

UNASIS
PRECISION TOOLING



Aerospace Tooling

Portable Cutting Tool Instruction Manual



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Unasis Portable Cutting Tool



Unasis Portable Proof Load Tool



Unasis Breakaway Torque Tool

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Part List



Figure 1 - Portable cutting tool

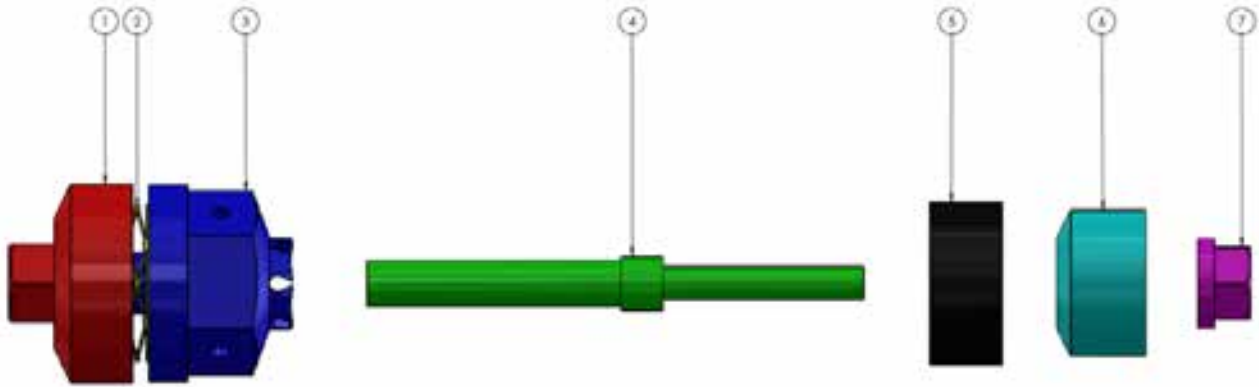


Figure 2 - C-Spanner



Figure 3 - Ratchet ring spanner (if applicable)

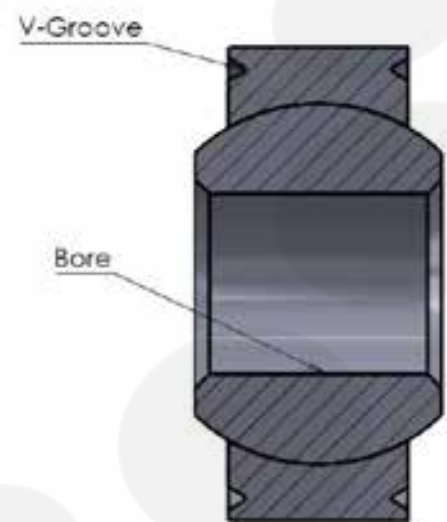
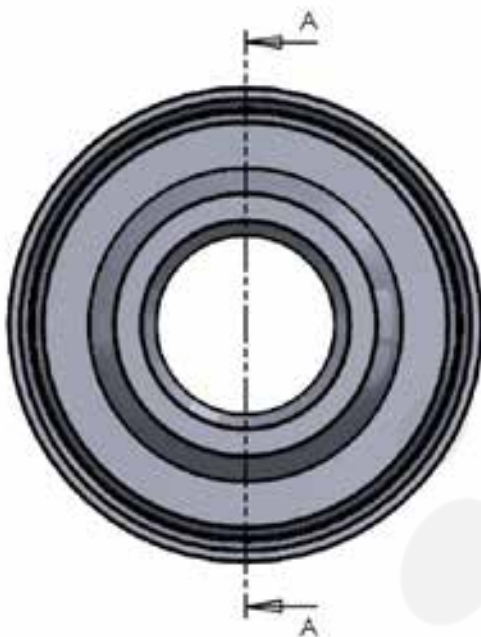
Tool Component Breakdown



Number	Tool Component
1	Pretention Nut
2	Spring
3	Cutter Head
4	Draw Rod
5	Plastic Spacer
6	Locating Feature
7	Hex Nut

Figure 4 - Tool component breakdown

Bearing Terminology



SECTION A-A

Figure 5 - Bearing terminology



Figure 6 - Disassemble tool using spanner

Precautions Prior to Use

- Ensure the housing has suitable clearance for tool operation to be performed.
- Make sure all contact surfaces are clean and free of debris.
- Application of a light machine oil is advised.



Figure 7 – Plastic spacer removed from assembly

Set-Up Instructions

- Disassemble tool by unscrewing the hex nut (7).
- Remove plastic spacer (5) from between locating feature (6) and cutter head (3).
- Insert draw bolt (4) into bearing bore.

NOTE: IF YOU HAVE OPTED FOR THE HEXAGONAL CUTTER HEAD OPTION, SET RATCHET RING SPANNER ON CUTTER HEAD (ENSURING THE SPANNER IS POSITIONED TO ROTATE CLOCKWISE) PRIOR TO INSERTING DRAW BOLT INTO BEARING BORE.



Figure 8 – Draw bolt inserted through bearing bore



Figure 9 - Locating feature set for assembly

- Set locating feature (6) on opposite side of the bearing with the angled side seated in the bearing v-groove.
- Tighten hex nut (7) until tool is finger tight.

