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高速电子套结机 ZJ1900B、ZJ1901B ZJ1902B、ZJ1903B

COMPUTER-CONTROLLED HIGH SPEED LOCKSTITCH BAR TACKING MACHINE

使用说明书
OPERATION MANUAL

零 件 手 册
PARTS BOOK

中国·中捷缝纫机股份有限公司
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中国·中捷缝纫机股份有限公司
ZOJE SEWING MACHINE CO., LTD.

重要安全事项

此缝纫机在有的国家（设置场所）由于该国的安全规定而被禁止使用。同时，技术服务也同样被禁止。

1. 使用此缝纫机时，必须遵守包括如下项目的基本安全措施。
2. 使用次缝纫机之前，请阅读本使用说明书在内的所有指示文件。同时应将此使用说明书妥善保管，以便能够随时查阅。
3. 此缝纫机应与贵国的有关安全规定一起使用。
4. 使用此缝纫机和缝纫机动作中，所有的安全装置应安装到规定位置。没有安装规定的安全装置的缝纫机禁止使用。
5. 此缝纫机应由接受过培训的操作人员来操作。
6. 使用此缝纫机时，建议戴安全防护眼镜。
7. 发生下列情况时，应立即关掉电源开关，或拔下电源线插头。
   7-1 机针、弯针、分离器等穿线和更换旋梭时。
   7-2 更换机针、压脚、针板、弯针、分离器、送布牙、护针器、支架、布导向器等时。
   7-3 修理时。
   7-4 工作场所无人了或离开工作场所时。
   7-5 使用离合马达时，请等待马达完全停止之后再进行。
8. 缝纫机以及附属装置使用的机油、润滑脂等液体流入眼镜或沾到皮肤时，或被误饮时，应立即清洗有关部分并去医院治疗。
9. 禁止用手触摸打开了缝纫机开关通电的零件或装置。
10. 有关缝纫机的修理、改造、调整应由专门训练的技术人员或专家来进行。
11. 一般的修保养应由受过专业培训的人员来进行。
12. 有关缝纫机的电气修理、维修应由有资格的电气技术人员或专家的监督和指导下进行。
13. 修理、保养有关空气。气缸等空气压缩的零件时，应切断空气压缩机供源后在进行。有残留压缩空气时，应放掉压缩空气。但受过相当训练的技术人员或专家进行有关调整或确认工作除外。
14. 缝纫机的使用期间应定期进行清扫。
15. 为了正常安全运转，应安装底线。同时应在不受高频焊接机等强噪音源影响的环境下使用。
16. 电源插头应用具有电气专门知识人员来安装。电源插头必须连接到接地插座上。
17. 缝纫机指定用途以外不能使用。
18. 对缝纫机的改造、变更符合安全规格，并采取有效的安装措施。另外。对于有关改造和变更，本公司概不负责。
19. 本使用说明书上采用以下 2 个警告符号。


有损伤操作人员、维修人员的危险。


安全上需要特别加以注意的事项。

为了安全地使用1900B缝纫机的注意事项

 危险	1. 为了防止触电事故，请不要在接通电源的状态下打开马达电气箱的盖子或触摸电气箱内的零件 2. 变更图案后，请确认落针的位置。万一图案突出压脚，缝制中机针会碰到压脚，发生危险的断针事故。 3. 机针落下的状态请不要关闭电源。有可能挑线杆弄弯机针。
 注意	1. 打开（ON）电源开关后，操作盘上不显示时，请关闭（OFF）电源开关确认电源的电压规格。 2. 为了防止被卷入的人身事故的发生，绕线时请确认了机针下没有障碍物之后再踩启动开关。 3. 打开电源、打开准备键、打开压脚开关时，压脚会自动地下降，为了防止人身事故的发生，请绝对不要把手指放倒压脚下面。 4. 为了防止手指碰到机针的事故，更换压脚时，请安装适合压脚的手指保护器。

目录

Ⅰ.1900B高速电子套结机的说明

Ⅱ.1901B 高速电子锁眼加固缝缝纫机的说明

Ⅲ.1902B高速电子钉皮带环缝纫机的说明

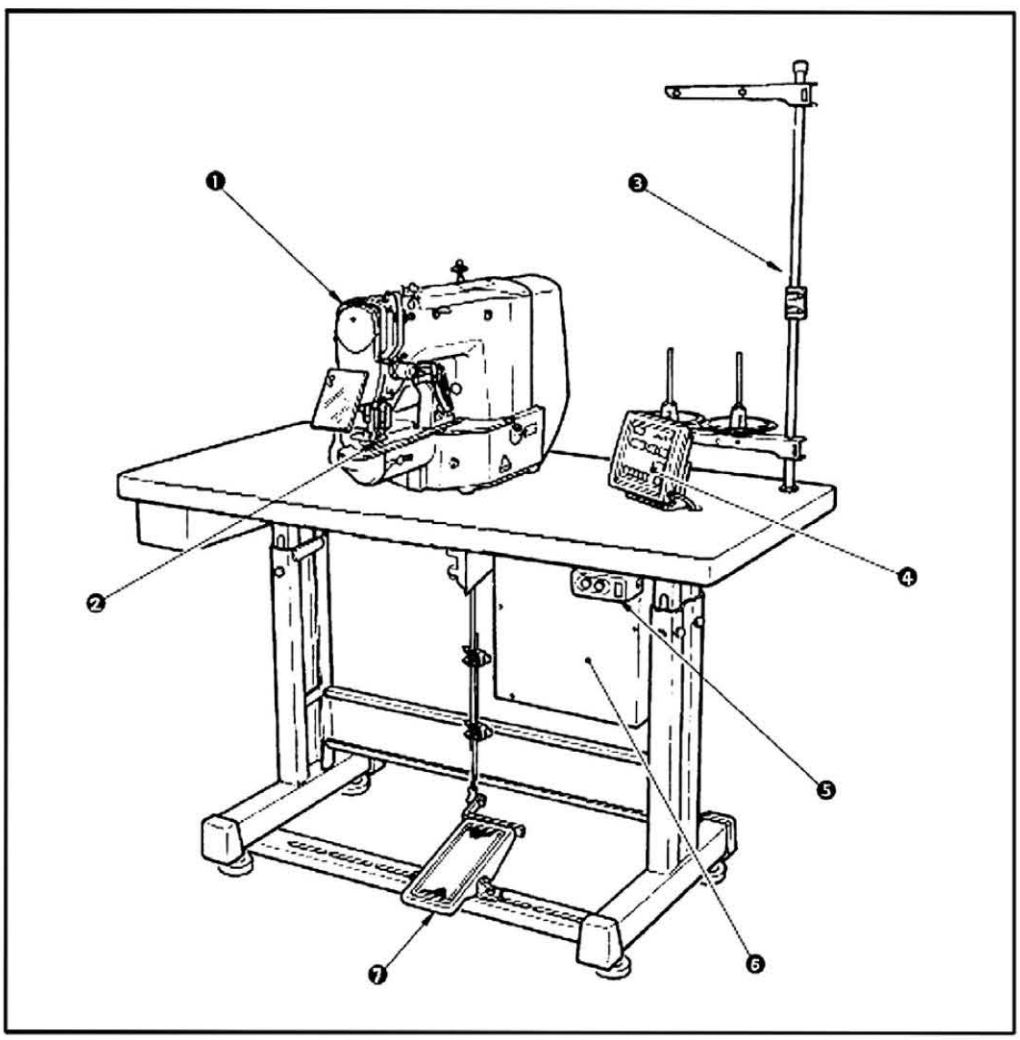
Ⅰ.1900B高速电子套结机的说明

[1] 规格

1. 缝制范围：X（左右）方向 40mm，Y（前后）方向 30mm
2. 缝纫速度：3000rpm
3. 线迹长度：0.1-10mm
4. 压脚送布：间断送布
5. 针杆行程：41.2mm
6. 使用机针：DP×5、DP×17
7. 压脚上升量：标准 13mm 最大 17mm
8. 旋梭：标准摆梭（油线润滑）
9. 使用机油：10#白油
10. 数据记录：EPROM
11. 向右、缩小功能：X 方向、Y 方向各为 20-200%
12. 放大、缩小功能：调整线迹长短方式
13. 缝纫速度限制：400-3000rpm（100rpm）
14. 图案选择功能：图案 NO.指定（1-200）
15. 底线计数器：上升/下降方式（1-9999）
16. 缝纫机马达：500W 伺服马达
17. 外形尺寸：W：1200 L：540mm H：1100mm
18. 重量：机头 50Kg 电控箱 6Kg
19. 功率：0.6KW
20. 使用温度范围：5℃-35℃
21. 使用湿度范围：35% -85%（无节露）
22. 电源电压：额定电压±10% 50-60Hz

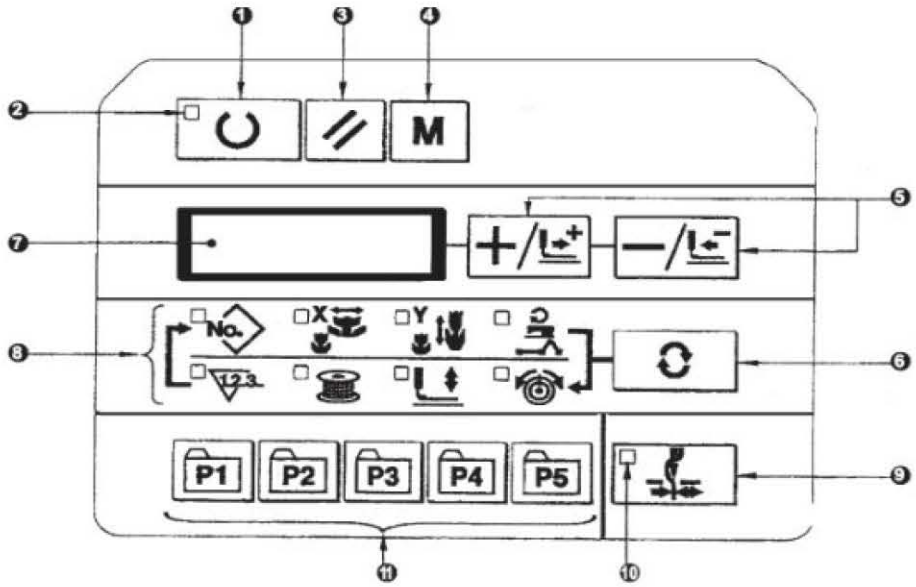
[2] 各部件名称

1. 主机的名称



(1). 缝纫机机头
(2). 送布压脚
(3). 线架
(4). 操作面板
(5). 电源开关
(6). 电控箱
(7). 脚踏开关

2. 操作面板按键名称及说明



(1). 准备键
控制面板的设定编程状态和缝纫机实际动作的缝制状态的变换键。

(2). 缝制 LED
设定编程状态时为灭灯，缝制状态时为亮灯。通过准备键来切换。

(3). 复位键
解除异常、将设定值返回到初期值时使用。

(4). 方式键
在缝制 LED 灯灭灯状态下，可以设置参数或存储花样的开关键。在缝制 LED 灯亮灯状态下，按方式键可以打开支线功能，进行穿线动作，20 秒后支线自动关闭。

(5). ＋/前进传送键和－/后退传送键
适用于花样号.、扩大缩小率的变更、前进/后退送布。

(6). 选择键
选择设定的项目。被选择项目的项目选择 LED 和设定值被显示。

(7). 数据显示 LED
显示花样号、扩大缩小率等被选择项目的设定值。

(8). 项目选择 LED
被选择的项目的 LED 亮灯。

(9). 抓线ON/OFF 键
可以选择抓线功能的有效/无效。有效时，抓线显示 LED 亮灯。

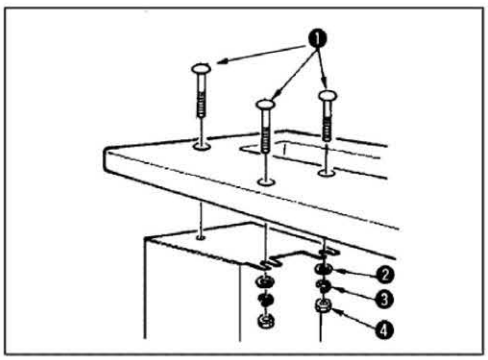
(10). 抓线显示 LED
亮灯时，进行抓线动作。

⑾花样存储键
存储花样。存储后的花样一按此键就可以立即进行缝制。
变更扩大缩小率、缝制位置等可以进行存储。

※注：1903B 标准出货时，存储器 No.35 设定为禁止抓线

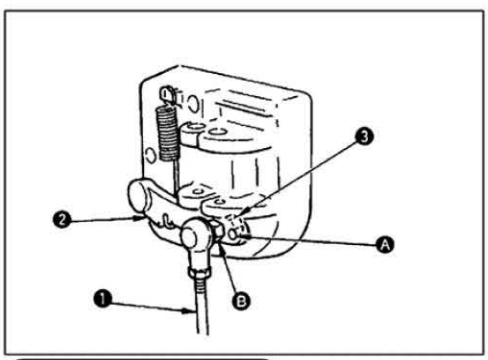
[3] 整机安装

1. 电控箱的安装



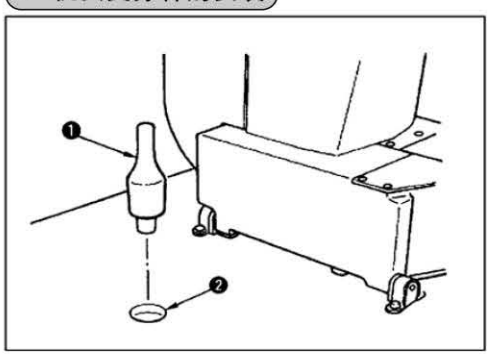
将附件箱中的四只圆头螺钉①按图装在台板上，将平垫②、弹簧垫圈③、螺母④按图装在圆头螺钉①上，将电控箱固定。

2. 脚踏开关拉杆的安装



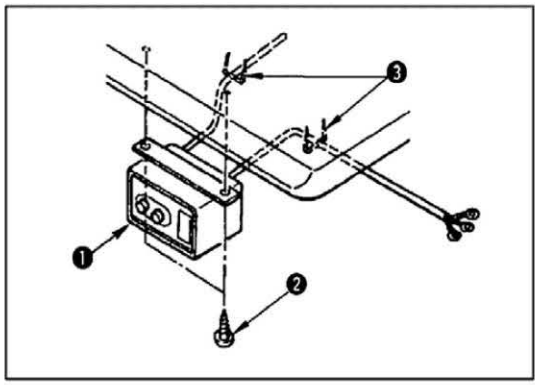
将脚踏开关拉杆①穿过脚踏开关曲柄②孔，用螺母③固定，上下拉动脚踏开关拉杆①，运动灵活，调整踏板至合适位置。

3. 机头支撑杆的安装



将机头支撑杆①装在台板孔②内

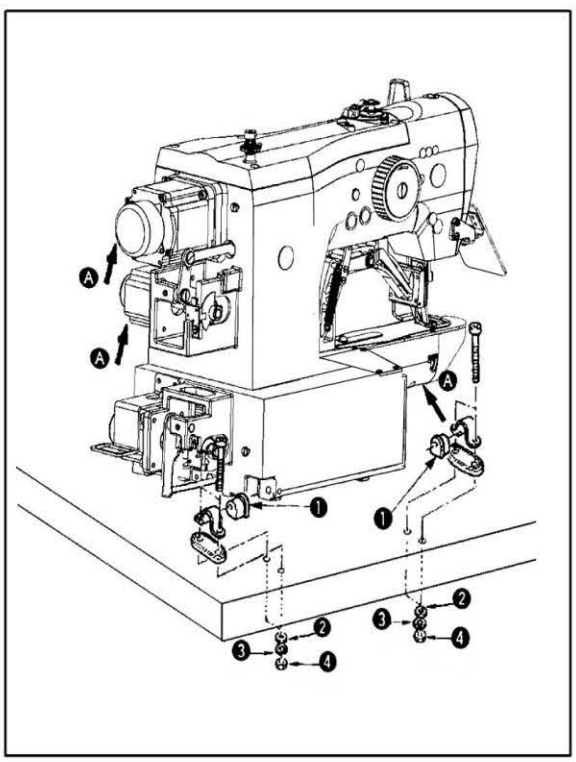
4. 电源开关的安装、连接



将电源开关①用木螺丝②装在台板下方，用电线固定钉③固定电源线。

5. 机头的安装

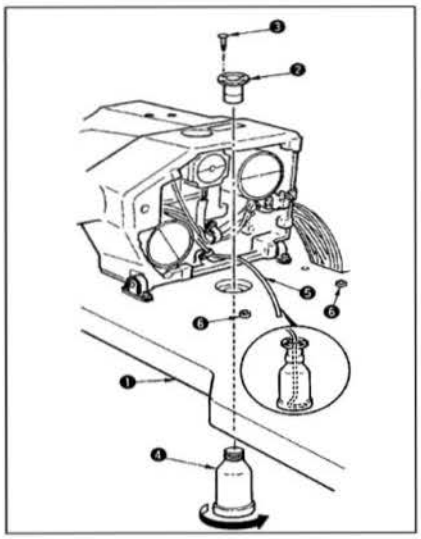
⚠注意 搬运缝纫机时，请一定是两人以上进行操作。



(1). 将机头胶垫①穿在机器支撑轴上，固定缝纫机主体；

(2). 将平垫②、弹垫③、螺母④按图示依次固定，注意螺母④的锁紧力量，如果拧的太紧，则防震效果不理想。

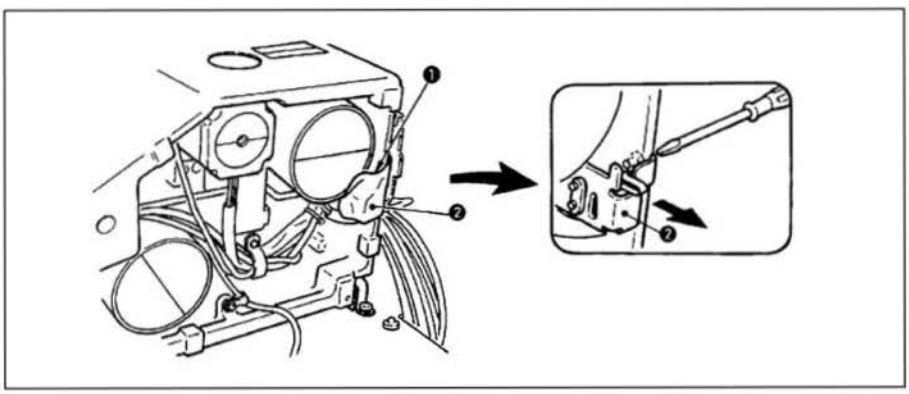
6. 废油壶及机头支垫的安装



(1). 用四个木螺丝③把废油壶上节②固定到台板①孔内，将废油壶④从台板①下方旋进废油壶上节②中，并将机头回油管⑤装在废油壶中。
(2). 将机头支垫⑥按图示装在台板①相应孔内。

注意 机头放倒后，回油管⑤不能从废油壶中脱落。

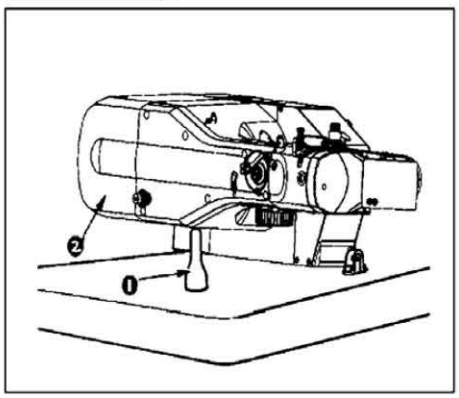
7. 安全开关的安装



将机器下方固定安全开关的扎带剪掉，将安全开关装在机器如图所示位置，用螺钉锁紧，翻倒机头，检查安全开关安装位置是否合适，要求机头放正后，台板能顶开安全开关拨片，使安全开关拨片与安全开关不接触，否则报错 E302

注意
1. 如果不取下安全开关，并装在正确位置，将不能缝纫；
2. 安全开关安装后，如报错E302，请将安全开关往下调整，确保安全开关拨片充分与台板接触。

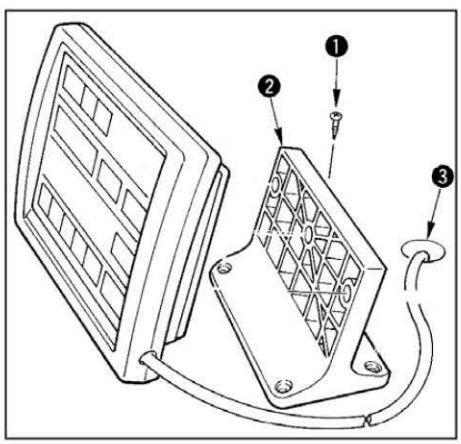
8. 机头的放倒



将机头①轻轻放倒，靠在机头支撑杆上②上。

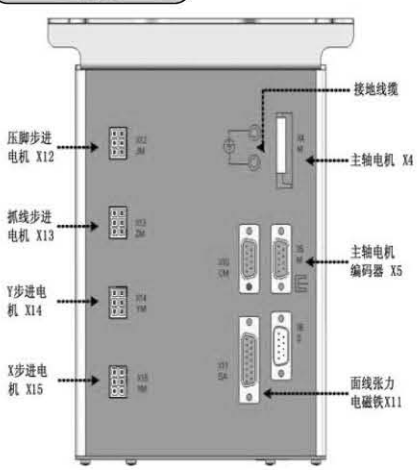
1. 放倒机头前，请先确认台板上是否有机头支撑杆；
2. 抬起机头时，请不要扳机头后罩，以免后罩受损；
3. 为防止机头侧翻，请确保台板水平。

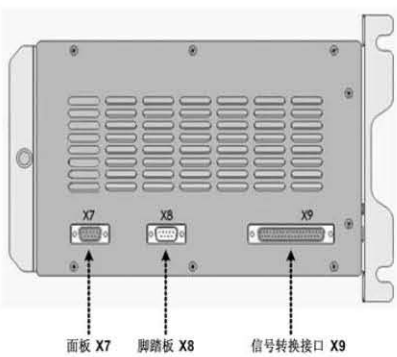
9. 操作面板的安装



请用四个木螺丝①将操作面板②固定在台板③上操作者舒适的位置，然后将操作面板②导线穿过台板③相应孔，然后与另外端对接。

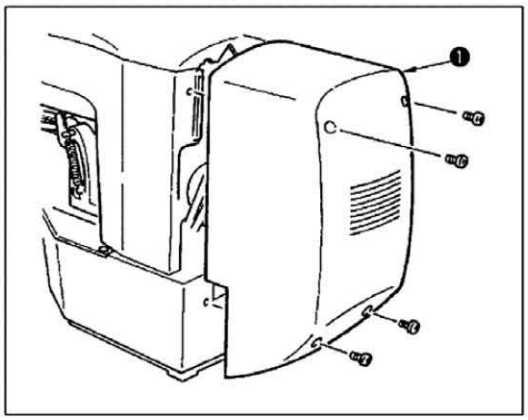
10. 电线的连接





请将机头上的电机线、信号线按照线上字母标识与电控箱连接，确保连接正确，没有遗漏。

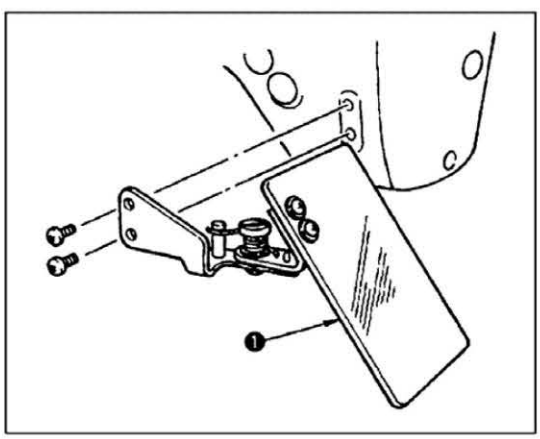
11. 机头后罩的安装



将机头后罩①对应机头后面螺孔装在机头上。

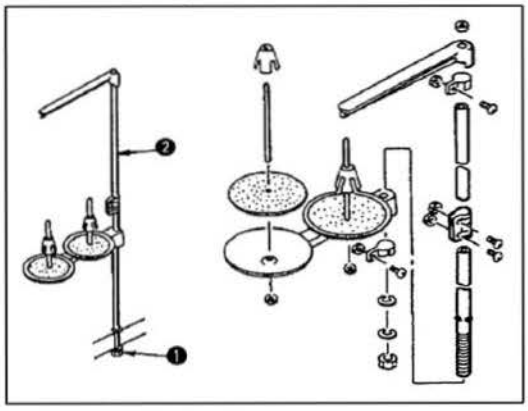
12. 眼睛防护罩的安装

⚠注意 为防止断针飞起弄伤眼睛，请一定安装起来。



将附件箱中眼睛防护罩装在机头左侧。

13. 线架的安装

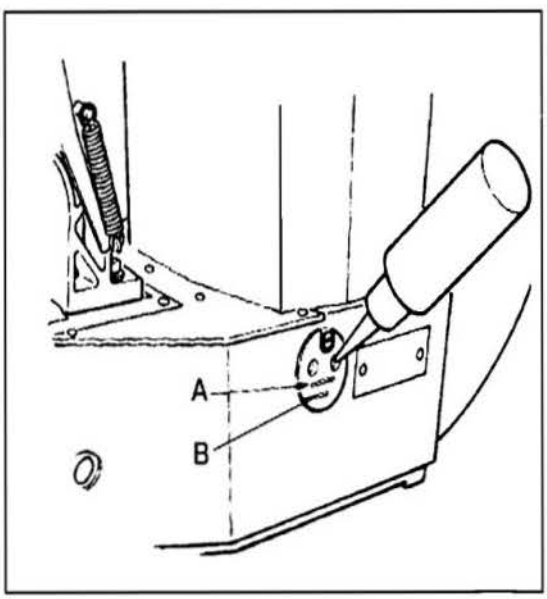


将附件箱中的线架如图装在台板上。

[4] 整机的准备

1. 加油

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

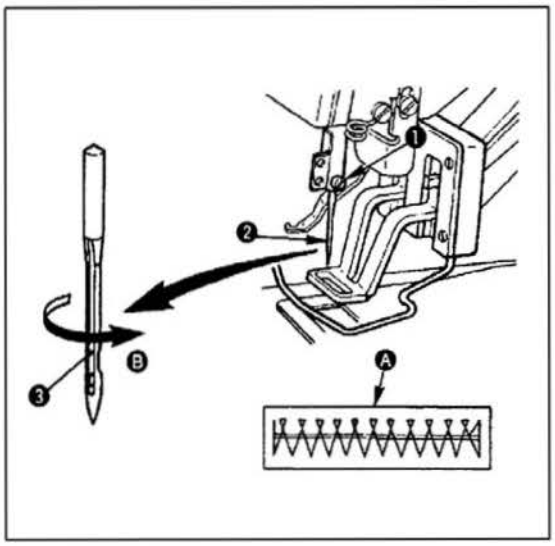


请确认机油在下线 B 和上线 A 之间。如果机油过少时，请用附属的加油器进行加油。
*加油的油槽仅是向旋梭加油的。使用转速低时，如果旋梭的油量过多，可以把油量调小。（请参照[6] 维修 8.旋梭油量的调整。）

1. 请注意不要向油槽和下列注意 2 的旋梭以外的部位加油。否则会发生零件故障。
2. 初次使用缝纫机或较长时间没有使用缝纫机时，请向旋梭加少量的机油后在使用缝纫机。(请参照[6] 维修　2. 机针和旋梭。)

2. 机针的安装

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

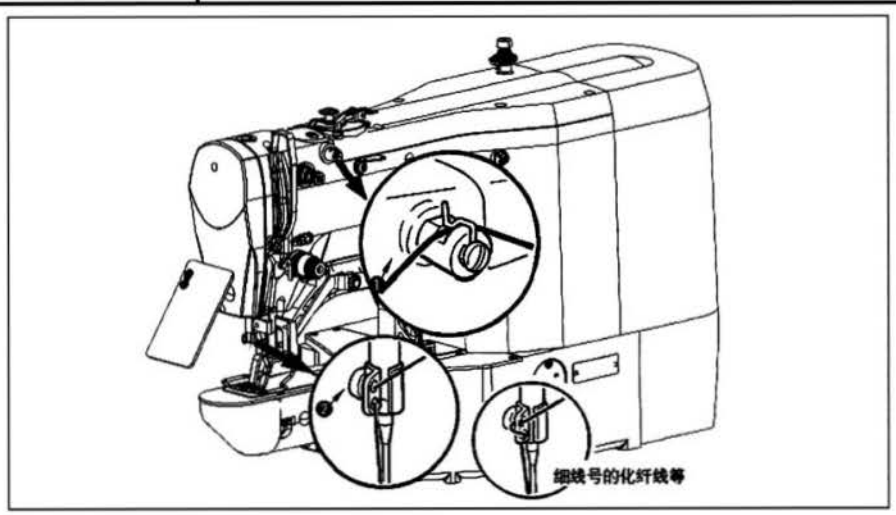


安装机针时，请拧松固定螺钉①，把机针②的绒线槽③朝向面前，插进针杆的深处，然后拧紧固定螺钉①。

注意 缝迹如 A 时，请把机针向 B方向稍稍移动然后安装起来。

3. 上线穿线

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

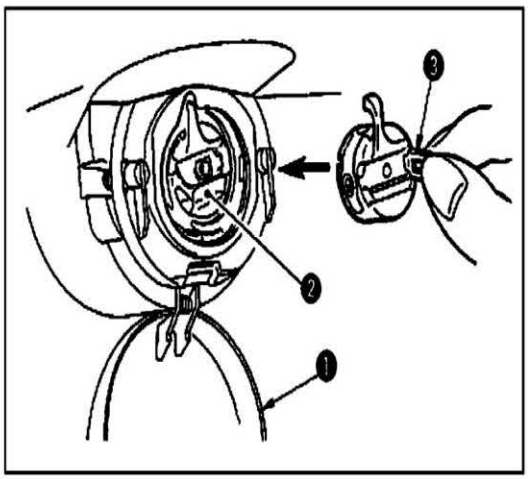


穿过机针的线应留出 4cm 左右。

注意
1. 使用硅油时，请把线穿过润滑导线器①。
2. 粗线时，请把机线只穿过针杆导线器②1 个孔。

4. 梭壳的取下插入

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

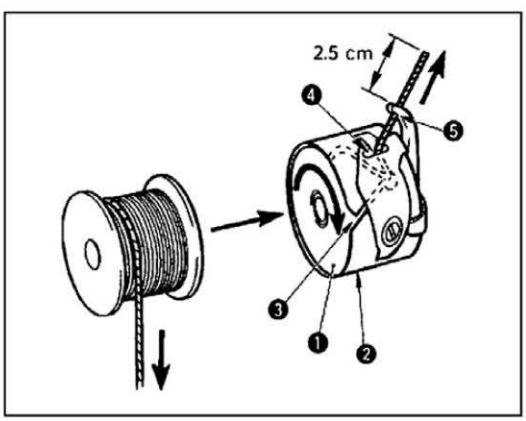


(1). 打开旋梭外罩①。
(2). 拨起旋梭壳②的抓脚③，取出梭壳。
(3). 插入时，请把梭壳深深插入旋梭轴，并关闭抓脚。

注意 如果没有插到底，缝制途中梭壳②就有可能脱落。

5. 旋梭的插入方法

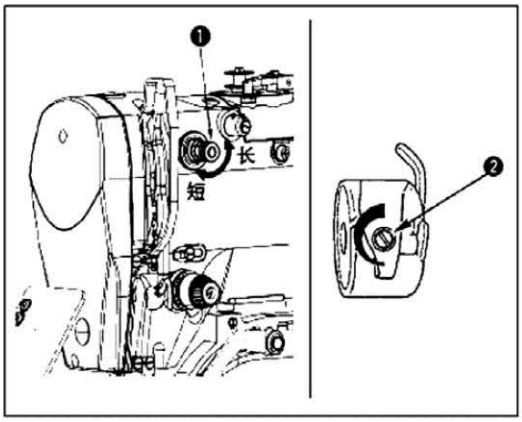
⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。



(1). 把旋梭①按图示的方向插入梭架②。
(2). 把线穿过梭壳②的穿线口③，然后拉线，把线从线张力弹簧下面的穿线口④拉出来。
(3). 把线从角部的线孔⑤穿出，从线孔约拉出2.5cm。

注意 旋梭的旋转方向相反的话底线的拉出就不稳定。

6. 线张力的调整

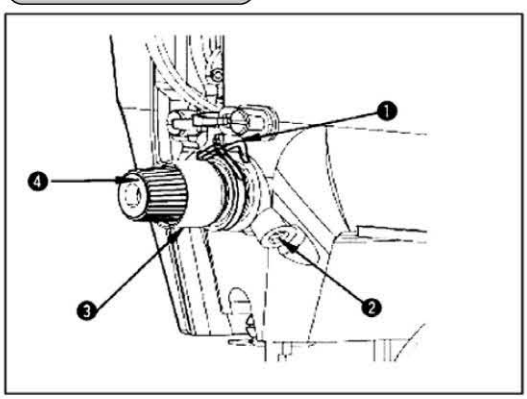


把第一线张力就旋钮①向右转动，切线后针尖上的残线长度变短，向左转动后变长。

请尽量在不脱线的情况下弄短残线。

在操作盘上调整上线张力，用②调整底线张力。

7. 挑线弹簧的调节



挑线弹簧①的标准移动量为 8~10mm，开始挑线时的强度为 0.1~0.3N。

(1). 移动量的调节

拧松固定螺钉②，转动线张力结合体③。

(2). 强度的调节

改变挑线弹簧的强度时，请在螺丝②拧紧的状态下，把细螺丝刀插到线张力杠④的缺口部转动调节。向右转动之后，挑线弹簧的强度变强，向左转动之后，强度变弱。

[5] 整机操作

1. 项目数据的设定

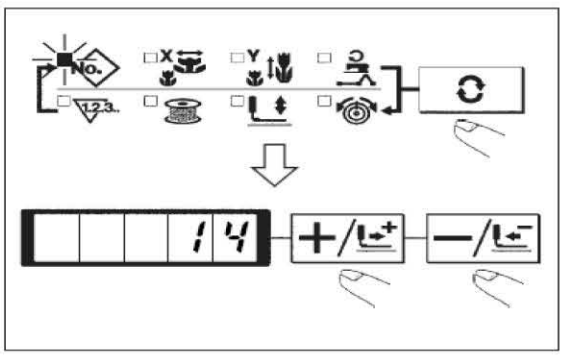
请按如下的顺序设定各项目。

图案号的设定 → X放大缩小率的设定 → Y放大缩小率的设定 → 最高速度限制的设定

(1). 打开电源开关

项目选择的花样号码亮灯，数据显示部分显示出花样号码。

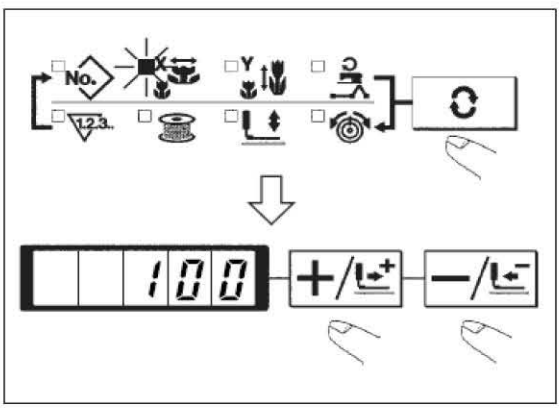
(2). 花样号码的设定



1. 按 键，设定为花样 No. 号码的显示项目 亮灯。
2. 按 键、 键，画面上显示出 14。
（设定为 No. 14 花样）

注意 图案号码请参照标准花样一览表。

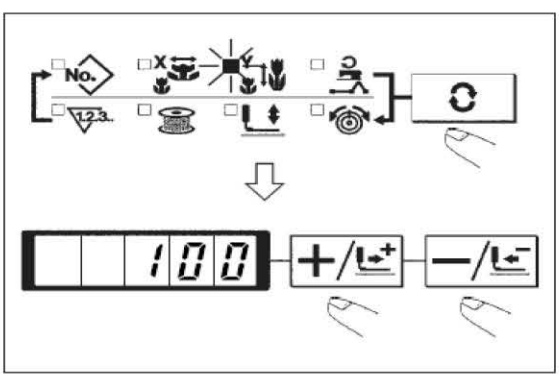
(3). X 放大缩小率的设定



1. 按 键，设定为 X 放大缩小率的项目 显示。
2. 按 键、 键，让缝纫机显示出 100。（把 X 放大缩小率设定为 100%）

注意 设定超过100%的话，机针将撞到压脚，危险！

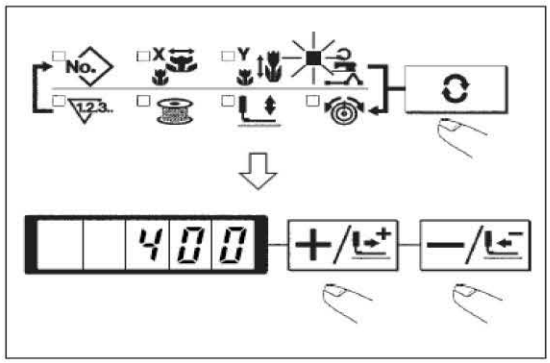
(4). Y 放大缩小率的设定



1. 按 键，设定为 Y 放大缩小率的项目 选择。
2. 按 键、 键，让缝纫机显示出 100。（把 Y 放大缩小率设定为 100%）

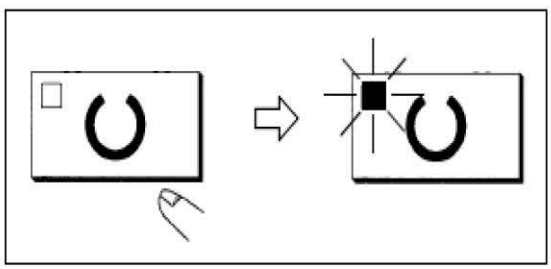
注意 设定超过100%的话，机针将撞到压脚，危险！

(5). 最高转速限制的设定



1. 按 键，设定为转速的项目 显示。
2. 按 +/ 键、 —/ 键，让缝纫机显示出 400。(设定为 400rpm)

(6). 设定结束



1. 按 键。
2. 压脚移动上升后，缝制 LED 亮灯，成为可以缝制的状态。

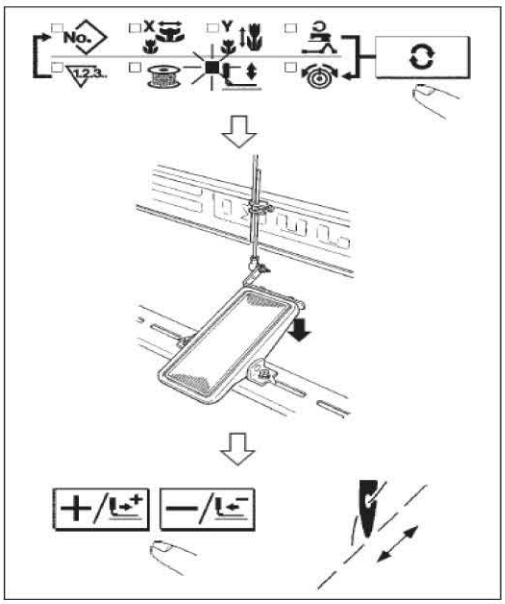
注意 压脚上升时，压脚要先下降再移动，注意不要夹到手指！

- 按下 键后，花样号、XY 放大缩小率等设定值被记忆。
- 按下 键后，可以重新确认各设定项目，但是缝制 LED 亮灯的状态不能变更。
- 按下 键后，缝制 LED 灭灯，各项目的设定值可以变更。
- 当花样号为 0（出厂设置）时，按下 键后，会显示错误 E-10，此时，按下复位键后请重新确定花样号。

注意 不按 键，关掉电源后，花样号、XY 放大缩小率、最高转速的设定值均不能被记忆。

2. 花样形状的确定

选择花样后，请一定要确认图案形状，如果图案远离压脚，缝纫中机针会碰到压脚，弄断机针。



(1). 按 键，缝制 LED 灯亮起。

(2). 用 键选择压脚下降，屏幕显示 ；踩脚踏板让压脚下降，屏幕显示 。

(3). 在压脚下降后的状态，按 键

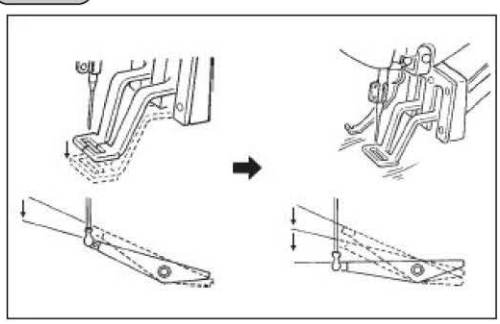
(4). 用 键、 键确认形状；确认缝制的花样在压脚允许的范围内。

(5). 按 键让压脚上升。

(6). 用 键，解除 选定（选定除 外的其他数据项目）后，按 键，结束试缝，缝制 LED 灯熄灭。

打开(ON)电源后，压脚不下降。

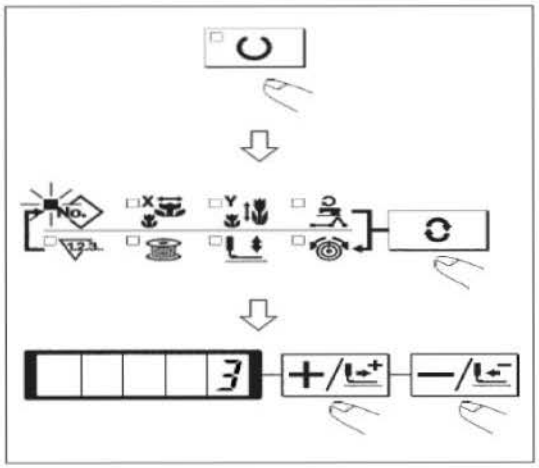
3.缝制



(1). 把缝制品放到压脚部。
(2). 把踏板开关踩到第一级，压脚下降，脚离开踏板后，压脚上升。
(3). 把压脚下降一级，踩到第二级之后开始缝制。
(4). 缝制结束后，压脚上升返回到起始缝的位置。

1. 将踩踏板开关至第一级，压脚下降，按 键、 键可以改变花样的缝制位置；然后将踏板开关位置踩至第二级，缝纫从选定的位置开始。在缝制过程中，如出现断线等现象时，排除故障后，可以使用此方法进行补缝。
2. 不要将注意 1 中的做法用作花样试缝操作，以免万一误将踏板开关踩至第二级，引起机器启动而发生危险。花样的试缝操作必须严格按照上一节中的【花样形状确定】步骤进行操作。

4.花样变更



(1). 按 键，缝制 LED 灭灯。

(2). 按 键，选择花样号的项目。

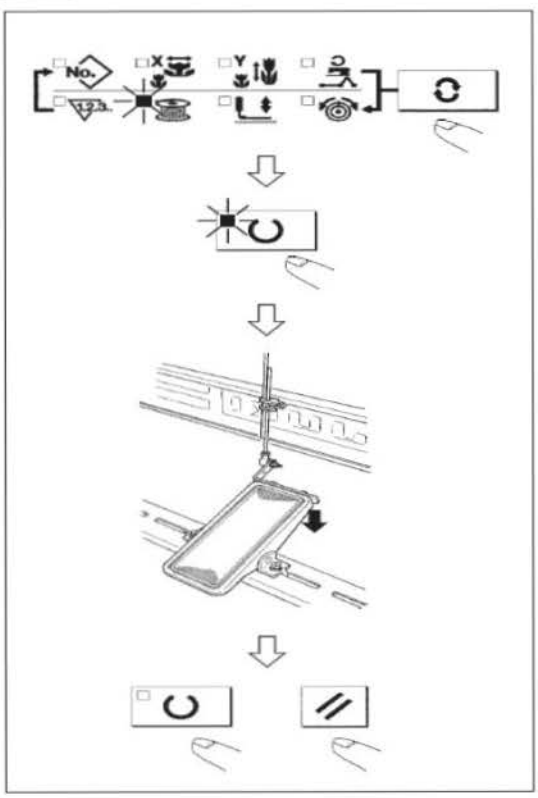
(3). 用 键、 键设定花样号。

(4). 同样地设定 XY 放大缩小率、转速等。

(5). 按 键之后，缝制 LED 亮灯，成为可以缝制的状态。

选择花样后，请一定要确认图案形状，如果图案远离压脚，缝纫中机针会碰到压脚，弄断机针。

5.绕线



刚打开电源后，绕线不动作。请设定 1 次花样号后，按 键让缝制 LED 亮灯之后再进行操作。

(1). 按 键，缝制 LED 灭灯。

(2). 按 键，选择绕线 。（如果缝制 LED 亮灯时不能选择）

(3). 按 键，压脚下降，缝制 LED 亮灯。

(4). 踩踏板开关后，缝纫机开始转动。

(5). 踩踏板开关之后，或者按 键、 键之后缝纫机停止转动。

(6). 按 键之后，缝制 LED 灭灯，压脚上升， 键变为有效。

6. 剪线设置

独立剪线装置，区别于一般的压脚联动及主轴联动剪线机构，拥有着独立的控制单元，可以更好的对剪线的全过程进行控制。

当存储参数 No.**46** 设定为 1（禁止剪线）时不进行剪线动作。

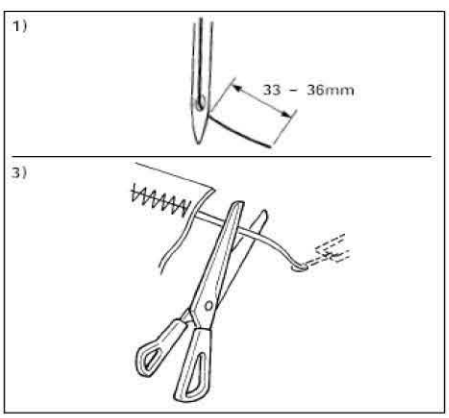
7. 抓线装置

用抓线装置可以防止高速开始时的缝制不良（上线脱线、跳针、上线脏污）。抓线在抓线显示LED亮灯的状态动作，灭灯状态下不动作。动作 ON/OFF的变 换可以用 键来进行。抓线装置 OFF 时，自动进行低速起动。

当存储参数 No. 35 设定为 1（禁止）时不进行抓线动作。同时， 键无效。

使用抓上线时的注意事项：

(1). 有（动作）抓线时，请把缝制开始上线的长度调小之后再使用。
机针长度过长的话，布料背面的线会被拉出，同时，过长的话，容易把上线抓线的端头缝进缝迹里。



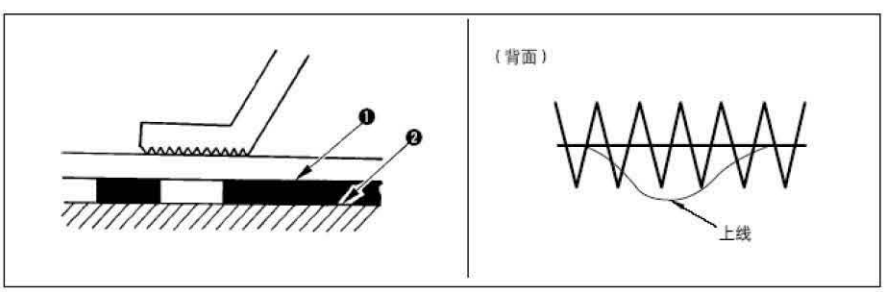
A. 有抓线时的机线长度约为 33～36mm。

B. 更换机线之后等机线变长。或用手拿机线缝制时，请把抓线键设定为 OFF。

C. 如果抓线夹持的上线被缝进缝迹后，请不要强行拉布料，请用剪刀等把缝进布料的上线剪掉。开始缝制的上线不会被缝进缝迹里。

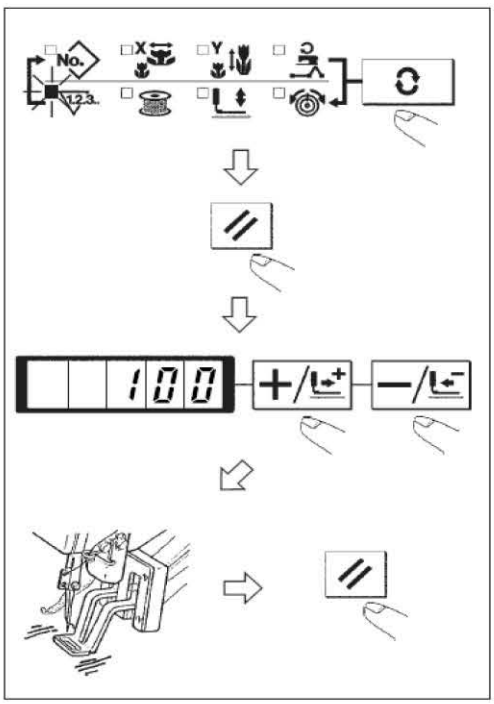
(2). 让抓线动作，可以保持缝制开始的稳定缝制，可以把机针调整短，因此布料的上线缠线现象变少。

(3). 使用布料不与针板紧密接触的下板时，可能发生上线松弛，不管线长度如何布料背面均卷入上线的现象。



8. 底线计数器

计数器的设定在出厂状态时设定为生产计数器（加算方式）。而作为底线计数器（减算方式）时，必把 No. 18 号参数的值设置为 1。



(1).按 键，设定为计数器显示 。

(2). 然后按 键。

(3). 然后，按 键、 键，设定一个旋梭可以缝制的次数。

(4).缝制后，每逢一次计数器减一。

(5).缝制完设定数后，显示屏会闪烁提示。

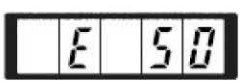
(6).更换底线，按 键，计数器值返回到设定值。

(7). 反复 4）～6）的步骤。

9. 暂停

把 No. 31 号参数设定为 1 之后， 键或者踏板的倒档可以作为暂停功能来使用。

(1). 按 键或踩踏板倒档，缝纫机停止转动，显示错误号 50。



(2). 停止后的操作有以下 3 种：

A. 按启动开关，重新开始缝制。

B. 按 键，进行切线之后，用 键、 键调整位置，按开始开关再次开始缝制。

C. 按 键，进行了切线之后，再次按 键返回到原点。

10. 设置 P 花样和 C 花样

10-1. 使用花样键（P1 P2 P3 P4 P5）进行缝制

把已经存储的花样（No.1~200）可以登记到 P1~P50 上。变更放大缩小率、最高转速限制、缝制位置就可以登记，用花样的滚动窗口选择同样可以登记花样，可以一次地叫出 P1~P25 。

• 当选择了 P6~P25 时，用下表所示的 P1 P2 P3 P4 P5 键的组合（同时按）进行缝制。

P-No.	选择键	P-No.	选择键	P-No.	选择键	P-No.	选择键
P1	P1	P8	P1+P4	P15	P4 +P5	P22	P2+P3+P4
P2	P2	P9	P1+P5	P16	P1+P2+P3	P23	P2+P3+P5
P3	P3	P10	P2+P3	P17	P1+P2+P4	P24	P2+P4+P5
P4	P4	P11	P2+P4	P18	P1+P2+P5	P25	P3+P4+P5
P5	P5	P12	P2+P5	P19	P1+P3+P4		
P6	P1+P2	P13	P3+P4	P20	P1+P3+P5		
P7	P1+P3	P14	P3+P5	P21	P1+P4+P5		

(1).花样键上的登记

例：把花样 No.3、X 放大缩小 50%、Y 放大缩小 80%、最高速度限制 2000rpm 、花样位置右移 0.5mm 、前移1mm 的设定到 P2 。

1. 打开电源，按 M 键（缝制 LED 应该灭灯）。进入方式设定（存储器开关设定）。 ⇨ 130

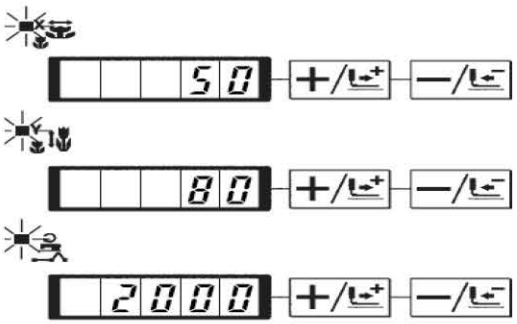
2. 用 +/⊾ 键、 −/⊾ 键显示出花样存储模式。 ⇨ P---

3. 按 ↻ 键。进入花样存储方式。 ⇨ P1--

4. 按 P2 键。（选择存储的 P-No.）
用 +/⊾ 键、 −/⊾ 键也可以选择。 ⇨ P2-- +/⊾ −/⊾ P1 ~ P5

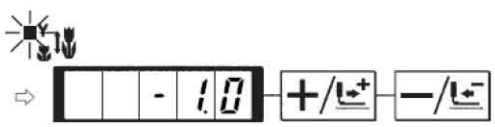
5. 用 0 键，显示花样号 No.。
用 +/⊾ 键、 −/⊾ 键设定花样号码。 ⇨ 3 +/⊾ −/⊾

6. 按 键，用 键、 键设定为 X 放大缩小率 “50”%、Y 放大缩小率 “80”%、最高速度限制 “2000” rpm。

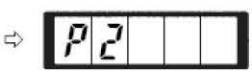


7. 按 键后，变为 X 放大缩小率 显示为 0.0。X 方向的移动量可以以 0.1mm 为单位进 行设定。用 键、 键设定 0.5。

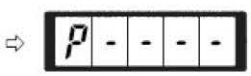
8. 按 键后，变为 Y 放大缩小率 显示为 0.0。Y 方向的移动量可以以 0.1mm 为 单位进行设定。用 键、 键设定 1.0。



9. 按 键后， 设定结束。



10. 按 键，结束花样存储方式。

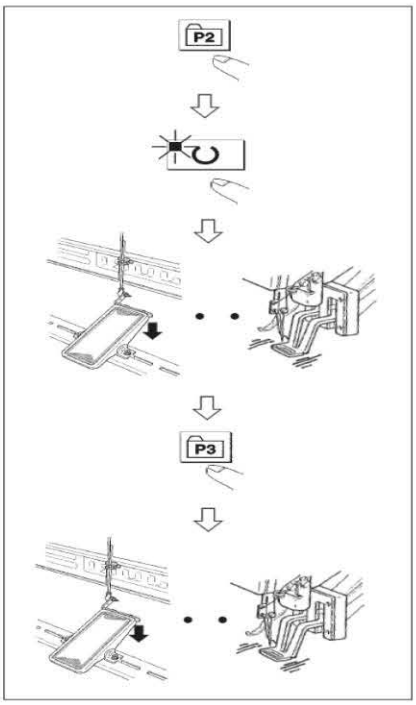


11. 按 键，结束方式设定，返回通常方式。

(2). 缝制操作

操作例：以存储的 P2 内容进行缝制，然后缝制 P3 的内容。

注意 缝制 LED亮灯时，按P1–P25 键之后，压脚下降，请注意不要夹到手指。P26–P50 可以进行图案登记，P1–P5 不能进行登记，只能用选择图案方式指定。用 “+” “–” 键显示。缝制 LED灯亮时，不能选择P26–P50。



