

# Gearbox support

## **T40173A**

# 1 General Information

Product Name:	Gearbox support
Product Type:	Load-holding device
Product Number:	T40173A
Weight:	23.75 kg/Set
Maximum Load Capacity:	see "Tab. 1: Maximum load capacity" on page 3
Static Test Coefficient:	3.0

## Intended Use:

- ▶ For supporting vehicle assembly groups during their removal and installation in accordance with the workshop manuals of the Volkswagen Group brands.

## Terms of Use:

- ▶ Only use the permitted versions of the gearbox support (see "Characteristics of the various versions" on page 3 and workshop manuals of the Volkswagen Group brands).
- ▶ Only for qualified workshop personnel.
- ▶ Only for qualified personnel, who are formally qualified for work on high-voltage vehicles or vehicles with gas drive.
- ▶ Only use the load-holding device for work approved by the Volkswagen Group.
- ▶ Only use for loads in accordance with "Tab. 1: Maximum load capacity" on page 3.
- ▶ Only use in connection with the approved accessories (see workshop manuals of the Volkswagen Group brands).
- ▶ Only use in connection with the engine and gearbox jack V.A.G. 1383A or VAS 6931.
- ▶ Only use the engine support and gearbox jack on level, horizontal, and weight-bearing ground.
- ▶ Do not hold or lift any persons or animals.
- ▶ Do not hold or lift articles other than described in the workshop manuals of the Volkswagen Group brands.

- ▶ Do not stay under the load.
- ▶ Do not work on the supported load.

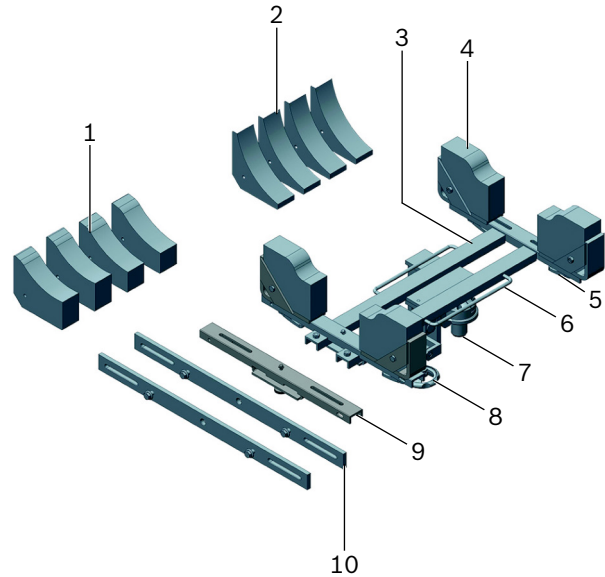


Fig. 1: Gearbox support T40173A

- 1 Support T40173/4 (4 pieces)
- 2 Support T40173/3 (4 pieces)
- 3 Frame
- 4 Support T40173/11 (4 pieces)
- 5 Clamping lever (4 pieces)
- 6 Bracket
- 7 Support pin
- 8 Hand wheel (2 pieces)
- 9 Adapter T40173/1
- 10 Adapter T40173/2 (2 pieces)

## Included in Delivery of T40173A

Product Number:	Name:	Weight:	Maximum Load Capacity:
T40173	Gearbox support	18.2 kg	see "Tab. 1: Maximum load capacity" on page 3
T40173/1	Adapter	1.4 kg	210 kg <sup>1)</sup>
T40173/2 (2x)	Adapter	3.7 kg/pair	120 kg <sup>1)/pair</sup>
T40173/3 (4x)	Support	0.19 kg/set	-
T40173/4 (4x)	Support	0.26 kg/set	-
T40173/11 (4x)	Support	0.34 kg/set	-

- 1. Depending on the jib length, see "Tab. 1: Maximum load capacity" on page 3

## Characteristics of the various versions

The various versions can be differentiated by the coloring and delivery date.

