



**FULL METAL FENDERS™**

Thank you for buying our Full Metal Fenders™. We designed these beauties to be safe, functional, and darn good looking. It will take some time and patience to get them set up juuuust right. If time and patience are two things you are a bit short on, have your local bike shop do the installation. They've installed a lot of fenders and usually have a trick or two up their sleeves for making fenders work with uncooperative frame designs.

Have fun. Stay dry.

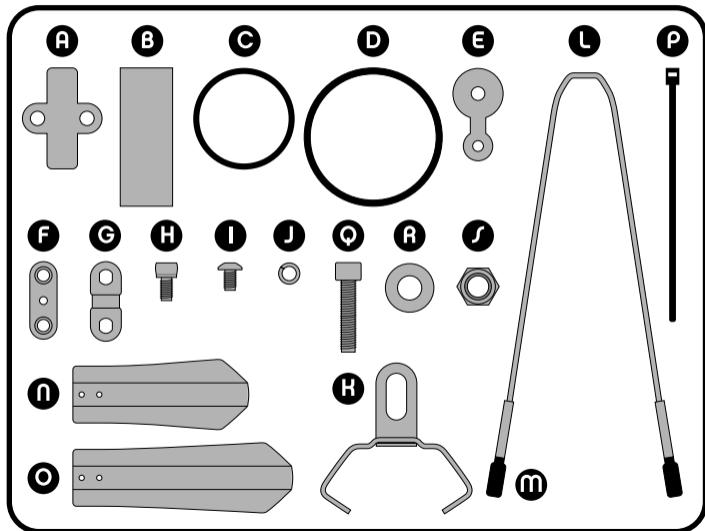


## Warnings

- Before riding, check to make sure your toes do not hit the front fender when turning the wheel from side to side. If your toe hits the fender, we do not recommend using fenders.
- Check hardware before each ride to make sure everything is properly installed and secure.
- Portland Design Works is not liable for injury or damage resulting from improper use or improper installation.
- Not for off-road use.



# Parts

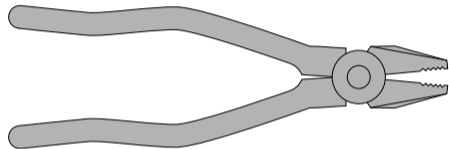


- A) Anti-rattle Sticker (x2)
- B) Anti-rattle Sticker (x1)
- C) Small O-ring (x1)
- D) Large O-ring (x1)
- E) Eyelet (x4)
- F) Bottom Stay Bracket (x4)
- G) Top Stay Bracket (x2)
- H) 4mm bolt (x4)
- I) 3mm bolt (x8)
- J) Washer (x4)
- K) Rear Hanger (x1)
- L) Stay (x2)
- M) Safety Tab (x4) (pre-installed)
- N) Front Mudflap
- O) Rear Mudflap
- P) Zip Ties (x2)
- Q) 25mm Bolt (x2)
- R) Large Washer (x4)
- S) Nyloc Nut (x2)

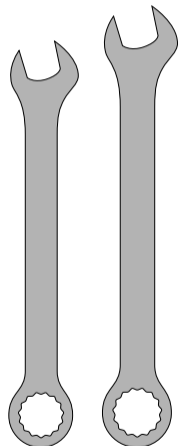
If you need any spare or specialized parts like disc brake spacers we have them available at [ridepdw.com](http://ridepdw.com).

