

MA432 (cn_en) 安装说明

AGV/AMR多芯充电连接器
AGV-CC6-UR
CombiTac align 15

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MA432 (cn_en) Assembly instructions

Multicore connector for AGV/AMR charging
AGV-CC6-UR
CombiTac align 15

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AGV-CC6-UR



安全须知

仅可使用 Stäubli 指定的组件和工具。自行装配时，切勿背离本手册所述的制备及装配说明，否则 Stäubli 无法保证产品安全性或性能达到官方技术参数。请勿以任何方式修改产品。

可与 Stäubli 元件插合的非 Stäubli 原厂制造的连接器的，在某些情况下，某些制造商甚至将其描述为“与 Stäubli 兼容”，但该连接器并不符合长期稳定安全的电连接要求，而且出于安全考虑，不得与 Stäubli 元件插合在一起。因此，Stäubli 对因此类连接器（即未经 Stäubli 批准）与 Stäubli 元件插合而造成的任何损失不承担任何责任。

如您未遵守上述警告，则 Stäubli Electrical Connectors (Stäubli) 不承担任何责任。

Safety instructions

Use only the components and tools specified by Stäubli. In case of self-assembly, do not deviate from the preparation and assembly instructions as stated herein, otherwise Stäubli cannot give any guarantee as to safety or conformity with the technical data. Do not modify the product in any way.

Connectors not originally manufactured by Stäubli which can be mated with Stäubli elements and in some cases are even described as "Stäubli-compatible" by certain manufacturers do not conform to the requirements for safe electrical connection with long-term stability, and for safety reasons must not be plugged together with Stäubli elements. Stäubli therefore does not accept any liability for any damages resulting from mating such connectors (i.e. lacking Stäubli approval) with Stäubli elements.

Stäubli Electrical Connectors (Stäubli) does not accept any liability in the event of failure to observe these warnings.



IEC 60417-6182
安装需电气专业知识

产品可由具备电气技能或受过此方面指导的人员依照适用的安全法规进行装配或安装。

Installation, electrotechnical expertise

The products may be assembled and installed by electrically skilled or instructed persons duly observing all applicable safety regulations.



IEC 60417-6042
注意电击风险

请在断电状态下工作
操作电气装置时，请遵守五项安全规定。
各电气装置确定后，应按照规定顺序执行以下五项基本要求（除非另有必要理由）：

- 完全分离；
- 确保不会重新连接；
- 确认无工作电压；
- 进行接地和短路；
- 针对临近带电部件提供防护。

任何从事此工作活动的人员均应具备电气技能或受过此方面指导，或者由同等能力的人员监督。
来源：EN 50110-1:2013

Caution, risk of electric shock

Work in a de-energized state
Follow the five safety rules, when working on electrical installations.
After the respective electrical installations have been identified, the following five essential requirements shall be undertaken in the specified order unless there are essential reasons for doing otherwise:

- disconnect completely;
- secure against re-connection;
- verify absence of operating voltage;
- carry out grounding and short-circuiting;
- provide protection against adjacent live parts.

Any person engaged in this work activity shall be electrically skilled or instructed, or shall be supervised by such a person.
Source: EN 50110-1:2013

最终应用时，还应检查电击防护。

Protection against electric shock shall be checked in the end-use applications too.



IEC 60417-6070
在负载下请勿断开

仅当额定电压不超过 AC 1000 V /DC 1500 V 时，连接器才可能在带电压的状态下断开和插合。
当额定电压超过 AC 1000 V/DC 1500 V 时，仅在连接器插合状态下方可带电，且不允许在负载下进行断开和插合动作。这也适用于在单一型号中同时配置电连接模块与气体和液体模块的情况。

