SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-13EXML35-501	DATE : 2013-07-17
SUBJECT : BRAKE BOOSTER OPERATION CHECK		<Destination/Model> (AS PER ATTACHED) <M/Y> 13-14
GROUP : BASIC BRAKE(Gr.35A)		MIRAGE/SPACE STAR(A03A)

1. Description :

Please refer to the attached document for the correction of the error in writing existing in the applicable service manual.

2. Applicable service manual :

Please refer to the attached document

3. About the details :

Please refer to the attached document (Attached sheet 3(1/3-3/3))

＜EU＞

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2013 MIRAGE/SPACE STAR Workshop Manual CD-ROM	CA0E13E1-CD CA0F13E1-CD CA0G13E1-CD CA0S13E1-CD CA0I13E1-CD	SPECIAL TOOLS (M351-00-060-85400-01)	Attached sheet 3 (1/3)
		BRAKE BOOSTER OPERATING CHECK (M351-00-101-35300-01)	Attached sheet 3 (2/3, 3/3)

＜Thailand-DOM＞

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2013 MIRAGE Workshop Manual CD-ROM	DRAFT	SPECIAL TOOLS (M351-00-060-85400-01)	Attached sheet 3 (1/3)
		BRAKE BOOSTER OPERATING CHECK (M351-00-101-32000-01)	Attached sheet 3 (2/3, 3/3)

＜G.EXP/GCC/ASEAN＞

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2013 MIRAGE/SPACE STAR Workshop Manual CD-ROM	PWFE1201R	SPECIAL TOOLS (M351-00-060-85400-01)	Attached sheet 3 (1/3)
		BRAKE BOOSTER OPERATING CHECK (M351-00-101-32000-01)	Attached sheet 3 (2/3, 3/3)

＜Philippines＞

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2013 MIRAGE Workshop Manual CD-ROM	PWFE1201RP	BRAKE BOOSTER OPERATING CHECK (M351-00-101-36400-01)	Attached sheet 3 (2/3, 3/3)

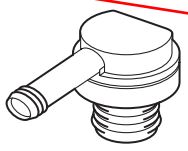
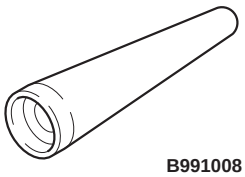
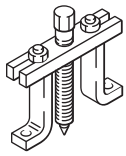
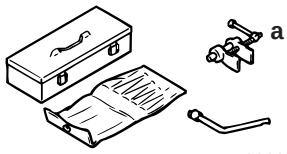
＜MMAL/NZ＞

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2014 MIRAGE Workshop Manual CD-ROM	AU900305	BRAKE BOOSTER OPERATING CHECK (M351-00-101-41600-01)	Attached sheet 3 (2/3, 3/3)

＜MMNA＞

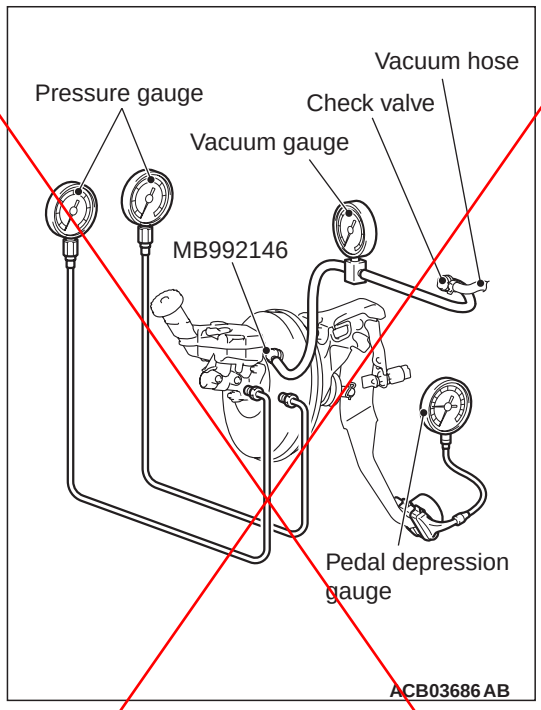
Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2014 MIRAGE Service Manual CD-ROM	MSCD-016B-2014	SPECIAL TOOLS (M351-00-060-88700-01)	Attached sheet 3 (1/3)
		BRAKE BOOSTER OPERATING CHECK (M351-00-101-40500-01)	Attached sheet 3 (2/3, 3/3)

