

Installation Manual Roof Zone Ladder Rack



Installation Time:
About 90 minutes.
Depending on truck
and Do-it-Yourself
experience level

Tools Required:
Electric Drill with 1/2" Chuck
1/2" & 7/32" Drill Bits
1/2", 9/16" & 3/8" Open or Box End Wrenches
Screwdriver
Framing Square
Level
Center Punch
Hack Saw
Tape Measure

102113,E1346

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WARNING

Before drilling, insure that there are no, fuel lines, fuel tanks, brake lines, electric wires, etc., this may require checking under the vehicle for all drill locations.

Wear protective eye wear when checking the underside of the vehicle, or when drilling.

This product is only intended for transporting ladders, lumber, pipe and other similar materials. It is the responsibility of the user of this truck rack to secure materials to the rack before transporting. Any modifications made to this product for any other purpose than its intended use could create a hazardous condition that can cause serious personal injury or property damage.

To prevent damage from vibration during vehicle operation with an unloaded rack, leg assemblies should be removed.

Any modification or unintended use of this product shall immediately void all manufacturers warranties. Manufacturer disclaims all liability for injuries to persons or property resulting from any modification to or unintended use of this product.

The manual shows installation on the passenger side of the vehicle. For installation on the driver side, simply reverse the parts.

If your pickup has a bed liner, you may be required to drill, trim or cut the liner for installation of this product.

The best mounting location is between floor ribs, a spacer and/or two extra washers have been provided to fill the void. Or rotate the leg socket assembly 90 degrees to the rear of the vehicle if possible.

If you are installing this product on a F-150 the F-150 adapter, provided, must be used.

If at any time during the assembly or installation procedures you have a question or are in need of assistance call 1-800-241-1806.

Apply silicone sealant around all drilled metal holes. Warranty will be void if sealant is not properly applied to all seams and crevices in the truck bed.

Do not seal uprights to the leg socket. Its strongly recommended that you remove and store the upright assemblies when they are not in use.

**WARRANTY WILL BE VOID IF
SEALANT IS NOT APPLIED TO
ALL SEAMS AND CREVICES**

STEP 1. MOUNTING THE FRONT LEG SOCKET NEAR CAB

- 1a. If installing on a 2004 Ford F-150 and newer, place the F-150 Adaptor onto the front leg socket. Install and tighten a 3/8-16 x 1" thread cutting bolt into the adaptor to make a mark on the front leg socket. Remove adaptor and drill a 7/16" pilot hole and then a 1/2" hole at the indentation mark of the thread cutting bolt on the leg socket. Re-install the F-150 adaptor onto the front leg socket. Do not tighten the thread cutting bolt at this time. See Figure 2.
- 1b. Insert the front leg socket into the front mounting bracket as seen in Figure 1. Hold the mounting bracket flush with the top rail of the truck bed ensuring the front leg socket assembly is plumb and square to the truck bed. This may also be mounted 90 degrees.
- 1c. Mark and center punch the four holes of the front mounting bracket and front leg socket foot as seen in Figure 1.
NOTE: If the best mounting hole location is between floor ribs, a floor spacer and/ or two extra 5/16" flat washers have been provided to fill the void. Or rotate the Leg Socket 90° to the rear of the vehicle if possible.
- 1d. Drill a pilot hole with a 7/32" drill bit in each marked hole. Then re-drill the holes with a 1/2" drill bit. Apply silicone sealant around all drilled metal holes.
- 1e. Install rivnut fastener into each drilled hole. (see page 7, Figure 9 for rivnut fastener installation instructions)
- 1f. Take the front leg socket assembly, four 5/16-18 x 1-1/4" hex head bolts, four 5/16" lock washers and four 5/16" flat washers and install as seen in Figure 1. Tighten all screws at this point ensuring assembly is square and plumb to the truck.
- 1g. Take a 3/8 - 16 x 1" thread cutting bolt and install into the front mounting bracket as seen in Figure 1. Tighten the thread cutting bolt enough to mark the front leg socket for drilling.
- 1h. Disassemble the front leg socket assembly, take the front leg socket and drill a pilot hole with a 7/32" drill bit through the mark created in the previous step by the thread cutting bolt. Then re-drill the hole with a 1/2" drill bit. Apply silicone sealant around all drilled metal holes. Reassemble the front leg socket assembly to the truck bed tightening all hardware except the 3/8-16 x 1" thread cutting blot.

