



TOYOTA A540/541E SERIES TRANSMISSIONS

ENGINE CHUGS COMING TO A STOP

COMPLAINT: Before or after overhaul, a Toyota equipped with the A540/541E automatic transmission exhibits a complaint of the engine lugging or chugging when braking and coming to a stop. Additionally it may be noticed that one of the Brake Lamps or Reverse Back Up Lamps are not working.

CAUSE: One cause may be a broken Brake Lamp and/or Reverse Back Up Lamp ground wire in the harness which is routed through the luggage compartment of the vehicle. The harness that includes the Brake and Reverse Back Up Lamp ground wires runs very close to the deck lid hinge. Through repeated opening and closing of the deck lid, the wire harness is stretched and/or rubs on the hinge until finally one of the wires in the harness breaks. See Figure 1 for wire harness location in the luggage compartment. If the ground wire for the Brake and/or Back Up lamps is one of the broken wires, it may cause a PCM logic issue allowing the TCC Solenoid to inadvertently be activated when the brake pedal is depressed causing the engine to chug or lug as the vehicle is braking to a stop because the Torque Converter Clutch is applied. As the vehicle is approaching a complete stop and the downshift into first gear is achieved, TCC application is uncoupled because there is no oil pressure fed to the TCC solenoid in first gear.

CORRECTION: If one of the Brake Lamps or Reverse Back Up Lamps will not illuminate, open the harness and check for broken ground wires. See Figure 2 for a typical wiring diagram that illustrates the wiring ground circuits for the Brake and Reverse Back Up Lamps.

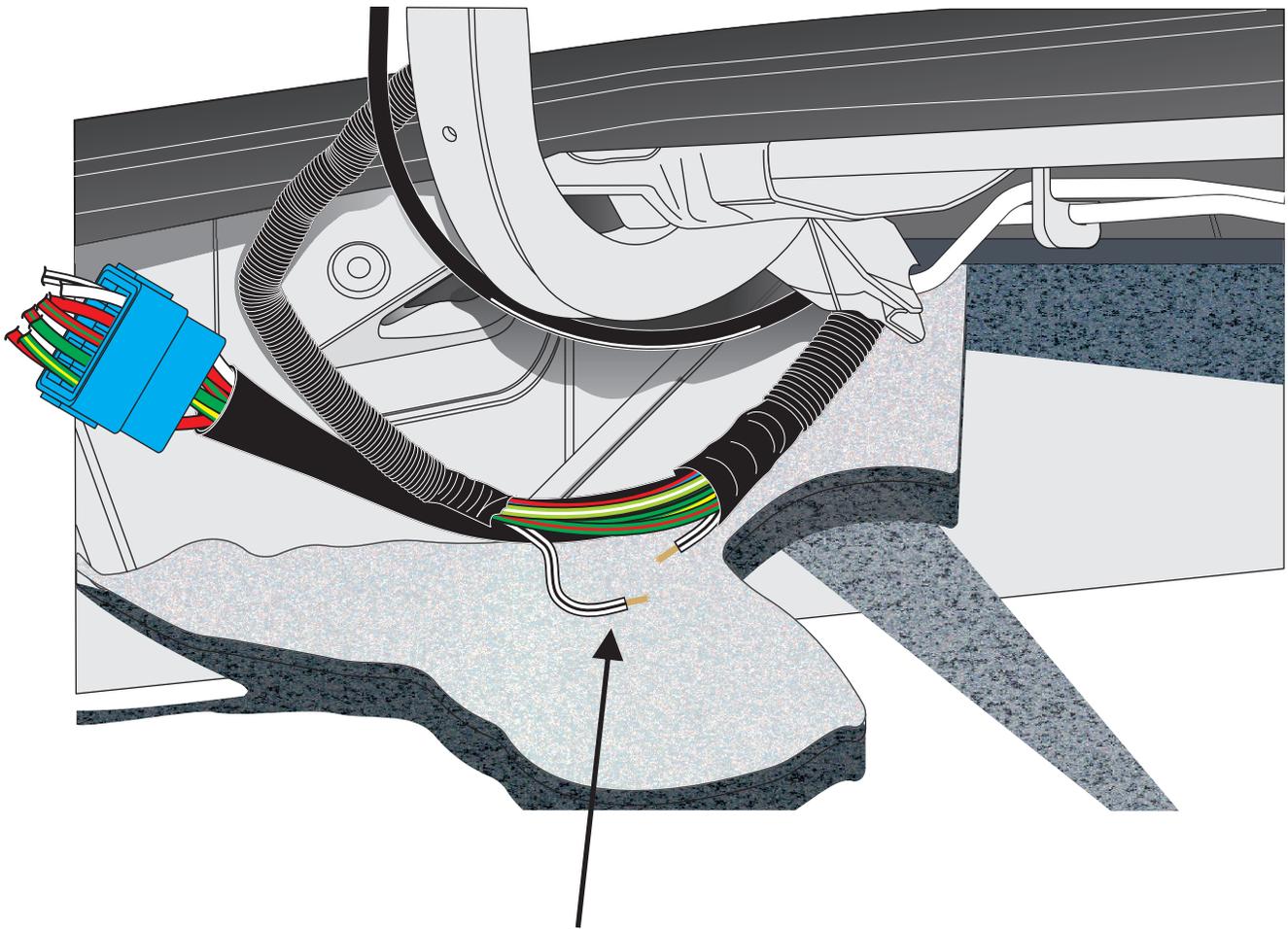
NOTE: 1999 Toyota Avalon XLS wiring information used for the sample diagram. Since wiring diagrams, connector, splice, and ground information may vary from year to year and model to model, consult the appropriate factory manual for the vehicle you are working on.

