

**SIB 34 01 21****Soft Rear Brake Pressure Point**

2021-05-19

This Service Information Bulletin replaces SI 34 01 21 **dated January 2021**.

## **MODEL**

Model	Model Description	Production Date Range
K50	R 1200/1250 GS	Sept 1, 2012 – Aug 31, 2020
K51	R 1200/1250 GSA	Sept 1, 2012 – Aug 31, 2020

## **SITUATION**

During operation of the rear wheel foot brake lever, the rider feels a soft pressure point or perceptibly longer lever travel.

Due to the ABS pump and model-specific conditions, small amounts of air may enter the control circuit of the rear brake system successively. With continual usage, this air can be perceived by the rider as a “soft pressure point” or “substantial lever travel” when only using the rear brake lever.

When using the front brake lever on bikes with partial integral brakes, the pressure for the rear brake is generated by the ABS pump which bypasses the use of the rear control circuit (rear brake lever). Thus:

- If there is air in the rear control circuit (between the rear lever brake master cylinder and the ABS module), it would not affect the rear braking during partial integral braking.
- If there is air in the rear wheel circuit (ABS pump to the rear caliper), the ABS pump can compress this small amount of air to where there is no perceptible change for the rider.

Therefore, the soft brake pressure is only perceptible when using the rear brake lever.

## **PROCEDURE**

Bleed the rear brake circuit manually in accordance with the repair instructions, then work through the following service procedure:

- “Brake system: soft pressure point”, calculate test plan
- Perform the service procedure “Check brake pressure point”

Note: See attachment for detailed screenshots of the steps above.

Continue to bleed the rear brake circuit thoroughly, including bleeding of the ABS module using ISTA. Perform this routine 2 times.

After the system is completely bled and no more air present, apply pressure to the rear brake circuit by attaching weight of 22-33 lbs. (10 to 15 kg) to the rear brake lever for at least 12 hours.

Flush the brake system again (at least 2x the contents of the reservoir).

As a final step, retrofit the vehicle with “Harder brake pressure point on rear wheel brake” using ISTA version 4.26.36 or greater.

## **WARRANTY INFORMATION**

Covered under the terms of the BMW New Vehicle Limited Warranty for Motorcycles and Scooters.

**Defect code**

34 00 90 72 00	Rear Brake System Incorrectly Bled
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**Labor Operation**

12 00 014	Carry out vehicle test with diagnostics	Refer to AIR for FRU
+34 00 549	Change brake fluid at rear	Refer to AIR for FRU
+34 99 000	Working time without brake specification	Tech Punch time
+61 00 502	Check Software	Refer to AIR for FRU
+61 00 510	Program vehicle control units (with Check software)	Refer to AIR for FRU

FRUs includes all repair procedures to complete the task with allowance for necessary ancillary tasks (e.g., visual inspection, lubrication, cleaning parts etc.) and administrative tasks.

**QUESTIONS REGARDING THIS BULLETIN**

Technical inquires	Contact the BMW Technical Support Group via TSARA
Warranty inquires	Submit an IDS ticket to the Warranty Department
Parts inquires	Submit an IDS ticket to the Motorrad Parts Department

**Supporting Materials**

[picture\\_as\\_pdf 34 01 21 Rear Brake-Soft Pressure Point.pdf](#)

[picture\\_as\\_pdf Serviceprogram-Soft pressure point.pdf](#)

# Service Information Bulletin

Brakes

May 19, 2021

34 01 21

## SOFT REAR BRAKE PRESSURE POINT



**BMW  
MOTORRAD**

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Note: See attachment for detailed screenshots of the steps above.

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After the system is completely bled and no more air present, apply pressure to the rear brake circuit by attaching weight of 22-33 lbs. (10 to 15 kg) to the rear brake lever for at least 12 hours.

Flush the brake system again (at least 2x the contents of the reservoir).

As a final step, retrofit the vehicle with "Harder brake pressure point on rear wheel brake" using ISTA version 4.26.36 or greater.

