FBL 2 Hinge Shaft: How to Apply Primer and Loctite

This Technical Bulletin is applicable to Junction Bikes (FBL 2) with the following condition:

1. Dealer and Distributor Stock Bikes or Spare Parts Frames

Before selling a new Junction Bikes (FBL 2), please apply the Loctite compound on the upper and lower Hinge Shaft and Bore. If the bike is equipped with Norglide bearings, please replace with Igus bearings. You do NOT need to replace the Hinge Shafts.

2. Consumers with Junction Bikes (FBL 2)
We recommend that all Junction Bikes (FBL 2) bikes that are brought in be given this service.

- Replace Norglide bearings with Igus bearings. If the Igus bearings are worn out, replace them.
- Apply the Loctite compound on the upper and lower Hinge Shaft and the Bore according to the attached instructions.
- Install the new upper and lower Hinge Shafts.

3. Junction Bikes (FBL 2) with broken Hinge Shaft
Measure the diameter of the Hinge Bore to verify that it is within tolerance.
See Verifying Hinge Condition below for instructions.

If the Hinge Bore is within tolerance, carefully drill out the remains of the Hinge Shaft using a Screw Extractor. Measure the Hinge Bore again to ensure that it was not enlarged during the extraction process.

If the Hinge Bore is out of tolerance, please take a picture of the FBL 2 Hinge with the Hinge Bore Testing Tool inserted in the Hinge Bore. An example photo is provided below. Please ensure that the Service Tag Number can be seen clearly on the picture.

Submit the photo to your distributor for possible frame replacement.

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Hinge Bore Testing Tool in the Hinge Bore showing Service Tag Number located underneath the Bottom Bracket. The Service Tag Number is an 8-character combination starting with "B" underneath a Bar Code.

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Verifying Hinge Condition

Tools Needed

- 6 mm Wrench
- Hinge Bore Testing Tool

1. Fold the Bike and loosen the Hinge Adjustment Bolt.

2. Prepare an open workspace and lay the bike flat. It is not recommended that you perform this service with the bike oriented upright in a bike stand.

3. Loosen both upper and lower Hinge Shafts.

4. Use the Hinge Bore Testing Tool to determine if the Hinge Bore and Hinge Shaft is within tolerance.

- **Hinge Bore OK:** The tool cannot be inserted or can be inserted less than 2/3 of the length of the tool tip.

- **Hinge Bore Out of Tolerance:** The tool can be inserted more than 2/3 of the length of the tool tip.

- **Hinge Shaft OK:** The Hinge Shaft's solid body cannot be inserted into the tool.
- **Hinge Shaft Out of Tolerance:** The Hinge Shaft's solid body can be inserted more than 1/2 into the tool.

5. If the Hinge Bore is within tolerance, proceed with servicing the Frame using the method described in the next section, Applying Loctite and Primer.

Applying Loctite and Primer

Tools/Parts Required

- 5mm Hex Key
- 6mm Wrench
- Torque Wrench, up to 12 Nm
- Degreasing Agent (Naphtha, or any compatible degreaser)
- Loctite 680 (green)
- Loctite 222 (red)
- Loctite Primer 7649 (Primer N, green)
- Clean Cloth
- Cotton Buds
- Hinge Shafts
- Igus Bearings

Notes:

- Replace Norglide bearings with Igus bearings.
- Install new Hinge Shafts for consumer bikes brought in for service.
- For inventory bikes, there is no need to replace the Hinge Shafts.

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1. Remove the bearings. If the bike has Norglide bearings, remove and discard. If the bike has Igus bearings, remove and preserve for reassembly.

