
开头语

衷心感谢您购买本公司产品！使用缝纫机之前，请认真阅读此说明书。本说明书介绍了缝纫机日常使用、维护与安全的有关注意事项。请您仔细加以保管，以便日后查阅。如产品规格或外观经过改良可能会与说明书略有不同，恕不另行通知。

PROLOGUE

Thanking you for your purchase our products sincerely, please reading the manual book before operation, the book introduce some points how to operate, maintenance, and safe. Please keep it carefully for reading in the further; you will be not informed if the file has been revised. Please set sample as standard.

非常感谢您购买我公司工业缝纫机。在使用缝纫机之前，请仔细阅读<为了您的安全使用>和使用说明书。

工业缝纫机的特性之一，因为要在机针和挑线杆等运动零部件附近进行作业，而这些零部件很容易引起受伤的危险，所以在受过培训的人或熟练人员的安全操作知识的指导下，正确地使用本缝纫机。

为了您的安全使用

[1] 安全使用的标记及其意义

本使用说明书及产品所使用的标记和图案记号是为了您的安全而正确地使用产品，防止您及其他人受到危害和损害。表示方法及含意如下。

说 明

 危险	该表示内容为如果忽视此标记而进行了错误的操作，必将导致死亡或重伤。
 注意	如果忽视此标记而进行了错误的操作，有可能会引起人员受伤及造成设备损坏。

图案和符号



.....该符号（△）表示 “应注意事项” 。
三角中的图案表示必须要注意的实质内容。
（例如，左边的符号表示 “当心受伤” 。）



.....该符号（⊘）表示 “禁止” 。



.....该符号（●）表示 “必须” 。
圆圈中的图案表示必须要做的事情的实质内容。
（例如，左边的符号表示 “必须接地” 。）

[2] 安全注意事项

危险



在关闭电源开关并将电源插头从插座上拔下后,至少等待 5 分钟,再打开控制箱盖。触摸带有高电压的区域将会造成人员伤亡。

注意

使用环境



请不要在有电源线干扰及静电干扰等有强电气干扰源影响的环境下使用。
强电气干扰源可能会影响缝纫机的正确操作。



电源电压的波动应该在额定电压的 $\pm 10\%$ 以内的环境下使用。
电压大幅度的波动会影响缝纫机的正确操作。



电源容量应大于设备的消耗电量。
电源容量不足会影响缝纫机的正确操作。



压缩空气的供气量应大于设备所要求的总耗气量。压缩空气的供气量不足可能会导致缝纫机的操作不正常。



环境温度应在 $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$ 的范围内使用。
低温或高温会影响缝纫机的正确操作。



相对湿度应在 $45\% \sim 85\%$ 的范围内,并且设备内不会形成结露的环境下使用。干燥或多湿的环境和结露会影响缝纫机的正确操作。



万一发生雷电暴风雨时,关闭电源开关,并将电源插头从插座上拔下。
雷电可能会影响缝纫机的正确操作。

安 装



请让受过培训的技术人员来安装缝纫机。



请委托购买商店或电气专业人员进行电气配线。



缝纫机重约 88Kg, 安装工作必须由两人以上来完成。



在安装完成前,请不要连接电源,如果误踩脚开关,缝纫机动作会导致受伤。



缝纫机头倒下或竖起时,请用双手进行操作。
另外在缝纫机头倒下的状态下,请不要用力压缝纫机。如缝纫机失去平衡,滑落到地上是造成受伤或缝纫机损坏的原因。



必须接地。接驳地线不牢固,是造成触电或误动作的原因。



所有电缆应固定在离活动部件至少 25mm 以外处。另外,不要过度弯曲电缆或用卡钉固定得过紧,会引起火灾或触电的危险。



请在机头及马达上安装安全罩壳。



如果使用带小脚轮的工作台,则应该固定小脚轮,使其不能移动。



使用润滑油和黄油时,务必戴好保护眼镜和保护手套等,以防润滑油落入眼中或沾在皮肤上,这是引起发炎的原因。

另外,润滑油或黄油不能饮用,否则会引起呕吐和腹泻。

将油放在小孩拿不到的地方。

! 注意

缝 纫

- | | |
|---|---|
| <p> 本缝纫机仅限于接受过安全操作培训的人员使用。</p> <p> 本缝纫机不能用于除缝纫外的任何其他用途。</p> <p> 使用本缝纫机时必须戴上保护眼镜。如果不戴保护眼镜，断针时就会有危险，机针的折断部分可能会弹入眼睛并造成伤害。</p> <p> 发生下列情况时，请切断电源。当误踩脚开关时，缝纫机动作会导致受伤。</p> <ul style="list-style-type: none"> · 机针穿线时 · 更换机针或梭芯时 · 缝纫机不使用，或人离开缝纫机时。 <p> 如果使用带小脚轮的工作台，则应该固定小脚轮，使其不能移动。</p> | <p> 为了安全起见，在使用本缝纫机之前，请安装保护装置。如果未安装这些安全装置就使用缝纫机，会造成人身伤害及缝纫机损坏。</p> <p> 缝纫过程中不要触摸任何活动部件或将物件靠在运动部件上，因为这会导致受伤或缝纫机损坏。</p> <p> 如果缝纫机操作中发生误动作，或者如果听到异常的噪声或闻到异常的气味，应立即切断电源。然后请与购买商店或受过培训的技术人员联系。</p> <p> 如果缝纫机出现故障时，请与购买商店或受过培训的技术人员联系。</p> |
|---|---|

清 洁

- | | |
|--|--|
| <p> 在开始清洁作业前，请切断电源。如果误踩了脚开关，缝纫机动作会导致人员受伤。</p> | <p> 使用润滑油和黄油时，务必戴好保护眼镜和保护手套等，以防润滑油落入眼中或沾在皮肤上，这是引起发炎的原因。</p> <p>另外，润滑油或黄油不能饮用，否则会引起呕吐和腹泻。</p> <p>将油放在小孩拿不到的地方。</p> |
|--|--|

维 护 和 检 查

- | | |
|---|--|
| <p> 只有经过训练的技术人员才能进行缝纫机的维修、保养和检查。</p> <p> 与电气有关的维修、保养和检查请委托购买商店或电气专业人员进行。</p> <p> 发生下列情况时，请关闭电源。并拔下电源线插座。否则误踩下脚开关时，缝纫机动作会导致受伤。</p> <ul style="list-style-type: none"> · 检查、调整和维修 · 更换旋梭等消耗零部件 <p> 在检查、调整和修理任何使用气动装备的部件前，请断开气源，并等压力表指针下降到“0”为止。</p> | <p> 缝纫机头倒下或竖起时，请用双手进行操作。另外在缝纫机头倒下的状态下，请不要用力压缝纫机。如缝纫机失去平衡，滑落到地上是造成受伤或缝纫机损坏的原因。</p> <p> 在必须接上电源开关进行调整时，务必十分小心遵守所有的安全注意事项。</p> <p> 请使用兄弟工业公司指定的更换零部件。</p> <p> 取下的安全保护装置，再次安装时，请务必安装在原位上，并检查能否正确地操作。</p> <p> 未经授权而对缝纫机进行改装而引起的缝纫机损坏不在保修范围内。</p> |
|---|--|

[3] 警告标签

缝纫机上有列警告标签。

当使用缝纫机时，请遵守标签上的说明。如果标签脱落或模糊不清，请和购买商店联系。

1

	⚠ 危険 高電圧部分にふれて、大けがをすることがある。電源を切り、5分たってからカバーをはずすこと。	⚠ 危険 触摸高压电部分，会导致受伤。在切断电源5分钟后，再开启盖罩。
⚠ DANGER Hazardous voltage will cause injury. Turn off main switch and wait 5 minutes before opening this cover.	⚠ GEFAHR Hochspannung verletzungsgefahr! Bitte schalten sie den hauptschalter aus und warten sie 5 minuten, bevor sie diese abdeckung öffnen.	⚠ PELIGRO Un voltage non adapte provoque des blessures. Eteindre l'interrupteur et attendre 5 minutes avant d'ouvrir le capot.

2

	⚠ 注意 触摸运动部分，易造成受伤。所以在装上安全保护装置后，再进行缝纫操作。在切断电源后，进行穿线，更换梭芯，机针和做清扫，调整工作。
⚠ CAUTION Moving parts may cause injury. Operate with safety devices. Turn off main switch before threading, changing bobbin and needle, cleaning etc.	

3



缝纫机头倒下或竖起时，请小心别夹住您的手指。

安全保护装置
护眼板，护指器，
挑线杆防护罩，马达盖，
松线电磁铁盖，内盖，外盖，
固定盖，缓冲器支架盖等

4

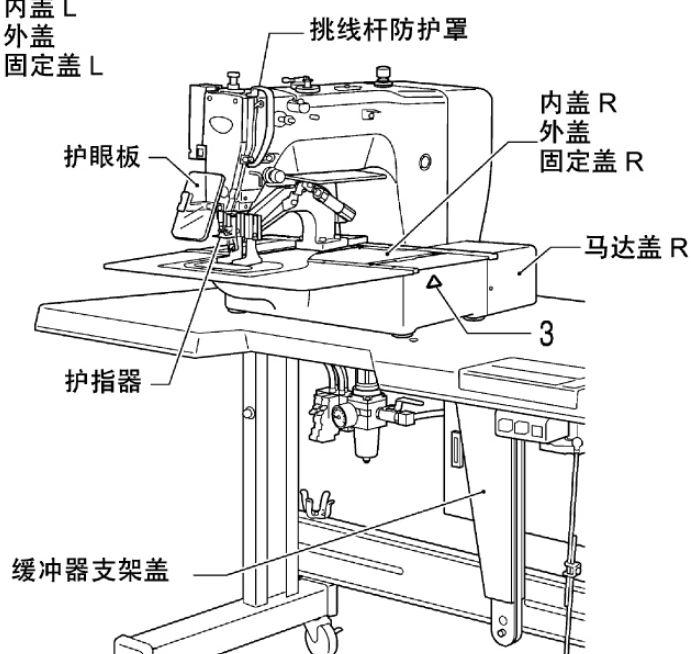
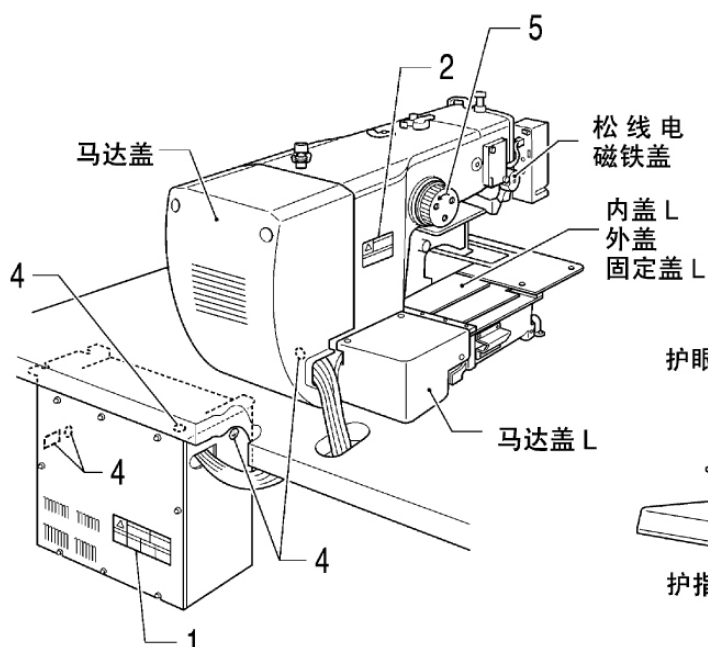



必须保证接地。如果接地不可靠，很有可能受到严重电击，操作也可能出现问题。

5



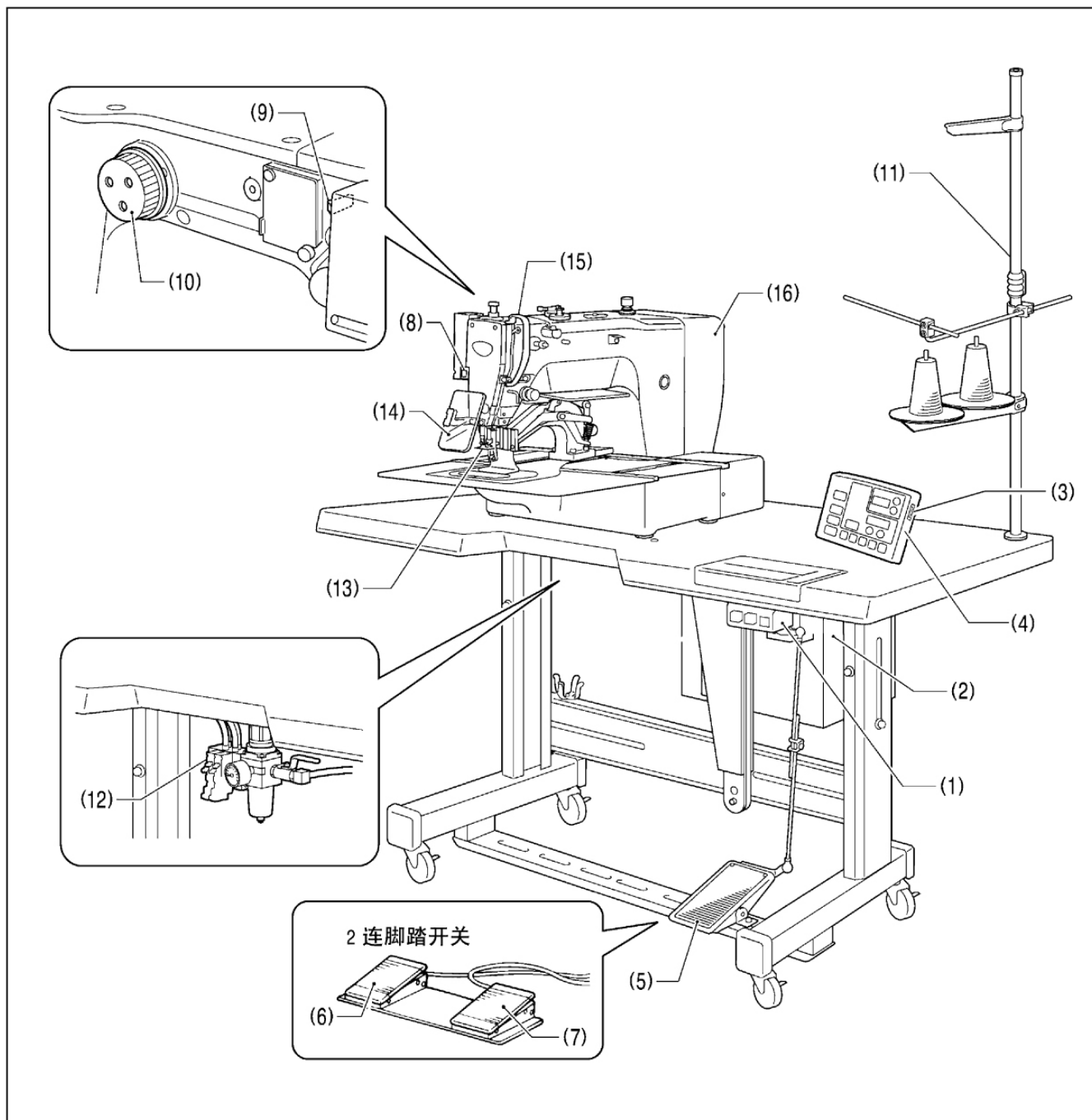
表示转动方向



目录

1. 各部件名称.....1	6-2. 控制箱进气口的清洁.....24
2. 规格.....2	6-3. 更换润滑油.....24
3. 安装方法.....3	6-4. 护眼板的清洁.....24
3-1. 台板加工图.....3	6-5. 机针的检查.....24
3-2. 控制箱的安装方法.....4	6-6. 加油.....24
3-3. 油盘的安装方法.....4	7. 标准调整.....25
3-4. 缝纫机头部的安装方法.....5	7-1. 头部开关的确认.....25
3-5. 缝纫机头部的倒下.....9	7-2. 挑线簧.....26
3-6. 踏脚用复合件的安装方法（电磁规格）.....10	7-3. 机壳线导向 R.....26
3-7. 2 连脚踏开关的安装方法（空压规格）.....10	7-4. 机针高度的调整.....27
3-8. 线架的安装方法.....11	7-5. 机针上升量的调整.....27
3-9. 空压用复合件的安装方法（空压规格）.....12	7-6. 梭托导针部的调整.....27
3-10. 护眼板的安装方法.....13	7-7. 针隙的调整.....28
3-11. 马达盖的安装方法.....13	7-8. 旋梭导线器的调整.....28
3-12. 加油.....14	7-9. 旋梭供油量.....28
3-13. 机头部固定螺栓的安装法.....15	7-10. 动刀的位置调整.....29
4. 缝纫前的准备.....16	7-11. 动刀和定刀的更换方法.....31
4-1. 机针的安装方法.....16	7-12. 扫线器的调整.....32
4-2. 面线的穿法.....16	7-13. 间歇压脚的安装位置.....32
4-3. 底线的绕线方法.....18	7-14. 间歇压脚行程的变换.....33
4-4. 梭芯套的装取方法.....19	7-15. 压脚上升量的调整.....35
4-5. 缝纫张力.....20	7-16. 空气压力的调整（空压规格）...35
4-5-1. 底线的张力.....20	8. 故障检修.....36
4-5-2. 面线的张力.....20	
5. 缝纫.....21	
5-1. 缝纫的方法.....21	
5-2. 暂停开关的使用方法.....22	
5-3. 扫线用开关的使用方法.....22	
6. 保养.....23	
6-1. 旋梭的清洁.....23	

1. 各部件名称

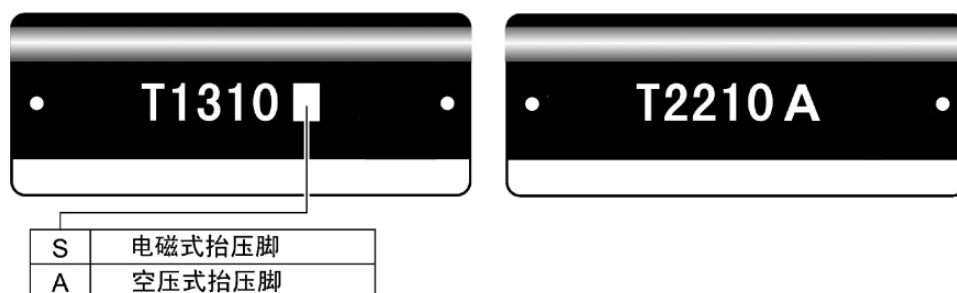


- (1) 电源开关
- (2) 控制箱
- (3) USB接口
- (4) 操作盘
- (5) 脚踏开关（电磁规格）
- (6) 压脚开关（空压规格）
- (7) 启动开关（空压规格）
- (8) 暂停开关
- (9) 扫线用开关
- (10) 皮带轮
- (11) 线架
- (12) 电磁阀（空压规格）

安全保护装置

- (13) 护指器
- (14) 护眼板
- (15) 挑线杆防护罩
- (16) 马达罩

2. 规格



使用的缝纫机	平缝花样缝缝纫机（带大旋梭）
线迹形式	单针平缝
最高缝纫速度	2,700rpm
缝纫尺寸（X×Y）	T1310: 最大 130×100 mm, T2210: 最大 220×100 mm
送布驱动方式	间歇送布（脉冲马达驱动）
针距	0.05~12.7mm
针数	内存 500,000 针（※）
最大针数	20,000 针（1 个程序）
存储可能缝纫的数据	内存：512（※）
抬压脚驱动方式	电磁规格：脉冲马达驱动，空压规格：空压式
压脚上升量	电磁规格：最大 25mm，空压规格：最大 30mm
2 段压脚	电磁规格：左右一体式压脚，空压规格：左右分离式压脚
间歇压脚上升量	22mm
间歇压脚行程	2~4.5mm、4.5~10mm 或 0（出厂时 3mm）
使用的旋梭	半回转 2 倍旋梭（标准旋梭另买）
扫线装置	标准装备
切线装置	标准装备
数据存储方式	内存(快擦写存储器)
用户程序数	999
循环程序数	9
马达	AC 伺服马达 750W
重量	头部：约 88kg，操作盘：约 0.6kg 控制箱：14.2~16.2kg（根据电压不同而不同）
电源	单相 100V / 220V、3 相 200V / 220V / 380V / 400V 400VA
空气压力	0.5 Mpa 1.8 l/min

※ 根据各个程序的针数的不同，能够存储的缝纫数据和针数也不同的。

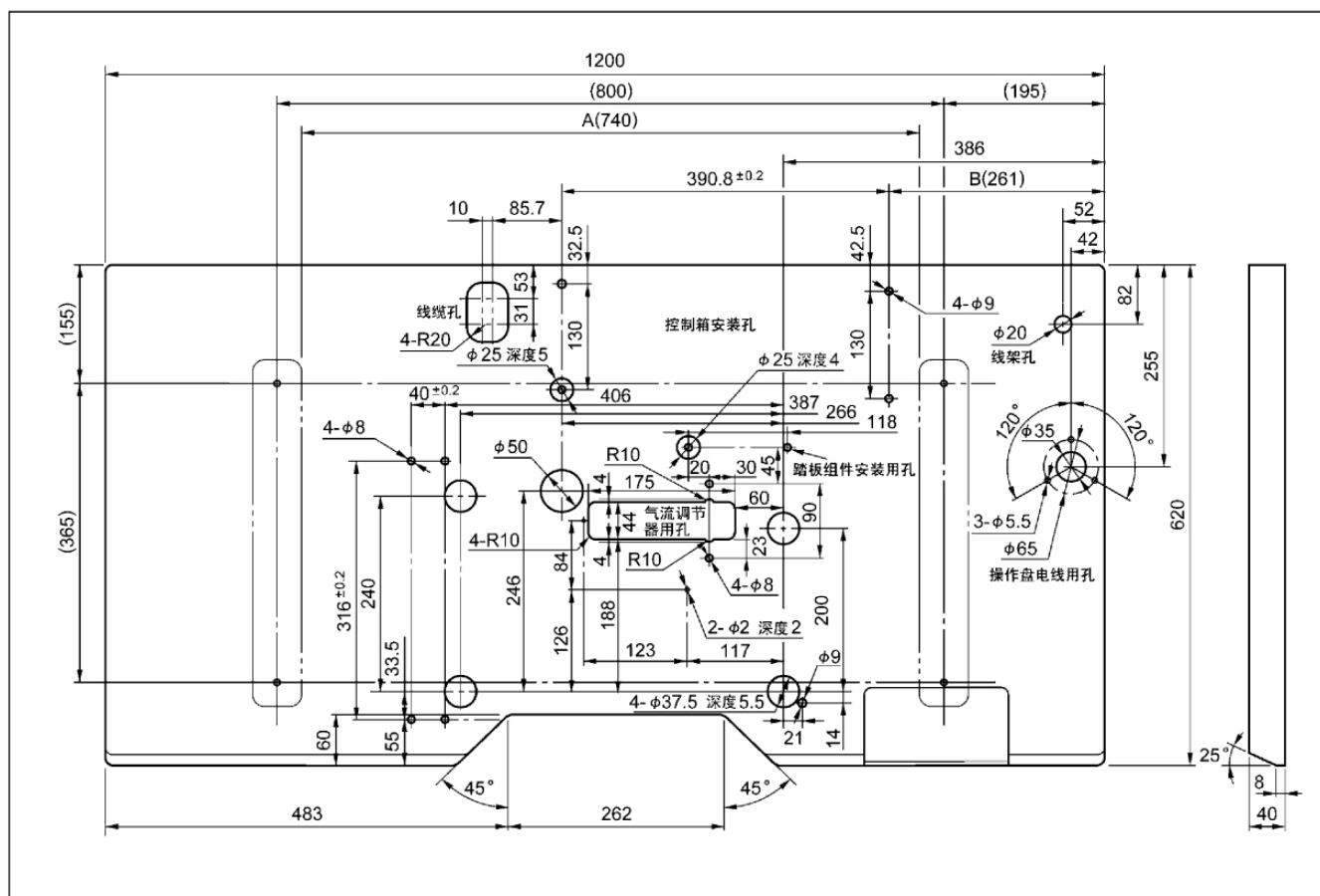
3. 安装方法

⚠ 注意

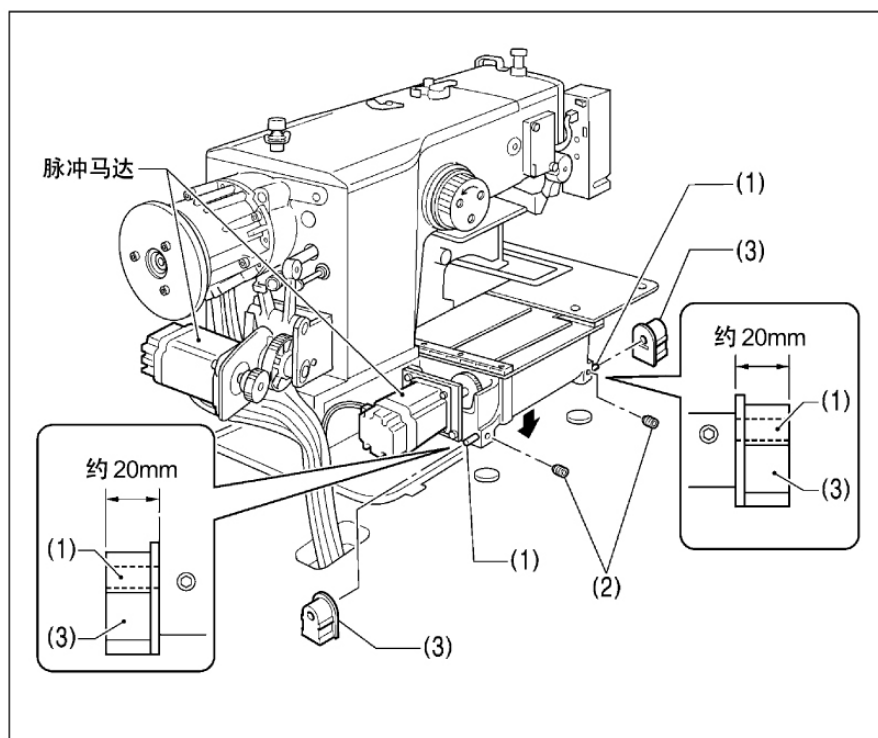
- ⊘ 请让受过培训的技术人员来安装缝纫机。
- ⚠ 请委托购买商店或电气专业人员进行电气配线。
- ⚠ 缝纫机重约 88Kg，安装工作必须由两人以上来完成。
- ⊘ 在安装完成前，请不要连接电源，如果误踩脚开关，缝纫机动作会导致受伤。
- ⚠ 缝纫机头倒下或竖起时，请用双手进行操作。
- ⚠ 另外在缝纫机头倒下的状态下，请不要用力压缝纫机。如缝纫机失去平衡，滑落到地上是造成受伤或缝纫机损坏的原因。
- ⚠ 所有电缆应固定在离活动部件至少 25mm 以外处。另外，不要过度弯曲电缆或用卡钉固定得过紧，会引起火灾或触电的危险。
- ⊘ 必须接地。接驳地线不牢固，是造成触电或误动作的原因。
- ⚠ 请在机头及马达上安装安全罩壳。

3-1. 台板加工图

- 台板的厚度应达 40mm，能够承受缝纫机的重量，并经受起缝纫机的震动。
- 如果机脚的内侧尺寸 A 小于 740mm，请将控制箱的安装位置 (B=261mm) 移向左侧进行加工。
- 请确认控制箱应离开机脚 10mm 以上。如果控制箱过于靠近机脚，则可能会引起缝纫机的误动作。



3-4. 缝纫机头部的安装方法

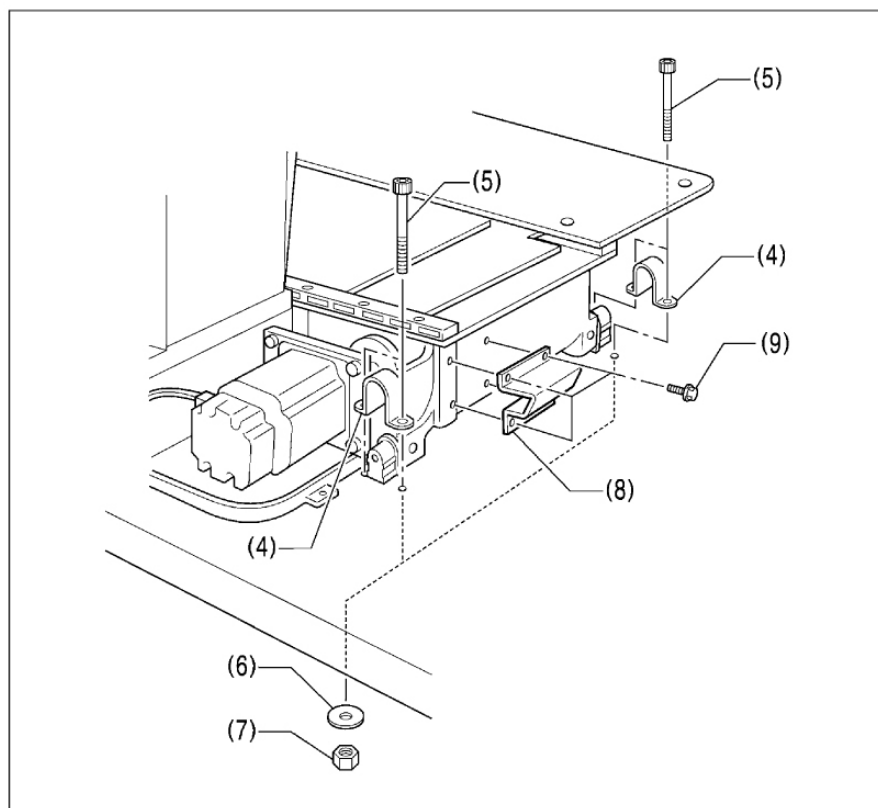


- (1) 机头支撑销 [2 个]
- (2) 螺钉 [2 个]
- (3) 机头铰链橡皮组 [2 个]

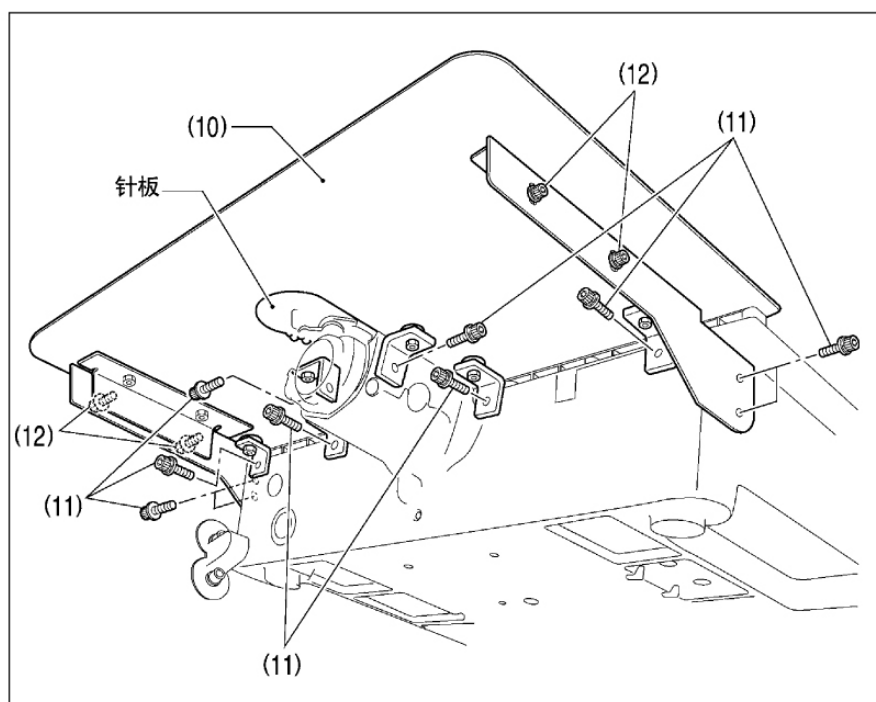
将机头轻轻地放在油盘、防震橡皮上。

注意:

- 请注意不要让电线夹在机头和油盘之间。
- 在拿机头时, 请不要握住脉冲马达。否则可能会引起脉冲马达的故障。



- (4) 机头铰链套 [2 个]
- (5) 螺栓 [4 个]
- (6) 垫圈 [4 片]
- (7) 螺母 [4 个]
- (8) 机头撑杆
- (9) 螺栓带垫圈 [4 个]



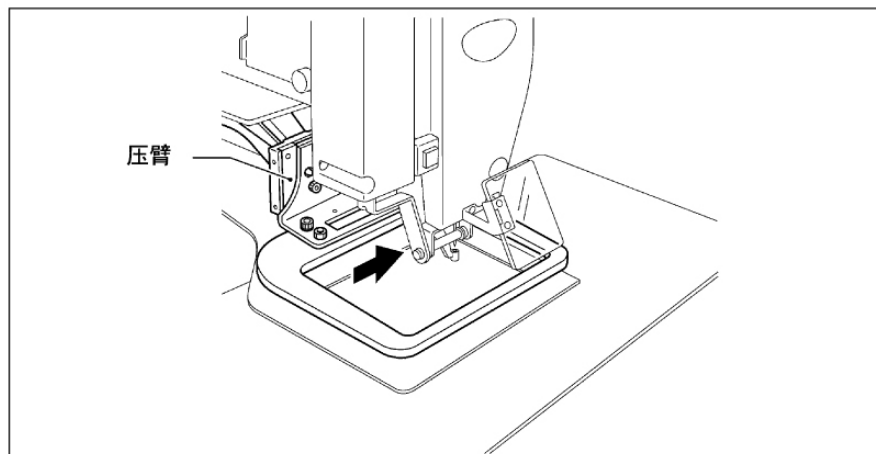
(10) 针板辅助板

(11) 螺栓带垫圈 [10 个]

为了使针板辅助板 (10) 和针板在同一高度平面，旋松螺栓带垫圈 (12) 进行调整。

注意：

请将针板辅助板水平安装。

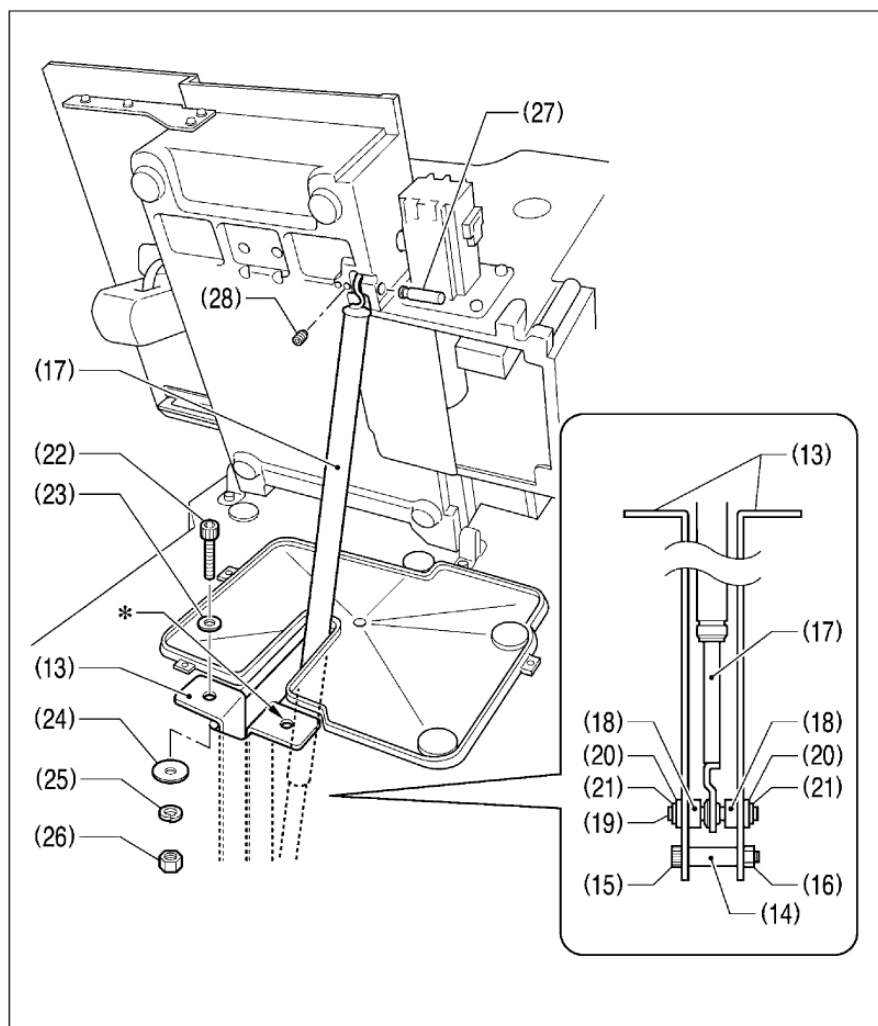


从缝纫机正面将压臂移动到最右侧(图中箭头方向)之后，慢慢地将缝纫机头部倒下。

注意：

缝纫机头部的操作请 2 人以上，使用双手慢慢地将缝纫机头部倒下。

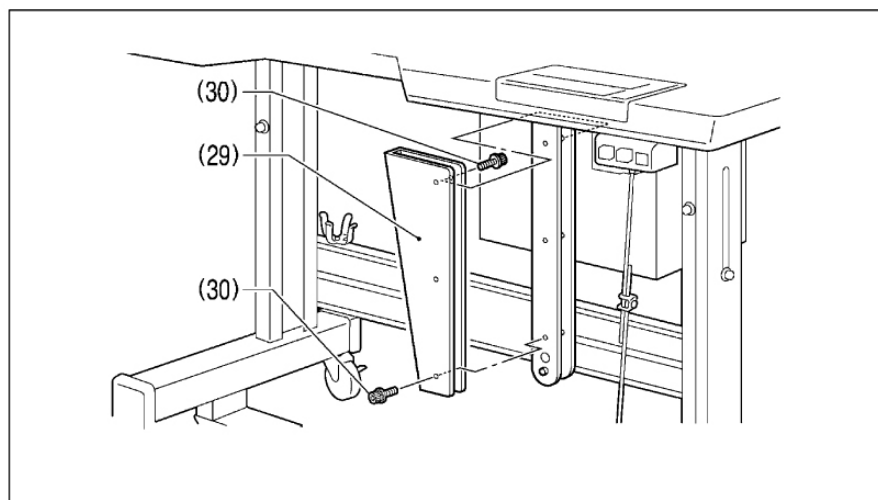
3. 安装方法



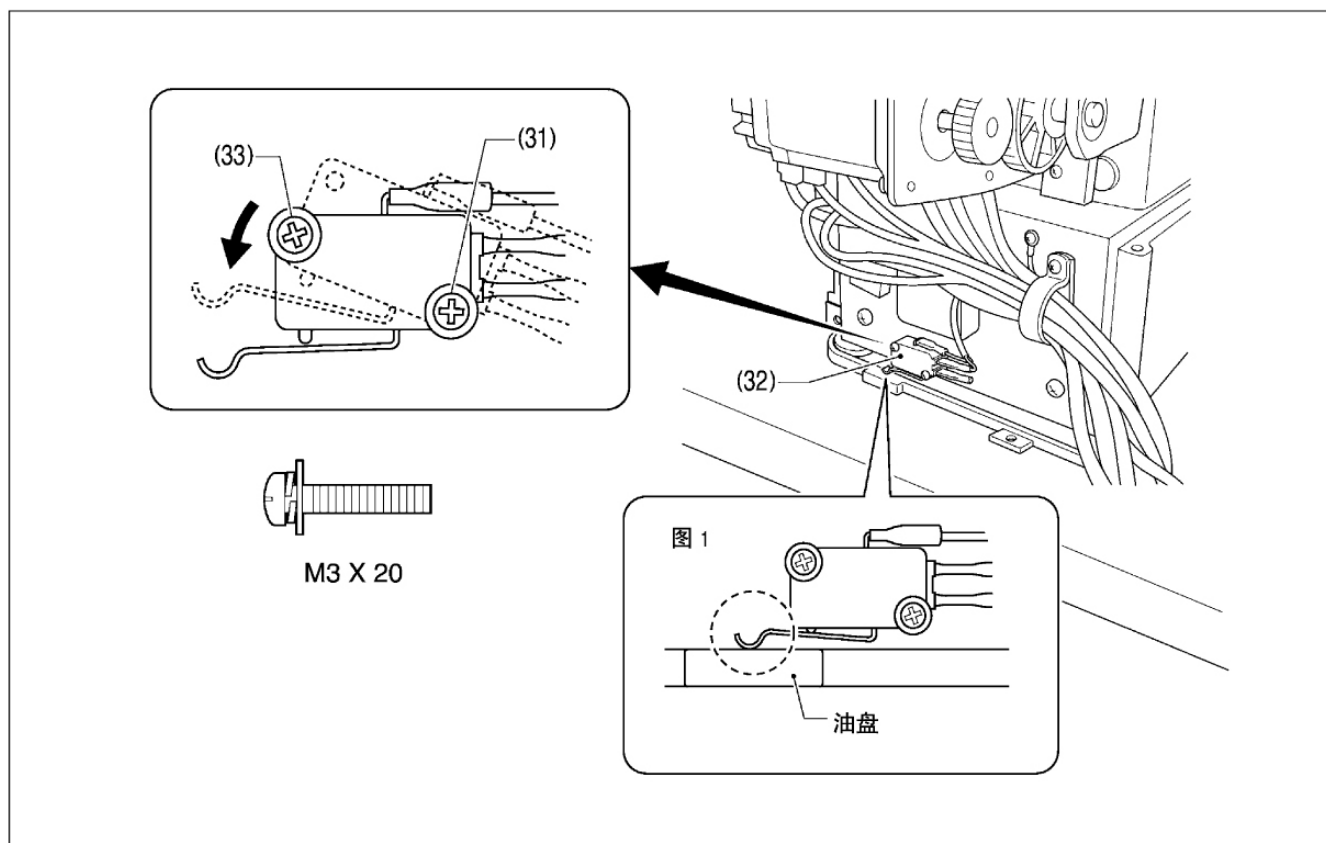
- (13) 缓冲器支架 [2 片]
- (14) 垫片
- (15) 螺栓
- (16) 螺母
- (17) 缓冲器
- (18) 轴套 [2 个]
- (19) 缓冲器轴 D
- (20) 垫圈 [2 片]
- (21) 制动轮 E [2 个]
- (22) 螺栓 [2 个]
- (23) 垫圈 (中) [2 片]
- (24) 垫圈 (大) [2 片]
- (25) 弹簧垫圈 [2 片]
- (26) 螺母 [2 个]
- (27) 缓冲器轴 U
- (28) 螺钉

注意:

如果是电磁规格时, 印有 * 的请使用螺栓 (22)、垫圈 (23)、垫圈 (24)、弹簧垫圈 (25)、螺母 (26), 将踏脚用复合件一起拴住。

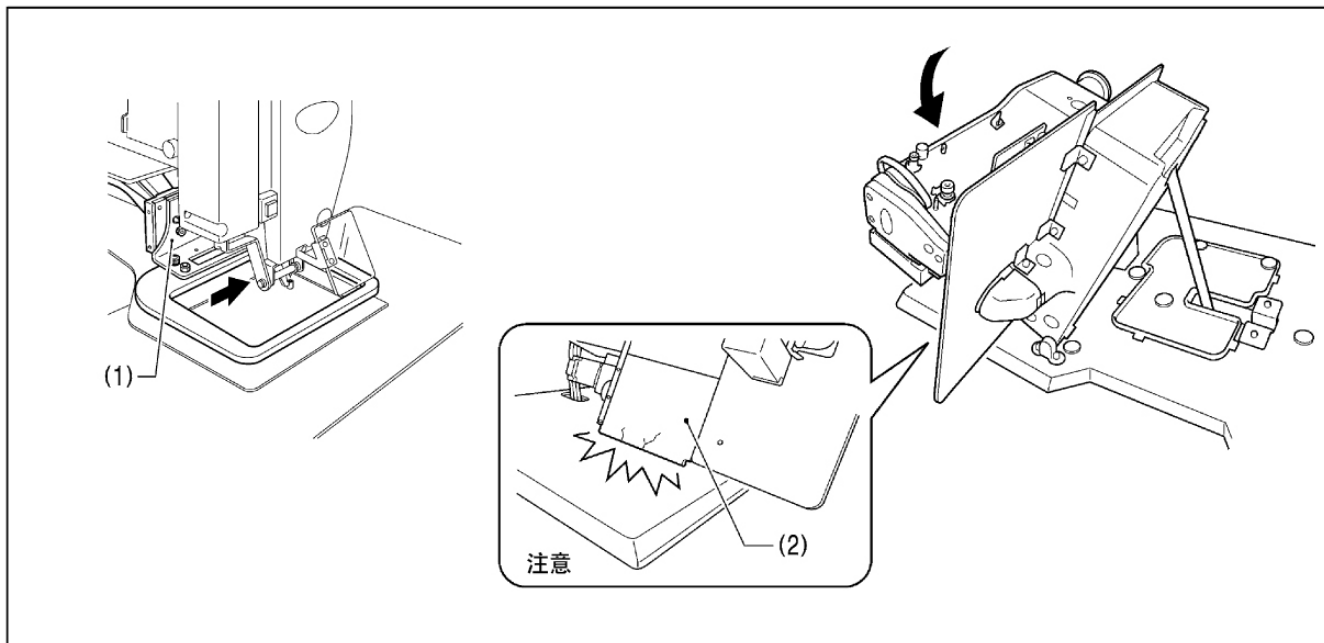


- (29) 缓冲器支架盖
- (30) 螺栓带垫圈 [6 个]



- 慢慢地将机头返回到原位。
- 松开螺钉 (31)，在如图所示的位置上安装头部开关 (32)，使用螺钉 (31) 和附属螺钉 M3X20 (33) 将头部开关 (32) 固定。
- 如图 1 所示，确认接通头部开关 (32)。

3-5. 缝纫机头部的倒下

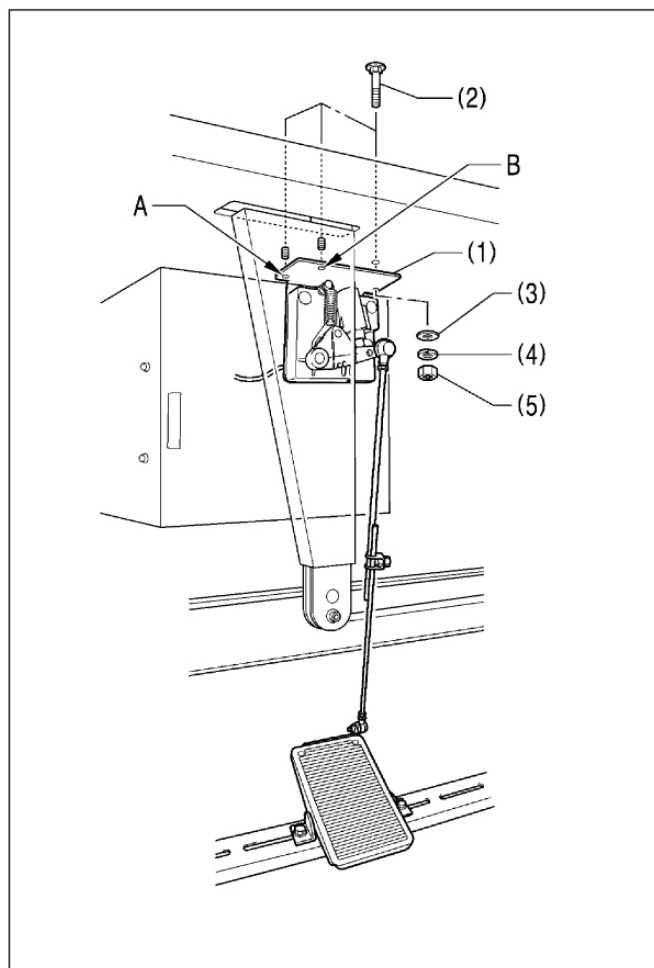


1. 从缝纫机正面将压臂(1)移动到最右侧（图中箭头方向）。
2. 使用双手慢慢地将缝纫机头部向工作台的左侧倒下。

注意：

倒下缝纫机头部时，请一定将压臂移动到最右侧之后再倒下缝纫机头。如果压臂留在左侧倒下缝纫机头部时，外盖 L (2) 有可能会破损。

3-6. 踏脚用复合件的安装方法（电磁规格）



- (1) 踏脚用复合件
- (2) 螺栓 [3 个]
- (3) 垫圈 [3 片]
- (4) 弹簧垫圈 [3 片]
- (5) 螺母 [3 个]

注意：

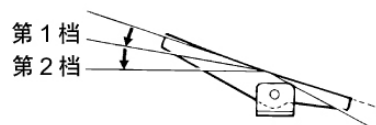
- 安装孔 A 的螺栓，请在装油盘前安装。（参考「3-3. 油盘的安装方法」）
- 安装孔 B 是为了安装缓冲器支架用的螺栓，垫圈，弹簧垫圈和螺母用的。（参考「3-4. 缝纫机头部的安装方法」）

※ 脚踏开关和连杆请使用市售商品。

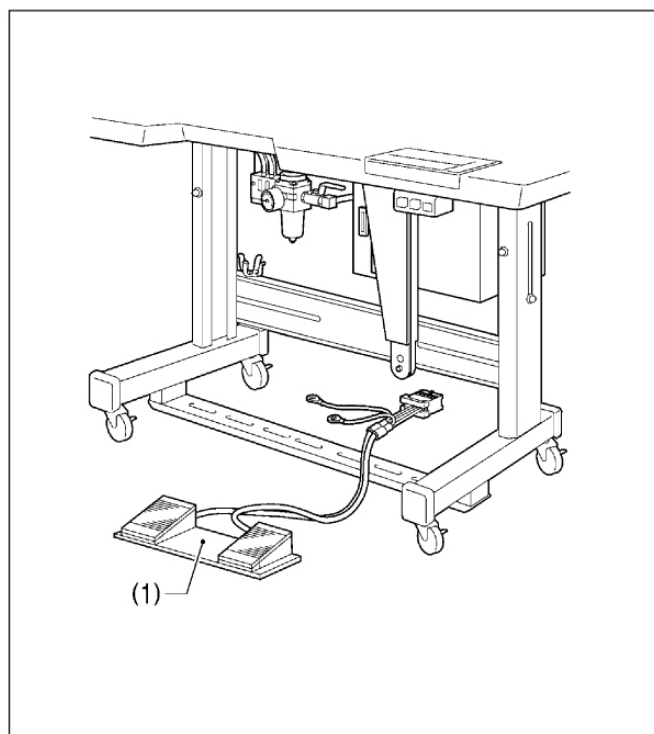
※ 当踏脚用复合件的位置要更改时，请使用附属的螺栓，垫圈，弹簧垫圈和螺母。

<脚踏开关的操作法>

踩下脚踏开关到第 1 挡为止时压脚会放下，在踩到第 2 挡为止时缝纫机将启动。



3-7. 2 连脚踏开关的安装方法（空压规格）

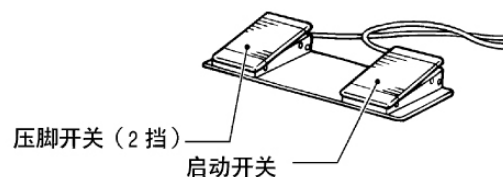


- (1) 脚踏开关

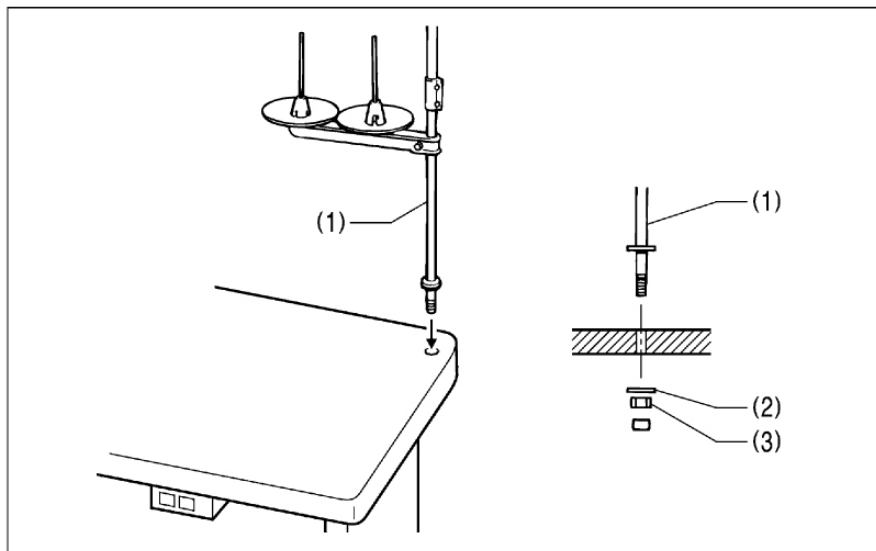
将脚踏开关(1)的插头插入主基板的插座 P6(FOOT)处。

<脚踏开关的操作法>

当踩下压脚开关（左侧）时压脚会放下，当踩下启动开关（右侧）时缝纫机将启动。



3-8. 线架的安装方法

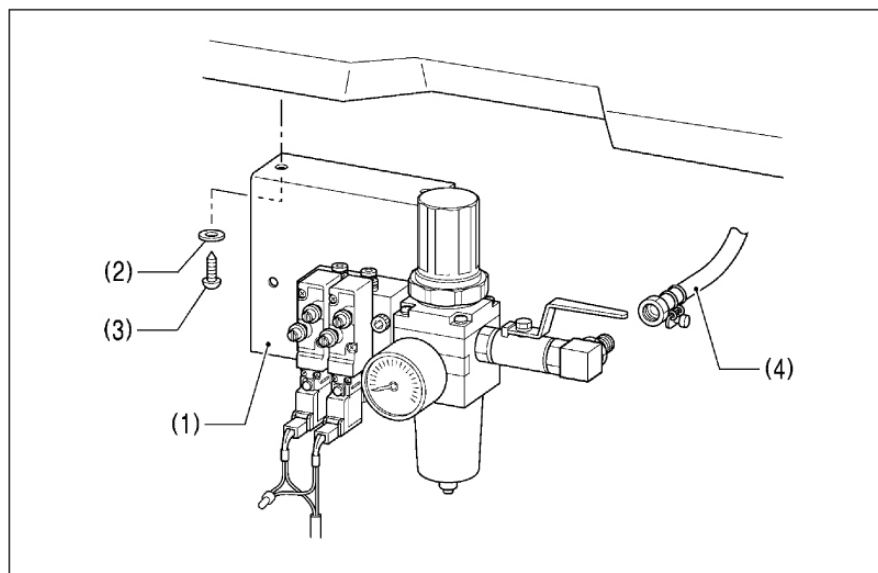


(1) 线架

注意:

按装上垫圈 (2)，请拧紧螺母 (3)
使线架完全不能移动。

3-9. 空压用复合件的安装方法（空压规格）



安装在工作台的下面。

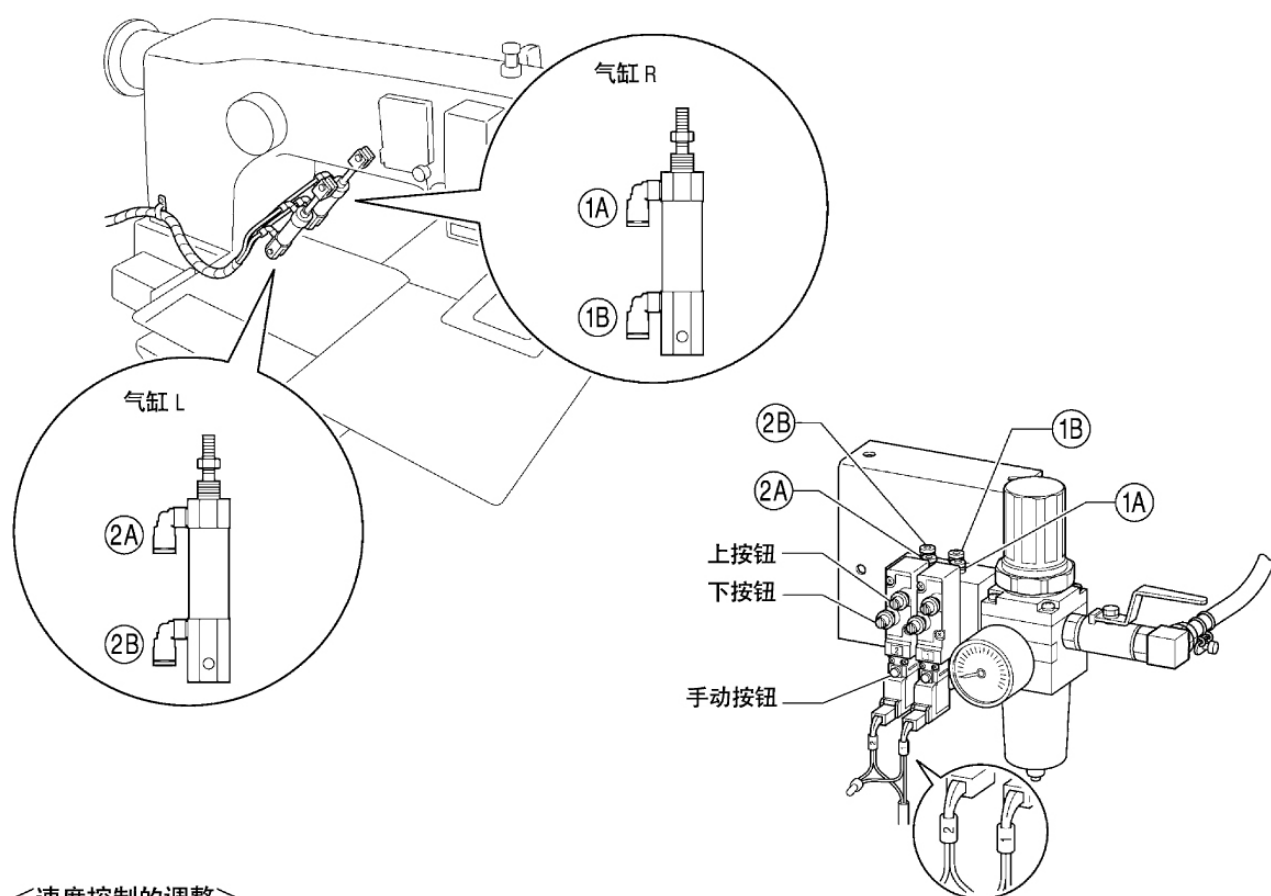
- (1) 电磁阀组
- (2) 垫圈 [2 片]
- (3) 螺钉 [2 个]
- (4) 皮管

安装好空压用复合件后, 请进行空气压力的调整。(参考「10-16. 空气压力的调整」)

注意:

安装空压用复合件时, 请不要碰到控制箱和工作台脚。

将各空气管的同样号码连接在一起。



<速度控制的调整>

使用阀门的按钮可以调整压脚的上升和下降的速度。

请使用调节按钮, 让左右的压脚以同样的速度进行作动。

- 旋紧上按钮, 压脚的上升速度会变缓慢。反之, 如旋松上按钮, 压脚的上升速度会变快。
- 旋紧下按钮, 压脚的下降速度会变缓慢。反之, 如旋松下按钮, 压脚的下降速度会变快。

