



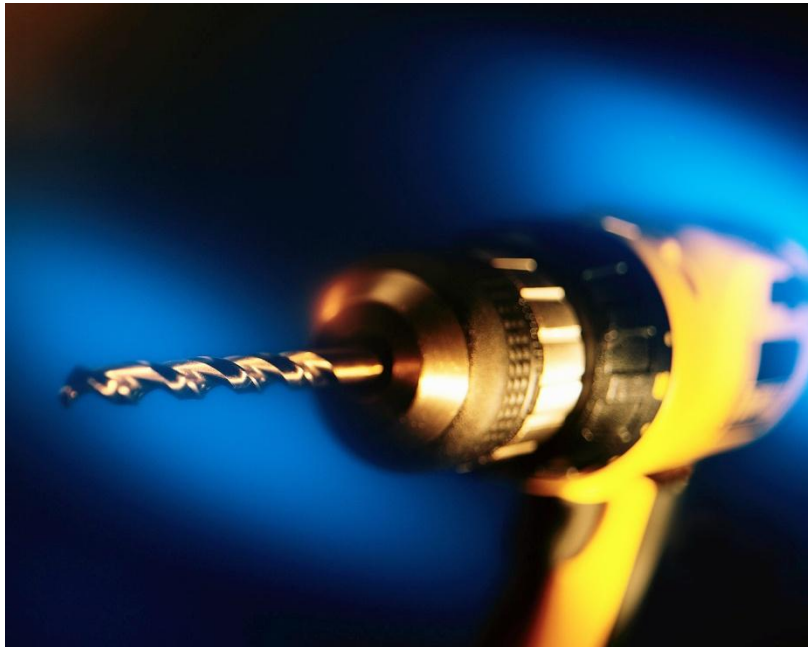
TRAN SAFE

The global leader for bariatric transport.

TRANSafe BARIATRIC PATIENT

LOADING SYSTEM

INSTALLATION GUIDE



Additional copies of the Installation Guide can be downloaded from www.transafesystems.com

Installation Recommendations

Qualified installers should use this Installation Guide to supplement training instructions provided by manufacturers of the Transafe System components. Installers using this manual should be familiar with the installation of ambulance cot fastener systems and regulations pertaining to the installation of such devices, i.e. EG Federal Ambulance Specifications KKK-A-1822C; Ambulance Manufacturers Division (ADM) standards. Installers should be generally familiar with ambulances, ambulance cot fastener installation procedures, installation of DC electrical powered accessories and safety standards pertaining to the installation and use of electrical accessories. Installers will encounter many varying ambulance interior configurations, body and underbody structures.

Installers should be prepared with fastener selections and tools that will allow modification of the installation guidelines contained herein. A recommended Supplies and Tools inventory list is available from Transafe upon request.

Components And Parts Supplied With The Transafe System

- 1 - *Set of ramps (rated for a total combined patient and cot weight of 1200 lbs.)*
 - *Each ramp folds into a storage dimension of 48" high x 13" wide x 15" deep*

- 1 - *Transition Plate (Includes pre attached winch cable center roller and 2 stainless steel ramp mounting bars).*

- 1 - *Aluminum diamond plate Winch Box*
 - *Winch Model 653700*
 - *3' power cord wired to an internal circuit breaker w/dual wire DC power connector*
 - *12' long winch control switch (on/off, direction and breaking of winch motor)*

- 1 - *Ramp and Winch Mounting Hardware Kit:*
 - 5 *hand-tight screws (for quick fastening of Transition Plate to ambulance floor)*
 - 5 *stainless steel floor mounting plates*
 - 5 *aluminum under-carriage back-plates*
 - 10 *hardened steel cap screws*
 - 10 *nuts*
 - 10 *nylon-lock flanged washers*

- 2 - *Pull-Slings (attaches cot to winch hook when cot is not factory equipped with a tow package)*

- 1 - *12' jacketed power cable (connects to vehicle power source) w/ dual wire DC power connector (for fast no-fault connection to winch power cord)*

Note: In some circumstances longer hardened steel cap bolts may be required to install the floor plates. When using fasteners, hardware or parts not supplied with the system, use only high-grade fasteners (grade 5 or better), high quality materials or those materials required by industry code regulations.

Step 1. Use The Transition Plate As A Template To Locate Floor Plate Positions

Place the Transition Plate in the center of the rear door of the vehicle, in exactly the position in which it will be used. (see figure 1) Position the Transition Plate as far forward (towards the front of the vehicle) as possible, without interfering with the connection between the ramp and Transition Plate. (see figure 2) **When doing this procedure, make sure that the ambulance nadir pins are not in the way of the Transition Plate mounting bars.** Before determining a final location, test to make sure the Transition Plate is in its optimal position by dropping the ramp in place. The ramp should be able to drop in freely, without interference at any and all operating angles and inclines. This procedure will require the help of one additional person to hold the transition plate in position, as the unfastened Transition Plate can flip or fall and may cause injury.

