



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

The Lock and Load Ladder Carrier for vans is a rack designed to mount to the rain gutters of commercial vans as shown in the below photos. The rack can carry one ladder not exceeding 50 lbs in each side of the rack with the load distributed evenly between the front and back portions of the rack. Model 2006-LLVS has a ladder carrier on one side and model 2006-LLVD has a carrier on both sides. In addition to transporting ladders in the carrier, up to 200 lbs of cargo may be loaded on the available space on the cross-bar extension, on model 2006-LLVS; however, the maximum collective weight of all cargo must not exceed 250 lbs nor can it exceed the maximum strength of your rain gutters. No more than 125 lbs can be placed on either cross bar and no more than 50 lbs can be concentrated on any space less than 12 inches wide on either cross-bar. **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 30 lbs. is concentrated on either arm and do not carry ladders with a carrying length exceeding twice 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. **Merchandise must be returned in the original box and packaging.** See return policies and procedures at <http://www.usrack.com/service.shtml>

INVENTORY

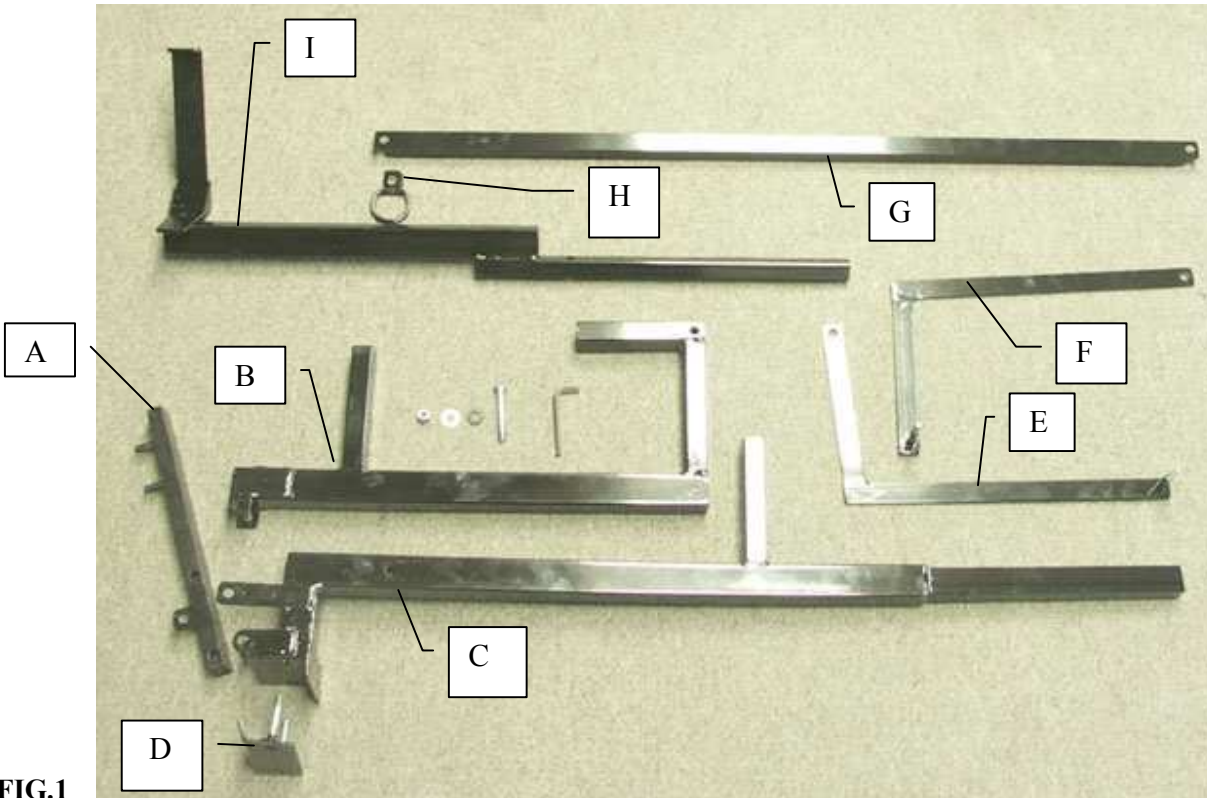


FIG.1

If you have the Lock and Load Ladder Carrier for Vans (**single-side**, model 2006-LLVS) you should have the following parts as shown in FIG. 1:

