

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. 此缝纫机应于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，或拨下电源线插头。
 - 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。如 14. 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。

为了安全的使用该款缝纫机的注意事项

 危险	<ol style="list-style-type: none">1. 为了防止触电事故，请不要在接通电源的状态下打开机壳后罩或触摸后罩内的零件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	<ol style="list-style-type: none">1. 打开（一）电源开关后，操作盘上不显示时，请关闭（○）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。

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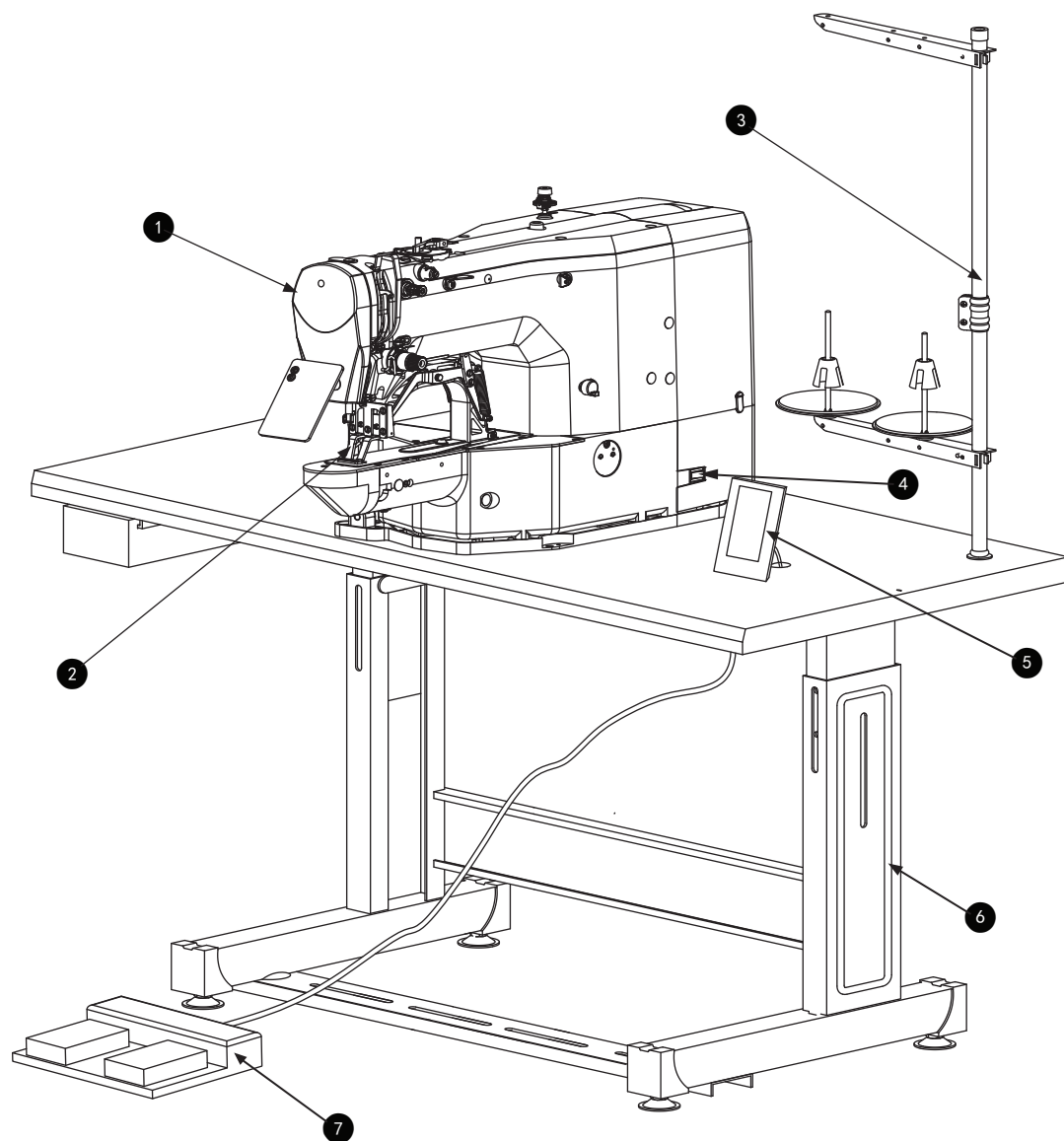
I. 0604一体式高速电子套结机的说明

[1] 规格

1. 缝制范围: X (左右) 方向 60mm, Y (前后) 方向 40mm
2. 缝纫速度: 2500rpm
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. 放大、缩小功能: X 方向、Y 方向各为 20-200%
12. 放大、缩小方式: 调整线迹长短方式
13. 缝纫速度限制: 400-2500
14. 图案选择功能: 图案 NO.指定 (1-300)
15. 底线计数器: 上升/下降方式 (1-9999)
16. 缝纫机马达: 550W 伺服马达
17. 外形尺寸: W: 1200mm L: 540mm H: 1100mm
18. 重量: 整机 55Kg
19. 功率: 0.6KW
20. 使用温度范围: 0℃-50℃
21. 使用湿度范围: 35%-85% (无节露)
22. 电源电压: 额定电机±10% 50-60Hz

[2] 各部件名称

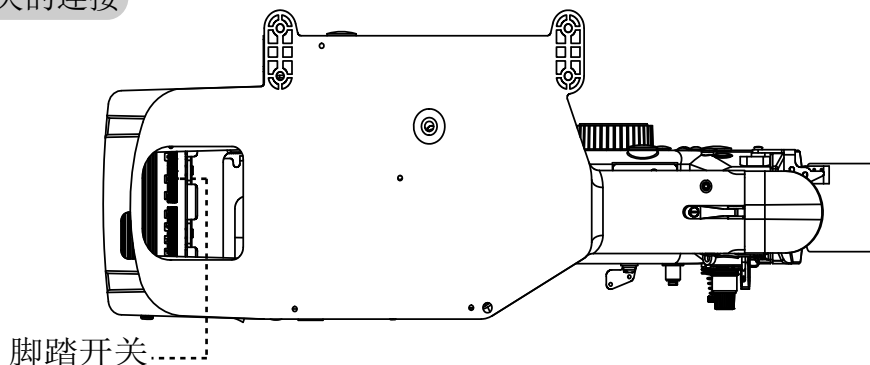
1. 主机的名称



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

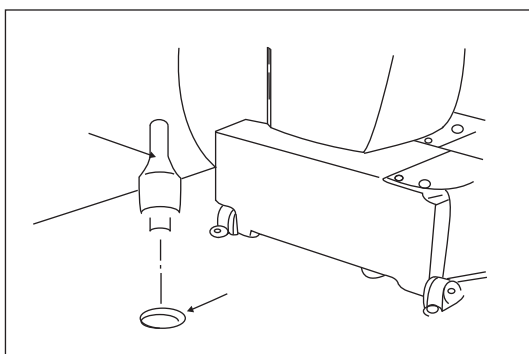
[3] 整机安装

1. 脚踏开关的连接



把机头翻倒，将脚踏开关接头与电控箱底部接口对应连接。

2. 机头支撑杆的安装



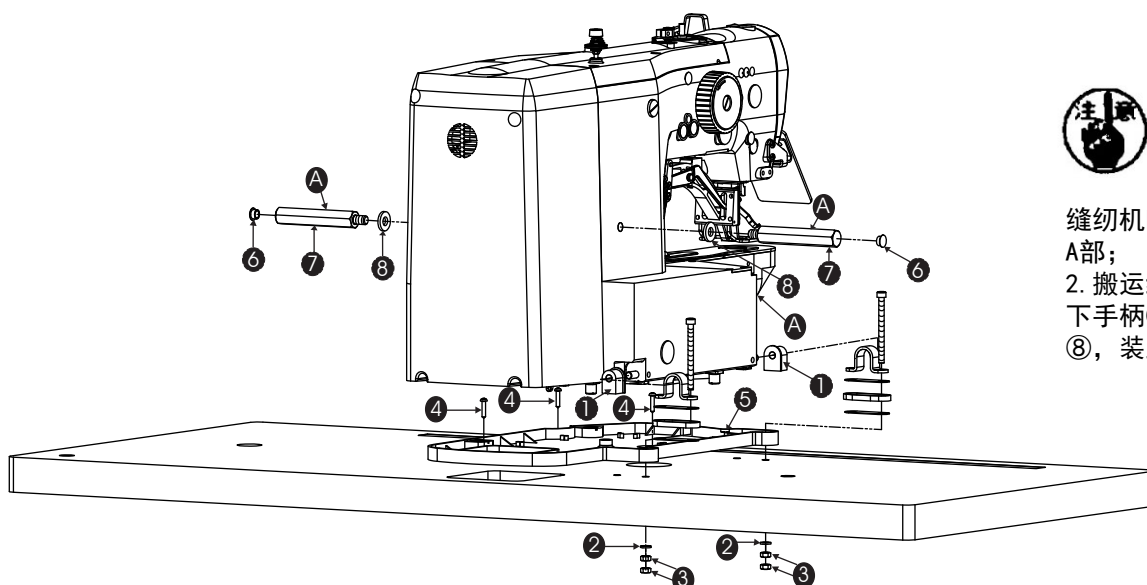
将机头支撑杆①装在台板孔②内。

3. 机头的安装



注意

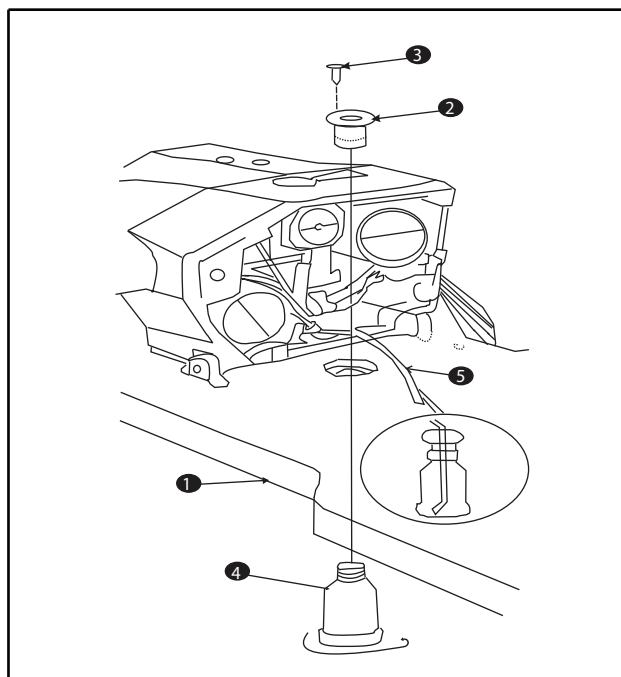
搬运缝纫机时，请一定是两人以上进行操作。



1. 搬运缝纫机时，请手持A部；
2. 搬运结束，请卸下手柄⑦及橡胶垫⑧，装上橡胶塞⑥。

- (1). 将油盘⑤用木螺钉④固定在台板相应位置上；
- (2). 将机头胶垫①穿在机器支撑轴上，固定缝纫机主体；
- (3). 将平垫②、螺母③按图示依次固定，注意螺母③的锁紧力量，如果拧的太紧，防震效果不理想

4. 废油壶的安装

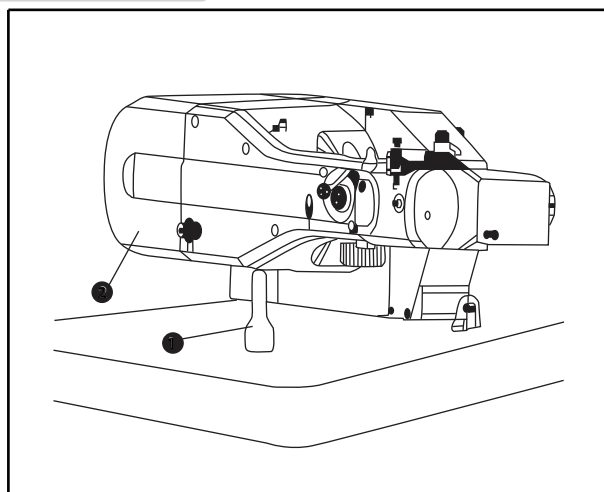


用四个木螺丝③把废油壶上节②固定到台板①孔内，将废油壶④从台板①下方旋进废油壶上节②中，并将机头回油管⑤装在废油壶中。



机头放倒后，回油管⑤不能从废油壶中脱落。

5. 机头的放倒

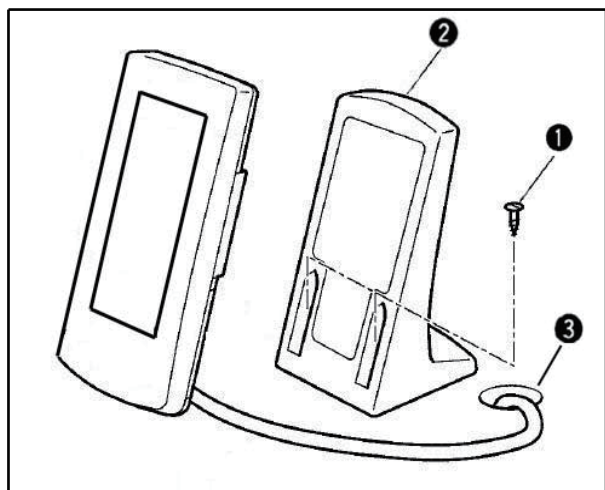


将机头①轻轻放倒，靠在机头支撑杆上②上。



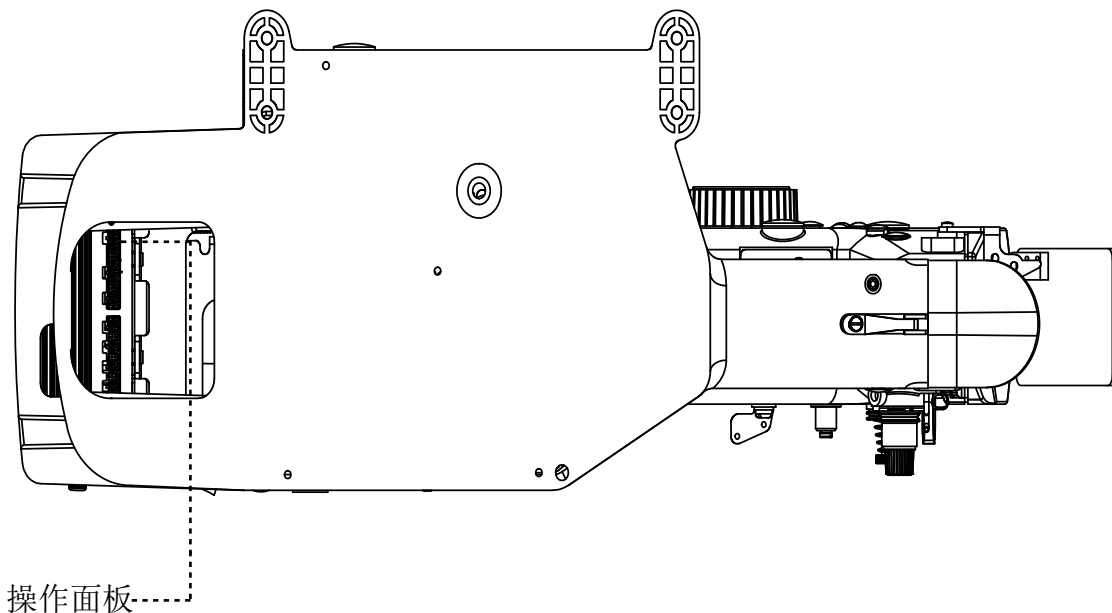
1. 放倒机头前，请先确认台板上是否有机头支撑杆；
2. 抬起机头时，请不要扳机头后罩，以免后罩受损；
3. 为防止机头侧翻，请确保台板水平。

