

MAXIMUS-3



JK Wrangler

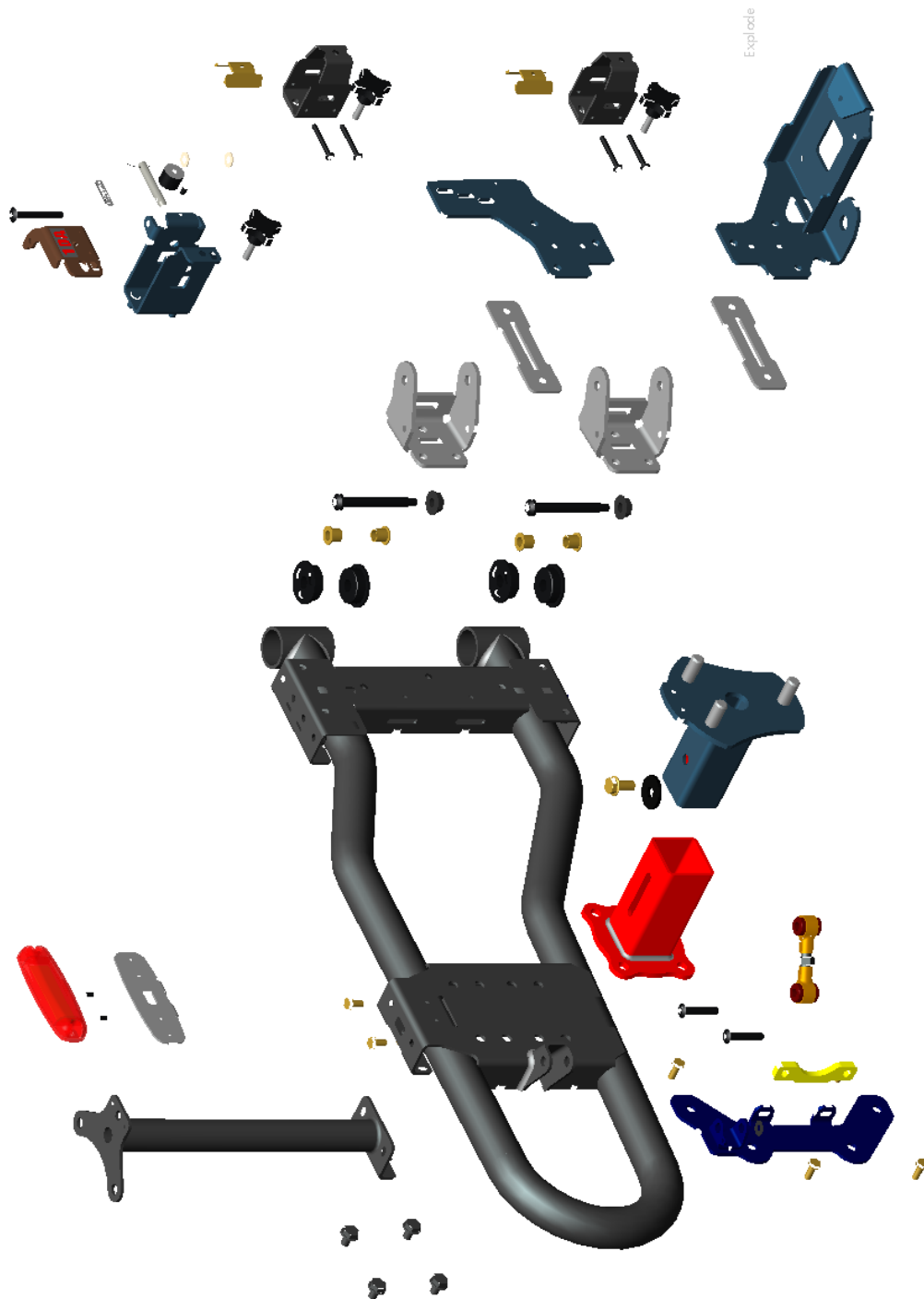
MAXIMUS-3 MODULAR TIRE CARRIER



Installation Guide

Please make sure you read and understand the entire installation guide before you start.

No Metal Drilling or Cutting Required.



