



INSTRUCTIONS for the LOCK AND LOAD LADDER CARRIER FOR TRUCK CAPS **SPECIFICATIONS and SAFE LOADING REQUIREMENTS**

The Lock and Load Ladder Carrier for Truck Caps is a rack designed to mount to the top of a pickup truck camper shell as shown in the below photos. The rack can carry one ladder not exceeding 65 lbs in each side of the rack with the load distributed evenly between the front and back portions of the rack. Model 2009-2S has a ladder loader on one side and model 2009-2D has ladder loaders on both sides.

In addition to carrying ladders in the loader, cargo may also be carried on the crossbars that span the other side of the roof of the cap on model 2009-2S. However, the maximum collective weight of all cargo loaded on either the 2009-2S or the 2009-2D must not exceed 150 lbs nor can it exceed the maximum strength of the camper shell. **This carrier is designed to carry loads, which are evenly distributed between the front and rear arms of the carrier. Do not carry ladders where a force of over 35 lbs. is concentrated on either arm and do not carry ladders with a carrying length exceeding 2.5 times the distance between the arms. This product is not warranted for use off-road or on unimproved, poorly maintained, or bumpy roads, nor is it warranted when used contrary to instructions or specified uses. U.S. Rack does NOT warrant any automotive product to which the carrier is attached. Ensure the rack to which the carrier is attached is sturdy enough to support the loaded carrier during use. U.S. Rack is not responsible for injury or property damage resulting from the carrier being improperly installed or used.** Loads extending beyond the rear bumper of the vehicle must be designated with a red flag during daylight or red light during darkness in accordance with state law.

BE SAFE: Be aware that the when the carrier opens, it extends down and the ladder slides suddenly toward you. **Always open the carrier slowly** to prevent the ladder from falling off the carrier onto you. This is especially important if the truck is not parked on level ground. Do not drive the vehicle when the carrier is in the open position. Ensure ladder is properly seated in the closed carrier with a lock or clevis pin installed in each arm to insure the carrier cannot open. Make sure all threaded connections remain tight. Check tightness each time you install or load the carrier, as well as daily to ensure that all connections remain tight. Periodically check welds for cracking caused by use. Also check the condition of rain gutters to ensure they remain structurally strong. Remember that the carrier raises the profile of the vehicle. High loads must be transported with **GREAT CAUTION** to prevent loads from striking low overhead objects such as garage door headers.

WARRANTY for Lock and Load Ladder Carrier

U.S. Rack™ products are warranted for a period of one year against all structural defects in materials and workmanship provided that they are assembled, installed, and used in accordance with all manufacturer's specifications and instructions. U.S. Rack **cannot warrant the powder-coating** on its products. Normal use of any powder-coated rack and exposure to weather can result in scratching of the surface, exposing metal below; therefore, **maintenance** on your rack will be required. To prevent rust, spot paint any scratches or breaks in the surface with a high quality metal paint. **Merchandize must be returned in the original box and packaging.** See return policies and procedures at <http://www.usrack.com/service.shtml>

