

LIGHTWEIGHT EXTENSION LADDERS  
DESCRIPTION, USE, INSPECTION  
AND MAINTENANCE

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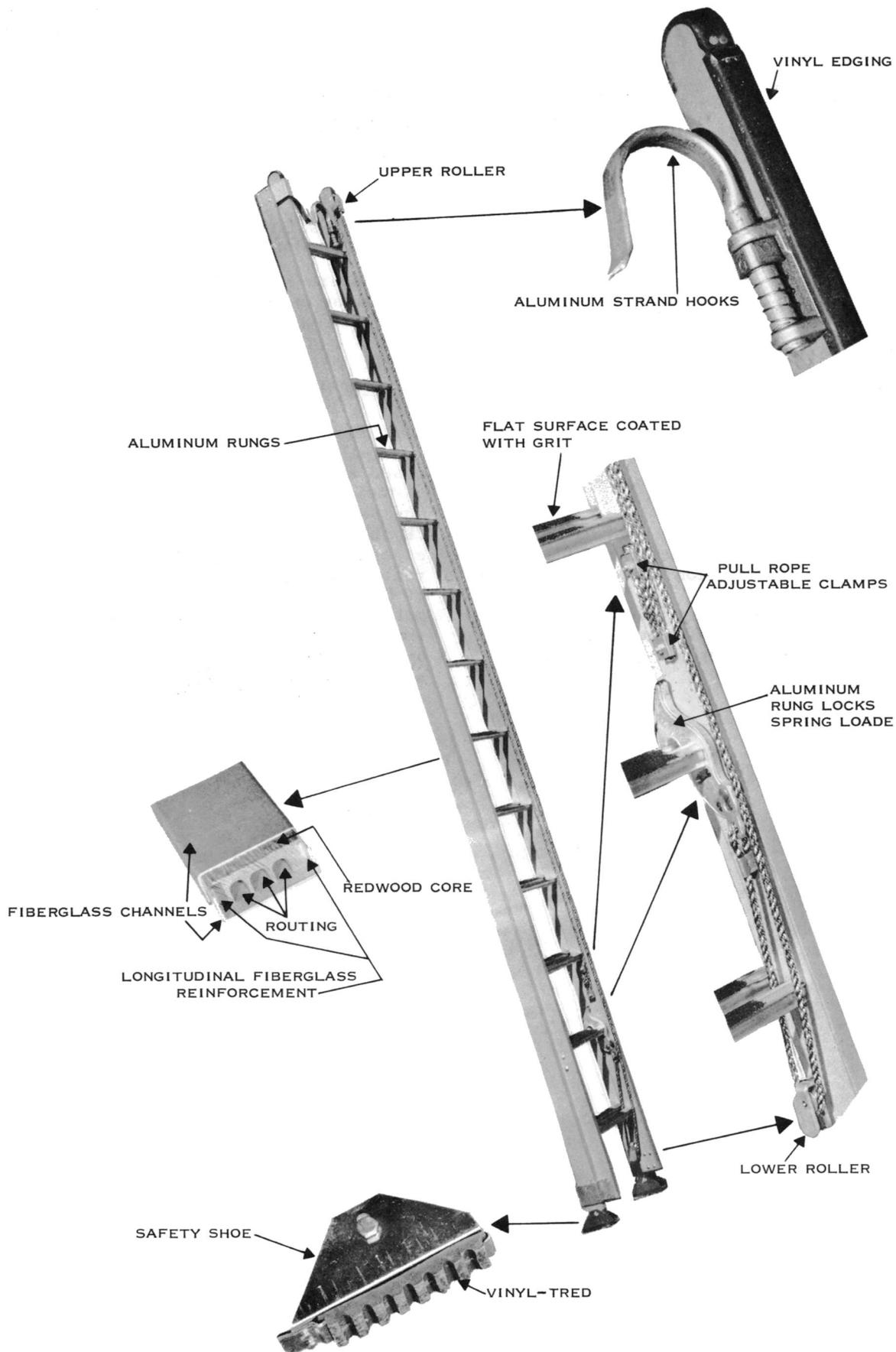
**1. GENERAL**

- 1.01 This section covers the description, use, inspection, and maintenance of light-weight fiberglass extension ladders.
- 1.02 Information regarding the length, footing and upper support of extension ladders is outlined in other sections of the 081 Division.

