

BRABUS®

Fitting instructions

Official technology-partners PIRELLI BILSTEIN Continental MOTUL YOKOHAMA ADVAN Member of VDAT

English



The product described in the instructions was developed, produced and checked considering the necessary safety requirements.

In order to ensure a proper and safe function and to rule out danger for persons and objects, this product must be installed appropriately.

Only trained, qualified staff, having the necessary technical experience and tools, should make the installation.

Therefore you have to read and completely understand these instructions.

Before you start please check the content of the supplied parts as detailed below.

Lieferumfang BRABUS:

1x	463-016-01	Ridecontrol-Ecu
1x	463-016-03	Wiring harness base
2x	463-016-04	Cable extension 2.5m
1x	463-016-07	Cable extension 4.0m
2x	463-016-100B_110B	Front shock absorber G463
2x	463-016-200B_210B	Rear shock absorber G463
1x	463-016-80	Automatic damper control-Ecu
1x	463-016-81	Wiring harness for automatic-control
1x	197-018-04	Control button
1x	176-670-91	Spacer kit for button

Required tools:

- Soldering equipment
- Lifting platform with sufficient carrying capacity

Additionally required material:

- Cable ties
- Heat-shrinkable tubing for cable isolation

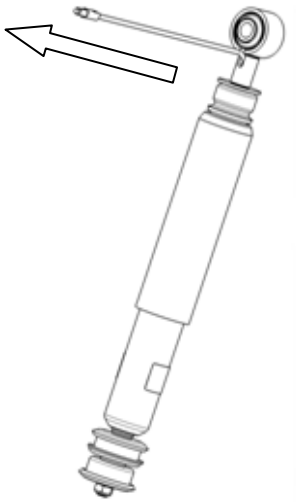
In order to avoid harmful injuries and damages when fitting the suspension components, urgently regard to valid safety requirements, so as the safety instructions of the Mercedes-Benz workshop instructions!

Assembly:

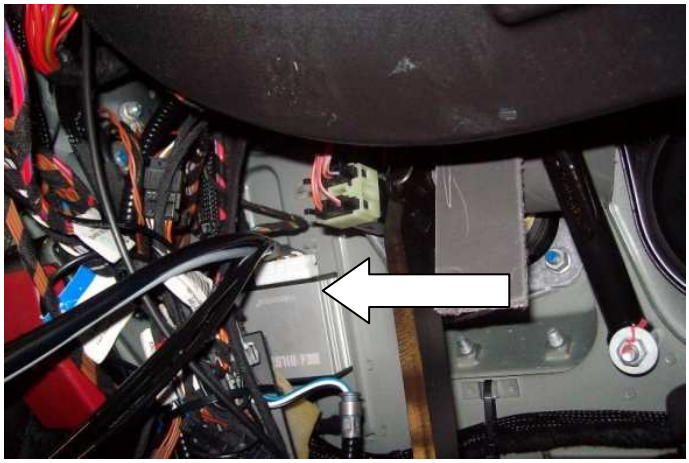
- Remove the blower housing that finds in the engine bay, the lower dashboard panels (left and right) and the engine cover.

- Remove the front and rear standard shock absorbers according to Mercedes-Benz workshop instructions.

- Fit the delivered Brabus Ridecontrol shock absorbers. Please be advised that the shock absorbers article-nos. 463-016-100B are for front use and those with article-nos. 463-016-200B for rear use.
  The tightening torques are the same as those of the standard shock absorbers. Take care for the fitting positions of the front shock absorbers, the damper control cables have to be directed according to the further laying of the wiring.



- Place the Ridecontrol electronic control unit to the driver's side footwell according to figure beside, it gets attached to the front bulkhead using the adhesive tape that finds on the back of the control unit housing.
  The connection for the plug has to face upwards.



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- Route the 4 connection cables for the shock absorbers through the rubber main channel of the front bulkhead into the engine bay.
  The main channel finds above the Ride-Control electronic control unit.

- Connect the cable for the front left shock absorber to the connection cable of the shock absorber, fix the plug connection to standard hoses or wirings that find on top of the frame. Also fix the rest of the cable using cable ties, take care it is protected against any damages.

