



JK FRAME MOUNTED TIRE CARRIER

IMPORTANT: Thank you for purchasing this Poison Spyder product. Please read through this entire document before proceeding with installation. If you are not confident in your mechanical skills, please seek the help of a professional to perform the installation. Check your packages immediately upon arrival to ensure that everything listed is included, and to check for damage during shipping. If anything is missing or damaged, or if you need technical assistance with any aspect of this installation, call Poison Spyder at (951) 849-5911 as soon as possible. This document last updated September 2018.



APPLICATIONS

NOTE: TO INSTALL THIS TIRE CARRIER, ONE OF THE FOLLOWING BUMPER IS REQUIRED! YOU MAY NEED TO REFER TO THE BUMPER INSTRUCTIONS. ALL INSTRUCTIONS CAN BE FOUND ON OUR WEBSITE-

WWW.POISONSPYDER.COM

17-65-010P1 JK CRAWLER REAR BUMPER

17-67-010P1 JK BRUISER REAR BUMPER

NOTE: Some parts pictured in these instructions are for reference and may slightly vary from what you have. The direction should still apply.

SUGGESTED TOOLS

- * *You will most likely need a helper as these parts are heavy.
- A mechanic's tool set with a full assortment of SAE and metric end wrenches, sockets, ratchets, hex keys, etc.
- A measuring tape or ruler
- A felt-tip fine point marker, scribe or punch
- A floor jack and large block of wood (if no helper)
- A power drill and drill bits
- Masking tape

PARTS LIST

- 1- UPPER SWING
- 1- LOWER BUMPER MOUNT
- 1- PARTS KIT BOX

| | | |
|--------------------------|----------------------------|--|
| <i>Includes..</i> | 1- JK TC TRAMP STAMP | 1- 3 PC WHEEL MOUNT- LUG PLATE |
| | 1- V BLOCK LOCATOR BRACKET | 1- LICENSE PLATE MOUNT |
| | 1- SPINDLE SEAL WASHER | 2- HUB BEARING SEAL |
| | 1- GATE LINK ASSEMBLY | 1- UHMW V-ALIGNMENT BUSHING |
| | 2- TAPERED ROLLER BEARINGS | 1- GREASE PACK |
| | 1- SPARE TIRE MOUNT | 2- HARDWARE PACKS - (HW-17-62-030T) , (HW-17-61-030) |

HW-17-62-030T HARDWARE KIT

- 6- 3/8" HIGH STRENGTH SAE YELLOW ZINC FLAT WASHERS
- 1- 1/2"-13 X 4.25" GRADE-8 HEX HEAD BOLT
- 2- 1/2" GRADE 8 FLAT WASHERS
- 1- 1/2"-13 GRADE 8 NYLOCK NUT
- 2- 3/8"-16 DEEP CLIP NUTS
- 4- 1/4"-20 x 1" STAINLESS STEEL BUTTON HEAD CAP SCREWS
- 4- 1/4" STAINLESS STEEL FLAT WASHERS
- 4- 1/4"-20 STAINLESS STEEL NYLON INSERT LOCK NUT
- 2- 3/8"-16 X 1.25" STAINLESS STEEL FLAT HEAD CAP SCREWS
- 4- 3/8"-16 STAINLESS STEEL NYLON INSERT LOCK NUT
- 2- 3/8"-16 X 1.75" STAINLESS STEEL BUTTON HEAD CAP SCREW
- 1- 3/4"-16 X 1.25" GRADE-8 HEX HEAD BOLT
- 1- 3/4" SPLIT LOCK WASHER
- 14- PUSH-IN NYLON RIVETS

