

921-Dave's Rack Jeep Unlimited

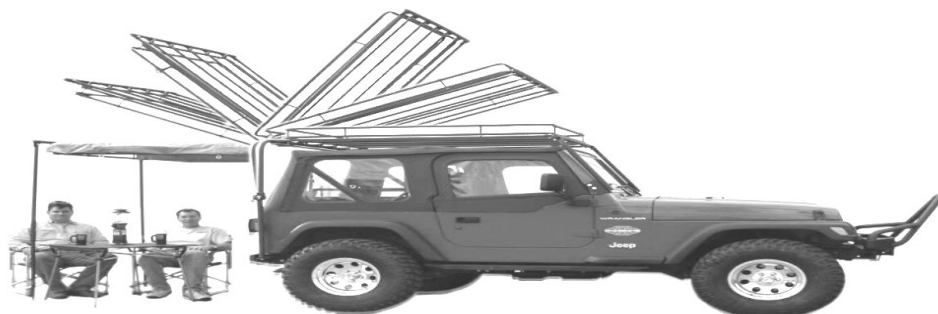
Can be converted from a luggage carrier to a sunshade in minutes.

Dave's rack is designed to work on stock vehicles and vehicles with Genuine Olympic 4X4 accessories except it is not compatible with our 153-AT Slider rear bumper. Some aftermarket equipment may interfere with the installation of Dave's rack. OEM bumper plastic end caps must be removed or modified to allow installation of Dave's rack, or you can purchase one of Olympic 4X4's many different styles of bumpers. Vehicles with hard tops cannot open rear hatch completely when rack is converted into the sunshade. On some jeeps you can reuse end caps without modification. Due to periodic manufacturing changes, your parts might not look identical to the parts shown in these instructions, this will not effect the installation of your rack.

Olympic 4x4 Products are serviced by our factory. We provide answers to installation questions. We ship parts ASAP. Try us before the hassle of returning Olympic 4x4 Products to your retailer or mail order specialist.

For any assistance please call (800) 777-0878.

Please read ALL directions before starting on Dave's Rack.



List of hardware

2	Knobs with 1/4" threaded bolt
2	Plastic cap, rectangular
2	1/4" X 2 1/4" stainless steel pull pin
4	Plastic cap, round, windshield support tube
8	Spacer tubes 1/2" round X 2"long
1	5/16" X 1 1/2" Allen head set screw
6	5/16" X 1" Hex head bolt
124	5/16" Flat washer
56	5/16 x 1 3/4" hex head bolts
56	5/16" Nylock nut
2	3/8" X 3" Grade 8 hex head bolt
12	3/8" NyLock nut
36	3/8" Flat washer
8	3/8" Eyebolt
140	3/8" Plastic flat washer
8	3/8" x 4" hex head bolts
2	7/16" X 1 1/4" Hex head bolt
2	7/16" X 3 1/2" Hex head bolt
4	7/16" Flat washer
2	7/16" Lock washer
2	7/16" Flange nut
2	1/2" X 1 1/2" Hex head bolt
2	1/2" Flat washer
2	1/2" Lock washer
6	12-24 X 1" Slot screw
6	12-24 Hex nut
6	#12 Flat washer
6	#12 Lock washer
6	Fender washer
2	Lanyards
4	Stainless steel buttons/bullet pins
6	5/16" x 1" countersunk head bolts

Parts list Box A

Front cross bar
Rear cross bar
Front supports L&R
Rear pivot support
Rear support tops L&R
Rear bottom supports L&R

Box B

Rotating front cross bar end (2)
Telescoping leg, outer (2)
Taillight backing plate (2)
Telescoping leg, inner (2)
Rear mounting bracket, right
Rear mounting bracket, left
Basket sides (2) 66"
Basket ends (2) 33"
Basket corners (8)
Load bar mounting bracket (4)
Load bar (11)

Tools needed

3/8" or 1/2" drive ratchet wrenches
Socket wrench sizes: 1/2", 9/16", 5/8", 3/4"
Combination wrench sizes: 7/16", 1/2", 9/16", 5/8", 11/16", and 3/4"
Socket wrench extension.
T-40 Torx drive socket
5/32" Allen wrench
Flat head screwdriver
Phillips head screwdriver
Silicon sealer

