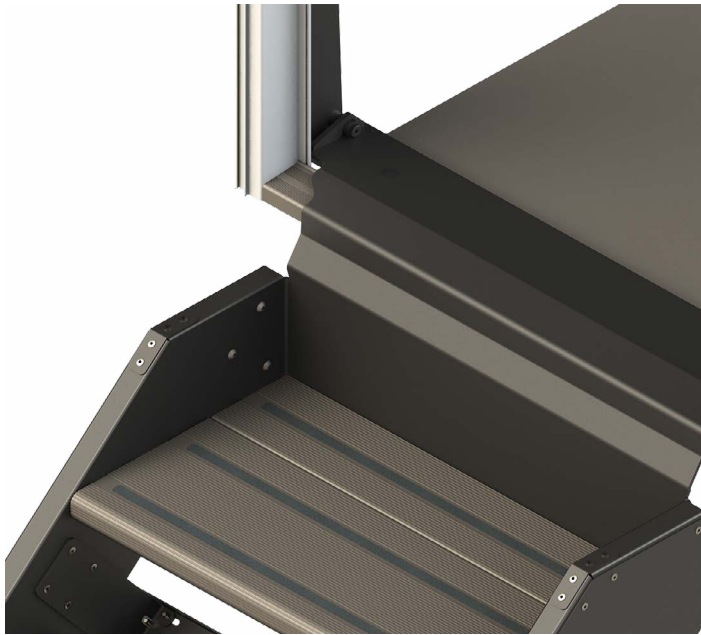




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**Solid
Step®**



SolidStep® 3.0 Lift Assist Conversion

Installation and Owner's Manual

(For Aftermarket Applications)

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Kit #	Information
733937	Narrow Lift Assist Upgrade Kit
733939	Wide Lift Assist Upgrade Kit



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Purchase Verification

The Lift Assist Upgrade Kit will **ONLY** work with triple and quad SolidStep 3.0 (**Fig.1**). The Lift Assist will **NOT** work with double SolidStep 3.0 or with previous versions of SolidStep - including SolidStep Gen 2 (**Fig.2**). Lift Assist will not work with any other LCI step or any other brand of step.

NOTE: SolidStep 3.0 has solid side rails (**Fig. 1**). SolidStep 2.0 has open side rails (**Fig.2**).

SolidStep 3.0



Fig.1

SolidStep Gen 2



Fig.2

To verify you have the correct Lift Assist assembly for your SolidStep (If SolidStep is already on your trailer)

A. Measure the tread width on the SolidStep (**Fig.3**)

B. Measure the width of the door frame (**Fig. 4**) and **round up** to the nearest even number to obtain the rough opening.

I. If the tread width is 20 1/8" and the rough opening is 26" - 29" (i.e. 26" or 28") the step and door are compatible with Narrow Lift Assist Upgrade Kit PN [733937](#).

II. If the tread width is 24 1/8" and the rough opening is 30" - 33" (i.e. 30" or 32") the step and door are compatible with Wide Lift Assist Upgrade Kit PN [733939](#).

NOTE: Doors with 34" or 36" rough openings are not compatible with Lift Assist.

NOTE: Tread width of 18 1/8 or 22 1/8 are not compatible with Lift Assist.

NOTE: Single and double SolidSteps are not compatible with Lift Assist.

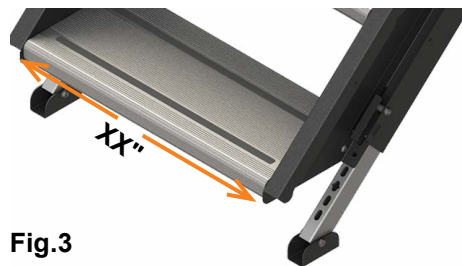


Fig.3

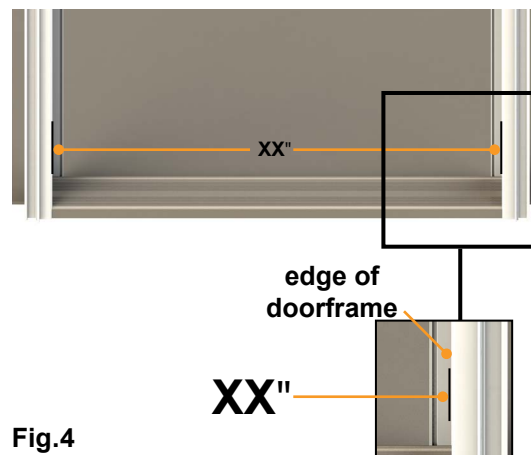


Fig.4



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Compatibility verification if you have purchased both a SolidStep and Lift Assist Kit to install

There are two versions of SolidStep - a Fixed Latch version (**Fig.5**) and an Adjustable Latch version (**Fig.6**).

