

FORSTER PRODUCTS

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User Instructions for the Bench Rest® Full Length Sizing Die*

Issue 14

1.0 GENERAL INFORMATION

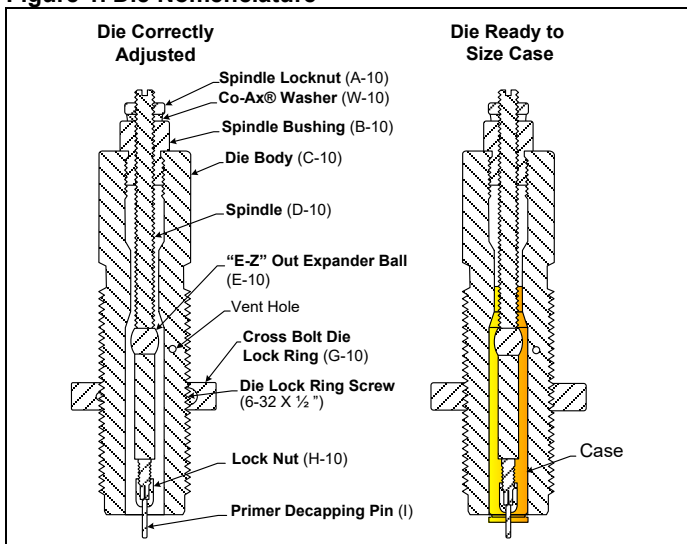
NOTICE

These User Instructions are for use with all Full Length Sizing Dies *except* the 300 AAC Blackout cartridge (order number 005545) model. Due to this cartridge's very small shoulder, the placement of the sizing die's "E-Z" Out Expander Ball differs from that of other cases.

The Bench Rest Full Length Sizing Die reduces the outside case diameter, removes the spent primer and expands the inside case neck diameter.

Each die has a precisely positioned vent hole located in the threaded or the recessed portion of the Die Body (C-10) that prevents excessive, trapped air and lubrication from damaging your cases or die components (see Fig. 1).

Figure 1. Die Nomenclature



2.0 SAFETY INFORMATION

- Always wear safety glasses.
- Keep complete, chronological records of all reloads. These load data are useful for future load development.

- Primer** (manufacturer, type, lot)
- Case** (manufacturer, overall length, neck wall thickness, number of times fired, comments)
- Powder** (type, manufacturer, lot, charge)
- Bullet** (manufacturer, type, weight, lot)
- Cartridge** (overall length, comments)

- **Do not use on military brass with crimped primers.** Use a specially designed (decapping only) sizing die.

3.0 PREPARATION

- 3.1 Have a 7/64 short arm hex key (Allen wrench) available.

3.2 Inspect Cases, Die and Die Components for Cleanliness

To keep the inside of your dies scratch-free, ensure the outside and inside of your cases are free of powder residue and other debris, case necks are deburred and the die itself is kept clean. This precaution also applies to the "E-Z" Out Expander Ball (E-10) on the Decapping/Expander Assembly, where brass chips and other debris may inadvertently be transferred to the case and die neck. Chips that result from trimming and deburring, or a case that has not been deburred, are especially damaging to die interiors. These chips can become embedded in the die interior. The resulting brass against brass effect "galls" or wears away minute pieces of brass on the case, and gets worse with each use of the die.

3.3 Prepare the Cases

1. Inspect all cases and dispose of any that are split or separated.
2. Clean cases.
3. If the case neck walls vary in thickness, turn the outside neck to a consistent thickness using the Forster **Outside Neck Turner** (OT1010 or HOT100).
4. Chamfer sharp corners of trimmed cases with the **Inside-Outside Deburring Tool** (DB1000).
5. Lightly lubricate the case neck, shoulder and body with **High Pressure Lubricant** (011071). Do not over-lubricate, as this may create pressure dents during sizing.
6. Apply a thin coat of dry lubricant to the inside of the case necks by pushing the cases down over the brushes of the Forster **Case Neck Graphiter** (011341).