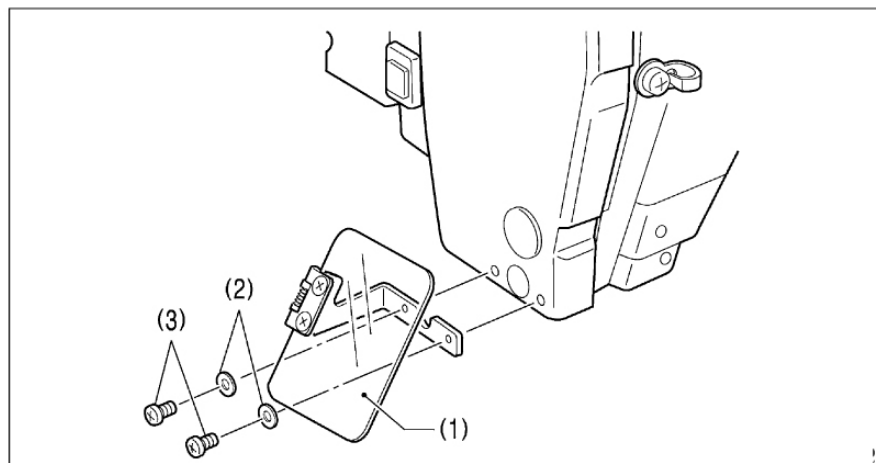
在切断电源的状态下, 如使用手动按钮能使压脚运动。

3-10. 护眼板的安装方法

**注意**

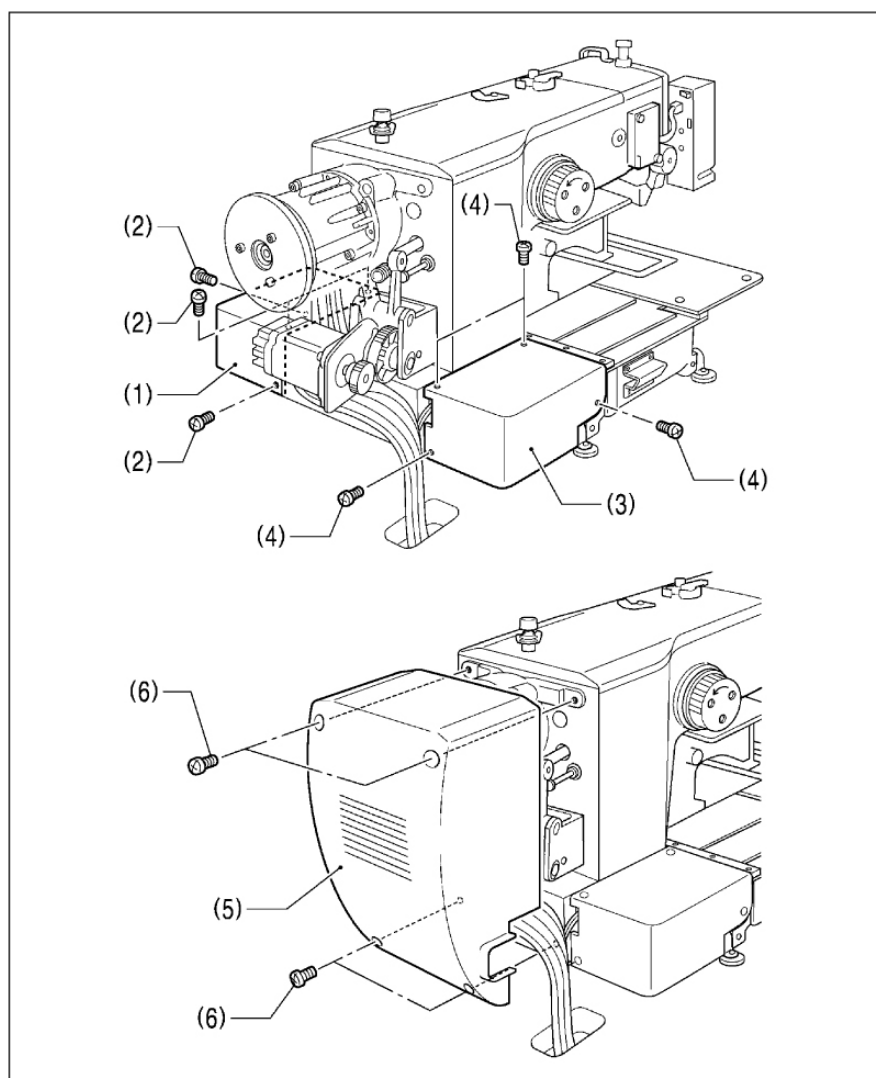
为了安全起见, 在使用本缝纫机之前, 请安装保护装置。

如果未安装这些安全装置就使用缝纫机, 会造成人身伤害及缝纫机损坏。



- (1) 护眼板组件
- (2) 垫圈 [2 片]
- (3) 螺钉 [2 个]

3-11. 马达盖的安装方法



- (1) 马达盖 R
- (2) 螺钉 [4 个]
- (3) 马达盖 L
- (4) 螺钉 [4 个]
- (5) 马达盖
- (6) 螺钉 [4 个]

注意:

在安装马达盖 (1) 时, 请注意不要夹住电线等。

3-1 2. 加油

! 注意



在加油未完成前，请勿插上电源。

如果误踩脚开关，缝纫机动作会导致受伤。



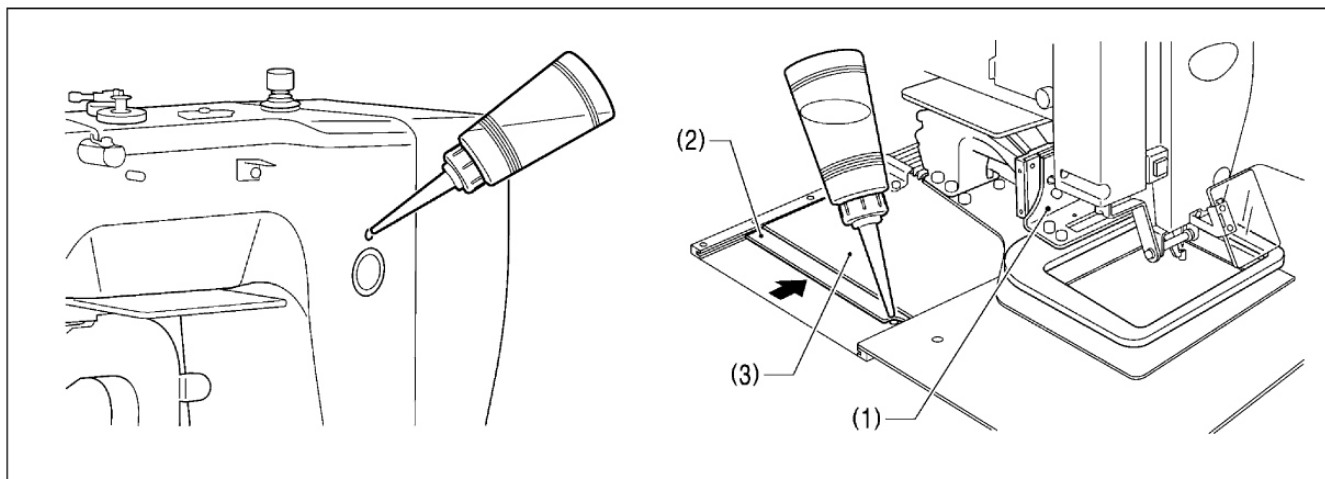
使用润滑油和黄油时，务必戴好保护眼镜和保护手套等，以防润滑油落入眼中或沾在皮肤上，这是引起发炎的原因。

另外，润滑油或黄油不能饮用，否则会引起呕吐和腹泻。

将油放在小孩拿不到的地方。

必须经常润滑缝纫机，第一次使用缝纫机或长时间未使用缝纫机时，要补充机油。

请使用本公司指定的缝纫机润滑油。

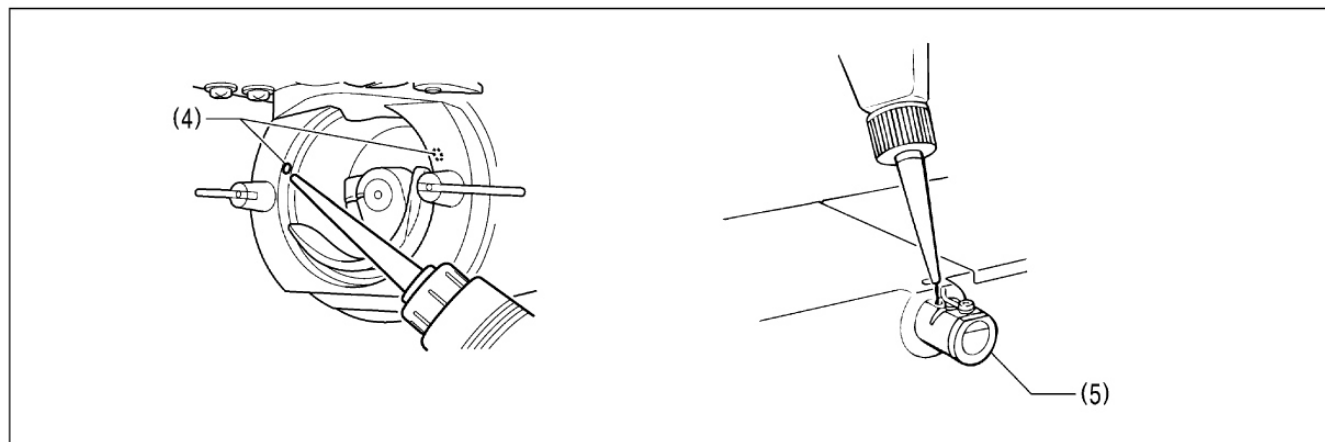


1. 向机壳侧面的油箱注油。

2. 从缝纫机正面将压臂(1) 移动到最右侧，将外盖 L (2) 滑动到内盖 L(3) 的中间，使底板的油孔能看见，从该油孔向底板侧面的油箱注油。

注意：

当油面下降到油面指示窗的 1 / 3 左右时，请务必加注机油。如果油面下降到油面指示窗的 1 / 3 以下，则可能会成为机器烧伤等故障的原因。



3. 给大旋梭本体组件的 2 个孔 (4) 注入机油，使毛毡上含有微量的机油。

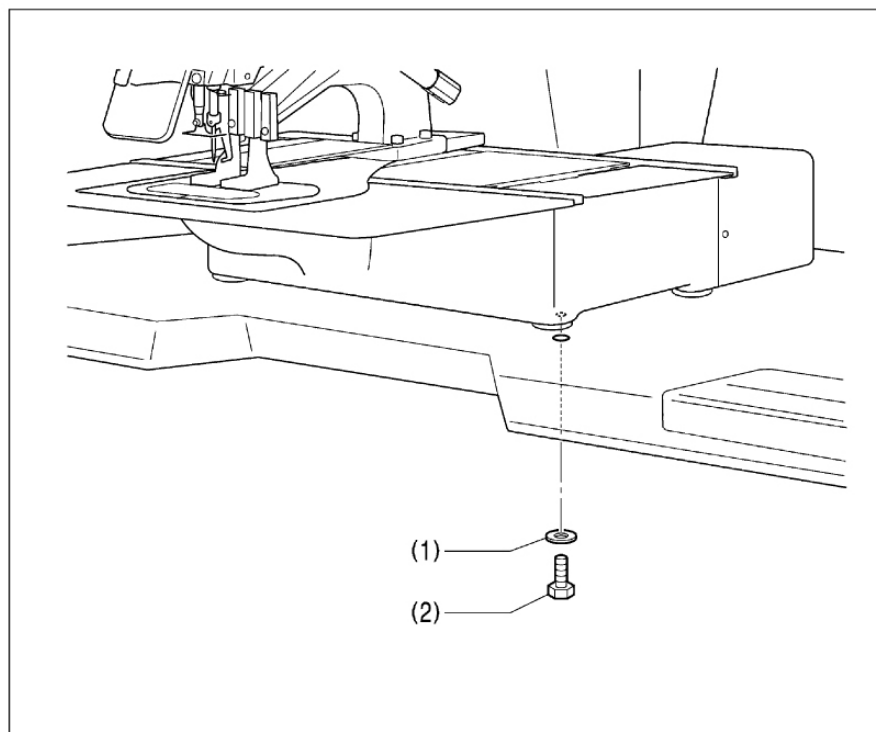
注意：

如果大旋梭本体组件的毛毡上没有机油，则可能会成为缝纫故障的原因。

4. 如果使用冷却液槽(5)时，请在槽中注入硅油 (100mm²/s)。

3-1 3. 机头部固定螺栓的安装法

在搬运缝纫机时，请使用机头部固定螺栓将头部和工作台固定。



(1) 垫圈

(2) 机头部固定螺栓

注意：

缝纫机运转时，请将机头部固定螺栓拆除。

4. 缝纫前的准备

4-1. 机针的安装方法

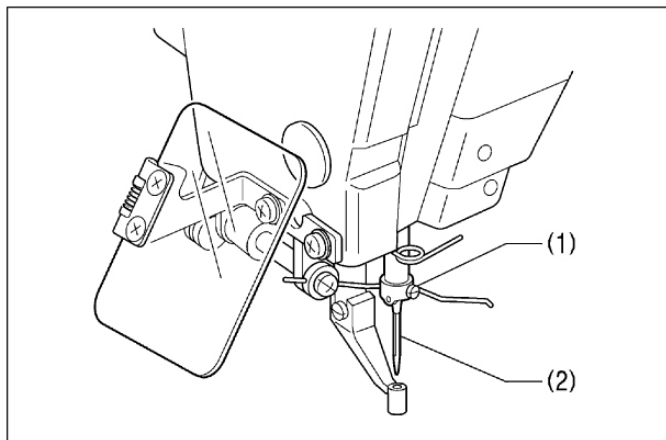


注意



安装机针时，请切断电源。

当误踩下脚开关时，缝纫机动作会导致人员受伤。

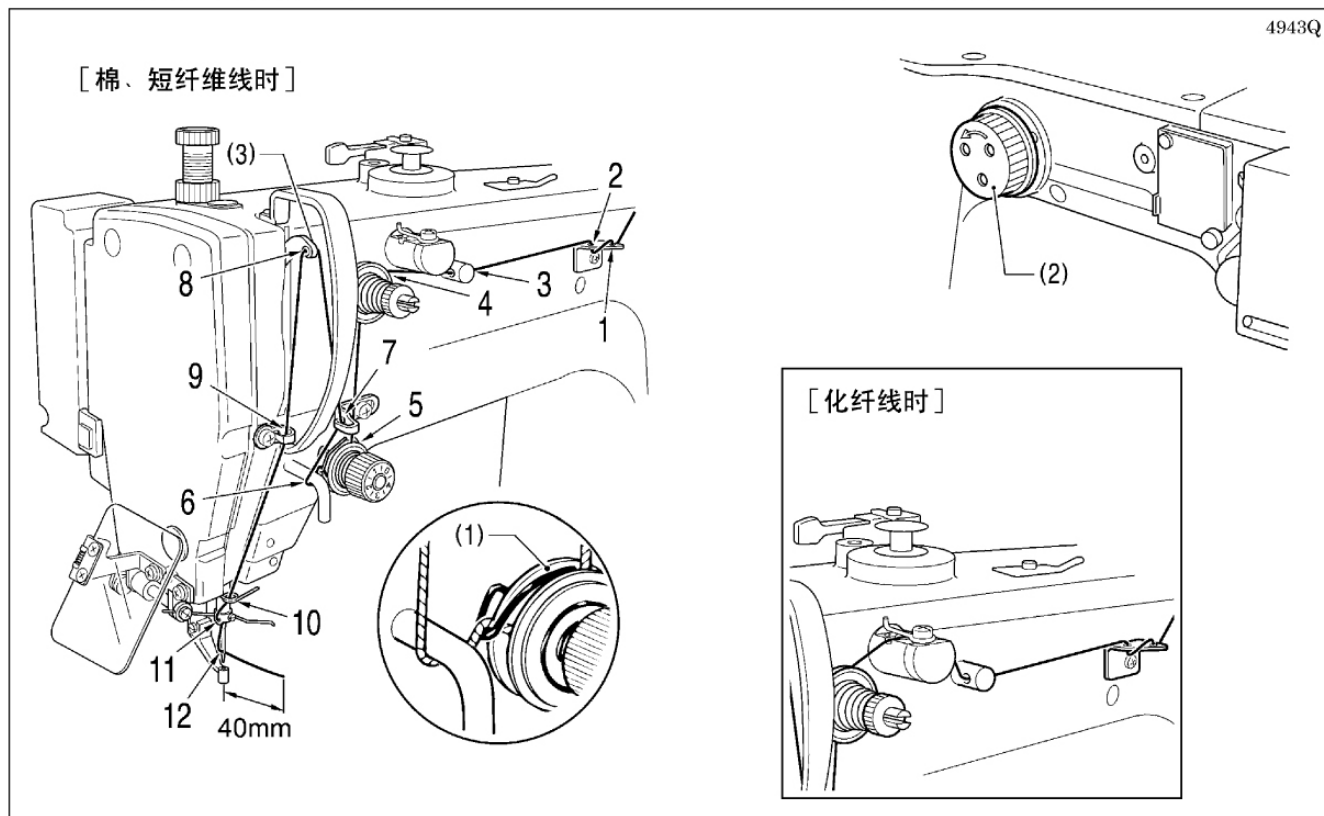


1. 松开螺钉 (1)。
2. 正面朝着机针 (2) 的长槽，笔直插到底并用力拧紧止动螺钉 (1)。

4-2. 面线的穿法

请按照下图所示正确地穿面线。

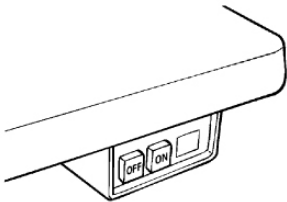
※ 如果在穿线模式下进行穿线，夹线盘 (1) 将变成打开状态，机线就更加便于穿过。(参考下一页)



- 请回转缝纫机手轮 (2)，将挑线杆 (3) 调到最高点后，进行穿线。
(容易穿线，且可防止开始缝纫时的脱线。)
- 在线穿过机针后，从机针孔残留的线的长度为 40mm 左右。
如残留的线过长有可能会打结。

＜穿线模式＞

在穿线模式下，即使踩下脚踏开关，缝纫机也不会起动，所以非常安全。

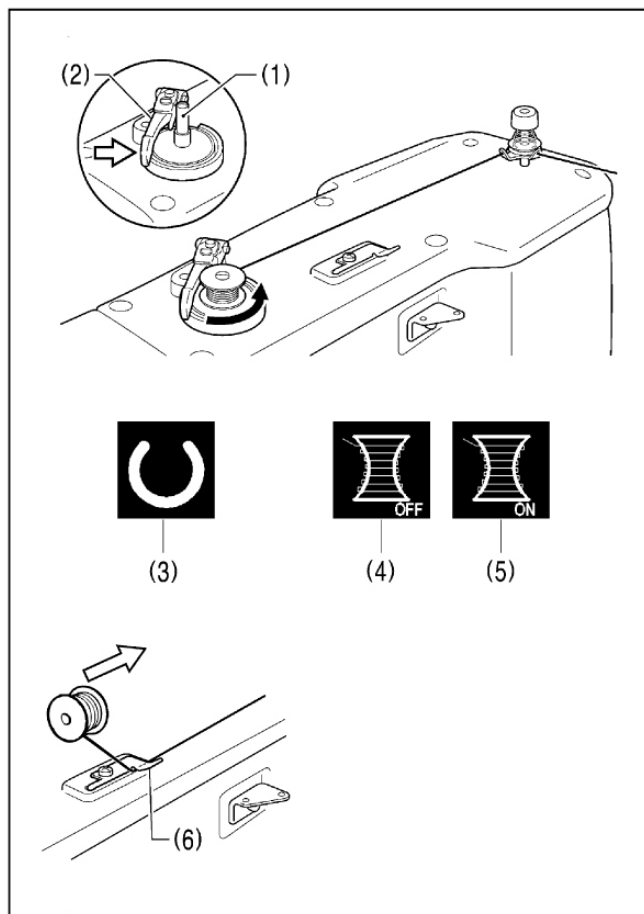
1	打开电源。 	
2	按回零键 	按穿线键，同时键符改变  • 降下压脚。
3	进行穿线。	
4	穿线模式结束	按穿线键，同时键符改变  • 压脚返回到进入穿线模式前的状态。

4-3. 底线的绕线方法

! 注意



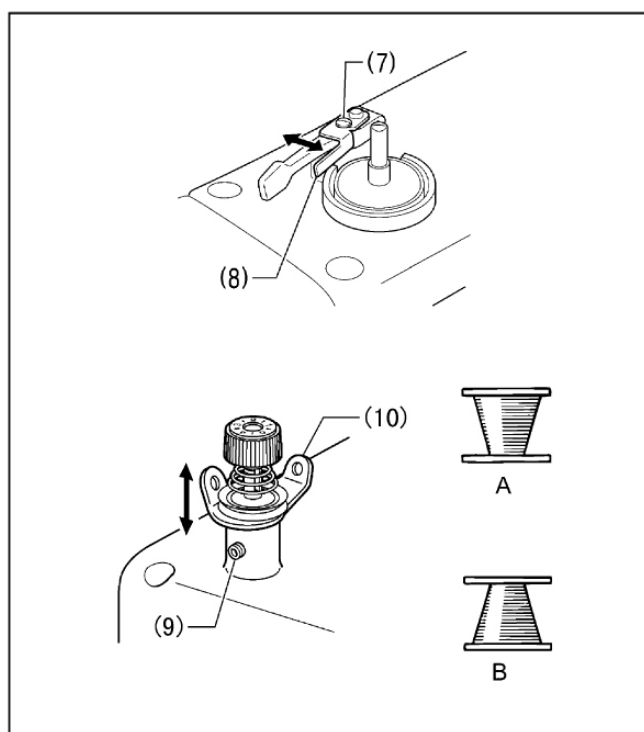
在卷线过程中，不要触摸任何运动部件或将物件靠在运动部件上，因为这会导致人员受伤或缝纫机损坏。



1. 将梭芯置于梭芯卷线轴 (1) 上。
2. 按照图示那样穿线，将线在梭芯内绕几圈，然后推梭芯压臂柄 (2)。
3. 打开电源。
4. 按回零键 (3) 进行原点检测。
5. 确认机针不会碰到压脚，按绕线键 (4)，使绕线键 (4) 切换成绕线键 (5)，并处于“ON”状态，将脚踏开关踩到第2档位置，开始绕线。
(2连脚踏开关时，踩下2连脚踏开关的启动开关)
6. 当绕线量达到规定的数量 (梭芯外径的80%~90% 时，应停止绕线，梭芯压臂柄 (2) 将自动返回 (如果在中途踩下脚踏开关的启动开关，或按下绕线键 (5)，使绕线键 (5) 切换成绕线键 (4)，并处于“OFF”状态，则停止绕线)。
7. 拆下梭芯，将线钩在切刀 (6) 上，朝箭头方向拉梭芯将线切断。

调节梭芯绕线量

拧松螺钉 (7)，调节梭芯压杆 (8)。



如果梭芯上的线不均匀

拧松止动螺钉 (9)，上下移动卷线用夹线器 (10) 进行调节。

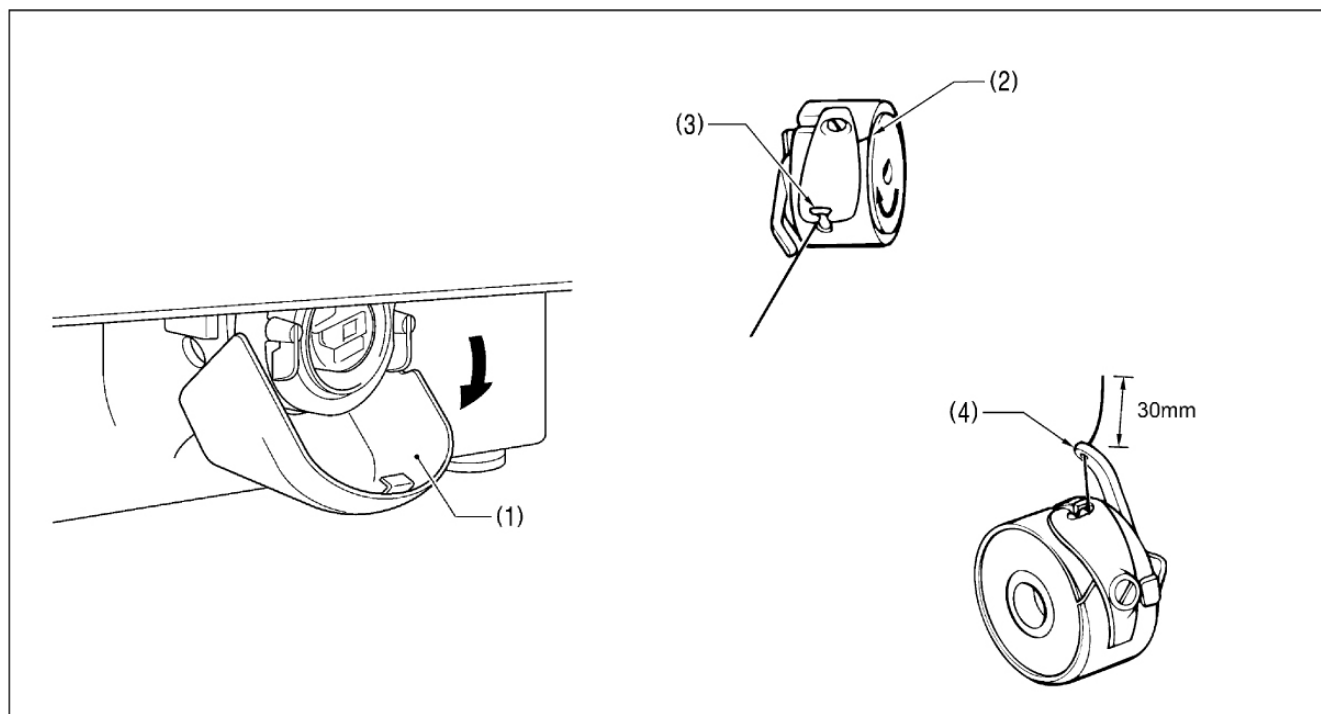
- ※在 A 的情况下，将卷线用夹线器 (10) 向下移动；
- 在 B 的情况下，将卷线用夹线器 (10) 向上移动。

4-4. 梭芯套的装取方法

! 注意

在安装梭芯套时，请切断电源。

当误踩下脚开关时，缝纫机动作会导致人员受伤。



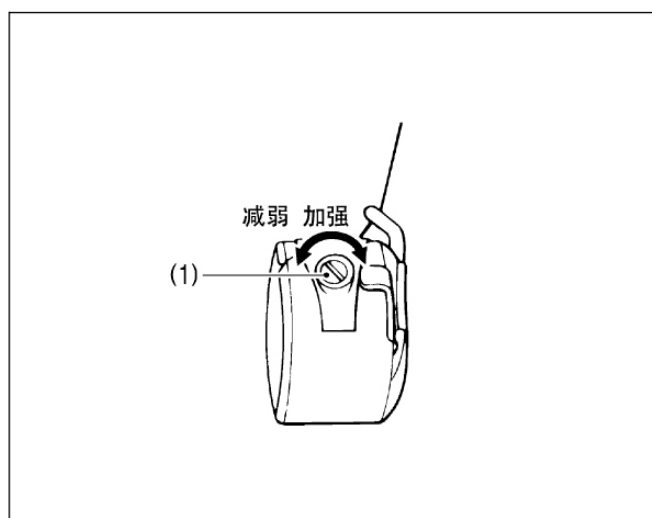
1. 向下拉大旋梭盖（1）将其打开。
2. 握住梭芯以便向右卷绕底线，将梭芯插入梭芯套。
3. 将底线穿过线槽（2），然后从导线器（3）中拉出。
4. 当拉出底线时，检查梭芯是否按顺时针方向转动。
5. 将线穿过套柄上的线孔（4），使线端伸出约 30mm。
6. 将插销装在梭芯套上，再将梭芯套插入旋梭。

4-5. 缝纫张力

[参考线张力]

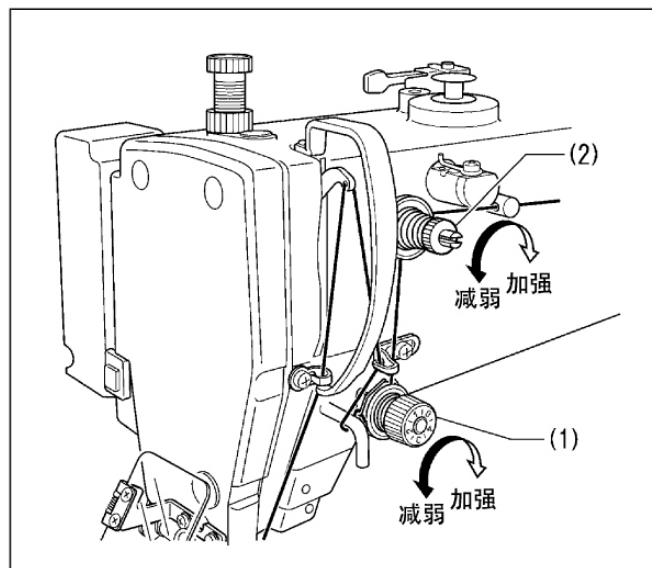
规格	厚布料 (-01)	中厚布料 (-02)
面线	相当 20 号	相当 50 号
底线	相当 20 号	相当 50 号
面线的张力 (N)	1.4~1.8	0.8~1.2
底线的张力 (N)	0.2~0.3	
预张力 (N)	0.1~0.6	0.1~0.3
机针	DP×17#19	DP×5#16
常用回转数	2,000 rpm	2,000 rpm

4-5-1. 底线的张力



转动调节螺钉(1)来调节底线的张力,将张力调节到当用手握住线端时梭芯套靠它的自重不会滑落的程度,应尽可能减弱张力。

4-5-2. 面线的张力



1. 转动夹线螺母(1),根据缝制品进行夹线的调节(主夹线)。
2. 用夹线螺母(2)(副夹线器)进行调节,使面线残留量在40mm左右的范围内。

5. 缝纫

! 注意



发生下列情况时, 请切断电源。

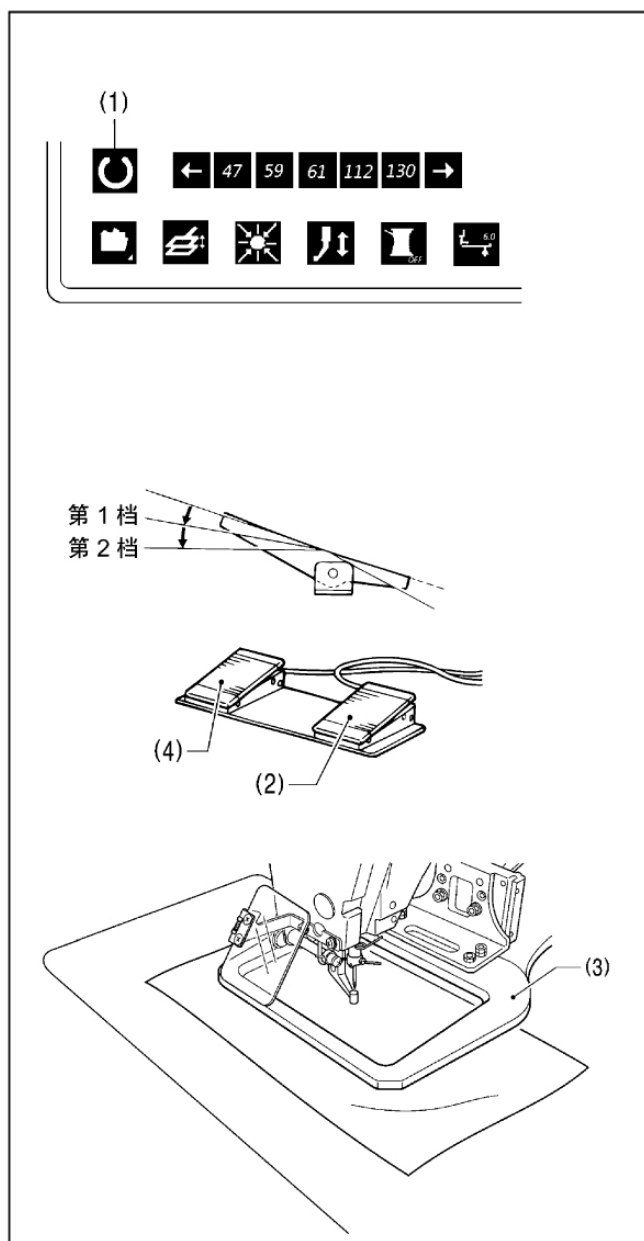
当误踩脚踏开关时, 缝纫机动作会导致受伤。

- 机针穿线时
- 更换机针或梭芯时
- 缝纫机不使用, 或人离开缝纫机时。



缝纫过程中不要触摸任何活动部件或将物件靠在运动部件上, 因为这会导致受伤或缝纫机损坏。

5 - 1. 缝纫的方法



1. 打开电源。
2. 按 或 键翻页, 按数字键选择要缝纫的程序号。

3. 按回零键 (1) 进行原点检测。

4. 将布料放在压脚 (3) 的下面
5. 将脚踏开关踩到第 1 档。
(2 连脚踏开关时, 先踩放下压脚 (4) 。)
· 压脚 (3) 下降。
6. 将脚踏开关踩到第 2 档位置。
(2 连脚踏开关时, 踩下启动开关 (2) 。)
· 缝纫机起动。

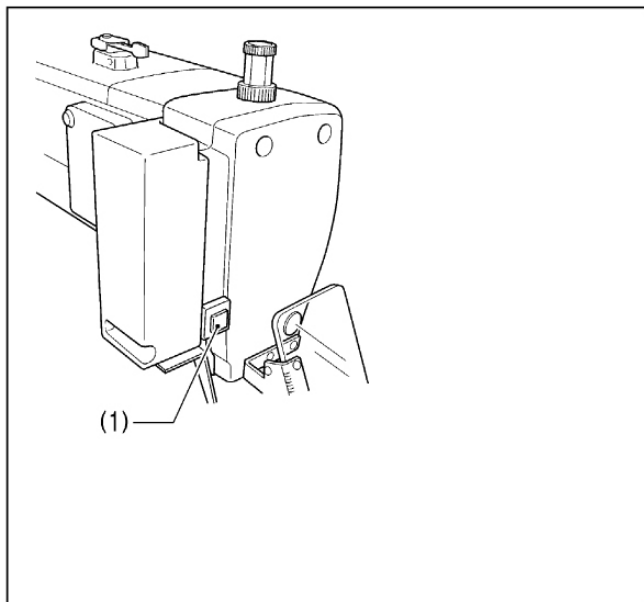
7. 缝纫一结束就剪线, 然后压脚 (3) 上升。

请使用能确保缝制布料不偏移的压脚。

如使用标准的压脚和送料板而缝制布料偏移时, 请使用压脚和送料板不能滑动的措施。

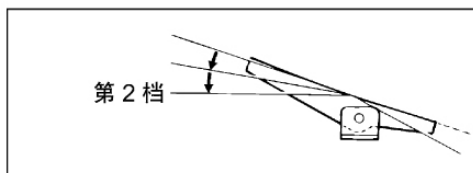
5-2. 暂停开关的使用方法

在缝制中或是试送布中，如果按了暂停开关(1)，缝纫机立即会停止。



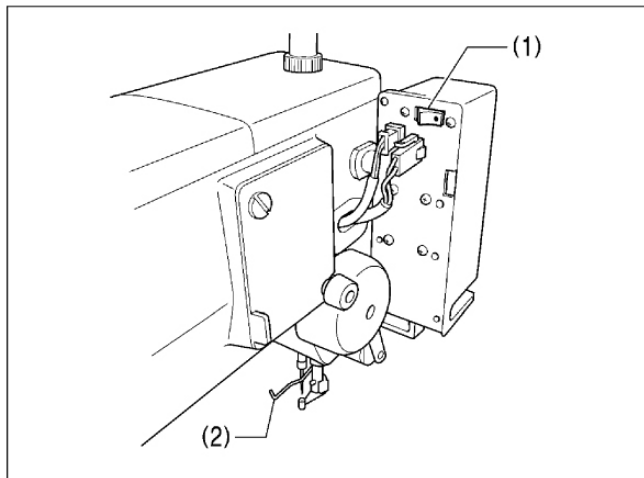
＜接着缝制的方法＞

在缝纫中，当出现断线或是底线用完等情况时，按下了暂停开关(1)后，还是可以在出现断线的位置处继续接着缝制工作的。



将脚踩开关踩到第2档位置。
(2 连脚踏开关时，踩下启动开关。)
· 缝纫机起动，缝纫开始。

5-3. 扫线用开关的使用方法



使用扫线用开关(1)、可以扫线杆(2)的开和关(ON, OFF)。

6. 保养

! 注意



在开始清洁作业前，请切断电源。

如果误踩了脚开关，缝纫机动作会导致人员受伤。

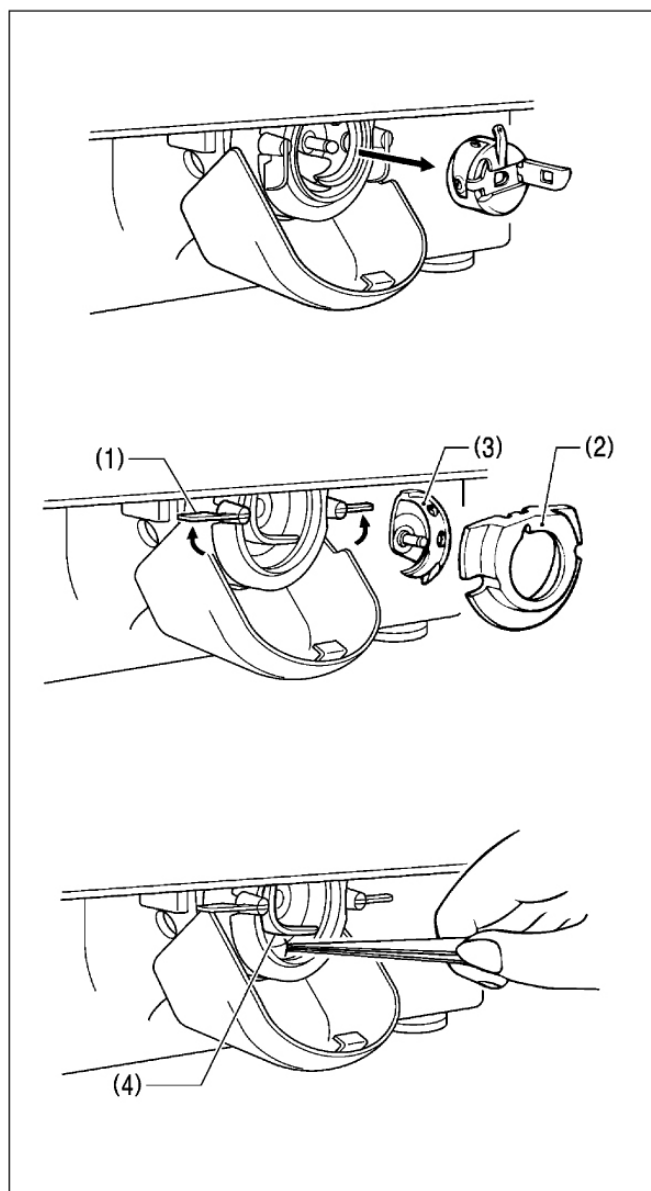


使用润滑油和黄油时，务必戴好保护眼镜和保护手套等，以防润滑油落入眼中或沾在皮肤上，这是引起发炎的原因。

另外，润滑油或黄油不能饮用，否则会引起呕吐和腹泻。

将油放在小孩拿不到的地方。

6-1. 旋梭的清洁

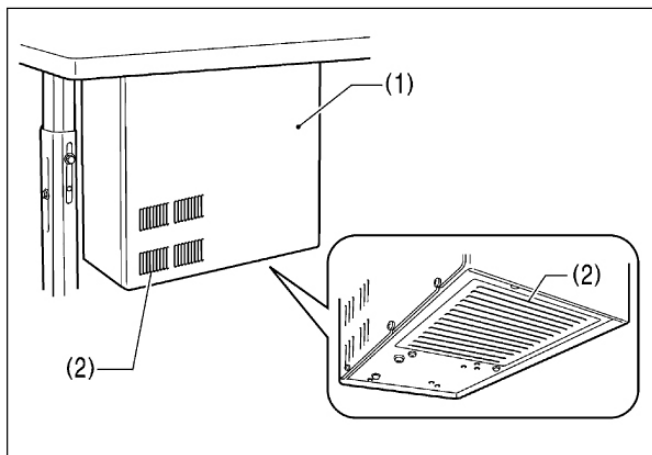


1. 将大旋梭盖向下拉开，取出梭芯盒。

2. 将大旋梭固定柄（1）朝箭头方向打开，取出大旋梭（2）和中旋梭（3）。

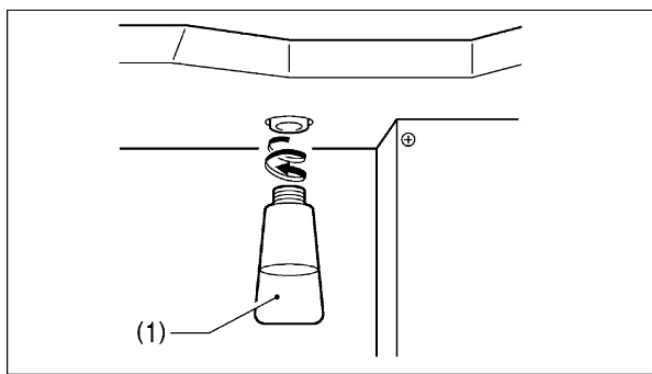
3. 将梭托（4）四周、旋梭线导向上部及旋梭边缘的棉尘和线屑等擦干净。

6 - 2. 控制箱进气口的清洁



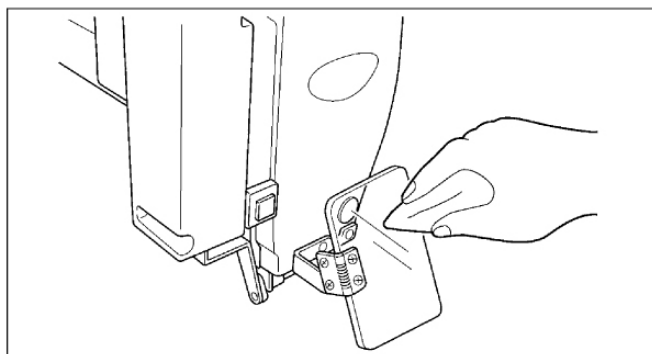
请每月一次左右用吸尘器清洁控制箱(1)的进气口(2)处的滤网。

6 - 3. 更换润滑油



1. 如果注油器瓶(1)内积满了油, 则请拆下瓶将油倒掉。
2. 油倒掉后, 再将注油器瓶(1)拧入到原来位置。

6 - 4. 护眼板的清洁

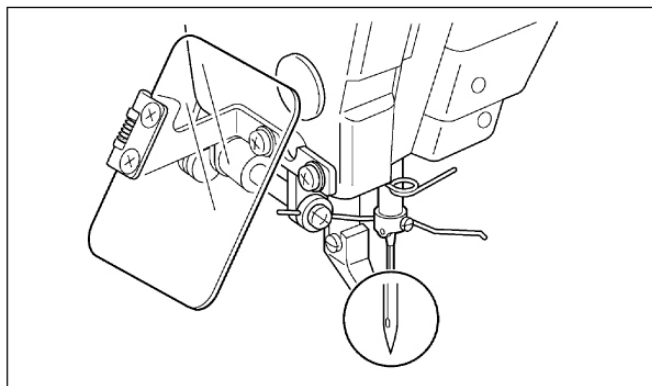


护眼板污秽时, 请用软布将其擦拭干净。

注意:

请勿使用有机溶液如汽油或稀释剂清洁护眼板。

6 - 5. 机针的检查



缝纫开始前先确认针头有否断裂, 机针有否弯曲。

6 - 6. 加油

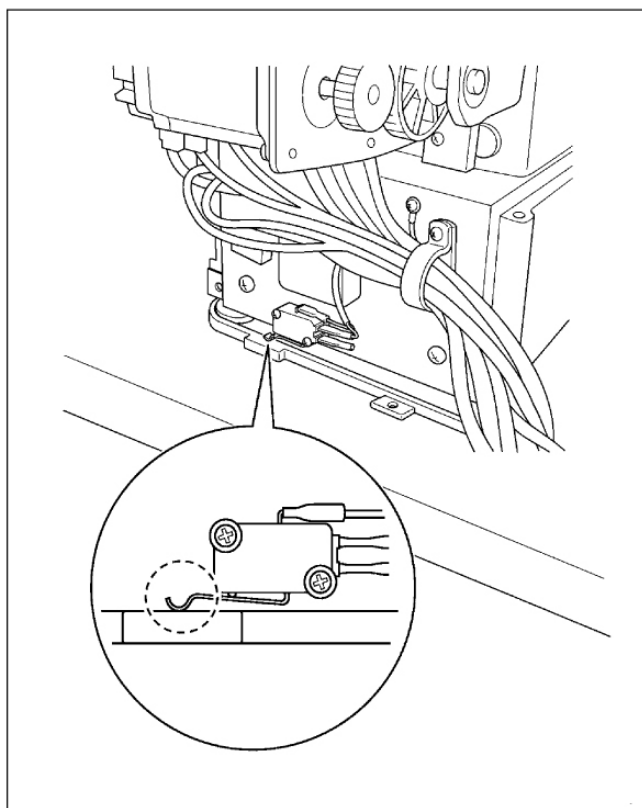
参照“3-11. 加油”所述, 添加机油。

7. 标准调整

⚠ 注意

- ⊘ 只有经过训练的技术人员才能进行缝纫机的维修、保养和检查。
- ⚠ 与电气有关的维修、保养和检查请委托购买商店或电气专业人员进行。
- ⚠ 发生下列情况时，请关闭电源。并拔下电源线插座。否则误踩下脚开关时，缝纫机动作会导致受伤。
 - 检查、调整和维修
 - 更换旋梭等消耗零部件
- ⚠ 缝纫机头倒下或竖起时，请用双手进行操作。另外在缝纫机头倒下的状态下，请不要用力压缝纫机。如缝纫机失去平衡，滑落到地上是造成受伤或缝纫机损坏的原因。
- ⚠ 在必须接上电源开关进行调整时，务必十分小心遵守所有的安全注意事项。
- ⚠ 取下的安全保护装置，再次安装时，请务必安装原位上，并检查能否正确地操作。

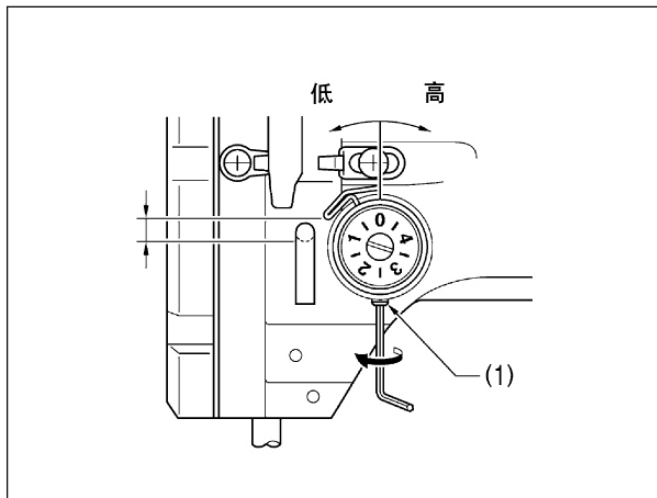
7-1. 头部开关的确认



如图所示，确认接通头部开关。

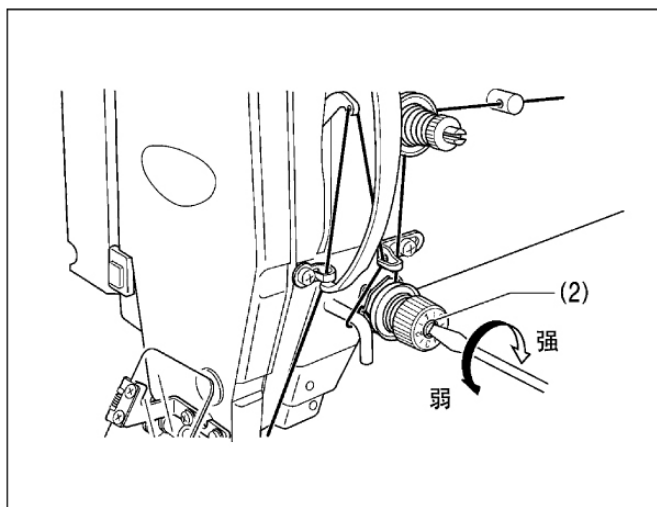
7-2. 挑线簧

规格	厚布料 (-01)	中厚布料 (-02)
挑线簧高度 (mm)	7~10	
挑线簧强度 (N)	0.6~1.2	0.2~0.5



<挑线簧的高度>

拧松固定螺钉(1)，转动调节器全体进行调节。



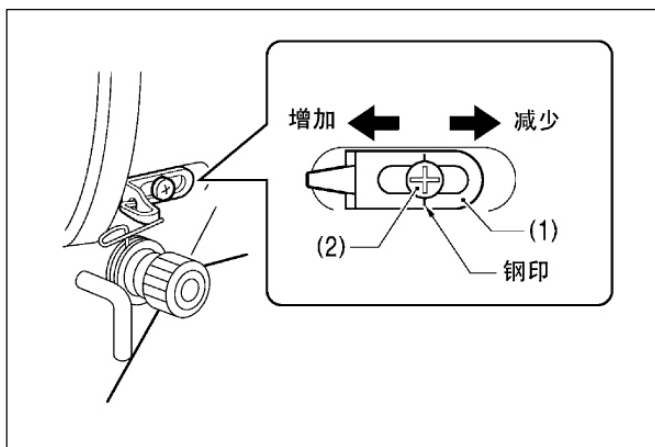
<挑线簧的强度>

用螺丝刀转动夹线杆(2)进行调节。

注意：

如果对挑线簧不能正确地进行调整，那么每次切线后面线的残留量有可能会长短不一。

7-3. 机壳线导向R



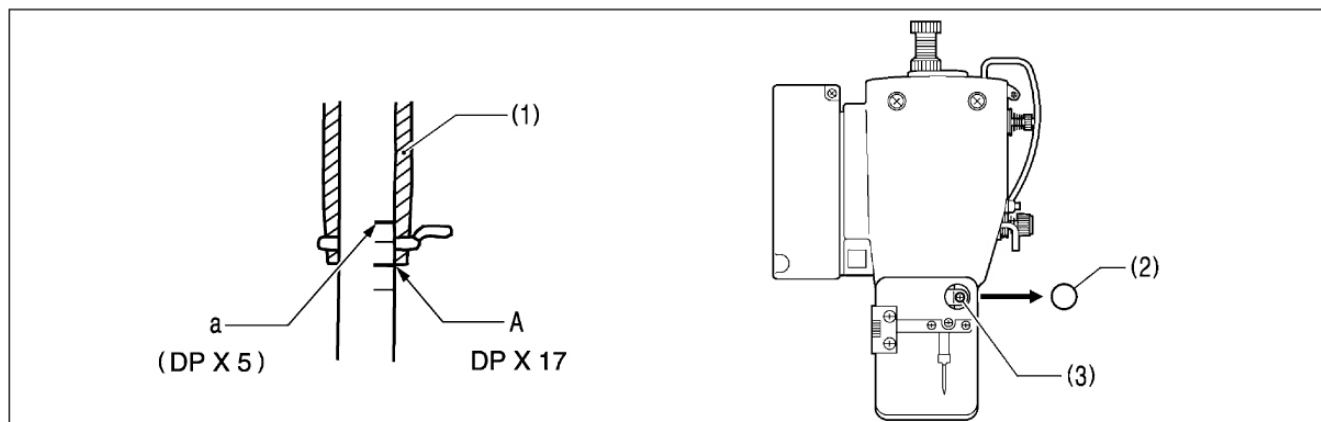
机壳线导向R(1)的位置，当螺钉(2)被固定在钢印的为止为标准位置。

旋松螺钉(2)，移动机壳线导向R(1)进行位置的调节。

※ 当缝纫厚料时，向左移动机壳线导向R(1)。(挑线量增加。)

※ 当缝纫薄料时，向右移动机壳线导向R(1)。(挑线量减少。)

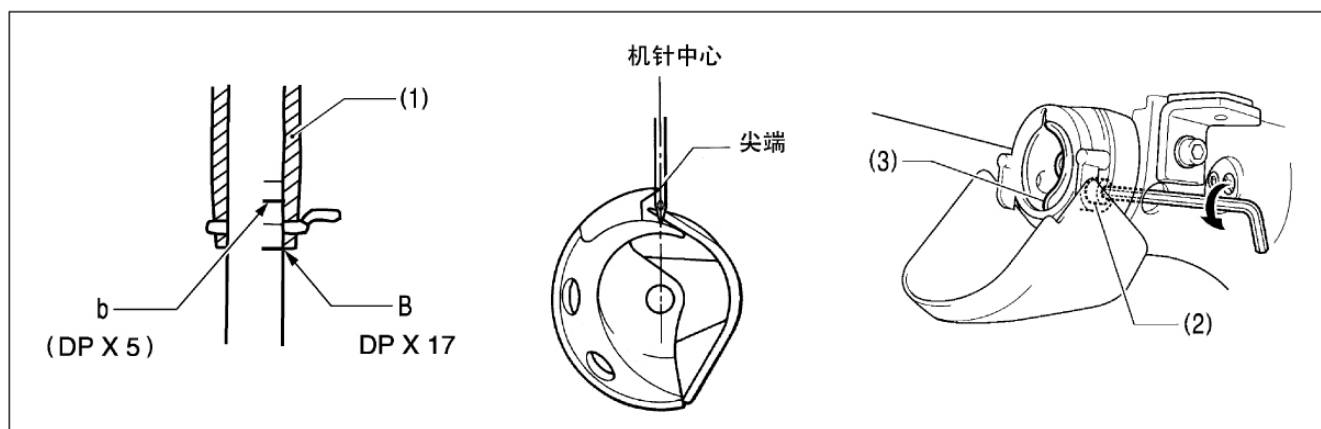
7-4. 针杆高度的调整



转动手轮使针杆降至最低点时,将针棒下方的第二根基线 A 与针棒金属(1)下端对齐,卸下橡皮栓(2)并松开螺钉(3),上下移动针杆以进行调整。

※ 使用 DP×5 的机针时,应与最上方的基线 a 对齐。

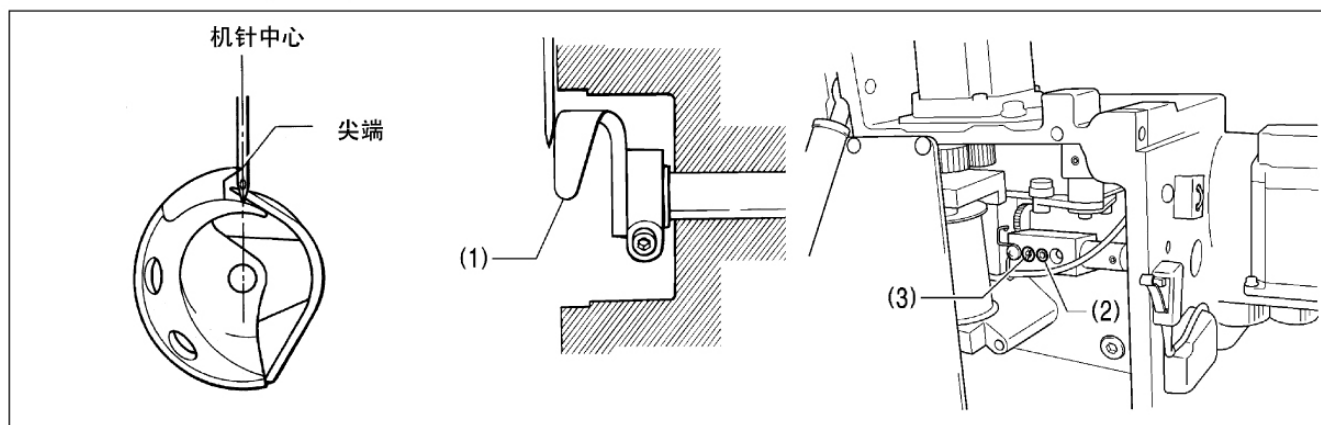
7-5. 针杆上升量的调整



转动手轮使针杆从最低点开始上升,当针棒最下方的基线 B 与针棒金属(1)下端对齐时,将旋梭尖端与机针中心对齐,并拧松插孔螺栓(2),移动梭托(3)进行调整。

※ 使用 DP × 5 的机针时,应与从上方开始的第二根基线 b 对齐。

7-6. 梭托导针部的调整

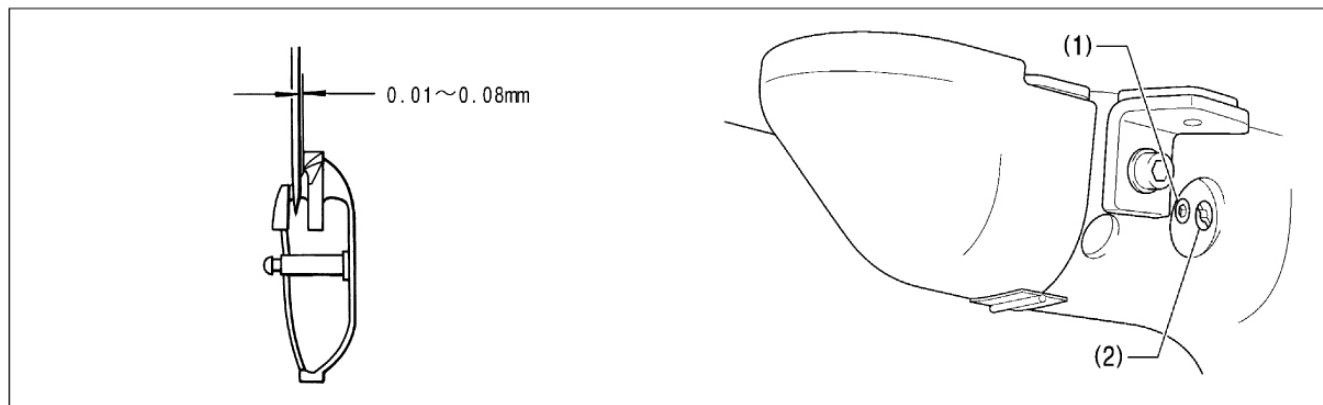


转动手轮使旋梭尖端与机针中心对齐时,梭托导针部(1)好象要与机针接触似的,松开固定螺钉(2),转动偏心轴(3)进行调整。

注意:

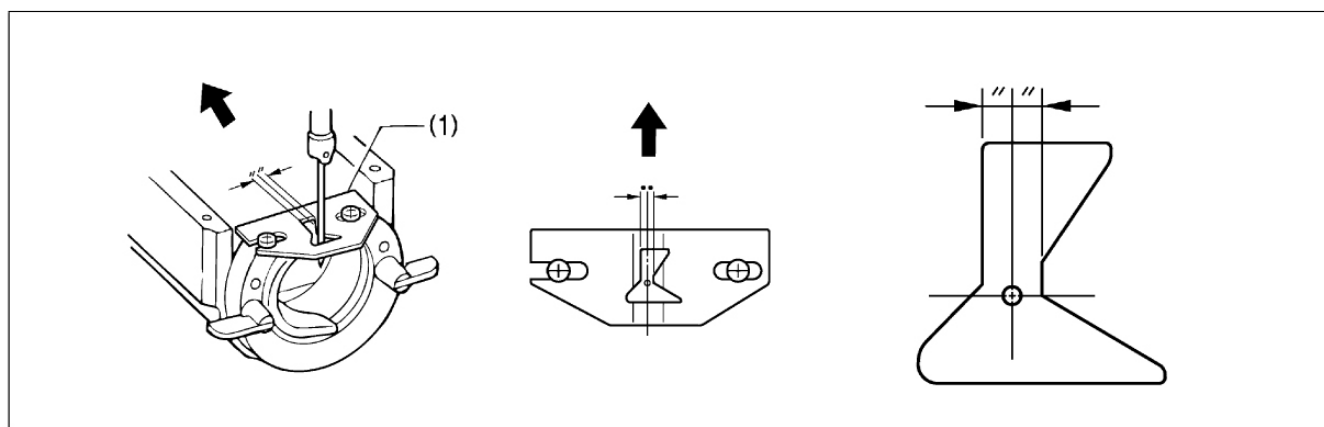
如果护针器的过度导入会使机针的负担加重,还会引起夹线不良。此外,如果护针器不导入,则中旋梭的梭尖端会和机针相接触,会产生跳针的原因。

