

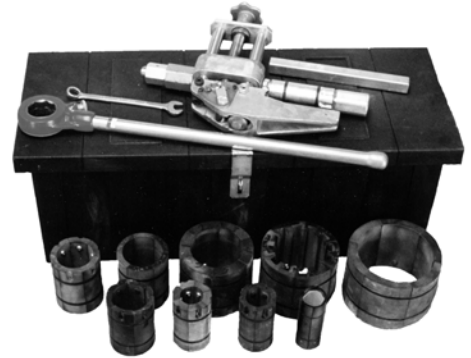
Manual Unique Tapering Tool *(Operating Instructions - Model 010 (2"-6"))*

Operating Instructions

The Unique Tapering Tool Model 010 series is designed to accurately cut tapers on fiberglass pipe in normal pipe sizes 2" through 6", and angles up to 3.5 degrees. It can be operated manually by a ratchet or by an electric power drive. (Ridgid® #700)

The Unique Tapering Tool Model 010 series is factory assembled with 2" expandable collets, Ridgid 11-R ratchet, 3/4" end wrench, 1" nipple bar and detailed instructions in a plastic box.

Collets for the Unique Tapering Tool Model 010 series come standard to fit Fiber Glass Systems high pressure pipe sizes 2"-6" and low pressure 2"-6" fiberglass pipe.



Set Up Instructions

1. **The Unique Tapering Tool comes factory assembled with collets for 2" pipe.** (HPLP or normal)
2. **Changing the Taper Angle.**
 - a. Loosen bolt (39) sufficiently and also nut (47) on rear of cam shaft (41).
 - b. Pull locating pin (45) and turn (41) to the desired angle position.
 - c. Re-insert location pin and retighten (47) with a 3/4" wrench.*
 - d. Retighten (39) by taking out all the slack to snug - then 1/4 turn more*

Caution: Do not try to move (41) indicator without loosening (39) and (47)

3. **Adjusting the head (36)**
 - a. Turn (14) bolt counter clockwise to open the Tool before mounting Tool in the pipe.
 - b. Turn (14) bolt clockwise to move (36) down while cutting the taper.
4. **Collets** - (Be sure to select the correct collets)
 - a. Other than 2" - mount collets on tool before sliding collets into pipe.
 - b. Slide tool into pipe until pipe and the collets are flush. (Collets contracted)
 - c. Expand collets in the pipe by turning (1) Torque Knob clockwise.
* Hand tight for thin wall pipe.
* Hand tight - plus 1/4 turn with wrench for thick wall pipe.

Caution:

1. For all cutting and tapering the pipe must be held securely.
2. End of pipe must be as straight as possible to ensure proper insertion length.

5. **Cutting the taper operation**
 - a. For cutting a taper the Tool must be turned clockwise - while feeding the head (36) down a little every few turns by turning (14) clockwise. Feed by (14) should not be excessive.
 - b. Continue turning the Tool and lowering the head (36) alternately until the taper length is reached.
 - c. Rotate the Tapering Tool until tool stops cutting to eliminate any cutting ridge formed by the cutting blade and because of tool pressure.
 - d. Loosen (14) by turning counter clockwise before loosening (1) to contract collets removing the Tool from the pipe.

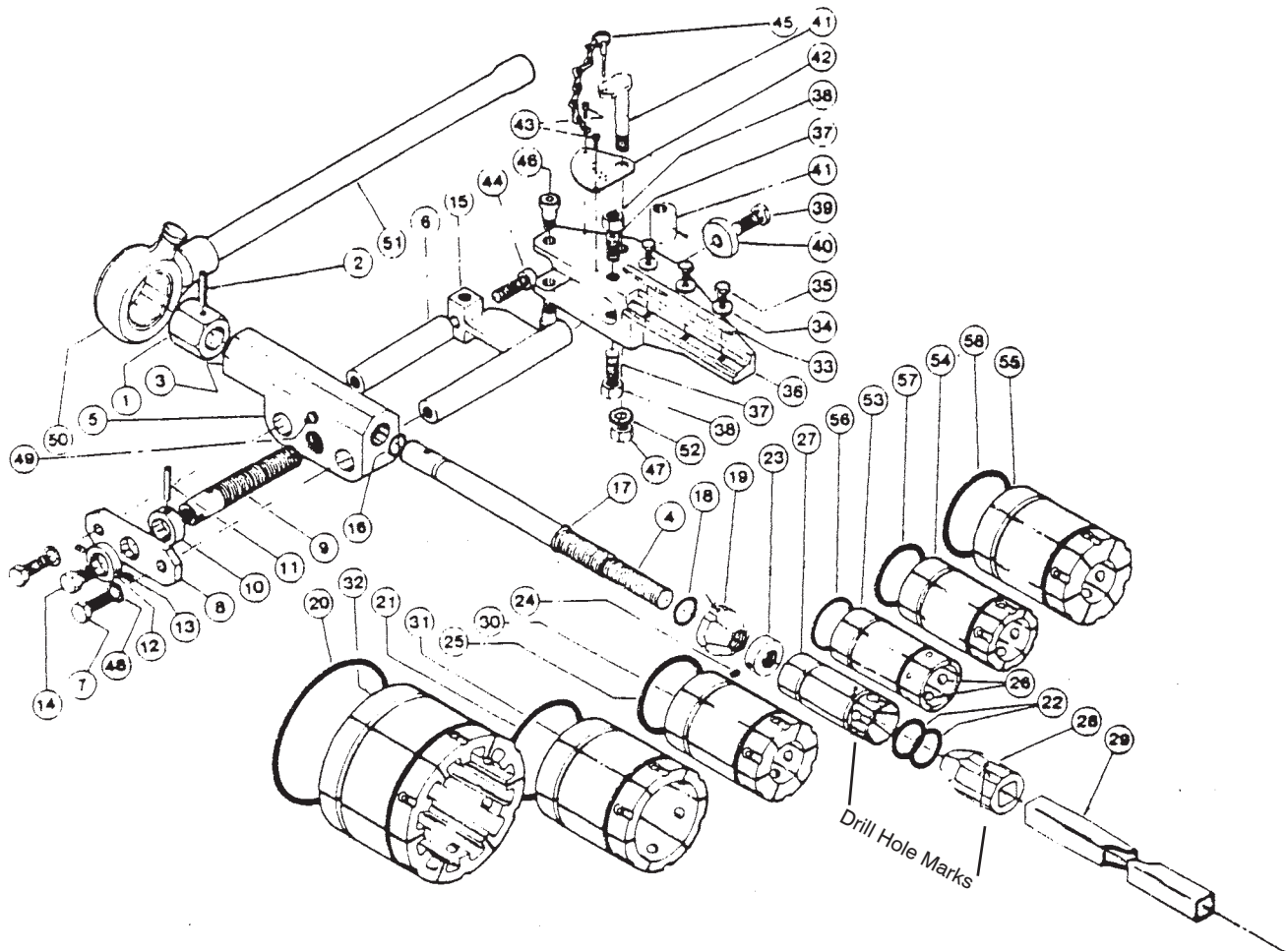
Note: Cut a TEST TAPER - check fitting to taper - the fit should be snug without clearance.