INVENTORY

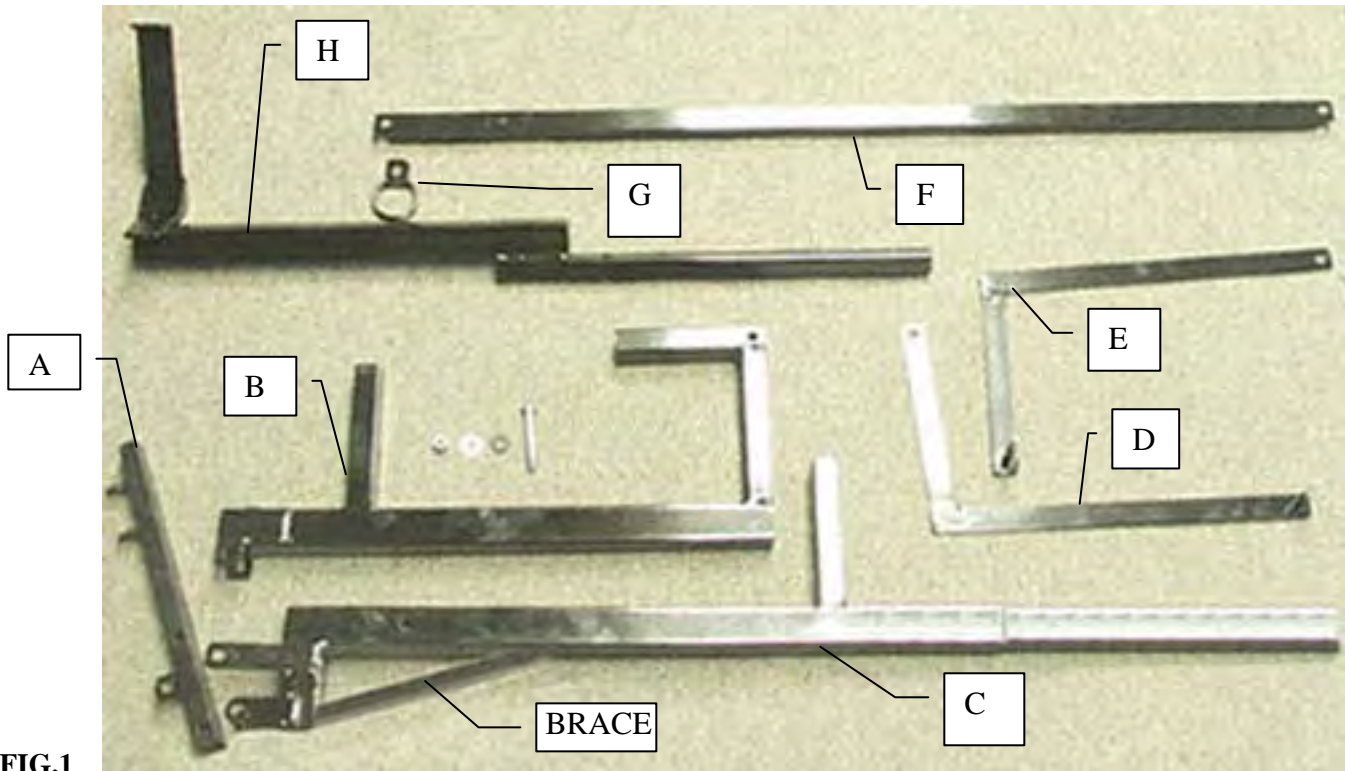


FIG. 1



FIG. 2

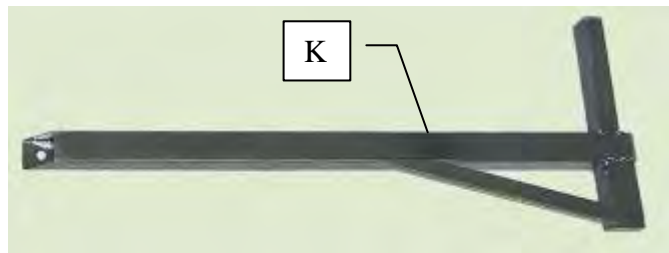


FIG. 3

If you have the Lock and Load Ladder Carrier for Vans (**single-side**, model 2009-2S) you should have the following parts as shown in FIG. 1, 2 and 3:

A. Lifting Arm (x2); B. Resting Arm (x2); C. Mounting Base (male side) (x2); D. Right Arm Guide(x2); E. Left Arm Guide (x2); F. Handle (x1); G. Strap Loop (x2); H. Handle Receiver (mirror set of 2) (x 1); I. U-shaped Clamps (x4); J. Foot (x4); K. Cross-Bar Extension (x2).

Additional items include:

3/8-16x 3-inch button-head hex cap screws (x4)
3/8-16x 2-inch button-head hex cap screws (x4)
3/8-16x 1-1/2-inch button-head hex cap screws (x4)
3/8-16 nylon lock nuts (x12)
3/8+” standard metal washers (x16)
5/16-18 x 1.25” carriage bolt (x8)
5/16-18 nylon lock nuts (x8)
5/16+” metal fender washers (x8)
5/16+” rubber fender washers (x8)
Nylon washers (x24)
Allen Wrench (1)

NOTE THAT SCREWS AND SMALL PARTS MAY BE FASTENED TO OTHER PARTS

If you have the Lock and Load Ladder Carrier for Vans (**double-side**, model 2009-2D) you should have the following parts as shown in FIG. 1, 2 and 4.