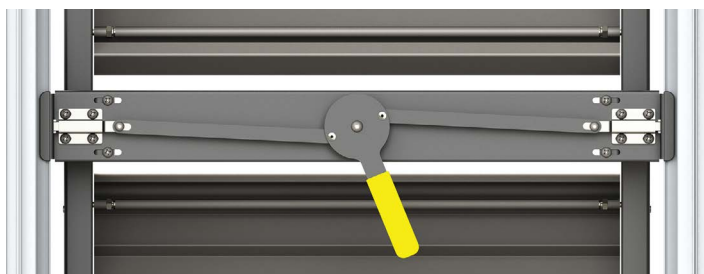


Fig.5



Fig.6

Tread/Latch	SolidStep	Part #	Lift Assist Kit
Triple/Fixed	26"	678040	733937 Narrow
	28"	678041	733937 Narrow
	30"	678044	733939 Wide
	32"	678047	733939 Wide
Triple/Adjustable	26"	791572	733937 Narrow
	30"	791573	733939 Wide
Quad/Fixed	26"	678024	733937 Narrow
	28"	678025	733937 Narrow
	30"	678027	733939 Wide
	32"	678028	733939 Wide
Quad/Adjustable	26"	791574	733937 Narrow
	30"	791575	733939 Wide

Introduction

The SolidStep 3.0 Lift Assist Conversion Kit is an assembly that can be added to an existing triple or quad SolidStep 3.0 to assist in raising and lowering the steps. When replacing an existing step with SolidStep 3.0 with Lift Assist, the SolidStep 3.0 and the Lift Assist Conversion Kit are purchased separately.

Safety

⚠ WARNING

FAILURE TO FOLLOW THE INSTRUCTIONS PROVIDED IN THIS MANUAL MAY RESULT IN DEATH, SERIOUS INJURY, TRAILER DAMAGE OR VOIDING OF THE PRODUCT WARRANTY.

⚠ WARNING

ALWAYS WEAR EYE PROTECTION WHEN PERFORMING SERVICE OR MAINTENANCE TO THE TRAILER. OTHER SAFETY EQUIPMENT TO CONSIDER WOULD BE HEARING PROTECTION, GLOVES AND POSSIBLY A FULL FACE SHIELD, DEPENDING ON THE NATURE OF THE SERVICE.

⚠ WARNING

DO NOT EXCEED SPECIFIED WEIGHT LIMITS. EXCEEDING WEIGHT LIMITS MAY CAUSE PRODUCT DAMAGE AND/OR PERSONAL INJURY.

⚠ CAUTION

MOVING PARTS CAN PINCH, CRUSH OR CUT. KEEP CLEAR AND USE CAUTION.

⚠ CAUTION

THE DEPLOYMENT AND RETRACTION OF THE STEP ASSEMBLY CAN CAUSE INJURY IF PROPER PRECAUTIONS ARE NOT TAKEN.

SolidStep® 3.0 Lift Assist Conversion

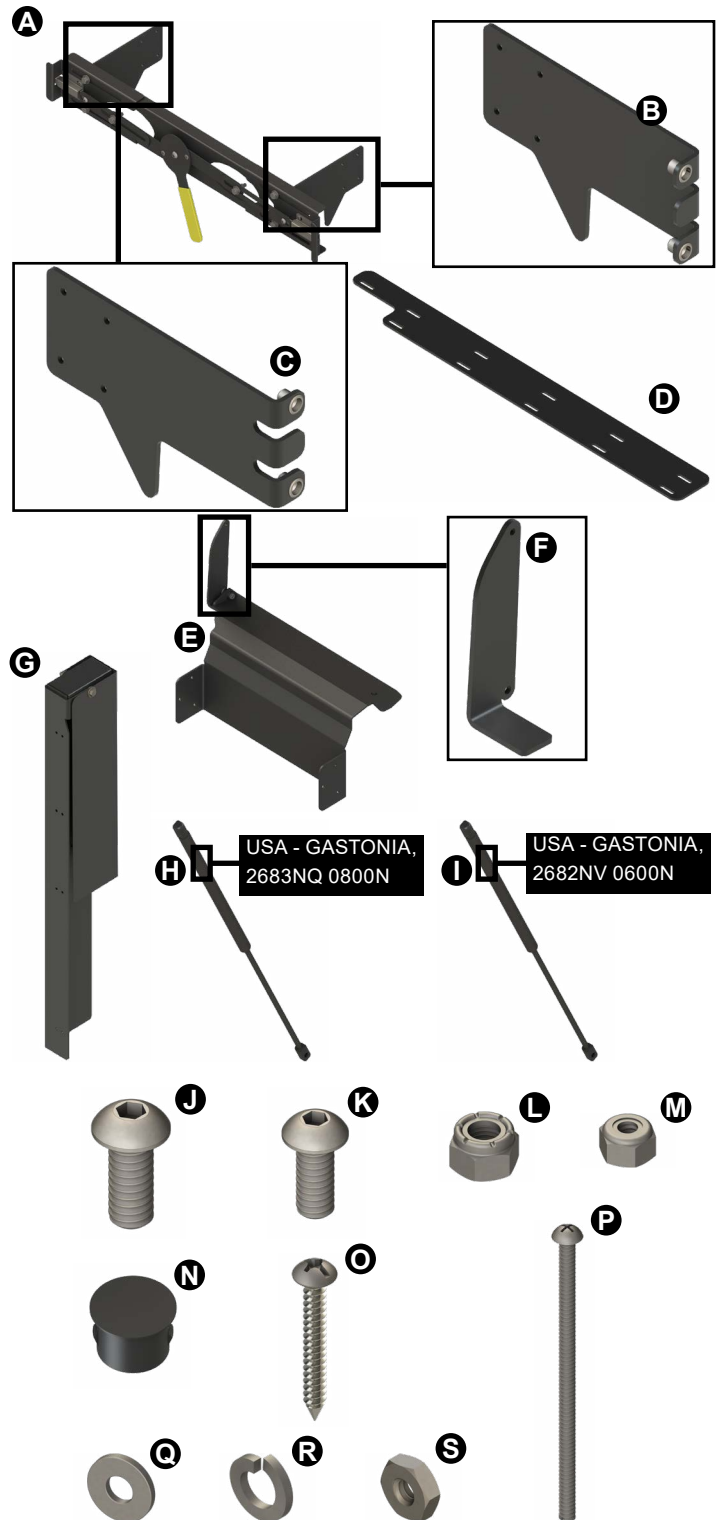
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Parts List (Narrow)

