



Veigel North America  
24291 Sorrentino Ct.  
Clinton Township  
Michigan 48035, USA

## Operation Manual Hand Control

Phone 586-719-2092  
Fax 586-790-2098  
e-mail: [jann@veigel-na.com](mailto:jann@veigel-na.com)

Part-No.: BZD01-BZD06

### OPERATION MANUAL VEIGEL HAND CONTROL “Compact”

**During the installation please pay attention to the following points:**



- Installation and maintenance work has to be carried out by qualified personnel only and with adequate tools!
- Prior to installation, please read the installation and operation manual carefully!
- After installation please hand this manual over to the customer.
- Follow the accident prevention and safety regulations whilst installing the hand control or during maintenance!
- Only use original parts provided by the manufacturer.
- Constructional changes only with permission of manufacturer.



**The hand control including linkage or lever, cuts down on the space and adjustment area of the driver's seat.**



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### PRODUCT DESCRIPTION

The new Compact hand control stands for mature technology in connection with modern design.

The Veigel Compact hand control is easy to handle

- to accelerate, simply pull back the ergonomically designed handle
- to brake, push handle slightly forward – the brake can be locked temporarily

The transmission is done by means of push rods, which guarantee highest possible reliability for many years.

The ergonomically designed handle guarantees a relaxed and effortless driving, even during long-distance trips. The whole unit can be folded backward for non-handicapped drivers.

The Compact hand control stands for reliability, safety and simple and effortless maintenance-free operation. The modern and appealing design perfectly matches the interior of today's cars. Further an important contribution to safety and to avoid the risk of injury, is the complete lack of sharp edges.

The Compact hand control meets the strict requirements of the automotive industry.

We provide car type specific ready-made kits, which can be installed by any qualified mechanic.

The car type specific installation kits include all parts necessary to install the hand control. The parts are being attached by using the existing attachment points, therefore almost no drilling necessary.

**Please see instructions of installation kit.**



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## Scope of Delivery

Brake lock

Base rail

Locking lever

Side cover

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## Label

<b>Veigel GmbH + Co. KG 74653 Künzelsau</b>	
Typ : <b>ZD</b>	Ausf.:
Typzeichen :	
Fabr.-Nr.:	<b>5XXXXXX-XXX</b>
Artikel-Nr.:	<b>BZDxx</b>

BZDxx = part number

Typ = type indication

Fabrik-Nr. = explicit serial number of driving aid

The label is situated on the base rail of the hand control.

## **Veigel Tip**

The label with the fabrication number is important to identify the production batch .

Note: Please let your insurance know, that your car is equipped with a hand control.

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## SAFETY INSTRUCTIONS

Please read these safety instructions carefully.



**Warranty claims of any kind do not apply, in case the installation manual has not been followed exactly.**

*Only persons, who are familiar with and depend on this hand control may drive this vehicle by means of this hand control.*

Handicapped persons, not familiar with the use of a hand control, are advised to make their first driving test on a proving ground or similar location.

The hand control for accelerator and main brake including linkage, cuts down the space and adjustment area of the driver's seat – handicapped or non-handicapped. Therefore special diligence for driving the vehicle is demanded.

Non-handicapped persons can drive by using the pedals, but:

- In order to minimize the risk, we recommend the vehicle not to be used by non-handicapped persons on a regular basis.
- Exceptions could be, among other things, test drives within the scope of service works or the temporary indisposition of the handicapped person.

For handicapped persons, who only have a limited control over their legs, the use of a pedal shield for the accelerator and brake is mandatory, in order to avoid an uncontrolled activation or blockage of the pedals.

This pedal shield is not included in the delivery scope of the hand control or the installation kit. It has to be ordered separately for the specific vehicle type

**Alterations or attachments in the area of the hand control, dashboard and centre console are not permitted. Therefore it is not possible, for example, to attach brackets for cellular phones etc.**

If you want to drive with the hand control folded away, please make sure, that with the folded away hand control, the accelerator and brake pedal are easily moveable.



