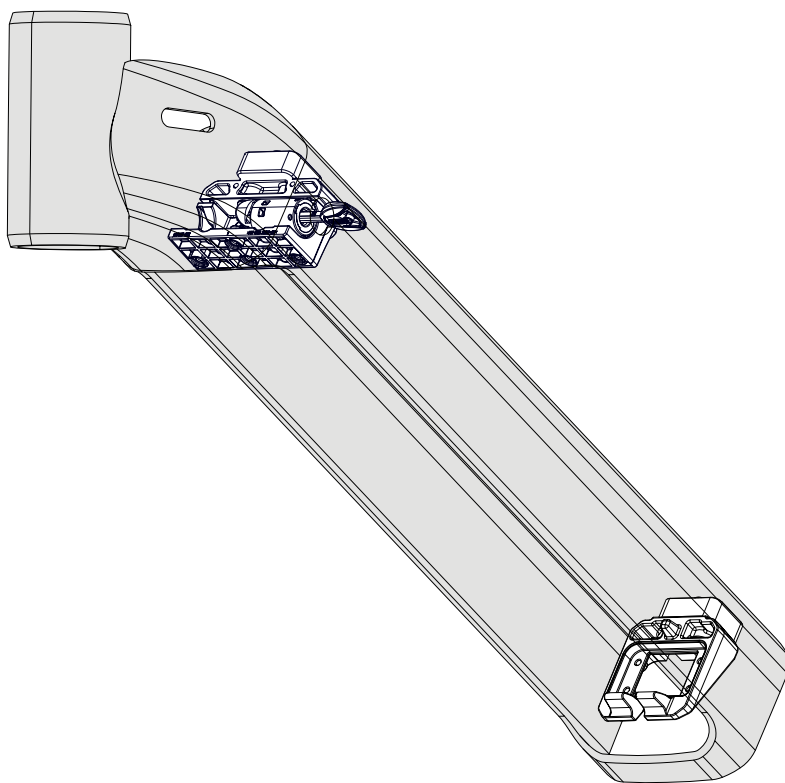


Battery holder

E-Bike System Operating Manual | V1.1

QORE



**IMPORTANT SAFETY INSTRUCTIONS
KEEP THESE INSTRUCTIONS**

Yamaha no. 592600-101

Contents

1 About this operating manual	3	7 ASSEMBLY	16
1.1 Design of safety and warning notices .3		7.1 Assembly of the battery holder	17
1.2 Format conventions	4		
1.3 Terms and abbreviations	5	8 DISPLAY AND OPERATION	21
1.4 Symbols and notices	6		
1.5 Applicable documents	6	9 MAINTENANCE BY THE USER	22
2 IMPORTANT SAFETY INFORMATION	7	10 Troubleshooting	23
2.1 Overall system safety instructions	7		
		11 Accessories and spare parts	26
3 Intended use	11	11.1 Accessories	26
		11.2 Spare parts	27
4 Structure and function	12		
		12 DISASSEMBLY AND DISPOSAL	28
5 Technical data	13	12.1 Disassembly	28
		12.2 Disposal	29
6 TRANSPORT AND STORAGE	14		

1 About this operating manual

This operating manual contains the necessary information for the intended use and safe assembly of the battery holder for the QORE System (hereinafter referred to simply as the “product”). The information is primarily intended for the technical personnel responsible for the assembly and integration of the product.

Before completing any work relating to the product:

- Make sure that you have read and understood this operating manual in full, paying particular attention to the safety and warning notices.
- Keep this operating manual in a safe place for future reference.

- Follow the instructions in this operating manual at all times when using and handling the product.

If you have any queries, questions or problems with the product that cannot be resolved by this operating manual, do not attempt to carry out any work yourself and contact Yamaha or your dealer.

Distributing company	Yamaha Motor eBike Systems GmbH
Address	Sickingenstraße 29-38 10553 Berlin
Phone	+49 30 343498 100
Contact	service.ebike@ yamaha-ebike-systems.com

1.1 Design of safety and warning notices

This operating manual contains safety-related instructions to warn the user of residual risks.

The safety instructions in this operating manual are detailed in „**IMPORTANT SAFETY INFORMATION**“. To warn of specific hazards in the context of an activity or life cycle phase, warnings are used in the text. These warnings are identified by a warning symbol in conjunction with a signal word. The signal words indicate the degree of the hazard.

The following warnings are used in this operating manual.



DANGER indicates an immediate hazard which, if the safety measures are not followed, will result in fatal or serious injury.



WARNING indicates a potential hazard which, if the safety measures are not followed, can result in fatal or serious injury.

