Current Tools

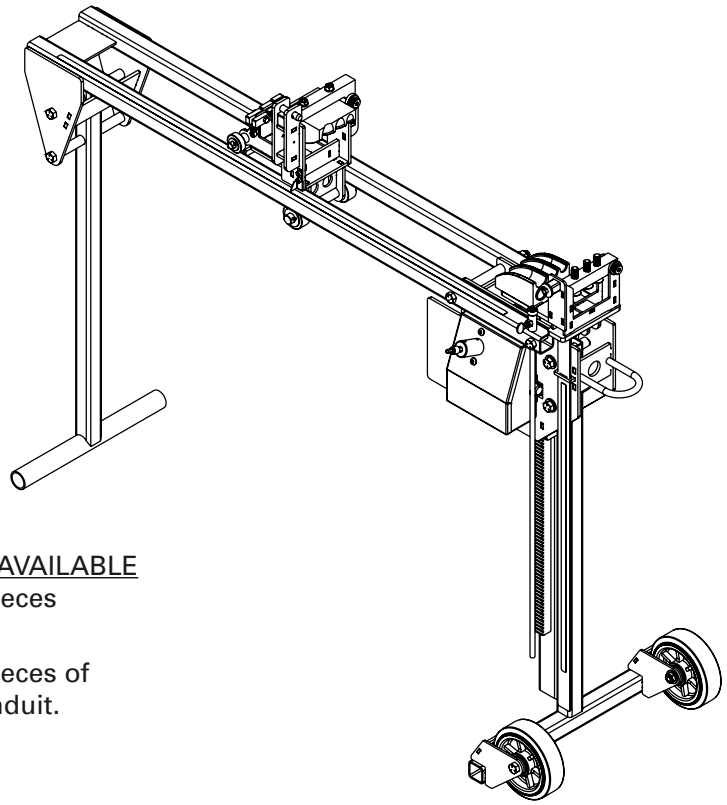
FOR THE PROFESSIONAL ELECTRICIAN

MODEL 754 OFFSET BENDER

for

½", ¾" & 1" EMT

½"& ¾" Rigid, IMC and PVC Coated Rigid



OPTIONAL SHOE GROUPS AVAILABLE

- Part #754-1/2 To bend 4 pieces of 1/2" EMT conduit.
- Part #754-3/4 To bend 2 pieces of 3/4" EMT or 1/2" Rigid conduit.

Operating, Maintenance, Safety and Parts Manual

01/2021

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

This manual is free of charge. All personnel who operate or service this Offset 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.

IMPORTANT SAFETY INFORMATION

⚠ CAUTION NEVER alter this equipment. Doing so will void the warranty.

⚠ CAUTION NEVER remove guards. They are installed for your protection.

⚠ CAUTION ALWAYS keep conduit under control when unloading. Conduit not under control could injure the operator or others in the area.

⚠ CAUTION ALWAYS inspect the bender before operating. Replace any damaged, missing or worn parts.

⚠ 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 ONLY use the bender for its intended purpose. Only use the bender to bend the specified types and sizes of conduit or pipe.

⚠ CAUTION DO NOT allow the rolling shoe carriage to make contact with the elevating shoe carriage.

