

Technical information

TI No.: 72.00U20089A

Distribution list: D

Distribution date:

20.05.2020

Valid until: 31.12.2040

The point of contact is the EvoBus after-sales service in each country

Model: TC 400 USA

MODEL SERIES: 629557

TITLE: **TC 400 USA - Replacing the support arm at door I**

COMPLAINT

In strong gusts of wind, door I lifts up while the bus is in motion.

CAUSE

Inadequate dimensional accuracy of the welded support arm variant.

REMEDY

Exchange the support arm and angle mounting at door I for optimised variants.

MEASURE TYPE

The scope of the work is carried out as part of a safety recall (RC).

DEFECT PART HANDLING

The GALA (warranty parts processing) stipulations are binding. Workshops without GALA should scrap the defect parts immediately after the repair.

REPLACEMENT PARTS REQUIRED

Quantity	Designation	Number	Comment
1	Support arm	A 629 760 17 73 05	
2	Coupling screw	A 010 990 91 04 05	
3	Hexagon nut	N 910112 010001	
4	Washer	N 000000 008842	
1	Angle mounting	A 629 723 02 12 05	
2	Screw M8x30	N 000000 001388	
2	Blind rivet nut	A 001 990 41 59 05	Only if required

OPERATION TEXTS

Operation no.	Operation text	Working time/h	Comment
02-1782	Replace support arm of passenger door with new one	2.9	Includes adjustment work

The times apply for work at an hourly rate.

DEFECT NUMBER

Defect no.: **Designation**

7290074

CODEWORD

7200U20089

INTRODUCTION OF MODIFICATIONS INTO SERIES PRODUCTION

Batch problem

WARRANTY AND GOODWILL SETTLEMENTS

Field measure type RC: 100 % of costs will be accepted.

BUS/MCC

pp.

Johannes Lehmann

BUS/MCC-O

pp.

Markus Fischer

Attachments

Procedure



Warning

Risk of injury. During work on doors, there is a risk of pinch point injuries or entrapment of individual limbs, e.g. hands, arms or legs. The following points must be observed during work on the doors, flaps, covers and roof hatches.

[Details...](#)



Warning

Risk of entrapment and crushing. Danger to hands, arms and legs during all work on doors, flaps, covers and roof hatches.

[Details...](#)



Warning

Risk of entrapment and crushing. Reaching in between mechanically operated parts may result in serious injuries due to the severing or crushing of body parts.

[Details...](#)



Warning

Risk of entrapment and crushing. Danger to fingers and hands when the power supply is connected.

[Details...](#)



Warning

Risk of injury. Danger due to the dropping of unwieldy or heavy components. The unforeseen dropping of components can result in serious injuries to the body and limbs.

[Details...](#)



Warning

Risk of accident. Danger when lifting and transporting heavy components. The use of defective or unsuitable lifting equipment and hoists for the lifting and transporting of heavy components could result in serious or fatal injuries to all persons involved if the component were to drop or slip.

[Details...](#)



Warning

Risk of injury. Danger from the spontaneous opening or dropping of flaps, doors, covers and panels. There is a risk of flaps, doors, covers or panels that have been closed or fitted incorrectly opening or coming loose spontaneously, especially while the vehicle is in motion, and thereby causing injury.

