TOYOTA
Technical Service Bulletin

Rear Air Suspension Feels Rough Over Bumps

Service Category Suspension

Section Suspension Control System **Market** USA and Mexico

Toyota Supports ASE Certification

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2022	Tundra, Tundra HV	VDS(s): JA5AA, JA5AB, JA5BC, JA5DA, JA5DB, JA5EC, JC5AB, JC5BC, JC5DB, JC5EC, LA5AA, LA5AB, LA5BC, LA5CD, LA5DA, LA5DB, LA5EC, LA5GD, MA5AB, MA5BC, MA5DB, MA5EC, MC5AB, MC5BC, MC5DB, MC5EC, NA5AB, NA5BC, NA5DB, NA5EC, NC5AB, NC5BC, NC5DB, NC5EC, VC5DB

Introduction

Some 2022 model year Tundra and Tundra Hybrid vehicles equipped with air suspension may exhibit a rough-ride feel when driving over uneven road conditions such as bumps or dips. Follow the Repair Procedure in this bulletin to address this condition.

Rear Air Suspension Feels Rough Over Bumps

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Warranty Information

For USA Market

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
SU1922	Adjust the Height Control Sensor for Both Sides and Adjust the Headlights	1.0	89407-0C010	34	99

APPLICABLE WARRANTY (USA)

- **This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.**
- **Warranty application is limited to occurrence of the specified condition described in this bulletin.**

For Mexico Market

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
SU1922	Adjust the Height Control Sensor for Both Sides and Adjust the Headlights	1.0	89407-0C010	34	99

APPLICABLE WARRANTY (MEXICO)

- **This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 60,000 kilometers, whichever occurs first, from the vehicle's in-service date.**
- **Warranty application is limited to occurrence of the specified condition described in this bulletin.**

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Required Tools & Equipment

REQUIRED TOOLS & MATERIAL	QUANTITY
Metric Ruler	1

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream ADVI*	ADE	TSADVUNIT	1
Techstream 2.0		TS2UNIT	
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 17.10.012 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787 (USA) or 01-55-50103041 (Mexico).

Repair Procedure

1. Confirm the condition exists.

   Does the vehicle exhibit a rough-ride feel when driving over uneven road conditions such as bumps or dips?

   - **YES —** Continue to step 2.
   - **NO —** This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

2. Drive the vehicle onto an alignment rack and cycle the vehicle height twice.

   Refer to TIS, applicable model and model year Repair Manual:

   - 2022 Tundra and Tundra HV

     Suspension – Suspension Control System – "Suspension Control: Suspension Control System: Adjustment"

   NOTE

   ONLY perform step 1.

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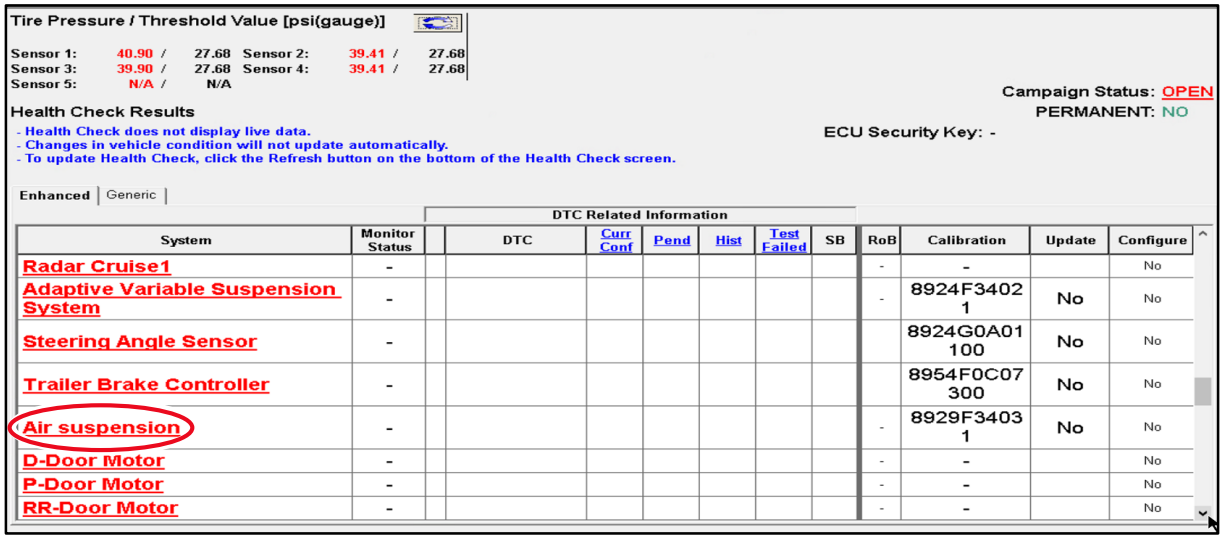
Repair Procedure (continued)

