



安装说明 / INSTALLATION INSTRUCTIONS

E系列推拉、推出类产品

E-Series Push/Pulls, Load Pushes & Bag Load Pushes



官方微信号 天猫旗舰店



服务热线 **40088 57315**
Customer Service Hotline

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- ▲ 警告：安装不当是导致属具故障的第一要素，请在安装属具前认真阅读本《安装说明书》。
- ▲ 注意：叉车/属具组合承载能力系由叉车主机厂确定，其值可能比属具铭牌上所示数值小，请见叉车铭牌。
- 💡 重要提示：现场改动将减弱属具的性能和承载能力，并导致失去保修资格。任何需要对属具进行的改动，请事先与卡斯卡特公司协调。
- ▲ **WARNING:** Incorrect installation is the main calls of Attachment malfunctioning. Please do read this INSTALLATION INSTRUCTIONS comprehensively before installation.
- ▲ **CAUTION:** Rated capacity of the truck/attachment combination is a responsibility of the original truck manufacturer and may be less than shown on the attachment nameplate.
- 💡 **IMPORTANT:** Field alterations may impair performance or capability and could result in loss of warranty. Consult Cascade for any required modifications. Operating at pressures over 160bar(2300 psi) will void warranty.

安装前对叉车的要求 **T** RUCK REQUIREMENTS



警告：叉车/属具的综合承载能力由叉车制造商决定，它可能低于铭牌所标注的数值。详细数据请查阅叉车铭牌

WARNING: Rated capacity of the truck/attachment combination is a responsibility of the original truck manufacturer and may be less than that shown on the attachment nameplate. Consult the truck nameplate.

叉车供油压力 **Truck Relief Setting**

推荐压力值 (Recommended) : 140 bar (2000 psi)

最大压力值 (Maximum) : 160 bar (2300 psi)

叉车供油流量 **Truck Flow Volume** ①

	最小值 Min. ②	推荐值 Recommended	最大值 Max. ③
35E, X35E, 45E, X45E	15 L/min (4 GPM.)	26 L/min (7 GPM.)	38 L/min (10 GPM.)

① 卡斯卡特旋转器兼容SAE 10W的油基液压油标准参见 Mil.Spec.MIL-0-5606 或者MIL-0-2104B.不推荐使用合成或水基液压油.如果需要使用阻燃液压油, 则必须采用特殊密封件.详细请联系卡斯卡特(厦门)。

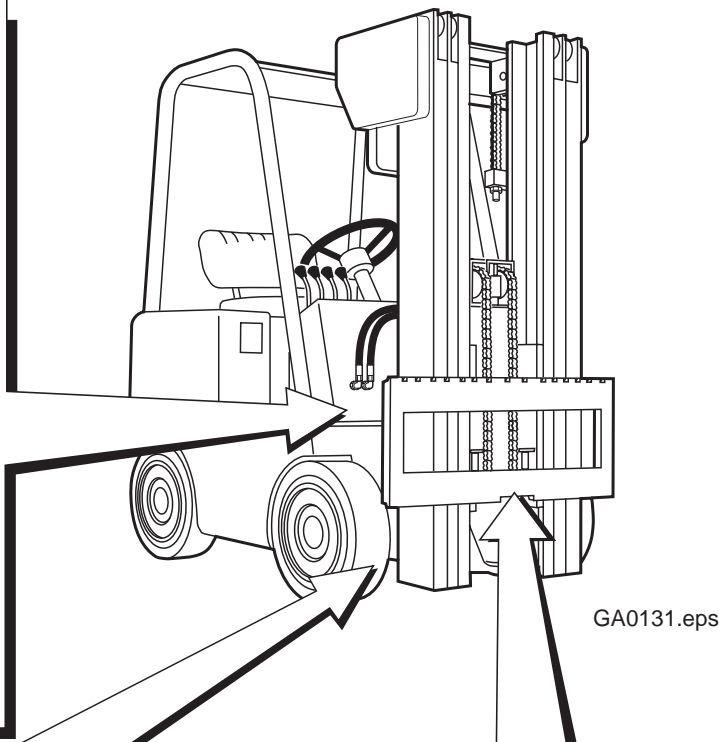
② 如果流量低于推荐值,会造成旋转器的转速偏低。

③ 如果流量超过最大值,会造成过热,降低系统性能同时缩短液压系统的寿命。

① Cascade Rotators are compatible with SAE 10W petroleum base hydraulic fluid meeting Mil. Spec. MIL-0-5606 or MIL-0-2104B. Use of synthetic or aqueous base hydraulic fluid is not recommended. If fire resistant hydraulic fluid is required, special seals must be used. Contact Cascade Xiamen.

② Flow less than recommended will result in a rotate speed less than 2 RPM.

③ Flow greater than maximum can result in excessive heating, reduced system performance and short hydraulic system life.



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货叉架安装尺寸 (A) ITA (ISO)

Carriage Mount Dimension (A) ITA (ISO)

	最小值 Minimum	最大值 Maximum
ISO 2A	380.0 mm (14.94 in.)	381.0 mm (15.00 in.)
ISO 3A	474.5 mm (18.68 in.)	476.0 mm (18.74 in.)

货叉架

清理并检查货叉架横梁。确保上下横梁平行且端部经过冲洗。磨平焊接突出部位以防止侧移机构下支滑动支承被干涉。须对被磨损的槽口进行修补。

Carriage – Clean and inspect carriage bars. Make sure that bars are parallel and that end are flush. Grind smooth any protruding welds that may affect sideshift lower bearings. Repair any damaged notches.

液压功能 HYDRAULIC SUPPLY

属具可采用所提供的液压供油管路布置方案中任何一种，所有管路联接须采用不小于7mm的#6号软管接头，如何正确选择卷管器请参考卷管器选择指南(4099)。

The attachment will require one of the following hydraulic supply arrangements. All hoses and fittings should be at least No.6 with 7 mm (9/32 in.) minimum I.D. Refer to Hose and Cable Reel Selection Guide Form 4099 to select the correct hose reels for the mast and truck.

单功能

- A 两管式细管右卷管器
或
- B 内系同步油路

SINGLE FUNCTION

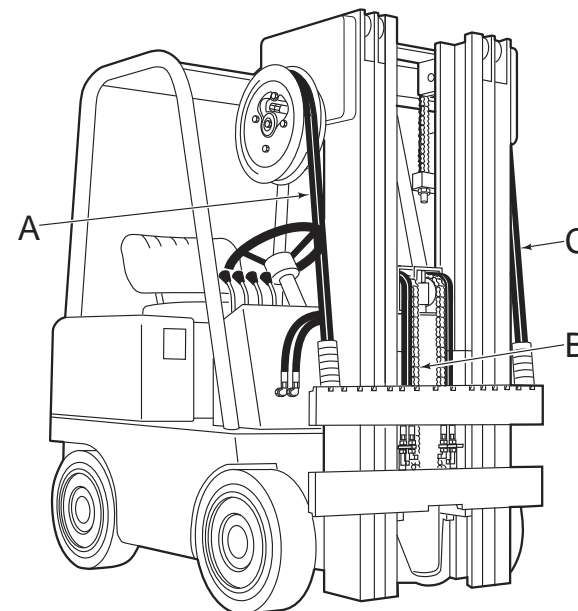
- A RH THINLINE™ 2-Port Hose Reel Supply Group
OR
- B Mast Internal Reeving

双功能(不带电磁阀)

- A和C 两管式细管左、右卷管器
或
- A 和 B 两管式细管右卷管器和内系同步油路或
或
- A 四管式细管右卷管器

DOUBLE FUNCTION WITHOUT SOLENOID

- A and C RH and LH THINLINE™ 2- Port Hose Reel Supply Groups
OR
- A and B RH THINLINE™ 2- Port Hose Reel Supply Group and Mast Internal Reeving
OR
- A RH THINLINE™ 4-Port Hose Reel Supply Group



双功能(带电磁阀)

A 6-N-1 带电缆的右卷管器

或

A 和 B 带电缆的右卷管器和内系同步油路

DOUBLE FUNCTION WITH SOLENOID

A RH 6-N-1 Cable/Hose Reel Supply Group

OR

A and B RH THINLINE™ 2- Port Hose Reel Supply Group and Mast Internal Reeving

三功能(带电磁阀)

叉板可调式

A 6-N-1 带电缆的右卷管器

滑板可留式

A 和 B 6-N-1 带电缆的右卷管器和内系同步油路

TRIPLE FUNCTION WITH SOLENOID

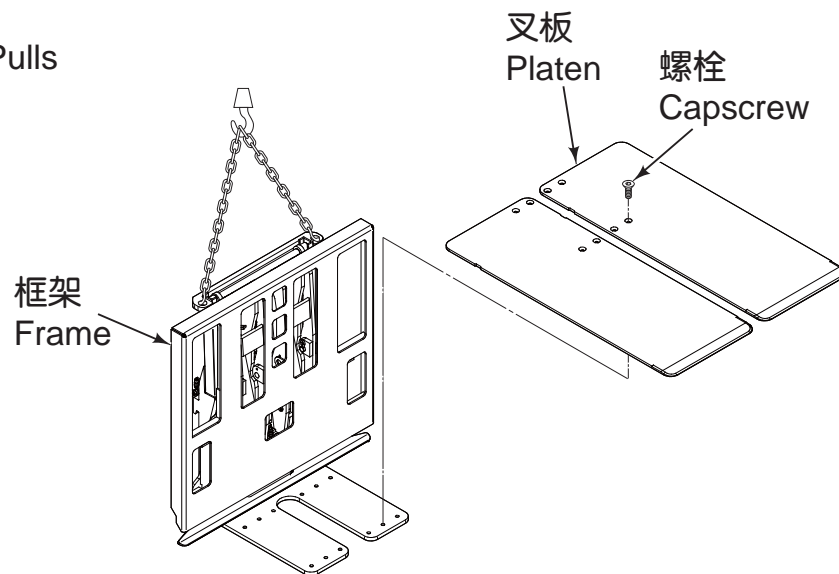
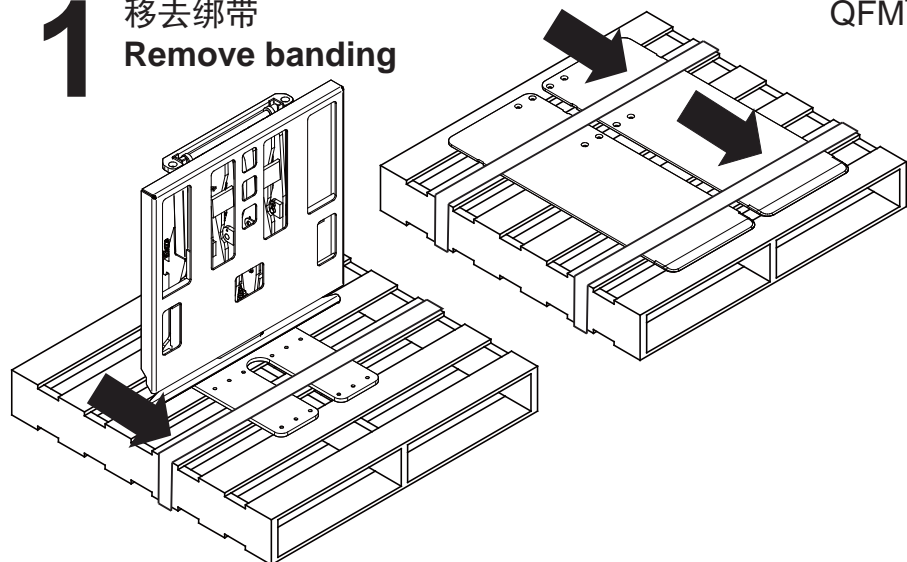
HYDRAULIC ADJUSTABLE PLATENS

