fig. 1: Shift Interlock & Key Interlock Component Locations (Lexus GS300 & GS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



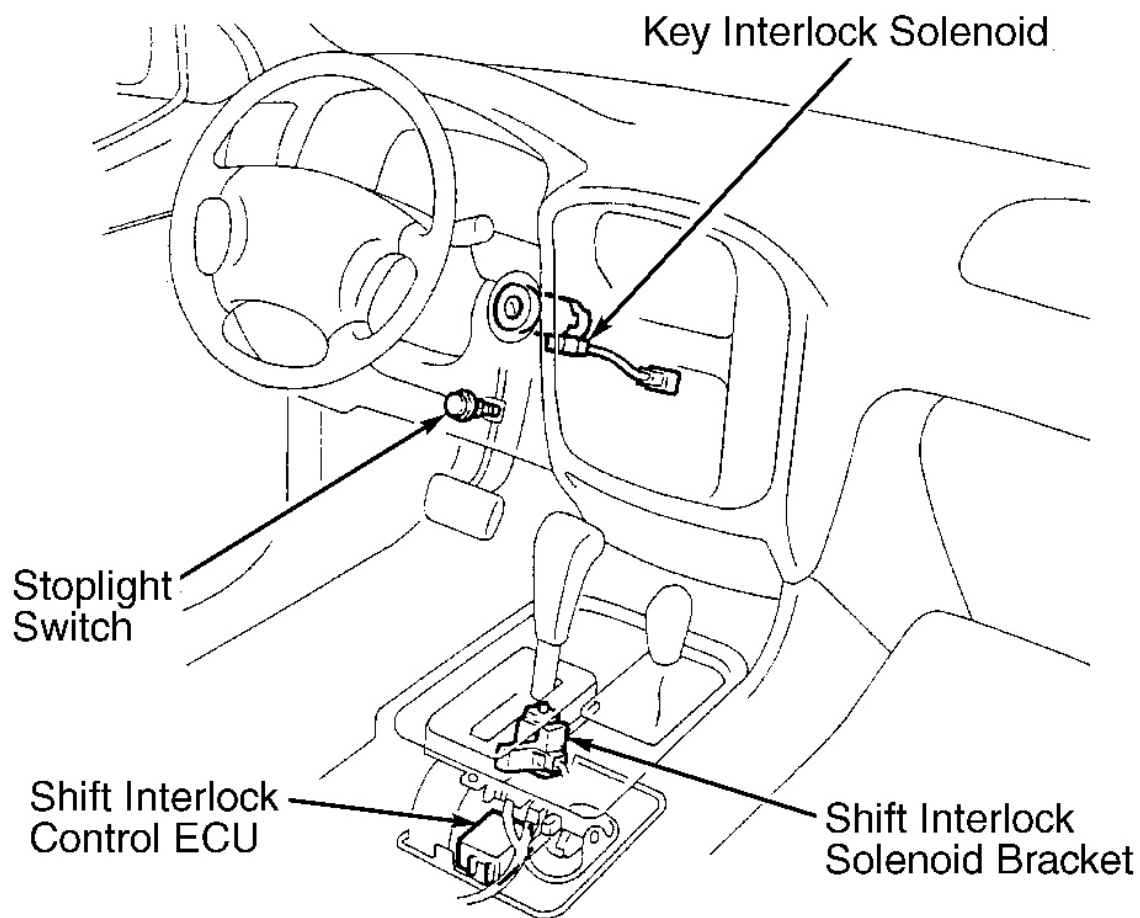
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Fig. 2: Shift Interlock & Key Interlock Component Locations (Lexus IS300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



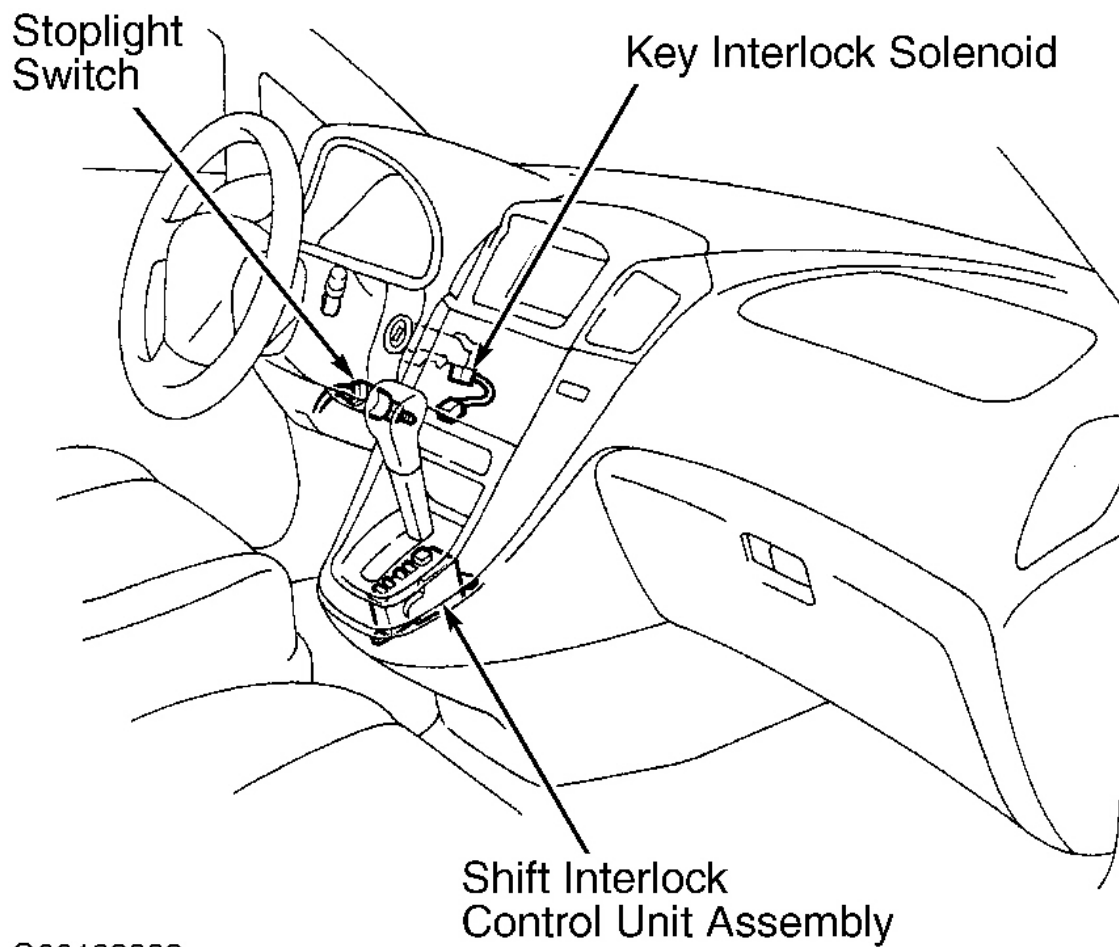
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Fig. 3: Shift Interlock & Key Interlock Component Locations (Lexus LS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



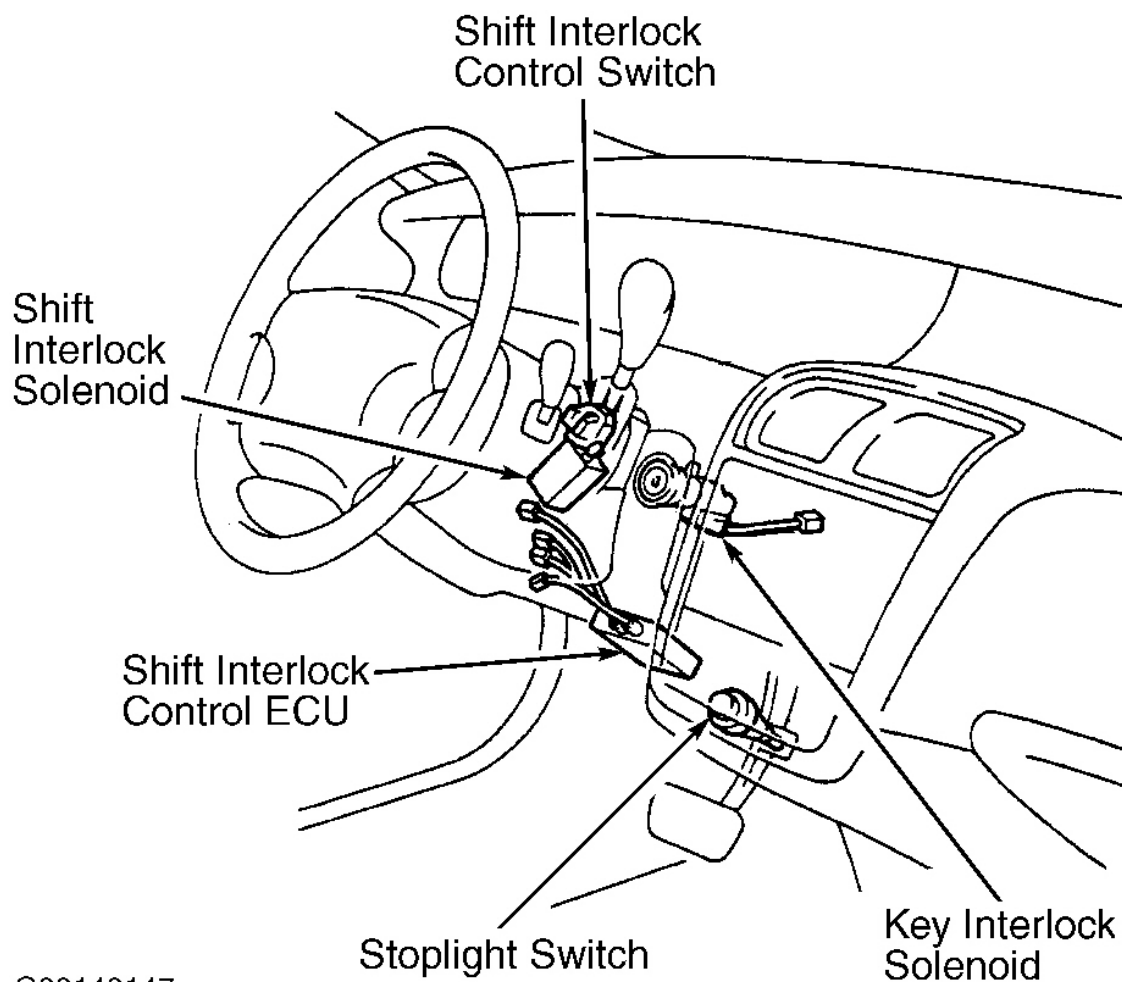
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Fig. 4: Shift Interlock & Key Interlock Component Locations (Lexus LX470 & Toyota Land Cruiser)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



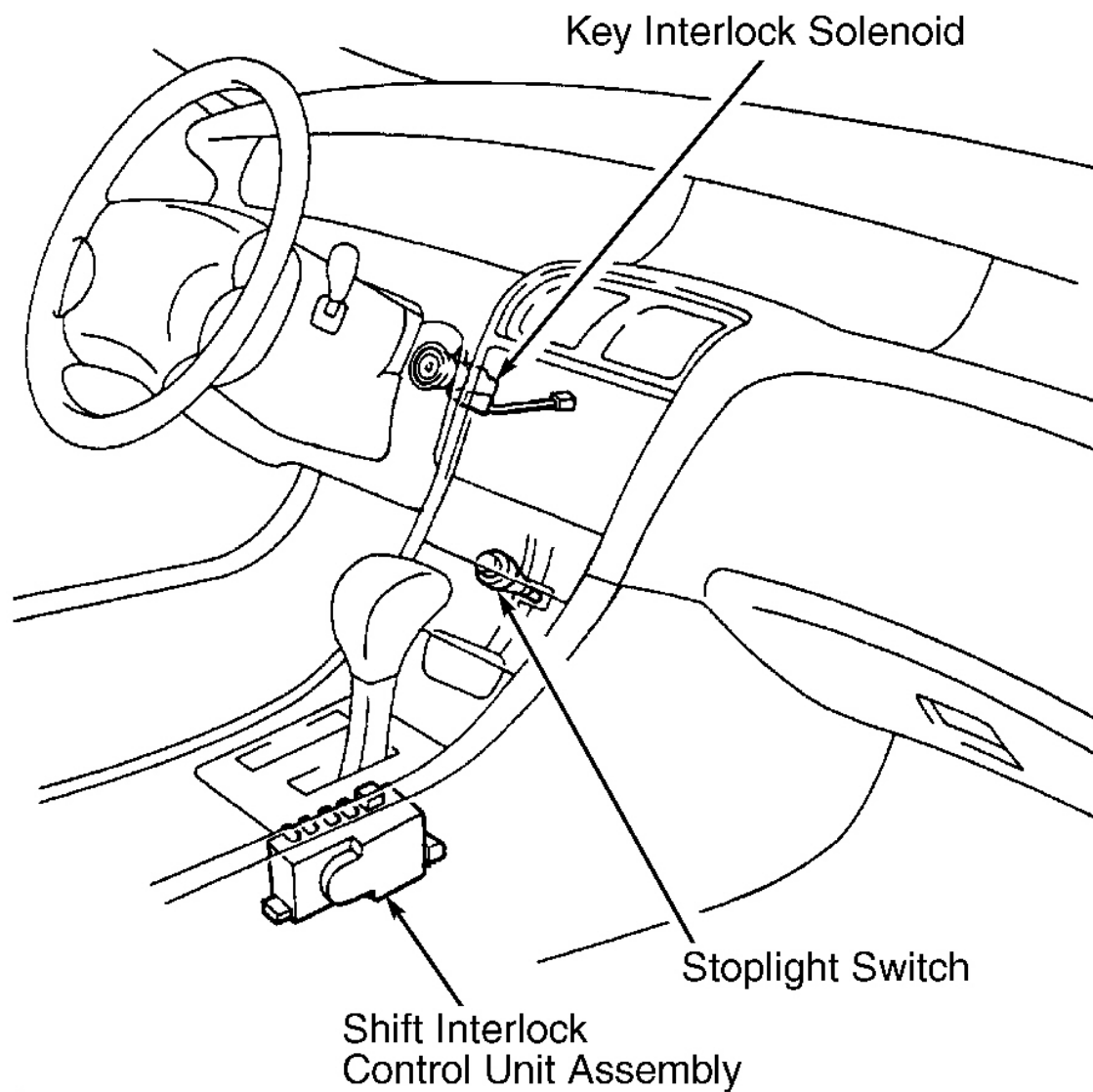
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Fig. 5: Shift Interlock & Key Interlock Component Locations (Lexus RX300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



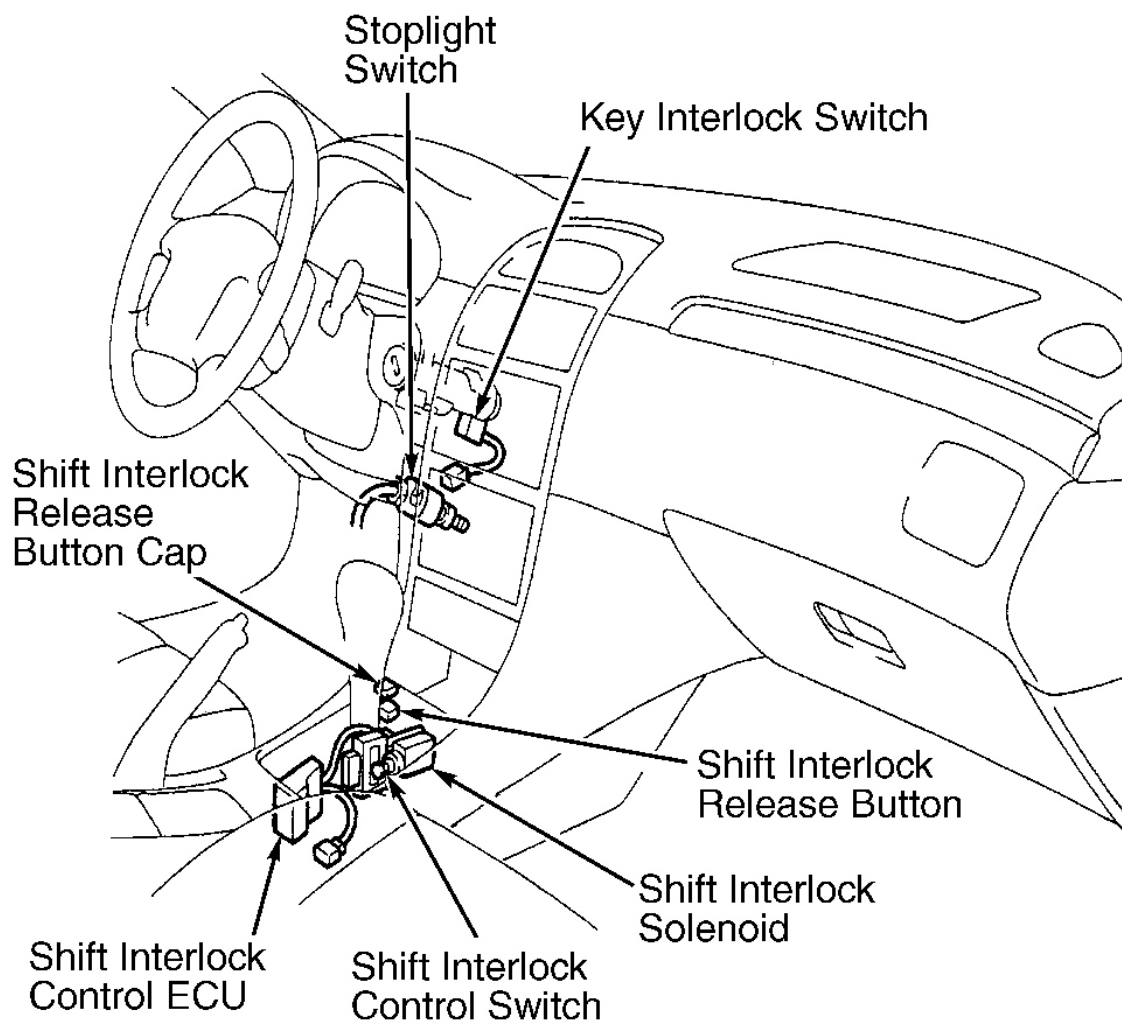
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Fig. 6: Shift Interlock & Key Interlock Component Locations (Toyota Avalon - Column Shift)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



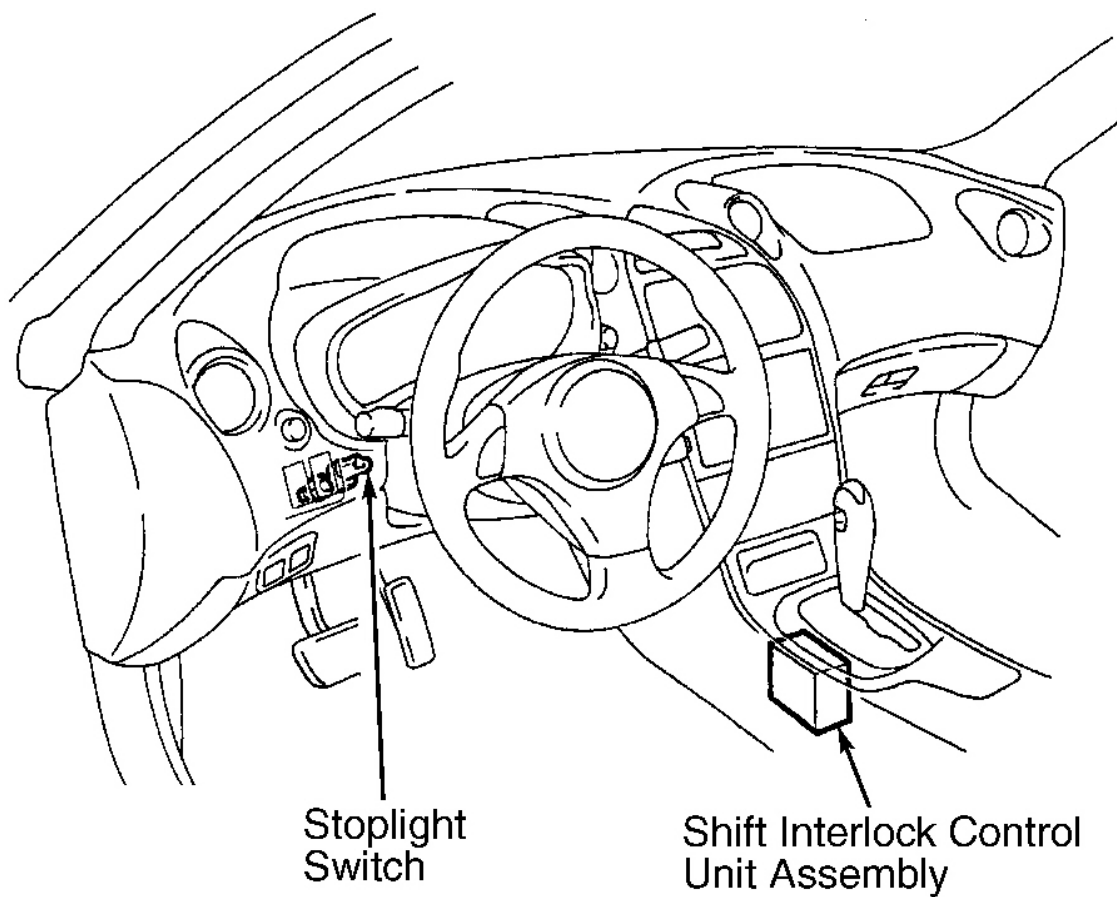
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Fig. 7: Shift Interlock & Key Interlock Component Locations (Toyota Avalon - Floor Shift)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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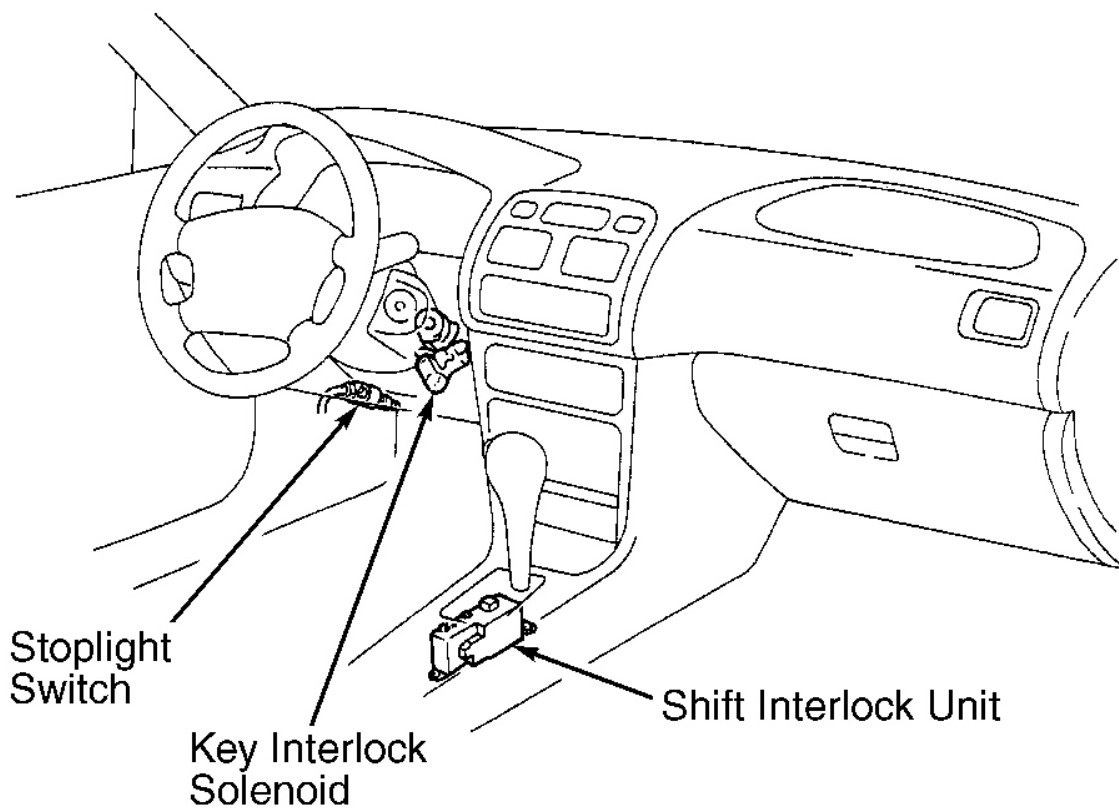
Fig. 8: Shift Interlock & Key Interlock Component Locations (Toyota Camry Solara)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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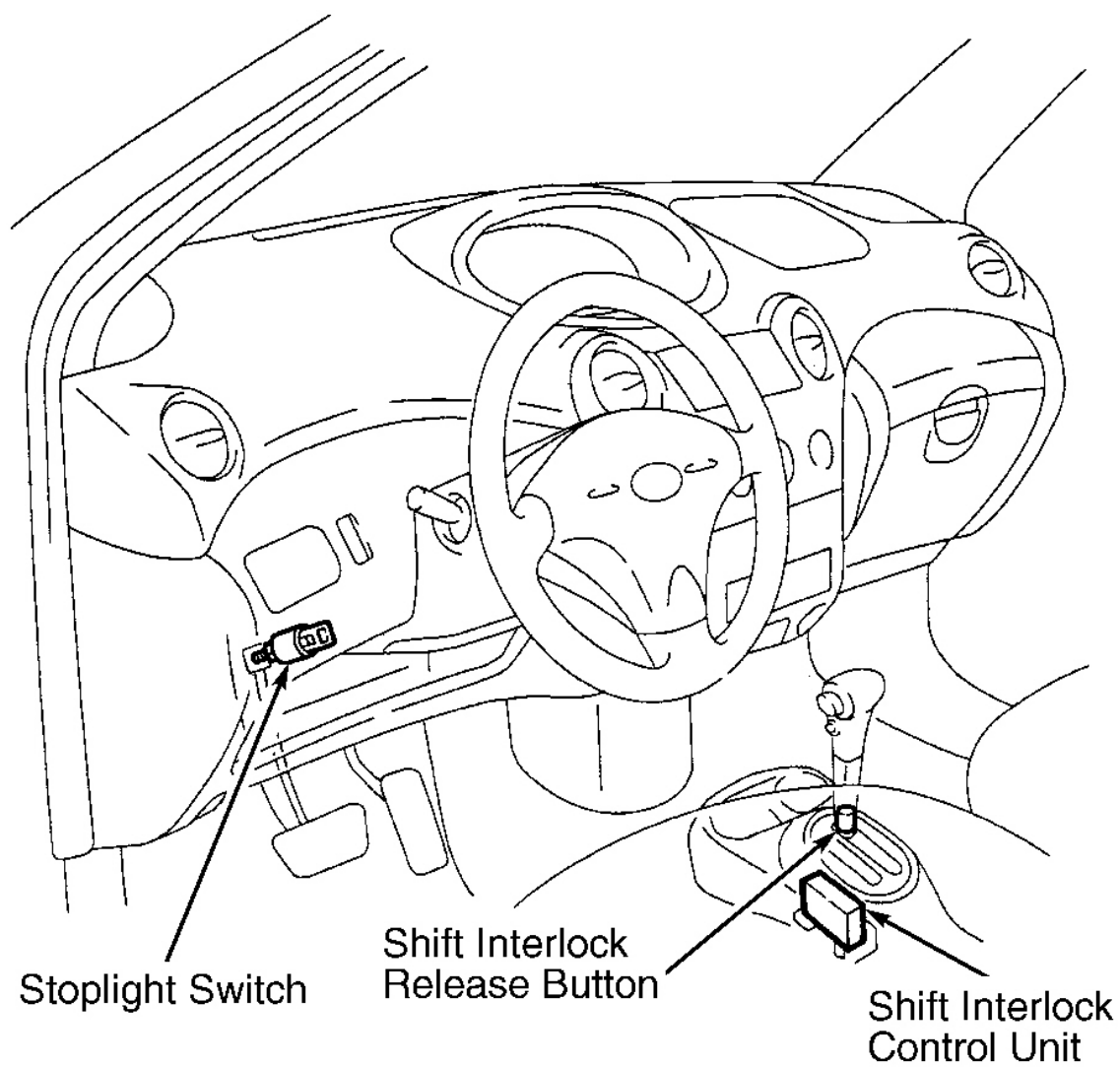
Fig. 9: Shift Interlock & Key Interlock Component Locations (Toyota Celica)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



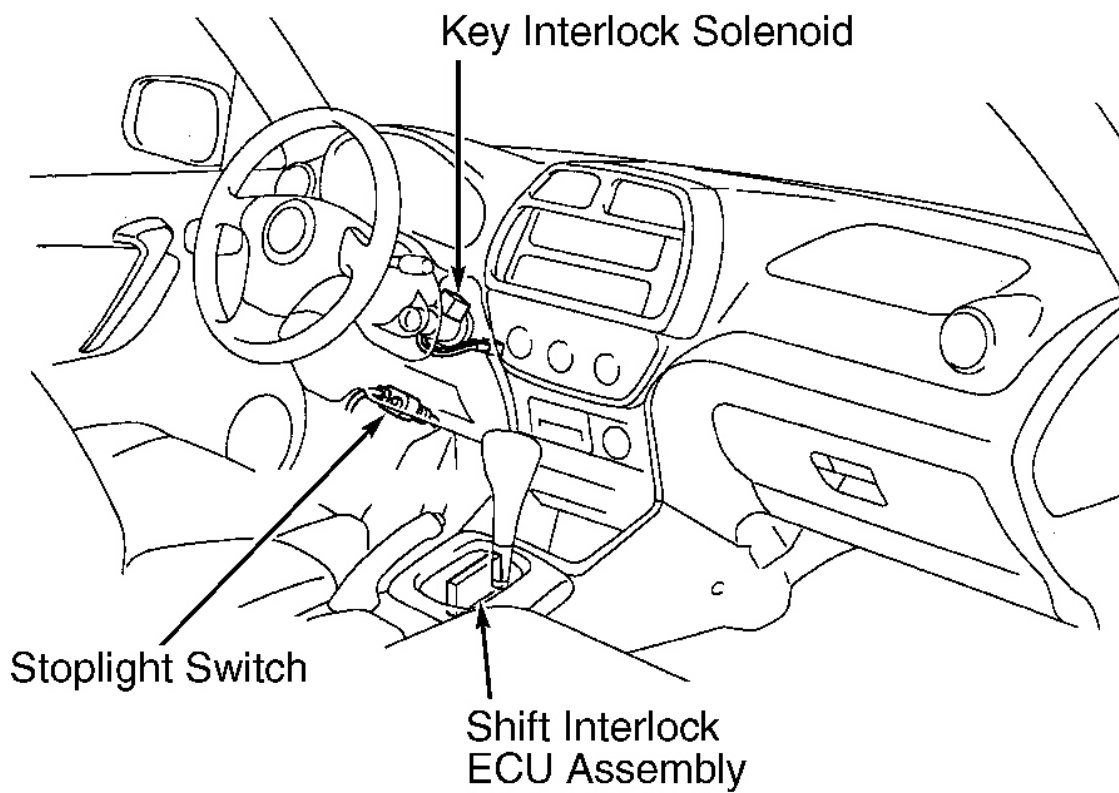
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Fig. 10: Shift Interlock & Key Interlock Component Locations (Toyota Corolla)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



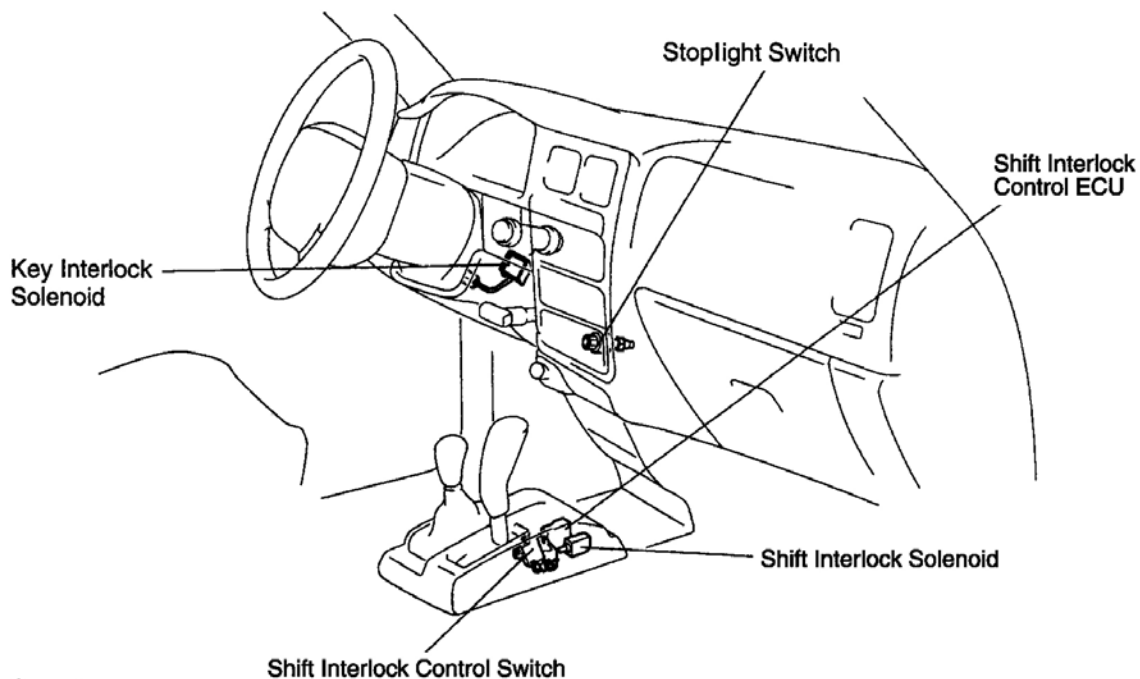
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Fig. 11: Shift Interlock & Key Interlock Component Locations (Toyota ECHO)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



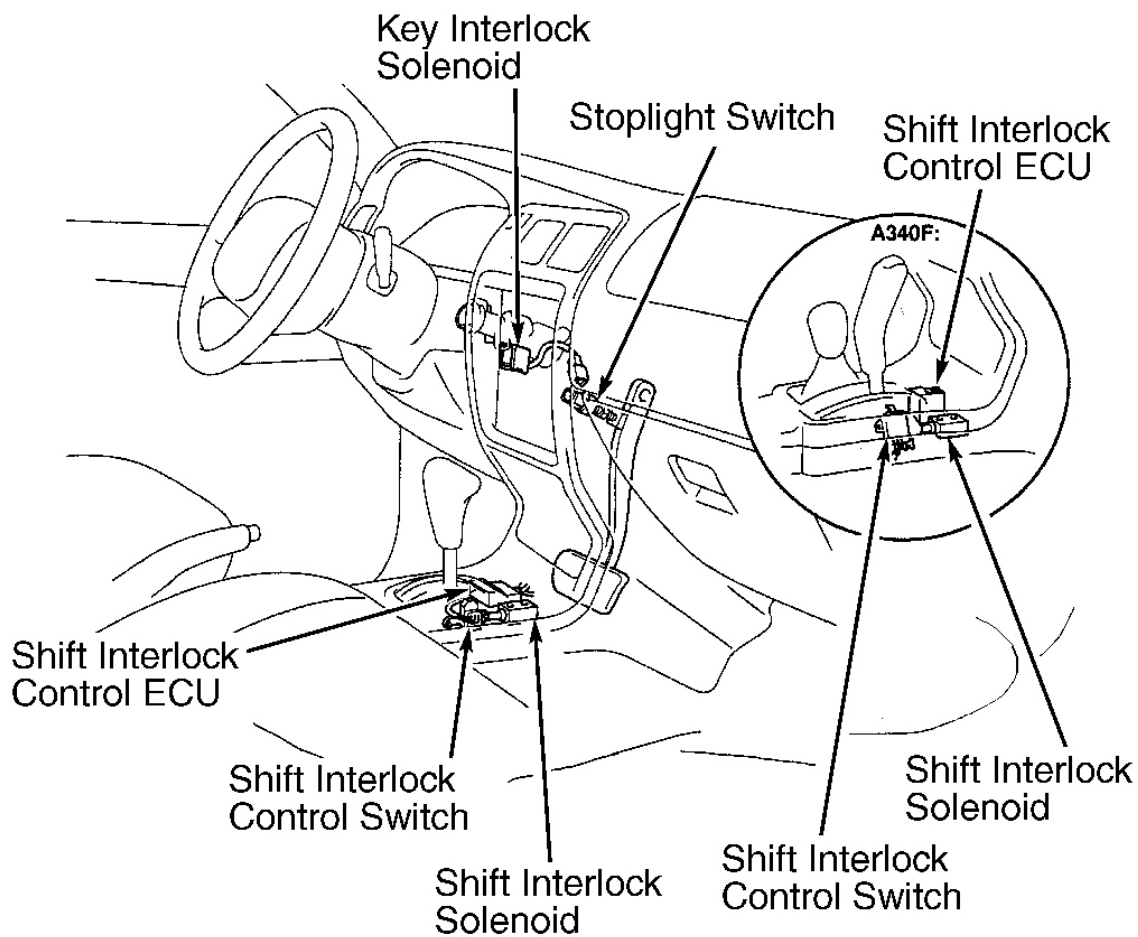
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Fig. 12: Shift Interlock & Key Interlock Component Locations (Toyota RAV4)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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Fig. 13: Shift Interlock & Key Interlock Component Locations (Toyota Tacoma)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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Fig. 14: Shift Interlock & Key Interlock Component Locations (Toyota 4Runner)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TROUBLE SHOOTING

PRELIMINARY INSPECTION

Diagnosis of shift interlock system should begin with a general visual inspection of related components, i.e., shift linkage, electrical connections, components, etc.

Inspect for aftermarket devices which could affect the operation of the shift interlock control system. Inspect easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent faulty electrical connections or wiring may be the cause of intermittent conditions. Check for loose, bent or corroded terminals and terminal tension. Check for cut, bare or pinched wiring. Simulate the condition that is potentially causing the intermittent connection, either by wiggling the connections or the wiring, test driving or performing other operations while observing scan tool, DVOM or other testing equipment. See **WIRING DIAGRAMS**.

KEY INTERLOCK SYSTEM OPERATION CHECK

Turn ignition on. Depress the brake pedal and move the gearshift lever to any other position than Park. Ensure that the ignition key cannot be turned to Lock. Move the gearshift lever to Park, turn ignition key to Lock position and ensure the ignition key can be removed.

SHIFT INTERLOCK RELEASE BUTTON OPERATION CHECK

Using a small screwdriver, remove the shift interlock release cover. When moving the gearshift lever with the shift interlock button pressed, ensure the gearshift lever can be moved to any other position, other than Park.

SHIFT INTERLOCK SYSTEM OPERATION CHECK (CABLE OPERATED)

Toyota (Sequoia, Sienna & Tundra)

Ensure shift interlock cable does not interfere with wiring harness. Ensure ignition switch turns to LOCK position when gearshift lever is in "P" position. Ensure brake pedal returns fully. Ensure shift interlock is released when brake pedal is depressed with ignition switch in ACC, ON or START position. If system does not operate as specified, see **SHIFT INTERLOCK CABLE** under ADJUSTMENTS.

COMPONENT TESTS

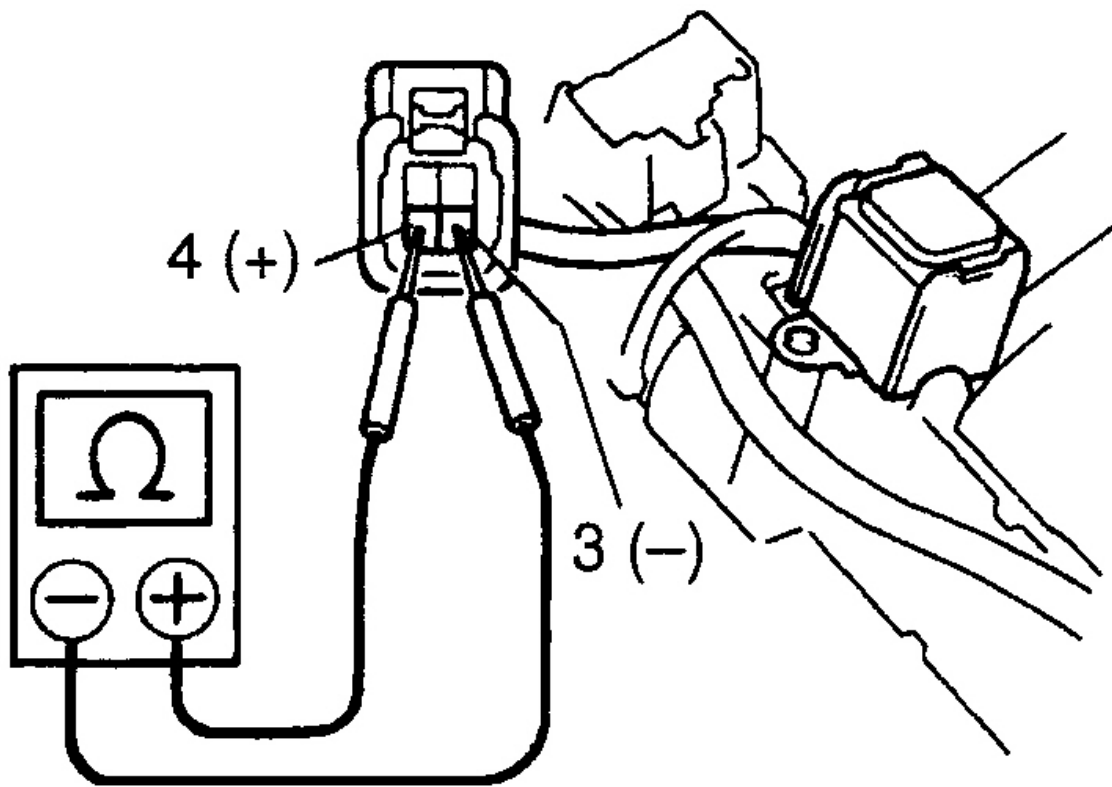
KEY INTERLOCK SOLENOID

NOTE: For circuit reference, see **CONNECTOR IDENTIFICATION** and/or **WIRING DIAGRAMS**.

NOTE: Not all vehicles are equipped with a key interlock solenoid.

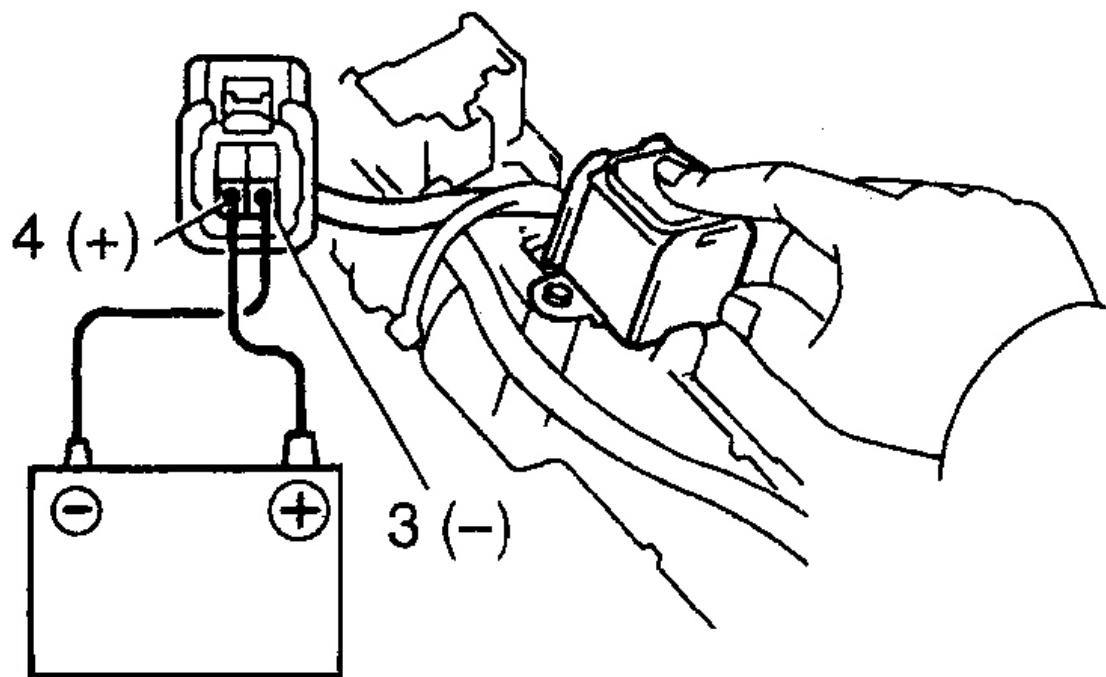
Lexus GS300 & GS430

1. Disconnect the solenoid connector. Using an ohmmeter, measure the resistance between terminals. See **Fig. 15**. Resistance should be 12-17 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 16**. Ensure an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 15: Measuring Resistance Of Key Interlock Solenoid (Lexus GS300 & GS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



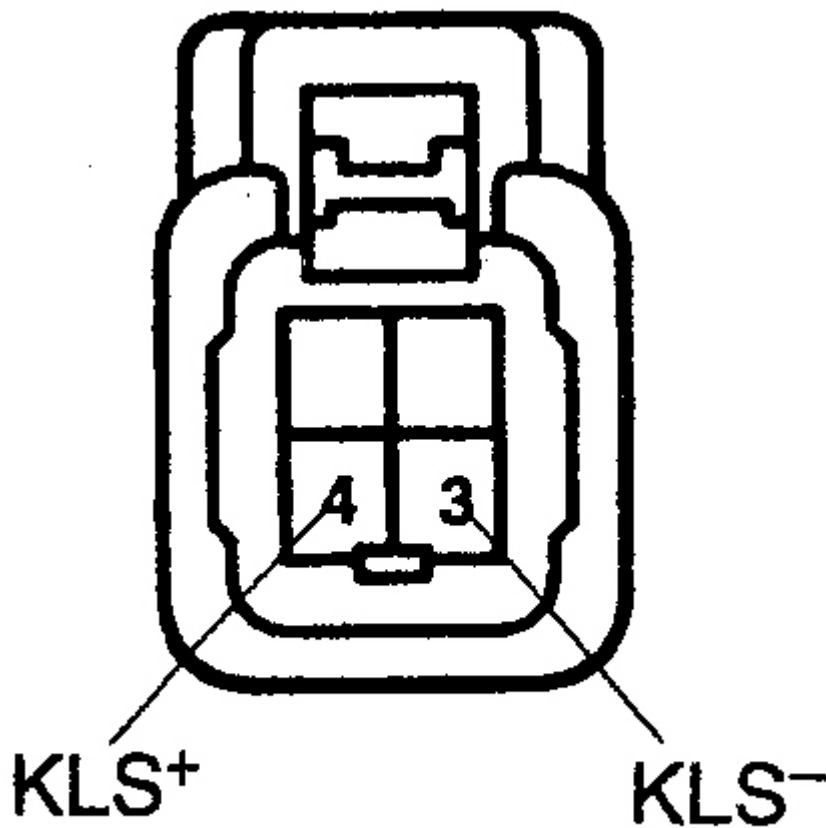
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Fig. 16: Testing Operation Of Key Interlock Solenoid (Lexus GS300 & GS430)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Lexus IS300

1. Disconnect the solenoid connector. Using an ohmmeter, measure the resistance between terminals. See **Fig. 17** . Resistance should be 12-17 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily apply battery positive voltage to terminal KLS+ and ground terminal KLS-. See **Fig. 17** . Ensure an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



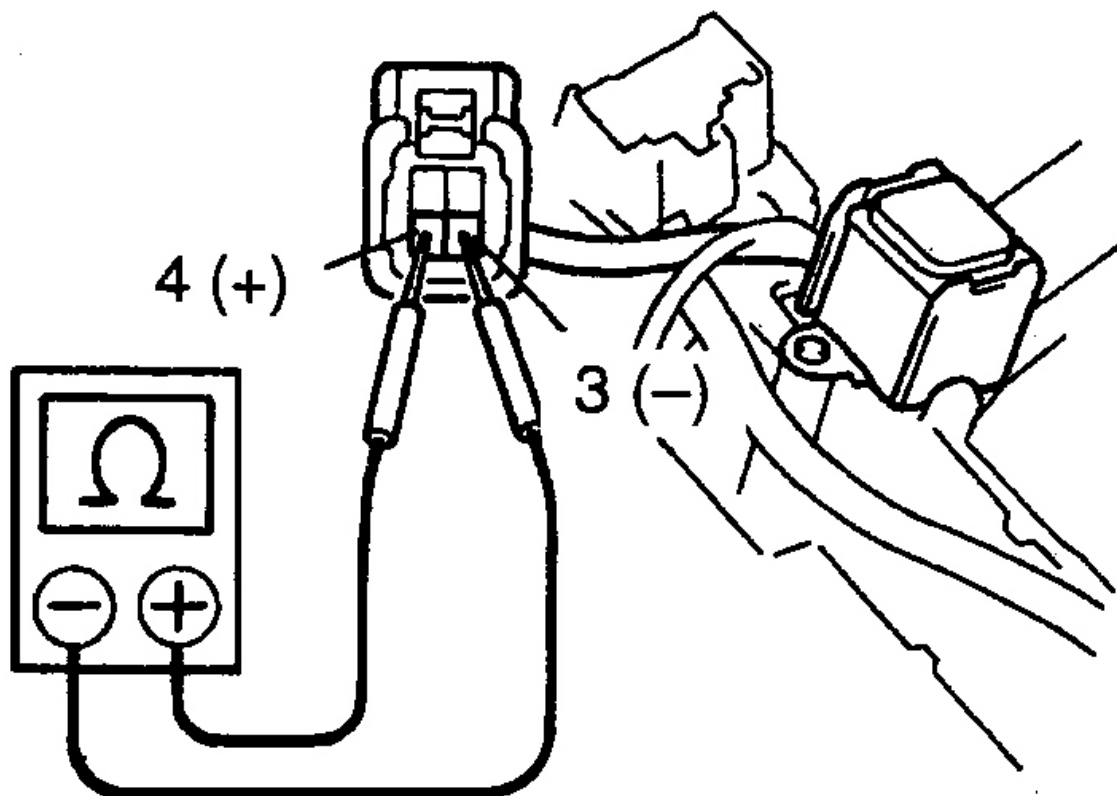
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Fig. 17: Measuring Resistance Of Key Interlock Solenoid (Lexus IS300)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

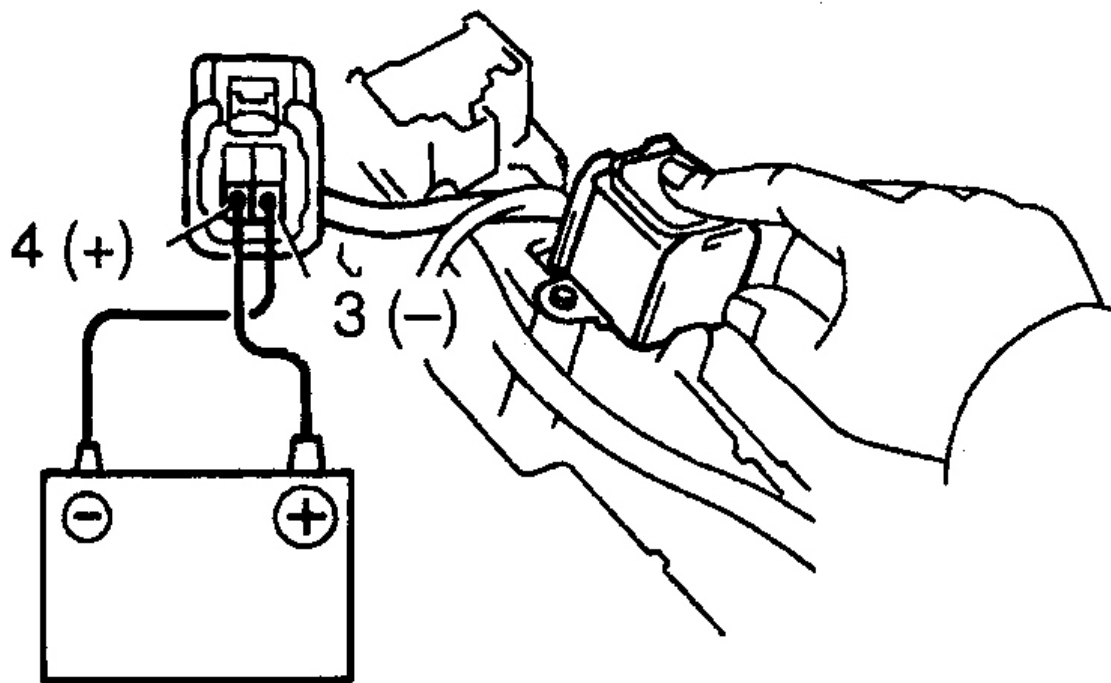
Lexus LS430

1. Disconnect the solenoid connector. Using an ohmmeter, measure the resistance between terminals No. 3 and 4. See **Fig. 18** . Resistance should be 12-17 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 19** . Ensure an operating noise can be heard from the solenoid. If the solenoid does not operated, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 18: Measuring Resistance Of Key Interlock Solenoid (Lexus LS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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Fig. 19: Testing Operation Of Key Interlock Solenoid (Lexus LS430)

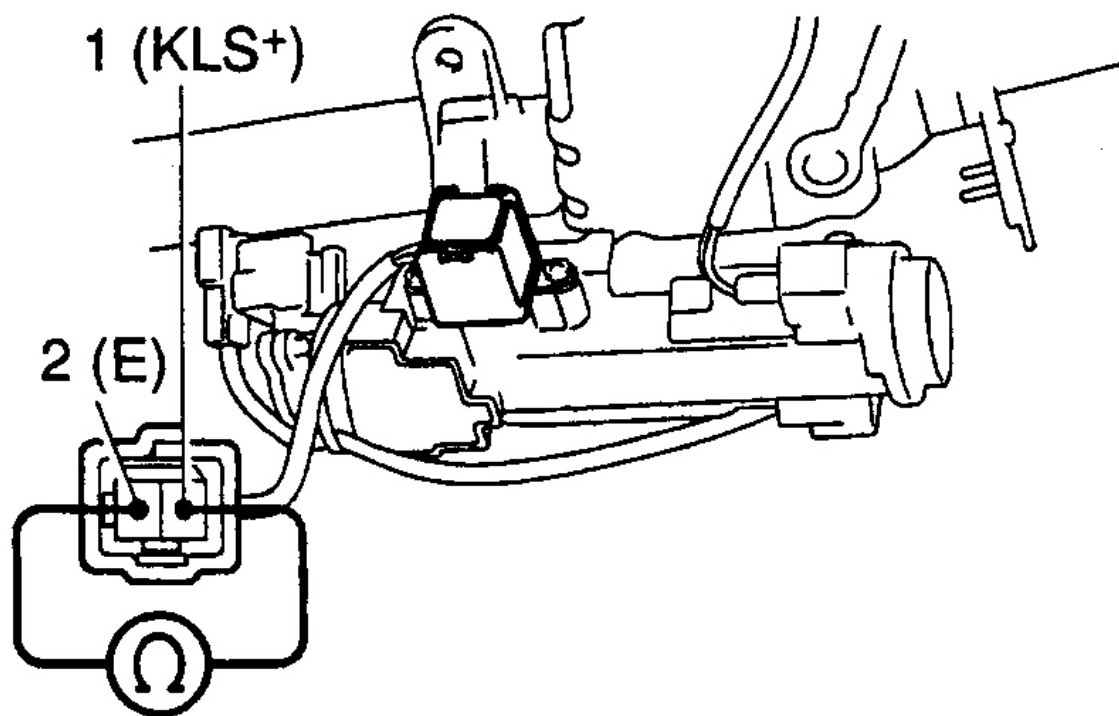
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Lexus LX470 & Toyota Land Cruiser

1. Disconnect the solenoid connector. Using an ohmmeter, measure the resistance between the 2 terminals. Resistance should be 12-17 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily supply battery positive voltage and ground at the 2 terminals. Ensure an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.

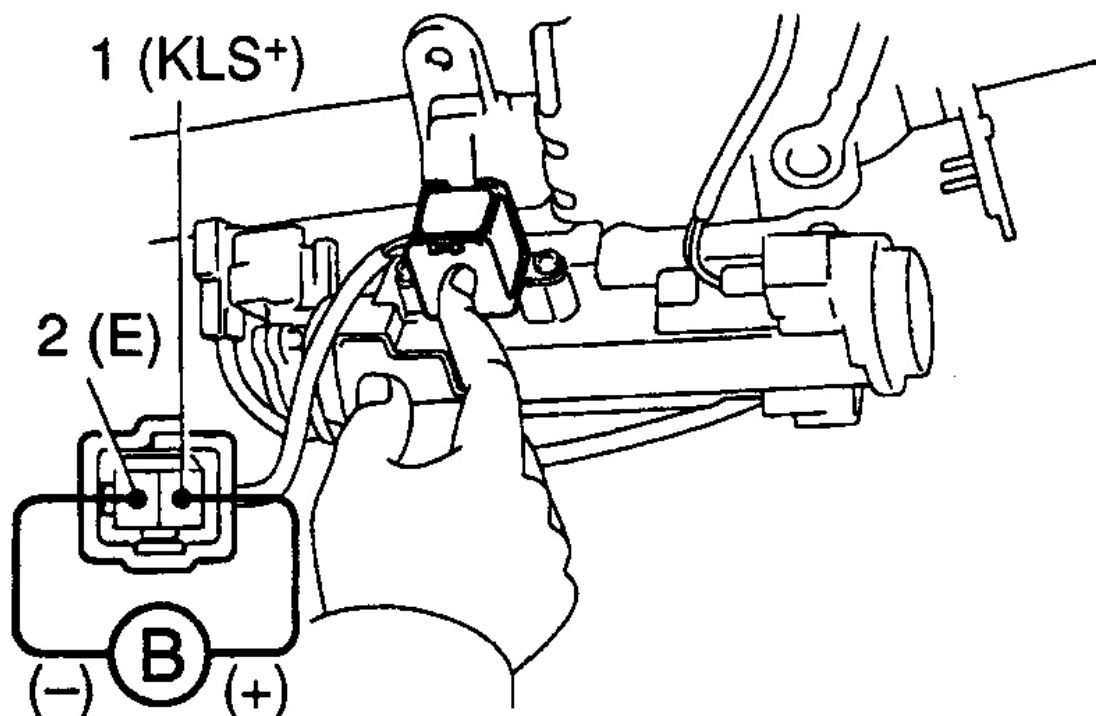
Lexus RX300

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 20** . Resistance should be 12.5-16.5 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 21** . Ensure an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 20: Measuring Resistance At Key Interlock Solenoid (Lexus & Toyota - Floor Shift)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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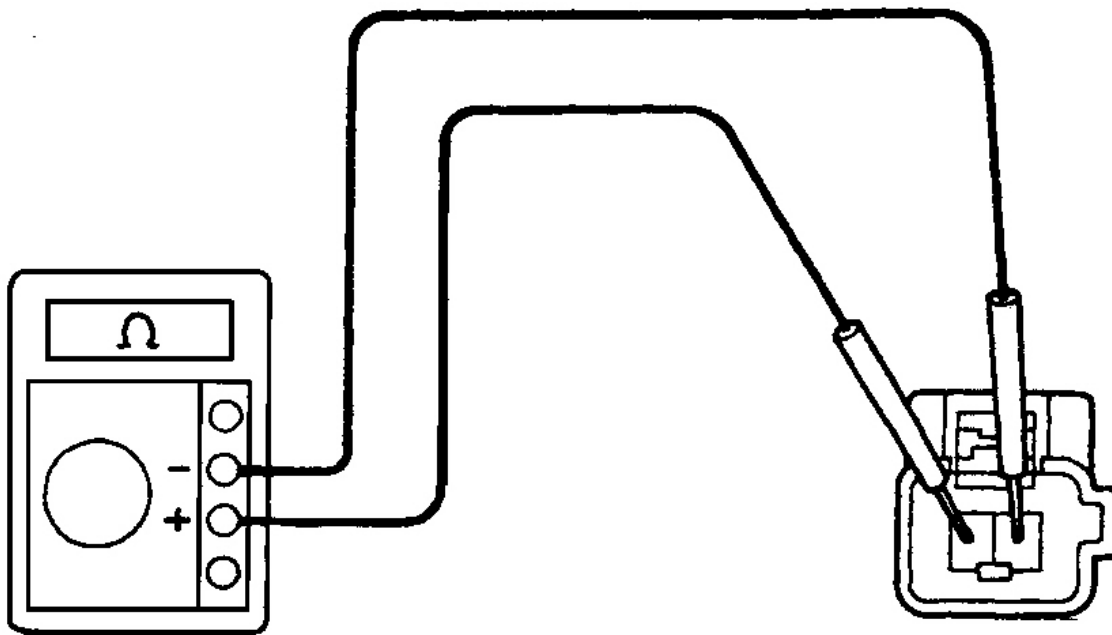
Fig. 21: Testing Operation Of Key Interlock Solenoid (Lexus & Toyota - Floor Shift)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Lexus SC430

Disconnect solenoid connector. Momentarily supply battery voltage to terminal KLS+ and ground terminal KLS-. See **Fig. 118** . Ensure an operating sound is heard. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.

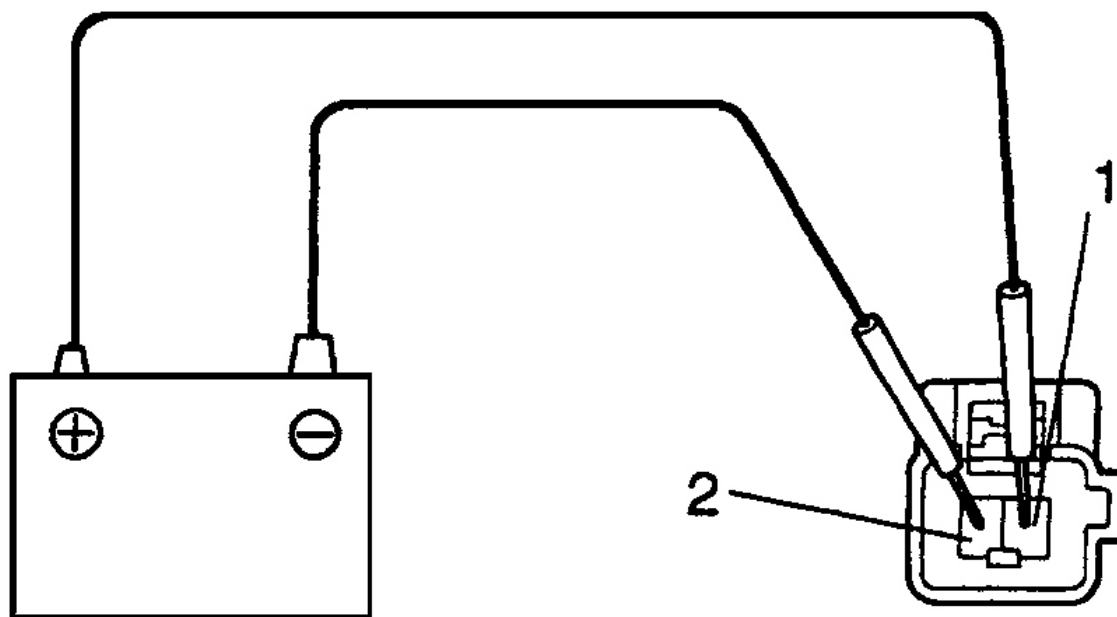
Toyota Avalon (Column Shift)

1. Disconnect the solenoid connector. Using an ohmmeter, measure the resistance between terminals. See **Fig. 22** . Resistance should be 12.5-16.5 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 23** . Ensure an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 22: Measuring Resistance At Key Interlock Solenoid (Toyota Avalon - Column Shift)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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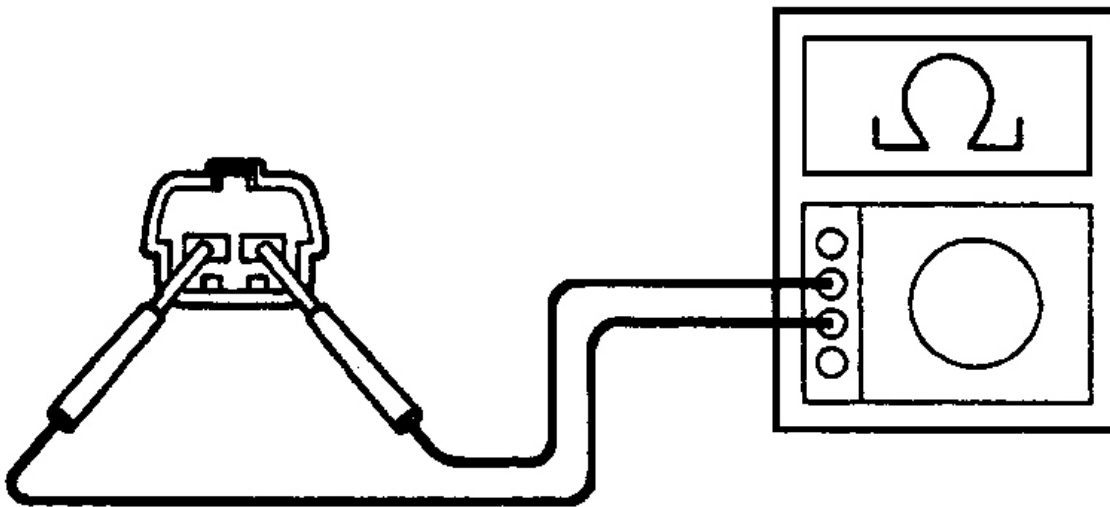
Fig. 23: Testing Operation Of Key Interlock Solenoid (Toyota Avalon - Column Shift)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Toyota Avalon (Floor Shift) & Camry Solara

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 20** . Resistance should be 13-16 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Apply battery positive voltage and ground to terminals. See **Fig. 21** . Ensure an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.