HW-17-61-030 HARDWARE KIT

- 8- 7/16" HIGH STRENGTH SAE YELLOW ZINC FLAT WASHER
- 4- 7/16"-14YELLOW ZINC FINISH NE GRADE 8 NYLON INSERT LOCK NUT
- 4- 7/16"-14 x 1" YELLOW ZINC GRADE 8 HEX CAP SCREW
- 10- 3/8" HIGH STRENGTH SAE YELLOW ZINC FLAT WASHER HARDENED
- 3- 3/8"-16 x 1" YELLOW ZINC GRADE 8 HEX CAP SCREW
- 3- 3/8"-16YELLOW ZINC FINISH NE GRADE 8 NYLON INSERT LOCK NUT
- 4- 1/4 FLAT WASHER, SMALL OD, 18-8 STAINLESS STEEL
- 4- 1/4"-20 x 0.75" 18-8 STAINLESS STEEL BUTTON HEAD CAP SCREWS
- 3- 1/2-20 X 1.72/1.750L STEEL WHEEL BOLT
- 3- 1/2"-20x 15/16" 60° SEAT ZINC OPEN WHEEL NUT
- 4- 1/4" HIGH STRENGTH SAE YELLOW ZINC FLAT WASHER YZ THRU HARD
- 2- 1/4"-20 x 0.75" YELLOW ZINC GRADE 8 HEX CAP SCREW
- 6- 1/4"-20YELLOW ZINC FINISH NE GRADE 8 NYLON INSERT LOCK NUT
- 2- 3/8"-16 x 1" 18-8 STAINLESS STEEL BUTTON HEAD SOCKET CAP SCREW

INSTALLATION PROCEDURE

1. Park the Jeep on a flat, level surface and set the parking brake.
2. Remove the OEM/ Poison Spyder rear bumper and all brackets. Retain all stock hardware as some of it will be used to install the new Poison Spyder rear bumper.
3. Remove the spare tire and the OEM tire carrier. Retain all stock hardware as some of it will be used to install your new bumper mounted tire carrier.
4. Locate the lower tire carrier mount and secure it to the table, in a vice, etc. Use rags to not scratch the powder coat ([image - 01](#)).



(Image-01)

5. Locate the provided tapered roller bearings. Using your finger, apply a generous amount of the provided bearing grease. “Pack” the grease into the bearings, forcing the grease in between each roller (image -02).



(Image-02)

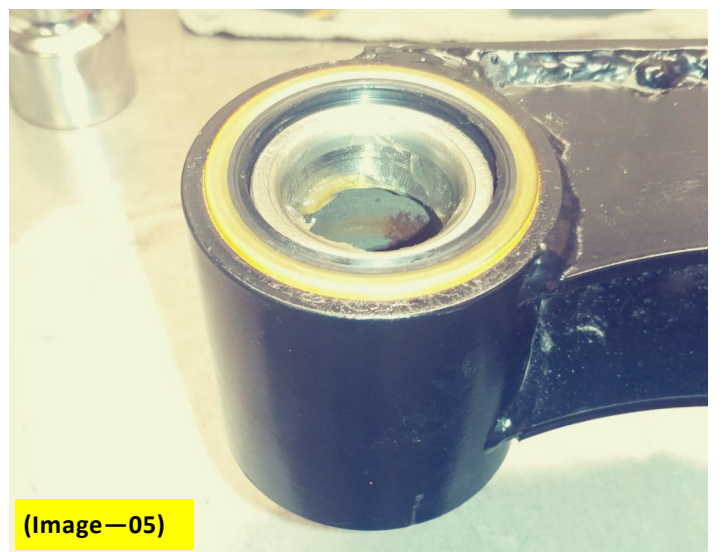
6. Install one of the bearing into the top of the provided lower frame mount. Make sure the taper matches the race in the cup (image -03).
7. Using a dead blow, line up one of the provided bearing seals, and tap down into place (image -04). Should be 1/16” - 1/8” exposed. (image -05)



(Image-03)



