## ROOF RACK INSTALLATION INSTRUCTIONS

(85" RAIL LENGTHS)







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**NOTE:** Perrycraft's products are manufactured to be installed into the skin of the roof panel of vehicles. They are not designed to line up or be installed at the factory fitment points available on some vehicles.

**NOTE:** The included hardware pack contains screws for securing this rack to a sheet metal roof or metal surface.

**NOTE:** Perrycraft, Inc. manufactures racks and rails that are size specific, not vehicle specific. Therefore, the bow of the rails (front to back) may need adjusting. Place the rails (without the feet) on the roof in the desired location. Ideally the rails should match the roof curvature. The ends of the rails should touch the roof and the center should be no more than 3/16" off the roof surface. The rails can be adjusted (more bow or less bow) by placing the ends of the rails on supports and either pressing down from the top (to take away bow), or pressing down from the bottom (to add more bow). Rails are heat treated aluminum, therefore, very strong. Several attempts of adjustment may be required to get the correct curvature.

Retain these instructions. They are useful if contacting Perrycraft for information, parts, or service.

### **ITEMS NEEDED (NOT INCLUDED)**

- Measuring Tape
- Masking Tape
- Marker
- Drill
- 1/8" Drill Bit
- Phillips Screwdriver
- Rag and Cleaner for roof

#### **CONTENTS:**

- 2 Side Rails (Rails will be 10" shorter than last two numbers of part number (ex. DS3645-B, rails are 35")
- 2 Cross Bars (Cross bars will be 6" shorter than the first two numbers of part number (ex. DS3645-B, cross bars are 30")
- 4 Stanchions
- 4 Center Posts
- 4 Cross Bar Connectors
- 1 Hardware pack
  - 4 #8 x 1/2" Pan Phillips Blunt End Screw –
     Stainless Steel
  - 16 #10 x 1-1/2" Pan Phillips Screw Stainless Steel – Waxed
  - 4 Stanchion Plug

#### **ASSEMBLY AND INSTALLATION:**

Installation will include assembling the rack, placing it on the roof and marking the hole locations, removing the rack and drilling holes at the marked locations, cleaning the roof, and securing the rack to the roof.

- 1. Loosen cross bar connector thumbscrews and slide connector tabs completely into cross bars (cover on rib side of cross bar). Secure connectors to cross bars with  $\#8 \times 1/2$ " screws through pre-drilled holes underneath.
- 2. Slide cross bar assemblies into top side of rails. Tighten thumbscrews enough to keep cross bars from sliding, but loose enough for rail to pivot. Crossbars should be placed approximately 7 inches from the ends of the rails, so that the installation will be as "square" as possible.
- 3. Insert stanchions into rails. Tape the stanchions to the rails, being careful not to cover the screw holes.
- 4. Place center posts in balance along the rails. Tape the posts to the rails, being careful not to cover the screw holes.
- 5. Place assembled rack onto roof in desired location (approximately 2-3 inches forward of the back hatch joint) and adjust as necessary to get the rails parallel.
- 6. Mark the three hole locations in each foot and one hole location in each post. It will be necessary to have a very thin marker or trim a pencil skinny enough to reach the roof through the screw holes.
- 7. Remove rack from roof and tape from rack.
- 8. Lightly center punch and drill pilot holes where marked using 1/8" drill bit going no deeper than 1/2", being careful not to penetrate interior headliner. Clean roof, removing all drill chips.
- 9. Place rack back onto roof, lining up with drilled holes.

- 10. Using hand screwdriver, secure rails to roof using supplied #10 x 1-1/2"" pan head waxed screws. Do not overtighten. Snug is enough. Additional sealant/silicone isn't necessary, but can be applied to hole locations.
- 11. Insert plugs into stanchion ends. Plugs have tabs that line up with grooves in the stanchions.
- 12. If installed correctly, cross bars should be able to move to various positions along rails. Tighten cross bar connectors when satisfied with location of cross bars.

#### **NOTES AND WARNINGS:**

- All fasteners, knobs, and securing methods should be checked frequently and tightened as necessary.
- Going through a brush car wash is not recommended with this rack installed.
- Do not use rack if a part is cracked or broken.
- External roof racks do not increase the GVWR of the vehicle. Total occupant and cargo load should not exceed the manufacturer's rated vehicle capacity.
- Maximum load for this rack is 75 pounds, evenly distributed on the cross bar assemblies. Torque applied to any straps, cords, etc. holding down gear or equipment also increases the "load weight" to the cross bars and roof.

- Large or flat items such as plywood, ladders, lumber, hang gliders, canoes, kayaks, etc., can trap air and create wind lift. Secure the ends of long objects directly to the front and back bumpers or tie-down positions.
- Bulky or tall loads can create tremendous horizontal wind resistance from headwinds and crosswinds.
   Extreme caution should be used when transporting such loads.

Perrycraft, Inc. does not assume responsibility for style or size of rack installed, improper rack installation, exceeding rack load limit, load securing methods, vehicle roof strength, wind lift or any other factors beyond its control.