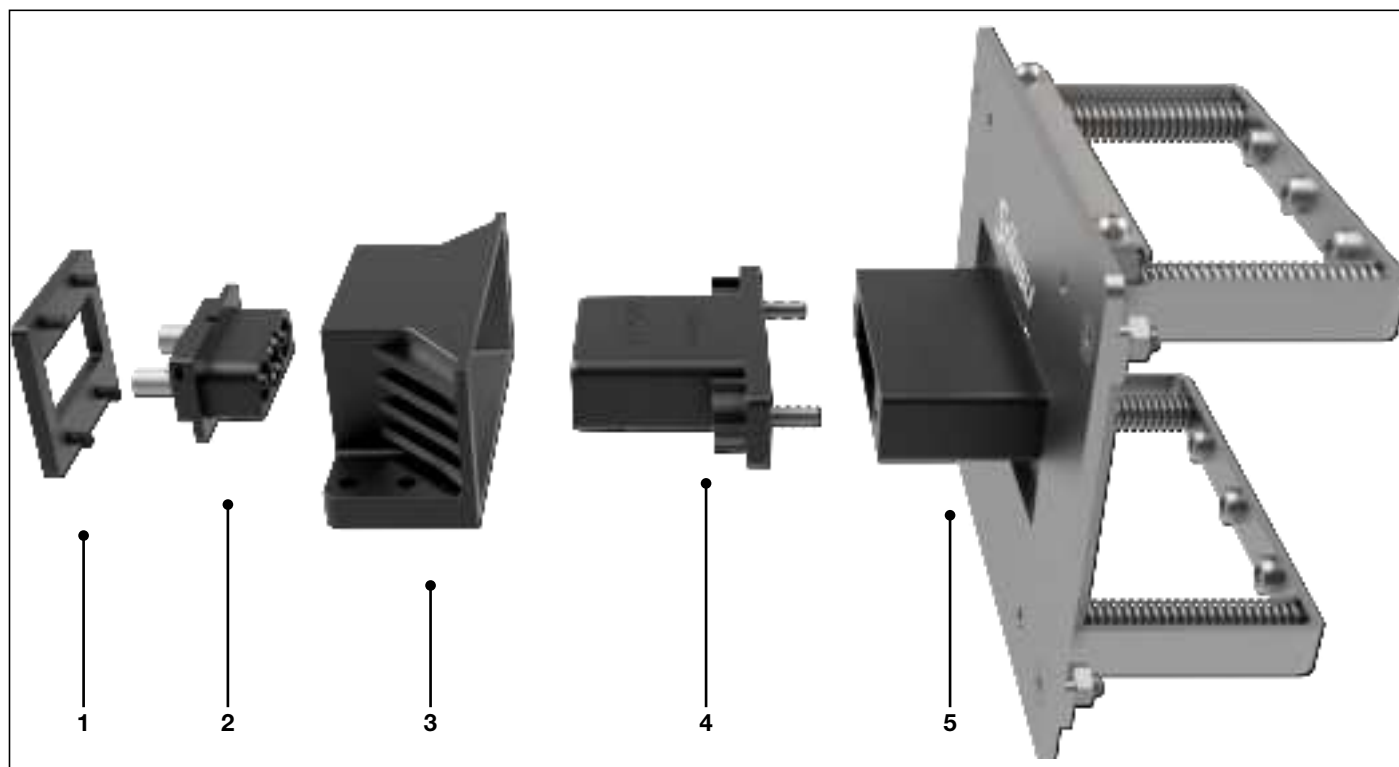
Do not disconnect under load

Connecting and disconnecting when live is only permitted if the rated voltage does not exceed AC 1000 V/DC 1500 V.
For rated voltages over AC 1000 V/DC 1500 V, the voltage must only be applied in mated condition, disconnecting under load or connecting when live is not permitted. This also applies for electrical connections in close proximity to fluid and gas connections.

安全须知	Safety instructions
ISO 7000-0434B 注意 每次使用连接器前,需提前检查外部是否有缺陷(尤其是绝缘层)如有安全疑虑,必须咨询专业人员或更换连接器。 IP防护等级依据 IEC 60529:2013 未插合的连接器必须防潮防尘。被污染的公母连接器不应插合使用。	Caution Each time the connector is used, it should previously be inspected for external defects (particularly the insulation). If there are any safety concerns, an electrically skilled person must be consulted or the connector must be replaced. IP protection according to 60529:2013 Unmated plug connectors must be protected from moisture and dirt. The male and female parts must not be plugged together when soiled.
ISO 7000-0421 检查	Examine; Check
告知检查	To indicate examination or checking
产品使用说明或技巧	Useful hint or tip
欲了解更多技术参数, 请参阅产品目录。	For further technical data please see the product catalog.