SolidStep 3.0 Lift Assist Conversion Kit Part #733937			
Letter	Part#	Description	Qty.
A	730045	Lift Assist Transport Latch (Narrow)	1
B	707050	Right Side Angle	1
C	707049	Left Side Angle	1
D	687974	Backer Plate	1
E	732195	Threshold	1
F	675341	Cam Angle Load Bracket	1
G	732268	Lift Assist Bracket	1
H	689044	800N Strut (Quad Step)	1
I	690006	600N Strut (Triple Step)	1
J	688292	Screw, 5/16" - 18 x 3/4"	6
K	429169	Screw, #10 - 24 x 1 1/2"	8
L	118043	Nylock Nut, 5/16" - 18	6
M	378213	Nylock Nut, #10 - 24	8
N	675828	Hole Plug, 5/8" Diameter	2
O	723225	Screw, #10 - 13 x 1 1/4"	19
P	702570	Bolt, #10 - 24 x 4"	11
Q	231161	Washer, #10	11
R	383612	Lock Washer, #10 x .34	11
S	383610	Nut, #10 - 24	11

NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.





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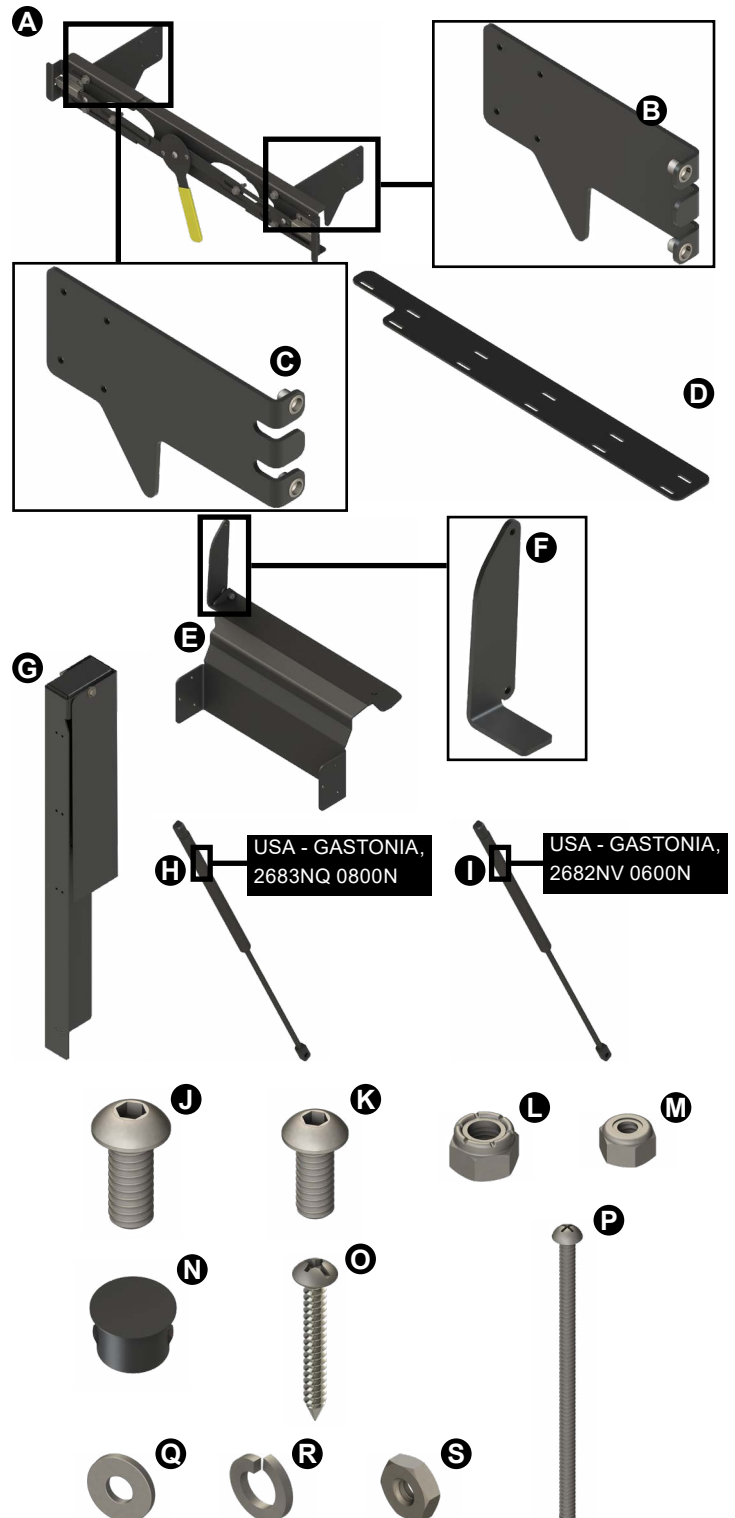
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Parts List (Wide)

