

## Module Detacher

### T40424 | T40424/5

<b>en-gb</b>	Original Instructions	<b>fi</b>	Alkuperäiset ohjeet	<b>pl</b>	Oryginalne instrukcje
<b>de</b>	Originalbetriebsanleitung	<b>fr-fr</b>	Instructions d'origine	<b>pt-br</b>	Instruções originais
<b>ar</b>	التعليمات الأساسية	<b>he</b>	הוראות מקוריות	<b>pt-pt</b>	Instruções originais
<b>bg</b>	Оригинално ръководство за експлоатация	<b>hr</b>	Izvorne upute	<b>ro</b>	Instrucțiuni originale
<b>cs</b>	Originální návod k použití	<b>hu</b>	Eredeti útmutató	<b>ru</b>	Инструкции на языке оригинала
<b>da</b>	Originale brugsanvisninger	<b>it</b>	Istruzioni originali	<b>sk</b>	Rôvodný návod
<b>el</b>	Πρωτότυπο οδηγιών χρήσης	<b>ja</b>	元の手順	<b>sl</b>	Originalna navodila za uporabo
<b>en-us</b>	Original Instructions	<b>ko</b>	원래 지침	<b>sr</b>	Originalna uputstva
<b>es-es</b>	Instrucciones originales	<b>lt</b>	Originali instrukcija	<b>sv</b>	Originalinstruktioner
<b>es-mx</b>	Instrucciones originales	<b>lv</b>	Instrukcijas oriģinālvalodā	<b>tr</b>	Orijinal Talimatlar
<b>et</b>	Originaalkasutusjuhend	<b>mk</b>	Оригинално упатство	<b>uk</b>	Оригінальна інструкція
<b>fa</b>	دستورات اصلی	<b>nl</b>	Originele instructies	<b>zh-cn</b>	原始说明
		<b>no</b>	Opprinnelige instruksjoner	<b>zh-tw</b>	原廠操作說明

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# 1 General Information

Product Name:	Module detacher
Product Type:	Load holding device
Product Number:	T40424
Weight:	4.5 kg
Max. Load Capacity:	25 kg
Static Test Coefficient:	3.0

## Intended Use:

- ▶ The module detacher removes and lifts battery modules from high-voltage batteries for vehicles as defined in the workshop manuals of the Volkswagen Group.

## Terms of Use:

- ▶ For qualified workshop personnel only.
- ▶ Use only for work approved by the Volkswagen Group.
- ▶ For use on high-voltage components only by qualified personnel.
- ▶ Use only for loads up to 25 kg (55 lb).
- ▶ Do not hold or lift any persons or animals.
- ▶ Do not hold or lift items other than those described in the workshop manuals of the Volkswagen Group brands.
- ▶ Do not stand under suspended loads.
- ▶ When using with a workshop crane, use only on level, even, and stable ground.
- ▶ Use and store only in enclosed workshops with a roof.
- ▶ Use only with the approved accessories (see the workshop manuals of the Volkswagen Group brands).
- ▶ Do not work on suspended loads.
- ▶ Use only at ambient air temperatures between -20 °C and +80 °C.

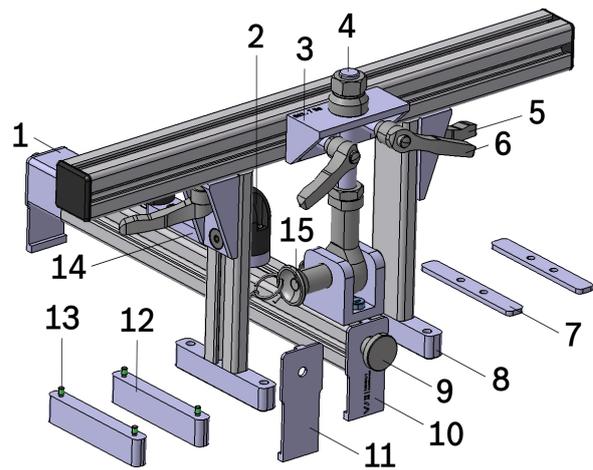


Figure 1: Module detacher T40424

- 1 Hook
- 2 Bow-type handle
- 3 Support
- 4 Spindle, max. torque 7 Nm
- 5 Locking lever, 2 pieces
- 6 Locking lever, 2 pieces
- 7 Disc of the Extension Set T40424/5, 2 pieces
- 8 Base, 2 pieces
- 9 Knurled-head screw M8 x 16, burnished, torque 5 Nm to 10 Nm
- 10 Hook T40424/1
- 11 Hook T40424/2
- 12 Adapter T40424/3, 2 pieces
- 13 Cylinder head screw DIN 912M5 x 20 8.8, max. torque 2 Nm, 2 pieces per adapter
- 14 Handle adapter T40424/4
- 15 Ball lock pin Ø 16 x 40 with tether

