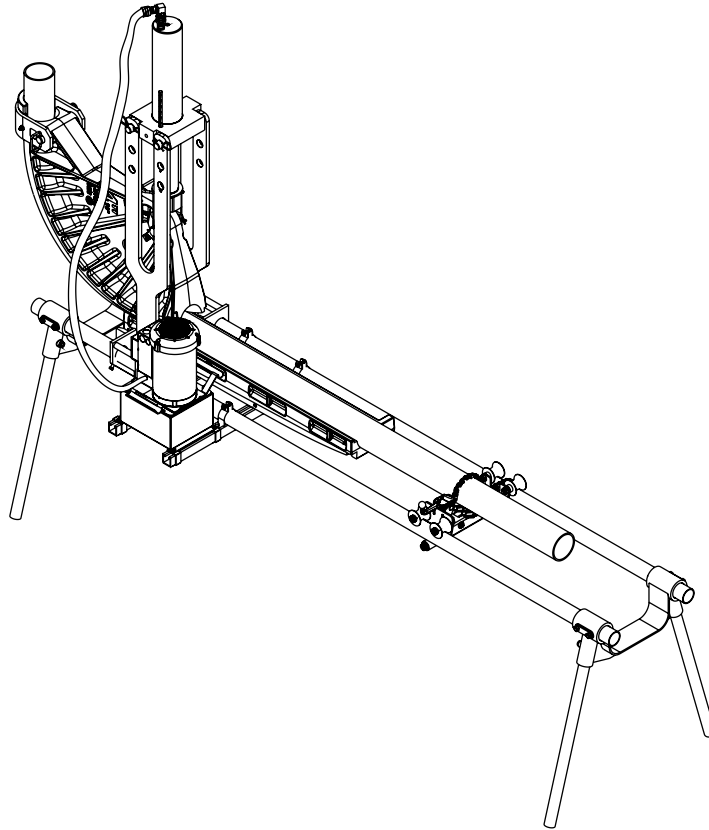




Current Tools

FOR THE PROFESSIONAL ELECTRICIAN

Current Tools™ Model 281 Bending Table for use with Model #254 Hydraulic Conduit Bender



Assembly, Operating, Safety and Parts Manual



Read and understand this material before assembling, operating or servicing the 281 Bending Table and 254 Hydraulic Bender. Failure to understand how to safely assemble and operate this equipment may result in serious injury or death.

3/2019

This manual is free of charge. All personnel who assemble, operate or service this equipment should have a copy of this manual and read and understand its contents. To request a copy, call or write to the address below. 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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RETAIN SAFETY INFORMATION



This manual should be read and understood by all personnel who assemble, operate or service this bending table and hydraulic bender. Failure to understand how to safely assemble and operate these units could result in injury or death. This bending table and hydraulic bender should only be assembled, operated and serviced by qualified personnel.

IMPORTANT

Refer to the Current Tools Model #254 Assembly, Operating and Maintenance, Safety and Parts Manual for complete bending instructions, charts, etc.

When using the 281 Bending Table with Greenlee® 881 or 881 CamTrack®* Bender, read and understand the bender manufacturer's operating and safety instructions before attaching to or operating with the 281 Bending Table. Failure to do so may result in serious injury or death.



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.

* Greenlee® and CamTrack® are registered trademarks of Emerson Electric Co., which has no affiliation with Current Tools.



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

- ⚠ DANGER** NEVER operate the bender in an explosive atmosphere.
- ⚠ DANGER** NEVER operate the bender in wet or damp locations. DO NOT expose the bender to rain.
- ⚠ WARNING** ALWAYS disconnect the bender from the hydraulic pump before servicing and when not in use.
- ⚠ WARNING** ALWAYS inspect the bender before operating. Replace any damaged, missing or worn parts. Check for alignment of moving parts, binding of moving parts, breakage of parts and any other conditions that may affect its operation.
- ⚠ WARNING** NEVER alter this equipment. Doing so will void the warranty.
- ⚠ WARNING** ALWAYS keep hands and feet away from pinch points such as bending shoes, follow bars, saddles, conduit and other moving parts.
- ⚠ WARNING** ALWAYS use appropriate bending shoe, follow bar and saddle for the size conduit to be bent.
- ⚠ WARNING** NEVER allow the carriage with vise to contact any component of the bender or bending table during a bend.
- ⚠ WARNING** ALWAYS keep conduit under control when unloading.
- ⚠ WARNING** ALWAYS keep the path of the bending conduit clear of obstructions. Make sure all obstacles are clear of the bending path BEFORE you bend the conduit.
- ⚠ WARNING** ALWAYS wear approved safety glasses when the bender is in operation.
- ⚠ WARNING** ALWAYS wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- ⚠ WARNING** NEVER stand in direct line with the hydraulic cylinder while operating or servicing the bender. Some parts of the cylinder are under high pressure and can be propelled with considerable force.
- ⚠ WARNING** NEVER stand in direct line with the follow bar while operating the bender. The follow bar is under high pressure during use and can be propelled with considerable force.
- ⚠ WARNING** ALWAYS read and understand the safety and operating instructions supplied with your hydraulic pump.
- ⚠ WARNING** ALWAYS keep children away. All visitors should remain a safe distance from work area.



IMPORTANT SAFETY INFORMATION — *continued*

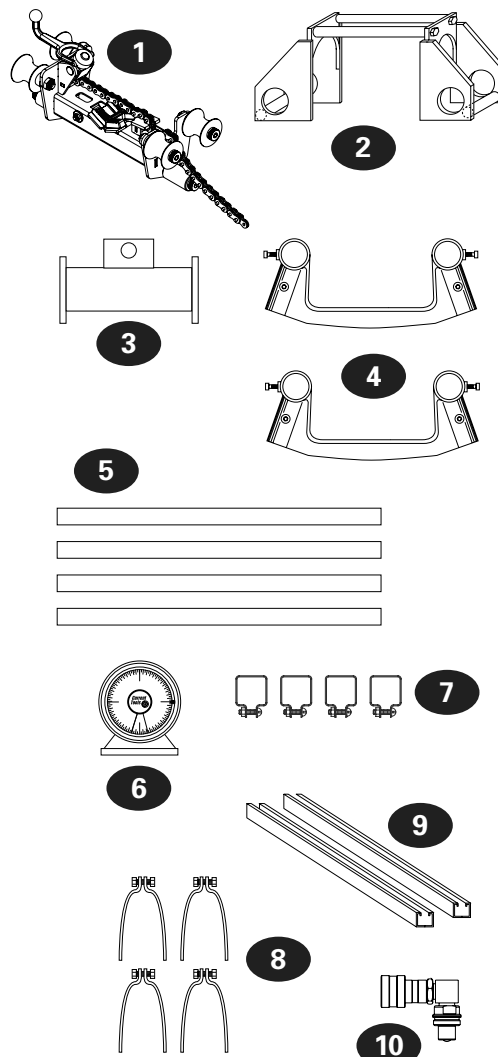
- ⚠ CAUTION** The bender and some accessories exceed 50 lbs. and will require more than one person to lift, transport and assemble.
- ⚠ CAUTION** Only use the bender for its intended purpose as specified in this manual.
- ⚠ CAUTION** ALWAYS maintain bender with care. Keep bender clean for best and safest performance.
- ⚠ CAUTION** CHECK all hose connections prior to use and ensure they are properly connected. Improper connections may not allow the hydraulic cylinder to operate.



COMPONENTS – 281 BENDING TABLE

For use with Model #254 Hydraulic Conduit Bender. Can also be used with Greenlee® Model #881 or #881 CamTrack® Benders*.

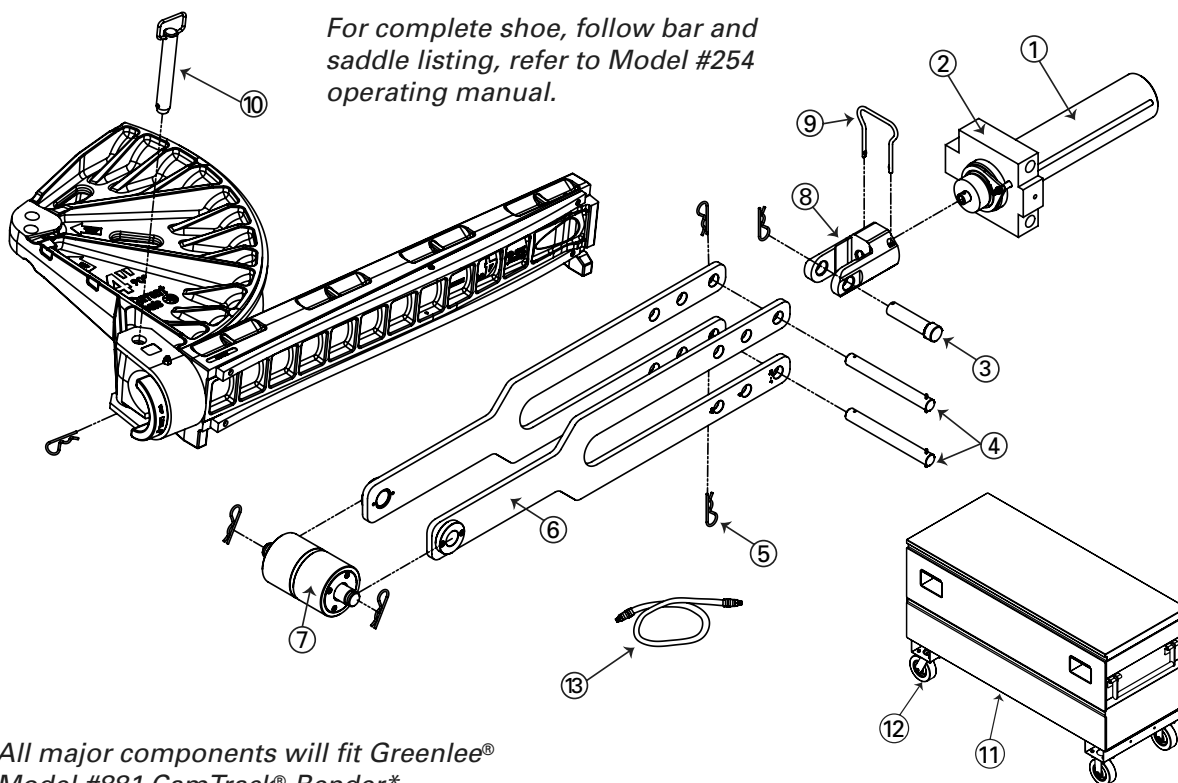
KEY	NO.	DESCRIPTION	QTY
1	281-221	Carriage with vise	1
2	281-400	Bender mounting unit	1
3	281-3	Ram positioning unit	1
4	280-5	Leg support	2
5	280-6	Legs	4
6	280-7	Magnetic protractor	1
7	281-4	Pump mounting brackets	4
8	281-5	Conduit clamps	4
9	281-6	Pump mounting track	2
10	281-CPLNGASSY	90° Coupling assembly	1
	104	Storage Box (not shown)	1



NOTE: 2 each 10' lengths of 2" rigid conduit used as the table supports are to be supplied by the user.

* Greenlee® and CamTrack® are registered trademarks of Emerson Electric Co., which has no affiliation with Current Tools.

MAJOR COMPONENTS – BENDER



MAJOR COMPONENTS – PARTS LIST

ITEM	CATALOG	DESCRIPTION	QTY.
1	254-100	HYDRAULIC CYLINDER (INCLUDES ITEM #2)	1
2	254-102	CYLINDER MOUNTING BLOCK	1
3	254-107	CLEVIS PIN	1
4	254-148	CYLINDER BLOCK PIN	2
5	254-006	SPRING CLIP	6
6	254-104	FRAME SIDE ASSEMBLY	2
7	254-151	ROLLER ASSEMBLY	1
8	254-103	CLEVIS	1
9	254-108	CLEVIS RETAINING CLIP	1
10	254-149	SADDLE PIN	1
11	105	STORAGE BOX	1
12	506	CASTER SET – 2 RIGID, 2 SWIVEL	1
13	291	HYDRAULIC HOSE	1

* Greenlee® and CamTrack® are registered trademarks of Emerson Electric Co.

ASSEMBLY INSTRUCTIONS

Insert two of the legs into the leg support as shown in Figure 1 and tighten the bolts to hold the legs in place. Repeat for second leg support.

Insert the ends of the two 10' pieces of 2" rigid conduit (supplied by the user) into one leg support assembly and tighten the two bolts on each side. See Figure 1.

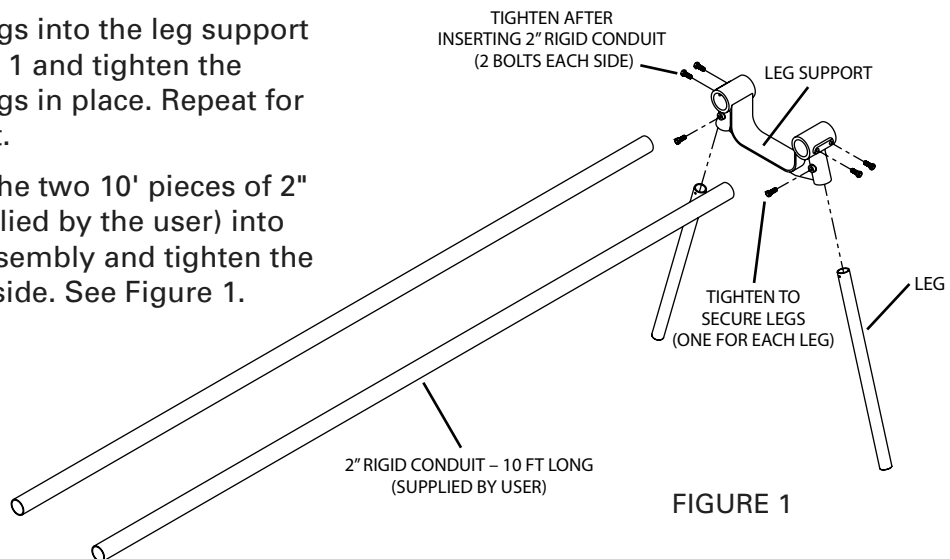


FIGURE 1

Next, slide the carriage with vise onto the conduit as shown in Figure 2. The carriage with vise should be installed so that the vise chain handle will be on the same side as the pump (See Figure 7 on page 9 for pump orientation).