- 1.03 The safety precautions outlined for other extension ladders also apply to this ladder.
- 1.04 Where 24-foot lengths will do the job, continue to use the "C" Wooden Ladder. The "C" type is also available in the other lengths.

**2. DESCRIPTION**

- 2.01 The ladder sections consist of two parallel reinforced redwood side rails encased in fiberglass channels. The flat surfaces of the aluminum rungs are coated with epoxy and carborundum grit to provide a non-slip climbing surface. Spring loaded rung locks engage automatically. The side rails are routed between each rung to reduce the weight of the ladder. The endless pull rope and pulleys are mounted on the side rail to provide unobstructed climbing space. Safety shoes and aluminum strand hooks are standard equipment. See Figure 1.



DESCRIPTION  
FIGURE 1

3. HANDLING

3.01 Check the tension of the pull rope as follows (see Figure 2):

- (a) With the ladder in a horizontal retracted position, move the top section until the rung locks are free of the rung.
- (b) Grasp the pull rope near the center of the ladder and pull it up away from the ladder.
- (c) The distance between rope and ladder should be about 6 to 12 inches before the rung locks are actuated.
- (d) Adjust the rope length at the clamps on the top section.

**THINK** (e) The rung locks will not engage properly if the rope is too tight.

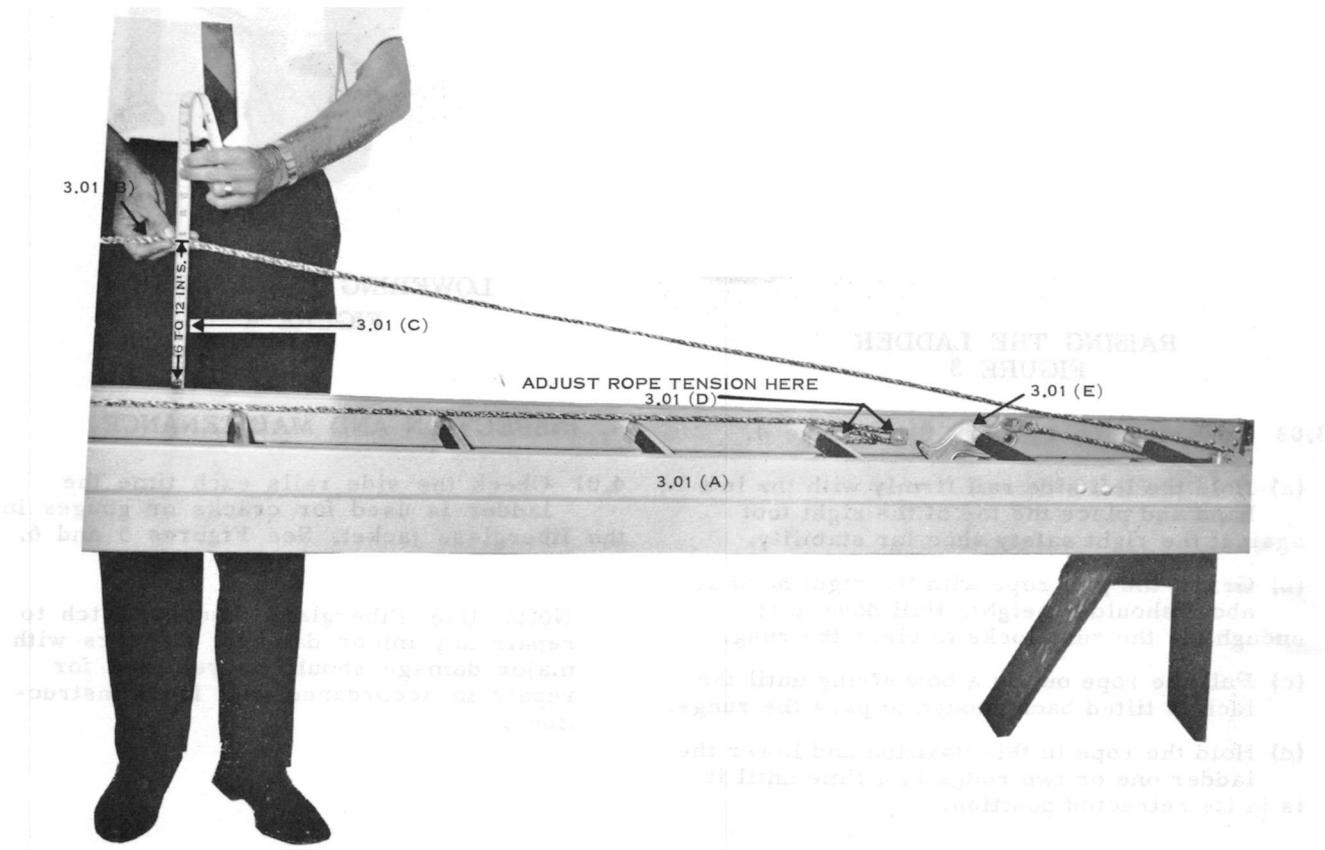
3.02 Raising the Ladder. See Figure 3.