Figure 1

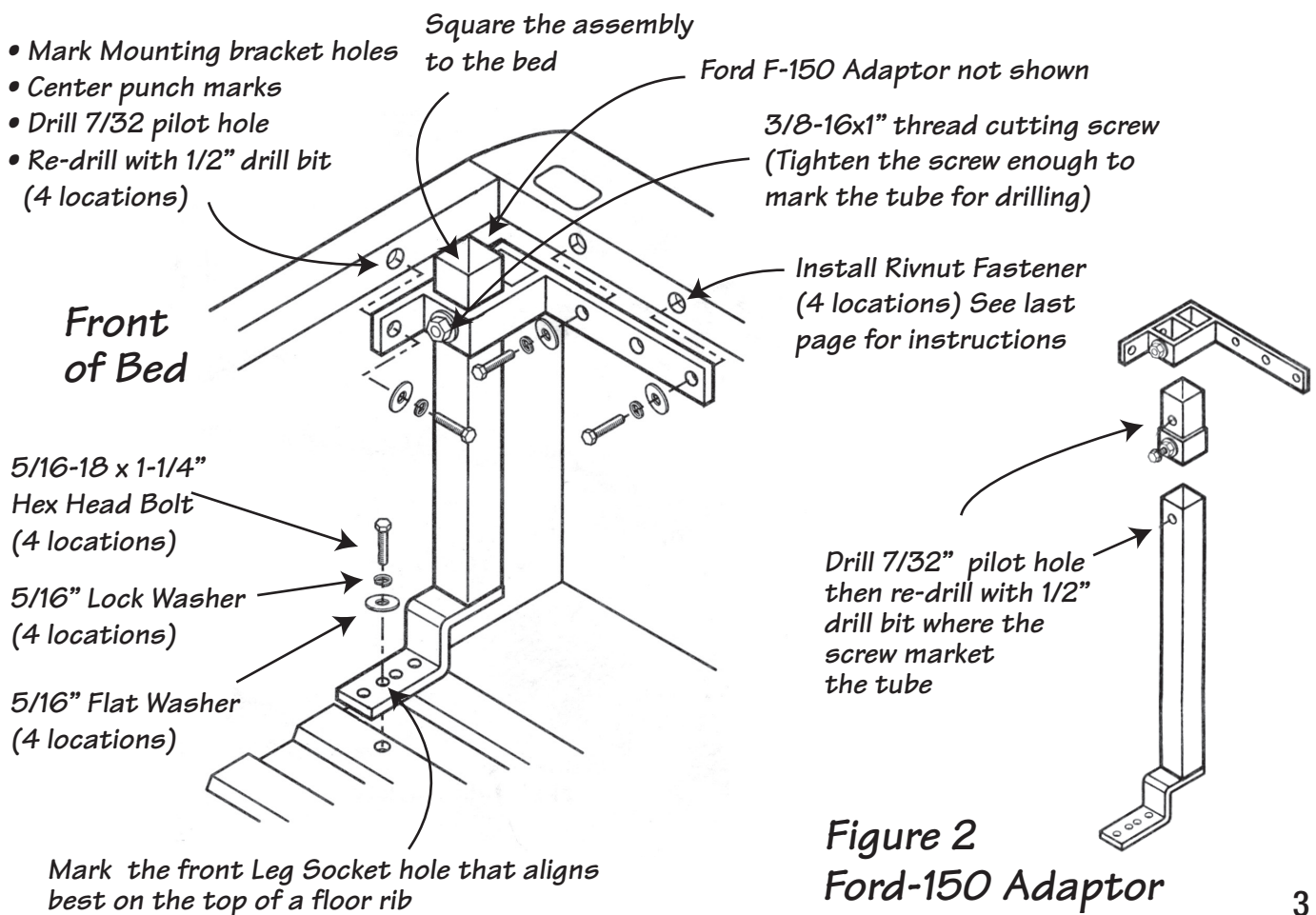


Figure 2
Ford-150 Adaptor

Step 2. MOUNTING THE REAR LEG SOCKET

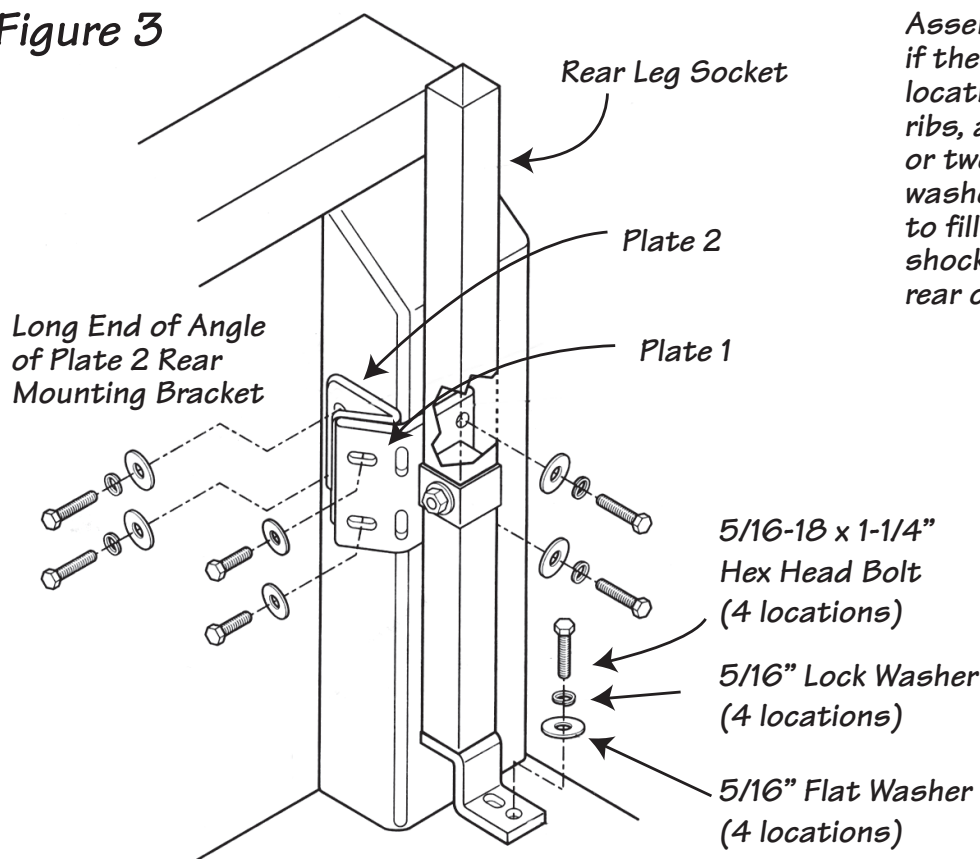
Step 2a-g is to be used when mounting to a 90° degree tailgate stop (Most vehicles)

NOTE: Skip to Step 2h if you own a Toyota Tacoma, Chevy Colorado, or GMC Canyon with a 45-degree tail-gate stop.

- 2a. Using the Hex Head 5/16-18 X 1" bolts, washers, and nylon lock nuts fasten the rear mounting bracket plate 1 and 2 together. The long end of the angle on plate 2 faces away from plate 1.
- 2b. Insert the rear leg socket into the rear mounting bracket assembly as seen in 3. Hold the mounting bracket assembly flush with the tailgate stop ensuring that the rear leg is plumb and square to the truck bed. (See note at bottom of page for mounting to truck bed floor)
- 2c. Mark the five holes. Remove the assembly and center punch each of the holes. Drill a 7/32" pilot hole, then re-drill each hole using a 1/2" drill bit. Apply silicone sealant around all drilled metal holes.
- 2d. Install rivnut fastener into each drilled hole. (see page 7, Figure 9 for rivnut fastener installation instructions)
- 2d. Take the rear leg socket assembly, four 5/16-18 X 1-1/4" hex head bolts, four 5/16" lock washers and four 5/16" flat washers and install as seen in Figure 3. (It may be necessary to dis-assemble rear mounting bracket plate 1 and 2 in order to fasten plate 2 to the truck) Tighten all fasteners at this time on the rear mounting bracket.
- 2f. Take a 3/8-16 X 1" thread cutting bolt and install into the rear mounting bracket as seen in Figure 3
- 2g. Disassemble the rear leg socket assembly taking the rear leg socket and drill a 7/32" pilot hole through the mark created in the previous step with the thread cutting bolt. Then re-drill the hole using a 1/2" drill bit. Reassemble the rear leg socket assembly to the truck bed tightening all hardware except the 3/8-16 x 1" thread cutting blot.

