TOYOTA SERVICE BULLETIN

Group: 09 No.: 13 Date: Mar, 13

Land Cruiser 200

Correction to Repair Manual RM19U1E

Please ensure these pages are distributed to all relevant staff for their information; and a copy made available for future reference, with the above repair manual.

Section	Title	Paragraph
BRAKE CONTROL / DYNAMIC CONTROL SYSTEMS	ANTI-LOCK BRAKE SYSTEM	C1256
		C1256/56
	VEHICLE STABILITY CONTROL SYSTEM	C1256
		C1256/56

The revised pages listed above are attached.
(The corrected parts are indicated by arrows.)

This Bulletin does not cause the Flat Rate Manual to be changed.

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DTC	C1256	Accumulator Low Pressure

DESCRIPTION

Refer to DTC C1254 (See page BC-161).

DTC Code	DTC Detection Condition	Trouble Area
C1256	The fluid pressure inside the accumulator is below the standard value. [Corrected]	• Brake booster with accumulator pump assembly • Master cylinder solenoid (Accumulator pressure sensor) • Hydraulic brake booster assembly

BC

INSPECTION PROCEDURE

NOTICE:

After replacing the master cylinder solenoid, perform zero point calibration (See page BC-30).

HINT:

When DTC C1251, C1253 or C1254 is output together with DTC C1256 inspect and repair the trouble area indicated by DTC C1251, C1253 or C1254 first.

1	RECONFIRM DTC

(a) Clear the DTCs (See page BC-55).
(b) Turn the ignition switch off.
[Corrected] (c) Depress the brake pedal 20 times or more.
(d) Turn the ignition switch to ON.
(e) Wait for 99 seconds.
(f) Check if the same DTC is output (See page BC-55).

Result

Result	Proceed to
DTC is output	A
DTC is not output	B

HINT:

Excessive brake pedal operation results in abnormal accumulator pressure consumption. This is normal.

B → **CHECK FOR INTERMITTENT PROBLEMS (See page)**

A

2	INSPECT HYDRAULIC BRAKE BOOSTER ASSEMBLY FUNCTION

(a) Inspect brake booster pump power supply system function.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Check that the brake fluid level is at the MAX level.
(4) Chock the 4 wheels and release the parking brake.

[Corrected]

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(5) Turn the ignition switch to ON and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
20 to 80 seconds
(6) Start the engine after the brake boost pump stops.
(7) Check that the ABS warning light and slip indicator light are not illuminated.
(8) Turn off the engine, and then turn the ignition switch to ON.
(9) Check that the brake boost pump operates and then stops when the brake pedal is depressed 4 or 5 times.
(10) Depress the brake pedal 4 or 5 times and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
2 to 11 seconds
[Corrected] (11) Check that the brake warning light illuminates and the buzzer sounds when the brake pedal is fully depressed continuously 15 to 20 times.
NOTICE:
Wait 120 seconds or more after turning the ignition switch to ON before performing this inspection.

(b) Check brake booster operation.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Depress the brake pedal, start the engine, and check the change in the brake pedal height.
OK:
The brake pedal moves slightly inward.

(c) Inspect brake master cylinder fluid pressure change (for LHD: See page See *1, for RHD: See page See *2).

NG	Go to step 5

OK

See *1: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - ON-VEHICLE INSPECTION (2012/01-)
See *2: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - ON-VEHICLE INSPECTION (2012/01-)

3	READ VALUE USING GTS (ACCUMULATOR SENSOR)

(a) Turn the ignition switch off.
(b) Connect the GTS to the DLC3.
(c) Turn the ignition switch to ON.
(d) Turn the GTS on.
(e) Enter the following menus: Chassis / ABS/VSC/TRC / Data List.

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ABS/VSC/TRC

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Accumulator Sensor	Accumulator pressure sensor reading/ Min.: 0.00 V, Max.: 5.00 V	3.58 to 5 V	If the value is constant regardless of the pump operation, an accumulator pressure sensor malfunction is suspected.

