

## Care and Feeding of the Carver Squeak-Proof EBB

Here are some assembly and maintenance tips.

1. Lubricate expander wedge faces periodically with grease. A very thin layer of grease on the threads is good, also. Do not lubricate the Delrin shell or outer surfaces. The only portion of the EBB that should be greased is the bolt threading and the faces of the wedges. It is common for the EBB to become oily from chain lube after a period of time. It is a good idea to clean it periodically. Roughing up the inside of the EBB and the outside of the sleeve (horizontally) with rough grit sandpaper helps.
2. Use a high-quality 4 mm allen wrench to tighten expander bolt. Do not use a Ball-end Allen wrench! Using 2 4 mm. Allen wrenches together is even better, if the crank spider allows it. This allows you to effectively double the torque without stripping the allen socket. Some socket type allen wrenches do not reach all the way into the socket.
3. Clockwise to tighten and counter clockwise to loosen, looking at the bolt from the non-drive side. It is possible for the bolt to be installed backwards. Looking at the side with normal right hand Bottom bracket threads (non driveside) the flanges should gradually open when the allen bolt is turned in a clockwise direction.
4. Do not overtighten. Torque setting for the expander bolt is 80 inch pounds. Using both ends of the bolt will allow a maximum torque of 160 inch pounds (80 inch/pounds per side. 80 inch/pounds is equivalent to 6.67 foot/pounds or 9.0 Newton/meters.
5. Chain stretch and cog or chainring wear is a normal thing, especially when new. It is not the EBB slipping. It's not uncommon to have to retighten the chain once or twice on the first ride.
6. Creaking is almost always associated with the crankarm/spindle joint (very common) or the BB cups and or chainring bolts (less common). This seems to be particularly prevalent with Truvativ and Bontrager cranks. If the crank creaks when pedaling just with the left leg (harder than it sounds!) but not with just the right leg, that usually indicates that the joint between the left crank arm and spindle is the culprit.
7. To re-adjust the EBB, loosen the expander bolt. Then, using the 4 mm. Allen wrench as a lever, with the short end in the bolthole and the long end against the spindle or BB cup. Rotate it in the appropriate direction. Then tighten to the recommended setting.
8. The stock Fisher EBB is wider (73 mm) than any other EBB (68 mm.). Consequently, If you are using an outboard bearing crank, you'll need to add back the 2 2.5 mm spacers, one on each side. If you are running, ISIS, Octalink or square taper cranks, you will need to use a 68 mm. BB.
9. Bottom bracket position is important. Looking at the EBB from the driveside, the 1 o'clock to 3 o'clock position is best. If your chain length makes this position not possible, a "half link " can lengthen the chain to the optimum position. An alternate position is the 8 o'clock to 6 o'clock position.
10. We occasionally see frames, particularly Fisher Rigs, where the EBB shell hole is not round, due to welding deformation or heat-treating. Since the EBB is not

round, it will rotate to a different position, even when torqued properly. A measurement across different portions of the shell with a caliper will tell the tale. Experimenting with different orientations of the EBB can solve the problem (See #9). Also, using a carbon assembly paste, such as Tacx Assembly Paste or Finish Line Fiber Grip can work wonders for increasing friction. It should be applied in a thin layer in both of the inside and outside surface of the Delrin sheath. There can be variations in the inside diameters of certain frames, especially Fishers. We have included a rectangle of adhesive grip tape to take up space, in case of an EBB shell that is slightly oversized. The adhesive grip tape should be fixed to the center of the aluminum portion of the insert, with the rough surface against the inside face of the Delrin sheath.

11. After installing the EBB, it's a good idea to mark the position of the bolt, as well as the edge of the sleeve with a marker on the EBB shell. That way you can determine if the chain has stretched, the sleeve is slipping, or the insert is slipping inside the sleeve.
12. Outside diameters of our EBB's are as follows...

Standard EBB	54 mm.
Niner EBB	55 mm.
Fisher EBB	56 mm.

Any issues? Just give me a call at 1-800-245-3626 or e-mail me at [info@carverbikes.com](mailto:info@carverbikes.com).... Now get out of the house and ride!!!!