

# Troubleshooting

## (Keyless drill chuck)

	Details of the trouble	Cause	Pulled out of holder. Unable to attach fast to spindle or holder in case of MT shank.
1	Head part does not rotate.	① Over-loosening causes claw to stick fast to internal chuck.  ② Seized or adhered chip and dust to movable part of claw.	① Turn hard to tightening direction by using spanner. When loosening, turn by spanner until tool is pulled out. Then turn manually.  ② Removal of internal chip and dust by blowing air. Ask NT for repair.
2	Unable to chuck cutting tool.	① Tool shank diameter is out of chuck's chucking range.  ② Seized or adhered chip and dust to movable part of claw.	① Check chucking range.  ② Removal of internal chip and dust by blowing air. Ask NT for repair.
3	Unable to pull out cutting tool.	① Over-tightening causes claw to stick fast to tool shank.  ② Seized or adhered chip and dust to movable part of claw.	① Turn hard to loosening direction by spanner.  ② Removal of internal chip and dust by blowing air. Ask NT for repair.
4	Poor run-out accuracy. (Target: 0.05mm or less at 4D tip)	① Seized or adhered chip and dust to chuck claw and tool shank part.  ② Cutting edge is chucked.  ③ Deformation and abrasion of claw.	① Cleaning of chuck claw and tool shank part.  ② Cutting edge must not be chucked.  ③ Ask NT for repair.
5	Machining accuracy is not stable.	① Cutting resistance is too large.  ② Mischoice of retention stud  ③ Expansion of BT shank because of over-tightening retention stud.  ④ Low taper contact of interface Poor taper contact from expanded spindle nose Dust, scratch or dent in the taper part or end face (in the case of two-face contact)	① Revision of cutting conditions (Decrease cutting resistance.) a. Higher rotation or lower feed rate (Approx. 20%)  ② Use designated retention stud for the machine  ③ Keep recommended torque value for tightening retention stud.  ④ Regrinding and correction of machine spindle (Contact the manufacturer.) Cleaning of taper and end face (in the case of two-face contact), touching up of scratch or dent.
6	Slippage of tool during machining.	① Seized or adhered chip and dust to chuck claw and tool attachment part.  ② Adhered oil to chuck claw and tool shank part.  ③ Short insert length.  ④ Cutting resistance is too large.  ⑤ Insufficient chucking force.  ⑥ Deformation and abrasion of claw.	① Cleaning of chuck claw and tool shank part.  ② Cleaning (degreasing) of chuck claw and tool shank part.  ③ Bring tool's bottom to keyless drill chuck. The tool with short shank must not be chucked at its cutting edge part.  ④ Revision of cutting conditions (Decrease cutting resistance.) a. Higher rotation or lower feed rate (Approx. 20%)  ⑤ Tighten more by special spanner.  ⑥ Ask NT for repair.