材料概述

Material overview



位置 Pos.	说明 Description
1	盖板 Cover plate
2	连接器, 公头 Connector, plug side
3	导向口 Funnel
4	连接器, 母头 Connector, socket side
5	浮动机构 Floating mechanism

连接器 AGV-CC6-UR

Connector AGV-CC6-UR





①

工具准备

(图 1)
压接钳 CT-M-CZ
订货号: 33.3800
和定位块 (表1)

注意事项:
操作说明 MA079,
www.staubli.com/electrical

Tools

(ill. 1)
Crimping pliers CT-M-CZ
Order No.: 33.3800
and locator (Tab. 1)

Note:
Operating instructions MA079,
www.staubli.com/electrical

表1/Tab. 1

型号 Type	订货号 Order No.	导体截面积 Conductor cross-section (mm²)	说明 Description
MES-CZ	18.3801	0.14 – 4	定位块 适用于直径2.5毫米信号触点的可调节装置 Locator adjustable for Ø 2.5 mm signal contacts



②

(图 2)
压接钳 M-PZ13
订货号: 18.3700
和压接模具 (表2)

注意事项:
操作说明 MA224,
www.staubli.com/electrical

(ill. 2)
Crimping pliers M-PZ13
Order No.: 18.3700
and crimping dies (Tab. 2)

Note:
Operating instructions MA224,
www.staubli.com/electrical

表2/Tab. 2

型号 Type	订货号 Order No.	导体截面积 Conductor cross-section (mm²)	说明 Description
MES-PZ-TB5/6	18.3701	6	压接模具/Crimping die
MES-PZ-TB8/10	18.3702	10	压接模具/Crimping die



③

(图 3)
压接钳 M-PZ-T2600
订货号: 18.3710
和压接模具 (表3)

注意事项:
操作说明 MA226,
www.staubli.com/electrical

(ill. 3)
Crimping pliers M-PZ-T2600
Order No.: 18.3710
and crimping dies (Tab. 3)

Note:
Operating instructions MA226,
www.staubli.com/electrical

表3/Tab. 3

型号 Type	订货号 Order No.	导体截面积 Conductor cross-section (mm²)	说明 Description
TB9-13	18.3712	16	压接模具/Crimping die
TB11-14.5	18.3713	25	压接模具/Crimping die



④

(图 4)
压接钳 CT-CP
订货号: 33.3930
和压接模具 (表4)

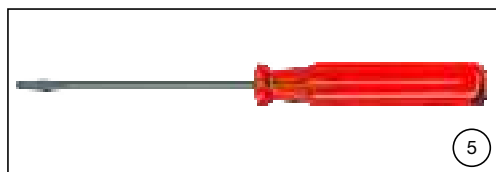
注意事项:
操作说明 MA420,
www.staubli.com/electrical

(ill. 4)
Crimping pliers CT-CP
Order No.: 33.3930
and crimping dies (Tab. 4)

Note:
Operating instructions MA420,
www.staubli.com/electrical

表4/Tab. 4

型号 Type	订货号 Order No.	导体截面积 Conductor cross-section (mm²)	说明 Description
CT-I-CP16	33.3933	16	压接模具/Crimping die
CT-I-CP25	33.3937	25	压接模具/Crimping die



(图 5)
3mm平头螺丝刀。

(ill. 5)
Flat screwdriver size 3 mm.



(图 6)
扭力扳手配有：
• PZ型套筒，2号规格，适用于M4螺丝
• 六角套筒，4号规格，适用于M5螺丝
• 六角套筒，5号规格，适用于M6螺丝

(ill. 6)
Torque wrench with:
• PZ insert, size 2 for M4 screws
• Hex. insert, size 4 for M5 screws
• Hex. insert, size 5 for M6 screws

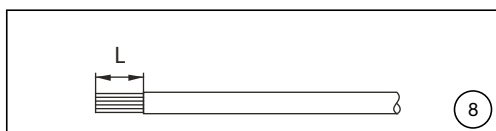


(图 7)
9mm开口扳手(细柄)。

(ill. 7)
Open-end spanner size 9 mm (thin).

线缆准备

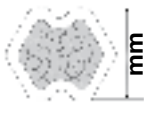
Cable preparation



(图 8)
单芯线缆的剥线长度L, 参见表5。

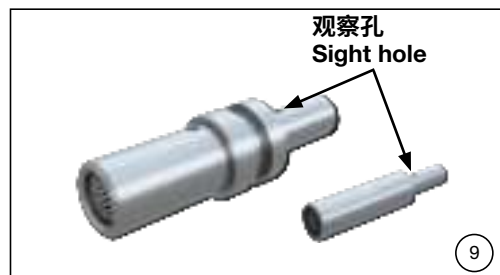
(ill. 8)
Stripping length **L** for single conductors, see Tab. 5.

