

## Instruction Manual

Insert Bearing Units

(How to remove Insert Bearing Units)

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## 1. Removal method for set-screw locking type

- (1) Loosen the set screws.

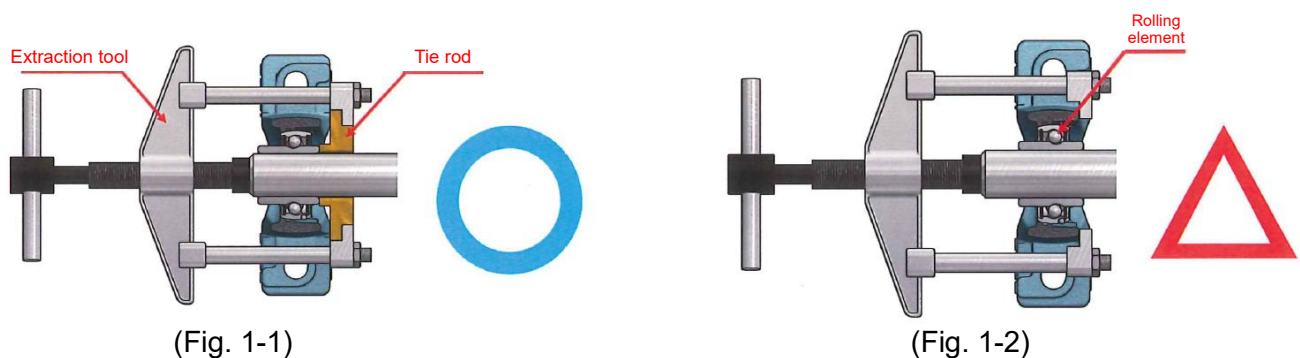
When loosening the set screws, if the set screw tip protrudes from the inner ring inside diameter surface, the shaft will be damaged when extracting the unit; therefore, it is necessary to loosen the set screws sufficiently.

- (2) Remove the mounting bolts.

- (3) Extract the unit.

\* If the inner ring is stuck to the shaft:

- Extract the unit with an extraction tool (pulley puller, etc.) after applying lubrication grease.
- It is recommended to extract the unit using an extraction tool with a tie rod, etc. through the bearing inner ring so that the extraction force is not transferred to the unit through the rolling element. (Refer to Section 1-1.)
- When extracting the unit through the rolling element (by hooking the jaw of the extraction tool over the housing, for example) (Fig. 1 -2), since flaws will be generated on the bearing rolling surfaces, which are likely to cause abnormal sound or damage the machine at an early stage, replace the current bearing with a new one and do not reuse the current one. Since there is a risk that the housing may be cracked depending on how stuck the bearing is, use extra caution during work.



## 2. Removal method for eccentric locking collar type

- (1) Loosen the set screw for eccentric locking collar

If the set screw tip protrudes from the eccentric collar inside diameter surface, the shaft will be damaged when extracting the eccentric collar; therefore, it is necessary to loosen the set screw sufficiently.

- (2) Loosen the eccentric locking collar

When loosening the eccentric locking collar, it is necessary to loosen it in the direction opposite to the shaft rotation direction. If it is stiff, insert the tip of a cold chisel or similar tool into the drill hole of the collar and hit the chisel with a plastic hammer to loosen the collar. (Fig. 2)



(Fig. 2)

- (3) Remove the attachment bolt.

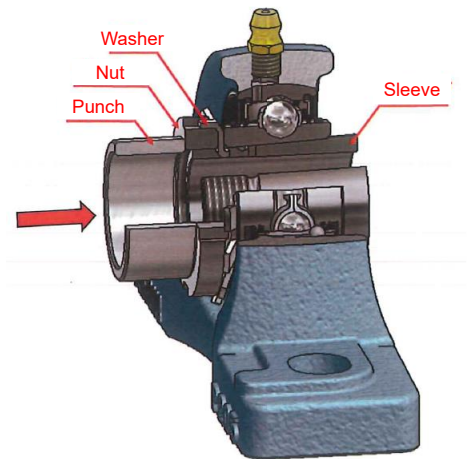
- (4) Extract the unit.

\* If the inner ring is stuck to the shaft:

⇒ (Refer to 1. (3).)

### 3. Removal method for adapter locking type

- (1) Unhook the teeth of the washer and loosen the nut by 2 to 3 turns.
- (2) Apply a punch to the side of the nut and hit around the entire circumference with a hammer to move the sleeve in the axial direction. (Fig. 3)
  - \* Note that if the nut is loosened excessively so that the threads are only slightly engaged, hitting with a hammer may damage the threads.
  - \* If the sleeve is stuck to the inner ring:
    - ⇒ After removing the mounting bolt
    - (Refer to 1. (3)).
- (3) Remove the mounting bolt.
- (4) Extract out the unit.



(Fig. 3)

If there is sufficient space for a person to enter on the opposite side of the nut, the following method can also be used: Remove the nut, apply the punch to the end of the inner ring on the opposite side from the nut and hit the punch with a hammer in the direction to extract it from the sleeve. Be sure to put on protective equipment before work and pay careful attention during work. A more effective removal method would be to use a hydraulic nut, but it would be necessary to design and process the unit on the shaft side in advance at the mounting stage.

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