A RH 6-N-1 Cable/Hose Reel Supply Group

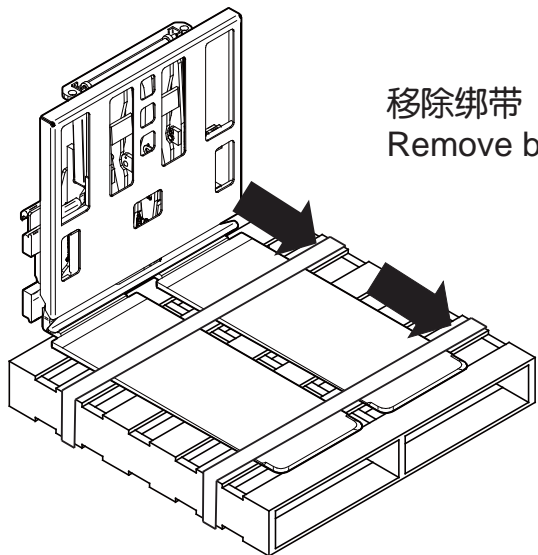
SHEET-SAV

A and B RH 6-N-1 Cable/Hose Supply Group and Mast Internal Reeving

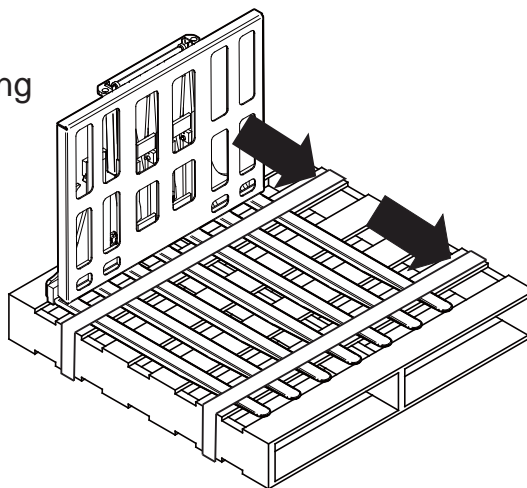
1 移去绑带 Remove banding



标准型推拉器 Standard Push/Pulls



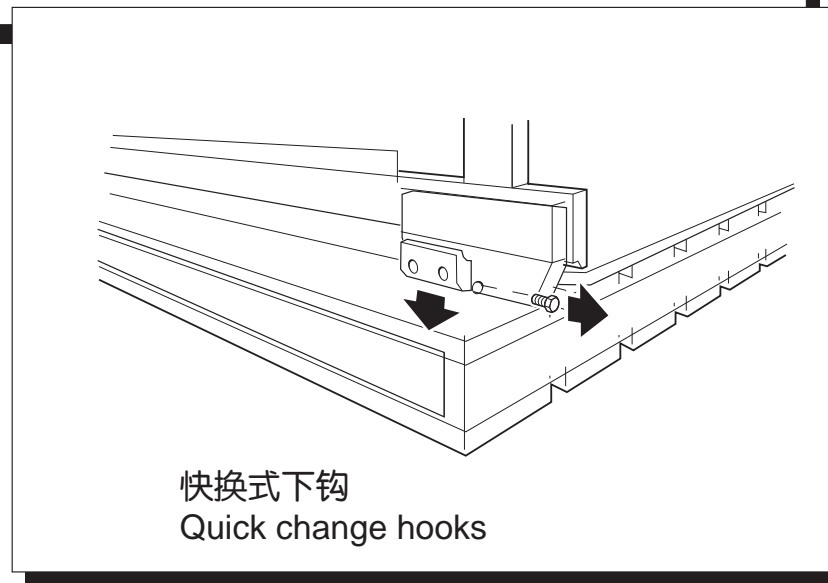
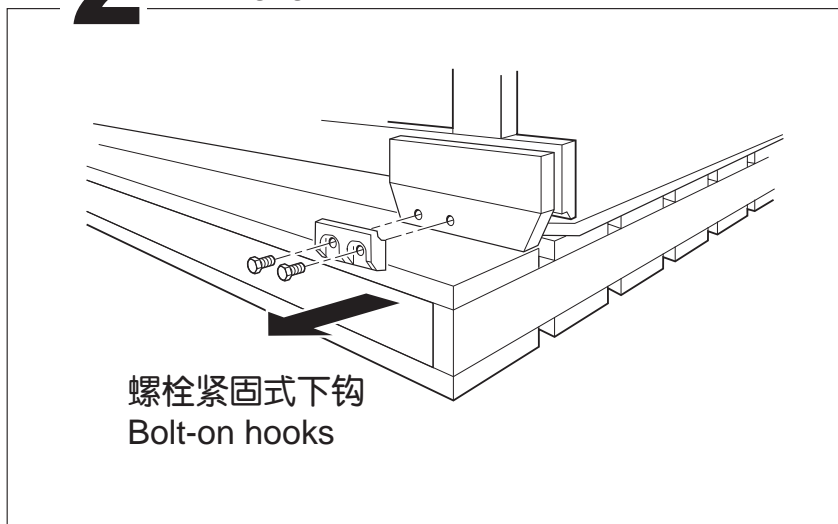
软包推出器 Bag Load Pushes



备注：移去绑带后需将叉板安装到框架上，但在此之前需要根据所配货叉厚度确定是否使用叉板调整垫片，详细参见安装步骤4。

NOTE: Install Platen on Frame after removing banding, but before that, whether the spacer kits should be used must based on the thickness of the fork equipped, please refer to Step Installation 4.

2 卸下钩 Disengage lower hooks

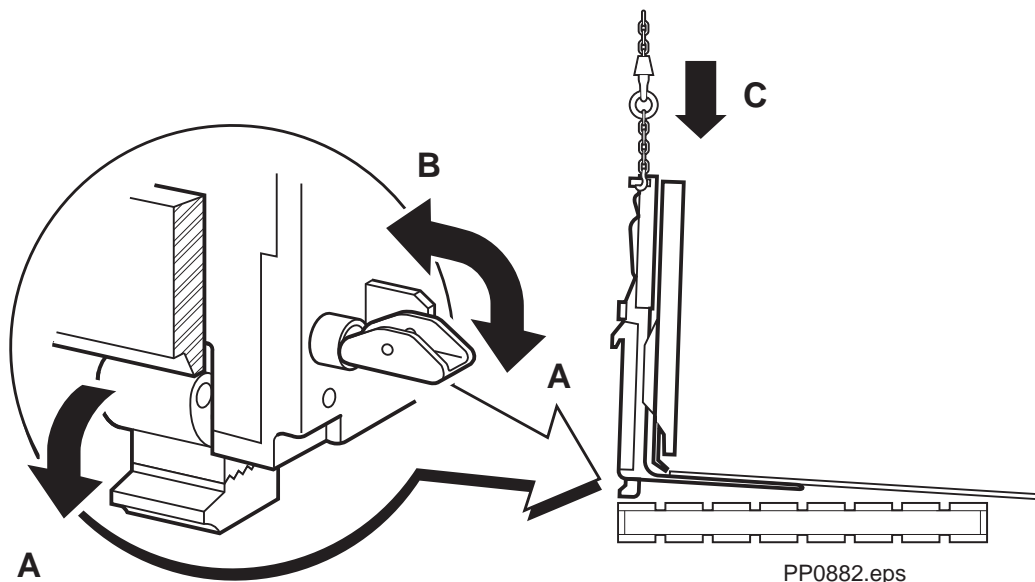


2

松开下钩

Turn down lower hooks

- A** 打开安全紧固销，向下翻转松开下钩。
Open safety lockpin and turn down lower hooks.
- B** 闭合安全紧固销以确保下钩处于朝下状态。
Close safety lockpin to secure hooks down.
- C** 下降并将推拉器置于托盘上。
Lower Push/Pull onto pallet.

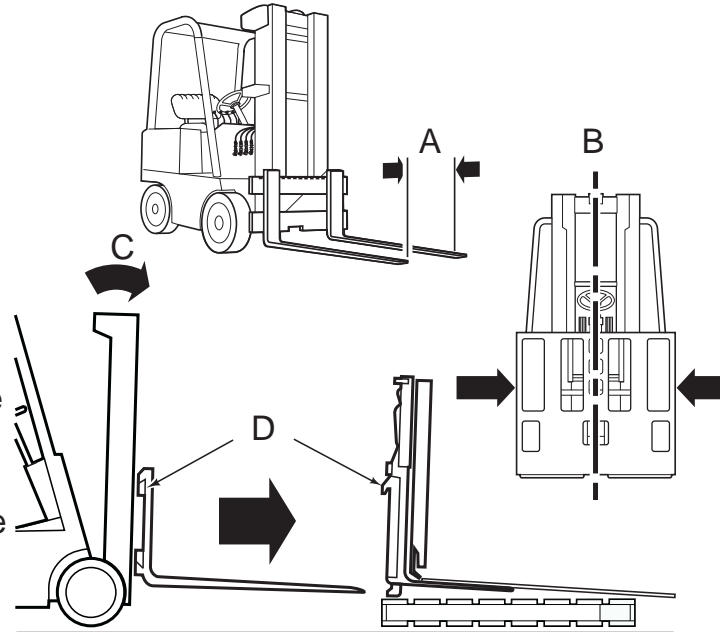


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快装型推拉器 QFM™ Push/Pulls

3 装上叉车 Mount Attachment on truck carriage

- A 调整货叉间距。
Adjust Forks.
- B 属具居中。
Center truck behind Push/Pull.
- C 向前轻微倾斜叉车门架，并调整货叉至属具下方。
Tilt mast slightly forward and drive forks under the attachment.
- D 使上钩嵌入货叉架上横梁凹槽。
Engage upper hooks with carriage top bar.

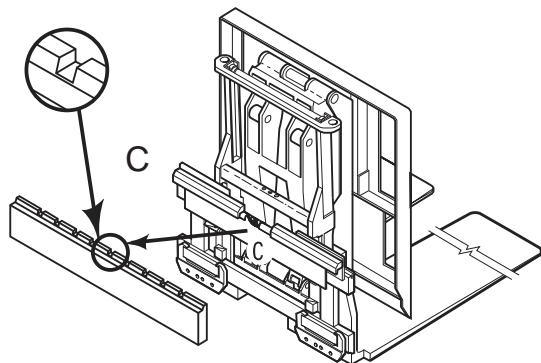


▲ 注意：QFM™快装型挂装推拉器必须同时装上标准型货叉（货叉同时承受推拉器和货物的重量），可选用的货叉厚度可达45mm,长度为1015mm-1170mm(推荐为1060mm),两货叉内侧之间的距离520-650mm，货叉厚度大于40mm(1.5")等情况下需加装垫块，详情请洽卡斯卡特（厦门）公司。

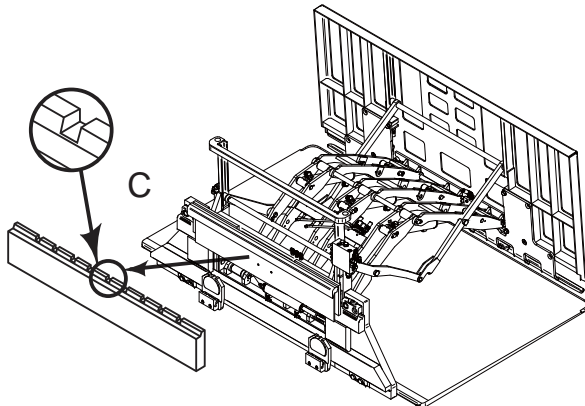
▲ **IMPORTANT:** QFM™ Push/Pulls must be mounted on standard forks to support the load and the push/pull. Forks up to 1.8" thick and 40" to 46" long may be used. Recommended fork length is 42" with bottom taper. Forks must be spaced 20.5" to 25.5" apart, inside to inside. If fork thickness is bigger than 1.5", the spacer kit is needed.

3 装上叉车 Mount Attachment on truck carriage

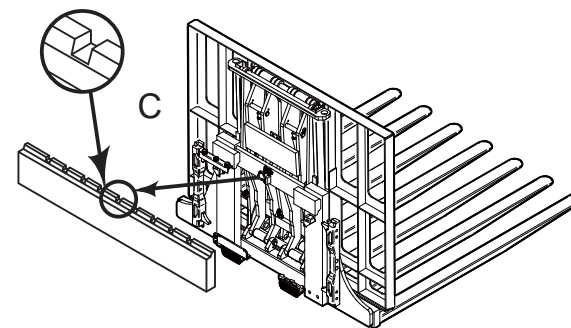
标准型推拉器
Standard Push/Pulls



加宽型推拉器
Double Wide Push/Pulls



软包推出器
Bag Load Pushes



A 属具居中。

Center truck behind Push/Pull.