A. R Lifting Arm (x2) B. Resting Arm C. Mounting Base (male side) (x2) D. Clamp Plate (x4) E. Right Arm Guide (x2) F. Left Arm Guide (x2) G. Handle (x1) H. Strap Loop (x2). Handle Receiver (mirror set of 2) (x 1). In addition, you will also have the Cross-Bar Extension (x2) as shown in Fig. 2.

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)
- Nylon washers (16)
- Nylon Lock nuts (18)
- Metal washers (18)
- Allen Wrench (1)

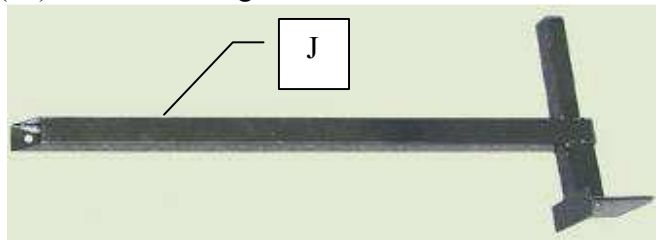


FIG. 2

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 2006-LLVD) you should have the following parts as shown in FIG. 1:

A. R Lifting Arm (x4) B. Resting Arm (x4) C. Mounting Base (male side) (x2) D. Clamp Plate (x4) E. Right Arm Guide (x4) F. Left Arm Guide (x4) G. Handle (x2) H. Strap Loop (x4). Handle Receiver (mirror set of 2) (x 2). In addition, you will also have the 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)
- Nylon washers (30)
- Nylon Lock nuts (26)
- Metal washers (26)
- Allen Wrench (1)

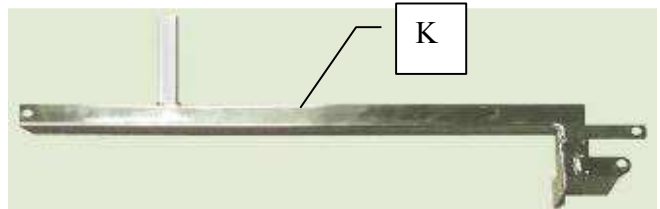


FIG. 3

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 Assembly.** Examine the 2 Handle Receivers (I). Notice also that each end of the Handle Receivers is a mirror image of the other. Lay the two Handle Receivers down on the ground with the Handle (G) 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. 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. 2 and 3.



FIG. 4



FIG. 5

3. **Temporarily attach movable parts.** Before attaching any of the parts to the van, temporarily lay out the parts shown in FIG 6, below. These parts include the Lifting Arm (A), the Resting Arm (B), the Mounting Base (C), and the Left Arm Guide (D). These parts may be temporarily assembled by using screws without nuts to demonstrate how each part attaches to two other parts. The numbers in Figs. 6 and 7, 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 completed the parts should appear as in FIG. 7. Note that the Right Arm Guide is not attached at this time in order to save time. Now disassemble these parts.