Optional tools and equipment

(highly recommended but not an absolute must)
Light penetrating oil, such as WD-40
Lithium grease
Anti-seize lubricant (copper based)
Stepladder
Clear or black paint or fingernail polish

Technical Specifications:

Load capacity: 500lbs. onroad, 350lbs offroad

Basket dimensions: XX" X xx"

To figure out how high the top of the Sports rack will be on your vehicle, measure the distance from the floor to the top of your Jeep's body tub and add 3X.5". Total height will differ from vehicle to vehicle depending on your vehicles tires and suspension system.

Note:

5/16" bolts use 1/2" wrench	5/16" nuts use 1/2" wrench	12-24 hex nut use 7/16" wrench
3/8" bolts use 9/16" wrench	3/8" nuts use 9/16" wrench	
7/16" bolts use 5/8" wrench	7/16" nuts use 11/16" wrench	
1/2" bolts use 3/4" wrench	1/2" nuts use 3/4" wrench	

7/16" nuts use a different size then the 7/16" bolts

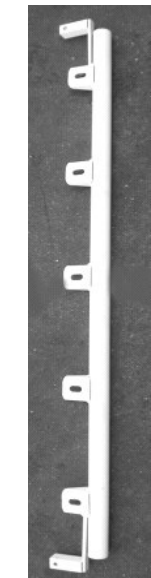
When installing the rack, it will install alot easier if you leave all bolts loose till the entire rack is assembled. Once everything is in place, tighten down all hardware. This is not necessary but it does ease the installation. The instructions will inform you when it is "OK" to tighten down bolts and when to leave them loose.

Contents photos:

Box A

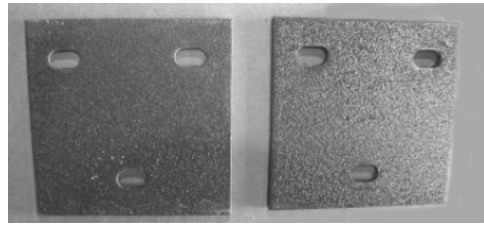
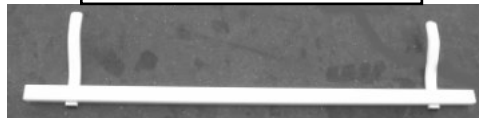


Front cross bar
1 1/2" tube
48 7/8" long

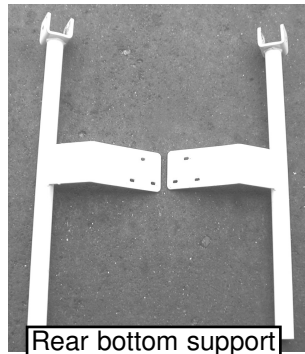


Rear crossbar
1 1/2" tube
54" long

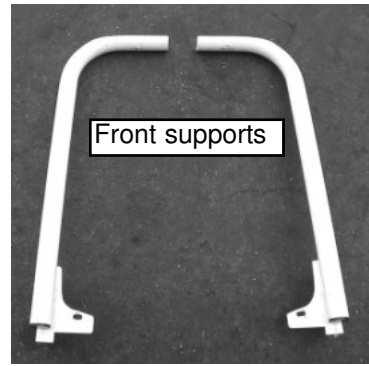
Rear pivot support
3/4" X 1 1/2" rectangular tube
51 3/8" long