- (a) With the ladder in an upright position, hold the left side rail firmly with the left hand.



Be careful that the aluminum guide attached to the sliding section does not strike the hand during raising and lowering operations.

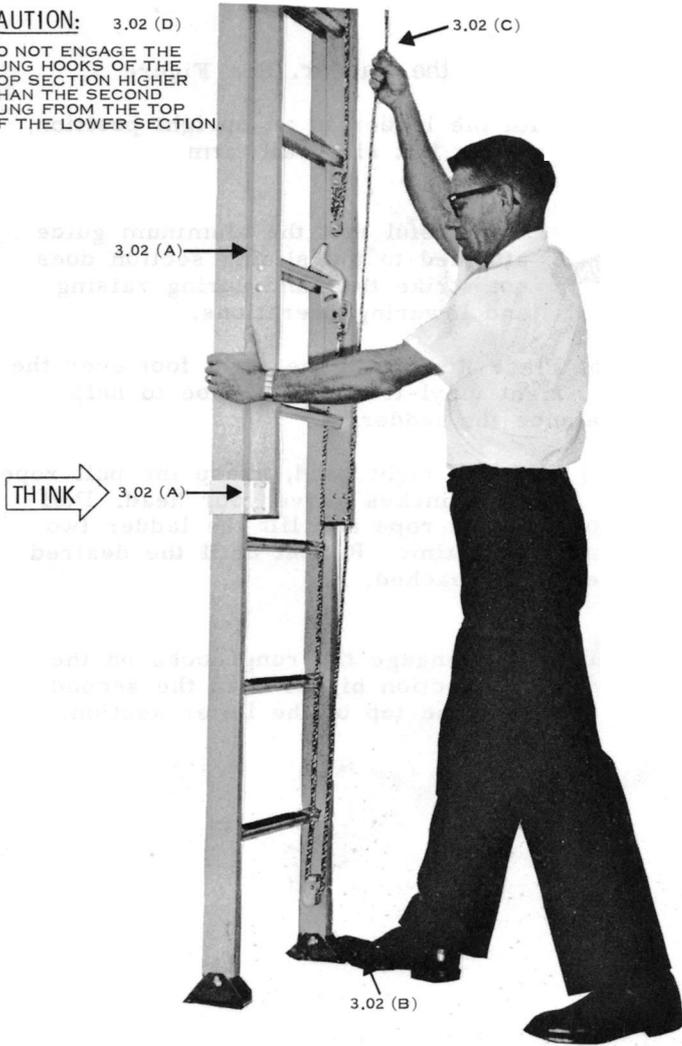
- (b) Place the toe of the right foot over the right vinyl-tred safety shoe to help balance the ladder.
- (c) With the right hand, grasp the pull rope about 6-inches above your head. Pull down on the rope and lift the ladder two rungs at a time. Repeat until the desired height is reached.
- (d) Do not engage the rung hooks on the upper section higher than the second rung from the top of the lower section.