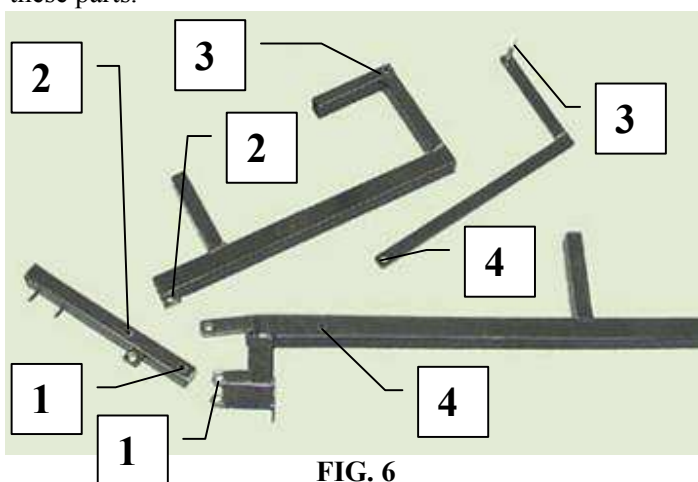


FIG. 6

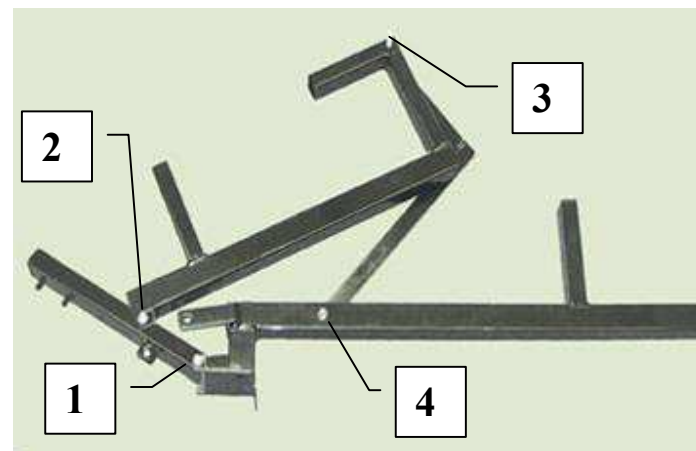


FIG. 7

4. **Assemble Cross bars.** As shown in **FIG. 8** and **FIG. 9**, below, the cross-bars that fit across the top of your van are formed from two parts. The Mounting Base (male side) (C) is connected to the Cross-bar Extension (J) for the LLVS. For the double sided carrier, model LLVD the Mounting Base (male side) (C) is connected to the Mounting Base (female side) (K). Before connecting the two sides use a tape measure to measure across the top of your van where you intend to place the cross-bars. The measurement should be from the center of the rain gutter on one side of the van to the center of the rain gutter on the other at the point you which to place the front assembly. This is usually just behind the front door. This measurement will be used to set the approximate distance between the vertical plates at the bottom of the Male Mounting Base and the bottom of the Cross-bar Extension or Female Mounting Base. These plates will rest on the center of the rain gutter on each side of the van.