NOTE: THE SPRING (2) IS DESIGNED TO CONTROL THE FORCE ON THE CUTTER TEETH. IT IS IMPORTANT TO ENSURE THE SPRING IS NEVER FULLY COMPRESSED.

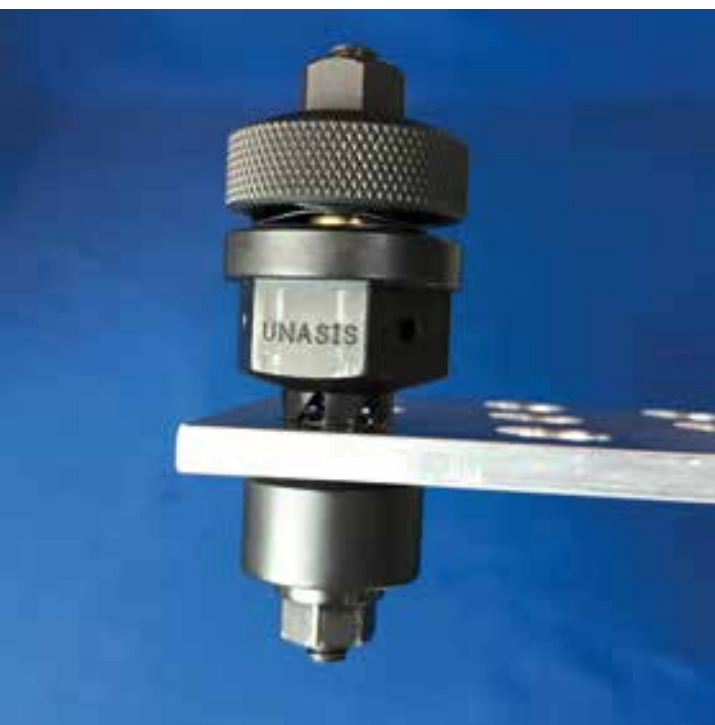


Figure 10 - Tool fully assembled on bearing (both options shown)

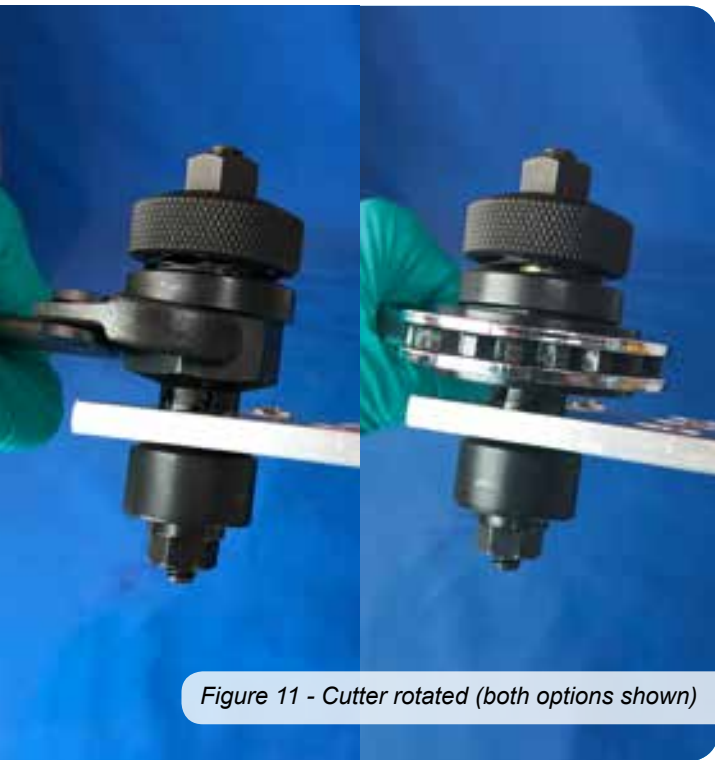


Figure 11 - Cutter rotated (both options shown)



Figure 12 - Pretension nut tightened

Operating Instructions

Step 1 – Turn Cutter Head

- Turn cutter with c-spanner wrench or ratchet ring spanner 5-10 rotations or until cutter rotates freely.

NOTE: ENSURE ONLY CUTTER HEAD (3) ROTATES AND PRETENSION NUT (1) REMAINS CONSTANT.

Step 2 – Tighten Pretension Nut

- Tighten pretension nut (1) approximately 10 degrees allowing the spring to apply more pressure and rotate cutter head 5-10 rotations or until cutter rotates freely.

Step 3 – Repeat Step 2

- Repeat Step 2 until cutter has creased bearing lip 0.030-0.040 in.

NOTE: CUTTER IS NOT DESIGNED TO CUT COMPLETELY THROUGH V-GROOVE LIP. AS AN ADDED PRECAUTION, THE TEETH ARE DIMENSIONED TO NOT CUT INTO THE HOUSING.

Step 4 – Disassemble Tool

- Disassemble tool by unscrewing the hex nut (7).
- Once cutting operation is completed, the install/remove tool should be used to accurately remove bearing without damaging housing.

NOTE: REASSEMBLE TOOL IMMEDIATELY AFTER COMPLETION TO ENSURE NO COMPONENTS ARE MISPLACED.

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