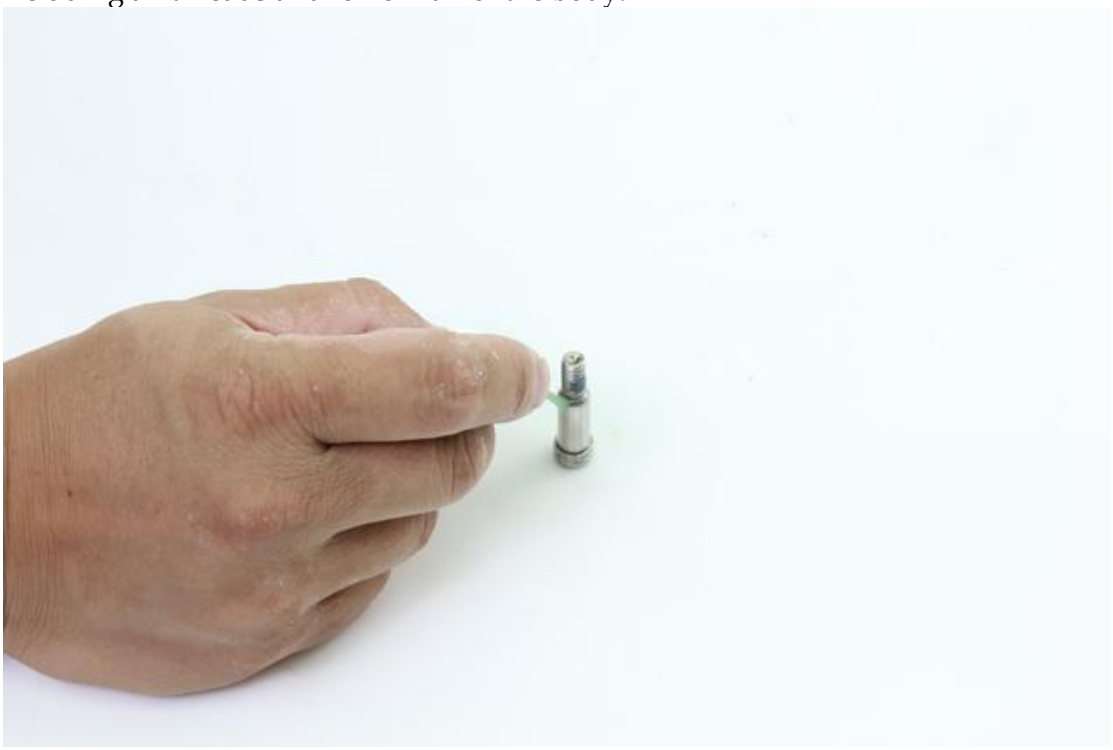
2. Use a Cotton Bud and Degreaser to clean the grease from the Hinge Shafts, the Upper/Lower Hinge Plate Bores, Threading, and the Bearing.

3. Replace Norglide bearings with Igus bearings. If the bike is already fitted with Igus bearings, and they show no sign of wear, continue to assemble with the old Igus

bearings.

4. Please double check that washers are present inside the Upper and Lower Bore. If either is missing, insert a new washer.

5. Apply Loctite Primer (7649, Primer N, green) onto the Hinge Shaft surfaces, including all threads and lower half of the body.



6. Apply the Loctite Primer (7649, Primer N, green) inside the Hinge Bore. The Primer should dry very quickly.

7. Ensuring no contamination, apply 2 – 3 small drops of Loctite 680 (green) around the inside edge of the Upper and Lower Bores. Wipe off any excess.

8. Assemble the Hinge by alternately tightening the upper and lower Hinge Shafts. Avoid the Loctite getting onto the bearing surfaces as much as possible.

9. Wipe off any Loctite coming out of the gap between the Hinge Plates.

10. Tighten the Hinge Shaft to the proper torque value (10 ~ 12 Nm.)

11. If the Nylok Blue Patch on the Adjustment Bolt is insufficient, apply Loctite 222 and tighten the Adjustment Bolt.

12. Close the Frame Lever and allow the Loctite to cure for a minimum of **40 minutes**. If possible, allow **24 hours** for the Loctite to cure completely.

13. Check Hinge Lever tightness before riding.

Note: Additional resistance during folding/unfolding may be experienced due to Loctite on the sliding surfaces. This is normal as long as the amount of friction does not interfere with normal folding/unfolding action.

Removal of Loctite

Tools Needed

- Heat Gun
- 6mm Wrench
- 5mm Hex Key

In addition to filling the gap between the Hinge Shaft and the Hinge Bore, Loctite 680 is a high strength threadlocker. Once cured, it is necessary to use heat treatment to loosen and remove the Hinge Shaft.

1. Untighten the Adjustment Bolt.

2. Use a heat gun to heat the Hinge Shaft from the outside.
Note: A torch is NOT recommended for this purpose.

3. Heat the area of the Hinge Shaft to roughly 120 degrees C (248 deg F). With a heat gun, this should take no more than 15 to 20 seconds. Take care not to overheat.

4. While the area remains at temperature, loosen the Hinge Shaft slowly. Avoid excessive force. Make sure that the Heat Gun is pointed on the lower Hinge Plate.

5. The Hinge Shaft may become tight again as the temperature drops. Re-heat slightly to continue loosening until the Hinge Shaft is fully removed.

Videos

A video of this service is available for viewing at the Tern Support Site. We recommend you watch the video before performing the service.

Visit support.ternbicycles.com and locate the video under Tern Video Tutorials >> Spare Parts Replacement >> Application of Loctite Compound on Junction Bikes FBL 2 Hinge Shaft.

Login required.

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