Toyota Corolla

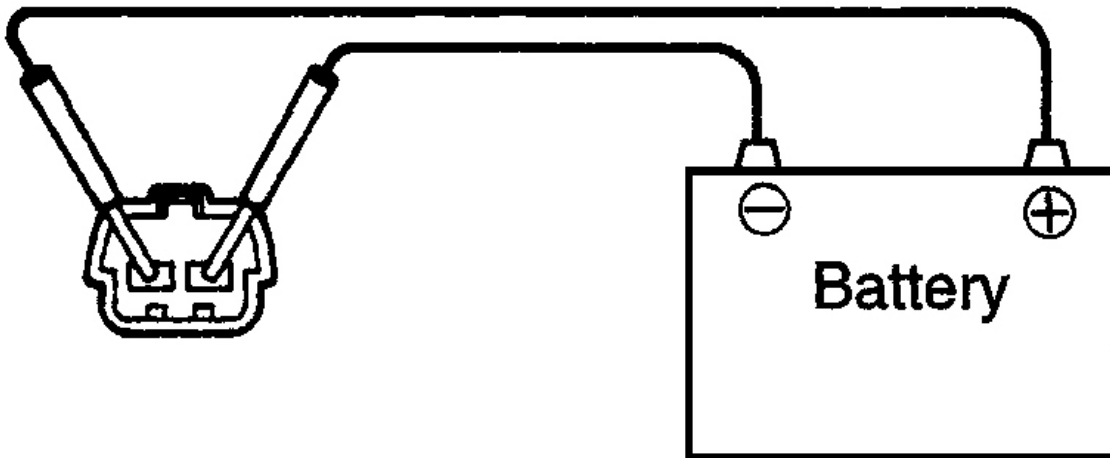
1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 24** . Resistance should be 12.5-16.5 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 25** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 24: Measuring Resistance At Key Interlock Solenoid (Toyota Corolla)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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Fig. 25: Testing Operation Of Key Interlock Solenoid (Toyota Corolla)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

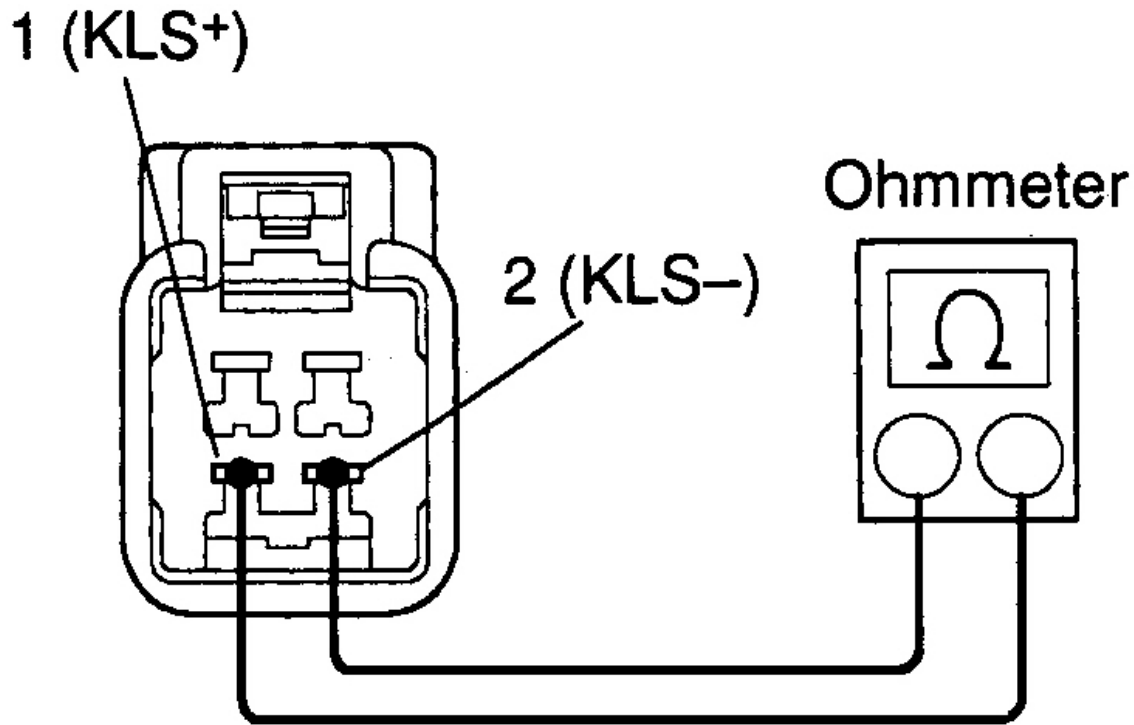
Toyota Highlander

Momentarily supply battery positive voltage and ground at terminals No. 3 and 4. See **Fig. 118** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.

Toyota RAV4

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 26** . Resistance should be 12.5-16.5 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.

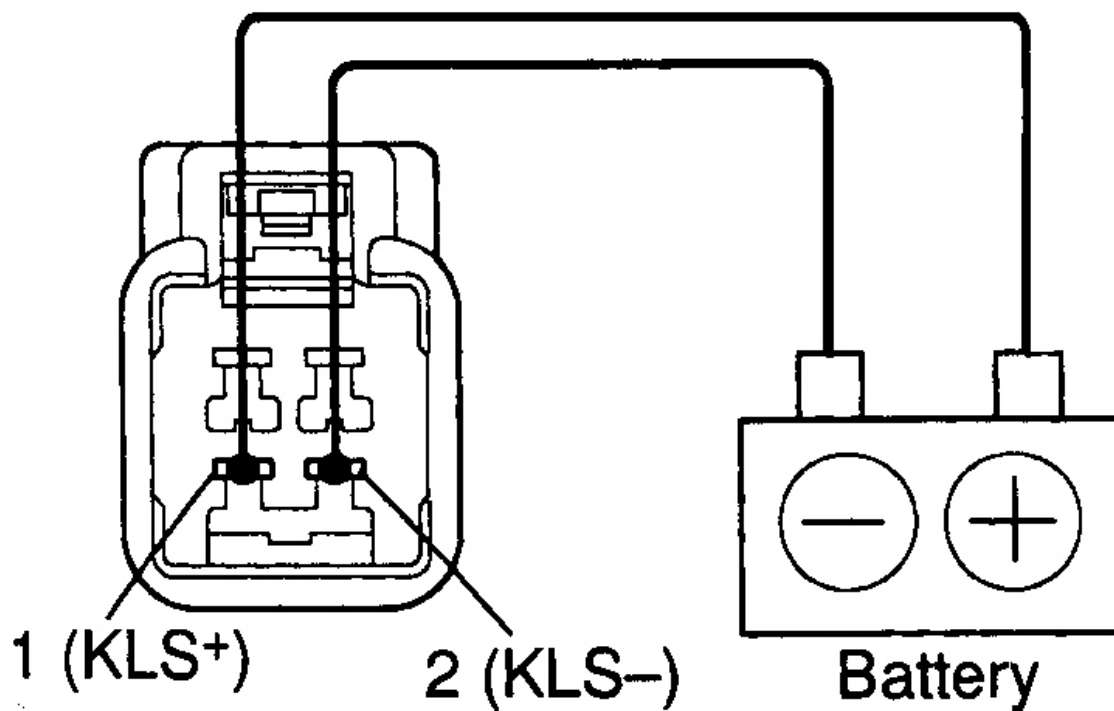
2. Disconnect solenoid connector. Momentarily supply battery voltage to terminal KLS+ and ground terminal KLS-. See **Fig. 27** . Ensure an operating sound is heard. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 26: Measuring Resistance At Key Interlock Solenoid (Toyota RAV4)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



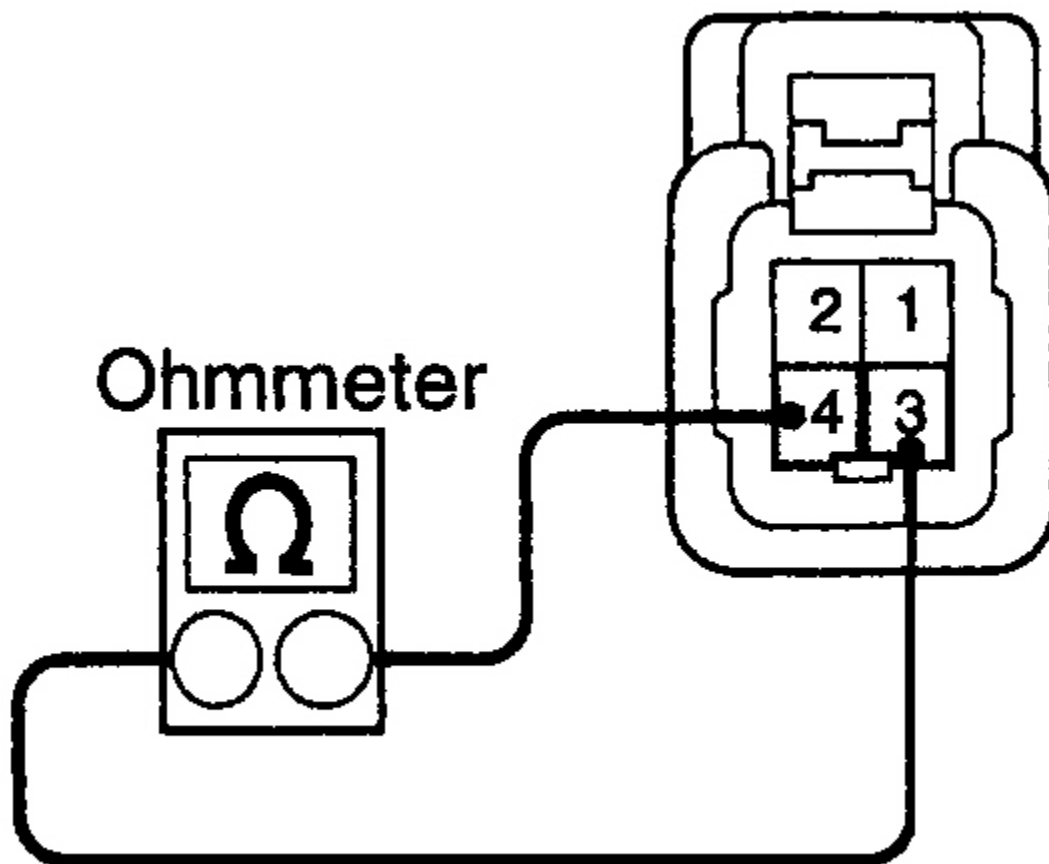
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Fig. 27: Testing Operation Of Key Interlock Solenoid (Toyota RAV4)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

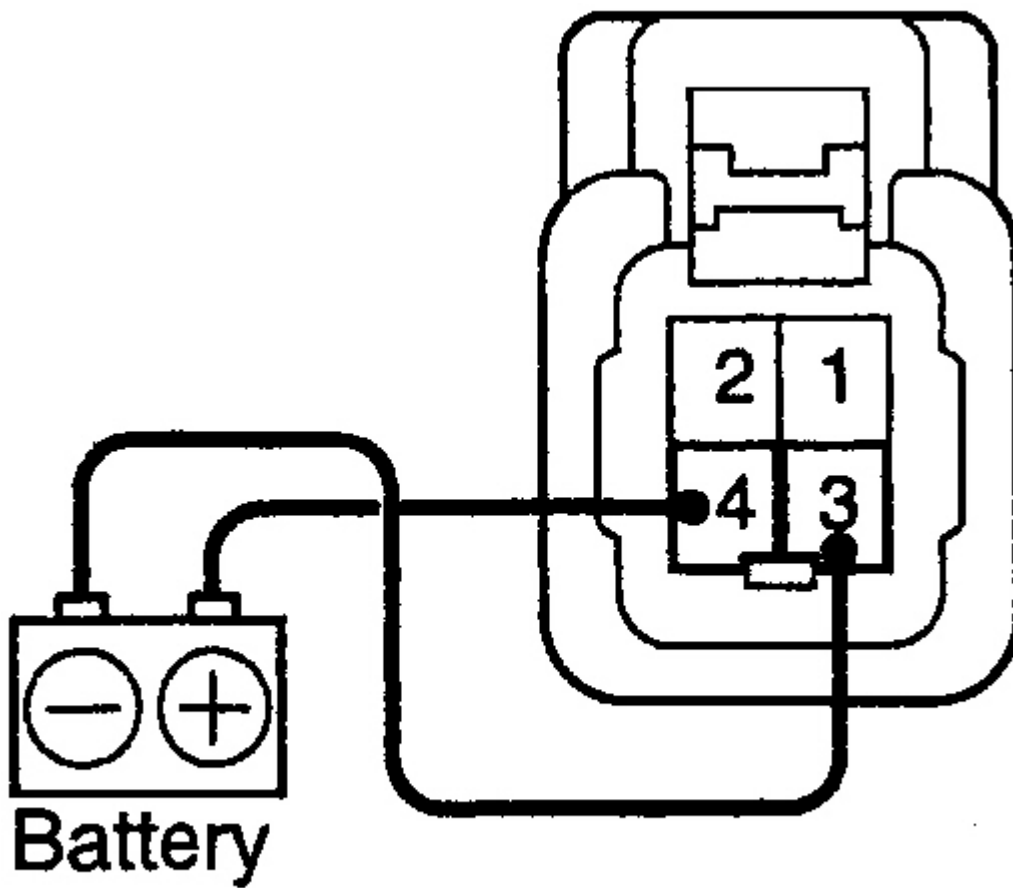
Toyota Tacoma

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminal No. 3 and 4. See **Fig. 28** . Resistance should be 12-17 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Disconnect solenoid connector. Momentarily supply battery voltage to terminal No. 3 and 4. See **Fig. 29** . Ensure an operating sound is heard. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 28: Measuring Resistance At Key Interlock Solenoid (Toyota Tacoma)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

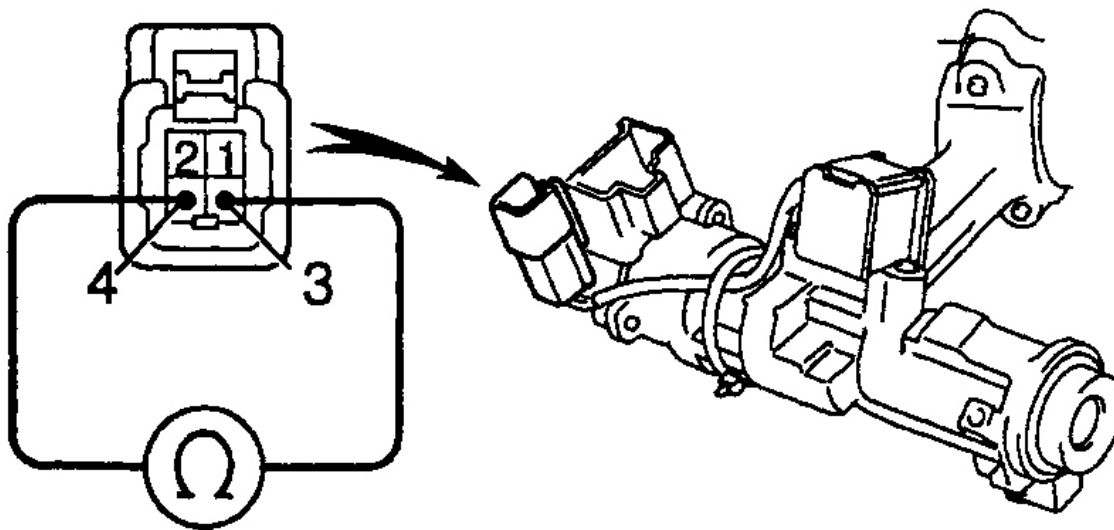


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Fig. 29: Testing Operation Of Key Interlock Solenoid (Toyota Tacoma)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

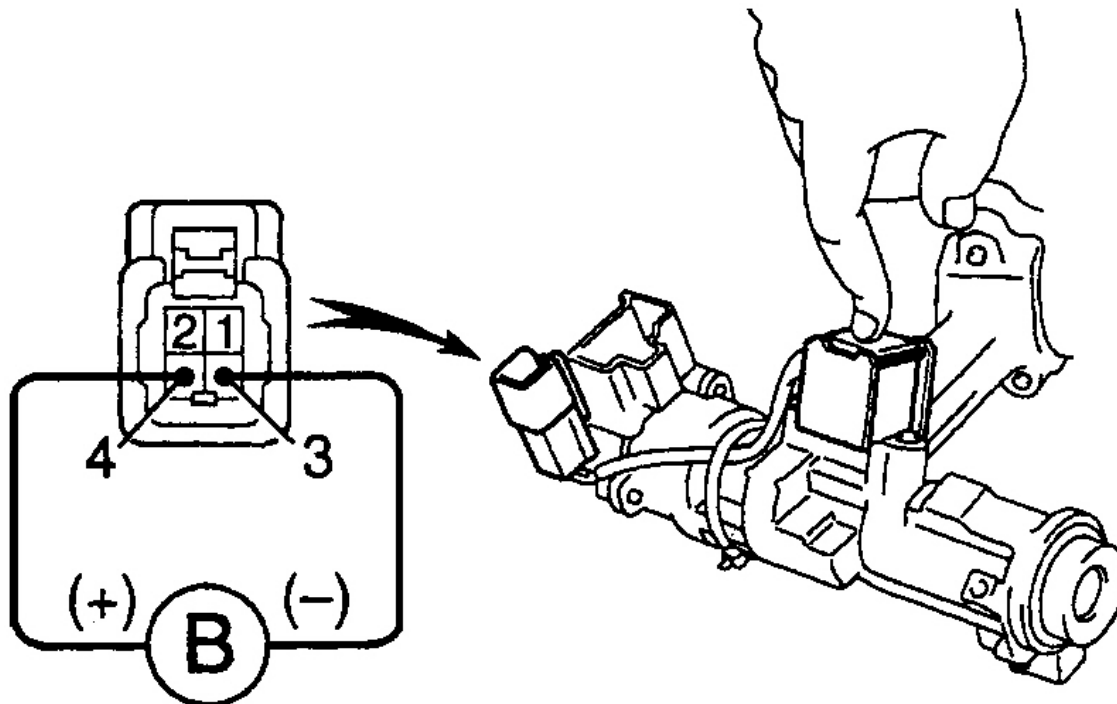
Toyota 4Runner

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminal No. 3 and 4. See **Fig. 30** . Resistance should be 12.5-16.5 ohms. If resistance value is not as specified, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.
2. Disconnect solenoid connector. Momentarily supply battery voltage to terminal No. 4 and ground terminal 3. See **Fig. 31** . Ensure an operating sound is heard. If the solenoid does not operate, replace the solenoid. See **KEY INTERLOCK SOLENOID** under REMOVAL & INSTALLATION.



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Fig. 30: Measuring Resistance At Key Interlock Solenoid (Toyota 4Runner)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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Fig. 31: Testing Operation Of Key Interlock Solenoid (Toyota 4Runner)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SHIFT INTERLOCK CONTROL SWITCH

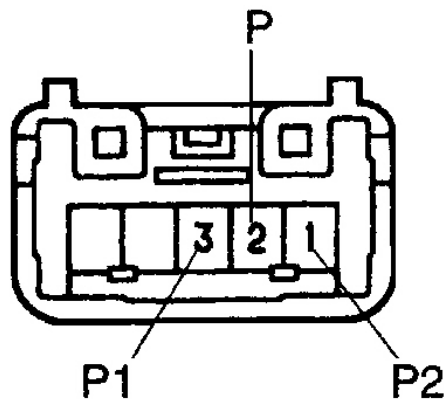
NOTE: For circuit reference, see **CONNECTOR IDENTIFICATION** and/or **WIRING**

DIAGRAMS .

NOTE: On models not listed, shift interlock control switch is incorporated in shift interlock ECU. No voltage tests for shift interlock control switch circuits are available.

Lexus & Toyota

Disconnect the shift interlock switch. See **COMPONENT LOCATIONS** . Using a DVOM, check for continuity between specified terminals. See **Fig. 32 - Fig. 38** . If continuity is not as specified, replace the switch.



Shift position	Terminal condition to terminal number	Specified value
P position (Release button is not pushed)	P – P1	Continuity
P position (Release button is pushed)	P – P1 P – P2	Continuity
Except P position	P – P2	Continuity

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Fig. 32: Checking For Continuity At Shift Interlock Switch (Lexus IS300)

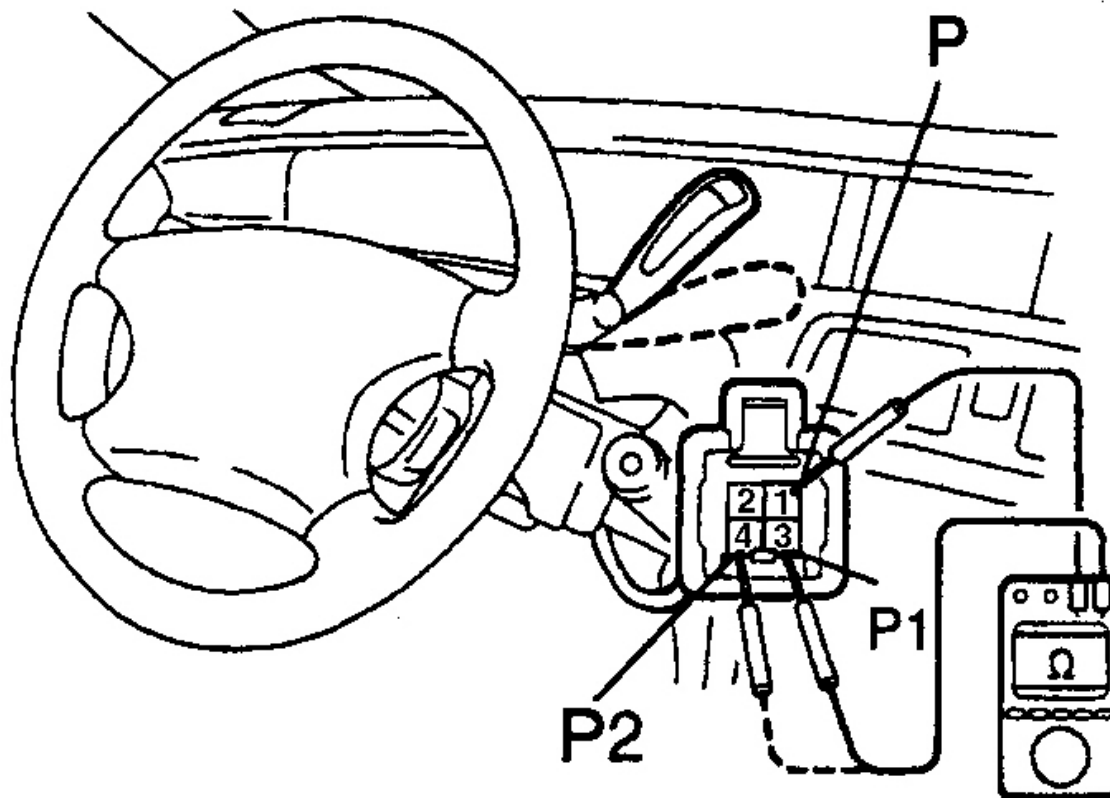
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Shift position	Tester connection	Specified value
P position (Release button is not pushed)	1 - 3 (P - P1)	Continuity
P position (Release button is pushed)	1 - 4 (P - P2)	Continuity
R, N, D, 2, L position	1 - 4 (P - P2)	Continuity

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Fig. 33: Checking For Continuity At Shift Interlock Control Switch (Lexus LX470 & Toyota Land Cruiser)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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Fig. 34: Checking For Continuity At Shift Interlock Control Switch (Toyota Avalon)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Terminal	Measuring Condition	Voltage (V)
5 (IG) – 1 (E)	Ignition switch ON	10 – 14
5 (IG) – 1 (E)	Ignition switch OFF	0
3 (STP) – 1 (E)	Depress brake pedal	10 – 14
3 (STP) – 1 (E)	Release brake pedal	0

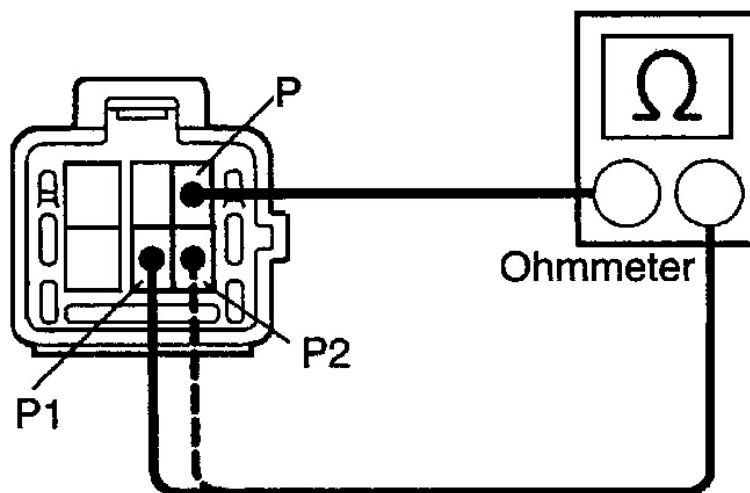
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Fig. 35: Checking For Continuity At Shift Interlock Control Switch (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Shift position	Tester connection	Specified value
P position (Release button is not pushed)	1 – 3 (P – P1)	Continuity
P position (Release button is pushed)	1 – 3 (P – P1) 1 – 4 (P – P2)	Continuity
R, N, D, 2, L position	1 – 4 (P – P2)	Continuity

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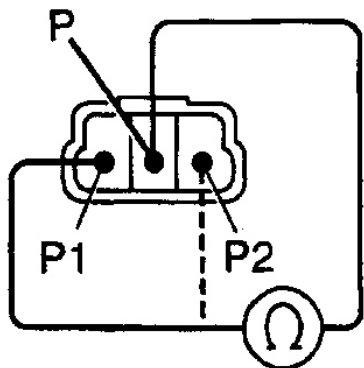
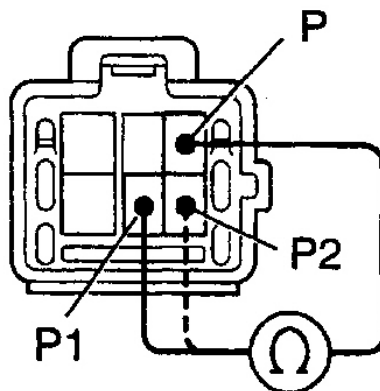
Fig. 36: Checking For Continuity At Shift Interlock Control Switch (Toyota Camry Solara)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Shift position	Tester connection	Specified value
P position	P1 – P or E	Continuity
P position	P1 – P or E P2 – P or E	Continuity
R, N, D, 2, L position	P2 – P or E	Continuity

G00143192

Fig. 37: Checking For Continuity At Shift Interlock Control Switch (Toyota Tacoma)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

A340E:**A340F:**

Shift position	Tester condition to terminal number	Specified value
P position (Release button is not pushed)	P – P1	Continuity
P position (Release button is pushed)	P – P1 P – P2	Continuity
R, N, D, 2, L position	P – P2	Continuity

G00143195

Fig. 38: Checking For Continuity At Shift Interlock Control Switch (Toyota 4Runner)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SHIFT INTERLOCK SOLENOID

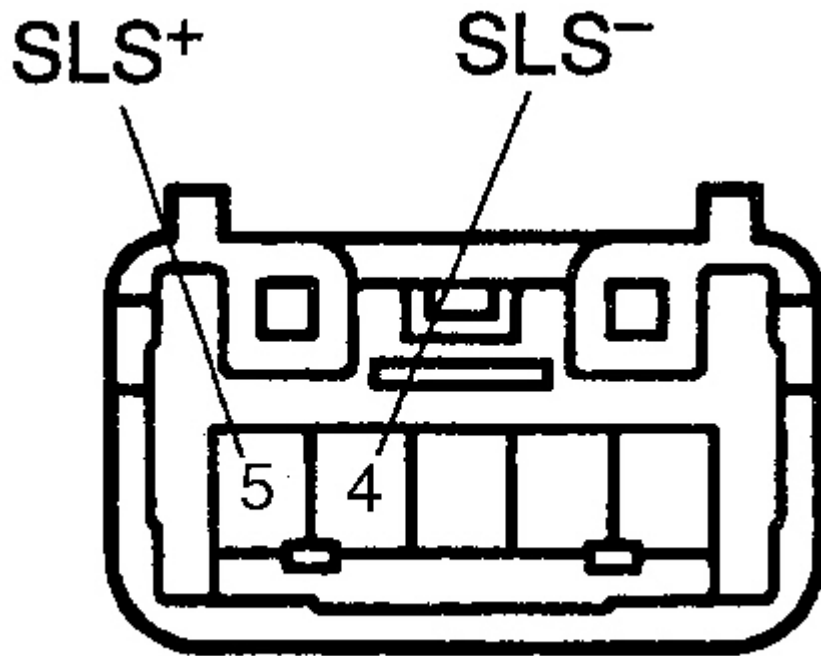
NOTE: For circuit reference, see CONNECTOR IDENTIFICATION and/or WIRING DIAGRAMS.

NOTE: On models not listed, shift interlock solenoid is incorporated in shift interlock ECU. See SHIFT INTERLOCK ELECTRONIC CONTROL UNIT under PIN VOLTAGE TESTS.

Lexus IS300

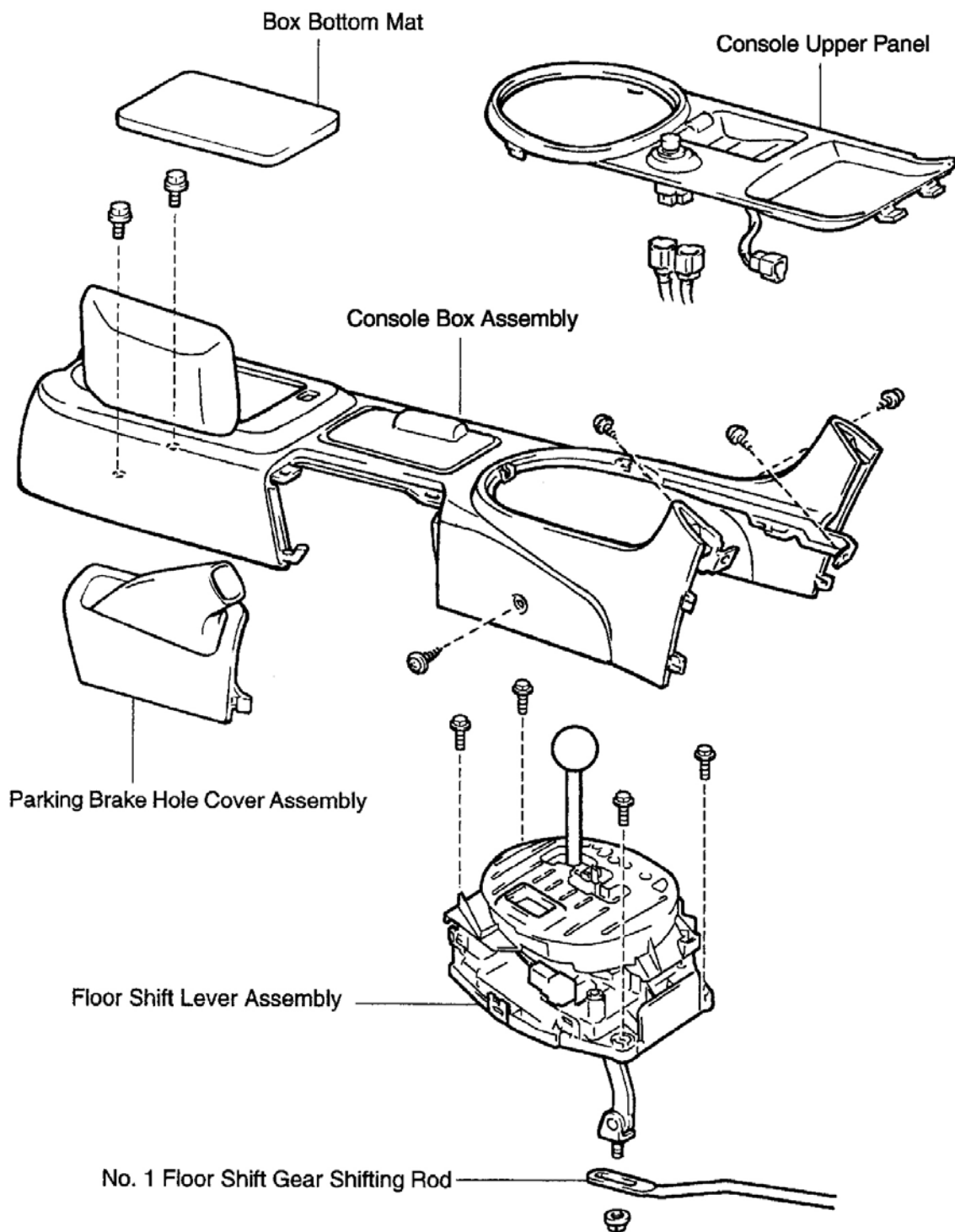
1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 39**. Resistance should be approximately 20-28 ohms. If resistance value is not as specified, replace the solenoid. See **Fig. 40** and **Fig. 41**.
2. Momentarily supply battery positive voltage to terminal No. 5, and ground terminal No. 4. Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See

Fig. 40 and Fig. 41 .



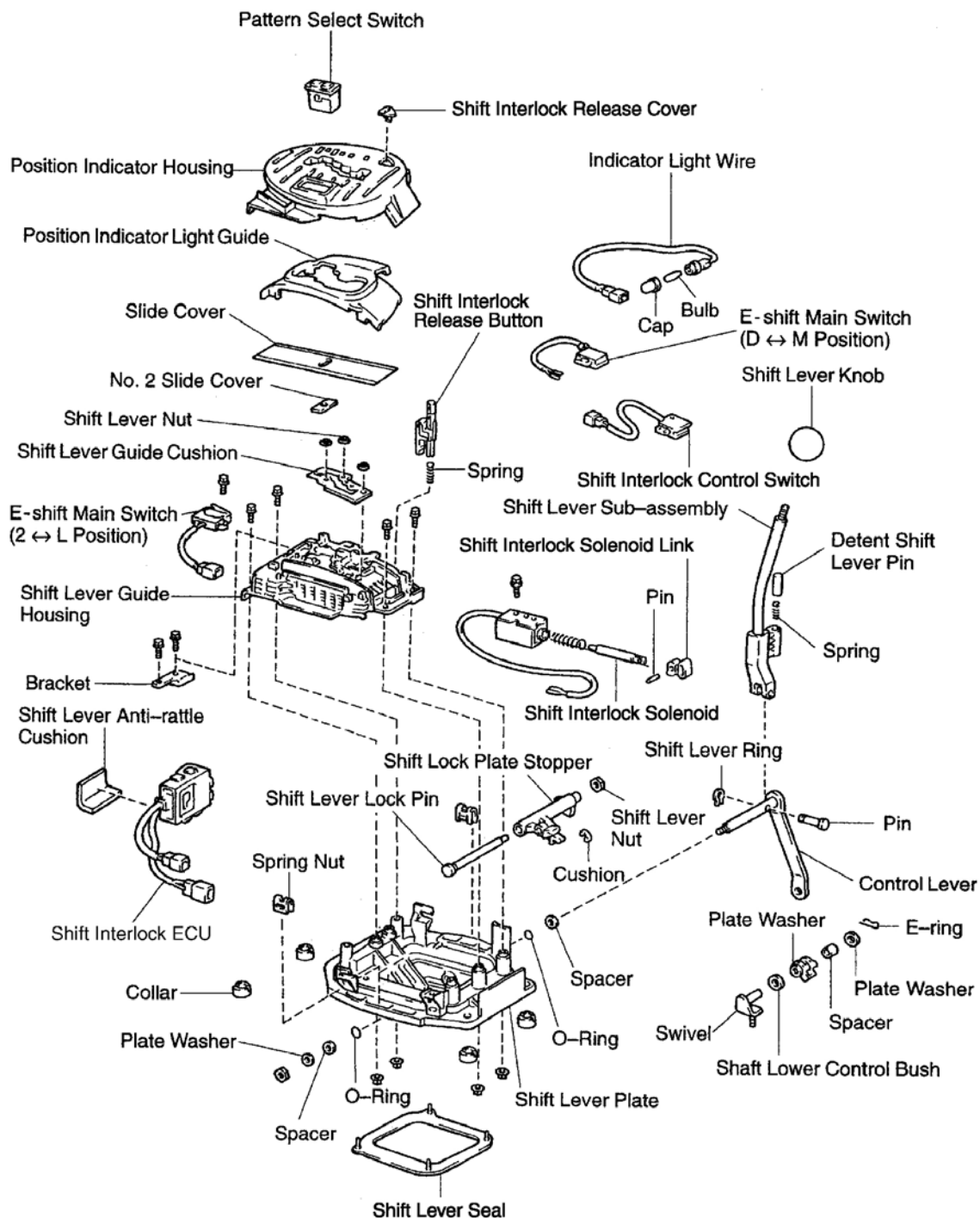
G00139871

Fig. 39: Measuring Resistance At Shift Interlock Solenoid (Lexus IS300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143174

Fig. 40: Exploded View Of Floor Console (Lexus IS300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00139875

Fig. 41: Exploded View Of Floor Shift Control & Related Components (Lexus IS300)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Lexus LX470 & Toyota Land Cruiser

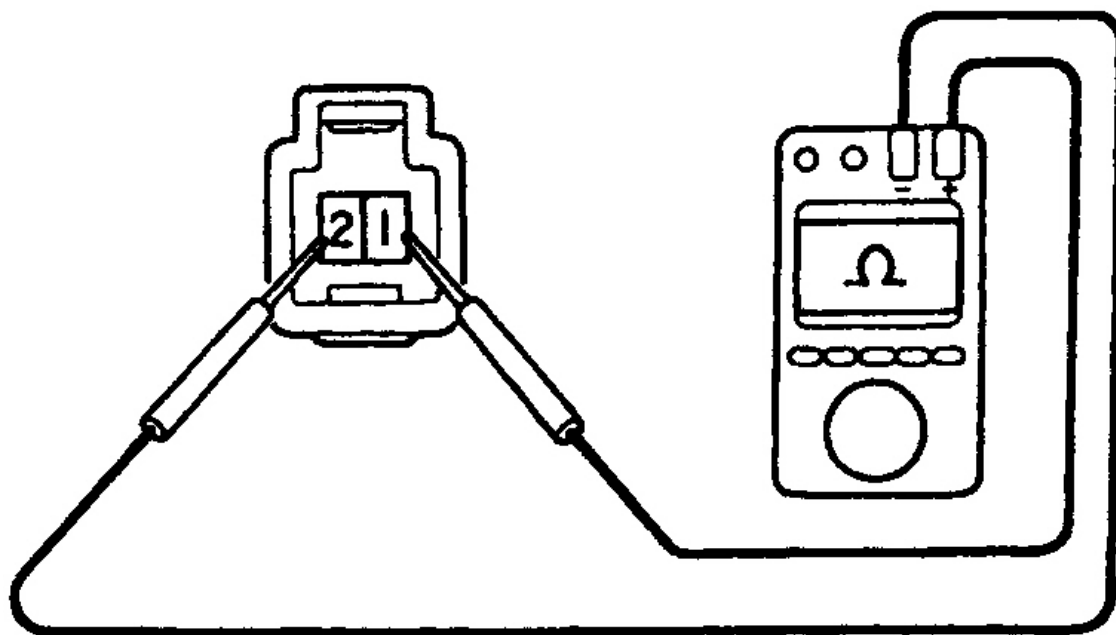
NOTE: Manufacturer does not provide removal and installation information for shift interlock solenoid.

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 123** . Resistance should be approximately 20-28 ohms. If resistance value is not as specified, replace the solenoid. See **Fig. 4** .
2. Momentarily supply battery positive voltage to terminal No. 5, and ground terminal No. 2. Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **Fig. 4** .

Toyota Avalon (Column Shift)

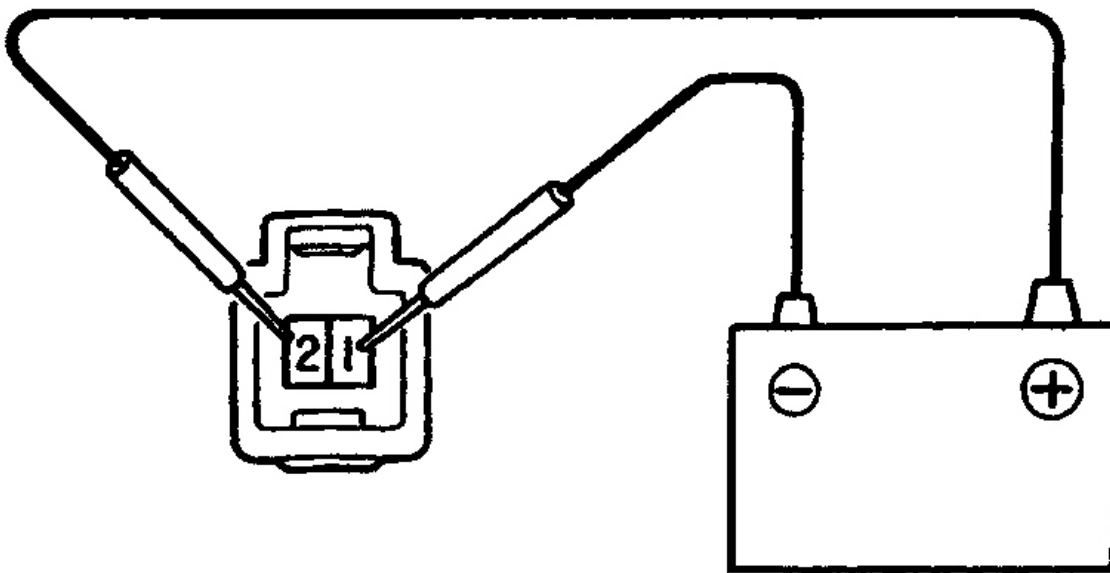
NOTE: **Manufacturer does not provide removal and installation information for shift interlock solenoid.**

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 42** . Resistance should be 29-35 ohms. If resistance value is not as specified, replace the solenoid. See **Fig. 6** .
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 43** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **Fig. 6** .



G00139851

Fig. 42: Measuring Resistance At Shift Interlock Solenoid (Column Shift - Toyota Avalon)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



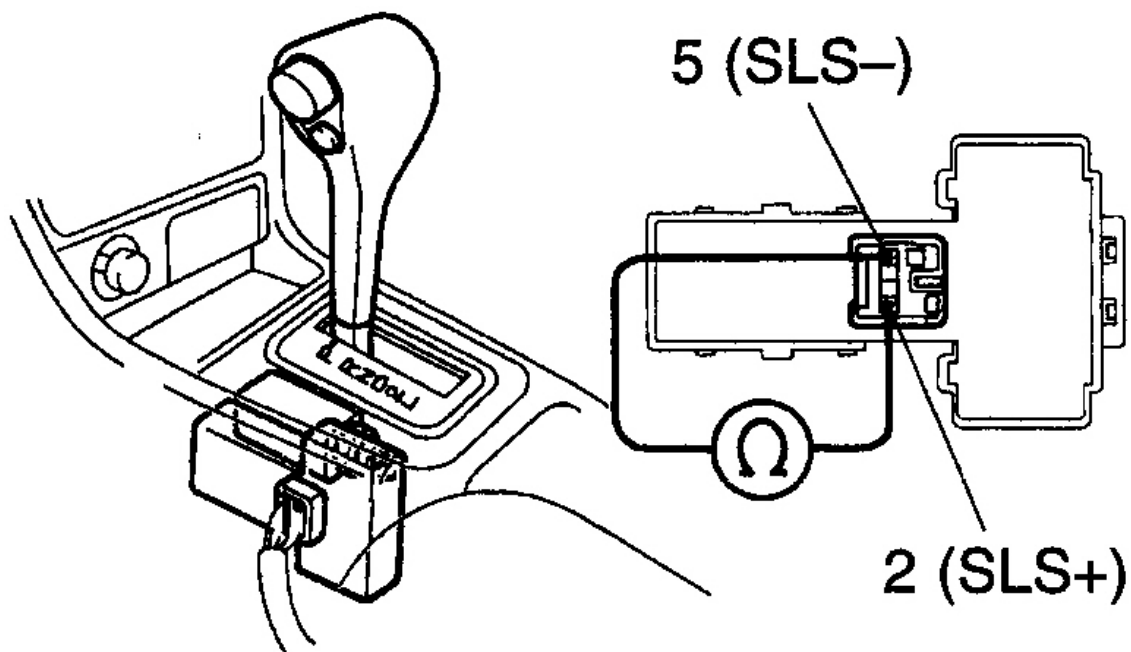
G00139852

Fig. 43: Testing Operation Of Shift Interlock Solenoid (Column Shift - Toyota Avalon)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Toyota Camry Solara

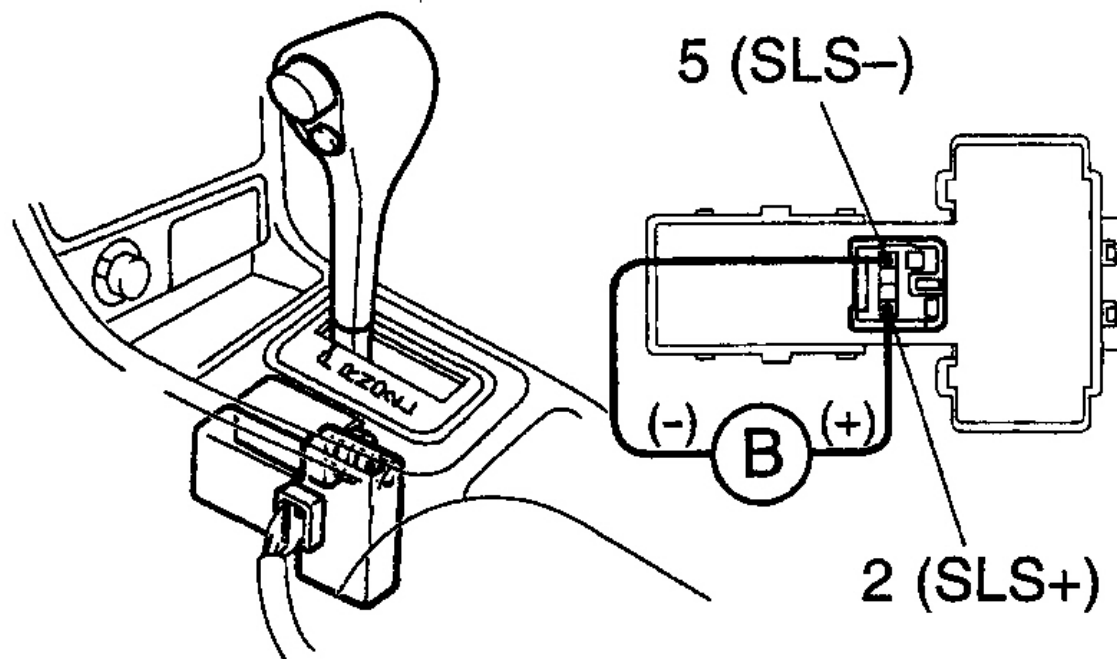
NOTE: **Manufacturer does not provide removal and installation information for shift interlock solenoid.**

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminals. See **Fig. 44** . Resistance should be 29-35 ohms. If resistance value is not as specified, replace the solenoid. See **Fig. 8** .
2. Momentarily supply battery positive voltage and ground at terminals. See **Fig. 45** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **Fig. 8** .



G00139907

Fig. 44: Measuring Resistance At Shift Interlock Solenoid (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

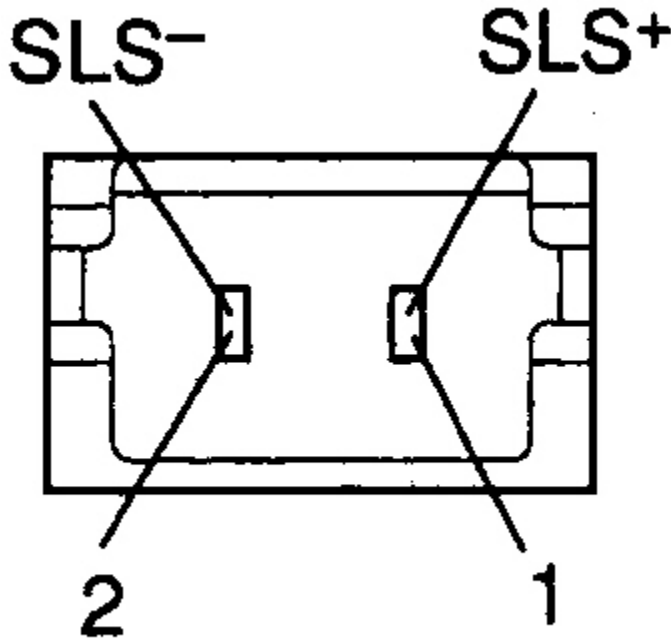


G00139908

Fig. 45: Testing Operation Of Shift Interlock Solenoid (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: Manufacturer does not provide removal and installation information for shift interlock solenoid.

Momentarily supply battery positive voltage and ground at terminals No. 1 and 2. See **Fig. 46** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **Fig. 11** .



G00143146

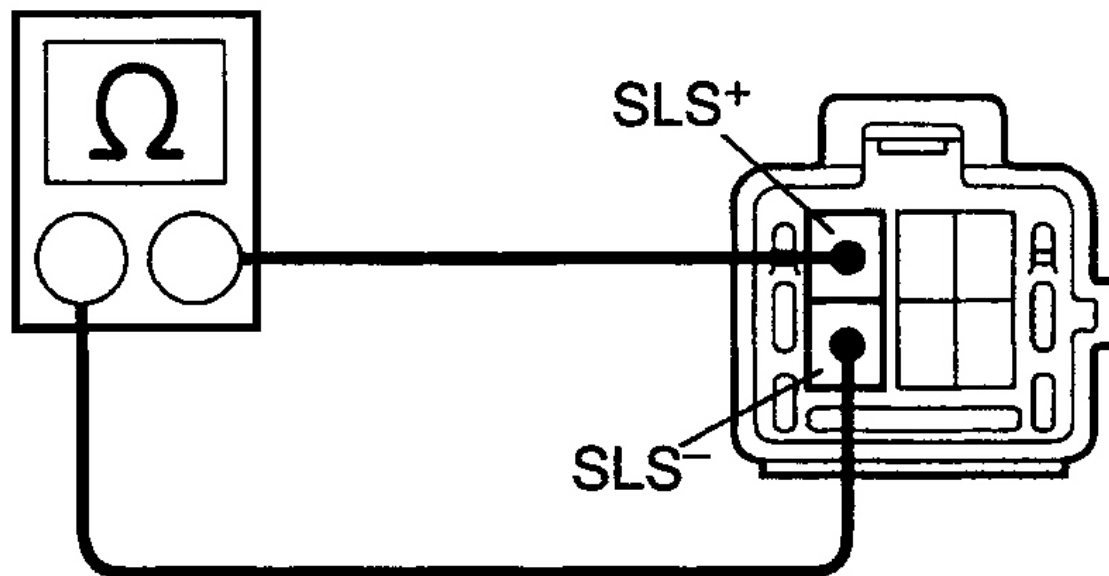
Fig. 46: Testing Operation Of Shift Interlock Solenoid (Toyota ECHO)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Toyota Tacoma

NOTE: Manufacturer does not provide removal and installation information for shift interlock solenoid.

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminal SLS+ and SLS-. See **Fig. 47** . Resistance should be 20-28 ohms. If resistance value is not as specified, replace the solenoid. See **Fig. 13** .
2. Momentarily supply battery positive voltage and ground at terminal SLS+ and SLS-. See **Fig. 48** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **Fig. 13** .

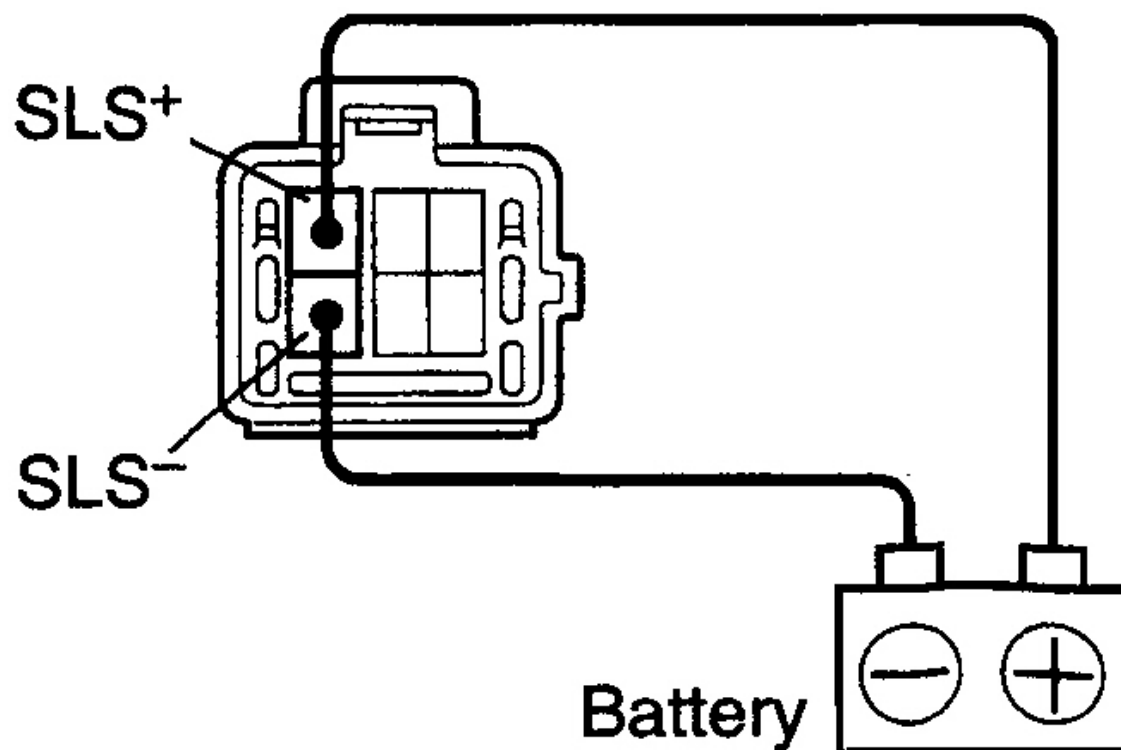
Ohmmeter



G00143185

Fig. 47: Measuring Resistance At Shift Interlock Solenoid (Toyota Tacoma)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



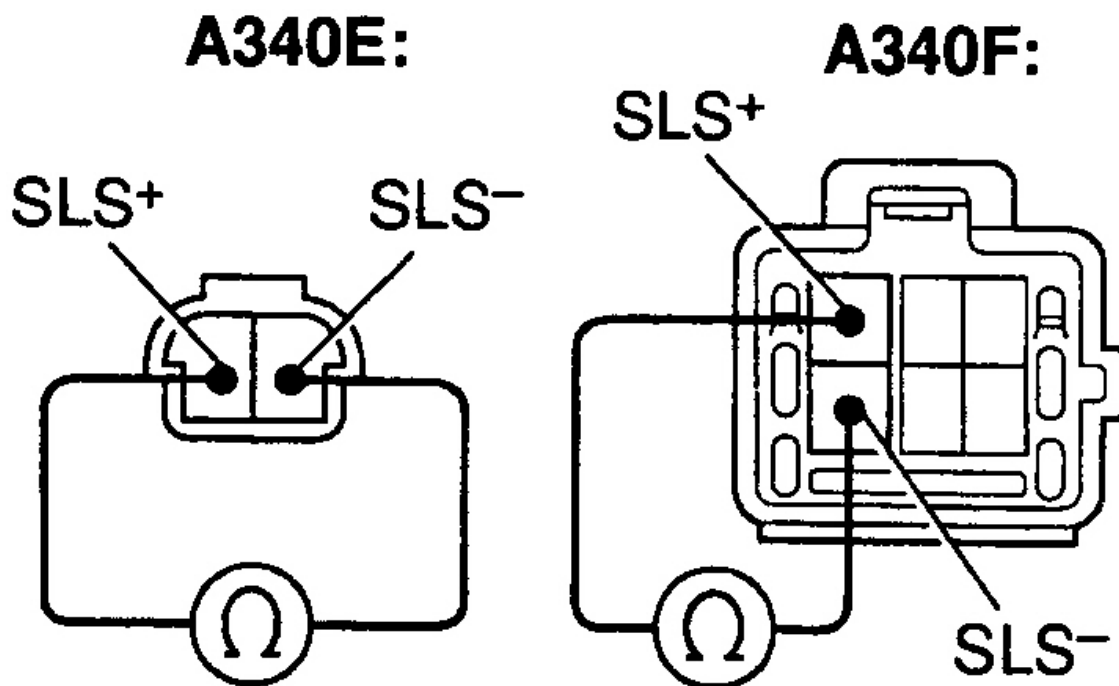
G00143186

Fig. 48: Testing Operation Of Shift Interlock Solenoid (Toyota Tacoma)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

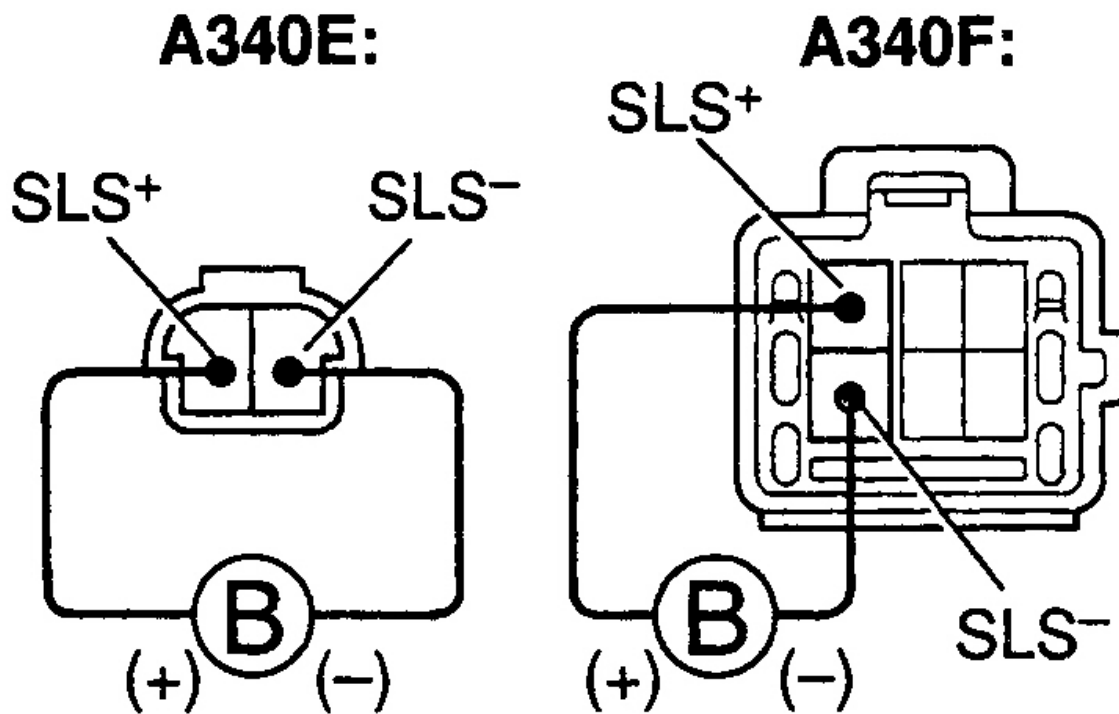
NOTE: Manufacturer does not provide removal and installation information for shift interlock solenoid.

1. Disconnect the solenoid connector. Using an ohmmeter, measure resistance between terminal SLS+ and SLS-. See **Fig. 49** . Resistance should be 21-27 ohms. If resistance value is not as specified, replace the solenoid. See **Fig. 14** .
2. Momentarily supply battery positive voltage and ground at terminal SLS+ and SLS-. See **Fig. 50** . Ensure that an operating noise can be heard from the solenoid. If the solenoid does not operate, replace the solenoid. See **Fig. 14** .



G00143191

Fig. 49: Measuring Resistance At Shift Interlock Solenoid (Toyota 4Runner)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143188

Fig. 50: Testing Operation Of Shift Interlock Solenoid (Toyota 4Runner)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

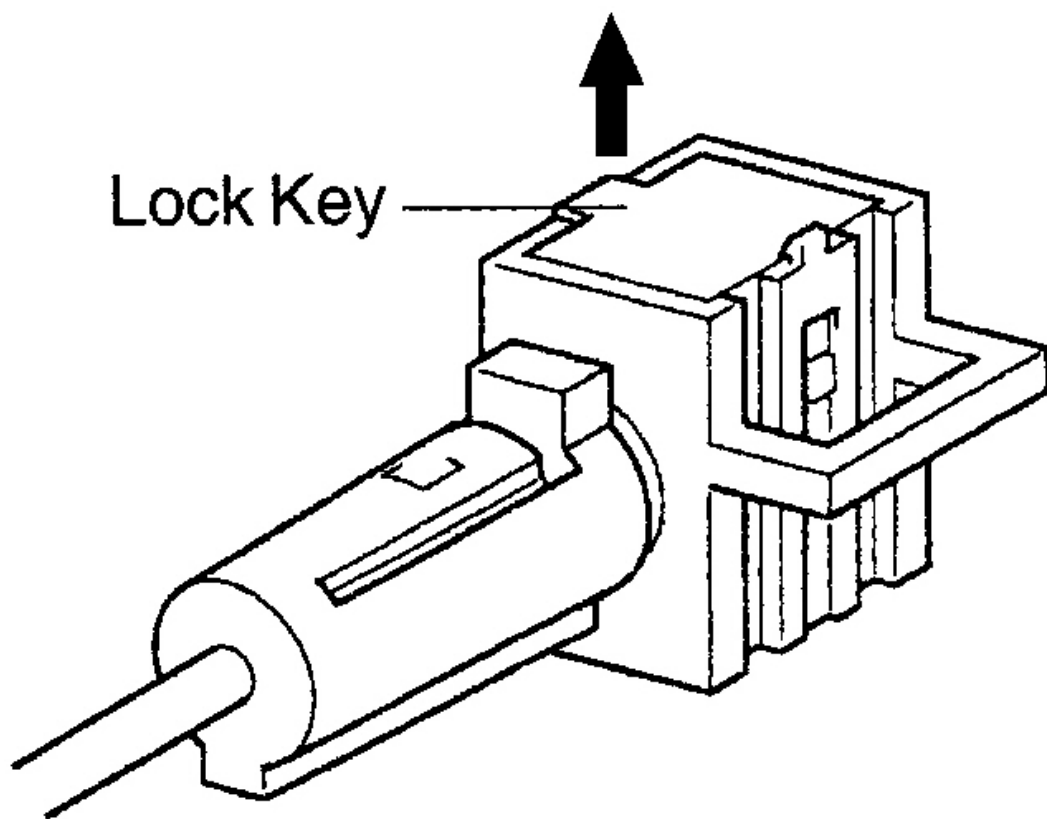
ADJUSTMENTS

SHIFT INTERLOCK CABLE

NOTE: Not used on all models.

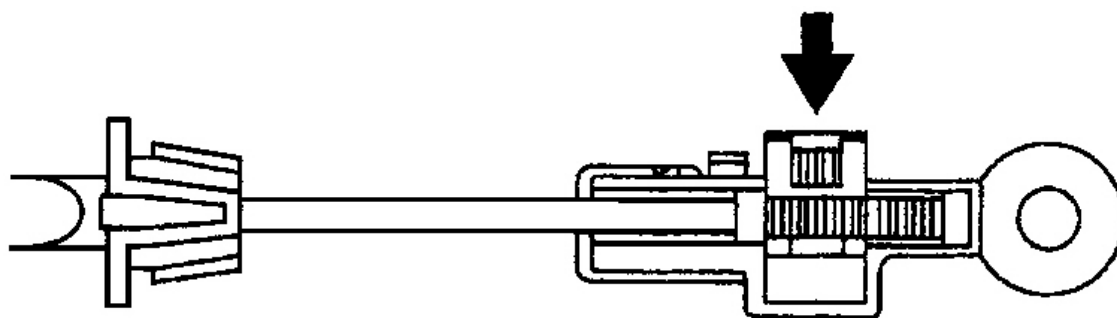
Lexus ES300

Access floor shift control assembly, see **SHIFT INTERLOCK CABLE** under REMOVAL & INSTALLATION. Using a screwdriver, unlock the claw of the automatic adjuster. See **Fig. 51** . Place the gearshift lever into Park and turn the ignition to the OFF position. Push the lock key down to complete the adjustment. See **Fig. 52** . Install console and related trim.