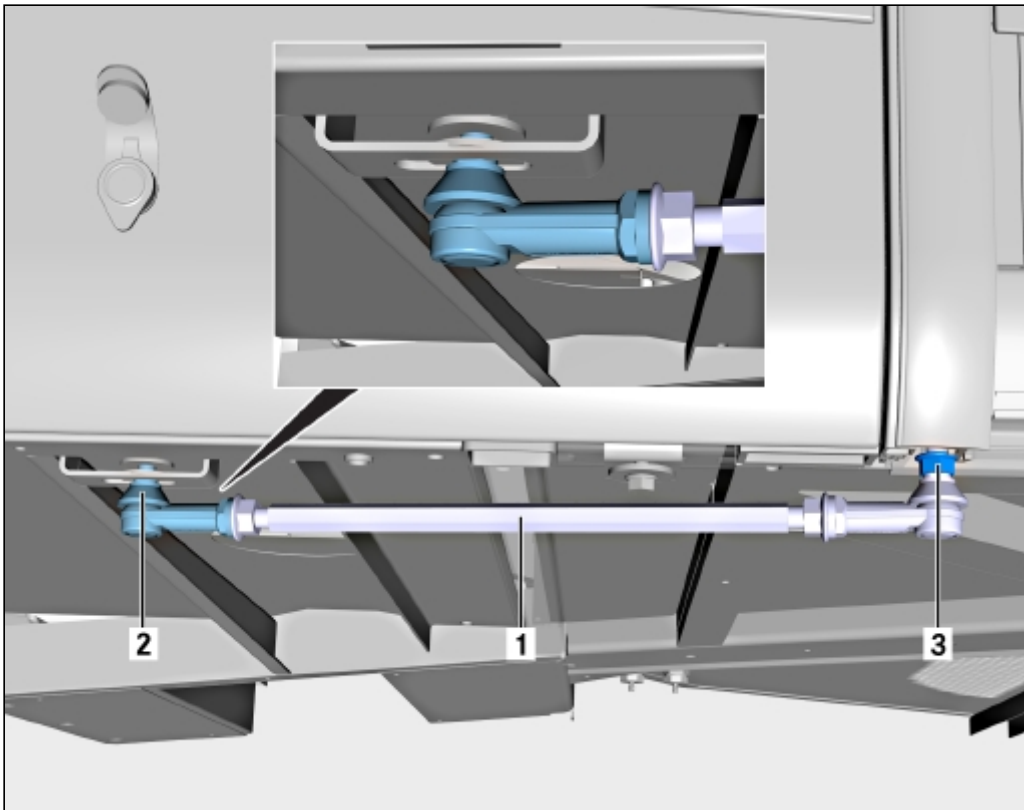
[Details...](#)

Preparatory tasks

1. Ignition starter switch to position 0 (ignition OFF).
2. Turn the emergency valve as far as the stop in the direction of the arrow.

