

INSTALL/REMOVAL INSTRUCTIONS: AIR SUSPENSION CONVERSION KIT

ATTENTION: Refer to the appropriate shop manual for your vehicle to obtain specific service procedures for this part. If you do not have a service manual or lack the skill to install this part, it is recommended that you seek the services of a qualified technician. Pay special attention to all cautions and warnings included in the shop manual. Read and follow all instructions carefully.

Air Suspension Conversion Kit

General Installation Instructions

When servicing any vehicle be sure to follow all safety procedures. First, make sure that when lifting the vehicle that you use an appropriate jack with a proper weight rating. Before going underneath any vehicle, make sure that it is properly supported with sturdy jack stands and on level ground so that the vehicle doesn't fall or slide off of the jack and onto you. As with any automotive repair, make sure you have the appropriate tools to do the job so you don't damage any parts on the vehicle. Safety glasses and mechanic's gloves should also be worn for your protection.

Take care not to exceed the Gross Vehicle Weight Rating (GVWR), or the maximum load recommended by the manufacturer. It is important that all the vehicle owner manuals recommendations are followed for your own safety and to prevent damage to the vehicle.

Once you are ready to disable the ride light, you will need to disconnect the negative battery cable (-) to prevent electrical shock/malfunction.

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Installation Instructions

Lexus LS 400

Front Kit 1990 - 2000

Parts included in this kit

- (2) Fully assembled coil over struts



Tools Needed For Installation

- Metric socket set
- Floor jack or lift
- Jack stands
- Metric wrenches
- Screwdrivers (Phillips and flat head)
- Wire cutter/stripper/crimping tool
- Spring compressor (if applicable)
- Allen wrenches

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Lexus LS 400 1990 - 2000

Front Kit Installation Instructions

Front Removal Instructions

1. Remove the front wheel. Torque 103 Nm (76 ft. lbs.)
2. Bleed air. Note: Turn off the air suspension switch located on the left side of the trunk compartment.

Hint: Disconnect the necessary one touch air connector of the height control valves and bleed the air. (See Figure 1)

Fig. 1



3. Disconnect the height control sensor link from the shock absorbers lower bracket. Remove the nut and disconnect the sensor link. Torque: 5.0 Nm (48 inch lbs.)
4. Disconnect the steering knuckle from the upper ball joint.
 - a. Remove the clip and nut. Torque : 65 Nm (48 ft. lbs.)
 - b. Using Special Service Tool (SST) 09610 - 20012 or equivalent, disconnect the steering knuckle from the upper ball joint.
 - c. Support the steering knuckle securely.



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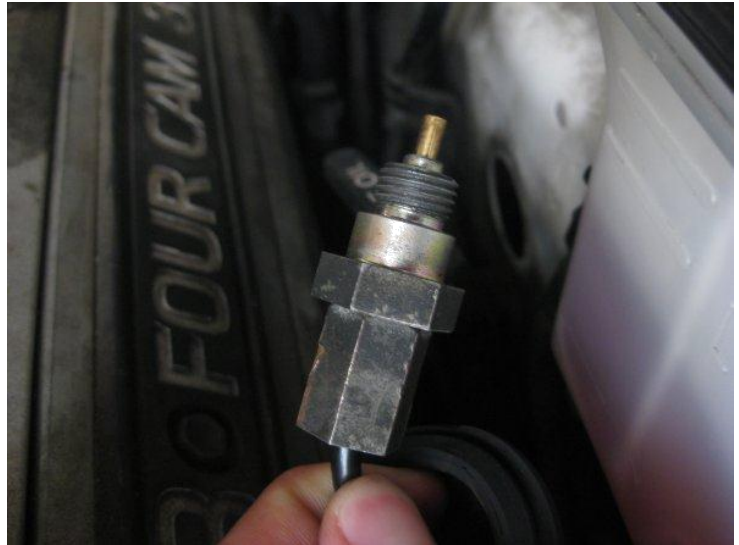
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5. Disconnect pneumatic cylinder from shock absorber lower bracket. Remove the bolt and nut. Torque: 157 Nm (116 ft. lbs.) Hint: After stabilizing the suspension, torque the bolt.



6. Disconnect air tube from the pneumatic cylinder. Remove the grommet and disconnect the air tube from the pneumatic cylinder. Torque: 17 Nm (13 ft. lbs.) (See Figure 2)

Fig. 2



7. Remove suspension control actuator. (See Figure 3)
- Remove the 3 nuts and actuator cover. Torque: 58 Nm (43 ft. lbs.)
 - Disconnect the actuator connector.
 - Remove the 2 nuts and actuator. Torque 7.8 Nm (69 inch lbs.)