G00139862

Fig. 51: Unlocking Automatic Cable Adjuster Claw (Lexus)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

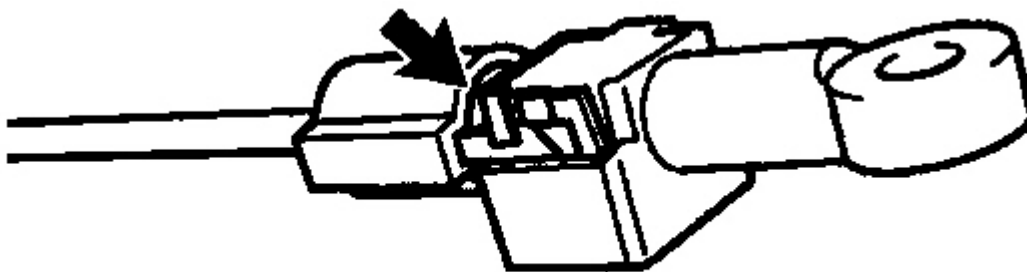


G00139863

Fig. 52: Locking Shift Interlock Cable Adjuster (Lexus)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

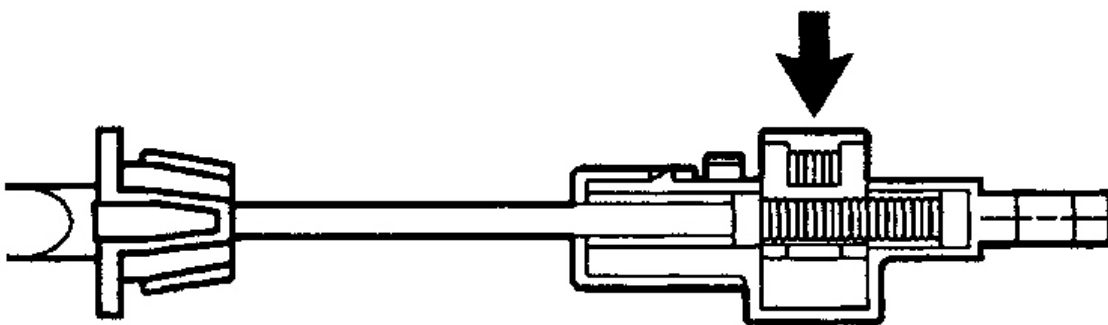
Toyota Camry

Access floor shift control assembly, see **SHIFT INTERLOCK CABLE** under REMOVAL & INSTALLATION. Using a screwdriver, unlock the claw of the automatic adjuster. See **Fig. 53** . Ensure gearshift lever is in Park position and ignition is in the Lock position. Push down on the locking claw. See **Fig.**



G00139898

Fig. 53: Unlocking Automatic Cable Adjuster Claw (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

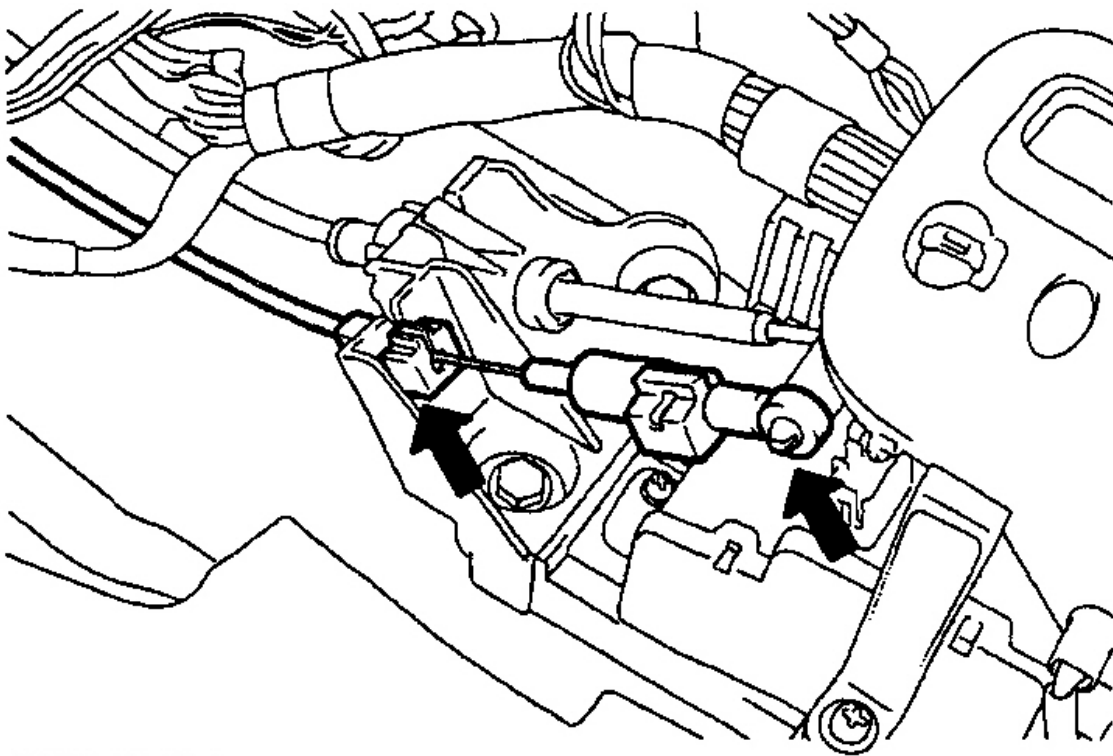


G00139900

Fig. 54: Locking Shift Interlock Cable Adjuster (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

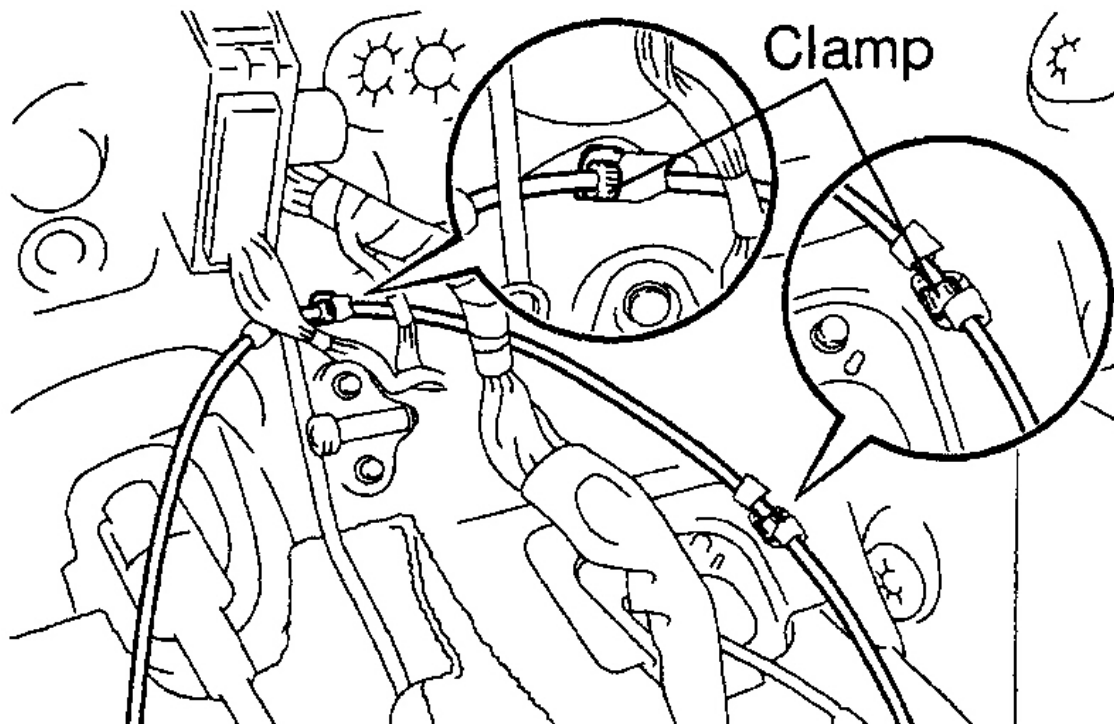
Toyota Celica

1. Remove floor console and related components as necessary. See **SHIFT INTERLOCK CABLE** under REMOVAL & INSTALLATION. Remove the park interlock cable end from the rod of the floor shift assembly. See **Fig. 55** .
2. Pull the cable out of the floor shifter while pressing the clip of the park interlock cable. Remove the cable clamps from the cable. See **Fig. 56** . Place the ignition in the Neutral position. Remove cable from the ignition switch assembly. See **Fig. 57** . Using a screwdriver, unlock the claw on the key lock of the automatic adjuster. See **Fig. 58** .
3. Install the cable into the cable clamps. Place the ignition in the ACC position. Install the cable into the ignition switch assembly. Place ignition in the Neutral position, install cable to floor shifter. Snap down the cable adjuster claw. Ensure the key lock is in contact with the cam stopper. See **Fig. 59** . Check system operation. Install floor console components as necessary.



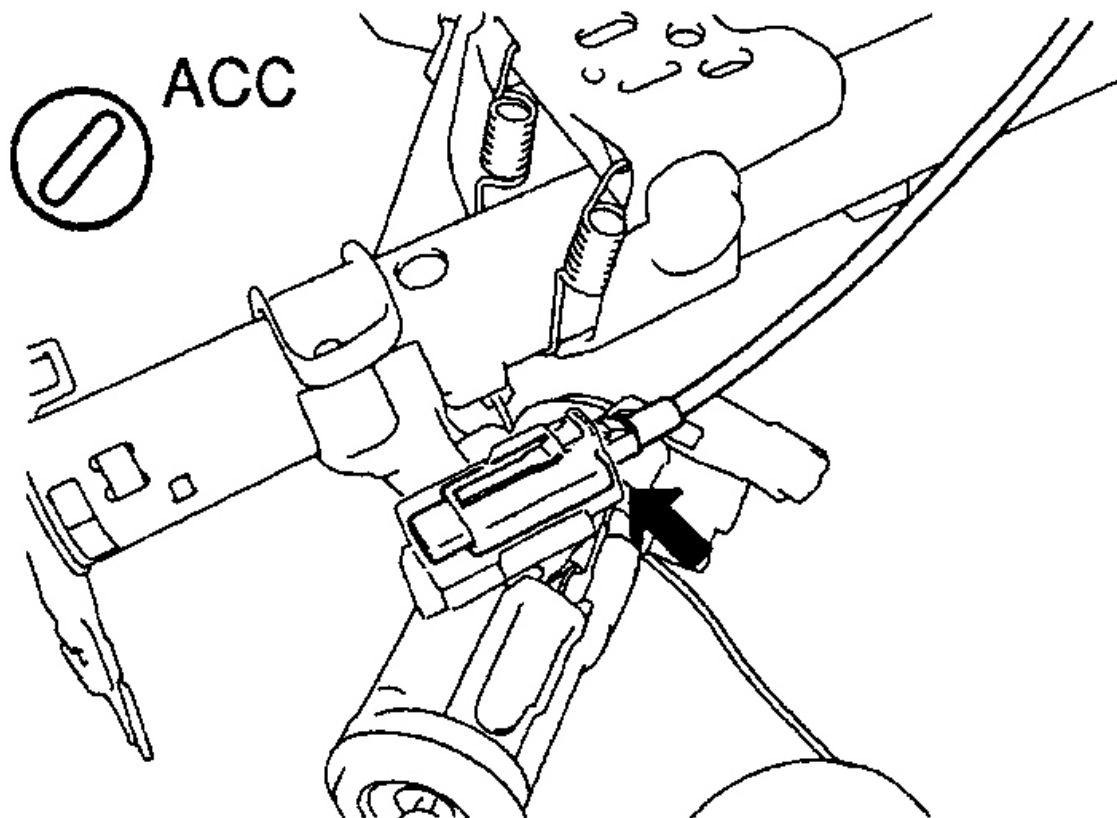
G00143127

Fig. 55: Removing & Installing Shift Interlock Cable At Floor Shift Assembly (Toyota Celica)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



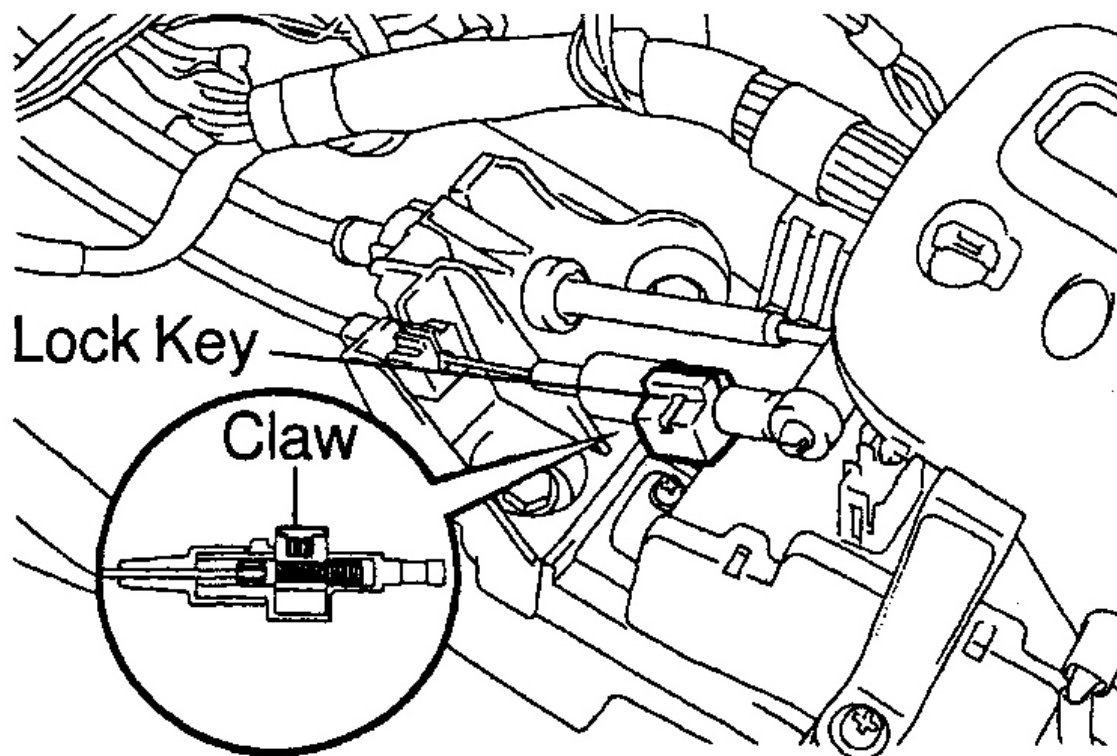
G00143129

Fig. 56: Removing & Installing Shift Interlock Cable & Clamps (Toyota Celica)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



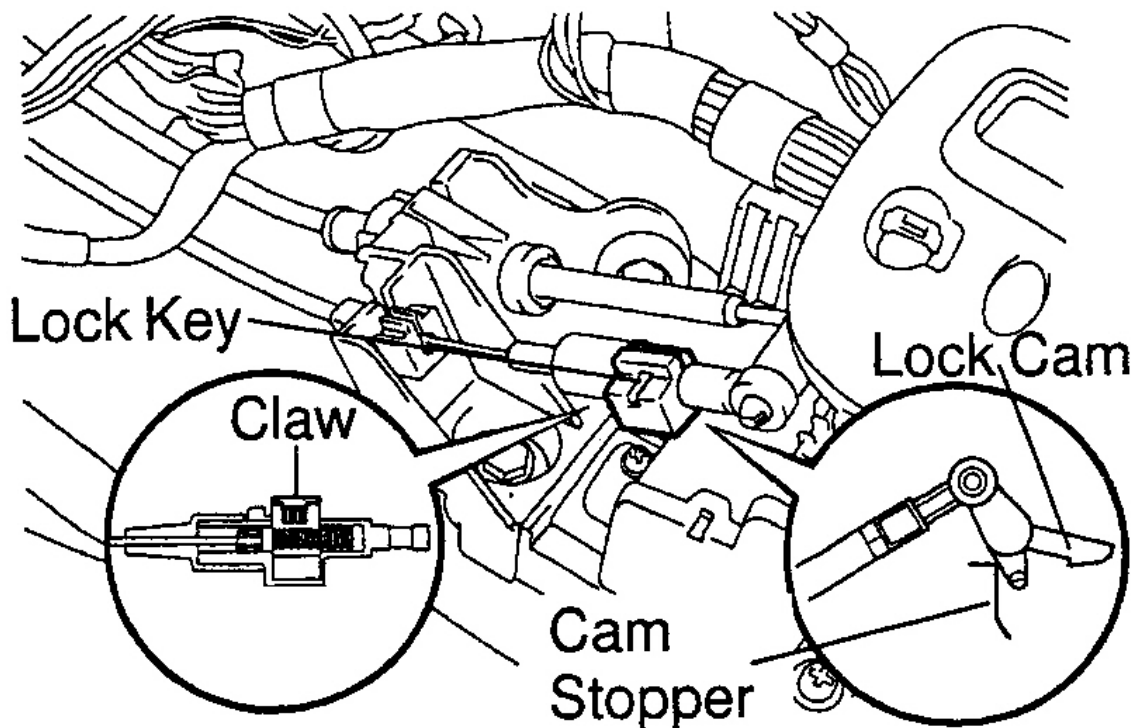
G00143130

Fig. 57: Removing & Installing Shift Interlock Cable At Ignition Switch Assembly (Toyota Celica)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143126

Fig. 58: Unlocking Shift Interlock Cable Claw (Toyota Celica)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143131

Fig. 59: Checking For Proper Shift Interlock Cable Adjustment (Toyota Celica)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Toyota (Sequoia, Sienna & Tundra)

Place gearshift lever in Park position. Turn ignition switch to LOCK position. Loosen 2 bolts and ensure pedal button touches pedal plate cushion. See **Fig. 79** or **Fig. 80** . Tighten 2 bolts to specification. See **TORQUE SPECIFICATIONS** .

REMOVAL & INSTALLATION

WARNING: Vehicle is equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See AIR BAG DEACTIVATION PROCEDURES article in GENERAL INFORMATION.

CAUTION: When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION before disconnecting battery.

KEY INTERLOCK SOLENOID

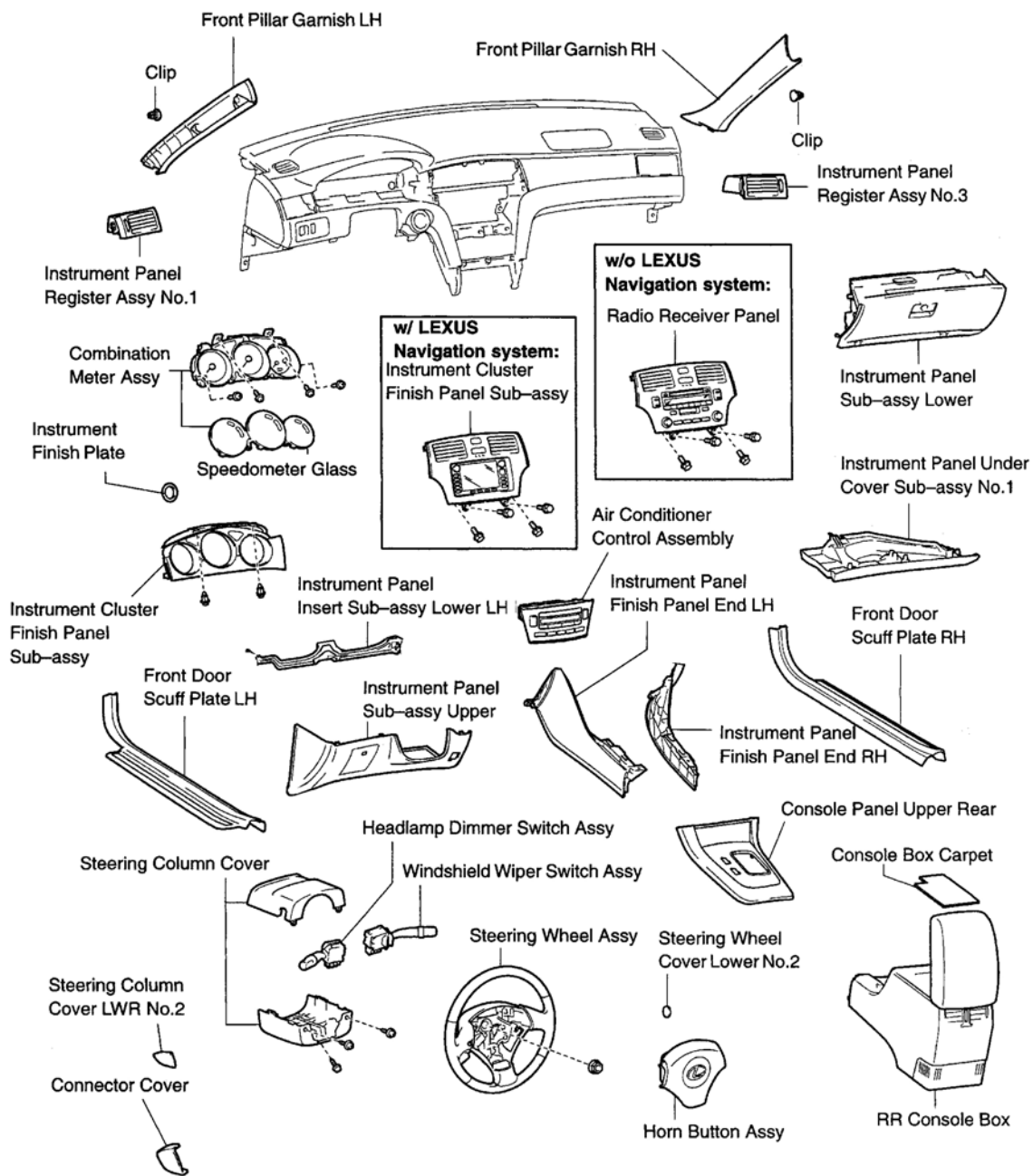
NOTE: Key interlock solenoid removal and installation procedures are not available from manufacturer. See Fig. 1 -Fig. 14 for locations of system components.

SHIFT INTERLOCK CABLE

NOTE: Not used on all models.

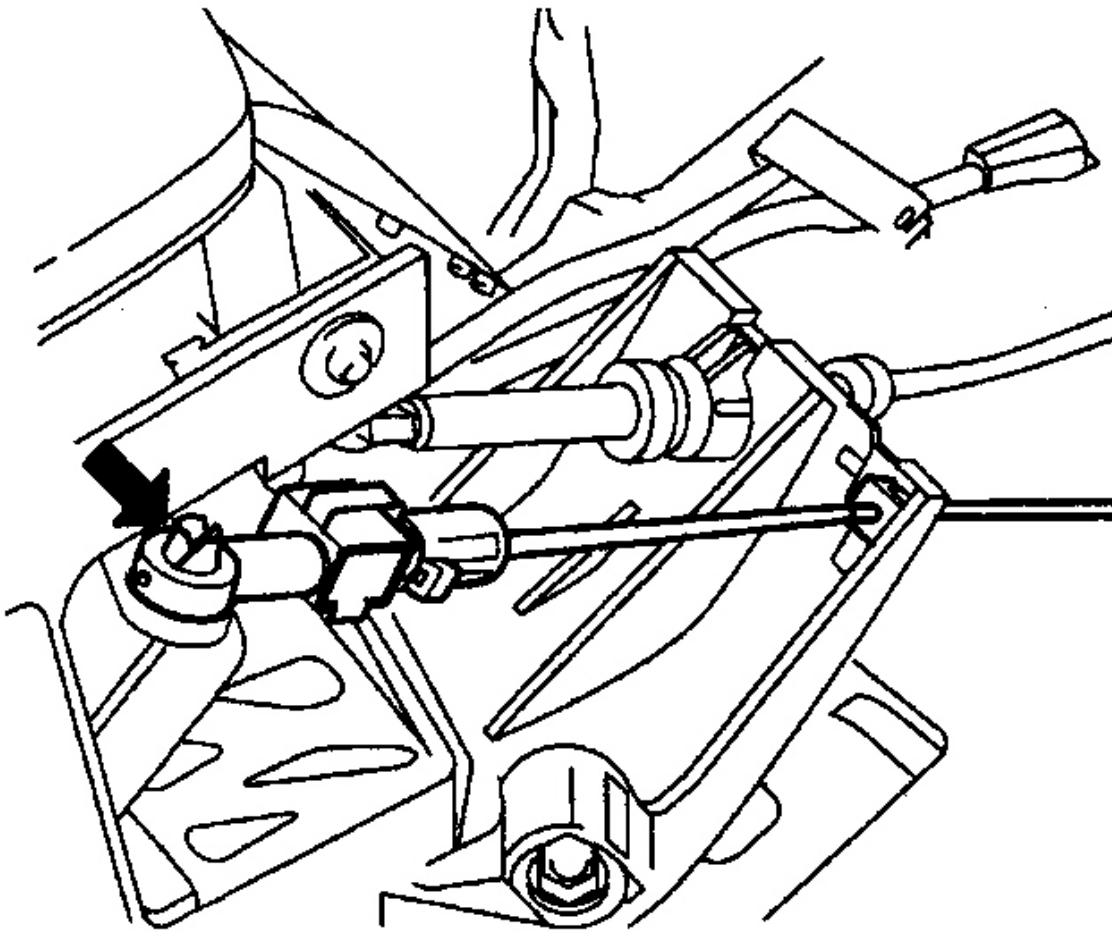
Removal & Installation (Lexus ES300)

1. Disconnect the battery. Remove all necessary trim and console covers. See Fig. 60 . Disconnect shift interlock cable end from the lever pin of the floor shift assembly. See Fig. 61 .
2. Using a screwdriver, disconnect the shift interlock cable from the floor shift assembly and clamp. See Fig. 62 . Turn ignition to ACC or ON position.
3. Using a screwdriver, remove the cable from the upper bracket. See Fig. 63 .
4. To install, ensure the ignition is in the ACC or ON position. Connect the cable to the cable bracket and install the clamp.
5. Place the gearshift lever into Park and turn the ignition to the OFF position. To adjust, see SHIFT INTERLOCK CABLE under ADJUSTMENTS.
6. Insert the shift interlock cable through the floor shift bracket and snap into place. See Fig. 62 . Insert the lever pin into the hole of the shift interlock cable. Install all trim and console covers. See Fig. 60 .



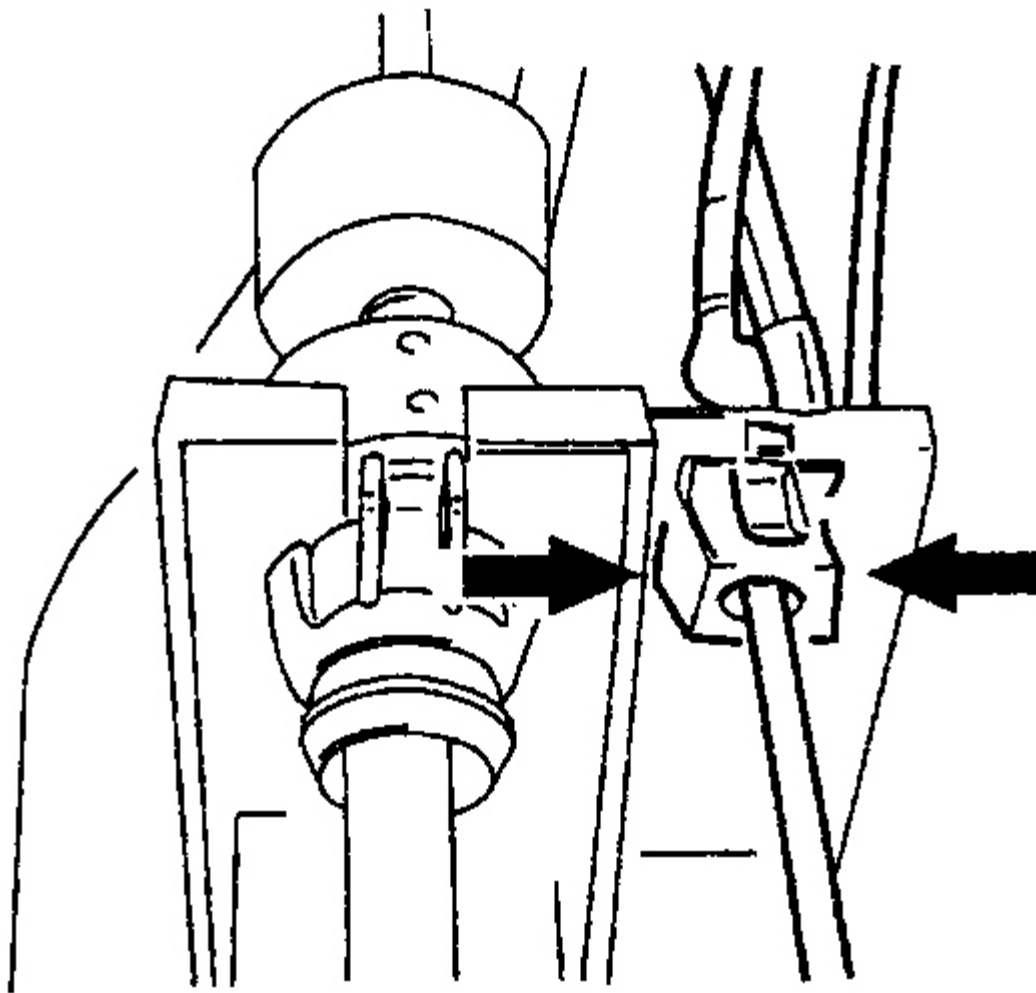
G00139858

Fig. 60: Accessing Center Console & Related Components (Lexus ES300)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



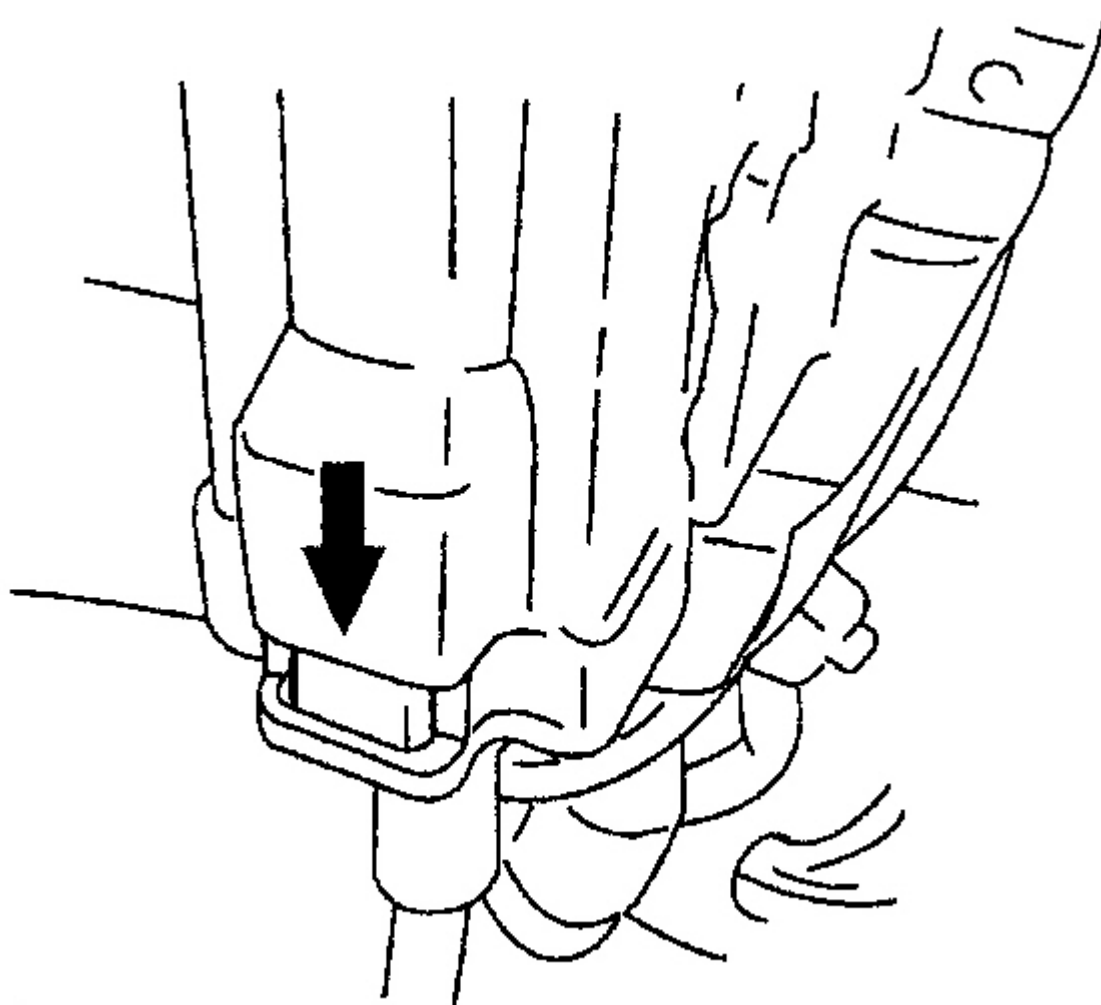
G00139861

Fig. 61: Removing & Installing Shift Interlock Cable At Shift Lever Pin (Lexus ES300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00139859

Fig. 62: Removing & Installing Shift Interlock Cable & Clamp (Lexus ES300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00139860

Fig. 63: Removing Shift Interlock Cable From Bracket (Lexus ES300)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

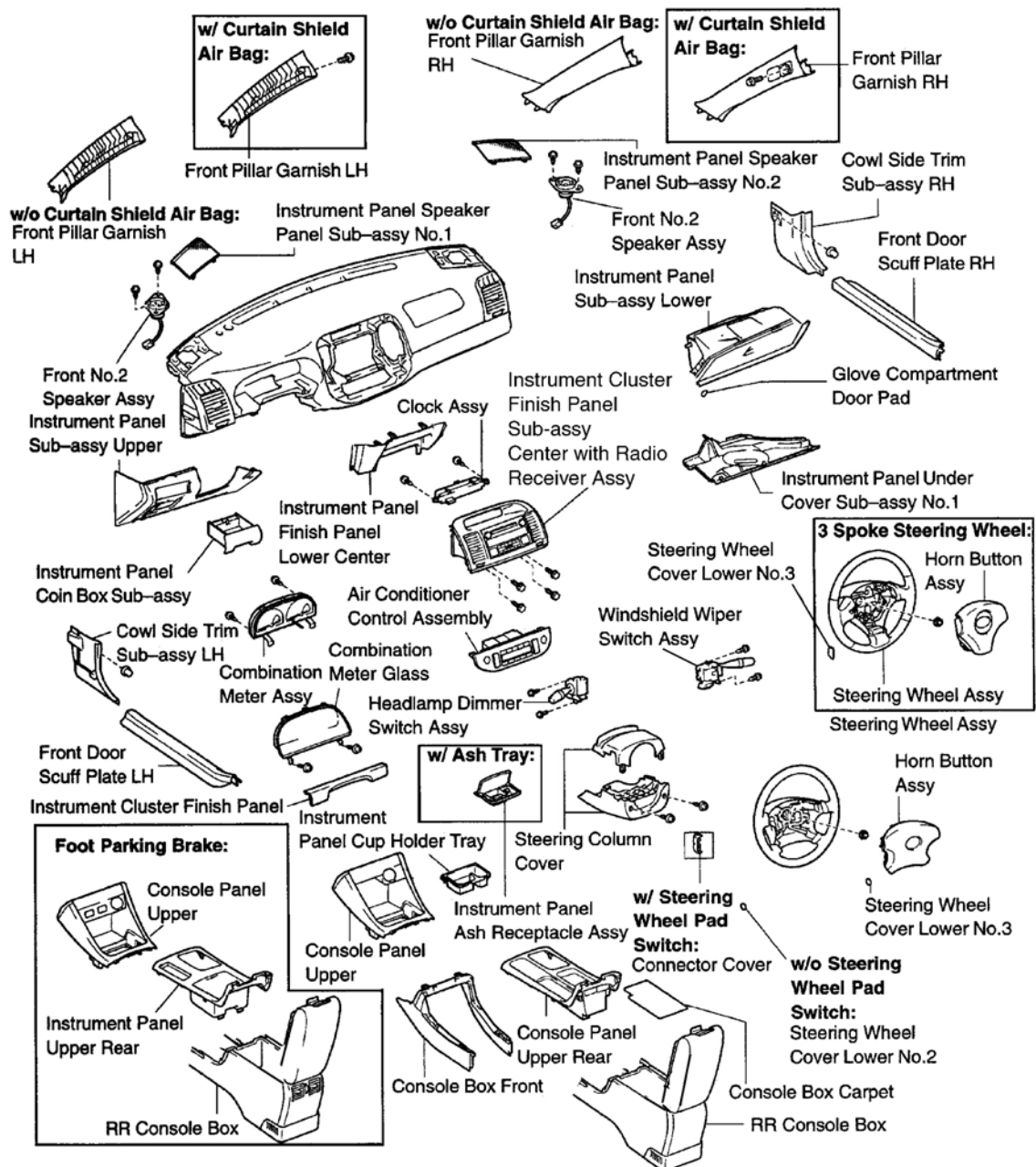
Removal & Installation (Toyota Camry)

NOTE: Special tools needed: TMC 33693-33010 or TMMK 33693-06010.

1. Remove all necessary instrument panel, steering column and console trim to access floor shift assembly. See **Fig. 64** .
2. Disconnect the parking lock cable end from the lever pin of the floor shift assembly. See **Fig. 65** . Using a screwdriver, disconnect the parking lock cable from the floor shift assembly and clamp. See **Fig. 66** . Disconnect the cable clamp. See **Fig. 67** .
3. Turn the ignition switch to ACC or ON position. Using a screwdriver, remove the cable from the upper bracket. See **Fig. 68** .
4. To install, connect the cable to the upper bracket. See **Fig. 68** . Connect the cable clamp. See **Fig. 67** . Insert the slide cap into the through hole and install. Shift the shift lever to Park position and turn the

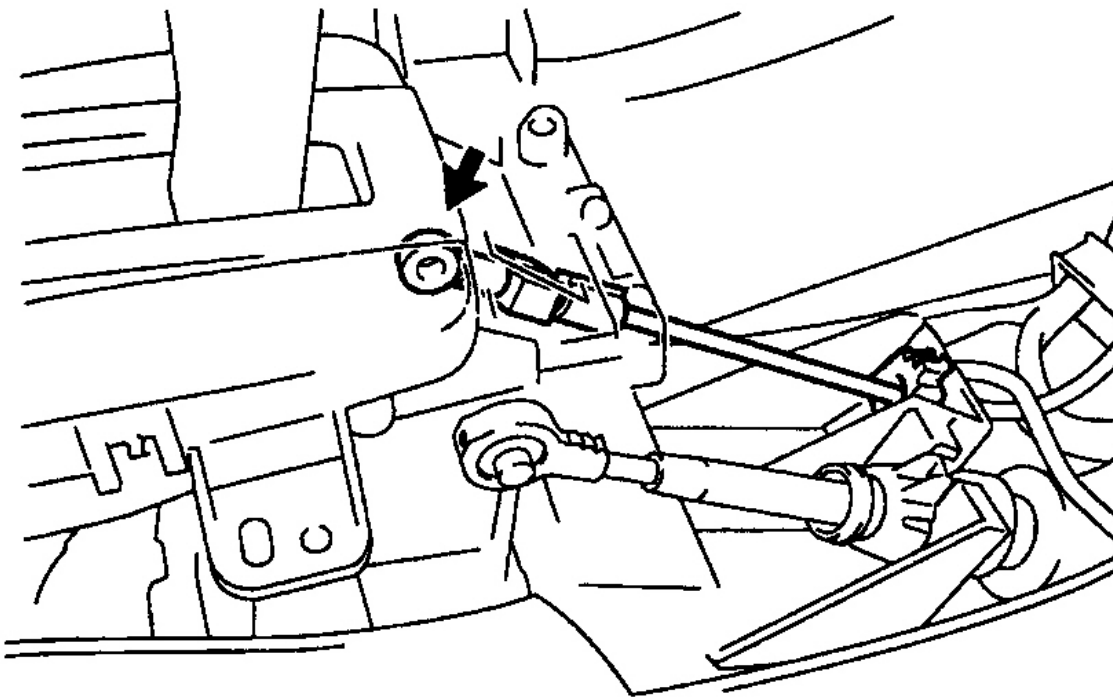
ignition switch to Lock position.

5. For TMC made floor shift control, use Tool No. 33693-33010 and place the gearshift lever in the Park position. Set the tool into position. See **Fig. 69** .
6. For TMMK made floor shift control, use Tool No. 33693-06010 and place the gearshift lever in the neutral position. Set the tool into position. See **Fig. 69** .
7. Adjust the shift interlock cable. See **SHIFT INTERLOCK CABLE** under ADJUSTMENTS. Install console, steering and instrument panel trim.



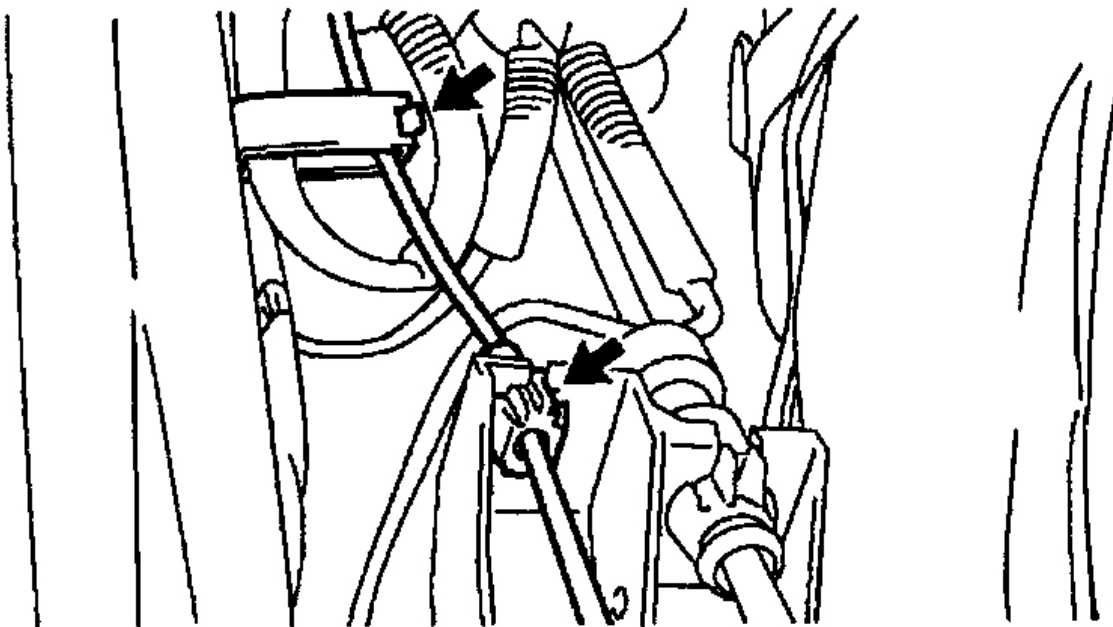
G00143155

Fig. 64: Exploded View Of Instrument Panel & Console Components (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



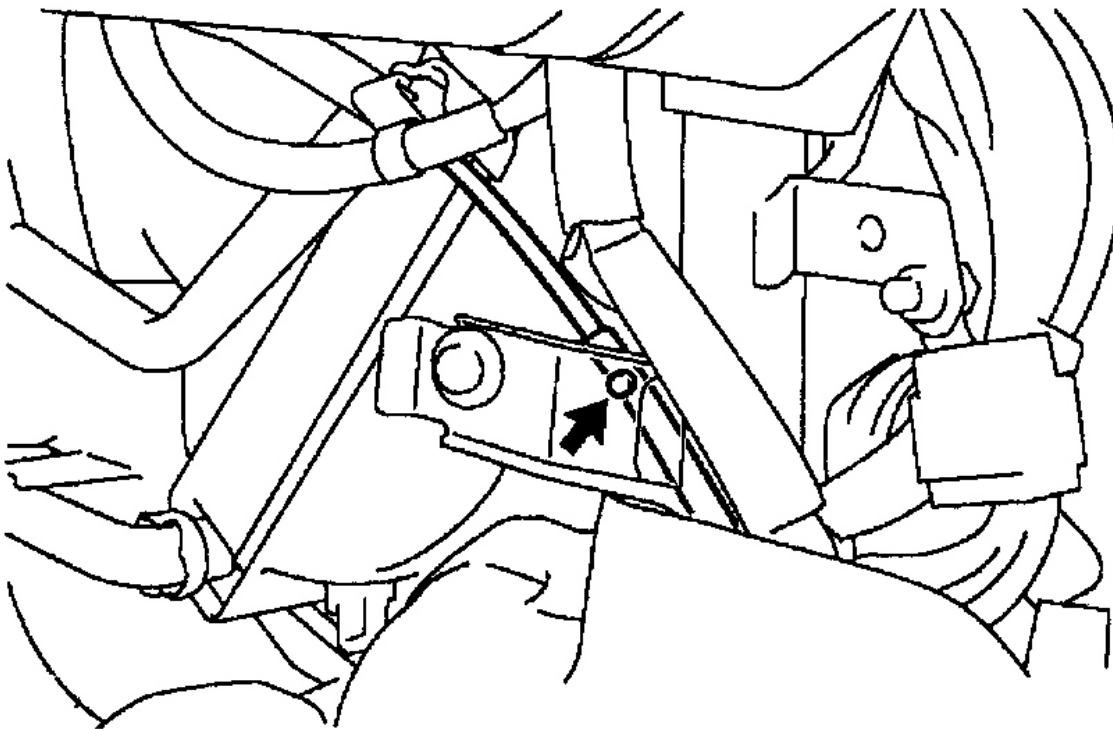
G00139899

Fig. 65: Removing & Installing Shift Interlock Cable From Lever Pin (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



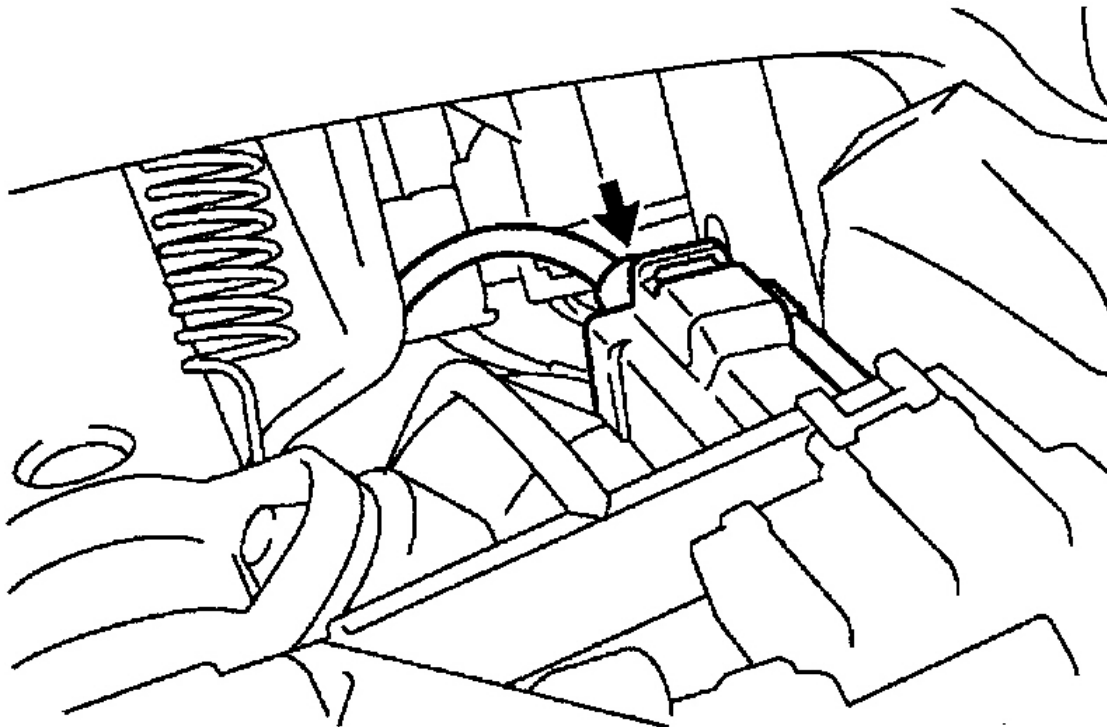
G00139901

Fig. 66: Removing & Installing Shift Interlock Cable At Floor Shift Control (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00139902

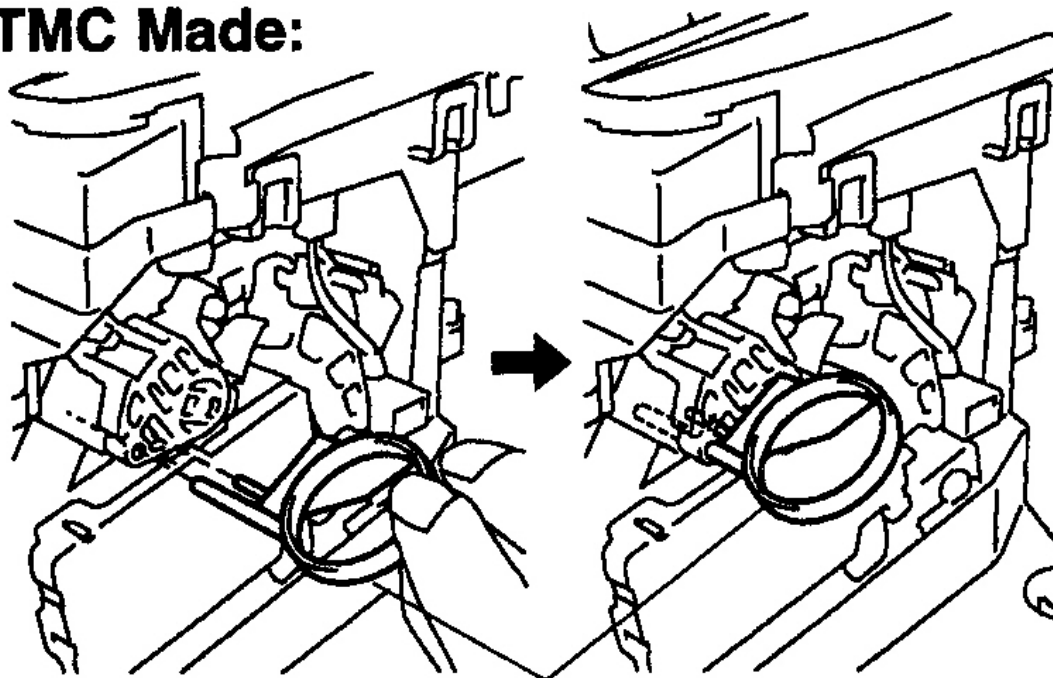
Fig. 67: Disconnecting & Connecting Shift Interlock Cable Clamp (Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00139903

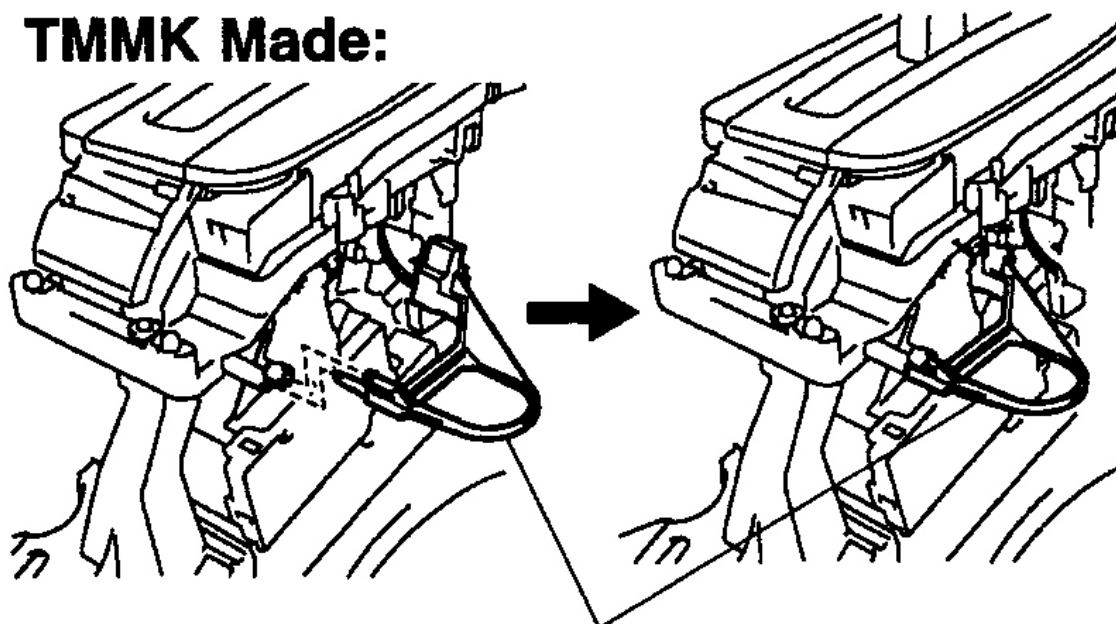
Fig. 68: Removing & Installing Shift Interlock Cable At Upper Bracket (Toyota Camry)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TMC Made:



Accessory tool

TMMK Made:



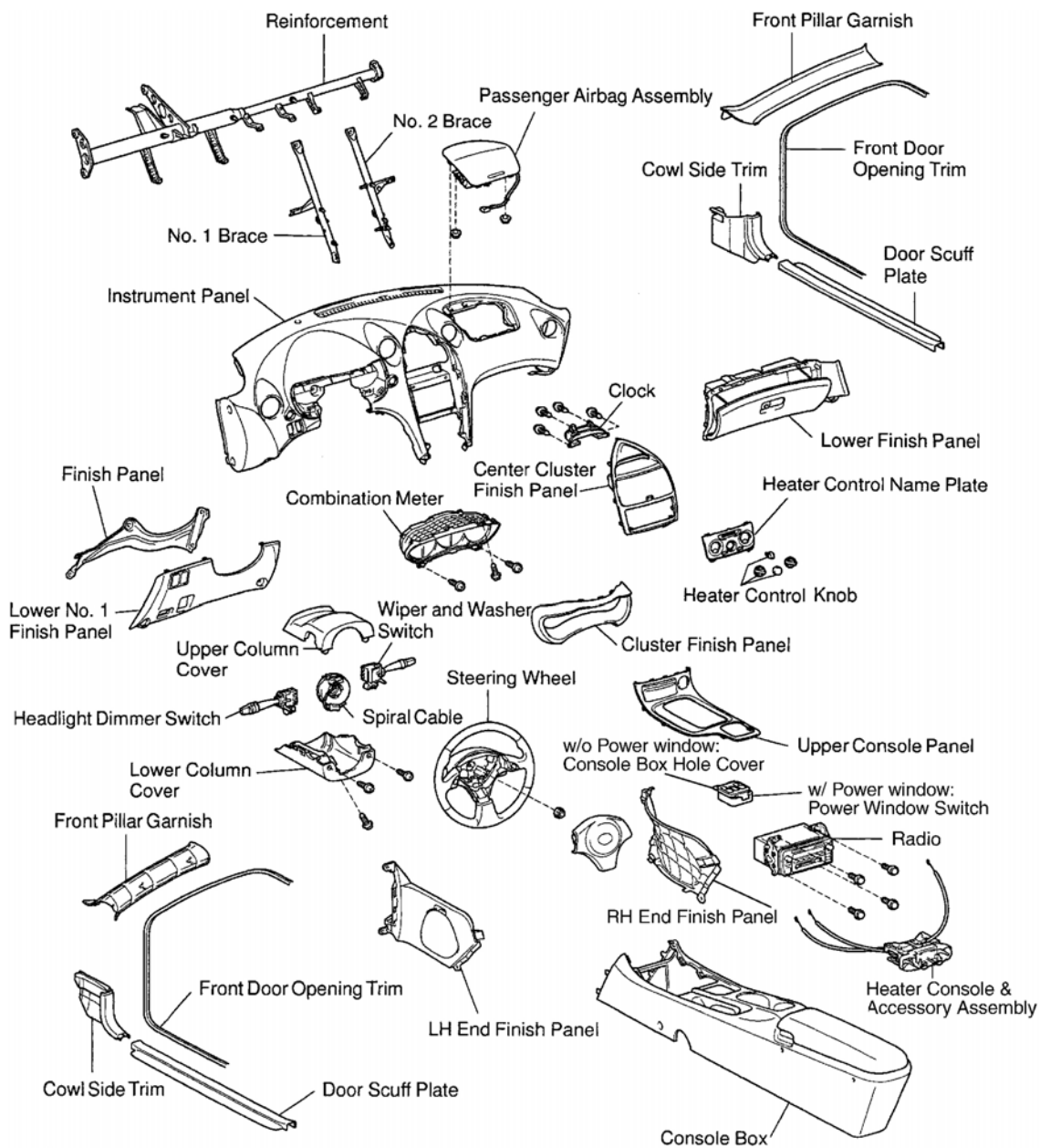
Accessory tool

G00139904

Fig. 69: Installing Special Park Lock Tools On Floor Shift Control (Toyota Camry)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

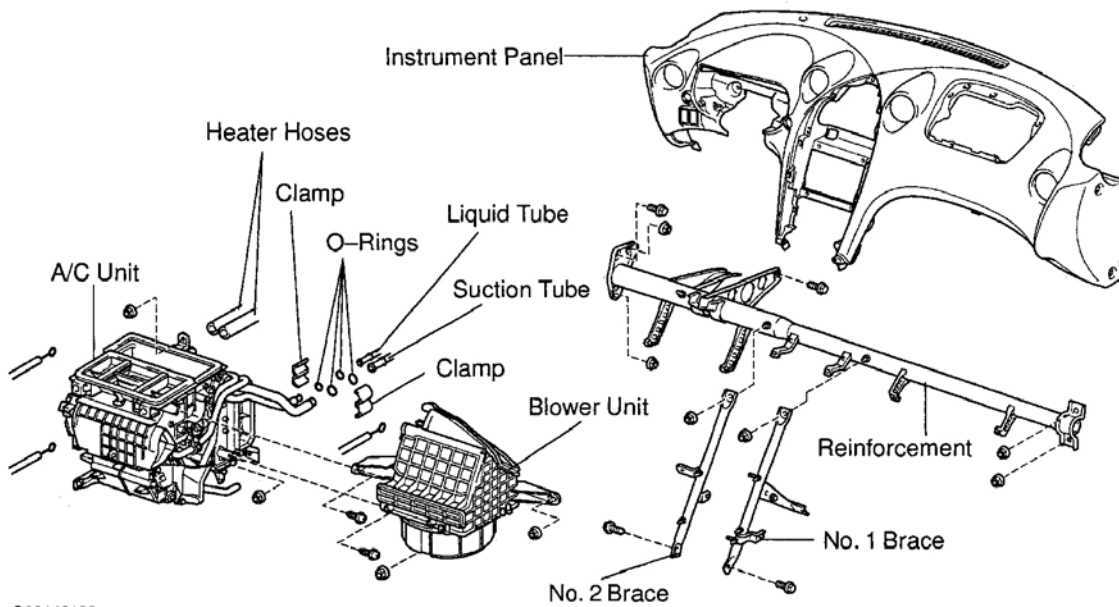
NOTE: Not all the components in the figures below may need to be removed.

1. Remove the floor console, instrument panel and the air conditioning unit as necessary. See **Fig. 70** and **Fig. 71** . Remove the cable end from the rod of the floor shift assembly. Pull out the cable while pressing the clip of the park interlock cable. See **Fig. 72** .
2. Turn ignition to ACC. Remove the cable cap claw from the key interlock and pull it. See **Fig. 57** . Disconnect the 2 park interlock cable clamps. See **Fig. 56** . Disconnect the 2 connectors. Disconnect the 2 wire harness clamps from the floor shift assembly.
3. Remove the cable end from the rod of the floor shift assembly. See **Fig. 55** . Pull out the cable while pressing the clip of the transaxle control cable. Remove the floor shifter if necessary for cable access.
4. To assemble, install floor shifter if removed and tighten to specification. See **TORQUE SPECIFICATIONS** . Pass the key interlock cable end through the hole in the floor shift assembly. With the shift lever in Neutral position, set the hole of the cable end to the floor shift assembly to assemble.
5. Turn ignition to ACC. Push the claw into lock key. See **Fig. 59** . At this time, be careful not to apply undue force on bending to the cable. Adjust cable. See **SHIFT INTERLOCK CABLE** under ADJUSTMENTS.
6. Ensure the key lock cam is contact with the cam stopper. See **Fig. 59** . Turn ignition to ACC. Install the cable to the key interlock. See **Fig. 57** . Connect the 2 key interlock cable clamps. Pull in the cable while pressing the clip of the key interlock cable.
7. Ensure ignition turns from ACC to LOCK only when the gearshift lever is in the Park position. Ensure the ignition will not turn to LOCK when the gearshift lever is in any position other than Park. When the ignition key is in LOCK, ensure that pressing the shift release button wont allow the gearshift lever to move. Install the floor console, air conditioning unit and the instrument panel. See **Fig. 70** and **Fig. 71** .



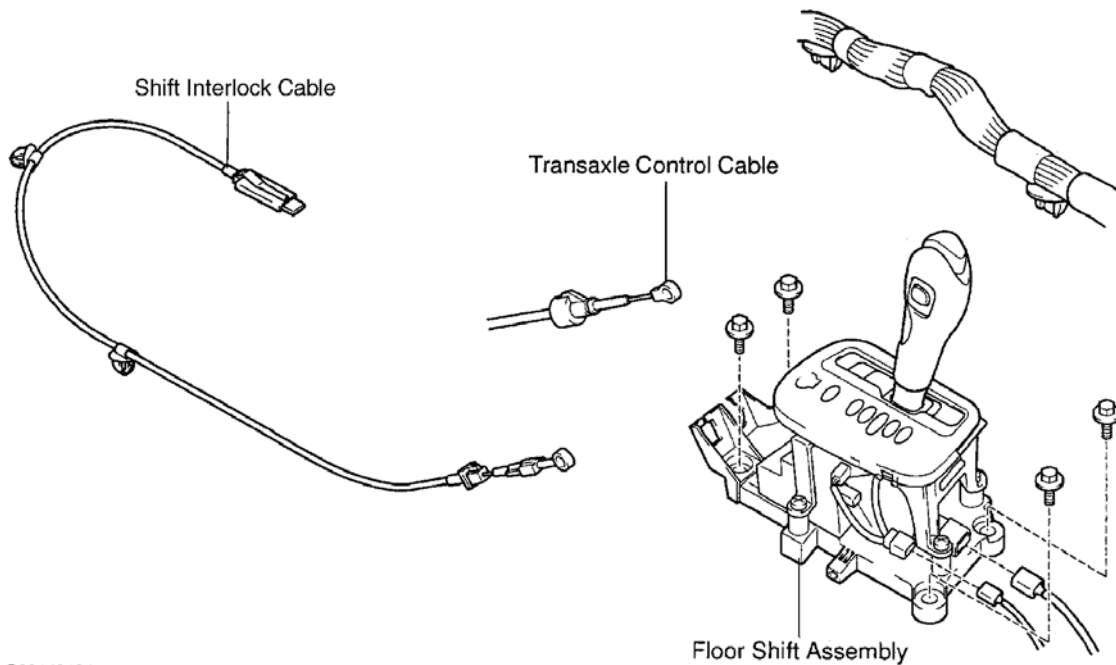
G00143132

Fig. 70: Exploded View Of Console, Instrument Panel & Related Components (Toyota Celica)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143133

Fig. 71: Exploded View Of Air Conditioning Unit (Toyota Celica)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



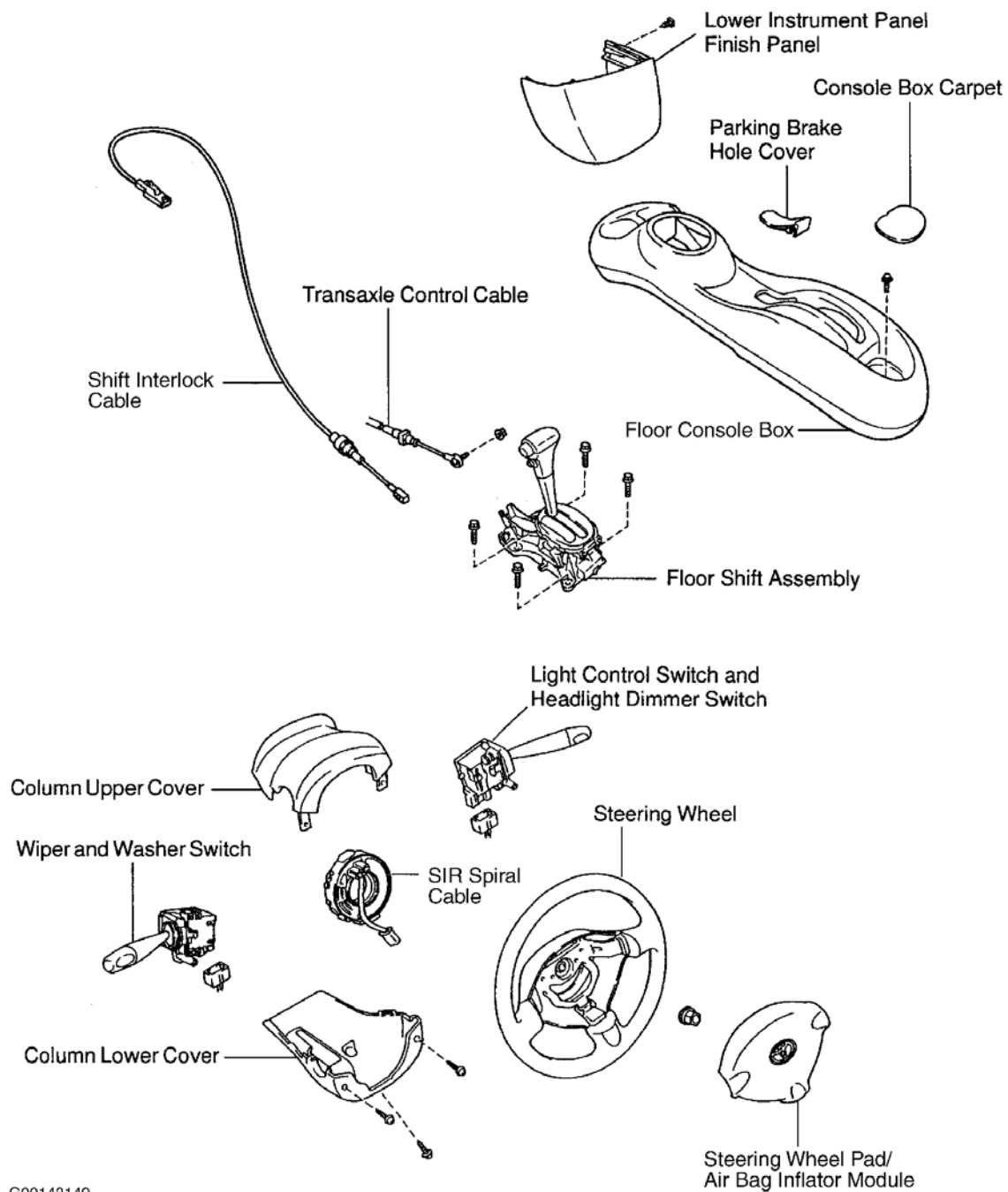
G00143134

Fig. 72: Exploded View Of Shift Interlock Cable (Toyota Celica)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota ECHO)

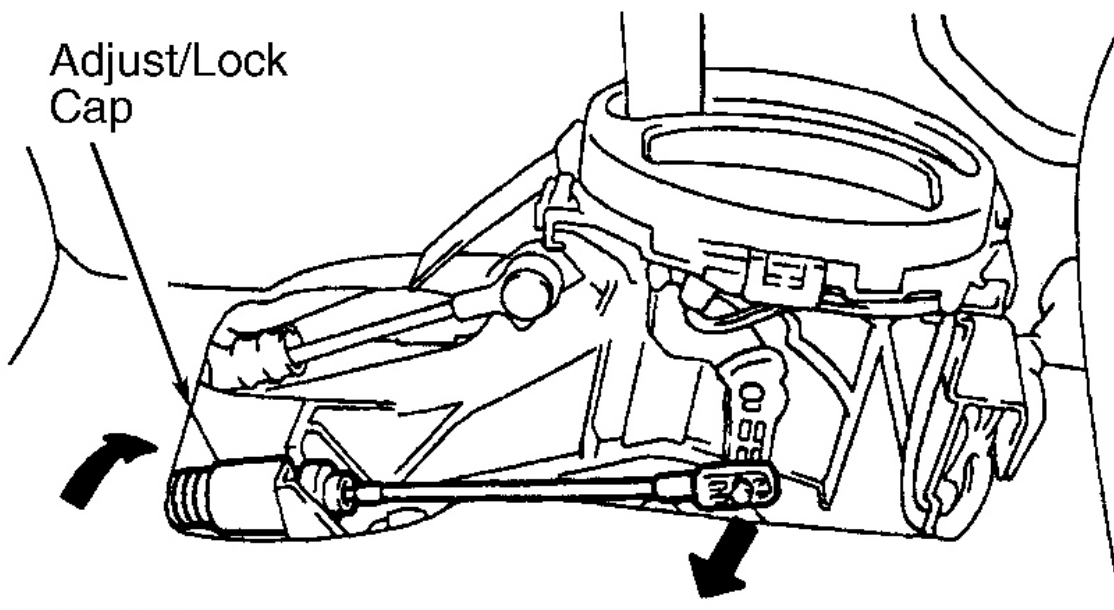
1. Remove floor console box and remove column cover. See **Fig. 73** . Release the adjust/lock cap. See **Fig. 74** . Rotate it clockwise by 90 degrees facing to the front of the vehicle. Remove the cable end from the rod on the shift lever side.

