

 **34 00 095 Bleed all brake circuits, Integral ABS system**

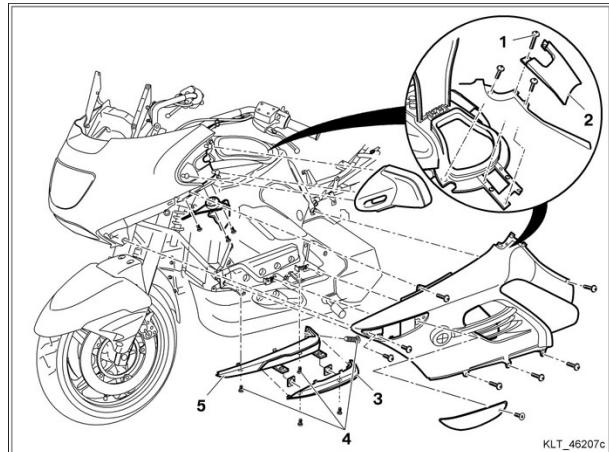
+ 34 00 595

Core activity**(-) Raising front seat**

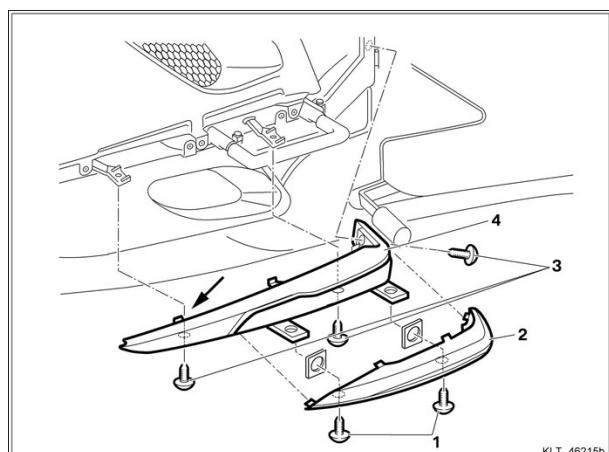
- Open the left side case.
- Actuate the seat latch.
» The front seat rises.

(-) Removing tank cover bottom section

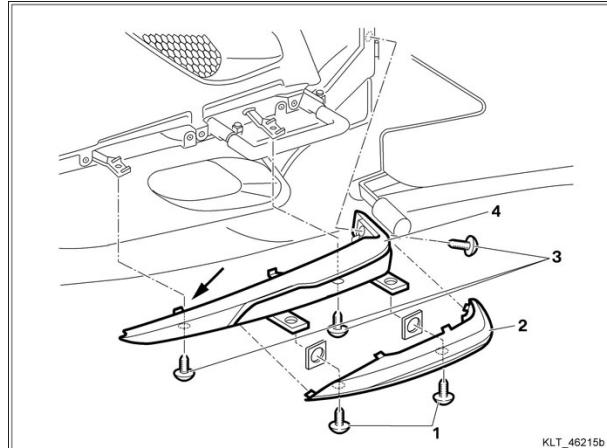
- Open the flap of the radio operating panel.
- Remove screws (1).
- Work tank cover bottom section (2) down to disengage it and remove.

**(-) Removing rubbing-strip finisher, left**

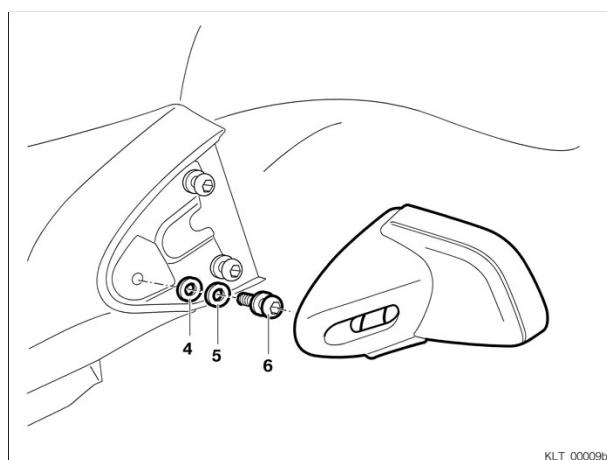
- Remove screws (1).
- Remove rubbing-strip finisher (2) from rubbing strip (4).

**(-) Removing rubbing strip, left**

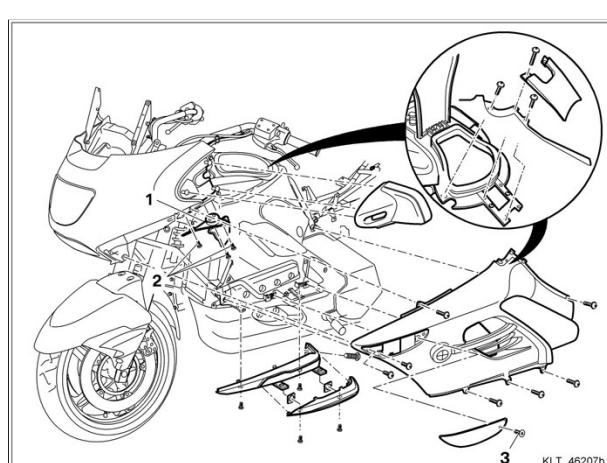
- Remove screws (3).
- Remove rubbing strip (4).



(-) Removing left mirror



- Hold side mirror with one hand. Release the mirror by tapping lightly with the other hand on the mirror casing in the direction of the mirror.

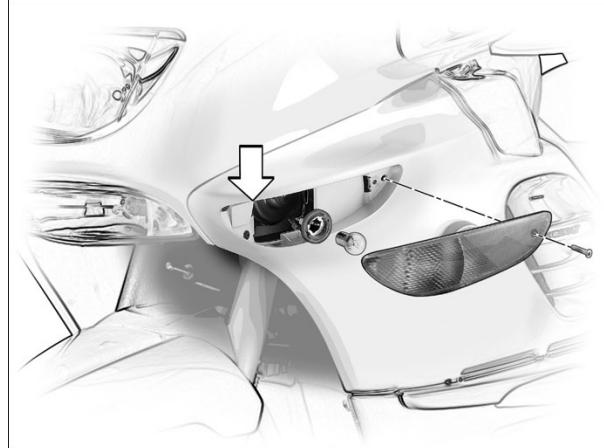


(-) Removing left fin

- Remove screws (2).
- Remove fin (1).

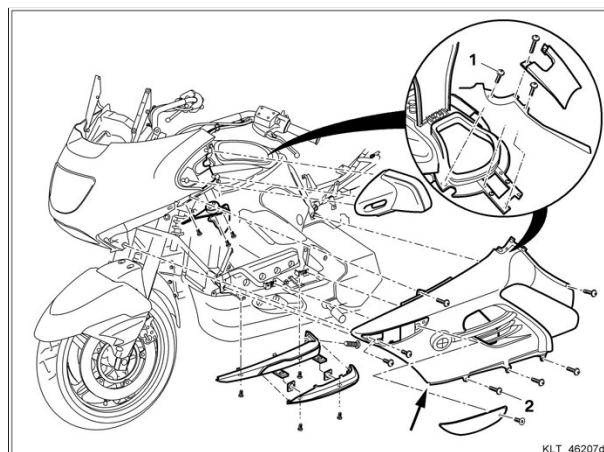
(-) Removing left flashing turn indicator

- Remove the screw.
- Disengage the turn indicator housing (arrow).
- Disengage the turn indicator bulb.
- Remove the turn indicator housing.



(-) Removing left side panel

- Remove screws (2).



- Remove pin (3) from rubber grommet (4) in the battery cover.
- Work the side panel up to disengage it from the radio operating unit.
- Remove the side panel.



(-) Removing rear seat

- Remove 2 screws and remove the rear seat.

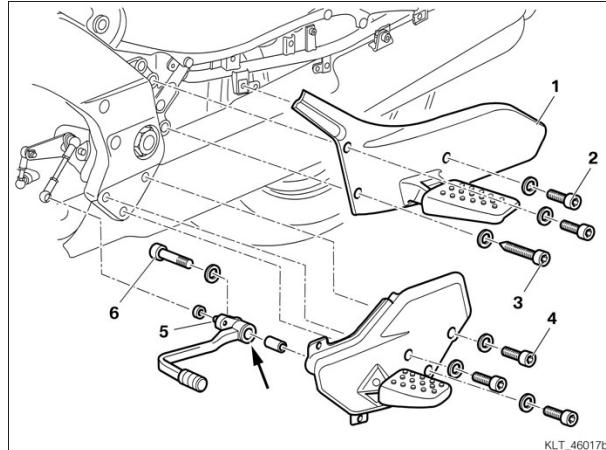
(-) Removing rear left footrest plate

- Remove screws (2, 3).

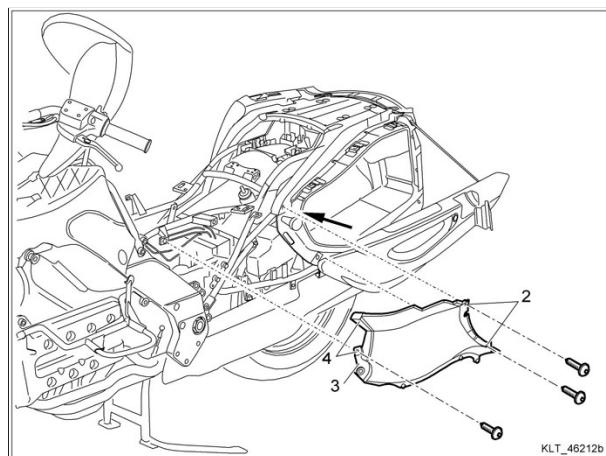


Note

The front, long pointed-tip screw of the left footrest plate is also a retainer for the battery carrier.