1. 打开电源。
2. 按 P2 键。
3. 按 键，缝制 LED 亮灯后，压脚移动上升。
4. 确认花样形状。
5. 如果花样形状正确，则可以缝制。
6. 缝制结束后，按 键，压脚下降，检索原点后，移动到缝制开始点，然后压脚上升。
   （P 键在缝制 LED 亮灯时，也可以按键变换花样。）
7. 进行 4、5 项操作。

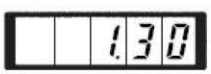
10-2. 使用组合功能进行缝制

按顺序排列已经存储的花样存储（P1~P50），存储到 C1~C20，每次缝制之后按顺序变换缝制花样。1 个组合号码最多可以存储 30 个花样。

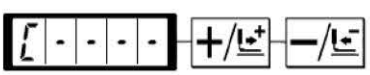
⑴. 组合花样的存储

例：按 P1、P2、P3 的顺序组合进行存储。

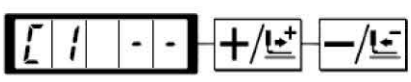
1. 打开电源，按 M 键（缝制 LED 应该灭灯）。进入方式设定（存储器参数设定）。

⇨ 

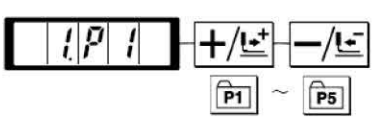
2. 用 +/L+ 键、−/L− 键显示组合模式。

⇨ 

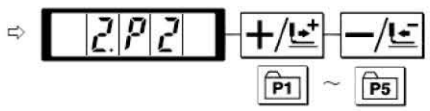
3. 按 键，缝制 LED 亮灯，进入组合花样设定方式。用 +/L+ 键、−/L− 键可以选择 C1~C20。

⇨ 

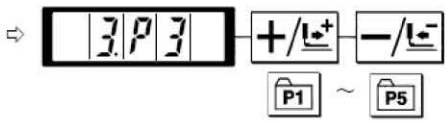
4. 按 键，然后按 P1 键。P1 被设定到 C1 的第 1 个花样。用 +/L+ 键、−/L− 键选择 P1~P50。

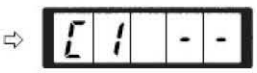
⇨ 

5. 按 键，然后按 键。P2 被设定到 C1 的第 2 个花样。用 键、 键选择 P1~P50。

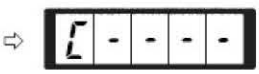


6. 按 键，然后按 键。P3 被设定到 C1 的第 3 个花样。用 键、 键选择 P1~P50。

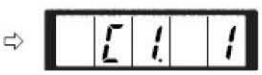




7. 按 键结束存储。



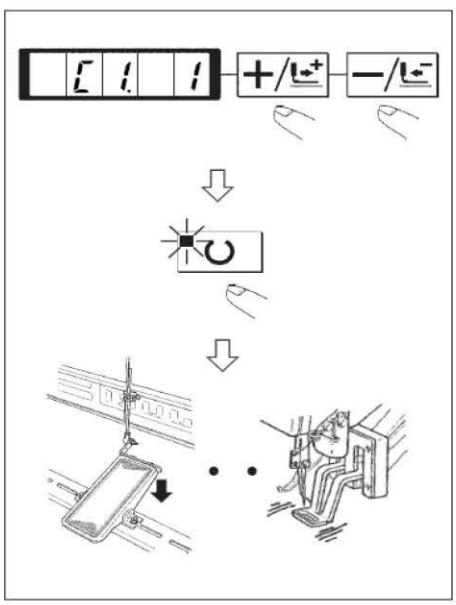
8. 按 键结束组合花样存储模式。



9. 按 键结束方式设定，返回通常方式。

(2). 缝制操作

操作例：以存储的 C1 内容进行缝制。



(1). 打开电源。

(2). 用 键、 键把花样号设定为 C1. 1。

(3). 按 键，缝制 LED 亮灯，然后压脚移动上升。

(4). 如果花样形状良好，则可以缝制。

(5). 按照每次缝制组合的顺序进行缝制，最后一个花样缝制结束后，返回第一个花样，反复进行缝制。

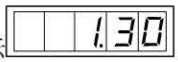
✧ 缝制后，如果想返回前面的图案或跳到下一图案时，可以在缝制 LED 亮灯的状态按 键、 键，图案显示变化，压脚移动到缝制起始点。

✧ • 存储 C1～C20 后，若改变 P1～P50 的话，存储在 C1～C20 中的 P1～P50 的内容也改变。

✧ 每种花样都应该确认花样形状。

11. 调试模式

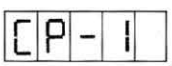
通过启动该模式，可进行保养检查操作。

(1). 在缝制灯熄灭的状态下，按 M 键，显示  ，然后同时按下 P1 P2 P3 P4 P5 键，听到蜂鸣器响声后，在记忆开关的客户等级设定模式下可以进入调试模式。

（注意）不同时按 P1 P2 P3 P4 P5 的话，就不能进入调试模式。

(2). 按一次 −/⊑ 键进入调试模式，屏幕显示“CP---” 如右图所示  ；

(3). 按 ↺ 键，开始进行显示输出测试。显示输出测试将循环检测每个 LED 显示模块及 LED 指示灯的亮灭状态，具体流程如下图所示：

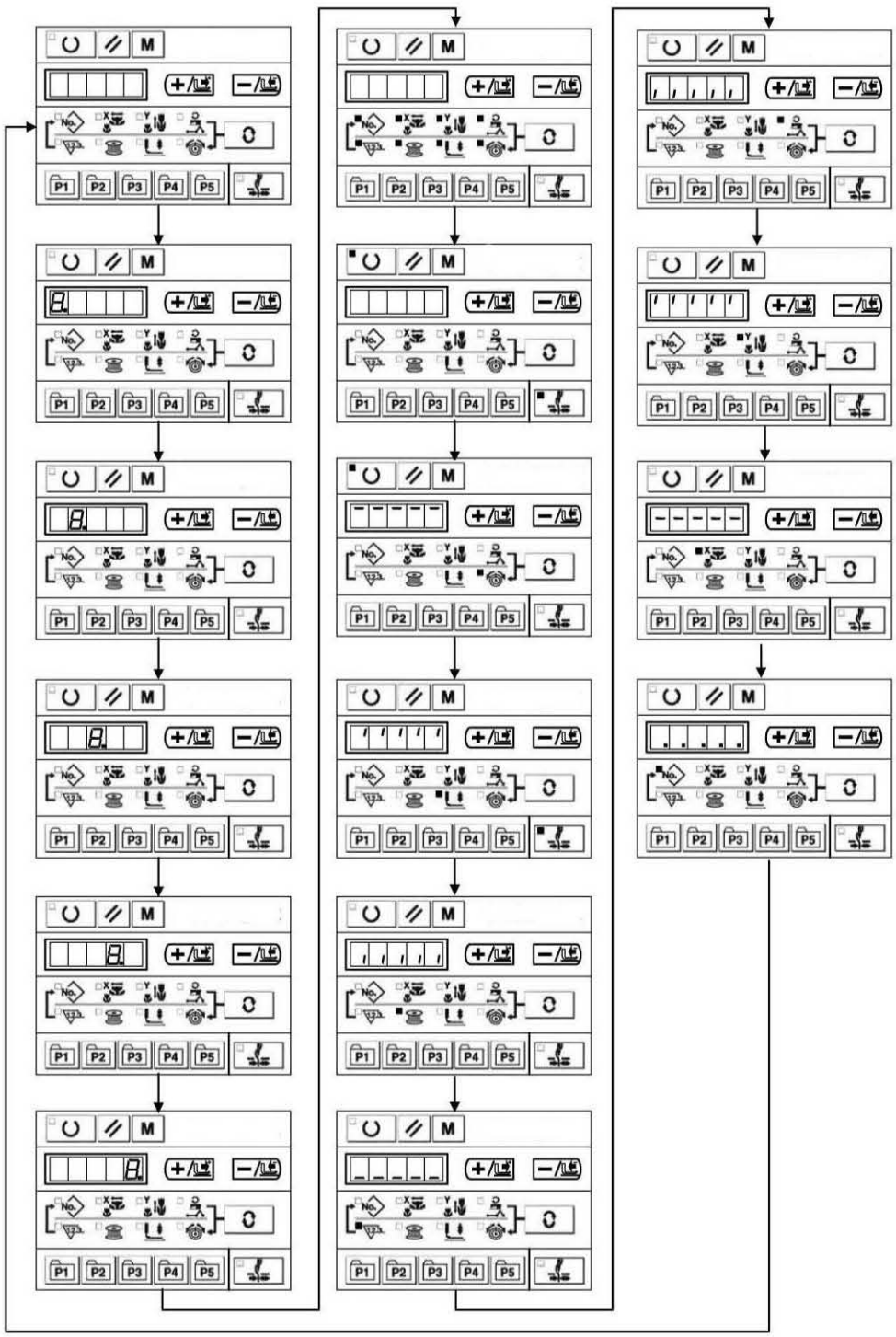
(4). 再次按下 ↺ 键，结束显示输出测试，屏幕显示“CP-1”，如右图所示：  。

注意 只有在显示输出测试结束之后才能进行其他功能的测试选择。

(5). 按 +/⊑ 、−/⊑ 键，可以变更功能测试程序号，每个序号代表的功能如下表所示：

(6). 按住 ↺ 键，进入功能测试。

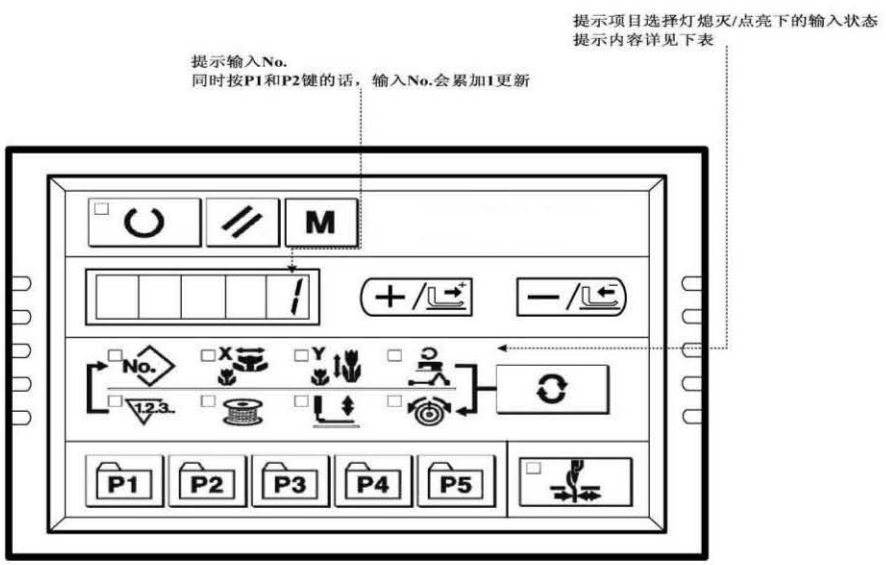
(7). 各功能测试如果按 M 键的话，就会终止测试，返回到 5）的状态； 但是，如果使用过连续模式1次的话，就不能解除了，只有关闭电源才能结束。



功能测试序号	功能	内容
CP-1	输入信号检验	以灯亮提示开关，传感器输入的状态。
CP-2	XY 马达/原点传感器检验	显示 X/Y 马达寸动操作，原点检索操作以及 X/Y 原点传感器的状态
CP-3	连续运转	在设定连续运转条件后，移向连续运转模式。
CP-4	主马达旋转数检验	设定旋转数、机器启动、显示实测旋转数。
CP-5	切线调试	剪线电机动作，配合调试剪刀的安装等
CP-6	压脚、切线马达/原点传感器检验	显示压脚、切线马达寸动操作，原点检索操作，以及压脚原点/压脚传感器的状态。
CP-7	抓线马达/原点传感器检验	显示抓线马达的寸动操作，原点检索操作，以及抓线原点/抓线传感器的状态。
CP-8	————————	————————

11-1. CP-1 输入信号检验

能够检验操作控制键盘、踏板开关、各种传感器等的输入状态。在屏幕显示“CP-1”时，按 键，进入 CP-1，屏幕显示“1”，即第 1 项测试内容。



每个输入 No. 的显示内容

输入 No.	花样 N0. 灯	X 扩大灯	Y 扩大灯	速度灯	计数灯	卷线灯	压脚下降灯	支线电磁铁灯
1	/	/	键	键	键	键	键	键
2	/	/		P5 键	P4 键	P3 键	P2 键	P1 键
3	/	/	/	/	/	/	/	/
4	踏板 0 档	踏板 1 档	踏板 2 档	/	/	/	/	/
5	压脚马达原点传感器	Y 马达原点传感器	X 马达原点传感器	抓线马达原点传感器	切线传感器	抓线传感器	/	/
6	主轴角度显示							
7	主轴马达 Z 相	/	/	/	/	/	/	/
8	/	/	/	/	/	机头翻起开关	/	/

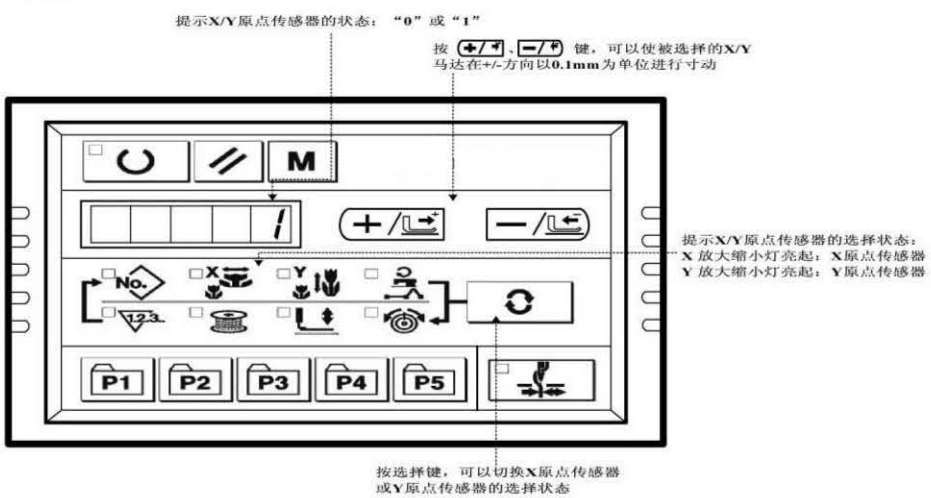
11-2. CP-2 检验 X 、Y 马达/原点传感器

显示 XY 马达的寸动操作，原点检索操作以及 X/Y 原点传感器的状态。

(1). 准备

首先按 键，进入 CP-2，屏幕显示“1”，再按 键进行 X、Y 马达的原点检索，压脚下降，缝制灯亮起。(也可不按 键直接进行步骤 2 的操作)

(2). 操作



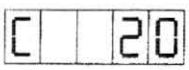
11-3.　CP-3 连续运转（自动跑合）

当屏幕显示“CP-3”时，按 键，进入连续运转模式。在设定了连续运转条件后，启动连续运转模式；如果要解除连续运转模式请关闭电源。

⑴.间隔时间的设定

按 、 键，设定两次运转的间隔时间。

从 1800ms 至 9900ms 可以 100ms 为单位进行设定。（默认值 2000ms ）设定后，按 键，保存设定值。

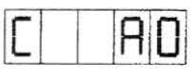


⑵.缝制结束有无原点检索的设定

按 、 键，设定缝制结束时有无原点检索。

A0：无效（ 默认值）

A1：有效（每次缝制结束后进行原点检索）



设定完成后，按 键，进入普通缝制模式。

⑶.连续操作

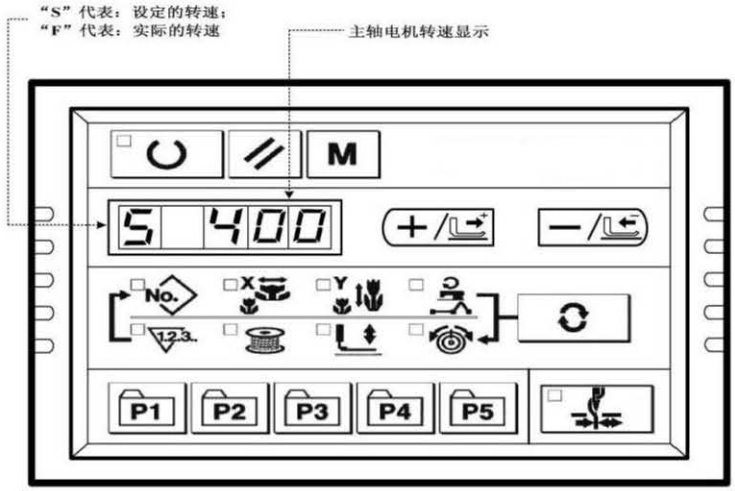
在普通缝制模式下，用户可以设定花样号码、X 、Y 缩放率、最高转速等条件然后开始缝制。缝制结束之后，如果在第 2 步操作中设定有原点检索的话，则开始进行 X/Y 压脚、切线/抓线的各个马达的原点检索；如果在第 1 步操作中设定的休止时间后，就会自动再次开始进行缝制；如果要中止连续缝制，请在缝纫停止时，按 键停止。

11-4.　CP-4检验主马达转速

设定机器的转速，在设定的转速下仅驱动机器的主马达转动，显示实测的转速。

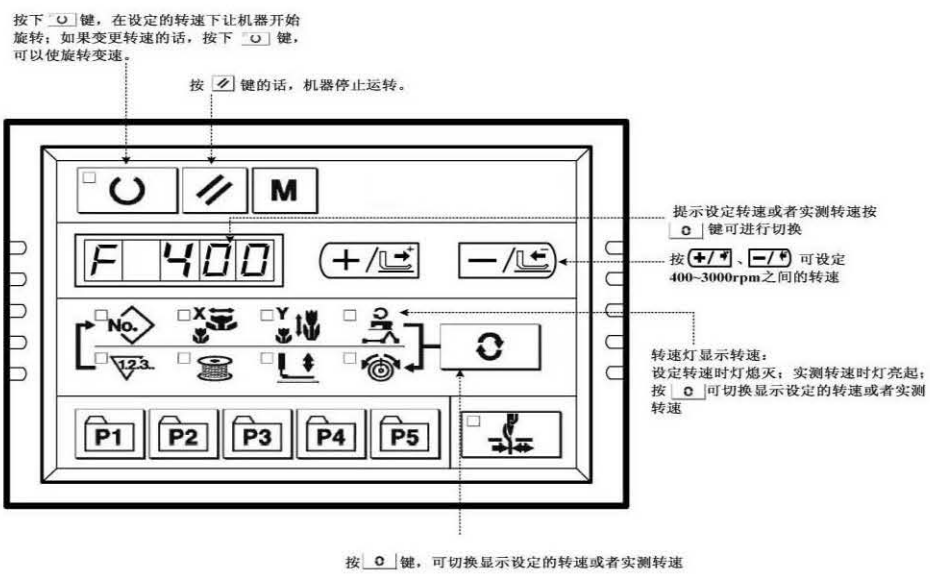
⑴.准备

首先按 键，进入 CP-4，屏幕显示“S400”；然后按 键，进行抓线和压脚、切线马达的原点检索，缝制灯亮。



(2). 操作

按 +/ 、 −/ 键，可以变更设定的主轴转速，然后按 键，机器以设定的转速开始运转。此时，按 键，可以切换设定转速显示和实际转速显示。如需再次变更设定转速，再次按 键，使用 +/ 、 −/ 键，设定转速值，然后按 键，机器以新设定的转速运转。如需停止运转，按 键。如需退出该模式，请按 M 键。



11-5. CP-5 切线调节

显示切线马达的寸动操作以及运行到到线弯曲位置、切线、剪刀回位、回原点的切线动作。

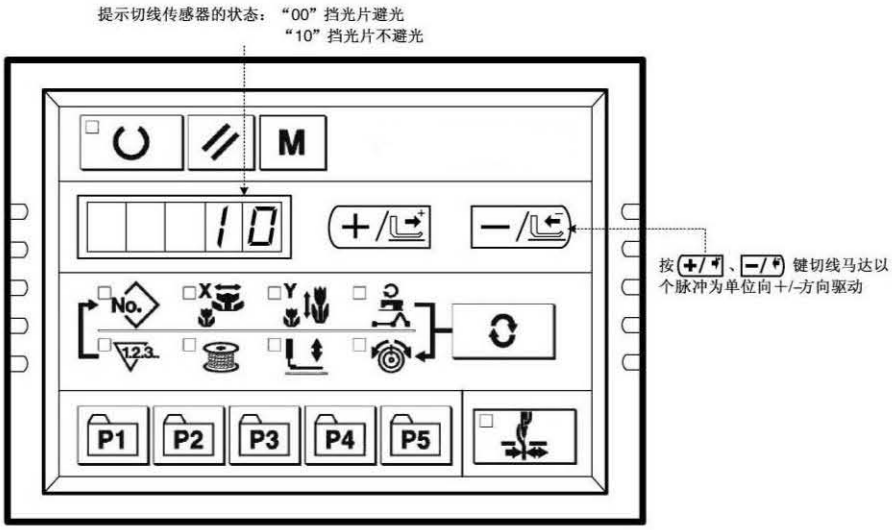
⑴. 准备

首先按 键，进入 CP-5。

⑵. 操作

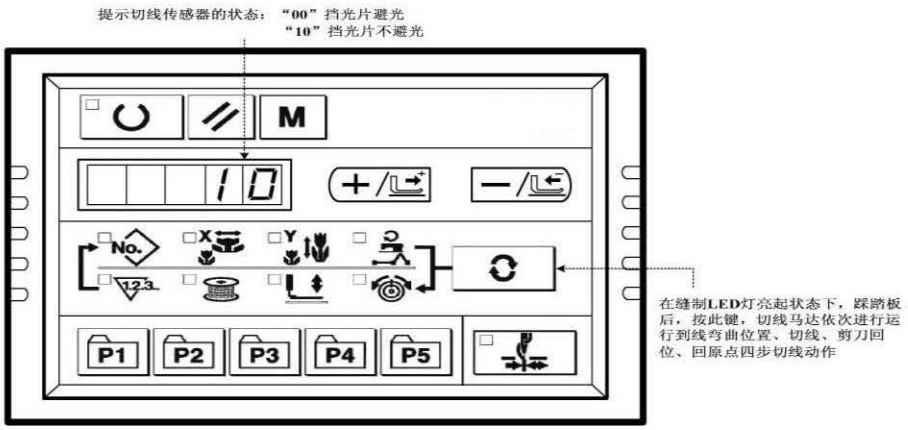
1. 切线马达寸动操作

按 、 键可以进行切线马达的寸动操作，供调试人员安装、调试剪刀时使用。



2. 切线动作

按 键，缝制 LED 灯亮起，踩踏板进行原点检索；依次按 键，切线马达分别进行运行到线弯曲位置、切线、剪刀回位、回原点四步动作。如需退出该模式，请按 M 键退出。



11-6. CP-6 检验压脚原点传感器

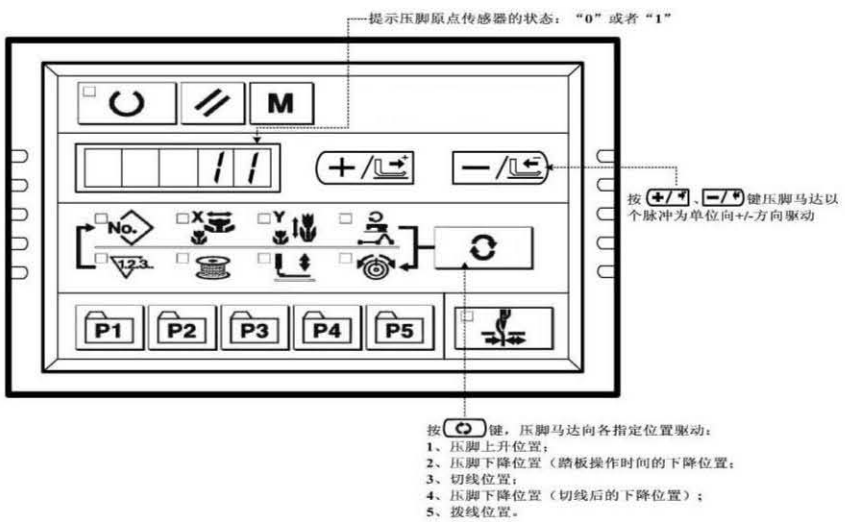
显示压脚马达的寸动操作，原点检索操作以及压脚原点传感器的状态。

⑴. 准备

首先按 [0] 键，进入 CP-6，然后按 [↻] 键进行抓线的原点检索，缝制灯亮。

⑵. 操作

按 [−/⌐] 键，在 6 ~ 8 次后，屏幕显示由“00”变为“01”，则压脚传感器正常，如果与上述现象不符，请调整压脚传感器的位置。



按 [0] 键，机器上相关执行部件可以按上图所示 1~5 步，循环动作。如需退出该模式，请按 [M] 键退出。

11-7. C P-7（检验抓线马达/原点传感器）

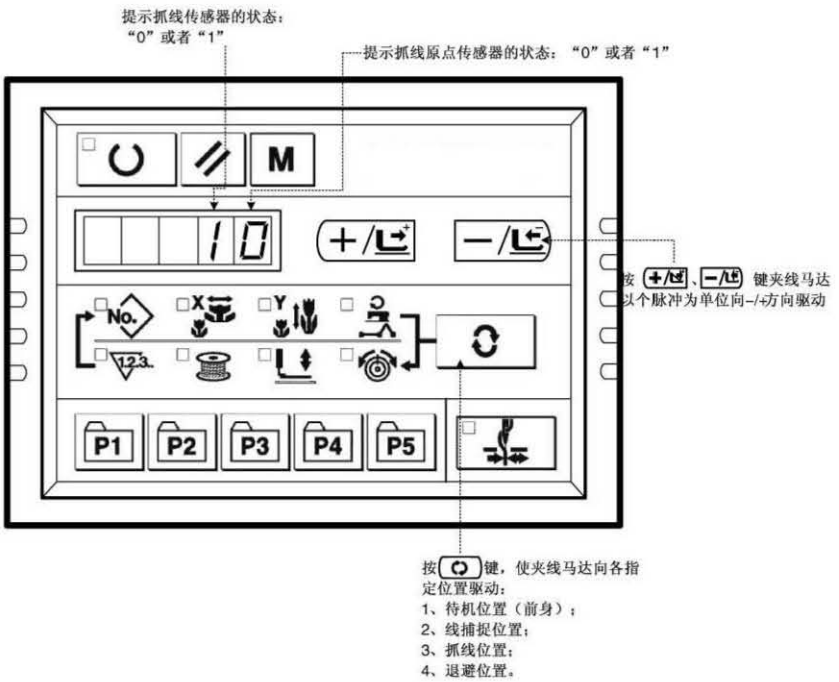
显示抓线马达的寸动操作，原点检索操作以及抓线马达原点传感器和抓线传感器的状态。

(1). 准备

首先按 键，进入 CP-7；然后按 键，缝制灯亮起，踩踏板，进行原点检索后，屏幕显示“10”。

(2). 操作

按 、 键，抓线器可以以脉冲为单位进行寸动。按 键，抓线器向后驱动；按 键，抓线器向前驱动。



按 键，机器可以按上图所示 1~4 的步骤循环运作。如需退出该模式，请按 。

12. 参数设置

12-1. 参数设置的具体操作

(1). 缝制 LED 灭灯的状态下，按 M 键之后，成为参数设置的设定方式。

（按 M 键之后，显示的 1.30 表示第一号参数的最高速度限制为 3000rpm。）

(2). 参数号码可以用 +/⊵ 键、 −/⊵ 键进行变更。

(3). 按 ↵ 键，调整想变更的参数号码，缝制 LED 亮灯。

(4).用 +/⊵ 键、 −/⊵ 键变更参数对应值。

(5).按 // 键，可以返回出厂设置。

(6). 按 ↵ 键，存储变更内容，缝制 LED 灭灯，返回参数号码选择状态。

(7).按 M 键，结束参数设定方式，返回通常状态。

12-2. 参数设置示例

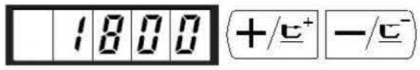
(1). 缝制速度上限的设定

设定例：把缝制速度的上限设定到 1800rpm 。

1. 在缝制 LED 灭灯的状态按 M 键，显示为参数号 No. 1 的内容。缝纫机的最高速度显示用参数号 No. 1 设定。

2. 显示参数号 No. 1 的状态下，按 ↵ 键，点亮缝制 LED。参数号 No. 1 的内容被显示。

3. 用 键、 键设定为“1800”。



4. 按 键存储，缝制 LED 灭灯。

5. 按 M 键，返回通常状态

⑵. 缝制开始软启动速度的设定

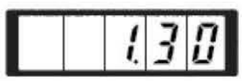
缝制开始的第 1 针～第 5 针的速度可以以 100rpm 为单位进行设定。可以设定为有抓线和没有抓线。

有抓线时

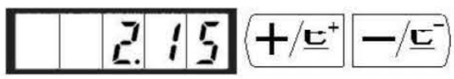
	出厂设置 (rpm)	设定范围
第 1 针	600	400 ~ 1500
第 2 针	1800	400 ~ 3000
第 3 针	2700	400 ~ 3000
第 4 针	2700	400 ~ 3000
第 5 针	2700	400 ~ 3000

• 最高转速（参数号N o. 1）被优先。
设定例：有抓线时，变更为第 1 针 1500→1000rpm、第 2 针 3000→2000rpm。

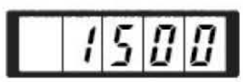
1. 缝制 LED 灭灯的状态下，按 M 键。



2. 用 键、 键显示出参数号 No. 2，这里设定第 1 针的缝纫机速度。

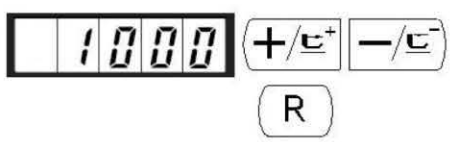


3. 按 键，缝制 LED 亮灯，第 1 针的设定值被显示出来。



4. 用 键、 键显示出“1000”。

按 键则返回出厂设置。按 M 键后，当前的操作全被取消，返回 2）的状态。



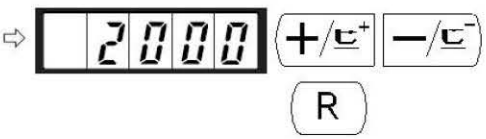
5. 按 键，缝制 LED 亮灯，第 1 针的设定值被存储。

6. 用 键、 键显示出参数号 No. 3，这里设定第 2 针的缝纫机速度。

7. 按 键，缝制 LED 亮灯，第 2 针的设定值被显示出来。

8. 用 键、 键显示出“2000”。

按 键则返回出厂设置。按 键后，当前的操作全被取消，返回 6）的状态。



9. 按 键，缝制 LED 灭灯，第 2 针的设定值被存储。

10. 按 键，结束参数设定方式，返回通常状态。

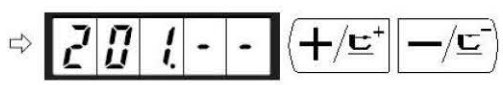
A. 是否可以读出花样号的设定

设定为不要的花样不能读出，防止错误的花样调出。另外，可调出可以使用的需要花样。

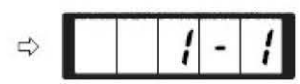
设定例：把 2 号花样和 3 号花样设定为不能读出。

1. 在缝制 LED 灭灯的状态下，按 键。

2. 用 键、 键显示出参数号 No. 201。

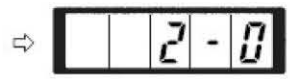


3. 按 键，缝制 LED 亮灯，图案 No. 1 的设定值被显示出来。设定值 1：可以读出，0：不能读出。



4. 用 +/⊵ 键、 −/⊵ 键设定为花样 No. 2。

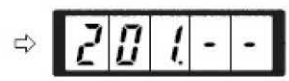
5. 按 0 键，把设定值设定为 0。



6. 用 +/⊵ 键、 −/⊵ 键设定为 No. 3。

7. 按 0 键，把设定值设定为 0。

8. 按 ↺ 键，存储设定值，缝制 LED 灭灯。



9. 按 M 键，结束参数设定方式，返回通常状态

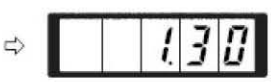
B. 计数器动作的设定

生产计数器可以作为底线计数器使用。反复缝制同样的图案，1 个梭芯可以缝制的次数（设定值）缝制结束后，缝纫机便不能起动。底线计数器采用减算方式。

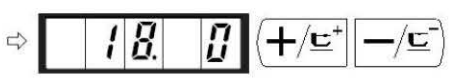
计数器的设定在出货状态时设定为生产计数器（加算方式）。作为底线计数器使用时，必须变换参数开关 No. 18。

设定例：把生产计数器（加算方式）变更为底线计数器（减算方式）。

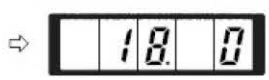
1. 在缝制 LED 灭灯的状态下，按 M 键。



2. 用 +/⊵ 键、 −/⊵ 键显示出参数号 No. 18。



3. 按 ↺ 键，缝制 LED 亮灯，计数器动作的设定值被显示出来。



4. 按 +/⊵ 键把设定值设定为 1。

设定值 0：生产计数器，1：底线计数器。

5. 按 ↺ 键，存储设定值，缝制 LED 灭灯。

6. 按 M 键，结束参数设定方式，返回通常

12-3. 参数设置表

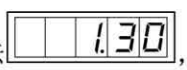
参数号	功能	调整范围	初值	备注
1.30	缝制的最高速度。 （可以以 100rpm为单位设定）	400~3000	2700	
2.15	第 1 针的缝制速度。（抓线） （可以以 100rpm为单位设定）	400~1500	600	
3.30	第 2 针的缝制速度。（抓线） （可以以 100rpm为单位设定）	400~3000	1800	
4.30	第 3 针的缝制速度。（抓线） （可以以 100rpm为单位设定）	400~3000	2700	
5.30	第 4 针的缝制速度。（抓线） （可以以 100rpm为单位设定）	400~3000	2700	
6.30	第 5 针的缝制速度。（抓线） （可以以 100rpm为单位设定）	400~3000	2700	
9.--	切线时的线张力变换同步时间	-6~4	4	
10.4	第 1 针的缝制速度。（不抓线） （可以以 100rpm为单位设定）	400~900	400	
11.9	第 2 针的缝制速度。（不抓线） （可以以 100rpm为单位设定）	400~3000	900	
12.30	第 3 针的缝制速度。（不抓线） （可以以 100rpm为单位设定）	400~3000	2700	
13.30	第 4 针的缝制速度。（不抓线） （可以以 100rpm为单位设定）	400~3000	2700	
14.30	第 5 针的缝制速度。（不抓线） （可以以 100rpm为单位设定）	400~3000	2700	
16.--	缝制开始的线张力（不抓线）变换同步时间。	-5~2	-5	
18.0	计数器动作	0：生产计数器（加算） 1：底线计数器（减算）	0	
25.1	压脚分段	0~1	1	0：分段　1：不分段；
26.70	压脚分段高度调节	50~90	70	
31.0	可以用操作键盘（清除键）停止缝纫机动作	0：无效 1：操作盘复位键	0	
32.1	可以禁止蜂鸣音响	0：不响蜂鸣音 1：操作盘操作音	1	
33.2	设定抓线开放的针数	1~7	2	

参数号	功能	调整范围	初值	备注
34.--	可以推迟抓线的同步时间	-10~0	-5	-方向变慢
35. 1	可以禁止上线抓线控制	0：通常 1：禁止	1	
36.--	选择送布动作的同步时间 紧线不好时设定为-方向	-8~16	12	向-侧移动过多的话，有断针的危险。缝制厚料时请加以注意
37. 1	缝制结束后的压脚状态	0：压脚直接抬起 1：踩踏板抬压脚	0	
39. 0	可以设定每次缝制结束后均检索原点（除循环缝制以外）	0：不检索原点 1：检索原点	0	有关该参数，详见【3.3恢复出厂默认设置】
40. 0	可以设定循环缝制时的原点检索	0：不检索原点 1：每1图案结束	0	
42. 0	设定针杆停止位置	0：上位置 1：上死点	0	上死点停止时为上位置停止后反转然后停止
46. 0	可以禁止切线	0：通常 1：禁止切线	0	
49.16	可以设定卷线速度	800~2000	1600	
201.--	设定是否可以读出图案数据	0：不能读出 1：可以读出	机型不同则设定不同	可以分别设定花样图案打开与否
P----	进行图案登记			
C----	进行循环缝制登记			

13.服务参数设置

服务参数有别于普通参数，一般禁止用户自行更改，这些参数提供给专业技术人员，供其调试时使用。

13-1. 服务参数的开启和变更

在缝制灯熄灭的状态下，按 M 键，显示  ，然后同时按 P1 P3 P5 键，听到蜂鸣器响声后，就能对服务参数进行启动与变更。

服务参数的修改与普通参数相同，具体操作方法可参考【2.6用户参数设置】一节。

13-2. 服务参数列表

参数号	定义	调整范围	初值	备注
21.--	标准踏板、踏脚开关位置	50~200	70	增加设定值的话，踏板的踩踏量会增多
22.--	标准踏板、高低段行程开关位置	50~200	120	增加设定值的话，踏板的踩踏量会增多
23.--	标准踏板、启动开关位置	50~200	185	增加设定值的话，踏板的踩踏量会增多
27.--	踩踏板时压脚下降速度	100~4000pps	4000	
28.--	踩踏板时压脚上升速度	100~4000pps	1500	设定上升过度的话会引起操作不良
29.--	缝制结束时切线压脚上升速度	100~4000pps	3000	设定上升过度的话会引起操作不良
38.--	压脚不上升时，只通过启动开关可进行缝制	0：普通 1：禁止抬压脚	0	
43. 1	切线时的机器旋转数选择	0：400rpm 1：800rpm	0	动刀分线时的旋转数；切线是在机器停止运转后进行的
44. 1	切线时在易于切线的方向选择有无送布的操作	0：无送布 1：有送布	1	
45.--	切线时进行送布的针孔导向直径（可设定以 0.2mm 为单位）	16~40	16	1.6mm~4.0mm
50.--	剪线角度	0~9	5	
56.--	+X 方向（右侧）的移动限定范围	-20~20m	20	在出厂状态下不考虑压脚的形状
57.--	-X方向（左侧）的移动限定范围	-20~20m	-20	在出厂状态下不考虑压脚的形状
58.--	+Y 方向（后面）的移动限定范围	-20~10m	10	在出厂状态下不考虑压脚的形状
59.--	-Y方向（前面）的移动限定范围	-20~10m	-20	在出厂状态下不考虑压脚的形状
62. 0	花样升级	0：普通模式 1：花样升级模式	0	有关花样升级详见【5 通过 U 盘升级花样】一章
67.--	默认参数调用	0：参数恢复出厂设置 1：无变化	1	
68.--	主轴停车补偿	-10--+10	0	
90.--	底线计数器预设值	0~9999	0	
91.--	生产（底线）计数当前值	0~9999	0	

参数号	定义	调整范围	初值	备注
150.0	机头翻起安全开关可以无效	0：普通 1：机头翻起安全形状无效	0	
241.0	功能选择	0：套结（加固） 7：钉扣	0	

⚠注意 以上参数只供维修人员使用，用户不能轻易改动。

13-3. 恢复出厂默认设置

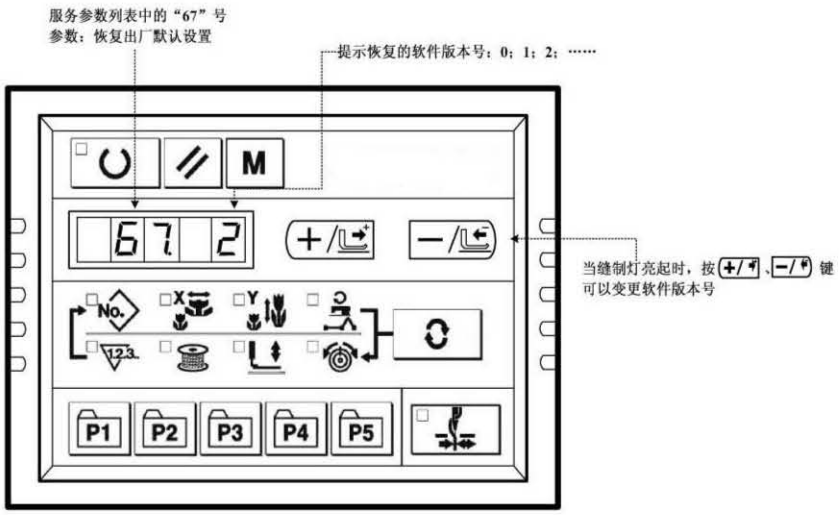
当用户无意中修改了某些出厂时设置好的参数或者电控系统出现故障时，可以尝试使用“恢复出厂默认设置”功能，进行系统恢复。

⚠注意 恢复出厂默认设置，用户以前设定的数据参数将会被覆盖，使用此功能时，请慎重考虑，如不清楚，应及时联系厂家技术人员，在其指导下进行操作。

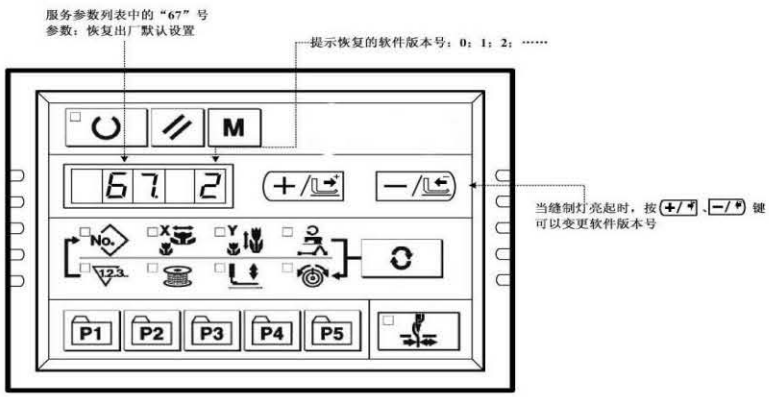
具体操作步骤如下：

(1). 在缝制灯熄灭的状态下，按 M 键，显示 1.30，然后同时按 P1 P3 P5 键，听到蜂鸣器响声后，即开启了服务参数变更；

(2). 按 +/↳ 、 −/↳ 键，选择 67 号参数：



(3). 按 键，缝制灯亮起，然后按 、 键，可以选择要恢复成的软件版本号：



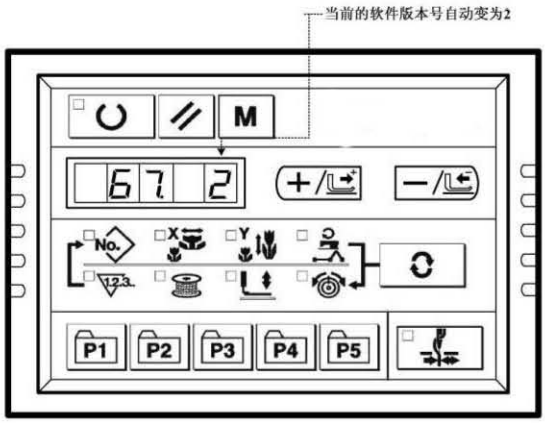
(4). 比如当前版本号为 2，你可以选择恢复为 0 或者 1（小于当前版本号的软件），然后再次

按 键确认要恢复成的版本号，缝制灯灭；

(5). 按 键，退出服务参数设置模式，返回到普通缝制模式；

(6). 然后关断电源，约 1 分钟后打开电源，给系统上电，操作面板数码管显示为“EEP——”大约 20 秒钟后，操作面板恢复正常显示（注意，这是正常现象， 系统需要一定的时间完成出厂软件恢复）。

(7). 恢复完成之后，系统自动将当前软件版本号定为最高版本，比如，系统中的默认版本有 0、1 两个版本，那么恢复完成后的版本号自动为 2.

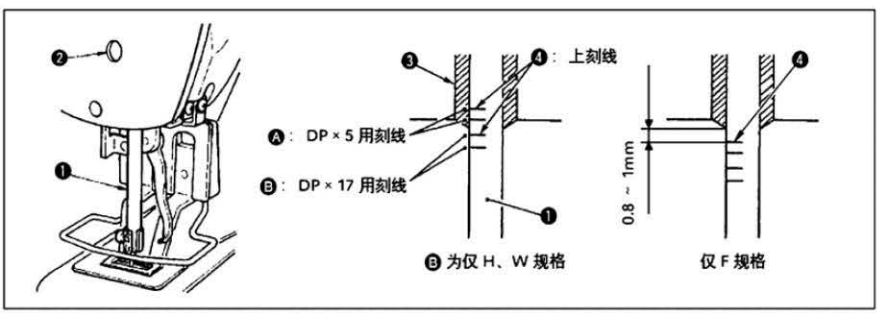


注意 在再次打开电源，给系统上电，系统进行恢复过程中，如果断电，恢复过程将被迫中断，将不能完成恢复出厂默认设置，返回到恢复之前的软件状态。

[6] 维修

1. 针杠高度

注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

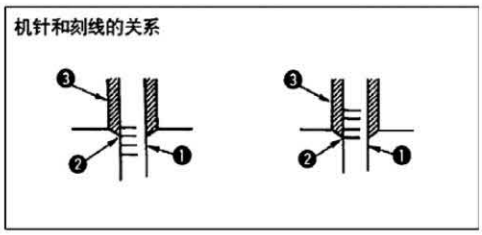


把针杠①设到最下点，拧松针杆紧固螺丝②，把针杠上刻线④和针杠下挡块③的下端调节成一致。

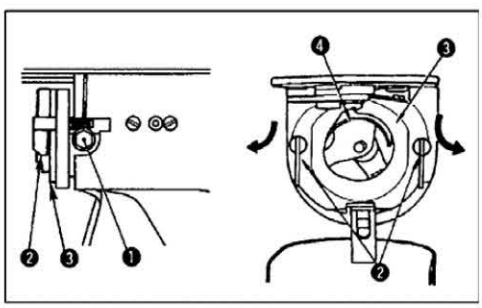
注意 请调节后一定确认不要有松动。有的缝制条件发生跳针时，请从针杠上刻线④往下调节 0. 5mm –1mm。

2. 机针与旋梭

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

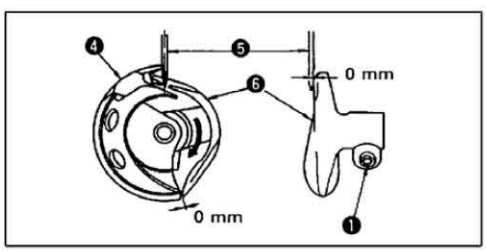


(1). 用手转动皮带轮，针杠①上升时，把下刻线②对准针杠下挡块前段一致。

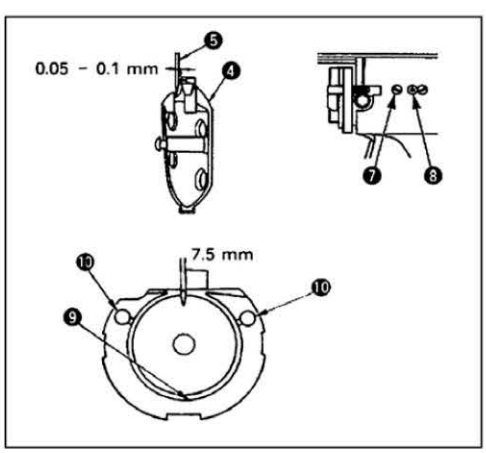


(2). 拧松驱动器固定螺丝①，左右打开中旋梭压片②，卸下中旋梭压脚③。

注意 此时请注意不要脱落中旋梭④。



(3). 为了让中旋梭④的梭尖与针⑤的中心一致，同时防止驱动器⑥在前段面与机针相碰，弄弯机针，请把驱动器前端面与机针的间隙调整为 0mm，然后把驱动器固定螺丝①拧紧。



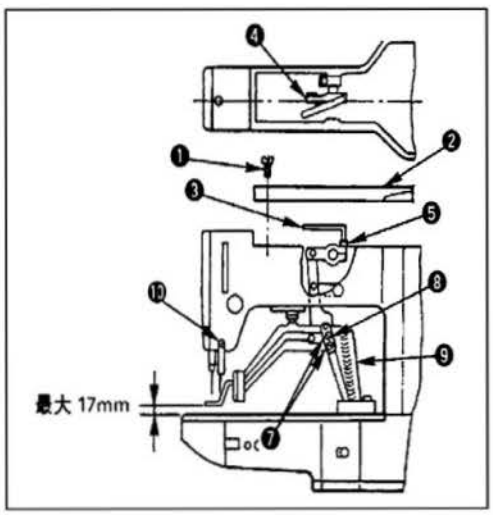
(4). 拧松大旋梭固定⑦，左右转动大旋梭调节轴⑧，调节大旋梭的前后位置，把机针⑤和中旋梭④的梭尖的间隙调整为 0.05~0.1mm。

(5). 调节完大旋梭的前位置后，机针和大旋梭的间隙应为 7.5mm，然后拧紧大旋梭固定螺丝⑦。

注意 较长时间没有使用缝纫机或清扫过旋梭周围之后时，请往导轨部⑨和油芯⑩加少量的机油后再使用。

3. 压脚的高度

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

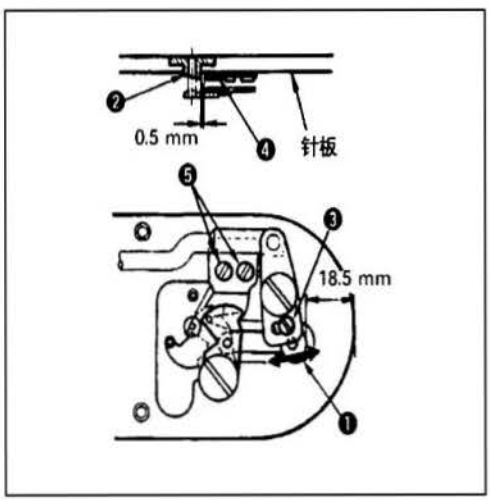


(1). 在停止状态，卸下 6 根机架外罩固定螺丝①，然后卸下机架外罩②。
(2). 把 L 形扳手插入中央的紧固筒的六角孔螺栓⑤，把它拧松。
(3). 把 L 形扳手③向下压布压脚升高，向上抬布压脚降低。
(4). 调节后，把六角孔螺栓⑤确实拧紧。
(5). 左右压脚不一致时，拧松固定螺丝⑦，调节布压脚拨杠挡板⑧调整高度。

注意 此时，请不要让布压脚拨档杆板⑧与送布台⑨相碰。如果和挑线杆相碰，请用挑线杆安装台固定螺丝⑩调节挑线杆高度。

4. 动刀和定刀

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

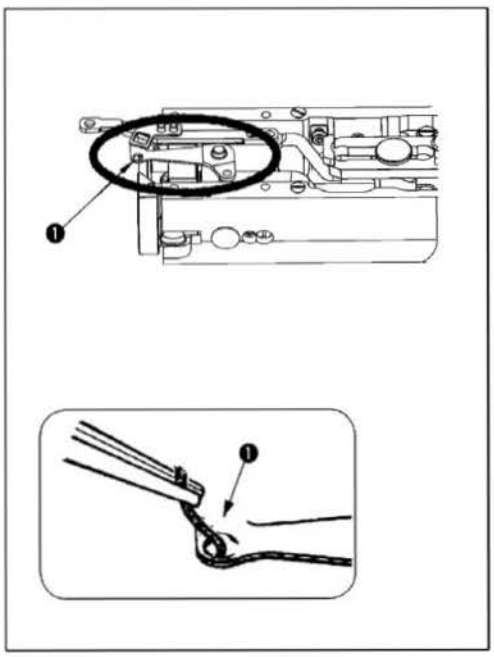


(1). 拧松调节螺丝③，向箭头方向移动动刀，把从针板前段刀切线小拨杆①前段的距离调整为 18.5mm。

(2). 拧松固定螺丝⑤，移动固定刀，把针孔导线器②和固定刀④之间的间隙调整为 0.5mm。

5. 抓线装置

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

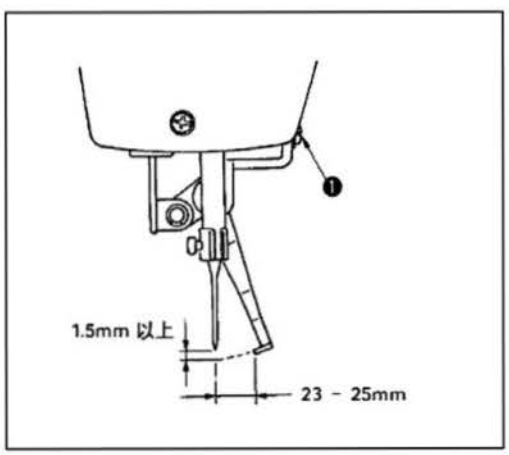


(1). 在抓线前段①，线被夹的话，会发生抓线不良，缝制开始的缝制故障。请用镊子等夹掉。

(2). 清除抓线装置的线屑，线灰尘时，请卸下针板之后再进行清除。

6. 挑线杆的调整

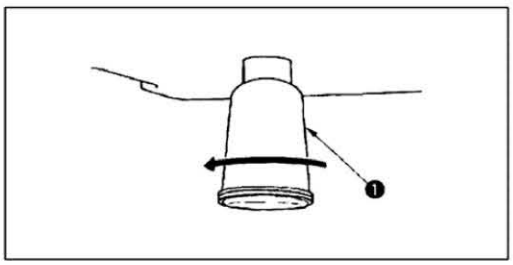
⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。



拧松螺丝①把挑线杆和机针的间隙调整为 1.5mm 以上。此时的挑线杆和机针的距离大约为 23~25mm 通过较宽的调整，在压脚下降时可以防止压到纫机线。
特别是使用细针时，请调宽刀 23mm 左右。

