

TAPMATIC

Safety and Operation Instructions

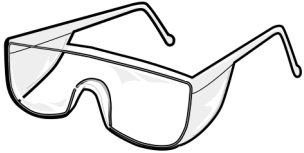
NC Tension Compression Tap Holders

NC0, NC1, NC2S

WARNING: To Avoid Serious Injury And Ensure Best Results for Your Tapping Operation, Please Read Carefully All Operator and Safety Instructions provided for this tapping attachment as well as all other safety instructions that are applicable, especially those for your machine tool.

1. Proper Clothing: the rotating spindle of a machine tool can snag loose fitting clothing, jewelry or long hair. Never wear jewelry, long sleeves, neckties, gloves or anything else that could become caught when operating a machine tool. Long hair must be restrained or netted to prevent it from becoming entangled in rotating spindle.

2. Proper Eye Protection: Always wear safety glasses with side shields to protect your eyes from flying particles.



3. Proper Work Piece Fixturing: Never hold the work piece or the vise it is held in, by hand. The work piece must be clamped firmly to the table of the machine so that it cannot move, rotate or lift.



4. Always Be Aware Of The Potential Hazards Of A Machining Operation: sometimes working with your machine can seem routine. You may find that you are no longer concentrating on the operation. A feeling of false security can lead to serious injury. Always be alert to the dangers of the machines with which you work. Always keep hands, body parts, clothing, jewelry and hair out of the areas of operation, when the machine spindle is rotating. Areas of operation include the immediate point of machining and all transmission components including the tapping attachment. Never bring your hand, other body parts or anything attached to your body into any of these areas until the machine spindle is completely stopped.

5. Be aware of any other applicable safety instructions / requirements

CHECK LIST FOR GOOD TAPPING.

1. Never use this unit before reading all safety instructions for this attachment as well as the machine it is to be used on.
2. Is the tap sharp and of correct design for current job?
3. Is tap in proper alignment with drilled hole?
4. Is machine speed correct?
5. Is machine feed correct?
6. Is machine stop set properly so tap does not bottom in work piece or fixture?
7. Is work piece held rigidly against rotation and axial movement?
8. Is drilled hole the correct size?
9. Is clearance between the drilled hole and tap sufficient at start position to allow the tap to clear the hole upon retraction?
10. Is the proper cutting fluid or coolant being used for lubricating the tap?
11. If a bottom hole is being tapped is there sufficient chip clearance?

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These NC positive drive units are for use on machines with reversible motors and are offered with a quick change spindle.

Through Hole Tapping: Easily performed by setting the machine feed correctly for 5% slower than the thread pitch feed rate, then reverse and retract when the desired depth is reached. Please note that when tapping through holes the release feature will not function. **Do Not** use dwell.

Bottom Hole Tapping: For accurate and efficient bottom hole tapping a Z axis feed stop plus a short dwell should be used to allow the attachment's spindle to release in neutral before the tap bottoms in the hole. To achieve this, set the Z axis stop so that the machine feed into the hole plus the tap holder's **Self Feed** will equal the desired thread depth. Dwell, then reverse the machine spindle and feed out.

If a dwell is programmed at the end of the machine feed into the hole, the tap holders will continue to **Self Feed** deeper into the hole by the following distances.

Tap Holder	Self Feed
NC0	6mm (.25")
NC1	5mm (.20")
NC2S	8mm (.30")

PROGRAMMING:

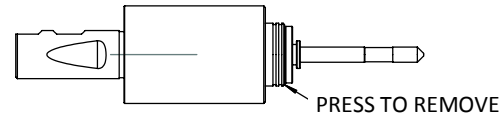
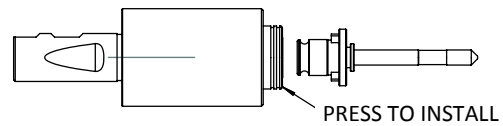
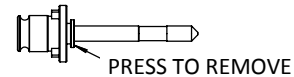
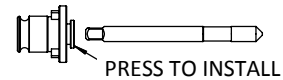
1. Utilize tapping cycle of machine.
2. Set machine feed at tap pitch or slightly slower, for example 95% of tap pitch feed rate.
3. Clearance plane (minimum standard amount recommended by machine builder for tension-compression tapping.) If using **Self Feed** release to neutral, clearance plane should be greater than the units **Self Feed**, we recommend 10mm (.40")
4. For through holes or blind holes with sufficient chip clearance, machine feed to desired depth, reverse and retract.
5. For blind holes or controlled thread depth, machine feed to estimated partial depth (equal to desired thread depth minus the unit's **Self Feed**), dwell until tap driver reaches release position (usually no more than a fraction of a second), reverse and retract.