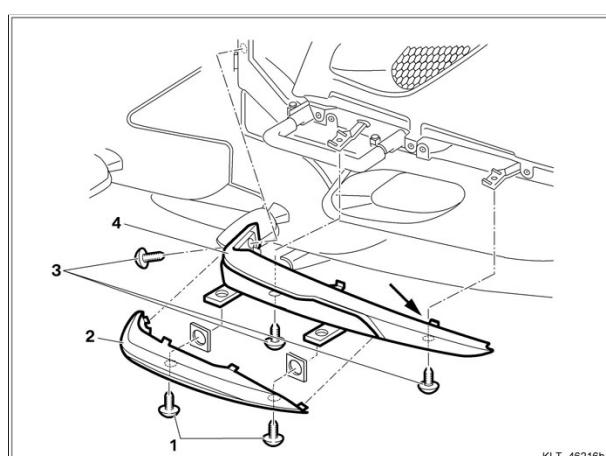


- Remove rear footrest plate (1).



(-) Removing left battery cover

- Open the left case.
- Remove the screw with washer (arrow) from the cover.
- Remove screws (2, 4) from the battery cover.
- Remove battery cover (3).

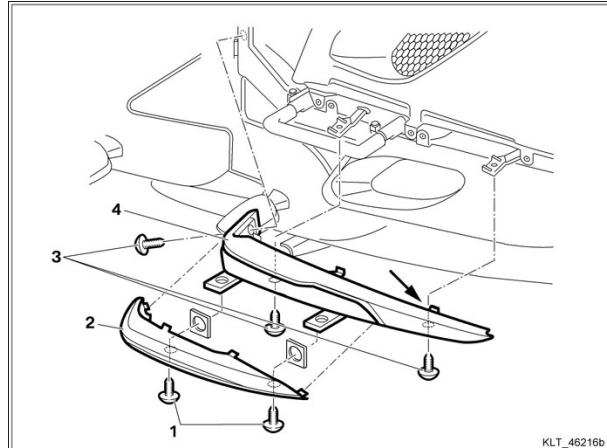


(-) Removing rubbing-strip finisher, right

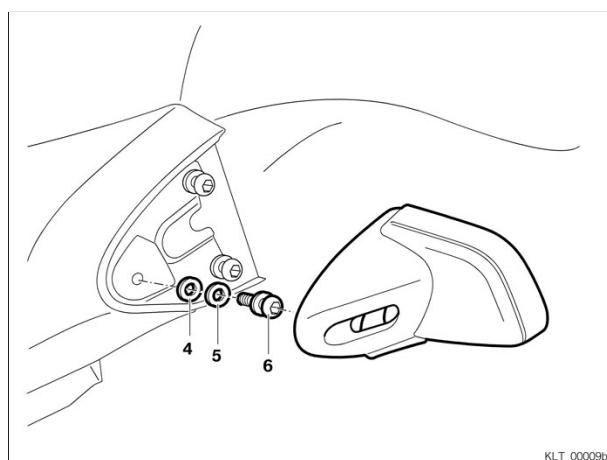
- Remove screws (1).
- Remove rubbing-strip finisher (2) from rubbing strip (4).

(-) Removing rubbing strip, right

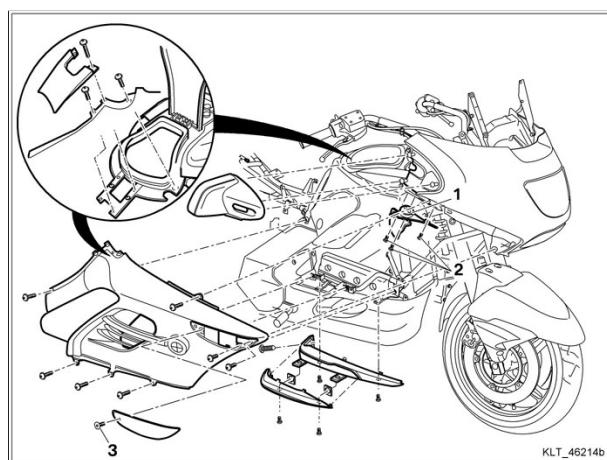
- Remove screws (3).
- Remove rubbing strip (4).



(-) Removing right mirror

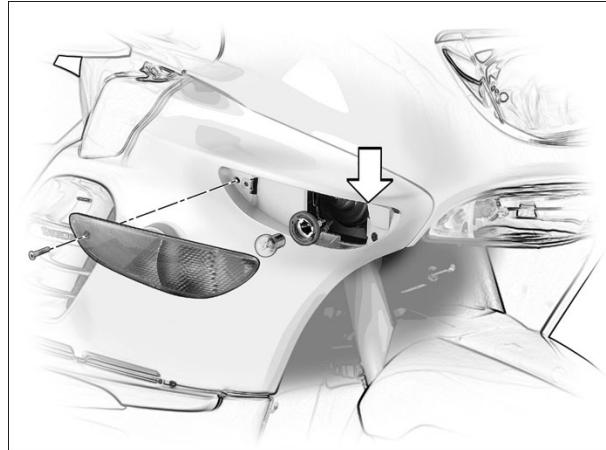


(-) Removing right fin



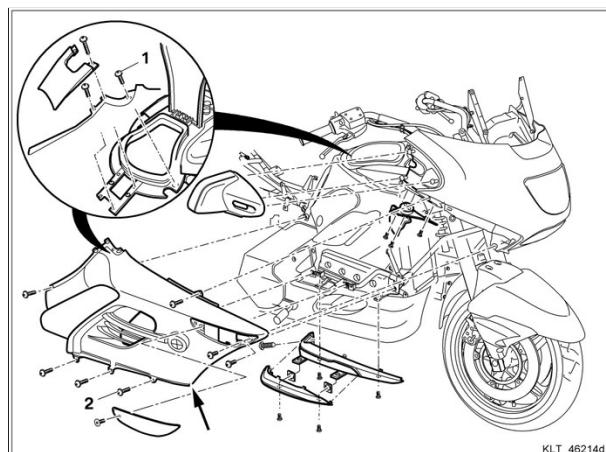
(-) Removing right flashing turn indicator

- Remove the screw.
- Disengage the turn indicator housing (arrow).
- Disengage the turn indicator bulb.
- Remove the turn indicator housing.



(-) Removing right side panel

- Remove screws (2).

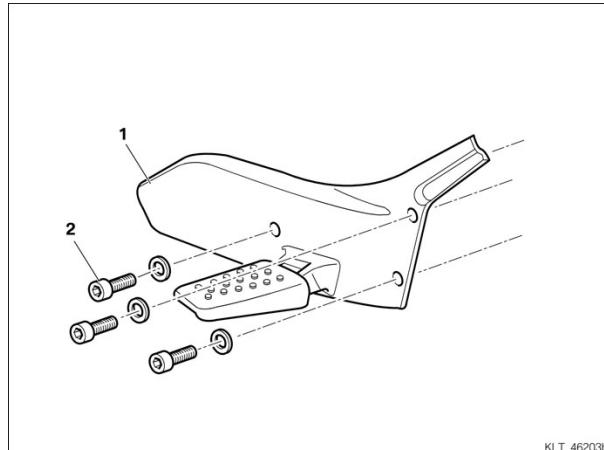


- Remove pin (3) from rubber grommet (4) in the battery cover.
- Work the side panel up to disengage it from the radio operating unit.
- Remove the side panel.



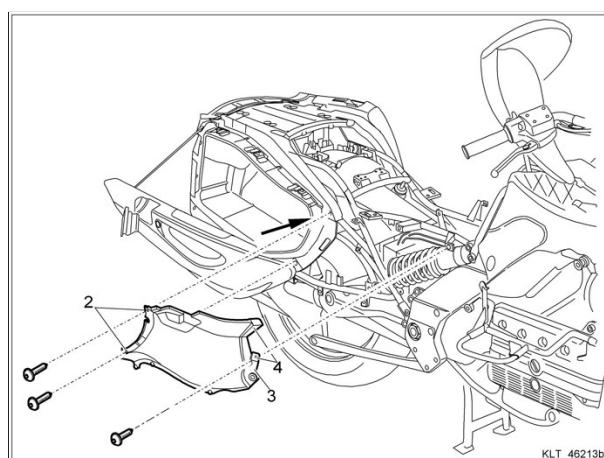
(-) Removing rear right footrest plate

- Remove screws (2).
- Remove rear footrest plate (1).



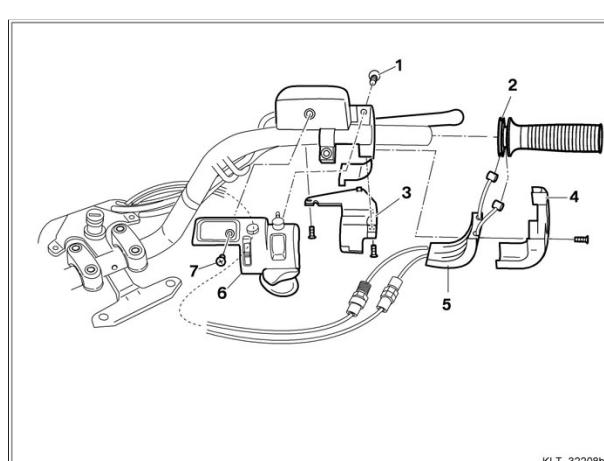
(-) Removing right battery cover

- Open the right case.
- Remove the screw with washer (arrow) from the cover.
- Remove screws (2, 4) from the battery cover.
- Remove battery cover (3).



(-) Removing right multifunction switch

- Remove screws (3) and remove bottom cover (4).
- Remove screws (2 and 3) and remove the multi-function switch from the brake fitting.