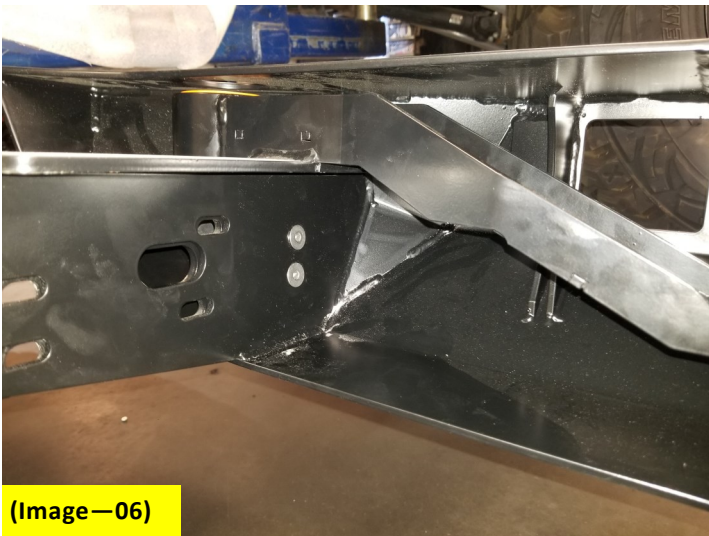
(Image-04)



(Image-05)

8. Repeat steps 6 & 7 on the bottom of the lower bumper mount.

9. Install the lower bumper mount into the passenger side of the rear bumper. install the **two 3/8"** flat head cap screws through the bumper and lower mount and complete with **two more 3/8"** washers and Nylock nuts (**image-06**). ****Note**** The holes are slotted. Adjust the lower mount to align with the spindle hole in the top of the bumper and the other mounting slots. Tighten the hardware. You will not be able to access these after bumper is installed.



10. At this point, we can re-install the rear bumper. Please refer to instruction sheet **INST-17-65-010**. If you do not have the original copy provided with the **Poison Spyder** rear bumper, all of our instructions can be found on our website. **WWW.POISONSPYDER.COM**



11. Now that the rear bumper is fully installed (**image-07**), Using the OEM hardware, install the "JK TC Tramp Stamp" (**image-08**). *Do not over tighten the hardware.*



12. Install UHMW V-ALIGNMENT BUSHING on the TC TRAMP STAMP using the provided 1/4"-20 X 1" Stainless steel button heads, 1-4" stainless washers, and 1/4"-20 Nylock nuts (**image-09**).

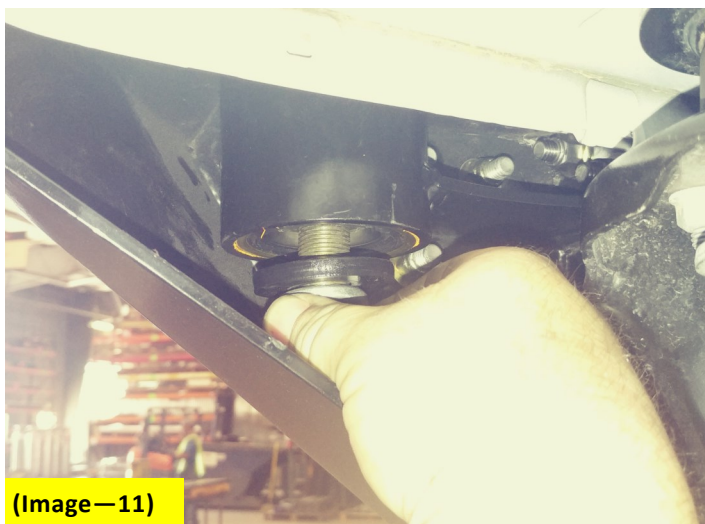


13. Moving to the tire swing, apply a bit of bearing grease evenly to the exposed shaft on the “upper swing”. Insert the spindle shaft through the bumper into the bearing cup. Careful not to push the bearing or seal out of the bottom of the cup (image -10).



(Image—10)

14. Install the provided 3/4”-16X 1.25” bolt, 3/4” split lock washer, and “spindle seal washer”, into the bottom of the spindle shaft and tighten (image -11). **Note*** It is difficult to fit a tool in this area. The best method is to hold a box end wrench on the bolt while a helper rotates the tire carrier.