The brake lock button is simply a starting aid, it does not replace the use of the regular parking brake (hand or foot parking brake), **it is not allowed to use it when parking uphill/ downhill and leaving the car**, as due to internal hydraulic leakage and the discharge of the car battery there definitely is no constant holding effect. To park the car, always use the parking brake and put the gear lever in “P” position or switch to first gear in manual transmission.

For drivers who depend on the lockability of the brake pedal in this form, it is necessary and therefore allowed. For other drivers, who are able to drive regularly, it is not allowed to use this locking device, as the state of the art for regular vehicles requires different technical solutions.



Only applicable for installation kits with adjustable limitation of the longitudinal seat adjustment:

When adjusting the seat forward in a high seating position, in some vehicle types it is possible to activate the hand control. Therefore the limitation device for the seat adjustment attached to the base rail should be adapted to the adjusted seat height.

Please see the instructions in the installation kit manual.

Installation kits with these adjustable limitation devices are provided together with settings for the most unfavourable seat position (e.g. maximum seat height).

In case you would like to change these pre-settings, please see the instructions in the installation kit manual.

When the restricted seat adjusting area is changed, please check that the seat still does not collide with the hand control.



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## OPERATION

### SAFETY HINTS



*Please keep the installation and operation manual with your car documents.*

*Due to the installation of the hand control, the space conditions on the driver's side are partially restricted. The operation of the vehicle has changed.*

*Please let every other person driving the vehicle know, that a hand control has been installed and brief them on the use of the hand control.*

***On no account should you use the hand control as a lever to pull yourself into, our push yourself out of, the car!***

*Become familiar with the adapted vehicle. Possibly make your first driving test on a proving ground or similar location.*



Check carefully, as otherwise a proper function of the hand control is not given.

Check	Action
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**before each ride**

Linkage	- freely and easily moveable - if there is a lot of tolerance, please adjust rods
Brake lock	- function of the brake lock, does the locking latch release automatically?



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### OPERATION

#### **Brake:**

By pushing the hand control forward the brake is activated. It takes no more effort to work the hand controls brake than it would do to work the foot brake. **The travel of the lever is very short and there is very little effort needed to brake to a full stop. If you are new to using a hand control, you should practise on quiet roads at a low speed, before merging with heavy and fast moving traffic!**

#### **Accelerate:**

By pulling the hand control the accelerator is activated. In order to reach the kick-down position, pull hand control all the way back. A stop avoids overstressing the accelerator linkage.

#### **Other information:**

You should inform your insurance company that you use a hand control, and at the same time advise them of the cost of the device.

### FOLDING AWAY THE HAND CONTROL

If necessary, the hand control can be folded away.

Slightly push hand control forward into brake position (forward) and push down locking lever. The hand control can then be folded away. To put the hand control back in position, simply push hand control forward until the locking lever snaps in place. Now you should be able to activate the accelerator again.



*Please shut the motor off before folding away the hand control.*



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### BRAKE LOCK

As starting aid, for example when standing at a hill, at a light or when changing the cruising range in automatic transmission, the hand control is equipped with brake lock buttons:

By pushing the hand control forward the brake is activated. At the same time, press button in the hand lever of the hand control. The brake lock is activated.

In order to activate the brake lock, press either both or just one button.

To unlock, slightly push brake, the lock loosens automatically. There is no need to push the brake lock button again!



The brake lock button is simply a starting aid, it does not replace the use of the regular parking brake (hand or foot parking brake), **it is not allowed to use it when parking uphill/ downhill and leaving the car**, as due to internal hydraulic leakage there definitely is no constant holding effect.