(f) Check that the accumulator output value is normal.
OK:
Accumulator pressure sensor value is normal.

BC

Result

Result	Proceed to
OK	A
NG (for LHD)	B
NG (for RHD)	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

A

4 RECONFIRM DTC

(a) Clear the DTCs (See page BC-55).
(b) Turn the ignition switch off.
(c) Check if the same DTC is output (See page BC-55).

Result

Result	Proceed to
DTC is not output	A
DTC is output (for LHD)	B
DTC is output (for RHD)	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

A

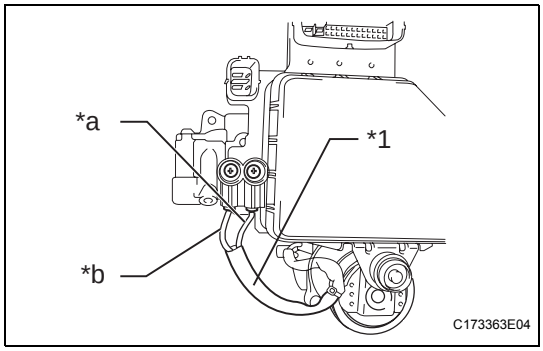
CHECK FOR INTERMITTENT PROBLEMS (See page)

5 INSPECT BRAKE BOOSTER PUMP ASSEMBLY

(a) Remove the hydraulic brake booster assembly (for LHD: See page See *3, for RHD: See page See *4).
(b) Using a screwdriver, remove the 2 screws and pull out the wire harness from the master cylinder solenoid.

[Added]

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(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
Red wire terminal - Black wire terminal	Always	Below 2 Ω

Text in Illustration

*1	Pump motor wire harness
*a	Red wire
*b	Black wire

(d) Install the pump motor wire harness to the master cylinder solenoid with the 2 screws.

Torque: 2.9 N*m (30 kgf*cm, 26 in.*lbf)

Result

Result	Proceed to
OK (for LHD)	A
OK (for RHD)	B
NG (for LHD)	C
NG (for RHD)	D

B → **REPLACE HYDRAULIC BRAKE BOOSTER ASSEMBLY (See *4)**

C → **REPLACE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY (See page)** (See *5)

D → **REPLACE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY (See page)** (See *6)

A

REPLACE HYDRAULIC BRAKE BOOSTER ASSEMBLY (See *3)

[Added]

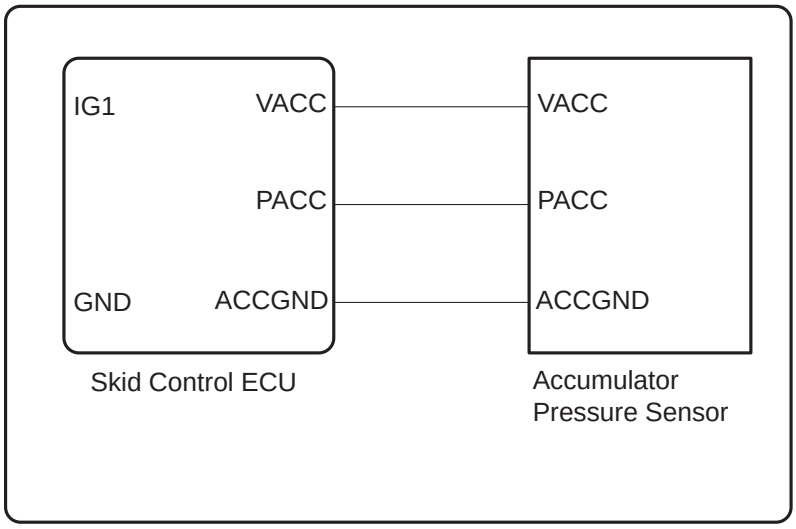
See *3: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - REMOVAL (2012/01-)
See *4: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - REMOVAL (2012/01-)
See *5: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - DISASSEMBLY (2011/09-)
See *6: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - DISASSEMBLY (2011/09-)

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DTC	C1256/56	Accumulator Low Pressure

DESCRIPTION

The accumulator pressure sensor is connected to the skid control ECU in the master cylinder solenoid.