6. 操作面板的安装



请用三个木螺丝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。

7. 操作面板的连接



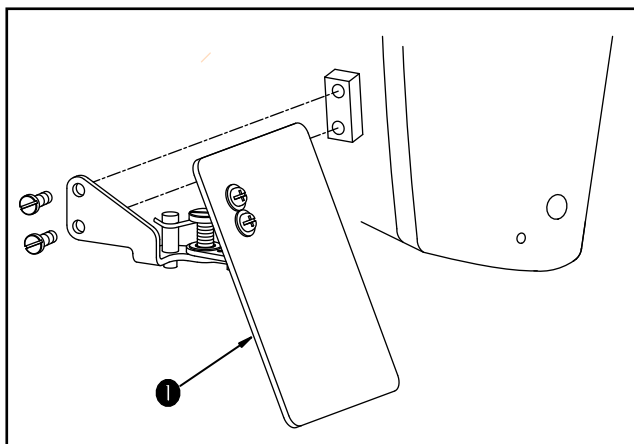
把机头翻倒，将操作面板接头与电控箱底部接口对应连接。

8. 眼睛防护罩的安装



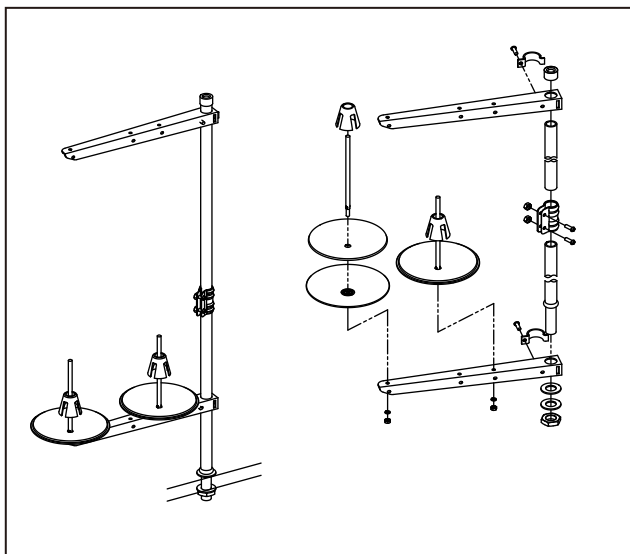
注意

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
如图所示左侧。

9. 线架的安装



将附件箱中的线架如图装在台板孔上。

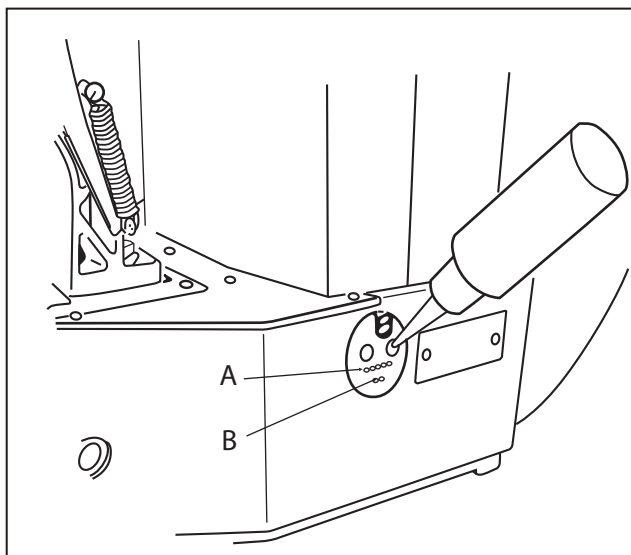
[4] 整机的准备

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。）



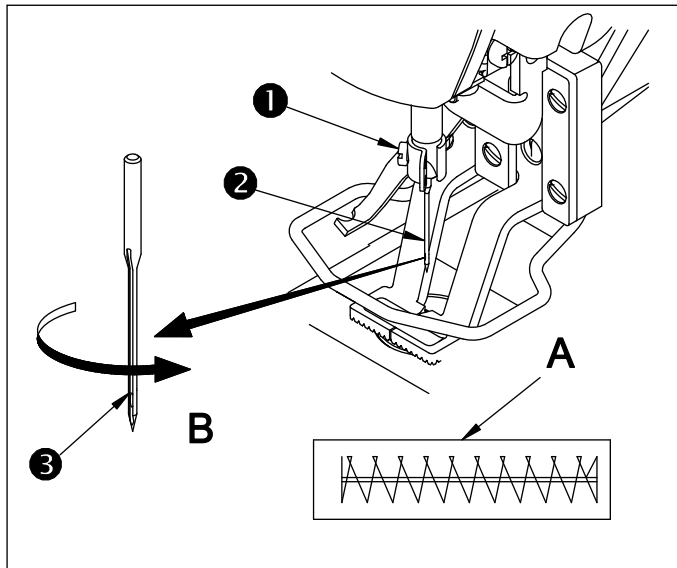
1. 请注意不要向油槽和下列注意 2 的旋梭以外的部位加油。否则会发生零件故障。
2. 初次使用缝纫机或较长时间没有使用缝纫机时，请向旋梭加少量的机油后在使用缝纫机。（请参照[6]维修 2. 机针和旋梭。）

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的容线槽③朝向面前，插进针杆的深处，然后拧紧固定螺钉①。



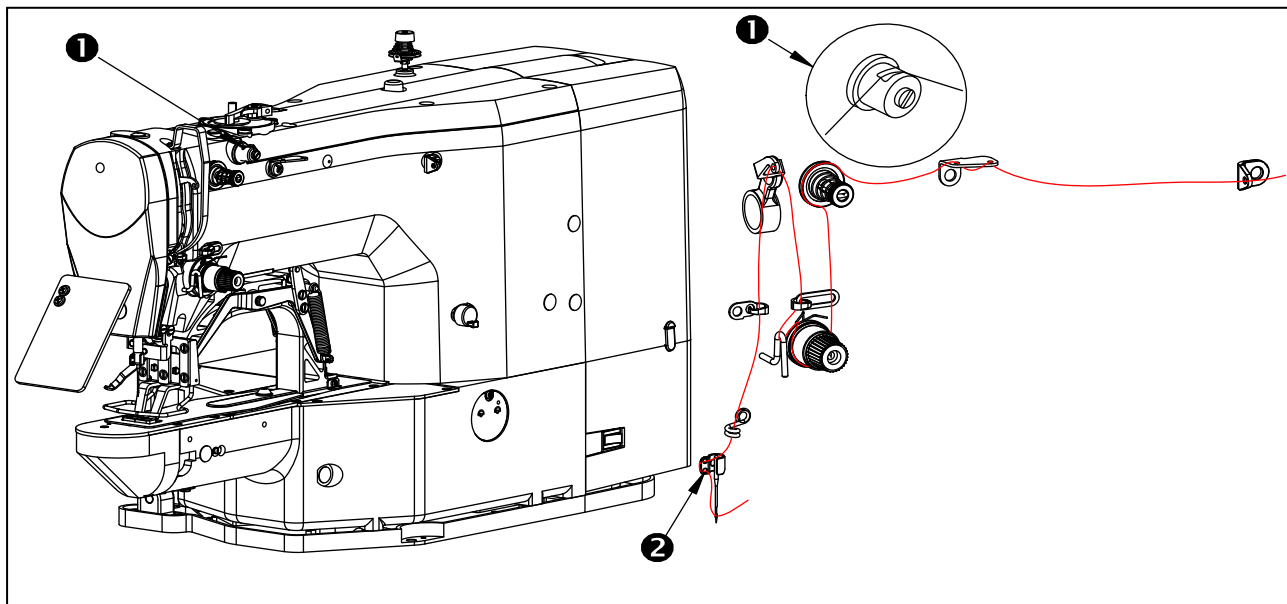
缝迹如 A 时，请把机针向 B 方向稍稍移动然后安装起来。

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。

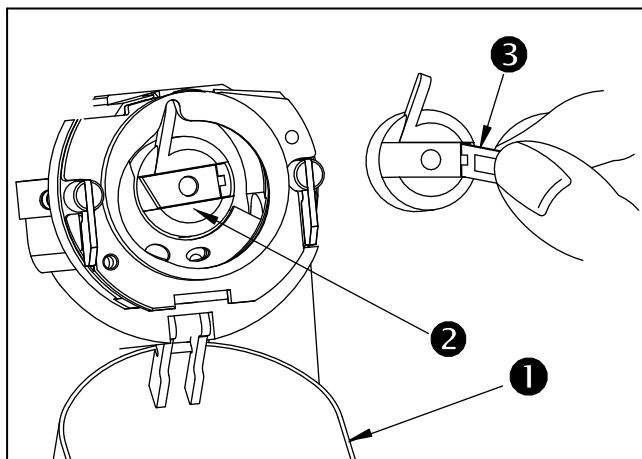


1. 使用硅油时，请把线穿过润滑导线器①。
2. 粗线时，请把机线只穿过针杠导线器②1 个孔。

4. 梭壳的取下插入



为了防止突然启动造成人身事故，请关掉电源后再进行。



- (1). 打开梭床外罩①。
- (2). 拨起梭壳②的抓脚③，取出梭壳。
- (3). 插入时，请把梭壳深深插入摆梭轴，并关闭抓脚。

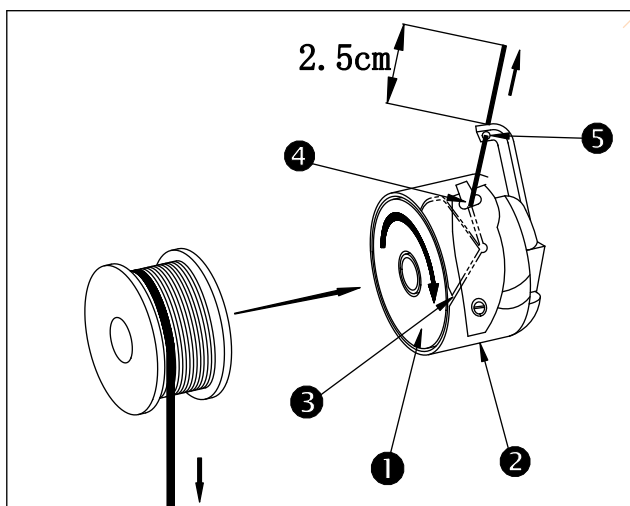


如果没有插到底，缝制途中梭壳②就有可能脱落。

5. 梭芯的插入方法




为了防止突然启动造成人身事故，请关掉电源后再进行。

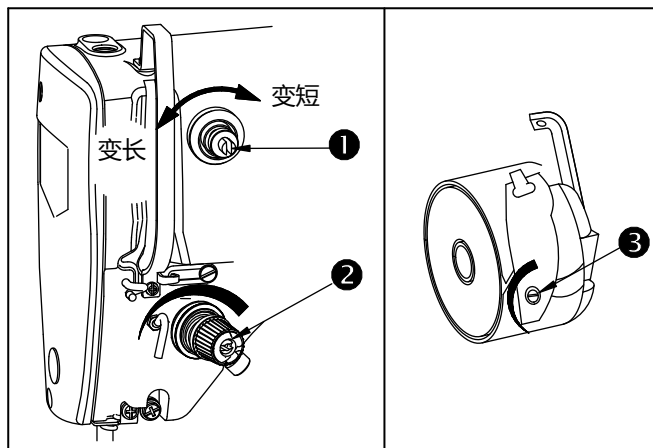


- (1). 把梭芯①按图示的方向插入梭壳②。
- (2). 把线穿过梭壳②的穿线口③，然后拉线，把线从线张力弹簧下面的穿线口④拉出来。
- (3). 把线从梭壳②的线孔⑤穿出，从线孔约拉出2.5cm。



 底线的旋转方向请按照左图所示；
如果相反的话底线的拉出就不稳定。

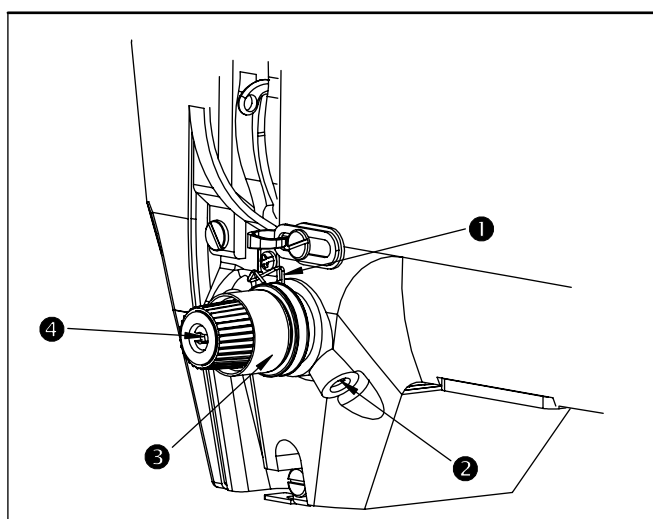
6. 线张力的调整



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。
在操作盘上调整电子夹线器的线张力，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④，转动夹线器挡圈③。

