

**READ THESE INSTRUCTIONS COMPLETELY BEFORE STARTING WORK.  
IF YOU DON'T UNDERSTAND CALL 888-229-7727 FOR ASSISTANCE.**



## Model PK80-2 Level-Master®

**Automatic Ladder Leveler**  
*for using ladders on uneven surfaces*



### **WARNING:**

1. Failure to comply with all instructions may result in serious injury.
2. Make sure this kit fits your ladder by identifying your ladder's model number and mark number using the instructions on the packaging, then refer to the application chart also on the packaging. If you have any questions concerning the use of this kit on other Werner Co. products, call 888-229-7727 for assistance.
3. Before installing this kit, identify all kit components. If any components are missing or damaged, return the kit to place of purchase. Do not substitute any components.
4. Inspect the ladder before installing this kit. Repair or replace any damaged or missing ladder parts before using the ladder. Use only Werner Co. repair or replacement parts. If unable to repair, discard the ladder.


**Attention:** Leave the tape on the leveler leg assemblies until instructed to remove it. Removing the tape too soon can cause the legs to move and reduce the amount of adjustment your leveler will have. If the tape has been removed, refer to Troubleshooting, page 13, for directions on how to replace tape.

### **KIT COMPONENTS**

QUANTITY	DESCRIPTION	QUANTITY	DESCRIPTION
Inside, you will find the following components for use with model <b>PK80-2</b> :			
2	leveler leg assemblies	4	pair of drill templates
2	rung braces	1	shaft length template
1	1/4" square aluminum shaft	1	shaft range template
6	back-up plates	4	#10 tapping screws, 1/2" long
14	1/4" – 20 lock nuts	2	#10-32 bolts, 5/8" long
2	swivel shoes	2	#10-32 lock nuts
2	5/16" diameter x 1-7/8" long shoulder bolts	1	swivel shoe instruction label

If you have a two section ladder from the **D1100 series**, you'll also need **Kit 36-9**. This kit is necessary to install the leveler. **Kit 36-9** contains these components:


16	spacer sleeves	16	#10-16 tapping screws, 1/2" long
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**WARNING:** Do not use a two section D1100 with a leveler unless Kit 36-9 is installed.

If you have a two section **D1500 series** ladder, you'll also need **Kit 36-14**. This kit is necessary to install the leveler. **Kit 36-14** contains these components:

2	guide brackets		
4	#10-32 bolts, 7/8" long		
4	#10-32 lock nuts		



**WARNING:** Do not use a two section D1500 with a leveler unless Kit 36-14 is installed.

## TOOLS REQUIRED

**You'll need these tools to install your Level-Master® ladder leveler:**

Power drill  
5/32", 3/16", and 9/32" drill bits  
Two 7/16" wrenches or sockets  
Two 3/8" wrenches or sockets  
#2 Phillips head screw driver  
Hacksaw  
Hammer  
Center punch  
Square  
Straight edge (2 ft. or longer)  
Scissors  
Pencil or marking pen  
Tape Measure  
Metal file

Adhesive tape  
Goggles  
Dust mask and gloves (for fiberglass ladders)  
1-1/4" hole saw (for fiberglass ladders with rungs riveted to side rails)

### **Also required for installation onto a 2 section D1500 series ladder:**

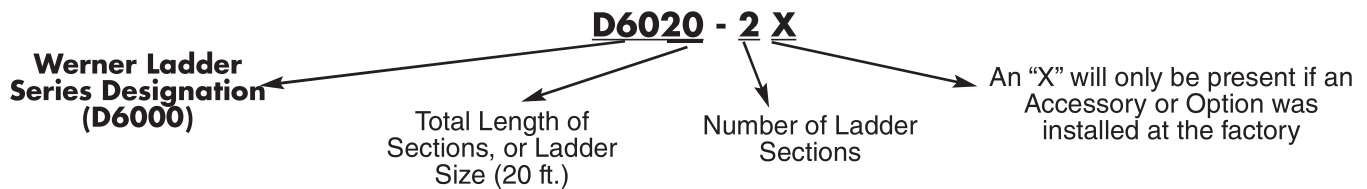
One 5/16" wrench or socket  
One 3/8" wrench or socket  
1/8" diameter punch  
Chisel  
C-clamp

**If you have any questions about installing your Level-Master® ladder leveler, call 888-229-7727.**

## INSTALLATION

### **Determine Your Ladder Series**

The ladder series is part of the model number. The model number is located on the identification label of the ladder. For a 20 foot extension ladder in the D6000 Series, the model number will look like this:



If this information cannot be located, please call 888-229-7727 for assistance.



**fiberglass.**

### **WARNING:**

**Always wear safety goggles when working with any tools. Wear a dust mask and gloves when cutting or drilling**

## Where To Start

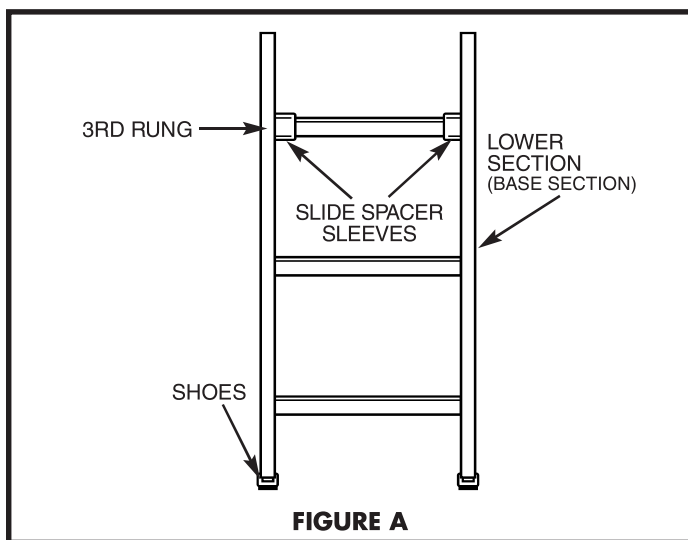
FOR THIS LADDER SERIES	GO TO THIS SECTION FIRST
D1100-2 (2 section ladders only)	Add Spacer Sleeves, page 3
D1500-2 (2 section ladders only)	Replace Guide Brackets, page 4
Fiberglass ladders with rungs riveted to the side rails	Drill Clearance Holes, page 6
All other Werner ladders	Mark Template Location, page 7

## ADD SPACER SLEEVES

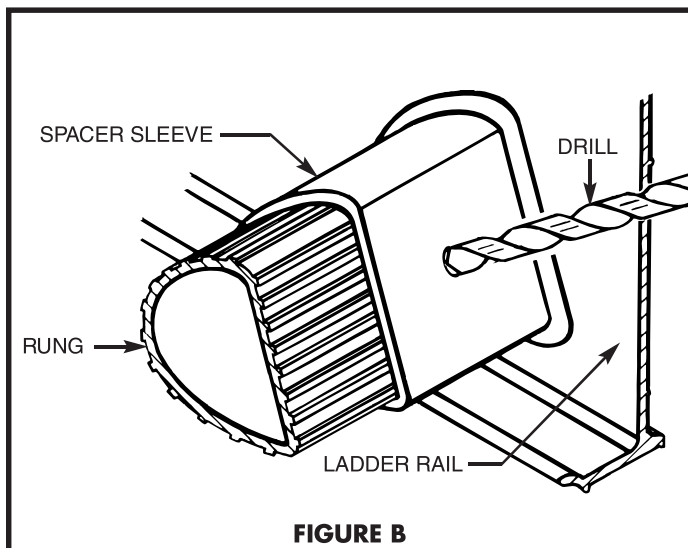
### to D1100-2 (2 section) series extension ladders

**Note:** Spacer sleeves are not required on single section D1100 series ladders (D1100-1). If you have a single section D1100 series ladder, proceed to **Mark Template Location** on page 7.