7 - 7 . 针隙的调整



转动手轮使旋梭尖端与机针中心对齐时，使机针和旋梭尖端之间的间距为 $0.01 \sim 0.08\text{mm}$ ，并松开固定螺钉(1)，转动偏心轴(2)进行调整。

7 - 8 . 旋梭导线器的调整



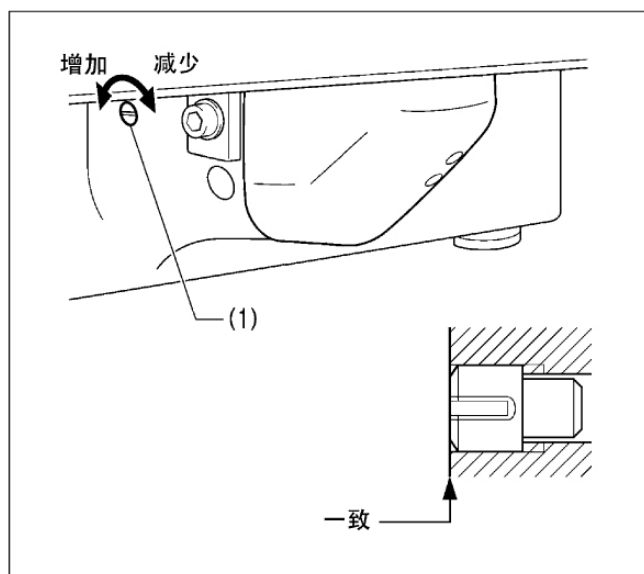
左右位置是将旋梭导线器(1)的针槽作为机针中心的分配位置，前后位置是将旋梭导线器(1)按箭头方向压上并安装。

注意：

如果旋梭导线器的位置不佳，则会导致切线、缝线受污或者缠绕。

旋梭导线器的位置在出厂时已作调整。请尽量不作改动。

7 - 9 . 旋梭供油量

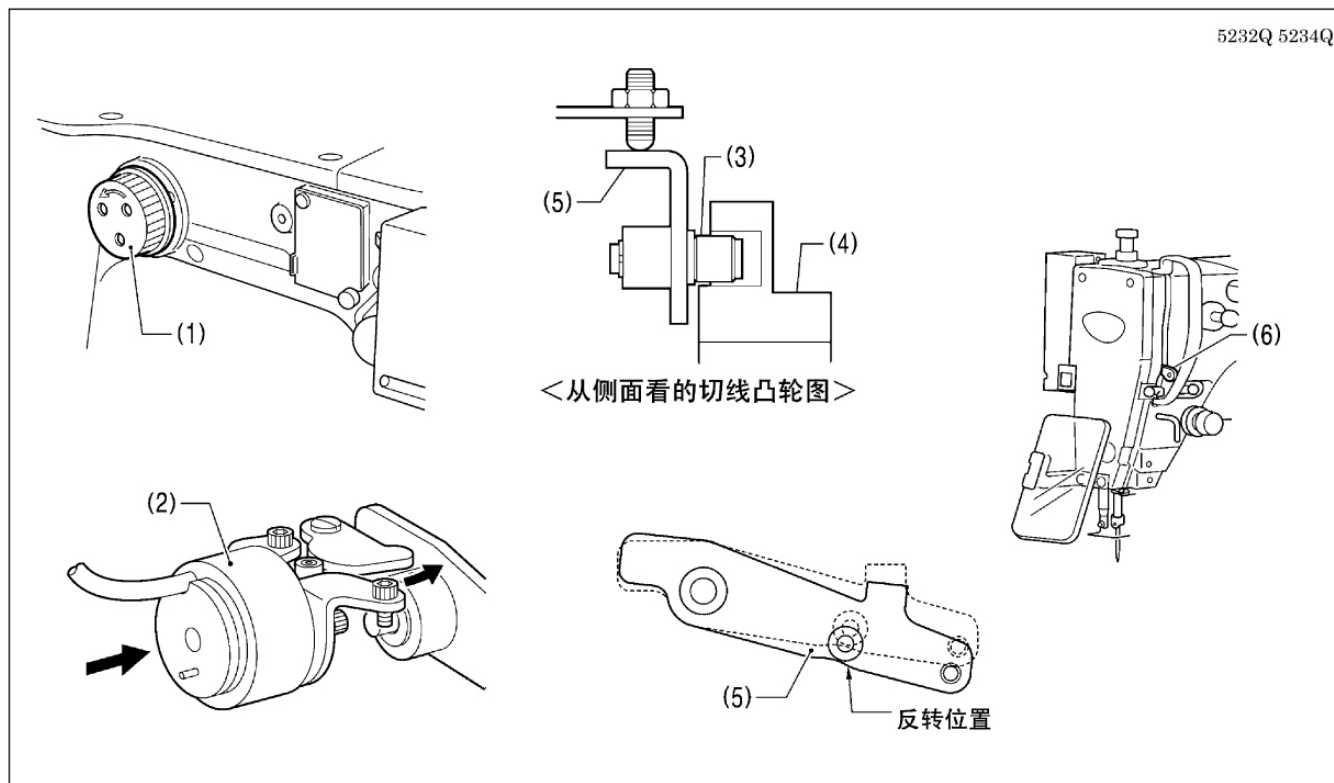


螺钉(1)的头部和底板的端面呈一致状态时为适量的位置。供油量的调节，可从该位置起向右旋转 3 周的范围内进行调节。

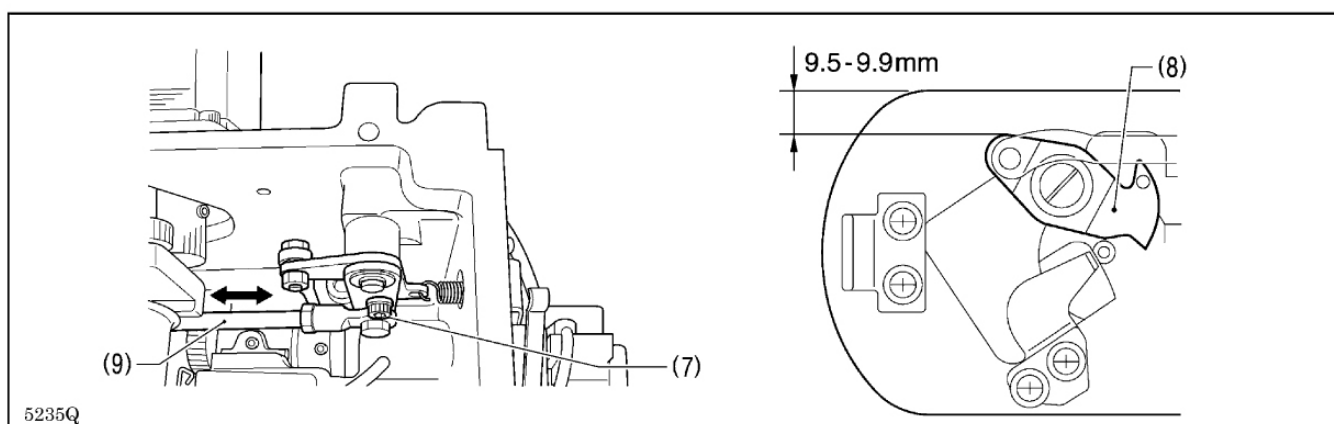
- 螺钉(1)向右旋转时供油量减少。
- 螺钉(1)向左旋转时供油量增加。

7-10. 动刀的位置调整

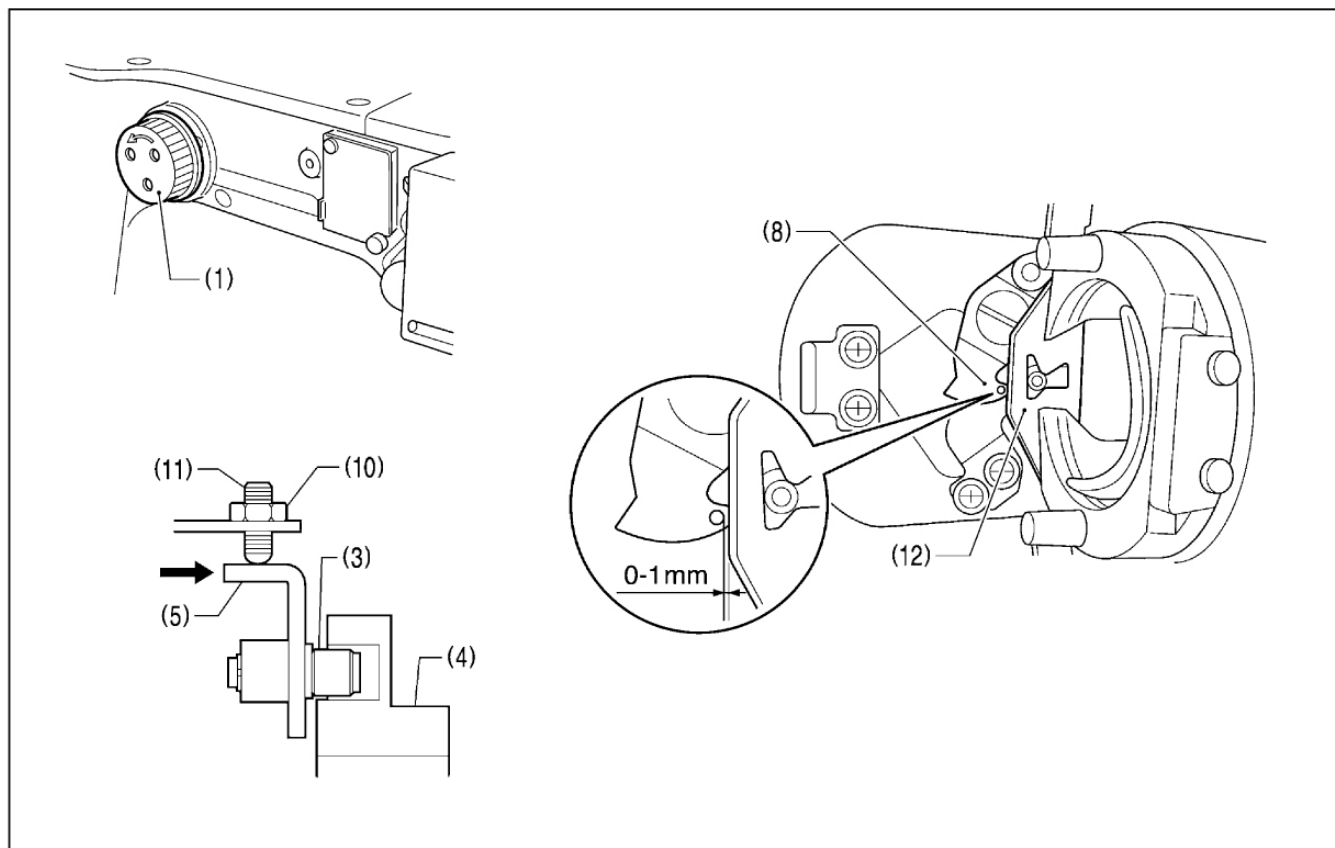
5232Q 5234Q



1. 取下顶盖，将机头放倒。
2. 用手转动手轮(1)使针杆在最低位置后，将切线电磁铁(2)完全推到底。
3. 在切线滚轮(3)嵌入切线凸轮(4)的槽中的状态下，用手回转手轮(1)，使切线驱动杆(5)在反转位置（挑线杆(6)处于最低位置附近）。

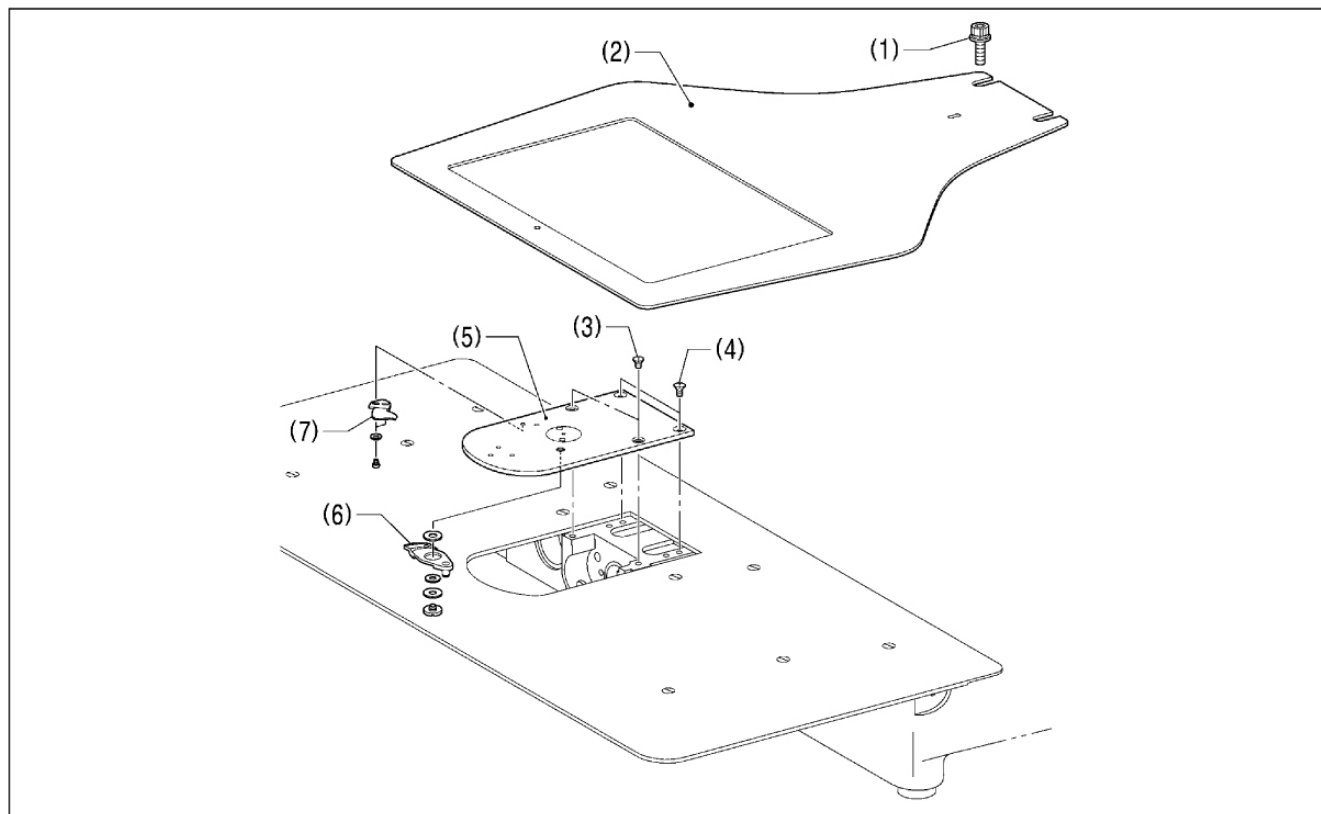


4. 松开插孔螺栓(7)。
5. 将针板右侧的棱线到动刀(8)的棱线距离保持在 9.5~9.9 mm，前后移动切线杆H(9)来进行调整。
6. 拧紧插孔螺栓(7)后，再次确认上述的位置。

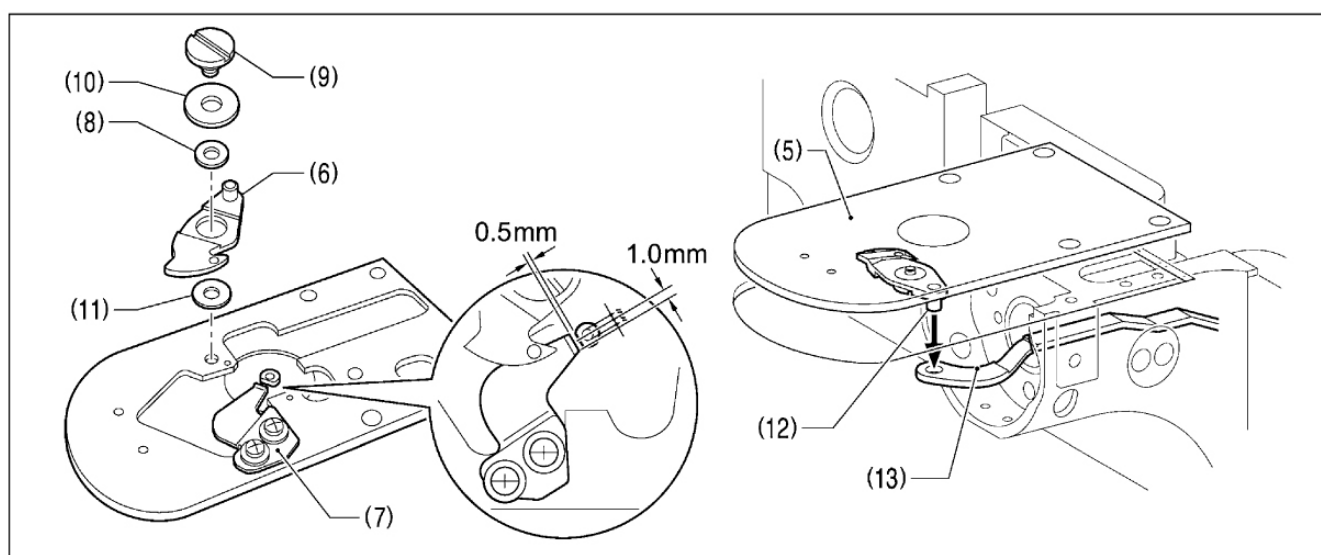


7. 用手转动手轮(1)使针杆置于最低位置。
8. 松开螺母(10)，将切线滚轮(3)嵌入切线凸轮(4)的槽中并碰到其内侧为止后旋紧螺钉(11)，再从此开始将其按逆时针方向回转约1/4转。
9. 旋紧螺母(10)，确认切线滚轮(3)不能接触到切线凸轮(4)的内侧。还有，用手将切线驱动杆(5)推向切线凸轮侧，切线滚轮(3)嵌入到切线凸轮(4)的槽中后，当松开手后确认切线驱动杆(5)应能顺利复位。
10. 动刀(8)的孔的外周和旋梭线导向(12)的棱线，在留有一定的间隙状态下确认其间隙范围在0~1mm之间。

7-1 1. 动刀和定刀的更换方法

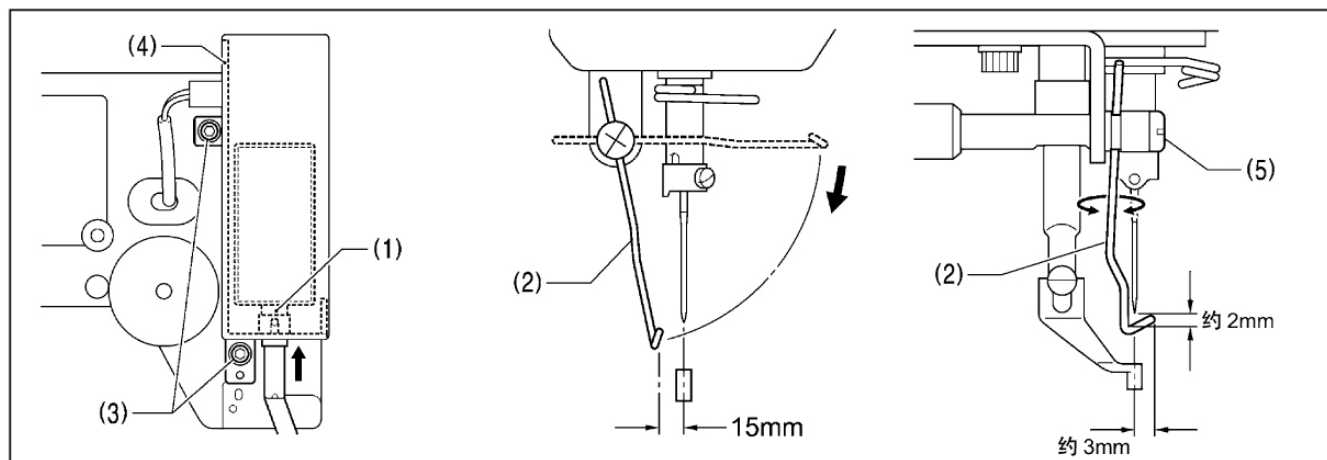


1. 松开螺栓(1) [2个], 拆下送料板(2)。
2. 打开大旋梭盖, 取下螺钉(3) [2个]和螺钉(4) [2个], 拆下针板(5)。
3. 拆下动刀(6)和定刀(7)。



4. 在如图所示位置安装新的定刀(7)。
5. 在动刀轴套(8)的外周部和段螺钉(9)处涂上润滑脂, 和轴向垫圈(10)及动刀之间的垫圈(11)再加上新的动刀(6)一起安装。
6. 确认动刀(6)和定刀(7)在切线时的锋利度。为了能很好的切线使用附属的动刀垫片($t=0.2, 0.3, 0.4$)进行调整。
 ※ 当切刀的压力很低, 不能完全切断线时, 请使用薄的动刀垫片。
 ※ 当切刀的压力很高, 动刀(1)的回转很重时, 请使用厚的动刀垫片。
7. 在动刀的销(12)处涂上润滑脂嵌入动刀连杆(13)的孔中, 然后安装针板(5)。
8. 确认针孔中心和机针对齐。

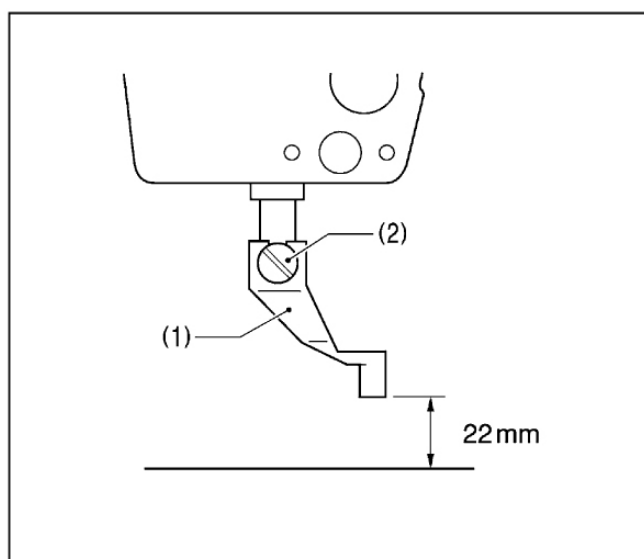
7-1 2. 扫线器的调整



1. 扫线器的电磁铁插棒(1) 被拉到最大时, 扫线杆(2)从机针中心向前出 15mm 处将螺钉(3) [2 个] 松开, 电磁铁安装板(4) 整体上下移动来进行调整。
2. 操作扫线杆(2)使其在通过机针的下面时, 扫线杆(2)和机针的尖端之间的间隙约为 2mm 左右, 扫线杆(2)的尖端到机针中心约为 3mm 左右, 松开螺钉(5) 调整扫线杆(2)的位置。

注意：请确认扫线杆(2) 不可碰到护指器。

7-1 3. 间歇压脚的安装位置

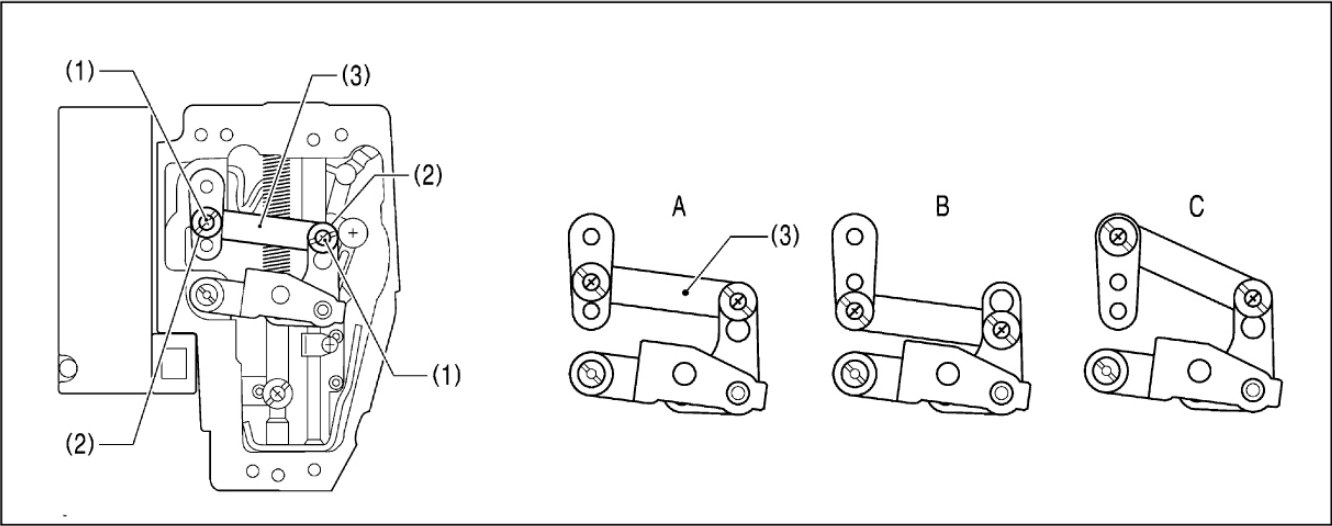


缝纫机在停止位置处间歇压脚(1)呈上升状态时, 从间歇压脚(1)的底部到针板表面的距离为 22mm 时将螺钉(2)装上拧紧。

7 - 1 4 . 间歇压脚行程的变换

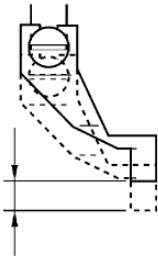
根据间歇压脚连杆的位置调整，及间歇连杆 A 的安装位置的更改，可以在 2~10mm 之间更改间歇压脚的行程。

<间歇连杆 A 的安装位置的更改>

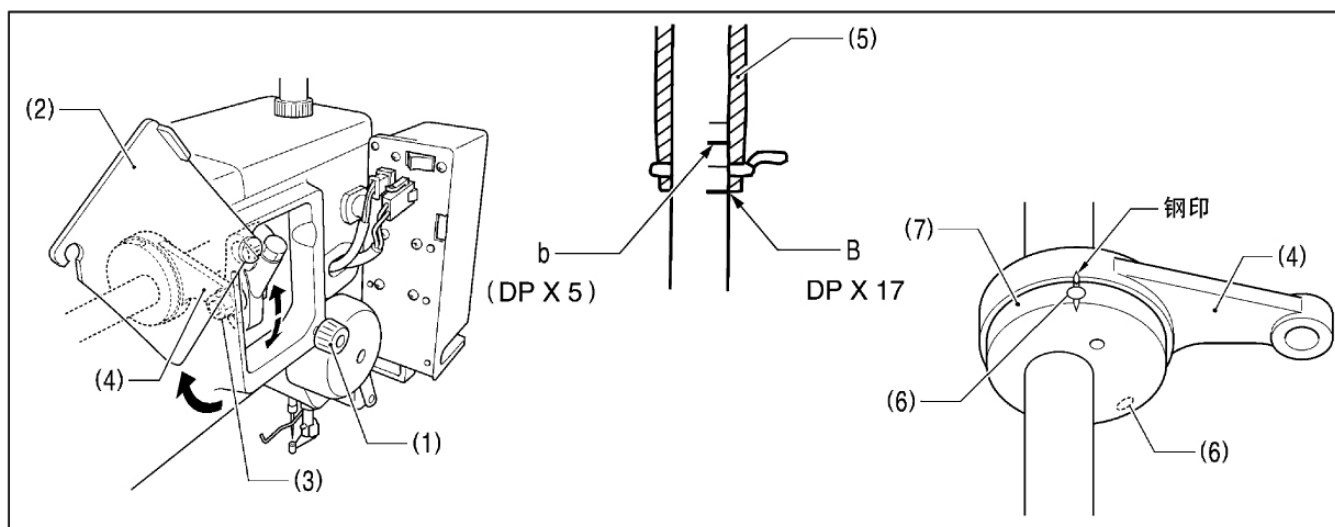


- 1. 拆下面板。
- 2. 取出螺钉(1) [2 个] 和段螺钉(2) [2 个]，拆下间歇连杆 A(3)。
- 3. 间歇连杆 A(3)的安装位置可更改成在上述的 A~C 中的任何位置中。
在各个安装位置处，如下表所示，当对间歇连杆的位置进行调整时，间歇压脚的行程在下表所示的范围内可进行调整。

安装位置	间歇压脚行程的范围
A	2 ~ 4.5mm
B	4.5 ~ 10mm
C	0mm (间歇压脚不能上下移动)



<间歇压脚连杆的位置调整>

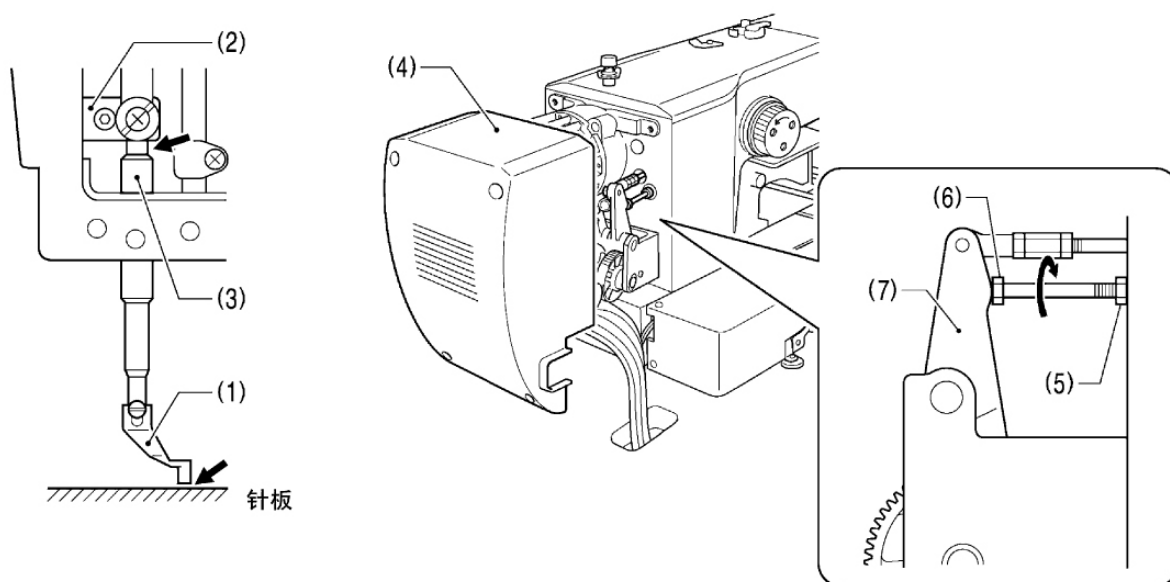


1. 松开手柄螺钉(1)，打开间歇盖(2)。
2. 旋松螺母(3)，调整间歇压脚连杆(4)的位置。
 - 间歇压脚连杆(4)向上去的位置时，间歇压脚行程变大。
 - 间歇压脚连杆(4)向下去的位置时，间歇压脚行程变小。

下面是针杆和间歇压脚操作时相互之间的同步。

3. 回转手轮让针杆从最下点向上升，使针杆的最下面的基线和针杆轴套(5)的下端面对齐。(如果是使用 DP × 5 的机针时，请与从上往下数第二条的基线 b 对齐。)
4. 拆下上盖，旋松螺钉(6) [2 个]。
5. 使间歇压脚凸轮(7)和间歇压脚连杆(4)的钢印一致后，旋紧螺钉(6)。

间歇压脚的行程更改之后，请进行以下的确认。



1. 在间歇压脚(1)呈下降状态，回转手轮使间歇压脚(1)降到最下点。
2. 确认间歇压脚(1)是否没碰到针板，还有压杆抱箍(2)是否也没碰到压杆轴套(3)。

<如果有碰到时>

拆下马达盖(4)。

请旋松螺母(5)，使用回转螺栓(6)使其推动间歇驱动杆(7)来调整，直到上述 2 处不被碰到为止。

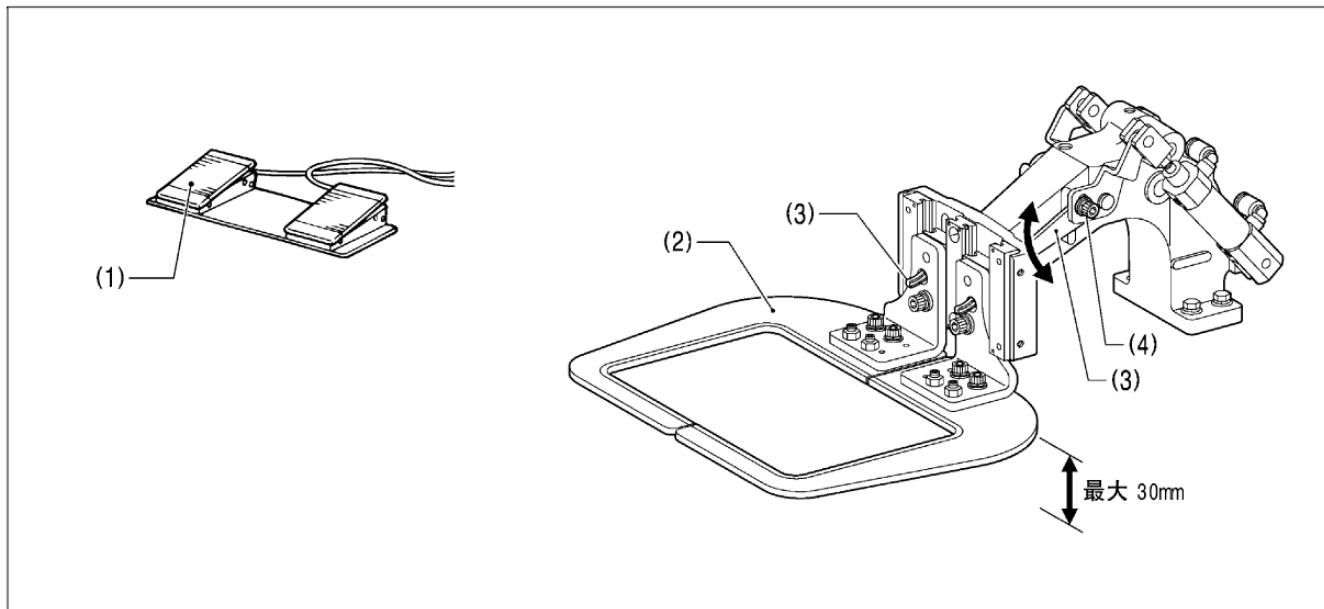
7-15. 压脚上升量的调整

<电磁规格>

可以使用操作盘在 15mm~25mm 之间进行设定。

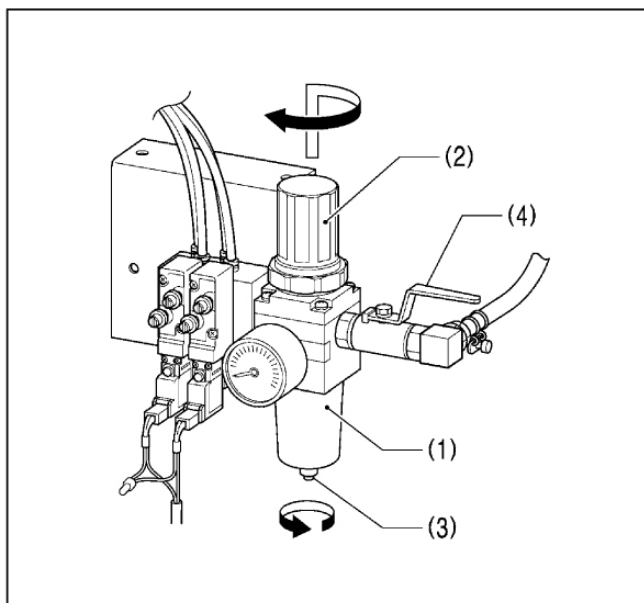
<气压规格>

压脚的最大上升量为从针板向上 30mm。



1. 送入气压，踩下脚踏开关(1)，压脚(2)向上升起。
2. 旋松压脚臂杆 (3)的螺栓(4) [2 个]，上下移动来调整压脚臂杆(3)。

7-16. 空气压力的调整（空压规格）



将调节器(1)的舵轮(2)向上拔起后再回转，使空气压力调整到 0.5Mpa。

调整完了后，将舵轮(2)往下按锁住。

如果调节器(1)内的瓶中积有水时，按箭头方向回转排水旋栓(3)，将水放掉。

注意：

请慢慢打开气压栓(4)。

8. 故障检修

- 请您在要求维修或服务前，先检查以下各项。
- 如果以下方法仍然不能解决问题，关闭电源开关，向受过训练的技术人员或经销商咨询。

注意



在作业之前，请先关闭电源开关。

并将电源插头从插座上拔下，如果误踩脚踏开关，缝纫机动作会导致受伤。

现 象	原 因	措 施	参 照
压脚不能上升	压脚操作很重	在压脚的运动部分涂敷适当的润滑脂	
	抬压脚汽缸的空气接管的弯曲，破损（空压规格）	修正弯曲了的接管或更换新的	
压脚不能下降	压脚操作很重	在压脚的运动部分涂敷适当的润滑脂	
	抬压脚汽缸的空气接管的弯曲，破损（空压规格）	修正弯曲了的接管或更换新的	
压脚上升量不正确	操作盘上的压脚设定值不正确（电磁规格）	更改压脚设定值	
	压脚臂杆的位置不对（空压规格）	调整压脚臂杆的位置	P. 35
压脚不能上升到最高点	压脚臂组件的定位器的位置不对（电磁规格）	调整定位器的位置	
	汽缸接头的位置不对（空压规格）	调整汽缸接头的位置	
扫线器操作不好	扫线器和机针有干扰	调整扫线器的高度	P. 32
		调整扫线器的操作量	P. 32
	扫线器的位置不对	调整扫线器的操作量	P. 32
底线被卷在一边	卷线夹线器组的高度不对	调整卷线夹线器组的高度	P. 18
底线被卷的量不恰当	梭芯压杆的位置不对	调整梭芯压杆的位置	P. 18
脱线	在缝纫开始时有脱线	请参考「跳针」一览	P. 37
	机针处线的残余量不稳定，偏差很大	调整副夹线器	P. 20
	旋梭导线器的位置不对	调整旋梭导线器的位置	P. 28

现 象	原 因	措 施	参 照
面线断线	面线张力太强	调整面线张力	P. 20
	机针的安装方法不正确	正确的方向按装机针	P. 16
	和机针相比线太粗	选择使用符合机针的线	P. 20
	挑线簧的强度和高度不正确	调整挑线簧的强度和高度	P. 26
	旋梭、针孔板和机针等有缺陷和毛刺	分别将这些零部件磨光或更换	
	因发热断线（化纤线）	使用冷却液槽	P. 16
	穿线不正确	在道上正确穿线	P. 16
底线断线	底线张力太强	调整底线张力	P. 20
	针孔板、和梭芯盒的角部有缺陷	分别将这些零部件磨光或更换	
跳针	机针和旋梭尖端的间隙过大	调整机针的间隙	P. 28
	机针和旋梭的相遇不正确	调整针杆的上升量	P. 27
	梭托如果在必要以上的过度导入机针	调整梭托导针部	P. 27
	机针弯曲	更换机针	
	机针的安装方法不正确	正确的方向按装机针	P. 16
断针	机针和旋梭尖端的间隙过大	调整机针的间隙	P. 28
		调整针杆的上升量	P. 27
	机针弯曲	更换机针	
	进针时机针被拉偏	选择符合缝纫条件的机针 降低回转数	P. 20
	机针太细	选择符合缝纫条件的机针	P. 20
咬线	挑线簧的强度和高度不正确	调整挑线簧的强度和高度	P. 26
	机针和旋梭的相遇不正确	调整针杆的上升量	P. 27
	旋梭导线器没能分线	调整旋梭导线器的位置	P. 28

现 象	原 因	措 施	参 照
面线未切断	动刀的刀锋不利	更换新的动刀	P. 31
	定刀的刀锋不利	磨快定刀或是 更换新的动刀	P. 31
	动刀勾不住面线	调整旋梭导线器的位置	P. 28
		调整针杆的上升量	P. 27
	最后一针因跳针，动刀勾不住面线	请参考「跳针」一览	P. 37
	动刀的位置不正确	调整动刀的位置	P. 29
	副夹线器的张力太弱	回转夹线螺母进行调整	P. 20
布料的背面缝纫针迹不良	旋梭导线器不能完全分线	调整旋梭导线器的位置	P. 28
	面线不够紧密	调整面线张力	P. 20
	机针处线的残余量不稳定，偏差很大	调整副夹线器	P. 20
线不够紧密	面线张力太弱	调整面线张力	P. 20
	底线张力太弱	调整底线张力	P. 20
	挑线簧的强度和高度不正确	调整挑线簧的强度和高度	P. 26
	机壳线导向 R 的位置不正确	调整机壳线导向 R 的位置	P. 26
机针处线的残余量不稳定，偏差很大	挑线簧的强度和高度不正确	调整挑线簧的强度和高度	P. 26
	副夹线器的张力太弱	回转线调整螺母进行调整	P. 20
	定刀的刀锋不利	磨快定刀或是 更换新的动刀	P. 31
接通电源，即使踩下脚踏开关缝纫机也不启动	头部开关不起作用	确认头部开关的电源线是否脱开着	
		调整头部开关的位置	P. 8
		如果头部开关有故障的话 更换新的开关	

Thank you very much for buying our company sewing machine. Before using your new machine, please read the safety instructions below and the explanations given in the instruction manual.

With industrial sewing machines, it is normal to carry out work while positioned directly in front of moving parts such as the needle and thread take-up lever, and consequently there is always a danger of injury that can be caused by these parts. Follow the instructions from training personnel and instructors regarding safe and correct operation before operating the machine so that you will know how to use it correctly.

SAFETY INSTRUCTIONS

[1] Safety indications and their meanings

This instruction manual and the indications and symbols that are used on the machine itself are provided in order to ensure safe operation of this machine and to prevent accidents and injury to yourself or other people. The meanings of these indications and symbols are given below.

Indications

 DANGER	The instructions which follow this term indicate situations where failure to follow the instructions may result in death or serious injury.
 CAUTION	The instructions which follow this term indicate situations where failure to follow the instructions could cause injury when using the machine or physical damage to equipment and surroundings.

Symbols



.....

This symbol () indicates something that you should be careful of. The picture inside the triangle indicates the nature of the caution that must be taken.
(For example, the symbol at left means "beware of injury".)



.....

This symbol () indicates something that you must not do.



.....

This symbol () indicates something that you must do. The picture inside the circle indicates the nature of the thing that must be done.
(For example, the symbol at left means "you must make the ground connection".)

[2] Notes on safety

DANGER



Wait at least 5 minutes after turning off the power switch and disconnecting the power cord from the wall outlet before opening the cover of the control box. Touching areas where high voltages are present can result in severe injury.

CAUTION

Environmental requirements



Use the sewing machine in an area which is free from sources of strong electrical noise such as electrical line noise or static electric noise. Sources of strong electrical noise may cause problems with correct operation.



Any fluctuations in the power supply voltage should be within $\pm 10\%$ of the rated voltage for the machine. Voltage fluctuations which are greater than this may cause problems with correct operation.



The power supply capacity should be greater than the requirements for the sewing machine's power consumption. Insufficient power supply capacity may cause problems with correct operation.



The pneumatic delivery capability should be greater than the requirements for the sewing machine's total air consumption. Insufficient pneumatic delivery capability may cause problems with correct operation.



The ambient temperature should be within the range of 5°C to 35°C during use. Temperatures which are lower or higher than this may cause problems with correct operation.



The relative humidity should be within the range of 45% to 85% during use, and no dew formation should occur in any devices. Excessively dry or humid environments and dew formation may cause problems with correct operation.



In the event of an electrical storm, turn off the power and disconnect the power cord from the wall outlet. Lightning may cause problems with correct operation.

Installation



Machine installation should only be carried out by a qualified technician.



Contact your Brother dealer or a qualified electrician for any electrical work that may need to be done.



The sewing machine weighs approximately 88 kg. The installation should be carried out by two or more people.



Do not connect the power cord until installation is complete. If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.



Hold the machine head with both hands when tilting it back or returning it to its original position. Furthermore, do not apply excessive force when tilting back the machine head. The sewing machine may become unbalanced and fall down, and serious injury or damage to the sewing machine may result.



Be sure to connect the ground. If the ground connection is not secure, you run a high risk of receiving a serious electric shock, and problems with correct operation may also occur.



All cords should be secured at least 25 mm away from any moving parts. Furthermore, do not excessively bend the cords or secure them too firmly with staples, otherwise there is the danger that fire or electric shocks could occur.



Install the safety covers to the machine head and motor.



If using a work table which has casters, the casters should be secured in such a way so that they cannot move.



Be sure to wear protective goggles and gloves when handling the lubricating oil and grease, so that they do not get into your eyes or onto your skin. If the oil and grease get into your eyes or onto your skin, inflammation can result. Furthermore, do not drink or eat the lubricating oil or grease. They may cause diarrhea or vomiting. Keep the oil out of the reach of children.

CAUTION

Sewing

-  This sewing machine should only be used by operators who have received the necessary training in safe use beforehand.
-  The sewing machine should not be used for any applications other than sewing.
-  Be sure to wear protective goggles when using the machine.
If goggles are not worn, there is the danger that if a needle breaks, parts of the broken needle may enter your eyes and injury may result.
-  Turn off the power switch at the following times. If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.
 - When threading the needle
 - When replacing the bobbin and needle
 - When not using the machine and when leaving the machine unattended
-  If using a work table which has casters, the casters should be secured in such a way so that they cannot move.
-  Attach all safety devices before using the sewing machine. If the machine is used without these devices attached, injury may result.
-  Do not touch any of the moving parts or press any objects against the machine while sewing, as this may result in personal injury or damage to the machine.
-  If an error occurs in machine operation, or if abnormal noises or smells are noticed, immediately turn off the power switch. Then contact your nearest Brother dealer or a qualified technician.
-  If the machine develops a problem, contact your nearest Brother dealer or a qualified technician.

Cleaning

-  Turn off the power switch before carrying out cleaning. If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.
-  Be sure to wear protective goggles and gloves when handling the lubricating oil and grease, so that they do not get into your eyes or onto your skin. If the oil and grease get into your eyes or onto your skin, inflammation can result.
Furthermore, do not drink or eat the lubricating oil or grease. They may cause diarrhea or vomiting.
Keep the oil out of the reach of children.

Maintenance and inspection

-  Maintenance and inspection of the sewing machine should only be carried out by a qualified technician.
-  Ask your Brother dealer or a qualified electrician to carry out any maintenance and inspection of the electrical system.
-  Turn off the power switch and disconnect the power cord before carrying out the following operations. If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.
 - Inspection, adjustment and maintenance
 - Replacing consumable parts such as the rotary hook
-  Disconnect the air hoses from the air supply and wait for the needle on the pressure gauge to drop to "0" before carrying out inspection, adjustment and repair of any parts which use the pneumatic equipment.
-  Hold the machine head with both hands when tilting it back or returning it to its original position.
Furthermore, do not apply excessive force when tilting back the machine head. The sewing machine may become unbalanced and fall down, and serious injury or damage to the sewing machine may result.
-  If the power switch needs to be left on when carrying out some adjustment, be extremely careful to observe all safety precautions.
-  Use only the proper replacement parts as specified by Brother.
-  If any safety devices have been removed, be absolutely sure to re-install them to their original positions and check that they operate correctly before using the machine.
-  Any problems in machine operation which result from unauthorized modifications to the machine will not be covered by the warranty.

[3] Warning labels

The following warning labels appear on the sewing machine.

Please follow the instructions on the labels at all times when using the machine. If the labels have been removed or are difficult to read, please contact your nearest Brother dealer.

1

	⚠ 危険 高電圧部分にふれて、大けがをすることがある。電源を切り、5分たってからカバーをはずすこと。	⚠ 危険 触摸高压电部分，会导致受伤。在切断电源5分钟后，再开启盖罩。
⚠ DANGER	⚠ GEFAHR	⚠ DANGER
Hazardous voltage will cause injury. Turn off main switch and wait 5 minutes before opening this cover.	Hochspannung verletzungsgefahr! Bitte schalten sie den hauptschalter aus und warten sie 5 minuten, bevor sie diese abdeckung öffnen.	Un voltage non adapte provoque des blessures. Eteindre l'interrupteur et attendre 5 minutes avant d'ouvrir le capot.
⚠ PELIGRO		Un voltaje inadecuado puede provocar las heridas. Apagar el interruptor principal y esperar 5 minutos antes de abrir esta cubierta.

2

	⚠ 注意 触摸运动部分，易造成受伤。所以在装上安全保护装置后，再进行缝纫操作。在切断电源后，进行穿线，更换梭芯，机针和做清扫，调整工作。
⚠ CAUTION	
Moving parts may cause injury. Operate with safety devices. Turn off main switch before threading, changing bobbin and needle, cleaning etc.	

3



Be careful not to get your hand caught when tilting back the machine head and returning it to its original position.

4



Be sure to connect the ground. If the ground connection is not secure, you run a high risk of receiving a serious electric shock, and problems with correct operation may also occur.

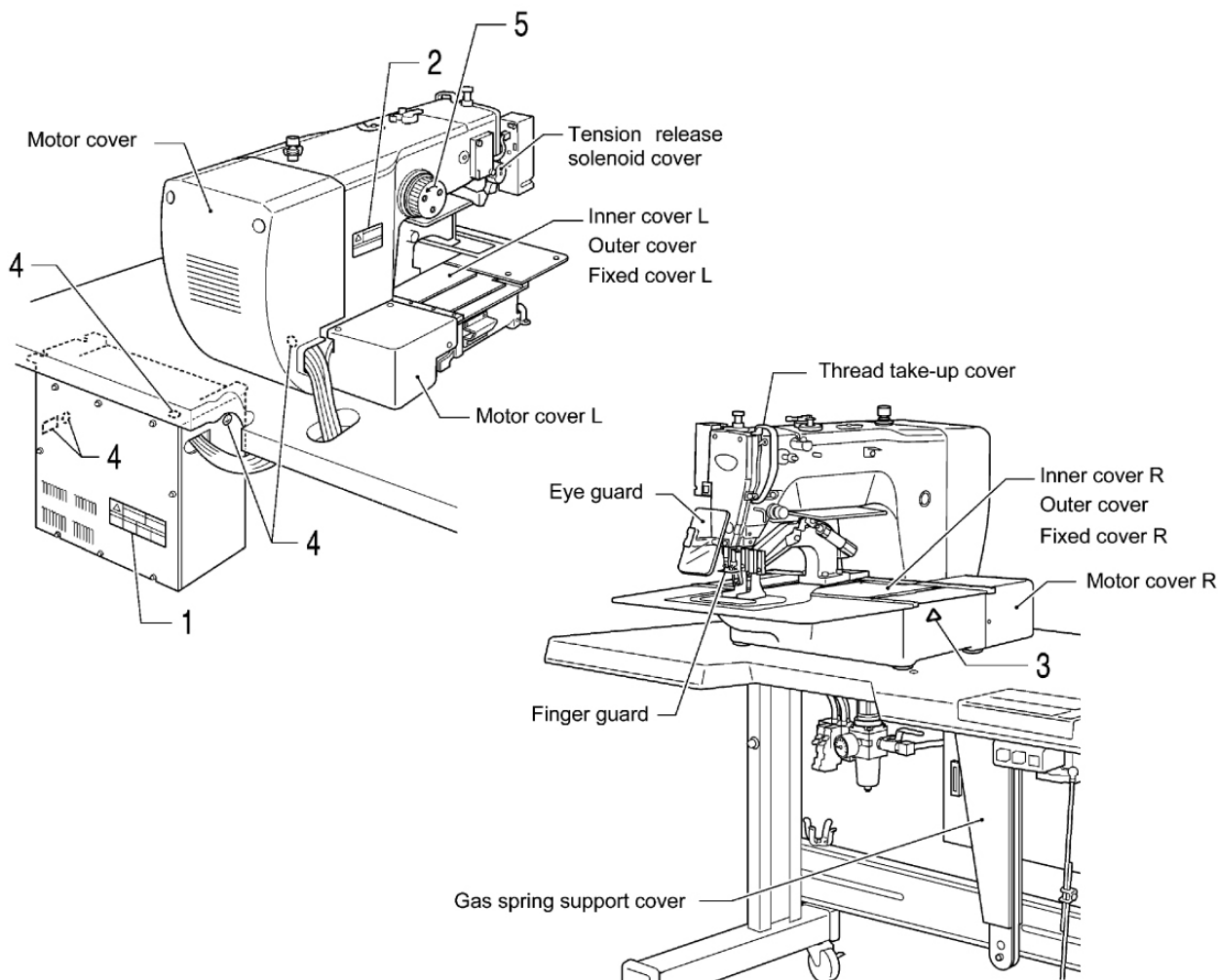
5



Direction of operation

Safety devices

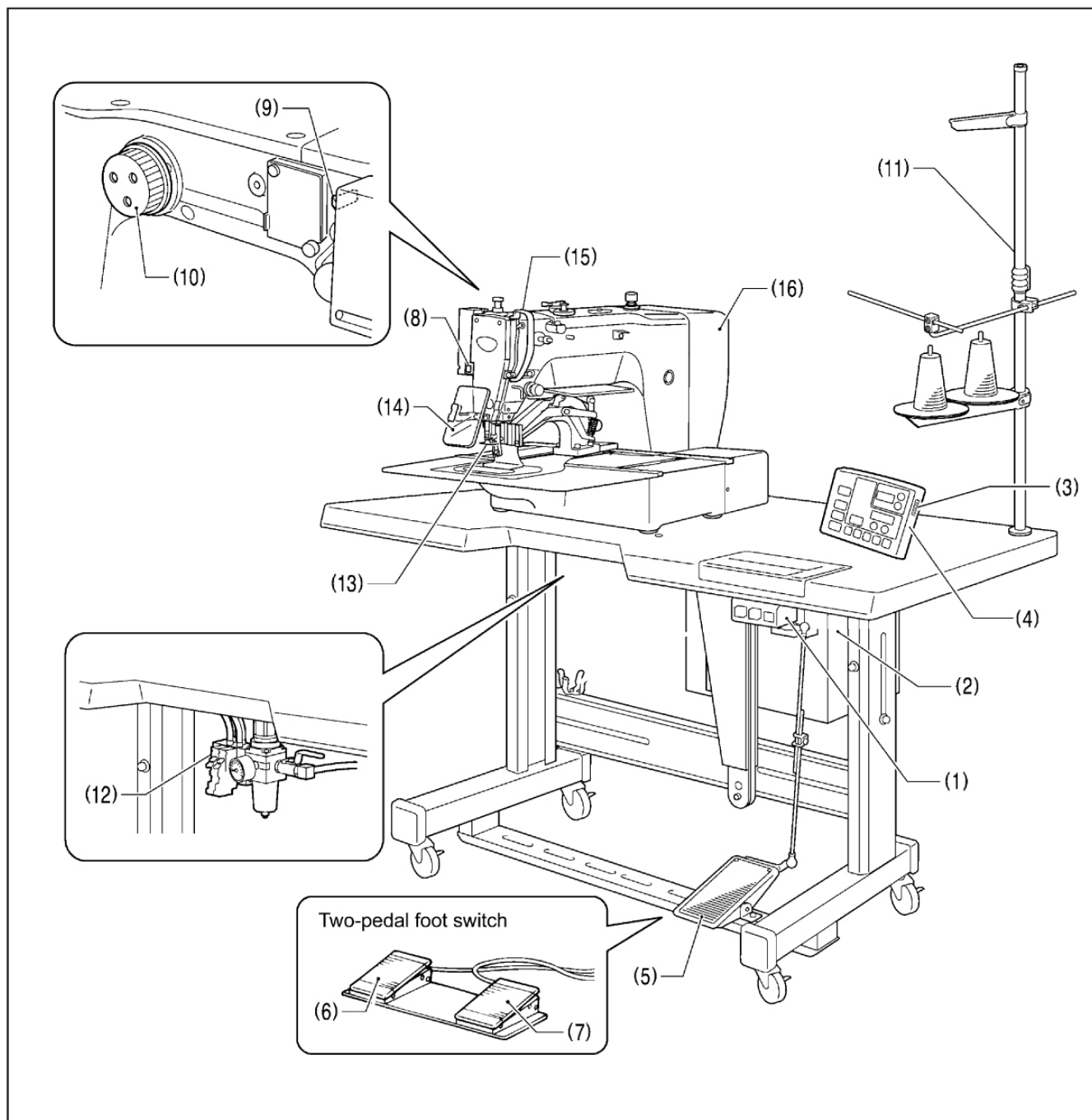
Devices such as eye guard, finger guard, thread take-up cover, motor cover, tension release solenoid cover, inner cover, outer cover, fixed cover and gas spring support cover



CONTENTS

1. NAMES OF MAJOR PARTS1	6. CLEANING23
2. SPECIFICATIONS2	6-1. Cleaning the rotary hook.....23
3. INSTALLATION3	6-2. Cleaning the control box air inlet ports24
3-1. Table processing diagram.....3	6-3. Draining the oil.....24
3-2. Installing the control box.....4	6-4. Cleaning the eye guard.....24
3-3. Installing the oil pan.....4	6-5. Checking the needle.....24
3-4. Installing the machine head.....5	6-6. Lubrication.....24
3-5. Tilting the sewing machine head.....9	7. STANDARD ADJUSTMENTS ...25
3-6. Installing the treadle unit (solenoid specifications)10	7-1. Checking the machine head switch...25
3-7. Installing the two-pedal foot switch (pneumatic specifications)10	7-2. Thread take-up spring.....26
3-8. Installing the cotton stand.....11	7-3. Arm thread guide R.....26
3-9. Installing the pneumatic unit(pneumatic specifications)12	7-4. Adjusting the needle bar height.....27
3-10. Installing the eye guard.....13	7-5. Adjusting the needle bar lift amount...27
3-11. Installing the motor cover.....13	7-6. Adjusting the driver needle guard ...27
3-12. Lubrication.....14	7-7. Adjusting the needle clearance.....28
3-13. Installing the machine head fixing bolt.....15	7-8. Adjusting the shuttle race thread guide.....28
4. PREPARATION BEFORE SEWING16	7-9. Rotary hook lubrication amount.....28
4-1. Installing the needle.....16	7-10. Adjusting the position of the movable knife.....29
4-2. Threading the upper thread.....16	7-11. Replacing the movable and fixed knives.....31
4-3. Winding the lower thread.....18	7-12. Adjusting the thread wiper.....32
4-4. Installing the bobbin case.....19	7-13. Presser foot installation position.....32
4-5. Thread tension.....20	7-14. Changing the intermittent stroke.....33
4-5-1. Lower thread tension.....20	7-15. Adjusting the work clamp lift amount35
4-5-2. Upper thread tension.....20	7-16. Adjusting the air pressure(pneumatic specification)35
5. SEWING21	8. TROUBLESHOOTING36
5-1. Sewing.....21	
5-2. Using the STOP switch.....22	
5-3. Using the thread wiper switch...22	

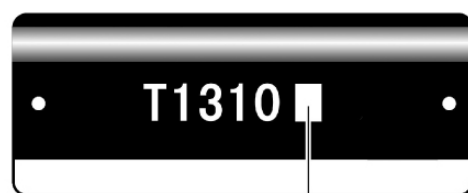
1. NAMES OF MAJOR PARTS



- (1) Power switch
- (2) Control box
- (3) USB slot
- (4) Operation panel
- (5) Foot switch (solenoid specifications)
- (6) Work clamp switch (pneumatic specifications)
- (7) Start switch (pneumatic specifications)
- (8) STOP switch
- (9) Thread wiper switch
- (10) Pulley
- (11) Cotton stand
- (12) Solenoid valve (pneumatic specifications)

- Safety devices:**
- (13) Finger guard
 - (14) Eye guard
 - (15) Thread take-up cover
 - (16) Motor cover

2. SPECIFICATIONS



S	Solenoid-type work clamp lifter
A	Pneumatic-type work clamp lifter

Sewing machine	Lock stitch, pattern tacking sewing machine (with large shuttle hook)
Stitch formation	Single needle lock stitch
Max. sewing speed	2,700 rpm
Sewing area (XxY)	T1310: Max. 130 x 100 mm, T2210: Max. 220 x 100 mm
Feed mechanism	Intermittent feed, pulse motor drive
Stitch length	0.05 – 12.7 mm
No. of stitches	500,000-stitch internal memory (*)
Maximum no. of stitches	20,000 stitches (per program)
No. of sewing data items that can be stored	Internal memory: 512 (*)
Work clamp lift method	Solenoid specifications: Pulse motor drive method Pneumatic specifications: Pneumatic method
Work clamp height	Solenoid specifications: Max. 25 mm, pneumatic specifications: Max. 30 mm
2-step work clamp	Solenoid specifications: Integrated-type work clamp Pneumatic specifications: Separate-type work clamp
Intermittent presser foot lift amount	22 mm
Intermittent stroke	2 – 4.5 mm, 4.5 – 10 mm or 0 (Default setting 3 mm)
Rotary hook	Double-capacity shuttle hook (standard shuttle hook sold separately)
Wiper device	Standard equipment
Thread trimmer	Standard equipment
Data storage method	Internal memory (Flash memory)
User programs	50
Cycle programs	999
Motor	750 W AC servo motor
Weights	Machine head approx. 88 kg, operation panel approx. 0.6 kg Control box 14.2 – 16.2 kg (Differs depending on destination)
Power supply	Single-phase 100 V/220 V, Three-phase 200 V/220 V/380 V/400 V 400 VA
Air pressure	0.5 MPa 1.8 l/min.