2. Remove the cable on the shift lever side. Remove the cable from the clamp for No. 1 instrument panel box. Turn ignition to ACC position, remove the cable cap claw from the key interlock and pull it. See **Fig. 75** . To remove the floor shift assembly remove the 4 bolts and disconnect the 2 harness connectors. See **Fig. 76** .
3. To assemble, install floor shift assembly (if removed) with the 4 bolts. Install the wire harness clamps the shift lever plate. Place the gearshift lever in Neutral position, then push the lever to the Reverse position side (do not place lever into Reverse position) and hold it there. While pulling the cable, install the cable with the nut. Tighten to specification. See **TORQUE SPECIFICATIONS** . Connect the 2 harness connectors.
4. Turn ignition to ACC position, install the cable cap claw to the key interlock housing. See **Fig. 75** . Install the cable to the clamp for No. 1 instrument panel box. Insert the cable end rod from the slit of the gearshift lever plate. Insert the slide cap into the through hole and install. See **Fig. 74** . Insert the lever pin into the hole in the cable end. Place gearshift lever in Neutral position and check for proper operation.
5. Ensure that the spring for automatic adjustment works properly. Hold the slide cap and move it back and forth. If system operates correctly, lock the adjust/lock cap by rotating it counterclockwise by 90 degrees facing the front of the vehicle. Install the cable on the shift lever side with the key in ACC position. Ensure the slide spring for automatic adjustment is .31" (8 mm.) Install floor console box, instrument cluster panel and column cover.



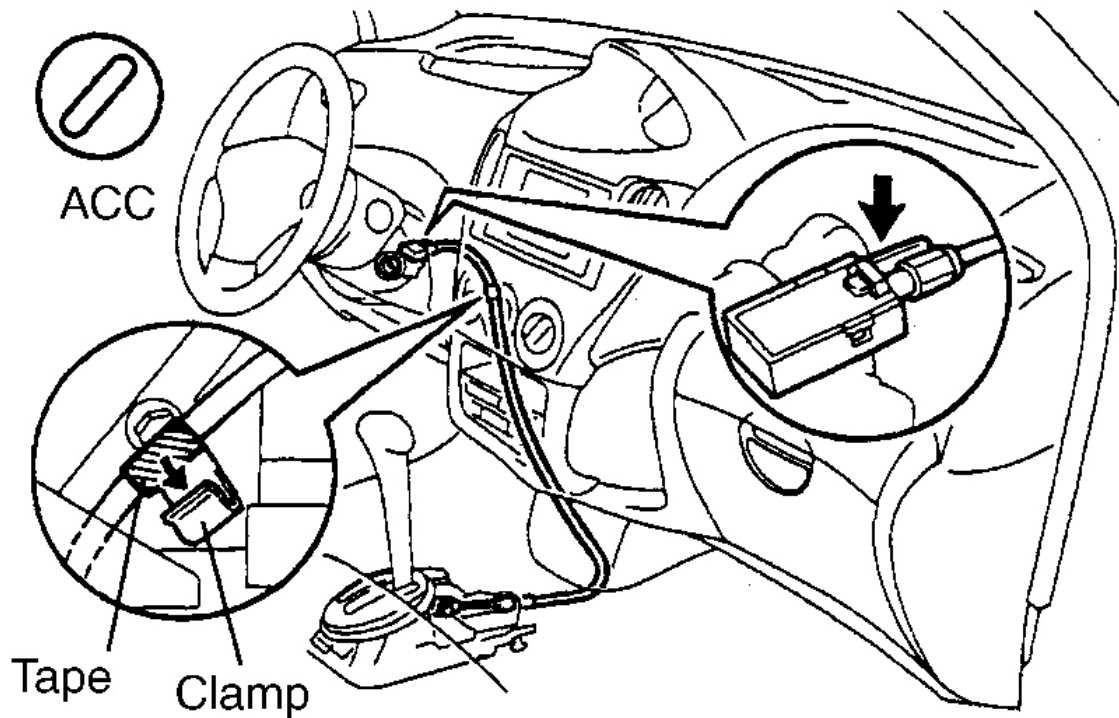
G00143149

Fig. 73: Exploded View Of Shift Interlock Components (Toyota ECHO)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



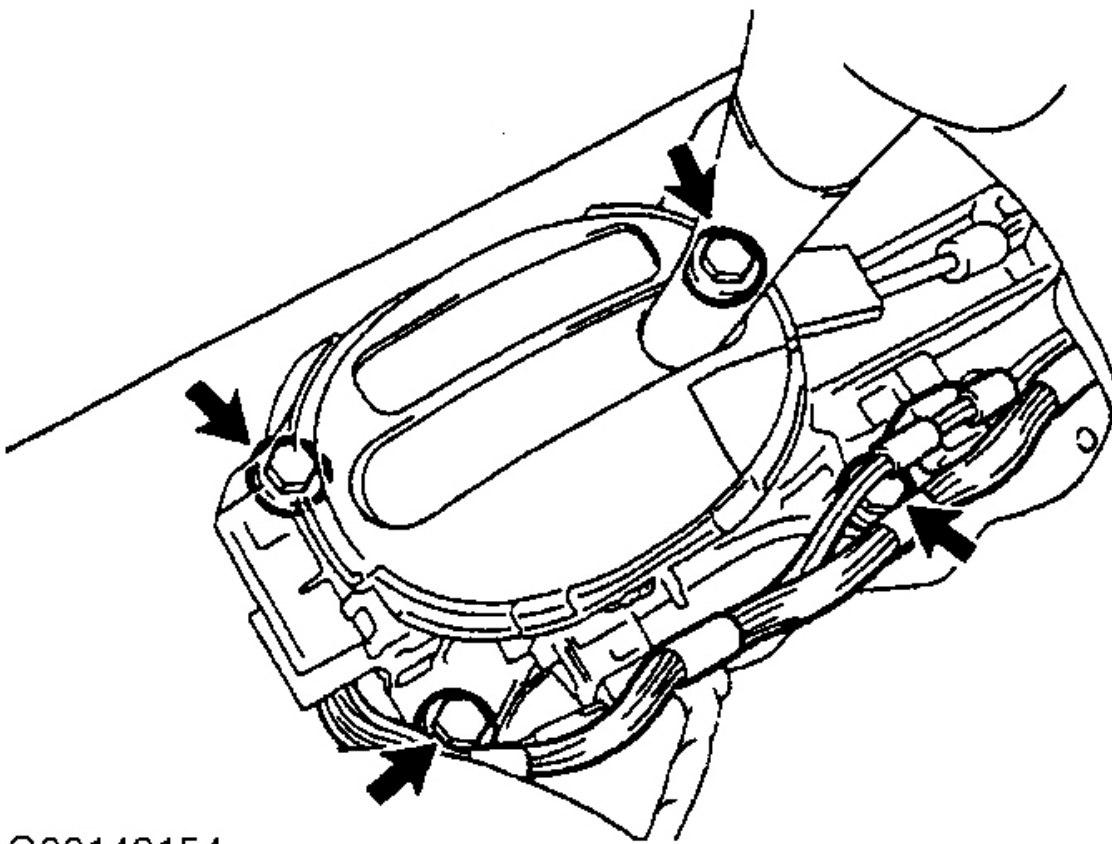
G00143151

Fig. 74: Releasing Shift Interlock Adjust Cap (Toyota ECHO)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143152

Fig. 75: Removing & Installing Cable From Key Interlock Housing (Toyota ECHO)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143154

Fig. 76: Removing & Installing Floor Shift Assembly (Toyota ECHO)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota Sequoia, Sienna & Tundra)

1. Remove left front door scuff plate and cowl side trim. Remove lower steering column trim panel. See **Fig. 77** . Remove steering column assembly. See REMOVAL & INSTALLATION in appropriate STEERING COLUMNS article in STEERING.
2. Remove the screw and parking lock cable No. 2. See **Fig. 78 -Fig. 80** . Using a Torx(R) socket wrench, remove the 2 screws and parking lock cable No. 1. Remove the spring. Remove the 2 bolts and parking lock cable housing. See **Fig. 81** .
3. Disconnect the connector. Using Torx(R) socket wrench, remove the screw and shift lever. Remove the upper No. 2 steering column cover. Using a Torx(R) socket wrench, remove the 3 screws and shift lever housing.
4. To assemble, install the shift lever housing with 3 NEW screws. Tighten to specification. See **TORQUE SPECIFICATIONS** . Install the upper No. 2 steering column cover. Using a Torx(R) socket wrench, install the shift lever with a NEW screw. Connect the connector. Apply grease on the lock pin and internal surface of shift lever housing.
5. Install the spring and parking lock cable No. 1 into the shift lever housing. Using a Torx(R) socket wrench, install 2 NEW screws. Route the cable, No. 1 and 2, as shown. See **Fig. 82** . Install the cable housing to steering column assembly with 2 new bolts. After installation, confirm then following items:

- A. When the shift lever is in Park position and the pedal button is pushed by 0.28 in. (7 mm.), shift lever should be locked by lock pin. See **Fig. 83** .
 - B. When the pedal button is released, the shift lever should be able to be shifted from Park position to other positions.
 - C. When the shift lever is in Neutral or Drive positions and the pedal button is pushed by 0.28 in. (7 mm.), the shift lever should be able to be shifted.
6. To assemble, install the parking lock cable No. 2 to column upper bracket with the clip. Install the cable end to the sliding block of the column upper bracket with the screw. See **Fig. 84** . Tighten to specification. See **TORQUE SPECIFICATIONS** . After installation, check the following items:
- A. When the pedal button is pushed, shift lever should be locked.
 - B. When the pedal button is released, shift lever should be unlocked.
7. Install steering column assembly. Install lower steering column trim panel, cowl side trim and left front door scuff plate.

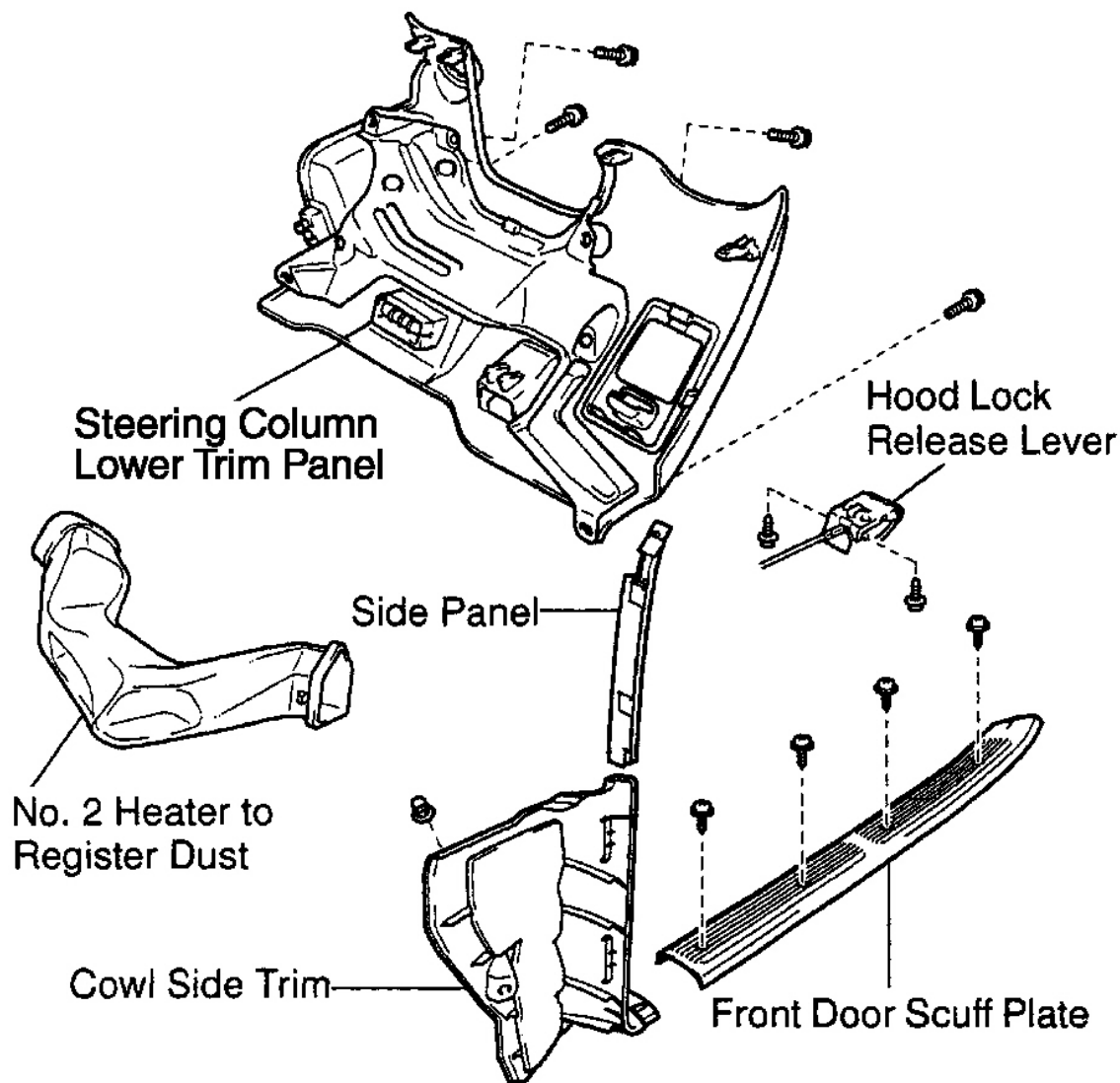
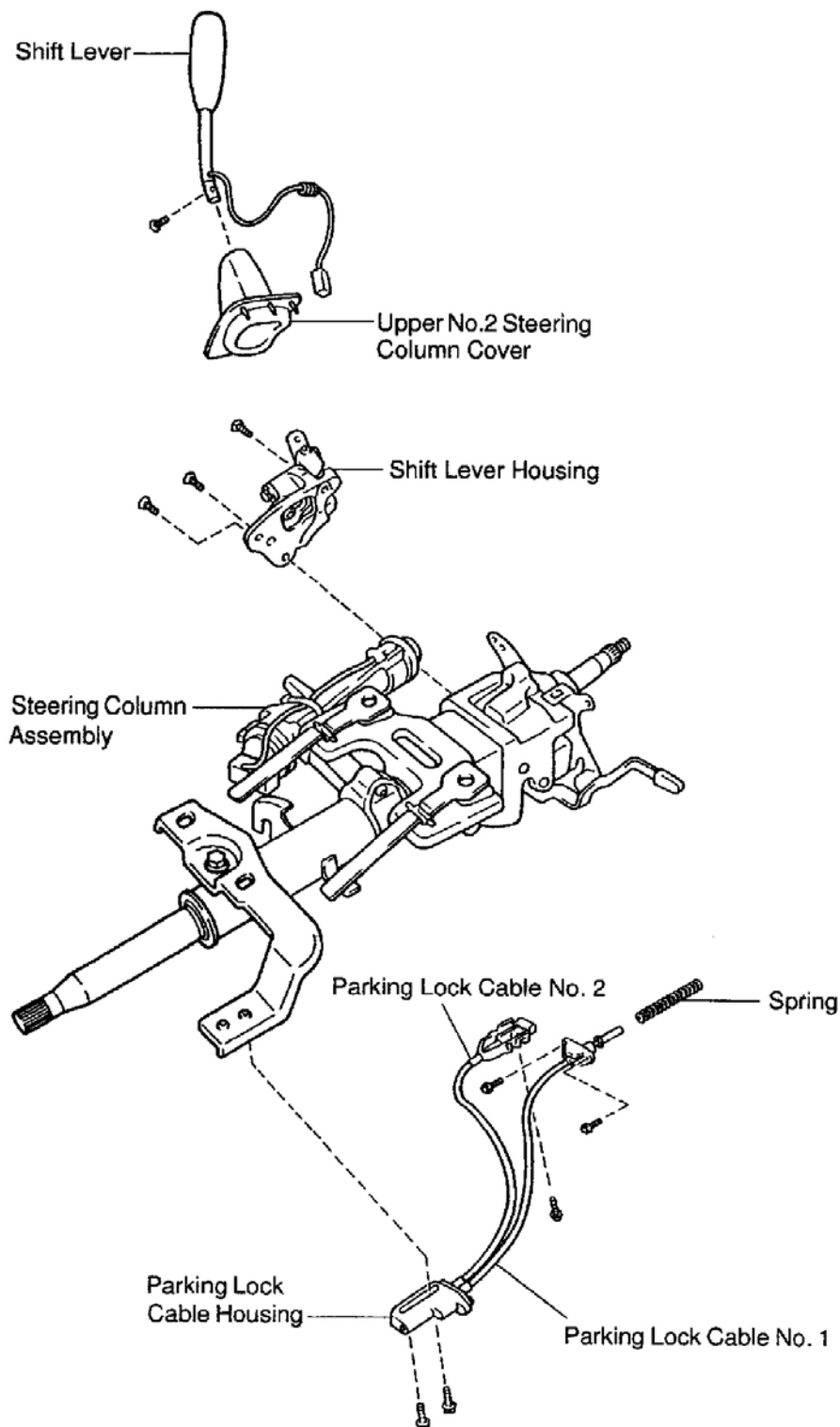


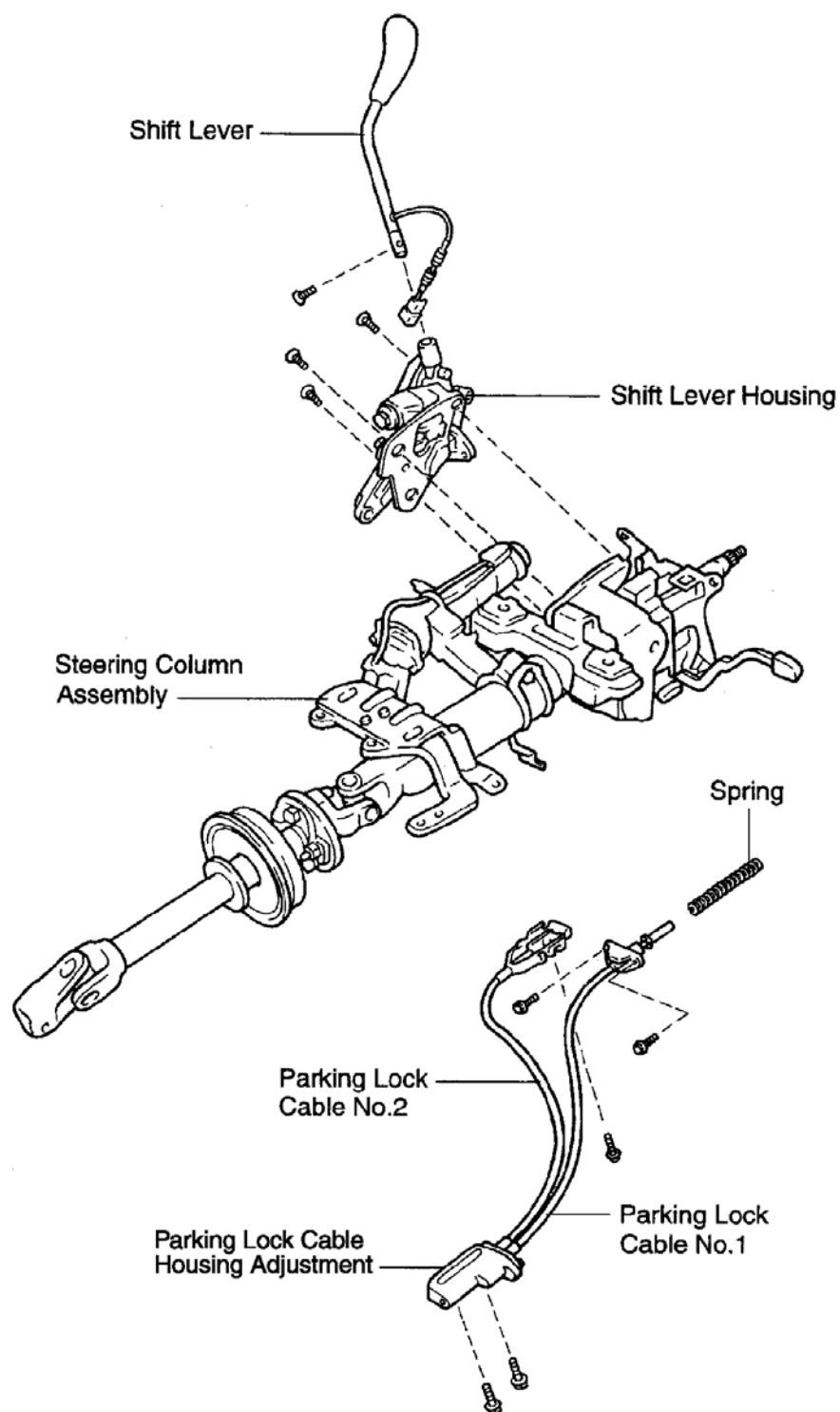
Fig. 77: Exploded View Of Trim Panels (Toyota)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143177

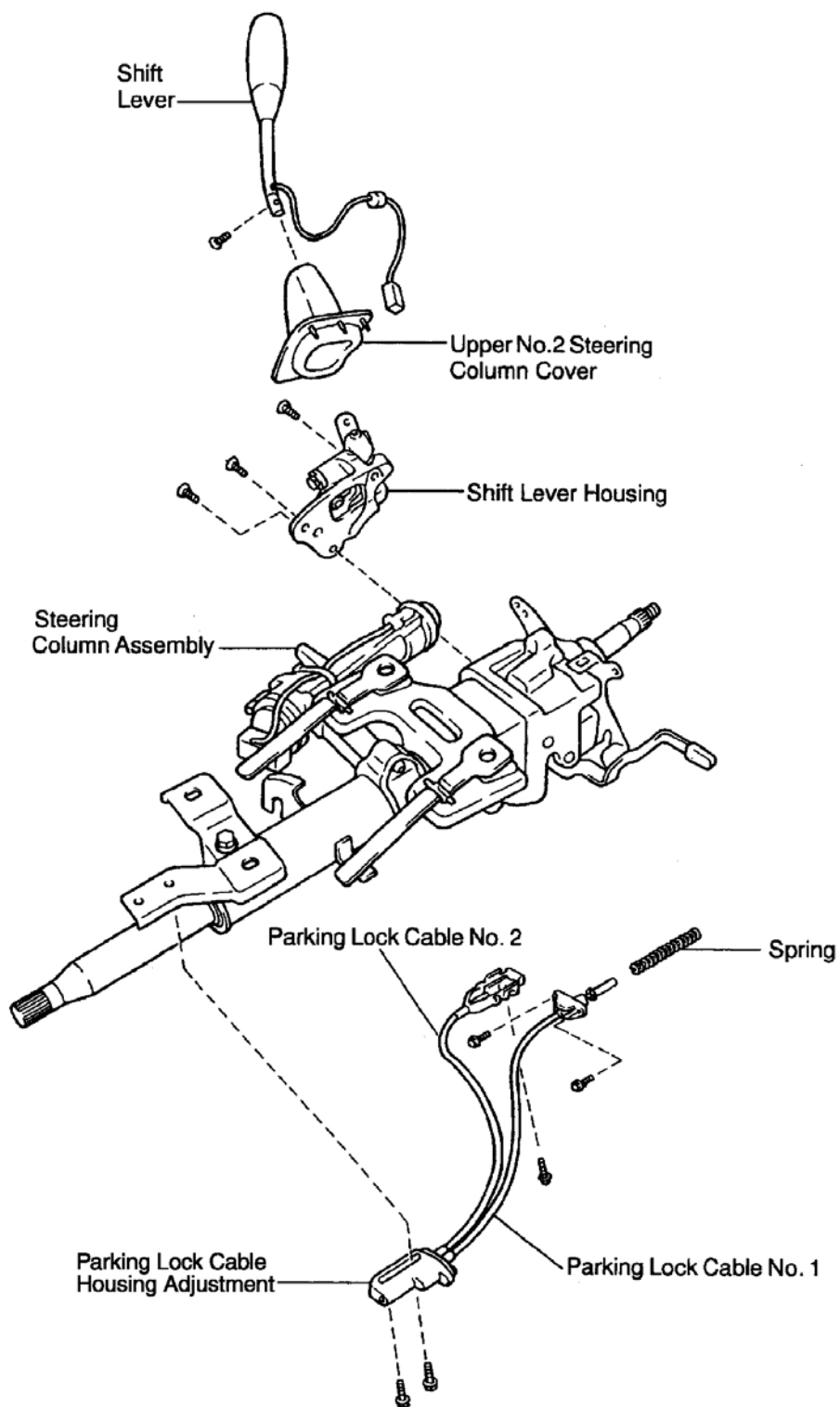
Fig. 78: Exploded View Of Shift Interlock Cable & Related Components (Toyota Sequoia)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



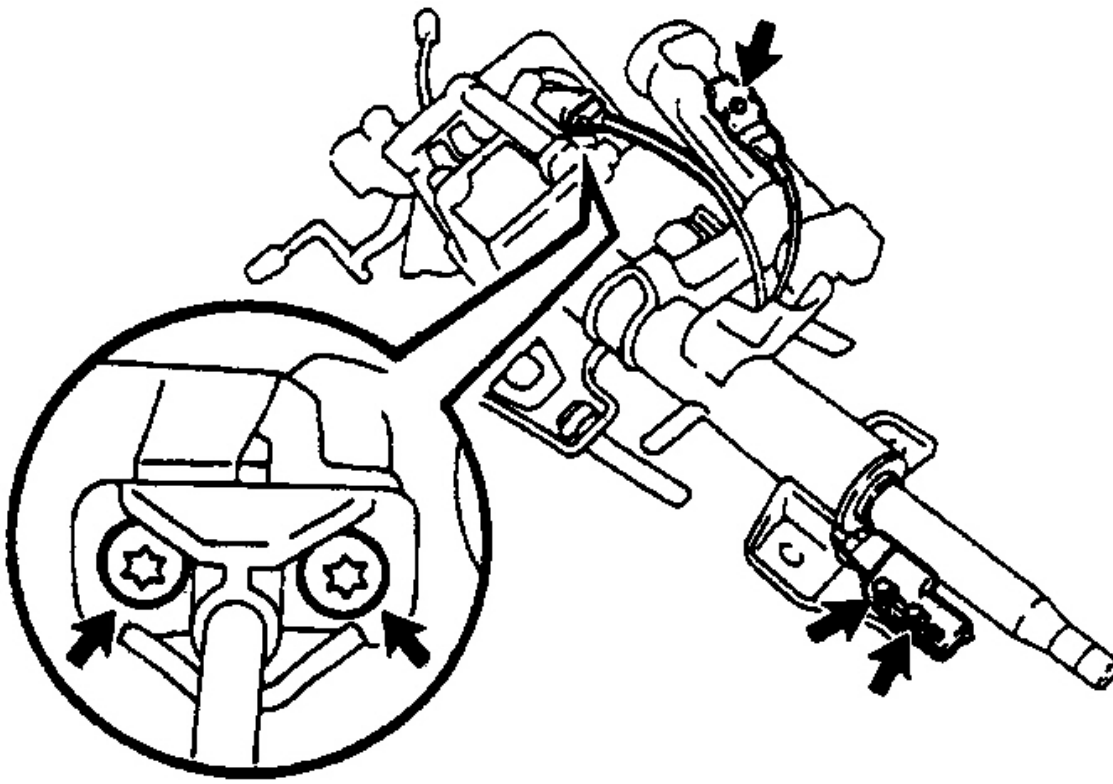
G00139845

Fig. 79: Exploded View Of Shift Interlock Cable & Related Components (Toyota Sienna)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



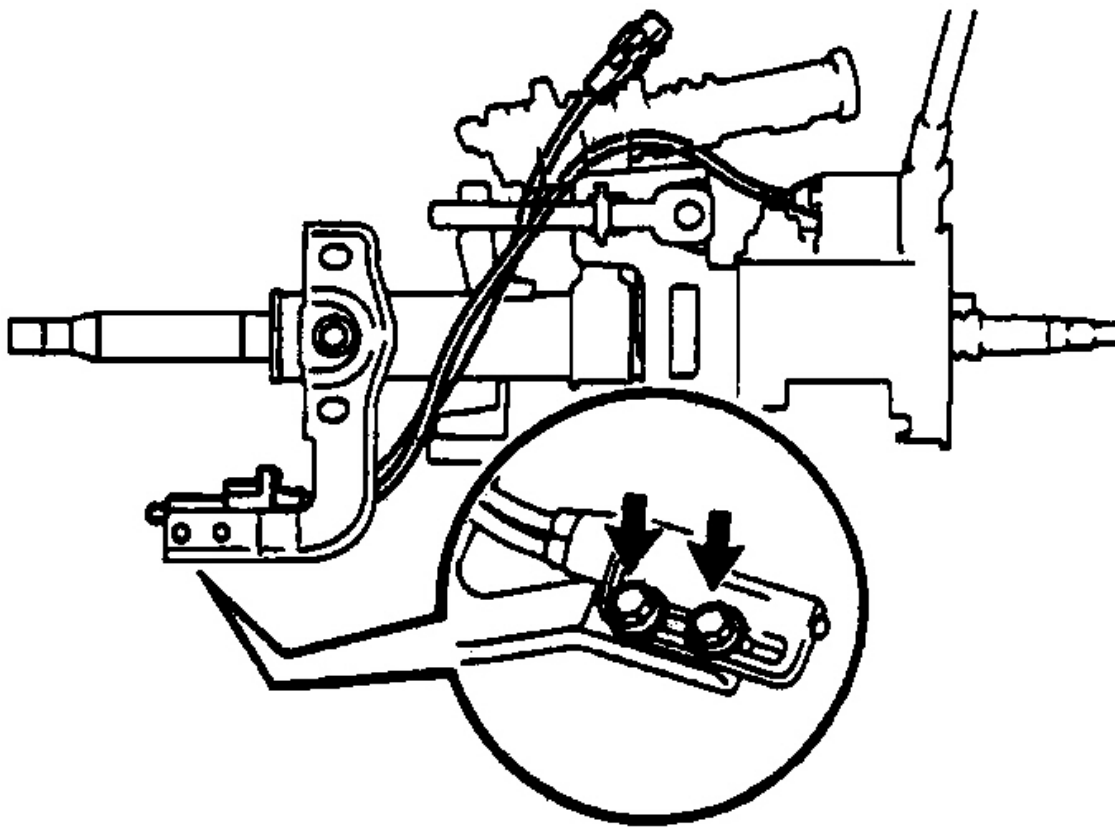
G00139846

Fig. 80: Exploded View Of Shift Interlock Cable & Related Components (Toyota Tundra)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



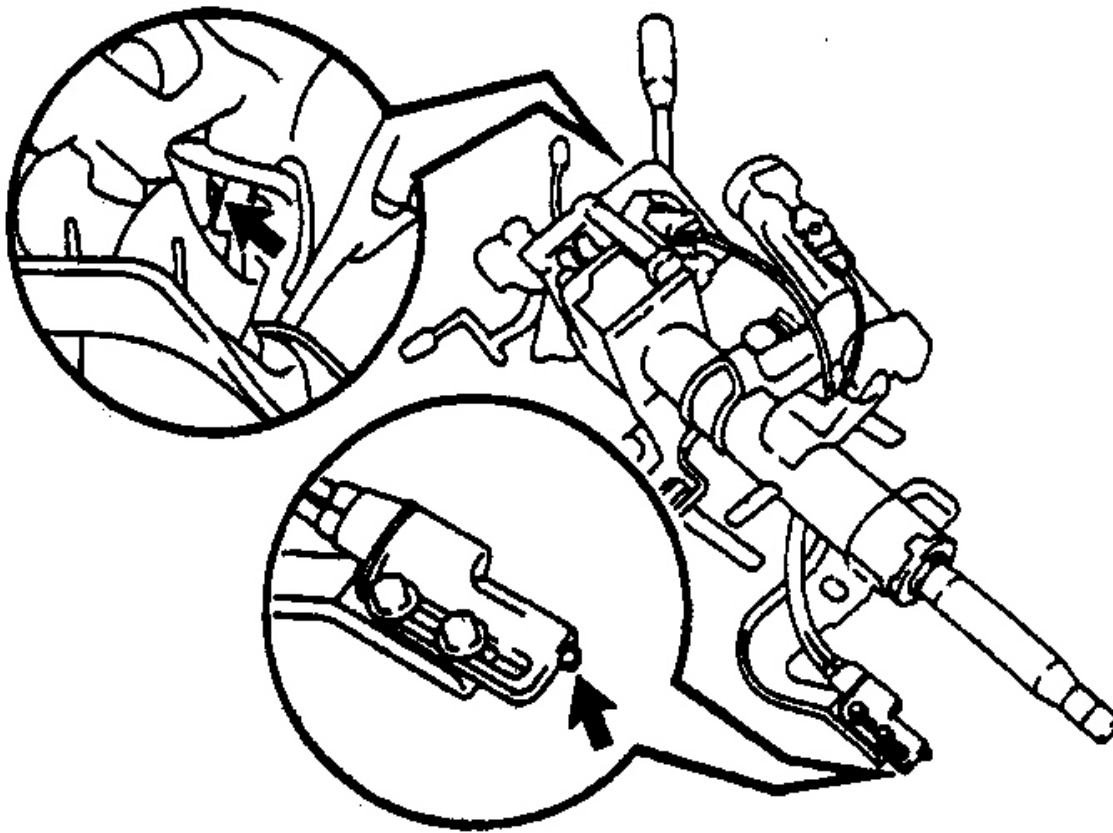
G00143181

Fig. 81: Locating Shift Interlock Cable Retaining Screws (Toyota)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143178

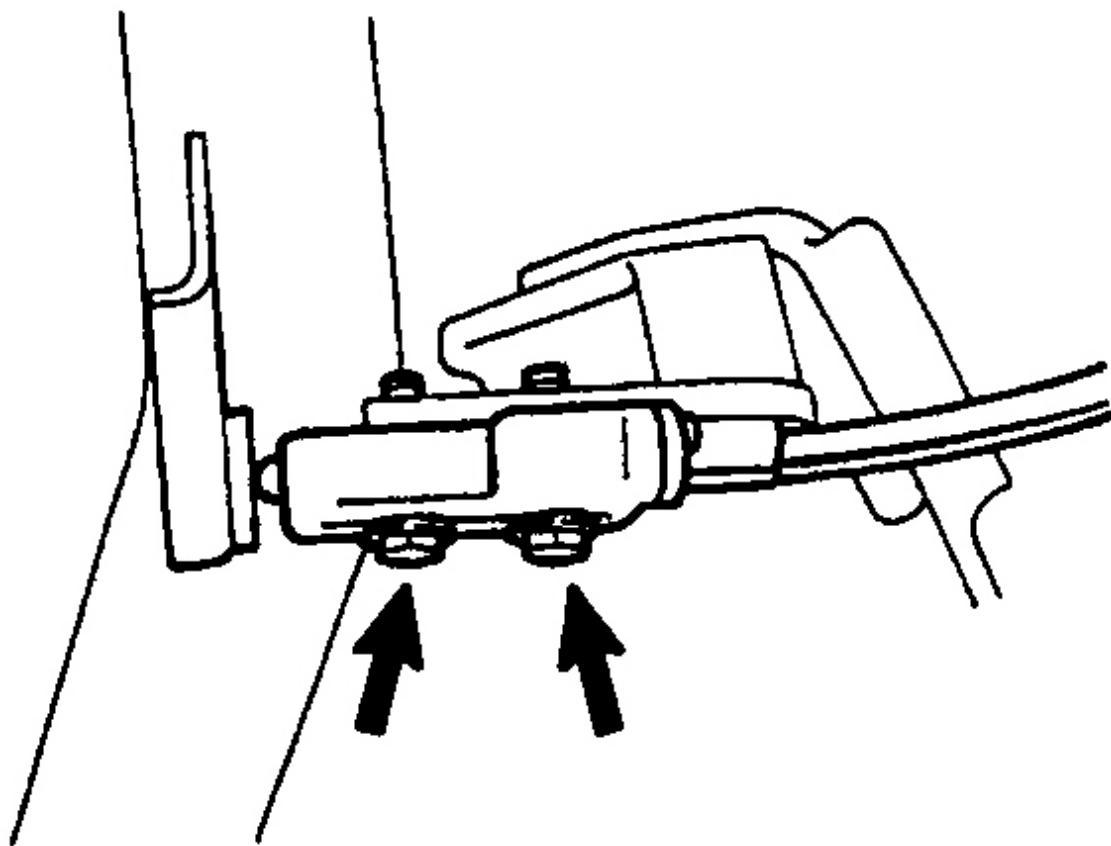
Fig. 82: Routing Location Of Shift Interlock Cable (Toyota)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143179

Fig. 83: Locating Locking Pin (Toyota)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143180

Fig. 84: Installing Shift Interlock Cable To Sliding Block (Toyota)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

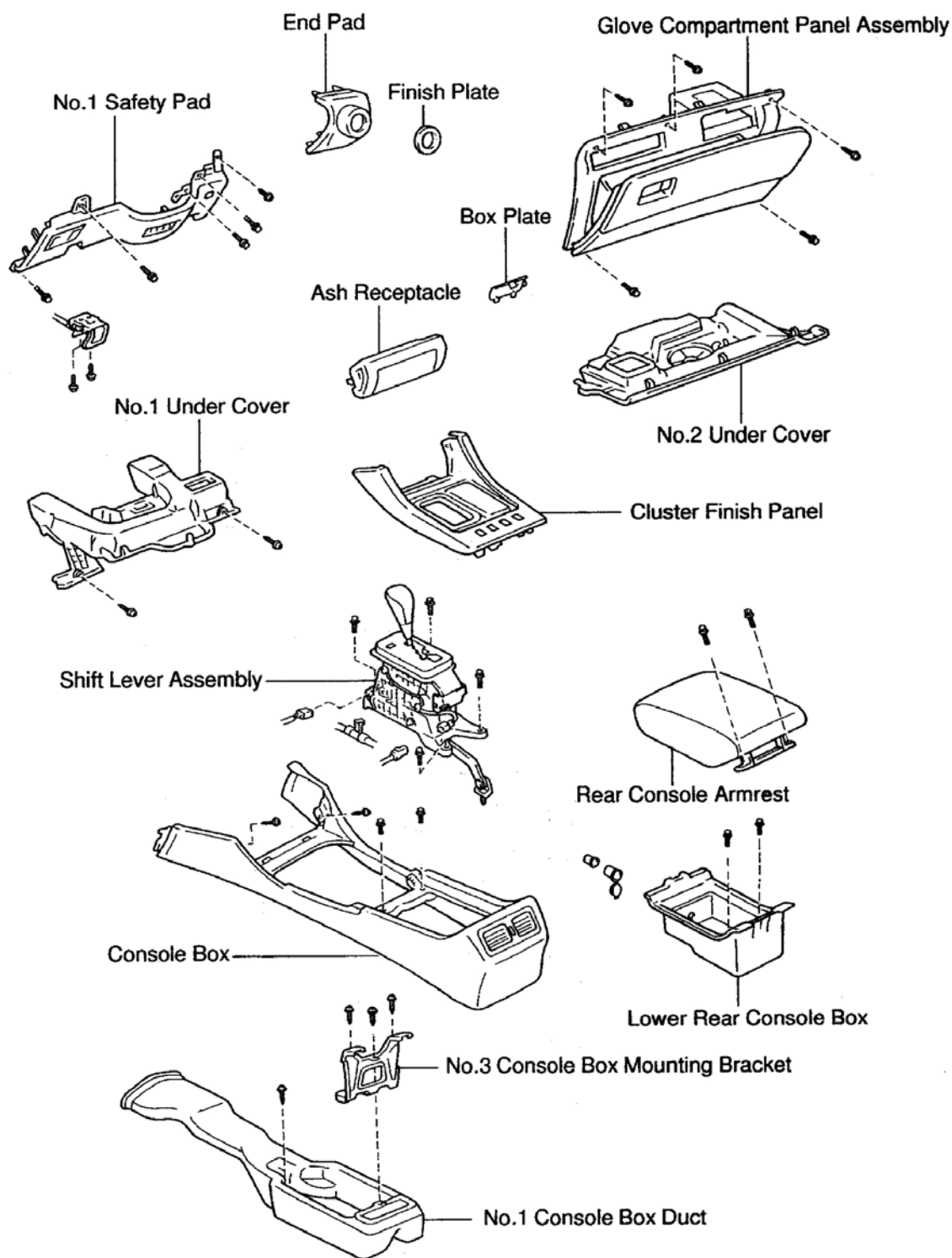
SHIFT INTERLOCK ELECTRONIC CONTROL UNIT

Removal & Installation (Lexus ES300)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 60** .

Removal & Installation (Lexus GS300 & GS430)

Manufacturer does not provide shift interlock electronic control unit removal and installation procedure. See **Fig. 1** and **Fig. 85** .



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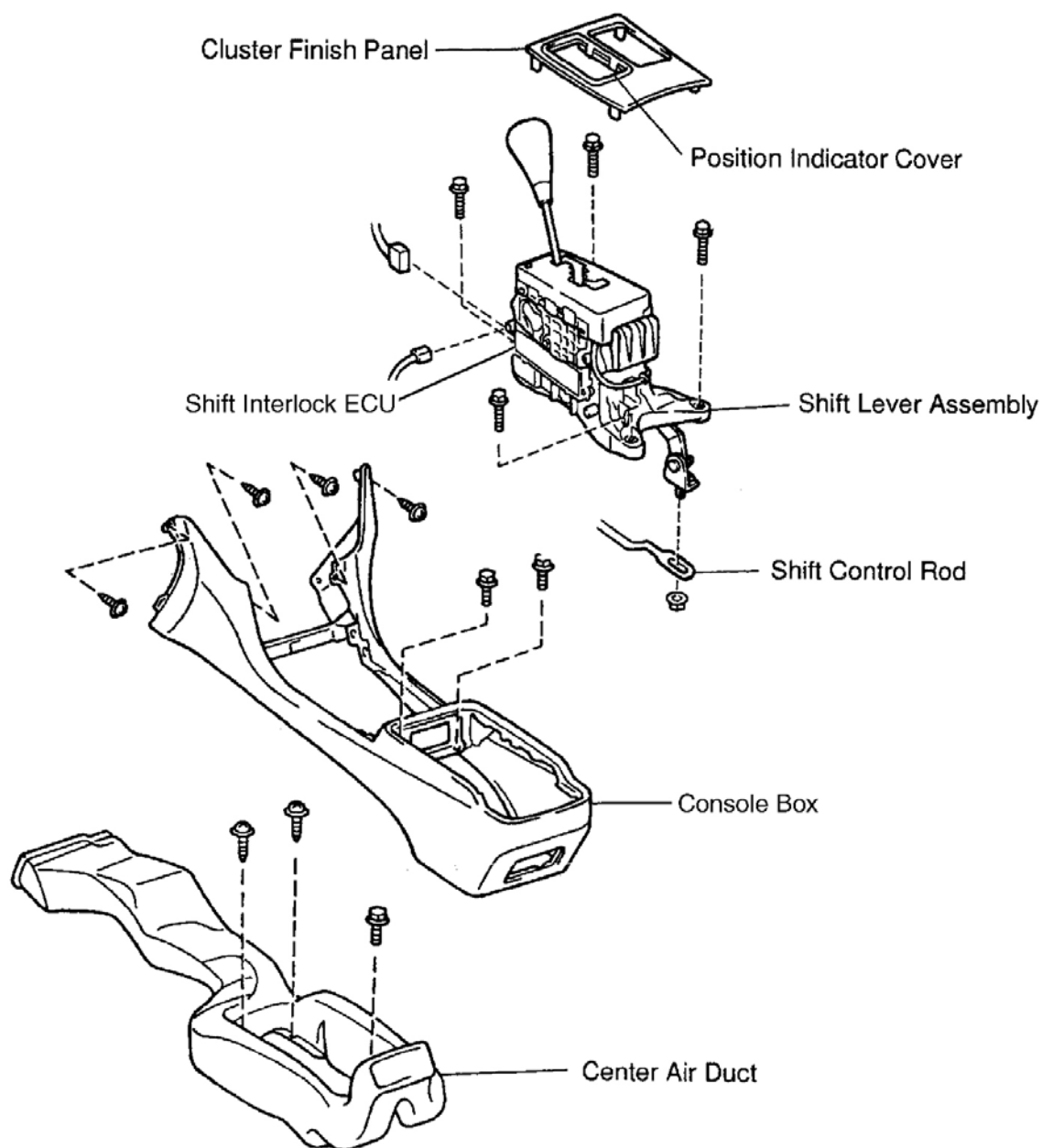
Fig. 85: Exploded View Of Center Console & Related Components (Lexus GS300 & GS430)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Lexus IS300)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 40** and **Fig. 41** .

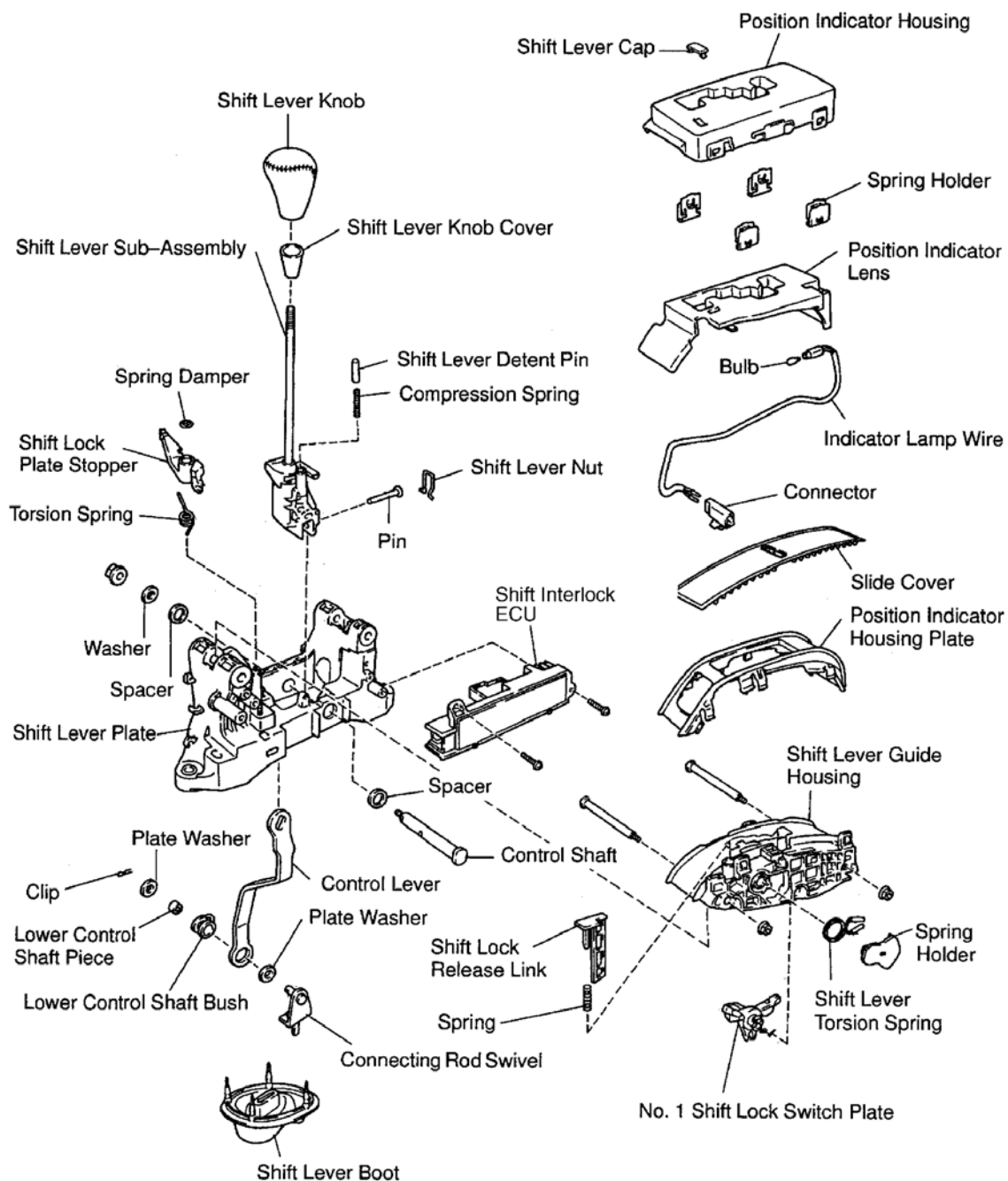
Removal & Installation (Lexus LS430)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 86** and **Fig. 87** .



G00139880

Fig. 86: Exploded View Of Floor Console (Lexus LS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

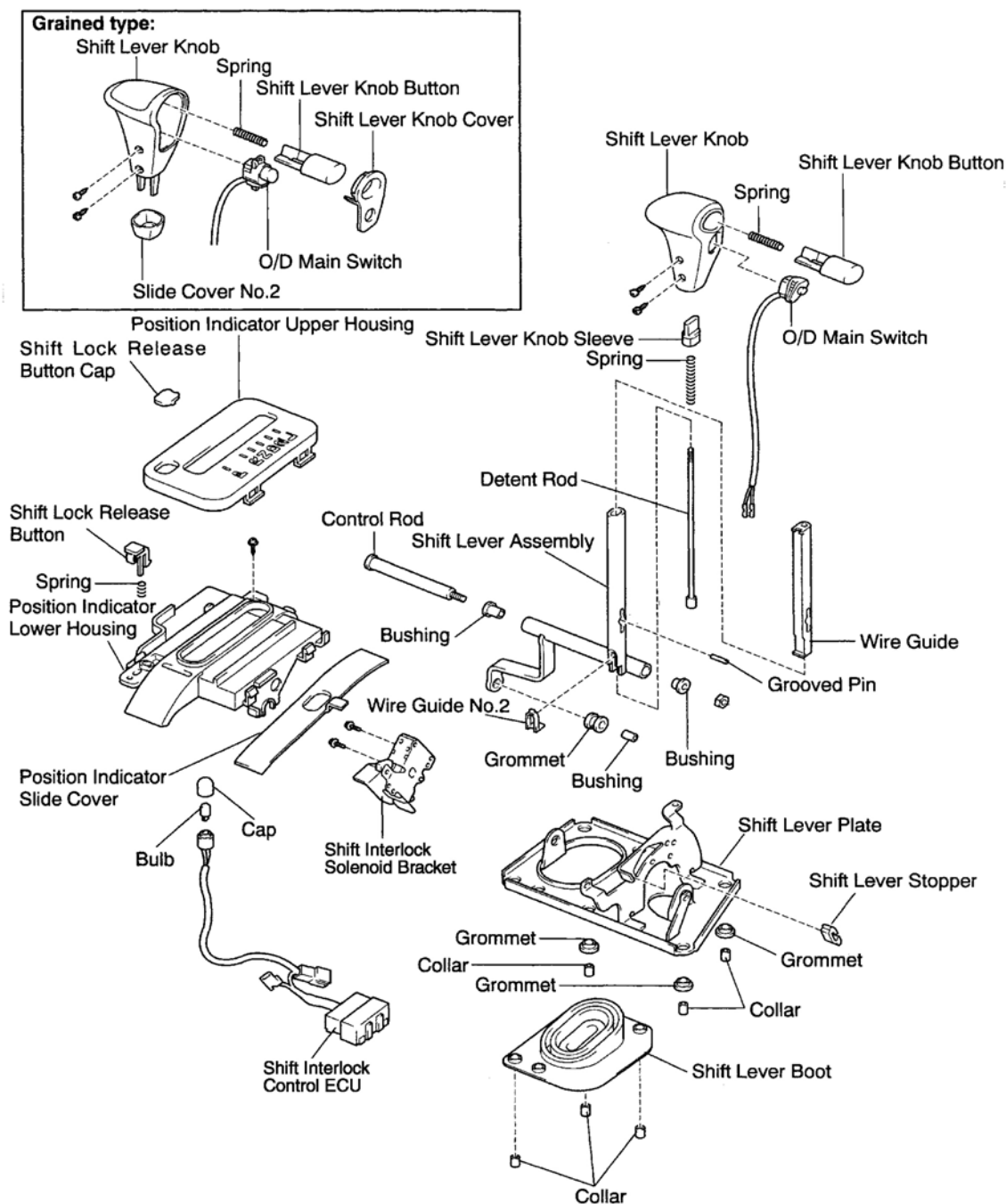


G00139881

Fig. 87: Exploded View Of Floor Shift Control & Shift Interlock Electronic Control Unit (Lexus LS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Lexus LX470 & Toyota Land Cruiser)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 88**.

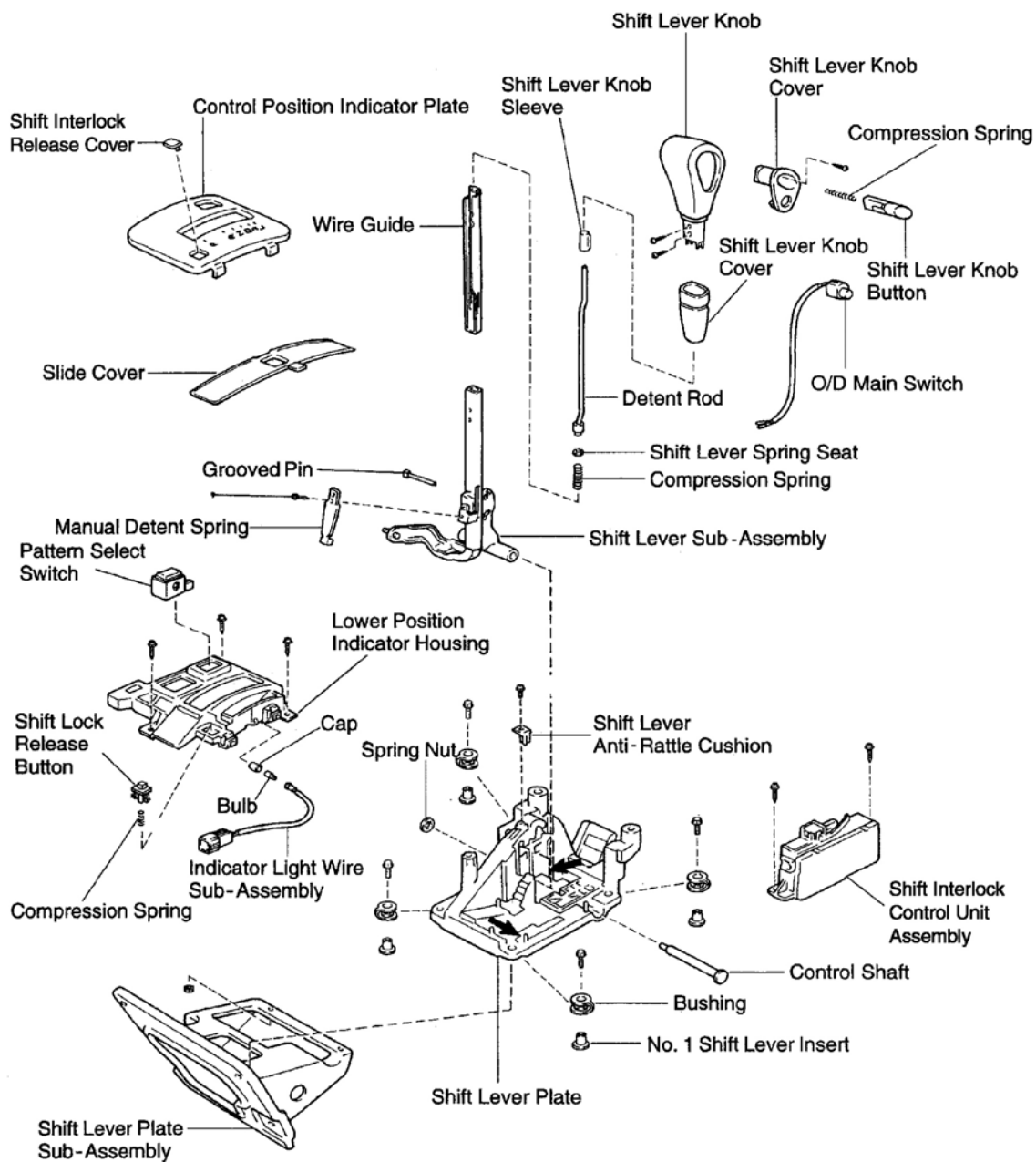


G00139888

Fig. 88: Exploded View Of Floor Shift Control & Related Parts (Lexus LX470 & Toyota Land Cruiser)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

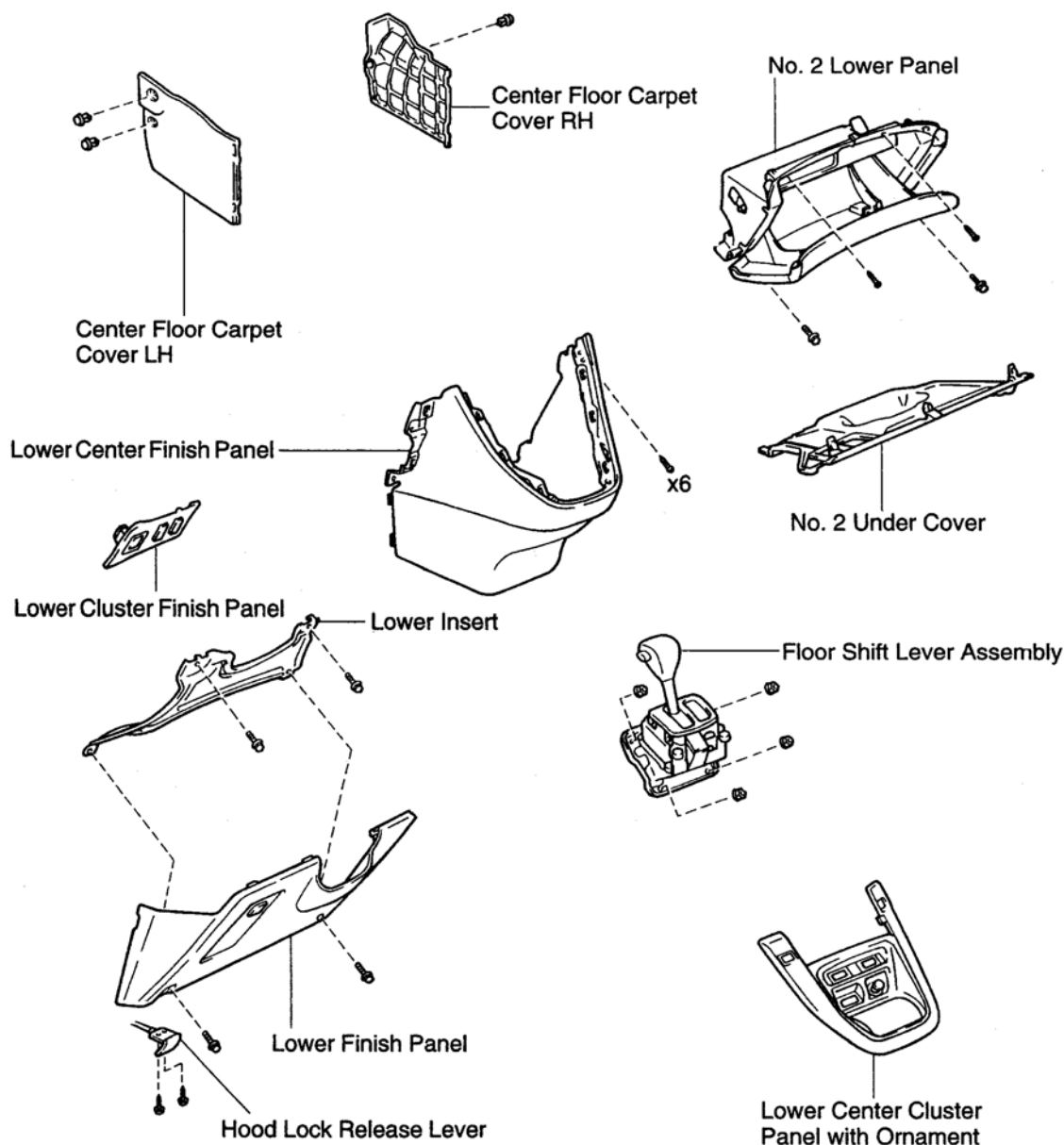
Removal & Installation (Lexus RX300)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 89** and **Fig. 90**.



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Fig. 89: Exploded View Of Floor Shift Control & Related Parts (Lexus RX300)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

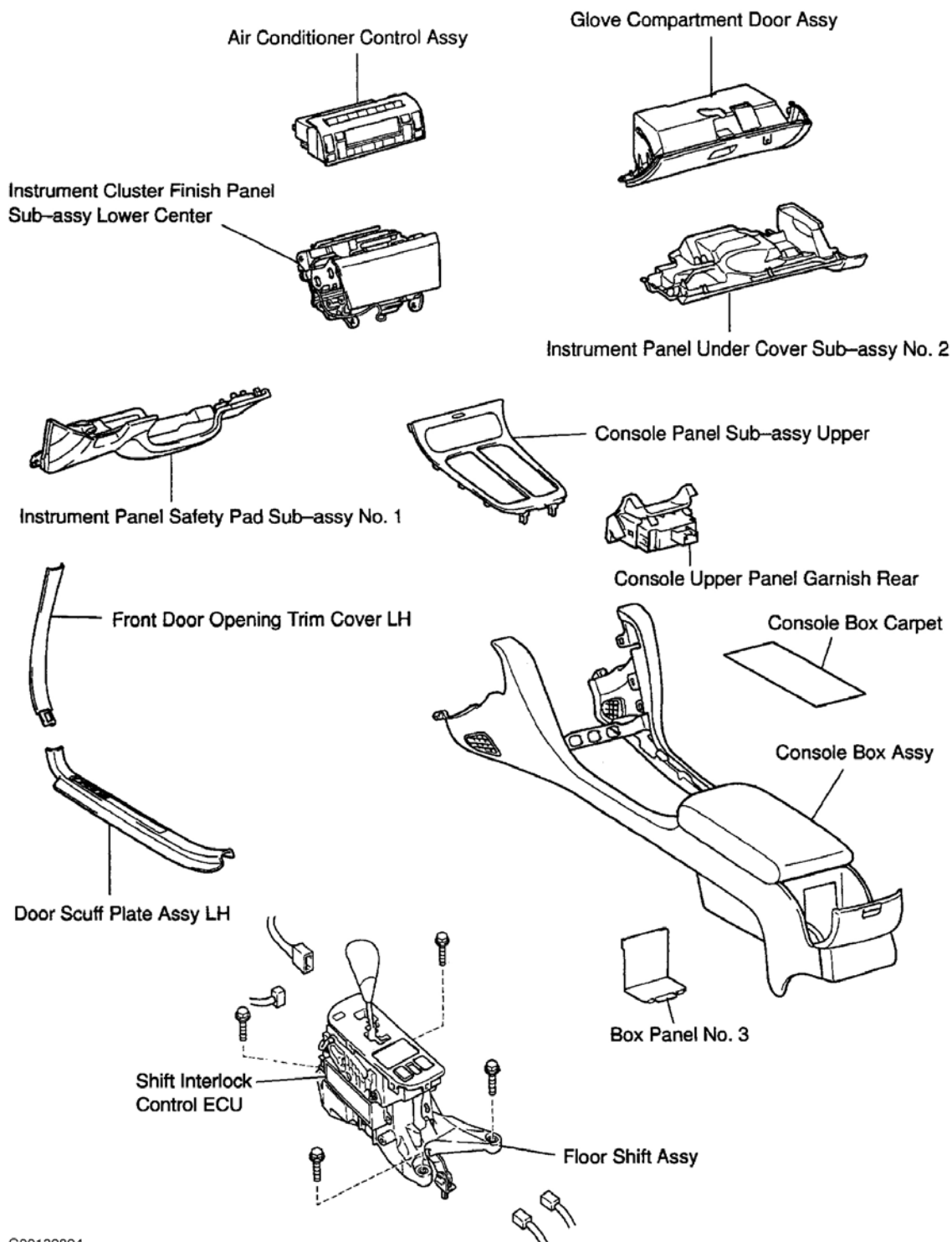


G00139891

Fig. 90: Identifying Floor Console & Related Parts (Lexus RX300)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

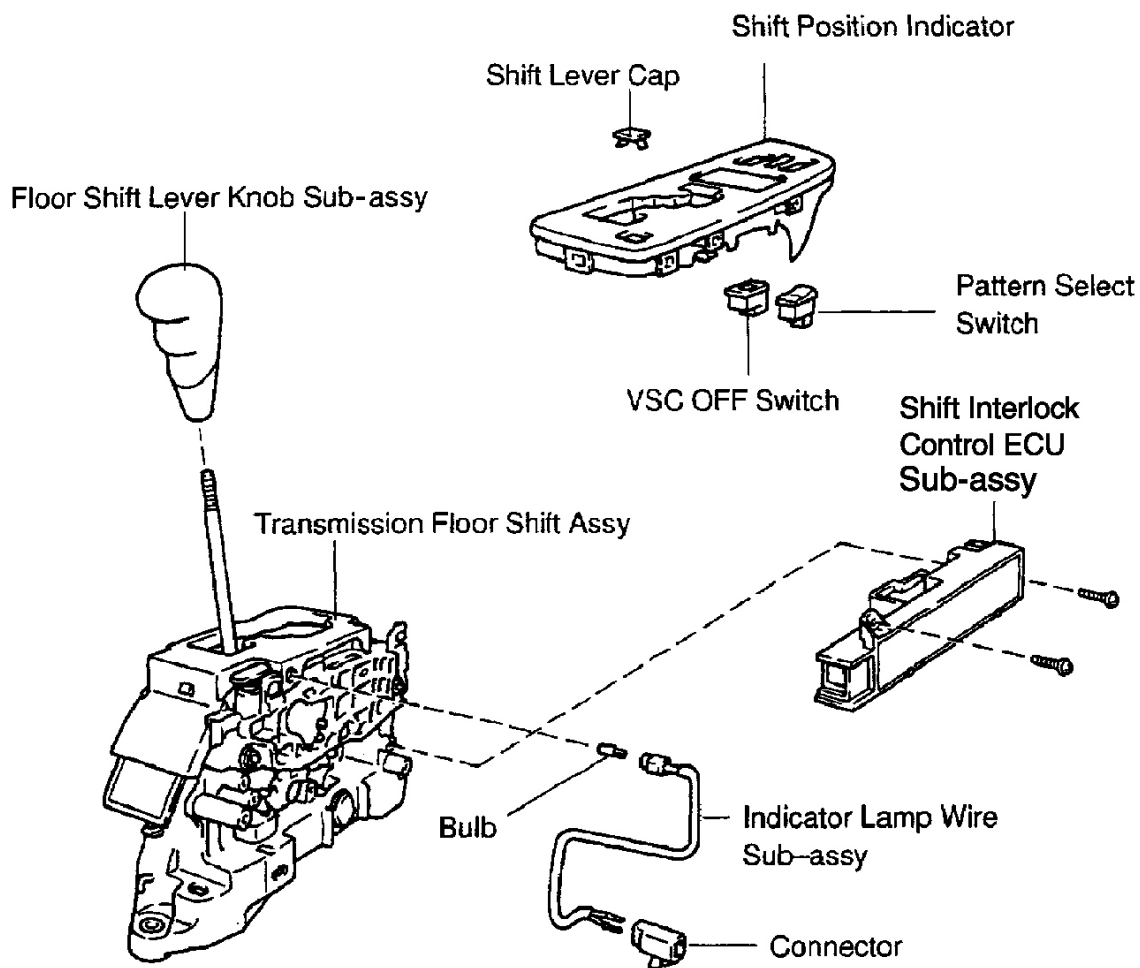
Removal & Installation (Lexus SC430)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 91** and **Fig. 92**.



