



HOW-TO

EZRA FREECOASTER/CASSETTE CONVERTIBLE BMX HUB



INSIDE THE EZRA CONVERTIBLE FREECOASTER HUB

1. NON DRIVE SIDE CONE NUT: CNCed 7075T6 Alloy M14x1.0 thread

2. AXLE: 4130 Heat Treated Hollow Chromoly Precision CNC machined axle with M14x1.0 threads. The axle is broached at each end to accept an 8mm hex key/allen wrench to make disassembly easier.

3. HUB BEARINGS: Precision sealed 6902RS2 bearings. The larger bearings have been proven to be longer-lasting than the smaller bearings used in many other hubs.

4. HUB SHELL: Forged then CNC machined from 6061-T6 alloy. 36H. Features built-in groove to accommodate the Eastern Pop-N-Lock Hubguard.

5. RATCHET RING: Heat treated Chromoly. Just the right hardness to never wear out.

6. CLUTCH SPRING WASHER

7. CLUTCH SPRING: Custom precision made spring to allow just enough tension to get the pawls moving.

8. CLUTCH DISC: Precision CNC'd Delrin

9. CLUTCH DISC PILOT SPACER: CNC machined 6061 Alloy

10. BACKSIDE DRIVER BEARING: 6902RS2 precision sealed bearing. It's used on the back of the driver to add strength. Most drivers use a small bearing on the inside of the driver under the pawls but we chose to use something stronger.

11. PAWLS: Precision CNC machined pawls. 3 per hub. Used in both the cassette & the freecoaster mode.

12A. RETENTION SPRINGS (used in freecoaster mode): Precision custom made retention springs provide just enough down force to keep the pawls out of the way in freecoaster mode.

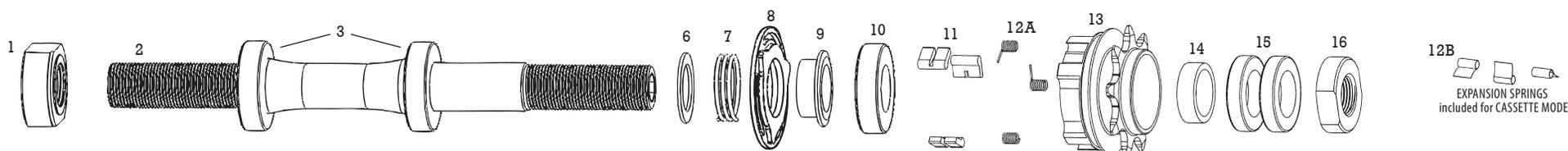
12B. EXPANSION SPRINGS (used in cassette mode): Expansion Springs are custom made to push the pawls up when you use the hub in cassette mode.

13. DRIVER: Precision CNC machined 4130 Heat Treated Chromoly

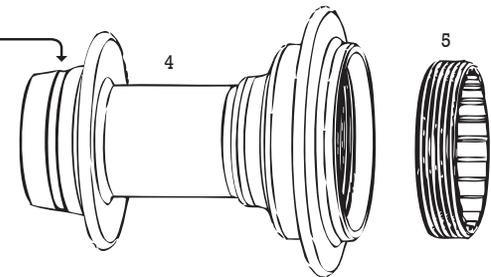
14. DRIVER BEARING SPACER: CNC machined Bearing spacer

15. FRONTSIDE DRIVER BEARINGS: Precision sealed 6802RS2 bearings. 2 are used under the chain to add strength. These two combined w/ the larger 6902RS2 bearing under the pawls make for a superior combination.

16. DRIVE SIDE CONE NUT: CNC machined 7075-T6 Alloy



BUILT-IN GROOVE TO ACCOMMODATE THE EASTERN POP-N-LOCK HUBGUARD



INCLUDES 3 CLUTCH DISCS FOR 3 OPTIONS

SLACK OPTIONS



THIS CLUTCH OFFERS THE MOST SLACK POSSIBLE. (ALREADY PRE-INSTALLED)



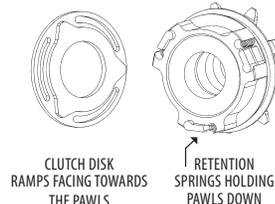
THIS IS MIDDLE OF THE ROAD SLACK.



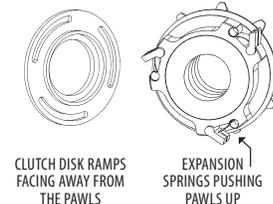
THIS IS A LITTLE MORE THAN THE SLACK THAT YOU GET WITH A CASSETTE HUB.