B 向前倾斜叉车门架，对中属具。

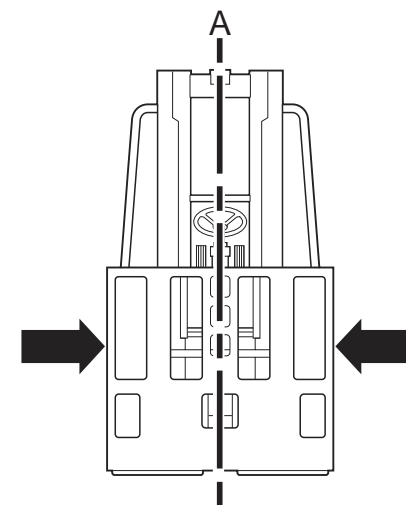
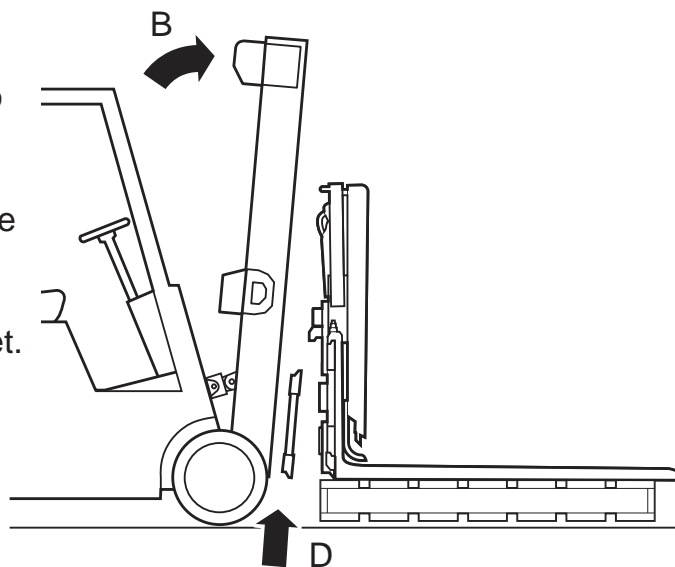
Tilt forward and raise carriage into position

C 使上钩嵌入货叉架上横梁凹槽。

Engage upper hooks with carriage top bar.

D 将属具提升离托盘5cm

Lift Attachmen 5 cm(2 in.) off pallet.



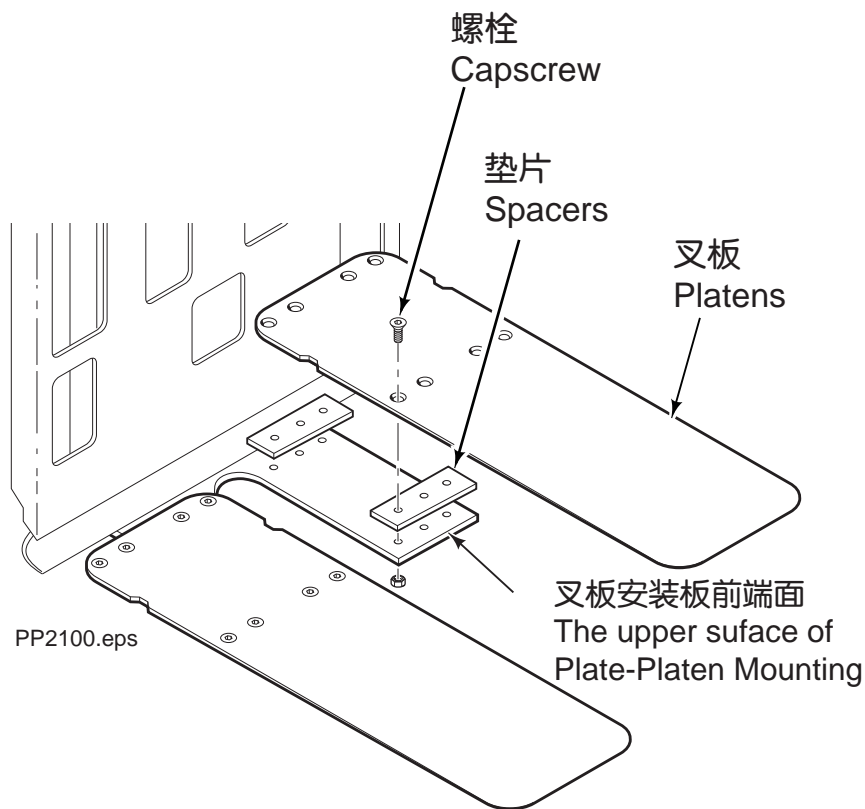
快装型推拉器 QFM™ Push/Pulls

4

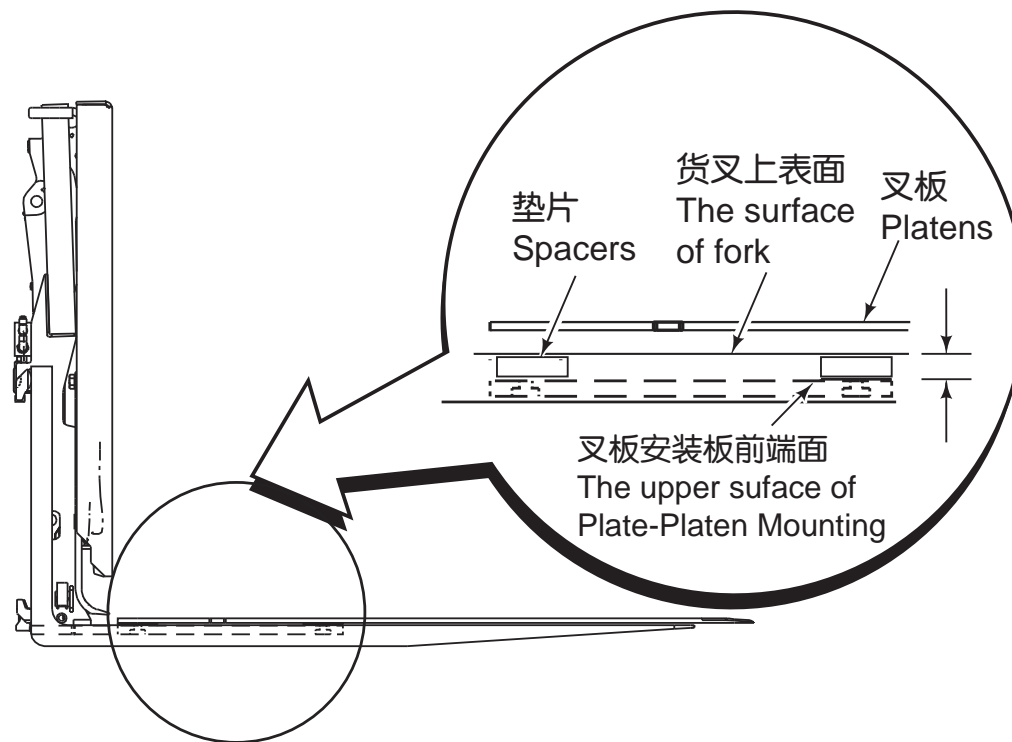
快装型推拉器叉板垫高说明 QFM™ Load Push/Pull Platen Spacer Kits

当E系列快装型推拉器QFM™（带货叉）挂装在叉车上时，若叉板安装板前端面（如图）低于货叉上表面时，需要对叉板进行垫高处理，以消除叉板被“顶起”的现象。

When an E-Series QFM™ is mounted on a truck equipped with forks, if the upper surface is lower than the surface of forks, which require spacers under the platens to allow the upper mounting hooks to properly engage with the upper carriage bar.



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备注：卡斯卡特将随机向用户提供8片垫片，用户可根据实际需要选择使用。

Note: Cascade would supply 8 pcs spacers with attachment to users, users could use the spacers as required.

快装型推拉器 QFM™ Push/Pulls

4

垫片及叉板安装

Spacers & Platens Installation

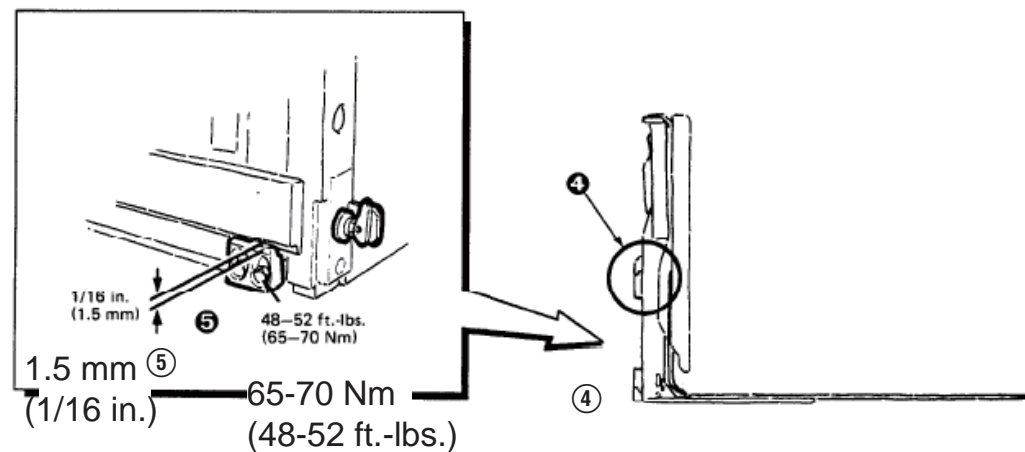
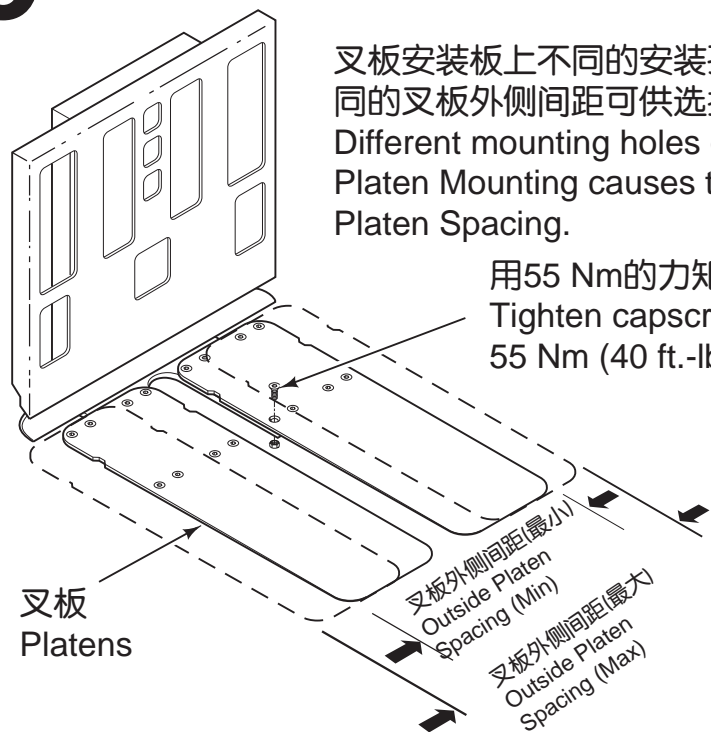
- ① 在叉板和叉板安装板之间放入垫片（垫片数量视叉板安装板与货叉之间的间隙大小而定，如无需垫片则忽略此步骤）。
Install the spacers between the platen and plate-platen mounting with the new capscrews and nuts supplied (The number of spacers depend on the clearance between plate-platen mounting and fork, skip this step if spacers are unneeded).
- ② 安装叉板，锁紧螺栓，力矩为48-60 Nm。
Install platen, tighten the capscrews to a torque of 48-60 Nm (35-45 ft.-lbs.).

- ③ 检查推拉器上钩与叉车上横梁的配合情况。
Check the upper carriage bar hooks for proper engagement with the carriage bar.
- ④ 重新调节下钩配合间隙，锁紧下钩螺栓，力矩为65-70 Nm。
Adjust the lower carriage bar hooks to 1.5 mm (1/16 in.) maximum gap. Tighten the capscrews to a torque of 65-70 Nm (48-52 ft.-lbs.).

