



Current Tools

FOR THE PROFESSIONAL ELECTRICIAN

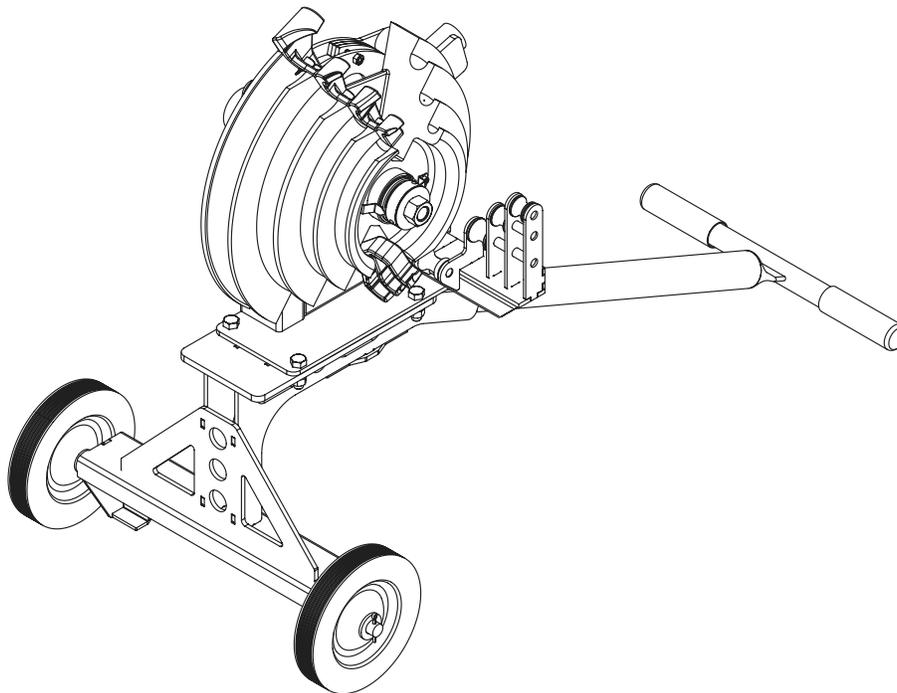
Current Tools™ Mechanical Bender MODEL 753

For bending

½" to 1" Rigid/IMC conduit

½" to 1 ¼" EMT conduit

½" to 1" schedule 40 pipe



Operating, Maintenance, Safety and Parts Manual

09/2016



Read and understand this material before operating or servicing this Mechanical Bender. Failure to understand how to safely operate and service this unit may result in serious injury or death.

This manual is free of charge. All personnel who operate or service this Mechanical Bender should have a copy of this manual and read and understand its contents. To request a copy, call, write to the address below or visit our website at www.currenttools.com. All information, specifications and product designs may change due to design improvements or updates and are subject to change without notice. Current Tools does not assume any liability for damages resulting from misuse or incorrect application of its products.

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SAFETY ALERTS



Safety Alert Symbol

THIS SAFETY SYMBOL is used to call your attention to instructions that concern your personal safety. It means: ATTENTION! BE AWARE! THIS IS AN IMPORTANT SAFETY INSTRUCTION!

Read, understand, and follow these safety instructions. Failure to follow these safety instructions may result in injury or death.



DANGER

Immediate hazards which, if not avoided, WILL result in serious personal injury or death.



WARNING

Hazards or unsafe practices which, if not avoided, COULD result in serious personal injury or death.



CAUTION

Hazards or unsafe practices which, if not avoided, COULD result in minor personal injury or property damage.

RETAIN SAFETY INFORMATION



This manual should be read and understood by all personnel who operate or service this Mechanical Bender. Failure to understand how to safely operate and service this unit could result in serious injury or death. This unit should only be operated and serviced by qualified personnel.

