

# Maintenance BMW Integral ABS



R 1150 R

**BMW Motorrad  
After Sales**

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|                                  |    |   |
|----------------------------------|----|---|
| <b>Model</b>                     |    | <b>R 1150 R</b>                         |
| <b>Connection</b>                |    |   |
| <b>18 Exhaust system</b>         |    |   |
| Manifold to cylinder head        | Nm | 21                                      |
| Clamp for manifold               | Nm | 45<br>(apply Optimoly TA to clamp seat) |
| Front silencer to manifold       | Nm | 45<br>(apply Optimoly TA to clamp seat) |
| Silencer to main stand lugs      | Nm | 20                                      |
| Silencer to rear frame at top    | Nm | 35                                      |
| Oxygen sensor to silencer        | Nm | 45<br>(apply Optimoly TA to thread)     |
| End cap to rear silencer         | Nm | 8<br>(threads greased)                  |
| Bracket to rear silencer         | Nm | 15<br>(threads greased)                 |
| <b>Model</b>                     |    | <b>R 1150 R</b>                         |
| <b>Connection</b>                |    |   |
| <b>21 Clutch</b>                 |    |   |
| Clutch housing                   |    |   |
| Closing torque                   | Nm | 40<br>(oil screw threads lightly)       |
| Wrench angle                     | °  | 32                                      |
| Housing cover to housing         | Nm | 12                                      |
| Clutch line to handlebar fitting | Nm | 14                                      |
| Slave cylinder to gearbox        | Nm | 9                                       |
| Grub screw in filler adapter     | Nm | 10                                      |

## Checking the shipping pallet for damage

- When the motorcycle arrives, check the packing material immediately for damage and, if necessary, examine the contents for consequential damage.



### In case of damage in Germany

- Note the damage on the delivery slip.
- Read the information sheet on damage in transit.
- Notify supplier (e.g. freight company or DB) and Bavaria Wirtschaftsagentur GmbH  
Abteilung ZW - 12  
80788 München  
Tel. 089/14327-632  
Fax 089/14327-709  
without delay.

### In case of damage in importer markets

- Note the damage on the delivery slip.
- Comply with specific national market procedures.  
In case of doubt, please submit enquiries to:  
Bavaria Wirtschaftsagentur GmbH  
Abteilung ZW - 12  
D-80788 München  
Tel. +49 89/14327-632  
Fax +49 89/14327-709
- Notify the supplier (e.g. freight company) without delay.

## 00 11 Unpacking the motorcycle

- Lever off the cover.
- Take out the separate pack of items:
  - Documentation
  - Optional Speedster fairing, if applicable
  - Optional seat cover, if applicable
- Force off cross-struts with a suitable lever.

### Important:

Do not knock the cross-struts out or the motorcycle may be damaged.

- Remove the end-walls.
- Remove the side-walls.

### Important:

Remove any nails projecting from the base of the packing or lying on the base or on the floor.

- Loosen the front tensioning straps.
- Loosen the rear tensioning straps.
- Push the motorcycle forwards off the pallet.
- Remove the set of keys from the left rear footrest.
- Dispose of the packing materials in an environmentally responsible manner as described in Circular 23/91 - Sales.

## 00 11 Installing remaining items on motorcycle

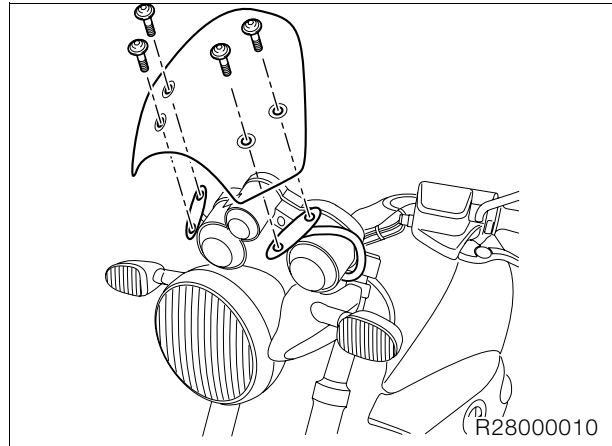
- Fit the rear-view mirror.



### Tightening torque:

Mirror on handlebar fitting ..... 10 Nm

## 71 63 099 Mounting the Speedster fairing



- Carefully tighten the Speedster fairing securing screws by hand.