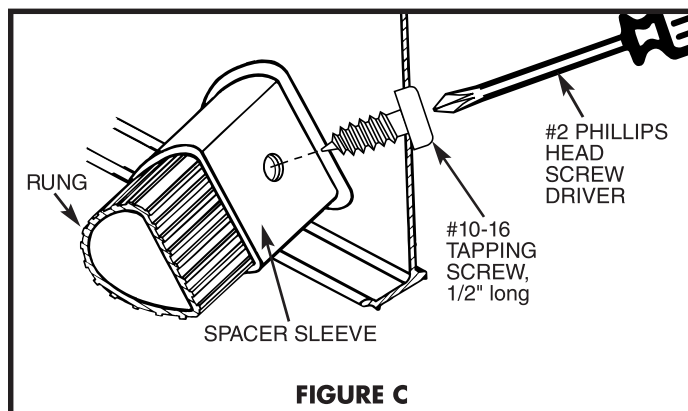
- ❶ Remove extending section (fly) from the lower section (base). See separation instructions on ladder.
- ❷ Place 2 spacer sleeves from **Kit 36-9** onto the third rung from the bottom of the lower section (base section). Slide the spacer sleeves against each side rail as shown in Figure A.



- ❸ Using 5/32" drill bit, drill a hole through each spacer sleeve and rung centered on the flat surface of the rung, see Figure B.



- ❹ Screw a #10-16 tapping screw, 1/2" long, from **Kit 36-9** into each drilled hole using a #2 Phillips head screw driver, see Figure C.



- ❺ Repeat steps 1 through 4 on every other rung (5th, 7th, 9th, etc.) of the lower section.
- ❻ Reassemble the extending section onto the lower section (see reassembly instructions on ladder). Make sure the extending section slides freely on the lower section and that the spacer sleeves do not interfere with the operation of the ladder's locking hardware. If the ladder does not operate properly, check the installation of the spacer sleeves and the reassembly of the ladder. If the ladder still will not operate properly, contact Werner Co. at 888-229-7727 for assistance.

When you're done with the installation of the spacer sleeves, and the upper section slides freely, go to **Mark Template Location** (page 7).

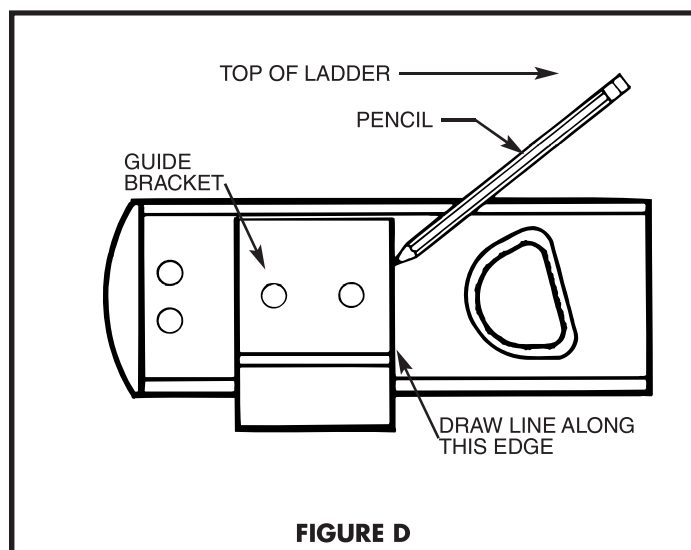
# REPLACE GUIDE BRACKETS

## for a D1500-2 (2 section) series extension ladder

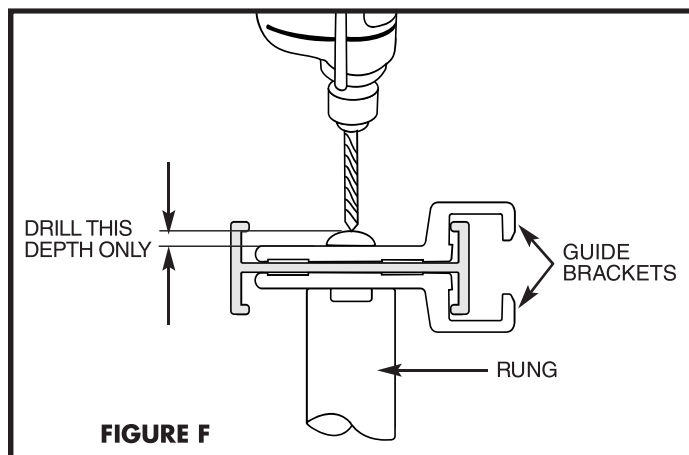
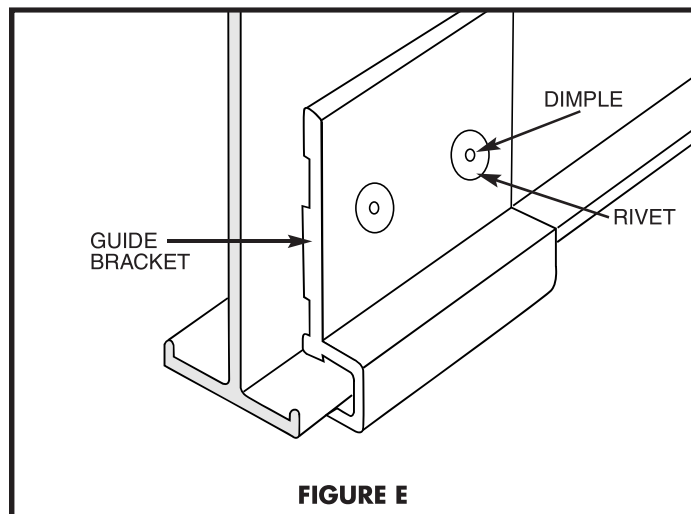
Guide brackets must be replaced because the original guide brackets can interfere with the correct operation of the **Level-Master®**.

### Remove Original Guide Brackets:

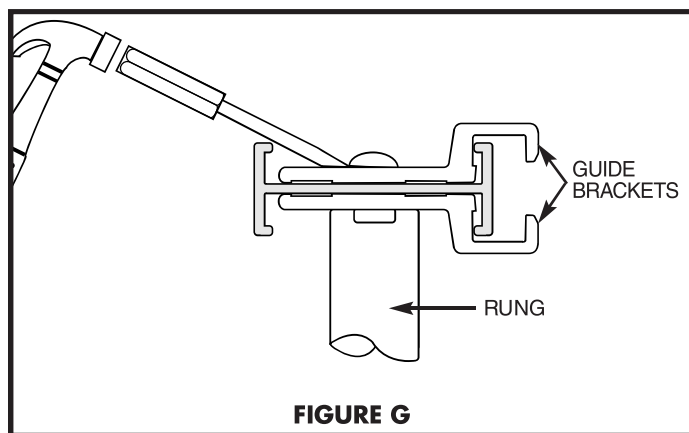
- ❶ Remove extending section (fly) from lower section (base). See separation instructions on ladder.
- ❷ Locate guide brackets at the bottom of the extending section. Using a pencil, mark the position of the guide bracket on the outside of each side rail by drawing a line along the edge closest to the top of the ladder, see Figure D.