## Tools (not included)

Pliers

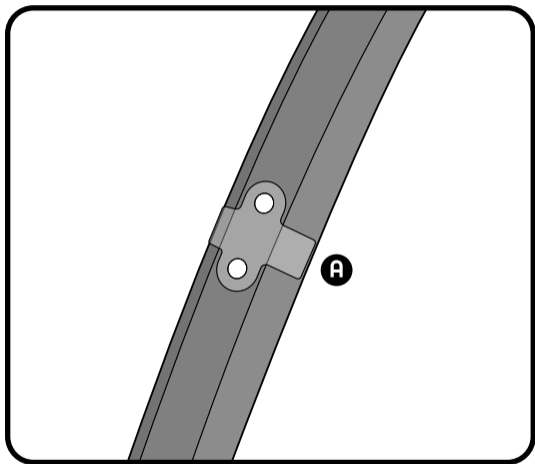


2, 2.5, 3, 4mm Allen/hex wrenches



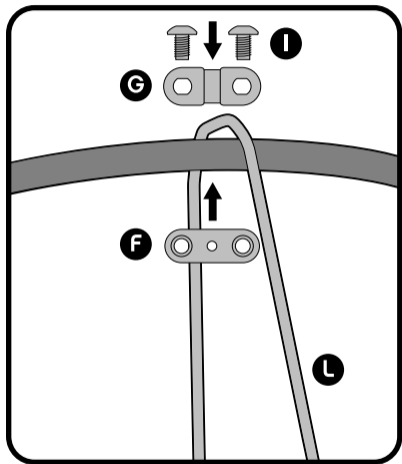
7, 8mm box wrenches

## Step 1



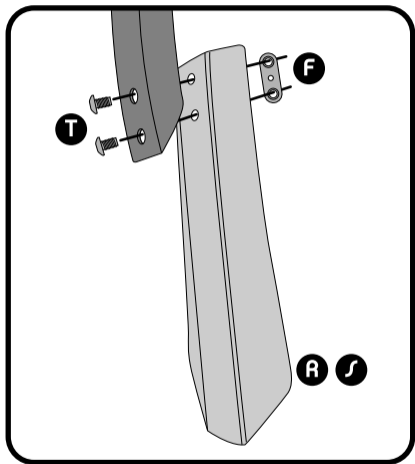
Apply anti-rattle stickers (A) to front and rear fenders. Make sure fender surface is clean before applying.

## Step 2



Attach fender stays (L) to front and rear fenders using 3mm bolts (I) and stay brackets (F, G). Make sure the flat side of the bottom stay brackets (F) are flat against the underside of the fenders. With stays perpendicular to the fenders, tighten bolts with a 3mm Allen/hex wrench.

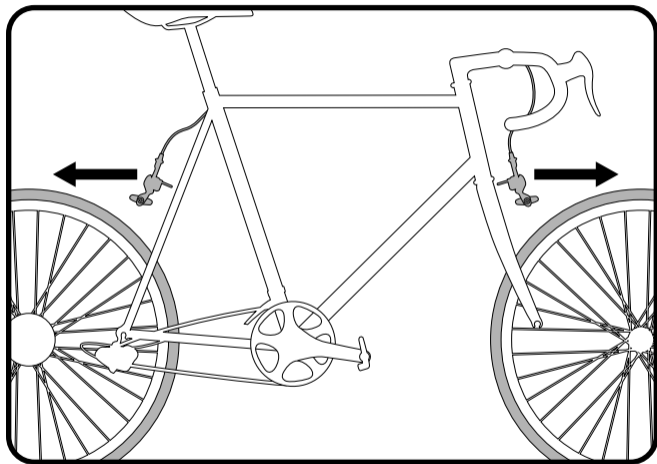
## Step 3



Crease the front (R) and rear (S) mudflaps along fold lines and install on fenders with 3mm allen wrench. Be sure to install the mudflaps in the inside of the fenders.

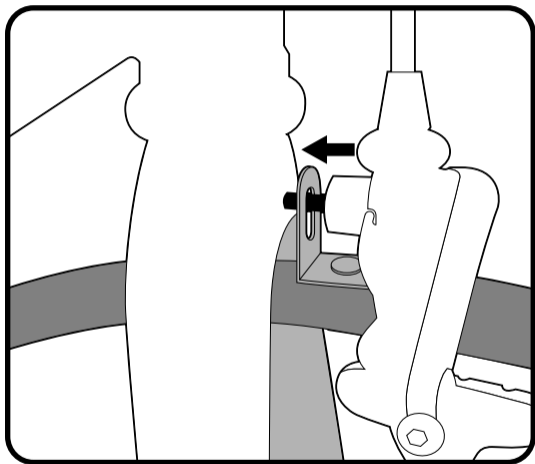


## Step 4



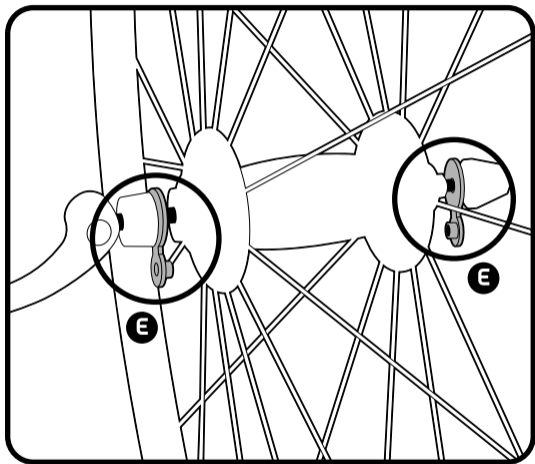
Remove wheels and  
brakes from bike.

## Step 5



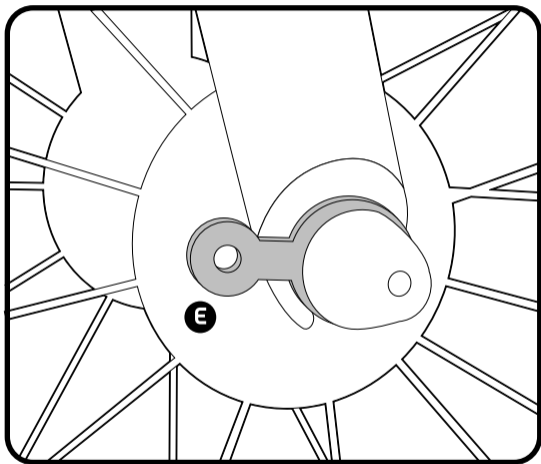
Reinstall front brake with the front fender bracket between the brake and the fork. Do not fully tighten brake bolt yet.