(2). 强度的调节

改变挑线弹簧的强度时，请在螺丝④拧紧的状态下，把细螺丝刀插到夹线器螺钉②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。

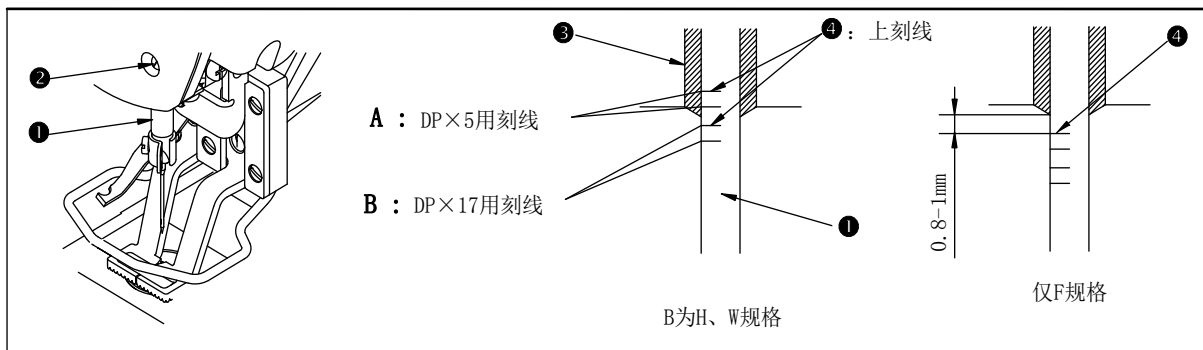
[5] 维修

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

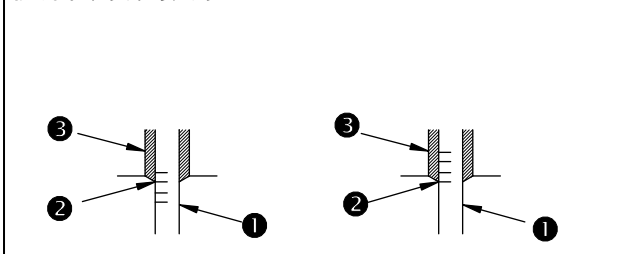
请调节后一定确认不要有松动。有的缝制条件发生跳针时，请从针杠上刻线④往下调节 0.5mm-1mm。

2. 机针与旋梭

**注意**

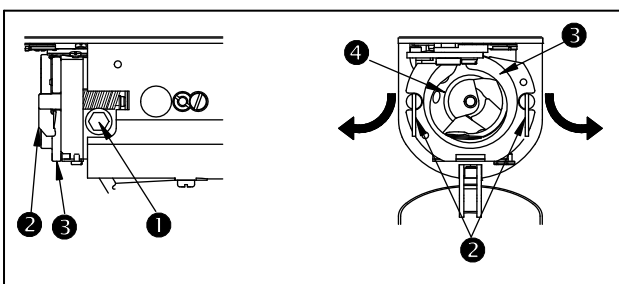
为了防止突然启动造成人身事故，请关掉电源后再进行。

机针和刻线的关系

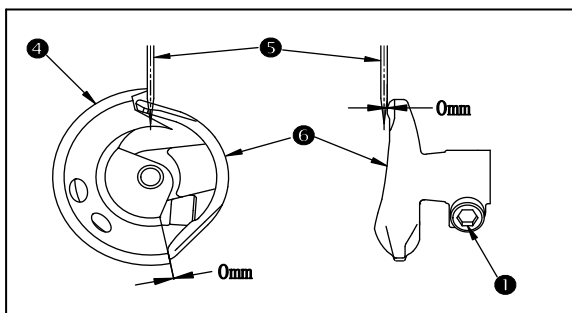


- (1). 用手转动手轮，针杆①上升时，把下刻线②对准针杆下挡块前段一致。

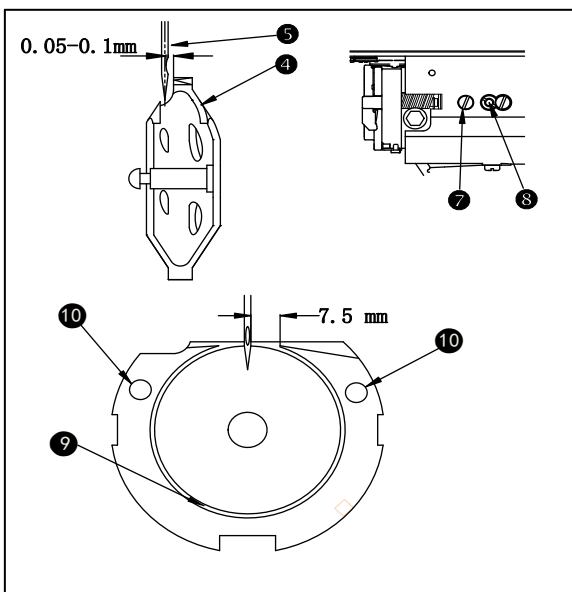
- (2). 拧松驱动器固定螺丝①，左右打开梭床盖压片②，卸下梭床盖③。



此时请注意不要脱落摆梭④。



- (3). 为了让摆梭④的梭尖与机针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). 拧松梭床固定螺丝⑦，左右转动梭床调节轴⑧，调节梭床的前后位置，把机针⑤和摆梭④的梭尖的间隙调整为 0.05~0.1mm。

- (5). 调节完梭床的前位置后，机针和梭床的间隙应为 7.5mm，然后拧紧梭床固定螺丝⑦。



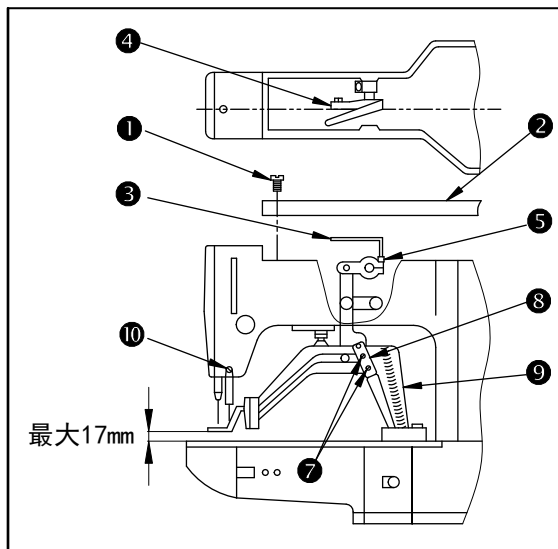
较长时间没有使用缝纫机或清扫过旋梭周围之后时，请往导轨部⑨和油芯⑩加少量的机油后再使用。

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，调节布压脚拨杆挡板⑧调整高度。



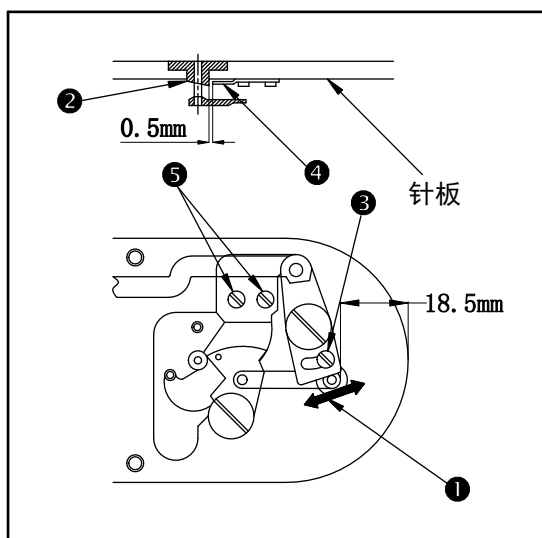
此时，请不要让布压脚拨档杆板⑧与送布台⑨相碰。如果和挑线杠相碰，请用挑线杠安装台固定螺丝⑩调节挑线杠高度。

4. 动刀和定刀



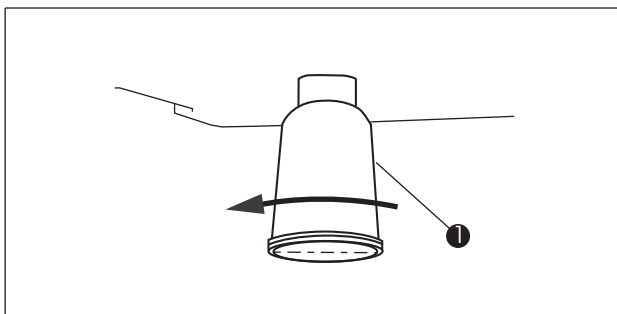
注意

为了防止突然启动造成人身事故，请关掉电源后再进行。



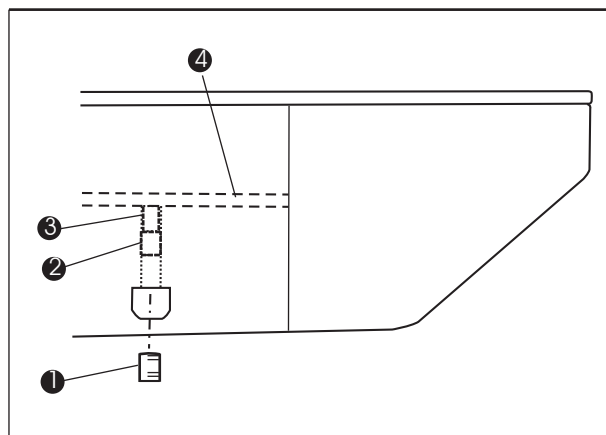
- (1). 拧松调节螺丝③，向箭头方向移动动刀，把从针板前段刀切线小拨杆①前段的距离调整为 18.5mm。
- (2). 拧松固定螺丝⑤，移动固定刀，把针孔导线器②和固定刀④之间的间隙调整为 0.5mm。

5. 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。

6. 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。



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

7. 向指定部位补充润滑油

使用缝纫机进行了一定的缝制次数之后，打开电源时操作盘上会显示出异常代码 No. E221。这是通知需要向指定部位补充润滑油，此时请一定补充下列润滑油，叫出存储器开关 No. 245，用复位键复位到[0]。显示出异常 No. E221 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. E221。

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油，然后启动存储器开关 No. 245，用复位键复位到[0]。

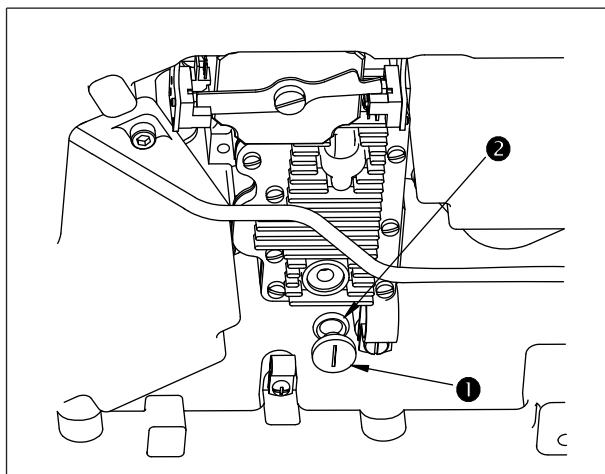


补充润滑油之后，如果不把存储器开关 No. 245 变更为[0]，异常 No. E2220 或 No. E221 会被再次显示。



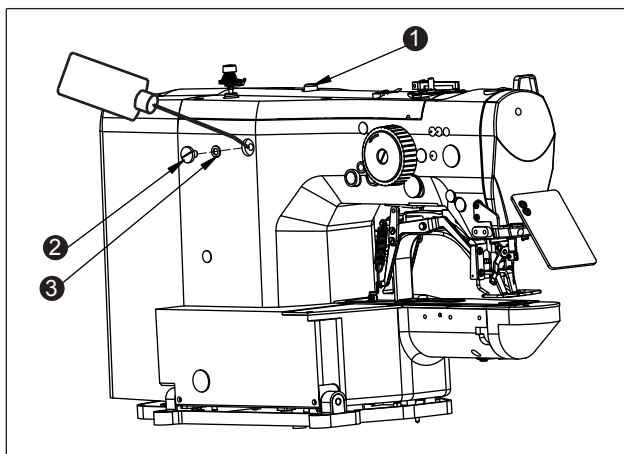
为了防止突然启动造成人身事故，请关掉电源后再进行。

(1). 将齿轮箱的废油放光



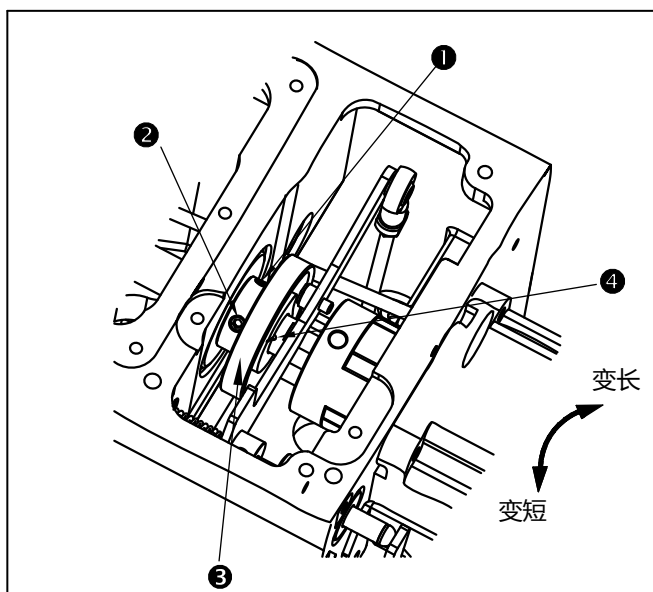
- A. 放倒缝纫机，卸下密封螺钉①和密封圈②。
- B. 放正缝纫机，把齿轮箱内的油放光。
- C. 放倒缝纫机，把密封圈②和密封螺钉①装回去，然后再放正缝纫机。