VACC: Accumulator Pressure Sensor Power Supply Output

PACC: Accumulator Pressure Sensor Signal Input

ACCGND: Accumulator Pressure Sensor Ground

Y

C173281E01

DTC Code	DTC Detection Condition	Trouble Area
C1256/56	The fluid pressure inside the accumulator is below the standard value. [Corrected]	• Brake booster with accumulator pump assembly • Master cylinder solenoid (Accumulator pressure sensor) • Hydraulic brake booster assembly

INSPECTION PROCEDURE

NOTICE:

When replacing the master cylinder solenoid, perform zero point calibration (See page BC-28).

HINT:

When C1251/51, C1253/53, or C1254/54 is output together with C1256/56, inspect and repair the trouble area indicated by C1251/51, C1253/53, or C1254/54 first.

1	RECONFIRM DTC

(a) Clear the DTC (See page BC-53).
(b) Turn the ignition switch off.
[Corrected] (c) Depress the brake pedal 20 times or more.
(d) Turn the ignition switch to ON.
(e) Wait for 99 seconds.

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(f) Check if the same DTC is output (See page BC-53).
Result

Result	Proceed to
DTC is output	A
DTC is not output	B

HINT:
Excessive brake pedal operation results in abnormal accumulator pressure consumption. This is normal.

B → **USE SIMULATION METHOD TO CHECK (See page)**

BC

A

2 INSPECT HYDRAULIC BRAKE BOOSTER ASSEMBLY FUNCTION

(a) Inspect brake booster pump power supply system function.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Check that the brake fluid level is at the MAX level.
(4) Chock the 4 wheels and release the parking brake.
(5) Turn the ignition switch to ON and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
20 to 80 seconds
(6) Start the engine after the brake boost pump stops.
(7) Check that the ABS warning light and slip indicator light are not illuminated.
(8) Turn off the engine, and then turn the ignition switch to ON.
(9) Check that the brake boost pump operates and then stops when the brake pedal is depressed 4 or 5 times.
(10) Depress the brake pedal 4 or 5 times and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
2 to 11 seconds
(11) Check that the brake warning light illuminates and the buzzer sounds when the brake pedal is fully depressed continuously 15 to 20 times.
NOTICE:
Wait 120 seconds or more after turning the ignition switch to ON before performing this inspection.

[Corrected]

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BC

[Corrected]

(b) Check brake booster operation.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Depress the brake pedal, start the engine, and check the change in the brake pedal height.
OK:
The brake pedal moves slightly inward.

(c) Inspect brake master cylinder fluid pressure change (for LHD: See page See *7, for RHD: See page See *8).

NG → **Go to step 5**

OK

See *7: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - ON-VEHICLE INSPECTION (2012/01-)
See *8: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - ON-VEHICLE INSPECTION (2012/01-)

3 READ VALUE USING INTELLIGENT TESTER (ACCUMULATOR SENSOR)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to ON and turn the intelligent tester on.
(c) Enter the following menus: Chassis / ABS/VSC/TRC / Data List.

ABS/VSC/TRC

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Accumulator Sensor	Accumulator pressure sensor reading / min.: 0.00 V, max.: 5.00 V	3.58 to 5 V	If the value is constant regardless of the pump operation, an accumulator pressure sensor malfunction is suspected.

(d) Check that the accumulator output value is normal.
OK:
Accumulator pressure sensor value is normal.
Result

Result		Proceed to
OK		A
NG	LHD	B
	RHD	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

A

4 RECONFIRM DTC

(a) Clear the DTC (See page BC-53).

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(b) Check if the same DTC is output (See page BC-53).