 - e. If angle of taper is incorrect - follow instruction from #2. Remove pin and turn (41) between pin holes - retighten leaving the pin out (See (42) above).
6. **SHORT NIPPLES** - the 1 inch nipple bar can be held in a vise and the Tool mounted on it by the square hole in (28) operation per #5.

ITEM	DESCRIPTION
1	Torque Knob
2	Roll Pin
3	O-Ring
4	Mandrel
5	Hub
6	Rear Post
7	Hex Head Bolt
8	Feed Plate
9	Feed Post
10	Inner Feed Ring
11	Roller Pin
12	Outer Feed Ring
13	Allen Set Screw
14	Hex Head Bolt
15	Front Post
16	O-Ring
17	Retainer Ring
18	O-Ring
19	Cone, Left Hand Thread
20	O-Ring, Collet 6"
21	O-Ring, Collet 4"

ITEM	DESCRIPTION
22	O-Ring, Collet 2"
23	Centering Washer
24	Allen Set Screw
25	O-Ring, Collet 3"
26	Round Head Screw
27	Collet, 2"
28	Cone, Right Hand Thread
29	Nipple Bar
30	Collet, 3"
31	Collet, 4"
32	Collet, 6"
33	Carbide Blade
34	Blade Washer
35	Hex Head Bolt
36	Head
37	Allen Socket Screw
38	Hex Nut
39	Hex Head Bolt
40	Holding Washer
41	Cam Shaft Assembly
42	Angle Scale

ITEM	DESCRIPTION
43	Allen Socket Screw
44	Allen Socket Screw
45	Lock Pin w/ Chain
46	Shoulder Bolt
47	Hex Nut
48	Lock Washer, ext. Tooth
49	Crease Zert
50	Ratchet (Ridgid 11R)
51	Ratchet Handle
52	Lock Washer, Ext. Tooth
53	HPLP Collet, 2 1/2"
54	HPLP Collet, 3"
55	HPLP Collet, 4"
56	O-Ring, HPLP Collet 2 1/2"
57	O-Ring HPLP Collet 3"
58	O-Ring, HPLP Collet 4"
59	1/2" Width Pipe (Ring Gauge)
60	3/4" Wrench
61	Plastic Box
62	Drive Socket



Calibrating the 2" Collets

1. Checking the Centering Washer Location

- a. Expand collets (27) by holding collets and turning the Torque Knob (1) clockwise until (23) and (24) are visible between the collets.
- b. The distance between "A" and "B" should be about $2 \frac{7}{8}$ " to 3".
 - * If collets contracted fit the 2" pipe it is ready to CALIBRATE.
 - * If the centering washer is loose - set the distance-snug set screw - CHECK - see if collets fit 2" pipe - If so set screw.

Note: (23) is set by manufacture and should not have to be moved. (normally)

- c. The distance between "A" and "B" will be about $2 \frac{3}{4}$ " to $2 \frac{7}{8}$ " for the "L" Series collets.

2. Calibrating the 2" Collets

- a. Contract the collets completely - making (19) as close as possible to the HUB (5)
 - (use a $\frac{1}{2}$ " piece of 2" HPLP to calibrate 2" collets)
 - (use a $\frac{1}{2}$ " piece of 2" normal pipe to calibrate the "L" Series)
 - * The 2" x $\frac{1}{2}$ " pipe becomes a Ring Gauge.
- b. The Ring should fit both ends of the collets the same.
 - (a) Slide Ring on collets to HUB end of collets.
 - (b) Expand collets by turning (1) Torque Knob clockwise while holding the collets until Ring just fits.
 - (c) If the Ring is loose at the other end of the collets - turn (28) clockwise while holding the collets until both ends are the same.
 - (d) If the Ring will not slide to the other end of the collets turn (28) counter-clockwise until both ends fit the same.

3. On New Tools and modified tools the cones (19) and (28) are marked and one segment of the collets by a drilled hole.

These marks should line up at all times.

- * If someone should turn (28) by accident - use the Ring and the instructions above in #2 to re-calibrate.
 - If (28) is one gull turn too loose the Ring will be noticeably loose.
 - If (28) is one full turn too tight the Ring will be noticeable tight or may not even go on.

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