



TJ DeFenders™

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 February 2016.

APPLICATIONS

These installation instructions apply to the following Poison Spyder products:



- 14-02-040** TJ DeFenders - 3" Tapered Flares (Steel)
- 14-02-040-ALUM** TJ DeFenders - 3" Tapered Flares (Aluminum)
- 14-02-050** TJ DeFenders - Negative Flares (Steel)
- 14-02-050-ALUM** TJ DeFenders - Negative Flares (Aluminum)
- 14-02-060** TJ DeFenders - Zero Flares (Steel)
- 14-02-060-ALUM** TJ DeFenders - Zero Flares (Aluminum)
- 14-02-070** TJ DeFenders - 3" Flares (Steel)
- 14-02-070-ALUM** TJ DeFenders - 3" Flares (Aluminum)
- 14-02-075** TJ DeFenders - 5" Tapered Flares (Steel)

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.

- (1) Driver side DeFender™
- (1) Passenger side DeFender™
- (1) Driver side DeFender™ Side Insert
- (1) Passenger side DeFender™ Side Insert
- (1) Battery Tray Bracket
- (1) TJ DeFender™ Hardware Kit
PN: HWKIT-14-02-070 includes:
 - (10) 1/4-20 x 3/4 SS BHCS
 - (10) 1/4-20 NYLOCK NUT

- (10) 1/4 YZ HARD FLAT WASHER
- (14) 1/4-20 x 3/4 SS BHCS
- (4) 5/16-18 x 1 SS BHCS
- (4) 5/16 YZ HARD FLAT WASHER
- (4) 5/16-18 NYLOCK NUT

TOOLS NEEDED

- Fine-tip felt marker & measuring tape
- Sockets, ratchet, end-wrenches and hex keys
- Cut-off wheel, pneumatic body saw, plasma cutter or reciprocating saw (or other suitable cutting device)
- Grinder or flap wheel, sanders, file, etc.
- Drill motor with 1/4" and 3/8" drill bits
- Touch-up paint

INSTALLATION PROCEDURE

NOTE: the following steps denote the procedure for making the necessary cuts to the stock fenders, with the fenders and inner fenders not fully removed from the Jeep. Some customers have reported they found it quicker/easier to remove the entire fender from the Jeep to make the necessary cuts to the fender on a workbench. You may choose either method at your discretion, but note that if removing the entire fender to make the cuts, you will need to remove and reinstall all of the under-hood components that mount to the inner fender, for which we do not provide a detailed procedure.

IMPORTANT: Completely install and remove the DeFenders™ prior to painting or powder coating it. This will allow you to check for fitment or do any clearancing or fitting ahead of time, to reduce the chance of damage to the finish during final installation. Poison Spyder Customs Inc. is not responsible for costs for or damage to paint or powder coat finish under any circumstances, including paint or powder coat of incorrectly shipped or defective parts.

NOTE: The photos used in the following steps depict installation on a YJ. The procedure is identical for the TJ, as depicted in the photos.

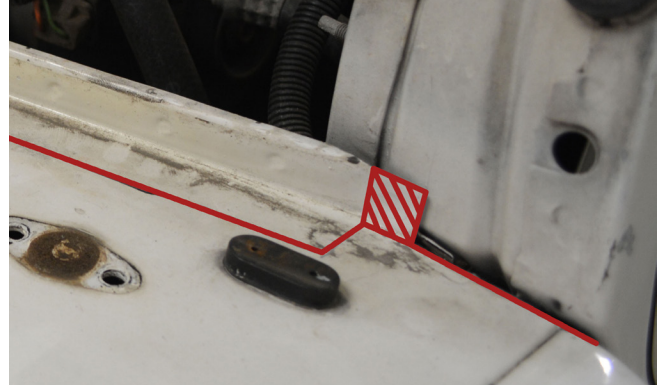
1. **Park vehicle on a level** surface and set the emergency brake. You will want to wear eye protection beyond this point in time.
2. **Remove any existing plastic fender** flares from the vehicle. Remove the hood latches.
3. **Disconnect and remove battery, battery** tray, and battery tray bracket. Retain the OE hardware.
4. **Disconnect all turn signal wires** from the turn signal light housing. Check for any other loose wiring and be sure it is out of the way.