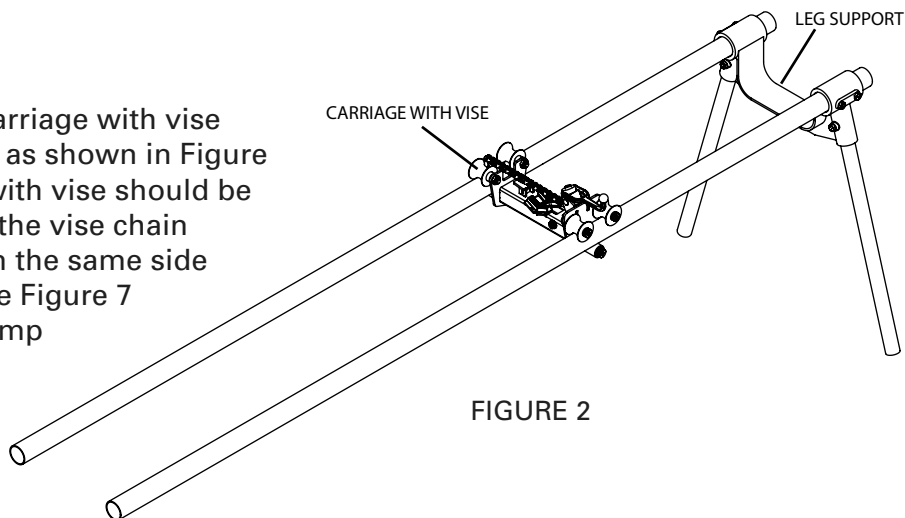


FIGURE 2

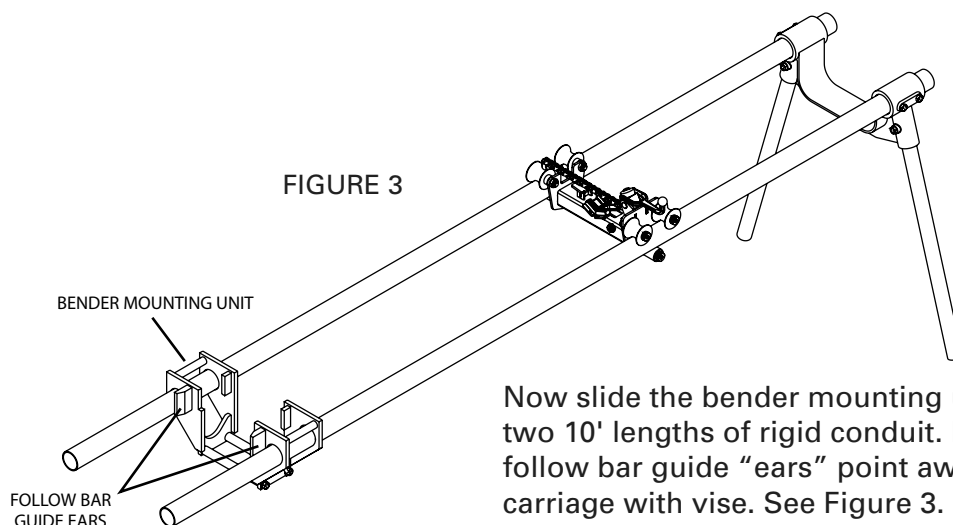


FIGURE 3

Now slide the bender mounting unit onto the two 10' lengths of rigid conduit. Be sure that the follow bar guide "ears" point away from the carriage with vise. See Figure 3.

ASSEMBLY INSTRUCTIONS — continued

Insert the two 10' lengths of conduit into the remaining leg support assembly and tighten the four bolts against the conduit. See Figure 4.

Place the bender mounting unit 15 inches away from the leg support you have just completed and tighten the 2 bolts on the bottom of the bender mounting unit against the two 10' lengths of rigid conduit to keep the bender mounting unit in place. See Figure 4.

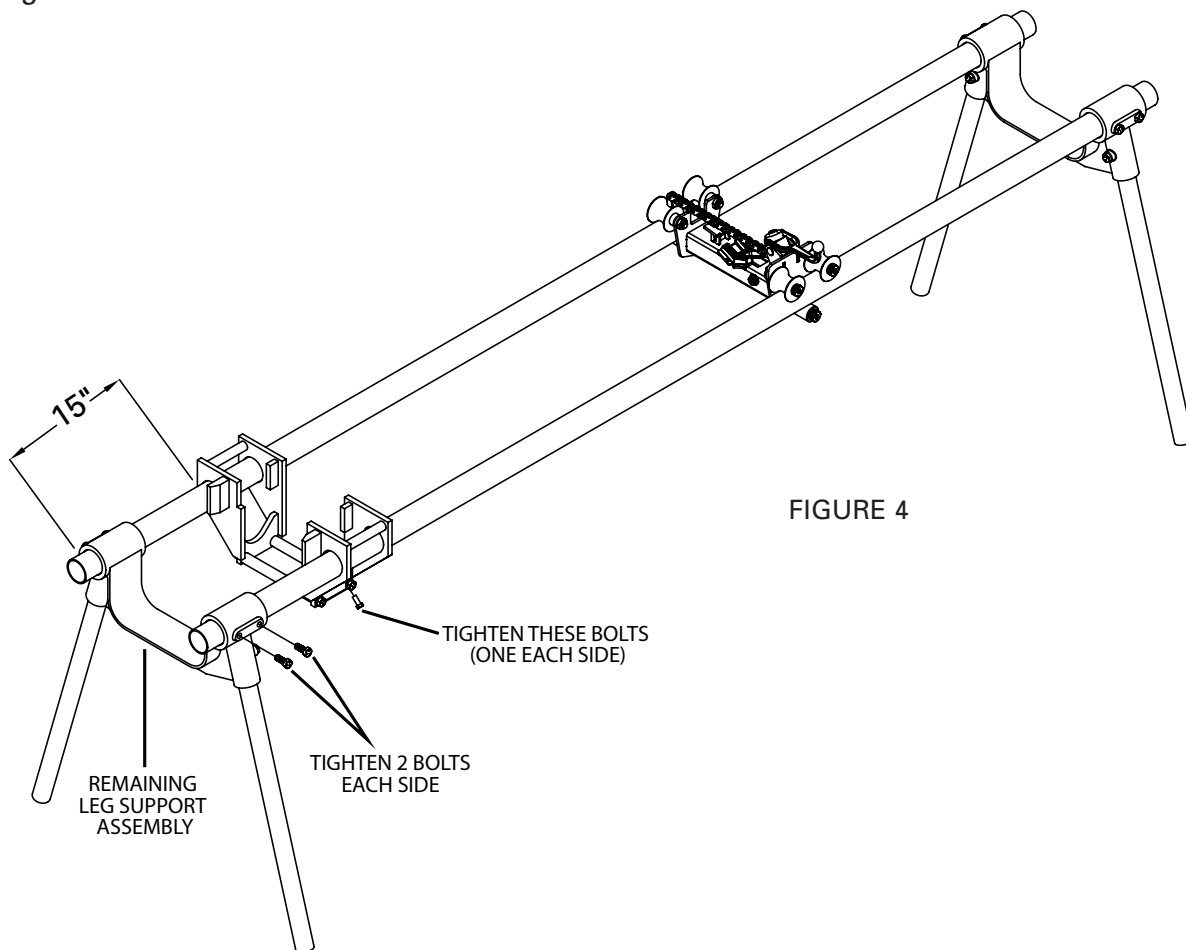


FIGURE 4

Next, attach the two pump mounting tracks to the bending table with the 4 conduit clamps as shown in Figure 5. **DO NOT** tighten these firmly at this time.

NOTE: Be sure the table is level before continuing.

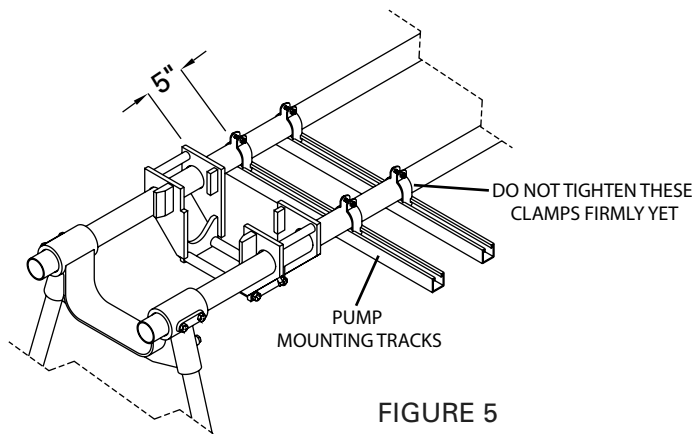


FIGURE 5

281 BENDING TABLE

– Ready to mount pump and bender

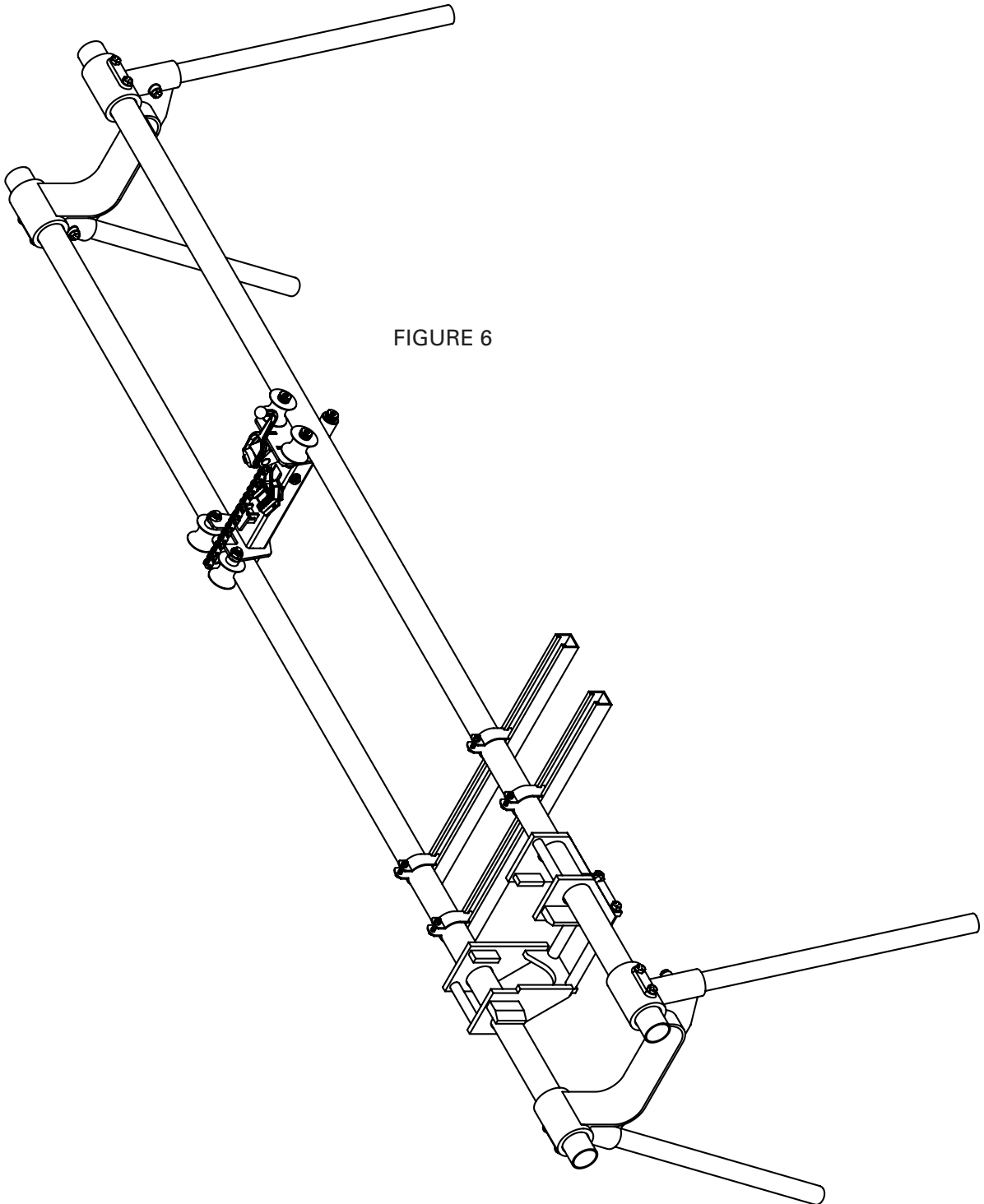


FIGURE 6



ASSEMBLY INSTRUCTIONS — *continued*

Attach the pump mounting brackets to the 4 corner holes of the pump. *See drawings below for pump mounting bracket installation.* Place the pump with brackets attached onto the pump mounting track. Secure the pump mounting brackets in place by tightening the bolts on the bottom of each pump mounting bracket. Next, firmly tighten the conduit clamps.

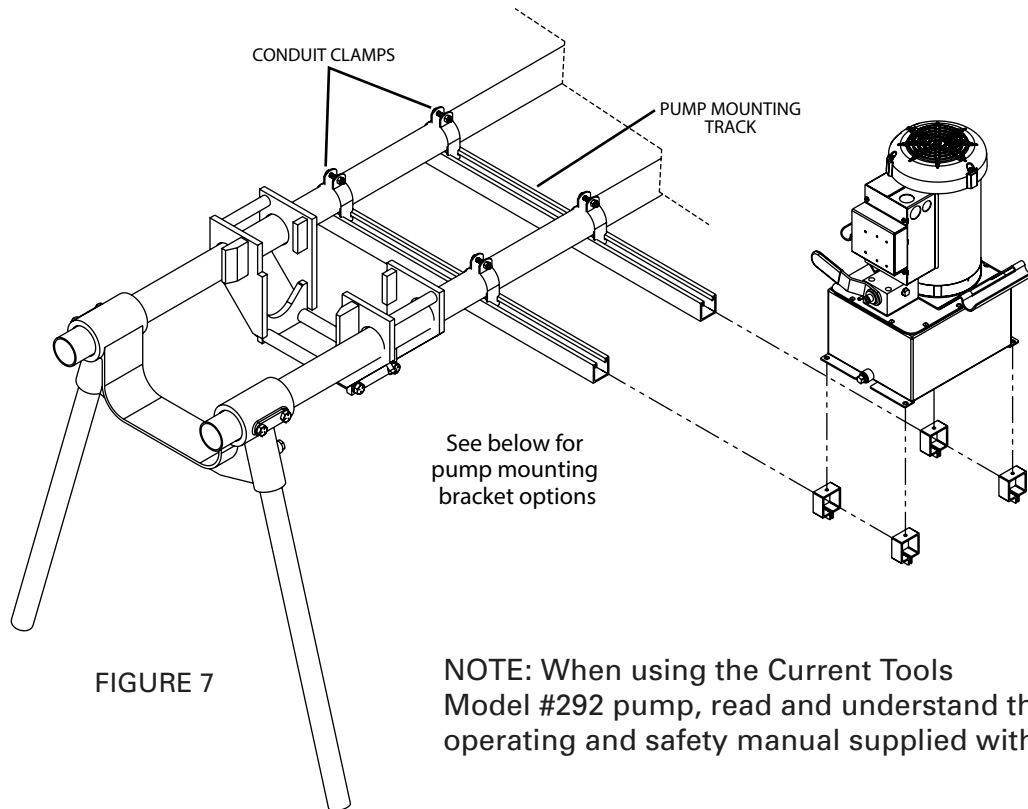
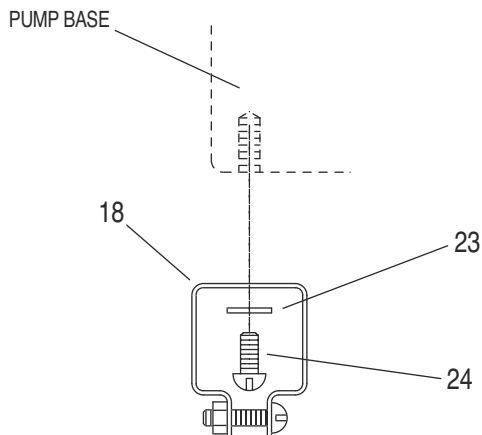


FIGURE 7

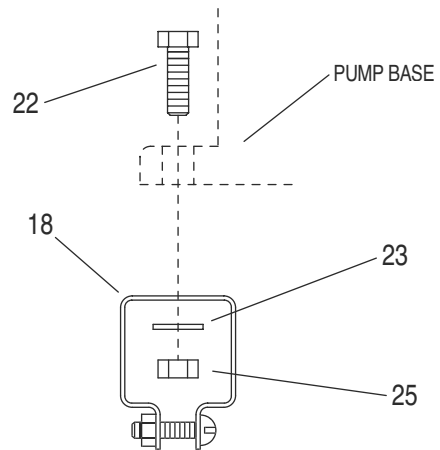
NOTE: When using the Current Tools Model #292 pump, read and understand the operating and safety manual supplied with it.