SolidStep 3.0 Lift Assist Conversion Kit Part #733939			
Letter	Part#	Description	Qty.
A	730046	Lift Assist Transport Latch (Wide)	1
B	707050	Right Side Angle	1
C	707049	Left Side Angle	1
D	675345	Backer Plate	1
E	732196	Threshold	1
F	675341	Cam Angle Load Bracket	1
G	732268	Lift Assist Bracket	1
H	689044	800N Strut (Quad Step)	1
I	690006	600N Strut (Triple Step)	1
J	688292	Screw, 5/16" - 18 x 3/4"	6
K	429169	Screw, #10 - 24 x 1 1/2"	8
L	118043	Nylock Nut, 5/16" - 18	6
M	378213	Nylock Nut, #10 - 24	8
N	675828	Hole Plug, 5/8" Diameter	2
O	723225	Screw, #10 - 13 x 1 1/4"	19
P	702570	Bolt, #10 - 24 x 4"	11
Q	231161	Washer, #10	11
R	383612	Lock Washer, #10 x .34	11
S	383610	Nut, #10 - 24	11

NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.





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Resources Required

- 1 to 2 people, depending on task
- Cordless or electric drill or screw gun
- Appropriate drive bits
- Drill bits $\frac{5}{32}$ " (0.16") and $\frac{7}{32}$ " (0.22")
- Tape measure
- $\frac{3}{8}$ " wrench
- $\frac{1}{2}$ " wrench
- $\frac{1}{8}$ " hex key
- $\frac{3}{16}$ " hex key

Preparation

Prior to Installation

The existing SolidStep will need to be removed from the trailer and then converted with the Lift Assist kit or the new SolidStep 3.0 will need to be converted prior to installation on the trailer.

1. Make sure that the trailer is on level ground.

NOTE: The door and frame have been omitted from figures for clarity.

Removing Existing SolidStep

1. Remove the 10 screws or bolts, washers, and nuts located on the hinge plate (**Fig.7A**).

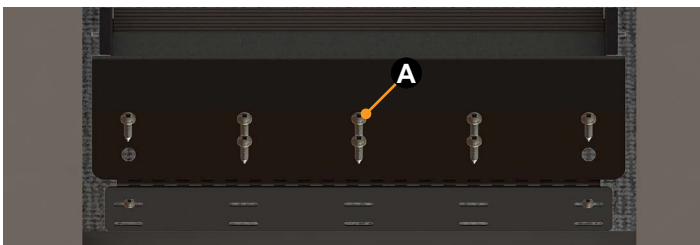


Fig.7

2. Remove the SolidStep out of the door frame, carefully lowering the SolidStep to the ground.

3. Relocate SolidStep to a workspace for modification to add the conversion kit.

⚠ CAUTION

DO NOT USE ANY POWER TOOLS WHEN THE REMOVING SCREWS IN STEPS 4 AND 5. USE OF POWER TOOLS INCREASES RISK OF DAMAGING THE HEX SOCKETS ON THE SCREW HEADS.

4. Remove the threshold by unscrewing the six screws, three on each side, with a $\frac{3}{16}$ " hex key and $\frac{1}{2}$ " wrench (**Fig.8A**).