To Calculate Minimum Dwell Time:

Dwell Time = Self Feed Distance / Feed Rate

TAP LUBRICATION: To insure maximum tap life, the proper lubricant should be used. For an all purpose, safe, economical, and ecological tapping fluid we recommend Dry-Cut Minimum Quantity Lubricant.

Installing the Tap:



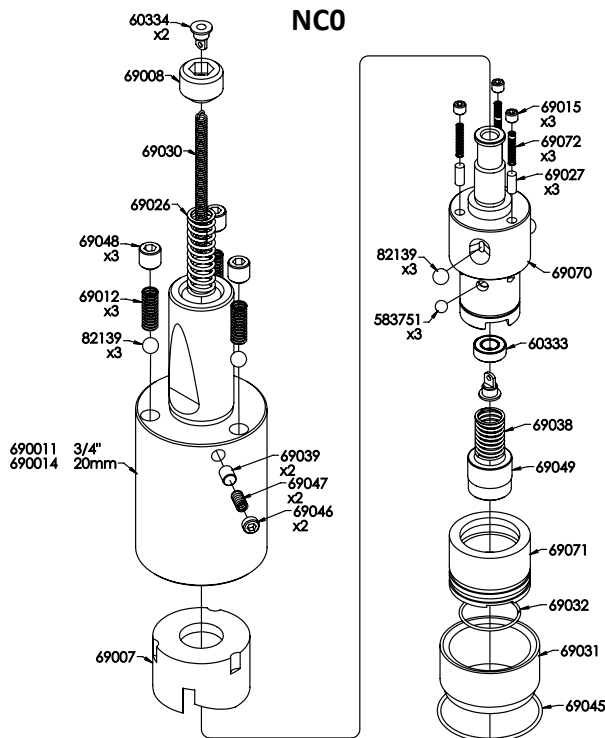
Torque Adapters: Torque control adapters are also available to protect the tap from breaking if the tap accidentally hits the bottom of the hole, but this is recommended mainly on conventional machines where a machinist controls the feed rate and can stop the feed when the torque slips.

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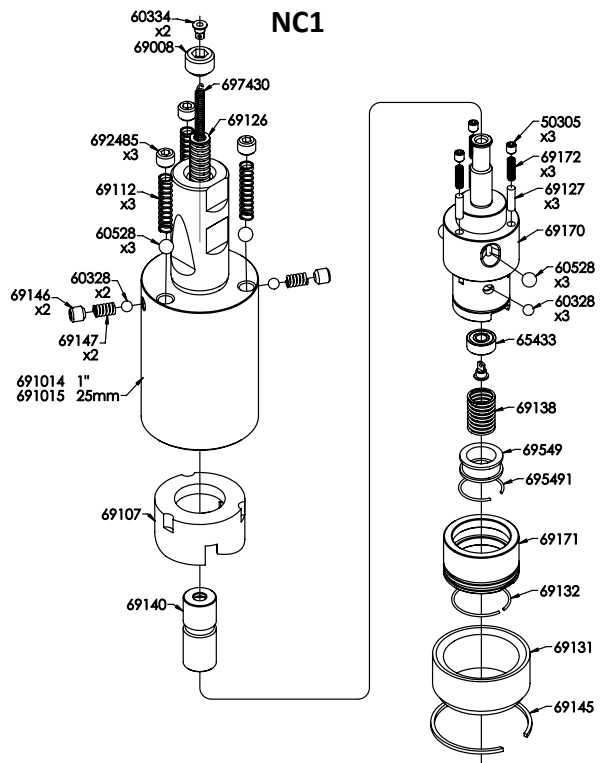
NC0

Instructions for Disassembly. Part numbers refer to (NC0, NC1, NC2S) Please see drawings.