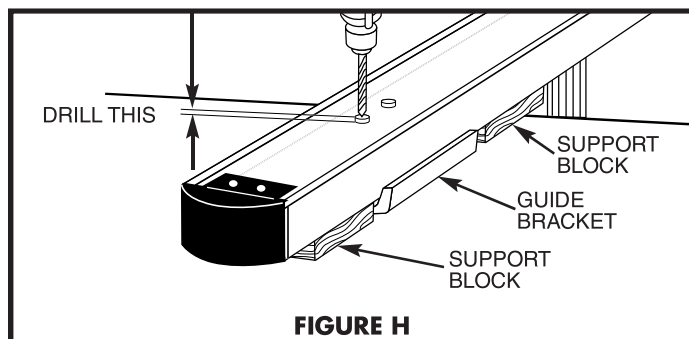
- ❸ Using a 3/16" drill bit, drill through the rivet heads of one of the guide brackets marked in step 2 above. Center the bit in the dimple of the rivet head while drilling, see Figure E. Drill only the depth of the rivet head. **Do not drill into the guide bracket**, see Figure F.



- ❹ If the rivet head does not fall off, gently tap it with a chisel and hammer. Keep the end of the chisel as parallel as possible to the bracket while tapping as shown in Figure G.



- ❺ Remove the outside guide bracket and set it aside.
- ❻ Support the underside of the side rail with two blocks of wood or similar substitute. Position one block above and one block below the guide bracket along the ladder side rail. Remove the inside guide bracket by gently tapping the rivets through the side rail using a 1/8" punch and hammer. Be careful not to damage the side rail with excessive pounding. If the rivets won't tap through, you'll need to drill the remaining part of the rivets down to the side rail — **but do not drill into the side rail**, see Figure H.

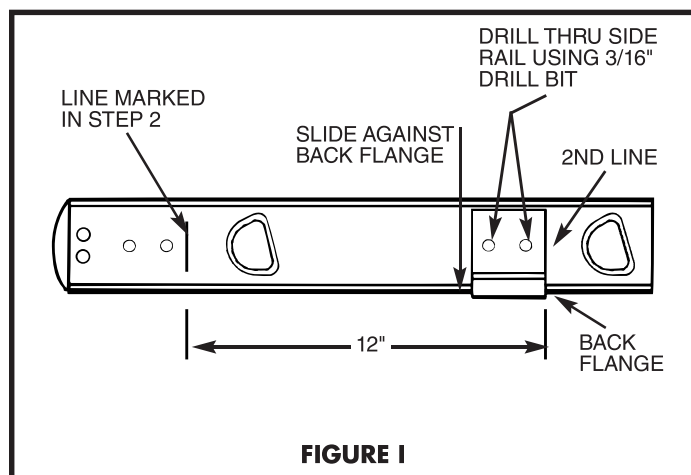


## REPLACE GUIDE BRACKETS (Continued) for a D1500-2 (2 section) series extension ladder

### Attach Guide Brackets:

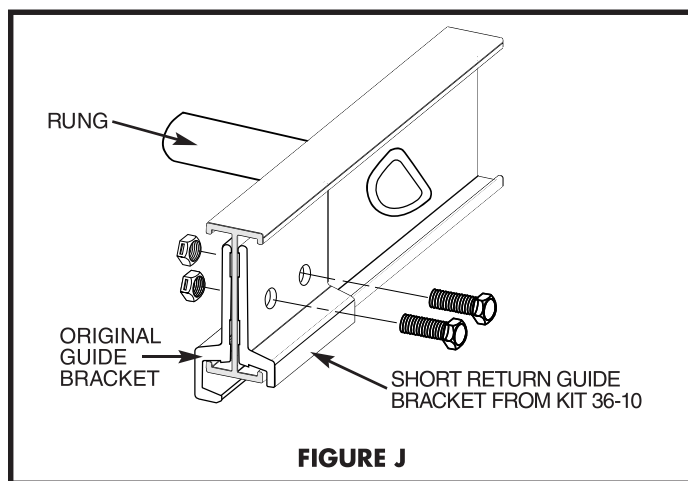
The guide brackets on the D1500-2 (2 section) series ladders in lengths up to and including 32' (two 16' sections) need to be relocated 12" closer to the top of the ladder. This step is not needed for the D1536-2 and D1540-2 ladders. If your ladder is a D1536-2 or D1540-2, skip steps 7 and 8.

- 7 On the outside of the rail, measure up 12" from the original line marked in step 2 on the previous page and draw a second line using a pencil. Position the top edge of a replacement short return guide bracket (short return guide bracket shown in Figure J) from **Kit 36-14** along this line. Slide it against the back flange of the side rail as shown in Figure I. Figure J illustrates an end view of the guide brackets properly attached to the side rail.



- 8 Using a C-clamp, clamp this guide bracket in place. Then, using a 3/16" drill bit, drill two holes in the side rail using the guide bracket holes as a guide. Remove the C-clamp.

- 9 Place one of the original guide brackets on the inside of the side rail, and the guide bracket with the short return from **Kit 36-14** on the outside of the side rail. For D1536-2 and D1540-2, install the guide brackets at the original holes in the side rail. For all other ladders, the guide brackets are to be placed at the holes drilled in step 8.



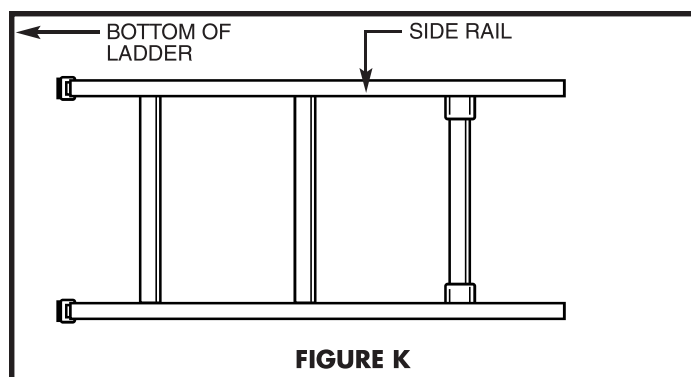
- 10 Attach both guide brackets with two #10-32 bolts, 7/8" long, and #10-32 lock nuts from **Kit 36-14**. Tighten until the guide brackets are snug against side rail.
- 11 Repeat steps 3 through 10 for the opposite side rail.
- 12 Reassemble the extending section (fly) onto the lower section (base). See reassembly instructions on the ladder. Make sure the extending section slides freely on the lower section. If the ladder does not operate properly, check the installation of the guide brackets and the reassembly of the ladder. If the ladder still will not operate properly, contact Werner Co. at 888-229-7727 for assistance.

When you're done, go to **Mark Template Location** (page 7).

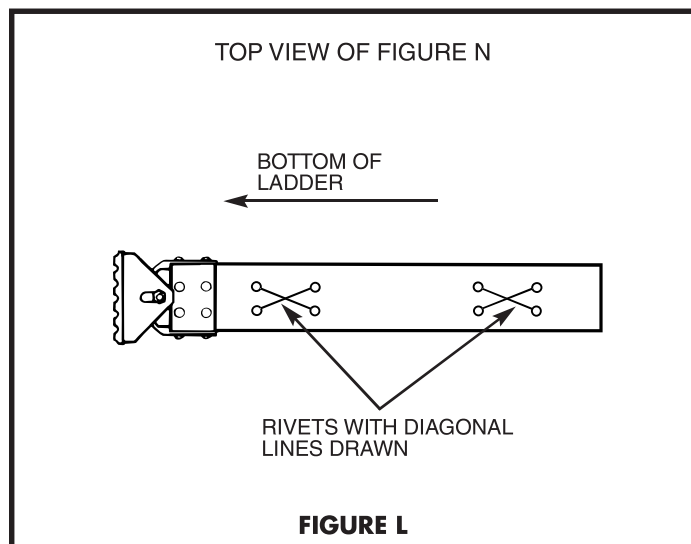
## DRILL CLEARANCE HOLES for fiberglass ladders with rungs riveted to side rails

Clearance holes must be drilled for the square rod that connects the left and right leveler legs.

