



JK TrailGate™

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 June 2017.

APPLICATIONS

These installation instructions apply to the following Poison Spyder products:



17-66-010 JK TrailGate™

PARTS LIST

Please 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, call Poison Spyder at (951) 849-5911 as soon as possible. The ID numbers for each item correspond to the diagram on the following page.

- (1) JK TrailGate™ Panel
- (1) Latch Cover Left
- (1) Latch Cover Right
- (1) Driver Side Cable Bracket
- (1) Driver Side Cable Bracket Spacer
- (1) Passenger Side Cable Bracket
- (1) Passenger Side Cable Bracket Spacer
- (2) Gate Cable Bracket
- (2) Limit Cable
- (2) Upper Hinge
- (2) Lower Hinge
- (2) Lock-latch assembly

- (1) JK Tailgate Hinge Delete Plate Upper
- (1) JK Tailgate Hinge Delete Plate Lower
- (1) 5/8" X 2.67 ft. Adhesive Back foam Rubber Bulb Seal
- (1) JK TrailGate™ Hardware Kit

PN: HW-17-66-010 includes:

- (1) 1/4-20 X 1-3/4 SS Button Head Cap Screw
- (3) 1/4-20 X 3/4 SS Button Head Cap Screw
- (11) 1/4 SAE Hardened Flat Washer
- (4) 1/4-20 X 1/2 SS Flat Head Cap Screw
- (7) 1/4-20 Gr8 Nylon Insert Lock Nut
- (4) 1/4-20 X 1 SS Socket Head Cap Screw
- (1) 1/4-20 Nut-Sert
- (4) #10-24 X 3/4 SS Button Head Cap Screw
- (4) #10 SS Flat Washer
- (4) #10-24 SS Nylon Insert Lock Nut
- (2) #10-24 X 2-1/2 SS Socket Head Cap Screw
- (2) M8-1.25 X 30mm SS Button Head Cap Screw
- (2) M8 SS Flat Washer
- (2) M5-.8 X 50mm SS Hex Head Cap Screw
- (1) 5/16-18 X 1 SS Button Head Cap Screw
- (1) 5/16-18 Nut-Sert
- (1) 5/16 SAE High Strength Flat Washer
- (1) 5/16" Nut-Sert Install Tool - includes:
 - (1) 5/16-18 X 2 Gr5 Hex Head Cap Screw
 - (2) 5/16" SAE Hardened Flat Washer
- (1) 7/16-14 X 1-1/4 Coupling Nut
- (1) 5/16-18 Nut-Sert
- (1) 1/4" Nut-Sert Install Tool - includes:
 - (1) 1/4-20 X 2 Gr8 Hex Head Cap Screw
 - (2) 1/4" SAE Hardened Flat Washer
- (1) 3/8-16 X 1-1/8 Coupling Nut
- (1) 1/4-20 Nut-Sert

TOOLS NEEDED

- Mechanic's tool set
- Drill motor with 1/4" & 25/64" & 17/32" drill bits
- Removable thread-locking compound (Loctite® Blue 242 or equivalent)
- Professional nut-sert installation tool (optional)

BEFORE YOU BEGIN

Some of the brackets and small parts supplied in this kit are made of steel. These will need to be painted or powder coated prior to final installation of the TrailGate. The

TrailGate itself is made of aluminum, and may be installed bare, if desired. However, if painting or powder coating the TrailGate, it is recommended to perform an initial installation of it prior to painting, in order to avoid damaging the finish while drilling, clamping, etc., during the initial installation process.

IMPORTANT: Use a removable threadlocker compound, such as Loctite Blue 242 or equivalent, on any threaded fasteners which do NOT employ a lock washer or lock nut. Note that some components are pre-installed then re-installed. In such cases, only apply thread locker upon the final installation. For this reason, it is important to read through the entire instructions before starting.

INSTALL PROCEDURE

- 1. Remove the spare tire, stock** spare tire mount and third brake light (if present). Remove the stock tailgate and tailgate hinges.

IMPORTANT: Retain the stock tailgate hinge bolts, as they will be re-used later, when installing the Tailgate Hinge Delete Plates.

- 2. Remove the stock tailgate latch** loop and alignment plate from just inside the tailgate opening on the driver's side.



- 3. Locate the Driver Side Cable** Bracket and Spacer, provided with the TrailGate hardware package, shown below.



- 4. Use two M8-1.25 X 30mm** SS Button Head Cap Screws to attach the Driver Side Cable Bracket and Spacer

to the upper set of bolt holes on the driver side of the tailgate opening (where the stock tailgate latch loop was previously located). Install the Spacer between the Cable Bracket and the Jeep's body, as shown.