Result

Result		Proceed to
DTC is not output		A
DTC is output	LHD	B
	RHD	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

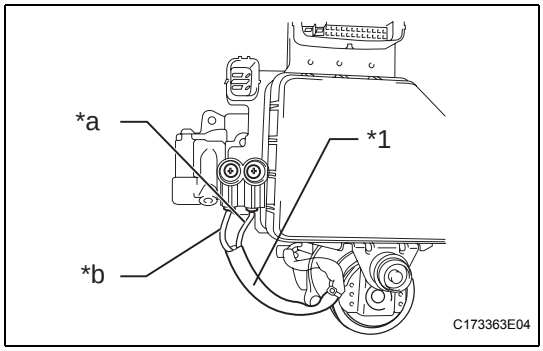
C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

BC

A

USE SIMULATION METHOD TO CHECK (See page)

5 INSPECT BRAKE BOOSTER PUMP ASSEMBLY



(a) Remove the hydraulic brake booster assembly (for LHD: See page See *9, for RHD: See page See *10).

(b) Using a screwdriver, remove the 2 screws and pull out the wire harness from the master cylinder solenoid.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
Red wire terminal - Black wire terminal	Always	Below 2 Ω

Text in Illustration

*1	Pump motor wire harness
*a	Red wire
*b	Black wire

(d) Install the pump motor wire harness to the master cylinder solenoid with the 2 screws.

Torque: 2.9 N*m (30 kgf*cm, 26 in.*lbf)

Result

Result		Proceed to
OK	LHD	A
	RHD	B
NG	LHD	C
	RHD	D

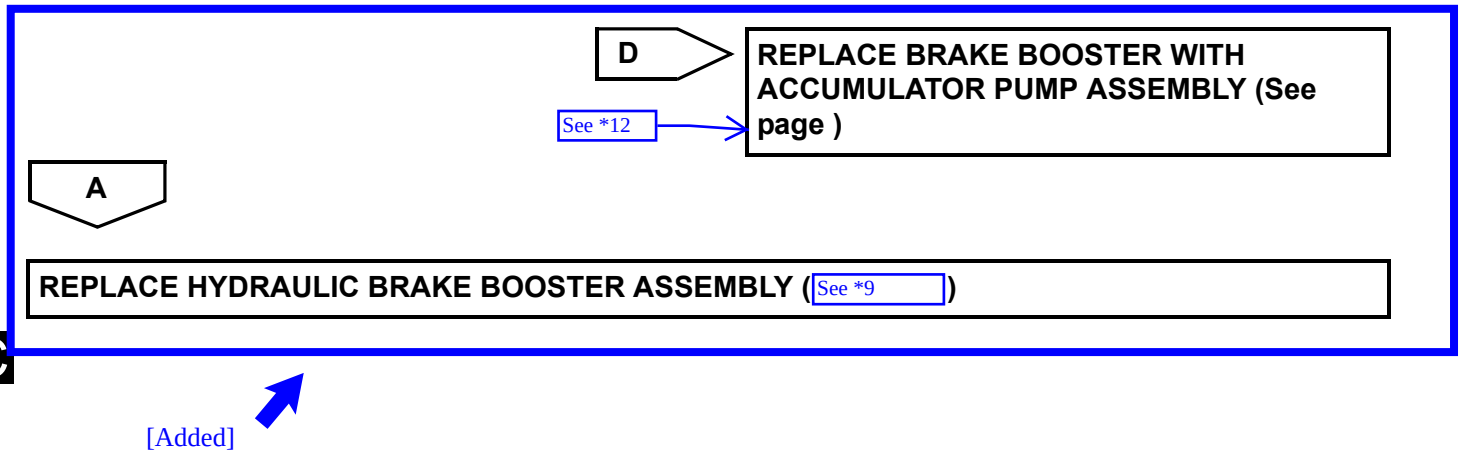
B → **REPLACE HYDRAULIC BRAKE BOOSTER ASSEMBLY (See *10)**

C → **REPLACE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY (See page)**

See *11

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[Added]



BC

[Added]

See *9: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - REMOVAL (2012/01-)
See *10: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - REMOVAL (2012/01-)
See *11: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - DISASSEMBLY (2011/09-)
See *12: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - DISASSEMBLY (2011/09-)

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DTC	C1256	Accumulator Low Pressure

DESCRIPTION

Refer to DTC C1254 (See page BC-495).

