



## 16C-to-5C SPINDLE ADAPTER INSTRUCTIONS

### DESCRIPTION

The 16C-to-5C Spindle Adapter is designed specifically for use with Hardinge A2-5 inch 16C Spindle machines with 1-5/8 inch through-collet capacity. The adapter allows the use of standard and special shape 5C collets, 5C stop collets, 5C collet fixture plates, and 5C master expanding collets. Refer to Bulletin T-112 for a listing of 5C spindle tooling, which may be used with this adapter.

#### - WARNING -

Do not use cast iron 5C work holding fixtures.

### MOUNTING INSTRUCTIONS

#### - CAUTION -

If coolant will not be used, the bearing and taper diameters of the 5C collet should be coated with molybdenum disulfide grease.

1. Loosen key screw "C", Figure 2, enough to permit separation of draw tube "E" and reducer bushing "A".

#### - NOTE -

There are four slots milled on the O.D. of draw tube "E".

2. Scribe a line "D" on the O.D. of the draw tube to indicate the location of each of the milled slots.

#### - NOTE -

Key screw "B" acts as a key for the 5C collet. It may be necessary to loosen screw "B" slightly to allow the tooling to slide in smoothly.

3. Place the desired 5C collet in reducer bushing "A".
4. Thread draw tube "E" onto the collet and draw the tool into the reducer bushing until the tool is locked firmly in place.
5. Turn draw tube "E" counterclockwise until one of the scribed lines is aligned with key screw "C".
6. Tighten key screw "C" until it bottoms against draw tube "E"; then, back the screw off one-quarter turn.

#### - NOTE -

It is not necessary for the key ways in the reducer bushing and draw tube to be aligned.

7. Align the draw tube keyway with the spindle key and slide the assembly into the spindle. If necessary, rotate the reducer bushing to align its keyway with the spindle key, and slide the assembly into the spindle.

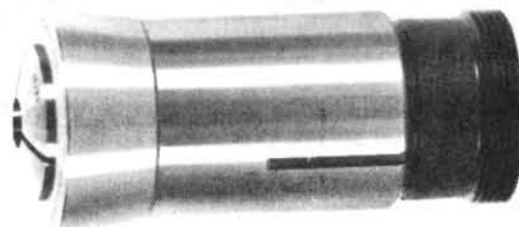


Figure 1 - Spindle Adapter With Optional 5C Collet

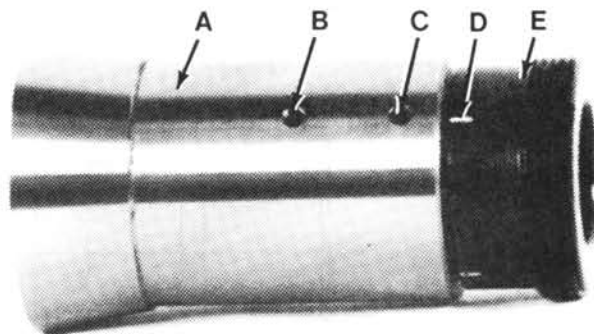


Figure 2 - Spindle Adapter Components

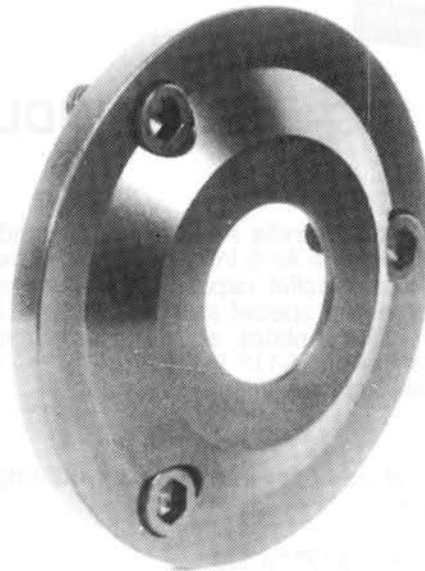
**Hardinge Brothers, Inc.**  
Elmira, New York 14902 USA  
Phone 607 734-2281 • Fax 607-734-3886

8. Install the assembly in the machine spindle following the directions outlined in the Programmer's and Operator's manual. Draw the adapter into the spindle until it is fully seated.
9. Adjust the collet closer gripping pressure as outlined in the Programmer's and Operator's manual.

**- NOTE -**

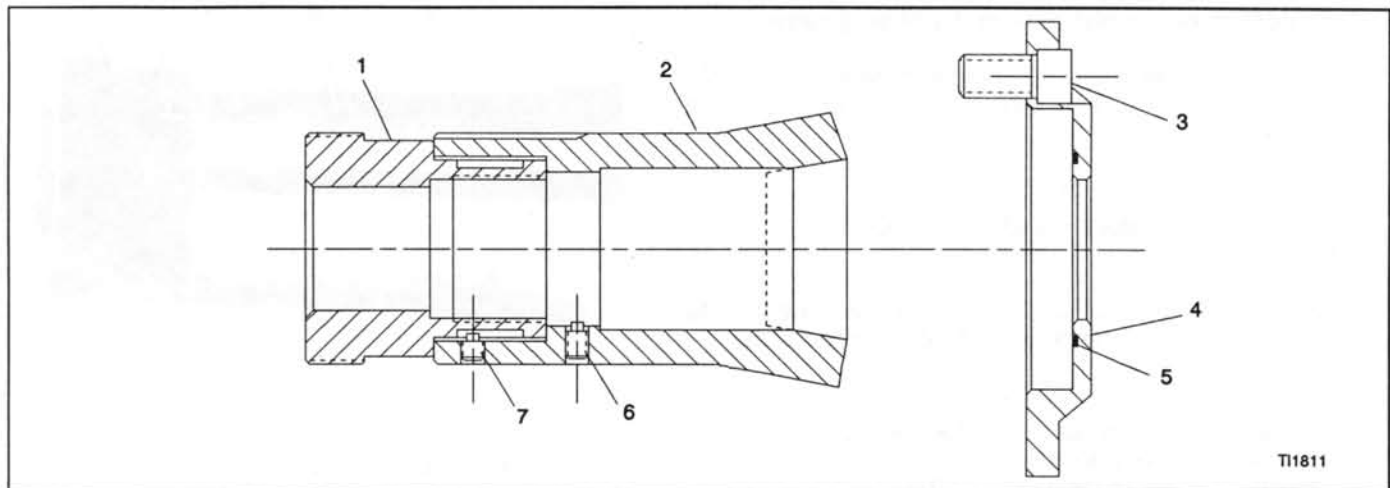
A properly assembled unit will allow the 5C collet to move back and forth approximately 1/8 inch (3.175 mm).

10. Install the adapter cap, Figure 3, on the spindle with the three screws provided.



**PARTS LIST**

Figure 3 - Adapter Cap



T11811

KEY	PART NUMBER	PCS.	PART NAME
1	16A00003015C	1	Draw Tube
2	16A00001865C	1	Reducer Bushing
3	CC 0007373	3	Screw
4	16A0010768	1	Adapter Cap
5	40 001115132	1	Quad Ring *
6	16 00003385C	1	Key Screw
7	N 0590304 L	1	Set Screw

\* If a new Quad ring is being installed, use Eastman® 910 adhesive to secure it to the adapter cap