

# How to install the Borer device to model HCR

Ver. 1.0



For qualified personal only

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## # For safe adjustment and repair #

In order to conduct adjustment and repair safely and surely,

Please be sure to abide by what is mentioned in this manual to prevent trouble.



1. When you conduct adjustment and repair of this embroidery machine or handle electric related parts, you are required to take technical lesson in advance.
2. When you conduct adjustment and repair using this manual, please be sure to use together with instruction with it in hand.

# Please conduct in accordance with work process in this manual.

# In case there are no specific instructions or explanations in work process.

please be sure to unplug cord from receptacle.

# When you exchange parts, please be sure to use genuine parts designated by us.

# Please never remodel the embroidery machine.

When you handle circuit boards:

# In order to prevent troubles from static electricity, please remove earth from human body.

# Please don't touch metal part of circuit board with bare hand as it will short-circuit and threaten to break circuit boards.

# When you removed circuits boards from the machine or you store or transport them, please wrap them in static electricity preventive bag and avoid to give shock.

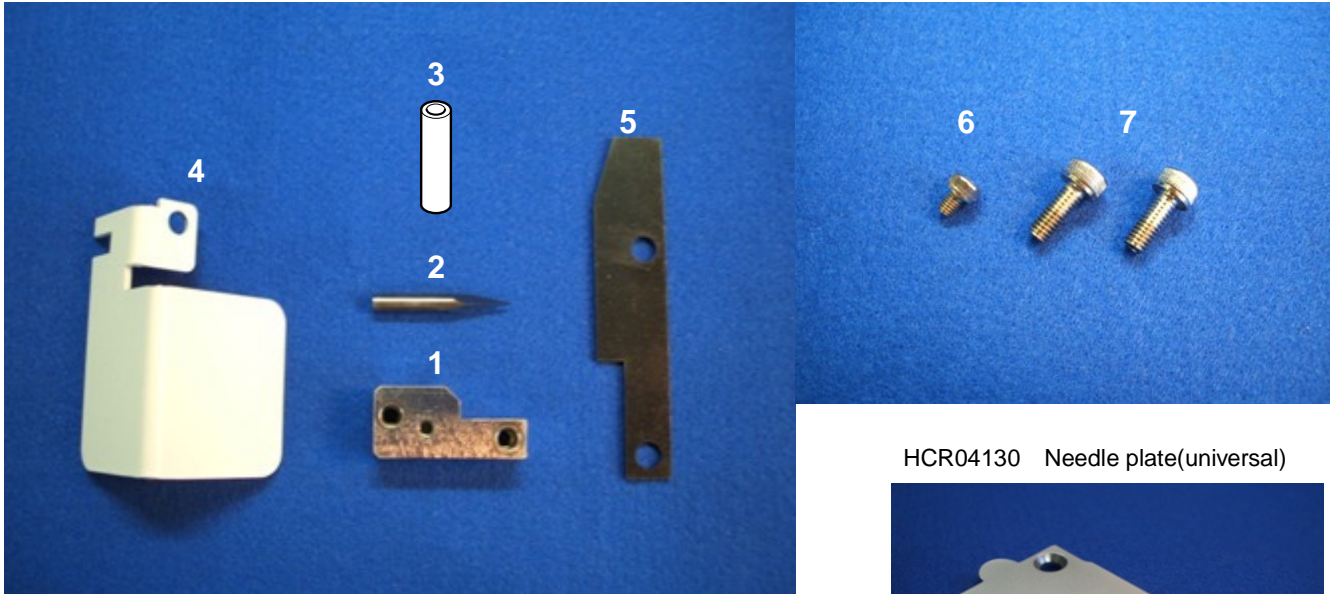
## 1. Required Parts and Steps of installation

For making Borer embroidery on HCR machine, the below Borer device set is required. (Required same quantity of number of machine head)

Also Needle plate (universal) which has hole for Borer blade is required to use Boer device.

In case your machine does not have this type of needle plate, please prepare this needle plate too.