Now proceed to step 3.

Figure 3



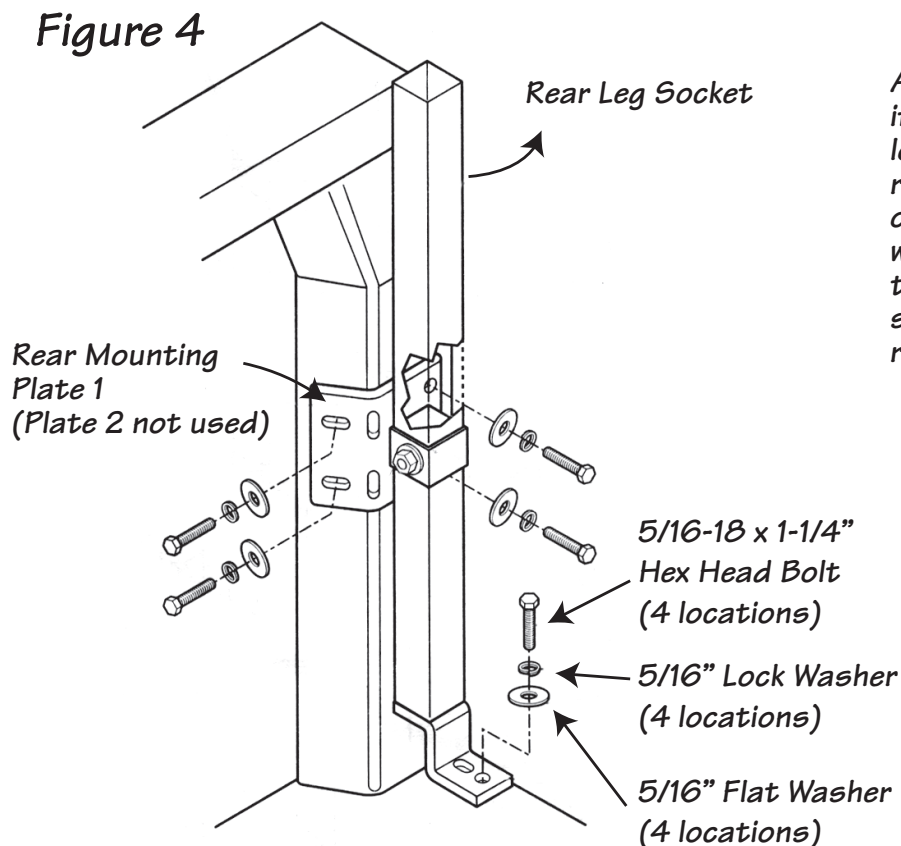
*Assembly Note:
if the best mounting hole location is between floor ribs, a floor spacer and or two extra 5/16" flat washers have been provided to fill the void. Rotate the leg socket 90 degrees to the rear of the vehicle if possible.*

Mark the Front Leg Socket hole that aligns best on the top of a floor rib

Start here for 45° degree tailgate stop.