Fig. 3



Hint: At time of installation, match the rod of pneumatic cylinder with the hole in the actuator.

8. Remove front pneumatic cylinder. Remove the 3 nuts and pneumatic cylinder from the vehicle. Torque: 58 Nm (43 ft. lbs.)

9. Remove suspension support. Remove the 3 nuts and suspension support from the pneumatic cylinder. Torque: 36 Nm (26 ft. lbs.)

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Front Installation Instructions

Read instructions carefully before attempting installation. If you have problems during the install, call our Technical Support Line.

- 1. Install the strut into the top of the strut mount and attach wheel strut mounting nuts loosely.**
- 2. Install the bottom of the strut into the lower mounting bracket and secure with the bolt and nut.**
- 3. Reconnect the steering knuckle to the upper ball joint.**
- 4. Prior to completely tightening lower shock absorber bolt, stabilize the suspension by installing wheels and bouncing vehicle up and down several times.**
- 5. Tighten lower shock absorber bolt with vehicle on the ground.**
- 6. This will keep vehicle from binding and sitting high after install.**

Note: Should the vehicle height appear too high after installation is complete, loosen lower strut mount and sway bar end links and repeat bounce procedure.

Note: The front springs may settle some during the first couple of weeks of use. It may be necessary to adjust the front height sensors to match the level of the new rear springs. The front springs can sit a little low if the rear shocks are bad. Test the rear shocks by pushing down on the rear of the car. If the rear bounces, then replace the shocks as well.

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Installation Instructions

Lexus LS 400

Rear Kit 1990 - 2000

Parts included in this kit

- (2) Fully assembled coil over struts



Tools Needed For Installation

- Metric socket set
- floor jack
- Jack stands
- Metric wrenches
- Screwdrivers (Phillips and flat head)
- Wire cutter/stripper/crimping tool
- Level work surface
- Spring compressor (if applicable)
- Allen wrenches

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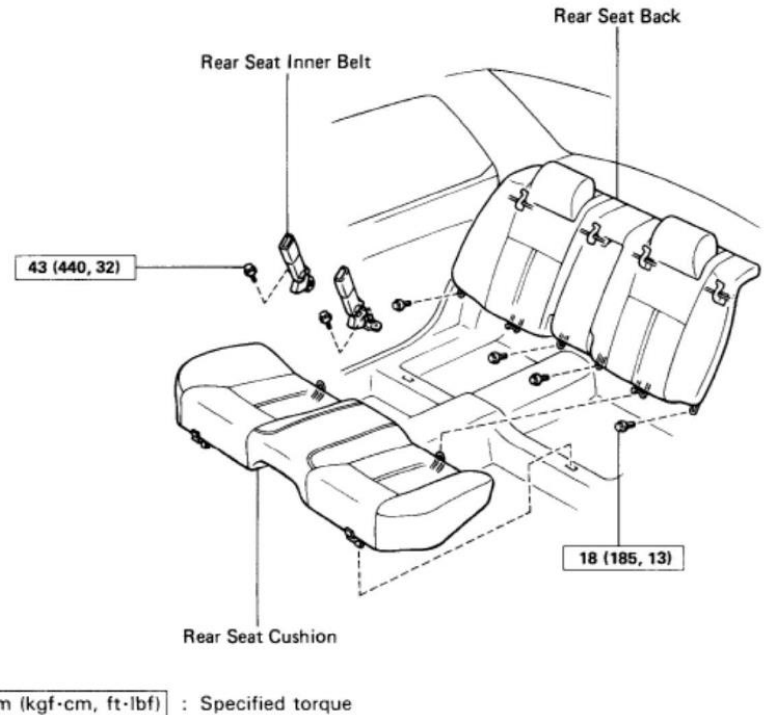
Lexus LS 400 1990-2000

Rear Kit Installation Instructions

Rear Removal Instructions

1. Remove the rear wheel. Torque: 103 Nm (76 ft. lbs.)
2. Remove the rear seat cushion, rear seat back and package tray trim. Refer to body and frame. (Figure 1)

Fig. 1



3. Remove the rear drive shaft.
4. Disconnect the stabilizer bar link from the stabilizer bar. Torque: 65 Nm (48 ft. lbs.) (Figure 2)

Fig. 2



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5. Remove the rear brake caliper. (Figure 3)

- a. Remove the 2 bolts and brake caliper.
Torque: 104 Nm (77 ft. lbs.)
- b. Support the brake caliper securely.