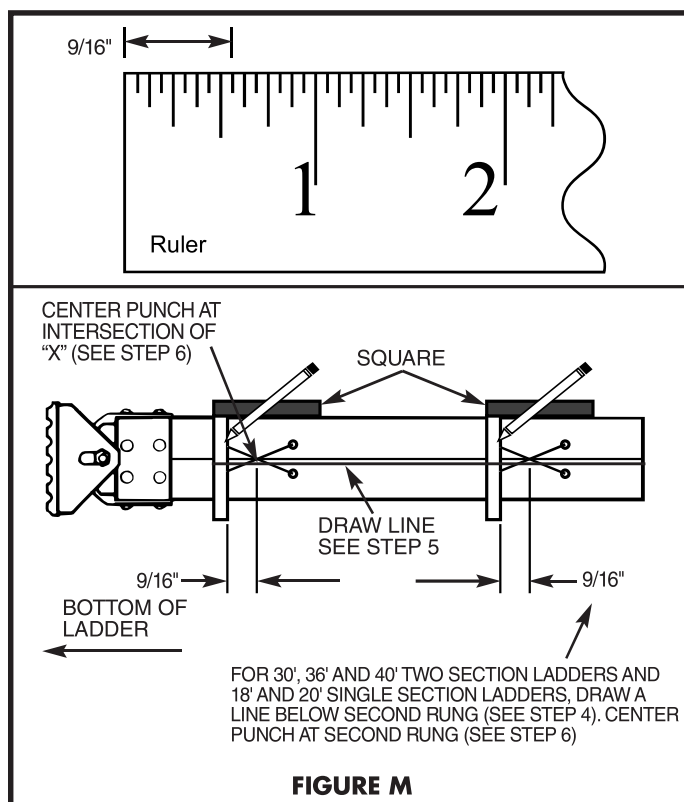
- ❶ Lay ladder down with extending section (fly) on top of lower section (base). Extend ladder three rungs or remove extending section (fly) from lower section (see separation instructions on ladder - not all ladders can be separated).
- ❷ Turn the ladder on its side so a side rail is up, see Figure K.



- ❸ Draw diagonal lines on the side rail between the rivets that attach the bottom two rungs to the lower section (base section). When complete, it should look like an 'X' is drawn on the rail at the bottom two rung locations, see Figure L.



- ❹ In this step you will draw a line which will be used later to locate a drill template. Starting at the intersection of the X at the bottom rung, measure down  $9/16$ " toward the bottom of the ladder. On 30', 36', and 40' two section ladders and 18' and 20' single section ladders, use the intersection of the X at the second rung from the bottom. Use a square and draw a line across the width of the side rail, see Figure M.



- ❺ In this step you will draw a line which will be used later to locate a drill template. Using a straight edge, draw a line through the intersection of the X's that extends from the bottom of the side rail through both X's. For 30', 36' and 40' two section ladders and 18' and 20' single section ladders, continue this line past the third from the bottom rung, see Figure M.
- ❻ Center punch at the intersection of the X at the bottom rung using a punch and hammer. For 30', 36' and 40' two section ladders and 18' and 20' single section ladders, center punch at the second rung from the bottom.
- ❼ Using a 1-1/4" hole saw, drill a hole through the fiberglass side rail at the center punch mark.
- ❽ Repeat steps 2 through 7 on the opposite side rail.

When you're done, go to **Attach Leveler** (page 8).

# MARK TEMPLATE LOCATION

## all ladders except fiberglass ladders with rungs riveted to side rails

- ❶

Lay the ladder down with the extending section (fly) on top of the lower section (base). Extend the ladder three rungs or remove extending section (fly) from lower section (see separation instructions on ladder - not all ladders can be separated).
- ❷

Turn the ladder on its side so a side rail is up, See page 6, Figure K.
- ❸

Some ladders will have the leveler attached to the bottom rung and others will have the leveler attached to the second rung. Refer to the chart below for the proper installation location for your ladder.
- ❹

In this step you will draw a line which will be used later to locate a drill template. This line must be located correctly; otherwise the leveler may not function properly when attached. The line is to be drawn at the bottom **or** second rung of the lower section (base section)
- ❺

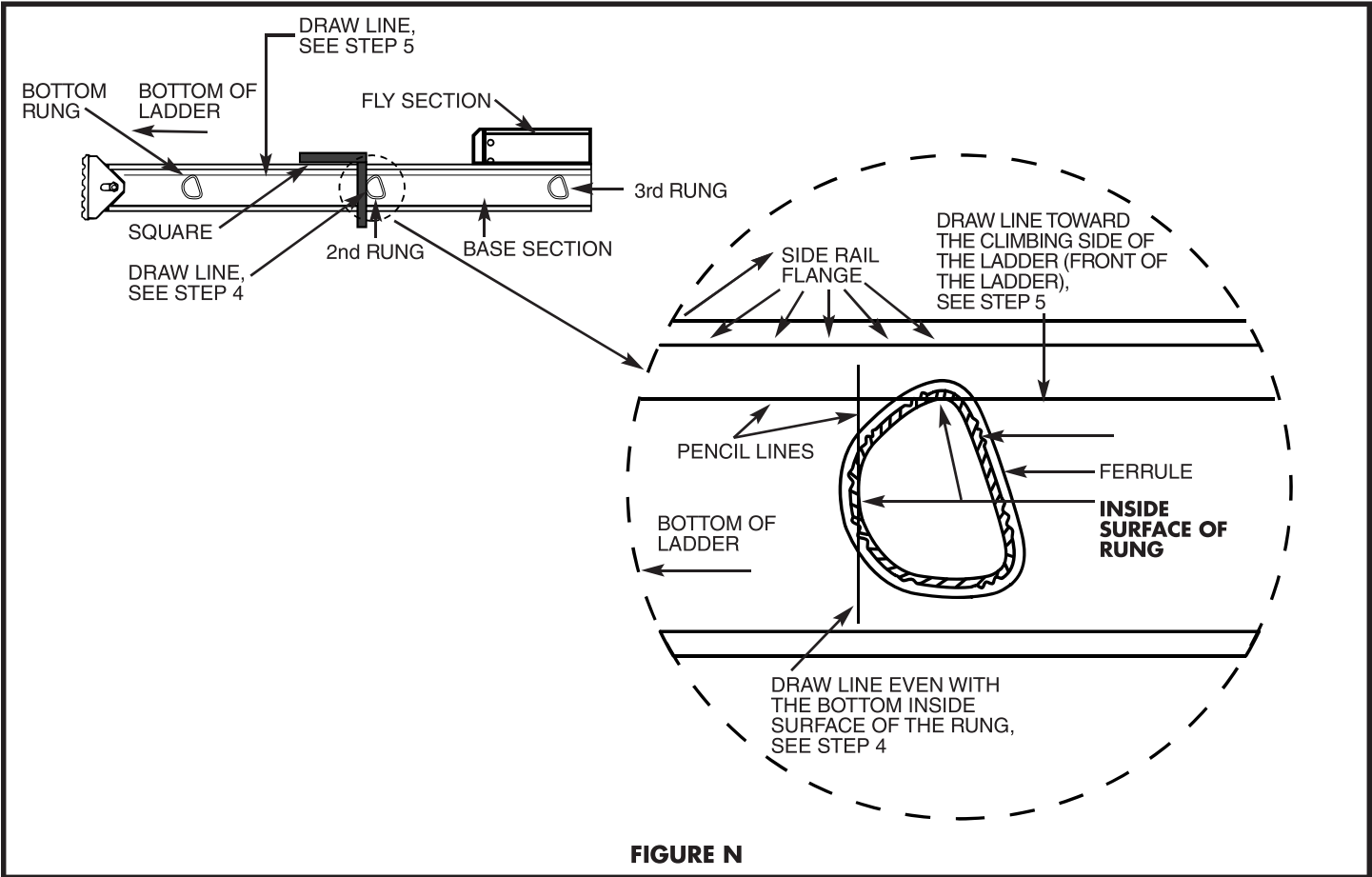
as determined in step 3. Using a square, draw the line across the outside of the side rail even with the bottom inside surface of rung, see Figure N.
- ❻