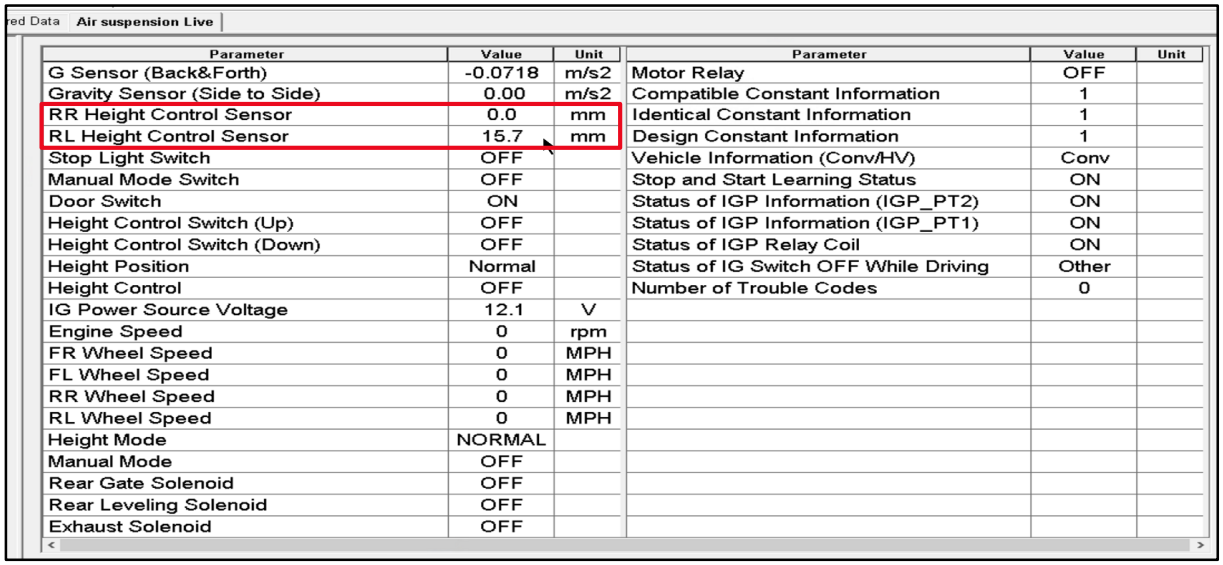
3. Using Techstream, perform a Health Check on the vehicle. From the Health Check results, select Air Suspension as shown.

Figure 1. Health Check



4. Ensure the Techstream display settings are set to metric. Note the initial values displayed by Air Suspension Live for the RR Height Control Sensor and the RL Height Control Sensor.