## Included in Delivery

Product Number:	Product Name:
T40424/1	Hook
T40424/2	Hook
T40424/3	Adapter, 2 pieces
T40424/4	Handle adapter

## Available Accessories

Product Number:	Product Name:
T40424/5	Extension Set Discs, 2 pieces

## 2 General Safety Instructions

### WARNING

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

Failure to follow the safety instructions could result in serious personal injuries and severe damage to materials.

Observe and follow the safety notes below.

- 
- ▶ 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 injuries or severe damage to materials could occur.
  - ▶ Ensure that each person using the load holding device is familiar with these instructions and can access them at all times.
  - ▶ Ensure that all users are also familiar with the instructions of the additional tools and workshop equipment that 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 basic information and safety notes in the corresponding Volkswagen Group information materials for use on vehicles with high-voltage components.
  - ▶ Wear safety shoes with ESD protection.
  - ▶ Wear cloth gloves.
  - ▶ Wear safety glasses.
  - ▶ Position hands and feet so as to avoid potential crushing hazards.
  - ▶ Use the load holding device only for the 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 of 25 kg (55 kg).
  - ▶ Use only the screw included in delivery or the replacement screws with the same size and quality grade.
- ▶ Tighten the screws with the specified torques (see the workshop manuals of the Volkswagen Group brands).
  - ▶ The module detacher may only be used alone or with a suitable workshop crane, such as VAS 6100, and the swivel lifting hook VAS 691 013 in accordance with the workshop manuals of the Volkswagen Group brands.
  - ▶ Ensure that the workshop crane and the swivel lifting hook are in good working order before each use.
  - ▶ When using with a workshop crane, ensure that the path is clear and easily visible.
  - ▶ Move the load slowly and carefully.
  - ▶ Observe the module detacher and the load during all movements.
  - ▶ It is prohibited for persons to stand under the load and in the danger zone while the load is being moved.
  - ▶ Do not work on suspended loads.

### 3 Operating Instructions

#### WARNING

##### Risk of electric shock!

The high-voltage battery is a high-voltage storage capacitor. High voltage could cause serious personal injuries or severe damage to materials.

- ▶ Observe and follow the risk classification of the high-voltage storage capacitor in the workshop manual.
- ▶ Observe and follow the notes and work instructions in the workshop manual.
- ▶ For qualified workshop personnel only.

1. Ensure that the complete module detacher and extension set are complete and inspect them for visible damages such as signs of wear, deformation, breaks, cracks, and corrosion before each use. Do not use the module detacher or extension set if damaged or in poor condition, but discard it immediately.
2. Perform the necessary preparatory work to use the module detacher in accordance with the workshop manuals of the Volkswagen Group brands.
3. Perform the steps described in sections “Attach the lifting clamp to the battery module” and then “Using the support bar”.  
Perform the steps described in sections “Lifting the battery module by hand” or “Lifting the battery module with the workshop crane”.

#### 3.1 Attach the lifting clamp to the battery module

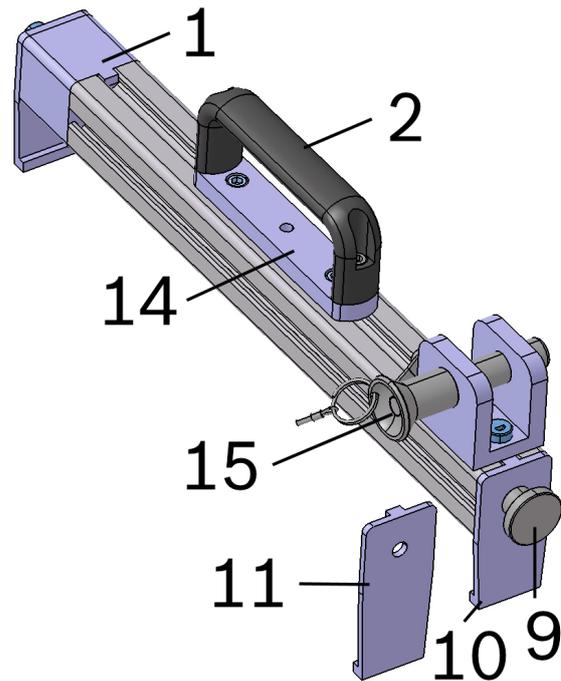


Figure 2: Lifting clamp

- 1** Hook
- 2** Bow-type handle
- 9** Knurled-head screw M8 x 16, burnished, torque 5 Nm to 10 Nm
- 10** Hook T40424/1
- 11** Hook T40424/2
- 14** Handle adapter T40424/4
- 15** Ball lock pin Ø 16 x 40 with tether