FIG. 8



FIG. 9

INSTALLATION

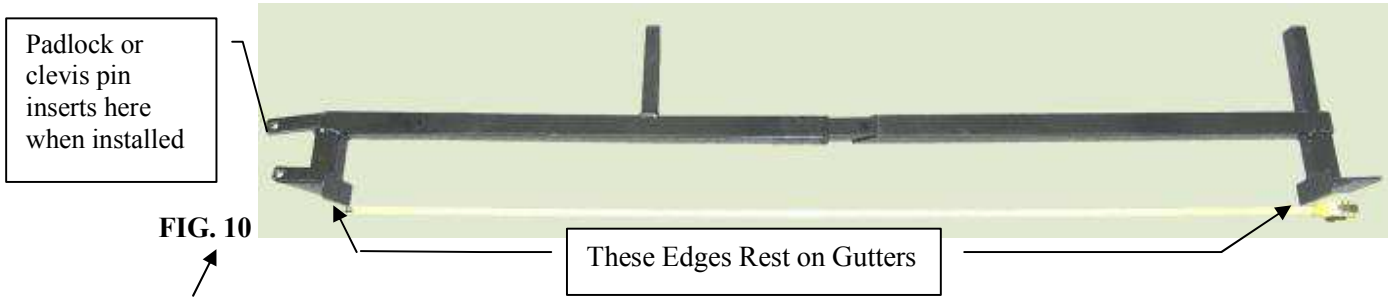


FIG. 10

5. **Position Rack on van.** Consider where to position both the front and back cross-bars of the rack on your van. The front cross-bar should be positioned just behind the front doors of the van. The back cross-bar should be positioned about 78 inches behind it. Place each cross-bar so that the vertical plate at the bottom of each end rests on the center of the rain gutter. Once you are satisfied with the position, you will need to set the length of the cross-bar permanently. Look for the hole near the end of the Cross-bar Extension or Female Mounting Base. This is done by making a 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 assembly from the van 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. 11**.



FIG. 11

6. **Loosely attach Mounting Base and Backing Plate.** Refer to Figs. 12 and 13 and see how the Mounting Base (C) and the Clamp Bottom (F) are connected. FIG 11 shows how these parts mount to the rain gutters of commercial vans. Not all rain gutters have exactly the same shape, but the method of installation is the same. Place the Cross-bar assembly atop the van so that the bottom of the vertical edge of the Mounting Base and Cross-bar Extension sit fully on the rain gutters. After placement, insert the threaded portion of the Clamp Bottom up through the two holes on each

side of the cross-bar. Place a metal washer on each screw and then screw on a nylon lock nut. Tighten firmly enough so that the cross-bars will not come off the truck, but loosely enough so you can slide them along the gutter.

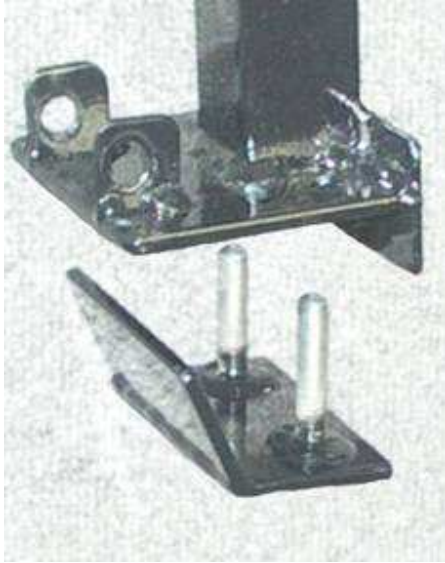


FIG. 12

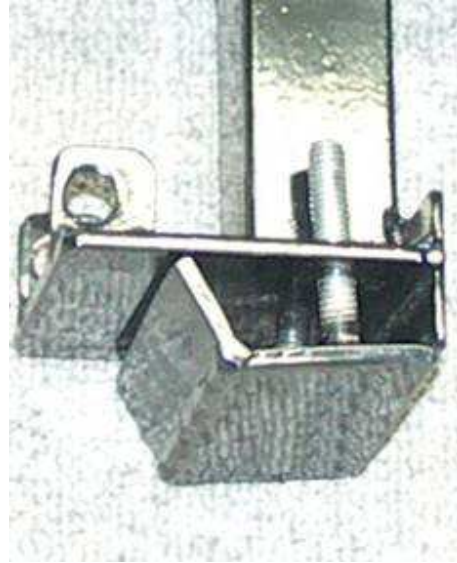


FIG. 13

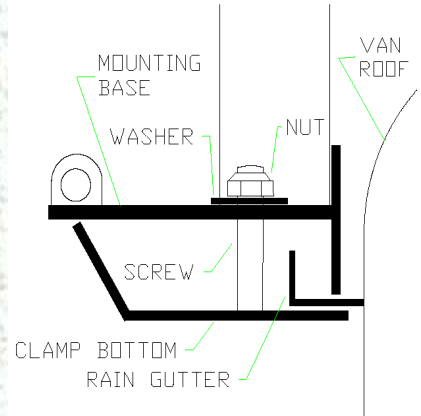


FIG. 14

7. **Attach Movable Parts.** Attach the Lifting Arms, the Resting Arms, Mounting Bases, and Arm Guides together as shown in **Figs. 6 and 7**, above. 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 15, below, shows typical installation of the Arm Guides with washers and lock nut.