PUMP MOUNTING BRACKET OPTIONS



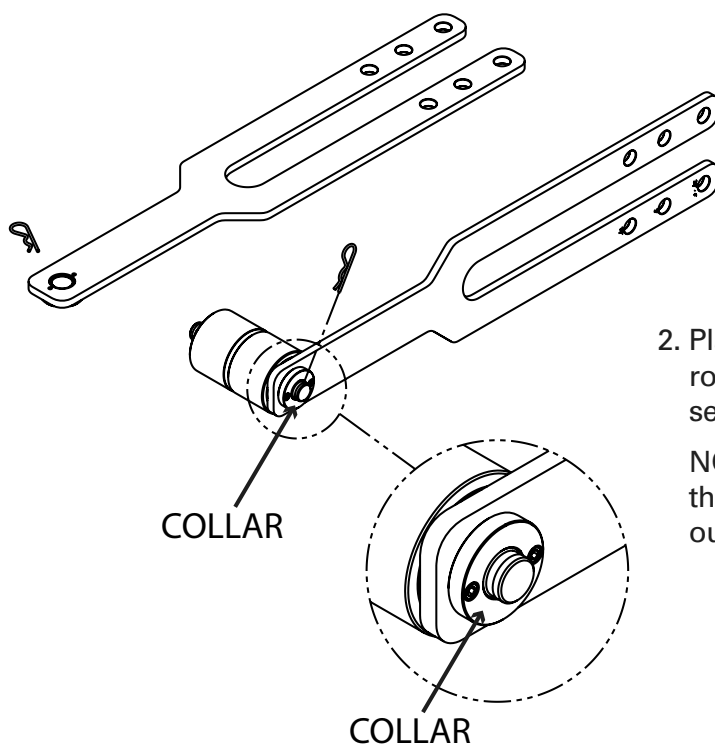
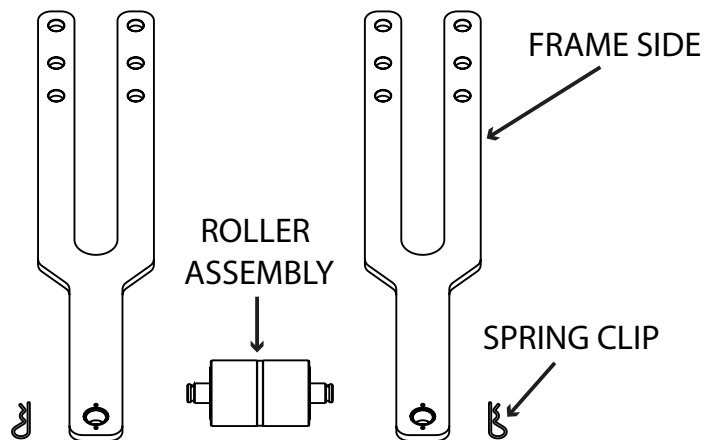
BLIND HOLE STYLE BRACKET



THROUGH HOLE STYLE BRACKET

BENDER ASSEMBLY AND MOUNTING INSTRUCTIONS

1. Locate the two frame sides, roller assembly and two spring clips.

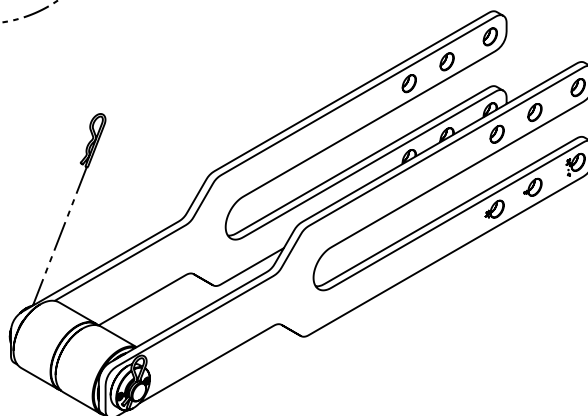


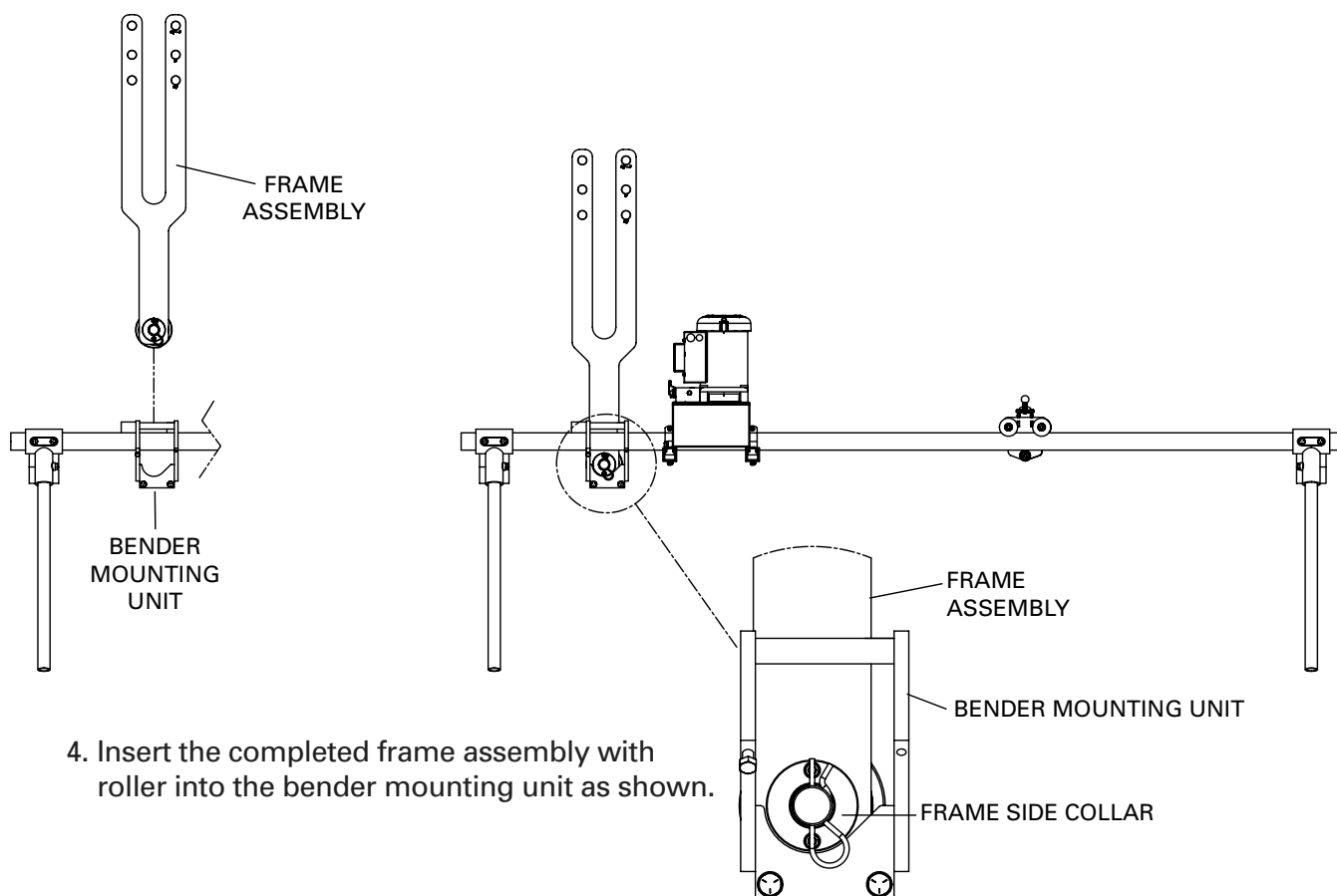
2. Place one frame side onto the roller assembly as shown and secure with a spring clip.

NOTE: The collar in the end of the frame side must be facing outward.

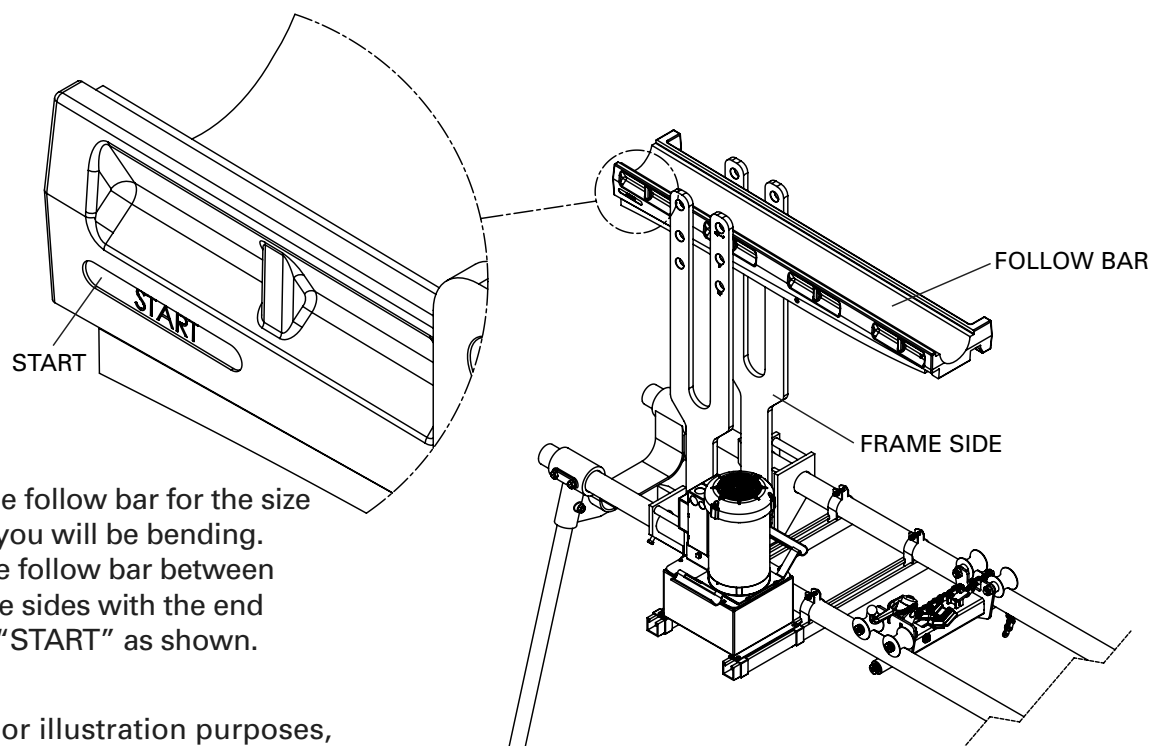
3. Place the second frame side onto the roller assembly and secure with a spring clip.

NOTE: The collar in the end of the frame side must be facing outward.





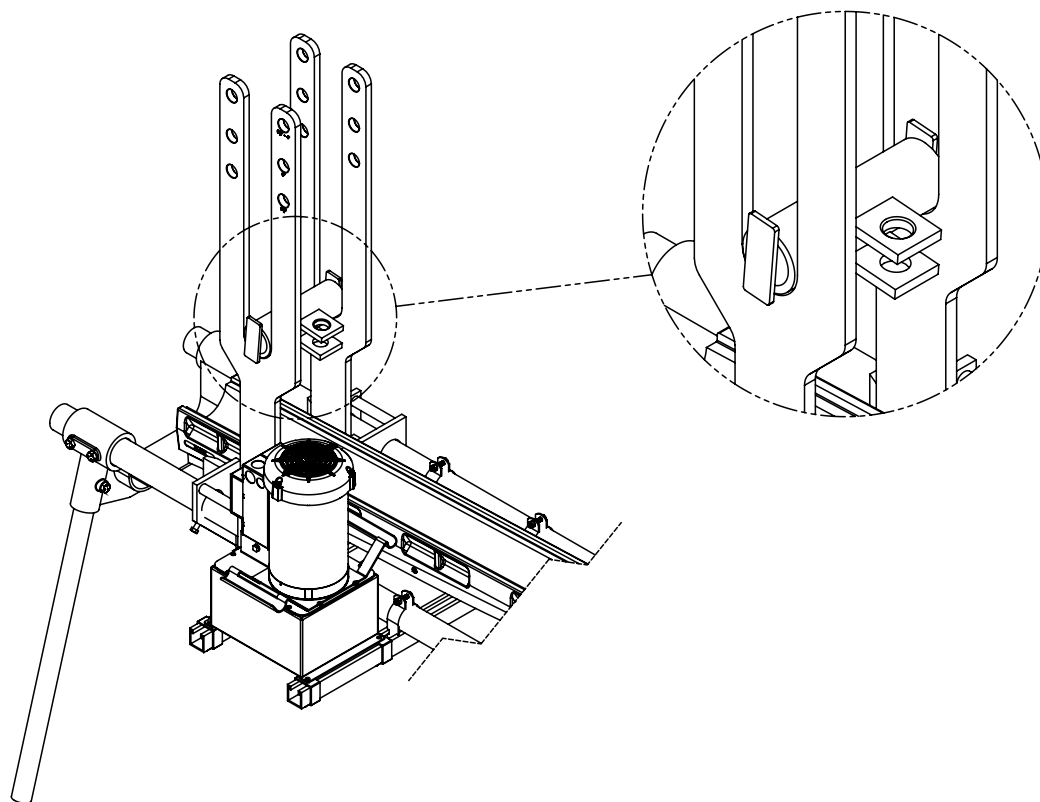
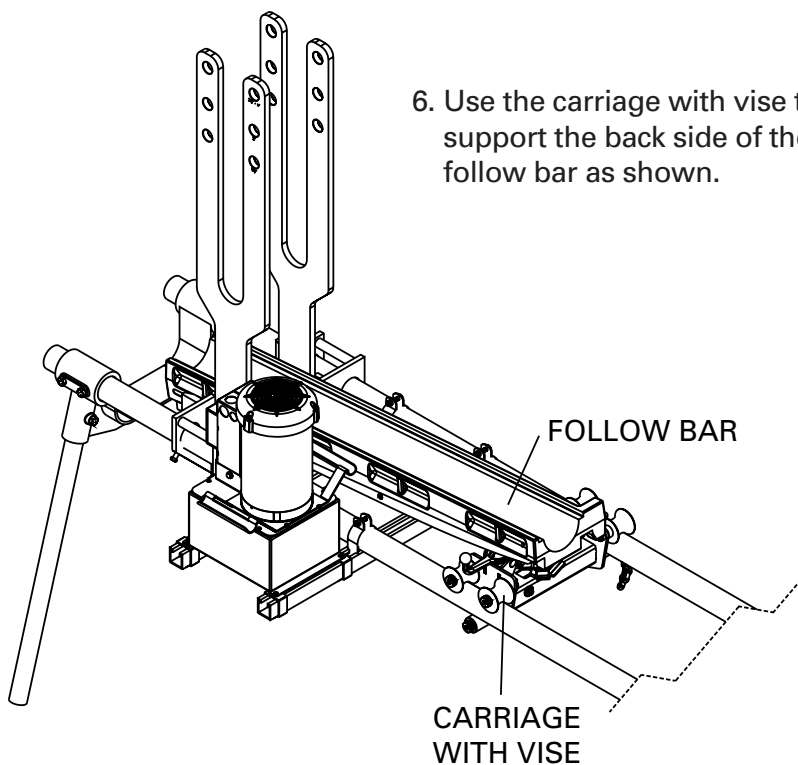
4. Insert the completed frame assembly with roller into the bender mounting unit as shown.