5

叉板间距调整（如果需要）

Adjust platens (if required)

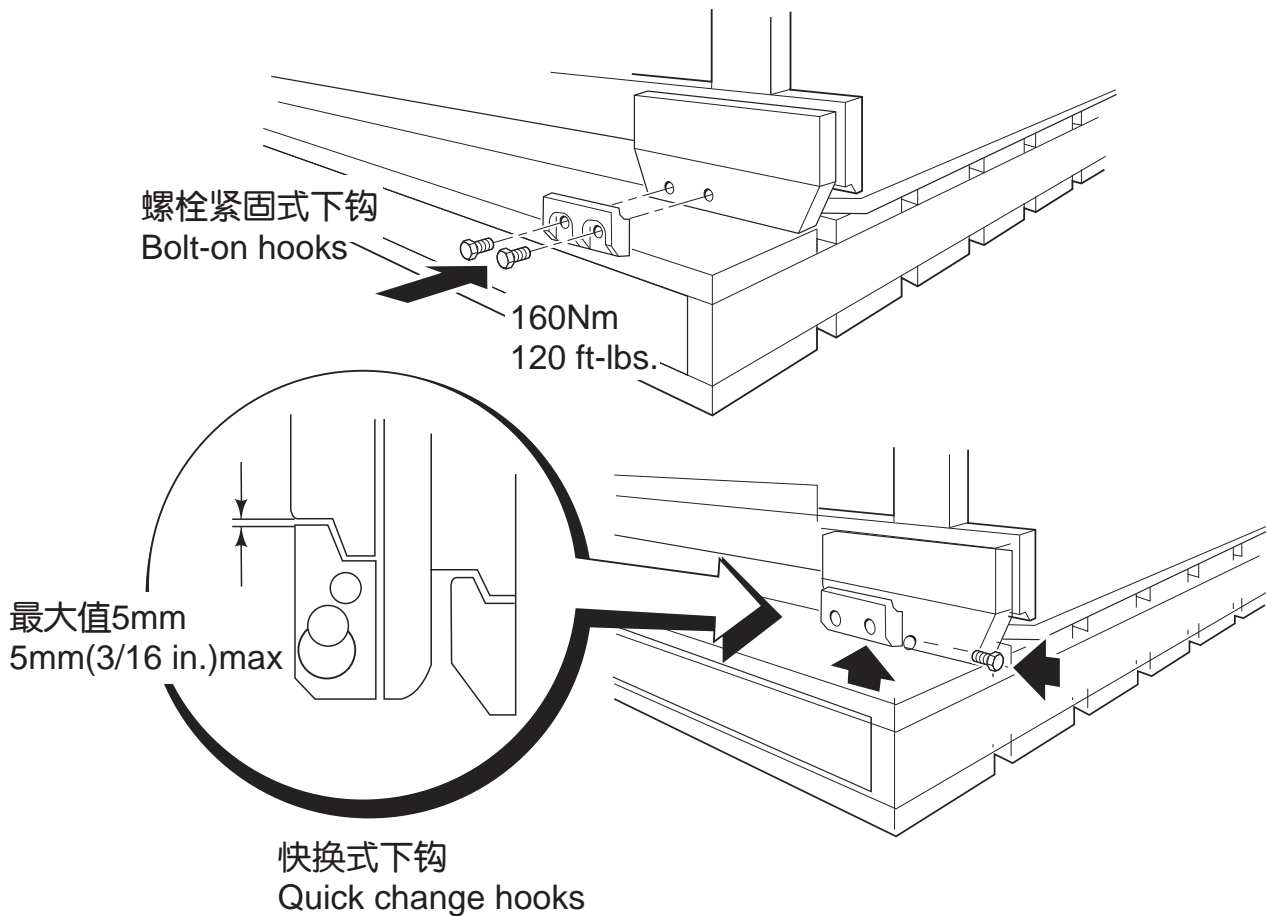


标准型推拉器 Standard Push/Pulls

6

安装下钩

Install and engage lower hooks



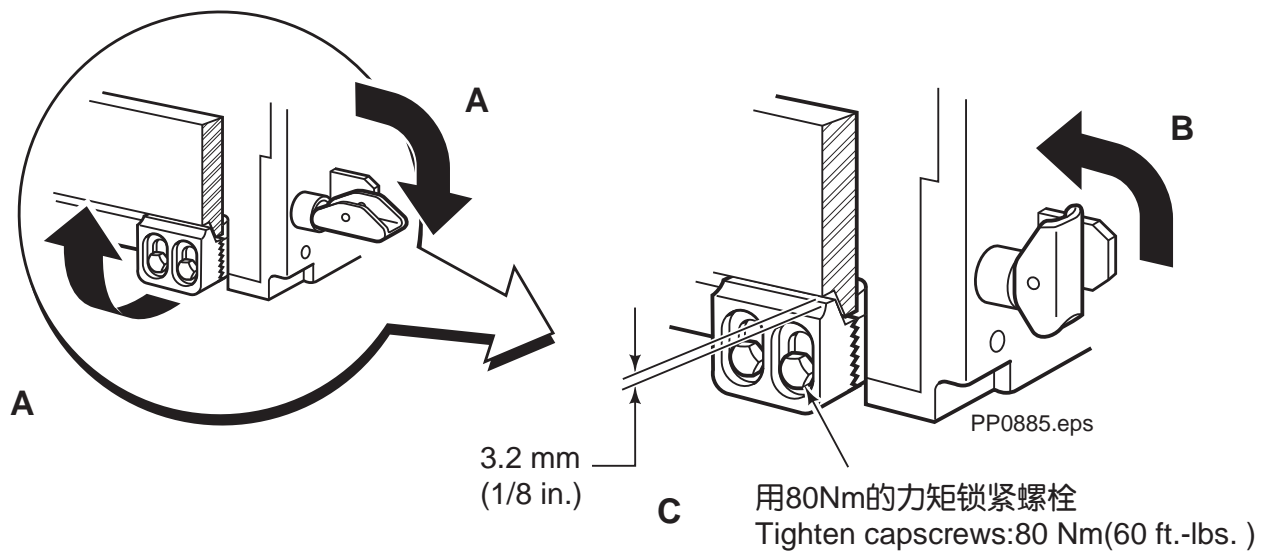
快装型推拉器 QFM™ Push/Pulls

6

安装下钩

Engage lower hooks

- A 打开安全紧固销并向上翻转下钩。
Open safety lockpin and turn hooks up.
- B 松开安全紧固销以确保下钩处于向上的姿态。
Release safety lockpin to secure hooks up.
- C 调整间隙并锁紧下钩螺栓。
Adjust clearance and tighten hook capscrews.



快装型推拉器 QFM™ Push/Pulls

7

调节并锁紧上钩紧固螺栓
Adjust and lock upper hook setscrews

A 通过上钩紧固螺栓调节上钩与货叉架上横梁之间的间隙。

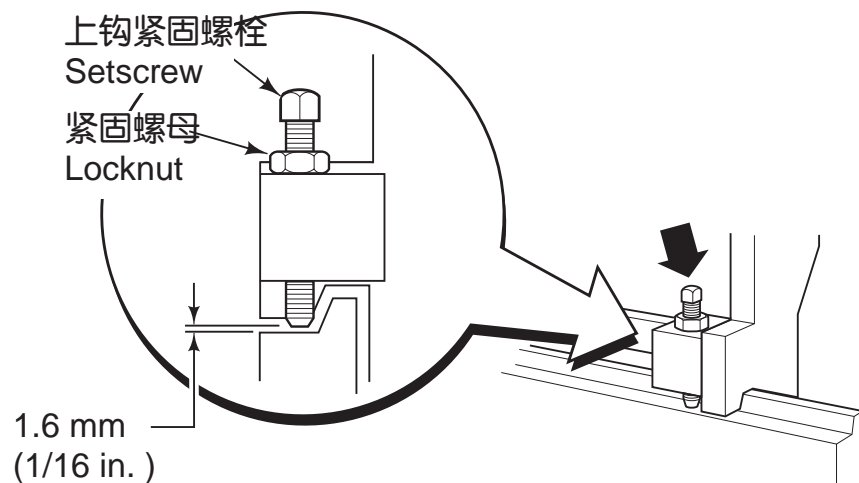
警告：禁止过度调节。

Adjust clearance for upper hook setscrews.

CAUTION: Do not overadjust.

B 锁紧螺母。

Tighten locknuts.

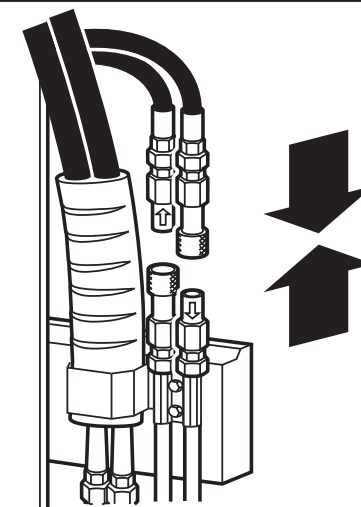


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8

安装快换接头组件 (如果有配置)

Install Quick-Disconnect (QD) Connector Kits (if equipped)

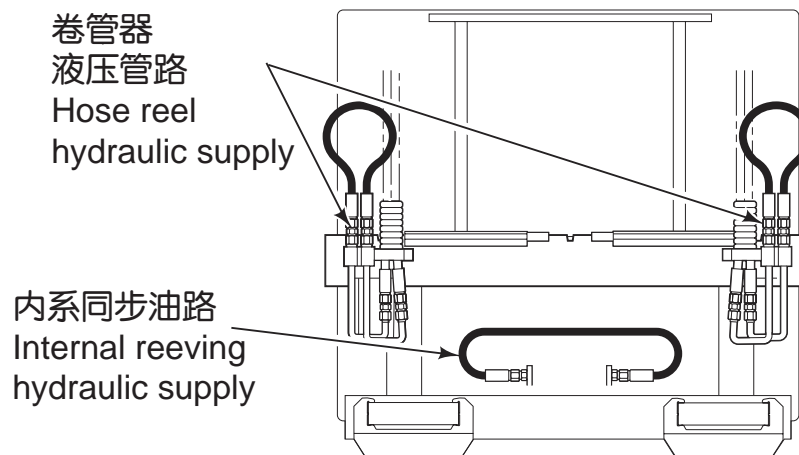


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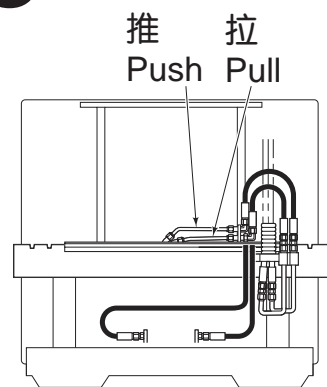
安装 / INSTALLATION

9 冲洗软管 Flush hydraulic supply hoses

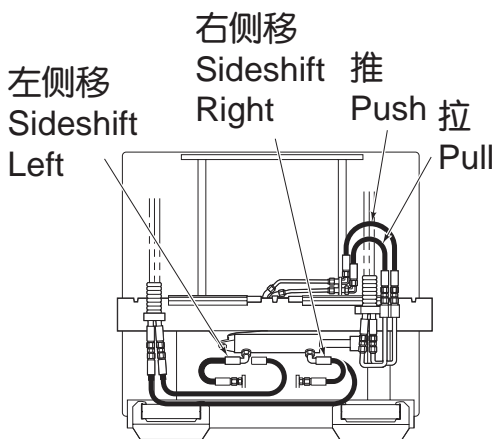
- A 安装软管
Install hoses
- B 操纵叉车多路阀（双向）
Operate auxiliary valves (both directions)
- C 移去软管
Remove hoses



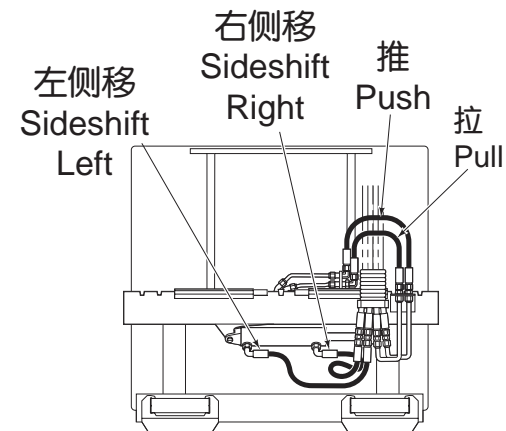
10 安装软管-单、双功能（不带电磁阀） Install hose-Single and double function without solenoid adaption