(-) Bleeding front control circuit



Warning

Mistakes can be made in repair and maintenance routines if work is carried out by persons who have not received the correct training, or in the event of non-compliance with the specified instructions.

All repair and maintenance work on the **BMW Motorrad Integral ABS** must

be performed by trained, qualified specialists.

Comply with all maintenance and repair instructions and always work through the various steps in the correct order.



Warning

Brake fluid is hygroscopic, which means that its boiling point drops once the container has been opened.

Use only new brake fluid from freshly opened containers.



Warning

If there are air bubbles trapped in the brake system, rapid pumping can cause them to break down and form a multitude of tiny bubbles which in turn cause the brake fluid to foam. This would mean that small quantities of entrained air would escape detection in the bleed test with the **BMW Motorrad** diagnostic system, and braking efficiency would be significantly impaired as a result.

When performing maintenance and repair work on the **BMW Motorrad Integral ABS**, always operate the brakes slowly. Do not pump quickly or vigorously.



Attention

Brake fluid attacks paintwork, plastic and rubber parts.

Do not allow brake fluid to come into contact with paintwork, plastic or rubber parts.

- Position the motorcycle upright.
- Turn the handlebars all the way to the **left**.
- Release clamping screw (1).
- Rotate the handbrake fitting so that the sealing surface of the reservoir cap is horizontal when viewed from the side.
- Tighten clamping screw (1).
- Repeatedly and slowly pull front brake lever lightly to expel air from the handbrake cylinder.
- Wrap cloths around the reservoir.



Attention

Brake fluid attacks paintwork, plastic and rubber parts.

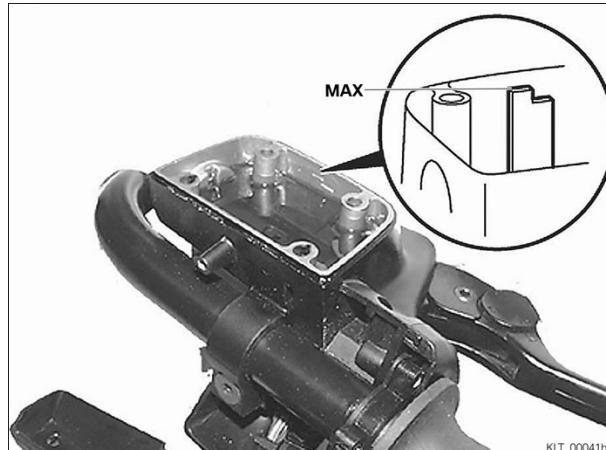
Do not allow brake fluid to come into contact with paintwork, plastic or rubber parts.

- Remove the reservoir cap with rubber diaphragm.
- Top up with fresh brake fluid to the MAX mark (arrow).



Fluids and lubricants

Brake fluid	Hydraulic systems	
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Warning

Air can be drawn into the system through the fluid replenishing hole if the fluid level in the reservoir is too low; the system has to be bled again if this happens.

Make sure that the fluid replenishing bore is always under the surface of the brake fluid throughout the entire process of fluid changing/system bleeding.

- Set the handbrake lever to position 4.



Attention

If plugs are disconnected from the pressure modulator, there is a possibility of dirt and brake fluid penetrating inside the housing and causing damage. Do not disconnect the plugs from the pressure modulator.

- Connect the brake bleeding device to bleed screw (1) of the front metering cylinder, but **do not switch on**.



Warning

Vacuum extraction with conventional devices does not ensure that the control circuits are adequately bled.

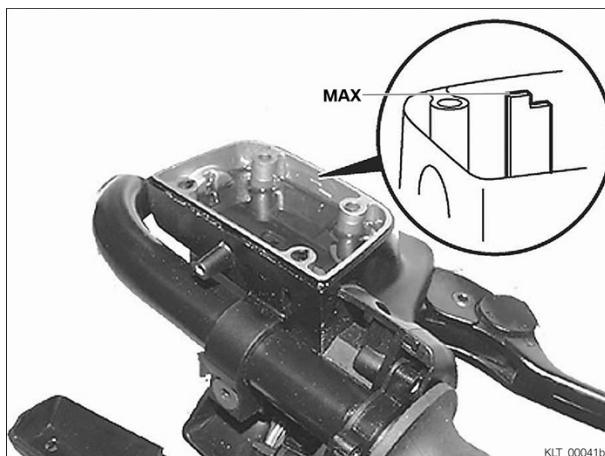
Do not use vacuum extraction to change the fluid in the control circuits or bleed the control circuits.

- In the following sequence, bleed:
- Bleed screw (1) front metering cylinder
- Bleed screw (2) front integral circuit
- Bleed screw (3) front control circuit, and
- bleed screw (1) front metering cylinder again, in accordance with instructions for bleeding and using special ring spanner (No. 34 2 532).

► Instructions for bleeding

- 1. Slowly pull brake lever until brake-light switch clicks (blow-by bore closed).
- 2. Open the bleed screw.
- 3. Slowly pull brake lever to full extent of its travel and close the bleed screw.
- 4. Slowly release the brake lever.

- 5. Repeat steps 1 to 4 until the brake fluid emerges clear and free of bubbles.



- Fit the protective caps on the bleed screws.
- Top up with fresh brake fluid to the "MAX" mark (arrow).
- Wipe the rim of the reservoir, the diaphragm and the cover to remove brake fluid, and carefully re-assemble the components.



Note

After all the work on the brake system has been completed, perform a bleed test using the **BMW Motorrad** diagnostic system and check the fault code memory.

(-) Performing bleed test with the BMW Motorrad diagnostic system



Warning

If there are air bubbles trapped in the brake system, rapid pumping can cause them to break down and form a multitude of tiny bubbles which in turn cause the brake fluid to foam. This would mean that small quantities of entrained air would escape detection in the bleed test with the **BMW Motorrad** diagnostic system, and braking efficiency would be significantly impaired as a result.

When performing maintenance and repair work on the **BMW Motorrad Integral ABS**, always operate the brakes slowly. Do not pump quickly or vigorously.

- Connect the BMW Motorrad diagnosis system to the diagnosis plug.
- Perform the bleed test with the BMW Motorrad diagnostic system.
- Perform all requisite repair work.

Test

- Read all fault memories.

 Technical data			
Test criterion, control units / fault memory		No faults stored in memory	

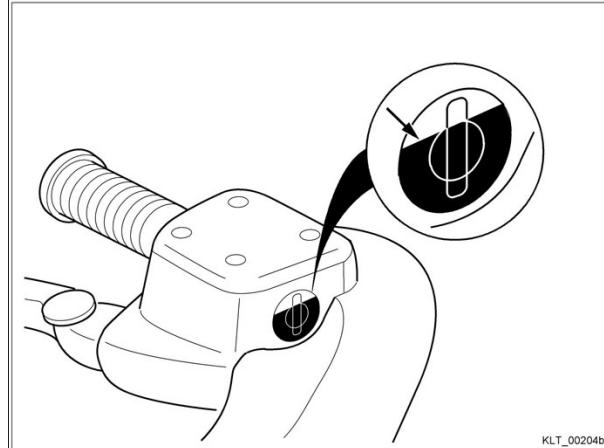
Result: Fault-code entry in one or more control units.

Measure:

- Carry out repairs as specified.
- Disconnect the BMW Motorrad diagnosis system from the vehicle.

(-) Checking front brake fluid level

- Position the motorcycle upright.
- Turn the handlebars all the way to the left.

**Test**

- Check the fluid level in the sight glass.

**Note**

The brake fluid level in the sight glass/brake fluid reservoirs of control circuits remains constant despite wear of the brake pads. A brake-fluid level below MAX is indicative of some other fault.

**Technical data**

Specified level in brake-fluid reservoir, front, with handlebars turned all the way to the left		Top edge of marking ring	
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Result: Level not as specified

Measure:

- Check for leak or source of fault.

(-) Bleeding rear control circuit**Warning**

Mistakes can be made in repair and maintenance routines if work is carried out by persons who have not received the correct training, or in the event of non-compliance with the specified instructions.

All repair and maintenance work on the **BMW Motorrad Integral ABS** must be performed by trained, qualified specialists.

Comply with all maintenance and repair instructions and always work through the various steps in the correct order.

**Warning**

Brake fluid is hygroscopic, which means that its boiling point drops once the container has been opened.

Use only new brake fluid from freshly opened containers.

**Warning**

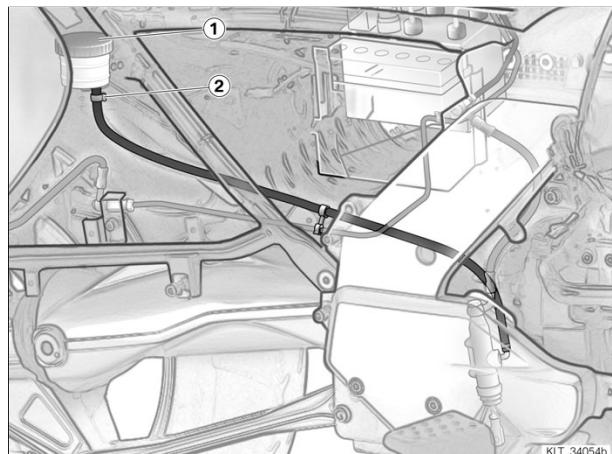
If there are air bubbles trapped in the brake system, rapid pumping can cause them to break down and form a multitude of tiny bubbles which in turn cause the brake fluid to foam. This would mean that small quantities of entrained air would escape detection in the bleed test with the **BMW Motorrad** diagnostic system, and braking efficiency would be significantly impaired as a result.

When performing maintenance and repair work on the **BMW Motorrad Integral ABS**, always operate the brakes slowly. Do not pump quickly or vigorously.

