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MERO 3 - Brake and Accelerator Hand Control

Installation Instructions



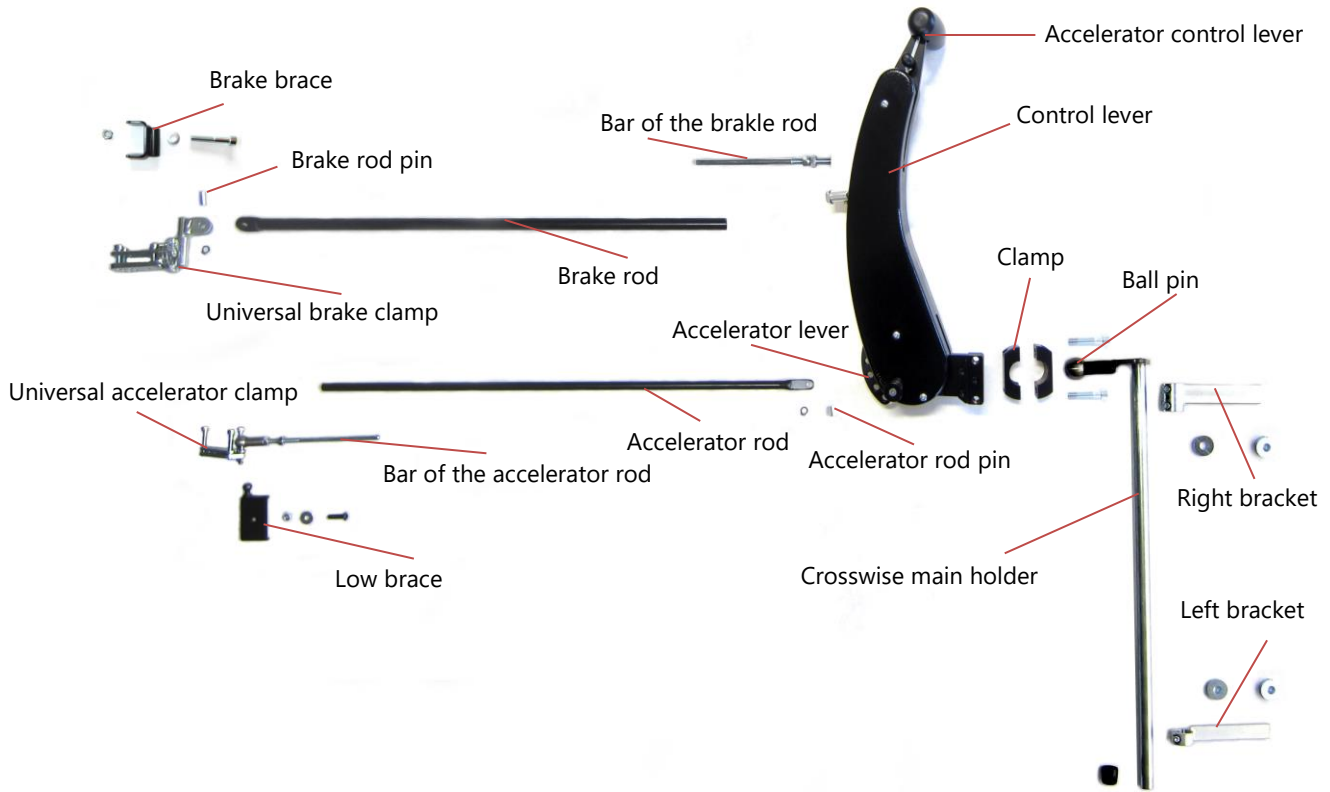
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Read these instructions carefully before installing the device. Installation can be performed only by workshop that routinely performs similar adaptations for disabled people or it is trained for assembly by our company.

Schemes of MERO 3 Hand Control

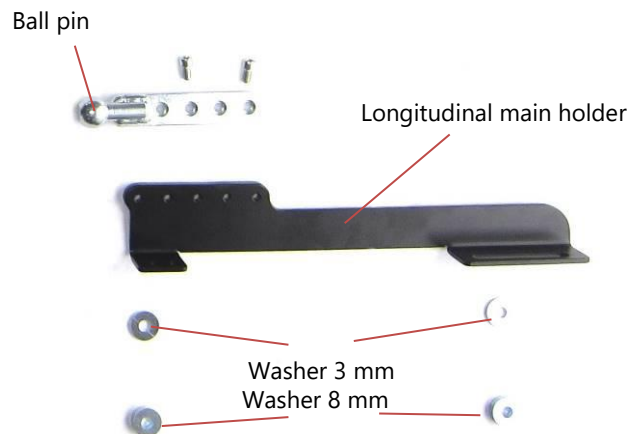
MERO 3 Bent Lever



MERO 3 Flat Lever



Longitudinal Main Holder



Assembly Principles

MERO 3 hand control is generally assembled under the front seat bolts of the driver's seat with our universal crosswise main holder. In some cars it is possible to make the assembly under side seat bolts. This assembly requires different type of holder which we call longitudinal main holder. In most cars we are able to use crosswise holder under front seat bolts. In this manual we will describe mounting of main holders, two types of lever (flat and bent), connecting levers to the pedals and setting the levers. In the end we will do brake test and overall adjusting.