 **CAUTION**

CAUTION indicates a potential hazard which, if the safety measures are not followed, can result in minor or non-serious injury.

NOTICE

NOTICE indicates a potential hazard which, if the safety measures are not followed, can result in property or damage to the environment.

1.2 Format conventions

This operating manual uses additional forms of presentation for certain information.

Highlighting in texts

Bold	Highlights information which is particularly important when describing procedures.
<i>Italicized</i>	Highlights references to information in this operating manual.
<u><i>Italicized</i></u> <u><i>underlined</i></u>	Highlights references to information in other documents.

Figures

The figures contained in this operating manual are schematic representations and serve only to graphically clarify the product and the respective processes. The figures may deviate from the actual state of the product upon delivery.

Lists

Instructions are presented as numbered lists and must be carried out in the specified order.

1. Activity step 1
 2. Activity step 2
- ✓ Outcome

Bulleted lists are displayed as unnumbered lists.

- Bullet point 1
- Bullet point 2
- Sub-point 1
- Sub-point 2

1.3 Terms and abbreviations

Term	Meaning
EPAC	Electrically Power Assisted Cycle

1.4 Symbols and notices

Symbols



This symbol indicates that personal protective equipment must be worn for the subsequent activity.



This symbol indicates components that are included in the scope of delivery.



This symbol indicates components that are not included in the scope of delivery but are required.



This symbol indicates tools and equipment required for the subsequent activity.

Mandatory signs



Read the instructions in full before working on the product and follow the instructions provided.



Wear safety gloves.



Wear safety boots.



Wear safety goggles.

1.5 Applicable documents

To use the product as intended, it is necessary to observe all the accompanying information provided.

This includes this assembly manual, the operating manual of the manufacturer of the EPAC, and the accompanying information for the additional components of the QORE System.

This includes, in particular:

- Operating manuals for the battery and the charger.
- Operating manual for HMI Allround
- Operating manual for the speed sensor

2 IMPORTANT SAFETY INFORMATION

The following safety information describes potential hazards and residual risks that may arise when using the product. To avoid personal injury and damage to property, it is necessary to read and follow the instructions provided here before

using the product. It is also necessary to comply with all the applicable national regulations for the operation of EPACs as well as all the applicable national and international regulations on safety, health, and occupational safety.

2.1 Overall system safety instructions

WARNING

When using this product, basic precautions should always be taken, including the following:

- Read all instructions concerning the use of the product.
- To reduce the risk of injury, close supervision is required when the product is used near children.
- Do not insert fingers or other extremities into the product.
- Do not use the product if the power cord or any other current-carrying wires or cables are damaged.
- The product and its accessories are designed for use within specified ambient conditions / temperatures (see „*Technical data*“).
- If live components of the product come into contact with moisture, there is a risk of a short circuit. Keep liquids away from live components and do not spray any liquids (e.g., cleaning agents) onto live components.
- Working on live parts with conductive tools poses a risk of electric shock. Always remove the battery when working on the product and only use insulated tools.
- Moisture and foreign matter can enter the product through exposed connections. Seal exposed connections with dummy plugs.

ELECTRICAL HAZARDS

- Damage to live parts poses the risk of electric shock. Do not use the product if it is damaged.

HAZARDS DUE TO HEAT AND FIRE

- Electrical energy or sparks can ignite materials in the immediate vicinity. The area must be free of flammable substances or other combustible materials during all assembly work.

- The surfaces of the drive unit's housing can become hot during operation (up to 70 °C) and cause burns upon contact. Avoid contact with the drive unit's housing during and shortly after operation. Integrate the drive unit into the overall system in such a way as to ensure the safety of the end user and prevent the risk of burns.

Mechanical hazards

- If any mechanical connections between the components of the product are improperly or incorrectly made, personal injury and damage to property can result from loose connections and damage to materials. Ensure that all screw connections are always tightened to the specified torque.
- Due to its design, the product has sharp edges. During the assembly work, wear the prescribed personal protective equipment.
- Dropping the product can cause bruising and contusions to persons as well as damage the product. Always handle the product with care and wear the prescribed personal protective equipment.

Hazards posed by combining the product

- Combining the product with accessories (e.g., batteries) or spare parts not approved by Yamaha may result in personal injury or damage to property. Only use accessories and spare parts that are approved by Yamaha. If in doubt, contact Yamaha customer service team.
- The product may only be integrated into EPACs that are compatible with the product's specifications. If in doubt, contact the Yamaha customer service team.