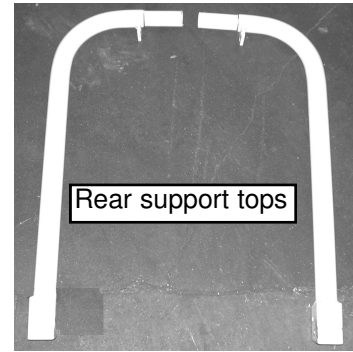
Taillight backing plates



Rear bottom support



Front supports

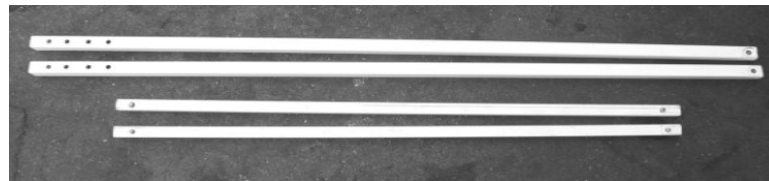


Rear support tops

Box B



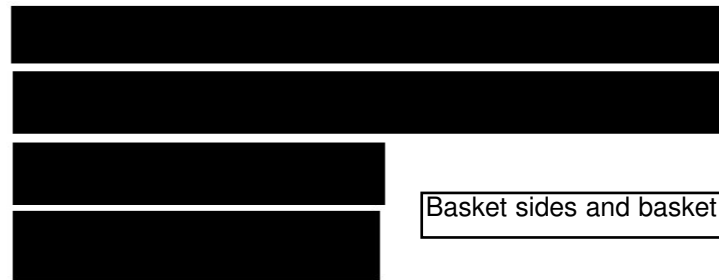
Rear mounting brackets



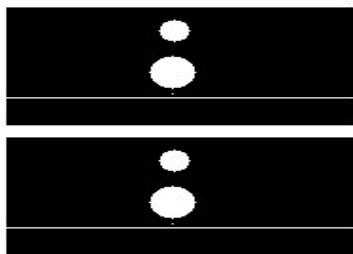
Telescoping legs outer & inner



Rotating front cross bar ends



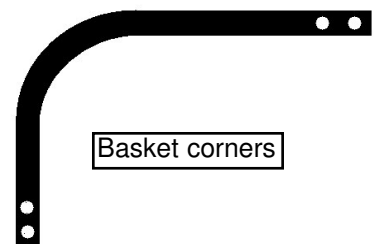
Basket sides and basket ends



Load bar mounting bracket



Load bars



Basket corners



Photo 1



Photo 2

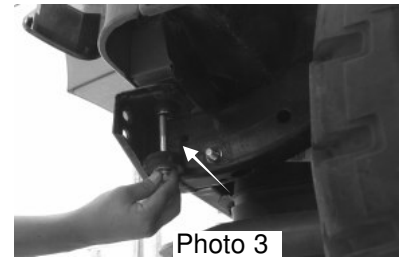


Photo 3

Step 1. Remove your taillight cover and taillight housing from vehicle body. Using Phillips head screwdriver and flat head screwdriver, some models require a 3/8" socket. See Photos 1 & 2.

Step 2. Remove rear body mount bolt on both sides using 9/16" sized wrench. See Photo 3.

Step 3. Using 7/16" x 1 1/4" hex head bolts, flat washer, and flange nuts, attach rear mounting bracket to frame. Leave bolts loose till later.

Note: Top of hex head bolt goes outside of frame. The flange nut will be inside the frame. There is an oval access hole that will allow you to gain access to the inside of frame. See photos 4 & 5. You may have to remove the rear bolt of your tow hook so you can access the oval hole.

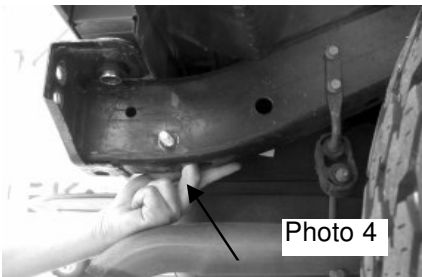


Photo 4



Photo 5

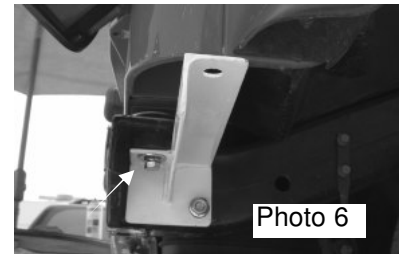
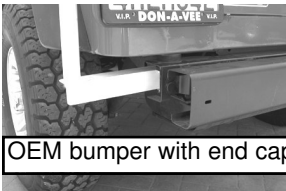


Photo 6

Step 4. Install rear mounting bracket using 7/16"x 3 1/2" hex head bolt, lock washer, and flat washer. The lock washer goes on the bolt first, followed by the flat washer. Then insert bolt through the rear mounting bracket and through the body mount bushings. **Loosely finger tighten body mount bolt.** See photo 6.