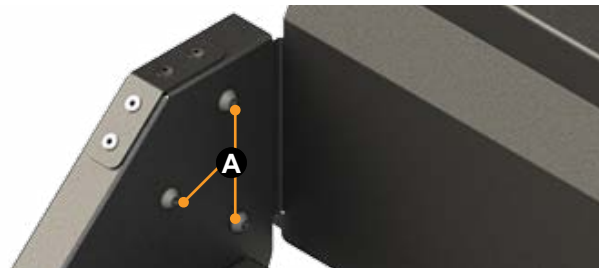


Fig.8

5. Remove SolidStep transport lock by unscrewing eight screws, four on each side (**Fig.9A**), on the inside of the SolidStep with a $\frac{1}{8}$ " hex key and $\frac{3}{8}$ " wrench.



Fig.9

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Assembling SolidStep Lift Assist

NOTE: Your upgrade kit includes new replacement hardware for all of the fasteners that were disassembled and removed in the previous section.

1. Install new adjustable transport latch for lift assist steps (Parts List item A) using new screws (item K, **Fig.10A**) and nuts (item M).

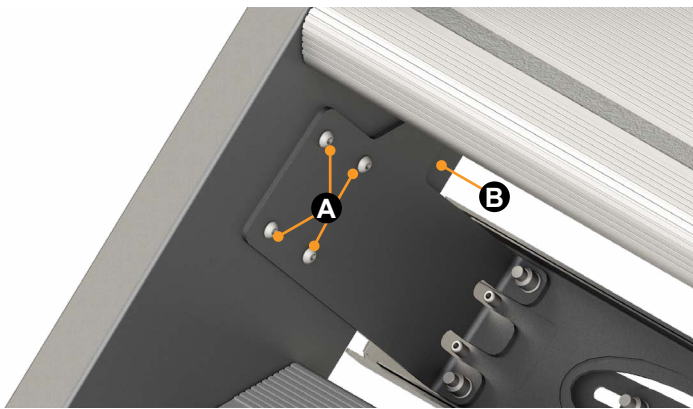


Fig.10

NOTE: If the holes do not line up because the triangular sections of steel (**Fig.10B**) interfere with an aluminum step tread, then flip the entire transport lock assembly over to avoid the interference and re-align the holes.

2. Install new lift assist threshold assembly (Parts List item E) using new screws (item J, **Fig.11A**) and nuts (item L).

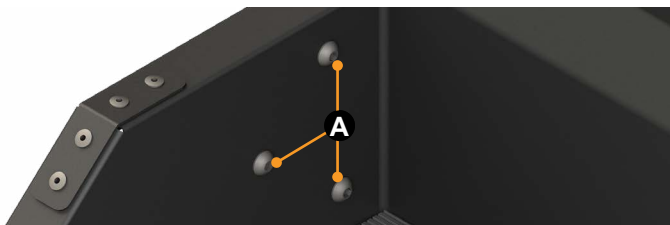


Fig.11

Installation

⚠ CAUTION

THE UPGRADED THRESHOLD ASSEMBLY (PARTS LIST ITEM E) IS WIDER THAN THE ORIGINAL THRESHOLD ASSEMBLY. USE EXTRA CAUTION TO AVOID DAMAGE TO THE DOORFRAME AND FLOOR WHEN PLACING THE UPGRADED STEP IN THE DOORFRAME.

Place Assembly Inside Doorframe

1. Place the upgraded SolidStep back into the doorframe in the extended position (**Fig.12**).

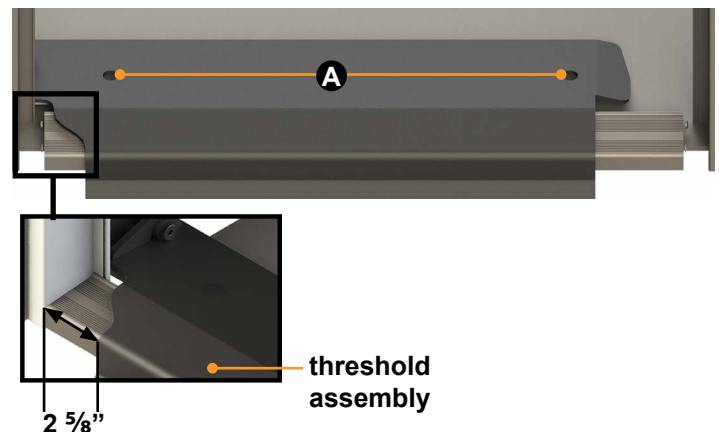


Fig.12

NOTE: Before installing any fasteners, make sure that the step is properly leveled so that the sheet metal threshold of the step rests firmly on the aluminum doorframe threshold, without any gap between them. The rear step threshold wall should be approximately parallel with the trailer's sidewall in this position. Refer to Leg Extension Adjustment section for proper step leveling.

NOTE: Make sure door closes.

2. Verify with a tape measure that the assembly is 2 5/8" offset (**Fig.12**) from the left-hand door jamb. Measure the widest gap between door jamb and threshold.

3. With the step assembly still in the extended position, using method **A** or **B** (see NOTE for more information), install two fasteners.