## Step 6



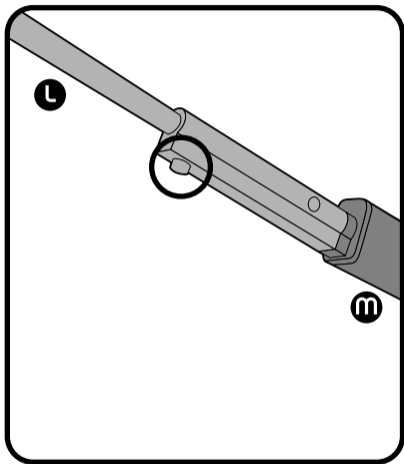
If the bike does not have threaded eyelets to bolt fender stays to, remove the wheel skewer and install an eyelet (E) on each side of the wheel.

## Step 7



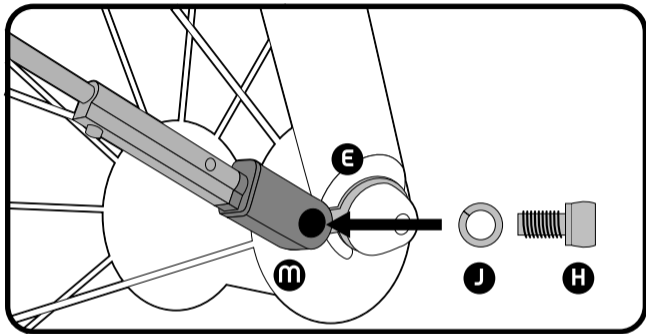
Reinstall the wheel, with the eyelets (E) as close to the 9 o'clock position as possible. Make sure wheel is all the way in before tightening the skewer.

## Step 8



With a 2mm Allen/hex wrench (P), loosen the 2mm bolts on the safety tabs (M) so they can slide up and down the stays (L)

## Step 9



With a 4mm Allen/hex wrench, attach the safety tabs (M) to the eyelets (E) with 4mm bolts (H) and washers (J). Hold the safety tabs (M) as you tighten the bolts (H) to prevent them from rotating. Make sure the bolts are secure but do not crank them down with all of your might or you could break the hardware.

## Step 10

Position fender so it is centered and a safe distance away from the tire (at least 5mm). Tighten the 2mm bolts of safety tabs (M).

## Step 11

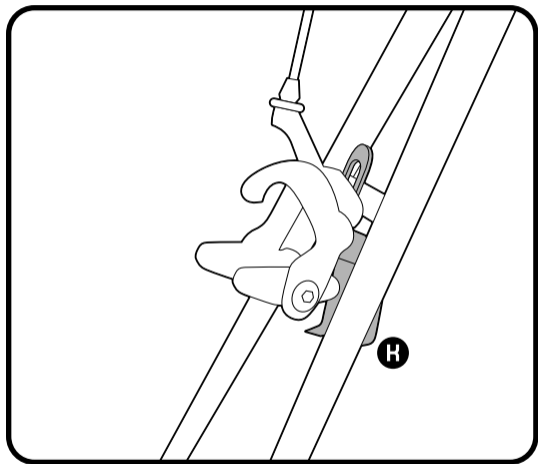
Center the brake on the wheel and position the fender as far away from the tire as possible.  
Tighten brake bolt.



## Step 12

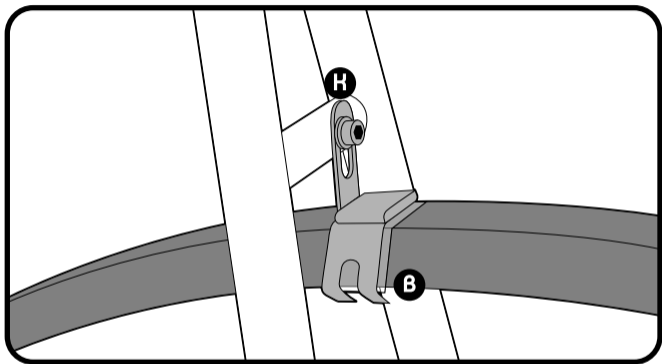
Spin wheel to check for rubbing and adjust as necessary. Double check that all hardware and brakes are tight. Congratulate yourself. Take a breather and continue to step 13.

## Step 13



Attach rear brake with the rear hanger (K) between the brake and bike frame. Do not fully tighten bolt yet. If your bike does not have a caliper brake, use a 25mm bolt (Q), a washer on each side of the brake bridge (R) and nyloc nut (S) to attach rear hanger (K) to brake bridge.