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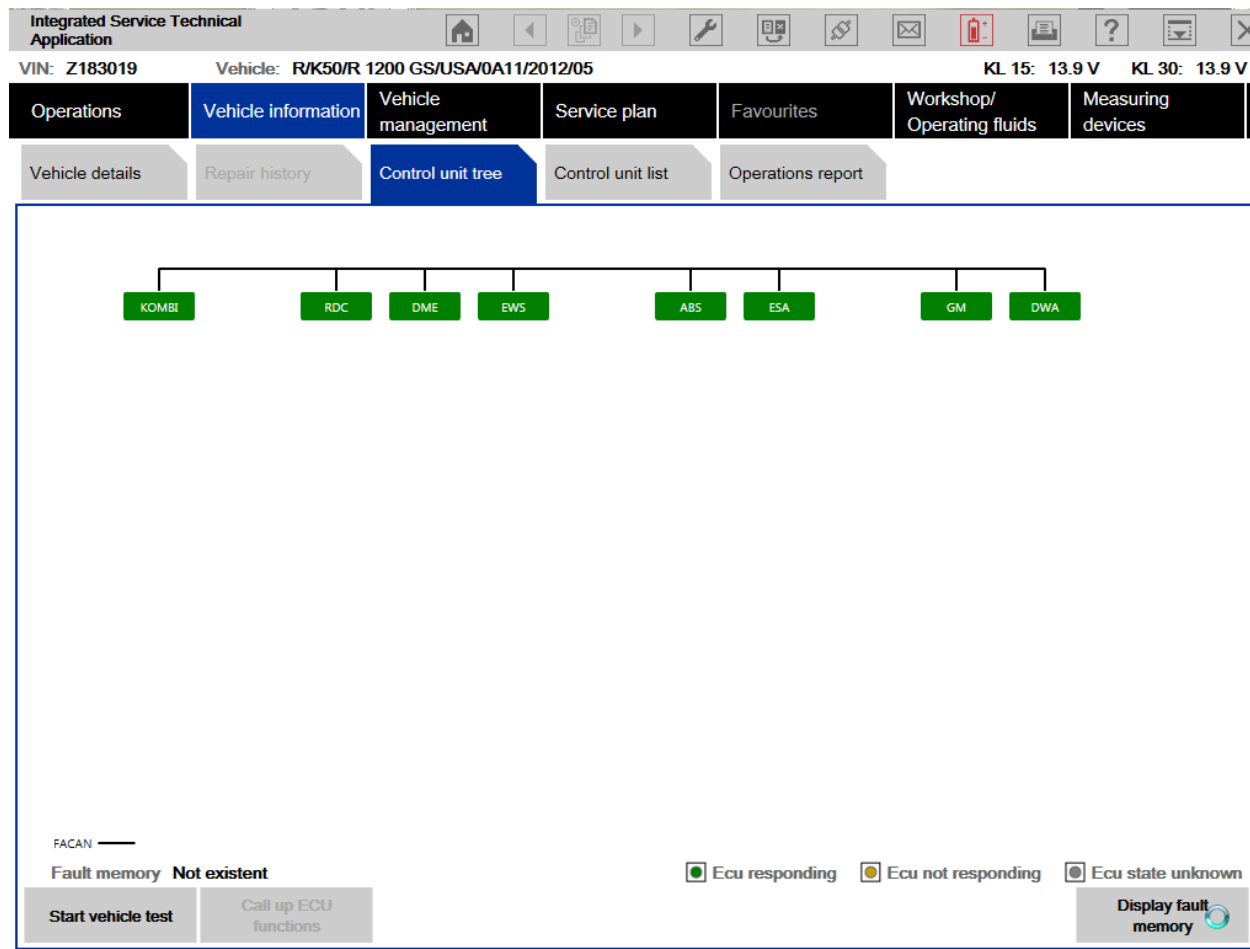
FRUs includes all repair procedures to complete the task with allowance for necessary ancillary tasks (e.g., visual inspection, lubrication, cleaning parts etc.) and administrative tasks.