IMPORTANT SAFETY INFORMATION

- ▲ WARNING** Keep hands and feet away from pinch points such as bending shoe, ratchet handle and conduit when operating the bender.
- ▲ WARNING** DO NOT leave the ratchet handle in the up position. The handle could fall and cause serious injury.
- ▲ WARNING** DO NOT force tool. If bend cannot be completed with the supplied ratchet handle, discontinue bend and determine cause before continuing. DO NOT use a ratchet handle longer than 4'.
- ▲ WARNING** NEVER alter this equipment. Doing so will void the warranty and could cause serious injury or death.
- ▲ WARNING** DO NOT stand on the bender. Serious injury could occur if bender is tipped.
- ▲ WARNING** ALWAYS check for damaged or worn parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced.
- ▲ CAUTION** ALWAYS keep conduit under control when unloading. Conduit not under control could injure the operator or others in the area.
- ▲ CAUTION** WEAR approved safety glasses when using the bender.
- ▲ CAUTION** Bender MUST be used on a firm, flat surface. DO NOT use on an inclined surface.
- ▲ CAUTION** ALWAYS keep the path of the bending conduit clear of obstructions.
- ▲ CAUTION** Keep firm hand pressure on the ratchet handle while bending. The stored energy of bending conduit could cause the ratchet handle to spring forward and strike operator or nearby personnel.
- ▲ CAUTION** REMOVE the ratchet handle and conduit before moving or transporting the bender.
- ▲ CAUTION** ONLY use the bender for its intended purpose. Only use the bender to bend the specified types and sizes of conduit or pipe.
- ▲ CAUTION** Keep firm control of the bender T-handle when moving the bender to avoid tipping over.
- ▲ CAUTION** Bender is heavy and requires more than one person to lift.



SPECIFICATIONS – 753 MECHANICAL BENDER

Model No.	753
Capacity	1/2" to 1" RIGID and IMC conduit 1/2" to 1 1/4" EMT conduit 1/2" to 1" schedule 40 pipe
Overall Dimensions	46 1/2" x 24 1/2" x 38"
Weight	129 lbs.



OPERATING INSTRUCTIONS — MECHANICAL BENDER

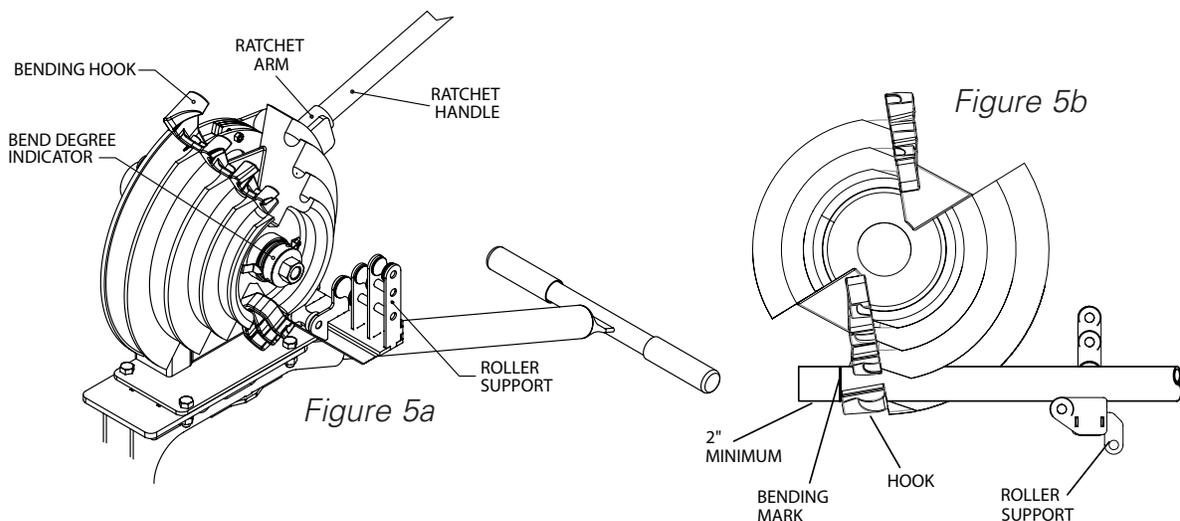
1. Locate the Mechanical Bender on a firm, level surface.
2. Place the ratchet arm in the up position. This will release the ratchet pawl. Rotate the bending shoe until the conduit hook for the size and type of conduit you are bending is at approximately the 6 o'clock position. (See Figure 5b).