SPECIAL TOOLS

Tool	Number	Name	Use <Deleted>
 MB992146	MB992146	Booster test adapter	Inspection using a simplified tester
 B991008	MB991008	piston cup Installer	Installation of the drum brake wheel cylinder piston cup
 B990241	MB991292	Axle shaft puller	Rear wheel hub assembly removal
 MB990964	MB990964 a: MB990520	Brake tool set a: Disc brake piston expander	Pushing-in of the disc brake piston

INSPECTION USING SIMPLIFIED TESTER

1. Before starting this inspection, remove the brake booster check valve from the vehicle and check its operation (Refer to P.35A-16<LH>, P.35A-18<RH>).



2. After checking, install the check valve to the vacuum hose and connect it to the vacuum gauge. Install special tool booster test adapter (MB992146) to the brake booster and connect it to the vacuum gauge. Connect the pressure gauge and pedal depression gauge as shown in the figure. Bleed the pressure gauge and then perform the following tests:

(1) Airtightness test with no load <Incorrect>

Start the engine, and stop it when the vacuum gauge indicator has reached approximately –67 kPa. The result is judged as "Good" when the drop of the vacuum approximately 15 seconds after the engine was stopped is within –3.3 kPa.

<Correct> Insert the attached sheet 3 (3/3)

(2) Airtightness test with load

Start the engine and depress the brake pedal with 200 N. Stop the engine when the vacuum gauge indicator reached approximately –67 kPa. The result is judged as "Good" when the drop of the vacuum approximately 15 seconds after the engine was stopped is within –3.3 kPa.

When one or more of the above check results are judged as "No Good," the vacuum hose or brake booster is suspected faulty.

(3) Brake booster characteristics test

Perform this test after the above (1) and (2) were performed.

a. Non-servo effect test

With the engine stopped, make sure that the vacuum gauge reading is 0 kPa. Depress the brake pedal with 100 N and 300 N, and measure the fluid pressure generated.

Standard value:

Item	**Pedal depression force**	
	100 N	**300 N**
Generated fluid pressure kPa	0 – 440	1,770 – 2,370

b. Servo effect test

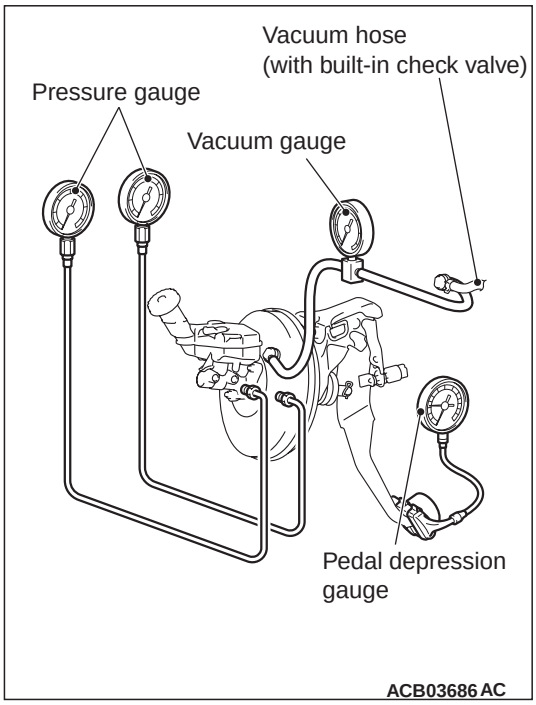
Start the engine. Depress the brake pedal with 100 N and 300 N when the vacuum gauge indicator reached approximately –67 kPa, and measure the fluid pressure generated.

Standard value:

Item	**Pedal depression force**	
	100 N	**300 N**
Generated fluid pressure kPa	3,730 – 4,930	7,690 – 8,880

<Correct>

2. Connect a vacuum gauge between the vacuum hose (incorporating the check valve) and the brake booster.



3. Connect a pressure gauge and a pedal depression force gauge as shown. Air-bleed the pressure gauge and then follow the procedure below: