COMPATIBILITY GUIDE

updated April 2020

ATTENTION DIY'ers, makers, builders, hackers, tinkerers, fabricators, and master mechanics. If you are looking to build a custom cargo bike from the bottom up with your dream frame and ideal components, the FreeRadical Leap Cargo Bike Conversion Kit is the project for you!

The goal of this guide is to help you see if your frame meets the requirements to be converted into a cargo bike using the Leap kit. Since the Leap is designed to fit a wide range of bikes, it is likely that even if your bike does meet the requirements, a little extra tweaking here and there might be necessary. So you should have experience with such works.

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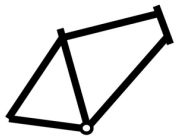
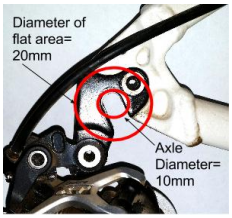
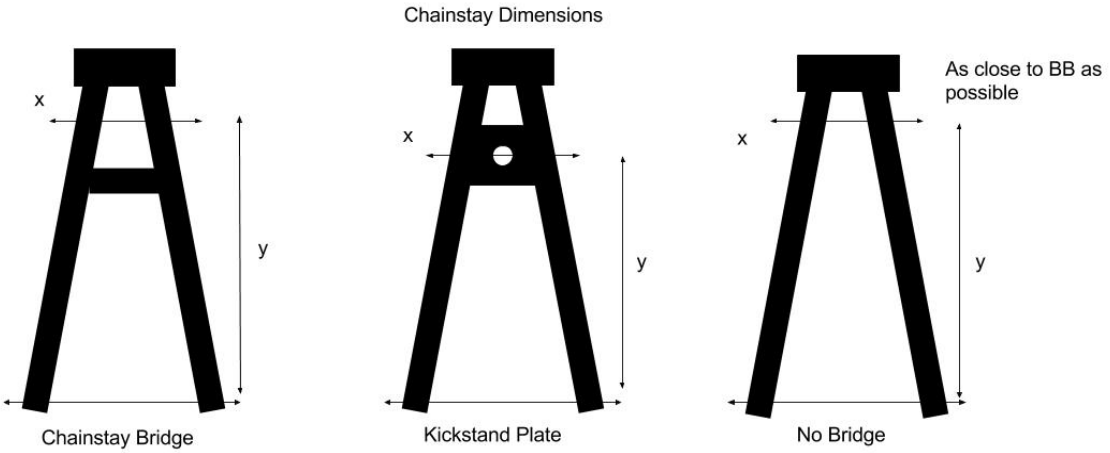
Frame Specifications

Frame type	Rigid frame with steel, aluminum, or titanium construction. Not intended for use with carbon fiber frames or full suspension bikes.	
Rear dropout spacing.	135mm	
Rear dropout type	Open dropout (vertical, horizontal, or track end) for 10mm axle, with a flat area 20mm in diameter around outside of dropout (see picture).	
Chainstay width at clamping point	70mm - or will require the fabrication of wide "adapter plate".	See diagram below (x axis)
Chainstay length	Distance from dropout to forward clamping point: 33cm to 42.5cm	See diagram below (y axis)



In any configuration, chainstay width (x) should be no greater than 70mm (outside-outside) where clamp plates attach.
Distance from dropouts to clamping point (y) should be between 33cm and 42.5cm

Note: Leap will affect your bike's frame geometry. In addition to lengthening your wheelbase, it may also change the bottom bracket height, head tube angle, and seat tube angle.

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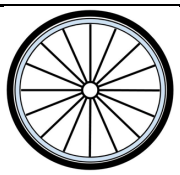
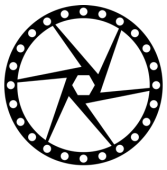
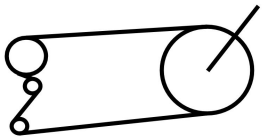
Wheel Specifications	
Supported wheel sizes	20”, 24”, 26”, 650b, 27.5”, 650b+, 700c, 29”, 29+
Maximum tire width	3”/75mm
Rear axle dimensions (Quick Release or bolt-on axles only. Not compatible with thru-axle rear wheels).	10x135mm
Brake type	If your frame does not have disc brakes and uses rim brakes instead, you may still be able to use it for a Leap conversion. If the frame meets all other requirements, you would need to buy a disc brake compatible rear wheel, a rear brake caliper to be installed on the Leap and a rear brake disc to be installed on the new wheel. Your converted bike will then have a disc brake on the rear and an original brake on the front.

- Leap is designed to work best using the same size wheels as the donor bike.

Brake Specifications	
Brake type	Disc Brake Only, 74mm Post Mount
Minimum rotor size	180mm

- Bikes with rim brakes can be converted, but will need a disc brake compatible rear wheel and a rear disc brake to complete the conversion.
- Hose for hydraulic disc brake conversions not currently offered by Xtracycle.
- Refer to brake manufacturer specifications for required spacers if using a rotor larger than 180mm.

Drivetrain Specifications	
Supported drivetrain types	Front and Rear Derailleurs, Internally Geared Hubs*, Single speed*
Number of derailleur gears	up to 3 front, up to 11 rear**

- * Chain-driven internally geared hubs and single speeds will work with a spring loaded chain tensioning device (e.g. Surly Singelator, Paul Melvin, Shimano CT-S500). Not compatible with coaster brake or fixed gear drivetrains.
- ** Bikes with 11 speeds, wide tires, and/or small (20 or 24" wheels) may experience some chain/tire clearance issues. Chain extensions for 11 speed drivetrains not offered by Xtracycle at this time.

Leap Package Includes:	Leap Frame with all mounting hardware
	Xtralong rear derailleur cable and housing
	Xtralong rear brake cable and housing (for mechanical disc brakes)
	V-Racks
	RackLocks
	FlightDeck LT2 AND Set of Wheelskirts

Accessories	*Leap is designed to use the Xtracycle LT2 system of cargo and passenger carrying accessories.*
Cargo Accessories	
	KickBack KB3 dual kickstand
	X3 CargoBay (Hi-Viz Lids optional) & SlingSet
	CarryHandle
Passenger Accessories	Hooptie LT2
	Front & Rear Yepp Kid Seat Adapters
	MagicCarpet & Mini MagicCarpet
	SnackBars
Other Accessories	Chain Roller (needed for use with the KickBack kickstand)
	Leap Brake Caliper Protector

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