

Roof Rack & Roof Rails

Universal Mounting Hardware for Installation on Fiberglass/Composite Surfaces & Sheet Metal Roofs Without Headliners

This hardware must be used in conjunction with several parts from the standard DynaSport rack or rail hardware kits. Please note that some steps on this instruction sheet apply to roof racks only (such as crossbar assembly, roof slat installation, etc.), and are not applicable to roof rail installations. This hardware kit may also be used for bolt-thru installations in vehicles without headliners.

WARNING: Do not use sheet metal screws to attach roof racks or rails to fiberglass or composite materials or vehicles with sheet metal roofs without headliners. External roof racks or rails 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 or rails is 75 lbs. evenly distributed on the crossbar assemblies. Maximum weight of loads placed directly on the roof slats (if applicable) is dependent on the particular vehicle roof material 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 (pods) should be placed on the vehicle roof between the rack crossbars (if applicable) and secured directly to vehicle body. Perrycraft, Inc cannot and does not assume responsibility for improper rack or rail installation, exceeding rack load limit, load securement methods, vehicle roof strength, wind lift or any other factors beyond its control. **NOTE:** All fasteners, adjustment knobs and load securements should be checked frequently.

Hardware Contents: 14/ea. - #10-24 x 2" Pan Head Stainless Machine Screws, #10-24 Propeller Tee Nuts, 1 1/8" Retainer Washers with Snap on Caps, 3/16" x 3/8" x 1/32" Neoprene Washers, #10-24 Nylock Nuts, 1/4" Stainless Steel Flat Washers; 24/ea. - 3/16" x 1/2" x 1/8" Foam Rubber Washers; 4/ea. - 3/4" x 3/4" x 3/4" Foam Rubber Blocks. (Shorter racks without center post will not require all fasteners included)

Tools required: Hand drill, 3/16 drill bit (2 1/2" or longer) and 9/32 drill bit, Phillips Screwdriver.

CAUTION: FAILURE TO PROPERLY INSTALL ALL SEALING WASHERS COULD RESULT IN WATER DAMAGE TO TRUCK CAP AND/OR VEHICLE CONTENTS.

NOTE: For installing in fiberglass caps without hollow core roofs, mounting outside core area, in vehicle roofs less than 1/2" thick, or sheet metal roofs without headliners, substitute #10-24 Lock Nuts and Stainless Steel Flat Washers (included, shown in diagram "Single Layer Installation" on Page 2 of this Instruction Sheet) for the Propeller Tee Nuts. For roofs exceeding 1" in thickness, substitute #10-24 stainless steel Machine Screws in a proportionately longer length (not included) in place of the 2" Machine Screws in conjunction with the propeller tee nuts as shown in "Core Installation" on Page 2.

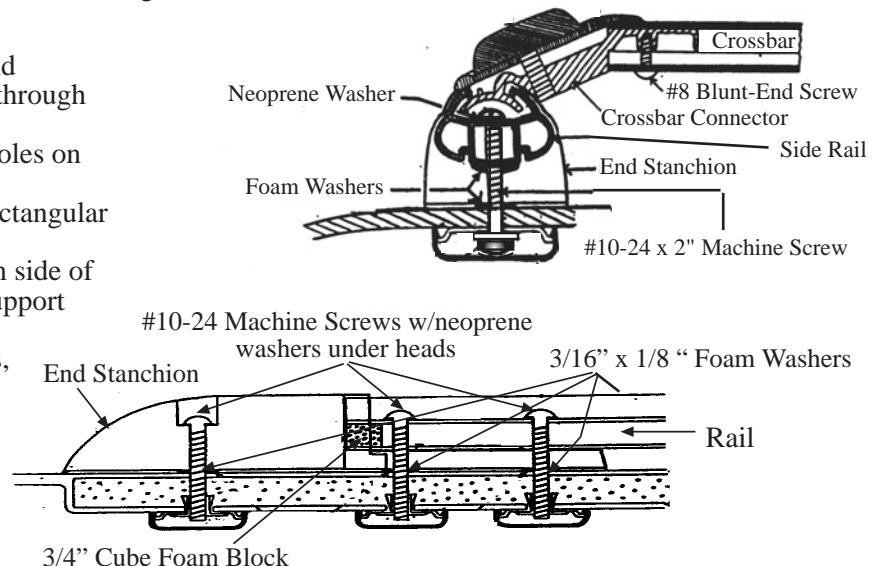
Prior to assembling roof rack or rails check the curvature of side rails and crossbars relative to the curvature of cap roof or vehicle roof. Rail and crossbar curvature can be adjusted by applying moderate hand pressure at necessary points with rail/crossbar ends resting between two solid points. If roof rack or rails has center support post on side rails (longer racks/rails only) it is critical that rails closely match the cap roof contour to avoid excessive tension on fasteners.

SIZING: For fiberglass or composite truck cap or lid installations, prior to assembling rack or rails, measure the size of the "core" area of the cap roof. If mounting inside the core area (thicker area), side rails should be positioned so that mounting hardware penetrates the core a minimum of 1" in from edges of core. If mounting outside core area (thinner area), position so that mounting hardware penetrates a minimum of 1" outside edges of the thicker core area.

