

Test instruction

i Prior to testing read carefully the safety instructions.

Safety information

! WARNING

Only qualified skilled personnel with specific system knowledge are authorized to perform the device testing at the test bench.

Never start testing until you have read and understood all the information required for the test.

Test the device on a calibrated test bench only.

In case of doubt, use test values specified by the vehicle manufacturer.

While testing the device, always adhere to the contents of this test instruction.

! CAUTION

Comply with the company and national accident prevention/health & safety regulations

Unlock screws, hoses and equipment parts only when the respective lines of the test bench are vented.

Test instruction for device 461 317 ... 0

000	008	036	046	054
002	009	037	047	055
003	011	038	048	056
004	012	039	049	
005	020	041	050	
006	024	044	051	
007	025	045	053	


Symbols and Signal Words

! WARNING

Possible hazardous situation. To disregard this may lead to serious or fatal personal injuries.

! CAUTION

Possible hazardous situation. To disregard this may lead to personal injuries.

- Handling
- List
- i** Instructions, explanations, information, tips
-  Gauge indication

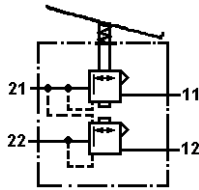
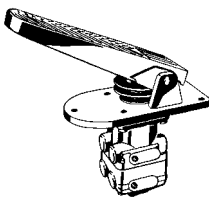


Fig. 1 + 2 Brake valve 461 317 ... 0, functional symbol

i Necessary equipment/tools

- Test bench 435 197 000 0 or an adequate testing equipment
- Adequate equipment:
 - for clamping the brake valve,
 - for actuating the pedal with ° graduation.
- Soapsuds and brush

i Additional documents:

(see www.wabco-auto.com => INFORM)

- Test Values 2/2:
to be found by entry of the product number in INFORM
- Test Bench - Operating Instructions:
435 197 000 0
- General Repair and Test Hints:
815 010 109 3 en
815 020 109 3 de
815 030 109 3 fr
815 040 109 3 es
815 050 109 3 it

Check sequence

i Perform test procedure as per specified sequence

Find test values P1 to P9 (pressure in bar) and G1 to G5 (travel in °) in document "Test values 2/2".

Reservoir pressure is 10 bar max.

Before starting each test, ensure that the stop-cocks are in their correct normal position (see table 1).

Cock	A	B	C	D	F	L	V	2	3	4	6	7	11	12	21	22
open	x												x		x	
closed		x	x	x	x	x	x	x	x	x	x	x		x		x

Table 1: Normal position of cut-off cocks on the test bench

1. External inspection

! CAUTION

Make sure that the retaining rings are mounted correctly. The brake valve could otherwise explode while testing.

- Inspect the device for external visible damage.
- Visually inspect all the device's ports for blockages.

i The pedal must be without clearance.

2. Preparations

- Fix device in clamping equipment.
- Connect device to test bench ports (see fig. 3).

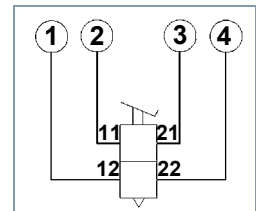


Fig. 3 Test bench ports

! CAUTION

Ensure that the plug-in connections on the test bench and the device are securely inserted.

- Lock unused ports.
- Adjust pedal twice to check that it is without clearance.

3. Check for leaks

! WARNING

Never install an untightened brake valve on the vehicle.

3.1 Exhaust

i From a non-actuated device no air must exceed from the exhaust.

- Vent ports 11 and 12 with P1.
- Gauges 1 and 2 must indicate P1.
- Fully operate device several times.
- Wait until excess pressure has decreased.

- Check exhaust of the device for tightness.

i No leakages admissible.

3.2 Complete device

- Fix degree scale to device.

i 0-position of the pedal means 0-position of the graduation at the same time.

- Adjust pedal to G1 (stop within device).

↻ Gauges 3 and 4 must indicate P2.

- Cover complete device with soap and check tightness.

i No leakages admissible.
With soap bubbling the device is not tight.

- Re-adjust pedal to 0°.

↻ Gauges 3 and 4 must indicate 0 bar.

4. Obtain maximum pressure

- Adjust pedal to G1 (stop within device).

i Pressure must increase immediately.

↻ Gauges 3 and 4 must indicate P2.

- Re-adjust pedal to 0°.

↻ Gauges 3 and 4 must indicate 0 bar.

5. Graduability

i In all pressure scopes incremental steps of max. 0.2 bar must be possible.

6. Check pressure increase

- Operate pedal several times.

↻ Gauges 3 and 4 must indicate immediate pressure increase resp. decrease.

i In accordance with the type of device, one circuit must have predominance.

6.1 Check sudden pressure increase

- Adjust pedal to G2.

↻ Gauge 3 must indicate P3.
Gauge 4 must indicate P4.

6.2 Distance until venting of P5/P6

- Adjust pedal to G3.

i Pressure must increase immediately.

↻ Gauge 3 must indicate P5.
Gauge 4 must indicate P6.

6.3 Distance until venting of P7/P8

- Adjust pedal to G4.

i Pressure must increase immediately.

↻ Gauge 3 must indicate P7.
Gauge 4 must indicate P8.

6.4 Distance until venting of P2

- Adjust pedal to G1.

i Pressure must increase immediately.

↻ Gauges 3 and 4 must indicate P2.

- Re-adjust pedal to 0°.

↻ Gauges 3 and 4 must indicate 0 bar.

7. Failure of circuit 1

- Vent port 11 to 0 bar.

↻ Gauge 1 must indicate 0 bar.
Gauge 2 must indicate P1.

- Adjust pedal to G5.

↻ Gauge 3 must indicate 0 bar.
Gauge 4 must indicate P9.

- Re-adjust pedal to 0°.

↻ Gauges 3 and 4 must indicate 0 bar.

8. Completion of test

- Vent port 12 to 0 bar.

↻ Gauges 1 and 2 must indicate 0 bar.



CAUTION

Do not disconnect the hose connections until you have vented the device to 0 bar.

- Remove device from fixture.
- Clean device.