The following variants are possible:

- ▶ The tool was delivered **before 05/2018** and all parts of the tool are galvanized in silver.
  - ⇒ The tool must no longer be used and must be replaced.
- ▶ The tool was delivered **before 05/2018** and the base frame and the joint head are chromated in yellow.
  - ⇒ The tool can be used. No further action necessary.
- ▶ The tool was manufactured **after 05/2018 according to the type plate** and all parts of the tool are galvanized in silver.
  - ⇒ The tool corresponds to the current version.

## Maximum load capacity with different jib lengths

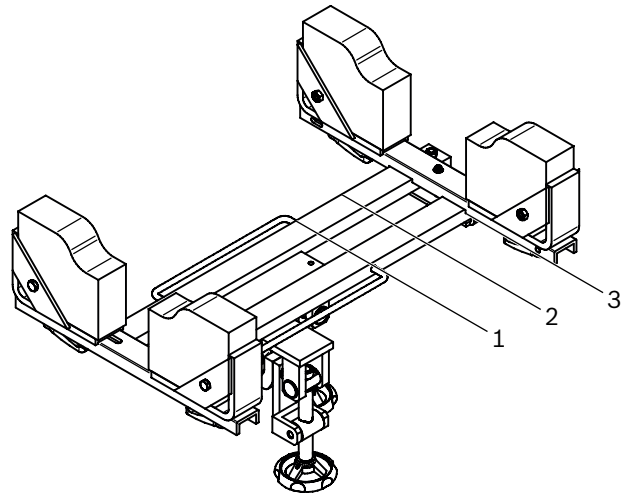


Fig. 2: Load sketch

No.:	Position of the movable support:	Maximum Load Capacity:
1	0 mm from the bracket	210 kg
2	100 mm from the bracket	200 kg
3	200 mm from the bracket	130 kg
-	When using 40173/2	120 kg <sup>1)</sup>

Tab. 1: Maximum load capacity

<sup>1)</sup> Only use adapter 40173/2 for lifting gas tanks. Only use in connection with the supports in accordance with the workshop manuals.

## 2 General Safety Instructions

### WARNING

#### Read and follow all safety notes and instructions!

Failure to follow the safety instructions may result in serious injuries and material damages.

- ▶ Observe and follow the safety notes below.
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- ▶ The load-holding device has been specifically constructed for its intended use. The safety of the load-holding device can no longer be ensured if it is misused or modified in ways not expressly approved by the manufacturer. Serious personal injury or severe damage to materials can occur.
  - ▶ Ensure each person using the load-holding device is familiar with these instructions and can access them at all times.
  - ▶ Ensure all users are also familiar with the operating manuals of all tools and workshop equipment, which are necessary for the work.
  - ▶ Carefully read and adhere to the instructions in the technical safety information of the Volkswagen Group brands.
  - ▶ Observe and follow the hazard classification of the high-voltage system in the workshop manuals.
  - ▶ Observe and follow the basic information and safety notes for vehicles with gas drive in the corresponding Volkswagen Group information materials.
  - ▶ Wear safety shoes (according to ISO 20345, S2).
  - ▶ Wear protective gloves in order to avoid cuts.
  - ▶ Position hands and feet carefully to avoid potential crushing hazards.
  - ▶ Use the load-holding device only for work approved by the Volkswagen Group.
  - ▶ Use the load-holding device only with the accessories approved by the Volkswagen Group.
  - ▶ Do not exceed the maximum load capacity listed in "Tab. 1: Maximum load capacity" on page 3.
  - ▶ Only use the adapter T40173/2 in pairs including feet and supports in accordance with the workshop manuals.
  - ▶ Observe the center of gravity in accordance with the position of the support pin.
  - ▶ Ensure the support rail is positioned and secured exactly as described in the workshop manuals.
  - ▶ The engine and gearbox jack may only be operated by one person.
  - ▶ The positioning of persons under the load and in the dangerous area is prohibited during the movement process.
  - ▶ Only move the load on the lowest setting.
  - ▶ Ensure the track is clear and easily visible.
  - ▶ Move the load slowly and carefully.
  - ▶ Observe the gearbox support as well as the load during all movements.