(2). 向齿轮箱中加入润滑油



- A. 当通过油窗①观察到出油不明显或无出油时，应即时往齿轮箱内加油；
- B. 在停机状态下，取下螺钉②与橡胶垫圈③，加10#白油，无出油时，加100ml，出油不明显时，加50-70ml。装回②与③，启动机器观察出油是否明显。

9. 剪线凸轮位置的调整






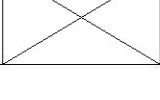
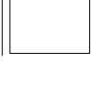
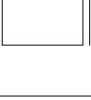



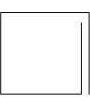

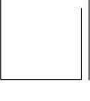




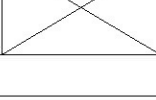
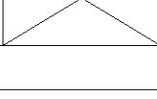
剪线凸轮③的标准位置为剪线凸轮③刻度线与上轴④定位孔对齐。

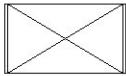


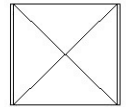
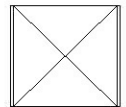
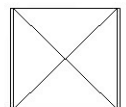
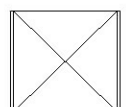
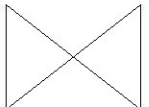
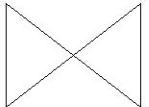
拧松固定螺钉①、②，调整剪线凸轮③位置，向右调节，切线后针尖上的残线长度变长，向左调节后变短。

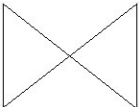
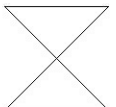
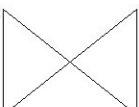
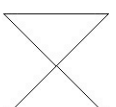
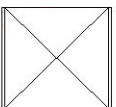

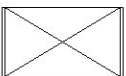

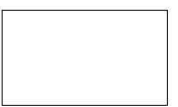
如需调整，请控制在正负3°到5°范围内调节，如调节过多，会产生剪线不良。



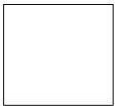




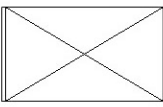
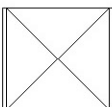
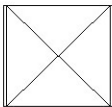
[6]. 标准花样列表



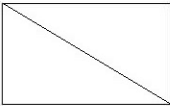
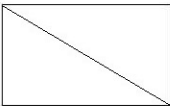



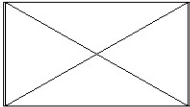
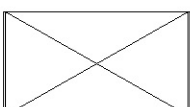
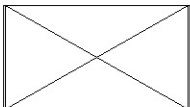
No.	落针图	针数	缝纫尺寸 mm		针距 mm
			纵	横	
1		56	40	60	4
2		73	40	60	3
3		86	40	60	2.5
4		114	40	60	4
5		152	40	60	3
6		177	40	60	2.5
7		48	25	25	3
8		48	25	25	3
9		38	20	20	3

No.	落针图	针数	缝纫尺寸 mm		针距 mm
			纵	横	
10		38	20	20	3
11		33	18	18	3
12		33	18	18	3
13		30	13	18	3
14		30	13	18	3
15		45	35	25	3.5
16		108	30	40	3
17		96	30	40	3.5
18		84	30	40	4

No.	落针图	针数	缝纫尺寸 mm		针距 mm
			纵	横	
19		66	25	35	4.5
20		62	25	30	4.5
21		58	20	30	4.5
22		68	28	28	4
23		66	20	28	3.5
24		66	20	25	3.5
25		52	20	20	4
26		42	30	40	4.5
27		38	25	35	4.5

No.	落针图	针数	缝纫尺寸 mm		针距 mm
			纵	横	
28		36	25	30	4.5
29		46	28	28	3.5
30		37	20	25	3.5
31		42	20	25	3.5
32		52	15	15	3
33		60	16	25	3.5
34		65	30	35	5
35		30	15	15	2.5
36		34	18	24	3

No.	落针图	针数	缝纫尺寸 mm		针距 mm
			纵	横	
37		36	20	24	3
38		36	16	25	3
39		42	25	25	3
40		42	25	35	3.5
41		48	20	40	3
42		54	30	40	3
43		46	30	30	3
44		107	20	38	2.5
45		91	20	28	2.5
46		78	20	19	2.5

No.	落针图	针数	缝纫尺寸 mm		针距 mm
			纵	横	
47		52	11	9	2
48		120	25	25	2
49		71	30	40	3
50		83	30	40	2.5
51		56	40	60	4
52		73	40	60	3
53		86	40	60	2.5
54		114	40	60	4
55		152	40	60	3
56		177	40	60	2.5

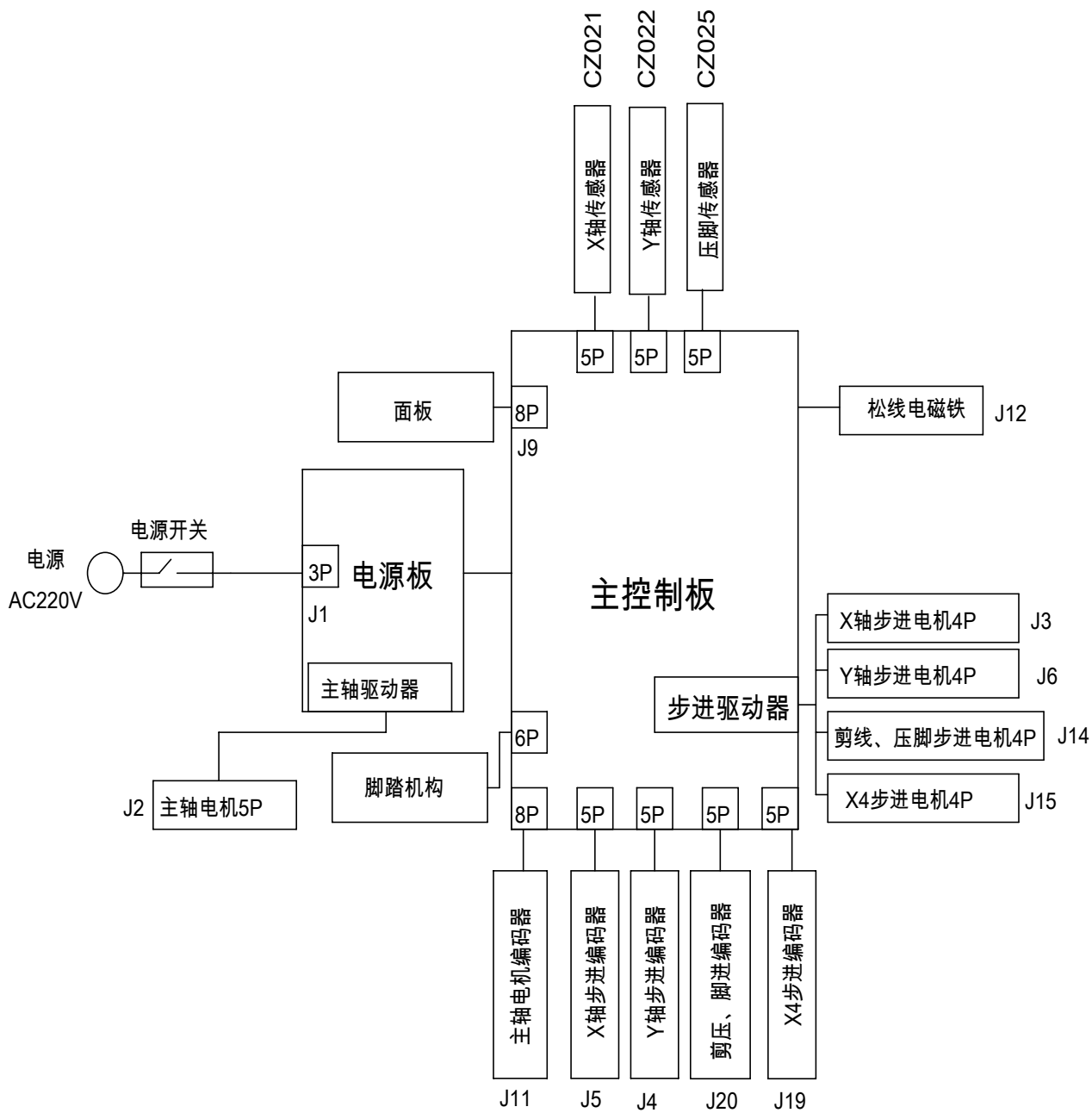
II. 缝纫时故障、原因及对策

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。 ○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。 ○使用硅油。
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. 常跳线	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。	○调整针和摆梭的位置。 ○调整针和摆梭的位置。 ○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。 ○使用暗缝式下板。

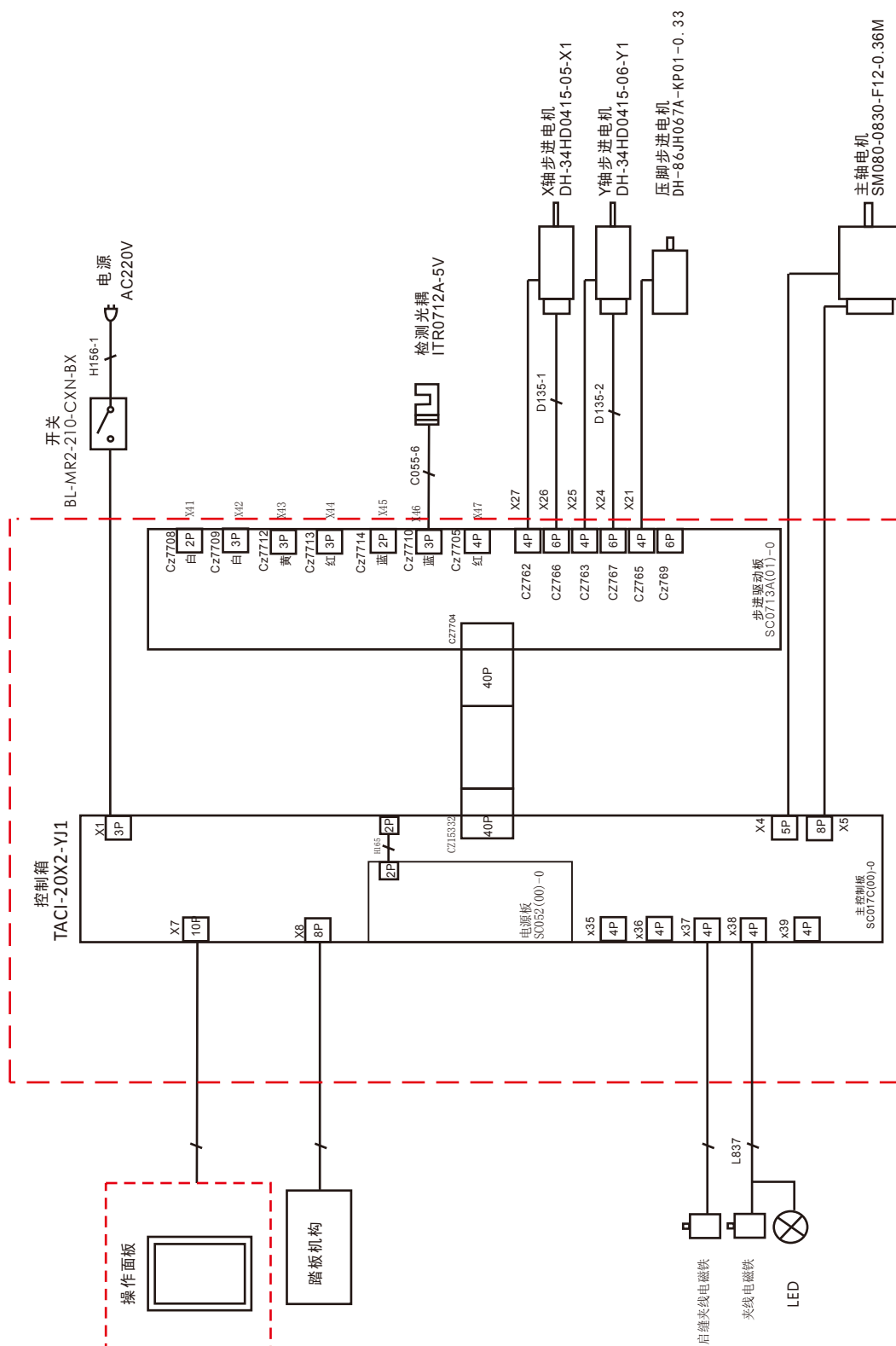
7. 切线时 短线	①动刀位置不好。	○调节动刀位置 ○调节剪线凸轮位置
8. 机线长度不一致	①挑线弹簧的张力低。	○提高挑线弹簧的张力。
9. 机线长度不能弄短	①第 1 线张力器的张力低。 ②挑线弹簧张力过强。 ③因为挑线弹簧的张力过低，所以动作不稳定。	○增强第 1 线张力器的张力。 ○降低挑线弹簧的张力。 ○增强挑线弹簧的张力，行程也变长。
10. 缝制开始第 2 针的底线结线部露出表面	①梭芯的空槽大。 ②底线张力低。 ③第 1 针的上线张力过强。	○调整活动刀的位置。 ○增强底线张力。 ○下降第 1 针的上线张力。