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Parts inquires	Submit an IDS ticket to the Motorrad Parts Department

# Check the brake pressure point

## 1. Identify motorcycle, start vehicle test



## 2. Select fault pattern

### 2.1. Select Main group [002 Chassis and suspension]

The screenshot displays the 'Integrated Service Technical Application' interface. At the top, a status bar shows the VIN: Z183019, Vehicle: R/K50/R 1200 GS/USA/0A11/2012, and battery voltages KL 15: 13.9 V and KL 30: 13.9 V. Below this is a navigation menu with tabs: Operations, Vehicle information, Vehicle management, Service plan, Favourites, Workshop/Operating fluids, and Measuring devices. The 'Vehicle information' tab is selected, showing sub-tabs: Repair/Maintenance, Troubleshooting, and Fault memory. The 'Fault pattern' sub-tab is active. The main area is divided into 'Main groups' and 'Selected structure elements'. The 'Main groups' list includes '001 Drive', '002 Chassis and suspension' (highlighted with a red box), and '003 Electrical system'. The 'Selected structure elements' panel shows 'Layer 1: Perceived symptoms (old)'. At the bottom, status information indicates 'Number of fault memories: 0 / 0' and 'No. fault patterns: 0'. A row of buttons at the bottom includes 'Undo all', 'Undo', 'Add fault pattern', 'Show fault pattern', and 'Calculate test plan'.

1

2

3

4

Integrated Service Technical Application

VIN: Z183019 Vehicle: R/K50/R 1200 GS/USA/0A11/2012 KL 15: 13.9 V KL 30: 13.9 V

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/Operating fluids	Measuring devices
Repair/Maintenance	Troubleshooting	Service function	Software update	Control Unit Exchange	Vehicle modification	
Fault memory	Fault pattern	Function Structure	Component Structure	Text Search	Input fault code	

**Main groups**

001 Drive

002 Chassis and suspension

003 Electrical system

**Selected structure elements**

Layer 1:  
Perceived symptoms (old)

Number of fault memories: 0 / 0 No. fault patterns: 0

Undo all

Undo

Add fault pattern

Show fault pattern

Calculate test plan

## 2. Select fault pattern

### 2.2. Select Main group [Antilock braking system ABS]

The screenshot displays the 'Integrated Service Technical Application' interface. At the top, a toolbar contains various icons for navigation and actions. Below the toolbar, the vehicle information is shown: VIN: Z183019, Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05, and battery voltages KL 15: 13.9 V and KL 30: 13.9 V.

The main menu is organized into a grid of tabs. The 'Vehicle management' tab is selected, and within it, the 'Fault pattern' sub-tab is active. A red arrow points from the '2.2. Select Main group [Antilock braking system ABS]' heading to the 'Antilock braking system ABS' option in the 'Main groups' list.

The 'Main groups' list on the left includes:

- Antilock braking system ABS (highlighted with a red box)
- Electronic suspension adjustment
- RDC tyre pressure control

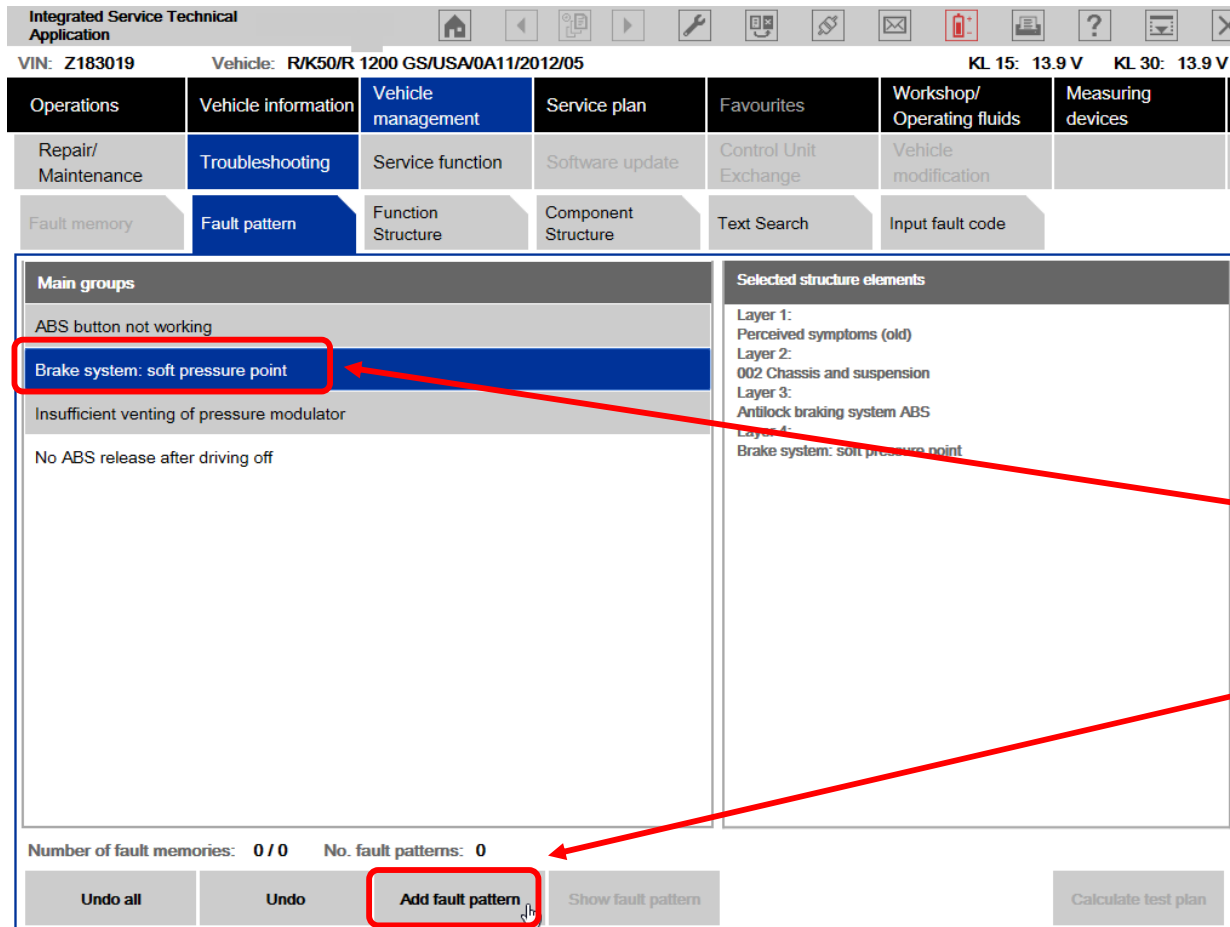
The 'Selected structure elements' panel on the right shows the following structure:

- Layer 1: Perceived symptoms (old)
- Layer 2: 002 Chassis and suspension

At the bottom, the status bar indicates 'Number of fault memories: 0 / 0' and 'No. fault patterns: 0'. Below this, there are buttons for 'Undo all', 'Undo', 'Add fault pattern', 'Show fault pattern', and 'Calculate test plan'.

## 2. Select fault pattern

2.3. Select the fault pattern [Brake system: soft pressure point], then push button “Add fault pattern”



### 3. Calculate test plan

Integrated Service Technical Application

VIN: Z183019 Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05 KL 15: 13.9 V KL 30: 13.9 V

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ Maintenance	Troubleshooting	Service function	Software update	Control Unit Exchange	Vehicle modification	
Fault memory	Fault pattern	Function Structure	Component Structure	Text Search	Input fault code	

**Main groups**

Perceived symptoms (old)

**Selected structure elements**

Number of fault memories: 0 / 0 No. fault patterns: 1

Undo all

Undo

Add fault pattern










Show fault pattern

Calculate test plan

Note: fault pattern selected

## 4. Operate serviceprogram

Integrated Service Technical Application



VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.9 V    KL 30: 13.9 V

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Hit list	Test plan	Programming plan				

Type	Title	Status	Priority
Brake system			1
ABL	Check the brake pressure point	<input checked="" type="checkbox"/>	1

Hits: 1 / 1    Filter: Default    ☐ Not called    ☒ Performed    ☐ Minimized    ☐ Canceled    ☐ Suspected

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Filters

Show symptoms

Collapse / expand

Set standard filter

Display

## 4. Operate serviceprogram

### 4.1. choose brake circuit

Integrated Service Technical Application

VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.9 V    KL 30: 13.9 V

ABL-DIT-BIKE\_ABS\_CT\_MK100\_LUFTEINTRAG - Check the brake pressure point

Procedure

Wiring Diagram

Functional Description

**Test step selection**

Front brake circuit

Rear brake circuit

End

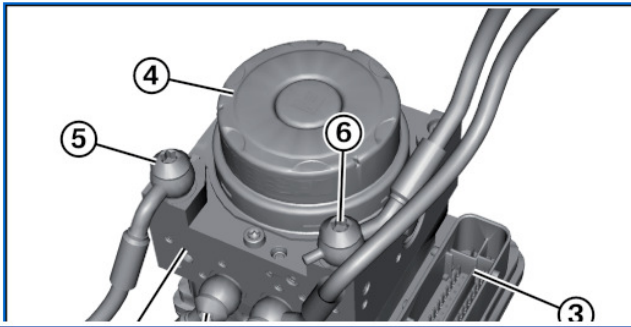
**BMW Motorrad Integral ABS IV**

The BMW Motorrad Integral ABS IV is based on the tried-and-tested MK100 from Continental-Teves and is adapted to the special requirements and functions in Motorrad.