Component List:**Quantity****Tools Required:**

Tire Carrier Hinge Frame	1
Carrier Hinge Brackets	2
Carrier Hinge Pin	2
Carrier Hinge 12MM SS Flat Washer	2
Tailgate Hinge Spacer	2
Tie Rod Link Plate	1
Tie Rod Link	1
Tie Rod Link Bolt	2
Tie Rod Link Flat Washer	4
Tie Rod Link Spacer	4
Tie Rod Link Lock Nut	2
Nylon Stop Block	1
Stop Block 8MM SS Bolt	2
Stop Block 8MM Flanged Nut	2
Wheel Mount Base	1
Wheel Mount Base 10MM Hex Bolt	4
Wheel Mount Base 10MM Flanged Nut	4
Wheel Mount Base 10MM Washer	4
Wheel Mount (male)	1
Wheel Mount 12MM Hex Lock Bolt	1
Wheel Mount 12MM Flat Washer	1
Center Accessories Mast/Tower	1
Accessories Mast 8MM SS Bolt	3
CHM 3 rd Brake Light kit	1
CHM 3 rd Brake Light Bracket	1
CHM 3 rd Brake Light Bracket 5MM Bolt	2
CHM 3 rd Brake Light Bracket 5MM Nut	2
Center High Mount Work Light Bracket	1
Work Light Bracket 6MM SS Bolt	2
Work Light Bracket Flanged Nut	2
Hi-Lift Jack Mount Base	1
Hi-Lift Jack Clamp Plate	1
Hi-Lift Jack Clamp Assembly	1
Hi-Lift Jack Mount 8MM SS Bolt	6
Hi-Lift Jack Clamp Assembly Nut	2
Hi-Lift Jack Clamp Assembly Flat Washer	2
Hi-Lift Jack Safety Pin	1
Tailgate Over-travel Limiter Bolt	1
Shovel Mount Clamp Assembly	1
Shovel Mount Holster Assembly	1
Shovel Mount 8MM SS Bolt	4
Side Mount Rotopax Bracket	1
Side Mount Rotopax Bracket 8MM SS Bolt	3
High Mount Rotopax Dually Mount	1
High Mount Rotopax U-Blot Assembly Kit	1

- ✓ Metric Drive Sockets
- ✓ Metric open wrench/spanner
- ✓ Metric Allen Keys Set
- ✓ Torx Socket Bit #50
- ✓ L-shape Torx key #50

Installation

1- REMOVE THE FACTORY SPARE TIRE/WHEEL MOUNT:

First remove the spare tire/wheel.

Using a pry tool remove the vent cover on the inner side of the tailgate and disconnect the 3rd brake light wire.

Pull out the harness through the grommet on the tailgate and save for installing the Maximus-3 CHM 3rd brake light later. *Alternatively, you can tape the harness to the tailgate out of the way for modification later.*

Using a 13mm drive socket and ratchet remove the 8 bolts on the factory tire mount.

Reinstall the outer passenger side 4 bolts and save the remaining 4 bolts to install the Tie Rod Linkage Plate later.

Pop out the top and bottom hinge covers - you may keep them to reinstall later (*optional*).

Remove the rubber tire bumpers: gently twist and pull to remove. Plug the holes with the grommet plugs provided.

2- INSTALL THE TIRE CARRIER HINGE BRACKETS:

Starting with the top tailgate hinge strap, use the 13mm drive socket to remove the 2 hinge bolts on the tail gate.

Keeping the door closed swing the hinge strap open to access the 3 outer torx bolts and remove using the #50 torx socket. Make sure you keep the bottom hinge in place for now in order to maintain the door alignment.