- 2h. Insert the rear leg socket into the rear mounting bracket plate 1 as seen in 4. (Plate 2 will not be used) Hold the mounting bracket assembly flush with the tailgate stop ensuring that the rear leg is plumb and square to the truck bed. (See note at bottom of page for mounting to truck bed floor)
- 2c. Mark the five holes. Remove the assembly and center punch each of the holes. Drill a 7/32" pilot hole, then re-drill each hole using a 1/2" drill bit. Apply silicone sealant around all drilled metal holes.
- 2d. Install rivnut fastener into each drilled hole (see page 7, Figure 9 for rivnut fastener installation instructions).
- 2e. Take the rear leg socket assembly, four 5/16-18 X 1-1/4" hex head bolts, four 5/16" lock washers and four 5/16" flat washers and install as seen in Figure 4. Tighten all fasteners at this time on the rear-mounting bracket.
- 2f. Take a 3/8-16 X 1" thread cutting bolt and install into the rear mounting bracket as seen in Figure 4. Tighten the thread cutting bolt enough to mark the front leg socket for drilling.
- 2g. Disassemble the rear leg socket assembly taking the rear leg socket and drill a 7/32" pilot hole through the mark created in the previous step with the thread cutting bolt. Then re-drill the hole using a 1/2" drill bit. Reassemble the rear leg socket assembly to the truck bed tightening all hardware except the 3/8-16 x 1" thread cutting bolt.

Now proceed to step 3.

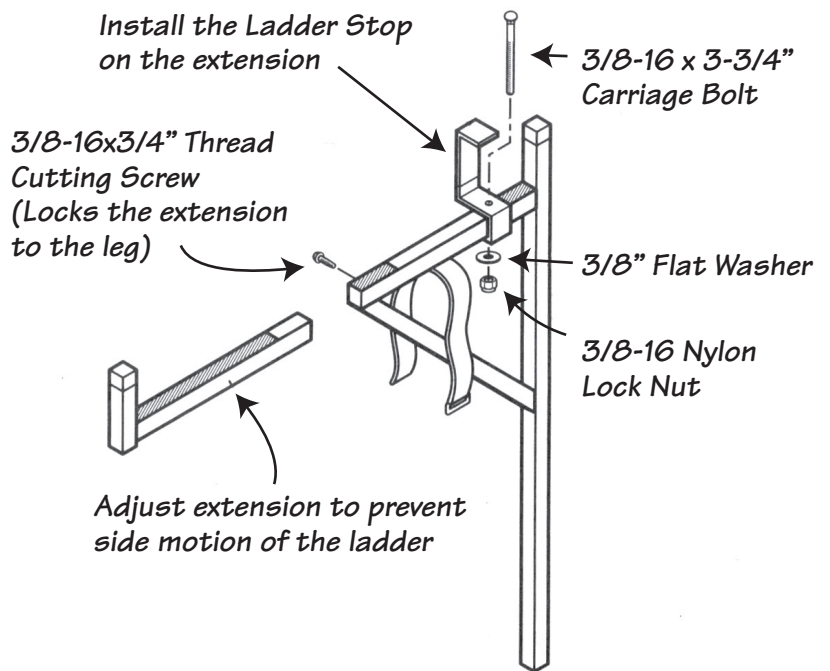


Assembly Note:
if the best mounting hole location is between floor ribs, a floor spacer and or two extra 5/16" flat washers have been provided to fill the void. Rotate the leg socket 90 degrees to the rear of the vehicle if possible.

STEP 3. INSTALLING THE FRONT UPRIGHT

- 3a. Take one upright and insert into the front leg socket assembly. Tighten the 3/8 - 16 x 1" thread cutting screw installed in step 1f. in the front mounting bracket.
- 3b. Take one extension and insert it into the upright as seen in Figure 6. After tighten at the desired location, seal the joint between the two tubes with the provided silicone sealant.
- 3c. Take the ladder stop, one 3/8 - 16 x 3/4" carriage bolt, one 3/8" flat washer and one 3/8 - 16 nylon lock nut and install onto the upright as seen in Figure 6.
- 3d. Take the one strap and install it onto the bracket as seen in Figure 6.