DRIVER & CLUTCH DISC CONFIGURATIONS

FREECOASTER MODE



CASSETTE MODE



Switching between Freecoaster & Cassette (HUB COMES SET UP AS A FREECOASTER)

VISIT EZRABMX.COM/FREECOASTER-HUB/ FOR THE HOW-TO VIDEO

TOOLS NEEDED:

- 8MM ALLEN WRENCH
- 21MM SPANNER WRENCH

1. The first thing you want to do is remove the wheel from your bike using the appropriate wrench to loosen the axle nut. The stock axle nut uses a 19mm wrench.



Insert 8mm allen wrench into non drive side of axle. On the drive side, loosen the 21mm cone nut (16) beside the driver & completely remove the cone nut from the axle.



To prevent losing any parts, hold the hub so that the drive side is facing up. Slowly wiggle & pull the driver (13) off of the axle.



Remove the clutch disc (8) & spacer (9) out of the hub. Look at the two sides of the disc.

WHEN IN FREECOASTER MODE:

The ramps on the clutch disc should face toward the driver. **WHEN IN CASSETTE MODE:** The ramps on the clutch disc should face toward the inside of the hub.

CASSETTE MODE:

(steps 1-3 are the same for both modes)



Pop out the Clutch Disc Spacer, Flip clutch disc to Cassette Mode (ramps face toward the hub), insert Disc Spacer back into the clutch disc with flanged end facing the driver & insert back into hub w/ clutch disc spacer, making sure the spring & all components are in the correct position.

6-C. EXPANSION SPRINGS

Look at side of the driver (13) with the pawls (11). THE HUB WILL BE SET UP AS A FREECOASTER. The freecoaster uses retention springs (12A) while the cassette hub uses expansion springs (12B). To switch back and forth, you'll need to swap out the springs.

TIP: Some people find it easier to do one pawl at a time so there is no confusion.



Remove the spring by slipping your fingernail under the pawl & lift the spring so that you can hold it with your finger. Now slowly pull the pawl out of the driver. Then, slowly pull the retention spring out of the driver.



After the pawl & spring is out of the driver, insert the expansion spring in the same place that the previous spring came from. Be sure to insert the spring with the long side facing the pawl side. After the spring is loaded depress the spring with your finger & slowly reinsert the pawl. Now repeat for the other pawls.



Carefully, take the reassembled driver & slip it over the axle & slide it all the way back into the hub. You might have to wiggle & turn the driver into position because of the tight tolerances.



Thread the cone nut back onto the hub. Tighten with the 8mm allen inserted into the non drive side of the axle & the 21mm spanner wrench on the cone nut. Spin the hub & makes sure everything is moving freely & there is no rubbing or interference. Reinstall the wheel & you are on your way.

FREECOASTER MODE:

(steps 1-3 are the same for both modes)



Pop out the Clutch Disc Spacer, Flip clutch disc to Freecoaster Mode (ramps face toward the driver), insert Disc Spacer back into the clutch disc with flanged end facing the driver & insert back into hub w/ clutch disc spacer, making sure the spring & all components are in the correct position.

6-F. RETENTION SPRINGS

Remember, freecoaster uses retention springs while the cassette hub uses expansion springs. To switch back and forth, you'll need to swap out the springs. The retention spring has a small stopper that rests on the driver. For the Freecoaster mode we will use the retention springs.

TIP: Some people prefer using a small flathead screwdriver instead of a finger.



With the driver facing you depress the expansion springs with your finger & remove the pawls.



Insert the retention spring with the stopper touching the edge of the driver. The part that actually touches the pawl will be pointing downward. With your finger slowly turn the spring counter clockwise & once it clears the driver slowly push it back into its place. Using your finger, pull the retention spring upward just enough to clear the pawl & slowly reinsert the pawl. Be sure that the spring is in the channel that is machined into the pawl. At this point the pawl should be held downward against the driver. Repeat for the rest of the pawls.



Slowly take the driver & slip it over the axle & slide it all the way back into the hub. Slowly turn the driver as you put it into the hub body to make sure the clutches are aligned in their correct position.



Thread the cone nut back onto the hub. Tighten with the 8mm allen inserted into the non drive side of the axle & the 21mm spanner wrench on the cone nut. Spin the hub & makes sure everything is moving freely & there is no rubbing or interference. Reinstall the wheel & you are on your way.