NOTE: The bending shoe hooks are color coded. The blue hook is for Rigid/IMC conduit and schedule 40 pipe. The silver hook is for EMT conduit.

3. Mark the conduit to desired length. Note that a minimum of 2" from the end of the conduit to the front edge of the hook is required to eliminate flattening the end of the conduit. See Figure 5b.

NOTE: Stub-up and offset information can be found on pages 7, 9 and 10 in this manual.

4. Place conduit into the bender. The conduit should slide over the roller support, through the shoe groove and into the hook. The bending mark should be at the front (outside) edge of the hook. See Figure 5b.
5. Cut a 4' length of 1" RIGID conduit and insert it into the ratchet arm as shown in Figure 5a. This will serve as the ratchet handle.





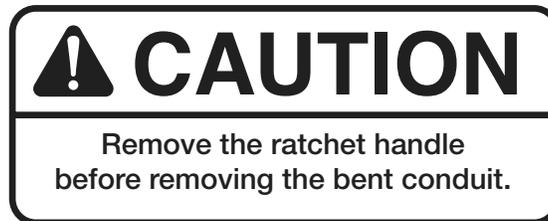
OPERATING INSTRUCTIONS – CONTINUED

6. Adjust the bend degree indicator by hand (see Figure 5a) so that it is at the zero (\emptyset) position when the shoe hook first makes contact with the conduit.
7. Pull the ratchet handle down and return to the up position. Repeat until you have completed the desired bend.

NOTE: Springback compensation is not calculated on the bend degree indicator. Refer to the springback chart on page 8 to achieve your desired degree of bend.

8. To remove the bent conduit, raise the ratchet handle to the up position and remove the ratchet handle from the ratchet arm. While holding the bent conduit, slowly rotate the bending shoe in the counter-clockwise direction and remove the bent conduit.

NOTE: When not in use, the ratchet handle and ratchet arm **MUST** remain in the down position.





STUB-UP BENDING INFORMATION

To locate bending marks and springback of 15, 30, 45, 60, and 90 degree bends for a desired stub:

1. Check Springback Chart A, B, or C for deduct length (See page 8). Note that minimum stub length is deduct length plus 2".
2. Measure and mark desired stub length on conduit (stub length mark). Subtract "Deduct Length" from this mark and make a second mark (bending mark). (See Fig 7a and 7b). Place bending mark at front edge of shoe hook. (See Figure 7c). Check Springback Chart A, B, or C for springback of desired degree of bend (See page 8). Bender should be advanced to this degree to obtain desired degree of bend.

