

# EdgeRunner 2015-2016 (LT2) Shop Assembly Guide.

Beta Version



This guide is designed to help you build an EdgeRunner as efficiently as possible. Please follow the assembly instructions in order.

This guide covers most common accessory variations and all models, with notes on common problems and troubleshooting. While thorough, this guide is not exhaustive - you should already be familiar with all bike component installation and adjustment procedures. If you are not, please refer to the component documentation to ensure correct installation and adjustment.

If you have questions not answered here or in the product manuals, contact: [technicalsupport@xtracycle.com](mailto:technicalsupport@xtracycle.com)

## Receiving the Bike

Check the received goods against the packing slip and order. Kickback, V-Racks, and FlightDecks are usually in the box with the bike. CarryAll bags, the PorterRack, and Family Pack (Hooptie and U-Tubes) always ship separately from the bike, even if they are included on the bike's specifications.

Gather all accessories and add-ons.

## Unboxing

Look through the box handle to determine which side the front wheel is on. Slit the box open on the opposite side from the front wheel. Remove any parts boxes on top of the bike.

Clip the zip tie that holds the deck, KickBack box, and seat in place. Set the deck and KickBack box aside for now.

Pull the protective cardboard and plastic sleeve off the seatpost. Grease the threads of the seatpost collar bolt. Apply a thin film of grease to the outside of the seatpost and install the seatpost up to the minimum insertion mark; tighten the seatpost collar bolt.

Pull the bike out of the box. Team lift is recommended when getting the bike into or out of the stand, particularly fully-equipped electric bikes.

Clamp the bike in the stand by the post. (Photo 1)

Working back to front, clip the zip ties and remove the plastic packaging. Be careful to hold onto the fork and the front wheel when you clip their zip ties. (Photo 2) Set the fork and front wheel aside and zip tie or strap the handlebar to top tube to keep it out of the way and avoid placing strain on the housing ends and cables. (Photo 3, 4)

Remove the paper packaging. The masking tape that holds the paper on has a tab - pull the tab and the masking tape will unwrap. (Photo 5, 6)

Check the bike box for any remaining parts or boxes. At this point you should have:

1. Bicycle frame and rear wheel clamped in work stand by seatpost (with seat attached).
2. Fork (off bike)
3. Front wheel (off bike)
4. 2 small parts boxes, one with front brake rotor taped to it.
5. Larger rectangular box containing the Kickback
6. 2 V-racks (left and right)
7. FlightDeck
8. Xtracycle Manual
9. Electric bikes will also have an empty battery box (not shown), a box containing the battery charger, and a manual for the Bosch system.

Here's what comes in the electric bike box besides the bike itself. (Photo 59)

Once you have everything you from the box, recycle the bike box.



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## Frame

Find the headset parts and stem in the small parts box with the rotor taped to it. (Photo 7)

On bikes with loose ball headsets the bearing with larger diameter balls goes on the bottom. For bikes with cartridge bearing headsets, except the pink 11i, the bearings are identical and the lower bearing is already installed with a clip holding it in place; verify that it is installed before installing the fork. (Photo 60) shows the lower bearing in place on a cartridge bearing headset. On the pink 11i, the lower bearing is a cartridge bearing, but it is not held in place by a clip - sometimes it will be loose in the bike box. (Photo 8)

Before installing, it is recommended that you apply a thin film of grease to the lower part of the fork steerer tube to prevent corrosion on the unpainted surface. Do not grease where the handlebar stem clamps the steerer tube. Lightly grease the threads of all of the stem bolts. Install the fork, headset, spacers, and stem. (Photo 9) Don't adjust the headset, except for on the pink 11i.

Install the bars, but don't do the final torque on the stem faceplate. We'll adjust the headset, stem and bar alignment, and control alignment at the end when the bike is on the ground and level.