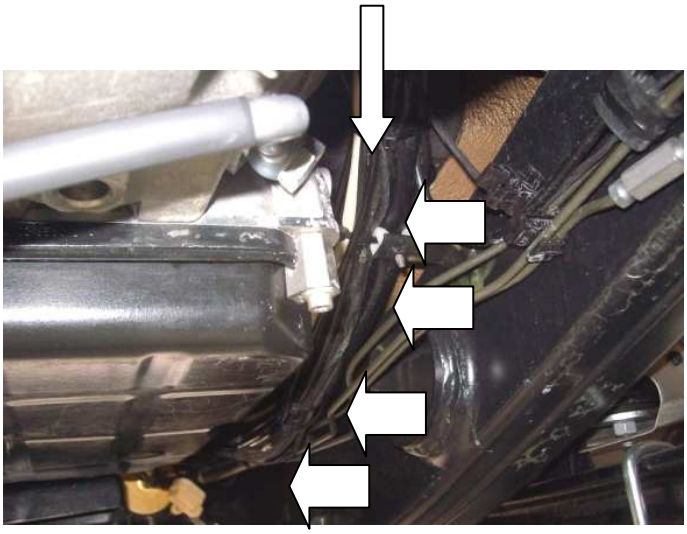


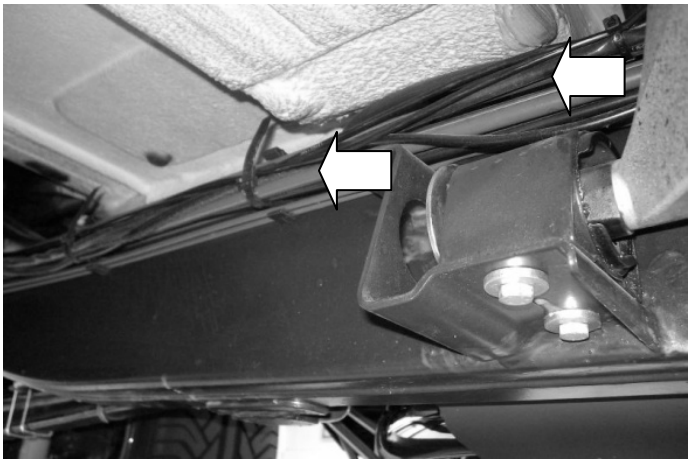
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- Route the cable for the front right shock absorber along the front bulkhead to the shock absorber. Connect the cables (take care for correct polarity) and fix the cable connection on top of the frame using a suitable cable tie.
  Also fix the cable along the whole laying to standard hoses or cables using cable ties. Lay the outstanding cable into a loop and place it below the brake power assist unit. Fix the loop using cable ties and take care the cable is protected against any damages.



- Route the cables for the rear shock absorbers along the laying of the standard MB cables to the rear of the car. Fix it along the whole laying using cable ties and take care it is protected against any damages (heat or rotating parts).







- Connect the cables to the rear left and right shock absorbers and fix the connections on top of the left and right frame using cable ties. For the rear right shock absorber an extension cable is required (delivered).



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- Lay the outstanding cable of the rear right shock absorber into a loop and fix it to the rear frame cross bar using cable ties (figure beside).



- After the cables were routed please check if all connections were properly made (correct polarity) and if the cables were sufficiently fixed.

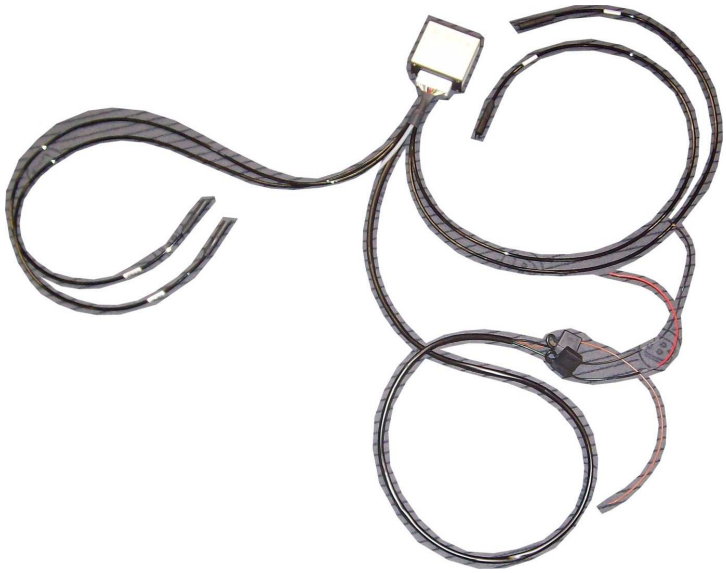
It is possible to connect the plugs and the connection cables in a wrong way, please always regard to the numbers of the pins when performing a connection in order to avoid malfunctions!