Fig. 3



- 6. Remove ABS speed sensor. Remove the bolt and ABS speed sensor. Note: Do not disconnect the RH pad wear indicator connector. Torque: 7.8 Nm (69 inch lbs.) (Figure 4)**

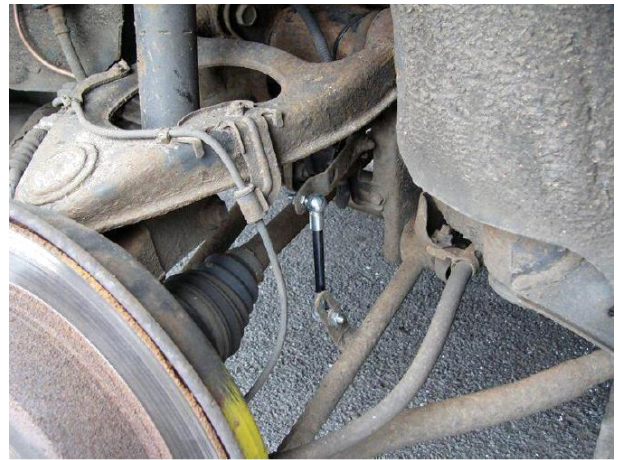
Fig. 4



7. Disconnect height control sensor link from No. 1 lower suspension arm. (Figure 5)

- a. Place the match marks on the link and bracket.
- b. Remove nut and disconnect the height control sensor link.
Torque: 5.0 Nm (48 in lbs.)

Fig. 5



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8. Remove the shock absorber and coil spring.

- a. Loosen the bolt and remove the nut on the lower side of the shock absorber. (Figure 6)

Torque: 137 Nm (101 ft. lbs.)

Hint: Do not remove the bolt

- b. Support the rear axle carrier with a jack.
c. Remove the 3 nuts and shock absorber cap. (Figure 7)
Torque: 25 nm (18 ft. lbs.)

- d. Loosen the suspension support center nut.

Note: Do not remove the nut

Installation Hint: Torque to 27 Nm (20 ft. lbs.)

- e. Remove the 3 nuts.

Installation Hint: Torque to 64 Nm (47 ft. lbs.)

- f. Lower the rear axle carrier and remove the bolt on the lower side of the shock absorber. (Figure 8)

- g. Remove the Air Strut

Fig. 6

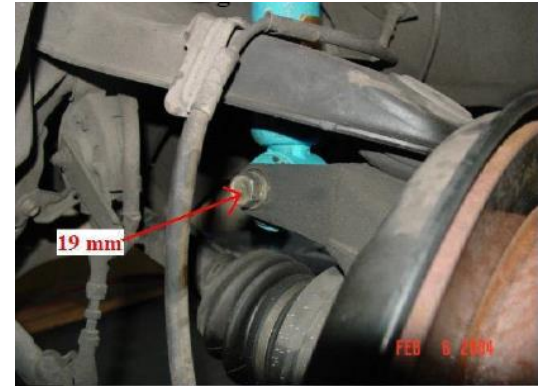


Fig. 7



Fig. 8



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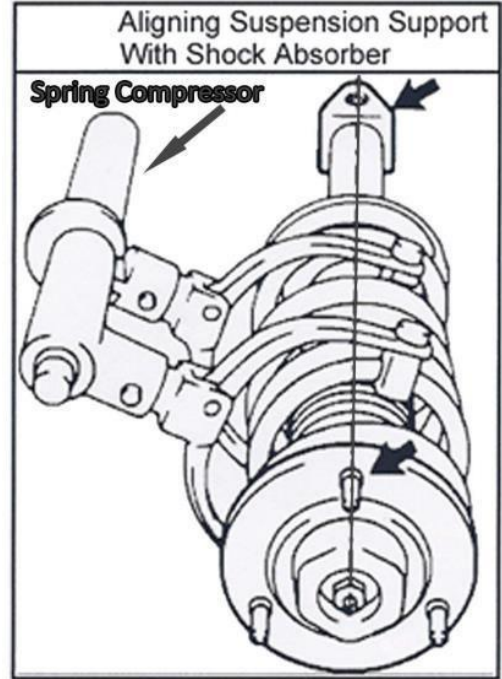
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Read instructions carefully before attempting installation. Please have your invoice handy before calling for technical help.

