



Sturdy-Lite

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RAMP STORAGE RACK –INSTALLATION INSTRUCTIONS

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ATTENTION:

Before using Sturdy-Lite Ramp Storage Rack with Sturdy-Lite aluminum Loading Ramps, read this Manual in its entirety. The end-user (“you”), must ensure that all Ramp Storage Racks are installed and used, per the procedures described within this Manual. If you are unsure of how to follow any part of this Manual, contact the distributor from whom you purchased your Ramps and/or Ramp Storage Racks, with details on your trailer (make, model, requested measurements, etc) so that they may properly advise as to selection and usage of parts specific to your Trailer.



WARNING:

Improper installation of a Ramp Storage Rack may result in insecure trailer cargo which can result in serious property damage, personal injury and/or death. If the procedures described within this Manual cannot be followed at any time, you are responsible for ceasing installation and/or use of all Ramp Storage Rack until such procedures can be resumed. **STURDY-LITE DOES NOT ASSUME ANY RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE CAUSED BY INCORRECT INSTALLION AND/OR USE OF RAMP STORAGE RACK ASSEMBLIES.**



WARNING:

You must exercise caution at all times when installing and using Ramp Storage Racks per the procedures described in this Manual. If, at any point during a procedure in this Manual you are unable to continue unassisted, it is your responsibility to discontinue the procedure and seek assistance from a qualified person or persons.



NOTICE/WARNING:

Upon initial possession, and before & after each session of transporting your Ramp(s) as-stored within Ramp Storage Racks as-installed per this Manual, you must visually inspect each Ramp Storage Rack assembly along all visible surfaces and all weld junctions for any signs of material yielding (i.e. bent/deformed metal) and/or failure (i.e. cracking/tearing of material). If you observe any yielding and/or failure whatsoever, you must avoid using such Ramp Storage Rack assembly indefinitely, and contact Sturdy-Lite or a local distributor to inquire about a new unit.

Pre-Install Application Survey

Components included per set (2 pairs/set, stores four [4] eight-foot ramp sections):
(Qty: 2) Left-side ramp storage brackets, as depicted in Figure 1:

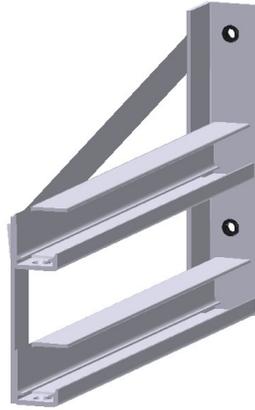


Figure 1 – Basic Perspective View of Left-side Ramp Storage Bracket

(Qty: 2) Right-side ramp storage brackets, as depicted in Fig. 2:

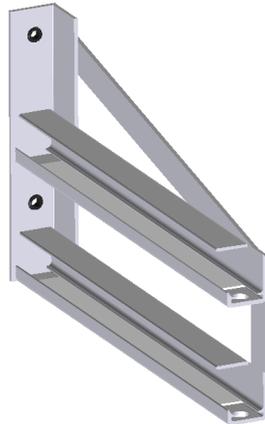


Figure 2 – Basic Perspective View of Right-side Ramp Storage Bracket

(Qty: 4) Ribbed rectangular rubber gasket strips, as depicted in Fig. 3:

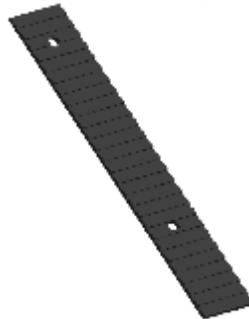


Figure 3 – Basic Perspective View of Rubber Gasket Strip w/ bolt holes punched

(Qty: 8) 5/8"-dia x 2"length SAE Grade 5 steel coarse thread Hex bolts, depicted in Fig. 4:



Figure 4 – Head view of SAE Grade 5 Bolt, where the grade of '5' is indicated by 3 radial lines