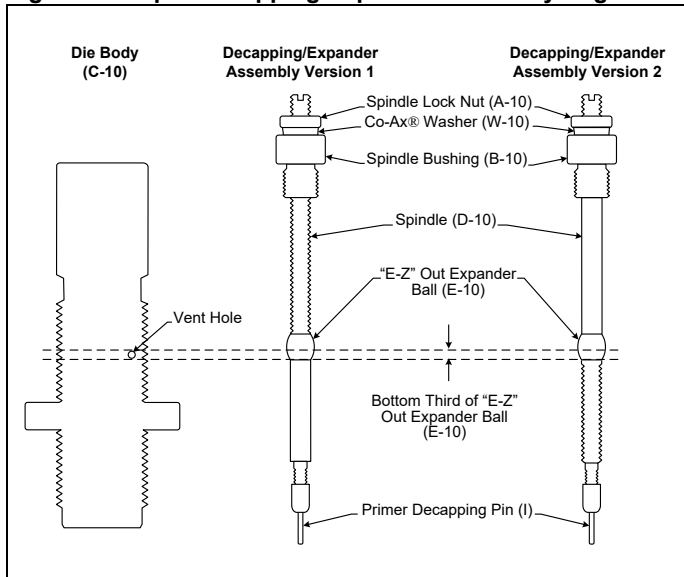
* For use with all cartridges except 300 AAC Blackout.

3.4 Inspect the Die

Inspect the Decapping/Expander Assembly to ensure that shipping vibration did not change the critical factory settings. The hole in the die should line up with the bottom third of the "E-Z" Out Expander Ball, as shown in Fig. 2.

- To check, remove the Decapping/Expander Assembly and place it next to the Die Body.
- If adjustments are needed, position the "E-Z" Out Expander Ball by setting the Spindle Lock Nut (A-10) and the Spindle Bushing (B-10). (Do not move the "E-Z" Out Expander Ball itself. Ensure it remains at its factory-set position on the Spindle [D-10].)

Figure 2. Proper Decapping/Expander Assembly Alignment



3.5 Clean the Die

Clean die inside surfaces using a cloth patch saturated with gun-cleaning solvent.

3.6 Re-assemble the Die

When re-assembling the Decapping/Expander Assembly to the Die Body, ensure:

- The Primer Decapping Pin (I) is centered at the bottom of the die.
- The Spindle Lock Nut is snug against the Co-Ax Washer (W-10) and the Spindle Bushing is tight against the top of the Die Body.

4.0 CASE SIZING PROCEDURE

1. Install the Die into any standard 7/8-14 thread reloading press or Forster **Co-Ax® Reloading Press** (028271) so that it makes contact with the shell holder when the ram is at its uppermost position.
2. Turn the Die another 1/8 to 1/4 turn against the shell holder to remove all play from the linkage system of the press.

3. Tighten the Cross Bolt Die Lock Ring (DIE-G-10) by using a 7/64 short arm hex key on the Die Lock Ring Screw (6-32 x 1/2").
4. Insert a case into the reloading press.
5. Size the case by actuating the reloading press. (Ensure the bottom of the Die makes complete contact with the shell holder.) This operation reduces the outside case diameter, removes the spent primer, and expands the case neck inside diameter. It also may stretch the case neck, so check the overall case length and trim, if necessary.
6. Remove the sized case from the Die.
7. The case is now ready for priming and powder charge.

NOTICE

- As the case is sized, the "E-Z" Out Expander Ball will be located near the neck of the case. When the case is withdrawn from the die, most of the neck is still in the neck sizing portion of the die, keeping the axis of the neck and case in alignment. You will barely feel the effort required to draw the "E-Z" Out Expander Ball through the case neck.
- Do not position the "E-Z" Out Expander Ball too high, to avoid crushing the case neck and damaging the Decapping/Expander Assembly. Refer to Fig. 2 for proper "E-Z" Out Expander Ball positioning, to ensure that the "E-Z" Out Expander Ball is aligned as co-axially with the case neck as possible.

TIP

It is preferable to adjust headspace without removing the Die from the press, using the following technique:

1. Slightly loosen the adjustment screw on the Lock Ring.
2. Hold the Lock Ring in place while turning the Die to the required depth.
3. Tighten the Lock Ring, and continue sizing cases.

5.0 AFTER USE

Oil the die with good quality gun oil before storing die until the next use. Clean the inside of die using a patch with gun cleaning solvent prior to sizing each subsequent batch of cases.

6.0 REPLACEMENT PARTS

Every product component is available individually. A complete list of component order numbers and prices is available at our website. Go to forsterproducts.com and click **Replacement Parts**.

We recommend using our Resellers when ordering our products. Their experience and knowledge will help you select the best products that meet your specific requirements. In addition, they usually offer the best prices and convenient delivery options. To find a Reseller, go to forsterproducts.com and click **Distributors**. If your Reseller cannot supply you, please contact Forster Products directly.

WARRANTY

All Forster Products are warranted against defects in materials and workmanship for the life of the product. Parts excluded from the warranty are those that, by nature of their function, are subject to normal wear (such as springs, pins, etc.) or that have been altered, abused, or neglected. If the product is deemed defective by workmanship or materials, it will be repaired, reconditioned or replaced (at Forster's option). This warranty supersedes all other warranties for Forster Products, whether written or oral.