Figure 7a

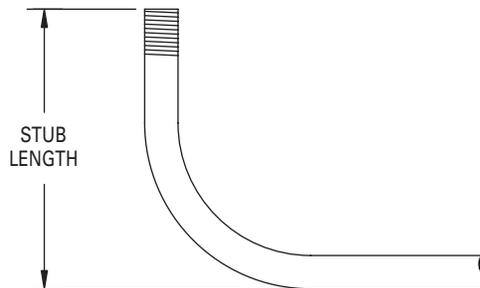


Figure 7b

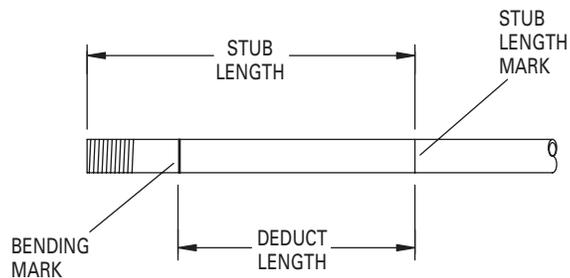


Figure 7c

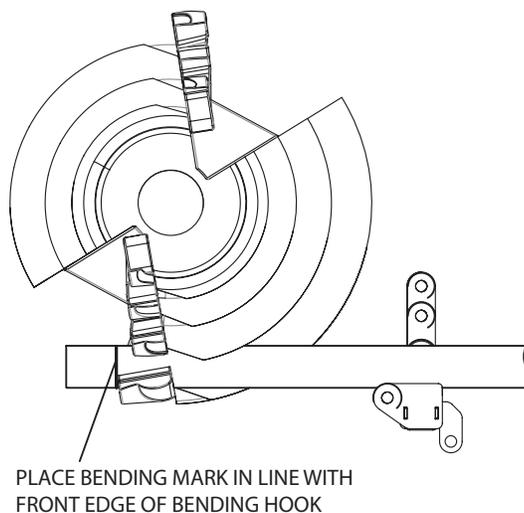


Chart A – RIGID Conduit/Schedule 40 Pipe

Conduit Size	Deduct Length	Springback				
		15°	30°	45°	60°	90°
1/2"	7 1/2"	18	34	49	65	95
3/4"	9 1/4"	17	33	48	62	92
1"	11"	18	33	50	65	95

Chart B – EMT Conduit

Conduit Size	Deduct Length	Springback				
		15°	30°	45°	60°	90°
1/2"	7 1/2"	19	34	49	65	96
3/4"	9"	19	34	50	65	97
1"	11"	19	34	50	65	97
1 1/4"	13 5/8"	19	33	50	65	95

Chart C – IMC Conduit

Conduit Size	Deduct Length	Springback				
		15°	30°	45°	60°	90°
1/2"	7 1/2"	22	38	54	69	100
3/4"	9"	20	36	48	66	98
1"	11"	20	35	52	67	99

NOTE: Springback figures are approximate.

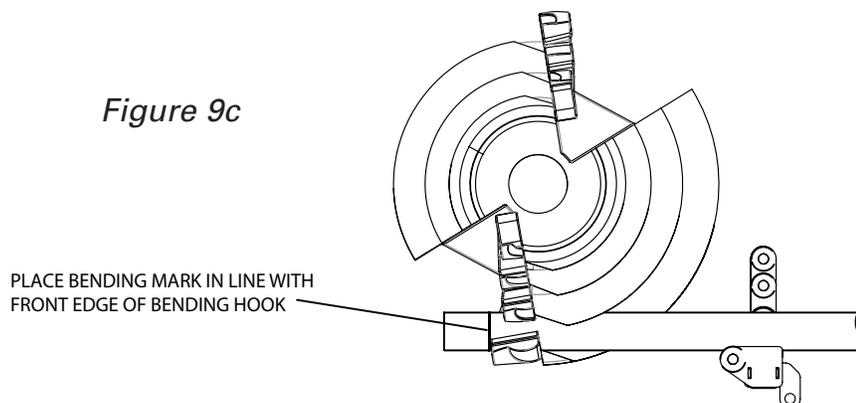
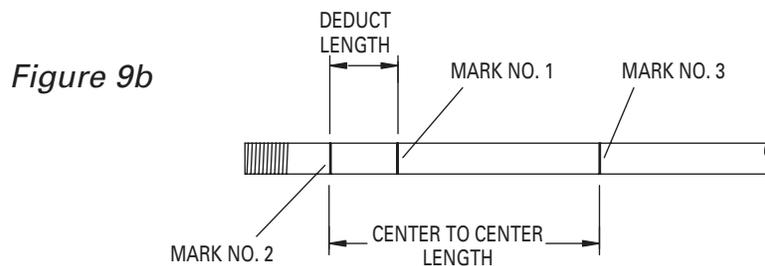
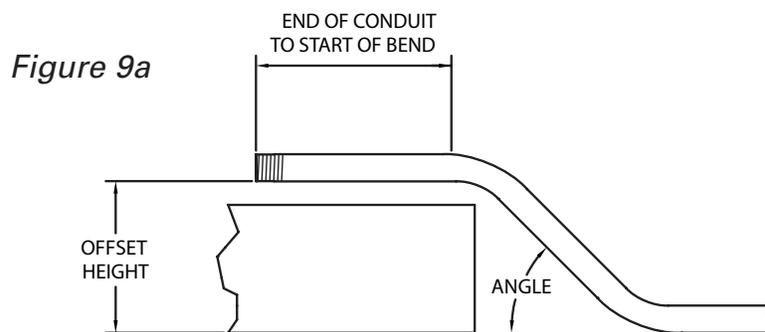
Minimum Stub Length = Deduct Length plus 2"