### 3 Operating Instructions

1. Check the gearbox support for completeness, and visible damages like signs of wear, deformation, breakages, cracks, and corrosion damages prior to each use. Check the threads of the screws for damage. Check the locking mechanisms for functionality. If defects are noted on the gearbox support, do not use it and immediately discard it.
  - ⇒ Ensure only a permitted version of the gearbox support is used (see "Characteristics of the various versions" on page 3 and workshop manuals).
  - ⇒ Check the joint head, clamping levers, safety devices, and threads of all screws for functionality.
  - ⇒ Check the screw connection of the joint body and of the end stop on the base body.
  - ⇒ Ensure the knurled screw is provided with a circlip.
  - ⇒ Align the supports in accordance with the workshop manuals and secure them with the original screws.
2. Carry out the necessary preparation work for the attachment of the load in accordance with the workshop manuals.
3. Place the engine support on the engine and gearbox jack and ensure the support pin is inserted completely into the receptacle of the engine and gearbox jack, and is secured.

#### WARNING

##### **Risk of the load swiveling or falling!**

If the gearbox support is not attached to the engine and gearbox jack correctly, the load may swivel or fall! This could cause serious personal injury or severe damage to materials.

- ▶ Place the gearbox support correctly on the engine and gearbox jack and secure it.

#### WARNING

##### **Crushing hazard!**

Observe hazard of crushing between the load and vehicle parts.

- ▶ Position hands and feet in such a manner that crushing hazards do not exist when moving the gearbox.

4. Align the gearbox support under the load using the hand wheels. Move the engine and gearbox jack up until the gearbox support abuts the load.
5. Align the four supports on the load, tighten the clamping levers of the feet.
6. Pull the clamping levers down slightly, so that the clamping lever can be moved without loosening the screw connection again. Align the clamping levers in parallel to the support rail.

#### WARNING

##### **Risk of the load swiveling or falling!**

The center of gravity of the load and the maximum load capacity shifts in dependence on the position of the support rails. This may result in a swiveling or falling load. This could cause serious personal injury or severe damage to materials.

- ▶ Attach the gearbox support exactly as described in the workshop manuals.
- ▶ Observe the center of gravity in relation to the support pin. If necessary, shift the supports of the gearbox support.
- ▶ Move the load slowly and carefully.
- ▶ Observe the load during all movements.

7. Carry out further work as described in the workshop manuals.
8. Ensure all parts of the special tool have been removed after completing the repair work.

### 3.1 Convert the adapter

#### T40173/1

Attach and position the adapter T40173/1 on the frame of the gearbox support in accordance with the workshop manuals.

1. Loosen the knurled screw and set the clamping bar transversely.
2. Position the U bar on the base frame of the gearbox support as described in the workshop manuals.
3. Rotate the clamping bar back into the original position, so that both frame parts are enclosed by the clamping bar. Tighten the knurled screw.

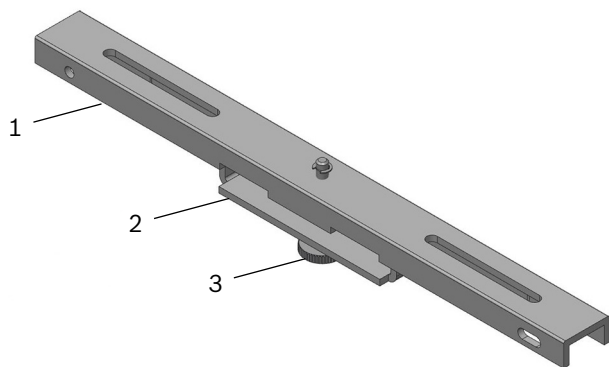


Fig. 3: Adapter T40173/1

- 1 U bar
- 2 Clamping bar
- 3 Knurled screw

#### T40173/2

Attach and position the adapters T40173/2 on the gearbox support in accordance with the workshop manuals.