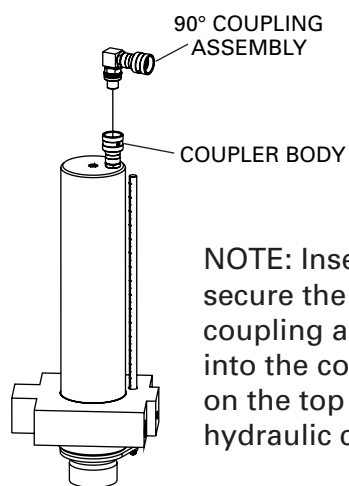
5. Select the follow bar for the size conduit you will be bending. Insert the follow bar between the frame sides with the end marked "START" as shown.

NOTE: For illustration purposes, the 4" shoe, follow bar and saddle have been selected.

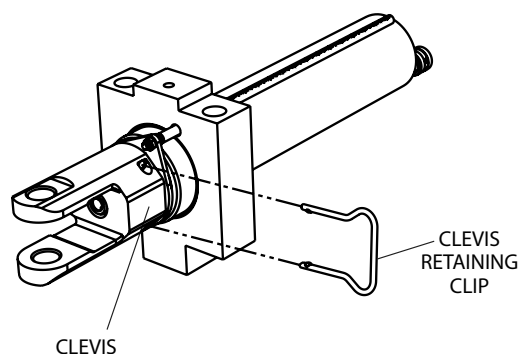
6. Use the carriage with vise to support the back side of the follow bar as shown.



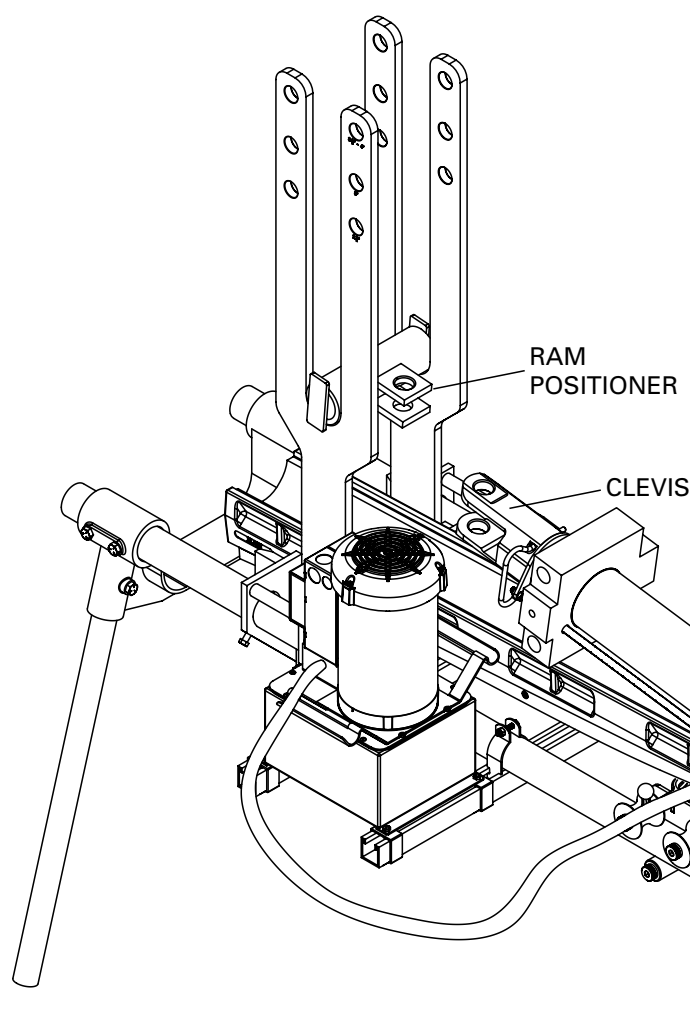
7. Insert the ram positioner between the frame sides as shown.



NOTE: Insert and secure the 90° coupling assembly into the coupler body on the top of the hydraulic cylinder.

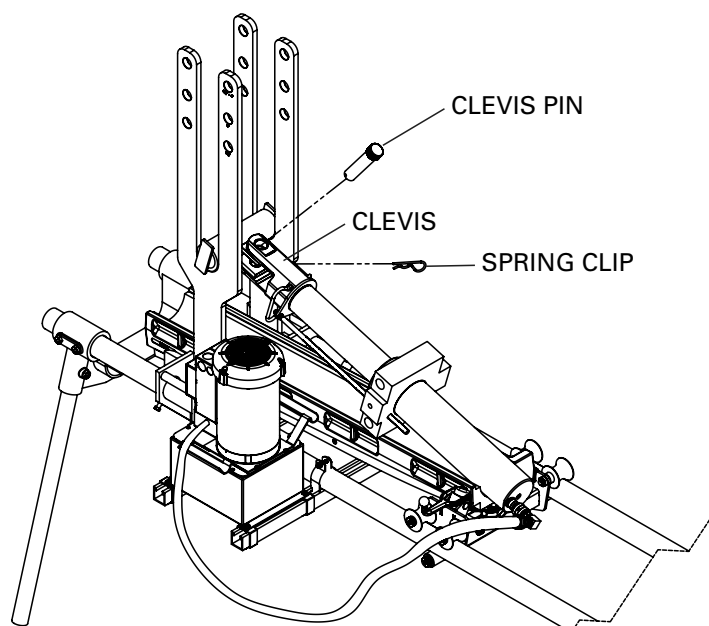


8. Place the clevis onto the end of the hydraulic cylinder and secure with the clevis retaining clip as shown.

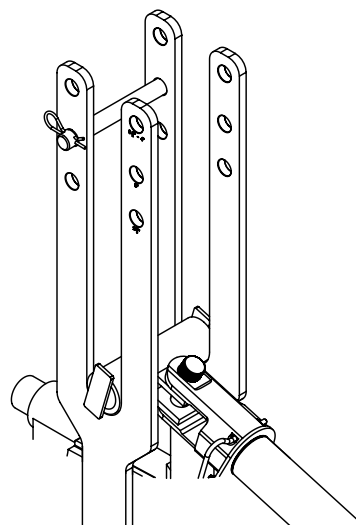
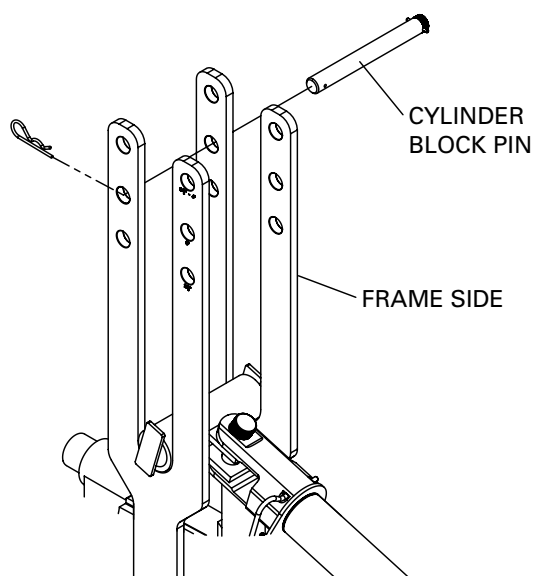


9. Place the hydraulic cylinder, with clevis attached, onto the follow bar. Attach one end of the hydraulic hose to the 90° coupling assembly on the hydraulic cylinder. Attach the other end of the hose to the coupling on the hydraulic pump.

NOTE: Adjust the clevis so that the holes of the clevis line up with the holes of the ram positioner as shown.



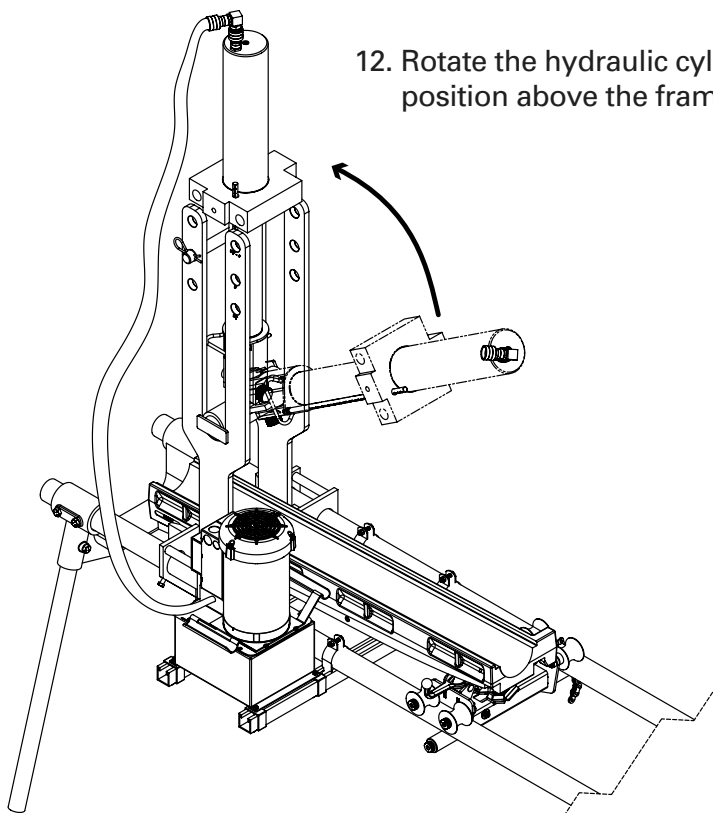
10. Rotate the pump valve lever to the closed position and advance the hydraulic cylinder approximately 14" towards the ram positioner. DO NOT OVER EXTEND. Align the clevis holes with the ram positioner holes and insert the clevis pin. Secure the clevis pin with a spring clip.



11. Fully insert one cylinder block pin through both frame sides in the holes marked for bending 3" conduit. The pin should be inserted in the frame side holes that are farthest away from the hydraulic cylinder as shown. Secure the pin with a spring clip.



12. Rotate the hydraulic cylinder into position above the frame sides.



13. Slowly rotate the pump valve lever to the open position and retract the hydraulic cylinder until it is secured in the frame sides. Rotate the pump valve lever to the closed position to stop the cylinder before it contacts the cylinder block pin. Remove the cylinder block pin from the 3" conduit bending hole in the frame sides (See Figure 15A).

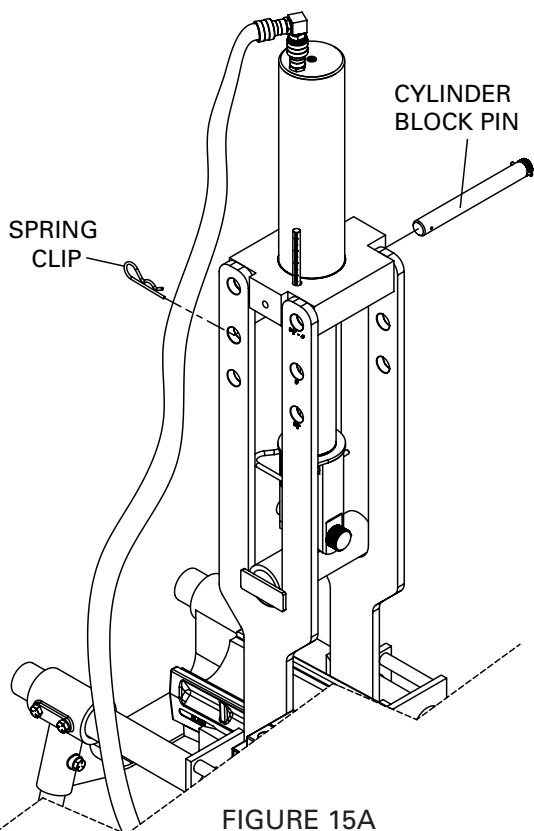


FIGURE 15A

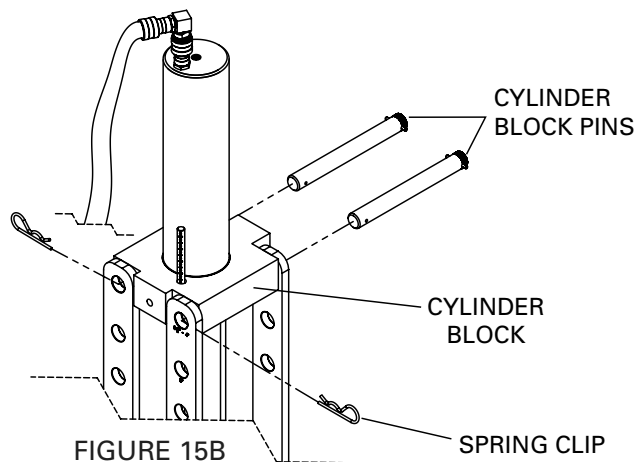


FIGURE 15B

Next, Advance or retract the cylinder until the holes in the cylinder block line up with the holes in the frame sides that correspond to the size conduit you are bending. Insert both cylinder block pins through the frame sides and cylinder block. Secure both pins with spring clips. (See Figure 15B).



14. Rotate the pump valve lever to the open position and fully retract the hydraulic cylinder. Pull the spring clip and remove the clevis pin from the clevis and ram positioner. Remove the ram positioner. Rotate the clevis 90° to the position shown in Figure 16.