* The number of data items and stitches that can be stored will vary depending on the number of stitches in each program.

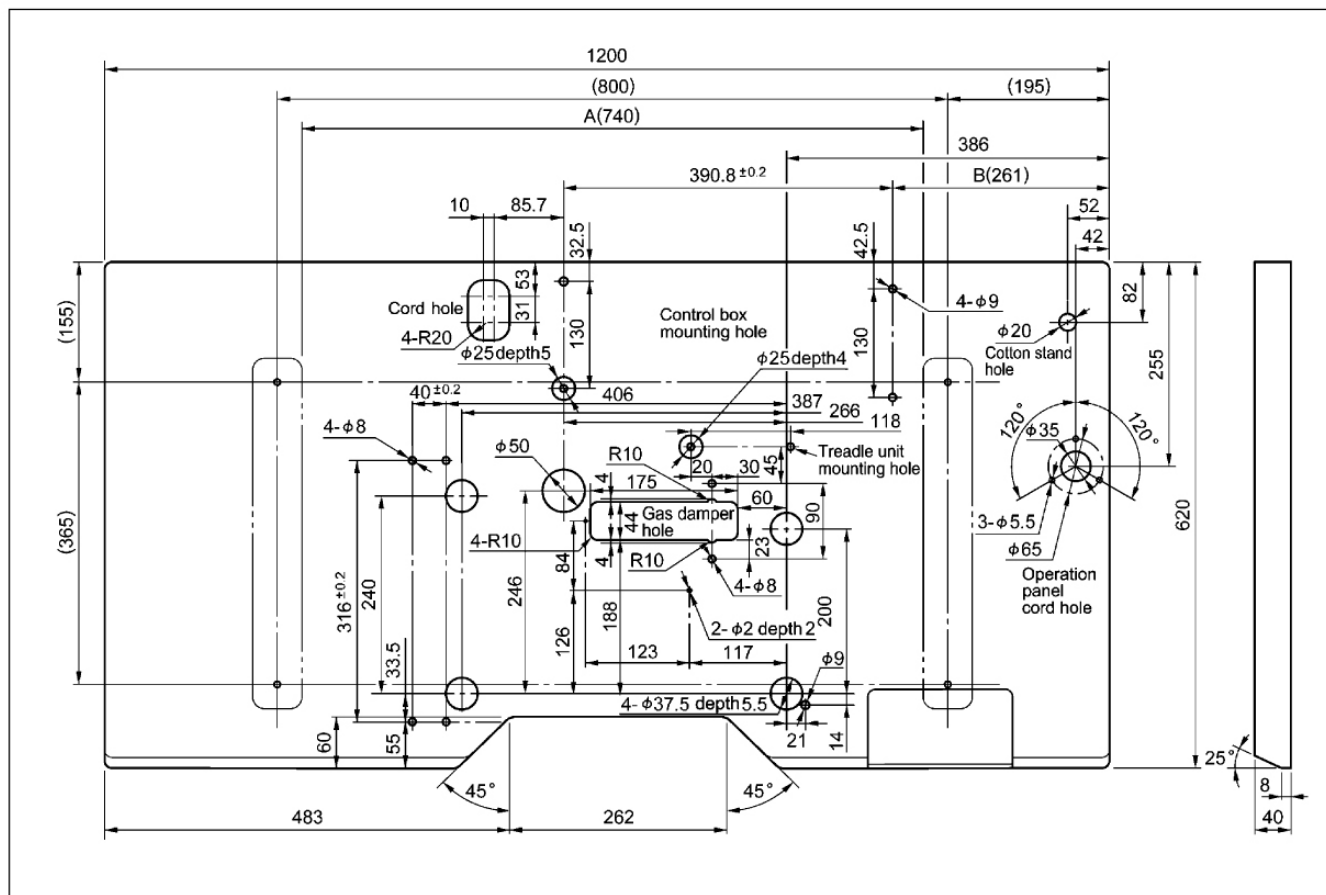
3. INSTALLATION

CAUTION

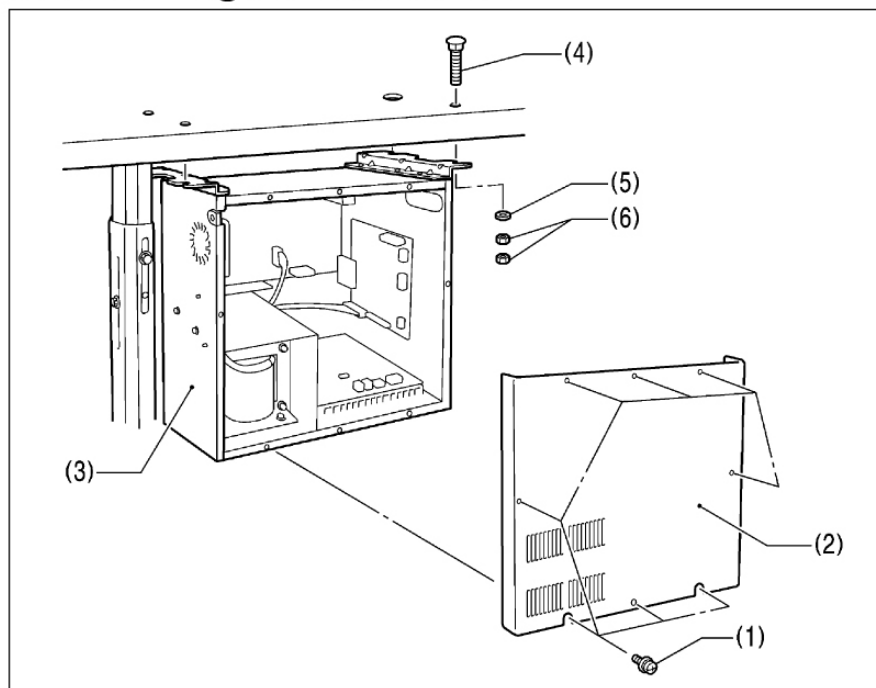
-  Machine installation should only be carried out by a qualified technician.
-  Contact your Brother dealer or a qualified electrician for any electrical work that may need to be done.
-  The sewing machine head weighs approximately 88kg. The installation should be carried out by two or more people.
-  Do not connect the power cord until installation is complete.
If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.
-  Hold the machine head with both hands when tilting it back or returning it to its original position.
Furthermore, do not apply excessive force when tilting back the machine head. The sewing machine may become unbalanced and fall down, and serious injury or damage to the sewing machine may result.
-  All cords should be secured at least 25 mm away from any moving parts. Furthermore, do not excessively bend the cords or secure them too firmly staples, otherwise there is the danger that fire or electric shocks could occur.
-  Be sure to connect the ground. If the ground connection is not secure, you run a high risk of receiving a serious electric shock, and problems with correct operation may also occur.
-  Install the safety covers to the machine head and motor.

3-1. Table processing diagram

- The thickness of the table should be at least 40 mm, and it should be strong enough to bear the weight and vibration of the sewing machine.
- If the distance A between the insides of the legs is less than 740 mm, move the control box installation position to the left (B = 261mm).
- Check that the control box is at least 10 mm away from the leg. If the control box and the leg are too close together, it may result in incorrect sewing machine operation.



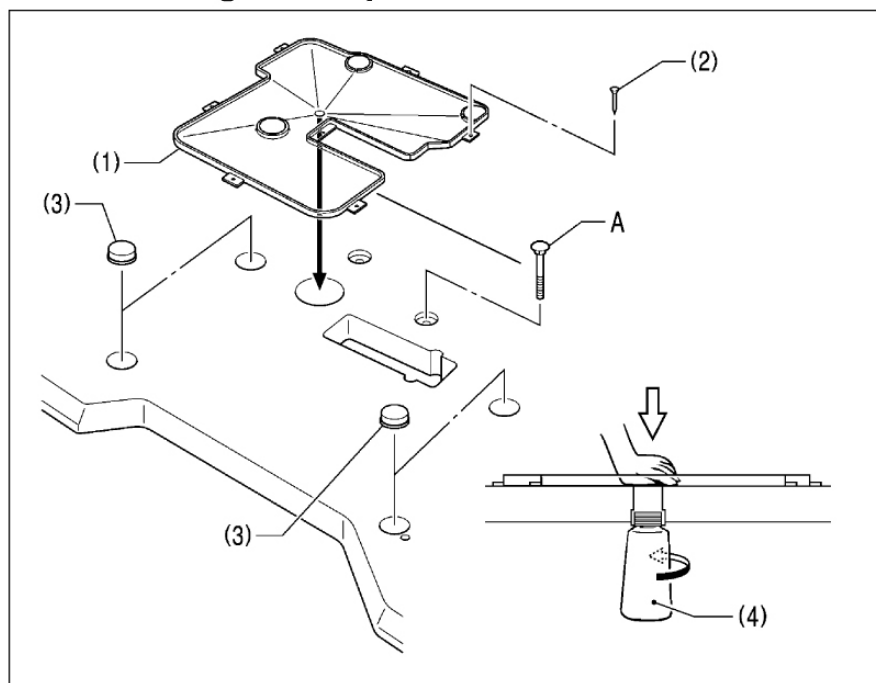
3-2. Installing the control box



Remove the eight screws (1), and then remove the control box cover (2).

- (3) Control box
- (4) Bolts [4 pcs.]
- (5) Plain washers [4 pcs.]
- (6) Nuts [8 pcs.]

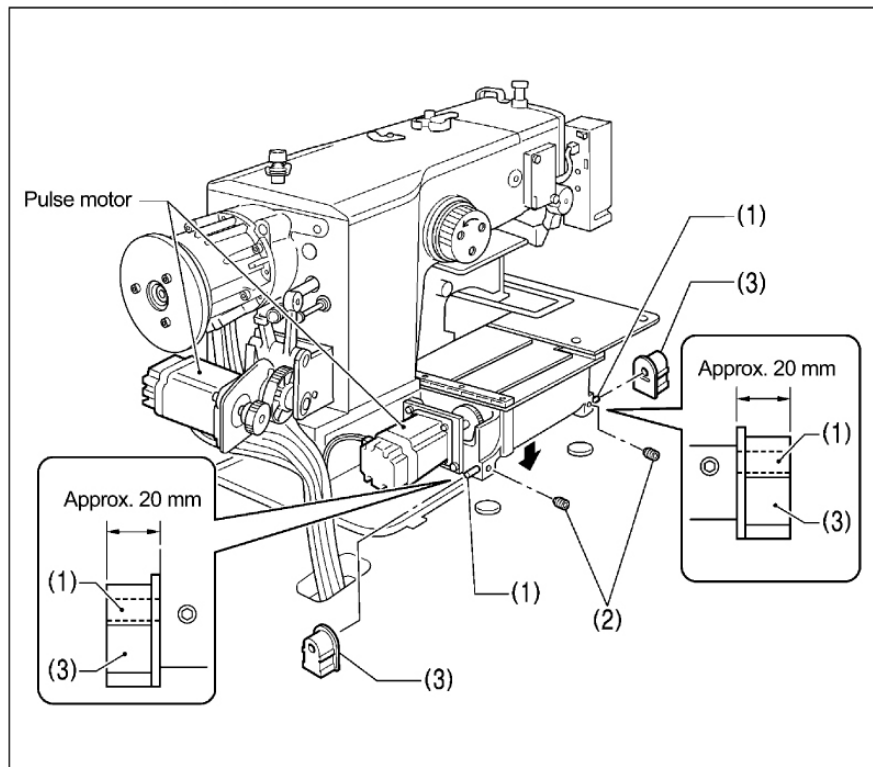
3-3. Installing the oil pan



For solenoid specifications, install the treadle unit mounting bolt (A) before installing the oil pan.

- (1) Oil pan
- (2) Nails [7 pcs.]
- (3) Rubber cushions [4 pcs.]
- (4) Waste oil tank

3-4. Installing the machine head

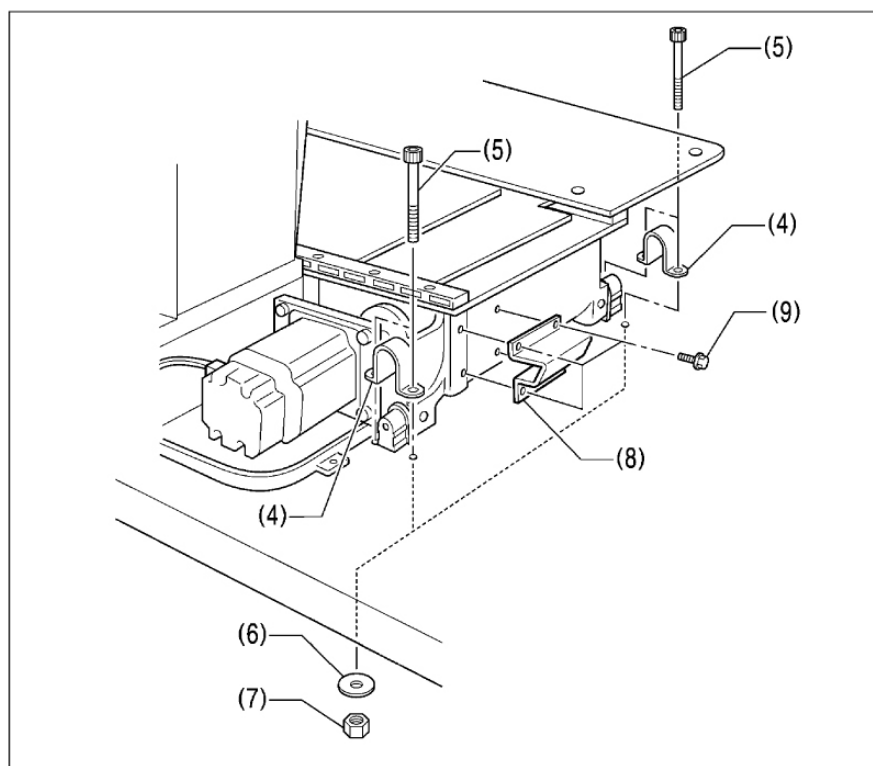


- (1) Pins [2 pcs.]
- (2) Set screws [2 pcs.]
- (3) Hinge rubber assemblies [2 pcs.]

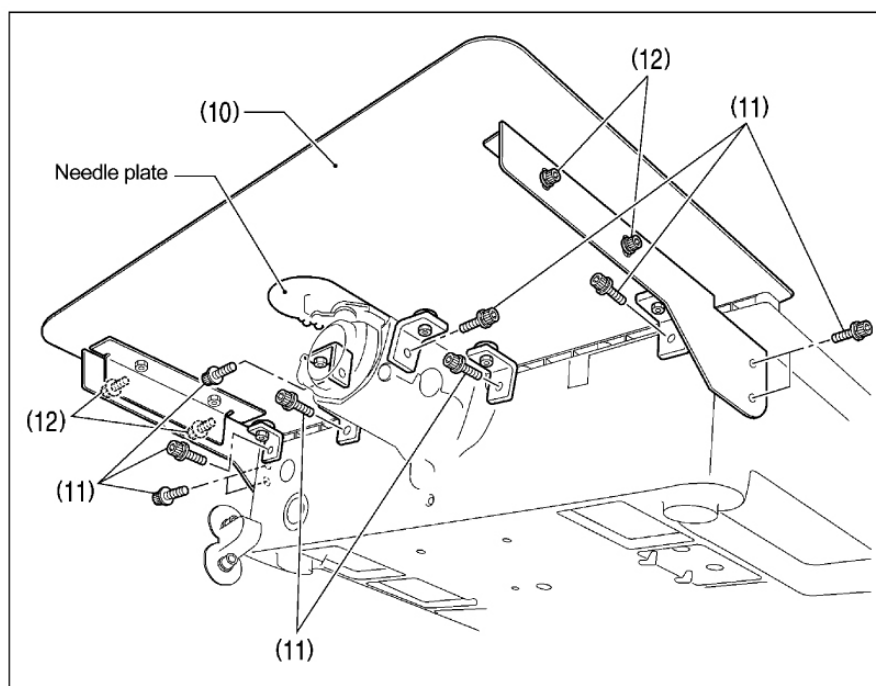
Place the machine head gently on top of the oil pan and the rubber cushions.

NOTE:

- Be careful not to get the cords clamped between the machine head and the oil pan.
- When holding the machine head, do not hold it by the pulse motor. This may cause problems with operation of the pulse motor.



- (4) Hinge holders [2 pcs.]
- (5) Bolts [4 pcs.]
- (6) Plain washers [4 pcs.]
- (7) Nuts [4 pcs.]
- (8) Head rest
- (9) Bolts with washer [4 pcs.]



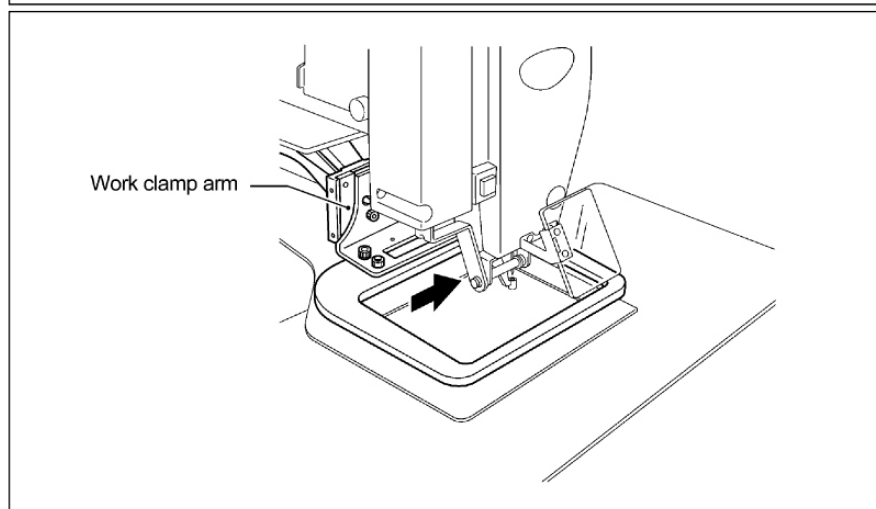
(10) Auxiliary plate

(11) Bolts with washer [10 pcs.]

Loosen the bolts with washer (12) and adjust so that the auxiliary plate (10) and the needle plate are at the same height.

NOTE:

Install the auxiliary plate so that it is horizontal.

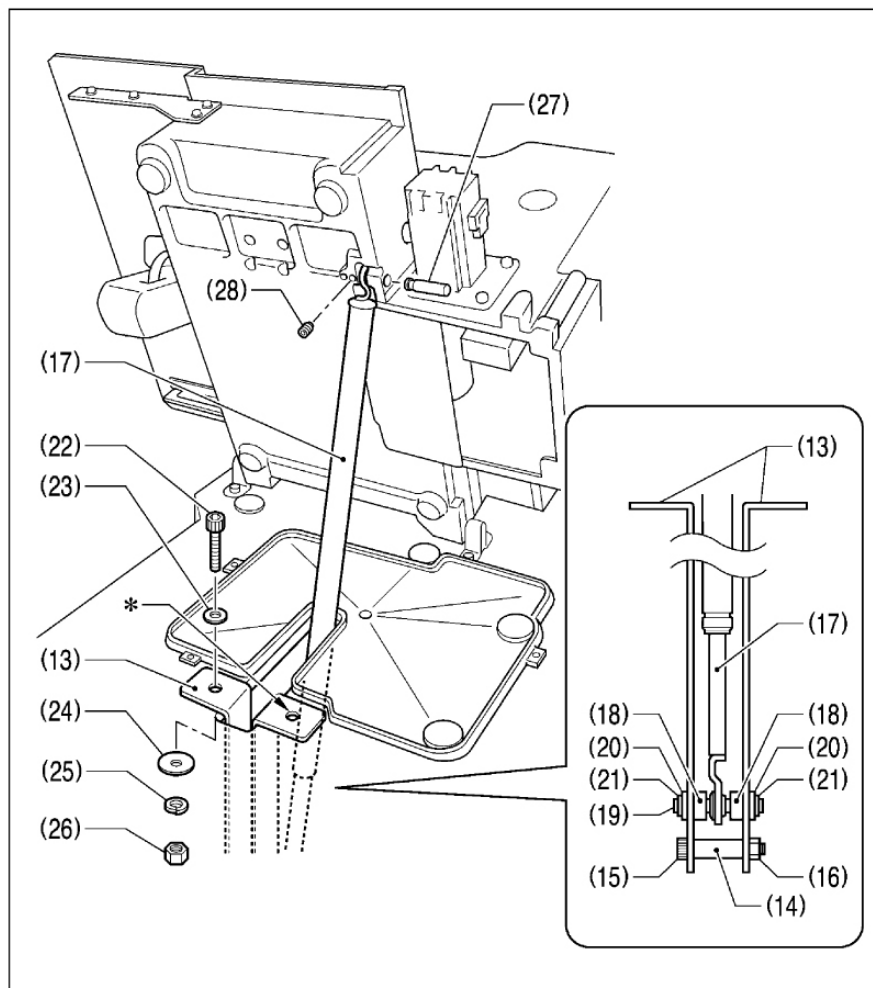


Move the work clamp arm all the way to the right when looking from the front of the sewing machine (the direction of the arrow in the illustration), and then gently tilt back the machine head.

NOTE:

Two or more people should tilt back the machine head, and it should be tilted gently while being held with both hands.

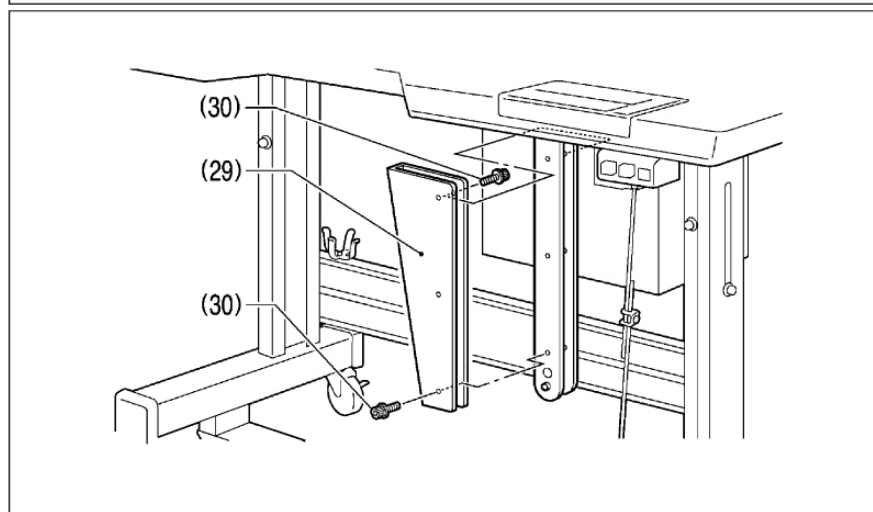
3. INSTALLATION



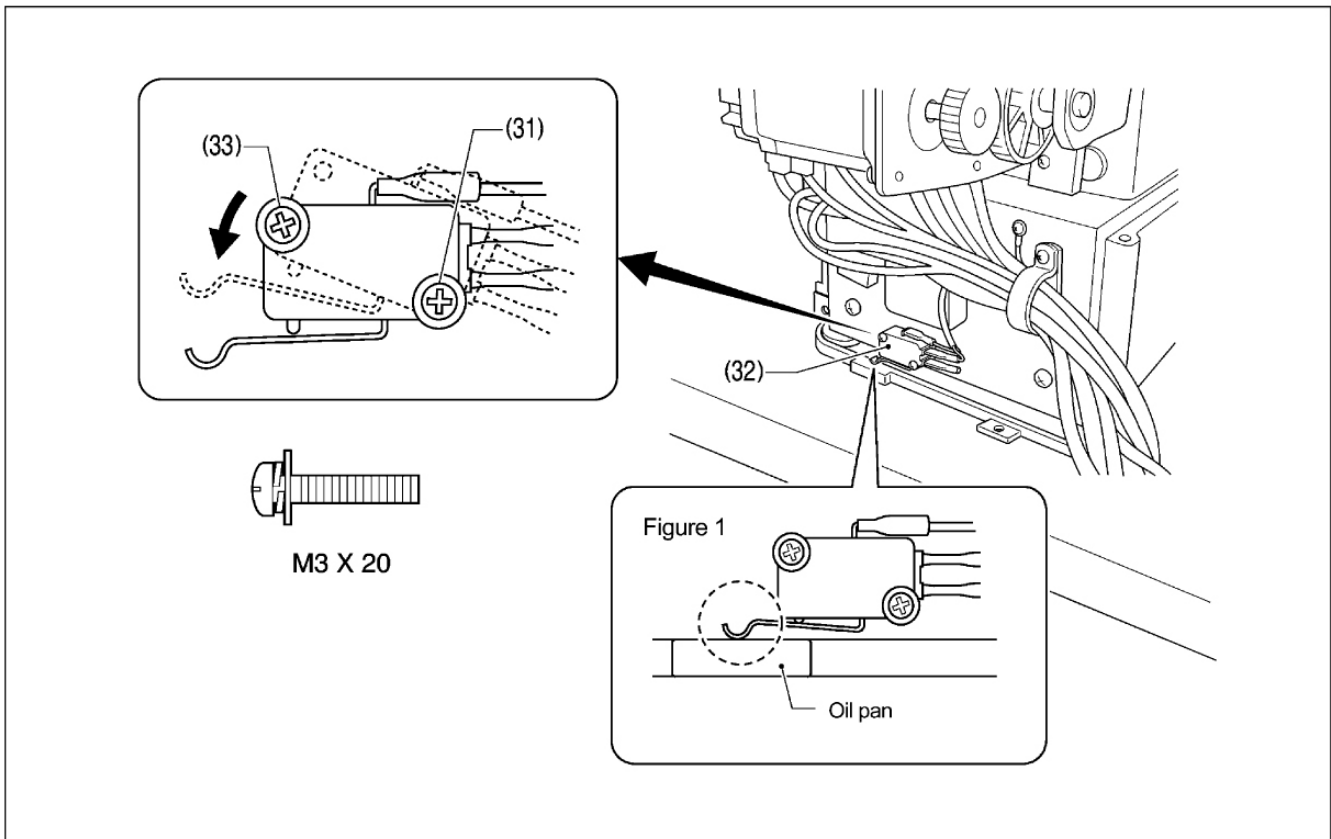
- (13) Gas spring holders [2 pcs.]
- (14) Spacer
- (15) Bolt
- (16) Nut
- (17) Gas spring
- (18) Shaft collars [2 pcs.]
- (19) Gas spring shaft D
- (20) Plain washers [2 pcs.]
- (21) Retaining rings E [2 pcs.]
- (22) Bolts [2 pcs.]
- (23) Plain washers (medium) [2 pcs.]
- (24) Plain washers (large) [2 pcs.]
- (25) Spring washers [2 pcs.]
- (26) Nuts [2 pcs.]
- (27) Gas spring shaft U
- (28) Set screw

NOTE:

For solenoid specifications, the bolts (22), plain washers (23), plain washers (24), spring washers (25) and nuts (26) in the places marked with * are also used to install the treadle unit.

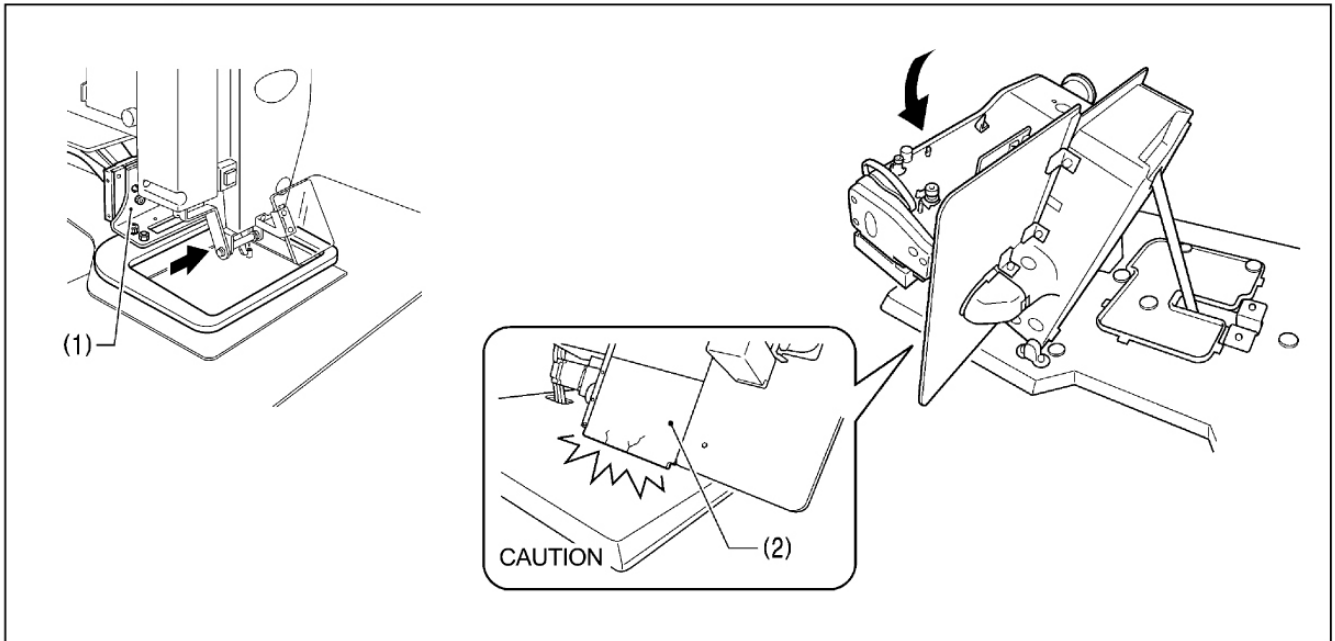


- (29) Gas spring support cover
- (30) Bolts with washer [6 pcs.]



- Gently return the machine head to its original position.
- Loosen the screw (31). Move the machine head switch (32) to the position shown in the illustration, and then secure the machine head switch (32) with the screw (31) and the accessory M3x20 screw (33).
- Check that the machine head switch (32) is turned on as shown in figure 1.

3-5. Tilting the sewing machine head

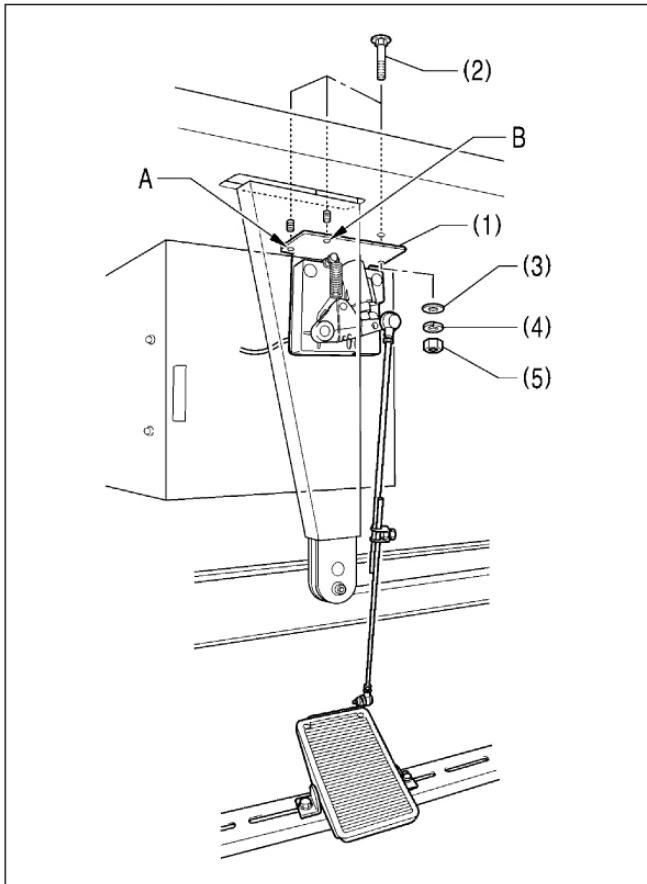


1. Move the presser arm assembly (1) as far as it will go in the direction of the arrow in the illustration (to the right when looking from the front of the sewing machine).
2. Stand at the left side of the table, and gently tilt the machine head towards you.

NOTE:

Always be sure to move the work clamp arm all the way to the right before tilting back the machine head. If you try to tilt back the machine head while the work clamp arm is still on the left side, it may damage the outer cover L (2).

3-6. Installing the treadle unit (solenoid specifications)



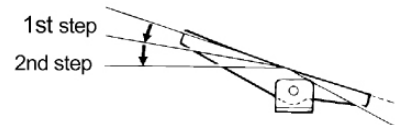
- (1) Treadle unit
- (2) Bolts [3 pcs.]
- (3) Plain washers [3 pcs.]
- (4) Spring washers [3 pcs.]
- (5) Nuts [3 pcs.]

NOTE:

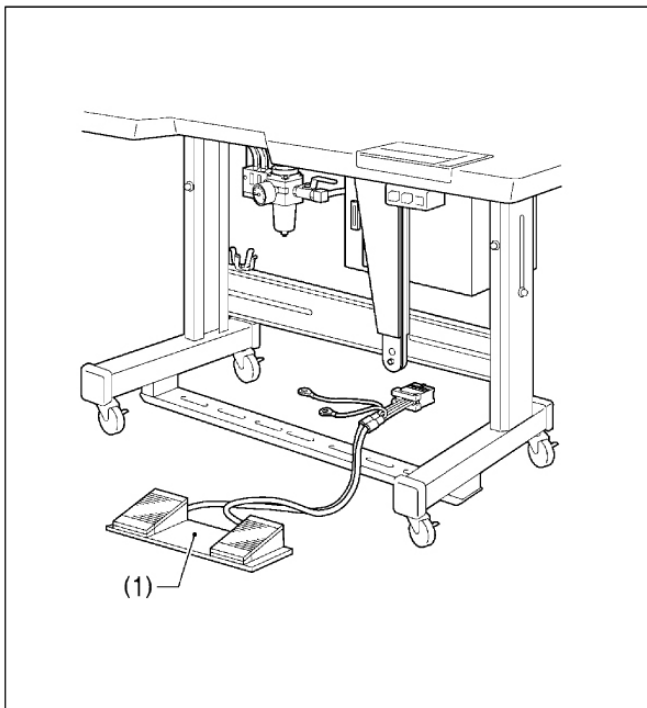
- Install the bolt for mounting hole A before installing the oil pan. (Refer to "3-3. Installing the oil pan.")
 - Mounting hole B is used to install the gas spring supports with the bolt, plain washer, spring washer and nut. (Refer to "3-4. Installing the machine head".)
- * Use a commercially-available foot switch and connecting rod.
- * If changing the mounting position for the treadle unit, use the accessory bolts, plain washers, spring washers and nuts.

<Foot switch operating method>

When the foot switch is depressed to the 1st step, the work clamp is lowered, and when it is depressed to the 2nd step, the sewing machine starts sewing.



3-7. Installing the two-pedal foot switch (pneumatic specifications)

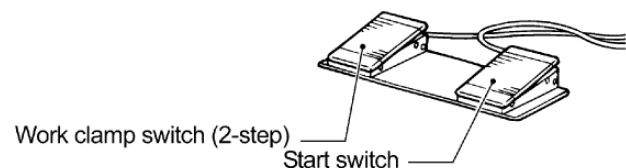


- (1) Foot switch

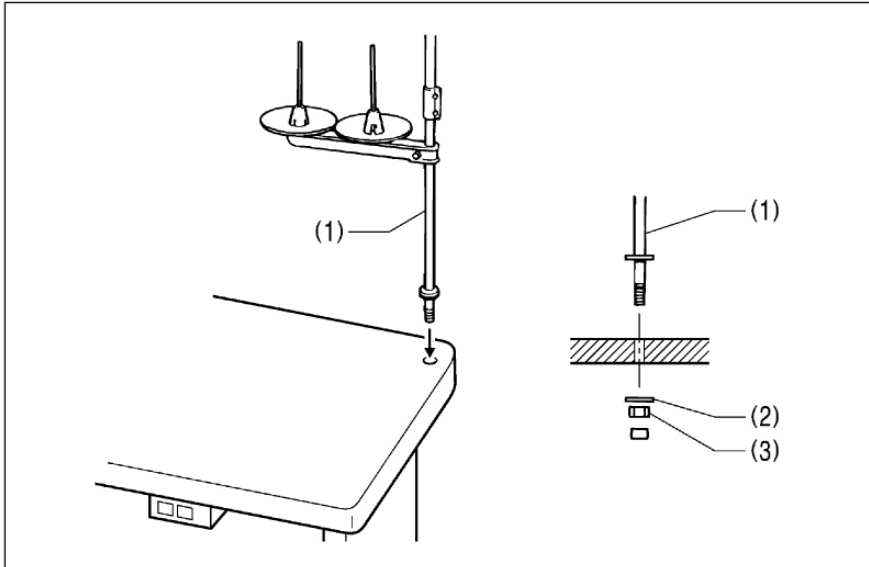
Insert the connector for the foot switch (1) into P6 (FOOT) on the main P.C. board.

<Foot switch operating method>

When the work clamp switch (left) is depressed, both work clamps are lowered, and when the start switch (right) is depressed, the sewing machine starts sewing.



3-8. Installing the cotton stand

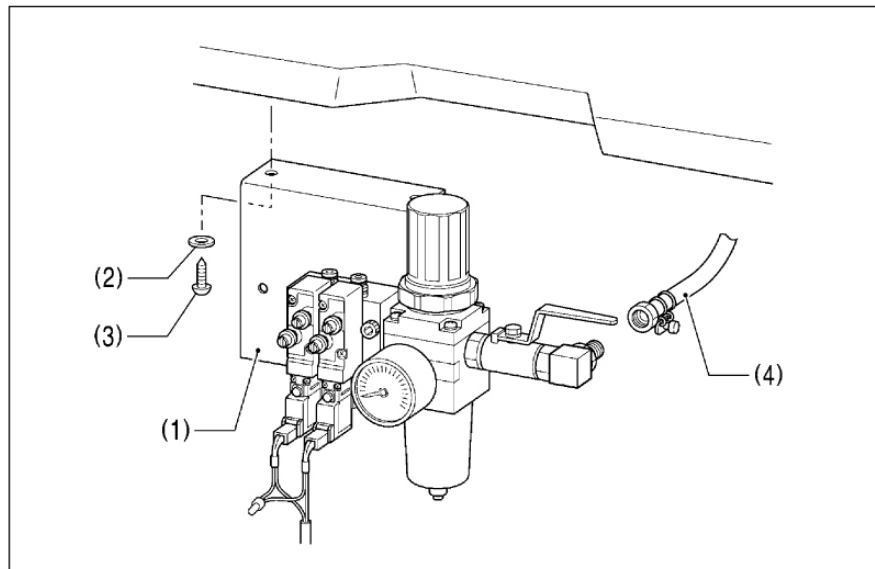


(1) Cotton stand

NOTE:

Fit the washer (2), and then securely tighten the nut (3) so that the cotton stand does not move.

3-9. Installing the pneumatic unit (pneumatic specifications)



Install underneath the work table.

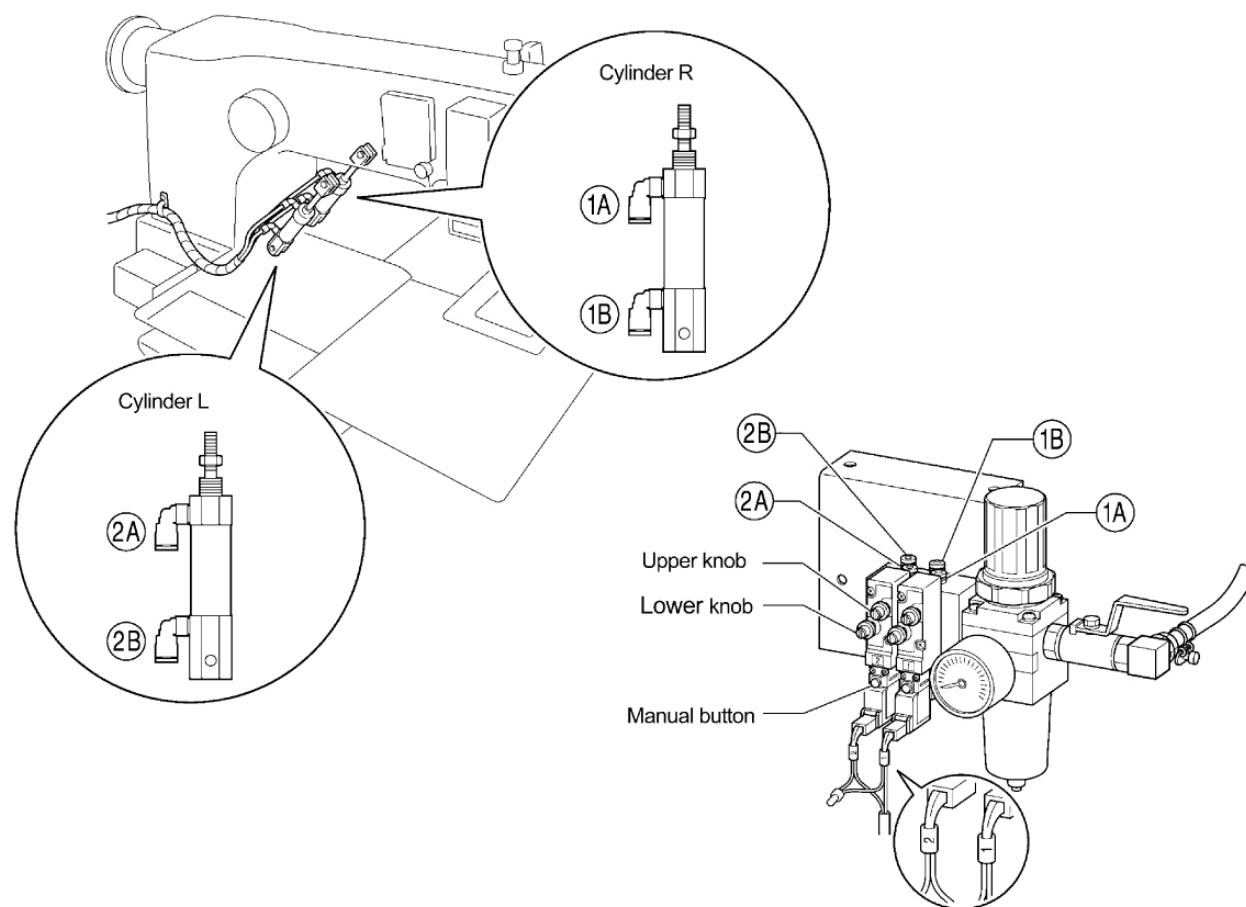
- (1) Solenoid valve assembly
- (2) Washers [2 pcs.]
- (3) Wood screws [2 pcs.]
- (4) Rubber hose

After installing the pneumatic unit, adjust the air pressure.
(Refer to "10-16. Adjusting the air pressure".)

NOTE:

Make sure that the pneumatic unit does not touch the control box or the work table leg.

Connect each air tube to the position with the corresponding number.



<Adjusting the speed controller>

You can use the valve knobs to adjust the lifting and lowering speeds.

The valve knobs should be adjusted so that the left and right sides of the work clamp operate at the same speed.

- When the upper knob is tightened, the lifting speed becomes slower. When it is loosened, the lifting speed becomes faster.
- When the lower knob is tightened, the lowering speed becomes slower. When it is loosened, the lowering speed becomes faster.

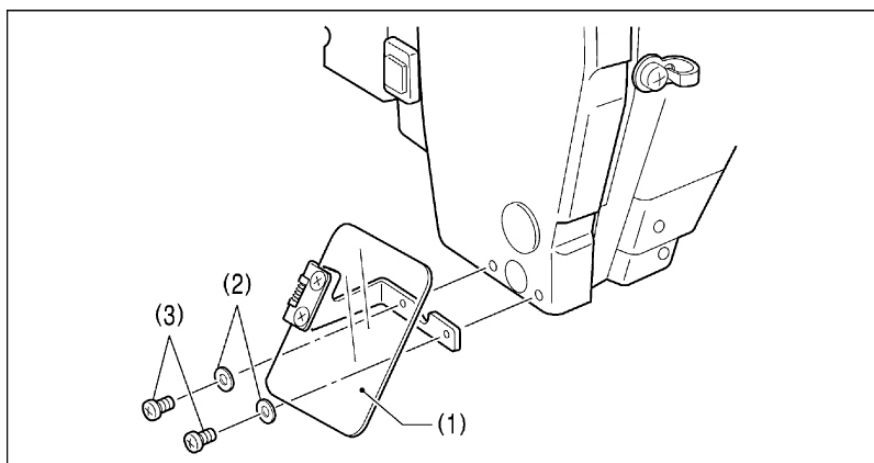
You can operate the work clamp while the power is turned off by pressing the manual button.

3-10. Installing the eye guard

! CAUTION

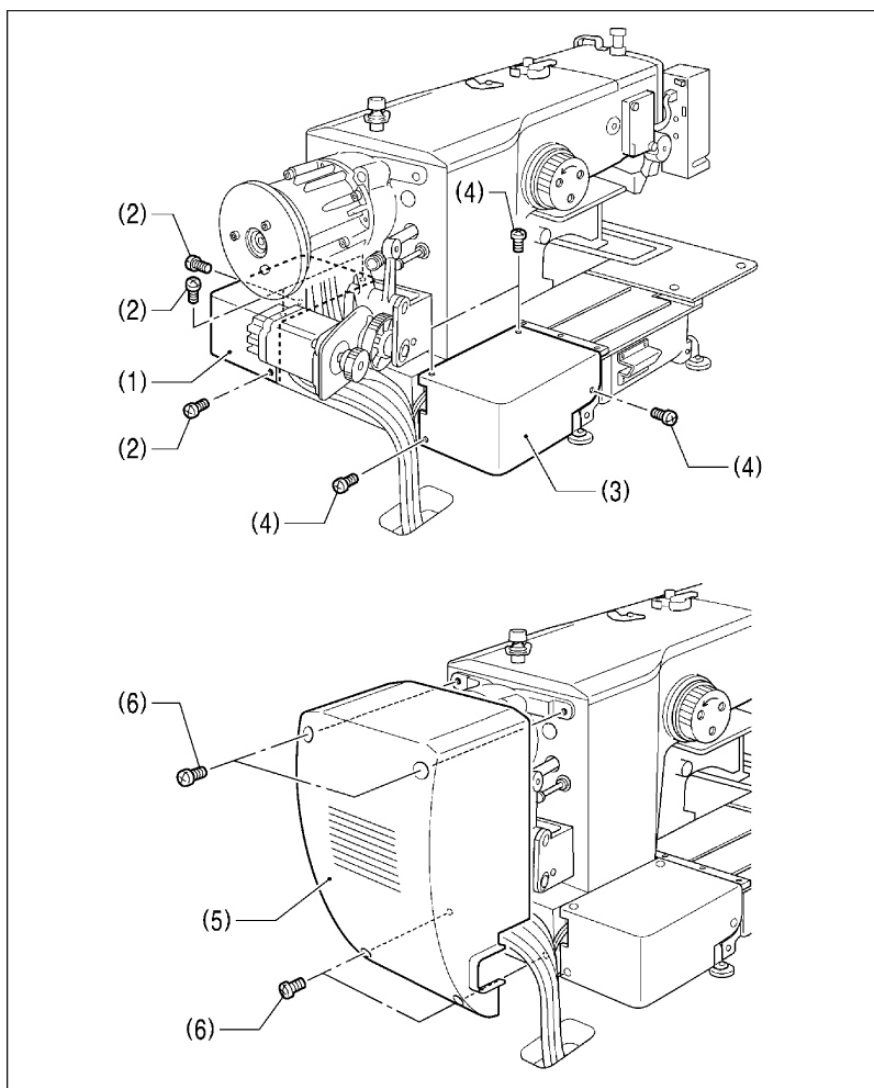


Attach all safety devices before using the sewing machine.
If the machine is used without these devices attached, injury may result.



- (1) Eye guard assembly
- (2) Plain washers [2 pcs.]
- (3) Screws [2 pcs.]

3-11. Installing the motor cover



- (1) Motor cover R
- (2) Screws [4 pcs.]
- (3) Motor cover L
- (4) Screws [4 pcs.]
- (5) Motor cover
- (6) Screws [4 pcs.]

NOTE:

Be careful not to clamp the cords when installing the motor cover.

3-12. Lubrication

⚠ CAUTION



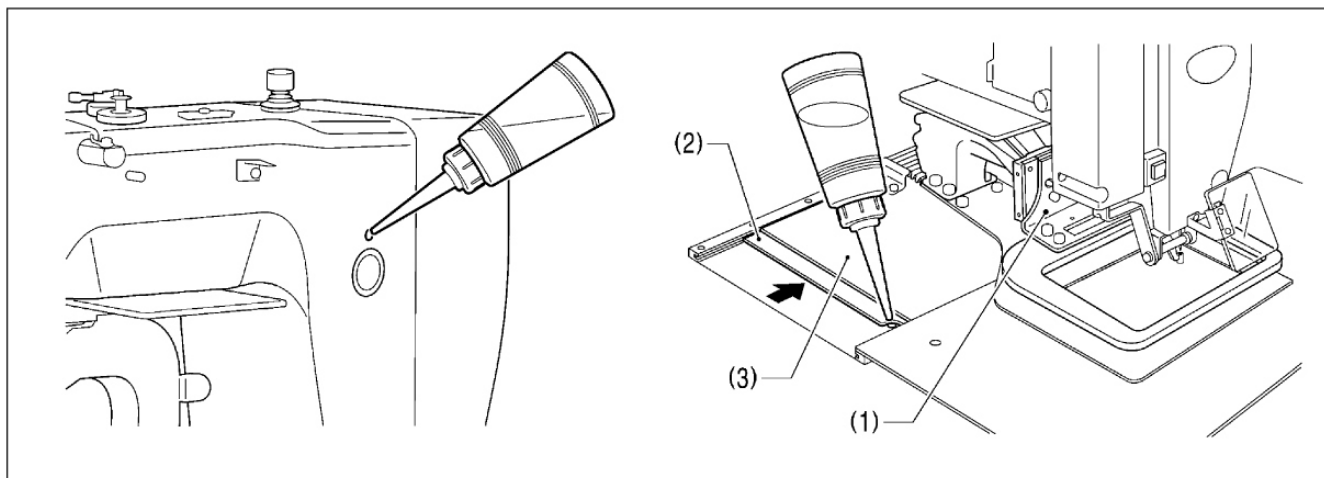
Do not connect the power cord until lubrication is complete.
If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.



Be sure to wear protective goggles and gloves when handling the lubricating oil and grease, so that they do not get into your eyes or onto your skin. If the oil and grease get into your eyes or onto your skin, inflammation can result. Furthermore, do not drink or eat the lubricating oil or grease. They may cause diarrhea or vomiting. Keep the oil out of the reach of children.

The sewing machine should always be lubricated and the oil supply replenished before it is used for the first time, and also after long periods of non-use.

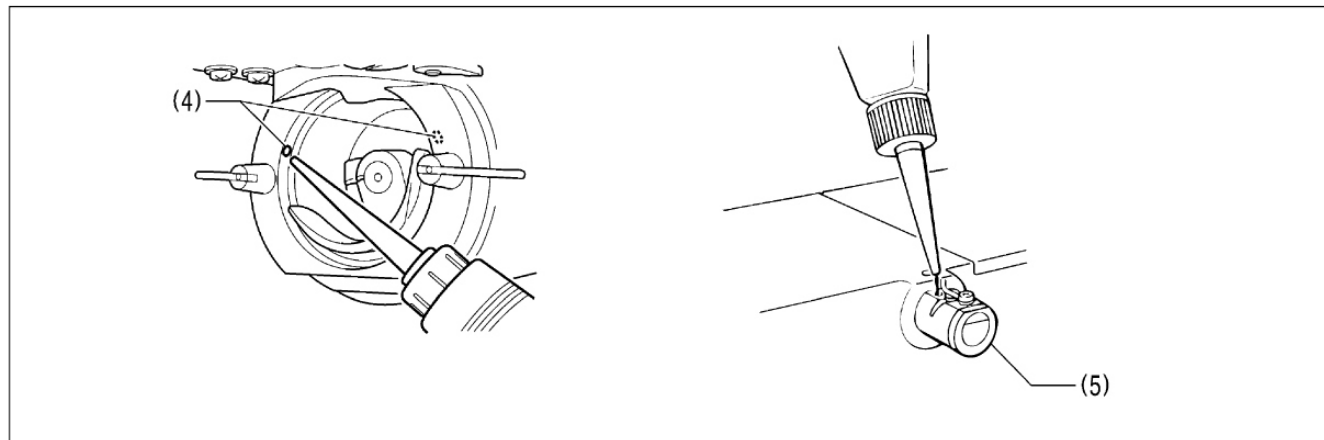
Use only the lubricating oil specified by our company.



1. Fill the arm-side oil tank with oil.
2. Move the work clamp arm (1) as far as it will go to the right when looking from the front of the sewing machine, and then slide the outer cover L (2) into the inner cover L (3) so that the lubrication hole in the bed is visible. Pour oil into the bed side oil tank through this hole.

NOTE:

Be sure to fill the machine with oil when the oil level is down to about one-third full in the oil sight glass. If the oil drops below the one-third level, there is the danger that the machine may seize during operation.



3. Pour oil in through the two holes (4) of the shuttle race base assembly so that the felt is lightly moistened.

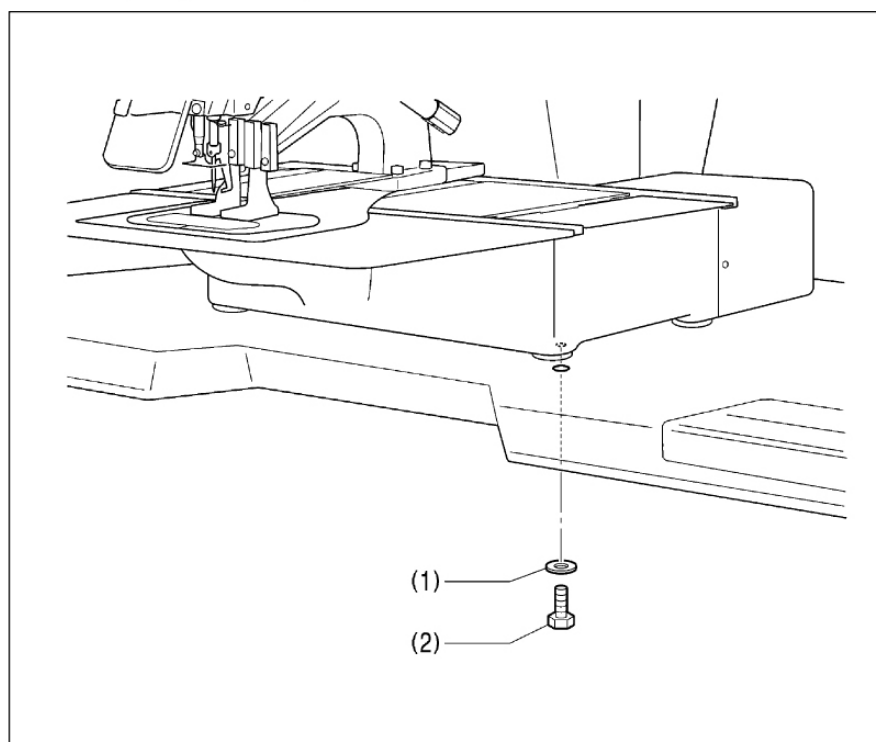
NOTE:

If there is no more oil on the felt of the shuttle race base assembly, problems with sewing may result.

4. If using the liquid cooling tank (5), fill it with silicon oil (100 mm²/s).

3-13. Installing the machine head fixing bolt

When transporting the sewing machine, secure the machine head to the table with the machine head fixing bolt.



- (1) Plain washer
- (2) Machine head fixing bolt

NOTE:

When operating the sewing machine, remove the machine head fixing bolt.

4. PREPARATION BEFORE SEWING

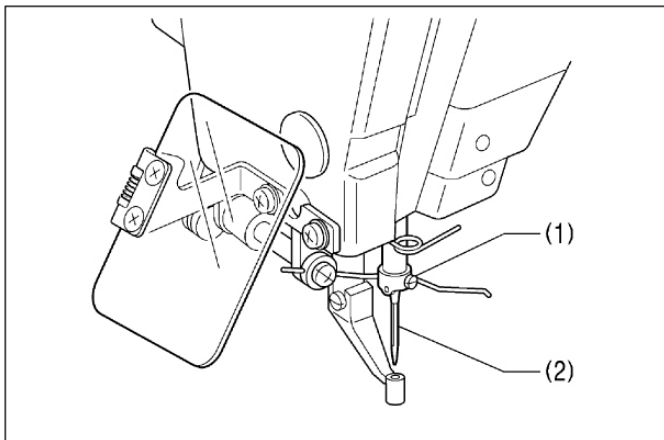
4-1. Installing the needle

⚠ CAUTION



Turn off the power switch before installing the needle.

If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.