Verify that the cables (and the console wire on Bosch electric bikes) are routed smoothly, not twisted around each other, and that they are on the proper side of the headtube. The rear derailleur cable is routed to the right of the headtube, rear brake cable is routed to the left side of the headtube. On bikes with a front derailleur, the front derailleur cable is routed to the left side of the headtube. (Photo 61 shows proper cable routing around the headtube on an 8e)

Install the front brake, leaving it a little loose so that it will center over the disk. On the 24d and 8e, you will have to remove the rear caliper bolt to be able to install the adapter mounting bolt under the caliper. (Photo 10) Be sure to torque both adapter bolts fully before installing or adjusting the caliper. On bikes with mechanical disc brakes, route the front brake cable to the front brake, but do not clip it to the cable guide on the rear of the fork blade yet.

## Wheels

Remove the rear wheel. Air up the front and rear tires. On bikes with cup and cone bearing hubs, check the bearing adjustment and adjust if needed; it's also not a bad idea to apply a drop of chain lube to the rubber dust seals on those hubs (they can make noise as they rub on the hub if they're too dry).

The front rotor and its bolts are in a cardboard sleeve on the side of the small parts box. Install the front rotor, then true both wheels and rotors. (Photo 31)

## Tail

Remove the tailpiece from its box and packaging. In the rotor box, find the tailpiece bolts in the



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accessory bag: 4x M6 bolts w/ captured washers, 4x M6 nyloc nuts, 4x washers. (Photo 11)

Install the tailpiece bolts heads out, nuts and washers on the inside (Photo 12), but do not tighten them fully. Make sure the tailpiece can move fore and aft. This is necessary for ensuring the V-Racks and U-Tubes fit properly.

## KickBack

The large rectangular box contains the kickback and all of its mounting hardware. Pull the Kickback out and unwrap it. Make sure you have all the parts: 1x KickBack body, 2x legs, 1x mounting hardware kit. (Photo 13)

Cut one of the legs down 40mm from the open end, or right above the minimum insert text. (Photo 14) A hacksaw or pipe cutter works well for this. Be sure to smooth and deburr the cut end with sandpaper, emory cloth, or a file before installing.

It's not a bad idea to grease the bolts that clamp the legs in the Kickback body. Install the cut leg into the bent leg of the KickBack body so that it protrudes 70mm from the end of the KickBack body, repeat with the uncut leg on the other side, and tighten both clamping bolts. (Photo 15)

The KickBack installs under the bike with an M5 and M10 bolt. Find the M5 bolt and the smaller split washer. This bolt secures the front of the KickBack to the tab next to the boom tube on the EdgeRunner frame. Slip the bolt through the split washer, the frame tab, and then thread into the outer (left) M5 threaded hole on the KickBack. Leave the bolt a little loose to allow you to align the large threaded hole with the kickstand plate on the left side of the Edgerunner frame. (Photo 16)

Slip the M10 bolt through the larger split washer, the kickstand plate and the spacer, and thread into the large threaded hole in the KickBack. (Photo 17) Be careful not to damage or pinch the rear brake cable or hose, and any sensor or light wires that run near the kickstand plate.

Tighten both the M10 and M5 bolts firmly. Once both bolts are tight, secure the M10 with the nyloc nut. Make sure you're not unthreading the bolt by holding the bolt in place with a wrench while tightening the nut. (Photo 18)

## Lights, Fenders, Handlebar Stabilizer

Lights, fenders, and the handlebar stabilizer are all intertwined. If you're installing any or all of those items, read through all the relevant instructions before proceeding.

A general note on the metal fenders: when installing the fenders, avoid bending or forcing them into place as much as possible; doing so may cause them to fatigue and crack from vibration. Allow them to follow their pre-formed curve and adjust the stays to achieve proper positioning.

## Rear Fenders

Assemble the fenders, starting with the mud flaps. The mud flaps mount to the outside of the

fender (to prevent flap ingestion) and use the lowest hole on the rear of the fender. Secure the mudflap with a short philips head bolt and M5 nyloc nut. (Photo 19)

If you're mounting lights and fenders on an EdgeRunner with a dynamo front hub, or with a Bosch electric drive system, thread the rear light wire through the clips on the inside the fender, connect the light, and bolt it on. The light bolts into the topmost hole on the rear of the fender, and the light's anti-rotation tab and wires feed through the slot below that.