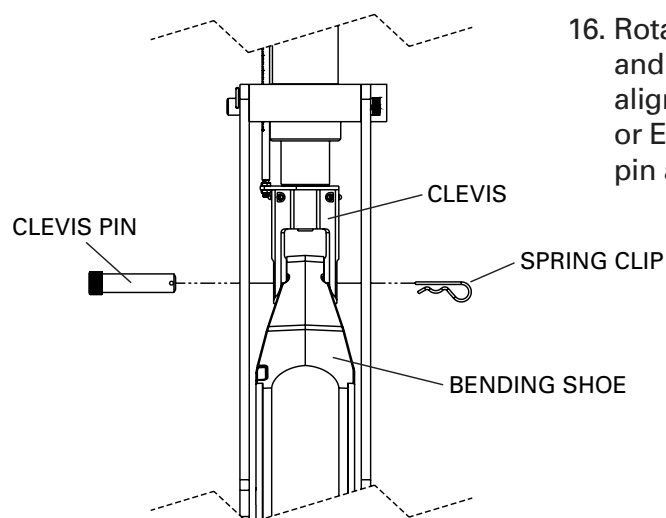
CLEVIS
(IN POSITION TO
INSERT BENDING SHOE)

FRAME SIDE

FIGURE 16

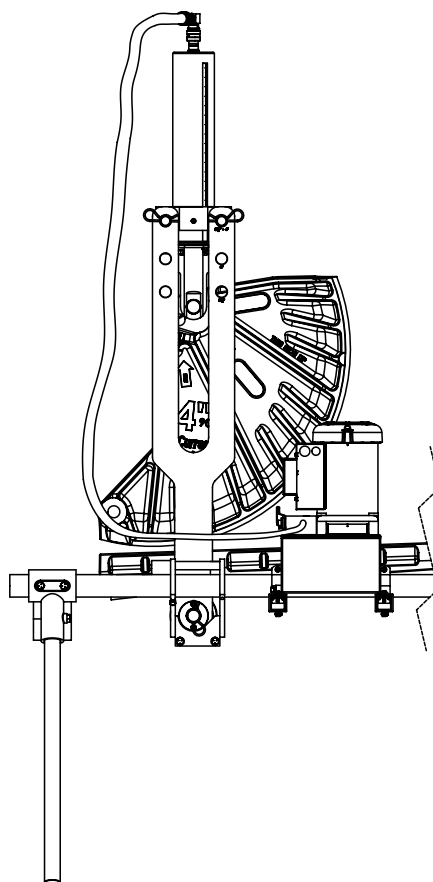
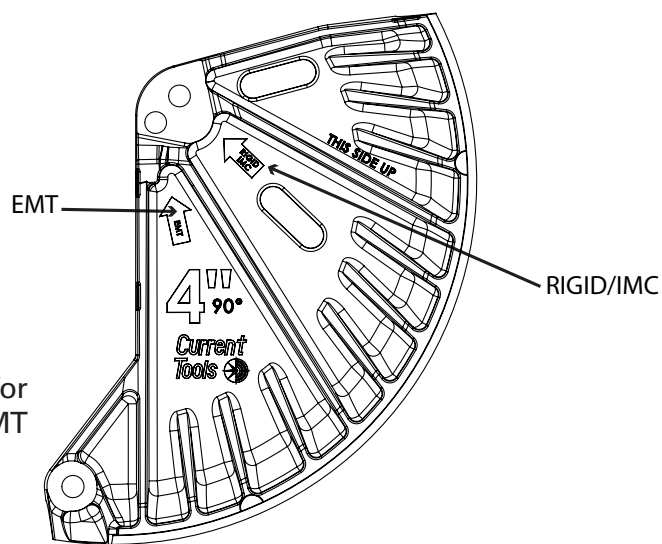
SADDLE
PIN HOLE

15. Place the correct size bending shoe between the frame sides, making sure the saddle pin hole is located as shown.



16. Rotate the pump valve lever to the closed position and advance the cylinder until the clevis holes are aligned with the correct conduit type (Rigid/IMC or EMT) hole in the bending shoe. Insert the clevis pin and secure with a spring clip.

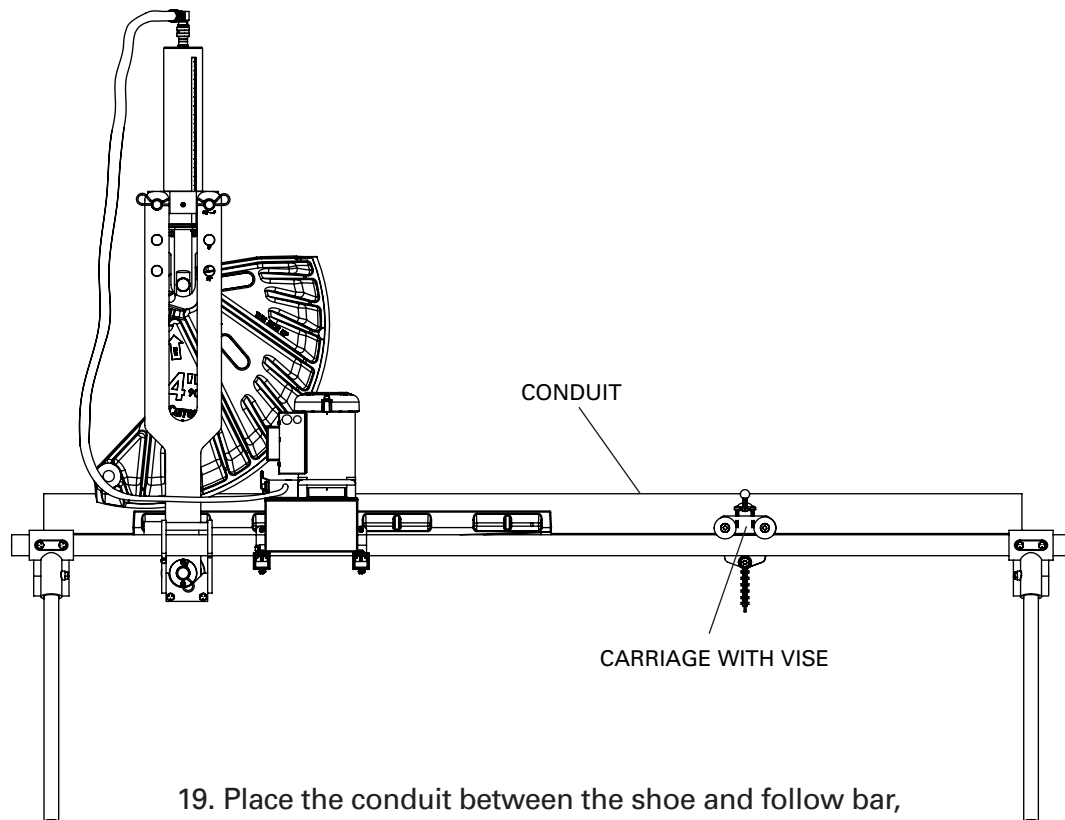
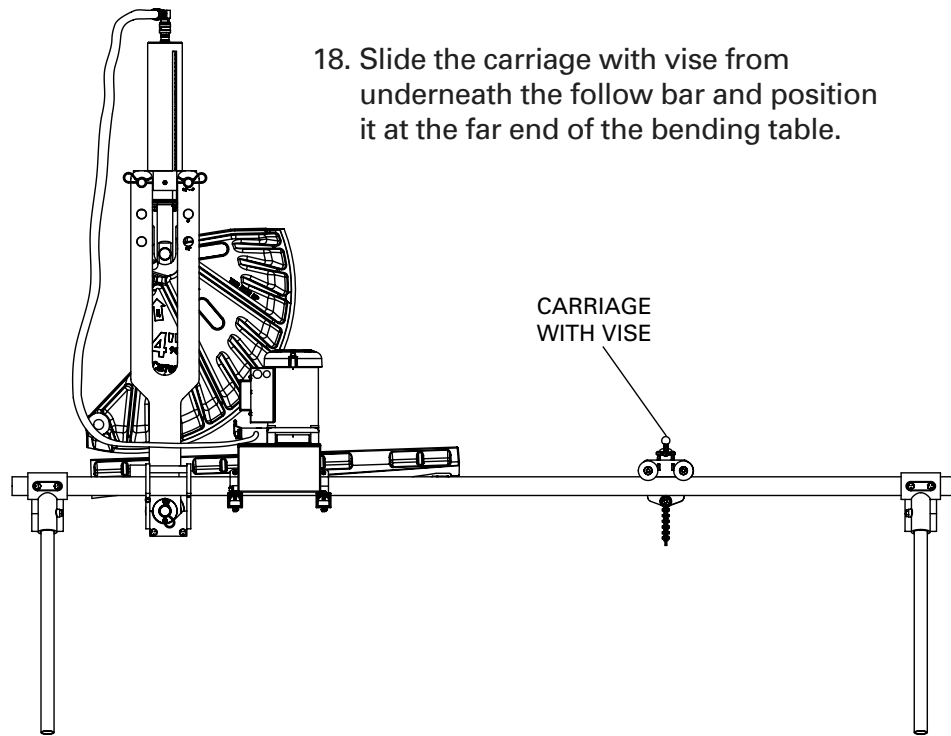
NOTE: Arrows on the bending shoe indicate the correct hole for bending either Rigid/IMC or EMT conduit.



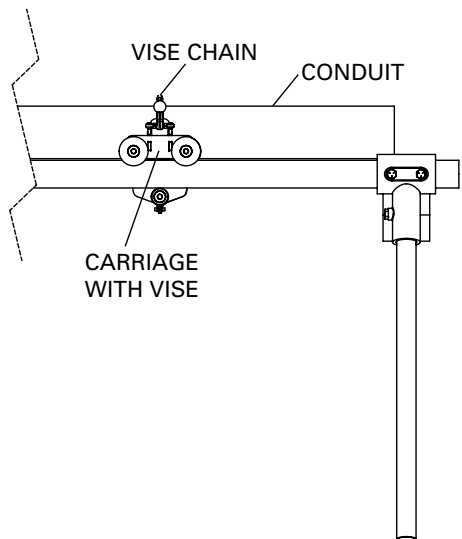
17. Rotate the pump valve lever to the open position to retract the hydraulic cylinder and raise the shoe.



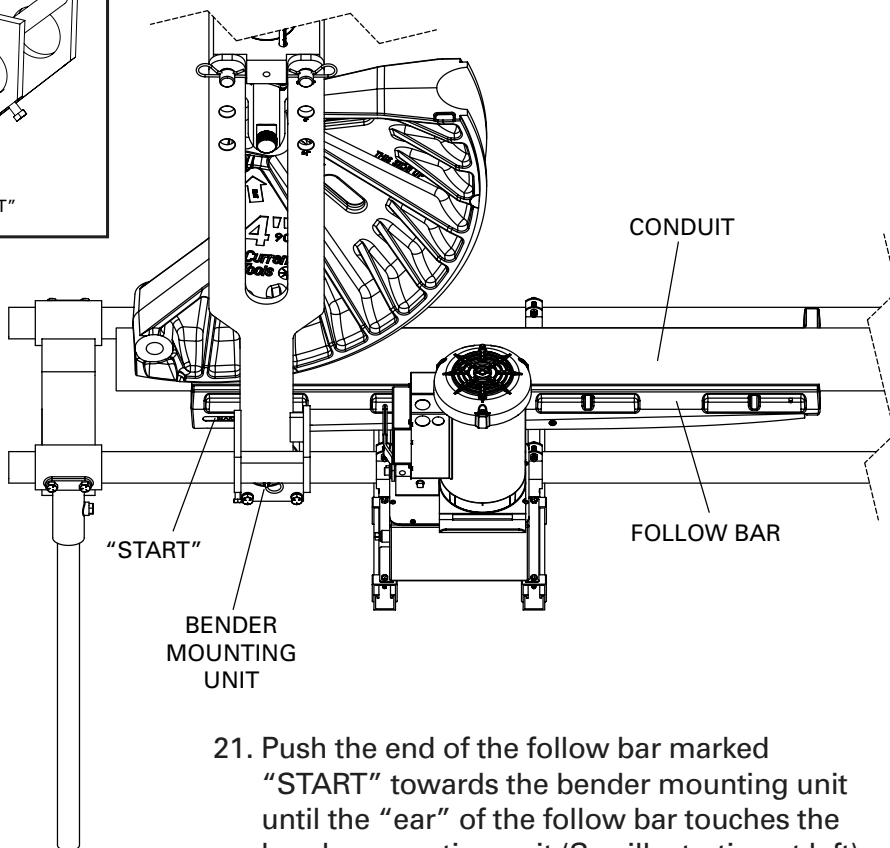
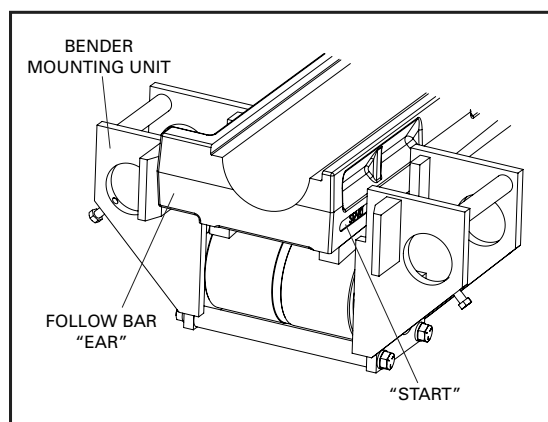
18. Slide the carriage with vise from underneath the follow bar and position it at the far end of the bending table.



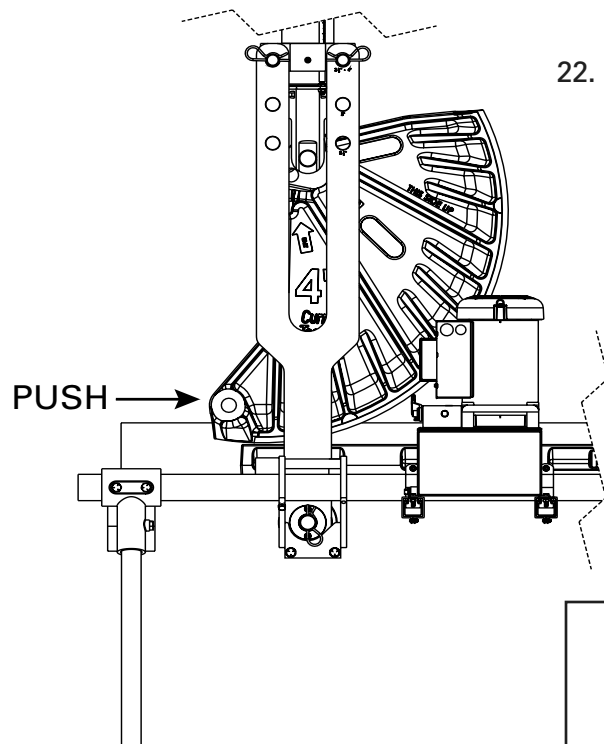
19. Place the conduit between the shoe and follow bar, resting the conduit on the carriage with vise. Rotate the pump valve lever to the closed position and activate the pump until the shoe almost makes contact with the conduit.