表5/Tab. 5

标称直径的插针/插座 Nominal Ø pin/socket	最大电缆外径 (包括热缩管) Max. cable outer Ø (incl. shrink tubing)	导体横截面 Conductor cross-section		压接钳 Crimping pliers					剥线长度 Stripping length	检查尺寸 Check dimension
mm	mm	mm ²	AWG	CT-M-CZ 33.3800	M-PZ13 18.3700	M-PZ-T2600 18.3710	CT-CP 33.3930			
				选择器 Selector SEL-N°	定位块 Locator	压接模具 Crimping die	压接模具 Crimping die	压接模具 Crimping die	L ±0.5 (mm)	
2.5 信号触点 2.5 (signal contact)	3	0.5	20	4					5.5	
		0.75	18	5	MES-CZ 18.3801				5.5	
		1	18	5					5.5	
		1.5	16	6					5.5	
6 电源触点 6 (power contact)	11	6	10			MES-PZ-TB5/6 18.3701			10	4.3
		10	8			MES-PZ-TB8/10 18.3702			10	6.3
		16	6				TB9-13 18.3712	CT-I-CP16 33.3934	10	7.3
		25	4				TB11-14.5 18.3713	CT-I-CP25 33.3937	10	8.8

线束装配

Lead assembly



线缆压接

● 注意事项 (图 9)

i 压接前后, 必须能在观察孔中看到导线。

Crimp termination

● Note (ill. 9):

i Wire must be visible in the sight hole before and after crimping.



(图 10 - 11)

- 将线芯尽可能深地插入压接套。
- 然后进行压接。
压接钳和压接模具参见第 6 页的表 1+2。

(ill. 10 - 11)

- Insert cable into the crimping sleeve as far as it will go.
- Proceed with crimping.
Crimping pliers and crimping dies according to Tab. 1+2, page 6.



将热缩套管套在触子压接位置

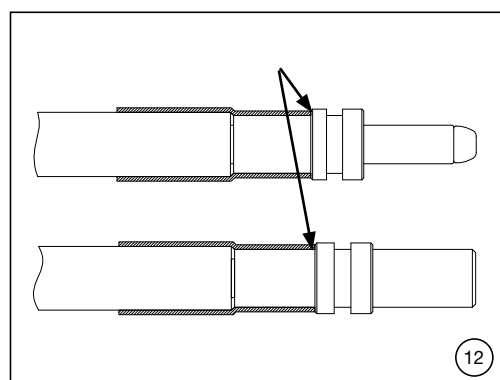
Position shrink tubing on contact

(图 12)

包覆到压接套轴肩底部, L = 25 mm

(ill. 12)

Flush with the end of shoulder, L = 25 mm

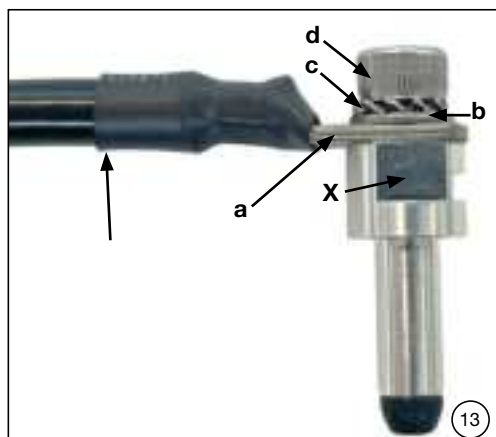


螺纹连接

(图 13)

- 按所示顺序安装电缆接头 (a)、垫圈 (b)、锁紧垫圈 (c) 和内六角螺钉 M5x10 (d)。
- 用扭矩扳手拧紧内六角螺钉 (d)，并用开口扳手将其固定在位置 X。

最大拧紧扭矩：
M5: 2 N m 使用黄铜螺钉



ⓘ 注意事项

当触点安装在外壳中时，请勿拧紧电缆接线头。

ⓘ 注意事项

线束组装完成后，必须使用热缩管对电缆接线头进行绝缘处理。

Screw termination

(ill. 13)

- Install the cable lug (a), washer (b), lock washer (c) and hexagon socket-head screw M5x10 (d) in the order shown.
- Tighten the hexagon socket-head screw (d) with a torque wrench and secure it with an open-end spanner at pos. X.