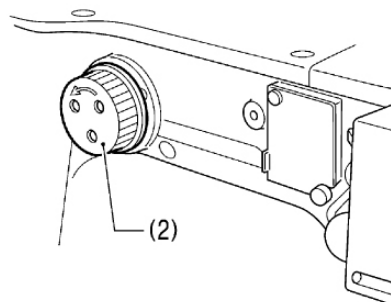
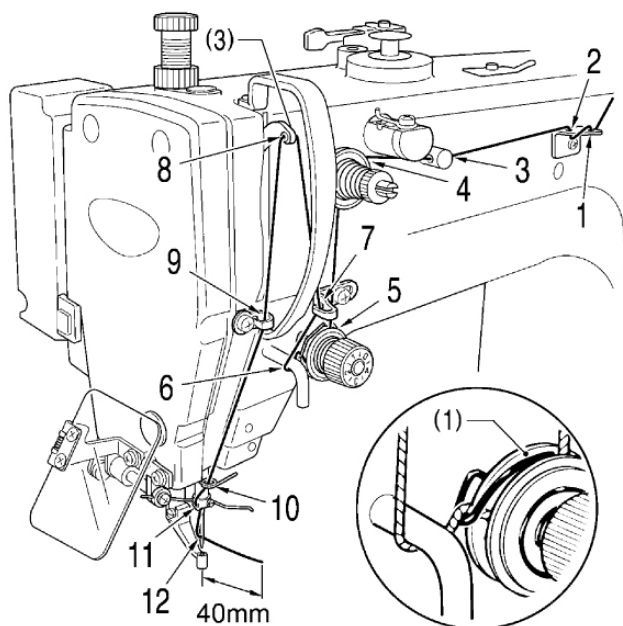
1. Loosen the set screw (1).
2. Insert the needle (2) in a straight line as far as it will go, making sure that the long groove on the needle is at the front, and then securely tighten the set screw (1).

4-2. Threading the upper thread

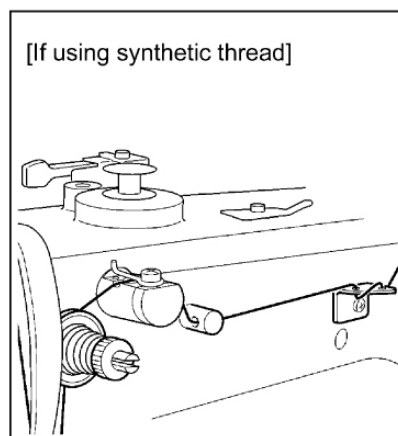
Thread the upper thread correctly as shown in the illustration below.

* When using threading mode for threading, the tension discs (1) will open so that the thread can be threaded more easily. (Refer to following page.)

[If using cotton thread or spun thread]



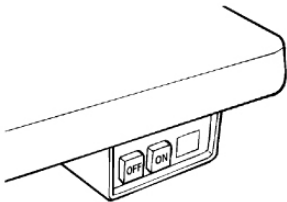
[If using synthetic thread]



- Turn the machine pulley (2) and raise the thread take-up (3) to its highest position before threading the upper thread. (This will make threading easier and it will prevent the thread from coming out at the sewing start.)
- When threading the thread through the needle, allow a distance of approximately 40 mm between the needle hole and the end of the thread.
If the trailing length of the thread is too long, it may cause the thread to become tangled.

<Threading mode>

Threading mode is safe because the sewing machine will not start even when the foot switch is depressed.

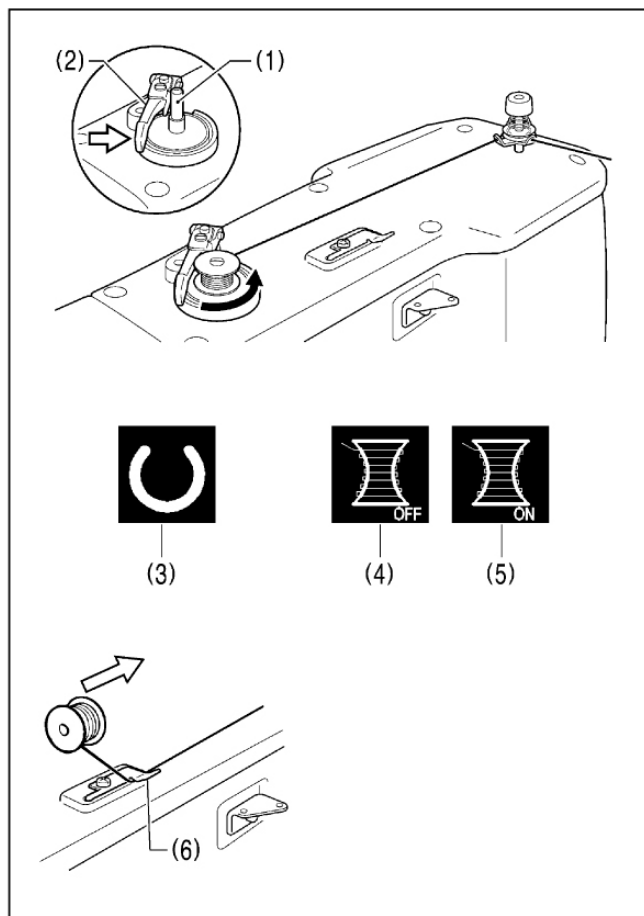
1	 Turn on the power switch.
2	Press the home position key  Press the threading key, and the key   The work clamp will drop.
3	Threading the thread.
4	Ending threading mode Press the threading key, and the key change   The work clamp will return to where it was before threading mode was started.

4-3. Winding the lower thread

CAUTION



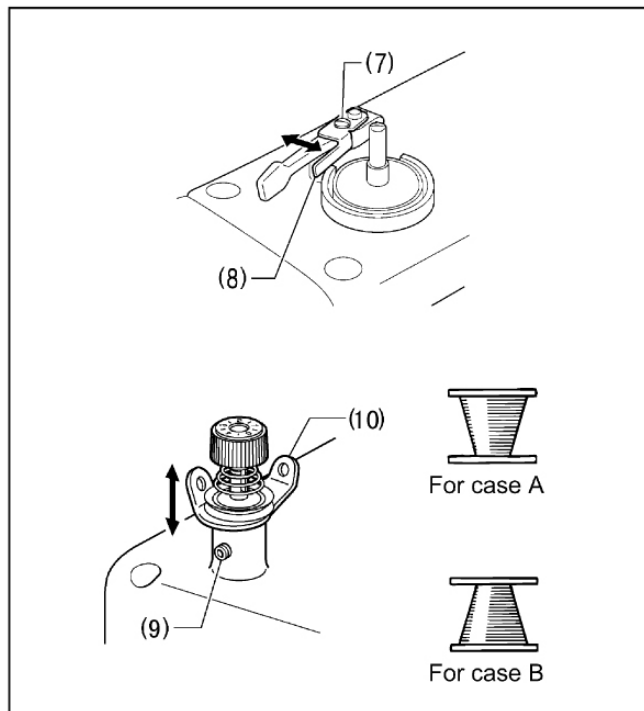
Do not touch any of the moving parts or press any objects against the machine while winding the lower thread. Injury or damage to the sewing machine may result.



1. Place the bobbin onto the bobbin winder shaft(1).
2. Thread the thread as shown in the illustration, wind the thread around the bobbin several times, and then press the bobbin presser arm(2).
3. Turn on the power switch.
4. Press the time position key(3), the sewing machine move to the time position.
5. Check that the needle does not touch the clamp, and then press the bobbin winder key(4), the bobbin winder key(4) change to key(4) change to the bobbin winder key(5), and it keep in the state "ON", depress the foot switch to the 2nd step, and it will start wind.
(If using a two-pedal foot switch, depressing the start switch two-pedal foot switch.)
6. Once winding of set amount of lower thread (80%-90% of the bobbin capacity) is completed, the bobbin presser arm(2) will return automatically.
7. Remove the bobbin, hook the thread onto the knife(6), and then pull the bobbin in the direction of the arrow to cut the thread.

Adjusting the bobbin winding amount

Loosen the screw (7) and move the bobbin presser (8) to adjust.



If the thread winds onto the bobbin unevenly

Loosen the set screw (9) and move the bobbin winder tension assembly (10) up and down to adjust.

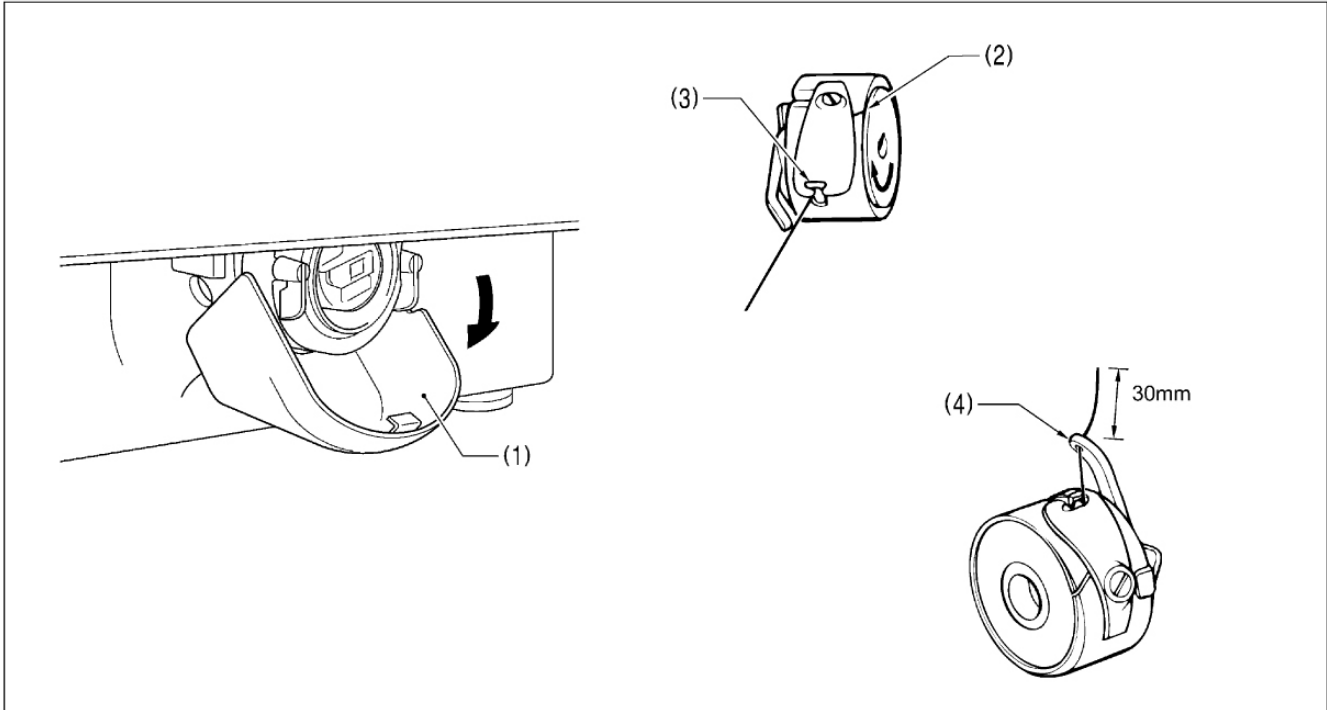
* For case A, move the bobbin winder tension assembly (10) down, and for case B, move it upward.

4-4. Installing the bobbin case

! CAUTION

Turn off the power switch before installing the bobbin case.

If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.



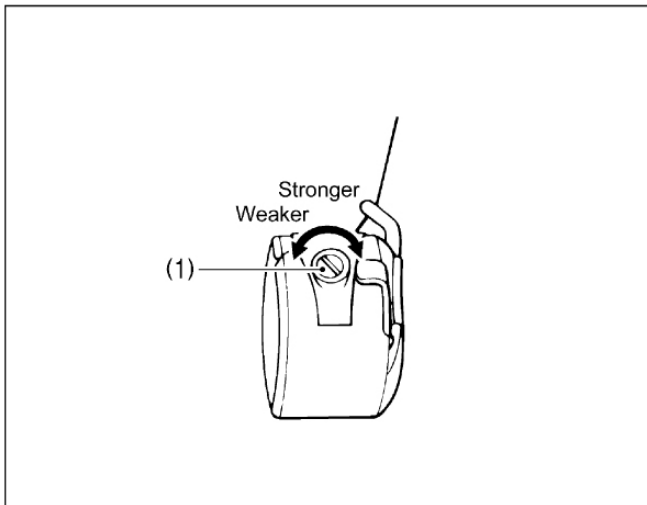
1. Pull the shuttle race cover (1) downward to open it.
2. While holding the bobbin so that the thread winds to the right, insert the bobbin into the bobbin case.
3. Pass the thread through the slot (2) and pull it out from the thread hole (3).
4. Check that the bobbin turns in the direction of the arrow when the thread is pulled.
5. Pass the thread through the lever thread hole (4), and then pull out approximately 30 mm of thread.
6. Hold the latch on the bobbin case and insert the bobbin case into the rotary hook.

4-5. Thread tension

[Thread tension reference]

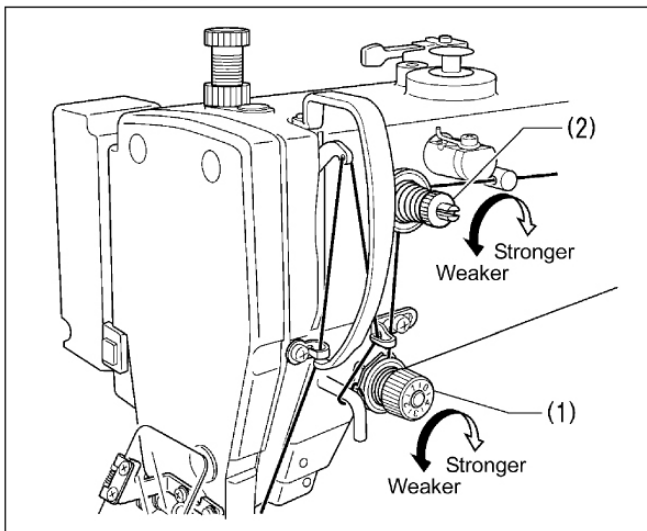
Specifications	Heavy-weight materials (-01)	Medium-weight materials (-02)
Upper thread	#20 or similar	#50 or similar
Lower thread	#20 or similar	#50 or similar
Upper thread tension (N)	1.4 – 1.8	0.8 – 1.2
Lower thread tension (N)	0.2 – 0.3	
Pre-tension (N)	0.1 – 0.6	0.1 – 0.3
Needle	DP x 17 #19	DP x 5 #16
Normal sewing speed	2,000 rpm	2,000 rpm

4-5-1. Lower thread tension



Adjust the thread tension to the weakest possible tension by turning the thread tension nut (1) until the bobbin case will not drop by its own weight while the thread end coming out of the bobbin case is held.

4-5-2. Upper thread tension



1. Turn the tension nut (1) (main tension) to adjust the tension as appropriate for the material being sewn.
2. Use the tension nut (2) (sub tension) to adjust the upper thread trailing length to about 40 mm.

5. SEWING

! CAUTION



Turn off the power switch at the following times.

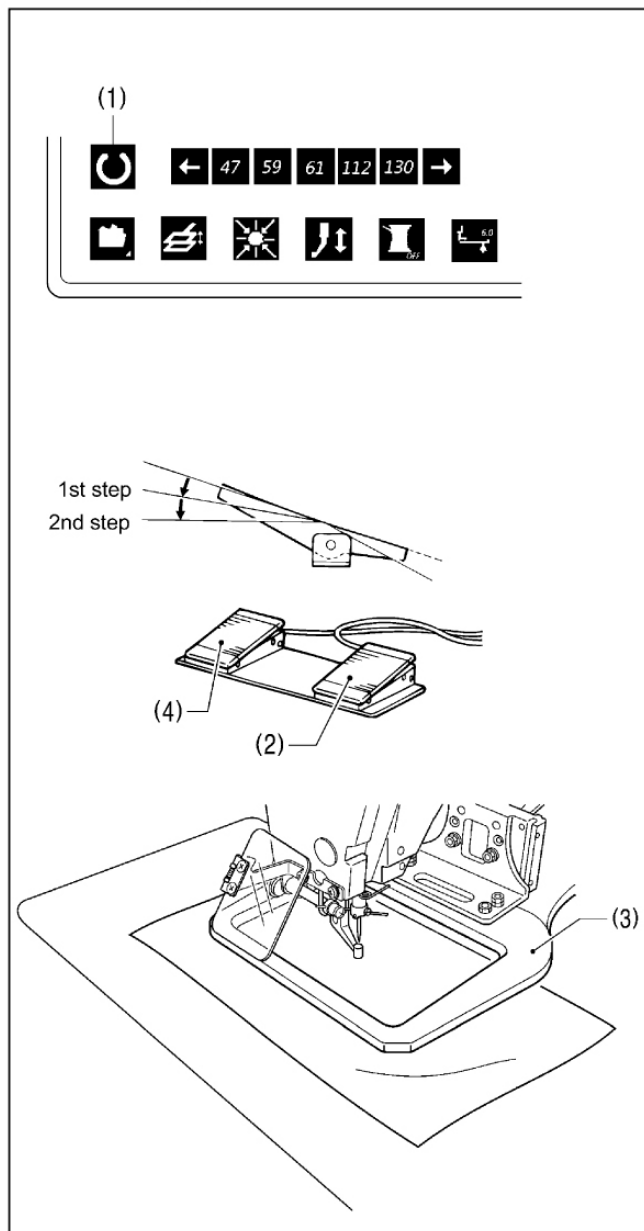
If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.

- When threading the needle
- When replacing the bobbin and needle
- When not using the machine and when leaving the machine unattended



Do not touch any of the moving parts or press any objects against the machine while sewing, as this may result in personal injury or damage to the machine.

5-1. Sewing



1. Turn on the power switch.
2. Press the or key to turn on the page, and press the data key to select the sewing program.

3. Press the time position key (1), the sewing machine will move to the loading position.

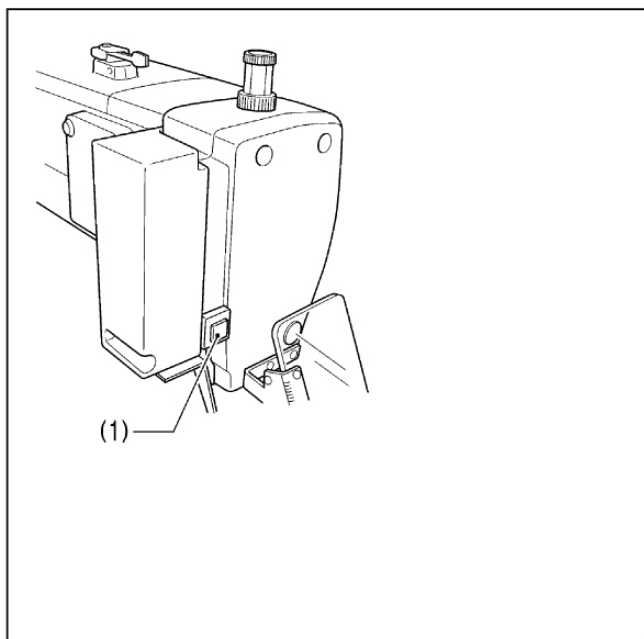
4. Place the article to be sewn underneath the work clamp (3).
5. Depress the foot switch to the 1st step.
(If using a two-pedal foot switch, depress the work clamp switch (4).)
 - The work clamp (3) will drop.
6. Depress the foot switch to the 2nd step.
(If using a two-pedal foot switch, depress the start switch (2).)
 - The sewing machine will start sewing.
7. When sewing is complete, the thread will be trimmed and the work clamp (3) will rise.

Use a work clamp that hold the article being sewn firmly, without allowing it to slip.

If using the standard work clamp and feed plate and the article being sewn is slipping, take measures to stop the work clamp and feed plate from being slippery.

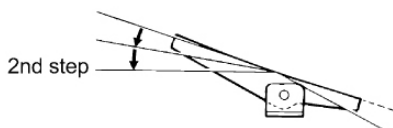
5-2. Using the STOP switch

If you press the STOP switch (1) while sewing or test feeding is in progress, the sewing machine will stop immediately.



<Continuing sewing from a stopping point>

If you have pressed the STOP switch (1) at times such as if the thread breaks while sewing or the lower thread runs out, you can resume sewing from the point where the thread ran out.

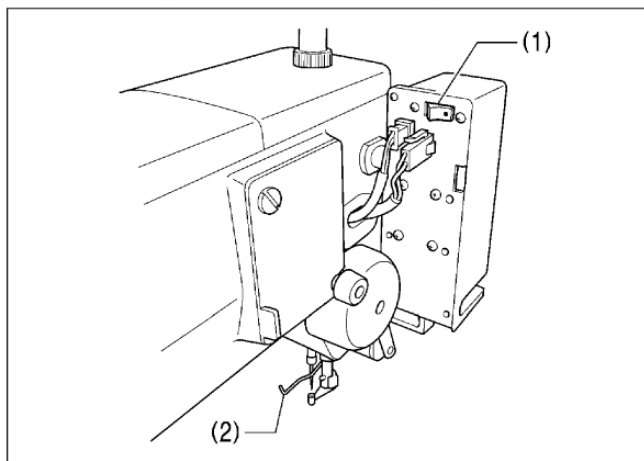


Depress the foot switch to the 2nd step.

(If using a two-pedal foot switch, depress the start switch.)

- The sewing machine will start operating and sewing will start.

5-3. Using the thread wiper switch



The thread wiper switch (1) can be used to turn the thread wiper (2) on and off.

6. CLEANING

! CAUTION



Turn off the power switch before carrying out cleaning.

If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.

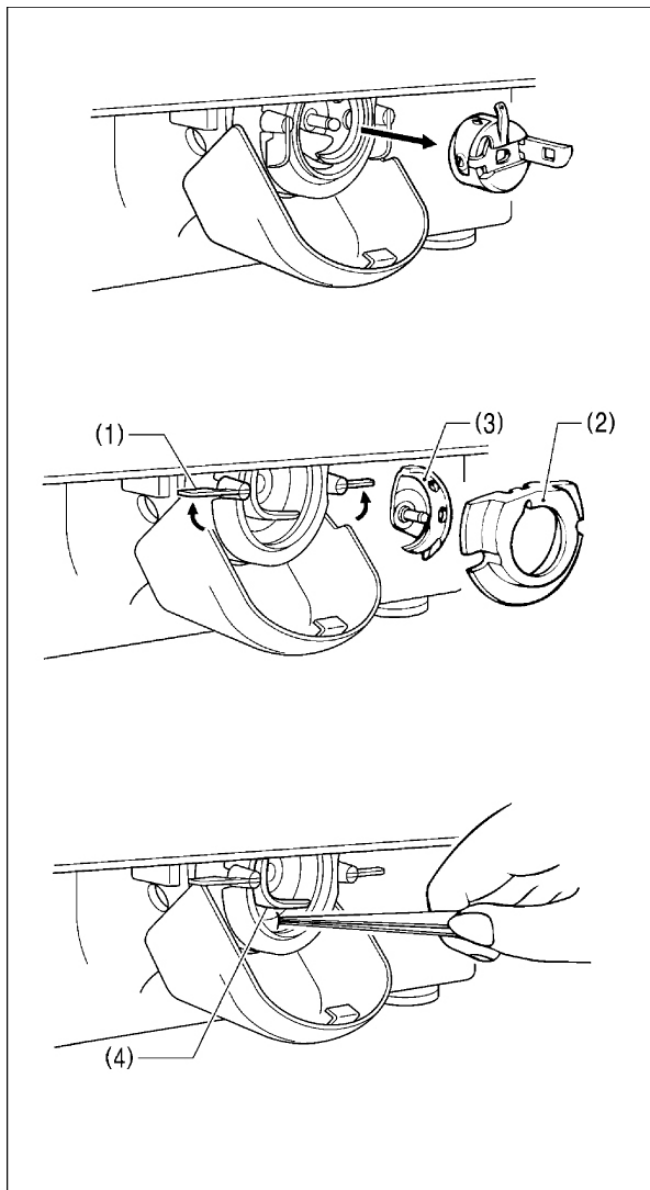


Be sure to wear protective goggles and gloves when handling the lubricating oil and grease, so that they do not get into your eyes or onto your skin. If the oil and grease get into your eyes or onto your skin, inflammation can result.

Furthermore, do not drink or eat the lubricating oil or grease. They may cause diarrhea or vomiting.

Keep the oil out of the reach of children.

6-1. Cleaning the rotary hook

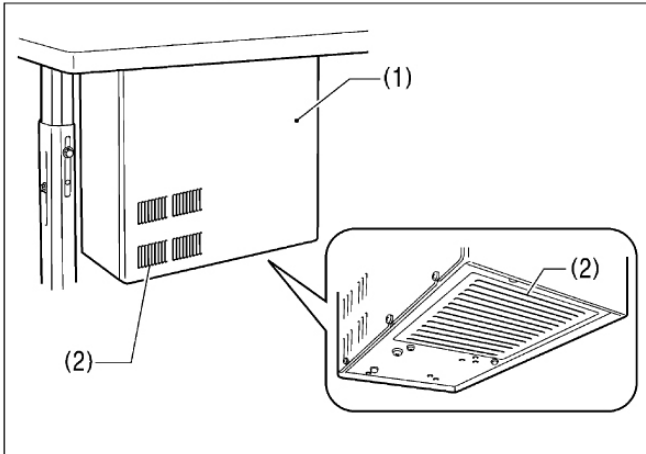


1. Pull the shuttle race cover downward to open it, and then remove the bobbin case.

2. Open the setting claw (1) in the direction indicated by the arrow, and then remove the shuttle race base (2) and the shuttle hook (3).

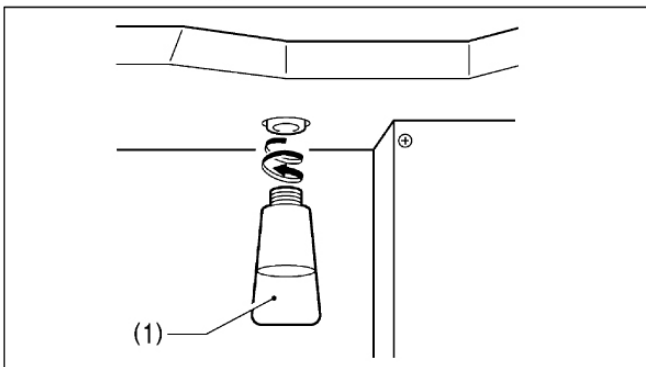
3. Clean all the dust and thread ends from around the driver (4), the top of the rotary hook thread guide and the shuttle race.

6-2. Cleaning the control box air inlet ports



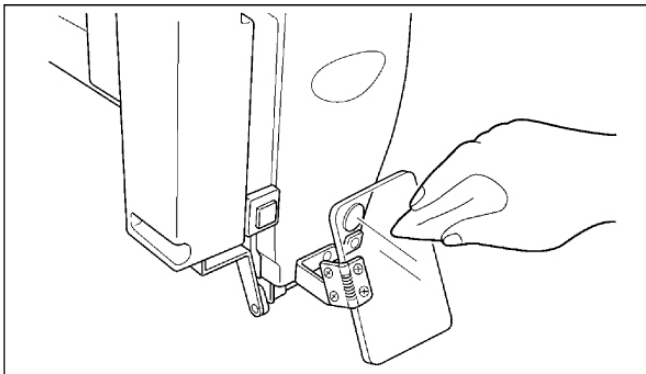
Use a vacuum cleaner to clean the filter in the air inlet ports (2) of the control box (1) at least once a month.

6-3. Draining the oil



1. Remove and empty the waste oil tank (1) whenever it is full.
2. After emptying the waste oil tank (1), screw it back into its original position.

6-4. Cleaning the eye guard

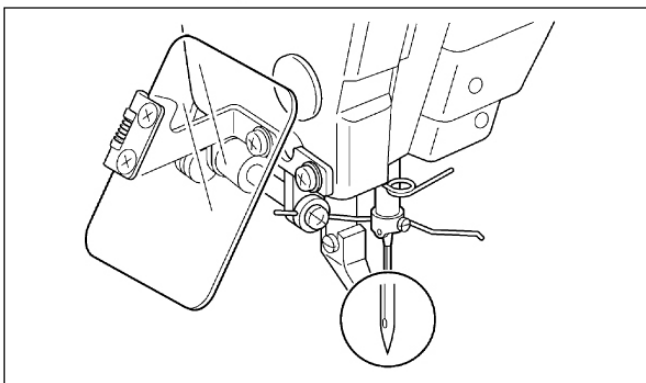


Wipe the eye guard clean with a soft cloth.

NOTE:

Do not use solvents such as kerosene or thinner to clean the eye guard.

6-5. Checking the needle



Always check that the tip of the needle is not broken and also that the needle is not bent before starting sewing.

6-6. Lubrication

Lubricate the sewing machine while referring to "3-11. Lubrication".

7. STANDARD ADJUSTMENTS

⚠ CAUTION



Maintenance and inspection of the sewing machine should only be carried out by a qualified technician.



Ask your Brother dealer or a qualified electrician to carry out any maintenance and inspection of the electrical system.



Turn off the power switch and disconnect the power cord before carrying out the following operations. If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.

- Inspection, adjustment and maintenance
- Replacing consumable parts such as the rotary hook



Hold the machine head with both hands when tilting it back or returning it to its original position.

In addition, do not apply excessive force when tilting back the machine head. The sewing machine may become unbalanced and fall down, and serious injury or damage to the sewing machine may result.

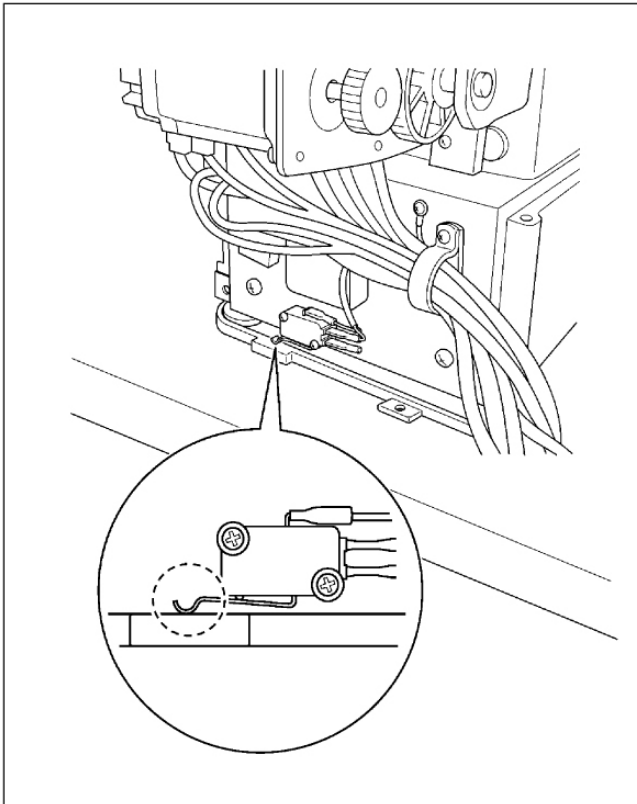


If the power switch needs to be left on when carrying out some adjustment, be extremely careful to observe all safety precautions.



If any safety devices have been removed, be absolutely sure to re-install them to their original positions and check that they operate correctly before using the machine.

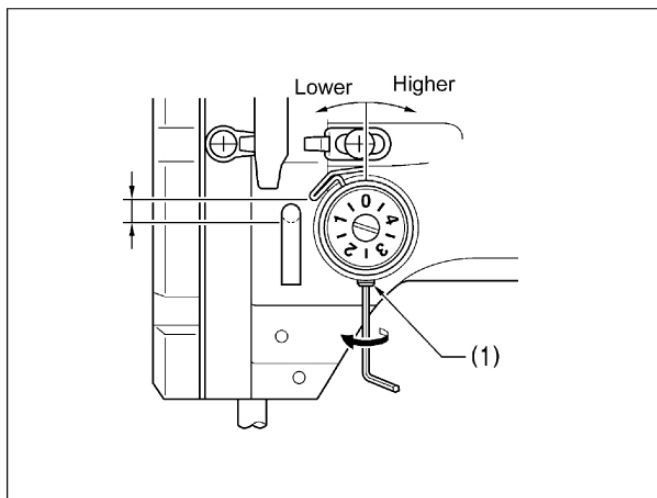
7-1. Checking the machine head switch



Check that the machine head switch is turned on as shown in the illustration.

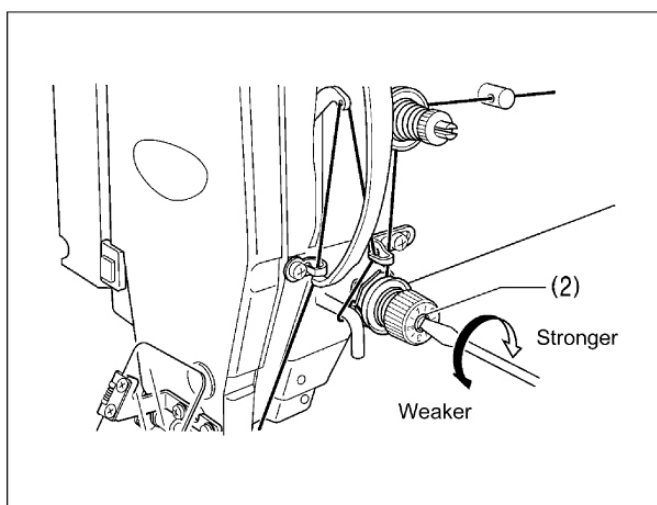
7-2. Thread take-up spring

Specifications	Heavy-weight materials (-01)	Medium-weight materials (-02)
Thread take-up spring height (mm)	7 – 10	
Thread take-up spring tension (N)	0.6 – 1.2	0.2 – 0.5



<Thread take-up spring height>

Loosen the set screw (1) and turn the adjuster to adjust.



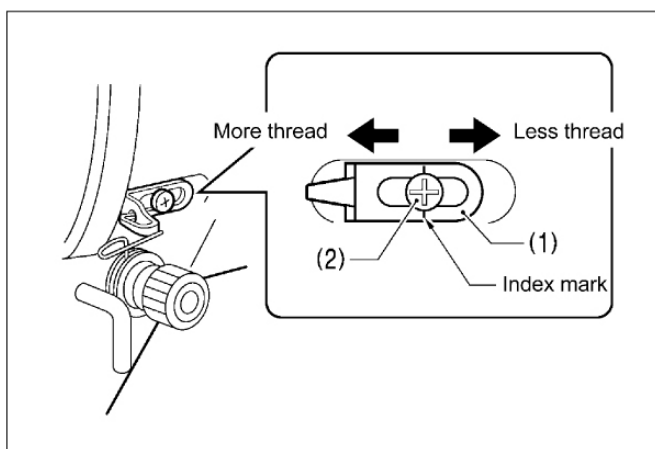
<Thread take-up spring tension>

Turn the tension stud (2) with a screwdriver to adjust the tension.

NOTE:

If the thread tension spring is not adjusted correctly, the upper thread trailing length will be uneven after thread trimming.

7-3. Arm thread guide R

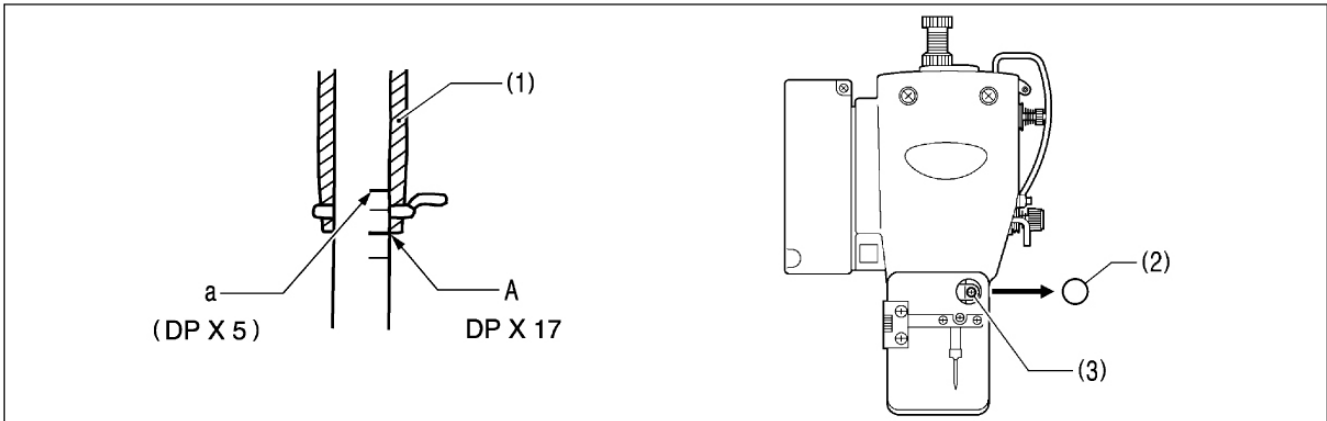


The standard position of arm thread guide R (1) is when the screw (2) is aligned with the index mark.

Loosen the screw (2) and move arm thread guide R (1) to adjust.

- * When sewing heavy material, move arm thread guide R (1) to the left. (The thread take-up amount will become greater.)
- * When sewing light material, move arm thread guide R (1) to the right. (The thread take-up amount will become less.)

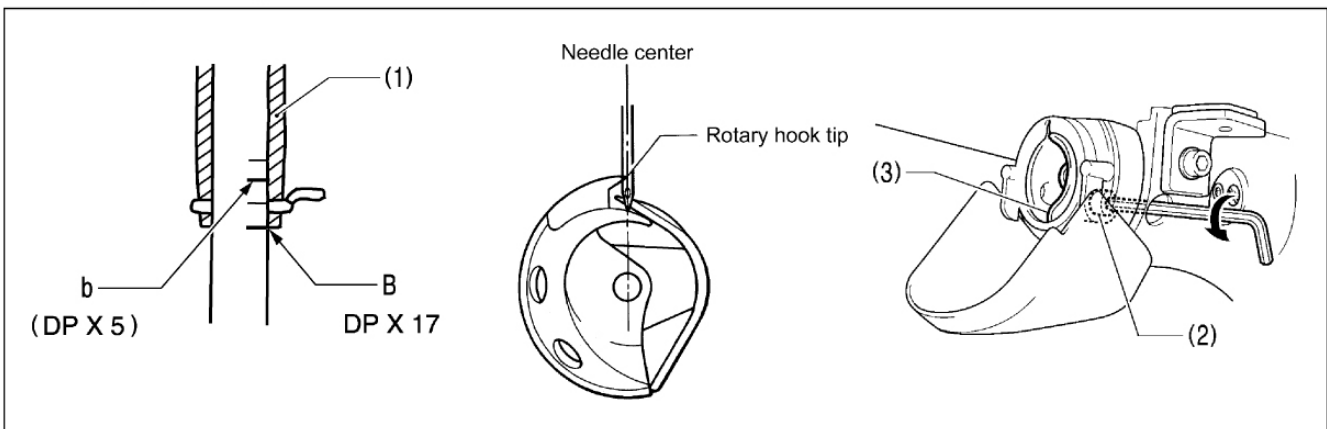
7-4. Adjusting the needle bar height



Turn the machine pulley to move the needle bar to the lowest position. Then remove the rubber plug (2), loosen the screw (3) and then move the needle bar up or down to adjust so that the second reference line from the bottom of the needle bar (reference line A) is aligned with the lower edge of the needle bar bush (1).

* If using a DP X 5 needle, use the highest reference line (reference line a).

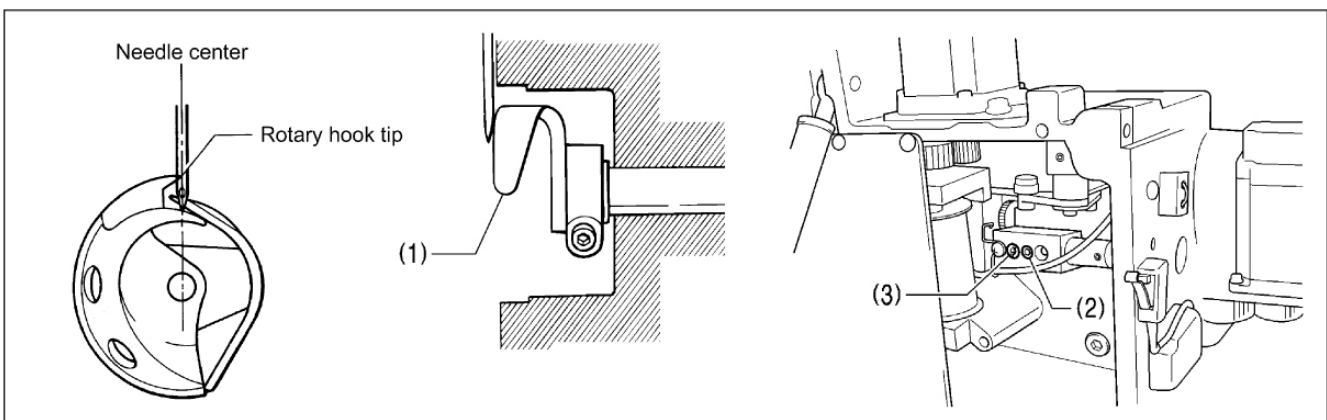
7-5. Adjusting the needle bar lift amount



Turn the machine pulley to raise the needle bar from the lowest position until the lowest reference line on the needle bar (reference line B) is aligned with the lower edge of the needle bar bush (1), and then loosen the bolt (2) and move the driver (3) so that the tip of the rotary hook is aligned with the center of the needle.

* If using a DP X 5 needle, use the second reference line from the top of the needle bar (reference line b).

7-6. Adjusting the driver needle guard

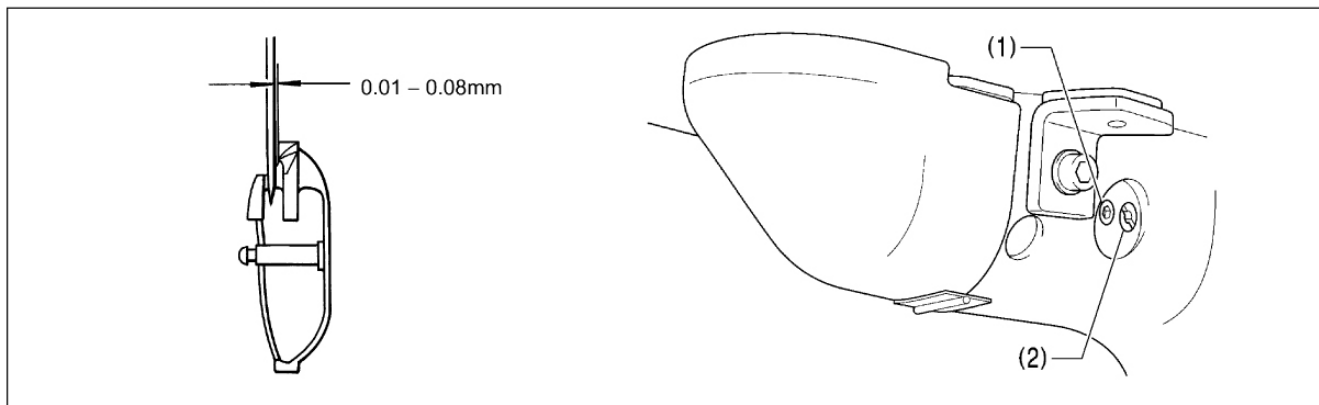


Turn the machine pulley to align the tip of the rotary hook with the center of the needle, and then loosen the set screw (2) and turn the eccentric shaft (3) to adjust so that the driver needle guard (1) is touching the needle.

NOTE:

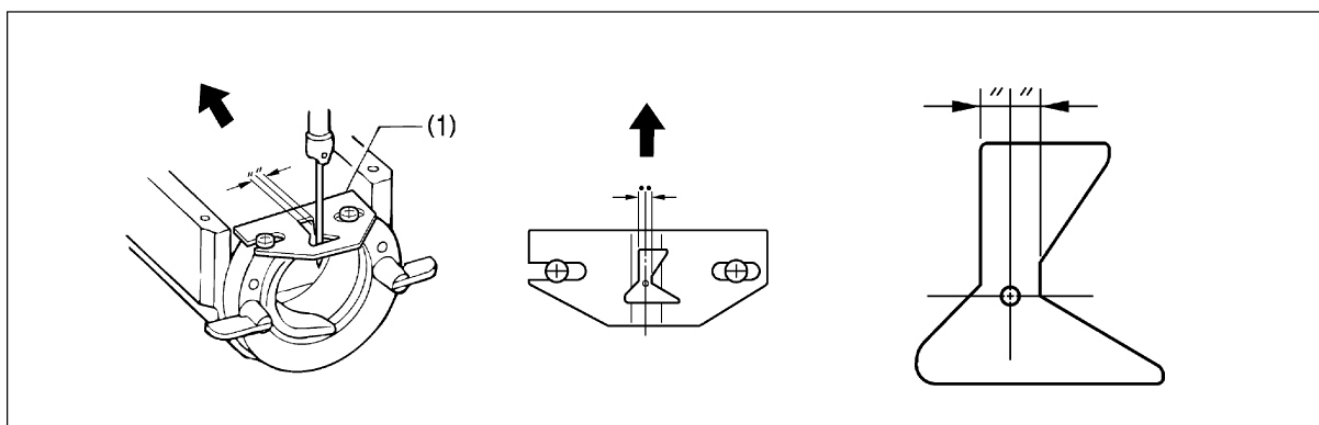
If it crosses the needle more than necessary, it will place a load on the needle, or it may cause poor thread tension. Furthermore, if it does not cross the needle at all, the tip of the rotary hook will interfere with the needle and skipped stitches may occur.

7-7. Adjusting the needle clearance



Turn the machine pulley to align the tip of the rotary hook with the center of the needle, and then loosen the set screw (1) and turn the eccentric shaft (2) to adjust so that the clearance between the needle and the rotary hook is 0.01 – 0.08 mm.

7-8. Adjusting the shuttle race thread guide



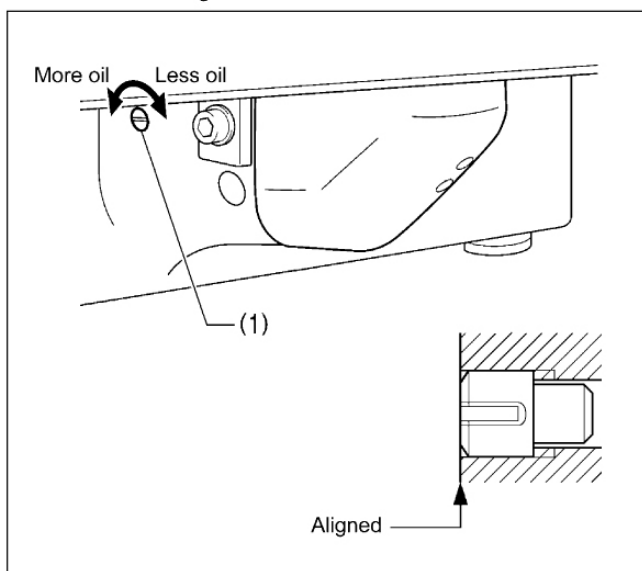
Install the shuttle race thread guide (1) by pushing it in the direction of the arrow so that the needle groove is aligned with the center of the needle plate hole.

NOTE:

If the shuttle race thread guide is in the wrong position, thread breakages, soiled thread or tangling of the thread may occur.

The position of the shuttle race thread guide is adjusted at the time of shipment from the factory. It should not be changed if possible.

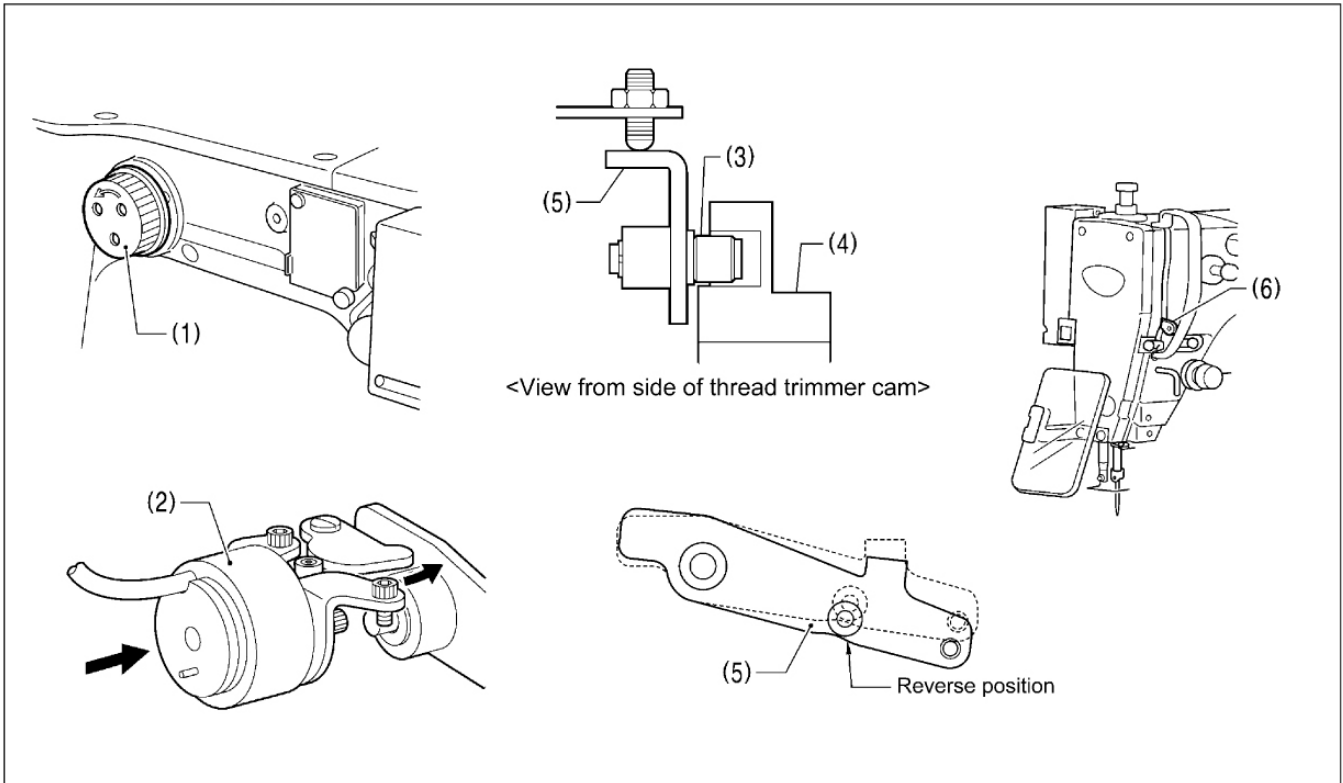
7-9. Rotary hook lubrication amount



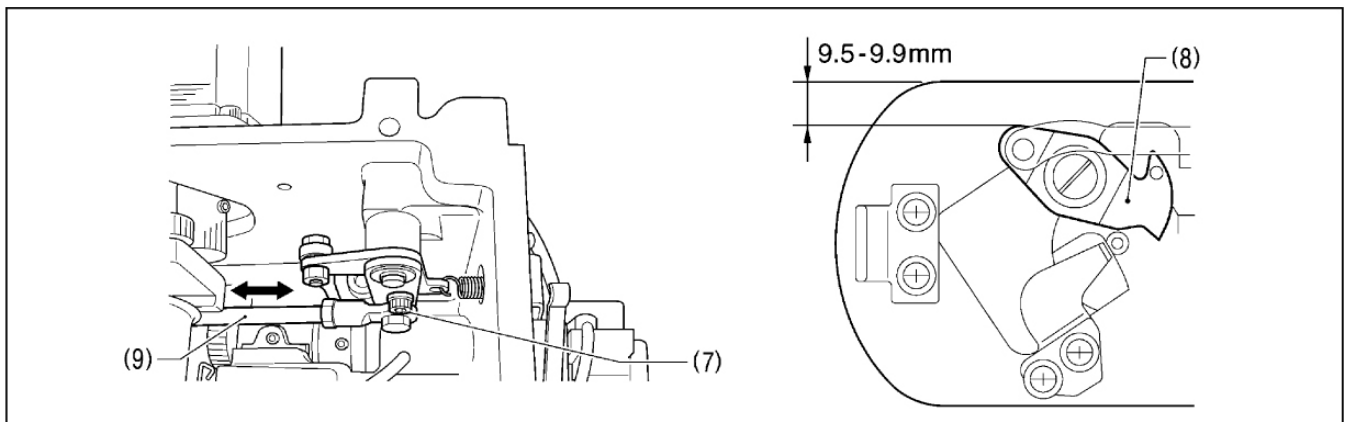
The optimum position is when the head of the set screw (1) is aligned with the edge of the bed. The rotary hook lubrication amount can be adjusted within three turns to the right from that position.

- If the set screw (1) is turned clockwise, the lubrication amount becomes smaller.
- If the set screw (1) is turned counterclockwise, the lubrication amount becomes greater.

7-10. Adjusting the position of the movable knife

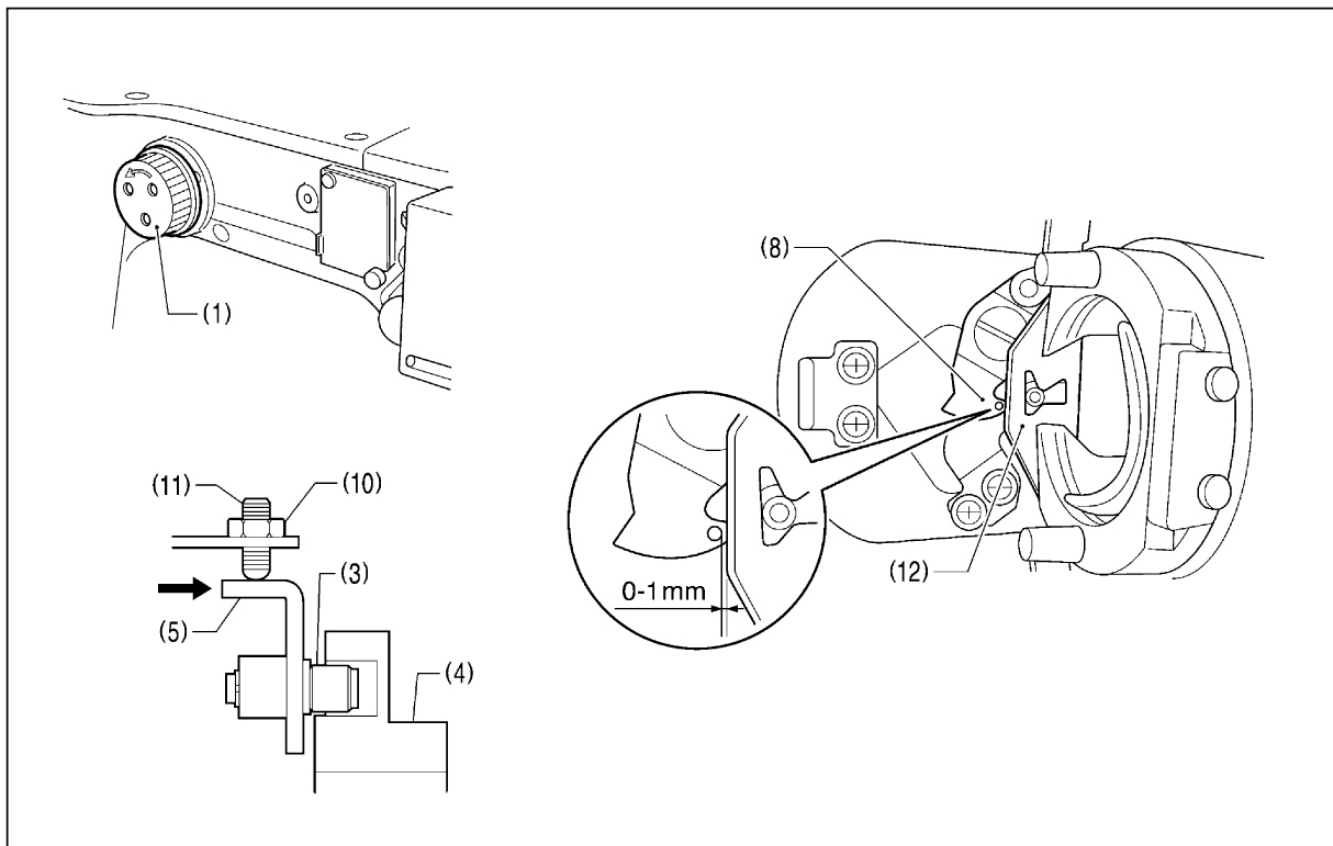


1. Open the top cover and tilt back the machine head.
2. Turn the pulley (1) by hand to lower the needle bar to its lowest position, and push the thread trimmer solenoid (2) as far as it will go.
3. With the collar (3) inserted into the groove of the thread trimmer cam (4), turn the pulley (1) by hand to set the driving lever (5) to the reverse position (when the thread take-up (6) is close to its lowest position).



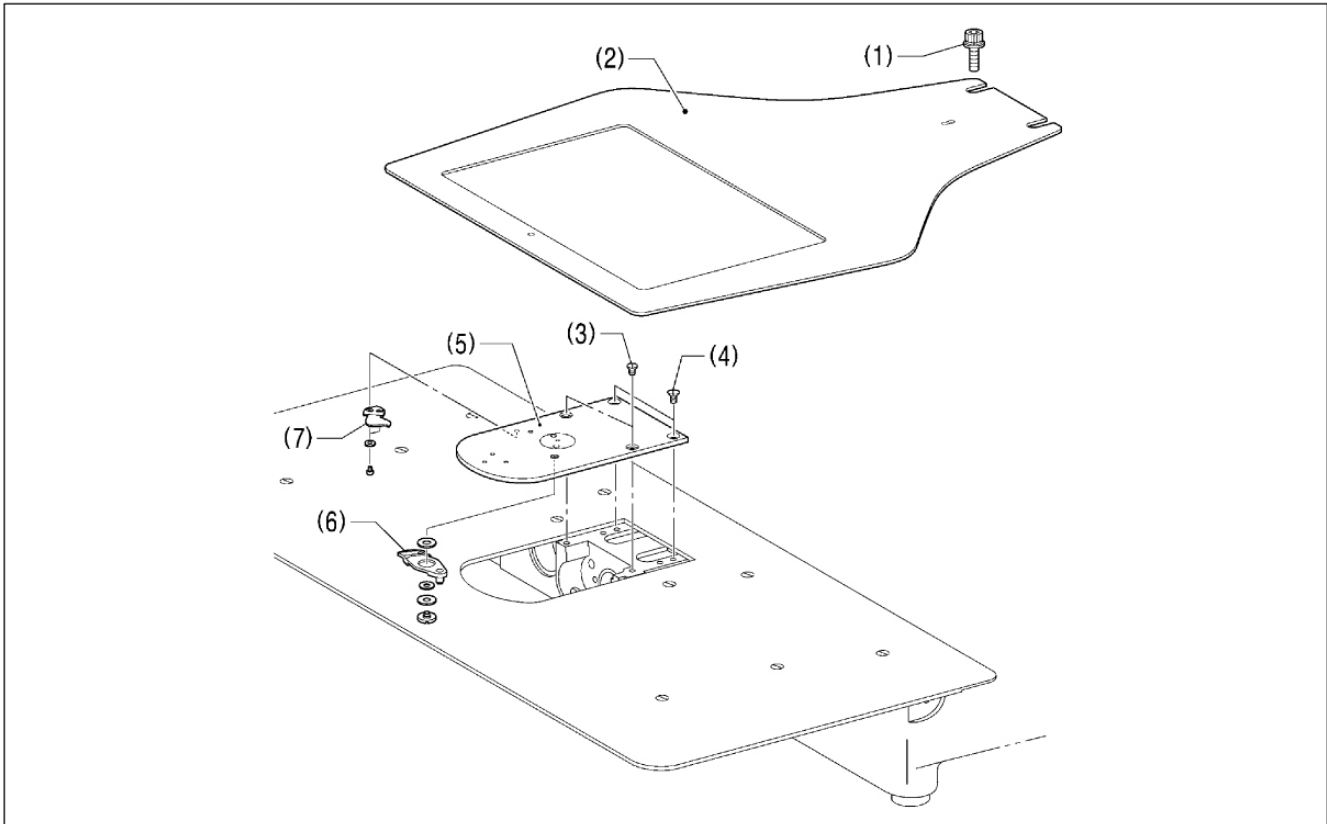
4. Loosen the bolt (7).
5. Move the thread trimming rod H (9) forward or back to adjust so that the distance from the ridge line on the right side of the needle plate to the ridge line on the movable knife (8) is 9.5 – 9.9 mm.
6. After tightening the bolt (7), check the above position once more.