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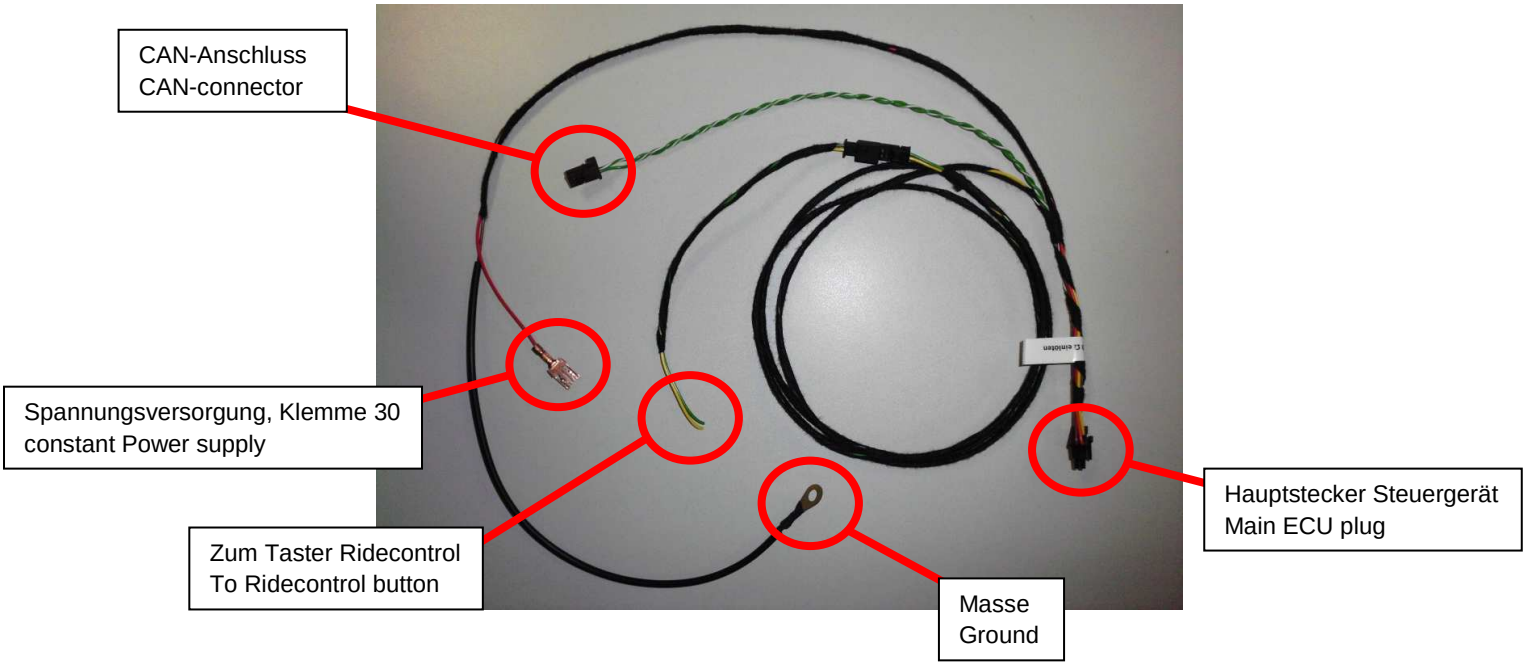
Electrical connections of the electronic control units:

- Included in delivery of the Ridecontrol suspension there are two electronic control units:
  The Ridecontrol Ecu for the shock absorbers and the automatic control-Ecu which automatically switches the shock absorbers from „sport“ to “comfort“-mode.
  The adjustment of the shock absorbers is influenced by the actual speed of the car, the lateral acceleration, the steering angle and the temporal change of the steering angle.

Wiring harness Ridecontrol



Automatic-control wiring harness



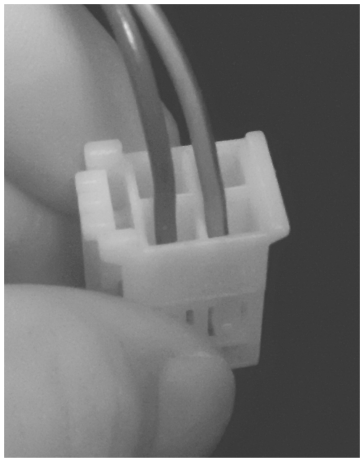
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- Solder the red wire of the Ridecontrol harness parallel to the Wire out of PIN 16 of the OBD plug within the left footwell. Sufficiently isolate the soldering area. Route the brown and black wire to the centre console.
  We recommend to route the wires below the steering-column tube module behind the centre console penalling. Secure the wires using cable ties.

  - Solder the brown wire of the Ridecontrol harness to the ground wire of the additional 12Volt socket (white plug, shown within figure below, within passenger footwell).