In this step you will draw a line which will be used later to locate a drill template. This line must be located correctly; otherwise the leveler may not function properly when attached. The line is to be drawn at the bottom **or** second rung of the lower section (base section) as determined in step 3. Using a straight edge, draw a line on the outside of the side rail from the bottom rung to the third rung. This line is to be even with the inside surfaces of rungs, parallel to the side rail flange and toward the climbing side of the ladder (front of the ladder), see Figure N.
- ❼

Repeat steps 2 through 5 for the opposite side rail.
- When you're done, go to **Attach Leveler** (page 8).

FOR THIS LADDER	ATTACH AT THIS RUNG
Fiberglass Type IA and IAA (300 lb. and 375 lb. duty rated) two section ladders in lengths of 16', 20', 24', 26', 28' and 32' (excluding 30') and fiberglass Type IA and IAA (300 lb. and 375 lb. duty rated) single section ladders in lengths of 8', 10', 12', 14', and 16' †	bottom rung
All aluminum and other fiberglass ladders not listed above	second rung

† *Type and duty rating can be found on the I.D. label affixed to the ladder's side rail. If this information cannot be located call the Werner Co. at 888-229-7727 for assistance.*

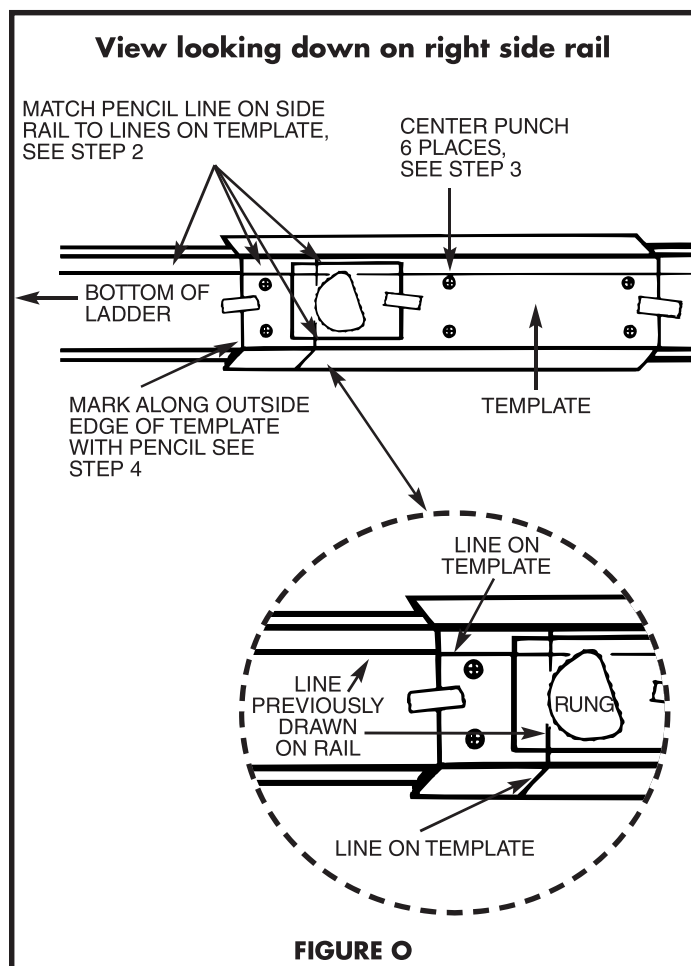


# ATTACH LEVELER

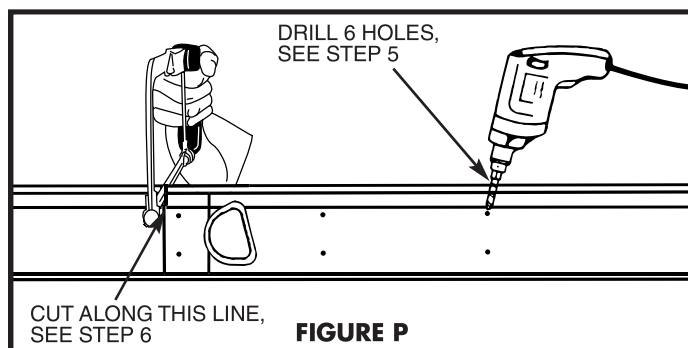
## applies to all ladders

### Prepare Side Rails For Mounting Leveler:

- ❶ Find the left and right templates matching the ladder series of your ladder. **See page 2 for an explanation of the ladder series of your ladder.** Cut the templates along the dashed lines. Fold the templates along the dotted lines.
- ❷ Turn the ladder on its side so its right side rail is up (the right side rail is on your right when you're facing a standing ladder). Carefully place the right template on the right side rail. Line up the specified lines on the template with the lines drawn on the side rail. Tape the template in place, see Figure O.

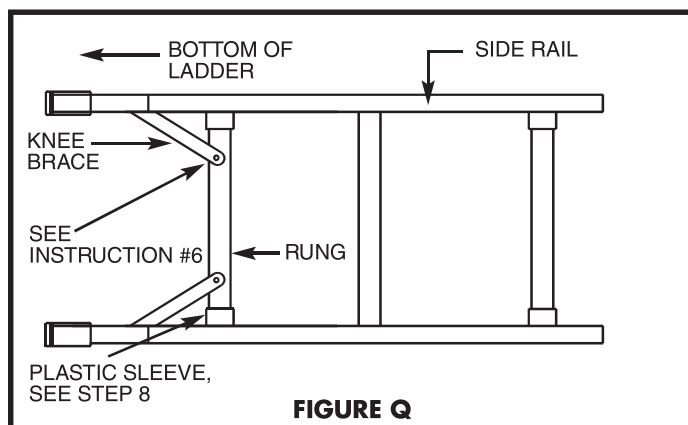


- ❸ Using a center punch and hammer, center punch the six hole locations on the template, see Figure O.
- ❹ Draw a line along the outside edge of the template nearest the bottom of the ladder, then remove the template, see Figure O.
- ❺ Using a 9/32" drill bit, drill the holes at the 6 center punch marks, see Figure P.



**FIGURE P**

- ❻ Using a hacksaw, cut the side rail along the line drawn at the bottom edge of the template in step 4, see Figure P. It is necessary to saw the side rail through so the ladder will not interfere with the leveler. On some ladders there may be a brace at the location where the side rail must be cut off, see Figure Q. If there is, use a 3/16" drill bit and drill out and remove the rivets that attaches the brace to the rung. Make sure there is no part of the rivet left inside the rung (this could interfere with the ladder leveler's operation). Once this is done, the side rail can be sawed completely through.