7. STANDARD ADJUSTMENTS

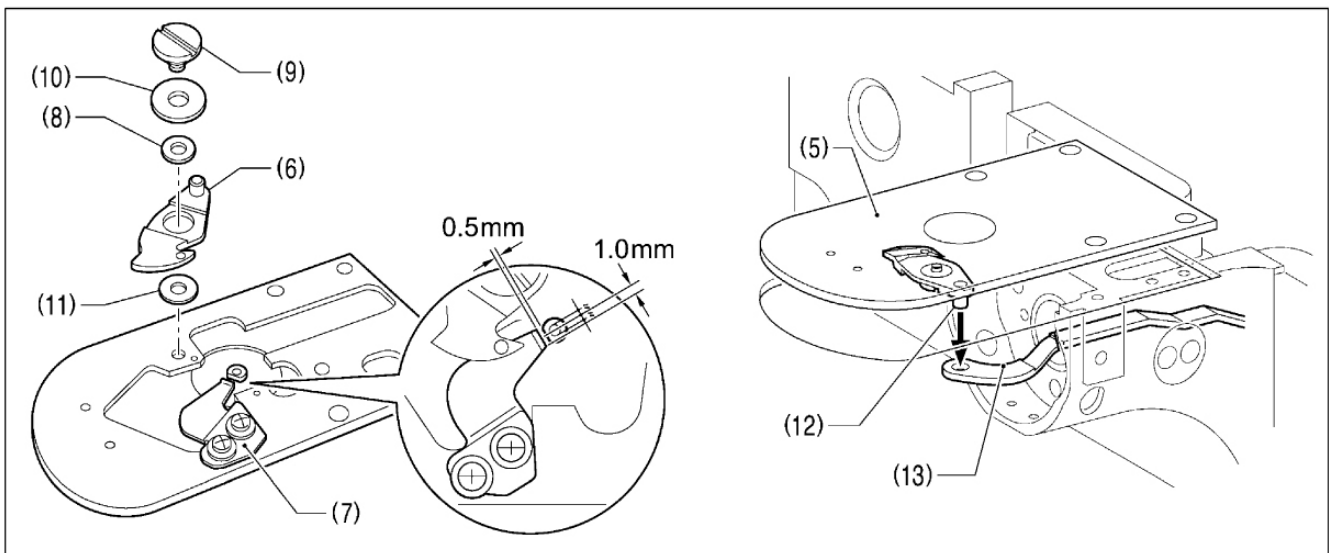


7. Turn the pulley (1) by hand to move the needle bar to its lowest position.
8. Loosen the nut (10), tighten the set screw (11) until the collar (3) is touching the inside of the groove in the thread trimmer cam (4), and then turn it back in the counterclockwise direction by approximately 1/4 of a turn.
9. Tighten the nut (10), and then check that the collar (3) is not touching the inside of the groove in the thread trimmer cam (4). In addition, push the driving lever (5) by hand toward the thread trimmer cam until the collar (3) touches the groove of the thread trimmer cam (4), and then check that the driving lever (5) returns smoothly to its original position when it is released.
10. Check that there is a gap of about 0 - 1 mm between the outside of the hole in the movable knife (8) and the ridge line on the shuttle race thread guide (12) when there is still play between the parts.

7-11. Replacing the movable and fixed knives

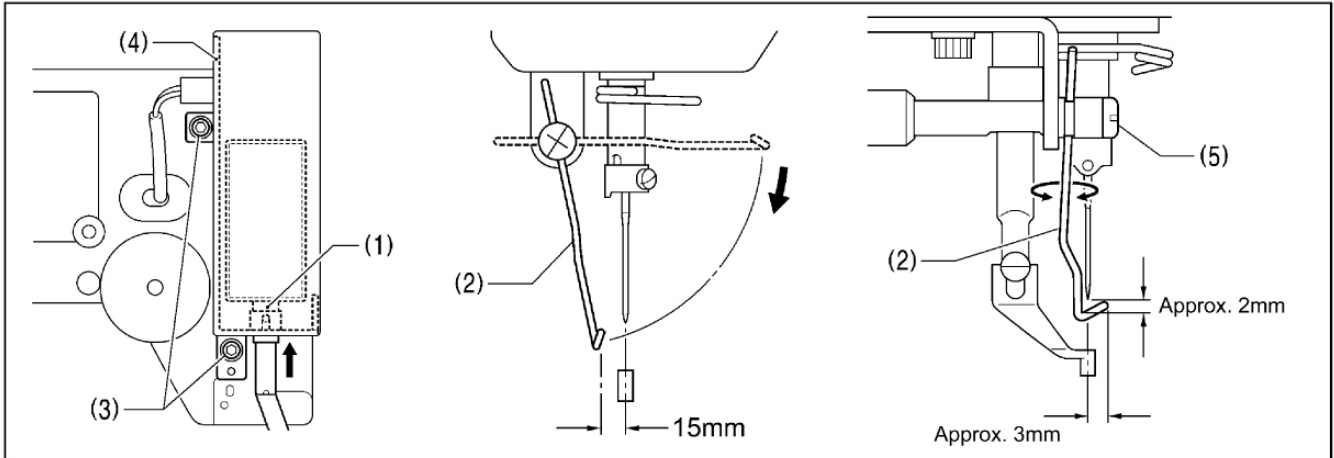


1. Loosen the two bolts (1) and then remove the feed plate (2).
2. Open the shuttle race cover, remove the two screws (3) and the two flat screws (4), and then remove the needle plate (5).
3. Remove the movable knife (6) and the fixed knife (7).



4. Install the new fixed knife (7) in the position shown in the illustration.
5. Apply grease to the outside of the collar (8) and to the shoulder screw (9), and then install the new movable knife (6) together with the thrust washer (10) and the movable knife spacer (11).
6. Check that the movable knife (6) and fixed knife (7) cut the thread cleanly. Replace the movable knife spacer with accessory spacers ($t=0.2, 0.3, 0.4$) so that the knives trim the thread accurately.
 * If the knife pressure is too weak and the thread is not completely cut, use a thinner movable knife spacer.
 * If the knife pressure is too strong and the movable knife (1) turns stiffly, use a thicker movable knife spacer.
7. Apply grease to the pin (12), place it into the movable knife connecting plate (13), and install it to the needle plate (5).
8. Check that the needle is aligned with the center of the needle hole.

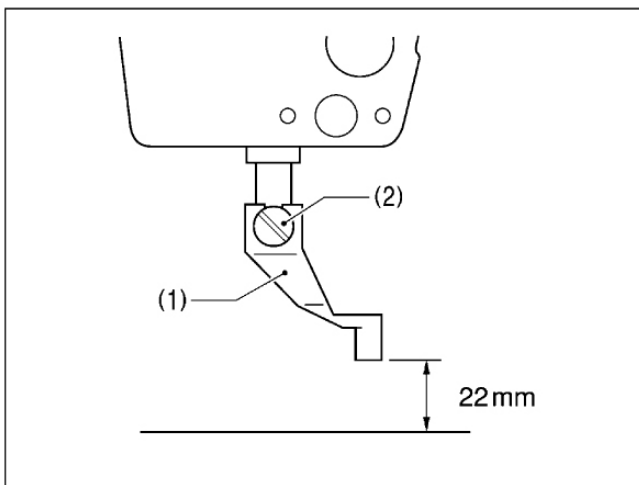
7-12. Adjusting the thread wiper



1. Loosen the two screws (3) and shift the entire solenoid setting plate (4) up or down to adjust so that the thread wiper (2) is 15 mm in front of the needle center when the plunger (1) of the thread wiper solenoid is driven to the full stroke.
2. Loosen the screw (5) and adjust the position of the thread wiper (2) so that the distance from the thread wiper to the tip of the needle is approximately 2 mm and the tip of the thread wiper (2) is approximately 3 mm from the center of the needle when the thread wiper (2) passes below the needle during operation.

Note: Check that the thread wiper (2) does not touch the finger guard.

7-13. Presser foot installation position

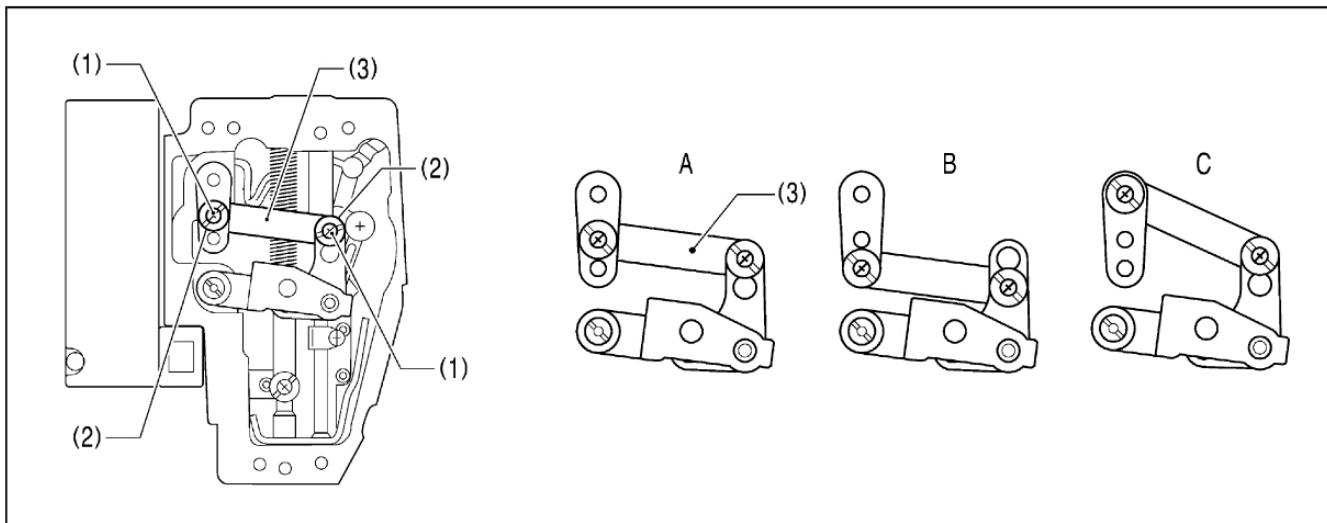


Install the presser foot (1) with the screw (2) so that the distance from the bottom of the presser foot to the top of the needle plate is 22 mm when the sewing machine is stopped and the presser foot (1) is raised.

7-14. Changing the intermittent stroke

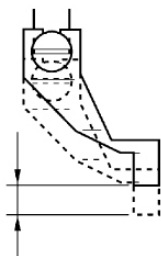
The intermittent stroke can be adjusted to within 2 – 10 mm by adjusting the position of the stepping clamp connecting rod and changing the installation position of stepping clamp link A.

<Changing the installation position of stepping clamp link A>

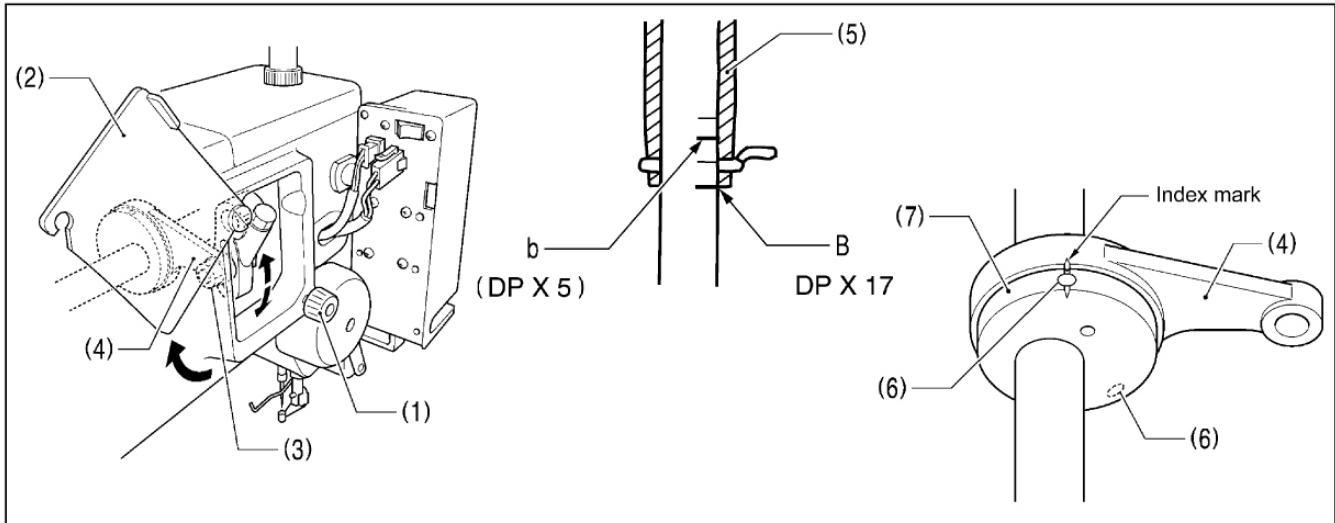


1. Remove the face plate.
 2. Remove the two screws (1) and the two shoulder screws (2), and then remove stepping clamp link A (3).
 3. Change the installation position for stepping clamp link A (3) to either A, B or C above.
- If the position of the stepping clamp connecting rod is adjusted as described in the following at any one of the installation positions, the adjustment range for the intermittent stroke will as given in the following table.

Installation position	Intermittent stroke range
A	2 – 4.5mm
B	4.5 – 10mm
C	0 mm (Presser foot does not move up and down)



<Stepping clamp connecting rod position adjustment>

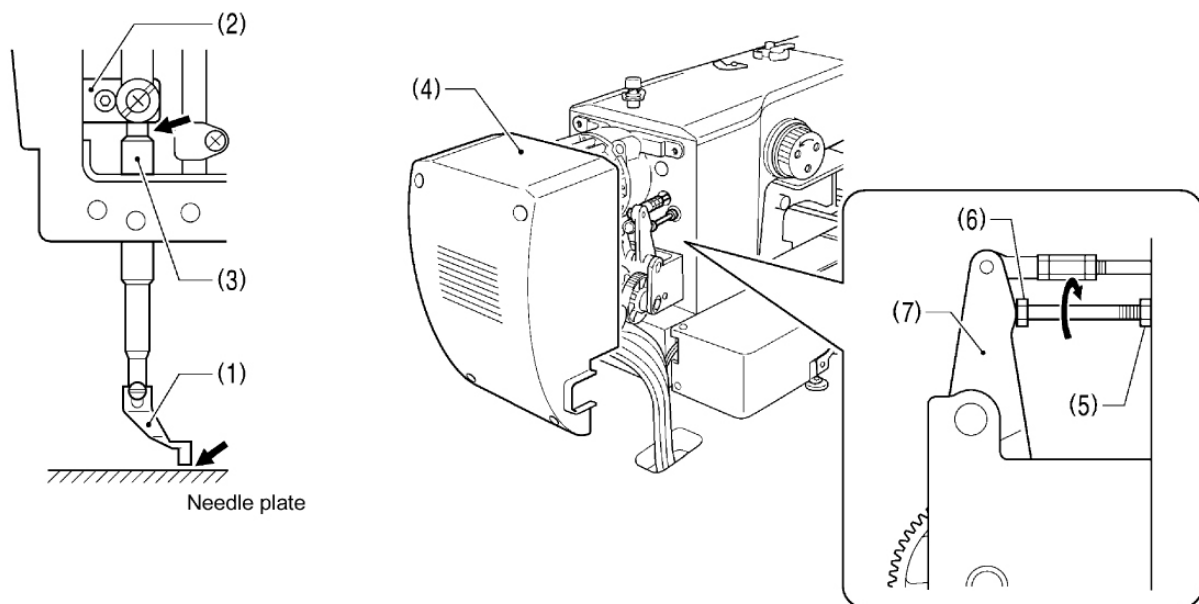


1. Loosen the screw (1), and then open the cover (2).
2. Loosen the nut (3), and then adjust the position of the stepping clamp connecting rod (4).
 - When the stepping clamp connecting rod (4) is raised, the intermittent stroke will increase.
 - When the stepping clamp connecting rod (4) is lowered, the intermittent stroke will decrease.

Next, adjust the needle bar and presser foot timing.

3. Turn the machine pulley to raise the needle bar from the lowest position until the lowest reference line on the needle bar (reference line B) is aligned with the lower edge of the needle bar bush (5).
(If using a DP x 5 needle, align with the second reference line from the top (reference line b).)
4. Open the top cover and loosen the two set screws (6).
5. Align the index marks on the stepping clamp cam (7) and the stepping clamp connecting rod (4), and then tighten the set screws (6).

Check the following after changing the intermittent stroke.



1. With the intermittent presser foot (1) lowered, turn the pulley to move the intermittent presser foot (1) to its lowest position.
2. Check that the presser foot (1) does not touch the needle plate and that the presser bar clamp (2) does not touch the presser bar bush (3).

<If they are touching>

Remove the motor cover (4).

Loosen the nut (5), and turn the bolt (6) until it is pressing against the intermittent drive lever (7), and then adjust until the two points mentioned above are not touching.

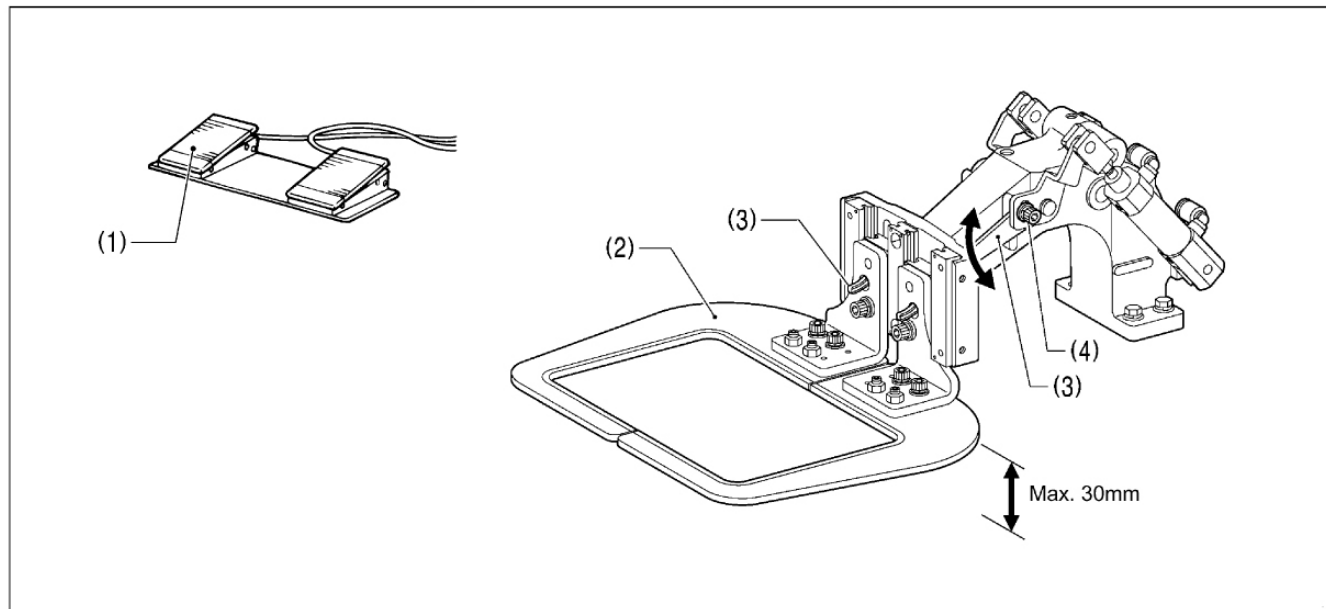
7-15. Adjusting the work clamp lift amount

<Solenoid specifications>

The operation panel settings can be used to adjust the height to within 15 – 25 mm. (Refer to "5-7. Setting the work clamp lift amount.")

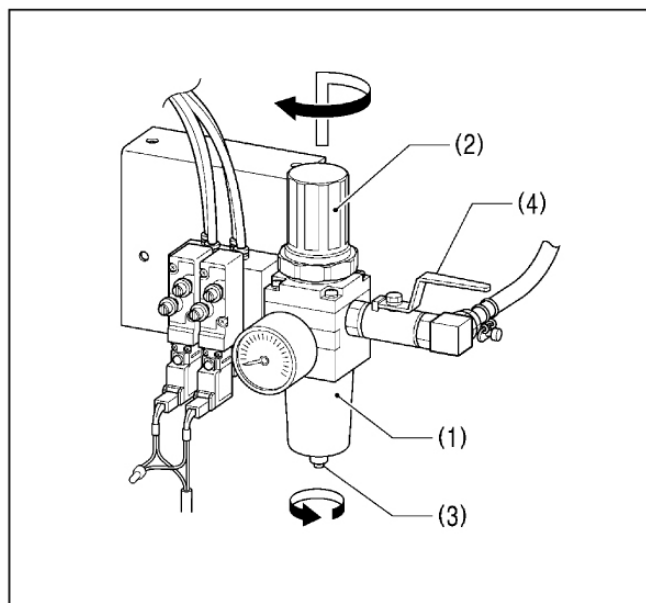
<Pneumatic specifications>

The maximum lift amount for the work clamp is 30 mm above the top of the needle plate.



1. Turn on the air, and depress the work clamp switch (1) to raise the work clamp (2).
2. Loosen the two bolts (4) of the work clamp arm lever (3), and move the work clamp arm lever (3) up or down to adjust.

7-16. Adjusting the air pressure (pneumatic specifications)



Lift up the handle (2) of the regulator (1) and then turn it to adjust the air pressure to 0.5 MPa. After adjustment is complete, push the handle (2) downward to lock it.

If water has collected in the bottle of the regulator (1), turn the drain cock (3) in the direction indicated by an arrow to drain the water.

NOTE:

Open the air cock (4) slowly.

8. TROUBLESHOOTING

- Please check the following points before calling for repairs or service.
- If the following remedies do not fix the problem, turn off the power switch and consult a qualified technician or the place of purchase.

CAUTION



Turn off the power switch and disconnect the power cord before carrying out troubleshooting.
If the foot switch is depressed by mistake, the sewing machine might start operating and injury could result.

Problem	Cause	Remedy	Reference
Work clamp does not lift.	Work clamp moves stiffly.	Apply a suitable amount of grease to the sliding parts of the work clamp.	
	Air tube of presser lifter cylinder is bent or damaged (Pneumatic specifications).	Straighten the bend in the tube or replace the tube.	
Work clamp does not drop.	Work clamp moves stiffly.	Apply a suitable amount of grease to the sliding parts of the work clamp.	
	Air tube of presser lifter cylinder is bent or damaged (Pneumatic specifications).	Straighten the bend in the tube or replace the tube.	
Work clamp lift amount is incorrect.	Work clamp lift amount setting at operation panel is incorrect (Solenoid specifications).	Change the work clamp lift amount setting.	
	Work clamp arm lever position is incorrect. (Pneumatic specifications)	Adjust the position of the work clamp arm lever.	P. 35
Work clamp does not lift to the maximum height.	Work clamp arm stopper position is incorrect (Solenoid specifications).	Adjust the position of the stopper.	
	Cylinder joint position is incorrect. (Pneumatic specifications)	Adjust the position of the cylinder joint.	
Thread wiper does not operate correctly.	The thread wiper is obstructing the needle.	Adjust the height of the thread wiper.	P. 32
		Adjust the stroke of the thread wiper.	P. 32
	Thread wiper position is incorrect.	Adjust the stroke of the thread wiper.	P. 32
Lower thread winds to one side.	Bobbin winder tension assembly height is incorrect.	Adjust the height of the bobbin winder tension assembly.	P. 18
Lower thread winding amount is incorrect.	Bobbin presser position is incorrect.	Adjust the position of the bobbin presser.	P. 18
Thread slips out of the needle.	Stitches being skipped at the sewing start.	Refer to "Skipped stitches occur".	P. 37
	Upper thread length is irregular.	Adjust the sub-tension.	P. 20
	Position of shuttle race thread guide is incorrect	Adjust the position of the shuttle race thread guide.	P. 28

Problem	Cause	Remedy	Reference
Upper thread breaks.	Upper thread tension is too strong.	Adjust the upper thread tension.	P. 20
	Needle is incorrectly installed.	Install the needle correctly.	P. 16
	Thread is too thick for the needle.	Select a thread that matches the needle.	P. 20
	Thread take-up spring tension and height are incorrect.	Adjust the tension and height of the thread take-up spring.	P. 26
	Damage or burring of the rotary hook, needle hole plate or needle.	Repair or replace the problem part.	
	Thread breaking from heat (Synthetic thread)	Use a cooling tank.	P. 16
	Thread is threaded incorrectly.	Thread the thread correctly.	P. 16
Lower thread breaks.	Lower thread tension is too strong.	Adjust the lower thread tension.	P. 20
	Damage to corners of needle hole plate or bobbin case.	Repair or replace the problem part.	
Skipped stitches occur.	Clearance between needle and rotary hook tip is too great.	Adjust the needle clearance.	P. 28
	Needle and rotary hook timing is incorrect.	Adjust the needle bar lift amount.	P. 27
	The driver is covering the needle more than necessary.	Adjust the driver needle guard.	P. 27
	Needle is bent.	Replace the needle.	
	Needle is incorrectly installed.	Install the needle correctly.	P. 16
Needle is broken.	Clearance between needle and rotary hook tip is too great.	Adjust the needle clearance.	P. 28
		Adjust the needle bar lift amount.	P. 27
	Needle is bent.	Replace the needle.	
	Needle deflection	Select a needle that is suitable for the sewing conditions. Reduce the sewing speed.	P. 20
	Needle is too thin.	Select a needle that is suitable for the sewing conditions.	P. 20
Thread jamming.	Thread take-up spring tension and height are incorrect.	Adjust the tension and height of the thread take-up spring.	P. 26
	Needle and rotary hook timing is incorrect.	Adjust the needle bar lift amount.	P. 27
	Shuttle race thread guide is not separating the threads.	Adjust the position of the shuttle race thread guide.	P. 28

8. TROUBLESHOOTING

Problem	Cause	Remedy	Reference
Upper thread is not trimmed.	Movable knife is not cutting cleanly.	Replace with a new one.	P. 31
	Fixed knife is not cutting cleanly.	Sharpen the fixed knife or replace it with a new one.	P. 31
	Movable knife is not picking up the upper thread.	Adjust the position of the shuttle race thread guide.	P. 28
		Adjust the needle bar lift amount.	P. 27
	Movable knife is not picking up the upper thread because the last stitch is being skipped.	Refer to "Skipped stitches occur".	P. 37
	Movable knife position is incorrect.	Adjust the position of the movable knife.	P. 29
Poor stitch finish on underside of material.	Sub-tension is too weak.	Turn the sub-tension nut to adjust the tension.	P. 20
	Shuttle race thread guide is not separating the threads enough.	Adjust the position of the shuttle race thread guide.	P. 28
	Incorrect tightening of the upper thread	Adjust the upper thread tension.	P. 20
Incorrect tightening of the thread	Upper thread length is irregular.	Adjust the sub-tension.	P. 20
	Upper thread tension is too weak.	Adjust the upper thread tension.	P. 20
	Lower thread tension is too weak.	Adjust the lower thread tension.	P. 20
	Thread take-up spring tension and height are incorrect.	Adjust the tension and height of the thread take-up spring.	P. 26
Upper thread length is irregular.	Position of arm thread guide R is incorrect.	Adjust the position of arm thread guide R.	P. 26
	Thread take-up spring tension and height are incorrect.	Adjust the tension and height of the thread take-up spring.	P. 26
	Sub-tension is too weak.	Turn the sub-tension nut to adjust the tension.	P. 20
Sewing machine does not operate when the power is turned on and the foot switch is depressed.	Machine head switch does not work.	Fixed knife is not cutting cleanly.	P. 31
		Sharpen the fixed knife or replace it with a new one.	
		Check if the machine head switch cord is disconnected.	
		Adjust the position of the machine head switch.	P. 8
		If the machine head switch is malfunctioning, replace it with a new one.	

零 件 样 本
PARTS BOOK

目录/CONTENTS

A. 机体部分 / Machine body	1
B. 上轴、针杆装置 / Upper shaft and needle bar machanis	3
C 1. 送料装置 / Feed mechanism	5
C 2. 送料装置 / Feed mechanism	7
C 3. 送料装置 / Feed mechanism	11
C 4. 送料装置 / Feed mechanism	13
D 1. 抬压装置 / Work clamp lifter mechanism	15
D 2. 抬压装置 / Work clamp lifter mechanism	17
D 3. 抬压装置 / Work clamp lifter mechanism	19
E. 下轴装置 / Lower shaft mechanism	21
F. 供油润滑装置 / Lubrication	23
G. 穿线装置 / Threading mechanism	27
H. 卷线装置 / Bobbin winder mechanism	29
J. 切线装置 / Thread trimmer mechanism	31
K. 扫线装置 / Thread wiper mechanism	35
L. 松线装置 / Tension release mechanism	37
M. 电控装置 / Electronic control device	39
P. 空压装置 / Air pressure mechanism	41
Q. 电气部品装置 / Power supply equipment mechanism	43
S. 马达装置 / Motor mechanism	45
T. 踏板关系 / Foot switch pedal mechanism	47
Z. 附件 / Accessories	51
Ga. 工模具一览表 / Gauge parts list	53

This exploded view diagram illustrates the assembly of a mechanical unit, likely a pump or motor housing. The components are numbered as follows:

- 1:** A cylindrical component, possibly a bearing or seal.
- 2:** A small pin or clip.
- 3:** A small circular component, possibly a cap or plug.
- 4:** A small circular component, possibly a cap or plug.
- 5:** A small circular component, possibly a cap or plug.
- 6:** A rectangular plate or cover.
- 7:** A screw or bolt.
- 8:** A large rectangular component, possibly a housing or frame.
- 9:** A screw or bolt.
- 10:** A large rectangular plate or cover.
- 11:** A small circular component, possibly a cap or plug.
- 12:** A large rectangular plate or cover.
- 13:** A small screw or bolt.
- 14:** A curved component, possibly a bracket or support.
- 15:** A small component, possibly a pin or clip.
- 16:** A small component, possibly a pin or clip.
- 17:** A small component, possibly a pin or clip.
- 18:** A small component, possibly a pin or clip.
- 19:** A small component, possibly a pin or clip.
- 20:** A small component, possibly a pin or clip.
- 23:** A curved component, possibly a bracket or support.
- 24:** A screw or bolt.
- 25:** A small rectangular plate or cover.
- 26:** A small screw or bolt.
- 27:** A small circular component, possibly a cap or plug.
- 28:** A small circular component, possibly a cap or plug.
- 29:** A small screw or bolt.
- 30:** A small triangular component, possibly a pin or clip.
- 31:** A small rectangular plate or cover.
- 32:** A small circular component, possibly a cap or plug.
- 33:** A small circular component, possibly a cap or plug.
- 34:** A small component, possibly a pin or clip.
- 35:** A small component, possibly a pin or clip.
- 36:** A small rectangular plate or cover.
- 37:** A small screw or bolt.
- 38:** A small component, possibly a pin or clip.
- 39:** A small circular component, possibly a cap or plug.
- 40:** A small circular component, possibly a cap or plug.
- 41:** A small rectangular plate or cover.
- 42:** A small circular component, possibly a cap or plug.
- 43:** A small circular component, possibly a cap or plug.

A、机体部分/Machine body

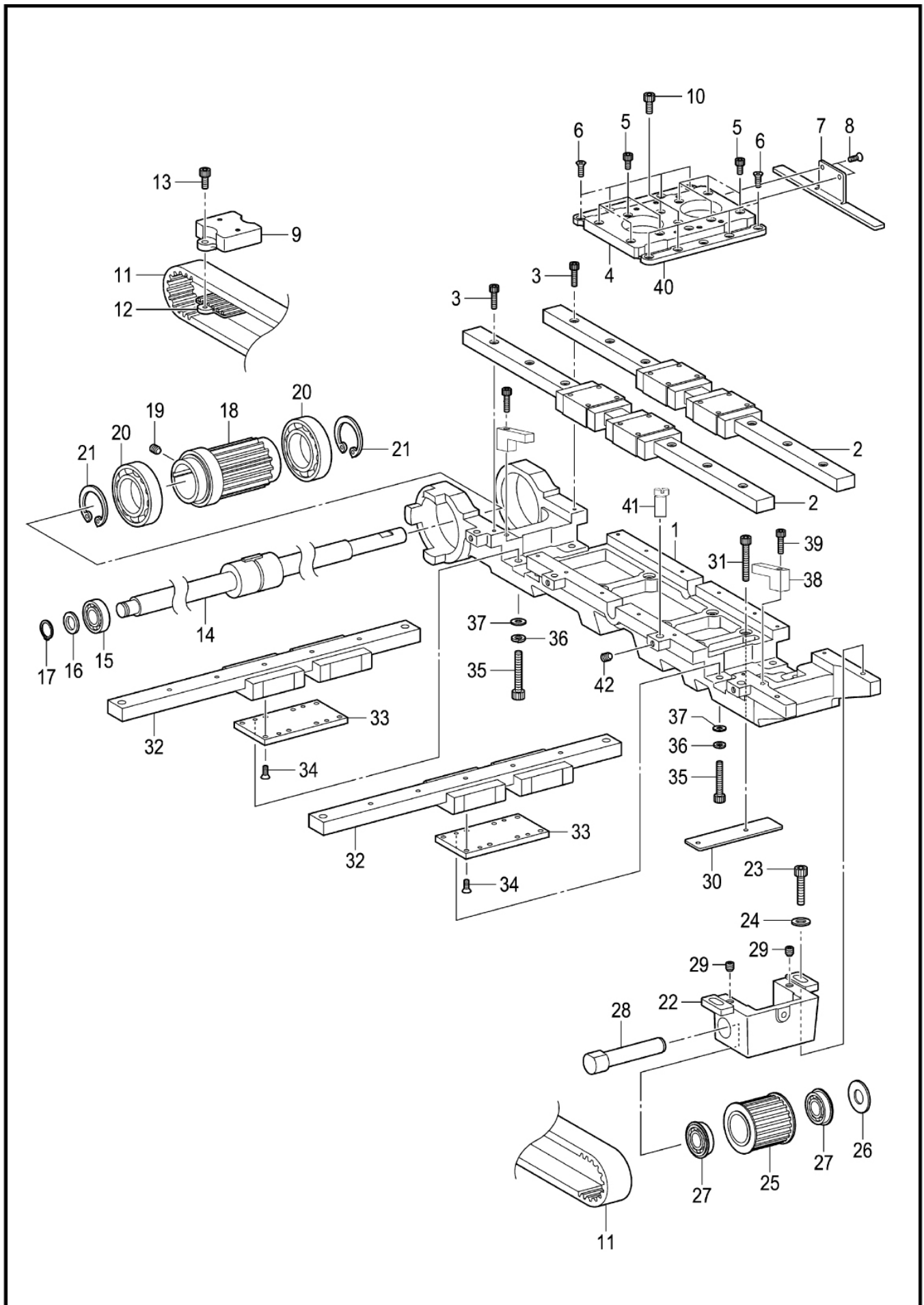
序号 No.	件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
3	41722001	SA4596001	橡皮塞 20-15	RUBBER CAP 20-15	1	
4	41722002	117934001	橡皮塞 13.5	RUBBER CAP 13.5	1	
5	41722003	104821001	橡皮塞 10.5	RUBBER CAP 10.5	3	
6	41711205	SA4591001	马达盖 QR	MOTOR COVER QR	1	
7	S04038	62061016	螺钉 M6 X 10	SCREW PAN M6 X 10	4	
8	41711206	SA4598001	马达盖 QL	MOTOR COVER QL	1	
9	S04038	62061016	螺钉 M6 X 10	SCREW PAN M6 X 10	4	
10	304727	SA4600001	面板	FACE PLATE	1	41701201
11	41722004	104449001	橡皮塞 15.5	RUBBER CAP 15.5	1	
12	41712003	SA4601001	面板垫片	F-PLATE PACKING	1	
13	S04038	62061016	螺钉 M6 X 10	SCREW PAN M6 X 10	3	
14	301383	SA4603101	大旋梭盖	SHUTTLE RACE COVER	1	41712004
15	41712005	SA6272001	大旋梭盖挂钩 D	SHUTTLE RACE COVER HOOK D	1	
16	S02031	4300513	螺钉 M3 X 5	SCREW PAN M3 X 5	2	
17	41712006	SA3264001	板螺母	NUT PLATE	1	
18	4171220200	SA6207001	铰链	HINGE	1	
19	NO1013	21300103	六角螺母 M3	STEPPING COVER	2	
20	421S10005	62300506	螺钉 M3 X 6	SCREW PAN M3 X 6	2	
23	301384	SA3200101	挑线杆防护罩	THREAD TAKE-UP COVER	1	41712007
24	417S30025	06240 1006	复合槽圆柱头螺钉	SCREW PAN M4 X 10	1	
25	41711207	SA460400J	间歇盖板Q	STEPPING COVER Q	1	
26	417S30012	SA3306001	段螺钉 7-3	SHOULDER SCREW 7-3	1	
27	41728020	120265002	弹簧垫圈	SPRING WASHER	1	
28	41728035	S07350002	垫圈	WASHER PLAIN	1	
29	41711208	S36475000	螺钉 M5Q	SCREW M5 Q	1	
33	41722009	S20164001	橡皮塞 13	RUBBER CAP 13	1	
34	41712009	S0244500 1	护指器	FINGER GUARD	1	
35	41728025	25350332	平垫圈 L3.5	WASHER PLAIN L3.5	2	
36	41712010	SA4605001	机头撑杆	HEAD REST	1	
37	417S30037	S42446001	螺钉 M6 X 14	BOLT SOCKET(S /P WASHER)M6 X 14	4	
38	403S11035	62300506	十字槽圆柱头螺钉	SCREW PAN M3 X 5	2	
39	41722006	SA6194001	橡皮塞 26	RUBBER CAP 26	1	
40	41722007	S44010001	橡皮塞 11.5	RUBBER CAP 11.5	2	
41	41722008	SA6441001	橡皮盖	RUBBER CAP	2	
42	41722009	S2016400 1	橡皮塞 13	RUBBER CAP 13	1	

This technical drawing is an exploded view of a mechanical assembly, likely a pump or motor component. The parts are numbered 1 through 52. The diagram shows the following components and their assembly relationships:

- Top Section:** Includes a large gear-like component (45) with a central shaft (46) and a nut (47). A smaller gear (42) is shown with a shaft (41) and a nut (48). A spring (39) is shown near a component (40).
- Central Section:** Features a main cylindrical body (1) with a shaft (49) passing through it. A large circular disc (50) is attached to the end of the shaft. A nut (51) is shown near the disc.
- Bottom Section:** Shows a complex linkage mechanism. A long shaft (1) is connected to a lever arm (2) via a pin (3). The lever arm (2) is connected to a pivot point (4). A series of gears and shafts (5, 6, 7, 8, 9, 10, 11) are shown. A long shaft (12) is connected to a lever arm (13) via a pin (14). A spring (15) is shown near a component (16). A lever arm (17) is connected to a pivot point (18). A spring (19) is shown near a component (20). A lever arm (21) is connected to a pivot point (22). A spring (23) is shown near a component (24). A lever arm (25) is connected to a pivot point (26). A spring (27) is shown near a component (28). A lever arm (29) is connected to a pivot point (30). A spring (31) is shown near a component (32). A lever arm (33) is connected to a pivot point (34). A spring (35) is shown near a component (36). A lever arm (37) is connected to a pivot point (38). A spring (39) is shown near a component (40). A lever arm (41) is connected to a pivot point (42). A spring (43) is shown near a component (44). A lever arm (45) is connected to a pivot point (46). A spring (47) is shown near a component (48). A lever arm (49) is connected to a pivot point (50). A spring (51) is shown near a component (52).

B、上轴·针杆装置/Upper shaft and needle bar mechanism

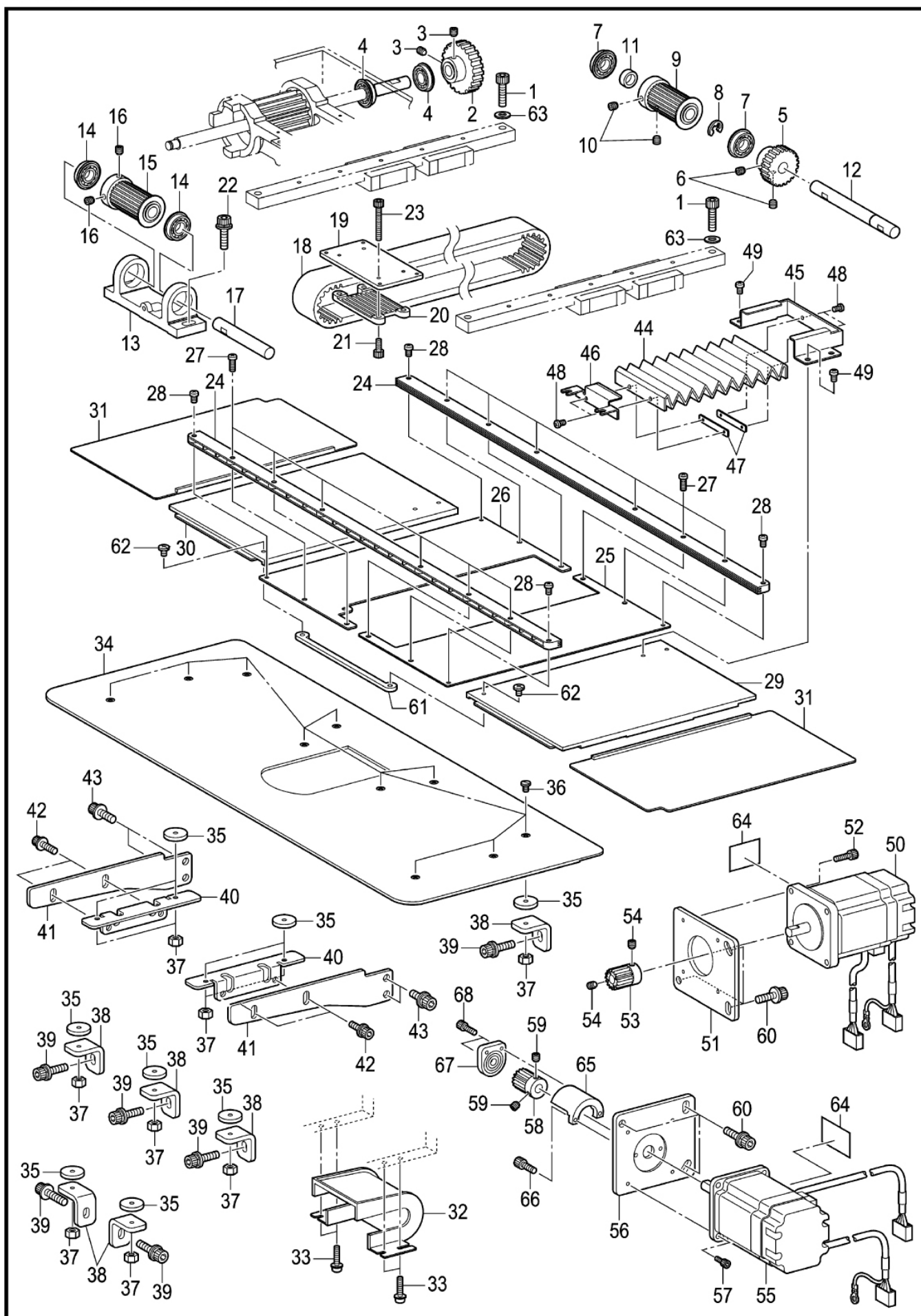
序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41702001	SA4606001	上轴	UPPER SHUFT	1	
2	4170501100	SA3499001	曲柄轴组件	CRANK ROD ASSY	1	
4	41724001	SA4172001	滚针轴承 K15×18×14	NEEDLE BEARTNG:BLUE	1	
5~7	141724027	SA4179001	一体式轴承(6904-LNRT)	6904DDUNR BALL BEARING	1	
8	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	2	
9~10	141724028	SA4177001	一体式轴承(6004-NR)	BALL BEARING 6004DDUNR	1	
11	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	2	
12	41703004	SA4608101	管接头 G	J01NT G	1	
13	B10013	SA4178001	深沟球轴承6204 (带挡圈)	BALL BEARING 6204DDUNR	1	
14	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT)M6 X 6	4	
15	417S30002	S25235001	螺钉 M8	SCREW M8	1	
16	41704001	SA4609101	针杆曲柄 G	THREAD TAKE-UP CRANK G	1	
17	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	4	
18	41712133	110367001	垫圈 8	WASHER , PLAIN SPECIAL 8	1	
19	14170500400	SA6182001	针杆连杆组件 FK	THREAD TAKE-UP CRANK FK	1	
20	417S17003	SA2958001	螺钉 M5×6	SCREW FLAT M5 X 6	1	
22	S04078	0624008 16	螺钉 M4 × 8	SCREW PAN M4 X 8	1	
23	417S14001	1454650 01	螺钉 SM3. 57-40×6L	SCREW SM3. 57-40 X 6L	1	
24	S10019	12060636	螺钉 M6 × 6	SET SCREW SOCKET (FT) M6 X 6	2	
25	41709001	142211001	滑块	SLIDE BLOCK	1	
26	41709002	SA3528001	滑块导向 B	SLIDE BLOCK GUIDE	1	
27	S05118	18401636	螺栓 M4×16	BOLT SOCKET M4 X 16	2	
28	41702002	SA4622001	针杆	NEEDLE BAR	1	
29	417S15002	144458001	螺钉 SM3. 57-40×4.5 L	SET SCREW SM3. 57-40 X 4. 5	1	
30	41703005	SA4666001	针杆轴套 UK	NEEDLE BAR BUSH UK	1	
31	41703006	SA3224001	针棒轴套 D	NEEDLE BAR RUSH D	1	
33	12411002	S38713100	叶轮	FAN	1	
34	S04078	62400816	螺钉 M4 X 8	SCREW PAN M4 X 8	3	
35	40325010	SA6108001	齿轮 R	PULLEY GEAR R	1	
37	41702003	SA1626001	上轮轴	PULLEY SHUFT	1	
38	41703007	SA4627001	上轮轴套	PULLEY BUSH	1	
39	41727001	SA4628001	上轮弹簧	PULLEY SPRING	1	
40	41703008	SA4629001	上轮基座	PULLEY BASE	1	
41	P03027	47401242	弹簧销 4 X 12	PTN SPRING ROLL AW4	1	
42	41725002	SA4624001	齿轮	PULLEY GEAR	1	
44	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	2	
45	41711001	SA4630001	上轮	PULLEY	1	
46	S04081	62101006	复合槽圆柱头螺钉	SCREW PAN M4 X 10	3	
47	41728024	SA5158001	垫圈 L4	WASHER PLAIN L4	3	
48	S10019	12060636	螺钉 M6 X6	SET SCREW SOCKET (FT)M6 X 6	1	
49	S05124	18501636	螺栓 M5 X 16	BOLT SOCKET M5 X 16	4	
50	41712011	SA5230001	惯性轮 2	FRIES WHEEL 2	2	
51	403S11043	62401016	螺钉 M4 X 12	SCREW PAN M4 X 12	3	
52	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT) M6 X 5	1	



C1、送料装置 / Feed mechanism

序号 No.	公司件号 Part.No.	参考件号 Ref.No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	141712265	SA5229101	送布基座	FEED BRACKET ASSY	1	
2	141724044		Y-LM导轨C	Y-LM GUIDE	2	
3	413S14012	018301436	螺栓 M3 X 14	BOLT SOCKET M3 X 14	15	
4	4170 1003	SA4635101	送布台 (X)	FEED BRACKET X	1	
5	S05094	18300636	螺钉M3×8(镀铬)	BOLT SOCKET M3 X 6	8	
6	S02032	61300616	螺钉 M3 X 6	SCREW FLAT M3 X 6	8	
7	41709004	SA4636101	传感器板 (X)	X-SENSOR PLATE	1	
8	S02032	61300616	螺钉 M3 X 6	SCREW FLAT M3 X 6	2	
9	41709005	SA4641001	皮带支架	X-BELT HOLDER	1	
10	421S13035	18400836	螺栓 M4 X 8	BOLT SOCKET M4 X 8	2	
11	41735001	SA4649001	X-GT 皮带	X-GT BELT	1	
12	41712012	SA4640001	皮带支架板 (X)	X-BELT HOLDER PLATE	1	
13	421S13035	18400836	螺栓 M4 X 8	BOLT SOCKET M4 X 8	2	
14	14170802000		花键轴组件C	C-BALL SPLINE ASSY	1	
15	B06006	76000600	球轴承 6000VV	BALL BEARING RADIAL 6000vv	1	
16	41728001	S20356001	平垫圈 10	WASHER PLAIN 10	1	
17	H03008	48100142	轴用挡圈 C10	RETAINING RING EXTERNAL C10	1	
18	14173500900	SA4638001	X-左轮组件5GT	X-LEFT PULLEY	1	
19	S10019	12060636	螺栓 M6 X 6	SET SCREW SOCKET (PT) M6 X 6	1	
20	B06007	76806606	球轴承 6806VV	BALL BEARING 6806VV	2	
21	H01004	48420242	孔用挡圈 C42	RETAINING RING EXTERNAL C42	2	
22	41701013	SA4642001	X-轮基座	X-PULLEY BRACKET	1	
23	S05035	18501636	螺栓 M5 X 16	BOLT SOCKET M5 X 16	2	
24	W01009	25050236	平垫圈 M5	WASHER PLAIN M5	2	
25	14173501000	SA4643001	X-右轮组件5GT	X-RIGHT PULLEY ASSY	1	
26	41728001	S20356001	平垫圈 10	WASHER PLAIN 10	1	
27	B10015	SA4647001	球轴承 6900ZZNR	BALL BEARING 6900ZZNR	2	
28	41702005	SA4648001	X-轮支点轴	X-PULLEY FULCRUMSHAFT	1	
29	S10019	0J2060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
30	41712013	SA4650001	Y-传感板	Y-SENSOR PLATE	1	
31	S05119	18402036	螺栓 M4 X 20	BOLT SOCKET M4 X 20	2	
32	141724041		X-LM导轨C	X-LM GUIDE	2	
33	41728002	SA4652101	Y-LM 垫片	Y-LM SPACER	2	
34	S02032	61300616	螺钉 M3 X 6	SCREW FLAT M3 X 6	16	
35	S05119	18402036	螺栓 M4 X 20	BOLT SOCKET M4X 20	8	
36	W01006	25040236	平垫圈4	WASHER PLAIN M4	8	
37	W02008	28040246	弹簧垫圈2-4	WASHER SPRING 2-4	8	
40	41711062		固定板	HOLDER PLATE	2	
41	41726020	SA5220001	调节销	ADJUST PIN	4	
42	S09005	12030536	螺钉 M3 X 5	SCREW FLAT M3 X 5	4	

C2. 送料装置 / Feed mechanism

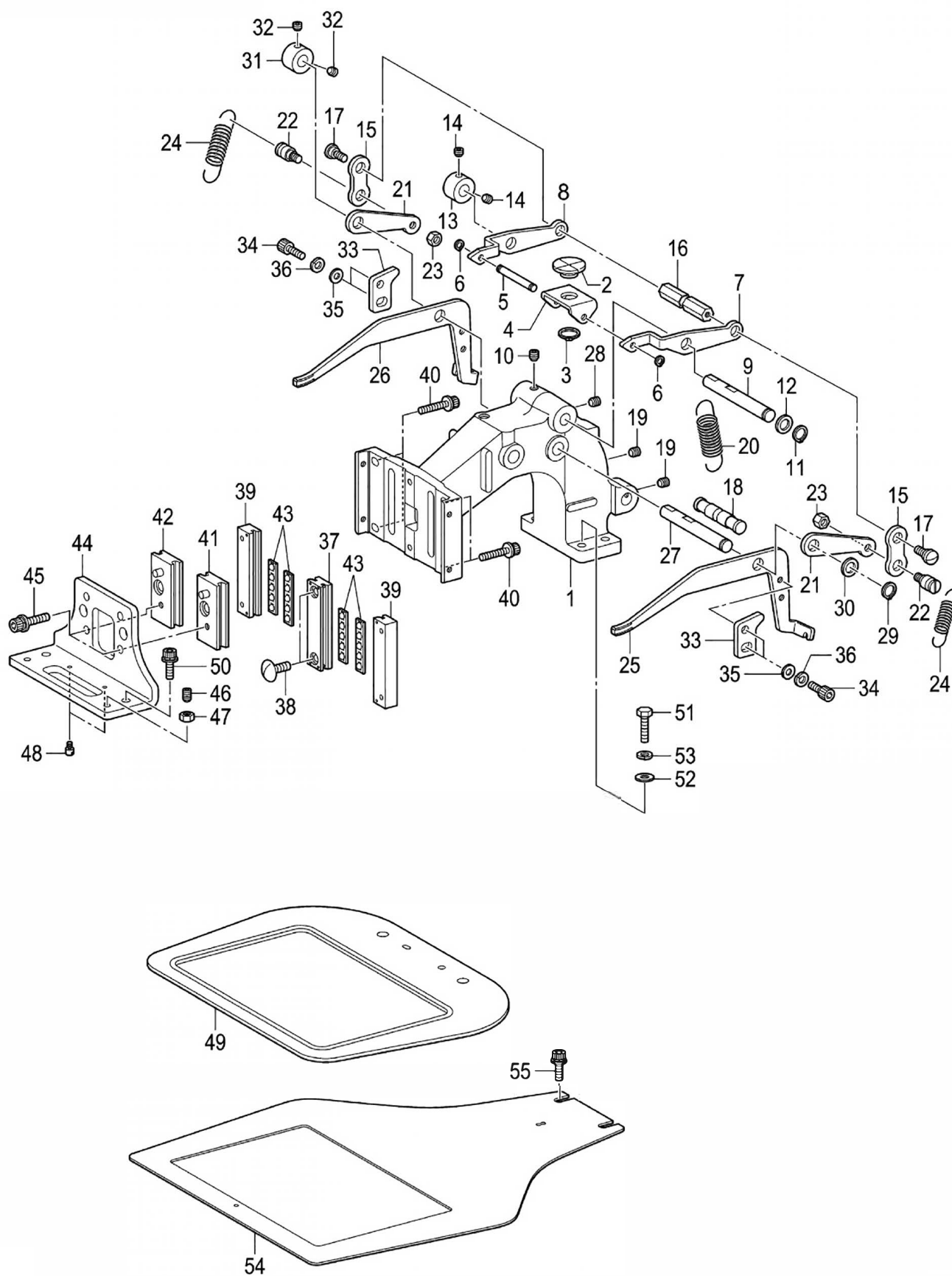


C2、送料装置 / Feed mechanism

序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	S05111	18062036	螺栓 M6 X 20	BOLT SOCKET M6 X 20	4	
2	41725003	SA4653001	X-送布齿轮	X-FEED GEAR	1	
3	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
4	B10015	SA4647001	球轴承 6900ZZNR	BALL BEARING 6900ZZNR	2	
5	41725004	SA4654001	Y-送布齿轮	Y-FEED GEAR	1	
6	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
7	B10015	SA4647001	球轴承 6900ZZNR	BALL BEARING 6900ZZNR	2	
8	H05011	48080342	卡簧9	RETAINING RING 9	1	
9	14173501100	SA4655101	Y-轮组件	Y-PULLEY ASSY	1	
10	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	4	
11	41703009	SA4658001	Y-轮轴套	Y-PULLEY COLLAR	1	
12	41702006	SA4659001	Y-驱动轴	Y-PULLEY DRIVING SHAFT	1	
13	41701005	SA4661001	Y-轮基座	Y-PULLEY BRACKET	1	
14	B10015	SA4647001	球轴承 6900ZZNR	BALL BEARING 6900ZZNR	2	
15	14173501200	SA4655101	基座带轮组件	Y-PULLEY ASSY	1	
16	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
17	41702007	SA4662001	Y-轮支点轴	Y-PULLEY FULCRUM SHAFT	1	
18	41735005	SA4663001	Y-GT 皮带	Y-GT BELT	1	
19	41712014	SA4664001	Y-皮带支架板	BELT SUPPORT PLATE Y	1	
20	41712015	SA4665001	Y-皮带支撑板	Y-BELT WORK CLAMP PLATE	1	
21	421S13035	18400836	螺栓 M4 X 8	BOLT SOCKET M4 X 8	4	
23	S05119	18402036	螺栓 M4 X 20	BOLT SOCKET M4 X 20	4	
24	41711204	SA4667101	盖轨道Q	COVER RAIL Q	2	
25	41712017	SA4671001	固定盖 (R)	FIXATION R	1	
26	41712018	SA4672001	固定盖 (L)	FIXATION L	1	
27	403S11043		螺钉 M4 X 10	SCREW FAN M4 X 10	12	
28	417S30009	62400416	螺钉 M4 X 6	SCREW FAN M4 X 6	4	
29	41711201	SA4860101	内盖QR	INSIDE COVER QR	1	
29	41722025		内盖橡皮块		4	
29	41722026		内盖橡皮条		2	
30	41711202	SA4861101	内盖QL	INSIDE COVER QL	1	
31	41711203	SA4670101	外盖组件Q	OUTSIDE COVER Q ASSY	2	
31	41722027		外盖橡皮条		2	
32	41711002	SA4673001	Y-皮带轮盖	BELT COVER Y	1	
33	417S30025	OA5401006	螺栓 (带垫圈) M4 X 10DB	SCREW PAJ (S/P WASHER) M4 X 10	2	
34	41712022	SA4675201	补肋板	AUXILIARY PLATE	1	
35	41722010	SA4677101	补肋板缓冲	AUXILIARY PLATE CUSHION	10	
36	417S15003	S23849001	螺钉 M4 X 12	SCREW M4 X 12	10	
37	417N01002	21400216	自锁螺母	LOCKNUT	10	
38	41712023	SA4676001	补肋板支架	AUXILIARY PLATE BRACKET	4	
38	41712064	SA4676001	L型支架	L TYPE BRACKET	2	
39	417S30304	S42446001	螺栓 M6 X 20	BOLT SOCKET(S/P IVASHER) M6 X 20	6	
40	41712024	SA6434001	补肋板支架 U	SUPPORT PLATE GUIDE U	2	
41	41712025	SA6435001	补肋板支架 D	SUPPORT PLATE GUIDE D	2	
42	417S30035	S55484002	螺栓 (带垫圈) M5 X 10	BOLT SOCKET (S/P IVA5HER) M5 X 10	4	
43	417S30304	S42446001	螺栓 M6 X 20	BOLT SOCKET(S/P IVASHER) M6 X 20	4	
44	41722011	SA4679101	蛇纹管	BELLOW	1	
45	41712026	SA4680101	蛇纹管支架 R	BELLOW PRESSER R	1	
46	41712027	SA4681001	蛇纹管支架 F	BELLOW PRESSER F	1	
47	41712060	SA4682001	板螺母	BELLOW NUT	2	
48	413S11022	062300416	螺钉 M3 X 4	SCREW FAN M3 X 4	4	
49	417S30009		螺钉 M4 X 6	SCREW FAN M4 X 6	4	
51	41712029	SA4684001	马达安装板	MOTOR BRACKET PLATE	1	
52	413S13017	18401036	螺钉 M4 X 10	BOLT SOCKET M4 X 10	4	
53	41725005	SA3707001	驱动齿轮 16	GEAR 16	1	
54	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT) M6 X 5	2	
56	41712029	SA4684001	马达安装板	MOTOR BRACKET PLATE	1	
57	413S13017	18401036	螺钉 M4 X 10	BOLT SOCKET M4 X 10	4	
58	41725005	SA3707001	驱动齿轮 16	GEAR 16	1	
59	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT) M6 X 5	2	
60	417S30037	S42446001	螺栓 M6 X 14	BOLT SOCKET(S/P IVASHER) M6 X 14	10	
61	41712030	S42446001	盖连接板	BOLT SOCKET(S/P IVASHER) M6 X 20	1	
62	417S15006	S23418002	螺钉 M4 X 5	SCREW M4 X 5	2	
63	41728012	118735001	垫圈	WASHER	4	
65	41712100	SA6450101	轴承支架座	BEARING HOLDER BASE	2	
66	S05121	18401036	螺栓 M5 X 10 (滚花, 镀锌)	BOLT SOCKET M5 X 10	4	
67	41712101	SA3707001	轴承支架	BEARING HOLDER	2	
67	41724005		调心球轴承126	BALL BEARING 126	2	
68	413S13017	18401036	螺钉 M4 X 10	BOLT SOCKET M4 X 10	4	