- 5. Tighten the two button head** cap screws until bare snug. Do not fully tighten them at this time. The final positioning of this bracket will be adjusted later in the process.



- 6. Attach one end of one** of the Limit Cables to the remaining hole at the end of the Cable Bracket, using a supplied 1/4-20 X 3/4 SS Button Head Cap Screw, 1/4-20 Gr8 Nylon Insert Lock Nut and 1/4 SAE Hardened Flat Washer. Do not fully tighten, as this hardware will be further adjusted later in the procedures.



- 7. Locate the existing small hole** in the Jeep's body tub, just inside the tailgate opening on the passenger side, roughly even with the height of the upper tailgate hinge mounting holes. The Passenger Side Cable Bracket will

be installed here, but first this hole must be drilled and a nut-sert installed.



Drill the hole to 17/32".



- 8. Install a 5/16-18 Nut-Sert into** the hole that was just drilled in the previous step.



NOTE: It is HIGHLY RECOMMENDED to invest in a professional nut-sert installation tool, such as the Marson Giant Threadsetter, available from online tool sellers. The professional tool will make the installation of nut-serts MUCH easier than using the free tool included in this kit, and it will come in handy with future product installations as well. If using a professional nut-sert installation tool, follow the directions that came with the tool and skip the next three steps of these instructions.

The simple "tool" included with this product is admittedly frustrating to use, however it will work for those with patience who would like to save the cost of purchasing the professional tool. If using the simple tool included with this

product, continue through the following steps (ignore that the photos show a different product—the procedure is the same).



- 9. The provided nut-sert install tool** consists of a bolt, two washers and a coupler (long) nut. Assemble these items as shown (bolt—washer—coupler nut—washer—nut-sert). Insert the nut-sert end into the hole you drilled.



- 10. Use an open end wrench** to hold the coupler nut stationary while turning the head of the bolt clockwise with a ratchet (or small impact wrench) and socket. As you turn the ratchet, the bolt will draw the far end of the nut-sert toward the inside of the sheet metal, gripping it with the knurled outside edge of the nut-sert as it deforms. Continue to turn the ratchet until the nut-sert is fully seated. **DO NOT OVER-TIGHTEN** as you can damage the nut-sert, or cause it to lose its grip.



- 11. Once the nut-sert has seated** correctly, loosen the bolt then remove it and the rest of the tool from the nut-sert. Install a new nut-sert onto the tool, oriented the same as the last, and set it aside until your next nut-sert installation. Inspect the nut-sert to make sure it is properly seated and that the surrounding sheet metal isn't excessively deformed. Note that some deformation of the sheet metal is normal, and that it will be covered by the part after installation.



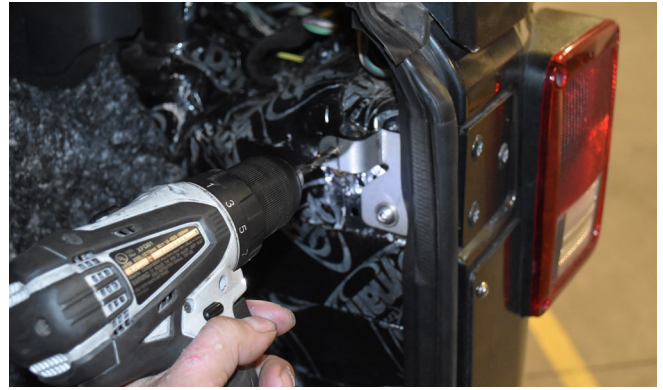
12. Use a supplied 5/16-18 X 1 SS Button Head Cap Screw to attach the Passenger Side Cable Bracket to the newly-installed nutsert. Make sure the bracket is oriented as shown below. There are two holes in the bracket, for this step the larger of the two holes is used.



13. Tighten the screw while holding the bracket perpendicular to the edge of the tailgate opening. If the Jeep is sitting on level ground, the bottom edge of the Passenger Side Cable Bracket should be level (parallel to the ground).



14. Use the remaining hole in the Passenger Side Cable Bracket as a drill guide to drill a 1/4" (drill size) hole into the Jeep's body tub sheet metal. Be careful to hold the drill level and perpendicular to the vertical surface of the Jeep that you are drilling into.



15. Loosen the button head cap screw and swing the Passenger Side Cable Bracket downward, away from the new hole that was just drilled. Change bits and drill the new hole out to 25/64".