Hazards during assembly and commissioning

- The assembly may only be performed only by trained and qualified personnel.
- Before any assembly work, remove the battery properly and disconnect the power supply to the drive unit.
- The use of sharp or pointed tools during assembly can damage live parts of the product. Keep sharp or pointed tools away from cables, connectors and any other live parts.
- Modifications to the product may lead to malfunctions and compromise the operational safety. Do not make any modifications to the product that have not been confirmed and approved in writing by Yamaha.

- The safety features on the product are essential for the operational safety. Check that the safety features are functioning properly before using the product. If any defects are discovered, do not operate the product and contact the Yamaha customer service team immediately.
- Foreign matter in the working area of the product can cause damage to property or compromise the operational safety. Remove any unused cables, tools and other objects from the working area after completing any and all assembly work.
- Improper assembly can lead to personal injury and damage to property. Before use, ensure that the assembly has been carried out correctly and that the product is functioning properly.
- The product is subject to wear and tear and high levels of stress. Different materials and components may respond differently to wear and continuous stress. If the intended service life of a component is exceeded, it may fail suddenly and potentially cause injury to the rider. Any cracks, grooves or discoloration in high-stress areas indicate that the component has reached the end of its service life and should be replaced.
- High temperatures can occur in the area of the drive unit. Inspect the area around the drive unit for damage and unusual changes on a regular basis.

Hazards during operation

- Modifications to the product and its components that aim to result in an increased performance are not permissible.
- In the event of failure, malfunctioning, or obvious damage to the product (e.g., loose connections/missing screws), do not attempt to embark on any repairs yourself and contact Yamaha or an authorized garage.
- Unauthorized access to the product can result in personal injury and damage to property. When not in use, secure the product against unauthorized access using appropriate measures.
- Unauthorized repairs to the product can lead to personal injury and damage to property. Repairs should be carried out by authorized garages only.
- Before any maintenance work, remove the battery properly and disconnect the power supply to the drive unit.
- The surfaces of the drive unit's housing can become hot during operation. Before any maintenance work (e.g., lubricating the chain), allow the product to cool down completely.
- Aggressive cleaning agents can damage the product. Only use solvent-free, non-corrosive and non-abrasive cleaning agents.

Hazards during maintenance

- For information on the cleaning and maintenance of third-party components (e.g., chain guides, chains), refer to the accompanying information provided with each component.

Hazards during storage and disposal

- The product may be damaged if it is stored in a humid environment. Store the product (whether installed or as a separate component) in a dry environment, protected against direct sunlight and away from dust and moisture.
- When disposing of the product or its components, observe the local waste disposal regulations.

3 Intended use

The battery holder is exclusively intended for use with the Yamaha Battery InTube 650/800 in the QORE System.

Foreseeable misuse

The operation of the product with components, parameters or equipment other than those specified by Yamaha is considered misuse. Furthermore, the following are considered misuse:

- The unauthorized modification or alteration of the product and its integrated safety features without the written approval of Yamaha.
- The bypassing or disabling of safety- and protective equipment.
- The use of accessory components not approved by Yamaha for use with the product.
- Fitting a heavily soiled battery.
- Cleaning the lever mechanism with the use of aggressive cleaning agents.
- Loosening the screws on the brackets.
- Loosening the screws on the lever mechanism.
- Dropping the battery (damaging the lever mechanism).
- Inserting the battery with moisture/liquid in the connector (battery and EPAC sides).
- Unlocking the lever mechanism using only one lever.
- Unlocking the lever mechanism with a tool.
- Failing to close the lever mechanism fully after insertion.
- Driving with the lock open.
- Opening the levers with the lock closed.
- Holding/carrying the battery by only one lever.

4 Structure and function

The battery holder is permanently mounted to the frame of the EPAC and is designed to accommodate the

Battery InTube 650/800. (*for further information on the battery, see the separate operating manual*).