The rear fender stays mounted to the hole directly above the mud flap, using the eyebolt and cup on the outside of the fender, and a M5 nyloc nut on the inside. The fender stays have slight markings indicating their center. (Photos 62 and 63 show the center markings on the fender stays). Slip the stays through the eyebolt until it rests between these markings. If you tighten the nut slightly, it will allow the stay to rotate but not slip out of place side-to-side. The p-clips slip on to the end of the struts with the tabs facing out. (Photo 20)

The front stay on the rear fender also mounts with an eyebolt, cup, and M5 nyloc nut. Install the front stay loosely on the fender, then mount the fender to the bike. The front fender stay bolts onto an eyelet on the top of the left-side chainstay, and the rear fender stay p-clips bolt to the eyelets on top of the seat stays (Photo 21). It is recommended that you use a medium strength thread lock compound, such as Blue Loctite, on the screws attaching the fender stays to the frame to prevent them from vibrating loose.

After attaching the rear fender, install the rear wheel to check alignment and that the fender is not rubbing on the tire anywhere. Tighten everything down (you may find it easier to temporarily remove the rear wheel to access the nuts on the inside of the fender). Then find the bridge mount - either the black or the silver will work fine.

The bridge mount has to be formed to the fender. Bend it to match the curve of the fender, then bolt it to the seatstay bridge. Once it's bolted into place use pliers or a flat-head screwdriver to bend the tabs around the fender (Photo 22). This needs to be a tight fit to keep the fender off the tire and prevent rattling.

## Front Fender, Handlebar Stabilizer, Front Light.

The front fender is much simpler to install. The stays use the same mounting hardware as in the rear, and the top bolts to the crown of the fork with the riveted on L-bracket. As in the rear, it is recommended that you use medium strength thread locking compound on the screws attaching the fender stay p-clips to the fork.

If you're installing a crown mounted front light and/or handlebar stabilizer they will also need to be installed at this point.

Find the appropriate length of bolt for the installation - it just has to be long enough to thread through fork crown, all accessories mounted, and then past the end of the M6 nyloc nut.

Hook the stabilizer spring through the plate (Photo 23), but do not attach the other end to the bike



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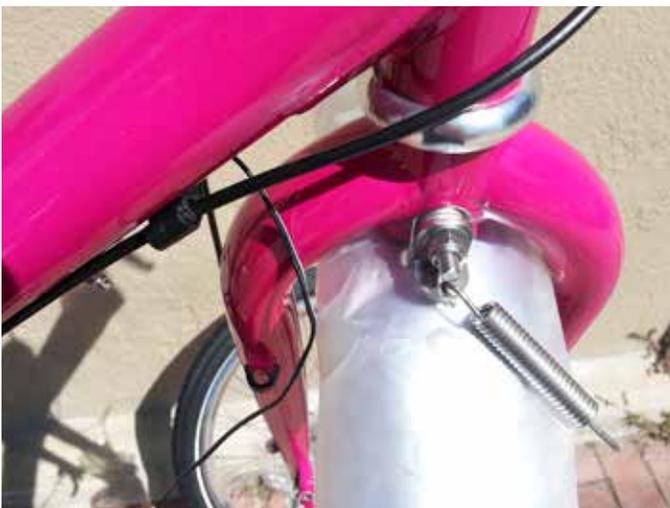
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until after everything is tightened down! The force on the spring is enough to cause the nyloc nut to gall and then strip the bolt.

Install the front wheel on the bike. Adjust the position of the fender using the vertical slot in the fork crown L-bracket and by sliding the fender stays through the p-clips, until the fender follows the curve of the wheel evenly. (Photo 64 shows a properly adjusted front fender line on an 8e) Once you are happy with the alignment of the fender, tighten down the fork crown bolt, the screws attaching the p-clips to the fork, and the eyebolt nut on the inside of the fender, making sure the nyloc is fully engaged (you may find it easiest to temporarily remove the front wheel to access this nut). On bikes with curved fork blades (24d and 8e), you may end up with excess fender stay protruding in front of the p-clip. They can be trimmed with bolt cutters or a hacksaw (be careful not to chip the paint on the fork), smoothed with a file, and protected by the included black stay caps. (Photo 65 shows the excess fender stay to be trimmed on an 8e)