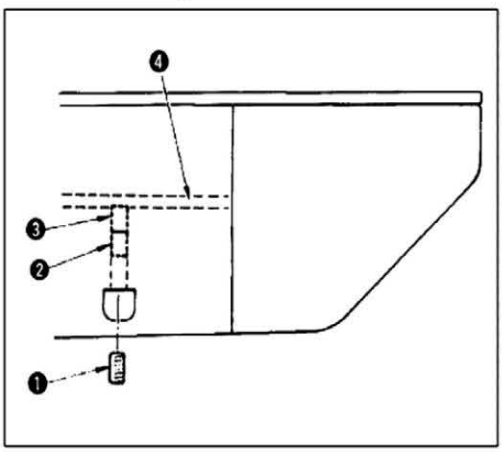
※ 机针为缝制结束停止的位置。

7. 废油的处理



积油杯①里积满了油之后，请卸下积油杯①排放出废油。

8. 旋梭的加油量



(1). 拧松固定螺丝①，卸下固定螺丝①。
(2). 拧紧调整螺丝②之后，加油管左④的油量杯弄小。
(3). 调整后，拧紧固定螺丝①固定好。

注意
1. 在标准出货状态，轻轻拧紧③回转 4 圈的位置。
2. 弄小油量时，不要一次拧紧，拧紧③回转 2 圈，待半日左右观看一下。拧得过紧的话会磨损旋梭。

9. 向指定部位补充润滑脂

使用缝纫机进行了一定的缝制次数之后没打开电源时操作盘上会显示出异常代码 No. E220。这是通知需要向指定部位补充润滑脂，此时请一定补充下列润滑脂，叫出存储器开关 No. 245，用复位键复位到[0]。显示出异常 No. E220 显示后，按复位键可以解除异常，但再次打开电源后会再次显示出 No. E220。

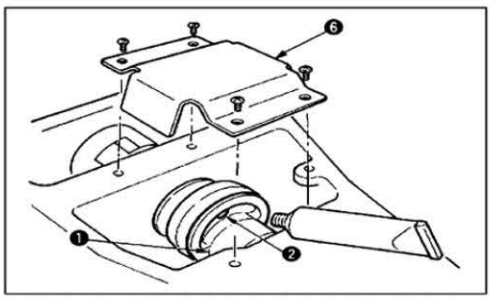
而且，异常 No. E220 显示，继续缝制一定期间后会显示出异常 No. E221，按复位键不能解除异常，同时缝纫机变成不能动作。

因此，显示出异常 No. E221 以后，请一定向下列部位补充润滑脂，然后启动存储器开关 No. 245，用复位键复位到[0]。

注意
1. 补充润滑脂之后，如果不把存储器开关No. 245 变更为[0]，异常 No. E2220 或No. E221 会被再次显示。
2. 下列指定部位补充润滑脂时，请使用附件箱中的油脂注射枪，如果不使用注射枪注射，油脂将很难加入。

⚠注意 为了防止突然启动造成人身事故，请关掉电源后再进行。

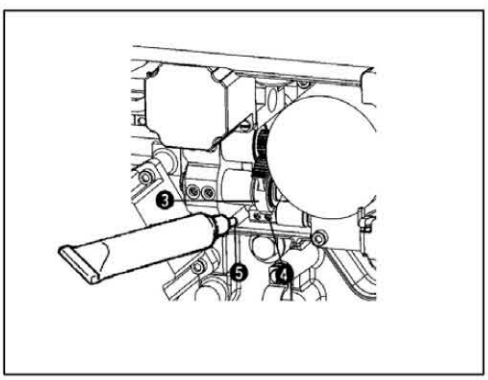
(1). 向偏心凸轮部加润滑脂



A. 打开上面护罩，卸下润滑脂护罩⑥。

B. 卸下偏心凸轮①侧面的橡胶盖②，然后补充润滑脂。

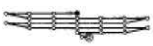
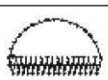
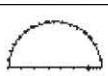
(2). 向扇齿轮销中加润滑脂

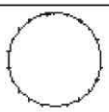
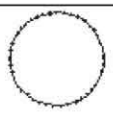
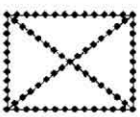
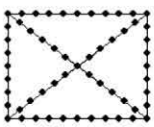
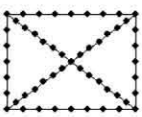
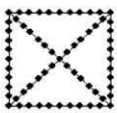
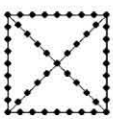
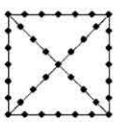
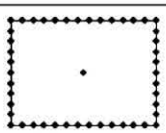
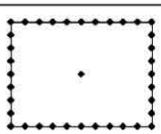


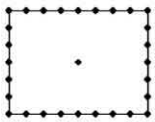
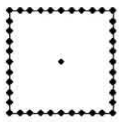
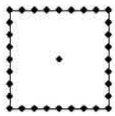
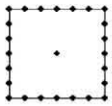
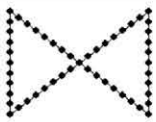
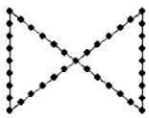
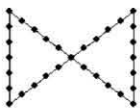
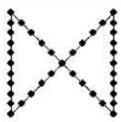
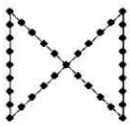
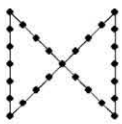
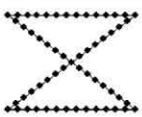
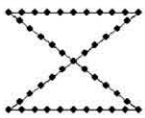
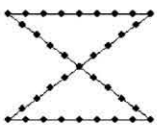
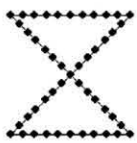
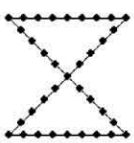
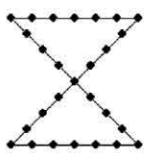
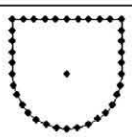
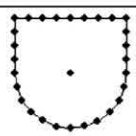
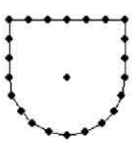
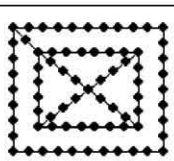
A. 放倒缝纫机，卸下润滑脂护罩⑦。
B. 卸下大摆动齿轮③的固定螺丝④，安装的附属接头⑤的润滑脂软管拧到螺丝孔，然后补充润滑脂。
C. 补充了润滑脂之后，请卸下的固定螺丝④拧紧固定。

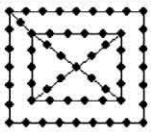
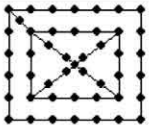
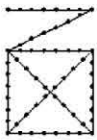
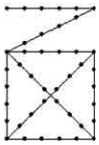
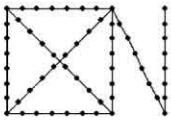
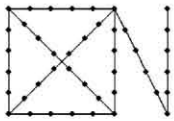
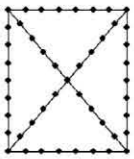
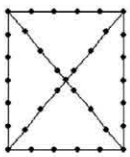
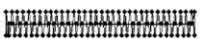
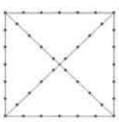
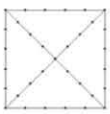
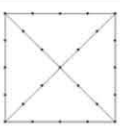
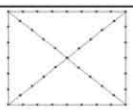
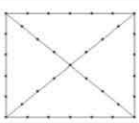
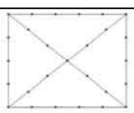
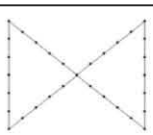
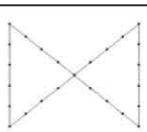
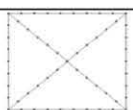
[7] 标准花样、压脚一览表

1.标准花样一览表

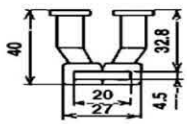
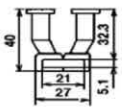
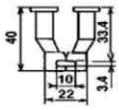
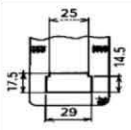
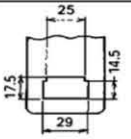
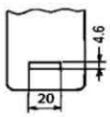
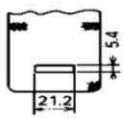
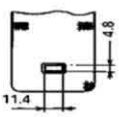
NO.	缝纫图案	针数	长×宽 (mm)	NO.	缝纫图案	针数	长×宽 (mm)
1		42	16×2	2		42	10×2
3		42	16×2.5	4		42	24×3
5		28	10×2	6		28	16×2.5
7		36	10×2	8		36	16×2.5
9		56	24×3	10		64	24×3
11		21	6×2.5	12		28	6×2.5
13		36	6×2.5	14		15	8×2
15		21	8×2.2	16		28	8×2
17		21	10×1	18		28	10×1
19		28	25×1	20		36	25×1
21		41	25×1	22		44	35×1
23		28	4×20	24		36	4×20
25		42	4×20	26		56	4×20
27		18	1×20	28		21	1×10
29		21	1×20	30		28	1×20
31		52	10×7	32		63	12×7
33		24	10×6	34		31	12×6
35		48	7×10	36		48	7×10

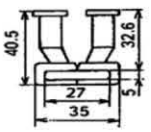
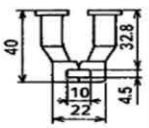
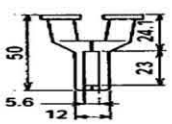
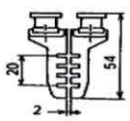
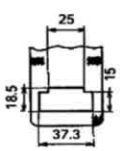
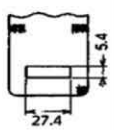
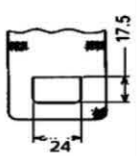
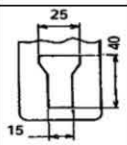
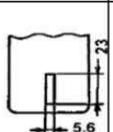
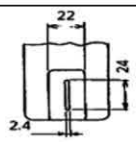
37		90	24 × 3	38		28	8 × 2
39		28	12 × 12	40		48	12 × 12
41		29	2.5 × 20	42		39	2.5 × 25
43		45	2.5 × 25	44		58	2.5 × 4.4
45		76	2.5 × 4.4	46		42	2.5 × 4.4
47		91	8 × 8	48		99	8 × 8
49		148	8 × 8	50		164	8 × 8
51		100	40 × 30	52		78	40 × 30
53		70	40 × 30	54		90	30 × 30
55		70	30 × 30	56		54	30 × 30
57		53	40 × 30	58		40	40 × 30

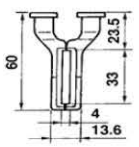
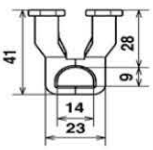
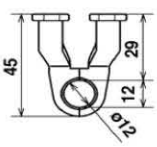
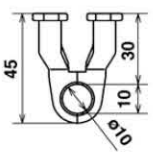
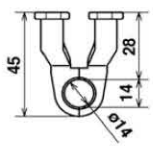
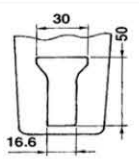
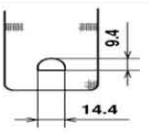
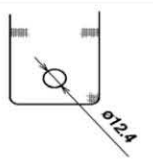
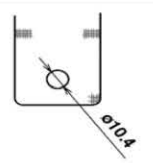
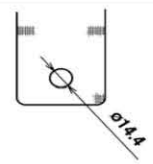
59		31	40 × 30		60		45	30 × 30
61		36	30 × 30		62		27	30 × 30
63		57	40 × 30		64		45	40 × 30
65		35	40 × 30		66		55	30 × 30
67		42	30 × 30		68		33	30 × 30
69		65	40 × 30		70		49	40 × 30
71		39	40 × 30		72		55	30 × 30
73		42	30 × 30		74		33	30 × 30
75		43	30 × 30		76		33	30 × 29.9
77		26	30 × 29.8		78		93	30 × 25

79		72	30 × 25		80		54	30 × 25
81		77	20 × 30		82		57	20 × 30
83		77	30 × 20		84		57	30 × 20
85		69	20 × 24.1		86		52	20 × 24.1
87		101	40 × 5		88		109	40 × 5
89		97	5 × 30		90		107	5 × 30
91		56	20 × 20		92		48	20 × 20
93		38	20 × 20		94		62	25 × 20
95		50	25 × 20		96		40	25 × 20
97		36	25 × 20		98		28	25 × 20
99		24	25 × 20		100		76	30 × 25

2. 标准压脚一览表

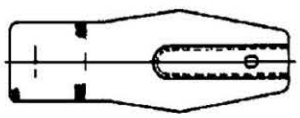
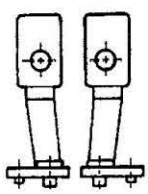
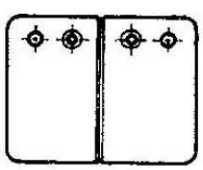
压脚号码	1	2	3	4	5
压布压脚	左：10011508　右：10011505			左：10011687 右：10011691	左：10011758 右：10011759
					
压布底板	10011565	10012300	10012279	10011751	10011755
	有齿牙	无齿牙	无齿牙	有齿牙	有齿牙
					
缝制规格	S	F	F	H	M
护指器	10011556(S M、F)、10011695(H)				
备注	S（标准）规格机头上标准装备。	F（内衣）规格机头上装备。（根据出口地）		选购品	M（针织）规格机头上标准装备。

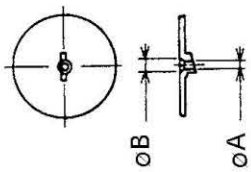
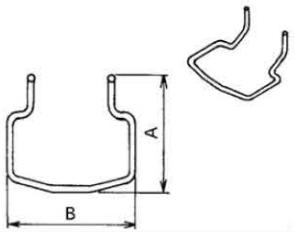
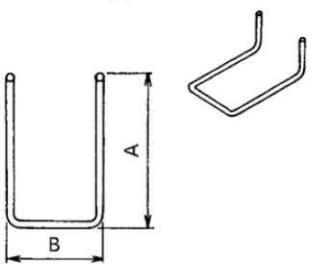
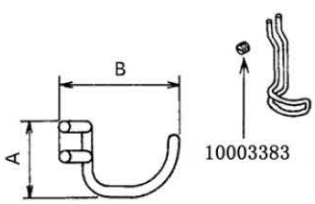
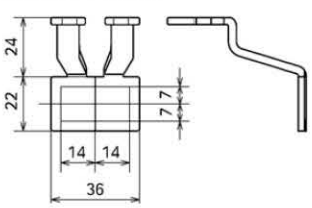
压脚号码	6	7	8	9	10	11
压布压脚	左：10012349 右：10012342		左：10012339 右：10012346	左：10012341 右：10012348		左：10026244 右：10026245
						
压布底板	10012277	10012302	10012286	10012296	10012301	10026246
	有齿牙	有齿牙	有齿牙	无齿牙	无齿牙	无齿牙
						
缝制规格	S	H/W	S	F	F	F
护指器	10011556(S M、F)、10011695(H、W)					
备注	选购品	H（厚料）W（倍旋梭）规格机头上标准装备	选购件	F（内衣）规格选购品。（根据出口地）		选购品

压脚号码	12	13	14	15	16
压布压脚	左：10026247 右：10026248	左：10026250 右：10026251	左：10012344 右：10012345	左：10026253 右：10026254	左：10026256 右：10026257
					
压布底板	10026249	10026252	10012338	10026255	10026258
	有齿牙	无齿牙	无齿牙	有齿牙	有齿牙
					
缝制规格	F	S	S	S	S
护指器	10011556				
备注	选购品	选购品	选购品	选购品	选购品

※更换压脚时，请安装合适各压脚的手指保护器。

[8] 选购件一览表

零件名称	种类	货号	备考
布压脚下板夹  t=1.2	无齿牙 / 有表面处理 缝制范围 纵 20× 横 40	10026226	
	有齿牙 / 有表面处理 缝制范围 纵 20× 横 40	10012303	
	无齿牙 / 不锈钢 缝制范围 纵 20× 横 40	10026227	t=0.5
	无齿牙 / 有表面处理 缝制范围 纵30× 横40	10026228	
	无齿牙 / 无表面处理 缝制范围 纵30× 横40	10026237	
	无齿牙 / 不锈钢 缝制范围 纵30× 横40	10026238	t=0.5
	有齿牙 / 有表面处理 缝制范围 纵30× 横40	10014401	
	有齿牙 / 无表面处理 缝制范围 纵30× 横40	10026239	
压脚滑板（组件） 		10026229 10026230	布压脚夹用滑板
布压脚夹  t=3.2	有齿牙 / 有表面处理（右） 缝制范围 纵 20× 横 40	10026232	
	有齿牙 / 有表面处理（左） 缝制范围 纵 20× 横 40	10026231	
	有齿牙 / 有表面处理（右） 缝制范围 纵 30× 横 40	10026241	
	有齿牙 / 有表面处理（左） 缝制范围 纵 30× 横 40	10026240	
	有齿牙 / 无表面处理（右） 缝制范围 纵 30× 横 40	10026243	
	有齿牙 / 无表面处理（左） 缝制范围 纵 30× 横 40	10026242	

针孔导向器 	A=1.6 B=2.6 有槽	10004646	S 规格
	A=1.6 B=2.0 无槽	10011757	F.M 规格
	A=2.3 B=4.0 无槽	10004727	H 规格
	A=2.7 B=3.7 无槽	10026236	极厚料规格
手指保护器（1） 	A=56.5 B=64	10011556	
	A=59 B=74	10011695	大摆动用
手指保护器(2) 	A=66.5 B=43	10014408	纵加固用
手指保护器(3) 	A=21.5 B=35.5	10026235	特殊订制布压脚用
布压脚头半成品 	有齿牙／有表面处理（右）	10026234	
	有齿牙／有表面处理（左）	10026233	大摆动用

Ⅱ.1901B 高速电子锁眼加固缝缝纫机的说明

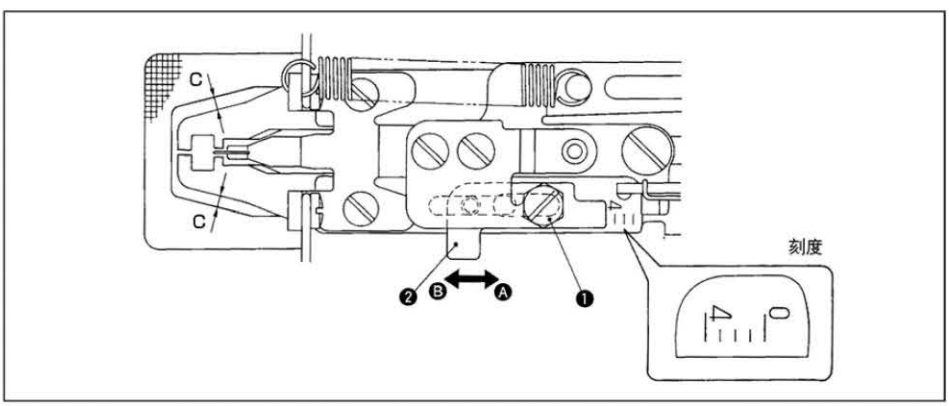
[1] 规格

这里只记述与1900B不同部位的说明内容。

(1). 转速.....最高3,000rpm
(2). 使用机针.....DP×5 #14,#16
(3). 压脚提升方式.....脉冲马达
(3). 压脚上升量.....最大17mm
(4). 记忆数据数量.....3 种
(5). 拨线方式.....脉冲马达压脚提升连动

[2] 靠布量的调节

⚠注意 为了防止突然的起动造成人身事故，请关掉电源，确认马达完全停止后再进行操作。

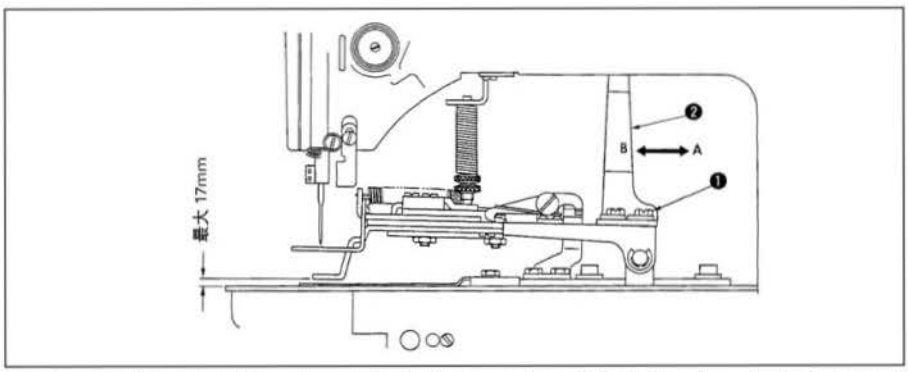


(1). 靠布量最大为4mm，因布压脚底板窗和布压脚的关系（C 尺寸），出厂时调整为2mm。（刻度位置2）
(2). 靠布量，请拧松螺栓1，沿箭头方向移动抓起量调节板2 进行调整。
把抓起量调节板 2 向 A 方向移动后，靠布量变窄，向 B 方向移动后，靠布量变宽。

注意 靠布量3mm以上时，可以换大布压脚底板窗（把 C 尺寸放大的），使之不与布压脚相碰。

[3] 压脚提升量的调节

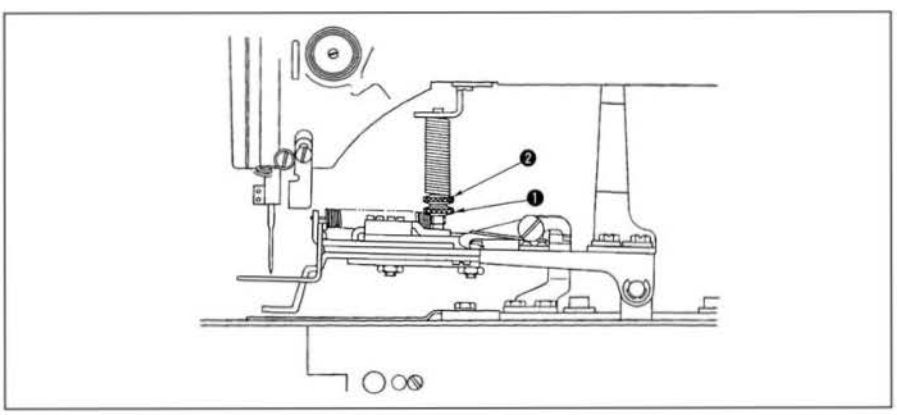
⚠注意 为了防止突然的起动造成人身事故，请关掉电源，确认马达完全停止后再进行操作。



把压脚提升动作板2 向A 方向移动后，压脚提升量变低，向B 方向移动后，则变高。调整后把固定螺丝1 确实拧紧。

[4] 压脚压力的调节

⚠注意 为了防止突然的起动造成人身事故，请关掉电源，确认马达完全停止后再进行操作。



拧松调节螺丝 1，转动调节螺丝 2，让布料在运转中尽可能不要偏斜。

[5] 靠布动作的设定

(1). 靠布动作是由电磁继电器来进行的，可以设定变换动作（有、无）。出厂时，本设计为出货时靠布动作与缝制同时动作。

(2). 不靠布时，通过存储器开关进行变换。

操作方法请参照 1900B使用说明书中的存储器开关的使用方法。

◎存储器开关功能表

货号	功能	设定范围	设定范围
50	靠布动作的设定	0：无 1：压脚同步 2：开始同步	2

※ 设定范围为压脚下降的同时向右靠布。
设定范围为压脚下降后缝制动作的同时向右靠布。
※ 其他的存储器开关功能号码内容请参照1900B 使用说明书存储器开关功能一览表。

[6] 缝制图案的选定和确认

⚠注意 使用专用压脚时，请确认缝制图案的形状。万一压脚突出缝制图案，缝制途中机针就有碰到压脚，发生断针的危险。

(1). 锁眼加固用的图案为No11 ～o. 13。
(2). 靠布动作时的最大缝纫尺寸为3×7mm，请利用扩大、缩小功能设定为最适的尺寸。
缝制花样的设定、确认、变更的操作方法请参照1900B使用说明书的缝纫机的操作内容

设定后，请一定确认机针是否与压脚相碰，落针位置是否正确。

图案号码	缝制尺寸（mm）		针数
	纵	横	
11	2.5	6	21
12	2.5	6	28
13	2.5	6	36

缝制尺寸为放大率100%的尺寸。

Ⅲ 1902B高速电子钉皮带环缝绷机的说明

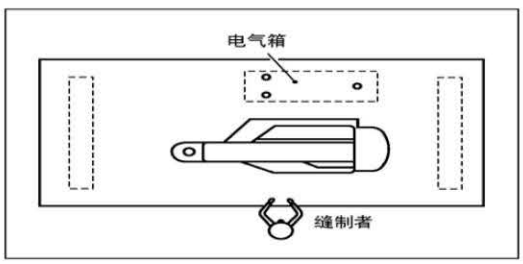
[1] 规格

这里只记述与1900B不同部位的说明内容。

(1). 转速.....最高3,000rpm
(2). 使用机针.....DP×5 #14,#16
(3). 压脚提升方式.....脉冲马达
(4). 压脚上升量.....最大17mm
(5). 记忆数据数量.....6 种
(6). 拨线方式.....脉冲马达压脚提升连动

[2] 安装和运转准备

⚠危险 搬运缝绷机时，一定要 2 人以上来搬运。

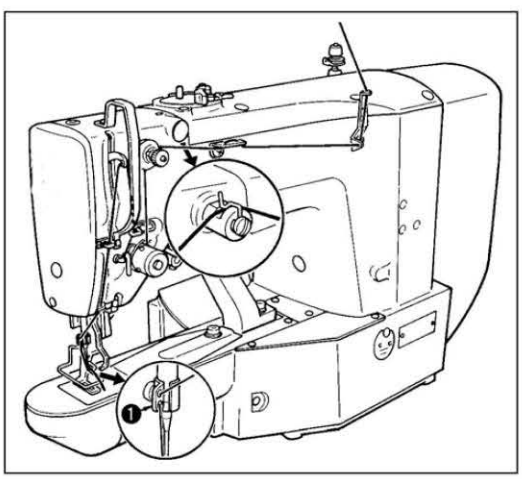


(1). 钉皮带环缝绷机的标准安装为横置。
(2). 电气箱与纵置同样地安装。
(3). 使用机头专用延长电缆线，连接电气箱和机头。

⚠注意 放倒缝绷机头时，请把机头部慢慢地放到机头支杆上。

[3] 上线的穿线方法

⚠注意 为了防止突然的起动造成人身事故，请关掉电源，确认马达完全停止后再进行操作。



请按上图所示穿上线。穿过针之后线头约留 4mm。

注意 粗线时，机线只穿针杆导线器① 上的1个孔。

［4］缝制图案的选定和确认

⚠注意 使用专用压脚时，请确认缝制图案的形状。万一压脚突出缝制图案，缝制途中机针就有碰到压脚，发生断针的危险。

钉皮带环用的缝制图案为No. 17 ～No. 22。缝制花样的设定、确认、变更的操作方法请参照1900B使用说明书的缝纫机的操作内容。

注意 设定后，请一定确认机针是否与压脚相碰，落针位置是否正确。

※ 因为怕运输时碰坏标准配备的压脚，出货时设定为不能呼出。使用时请把存储器开关功能的「可以呼出花样数据的设定功能」设定为可以呼出。操作方法请参照1900B使用说明书存储器开关的使用方法。

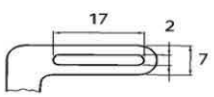
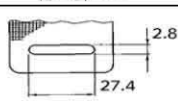
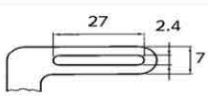
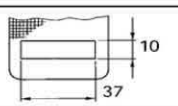
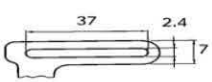
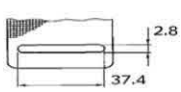
图案号码	缝制尺寸 (mm)		针数
	纵	横	
17	0	10	21
18	0	10	28
※19	0	25	28
※20	0	25	36
※21	0	25	42
※22	0	25	42

缝制尺寸为放大率100%的尺寸。

［5］布压脚、送布底板的组装

⚠注意 使用专用压脚时，请确认缝制图案的形状。万一压脚突出缝制图案，缝制途中机针就有碰到压脚，发生断针的危险。

压脚、送布底板请根据缝制条件适当地进行组合。
标准出货和特别订货的组合如下表所示。

规格	布压脚		布压脚底板	
1902B 标准		货号 10026316		货号 10026317
				货号 10026318
大尺寸用（特别订制零件）		货号 10026319		货号 10026320
特大尺寸用（特别订制零件）		货号 10026321		货号 10026322

Ⅳ.1903B高速电子钉扣机的说明

[1] 规格

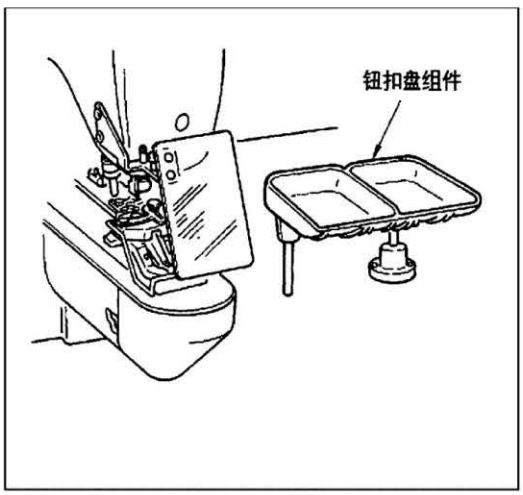
这里只记述与 1900B不同部位的说明内容。

(1). 转速.....最高 2，700rpm
(2). 使用机针.....DP X 17 #14
(3). 压脚提升方式.....脉冲马达
(4). 压脚上升量.....最大 13mm
(5). 记忆数据数量.....50 种
(6). 拨线方式.....脉冲马达压脚提升连动

※ 上线抓线装置用存储器开关No.35 设定为禁止（标准出货状态）

[2] 安装和缝纫前的准备

⚠注意 搬运缝纫机时，一定要 2 人以上来搬运。



(1). 机头、电气箱的安装于1900B相同，请参照 1900B 使用说明书。

(2). 附属品安装在纽扣盘架上，请安装到容易作业的位置。

注意 运转前请转动手轮确认机针是否与纽扣相碰。

[3] 机针和缝线

机针	上线	底线
DPx17 #14	#60	#80
	#60	#60
	#50	#60
	#40	#60

机针和机线，因缝制条件不同而不同，使用时请参照左表选择，最好使用棉线、缝纫机线。

[4] 各种图案的缝制

1. 缝制花样一览表缝线数、标准缝制长度 X、Y 如下表所示（缝制程序表）

图案号	缝制图案	缝线(根)	标准缝制长度 X(mm)	标准缝制长度 Y(mm)	图案号	缝制图案	缝线(根)	标准缝制长度 X(mm)	标准缝制长度 Y(mm)
1・34		6–6	3.4	3.4	18・44		6	3.4	0
2・35		8–8			19・45		8		
3		10–10			20		10		
4		12–12			21		12		
5・36		6–6			22		16		
6・37		8–8			23・46		6	0	3.4
7		10–10			24		10		
8		12–12			25		12		
9・38		6–6			26・47		6–6	3.4	3.4
10・39		8–8			27		10–10		
11		10–10			28・48		6–6		
12・40		6–6			29		10–10		
13・41		8–8			30・49		5–5–5	3.0	2.5
14		10–10			31		8–8–8		
15・42		6–6			32・50		5–5–5		

图案号	缝制图案	缝线(根)	标准缝制长度X(mm)	标准缝制长度Y(mm)	图案号	缝制图案	缝线(根)	标准缝制长度X(mm)	标准缝制长度Y(mm)
16・43		8–8			33		8–8–8		
17		10–10							

2. 缝制花样的选择及缝制宽度

(1). 缝制图案的选定方法与 1900B相同。

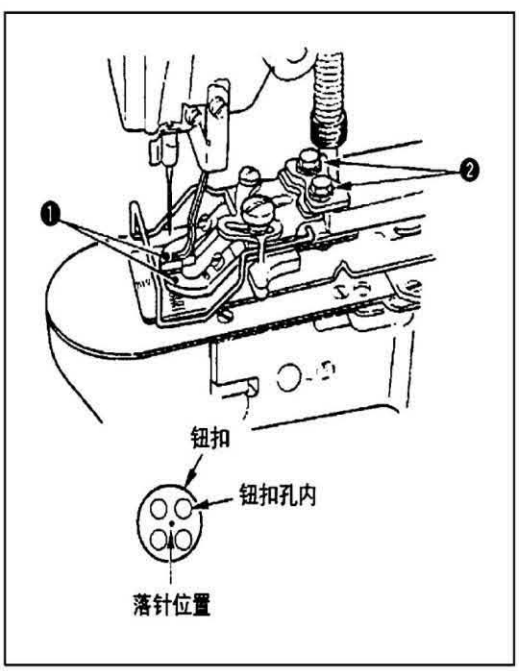
(2). 缝制图案号的标准缝纫宽度与使用纽扣的纽孔不合时，请利用扩大、缩小功能进行调整。扩大、缩小方法与 1900B相同。

(3). 变更了缝制图案号和缝纫宽度之后，请一定确认落针位置。确认方法请参考1900B使用说明图案形状的确认。

根据缝制宽度调整 X、Y 扩大、缩小率一览表

X・Y (mm)	2.4	2.6	2.8	3.0	3.2	3.4	3.6	4.0	4.3	4.5	4.7	5.2	5.6	6.0	6.2	6.4
%	71	76	82	88	94	100	106	118	126	132	138	153	165	176	182	188

[5] 纽扣夹的位置



（1）. 在缝制 LED 灭灯的状态，按操作盘上 键，选择绕线状态 ，指示灯亮；

（2）. 按 键，压脚下降，各部件回零；

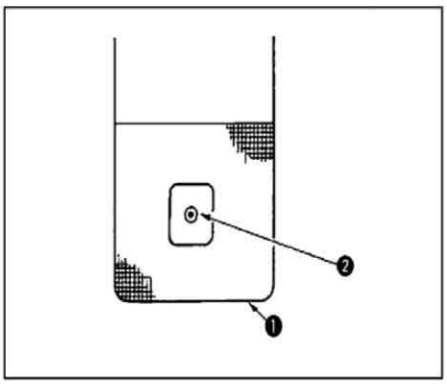
（3）. 调整控制步进马达左右方向和前后方向传感器的感光片位置，或调整纽扣夹的位置，然后按 键，压脚上升，再按一次 键，压脚下降，各部件回零，确认机针中心是否与纽扣中心重合，如没有，请再次调整感光片或纽扣夹位置；

（4）. 调节好后，请确认图案形状，确认机针是否正好落在纽扣孔内。

⚠注意	变更了纽扣的形状、图案，或利用扩大缩小功能变更了缝纫宽度之后，请一定要确认落针位置。如果机针落到纽扣外，图案超出抓起装置，机针在缝制中会发生断针的危险。

[6] 送料板的调整

⚠注意	变更了钮扣形状、图案，或利用扩大缩小功能变更了缝纫宽度之后，请一定要确认落针位置。如果布压脚与针孔导板相碰，会发生断针的危险。另外，调整中如果踩了踏板，爪脚装置会上下移动，请注意危险。



(1). 在缝制LED灭灯的状态，按操作盘 键，选择绕线状态 指标灯亮。

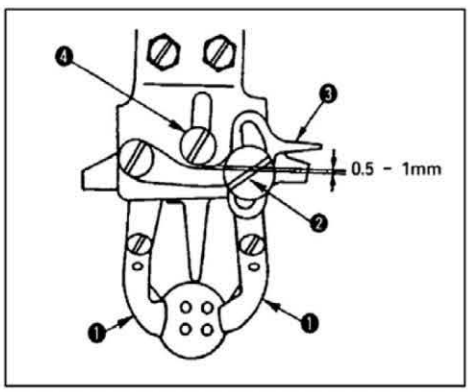
(2). 按 键，压脚下降，各部件回零。

(3). 调整布压脚底板①，使针孔导板②正好在布压脚底板①的H部的中心。

(4). 按 键，压脚上升，开始缝纫。

[7] 纽扣夹张开角度调整

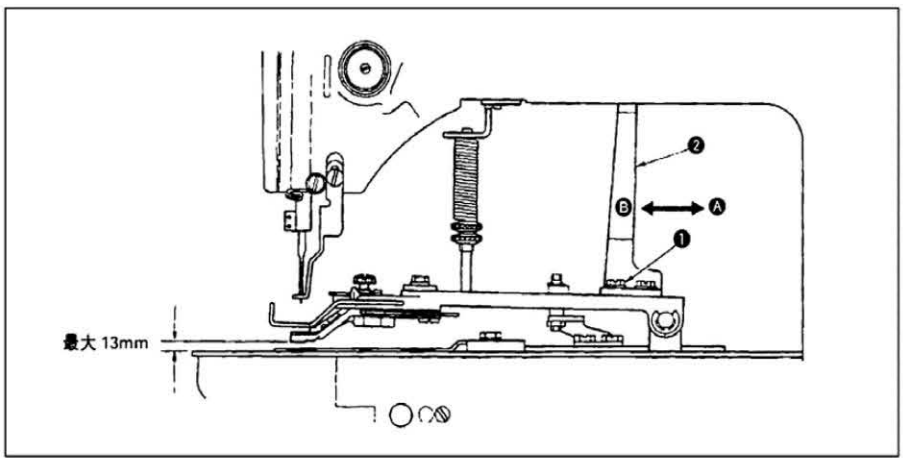
⚠注意	为了防止突然的启动造成人身事故，请关掉电源，确认马达完全停止后在进行操作。



在让停止位置的抓脚①上升的状态，拧松开关抓脚拨杆固定螺丝②，让纽扣设定到抓脚②，把抓脚打开拨杆③和塔形螺丝④之间的间隙为 0.5~1㎜，然后拧紧打开抓脚拨杆固定螺丝②。

［8］纽扣夹上升高度的调整

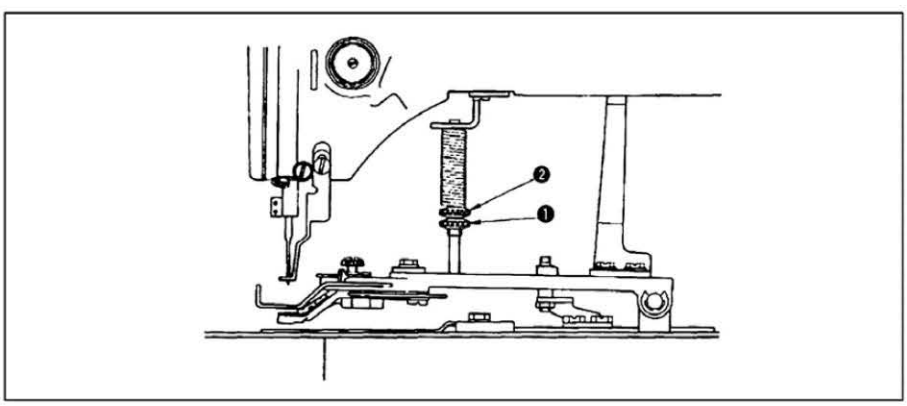
⚠注意 为了防止突然的启动造成人身事故，请关掉电源，确认马达完全停止后在进行操作。



把压脚提升动作板②向 A 方向移动后，提升量变低，向 B 方向移动后，则变高。调整后把固定螺丝确实拧紧固定。请拧松 2 哥固定螺丝①，前后调整压脚的提升动作板②进行调整。

［9］压脚压力的调整

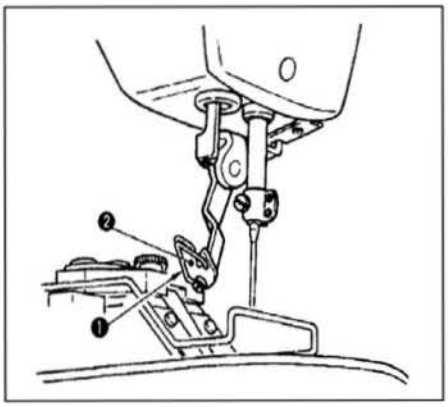
⚠注意 为了防止突然的启动造成人身事故，请关掉电源，确认马达完全停止后在进行操作。



拧松调整螺丝①，转动调节螺丝②，使布料运转中尽量不要偏斜。

[10] 扫线杆弹簧的调整

⚠注意 为了防止突然的启动造成人身事故，请关掉电源，确认马达完全停止后在进行操作。



调整挑线杆弹簧①，使挑线杆弹簧①把切线后的上线保持到挑线杆②之间，这时的强度为 20~30g（比从梭壳出来的底线稍强）。

注意 保持过强的话，旋梭上的线就会脱落。

[11] 1903B各机种的缝制范围

机种名称			1903B-301	1903B-302
纽扣尺寸分类			小纽扣用	中纽扣用
可以缝制的纽扣外径(mm)			Ø20~Ø30	Ø10~Ø20
缝制尺寸（mm）	纵		0~3.5	0~4.5
	横		0~3.5	0~4.5
纽扣抓脚	厚度（mm）		2.2（2.7）	2.7（2.2）
	货号	右	10011523	10011867
		左	10011538	10011841
针孔导板			10011825	10011133
布压脚底板			10011819	10011844

V. 缝纫中异常信息一览表

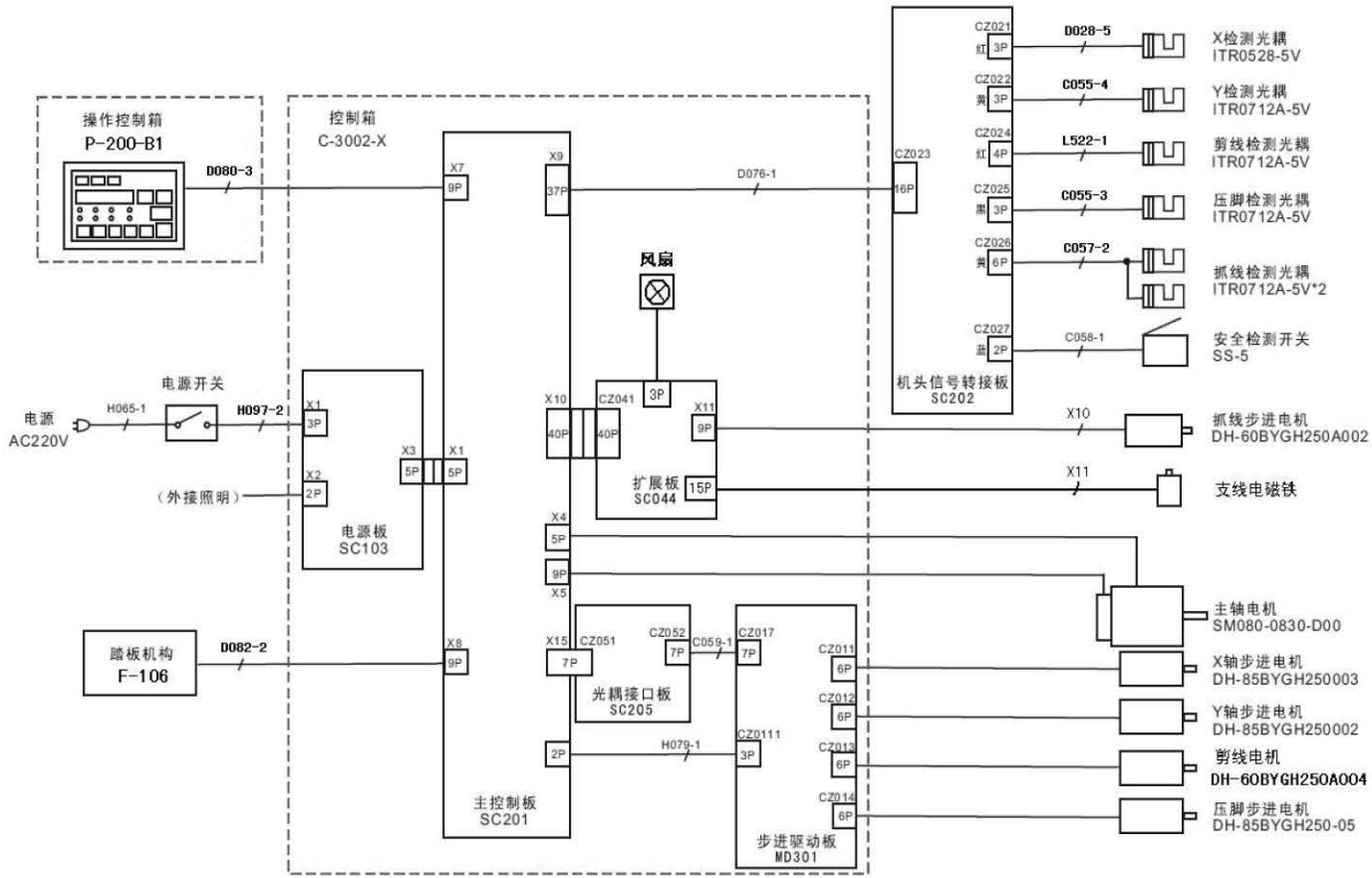
显示					异常名称	异常内容	解除方法
E				7	机器锁定	因为发生了某些故障，缝纫机主轴不能转动。	关闭电源，排除故障原因。
E			1	0	图案 NO.异常	被准备的图案 NO.没有登记到 ROM 里，或是被设定为不能读出。图案 NO.为 0。	按复位开关，确认图案 NO.。确认存储器开关 NO.201 的内容。
E			3	0	针杆上位置异常	针杆不在上位置。	转动手轮，把针杆返回到上位置。
E			4	0	超过缝制区域	超过缝制区域。	按复位开关，确认图案和 X、Y 放大率。
E			4	3	扩大异常	针迹不大于 10mm	按复位开关，确认图案和 X、Y 放大率。
E			4	5	图案数据异常	这是不能对应的图案数据	关闭电源，确认数据 ROM。
E			5	0	暂停	缝纫机运转中按了复位开关，暂停。	按复位开关切线后，再次开始或返回原点。
E		2	2	0	电控异常	与执行机构通讯异常	关闭电源，稍待一些时间后再次打开电源。
E		3	0	2	机头翻倒异常	机头翻倒检测开关被设定为 ON。	在放倒机头的状态不能运转。请返回到正常的位置。
E		3	0	3	未接主轴器	不能检测缝纫机的上死点。	关闭电源开关，确认 X5 插头是否插紧。
E		3	0	5	切线切刀位置异常	切线刀不在正确位置。	关闭电源开关，确认机头信号电路板上的 CZ024 是否松动脱落。
E		3	0	6	抓线位置异常	抓线装置不在正规位置。	关闭电源开关，确认机头信号电路板上的 CZ026 是否松动脱落。
E		3	0	7	剪线电机位置异常	剪线电机不在正常位置	检查剪线部分机械有无卡死现象，检查剪线电机
E		7	3	0	编码器连接异常	编码器信号无反馈	检查编码器插头是否牢固
E		7	3	1	主板与步进板通讯故障	步进未响应主板命令	关闭电源，检查步进电机接插
E		7	3	3	马达倒转	马达倒转。	关闭电源开关，确认主马达的杯环是否松动。

E		8	1	1	电压过高异常	电源电压超过规定值。	确认电源电压。
E		8	1	3	电压过低异常	电源电压不足。	确认电源电压。
E		9	0	1	马达驱动器不良	马达驱动器检测出异常。	关闭电源，稍待一些时间后再次打开电源。
E		9	0	3	脉冲马达电源异常	脉冲马达的电源不输出。	关闭电源，稍待一些时间后再次打开电源。
E		9	0	4	继电器电源异常	继电器的电源不输出。	关闭电源，稍待一些时间后再次打开电源。
E		9	0	7	X 原点检索异常	X 原点传感器不变化。	关闭电源开关，确认机头信号电路板 CZ021 控制箱 X9 是否松动、脱落。
E		9	0	8	Y 原点检索异常	Y 原点传感器不变化。	关闭电源开关，确认机头信号电路板 CZ022 控制箱 X9 是否松动、脱落。
E		9	1	0	压脚原点检索异常	压脚原点传感器不变化。	关闭电源开关，确认机头信号电路板 CZ025 控制箱 X9 是否松动、脱落。
E		9	1	1	Y向电机忙	Y电机未执行电控动作	检查Y向步进电机
E		9	1	2	X向电机忙	X电机未执行电控动作	检查X向步进电机
E		9	1	3	抓线原点检索异常	抓线原点传感器不变化。	关闭电源开关，确认机头信号电路板 CZ026 控制箱 X9 是否松动、脱落。
E		9	1	4	传送不良异常	送布和主轴不同步。	关闭电源，稍待一些时间后再次打开电源。
E		9	1	6	主电路板–步进电路板通信异常	主电路板–步进电路板不能通信。	关闭电源，稍待一些时间后再次打开电源。
E		9	9	9	不正常状态	机器有不只一个部件存在问题	检查各部分传感器有无插反
无显示					插头脱落	电源电压不规格。插头脱落。	关闭电源，确认电源插头、控制箱 X7 是否松动、脱落。

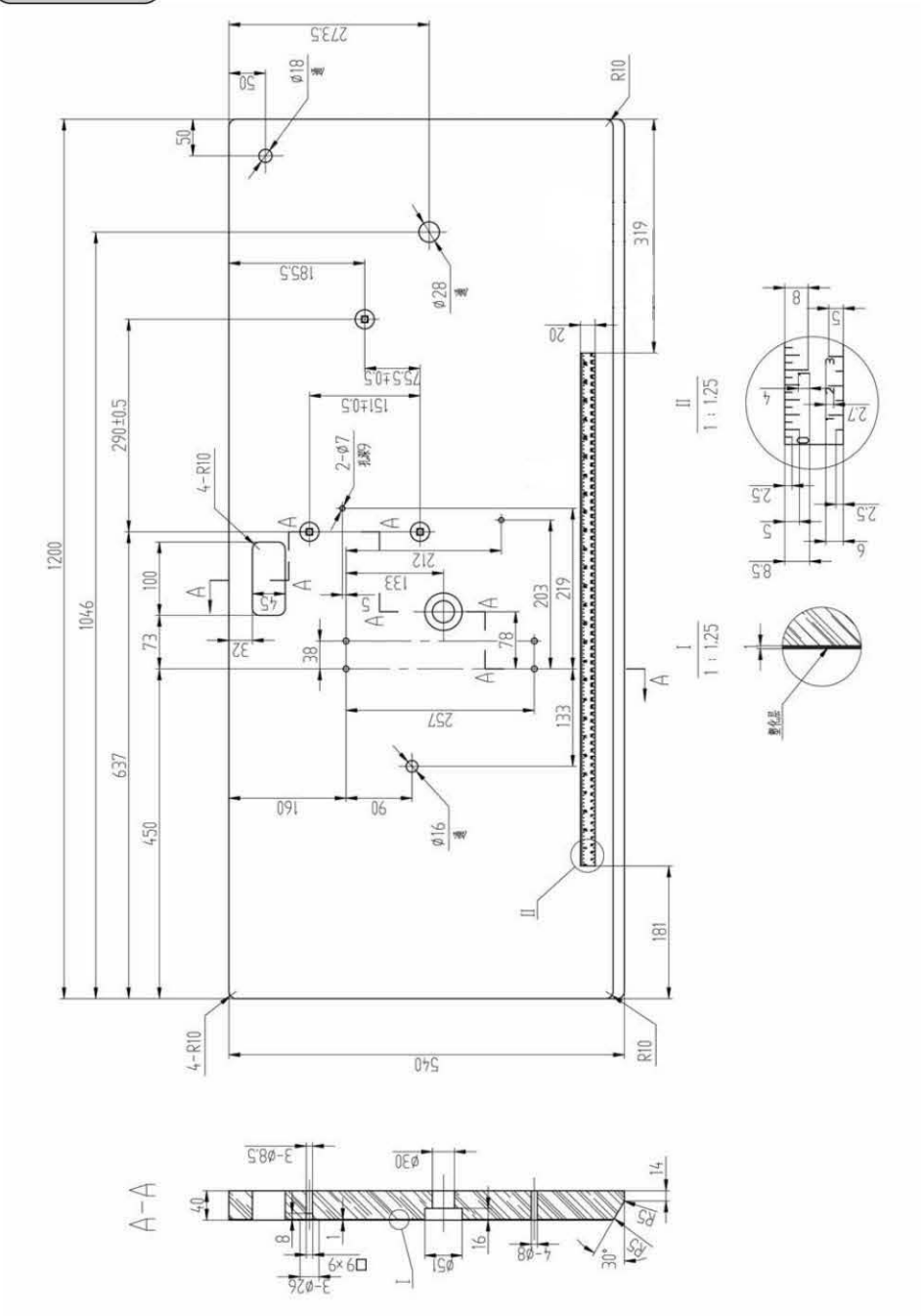
Ⅵ. 缝纫时故障、原因及对策

现象	原因	对策
1. 始缝时脱线	①始缝时跳针。 ②切线后上线长度短。 ③底线过短。 ④第一针的上线张力高。 ⑤抓线不稳定(布料容易伸长、线不滑、线粗等) ⑥第一针的间距小。	○机针和旋梭的间隙调整为 0.05~0.1mm ○设定始缝时软起动。 ○调节第 2 线张力器的浮线量。 ○把挑线弹簧弄强或把第一线张力盘的张力减弱。 ○减弱底线张力。 ○弄大针孔导向器和固定刀的间隙。 ○降低第一针的张力。 ○降低缝制开始第一针的转速。(600~1000rpm 左右) ○抓线针数增加 3~4 针。 ○增长第一针的间距。 ○下降第一针的上线张力。
2.老断线。化纤维拉断	①旋梭、驱动器上有伤。 ②针孔导向器上有伤。 ③机针碰布压脚。 ④线头进入大旋梭的沟里。 ⑤上线张力过强。 ⑥挑线弹簧过强。 ⑦化纤维摩热而断。	○卸下用细磨时或挫刀磨平。 ○用锉刀磨，或换新。 ○调节布压脚的位置。 ○卸下中旋梭，清除线头。 ○减弱上线张力。 ○减弱挑线弹簧。 ○使用?油。
3.常断针	①针弯了。 ②针碰布压脚。 ③针过粗。 ④驱动器把针弄得过弯。 ⑤在缝制开始时压脚压住缝纫机线 (机针弯曲)。	○更换机针。 ○调节布压脚。 ○根据缝制物选用适当的机针。 ○调整针和旋梭位置。 ○弄宽机针和挑线杠的距离。(23~25mm)
4. 切线不断(仅限底线)	①固定刀不快。 ②针孔导线器和固定刀高低差小。 ③动刀位置不好。 ④最终针跳线。 ⑤底线张力低。	○更换固定刀。 ○把固定刀再弄弯一些。 ○调整动刀位置。 ○调整针和旋梭的同步。 ○提高底线张力。
5.常挑线	①针和旋梭调整不好。 ②针和中旋梭得间隙过大。 ③针弯了。 ④驱动器把针弄得过弯。	○调整针和旋梭的位置。 ○调整针和旋梭的位置。 ○更换机针。 ○调整驱动器的位置。
6.上线从布的里侧露出来	①上线紧线不好。 ②线张力盘浮起机构不动作 ③切线后的上线过长。 ④针数少。 ⑤缝制长度短时(缝制背面上线头露出。) ⑥针数少。	○加强上线张力。 ○确认缝制中第 2 线张力盘是否浮起。 ○加强第 1 线张力。 ○把抓线装置设定为 OFF。 ○把抓线装置设定为 OFF。 ○使用暗缝式下板。

现象	原因	对策
7.切线时短线	①动刀位置不好。	○调节动刀位置
8.上线缠结在抓线装置上	①缝制开始的上线长。	○拧紧第 1 线张力器，把机线长度调整为 33~36mm。
9.机线长度不一致	①挑线弹簧的张力低。	○提高挑线弹簧的张力。
10.机线长度不能弄短	①第 1 线张力器的张力低。 ②挑线弹簧张力过强。 ③因为挑线弹簧的张力过低，所以动作不稳定。	○增强第 1 线张力器的张力。 ○降低挑线弹簧的张力。 ○增强挑线弹簧的张力，行程也变长。
11.缝制开始第 2 针的底线结线部露出表面	①梭芯的空槽大。 ②底线张力低。 ③第 1 针的上线张力过强。	○调整活动刀的位置。 ○增强底线张力。 ○下降第 1 针的上线张力。 ○把抓线装置设定为 OFF。



Ⅷ. 台板图纸



IMPORTANT SAFETY INSTRUCTIONS

Putting sewing systems into operation is prohibited until it has been ascertained that the sewing systems in which these sewing machines will be built into, have conformed with the safety regulations in your country. Technical service for those sewing systems is also prohibited.