HCRU49010 Borer device set



HCR04130 Needle plate(universal)

### Borer device set

- 1 Blade holding bracket (QTY:1)
- 2 Borer blade (QTY:1)
- 3 Blade cap (QTY:1)
- 4 Blade cover (QTY:1)
- 5 Borer plate (QTY:1)
- 6 Cap screw M3x5 (QTY:1)
- 7 Cap screw M4x10 (QTY:2)

### Flow for setting of Borer device


Change Machine setting ➔ Installation of Borer device

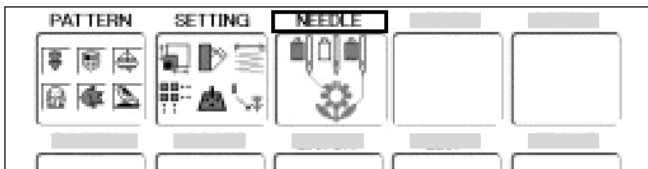
Please start setting with the following operation order.

## 2. Check and Change Machine setting

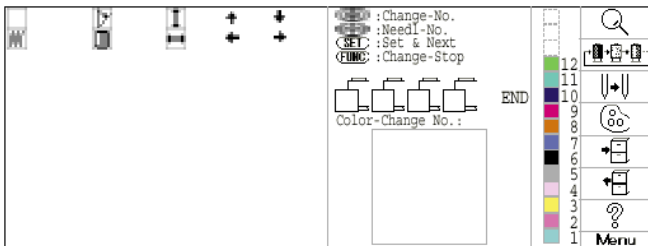
Before start installing Borer device, please check setting of [Borer device] in machine setting. In case setting is [No], please change it to [Yes]. In order to check and change this setting, you are required to enter into Maintenance Mode. Please refer to Maintenance manual for entering Maintenance Mode.



### 2-1 Check Machine setting

1. When the machine is stopped, press **MENU** and Select "NEEDLE" with .




2. Press the **SET**.




3. Press **MENU** and move to submenu. Press right or down key of  and check  (Set Borer) icon is on submenu.



4. If  is on submenu, Machine setting of [Borer device ] is [Yes].(you can use borer device)

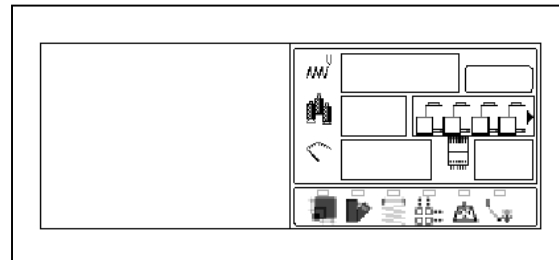
Please jump to step [ 3. Installation of Borer device ].

If  is not on submenu, Machine setting of [Borer device ] is [No].(you can not use borer device)

Please follow step [ 2-2 Change Machine setting ].

5. To return to Menu display, please press **ESC** button at above display.

If you press **ESC** button once more, return to running mode.



### 2-2 Change Machine setting

+ Machine setting

Borer device: Yes (Use of Borer device YES)

+ Refer manual

[ Maintenance Manual for HCR series ]

E5 Maintenance mode

E5-1 How to enter maintenance mode

E5-5 Setup- Machine setting

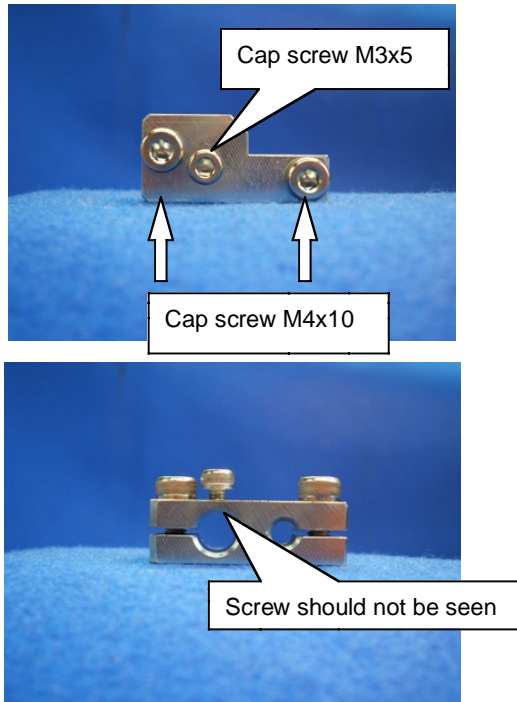
After finishing Check and Change Machine setting, please follow [3. Installation of Borer device].