Procedure

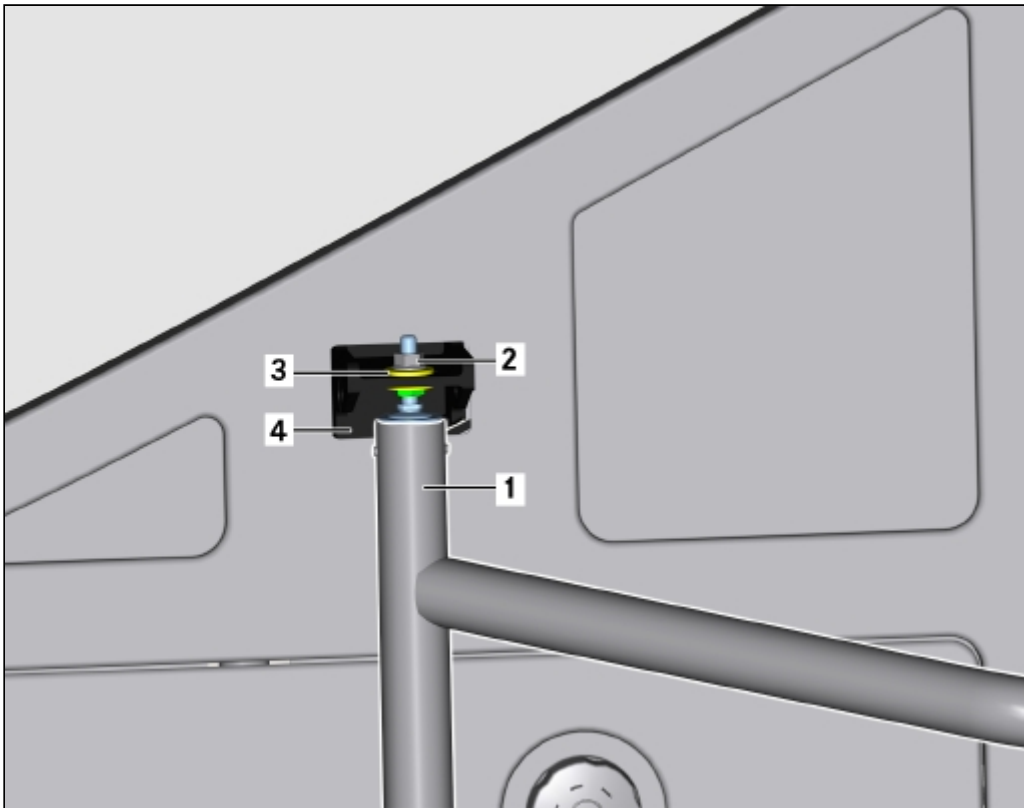
Loosening the lower linkage



M72.10-0167-81

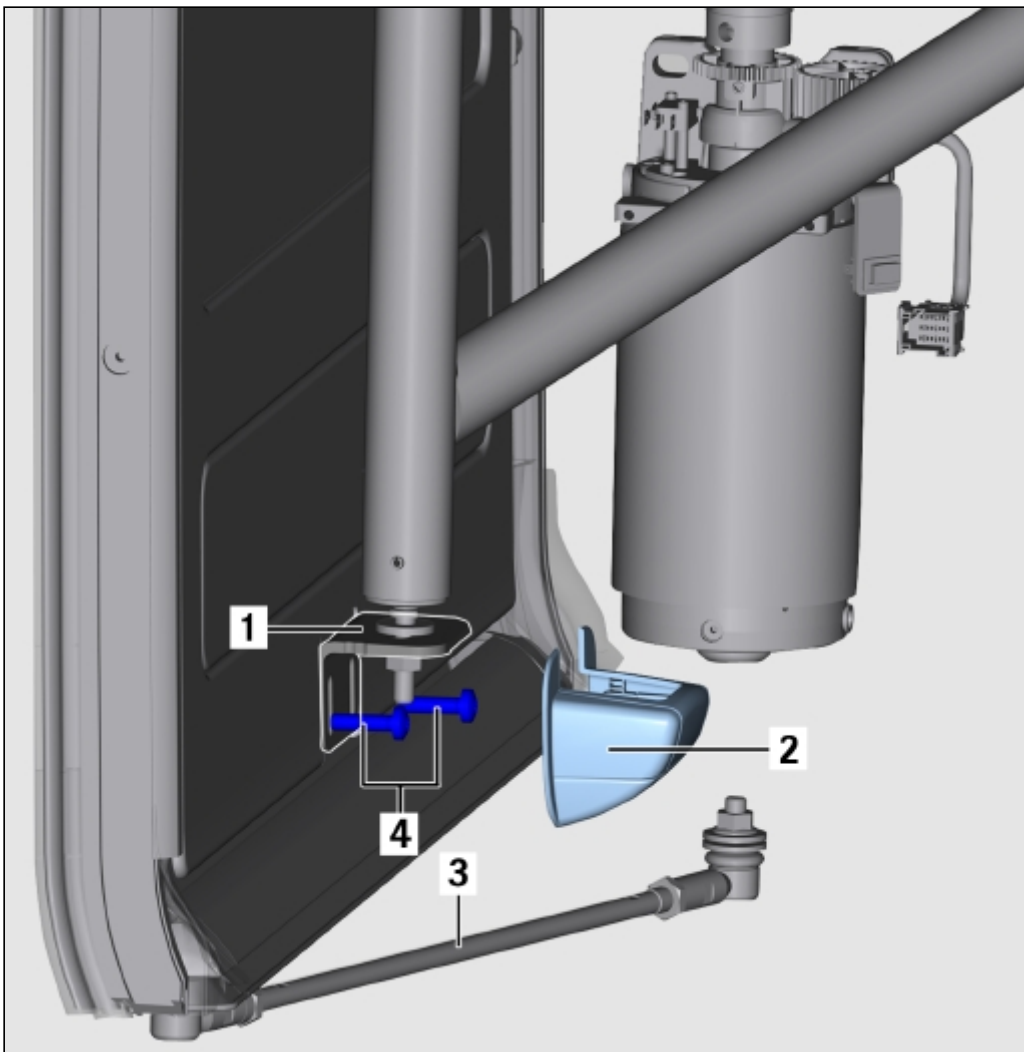
1. Remove ball joint **(2)** of linkage **(1)**.