Once everything is tight and aligned on the fork, install the M5 frame eyebolt for the handlebar stabilizer and lock it into place with the thin nut. On the 11i, the housing holder is bolted into the eyelet's position, relocate the holder to the braze-on closest to the head tube. Use a small screwdriver or needle nose pliers as a handle to pull the spring back and hook it into the frame eyelet. Slip the black spring cover over the spring. (Photo 24)

## Connecting Lights

The red wire or the white stripe designates the positive lead, the black is ground. On all bikes except the Bosch, which has dedicated front and rear light wiring, the rear light plugs into the front light (Photo 25) and the front light is wired to the dynamo (Photo 26).

Run the rear light wire along the rear brake housing up to the front light, or to the motor on a Bosch bike.

The dynamo plug is marked with the ground, and the wires are captured between the inner gray piece and the outer sleeve. The dynamo plug should be oriented so that it faces towards the rear of the bike at about a -45° angle to prevent water entry.

If you're using the pre-installed wiring on a Bosch bike, leave the excess wire for right now - the excess will be stored in the motor housing.

## Store Excess Wire on Bosch EdgeRunners

Remove the non-drive side crank (both sides if you're replacing the cog - refer to the Bosch documentation for that procedure).

There are three long screws that hold the plastic case together - they take a T20 driver to remove. Split the case along the vertical seam and pop the halves apart.

On the left side of the motor there are three 13mm hex nuts and two T30 self tapping screws. Torque the 13mm nuts to 25-30Nm, and the T30 screws to 8Nm. **USE A TORQUE WRENCH**



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If there is excess light or console wire, pull it back into the casing and tuck it out of the way.

Reinstall the plastic case. The halves join using a lip and tabs, make sure these all meet properly to avoid having a distorted case.

Secure the case with the three long screws - these should be only finger tight, they strip out easily. Re-install the crank arm(s).

## Brake Adjustment

Now is a good time to adjust front and rear brakes per the manufacturer instructions. If you are at all unsure of how to properly set up disc brakes, it is highly recommend that you seek the assistance of a professional mechanic to ensure the brakes will operate safely.

If the brakes are hydraulic, inspect the rear caliper and hose fitting for leaks. The lines are lengthened at the factory, and there is occasionally oil on the pads or an improperly assembled hose end.

Once the brakes are adjusted, clip the front brake hose or cable to the guide on the back of the left fork blade using the provided c-clip or a zip tie. On bikes with mechanical disc brakes, trim the excess front brake cable (leaving about 2cm for future adjustment) and install a crimp to prevent the end of the cable from fraying.

Please note that all disc brakes require a "bed-in" period before they will operate at maximum performance. During the bed-in period it is essential to avoid heavy braking and/or locking up either wheel; plan your first test rides as such. Refer to the manufacturer instructions for specific bedding in procedures for each braking system.

## Derailleur Adjustment

Before adjusting the derailleurs, install the pedals--it will make it easier to spin the cranks as you adjust the derailleur(s). Apply grease to the pedal threads, remember that the left pedal is reverse threaded (tightens to the left), and tighten firmly using a 15mm pedal wrench.

Adjust the front and rear derailleurs per the manufacturer instructions. (Photos 34, 35) Adjust chain length if needed - if changing cog size, or if you notice the chain is slightly long. Running less chain helps keep the derailleur higher, and reduces chain bounce.

For all the bikes with front derailleurs, the chain may brush up against the tire in the lowest combination of gears. This is normal, and does not seem to wear the chain or tire unduly. (Photo 36)

On the 30D, which uses a long cage derailleur, there have been some instances of the derailleur cage rubbing on the tire - this needs to be corrected, by using the limit screws or derailleur hanger alignment as appropriate. If those measures cannot correct the rub, contact Xtracycle.