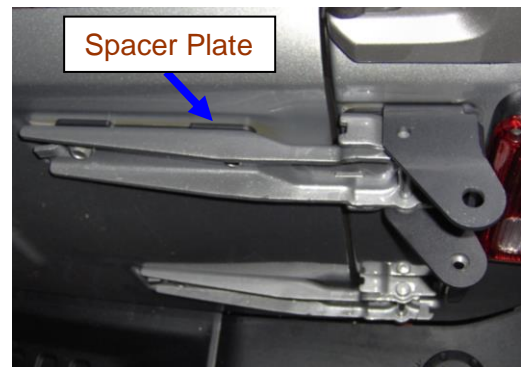
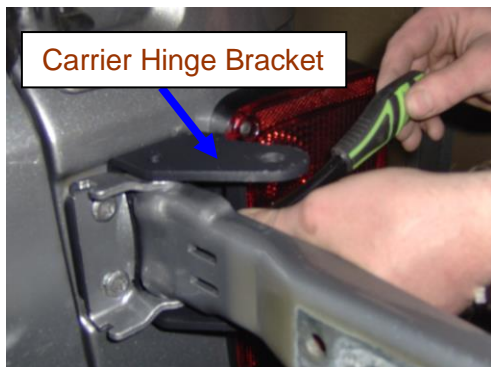
With the hinge removed, wipe the surfaces cleaned for the Carrier Hinge Bracket install.

Slide the tailgate hinge into the Carrier Hinge Bracket, line up the holes and bolt the arrangement back to the stock location using the original torx bolts. Use Locktite on all bolts – **important that you do not tighten the bolts for now as you will need some movement to be able to adjust the hinge pins later.**

Place a Spacer Plate between the hinge strap and the tailgate, line up the holes and bolt back to the stock location on the tailgate using the original stock hex bolts. Use Locktite on both bolts and tighten well.

Repeat the same with the bottom hinge. Make sure the Carrier Hinge Brackets are somewhat snug/loose to move.

With the tailgate still closed check alignments between the door and the body.



3- INSTALL THE MAXIMUS-3 TIRE CARRIER:

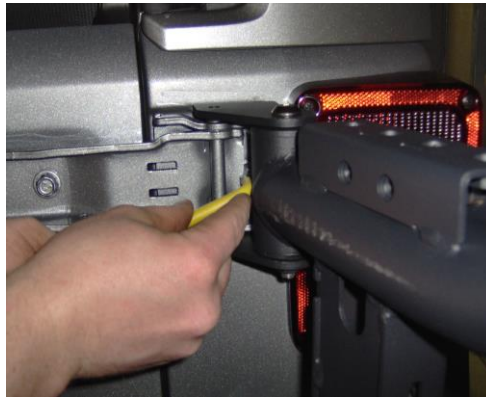
Now pick up the carrier, slide the bushings into the Carrier Hinge Brackets (installed in the previous steps), line up the holes and push in the Hinge Pins - you may need a second person to hold the Carrier for you while you insert the pins. **Use the looseness in the bolts to wiggle the Carrier Hinge Bracket to line up with the bushings.** Add a 12MM Stainless Steel Washer between each bottom bronze bushing and the brackets, **beveled face down** (*this is important: the beveled face will not scratch into the powder coated hinge as it turns*) - use Locktite on the Carrier Hinge pins and fasten with an Allen key (do not tighten too much – make sure the Carrier moves smoothly and that the Stainless Steel Washers are not obstructing the Hinge Pins from reaching full travel).

Swing the Carrier closed onto the tailgate and check for horizontal alignment with respect to the tailgate.

You may need to pull up the front end of the carrier to correct any drooping before you tighten the back bolts in the next step.

While pulling up, swing the Carrier open and tighten the outer hinge bolts using the L-shape torx bit #50.

Now open the tailgate and carefully swing both the tailgate and the Carrier open to access the inner hinge torx bolts. Tighten all 4 bolts using the L-shape torx key #50. Be careful when you swing the Carrier open not to cause damage to the body.



4- INSTALL THE TIE ROD LINKAGE PLATE:

Using the 4 factory/OEM bolts you saved earlier in step 1, line up and bolt-on the Tie Rod Linkage Plate to the tailgate. Tighten just snug for now because you may need to adjust it vertically later.

Install the Nylon Stop Block using the 8mm Stainless Steel Bolts and flanged nuts provided as shown below.