Note: Stock OEM bumper end caps must be removed if using OEM bumper. OEM bumper caps may be trimmed so they can be reinstalled on the bumper. A sawzall can be used or other cutting device to trim the OEM bumper end caps. Trimming and re-installation of OEM bumper end caps is optional. Olympic 4x4 Products has a wide selection of bumpers that allow for the installation of the Dave's Rack and provide extra protection for your jeep. On some Wranglers with a tow hitch or a tow hook, you must remove them to allow Dave's rack to be mounted properly, depending on application they might be able to be remounted.



OEM bumper with end caps removed

Step 5. Using a 1/2" x 1 1/2" hex head bolt, lock washer and flat washer, bolt rear bottom support tube to rear mounting bracket. A 3/4" socket wrench will aid in tightening these bolts. Leave bolts loose. See photo 7.

Step 6. Place taillight-backing plate inside body tub and replace taillight housing over tab on rear bottom support and attach to vehicle body using 12-24x 1" slot screw, 12-24 hex nut, and a #12 lock washer, fender washer. Slot screws will pass through rear taillight housing, rear bottom support, jeep body, and through the taillight backing plate. Tighten ALL bolts now, including rear bottom support bolt to rear mounting bracket, as assembled in step 5, rear mounting bracket, and rear body mount. Reinstall taillight cover.



Photo 7

Note: On some Wrangler LJ's you might have a difficult time installing the taillight backing plate on the passenger side. you must remove the passenger side rear tire, rear splash guard that covers the wheel well, and a canister that is inside the rear quarter panel. You must do this in order to gain access to install the rear taillight-backing plate. Remove the 5/16" bolts (4) and the 5/16" nut that holds the canister mounts in place. Slide the canister out far enough so you can access the area behind the rear taillight, then complete step 6. Next reinstall the canister, splashguard, and rear tire.



Photo 8



Photo 9



Photo 10

Step 7. Connect one rear top support to rear bottom support using 3/8" x 3" hex head gold grade 8 bolts with flat washer and NyLock nut using a 9/16" socket wrench, also install the lanyard between the 3/8" NyLock nut and one of the flat washers. Leave in downward position. Tighten these bolts now. Then insert rear cross bar into one end of rear top support. See Photos 8-13.

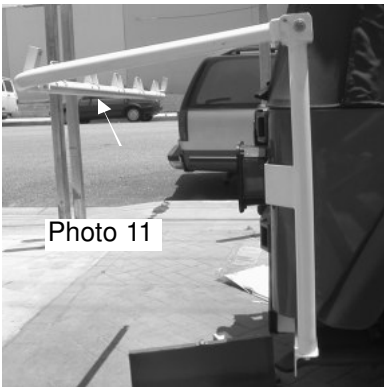


Photo 11



Photo 12



Photo 13

Step 8. Install the second rear top support to the rear cross bar, then swing rear top support upwards and connect to rear bottom support using 3/8" x 3" hex head gold grade 8 bolts with flat washers, and NyLock nut using a 9/16" socket wrench, also install the lanyard between the 3/8" NyLock nut and one of the flat washers. See Photos 12 & 13.