CHECKING PULL ROPE TENSION  
FIGURE 2

**CAUTION:** 3.02 (D)

DO NOT ENGAGE THE RUNG HOOKS OF THE TOP SECTION HIGHER THAN THE SECOND RUNG FROM THE TOP OF THE LOWER SECTION.



RAISING THE LADDER  
FIGURE 3



LOWERING THE LADDER  
FIGURE 4

3.03 Lowering the Ladder. See Figure 4.

- (a) Hold the left side rail firmly with the left hand and place the toe of the right foot against the right safety shoe for stability.
- (b) Grasp the pull rope with the right hand at about shoulder height. Pull down just enough for the rung locks to clear the rung.
- (c) Pull the rope out as a bow string until the lock is tilted back enough to pass the rungs.
- (d) Hold the rope in this position and lower the ladder one or two rungs at a time until it is in its retracted position.

4. INSPECTION AND MAINTENANCE

4.01 Check the side rails each time the ladder is used for cracks or gouges in the fiberglass jacket. See Figures 5 and 6.

Note: Use Fiberglass Ladder Patch to repair any minor damage. Ladders with major damage should be returned for repair in accordance with local instructions.

STEP 1



REPAIRING GOUGES IN SIDE RAILS  
FIGURE 5A

STEP 2

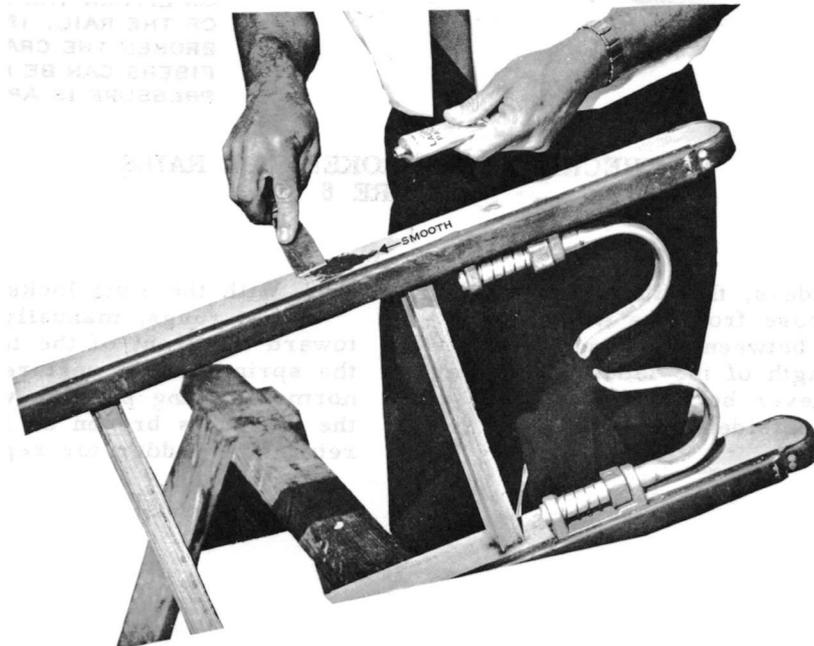
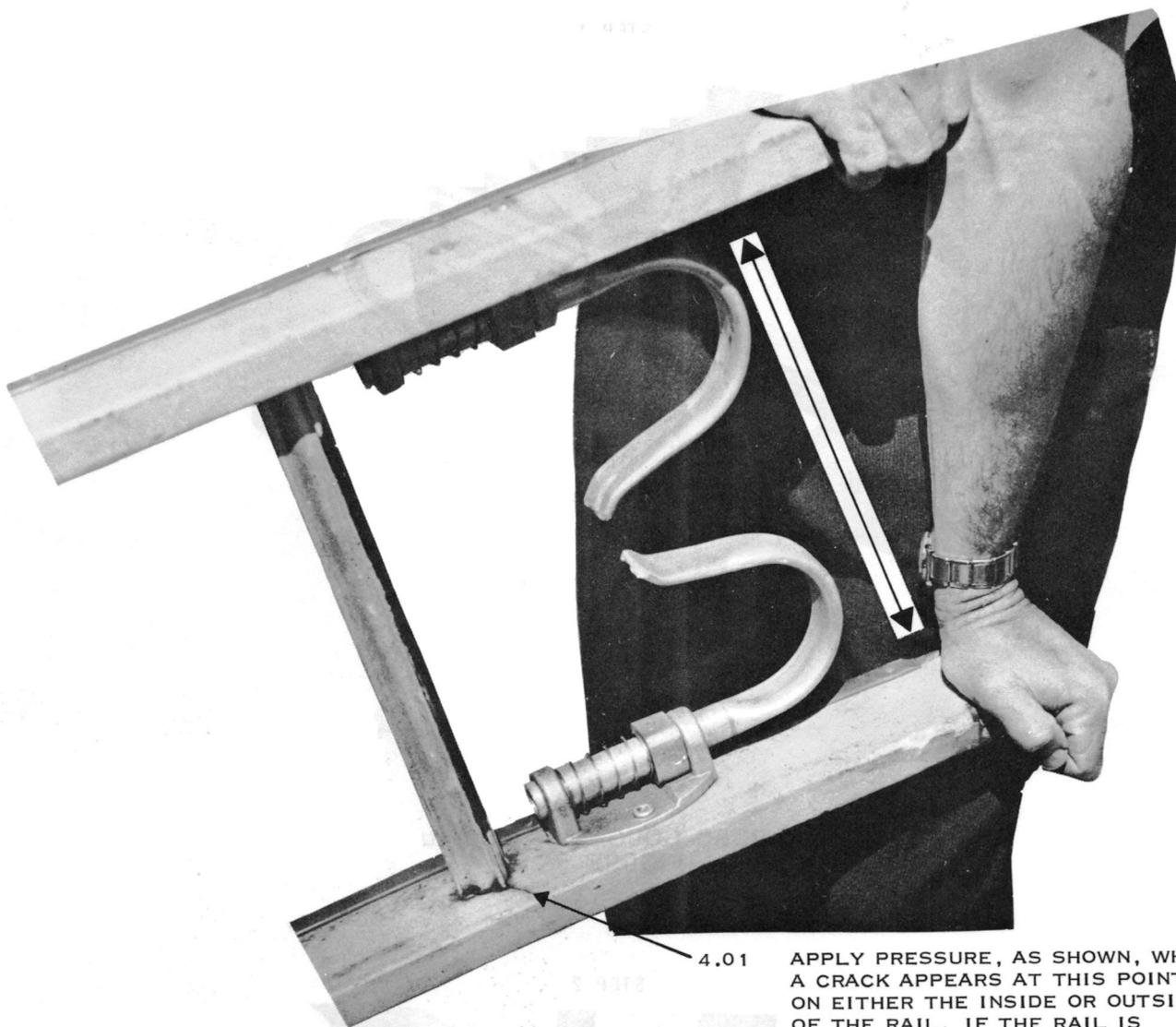