  - Solder the black wire of the Ridecontrol harness to the red/green wire of the additional 12Volt socket (white plug, shown within figure below, within passenger footwell).

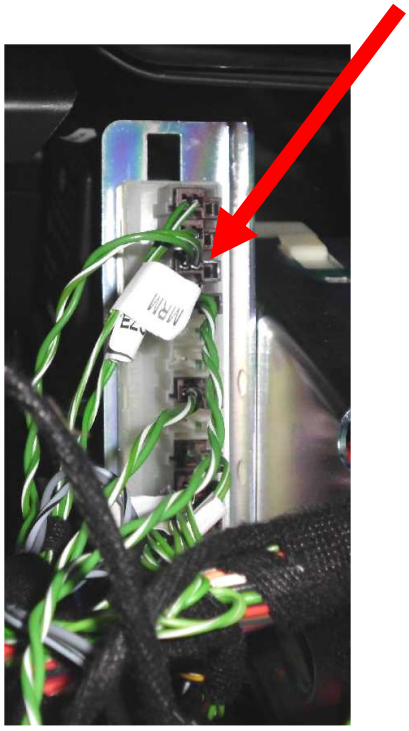




Take care for sufficient isolation of the soldered areas.

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- Attach the brown plug of the Brabus harness into a free port of the CAN dsitributor behind the glovebox (fig. below).

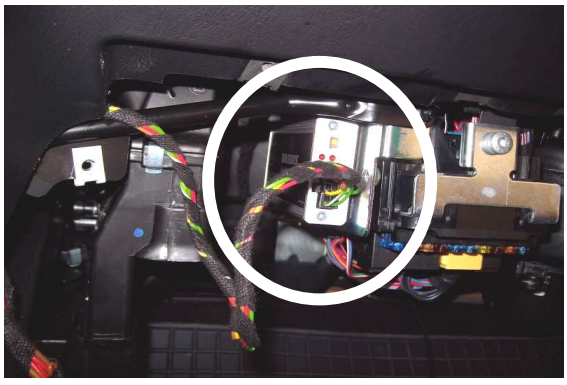


- Attach the control button according to figure below. Therefore remove the 12 Volt socket within the centre console according to Mercedes-Benz workshop instructions. The 12V socket remains connected within the centre console.



- Solder the green and yellow wires of the Brabus harness parallel to the wires of the control button.

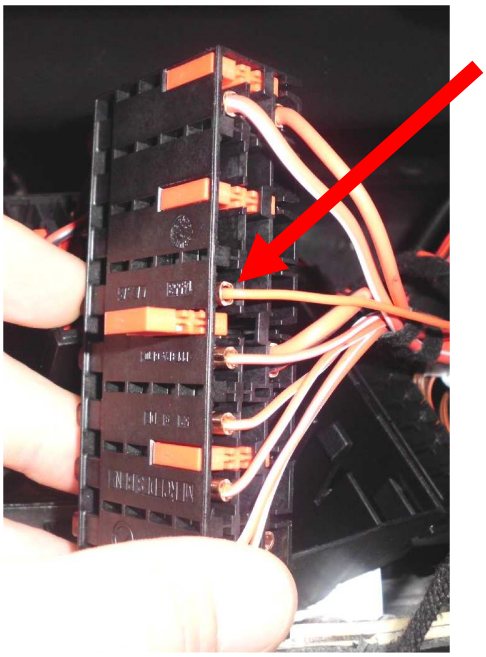
- Remove the protection foil of the adhesive velcro tape and attach the control unit to the stainless steel bracket next to the fuse and relay box according to figure below.



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- Remove the fuse panel shown below (right next to glovebox, remove side panel of dashboard).

- Remove the red latching and attach the cable lug of the red wire to port 15 of the fuse panel (constant power supply). Attach the fuse supplied to port 15.



- Re-attach the latching, bolt the ring lug of the brown wire to the ground terminal at the right lower a-trim (fig. below).



- Connect the main plug of the Brabus harness to the control unit.

  In case that a fault appears within the system, the LED that finds within the button lights up for several times. The number of light ups shows which fault may have occured.

  On the following sides you will find a schedule with malfunctions, possible reasons for those malfunctions and diameters which help finding a possible fault.