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Fig. 91: Exploded View Of Floor Console & Related Components (Lexus SC430)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

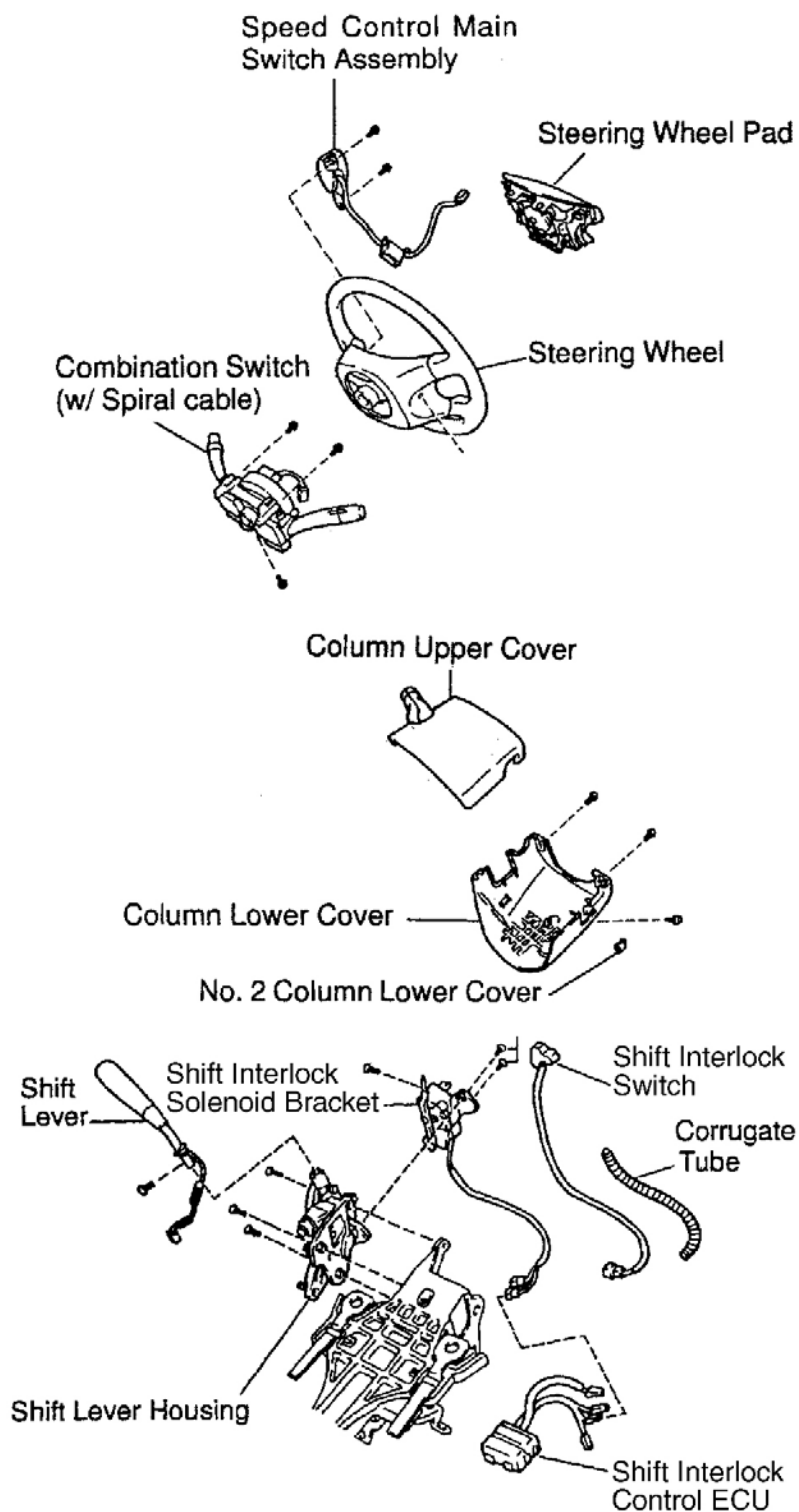


G00139895

Fig. 92: Exploded View Of Floor Shift Control Assembly (Lexus SC430)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota Avalon - Column Shift)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 93**.

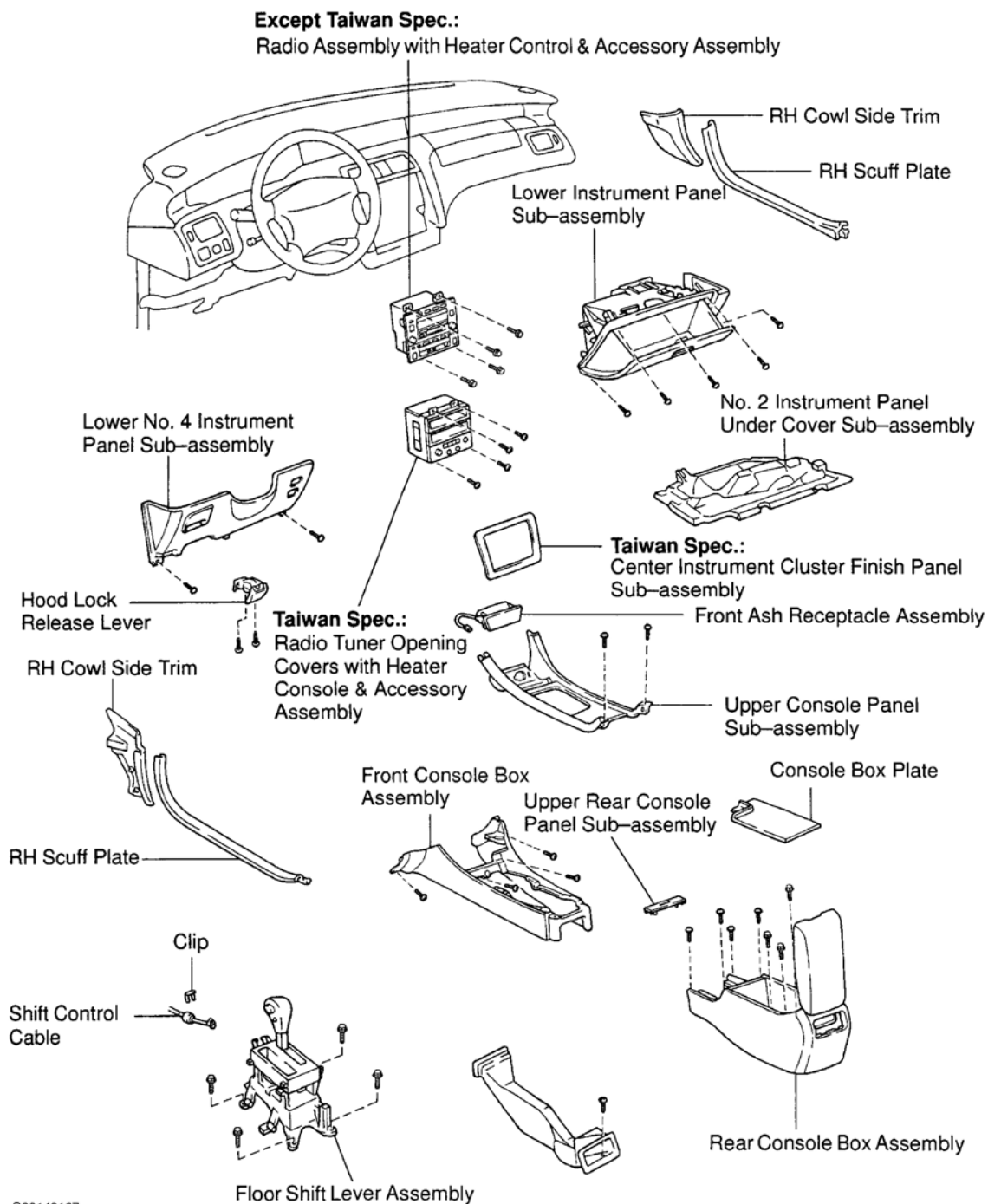


G00143166

Fig. 93: Exploded View Of Steering Column & Covers (Toyota Avalon)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

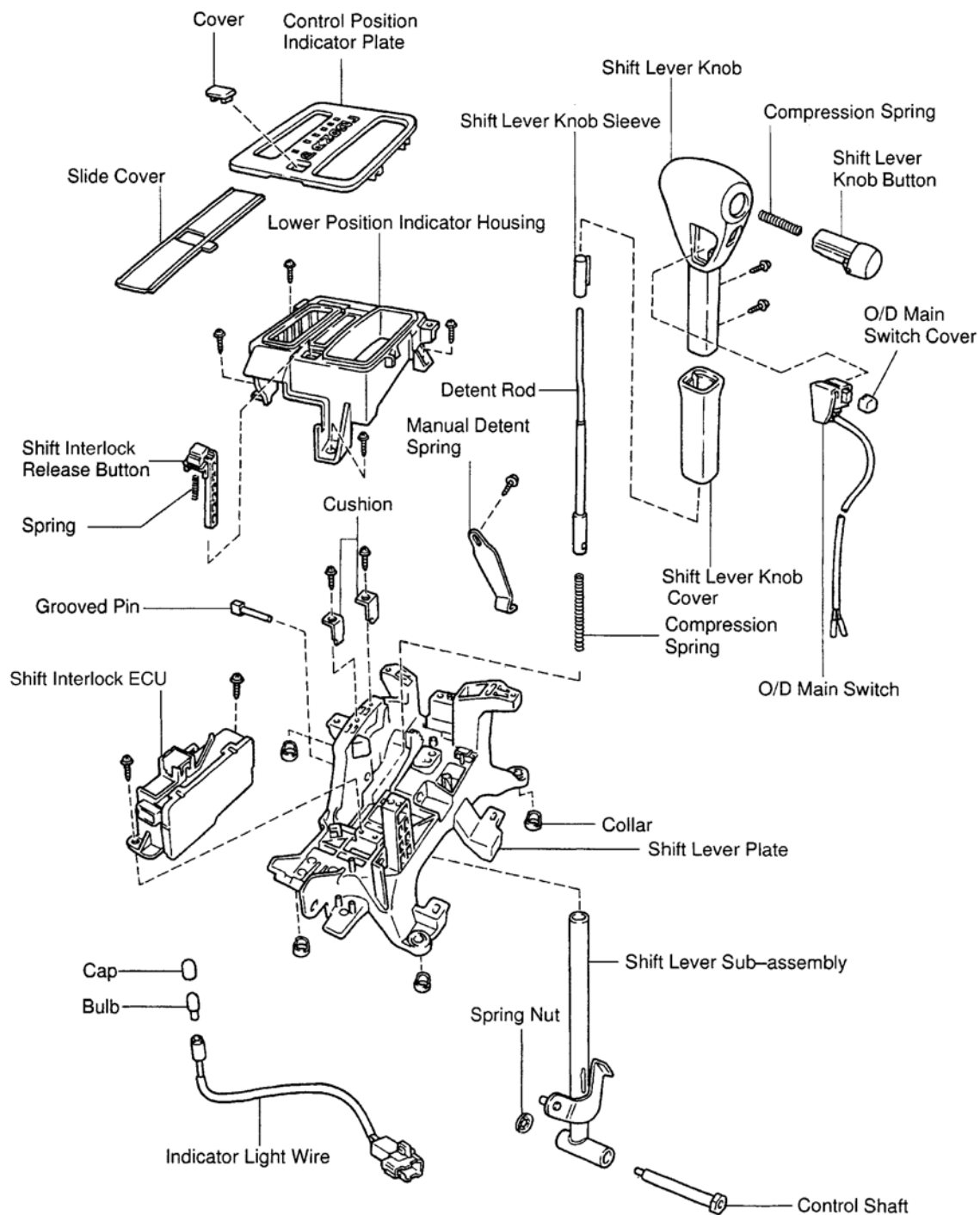
Removal & Installation (Toyota Avalon - Floor Shift)

1. Remove all necessary trim to access floor shift assembly. See **Fig. 94** . Remove the clip and disconnect the shift cable from floor shift assembly. Disconnect the wire harness from the wire harness clamp. Remove the, 2 bolts from the brace. Remove the 4 bolts and floor shift assembly.
2. Remove the connector from the shift lever plate. Remove the secondary locking device. Side the shift lever knob cover. See **Fig. 95** . Remove the 2 screws and shift lever knob sub-assembly. Using a small screwdriver, remove the O/D main switch cover and the O/D main switch from the shift lever knob.
3. Insert a small screwdriver into the position in the illustration and disengage the button. See **Fig. 96** . Remove the shift lever knob button and compression spring. Remove the indicator light from the lower position indicator housing. Remove the cap and bulb from the indicator light wire.
4. Remove the 4 screws and lower position indicator housing. Remove the control position indicator plate. Remove the shift interlock release button and spring and the slide cover. Remove the shift interlock and ECU assembly.
5. To assemble, install the shift interlock ECU assembly. Install the slide cover. Install the spring and shift interlock release bottom. Install the control position indicator plate. Install the lower position indicator housing with the 4 screws. Install the bulb and cap to the indicator light wire. Install the indicator light to the lower position indicator housing. See **Fig. 95** .
6. Install the spring and shift lever knob to the shift lever knob. Install the O/D main switch and O/D main switch cover to the shift lever knob. Install the shift lever knob and shift lever knob cover to the shift lever sub-assembly.
7. Install the 2 shift lever sub-assembly set screws. Raise the shift lever knob cover. Connect the terminals of the O/D main switch. Connect the O/D main switch connector to the shift lever plate.
8. Install all removed console and instrument panel trim in reverse order. See **Fig. 94** .



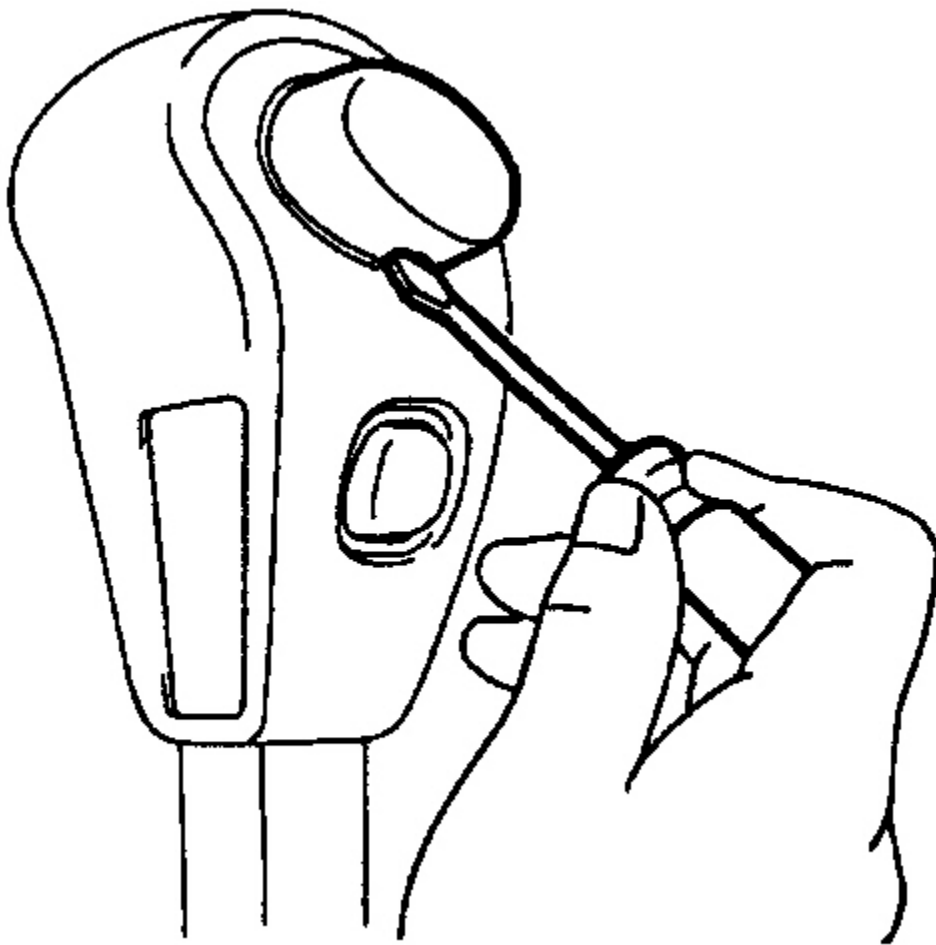
G00143167

Fig. 94: Exploded View Of Floor Console & Related Components (Toyota Avalon)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143168

Fig. 95: Exploded View Of Floor Shift Assembly & Related Components (Toyota Avalon)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

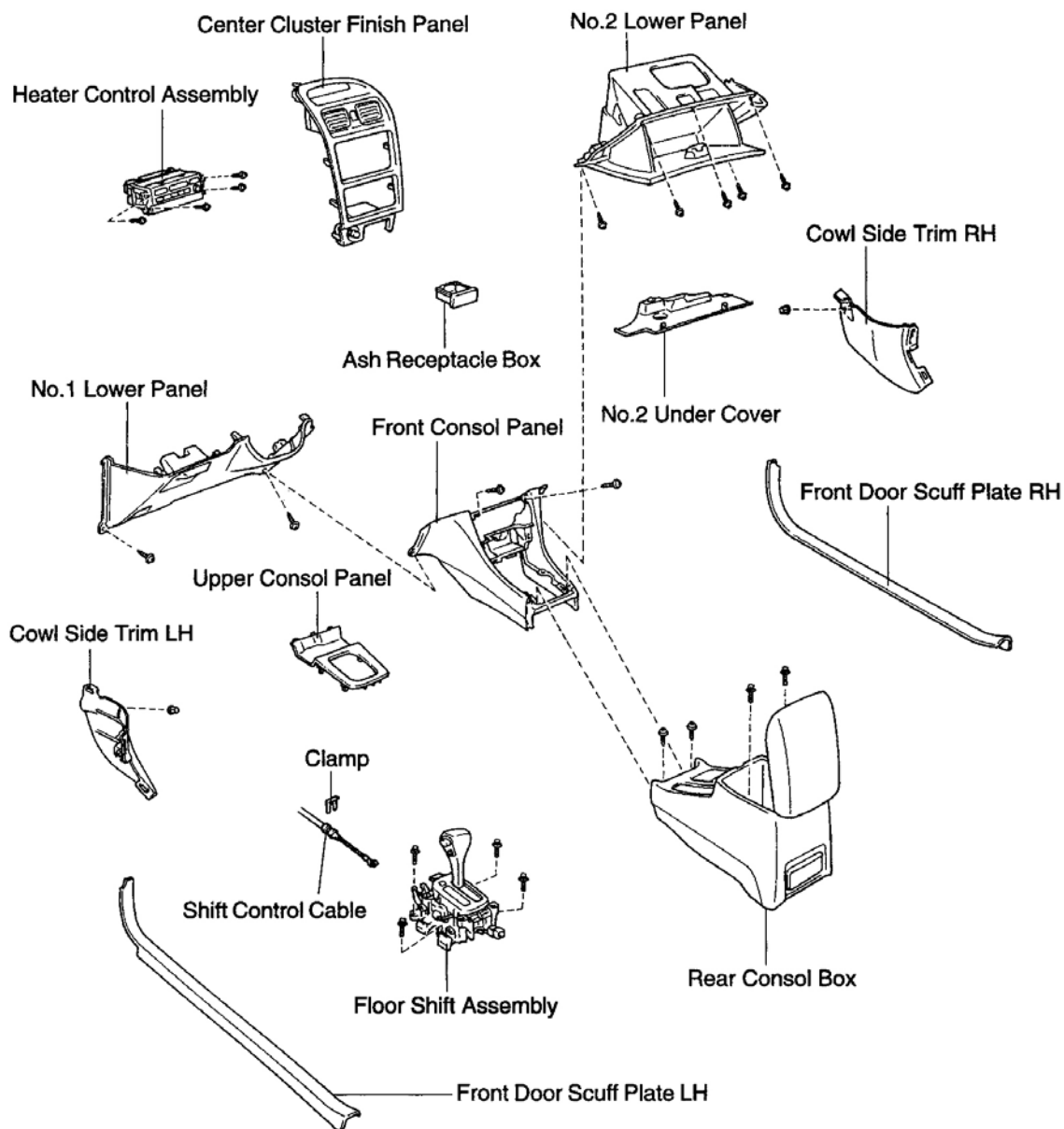


G00143169

Fig. 96: Removing Shift Knob Button (Toyota Avalon)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

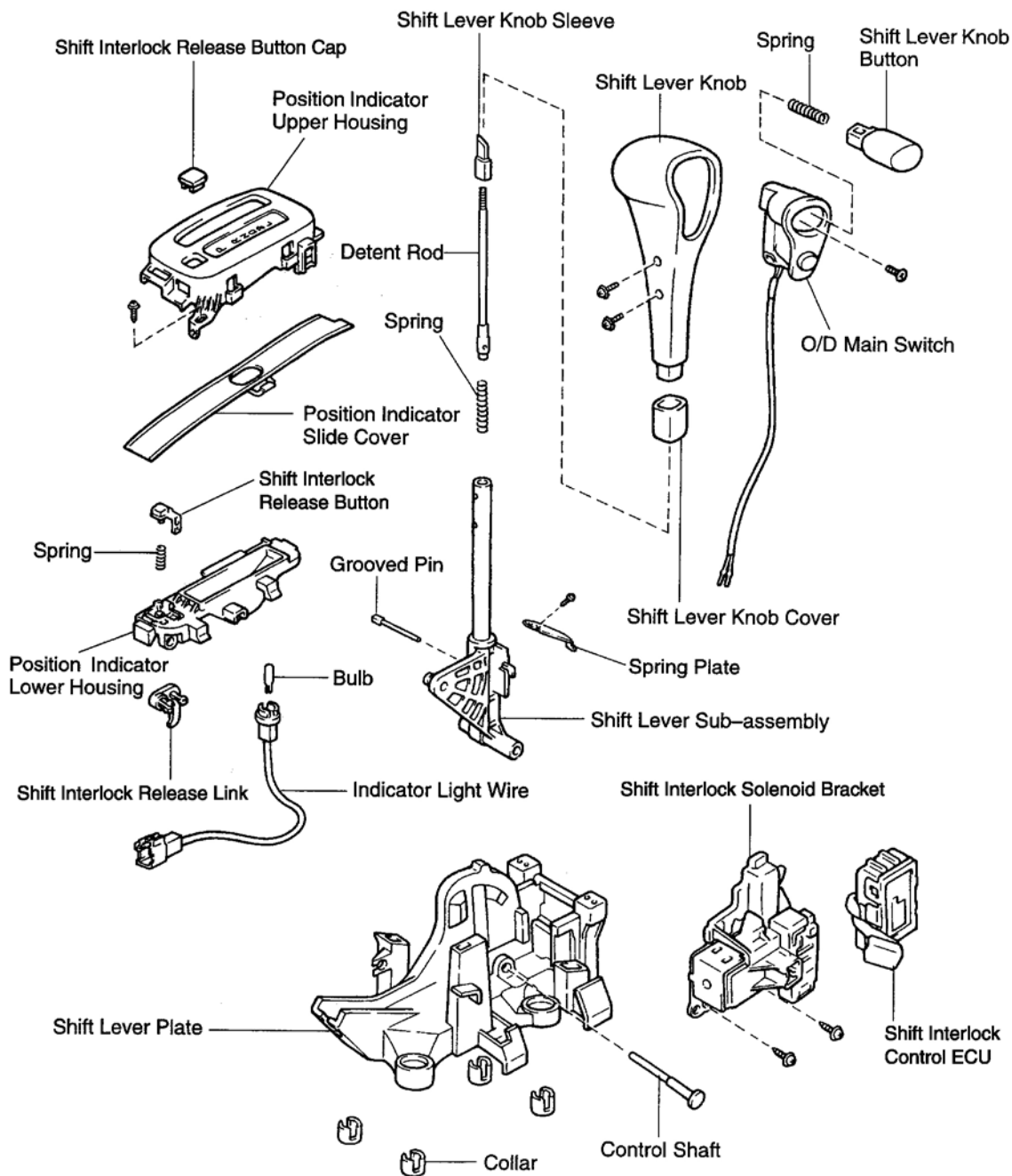
Removal & Installation (Toyota Camry Solara)

Manufacturer does not provide removal and installation procedures for this model. For an exploded view of related components, see **Fig. 97** and **Fig. 98** .



G00139912

Fig. 97: Exploded View Of Floor Console & Related Components (Toyota Camry Solara)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



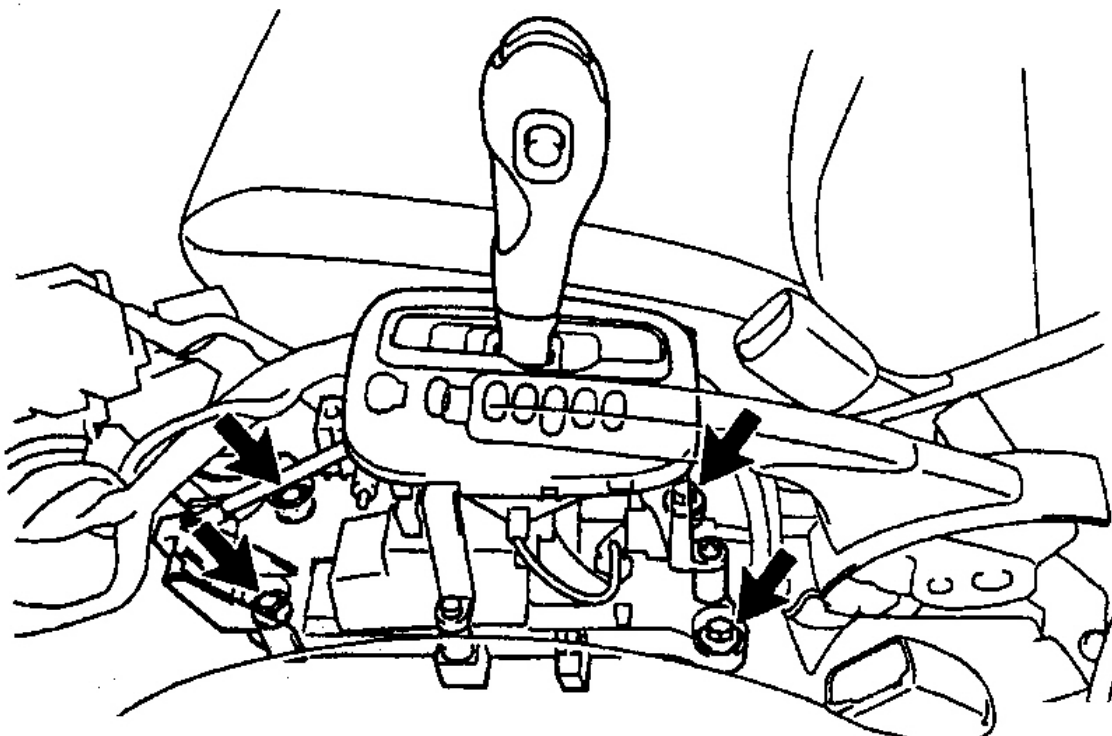
G00143124

Fig. 98: Exploded View Of Floor Shift Assembly (Toyota Camry Solara)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota Celica)

1. To access the shift interlock ECU, see **SHIFT INTERLOCK CABLE**. Remove the 4 bolts and remove the floor shift assembly. See **Fig. 99**. Remove the O/D main switch connector from the gearshift lever plate. Disengage the secondary locking device. Release the locking tab of the terminals No. 5 and 6, and pull the terminals out from the rear. See **Fig. 100**. Remove the 2 screws and shift lever knob assembly. See **Fig. 101**.

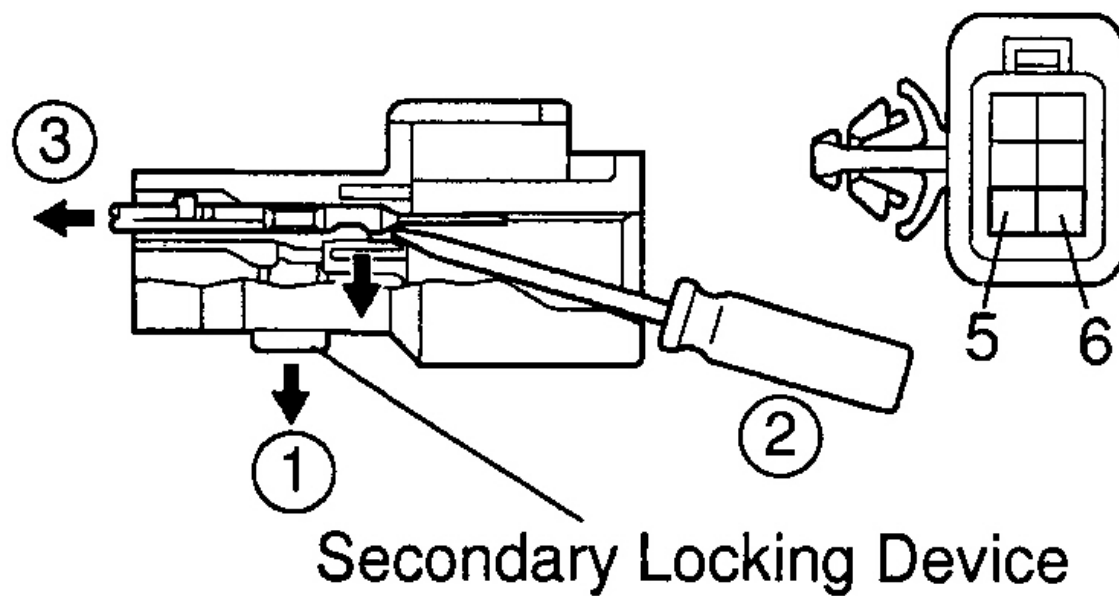
2. Remove the O/D main switch. Remove the No. 2 slide cover. Remove the shift lever stop pin, shift lever knob button, shift lever knob button guide and compression spring. Remove the upper position indicator housing. Remove the control position indicator plate and remove the 4 slide covers from the lower position indicator housing. See **Fig. 101** .
3. Remove the indicator lamp wire assembly. Remove the 4 screws and lower position indicator housing. Remove the screw and indicator lamp wire sub-assembly. Remove the shift interlock release button and spring. Remove the 2 screws and shift interlock ECU. See **Fig. 101** .
4. To assemble, install the shift interlock ECU with the 2 screws. Apply grease on the shift interlock release button spring. Install the spring and shift interlock release button. Install the indicator lamp wire sub-assembly with the screw. Install the lower position indicator housing with the 4 screws.
5. Install the indicator lamp wire sub-assembly. Install upper position indicator housing Install the 4 slide covers to the lower position indicator housing. See **Fig. 101** . Install the control position indicator plate. Install the upper position indicator housing. Apply grease on the compression spring. Install the compression spring, shift lever knob button guide, shift lever knob button and shift lever stop pin.
6. Install the No. 2 slide cover. Install the O/D main switch. Install the gearshift lever knob sub-assembly with the 2 screws. Coat the threads of screws with sealant. Toyota Part No. 03333-00030, Three Bond 1344, Loctite 242 or equivalent. Connect the 2 O/D main switch terminals to the connector. Connect the connector to the shift lever plate.
7. Pull in the cable while pressing the clip of the transaxle control cable to the floor shift assembly. Install the cable end from the rod of the floor shift assembly. Install the floor shift assembly with the 4 bolts. Connect the 2 wire harness clamps from the floor shift assembly. Connect the 2 connectors. To reassemble trim, see **SHIFT INTERLOCK CABLE** .



G00143135

Fig. 99: Removing & Installing Floor Shift Assembly (Toyota Celica)

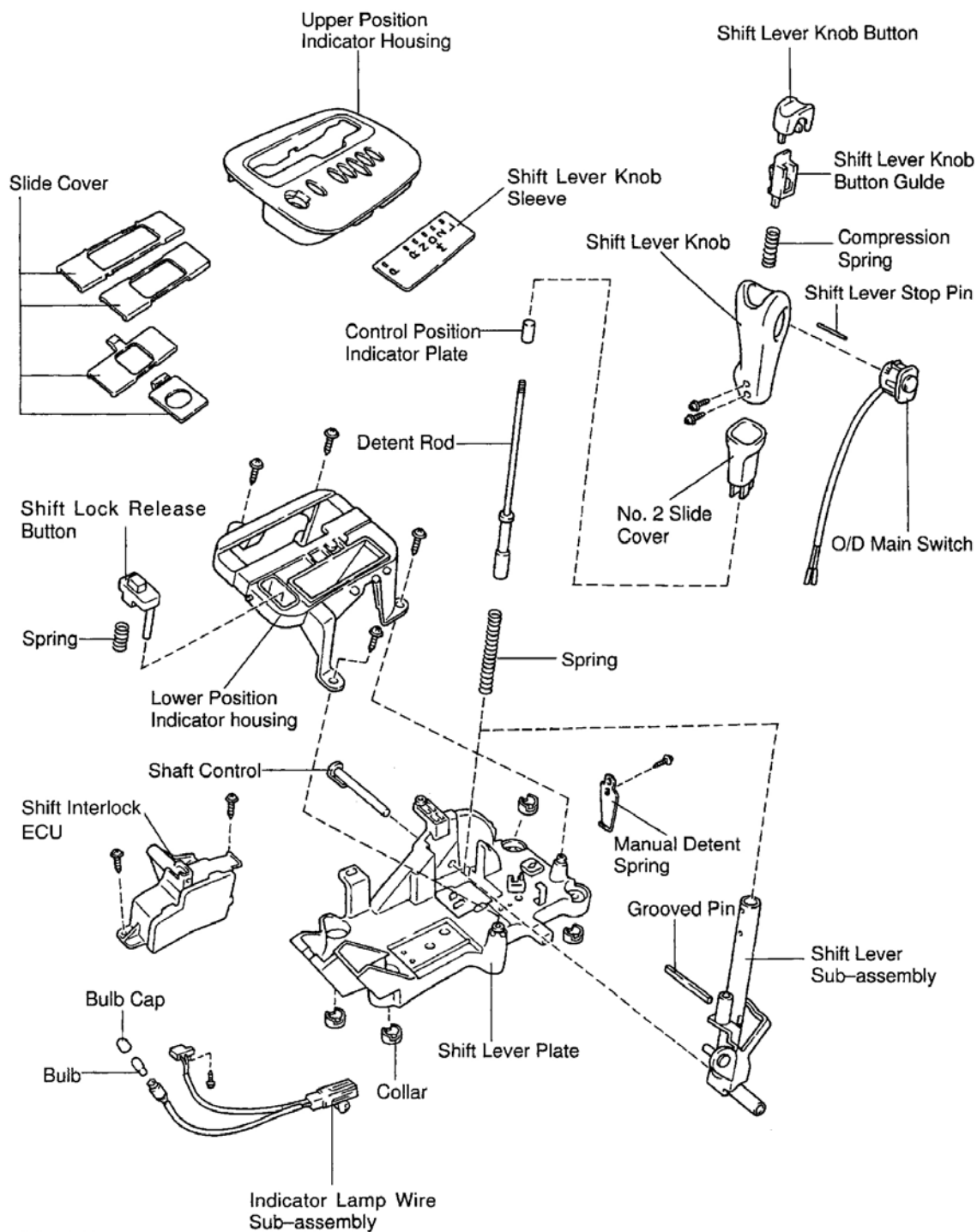
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143137

Fig. 100: Removing Overdrive Terminals From Connector (Toyota Celica)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143136

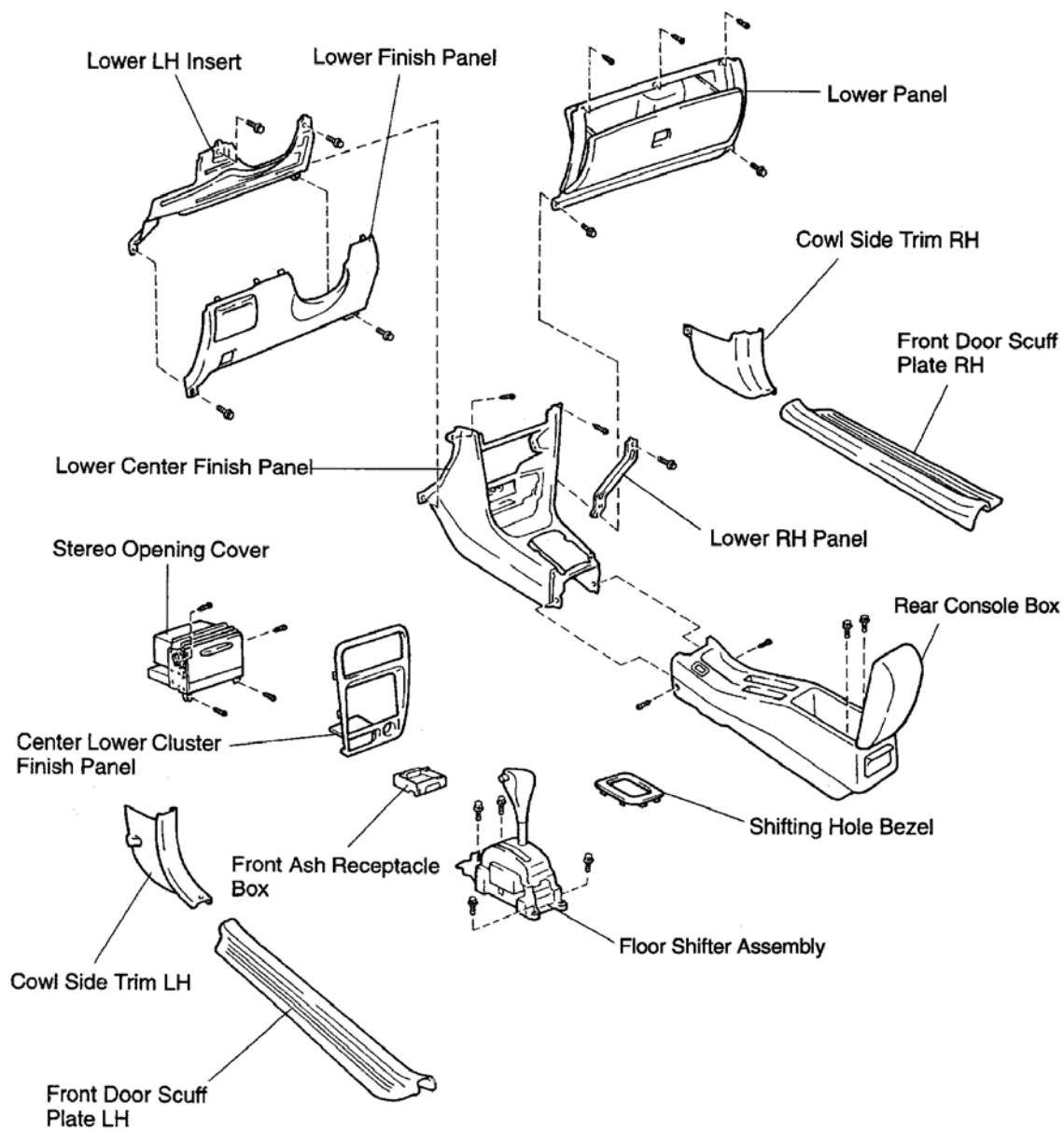
Fig. 101: Exploded View Of Floor Shift Assembly (Toyota Celica)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota Corolla)

1. Remove the left front door scuff plate, left side cowl side trim, right front door scuff plate and the right side cowl side trim. Remove the lower finish panel, left side lower insert, and the left and right side lower

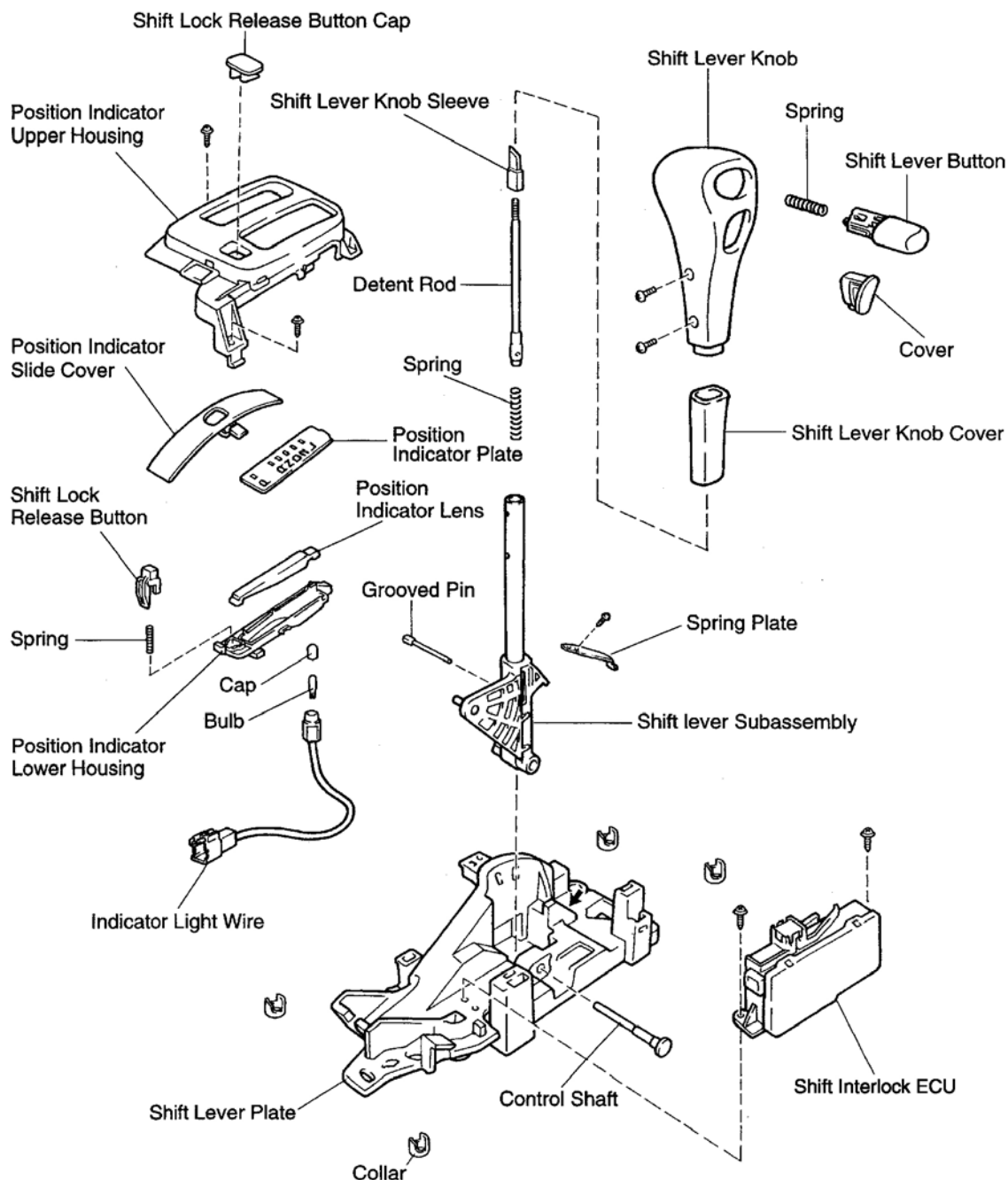
trim panels. See **Fig. 102** .

2. Remove the front ash tray box, center lower cluster finish panel, stereo opening cover and gearshift bezel. Remove the rear console box, lower center finish panel. See **Fig. 102** .
3. Disconnect shift control cable and remove the 4 bolts. See **Fig. 103** . Disconnect the 2 connectors and remove the shift lever assembly. Remove the 2 screws and the shift interlock ECU.
4. To assemble, install shift interlock ECU with the 2 screws. Install the floor shift assembly with 4 screws, the 2 connectors and connect the shift cable. See **Fig. 103** . Install the center lower finish panel, rear console box, gearshift bezel and the stereo opening cover. See **Fig. 102** .
5. Install the center lower cluster finish panel, front ash tray, right side lower panel and the lower panel. Install the left side lower insert and lower finish panel. See **Fig. 102** .
6. Install the left and right side cowl trim, right side scuff plate and the left side scuff plate. See **Fig. 102** .



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Fig. 102: Exploded View Of Floor Console & Related Components (Toyota Corolla)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



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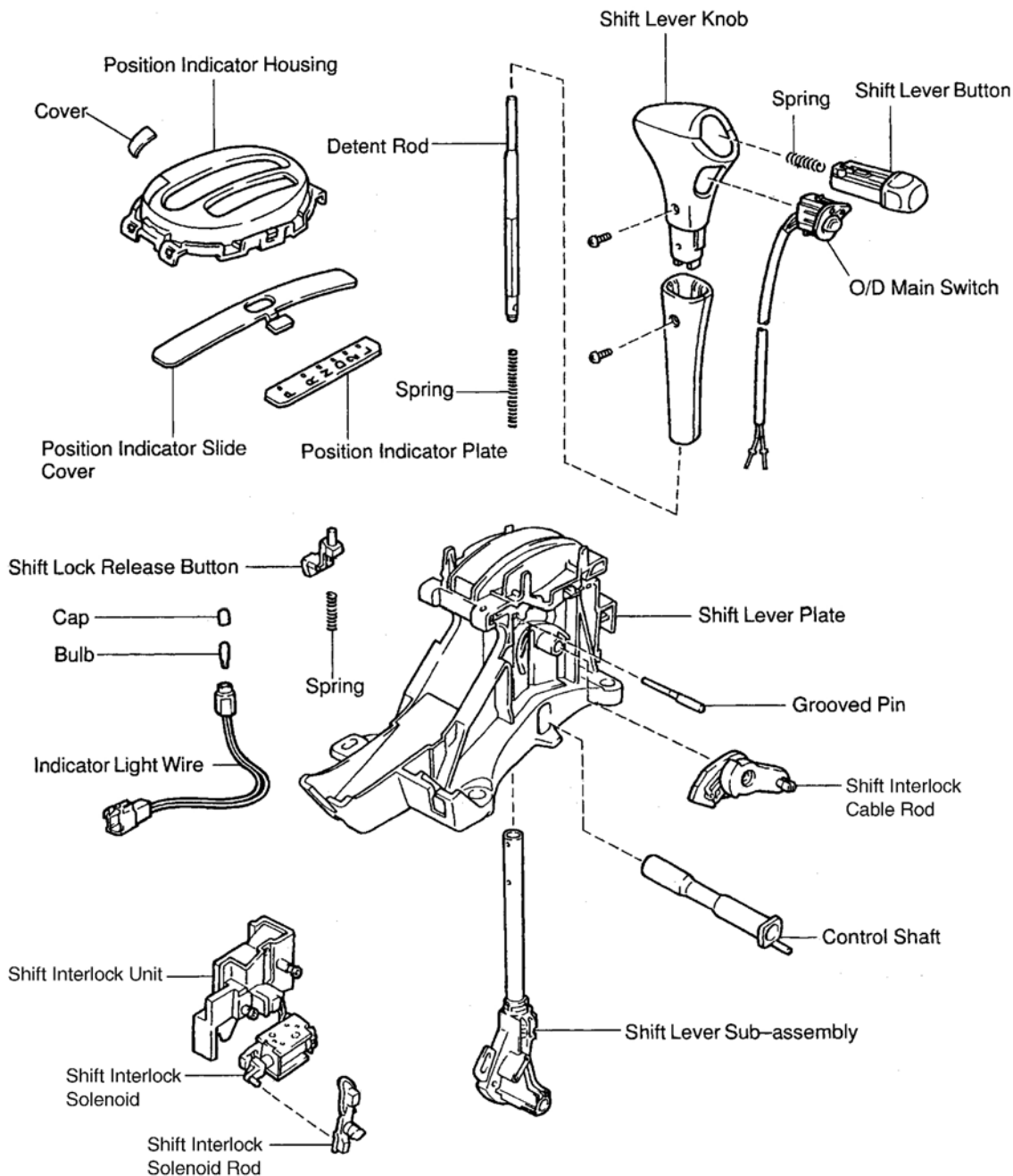
Fig. 103: Exploded View Of Floor Shift Assembly & Related Components (Toyota Corolla)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota ECHO)

Remove floor shift assembly. See **SHIFT INTERLOCK CABLE** . Disassemble floor shift assembly See **Fig. 104** . Remove the shift interlock ECU assembly and remove the shift interlock solenoid.

To assemble, install the shift interlock solenoid to the shift interlock ECU assembly. Attach the shift interlock

ECU assembly to the floor shift assembly, see **Fig. 104** . Install the floor shift assembly. See **SHIFT INTERLOCK CABLE** .



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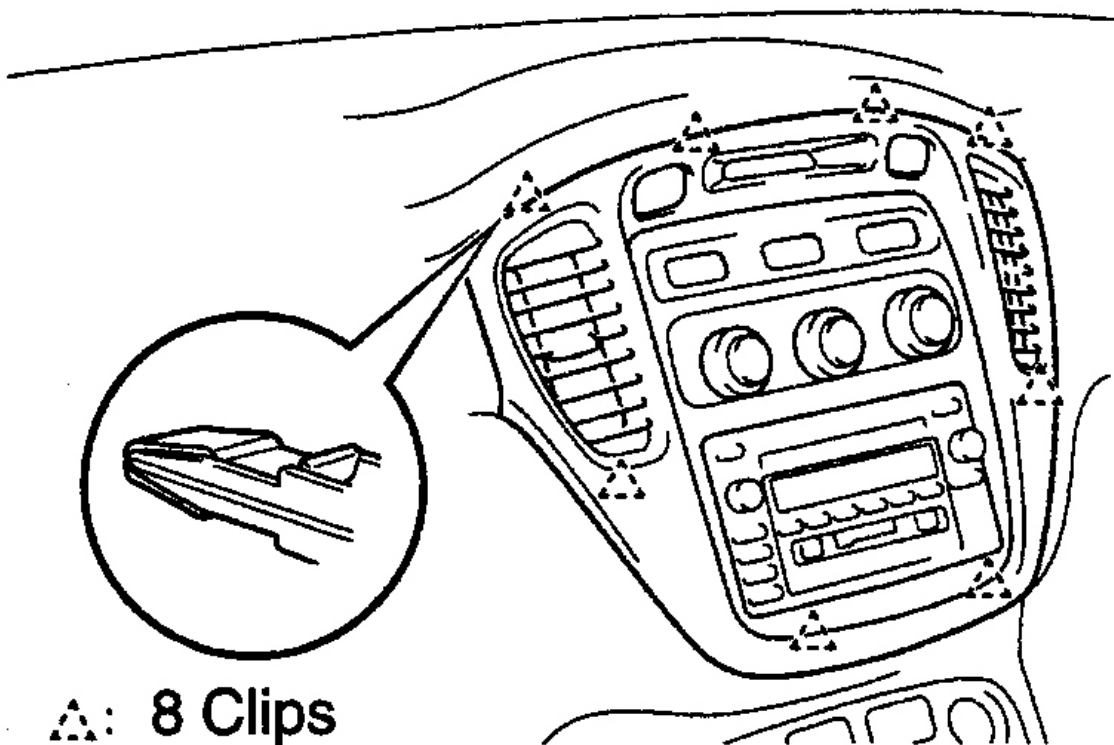
Fig. 104: Exploded View Of Floor Shift Assembly (Toyota ECHO)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Removal & Installation (Toyota Highlander)

1. Remove radio bezel finish panel assembly and radio. See **Fig. 105** and **Fig. 106** . Remove right side floor

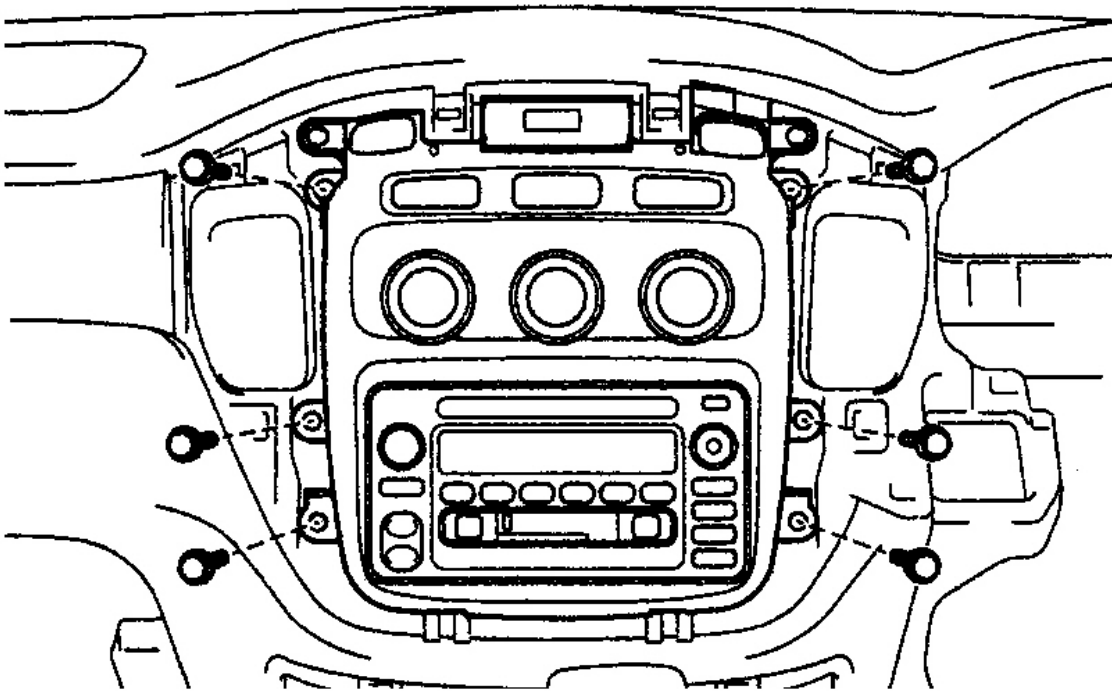
carpet cover. Remove left side floor carpet cover. Remove floor shift finish panel. See **Fig. 107** .

2. Disconnect the shift cable end from the floor shift assembly. See **Fig. 108** . Disconnect the 3 connectors. Remove the 4 nuts and remove the floor shift assembly from the vehicle. See **Fig. 109** . Release the floor shift knob sub-assembly lock by pressing the click, then disconnect the indicator lamp wire connector from the shift lever plate. See **Fig. 110** .
3. Lower the shift lever knob cover. Remove the screws and shift lever knob from the shift lever. Remove the shift lever knob cover from the shift lever. Remove the indicator lamp wire from the position indicator lower housing. Remove the indicator lamp cap and indicator lamp bulb from the indicator lamp wire. Remove the 3 screws, detach the position indicator lower housing from the shift lever plate. While pressing the 2 claws, remove the shift interlock release button and spring from the position indicator lower housing. See **Fig. 111** .
4. Using a screwdriver, release the 4 claws and remove the pattern select switch assembly No. 1 from the position indicator lower housing. Remove the position indicator slide cover from the position indicator lower housing. Remove the 4 bolts and nut, detach the shift lever housing from the shift lever plate. Remove the 2 screws and the shift interlock ECU assembly from the shift lever plate. See **Fig. 111** .
5. To assemble, install the shift interlock ECU to the shift lever plate with 2 screws. Install the shift lever housing to the shift lever plate with 4 bolts. Install the position indicator slide cover to the position indicator lower housing. Install the pattern select switch assembly to the position indicator lower housing. Ensure the claws fit securely.
6. Install the shift interlock release button and greased spring to the position indicator lower housing. Ensure the claws fit securely. Install the position indicator lower housing to the shift lever plate with 3 screws. Install the control position indicator plate to the position indicator lower housing.
7. Install the shift interlock release cover to the control position indicator plate. Install the indicator lamp bulb and indicator lamp cap to the indicator lamp wire. Install the indicator lamp wire to the position indicator lower housing. Install the transmission control switch to the shift lever knob cover No. 1. Install the shift lever knob cover No. 1 to the shift lever knob with a screw. See **Fig. 111** .
8. Apply grease to the shift lever knob button and spring and install them to the shift lever knob. Install the wire harness of the transmission control switch. See **Fig. 112** . Install the shift lever knob to the shift lever with 2 screws. Install the shift lever knob cover to shift lever knob. Install the 2 wire harnesses of the transmission control switch.
9. Install the indicator lamp wire harness and connector as shown. Install the floor shift assembly to the vehicle with the 4 nuts. Tighten to specification. See **TORQUE SPECIFICATIONS** . Tighten them in the order, A, B, C and D. See **Fig. 113** . Connect the 3 connectors. Connect the cable end to the floor shift assembly with the uneven surface facing up. See **Fig. 108** . Install all trim in reverse order of removal.