DTC Code	DTC Detection Condition	Trouble Area
C1256	The fluid pressure inside the accumulator is below the standard value. [Corrected]	• Brake booster with accumulator pump assembly • Master cylinder solenoid (Accumulator pressure sensor) • Hydraulic brake booster assembly

BC

INSPECTION PROCEDURE

NOTICE:

After replacing the master cylinder solenoid, perform zero point calibration and store the system information (See page BC-337).

HINT:

When DTC C1251, C1253 or C1254 is output together with DTC C1256 inspect and repair the trouble area indicated by DTC C1251, C1253 or C1254 first.

1	RECONFIRM DTC

(a) Clear the DTCs (See page BC-369).
(b) Turn the ignition switch off.
[Corrected] (c) Depress the brake pedal 20 times or more.
(d) Turn the ignition switch to ON.
(e) Wait for 99 seconds.
(f) Check if the same DTC is output (See page BC-369).

Result

Result	Proceed to
DTC is output	A
DTC is not output	B

HINT:

Excessive brake pedal operation results in abnormal accumulator pressure consumption. This is normal.

B → **CHECK FOR INTERMITTENT PROBLEMS (See page)**

A

2	INSPECT HYDRAULIC BRAKE BOOSTER ASSEMBLY FUNCTION

(a) Inspect brake booster pump power supply system function.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Check that the brake fluid level is at the MAX level.
(4) Chock the 4 wheels and release the parking brake.

[Corrected]

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(5) Turn the ignition switch to ON and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
20 to 80 seconds
(6) Start the engine after the brake boost pump stops.
(7) Check that the ABS warning light and slip indicator light are not illuminated.
(8) Turn off the engine, and then turn the ignition switch to ON.
(9) Check that the brake boost pump operates and then stops when the brake pedal is depressed 4 or 5 times.
(10) Depress the brake pedal 4 or 5 times and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
2 to 11 seconds
[Corrected] (11) Check that the brake warning light illuminates and the buzzer sounds when the brake pedal is fully depressed continuously 15 to 20 times.
NOTICE:
Wait 120 seconds or more after turning the ignition switch to ON before performing this inspection.

(b) Check brake booster operation.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Depress the brake pedal, start the engine, and check the change in the brake pedal height.
OK:
The brake pedal moves slightly inward.

(c) Inspect brake master cylinder fluid pressure change (for LHD: See page See *1, for RHD: See page See *2).

NG	Go to step 5

OK

See *1: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - ON-VEHICLE INSPECTION (2012/01-)
See *2: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - ON-VEHICLE INSPECTION (2012/01-)

3	READ VALUE USING GTS (ACCUMULATOR SENSOR)

(a) Turn the ignition switch off.
(b) Connect the GTS to the DLC3.
(c) Turn the ignition switch to ON.
(d) Turn the GTS on.
(e) Enter the following menus: Chassis / ABS/VSC/TRC / Data List.

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ABS/VSC/TRC

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Accumulator Sensor	Accumulator pressure sensor reading/ Min.: 0.00 V, Max.: 5.00 V	3.58 to 5 V	If the value is constant regardless of the pump operation, an accumulator pressure sensor malfunction is suspected.

(f) Check that the accumulator output value is normal.
OK:
Accumulator pressure sensor value is normal.

BC

Result

Result	Proceed to
OK	A
NG (for LHD)	B
NG (for RHD)	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

A

4 RECONFIRM DTC

(a) Clear the DTCs (See page BC-369).
(b) Turn the ignition switch off.
(c) Check if the same DTC is output (See page BC-369).