## SAFETY INSTRUCTIONS



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## TIGHTENING TORQUE



*For Vehicle adaptations with Veigel driving aids the tightening torques required by the car manufacturer apply. For Veigel parts the general DIN tightening torques mentioned in the table below apply, if no other tightening torques are mention in the text.*

Regular type screw thread			Fine thread		
Dimension	Tightening torque [Nm]		Dimension	Tightening torque [Nm]	
	8.8	10.9		8.8	10.9
M4	3	4,4	M8x1	27	39
M5	5,9	8,7	M10x1	55	81
M6	10	15	M10x1,25	52	76
M8	25	36	M12x1,25	93	135
M10	49	72	M12x1,5	89	130
M12	85	125	M14x1,5	145	215
M14	135	200	M16x1,5	225	330
M16	210	310			

## LINKAGE INSTALLATION

During installing, the accelerator and brake linkage parts that come with the installation kit (see installation kit manual) have to be attached to the hand control.

### HINT

First attach hand control with two hexagonal bolts M8 to the base rail (see installation kit manual).

**Tightening torque 20 Nm  $\pm$  10 %**

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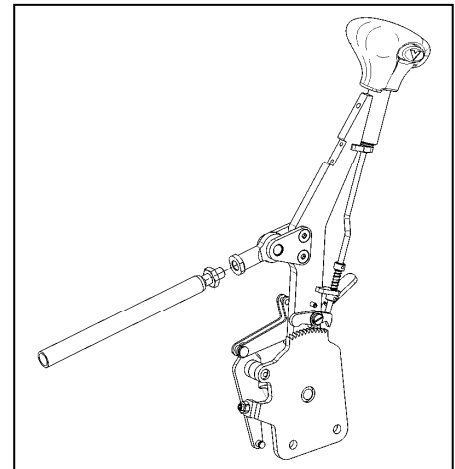
## INSTALLATION OF BRAKE LINKAGE

Remove label from the pre-assembled ball joint. Remove plug by means of a screw driver. Insert the threaded pin M10 into the ball joint of the hand control.

Please note:

Screw thread in all the way. **Do not adjust the linkage length here.** Tighten counter nut with a max. Tightening torque of 15 Nm.

As there are different bent brake tubes, the precise alignment of the brake tubes to the hand control is important (see installation kit manual). Please check if the push linkage is easily moveable.



Please note:

Instead of the brake tube sometimes the brake rod is attached to the hand control, depending on the installation kit. Please carefully read the installation kit manual.



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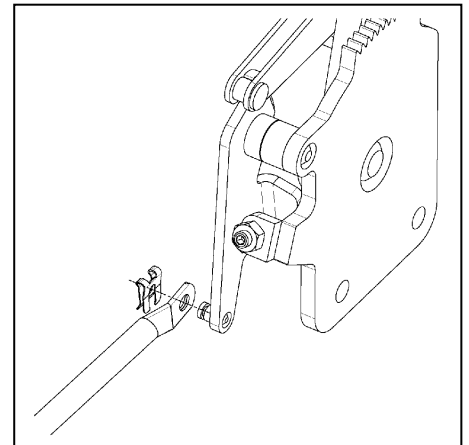
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### INSTALLATION OF ACCELERATOR LINKAGE

Remove locking plate from the pin of the accelerator lever.  
Mount accelerator tube and re-attach locking plate.

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### LINKAGE ADJUSTMENT

The linkage has to be adjusted in idle position (neither accelerator nor brake is activated). Make sure that the accelerator lever is in its stop position.

***The linkage adjustment has to be done very carefully to ensure the proper function of the hand control. Take special care that the hand control does not put pressure on the brake pedal when it is in starting (idle) position. Improper adjustment can lead to major damage in the brake system!***

After adjusting the linkage, push/pull brake and accelerator several times then check adjustment and reset if necessary.



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### ***Accelerator linkage***

The idle position of the accelerator linkage is adjusted by the collar of the accelerator rod.

*Make sure that the accelerator lever is positioned all the way back, is necessary hold it there.*

With the accelerator pedal in idle position, place the adjusting collar against the accelerator tube and tighten the setscrew.