III.电控系统框图

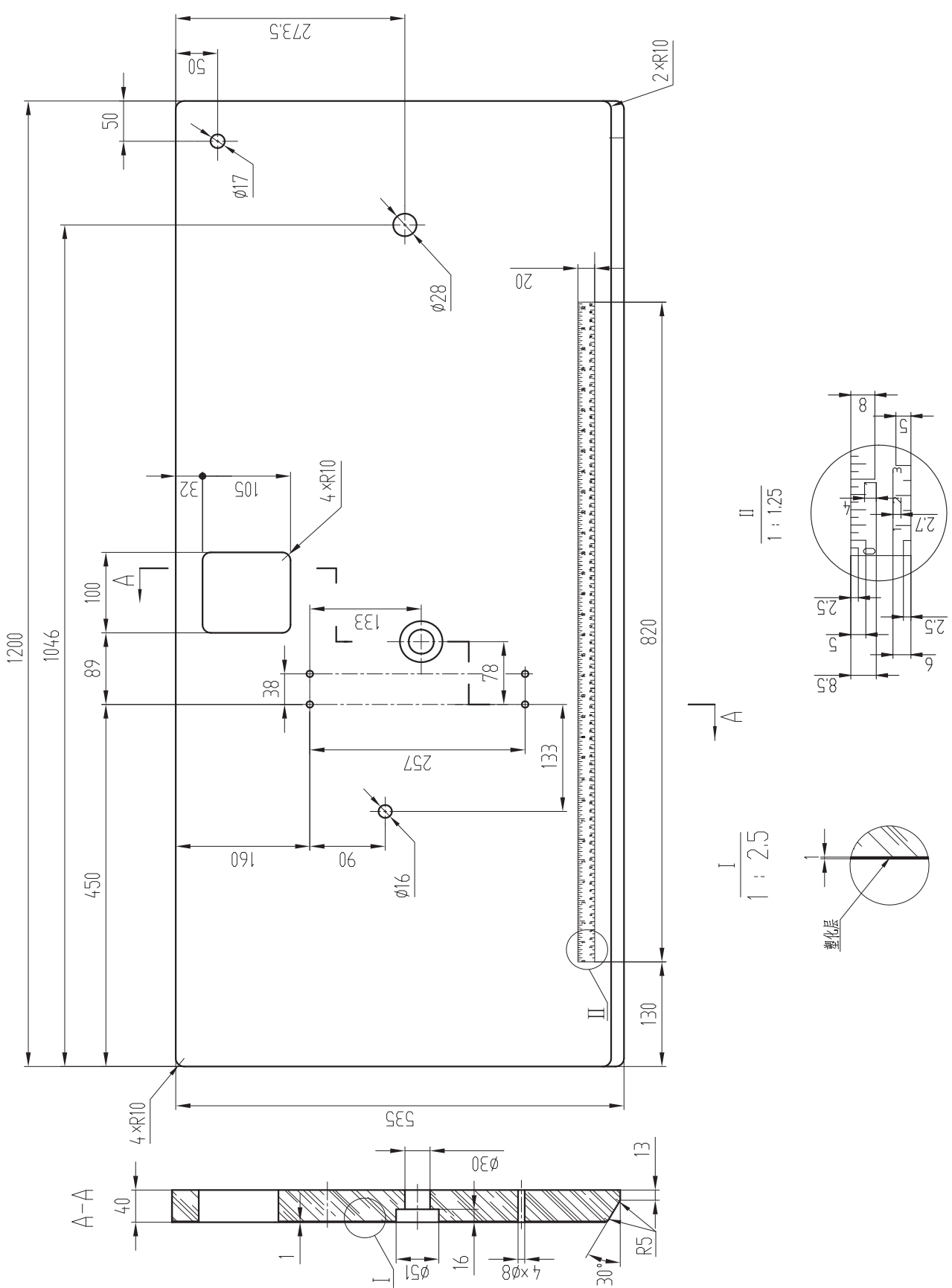
1 .电控系统框图(-03)



2 .电控系统框图(-04)



VI. 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.

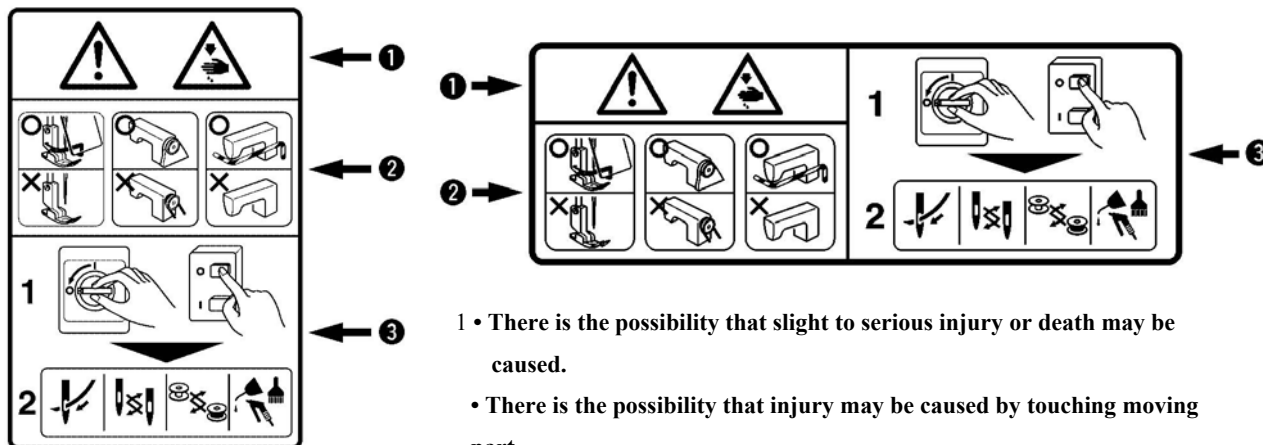
1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
2. Read all the instructions, including, but not limited to this Instruction Manual before you use the machine. In addition, keep this Instruction Manual so that you may read it at anytime 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), loopier, spreader etc. and replacing bobbin.
 - 7-2 For replacing part(s) of needle, presser foot, throat plate, loopier, 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 JUKI 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 especially 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 especially 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 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 shell nor touch the components mounted inside the back cover.
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.

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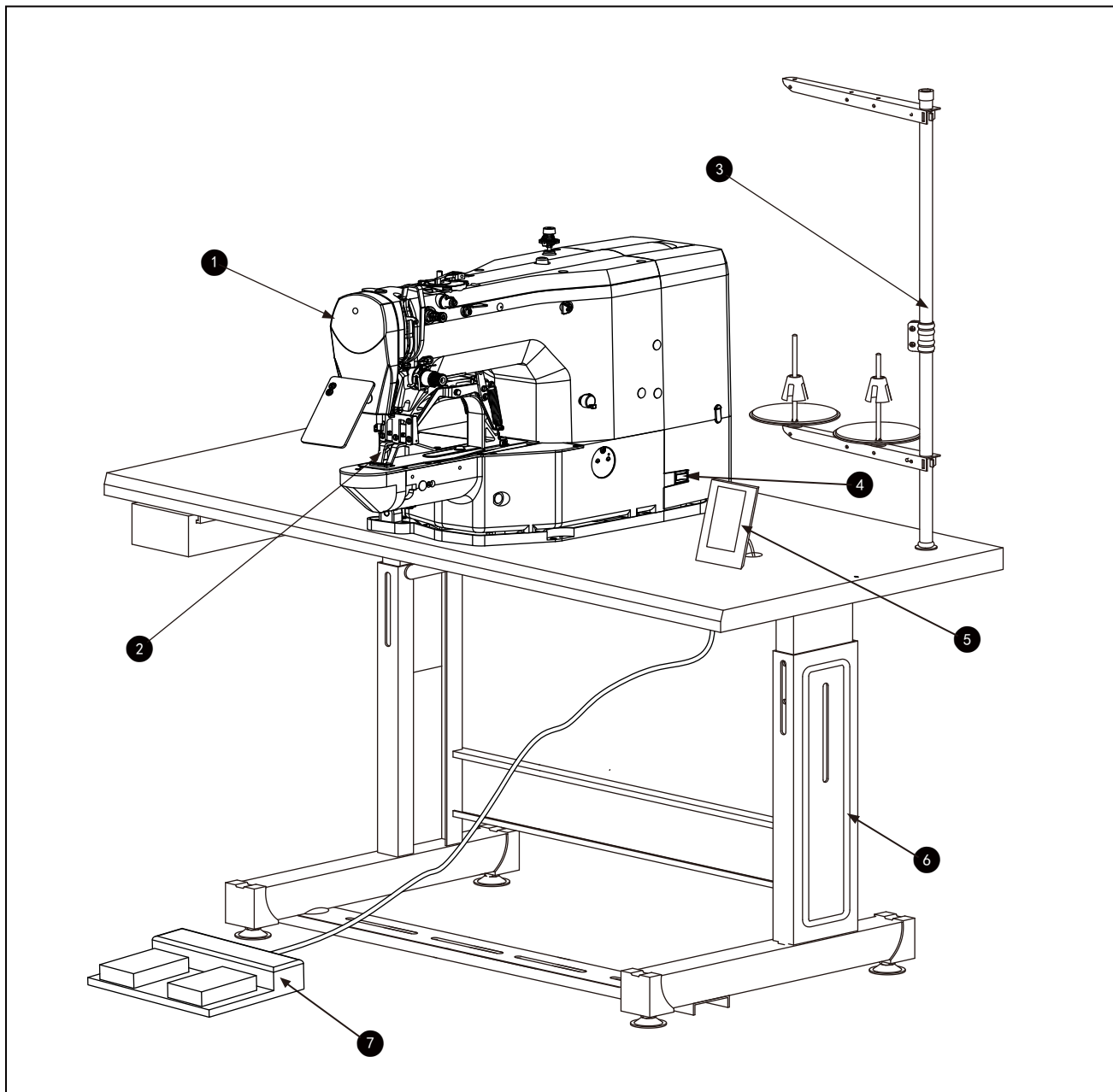
I . EXPLANATION OF 0604 BARTACKING SEWING MACHINE, COMPUTER-CONTROLLED HIGH-SPEED BAR TACKING MACHINE

[1] SPECIFICATIONS

- | | |
|------------------------------------|---|
| 1. Sewing area: | X (lateral) direction 60mm
Y (longitudinal) direction 40mm |
| 2. Max. Sewing speed: | 2500rpm
(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: | 41.2mm |
| 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 recording: | 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 2500rpm (100rpm) |
| 14. Pattern selection: | Specifying pattern No. type (1 to 300) |
| 15. Bobbin thread counter: | UP/DOWN type (1-9999) |
| 16. Sewing machine motor: | 550W Servo motor |
| 17. Dimensions: | W: 1200mm L: 540mm H: 1100mm |
| 18. Weight: | Machine 55Kg |
| 19. Power consumption: | 0.6KW |
| 20. Operating temperature range: | 5℃ to 35℃ |
| 21. Operating humidity range: | 35% to 85% (No dew condensation) |
| 22. Line voltage: | Rated voltage ±10% 50-60Hz |

[2] CONFIGURATION

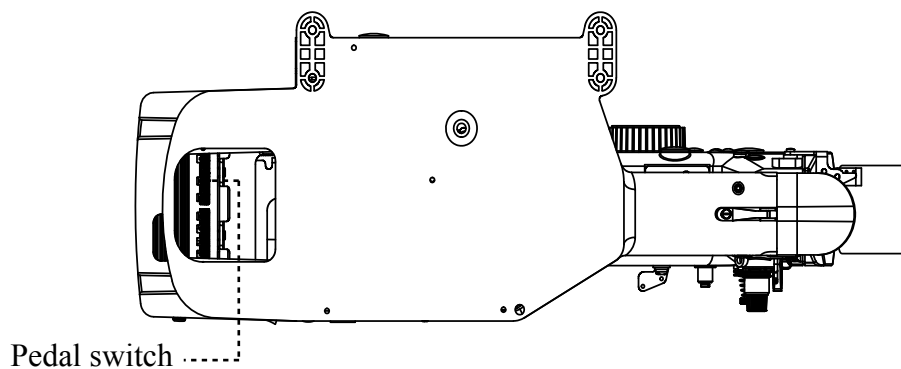
1. Names of main unit



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

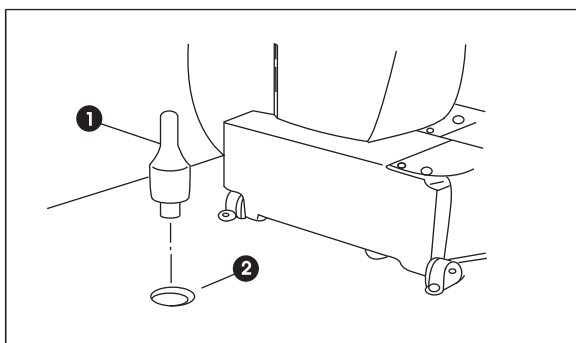
[3] INSTALLATION

1. Connecting pedal switch



Please let the pedal switch line connect with the electronic control box according to online identity, make sure the connection is correct.

2. Installing the head support rod

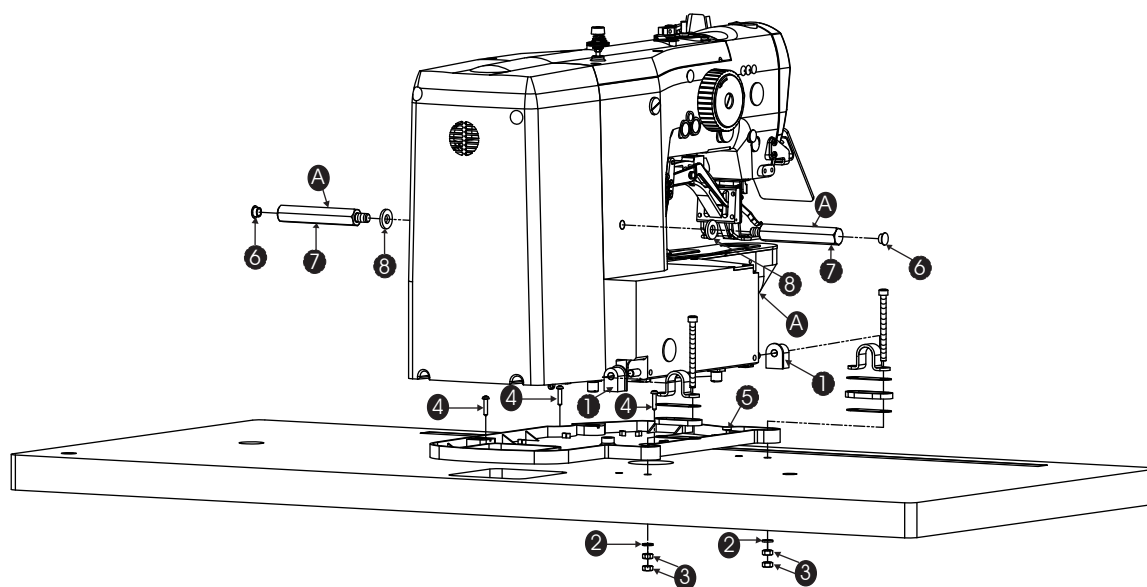


Drive head support rod① in hole② in the machine table.