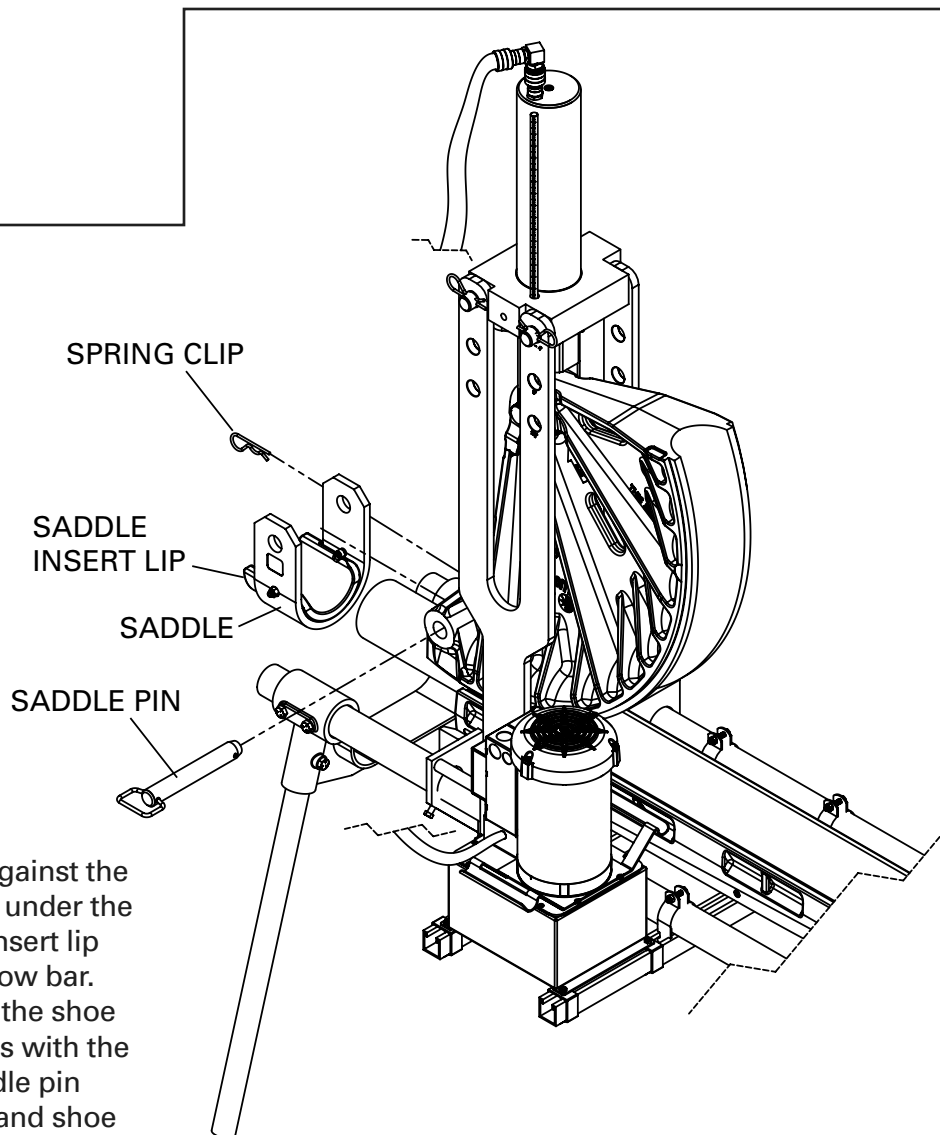
20. Locate the carriage with vise near the far end of the conduit, making sure that it will not make contact with the pump mounting track prior to completing the bend. Place the vise chain around the conduit and tighten to secure.



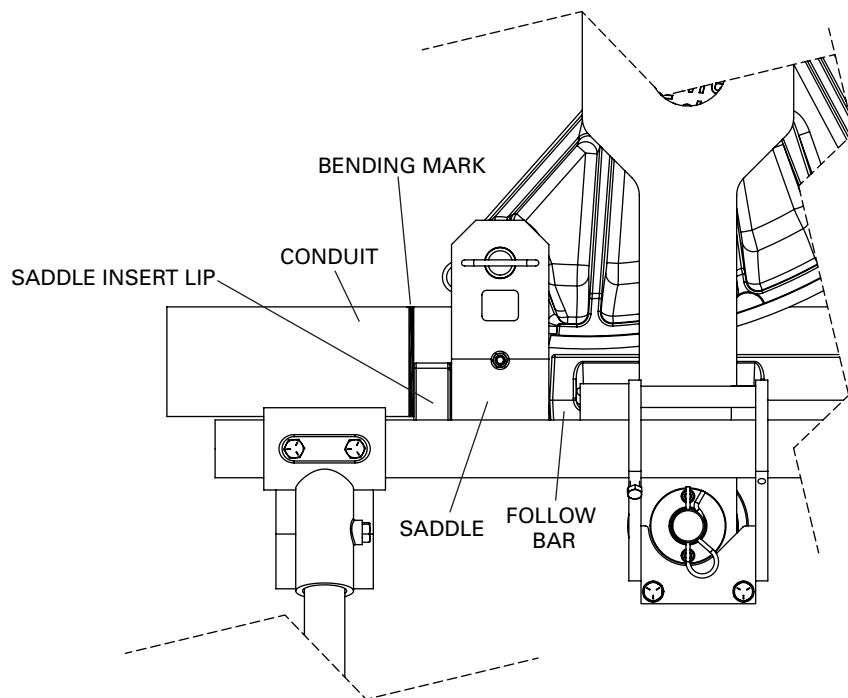
21. Push the end of the follow bar marked "START" towards the bender mounting unit until the "ear" of the follow bar touches the bender mounting unit (See illustration at left). Place the correct saddle and saddle pin within reach for assembly to the bending shoe.



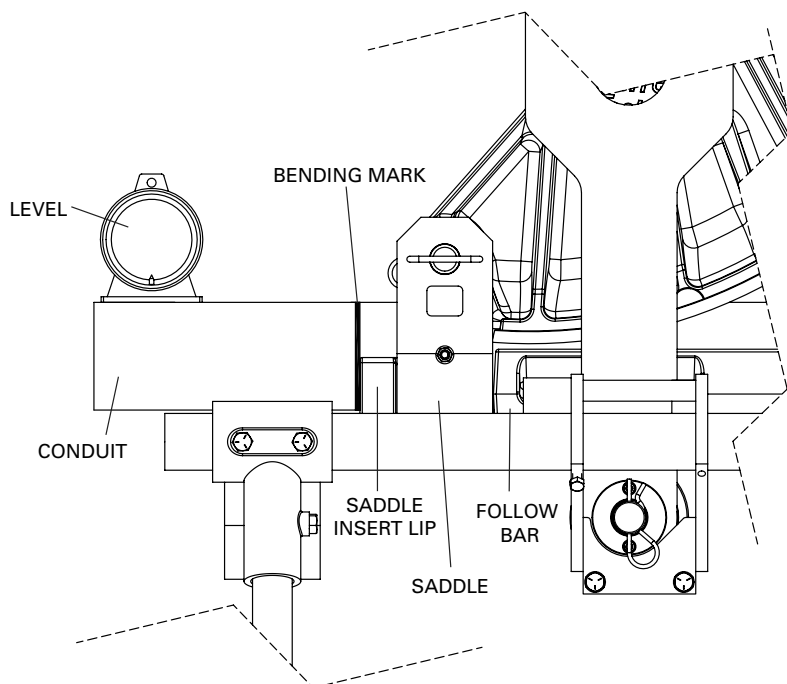
22. While rocking the bender frame, push the bottom of the bending shoe to the position shown for attaching the saddle and saddle pin.



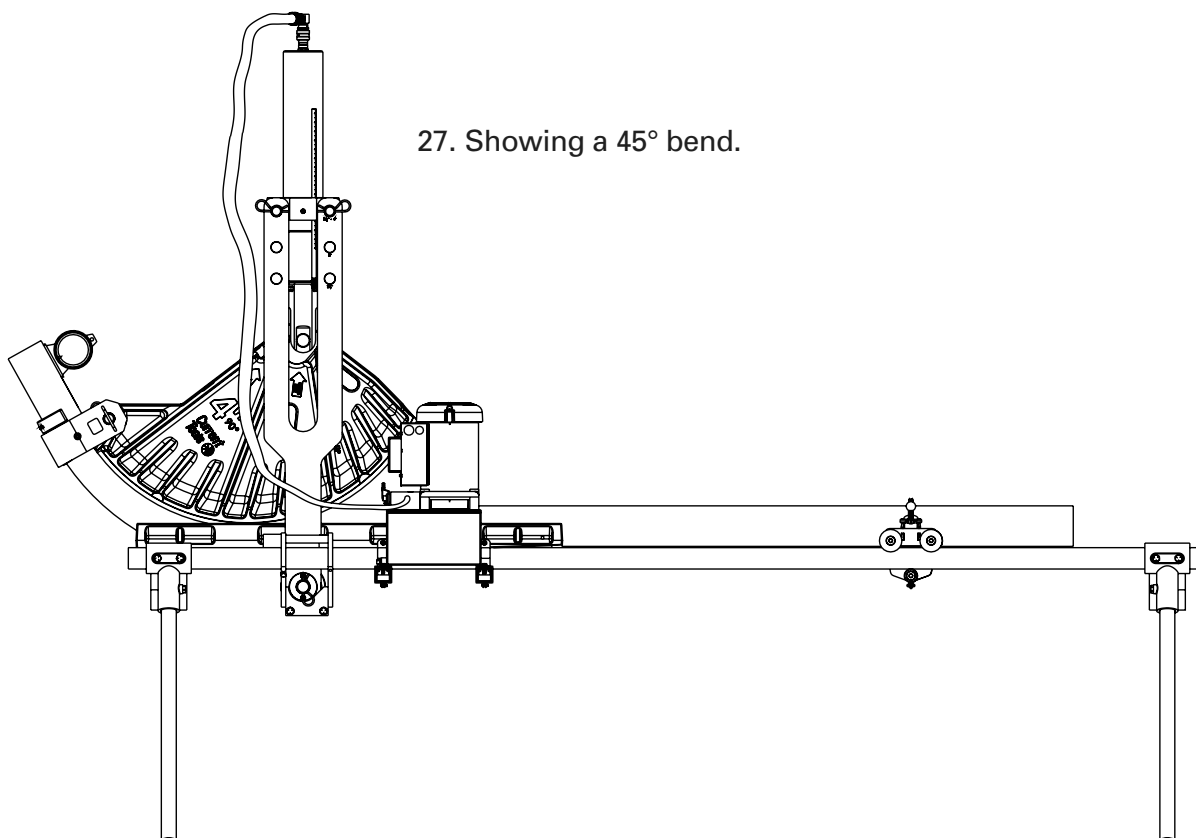
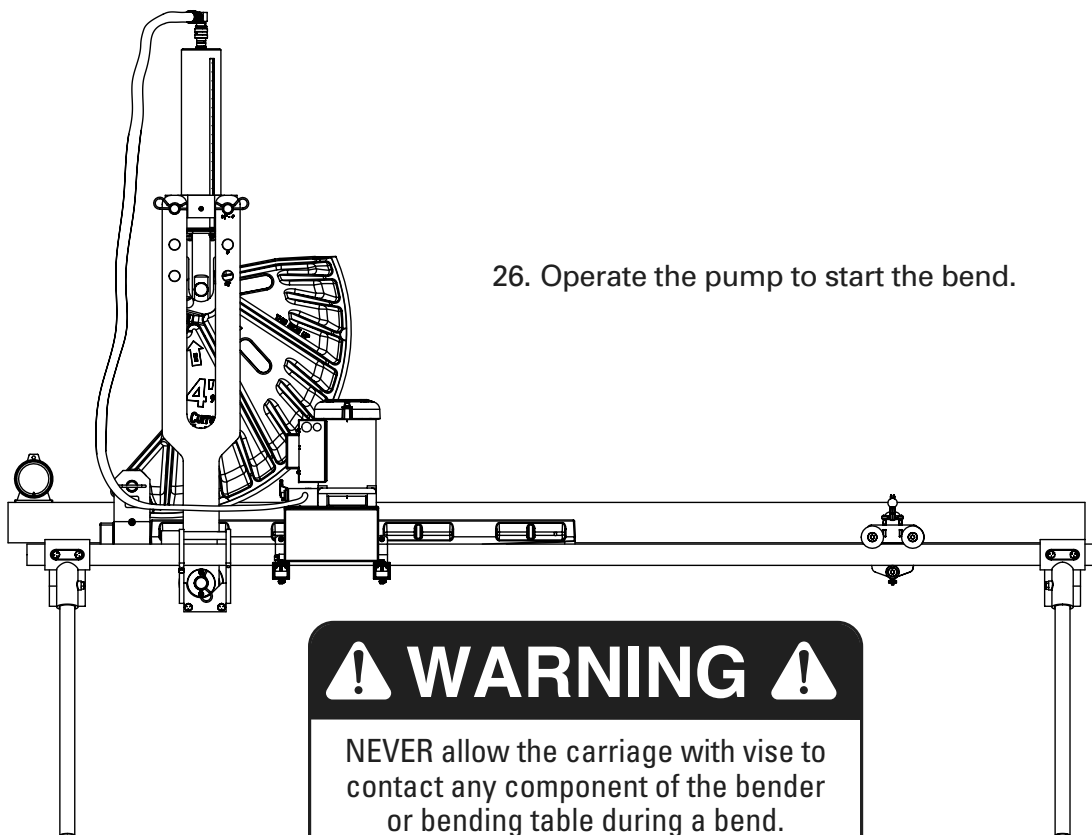
23. While holding the shoe against the conduit, place the saddle under the conduit with the saddle insert lip facing away from the follow bar. Slide the saddle towards the shoe and align the saddle holes with the shoe hole. Insert the saddle pin through both the saddle and shoe and secure it with a spring clip.