Wind noise is a definite when carrying items on top of the vehicle. It is also possible with nothing on the bars. Make sure all connectors are tight. Sometimes wind noise can be alleviated by moving the front cross bar toward the rear of the vehicle. If wind noise persists, a wind fairing may need to be purchased and installed.



**CAUTION**: <u>Do not</u> use the mounting hardware contained in this roof rack kit for installation on Fiberglass or Composite Plastic surfaces. Supplemental hardware pack, part# **HWDSTC-UV**, is required for installation on such non-metal surfaces.

**Warning:** External roof racks do not increase the GVWR of the vehicle. Total occupant and cargo load should not exceed the vehicle manufacturer's rated vehicle capacity. **Maximum load for this rack is 75 lbs. evenly distributed on the crossbar assemblies**. Maximum weight of loads placed directly on the roof slats is dependent on the particular vehicle roof structure and construction. Large or flat items such as plywood panels or small water craft can trap air and cause wind lift. Extreme caution should be used when transporting such items, taking into consideration road conditions, vehicle speed, load securement methods, etc. Molded car top luggage carriers or pods should be placed **between** the rack crossbars and **secured directly to vehicle body**. Perrycraft, Inc. cannot assume responsibility for improper rack installation, exceeding rack load limit, load securement methods, vehicle roof strength or wind lift.

**CONTENTS**: 2-Side Rails, 2-Crossbars, 4-End Supports, 4-Crossbar Connector Assemblies, 5-PVC Roof Slats, 1-Hardware Pack consisting of 12-14/ea. #10x1-1/2" Pan Head Phillips Screws, 4/ea. #8x1/2" Blunt-end Pan Head Phillips Screws, 4/ea. Support Screw Hole Plugs, 0-4/ea. Center Support Posts (determined by side rail length), 1/ea. Instruction Sheet, 1/ea. Warranty/Consumer Information Card, 1/ea. Tech Help/Missing Parts Sheet.

#### **INSTALLATION:**

1) As this DynaSport "universal" roof rack is designed to fit several different vehicles, the "bow/curvature" of the rails may or may not exactly match the roof contour of a particular vehicle. The rails should be "dry fit" to the roof panel before installing. Carefully place one of the rails (without end supports or center support posts) on the vehicle roof in the approximate location to be installed. The curvature of the rail should approximate the roof contour. If the rail is under-curved and there is more than a 3/16" space between the ends of the rail and the vehicle roof panel, or over-curved and there is more than a 3/16" space between the center of the rail and the vehicle roof panel, "bench adjusting" the curvature of the rails is required. Adjust by suspending the rail between two points (4x4 wooden blocks, two tables, etc). To increase the curvature, start with the rail right side up (see appropriate illustration below). With hands spaced shoulder-width apart, apply sufficient pressure to the rail to increase or decrease the curvature as desired. Repeat this process for both rails.

**Important Note:** While made of extruded aluminum, the rails are heat-treated for added strength. Therefore, several applications of adequate "springing" pressure may be required to modify the curvature of the rails.

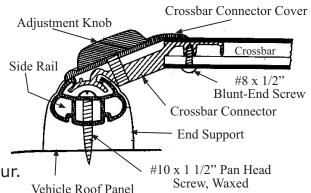


Increase Rail Bow



Decrease Rail Bow

- 2) Using illustration to right as a guide, Insert crossbar connector assemblies into ends of crossbars and secure with #8 x 1/2" blunt end pan head screws through holes in underside of crossbars.
- 3) Slide crossbar connectors into top of side rails and tighten adjustment knobs sufficiently to hold crossbars in place approximately ten inches from the end of rails, but loose enough to allow rails to swivel to conform to roof contour.



- 4) Using illustration below as a guide, place rail end supports on ends of rails, pressing into slots on bottom of rails as shown. If supplied with kit, align rail center support posts with remaining pre-drilled holes in rails and press into slots in bottom of rails.
- 5) Place rack in desired position on vehicle roof and mark mounting hole locations. Place self-adhesive roof slats in position, and mark location. **Do not remove tape liner from roof slats at this time!**
- 6) Remove rack and slats. Clean roof surface where slats will be located with an adhesive prep solution (Pro-bond, Tite-R-Bond or alcohol) to ensure proper bonding of slats to roof. Peel adhesive liner from bottom of slats, place in position and press firmly in place. Adhesive should be allowed to cure for a minimum of 24 hours before washing vehicle.
- 7) Drill pilot holes for rack using 1/8" drill bit, being careful not to penetrate interior headliner. Apply a coat of primer or rust inhibitor to bare metal edges of each hole.
- 8) Reposition rack on roof and secure using #10x1-1/2" pan head waxed screws (Do not remove wax); 3 fasteners per each end support, 1 fastener per each center support post (if post included). Use caution when tightening fasteners to avoid stripping pilot hole in roof.
- 9) Position alignment tabs on screw hole caps with grooves in recessed screw openings in rail end supports and press caps into place.
- 10) To adjust crossbar position, rotate adjustment knobs 1 to 2 turns counter-clockwise. Slide crossbars to desired position and secure in place by rotating knob clockwise until tightened securely.