Figure 2. Techstream Air Suspension Live



Parameter	Value	Unit	Parameter	Value	Unit
G Sensor (Back&Forth)	-0.0718	m/s2	Motor Relay	OFF	
Gravity Sensor (Side to Side)	0.00	m/s2	Compatible Constant Information	1	
RR Height Control Sensor	0.0	mm	Identical Constant Information	1	
RL Height Control Sensor	15.7	mm	Design Constant Information	1	
Stop Light Switch	OFF		Vehicle Information (Conv/HV)	Conv	
Manual Mode Switch	OFF		Stop and Start Learning Status	ON	
Door Switch	ON		Status of IGP Information (IGP_PT2)	ON	
Height Control Switch (Up)	OFF		Status of IGP Information (IGP_PT1)	ON	
Height Control Switch (Down)	OFF		Status of IGP Relay Coil	ON	
Height Position	Normal		Status of IG Switch OFF While Driving	Other	
Height Control	OFF		Number of Trouble Codes	0	
IG Power Source Voltage	12.1	V			
Engine Speed	0	rpm			
FR Wheel Speed	0	MPH			
FL Wheel Speed	0	MPH			
RR Wheel Speed	0	MPH			
RL Wheel Speed	0	MPH			
Height Mode	NORMAL				
Manual Mode	OFF				
Rear Gate Solenoid	OFF				
Rear Leveling Solenoid	OFF				
Exhaust Solenoid	OFF				

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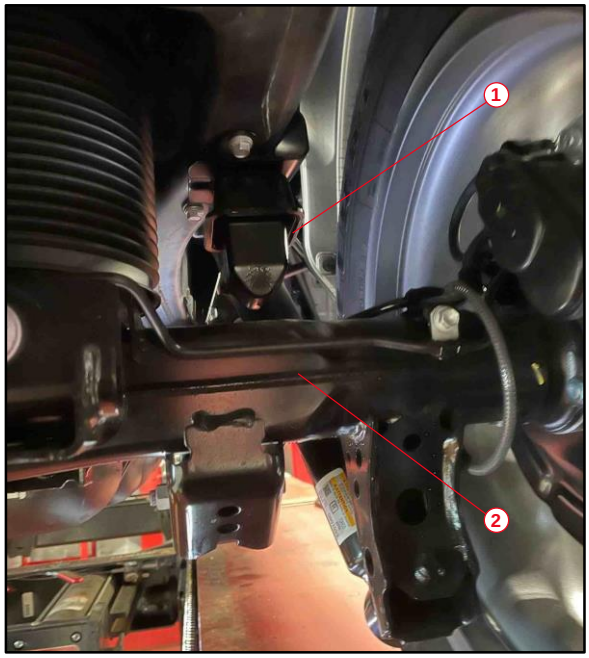
Repair Procedure (continued)

5. Under the vehicle, measure the distance between each rear bump stop and the top of the rear axle housing, as shown below.

Figure 3.



1	Bump Stop
2	Rear Axle Housing

Figure 4. Bump Stop to Rear Axle Housing Gap

Is the gap less than 35 mm?

- **YES —** Continue to step 6.
- **NO —** This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

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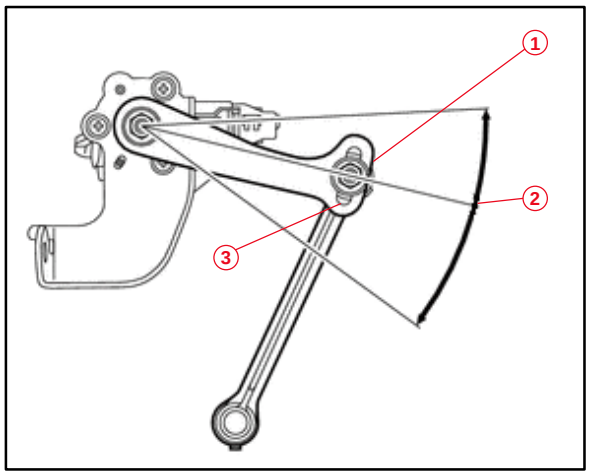
Repair Procedure (continued)