Repair the harness as necessary, and move or tie the harness away from the deck lid hinge to reduce possibility of future contact.

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*PARTIAL VIEW OF TYPICAL
TOYOTA LUGGAGE COMPARTMENT
NO MODEL OR YEAR SPECIFIED*

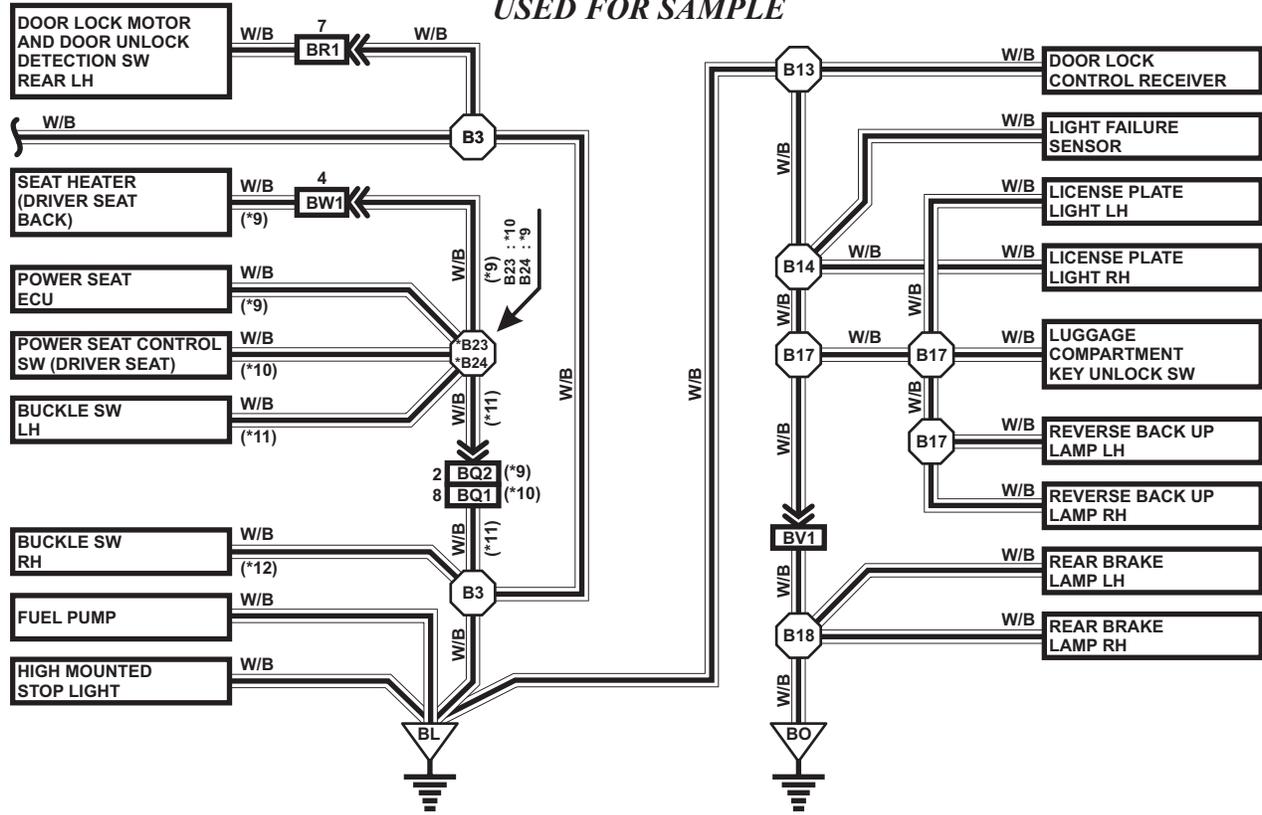


Ground wire broken
in the harness.

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Figure 1

TYPICAL GROUND WIRING DIAGRAM 1999 TOYOTA AVALON XLS USED FOR SAMPLE



- *4 : AUTOMATIC A/C
- *5 : MANUAL A/C
- *6 : W/MOON ROOF
- *7 : COLUMN SHIFT
- *8 : FLOOR SHIFT
- *9 : W/POWER SEAT W/DRIVING POSITION MEMORY
- *10 : W/POWER SEAT W/O DRIVING POSITION MEMORY
- *11 : W/POWER SEAT
- *12 : W/O POWER SEAT

□ : HARNESS JOINING CONNECTOR LOCATIONS:

CONNECTOR:	LOCATION:
BR1: (White 10 Pin)	At Left Center Pillar
BQ1: (White 5 Pin)	Under Driver Front Seat
BQ2: (White 10 Pin)	Under Driver Front Seat
BV1: (White 8 Pin)	Left Side of Luggage Compartment
BW1: (White 4 Pin)	Under Driver Front Seat

○ : HARNESS SPLICE LOCATIONS:

CONNECTOR:	LOCATION:
B3:	In Body Harness, Left Front Door Sill
B13:	In Body Harness, Upper Left Quarter Panel
B14:	In Body Harness, Upper Left Quarter Panel
B17:	In Body Harness, Top Center of Trunk Lid
B18:	In Body Harness, Behind Left Taillight
B23:	In Body Harness, Under Driver Front Seat
B24:	In Body Harness, Under Driver Front Seat

▽ : GROUND LOCATIONS:

GROUND:	LOCATION:
BL:	Under Driver Side Rear Pillar
BO:	Rear Center of Luggage Compartment

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Figure 2