### 3. Installation of Borer device

#### Setting of Blade holding bracket

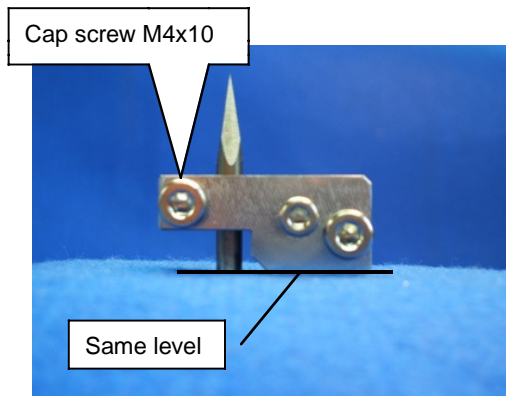
1. Temporarily set Cap screw M3x5 and Cap screw M4x10 to Blade holding bracket.

Cap screw M3x5 should not be seen from hole of bracket.



2. Insert Borer blade into hole of Blade holding bracket as photo below and fix by Cap screw M4x10.

\* As tip of Borer blade is very sharp, please handle with care.



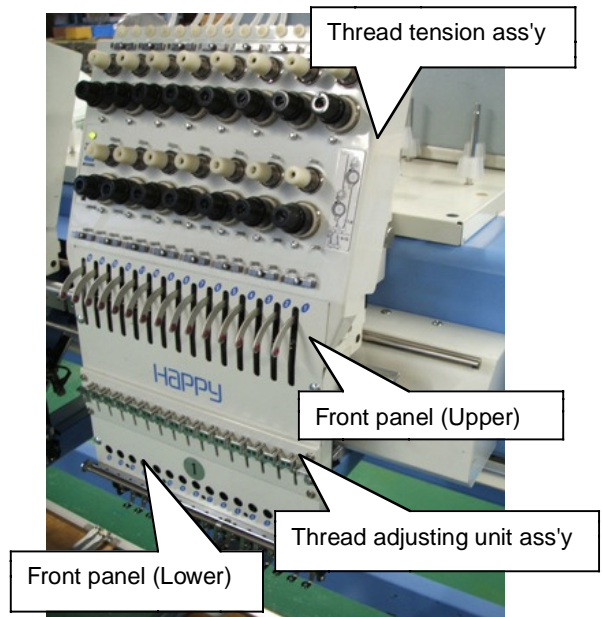
#### Installation

\* Borer device should be installed on Needle no.15.

1. Move moving head to the position which 1<sup>th</sup> needle is active.

Take Thread tension ass'y, Thread adjusting unit ass'y, Front panel (Upper), Front panel (Lower) out.

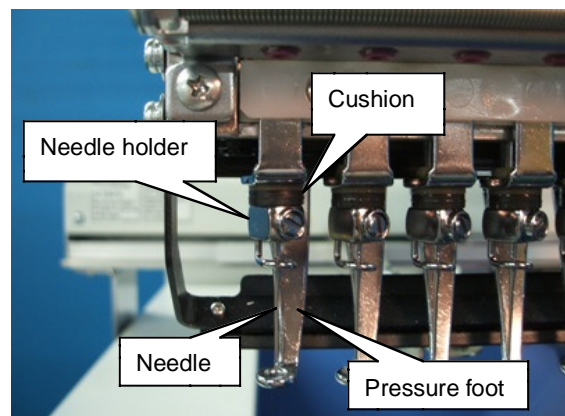
Please refer to Maintenance manual [ 4-2-5 Adjustment of needle position ] [ 4-2-6 Adjustment of needle height ].



2. Take items listed below out from 15<sup>th</sup> needle bar.

Please refer to Maintenance Manual [ 4-1-5 Exchange of pressure foot .