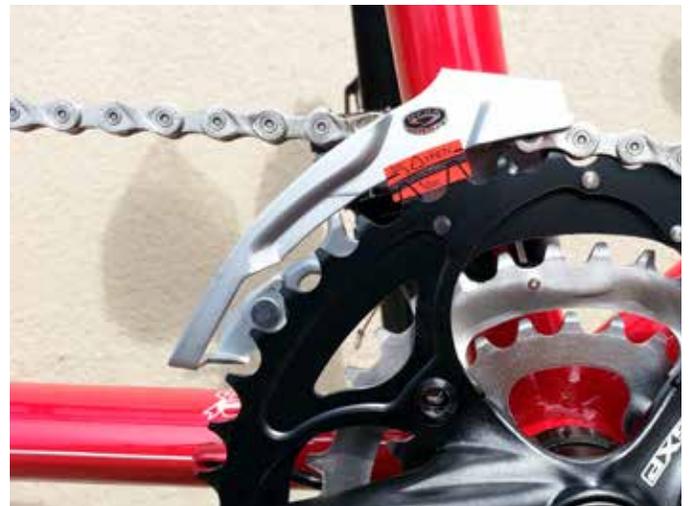
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If the bike has fenders installed, also check the clearance between the chain and front of the rear fender when in the lowest gear combination. If the chain is too close to the fender, it may get caught on the fender while pedaling. We recommend at least 1.5 cm of clearance between the chain and fender. (Photo 66 shows minimum clearance between the chain and fender in the lowest gear)

## V-Rack Installation

The V-racks are sided! The corner with the single bend is forward, and the blocks on the top of the rail face the center of the bike. (Photo 37) depicts a drive side rack, with the front corner and block visible.

Remove the RackLocks outer collar and the o-rings (Photo 38) from one side of the bike. It's not a bad idea to grease the threads of the RackLock bolts and apply a thin film of grease to the ends of the V-rack, to prevent corrosion. Slip the RackLocks on to the corresponding legs of the rack: collars first, then o-rings. The o-rings will keep the collars from sliding off, and if you place the o-rings at the minimum insertion marks on the racks they'll slide into place as the racks are installed. (Photo 39)

Slip the rack into the uprights making sure they are seated all the way down in the uprights. If they are not seated all the way down, the deck will not lie flat, and you'll be unable to install the Hootie.

Slide the outer collars down until the o-rings seat into the machined groove in the outer collars and there is no amount of the inner collar protruding beneath. (Photo 40)

Finger Test - slide your fingernail up the frame upright then across the bottom of the collar assembly. (Photo 41) If you can feel a step, (your nail hits, slides, then hits again) then the outer collar is too high. If you feel just one piece, then the outer collar is set correctly. (Photo 42)

Tighten the collar pinch bolts to 4Nm.

Repeat on the other side.

## U-Tubes Installation

The longer leg of the U-Tubes goes in the rear horizontal port of the bike, and they are not sided.

Insert the U-Tube into the horizontal ports so that one of the two sets of minimum insert marking lines up with the ends of the ports. The set of marks closest to the open end of the U-Tubes will set them to their widest width, the next set of marks is narrower, and will interfere with opening and closing the quick release.

Before tightening down the set screws, make sure the hole in the rails are aligned with the bosses on the brackets so the set screw can pass through them both. Tightening the set screws into the



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side of the tube can deform it, preventing removal.

Lock the rails into position threading the provided M5 ball-end screws with split washers through the braze-ons and U-Tubes until they bottom out on the inner side of the U-Tubes. (Photo 43)

## Tighten Tail Piece

The tail piece is now aligned to the V-Racks and U-Tubes.

Note: If there aren't U-Tubes installed now, installing them in the future may require loosening the tail bolts to allow it to align to the U-Tubes

Tighten the 4 bolts that hold the tail piece on to the frame, being careful not to strip out the hex heads - the bolts are relatively soft. (Photo 44) Holding the bolts stationary with a hex wrench and torquing the nut reduces the load on the screw head, and greatly reduces the chances of stripping.