Removing the door leaf



M72.10-0203-81

1. Remove nut **(2)** and washer **(3)**.



M72.10-0192-82

2. Remove cover **(2)**.
3. Remove, release and disconnect the electrical connection of the pressure shaft switch.
4. Support the door leaf using an assembly lifter.
5. Unscrew screws **(4)**.
6. Remove the door leaf upwards.

i Note

Set the door leaf down on a suitable underlay and protect it from damage.

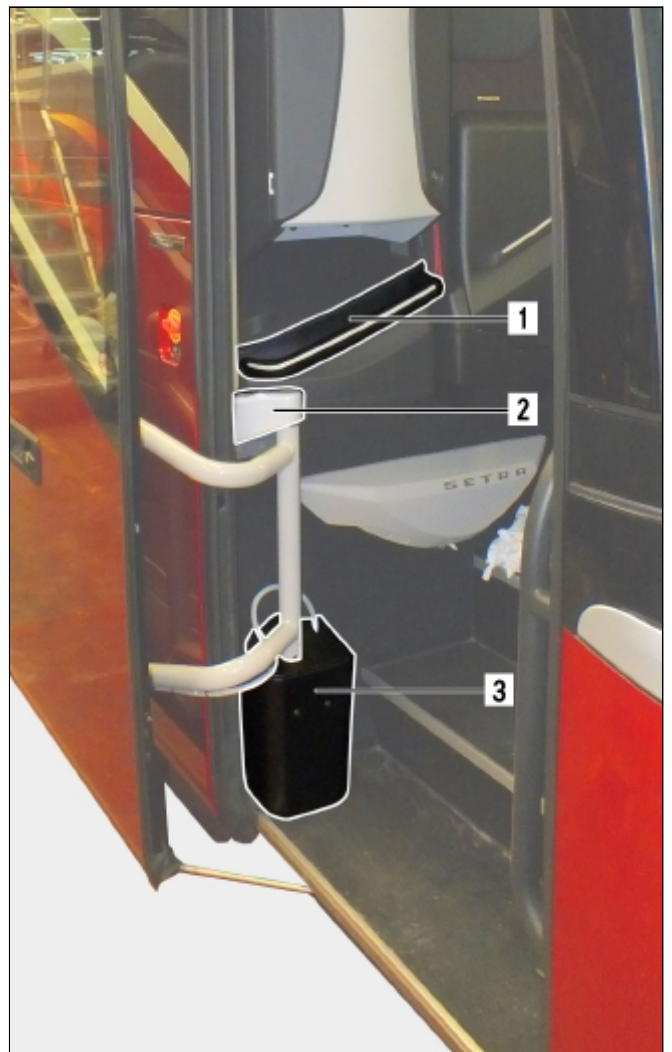
7. On the door leaf, check that the blind rivet nuts for securing the angle mounting are firmly seated.

i Note

If necessary, the blind rivet nuts must be replaced with new ones to a professional standard.