非侧移式
两管式细管右卷管器或内系同步油路门架
NON-SIDESHIFTING
RH THINLINE™2-Port Hose Reel Group and
or Mast Internal Reeving



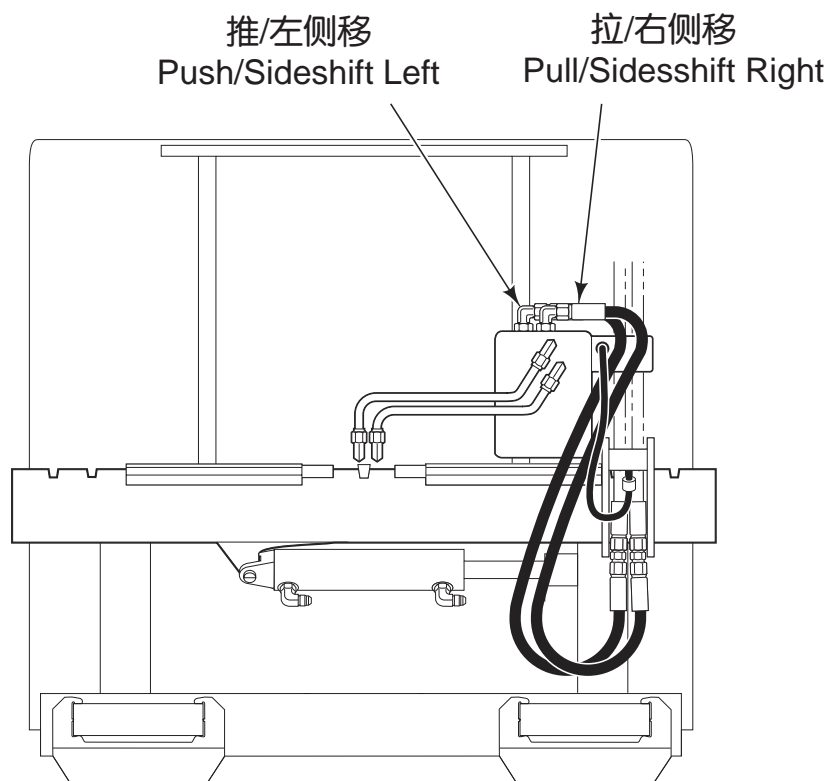
侧移式
两管式细管右卷管器和两管式细管左卷管器
或内系同步油路门架
SIDESHIFTING
RH THINLINE™2-Port Hose Reel Group and
LH THINLINE™2-Port Hose Reel Group or
Mast Internal Reeving



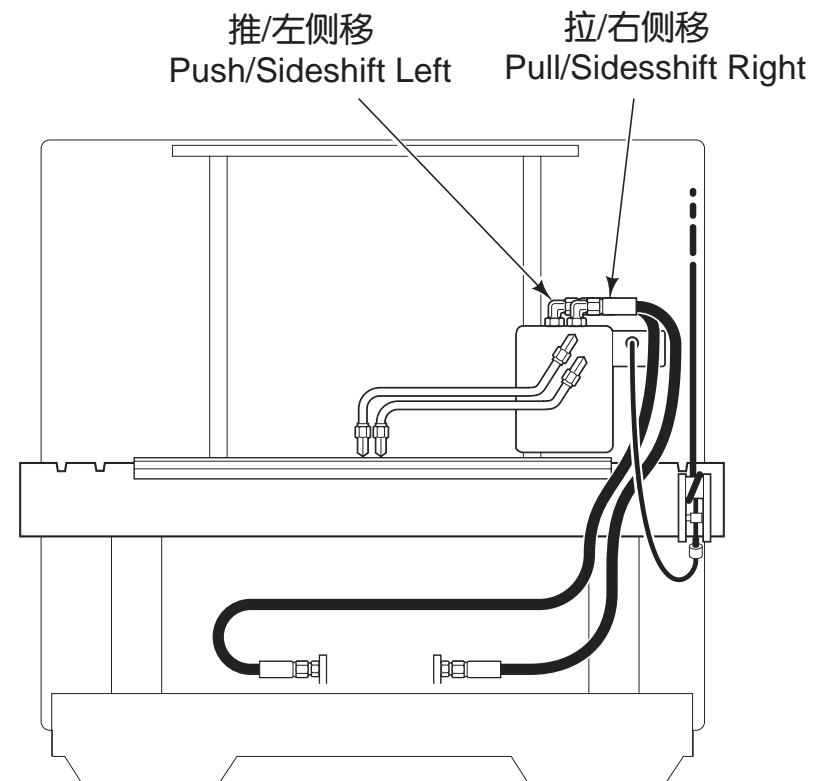
侧移式
四管式细管右卷管器
SIDESHIFTING
RH THINLINE™4-Port Hose Reel Group

10

安装软管-双功能（带电磁阀）
Install hose-Double function with solenoid adaption



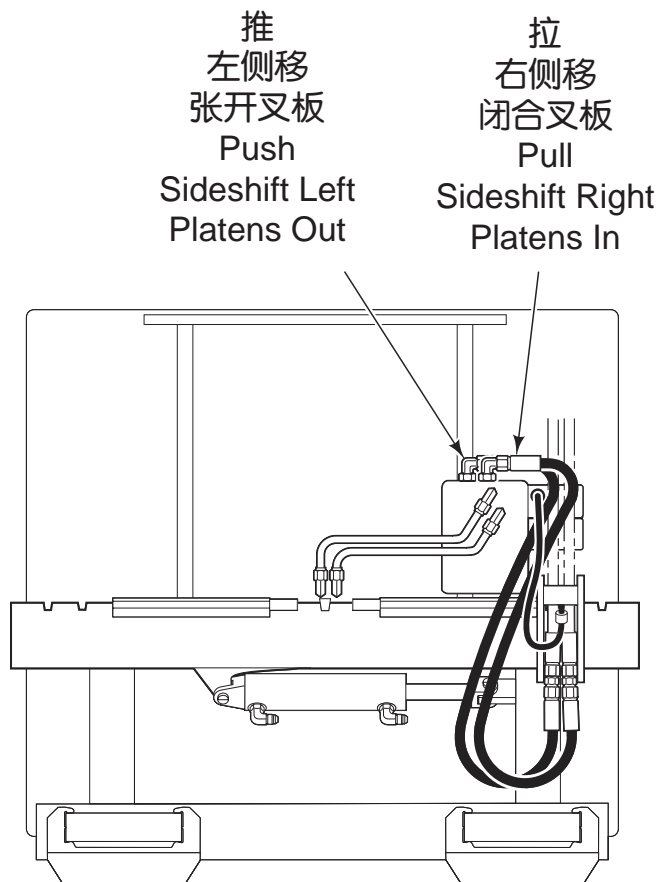
电磁阀
6-N-1 带电缆的右卷管器
SOLENOID EQUIPPED
RH 6-N-1 Cable-Hose Reel Group



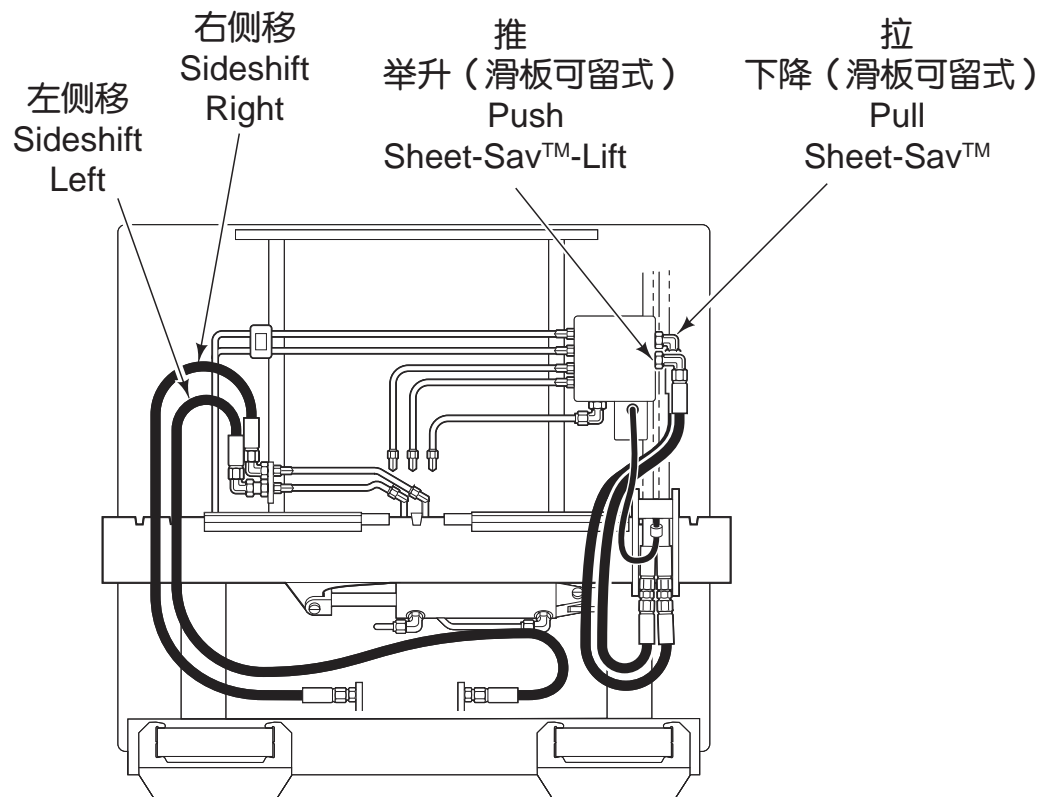
电磁阀
带电缆的卷管器和内系同步油路门架
SOLENOID EQUIPPED
RH Cable Reel Group and Mast Internal Reeving

10

安装软管-三功能（带电磁阀）
Install hoses-Triple function with solenoid adaption



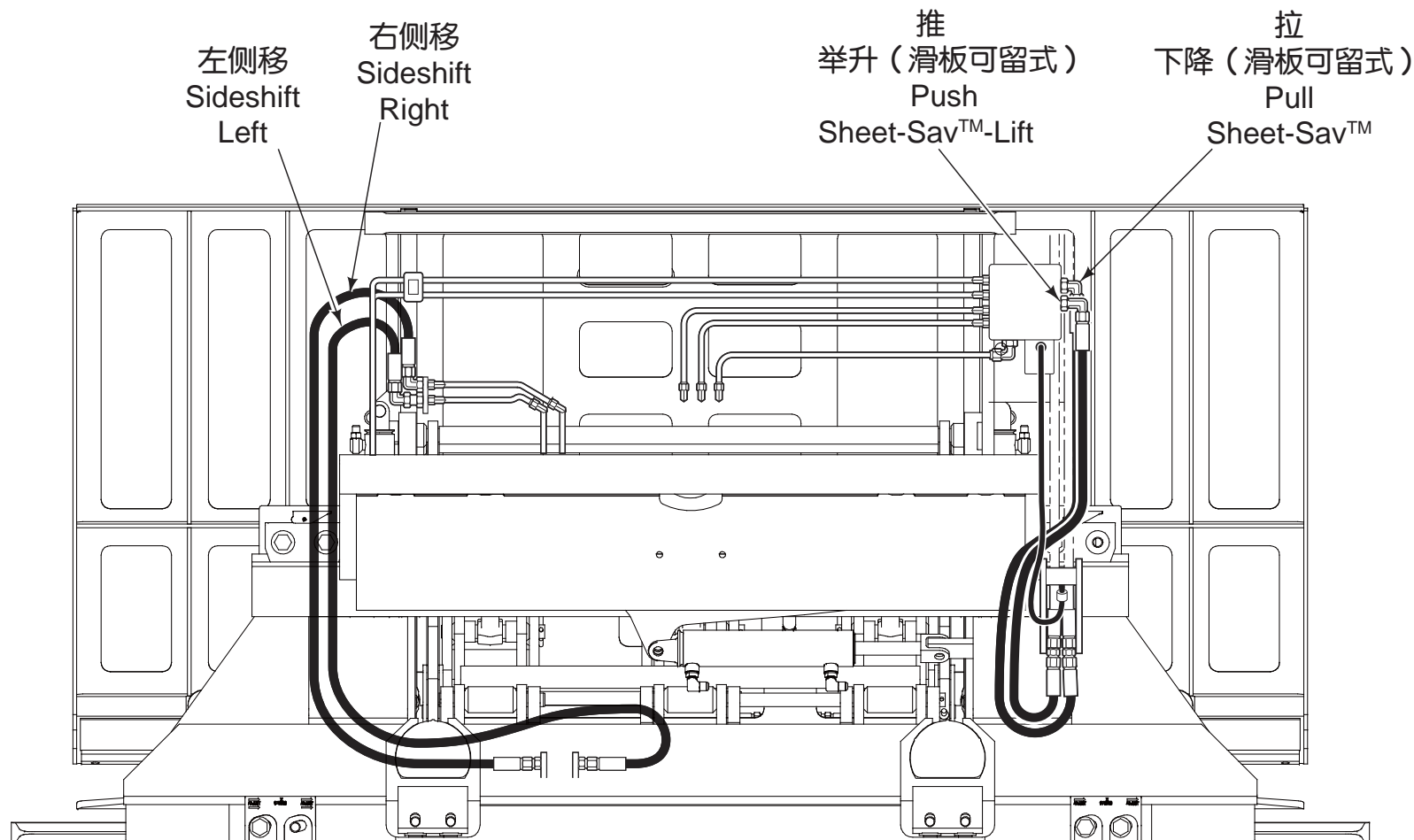
叉板可调式
6-N-1 带电缆的右卷管器
HYDRAULIC ADJUSTABLE PLATENS
RH 6-N-1 Cable-Hose Reel Group