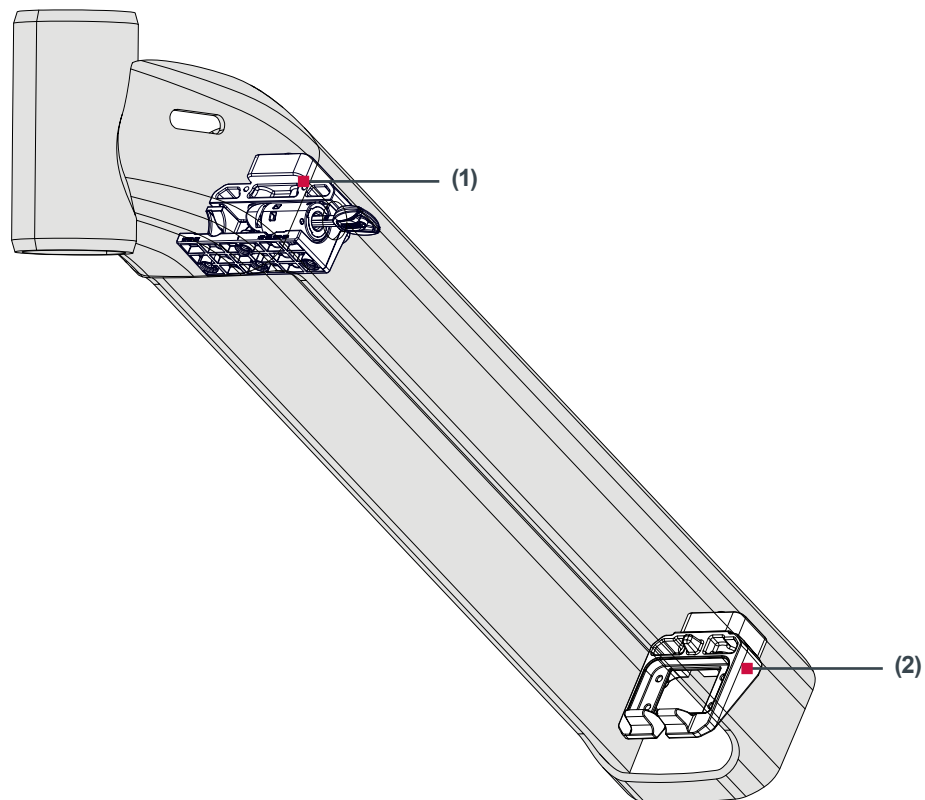


Fig. 1 Overview of Direct Mount battery holder

- (1) Lock bracket with lock
- (2) Connector bracket

5 Technical data

Battery holder specifications	Value
Dimensions (L x H x W)	452.3 x 83.3 x 66.8
Weight	Brackets and screws: 120 g Lock holder (with-out lock): 41 g Lock: 100 g
Compatible with	Battery InTube 650 (G8K7J5) Battery InTube 800 (G8B371)

6 TRANSPORT AND STORAGE

The packaging of the product depends on the customer's requirements, the transport route, and the duration of storage after delivery and before assembly.



WARNING

Hazard posed by hazardous materials

The improper transport of hazardous materials can lead to a risk of fire and explosion.

- Please observe the instructions in the enclosed accompanying information and safety data sheets.



CAUTION

Bruises and contusions caused by falling components

If the product falls on extremities, bruises and contusions may result.

- Handle the product with care at all times.
- Wear personal protective equipment.

NOTICE





Damage to the product due to improper transport

Failure to follow the instructions on the packaging may result in damage to the product.

- Observe the packaging labelling when handling the package.
- If you are unsure, do not carry out any work and contact the Yamaha customer service team or your dealer.

Symbols on the packaging

The packaging may feature symbols indicating special transport or storage conditions and warning the user of hazards when handling the package.

Symbol	Meaning
	Protect the package against the rain and moisture.
	Do not exceed the specified stacking limits.
	Transport with this side facing upwards.
	Protect the package against direct sunlight.

Delivery

Upon delivery, the packages are packed according to requirements. Upon delivery, check for the following:

- Completeness of the packages
- Damage to the packaging and the components inside
- Completeness and accuracy of the shipping documents

If any defects are discovered to the packages or shipping documents during inspection, report them to Yamaha and the responsible forwarding company immediately and document them on the transport documents.

Storage

Remove the product in accordance with the instructions in this operating manual and store it in a dry and dust-free location. Avoid exposure to direct sunlight.

Storage conditions

- 0°C to +40°C

To avoid the premature aging of the product (e.g., aging of the battery's electronic components), a storage temperature range of +10°C to +25°C is recommended.

Refer to the respective accompanying information for storage instructions on additional QORE System components.

7 ASSEMBLY



WARNING

Risk of electric shock

Working on live components poses a risk of electric shock.

- Ensure the power supply is disconnected during all assembly steps.
 - Only insert the battery after the assembly is complete.
 - Ensure that cables and connections are not damaged during the assembly.
-



CAUTION

Risk of crushing and pinching

During assembly, extremities can be caught or crushed between the frame components and the product.

- Wear the prescribed personal protective equipment.
 - Observe the correct assembly position and sequence.
 - Secure the product against falling.
-

NOTICE

During assembly, ensure that the operation of the safety-relevant parts (e.g. brake levers) is always possible.

7.1 Assembly of the battery holder

The battery holder consists of two separate brackets which are positioned and secured within the EPAC frame using an assembly aid.