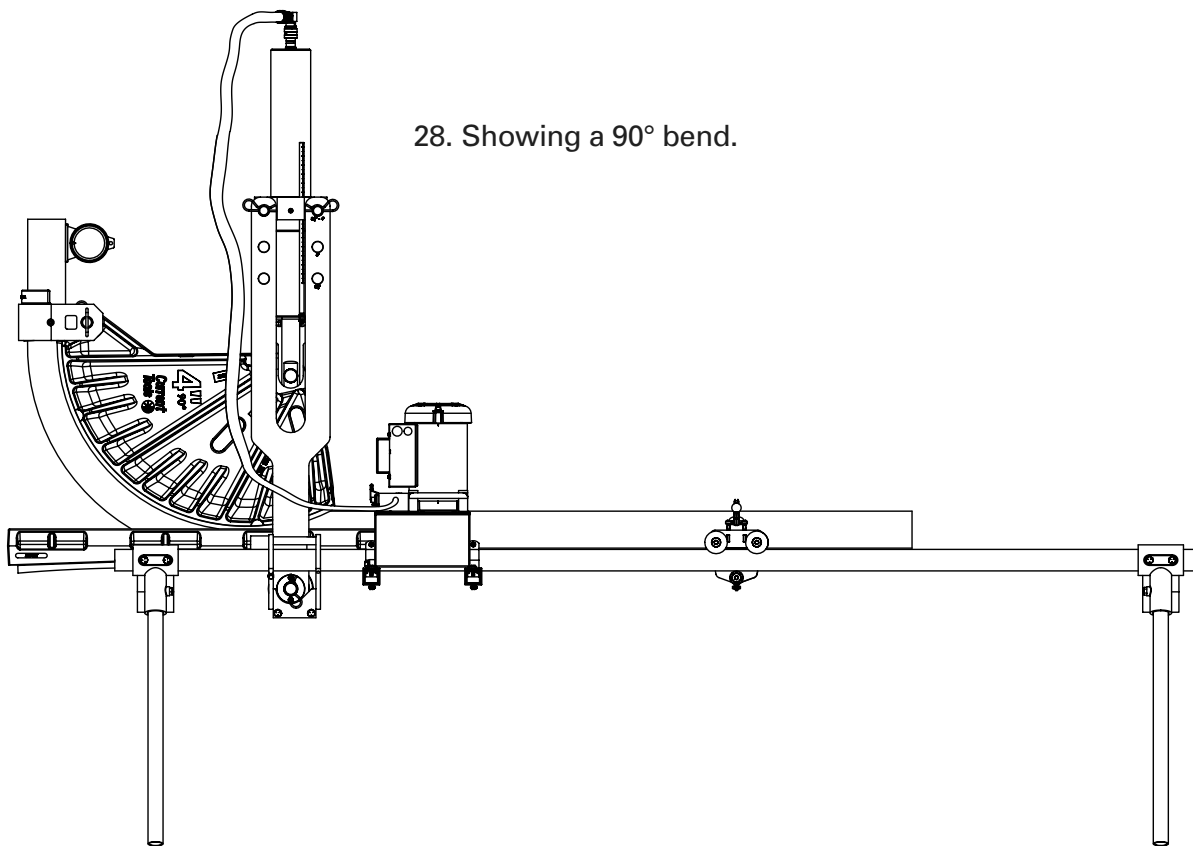
24. Once the saddle is pinned onto the shoe, let the bender lean forward. Make sure the follow bar moves with it and that the follow bar is flush with the saddle and the bending mark is aligned with the front edge of the saddle insert lip.



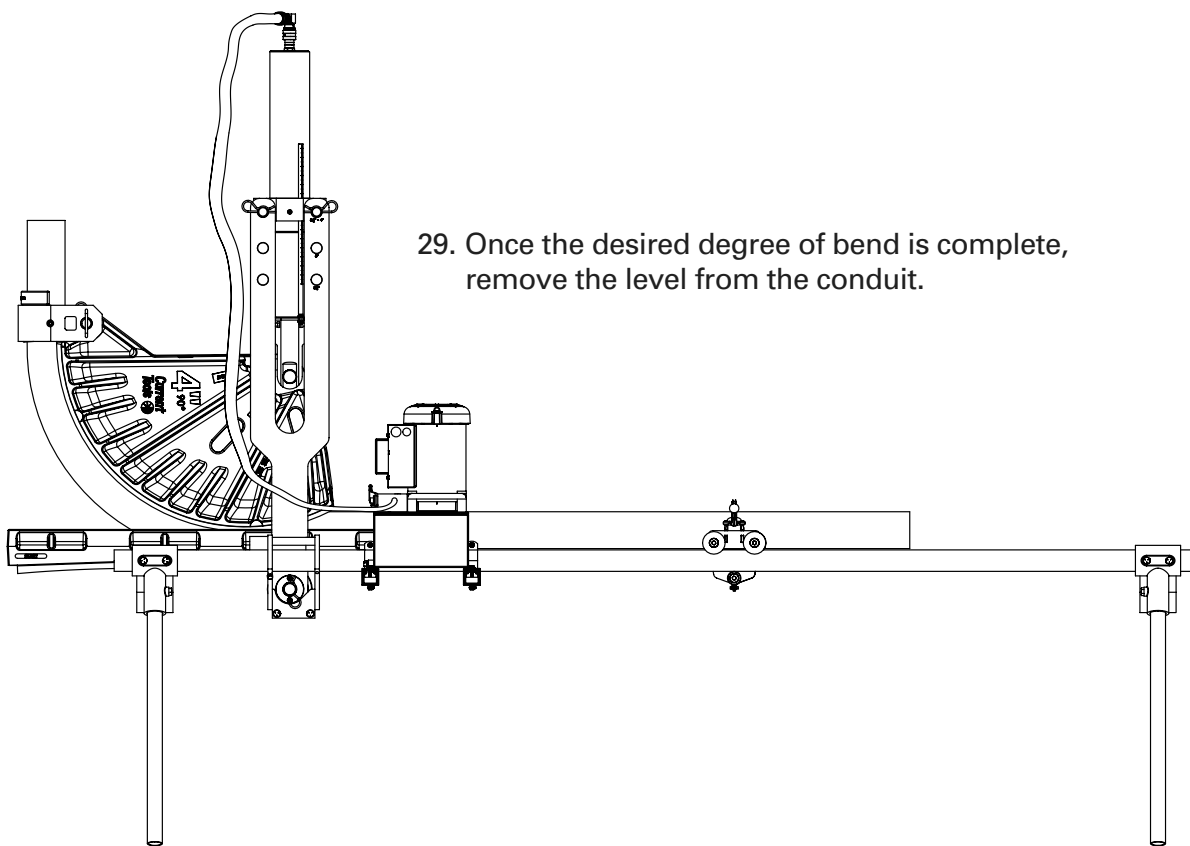
25. Ensure the pump valve lever is in the closed position and operate the pump until the bending shoe touches the conduit. The saddle and follow bar should be snug against the conduit and the follow bar should be touching the saddle as shown. The front of the saddle insert lip should be aligned with the bending mark on the conduit. Attach the level to the conduit.