To relieve the accelerator linkage, the travel of the accelerator lever is limited to the point where it reaches the kick-down. In full throttle position (kick-down is reached) turn the adjusting bolt against the accelerator lever and lock with nut.

***Check if the accelerator linkage is easily moveable!***

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### ***Brake linkage***

Adjust counter nut on brake link, leaving max. 1mm tolerance between the counter nut and the brake tube. *Here also make sure that the accelerator lever is positioned all the way back.*

***Check if the brake linkage is easily moveable! Make sure that the brake tube is in the correct position to the hand control (see installation kit manual).***

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### INSTALLATION OF THE LATERAL COVER

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After installing and adjusting the hand control attach the lateral cover by means of the Velcro stripes on the base rail. Make sure that the outline on the back of the lateral cover matches the outline of the hand control. There should be a gap of approx. 5mm between the top of the lateral cover and the hand control.

#### Veigel Tip

The adhesive joint of the Velcro takes approx. 24 hours to completely set. During this period of time the Velcro should not be separated and the cover should not be under strong pressure. The hand control certainly can be used.

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### FUNCTION CHECK



- Check function while vehicle is standing and during a test drive
- Make sure, that connecting parts, hand control and other equipment are freely moveable and do not collide with the steering column, the accelerator linkage or other parts of the vehicle.
- Keep the operating elements from blocking each other.
- The free mobility of the hand control has to be guaranteed even in case of a possible breakdown of one braking circuit.
- Check if, even when the hand control is folded away, the brake and gas pedal return to their starting position after being activated by foot.

### SERVICE AND MAINTENANCE

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Your Veigel hand control has been designed to operate within the expected temperature range of all European countries. However, extreme temperatures outside of these could affect it's efficiency. The hand control should be checked/serviced every 12.000miles/12 months, whichever is the sooner, and a service entry recorded.

The hand control requires very little maintenance. However, should you notice any deterioration of performance, please get in touch with the agent/fitter who installed the Pedal Guard, or email or phone our Service Department at GSG Services, 40 Bramble Ave, Oldham OL4 2PQ, Tel. No. 0161 620 1889, email: [graham.griffiths.uk@googlemail.com](mailto:graham.griffiths.uk@googlemail.com)

Our approved agents/fitters have been properly trained to fit and remove hand controls. Therefore do not try to cut corners and always make use of an APPROVED AGENT/FITTER, who will also remove the device when changing vehicles.



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## Action

## Parts

At the hand control all slide and ball bearings are maintenance free. Lubrication not needed.

Resetting and tightening

All bolted connections at the base rail, push rods and pedal connections

Check

Allowed play in brake linkage: 1 mm, possibly reset adjustment of accelerator linkage

## TRANSPORTATION, STORAGE AND DISPOSAL

### TRANSPORTATION, STORAGE



*Transportation and storage only in original packing.*

### DISPOSAL

When manufacturing this driving aid we mainly use recyclable materials.

**As packaging material** we use cardboard and partially bubble wrap, which can be brought to a recycling center or disposed as paper waste. Wood shavings can be composted or disposed as regular waste.

#### Disposal of driving aid as follows:

Steel parts:	Metal disposal or scrap metal collection
Plastic parts (pedal pads, bearing blocks, shaft mountings)	Plastic disposal
Rubber parts (pedal pad cover)	Regular waste, thermal use

The de-installation takes approx. 1-1,5 hours, depending on the vehicle type. For de-installation follow installation manual in reverse order



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The hand control was developed for a damage free installation/ de-installation, therefore normally no parts have to be replaced.

### Warranty:

Your local agent will have done a good job, fitting your hand control and is there whenever you need him. He will be happy to service the device and remove it when changing your car. This product is covered by a 36months warranty.

## WARRANTY CARD:

Hand control, serial No.: \_\_\_\_\_

Installed by: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Dear agent/fitter:

Please fill in this form before handing the manual over to the customer. Thank you!