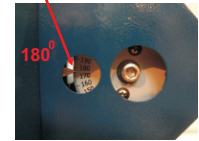
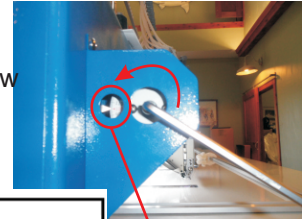


# Pro Shuttle Needle Bar Height Adjustment

## Needle bar height

Slowly rotate the machine at the direction of the arrow until 180° with the rench as show



### [Diagnosis]

1. Measure the distance (A) between the rotary hook center and the needle point when the needle bar is brought to the lower dead point by turning the hand wheel counterclockwise. (Fig. 1)
2. Measure the distance (B) between the upper end of needle hole and the upper end of rotary hook blade point when the rotary hook blade point is aligned with the needle center by turning the hand wheel further.

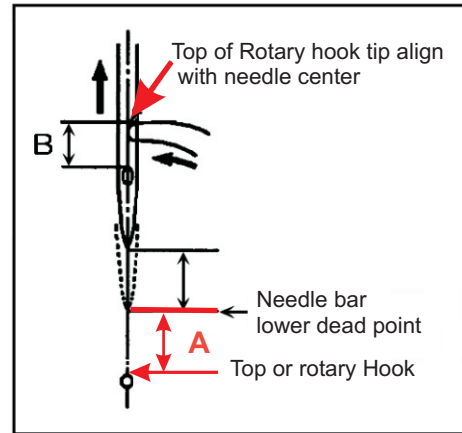


Fig 1

### [SETTINGS]

A = 6.0 mm

B (Reference) = 1.0 ± 0.2 mm (Fig. 1)

**\* Make adjustment if the diagnosis result fall approx. up or down**

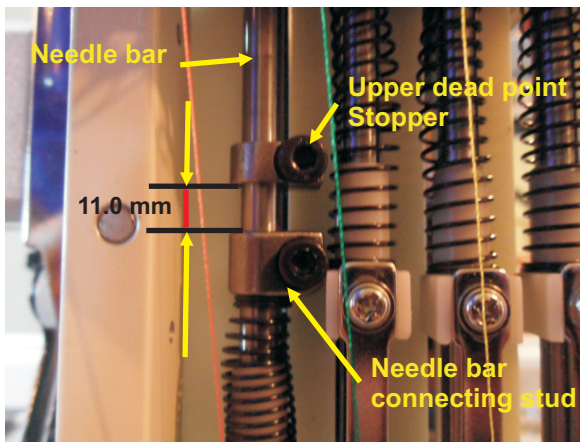
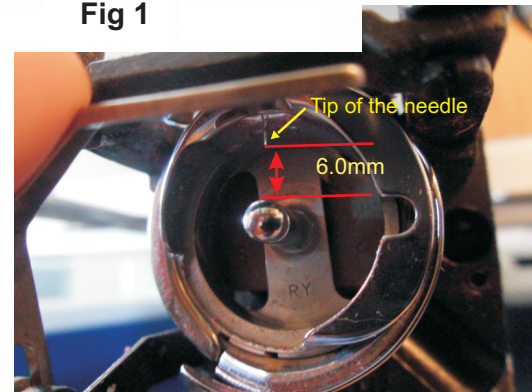


Fig 2



### [Adjustment]

1. Remove the lower cover (Fig 3)
2. Loosen the needle bar connecting stud set screw.(Fig. 2)
3. Adjust the needle bar height.(Fig. 1) **A**
4. Tighten the needle bar connecting stud set screw.

### [Note]

- ? Use a new needle when perform high making sure that is not the problem
- ? If needle replacement is not possible, adjust the distance between the upper dead point stopper lower end and the needle bar connecting stud upper end to 11.0 mm.(Fig. 2)

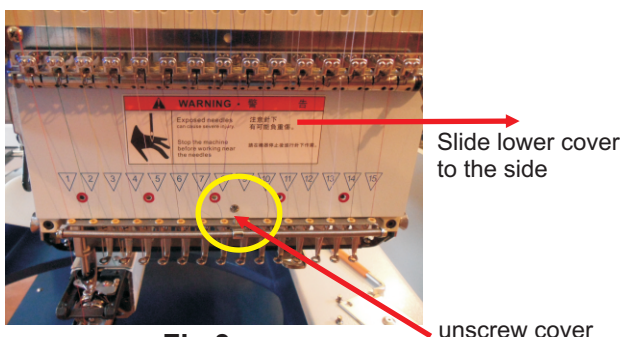


Fig 3

**\* Repeat the adjustment till the standard is met.**