FIGURE 5B

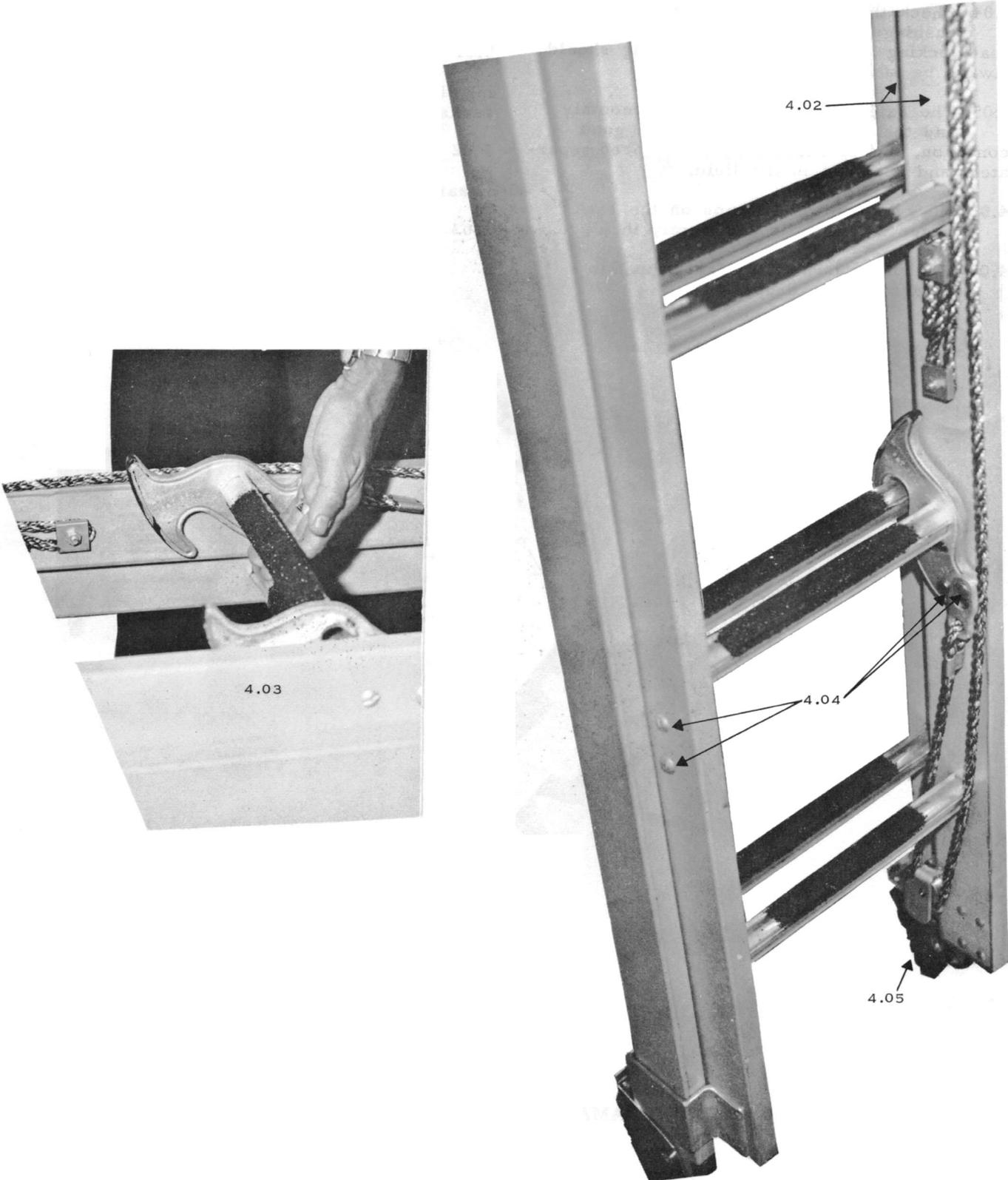


4.01 APPLY PRESSURE, AS SHOWN, WHEN A CRACK APPEARS AT THIS POINT ON EITHER THE INSIDE OR OUTSIDE OF THE RAIL. IF THE RAIL IS BROKEN THE CRACKING OF WOOD FIBERS CAN BE HEARD WHEN PRESSURE IS APPLIED.

CHECKING FOR BROKEN SIDE RAILS  
FIGURE 6

4.02 On some ladders, the fiberglass shell may come loose from the wood on the inside of the rail between the rungs without affecting the strength of the ladder. However, the shell should never be loose along the edges nor on the outside of the rails.

4.03 With the rung locks positioned between two rungs, manually operate the lock toward the front of the ladder. Upon release, the spring should restore the lock to its normal locking position without binding. If the spring is broken or if the lock binds, return the ladder for repair. See Figure 7.