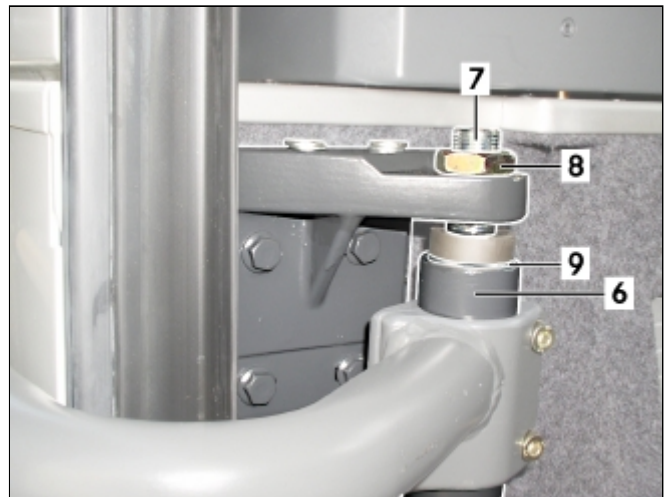
Removing the support arm

1. Remove cover **(2)** from the upper mounting console.
2. Remove cover **(3)** from the door drive.



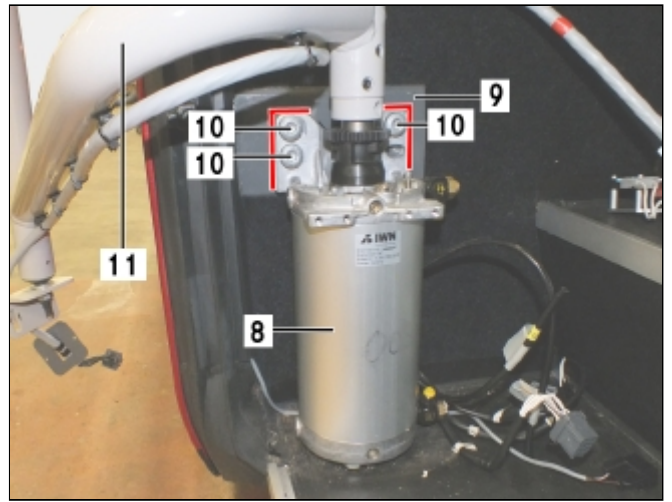
M72.10-0234-73

3. Loosen lock nut **(8)** from bearing pin **(7)**.
4. Fully unscrew bearing pin **(7)**.



M72.00-0446-71

5. Colour-mark the position of door drive **(8)** on lower mounting console **(9)** as illustrated.
6. Unscrew screws **(10)** and remove door drive **(8)** together with support arm **(11)**.