1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.

2. Read all the instructions, including, but not limited to this Instruction Manual before you use the machine. In addition, keep this Instruction Manual so that you may read it at anytime when necessary.

3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.

4. All safety devices must be in position when the machine is ready for work or in operation. The operation without the specified safety devices is not allowed.

5. This machine shall be operated by appropriately-trained operators.

6. For your personal protection, we recommend that you wear safety glasses.

7. For the following, turn off the power switch or disconnect the power plug of the machine from the receptacle.

7-1 For threading needle(s), looper, spreader etc. and replacing bobbin.

7-2 For replacing part(s) of needle, presser foot, throat plate, looper, spreader, feed dog, needle guard, folder, cloth guide etc.

7-3 For repair work.

7-4 When leaving the working place or when the working place is unattended.

7-5 When using clutch motors without applying brake, it has to be waited until the motor stopped totally.

8. If you should allow oil, grease, etc. used with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.

9. Tampering with the live parts and devices, regardless of whether the machine is powered, is prohibited.

10. Repair, remodeling and adjustment works must only be done by appropriately trained technicians or specially skilled personnel. Only spare parts designated by our company can be used for repairs.

11. General maintenance and inspection works have to be done by appropriately trained personnel.

12. Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel. Whenever you find a failure of any of electrical components, immediately stop the machine.

13. Before making repair and maintenance works on the machine equipped with pneumatic parts such as an air cylinder, the air compressor has to be detached from the machine and the compressed air supply has to be cut off. Existing residual air pressure after disconnecting the air compressor from the machine has to be expelled. Exceptions to this are only adjustments and performance checks done by appropriately trained technicians or specially skilled personnel.

14. Periodically clean the machine throughout the period of use.

15. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an environment that is free from strong noise sources such as high-frequency welder.

16. An appropriate power plug has to be attached to the machine by electric technicians. Power plug has to be connected to a grounded receptacle.

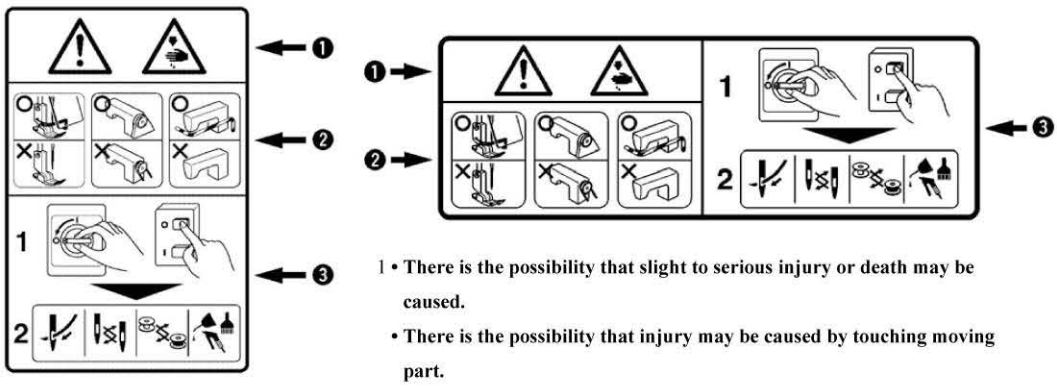
17. The machine is only allowed to be used for the purpose intended. Other used are not allowed.

18. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. our company assumes no responsibility for damage caused by remodeling or modification of the machine.

19. Warning hints are marked with the two shown symbols.

Danger of injury to operator or service staff

Items requiring special attention



1 • There is the possibility that slight to serious injury or death may be caused.
• There is the possibility that injury may be caused by touching moving part.

2 • To perform sewing work with safety guard.
• To perform sewing work with safety cover.
• To perform sewing work with safety protection device.

3 • Turn OFF the power and perform "threading", "replacement of bobbin or needle", "cleaning", "adjustment" and "lubrication".

FOR SAFE OPERATION

1. To avoid electrical shock hazards, neither open the cover of the electrical box for the motor nor touch the components mounted inside the electrical box.
2. After changing the pattern, make sure the needle entry point. If the pattern is protruded from the work clamp feet, the needle will interfere with the work clamp feet during sewing, and it is dangerous due to the needle breakage or the like.
3. Do not turn OFF the power in a state that the needle is lowered. Wiper may break the needle.

1. When nothing is displayed in the operation panel even when the power switch is turned ON, turn OFF the power switch and check the voltage and the type of the power source.
2. So as to prevent possible accidents caused by abrupt start of the sewing machine, depress the start switch after ascertaining that there is no interfering thing under the needle when winding the bobbin thread.
3. When turning OFF the power switch, turning ON the ready switch or turning ON the work clamp foot switch, the work clamp feet automatically come down. So, never place your fingers under the work clamp feet to prevent possible accidents caused by abrupt start of the sewing machine. During operation, be careful not to allow your fingers to come close to the work clamp feet.
4. So as to prevent possible accidents caused by the touch of the fingers with the needle, install a finger guard suitable for each work clamp foot when replacing the work clamp foot.

CONTENTS

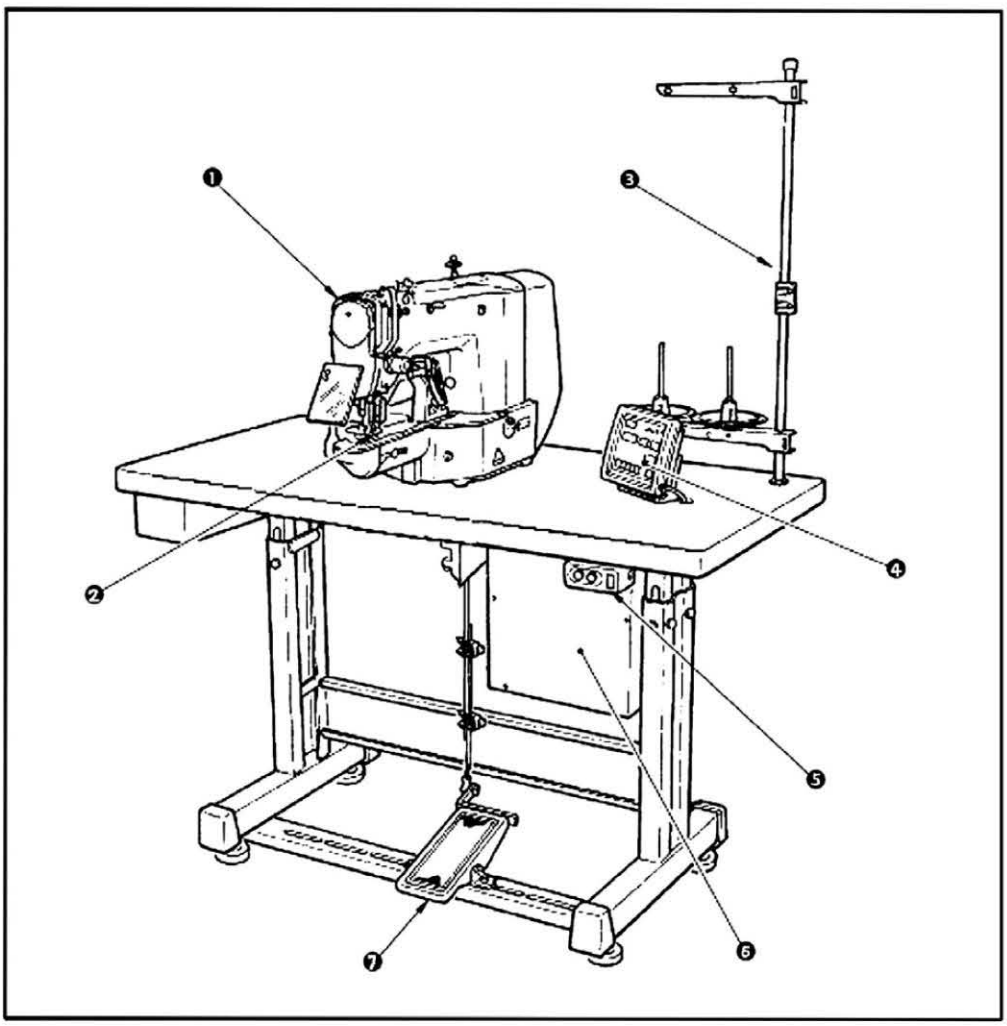
Ⅰ.EXPLANATION OF 1900B , COMPUTER-CONTROLLED HIGHSPEED BARTACKING MACHINE

[1] SPECIFICATIONS

1.	Sewing area:	X（lateral）direction 40mm， Y（longituinal）direction30mm
2.	Max.Sewing spead:	3000rpm (when sewing pitches are less than 5mm in X-direction and 3.5mm in Y-direction)
3.	Stitch length:	0.1-10mm (adjustable in 0.1mm step)
4.	Feed motion of work clamp foot:	Intermittent feed (2-shaft drive by stepping motor)
5.	Needle bar stroke:	1.2mm
6.	Needle:	DP×5、DP×17
7.	Lift of work clamp foot:	13mm(standard) Max.17mm
8.	Shuttle:	standard semi-rotary hook （oil wick lubrication）
9.	lubricating:	oil 10# (supplied by oiler)
10.	Date recoring:	EPROM
11.	Enlarging/Reducing facility:	20% to 200% (1% step) in X-direction and Y-direction respectively
12.	Enlarging/Reducing:	Patten enlargement/reduction can be done by increasing/decreasing the stitch length
13.	Max. Sewing speed limitation:	400 to 3000rpm（100rpm）
14.	Pattern selection:	Specifying pattern No.type（1 to 200）
15.	Bobbin thread counter:	UP/DOWN taye（0-9999）
16.	Sewing machine motor:	Servo motor
17.	Dimensions:	W：1200mm L：540mm H：1100mm
18.	Weight:	Machine head 50Kg Control box 6Kg
19.	Power consumption:	0.6KW
20.	Operating temperature range:	5℃ to 35℃
21.	Operating humidity range:	5% to 85%（No dew condensation）
22.	Line voltage:	Rated voltage ±10% 50-60Hz

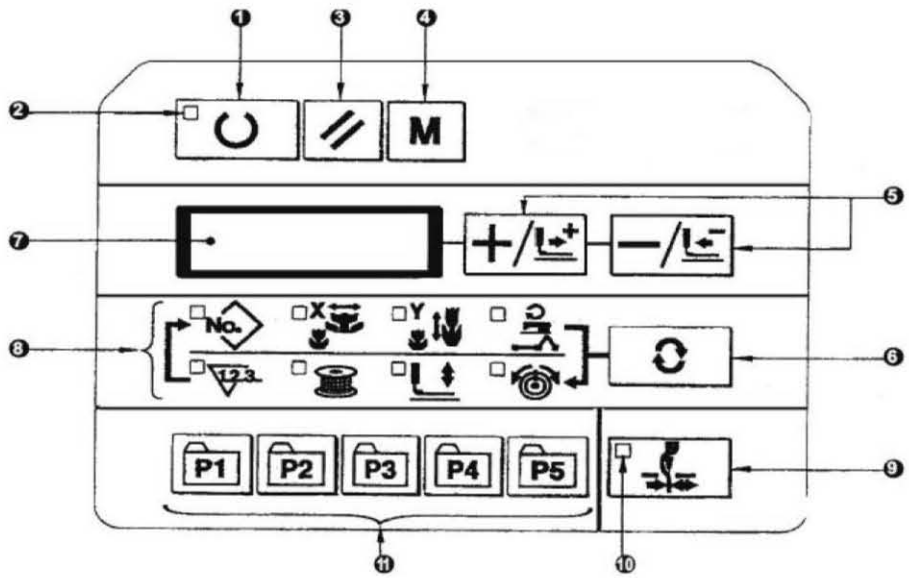
[2] CONFIGURATION

1. Names of main unit



(1). **Machine head**
(2). **Work clamp feet**
(3). **Thread stand**
(4). **Operation panel**
(5). **Power switch**
(6). **Control box**
(7). **Pedal switch**

2. Name & Description of Buttons on Control Panel



(1).**Ready Key**

Key for shifting between the setting/programming status of control panel and the sewing status of sewing machine;

(2).**Sewing LED**

It is set as: "ON" at sewing status, "OFF" at programming status. User can use the Ready Key for shifting between these two statuses;

(3).**Reset Key**

Release the error and restore the set value to the default value;

(4).**Mode Key**

When the Sewing LED is off, this key can activate the functions for setting parameters or storing the patterns; when the Sewing LED is on, this key can activate the siding function for threading actions, which will be automatically turned off in 20 seconds.

(5).**＋/Feed Forward Key & －/Feed Backward Key**

These two keys are applicable for changing pattern number, rate of scale and feeding cloth forward/backward.

(6).**Selection Key**

Select the set item. The Item Selection LED and the set value of the selected item will be displayed.

(7).**Data Display LED**

This LED indicates the set value of the selected items such as the pattern number, scale rate and so on.

(8).**Item Selection LED**

The LED of the selected item will be on.

(9)**Thread-catching ON/OFF Key**

The Validity/Invalidity of thread-catching function can be selected. When it is set as Validity, the Thread-catching Display LED will be on.

(10)**Thread-catching Display LED**

When the LED is on, the machine will catch the thread.

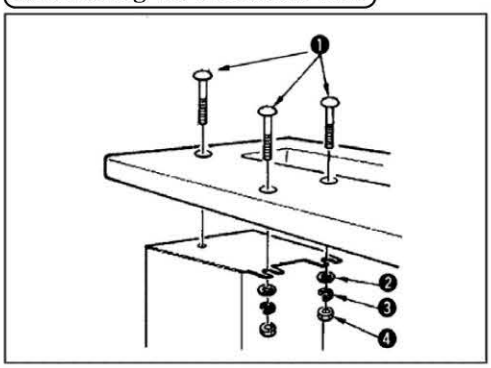
(11)**Pattern Storage Key**

Store the pattern. The stored pattern can be put into sewing as long as user presses this key. The changes in scale rate, sewing position and so on can also be stored.

※NOTE: 1903B set to needle thread clamp prohibited with memory switch No35 at the time of standard delivery.

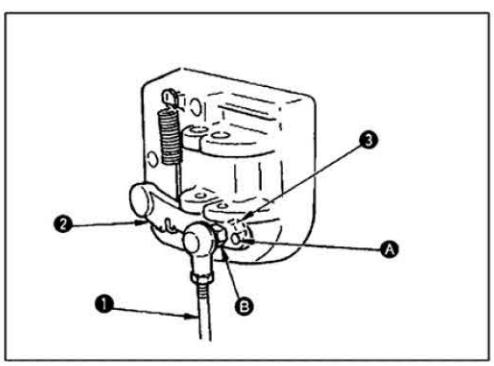
[3] INSTALLATION

1. Installing the electrical box



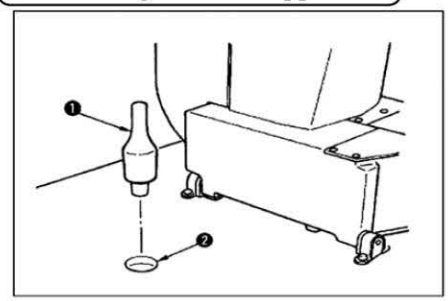
Install the electrical box on the underside of the table at the location illustrated using round-head bolt①, plain washer②, spring washer ③and nut ④ supplied with the machine

2. Attaching the connecting rod



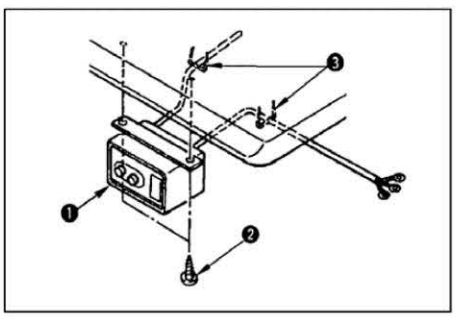
FIX connecting rod① to installing hole B of pedal lever ② with nut③. When connecting rod ①is installed in installing hole A, the depressing stroke og the pedal is increased.

3. Installing the head support rod



Drive head support rod① in hole② in the machine table.

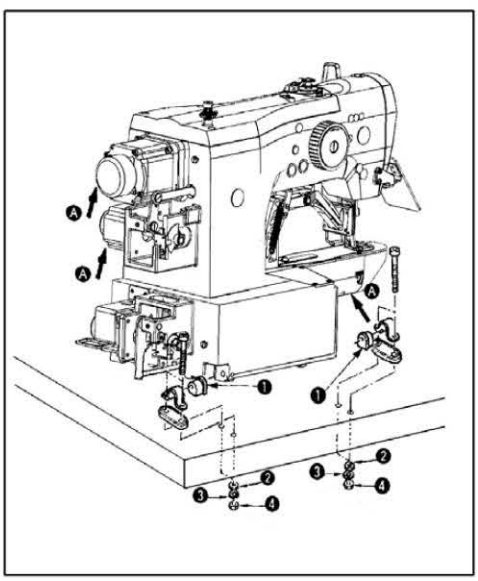
4. Installing and connecting the power switch



Fix power switch ①under the machine table with screws②.
Fix the cable with staples③ supplied with the machine as accessories in accordance with the forms of use.

5. Installation of the swing machine head

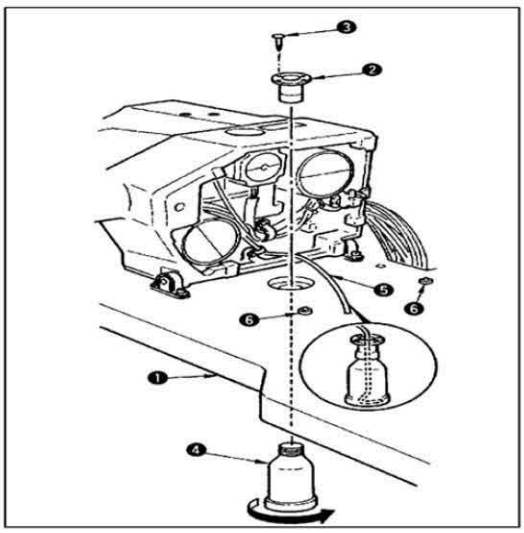
WARNING: To prevent possible accidents caused by the full of the sewing machine, perform the work by two persons or more when the machine is moved.



(1). Fit hinge rubber ① to the hinge shaft, and fix the swing machine main unit.

(2).The flat pad ②, elastic pad ③, nut icn④followed by a fixed, pay attention to the locking nut ④ force, if twisted too tightly, then the shock result is not satisfactory.

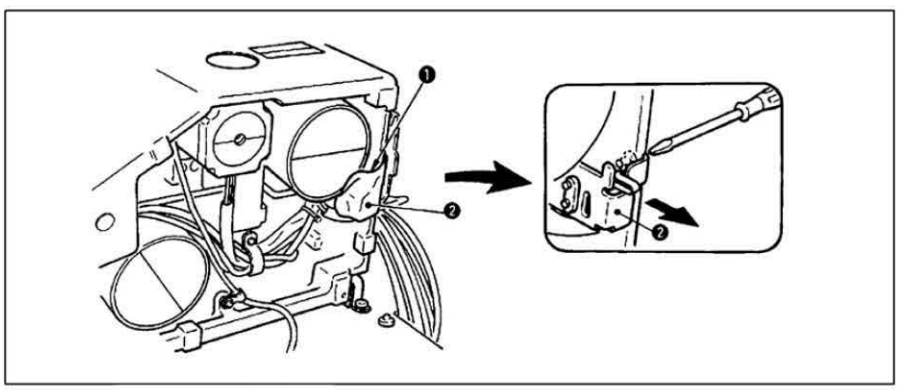
6. Installing the drain receiver and the head support rubber



(1). Fix drain receiver ② in the installing hole of table ① with four setscrews③. Screw in drain bin ④ to drain receiver②. Insert sewing machine drain pipe⑤ into drain bin ④ .
(2).Insert head support rubber⑥ into table ①.

Insert drain pipe⑤ until it will go on further so that it does not come off drain bin④ when tilting the machine head.

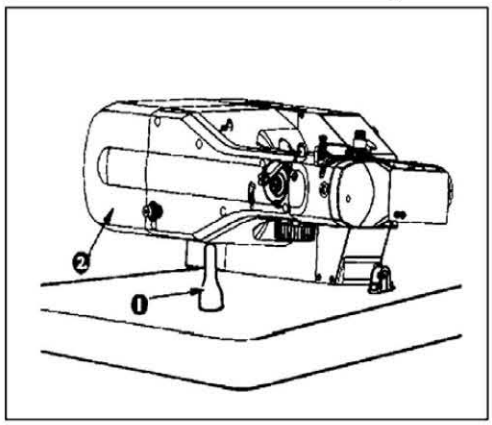
7. Safety switch



cut off the safety switches cable ties which be fixed under the machine , safety switches will be installed in the machine as shown here, with screw lock, overturning the head, checking the suitability of the safety switch mounting position, heads up is required, Table board to open the safety switch top picks, picks of safety switches and safety switches do not touch, otherwise the error E302

1.If you do not remove the safety switch, and installed in the correct position, machine will can't sewing;
2.Safety switches installed, if happen error E302, please adjust the security switch down, to ensure the safety switch picks with the table adequate contacts.

8. Tilting the sewing machine head



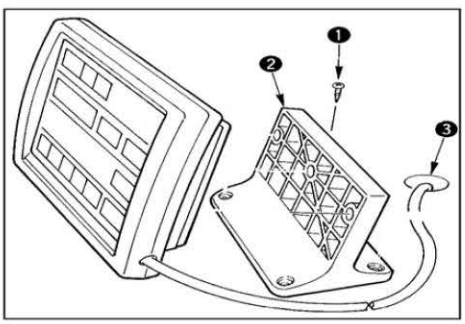
turn head① gently down , and leaning the head on the head supporting bar at ②.

1.Before tilting the sewing machine head, make sure that head support rod ①is attached to the machine table. ;

2.When raising the sewing machine head, do not raise it while holding motor cover ②.It will be the cause of breakage of motor cover②.

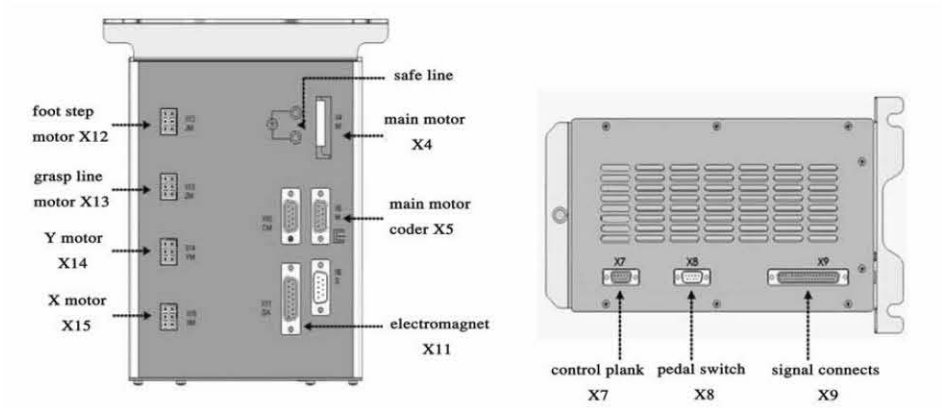
3.Be sure to tilt the sewing machine head on a flat place to prevent it from falling.

9. Installing the operation panel



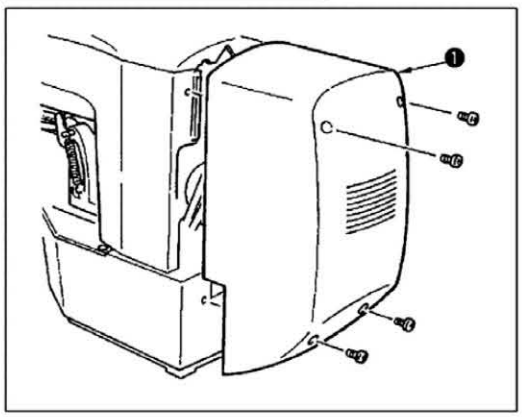
Use four wood screws① fix the operator panel ②on the table ③in a comfortable operation position, then the operator panel② corresponding wire hole through the table③, and then dock with the other side.

10. Connecting the cord



Please let the motor cable, the signal line of the machine head connect with the electronic control box according to online identity, make sure the connection is correct, there is no omission.

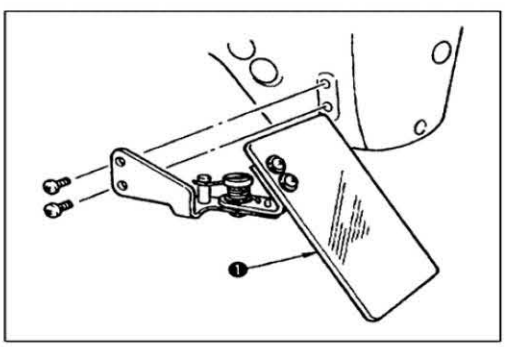
11. Installing the motor cover



Install motor cover① on the machine main unit with screws supplied with the machine as accessories

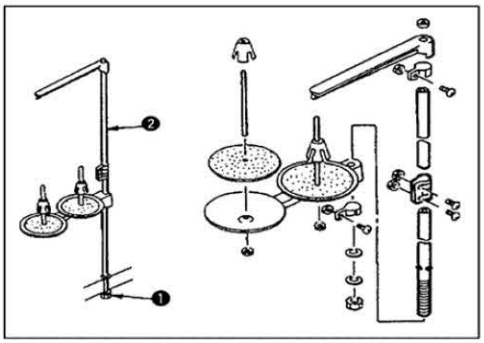
12. Installing the eye protection cover

WARNING: **Be sure to attach this cover to protect the eyes from the disperse of needle breakage.**



the eye shield in the accessories box should been installed in the head on the left.

13. Managing the cord

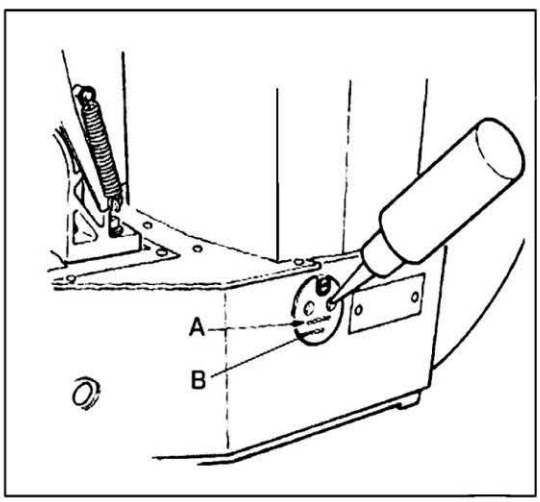


the line frame in the accessory box should be installed in Table.

[4] OPERATION OF THE SEWING MACHINE

1. Lubrication

WARNING : Turn of the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine



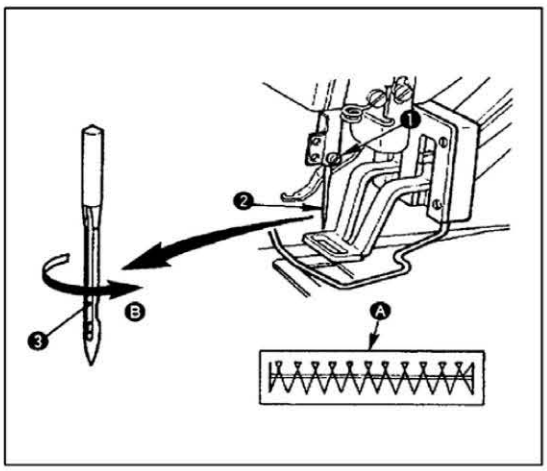
Check that the place between lower line Band upper line A is filled with oil . Fill there with oil using the oiler supplied with the machine as accessories when oil is short.
*The oil tank which is filled with oil is only for lubricating to the hook portion.It is possible to reduce the oil amount when the number of rotation used is low and the oil amount in the hook portion is excessive.(Refer to 8.Amount of oil supplied to hen kook of [6] maintenance

1. DO not lubricate to the places other than the oil tank and the hook of Caution 2 below. Trouble of components will be caused.

2. When using the sewing machine for the first time or after an extended period of disuse use the machine after lubricating a small amount of oil to the hook portion.(Refer to2.Adjusting the needle-to-shuttle relation of [6]MAINTENANCE

2. Attaching the needle

WARNING : Turn of the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine

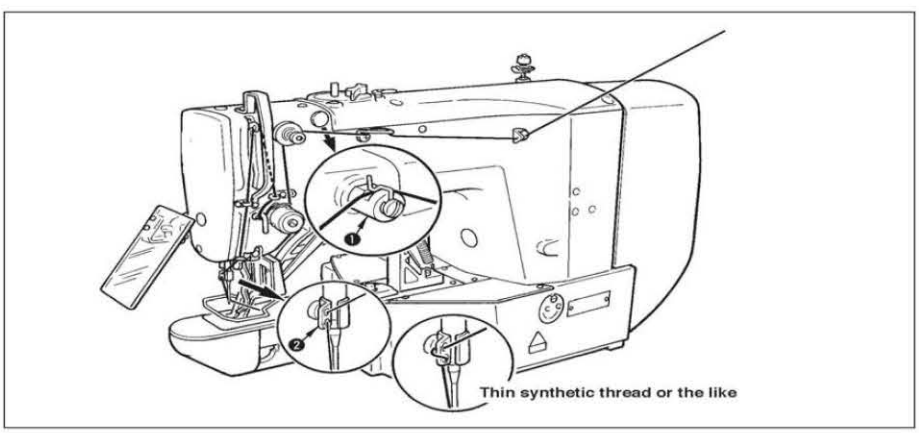


Loosen setscrew① and hold needle② with the long groove facing toward you. Then fully insert it into the hole in the needle bar, and tighten setscrew①.

If the stitches are made as shown in "A", attach the needle facing to the direction B" to a small extent.

3. Threading the machine head

WARNING : Turn of the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine



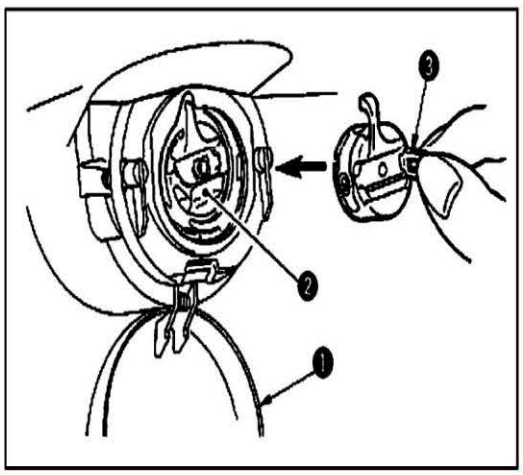
Pull out the thread by approximately 4cm from the needle after threading through the needle.

1.When the silicon oil is used, thread through thread guide for silicon①。

2.For thick thread, pass the thread through one hole only of needle bar thread guide②

4.Installing and removing the bobbin case

WARNING : **Turn of the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine**



(1).Open hook cover①。

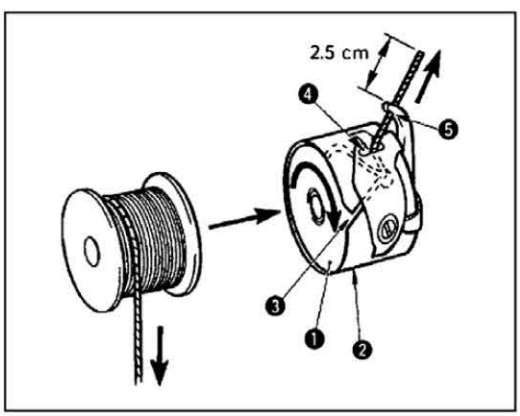
(2).Raise latch③ of bobbin case②， and remove the bobbin case.。

(3).When installing the bobbin case, fully insert it into the shuttle shaft, and close the latch.

Caution **If it is not fully inserted, bobbin case②may slip off during sewing.**

5. Installing the bobbin

WARNING : **Turn of the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine**



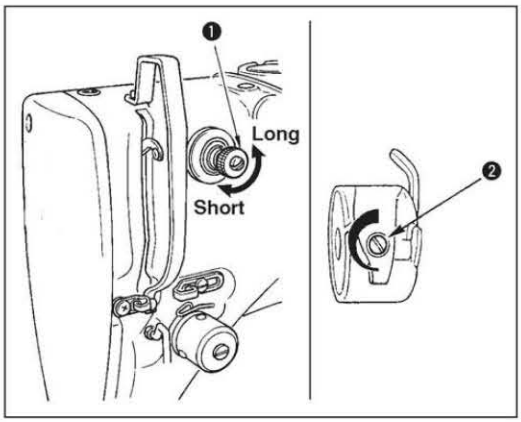
(1).Set the bobbin ① into bobbin case ②in the direction shown in the figure.

(2).Pass the thread through thread slit ③of bobbin case②， and pull the thread as it is. By so doing, the thread will pass under the tension spring and be pulled out from thread hole④.

(3).Pass the thread through thread hole ⑤of the horn section, and pull out the thread by2.5cm from the thread hole.

Caution **If the bobbin is installed in the bobbin case orienting the reverse direction, the bobbin thread pulling out will result in an inconsistent state.**

6. Adjusting the thread tension

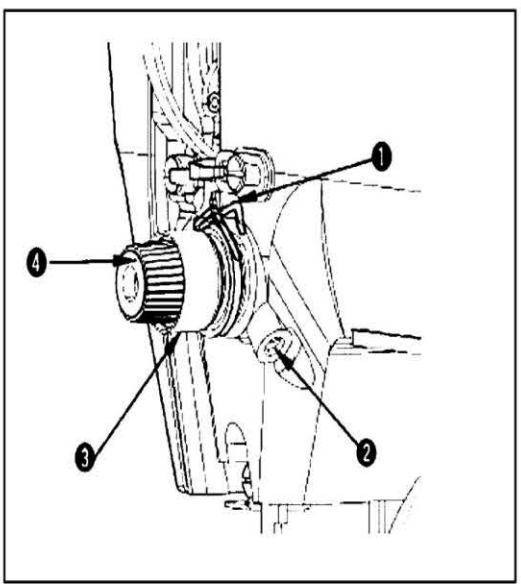


If thread tension controller No.1①is turn clockwise, the length of remaining thread on the needle after thread trimming will be shorter. If it turned counterclockwise, the length will be longer.

Shorten the length to an extent that the thread is not slipped off.

Adjust needle thread tension from the operation panel and bobbin thread tension with②.

7. Adjusting the thread take-up spring



The standard stroke of thread take-up spring ①is 8 to 10 mm, and the pressure at the start is 0.1 to 0.3N.

(1) .Adjusting the stroke

Loosen setscrew②， and turn thread tension asm.③. Turning it clockwise will increase the moving amount and the thread drawing amount will increase.

(2) .Adjusting the pressure

To change the pressure of the thread take-up spring, insert a thin screwdriver into the slot of thread tension post④ while screw② is tightened, and turn it. Turning it clockwise will increase the pressure of the thread take-up spring. Turning it counterclockwise will decrease the pressure.

[5] OPERATION OF THE SEWING MACHINE

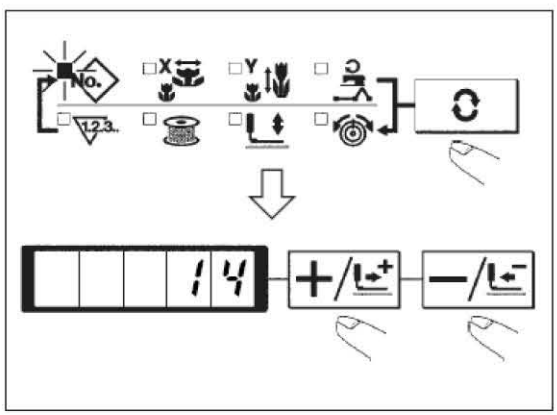
1. Settings of Item Data

Please set the items in the following sequence:

(1).**Turn ON the power switch.**

The pattern number of the item selection is lit up, and the pattern number will be displayed at data display part.

(2).**Setting of the pattern No.**



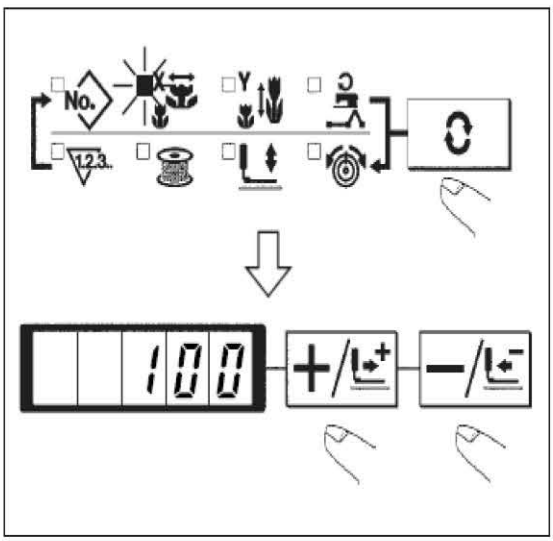
(1)Press [ ], and then the LED of [No.] will be on.

(2)Press [+/] and [−/] to display 14 in the Data Display LED

（We take No.14 pattern as an example.）

Refer the pattern No. to the separate table.

(3).Setting of the X scale

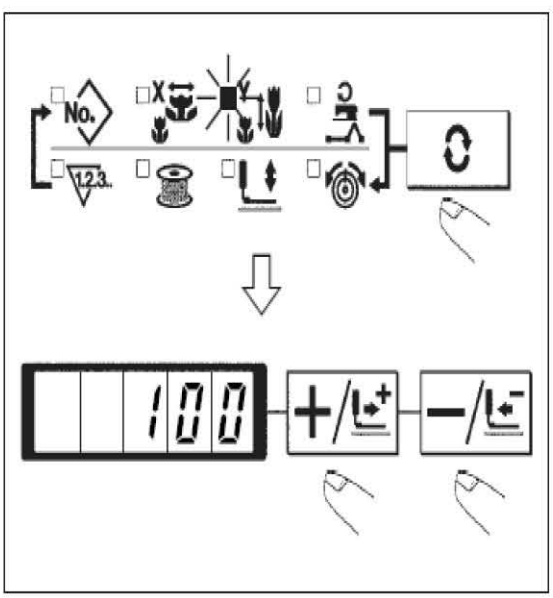


(1) Press [C], and then the LED of [X] will be displayed.

(2) Press [+/L+] & [−/L−] to display 100 at Data Display LED
（The Scale Rate in X Direction is set as 100%）

The setting exceeding 100% is dangerous since needle and the cloth presser interferes with each other and needle breakage or the like will occur.

(4).Setting of Scale Rate in Y scale

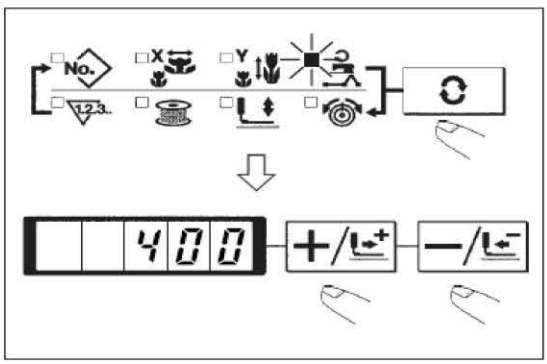


(1)Press [C], and then the LED of [Y] will be displayed.

(2)Press [+/L+] & [−/L−] to display 100 at Data Display LED.
（The Scale Rate in Y Direction is set as 100%）

The setting exceeding 100% is dangerous since needle and the cloth presser interferes with each other and needle breakage or the like will occur.

(5).Setting of Limitation on Max Speed

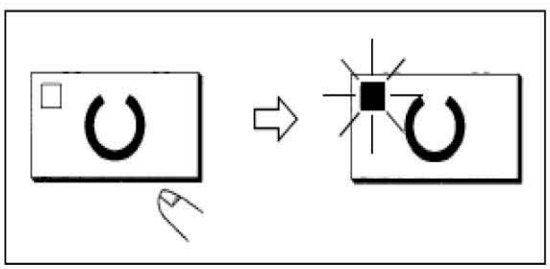


(1) Press , and then the LED of will be displayed.

(2) Press +/ & —/ to display 400 at Data Display LED

（ The limitation is set as 400rpm）

(6). Setting End



(1)Press .

(2) After the presser goes up, the Sewing LED is on. At this time the system is in the sewing status.

When the presser is raised, be careful that fingers are not caught in the presser since the presser moves after having lowered.

·Press to record the set values like pattern number, X/Y scale rate and so on.

·Press to reconfirm each set item, but the Sewing LED can't changes its status.

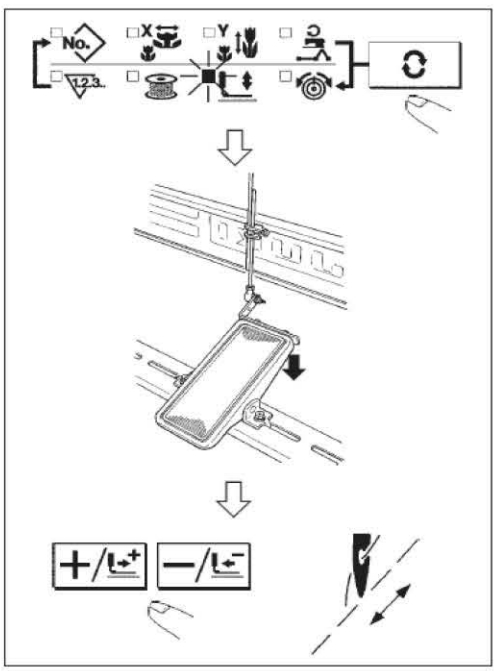
·Press to turn off the Sewing LED, then each set value of item can be changed

·When the pattern number is 0 (the default setting), pressing will activate the error "E-10". At this time, please press the Reset Key to reconfirm the pattern number.

When turning OFF the power without pressing key, the set values of pattern No., X/Y scale, number of max. rotation, and thread tension are not memorized.

2.Confirmation of Pattern Shape

After selecting the pattern, user shall confirm the shape of the pattern.
If the pattern is far away from the presser, the needle will run into the presser, thus breaks the needle.



The work clamp feet do not come down immediately after turning ON the power.

(1) Press [ ] to light up the Sewing LED

(2)Press [ ] to select [ ], and then the screen displays [--CJ-]; step the pedal to lower the presser and then the screen displays [--CJ-].

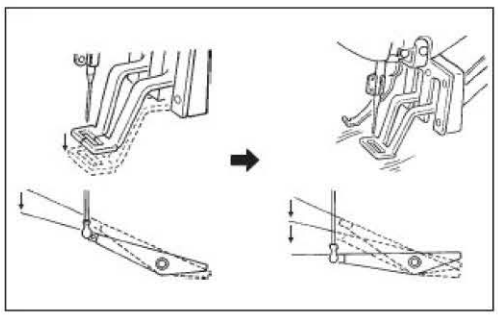
(3) In the status of lowering the presser, press [+/L+].

(4)Use [+/L+] and [—/L-] to confirm the shape. The confirmed pattern for sewing shall be in the permitted range of the presser.

(5)Press [ ] to lift presser.

(6) Press [ ] to release the selection of [ ] (select other data item other than [ ]). After that, press [ ] to end the trial sewing and the Sewing LED will be off.

3. Sewing

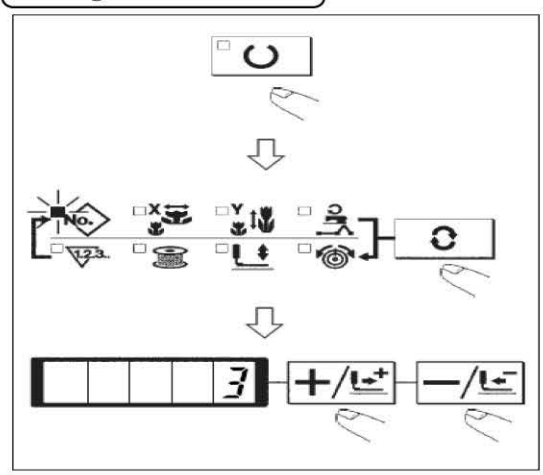


(1)Put the fabric to the presser section
(2)Step on the pedal switch to the level 1, then the presser goes down. If you detach the foot from the pedal, the presser will go up.
(3) Lower the presser to the next level, and then depress the pedal to the second level to start sewing
(4)At sewing end, the presser will go up and stop at the initial position.

Attention 1： When depressing the pedal to level 1 and lowering the presser, the user can press +/L+ & −/L− to change the sewing position of pattern. Then the user could start sewing at the selected position by depressing the pedal to level 2. During the sewing, for the problems like thread-breakage, user can use this method for mending after releasing the malfunction

Attention 2： Don't apply the operations in Attention 1 into the operation of pattern trial sewing, in case the user depresses the pedal to level 2 by mistake, thus start the machine and cause the dangerous. For the operations in trial sewing, user shall strictly follow the descriptions of 【Confirmation of Pattern Shape】in the above sector.

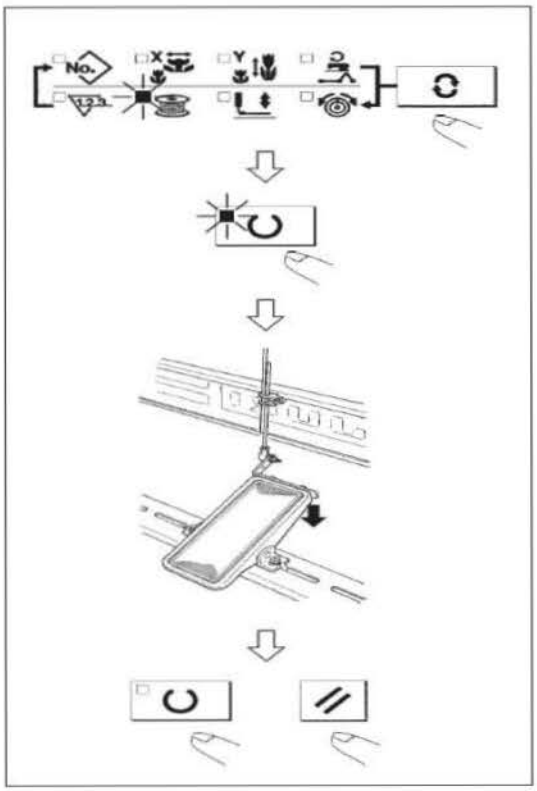
4.Change to Other Patterns



(1) Press ↻ to turn of the Sewing LED.
(2)Press ↻ to select the No..
(3) Use +/L+ & −/L− to set pattern number.
(4)Set the X/Y scale rate, speed and so on in the same way
(5) Press ↻ to turn on the Sewing LED, thus have access to Sewing status.

After selecting the pattern, user shall confirm the shape of the pattern.
If the pattern is far away from the presser, the needle will run into the presser, thus breaks the needle.

5. Winding



The winding device will not work just after power-on. Please set a pattern code and press [ ] to turn on the Sewing LED before the winding operation.

(1) Press [ ] to turn off Sewing LED.

(2) Press [ ] to select the [ ]. (It is unable to select when the Sewing LED is on.)

(3) Press [ ] to lower the presser and turn on the Sewing LED.

(4) Depress the pedal to start the sewing machine

(5) Depress the pedal switch or press [ ] or [ ] to stop machine

(6) Press [ ] to turn off the Sewing LED and lift the presser. Then [ ] become valid.

6. Independent Thread-trimming Device

Independent thread-trimming, different from the general presser transmission and main-shaft transmission thread-trimming mechanisms, has the independent control unit, which can control the whole process of thread-trimming better,

If the storage parameter No.46 is set as 1 (Thread-trimming Forbidden), the machine will not perform the thread-trimming.

7. Thread-catching Device

With thread-catching device, the abnormal sewing, like the missing or staining of upper thread, as well as needle-jumping, can be avoided in the high speed start. The thread-catching function is only available when the Thread-catching Display LED is on.

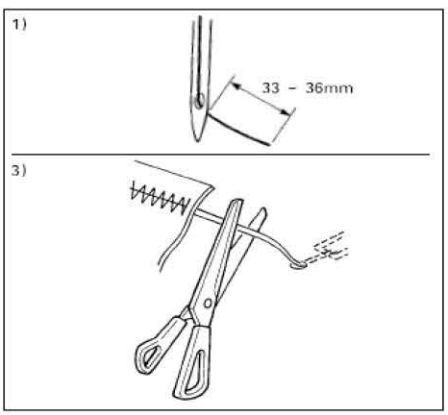
User can use  to turn on/off this function. When the thread-catching device is OFF, the machine will turn to low-speed start automatically.

The thread-catching action will be invalid if the Storage Parameter No.35 is set as 1 (Thread-catching Forbidden). At the same time,  **becomes invalid.**

Matters for attention in using the function for catching upper thread

1.For catching thread, please shorten the upper thread at sewing start.

If the needle is too long, the thread at the backside of the cloth will be pulled out; meanwhile that too-long needle will easily sew the end of the thread on needle into the seam.



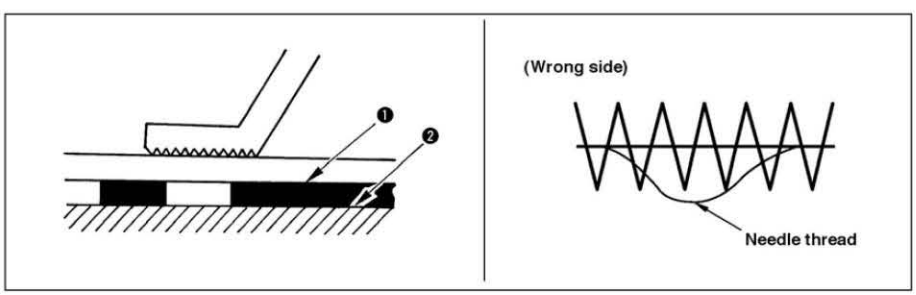
(1) The standard length of needle thread in thread-catching shall be 33～36mm.

(2) Lengthen the thread after replacing the needle thread. Or when holding the needle thread at sewing, please set the Thread-catching Key at OFF.

(3) When the needle thread held with the thread catcher is rolled in the seams, do not draw the material forcibly but cut the connecting needle thread with the scissors or the like. The seams are not damaged since it is the needle thread at the sewing start.

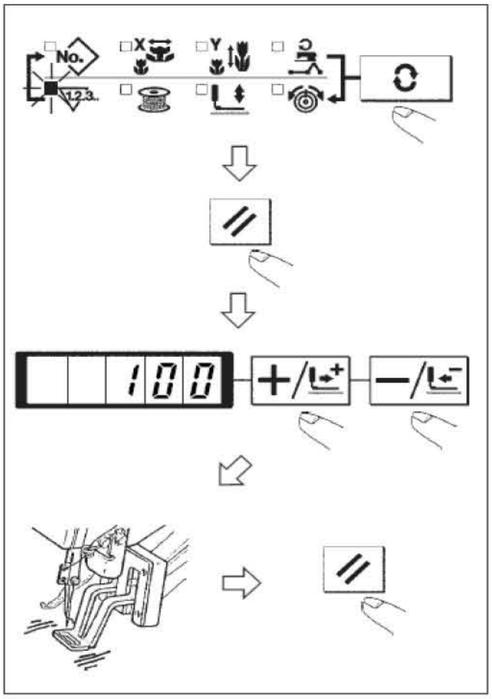
2.In order to make thread-catching action ensure the stable sewing at start, user can shorten the needle so that less needle thread could be winded in upper side of the cloth.

3.When the type of lower plate (1) that material doesn't closely contact to the board (2) is used, needle thread at backside of cloth will be rolled into the seams regardless the length of the thread or the needle thread will be loose



8. Bottom Thread Counter

The counters are set as Production Counter (Adding method) at the time of delivery. However, if it is used as the Bottom Thread Counter (subtracting method), the value of parameter No.18 shall be set at 1.



(1)Press to select .

(2)Then press .

(3)After that, press & to set number of times that can be sewn with a bobbin.

(4)Finish of sewing in each time will cause the counter to count down by one

(5)After the machine finishes the set times of sewing, the monitor will shine for hinting the user.

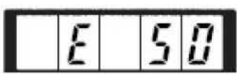
(6)Replace the bottom thread and press again. Then the value of counter will restore to the set value

(Repeat the steps from 4to 6).

9. Pause

After user set the value of No.31 parameter at 1, or the reverse gear of pedal can be used as the pause key.

(1)If user presses or depresses the reverse gear of pedal, the sewing machine will stop and display the error No.50.



(2)The following are the three available operations after the pause:

① Press the Start Switch to start the sewing.

② Press and perform the thread-trimming. After that, use & to adjust the position and then press start switch to start sewing.

③ Press and trim the thread. After that, press again to return to the origin.

10.Set P Pattern & C Pattern

10-1. Use Pattern Key (P1 P2 P3 P4 P5) for Sewing

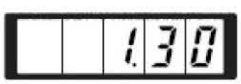
The saved patterns (No.1~200) can be registered on P1~P50. It is possible to change and register the scale rate, Max speed limitation and sewing position. With the rolling window of pattern, user can also register patterns and has access to the pattern from P1~P25 at a time.

·For selecting P6~P25, user can use the combinations of P1 P2 P3 P4 P5 (simultaneous pressing) shown in the below table at his sewing.