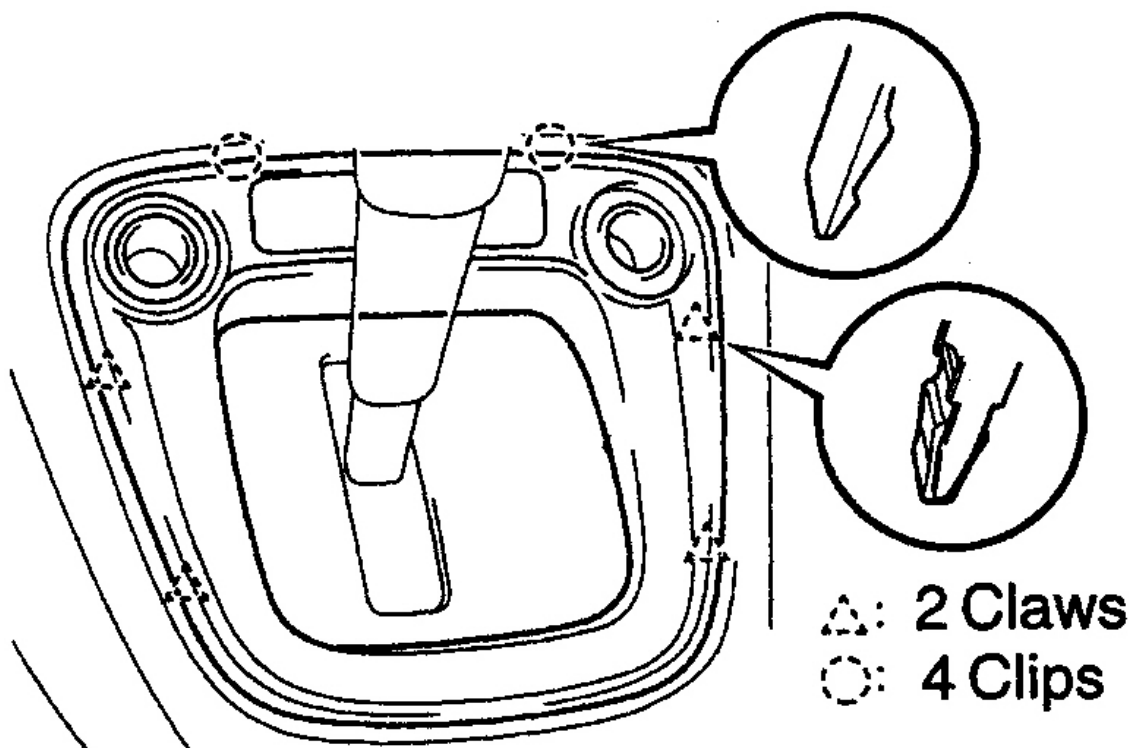
G00143158

Fig. 105: Removing & Installing Radio Bezel & Trim (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



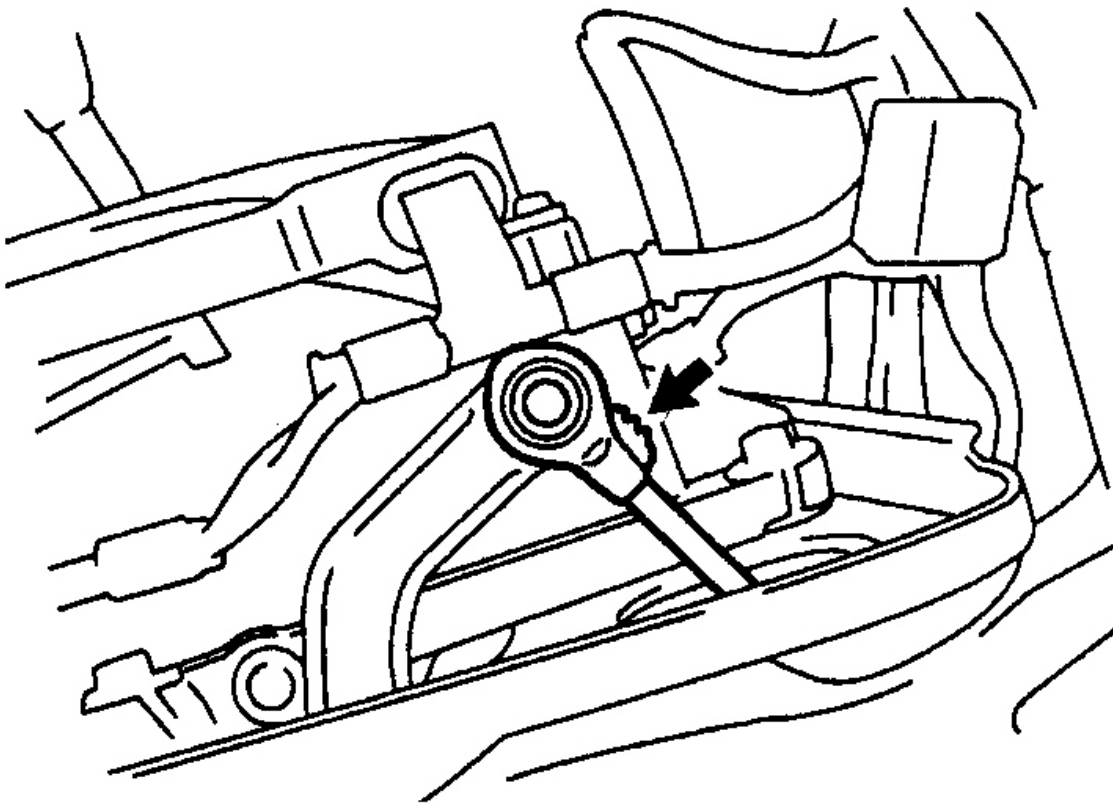
G00143159

Fig. 106: Removing & Installing Radio (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



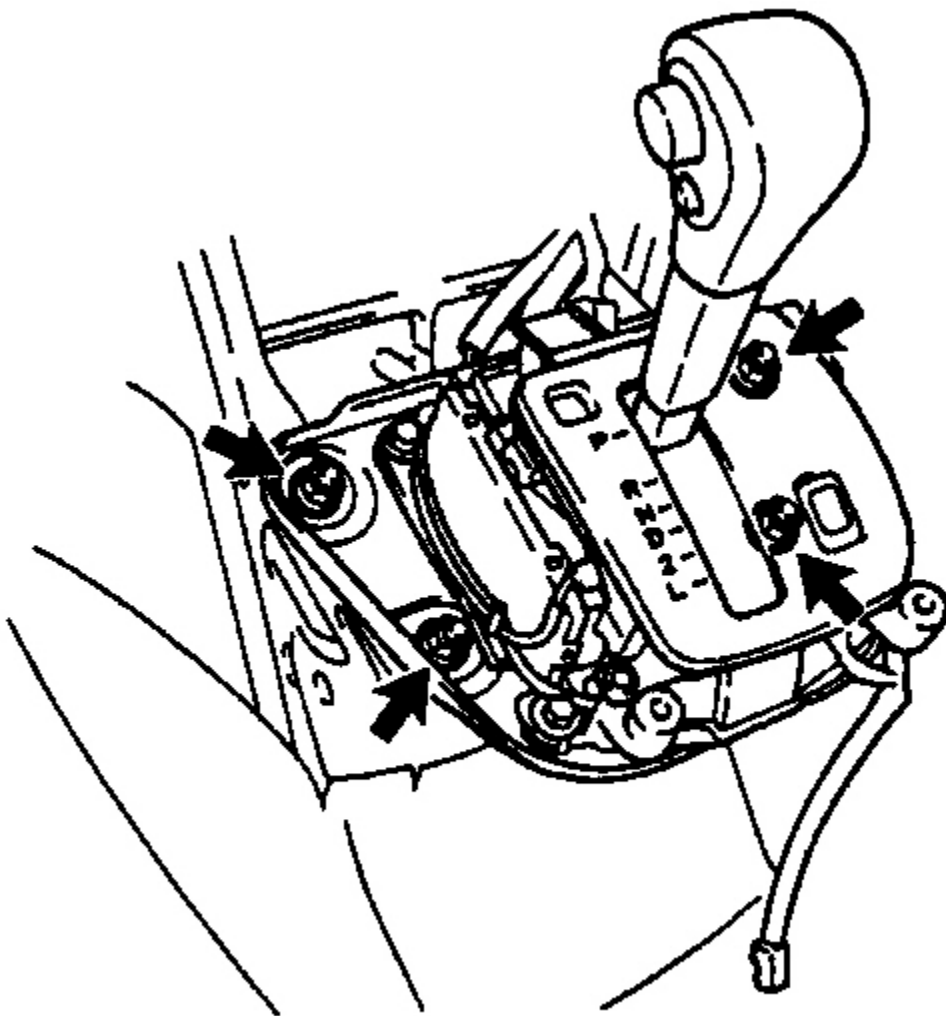
G00143160

Fig. 107: Removing & Installing Floor Shift Trim (Toyota highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



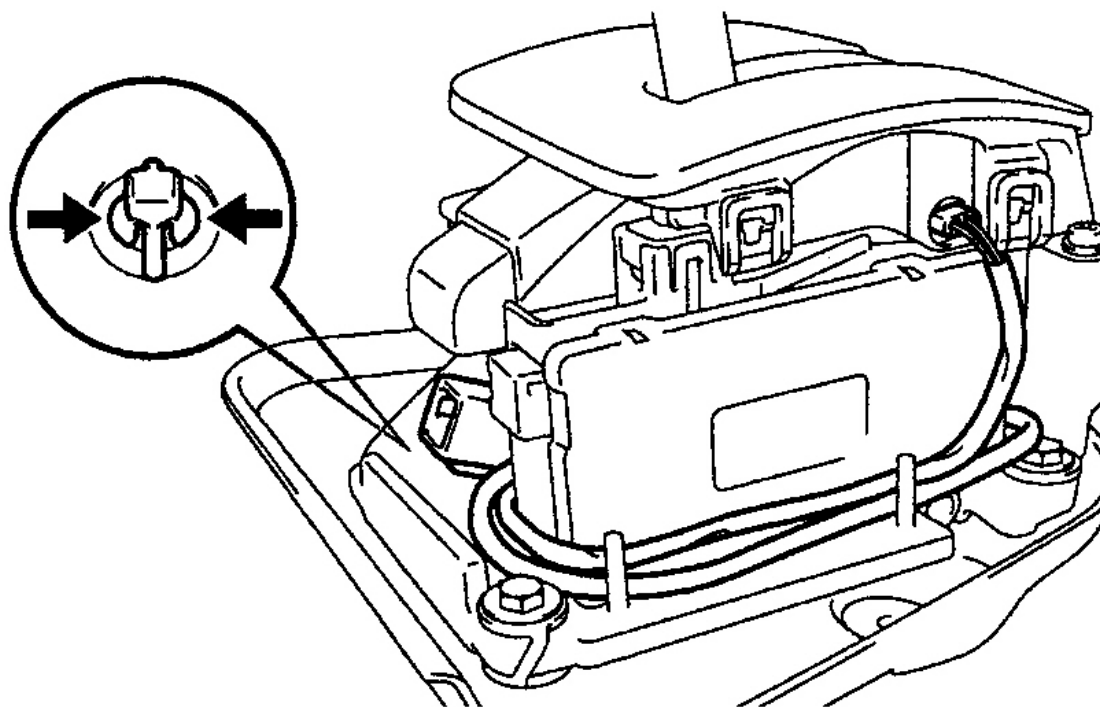
G00143162

Fig. 108: Removing & Installing Shift Cable (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



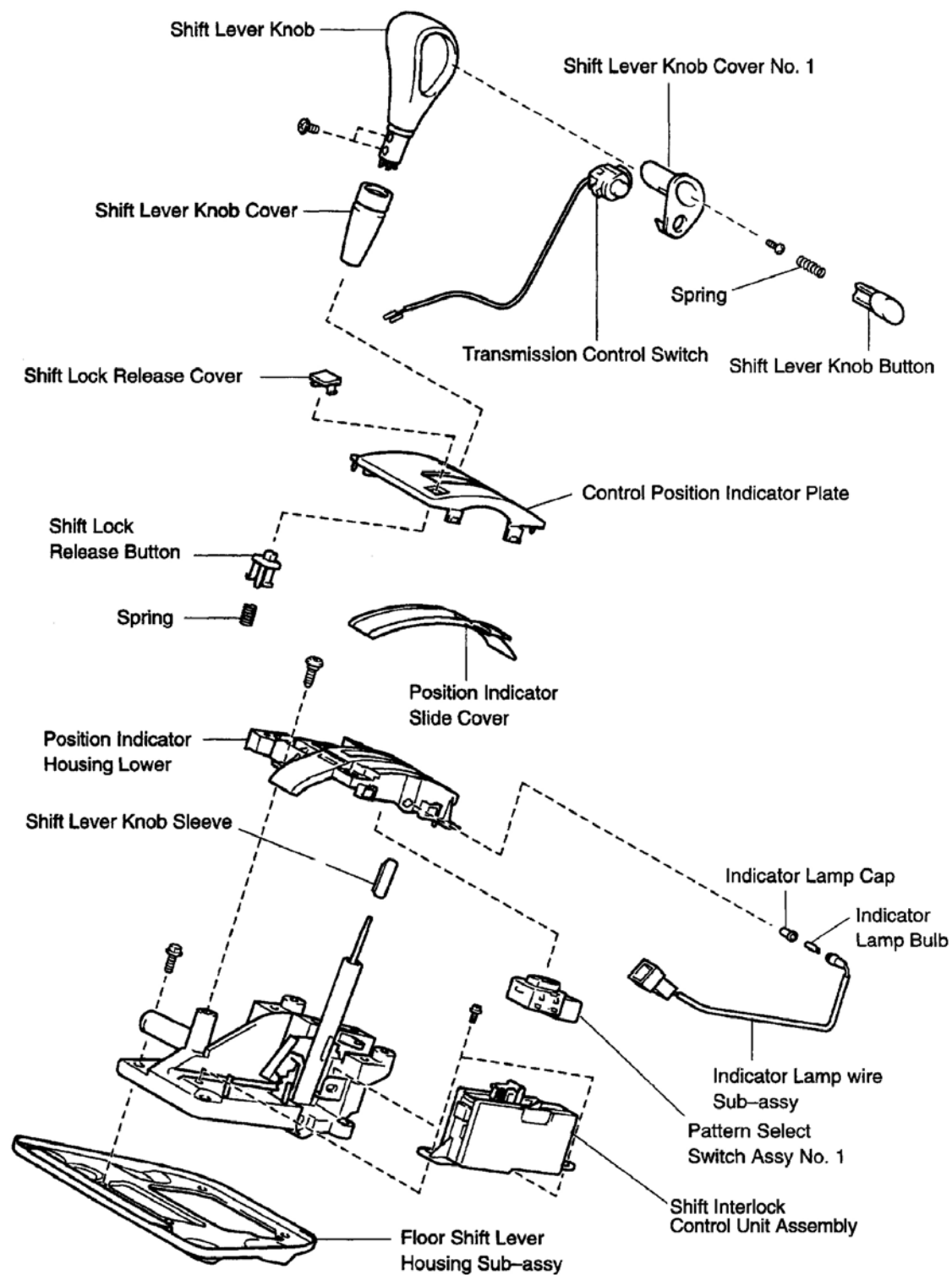
G00143163

Fig. 109: Removing & Installing Floor Shift Assembly (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



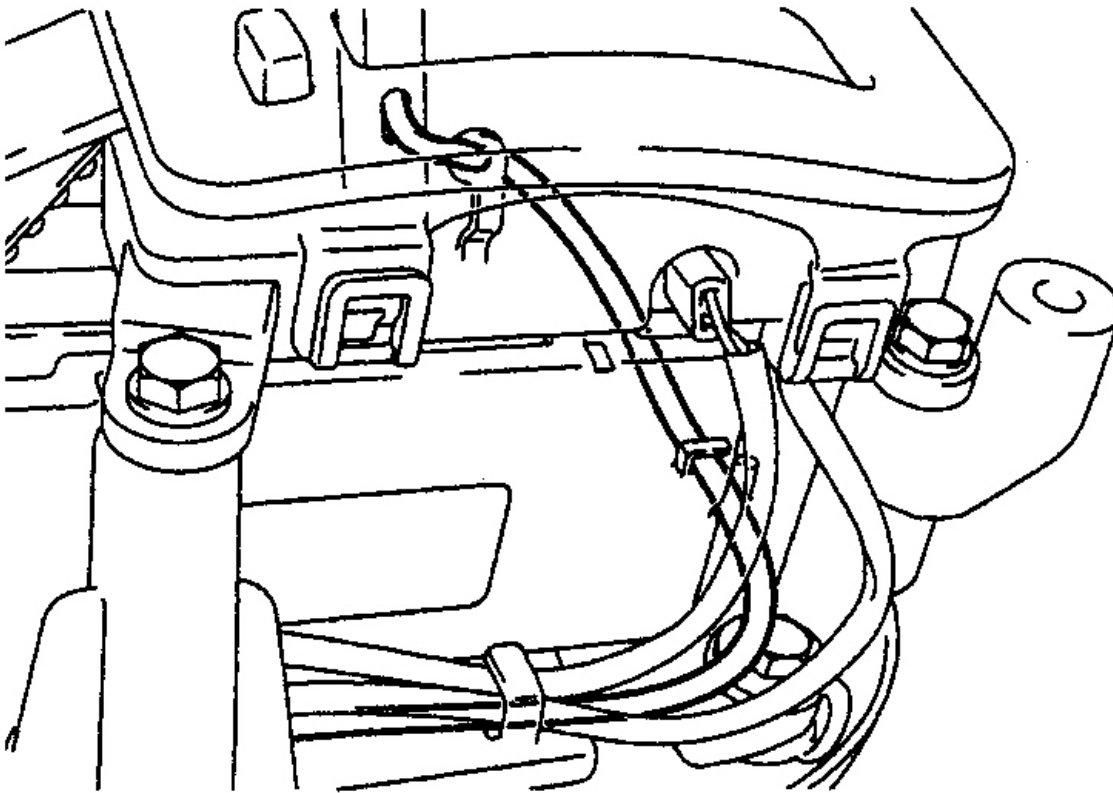
G00143161

Fig. 110: Releasing Floor Shift Interlock Assembly (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



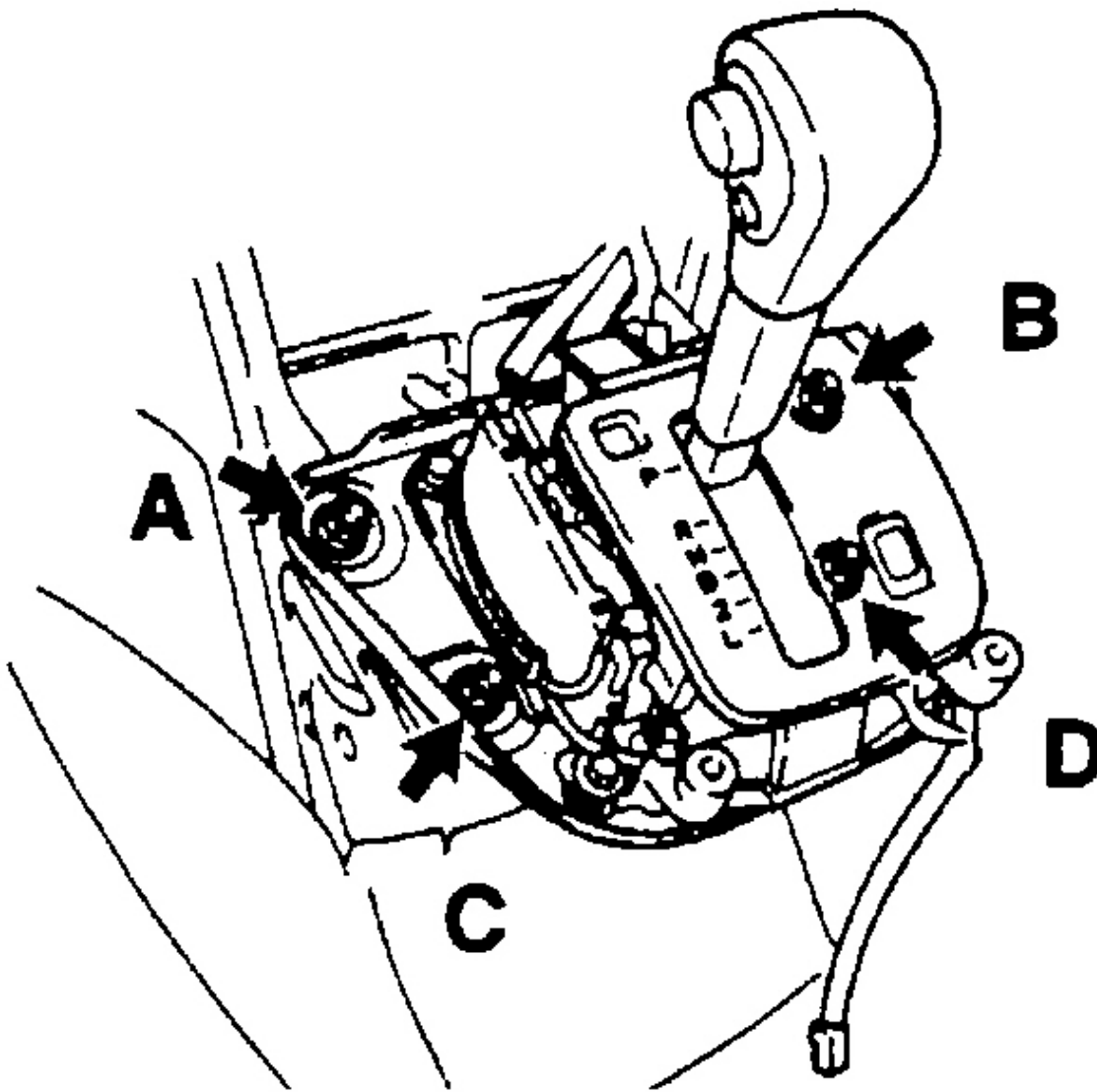
G00143156

Fig. 111: Exploded View Of Floor Shift Assembly (Toyota Highlander)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143164

Fig. 112: Routing Floor shift Wiring Harness (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143165

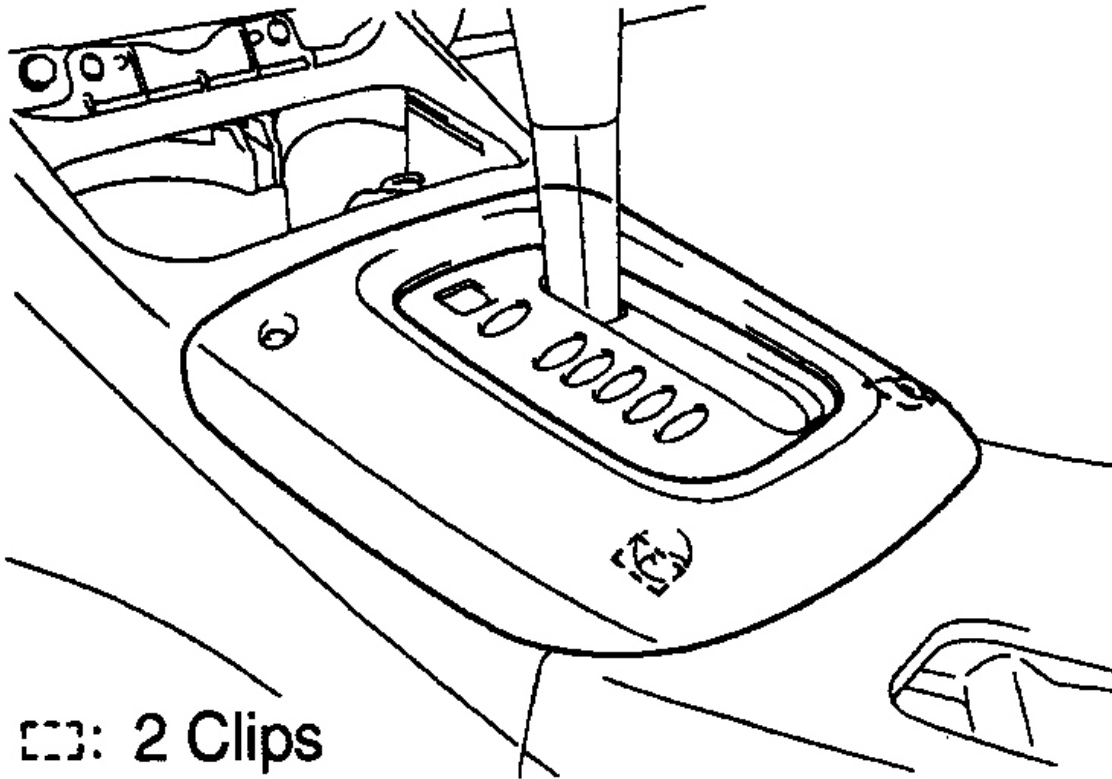
Fig. 113: Floor Shift Indicator Bolt Tightening Sequence (Toyota Highlander)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

RAV4

1. Remove the floor shift indicator trim bezel. See **Fig. 114** . Remove rear floor console box. See **Fig. 115** .
2. Remove front floor console box assembly. Remove shift cable by squeezing together the retaining tabs. See **Fig. 116** . Remove floor shift assembly by removing the 4 bolts. See **Fig. 117** .
3. Remove the shift knob retaining screws and O/D main switch. Remove the upper position indicator housing and slide cover. Remove the grooved pin, wiring connector and remove the shift interlock ECU.
4. To assemble, install the shift interlock ECU, wiring connector and the grooved pin. Install the slide cover and upper position indicator housing.
5. Install the floor shift assembly and tighten to specification. See **TORQUE SPECIFICATIONS** . Install

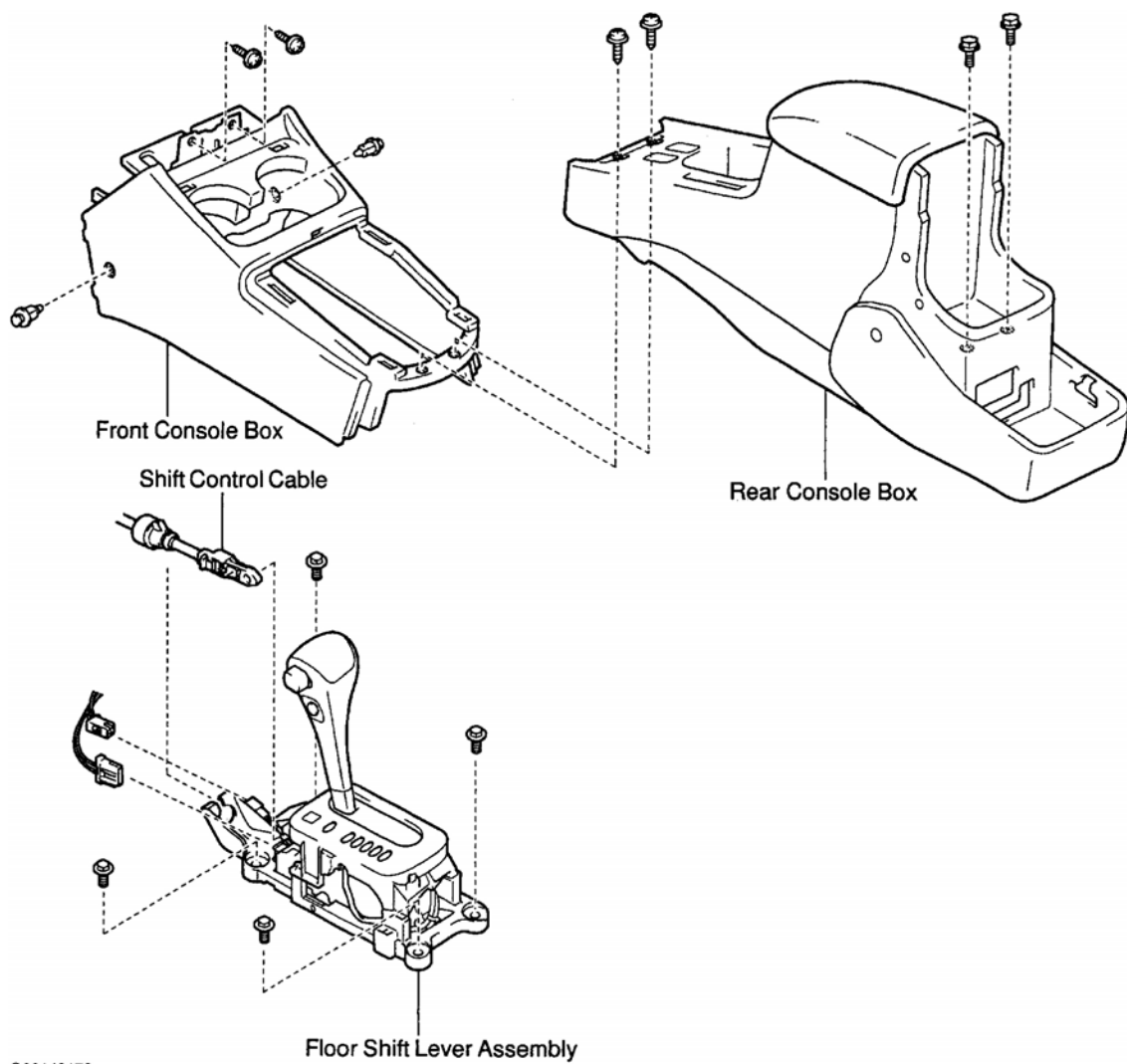
O/D main switch and shift knob assembly.

6. Install the front and rear floor console boxes. Install the floor shift indicator trim bezel.



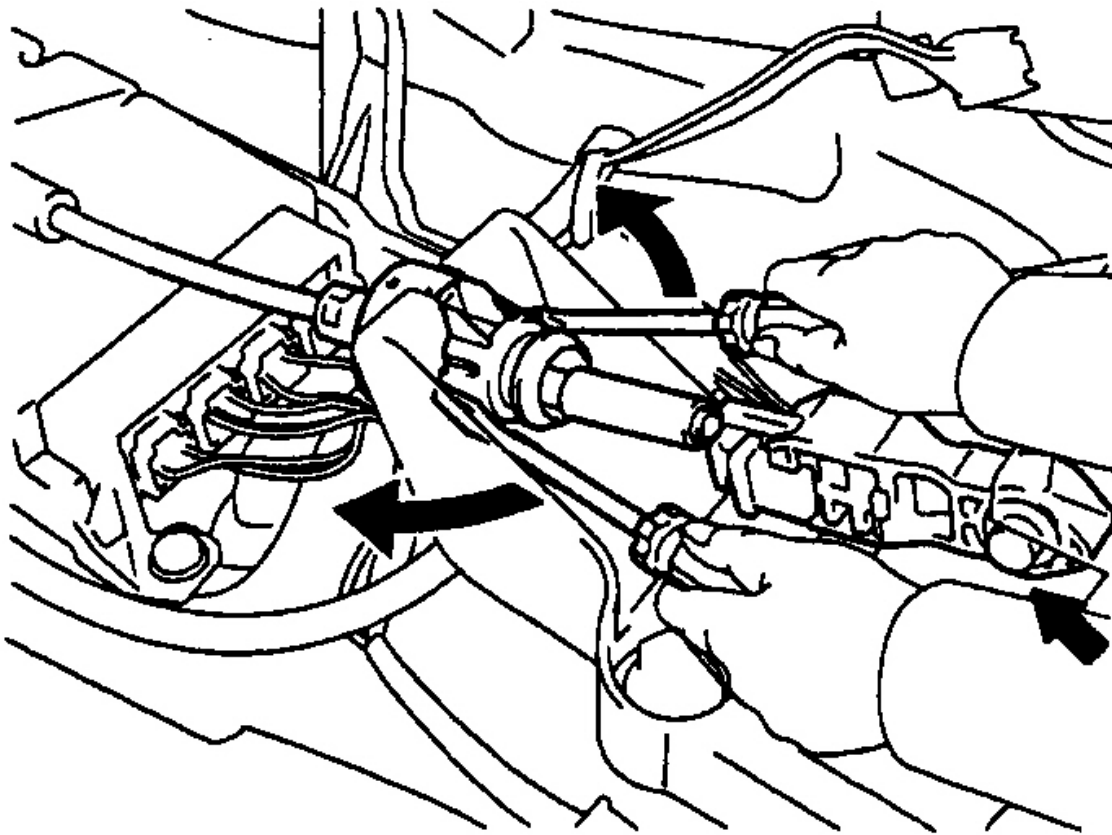
G00143175

Fig. 114: Removing & Installing Shift Indicator Trim Bezel Components (Toyota RAV4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



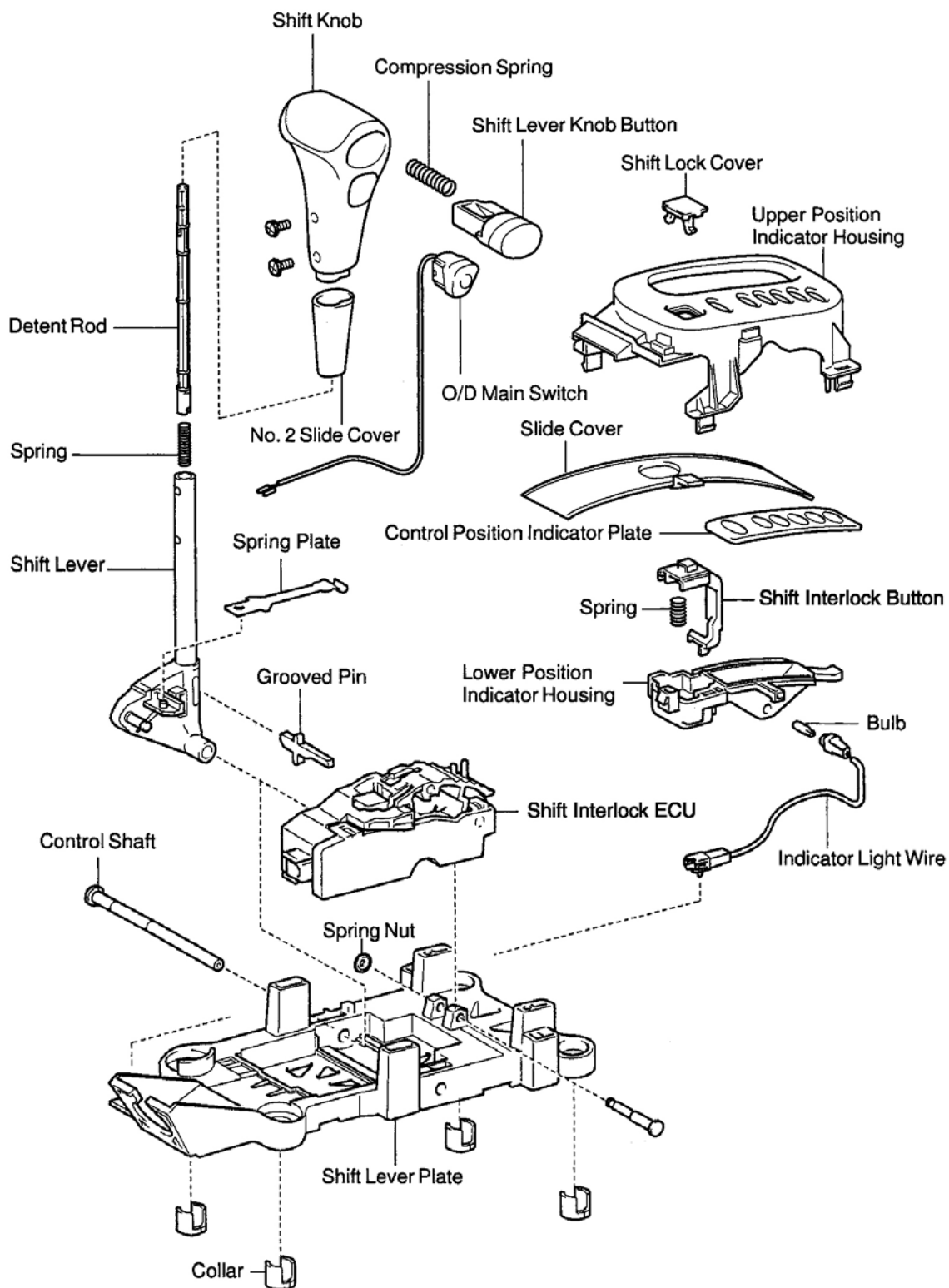
G00143173

Fig. 115: Exploded View Of Floor Console & Related Components (Toyota RAV4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143176

Fig. 116: Removing Shift Control Cable At Floor Shift Assembly (Toyota RAV4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00143174

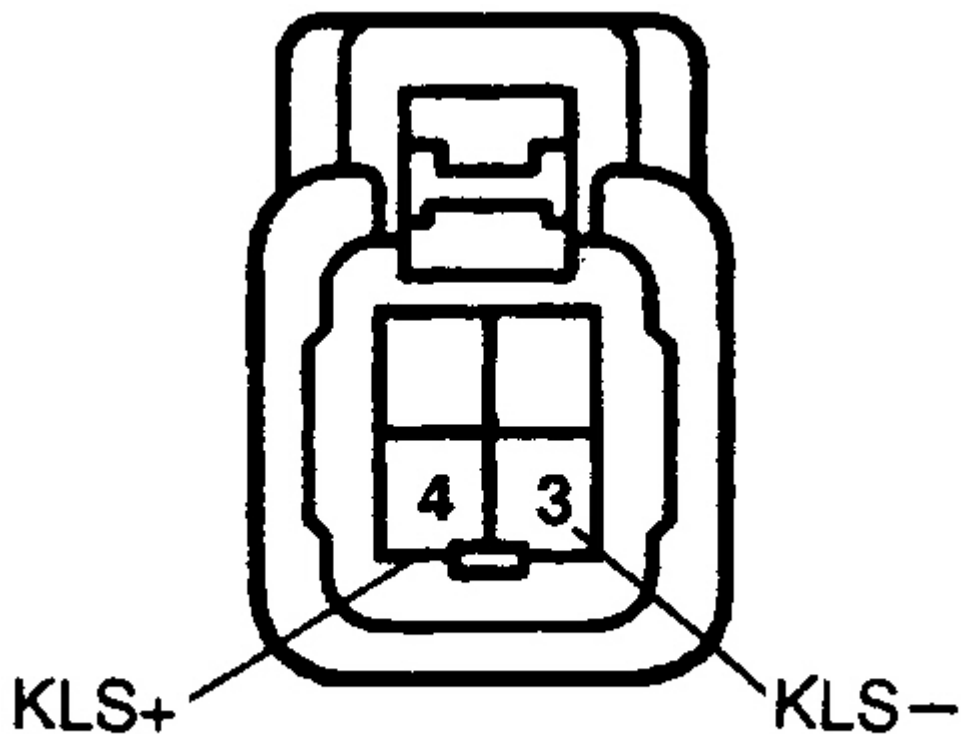
Fig. 117: Exploded View Of Floor Shift Assembly & Related Components (Toyota RAV4)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

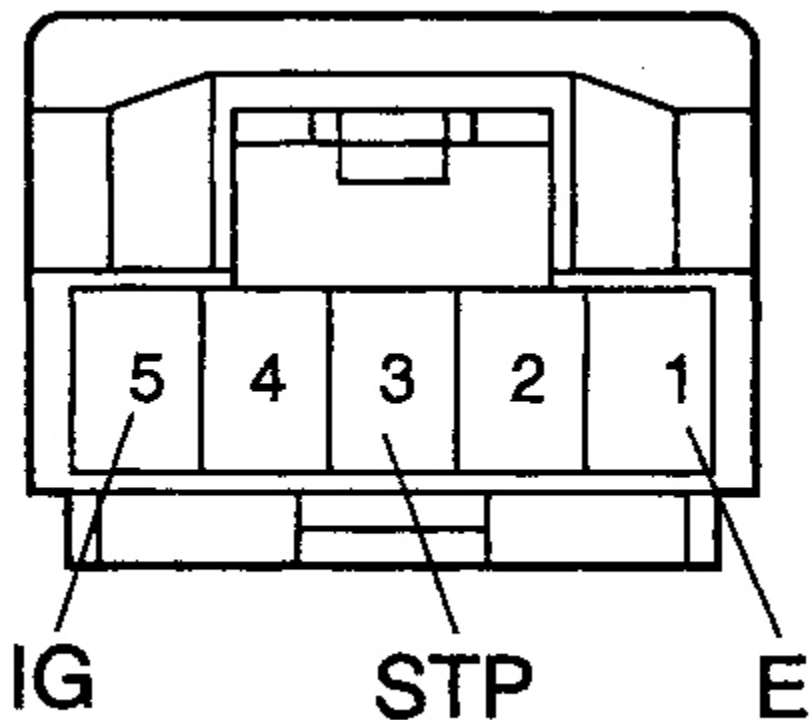
Application		INCH Lbs. (N.m)
Floor Shift Assembly Bolt		
Lexus		
ES300		104 (11.8)
GS300 & GS430		100 (8.3)
IS300		100 (8.3)
LS430		100 (8.3)
LX470		100 (8.3)
RX300		143 (12)
SC430		100 (8.3)
Toyota		
Celica		106 (12)
ECHO		106 (12)
Highlander		104 (11.8)
Land Cruiser		48 (5.4)
RAV4		106 (12)
Shift Interlock Cable Bolt		
Toyota ECHO		106 (12)
Toyota Sequoia		97 (11)
Toyota Sienna		97 (11)
Toyota Tundra		97 (11)
Shift Lever Housing Components		
Sequoia, Sienna & Tundra		
Cable Sliding Block	19 (2.2)	
Housing Bolt	106 (12)	
Lever Bolt	159 (18)	
Shift Interlock Cable Screw	25 (2.9)	

CONNECTOR IDENTIFICATION



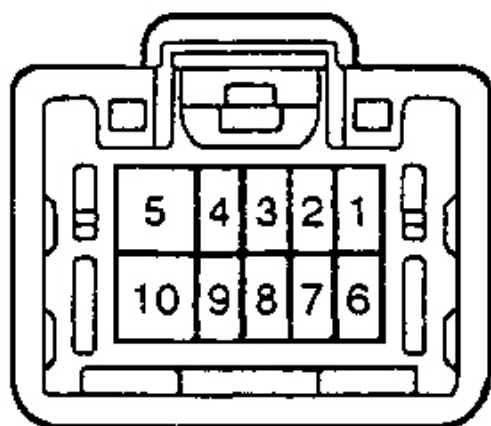
G00139893

Fig. 118: Identifying Key Interlock Solenoid Connector Terminals (Lexus SC430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

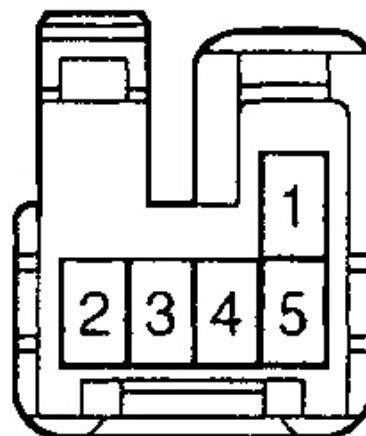


G00139896

Fig. 119: Identifying Shift Interlock ECU Connector Terminals (Lexus ES300 & Toyota Camry)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



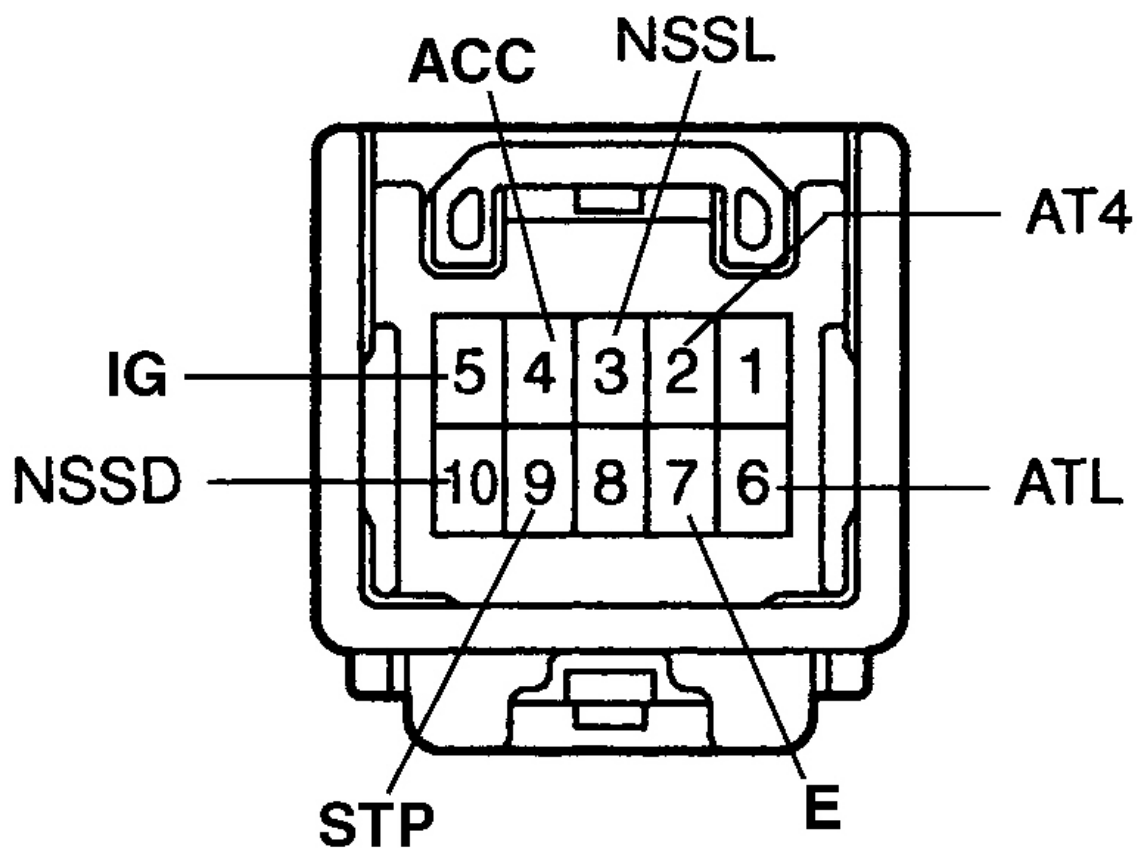
Connector A



Connector B

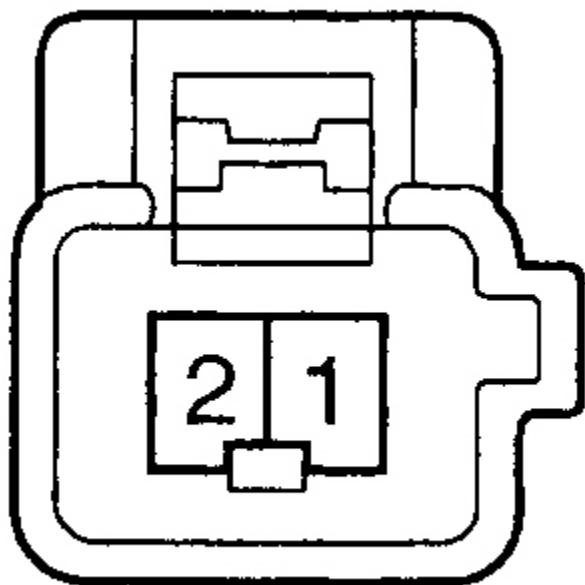
G00139883

Fig. 120: Identifying Shift Interlock ECU Connector Terminals (Lexus LX470 & Toyota Land Cruiser)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



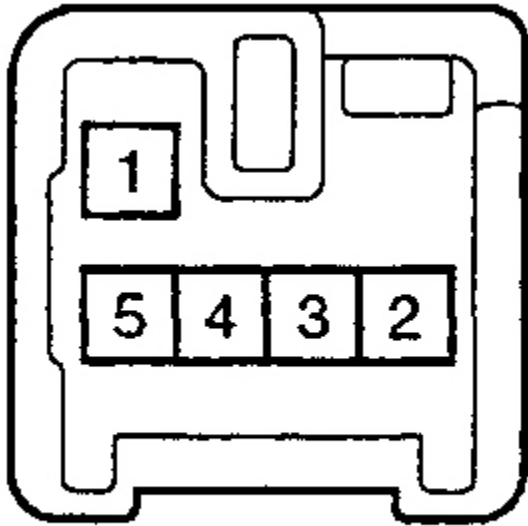
G00115771

Fig. 121: Identifying Shift Interlock ECU Connector Terminals (Lexus SC430)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



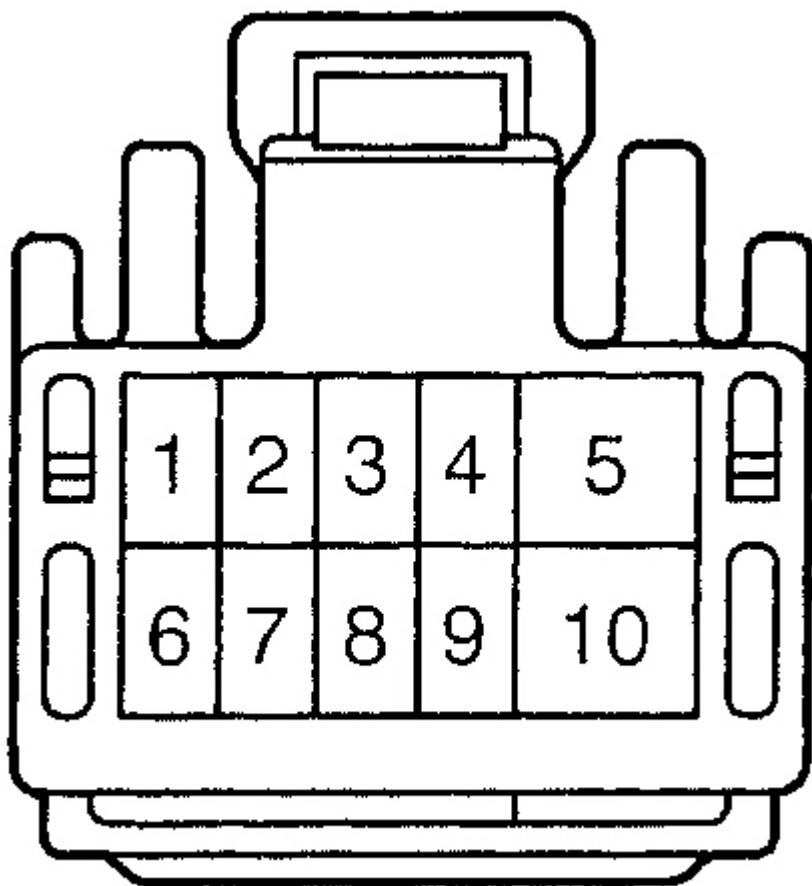
G00139887

Fig. 122: Identifying Key Interlock Solenoid Connector (Lexus LX470 & Toyota Land Cruiser)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00139884

Fig. 123: Identifying Shift Interlock Solenoid Connector Terminals (Lexus LX470 & Toyota Land Cruiser)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00060508

Fig. 124: Identifying Shift Interlock ECU 10-Pin Connector Terminals (Toyota Tacoma)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

PIN VOLTAGE TESTS

SHIFT INTERLOCK ELECTRONIC CONTROL UNIT

NOTE: For circuit reference, see CONNECTOR IDENTIFICATION and/or WIRING DIAGRAMS.

NOTE: Do not disconnect shift interlock electronic control unit for testing. For all models, access shift interlock ECU. See COMPONENT LOCATIONS. Turn ignition switch to ON position.

Lexus ES300

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 126**. Ensure terminal "E" has continuity to ground at all times with connector connected. See **Fig. 119**.

Lexus GS300 & GS430

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 127** . Using DVOM check for continuity at specified terminals.

Lexus IS300

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 128** .

Lexus LS430

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 129** . Using DVOM check for continuity between terminal No. 7 and ground.

Lexus LX470 & Toyota Land Cruiser

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 120** and **Fig. 130** .

Lexus RX300

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 131** .

Lexus SC430

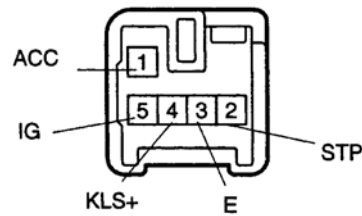
Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 121** and **Fig. 132** . Ensure terminal "E" has continuity to ground at all times with connector connected.

Toyota (Except Land Cruiser & Highlander)

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 131 -Fig. 139** .

Toyota Highlander

Using DVOM, measure voltage by backprobing between specified shift interlock ECU terminals and ground with vehicle operated under specified condition. See **Fig. 125** . Ensure terminal "E" has continuity to ground at all times with connector connected.



Terminal	Measuring Condition	Voltage (V)
1 (ACC) – 3 (E)	Ignition switch ACC	10 – 14
1 (ACC) – 3 (E)	Ignition switch OFF	0
2 (STP) – 3 (E)	Depress brake pedal	10 – 14
2 (STP) – 3 (E)	Release brake pedal	0
4 (KLS+) – 3 (E)	(1) Ignition switch ACC and P position	0
	(2) Ignition switch ACC and except P position	7.5 – 11
	(3) Ignition switch ACC and except P position (After approx. 1 second)	6 – 9
5 (IG) – 3 (E)	Ignition switch ON	10 – 14
5 (IG) – 3 (E)	Ignition switch OFF	0

Terminal	Measuring Condition	Specified Value
1 (E) – Body ground	Always	Continuity

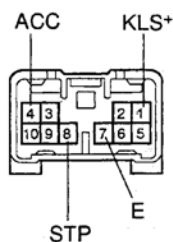
G00143157

Fig. 125: Measuring Voltage & Checking For Continuity At Shift Interlock ECU (Toyota Highlander)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Terminal	Measuring Condition	Voltage (V)
3 (STP) – 1 (E)	Depress brake pedal	10 – 14
3 (STP) – 1 (E)	Release brake pedal	0
5 (IG) – 1 (E)	Ignition switch ON	10 – 14
5 (IG) – 1 (E)	Ignition switch OFF	0

G00139857

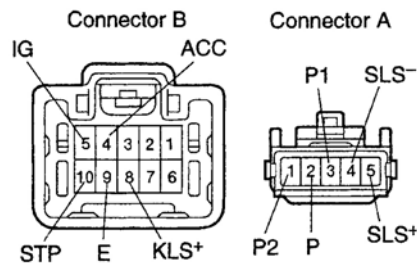
Fig. 126: Measuring Voltage At Shift Interlock ECU (Lexus ES300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Specified Condition
1 – 7 (KLS+ – E)	(1) IG SW ACC and shift lever P position	0 V
	(2) IG SW ACC and shift lever except P position	7.5 – 10V
4 – 7 (ACC – E)	(1) IG SW ON	10 – 14 V
	(2) IG SW ACC	10 – 14 V
8 – 7 (STP – E)	Depress brake pedal	10 – 14 V
7 – Ground (E – Ground)	Constant	Continuity

G00139865

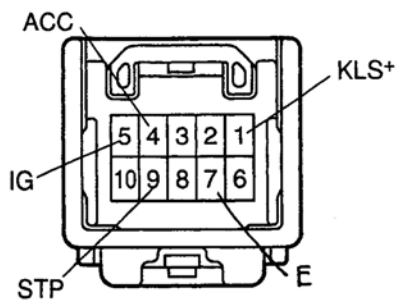
Fig. 127: Measuring Voltage & Checking Continuity At Shift Interlock ECU (Lexus GS300 & GS430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring condition	Voltage (V)
B4 – B9 (ACC – E)	Ignition switch ACC	10 – 14
B5 – B9 (IG – E)	Ignition switch ON	10 – 14
B8 – B9 (KLS+ – E)	1. Ignition switch ACC and P position	0
	2. Ignition switch ACC and except P position	7.5 – 11.5
	3. Ignition switch ACC and except P position (After approx. 1 second)	6 – 9
B10 – B9 (STP – E)	Depressing brake pedal	10 – 14
A5 – A4 (SLS+ – SLS-)	1. Ignition switch ON and P position	0
	2. Depress brake pedal	8 – 15
	3. Depress brake pedal (After approx. 1 second)	6 – 11
	4. Shift between P and N position under conditions above	6 – 11
	5. Shift D position under conditions above	0
A3 – A2 (P1 – P)	1. Ignition switch ON, P position and depress brake pedal	0
	2. Shift except P position under condition above	12
A1 – A2 (P2 – P)	1. Ignition switch ON, P position and depress brake pedal	12
	2. Shift except P position under conditions above	0

G00139870

Fig. 128: Measuring Voltage At Shift Interlock ECU (Lexus IS300)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Specified Voltage
1 – 7 (KLS+ – E)	(1) IG SW ACC and shift lever P position	0
	(2) IG SW ACC and shift lever except P position	7.5 – 8.5
4 – 7 (ACC – E)	(1) IG SW ON	10 – 14
	(2) IG SW ACC	10 – 14
9 – 7 (STP – E)	Depress brake pedal	10 – 14
5 – 7 (IG – E)	IG SW ON	10 – 14
7 – Ground (E – Ground)	Constant	Continuity

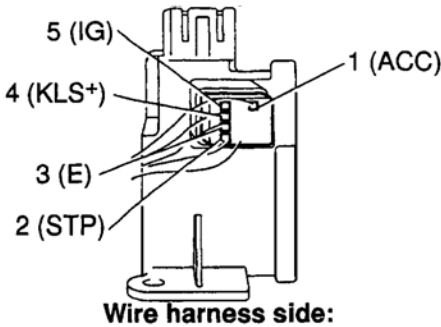
G00139877

Fig. 129: Measuring Voltage & Checking Continuity At Shift Interlock ECU (Lexus LS430)

Terminal	Measuring Condition	Voltage (V)
Connector A		
1 - 7 (ACC - E)	Ignition switch ACC	10 - 14
3 - 7 (IG - E)	Ignition switch ON	10 - 14
8 - 7 (STP - E)	Depress brake pedal	10 - 14
6 - 7 (KLS - E)	(1) Ignition switch ACC and P position	0
	(2) Ignition switch ACC and except P position	10 - 14
	(3) (After approx. 1 second)	6 - 9
Connector B		
2 - 5 (SLS+ - SLS-)	(1) Ignition switch ON and P position	0
	(2) Depress brake pedal	8 - 13.5
	(3) Shift except P position under conditions above	0
3 - 1 (P1 - P)	(1) Ignition switch ON, P position and depress brake pedal	0
	(2) Shift except P position under condition above	9 - 13.5
4 - 1 (P2 - P)	(1) Ignition switch ACC and P position	9 - 13.5
	(2) Shift except P position under condition above	0

G00139885

Fig. 130: Measuring Voltage At Shift Interlock ECU (Lexus LX470 & Toyota Land Cruiser)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal (Symbol)	Measuring Condition	Voltage (V)
1 (ACC) - 3 (E)	Ignition switch ACC	10 - 14
5 (IG) - 3 (E)	Ignition switch ON	10 - 14
2 (STP) - 3 (E)	Depressing brake pedal	10 - 14
4 (KLS+) - 3 (E)	(1) Ignition switch ACC and P position	0
	(2) Ignition switch ACC and except P position	7.5 - 11
	(3) Ignition switch ACC and except P position (After approx. 1 second)	6 - 9.5

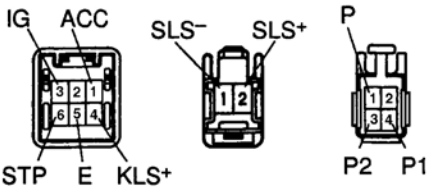
G00139847

Fig. 131: Measuring Voltage At Shift Interlock ECU (Lexus RX300 & Toyota Avalon - Floor Shift)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Terminal	Measuring Condition	Voltage (V)
1 (KLS+) – 7 (E)	(1) Ignition switch ACC and P position	0
	(2) Ignition switch ACC and except P position	7.5 – 11
	(3) Ignition switch ACC and except P position (After approx. 1 second)	6 – 9
4 (ACC) – 7 (E)	Ignition switch ON	10 – 14
	Ignition switch ACC	10 – 14
	Ignition switch OFF	0
9 (STP) – 7 (E)	Depress brake pedal	10 – 14
	Release brake pedal	0
5 (IG) – 7 (E)	Ignition switch ON	10 – 14
	Ignition switch OFF	0

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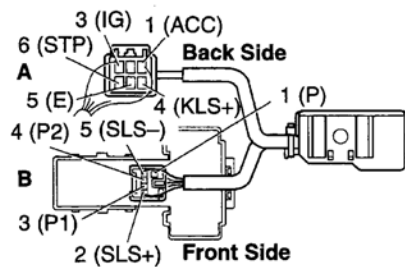
Fig. 132: Measuring Voltage At Shift Interlock ECU (Lexus SC430)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal No. (Symbols)	Measuring Condition	Voltage (V)
1 (ACC) – 5 (E)	Ignition switch ACC	10 – 14
3 (IG) – 5 (E)	Ignition switch ON	10 – 14
6 (STP) – 5 (E)	Depressing brake pedal	10 – 14
4 (KLS+) – 5 (E)	1. Ignition switch ACC and P position	0
	2. Ignition switch ACC and except P position	7.5 – 11
	3. Ignition switch ACC and except P position (After approx. 1 second)	6 – 9
2 (SLS+) – 1 (SLS-)	1. Ignition switch ACC and P position	0
	2. Depress brake pedal	8.5 – 13.5
	3. Except P position	0
4 (P1) – 1 (P)	1. Ignition switch ON, P position and depress brake pedal	0
	2. Shift except P position under condition above	9 – 13.5
3 (P2) – 1 (P)	1. Ignition switch ACC and P position	9 – 13.5
	2. Shift except P position under condition above	0

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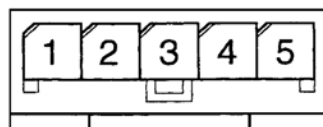
Fig. 133: Measuring Voltage At Shift Interlock ECU (Toyota Avalon - Column Shift)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Voltage (V)
A, 1 – A, 5 (ACC – E)	Ignition switch ACC	10 – 14
A, 3 – A, 5 (IG – E)	Ignition switch ON	10 – 14
A, 6 – A, 5 (STP – E)	Depressing brake pedal	10 – 14
A, 4 – A, 5 (KLS+ – E)	1. Ignition switch ACC and P position	0
	2. Ignition switch ACC and except P position	7.5 – 11
	3. Ignition switch ACC and except P position (After approx. 1 second)	6 – 9.5
B, 2 – B, 5 (SLS+ – SLS-)	1. Ignition switch ON and P position	0
	2. Depress brake pedal	8 – 13.5
	3. Except P position	0
B, 3 – B, 1 (P1 – P)	1. Ignition switch ON, P position and depress brake pedal	0
	2. Shift except P position under conditions above	9 – 13.5
B, 4 – B, 1 (P2 – P)	1. Ignition switch ACC, P position	9 – 13.5
	2. Shift except P position under conditions above	0

G00139906

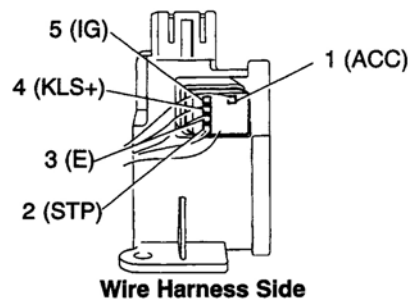
Fig. 134: Measuring Voltage At Shift Interlock ECU (Toyota Camry Solara)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Voltage (V)
5 – 1 (IG – E)	Ignition switch ON	10 – 14
3 – 1 (STP – E)	Depressing brake pedal	10 – 14

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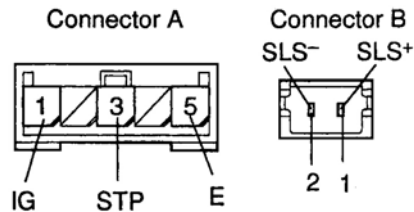
Fig. 135: Measuring Voltage At Shift Interlock ECU (Toyota Celica & RAV4)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Voltage (V)
1 – 3 (ACC – E)	Ignition switch ACC	10 – 14
5 – 3 (IG – E)	Ignition switch ON	10 – 14
2 – 3 (STP – E)	Depressing brake pedal	10 – 14
4 – 3 (KLS+ – E)	Ignition switch ACC and P position	0
	Ignition switch ACC and except P position	7.5 – 11
	Ignition switch ACC and except P position (After approx. 1 second)	6 – 9.5

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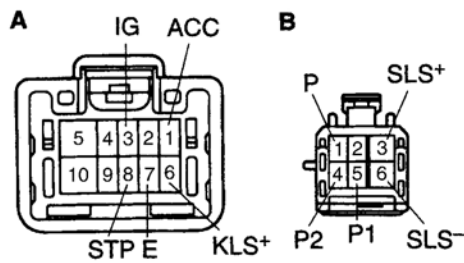
Fig. 136: Measuring Voltage At Shift Interlock ECU (Toyota Corolla)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Voltage (V)
A1 (IG) – A5 (E)	Ignition switch ON	10 – 14
A3 (STP) – A5 (E)	Depressing brake pedal	10 – 14
B1 (SLS+) – B2 (SLS-)	(1) Ignition switch ON and P range	0
	(2) Depressing brake pedal	10 – 14
	(3) Except P range	0

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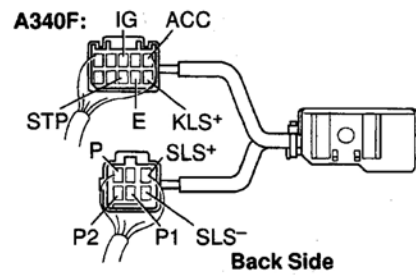
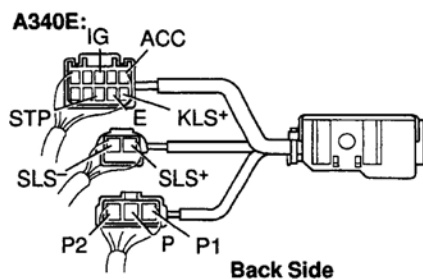
Fig. 137: Measuring Voltage At Shift Interlock ECU (Toyota ECHO)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal(Symbols)	Measuring Condition	Voltage (V)
A1 (ACC) – A7 (E)	Ignition switch ACC	10 – 14
A3 (IG) – A7 (E)	Ignition switch ON	10 – 14
A8 (STP) – A7 (E)	Depress brake pedal	10 – 14
A6 (KLS+) – A7 (E)	1. Ignition switch ACC and P position	0
	2. R, N, D, 2, L position	7.5 – 11
	3. R, N, D, 2, L position (After–approx. 1 second)	6 – 9.5
B3 (SLS+) – B6 (SLS-)	1. Ignition switch ON and P position	0
	2. Depress brake pedal	8 – 13.5
	3. Depress brake pedal (After–approx. 20 seconds)	6 – 8.5
	4. R, N, D, 2, L position	0
B5 (P1) – B1 (P)	1. Ignition switch ON, P position and depress brake pedal	0
	2. R, N, D, 2, L position	9 – 13.5
B4 (P2) – B1 (P)	1. Ignition switch ACC and P position	9 – 13.5
	2. R, N, D, 2, L position	0

G00143184

Fig. 138: Measuring Voltage At Shift Interlock ECU (Toyota Tacoma)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



Terminal	Measuring Condition	Voltage (V)
ACC – E	Ignition switch ACC	10 – 14
IG – E	Ignition switch ON	10 – 14
STP – E	Depressing brake pedal	10 – 14
KLS+ – E	(1) Ignition switch ACC and P position	0
	(2) Ignition switch ACC and except P position	7.5 – 11
	(3) (After approx. 1 second)	6 – 9.5
SLS+ – SLS-	(1) Ignition switch ON and P position	0
	(2) Depress brake pedal	8 – 13.5
	(3) (After approx. 20 seconds)	6 – 8.5
	(4) Shift except P position	0
P1 – P	(1) Ignition switch ON, P position and depress brake pedal	0
	(2) Shift except P position under conditions above	9 – 13.5
P2 – P	(1) Ignition switch ACC and P position	9 – 13.5
	(2) Shift except P position under conditions above	0

G00143187

Fig. 139: Measuring Voltage At Shift Interlock ECU (Toyota 4Runner)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WIRING DIAGRAMS

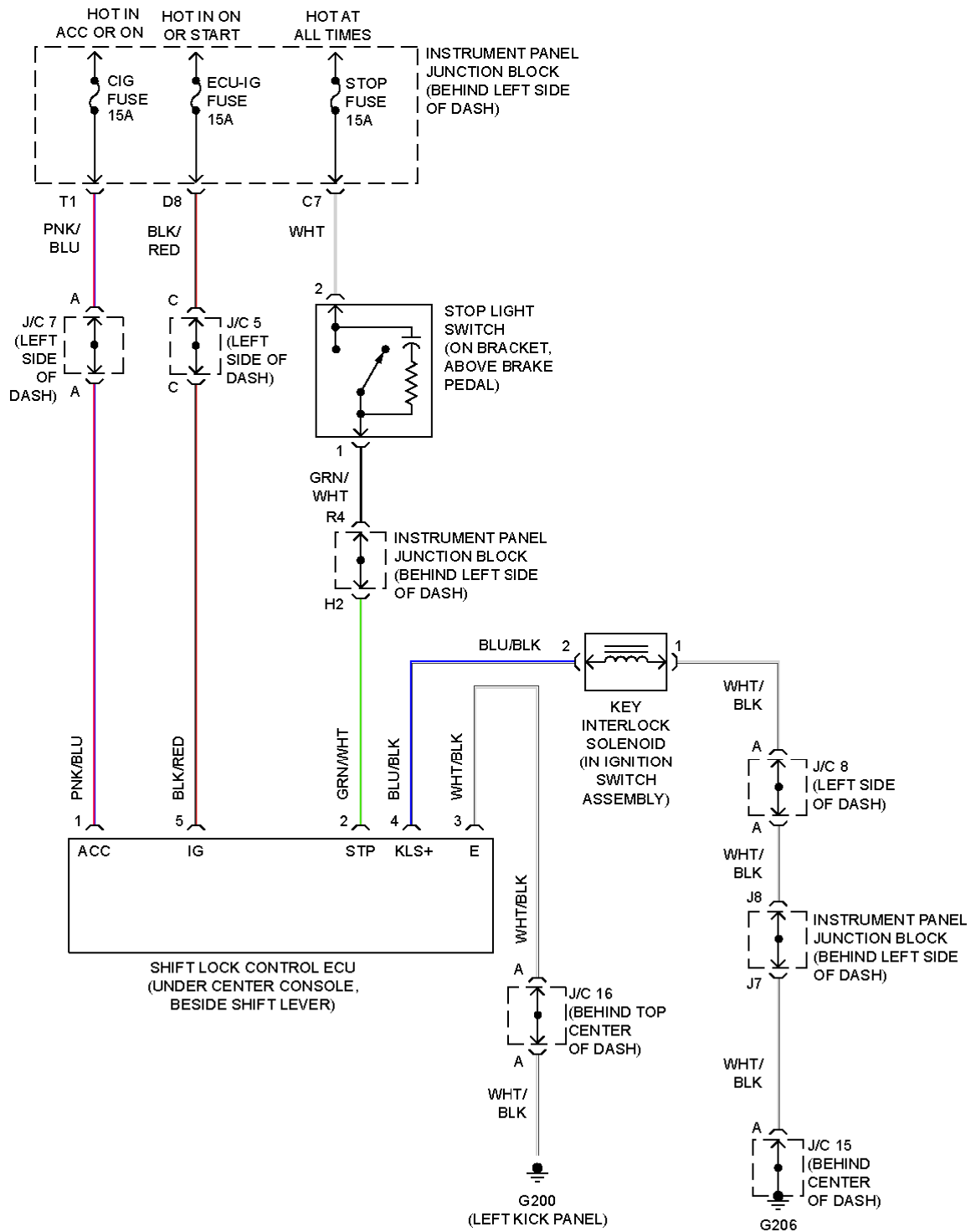


Fig. 140: Shift Interlock System Wiring Diagram (2001 - Lexus ES300)