RACK ASSEMBLY:

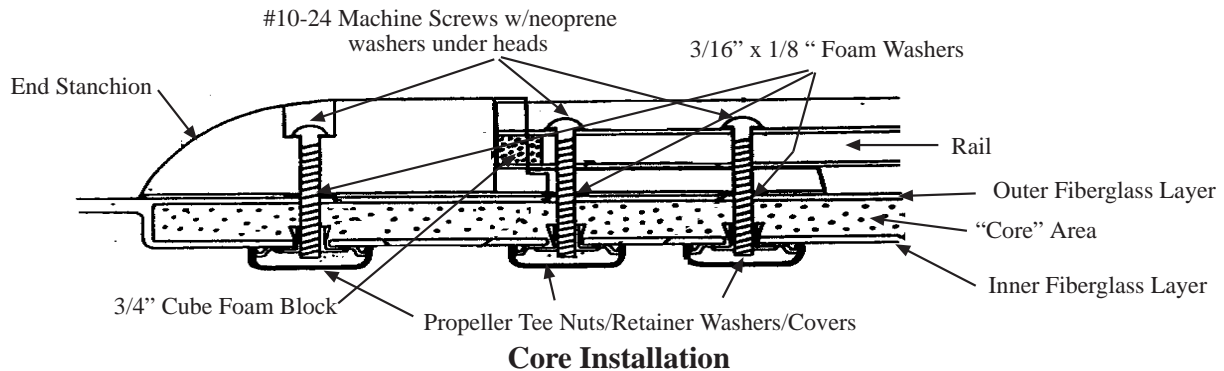
- 1- Insert crossbar connectors into ends of crossbars and secure with #8 x 1/2 blunt-end self-tapping screws through holes in underneath side of crossbars.
- 2- Apply self-adhesive foam rubber washers around holes on bottom of side rails.
- 3- Compress and insert foam rubber blocks into the rectangular hollow area in ends of side rails.
- 4- Apply self-adhesive foam rubber washers to bottom side of all mounting holes in molded end stanchions and support posts if included.
- 5- Place 3/16" neoprene washer on 2" machine screws, seating washers under screw heads.
- 6- Slide crossbar connectors into side rails positioning crossbars approximately 10" from ends of rails.

(Over)



INSTALLATION:

- 1-Fiberglass/composite cap or lid installations:** Place roof rack or rails in desired mounting location on cap or lid, and verify location relative to core area of cap or lid interior, insuring mounting fasteners will penetrate core area a minimum of 1" inside or outside the outer edges of the core, depending on positioning preference. Position self-adhesive roof slats in desired location (**Do not remove tape liner from slats at this time!**) Mark location of roof rack or rails and slats.
Single-layer vehicle installations: Place roof rack or rails in desired mounting location. Position self-adhesive roof slats in desired location (**Do not remove tape liner from slats at this time!**) Mark location of roof rack or rails and slats.
- 2-Remove rack or rails and verify marked location relative to core area as detailed in Step 1 (if applicable). Remove slats and clean roof area where slats will be applied, using an adhesive prep solution such as Pro Bond, Tite-R-Bond, or denatured alcohol. Roof surface **must** be free of dust, dirt, wax, oil, etc. to insure proper adhesion of slats.
- 3-Peel liner from tape on bottom of slats and carefully place slats in desired location, pressing firmly in place. **Do not** allow tape to contact roof surface until slats are in desired location.
- 4-Reposition rack or rails in pre-marked location. Secure with masking tape to prevent shifting. Using side rails as a template, drill 3/16" holes completely through roof beginning with the middle hole of each end stanchion. Place a machine screw in each middle hole as drilled to prevent shifting rail position. Drill remaining holes. Remove rails and clean away any chips or debris from drilling from under rails. Reposition rails over drilled holes. **Note: If mounting outside core area, in surfaces less than 1/2" thick, or sheet metal roofs without headliners, proceed to Step 10 now.**



- 5-From inside of cap or lid using 9/32" drill bit, ream out all drilled holes through the inner fiberglass layer only. **Note:** If truck cap has a liner glued to inside of roof, place a long nail or screw down through the mounting holes to aid in locating drilled holes in liner.
- 6-Assemble propeller Tee nuts and retaining washers with flange side of washer down toward floor of truck bed and barrel of Tee nut toward roof (Fig 1). Press barrel of Tee nuts into 9/32" holes until flush with roof.
- 7-Install 2" machine screws down through rails using minimal downward pressure to prevent pushing Tee nuts out of bottom holes (insure neoprene washers are positioned correctly under each screw head). **DO NOT OVER TIGHTEN!** Excessive screw torque may damage fiberglass layers and/or core material. Use of a liquid "thread lock" on machine screws is recommended. Insert screw hole covers (plugs) in end holes of rail end stanchions.
- 8-Snap black screw covers onto retaining washers. If excessive screw shank (over 1/4 ") extends from bottom of Tee nuts it will be necessary to remove the excess to properly install screw covers.
- 9-Position Crossbars in desired location and tighten adjustment knobs securely.

For installing outside core area, in surfaces less than 1/2" thick, or sheet metal roofs without headliners; this method requires two people in most instances:

- 10-Install 2" machine screws down through rails, insuring that neoprene washers are seated under screw heads.
- 11-Place retaining washer with flange side of washer down toward floor of vehicle or truck bed.
- 12-Place 1/4" Stainless Steel Flat Washer against bottom of retaining washer.
- 13-Install #10-24 Lock Nuts on Machine Screws and tighten securely.
- 14-Remove excessive screw length. Snap black screw covers onto retaining washers, and insert screw hole covers (plugs) in end holes of rail end stanchions.
- 15-Position Crossbars in desired location and tighten adjustment knobs securely.

OPERATING INSTRUCTIONS: To adjust crossbar position, rotate adjustment knobs 2 or 3 full turns counter clockwise. Slide crossbars to desired location and rotate adjustment knobs clockwise firmly to secure crossbars in position. Periodically check adjustment knobs for tightness.

Single-layer Installation