Max. tightening torque:
M5: 2 N m with brass screws

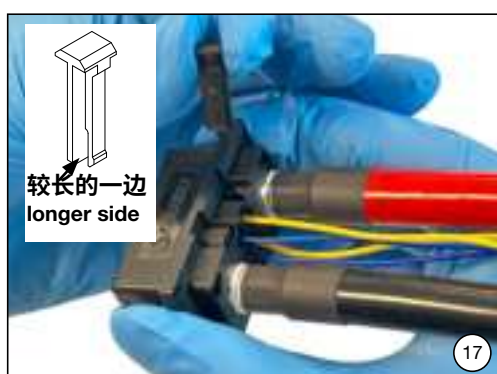
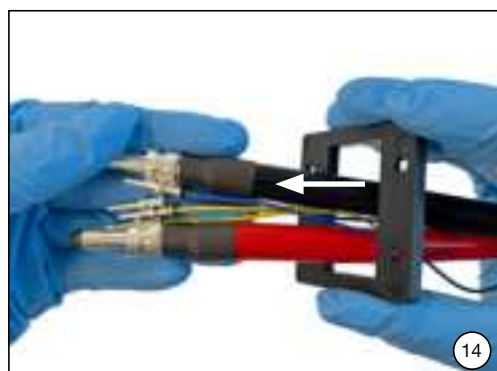
ⓘ Note

Don't tighten the cable lug when the contact is installed on the carrier.

ⓘ Note:

After lead assembly, the cable lug must be insulated with a shrink tubing.

触点安装



Contacts assembly

AGV侧 安装

(图 14)

- 将盖板套在电缆上。

(图 15 – 16)

- 将电源插头和信号插头 (同侧) 插入外壳。

两个电源插头和四个信号插头 (同侧) 应同时安装。

i 注意事项

- 将信号插头插入直至止位。

(图 17)

- 将2个固定卡扣插入以锁定外壳中的触点。

固定卡扣具有方向性, 以确保触点锁定。组装时请确保较长的凸出面正确定位并朝向插接面。

Assembly for AGV side

(ill. 14)

- Slip the cover plate on the cables.

(ill. 15 – 16)

- Insert power plug and signal plugs (same side) into the carrier.

The 2 power plugs and the 4 signal plugs (same side) should be installed at the same time.

i Hinweis:

- Insert the signal plug until it stops.

(ill. 17)

- Insert the 2 retaining clips to lock the contacts in the carrier.

The retaining clip is orientation-specific to ensure contact locking. Ensure the longer protruding surface is correctly positioned and facing the contact area during assembly.

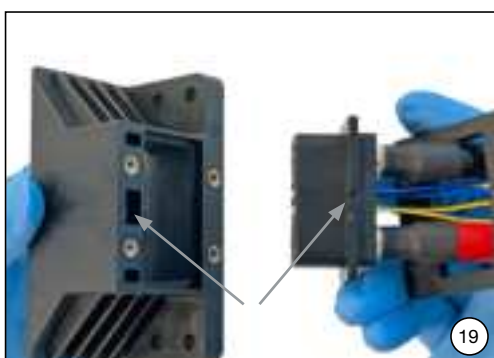
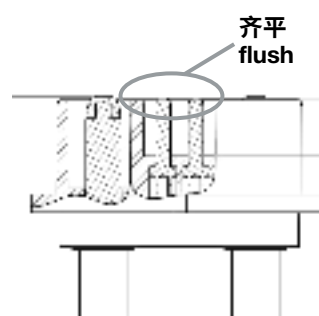


(图 18)

- 轻轻拉动线缆，检查触点是否正确安装。

(ill. 18)

- Check whether the contacts are properly engaged by gently pulling on the cable.



(图 19)

- 将插头连接器插入导向口底部。

(ill. 19)

- Insert the plug connector into the funnel's bottom.