Attention

Brake fluid attacks paintwork, plastic and rubber parts.

Do not allow brake fluid to come into contact with paintwork, plastic or rubber parts.



► Removing cap for rear brake-fluid reservoir

- Wrap cloths around the reservoir.

Attention

Brake fluid attacks paintwork, plastic and rubber parts.

Do not allow brake fluid to come into contact with paintwork, plastic or rubber parts.

- Remove reservoir cap (1) and diaphragm.



Warning

Air can be drawn into the system through the fluid replenishing hole if the fluid level in the reservoir is too low; the system has to be bled again if this happens.

Make sure that the fluid replenishing bore is always under the surface of the brake fluid throughout the entire process of fluid changing/system bleeding.

- Top up the brake fluid level to the "MAX" mark.



Fluids and lubricants

Brake fluid	Hydraulic systems	
-------------	-------------------	--

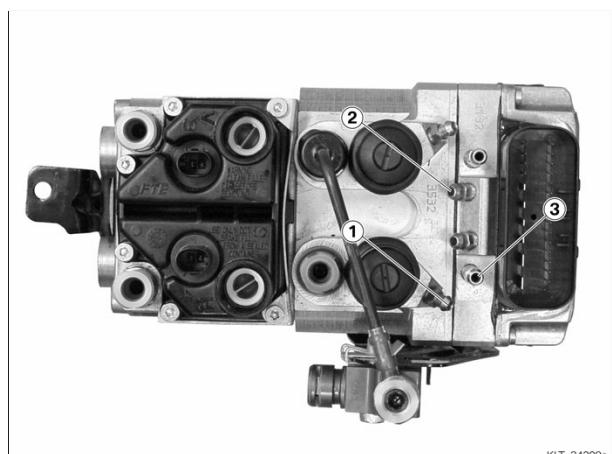


Warning

Vacuum extraction with conventional devices does not ensure that the control circuits are adequately bled.

Do not use vacuum extraction to change the fluid in the control circuits or bleed the control circuits.

- Connect the brake bleeding device to bleed screw (1) of the rear metering cylinder, but **do not switch on**.
- In the following sequence, bleed:
 - Bleed screw (1) rear metering cylinder
 - Bleed screw (2) rear integral circuit
 - Bleed screw (3) rear control circuit, and
 - for the second time, bleed screw (1) rear metering cylinder in accordance with instructions for bleeding and using special ring spanner (**No. 34 2**)



532).

► Instructions for bleeding

- 1. Slowly pull brake lever until brake-light switch clicks (blow-by bore closed).
- 2. Open the bleed screw.
- 3. Slowly pull brake lever to full extent of its travel and close the bleed screw.
- 4. Slowly release the brake lever.
- 5. Repeat steps 1 to 4 until the brake fluid emerges clear and free of bubbles.



- Fit the protective caps on the bleed screws.
- Correct the brake fluid level.
- Wipe the rim of the reservoir, the diaphragm and the cap to remove brake fluid, and carefully re-assemble the components.



Note

After all the work on the brake system has been completed, perform a bleed test using the **BMW Motorrad** diagnostic system and check the fault code memory.

(-) Performing bleed test with the BMW Motorrad diagnostic system



Warning

If there are air bubbles trapped in the brake system, rapid pumping can cause them to break down and form a multitude of tiny bubbles which in turn cause the brake fluid to foam. This would mean that small quantities of entrained air would escape detection in the bleed test with the **BMW Motorrad** diagnostic system, and braking efficiency would be significantly impaired as a result.

When performing maintenance and repair work on the **BMW Motorrad Integral ABS**, always operate the brakes slowly. Do not pump quickly or vigorously.

- Connect the BMW Motorrad diagnosis system to the diagnosis plug.
- Perform the bleed test with the BMW Motorrad diagnostic system.
- Perform all requisite repair work.

Test

- Read all fault memories.

 Technical data			
Test criterion, control units / fault memory		No faults stored in memory	

Result: Fault-code entry in one or more control units.

Measure:

- Carry out repairs as specified.
- Disconnect the BMW Motorrad diagnosis system from the vehicle.



(-) Checking brake-fluid level, rear brakes

- Position the motorcycle upright.
- Open the right case.

Test

- Check the fluid level in the reservoir; if necessary, direct the beam of a flashlight through the reservoir from behind.



Note

The brake fluid level in the sight glass/brake fluid reservoirs of control circuits remains constant despite wear of the brake pads. A brake-fluid level below MAX is indicative of some other fault.



Technical data

Specified level in brake-fluid reservoir, rear		"max" mark on reservoir	
--	--	----------------------------	--

Result: Level not as specified

Measure:

- Check for leak or source of fault.
- Close the right case.

(-) Bleeding front wheel circuit



Warning

Mistakes can be made in repair and maintenance routines if work is carried out by persons who have not received the correct training, or in the event of non-compliance with the specified instructions.

All repair and maintenance work on the **BMW Motorrad Integral ABS** must be performed by trained, qualified specialists.

Comply with all maintenance and repair instructions and always work through the various steps in the correct order.



Warning

Brake fluid is hygroscopic, which means that its boiling point drops once the container has been opened.

Use only new brake fluid from freshly opened containers.



Warning

If there are air bubbles trapped in the brake system, rapid pumping can cause them to break down and form a multitude of tiny bubbles which in turn cause the brake fluid to foam. This would mean that small quantities of entrained air would escape detection in the bleed test with the **BMW Motorrad** diagnostic system, and braking efficiency would be significantly impaired as a result.

When performing maintenance and repair work on the **BMW Motorrad Integral ABS**, always operate the brakes slowly. Do not pump quickly or

vigorously.

Attention

Brake fluid attacks paintwork, plastic and rubber parts.

Do not allow brake fluid to come into contact with paintwork, plastic or rubber parts.

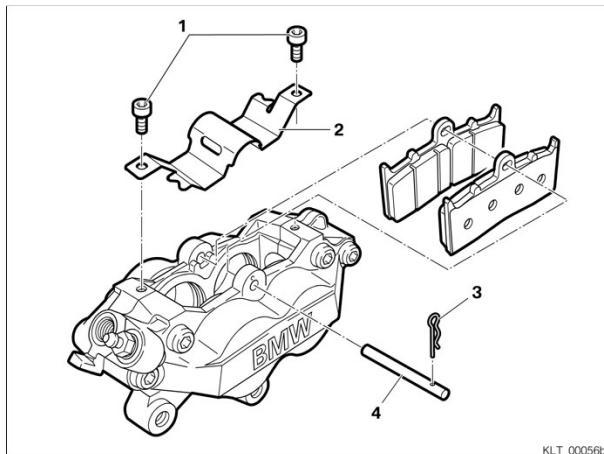
Attention

If plugs are disconnected from the pressure modulator, there is a possibility of dirt and brake fluid penetrating inside the housing and causing damage.

Do not disconnect the plugs from the pressure modulator.

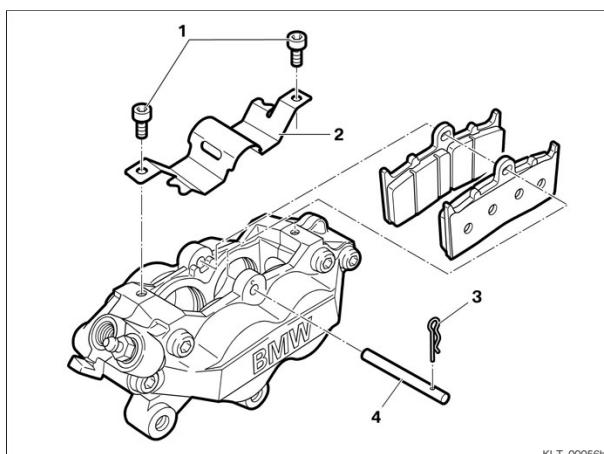
► Removing front left brake pads

- Remove spring plate (2) with screws (1).
- Remove split-pin keeper (3) from grubscrew (4).
- Remove grubscrew (4).
- Remove the brake pads.

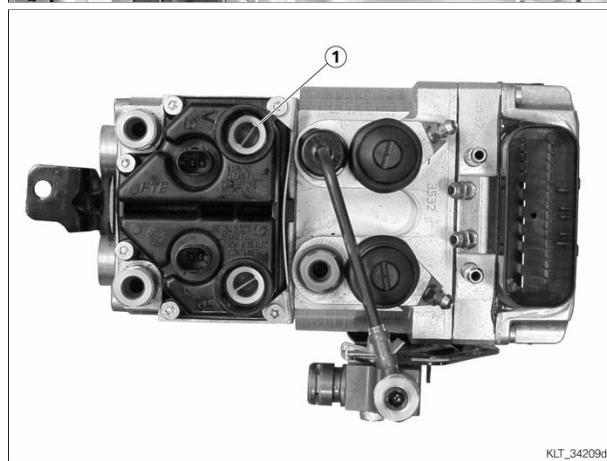
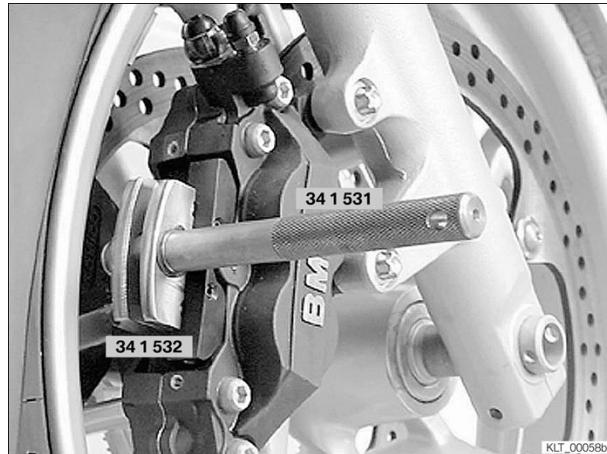


► Removing front right brake pads

- Remove spring plate (2) with screws (1).
- Remove split-pin keeper (3) from grubscrew (4).
- Remove grubscrew (4).
- Remove the brake pads.



