

FORSTER PRODUCTS

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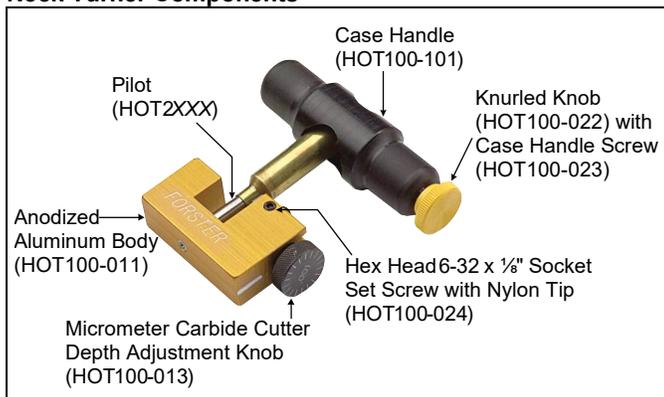
User Instructions for Hand-held Outside Neck Turners

Issue 3

1.0 GENERAL INFORMATION

The Hand-held Outside Neck Turner (HOT100) features a long-life carbide cutter to provide uniform case necks and improve accuracy. The micrometer adjustment knob (Fig. 1) is marked at .001" increments, and you can easily adjust intervals to one-half thousandth of an inch (.0005").

Figure 1. Shell Casing with Complete Hand-held Outside Neck Turner Components



A standard case-holder handle is included, and a larger handle (HOT100-102) is required for cases from .593" to .812" in diameter at their base.

Forster Products offers 29 standard Pilots (Fig. 2), which are ground .0020" to .0025" smaller than the bullet diameter. Custom-machined, precision-ground Pilots are available for an additional fee.

Figure 2. Hand-held Outside Neck Turner Pilot



2.0 TIPS FOR PREPARING CASES AND TURNING

- Use older, less-favorite brass cases for practice.
- Chamfer the inside of the case mouth, and then clean the necks internally and externally.
- Before turning the neck, expand the case with a sizing die. Expanders should be .001" smaller than the bullet diameter.
- Note that, for example, cutting to a depth of .001" will reduce the resulting neck diameter by .002".

- There is no definite tolerance for the correct neck thickness. Many reloaders prefer a clearance of .002" to .003" between the outside diameter (OD) of the case neck and the chamber. However, we recommend just barely turning the necks to a uniform thickness in order to extend the life of the brass.
- Remove the backlash from the micrometer adjustment knob before backing out of the carbide cutter.
- The gold anodized Neck Turner body may be locked into a vise for ease of use.
- Verify the case neck wall thickness with the Forster Co-Ax® Case & Cartridge Inspector (010482) or a tubing micrometer. To ensure consistency, you may need to turn each case again at the same depth.

3.0 SAFETY INFORMATION

Please follow all pertinent safety procedures, such as wearing safety glasses, being in a well-lit and well-ventilated workspace, and having all reloading tools in top working condition and no flames, sparks, or static electricity nearby.

4.0 PROCEDURE

1. Insert the head of the case to be turned into the case handle (HOT100-101) and tighten the knurled knob (HOT100-022) to secure the case.
2. Install the Pilot in the body (HOT100-011), according to the length of the neck. Tighten the Pilot set screw against the flat portion of the Pilot's shank.
3. Slip the case onto the Pilot until the case mouth rests against the shoulder of the Pilot.

Do not force the Pilot into the case – a slip fit is essential to proper turning.

4. Turn the large, knurled carbide cutter depth adjustment knob (HOT100-013) clockwise until the cutter is almost touching the case neck. Loosen the Pilot and position it so that the cutter will almost start to blend with the shoulder angle, and then retighten the Pilot set screw.

The Hand-held Outside Neck Turner is now set for length of the cut.

NOTICE

Turn the OD of the neck only. Cutting into the shoulder of the case will weaken the cartridge and can contribute to case separation.