A. Lifting Arm (x4) B. Resting Arm (x4) C. Mounting Base (male side) (x2) D. Right Arm Guide (x4); E. Left Arm Guide (x4); F. Handle (x2); G. Strap Loop (x4); H. Handle Receiver (mirror set of 2) (x 2); I. U-shaped Clamps (x4); J. Foot (x4); K. Mounting Base (female side) (x2) as shown in Fig. 3.

Additional items include:

- 3/8-16x 3-inch button-head hex cap screws (x8)
- 3/8-16x 2-inch button-head hex cap screws (x6)
- 3/8-16x 1-1/2-inch button-head hex cap screws (x4)
- 3/8-16 nylon lock nuts (x22)
- 3/8+” standard metal washers (x30)
- 5/16-18 x 1.25” carriage bolt (x8)
- 5/16-18 nylon lock nuts (x8)
- 5/16+” metal fender washers (x8)
- 5/16+” rubber fender washers (x8)
- Nylon washers (x42)
- Allen Wrench (1)

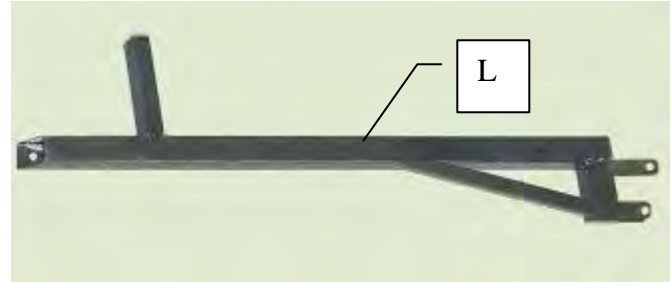


FIG. 4

NOTE THAT SCREWS AND SMALL PARTS MAY BE FASTENED TO OTHER PARTS

ASSEMBLY

Read ALL instructions through once BEFORE you do anything!

1. **Your safety is paramount.** Before assembling the rack, inventory and inspect all parts. Visually check each part to ensure it corresponds to the inventory list and check all welds for signs of cracking or weakness. If you do not have all the correct parts or if any parts appear to be defective, STOP and do NOT install the rack. Contact customer service at 1-888-877-2257 to replace missing or defective parts. If you have any questions about installation, call customer service.
2. **Assemble Handle.** Examine the 2 Handle Receivers (H). Notice also that the Handle Receivers are mirror images of each other. Lay the two Handle Receivers down on the ground with a Handle (F) between them so they form a line. Ensure that the plates with the two holes in them are on the each end and are flat on the ground. Slide each end of the Handle into the end of the Handle Receivers so that the holes in the Handle and Receivers align.
3. **Assemble movable parts.** Before attaching any of the parts to the canopy, temporarily lay out the parts shown in FIG 5, below. These parts include the Lifting Arm (A), the Resting Arm (B), the Mounting Base (C), and the Left Arm Guide (D). The numbers in Figs. 5 and 6, below, show where the parts attach to each other. To begin, attach the Lifting Arm to the Mounting Base with a 3-inch screw at the points marked “1”. Next attach the Resting Arm to the Lifting Arm with a 3-inch screw at the points marked “2. Next attach the Left Arm Guide to the Resting Arm with the screw already welded to the end of the guide at the points marked “3”. Finally, attach the Left Arm Guide to the Mounting Base with a 2-inch screw at the points marked “4”. When almost completed the parts should appear as in FIG. 6. Now add the Right Arm Guide to the mounting base.