The ABS control operation is effected separately for the front and rear wheel (2-channel ABS).

**Brief component description**

The ABS control unit (HECU) is made up of the hydraulic unit (HCU), the control unit (ECU) and the electrical pump motor.



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## 4. Operate serviceprogram

### 4.2. Notice instructions

Integrated Service Technical Application

VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.9 V    KL 30: 13.9 V

FUB-FUB-BIKE\_ABS\_MK100\_SYSTEMBESCHREIBG - BMW Motorrad Integral ABS IV

Procedure

Wiring Diagram

Functional Description

#### Function check

The pressure point of the brake lever is checked in the following function check,

1. first with an open and then
2. with a closed ABS intake valve

*Notes:*

The ABS system must be completely filled as well as fully connected both hydraulically and electrically.

#### Intake valves

The intake valves are open for normal braking and are closed in the ABS control operation (pressure reduction phase). In the pressure build-up phase of the ABS control operation the intake valves can be held opened and closed in any position or changed (analogue valves).

#### Exhaust valves

The discharge valves are closed for normal braking and are open in the ABS control operation (pressure reduction phase). During the ABS control operation the position of the discharge valves switches between open and closed (digital valves).

#### Separator valve

The separator valve is installed in the rear brake circuit between the footbrake cylinder and the pressure side of the 2-piston pump and is open in a de-energized state. In this state brake pressure can be built up in the rear brake circuit via the footbrake. At the start of the integral braking the separator valve is closed and prevents the delivery of brake fluid to the footbrake cylinder. During integral braking the separator valve can be held open or closed in any position or changed for the pressure reduction (analogue valve).

#### Changeover valve

The changeover valve is installed in the rear brake circuit between the expansion tank and the intake side of the 2-piston pump and is closed in a de-energized state. At the

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## 4. Operate serviceprogram

### 4.3. Braking system at initial state: Evaluate pressure point

Integrated Service Technical Application



VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.9 V    KL 30: 13.9 V

ABL-DIT-BIKE\_ABS\_CT\_MK100\_LUFTEINTRAG - Check the brake pressure point

Procedure

Wiring Diagram

Functional Description

#### Function check

Check the pressure point of the rear brake lever:

- Operate the rear brake lever several times and mind the pressure point.

Is the pressure point of the rear brake OK?

☐ Yes

☒ No, pressure point is too soft

#### Intake valves

The intake valves are open for normal braking and are closed in the ABS control operation (pressure reduction phase). In the pressure build-up phase of the ABS control operation the intake valves can be held opened and closed in any position or changed (analogue valves).

#### Exhaust valves

The discharge valves are closed for normal braking and are open in the ABS control operation (pressure reduction phase). During the ABS control operation the position of the discharge valves switches between open and closed (digital valves).

#### Separator valve

The separator valve is installed in the rear brake circuit between the footbrake cylinder and the pressure side of the 2-piston pump and is open in a de-energized state. In this state brake pressure can be built up in the rear brake circuit via the footbrake. At the start of the integral braking the separator valve is closed and prevents the delivery of brake fluid to the footbrake cylinder. During integral braking the separator valve can be held open or closed in any position or changed for the pressure reduction (analogue valve).

#### Changeover valve

The changeover valve is installed in the rear brake circuit between the expansion tank and the intake side of the 2-piston pump and is closed in a de-energized state. At the

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## 4. Operate serviceprogram

### 4.4. Braking system while ABS-inlet valve is actuated: Evaluate pressure point again

Integrated Service Technical Application



VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.7 V    KL 30: 13.7 V

ABL-DIT-BIKE\_ABS\_CT\_MK100\_LUFTEINTRAG - Check the brake pressure point

Procedure

Wiring Diagram

Functional Description

#### Function check

The ABS intake valve is being activated.  
Check the pressure point of the rear brake lever again:

- Operate the rear brake lever several times and mind the pressure point.