In some cases it may be necessary to remove the cot "Stop Block" (AKA Safety Hook) in order to position the Transition Plate properly. In this case you will then use the slot provided in the Transition Plate to locate a new position for the Stop Block/Safety Hook.

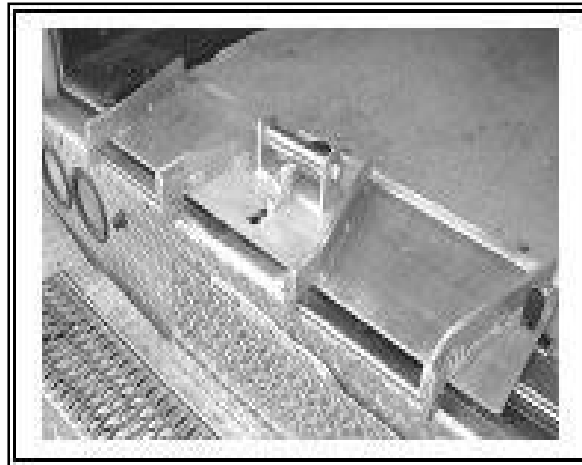


Figure 1 - Transition Plate is in a location that is free of obstructions and ready to be tested by dropping the ramp in place.



Figure 2 - Lowering the ramp onto the Transition Plate to test the Transition Plate location ensures that the final position is good.

The Transition Plate is made with multiple fastening holes along the outer sides of the plate. This allows the installer to select a position for the floor plates that provide the best undercarriage clearance. With the Transition Plate in the desired location and the desired mounting holes selected, use a transfer punch or any practical method of marking the three mounting hole locations (one at the left end of the Transition Plate, one at the right end of the Transition Plate and one at the center of the Transition Plate (just behind the Transition Plate winch cable roller guide).

With the hole positions selected and marked, remove the Transition Plate. Use a 1/4" steel drill bit to pick the center of the marks for each of the three floor plate mounting positions. Use the 1/4" bit to drill through the vehicle decorative flooring, sub-flooring and sheet metal body flooring. **CAUTION!!! Before drilling, determine that you will not be drilling into tanks, wire harnesses, critical cross members or other obstructions.** Ideally, Floor Plates should be positioned where no obstructions exist under the vehicle floor. If a clear location is not available, reposition or create an alternative mounting configuration. Call the manufacturer for suggestions and instruction. Using a 3/4" wood spade bit at all three mounting locations, drill through the decorative and sub-flooring, stopping at the vehicles metal flooring. (see figure 3) This will create a pocket for the 1/2" nut that is welded to the underside of the floor plates. (see figure 4) Using a 9/16" steel drill bit, open the previously drilled 1/4" holes in the vehicles metal flooring. This will create clearance for the 1/2" hand-tight screws used to lock components to the Floor Plates.

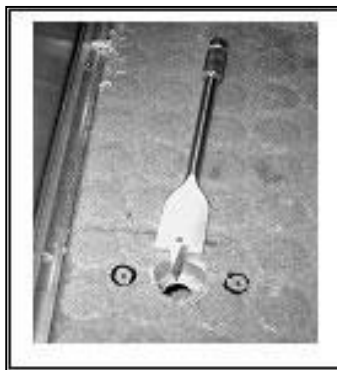


Figure 3 - 3/4" hole in the ambulance decorative and sub-flooring



Figure 4 - A pocket has been created for the 1/2" nut that is welded to the bottom of the Floor Plates

Drop the Floor Plate into position and orient the Floor Plate in the desired position, typically aligned with the length of the vehicle. Positioning the Transition Plate over the Floor Plates before spotting the thru-bolt holes. Spot the hole locations with a transfer punch or marker. (see figures 3 and 5)



Figure 5 - Place each Floor Plate in place and mark the thru-bolt holes on each side

Step 2. Install 3 Floor Plates For The Transition Plate

Use a 1/4" drill bit to pick-up the center of each mark for the Floor Plate thru-bolt holes. Drill a 1/4" pilot hole through all floor materials. Using a 7/16" drill bit, open the 1/4" pilot holes. You will now have clearance for the 3/8" diameter hand-tight fasteners.

Place a Floor Plate at each of the three locations. Using the 3/8" socket flat head bolts supplied (or a longer length if required), you are ready to permanently mount the Floor Plates. The Floor Plates aluminum back plate should be attached at the underside of the vehicle in the following sequence...

1. Slip the aluminum back plate over the two 3/8" bolts
2. Place a 3/8" washer over each bolt (and over the back plate)
3. Place a 3/8" lock washer over each bolt
4. Thread a 3/8" nut onto each bolt and tighten so that all components are compressed, flat and secure.

Repeat this procedure for each Floor Plate. Reinstall the cot catch hook in position if it had been relocated. (see figures 6)

Note: 3/8" nuts must be fully engaged, leaving at least several threads of the 3/8" bolt showing beyond the nut. If the bolts supplied are not long enough to pass through all flooring, back plate, washer and nut, then replace with proper length bolts of the same grade and quality..