The assembly aid has the necessary fastening mechanisms for locking the brackets in the intended installation position and mounting them correctly within the frame.



- Battery holder / brackets (G8G321 + G8G325)
- Assembly aid (G8H2L8)



- TORX 30 (brackets)
- TORX 20 (plugs)

Requirements

- The cable harness is fitted.

Preparation of the assembly

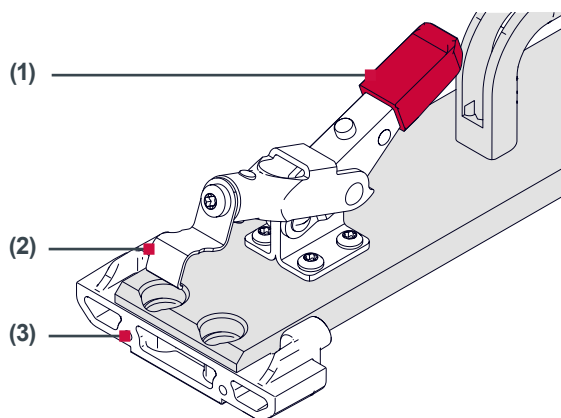


Fig. 2 Attaching the lock bracket

1. Pull the first clamping lever (1) on the assembly aid upwards to release it, and position the lock bracket (3) as shown in Figure 2.
2. Guide the retaining plate (2) over the lock bracket and close the clamping lever (1).

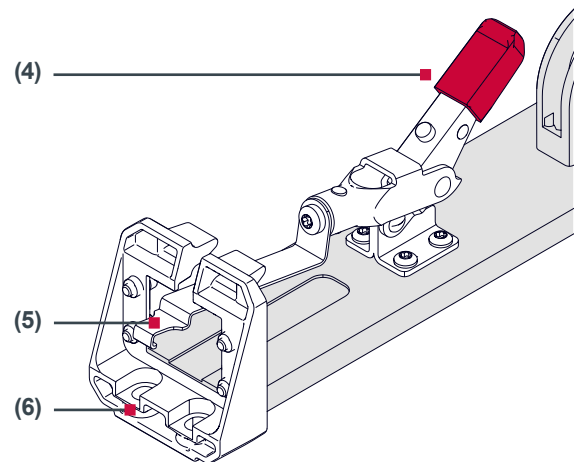


Fig. 3 Attaching the connector bracket

3. Pull the second clamping lever (4) on the assembly aid upwards to release it, and position the connector bracket (6) as shown in Figure 3.
 4. Guide the retaining plate (5) over the connector bracket and close the clamping lever (4).
- ✓ The two brackets are in position on the assembly aid and can be mounted in the frame.

Assembly in the frame

1. Position the EPAC frame on a suitable mounting surface or in a mounting bracket. The opening of the battery compartment must face upwards.

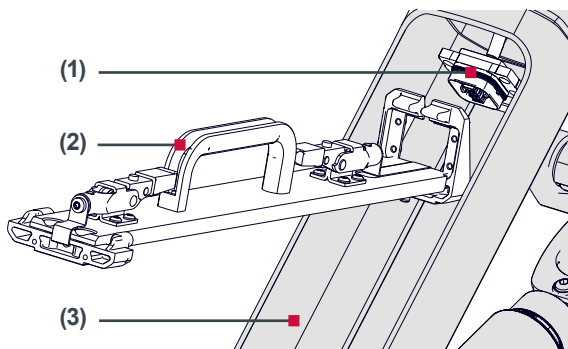


Fig. 4 Assembly in the frame (1/2)

2. Align the assembly aid with the positioned brackets of the battery holder (2) on the frame of the EPAC (3).
3. Feed the battery connector cable (1) through the opening of the connector bracket and then swivel the assembly aid into place on the side of the lock bracket.

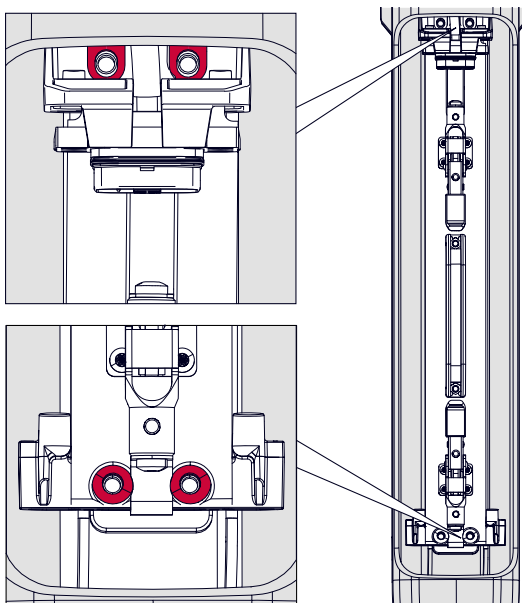


Fig. 5 Assembly in the frame (2/2)