Is the pressure point of the rear brake very tight?

Remaining activation time: 9 s

015

*Note:*  
The activation can be ended at any time with "Continue".

#### Intake valves

The intake valves are open for normal braking and are closed in the ABS control operation (pressure reduction phase). In the pressure build-up phase of the ABS control operation the intake valves can be held opened and closed in any position or changed (analogue valves).

#### Exhaust valves

The discharge valves are closed for normal braking and are open in the ABS control operation (pressure reduction phase). During the ABS control operation the position of the discharge valves switches between open and closed (digital valves).

#### Separator valve

The separator valve is installed in the rear brake circuit between the footbrake cylinder and the pressure side of the 2-piston pump and is open in a de-energized state. In this state brake pressure can be built up in the rear brake circuit via the footbrake.  
At the start of the integral braking the separator valve is closed and prevents the delivery of brake fluid to the footbrake cylinder. During integral braking the separator valve can be held open or closed in any position or changed for the pressure reduction (analogue valve).

#### Changeover valve

The changeover valve is installed in the rear brake circuit between the expansion tank and the intake side of the 2-piston pump and is closed in a de-energized state. At the


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## 4. Operate serviceprogram

### 4.4. Braking system while ABS-inlet valve is actuated: Evaluate pressure point again

Integrated Service Technical Application



VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.9 V    KL 30: 13.9 V

ABL-DIT-BIKE\_ABS\_CT\_MK100\_LUFTEINTRAG - Check the brake pressure point

Procedure

Wiring Diagram

Functional Description

Function check

Was the pressure point of the rear brake lever very tight during the activation of the ABS intake valve?

The pressure point is very tight

No, pressure point is too soft

Intake valves

The intake valves are open for normal braking and are closed in the ABS control operation (pressure reduction phase). In the pressure build-up phase of the ABS control operation the intake valves can be held opened and closed in any position or changed (analogue valves).

Exhaust valves

The discharge valves are closed for normal braking and are open in the ABS control operation (pressure reduction phase). During the ABS control operation the position of the discharge valves switches between open and closed (digital valves).

Separator valve

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Changeover valve

The changeover valve is installed in the rear brake circuit between the expansion tank and the intake side of the 2-piston pump and is closed in a de-energized state. At the

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## 4. Operate serviceprogram

### 4.5. Summarize test result

Integrated Service Technical Application

VIN: Z183019    Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05    KL 15: 13.9 V    KL 30: 13.9 V

ABL-DIT-BIKE\_ABS\_CT\_MK100\_LUFTEINTRAG - Check the brake pressure point

Procedure

Wiring Diagram

Functional Description

#### Test result

The pressure point is too tight with a closed intake valve.  
The pressure point is too soft with an open intake valve.

There is air in the rear brake circuit between the:

- ABS pressure modulator and
- rear brake caliper.

*Instructions:*

- Bleed rear brake.
- If applicable, carry out the "bleed pressure modulator" service function again.

#### Intake valves

The intake valves are open for normal braking and are closed in the ABS control operation (pressure reduction phase). In the pressure build-up phase of the ABS control operation the intake valves can be held opened and closed in any position or changed (analogue valves).