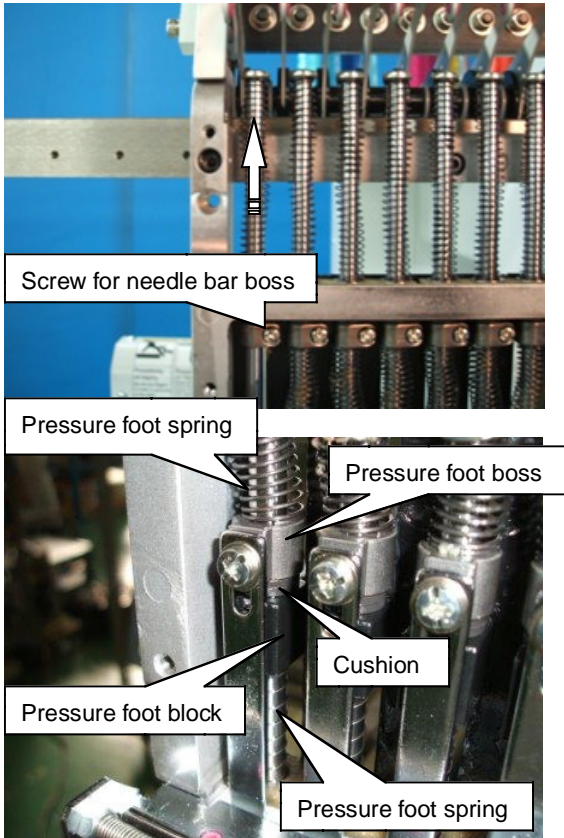
- \* Needle
- \* Needle holder
- \* Cushion
- \* Pressure foot





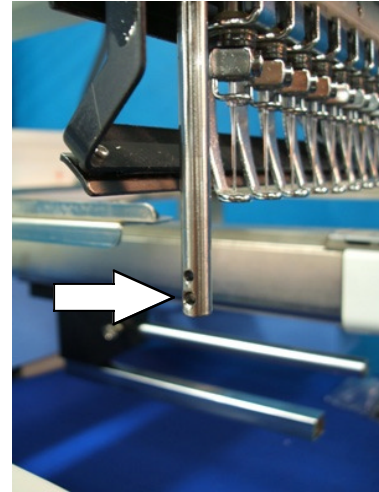
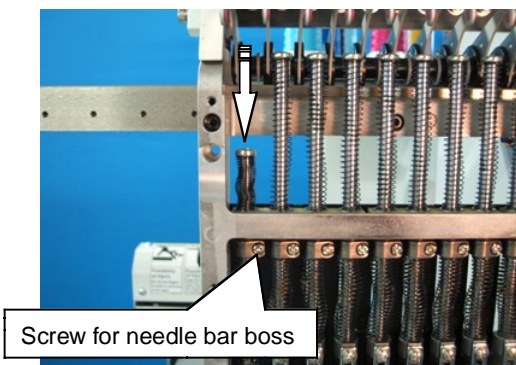
3. Loosen screw for needle bar boss and take the following items out ;

- \* Pressure foot spring (lower)
- \* Pressure foot block
- \* Cushion
- \* Pressure foot boss
- \* Pressure foot spring

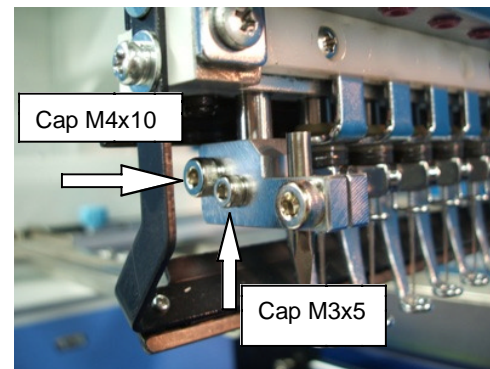


4. Press Needle bar down and tighten screw for needle bar boss.

Please set direction of needle bar as photo below (2 holes of needle bar face to left side).

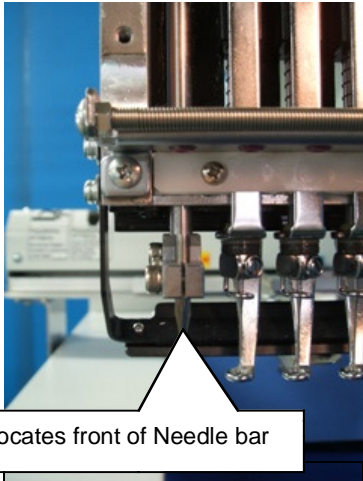


5. Set Blade holding bracket to Needle bar and fix by Cap screw M3x5 at lower hole of needle bar. Then tighten Cap screw M4x10.