5. **Remove the three bolts that** attach the stock fender to the grille. Set these bolts aside, they will be re-used to mount the DeFender™.
6. **If you are installing Poison** Spyder DeFender Inner Fenders, proceed by removing the entire stock inner/outer fender assembly. Remove the bolts that attach the fender assembly to the firewall, then un-bolt any underhood accessories that are attached to the inner fender. Skip the following steps regarding marking and cutting the stock fender. If you are retaining the stock inner fenders, proceed with the following steps:
7. **Loosen the bolts that attach** the fender to the firewall. Thread them most of the way out but leave them in for now. This will allow you to move the fender around slightly during the next few steps. You may find that you need to remove these bolts entirely in order to proceed during the cutting process.
8. **Use a measuring tape and** fine tip felt marker to place a cut line along the top surface of the fender, 1-1/4" from the vertical flange as shown in the photo.



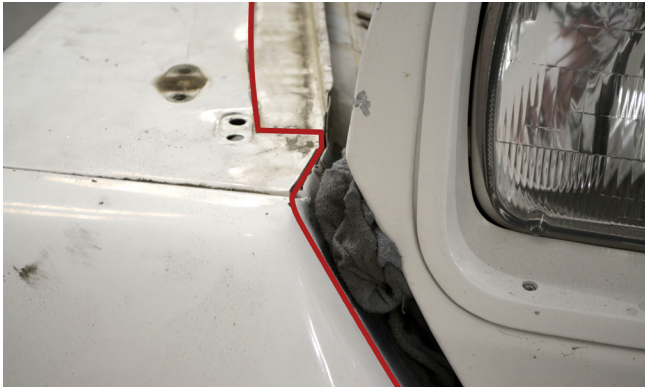
9. **At the back of the** fender, end your cut line at a point even with the back side of the grille, and turn it inward toward the vertical flange. At the flange, continue your cut line forward, along the crease where the fender sheetmetal curves downward to mate up with the side of the grille. See the photo below for reference. The cut line will continue forward but we will come back to it in a later step. Note that there will be a small portion of the vertical flange that will be removed, as shown in the photo.



10. **At the back of the** fender, closer to where it joins the firewall, trace a line that begins 1/4" from the vertical flange and continues forward, parallel to the outside edge of the fender, to where it joins with the previous line. The resulting cut line should look like the one in the photo below.



11. **Continuing at the front of** the fender, continue the cut line along the front of the fender adjacent to where it meets the grille. Continue the cut line downward until it reaches the edge of the fender. Place a rag or other suitable object between the fender and the grille to space it apart to gain access to the cut line with your cutting tool.



12. Cut along the traced cut-line with a pneumatic body saw, reciprocating saw, cut-off wheel or other appropriate cutting tool. Note that the sheetmetal is double thickness along the back portion of the fender. Also you will need to further loosen or remove the firewall bolts in order to pull the fender away from the firewall to continue your cut to the end.



13. When cutting along the front portion near the grille, be careful not to damage the grille with the cutting tool. This is why the spacer inserted between the fender and the grille is important.



14. Once the outer sheetmetal is cut, you will need to go underneath the fender to finish some of the cuts. At the front of the fender, you may need to finish cutting through the thick metal hood latch support from the underside.



15. Toward the back, from underneath, notice that the rear of the inner wheel well continues downward from where you had cut through the top surface of the fender. You will want to cut downward from the point of the top-surface cut, continue as close to the outer sheetmetal skin as possible. You may be limited by your cutting tool with regards to how close to the outer sheetmetal you can cut. Mark a cut line, trying to leave as much of this inner wheel well as possible.



16. Cut along the traced cut-line with a pneumatic body saw, reciprocating saw, cut-off wheel or other appropriate cutting tool.



17. All of the major cutting is now complete, however you may find that you need to do further cutting at various inner flanges and corners, in order to fully free the cut-away portion of the fender. Once this has been done, lift the cut portion away and set it aside.



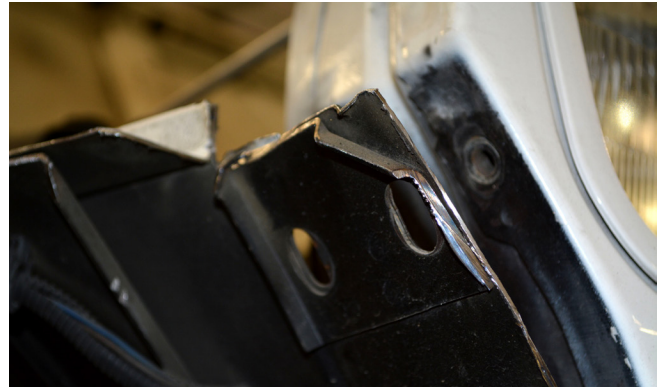
18. There may be a fender support bar behind the inner wheel well, that braced the fender to the firewall. Remove it if the material it had been attached to has been cut away.