- Wrap cloths around the left and right brake calipers.
- Use piston resetting device (No. 34 1 531) and locator (No. 34 1 532) to force the pistons in the left and right brake callipers all the way back and hold them in this position.



- Connect container (No. 34 1 611) with threaded adapter (No. 34 1 612) to front wheel-circuit reservoir (1).
- Slowly fill the container with fresh brake fluid until it is approximately 1/2 full.



Fluids and lubricants

Brake fluid	Hydraulic systems	
-------------	-------------------	--



Warning

Failure to bleed the various parts of the system in the correct sequence can enable air to remain in the system.

Always start at the brake caliper with the longer brake pipe.

- Connect the brake bleeding device to the bleed screw of the right brake caliper, but **do not switch on**.
- Use a cable tie to secure the hose of the brake bleeding device to the bleed screw.



Warning

Self-diagnosis is not performed unless both brake levers are in their fully released positions. Only the RESIDUAL BRAKING FUNCTION is available until self-diagnosis is completed.

Before and during self-diagnosis, be sure to leave both brake levers in their fully released positions.

- Switch on the ignition.
- Very gently pull the handbrake lever until the pump just starts up.



Warning

Air can be drawn into the system through the fluid replenishing hole if the fluid level in the wheel-circuit reservoir is too low; the system has to be bled again if this happens.

The brake fluid must always be visible in the container, because the piston in the wheel-circuit reservoir must always be covered by the fluid.

- Open the bleed screw, while topping up the container with new brake fluid

if necessary.



Fluids and lubricants

Brake fluid	Hydraulic systems	
-------------	-------------------	--

- Pump out the brake fluid with virtually no pressure to begin with, then vary the brake pressure.



Note

The higher the brake pressure the faster the fluid is pumped through the system, which means that the level in the wheel-circuit reservoir drops all the more rapidly.

- Continue pumping off brake fluid until it emerges clear and free from air bubbles.
- Close the bleed screw.



Tightening torques

Bleed screw in brake caliper	
------------------------------	--

10 Nm

- Release the brake lever.
- Disconnect the brake bleeding device from the bleed screw.
- Connect the brake bleeding device to the bleed screw of the left brake caliper, but **do not switch on**.
- Use a cable tie to secure the hose of the brake bleeding device to the bleed screw.
- The procedure for changing the brake fluid in the left brake caliper is the same as that for the right caliper.
- When the brake fluid emerges clear and free of bubbles, continue pumping until the fluid in the transparent threaded adapter and hose of the container just disappears from view.
- Close the bleed screw.



Tightening torques

Bleed screw in brake caliper	
------------------------------	--

10 Nm

- Release the brake lever and switch off the ignition.
- Disconnect the brake bleeding device from the bleed screw.
- Disconnect the container from the wheel-circuit reservoir.



Warning

When the fluid is changed or the brakes bled, the fluid level in the wheel circuits is initially undefined. The level of fluid in the wheel circuit might be too high or too low.

After changing the fluid and/or bleeding the brakes, always bring the fluid in the wheel circuits to the correct level in accordance with the instructions.

- Top up the fluid in the wheel-circuit reservoir to the "MAX" mark.

(-) Instructions for filling front wheel circuit reservoir

Attention

The front brake lever also applies the rear brakes (integral brakes). Once the brake calipers and brake pads have been removed, operating a brake lever could result in the pistons being pushed out.

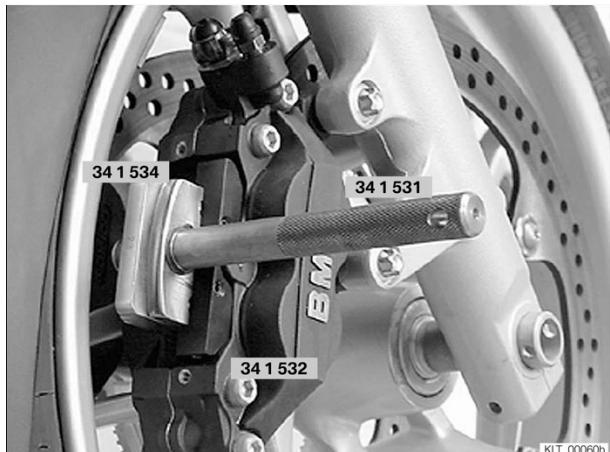
Install the brake caliper with brake pads or insert the piston resetting device.

- Make sure that the front wheel-circuit reservoir is topped up to the "MAX" mark.
- Install adapter 23 (No. 34 1 534) in piston resetting device (No. 34 1 531) and locator (No. 34 1 532) in both front brake calipers and **fully compress** them until the adapter cannot move.

Warning

Self-diagnosis is not performed unless both brake levers are in their fully released positions. Only the RESIDUAL BRAKING FUNCTION is available until self-diagnosis is completed.

Before and during self-diagnosis, be sure to leave both brake levers in their fully released positions.

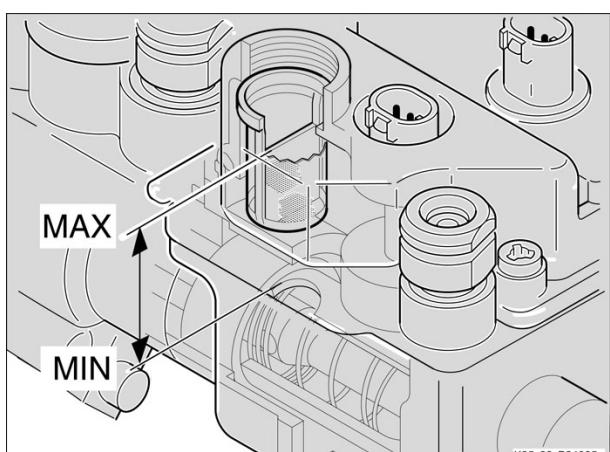


Warning

Air can be drawn into the system through the fluid replenishing hole if the fluid level in the wheel-circuit reservoir is too low; the system has to be bled again if this happens.

The brake fluid must always be visible in the container, because the piston in the wheel-circuit reservoir must always be covered by the fluid.

- Switch on the ignition.
- Pull handbrake lever until the pistons of the front brake calipers are in contact with piston resetting device for integral brakes (No. 34 1 531).
- Top up the brake fluid in the wheel-circuit reservoir until the (MAX) mark in the filler neck is just touching the surface of the fluid.



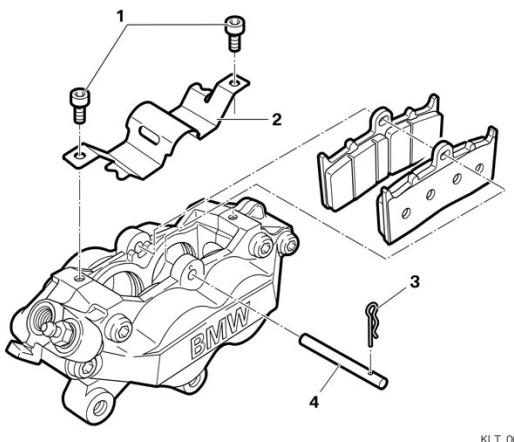
Fluids and lubricants

Brake fluid	Hydraulic systems	

- Using the piston resetting device for integral brakes (No. 34 1 531), force the brake pistons all the way back and remove, together with adapter 23 (No. 34 1 534).
- Hand-tighten the cap of the wheel-circuit reservoir.
- Replace the front brake pads after removal, if necessary.

► Installing front left brake pads

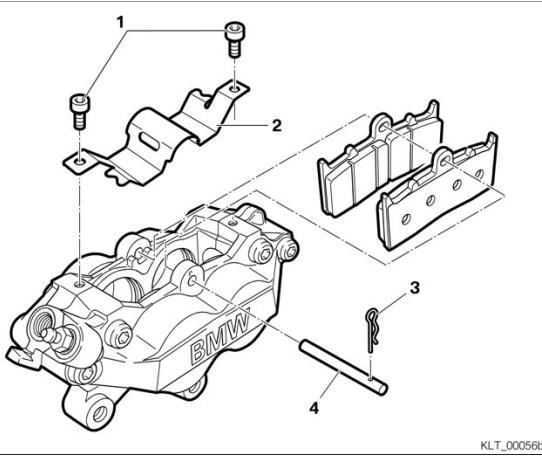
- Install the brake pads; if necessary, force back the pistons just far enough to allow the brake pads to be inserted.



Technical data

Colour of identification mark, brake caliper and brake pads, front		Red	
--	--	-----	--

- Install retaining pin (4) and split-pin keeper (3).
- Install spring plate (2) with screws (1).



► Installing front right brake pads

- Install the brake pads; if necessary, force back the pistons just far enough to allow the brake pads to be inserted.



Technical data

Colour of identification mark, brake caliper and brake pads, front		Red	
--	--	-----	--

- Install retaining pin (4) and split-pin keeper (3).
- Install spring plate (2) with screws (1).



Warning

Self-diagnosis is not performed unless both brake levers are in their fully released positions. Only the RESIDUAL BRAKING FUNCTION is available until self-diagnosis is completed.

Before and during self-diagnosis, be sure to leave both brake levers in their fully released positions.

-
- Check operation of the brake system with the ignition switched on.