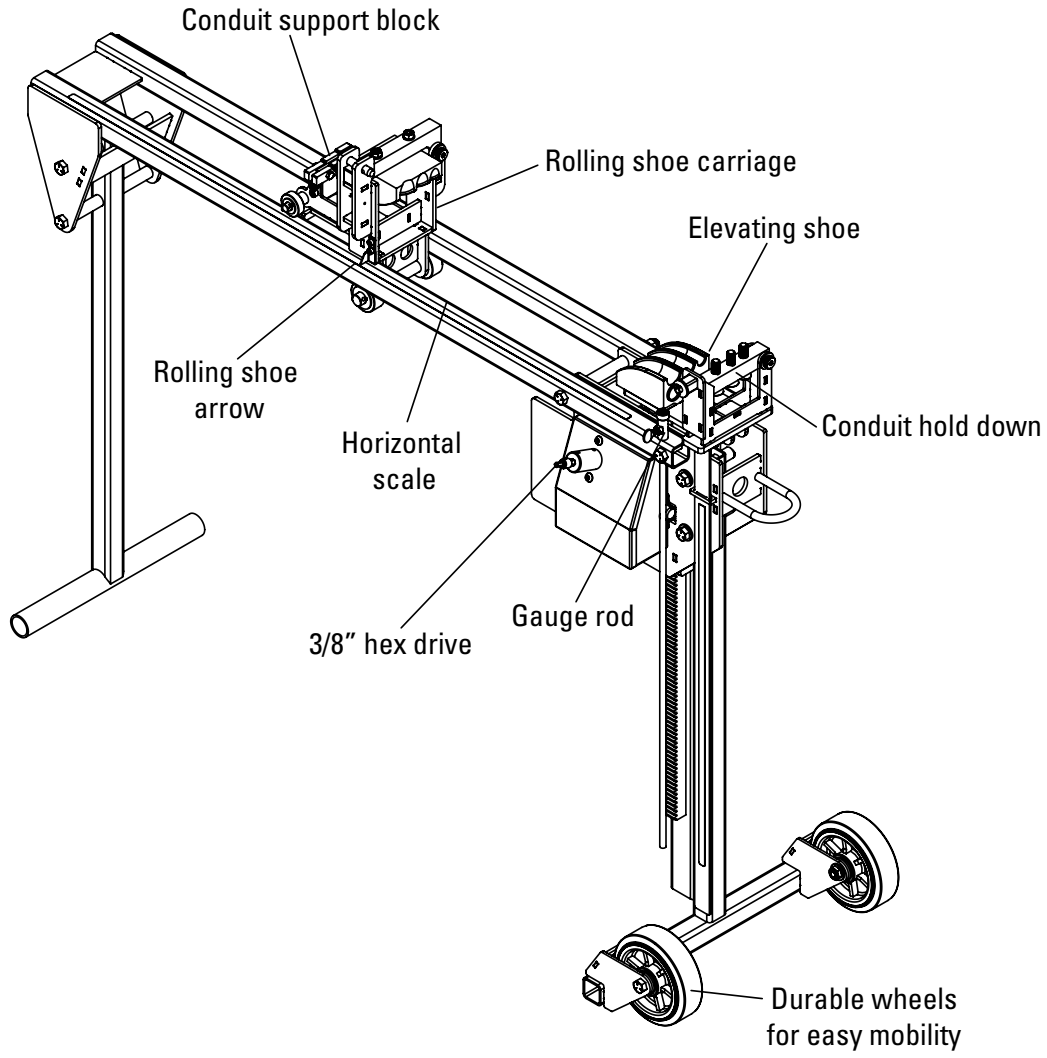
⚠ CAUTION ONLY roll on a firm, flat surface.

⚠ CAUTION NEVER use an impact driver to operate the offset bender. Using an impact driver could damage the gearbox and other components.