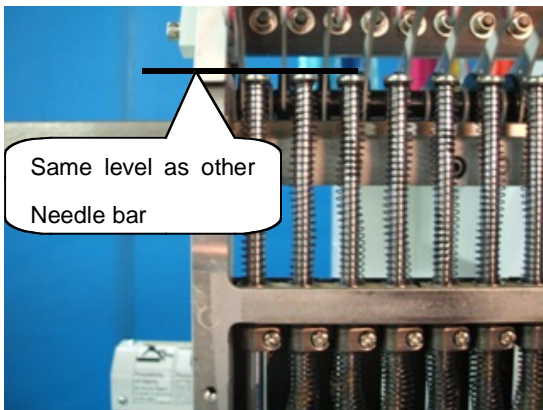


6. Loosen screw for needle bar boss and set needle bar position with the following condition, then tighten screw again ;

- Borer blade locates front of needle bar
- Height of needle bar is same as other needle bar

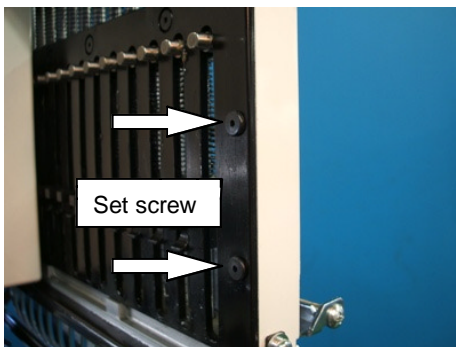


Blade locates front of Needle bar



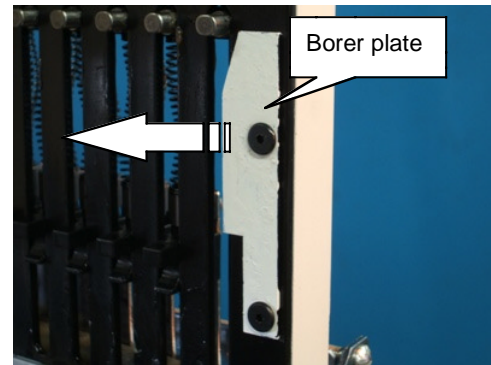
Same level as other Needle bar

7. Take out Set screws on Needle bar boss check plate which locates behind of Moving head. This is for setting Borer plate in next operation.

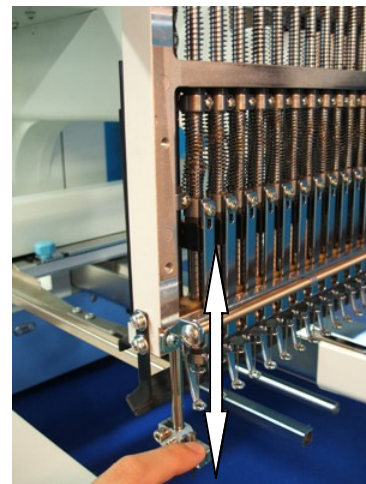


Set screw

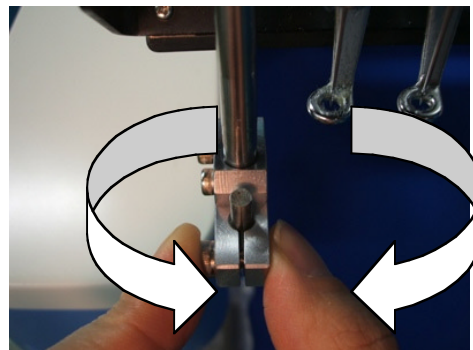
8. Set Borer plate and fix by Set screws which were taken in previous operation. Keep pressing Borer plate to the arrow direction in below photo and temporary fix by set screws.



9. Move 15<sup>th</sup> needle bar up and down by hand 2-3 times, then tighten set screws.



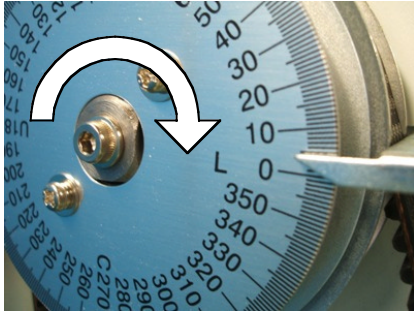
10. Press down Needle bar and confirm that needle bar cannot be turned to the left and right.