### Tightening torque:

Fairing on fairing bracket ..... 2 Nm

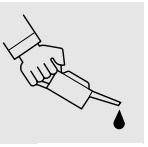
## 00 11 Inspecting motorcycle for damage

- Check for faults.
- "Express handling service" to:  
BMW Motorrad  
UX-VS-1  
Fax number +49 (0)89-382-33220
- Rectify the fault.
- If parts are needed, order them through the usual channel.
- Costs are to be processed through the warranty claim system (stage 4). Defect codes:
 

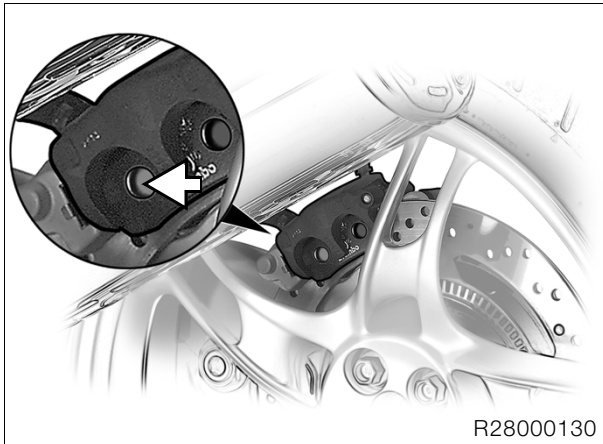
|                             |                |
|-----------------------------|----------------|
| – Parts missing             | 10 01 00 00 00 |
| – Parts damaged             | 10 02 00 00 00 |
| – Incorrect parts delivered | 10 03 00 00 00 |

## Checking that delivery is complete

- All optional extras
- Toolkit
- Documentation



## Checking rear brake pad wear



- Make sure that the brake disc is not visible through the bore (arrow) in the inner brake pad.
- If necessary, check/measure thickness of brake pads.

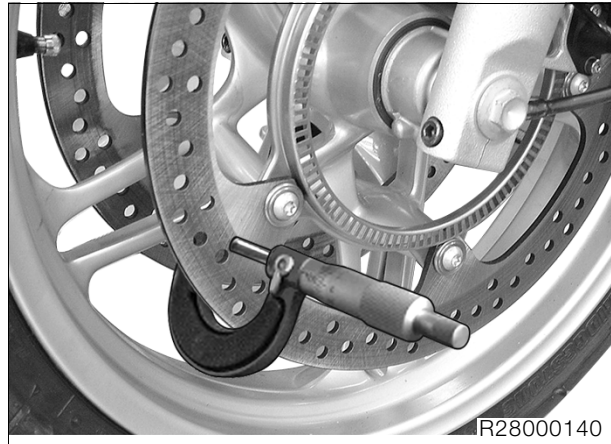
### **Important:**

Brake pad thickness must not fall below the minimum value. Always replace the brake pads as a complete set.

**Minimum pad thickness:** ..... 1.0 mm (0.3937 in)

- If the brake disc is visible through the bore in the wheel-side brake pad, the brake lining is worn to its minimum permissible thickness.

## Checking brake disc wear



- Examine the brake discs carefully for cracks, damage, distortion, wear and score-marks.

### **Brake disc wear limit:**

**front:**..... 4.5 mm (0.1771 in)  
**rear:**..... 4.5 mm (0.1771 in)

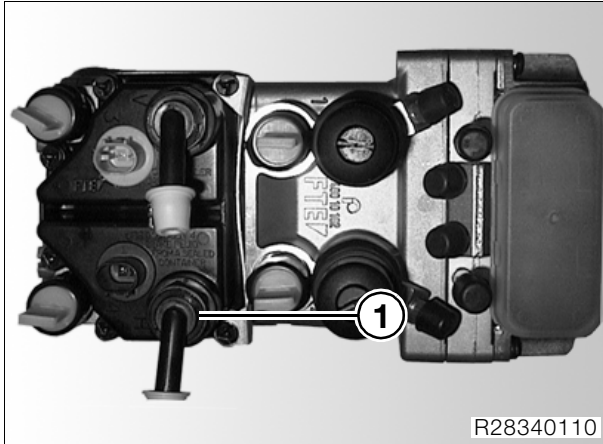
## 34 00 080 [Integral ABS] Bleeding/changing brake fluid in front wheel circuit

- Remove fuel tank.



### Important:

Do not allow brake fluid to come into contact with painted motorcycle parts as brake fluid destroys paint.