(图 20)

- 用螺丝刀拧紧螺丝 (导向口随附4颗M4螺丝)。
- 最大拧紧扭矩: 1.2Nm

(ill. 20)

- Tighten the screws with a screwdriver (4 pcs of M4 screws are included in the scope of delivery of the funnel).
- Max. tightening torque: 1.2 N m



(图 21)

该连接器现可安装在车辆上。

(ill. 21)

The connector can now be assembled on the vehicle.

充电桩侧 安装

(图 22)

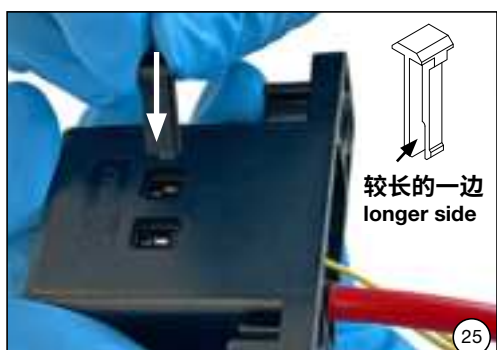
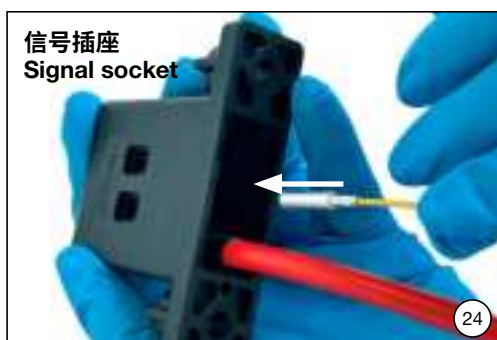
- 将装配好的插座线束穿过浮动机构。



(图 23 – 24)

- 将电源插座和信号插座(同侧)插入外壳。

两个电源插座和四个信号插座(同侧)应同时安装。



(图 25)

- 将2个固定卡扣插入以锁定外壳中的触点。

固定卡扣具有方向性, 以确保触点锁定。组装时请确保较长的凸出面正确定位并朝向插接面。

Assembly for charging side

(ill. 22)

- Pass the crimped cable socket through the floating mechanism.

(ill. 23 – 24)

- Insert power socket and signal sockets (same side) into the carrier.

The 2 power sockets and the 4 signal sockets (same side) should be installed at the same time.

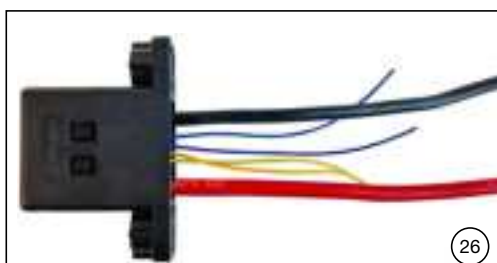
(ill. 25)

- Insert the 2 retaining clips to lock the contacts in the carrier.

The retaining clip is orientation-specific to ensure contact locking. Ensure the longer protruding surface is correctly positioned and facing the contacting area during assembly.

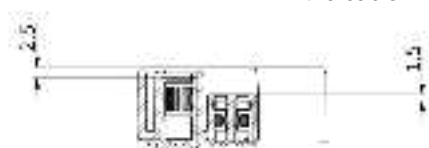
(图 26)

- 轻轻拉动线缆, 检查触点是否正确安装。



(ill. 26)

- Check whether the contacts are properly engaged by gently pulling on the cable.





(图 27)

将插座连接器安装在浮动机构的前部。

(ill. 27)

Install the socket side at the front of the floating mechanism.



(图 28)

- 拧紧螺钉 (2颗M6螺钉, 弹簧垫圈和垫圈随附在供货范围内)。
- 最大拧紧扭矩: 3Nm。

(ill. 28)

- Tighten the screws (2 M6 screws, spring washer and washer are included in the scope of delivery).
- Max. tightening torque: 3 N m.



(图 29)

该连接器现可安装在充电桩上。

(ill. 29)

The connector can now be assembled on the charging station.

触点拆卸

Contacts disassembly



(图 30 - 31)

- 将螺丝刀插入固定卡扣背面下方。
- 将其抬起。
- 取下固定卡扣。

(ill. 30 - 31)

- Insert the screwdriver under the back side of the retaining clip.
- Lift it up.
- Remove the retaining clips.

⚠ 注意

经过五次拆卸后, 必须更换固定卡扣。

⚠ Attention

After five disassemblies the retaining clip must be replaced.



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