## CarryAll Bags

Refer to the detailed installation instructions provided with the bags. The CarryAlls are sided - the tag on the back has which side of the bike the bag installs on (Photo 45). Bags are always installed before the FlightDeck and Hooptie. It is faster to carry out the CarryAll Left Side Fix (Photo 46) with the bags on the bike.

(Photo 47) Pictured is the correct routing for the lower front tiedown on the CarryAlls, avoid running the straps over derailleur housing, as it can impact shifting.

Removing the tags from the bags, and stowing them in the mesh pocket improves the look of the bike and prevents the tags from getting lost on test rides. (Photo 48)

## Deck, Hooptie, and Seat Adapters

The FlightDeck, Hooptie, and Seat Adapters all bolt into the same set of bosses on top of the V-Racks (see the instructions included with the FlightDeck hardware for hole details).

If you're installing just a deck, bolt it into place using the instructions and hardware provided with the deck. Once done, skip forward to Final Touches.

If you're installing a Hooptie or seat adapters, don't install the deck yet.

The Hooptie and Seat Adapters come with their own hardware that will replace the deck hardware for whichever attachment points are being used by the accessories. The hardware hierarchy is:

1. Seat Adapter(s)
2. Hooptie
3. Deck only

Use whichever hardware is supplied with the highest ranking accessory for a given attachment point. For example, if you're installing a Hooptie and a Front Yepp Adapter, the hardware you'd use would be the Front Seat Adapter hardware for the two farthest forward sets of bolts, the deck hardware for the third set, and the Hooptie hardware for the fourth.



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A good rule of thumb is that you should be using the longest hardware supplied to ensure full thread engagement. (Photo 48.5) shows the hardware included with the deck, the Hooptie, and a Seat Adapter, with lengths and bolt sizes called out.

## Yepp Seat Adapter

If you're installing a Yepp seat, the corresponding port (or ports, if two seats are going on) needs to be cut out of the deck. Using a sharp box cutter, carefully score the guidelines in the underside of the deck until you can press the blanking plate out of the deck (Photo 49). Then install the Seat Adapter according to the provided instructions.

## Hooptie + Deck

If installing a Hooptie, first find the Hooptie brackets - the wider bracket goes in the front (Photo 50), the narrow in the rear (Photo 51). Use a bolt or two through the brackets and the V-Rack blocks as pins (Photos 50, 51) to loosely hold the brackets in place while you install the Hooptie rails (Photo 52). Installing the rails before bolting the Hooptie and deck to the V-Racks ensures that the Hooptie brackets will be properly aligned and that it will be easy to adjust, remove, and re-install the Hooptie rails in the future.

Insert the Hooptie rails into the brackets so that one of the two sets of minimum insert markings line up with the edge of the bracket and the braze-ons face down. The set of marks closest to the open end of the Hooptie rails is for use with Yepp Seats (shown in Photo 53). The next set of marks is for older passengers out of Yepp seats, and makes the Hooptie narrower.

Before tightening down the set screws, make sure the hole in the rails are aligned with the bosses on the brackets so the set screw can pass through them both. Tightening the set screws into the side of the tube can deform it, preventing removal.