4. Position the assembly aid in the frame. Ensure that the mounting holes of the brackets are flush with the attachment points in the frame.
 5. Loosely attach the lock bracket to the frame using the fastening screws.
 6. Loosely attach the connector bracket to the frame using the fastening screws. If necessary, carefully slide the battery connector to the side.
 7. Once correctly positioned, tighten the fastening screws for the lock bracket followed by the fastening screws for the connector bracket by hand, then tighten all screws to a torque of **7 Nm**.
- ✓ Both brackets for the battery holder are now securely attached to the frame.

Removal of the assembly aid

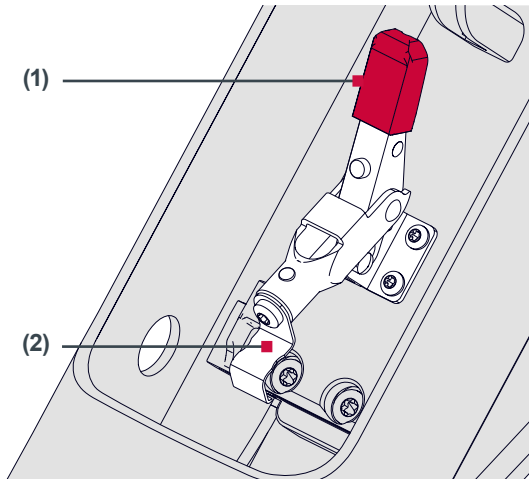


Fig. 6 Removing the assembly aid (1/2)

1. Release the clamping lever (1) on the lock bracket side and remove the retaining plate (2) from the lock bracket.
2. Release the clamping lever (5) on the connector bracket side and remove the retaining plate (4) from the connector bracket.

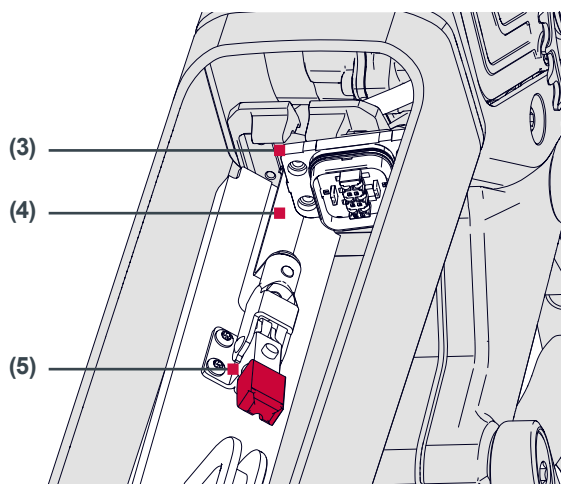


Fig. 7 Removing the assembly aid (2/2)

3. Carefully slide the battery connector (3) to the side.

4. Turn the assembly aid along its longitudinal axis and guide it out from underneath the battery connector.
5. Remove the assembly aid from the frame.

Assembly of the battery connector

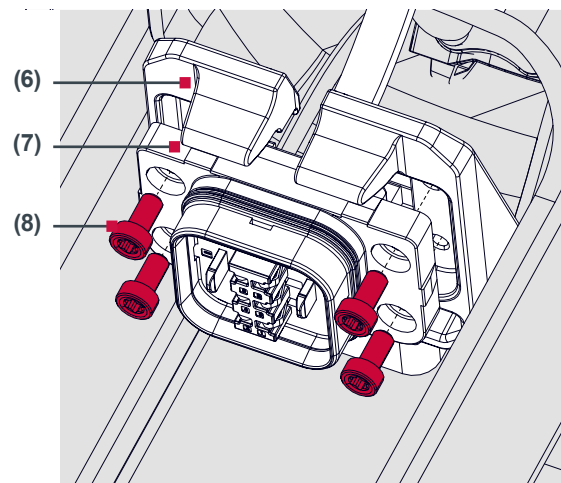


Fig. 8 Mounting the battery connector

1. Insert the battery connector (7) into the recess of the connector bracket (6).
2. Insert four fastening screws (M4 x 8) (8) and tighten with a tightening torque of **1.2 Nm**.