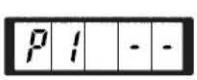
P-No.	Selection Key	P-No.	Selection Key	P-No.	Selection Key	P-No.	Selection Key
P1	P1	P8	P1+P4	P15	P4 +P5	P22	P2+P3+P4
P2	P2	P9	P1+P5	P16	P1+P2+P3	P23	P2+P3+P5
P3	P3	P10	P2+P3	P17	P1+P2+P4	P24	P2+P4+P5
P4	P4	P11	P2+P4	P18	P1+P2+P5	P25	P3+P4+P5
P5	P5	P12	P2+P5	P19	P1+P3+P4		
P6	P1+P2	P13	P3+P4	P20	P1+P3+P5		
P7	P1+P3	P14	P3+P5	P21	P1+P4+P5		

(1).Registration on Pattern Key

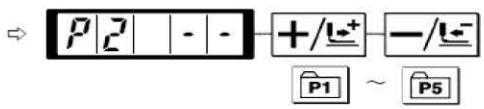
Exp： Register pattern No.3 to P2, X scale rate: 50%; Y scale rate: 80%; Max speed limitation: 2000 rpm, pattern position: 0.5mm to the right and 1mm to the front.

(1) Turn on the power, press M (the sewing LED shall be off at this moment) to have access to Mode Setting (Setting of Storage Switch). ⇨ 

(2) Use +/↵ & −/↵ to display the storage mode of pattern ⇨ 

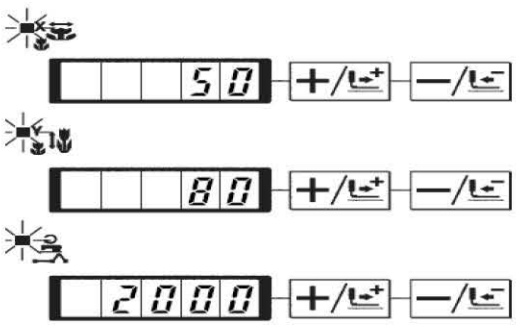
(3) Press ↻ to have access to the pattern storage mode. ⇨ 

(4) Press P2 to select the stored P-No.
This selection can also be done by using +/L & −/L.



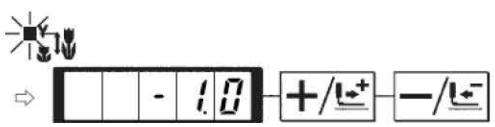
(5) Use L to select No.
Use +/L & −/L to set pattern number.

(6) Press L and use +/L & −/L to set the X scale rate at "50"% and the Y scale rate at "80%", as well as Max Speed limitation at "2000"rpm.

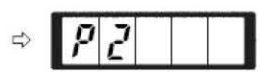


(7) Press L to activate X scale rate ,which is displayed at 0.0. The stroke in X direction can be changed in step at 0.1mm. Use +/L & −/L to set this value at 0.5.

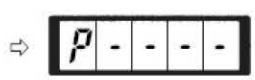
(8) Press L to activate Y scale rate , which is displayed at 0.0. The stroke in Y direction can be changed in step at 0.1mm. Use +/L & −/L



(9) Press ↺ to end the setting.



(10) Press M to end pattern storage mode

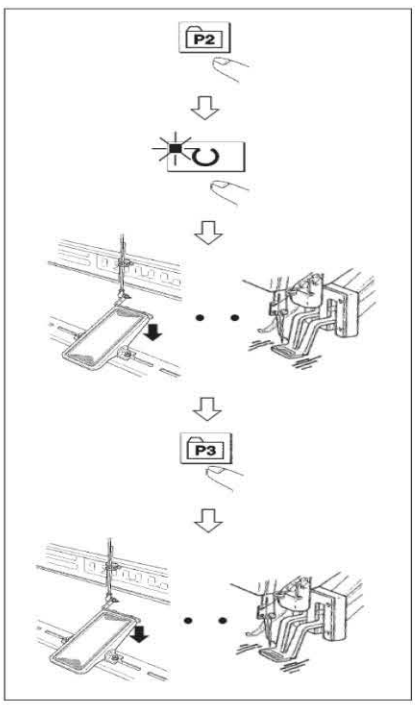


(11) Press M to end Mode Setting and return to Ordinary Mode

(2).Sewing Operation

Example: sew the pattern saved as P2 at first, and then sew the P3.

Press P1 to P25 key while the sewing LED lights up and the presser comes down. Be careful that your fingers are not caught in the presser. Pattern register from P26 to P50 can be performed. Register can not be performed in P1 to P5 key. Designate the pattern by the pattern selection only. Indicate the pattern with or key. Pattern selection from P26 to P50 cannot be performed while the sewing LED lights up.



(1) Turn on the power.

(2) Press P2.

(3) Press to turn on the Sewing LED, and then the presser will go up.

(4) Confirm the pattern shape.

(5) If the pattern shape is correct, the machine will be able to carry out the sewing.

(6) After sewing, please pres P3 to lower the presser for searching the origin. After that, the presser will move to the sewing start point and go up.
(When the Sewing LED is on, user can also press P keys to change the pattern.)

(7) Perform the operations in Step 4 and Step 5.

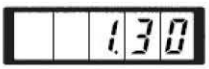
10-2. Sewing with Combination Functions

Store the patterns registered in the sequence as P1~P50 to C1~C20. The sewing pattern will be changed in order upon the finish of sewing in each time. 30 patterns can be stored in a combination code at most.

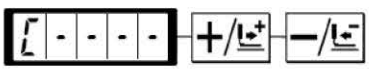
(1). **Storage of Combination Pattern**

Example: Register the combination in order of P1, P2 and P3.

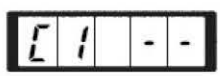
(1) Turn on power. Press [M] to have access to Mode Setting (for setting parameter of memory). The Sewing LED shall be off at the moment



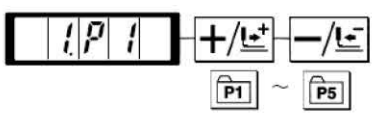
(2) Use [+/⊵] & [−/⊵] to display the Combination Mode



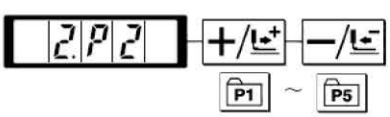
(3) Press [↻] to turn on the Sewing LED, thus to have access to the setting mode of combination pattern. User can select C pattern number from C1~C20 with [+/⊵] & [−/⊵].



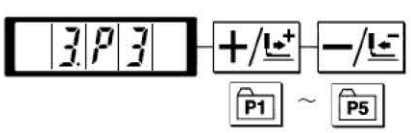
(4) Press [↻] and [P1] to set the P1 as the first pattern in the C1. User can select P pattern from P1~P50 with [+/⊵] & [−/⊵].

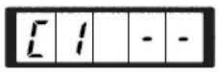


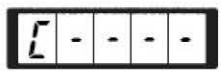
(5) Press [↻] and [P2] to set the P2 as the second pattern in C1. User can select P pattern from P1~P50 with [+/⊵] & [−/⊵].

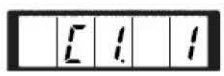


(6)Press [↻] and [P3] to set the P3 as the third pattern in C1. User can select P pattern from P1~P50 with [+/⊵] & [−/⊵].



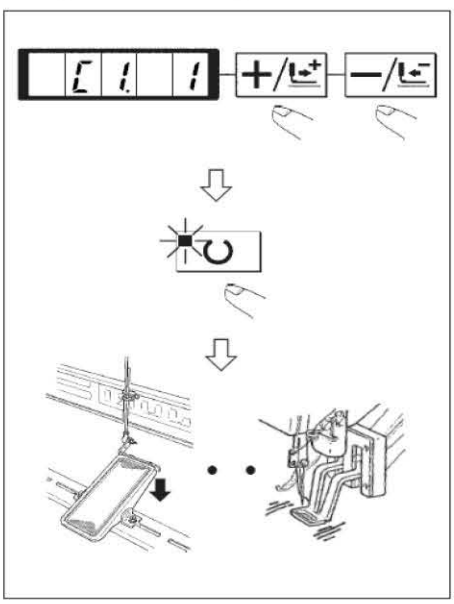
(7) Press [TI] to end the storage ⇨ 

(8) Press [M] to end the storage mode of combined pattern。 ⇨ 

(9)Press [M] to end the Mode Setting and return to the ordinary mode. ⇨ 

(2).**Sewing Operation**

Example: Sew the C1 pattern.



(1) Power on the machine

(2) Set the pattern number as C1.1 with [+/⌐] & [−/⌐].

(3) Press [TI] to turn on the Sewing LED. After that the presser will go up.

(4) If the pattern shape is sound, the sewing operation will proceed.

(5) Sew the C1 pattern in the sequence in the combination. When the last pattern in the combination is finished, the machine will start sewing the first pattern and repeat this combination.

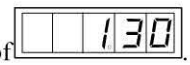
◎ After the sewing, if user wants to go to the previous pattern or the next pattern, user can press [+/⌐] & [−/⌐] when the Sewing LED is on. Then the pattern display will be changed and the presser will also move to the start point

◎ ·After storing the patterns among C1～C20, if the P pattern in P1~P50 id changed, the content of P pattern with same code will also be changed.。

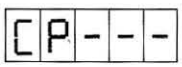
◎ Confirmation of pattern is necessary for each pattern.

11.Debugging Mode

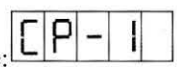
Via this mode, user can perform the operations of maintenance and checking.

(1) When the Sewing LED is off, press [M] to call the display of  . Then press [P1] [P3] [P5] at same time. After the ring of buzzer, the system will have access to the debugging mode via the user level setting mode of memory switch.

（**Attention**）Not pressing [P1] [P3] [P5] at same time will cause the failure of access to debugging mode.

(2) Press [−/↓] to have access to debugging mode, the monitor will show "CP---" as displayed in the following picture:  ;  ;

(3) Press [↻] to perform the display output test. This test will check the display module and indicator of each LED in cycle; the following is the specific procedure:

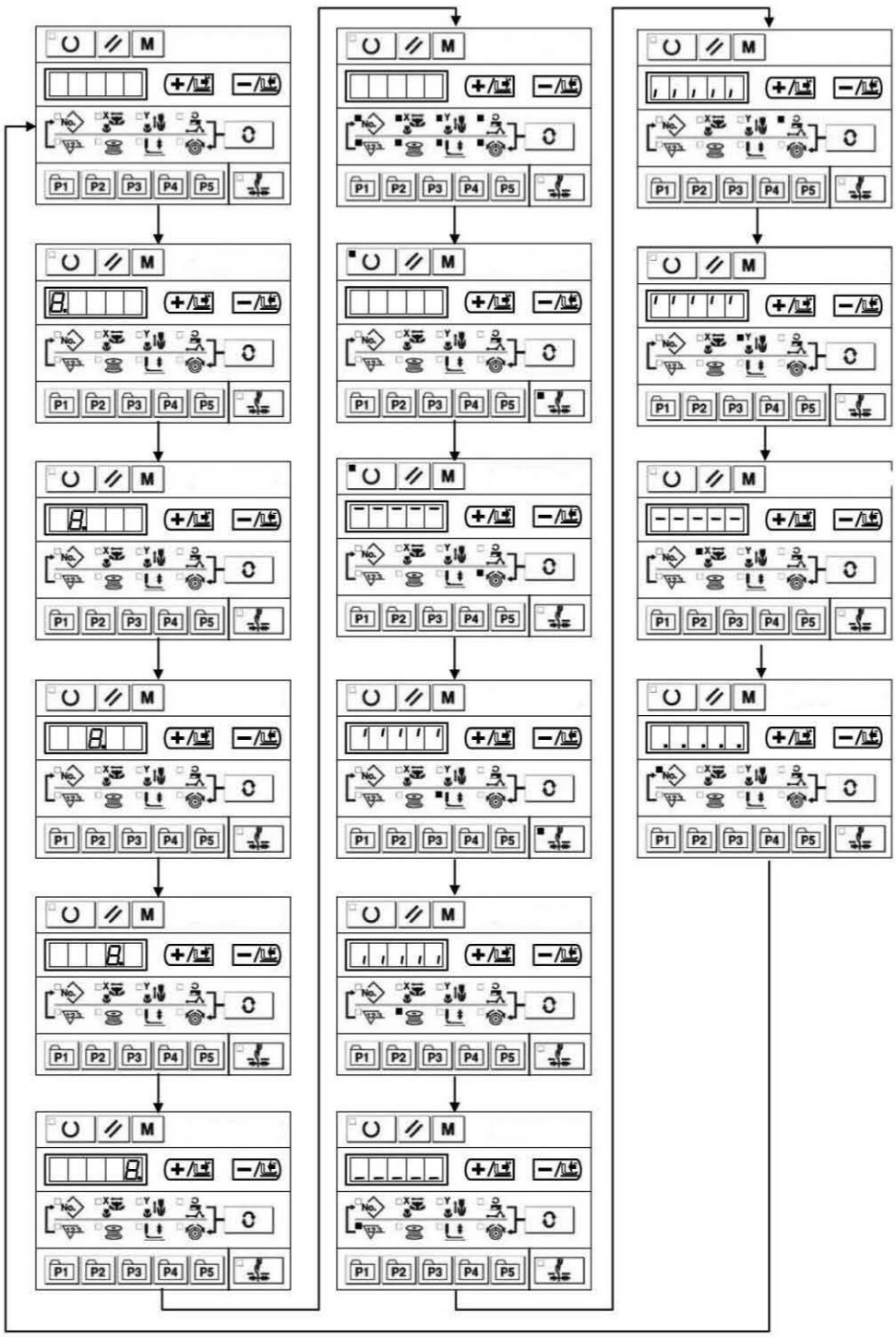
(4) Press [↻] again to end the display output test. The monitor will display "CP-1" as shown in the following picture:  .

Only after the display output test, can the user perform the test on other functions.

(5)Press [+/↑] & [−/↓] to change the program code of the function test. The function stood by each code is shown in the following table:

(6)Hold [0] to have access to the function test.

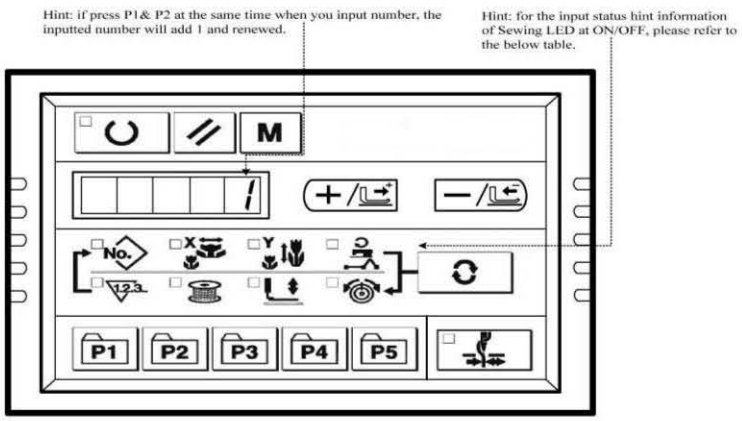
(7)During the function test, if user presses [M] , the test will be stopped and the system will return to the status of 5); However, if the continuous mode has been used for once, the test will be unable to be released. For ending the test, the user can only turn off the power.



Function Test Code	Function	Content
CP-1	Test input signal	LED hint switch, sensor input
CP-2	X/ Y Motor Origin Sensor Test	Display the statuses of the X/Y motor step motion operation, origin searching operation and X/Y origin sensor.
CP-3	Continuous Running	If setting the condition of continuous running, test the continuous running mode.
CP-4	Main motor rotation number test	Setting rotation number, machine start-up ,display of actual rotation number
CP-5	thread-trimming test	Action of thread-trimming motor, debugging the installation of knife
CP-6	Presser /thread-trimming motor /origin sensor test	Display the step motion of presser/thread-trimming motors, operation of origin searching, and the status of presser origin/presser sensor.
CP-7	Thread-catching motor/origin sensor test	Display the step motion of thread-catching motor, operation of origin searching and the status of thread-catching origin/thread-catching sensor.
CP-8	_____	_____

11- 1. CP-1Input Signal Test

Test the input status of the buttons, pedal and sensors. Press [0] to have access to CP-1 when the “CP-1” is displayed at the screen. After that, the screen displays the “1” that means the first test content.



The display content for each inputted No.

Input No.	Pattern N0. LED	X Scale LED	Y Scale LED	Speed LED	Counter LED	Winding LED	Presser -lowering LED	Solenoid LED
1	/	/						
2	/	/						
3	/	/	/	/	/	/	/	/
4	Pedal Level 0	Pedal Level 1	Pedal Level 2	/	/	/	/	/
5	Presser motor origin sensor	Y motor origin sensor	X motor origin sensor	Thread-catching origin sensor	Thread-trimming sensor	Thread-catching sensor	/	/
6	Main-shaft angle display							
7	Main-shaft motor Z phase	/	/	/	/	/	/	/
8	/	/	/	/	/	Head tilt switch	/	/

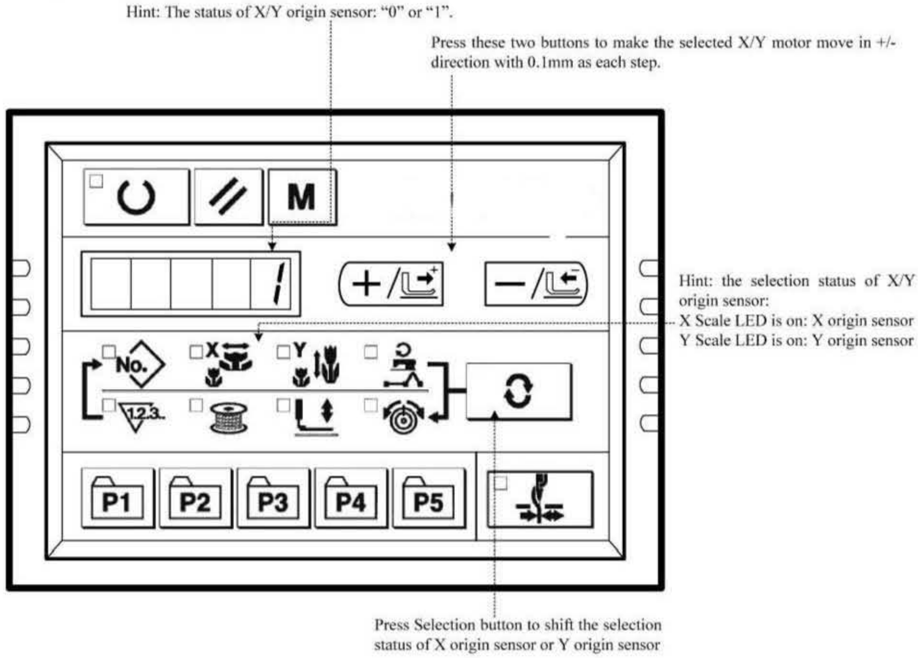
11-2. CP-2Check X/Y Motor/Origin Sensor

Display the statuses of X/Y origin sensor, operation of searching origin and step operation of X/Y motor.

(1).Preparation

Press  to have access to CP-2, and system displays “1” at screen. Then press  to search the origins of X/Y motors. At that time, the presser goes down and the Sewing LED is on (User can also perform step 2 directly without pressing ).

(2).Operation



11-3. CP-3 Continuous Running

When the screen displays the "CP-3", user can press to have access to the Continuous Running Mode. After setting the conditions for continuous running, user can start the continuous running mode; for quitting the continuous running mode, please turn off the power.

(1).Setting of Time Interval

User can press & to set the time interval between two operations.

From 1800ms to 9900ms, user can set the 100ms as a changing step. After the setting (the default value is 2000ms), user can press to save the set value

(2).Setting of origin search at sewing end。

User can press & to set the validity of origin search at sewing end.

A0： Invalid (Default value)

A1： Valid（Search origin after sewing at each time）

After the setting, user can press to have access to the normal sewing mode.

(3).Continuous Operation

Under the normal sewing mode, user can set the conditions, such as pattern number, X/Y scale rate and Max speed, and start sewing. At sewing end, if the user sets the origin search at the second step operation, the machine will search the origins of motors, including X/Y presser motors, thread-trimming motors and thread-catching motor; however, if the user set stop time in the 1st step operation, the machine will automatically start sewing again after sewing end.

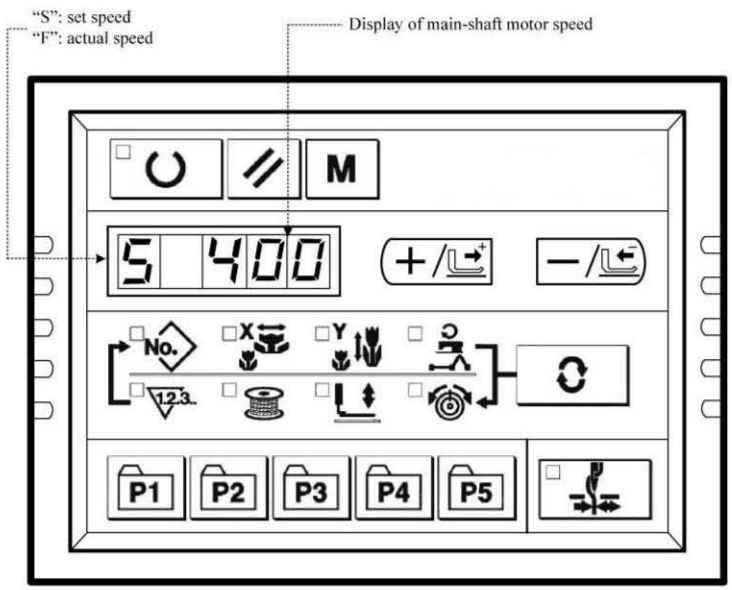
For stopping the continuous sewing, please press when the sewing ends.

11-4. CP-4 Test Main Motor Speed

Set the speed of machine. With the set speed, the machine will only run the main motor that is used for driving the machine and display the actual speed.

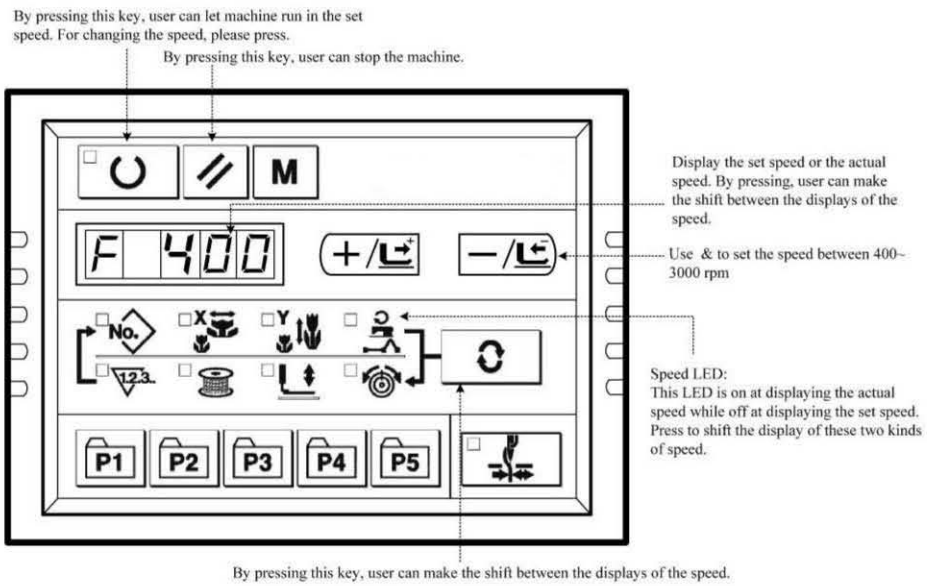
(1).Preparation

User shall press to have access to CP-4 firstly. At this time, the screen displays "S 400". Then the user can press to search the origins of motors, including thread-catching motors, presser motors, and thread-trimming motors. At this moment, the Sewing LED is on.



(2).Operations

User can use [+/⊑] & [−/⊑] to change the setting on the main-shaft speed. Then the machine will run in the set speed just after user presses [↻]. At this time, by pressing [0], user can shift the display of set speed and the display of actual speed. For changing the set speed again, user shall press [↻] again and use [+/⊑] & [−/⊑] to set the speed, and then press [↻] to enable machine to run in the newly set speed. Press [//] for stopping while pressing [M] for quit.



11-5. CP-5 Adjustment on Thread-trimming

Display the step motion of thread-trimming motor and the thread-trimming actions of moving to thread-curving position, thread-trimming, knife return, and return-to-origin.

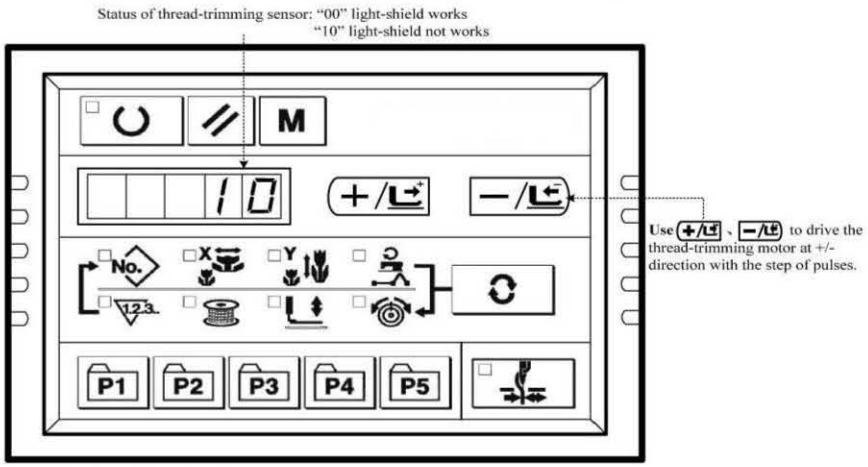
(1).Preparation

Press [0] to have access to CP-5.

(2).Operation

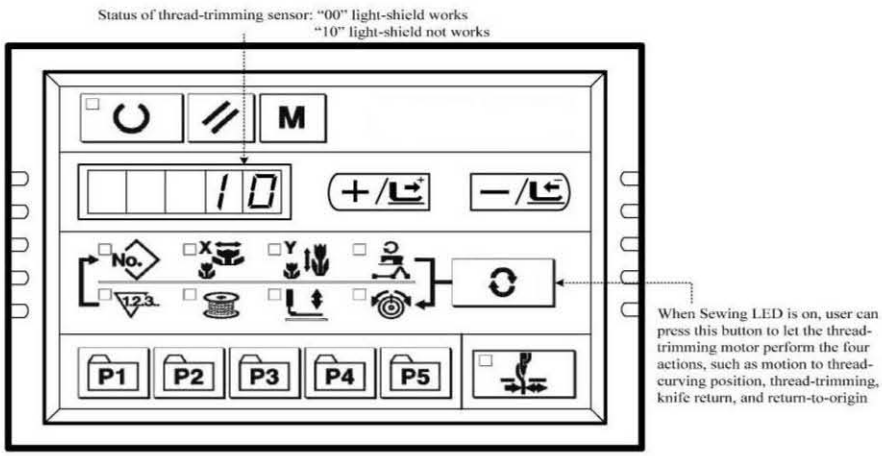
1.peration of step motion of thread-trimming motor

User can press +/⊾ & −/⊾ to operate the step motion of thread-trimming motor. This function is for the staffs at their installing and debugging the knife.



2. Thread-trimming Action

Press ↻ to turn on the Sewing LED, and then depress the pedal for searching the origin; by pressing ↻ for times, users can let the thread-trimming motor perform the four actions, such as motion to thread-curving position, thread-trimming, knife return, and return-to-origin. For quitting this mode, please press M.



11-6. CP-6 Test Presser Origin Sensor

Display the step motion operation of presser motor, operation of origin search and status of presser origin sensor.

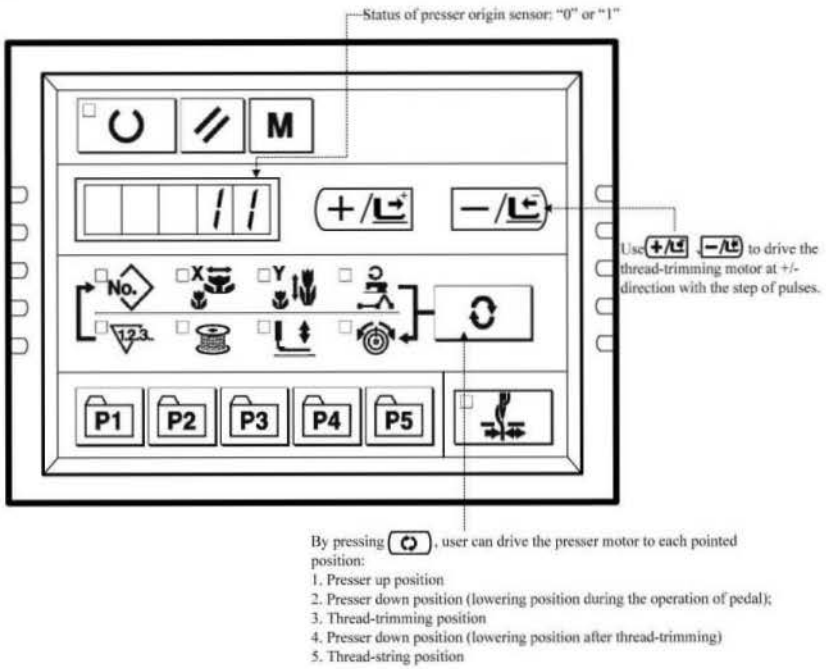
(1).Operation

1. Preparation

Firstly, user can press [C] to have access to CP-6. Then user can press [↻] to search the origin of thread-catching; at this time, the sewing LED is on.

2. Operations

If the user presses [−/↵] for 6 ~ 8 times, and then the display on screen changes to "01" from "00", it means the presser sensor is normal. If not, please adjust the position of the presser sensor.



After user presses [C], the relating parts on the machine will do the 5-step cyclic action in the sequence shown in above figure. Press [M] to quit that mode.

11-7. CP-7（Test Thread-catching Motor/ Origin Sensor）

Display the step operation of thread-catching motor, the statuses of thread-catching motor origin sensor and thread-catching sensor and operation of origin search.

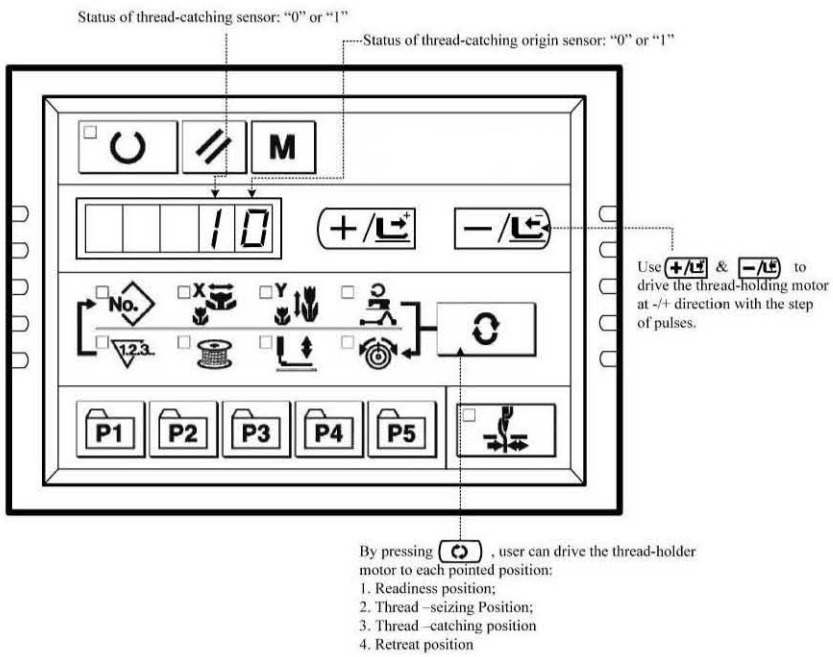
(1)Preparation

Firstly, user shall press [ ] to have access to CP-7; then press [ ] to turn on the Sewing LED. Depress the pedal to search origin. After that the screen will display "10".

(2)Operation

By pressing [+/⊾] & [−/⊾], user can let thread-catcher move in step with the pulse as unit.

Press [+/⊾] to drive the thread-catcher backward; press [−/⊾] to drive the thread-catcher forward.

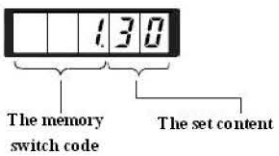


After user presses [ ], the relating parts on the machine will do the 4-step cyclic action in the sequence shown in above figure. Press [M] to quit that mode.

12.Parameter Setting

12-1.Specific Operations on Setting Parameters

(1)When Sewing LED is off, user can press [M] to set the parameters.



（After user presses [M], the displayed 1.30 means that the Max speed of the No.1 parameter is 3000rpm。）

(2) User can use [+/⊵] & [−/⊵] to change the number of parameter.

(3) By pressing [↺], user can adjust the wanted parameter number and turn on the Sewing LED

(4)By using [+/⊵] & [−/⊵], user can change the orresponding value of the paramter

(5)By pressing [//], user can make the parameters return to the initial value.

(6)By pressing [↺], user can save the changed content and turn off the Sewing LED. After that, the machine returns to parameter number selection status.

(7)Pressing [M] will end the parameter setting mode and let system return to ordinary status.

12-2.Example for Setting Parameters

(1).Setting of Max Sewing Speed

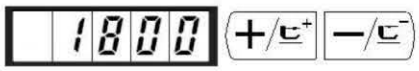
Emp.: Set the upper limitation of sewing speed to 1800rpm

1） When the Sewing LED is off, user can press [M] to display the content of Parameter No.1. Parameter No.1 displays the Max speed of sewing machine.

2） When the No.1 parameter is displayed; user can press ↺ to turn on the Sewing LED. Then the content of No.1 parameter is displayed in the screen.

⇨ 

3） User can use +/⊵ & −/⊵ to set the speed to "1800"

⇨ 

4） Press ↺ to save the value and turn off the Sewing LED.

5） Press M to return to the ordinary status.

(2).Setting of Soft-start Speed at Sewing Start

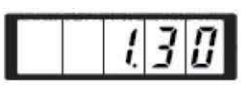
he speed of stitches from the first one to the fifth one can be set in the unit of 100rpm. User can also set the validity of thread-catching on these stitches.

With thread-catching function

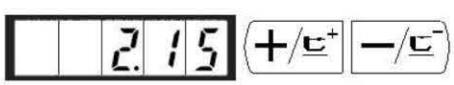
	Default Setting（rpm）	Setting Range
1st stitch	600	400～1500
2nd stitch	1800	400～3000
3rd stitch	2700	400～3000
4th stitch	2700	400～3000
5th stitch	2700	400～3000

·For the Max speed, the No.1 parameter takes the priority.
Emp.： In case of having thread-catching function, the 1st stitch will change from 1500 to 1000rmp, while 2nd stitch will change from 3000 to 2000rpm.

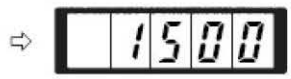
1. When the Sewing LED is off, press M.

⇨ 

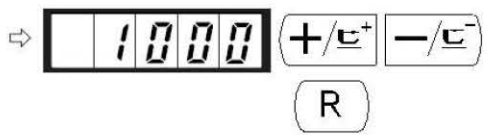
2.By using +/⊵ & −/⊵, user can have the parameter code No.2 displayed. And user can set the sewing speed of 1st stitch

⇨ 

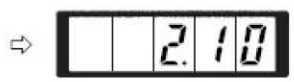
3. Press [U] to turn on the Sewing LED and display the set value of the 1st stitch.



4. By using [+/E+] & [−/E−], user can input "1000" in the screen. Press [//] to return to default setting. If user presses [M], the existing operations will be cancelled and system will return to the status in step 2).

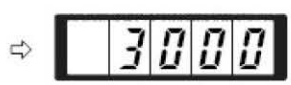


5. Press [U] to turn on the Sewing LED and save the set value of the 1st stitch.

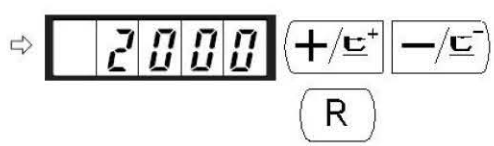


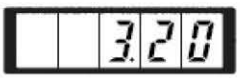
6. By pressing the [+/E+] & [−/E−], user can display the parameter code No.3 at screen. And the sewing speed of the 2nd stitch is display at here as well.

7. Press [U] to turn on the Sewing LED and display the set value of the 2nd stitch.



8. By using [+/E+] & [−/E−], user can input "2000" in the screen Press [//] to return to default setting. If user presses [M], the existing operations will be cancelled and system will return to the status in step 6).



9. Press [TI] to turn off the Sewing LED and save the set value of the 2nd stitch. ⇨ 

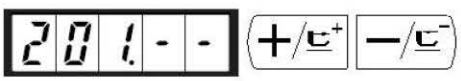
10. Press [M] to end the parameter setting mode and return to the ordinary status.

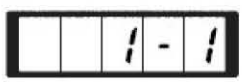
[3]. Setting on whether to call the pattern number

User sets the machine not to read the inoperative pattern in case the unnecessary pattern is called. Additionally, the available pattern can be called when necessary.

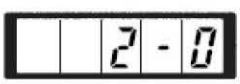
Emp.: Set the No.2 & No.3 patterns as the inoperative.

1） Press [M] when the Sewing LED is ⇨ 

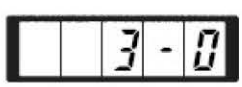
2） User can use [+/⊏+] & [−/⊏−] to let screen display parameter code No.201. ⇨ 

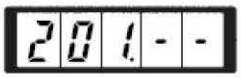
3). Press [TI] to turn on Sewing LED, at the same time the set value of pattern No.1 is displayed. Set value 1: Readable; 0: Unreadable. ⇨ 

4） Set pattern No. 2 with [+/⊏+] & [−/⊏−]. ⇨ 

5） Set the value to 0 with [0]. ⇨ 

6） Set pattern No.3 with [+/⊏+] & [−/⊏−]. ⇨ 

7） Set the value to 0 with [0]. ⇨ 

8） Press [TI] to save the set value and Turn off the Sewing LED ⇨ 

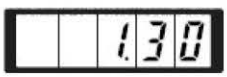
9） Press [M] to end the parameter setting mode and return to ordinary mode.

[4] Setting of Counter Action

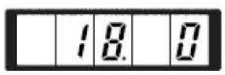
The production counter can be used as the Bottom Thread Counter. In repetition sewing, if a bobbin finishes the sewing time as set in parameter, the sewing machine will stop sewing. The Bottom Thread Counter uses the subtracting method.

The counters are set as Production Counter (Adding method) at the time of delivery. However, if it is used as the Bottom Thread Counter (subtracting method), the parameter switch No.18 shall be changed.

Example: change the Production Counter (Adding method) to Bottom Thread Counter (Subtracting method).

1. Press [M] when Sewing LED is off. ⇨ 

2. User can use [+/⊵] & [−/⊵] to let screen display parameter code No.18 ⇨ 

3.Press [TI] to turn on the Sewing LED. Then the set value of the counter action is displayed in the screen. ⇨ 

4. Set the set value to 1 with [+/⊵]

Set value 0： Production Counter;
1： Bottom Thread Counter ⇨ 

5. Press [TI] to save the set value and turn off the Sewing LED

6. Press [M] to end the parameter setting mode and return to ordinary mode.

12-3.Table for Parameter Setting

No.	Functions	Adjustment Range	Default Value	Remarks
1.30	Max Speed of Sewing （it can be set in step of 100rpm）	400～3000	2700	
2.15	Sewing speed of 1st Stitch (thread-catching) (It can be set in step of 100rpm)	400～1500	600	
3.30	Sewing speed of 2nd Stitch (thread-catching) (It can be set in step of 100rpm)	400～3000	1800	
4.30	Sewing speed of 3rd Stitch (thread-catching) (It can be set in step of 100rpm)	400～3000	2700	
5.30	Sewing speed of 4th Stitch (thread-catching) (It can be set in step of 100rpm)	400～3000	2700	
6.30	Sewing speed of 5th Stitch (thread-catching) (It can be set in step of 100rpm)	400～3000	2700	
9.--	Changeover time of thread tension at thread-trimming	－6～4	4	
10. 4	Sewing speed of 1st Stitch (no thread-catching) (It can be set in step of 100rpm)	400～900	400	
11. 9	Sewing speed of 2nd Stitch (no thread-catching) (It can be set in step of 100rpm)	400～3000	900	
12.30	Sewing speed of 3rd Stitch (no thread-catching) (It can be set in step of 100rpm)	400～3000	2700	
13.30	Sewing speed of 4th Stitch (no thread-catching) (It can be set in step of 100rpm)	400～3000	2700	
14.30	Sewing speed of 5th Stitch (no thread-catching) (It can be set in step of 100rpm)	400～3000	2700	
16.--	Changeover timing of thread tension at the sewing start （no thread-catching）	－5～2	-5	
18. 0	Action of Counter	0：Production Counter(Add	0	

No.	Functions	Adjustment Range	Default Value	Remarks
		ing Method) 1 ： Bottom Thread Counter(Subtracting Method)		
25.1	Presser Division	0~1	1	0：Divide 1: Not divided；
26.70	Adjustment of presser height in section	50～90	70	
31. 0	Use keyboard (Clear Key) to stop sewing machine	0：invalid 1：Reset Key	0	
32. 1	Buzzer forbidden	0：no voice 1 ： panel operation voice	1	
33. 2	Set number of stitches that thread-catching releases	1～7	2	
34.--	Time deferrable in catching thread	－10～0	-5	Speed down in direction “__”
35. 1	Enable to forbid the control on catching upper thread	0：Normal 1：Forbidden	1	
36.--	Select the Feed time. When stitches are not well tightened, set the value in “–” direction.	－8～16	12	If it moves to one side excessively, the needle might be broken. Be careful at sewing the thick fabric.
37. 1	Presser status at sewing end	0 ： Depress pedal to lift presser 1：Presser goes	1	

No.	Functions	Adjustment Range	Default Value	Remarks
		up automatically		
39. 0	Search origin at sewing end of each time (except the cyclic sewing)	0：Not search origin 1 ： Search Origin	0	Refer to 【 3.3 Recovery to Default Setting】
40. 0	Search origin at cyclic sewing	0：Not Search origin 1 ： Search origin after the finish of each pattern	0	
42. 0	Stop position of needle rod	0 ： upper position 1 ： highest position	0	Stop at highest point: Needle rod stops at the upper position and reverses.
46. 0	Forbid thread-trimming	0：normal 1 ： forbid thread-trimming	0	
49.16	Set winding speed	800～2000	1600	
201.--	Whether to read the pattern data.	0：unable 1：able	Setting depends on model used.	Whether the pattern can be opened can be set respectively.
P----	Register pattern			
C----	Register the cyclic sewing			

13 Setting of Service Parameter

The Service Parameter is different from the ordinary parameter. Generally, these parameters are provided to the technicians for their debugging, and the users are forbidden to change them without directions from the professionals.

13-1. Activation & Modification of Service Parameter

When the sewing LED is off, operator can press M to have system display  , then the operator needs to press P1 P3 P5 together. After hearing the voice from buzzer, the operation can activate and modify the service parameters

The modification is same to that of the ordinary parameters.

13-2. Table of Service Parameters

No.	Definition	Adjustment Range	Initial Value	Remarks
21.--	Positions of standard pedal & pedal switch	50-200	70	If increasing the set value, user will need to depress presser harder.
22.--	Position of standard pedal & stroke switch of high/low section.	50-200	120	If increasing the set value, user will need to depress presser harder.
23.--	Position of standard pedal & start switch	50-200	185	If increasing the set value, user will need to depress presser harder.
27.--	Dropping speed of presser at depressing pedal	100-4000pps	4000	
28.--	Lifting speed of presser at depressing pedal	100-4000pps	1500	The excessive lifting will cause problems in operation.
29.--	Lifting speed of thread-trimming presser at sewing end	100-4000pps	3000	The excessive lifting will cause problems in operation.
38.--	Start sewing with switch when presser keeps still	0：Normal 1：Not lift presser	0	
43. 1	Selection of machine rotating number at thread-trimming	0：400rpm 1：800rpm	0	Rotation number at dividing thread with moving knife; the thread-trimming is performed after the machine ends

No.	Definition	Adjustment Range	Initial Value	Remarks
44. 1	Selection on whether to feed cloth in the easy direction at thread-trimming	0：Not Feed 1：Feed Cloth	1	
45.--	Guide diameter of needle hole for feeding cloth at thread-trimming (Changing step can be set at 0.2mm.)	16~40	16	1.6mm~4.0mm
50.--	Thread-trimming Angle	0~9	5	
56.--	Limited range of motion in +X direction (Right)	-20-20mm	20	In the initial status, regardless shape of presser.
57.--	Limited range of motion in -X direction (Left)	-20-20mm	-20	In the initial status, regardless shape of presser.
58.--	Limited range of motion in +Y direction (Back)	-20-10mm	10	In the initial status, regardless shape of presser.
59.--	Limited range of motion in -Y direction (Front)	-20-10mm	-20	In the initial status, regardless shape of presser.
62. 0	Pattern Update	0: Normal Mode 1:Pattern update mode	0	For updating the pattern, please refer to【5 Updating pattern via U disk】
67.--	Default parameter transfer	0 or 1	1	
68.--	Main-shaft stop compensation	-10-+10	0	
90.--	Preset value for bottom thread counter	0~9999	0	
91.--	Current value for production (bottom thread) counter	0~9999	0	
150. 0	Invalidity of head tilt safety switch	0：Normal 1：The safe shape of head tilt is invalid.	0	
241. 0	Functional Selections	0：Bar-tacking 7：Button sewing	0	

the parameters above are only for the repair technicians, and ordinary users are forbidden to change those parameter

13-3.Recovery to Default Setting

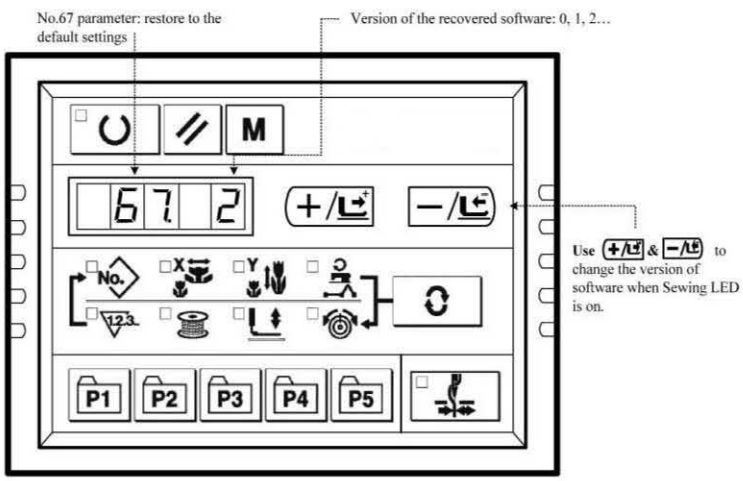
If the user changes some parameters by mistake, which are properly set at delivery, he will use the function of "Recovery to Default Setting" to restore the system.

At recovering the default settings, the entire parameters that are set by user before will be covered. Therefore, please take caution in using this function. For anything unknown, please contact the technicians of the manufacturer, and operate the machine with the instruction from the professionals

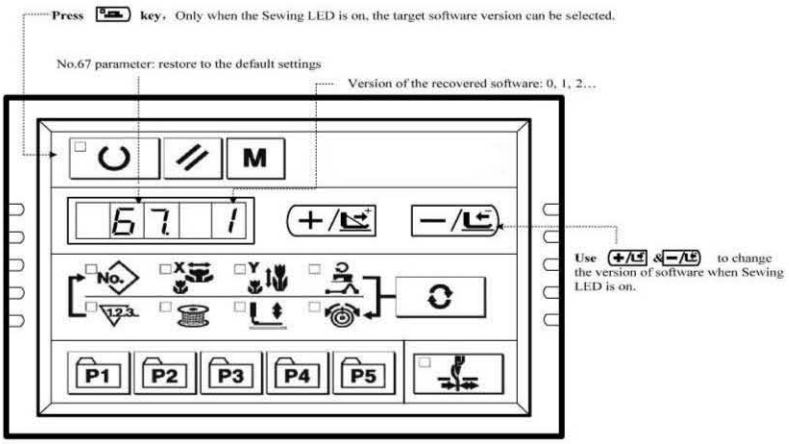
The following is the specific operation step：

1. When the Sewing LED is off, operator can press [M] to have system display [1.30], and then the operator needs to press [P1] [P3] [P5] together. Following the voice from buzzer, the modification of service parameters is started.

2. By using the [+/⌐] & [−/⌐], the operator can select the parameter No.67：



3、Press [↺] to turn the sewing LED, then select the needed software version number by using [+/⌐] & [−/⌐]：

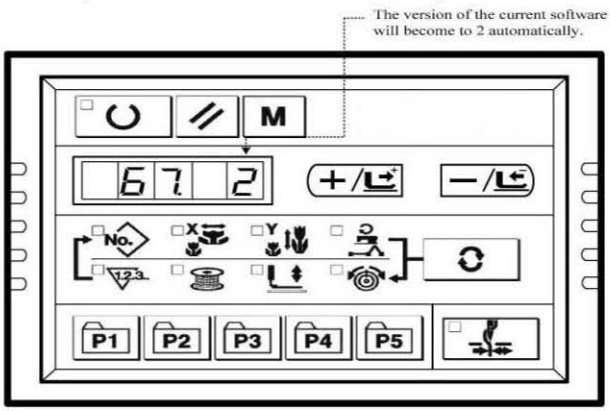


4、For an example, if the existing version is 2, operator can restore it to 0 or 1 (smaller than the current version number in all). And then press to confirm the restored version number and turn off the Sewing LED;

5. Press M to quit the setting mode of service parameters. Then the system will return to the normal sewing mode;

6. And then, turn off the power and repower the machine after about one minute. At the moment, "EEP——" will be displayed on the operation panel. After 20 seconds, the operation panel will become to display normally (attention: it is a normal phenomenon because the system needs some time to perform the recovery of the default software).

7. After the recovery, the system will set the current software version as the highest version. For example, there are 2 default versions, Version 1 & Version 0; in that case the version after the recovery will be defined at 2 automatically.

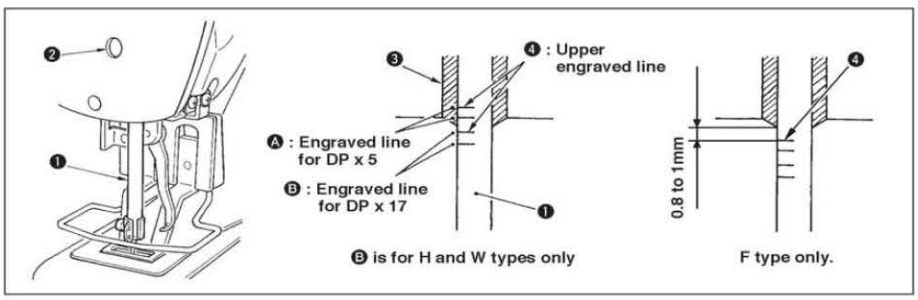


Attention: During the process of repowering the machine, if the power is off when the system is recovering, the recovery will be failed and the system will return to the software status before the recovery.

[6] MAINTENANCE

1. Adjusting the height of the needle bar

WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.

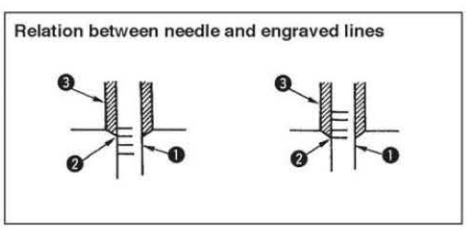


Bring needle bar ① to the lowest position of its stroke. Loosen needle bar connection screw ② and adjust so that upper marker line④ engraved on the needle bar aligns with the bottom end of needle bar bushing, lower ③. For F type only, adjust the needle bar to the position where it is lowered by 0.8 mm to 1 mm from the center of upper marker line ④ engraved on the needle bar.

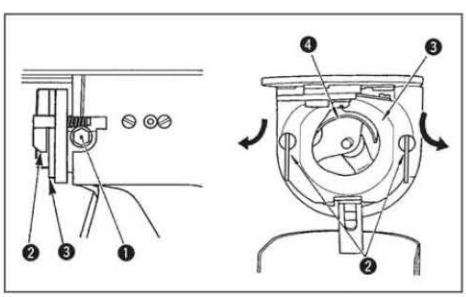
Caution: After the adjustment, make sure that there is no uneven torque. When stitch skipping occurs in accordance with the sewing conditions, adjust the height of the needle bar so as to lower it by 0.5 to 1 mm from the needle bar engraved

2. Adjusting the needle-to-shuttle relation

WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.

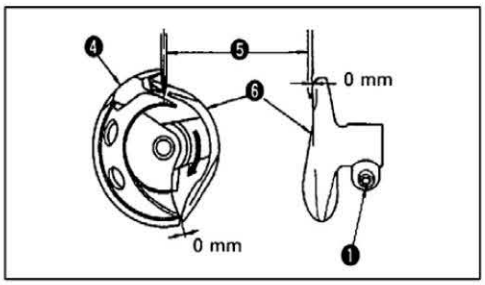


(1). Turn the handwheel by hand. When needle bar① has gone up, adjust so that lower marker line② engraved on the needle bar aligns with the bottom end of the needle bar bushing ③ ,

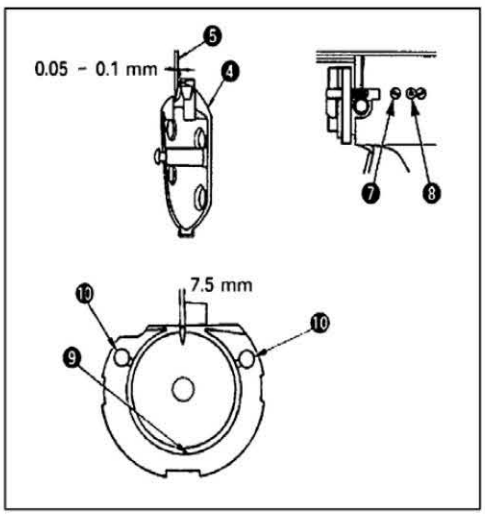


(2). Loosen setscrew ①in the driver. Open inner hook pressers ② to the right and left, and remove inner hook presser ③ .

Caution: At this time, be careful not to let inner hook ④come off and fall.



(3).Adjust so that the blade point of inner hook ④ aligns with the center of needle ⑤, and that a clearance of 0 mm is provided between the front end of the driver and the needle as the front end face of driver ⑥receives the needle to prevent the needle from being bent. Then tighten setscrew ①of the driver.



(4).Loosen setscrew ⑦of the shuttle, and adjust the longitudinal position of the shuttle. To do this adjustment, turn shuttle race adjusting shaft ⑧clockwise or counterclockwise to provide a 0.05 to 0.1 mm clearance between needle ⑤ and the blade point of inner hook ④ .