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NOTE: Most travel trailers use flooring construction that is sufficiently strong to support a lift assist upgrade with simple wood screw installation. Generally, if the flooring contains a wood subfloor thickness of at least ½", method A may be used.

NOTE: If you are unsure of your subfloor thickness, or are otherwise aware that your floor has a foam-laminated core construction and only a thin wood subfloor (sometimes used for weight savings), then method B should be used. This optional installation method connects the SolidStep hinge plate to a strong steel backing plate (Parts List item D) which gets placed underneath the floor, to ensure maximum floor support.

A. Install two wood screws (Parts List item O) into the mounting plate via the two access holes (**Fig.12A**).

B. Via the two access holes (**Fig.12A**), use a ⅞" (0.22") drill bit to drill two holes through the entire travel trailer floor.

NOTE: You may also use a pencil to mark the drill locations through the access holes, and then remove the step from the door before drilling if desired.

B. (cont.) Install two #10-24 bolts (Parts List item P), two #10 flat washers (item Q), two #10 lock washers (item R), two #10-24 hex nuts (item S) and backer plate (item D) via the two drilled holes (**Fig.12A**). Figure 17 shows the locations of the backer plate, flat washers, lock washers, and nuts, which should be installed to the exterior underside of the trailer.

⚠ CAUTION

UNPROTECTED CAM ANGLE LOAD BRACKET MAY CAUSE DAMAGE TO THE FLOOR.

NOTE: The cam angle load bracket (**Fig.13A**) will strike and possibly damage the floor when the SolidStep is lifted to a stowed position before the lift assist strut (Parts List item H or I) has been fully installed. Use tape or other material to protect the impact area on the floor from damage, and lift the step extra slowly to minimize impact damage whenever the lift assist strut is not installed.

4. Carefully and slowly lift the SolidStep to an upright, stowed position and hold the step in place until the transport lock has been adjusted properly.

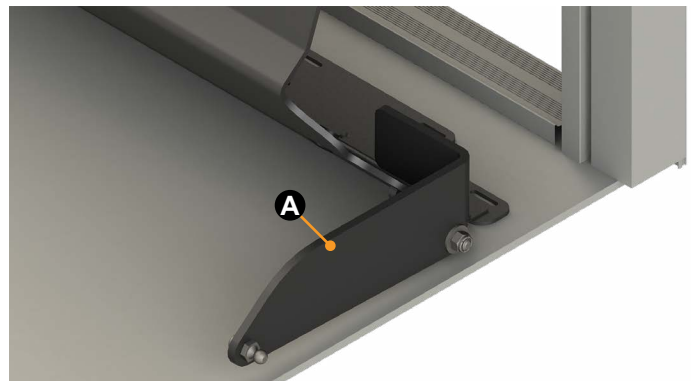


Fig.13

⚠ CAUTION

DO NOT ATTEMPT TO LOCK THE STEP IN PLACE, AS THE LATCHING MECHANISM MAY NEED TO BE ADJUSTED TO THE PROPER LEFT-RIGHT ORIENTATION AND TIGHTENED IN POSITION BEFORE USING THE TRANSPORT LOCK. ATTEMPTING TO ENGAGE THE TRANSPORT LOCK WITHOUT PROPER ADJUSTMENT MAY CAUSE THE STEP TO FALL INTO THE DOORWAY.

Adjust Transport Lock

1. If adjustment is required, loosen three bolts (**Fig.14A**) on either side of the adjustable transport lock.

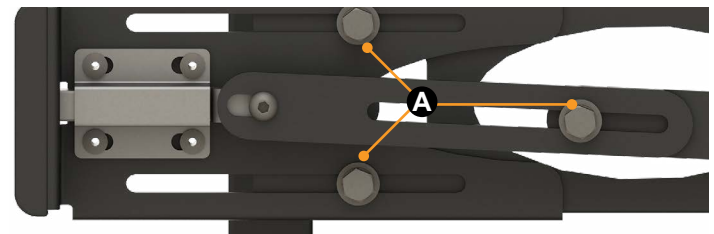


Fig.14

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NOTE: The SolidStep with Lift Assist will always be oriented from the left side so the adjustments may not be equal on left side and right side.

⚠ CAUTION

DONOT OVERTIGHTEN THE BOLTS. OVERTIGHTENING THE BOLTS MAY DAMAGE THE THREADS IN THE SHEET METAL OR CAUSE THE BOLT HEADS TO BREAK OFF.

2. Pull out each end of the transport lock (**Fig.15**) as far as it will go until it nearly contacts the doorframe.

3. Tighten all six bolts.

4. Test locking effectiveness by shaking the step in the stowed position. This simulates road vibration.

NOTE: To make larger adjustments, it may be necessary to loosen the original two fasteners installed in the hinge plate during placement of the assembly in the doorframe.