**FIGURE Q**

- ❼ Repeat steps 2 through 6 using the left template on the left side rail. Saw the side rail completely off from base section.
- ❽ If you have a ladder which will have the leveler attached at the bottom rung (see step 3 in "Mark Template Location" on page 7) there could be two plastic sleeves on the bottom rung (one next to each side rail), see Figure Q. If there are plastic sleeves, they must be relocated to the next higher rung. Use a 3/16" drill bit and drill out and remove the rivet that attaches the plastic sleeves to the rung. Make sure there is no part of the rivet left inside the rung. Remove the plastic sleeves from the bottom rung and place them on the next higher rung at the same location they were placed on the bottom rung. Use a 5/32" drill bit and drill a hole in the rung through the hole in each plastic sleeve, see page 3, Figure B. Screw each plastic sleeve in place with a #10 tapping screw, see page 3, Figure C.

## ATTACH LEVELER (continued)

### applies to all ladders

**IMPORTANT:** The code stamp (a series of numbers and letters) could be covered up by the installation of your ladder leveler or discarded if it is on the portion of the ladder that was cut off. It is necessary to record this code so that your ladder can be identified if you need to purchase replacement parts in the future. The code stamp will look something like this: 099744C03FFA

**FOR FIBERGLASS LADDERS** — The code stamp will be on the portion of the ladder to be discarded. The code stamp is located on the aluminum rail guard at the shoe. Either engrave this stamp into the aluminum guide at the top of the lower section (base) or write it on the inside of the side rail of the lower section with a permanent marker.

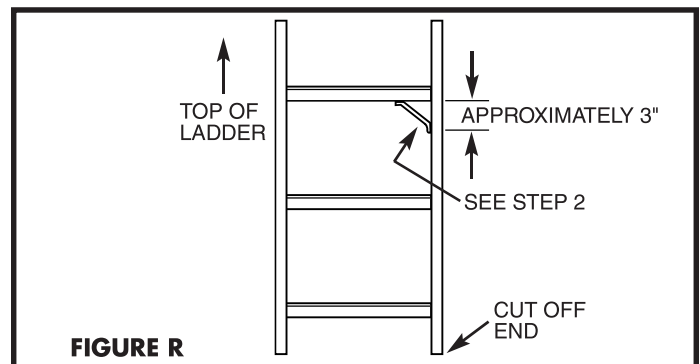
**FOR ALUMINUM LADDERS** — On some aluminum ladders the code stamp is located on the side rail below the third rung from the bottom. If this is where your code stamp is, then engrave it or write it with a permanent marker farther up the lower section on the inside of the side rail. You do not need to relocate your code stamp if it is already located above the third rung.

If you have trouble locating the code stamp, call Werner Co. at 888-229-7727 for assistance.

If you have an aluminum ladder, proceed to **"Attach Leveler Leg Assemblies"** on page 10, otherwise add rung braces as instructed next.

### Add Rung Braces To Fiberglass Ladders:

- 1 Rung braces must now be added to the 3rd rung from the bottom of the lower section (base) of fiberglass ladders to stiffen the ladder.
- 2 The rung brace has a flat surface on one end and a curved surface on the other end. The flat surface is to be mounted against the side rail and the curved surface is to be mounted under the rung. Hold the rung brace in place, so the curved surface is in full contact with the underside of the rung and the flat surface rests flat and is centered below the ladder rung. Mark the hole location on the ladder's side rail (approximately 3" below the bottom of the rung), see Figure R.



- 3 Using a 3/16" drill bit, drill a hole in the side rail at the brace hole location marked in step 2.
- 4 Insert a #10-32 bolt, 5/8" long, through the hole in the side rail and then through the hole in the brace (the bolt head is to be against the side rail). Thread a #10-32 lock nut onto the bolt and tighten it until the brace is snug against the rail.
- 5 Using a 5/32" drill bit, drill a hole into the under side of the rung using the hole in the brace as a guide.
- 6 Screw a #10 tapping screw through the brace and into the hole in the rung. Tighten until the brace is snug against the rung.
- 7 Repeat steps 2 through 6 for the other side of the ladder.

## ATTACH LEVELER (continued)

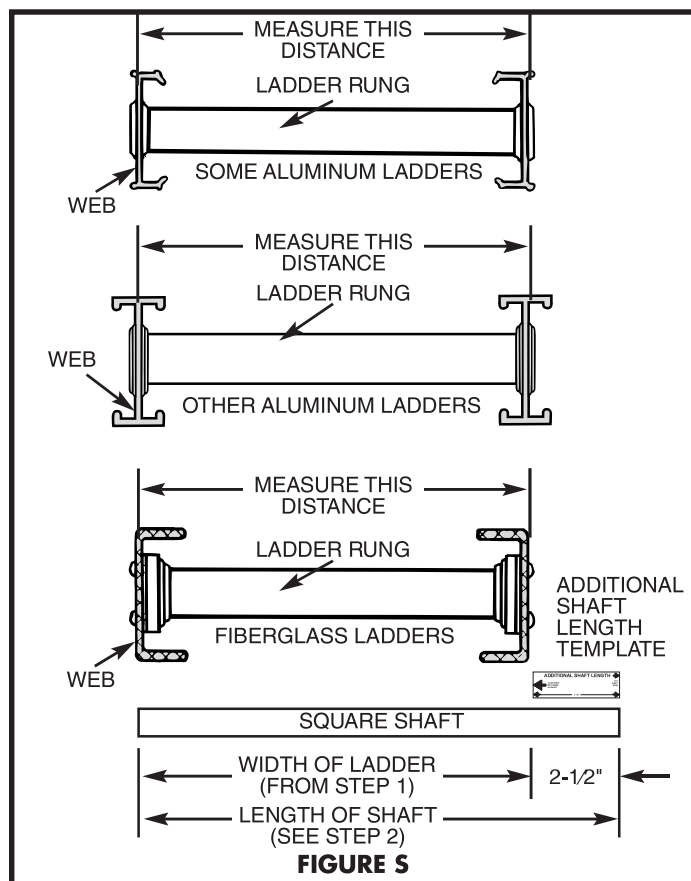
### applies to all ladders

#### Attach Leveler Leg Assemblies:

**Leave the tape on the leg assemblies until directed otherwise!** If you do not do this you may not get the full adjustment of the leveler. If the tape has already been removed, refer to troubleshooting on page 13.

- Using a tape measure, measure the distance between the **outside web** surfaces of the ladder side rail. The web is the portion of side rail to which the rungs are connected, see Figure S.

#### Typical Side Rail Shapes

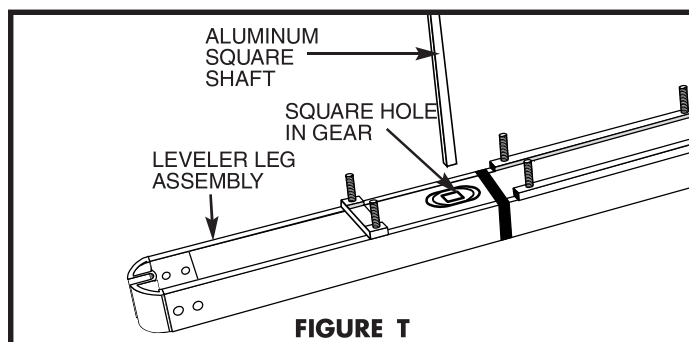


- The square aluminum shaft is to be 2-1/2" longer than the width of your ladder as measured in step 1, see Figure S. To mark where to cut the shaft, first mark your ladder width as measured in step 1 on the shaft, starting from either end. Second, using the "additional shaft length" template provided, align the marked edge of the template with the line just drawn on the shaft. Mark where to cut the shaft by drawing a line along the opposite side of the "additional shaft length" template. Cut the square aluminum shaft at the marked cut line using a hacksaw. File any burrs from either end of shaft with a metal file. If you cut the aluminum shaft too short (more than 1/8" from desired length), **Do Not Use.** Obtain a replacement shaft by calling Werner Co. at 888-229-7727 and order kit 36-73.