(Qty: 8) 5/8" SAE Grade 5 hex nut

(Qty: 8) 5/8"-ID steel washer

(Qty: 8) 5/8"-ID lock washer

(Qty: 4) 7/8"-dia, 10-1/16"L Lock Rod, depicted in Fig. 5:

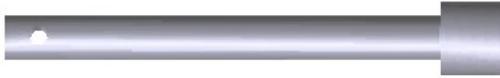


Figure 5 – Front/Side View of 7/8"-dia rod

Construction supplies needed for installation (not included):

(Qty: 1) Powered drilling tool with enough torque to drill through the trailer body's main beams

(Qty: 1) 5/8"-dia. (~16 mm) drill bit

(Qty: 1) Tape measure, at least 10' long

(Qty: 1) bubble/carpenter's level

(Qty: 1) Permanent marker, used for marking drill hole locations on side of trailer's main frame

(Qty: 1) Torque wrench* w/ torque-measuring capability, used for securing bolts on trailer receiver

***NOTE: Do not use an extension on the torque wrench, as the actual torque applied to the bolt will not match the measured torque**

(Qty: 1) Open-end or box-end wrench used to temporarily restrain each nut as bolt is secured

Supplies needed for theft-deterrence (not included):

(Qty: 4) Commercially-available padlocks (keyed, combination, etc)

→ If all of the aforementioned components and supplies are accounted for, installation can proceed according to the following Section

Installation Procedure

1) With tape measure in hand, locate two separate and conveniently-accessed spans of area along the trailer's main beam, each at least 98" long – Note that the 28" depth of the storage bracket receivers allows for the ramp storage assembly to be installed in front of and around trailer outriggers on most trailer makes and models, as seen in Fig. 6:



Figure 6 – Perspective View of trailer frame Outriggers

Also note that modification or removal of a trailer outrigger voids the OEM warranty for most (if not all) trailers, so avoid performing such an operation when selecting locations for the ramp storage rack assemblies to be installed. If the location of the 98"-wide span chosen for the ramp storage racks are not within an area where there is a trailer outrigger, you may have approximately 8" of excess sliding room depth for the ramps in the storage bracket arms – this is an excessive amount of free space that compromises the structural safety of the storage racks. In this case, you must contact your distributor in order to obtain an appropriate ramp storage rack set.

- 2) Of the areas chosen, make sure that the left- and right-side boundaries of each 98" span have a flat, level surface at least 17" high to locate bracket back supports (3"-wide L-shaped piece w/ predrilled holes)
- 3) Using the permanent marker or other marking device, mark the first point at the left-side boundary of one of the 98"-wide areas chosen, as far down on the trailer's main beam as possible, but no less than 5-3/4" from the bottom edge of the main beam
- 4) From the point marked in step (3), measure straight up 9-1/2" using the bubble/carpenter's level and make a mark for the second drill hole location. *For the next step, you may need a helper to hold the measuring tape end at the point just marked*
- 5) From the point marked in step (4), measure exactly 95-1/8" horizontally and to the right using the tape measure. Making sure that the tape measure is pulled taut (free of slack) and exactly horizontal with respect to the main beam (using the bubble/carpenter's level), mark the third point at the 95-1/8" mark
- 6) From the point marked in step (5), measure straight down 9-1/2" using the bubble/carpenter's level and make a mark for the fourth drill hole
- 7) Verify that the distance from the fourth point to the main beam's bottom edge is equal to the distance from the first point to the MB's bottom edge
- 8) Carefully and slowly drill a hole at each of the four marked points using the drill and 5/8"-dia bit. Try to keep the drill as straight and level as possible throughout the process of drilling each hole

11) Insert a ramp section into the lower receiver position/slot in the storage rack, as depicted in Fig. 8:

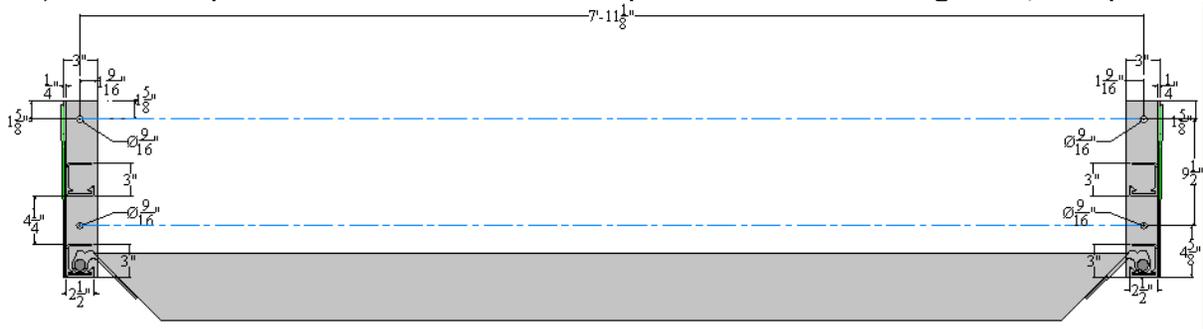


Figure 8 – Front View of Ramp Storage Rack w/ ramp section stored in lower receiver position

Slide the ramp far back enough so that its forward edge is behind the pre-drilled 1”-dia hole in the receiver arm, as depicted in Fig.9 below:

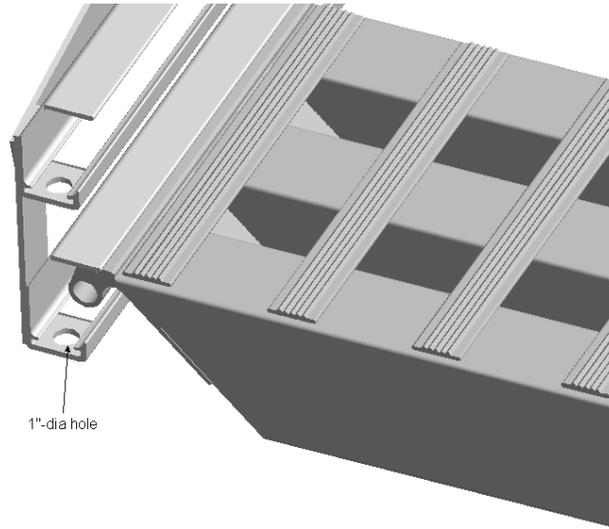


Figure 9 – Perspective View of ramp section installed in lower receiver slot, past the pre-drilled 1”-dia hole

12) Now insert another ramp section into the upper receiver position/slot on the storage rack, as depicted in Fig. 10 below:

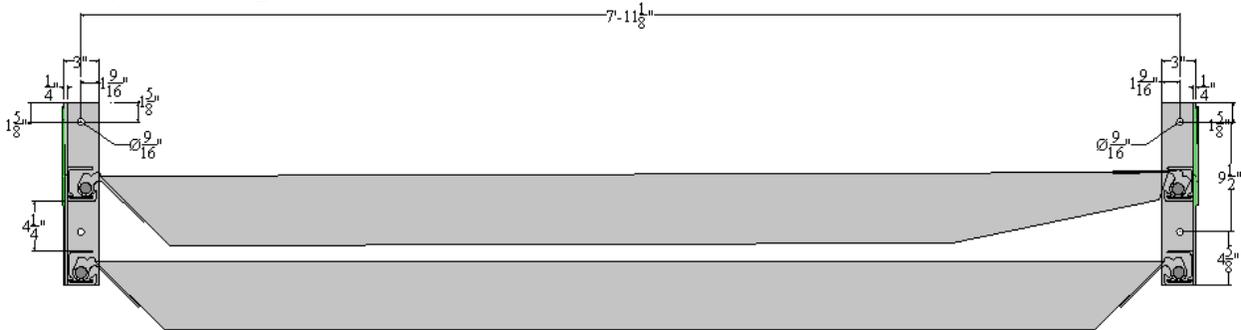


Figure 10 – Front View of Ramp Storage Rack w/ ramp sections stored in lower & upper receiver positions