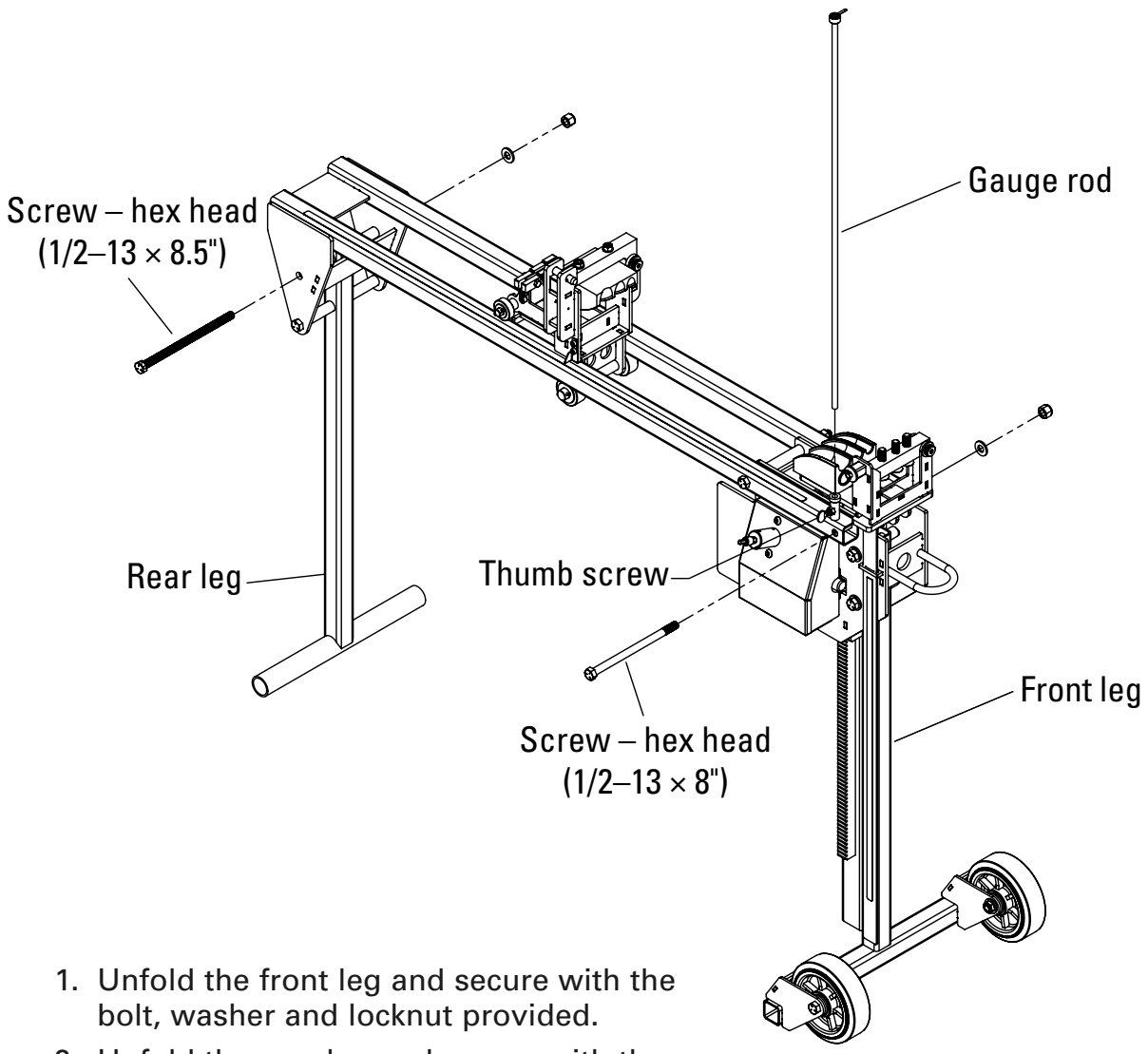
SPECIFICATIONS

Model No.	**754**
Capacity – Standard shoes	**½", ¾", 1" EMT conduit and ½" & ¾" Rigid, IMC and PVC Coated conduit**
Capacity – Optional shoes	
— Part #754-1/2	**½" EMT conduit (4 pieces)**
— Part #754-3/4	**¾" EMT conduit (2 pieces) ½" Rigid conduit or PVC coated conduit (2 pieces)**
Dimensions	**Length – 62" Width — 20" Height — 45"**
Weight	**135 lbs.**
Max. Offset Height	**22"**

FEATURES



ASSEMBLY INSTRUCTIONS



1. Unfold the front leg and secure with the bolt, washer and locknut provided.
2. Unfold the rear leg and secure with the bolt, washer and locknut provided.
3. Insert the gauge rod as shown and secure with the thumb screw.

OPERATING INSTRUCTIONS

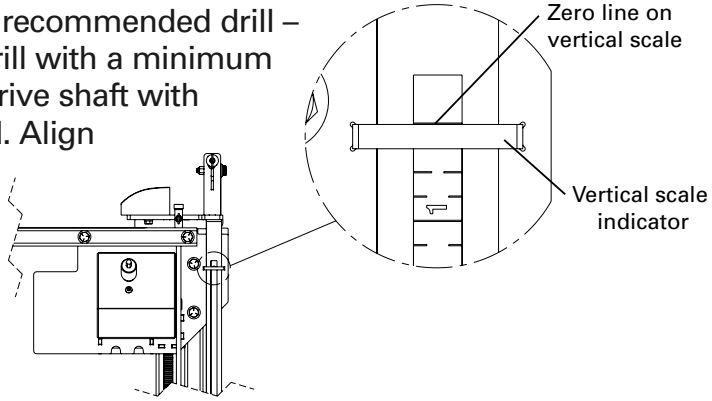
OFFSET BENDS

1. Determine the height and angle for the desired offset
2. Refer to the rolling shoe starting position chart and use the multipler calculation to determine the starting arrow position of the rolling shoe. As an example, for a 45° bend, the multiplier is 1.41. To make a 10" high offset bend, multiply 10" × 1.41 = 14.1". Place the arrow on the rolling shoe at the 14.1" mark on the horizontal scale.

ROLLING SHOE STARTING POSITION

Bend Degree	Multiplier Calculation
45°	1.41 × offset height
30°	2 × offset height
15°	3.86 × offset height

3. Using a battery powered drill (recommended drill – 1/2" variable speed cordless drill with a minimum 18 Volts), connect to the hex drive shaft with the 3/8" nut driver bit provided. Align the zero line on the vertical scale with the vertical scale indicator (see drawing).



4. With the conduit support block lowered, the rolling carriage block closed and secured and the conduit hold down open, slide the conduit over the conduit support block and through the correct groove on the rolling and elevating shoes. (See chart below for the correct groove size). Continue to slide the conduit past the elevating shoe until the desired amount of conduit extends past the shoe. The length of conduit that extends past the edge of the elevating shoe will be the straight portion of the conduit that extends past the offset.

NOTE: All shoes are marked with a line indicating the center of the bend.

Conduit Size	Conduit Type	Standard 3 Groove Shoe Correct Size Groove
½"	EMT	Small
¾"	EMT	Middle
1"	EMT	Large
½"	Rigid, IMC	Middle
¾"	Rigid, IMC	Large
½" & ¾"	PVC Coated Rigid	Large

5. Raise the conduit support block. Then close the conduit hold down and tighten the screw(s) against the conduit. Be sure the conduit is completely seated in the elevating shoe groove(s).