With the tailgate closed push the Carrier onto the tailgate and adjust the Nylon Stop Block such that it captures/seats the Carrier's horizontal tube. Use the slots in the bracket to adjust the Stop Block vertically, and tighten the bolts – do not over torque. *You can also get more vertical adjustment from the 4 Tie Rod Linkage Plate bolts if needed.*

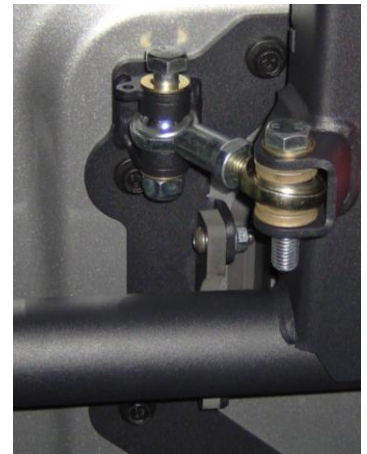
Now, tighten all 4 Tie Rod Linkage Plate bolts.

5- INSTALL AND ADJUST THE TIE ROD LINKAGE:

Install the Tie Rod to the Linkage Plate bracket using the 12mm bolt, washers, spacers and lock nut provided. Make sure you add a spacer on each face of the Tie Rod eye.

With the tailgate closed push the Carrier into the Nylon Stop Block and set the Tie Rod length to line up the rod eye to the linkage channel tab on the Carrier. **Once set, now reduce the length by 2 full turns to obtain preload setting.** The tension/preload setting will become more apparent later.

With the tailgate slightly open bolt the Tie Rod to the channel tab on the Carrier using the remaining 12mm bolt, spacers, lock nut and washers. Now you should feel tension in the tailgate just before closing.



Test the sync operation of the tailgate and the Carrier:

Test the sync operation by opening and closing the tailgate as you normally would. You should have a rattle free, one-touch synchronized opening and closing of the tailgate and the Tire Carrier.

Make sure the Tie Rod and the Nylon Stop Block are not rubbing with the Carrier during movement especially when the tailgate travels to full opened position.

With the tailgate closed check to make sure that the Carrier is captured tight in the Nylon Stop Block by shaking (pushing/pulling) on the Carrier. **Readjust the Tie Rod length accordingly if needed.**

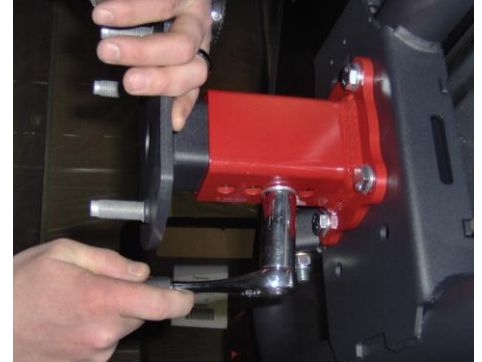
6- INSTALL AND ADJUST THE SPARE TIRE/WHEEL MOUNT:

Using the 10MM bolts, washers and flanged nuts provided, bolt the Base Mount (female) to the Carrier with the holes facing down – *use the top or bottom mounting holes according to your tire size and height preference*. Use Locktite and tighten well.

With the spare wheel/tire upside down, measure the distance from the face of the tire to the wheel hub mount surface (wheel/tire depth).

Install the Wheel Mount (male) into the Female Base Mount with the weld nut facing down. Adjust the Wheel Mount such that the distance between the mount surface and the Carrier tube surface is just shorter than the wheel/tire depth dimension you measured previously. Line up the Wheel Mount weld nut to the nearest mounting hole on female Base Mount to get the desired shorter wheel depth setting.

Use the 12mm bolt and washer provided to bolt the Wheel Mount in place. Use Locktite and tighten to 45lb torque.



6- INSTALL THE CENTER ACCESSORIES MAST/TOWER AND 3RD BRAKE LIGHT:

Install the Center Accessories Mast/Tower using the 8mm bolts provided.

Fish your wires up through the center of the MAST/Tower and splice your factory 3rd brake light harness wire and connect to the 3rd Brake Light wire using the bud connectors provided.

Install the Maximus-3 CHM 3rd Brake Light bracket to the Center Accessories Mast/Tower using the 5mm bolts and flanged nuts provided and install the 3rd Brake Light using the 4mm truss head bolts supplied. Bolt the Mast/Tower to the Carrier using the 8MM Stainless Steel Bolts supplied.

Alternatively, use black cable ties straps to secure the harness to the Center Mast/Tower and Carrier at the tie point on the Carrier.

Allow enough full travel harness length between the tailgate and the Carrier and then tie strap to the tie point on the linkage bracket on the tailgate.