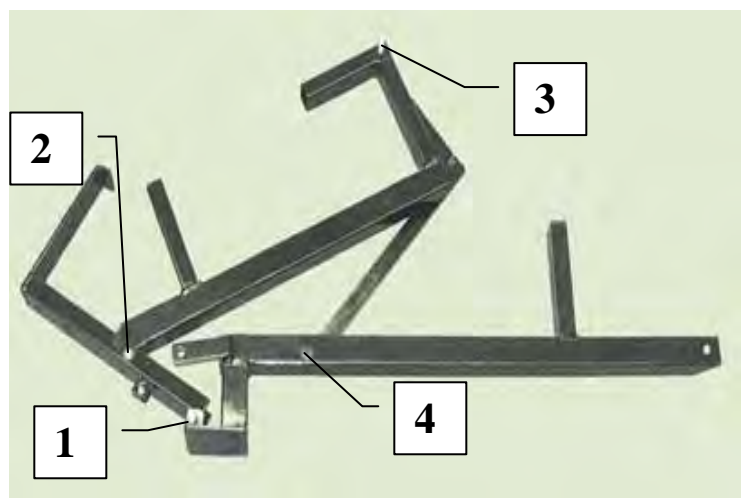
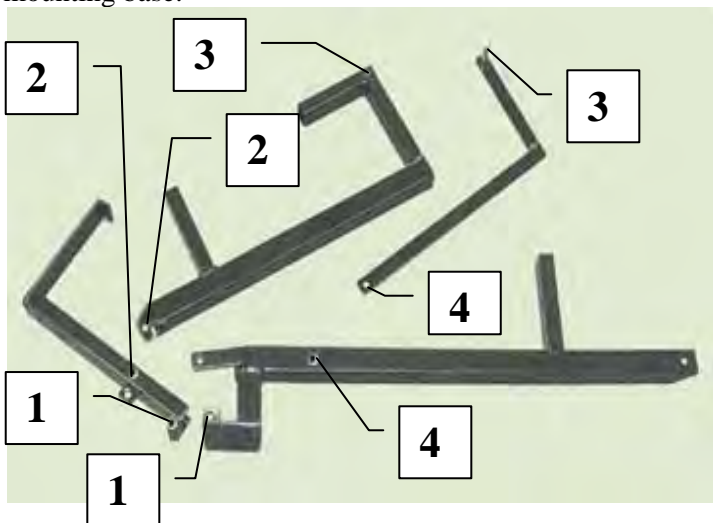
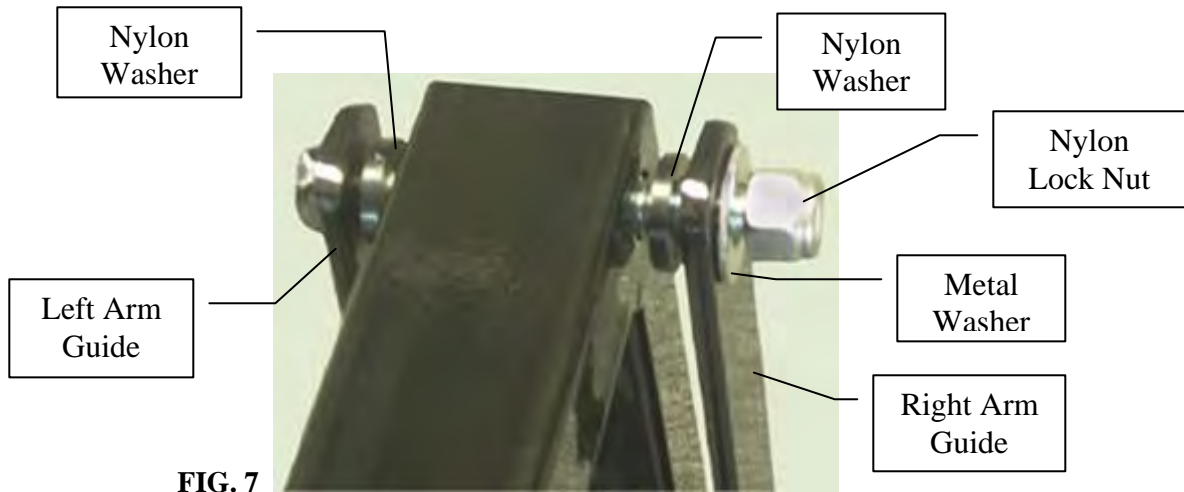