滑板可留式
6-N-1带电缆的右卷管器和内系同步油路门架
Sheet-Sav™
RH 6-N-1 Cable-Hose Reel Group and Mast
Internal Reeving

10

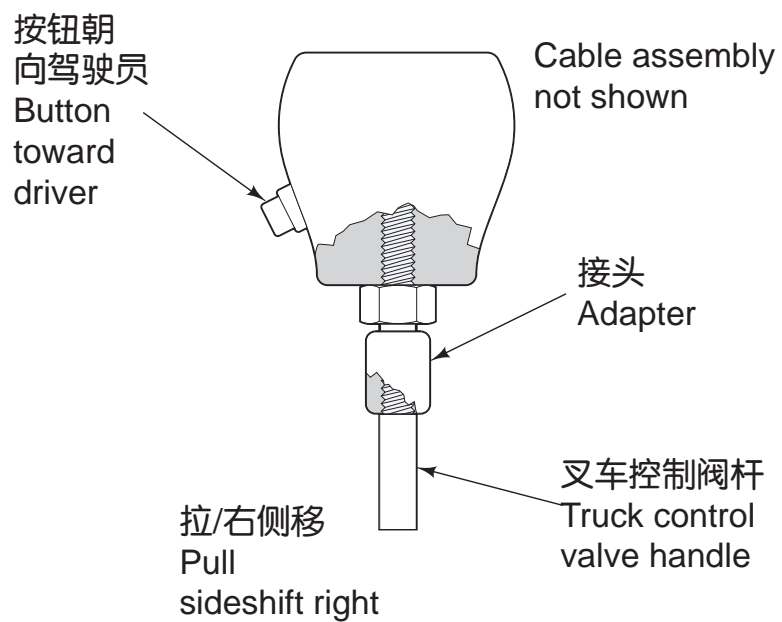
安装软管-三功能（带电磁阀）
Install hoses-Triple function with solenoid adaption



加宽型滑板可留式
6-N-1带电缆的右卷管器和内系同步油路门架
Double Wide Sheet-Sav™
RH 6-N-1 Cable-Hose Reel Group and Mast Internal Reeving