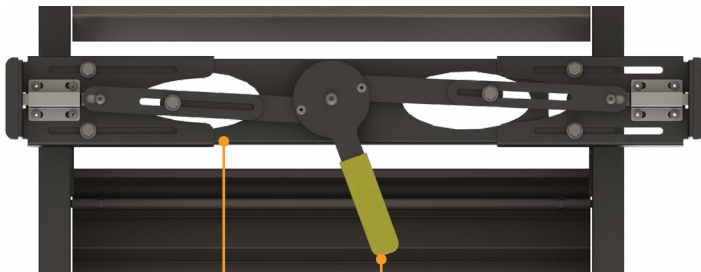


Fig.15

transport
lock

transport
lock latch

Secure Hinge Plate

1. Install fasteners into the nine remaining slots of the hinge slot per method A (**Fig.16**) or method B (**Fig.17**) as described and previously determined in step 3 of the "Installation" section.

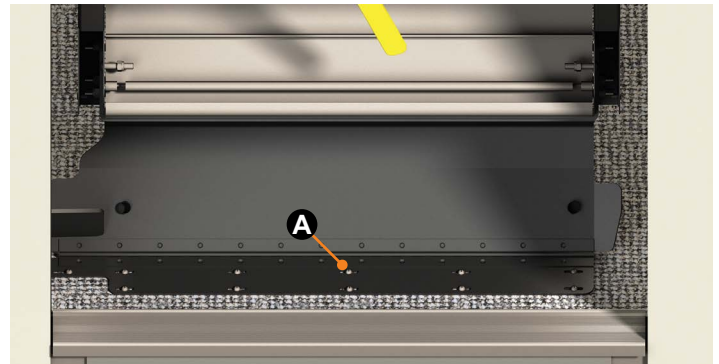


Fig.16

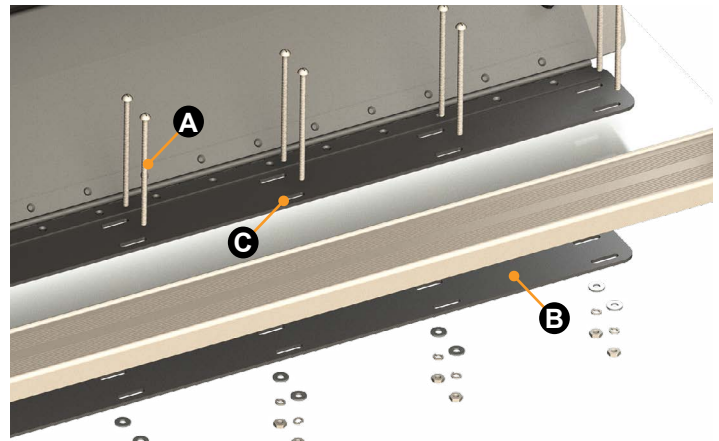


Fig.17

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Install Lift Assist Bracket and Strut

NOTE: If there are any objects that interfere with the intended installation position of the lift assist bracket, such as edge trim or a nearby item hanging from the wall, they must first be removed.

1. Extend and lower the step to the ground. Adjust the telescoping tube legs if necessary such that the step is level and the door is able to be closed normally.
2. Place the lift assist bracket (**Fig.18C and 18E**) into position so that it rests on the floor of the trailer and contacts the interior wall, which should be approximately flush with the interior doorjamb surface (**Fig.18B**). Use a tape measure to locate the left edge of the main bracket component (**Fig.18E**) $\frac{1}{4}$ " away from the interior doorjamb surface (**Fig.18B**).

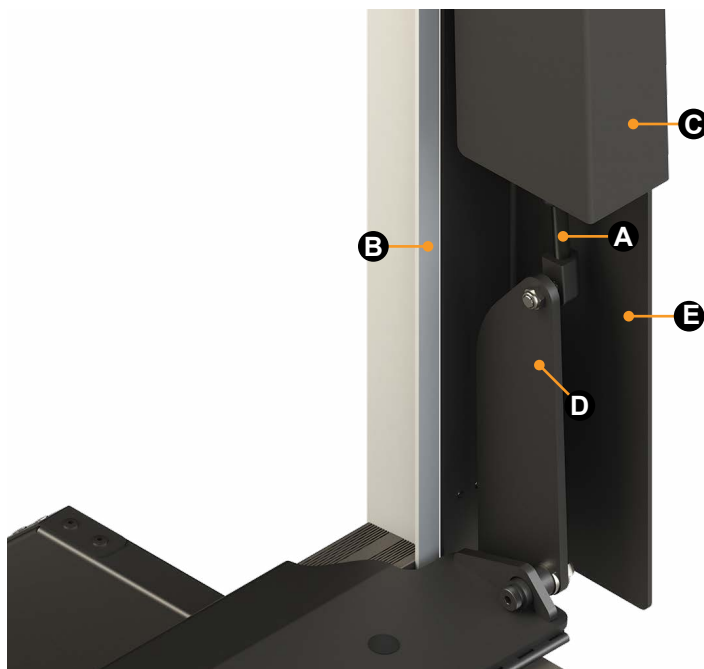


Fig.18

NOTE: Depending on wall thickness, the interior wall surface sometimes may not be flush with the interior doorjamb surface (**Fig.18B**). The lift assist bracket can still be installed to the wall in these situations as long as the main bracket component (**Fig.18E**) does not collide at any point with the cam angle load bracket (**Fig.18D**).