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Code	Fehler/ Error	mögliche Lösung/ solutions		Sollwerte/ Control input
Kein/none	keine Anzeige, System außer Funktion/ no blink, system out of order	Sicherung prüfen	check fuse	
		Spannung KL15 (Zündstrom) und KL 30 (Batteriespannung) prüfen	check voltage KL15 (ignition voltage) and KL30 (battery voltage)	6,8 - 16 Volt
		KL 31 (Masse) prüfen	check KL31 (ground)	
1	Energieversorgung System/ system power supply	Sicherung prüfen	check fuse	
		Spannung KL 15 (Zündstrom) und KL 30 (Batteriespannung) prüfen	check voltage KL15 (ignition voltage) and KL30 (battery voltage)	6,8 - 16 Volt
		KL 31 (Masse) prüfen	check KL31 (ground)	
2	Dämpfer vorne links n. i. O/ shock absorber front left fault.	Sichtkontrolle Kabel/ Stecker	visually check cable/ plugs	
		Steckverbindung Kabelbaum/ Kabelverlängerung VL/ FL trennen. Stecker der Kabelverlängerung auf Durchgang prüfen. Widerstandwert zu hoch = Unterbrechung im System; Widerstandwert zu niedrig= Kurzschluss im System	disconnect plugs between wiring harness and extension cables VL/ FL. Check plugs of extension cable for continuity. Resistance high = open circuit in system Resistance low = short circuit in system	5,6 ±0,4 Ohm
		Prüfung wie zuvor an der Kabelverlängerung/ Stoßdämpfer wiederholen.	same check as above, at plugs between extension cable and strut	5,6 ±0,4 Ohm
3	Dämpfer vorne rechts n.i.O/ shock absorber front right fault.	Sichtkontrolle Kabel/Stecker	visually check cable/ plugs	
		Steckverbindung Kabelbaum/ Kabelverlängerung VR/ FR trennen. Stecker der Kabelverlängerung auf Durchgang prüfen. Widerstandwert zu hoch = Unterbrechung im System; Widerstandwert zu niedrig= Kurzschluss im System	disconnect plugs between wiring harness and extension cables VR/ FR. Check plugs of extension cable for continuity. Resistance high = open circuit in system Resistance low = short circuit in system	5,6 ±0,4 Ohm
		Prüfung wie zuvor an der Kabelverlängerung/ Stoßdämpfer wiederholen.	same check as before, at plugs between extension cable and strut	5,6 ±0,4 Ohm
4	Dämpfer hinten links n.i.O/ shock absorber rear left fault.	Sichtkontrolle Kabel/Stecker	visually check cable/ plugs	
		Steckverbindung Kabelbaum/ Kabelverlängerung HL/ RL trennen. Stecker der Kabelverlängerung auf Durchgang prüfen. Widerstandwert zu hoch = Unterbrechung im System; Widerstandwert zu niedrig= Kurzschluss im System	disconnect plugs between wiring harness and extension cables HL/ RL. Check plugs of extension cable for continuity. Resistance high = open circuit in system Resistance low = short circuit in system	5,6 ±0,4 Ohm
		Prüfung wie zuvor an der Kabelverlängerung/ Stoßdämpfer wiederholen.	same check as before, at plugs between extension cable and strut	5,6 ±0,4 Ohm

5	Dämpfer hinten rechts n.i.O/ shock absorber rear right fault	Sichtkontrolle Kabel/Stecker	visually check cable/ plugs	
		Steckverbindung Kabelbaum/ Kabelverlängerung HR/ RR trennen. Stecker der Kabelverlängerung auf Durchgang prüfen. Widerstandwert zu hoch = Unterbrechung im System; Widerstandwert zu niedrig= Kurzschluss im System	disconnect plugs between wiring harness and extension cables HR/ RR. Check plugs of extension cable for continuity. Resistance high = open circuit in system Resistance low = short circuit in system	5,6 ±0,4 Ohm
		Prüfung wie zuvor an der Kabelverlängerung/ Stoßdämpfer wiederholen.	same check as before, at plugs between extension cable and strut	5,6 ±0,4 Ohm
6	Interner Steuergeräte Fehler/ internal controller error	**Bitte setzen Sie sich mit dem Brabus-Support in Verbindung!** **02041-777-198**	**Please contact Brabus-support!** **+49(0)2041-777-198**	
7	Bedieneinheit (LED-Taster) n.i.O./ Control Unit (LED button) fault	Steckverbindung LED- Taster/ Steuergerät trennen. Durchgangsmessungen der Kabel gegeneinander durchführen.	Disconnect plugs of LED- switch and control unit. Check continuity among cables.	
		KL 15 Zündstrom gegen gelb	KL 15 ignition current vs. yellow	100 Ohm
		KL 15 Zündstrom gegen grün	KL 15 ignition current vs. green	∞ Ohm
		KL 15 Zündstrom gegen grau	KL 15 ignition current vs. grey	∞ Ohm
		KL 15 Zündstrom gegen KL 31	KL 15 ignition current vs. KL 31	∞ Ohm