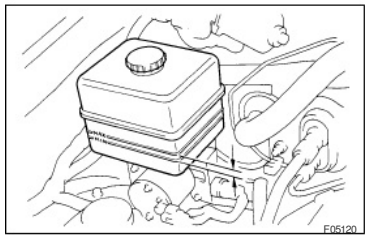


2003 Lexus LX470

Submodel: | Engine Type: V8 | Liters: 4.7
Fuel Delivery: FI | Fuel: GAS



ON-VEHICLE INSPECTION

1. INSPECT FLUID LEVEL

- (a) Start the engine on a level place. Adjust the vehicle height to "N" position with the vehicle unloaded.

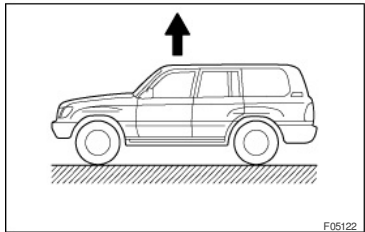
NOTICE:

After adjusting the vehicle height to control the fluid pressure in the height control accumulator, do not turn the engine OFF.

- (b) Check that the fluid level in the reservoir tank of the AHC pump motor is within the standard range.

2. OPERATE HEIGHT SELECT SWITCH AND CHECK CHANGE OF VEHICLE HEIGHT

- (a) Check the tires for the proper inflation pressure (See page SA-3).
- (b) Check the vehicle height (See page SA-5).
- (c) Start the engine.



- (d) Push the height select switch to change from "N" to the "HI" mode.
- (e) Check the time required for the height change and the changed amount of the vehicle height.

Standard value

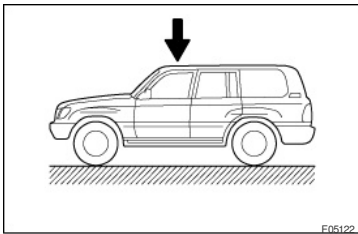
Up time	15 secs. less than
Down time	10 secs. less than

Amount of change in vehicle height

Front	30 - 45 mm (1.18 - 1.77 in.)
Rear	40 - 55 mm (1.57 - 2.17 in.)

NOTICE:

After vehicle height control has been completed, wait for approx. 5 secs. until the height is fixed securely, then check the changed amount of vehicle height.



- (f) Push the height select switch to change from "N" to the "LO" mode.
- (g) Check the time required for the height change and the changed amount of the vehicle height.

Standard value

Up time	15 secs. less than
Down time	10 secs. less than

Amount of change in vehicle height

Front	40 - 55 mm (1.57 - 2.17 in.)
Rear	30 - 45 mm (1.18 - 1.77 in.)

NOTICE:

After vehicle height control has been completed, wait for approx. 5 secs. until the height is fixed securely, then check the changed amount of vehicle height.

3. INSPECT VEHICLE SPEED SENSING FUNCTION

- (a) When vehicle height is in the "LO" position:
 - (1) Start the engine and push the height select switch to select the "LO" mode.
 - (2) Drive the vehicle at approx. 10 km/h (7 mph) or more and check with an indicator that the vehicle height changes from "LO" to the "N" position.
- (b) When vehicle height is in the "HI" position:
 - (1) Start the engine and push the height select switch to select the "HI" mode.
 - (2) Drive the vehicle at 30 km/h (19 mph) or more and check with an indicator that the vehicle height changes from "HI" to the "N" position.
- (c) When the height control switch is operated:
 - (1) Push the height control switch to turn off the height control.
 - (2) Drive the vehicle and check with the indicator that the height control is activated automatically.

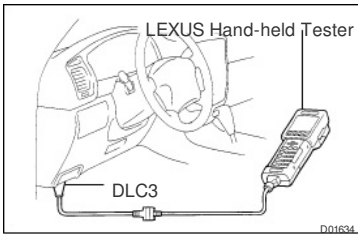
Standard value

Vehicle Height	Vehicle Speed
HI	More than 30 km/h (19 mph)
N	More than 80 km/h (50 mph)
L	More than 30 km/h (19 mph)

4. INSPECT PRESSURE VALUE OF FRONT SHOCK ABSORBER (IN CASE OF USING LEXUS HAND-HELD TESTER)

NOTICE:

Perform the operation with vehicle unloaded (with the fuel tank filled up).



- (a) Connect the LEXUS hand-held tester to DLC3 on the vehicle.
- (b) Start the engine and push the height select switch to adjust the vehicle height to the "N" position.
- (c) Push the height select switch to adjust the vehicle height from the "N" to "LO" then back to "N" position.

NOTICE:

Adjust it with no passengers are in.

- (d) Stop the engine.
- (e) Read the pressure value of the front shock absorber with LEXUS hand-held tester at this time.

Pressure:

$6.9 \pm 0.5 \text{ MPa}$ ($70 \pm 5 \text{ kgf/cm}^2$, $996 \pm 71 \text{ psi}$)

- (f) Start the engine and push the height select switch to adjust the vehicle height to the "N" position.
- (g) Check the fluid level (See page [SA-130](#)).

5. INSPECT PRESSURE VALUE OF FRONT SHOCK ABSORBER (IN CASE OF NOT USING LEXUS HAND-HELD TESTER)

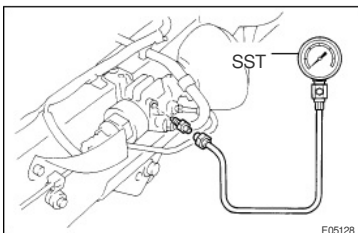
NOTICE:

- Perform the operation with the vehicle unloaded (with the fuel tank filled up).
- After and before using LSPV gauge (SST), make sure to clean the hose, gauge and adopter.