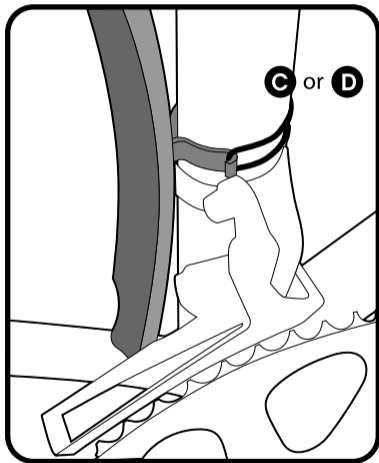
## Step 14



Slide rear fender through the rear bracket (K) until the hole on the front end of the fender lines up with the chainstay bridge or chainstays.

With a pencil, mark where the rear bracket (K) hits the fender. Slide the rear fender back and attach anti rattle sticker (B) to this area that will be under the rear bracket (K).

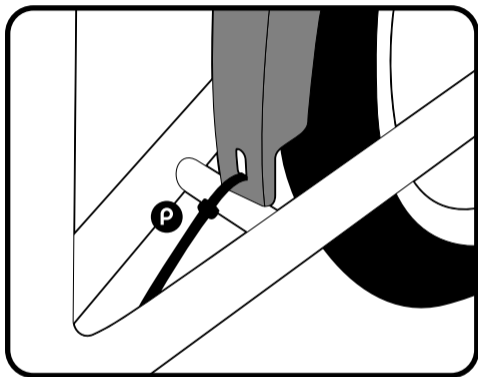
## Step 15-A



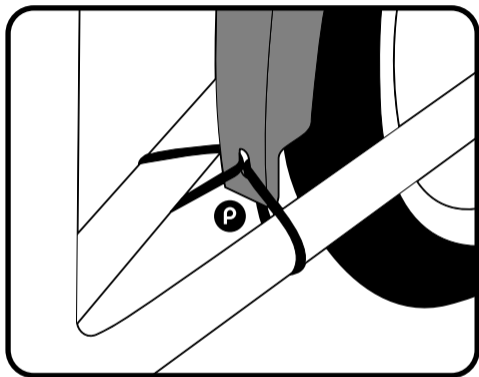
\*If your bike has a chainstay bridge, you can opt to remove the plastic bracket and proceed to step 15B.

Attach plastic bracket on rear fender to the seat tube, just above the front derailleur. Use the o-ring (C, D) that fits best on your frame.

## Step 15 B



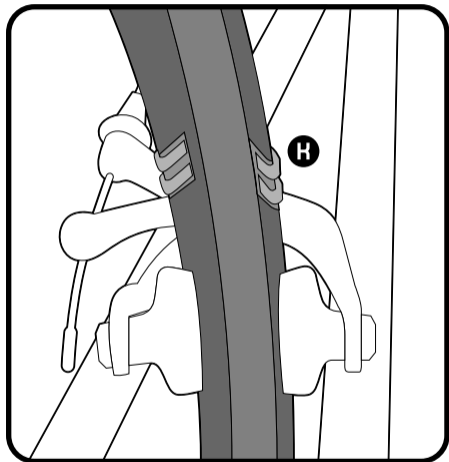
If your bike has a chainstay bridge, use one zip tie (P) to affix the rear fender to the chainstay bridge.



If your bike has no chainstay bridge, use two zip ties (P) to affix the fender to the chainstays.

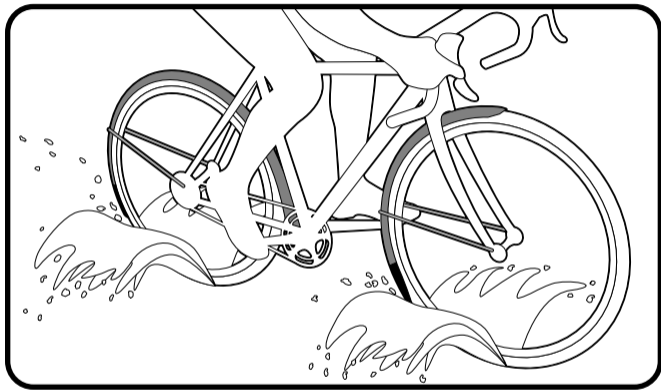
\*If you are lucky enough to have a chainstay bridge with an eyelet you can bolt fender directly to chainstay bridge. Make sure to use a large washer.

## Step 16



Crimp Z bracket (K) tabs under rear fender with pliers. Make sure all four tabs are crimped flat against underside of the fender.

## Step 17



Repeat steps 6-12 above, except in step 12 replace "Take a breather and continue to step 13" with "Ride your bike through the nearest puddle."