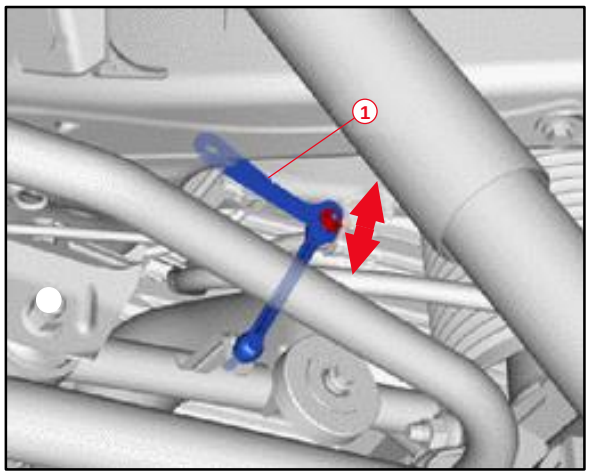
6. Adjust the height control sensor for each side.
   A. Loosen the height control sensor nut.
   B. Move the height control sensor link plate along the slotted hole of the bracket until it is positioned at the bottom of the slotted hole (see Figure 5).
   C. Tighten and retorque the nut.
      Torque: 5.6 N*m (57 kgf*cm, 50 in*lbf)
   D. Repeat on the opposite side.

Figure 5. Nominal Factory Setting Versus New Target Setting



1	Nut (Loosen)
2	Factory Setting for Nut Position
3	New Target Setting for Nut Position

Figure 6.



1	Height Control Sensor Link Plate

7. Cycle the suspension twice by repeating step 2 once.

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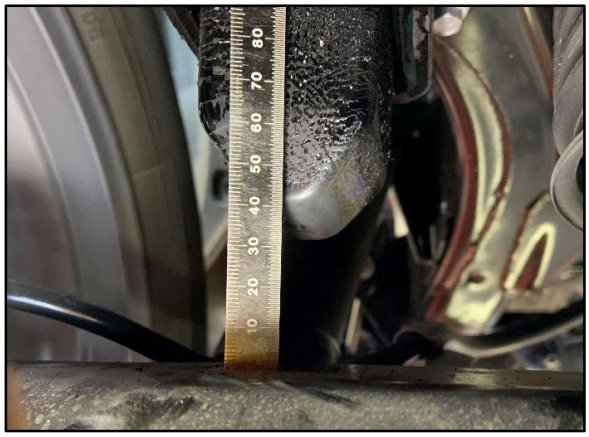
Repair Procedure (continued)

8. Measure the bump stop to axle housing.
   Is the gap measurement between 35 – 45 mm and equal side to side?
   - **YES —** Continue to step 9.
   - **NO —** Continue to adjust the height control sensors until an axle housing to bump stop gap of 35 – 45 mm is achieved. Then continue to step 9.

   NOTICE
   Do NOT exceed 45 mm.

Figure 7. Bump Stop to Rear Axle Housing Gap



9. Using Techstream Air Suspension Live, confirm that the RR Height Control Sensor and the RL Height Control Sensor measurements are within 10 mm of each other.

Figure 8.

Parameter	Value	Unit	Parameter	Value	Unit
G Sensor (Back&Forth)	-0.1795	m/s2	Motor Relay	OFF	
Gravity Sensor (Side to Side)	-0.07	m/s2	Compatible Constant Information	1	
RR Height Control Sensor	1.6	mm	Identical Constant Information	1	
RL Height Control Sensor	3.9	mm	Design Constant Information	1	
Stop Light Switch	OFF		Vehicle Information (Conv/HV)	Conv	
Manual Mode Switch	OFF		Stop and Start Learning Status	ON	

   Is the difference 10 mm or less?
   - **YES —** Continue to step 10.
   - **NO —** Continue to adjust the height control sensors until the side-to-side difference is 10 mm or less AND a rear axle housing to bump stop gap of 35 – 45 mm is achieved, then continue to step 10.

10. Adjust the headlight aim.
    Refer to TIS, applicable model and model year Repair Manual:
    - 2022 Tundra and Tundra HV
      Vehicle Exterior – Lighting (ext) – "Lighting (Ext): Headlight Assembly: Adjustment"

11. Test-drive the vehicle to confirm the rough-ride condition is no longer present.