1. If necessary, remove the hook (10) from the lifting clamp and store it in a suitable location. Secure the hook (11) to the lifting clamp.



Refer to the workshop manuals of the Volkswagen Group brands for information about which hook to use.

2. Attach the lifting clamp to the battery module. Ensure that the hook (1) and the hook (10) or (11) fit into the battery module correctly (see the workshop manuals of the Volkswagen Group brands).
3. Tighten the knurled-head screw (9) by hand (5 Nm to 10 Nm).

### 3.2 Using the support bar

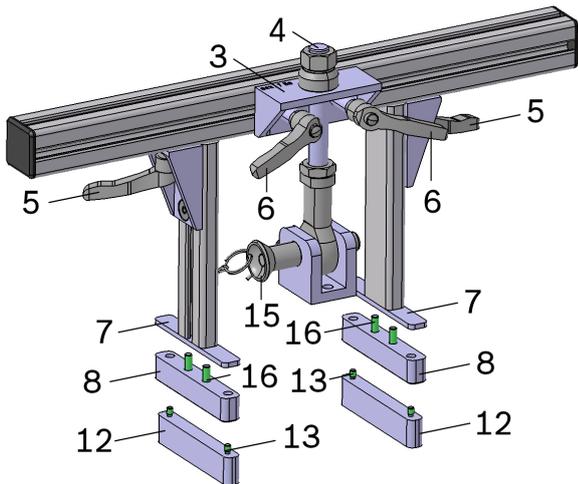


Figure 3: Support bar

- 3** Support
- 4** Spindle, max. torque 7 Nm
- 5** Locking lever, 2 pieces
- 6** Locking lever, 2 pieces
- 7** Disc of the Extension Set T40424/5, 2 pieces
- 8** Base, 2 pieces
- 12** Adapter T40424/3, 2 pieces
- 13** Cylinder head screw DIN 912 M5 x 20 8.8, max. torque 2 Nm, 2 pieces per adapter
- 15** Ball lock pin  $\varnothing$  16 x 40 with tether
- 16** Cylinder head screw DIN 912 M6 x 25 8.8, zinc coated, 2 pieces per base

1. If necessary, perform the preparatory work on the bases (8).



The discs and adapters adjust the height of the bases. Refer to the workshop manuals of the Volkswagen Group brands for information about whether to use the discs and/or adapters for the bases.

#### Attach the discs (7) to the support bar if necessary.

Loosen the cylinder head screws (16). Remove the bases (8) from the support bar.

Position both discs (7) and both bases (8) on the support bar (see Figure 3).

Secure the discs (7) and bases (8) to the support bar with the cylinder head screws (16). Tighten the cylinder head screws (16) with a torque of 5 Nm.

If necessary, attach the adapters to the bases.

#### Attach the adapters (12) to the support bar if necessary.

Secure both adapters (12) to the bases (8) with the cylinder head screws (13). Tighten the cylinder head screws (13) with a torque of no more than 2 Nm.

2. Connect the support bar to the lifting clamp with the ball lock pin (15).
3. If necessary, reposition the bases (8) and the adapters (12) (where used) on the battery module in accordance with the workshop manuals of the Volkswagen Group brands.

Release the locking levers (5).

Slide the bases (8) and the adapters (12) (where used) to the desired position on the battery module.

Retighten the levers (5).

4. If necessary, move the support (3) to reposition the clamping lever on the battery module in accordance with the workshop manuals of the Volkswagen Group brands.

Release the locking levers (6).

Slide the support (3) to the desired position.

Retighten the levers (6).

- Turn the nut on the spindle (4) very slowly and carefully. This will release the battery module from the thermal compound paste. Turn the nut with a torque no more than 7 Nm.

### CAUTION

#### Risk of injury!

The hooks could suddenly snap out of the battery module when it is released from the thermal compound paste incorrectly.