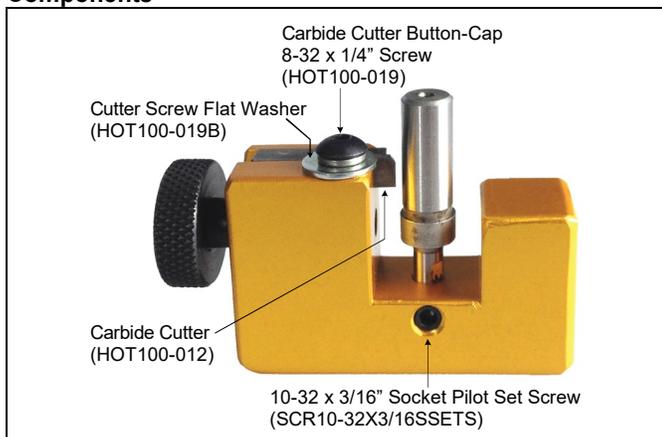
5. To set the depth of cut, turn the carbide cutter depth adjustment knob down until the cutter just barely contacts the case neck. Remove the case from the Pilot and turn the knob one-half increment (.0005") clockwise.

You are now set to take the first cut.

6. Guide the case neck onto the Pilot by turning the case holder clockwise. Turn the case slowly to provide a smooth, even cut over the entire case neck's outside diameter. Proceed until the case mouth stops against the Pilot's step. Fine-tune the depth if needed with the micrometer adjustment knob.

After the neck wall thickness adjustment is correct, the Hand-held Outside Neck Turner will hold your setting from case to case.

Figure 3. Hand-held Outside Neck Turner Body Components



7. Continue to turn the case clockwise as you remove the neck-turned case from the Pilot.

Note that the hex screw (HOT100-024) on the cutter body applies tension to the carbide cutter. Tighten this screw only if the cutter moves too freely while adjusting the depth of cut.

5.0 ORDERING INFORMATION

See www.forsterproducts.com for complete documentation and part numbers, including Pilots.

We recommend ordering from a dealer or distributor. 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 distributor cannot supply you, or if you need parts, please contact Forster Products directly by email, phone or fax.

The Pilot functions as a mandrel that precisely guides the carbide cutter in the Hand-held Outside Neck Turner. We offer 29 standard Pilot sizes (Table 1). Also, since cases vary in brass hardness and wall thickness, or in other manufacturers' expander ball dimensions, you may require a custom-machined Pilot (HOT-CUSTOM) to fit your specific circumstances.

Table 1. Hand-held Outside Neck Turner* Pilot Part Numbers

Order No.	Bullet Dia.	Pilot Dia.
HOT2017	.172"	.1685"
HOT2204	.204"	.2015"
HOT2224	.224"	.2215"
HOT2243	.243"	.2405"
HOT2257	.257"	.2545"
HOT2264	.264"	.2615"
HOT2277	.277"	.2745"
HOT2284	.284"	.2815"
HOT2308	.308"	.3055"
HOT2311	.311"	.3085"
HOT2323	.323"	.3205"
HOT2333	.333"	.3305"
HOT2338	.338"	.3355"
HOT2358	.358"	.3545"
HOT2375	.375"	.3725"
HOT2400	.400"	.397"
HOT2405	.405"	.402"
HOT2410	.410"	.407"
HOT2416	.416"	.413"
HOT2422	.422"	.419"
HOT2432	.429" or .430"	.427"
HOT2452	.452"	.449"
HOT2455	.455"	.452"
HOT2458	.458"	.455"
HOT2474	.474"	.471"
HOT2483	.483"	.480"
HOT2505	.505"	.5015"
HOT2510	.510"	.5065"
HOT2513	.513"	.5095"
HOT-CUSTOM	—	<specify>

* *Hand-held* Outside Neck Turner Pilots listed here are not interchangeable with Outside Neck Turner Pilots, which fit into a Forster lathe-style Case Trimmer.

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.