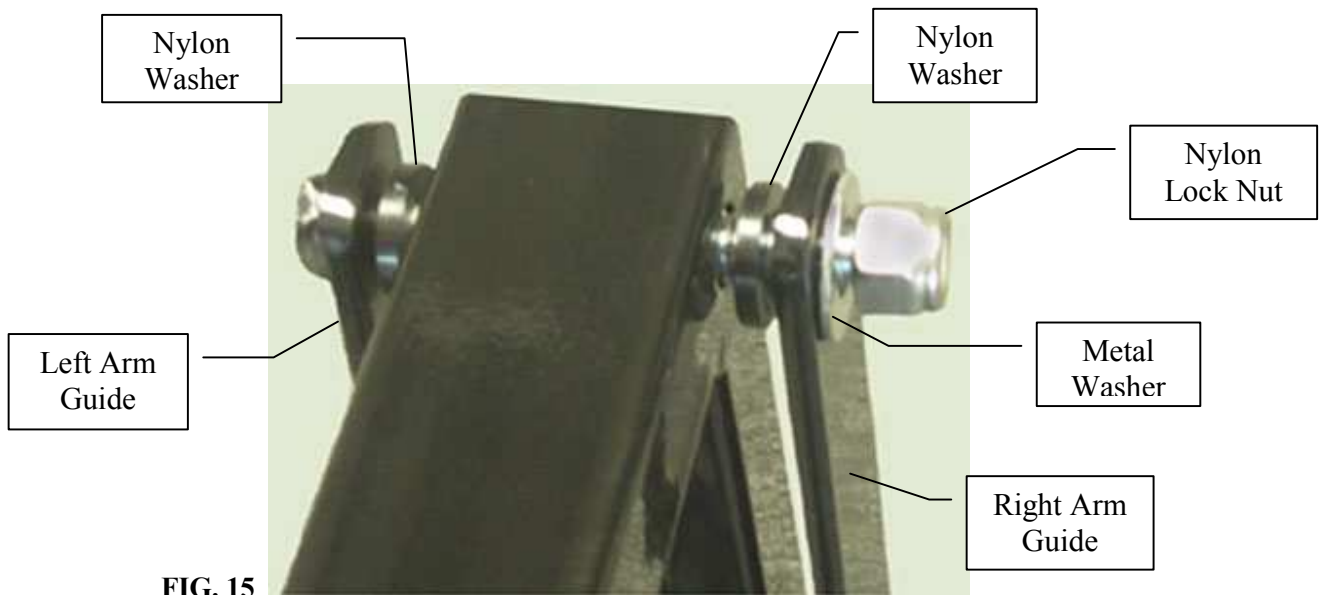


FIG. 15

10. **Attach Handle Receiver.** Align the two holes on each end of the assembled handle receiver assembly with the studs on each Lifting Arm. Orient the length of the tube so it is parallel to the ground. Ensure that the Strap Loops are facing upward. Connect these by inserting the threaded studs in the Lifting Arm through the two holes in the Handle Receiver and then secure all with a metal washer and nylon lock nut. See **Figs. 16 and 17**. If the Lifting Arms are too far apart or too close together you may move them on the van or you may lengthen or shorten the Handle Assembly by drilling additional holes in the Handle. Ensure that at least 4 inches of Handle remain within the receivers on both sides. 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.



FIG. 16



FIG. 17

13. **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. It may be necessary to slide parts forward or backward along the gutters to ensure everything is square. Ensure the clamp bottoms are fully tightened against the rain gutters 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 in FIG. 10. The vehicle must not be moved without the carrier being fully locked.