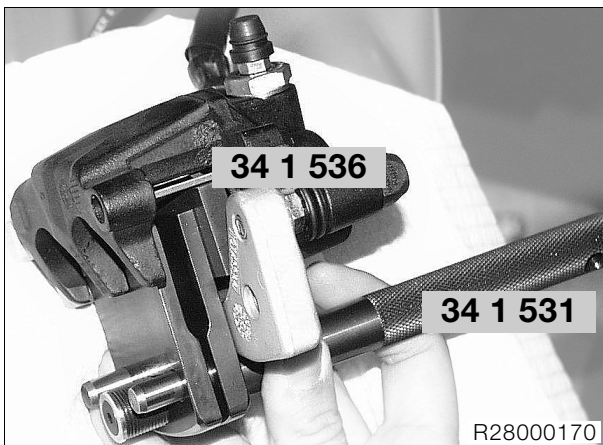


- Open rear wheel circuit reservoir (1).
- Draw off the old brake fluid from the wheel circuit reservoir.
- Remove rear brake pads.
- If necessary, press the brake pistons back by hand so that the reset device, **BMW No. 34 1 531**, can be used.



### Important:

Only use the piston reset device, **BMW No. 34 1 531**, if the wheel circuit reservoir cover is open.



- Use the adapter, **BMW No. 34 1 536**, instead of the external brake pad.

- With the handle outwards, use the reset device, **BMW No. 34 1 531**, on the rear brake caliper to press back the pistons completely and to position them.
- Wrap a cloth around the brake caliper.
- **[bleed only]** The rear wheel circuit should be bled only.  
(→ 00.49)
- Draw off the old brake fluid from the wheel circuit reservoir.
- Refill the rear wheel circuit reservoir (1) with new brake fluid.
- Connect the brake bleeding device to the bleed screw, but **do not switch it on**.



### Note:

If necessary, use a cable tie to secure the bleed hose to the bleed screw.

- Switch on the ignition

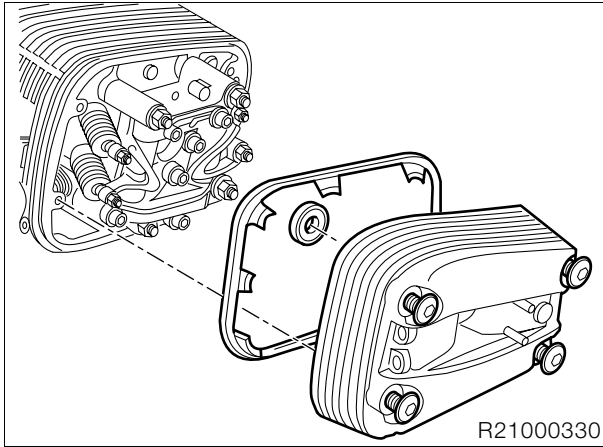


### Note:

After switching on the ignition, always wait for the BMW Integral ABS to complete its self-diagnosis. Do not operate the brake lever until self-diagnosis is complete.

## 11 12 009 Tightening cylinder heads

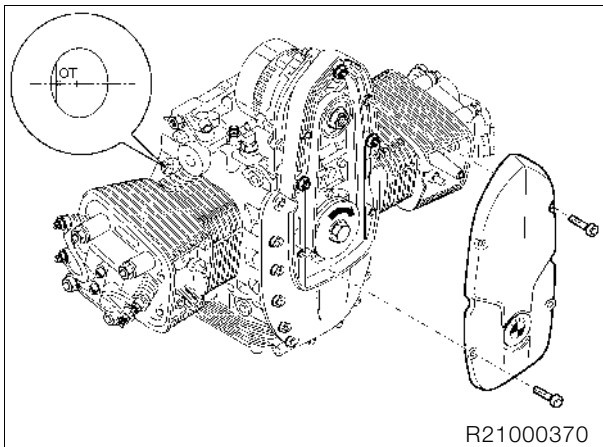
(Inspection I)



- Remove cylinder head cover.



**Important:**  
Catch escaping oil.



- Select a gear and turn the rear wheel, or set the piston to TDC on the ignition stroke by turning the belt pulley.

### Top dead centre on ignition stroke:

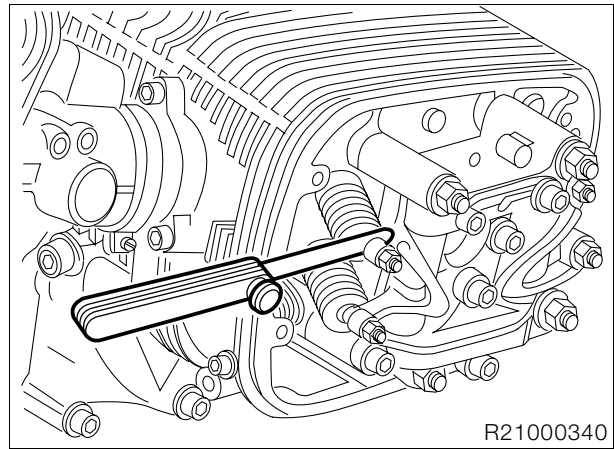
- The TDC mark is visible and the inlet and exhaust valves in the cylinder concerned are closed.
- Tighten cylinder head nuts.