OFFSET BENDING INFORMATION AND CHARTS

To locate bending marks for a desired offset:

1. Measure distance from end of conduit to start of bend and mark conduit. (Mark 1) See Figure 9b.
2. Refer to chart E (page 10) for measurement "X" and deduct this distance from Mark 1 and place Mark 2 on conduit. See Figure 9b.
3. Refer to chart D (page 10) for center-to-center distance between marks. Measure this distance from Mark 2 and place Mark 3 on conduit. See Figure 9b.
4. Layout of bends is now complete. Next, place Mark 2 in line with front edge of shoe hook, then check springback chart (page 8) and make first bend. See Figure 9c.
5. Rotate conduit 180 degrees. Place Mark 3 in line with front edge of shoe hook, then check springback chart (page 8) and complete second bend.





continued

CHART D

	15°		30°		45°	
OFFSET HEIGHT	MAX CONDUIT SIZE	CENTER TO CENTER	MAX CONDUIT SIZE	CENTER TO CENTER	MAX CONDUIT SIZE	CENTER TO CENTER
2"	3/4"	7-3/4"				
4"	1-1/4"	15-7/16"	3/4"	7-5/16"		
6"	1-1/4"	23-3/16"	1"	11-15/16"	1/2"	8-5/16"
8"	1-1/4"	30-7/8"	1-1/4"	15-15/16"	1"	11-1/16"
10"	1-1/4"	38-5/8"	1-1/4"	19-15/16"	1-1/4"	13-13/16"
12"	1-1/4"	46-3/8"	1-1/4"	23-15/16"	1-1/4"	16-5/8"
14"	1-1/4"	54-1/16"	1-1/4"	27-15/16"	1-1/4"	19-7/16"
16"	1-1/4"	61-13/16"	1-1/4"	31-15/16"	1-1/4"	22-1/4"
18"	1-1/4"	69-9/16"	1-1/4"	35-15/16"	1-1/4"	25-1/16"
20"	1-1/4"	77-1/4"	1-1/4"	39-15/16"	1-1/4"	27-15/16"
22"	1-1/4"	85"	1-1/4"	43-15/16"	1-1/4"	30-3/4"