Note

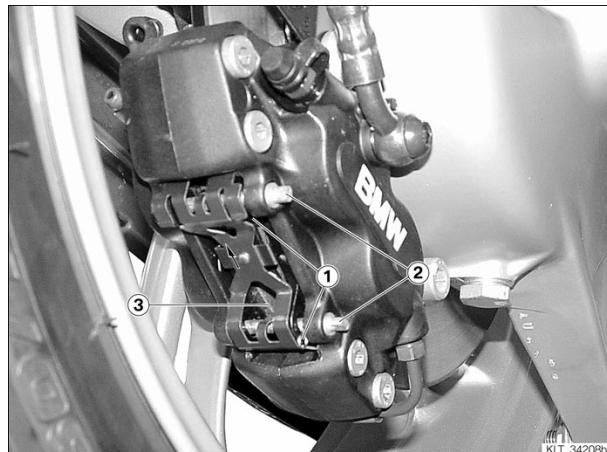
After all the work on the brake system has been completed, perform a bleed test using the **BMW Motorrad** diagnostic system and check the fault code memory.

(-) Removing rear brake pads

- Remove split pins (1) from retaining pins (2).
- Remove retaining pins (2) and retaining plate (3).



Attention



The front brake lever also applies the rear brakes (integral brakes). Once the brake calipers and brake pads have been removed, operating a brake lever could result in the pistons being pushed out.

Do not operate the brakes with a brake caliper removed.

Install the brake caliper with brake pads or insert the piston resetting device.

- Remove brake pads.

(-) Bleeding rear wheel circuit



Warning

Mistakes can be made in repair and maintenance routines if work is carried out by persons who have not received the correct training, or in the event of non-compliance with the specified instructions.

All repair and maintenance work on the **BMW Motorrad Integral ABS** must be performed by trained, qualified specialists.

Comply with all maintenance and repair instructions and always work through the various steps in the correct order.



Warning

Brake fluid is hygroscopic, which means that its boiling point drops once the container has been opened.

Use only new brake fluid from freshly opened containers.



Warning

If there are air bubbles trapped in the brake system, rapid pumping can cause them to break down and form a multitude of tiny bubbles which in turn cause the brake fluid to foam. This would mean that small quantities of entrained air would escape detection in the bleed test with the **BMW Motorrad** diagnostic system, and braking efficiency would be significantly impaired as a result.

When performing maintenance and repair work on the **BMW Motorrad Integral ABS**, always operate the brakes slowly. Do not pump quickly or vigorously.



Attention

Brake fluid attacks paintwork, plastic and rubber parts.

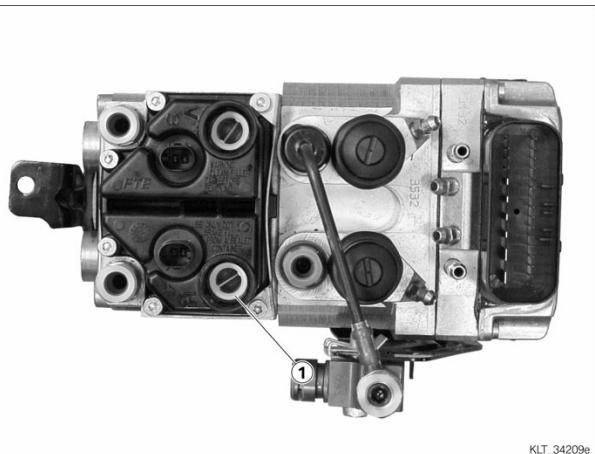
Do not allow brake fluid to come into contact with paintwork, plastic or rubber parts.

Attention



If plugs are disconnected from the pressure modulator, there is a possibility of dirt and brake fluid penetrating inside the housing and causing damage.

Do not disconnect the plugs from the pressure modulator.



- Screw container with filler adapter (No. 34 1 611), (No. 34 1 612) onto rear wheel-circuit reservoir (1).
- Slowly fill container with fresh brake fluid until it is approximately 1/3 full.



Fluids and lubricants

Brake fluid	Hydraulic systems	
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- Connect the brake bleeding device to the inboard bleed screw (wheel side) of the brake caliper, but **do not switch on**.
- Use a cable tie to secure the hose of the brake bleeding device to the bleed screw.



Warning

Self-diagnosis is not performed unless both brake levers are in their fully released positions. Only the RESIDUAL BRAKING FUNCTION is available until self-diagnosis is completed.

Before and during self-diagnosis, be sure to leave both brake levers in their fully released positions.

- Switch on the ignition.



Warning

Air can be drawn into the system through the fluid replenishing hole if the fluid level in the wheel-circuit reservoir is too low; the system has to be bled again if this happens.

The brake fluid must always be visible in the container, because the piston in the wheel-circuit reservoir must always be covered by the fluid.

- Very gently press the footbrake lever until the pump just starts up.
- Open the bleed screw, while topping up the container with new brake fluid if necessary.



Fluids and lubricants

Brake fluid	Hydraulic systems	
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- Pump out the brake fluid with virtually no pressure to begin with, then vary the brake pressure.



Note

The higher the brake pressure the faster the fluid is pumped through the system, which means that the level in the wheel-circuit reservoir drops all the more rapidly.

- Continue pumping off brake fluid until it emerges clear and free from air bubbles.
- Close the bleed screw.

	Tightening torques
	Bleed screw in brake caliper
	10 Nm

- Release the footbrake lever.
- Disconnect the brake bleeding device from the bleed screw.
- Connect the brake bleeding device to the outboard bleed screw (drive side) of the brake caliper, but **do not switch on**.
- Use a cable tie to secure the hose of the brake bleeding device to the bleed screw.
- Repeat the procedure to bleed the system at the outboard bleed screw in the same way as at the inboard bleed screw.
- When the brake fluid emerges clear and free of bubbles, continue pumping until the fluid in the transparent threaded adapter and hose of the container just disappears from view.
- Close the bleed screw.

	Tightening torques
	Bleed screw in brake caliper
	10 Nm

- Release the footbrake lever and switch off the ignition.
- Disconnect the brake bleeding device from the bleed screw.
- Disconnect the container from the wheel-circuit reservoir.



Warning

When the fluid is changed or the brakes bled, the fluid level in the wheel circuits is initially undefined. The level of fluid in the wheel circuit might be too high or too low.

After changing the fluid and/or bleeding the brakes, always bring the fluid in the wheel circuits to the correct level in accordance with the instructions.

- Top up the fluid in the wheel-circuit reservoir to the "MAX" mark.

(-) Instructions for filling rear wheel circuit reservoir

- Top up fluid in rear wheel-circuit reservoir to the "MAX" mark if necessary.
- Install Integral piston resetting device ([No. 34 1 591](#)) with adapter ([No. 34 1 535](#)) in the rear brake caliper and **fully compress** the device.



Warning

Self-diagnosis is not performed unless both brake levers are in their fully released positions. Only the RESIDUAL BRAKING FUNCTION is available until self-diagnosis is completed.

Before and during self-diagnosis, be sure to leave both brake levers in their fully released positions.

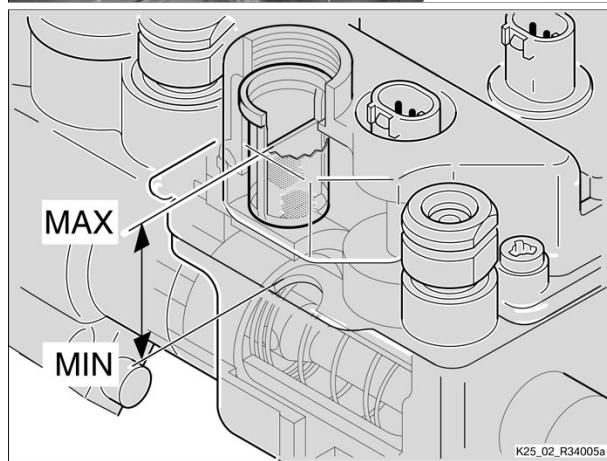


Warning

Air can be drawn into the system through the fluid replenishing hole if the fluid level in the wheel-circuit reservoir is too low; the system has to be bled again if this happens.

The brake fluid must always be visible in the container, because the piston in the wheel-circuit reservoir must always be covered by the fluid.

- Switch on the ignition.
- Operate the footbrake lever until the pistons of the rear brake caliper are in contact with Integral piston resetting device (No. 34 1 591) and adapter (No. 34 1 535).
- Top up the brake fluid in the wheel-circuit reservoir until the (MAX) mark in the filler neck is just touching the surface of the fluid.



Fluids and lubricants

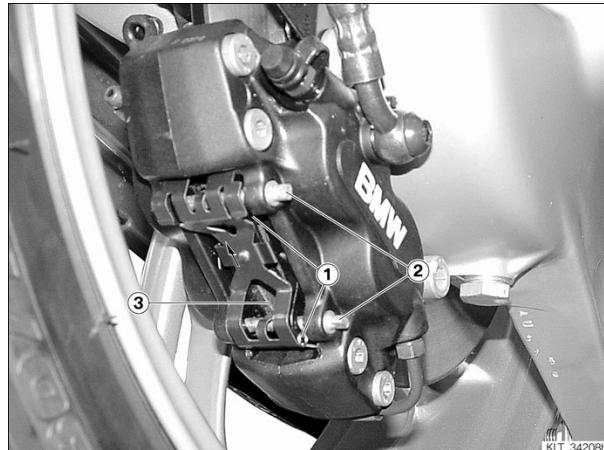
Brake fluid	Hydraulic systems	
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- Remove Integral piston resetting device (No. 34 1 591) and adapter (No. 34 1 535).
- Hand-tighten the cap of the rear wheel-circuit reservoir.
- Replace the rear brake pads after removal, if necessary

► Installing rear brake pads

- Install the brake pads; if necessary, press back the pistons just far enough to allow the brake pads to be inserted.
- Install retaining plate (3) and retaining pins (2).
- Install split-pin keepers (1) in retaining pins (2).