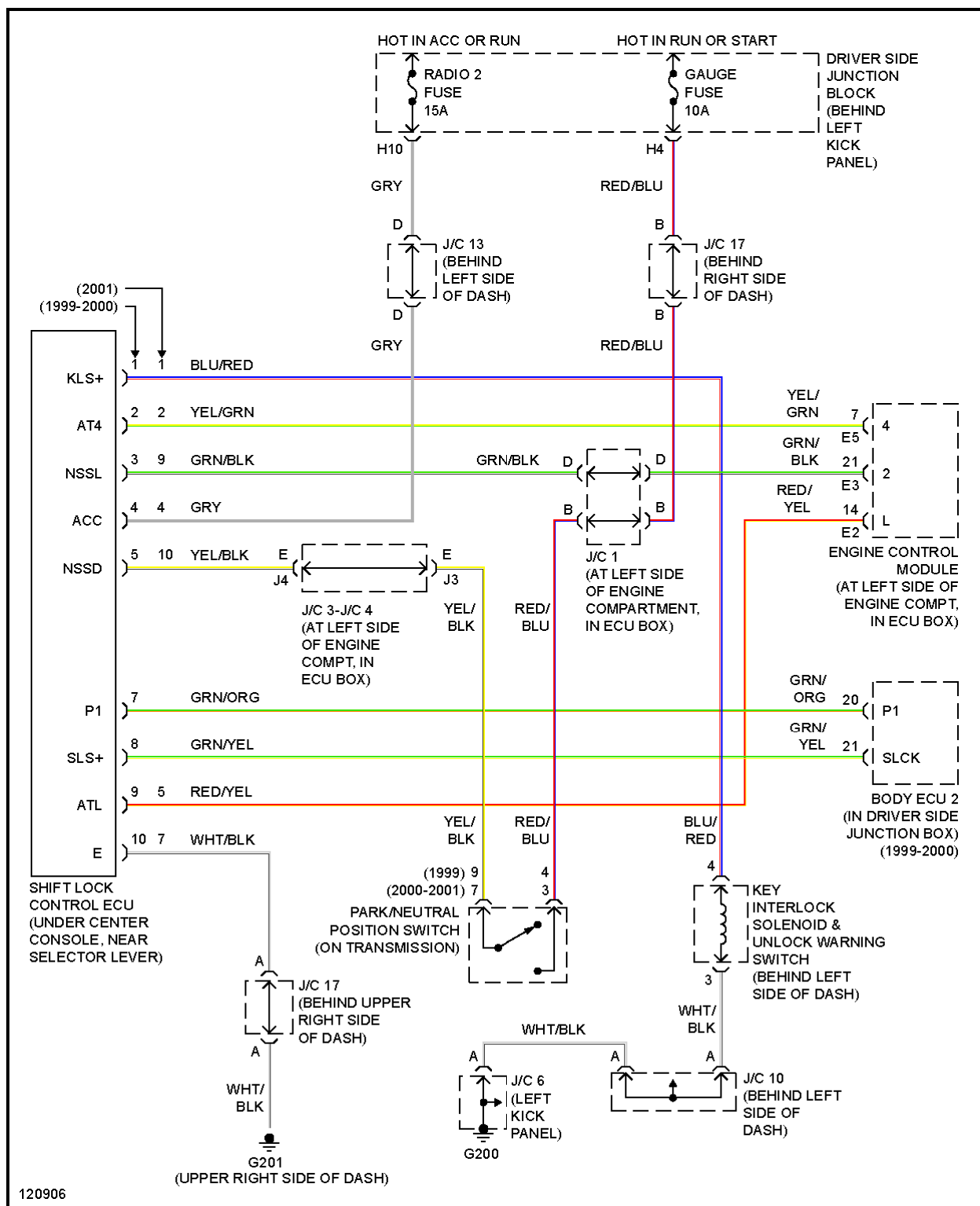


Fig. 141: Shift Interlock System Wiring Diagram (2001 - Lexus GS300)



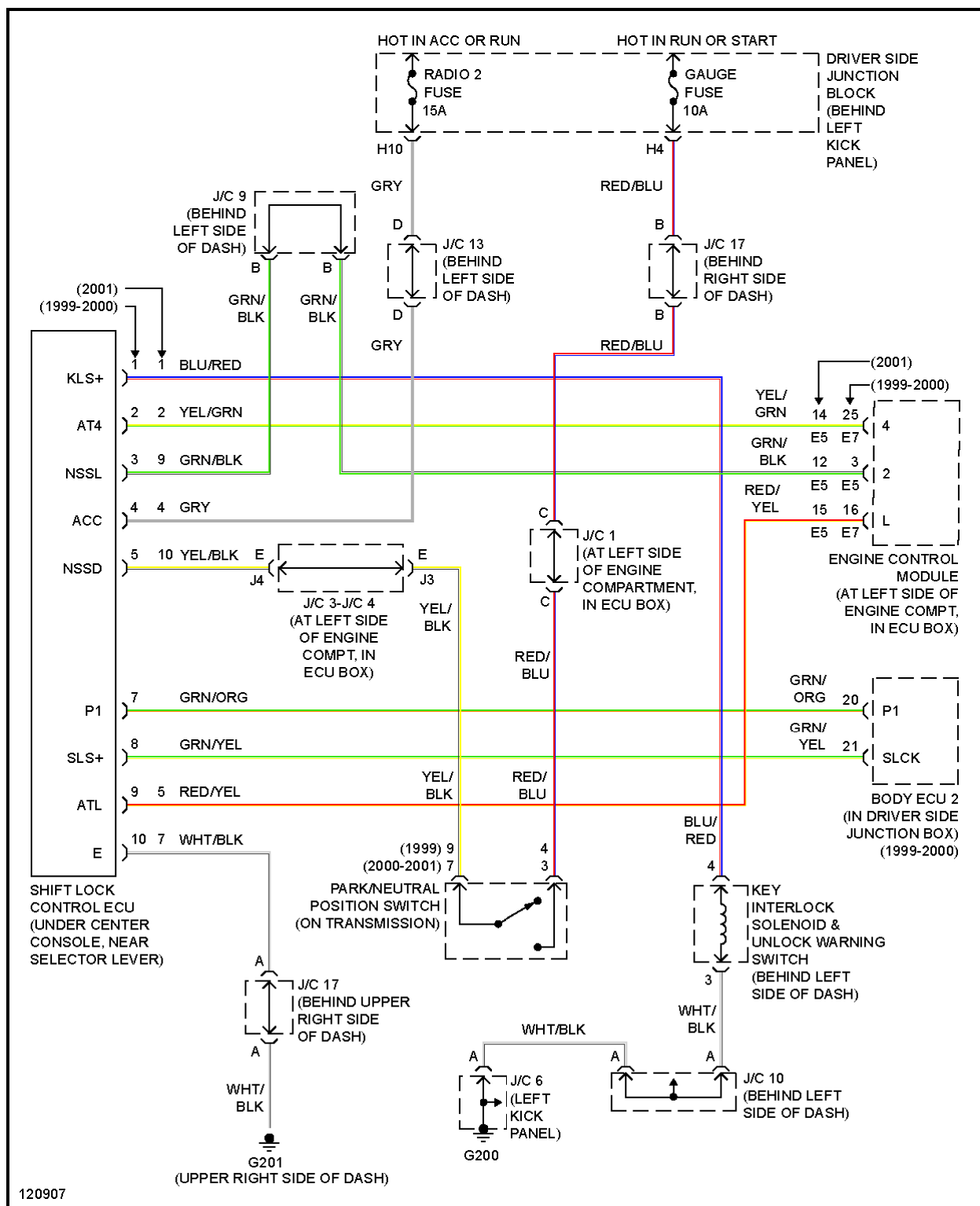


Fig. 142: Shift Interlock System Wiring Diagram (2001 - Lexus GS430)



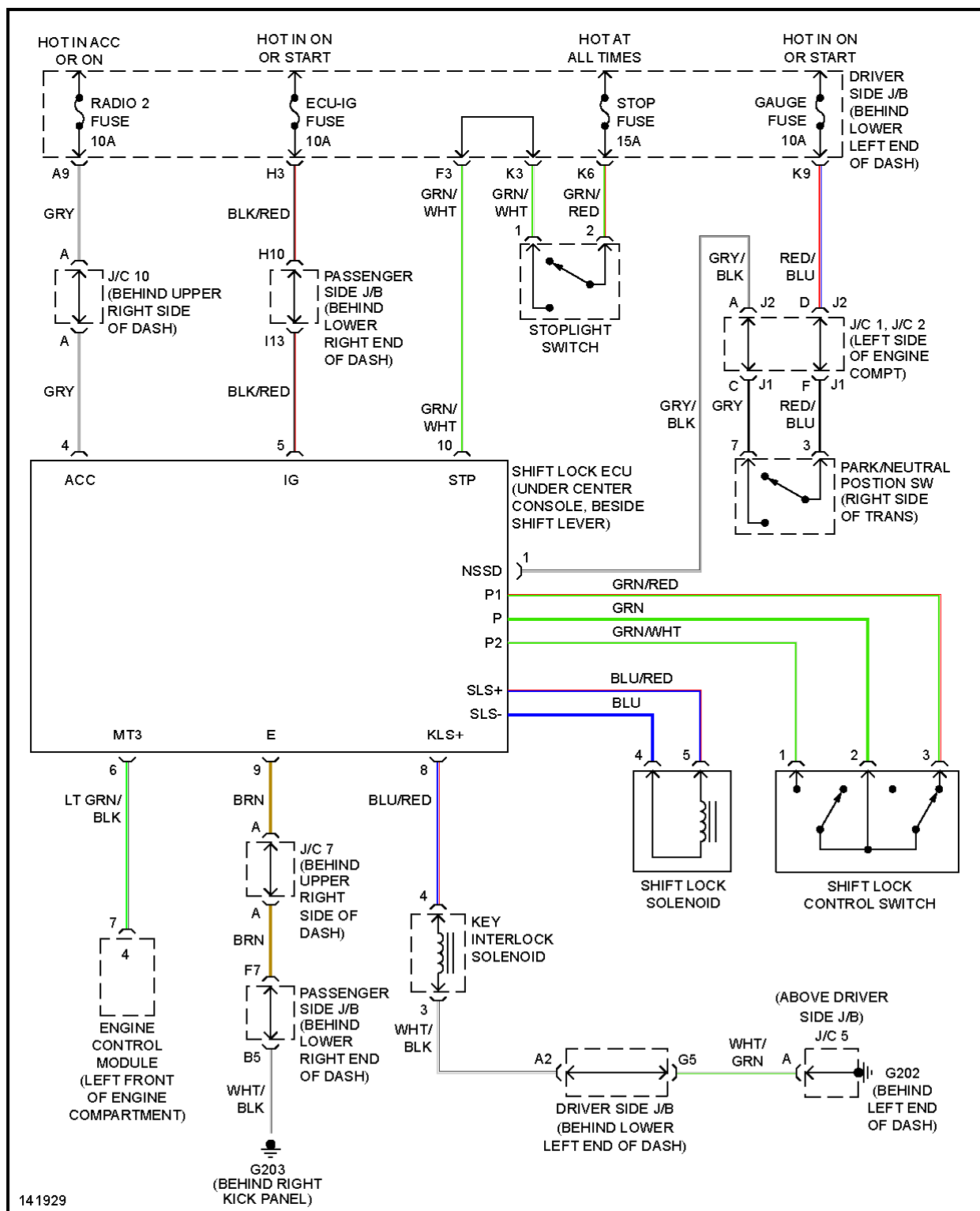


Fig. 143: Shift Interlock System Wiring Diagram (2001 - Lexus IS300)



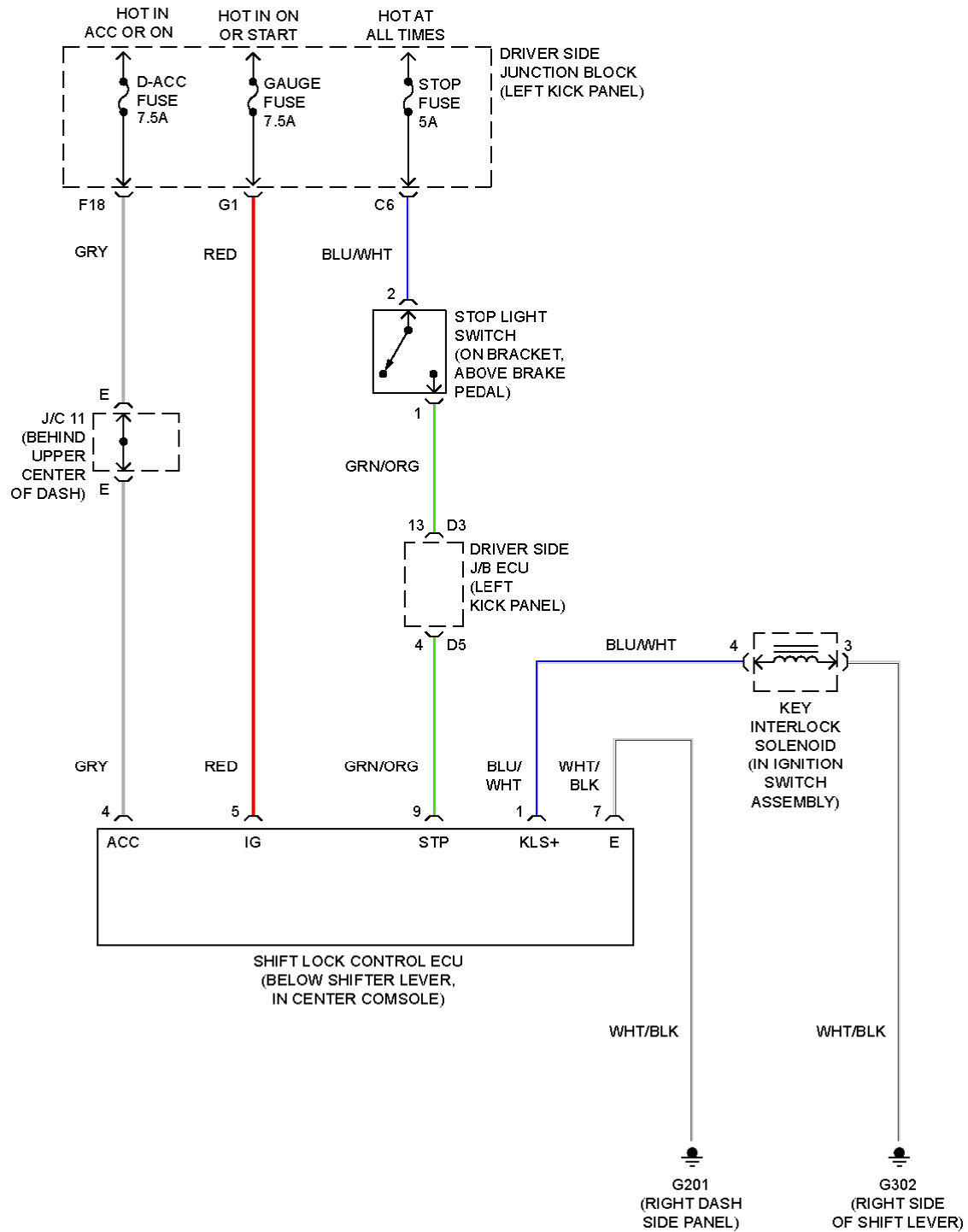


Fig. 144: Shift Interlock System Wiring Diagram (2001 - Lexus LS430)



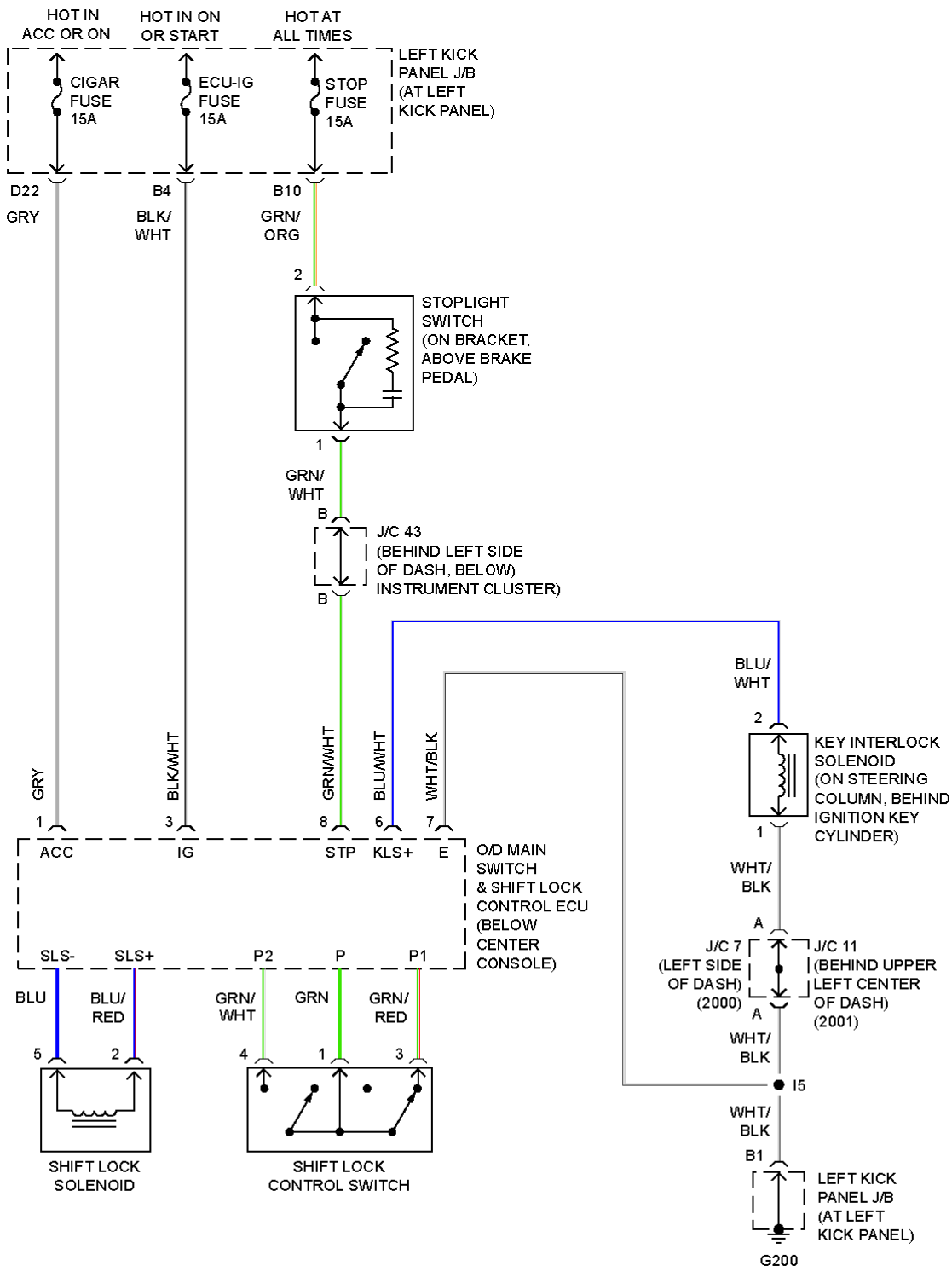


Fig. 145: Shift Interlock System Wiring Diagram (2001 - Lexus LX470)



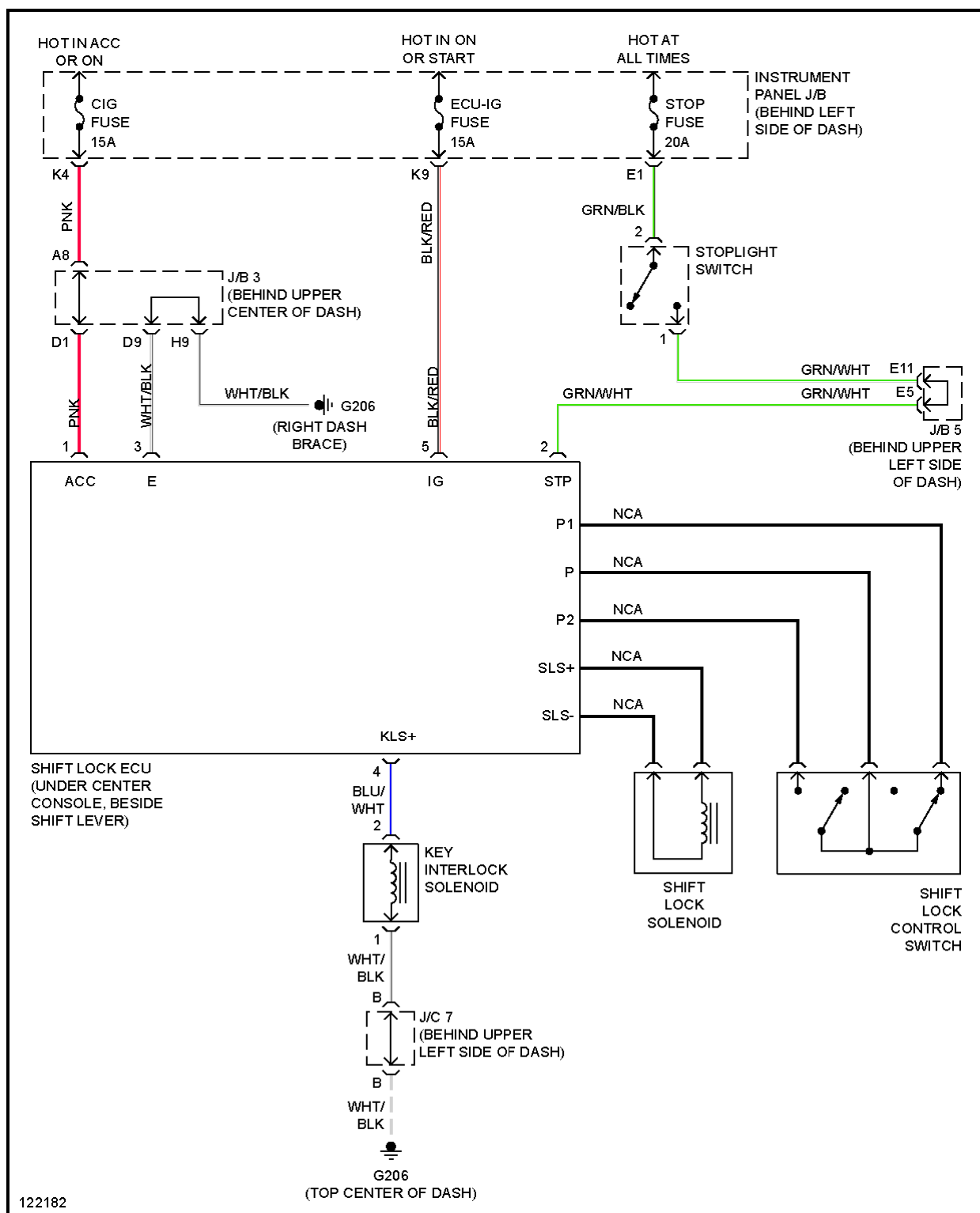


Fig. 146: Shift Interlock System Wiring Diagram (2001 - Lexus RX300)



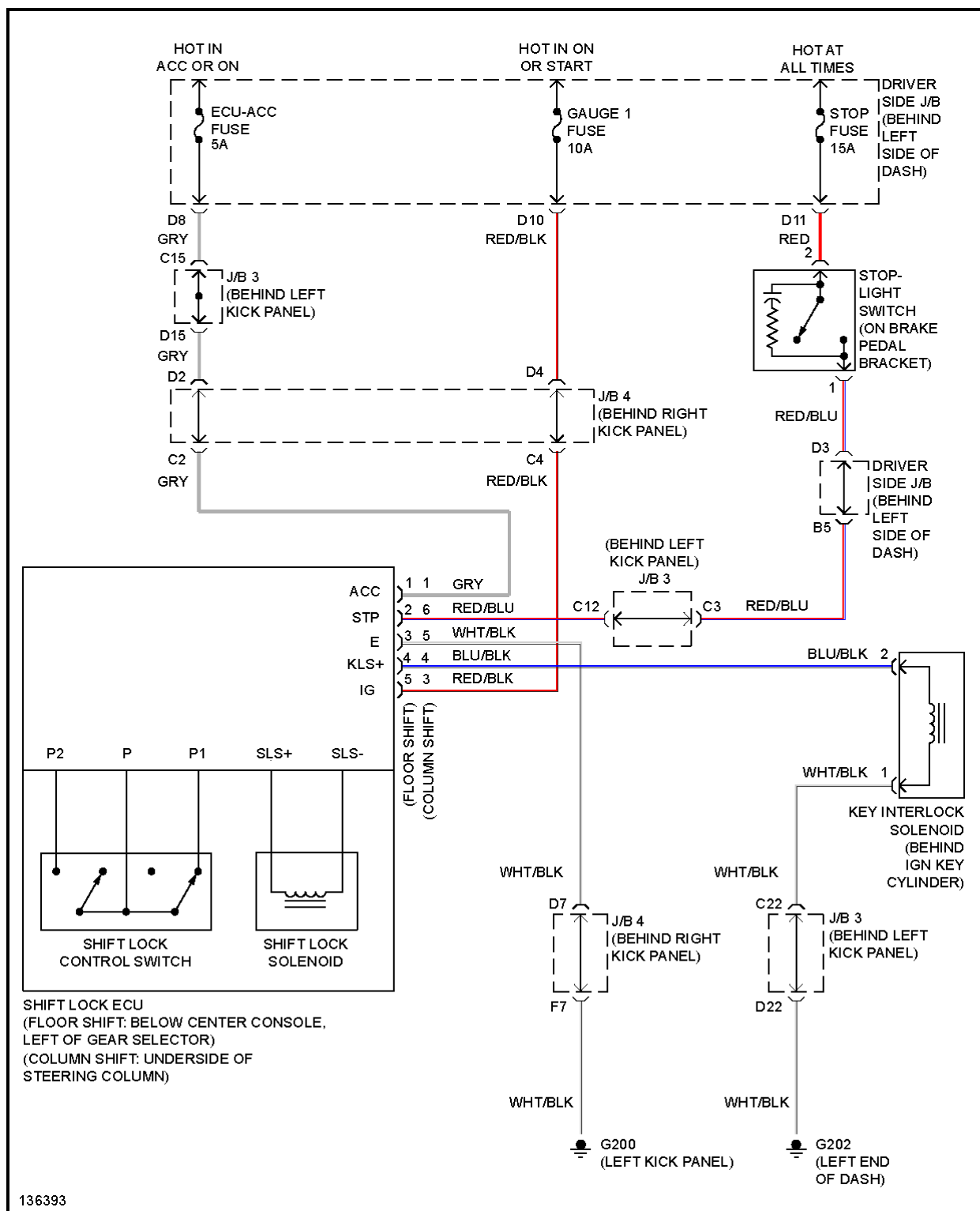


Fig. 147: Shift Interlock System Wiring Diagram (2001 - Toyota Avalon)



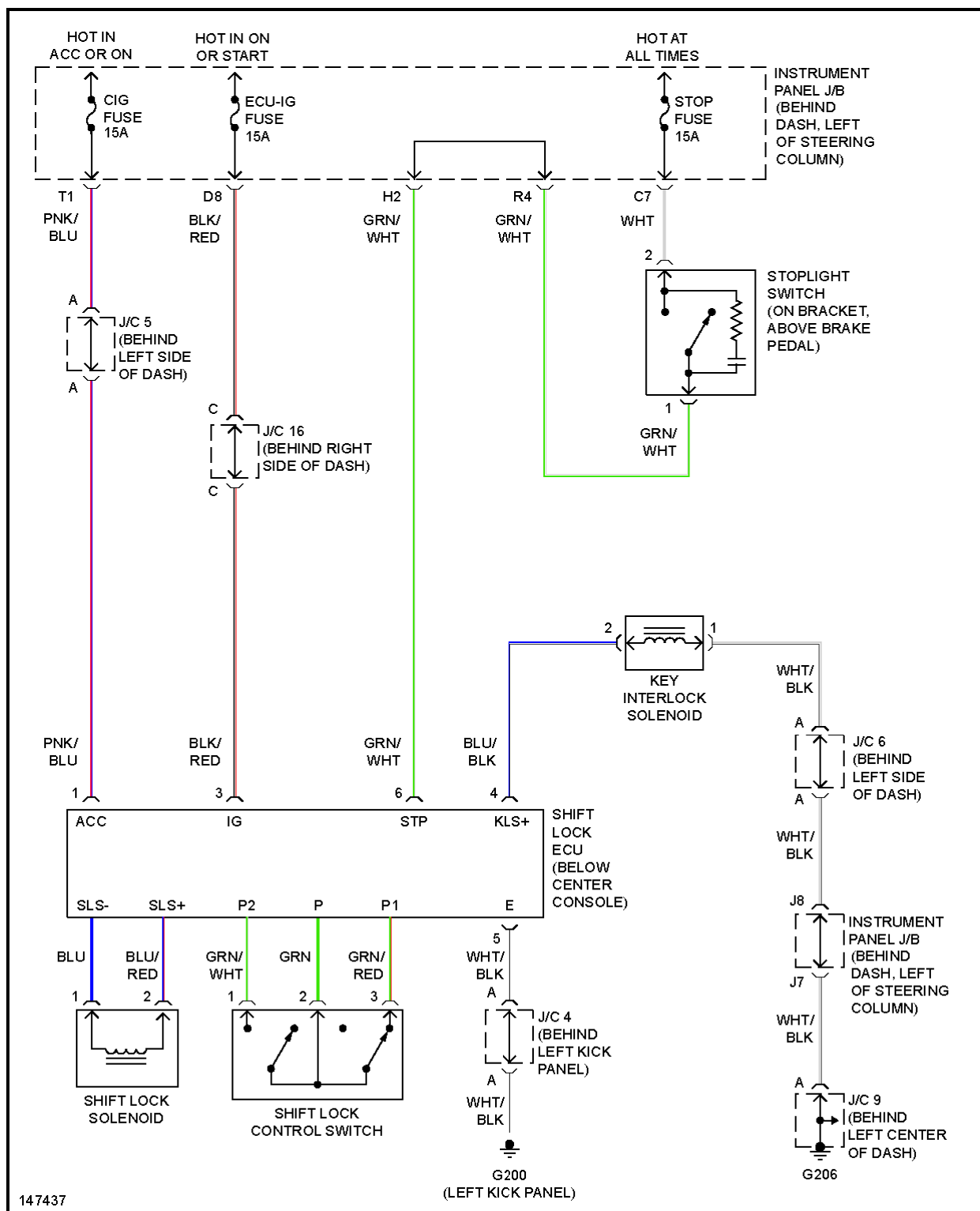


Fig. 148: Shift Interlock System Wiring Diagram (2001 - Toyota Camry 2.2L CNG)



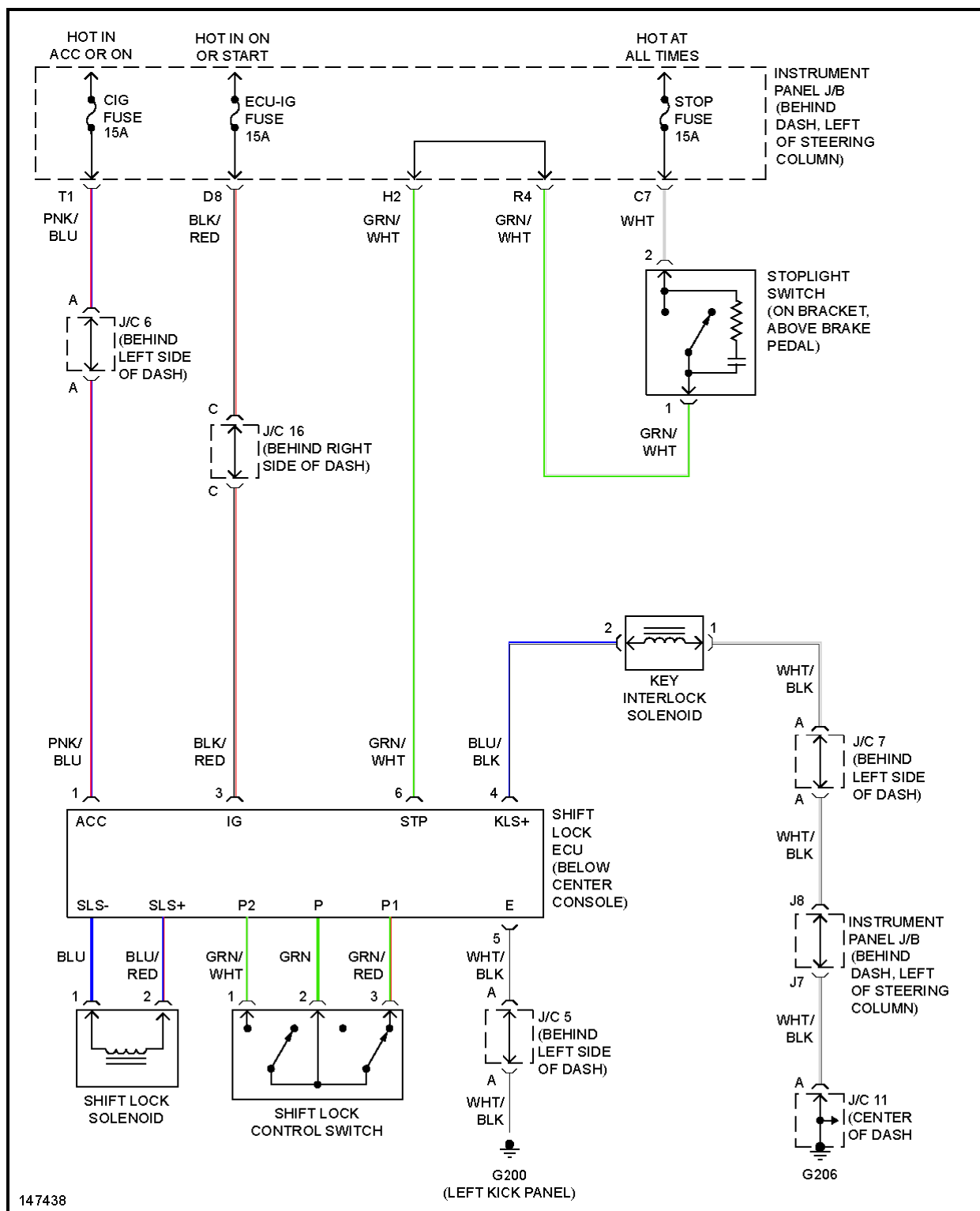


Fig. 149: Shift Interlock System Wiring Diagram (2001 - Toyota Camry 2.2L & 3.0L)



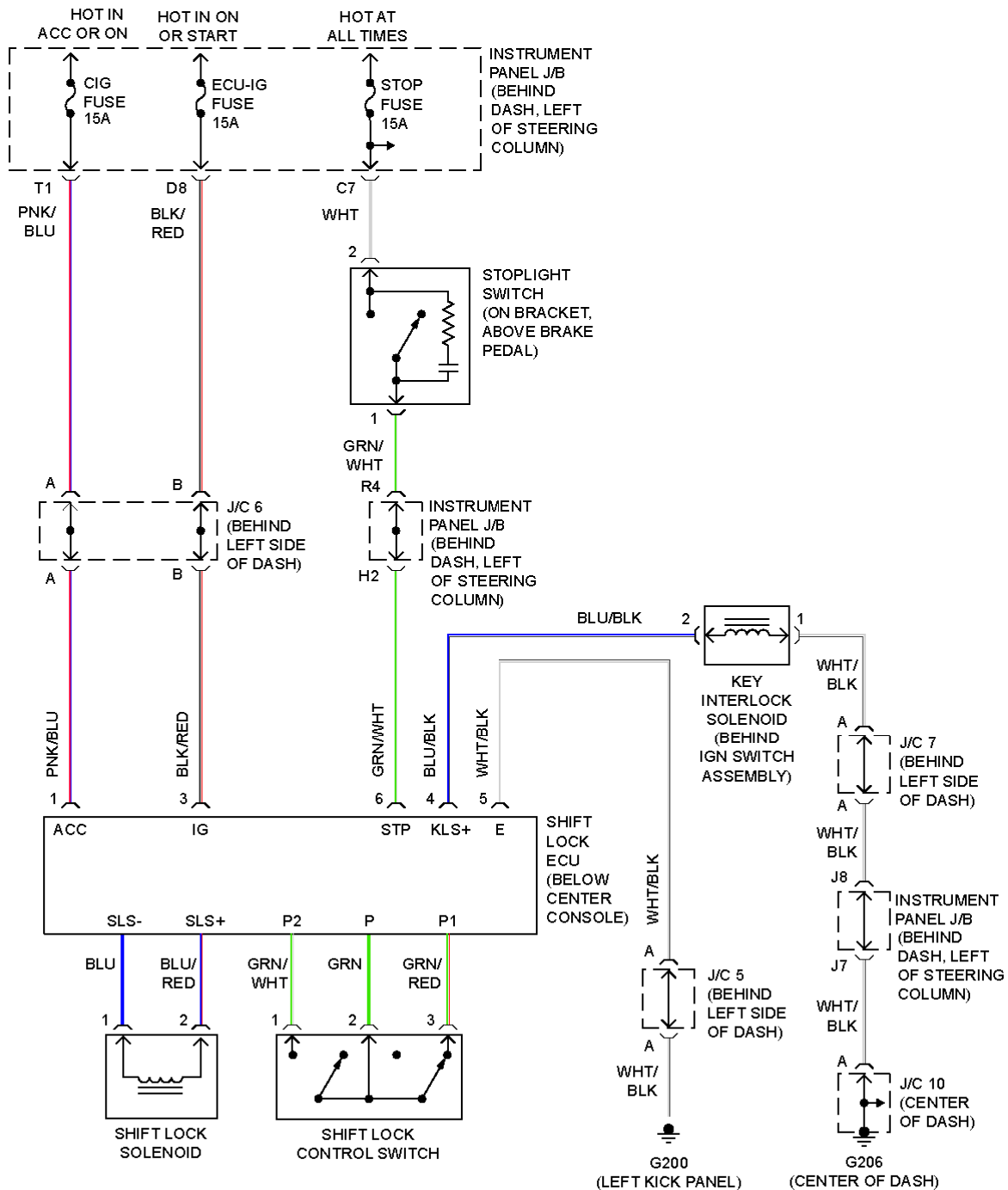


Fig. 150: Shift Interlock System Wiring Diagram (2001 - Toyota Camry Solara)





Fig. 151: Shift Interlock System Wiring Diagram (2001 - Toyota Celica)



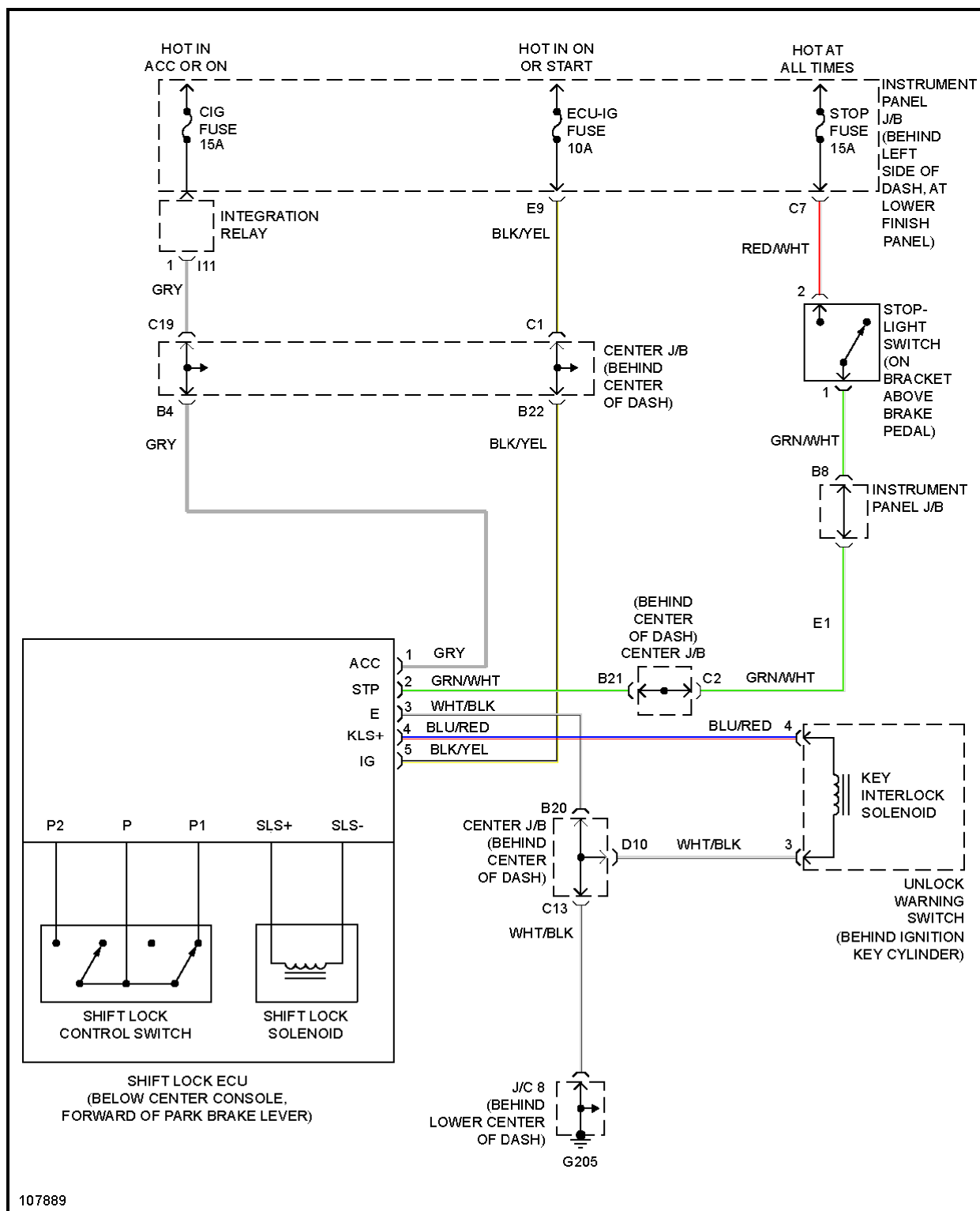


Fig. 152: Shift Interlock System Wiring Diagram (2001 - Toyota Corolla)



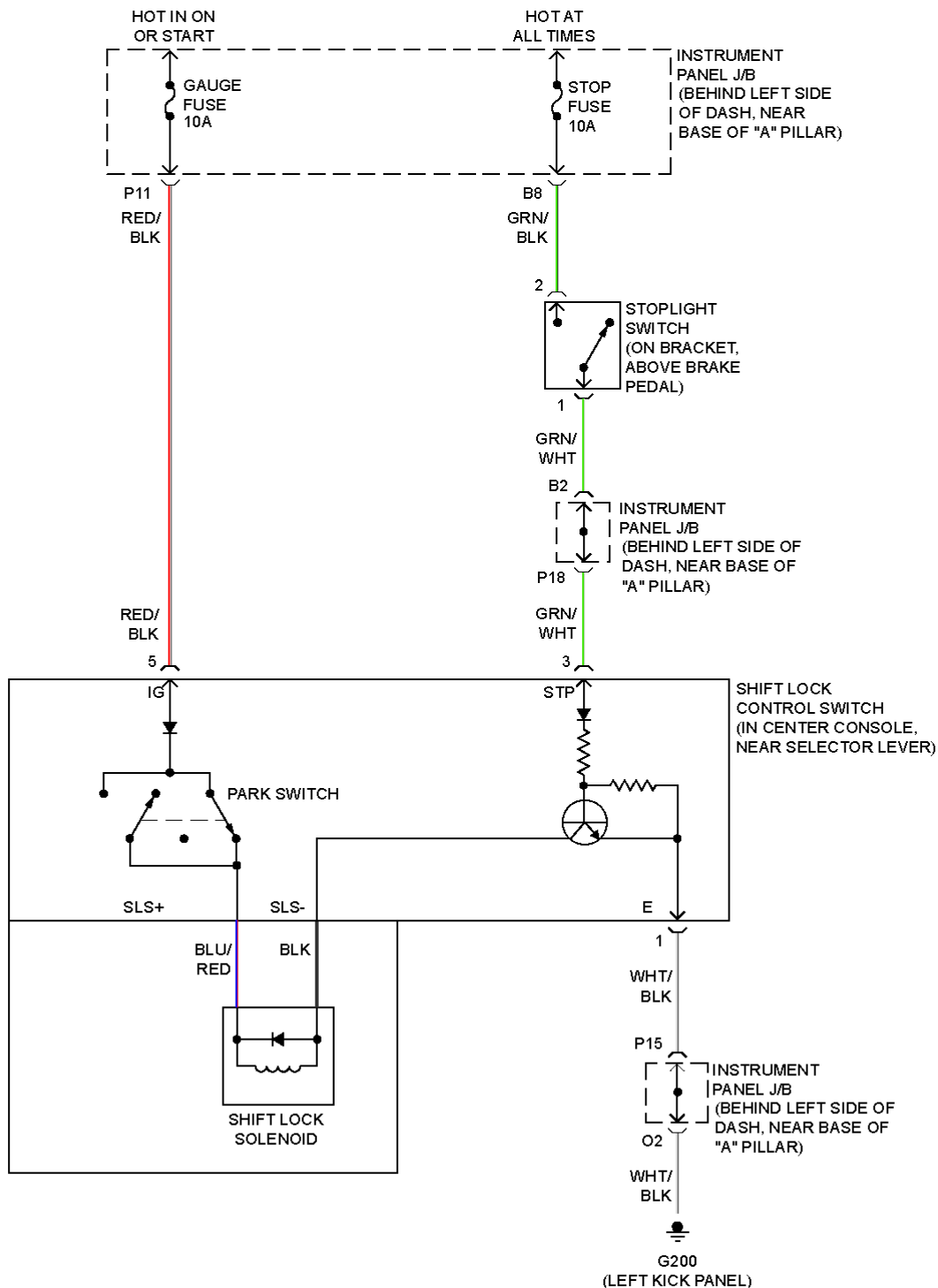


Fig. 153: Shift Interlock System Wiring Diagram (2001 - Toyota ECHO)



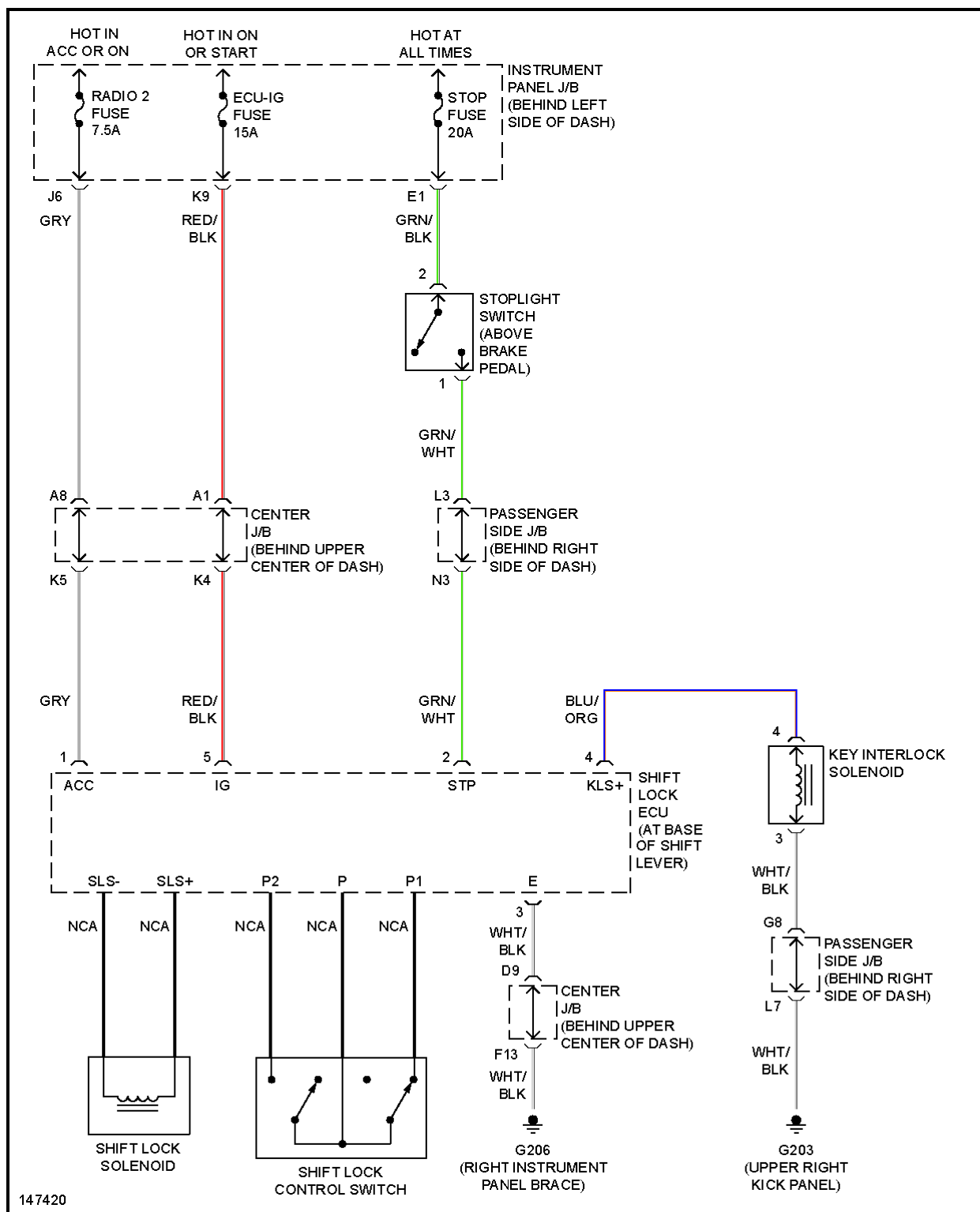


Fig. 154: Shift Interlock System Wiring Diagram (2001 - Toyota Highlander)



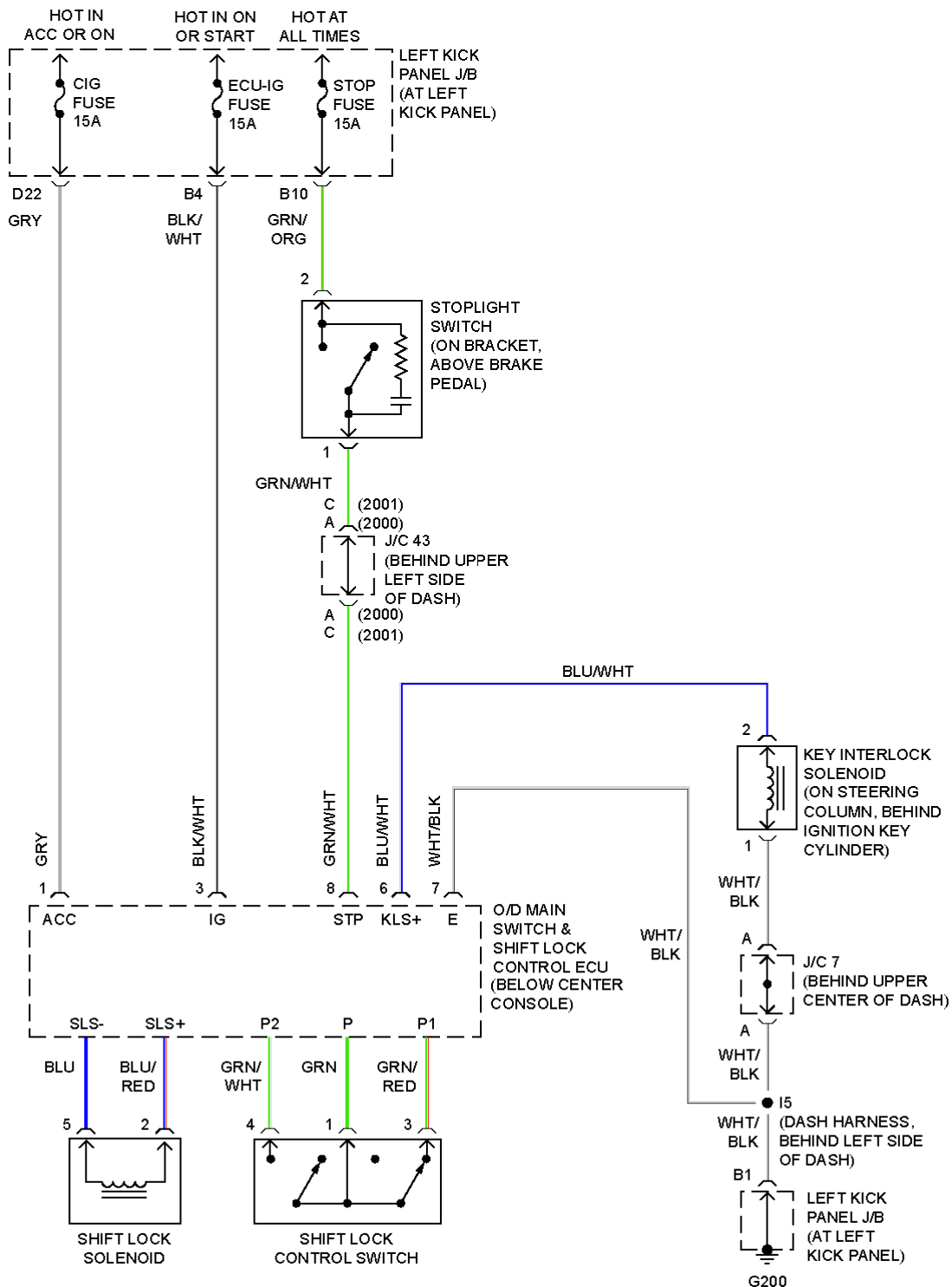


Fig. 155: Shift Interlock System Wiring Diagram (2001 - Toyota Land Cruiser)



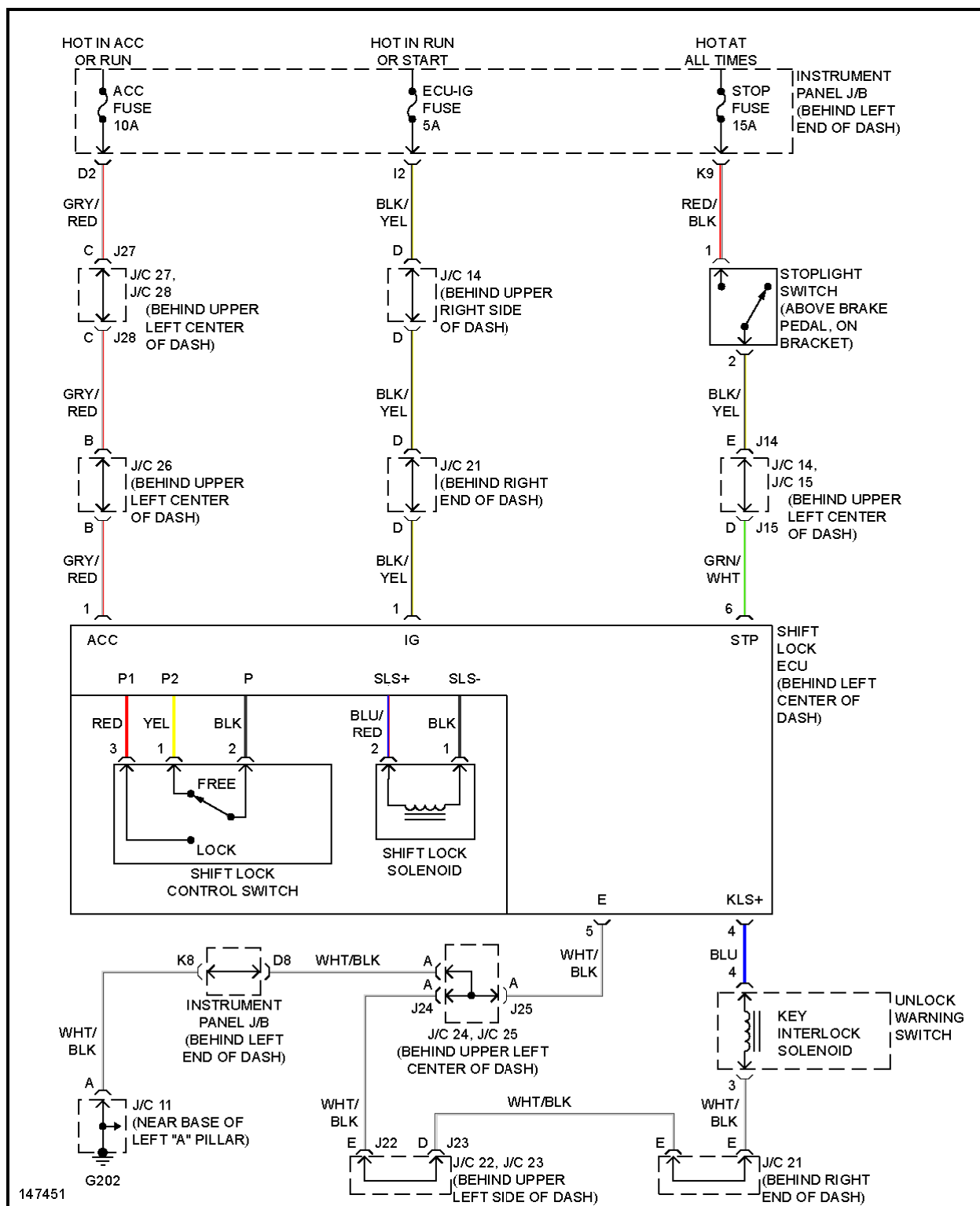


Fig. 156: Shift Interlock System Wiring Diagram (2001 - Toyota Prius)



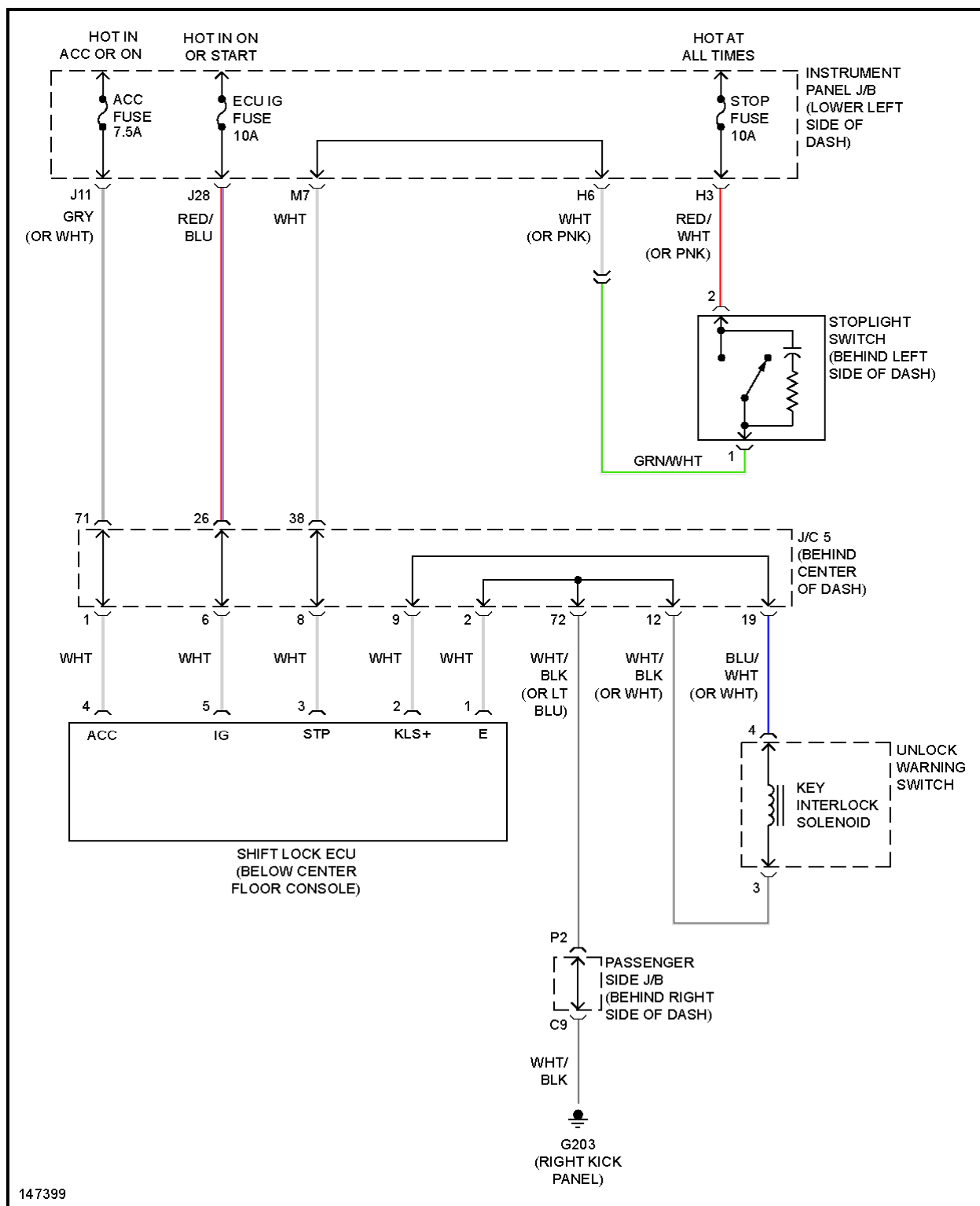


Fig. 157: Shift Interlock System Wiring Diagram (2001 - Toyota RAV4)



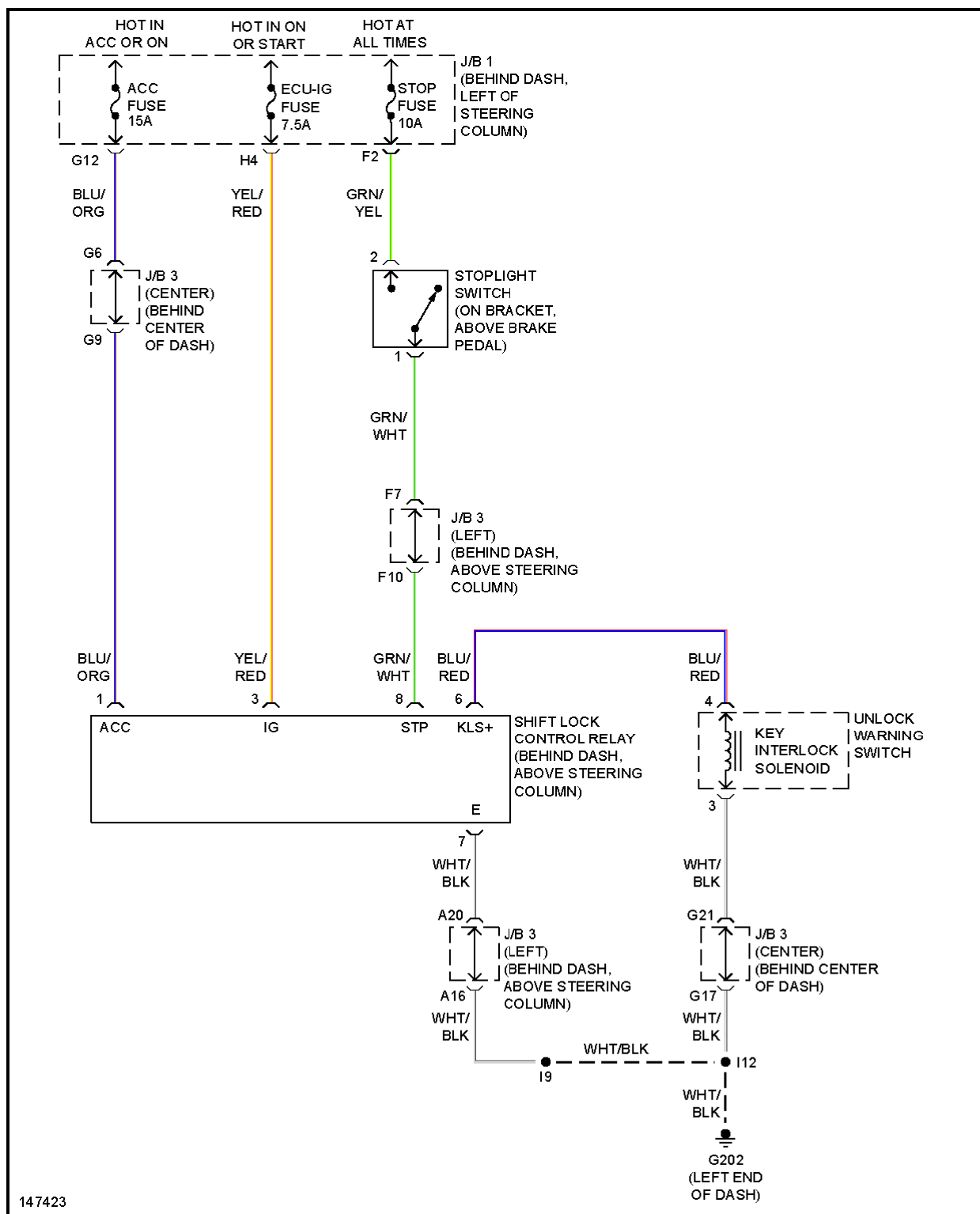


Fig. 158: Shift Interlock System Wiring Diagram (2001 - Toyota Tacoma)



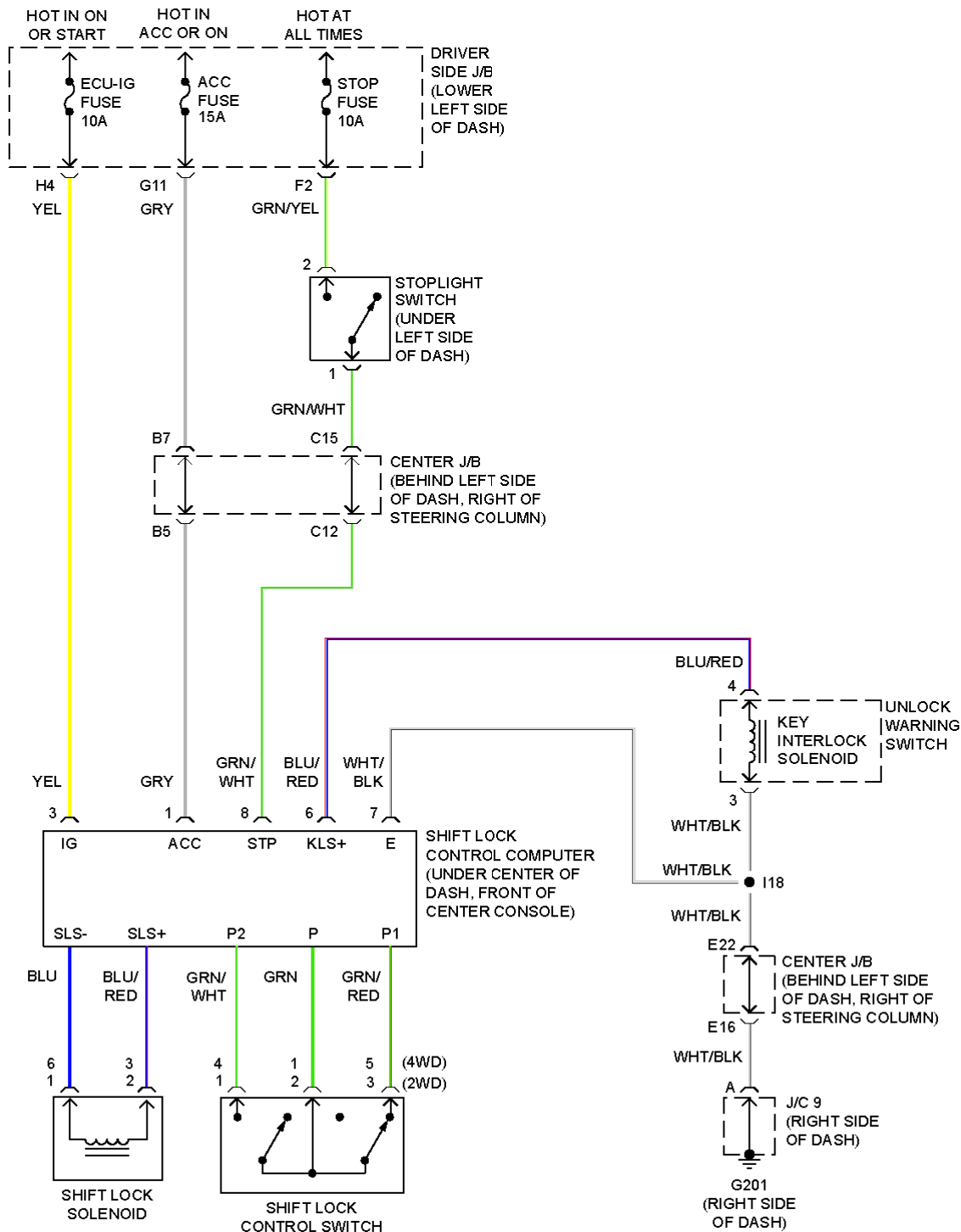


Fig. 159: Shift Interlock System Wiring Diagram (2001 - Toyota 4Runner)