11. Move moving head to the position which 15<sup>th</sup> needle is active.

Press needle bar down until needle driver catches needle bar boss.

Turn upper shaft to set dial disc to [ L+5 degrees ].



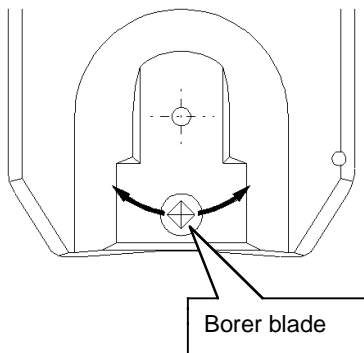
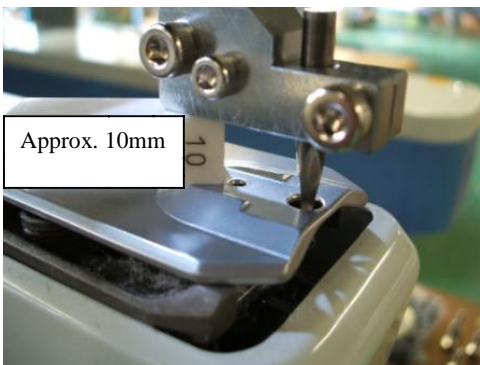
12. Loosen a Screw for needle bar boss.

Adjust position of Blade holding bracket that

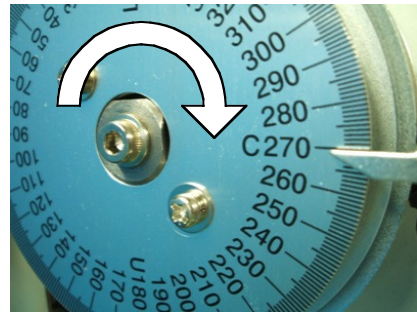
-Space between bottom face of Blade holding bracket and Needle plate is approx. 10mm

-Tip of Borer blade is center of hole of Needle plate

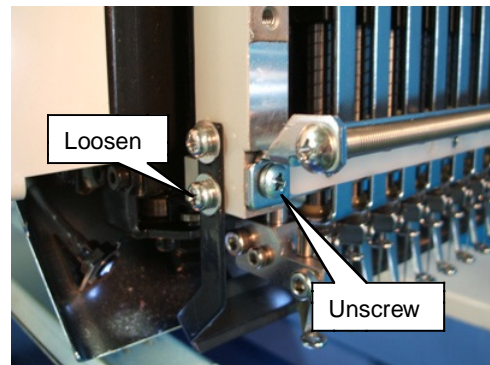
Then tighten screw on needle bar boss.



13. Turn upper shaft to set dial disc to [ 270 degrees (C point) ].

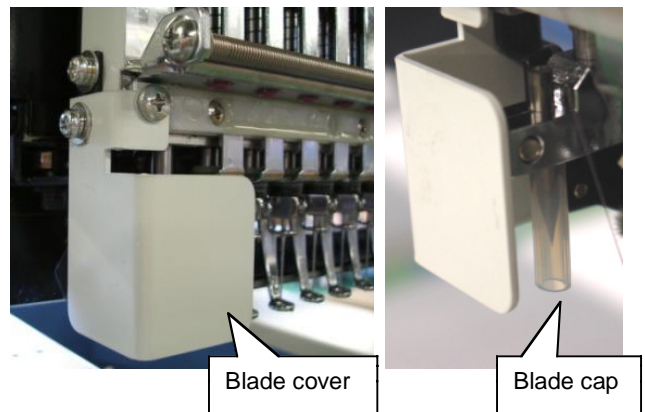


14. Unscrew Set screw of Lower thread guide plate and loosen lower screw of Thread holder for installing Blade cover.



15. Set Blade cover and tighten Screws.

Please set Blade cap to Borer blade when Borer device is not in use.



16. Return Take Thread tension ass'y. Thread adjusting unit ass'y, Front panel (Upper) and Front panel (Lower) to previous places to finish.



2010 / 8



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