### Tightening procedure after 1,000 km (600 miles)

1. Tighten the cylinder head nuts in a crosswise pattern one by one
  - 1.1. Slacken off one nut at a time
  - 1.2. Tighten nut to initial torque ..... 20 Nm
  - 1.3. Angle tighten nut ..... 180°
2. Undo/tighten M 10 bolt ..... 40 Nm

## 11 34 004 Checking/adjusting valve clearances

(Inspections I, II and III)



- Check valve clearance with feeler gauge and, if necessary, correct with adjusting screw.

### Valve clearances with engine cold (max. 35 °C/95 °F):

|                     |                     |
|---------------------|---------------------|
| Intake valve .....  | 0.15 mm (0.0059 in) |
| Exhaust valve ..... | 0.30 mm (0.0118 in) |



### Tightening torque:

Locknut ..... 8 Nm

- Check valve clearance, it should be possible to pull the feeler gauge between the valve stem and adjusting screw with little resistance.
- Assembly is the reverse of the disassembly procedure.



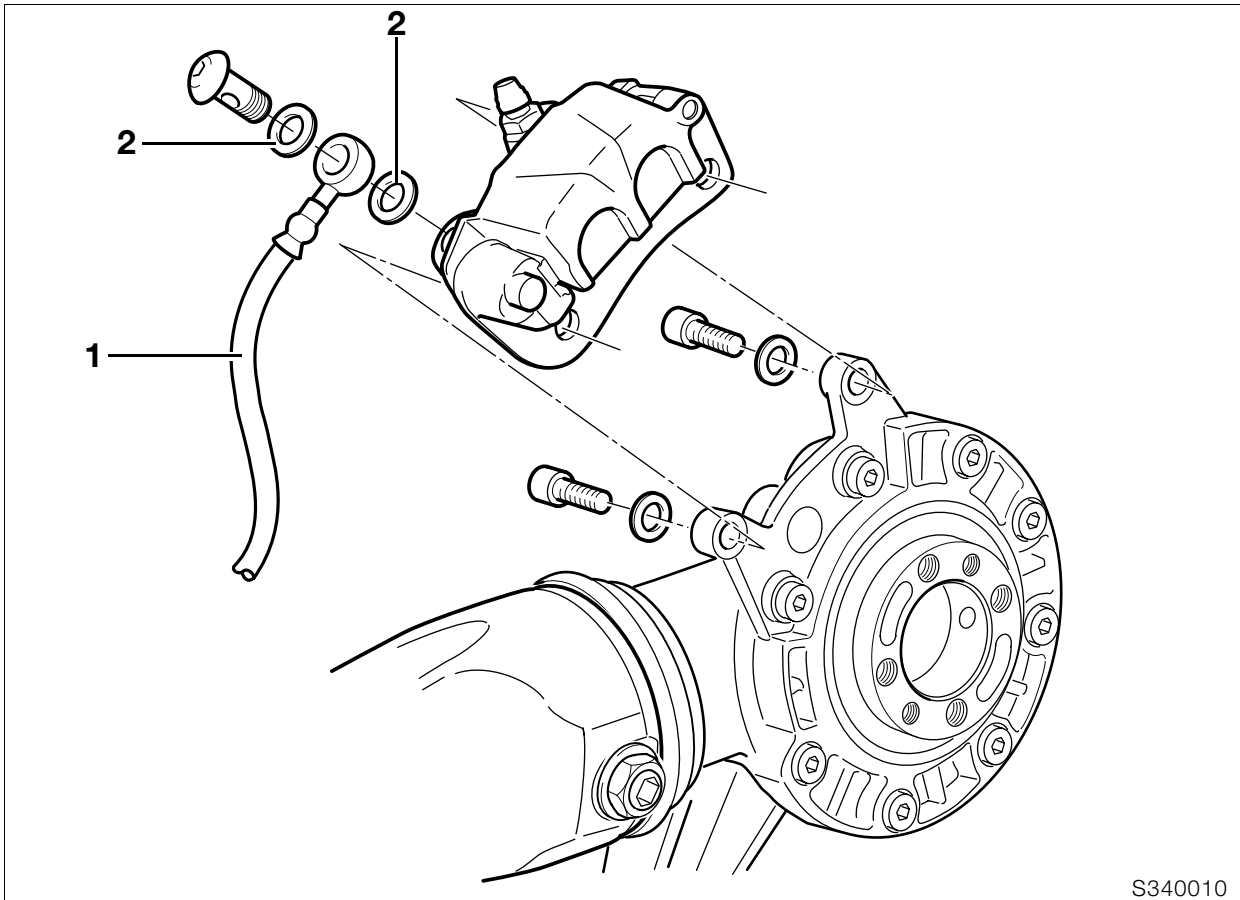
### Important:

Make sure that all seals are correctly seated. Seals and sealing faces must be free from oil and grease.