Photo 14

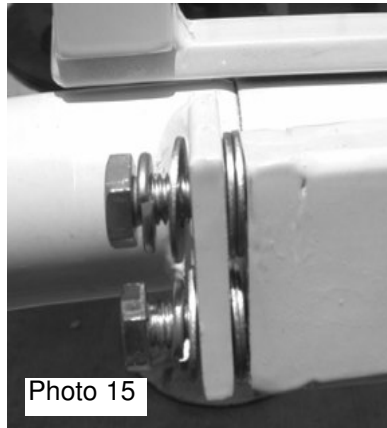


Photo 15

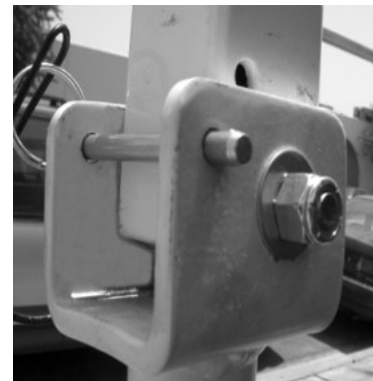
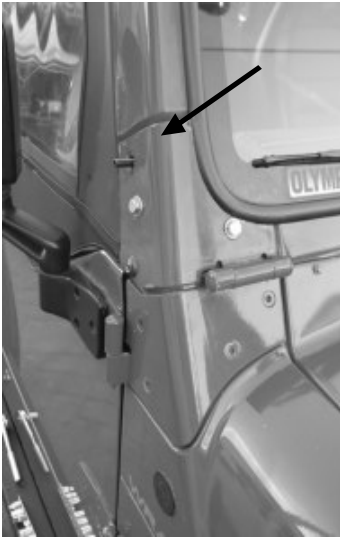


Photo 16

Step 9. Bolt rear rectangular pivot support in place using 3/8" bolts, lock washer and flat washer. Install rear cross bar and rear rectangular pivot support onto the rear support top. See Photos 14, 15

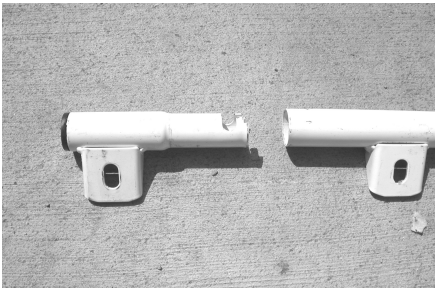
Note: One or two 3/8" flat washers will need to be placed between rear top support and rear rectangular pivot support in order for the rear rectangular pivot support to be centered **ONLY** if yours has enough gap to fit the washers in on both sides. The rear rectangular pivot support "S" shaped support legs will face toward front of vehicle. Finger tighten all bolts until all 4 bolts are finger tight, then securely tighten all bolts. See Photos 14&15.

Step 10. Secure rear support top in upward position with 1/4" pull pin. The pull pin assembly consists of the 1/4" pull pin connected to the key ring that is then connected to the lanyard. See Photo 16.



Step 11. Remove top bolt from upper part of windshield hinge, using #40 Torx bit and install a 5/16" x 1 1/2" Allen set screw with a 5/32" Allen wrench, to keep threaded plate inside windshield in place. Then remove all other bolts and attach front support with 5/16" x 1 1/2" countersunk head bolts, and 5/16" hex head bolts on the front of the windshield hinge also use a flat washer and lock washer. Once front support is tightened in place, remove Allen set screw and replace with countersunk head bolt. Leave these bolts loose till later. See Photos 17 & 18.

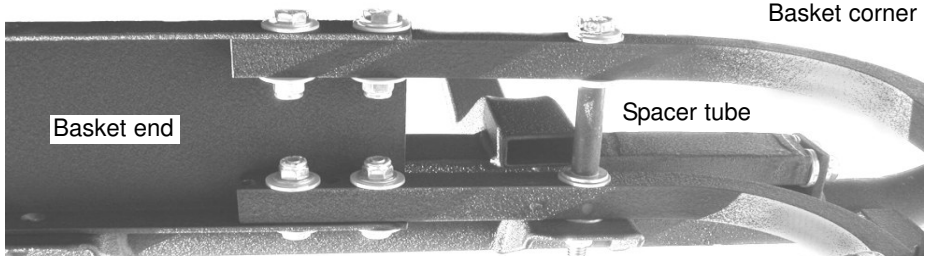
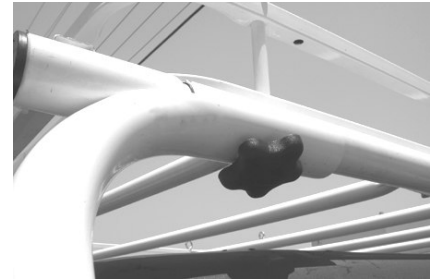
Note: It is advised that you use loc-tite on the windshield hinge bolts, and paint them with a clear spray paint or fingernail polish on the heads of the bolts. For a cleaner look you may wish to reuse the OE button head bolt in place of the hex head bolt.