CHECK RUNG LOCKS  
FIGURE 7

4.04 Check the rung lock pivot bolts and bushings frequently. Bolts and Allen head locking wedge inside the bushing should always be kept tight. See Figure 7.

4.05 The safety shoe should pivot smoothly and the vinyl-tred should be in good condition. Safety shoes may be ordered separately and replaced in the field.

4.06 Be sure the vinyl strips on the back edges of the rails are firmly in place.

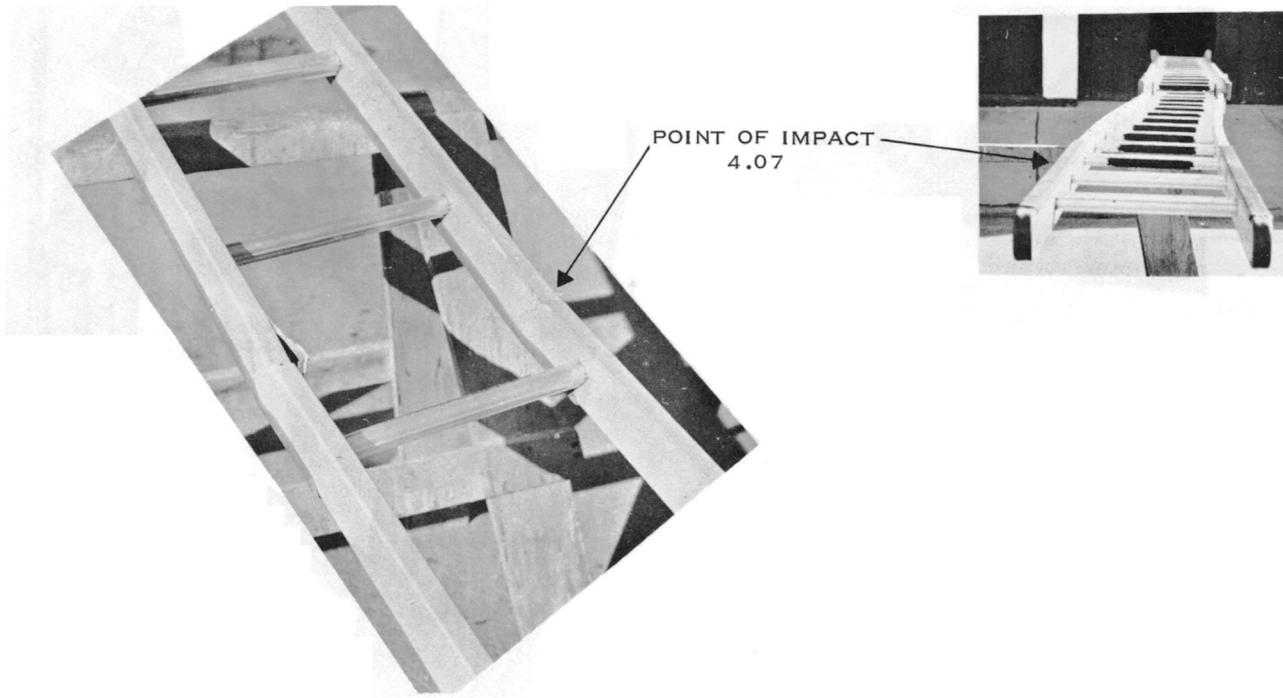
4.07 Figure 8 shows what might happen to a ladder if it is dropped.

## 5. PRECAUTIONS

5.01 Ladder racks are the major cause of damage to these ladders. Avoid bumping the ladder against sharp edges on the racks.

5.02 Position ladders on the racks so that the overhang at the front will not be a hazard to pedestrians.

5.03 Thoroughly inspect any ladder that has been dropped. See Figure 8.



LADDER DAMAGE CAUSED BY DROPPING  
FIGURE 8

REMEMBER! A TOOL IS ONLY AS SAFE AS THE PERSON USING IT!