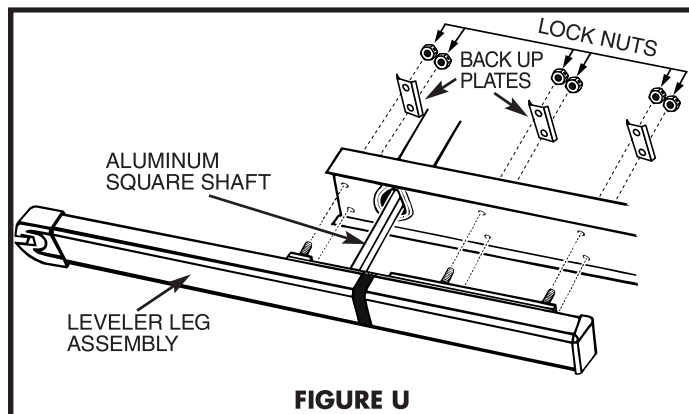
### **WARNING:**

**Do not use a shaft that is cut too short. The leveler may operate properly at installation but could malfunction at a later time causing a serious injury.**

- Place the square aluminum shaft into the square hole in the gear of one leveler leg assembly, see Figure T. Slide the square shaft through the bottom rung of the ladder and position the leveler leg assembly against the outside of the ladder side rail, see Figure U. Make sure the bolts in the leveler leg assembly protrude through the 6 mounting holes that you previously drilled in the side rail.



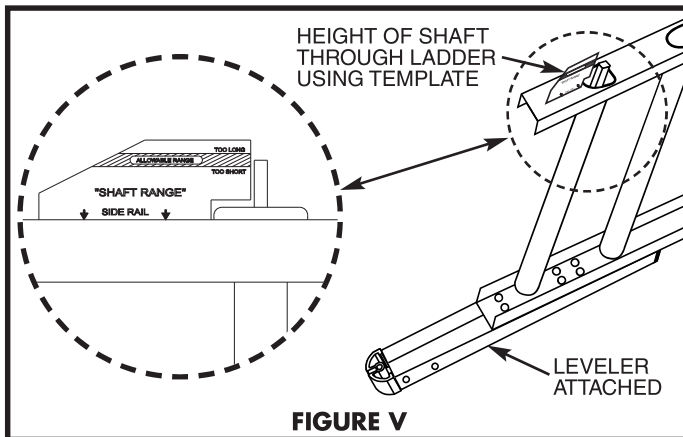
- Position 3 back-up plates over the bolts on the inside of the side rail with the curved edges pointing away from the side rail. Thread 1/4" -20 lock nuts onto the bolts and tighten them using a 7/16" wrench, so the leveler leg assembly is snug against the side rail. Do not over tighten, see Figure U.



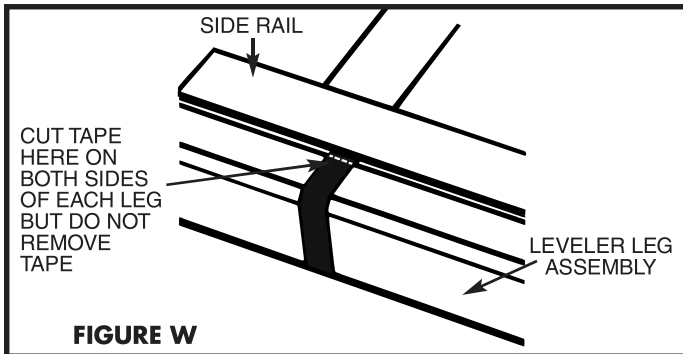
- Make sure shaft is properly seated in the leveler's square hole by lightly tapping it with a hammer. Using template labeled "shaft range," insure the length of the shaft is within the allowable range for operation of the leveler, see Figure V. If the shaft is too long, repeat step 2. If the shaft is too short (outside of the range on the template). **Do Not Use.** Obtain a replacement shaft by calling Werner Co. at 888-229-7727 and order kit 36-73.

## ATTACH LEVELER (Continued)

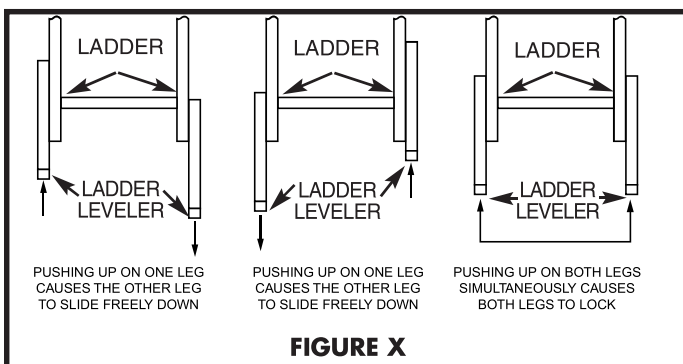
### applies to all ladders



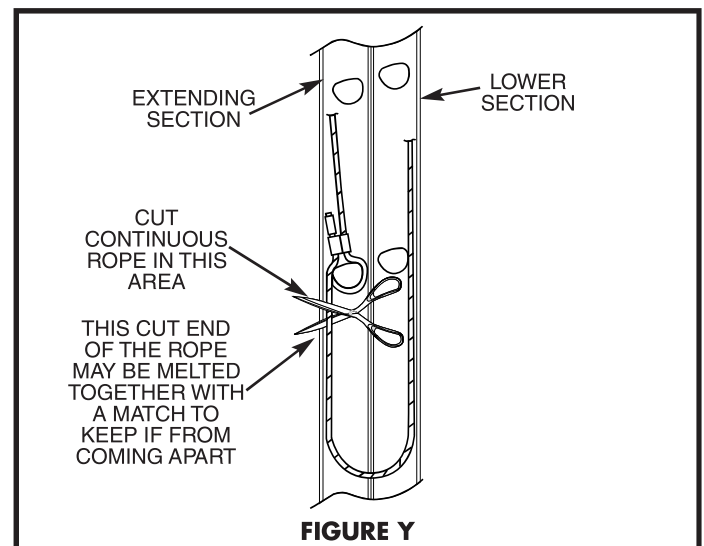
- 6 Place the opposite leveler leg assembly on the other side of the ladder making sure the square shaft goes into the square hole in the gear of the leg assembly. Place 3 back up plates onto the bolts and secure the leveler leg in place with lock nuts as in step 4 on page 10.
- 7 Without removing the tape, cut the tape at the gap between the leg and the mounting plate so that the legs can move, see Figure W. The leveler is operating correctly if pushing up on one leg causes the other leg to slide freely down and pushing on both legs simultaneously causes both legs to lock, see Figure X. Remove the tape after you've made sure both of these actions happen.



### The ladder leveler operates correctly if:



- 8 It may be necessary to lubricate the leveler for it to operate freely. Use liquid wax and apply it to the moving legs of the leveler where they slide along the plate bolted to the side rail. It is not necessary to lubricate the mechanism inside the legs. Do not use a lubricant that will not dry (like oil) because it could collect dirt which could prevent the leveler from operating properly.
- 9 If the ladder sections were separated to install the Level-Master® Ladder Leveler, then reassemble the extending section onto the lower section (see reassembly instructions on ladder).
- 10 Make sure the extending section slides freely on the lower section and that the Level-Master® does not interfere with the operation of the ladder. If the ladder or leveler does not operate properly, check the installation of the Level-Master®. If the ladder or leveler will still not operate properly, go to Troubleshooting on page 13.
- 11 If your ladder has a continuous rope (a rope that can not be removed from the lower section without cutting it) then you may notice that it has a little more slack than before. This is because the bottom rung of the lower section has been removed. If you do not like the additional slack in the rope, then the rope can be converted to a standard rope by cutting it just below the hardware that attaches it to the bottom rung of the extending section (fly). See Figure Y.