Assembly of the lock holder



- Lock (G896K5)
- 3x fastening screws (M5 x 10)



- TORX 25

Requirements

- The battery holder (lock bracket and connector bracket) is mounted in the frame.
- Operating units and other components above the lock bracket (e.g., lights) are connected to the cable harness.

Procedure

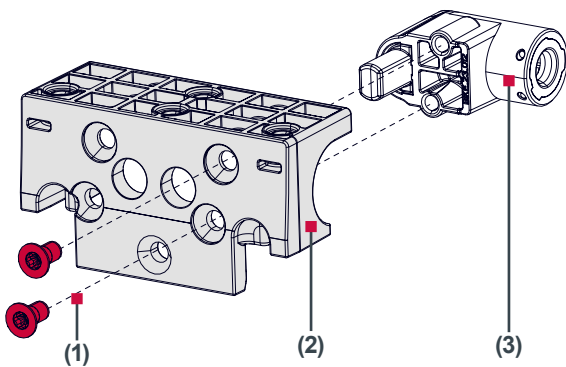


Fig. 9 Mounting the lock

1. Insert the lock (3) in the lock holder (2). Pay attention to the alignment of the keyhole.

2. Insert the fastening screws (1) and tighten with a tightening torque of **3.5 Nm**.

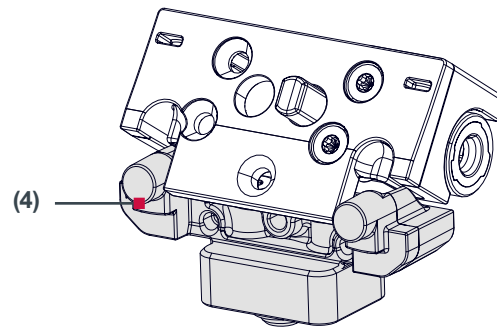


Fig. 10 Mounting the lock holder (1/2)

3. Position the pre-assembled lock holder slightly tilted on the lock bracket (4) assembled in the frame, before tilting it to its final position.

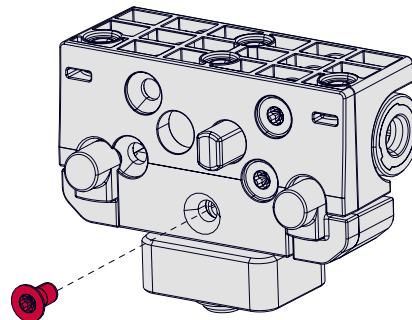


Fig. 11 Mounting the lock holder (2/2)

4. Insert the fastening screw and tighten it with a tightening torque of **3.5 Nm**.
 5. Put the key in the lock.
- ✓ The lock holder is assembled.

8 DISPLAY AND OPERATION

The display and operation are carried out via the respective connected operating unit. Observe the safety instructions in this operating manual (see „*IMPORTANT SAFETY INFORMATION*“) and in the accompanying documents.

For details on operation, refer to the enclosed user information for the operating unit.

Details on how to handle and insert the battery are provided in the information on the use of the battery enclosed.

9 MAINTENANCE BY THE USER

To support the longevity of the product and prevent repairs, the following activities should be carried out at the specified intervals.

CAUTION

Risk of burns due to hot surfaces

The surfaces of the drive unit can be hot during and after operation.

- Allow the drive unit to cool completely before embarking on any cleaning.

NOTICE

Damage to the product due to improper cleaning

Improper cleaning can damage the product and cause malfunctions.

- Do not clean the product with a pressure washer.
- Do not use any additional cleaning agents. Clean the product with water only.

DANGER

Risk of injury due to improper maintenance and repair

The improper maintenance or repair of the product and its components can result in malfunctions, failures and mechanical defects.

- Only perform the work described in this operating manual.
- Do not attempt to perform any other maintenance or repairs to the drive unit or the system components.
- Maintenance and repair work that is not described in this operating manual may only be performed by authorized Yamaha garages.

Task	Equipment / method	Interval
Check the battery holder for damage.	Visual inspection.	Before starting each trip.
Check the battery holder for proper functioning.	Functional test.	Before starting each trip.
Check all screw connections for tightness and tighten if necessary.	Tighten loose screw connections to the tightening torques specified in this operating manual.	Weekly or if unusual noises occur.

10 Troubleshooting

The following information is intended to help you troubleshoot any faults that may occur when using the product.

If the fault cannot be resolved using the measures provided here, or if the fault is not detailed below, do not use the product and contact the customer service team at Yamaha.