16. Install a 1/4-20 nutsert into the hole that was just created. We recommend using a professional nutsert installation tool. But if using the simple tool that was provided in the kit, repeat the nutsert installation procedures that were detailed earlier in these instructions.



17. Swing the Passenger Side Cable Bracket back into place so that the hole aligns with the newly-installed nutsert. Place the barrel-shaped Passenger Side Cable Bracket Spacer between the Bracket and the nutsert...



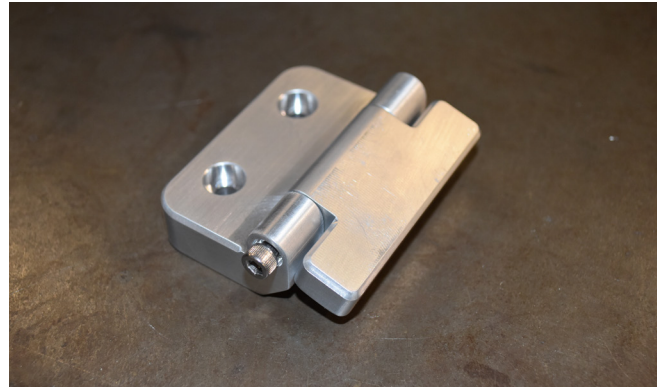
...then insert a provided 1/4-20 X 1-3/4" SS Button Head Cap Screw through a SS 1/4" Flat Washer, the eyelet end of a Limit Cable, and through the Bracket and Spacer, into the Nut-Sert. Do not fully tighten, as this hardware will be further adjusted later in the procedures.



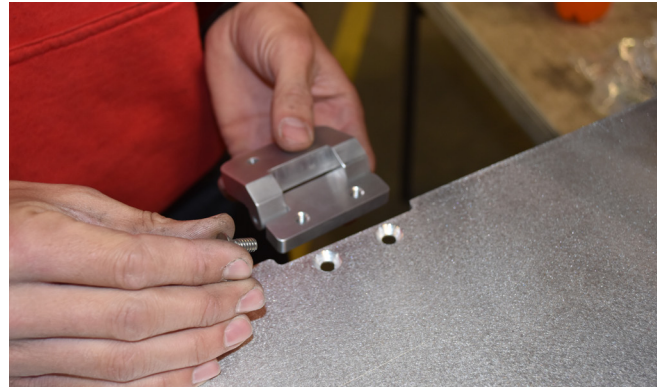
18. Assemble both hinge assemblies by using a #10-24 X 2-1/2 SS Socket Head Cap Screw to attach the Upper Hinge and Lower Hinge into an assembly as shown in the photos.



Note the orientation of the Upper Hinge and Lower Hinge in relation to each other. With the two hinge halves extended flat, as shown in the photo below, the blind-threaded holes in the Upper Hinge should be pointed in the opposite direction of the counter-bored holes in the Lower Hinge.



19. Attach the Hinge assemblies to the bottom of the TrailGate using the supplied 1/4-20 X 1/2 SS Flat Head Cap Screws.



To orient the hinges correctly, note the countersunk holes in the TrailGate. The Hinge attaches to the side opposite the countersinks.



20. Open the separate hardware packs that came with the latches, and install the locking bar onto the threaded stud of the latch.



21. Ensure that the locking bar is oriented as shown in the photo below, at about the middle of the threaded stud. Install it and hardware onto the threaded stud in the following order: jam nut—star washer—locking bar—star washer—jam nut. Snug the hardware but do not fully tighten at this time, as this hardware will be further adjusted later in the procedure.



22. Install the Latch into the TrailGate using the provided U-shaped mounting clamps and clamp screws. Make sure that the rotating stud and locking bar are oriented toward the adjacent edge of the TrailGate.



23. Attach the Gate Cable Brackets to the inside-upper lip of the TrailGate, at the pairs of holes located at either end of the TrailGate. Use the provided #10-24 X 3/4 SS Button Head Cap Screws, #10 SS Flat Washers and #10-24 SS Nylon Insert Lock Nuts. Ensure that the triangular flange of the Gate Cable Bracket is oriented away from the adjacent edge of the TrailGate. This hardware may be fully tightened at this time.



24. With the help of a friend, place the TrailGate against the tailgate opening on the Jeep. While holding the TrailGate against the Jeep, make sure that it is visually centered into the tailgate opening.



Ensure that the gaps between the TrailGate and the edge of the tailgate opening are equal on either side, and that the bend that forms the upper lip of the TrailGate is even with the corresponding contour on the Jeep's body tub, at the edge of the tailgate opening (see photo below)



25. Use vise-grips or clamps to hold the TrailGate in place once the positioning adjustments have been made. Be careful to continue monitoring the TrailGate's position as the clamps are installed, and make any necessary adjustments. One clamp at each upper corner of the TrailGate will suffice.