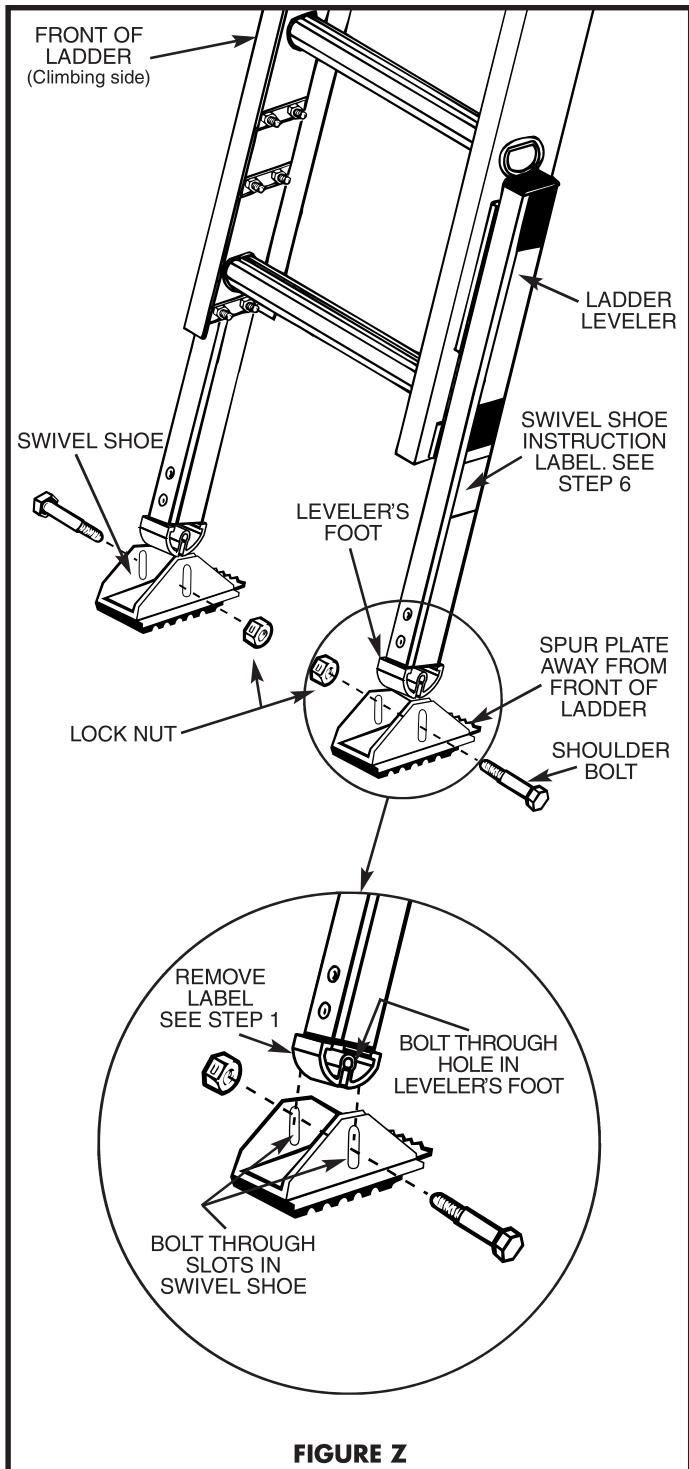


When you're done, go to **"Attach Swivel Shoes"** (page 12).

## ATTACH SWIVEL SHOES

### **⚠ WARNING:**

**The leveler's swivel shoes must be attached before using.**



- 1 Remove "Do Not Use" label from the bottom of each leveler leg.
- 2 Obtain the swivel shoes, two 5/16" shoulder bolts, 1-7/8" long, and two 1/4" - 20 locknut nuts supplied with the leveler.
- 3 Position the swivel shoe with spur plate end away from the front of the ladder. See Figure Z.

**IMPORTANT:** The orientation of the ladder, ladder leveler, and swivel shoe must be as shown.

- 4 Insert a shoulder bolt through the swivel shoe and hole in the leveler's hoop end. Thread on the locknut and tighten it until the locknut is against the shoulder of the shoulder bolt. The swivel shoe should pivot freely. If the swivel shoes do not pivot freely, remove the shoe, review steps 3 and 4 and reinstall. If the shoe still will not operate properly, contact Werner Co. at 888-229-7727 for assistance.
- 5 Repeat steps 3 and 4 for the swivel shoe on the opposite leveler leg.
- 6 Position the swivel shoe instruction label directly below the label on the right leveler leg as shown in Figure Z.

This completes the installation of the Level-Master® ladder leveler.

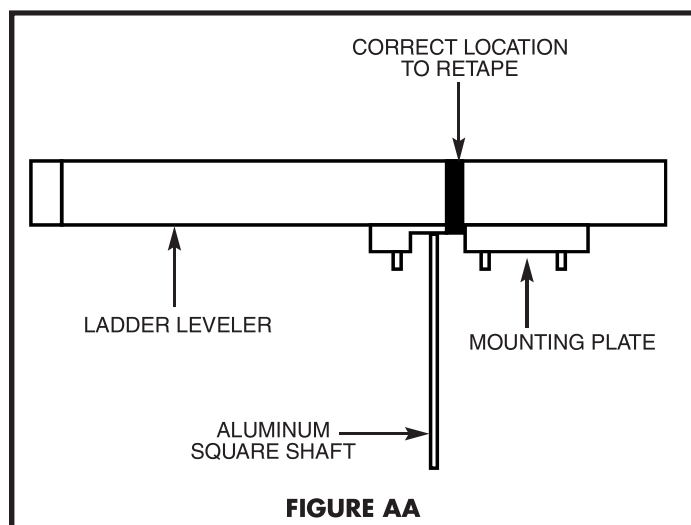
## TROUBLESHOOTING

### applies to all ladders

If you accidentally removed the tape on the leveler legs before mounting them to the ladder, then it will be necessary to reposition the legs. If you do not do this you may not get the full adjustment of the leveler.

- 1 Fully extend one leg and retape it to the mounting plate.
- 2 Fully retract the other leg and retape it to the mounting plate.

Note: The legs may be difficult to move when they are not attached to a ladder. To move a leg, hold the leg horizontally with the bolts facing down. Extend or retract the leg as needed. It may be necessary to manually turn the gear in the leg to extend or retract it prior to taping.



If the Ladder or Leveler Doesn't Operate Properly Then:

Realign cut pieces of tape and retape legs so they can't move.

- 2 Disassemble the leveler from the ladder and check the length of the square shaft by reviewing steps 1 and 2 in the section entitled "Attach Leveler Leg Assemblies" (page 10). Reassemble the leveler to the ladder by following steps 3 through 8 in the section entitled "Attach Leveler Leg Assemblies" (pages 10 and 11).
- 3 If the ladder or leveler still will not operate properly, contact Werner Co. at 888-229-7727 for assistance.

### **! WARNING:**

**Do not use a ladder or leveler that is not working properly. You could be injured.**

*For additional information or replacement parts contact:*



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