Result

Result	Proceed to
DTC is not output	A
DTC is output (for LHD)	B
DTC is output (for RHD)	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

A

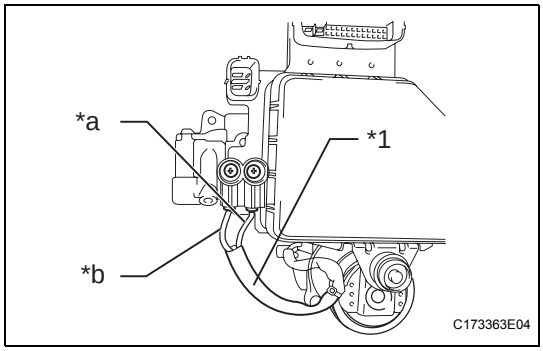
CHECK FOR INTERMITTENT PROBLEMS (See page)

5 INSPECT BRAKE BOOSTER PUMP ASSEMBLY

(a) Remove the hydraulic brake booster assembly (for LHD: See page See *3, for RHD: See page See *4).
(b) Using a screwdriver, remove the 2 screws and pull out the wire harness from the master cylinder solenoid.

[Added]

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(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
Red wire terminal - Black wire terminal	Always	Below 2 Ω

Text in Illustration

*1	Pump motor wire harness
*a	Red wire
*b	Black wire

(d) Install the pump motor wire harness to the master cylinder solenoid with the 2 screws.

Torque: 2.9 N*m (30 kgf*cm, 26 in.*lbf)

Result

Result	Proceed to
OK (for LHD)	A
OK (for RHD)	B
NG (for LHD)	C
NG (for RHD)	D

B → **REPLACE HYDRAULIC BRAKE BOOSTER ASSEMBLY (See *4)**

C → **REPLACE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY (See page)** (See *5)

D → **REPLACE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY (See page)** (See *6)

A

REPLACE HYDRAULIC BRAKE BOOSTER ASSEMBLY (See *3)

[Added]

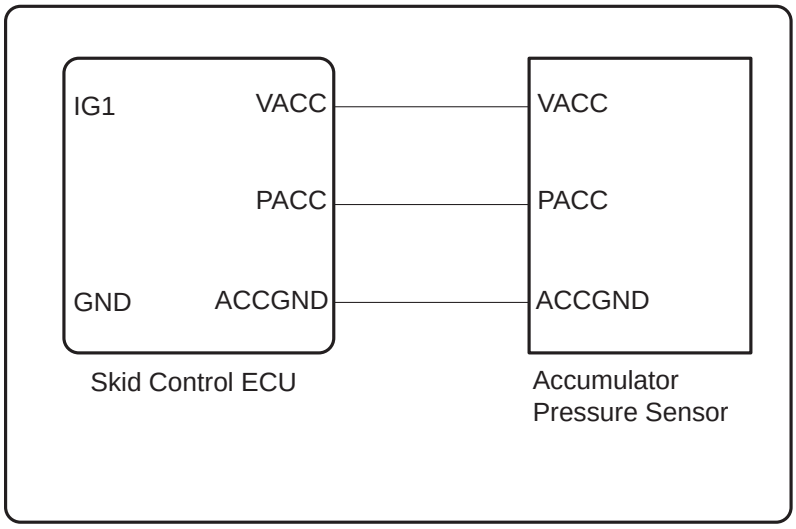
See *3: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - REMOVAL (2012/01-)
See *4: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - REMOVAL (2012/01-)
See *5: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - DISASSEMBLY (2011/09-)
See *6: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - DISASSEMBLY (2011/09-)

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DTC	C1256/56	Accumulator Low Pressure

DESCRIPTION

The accumulator pressure sensor is connected to the skid control ECU in the master cylinder solenoid.



VACC: Accumulator Pressure Sensor Power Supply Output

PACC: Accumulator Pressure Sensor Signal Input

ACCGND: Accumulator Pressure Sensor Ground

Y

C173281E01

DTC Code	DTC Detection Condition	Trouble Area
C1256/56	The fluid pressure inside the accumulator is below the standard value. [Corrected]	• Brake booster with accumulator pump assembly • Master cylinder solenoid (Accumulator pressure sensor) • Hydraulic brake booster assembly

INSPECTION PROCEDURE

NOTICE:

When replacing the master cylinder solenoid, perform zero point calibration (See page BC-334).