19. At this point your work should look somewhat like the photo below, with only the inner fender and a narrow strip along the top of the outer fender remaining. *NOTE: your stock inner fender will NOT be attached to the Jeep's tub at this time—at this point in the installation process it will be unsupported except by the accessories bolted to it. This is normal. It will regain its rigidity once the DeFender™ has been installed.*



20. Note the remnants of the stock fender bracing where the fender attaches to the grille, near the top, as shown in the photo below. These will need to be ground flush and smoothed out.



21. Use a file or sander to de-burr and smooth all of the cut edges. Then paint the bare metal around all cut edges to protect against rust. Allow the paint to dry before proceeding.



IMPORTANT: If you are using Poison Spyder DeFender Inner Fenders and skipped the previous steps for marking and cutting the stock fenders, continue with your installation here, ignoring any further references to the now-trimmed stock fender.

22. Loosen the front center body mount, located directly under the grill, as well as the two grille support rods that extend from the firewall to the grille. This will allow the grille to float slightly while fitting the DeFender™.



23. Carefully position the DeFender™ in place.



24. Ensure that the 1-1/4" wide strip of remaining material from the original fender is under the top surface of the DeFender™, and that the original part of the fender that bolted to the side of the grille is sandwiched between the corresponding part on the DeFender™, and the side of the grille, as shown in the photo below. Also make sure the sheetmetal at the back of the inner wheel well is positioned behind the wheel well mounting tabs on the DeFenders™.



25. Use the OE hardware to bolt the DeFender™ to the firewall and to the grille. Leave the hardware somewhat loose until both DeFenders™ are installed to this point in the instructions.



26. Once both DeFenders™ are loosely installed, tighten all mounting hardware. Check and adjust alignment as you tighten the hardware. Make sure the hood closes without interference, and check that all body lines match up while the hood is closed. Once everything is correctly aligned, re-tighten the front-center body mount and the two grille support rods, then fully tighten the hardware attaching the DeFenders™ to the firewall and grille.



27. Loosely install two each of the provided 5/16-18 X 1 SS button head cap screws, 5/16-18 nylon insert lock nuts, and 5/16 fender washers, where the inner wheel well mounting tabs on the DeFenders™ meet the inner wheel well. It may be necessary to enlarge or drill new holes in the inner wheel well. Also, depending on how much of the inner wheel well you managed to leave when cutting, there may be a vertical gap between the edge of the wheel well and the inside wall of the DeFender. If desired, the installer may fashion a sheetmetal or rubber strip to span this gap to keep mud from splashing past the inner wheel well. Otherwise it may simply be left open to promote airflow through the engine bay.

28. Make sure the top edge of the inner fender is snug against the inner edge of the DeFender™ and firmly clamped in place, and drill all ten inner fender mounting holes, using the holes in the DeFender™ as your drill guide. (Note: on some models the forward-most of these holes might not be used, depending on the amount of material removed in the cutting steps). Use the provided 1/4" hardware to attach the inner fender to the DeFender™.

29. Install the provided Battery Tray Bracket in the same position as the removed OE bracket, using the OE

hardware. Reinstall the battery tray and battery, re-connect the battery.

30. Install the Side Inserts using the provided 1/4-20 X 3/4 SS button head cap screws. Note that the Side Inserts come with pre-installed nuts. The insert is designed to be placed on the inside surface of the DeFender™, with the pre-installed nuts facing toward the center of the Jeep.

31. Re-install the hood latches to the top of the DeFenders™.



32. If you are using Poison Spyder DeFender Inner Fenders, install them using the instructions that came with them.

NOTE: It is recommended to relocate turn signals in accordance with your local laws. If you wish to convert to high intensity 3/4" round LED turn signals, the DeFenders™ have a small hole located near the front where it meets the grille, especially for this use. Note that this lamp requires some wiring skill to install and may also require a special "flasher" module (also available through Poison Spyder).

CONGRATULATIONS! You have completed your installation of Poison Spyder DeFenders™!