FIG. 5

FIG. 6

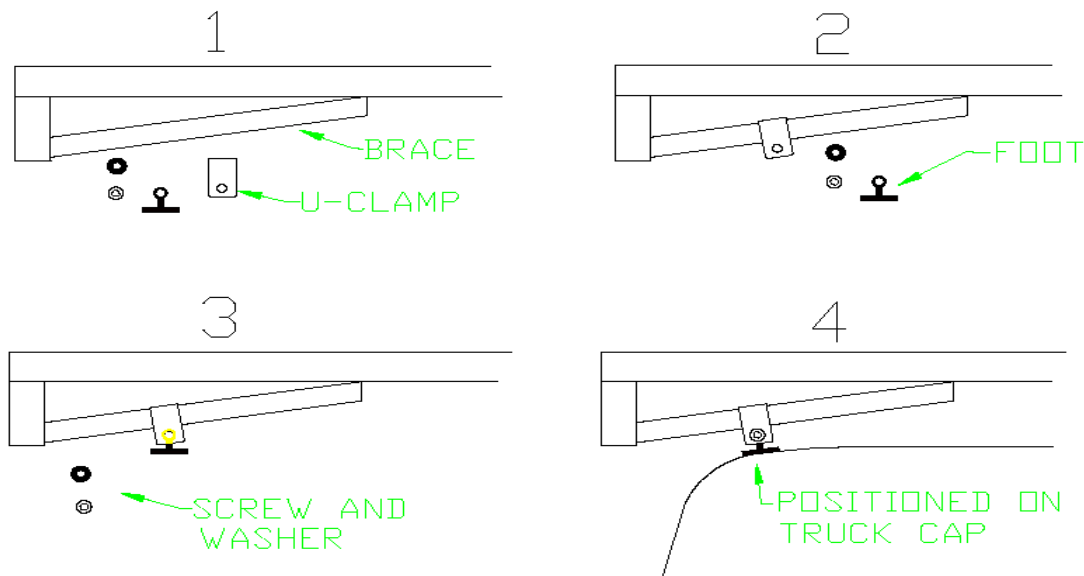
When applying washers, place nylon washers under the head of the screw and a metal washer just below the lock nut. There are additional nylon washers for attaching the Arm Guides, and their purpose is to provide a space between each Arm Guide and the Mounting Base and between each Arm Guide and the Resting Arm. Figure 7, below, shows typical installation of the Arm Guides with washers and lock nut.



4. **Merge the left and right sides of the rack.** The rack that spans the roof of your cap is formed from two parts. The Mounting Base (male side) (C) is connected to the Cross-bar Extension (K) for the 2009-2S. For the double sided carrier, model 2009-2D, the Mounting Base (male side) (C) is connected to the Mounting Base (female side) (L). Slide the Male side of the Mounting Base either into the Female side Mounting Base or into the Cross-bar Extension.

5. **Loosely attach feet.** Notice that both the Mounting Bases and the Cross-bar Extensions have a diagonal brace at the bottom. The purpose of this brace is not just to strengthen the part but also to act as the platform for connecting the Foot. Attach a Foot loosely to each brace somewhere near the center of the brace. Tighten it lightly and let it hang down as shown in Figure 8.

FIG. 8



INSTALLATION

6. **Position Rack on cap.** Place the back section of the rack on the back of the roof of your camper shell. Place it in such a way that the foot can be positioned near the edge of the cap as shown in **FIG. 8**, above. The edge of the cap is the strongest part of the roof for load bearing. Allow the end of the Mounting Base or Cross-bar Extension to overhang the edge of the cap. Gently open the lifting arm and let it hang down. Ensure that when the Lifting Arm is hanging all the way down there are several inches of clearance between it and the side of your camper shell. Adjust the location of the feet by sliding them along the bar to ensure that the carrier is high enough to easily clear the roof with at least an inch of clearance between the bottom of the carrier and the top of the cap. Once you are satisfied with the position, tighten the screw on the U-clamp with the Allen wrench to keep it from moving, then place the front section of the rack at the front of the cap in a similar manner to the back. After both the front and back sections are in position use a tape measure to measure the distance between the front and back sections on the driver side of the cap. Then measure the distance on the passenger side. Compare the two measurements and adjust the position of each section until they are the same and the two sections are parallel to each other.

7. **Fix length of Handle.** After measuring the distance between the centers of each Lifting Arm, adjust the handle assembly so that the holes in the plates at each end of the Handle receivers are the same distance apart. Also center the handle so that it goes into each receiver an equal amount on each end. Ensure that at least 4 inches of Handle extends into the receivers on both sides. Make a pencil mark on the handle at the center of hole in each Handle Receiver, then remove the handle. Using a 3/16" bit in an electric drill, make a hole through the handle at each mark, then reassemble with the Handle Receivers and align the holes. Pick up a Strap-Loop and place it down on the assembly so that the 3/8-inch hole in each loop aligns with the holes in the Handle and Receiver. Place a nylon washer under the head of a 2-inch button-head cap screw and then insert the screw down through the parts and affix them together using a metal washer and nylon lock nut on the other side as shown in Figs. 9 and 10.