#### Exhaust valves

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Keyboard

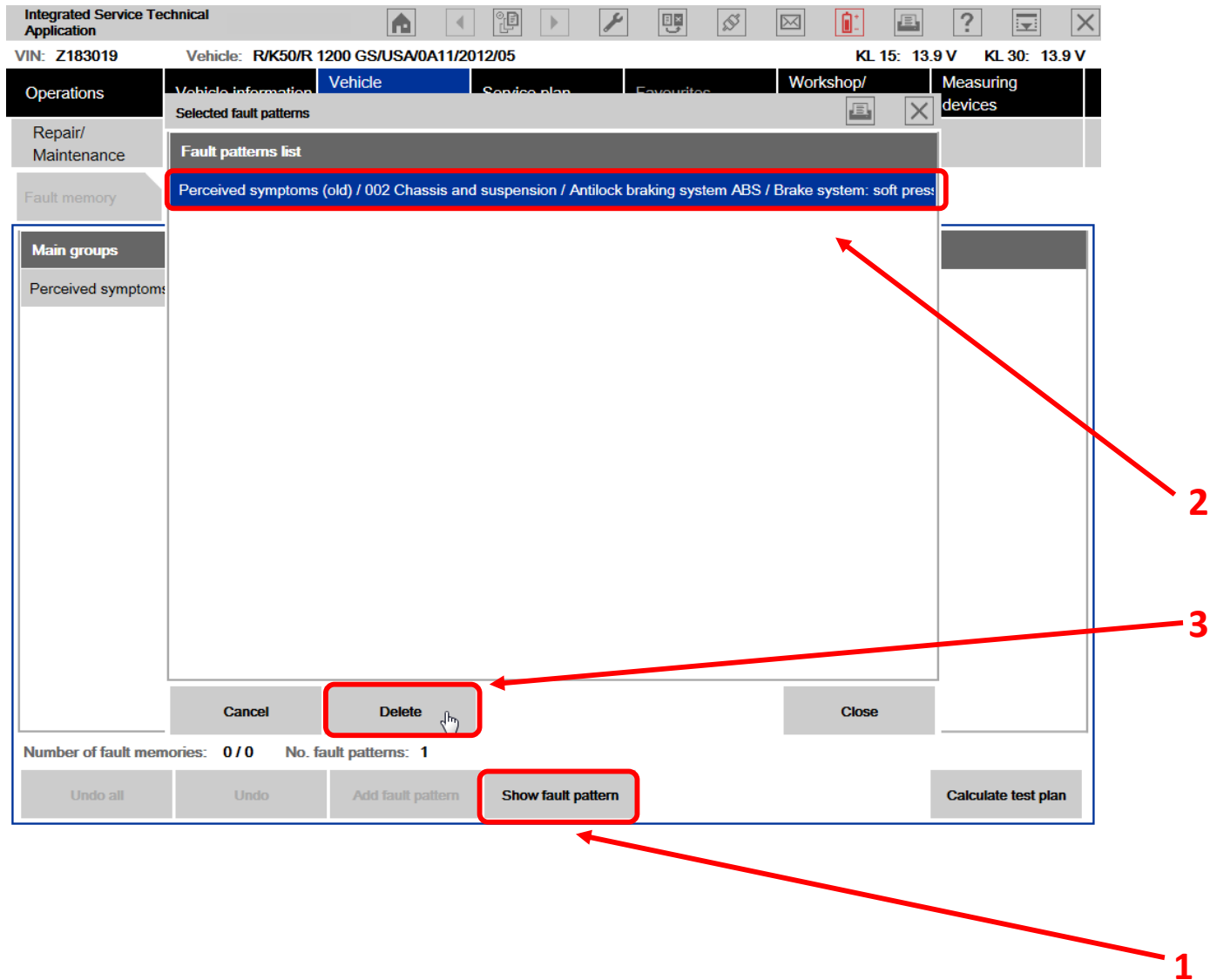
Full Screen

Update

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-> terminate service program.

## 5. Reset fault pattern



## 6. Display test result and diagnostic code in the operations report

Integrated Service Technical Application



VIN: Z183019      Vehicle: R/K50/R 1200 GS/USA/0A11/2012/05      KL 15: 13.9 V    KL 30: 13.9 V

Operations

Vehicle information

Vehicle management

Service plan

Favourites

Workshop/  
Operating fluids

Measuring  
devices

Vehicle details

Repair history

Control unit tree

Control unit list

Operations report

DIAGNOSE_MODE	JOB_STATUS	OKAY
ECU function - ABS - X ABS		
Action	Function	Result
STEUERN_IO	JOB_STATUS	OKAY
ECU function - ABS - X ABS		
Action	Function	Result
STEUERGERAETE_RESET	JOB_STATUS	OKAY
Function check		
Was the pressure point of the rear brake lever very tight during the activation of the ABS intake valve?		1
The pressure point is very tight		
No, pressure point is too soft		
Test result		
The pressure point is too tight with a closed intake valve.		False
The pressure point is too soft with an open intake valve.		
There is air in the rear brake circuit between the: ABS pressure modulator and rear brake caliper.		
Instructions:		
Bleed rear brake. If applicable, carry out the "bleed pressure modulator" service function again.		M0401_00000000_50_104
na		
DIAGCODE: M0401_00000000_50_104		3
Diagnosecode M0401_00000000_50_104		
Test step selection		
Front brake circuit		
X Rear brake circuit		
End		

Show vehicle test

Information search