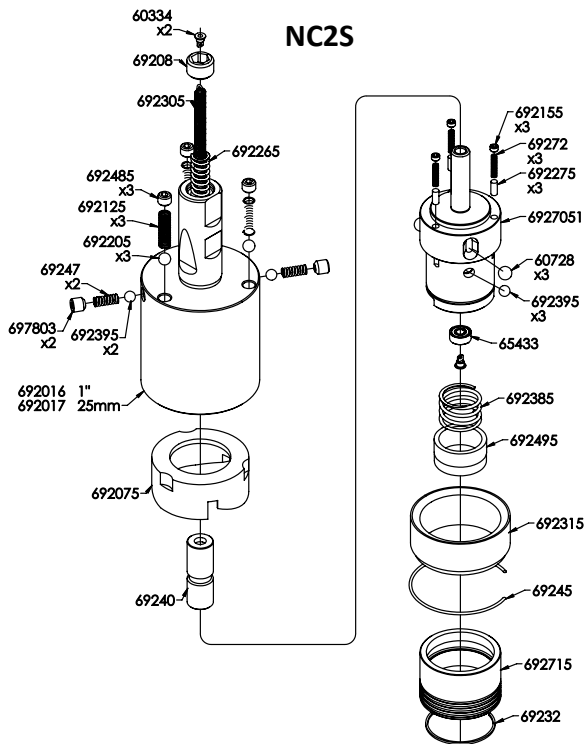
1. Remove driver springs (69012, 69112, 69125) and balls (82139, 60528, 692205) by first removing screws (69048, 692485, 692485).
2. Remove hard start screws (69046, 69146, 697803), and the springs and balls or pins.
3. Unhook return spring (69030, 697430, 692305) from the spring hanger (60334, all sizes) by first unscrewing (69008, 69008, 69208) to expose the spring. Use hook supplied with tool.
4. Remove retaining ring (69045, 69145, 69245) and slide out the assembly.
5. Move lock ring (69071, 69171, 692715) to release position and remove ring (69032, 69132, 69232)
6. To remove lock ring (69071, 69171, 692715) depress adapter release plug (69049, 69549, 692495)

Instructions for Reassembly

1. Reverse the above steps.



NC1



NC2S



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REPAIR POLICY

MAINTENANCE

When your NC holder is not use, please be sure to dry it, if wet from coolant, and apply oil to prevent corrosion. We recommend spraying with protective lubricant.

Repair Service is available at:

Attention:

Repair Department
Tapmatic Corporation
802 Clearwater Loop
Post Falls, ID 83854

To Expedite Repair: Return tool direct to Tapmatic Corporation. Tapmatic will inspect the tool and advise you of the repair costs by fax or email before the repair is completed.

IMPORTANT: Be sure to return the tool complete with the tap chuck nut, and if applicable the back jaw and if a reversing unit, include stop arm. Otherwise, we will add these missing parts to every non-warranty repair.

Cost Notification: Tapmatic will FAX or email a Cost Notification to you, soliciting your approval before repairs are completed.

If it is determined that a tapping attachment cannot be repaired, at the customer's request, Tapmatic will return the disassembled parts. We are not able to reassemble tapping attachments using damaged or worn out parts.

Optional Return Procedure: Tools may also be returned for repair through your local Tapmatic Distributor. They will ship the tool to us and include instructions for the repair and return. You may already have an open account with them, which facilitates the handling of invoicing.

Priority Service: Tapmatic services tapping attachments returned for repair in the order in which they are received. All tools will be evaluated and repaired within three weeks from the date they arrive subject to receiving the customer's approval to proceed with the repair.

Priority is given to the tools shipped to us by overnight or second day service.

If a repair is sent to us by UPS Ground or similar service it can also be given priority. Just call and let us know if you need priority service and advise if you would like the tool returned to you by overnight or second day service. Typical turn-around time, not including shipping time, for priority repairs is 5-7 days subject to receiving the customer's approval to proceed with the repair.

If we can answer any questions, please call our toll free number: 800 395 8231.

TAPMATIC ● 802 Clearwater Loop, Post Falls ID 83854
Tel. 800 854-6019 ● Tel. 001 208 773-2951 ● Fax 001 208 773-3021
info@tapmatic.com ● www.tapmatic.com