Rear Installation Instructions

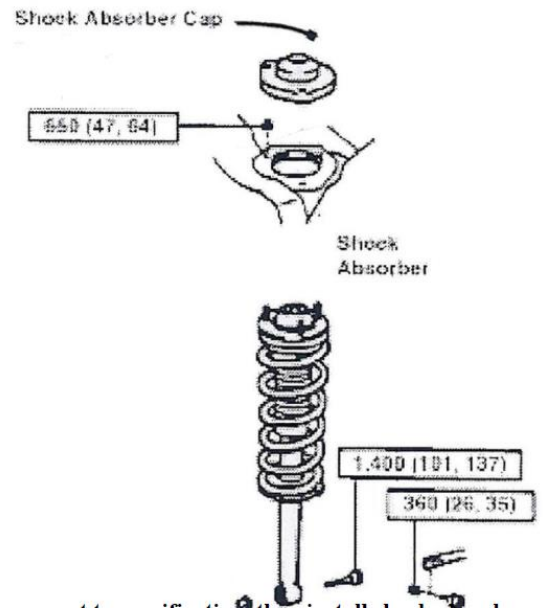
1. Install suspension support and temporarily tighten new nut. Then rotate the suspension support until the rod and one suspension support bolt line up with the lower bushing. (See Figure 9)

Fig. 9



2. Install the shock absorber in the vehicle with the three mounting nuts and torque to specifications. (See Figure 10)

Fig. 10



3. Torque the suspension support to specification, then install shock absorber cap and three nuts.

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Air Suspension Light Disarm Instructions 1993 – 1994 LS400

- 1. Turn off the air ride suspension switch if not already in off position**
- 2. In the trunk, pull back the right hand rear access cover to expose the ride control computer. (There are two bolts hidden inside the convenience tray). Pull back the protective coating on the wiring bundle closest to you on the ride control computer.**
- 3. Locate the following wires and cut them: (See Figure 1)**
 - Violet**
 - Violet with a yellow stripe**
- 4. Tape both ends of the wires to make sure they don't touch any metal surfaces.**
- 5. Reinstall the access tray. (See Figure 2)**

Note: The springs may settle some during the first couple of weeks of use. It may be necessary to adjust the front height sensors to match the level of the new springs.

The springs can sit a little low if the rear shocks are bad. Test the rear shocks by pushing down on the rear of the car. If the rear bounces then replace the shocks as well.

When installation is complete, lower the vehicle off the lift. Recheck and tighten all nuts and bolts while the vehicle is on the ground.

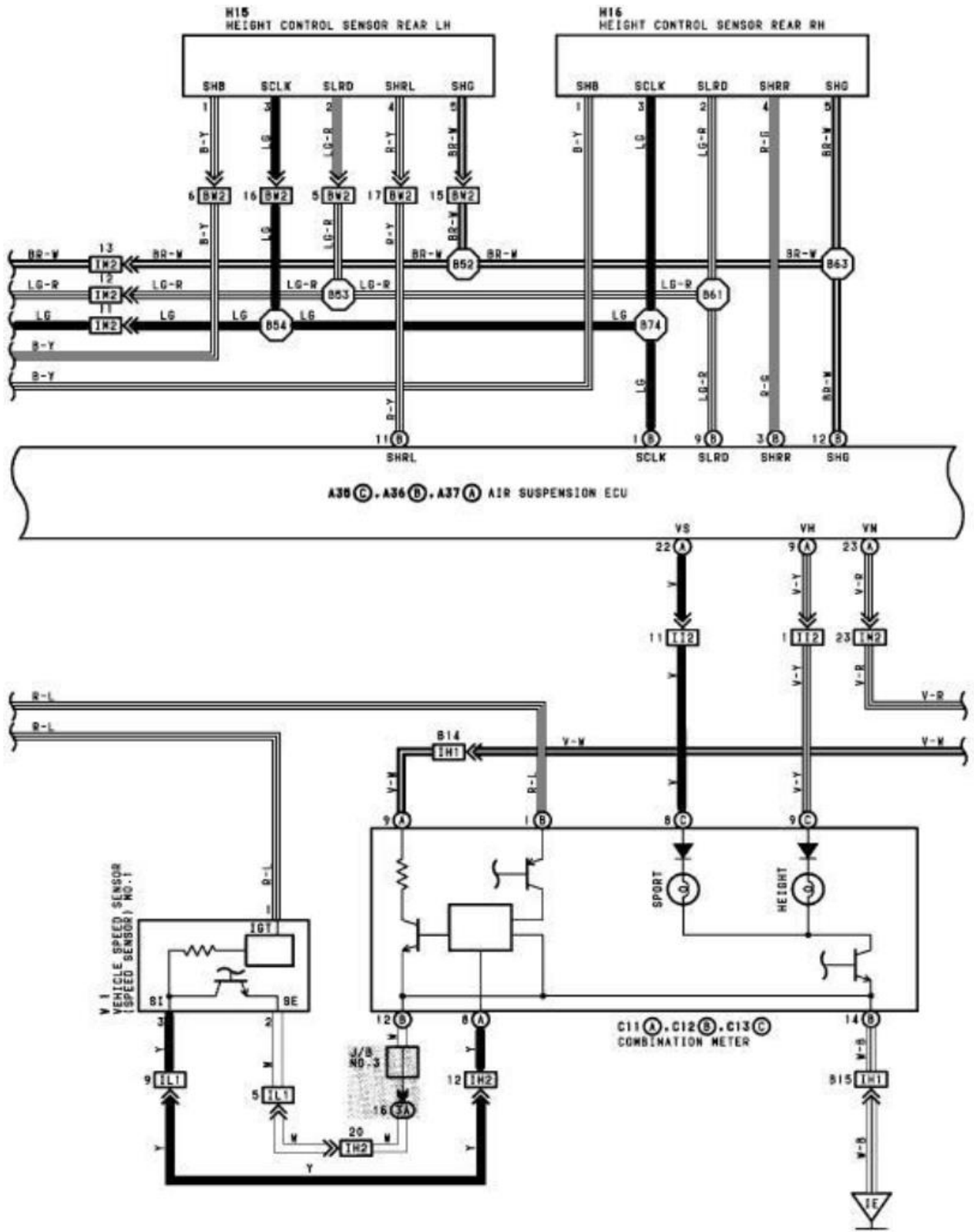
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Please read all instruction before installing.