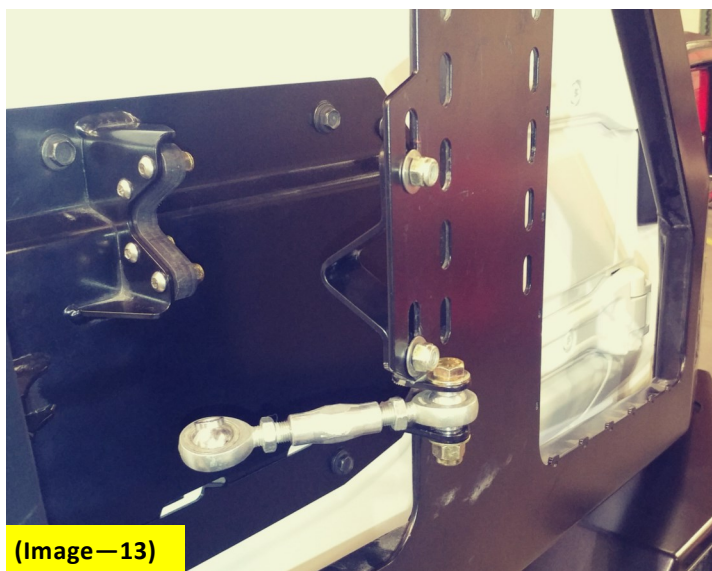
(Image—11)

15. Install one end of the “Gate Link Assembly” into the upper swing using the provided 3/8”-16 X 1.25” hex head bolts, 3/8” flat washers, and 3/8” nylock nuts (image -12).



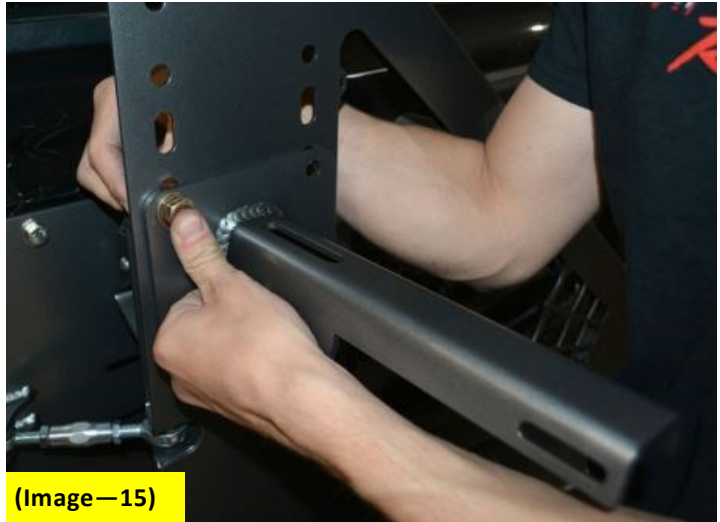
(Image—12)

16. Install the “V-block locator bracket”, short side down, using the provided 3/8”-16 x 1” SS button head cap screws, 3/8” flat washers, and 3/8” Nylock nuts (image -13). **Note*** Leave this semi loose. This will need to be adjusted after the wheel and tire have been installed.



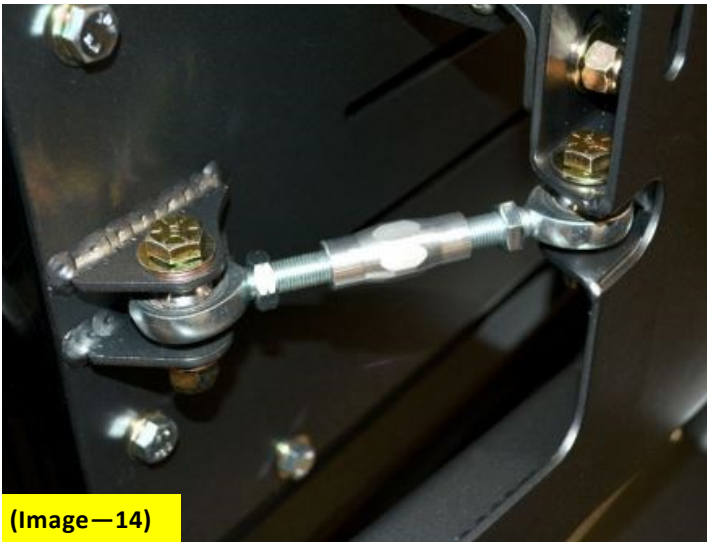
(Image—13)

17. Install the other end of the “Gate Link Assembly” into the “TC Tramp stamp” using the provided 3/8”-16 X 1.25” hex head bolts, 3/8” flat washers, and 3/8” nylock nuts. **Note*** Leave the jam nuts on the gate link loose. This will be adjusted after the spare tire has been installed (image-14).