3. Installation of the swing machine head



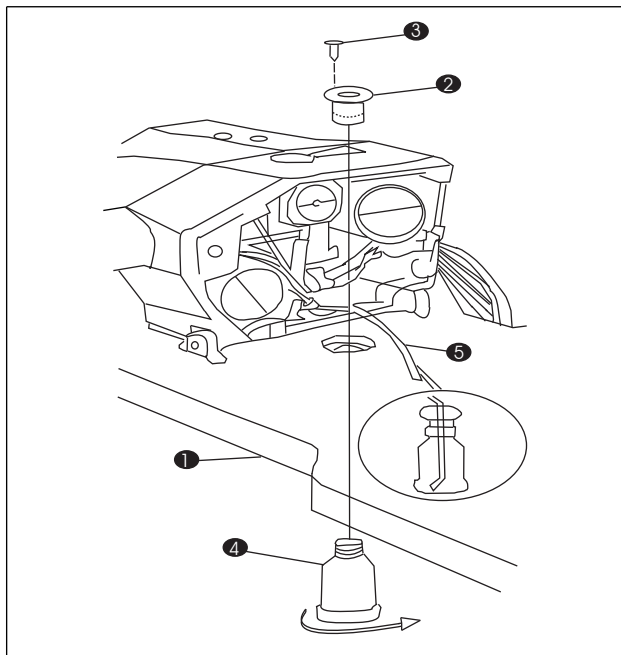
WARNING : To prevent possible accidents caused by the fall of the sewing machine, perform the work by two persons or more when the machine is



- 1、 When handling sewing machine, please hold A Department
- 2、 After handling, please remove the handle⑦ and rubber pad⑧, fitted with rubber plug⑥

- (1). the oil plate ⑤ with wood screws ④ fixed in the corresponding position of the platen.
- (2). Fit hinge rubber ① to the hinge shaft, and fix the swing machine.
- (3). The flat pad ② , nut③ , followed by a fixed, pay attention to the locking nut③ force, if twisted too tightly, then the shock result is not satisfactory.

4. Installing the drain receiver

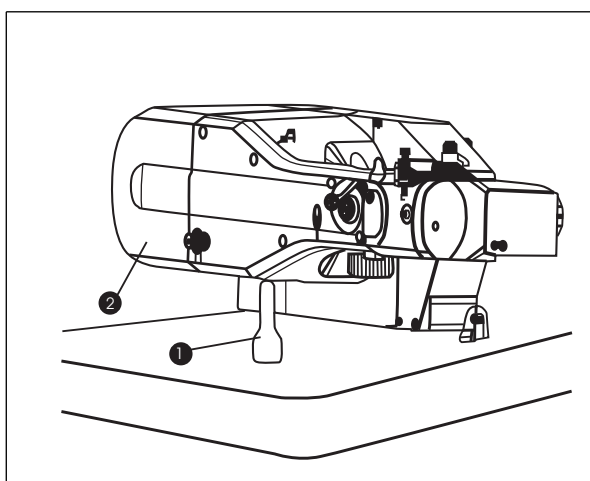


Fix drain receiver ② in the installing hole of table ① with four setscrews ③. Screw in drain bin ④ to drain receiver ②. Insert sewing machine drain pipe ⑤ into drain bin ④.



Insert drain pipe ⑤ until it will go on further so that it does not come off drain bin ④ when tilting the machine head

5. Tilting the sewing machine head

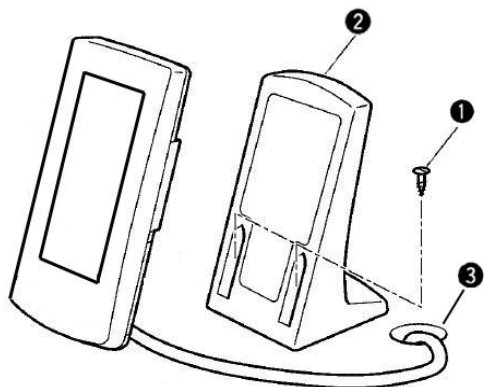


turn head ② gently down, and leaning the head on the head supporting bar at ①.

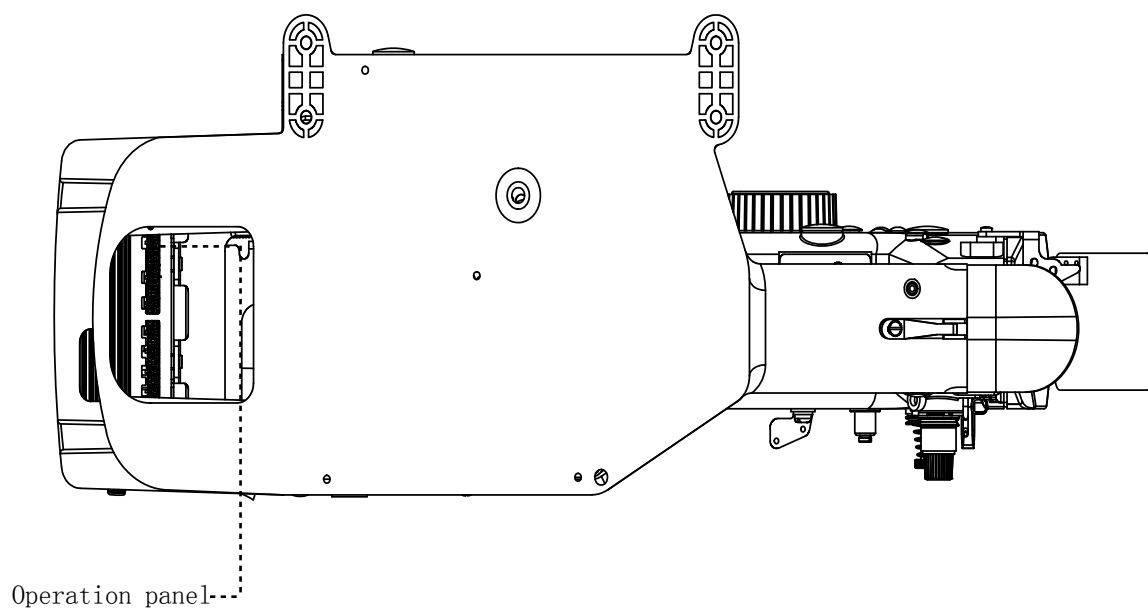


1. Before tilting the sewing machine head, make sure that head support rod ① is attached to the machine table;
2. When raising the sewing machine head, do not raise it while holding motor cover ②. It will be the cause of breakage of motor cover ②.
3. Be sure to tilt the sewing machine head on a flat place to prevent it from falling.

6. Installing the operation panel



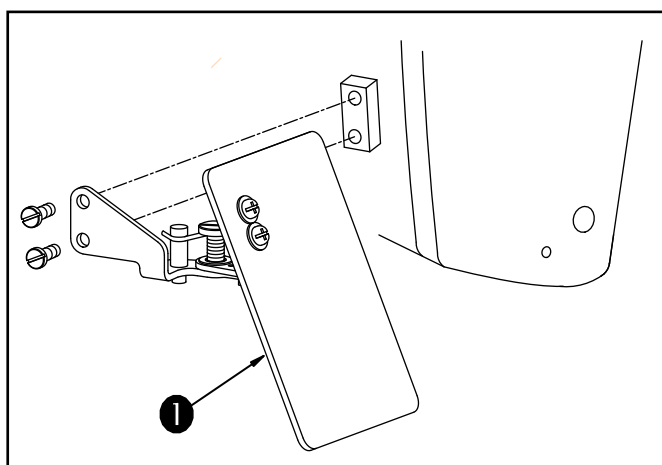
Use four wood screws ① fix the operator panel ② on the table ③ in a comfortable operation position, then the operator panel ② corresponding wire hole through the table ③, and then dock with the other side.

7. Connecting the operation panel

Please let the operation panel line connect with the electronic control box according to online identity, make sure the connection is correct.

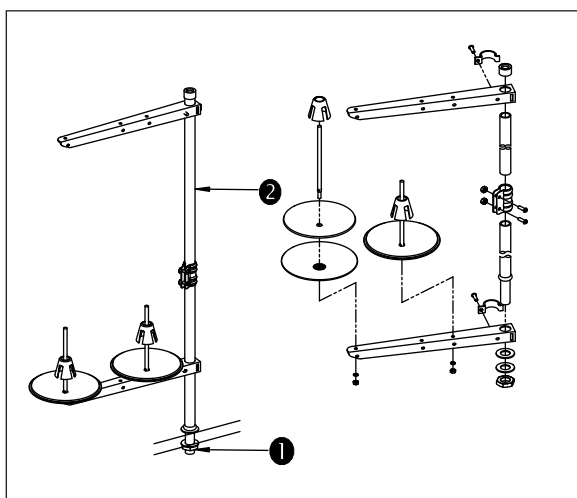
8. Installing the eye protection cover**WARNING :**

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



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

9. Installing the thread stand



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

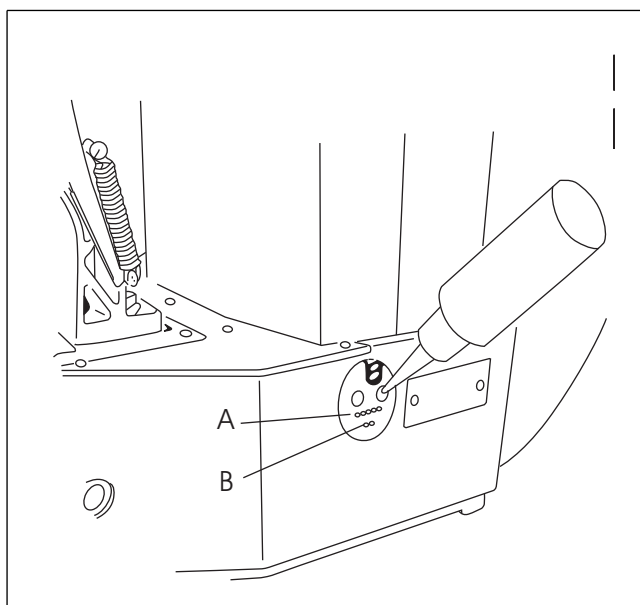
[4] OPERATION OF THE SEWING MACHINE

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 7.Amount of oil supplied to hen kook of [5] 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.

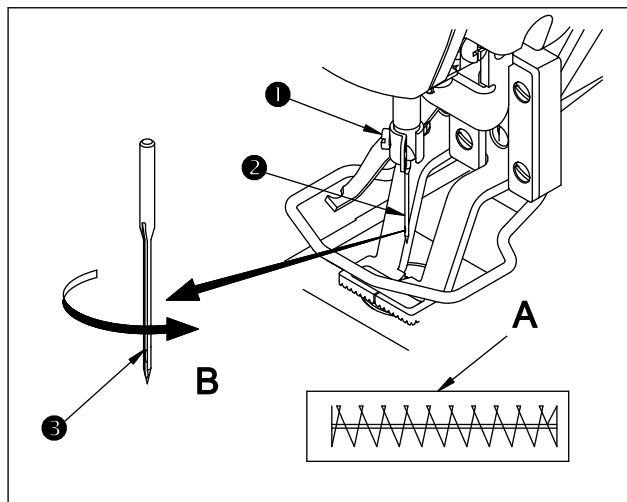


2. When using the sewing machine for the first time or after an extended period of disuse use the machine after lubricating a small amount of oil to the hook portion.(Refer to2.Adjusting the needle-to-shuttle relation of [5]MAINTENANCE

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.

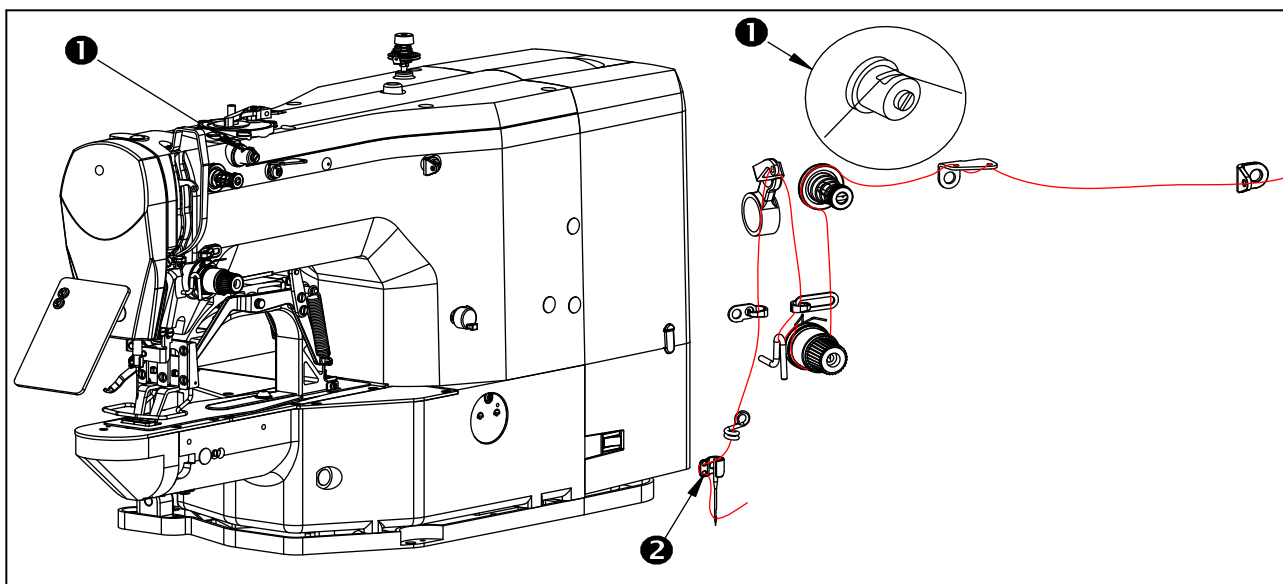


If the stitches are made as shown in "A", attach the needle facing to the direction "B" to a small extent.

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.