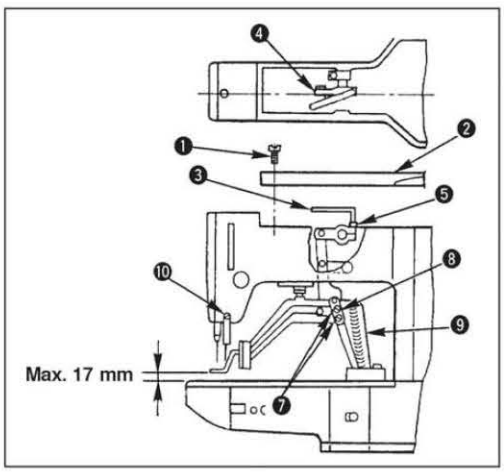
(5).After adjusting the longitudinal position of the

shuttle, further adjust to provide a 7.5 mm clearance between the needle and the shuttle by adjusting the rotating direction. Then tighten setscrew ⑦ of the shuttle.

Apply a small amount of oil to race section⑨and oil wick⑩ , and use the sewing machine after an extended period of disuse or cleaning the periphery of hook portion.

3. Adjusting the lift of the work clamp foot

WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.



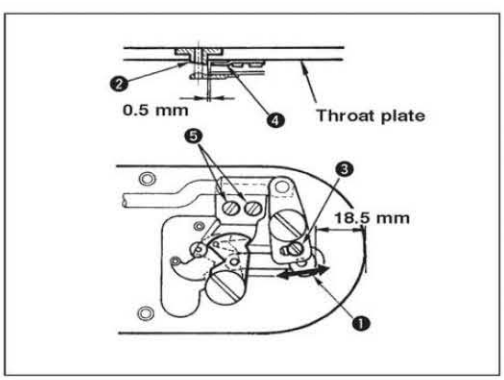
(1) With the machine in stop mode, remove six setscrews ① of the top cover, and take off top cover②.
(2) Apply L-shaped wrench ③to socket bolt ⑤of clamp ④ , and loosen the socket bolt.
(3) Push down L-shaped wrench ③ to increase the lift of the work clamp foot, or pull it up to decrease the lift.
(4) After the adjustment, securely tighten socket bolt⑤ .
(5)If the right and left work clamp feet are not levelled, loosen fixing screw ⑦ and adjust the position of the work clamp foot lever support plate ⑧to level them.

Caution

At this time, be careful not to cause work clamp foot lever support plate ⑧ to interfere with feed bracket⑨ .
If the work clamp foot lever support plate interferes with the wiper, readjust the height of the wiper using setscrew ⑩ in the wiper installing base.

4. The moving knife and counter knife

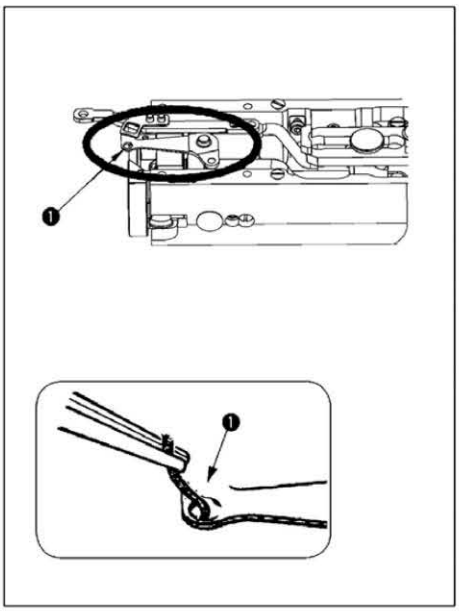
WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.



(1).Loosen adjusting screw ③so that a clearance of 18.5 mm is provided between the front end of the throat plate and the top end of thread trimmer lever, small ① . To adjust, move the moving knife in the direction of arrow.
(2).Loosen setscrew⑤ so that a clearance of 0.5 mm is provided between needle hole guide ② and counter knife ④. To adjust, move the counter knife.

5. Needle thread clamp device

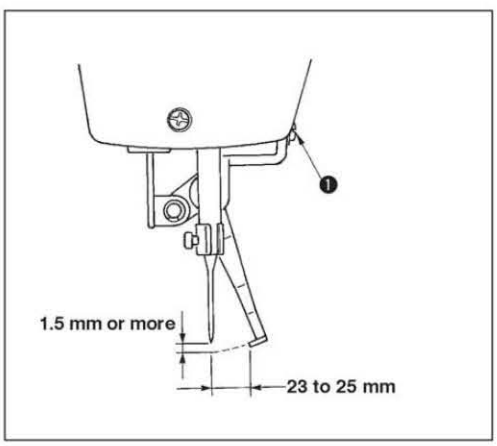
WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.



(1) When thread is caught at top end ① of the thread clamp, thread clamp becomes incomplete and sewing trouble at the sewing start will be caused.
Remove it with tweezers or the like.
(2) When removing thread waste or thread dust collected on the thread clamp device, remove it after removing the throat plate.

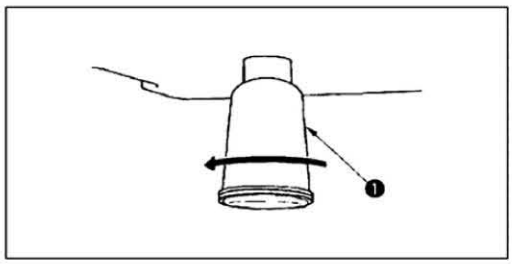
6. Adjustment of the wiper

WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.



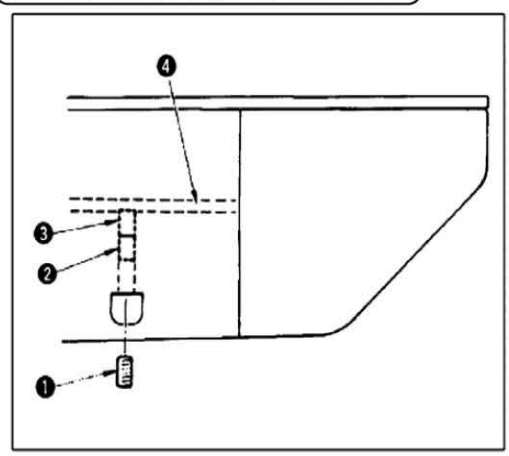
Loosen screw ①to adjust so that a clearance of1.5 mm or more is provided between the wiper and the needle.
At this time, the standard of the distance between the wiper and the needle is 23 to 25 mm. By adjusting the distance wide, the work clamp foot can prevent stepping on needle thread when it comes down.
Especially when the thin needle is used, adjust the distance wide to such an extent of 23 mm.
※The position of the needle is when the sewing machine has stopped after the sewing finished.

7. Draining waste oil



When polyethylene oiler ① becomes filled with oil, remove polyethylene oiler ①and drain the oil.

8. Amount of oil supplied to the hook



1) Loosen setscrew ① and remove setscrew ①.
2) When screwing in adjustment screw② , the amount of oil of oil pipe, left ④can be reduced.
3) After the adjustment, screw in setscrew ① and fix it.

1. The state of standard delivery is the position where③ is lightly screwed in and returned by 4 turns.
2. When reducing the amount of oil, do not screw in the screw at once. Observe the state for approximately half a day at the position where ③is screwed in and returned by2turns. If reducing is excessive, worn-out of the hook will result.

9. Replenishing the designated places with grease

When the sewing machine has been used for a certain number of times of sewing, error code No. E220 is displayed on the operation panel at the time of turning ON the power. This display informs the operator of the time of replenishing the designated places with grease. Be sure to replenish the places with the grease below. Then call the memory switch No. 245 and set it to "0" with the RESET key. Even after the display of the error No. E220, when the RESET key is pressed, the error is released, and the sewing machine can be continuously used. Afterwards, however, the error No. E220 is displayed every time the power is turned ON.

In addition, when the sewing machine is used further for a certain period of time after the display of error No. E220, the error No. E221 is displayed and the sewing machine fails to operate since the error cannot be released even when the RESET key is pressed.

When the error No. E221 is displayed, be sure to replenish the designated places below with grease. Then start up the memory switch and set No. 245 to "0" with the RESET key.

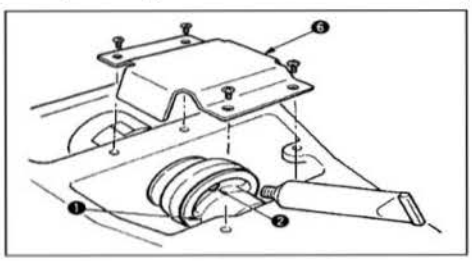
Caution

1. After replenishing the places with grease, the error No. E220 or No. E221 is displayed again unless the memory switch No. 245 is changed to "0".

2. Use grease tube (Part No. 40013640) supplied as accessories to replenish the designated places below with grease. If grease other than the designated one is replenished, damage of components will be caused.

WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.

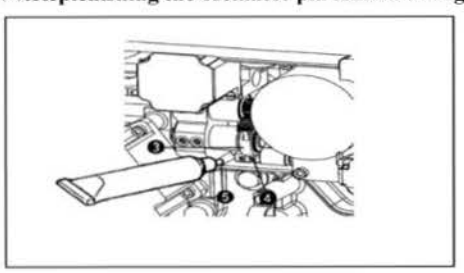
(1).Replenishing the eccentric cam section with grease



(1) Open the upside cover and remove the grease cover⑥

(2)Remove rubber cap ② located on the side of eccentric cam ①. Then replenish there with grease.

(2).Replenishing the oscillator pin section with grease



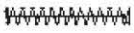
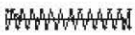
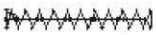
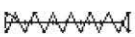
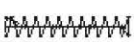
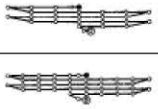
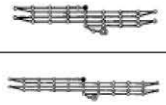
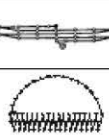
(1)Tilt the machine head and remove the grease cover ⑦.

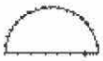
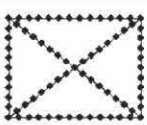
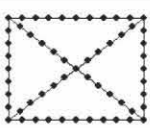
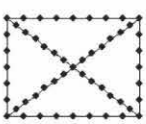
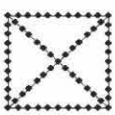
(2) Remove setscrew ④in oscillator gear ③, screw in the grease tube attached joint ⑤ supplied as accessories, and replenish there with the grease.

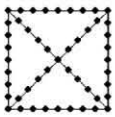
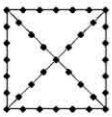
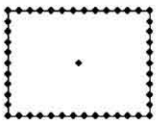
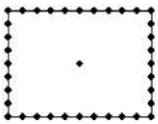
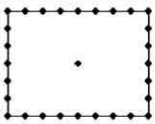
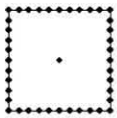
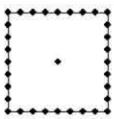
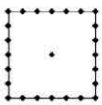
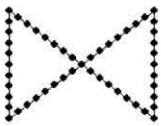
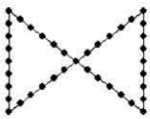
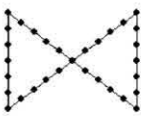
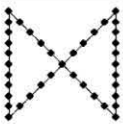
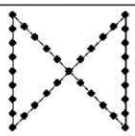
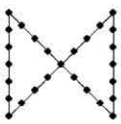
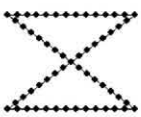
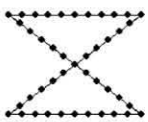
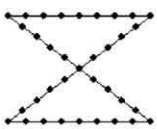
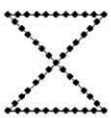
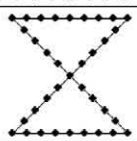
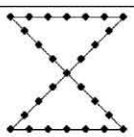
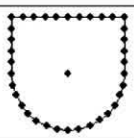
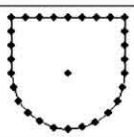
(3)Securely tighten setscrew ④which has been removed after replenishing with the grease.

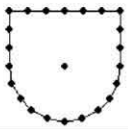
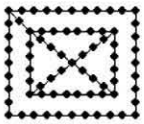
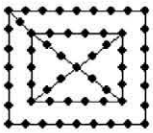
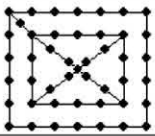
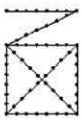
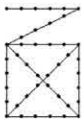
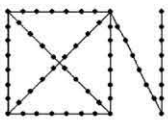
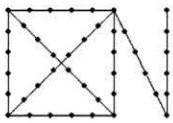
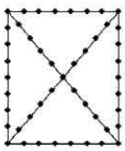
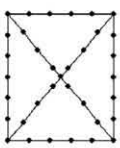
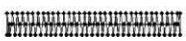
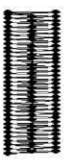
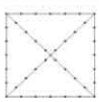
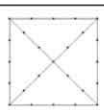
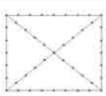
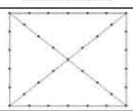
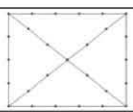
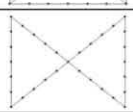
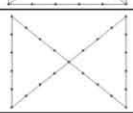
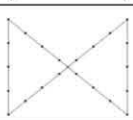
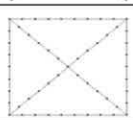
[7] Table of the standard patterns and the standard patterns

1. List of Standard Figure

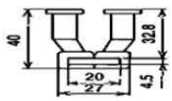
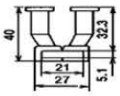
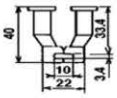
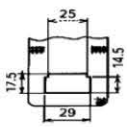
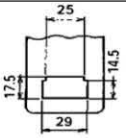
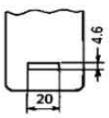
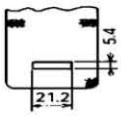
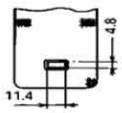
NO.	Sewing Pattern	Stitch number	Size (mm)	NO.	Sewing Pattern	Stitch number	Size (mm)
1		42	16×2	2		42	10×2
3		42	16×2.5	4		42	24×3
5		28	10×2	6		28	16×2.5
7		36	10×2	8		36	16×2.5
9		56	24×3	10		64	24×3
11		21	6×2.5	12		28	6×2.5
13		36	6×2.5	14		15	8×2
15		21	8×2.2	16		28	8×2
17		21	10×1	18		28	10×1
19		28	25×1	20		36	25×1
21		41	25×1	22		44	35×1
23		28	4×20	24		36	4×20
25		42	4×20	26		56	4×20
27		18	1×20	28		21	1×10
29		21	1×20	30		28	1×20
31		52	10×7	32		63	12×7

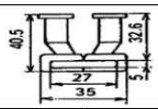
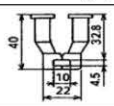
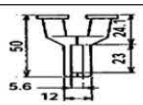
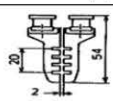
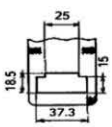
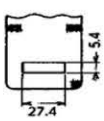
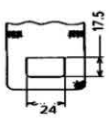
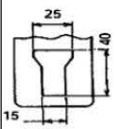
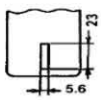
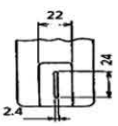
33		24	10×6	34		31	12×6
35		48	7×10	36		48	7×10
37		90	24×3	38		28	8×2
39		28	12×12	40		48	12×12
41		29	2.5×20	42		39	2.5×25
43		45	2.5×25	44		58	2.5×4.4
45		76	2.5×4.4	46		42	2.5×4.4
47		91	8×8	48		99	8×8
49		148	8×8	50		164	8×8
51		100	40×30	52		78	40×30
53		70	40×30	54		90	30×30

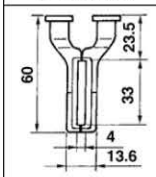
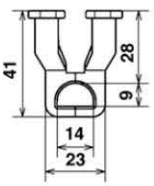
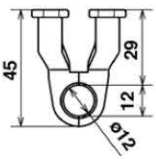
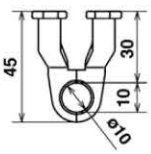
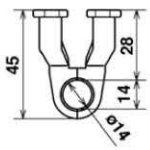
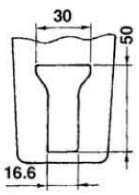
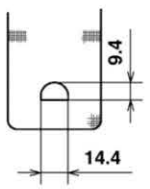
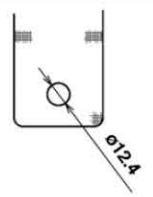
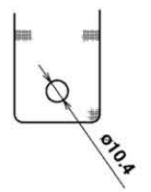
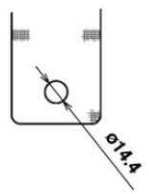
55		70	30×30		56		54	30×30
57		53	40×30		58		40	40×30
59		31	40×30		60		45	30×30
61		36	30×30		62		27	30×30
63		57	40×30		64		45	40×30
65		35	40×30		66		55	30×30
67		42	30×30		68		33	30×30
69		65	40×30		70		49	40×30
71		39	40×30		72		55	30×30
73		42	30×30		74		33	30×30
75		43	30×30		76		33	30×29.9

77		26	30×29.8		78		93	30×25
79		72	30×25		80		54	30×25
81		77	20×30		82		57	20×30
83		77	30×20		84		57	30×20
85		69	20×24.1		86		52	20×24.1
87		101	40×5		88		109	40×5
89		97	5×30		90		107	5×30
91		56	20×20		92		48	20×20
93		38	20×20		94		62	25×20
95		50	25×20		96		40	25×20
97		36	25×20		98		28	25×20
99		24	25×20		100		76	30×25

2. Table of the work clamp foot

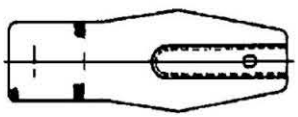
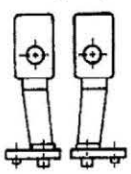
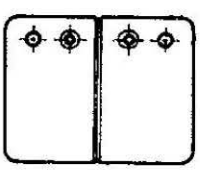
	1	2	3	4	5
Work clamp foot	Left：10011508 Right：10011505			10011687、10011691	10011758、10011759
					
Feed plate	10011565	10012300	10012279	10011751	10011755
	With knurl	Without knurl	Without knurl	With knurl	With knurl
					
Sewing specification	S	F	F	H	M
Finer guard	10011556(S、M、F)、10011695（H）				
Remarks	Standard accessory for S type machine head.	Supplied with F type machine head. (Depends on the destination)		Optional	Standard accessory for M (knit goods) type machine head.

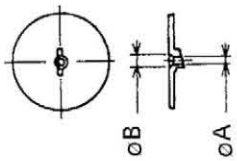
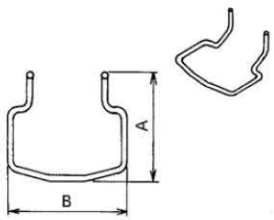
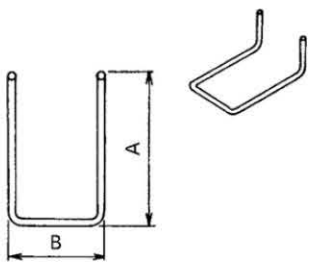
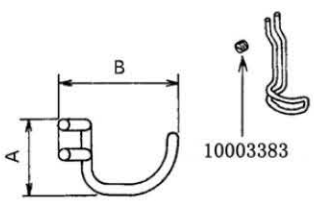
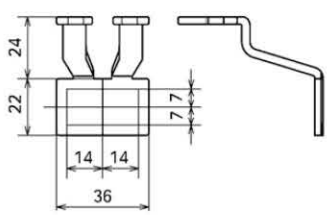
	6	7	8	9	10	11
Work clamp foot	10012349(L) 10012342(R)		10012339(L) 10012346(R)	10012341(L) 10012348(R)		10026244(L) 10026245(R)
						
Feed plate	10012277	10012302	10012286	10012296	10012301	10026246
	With knurl	With knurl	With knurl	Without knurl	Without knurl	Without knurl
						
Sewing specification	S	H/W	S	F	F	F
Finer guard	10011556(S、M、F)、10011695（H、W）					
Remarks	Optional	Standard accessory for H type(heavy-weight material) machine head.	Optional	Accessory part for F(foundation)type.(Depends on the destination)		Optional

	12	13	14	15	16
Work clamp foot	10026247(L) 10026248(R)	10026250(L) 10026251(R)	10012344(L) 10012345(R)	10026253(L) 10026254(R)	10026256(L) 10026257(R)
					
Feed plate	10026249	10026252	10012338	10026255	10026258
	Without knurl	Without knurl	Without knurl	Without knurl	Without knurl
					
Sewing specification	F	S	S	S	S
Finger guard	10011556				
Remarks	Optional	Optional	Optional	Optional	Optional

※Install a finger suitable for each work clamp foot when replacing the work clamp foot.

[8] Table of the optional parts

Name of Parts	Type	Part No.	Remarks
Feed plate blank  t=1. 2	Without knurl / processed Sewing area lengthwise 20 X crosswise 40	10026226	
	With knurl / processed Sewing area lengthwise 20 X crosswise 40	10012303	
	Without knurl / stainless steel Sewing area lengthwise 20 X crosswise 40	10026227	t=0.5
	Without knurl / processed Sewing area lengthwise 30 X crosswise 40	10026228	
	Without knurl / without processing Sewing area lengthwise 30 X crosswise 40	10026237	
	Without knurl / stainless steel Sewing area lengthwise 30 X crosswise 40	10026238	t=0.5
	With knurl / processed Sewing area lengthwise 30 X crosswise 40	10014401	
	With knurl / without processing Sewing area lengthwise 30 X crosswise 40	10026239	
Work clamp foot face plate (asm.) 		10026229 10026230	Face plate for presser blank
Presser blank  t=3.2	With knurl / Processed (right) Sewing area lengthwise 20 X crosswise 40	10026232	
	With knurl / Processed (Left) Sewing area lengthwise 20 X crosswise 40	10026231	
	With knurl / Processed (right) Sewing area lengthwise 30 X crosswise 40	10026241	
	With knurl / Processed (Left) Sewing area lengthwise 30 X crosswise 40	10026240	
	With knurl / without processing (right) Sewing area lengthwise 30 X crosswise 40	10026243	
	With knurl / without processing (Left) Sewing area lengthwise 30 X crosswise 40	10026242	

Needle hole guide 	A=1.6 B=2.6 With relief slit	10004646	Standard type
	A=1.6 B=2.0 Without relief slit	10011757	F and M types
	A=2.3 B=4.0 Without relief slit	10004727	H and W types
	A=2.7 B=3.7 Without relief slit		For extra heavyweight material
Finger guard(1) 	A=56.5 B=64	10011556	
	A=59 B=74	10011695	For large size bartacking
Finger guard (2) 	A=66.5 B=43	10014408	For lengthwise bartacking
Finger guard (3) 	A=21.5 B=35.5	10026235	For specially ordered work clamp
Work clamp foot blan 	With knurl / processed (right)	10026234	
	With knurl / processed (left)	10026233	

Ⅱ. EXPLANATION OF THE 1901B, COMPUTER-CONTROLLED HIGHSPEED EYELET BUTTONHOLE BARTACKING MACHINE

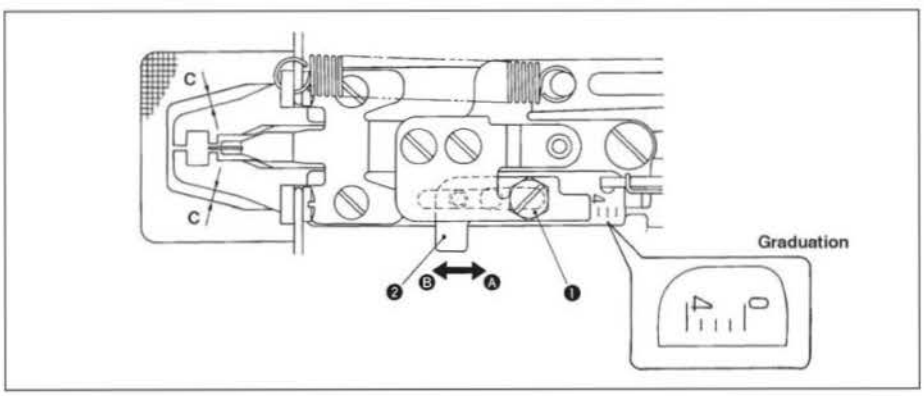
1. Specifications

Different specifications from those of the 1900B only are described.

1) Sewing speed ..... Max. 3,000rpm
2) Needle ..... DPx5 #14, #16
3) Lifting method of the work clamp foot..... Stepping motor
4) Lift of the work clamp foot ..... Max. 17mm
5) Number of standard patterns ..... 3 patterns
6) Wiper method ..... Interlocked with work clamp foot lifter driven by stepping motor

2. Adjustment of the material closing amount

WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



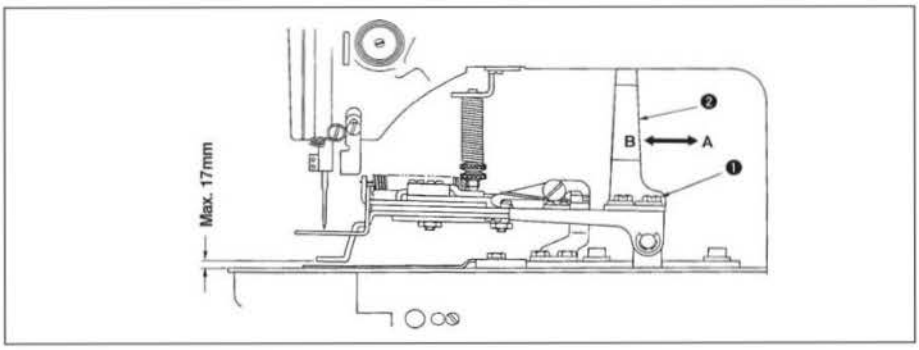
1) The maximum material closing amount is 4 mm. However, the amount is set to 2 mm at the time of delivery because of the relation of the feed plate window and the work clamp foot (dimension C). (Graduation position : 2)

2) Loosen bolt ① and move work clamp foot regulator ②in the direction of arrow to adjust the material closing amount. The material closing amount will be dereased when work clamp foot regulator ② is moved in the direction of A, and be increased when it is moved in the direction of B.

To increase the material closing amount more than 3 mm, widen the feed plate window by additional work (increase the dimension C.) so that the feed plate window does not interfere with the work clamp foot.

3. Adjustment of the lift of the work clamp foot

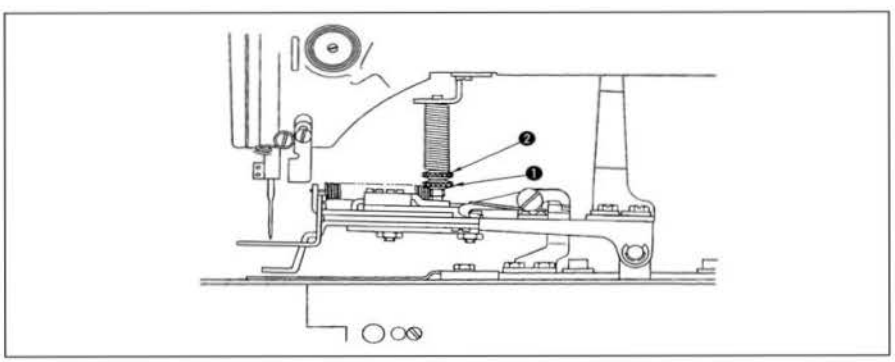
WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



(1)Loosen two setscrews ①and adjust by moving work clamp foot lifting plate ②back and forth in the direction os arrow. The amount of the lift os the work clamp foot will be decreased when work clamp lifting plate ②is moved in the direction of A, and be increased when it is moved in the direction of B. After the adjustment, securely tighten setscrews①.

4. Adjustment of the pressure of the work clamp unit

WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



(1) The pressure of the work clamp unit should be minimized as long as the material does not warp during sewing. Loosen adjusting screw ① and turn adjusting screw② to obtain the aforementioned pressure.

5. Setting of the material closing operation

(1)The material closing operation is performed by the electromagnetic solenoid, and change-over of the operation setting (effective / ineffective) is available. The material closing has been set to work simultaneously with sewing at the time of delivery.

(2)If the material closing is not performed, the change-over is made by the memory switch. For the way of operation, refer to item "How to use the memory switch" described in the instruction manual for the 1900B.

◎ List of memory switch functions

No.	Function	Setting range	State at time of delivery
50	Setting of material closing operation	0 : Ineffective 1 : Synchronized with work clamp foot 2 : Synchronized with start	2

Setting range "1" : The material closing simultaneously works when the work clamp foot comes down. Setting range "2" : The material closing simultaneously works with the sewing after the work clamp foothas come down.

As for the contents of memory switch function Nos. other than memory switch No. 50, refer to the list of the memory switch functions described in the Instruction Manual for the 1900B.

6. Selection and confirmation of the sewing patterns

To increase the material closing amount more than 3 mm, widen the feed plate window by additional work (increase the dimension C.) so that the feed plate window does not interfere with the work clamp foot.

(1)The patterns for eyelet buttonhole bartacking are from No. 11 to No. 13.

(2)When the material closing operation is performed, the maximum sewing size is 3x7mm. Set the most appropriate size using the enlargement/reduction function. As for the way of operation for setting, checking or changing the sewing pattern, refer to the item "Operation of the sewing machine (basic)" described in the instruction material for the 1900B.

To increase the material closing amount more than 3 mm, widen the feed plate window by additional work (increase the dimension C.) so that the feed plate window does not interfere with the work clamp foot.

Pattern No.	Sewing size (mm)		Number of stitches
	Lengthwise	Crosswise	
11	2.5	6	21
12	2.5	6	28
13	2.5	6	36

Sewing size is the dimension when the enlargement rate is 100%.

III.EXPLANATION OF THE 1902B, COMPUTER-CONTROLLED HIGHSPEED BELT-LOOP ATTACHING MACHINE

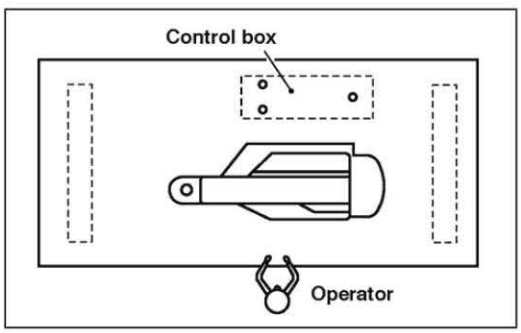
1. Specifications

Different specifications from those of the 1900B only are described.

1) Sewing speed ..... Max. 3,000rpm
2) Needle ..... DPx5 #14, #16
3) Lifting method of the work clamp foot ..... Stepping motor
4) Lift of the work clamp foot ..... Max. 17mm
5) Number of standard patterns ..... 6 patterns
6) Wiper method ..... Interlocked with work clamp foot lifter driven by stepping motor

2. Installation of the sewing machine and preparation of the operation

WARNING : Be sure to perform the work with two persons or more when moving the sewing machine.

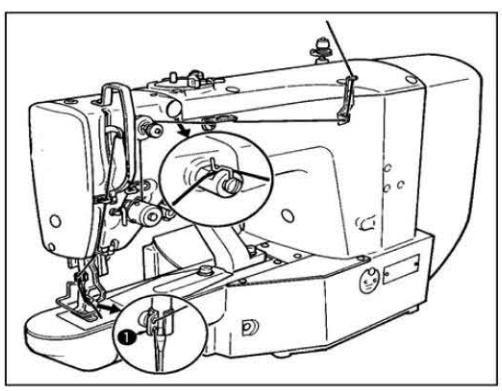


(1) The standard installing position of the belt-loop attaching machine should be lateral on the table.
(2) Install the control box the same as the longitudinal installation.
(3) Use the extension cord packed in the machine head box to connect the control box with the machine head.

WARNING : Tilt slowly the sewing machine head until it hits against the machine head support bar when tilting the sewing machine head.

3. Threading the machine

WARNING : Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Thread the machine in the order as illustrated in the left figure. Leave thread of approximately 4 cm after passing through the needle.

Caution For a thick thread, pass the thread through only one of the two holes in needle bar thread guide ❶.

4. Selection and confirmation of the sewing patterns

WARNING : In case of using an exclusive work clamp foot, make sure of the shape of the sewing pattern. If the sewing pattern extends outside the work clamp foot, the needle interferes with the work clamp foot during sewing, resulting in the danger of the needle breakage or the like.

(1)The patterns for the belt-loop attaching are from No. 17 to No. 22. As for the way of operation for setting, checking or changing the sewing pattern, refer to the item "Operation of the sewing machine (basic)" described in the instruction manual for the 1900B.

Caution: After setting, make sure of the needle entry point whether or not the needle interferes with the work clamp foot.

The calling has been set to ineffective at the time of delivery since the needle interferes with the standard work clamp foot which has been provided with the machine. When using this function, use "Setting the pattern data calling effective or ineffective" of the memory switch function to make the calling effective. As for the way of operation for setting, refer to the item "How to use the memory switch" described in the instruction manual for the 1900B.

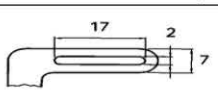
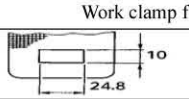
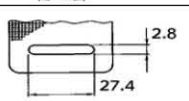
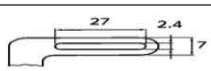
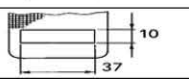
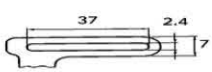
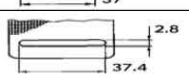
Pattern No.	Sewing size (mm)		Number of stitches
	Lengthwise	Crosswise	
17	0	10	21
18	0	10	28
※19	0	25	28
※20	0	25	36
※21	0	25	42
※22	0	25	42

Sewing size is the dimension when the enlargement rate is 100%.

5. Combination of the work clamp foot and the feed plate

WARNING : In case of using an exclusive work clamp foot, make sure of the shape of the sewing pattern. If the sewing pattern extends outside the work clamp foot, the needle interferes with the work clamp foot during sewing, resulting in the danger of the needle breakage or the like.

Make use of the appropriate combination of the work clamp foot and the feed plate in accordance with the sewing conditions. The combination for the standard delivery and the special order is shown in the following table.

Spec	Feed plate		Work clamp foot	
1902B Standard		Part No. 10026316		Part No. 10026317
				Part No. 10026318
For large size (Special order part)		Part No. 10026319		Part No. 10026320
For extra large size (Special order part)		Part No. 10026321		Part No. 10026322

Ⅳ.EXPLANATION OF THE 1903B, COMPUTER-CONTROLLED HIGHSPEED LOCKSTITCH BUTTON SEWING MACHINE

[1] Specifications

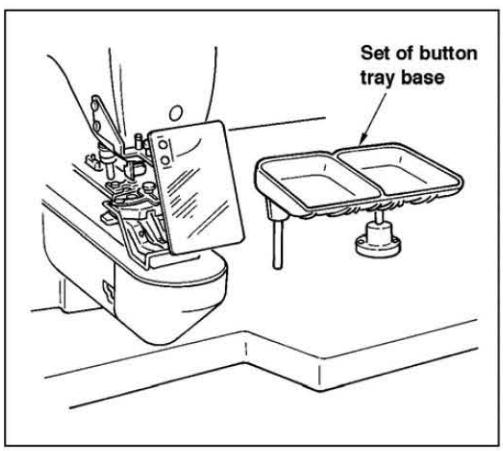
Different specifications from those of the 1900B only are described.

1) Sewing speed ..... Max. 2,700rpm
2) Needle ..... DPx17 #14
3) Lifting method of the work clamp foot..... Stepping motor
4) Lift of the work clamp foot ..... Max. 13mm
5) Number of standard patterns ..... 50 patterns
6) Wiper method ..... Interlocked with work clamp foot lifter driven by stepping motor

Caution **The needle thread clamp device is set to prohibition (state of standard delivery) with memory switch No. 35.**

[2] Installation of the sewing machine and preparation of the operation

WARNING : **Be sure to perform the work with two persons or more when moving the sewing machine**



(1).Installation of the sewing machine head and the control box is same as that of the1900B.
Refer to the instruction manual for the 1900B.

(2).Install a set of the button tray base to a convenient place for the work as the set is included in the accessories

Caution **Make sure before operation that the needle does not strike against the button hole .**

[3] Needle and thr ead

Needle	Needle thread	Bobbin thread
DPx17 #14	#60	#80
	#60	#60
	#50	#60
	#40	#60

Needle and thread will vary in accordance with the sewing conditions. when using the needle and the thread, select them referring to the left table. Cotton thread and polyester spun thread are recommended.

[4] Various sewing modes

1. List of sewing patterns Number of threads and standard sewing size of X and Y are as shown in the following list.

No	Sewing pattern	Thread number	Standard swing length X(mm)	Standard sewing length (mm)	No	Sewing pattern	Thread number	Standard sewing length X(mm)	Standard sewing length Y(mm)
1 • 34		6-6			18 • 44		6		0
2 • 35		8-8			19 • 45		8		
3		10-10			20		10	3.4	
4		12-12			21		12		
5 • 36		6-6			22		16		
6 • 37		8-8			23 • 46		6		3.4
7		10-10			24		10	0	
8		12-12			25		12		
9 • 38		6-6	3.4	3.4	26 • 47		6-6		3.4
10 • 39		8-8			27		10-10	3.4	
11		10-10			28 • 48		6-6		
12 • 40		6-6			29		10-10		
13 • 41		8-8			30 • 49		5-5-5		2.5
14		10-10			31		8-8-8	3.0	
15 • 42		6-6			32 • 50		5-5-5		

No	Sewing pattern	Thread number	Standard swing length X(mm)	Standard sewing length (mm)	No	Sewing pattern	Thread number	Standard sewing length X(mm)	Standard sewing length Y(mm)
16 • 43		8-8			33		8-8-8		
17		10-10							

2.Selection of the sewing pattern and the sewing width.

(1).Selection of the sewing pattern is the same as that of the 1900B.

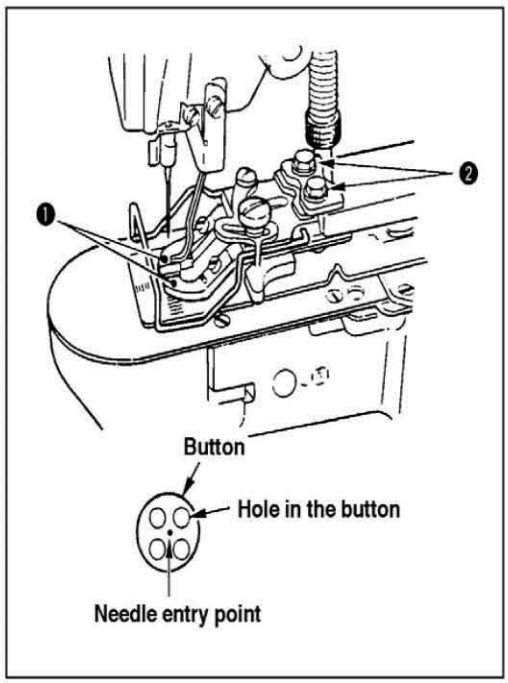
(2).When the distance between holes of the button used does not fit the standard sewing width of the sewing pattern No., adjust the sewing width by enlarging/reducing the sewing width. The way of enlarging/reducing is the same as that of the 1900B.Refer to the table given below for the scale for enlargement/reduction in terms of the sewing width.

(3).After changing the sewing pattern No. and the sewing width , make sure of the needle entry point. As for the way of confirmation, refer to the confirmation of the shape of sewing pattern in the instruction manual for the 1900B.

Table of XY scale in terms of the sewing width

X·Y (mm)	2.4	2.6	2.8	3.0	3.2	3.4	3.6	4.0	4.3	4.5	4.7	5.2	5.6	6.0	6.2	6. 4
%	71	76	82	88	94	100	106	118	126	132	138	153	165	176	182	188

[5] Position of the button clamp jaw lever



(1). Turn off the sewing LED, Press . to select the , than the Sewing LED is on.

(2). Press to lower the presser, and each ASM back to original position.

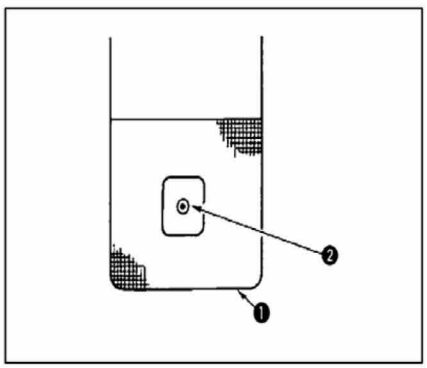
(3). Adjust the position of the sensor plate which control the direction of stepping motor or adjust the position of the button clamp. Press to upper the presser, press again to lower the presser, and each ASM back to original position. Make sure the center of needle is coincide with the center of button, if not coincide, adjust the position again.

(4). After the adjustment, confirm the pattern to make sure the needle will land in the button hole.

WARNING: When change of the shape of button , change of the sewing pattern or enlargement/reduction of the sewing width is performed, make sure the needle entry point. If the needle extends outside the button hole or the sewing pattern extends outside the button clamp unit, the needle interferes with the button hole or the button clamp unit, resulting in the danger of the needle breakage or the like.

[6] Adjusting the feed plate

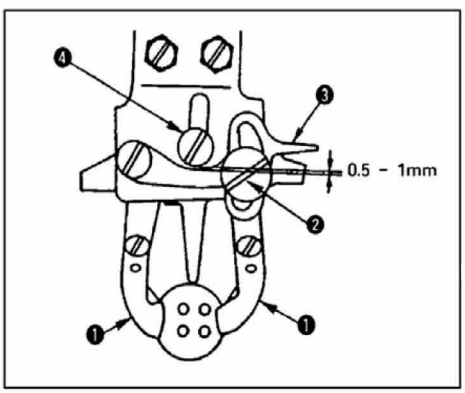
When change of the shape of the button, change of the sewing pattern or enlargement/reduction of the sewing width is performed, make sure of the shape of the sewing pattern. If the feed plate interferes with the needle hole guide, it will result in the danger of the needle breakage or the like. Also, if the pedal is depressed during the adjustment, the button clamp unit will go up or come down. So, be careful.



(1).In the state that the LED light off,press the key operation panel,choose windder state,light on.
(2).press key, the button clamp unit goes to the original position and goes up。
(3).adjust the feed plate①, so the needle hole guide② comes to the center of the recessed part of feed plate①H。
(4).press key, button clamp goes up, start sewing。

[7] Adjusting the button clamp jaw lever

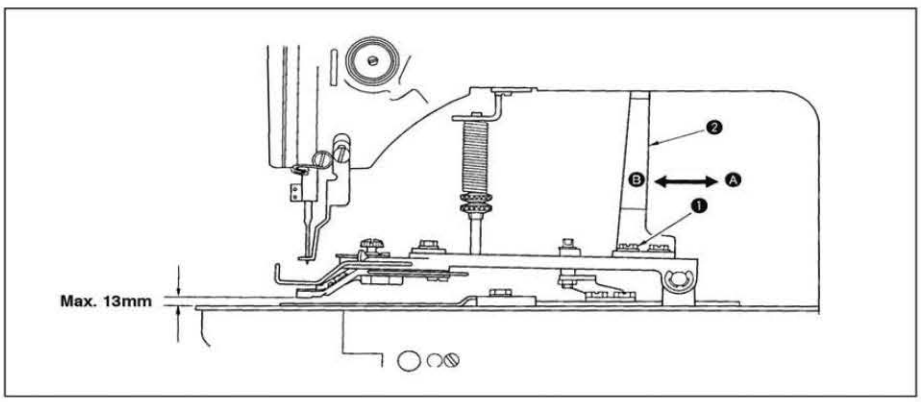
WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.



(1).In the state that the LED light off, press the key on the operation panel, choose windder state,light on.
(2).Press key, the button clamps ① go down, all the components go to the original position.
(3). Adjust the " X " sensor position, the " Y " sensor position, or the button clamps ① position, press twice key, the button clamps ① go down, confirm if the needle top is at the button center, if it isn't, continue to adjust until it's ok.
(4). At last, please confirm whenever the needle goes down, it can entre into the holes of the button(Refering to " Confirmation of Patton Shape" in the 16th. page).

[8] Adjusting the lifting amount of the button clamp

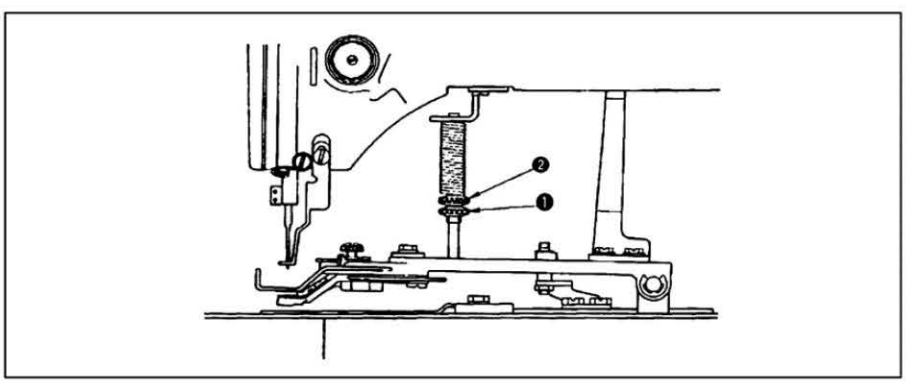
WARNING : **Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.**



Loosen two setscrews ①,and move moving plate ②back and forth in the direction of arrow to adjust. The lifting amount of the button clamp will be decreased when moving plate ②is moved in the direction "A", and be increased when it is moved in the direction of "B". After the adjustment, securely tighten setscrews①.

[9] Adjustment of the pressure of the work clamp unit

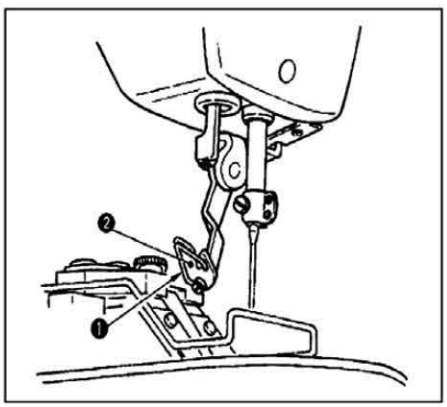
WARNING : **Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.**



The pressure of the work clamp unit should be minimized as long as the material does not warp during sewing. Loosen adjusting screw ①and turn adjusting screw ②to obtain the aforementioned pressure.

[10] Adjustment of the wiper spring

WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.



Wiper spring① retains the needle thread after thread trimming in between wiper② and the wiper spring. Correct properly the tension after wiper spring ① so that the tension at that time becomes 20 to 30 g(a little higher tension than that of the bobbin thread coming out of the bobbin case.

If the retaining of the needle thread is excessive, the thread may protrude from the upper side of the button.

[11] Each model of 1903B sewing scope

Model			1903B-301	1903B-302
Button size classification			For small-sized buttons	For medium-sized button
Outside diameter of applicable buttons（mm）			ø10 to ø20	ø10 to ø20
Sewing size (mm)	Length		0 to 3.5	0 to 4.5
	Width		0 to 3.5	0 to 4.5
Button clamp jaw lever	Thickness (mm)		2.2 (2.7)	2.2 (2.7)
	Part No.	Right	10011523	10011867
		Left	10011538	10011841
Needle hole guide			10011825	10011133
Feed plate			10011819	10011844

V . List of Error Information

Display					Error Name	Content of Error	Solution
E				7	Machine Lock Error	The main-shaft of sewing machine can't rotate due to some problem.	Turn off power and release the trouble
E			1	0	Pattern NO. Error	The prepared pattern number is not registered in ROM or it is set at unreadable. The pattern is 0.	Press RESET switch to confirm the pattern NO. Confirm the content in memory switch No.201.
E			3	0	Needle Rod Up Position Error	The needle rod is not at UP position.	Turn the hand pulley to return the needle rod to its UP position.
E			4	0	Sewing Area Over	The sewing area is over the limit.	Press RESET switch to confirm the X/Y scale rate
E			4	3	Enlargement Error	The sewing stitch is below 10mm.	Press RESET switch and confirm the pattern and X/Y scale rate.
E			4	5	Pattern Data Error	The pattern data cannot be adopted.	Power off and check the data ROM
E			5	0	Pause	Press the RESET switch while sewing machine is running. The machine pauses.	Restart or return-to-origin after pressing RESET switch for thread-trimming
E		2	2	0	Controller Abnormal	The communication with executive device is abnormal.	Turn off the power and repower the machine after a while.
E		3	0	2	Head Tilt Error	Head tilt detection switch is turned ON.	The sewing machine cannot be operated with the head tilted. Return the sewing machine head to its proper position
E		3	0	3	Connection to Main-shaft Fail	Can't detection the highest point of the sewing machine	Turn off the power, and check the connection of the X5 plug.
E		3	0	5	Thread Trimmer Position Error	Knife is not at proper position.	Turn off the power and check the CZ024 at the head signal circuit board.
E		3	0	6	Thread-catching position error	The thread-catching device is at wrong position.	Turn off the power and check the CZ026 at the head signal circuit board.
E		3	0	7	Thread-trimming Motor Position Error	The thread-trimming motor is not at the right position.	Check the thread-trimming device and thread-trimming motor to make sure it has no blockage.
E		7	3	0	Encoder error	The Encoder of main-shaft Motor is no signal	Check the cable of main-shaft motor

E		7	3	1	Stepping Board Error	Stepping Board can not execution command	Check the x, y stepping-motor cable
E		7	3	3	Motor Reverse	Motor Reverse	Turn off the power and check the coupling of the main-shaft motor.
E		8	1	1	Overvoltage Error	The voltage of power is over the specified value.	Confirm the voltage of power
E		8	1	3	Low Voltage Error	The voltage of power is too low.	Confirm the voltage of power.
E		9	0	1	Motor driver abnormal	The error is detected in motor driver.	Turn off the power and repower the machine after a while.
E		9	0	3	Power Supply of Pulse Motor Error	Power supply of the pulse motor is not output	Turn off the power and repower the machine after a while.
E		9	0	4	Solenoid Power Supply Error	Power supply of the solenoid cannot output	Turn off the power and repower the machine after a while.
E		9	0	7	X Origin Search Error	X origin sensor doesn't change.	Turn off power and check the connections of CZ021 on head signal circuit board and X9 on control box.
E		9	0	8	Y Origin Search Error	Y origin sensor doesn't change.	Turn off power and check the connections of CZ022 on head signal circuit board and X9 on control box.
E		9	1	0	Presser Origin Search Error	Presser origin sensor doesn't change.	Turn off power and check the connections of CZ025 on head signal circuit board and X9 on control box.
E		9	1	1	Y Direction Motor Busy	Y motor doesn't make action according to order	Check the stepping motor in Y direction.
E		9	1	2	X Direction Motor Busy	X motor doesn't make action according to order	Check the stepping motor in X direction.
E		9	1	3	Thread-catching Origin Search Error	Thread-catching origin sensor doesn't change.	Turn off power and check the connections of CZ026 on head signal circuit board and X9 on control box.
E		9	1	4	Transmission Error	Time lag exist between cloth-feeding motor and main-shaft motor	Turn off the power and repower the machine after a while.
E		9	1	6	Communication Error between Main-board and Stepping Board	Communication between Main-board and Stepping Board is down.	Turn off the power and repower the machine after a while.
E		9	9	9	Abnormal status	More than one part of machine has problem.	Make sure no sensor is plugged reversely.
No Display					Plug Take-off	The voltage of power doesn't meet standard. The plug is take-off.	Turn off power and check the connections of power plug and X7 plug on control box.