26. With a 1/4" drill, using the holes in the Lower Hinge as a drill guide, drill the two holes FOR THE DRIVER SIDE HINGE ONLY, into the Jeep's body tub, where the hinge lands against the sheet metal. Be careful to ensure that the position of the TrailGate within the tailgate opening does not shift.

IMPORTANT: Be careful to ensure that the drill bit drills into the Jeep's body exactly perpendicular to the surface of the sheet metal. The photo below gives the impression that the bit should be held parallel to the ground, however in actuality it will be pointed slightly upward, in order to strike the sheetmetal perpendicular to its surface. Be careful that the drill doesn't walk or the TrailGate's position shift, while drilling.

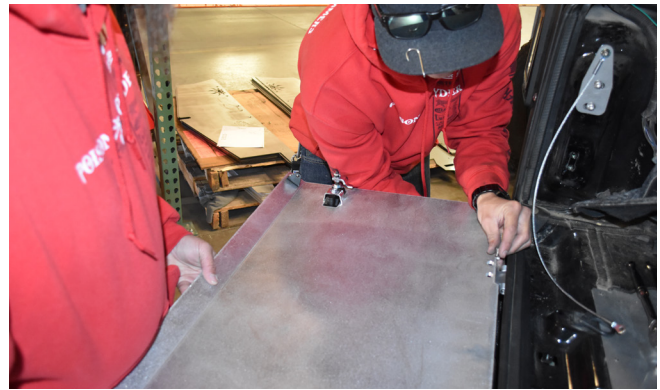


27. Un-clamp the TrailGate from the Jeep, and remove the Driver's Side Hinge assembly from the TrailGate.

28. Use the supplied 1/4-20 X 1 SS Socket Head Cap Screws, Flat Washers and Lock Nuts to attach the Driver Side Hinge assembly to the Jeep using the holes that were just drilled. Access to the back-side of the drilled panel can be reached through a hole in the floor of the Jeep, just forward of the tailgate opening. Carpet may need to be lifted for access.



29. Re-Attach the TrailGate to the Driver Side Hinge.



30. With the Driver Side Hinge snugly installed, re-clamp the top corners of the TrailGate into place, re-checking its position to ensure that it is still centered within the tailgate opening. At the Passenger side (where the hinge is still un-attached), ensure that it is at the correct height when clamping into place.



31. Drill the two 1/4" hinge bolt holes on the passenger side, using the same methods and pre-cautions that were stated for drilling the holes for the driver side.



32. Once again, remove the TrailGate from the Jeep, this time leaving the Driver Side Hinge attached to the Jeep.



33. Remove the Passenger Side Hinge from the TrailGate.

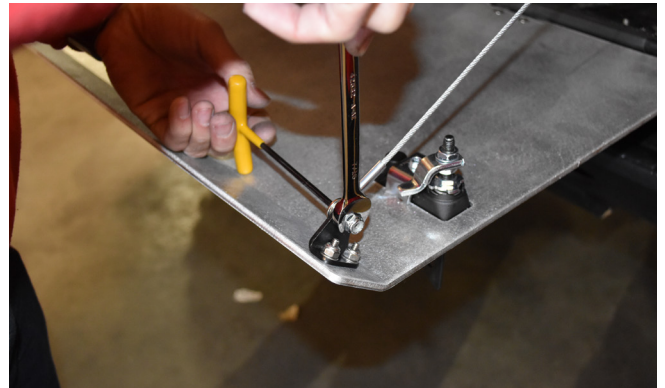
34. Use the supplied 1/4-20 X 1 SS Socket Head Cap Screws, Flat Washers and Lock Nuts to attach the Passenger Side Hinge assembly to the Jeep using the holes that were just drilled. Access to the back-side of the drilled panel can be reached through a hole in the floor of the Jeep, just forward of the tailgate opening. Carpet may need to be lifted for access.