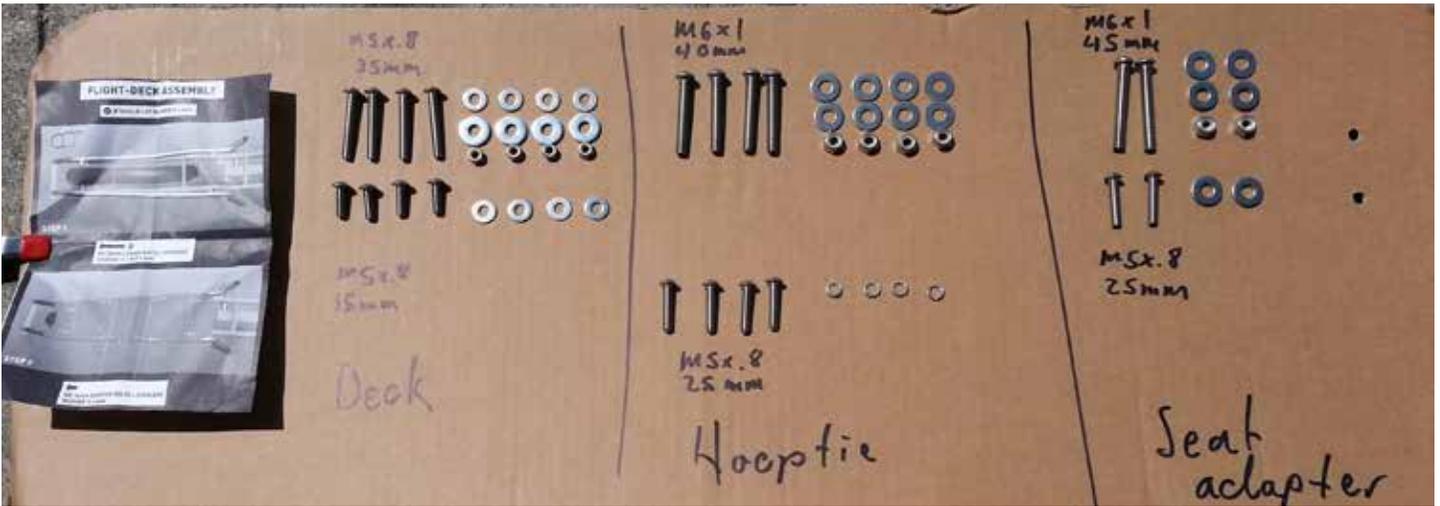
Lock the rails into position threading the provided M5 ball-end screws with split washers through the brackets and rail until they bottom out on the inner side of the rail. They may not lie flush with the top of the braze-ons, this is normal. (Photo 54)

Remove the temporary bolts holding the brackets onto the rail blocks.

Lay the deck on and install the middle four bolts (and any seat adapters) so they are finger tight. The deck needs to be able to move to get the bolts at the ends aligned. (Photo 55)

Then install the bolts at the ends of the deck. (Photo 56) If no Hooptie is installed, use the thick washers between the deck and the rack blocks to keep from pinching the bags. If installing a Seat Adapter but no Hooptie, use the thick washers between the rack blocks and the nut as well or damage to the rack block can result from the nut jamming against it. You will need to shift the different accessories, rack, and deck around until everything lines up.

Use a mallet if needed to coax the bolts through, but be careful not to damage the threads. (Photo 57)



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Tighten all the deck bolts to 4Nm, and make sure the nylock nuts are fully engaged.

## Yepp Seats

Install Yepp Seats according to Yepp instructions. Adapters are required on all LT2 bikes - simply cutting the holes in the deck is not enough to secure the seat. (Photo 58) shows two adapters installed over the deck cutouts - it is also possible to run just one Yepp seat, in either the front or the rear. Note that different adapters are needed for the fore and aft positions.

## Final Touches

If installing a MagicCarpet, it is the last thing to be installed on the deck - it just uses velcro loops to attach to the V-Racks. If needed, it can be run up the inside of the Hooptie bracket to clear a Yepp seat, or allow for mounting two pads.

Drop the bike out of the stand (get help) and adjust the headset, bar angle, and the control/grip rotation. Tighten the stem faceplate bolts and steerer clamp bolts on the stem to the specified torques. On Bosch electric bikes, you will need to loosen the 4 bolts clamping the console mount to the bar and rotate it the out of the way in order to access the faceplate bolts. (Photo 67 shows the console rotated out of the way to access the faceplate bolts)

Adjust the seat rail position to the desired setting and tighten the seat rail clamp bolt to the specified torque. Adjust seat height to desired position and tighten the seatpost clamp bolt to the specified torque.

Verify Kickback function, and that the bike sits on the KickBack with about 1" of space under the front tire when pushing the back of the bike down so the rear wheel makes contact with the floor.

Test ride the bike, bed in the brake pads, verify shifting function, listen for any rattles, adjust as necessary. Make sure all straps are secured before riding the bike.

Wipe down the bike, take in the beauty of the world's most capable cargo bike, congratulate yourself on completing your Edgerunner assembly, and....

That's it!



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