28. Showing a 90° bend.

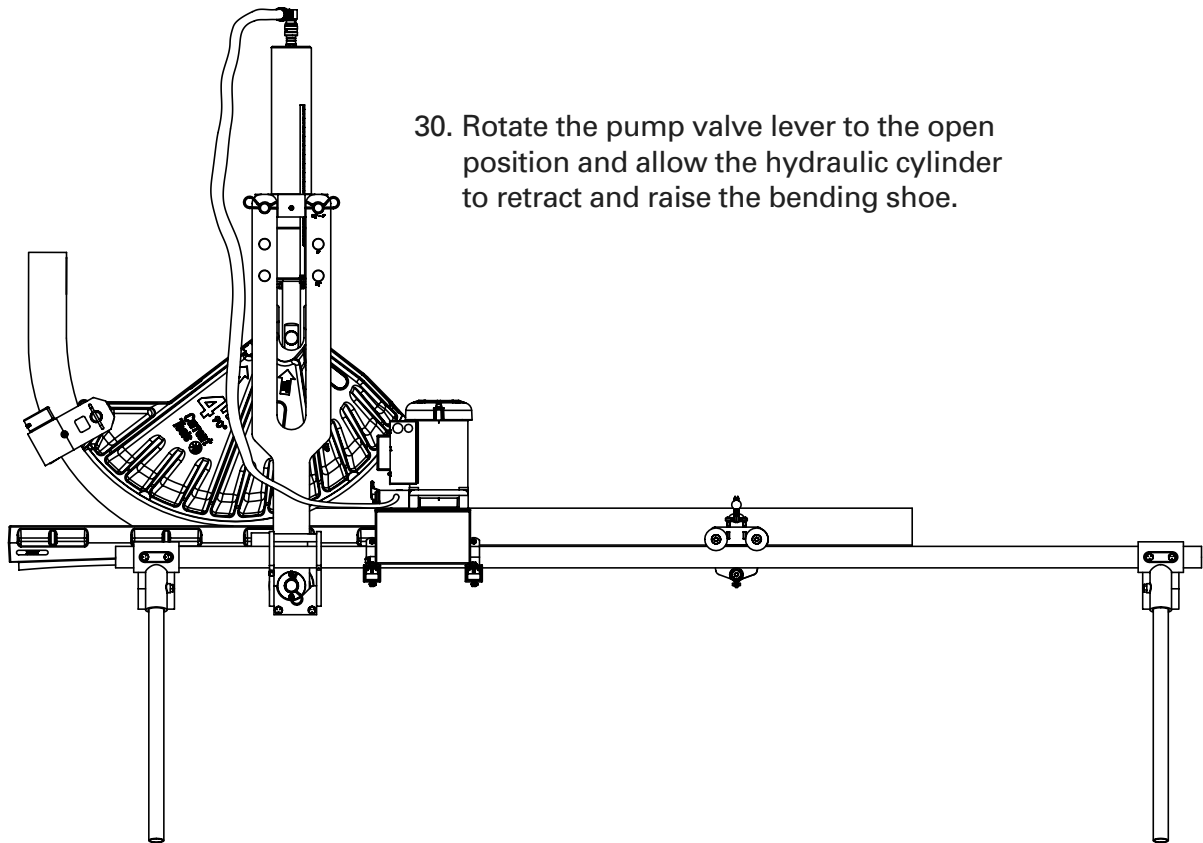


29. Once the desired degree of bend is complete, remove the level from the conduit.

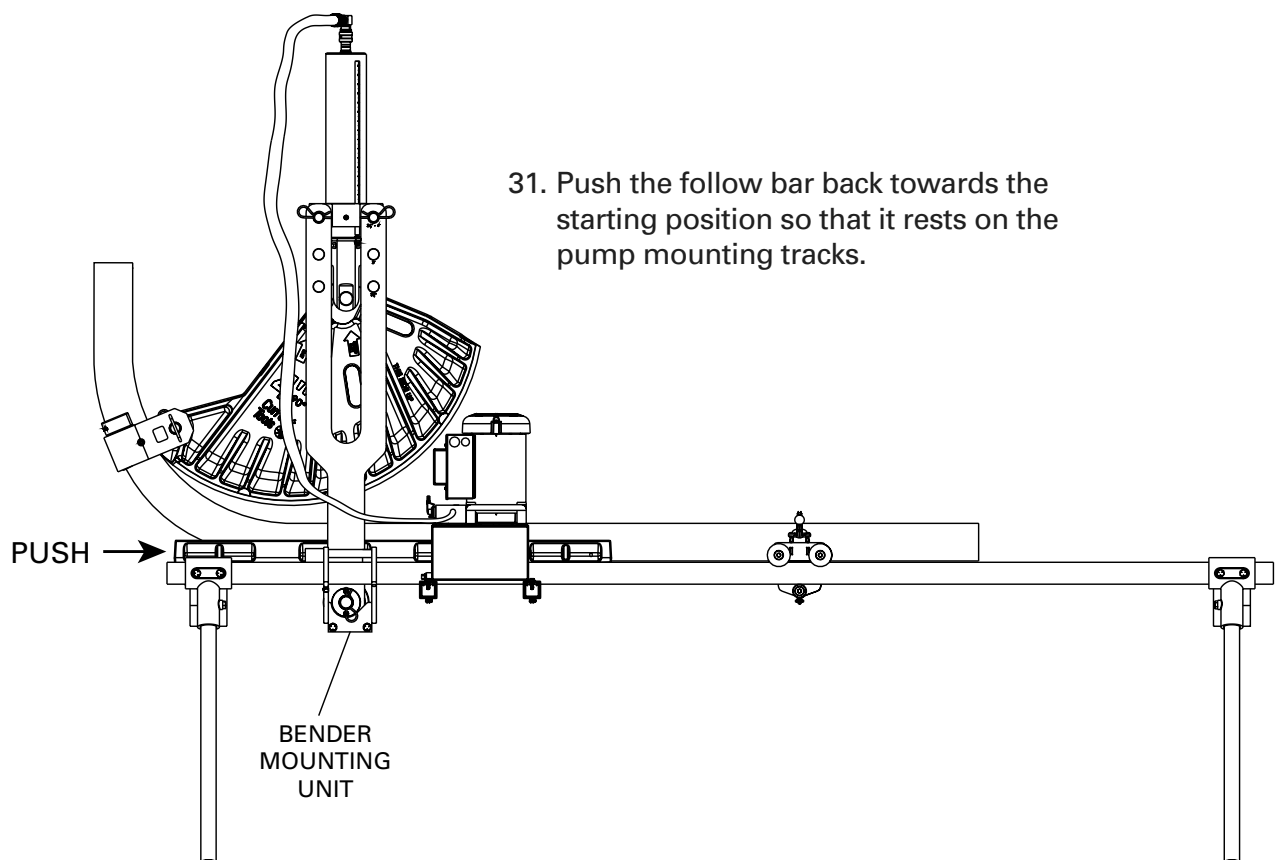


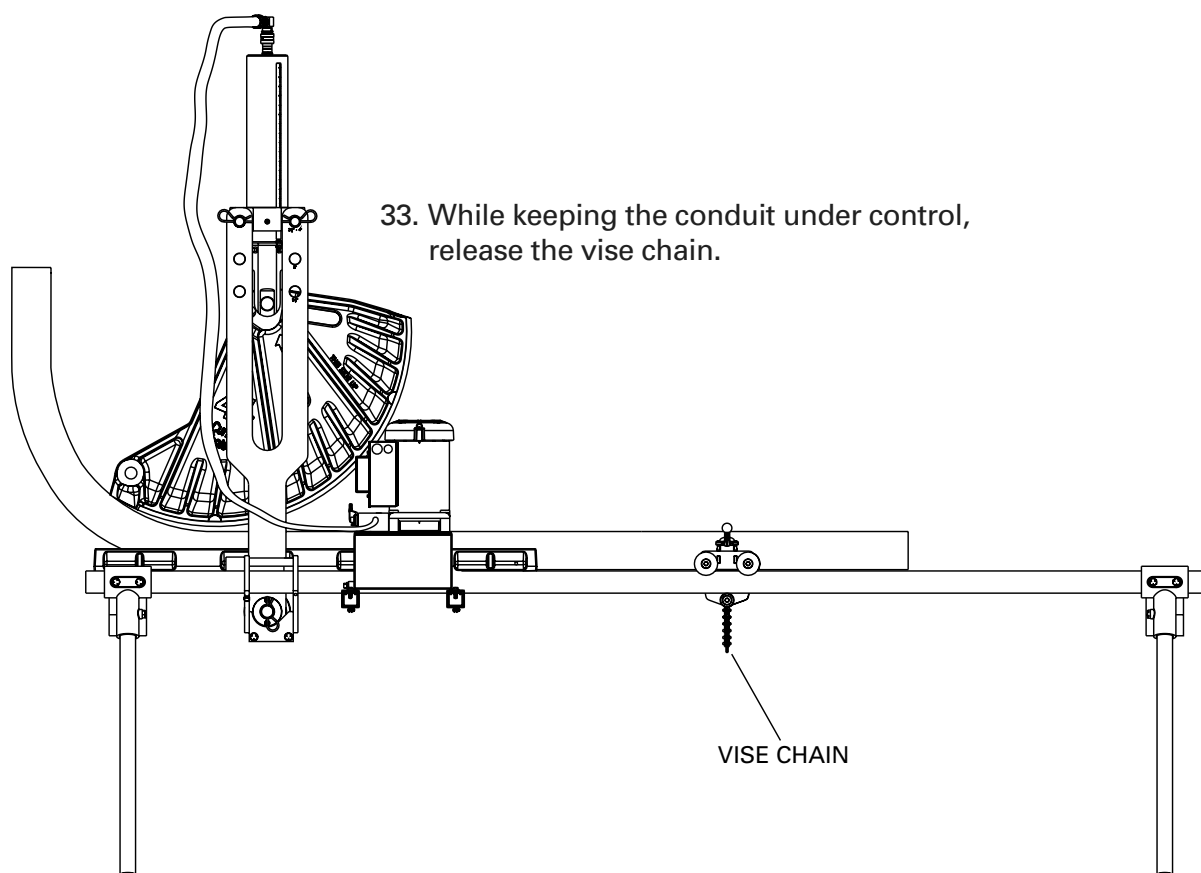
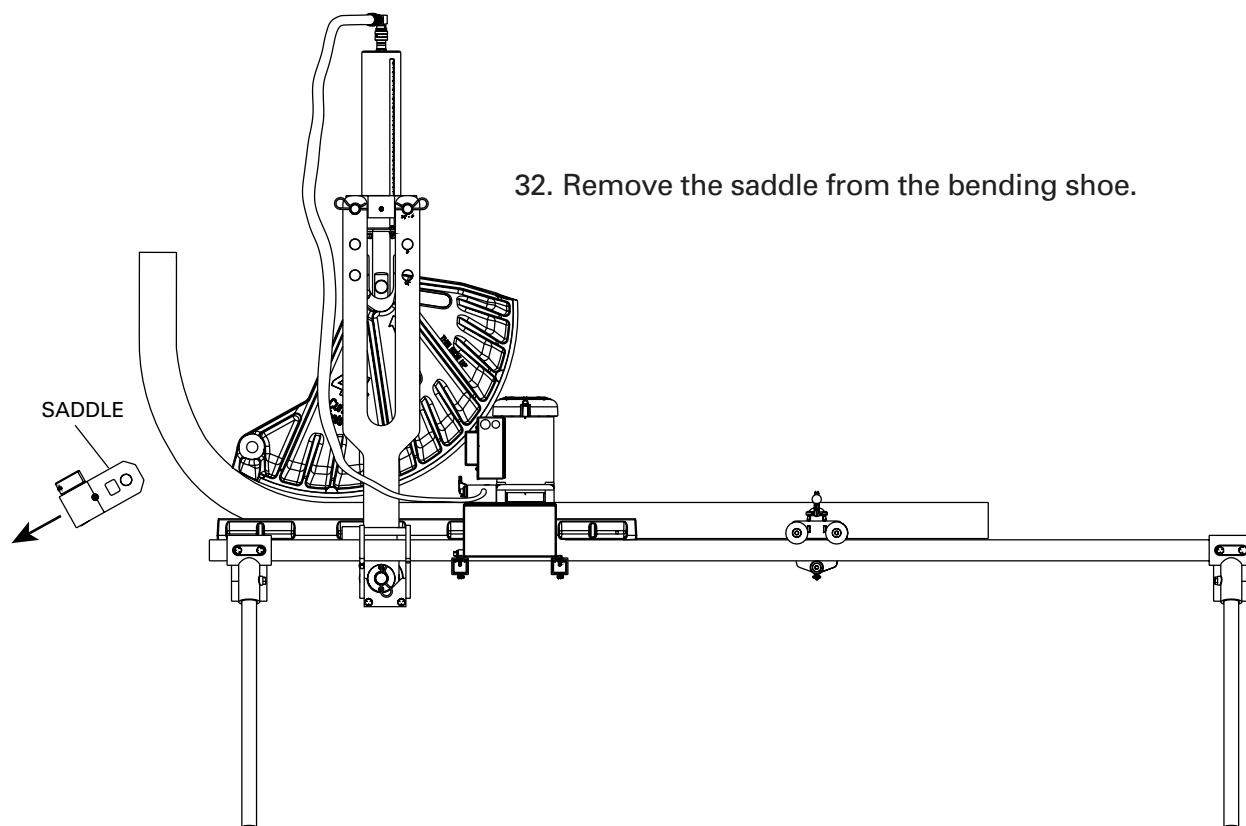


30. Rotate the pump valve lever to the open position and allow the hydraulic cylinder to retract and raise the bending shoe.



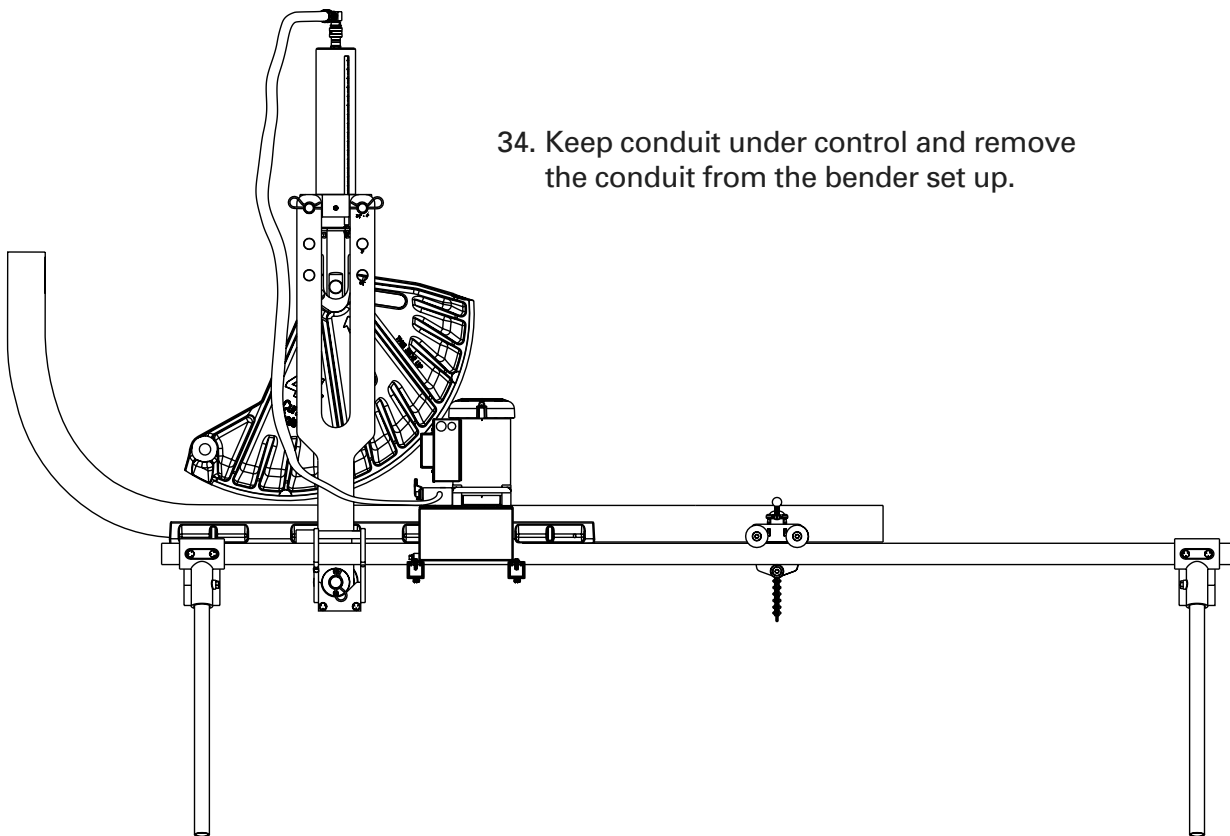
31. Push the follow bar back towards the starting position so that it rests on the pump mounting tracks.







34. Keep conduit under control and remove the conduit from the bender set up.



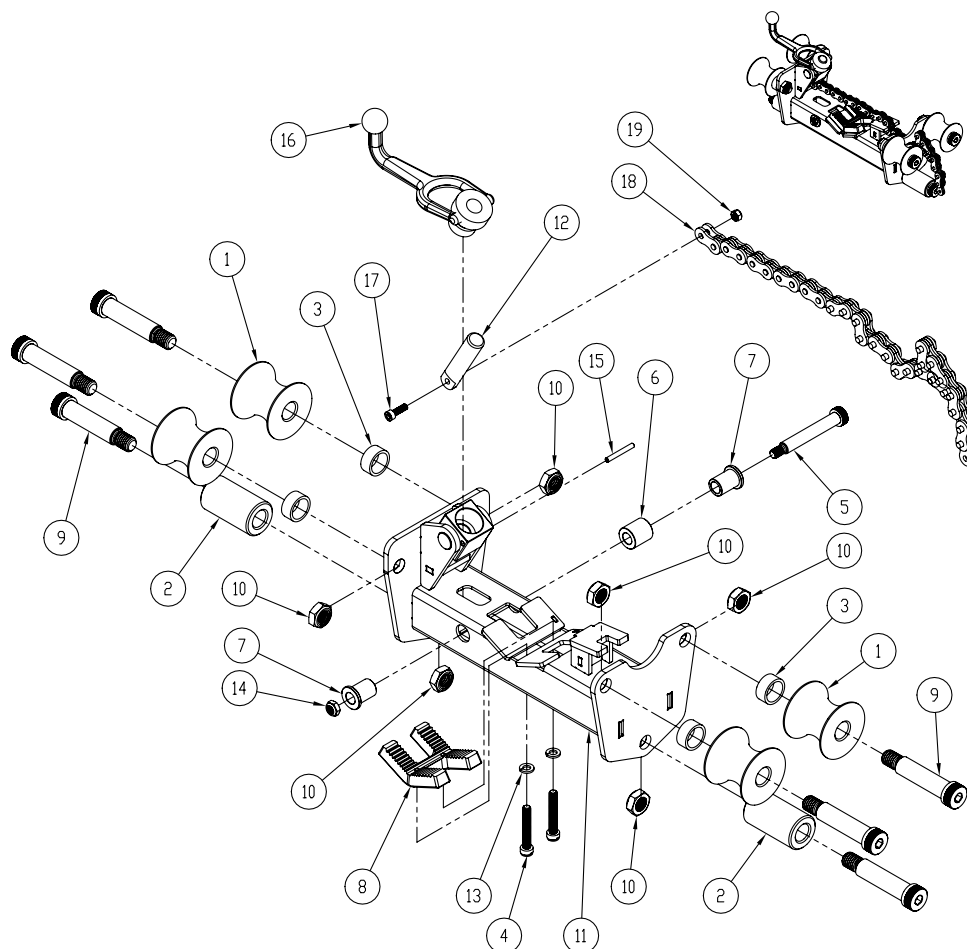
IMPORTANT

Refer to the Current Tools Model #254 Assembly, Operating and Maintenance, Safety and Parts Manual for complete bending instructions, charts, etc.

When using the 281 Bending Table with Greenlee® 881 or 881 CamTrack®* Bender, read and understand the bender manufacturer's operating and safety instructions before attaching to or operating with the 281 Bending Table. Failure to do so may result in serious injury or death.



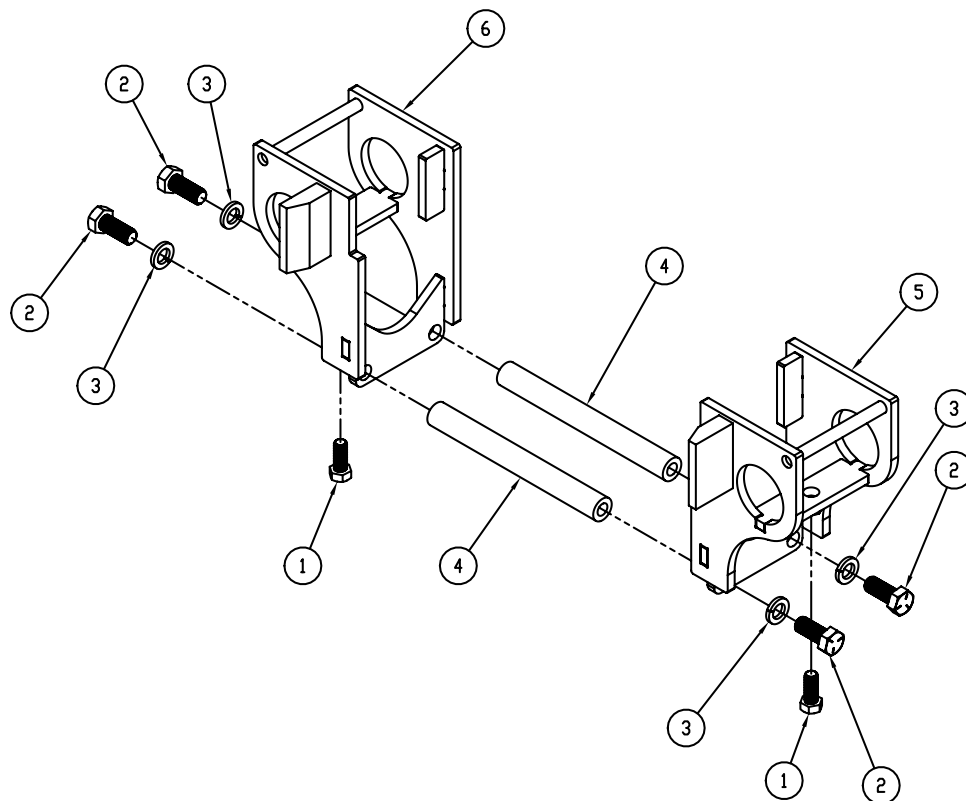
EXPLODED VIEW — CARRIAGE WITH VISE



PARTS LIST – CARRIAGE WITH VISE

ITEM	CATALOG	DESCRIPTION	QTY.
1	280-1A	ROLLER	4
2	280-1B	ROLLER – FLAT BENDING TABLE	2
3	280-2E	SPACER	4
4	281-004	SCREW – FILLISTER HEAD SLOTTED (5/16–18 × 2")	2
5	281-003	SCREW – SHOULDER SOCKET (1/2 × 3")	1
6	281-113	ROLLER – CHAIN	1
7	281-114	SPACER BUSHING	2
8	281-124	JAWS	1
9	281-1D	SCREW – SHOULDER SOCKET (3/4 × 2.75)	6
10	281-1I	NUT – HEX NYLON INSERT THIN (5/8–11)	6
11	281-220	FRAME – VISE UNIT	1
12	281-222	ACME STUD	1
13	412-11	WASHER – LOCK MEDIUM 5/16 ZINC	2
14	610-25	NUT – HEX NYLON INSERT (3/8–16)	1
15	8094-2A	ROLL PIN 3/16 × 1.5	1
16	281-223	TIE DOWN ASSEMBLY	1
17	281-012	SCREW – SOCKET HEAD CAP (M6 × 20)	1
18	281-224	WRENCH CHAIN	1
19	281-013	NUT – HEX NYLON INSERT THIN (M6)	1

EXPLODED VIEW — BENDER MOUNTING UNIT



PARTS LIST – BENDER MOUNTING UNIT

ITEM	CATALOG	DESCRIPTION	QTY.
1	77-025	SCREW, HX HD CAP – 1/2-13 × 1 1/4"	2
2	252-004	SCREW, HX HD CAP – 5/8-11 × 1 1/2"	4
3	252-005	WASHER, LOCK – 5/8"	4
4	252-209	BAR, CONNECTING	2
5	281-407	FRAME END – RH	1
6	281-410	FRAME END – LH	1