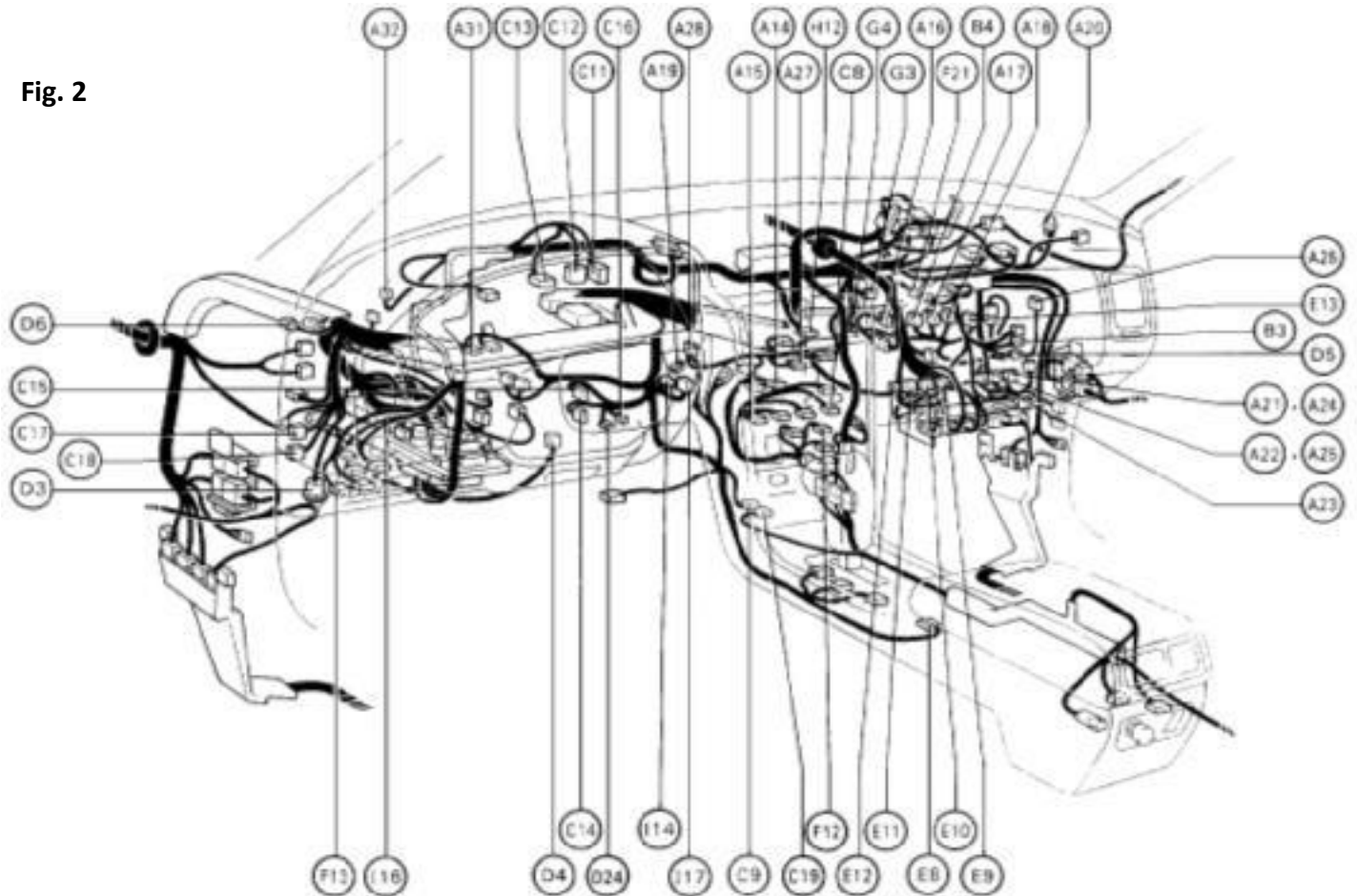
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Fig. 2