HINT:

When C1251/51, C1253/53, or C1254/54 is output together with C1256/56, inspect and repair the trouble area indicated by C1251/51, C1253/53, or C1254/54 first.

1	RECONFIRM DTC

(a) Clear the DTC (See page BC-367).

(b) Turn the ignition switch off.

[Corrected] (c) Depress the brake pedal 20 times or more.

(d) Turn the ignition switch to ON.

(e) Wait for 99 seconds.

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(f) Check if the same DTC is output (See page BC-367).
Result

Result	Proceed to
DTC is output	A
DTC is not output	B

HINT:
Excessive brake pedal operation results in abnormal accumulator pressure consumption. This is normal.

B → **USE SIMULATION METHOD TO CHECK (See page)**

BC

A

2 INSPECT HYDRAULIC BRAKE BOOSTER ASSEMBLY FUNCTION

(a) Inspect brake booster pump power supply system function.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Check that the brake fluid level is at the MAX level.
(4) Chock the 4 wheels and release the parking brake.
(5) Turn the ignition switch to ON and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
20 to 80 seconds
(6) Start the engine after the brake boost pump stops.
(7) Check that the ABS warning light and slip indicator light are not illuminated.
(8) Turn off the engine, and then turn the ignition switch to ON.
(9) Check that the brake boost pump operates and then stops when the brake pedal is depressed 4 or 5 times.
(10) Depress the brake pedal 4 or 5 times and measure the brake booster pump operating time (the time from when the brake booster pump starts operating until it stops).
OK:
2 to 11 seconds
(11) Check that the brake warning light illuminates and the buzzer sounds when the brake pedal is fully depressed continuously 15 to 20 times.
NOTICE:
Wait 120 seconds or more after turning the ignition switch to ON before performing this inspection.

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[Corrected]

(b) Check brake booster operation.
(1) Turn the ignition switch off.
(2) Depress the brake pedal 20 times or more to release the pressure in the accumulator.
HINT:
When the pressure is released, the brake pedal stroke becomes longer.
(3) Depress the brake pedal, start the engine, and check the change in the brake pedal height.
OK:
The brake pedal moves slightly inward.
(c) Inspect brake master cylinder fluid pressure change (for LHD: See page See *7, for RHD: See page See *8).

NG → **Go to step 5**

OK

See *7: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - ON-VEHICLE INSPECTION (2012/01-)
See *8: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - ON-VEHICLE INSPECTION (2012/01-)

3 READ VALUE USING INTELLIGENT TESTER (ACCUMULATOR SENSOR)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to ON and turn the intelligent tester on.
(c) Enter the following menus: Chassis / ABS/VSC/TRC / Data List.

ABS/VSC/TRC

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Accumulator Sensor	Accumulator pressure sensor reading / min.: 0.00 V, max.: 5.00 V	3.58 to 5 V	If the value is constant regardless of the pump operation, an accumulator pressure sensor malfunction is suspected.

(d) Check that the accumulator output value is normal.
OK:
Accumulator pressure sensor value is normal.

Result		Proceed to
OK		A
NG	for LHD	B
	for RHD	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

A

4 RECONFIRM DTC

(a) Clear the DTC (See page BC-367).

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(b) Check if the same DTC is output (See page BC-367).

