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**Electronic Suspension Adjustment ESA**

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– with Electronic Suspension Adjustment (ESA) <sup>OE</sup>

Operation

**Possible adjustments**  
Electronic Suspension Adjustment ESA provides a convenient way of adapting the motorcycle to the load it carries and the surface over which you intend riding. You can adapt the suspension settings for on-road or off-road riding.

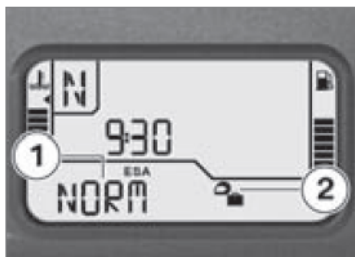
Three spring-preload stages can be combined with any of three damper settings for road riding, while two spring-preload stages can be paired with any of three damper settings for off-riding. The detailed description of the ESA Electronic Suspension Adjustment system starts on page (→ 95).

**Calling up settings**

- Switch on the ignition.



- Press button 1 to view the current setting.



The damping characteristic is shown in panel 1 of the multi-

function display, and spring preload in panel 2.

» The setting shows briefly, then disappears automatically.

**Adjust the suspension damping**

- Switch on the ignition.

▶ You can adjust the damping characteristic while the motorcycle is on the move. ◀



- Press button 1 to view the current setting.

- Repeatedly press button 1 until the setting you want to use appears on the display.

If a road-riding mode has been selected the following can be displayed:

- COME: comfort mode
- NORM: normal mode
- SPORT: sport mode

If an off-riding stage for off-road riding has been selected the following can be displayed:

- SOFT: Soft damping characteristic
- NORM: normal mode
- HARD: Hard damping characteristic

» The setting shown on the display is automatically accepted as the damping characteristic if you allow a certain length of time to pass without pressing button 1. The ESA setting

then automatically disappears from the display.

### Adjust spring preload




- Start the engine.
- ▷ You cannot adjust spring preload while the motorcycle is on the move.◀
- Wait until adjustment completes (reading stops flashing) before pulling away.
- If the temperature is very low, take the weight off the motorcycle before increasing spring preload; if applicable, have your passenger dismount.



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Operation

- Press button 1 to view the current setting.
  - Repeatedly press button 1 until the setting you want to use appears on the display.
- The following can be displayed:

-  One-up
-  One-up with luggage
-  Two-up (with luggage)

The possible settings for off-road riding then appear on the display.

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The riding modes you can select also change accordingly.

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Predominantly smooth terrain



Uneven terrain

» The settings shown on the display are automatically accepted as the spring preload and, if applicable, the damping characteristic if you allow a certain length of time to pass without pressing button 1. The reading flashes while spring preload adjustment is in progress. The ESA setting then automatically disappears from the display.

## Tyres

### Checking tyre pressure



Incorrect tyre pressures impair the motorcycle's handling characteristics and increase the rate of tyre wear.


Always check that the tyre pressures are correct.◀





At high road speeds, tyre valves installed perpendicular to the wheel rim have a tendency to open as a result of centrifugal force.

In order to avoid a sudden loss of tyre pressure, fit a valve cap with rubber sealing ring to the rear tyre and make sure that the cap is screwed on firmly.◀

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Check tyre pressures against the data below.

|  |
|--|
|  Tyre pressure, front |
| - 2.2 bar (one-up, tyre cold)  |

|   |
|---|
|  Tyre pressure, front |
| - 2.5 bar (two-up and/or with luggage, tyre cold)   |

|  |
|--|
|  Tyre pressure, rear |
| - 2.5 bar (one-up, tyre cold)  |
| - 2.9 bar (two-up and/or with luggage, tyre cold)  |

If tyre pressure is too low:

- Correct tyre pressure.

## Headlight

Adjustment for driving on right/driving on left

If the motorcycle is ridden in a country where the opposite rule of the road applies, its asymmetric low-beam headlight will tend to dazzle oncoming traffic.

Have the headlight set accordingly by a specialist workshop,

- Tyre pressure within permitted tolerance.
- Tyre pressure close to limit of permitted tolerance.
- Tyre pressure outside permitted tolerance.

A warning is also issued if tyre pressure drops sharply but stays within the permitted tolerance.

### Temperature compensation

Tyre pressure is a temperature-sensitive variable: pressure increases as tyre temperature rises and decreases as tyre temperature drops. Tyre temperature depends on ambient temperature, on the style of riding and the duration of the ride.

The tyre-pressure readings shown by the multifunction display are temperature-compensated; the reference tyre temperature for these readings

is always 20 °C. The air lines available to the public in petrol stations and motorway service areas have gauges that do not compensate for temperature; the reading shown by a gauge of this nature is the temperature-dependent tyre pressure. In most instances, therefore, these gauge readings will not tally with the pressures shown by the multifunction display.<

### Pressure adaptation

Compare the RDC readings on the multifunction display with the value in the table on the inside cover of the Rider's Manual. Then use the air line to compensate for the difference between the RDC reading and the value in the table.

Example: According to the Rider's Manual, tyre pressure should be 2.5 bar, but the reading in the multifunction display is 2.3 bar, so pressure is low by 0.2 bar. The gauge on the air line shows 2.4 bar. You must now increase tyre pressure by the 0.2 bar difference between the value in the table and the RDC reading; when the air-line gauge shows 2.6 bar, the tyre is inflated to the correct pressure.<

### Electronic Suspension Adjustment ESA

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#### Adjuster, spring preload


In order to ensure rapid adjustment at ambient temperatures below 0 °C, BMW Motorrad recommends adjusting the suspension to the setting for two-up riding and allowing adjustment to

complete before your passenger mounts the motorcycle.

The ESA indicator continues to flash until adjustment completes. Do not attempt to move the motorcycle until adjustment has completed.<

### Off-road settings

The Enduro ESA developed specially for the R 1200 GS incorporates the road-riding modes from other BMW models, plus special off-riding modes enabled by electro-hydraulic basic spring adjustment of the front spring strut. This convenient system of adjusting the suspension to suit very widely differing surfaces enhances the motorcycle's touring and off-riding capabilities.

 In this mode, the spring preload of the front spring strut is increased to about 50 %. The rear spring base setting ad-

justs to the same position. This setting is suitable for off-riding in terrain in which large bumps or holes in the ground are unlikely to be encountered.



This setting brings spring preload of both front and rear spring struts up to maximum. It can be used, for example, in terrain where the likelihood of having to negotiate bumps and holes in the ground necessitates maximum protection against the suspension bottoming out. Ground clearance in this mode is more than in the "one-up" road-riding mode.

Not every ESA setting is suitable for every surface. Try out the various combinations of spring preload and damping until you find the settings that are best suited to your style of riding and the surface.