OPERATING INSTRUCTIONS

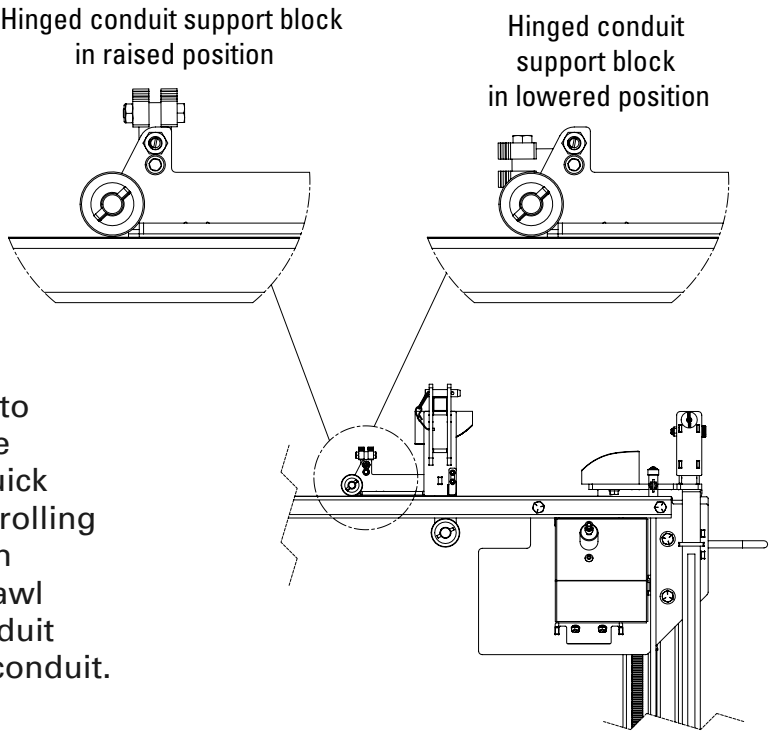
NOTE: Check the arrow on the rolling shoe carriage to be sure it has not moved during the bending set up process.

6. Using the Springback Chart for Vertical Scale (see chart below), determine the height to raise the elevating shoe. As an example, for a 45° bend, add an additional 5% to the desired offset height. To make a 10", 45° offset, you would add an additional 5%, which is ½", for a total of 10 ½".

SPRINGBACK CHART FOR VERTICAL SCALE

Bend Degree	Multiplier Calculation
45°	5%
30°	10%
15°	20%

7. Using the drill, raise the elevating shoe to the height calculated in step 6. The rolling shoe will move as the elevating shoe rises and create the second bend.
8. To remove the bent conduit, slightly lower the elevating shoe to release the tension on the conduit. Then, pull the quick release pin and raise the rolling carriage block to the open position. Next, pull the pawl release and raise the conduit hold down. Remove the conduit.



NOTE: Be sure to lower the conduit support block and close and secure the rolling carriage block before setting up the next bend.

NOTE: If the end of the conduit that extends past the conduit hold down is too high, the conduit hold down screw should be lowered. If it is too low, the conduit hold down screw should be raised.

OPERATING INSTRUCTIONS

Saddle Bend

1. Complete an offset bend as previous instructed. Pull the pawl release and raise the conduit hold down. Next, lower the elevating shoe to the zero (Ø) position. Rotate the conduit 180° degrees to ensure your two offsets will be in perfect alignment.
2. Slide the desired length of conduit through the elevating shoe to create the straight length between the offsets.
3. Return the rolling shoe carriage to the starting position of the offset, lower the conduit hold down and tighten the screw against the conduit. Then, raise the elevating shoe to the calculated offset height including the springback.
4. To remove the bent conduit, slightly lower the elevating shoe to release the tension on the conduit. Then, pull the quick release pin and raise the rolling carriage block to the open position. Next, pull the pawl release and raise the conduit hold down. Remove the conduit.