FIG. 9



FIG. 10

8. **Attach Handle to Lifting Arms.** Align the two holes on each end of the handle receivers with the studs on each Lifting Arm. Orient the tube so it is parallel to the ground, and ensure that the Strap Loops are facing upward. Connect Handle and Arms by inserting the threaded studs in the Lifting Arm through the two holes in each Handle Receiver and then secure all with metal washers and nylon lock nuts. See Figs. 11 and 12. If the Lifting Arms are too far apart or too close together you may move them on the roof of the cap or you may lengthen or shorten the Handle Assembly by drilling additional holes in the Handle. You may attach a short piece of rope or strap attached to the strap loops. This may be used to pull the handle down without your having to reach as high. Lower the Lift Arms gently by the Handle and ensure again that there are several inches of space between the lifting handle and the side of the Cap. If the Handle is too close to the side loosen the U-clamp and move the Mounting Base toward the outside and then retighten.



FIG. 11

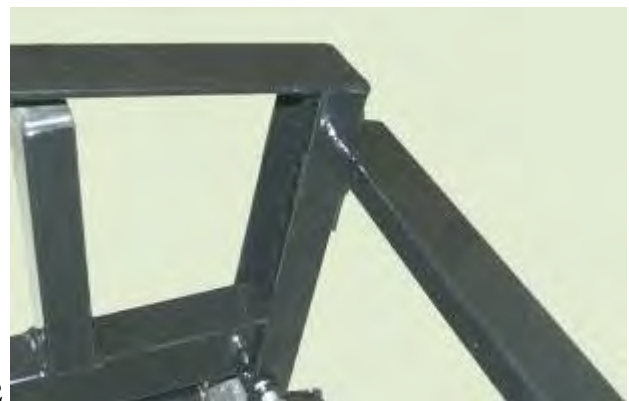


FIG. 12

9. **Attach both side of carrier and carrier to cap.** Once you are fully satisfied with the position of the Mounting Bases/Crossbar Extension you will need to set the location of the feet as well as the length of the cross-bar. Make a pencil mark through each of the holes in the four feet on the top of the cap. Also look for the hole near the end of the Cross-bar Extension or Female Mounting Base. Make a pencil mark on the Male Mounting Base through the hole near the end of the Cross-bar Extension or Female Mounting Base. After marking, remove the entire rack from the camper shell and drill a hole straight through the Male Mounting Base. Slide the two parts together and attach with a 2-inch screw with a black nylon washer on one side and a metal washer and nylon lock nut on the other. Tighten firmly until the assembly is one rigid piece as shown in **FIG. 13**.