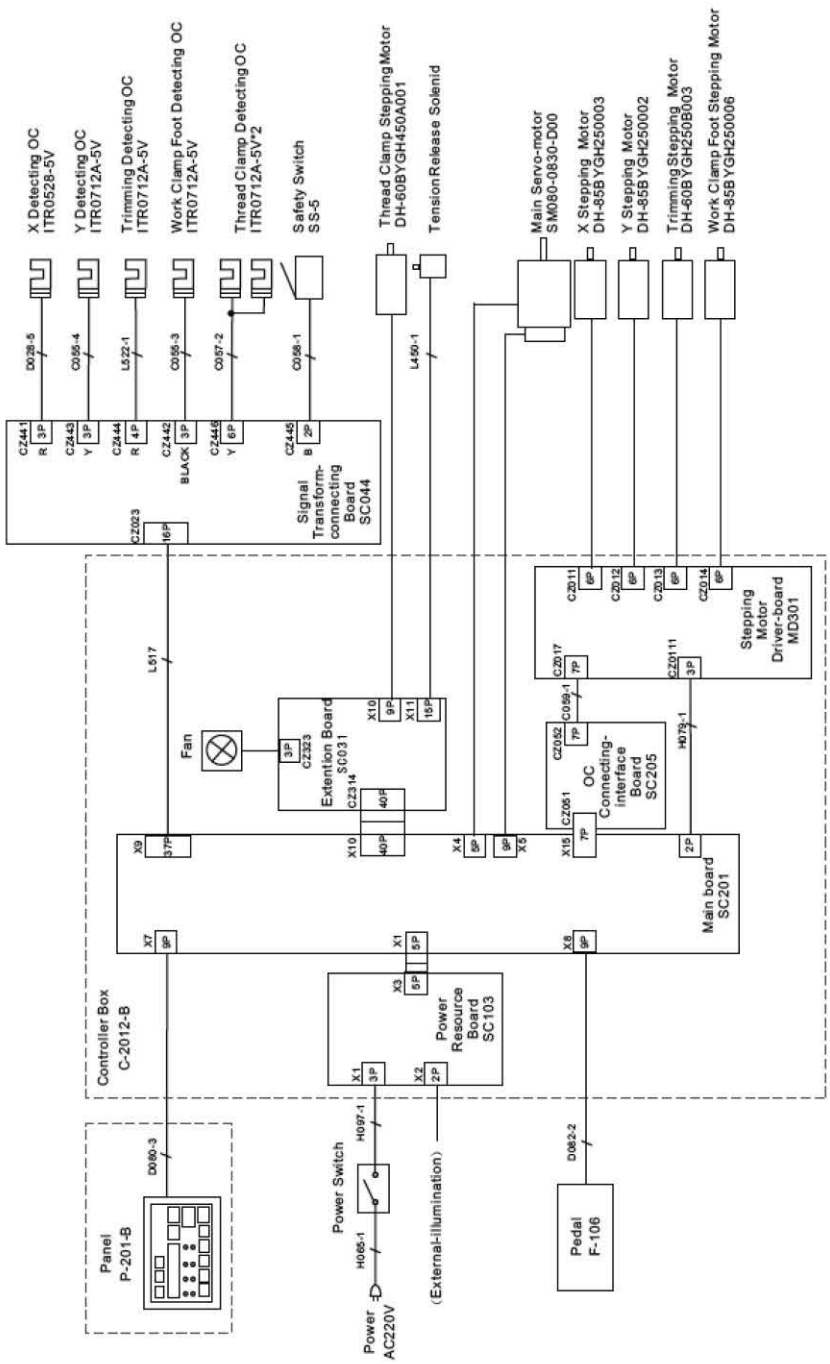
Ⅵ.Troubles and corrective measures (sewing conditions)

Trouble	Cause	Corrective measures
1.The needle thread slips off at the start of bar-tacking	① Stitches are slipped at the start ② The needle thread remaining on the needle after thread trimming is too short. ③ The bobbin thread is too short. ④ Needle thread tension at 1st stitch is too high. ⑤Thread clamp is unstable(material is apt to be expanded. Thread is hard to slide, thread is thick, etc.) ⑥ Pitch at 1st stitch is too small.	○ Adjust the clearance between the needle and the shuttle to 0.05 to 0.1mm. ○ Set soft-start sewing at the start of bartacking. ○ Correct the thread tension release timing of the thread tension controller No.2. ○ Increase the tension of the thread take-up spring, or decrease the tension of the thread tension controller No.1. ○ Decrease the tension of the bobbin thread. ○ Increase the clearance between the needle hole guide and the counter knife. ○ Decrease the tension at 1st stitch. ○ Decrease the number of rotation at 1st stitch at the sewing start.(Extent of 600to 1000rpm) ○ Increase the number of stitches of thread clamp to 3to 4stitches. ○ Make the pitch at 1st stitch longer. ○ Decrease the needle thread tension at 1st stitch.
2.Thread often breaks or synthetic fiber thread splits finely.	①The shuttle or the driver has scratches. ②The needle hole guide has scratches. ③The needle strikes the work clamp foot. ④Fibrous dust is in the groove of the shuttle race. ⑤The needle thread tension is too high. ⑥The synthetic fiber thread take-up spring is too high. ⑦The synthetic fiber thread melts due to heat generated on the needle.	○Take it out and remove the scratches using a fine whetstone or buff. ○Buff or replace it. ○Correct the position of the work clamp foot. ○Take out the shuttle and remove the fibrous dust from the shuttle race. ○Reduce the needle thread tension. ○Reduce the tension. ○Use silicone oil .
3.The needle often breaks.	①The needle is bent. ②The needle hits the work clamp foot. ③The needle is too thin for the material. ④the driver excessively bends the needle. ⑤Needle thread is stepped	○Replace the bent needle. ○Correct the position of the work clamp foot. ○Replace it with a thicker needle according to the material. ○Correctly position the needle caaording to the material. ○Widen the distance between the needle and the wiper.(23 to 25mm)

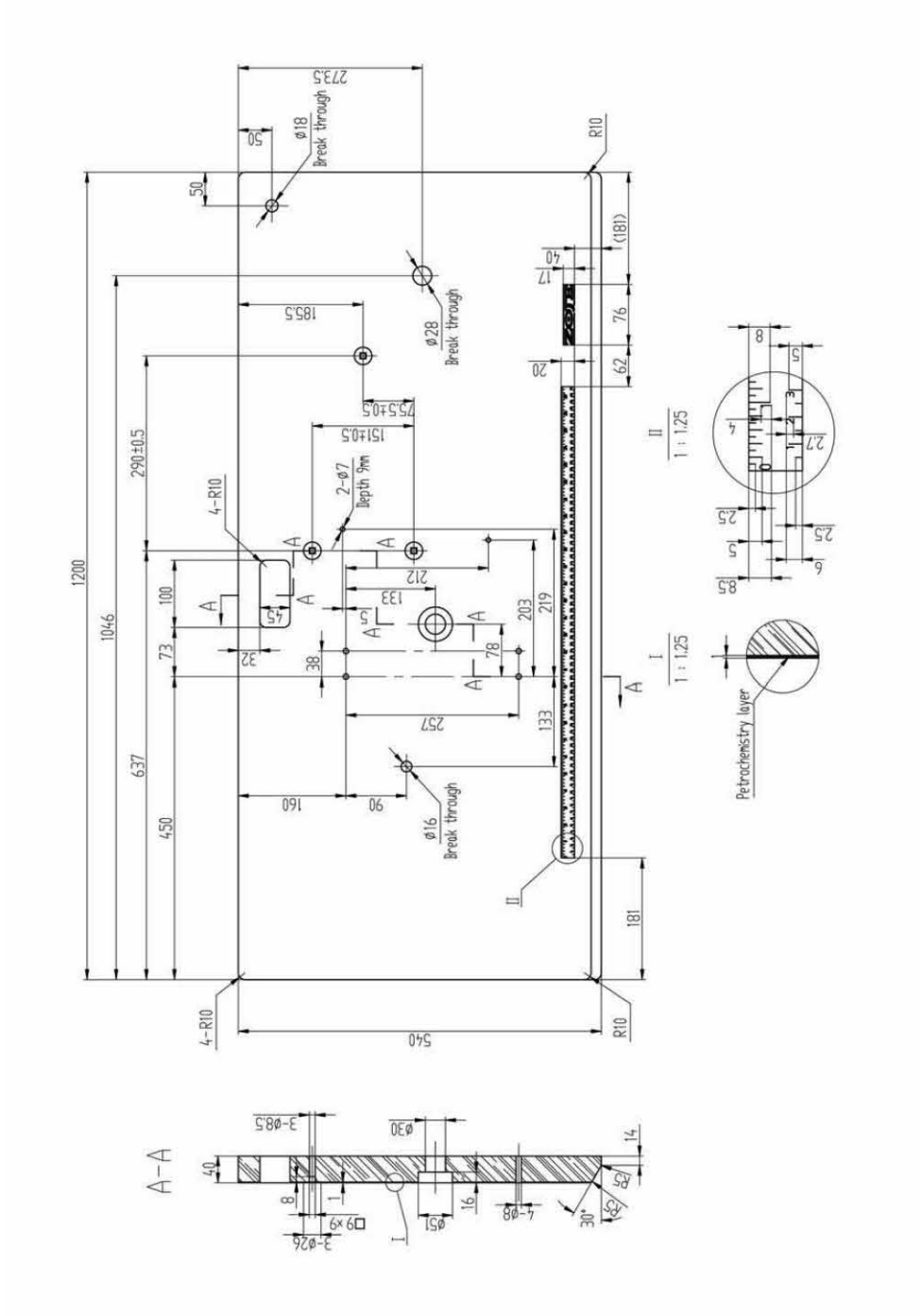
	on by the work clamp foot at the start of sewing (Needle bend)	
4. Threads are not trimmed.	①The counter knife is dull. ②The difference in level between the needle hole guide and the counter knife is not enough. ③The moving knife has been improperly positioned. ④The last stitch is skipped. ⑤Bobbin thread tension is too low.	○Replace the counter knife. ○Increase the bend of the counter knife. ○Correct the position of the moving knife. ○Correct the timing between the needle and the shuttle. ○In crease the bobbin thread tension.
5.Stitch skipping often occurs.	①The motions of the needle and shuttle are not properly synchronized. ②The clearance between the needle and shuttle is too large. ③The needle is bent. ④The driver excessively bends the needle.	○Correct the positions of the needle and shuttle. ○Correct the positions of the needle and shuttle. ○Replace the bent needle. ○Correctly position the driver.
6.The needle thread comes out on the wrong side of the material	①the needle thread tension is not high enough. ②The tension release mechanism fails to work properly. ③The needle thread after thread trimming is too long. ④Number of stitches is too few. ⑤When sewing length is short(End of needle thread protrudes on the wrong side of sewing product.) ⑥Number of stitches is too few.	○Increase the needle thread tension. ○Check whether or not the tension disc No.2 is released during bar-tracking. ○Increase the tension of the thread tension controller No.1. ○Correct the position of the moving knife. ○Turn OFF the thread clamp. ○Turn OFF the thread clamp. ○Use the lower plate,the hole of which is larger than the presser.

Trouble	Cause	Corrective measures
7.Threads break at time of thread trimming	①The moving knife has been improperly position。	○Correct the position of the moving knife.
8.The thread clamp is entangled with needle thread	①The needle thread at the sewing start is too long.	○Tighten thread tension controller No.1 and make the length of needle thread 33 to 36mm.
9.Uneven length of the needle thread	①The tension of thread take-up spring is too low.	○Increase the tension of the thread take-up spring.
10.The length of needle thread does not become short	①The tension of thread tension controller No.1 is too low.。 ②The tension of thread take-up spring is too high。 ③The tension of thread take –up spring is too low and motion is unstable.	○Increase the tension of thread tension controller No.1. ○Decrease the tension of thread take-up spring. ○Increase the tension of thread take-up spring and lengthen the stroke as well.
11.The knotting section of bobbin thread at 2 nd stitch at the sewing start appears on the right side.	①Idling of bobbin is large. ②The bobbin thread tension is too low. ③The needle thread tension at 1 st stitch is high.	○Adjust the position of the moving knife. ○Increase the bobbin thread tension. ○Decrease the needle thread tension at 1 st stitch. ○Turn OFF the thread clamp.

Ⅶ.System Diagram



Ⅷ.DRAWING OF THE TABLE



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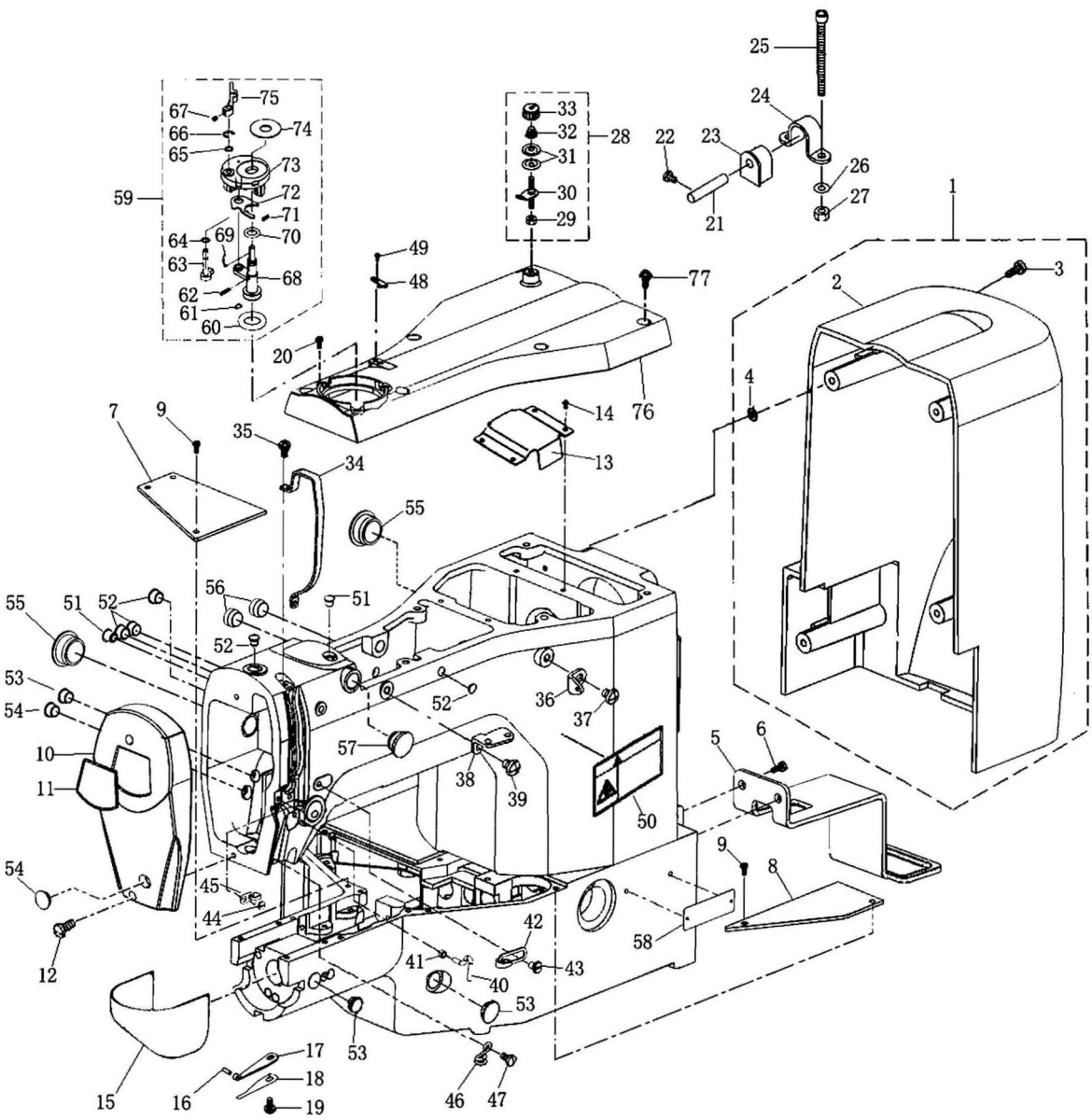
1.FRAME&MISCELLANEOUS CPVER COMPONENTS

机壳部件



1、机壳部件FRAME&MISCELLANEOUS COVER COMPONENTS

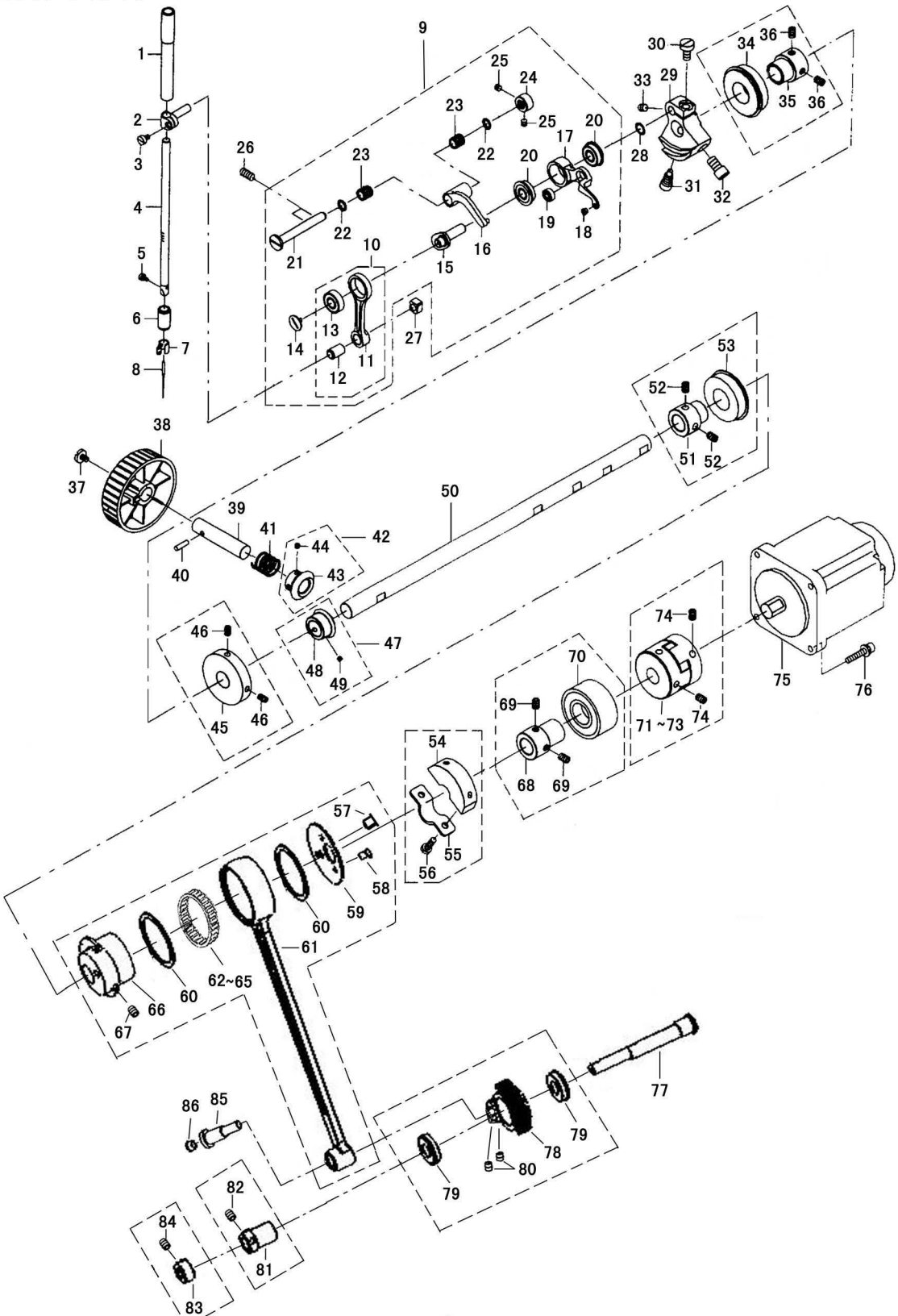
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	20006929	后罩组件	MOTOR COVER ASM	1
2	20004107	后罩	MOTOR COVER	1
3	10011101	螺钉	SCREW	4
4	10011135	垫片	STOPPER	4
5	10008600	电线固定板	PROTECTION_PLATE	1
6	10011101	螺钉	SCREW	2
7	20004112	左盖板	BED COVER LEFT	1
8	20004113	右盖板	BED COVER RIGHT	1
9	10011142	螺钉	SCREW	5
10	20004104	面板	FACE COVER	1
11	10005468	面板装饰牌	PLATE	1
12	10011150	螺钉	SCREW	2
13	10014301	大连杆防护罩	CRANK_ROD_COVER	1
14	10010668	螺钉	SCREW	4
15	20001911	梭床罩	CYLINDER ARM CAP	1
16	10010815	销	PIN	1
17	10011420	梭床罩弹簧A	HOOK COVER PRESSER SPRING A	1
18	10010807	梭床罩弹簧B	HOOK COVER PRESSER SPRING B	1
19	10010808	螺钉	SCREW	1
20	10011101	螺钉	SCREW	3
21	10011141	销	PIN	2
22	10011232	螺钉	SCREW	2
23	10011137	机头胶垫	HINGE RUBBER	2
24	10011160	支撑固定架	BED HINGE	2
25	10011147	螺钉	SCREW	4
26	10003076	垫圈	WASHER	4
27	10003084	螺母	NUT	8
28	10011595	绕线夹线器	BOBBIN THREAD TENSION ASM	1
29	10004507	螺母	NUT	1
30	10004504	中过线板组件	BOBBIN THREAD TENSION ROD ASM	1
31	10004393	夹线板	THEAD TENSION DISK	2
32	10004391	弹簧	CONNECTING ROD SPRING	1
33	10004686	螺母	NUT	1
34	20003790	挑线杆防护罩	BALANGE COVER	1
35	10011143	螺钉	SCREW	2
36	10011145	单眼过线板	THREAD GUIDE NO.1	1
37	10011158	螺钉	SCREW	1
38	10011200	上过线板	THREAD GUIDE PLATE	1
39	10011158	螺钉	SCREW	1
40	10011159	拦线钩	L-SHAPEDTHREAD GUIDE A	1
41	10011140	螺母	NUT	1
42	10008940	右线钩	ARM THREAD GUIDE A	1
43	10011142	螺钉	SCREW	1
44	10011142	螺钉	SCREW	1
45	10014281	中线钩	TAKE-UP THREAD GUIDE B	1
46	10011139	下过线钩	ARM THREAD GUIDE B	1
47	10010668	螺钉	SCREW	1
48	10011149	绕线切刀	THREAD CUTTER	1
49	10011143	螺钉	SCREW	1
50	10008936	机头安全提示牌	SAFETY LABEL	1

1、机壳部件FRAME&MISCELLANEOUS COVER COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
51	10011188	橡胶塞	RUBBER PLUG	2
52	10010587	橡胶塞	RUBBER PLUG	5
53	10011136	橡胶塞	RUBBER PLUG	4
54	10011099	橡胶塞	RUBBER PLUG	2
55	10011146	橡胶塞	RUBBER PLUG	2
56	10014279	橡胶塞	RUBBER PLUG	2
57	10011190	橡胶塞	RUBBER PLUG	1
58	10007967	型号牌	MACHINE COVER	1
59	20002101	绕线器	BOBBIN WINDER ASM	1
60	10004684	橡胶轮	RUBBER RING	1
61	10006142	挡圈	RETAINING RING	1
62	10004501	弹簧	SPRING	1
63	10006151	绕线定位块	BOBBIN WINDER REGULATOR	1
64	10004486	垫圈	WASHER	1
65	10004486	垫圈	WASHER	1
66	10013038	挡圈	E-RING	1
67	10000735	螺钉	SCREW	1
68	10004383	摆动板	BOBBIN WINDER SHAFT COMPL	1
69	10009937	弹簧	LATCH SPRING	1
70	10004485	O型圈	RUBBER RING	1
71	10004494	弹簧	SPRING	1
72	10004497	控制板	ADJUSTING PLATE	1
73	10011096	梭心卷绕体组件	BOBBIN FITING BASIS COMPL	1
74	10004498	卷绕轴垫	CUSHING	1
75	10000736	卷绕手柄	BOBBIN LEVER	1
76	20004106	上盖	TOP COVER	1
77	10011161	螺钉	SCREW	6

2.MAIM SHAFT&NEEDLE BAR COMPONENTS

挑线刺布部件



2、挑线刺布部件MAIN SHAFT & NEEDLE BAR COMPONENTS

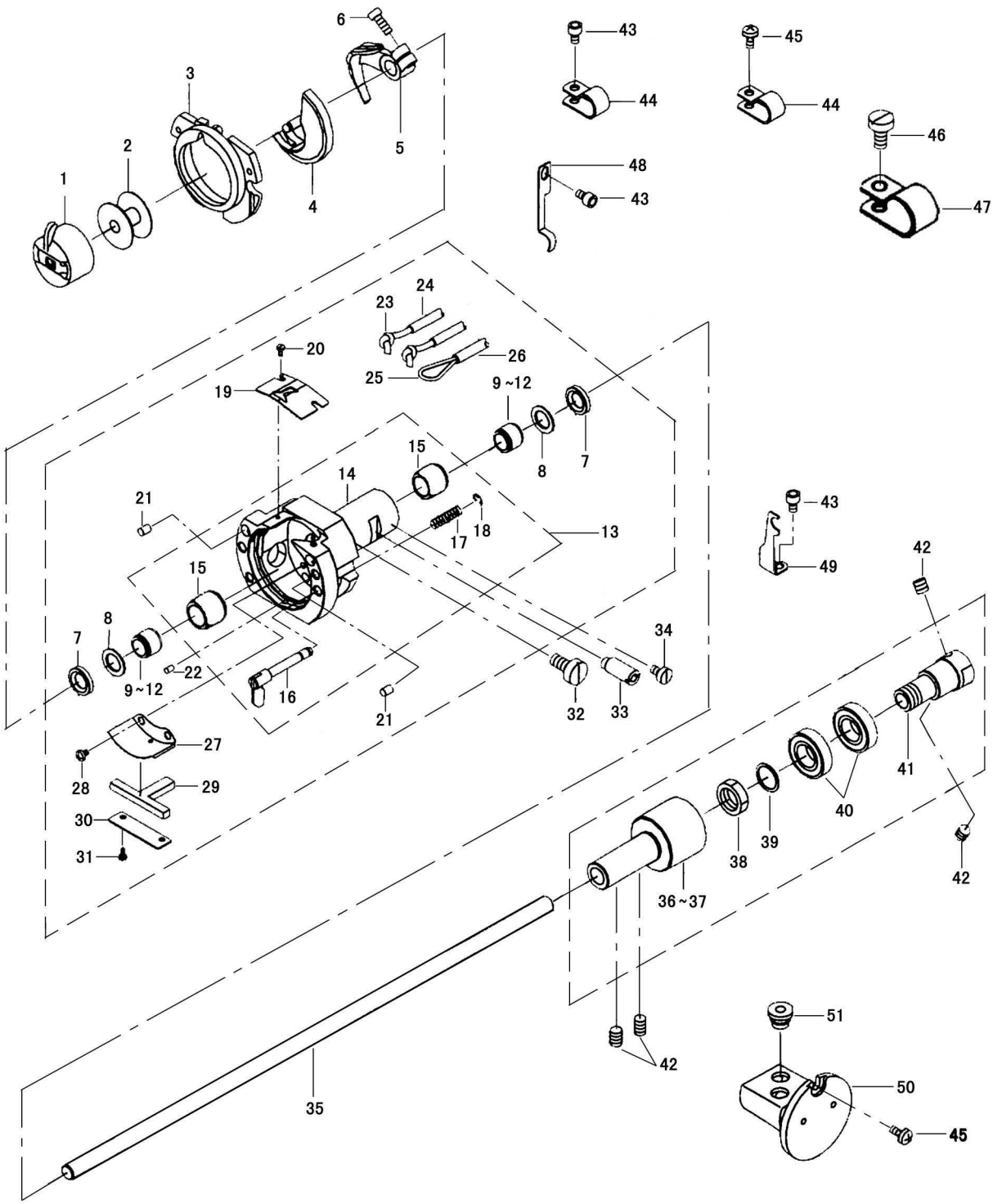
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10023528	轴套	NEEDLE ROD METAL	2
2	10010590	针杆连接柱	NEEDLE BAR CONNECTING COLUMN	2
3	10010643	螺钉	SCREW	1
4	10014277	针杆	NEEDLE BAR	1
5	10011699	螺钉	SCREW	1
6	10023529	轴套	NEEDLE ROD LOWER METAL	1
7	10011701	针杆线钩	THREAD GUIDE	1
8	10023286	机针	NEEDLE DP×5 #16	1
9	10021602	挑线杆组件	THREAD TAKE UP COMPL	1
10	10007983	针杆连杆组件	NEEDLE BAR CRANK BOD ASM	1
11	10007986	针杆连杆	NEEDLE BAR CRANK ROD	1
12	10005793	针杆连杆轴套	NEEDLE BAR CRANK BOD METAL	1
13	10009777	轴承	BEARING	1
14	10010537	螺钉	SCREW	1
15	10008014	挑线曲柄	NEEDLE BAR CRANK	1
16	10007987	挑线连杆	THREAD TAKE UP CRANK	2
17	10007985	挑线杆	THREAD TAKE UP LEVER	1
18	10004161	挑线杆过线套	THREAD PASS BUSH	1
19	10003533	轴承	BEARING	1
20	10009776	轴承	BEARING	2
21	10007984	挑线连杆销	BALANCE CRANK PIN	1
22	10005786	挡圈	THRUST COLLAR	2
23	10005747	轴承	BEARING	2
24	10005745	挡圈	THRUST COLLAR	1
25	10004482	螺钉	SCREW	2
26	10011232	螺钉	SCREW	2
27	10011194	针杆连接柱滑块	SQUARE BLOCK	1
28	10011622	挡圈	THRUST COLLAR	1
29	10014283	针杆曲柄	COUNTER EIGHT	1
30	10014272	螺钉	SCREW	1
31	10014282	螺钉	SCREW	1
32	10014284	螺钉	SCREW	1
33	10011232	螺钉	SCREW	1
34	10003467	轴承	BEARING	1
35	10014280	上轴前轴套	BEARING BUSH A	1
36	10010678	螺钉	SCREW	2
37	10011225	螺钉	SCREW	1
38	10011603	手轮	PULLEY	1
39	10011231	手轮轴	HAND PULLEY SHAFT	1
40	10006073	销	PIN	1
41	10011242	弹簧	SPRING	1
42	10021312	弧齿锥齿轮组件_手轮轴	GEAR ASM.	1
43	10011235	齿轮	GEAR	1
44	10011226	螺钉	SCREW	2
45	10002392	绕线主动轮	BTW DRIVING WHEEL	1
46	10011223	螺钉	SCREW	2
47	10027407	上轴齿轮组件	GEAR ASM.	1
48	10002413	齿轮	GEAR	1
49	10011226	螺钉	SCREW	2
50	10014278	上轴	MAIN SHAFT	1

2、挑线刺布部件MAIM SHAFT & NEEDLE BAR COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
51	10014362	轴承衬套	BEARING BUSH B	1
52	10010678	螺钉	SCREW	2
53	10003547	轴承	BEARING	1
54	10014337	上轴平衡轮	CRANK BALANCER	1
55	10014332	上轴平衡轮固定板	CRANK BALANCER FIX PLATE	1
56	10011644	螺钉	SCREW	2
57	10014266	橡胶塞	PUBBER PLUG	1
58	10009626	螺钉	SCREW	3
59	10014268	大连杆滚针轴承盖板	CRANK ROD SUPPORT PLATE	1
60	10014269	挡圈	THRUST COLLAR	2
61	10014270	大连杆	CRANK ROD	1
62	10023508	轴承	BEARING	1
63	10023509	轴承	BEARING	1
64	10023510	轴承	BEARING	1
65	10023511	轴承	BEARING	1
66	10014265	偏心轮	ECCENTRIC WHEEL	1
67	10009187	螺钉	SCREW	2
68	10014264	上轴后轴承套	BEARING BUSH C	1
69	10010678	螺钉	SCREW	2
70	10025863	轴承	BEARING	1
71	10012613	联轴器	COUPLING	1
72	10011227	传动连接橡胶块	RELAX	1
73	10012615	联轴器	COUPLING	1
74	10009187	螺钉	SCREW	4
75	10024981	上轴电机	AC SERVO MOTOR	1
76	10000157	螺钉	SCREW	4
77	10008551	销	PIN	1
78	10008790	齿轮	GEAR	1
79	10003533	轴承	BEARING	2
80	10011232	螺钉	SCREW	2
81	10025296	挡圈	THRUST COLLAR	1
82	10013590	螺钉	SCREW	2
83	10004600	挡圈	THRUST COLLAR	1
84	10013590	螺钉	SCREW	2
85	10014333	销	PIN	1
86	10011188	橡胶塞	PUBBER PLUG	1

3.SHUTTLE DRIVER SHAFT COMPONENTS

下轴部件

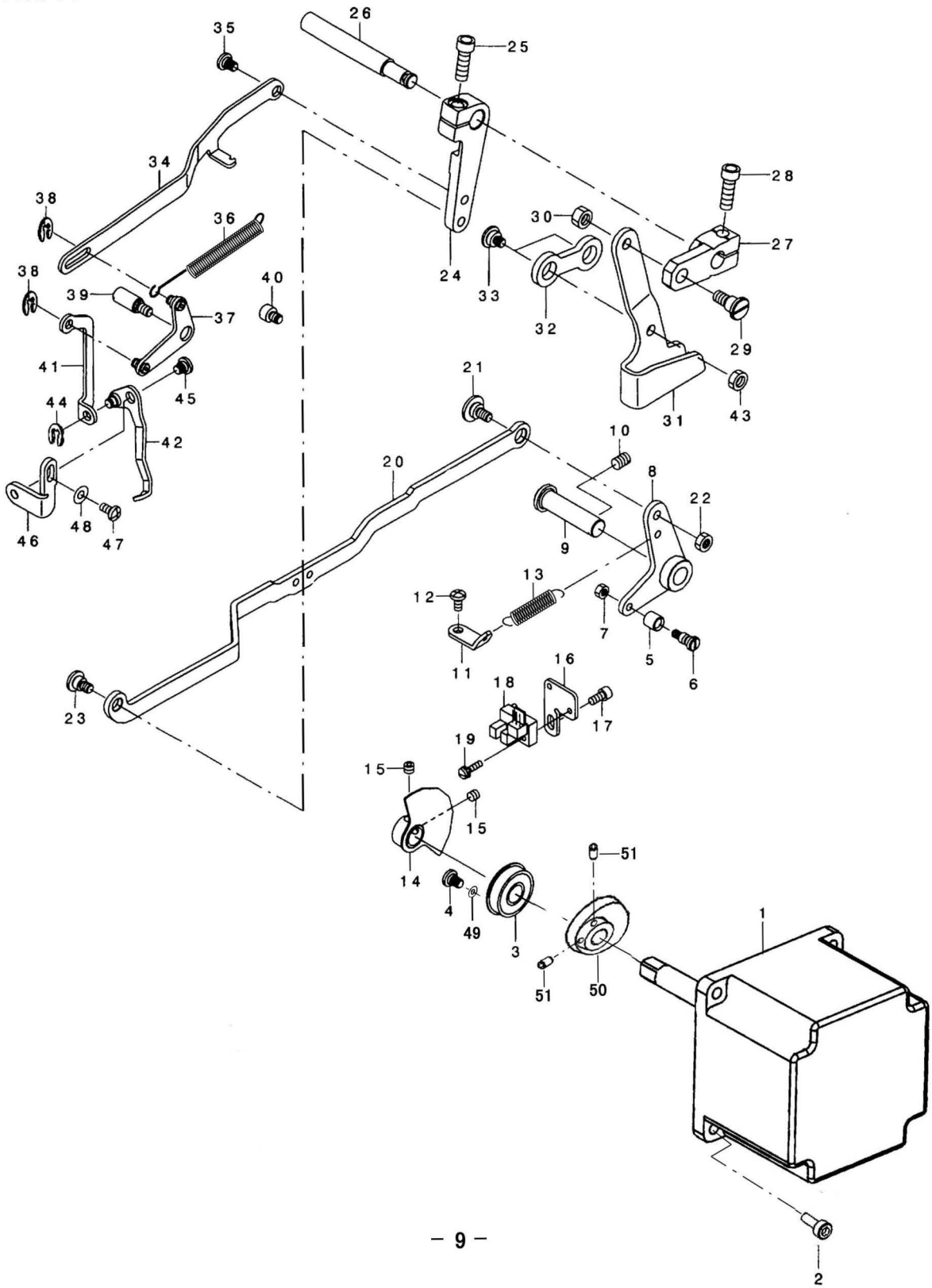


3、下轴部件SHUTTLE DRIVER SHAFT COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10003781	梭壳	BOBBIN CASE ASM	1
2	10004592	锁芯	BOBBIN	1
3	10010738	梭床盖组件	SHUTTLE RACE RING ASM	1
4	10025068	摆梭	INNER HOOK	1
5	10004609	摆梭托	SHUTTLE DRIVER	1
6	10004611	螺钉	SCREW	1
7	10014297	油封	SHUTTLE OIL SEAL	2
8	10014295	挡圈	SHUTTLE BEARING RING	2
9	10023516	轴承	BEARING	2
10	10023517	轴承	BEARING	2
11	10023518	轴承	BEARING	2
12	10023519	轴承	BEARING	2
13	10022792	梭床小组件	SHUTTLE ASM.	1
14	10014248	梭床	SHUTTLE	1
15	10008576	梭床衬套	SHUTTLE BUSH	1
16	10004261	梭床锁紧钩组件	INNER HOOK PRESSER ASM.	2
17	10004495	弹簧	SPRING	2
18	10009669	挡圈	E-RING	2
19	10004596	梭床簧	SHUTTLE UPPER SPRING	1
20	10010744	螺钉	SCREW	2
21	10011077	毛毡	SHUTTLE OIL FELT	2
22	10011427	毛毡	SHUTTLE OIL FELT	1
23	10008103	油线	OIL WICK	2
24	10007795	油管	VINYL PIPE	2
25	10008103	油线	OIL WICK	1
26	10007795	油管	OIL TUBE	1
27	10007926	油线夹板	SHUTTLE LUBRICATING PLATE	1
28	10010797	螺钉	SCREW	2
29	10010800	毛毡	SHUTTLE ONCE THROUGH OIL FELT	1
30	10010799	毛毡压板	ONCE THROUGH OIL LFELT PRESSER	1
31	10010744	螺钉	SCREW	2
32	10010817	螺钉	SCREW	1
33	10011426	螺钉	SCREW	1
34	10011425	螺钉	SCREW	1
35	10014336	下轴	LOWER SHAFT	1
36	10023514	齿轮套	GEARED SLEEVE A	1
37	10023515	齿轮套	GEARED SLEEVE B	1
38	10014335	螺母	NUT	1
39	10014330	垫圈	WASHER	1
40	10012777	轴承	BEARING	2
41	10014329	齿轮	GEARED	1
42	10011232	螺钉	SCREW	4
43	10010685	螺钉	SCREW	3
44	10008228	SN-3A夹头	CABLE CLIP	3
45	10012892	螺钉	SCREW	3
46	10011101	螺钉	SCREW	1
47	10008229	SL-12N夹头	CABLE CLIP	1
48	10014294	油管限位板	OIL_PIPE HOLDER	1
49	10014288	油管限位板	TUBE_CLAMP	1
50	10021601	油窗组件	OIL TANK ASM.	1
51	10014296	油塞	RUBBER BUSH	2

4.WIPER MECHANISM COMPONENTS

扫线部件

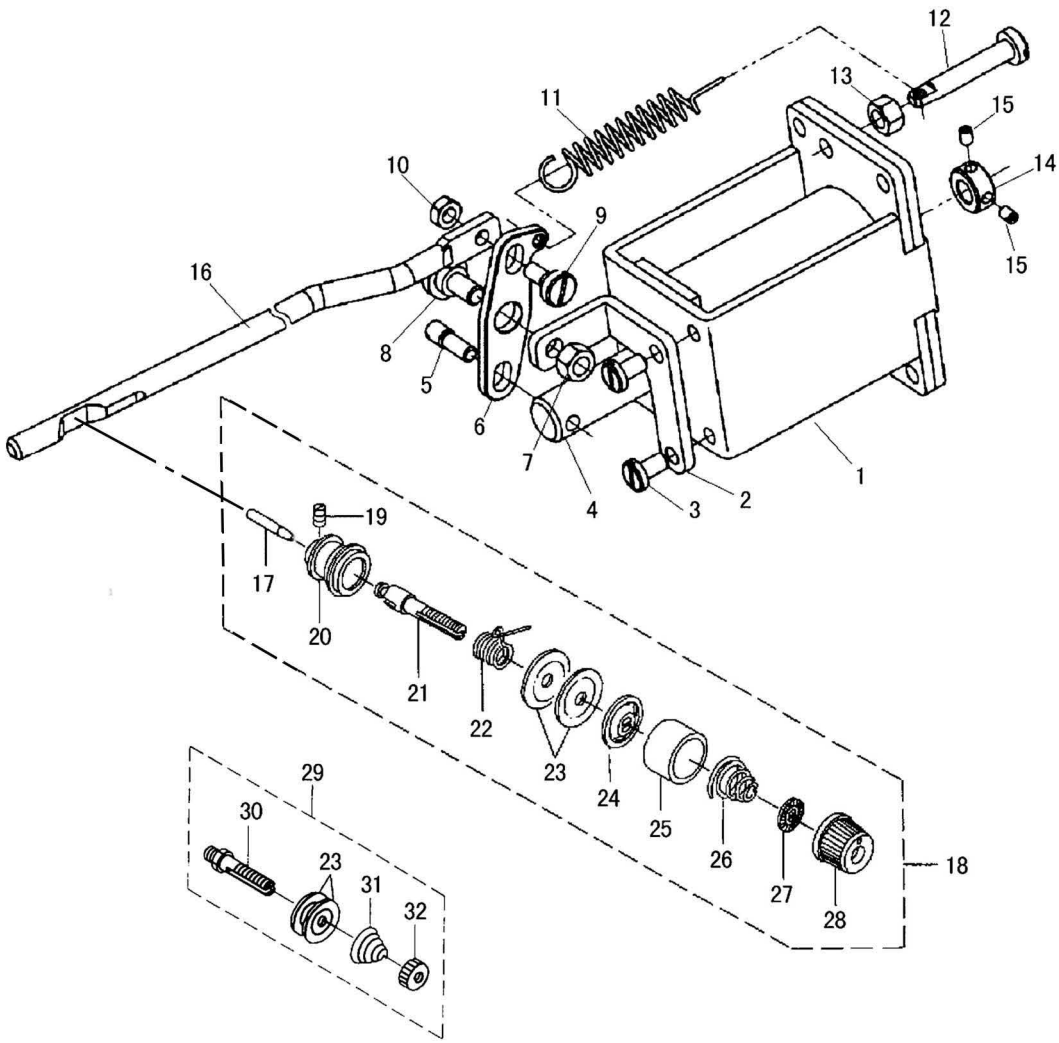


4、扫线部件WIPE MECHANISM COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10024982	抬压电机	PRESSER LIFTING MOTOR	1
2	10011644	螺钉	SCREW	4
3	10003601	轴承	BEARING	1
4	10010668	螺钉	SCREW	1
5	10028245	销套	NEEDLE CAM ROLLER A	1
6	10014342	销	UTT CAM ROLLER SHAFT	1
7	10014354	螺母	NUT	1
8	10007998	抬压曲柄组件	LIFTER LINK A ASM	1
9	10014289	抬压曲柄轴	THREAD TRIMMER SHAFT	1
10	10011232	螺钉	SCREW	1
11	10014343	拉板	SIDE COVER THREAD GUIDE	1
12	10012892	螺钉	SCREW	1
13	10014356	弹簧	SPRING	1
14	10014293	抬压电机传感片组件	SENSOR SLIT	1
15	10011518	螺钉	SCREW	2
16	10014291	抬压传感器安装板	SENSOR_INSTALLING_BASE	1
17	10010668	螺钉	SCREW	1
18	10026622	抬压传感器	PHOTO SENSOR	1
19	10010667	螺钉组件	SCREW	1
20	10014351	抬压拉杆	LIFTER LINK B	1
21	10014344	螺钉	SCREW	1
22	10010725	螺母	NUT	1
23	10025297	螺钉	SCREW	1
24	10010679	拨线曲柄	CONNECTING ARM	1
25	10010735	螺钉	SCREW	1
26	10011914	曲柄轴	CONNECTING SHAFT	1
27	10014340	抬压驱动曲柄	LOWERING ARM	1
28	10010735	螺钉	SCREW	1
29	10010674	螺钉	SCREW	1
30	10010725	螺母	NUT	1
31	10014355	抬压传动板	LOWERING FOOT	1
32	10010684	抬压脚定位连杆	CONNECTING LINK	1
33	10010727	螺钉	SCREW	2
34	10014346	扫线调节杆	WIPER CONNECTING LINK	1
35	10004594	螺钉	SCREW	1
36	10004604	弹簧	SPRING	1
37	10014352	扫线连接板组件	WIPER_CONNECTING_ARM_ASM	1
38	10009653	卡簧	RETAINING RING	2
39	10004601	螺钉	SCREW	1
40	10014345	螺钉	SCREW	1
41	10014353	扫线拉板	WIPER_CONNECTING_PLATE	1
42	10014348	扫线杆组件	WIPER C ASM	1
43	10010725	螺母	NUT	1
44	10009653	卡簧	RETAINING RING	1
45	10004593	螺钉	SCREW	1
46	10014341	扫线杆固定架	WIPER BASE PLATE	1
47	10004593	螺钉	SCREW	1
48	10009653	垫圈	WASHER	1
49	10010741	垫圈	WASHER	1
50	10014287	抬压凸轮	LIFT TO PRESS THE CAM	1
51	10011232	螺钉	SCREW	2

5.TENSION RELEASE&THREAD TENSION COMPONENTS

松线部件

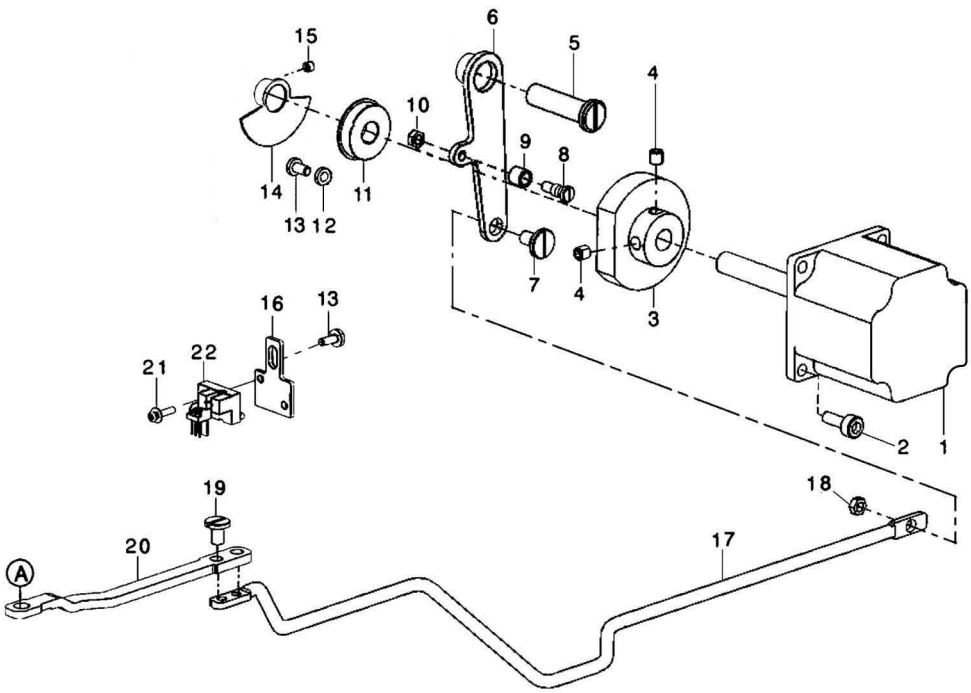


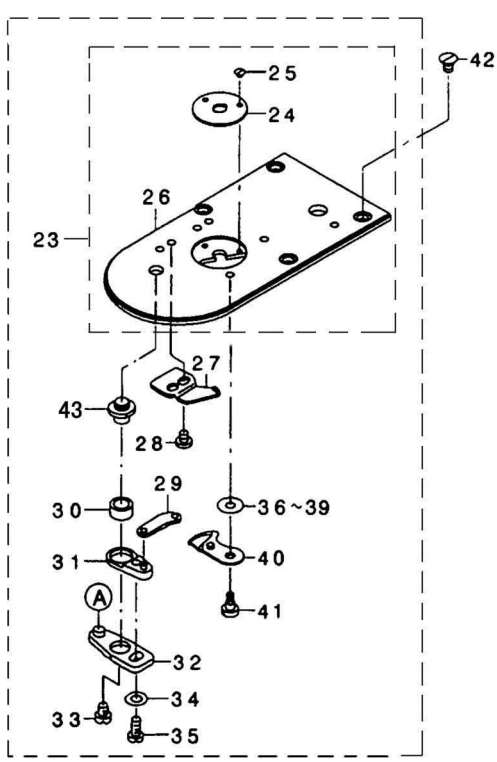
5、松线部件TENSION RELEASE&THREAD TENSION COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10008005	松线电磁铁线圈	LOOSE WIRE SOLENOID COIL	1
2	10014319	松线曲柄架	PINE LINE CRANK FRAME	1
3	10010668	螺钉	SCREW	2
4	10008029	松线电磁铁芯轴	PINE LINE SOLENOID MANDREL	1
5	10014320	螺钉	SCREW	1
6	10014316	松线曲柄	SONG LINE CRANK	1
7	10010133	螺母	NUT	1
8	10014317	螺钉	SCREW	1
9	10014299	螺钉	SCREW	1
10	10002076	螺母	NUT	1
11	10014356	弹簧	SPRING	1
12	10014323	螺钉	SCREW	1
13	10010133	螺母	NUT	1
14	10008025	挡圈	THRUST COLLAR	1
15	10002853	螺钉	SCREW	2
16	10008007	松线杆	TENSION RELEASE BAR	1
17	10008026	松线钉	TENSION RELEASE PIN	1
18	10014327	夹线器组件	SECOND THREAD TENSION ASM	1
19	10004632	螺钉	SCREW	1
20	10004631	夹线器座	THREAD TENSION ROD, LARGE	1
21	10004612	螺钉	SCREW	1
22	10004624	弹簧	SPRING	1
23	10004393	夹线板	THREAD TENSION DISK	4
24	10004625	松线板	THREAD TENSION DISK PRESSER	1
25	10004598	夹线簧座	THREAD TENSION DISK PRESSER	1
26	10004626	弹簧	SPRING	1
27	10004633	夹线制动板	ROTATING STOPPER	1
28	10004783	夹线螺母	THREAD TENSION NUT	1
29	10011493	夹线组件	FIRST THREAD TENSION ASM	1
30	10004666	螺钉	SCREW	1
31	10004669	弹簧	SPRING	1
32	10004664	夹线螺母	TENSION NUT	1

6.TENSION PELEASE&THREAD TRIMMER MEOHANISM COMPONENTS

剪线部件



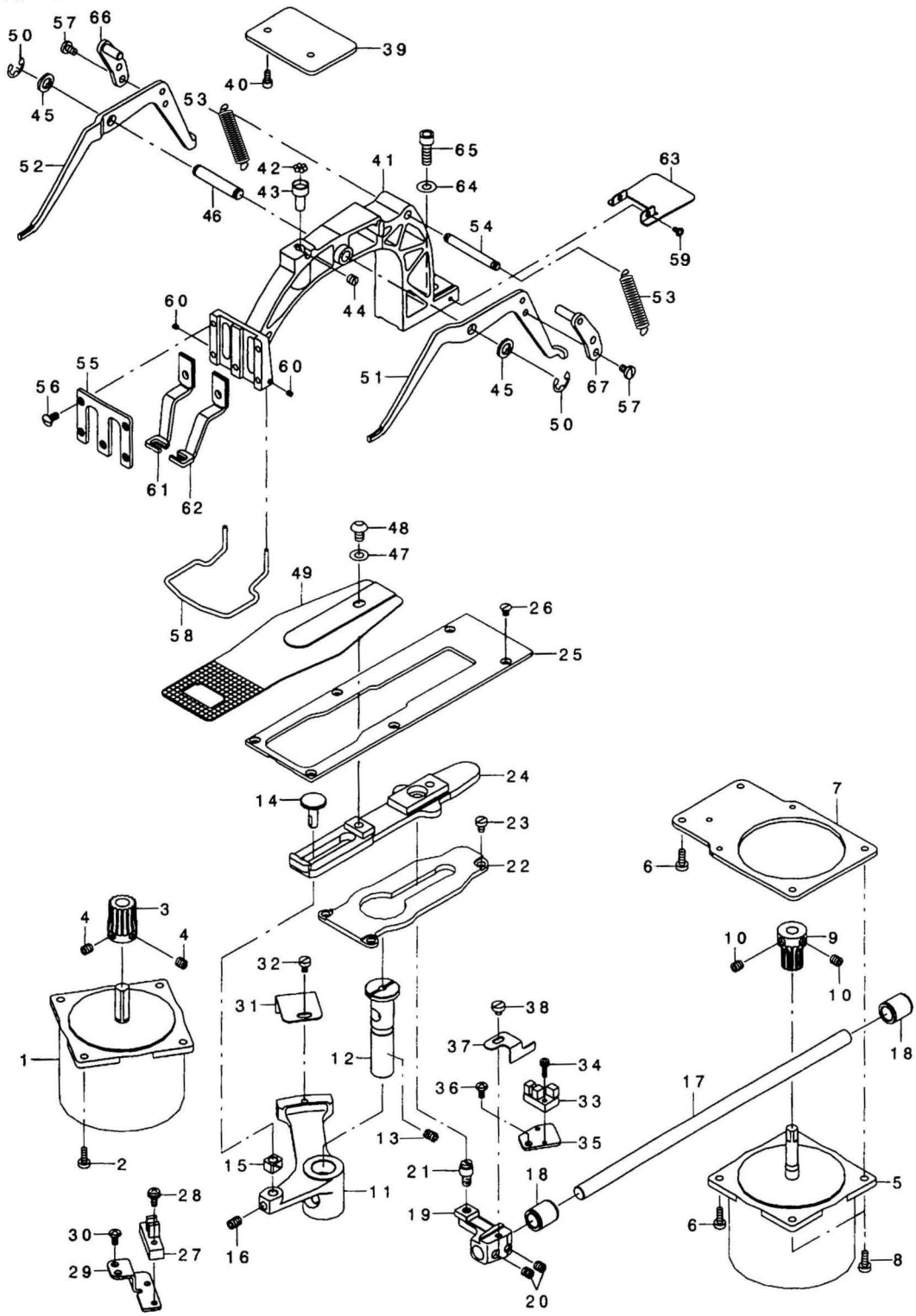


6、剪线部件THREAD TRIMMER MECHANISM COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10024983	剪线电机	SHEAR-LINE MOTOR	1
2	10011644	螺钉	SCREW	4
3	10014347	剪线凸轮	TRIMMING CAM	1
4	10011232	螺钉	SCREW	2
5	10014289	抬压曲柄轴	THREAD TRIMMER SHAFT	1
6	10014339	剪线曲柄组件	THREAD TRIMMER LINK	1
7	10014344	螺钉	SCREW	1
8	10014342	销	PIN	1
9	10028245	销套	PIN SET	1
10	10014354	螺母	NUT	1
11	10003601	轴承	BEARING	1
12	10010741	垫圈	WASHER	1
13	10010668	螺钉	SCREW	2
14	10024630	剪线电机传感片组件	SENSOR SLIT ASM	1
15	10011518	螺钉	SCREW	2
16	10014350	剪线传感器安装板	SHRAR-LINE SENSOR INSTALLLATION SHEET	1
17	10008078	剪线拉杆	CONNECTING BAR	1
18	10010725	螺母	NUT	1
19	10011142	螺钉	SCREW	2
20	10008006	剪线拉杆接头	SHEAR-LINE ROD CONNECTOR	1
21	10010667	传感器螺钉组件	SENSOR SCREW COMPONENTS	1
22	10026622	传感器	SENSORS	1
23	10014298	针板组件	NEEDLE PATE ASM.	1
24	10004646	小针板	NEEDLE HOLE GUIDE	1
25	10011509	螺钉	SCREW	2
26	10008027	针板	NEEDLE PLATE	1
27	10011501	定刀	FIXING KNIFE	1
28	10011499	螺钉	SCREW	2
29	10011453	动刀连杆	MOVING KNIFE LINK	1
30	10011502	动刀杆销衬套	THREAD CUTTING LEVER RING	1
31	10010733	动刀曲柄分组件	THREAD CUTTER LEVER ASM., SMAL	1
32	10010737	动刀传动杆分组件	THREAD CUTTER LEVER ASM., LARG	1
33	10011503	螺钉	SCREW	1
34	10011506	垫圈	WASHER	1
35	10009906	螺钉	SCREW	1
36	10007183	垫圈	WASHER	1
37	10007361	垫圈	WASHER	1
38	10007362	垫圈	WASHER	1
39	10007363	垫圈	WASHER	1
40	10011513	动刀分组件	MOVING KNIFE ASM.	1
41	10011500	螺钉	SCREW	1
42	10011511	螺钉	SCREW	1
43	10011455	螺钉	SCREW	1