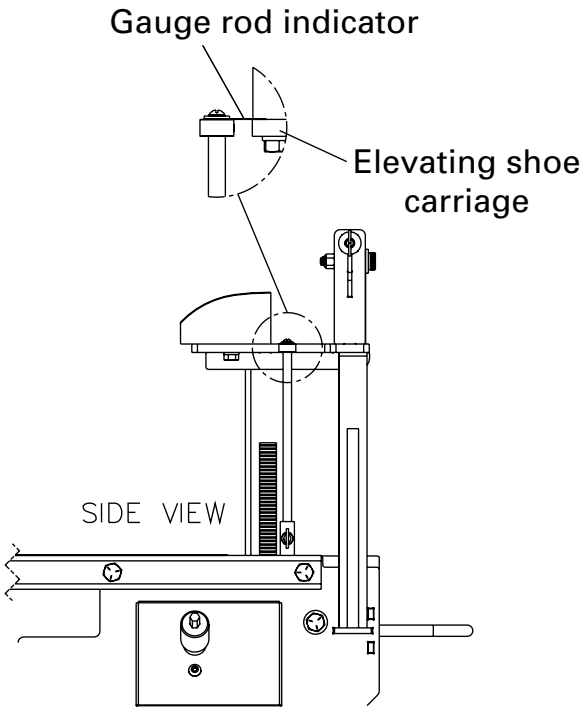
Matching Existing Offsets

1. You can match existing offsets without knowing the degree of the bend. First, measure the center distance on the bends of the existing offset. Set the arrow on the rolling shoe carriage at that number on the horizontal scale.
2. To determine the vertical scale calculation, measure the height of the existing offset. Next, check the springback chart and add the springback amount to this height.

Multiple Offset Bends

To easily repeat offsets, the Model 754 is equipped with a gauge rod.

1. To set the gauge rod, raise the elevating shoe to the calculated height for the first bend.
2. Next, loosen the thumb screw and raise the gauge rod until the gauge rod indicator just touches the top of the elevating shoe carriage (see drawing). Retighten thumb screw.
3. Gauge rod is now set for repeat bends.



OPERATING INSTRUCTIONS

SHOE ALIGNMENT

The shoes on every Model 754 are set and tested for alignment prior to shipping. However, if they ever become misaligned, use the following procedure to realign.

Front Bend — If the front bend has a "dog," the elevating shoe will need to aligned.

Rear Bend — If the rear bend has a "dog," the rolling shoe will need to be aligned.

Loosen the bolts that hold the shoe in question and use a straight piece of conduit to realign the shoe. Re-tighten the bolts.

OPTIONAL SHOE GROUPS

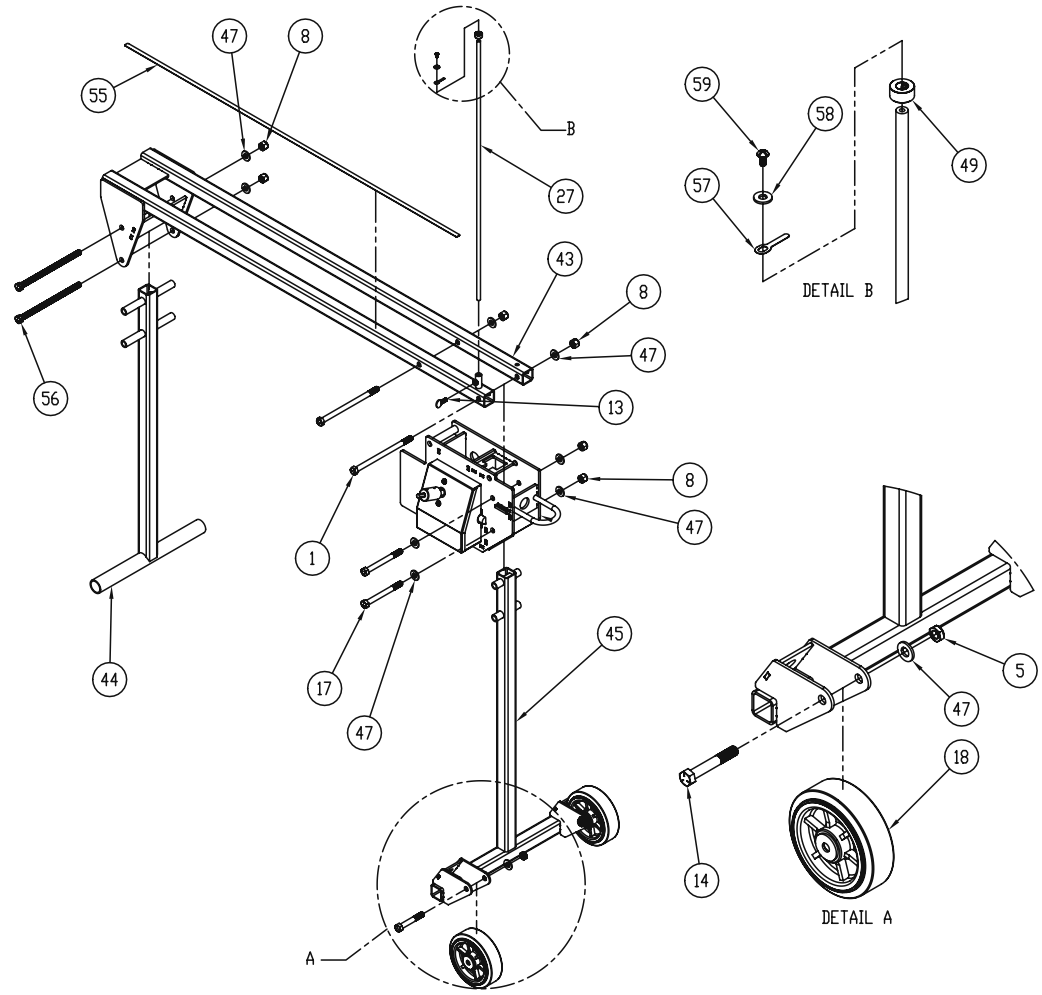
Optional shoe sets to bend mutiple pieces of the same size conduit are available.