35. Re-install the TrailGate by re-attaching it to the hinges.



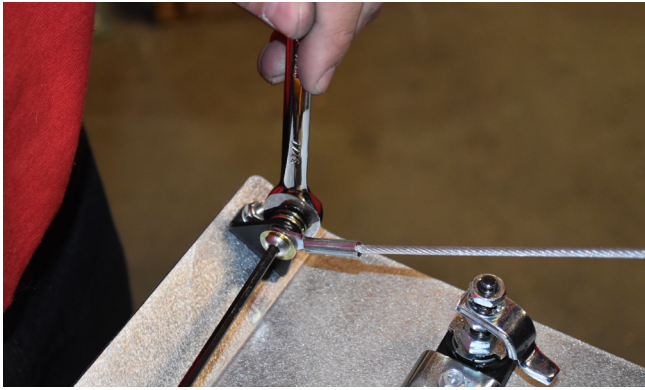
36. Attach the Limit Cables to the Gate Cable Brackets using the supplied 1/4-20 X 3/4 SS Button Head Cap Screws, Flat Washers and Lock Nuts. Do not fully-tighten them yet.



37. Observe the cables and how they "lay" with the TrailGate lying open. The TrailGate should be laying flat, with both cables equally taut. Adjustments to equalize the cables may be made on the Driver Side Cable Bracket, whose mounting holes are slotted to allow adjustment. Once adjustments have been made, ensure that the hardware fastening the Bracket to the Jeep is fully tightened.



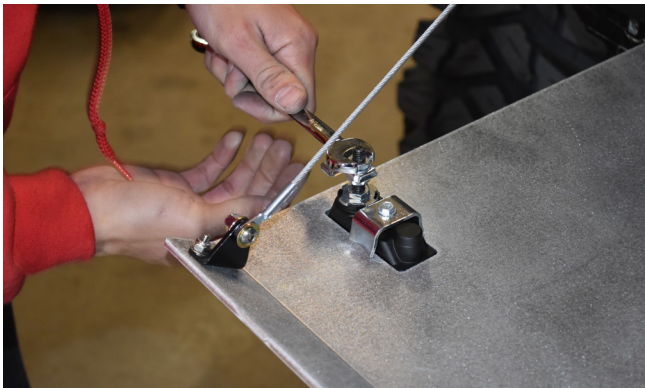
38. The fasteners at both ends of both Limit Cables may now be tightened, with the cable-ends of the eyelets pointing straight toward each other while the cable is taut.



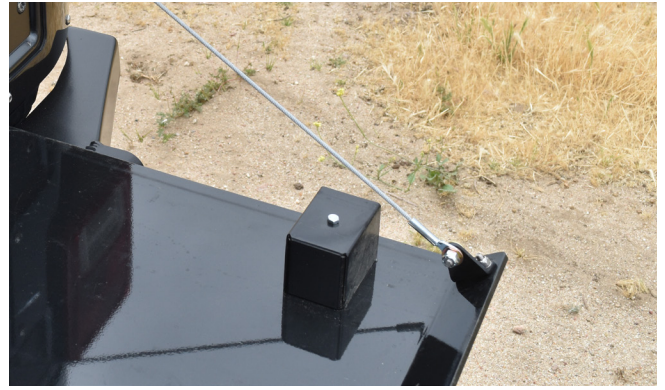
39. Close the TrailGate and test the functionality of the locking mechanisms. They will most likely require some adjustment at this point.



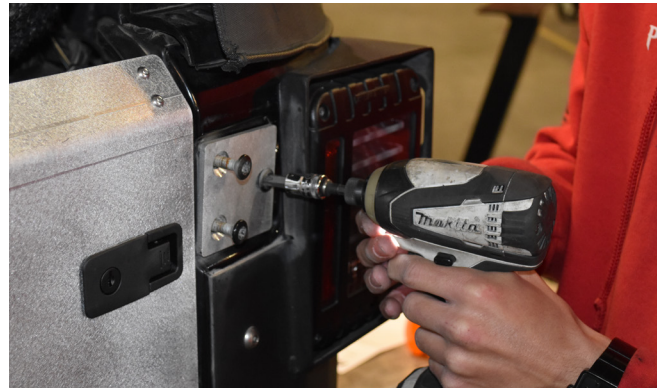
40. The locking bars on the back side of the latches may be adjusted by loosening the jam nuts on either side of the locking bar, and moving it up or down the threaded stud.



41. Install the latch covers. Begin by removing the u-brackets that were installed in a previous step, and replace them with the latch covers using the M5-.8 X 50 hex head cap screws and #10 flat washers provided. Note that the latch covers are not identical, there is a right and left cover. Make sure the rectangular notch for the latch is oriented toward the bottom of the TrailGate™ (when gate is closed).



42. Install the supplied Tailgate Hinge Delete Plates into the spaces where the stock tailgate hinges had been attached to the Jeep's tub, using the stock tailgate hinge bolts (not supplied).



43. Go back over the entire TrailGate assembly and ensure that all hardware and fasteners have been fully tightened.



Congratulations, you have completed the installation of your Poison Spyder JK TrailGate!