Figure 6



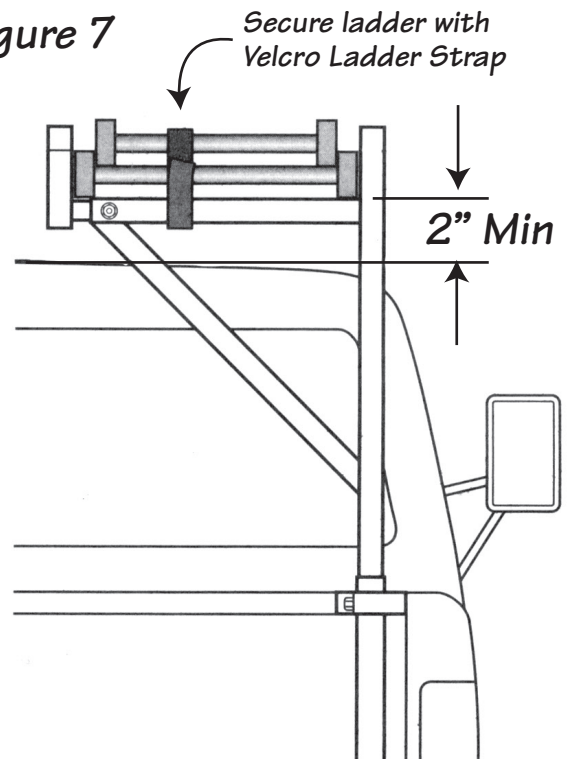
STEP 4. INSTALLING THE REAR UPRIGHT

- 4a. Take the remaining upright and insert into the rear leg socket assembly. Tighten the 3/8 - 16 x 1" thread cutting screw installed in step 2f. in the rear mounting bracket.
- 4b. Take the remaining extension and insert it into the upright as seen in Figure 6. After tighten at the desired location, seal the joint between the two tubes with the provided silicone sealant.
- 4c. Take the remaining ladder strap and install it onto the bracket as seen in Figure 6.

STEP 5. SECURING A LADDER TO THE RACK

- 5a. Carefully place a ladder on the rack, and check door entry and head clearance. If clearance is ample, and if desired, the uprights may be shortened as long as a minimum of 2" above the cab roof is maintained, see Figure 7. Remove and cut the uprights if desired. Note that you need to cut from the bottom of the upright. Double check the measurement before cutting.
- 5b. Secure ladder with the provided ladder straps when transporting. Secure or remove ladder straps when not being used.

Figure 7



STEP 6. INSTALLATION OF ROPE CLEATS (optional)

The two rope cleats are to be mounted where desired. Apply silicone sealant around all drilled metal holes.

See right for installation procedure.