CAUTION

WHEN PRE-DRILLING HOLES INTO THE WALL, ENSURE PROPER PRE-DRILLING DEPTH, MAKING SURE THE WALL IS NOT FULLY PIERCED.

NOTE: The $\frac{1}{4}$ " gap will allow the rotating cover component (**Fig.18C**) to open and close without binding.

3. The main bracket component (**Fig.18E**) will be installed to the wall via eight holes that are already cut into the contacting face. Use these holes to locate the hole centers on the trailer wall, and pre-drill holes with $\frac{5}{32}$ " (0.156") drill bit if necessary. Secure strut mounting bracket to the wall with eight #10 wood screws (Parts List item O).

NOTE: If any holes are inaccessible, lift and stow the step to improve access.

4. The lift assist upgrade kit includes two gas struts: a 600N (135lb) strut for use with triple (3) steps, and an 800N (180lb) strut for use with quad (4) steps. Each strut has printed identifying text (either "0600N" or "0800N") on its main cylinder. See items H and I on the Parts List page for reference. Locate the appropriate strut for your SolidStep and place it inside your trailer for later installation.

5. Lift and stow the step in the doorframe, taking care to protect the floor from damage by the cam angle load bracket (**Fig.18D**).

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NOTE: The following installation step must be completed from inside the trailer while the step is stowed. If your trailer has two entry doors, then use the other door to enter the trailer while the SolidStep is stowed. If your trailer only has one entry door, then a second person must stow the SolidStep from outside the trailer while you remain inside.

6. Using the appropriate strut, attach it as shown to the ball studs located on the lift assist bracket (**Fig.18E**) and the cam angle load bracket (**Fig.18D and Fig.19B**). The strut (**Fig.19A**) can be attached by simply pushing it onto and over the ball stud (**Fig.19B**), while taking care to ensure that the metal spring clips on the strut are not touched when pushing.

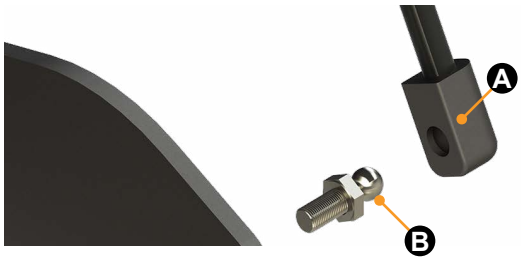


Fig.19

NOTE: If everything has been installed properly, then the strut should lift the cam angle load bracket (**Fig.18D**) enough such that it clears and does not contact the floor in the stowed (or any) position.

NOTE: The strut can be easily removed while the step is in the stowed position by using a flathead screwdriver to pry back the spring clips on both ends of the strut.

Operation

The cam angle load bracket (**Fig.18D**), the lift assist bracket (**Fig.18C, Fig.18E**), and the proper strut (**Fig.18A**) work together to provide lift assist throughout the most difficult portions of the step stowing and deployment processes:

A. While Stowed

While the SolidStep is stowed in the doorframe, the strut is fully extended and does not provide any lift assist. However, this makes it easy to attach or remove the lift assist strut when necessary.

B. Cam Angle Load Bracket Contact Point

While deploying the step, the threshold assembly (Parts List item E) makes contact with the cam angle load bracket (item F) at approximately the orientation shown (**Fig.20**). While in this position, the lift assist strut fully supports the weight of your SolidStep, similar to a popped trunk on a car or SUV.



Fig.20

C. Partial Strut Extension

At all points between full step deployment and the position shown in (**Fig.20**), the strut should provide adequate lift assist such that the step can be lifted with little to no effort. (**Fig.21**) shows an example of partial strut extension.



Fig.21

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D. Fully Deployed Step

When your SolidStep is fully deployed and the feet contact the ground, the lift assist provided by the strut should be small enough that it does not lift the step without a small amount of help from the user. While in this position (**Fig.22**), the lift assist strut should be mostly (but not completely) compressed.



Fig.22

Adjust Leg Extension

After extending the step, the leg extensions can be adjusted. The leg extensions are secured by clevis pins. Adjustments can be made to the leg extensions in 1" increments (**Fig.23**) by moving the inner legs up or down for the optimal angle and to adjust for the ground surface angle.

1. Remove the quick-release clevis pin (**Fig.23A**) from the tube.
2. Adjust the inner leg to the ground so the steps are parallel to the ground and level.
3. Reinsert the quick-release clevis pin into the tube and small slot (**Fig.23**).
4. Step on tread to test functionality.



Fig.23

Notes

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Follow proper safety practices. If in doubt, consult a professional RV technician.