C3 . 送料装置 / Feed mechanism

< 电磁式 / For Solenoid type >

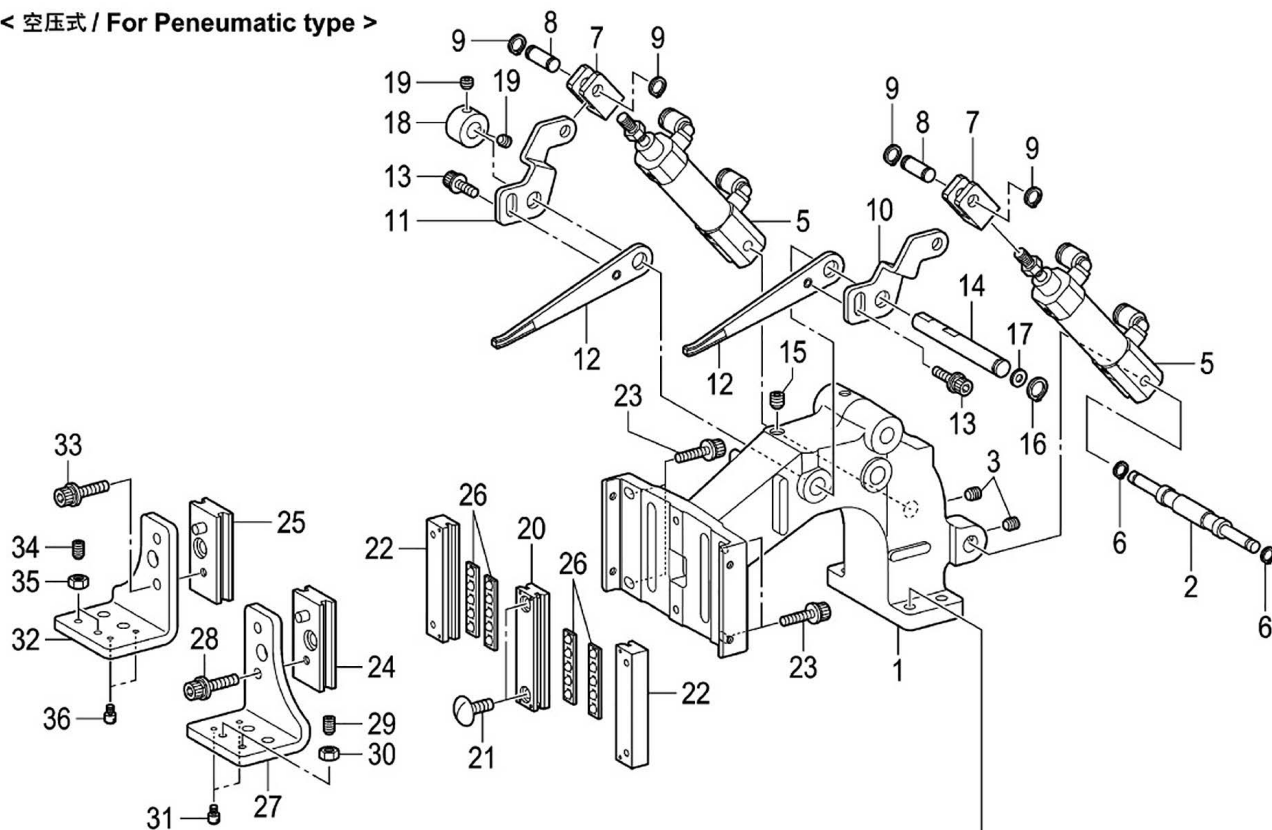


C3、送料装置/Feed mechanism (T1310)

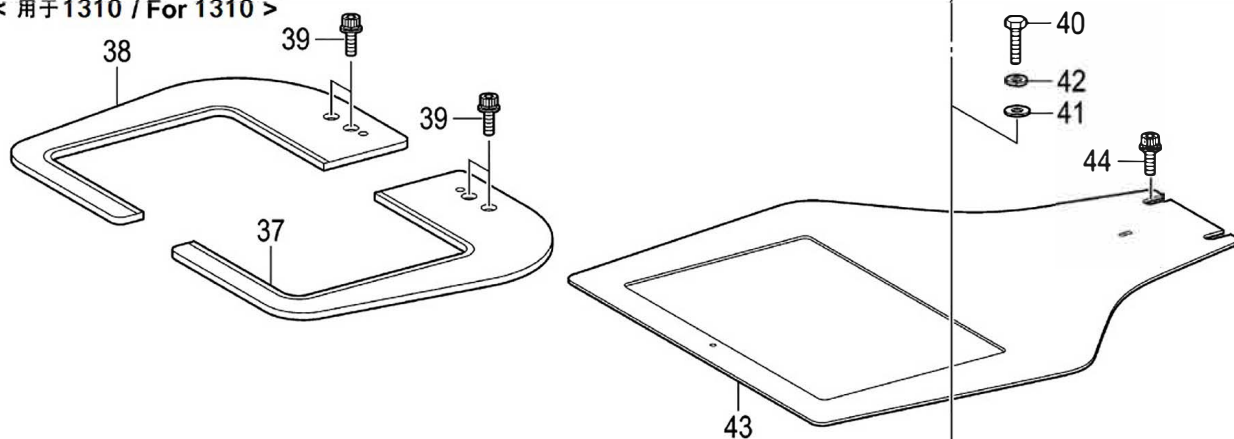
序号 No.	公司件号 Part.No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
			〈电磁式〉	<For Solenoid type>		
1	41701006	SA4686101	压脚臂	WORK CLAMP	1	
2	41711007	SA4687101	滑块	SLIDER	1	
3	H03008	48100142	轴用挡圈 C10	RETAINING RING EXTERNAL C10	1	
4	41712031	SA4688001	滑块支架	SUPPORT SLIDER	1	
5	41726001	SA4689001	滑块支架轴	SUPPORT SHAFT SLIDER	1	
6	H03018	48040142	轴用挡圈 C4	RETAINING RING EXTERNAL C4	2	
7	41712032	SA4690001	压脚柄 R	WORK CLAMP LIFTER LEVER R	1	
8	41712033	SA4691001	压脚柄 L	WORK<CLAMP LIFTER LEVER L	1	
9	41702012	SA4692001	压脚臂杆轴	WORK CLAMP LIFTER SHAFT	1	
10	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
11	H03006	48080142	轴用挡圈 C8	RETAINING RING EXTERNAL C8	1	
12	41712133	110367001	垫圈 8	WASHER PLAIN SPECIAL 8	1	
13	41708002	SA3231001	紧圈 B	SET SCREW COLLAR B	1	
14	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT) M6 X 5	2	
15	41712034	SA4696001	连杆	CONNECTING ROD	2	
16	41702021	SA4693001	弹簧挂钩轴A	SPRING HOLDER SHAFT A	1	
17	417S30003	SA469700 1	段螺钉M5	SHOULDER SCREW M5	2	
18	41702009	SA4694001	弹簧挂钩轴B	SPRING HOLDER SHAFT B	1	
19	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
20	41727002	SA4695001	弹簧	SPRING LIFT	1	
21	41712035	SA4698001	连接板	CONNECTING LINK	2	
22	417S12002	SA470000 1	弹簧挂钩	WORK CLAMP SPRING HOLDER	2	
23	N01017	0215002 16	六角螺母 M5	NUT 2 M5	2	
24	41727003	SA4701001	弹簧	WORK CLAMP SPRING	2	
25	41712036	SA470200 1	压脚臂杆 R	WORK CLAMP LIFTER LEVER R	1	
26	41712037	SA4703001	压脚臂杆 L	WORK CLAMP LIFTER LEVER L	1	
27	41702012	SA4692001	压脚臂杆轴	WORK CLAMP LIFTER LEVER	1	
28	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
29	H03006	48080142	轴用挡圈 C8	RETAINING RING EXTERNAL C8	1	
30	41712133	110367001	垫圈 8	WASHER PLAIN SPECIAL 8	1	
31	41708002	SA323100 1	紧圈 B	SET SCREW COLLAR B	1	
32	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT) M6 X 5	2	
33	41712038	SA469900 1	定位块	STOPPER	2	
34	S05120	18500836	螺栓 M5 X 8	BOLT SOCKET M5 X 8	4	
35	W01009	25050236	平垫圈 M5	WASHER PLAIN M5	4	
36	W02001	28050246	弹簧垫圈 2-5	WASHER SPRING 2-5	4	
37	4170901300	SA4863001	压脚导向组件 A	WORK CLAMP GUIDE A ASSY	1	
38	417S15003	S23849001	螺钉 M4 X 16	SCREW M4 X 16	2	
39	4170901400	SA4864001	压脚导向组件 B	WORK CLAMP GUIDE B ASSY	2	
40	417S30034	S55482001	螺栓(带垫圈) M4 X 14	BOLT SOCKET(S/P WASHER) M4 X 14	4	
41	4170901500	SA4712001	压脚滑块组件 R	WORK CLAMP SLIDER ASSY R	1	
42	4170901600	SA4714001	压脚滑块组件 L	WORK CLAMP SLIDER ASSY L	1	
43	141712271	SA4706101	压脚挡板组件	WORK CLAMP RETAINER ASSY	4	
44	41712039	SA4708001	压脚	WORK CLAMP	1	
45	417S30035	855485001	螺栓(带垫圈) M5 X 10	BOLT SOCKET (S/P WASHER) M5 X 10	2	
46	S09009	12501031	螺钉 M5 X 10	SET SCREW SOCKET (FT) M5 X 10	2	
47	N01017	21500216	六角螺母 M5	NUT 2 M5	2	
48	417S20001	SA4709001	定位段螺钉	SHOULDER SCREW	2	
49	401219	SA4866101	压板组件 1310	WORK CLAMP 1310 ASSY	1	41712040
50	417S30035	855484002	螺栓(带垫圈) M5 X 10	BOLT SOCKET(S/P WASHER) M5 X 10	2	
51	L02006	17501616	螺栓 M5 X 16	BOLT M5 X 16	4	
52	W01009	25050236	平垫圈 M5	WASHER PLAIN M5	4	
53	W02001	28050246	弹簧垫圈 2-5	WASHER SPRING 2-5	4	
54	400992	SA471500 1	送料板 1310	FEED PLATE 1310	1	41712041
55	417S30035	855484002	螺栓(带垫圈) M5 X 10	BOLT SOCKET(S/P WASHER) M5 X 10	2	
55	41728004		垫圈	WASHER	2	

C4 . 送料装置 / Feed mechanism

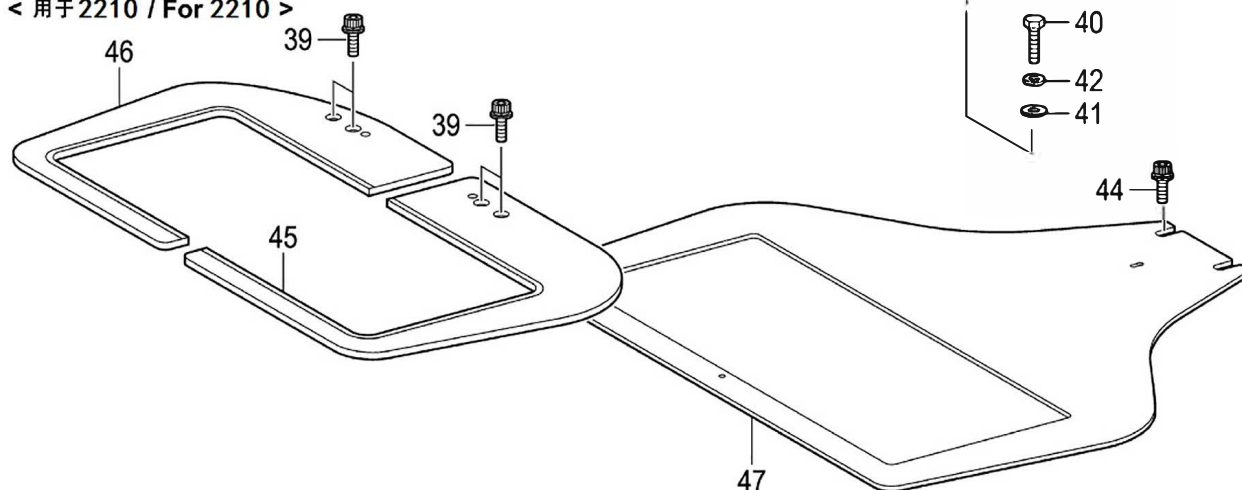
< 空压式 / For Pneumatic type >



< 用于 1310 / For 1310 >



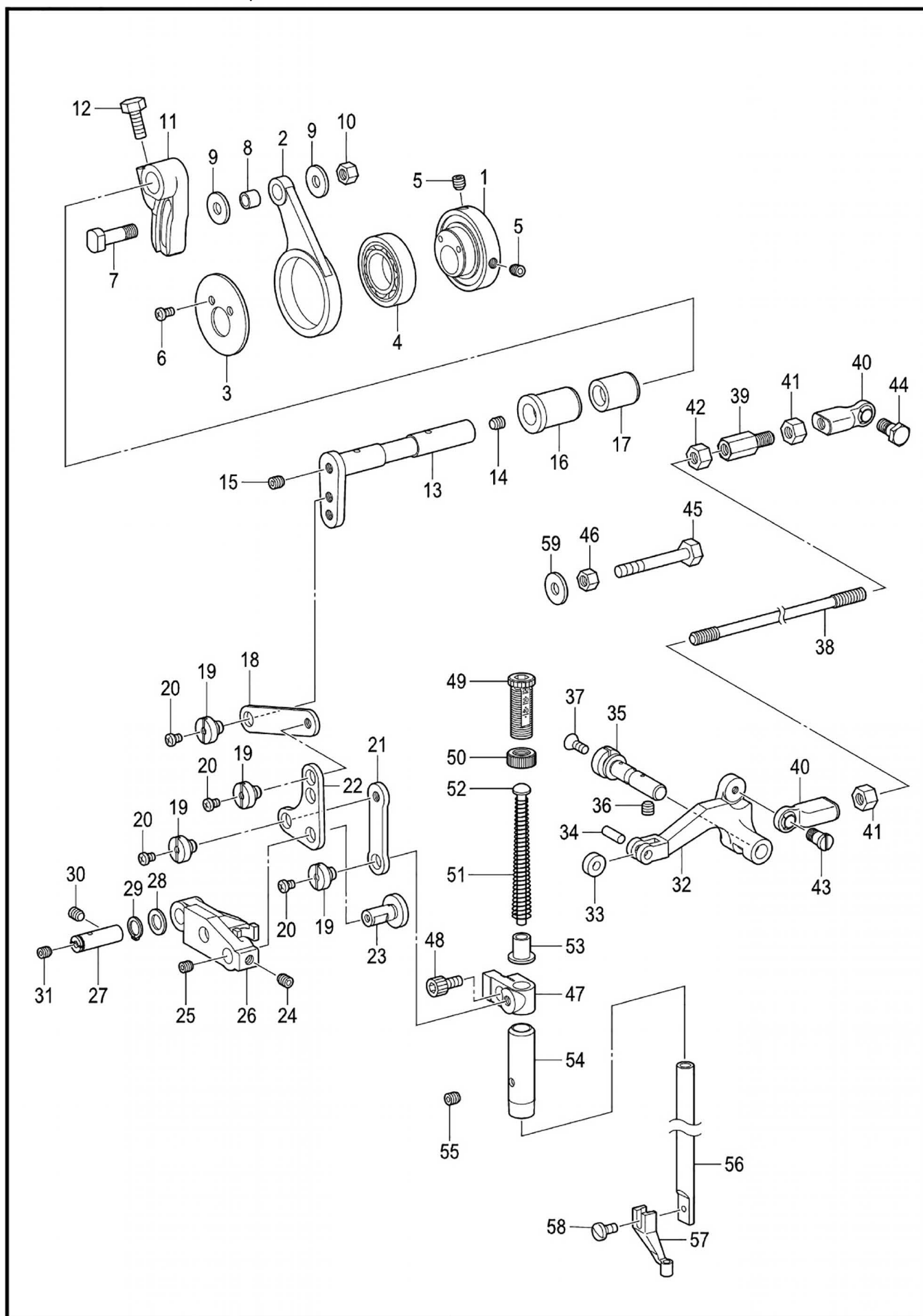
< 用于 2210 / For 2210 >



C4、送料装置/Feed mechsansm

序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41701006	SA4686101	压脚臂	WORK CLAMP	1	
2	41702011	SA4717001	气缸轴	CYLINDER SHAFT	1	
3	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
5	41730035	SA4719001	气缸组件 R	AIR CYLINDER ASSY	2	
5	41736003		气管接头		2	
5	41736005		接头PA4		2	
6	H03019	48050142	轴用挡圈 C5	RETAINING RING EXTERNAL C5	2	
7	41709012	SA4720001	气缸接头	CYLINDER JOINT	2	
8	41726002	SA4721001	气缸接头轴	CYLINDER JOINT SHAFT	2	
9	H03003	48060142	挡圈5.6	RETAINING RING EXTERNAL C6	4	
10	41712042	SA4722001	压脚柄 R(气压)	WORK CLAMP LIFTER LEVER R AIR	1	
11	41712043	SA4723001	压脚柄 L(气压)	WORK CLAMP LIFTER LEVER L AIR	1	
12	41712044	SA4724001	压脚臂杆(气压)	WORK CLAMP LIFTER SHAFT AIR	2	
13	413S13008	S55479001	螺栓(带垫圈) M4 X 8	BOLT SOCKET (S/P WASHER) M4 X 8	2	
14	41702012	SA4692001	压脚臂杆轴	WORK CLAMP LIFTER SHAFT	1	
15	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET (FT) M6 X 6	1	
16	H03006	48080142	轴用挡圈 C8	RETAINING RING EXTERNAL C8	1	
17	41712133	110367001	垫圈 8	WASHER PLAIN SPECIAL 8	1	
18	41708002	SA3231001	紧圈 B	SET SCREW COLLAR B	1	
19	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT)M6 X 5	2	
20	4170901300	SA4863001	压脚导向组件 A	WORK CLAMP GUIDE A ASSY	1	
21	417S15003	S23849001	螺钉 M4 X 12	SCREW M4 X 12	2	
22	4170901400	SA4864001	压脚导向组件 B	WORK CLAMP GUIDE B ASSY	2	
23	417S30034	S55482001	螺栓(带垫圈) M4 X 14	BOLT SOCKET(S/P WASHER) M4X 14	4	
24	4170901500	SA4712001	压脚滑块组件 R	WORK CLAMP SLIDER ASSY R	1	
25	4170901600	SA4714001	压脚滑块组件 L	WORK CLAMP SLIDER ASSY L	1	
26	41724002	SA4706101	压脚挡板组件	WORK CLAMP SLIDER ASSY	4	
27	41712045	SA4725001	压脚 R	WORK CLAMP R	1	
28	417S30036	S55485001	螺栓(带垫圈) M5 X 12	BOLT SOCKET(S/P WASHER) M5 X 12	1	
29	S09009	12501031	螺钉 M5 X 10	SET SCREW SOCKET (FT) M5 X 10	2	
30	N01017	21500216	六角螺母 M5	NUT 2 M5	2	
31	417S20001	SA4709001	定位段螺钉	SHOULDER SCREW	2	
32	41712046	SA4726001	压脚 L	WORK CLAMP L	1	
33	417S30036	S55485001	螺栓(带垫圈) M5 X 12	BOLT SOCKET(S/P WASHER) M5 X 12	1	
34	S09009	12501031	螺钉 M5 X 10	SET SCREW SOCKET (FT) M5 X 10	2	
35	N01017	21500216	六角螺母 M5	NUT 2 M5	2	
36	417S20001	SA4709001	定位段螺钉	SHOULDER SCREW	2	
39	417S30035	S55484002	螺栓(带垫圈) M5 X 10	BOLT SOCKET(S/P WASHER) M5 X 10	4	
40	L02006	17501616	螺栓M5×16(镀镍)	BOLT M5X 16	4	
41	W01009	25050236	平垫圈 M5	WASHER PLAIN M5	4	
42	W02001	28050246	弹簧垫圈 2-5	WASHER SPRING 2-5	4	
43	141712264	SA4852001	送料板	FEED PLATE 2210	1	
44	417S30035	S55484002	螺栓(带垫圈) M5 X 10	BOLT SOCKET(S/P WASHER) M5 X 10	2	
45	41712441	SA4870101	压板组件 2210R	WORK CLAMP 2210R ASSY	1	
46	41712442	SA4871101	压板组件 2210L	WORK CLAMP 2210L ASSY	1	

D1 . 抬压装置 / Work clamp lifter mechanism

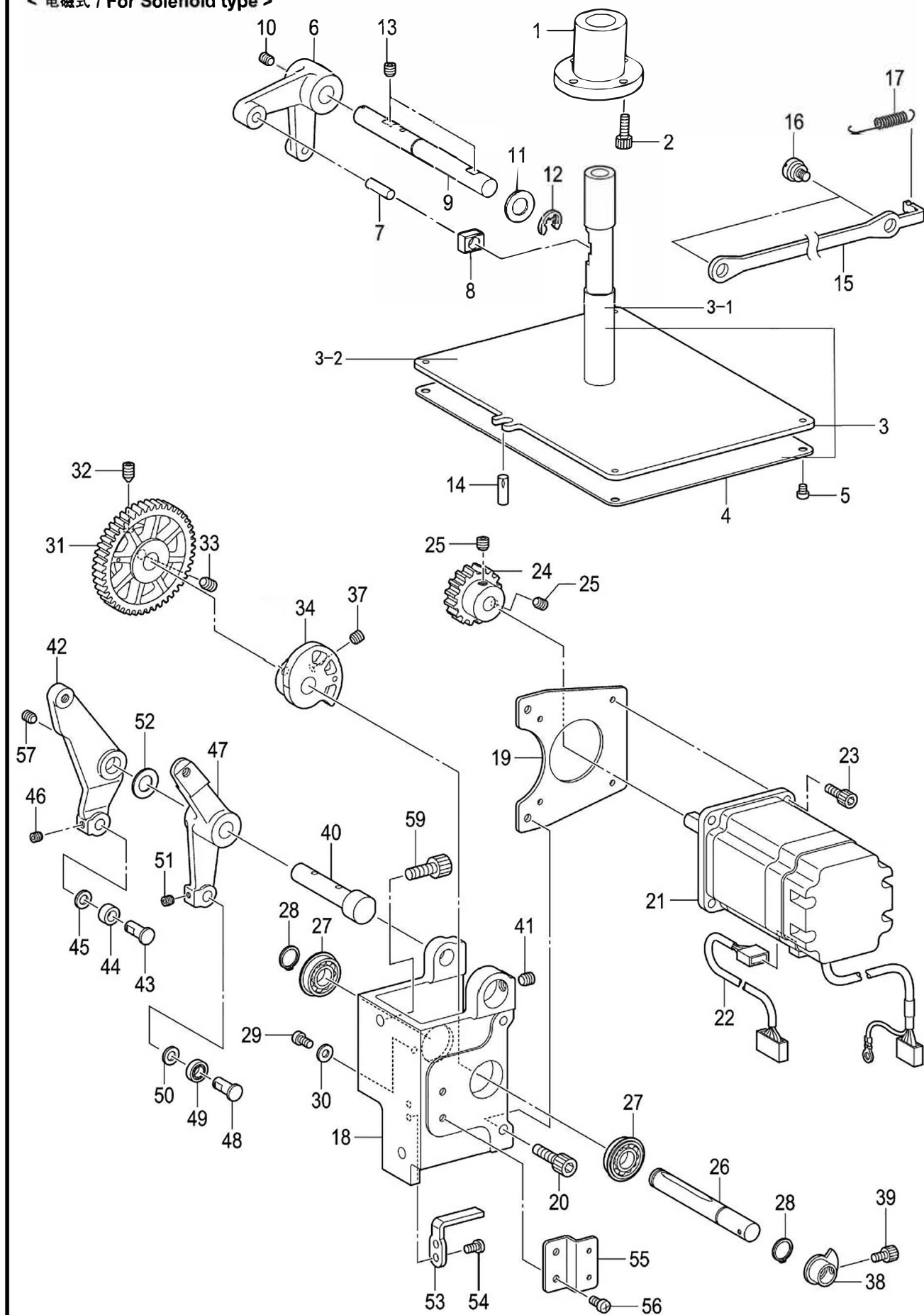


D1、抬压脚装置/Work clamp lifter mechanism

序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41710001	SA4759001	凸轮	STEPPING CLAM CAM	1	
2	41705001	SA4760001	连杆	STEPPINGCLAMP CON. ROD	1	
3	41728003	SA4763001	垫圈	WASHER STEPPING CLAMP CAM	1	
4	B06008	623033000	轴承 6805VV	BALL BEARING 6805VV	1	
5	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	2	
6	S04035	62400616	螺钉 M4 X 6	SCREW PAN M4 X 6	2	
7	41726003	SA4761001	上轮轴	ROLLER SHAFT STEPPING CLAMP	1	
8	41703010	SA4762001	滚轮	ROLLER STEPPING CLAMP	1	
9	41728004	SA4302001	垫圈	WASHER	2	
10	205S16005	21060106	螺母	NUT 1 M6	1	
11	41709017	SA4764001	压臂 R	STEPPING CLAMP ARM R	1	
12	L02032	17061216	螺栓 M6 X 12	BOLT M6 X 12	1	
13	41702013	SA4765001	压臂 F	STEPP NG CLAMP ARM F	1	
14	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET(FT)M6 X 6	1	
15	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	1	
16	41703011	SA4766001	压臂轴套 F	BUSH STEPPING CLAMP F	1	
17	417030 12	SA4767001	压 臂轴套 R	BUSH STEPPING CLMW R	1	
18	41712053	SA4768001	间歇连杆 A	STEPP NG CLAMP LINK A	1	
19	417S30007	SA4769001	段螺钉 6	SHOULDER SCREW 6	4	
20	413S11022	62300416	螺钉 M3 X 4	SCREIV PAN M3 X 4	4	
21	41712054	SA4770001	间歇连杆 B	STEPPING CLAMP LINK B	1	
22	41712055	SA4772001	间歇联杆	STEPPING CLAMP LINK	1	
23	41726004	SA4773001	联杆轴	SHAFT STEPPING CLAMP LINK	1	
24	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT)M6 X 6	1	
25	S09103	12400436	螺钉 M4 X 4	SET SCREW SOCKET (FT)M4 X 4	1	
26	41709018	SA4770001	联接板	STEPP NG CLAMP LIFTER LINK	1	
27	41702014	SA4771001	联接板轴	SHAFT STEPPING CLAMP LIFTER LINK	1	
28	41728031	SA2161001	垫圈	WASHER	1	
29	H03006	48080142	轴用挡圈 C8	RETA NING RING EXTERNAL C8	1	
30	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
31	S09103	12400436	内六角平端紧定螺钉M4×4	SET SCREW SOCKET (FT) M4 X 4	1	
32	41709019	SA4779001	间歇提升杆	STEPPING CLAMP LIFTER	1	
33	41703013	SA4781001	提升杆滑轮	ROLLER STEPPING CLAMP LIFTER	1	
34	41726005	141362001	滚轮轴	ROLLER	1	
35	41702015	SA4780001	提升杆轴	SHAFT STEPPING CLAMP LIFTER	1	
36	S10019	12060636	螺钉M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
37	S02039	S25310101	螺钉 M4	SCREW FLAT M4	1	
38	41702016	SA4775001	提升连杆	STEPPING CLAMP LIFTER ROD	1	
39	417S12003	SA4853001	提升连杆接头	JOINT STEPP NG CLAMP LIFTER	1	
40	4170500300	SA2663001	接头组件	BALL JOINT ASSY	2	
41	205S16005	21060306	螺母	NUT M6	2	
42	417S16001	SA3227001	螺母 M6 X 0. 75	NUT (FT) M6	1	
43	417S30008	SA4776001	段螺钉	SHOULDER SCREW	1	
44	417S12005	S32462001	段螺钉B M6	SHOULDER SCREW B M6	1	
45	L01007	17065002	螺栓 M6 X 50	BOLT M6 X 50	1	
46	205S16005	21060106	螺母	NUT 1 M6	1	
47	41709020	SA4778001	压紧杆接头	PRESSER BAR CLAMP	1	
48	421S13035	18400836	螺栓 M4 X 8	BOLT SOCKET M4 X 8	1	
49	123S30002	SA1174001	调节螺栓 M14	PESSER ADJUSTING SCREW M14	1	
50	129S16001	SA 1175001	调节螺母 M14	ADJUST SCREW NUT	1	
51	41727004	SA5300001	弹簧	PRESSER BAR SPRING	1	
52	41702017	S10112001	弹簧导向	PRESSER BAR SPRING GUIOE	1	
53	41703014	SA5301001	弹簧管套	COLLAR PRESSER BAR SPRING	1	
54	41703015	SA2195001	压紧杆轴套	PRESSER BAR BUSH	1	
55	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT)M6 X 5	1	
56	41702018	111466101	压紧杆	PRESSER BAR	1	
57	41716001	*P. 67	压脚	WORK CLAMP	1	
58	417S15011	S13399001	螺钉 SM3. 57 X 12	SCREW SM3. 57 X 12	1	
59	41728032	151439102	垫圈	WASHER	1	

D2 . 抬压装置 / Work clamp lifter mechanism

< 电磁式 / For Solenoid type >

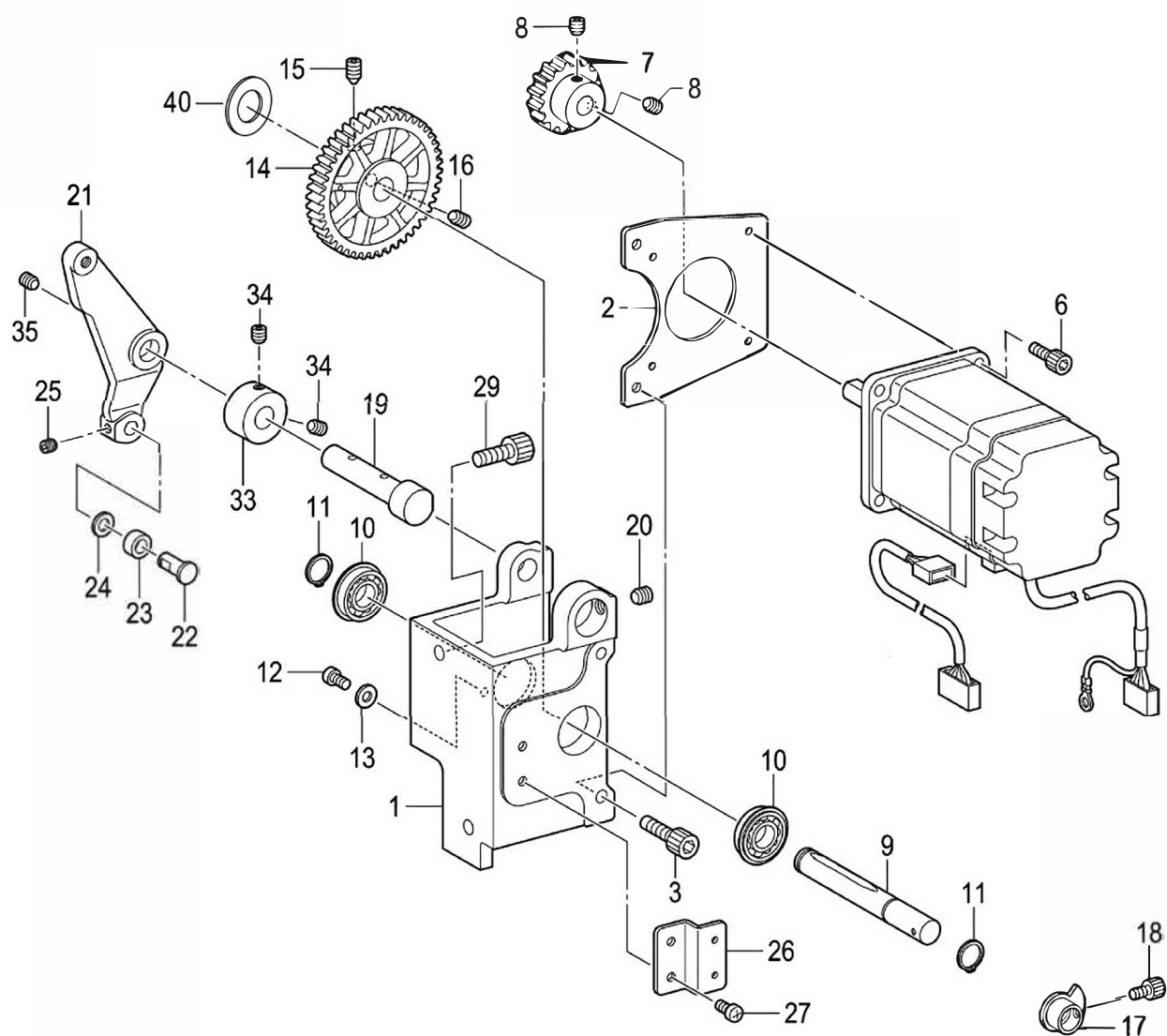


D2、抬压装置/Work clamp lifter mechanism (T1310)

序号 No.	公司件号 Part. No.	参考件号 Ref.No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
			〈电磁式〉	<For Solenoid type>		
1	41724004	SA4729001	滑杆轴套	SLIDE BUSH	1	
2	S05048	18401036	螺钉 M4 X 10	BOLT SOCKET M4 X 10	4	
3	41712056	SA4731001	压脚提升板组件	WORK CLAMP LIFTER PATE ASSY	1	
3-1	41702008		压脚提升轴	PRESSER LIFT SHAFT	1	
3-2	41712076		压脚提升板	PRESSER FOOT LIFT PLATE	1	
4	400993	SA4734001	底座板 E	SEAT E	1	41712057
5	S04080	62400416	螺钉 M4 X 4	SCREW PAN M4 X 4	1	
6	41709021	SA4736001	压脚提升杆	WORK CLAMP LIFTER LEVER	1	
7	41726006	152744001	销	PIN	1	
8	41709022	102630001	压脚提升滑块	NEEDLE BAR GUIDE SLIDE BLOCK	1	
9	41702019	SA4737001	提升杆轴 B	WORK CLAMP LEVER SHAFT B	1	
10	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT)M6 X 6	1	
11	41728001	S20356001	平垫圈 10	WASHER PLAIN 10	1	
12	H05033	48080342	挡圈 E8	RETAIN NG RING E8	1	
13	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT)M6 X 6	2	
14	41729002	118208001	带槽销	DOWEL PIN	1	
15	41712058	SA4738001	压脚提升杆	WORK CLAMP LIFTER PATE ASSY	1	
16	417S20010	SA343800 1	段螺钉	SHOULDER SCREW	2	
17	41727005	SA4739001	弹簧	PRESSER BAR SPRING	1	
18	41701008	SA4741101	马达座	MOTOR BRACKET	1	
19	41712063	SA474200 1	压脚马达板	WORK CLAMP MOTOR PLATE	1	
20	S05121	18501036	螺栓 M5 X 10	BOLT SOCKET M5 X 10	2	
21	141733010	SA4826201	Z向步进电机3	PULSE MOTOR ASSY Z	1	
22	41730044	SA4828001	马达端线 P	MOTOI HARNESS P	1	
23	S05133	18401036	螺钉 M4 X 12	BOLT SOCKET M4 X 12	4	
24	41725009	SA4743001	驱动齿轮	WORK CLAMP DRIV NG GEAR	1	
25	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
26	41702020	SA4744001	压脚支点轴	WORK CLAMP FULCRUM SHAFT	1	
27	B10015	SA4647001	球轴承 6900ZZNR	BALL BEARING 6900ZZ	2	
28	H03008	48100142	轴用挡圈 C10	RETAIN NG RING EXTERNAL C10	2	
29	S04035	62400616	螺钉 M4 X 6	SCREW PAIIN M4 X 6	1	
30	W01001	25040236	平垫圈 M4	WAS也R PLAIN M4	1	
31	41725010	SA4745001	凸轮齿轮	WORK CLAMP CAM GEAR	1	
32	S10021	16061031	螺钉 M6 X 10	SET SCREW SOCKET (CN)M6 X 10	1	
33	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCK ET (FT)M6 X 6	1	
34	4171000200	SA4746001	压脚凸轮	WORK CLAMP CAM	1	
37	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT)M6 X 6	1	
38	4170301700	SA4747001	压脚原点挡块	WORK CLAMP H-POS TION DOG	1	
39	S05115	18400636	螺栓 M4 X 6	BOLT SOCKET M4X 6	1	
40	41702025	SA4748001	压脚柄轴	WORK CLAMP LEVER SHAFT	1	
41	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
42	41709023	SA6210001	间歇驱动杆	STEPPING W-CLAMP DRIVING LEVER	1	
43	41702022	SA3441001	抬压滚轮轴	W-CLAMP LIFTER ROLLER SHAFT	1	
44	B04026	70696800	轴承 R-696ZZ	BALL BEARING RAD AL 696ZZ	1	
45	4 1728005	109763001	垫圈	WASHER	1	
46	S09019	12500536	螺钉 M5 X 5	SET SCREW SOCKET (FT)M5 X 5	1	
47	400683	SA4750001	压脚驱动杆	WORK CLAMP DRIVING SHAFT	1	41709024
48	41702022	SA3441001	抬压滚轮轴	W-CLAMP LIFTER ROLLER SHAFT	1	
49	B04026	70696800	轴承 R-696ZZ	BALL BEARING RAD AL 696ZZ	1	
50	41728005	109763001	垫圈	WASHER	1	
51	S09019	12500536	螺钉 M5 X 5	SET SCREW SOCKET (FT) M5 X 5	1	
52	41728001	S20356001	平垫圈 10	WASHER PLAIN 10	1	
53	41712061	SA4752001	凸轮定位	WORK CLAMP CAM STOPPER	1	
54	S04035	62400616	螺钉 M4 X 6	SCREW PAN M4 X 6	2	
55	41712062	SA4753001	压脚传感器板	WORK CLAMP SENSOR PLATE	1	
56	S04035	62400616	螺钉 M4 X 6	SCREW PAN M4 X 6	2	
57	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT)M6 X 6	1	
59	S05110	18061236	螺栓 M6 X 12	BOLT SOCKET M6 X 12	2	

D3 . 抬压装置 / Work clamp lifter mechanism

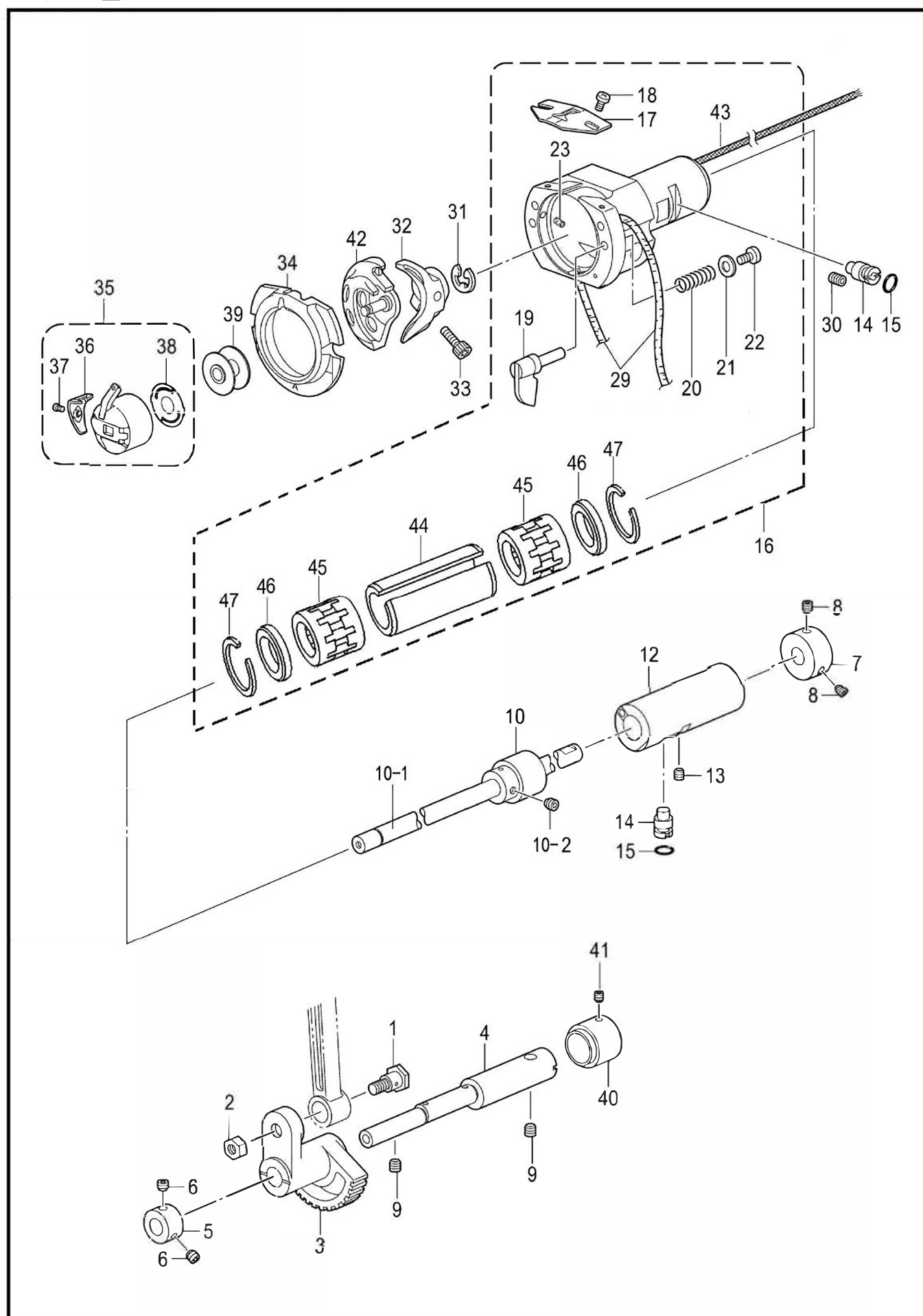
< 空压式 / For Pneumatic type >



D3、抬压装置/Work clamp lifter mechanism

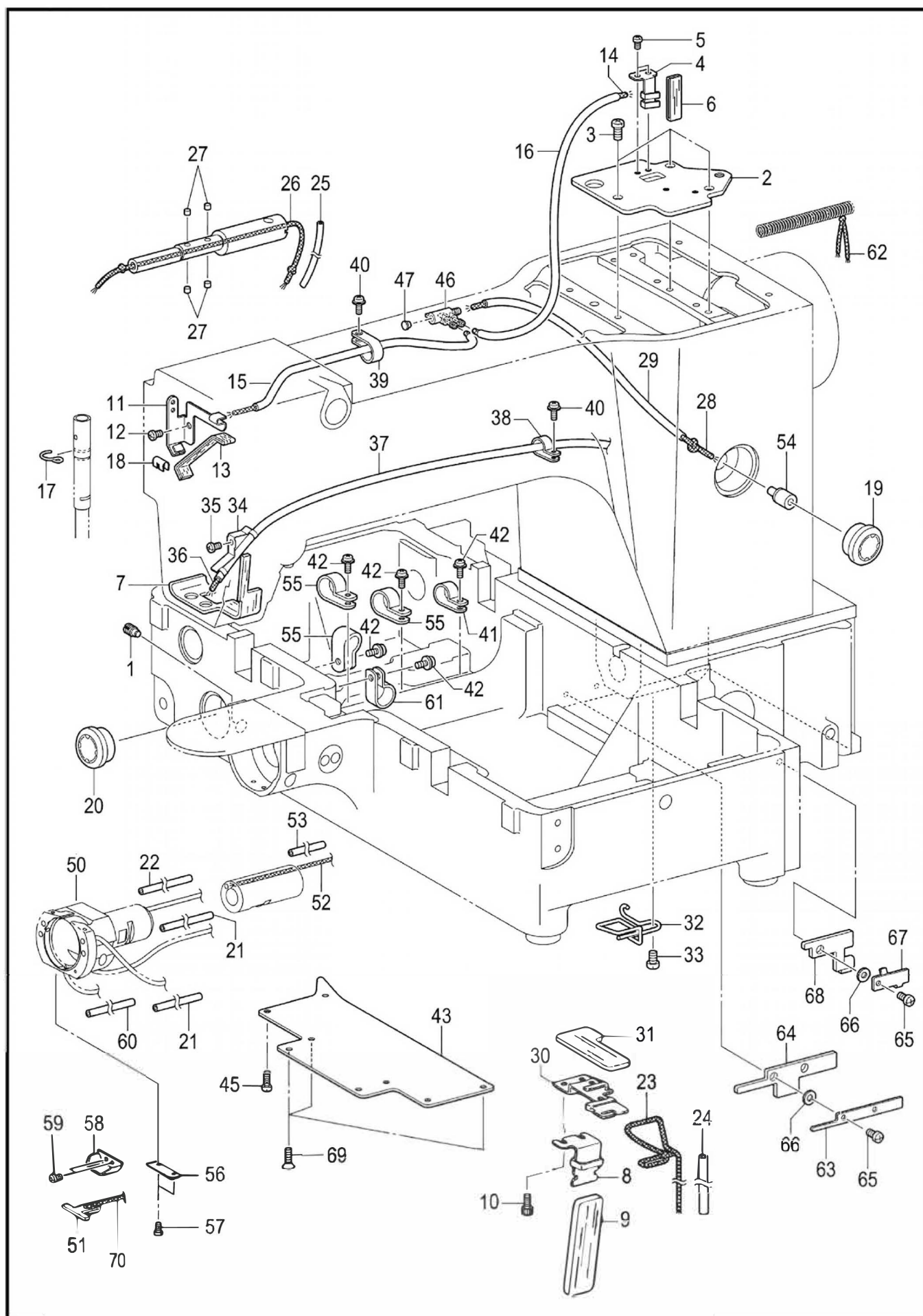
序号 No.	公司件号 Part. No.	参考件号 No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
			<空压式>	<For Penumatic type>		
1	41701008	AS4741101	马达座	MOTOR BRACKET	1	
2	41712063	SA4742001	压脚马达板	WORK CLAMP MOTOR PLATE	1	
3	S05121	18501036	螺栓M5×10	BOLT SOCKET M5X10	2	
6	S05133	18401036	螺栓M4×12	BOLT SOCKET M4X10	4	
7	41725009	SA4743001	驱动齿轮	WORK CLAMP DRIVING GEAR	1	
8	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET M6X6	2	
9	41702020	SA4744001	压脚支点轴	WORK CLAMP FULCRUM SHAFT	1	
10	B10015	SA1647001	球轴承6900ZZNR	BALL BEARING 6900ZZNR	2	
11	H03008	48100142	挡圈10	RETAINING RING EXTERNAL C10	2	
12	S04035	62400616	螺钉M4×6	SCREW PAN M4X6	1	
13	W01001	25040236	M4垫片	WASHER PLAIN M4	1	
14	41725010	SA4745001	凸轮齿轮	WORK CLAMP CAM GEAR	1	
15	S10021	16061031	凹端紧定螺钉 M6×10	SET SCREW SOCKET M6X10	1	
16	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET M6X6	1	
17	4170301700	SA4747001	压脚原点挡块	WORK CLAMP H-POSITION DOG	1	
18	S05115	18400636	螺栓M4×6	BOLT SOCKET M4X6	1	
19	41702025	SA4748001	压脚柄轴	WORK CLAMP LEVER SHAFT	1	
20	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET M6X6	1	
21	41709023	SA6210001	间歇驱动杆	STEPPING W-CLAMP DRIVING LEVER	1	
22	41702022	SA3441001	抬压滚轮轴	W-CLAMP LIFTER ROLLER SHAFT	1	
23	B04026	70696800	轴承 R-696ZZ	BALL BEARING RADIAL 696ZZ	1	
24	41728005	109763003	垫圈	WASHER	1	
25	S09019	12500536	螺钉M5X5	SET SCREW SOCKET M5X5	1	
26	41712062	SA4753001	压脚传感器板	WORK CLAMP SENSOR PLATE	1	
27	S04035	62400616	螺钉M4×6	SCREW PAN M4X6	2	
29	S05962	18061236	内六角圆柱头螺钉M6×12	BOLT SOCKET M6X12	2	
33	41708302	SA4757001	紧圈	SET SCREW COLLAR	1	
34	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET M6X6	2	
35	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET M6X6	1	
40	41728001		平垫圈10	WASHER PLAIN 10	1	

E. 下轴装置 / Lower shaft mechanism



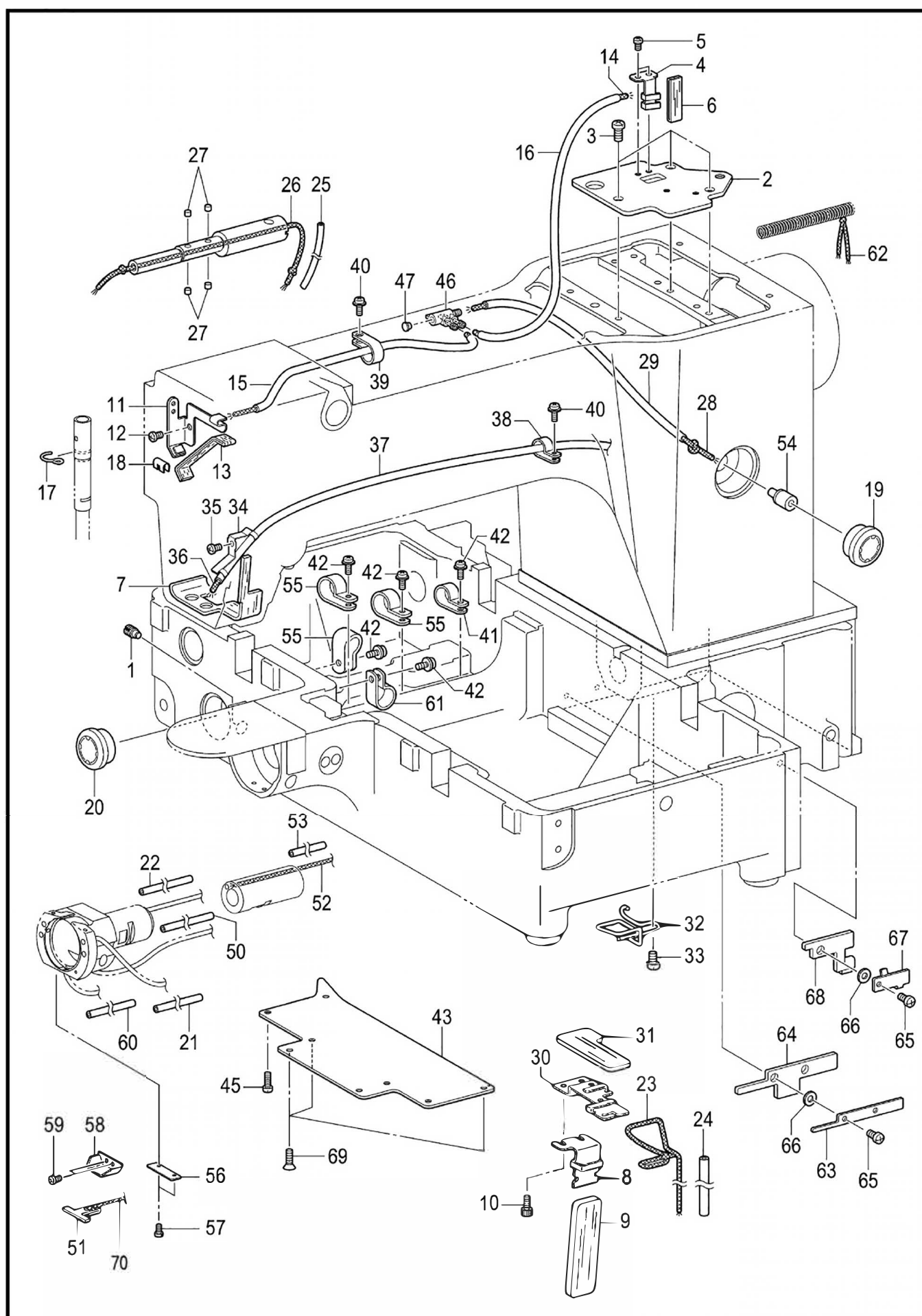
E、下轴装置/Lower shaft mechanism

序号 No.	公司件号 Part. No.	参考件号 Ref.No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	417S20062	SA3226001	JK-T2210-10-001段螺钉(DLC)	SHOULDER SCREW	1	417S30011
2	417S16001	SA3227001	螺母 M6 X 0.75	NUT(FT) M6	1	
3	41725011	SA3228101	摆动齿轮	ROCK GEAR	1	
4	41702027	SA4782001	摆动齿轮轴	ROCK GEAR SHAFT	1	
5	41708002	SA3231001	紧圈 B	SET SCREW COLLAR 8	1	
6	S09041	12060536	螺钉 M6 X 5	SET SCREW SOCKET (FT) M6 X 5	2	
7	41708006	SA3233001	紧圈	SET SCREW COLLAR	1	
8	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	2	
9	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	2	
10	4170202800		下轴组件(委外)	LOWER SHAFT ASSY	1	41702028
12	41703019	SA6216001	下轴轴套	LOWER SHAFT BUSH	1	
13	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
14	41702029	SA3238101	旋梭调节轴	ADJUSTING STUD	2	
15	41722015	81003670	O形圈 PW3	O RING PW3	2	
16	41701009	SA6220001	大旋梭基座	SHUTTLE RACE BASE ASSY G	1	
30	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (FT) M6 X 6	1	
31	H05032	48070342	挡圈 E7	RETAINING RING E7	1	
32	41718001	SA3284101	梭托 D	DRWER D	1	
33	S05122	18501232	螺栓 M5X 12	80LT SOCKET M5 X 12	1	
34	41718002	*P. 66	外旋梭	SHUTTLE RACE BASE	1	
35	4171801700	*P. 66	梭芯套组件	BOBBIN CASE ASSY	1	
39	41718004	*P. 66	梭芯	BOBBIN	1	
40	41703020	SA3283101	紧圈 R	SET SCREW COLLAR R	1	
41	S09019	12500536	螺钉 M5 X 5	SET SCREW SOCKET (FT) M5 X 5	1	
42	41718018	*P. 66	中旋梭	SHUTTLE HOOK	1	
50	S05124		螺栓 M5×16(滚花, 镀镍)"	SET SCREW SOCKET (FT) M5 X 16	1	



F、供油润滑装置 / Lubrication

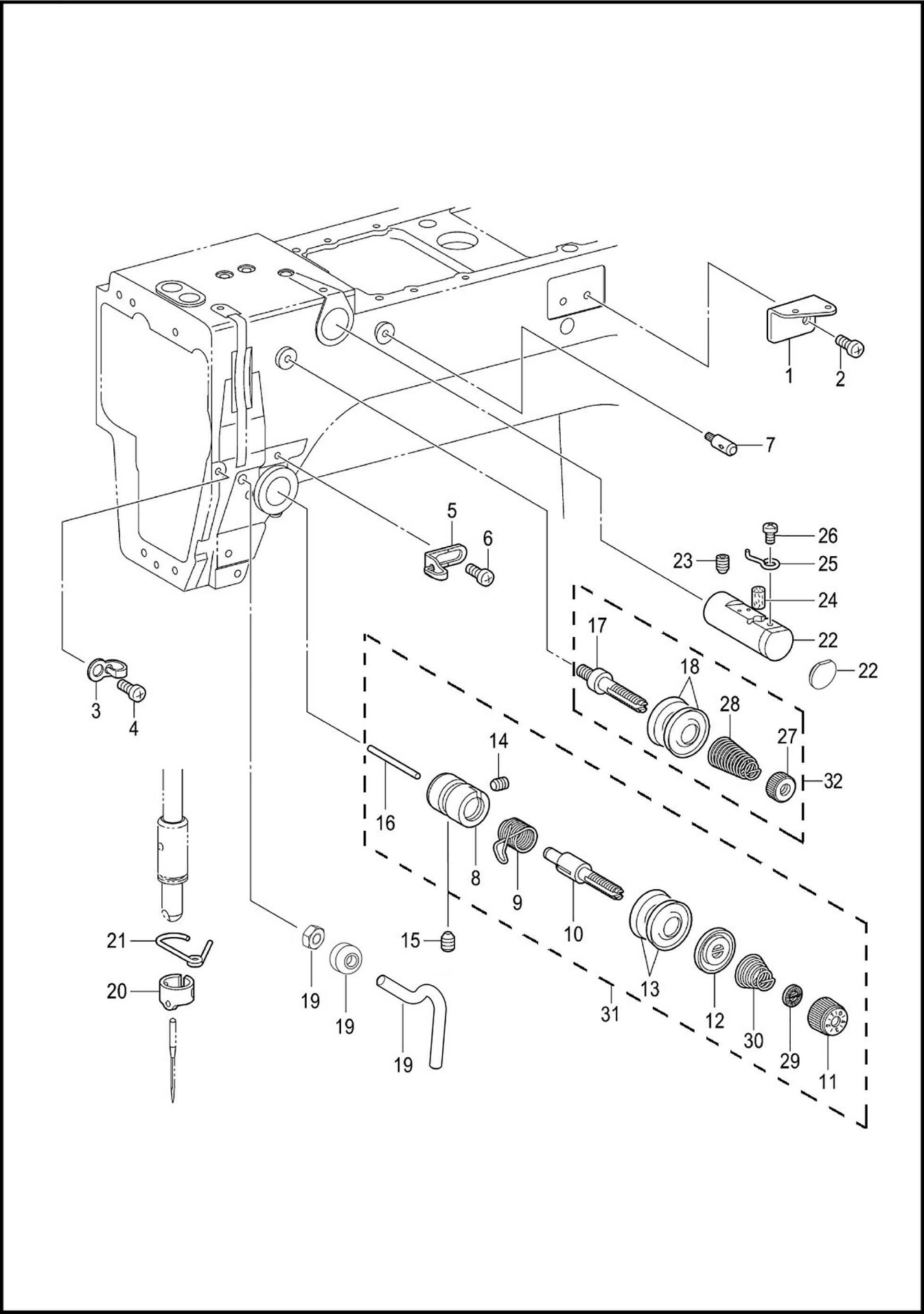
序号 No.	公司件号 Part. No.	参考件号 No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	417S30022	SA3244001	螺钉	SET SCREW	1	
2	41712065	SA4785001	曲柄盖	CRANK COVER	1	
3	S04038	062061016	螺钉M6×10	SCREW PAN M6X10	3	
4	41712066	SA4787001	曲柄供油板	CRANK WICK PLATE	1	
5	S04035	062400616	螺钉M4×6	SCREW PAN M4X6	2	
6	41723027	SA5294001	毡油线	FLAT WICK	0.27	
7	41723005	SA4786101	油毡	FELT	1	
8	41712067	SA3503201	下轴给油支架	LOWER SHAFT WICK SUPPORT	1	
9	41723006	SA3504201	下轴齿轮油毡	LOWER SHAFT GEAR FELT	1	
10	S04035	018400636	螺钉M4×6	BOLT SOCKET M4X6	2	
11	41712068	SA4788001	供油支架	WICK SUPPORT	1	
12	S04035	062400616	螺钉M4×6	SCREW PAN M4X6	1	
14	41723026	SA5292001	油线φ2.5	FLAT WICK	1	
15~16	12921002	SA6576001	维尼龙油管	OIL TUBE	0.21	
17	41712069	SA6087001	油线挂钩	WICK SUPPORT	1	
18	41712070	104567101	油线支架	WICK SUPPORT	1	
19	41711003	S49992000	油窗盖	OIL GAUGE WINDOW	1	
19	41711021		挡片		1	
19	41722030		橡胶圈		1	
20	41711004	152948001	油窗盖	OIL GAUGE WINDOW	1	
20	41711022		挡片		1	
20	41722031		橡胶圈		1	
21~22	12921002	SA6577001	维尼龙油管(φ3xφ5)(进口)	OIL TUBE	1	
23	12923018	SA5292101	油线4×4	WICK 4X4	0.68	
24	12921002	S53175000	维尼龙油管	OIL TUBE	0.45	
25	12921005	SA5072001	油管	OIL TUBE	0.3	
25	12923018		油线4×4	WICK 4X4	0.4	
26	12923019	S45849000	油线6×6	WICK 6X6	0.3	
27	41723011	S09043000	油毡	FELT	4	
30	41712071	SA3246001	齿轮供油支架	GEAR WICK SUPPORT	1	
31	41723031	SA3280001	油毡	GEAR FELT	1	
32	41712072	SA47879101	油线夹B	LOWER SHAFT WICK SUPPORT B	1	
33	S04033	062060816	螺钉M6×8	SCREW PAN M6X8	1	
34	41712073	145547001	回油管管托	TUBE HOLDER	1	
35	S04035	062400616	螺钉M4×6	SCREW PAN M4X6	1	
36	12923019	S49957000	油线6×6	WICK 6X6	0.7	
37	12921005	SA4791101	油管	OIL TUBE	0.82	
38	41711014		电线夹6.4	CORD HOLDER 6.4	1	
39	41711016	525567000	电线夹8.4	CORD HOLDER 8.4	1	
40	417S30025	OA5401006	螺栓(带垫圈)M4×10DB	SCREW PAN(S/P WASHER) M4X10	1	
40	417S30025	OA5401006	螺栓(带垫圈)M4×10DB	SCREW PAN(S/P WASHER) M4X10	6	
41	41711014	525664000	电线夹6.4	CORD HOLDER6.4	1	
42	417S30025	OA5401006	螺栓(带垫圈)M4×10DB	SCREW PAN(S/P WASHER) M4X10	5	
43	41712074	SA5259001	油盖	OIL COVER	1	
45	403S11043	062401016	x向传感器螺钉组件	SCREW PAN M4X10	5	
46	41736001	S38265000	管接头L	TERMINAL L	1	
47	41722016	142274101	橡皮塞4.2	RUBBER CAP 4.2	1	
51	12921002	SA6577001	维尼龙油管(φ3xφ5)(进口)	OIL TUBE	0.32	
53	12921005	12921002	油管(φ4xφ6)(进口)	OIL TUBE	0.11	
54	41736002	41736002	油嘴管	OIL FEEDING PIPE	1	
55	41711016	525567000	电线夹8.4	CORD HOLDER 8.4	2	
60	12921002	SA6577001	维尼龙油管	OIL TUBE	0.3	
61	41711015	552907000	电线夹13.2	CORD HOLDER 13.2	6	
63	41712110	SA6581001	油毡压板L	WICK SUPPORT L	1	
64	41723024	SA6583001	底板油毡L	FELT BED L	1	
65	S04035	062400616	螺钉M4×6	SCREW PAN M4X6	3	