### Tightening torque:

Cylinder head cover ..... 8 Nm



S340010

### 34 21 Removing and refitting rear brake caliper

#### Important:

Do not allow brake fluid to come into contact with painted motorcycle parts as brake fluid destroys paint.

- Drain the brake system.
- **[Integral ABS]** Drain rear wheel circuit (→ 34.16).
- Disconnect brake line (1) from brake caliper.
- Carefully press back the brake pads/pistons.
- Remove the brake caliper.
- Installation is the reverse of the removal procedure.
- Fill and bleed the brake system.
- **[Integral ABS]** Bleed/fill the rear wheel circuit (→ 34.23).
- To bleed, undo the brake caliper and place it so that the bleed nipple is as high as possible.

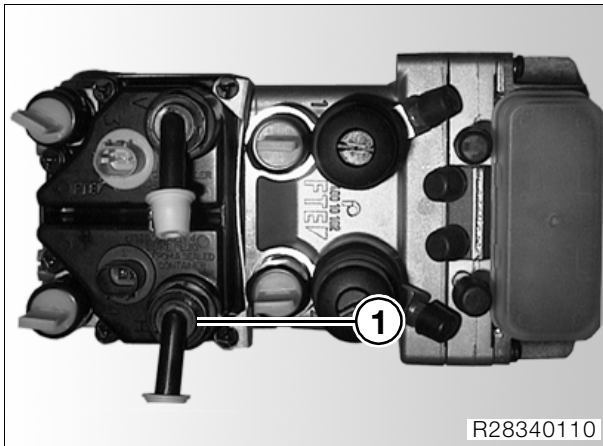
#### Important:

Replace the sealing rings (2) in the brake line. Do not damage brake pads.

#### Tightening torque:

|   |       |
|---|-------|
| Brake caliper to rear wheel drive ..... | 40 Nm |
| Brake hose to brake caliper .....       | 18 Nm |
| Bleed screw to brake caliper .....      | 7 Nm  |

## Bleeding rear wheel circuit



- Open rear wheel circuit reservoir (1).

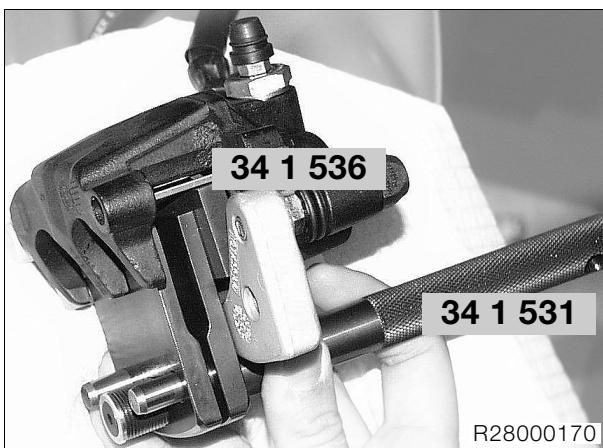
### Important:

To prevent brake fluid from entering the connector, do not release the ABS pressure modulator plug connections.

- Draw off the old brake fluid from the wheel circuit reservoir.
- Remove rear brake pads.

### Important:

Only use the piston reset device, **BMW No. 34 1 531**, if the wheel circuit reservoir cover is open.



- Use the adapter, **BMW No. 34 1 536**, instead of the external brake pad.
- With the handle outwards, use the reset device, **BMW No. 34 1 531**, on the rear brake caliper to press back the pistons completely and to position them.
- Wrap a cloth around the brake caliper.
- Connect the brake bleeding device to the bleed screw, but do not switch it on.
- Switch on the ignition.

### Note:

After switching on the ignition, always wait for the BMW Integral ABS to complete its self-diagnosis. Do not operate the brake lever until self-diagnosis has completed.

- Gently press the footbrake until the pump just starts up.
- Open the bleed screw.
- Drain wheel circuit using a pump.
- Close the bleed screw.
- Release the brake and switch off the ignition.
- Disconnect the brake bleeding device from the bleed screw.

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