(Image-15)

20. There are wheel stud holes for several different bolt patterns. Use the Bolt Pattern Template provided at the end of these instructions to determine which **THREE** holes to use for your specific bolt pattern. Once the three holes are correctly identified, mark them with a felt-tip marker (image-16).



(Image-14)

18. Measure the overall height of your spare tire (NOT one of the mounted tires on your Jeep!), divide that measurement in half, then add one inch. The resulting number will be your Tire Mount Height measurement. With the tire carrier closed and latched, measure upward from the recessed step surface of the bumper, and make a small mark on the tire carrier at the tire mount height measurement.

19. Use (4) 7/16-14 x 1 Gr8 Hex Head Cap Screws, (4) 7/16 Flat Washers and (4) 7/16-14 Nylock Nuts to attach the Tire Mount - Carrier Side to the Tire Carrier, centered on the mark you made in the previous step. The slots in the tire carrier allow for some adjustment, however if there isn't enough adjustment to center the Tire Mount exactly centered on your mark, move it up slightly to the next set of slotted holes in the carrier. Tighten the four bolts/nuts to approximately 50 ft.-lbs (image-15).



(Image-16)

21. Use a shop press or hammer to drive the three provided Wheel Studs into the mounting plate, using the holes that were marked in the previous step. Make sure the studs point in the opposite direction from the V-channel piece that is welded to the back of the plate

22. **Lay your spare tire** on the floor with the mounting surface of the wheel pointed up. Lay a long straight edge (yardstick, level, or other suitable item) across the middle of the tire. Measure the vertical distance from the straight edge to the wheel mounting surface. This is the Overall Offset measurement, including any bulge in the tire sidewall.

23. **Fit the Tire Mount - Tire Side** channel on to the corresponding beam of the Tire Mount - Carrier Side. Use (3) 7/16-14 X 3 Gr8 Hex Head Cap Screws with (6) 7/16 Flat Washers and (3) 7/16-14 Nylon Insert Lock Nuts to secure the Tire Mount-Tire Side to the Tire Mount - Carrier Side, using the slotted holes provided. Adjust the position of the mounting surface of the distance between the Tire Mount and the surface of the tire carrier frame is 1/4 to 1/2 inch LESS THAN the Overall Offset measurement found in the previous step. Once properly adjusted, tighten the three bolts/nuts to approximately 50 ft.-lbs (**image-17**).

24. **Lift the spare tire** onto the Tire Mount - Tire Side, and fit the previously installed lug studs through the holes in the wheel. Tighten the (3) Lug Nuts. This will draw the sides of the tire tightly against the frame of the Tire Carrier, to prevent rattles and squeaks (**image-18 & -19**).



(Image-18)



(Image-19)

25. Use (4) 1/4-20 X 3/4 SS Button Head Cap Screws, (4) 1/4 Flat Washers and (4) 1/4-20 Nylon Insert Lock Nuts to fasten your license plate to the License Plate Mount.



(Image-17)

Note* Some tire/wheel combinations, such as 12.50 wide tires on stock Jeep wheels, may require more Overall Offset than the adjustment in the Tire Mount components allows (approximately 4-3/4" to 6-3/4"). In these cases, source a wheel spacer of suitable thickness to make up the difference.