- ▶ Do not use the workshop crane to release the battery module from the thermal compound paste.
- ▶ Do not use electric tools such as an electric or impact screwdriver to release the battery module from the thermal compound paste.
- ▶ Turn the nut on the spindle with no more than 7 Nm.
- ▶ If the battery module is not released, stop the process. Ensure that all the preparatory steps were performed correctly. If necessary, repeat the preparatory steps. Proceed with the process carefully.

- Remove the support bar from the lifting clamp and store it in a suitable location.

### 3.3 Lifting the battery module by hand

- Ensure that the lifting clamp is secured to the battery module correctly.
- Lift the battery module by the handle (2) from the battery case by hand (see Figure 2).
- Place the battery module on a clean and fuzz-free surface.
- Remove the lifting clamp from the battery module.
- Remove the rest of the thermal compound paste from the battery module as described in the workshop manuals of the Volkswagen Group brands.
- Perform further work as described in the workshop manuals.
- Ensure that all parts of the special tool have been removed after completing the repair work.
- Reconvert the module detacher to its original state after completing the repair work.

When attaching the hook (10) to the lifting clamp, turn the knurled-head screw (9) by hand (5 Nm to 10 Nm).

Remove the adapters (12) from the bases (8).  
Store the hooks (11) and adapters (12) in a suitable location.

### 3.4 Lifting the battery module with the workshop crane

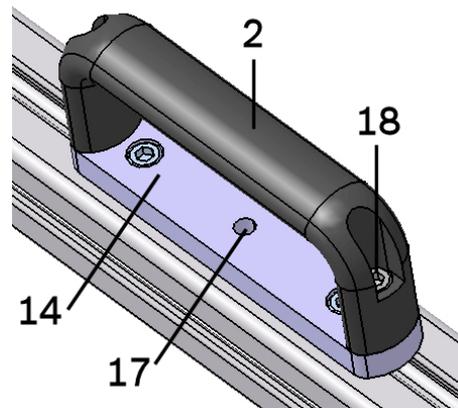


Figure 4: Bow-type handle, close-up

**2** Bow-type handle

**14** Handle adapter T40424/4

**17** Hole

**18** Cylinder head screw DIN 912 M6 x 25 8.8, zinc coated, torque 6 Nm, 2 pieces

- Remove the handle (2) from the handle adapter (14).
- Screw the swivel lifting hook VAS 691 013 into the hole (17) in the center of the handle adapter (14) with a torque of 10 Nm.
- Attach the workshop crane's (e.g. VAS 6100) hook to the swivel lifting hook VAS 691 013.
- Ensure that the lifting clamp is secured to the battery module correctly.

5. Lift the battery module by the swivel lifting hook VAS 691 013 from the battery case with the workshop crane (e.g. VAS 6100) carefully.

### **WARNING**

#### **Danger of a falling load**

Attaching the load incorrectly or moving the load carelessly could cause the load to fall. This could result in serious personal injuries or severe damage to materials.

- ▶ Screw in the swivel lifting hook with a torque of 10 Nm.
- ▶ Lower the load upright.
- ▶ Ensure that the load is secure when setting it down.

6. Place the battery module on a clean and fuzz-free surface.
7. Remove the lifting clamp from the battery module.
8. Remove the rest of the thermal compound paste from the battery module as described in the workshop manuals of the Volkswagen Group brands.
9. Perform further work as described in the workshop manuals.
10. Ensure that all parts of the special tool have been removed after completing the repair work.
11. Reconvert the module detacher to its original state after completing the repair work.

When attaching the hook (10) to the lifting clamp, turn the knurled-head screw (9) by hand (5 Nm to 10 Nm).

If necessary, remove the adapters (12) from the bases (8).

If necessary, remove the discs (7) from the support bar. Re-attach the bases (8) to the support bar. Tighten the cylinder head screws (16) with a torque of 5 Nm.

Store the hooks (11) and adapters (12) in a suitable location.

When attaching the handle (2) to the handle adapter (14), tighten the cylinder head screws (18) with a torque of 6 Nm.

## 4 Inspection and Maintenance

Ensure that the complete module detacher and extension set are complete and inspect them for visible damages such as signs of wear, deformation, breaks, cracks, and corrosion before each use. Do not use the module detacher or extension set if damaged or in poor condition, but discard it immediately.

Replacement parts are available on request. Use only original replacement parts.

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.*



## 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:	Module detacher
Product Type:	Load holding device
Product Number:	T40424

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

Any modification to the 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, September 25, 2019

Place, Date

Carsten Henkel, Managing Director