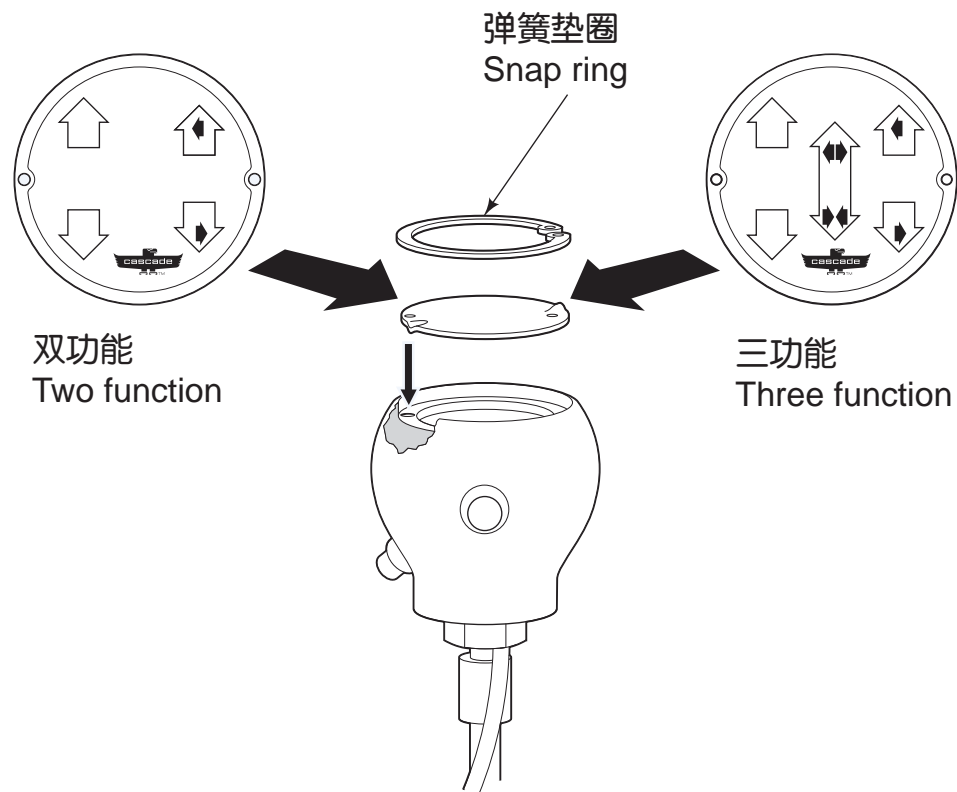
11

安装电磁阀控制杆
Install solenoid control knob



12

手柄上盖的正确位置
Show correct knob cover side



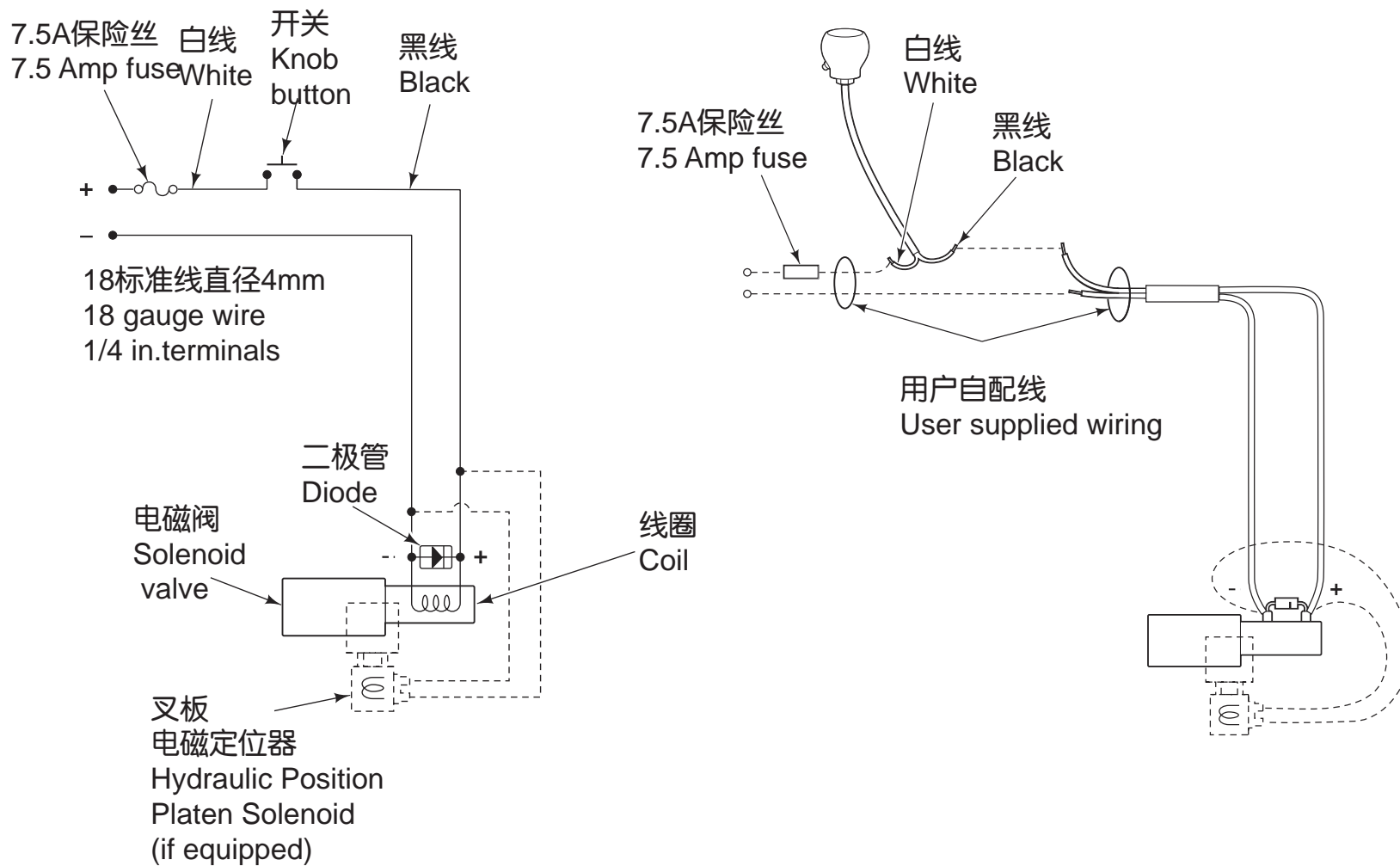
13

安装线路-带电磁阀

Install wiring-solenoid activated functions

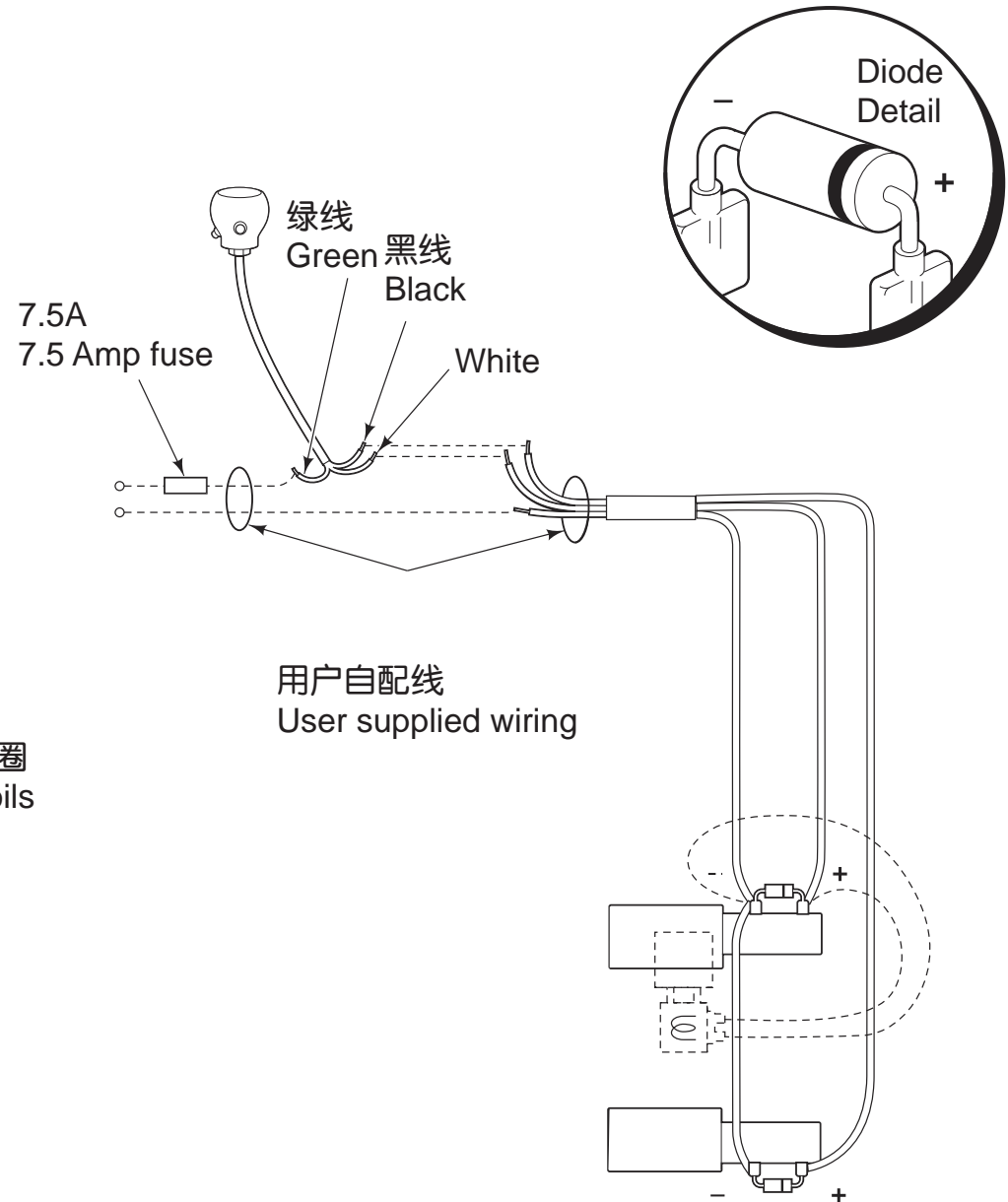
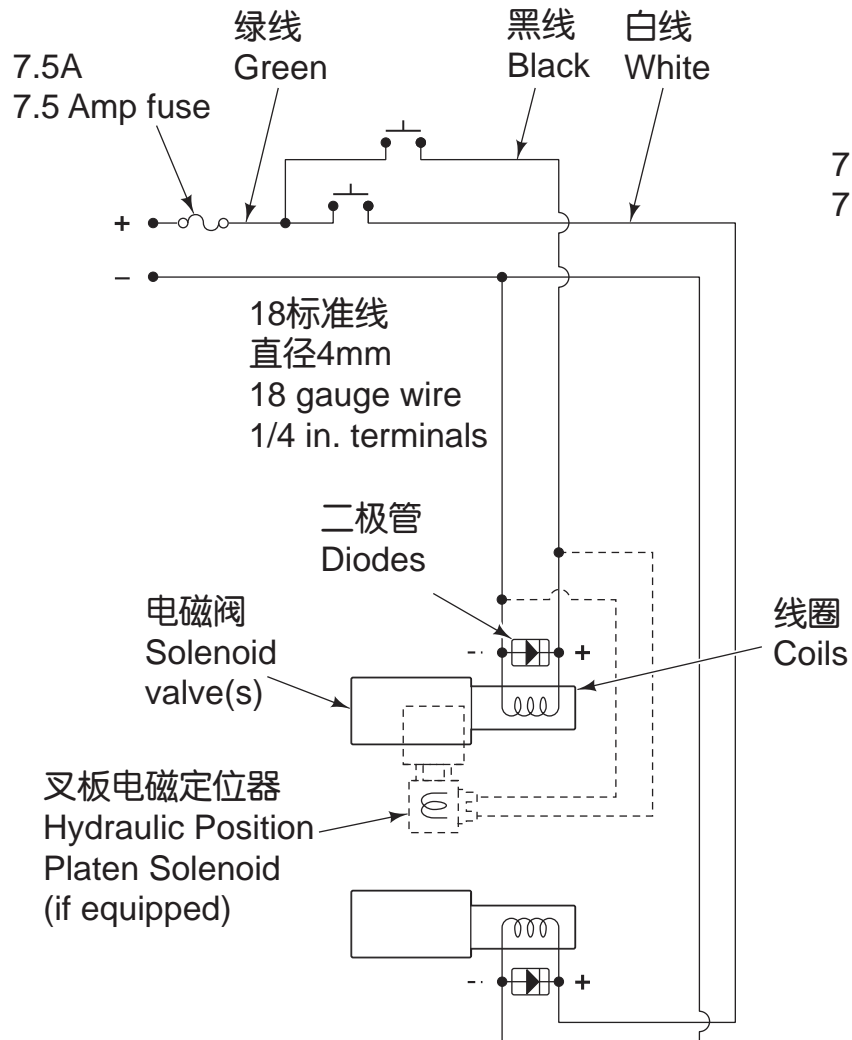
双功能（一个控制手柄）

TWO-FUNCTION(One button control knob)



13

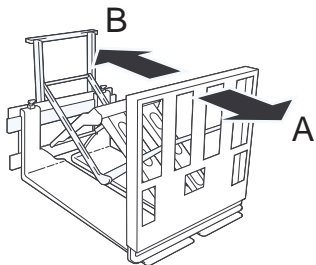
三功能（两个控制手柄） Three-Function (Two button control knob)



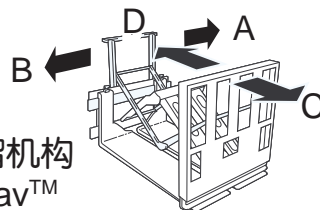
14

叉车多路阀功能 Auxiliary valve functions

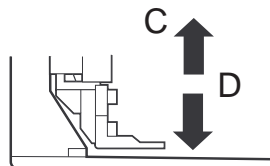
- 推拉器 Push/Pull
- 推出器 Bag Load Push
- A 面板推出
Faceplate push
- B 面板拉回
Faceplate retract/pull
- C 空置
Not used
- D 空置
Not used



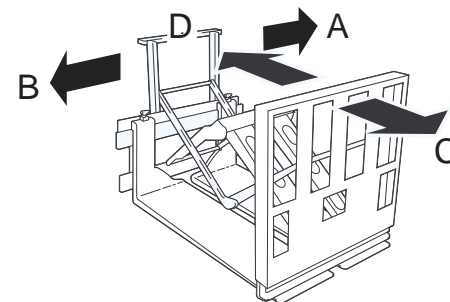
- 滑板可留式推拉器
Push/Pull With Sheet-Sav™
- A 左侧移
Sideshift left
- B 右侧移
Sideshift right
- C 面板前推
Faceplate push
- C 滑板保留机构提升 (按下手柄按钮)
Sheet-Sav™ lift (press knob button)
- D 面板回缩、后拉
Faceplate retract/pull
- D 滑板保留机构压下 (按下手柄按钮)
Sheet-Sav™ stomp (press knob button)



滑板保留机构
Sheet-Sav™



- 侧移式推拉器
Push/Pull With Sideshift
- 侧移式推出器
Bag Load Push With Sideshift
- A 左侧移
Sideshift left
- B 右侧移
Sideshift right
- C 面板推出
Faceplate push
- D 面板拉回
Faceplate retract/pull



14 叉车多路阀功能 Auxiliary valve functions

属具带电磁阀

Solenoid Equipped Attachments

推/拉

Push/Pull

推出

Load Push

A 左侧移

Sideshift left

A 面板前推 (压下手柄按钮)

Faceplate push (press knob button)

A 叉板张开 (压下手柄按钮)

Position platens-out (press knob button)

B 右侧移

Sideshift right

B 面板回缩后拉 (压下手柄按钮)

Faceplate retract/pull (press knob button)

B 叉板合拢 (压下手柄按钮)

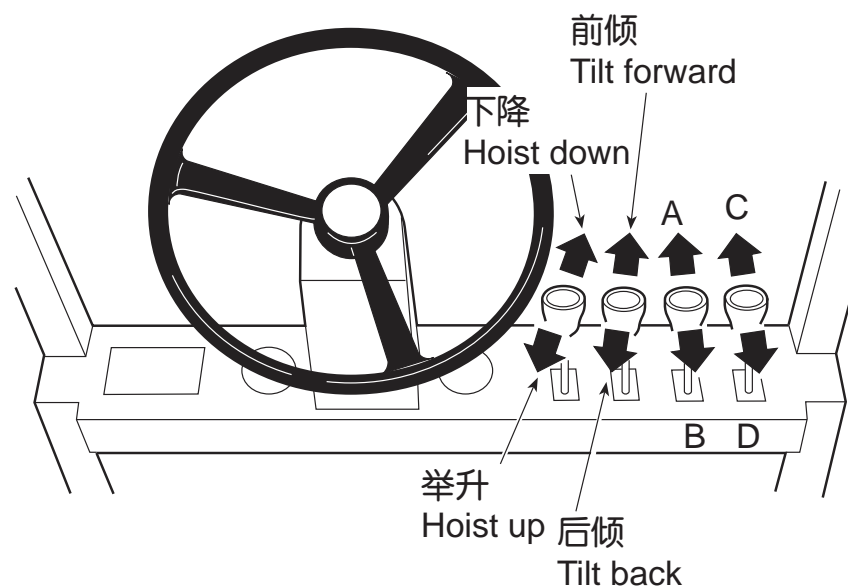
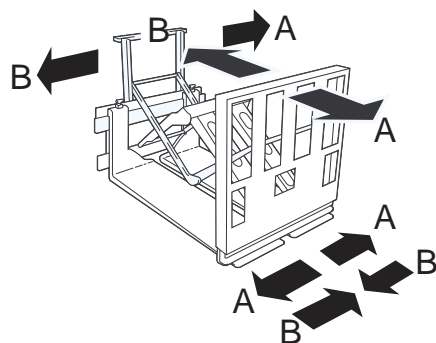
position platens-in (press knob button)

C 空置

Not used

D 空置

Not used



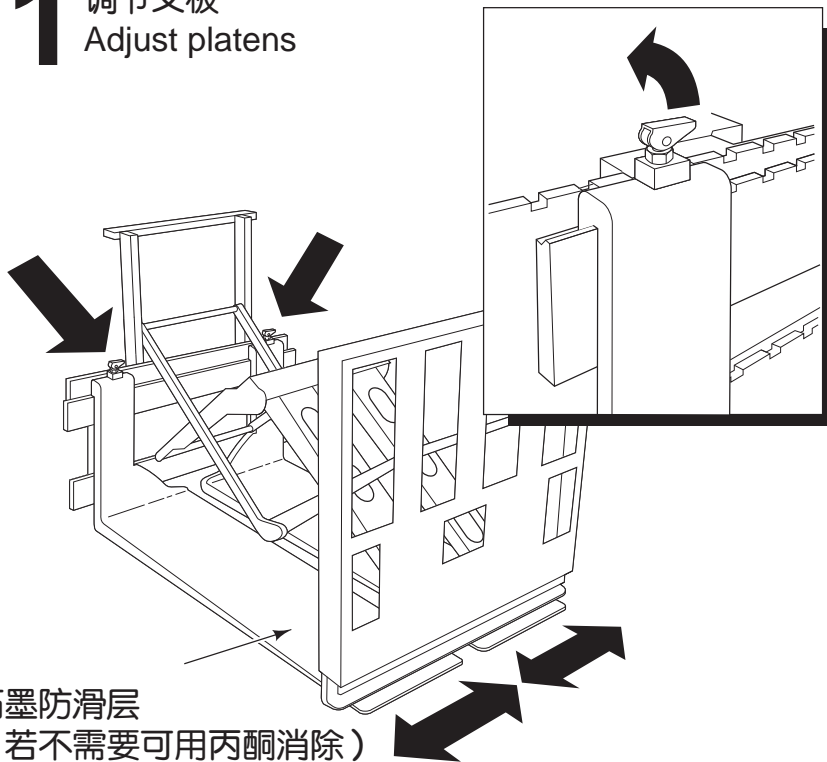
操作功能

Operate Attachment Functions

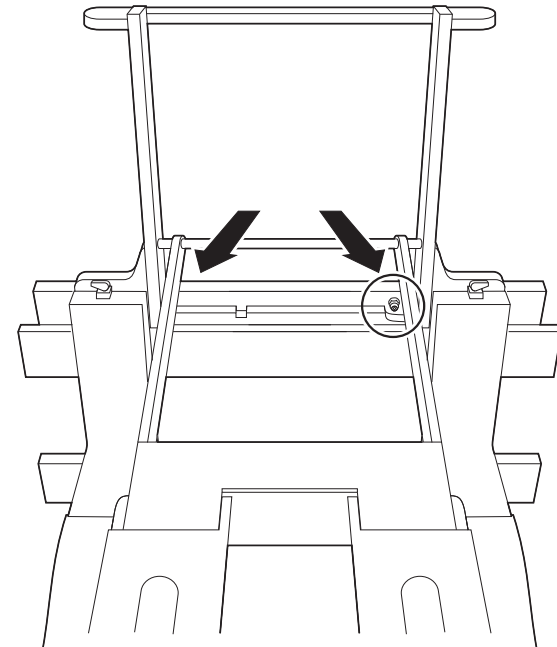
如果功能相反、转换管接头, 卷管器和多路阀的胶管方向
if functions are backwards-swith hoses
at hose terminal, hose reel or auxiliary valve.