- Part #754-1/2 is the complete set of shoes and accessories to bend 4 pieces of ½" EMT at the same time.
- Part #754-3/4 is the complete set of shoes and accessories to bend 2 pieces of 3/4" EMT or 1/2" Rigid at the same time.

MAINTENANCE

To ensure smooth operation, apply a liberal amount of multipurpose grease to the gear rack monthly.

EXPLODED VIEW – *MAIN FRAME*



PARTS LIST

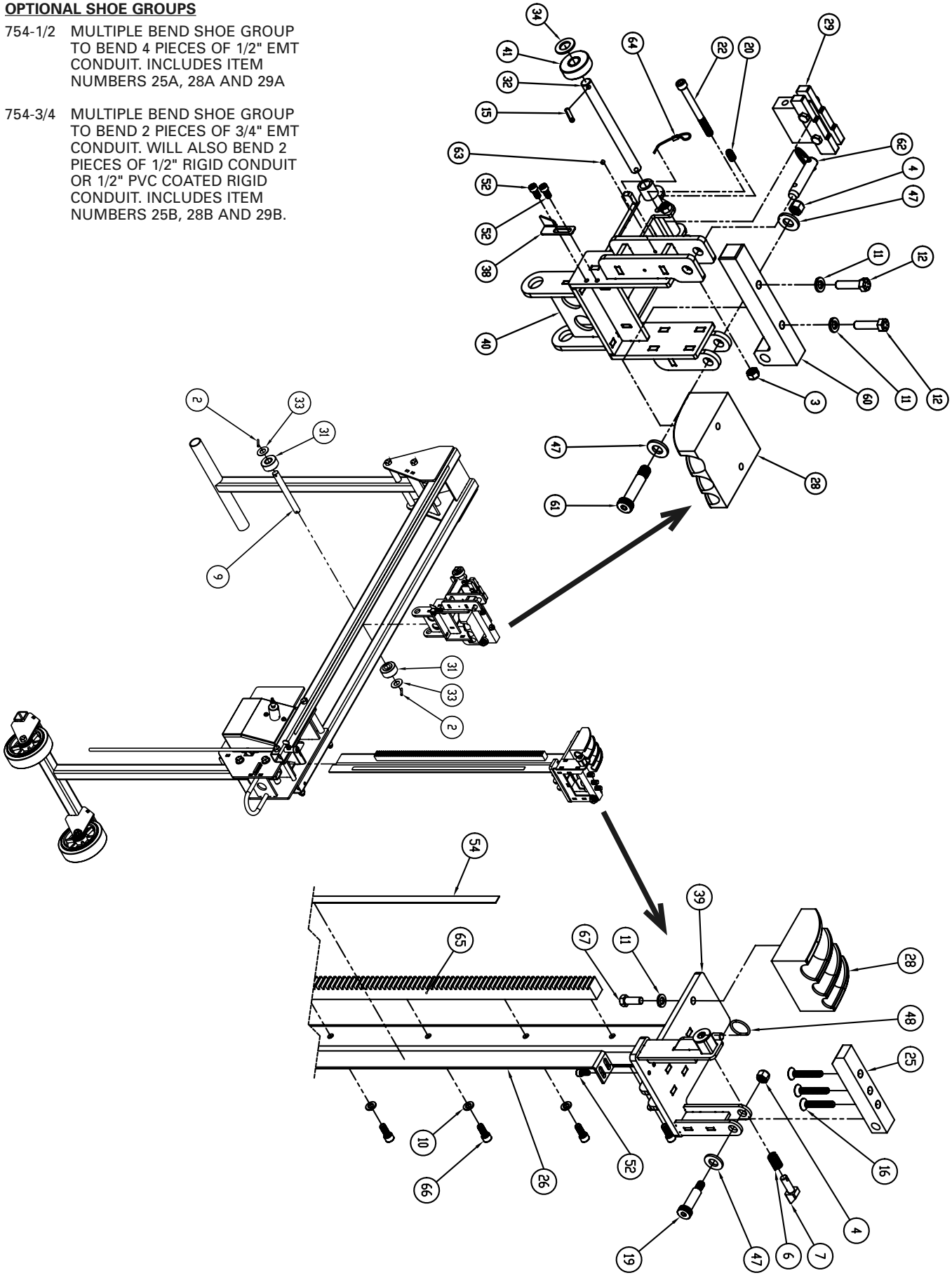
ITEM#	PART#	QTY	DESCRIPTION
1	12048-4	2	SCREW–HEX HEAD CAP GR5 ZINC (1/2-13 × 8)
5	281-1J	2	NUT–HEX, 1/2-13 THIN (NYL INS)
8	333-7	6	NUT–HEX NYLON INSERT (12-13)
13	66-56	1	SCREW–SPADE THUMB 18.88SS (5/16-18 × 3/4)
14	66-67	2	SCREW–HEX HEAD CAP GR5 ZINC (1/2-13 × 3.25)
17	754-001	2	SCREW–HEX HEAD CAP GR5 ZINC (1/2-13 × 5)
18	754-002	2	WHEEL – 6"
27	754-158	1	GAUGE ROD
43	754-700	1	CARRIAGE MOUNT
44	754-800	1	REAR LEG
45	754-900	1	FRONT LEG
47	77-017A	10	WASHER – FLAT SAE ZINC (1/2)
49	754-159	1	GAUGE ROD COLLAR
55	754-192	1	HORIZONTAL SCALE
56	754-012	2	SCREW, HX HD CAP (1/2-13 × 8 1/2")
57	754-193	1	GAUGE ROD INDICATOR
58	450-14J	1	WASHER – FLAT, USS #10
59	451-22	1	SCREW – PAN HD PHILLIPS (10/32 × 3/8")