Warning

Self-diagnosis is not performed unless both brake levers are in their fully released positions. Only the RESIDUAL BRAKING FUNCTION is available until self-diagnosis is completed.

Before and during self-diagnosis, be sure to leave both brake levers in their fully released positions.

- Check operation of the brake system with the ignition switched on.

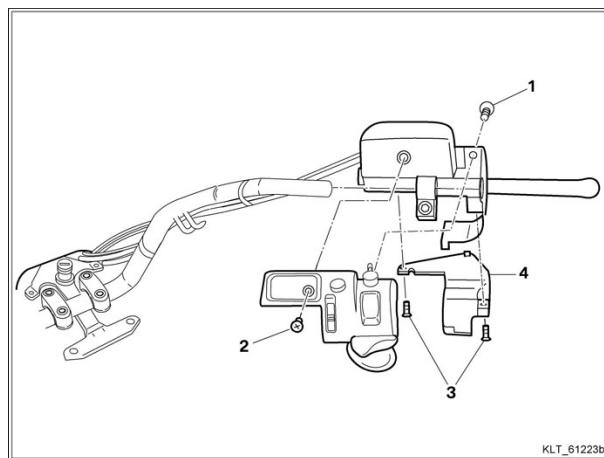


Note

After all the work on the brake system has been completed, perform a bleed test using the **BMW Motorrad** diagnostic system and check the fault code memory.

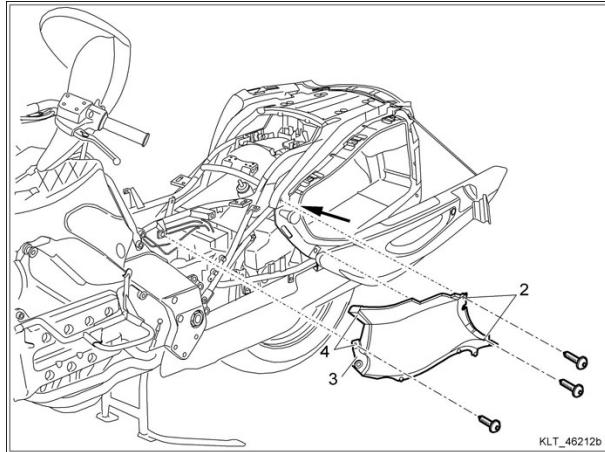
(-) Securing right multifunction switch

- Secure the multifunction switch with screws (1 and 2).
- Install bottom cover (4) with screws (3).



(-) Installing left battery cover

- Install battery cover (3) with screws (2, 4).
- Install the screw with washer (arrow) in the cover.
- Close the left case.



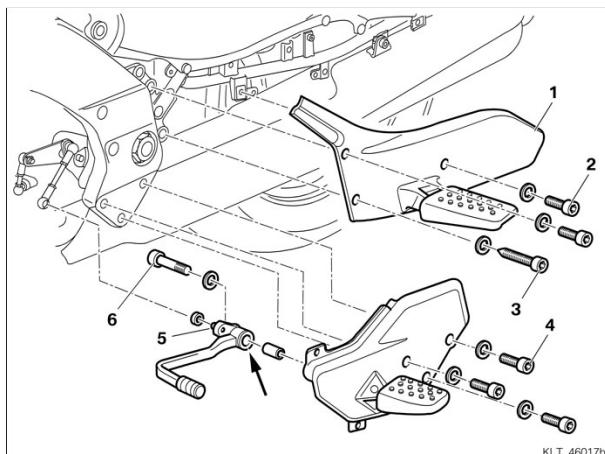
(-) Installing rear left footrest plate

- Clean the threads and install rear footrest plate (1) with screws (2, 3).



Note

The front, long pointed-tip screw of the left footrest plate is also a retainer for the battery carrier.



Tightening torques

Footrest plate to frame

21 Nm	
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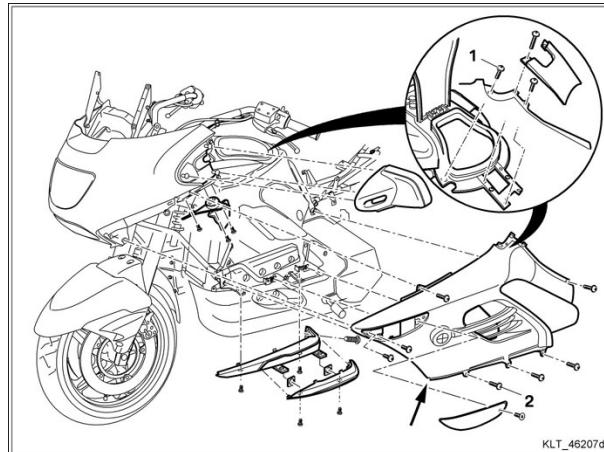
(-) Installing left side panel

- Hold the side panel in position.
- Push pin (3) into rubber grommet (4) of the battery cover.

- When installing, make sure that the bottom front corner (arrow) of the fairing side panel is correctly positioned relative to the engine spoiler.
- Install screws (1).
- Install screws (2).

Tightening torques

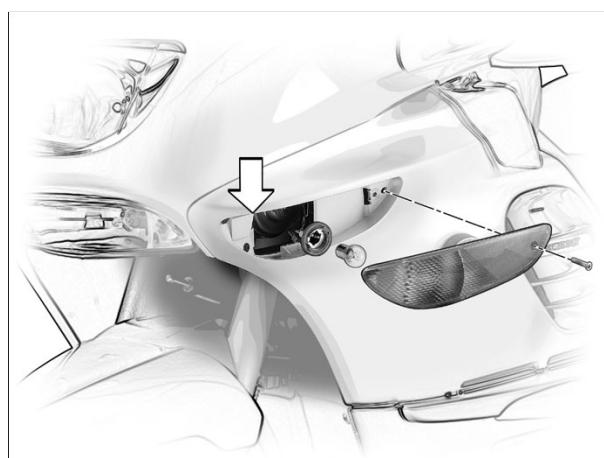
Side panel, left



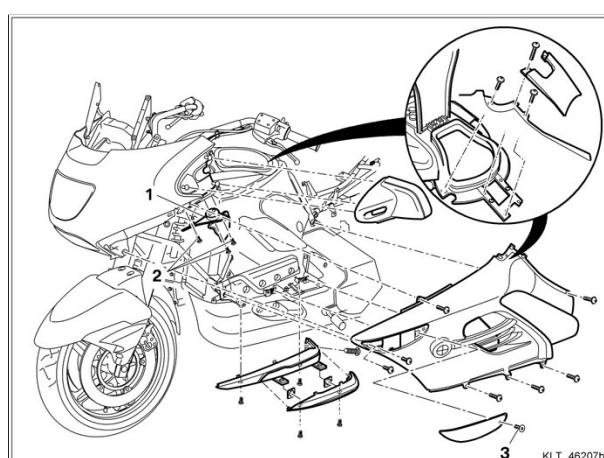
Loosely install all screws then tighten, working in counter-clockwise sequence.

2 Nm

(-) Installing left flashing turn indicator



- Insert the turn indicator bulb.
- Engage the turn indicator housing (arrow).
- Install the screw to secure the turn indicator housing.

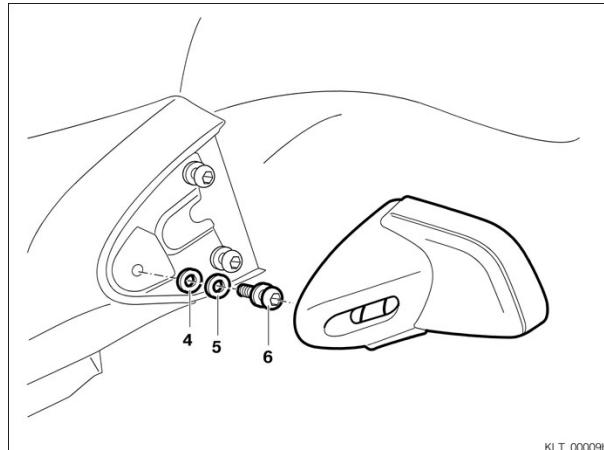


(-) Installing left fin

- Install fin (1) with screws (2).

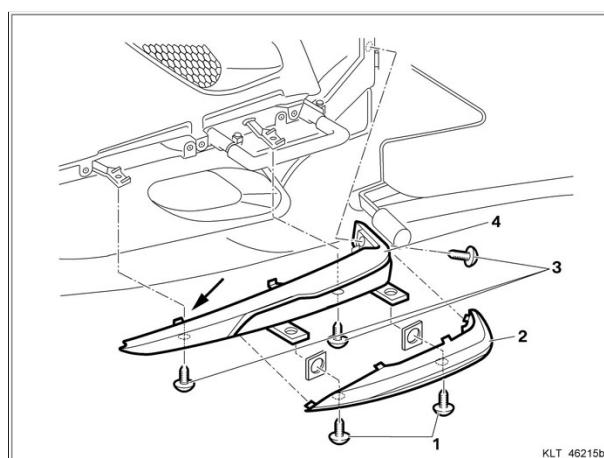
(-) Installing left mirror

- Position the mirror on the 3 securing pins (6).
- Tap the mirror housing gently to engage it, first at the front and then at the rear.
- Check that the gap is parallel and, if necessary, install washers (4, 5) to adjust the gap.