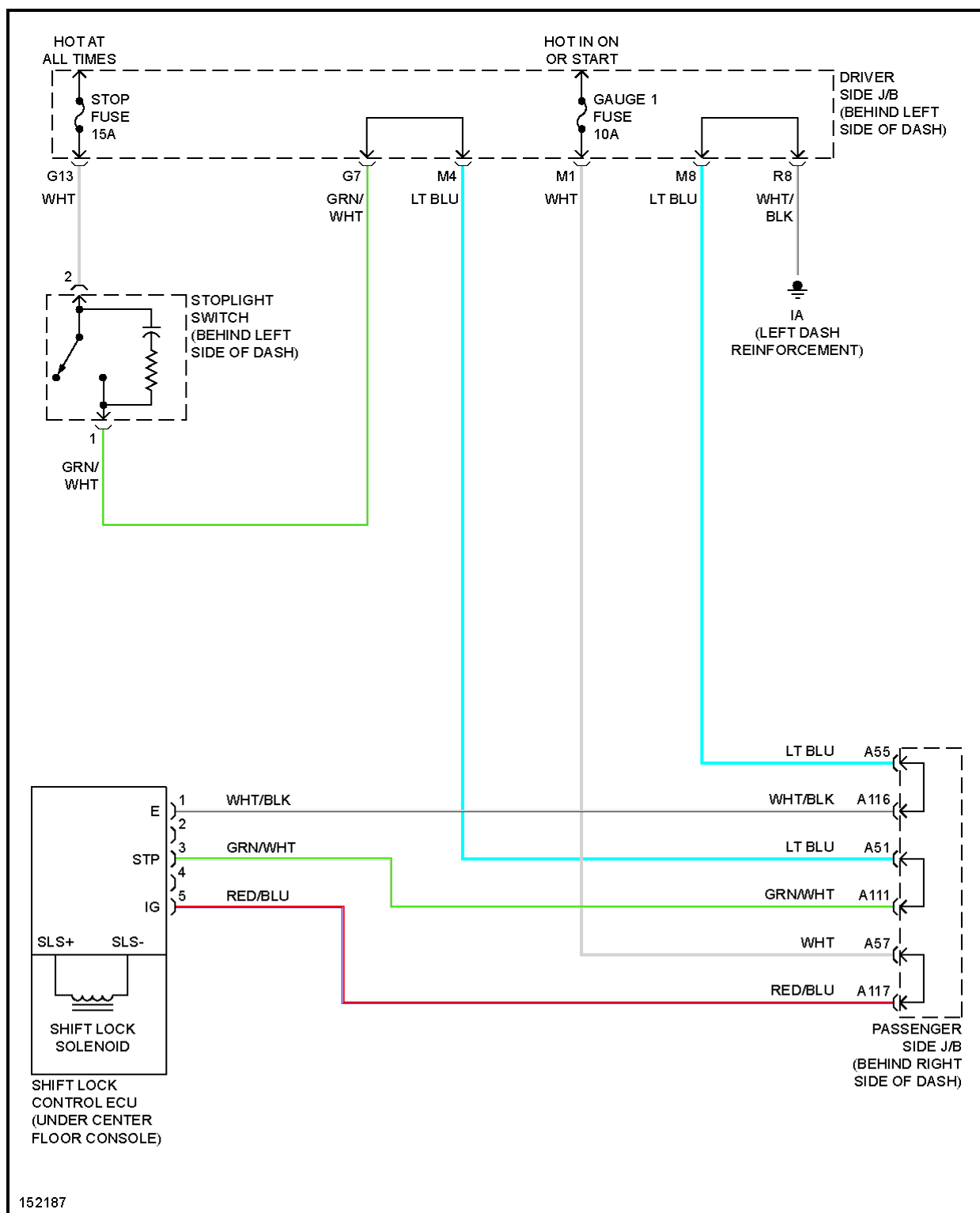


Fig. 160: Shift Interlock System Wiring Diagram (2002 - Lexus ES300)



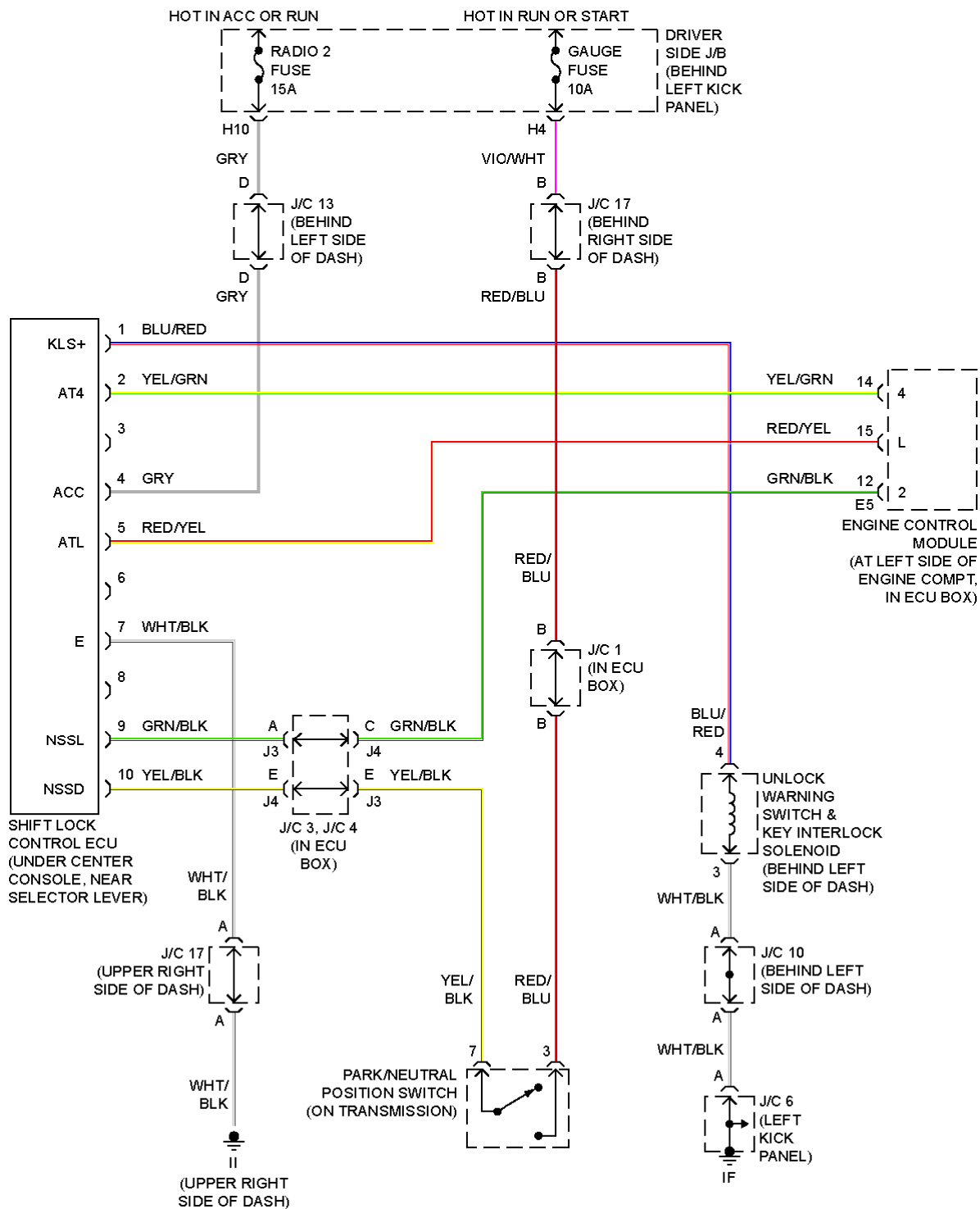


Fig. 161: Shift Interlock System Wiring Diagram (2002 - Lexus GS300)



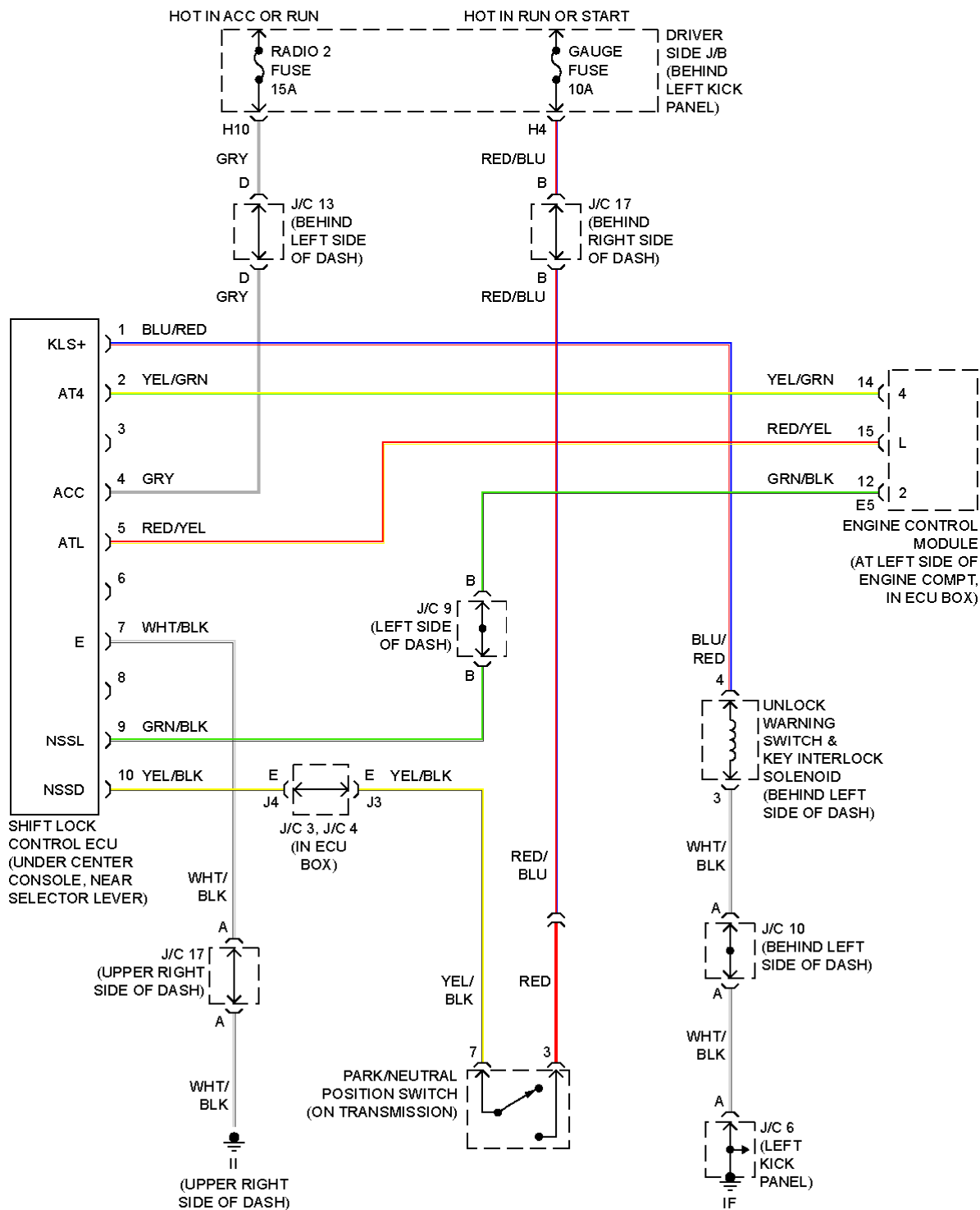


Fig. 162: Shift Interlock System Wiring Diagram (2002 - Lexus GS430)



Fig. 163: Shift Interlock System Wiring Diagram (2002 - Lexus IS300)



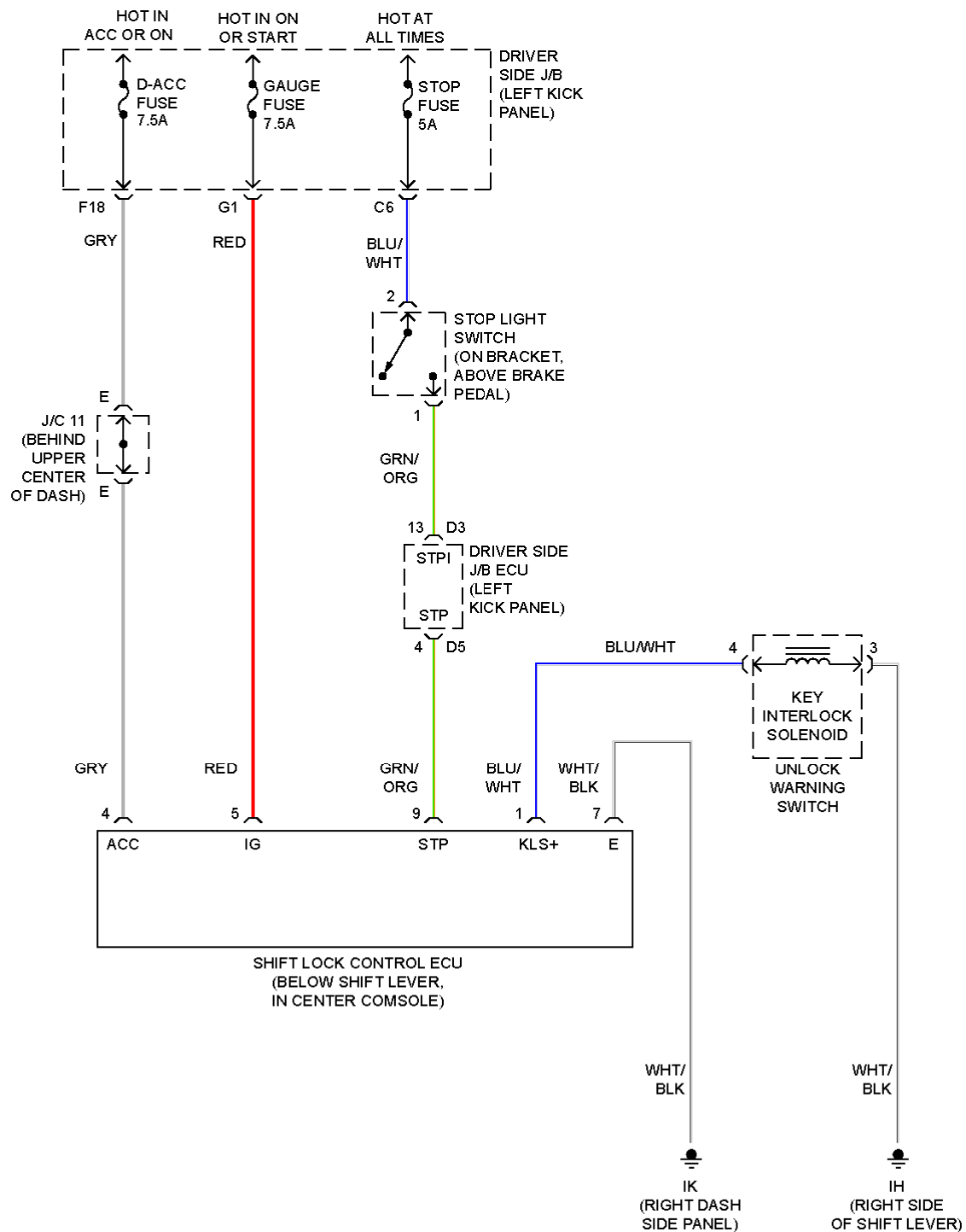


Fig. 164: Shift Interlock System Wiring Diagram (2002 - Lexus LS430)



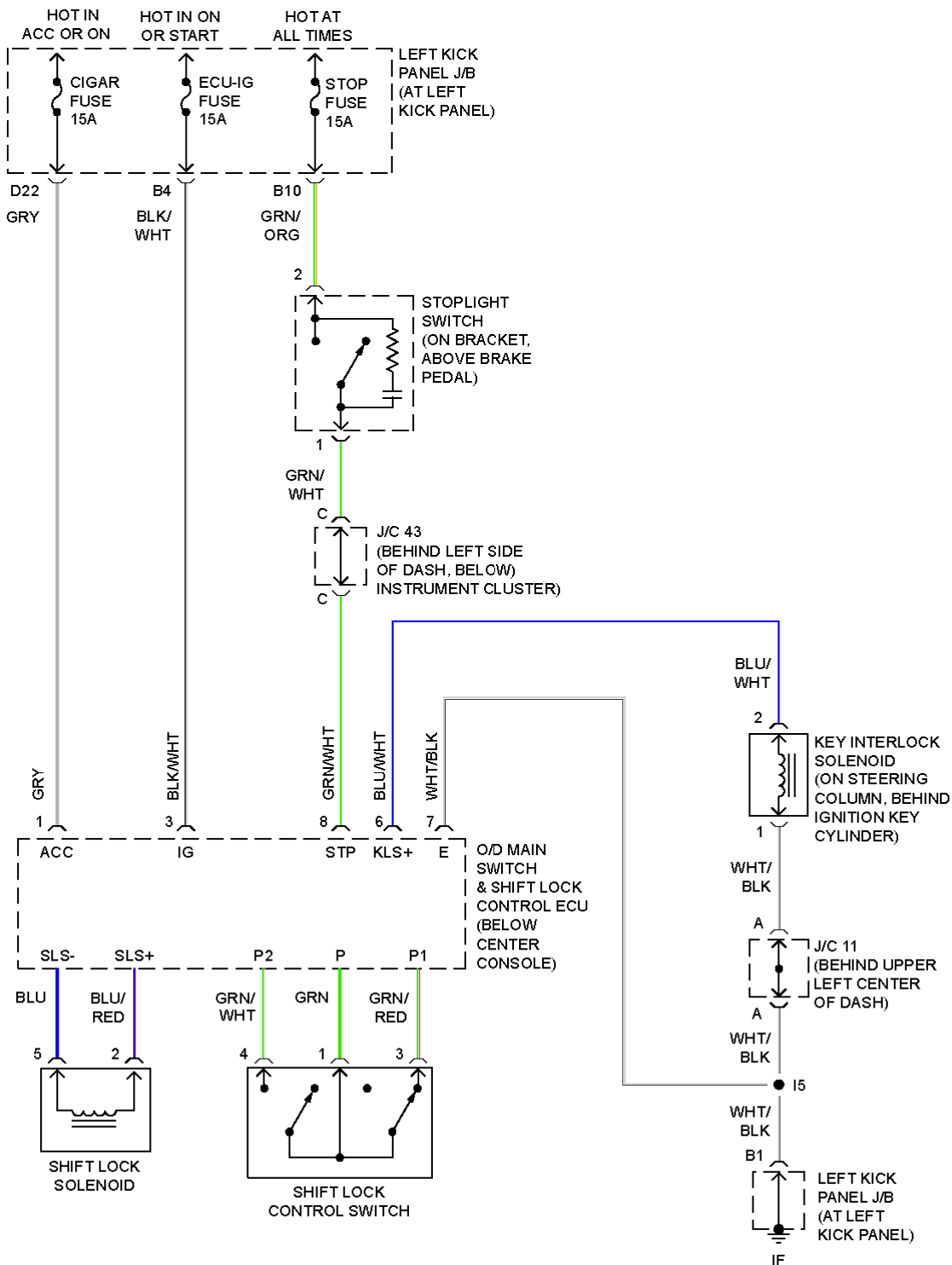


Fig. 165: Shift Interlock System Wiring Diagram (2002 - Lexus LX470)



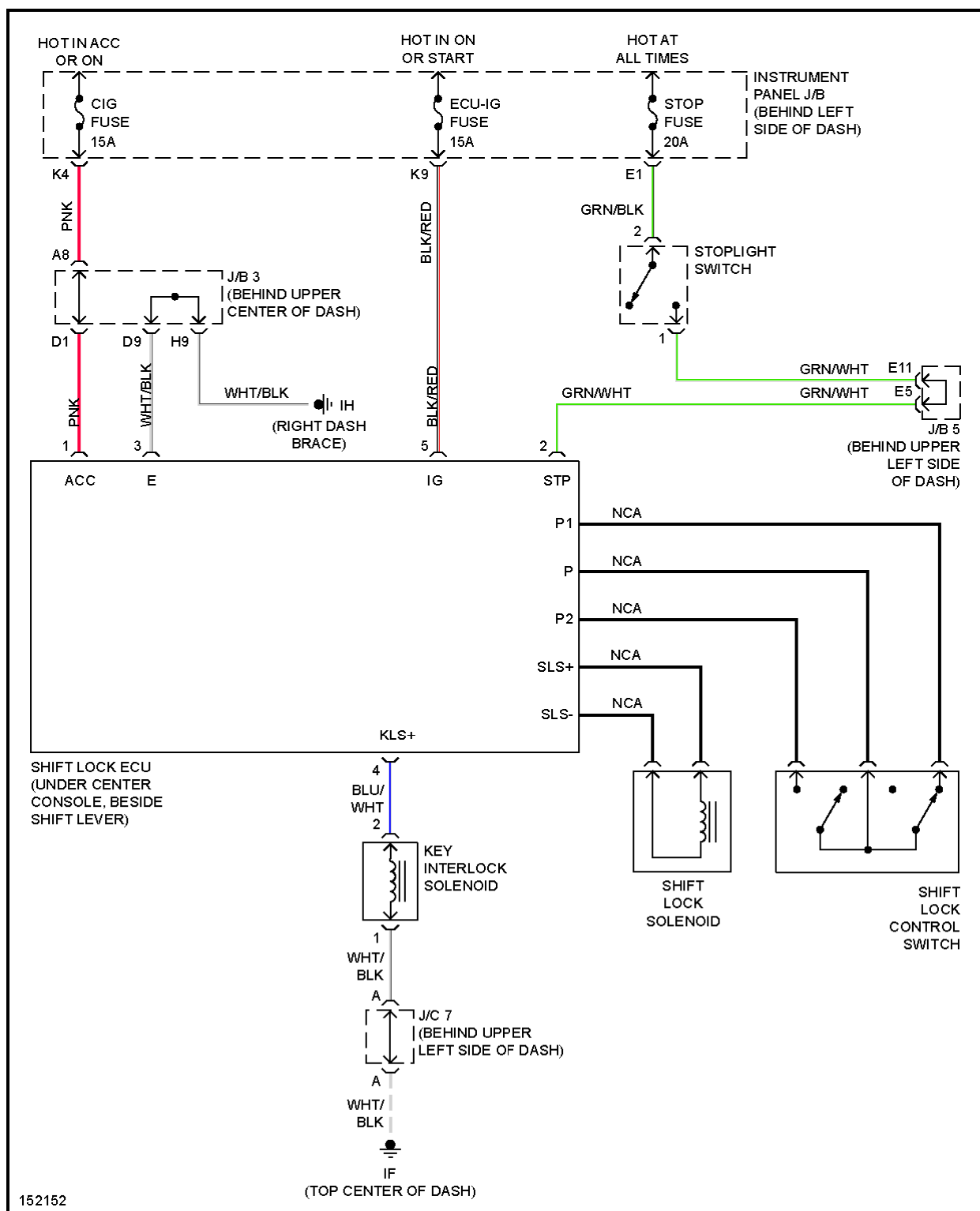


Fig. 166: Shift Interlock System Wiring Diagram (2002 - Lexus RX300)



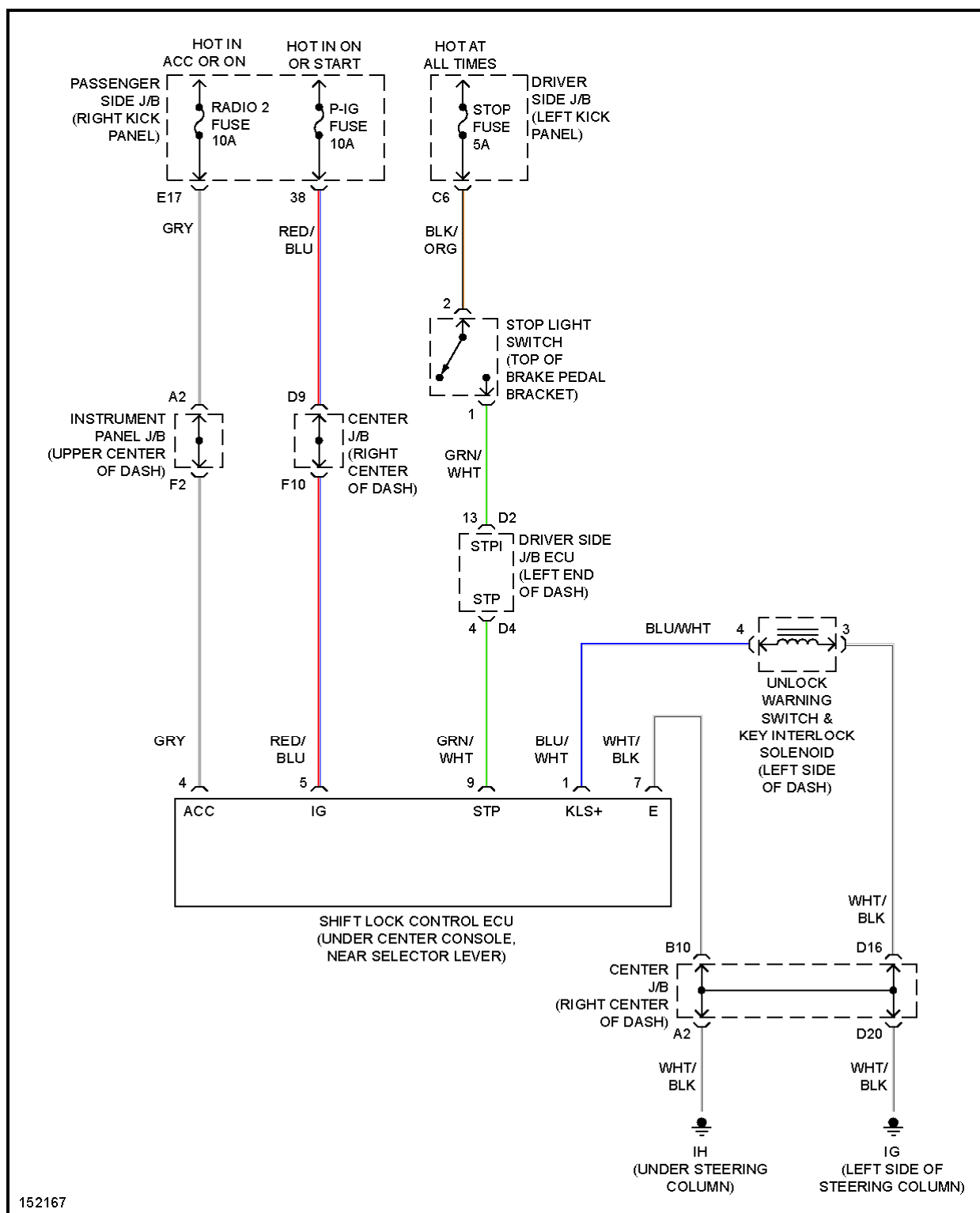


Fig. 167: Shift Interlock System Wiring Diagram (2002 - Lexus SC430)



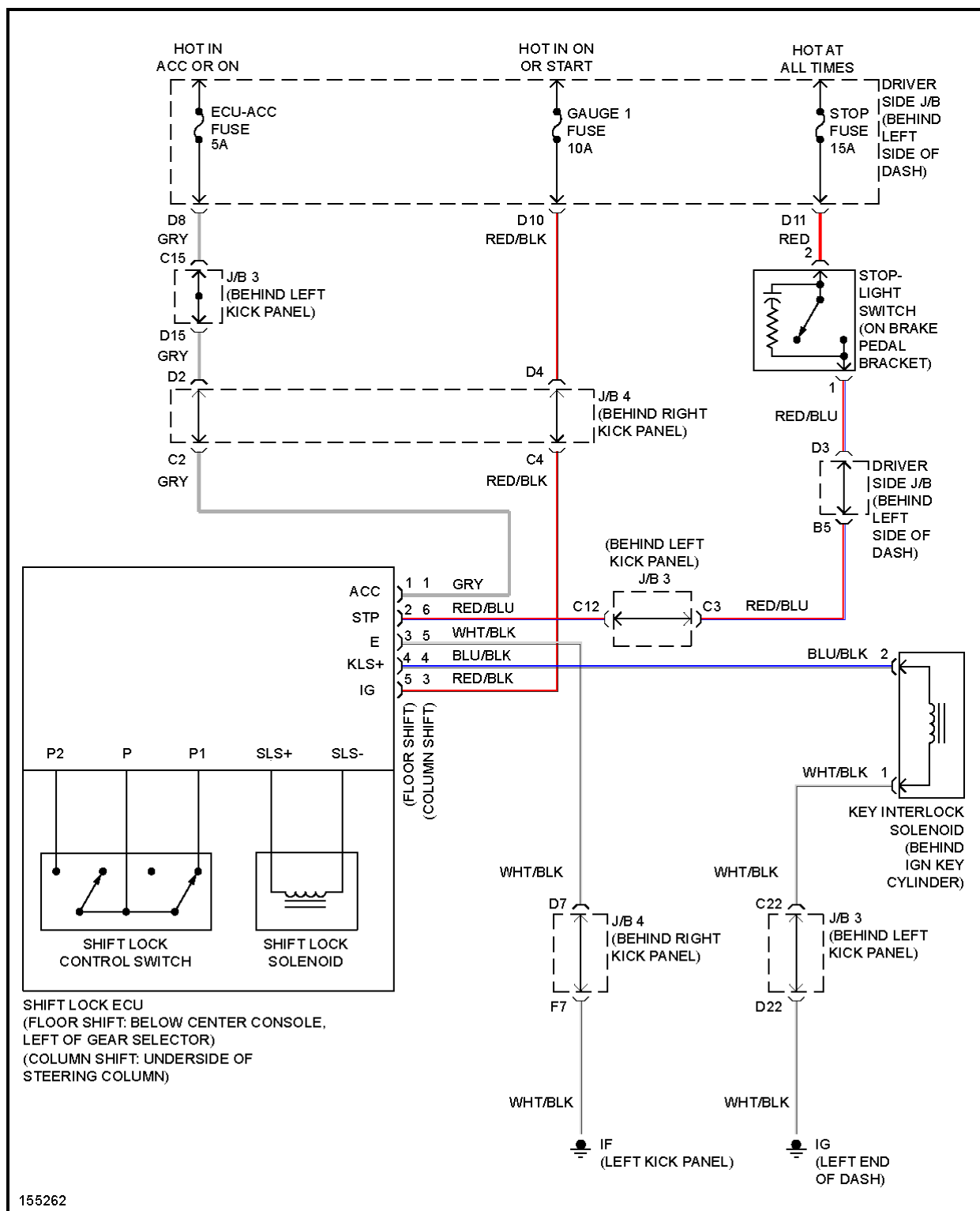


Fig. 168: Shift Interlock System Wiring Diagram (2002 - Toyota Avalon)



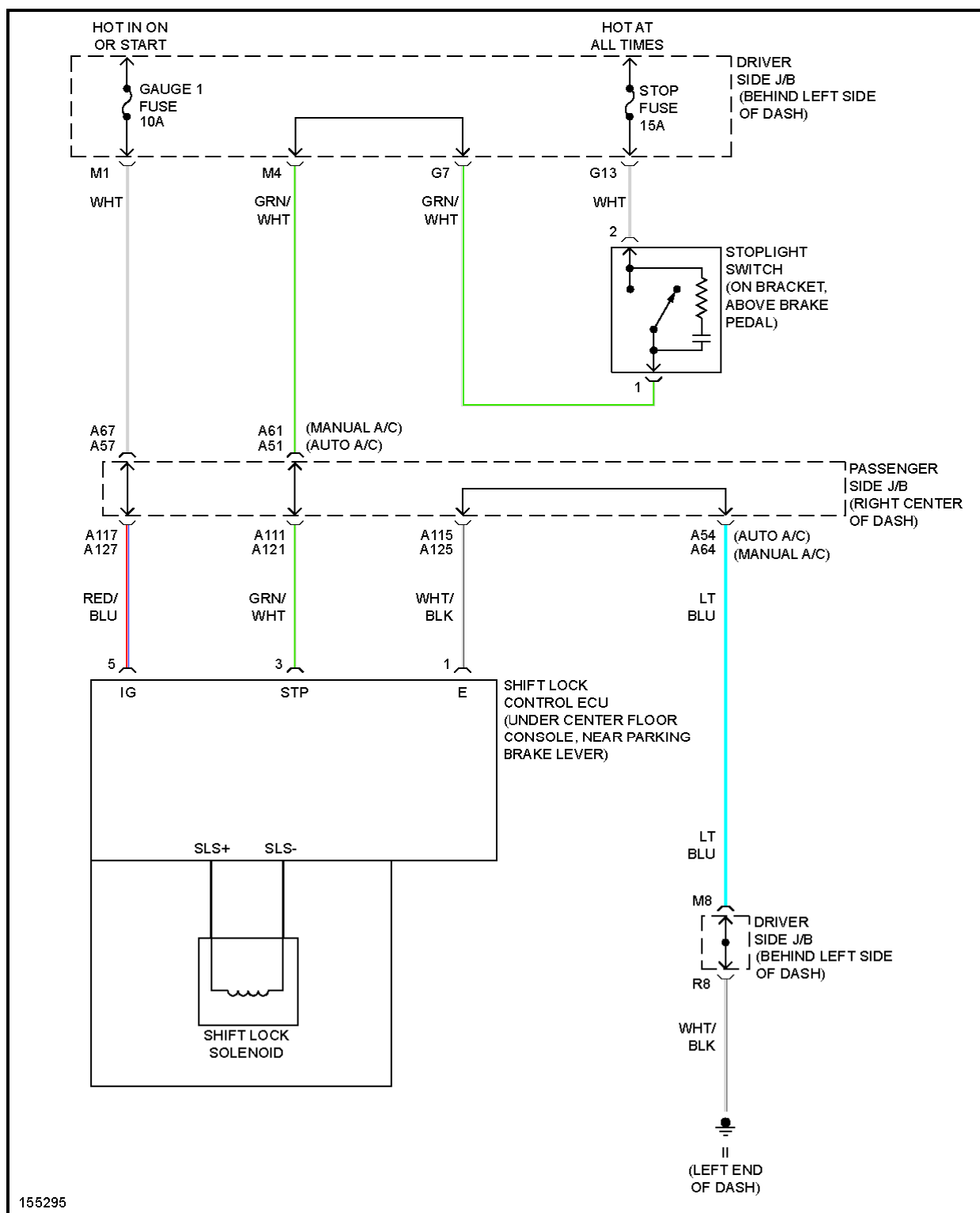


Fig. 169: Shift Interlock System Wiring Diagram (2002 - Toyota Camry)



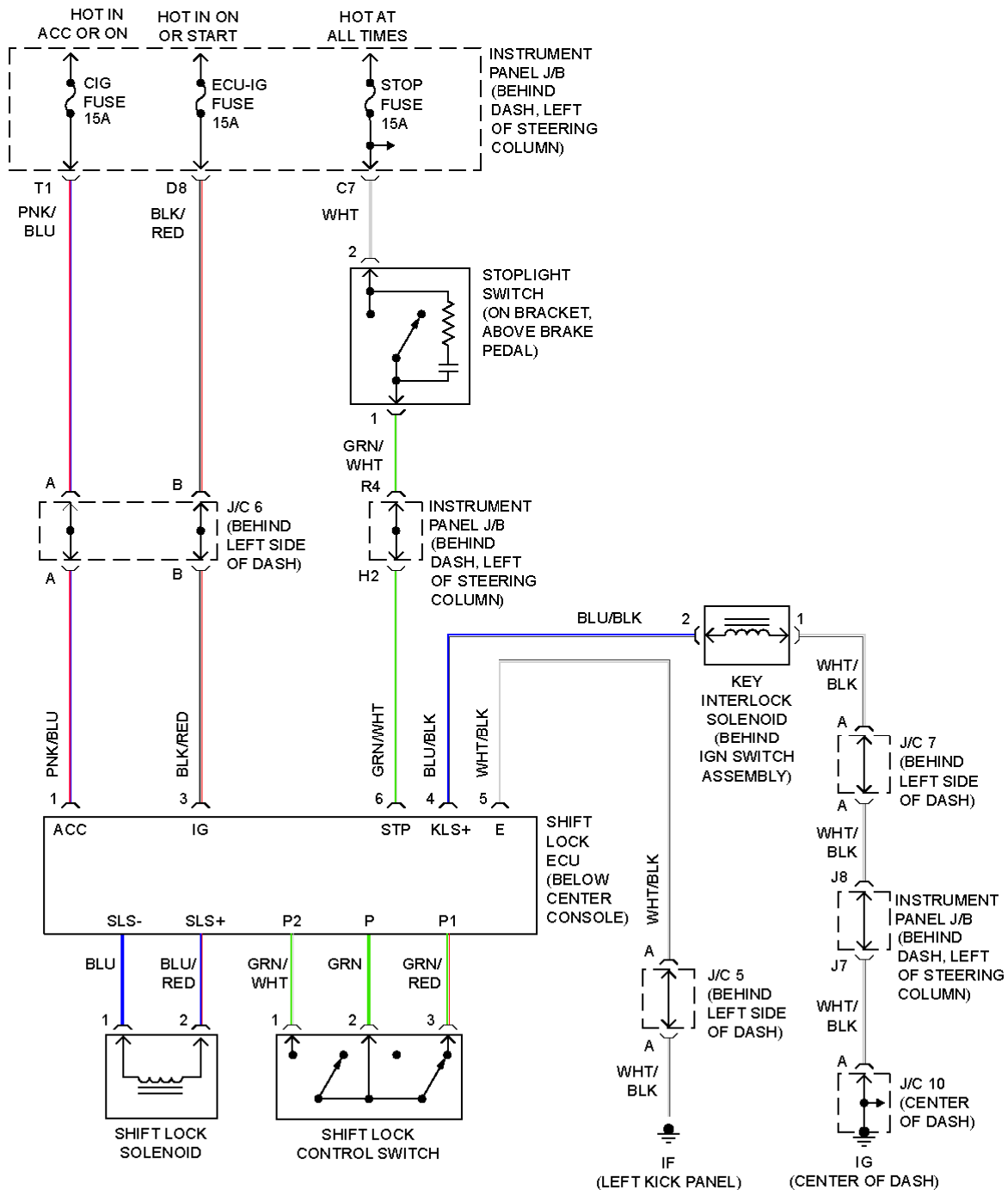


Fig. 170: Shift Interlock System Wiring Diagram (2002 - Toyota Camry Solara)





Fig. 171: Shift Interlock System Wiring Diagram (2002 - Toyota Celica)



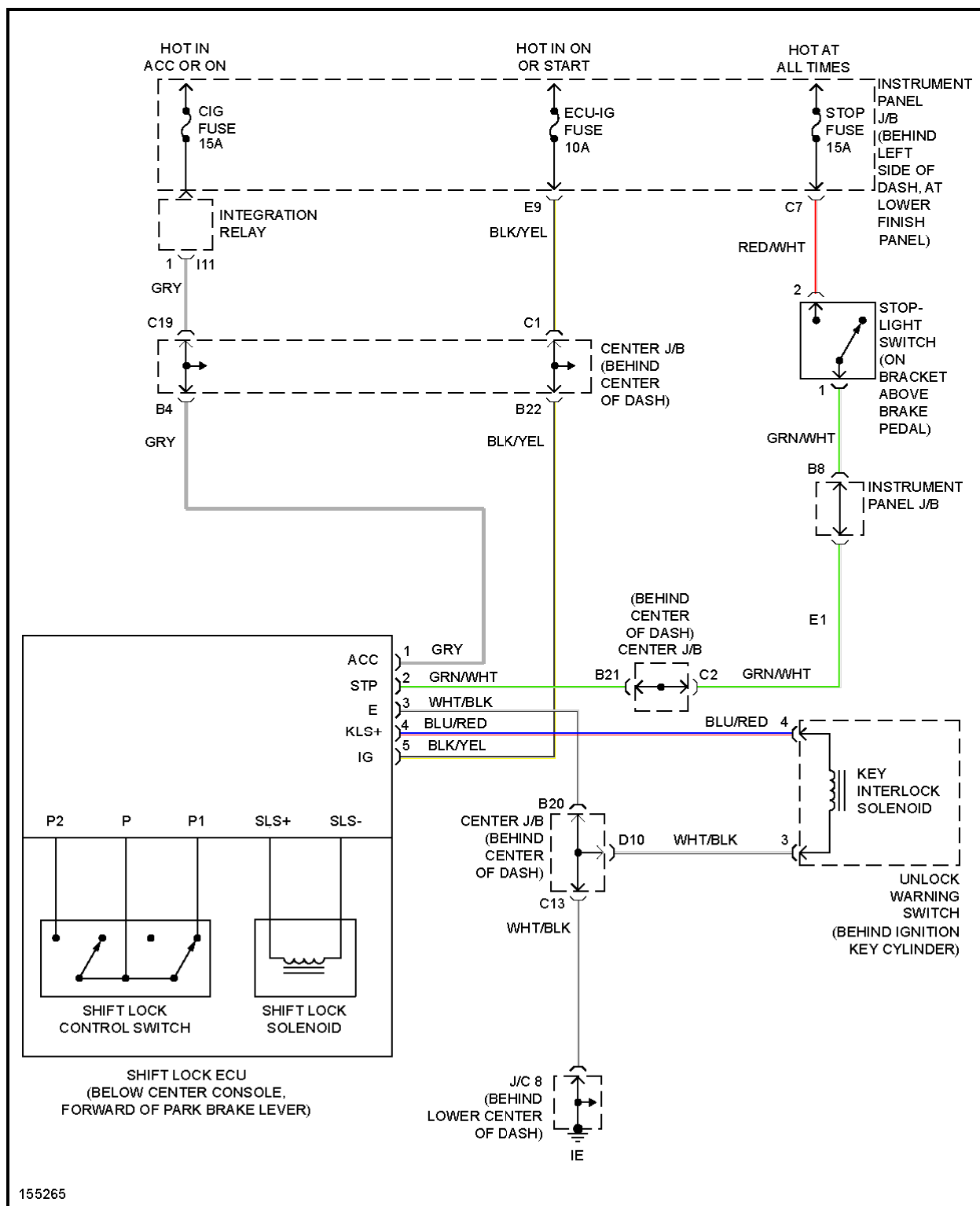


Fig. 172: Shift Interlock System Wiring Diagram (2002 - Toyota Corolla)





Fig. 173: Shift Interlock System Wiring Diagram (2002 - Toyota ECHO)



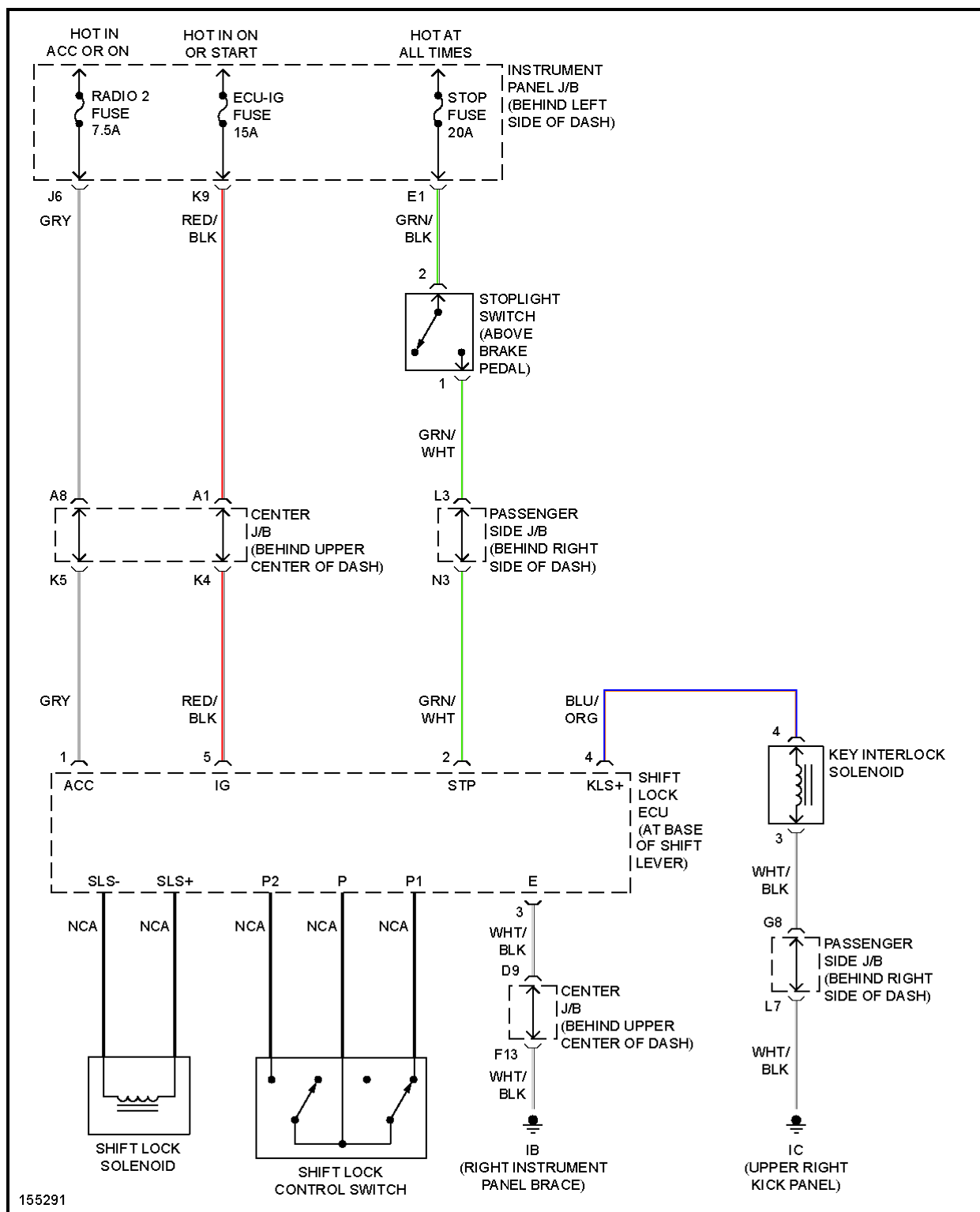


Fig. 174: Shift Interlock System Wiring Diagram (2002 - Toyota Highlander)



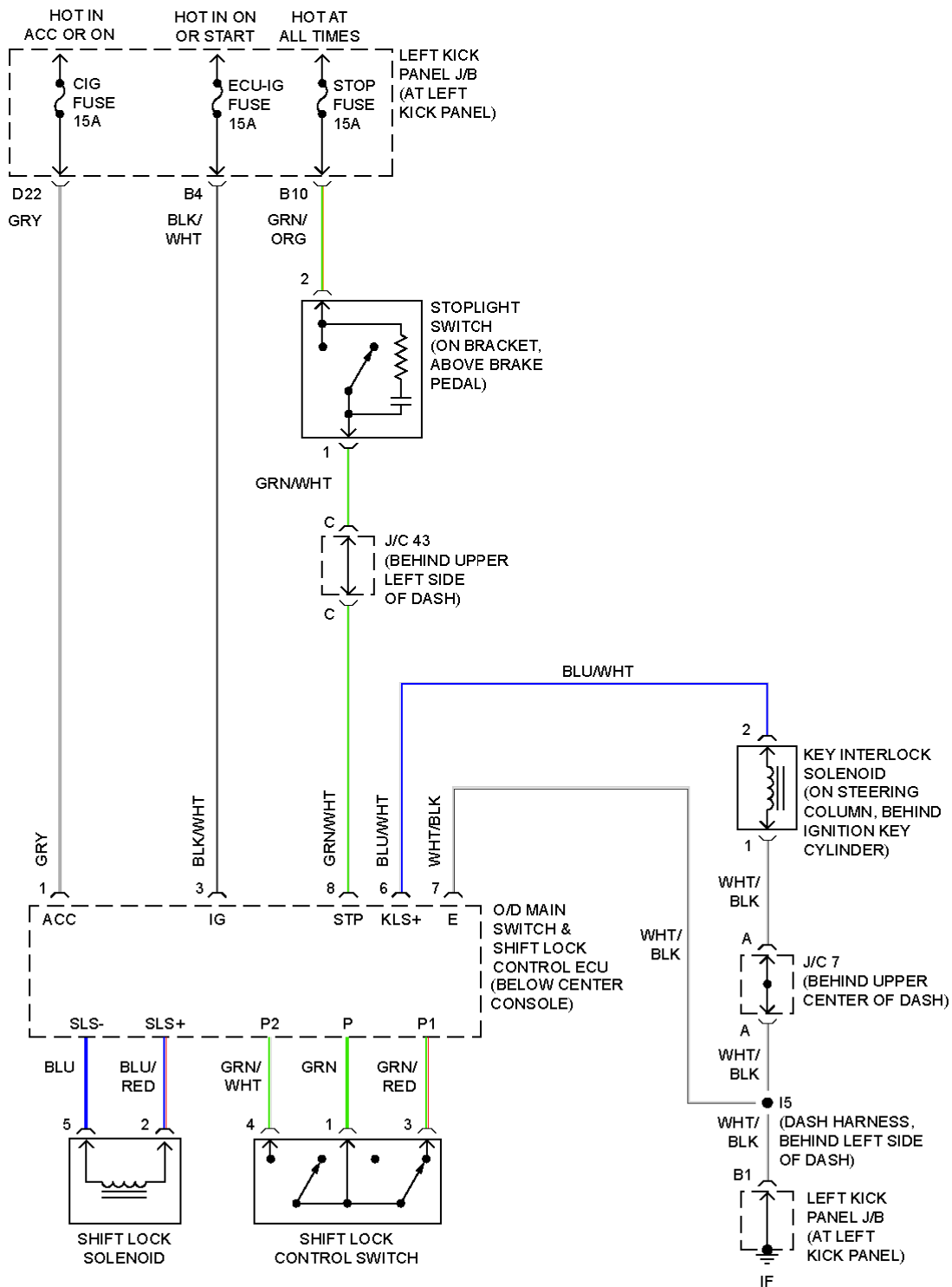


Fig. 175: Shift Interlock System Wiring Diagram (2002 - Toyota Land Cruiser)



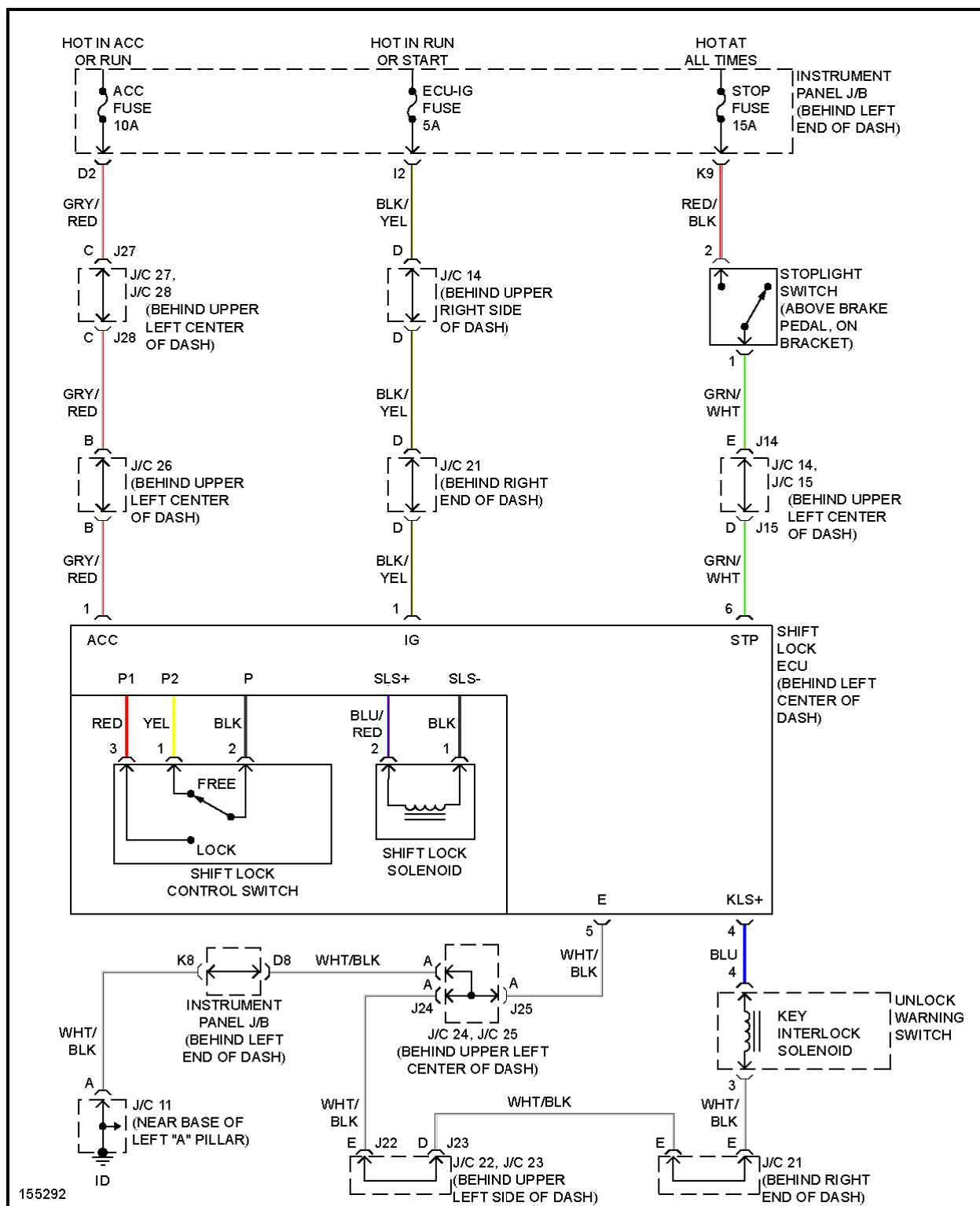


Fig. 176: Shift Interlock System Wiring Diagram (2002 - Toyota Prius)



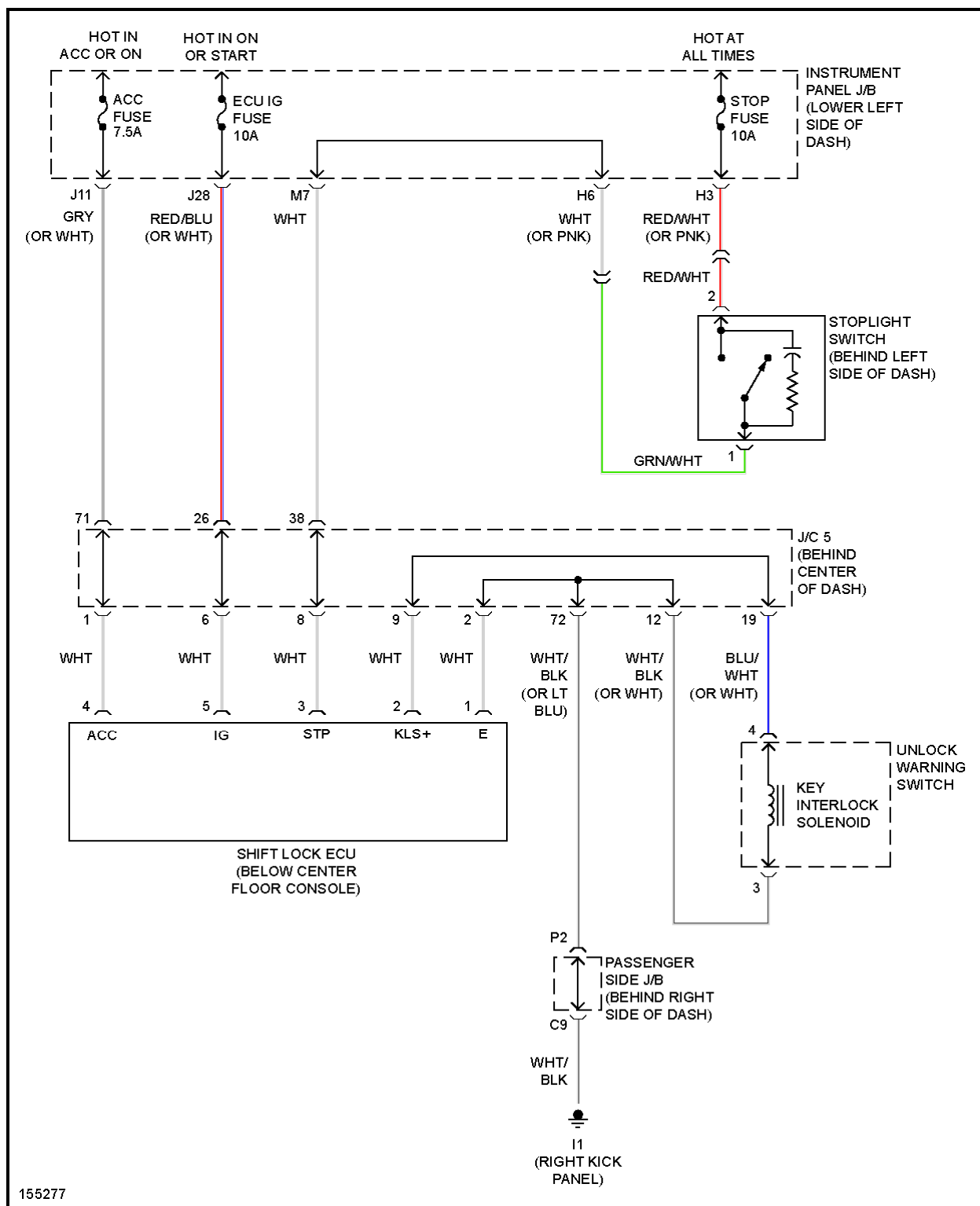


Fig. 177: Shift Interlock System Wiring Diagram (2002 - Toyota RAV4)



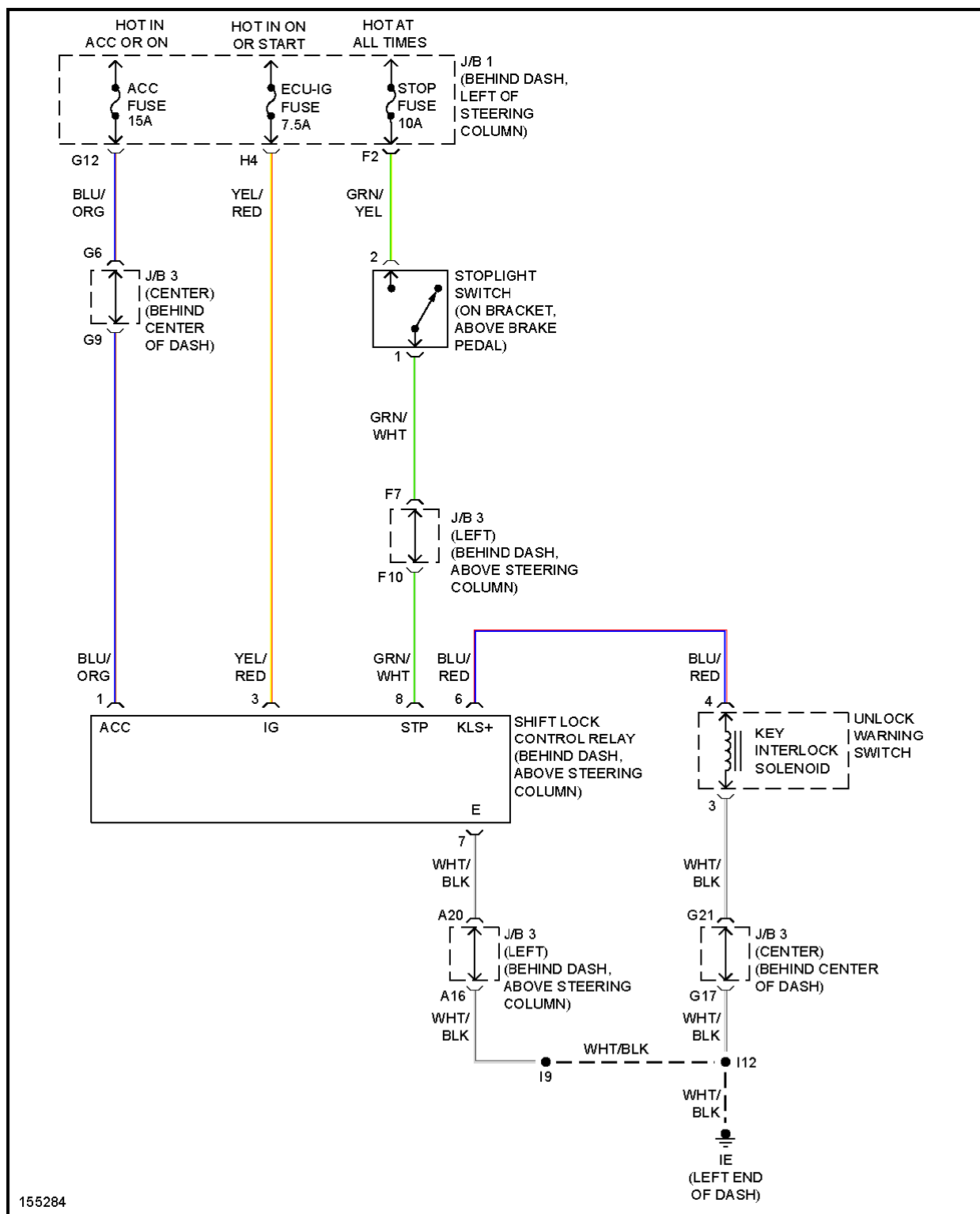


Fig. 178: Shift Interlock System Wiring Diagram (2002 - Toyota Tacoma)



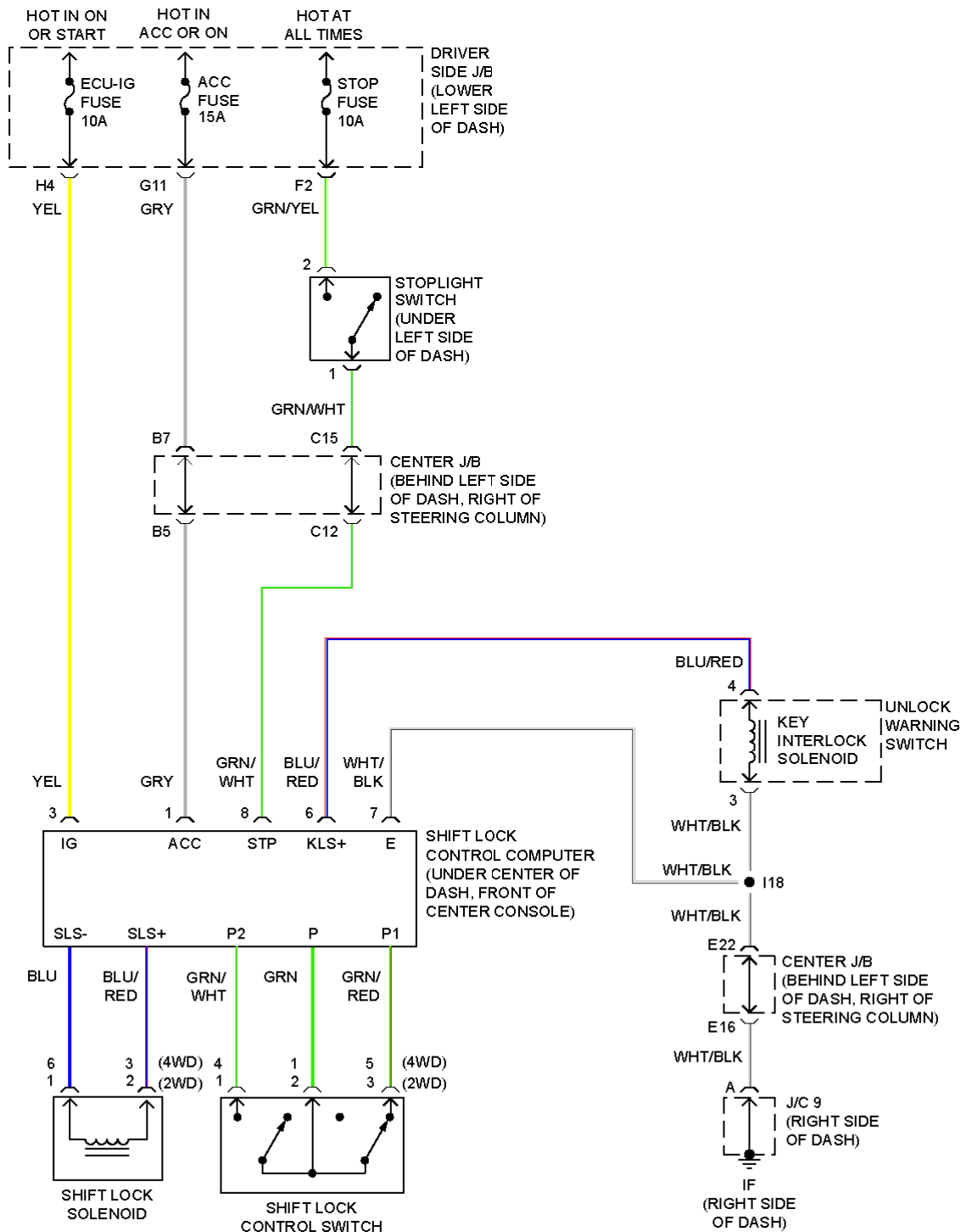


Fig. 179: Shift Interlock System Wiring Diagram (2002 - Toyota 4Runner)