EXPLODED VIEW – *BENDING SHOES*

OPTIONAL SHOE GROUPS

754-1/2 MULTIPLE BEND SHOE GROUP TO BEND 4 PIECES OF 1/2" EMT CONDUIT. INCLUDES ITEM NUMBERS 25A, 28A AND 29A

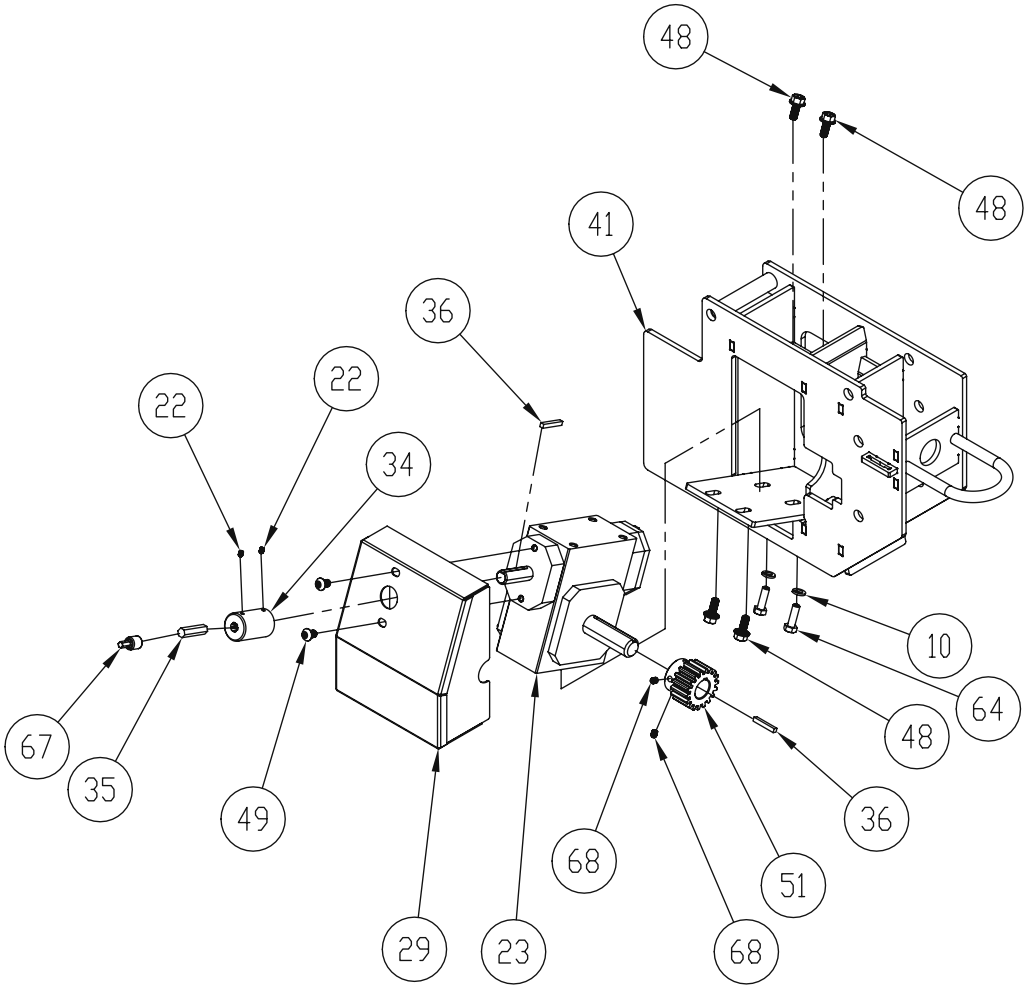
754-3/4 MULTIPLE BEND SHOE GROUP TO BEND 2 PIECES OF 3/4" EMT CONDUIT. WILL ALSO BEND 2 PIECES OF 1/2" RIGID CONDUIT OR 1/2" PVC COATED RIGID CONDUIT. INCLUDES ITEM NUMBERS 25B, 28B AND 29B.