Result

Result		Proceed to
DTC is not output		A
DTC is output	for LHD	B
	for RHD	C

B → **REPLACE MASTER CYLINDER SOLENOID (See page)**

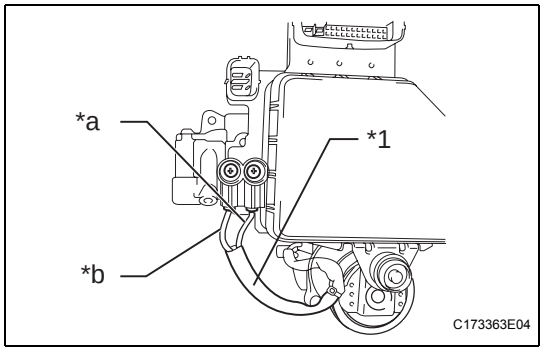
C → **REPLACE MASTER CYLINDER SOLENOID (See page)**

BC

A

USE SIMULATION METHOD TO CHECK (See page)

5 INSPECT BRAKE BOOSTER PUMP ASSEMBLY



(a) Remove the hydraulic brake booster assembly (for LHD: See page See *9, for RHD: See page See *10).

(b) Using a screwdriver, remove the 2 screws and pull out the wire harness from the master cylinder solenoid.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
Red wire terminal - Black wire terminal	Always	Below 2 Ω

Text in Illustration

*1	Pump motor wire harness
*a	Red wire
*b	Black wire

(d) Install the pump motor wire harness to the master cylinder solenoid with the 2 screws.

Torque: 2.9 N*m (30 kgf*cm, 26 in.*lbf)

Result

Result		Proceed to
OK	for LHD	A
	for RHD	B
NG	for LHD	C
	for RHD	D

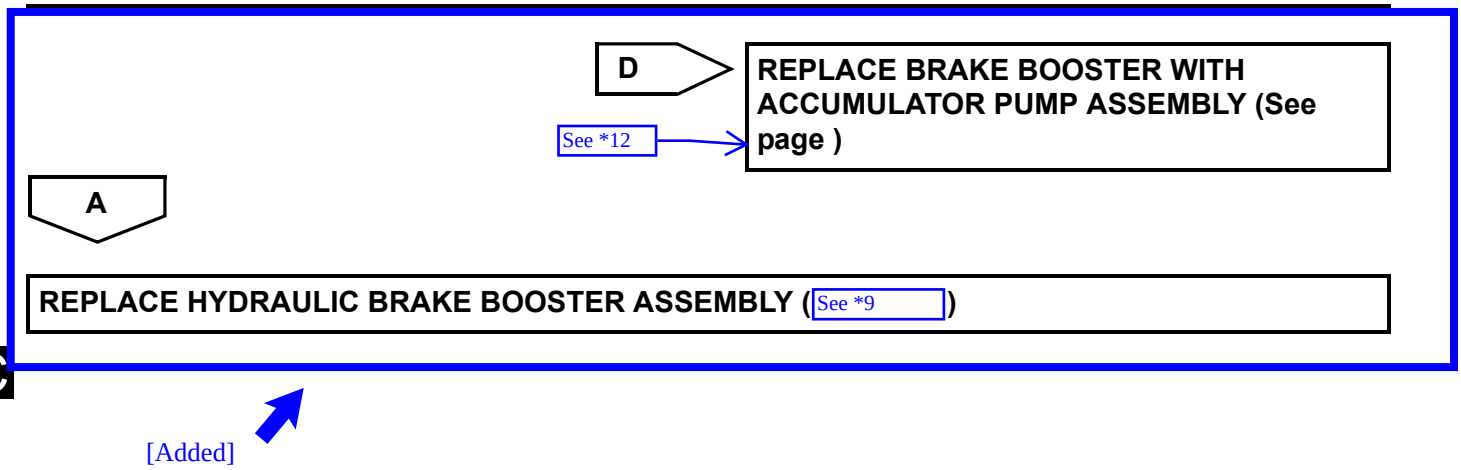
B → **REPLACE HYDRAULIC BRAKE BOOSTER ASSEMBLY (See *10)**

C → **REPLACE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY (See page)**

See *11

[Added]

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[Added]

See *9: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - REMOVAL (2012/01-)
See *10: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - REMOVAL (2012/01-)
See *11: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for LHD) - DISASSEMBLY (2011/09-)
See *12: BRAKE SYSTEM (OTHER) - HYDRAULIC BRAKE BOOSTER(for RHD) - DISASSEMBLY (2011/09-)

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