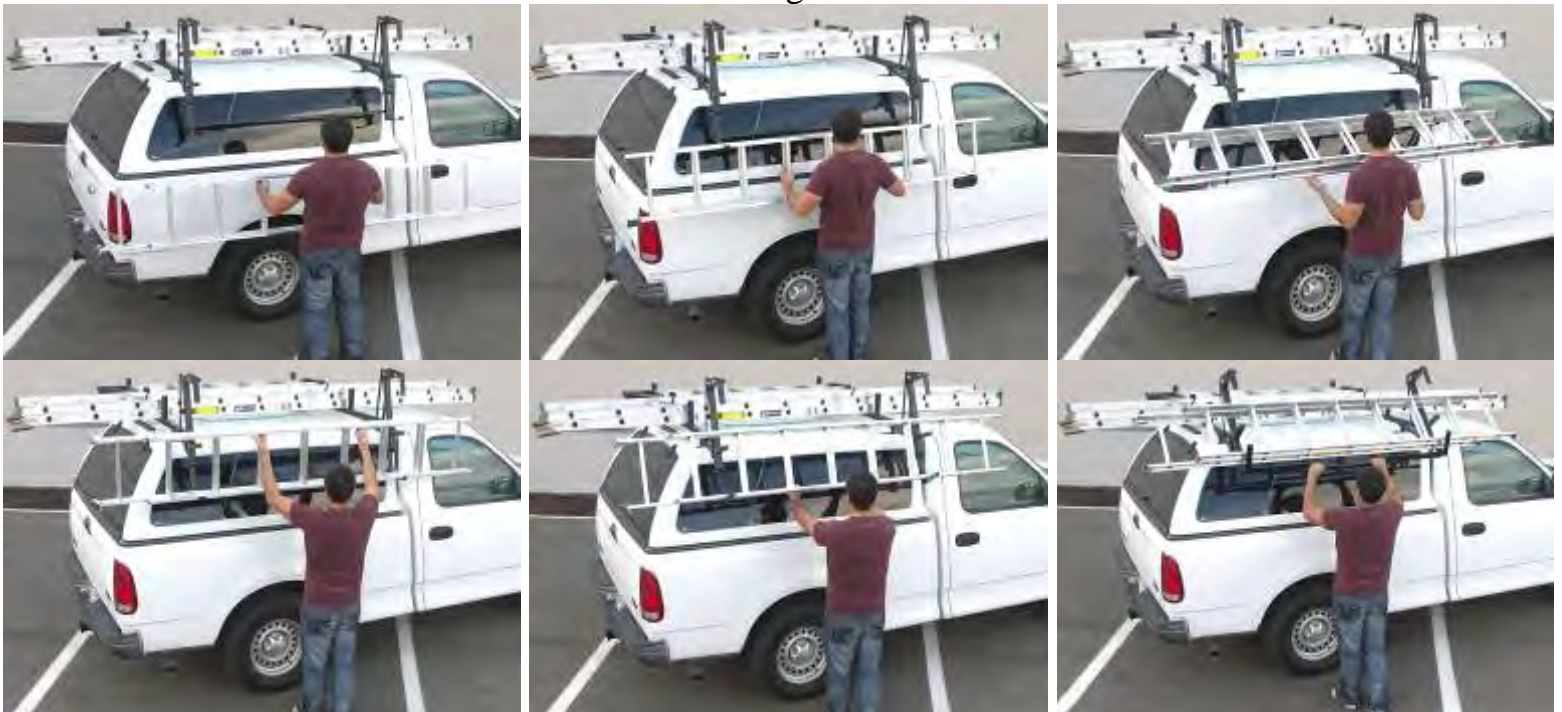


FIG. 13

Before re-installing the rack on the cap, drill a hole with an electric drill and 5/16" bit down through the top of the shell at each pencil mark on the roof. After drilling, reposition the rack so that the holes in the feet line up with the holes in the roof. For waterproof sealing, apply a good quality silicon caulk to each hole. Insert a carriage bolt down into each hole and apply a rubber washer, then a metal washer, and finally a nylon lock nut on the bottom side of the roof. Tighten securely.

10. **Final Adjustment.** It is important to ensure that both sections of the Ladder Carrier are mounted so that they are level and parallel to each other. If they are not, the Handle will not work properly to move them smoothly up and down together. After checking the alignment of the Front and Back sections of the rack, open and close the ladder carrier(s) a few times slowly using the handle to ensure that the parts are aligned and are not too close to the side of the cap. Ensure the U-clamps are fully tightened around the braces and tighten all other nuts firmly but not so tightly that they strip threads or deform parts. Do not tighten the moving parts of the rack so much that they bind together. Nylon lock nuts are used to avoid screw vibrating loose. **Please be Safe. Periodically check the tightness of all threaded parts. This is crucial to ensuring that your ladder and the carrier remain safe and fully intact on your vehicle**

Mounting a Ladder





Stage 1 – Carrier fully open, ladder hung from Lifting Arm Extension Hang the ladder horizontally on both the front and rear sections of the carrier so that it is suspended from the Lifting Arm. Ensure the ladder is centered on the rack and that a Lifting Arm goes between ladder rungs on both ends of the ladder. This way the ladder cannot fall off.

Stage 2 – Ladder rotates into lifting position Rotate the bottom side of the ladder upward over 180 degrees until the bottom side of the ladder is on top and resting against the Resting Arm.

Stage 3 – Ladder moves upward Grab the handle in the center with both hands. Lift and pull outward so that the Lifting Arms on both sides rotate upward. Note that as the handle is lifted, the bottom side of the ladder begins to move up the Lifting Arm, while the top side of the ladder slides up the Resting Arm.

Stage 4 – Ladder moves fully onto Resting Arm As the Handle is raised to nearly its highest position the lower side of the ladder slides onto the Resting Arm.

Stage 6 – Ladder is fully closed When handle finishes its upward motion, both sides rest fully on the Resting Arm.

Stage 7 – Carrier is locked When the carrier is closed, place a clevis pin or padlock through the locking eyes to prevent movement of the Mounting Base and Lifting Arm as shown.

The vehicle must not be moved without the carrier being fully locked.