1. Loosen the clamping levers of the feet (4 pieces) completely and remove the feet.
2. Unscrew the hexagon flange screws M8 x 15 from the two adapters T40173/2.
3. Position the adapters T40173/2 on the gearbox support or the adapter T40173/1 centrally as described in the workshop manuals and fasten them with the hexagon flange screws M8 x 15.

4. Fasten the feet to the adapters T40173/2 with the clamping levers.

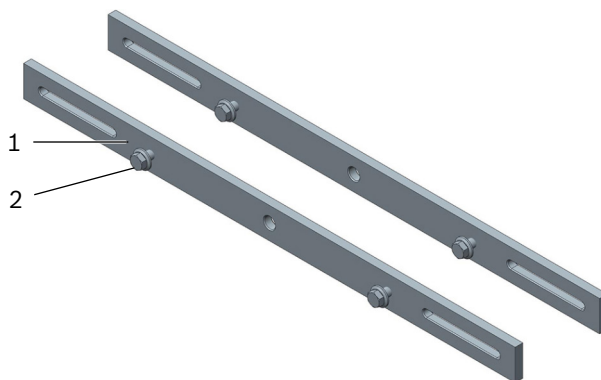


Fig. 4: Adapter T40173/2

- 1 Adapter T40173/2 (2 pieces)
- 2 Screw M8 x 15, 8.8 (4 pieces)

#### T40173/3, T40173/4, T40173/11

Attach the supports T40173/3 or T40173/4 or T40173/11 in accordance with the workshop manuals.

1. Loosen the screw M8 x 65 from the base and unscrew it.
2. Remove the support from the base and replace it with the desired support.
3. Screw the screw M8 x 65 back in and hand-tighten it with a wrench.

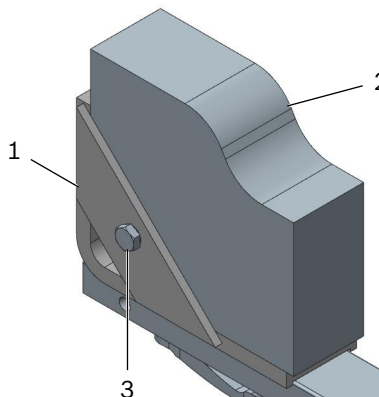


Fig. 5: Base with support

- 1 Base
- 2 Support
- 3 Screw M8 x 65

## 4 Inspection and Maintenance

- ▶ Check the gearbox support for completeness, and visible damages like signs of wear, deformation, breakages, cracks, and corrosion damages prior to each use. Check the threads of the screws for damage. Check the locking mechanisms for functionality. If defects are noted on the gearbox support, do not use it and immediately discard it.
- ▶ Spare parts are available on request. Only use original replacement parts.
- ▶ Please contact your first-level support representative with any queries.

### **NOTICE**

Modifications to this product which have not been expressly approved by the manufacturer will void any warranty. The manufacturer assumes no liability for personal injury or damage to materials which occur as the result of improper use of this product.

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## Declaration of Conformity with the Machinery Directive 2006/42/EC, Annex II 1A

Manufacturer:	Bosch Automotive Service Solutions GmbH Am Dörrenhof 1 85131 Pollenfeld-Preith Germany
Authorized to Compile the Technical Documents:	Bosch Automotive Service Solutions GmbH Am Dörrenhof 1 85131 Pollenfeld-Preith Germany
Product Name:	Gearbox support
Product Type:	Load-holding device
Product Number:	T40173A

We hereby declare that the product described above complies with the relevant clauses of the 2006/42/EC Machinery Directive.

Any modification to a product not expressly approved by the manufacturer will void the validity of this declaration.

The following harmonized standards have been applied:

EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 13155:2003+A2:2009	Cranes - Safety - Non-fixed load lifting attachments

Pollenfeld, March 01, 2018

Place, date

Matthias Wagner,  
Managing Director