F、供油润滑装置 / Lubrication

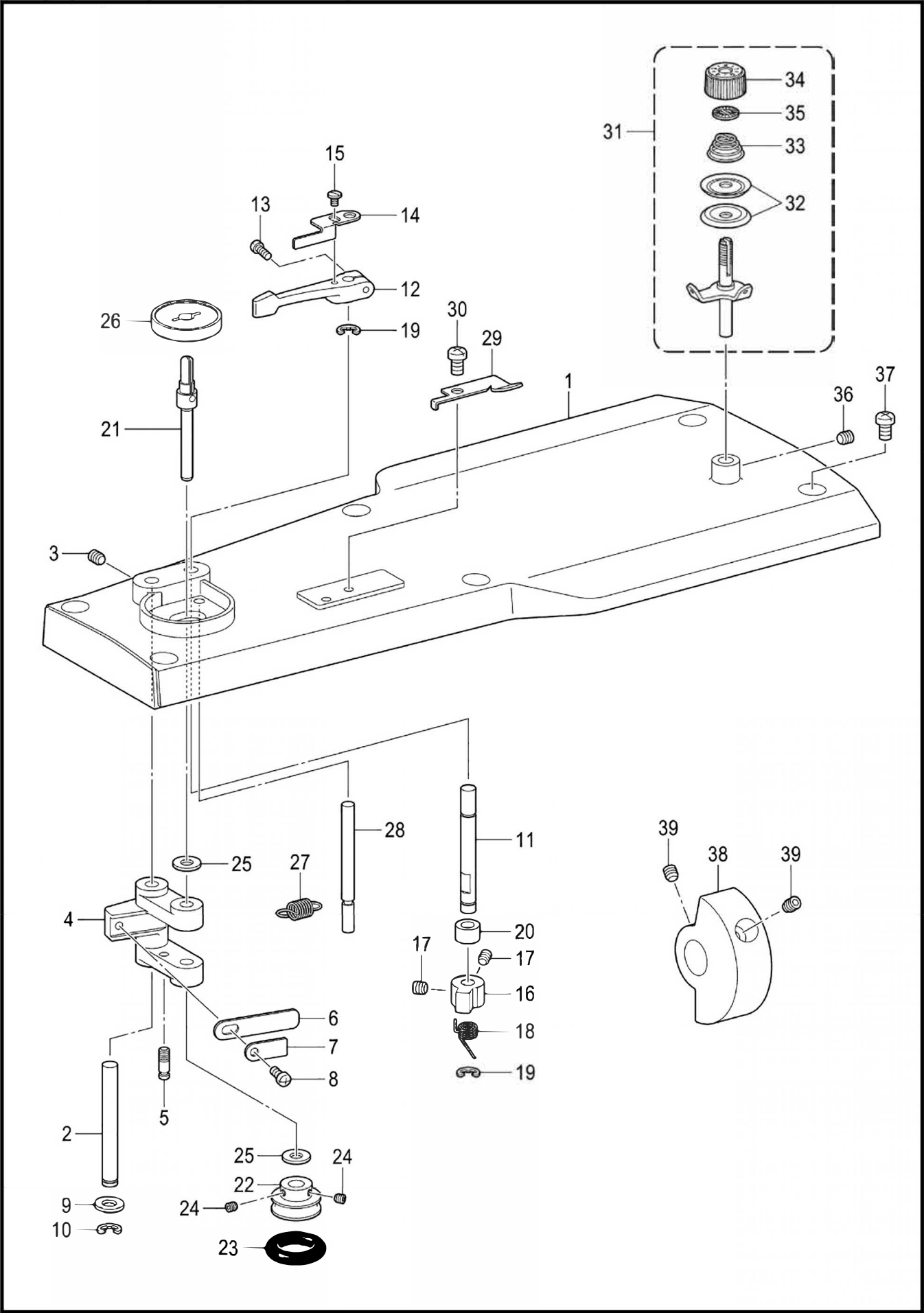
序号 No.	公司件号 Part. No.	参考件号 No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
66	W02008	028040246	弹垫2-4	WASHER SPRING 2-4	3	
67	41712130	SA6582001	油毡压板R	WICK SUPPORT R	1	
68	41723018	SA6584001	底板油毡R	FELT BED R	1	
69	S02039	S25310101	螺钉M4×9	SCREW FLAT M4X9	3	

G . 穿线装置 / Threading mechanism



G、穿线装置/Threading mechanism

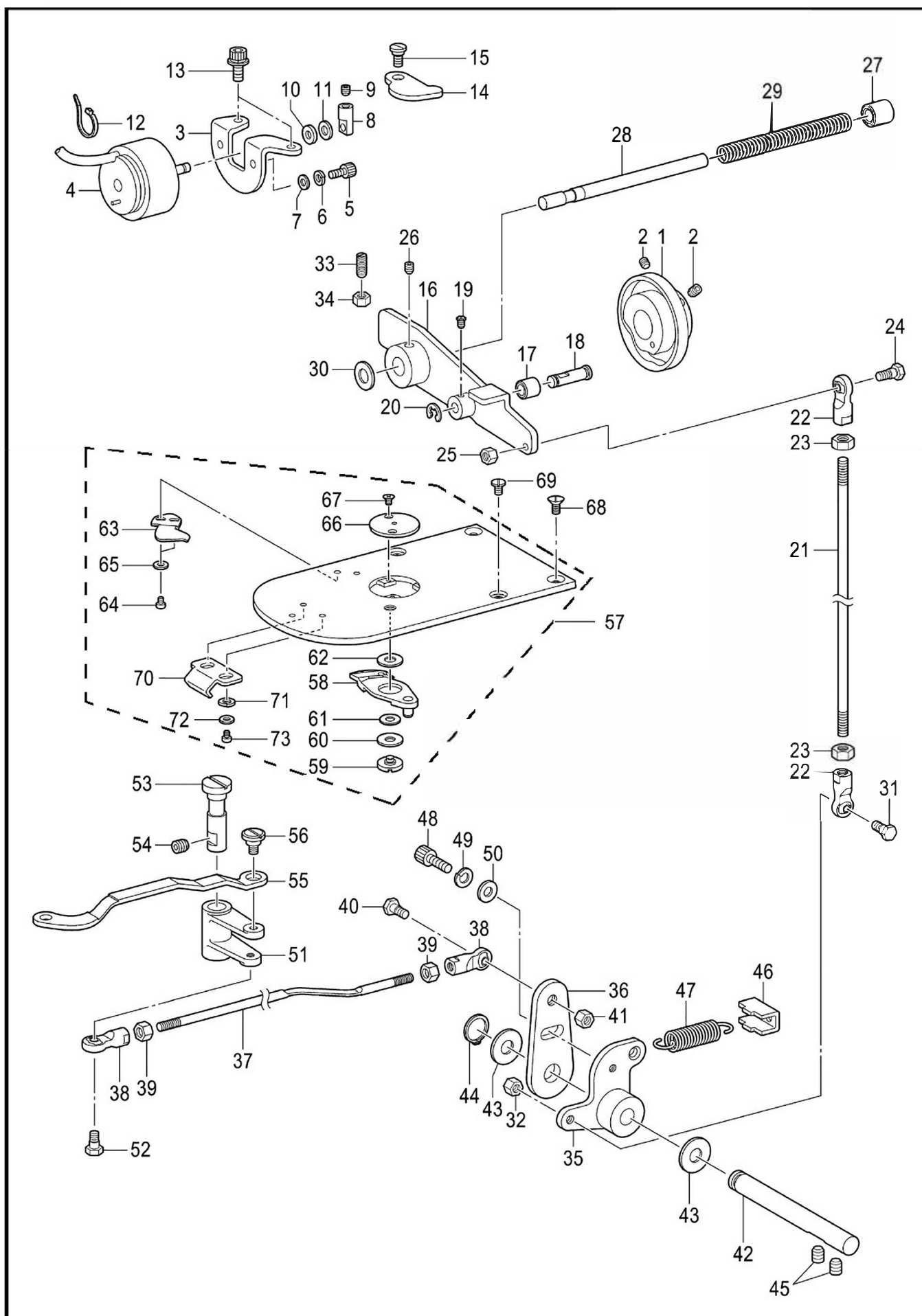
序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41712077	SA3250001	过线导向 A	ARM THREAD GUIDE A	1	
2	S04030	62500616	螺钉 M5×6	SCREW PAN M5 X 6	1	
3	41712078	SA4333001	过线导向 B	ARM THREAD GUIDE B	1	
4	S04030	0625006 16	螺钉 M5 × 6	SCREW PAN M5 X 6	1	
5	41712079	SA6391001	过线器 C	ARM THREAD GUIDE C	1	
6	S04030	62500616	螺钉 M5 × 6	SCREW PAN M5 X 6	1	
7	41702030	153049001	面线导向杆	UPPER THREAD GUIDE STUD	1	
15	S12001	5A4143001	螺钉 M6 × 8	SET SCREW (FT) M6 X 8	1	
19	41713301	159224001	机壳线钩	THREAD GUIDE ARM	1	
19	41722320		减震橡皮	RUBBER	1	
19	N01024		螺母M4	NUT M4	1	
20	41726014	P.67	针套	NEEOLE SLEEVE	1	
21	41712082	SA3258001	针杆轴套线导向 D	N-BAR BUSH THREAD GUIDE D	1	
22	41203018	152881001	线冷却器组件	NEEDLE COOLER ASSY	1	
22	41222019		塞头	RUBBER	1	
23	S10019	12060636	螺钉 M6×6	SET SCREW SOCKET (FT) M6 X 6	1	
24	41223043	152883000	油毡 8 X 15. 5	FELT 8 X 15.5	1	
25	41213008	152884001	过钱钩	NEEDLE COOLER THREAD GUIDE	1	
26	409S11017	62670412	螺钉 SM3. 57-40 ×4	SCREW PAN SM3. 57-40 X 4	1	
31	4171302000		主夹线器组件Q	MAIN TENSION ASSY Q	1	
32	4171301400		副夹线器组件	DEPUTY TENSION ASSY	1	



H、卷线装置/Bobbin winder mechanism

序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	301382	SA4795001	顶盖	TOP COVER	1	41701010
2	41702033	SA3290001	卷线手柄轴	SHAFT BW-LEVER	1	
3	S09019	12500536	螺钉M5 X 5	SET SCREW SOCKET (FT) M5 X 5	1	
4	41709026	SA3291001	卷线手柄	BOBBIN WINDER LEVER	1	
5	41702034	SA4171001	弹簧挂钩	SPRING HOOK	1	
6	41712084	152936001	板弹簧	PLATE SPRING	1	
7	41712085	152937001	垫圈	WASHER	1	
8	S04077	62350616	螺钉 M3. 5 X 6	SCREW PAN M3. 5 X 6	1	
9	W01015	15948600 1	垫圈	WASHER	1	
10	H05006	48050342	挡圈 E5	RETAINING RING E5	1	
11	41702035	SA3293001	卷线卡爪轴	STUD B-WINDER	1	
12	41709027	SA1984001	梭芯压臂柄	BOBBINPRESSER ARM	1	
13	S04081	62401216	螺钉 M4 X 12	SCREW PAN 4 X 12	1	
14	41712086	SA3291001	梭芯压杆	BOBBIN PRESSER	1	
15	417S15006	S23418002	螺钉 M4 X 5	SCREW M4 X 5	1	
16	41709028	SA3295001	卷线卡爪	CLAW B-WINDER	1	
17	S09103	12400436	内六角平端紧定螺钉M4×4	SET SCREW SOCKET (FT)M4 X 4	2	
18	41727007	S10438001	弹簧	SPRING TWIST	1	
19	H05006	48050342	挡圈 E5	RETAINING RING E5	2	
20	41708025	SA479600 1	垫片	SPRINGER COLLER	1	
21	41702036	SA3296001	卷线轴	BOBBIN WINDER SHAFT	1	
22	41703021	SA329700 1	卷线器	WHEEL B-WINDER	1	
23	41722017	120448001	橡皮圈	BOBBIN WINDER RUBBER BAND	1	
24	S09103	12400436	内六角平端紧定螺钉M4×4	SET SCREW SOCKET (FT) M4 X 4	2	
25	W010 15	15948600 1	垫圈	WASHER	2	
26	41711063	SA1988001	梭芯座	BOBBIN SUPPORT	1	
27	41727008	S10268001	拉簧	SPRING	1	
28	41702037	SA329800 1	止动轴	STOPPER SHAFT B-WINDER	1	
29	41719001	SA3299001	切刀	KNIFE	1	
30	S04030	0625006 16	螺螺钉M5 X 6	SCREW PAN M5 X 6	1	
31	4171302100	SA1994101	卷线器夹线组件Q	BOBBIN WINDER TENSION ASSY Q	1	
36	S09019	12500536	4摆在T M5 X 5	SET SCREW SOCKET (FT) M5 X 5	1	
37	S04038	62061016	螺钉 M6 X 10	SCREW PAN M6 X 10	6	
38	41704002	SA479710 1	卷线驱动轮	DRIVING WHEEL B-WINDER	1	
39	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	2	

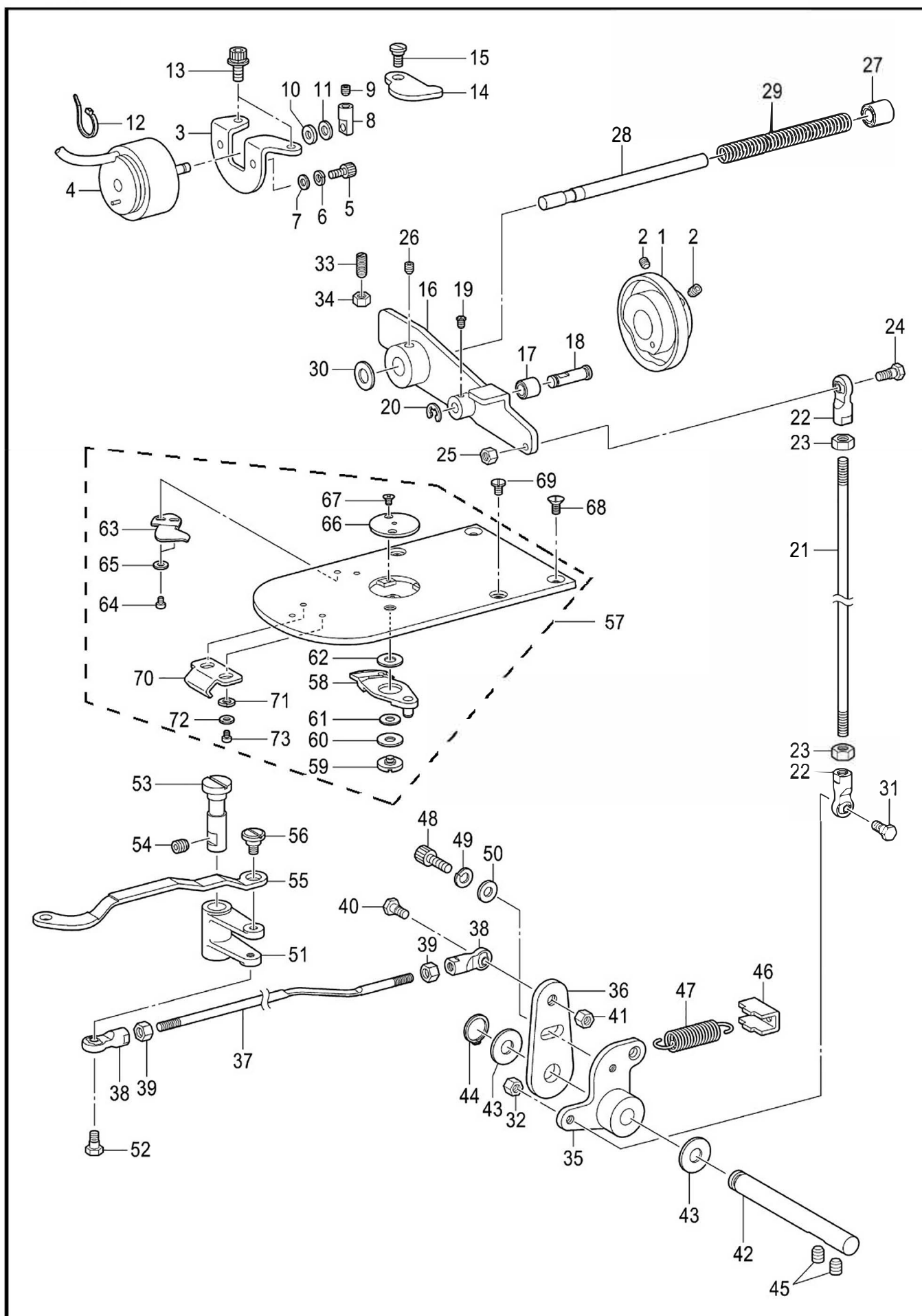
J. 切线装置 / Thread trimmer mechanism



J、切线装置 / Thread trimmer mechanism

序号 No.	公司件号 Part. No.	参考件号 No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41710003	SA3301101	切线凸轮	THREAD TRIMMER CAM	1	
2	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	3	
3	41712087	SA4798001	电磁铁安装板	SETTING PLATE SOLENOID	1	
4	41730001	SA5135001	切线电磁铁	THREAD TRIMMER SOLENOID	1	
5	L02031	17400802	六角头螺栓 全螺纹 M4×8	BOLT M4X8	2	
6	W02008	28040246	弹垫2-4	WASHER SPRING 2-4	4	
7	W01001	25040236	M4垫片	WASHER PLAIN M4	2	
8	41702038	SA3307001	电磁铁杆	SOLENOID LEVER	1	
9	S09103	12400436	内六角平端紧定螺钉M4×4	SET SCREW SOCKET (FT) M4 X 4	1	
11	41728033	S02445001	垫圈	WASHEWR	1	
13	417S30306	S55484002	螺栓M5×15	BOLT SCREW SOCKET M5 X 10	2	
14	41712088	SA4799001	驱动压杆	PUSHING LEVER D-LEVER	1	
15	417S30012	SA3306001	段螺钉 7-3	SHOULDER SCREW 7-3	1	
16	4171211100	SA3309101	切线驱动杆组件	TR-DRIVING LEVER	1	
17	41703022	SA3310001	切线滚轮	COLLAR TR-TRIMMER	1	
18	41702039	SA3311001	切线滚轮轴	COLLAR SHAFT	1	
19	417S12009	S46903001	螺钉 M4×5	SET SCREW M4 X 5	1	
20	H05029	48040342	挡圈 E4	RETAINING RING E4	1	
21~23	14170202200	28030246	JK-T2210-14-88切线杆V组件	WASHER SPRING 2-3	1	
24	417S12005	S32462001	段螺钉B M6	SHOULDER SCREW B M6	1	
25	N01012	21060306	螺母M6	NUT 3 M6	1	
26	403S14006	S23651001	内六角平端紧定螺钉	SET SCREW SOCKET (FT) M6 X 6	1	
27	41703023	231071001	轴套 8×15	BUSH 8X15	1	
28	41702041	SA3312001	驱动杆导向轴	GUIDE SHAFT	1	
29	41727009	SA3313101	弹簧	SPRING COMPRESSION	1	
30	41722018	154596000	减震垫圈	CUSHION	1	
31	417S12005	S32462001	段螺钉B M6	SHOULDER SCREW B M6	1	
32	N01012	21060306	螺母M6	NUT 3 M6	1	
33	417S10003	S25475101	螺钉M6×19	SET SCREW M6 x 19	1	
34	205S16005	21060106	螺母	NUT 1 M6	1	
35	41712089	SA4546001	切线杠杆V	THREAD TRIMMER LEVER V	1	
36	41712090	SA3317001	切线杠杆H	THREAD TRIMMER LEVER H	1	
37~39	14170202300	26030236	JK-T2210-14-89切线杆H组件	WASHER PLAIN M3	1	
40	417S12005	S32462001	段螺钉B M6	SHOULDER SCREW B M6	1	
41	N01012	21060306	螺母M6	NUT 3 M6	1	
42	41702042	SA3319101	切线杠杆轴	SHAFT TR-TRIMMER LEVER	1	
43	41728023	SA4545001	垫片	SPACER	2	
44	H03006	48080142	挡圈8	RETAINING RING EXTERNAL C8	1	
45	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET (FT) M6 X 6	2	
46	41712092	SA3320101	弹簧挂钩	SPRING HOOK	1	
47	41727010	SA3321001	切线复位弹簧	SPRING EXTENSION	1	
48	S05087	18501236	内六角圆柱头螺钉M5×12(镀镍)	BOLT SOCKET M5 x 12	1	
49	W02001	28050246	标准型弹簧垫圈5	WASHER SPRING 2-5	1	

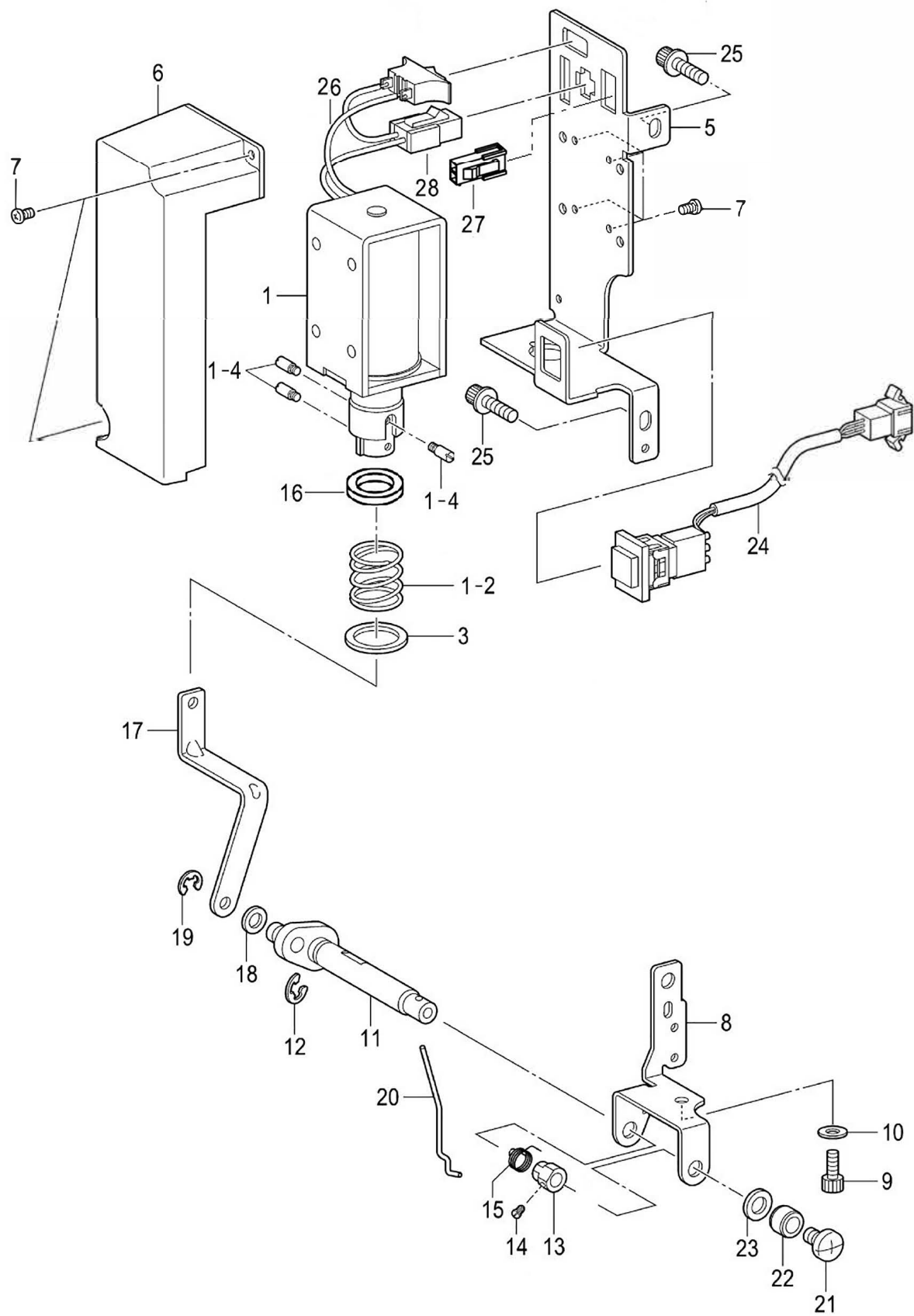
J. 切线装置 / Thread trimmer mechanism



J、切线装置 / Thread trimmer mechanism

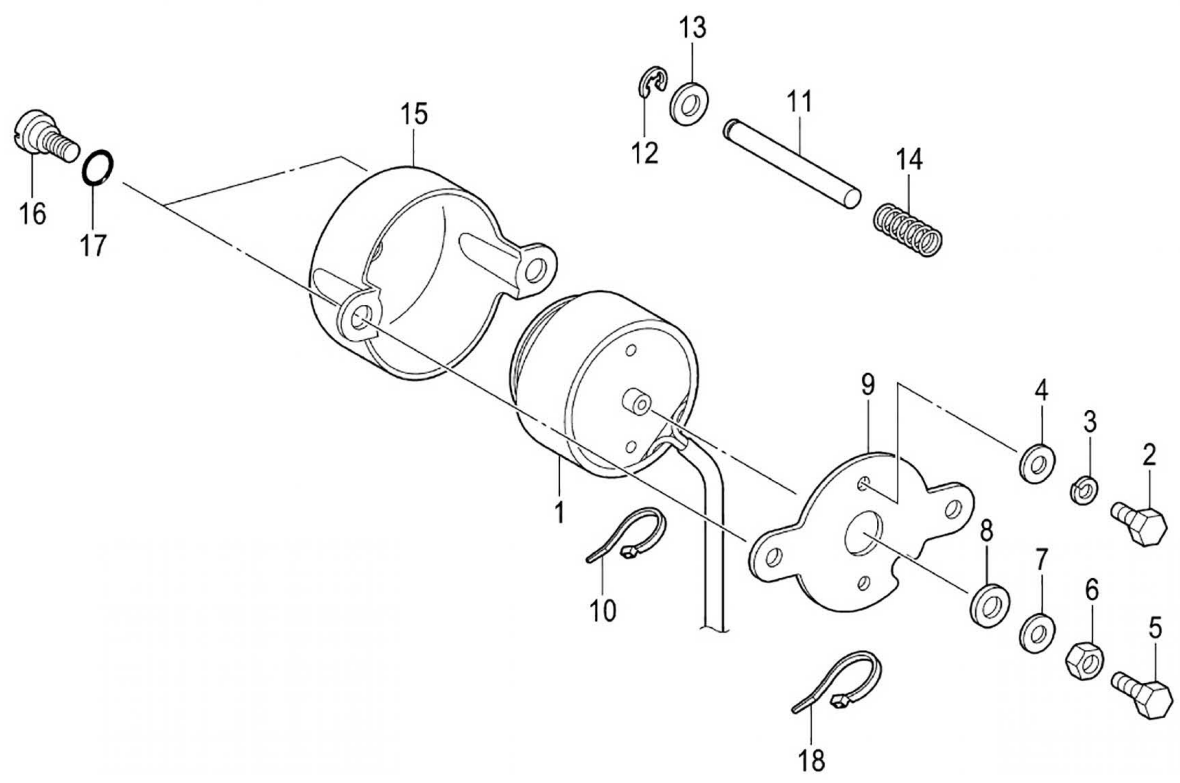
序号 No.	公司件号 Part. No.	参考件号 No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
50	41728028	146354002	垫圈5	WASHER PLAIN 5	1	
51	41709029	41709029	动刀曲柄	MOVING KNIFE LEVER	1	
52	417S12007	SA3325001	段螺钉 6.35-6	SHOULDER SCREW 6.35-6	1	
53	41702043	SA4802001	动刀杆轴	SHAFT MOVABLE KNIFE LEVER	1	
54	S10019	12060636	螺钉 M6X6	SET SCREW SOCKET M6X6	1	
55	41712093	SA3327101	动刀连杆	M-KNIFE CONNECTING PLATE	1	
56	417S30013	SA4354001	段螺钉 6-1.8	SHOULDER SCREW 6-1.8	1	
57~72	4171500100	SA6273001	JK-T2210-14-75针板A组件	SHUTTLE BASE COVER HOOK U	1	
68	1417NS17001	S25310101	针板螺钉(进口)	BOLT SOCKET M4 x 9	2	
69	417S15008	SA3538001	螺钉 M4×8	BOLT SOCKET M4 x 8	2	

K . 扫线装置 / Thread wiper mechanism



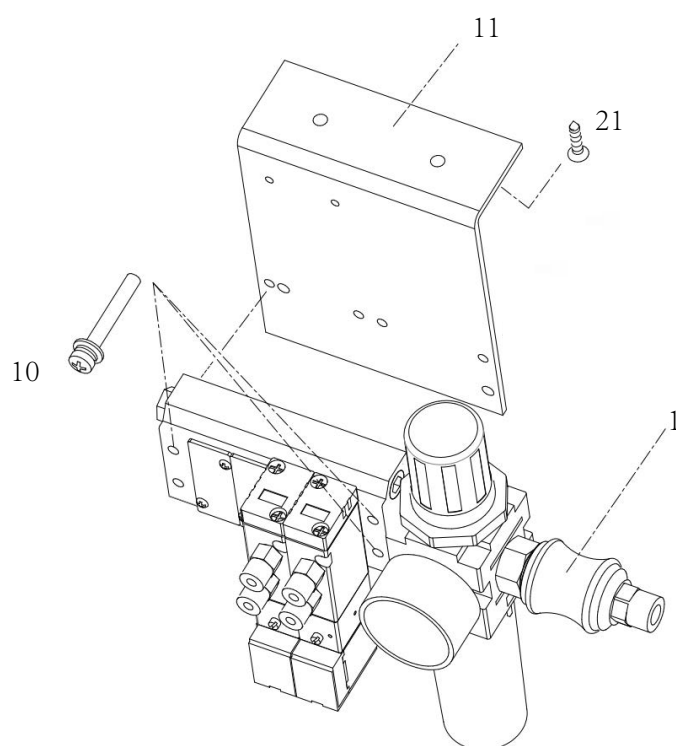
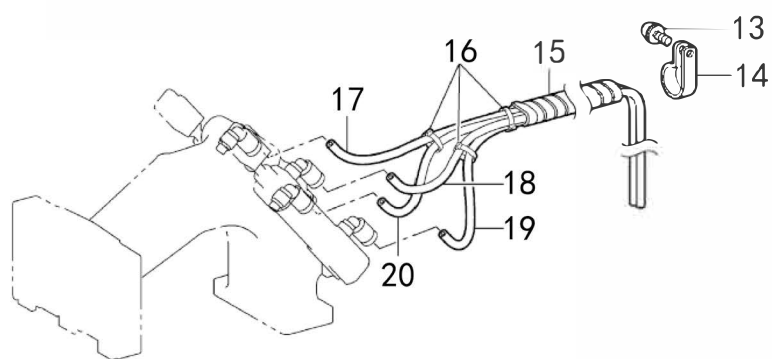
K、扫线装置/Thread wiper mechanism

序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41730002	SA5208001	扫线电磁铁组件	THREAD WIPER SOLENOID ASSY	1	
1	41730022	S41206001	电磁阀接线	THREAD WIPER SPRING	1	
3	41728011	S41205001	平垫圈	WASHER PLAIN	1	
5	41712210	SA5217001	扫线电磁铁安装板	T-WIPER SOLENOID SETTING PLATE	1	
6	41711210	SA4806001	电磁铁盖Q	SOLENOID COVER Q	1	
7	421S10005	62300616	螺钉M3×6	SCREW PAN M3 X 6	6	
8	41712096	SA5218001	扫线轴托架	THREAD WIPER SHAFT BRACKET	1	
9	421S13035	18400836	螺栓 M4X8	BOLT SOCKET M4x8	1	
10	W01001	25040236	平垫圈 M4	WASHER PLAN M4	1	
11	4170204400	SA1967001	扫线曲柄组件	THREAD WIPER CRANK ASSY	1	
12	H05029	48040342	挡圈 E4	RETAINING RING E4	1	
13	41708007	S25454001	螺纹紧圈	SET SCREW COLLAR	1	
14	417S15005	S25279001	螺钉M3、5-5	SET SCREW (CP)M3. 5-5	1	
15	41727012	SA2287001	扭簧	SPRING	1	
17	41712097	SA5219001	扫线杆	THREAD WIPER ROD	1	
18	W01024	110735001	垫圈	WASHER	1	
19	H05002	48030342	挡圈 E3	RETAINING RING E3	1	
20	41712098	S10470101	扫线钢丝	WIPER	1	
21	417S15013	60400516	螺钉 M4 X 5	SCREW BIND M4 X 5	1	
22	41708008	146288001	扫线轴挡圈	THREAD WIPER STUD COLLAR	1	
23	41728034	S03677001	垫圈	WASHER	1	
24	141730078	SA5213001	急停开关组件	STOP SWITCH ASSY	1	
25	417S30306	S55485001	螺栓(带垫圈) M5X15	BOLT SOCKET (S/P WASHER) M5 X 15	2	



L、松线装置/Tension release mechanism

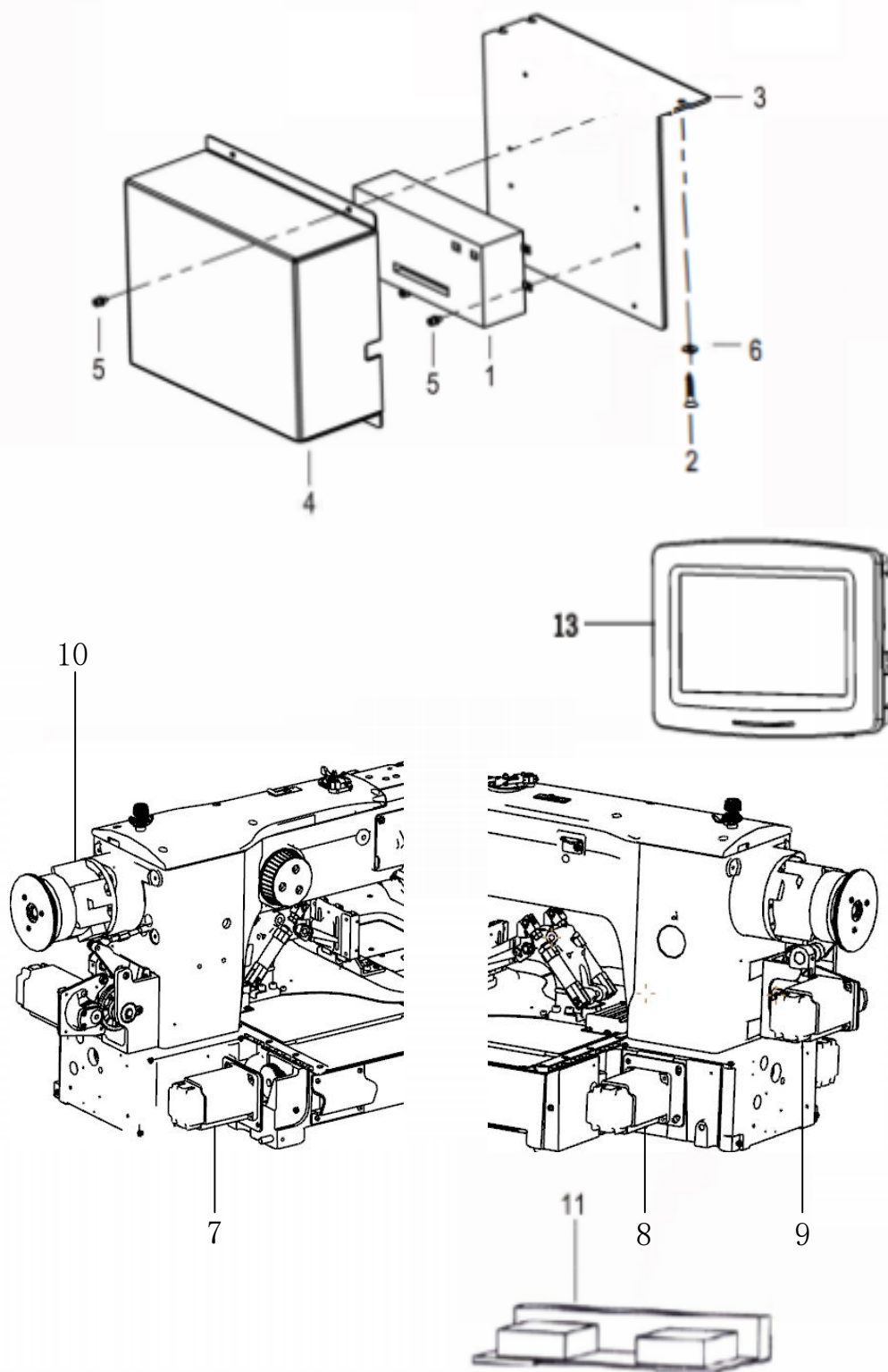
序号 No.	公司件号 Part. No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41730004	SA485500 1	松线电磁铁 HV	TENSION RELEASE SOLENOID HV	1	
2	L02031	17400802	六角头螺栓M4×8	BOLT M4 X 8	1	
3	W02008	28040246	弹簧垫圈 2-4	WASHER SPRING 2-4	2	
4	W01001	25040236	平垫圈 M4	WASHER PLAIN M4	2	
5	L02071	17401415	六角头螺栓 全螺纹 M4×18	BOLT M4 X 18	1	
9	41712099	SA6389001	电磁铁安装板	SETTING PLATE SOLENOID	1	
11	41702045	SA3347001	松线杆	TENSION RELEASE BAR	1	
12	H05029	48040342	挡圈 E4	RETAINING RING E4	1	
13	W01009	25050236	平垫圈 M5	WASHER PLAIN M5	1	
14	417270 13	SA3348001	弹簧	SPRING COMPRESSION	1	
15	41711211	SA3349001	电磁铁盖	SOLENOID COVER	1	
16	417S30012	SA3306001	段螺钉 7-3	SHOULDER SCREW 7-3	2	
17	41722021	81007070	O形圈 P7	O RING P7	2	



P、空压装置/Air pressure mechanism

序号 No.	公司件号 part.No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
			〈空压式〉	<For Peneumatic type>		
1~9	14174503500	S39116100	气 阀组合TZ(四位两阀)	VALVE M5B075-02-R-B	1	
10	417S30024	18503036	螺栓M4 X 30	80LT SOCKET M4 X 30	2	
11	41712106	SA5286001	阀安装板	SETTING PLATE VALVE	1	
13	417S30025	OA5401006	螺栓(带垫圈)M4×10DB(切换)	SCREW PAN M4X10	1	
14	41711015	525664000	电线夹13.2	CORD HOLDER 13.2	1	
15	42311004		缠绕管φ10		1	
16	11211005		扎带		3	
17~20	61911006	SA6406001	气管φ4×2.5	AIR TUBE L	8	
21	403S30015		十字槽圆头自攻螺钉		2	

Q电气部品装置 / Power supply equipment mechanism

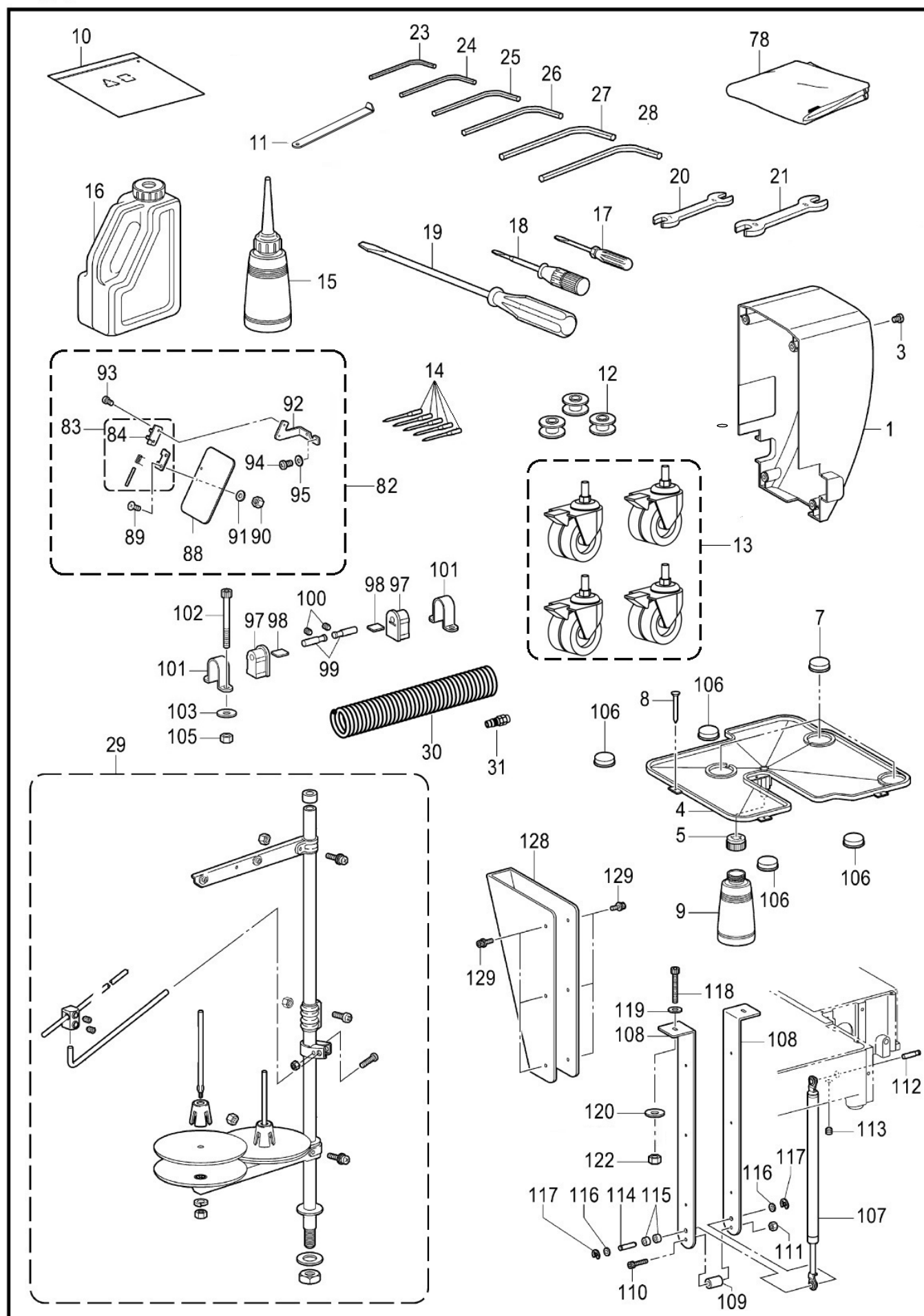


M、电控装置/Electronic control device

序号 No.	件号 Part.No.	参 考 件 号 Ref.No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	811823		大豪二代一体机电控(单电控)		1	
2			木螺钉		3	
3	930000016		电控箱安装板		1	
4	930000015		电控箱安装罩壳		1	
5	417S30035		螺栓(带垫圈) M5X10		8	
6	41728004		垫圈		3	
7	811516	141733005	X 向步进电机 2	MOTOR(X)	1	
8	811518	141733006	Y 向步进电机 2	MOTOR(Y)	1	
9	811515	141733010	Z 向步进电机 3	MOTOR(Z)	1	
10	811517	41733011	主轴电机	SOINDLE MOTOR	1	
11	41730556		脚踏板	2-PEDAL FOOT SWITCH SW ASSY	1	
12	41730070		led 灯 (TD-5)		1	
13	811824		显示屏		1	

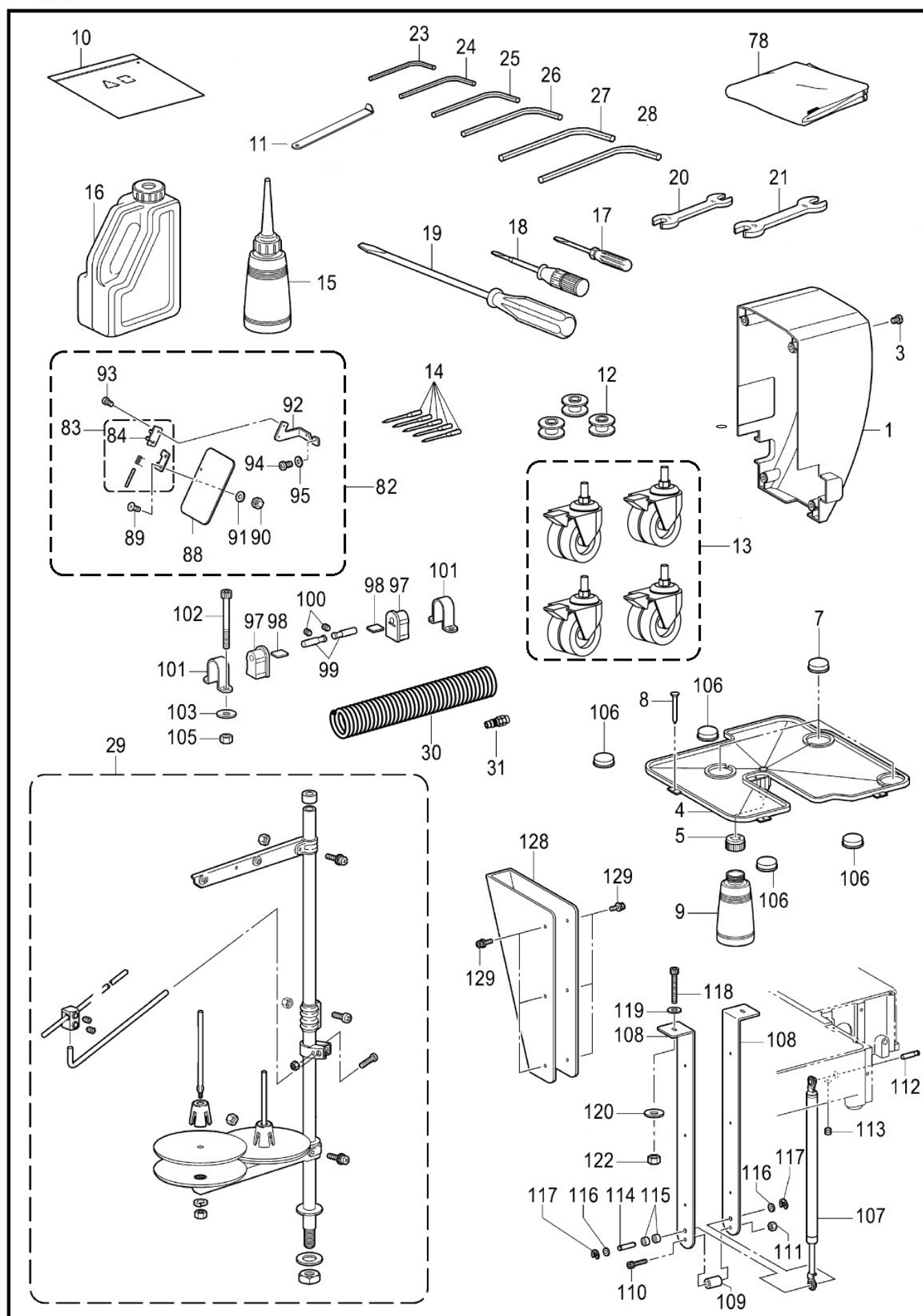
Q、电气部品装置/Power supply equipment mechanism

序号 No.	公司件号 part.No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41711015	525567000	电线夹13.2	CORD HOLDER 13.2	3	
2	41711014	149547000	电线夹6.4	CORD HOLDER 6.4	1	
3	41711017	525567000	电线夹16	CORD HOLDER 16	3	
4	417S30025	OA5401006	螺栓 M4X 10DB	SCREW PAN M4X10DB	7	
6	421S10015	62300816	螺钉M3X8	SCREW PAN M3X8	3	
8	417S30023	OA5301605	螺栓M3x16DB	SCREW PAN(S/PWASHER) M4X16DB	2	
9	417S30025	OA5401006	螺栓M4X10DB	SCREW PAN(S/PWASHER) M4X10DB	2	
14	417S30025	OA5401006	螺栓M4X10DB	SCREW PAN(S/P WASHER) M4 X 10D8	1	
15	41711025	554482000	电线夹19	CORD HOLDER 19	1	
16	41711026	554482000	电线夹23	CORD HOLDER 23	1	
17	417S30025	OA5401006	螺栓M4X10DB	SCREW PAN(S/P WASHER)M4X 10	2	
18~21	61910003	S04159000	扎带(小)	BAND	8	



Z、附件/Accessories

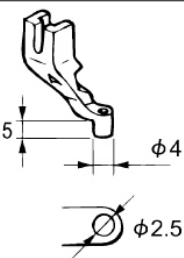
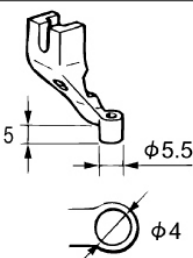
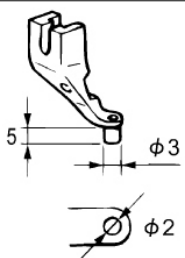
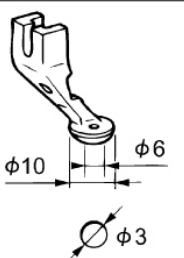
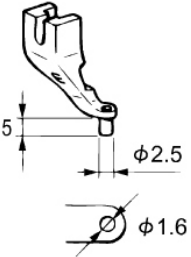
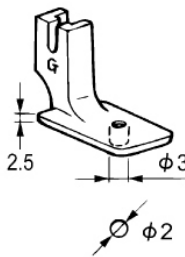
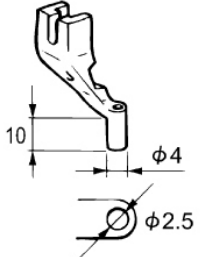
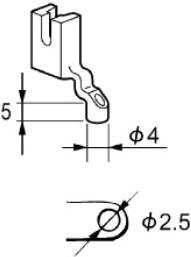
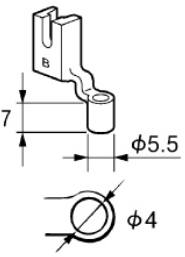
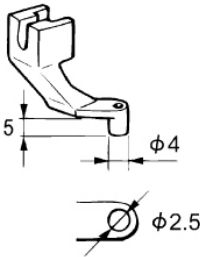
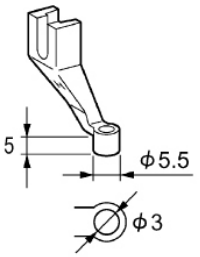
序号 No.	公司件号 part.No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
1	41711212	SA4842001	马达盖Q	MOTOR COVER Q	1	
3	S04038	62061016	螺钉 M6 X 10	SCREW PAN M6 X 10	4	
4	41711031	SA4844001	油盘	OIL PAN	1	
5	41711006	154467001	废油回收壶盖	DUST OILER COVER	1	
7	41722005	SA3540001	缓冲橡皮垫	RUBBER CUSHION	3	
8	101530010	109714000	钉	NAIL	7	
9	41711066	114486002	废油壶	DUST OILER	1	
10	20131076	122991001	15×9袋	ACCESSORY BAG	1	
11	41712355		针板专用螺丝刀	SCREW-DRIVER FOR	1	
12	41718004	S44633001	梭芯 LAN	BOBBIN LAN	3	
13	41532020		脚轮	CASTERS	4	
14	40319006	*P.67	机针	NEEDLE	5	
15	11631008	114483002	油壶组件	OILER ASSY	1	
16	110211011		油袋 (400ml)		1	
17	10131004	142443001	螺丝刀(小)	SCREW-DRIVER 1.9 X 52	1	
18	10131003	118837001	螺丝刀(中)	SCREW-DRIVER 3.4 X 70	1	
19	10131002	101572102	螺丝刀(大)	SCREW-DRIVER 5.5 X 190	1	
20	30131005	107779001	扳手 6 X 7	WRENCH 6 X 7	1	
21	30131006	100887001	双头扳手 8 X 10	WRENCH 8 X 10	1	
23	30131007	S07783001	内六角扳手1.5	HEXAGONAL WRENCH 1.5	1	
24	20131046	142002001	内六角扳手2	HEXAGONAL WRENCH 2	1	
25	30131010	154125001	内六角扳手2.5	HEXAGONAL WRENCH 2.5	1	
26	30131012	142721001	内六角扳手3	HEXAGONAL WRENCH 3	1	
27	30131047	118064001	内六角扳手4	HEXAGONAL WRENCH 4	1	
28	20131056	150335001	内六角扳手5	HEXAGONAL WRENCH 5	1	
29	1383100300	S40574209	线架组件	COTTON STAND ASSY	1	
30	40730010		螺旋气管	SPIRAL TUBE	1	
31	40736001		螺旋套管接头	SPIRAL TUBE JOINT	1	
78	140744001	144226001	防锈袋	RUST-PROOF BAG	1	
82	4121208400	S44485001	护眼板组件	EYE GUARD ASSY	1	
97	41722033	SA3395001	橡皮铰链	RUBBER CUSHION	2	
98	41712131	SA3392001	垫片	SPACER	2	
99	41726019	SA3384001	机头支承销	PIN	2	
100	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (CP) M6 X 6	2	
101	41712132	SA3385001	头部铰链座	HINGE HOLDER	2	
102	S05112	18066036	螺栓 M6 X 60	BOLT SOCKET M6 X 50	4	
103	41728030	213650001	垫圈 2.3 X 8.5 X 38	WASHER 2.3 X 8.5 X 38	4	
105	205S16005	21060106	螺母 M6	NUT M6	4	
106	41722005	SA3540001	缓冲橡皮垫	RUBBER CUSHION	4	

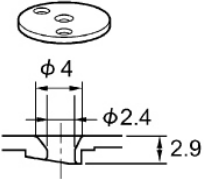
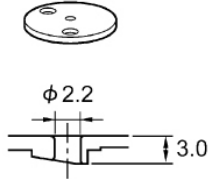
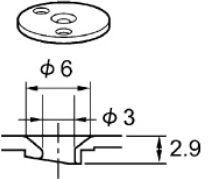


Z、附件/Accessories

序号 No.	公司件号 part.No.	参考件号 Ref. No.	零部件名称	NAME OF PARTS	数量 Amt.	备注
107	41730010	SA4845001	缓冲器	SHOCK ABSORBER GAS	1	
108	301671	41712113	缓冲器支架	HOLDER ABSORBER	2	
109	41703027	SA5251001	垫圈	SPACER	1	
110	S05117	18064031	螺栓 M6 X 40	BOLT SOCKET M6 X 40	1	
111	205S16005	21060106	螺母 M6	NUT 1 M6	1	
112	41702023	SA4847001	轴 U	SHAFT U	1	
113	S10019	12060636	螺钉 M6 X 6	SET SCREW SOCKET (CP) M6 X 6	1	
114	41702024	S17974001	轴 D	SHAFT D	1	
115	41703028	S17975100	轴套 GS	SHAFT COLLAR GAS	2	
116	41728018	25080132	垫圈 S8	WASHER PLAIN S8	2	
117	H05031	48060342	挡圈 E6	RETAINING RING E6	2	
118	S05112	SA3387001	螺栓 M6 X 60	BOLT SOCKET M6 X 60	2	
119	41728035	25060236	平垫圈 M6	WASHER PLAIN M6	2	
120	41728030	213650001	垫圈 2.3 X 8.5 X 38	WASHER 2.3 X 8.5 X38	2	
122	205S16005	21060106	螺母 M6	NUT 1 M6	2	
128	301672	41712114	支架盖	HOLDER ABSORBER COVER	1	
129	S05115	S55479001	螺栓(带垫圈) M4 X 8	BOLT SOCKET(S/P WASHER)M4 X 8	6	

Ga . 工模具一览表 / Gauge parts list

压脚 / Presser foot			
A / S42843-001 *	B / S42844-001	C / S42845-001	D / S42846-001
			
E / S42847-001	F / 157237-001	G / 158592-001	J / S42848-001
			
A-CUT / S40214-001	B-L / S49448-001	XA / S42849-101	H / SA4811-001 *
			

针孔板 / Needle hole plate		
2.4 C0.4 / SA3336-001 *	2.2 / SA5221-001 *	3.0 C1.5 / SA5222-001 *
		

印有*记号的为标准零部件

The * symbol is for Standard parts.