

# AIR SUSPENSION SYSTEM

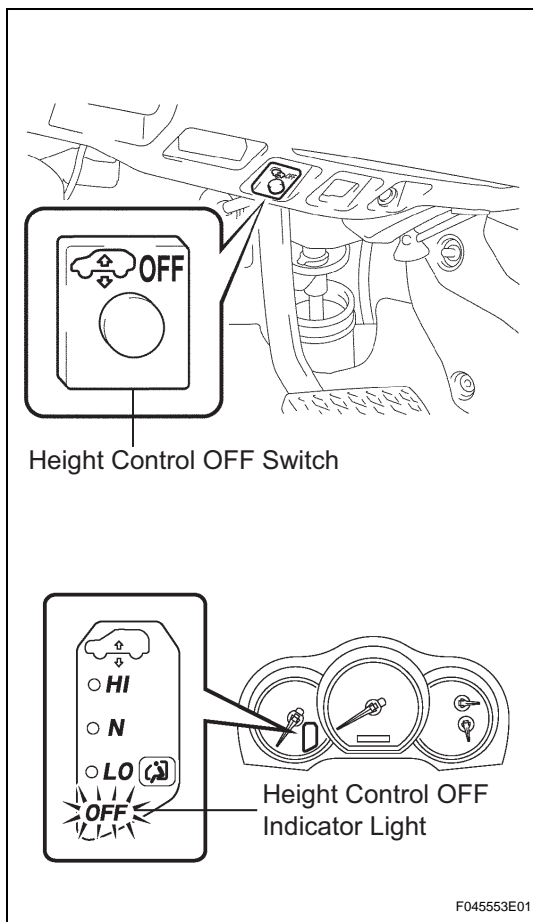
## PRECAUTION

### 1. PRECAUTION

#### NOTICE:

When disconnecting the negative (-) terminal cable of the battery, initialize the following systems after the completion of the operation.

System Name	See procedure
Lighting System (Adapting Front Lighting System)	LI-17
Power Window System	WS-12
Power Back Door System	ED-6
Sliding Roof System	RF-4



### 2. AIR SUSPENSION SYSTEM PRECAUTION

#### (a) Note for operation

- (1) When you work under or when jacking it up, make sure the height control OFF switch to prohibit controlling the height of the vehicle is on.

#### HINT:

- When the height control OFF switch is operated to prohibit controlling the vehicles height, the height control OFF indicator light on the combination meter comes on.
- The auto leveling control and access mode control continue to control for max. 60 seconds after turning the ignition switch OFF.
- Disallowance of the height control OFF switch is recorded even when the negative terminal of the battery is disconnected.
- Disallowance of the vehicle height control by the height control OFF switch is released at the vehicle speed of 30 km/h (19 mph) or more.

- (2) Do not operate the steering wheel, if there is no air in the pneumatic cylinder.

#### HINT:

The pneumatic cylinder could be damaged if it is twisted without air in the cylinder.

- (3) In the case of letting down the vehicle without air in the cylinder, make sure all the pipes are securely connected.

#### HINT:

The pneumatic cylinder could be damaged if there is any pipe disconnected while letting down the vehicle.

- (4) Do not apply battery voltage to the compressor motor for more than 60 seconds to prevent damage to the motor.