M72.10-0237-71

Replacing and fitting the support arm

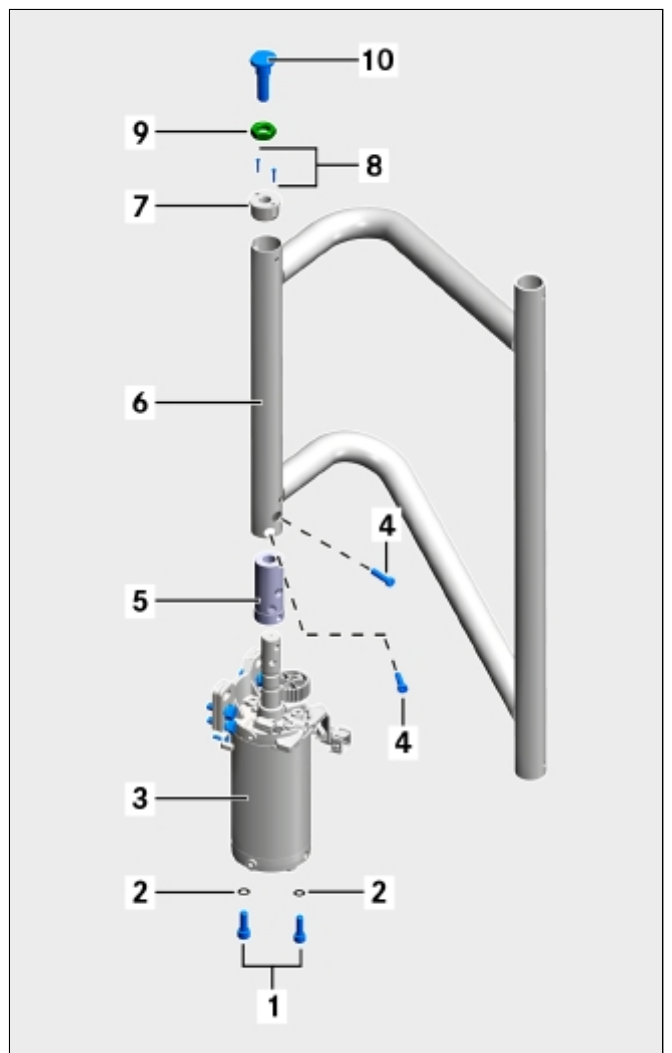
7. Unscrew coupling screws **(4)**.
8. Remove support arm **(6)** from door drive **(3)**.
9. Position new support arm **(6)** on door drive **(3)**.
10. Hold support arm **(6)** in position using new coupling screws **(4)**.

Tightening torque

Door rotating pillar to door drive

M8 × 33	28 Nm
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11. Remove the coil spring and guide sleeve from the removed support arm and fit them to the new support arm.

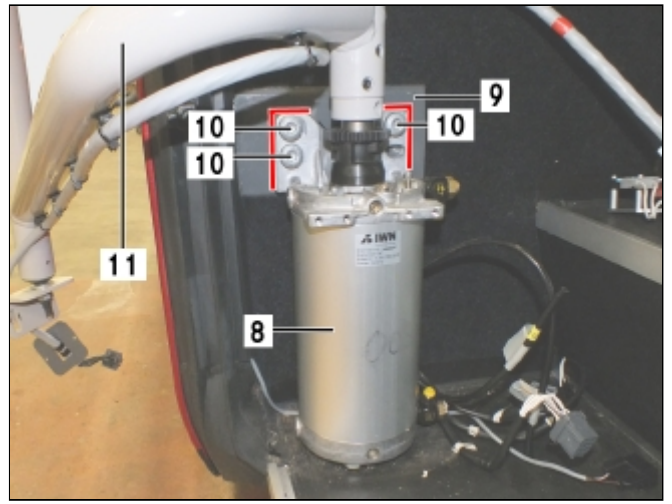


M72.00-0580-73

12. Align door drive **(8)** and support arm **(11)** with applied markings **(9)** and secure using screws **(10)**.

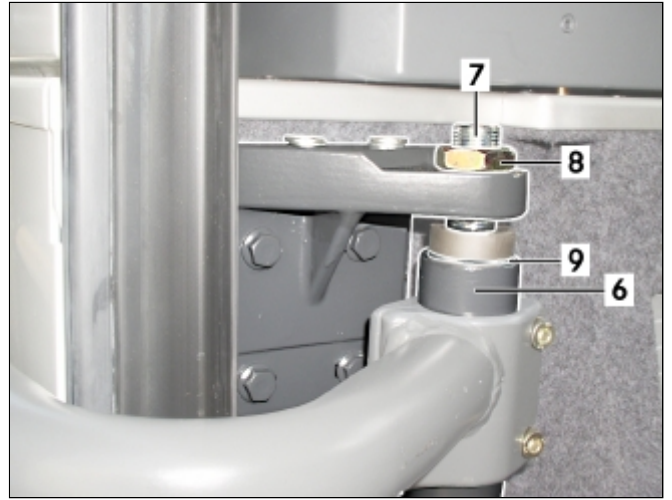
Tightening torque

Door drive to bodywork	46 Nm
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M72.10-0237-71

13. Insert bearing pin (7) and screw down until groove (9) of the bearing is flush with the top edge of rotating pillar tube (6).
14. Secure the position of bearing pin (7) by tightening lock nut (8).