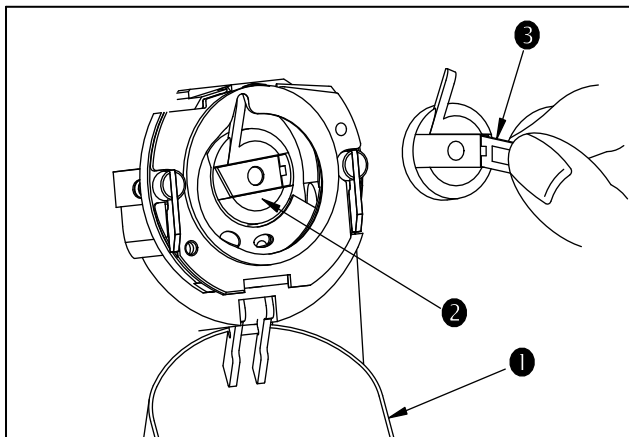


1. When the silicon oil is used, thread through thread guide for silicon①.
2. For thick thread, pass the thread through one hole only of needle bar thread guide②

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.

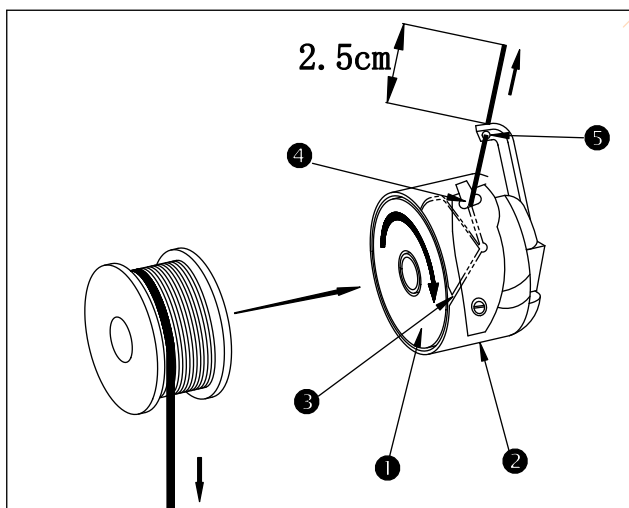


If it is not fully inserted, bobbin case ② may slip off during sewing.

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

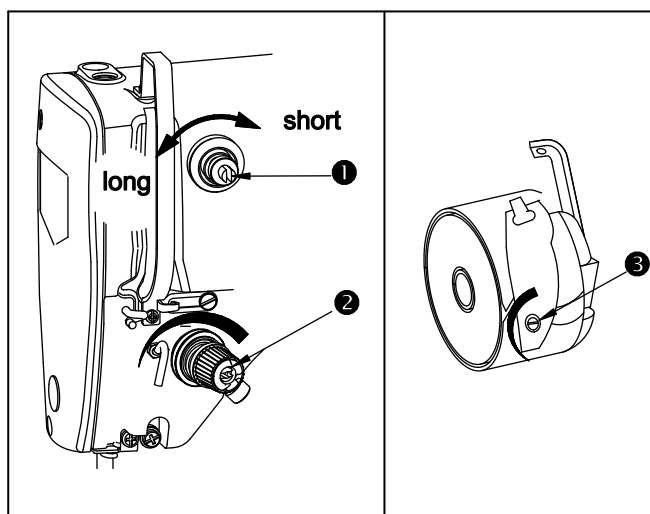


- (1). Set the bobbin ① into bobbin case ② in the direction shown in the figure.
- (2). Pass the thread through thread slit ③ of bobbin case ②, and pull the thread as it is. By so doing, the thread will pass under the tension spring and be pulled out from thread hole ④.
- (3). Pass the thread through thread hole ⑤ of the horn section, and pull out the thread by 2.5cm from the thread hole.



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

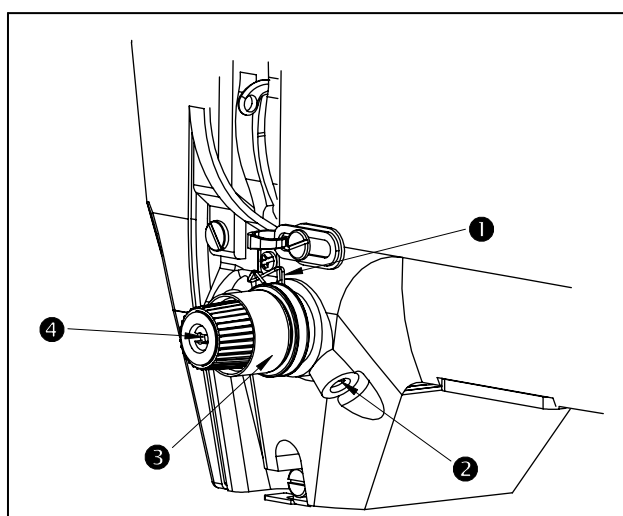


If thread tension controller No.1 ① is turned clockwise, the length of remaining thread on the needle after thread trimming will be shorter. If it is turned counterclockwise, the length will be longer.

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

with ② to adjust the upper thread tension,
with ③ to adjust the bottom line tension.

7. Adjusting the thread take-up spring



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

(1). Adjusting the stroke

Loosen setscrew ②, 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 post ② while screw ④ 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.

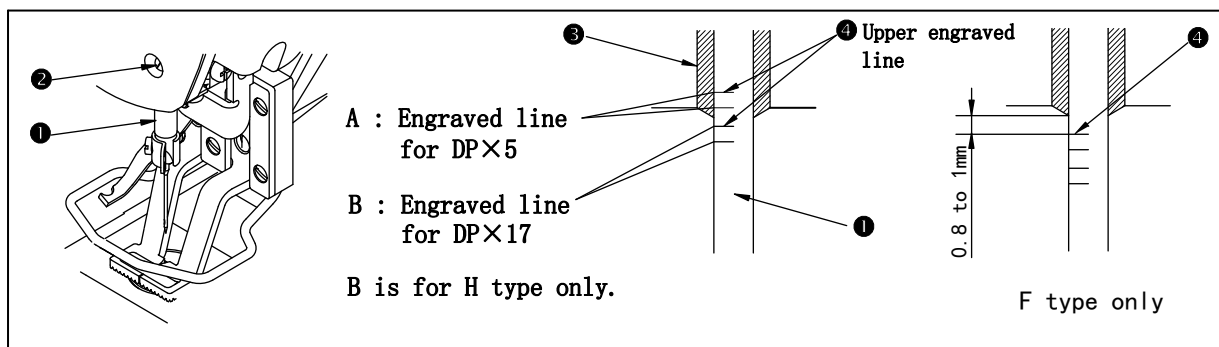
[6] MAINTENANCE

1. Adjusting the height of the needle bar



WARNING :

Turn OFF the power before starting the work so as to prevent accidents caused 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 line ④ 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.



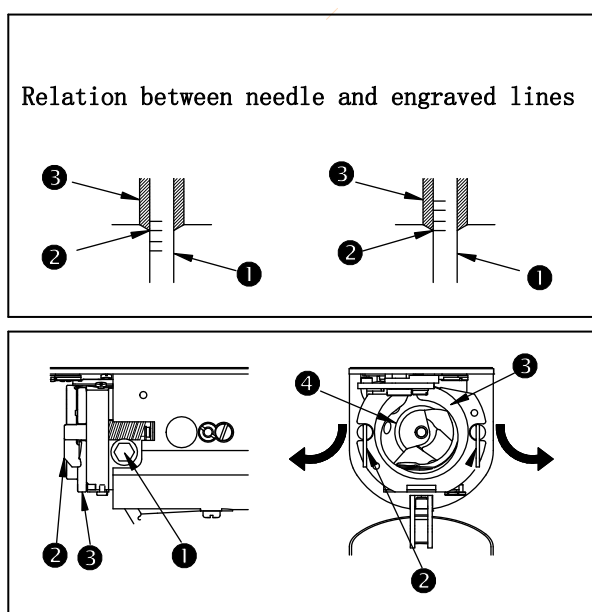
After the adjustment, make sure that there is no uneven torque. When stitch skipping occurs in accordance with the sewing conditions, adjust the height of the needle bar so as to lower it by 0.5 to 1 mm from the needle bar engraved line ④.

2. Adjusting the needle-to-shuttle relation



WARNING :

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

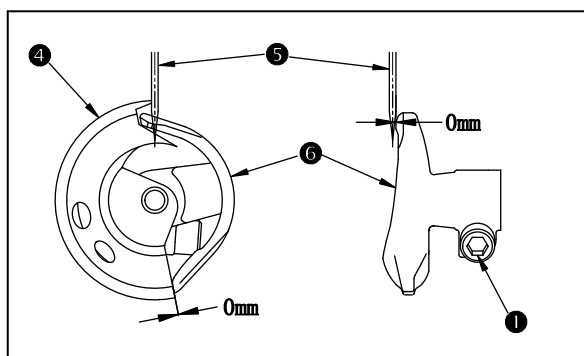


(1). Turn the hand wheel by hand. When needle bar ① has gone up, adjust so that lower marker line ② engraved on the needle bar aligns with the bottom end of the needle bar bushing ③, lower.

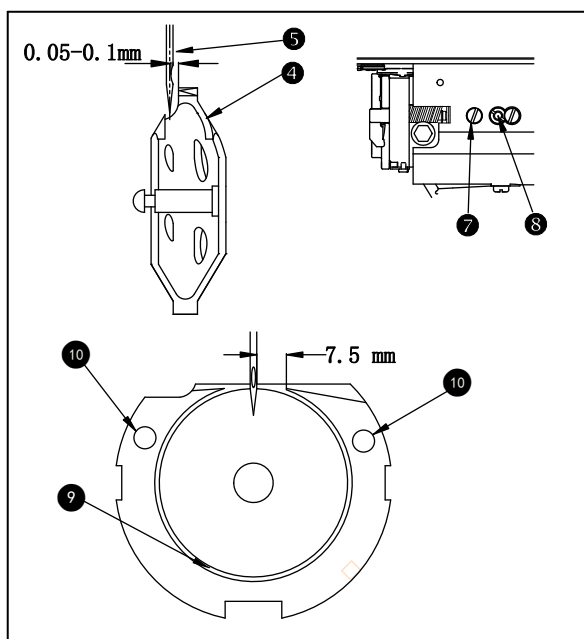
(2). Loosen setscrew ① in the driver. Open inner hook pressers ② to the right and left, and remove inner hook presser ③.



At this time, be careful not to let inner hook ④ come 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 ⑥ receives the needle to prevent the needle from being bent. Then tighten setscrew ① of



(4). Loosen setscrew ⑦ of the shuttle, and adjust the longitudinal position of the shuttle. To do this adjustment, turn shuttle race adjusting shaft ⑧ clockwise 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.



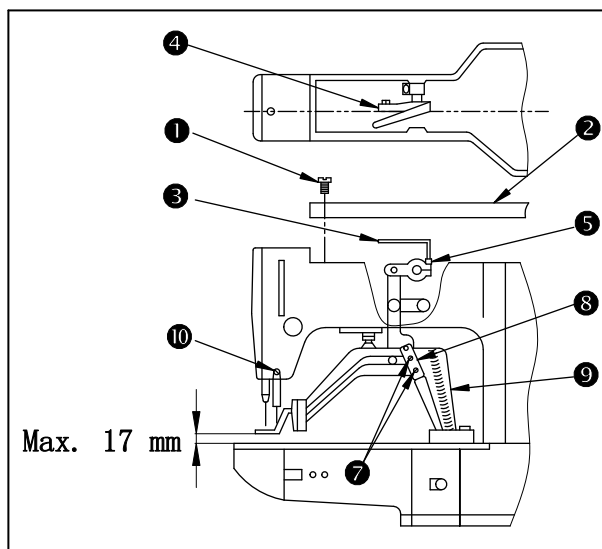
Apply a small amount of oil to race section ⑨ and oil wick ⑩, and use the sewing machine after an extended period of disuse or cleaning the periphery of hook portion.

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 set screws ① of the top cover, and take off top cover ②.
- (2) . Apply L-shaped wrench ③ to socket bolt ⑤ of 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 bolt ⑤ .
- (5) . If the right and left work clamp feet are not leveled, loosen fixing screw ⑦ and adjust the position of the work clamp foot lever support plate ⑧ to level them.



At this time, be careful not to cause work clamp foot lever support plate ⑧ to interfere with feed bracket ⑨ .

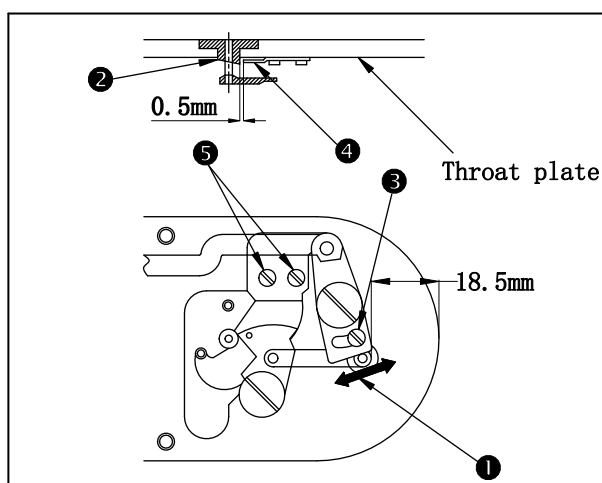
If the work clamp foot lever support plate interferes with the wiper, readjust the height of the wiper using setscrew ⑩ in the wiper installing base.

4. The moving knife and counter knife



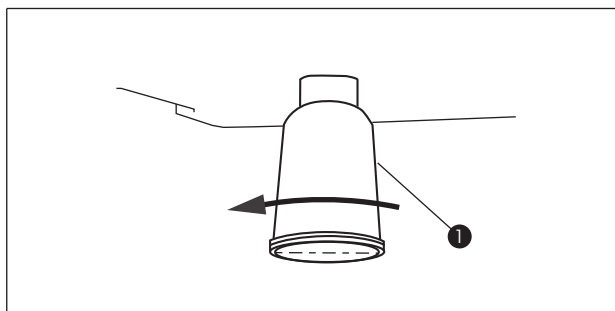
WARNING :

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



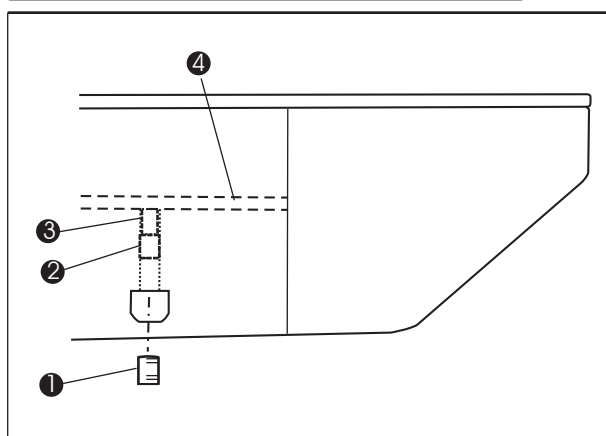
- (1). Loosen adjusting screw ③ so that a clearance of 18.5 mm is provided between the front end of the throat plate and the top end of thread trimmer lever, small ① . To adjust, move the moving knife in the direction of arrow.
- (2). Loosen setscrew ⑤ so that a clearance of 0.5 mm is provided between needle hole guide ② and counter knife ④ . To adjust, move the counter knife.