7.FEED MECHANISM COMPONENTS

送料部件



7、送料部件FEED MECHANISM COMPONENTS

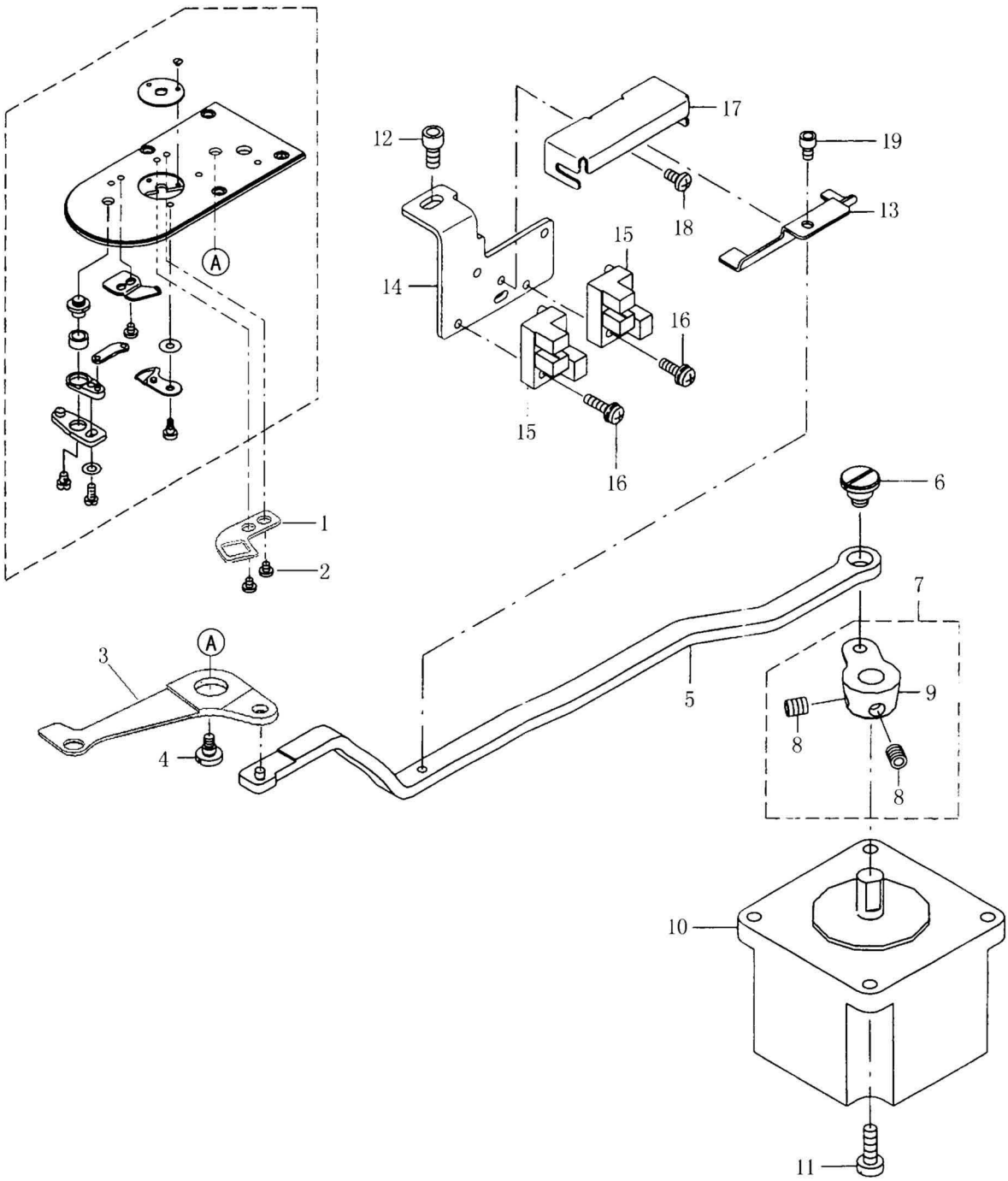
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10024984	X轴步进电机	X FEED STEPPING MOTOR	1
2	10000157	螺钉	SCREW	4
3	10011638	齿轮	GEAR	1
4	10011232	螺钉	SCREW	2
5	10024985	Y轴步进电机	Y FEED STEPPING MOTOR	1
6	10011644	螺钉	SCREW	2
7	10014358	Y轴步进电机安装板	Y-AXIS STEPPER MOTOR MOUNTING PLATE	1
8	10000157	螺钉	SCREW	4
9	10011640	齿轮	GEAR	1
10	10011232	螺钉	SCREW	2
11	10014318	齿轮	GEAR	1
12	10011573	X向铰轴	X HINGE AXIS	1
13	10010678	螺钉	SCREW	1
14	10011562	X向滑块轴	SLIDE BLOCK STUD	1
15	10011194	X向滑块	SQUARE BLOCK	1
16	10010678	螺钉	SCREW	1
17	10014326	Y向驱动轴	BUSHING, REAR	1
18	10011571	轴套	BUSHING, REAR	2
19	10011645	Y向驱动轴夹头	LENGTHWISE FEED ARM	1
20	10011642	螺钉	SCREW	2
21	10011568	螺钉	SCREW	1
22	10014325	送料托架支撑板	CLOTH FEED SUPPORT PLATE	1
23	10011142	螺钉	SCREW	3
24	10014321	送料托架	CLOTH FEED PLATE	1
25	10014322	盖板	CLOTH FEED PRESSER PLATE	1
26	10011566	螺钉	SCREW	6
27	10026623	X向传感器	PHOTO SENSOR	1
28	10010667	螺钉组件	SCREW COMPONENTS	1
29	10011592	X向传感器安装板	SENSOR INSTALING BASE	1
30	10011570	螺钉	SCREW	2
31	10011517	X向传感片	CROSSFEED SENSOR SLIT	1
32	10011142	螺钉	SCREW	1
33	10026622	Y向传感器	PHOTO SINSOR	1
34	10010667	螺钉组件	SCREW COMPONENTS	1
35	10011572	Y向传感器安装板	SENSOR INSTALLING BASE	1
36	10011570	螺钉	SCREW	1
37	10011591	Y向传感片	LENGTHWISE FEED SENSOR SLIT	1
38	10011590	螺钉	SCREW	1
39	10014300	送料架支撑板	SUPPORT PLATE	1
40	10011559	螺钉	SCREW	2
41	10014357	送料架	FEED BRACKET	1
42	10011574	钢球	WORK CLAMP FOOT MONTING BASE	7
43	10011561	钢球座	BALL RETAINER	1
44	10011564	螺钉	SCREW	1
45	10014124	垫圈	WASHER	2
46	10011507	提升架轴	LIFTING LEVER SHAFT	1
47	10011646	垫圈	WASHER	1
48	10011569	螺钉	SCREW	1
49	10011565	送料板	FEED PLATE	1
50	10013582	挡圈	E-RING	2

7、送料部件FEED MECHANISM COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
51	10011454	右压脚提升架	LIFTING LEVER, RIGHT	1
52	10011567	左压脚提升架	LIFTING LEVER, LEFT	1
53	10011558	弹簧	CLOTH PRESSER SPRING	2
54	10011456	拉簧支轴柱	SPRING SUSPENSION	1
55	10011557	压脚面板	WORK CLAMP FOOT FACE PLATE	1
56	10011150	螺钉	SCREW	5
57	10009906	螺钉	SCREW	4
58	10011556	护手圈	FINGER GUARDE	1
59	10011143	螺钉	SCREW	2
60	10003383	螺钉	SCREW	2
61	10011508	左压脚	WORK CLAMP FOOT, LEFT	1
62	10011505	右压脚	WORK CLAMP FOOT, RIGHT	1
63	10014359	送料架后拖板	HIDDEN_PLATE	1
64	10011646	垫圈	WASHER	1
65	10010735	螺钉	SCREW	1
66	10024705	左压脚提升导板组件	LEVER DRIVING PLATE ASM.	1
67	10024706	右压脚提升导板组件	LEVER DRIVING PLATE ASM.	1

8.TC CLAMP COMPONENTS

夹线部件

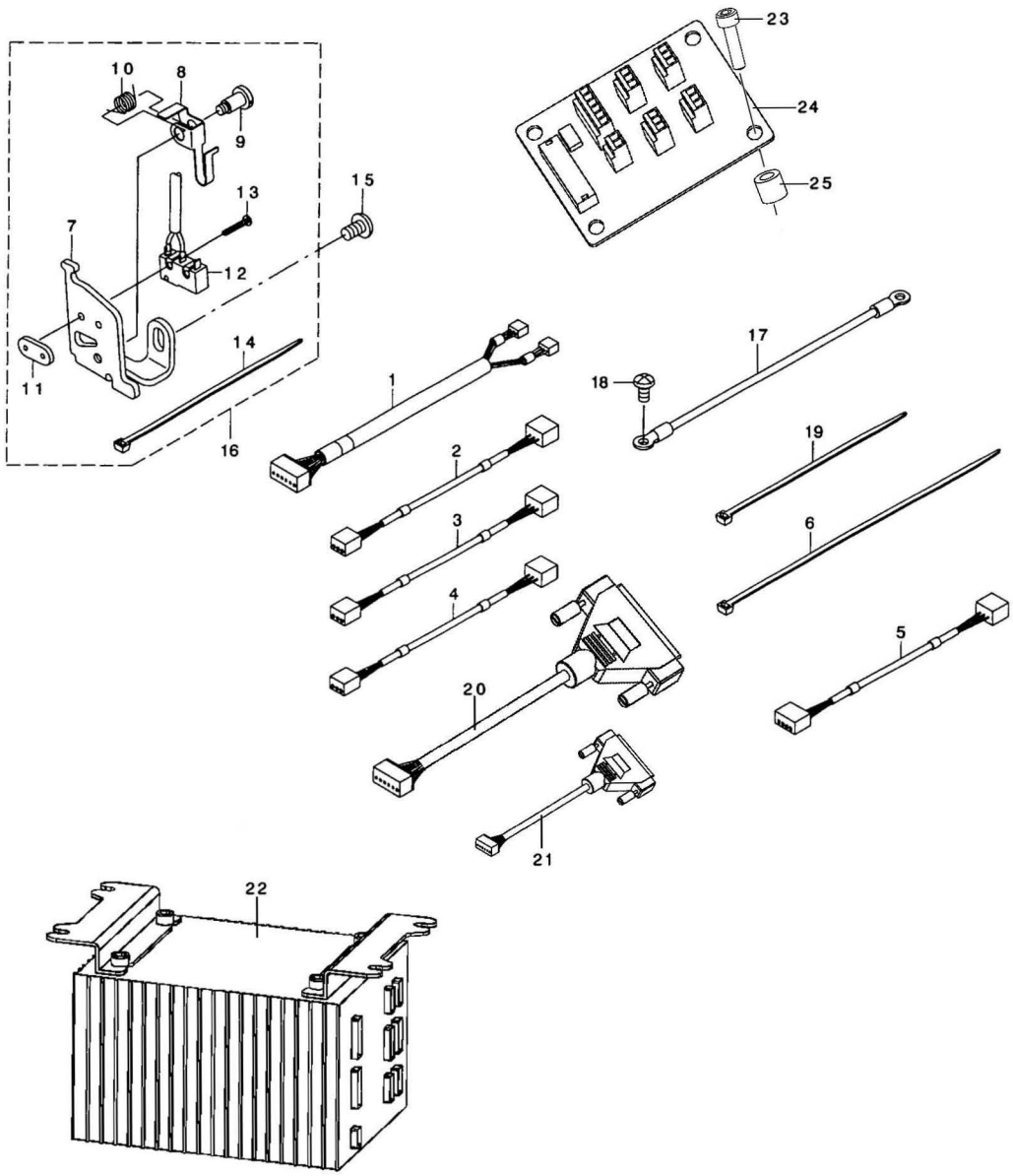


8、夹线部件TC CLAMP COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10014313	定夹头	FIX COLLET	1
2	10014328	螺钉	SCREW	2
3	10014307	动夹头	MOVE COLLET	1
4	10014305	螺钉	SCREW	1
5	10008019	夹线装置拉杆	TC CONNECTING LINK	1
6	10014312	螺钉	SCREW	1
7	20006928	夹持装置电机夹头组件	TC_DRIVING_ARM_ASM	1
8	10012162	螺钉	SCREW	2
9	10014308	夹持装置电机夹头	TC_DRIVING_ARM	1
10	10024986	夹持电机	THREAD CLAMP MOTOR	1
11	10012162	螺钉	SCREW	4
12	10010685	螺钉	SCREW	1
13	10014311	夹持装置传感片	SENSOR_SLIT	1
14	10014309	夹持装置传感器安装板	SENSOR_INSTALLING_BASE	1
15	10026622	夹持装置传感器	PHOTO SENSOR	2
16	10010667	螺钉	SCREW	2
17	10014306	夹持装置传感器防护罩	DUST_SUARD	1
18	10011357	螺钉	SCREW	1
19	10011143	螺钉	SCREW	1

9.SENSOR COMPONENTS

自动控制部件

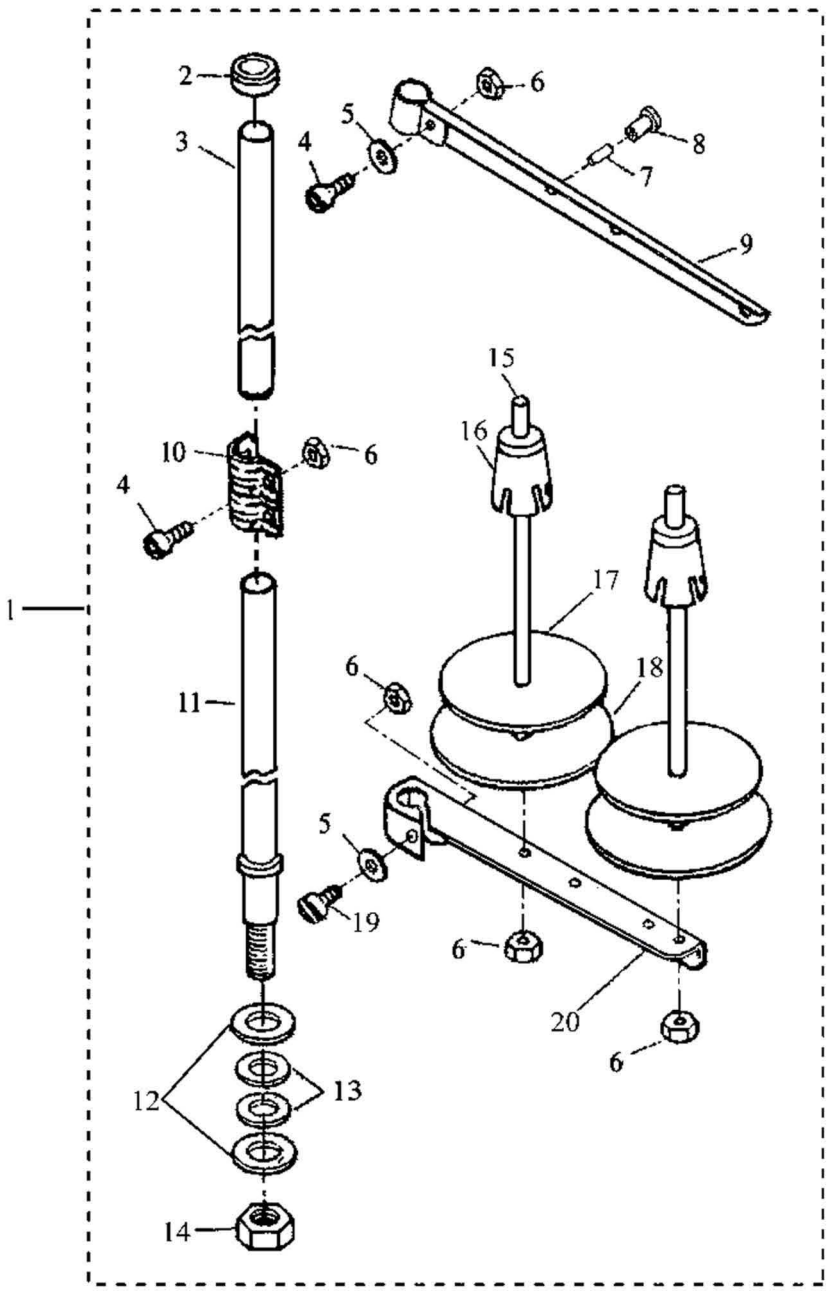


9、自动控制部件SENSOR COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10024999	夹线传感线	TH SENSOR CABLE ASM	1
2	10024997	X向传感线	X SENSOR CABLE ASM	1
3	10024998	Y向传感线	Y SENSOR CABLE ASM	1
4	10024995	剪线传感线	PF SENSOR CABLE ASM	1
5	10024994	抬压传感线	TT SENSOR CABLE ASM	1
6		扎带		1
7	10014249	安全开关固定架	SAFETY SW BASE	1
8	10014253	安全开关拨片	SAFETY SWITCH ARM	1
9	10012612	保险开关支架轴	SAFETY SW ARM SHAFT	1
10	10008875	弹簧	SPRING	1
11	10005877	螺母	SAFETY SWITCH NUT	1
12	10024996	安全开关小组件	SAFETY SW CABLE ASM	1
13	10003045	螺钉	SCREW	2
14		扎带		1
15	10009456	螺钉	SCREW	1
16	20007527	安全开关组件_ZJ1900BSS	SAFETY SW ASM	1
17	10025000	接地线	HEAD GRIUND CABLE A ASM	1
18	10010668	螺钉	SCREW	2
19		扎带		1
20	10024993	转接板信号线	THE SIGNAL OF TRANSFER PLANK	1
21	10025009	D型15P插头	D TYPE A PLUG	1
22	10024988	电控箱	THE ELECTRICITY CONTROLS BOX	1
23	10009103	螺钉	SCREW	4
24	10024991	机头转接板	THE MACHINE HEAD TRANSFERS PLANK	1
25	10024992	转接板支柱	THE TRANSFERS PLANK PILLAR	4

10.THREAD STAND COMPONENTS

线架部件

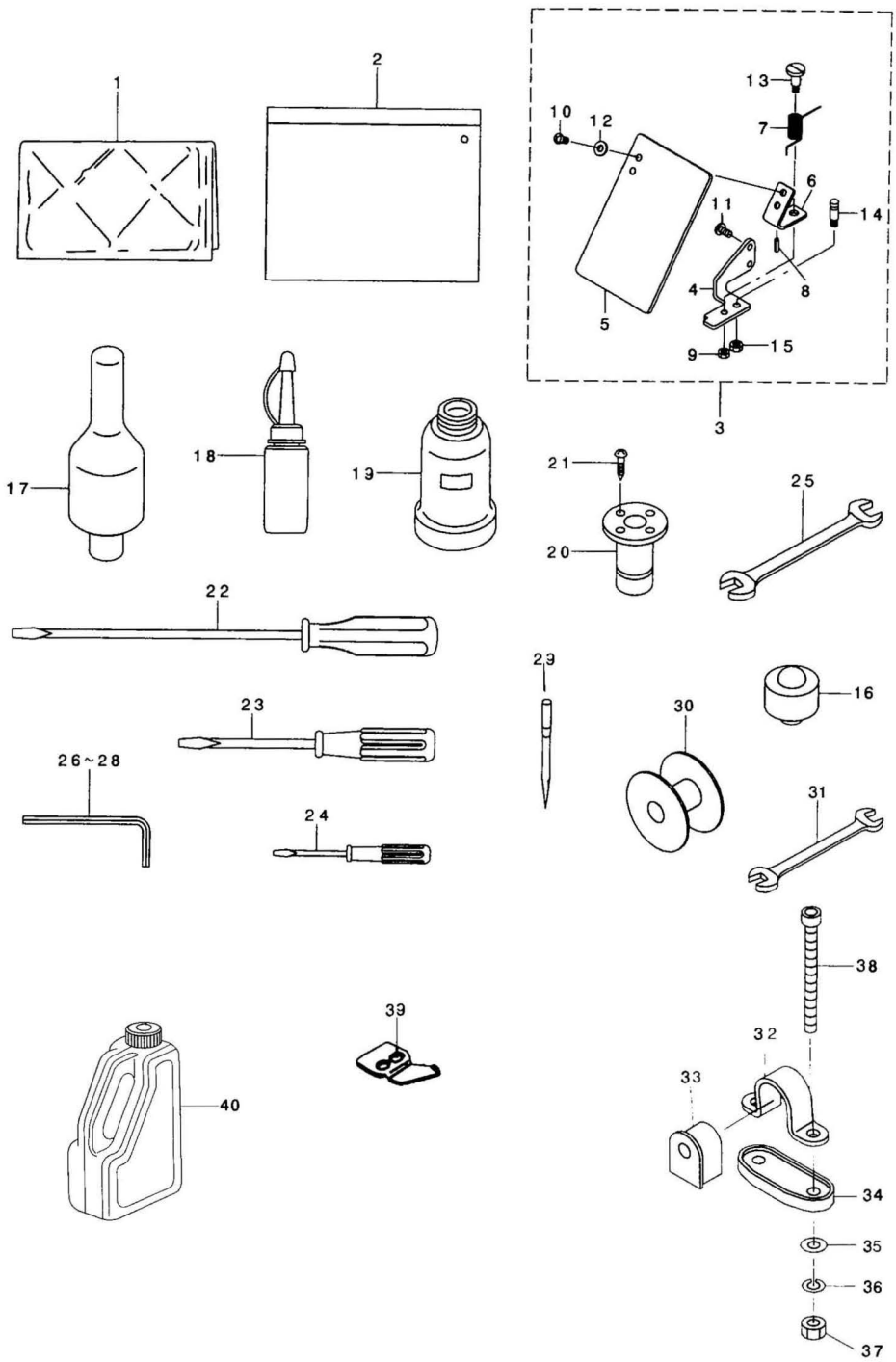


10、线架部件THREAD STAND COMPONENTS

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10007130	二线架组件	THREAD STAND ASM	1
2	10004282	撑管套	COLUMN CAP	1
3	10004293	线架上撑管	COLUMN PIPE	1
4	10003301	上过线架螺钉	SCREW	2
5	10003022	上过线架垫圈	WASHER	2
6	10002953	上过线架螺母	NUT	5
7	10004289	过线管	THREAD GUIDE PIPE	2
8	10004285	过线管套	THREAD GUIDE BUSHING	2
9	10004298	上过线架	THREAD HANGER	1
10	10004286	撑管夹	COLUMN PIPE CONNECTOR	1
11	10004291	线架下撑管	COLUMN PIPE	1
12	10004295	线架下撑管垫圈	WASHER	2
13	10004290	垫圈	WASHER	2
14	10002985	下过线架螺母	NUT	1
15	10004288	线轴	SPOOL PIN	2
16	10004287	线盘塑料压块	SPOOL CUSHION	2
17	10004281	线盘软垫	SOFT CUSHION OF THREAD PLARE	2
18	10004299	线盘	THREAD PLATE	2
19	10003312	下过线架螺钉	SCREW	1
20	10004292	下过线架	THREAD HANGER	1

11.ACCESSORIE PART COMPONENTS

附件

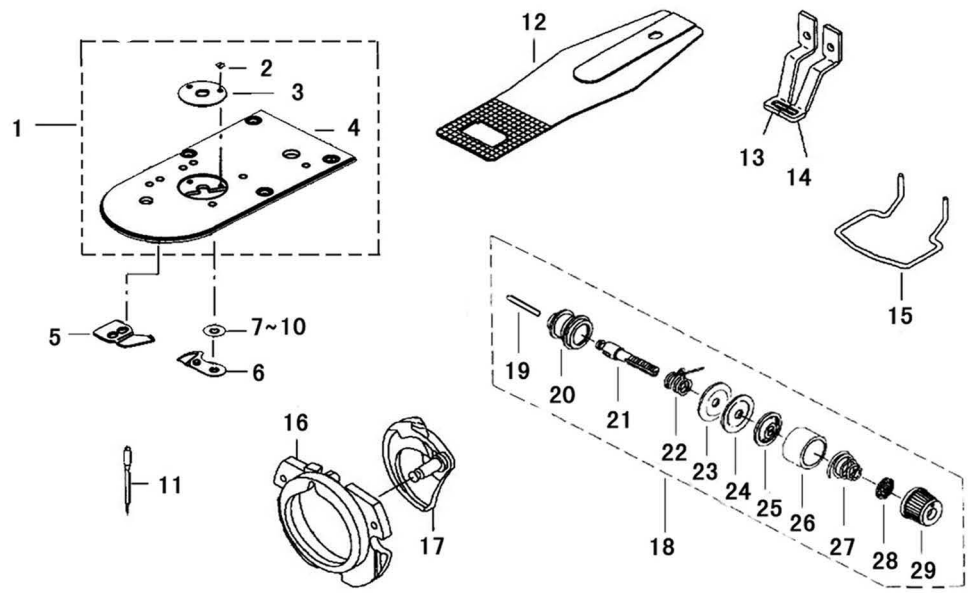


11、附件ACCESSORIE PART COMPONENTS

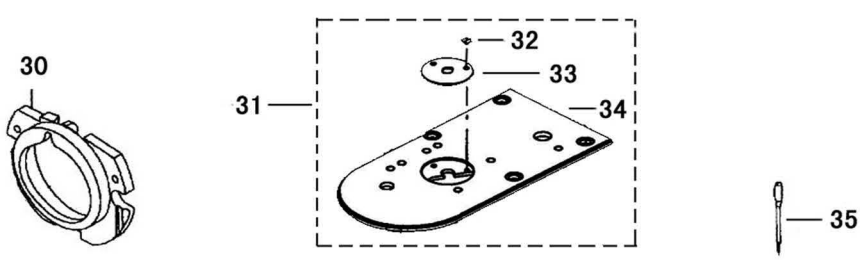
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10004724	机头罩	VINYL COVER	1
2	10004492	机头套	ACCESSORY BOX	1
3	20004358	眼睛防护罩组件	SAFETY PLATE ASM.	1
4	10011632	安全板座	SAFETY PLATE INSTALLING BASE	1
5	10011636	安全板	SAFETY PLATE	1
6	10004725	安全板架	SAFETY PLATE INSTALLING PLATE	1
7	10011678	弹簧	SPRING	1
8	10002880	销	PIN	1
9	10004507	螺母	NUT	1
10	10011570	螺钉	SCREW	2
11	10011570	螺钉	SCREW	2
12	10011680	垫圈	WASHER	2
13	10011677	螺钉轴	HINGE SCREW	1
14	10011633	销	PIN	1
15	10011682	螺母	NUT	1
16	10014250	机头支垫	FRAME_SUPPORT_RUBBER	2
17	10011749	机头支承杆	HEAD SUPPORT BAR	1
18	10005356	油壶	OILER	1
19	10011681	油杯	OIL CAN	1
20	10011683	油杯座	OIL MANAGEMENT	1
21	10003157	螺钉	SCREW	4
22	10010994	大螺丝刀	SCREW DRIVER LARGE	1
23	10010995	中螺丝刀	SCREW DRIVER MIDDLE	1
24	10013185	小螺丝刀	SCREW DRIVER SMALL	1
25	10003368	呆板手	WRENCH	1
26	10009685	内六角扳手3	HEXAGONAL WRENCH SMALL	1
27	10009687	内六角扳手4	HEXAGONAL WRENCH LARGE	1
28	10009689	内六角扳手5	HEXAGONAL SPANNER	1
29	10023286	机针	NEEDLE	1
30	10004592	梭芯	BOBBIN	1
31	10003369	呆板手	WRENCH	1
32	10011160	支撑固定架	BED HINGE	2
33	10011137	机头胶垫	HINGE RUBBER	2
34	10014251	机对胶垫底座	BED HINGE RUBBER	2
35	10003076	垫圈	WASHER	4
36	10011747	垫圈	WASHER	4
37	10003084	螺母	NUT	4
38	10011147	螺栓	SCREW	4
39	10011501	定刀	FIXING KNIFE	1
40	10004455	油箱	OIL BOX	1

12. 1900B SERIES PARTS
1900B 系列机零件

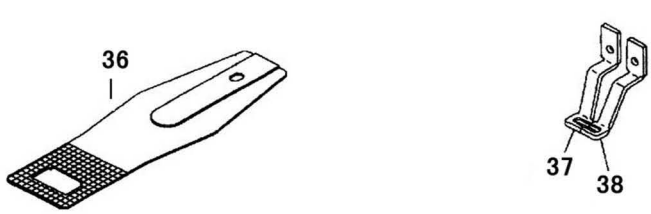
HEAVY MATERIAL（H）
1900BHS: 厚料



UNDERWARE（F）& KNITTING（M）
1900BFS: 内衣 与 1900BMS: 针织



KNITTING（M）
1900BMS: 针织

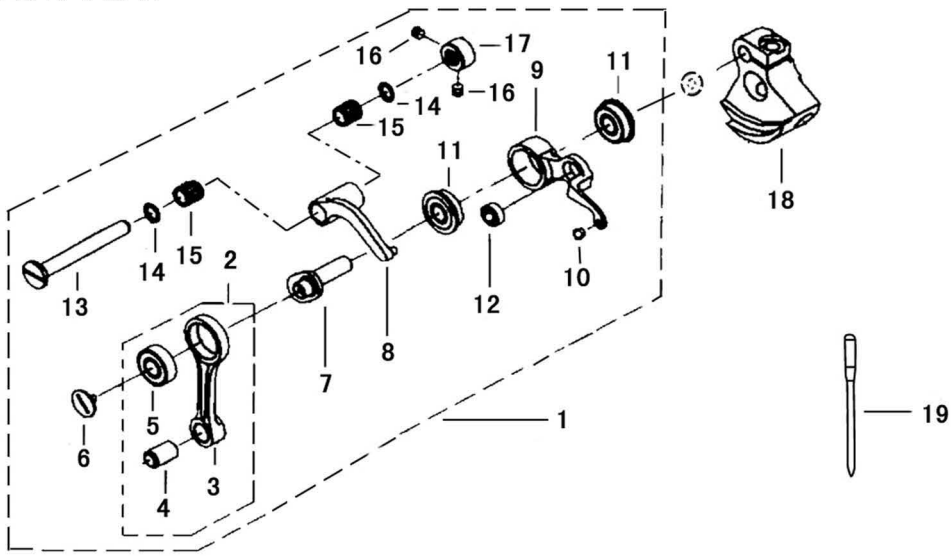


12、1900B系列机零件1900B SERIES PARTS

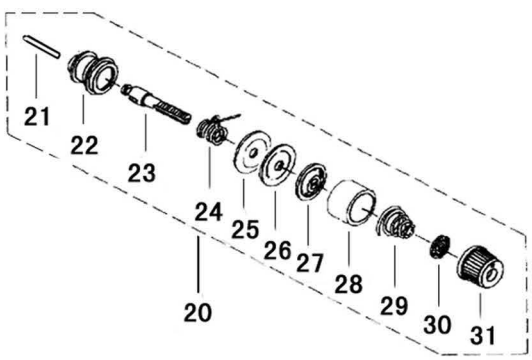
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10024626	针板组件	NEEDLE PLATE ASM.	1
2	10011509	螺钉	SCREW	2
3	10004727	小针板	NEEDLE HOLE GUIDE	1
4	10008027	针板	NEEDLE PLATE	1
5	10011748	定刀	FIXING KNIFE	1
6	10011694	动刀分组件	MOVING KNIFE ASM.	1
7	10007183	垫圈	WASHER	1
8	10007361	垫圈	WASHER	1
9	10007362	垫圈	WASHER	1
10	10007363	垫圈	WASHER	1
11	10004897	机针	NEEDLE DPX17(19#)	1
12	10011751	送料板	FEED PLATE	1
13	10011687	左压脚	WORK CLAMP FOOT,LEFT	1
14	10011691	右压脚	WORK CLAMP FOOT,RIGHT	1
15	10011695	护手圈	FINGER GUARDE	1
16	10011750	梭床盖组件	SHUTTLE BACE RING ASM.	1
17	10003834	旋梭	INNER HOOK	1
18	10024627	夹线器组件	SECOND THREAD TENSION ASM.	1
19	10008026	松线钉	TENSION RELEASE PIN	1
20	10004631	夹线器座	THREAD TENSION ROD,LARGE	1
21	10004612	螺钉	SCREW	1
22	10004730	弹簧	SPRING	1
23	10004393	夹线板	THREAD TENSION DISK	1
24	10004393	夹线板	THREAD TENSION DISK	1
25	10004625	松线板	THREAD TENSION DISK PRESSER	1
26	10004598	夹线簧座	THREAD TENSION DISK PRESSER	1
27	10011827	弹簧	SPRING	1
28	10004633	夹线制动板	ROTATING STOPPER	1
29	10004783	夹线螺母	THREAD TENSION NUT	1
30	10011760	梭床盖组件	SHUTTLE BACE RING ASM.	1
31	10026087	针板组件	NEEDLE PLATE ASM.	1
32	10011509	螺钉	SCREW	2
33	10011757	小针板	NEEDLE HOLE GUIDE	1
34	10008027	针板	NEEDLE PLATE	1
35	10004857	机针	NEEDLE DPX5(11#)	1
36	10011755	送料板	FEED PLATE	1
37	10011758	左压脚	WORK CLAMP FOOT,LEFT	1
38	10011759	右压脚	WORK CLAMP FOOT,RIGHT	1

13. 1903B-301 PARTS 1
1903B-301 零件 1

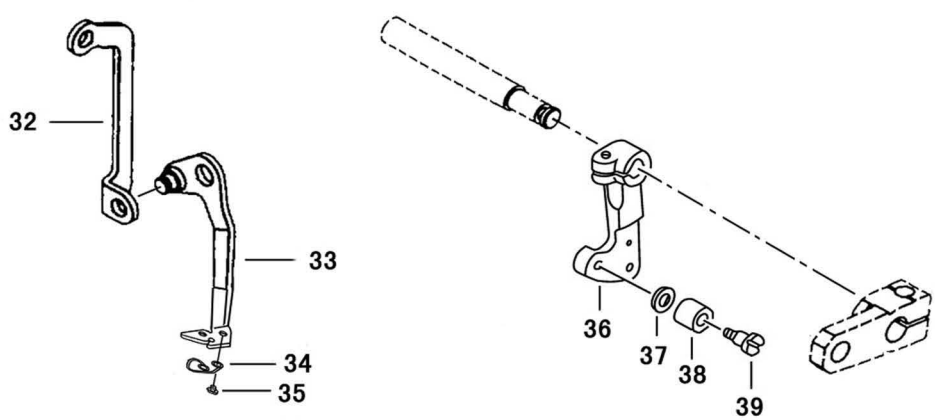
MAIM SHAFT & NEEDLE BAR COMPONENTS
挑线刺布部件



TENSION RELEASE & THREAD TENSION COMPONENTS
松线部件



WIPER MECHANISM COMPONENTS
拨线部件

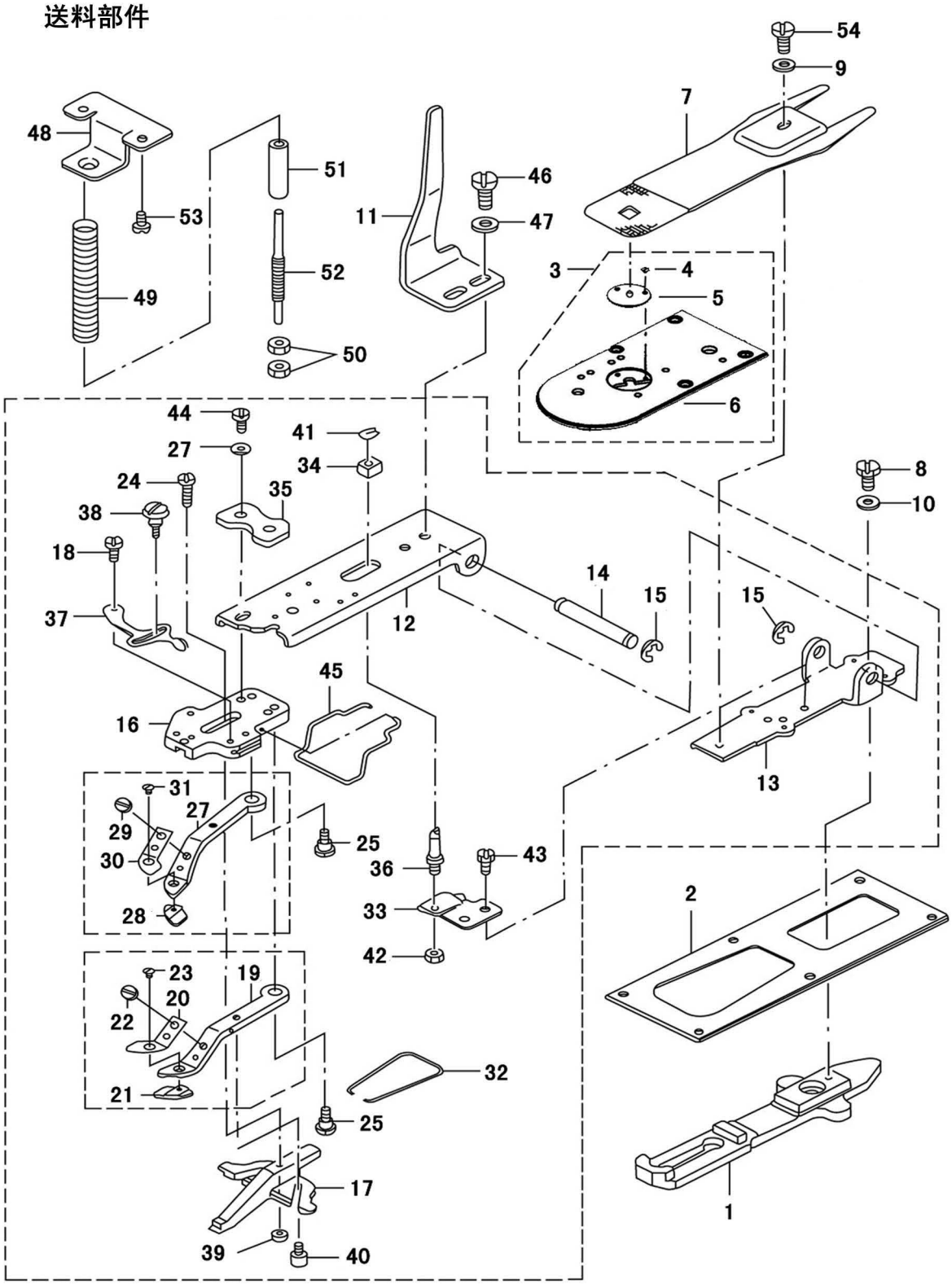


13、1903B-301零件1 1903B-301PARTS 1

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10023935	挑线杆组件	THEAD TAKE-UP COMPL	1
2	10007983	针杆连杆组件	NEEDLE BAR CRANK ROD ASM.	1
3	10007986	针杆连杆	NEEDLE BAR CRANK ROD	1
4	10005793	针杆连杆轴套	NEEDLE BAR CRANK ROD METAL	1
5	10009777	轴承	BEARING	1
6	10010537	螺钉	SCREW	1
7	10023931	挑线曲柄	NEEDLE BAR CRANK	1
8	10007987	挑线连杆	THREAD TAKE-UP CRANK	1
9	10023930	挑线杆	THREAD TAKE-UP LEVER	1
10	10004161	挑线杆过线套	THREAD PASS BUSH	1
11	10009776	轴承	BEARING	2
12	10003529	轴承	BEARING	1
13	10007984	挑线杆铰链轴	BALANCE CRANK PIN	1
14	10005786	挡圈	THRUST COLLAR	2
15	10005747	轴承	BEARING	2
16	10004482	螺钉	SCREW	2
17	10005745	挡圈	THRUST COLLAR	1
18	10023932	针杆曲柄	COUNTER EIGHT	1
19	10023288	机针	NEEDLE	1
20	10024627	夹线器组件	TENSION CONTROLLER ASM	1
21	10008026	松线钉	TENSION RELEASE PIN	1
22	10004631	夹线器座	THREAD TENSION ROD,LARGE	1
23	10004612	螺钉	SCREW	1
24	10004730	弹簧	SPRING	1
25	10004393	夹线板	THREAD TENSION DISK	1
26	10004393	夹线板	THREAD TENSION DISK	1
27	10004625	松线板	THREAD TENSION DISK PRESSER	1
28	10004598	夹线簧座	THREAD TENSION DISK PRESSER	1
29	10011827	弹簧	SPRING	1
30	10004633	夹线制动板	ROTATING STOPPER	1
31	10004783	夹线螺母	THREAD TENSION NUT	1
32	10023928	扫线拉杆	WIPER LINK	1
33	10023927	扫线杆组件	WIPER ASM.	1
34	10011706	弹簧	SPRING	1
35	10011714	螺钉	SCREW	2
36	10023925	拨线曲柄	CONNECTING ARM	1
37	10011720	垫圈	WASHER	1
38	10011721	拨线曲柄滚子	STOP MOTION TRIPPING LEVER CA	1
39	10011707	螺钉	SCREW	1

14. 1903B-301 PARTS 2
1903B-301 零件 2

FEED MECHANISM COMPONENTS
送料部件

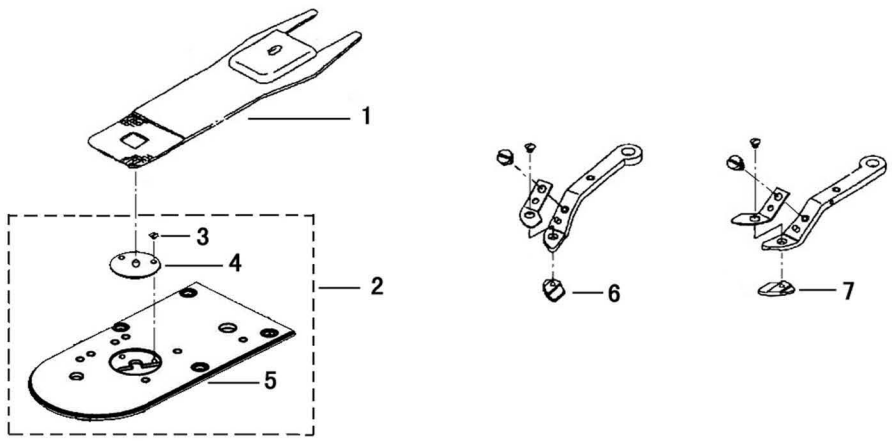


14、1903B-301零件2 1903B-301PARTS 2

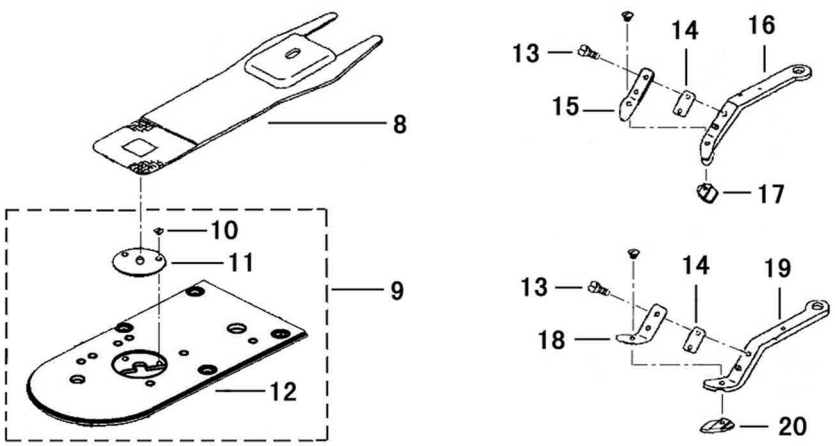
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10023929	送料托架	CLOTH FEED PLATE	1
2	10023933	盖板	FEED PLATE PRESSER	1
3	10026088	针板组件	NEEDLE PLATE ASM.	1
4	10011509	螺钉	SCREW	2
5	10011133	小针板	NEEDLE HOLE GUIDE	1
6	10008027	针板	NEEDLE PLATE	1
7	10011844	送料板	PRESSURE PLATE	1
8	10011824	螺钉	SCREW	1
9	10011820	垫圈	WASHER	1
10	10011646	垫圈	WASHER	1
11	10011764	抬压挡板	MOVING PLATE	1
12	10004776	抬压挡板座	PICK-UP FOOT INSTALLING BASE	1
13	10011829	送料板座	PICK-UP INSTALLING BASE	1
14	10011823	压脚导板轴	INSTALLING SHAFT	1
15	10003273	挡圈	RING	2
16	10011768	压脚连接座	PICK-UP FOOT INSTALLING BASE	1
17	10011529	压脚导向座	BUTTON CLAMP SLIDE	1
18	10011534	螺钉	HINGE SCREW	1
19	10011520	右压脚座	SMALL CLAMP JAW LEVER ASM.L	1
20	10011535	纽扣右定位板	SPRING,RIGHT	1
21	10011523	右压脚	PLATE K,R	1
22	10011525	螺钉	SCREW	1
23	10011537	螺钉	SCREW	1
24	10011818	螺钉	SCREW	1
25	10011539	螺钉	SCREW	2
26	10011820	垫圈	WASHER	2
27	10011532	左压脚座	SMALL CLAMP JAW LEVER ,L	1
28	10011538	左压脚	PLATE K,L	1
29	10011525	螺钉	SCREW	1
30	10011540	纽扣左定位板	SPRING,LEFT	1
31	10011537	螺钉	SCREW	1
32	10011536	弹簧	SPRING	1
33	10011830	压脚导向块座	SUPPORT PLATE	1
34	10011765	压脚导向块	SLIDE BLOCK	1
35	10011761	抬压挡板座压板	PRESSER PLATE	1
36	10011826	压脚导向轴	STATIONING BLOCK SHAFT	1
37	10011524	压脚调节扳手	SNAP FASTENER CLAMP STOP LEVER	1
38	10013564	螺钉	SCREW	1
39	10011522	螺母	NUT	1
40	10011521	压脚座导向柱	BUTTON CLAMP STOP PIN	2
41	10011822	挡圈	SNAP RING	1
42	10011769	螺母	NUT	1
43	10011831	螺钉	SCREW	2
44	10011766	螺钉	SCREW	2
45	10011527	手指保护器	FINGER GUARD	1
46	10011828	螺钉	SCREW	2
47	10011821	垫圈	WASHER	2
48	10023934	压脚导杆导板	ACCEPT PLATE,UPPER	1
49	10011593	弹簧	SPRING	1
50	10011526	螺母	THREAD TENSION NUT	2
51	10011528	压脚导杆套	SLEEVE	1
52	10011519	压脚导杆	ADJUSTING SHAFT	1
53	10010074	螺钉	SCREW	2
54	10011832	螺钉	SCREW	1

15. 1903B SERIES PARTS 1
1903B 系列机零件 1

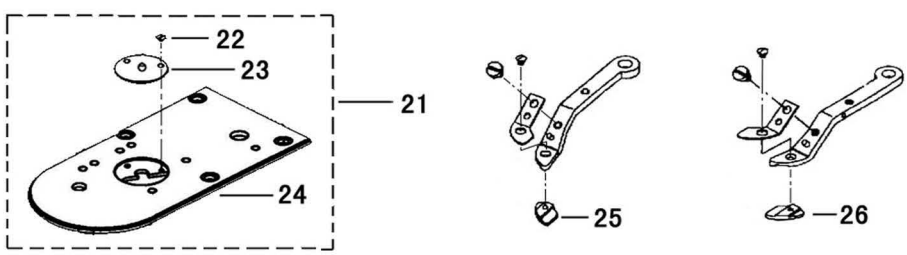
1903B-302:BUTTON CLAMP COMPL. FOR MEDIUM-SIZED BUTTONS
1903B-302: 中纽扣用



1903B-303:BUTTON CLAMP COMPL. FOR LARGE-SIZED BUTTONS
1903B-303: 大纽扣用



1903B-304:BUTTON CLAMP COMPL. FOR VERY SMALL-SIZED BUTTONS
1903B-304: 极小纽扣用



15、1903B系列机零件1 1903B SERIES PARTS 1

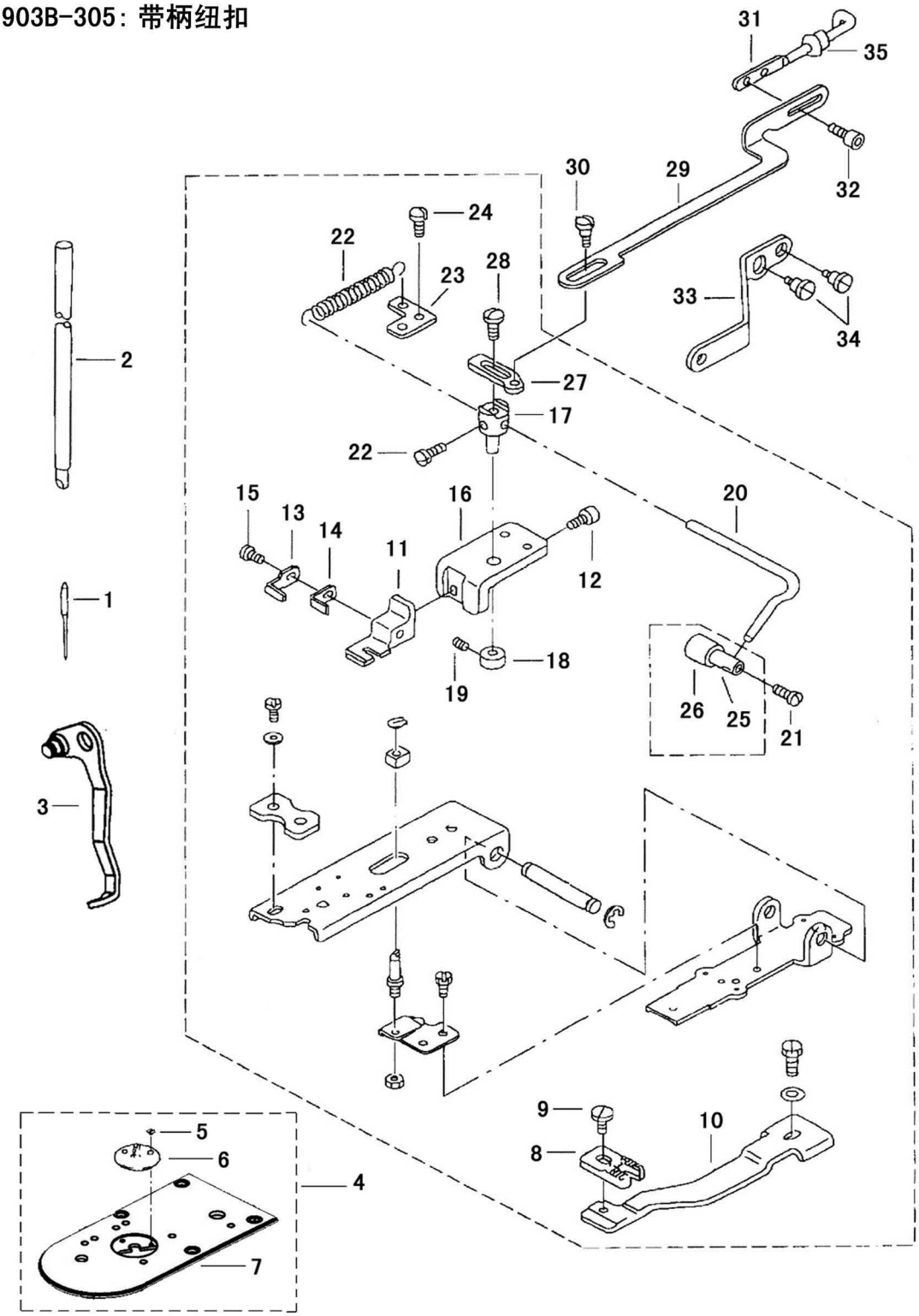
序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10011844	送料板	FEED PLATEA	1
2	10026088	针板组件	NEEDLE PLATE ASM.	1
3	10011509	螺钉	SCREW	2
4	10011133	小针板	NEEDLE HOLE GUIDE	1
5	10008027	针板	NEEDLE PLATE	1
6	10011841	左压脚	WORK CLAMP FOOT,LEFT	1
7	10011867	右压脚	WORK CLAMP FOOT,RIGHT	1
8	10011872	送料板	FEED PLATEA	1
9	10026089	针板组件	NEEDLE PLATE ASM.	1
10	10011509	螺钉	SCREW	2
11	10011838	小针板	NEEDLE HOLE GUIDE	1
12	10008027	针板	NEEDLE PLATE	1
13	10009062	螺钉	SCREW	2
14	10011875	纽扣定位板垫	SPACER	2
15	10011873	纽扣左定位板	SPRING,LEFT	1
16	10011833	左压脚座	SMALL CLAMP JAW LEVER ASM.L	1
17	10011837	左压脚	WORK CLAMP FOOT,LEFT	1
18	10011876	纽扣右定位板	SPRING,RIGHT	1
19	10011839	右压脚座	SMALL CLAMP JAW LEVER ASM.R	1
20	10011840	右压脚	WORK CLAMP FOOT,RIGHT	1
21	10026090	针板组件	NEEDLE PLATE ASM.	1
22	10011509	螺钉	SCREW	2
23	10011836	小针板	NEEDLE HOLE GUIDE	1
24	10008027	针板	NEEDLE PLATE	1
25	10011538	左压脚	WORK CLAMP FOOT,LEFT	1
26	10011523	右压脚	WORK CLAMP FOOT,RIGHT	1

16. 1903B SERIES PARTS 2

1903B 系列机零件 2

1903B-305:SHANK BUTTON CLAMP MECHANISM COMPONENTS

1903B-305: 带柄纽扣



16、1903B系列机零件2 1903B SERIES PARTS 2

序 号 Ref.No.	件 号 Part No.	名　　称	Description	数 量 QTY
1	10003636	机针	NEEDLE	1
2	10029150	针杆	NEEDLE BAR	1
3	10029151	扫线杆组件	WIPER ASM.	1
4	10026091	针板组件	NEEDLE PLATE ASM.	1
5	10011509	螺钉	SCREW	2
6	10011842	小针板	NEEDLE HOLE GUIDE	1
7	10008027	针板	NEEDLE PLATE	1
8	10004777	送料牙	FEED PLATE,A	1
9	10011425	螺钉	SCREW	2
10	10011869	送料牙座	FEED PLATE	2
11	10011868	送料块	BUTTON CLAMP BASE	1
12	10003382	螺钉	SCREW	1
13	10011835	长定位板	BUTTON CLAMP SUPPORT,FRONT	1
14	10011874	短定位板	BUTTON CLAMP SUPPORT,REAR	1
15	10013543	螺钉	SCREW	1
16	10011870	送料块座	BUTTON CLAMP BASE	1
17	10011785	旋转轴块	BUTTON SUPPORT LEVER SHAFT	1
18	10011775	旋转轴块挡圈	THRUST COLLAR	1
19	10004988	螺钉	SCREW	1
20	10011790	定位杆	BUTTON SUPPORT LEVER	1
21	10010074	螺钉	SCREW	1
22	10011789	弹簧	SPRING	1
23	10011776	复位簧固定板	LEVER SPRING HOOK	1
24	10010074	螺钉	SCREW	2
25	10011786	纽扣定位块	SHANK BUTTON HOLDING CLAMP	1
26	10011772	纽扣定位块塞	BUTTON SUPPORT RUBBER	1
27	10011779	调节板	BUTTON SUPPORT RELEASE LEVER	1
28	10010074	螺钉	SCREW	1
29	10011771	拉板	BUTTON SUPPORT LINK	1
30	10011788	螺钉	SCREW	2
31	10011783	拉杆	MOVING PLATE LINKA	1
32	10010685	螺钉	SCREW	2
33	10011784	拉杆驱动板	CONNECTING LINK	1
34	10011787	螺钉	SCREW	2
35	10011777	橡皮塞	BUSHING	1