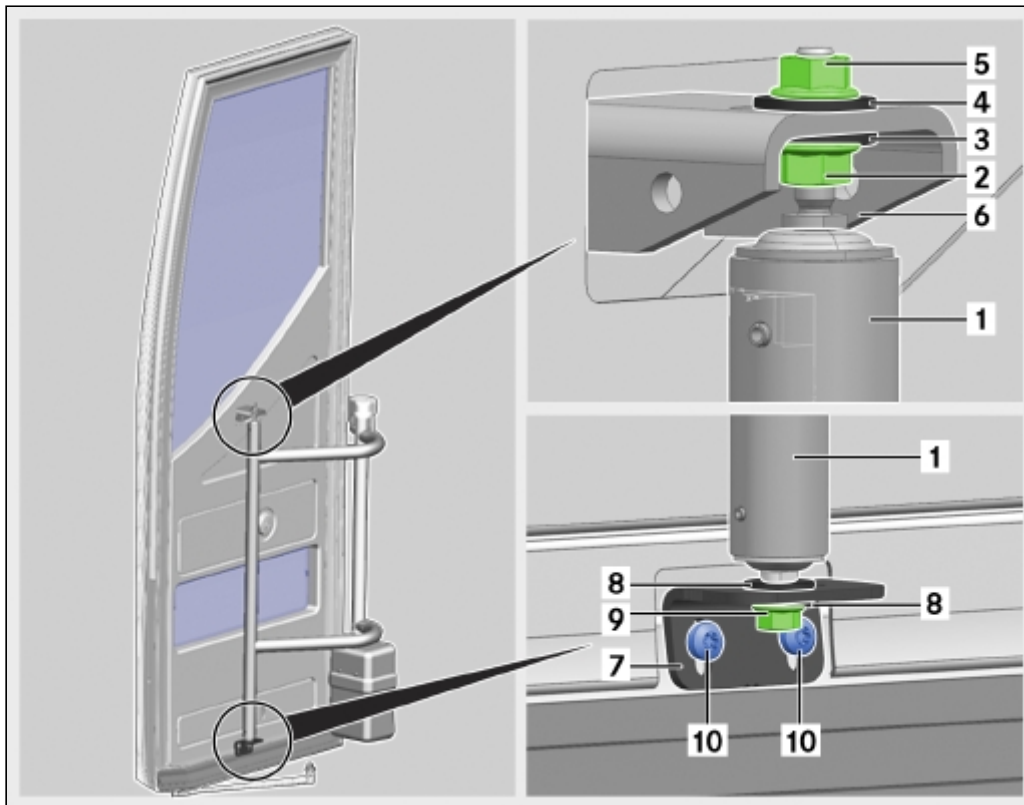
M72.00-0446-71

Tightening torque

Lock nut for upper door mounting bearing pin

Hexagon nut	54.0 Nm
M20 × 1.5 – -04- DIN 439	

Fitting the door leaf



M72.00-0742-81

15. On support tube **(1)**, fit a hexagon nut **(2)** and washer **(3)**.
16. Position the door leaf with upper angle bracket **(6)** on support tube **(1)** and screw it on with washer **(4)** and hexagon nut **(5)**.

Tightening torque	
Tubular bracket	
M10 – 8,8	46 Nm

17. At the bottom end of support tube **(1)**, fit new angle mounting **(7)** with washers **(8)** and hexagon nut **(9)**.
18. Secure angle mounting **(7)** to the door leaf using new screws **(10)**.

Tightening torque	
Angle mounting to door leaf	23 Nm

**Note**

If it is not possible to secure to the specified torque because the blind rivet nuts are loose, the blind rivet nuts must be replaced with new ones to a professional standard.