- (a) Start the engine and push the height select switch to adjust the vehicle height to the "LO" position.
- (b) With the ignition switch OFF, discharge the suspension fluid AHC from the bleeder plug of the either front right or left wheel dumping force control actuator.

CAUTION:

The fluid gushes out because of high pressure, so discharge the fluid in the same way as air bleeding.



- (c) Remove the bleeder plug of either right or left dumping force control actuator and install the LSPV gauge (SST). SST
- (d) Start the engine and push the height select switch to adjust the vehicle height to the "N" position.
- (e) Push the height select switch to adjust the vehicle height from the "N" to "LO" then back to "N" position.
- (f) Stop the engine.

- (g) Read the pressure value with LSPV gauge (SST) at this time.

SST

Pressure:

5.7 ± 0.3 MPa (58 ± 3 kgf/cm², 825 ± 43 psi)

- (h) Start the engine and push the height select switch to adjust the vehicle height to the "LO" position.
- (i) With the ignition switch OFF, discharge the suspension fluid AHC from the bleeder plug of LSPV gauge (SST).
SST

CAUTION:

The fluid gushes out because of high pressure, so discharge the fluid in the same way as air bleeding.

- (j) Remove the LSPV gauge (SST).
SST

- (k) Install the bleeder plug.

Torque: 8.3 N·m (84 kgf·cm, 73 in.-lbf)

- (l) Bleed the air (See page [SA-129](#)).

HINT:

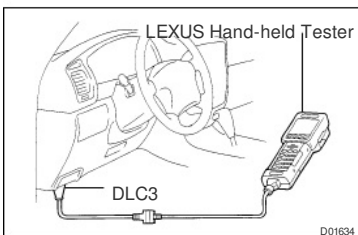
Bleed the bleeder plug with LSPV gauge (SST) installed to only once.

- (m) Check the fluid level (See page [SA-130](#)).

6. INSPECT PRESSURE VALUE OF REAR SHOCK ABSORBER (IN CASE OF USING LEXUS HAND-HELD TESTER)

NOTICE:

Perform the operation with the vehicle unloaded (with the fuel tank filled up).



- (a) Connect the LEXUS hand-held tester to DLC3 on the vehicle.
- (b) Disconnect the fluid temperature sensor connector.
- (c) Start the engine and push the height select switch to adjust the vehicle height from the "N" to "LO" then back to "N" position.

NOTICE:

Adjust it with no passengers are in.

- (d) Stop the engine.

- (e) Read the pressure value of the rear shock absorber with LEXUS hand-held tester at this time.

Pressure:

5.6 - 6.7 MPa (57 - 68 kgf/cm², 811 - 967 psi)

If the pressure is not within the specified range, its cause may be that a load object is either installed or removed.

HINT:

The cylinder pressure read by the LEXUS hand-held tester is estimated by the pump emitted pressure so the pressure is approx. 1.2 MPa (12 kgf/cm², 171 psi) higher than the pressure read by the LSPV gauge (SST).

- (f) Connect the fluid temperature sensor connector.

- (g) Check the DTC (See page [DI-336](#)).

If a DTC is displayed, clear the DTC (See page [DI-336](#)).

- (h) Start the engine and push the height select switch to adjust the vehicle height to the "LO" then to "N" position.
At this time, check that the 4 wheels are raised simultaneously.

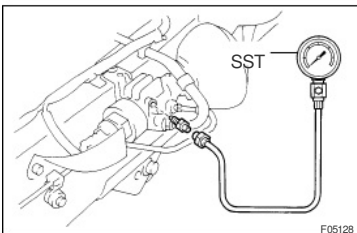
7. INSPECT PRESSURE VALUE OF REAR SHOCK ABSORBER (IN CASE OF NOT USING LEXUS HAND-HELD TESTER)

NOTICE:

- **Perform the operation with the vehicle unloaded (with the fuel tank filled up).**
 - **After and before using LSPV gauge (SST), make sure to clean the hose, gauge and adopter.**
- (a) Start the engine and push the height select switch to adjust the vehicle height to the "LO" position.
- (b) With the ignition switch OFF, discharge the suspension fluid AHC from the bleeder plug of the either rear right or left wheel dumping force control actuator.

CAUTION:

The fluid gushes out because of high pressure, so discharge the fluid in the same way as air bleeding.



- (c) Remove the bleeder plug of either right or left dumping force control actuator and install the LSPV gauge (SST).
SST
- (d) Start the engine and push the height select switch to adjust the vehicle height to the "N" position.
- (e) Push the height select switch to adjust the vehicle height from the "N" to "LO" then back to "N" position.
- (f) Stop the engine.

- (g) Read the pressure value with LSPV gauge (SST) at this time.

SST

Pressure:

4.4 - 5.5 MPa (45 - 56 kgf/cm², 640 - 797 psi)

If the pressure is not within the specified range, its cause may be that a load object is either installed or removed.

- (h) Start the engine and push the height select switch to adjust the vehicle height to the "LO" position.

- (i) With the ignition switch OFF, discharge the suspension fluid AHC from the bleeder plug of LSPV gauge (SST).
SST

CAUTION:

The fluid gushes out because of high pressure, so discharge the fluid in the same way as air bleeding.

- (j) Remove the LSPV gauge (SST).

SST

- (k) Install the bleeder plug.

Torque: 8.3 N·m (84 kgf·cm, 73 in.-lbf)

- (l) Bleed the air (See page [SA-129](#)).

HINT:

Bleed the bleeder plug with LSPV gauge (SST) installed to only once.

- (m) Check the fluid level (See page [SA-130](#)).

8. CHECK FLUID LEAKAGE

Check the connections of tube and parts for fluid leakage.