7- INSTALL THE SPARE TIRE/WHEEL (final install):

Bolt the spare wheel/tire on using your lug nuts and make sure that the tire is pressing against the carrier tube and center accessories mast/tower. When fully tightened you should have about 1/2" to 3/4" squish on the tire face – if not then you need to readjust the Wheel Mount (male) to the next bolt down location/hole.

8- INSTALL THE ACCESSORIES (OPTIONAL):



A- Installing the Hi-Lift Jack Mount:

Using the 8mm SS bolts provided, bolt the Jack Mount Base and Jack Clamp Bracket to the Carrier. Use medium duty Locktite on the bolts.

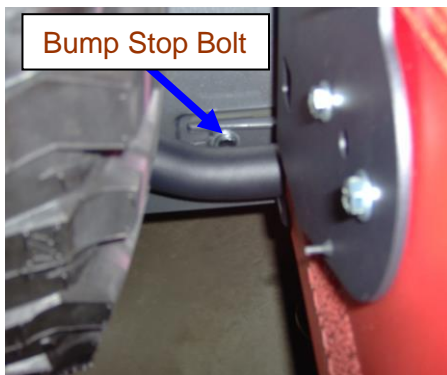
Using the 8mm flanged nuts and washers, mount the Jack Clamp Assembly to the Jack Clamp Bracket you assembled in the previous step. Do not tighten, just snug for now as you may need to adjust vertically when you come to mount your Hi-Lift Jack and aligning the safety lock pin.

Connect the safety lock pin to the lanyard.

Install the Tailgate Over-travel Limiter (Bump Stop Bolt):

Replace the factory inner bottom tailgate hinge bolt with the Tailgate Over-travel Limiter Bolt and washer as shown below. Add the 8MM zinc washer between.

Using a 13mm wrench (spanner), adjust the height of the limiter bolt to stop the tailgate just after the detent position at about 95 degrees opening angle – adjust as desired. **Make sure your Hi-Lift Jack does not hit the tail light when you open the tailgate fully. Now tighten the flanged head jam nut using a 13mm open wrench (spanner).** Push the Plastic Cap onto the head of the limiter bolt to protect the powder coat.



B- Installing the Shovel Mount:

Using the 8MM SS Bolts provided, mount the Shovel Clamp and Holster assemblies to the Carrier. Use medium duty Locktite on the bolts.

C- Installing the Side Rotopax Mount:

Using the hardware supplied bolt the Rotopax Mount and T-handle to the Maximus-3 Rotopax Mount Bracket. Discard the round metal plate.

Using the 8MM SS Bolts supplied, mount the Rotopax Mount assembly to the Carrier. Note you cannot use this set-up in combination with the Shovel Mount.

Mount and use your Rotopax cans per Rotopax instructions.

D- Installing the High Double Pax Mount:

Using the hardware supplied, assemble the Rotopax Mount and T-handles to the Maximus-3 Double Pax Mount bracket.

Using the U-bolts, washers and nuts supplied, mount the Double Pax Mount assembly to the Carrier. Use light duty Locktite on the bolts.

Mount and use your Rotopax cans per Rotopax instructions.

E- Installing the High Mount Work Light:

For Center High Mount: bolt the Work Light Bracket to the Center Accessories Mast/Tower using the 6MM bolts and flanged nuts supplied.

Mount and wire your work light per manufacturer's instructions.

For Side High Mount: bolt the Side Accessories Mast/Tower to the Carrier using the 8MM bolts and supplied.

Mount and wire your work light per manufacturer's instructions.

F- Installing the Backup Camera Mount:

Using the 6MM bolts and washers supplied, bolt the Backup Camera Mount bracket to the Wheel/Tire Mount.

Mount your backup camera to corresponding mounting holes in the bracket and wire per manufacturer's instructions.

Compatible camera lenses are:

HDE E336, TrendMart B005IEXXKM, PYLE PLCM22IR, Pyle PLCMB20, Pyle PLCM39FRV, XO Vision HTC35 Universal Mount.

Your installation is complete. If you have questions regarding this installation please contact us at info@maximus-3.com or call 248 821 6654.

Website: <http://www.maximus-3.com>