- | | |
|---------------------------------------|---|
| A14 A/C Control Assembly | D 3 Data Link Connector 2 (TDCL) |
| A15 A/C Control Assembly | D 4 Daytime Running Light Relay (Main) |
| A16 A/C Evaporator Temp. Sensor | D 5 Daytime Running Light Relay No. 2 |
| A17 A/C Power Transistor | D 6 Diode (for Daytime Running Light) |
| A18 A/C Power Transistor | D24 Driver Airbag Squib |
| A19 A/C Room Temp. Sensor | E 8 Electronic Controlled Transmission Pattern Select SW |
| A20 A/C Solar Sensor | E 9 Engine Control Module (Engine and Electronic Controlled Transmission ECU) |
| A21 ABS and Traction ECU | E10 Engine Control Module (Engine and Electronic Controlled Transmission ECU) |
| A22 ABS and Traction ECU | E11 Engine Control Module (Engine and Electronic Controlled Transmission ECU) |
| A23 ABS and Traction ECU | E12 Engine Control Module (Engine and Electronic Controlled Transmission ECU) |
| A24 ABS ECU (w/o Traction Control) | E13 Extra High Speed Relay (for Blower Motor) |
| A25 ABS ECU (w/o Traction Control) | F12 Front Cigarette Lighter |
| A26 Air Inlet Control Servo Motor | F13 Fuel Lid Opener SW |
| A27 Air Mix Control Servo Motor | F21 Front Passenger's Airbag Squib |
| A28 Air Vent Mode Control Servo Motor | G 3 Glove Box Light |
| A31 Automatic Light Control Relay | G 4 Glove Box Light SW |
| A32 Automatic Light Control Sensor | H12 Hazard SW |
| B 3 Blower Motor | I 14 Ignition Key Cylinder Light |
| B 4 Blower Resistor (for Low Speed) | I 16 Integration Relay |
| C 8 CD Player | I 17 Ignition SW, Unlock Warning SW and Key Interlock Solenoid |
| C 9 Center Airbag Sensor Assembly | |
| C11 Combination Meter | |
| C12 Combination Meter | |
| C13 Combination Meter | |
| C14 Combination SW | |
| C15 Combination SW | |
| C16 Combination SW | |
| C17 Cruise Control ECU | |
| C18 Cruise Control ECU | |
| C19 Center Airbag Sensor Assembly | |