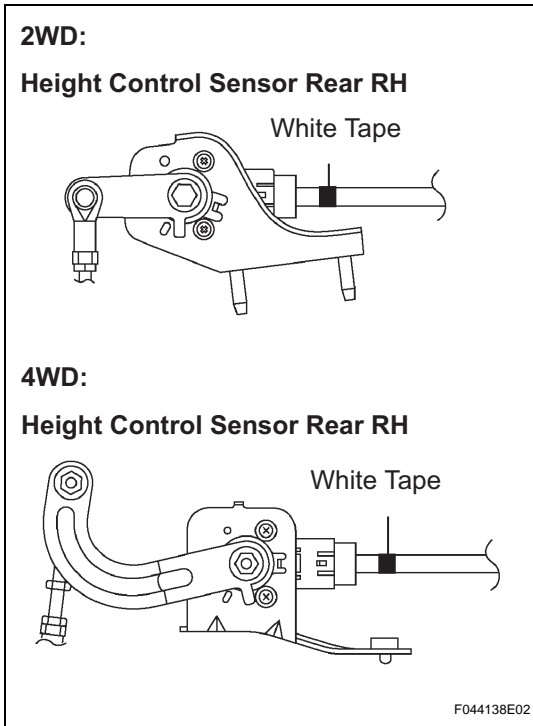
**HINT:**

In the case where it is necessary to perform the operation by charging the battery for more than 60 seconds, for example height recovery without air in the cylinder, proceed the operation as follow: after 60 seconds have passed, turn the ignition switch OFF once, and then turn the ignition switch ON again for commencement of operation.

- (b) Note for connector operation.
  - (1) In the case where disconnecting the connectors for height control sensor rear RH and height control valve sub-assembly No. 2, it possible causes incorrect connection. Since these 2 connectors have the same shape, they may be connected incorrectly unless the clamp of wire harness is properly connected. When you connecting the connectors, confirm a mark (white tape) on the wire harness of height control sensor rear RH and the clamp position of wire harness.

**3. FAIL-SAFE FUNCTION**

- (a) When a Air Suspension System malfunction is detected under the normal control operation, the suspension control ECU will suspected the switch control of the height control operation.



DTC No.	Malfunction Item	Fail-Safe Operation			Fail-Safe Deactivation Conditions
		Malfunction on one sensor	High speed range	To continue the control with the 3 normal sensors.	
C1711/11 C1712/12 C1713/13 C1714/14	Malfunction on height control sensor	Malfunction on one sensor	High speed range	To continue the control with the 3 normal sensors.	Return to normal condition.
		Malfunction on one sensor	Low speed range	To interrupt the height control.	
C1735/35	Open or short on exhaust solenoid valve circuit	Malfunction on two or more sensors	To interrupt the height control.		Return to normal condition.
		Normal on pneumatic tank solenoid valve	To implement the height down control for maximum 30 seconds, then interrupt the height down control for all the wheels.		
C1737/31 C1738/32 C1739/33 C1740/34	Open or short on height control solenoid valve circuit	Malfunction on pneumatic tank solenoid valve	To interrupt the height down control.		Return to normal condition.
		Open or short on one solenoid valve circuit	High speed range	To continue the control with only 3 normal solenoid valves.	
C1737/31 C1738/32 C1739/33 C1740/34	Open or short on height control solenoid valve circuit	Open or short on one solenoid valve circuit	Low speed range	To interrupt the height control.	Return to normal condition.
		Malfunction on two or more solenoid valve circuits	To interrupt the height control.		

DTC No.	Malfunction Item	Fail-Safe Operation		Fail-Safe Deactivation Conditions
C1741/41	Open or short on AIR SUS relay circuit	To interrupt the height up control.		Return to normal condition.
C1742/42 C1751/51	Lock, Powered continuously or powered excessively on height control compressor motor	After the DTC detection, to interrupt the height up control for 70 minutes.		After interrupting for 70 minutes, restart the control.
C1744/44 (*1)	Open or short on tank solenoid valve circuit	To prohibit the pneumatic tank solenoid valve exhaust control.		Return to normal condition.
C1761/61	Malfunction on suspension control ECU	To interrupt the height control.		Return to normal condition.
P1774/74	Power voltage dropped	To interrupt the height control.		Return to normal condition.
C1776/76	Malfunction on vehicle speed sensor circuit	Malfunction on one sensor	Height control is effected only with normal sensor.	Return to normal condition.
		Malfunction on two sensors	Target vehicle height is fixed on the normal.	
C1779/79	Malfunction on engine speed signal circuit	Low speed range	To interrupt the height control.	Return to normal condition.
		High speed range	To continue the usual control.	

**HINT:**

(\*1): The height control continues but the vehicle height lowering speed may be slower than usual.