Step 12. Install rotating front cross bar ends into the front cross member, making sure the tabs line up with the tabs on the front cross member. Install front cross member and rotating front cross bar ends to front support. See Photos 19 & 20.

Note: To ensure ease of installation and effortless future use of the sunshade, you may want to lubricate the holes on the front cross member where the rotating front cross bar ends are inserted with lithium grease.

Step 13. Finger tighten front cross bar to front supports with supplied knobs with 1/4" threaded bolt. You may want to apply anti-seize lubricant to the threads. See Photo 22. **Tighten the countersunk bolts that secure the front supports to the windshield hinge after you tighten the threaded knobs.** This will ensure that everything is lined up properly and that the tightening of the front supports will not effect the alignment of the rack.

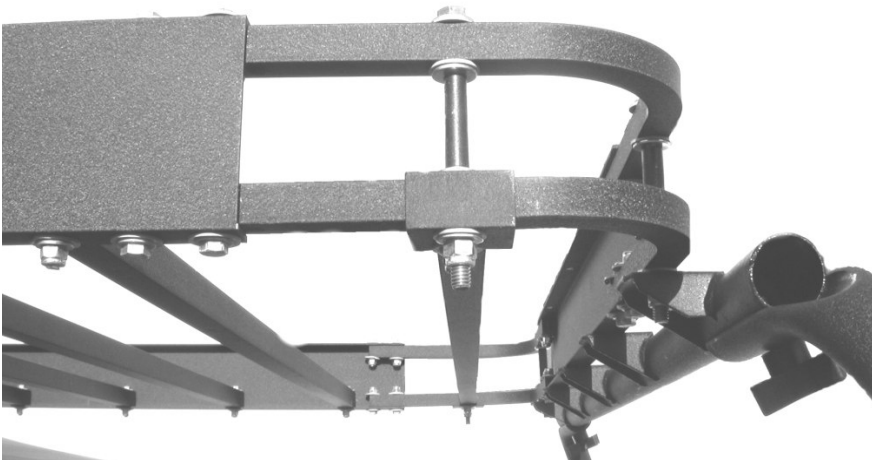


Basket corner

Basket end

Spacer tube

Load bar connected to load bar mounting bracket



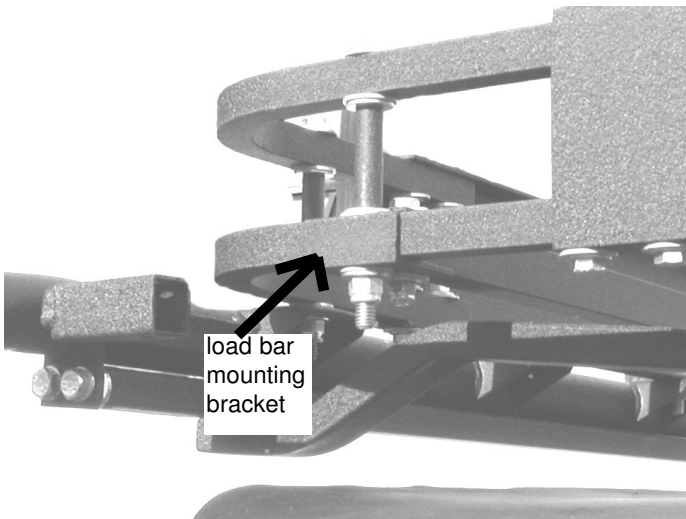
Basket attached to front crossbar

Step 14. Beside your jeep, lay out all the basket parts in the order they will be assembled.

Note: There will always be a plastic washer between any steel to aluminum contact areas. This is done to avoid any aluminum to steel contact.

Step 15. Bolt basket corners to basket end (the short side of basket corner will bolt to the basket ends). Then bolt basket corners onto the basket sides. Use 5/16" X 1 3/4" hex head bolts, 5/16" flat washers, plastic washers, and 5/16" Nylock nuts. First install a 5/16" flat washer onto bolt then a plastic washer, then slide bolt through the basket side/end, then through the basket corner, next install a plastic washer, then a 5/16" flat washer and secure with a 5/16" Nylock nut. Do this for all basket corners; making sure the bolt head is always on the basket ends/sides and not on the basket corners.