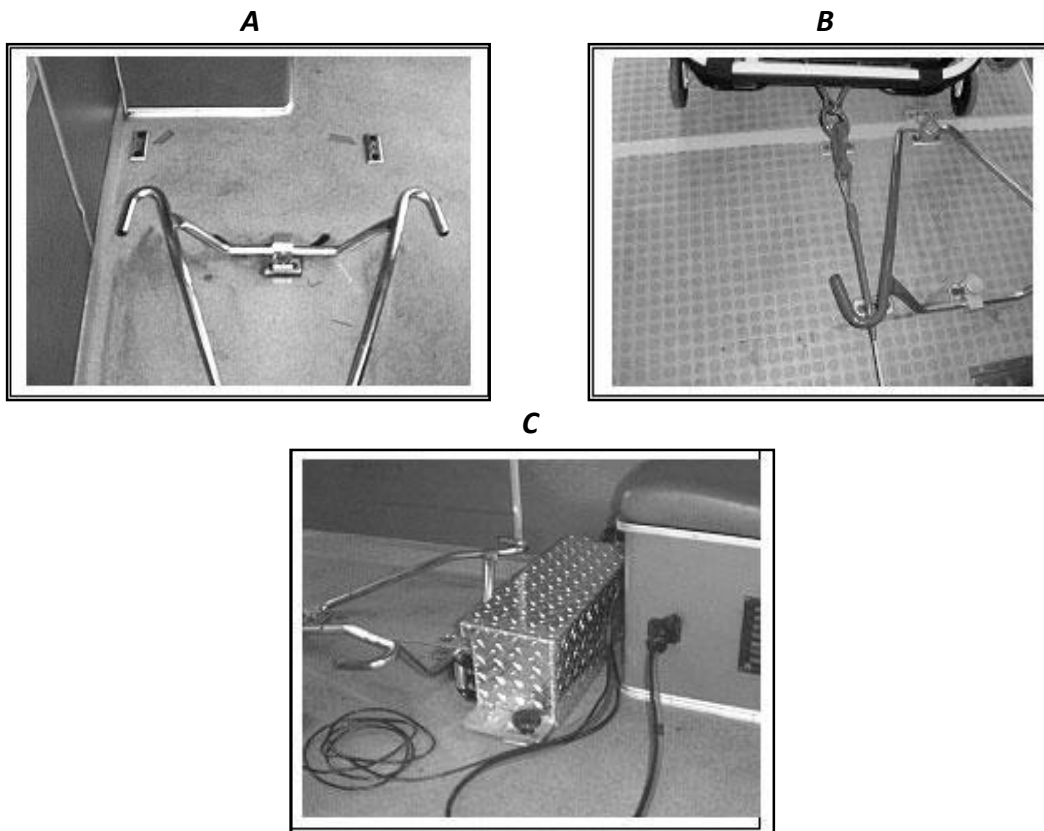
Do not use shoulder type bolts with unthreaded shoulder lengths that will not allow all components to be compressed together. The bolts that have been supplied are the size that fits most vehicle configurations. Bolt of longer length can be purchased through Transafe, 800 415-9881.



Figure 6 - Transition Plate has been installed, the cot catch hook is in place, the ramps are free of obstruction to securely be hooked onto the transition plate.

Step 3. Using The Winch Box As A Template To Locate The Floor Plate Positions

The Winch Box should be mounted behind the cot fastener/Antler (toward the front of the vehicle) so that the winch cable will pass to the inboard side (center of vehicle) under the Antler horns. (see figures 7A, 7B, 7C)



Figures 7 A, B, C - Winch Box in its proper position so that the winch cable can pass under the antlers.

*If you were to stand in the vehicle, behind the antlers, facing the rear doors, the Winch Box would be positioned so that when the winch cable is extended out the back of the vehicle and over the Transition Plate center guide roller, the cable would be as parallel to the side walls of the vehicle as possible. The Winch cable must pass **under** the Antler horn without coming in contact with any part of the Antler tubing.*

Like the Transition Plate mounting procedures, once the Winch Box location has been determined, mark the two holes (one for each side of the Winch Box) and follow the same Floor Plate mounting procedures as described in the previous section. Again, make sure that there are no obstructions in the under-carriage of the vehicle that would prevent the Floor Plates to be mounted in its determined location. If there are obstructions in the under-carriage of the vehicle, make adjustments that satisfy the requirements as close as possible for the best location of the Winch Box. Always make sure the Winch cable is able to run free of rubbing against anything in the vehicle.

Step 4. Installing The Winch Box Power Cable

The Transafe System is supplied with pre-installed snap in connectors to connect the Winch Box motor to the 12' power cable. It is up to the installer to select a connection point to for the 12' power cable to supply power to the Winch Box motor. Typical options are to connect directly to the vehicles 12 volt auxiliary battery source or to the vehicle's circuit breaker panel. Lugs to make these connections are not supplied. When deciding on the type of wire lug you need to use, make sure the lug is for #6 gauge wire. Follow the directions of the vehicle manufacturer when making connections to the vehicle circuit breaker panel.