**Note**

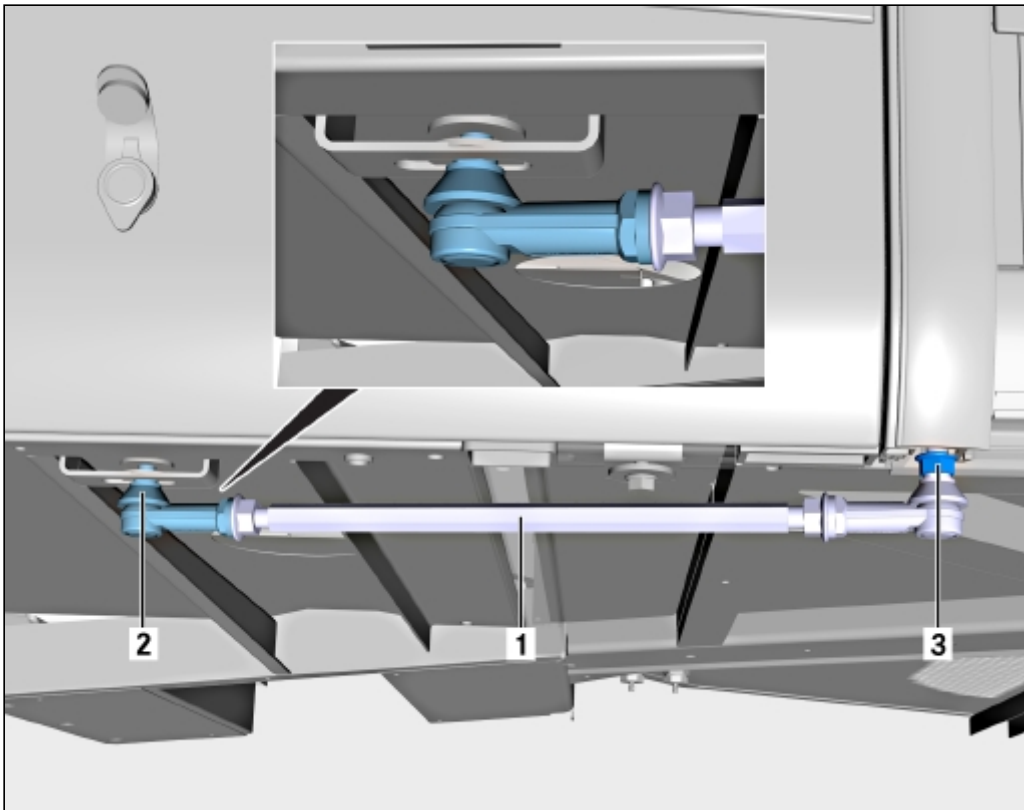
The new angle mounting must not be overpainted.

19. Secure angle mounting **(7)** to support tube **(1)** using nut **(9)**.

Tightening torque	
Tubular bracket	
M10 – 8,8	46 Nm

20. Connect the electrical connection for the pressure shaft switches and fit it into the door leaf.

Fitting the lower linkage



M72.10-0167-81

1. Secure guide arm **(1)** to bracket **(2)**.

Tightening torque

Lower guide arm to vehicle underside

Hexagon nut

35 Nm

Inspection and adjustment work

i Note

Due to the wide variety of door systems, it is not possible to provide an exact guide for a particular vehicle.

Example instructions can be found in BusDoc 35.51 TC 500. The variant on a particular vehicle may differ from the illustrations shown here.

21. Adjust the door leaf.
22. Adjust the rotating pillar drive.
23. Adjust door speed.
24. Adjust end position damping.
25. Adjust the striker pins.

Finishing tasks

1. Fit all covers.
2. [Updating vehicle documentation in the "VeDoc" system and updating bus-specific electrical data](#)

20.5.2020

Technical information

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