Main Holder Mounting

Crosswise Main Holder Mounting

Under the front seat screws attach the brackets. They are prepared so that you drill a hole into each to set the location to suit the overall fit of the main holder. It is possible that it is necessary to bend the brackets to place the main holder under the plane of the seat. Alternatively cut the brackets to fit into the rails. Shorten the brackets to the required length. Attach the brackets to the main holder and screw them under the front seat screws. Always check possibility of slides to be able to move the seat as front as possible.

Longitudinal Main Holder Mounting

Remove the seat from the car. MERO 3 main holder insert under the right rail. Put 3 mm washers on the holder and on the other side put 8 mm washers to set the seat in plane. Mount the seat back and on assembled MERO 3 holder screw the ball joint into the required distance not to impede the seat forward.

As for mounting of control lever it differs in several points according to the fact if you use flat lever or bent lever.

Ways of Control Lever Mounting

Regarding the attachment of control lever and control elements there are differences in several points whether it is a model of flat or bent lever.

a) Flat Lever Mounting

Attaching the Flat Lever

Mount the MERO 3 lever on the ball joint and set the position that is suited for the user. In advance, it is necessary to choose one of two types of accelerator lever - a short accelerator lever which is used for hanging from above accelerator pedals or long accelerator lever which is used for flat pedals anchored



to the floor. Replace the accelerator lever after disassembling the control lever. After fixing the MERO 3 lever set its position and tighten the ball joint clamp with two M8 socket head screws. Set lever stop at the bottom of the lever.

Attaching to Accelerator Pedal

Accelerator pedal hanging from above - use a short accelerator lever inside the control lever. We usually mount universal clamp on the pedal. Fasten the clamp in a suitable position of the pedal. Shape the accelerator rod and cut it for required length. In case of longer shortening of the rod, it is necessary to drill a 6.5 mm diameter hole to a depth of 150 mm so that the bar of accelerator rod went freely to the stop. Slide the rod onto the accelerator bar and insert a pin to the accelerator lever and ensure by circlip.

Accelerator pedal anchored into the floor - use a long lever throttle inside the control lever. Mount a low brace on the pedal. Shape the accelerator rod and cut it for required length. In case of longer shortening of the rod, it is necessary to drill a 6.5 mm diameter hole to a depth of 150 mm so that the bar of accelerator rod went freely to the stop. Slide the rod onto the accelerator bar, ensure the catch of ball joint and put a pin to the accelerator lever and secure by circlip.

Attaching to the Brake Pedal

On the brake pedal, there will be either clamp or brace. If the brake pedal is directed vertically downwards use the rectangular connection to the fork of the rod – the brace. If the pedal is hanging slantwise use a clamp which has the possibility of angular adjustment. The fork must always be set horizontally. Shape the rod, cut it to required length. In case of longer shortening of the rod, it is necessary to drill a 8.5 mm diameter hole to a depth of 150 mm so that the bar of brake rod went freely to the stop. Adjust the will through the nut on the telescopic part of the bar. The brake must be adjusted so that there was minimum 2 mm free play in the telescopic part of the rod.

b) Bent Lever Mounting

Control lever mounting

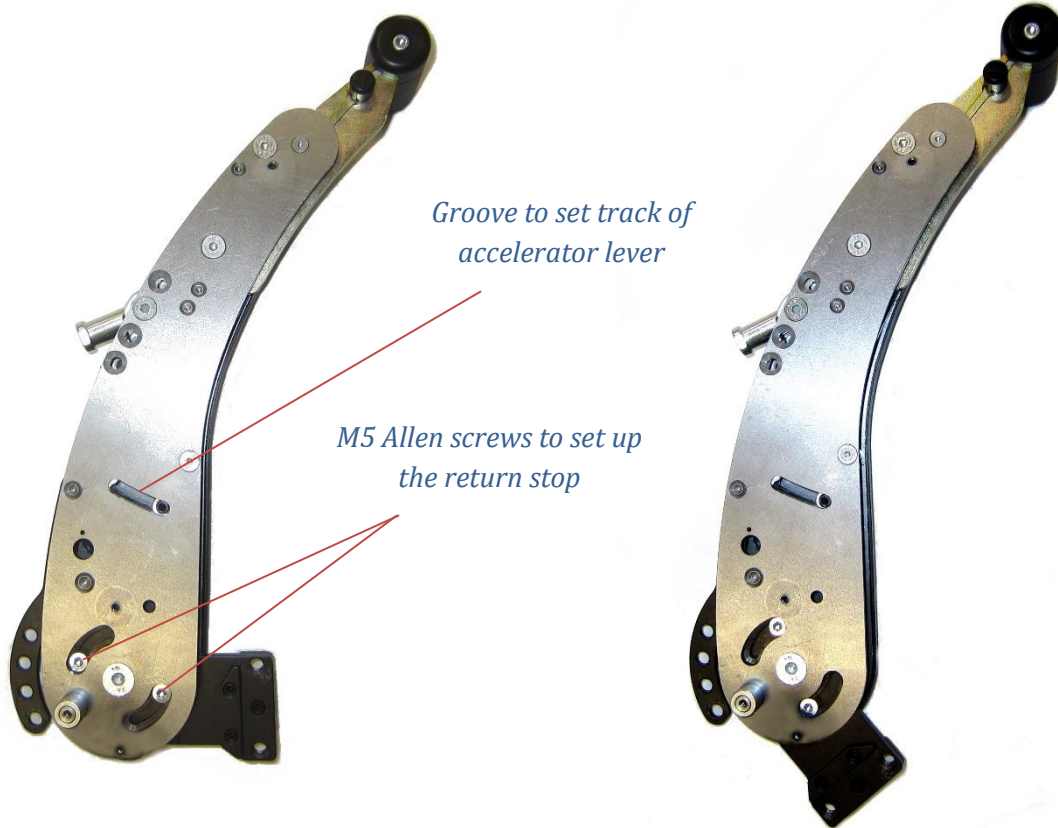
We catch the control lever MERO 3 to the ball joint and set it in the position which is suitable for the customer.