操作前 **P**RIOR TO OPERATION

1 调节叉板 Adjust platens



2 润滑轴承 Lube bearings-Units with sideshift Sideshift to access grease fitting.

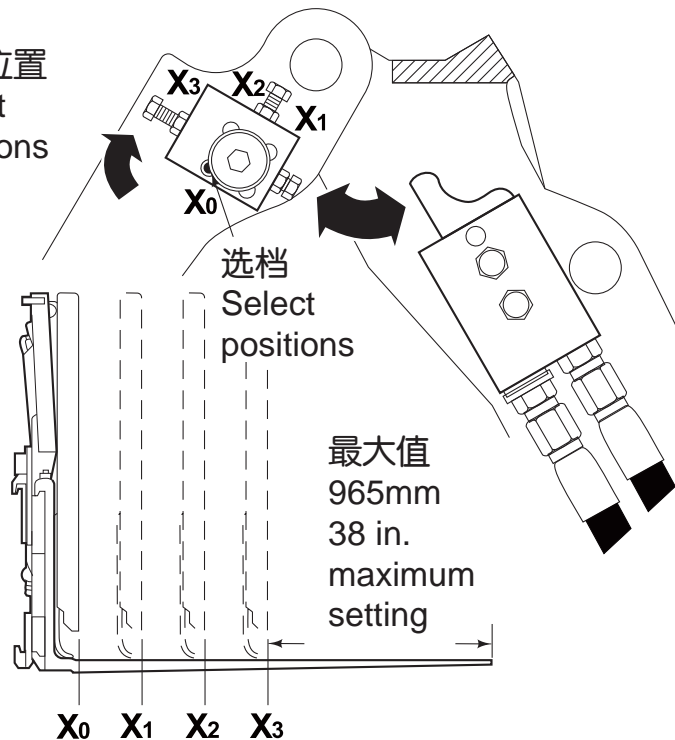


操作前 **P**RIOR TO OPERATION

调节止动阀

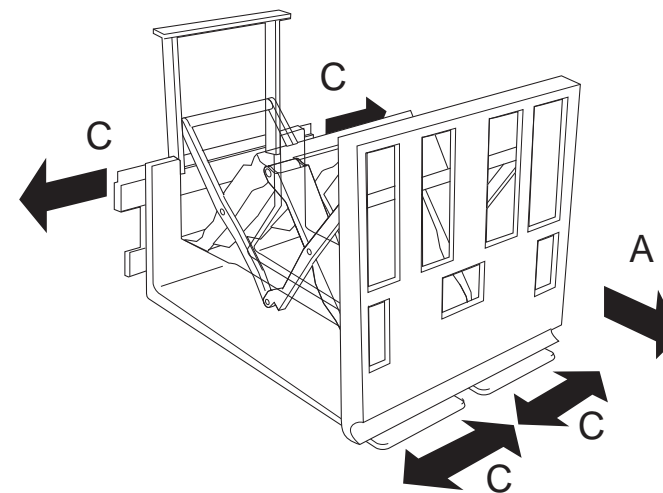
3 Adjust stop group(if equipped)

调节位置
Adjust
Positions



4 功能测试 Test functions

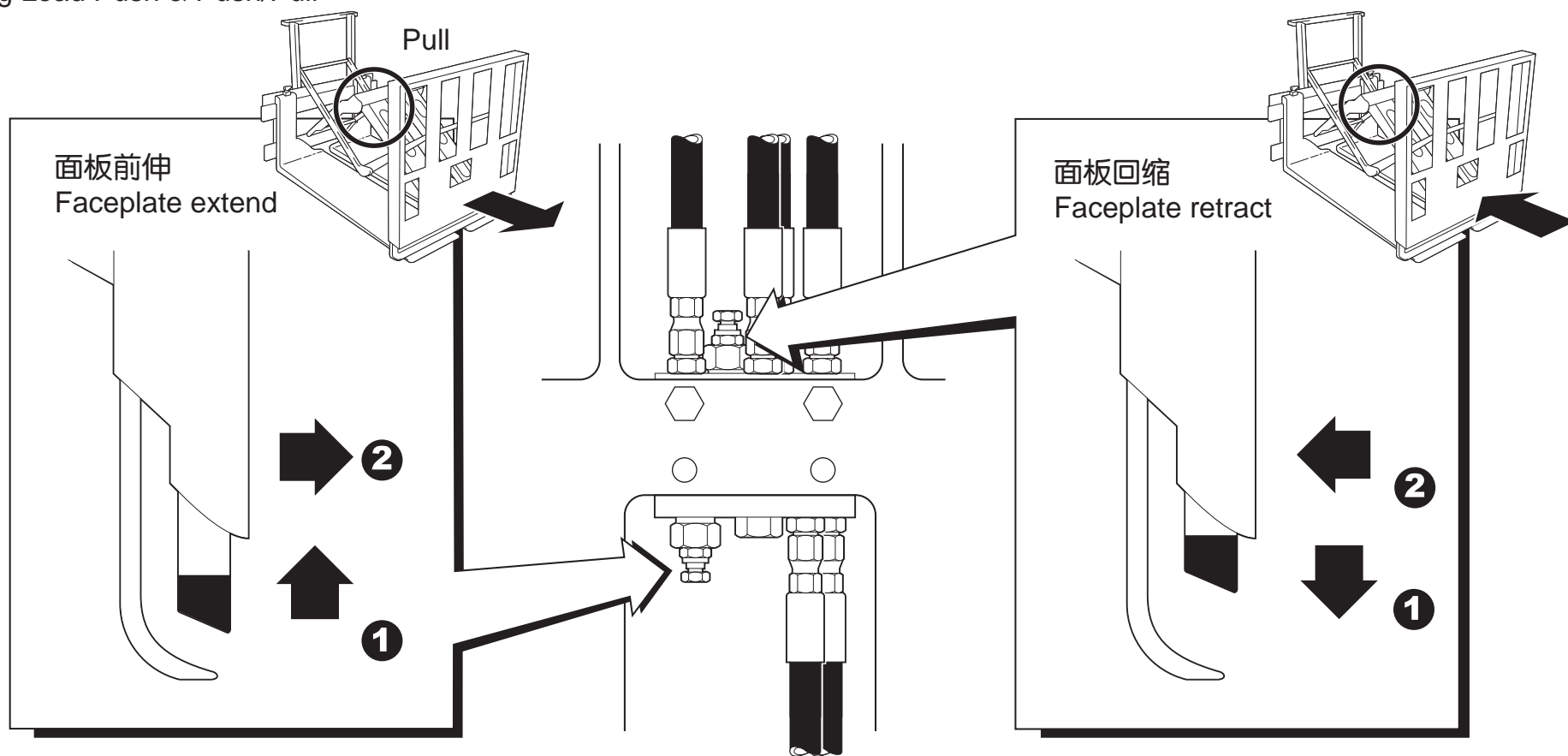
- A 面板前伸
Extend faceplate
- B 打开叉车多路阀持续10秒以排除空气
Hold truck valve open 10 seconds
to remove air
- C 重复以下支动作
Repeat for additional functions
- 侧移动作
Sideshift
 - 叉板张张开，合拢动作
Hydraulic platens
 - 滑板保留机构上下动作
Sheet-Sav



操作前 **P**RIOR TO OPERATION

5 面板动作功能调整 Faceplate gripper function adjustment

推出器和推拉器
Bag Load Push & Push/Pull

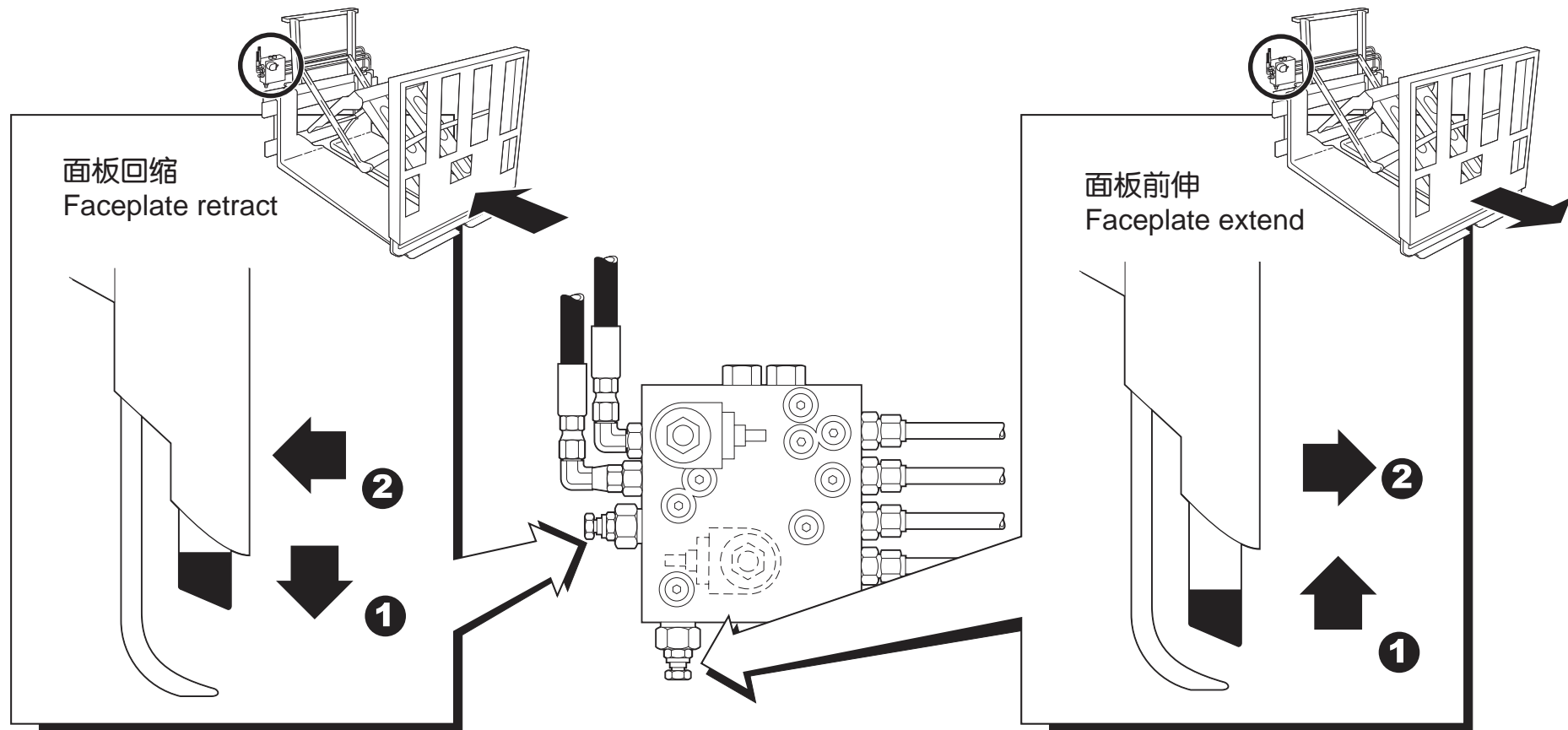


面板前伸时拨起可控手柄
Adjust-Gripper bar up
at full faceplate extension.

面板回缩前压下可控手柄
Adjust-Gripper bar down
prior to faceplate retract.

操作前 **P**RIOR TO OPERATION

5 滑板可留式推拉器 Push & Pull With Sheet-Sav™



面板回缩前压下可控手柄
Adjust-Gripper bar down
prior to faceplate retract.

面板前伸时拨起可控手柄
Adjust-Gripper bar up
at full faceplate extension.

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