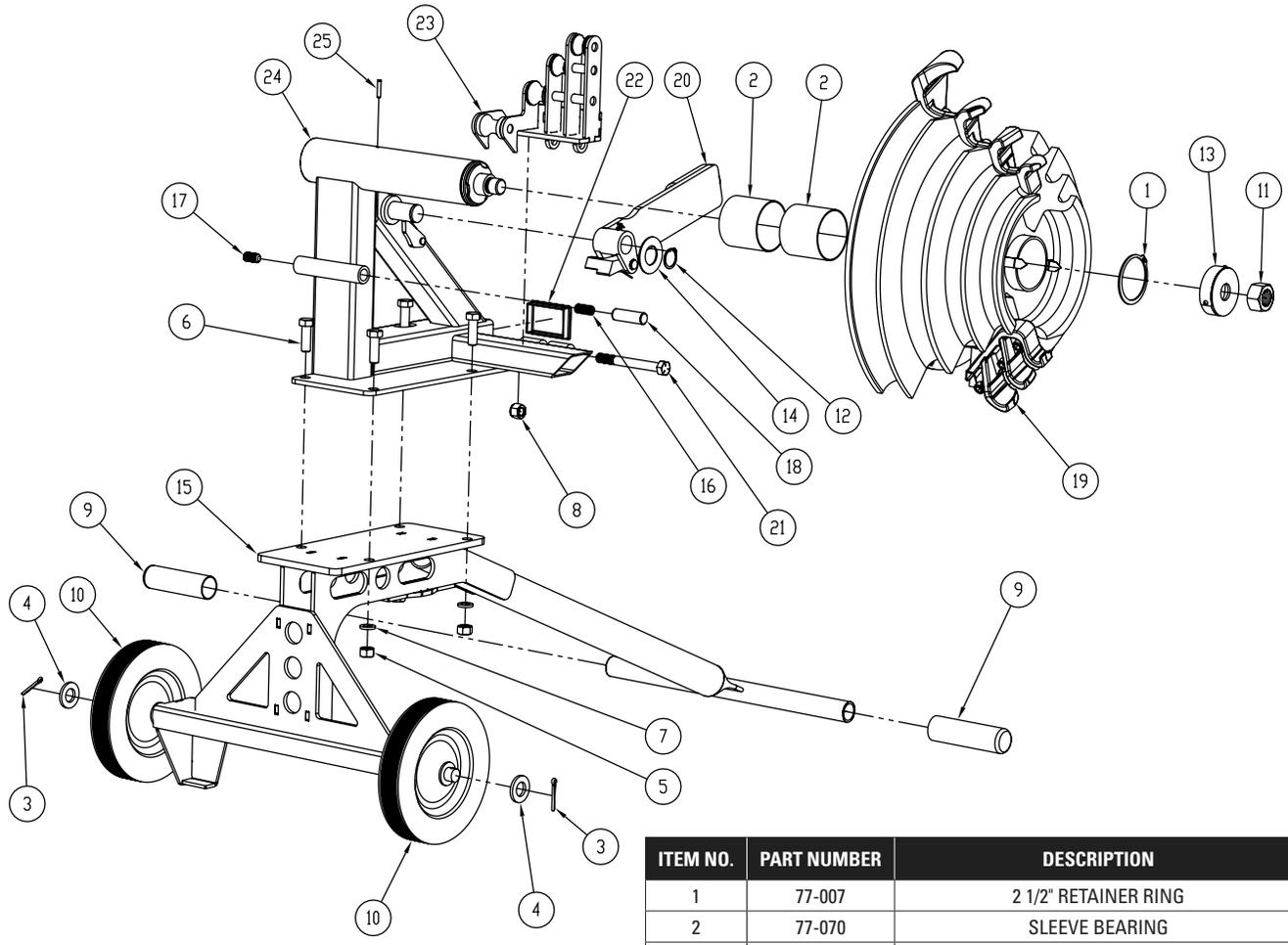
FIGURES ARE APPROXIMATE

TO LOCATE THE CENTER TO CENTER DISTANCE OF OFFSET BENDING MARKS OTHER THAN THOSE LISTED IN CHART D, USE THE FOLLOWING MULTIPLIERS: MULTIPLY THE HEIGHT OF THE OFFSET DESIRED BY 3.86 ON 15° BENDS, 2 ON 30° BENDS, AND 1.4 ON 45° BENDS.

CHART E

CONDUIT SIZE	1/2"	3/4"	1"	1-1/4"
"X"	2-1/2	3-1/16	3-1/16	4

EXPLODED VIEW



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	77-007	2 1/2" RETAINER RING	1
2	77-070	SLEEVE BEARING	2
3	77-016	COTTER PIN – 3/16 × 1-1/4" LONG	2
4	77-017	WASHER – FLAT 3/4 (SAE)	2
5	280-2G	NUT – HEX ZINC (1/2-13)	4
6	281-1F	SCREW – HEX CAP GR5 ZINC (1/2"-13 × 1.5)	4
7	281-2C	WASHER – LOCK 1/2" ZINC	4
8	333-7	NUT – HEX NYLON INSERT (1/2-13)	1
9	504-1	GRIP	2
10	509-13	8" WHEEL	2
11	750-18	NUT – LOCK, 7/8-9	1
12	750-22	1" RETAINER RING	1
13	750-349	DEGREE INDICATOR	1
14	750-394	1" WASHER	1
15	750-668	ROLLING STAND	1
16	750-9	SPRING	1
17	751-10	SET SCREW	1
18	751-419	SPACER	1
19	752-060	SHOE ASSEMBLY	1
20	752-068	RATCHET ARM ASSEMBLY	1
21	753-001	SCREW – HEX HEAD CAP GR5 ZINC (1/2-13 × 4.5)	1
22	753-002	CAP – PLASTIC	1
23	753-115	ROLLER SUPPORT WELDMENT	1
24	753-116	SHOE MOUNT WELDMENT	1
25	747-18	ROLL PIN – 3/16" × 1"	1