PARTS LIST

ITEM#	PART#	QTY	DESCRIPTION
2	2-1111	2	PIN–ROLL 3/16" × 1.25"
3	2-1301-4	1	NUT–HEX NYLON INSERT (5/16-18)
4	2-1501-4	1	NUT–HEX NYLON INSERT (3/8-16)
6	33-22	1	SPRING
7	33-485	1	PAWL
9	406-362	1	PIN
10	412-11	6	WASHER – LOCK, 5/16
11	452-27	4	WASHER–LOCK MEDIUM 3/8 ZINC
12	754-015	2	SCREW – HX HD CAP, 3/8-16 × 1 1/2"
15	747-18	2	3/16 × 1 LG ROLL PIN
16	754-013	3	1/2-13 x 2 1/4" FHCS
19	754-003	1	SCREW–SHOULDER SOCKET, 1/2" × 1 1/2"
20	754-006	1	BALL–NOSE SPRING PLUNGER 5/16"-18
22	754-008	1	SCREW–SOCKET HEAD CAP (5/16-18 × 3.25)
25	754-145	1	CONDUIT HOLD DOWN
25A (optional)	754-213	1	CONDUIT HOLD DOWN BLOCK WITH SCREWS FOR 1/2" EMT
25B (optional)	754-214	1	CONDUIT HOLD DOWN BLOCK WITH SCREWS FOR 3/4" EMT OR 1/2" RIGID CONDUIT
26	754-156	1	SCALE MOUNT BAR
28	754-160	2	BLOCK–1/2", 3/4" AND 1" EMT
28A (optional)	754-161	2	1/2" MULTIPLE BEND BLOCK TO BEND 4 PIECES 1/2" EMT
28B (optional)	754-162	2	3/4" MULTIPLE BEND BLOCK TO BEND 2 PIECES 3/4" EMT OF 1/2" RIGID CONDUIT
29	754-248	1	CONDUIT SUPPORT BLOCK
29A (optional)	754-249	1	CONDUIT SUPPORT BLOCK FOR 1/2" EMT MULTIPLE BEND BLOCKS
29B (optional)	754-250	2	CONDUIT SUPPORT BLOCK FOR 3/4" EMT/1/2" RIGID MULTIPLE BEND BLOCK
31	754-181	2	ROLLER–BOTTOM
32	754-182	1	PIN–ROLLER
33	754-183	2	WASHER–BOTTOM FRONT WHEELS
34	754-184	2	WASHER–REAR WHEELS
38	754-190	1	ARROW
39	754-301	1	ELEVATING SHOE CARRIAGE
40	754-400	1	ROLLING SHOE CARRIAGE
41	754-500	2	BACK ROLLER
47	77-017A	1	WASHER–FLAT SAE ZINC (1/2)
48	8099-3	1	PAWL PIN RING
52	99-8	4	SCREW–SOCKET HEAD CAP (1/4-20 × 1/2)
54	754-191	1	VERTICAL SCALE
60	754-205	1	BLOCK – ROLLING CARRIAGE
61	512-002	1	SCREW – SHOULDER SOCKET, 1/2" × 1.75"
62	754-014	1	PIN – QUICK RELEASE
63	670-6A	1	STOP – CABLE
64	754-212	1	LANYARD
65	754-102	1	GEAR RACK
66	254-001	5	SCREW – SHC 5/16-18 3/4"
67	524-11	2	SCREW – HX HD CAP, 3/8-16 × 1"

EXPLODED VIEW – *GEARBOX*



PARTS LIST

ITEM#	PART#	QTY	DESCRIPTION
10	412-11	2	WASHER – LOCK 5/16
22	754-009	2	SCREW–SET CUP PT (10/32 × 1/4")
23	754-019	1	GEARBOX
29	754-243	1	GEARBOX GUARD
34	754-185	1	DRIVE ADAPTER
35	754-186	1	HEX SHAFT–ADAPTER
36	33-49	2	ADAPTER KEY
41	754-245	1	GEARBOX MOUNT
48	754-016	4	SCREW– HX FLANGE, SERRATED (5/16-18 × 3/4")
49	99-123	2	SCREW–BUTTON HEAD SOCKET (5/16-18 × 1/2")
51	754-018	1	GEAR
64	9544-15	2	SCREW – HEX HD CAP (5/16-18 × 3/4")
67	163-14	1	NUT DRIVER – 3/8"
68	754-020	2	SCREW, SET CUP PT (1/4-20 × 5/16")