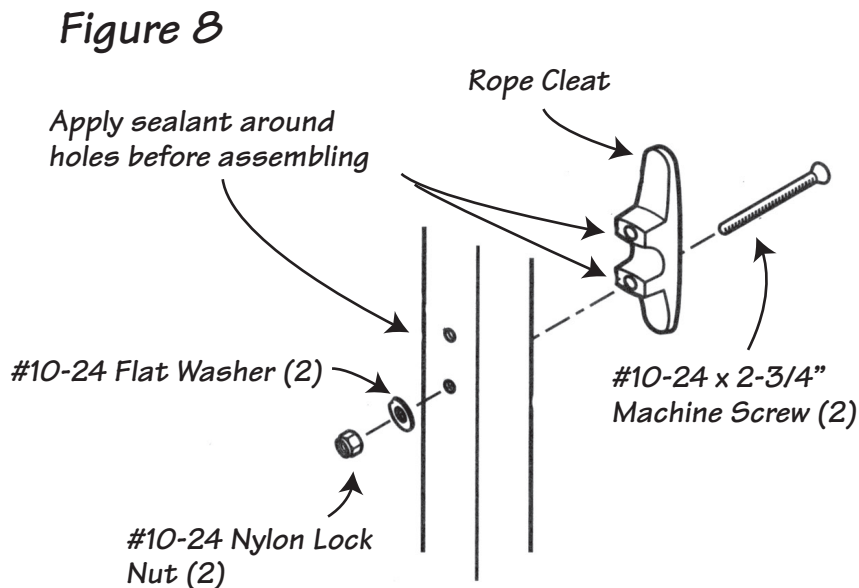


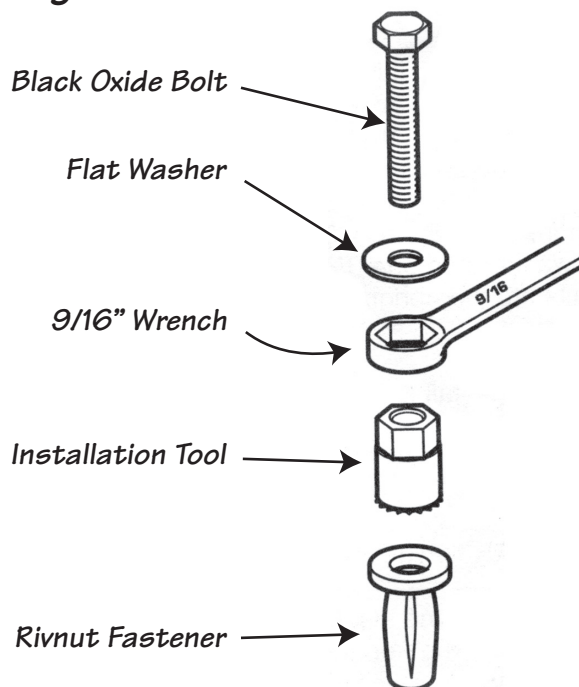
FIGURE 9: RIVNUT FASTENER INSTALLATION

Note: Make sure there is enough hole depth before installing the Rivnut fastener.

Note: Black Oxide Bolt, Flat Washer, and Installation Tool are only used to install Rivnut fastener.

- Place a drop of oil on the black oxide bolt for lubrication.
- Insert Rivnut fastener in the hole.
- Hold the "Installation Tool" with a 9/16" wrench while turning the "Black Oxide Bolt" with a 1/2" wrench until fully seated.
- Make sure the rivnut fastener and installation tool do not turn while tightening.
- Turning "Black Oxide Bolt" will be hard until fastener "bulbs" out.
- When Rivnut fastener is fully seated, remove the black oxide bolt and washer and continue with the installation.

Figure 9



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Limited Warranty TIE DOWN ENGINEERING Inc ("TIE DOWN") warrants its products to be free from defects in material and workmanship for one year from date of delivery to the original purchaser when properly installed, used and maintained by the purchaser.

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- Misapplication, misuse and failure to follow the directions or observe cautions and warnings on installation, operation, application, inspection or maintenance specified in any TIE DOWN quotation, acknowledgement, sales literature, specification sheet or installation instruction and service manual ("applicable literature").
- Use of product in any other application other than those described in TIE DOWN's product information materials.

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If requested by TIE DOWN, purchaser shall return the alleged defective product to TIE DOWN for examination at purchaser's expense. TIE DOWN will not pay for expenses incurred in returning a product to TIE DOWN without TIE DOWN's prior written authority. TIE DOWN shall not be liable for any other expenses purchaser incurs to remedy any defect. Purchasers waive subrogation on all claims under any insurance.

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- Model number, serial number and all other data on the specific component which appears to be involved in the difficulty.
- The date and from whom you purchased your TIE DOWN product.
- State your difficulty, being sure to mention at least the following: Application, Nature of load involved, and Weight of the load.

Field Service: If field service at the request of the purchaser is rendered and the difficulty is found not to be with TIE DOWN's product, the purchaser shall pay the time and expense (at the prevailing rate at the time of service) of seller's field representative(s). Charges for service, labor and other expenses that have been incurred by the purchaser, its customer or agent without prior written authorization of TIE DOWN will not be accepted.

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DUE TO THE WIDE VARIATION IN USES TO WHICH TIE DOWN PRODUCTS (WHEELS, HUBS, BRAKES, ETC.) ARE SUBJECTED BY USERS, WE ARE UNABLE TO SPECIFY CARRYING CAPACITIES OR SPEEDS FOR A PARTICULAR APPLICATION. THEREFORE, THE MANUFACTURER MUST TEST HIS EQUIPMENT UNDER THE MOST SEVERE CONDITIONS TO DETERMINE THAT TIE DOWN PRODUCTS ARE SUITABLE.

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