Fault	Possible cause	Remedy
The EPAC won't switch on.	The battery isn't inserted or isn't charged.	Insert a charged battery.
	The cable connections between the operating unit and the drive unit are loose.	Check the cable connections. Reconnect the cables insofar as this is possible without disassembly. Contact the customer service team at the authorized dealer.
	The product is defective.	Contact the customer service team at the authorized dealer.
The pedal assist of the EPAC is insufficient / does not work.	The pedal assist is not switched on or is set too low.	Adjust the pedal assist using the operating unit.
	The battery isn't inserted or isn't charged.	Insert a charged battery.
	The product is defective.	Contact the customer service team at the authorized dealer.
The handles / pedals of the EPAC won't move or are locked.	Mechanical fault.	Do not use the product. Contact the customer service team at the authorized dealer.
The battery holder is rattling.	The battery is loose.	Arrange for the bracket clearance to be adjusted by your authorized dealer.
The lever mechanism cannot be closed when the battery is inserted.	The bracket clearance is too small.	Arrange for the bracket clearance to be adjusted by your authorized dealer.

Fault	Possible cause	Remedy
The lever mechanism jams / is stiff (outside the frame).	The lever mechanism is dirty.	Clean the lever mechanism (e.g., blow it out, move the lever back and forth several times).
	The lever mechanism is extremely wet.	Allow the lever mechanism to dry and clean it if necessary (e.g., blow it out, move the lever back and forth several times).
The kinematics are compromised (broken levers, frame, etc.)	Crash with the EPAC.	Contact the customer service team at Yamaha or the authorized dealer.
	The battery falls / is dropped when removed.	Contact the customer service team at Yamaha or the authorized dealer.
The bracket is loose (rattles, moves).	The screws in the frame have become loose.	Re-tighten the screws. Contact the customer service team at Yamaha or the authorized dealer.
The key can't be inserted.	The key or the lock is dirty.	Clean the key and the lock.
	The wrong key was used.	Use the correct key.
	The key is misaligned with the front of the lock.	Check the positioning of the key and the lock.
	The key is broken.	Contact the customer service team at Yamaha or the authorized dealer
The key is inserted but can't be removed.	The lock is fully or partially open.	Lock in full
The key is inserted but the lock won't lock.	The lever mechanism is still open.	Close the lever mechanism in full.
The key won't turn.	The key or the lock is dirty.	Clean the key and the lock.
	The wrong key was used.	Use the correct key.

Fault	Possible cause	Remedy
The battery can't be fitted.	The lock is closed (the lock bolt is extended).	Open the lock using the key (retract the lock bolt).
	The battery was incorrectly positioned on the centering pin on the lock bracket.	Re-position the battery.
	The lever mechanism is jamming.	Refer to the remedy for when the lever mechanism jams.
	The bracket clearance in the frame is too small.	Arrange for the bracket clearance to be adjusted by your authorized dealer.
The system switches off in the event of extreme riding conditions / vibrations.	The contacts are faulty.	Contact the customer service team at Yamaha or the authorized dealer.

11 Accessories and spare parts

11.1 Accessories

Product	Product number
"Battery InTube 650"	G8K7J5
"Battery InTube 800"	G8B371
Battery holder (connector bracket)	G8G321
Battery holder (lock bracket)	G8G325
Assembly aid	G8H2L8

11.2 Spare parts

Necessary spare parts are available from Yamaha upon request. For information about extended maintenance and service procedures and the availability of spare parts, contact the Yamaha customer service team.

Distributing company	Yamaha Motor eBike Systems GmbH
Address	Sickingenstraße 29-38 10553 Berlin
Phone	+49 30 343498 100
Contact	service.ebike@ yamaha-ebike-systems.com

12 DISASSEMBLY AND DISPOSAL

12.1 Disassembly

The disassembly takes place in the reverse order of the installation. When disassembling third-party components, always observe the respective accompanying information and specifications of the component manufacturer.

For information on the required tools and equipment, refer to the relevant section in section „ASSEMBLY“.

1. Secure the battery holder against falling.
 2. Disconnect and remove the battery connector from the connector bracket.
 3. Remove the key and detach the lock holder from the lock bracket.
 4. Remove the lock holder.
 5. Remove the mounting screws for the connector bracket and the lock bracket from the frame.
 6. Carefully remove both brackets from the frame.
- ✓ The battery holder is disassembled.

12.2 Disposal

Dispose of the product properly at the end of its service life for recycling.

Observe the local regulations regarding the separation of waste.

// Battery holder

QORE



**IMPORTANT SAFETY INSTRUCTIONS
KEEP THESE INSTRUCTIONS**

Yamaha no. 592600-101

Yamaha Motor eBike Systems GmbH // Sickingenstraße 29-38 // 10553 Berlin