As instructed in Step (11), make sure that this ramp section is slid far back enough to clear the 1”-dia pre-drilled hole in the receiver arm. Note that the ramp section stored in the upper receiver position/slot in Fig. 18 is of a different profile than the one stored in the lower position, yet the storage configuration is arbitrary; that is, it does not matter which ramp section goes into the lower position or the upper – all four of the ramp sections in a 16’ Double Ramp set are interchangeable with one another in the ramp storage rack.

13) Insert one Lock Rod through each of the two inline 1”-dia holes on both of the ramp storage rack sides, as depicted in Fig. 11 below:

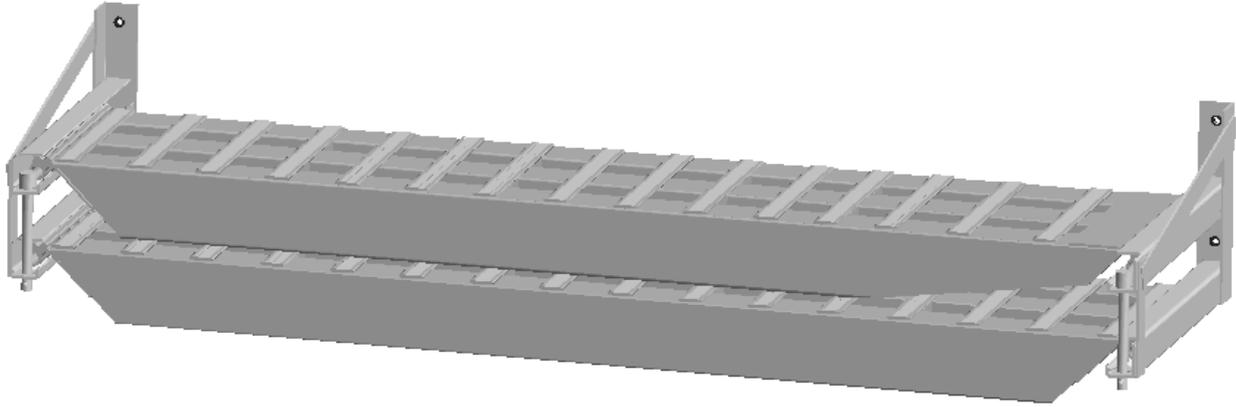


Figure 11 – Completed Ramp Storage Rack Assembly

14) Insert a padlock shackle through each pre-drilled 3/8”-dia hole on the supplied 7/8”-dia rod and secure the padlock to deter theft of the ramps

15) Inspect the amount of free space that each ramp section’s end supports have available in the Ramp Storage Rack receiver arms they are contained within. Again, if the installed locations of 97” span width for the ramp storage racks are not within an area where there is a trailer outrigger, you may have approximately 8” of sliding room for the ramps – this is an excessive amount of free space that compromises the structural safety of the storage racks. In this case, the dealer needs to contact Sturdy-Lite for a different ramp storage rack set with shorter receiver arms

16) Repeat steps (4) through (15) for the other pair of ramp storage racks and ramp sections

Usage and Maintenance Requirements

Usage:

1) each Ramp unit stored within a Ramp Storage Rack must have both end adapters fully nested within the interior boundaries of the receiver arms, and the Lock Rod has passed through both the upper and lower 1”-dia holes near the front of each Bracket's receiver arm pair, as shown in Figure 12 previously

Maintenance:

1) You must maintain a torque loading range of 55-62 lbs/ft for the bolt/washer/nut sets used to fasten each rack to the Trailer's main beam. Each Ramp Storage Rack was designed and manufactured using ASTM International and AWS written quality control specifications and procedures.

2) All Ramps and Ramp Storage Racks are to be regularly inspected per the directive specified in the Notice/Warning listed in the Important Safety Notices section