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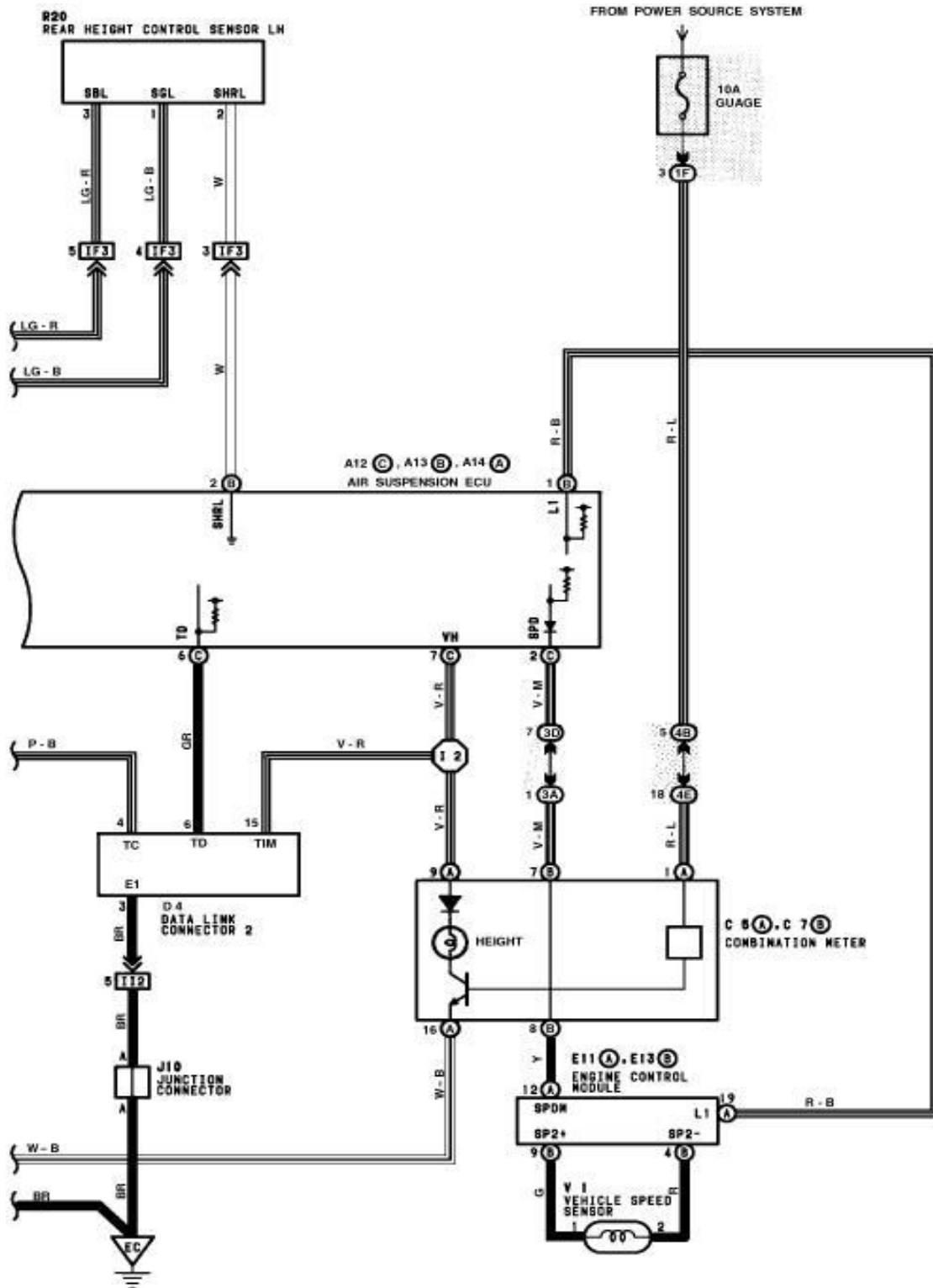
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Air Suspension Light Disarm Instructions 1993 – 1994 LS400

Locate the Air Suspension ECU. Find and cut the violet wire with a red stripe going into the module. Make sure to cut the wire several inches back from the module in case it is ever decided to reinstall the system. (See Figures 1 - 2)