5. Draining waste oil



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

6. Amount of oil supplied to the hook



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

1. The state of standard delivery is the position where ② 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 ② is screwed in and returned by 2 turns. If reducing is excessive, worn-out of the hook will result.

7. Replenishing the designated places with grease

When the sewing machine has been used for a certain number of times of sewing, error code No. E221 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 oil. Be sure to replenish the places with the oil 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. E221, when the RESET key is pressed, the error is released, and the sewing machine can be continuously used. Afterwards, however, the error No. E221 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 oil. Then start up the memory switch and set No. 245 to "0" with the RESET key.

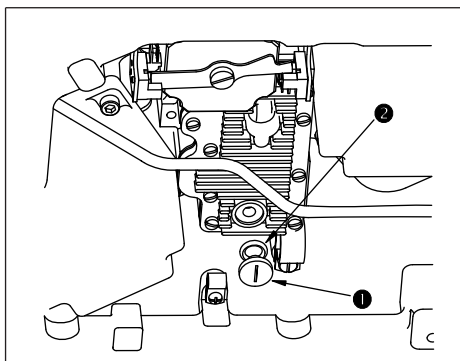


After replenishing the places with oil, the error No. E220 or No. E221 is displayed again unless the memory switch No. 245 is changed to "0".



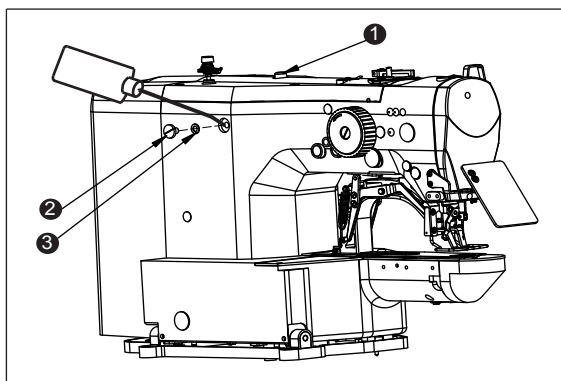
WARNING : Turn OFF the power before starting the work so as to prevent accidents cause by abrupt start of the sewing machine.

(1) . Outflow the residual oil in gearbox



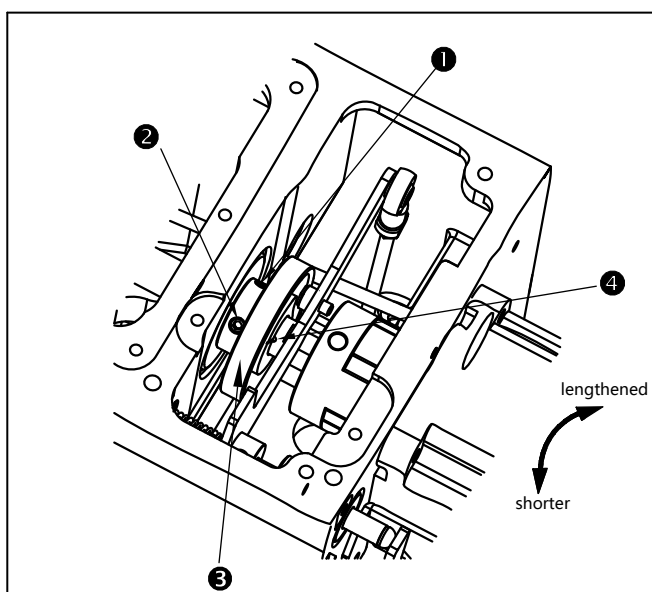
- 1) Tilt the machine, remove the screws ① and seal ②.
- 2) put back sewing machine, outflow the residual oil in the gearbox.
- 3) tilt the machine again, put back the seals ② and screws ①, then put sewing machine back to the position.

(2) . Lubricate the upper gearbox



- 1) When through the oil window ①, you can not find oil outlet obviously, or it is without oil outlet, you should add the oil into the wheel gear box.
- 2) Turn off the machine, you can take down the screw ② and the rubber washer ③, when it is without oil outlet, please add 100ml 10# white oil; when it is not oil outlet obviously, please add 50-70ml. Please install back ② and ③ parts, turn on the machine and check whether it is happened to oil outlet or not.

8. Adjusting the trimming cam




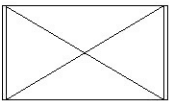
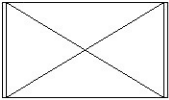
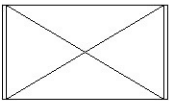










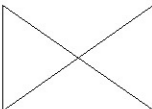
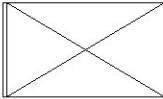
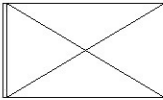
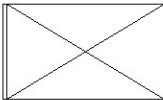
The standard position of the trimming cam is the alignment of the cutting line and the main shaft.


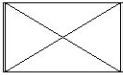
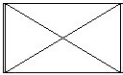
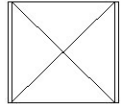
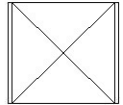
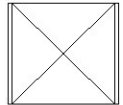
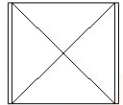
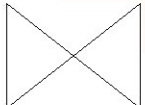
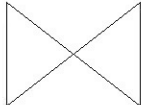
Loosen the fixing screwing ① and ②, adjust the position of the trimming cam, adjust to the right, and the length of the residual line on the tangent point becomes longer, then the left side is adjusted to shorten length of the line.

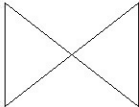
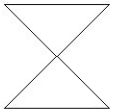
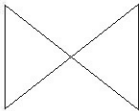

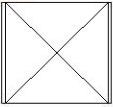
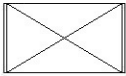
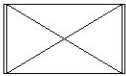


IF you need to adjust, please control in the positive and negative 3-5 degree range adjustment, such as excessive regulation will produce a bad line.



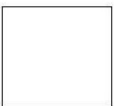




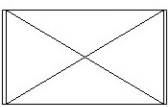
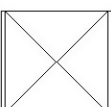
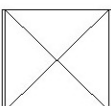
[6]. THE STANDARD PATTERNS



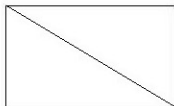
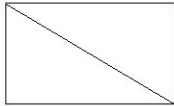



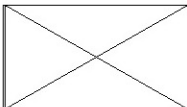
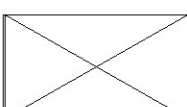
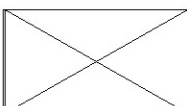
No.	Stitch diagram	Number of stitches	Sewing size mm		Needle disance mm
			Length- wise	Cross- wise	
1		56	40	60	4
2		73	40	60	3
3		86	40	60	2.5
4		114	40	60	4
5		152	40	60	3
6		177	40	60	2.5
7		48	25	25	3
8		48	25	25	3
9		38	20	20	3

No.	Stitch diagram	Number of stitches	Sewing size mm		Needle disance mm
			Length- wise	Cross- wise	
10		38	20	20	3
11		33	18	18	3
12		33	18	18	3
13		30	13	18	3
14		30	13	18	3
15		45	35	25	3.5
16		108	30	40	3
17		96	30	40	3.5
18		84	30	40	4

No.	Stitch diagram	Number of stitches	Sewing size mm		Needle distance mm
			Length-wise	Cross-wise	
19		66	25	35	4.5
20		62	25	30	4.5
21		58	20	30	4.5
22		68	28	28	4
23		66	20	28	3.5
24		66	20	25	3.5
25		52	20	20	4
26		42	30	40	4.5
27		38	25	35	4.5

No.	Stitch diagram	Number of stitches	Sewing size mm		Needle distance mm
			Length-wise	Cross-wise	
28		36	25	30	4.5
29		46	28	28	3.5
30		37	20	25	3.5
31		42	20	25	3.5
32		52	15	15	3
33		60	16	25	3.5
34		65	30	35	5
35		30	15	15	2.5
36		34	18	24	3

No.	Stitch diagram	Number of stitches	Sewing size mm		Needle distance mm
			Length-wise	Cross-wise	
37		36	20	24	3
38		36	16	25	3
39		42	25	25	3
40		42	25	35	3.5
41		48	20	40	3
42		54	30	40	3
43		46	30	30	3
44		107	20	38	2.5
45		91	20	28	2.5
46		78	20	19	2.5

No.	Stitch diagram	Number of stitches	Sewing size mm		Needle distance mm
			Length-wise	Cross-wise	
47		52	11	9	2
48		120	25	25	2
49		71	30	40	3
50		83	30	40	2.5
51		56	40	60	4
52		73	40	60	3
53		86	40	60	2.5
54		114	40	60	4
55		152	40	60	3
56		177	40	60	2.5

II. Troubles and corrective measures (sewing conditions)

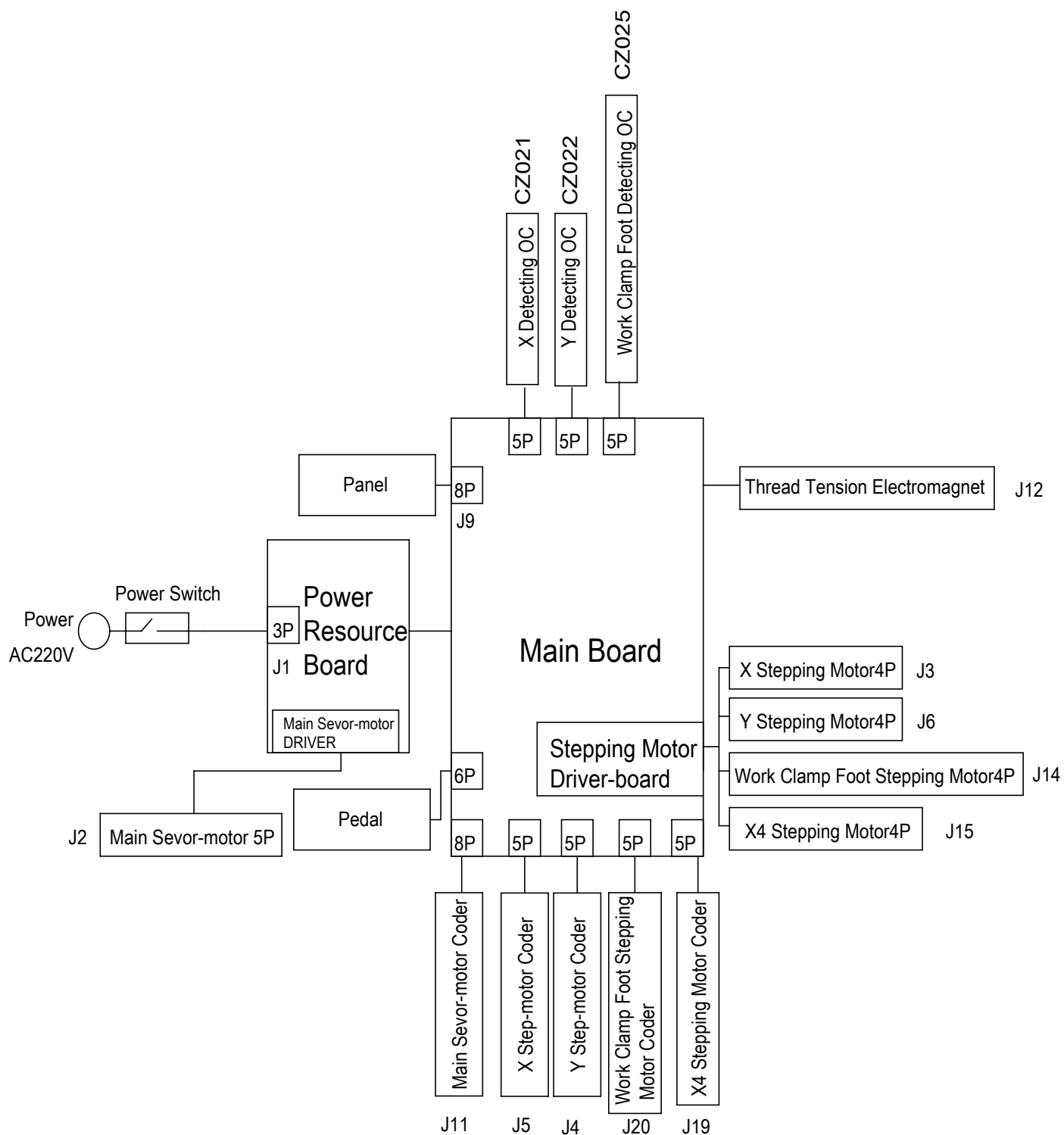
Trouble	Cause	Corrective measures
1.The needle thread slips off at the start of bar-tacking	① Stitches are slipped at the start ② The needle thread remaining on the needle after thread trimming is too short. ③ The bobbin thread is too short. ④ Needle thread tension at 1 st stitch is too high. ⑤ Pitch at 1 st 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 bar tacking. ○ 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 1 st stitch. ○ Decrease the number of rotation at 1 st stitch at the sewing start. ○ Make the pitch at 1 st stitch longer. ○ Decrease the needle thread tension at 1 st 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.	○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 according to the material. ○Widen the distance between the needle and the

	⑤Needle thread is stepped on by the work clamp foot at the start of sewing (Needle bend)	wiper.(23 to 25mm)
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. ○Increase 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. ○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. 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.
9. 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.

III. System diagram

1 .System diagram of the electricity controls(-03)



2 .The system diagram of the electricity controls(-04)