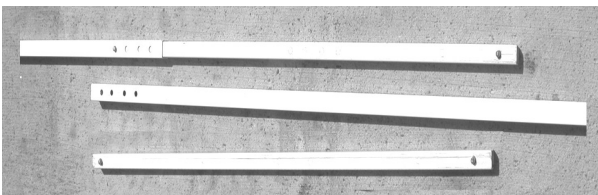
Step 16. Install load bars onto the basket sides using the same method you used in step X. The first and last load bar will not be mounted to the basket sides.



Step 17. Install the load bar mounting bracket. To do this you will run a bolt through the baskets corners, through a 1/2" X 2" spacer tube, through the bottom basket corner, through the load bar mounting bracket and secure with a plastic washer, then a flat washer then a 3/8" Nylock nut. So when you are looking at the bolted together assembly it will be in this order: head of the bolt, flat washer, plastic washer, top basket corner, plastic washer, flat washer, 1/2"x 2" spacer tube, flat washer, plastic washer, bottom basket corner, load bar mounting bracket, plastic washer, 3/8" flat washer, and secure with 3/8" Nylock nut. The load bar will now mount onto the load bar mounting bracket the same way you bolted the load bars to the basket sides.

Step 18. Set completed basket on top of the front and rear crossbars. Install spacer tubes between the basket corners where the other holes are located along the front and rear of the basket, these will strengthen the basket corners and will be assembled similar to step X but without the load bar mounting brackets. It should be assembled like this: head of the bolt, flat washer, plastic washer, top basket corner, plastic washer, flat washer, 1/2"x 2" spacer tube, flat washer, plastic washer, bottom basket corner, plastic washer, 3/8" flat washer, front/ rear crossbar, 3/8" flat washer and secure with 3/8" Nylock nut.

Step 19. The baskets ends have a hole in the center so it can be bolted to the front/rear cross bars. Insert a 3/8" x 1" hex head bolt with a flat washer and plastic washer through the basket ends, through the crossbar and secure with a 3/8" flat washer and Nylock nut.



Step 20. Install two (2) stainless steel buttons in each of the inner telescoping legs, shown in photo 26 at the very bottom. Slide the inner telescoping legs into the outer telescoping legs. Bolt outer telescoping legs to the front rotating cross member ends using 5/16" X 1 3/4" bolts, flat washers, and 5/16" Nylock nut. Telescoping legs will be installed in the U-shaped channel on the front cross bar ends. Extend telescoping legs into the rear cross member. See Photos 26&27.



Note: A light penetrating oil may be applied to the telescoping legs for ease of operation.

Step 21. Insert plastic caps in front support, cross bar ends, and rear pivot support.

Note: You may want to wrap the plastic end caps with masking tape where they are inserted into the front support, cross bar ends, and rear pivot support, for a more permanent installation of the end caps. When the masking tape heats up from your jeep being in the sun, the adhesive in the tape will melt and seal the plastic end caps in place.

Step 22. Re-check tightness on ALL nuts and bolts.

Step 23. After 500 miles or first off-road trip, whichever comes first, re-check tightness on ALL nuts and bolts.

Note: To transform the luggage rack into the sunshade, you must remove the front knobs, 1/4" pull pin from the rear support bottom, and the telescoping legs from the rear cross member. The Dave's rack will then pivot on the rear cross member and the rear support bottom. The telescoping legs will pivot downward to a vertical position. Extend the telescoping legs to desired length to support the sunshade. Dave's Rack also pivots on the rear support bottom to allow the installation/ removal of a soft top. To do this remove the front knobs and the 1/4" pull pins from the rear support bottom, the rack will then pivot backwards allowing removal/installation of your soft top. To remove/install a hard top, disconnect 1/4" pull pins, swing rack backwards with the telescoping legs attached to the rear cross member. Lay the rack in its most downward position. Then a hard top may be lifted over the top of the jeep.