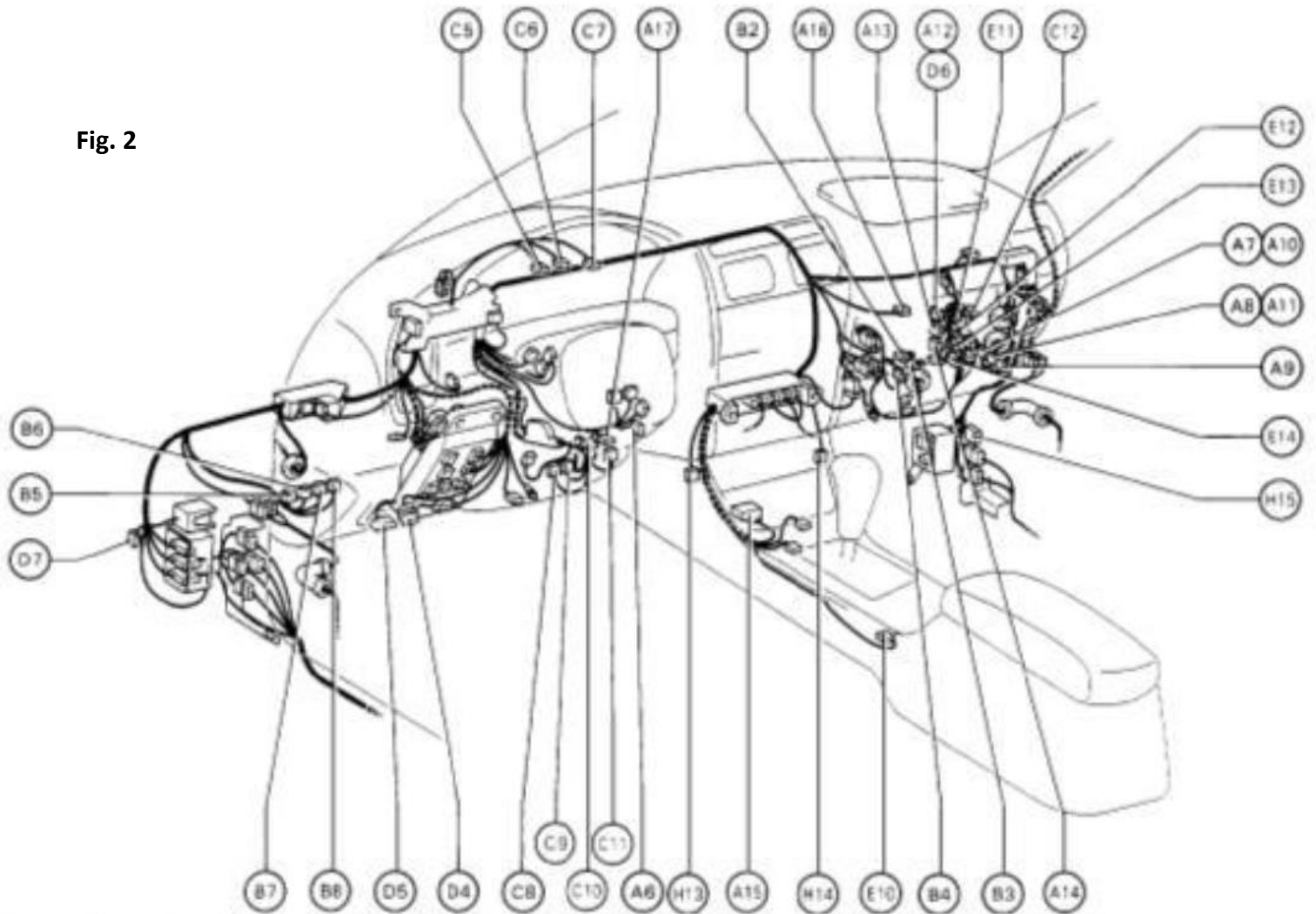
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Fig. 2



- | | | | |
|------|--|------|--|
| A 6 | A/C Room Temp. Sensor | C 8 | Combination SW |
| A 7 | ABS and Traction ECU | C 9 | Combination SW |
| A 8 | ABS and Traction ECU | C 10 | Combination SW |
| A 9 | ABS and Traction ECU | C 11 | Combination SW |
| A 10 | ABS ECU | C 12 | Cruise Control ECU |
| A 11 | ABS ECU | D 4 | Data Link Connector 2 |
| A 12 | Air Suspension ECU | D 5 | Data Link Connector 3 |
| A 13 | Air Suspension ECU | D 6 | Daytime Running Light Relay (Main) |
| A 14 | Air Suspension ECU | D 7 | Diode |
| A 15 | Airbag Sensor Assembly | E 10 | Electronically Controlled Transmission Pattern Select SW |
| A 16 | Airbag Squib (Front Passenger Airbag Assembly) | E 10 | Electronically Controlled Transmission Pattern Select SW and Height Control SW |
| A 17 | Airbag Squib (Steering Wheel Pad) | E 11 | Engine Control Module |
| B 2 | Blower Controller | E 12 | Engine Control Module |
| B 3 | Blower Controller | E 13 | Engine Control Module |
| B 4 | Blower Motor | E 14 | Engine Control Module |
| B 5 | Body ECU | H 13 | Heated Oxygen Sensor (Bank 1 Sensor 2) |
| B 6 | Body ECU | H 14 | Heated Oxygen Sensor (Bank 2 Sensor 2) |
| B 7 | Body ECU | H 15 | Height Control Connector |
| B 8 | Body ECU | | |
| C 5 | Combination Meter | | |
| C 6 | Combination Meter | | |
| C 7 | Combination Meter | | |