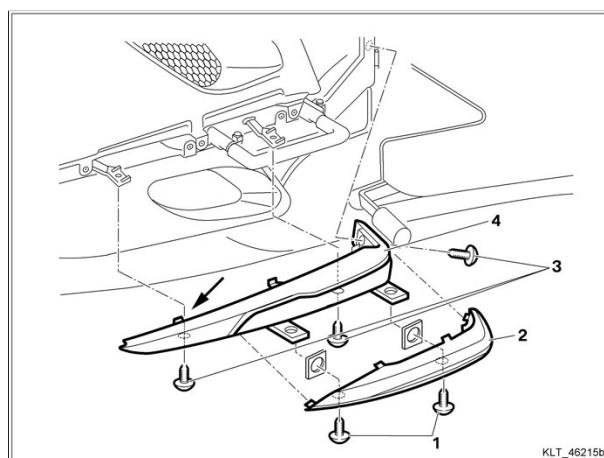
(-) Installing rubbing strip, left

- Settle the rubbing strip into position, making sure that all three hooks (arrow) engage the fairing side panel.
- Secure the rubbing strip (4) with screws (3).



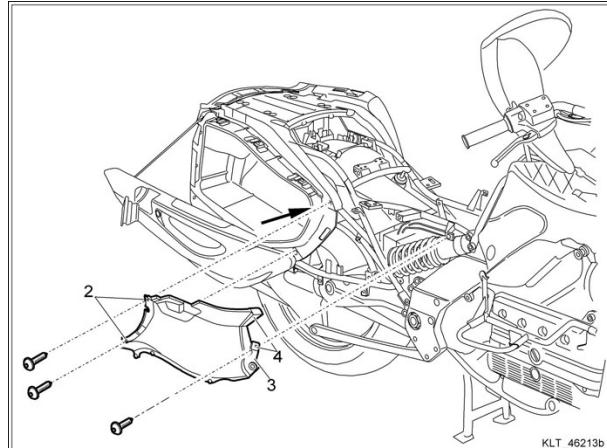
(-) Installing rubbing-strip finisher, left

- Install rubbing-strip finisher (2) on rubbing strip (4).
- Install screws (1).



(-) Installing right battery cover

- Install battery cover (3) with screws (2, 4).
- Install the screw with washer (arrow) in the cover.
- Close the right case.



(-) Installing rear seat

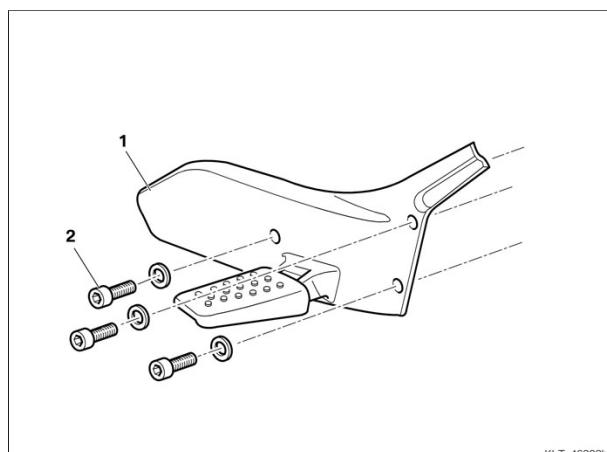
- Install 2 screws to secure the rear seat.

	Tightening torques
Seat, rear, to rear frame	
9 Nm	

(-) Installing rear right footrest plate

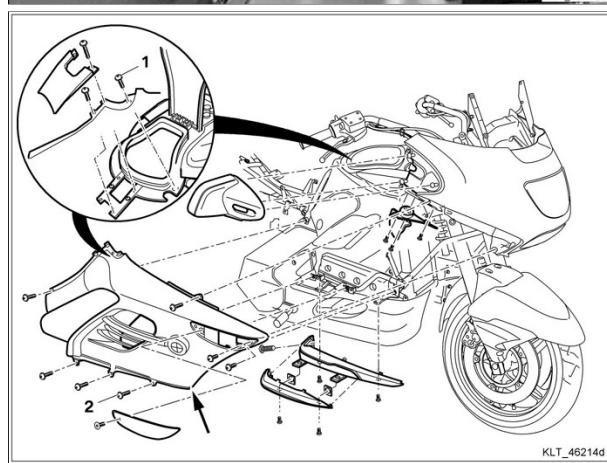
- Clean the threads and install rear footrest plate (1) with screws (2).

	Tightening torques
Footrest plate to frame	
21 Nm	



(-) Installing right side panel

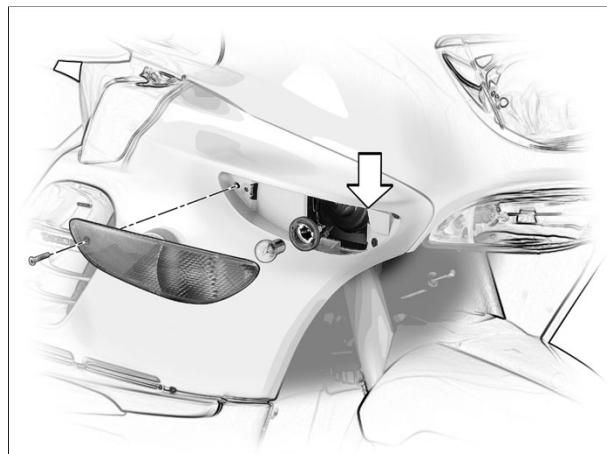
- Hold the side panel in position.
- Push pin (3) into rubber grommet (4) of the battery cover.



- When installing, make sure that the bottom front corner (arrow) of the fairing side panel is correctly positioned relative to the engine spoiler.
- Install screws (1).
- Install screws (2).

Tightening torques	
Side panel, right	
	Loosely install all screws then tighten, working in clockwise sequence.
	2 Nm

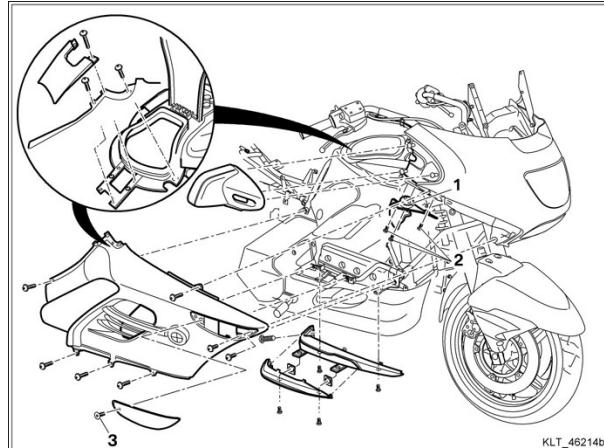
(-) Installing right flashing turn indicator



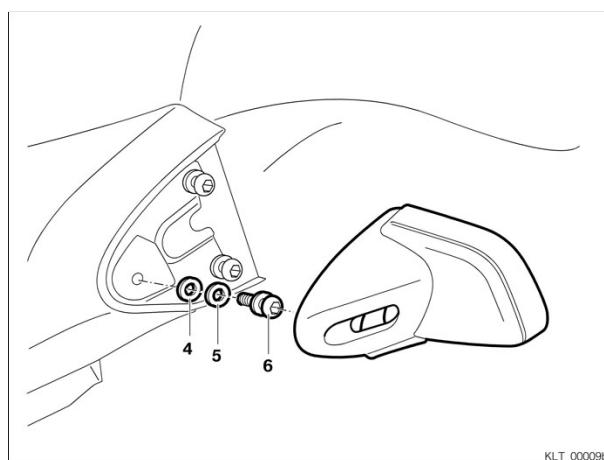
- Insert the turn indicator bulb.
- Engage the turn indicator housing (arrow).
- Install the screw to secure the turn indicator housing.

(-) Installing right fin

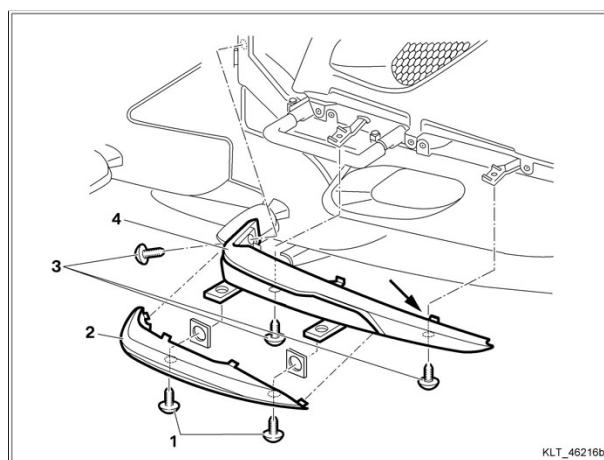
- Install fin (1) with screws (2).



(-) Installing right mirror

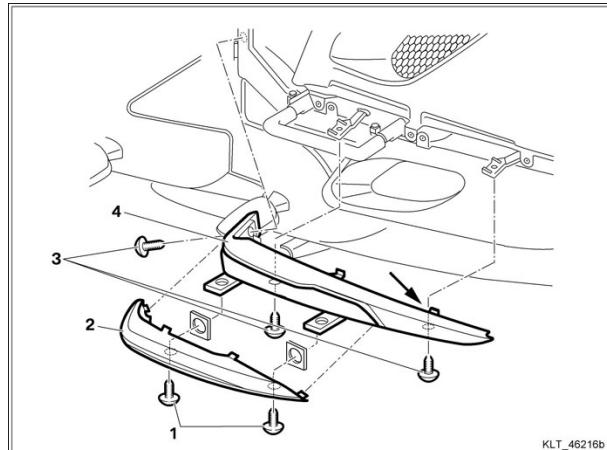


(-) Installing rubbing strip, right



(-) Installing rubbing-strip finisher, right

- Install rubbing-strip finisher (2) on rubbing strip (4).
- Install screws (1).



(-) Installing tank cover bottom section

- Work tank cover bottom section (2) up into position and engage.
- Install screws (1).