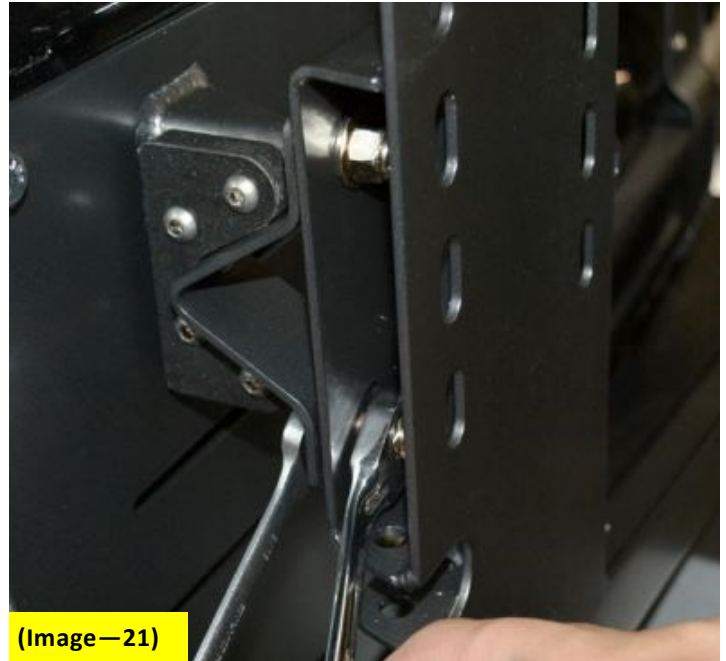
26. Use the 1/4-20 X 3/4 Hex Head Cap Screws with 1/4 Flat Washers and 1/4-20 Nylock Nuts to fasten the License Plate Mount to the Tire Mount at the center of the spare tire. Note that you will need to keep these wrenches available in the vehicle in order to remove the license plate mount to access your spare tire in the future (image-20).



(Image—20)

- **Note*** If required by law in your area, you will need to install a license plate light to illuminate the plate at night. Poison Spyder sells separately an LED License Plate & Third Brake Light (p/n 41-04-LP6) that is designed specifically for this purpose, and comes with a 6' lead to route down the tire carrier to tie into the Jeep's wiring. Instructions for making the electrical connections are outside of the scope of these instructions, however please note that the tire carrier has small loops laser-cut into the tire carrier swing to make routing and securing the license plate light easy. Simply secure the extension cable to these loops with zip-ties to securely hold it in place.

27. **Now we can return to the** final adjustment. With the weight of the wheel, tire, and any other accessories you may have added to your carrier, align the V-block locator bracket with the alignment bushing and tighten the hardware (image-21).



(Image—21)

28. **With the jam nuts on the** turnbuckle loose, adjust the length of the tie rod by rotating the turnbuckle. Adjust the length so that the V-Alignment Plate just begins to touch the V-Alignment Bushing when the tailgate is about 1/2" from being fully closed and latched. This is approximately the point at which the tailgate begins to compress the weather stripping as it closes. With the tie rod adjusted, test the door tension by firmly (but carefully) closing the tailgate all the way, until it latches. When properly adjusted, this will result in the tie rod firmly pulling the V-Alignment Plate into the V-Bushing, and holding it there with enough pre-load to keep everything tight while the tailgate is shut. Once the tie rod has been properly adjusted, tighten both jam nuts.

29. "Once over" and double check all of the hardware!

Congratulations, you have completed installation of your Poison Spyder JK Frame Mounted Tire Carrier!

BOLT PATTERN TEMPLATE

Use this Bolt Pattern Template to determine the correct holes to use in the Tire Mount - Tire Side plate, for your specific bolt pattern. The plate can be used for any of 5 different bolt patterns, each of which uses 3 holes which can be identified using the template. The list at right identifies some of the vehicle models each bolt pattern is typically used with, although there may be exceptions.

5 X 4.5 '87-'96 Jeep YJ, '97-'06 Jeep TJ, '84-'01 XJ

5 X 5.5 Jeep CJ, 1/2-ton Ford & Dodge trucks*

5 X 5 2007+ Jeep JK

6 X 5.5 Toyota, 1/2-ton Chevy & Jeep trucks*

8 X 6.5 Ford, GM, Dodge & Jeep 3/4- & 1-ton trucks*

*Prior to converting to metric for various models