Setting the return stop of the lever

To set forward and backward tilting of the lever it is necessary to set the return stop of the lever to place the bottom holder as horizontally as possible. We advise to tilt the lever rather forward than too backward. Arrange the setting after taking off the plastic cover with four M3 Allen screws. Set the return stop after loosen two M5 Allen screws and turning the holder. Then tighten the screws adequately.

Lever tilted the most backward

Lever tilted the most forward



Attaching to the brake pedal

Catch either brake brace or universal brake clamp to the brake pedal. If the brake pedal leads perpendicularly down use the brake brace (usual for VW group cars). If the brake pedal leads askew use universal brake clamp which has the possibility of angle setting. Fork of the clamp must be led horizontally. Shape the brake rod, cut it for appropriate length. Shape the rod, cut it to required length. In case of longer shortening of the rod, it is necessary to drill 8.5 mm diameter hole to a depth of 150 mm so that the bar of brake rod went freely to the stop. Adjust the will through the nut on the telescopic part of the bar. Brake must be set the way that there is a 2 mm free play in telescopic part of the rod.

Attaching to the accelerator pedal

To pedals hanged from above we install usually a universal accelerator clamp. To pedals caught to the floor install our low brace. Fix the clamp or brace in suitable position to the pedal. Shape the accelerator rod and cut it to suitable length. In case of longer shortening of the rod, it is necessary to drill 6.5 mm diameter hole to a depth of 150 mm so that the bar of accelerator rod went freely to the stop. Slide the rod to the bar of the brake rod, secure the lock of ball joint and insert the accelerator rod pin to the accelerator lever and secure with the circlip.

Setting the accelerator track

Setting of accelerator track has to be set due to two various types of accelerator pedal. Accelerator pedal hanged from above has shorter track and pedal cought into the floor has longer track. Our lever enables continuous setting of track length due to requirements in a specific car. We try to set the track the way that when we press full gas on the lever there was just full gas on the pedal kickdown included. Setting is done after removing the side plastic cover of the lever. The cover is cought with four M3 Allen bolts. Length of the track is set after loosing M4 Allen bolt and moving the segment in a groove. The more left the more track length. In a simplified way you can set the track the way that for pedals cought into the floor move the segment to the left and for the pedals hanged from above move the segment to the right. If the track and force to the lever will not be adequate, change the setting in an intermediate position.

Plastic cover of the lever



Longest track of the accelerator lever



Shortest track of the accelerator lever



Adjusting the correct ratio of accelerator lever to the track of accelerator pedal during full acceleration



Brake test and adjusting

MERO 3 is mounted and you should make an overall adjusting. On the accelerator and brake rod there must be at least 2 mm free play between the rod and bar. Make the brake test when engine is running in order to operate the brake booster. There are two people needed for this operation. Push brake with the MERO 3 lever. To increase the power, we can help with the foot. Drain brake fluid from one of brake circuit of the vehicle. Usually drain the brake fluid from the left wheel cylinder because that one who drains the liquid easily communicates with that one who controls the brake. Brake pedal descends to its lowest position. When released the brake circuit the handle of control lever should never touch the dashboard or other parts of interior. If the control lever touches one of these parts it is possible to move the brake joint of the control handle MERO 3 downwards, or move the brake clamp on the brake pedal upwards. In this way at the cost of more power on the lever we shorten the track of the lever and we can finally avoid the conflict with interior parts. Distance between the handle of control lever and opposite parts of the interior should be 20 mm at least. After setting and securing pins, joints and bolted connections make a test drive. During this ride make final adjustment of all parts of MERO 3.



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