Disc Brake Systems - TiLite Camber Tube Narrowing

TOOLS NEEDED

1 each - 3/4 Open end wrench
1 each - 1″ socket or capable Cresent wrench
1 each - 3/16 Allen wrench
1 each - 5mm Allen
1 each - Hammer
1 each - Straight rod (Approx. 2′ x 1/2″ to 3/8″)
1 each - Red Loctite
1 each - Bandsaw or capable tool

Fig. 1

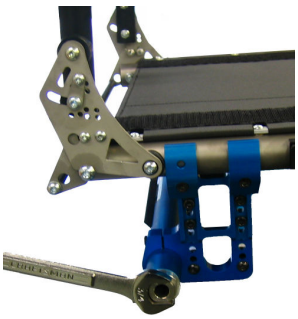

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

These instructions detail ADI's procedure of shortening the camber tube to remove the additional wheel spacing added by the ADI Disc Brake System. This is done by carefully measuring then cutting down one side after removing the camber end plug and resetting.

1. Measure original wheel spacing and make note of measurement.

2. Mark the camber tube just inside frame brackets at the split in the clamp.
(Fig. 1)

3. Remove the threaded axle inserts from both sides of the camber tube
using a 3/4 open end wrench (Fig. 2)

4. As a mock-up guide, use a 1'' socket or Cresent wrench to loosely attach the caliper mounting brackets to the camber tube using the ADI supplied threaded inserts. Slide the disc/hub onto the ADI insert, but do not secure with snap ring at this time. Also, using a 5mm allen, attach calipers to the caliper mounting brackets as shown. (Fig. 3 & 4)

5. Attach wheel, with ADI Quick Release insert installed, to check wheel spacing.

6. Disc or caliper interference to the frame will dictate how much camber tube can be removed.

7. Using a 3/16 allen, loosen the frame to camber tube brackets and slide the brake assembly toward the frame. Leave at least 1/8" of clearance between disc and any interference. (Fig. 5)

8. Put a new mark to the inside of the frame bracket. Repeat on the other side. Take the distance between the two marks and add the measurements of the combined length, of the two sides, to be removed. Both measurements need to be the same. (Fig. 1)

9. Mask the inside of the cut line. Also cover the rest of the camber tube with masking tape to protect the finish. (Fig 6)

10. Scribe a line from the end of the camber end plug across the center of the roll pin and just past the taped cut-line. This will realign the camber end plug during reassembly. (Fig. 7)

NOTE: It is crucial that the end plug is reinstalled exactly the same degree as it was removed to ensure proper wheel alignment.

Fig. 8

Fig. 9

Fig. 10

Fig. 11

11. Drill the roll pin down just below the surface of the tube's aluminum or titanium. (Fig. 8)

12. With a long rod no larger than ½" diameter knock out the camber end plug from the backside being careful only to catch the edges of the plug and not the threads. The original axle insert can be turned in no more than 12 turns to help protect the 5/8-24 threads. (Fig. 9)

13. Once the end plug is removed clean away any epoxy residue.

14. Continue the scribe line across the full length of the camber end plug. Do not cut more than 2" or any distance narrower than wheel spacing ordered.

15. Cut the camber tube at this time on the mark and deburr. (Fig.10)

16. Fully reinstall the original TiLite axle inserts into both ends using a 3/4 open end wrench.

17. Apply 2 part epoxy or red LocTite to the camber end plug.

18. Line up the scribe lines and drive in with a press or hammer on a solid base. (Fig. 11)

19. Drill 1/8" hole approximately .325 from the end of the tube no deeper than .250. Set a 1/8" roll pin and grind away any excess. (Fig. 8)

20. Reinstall tube to the chair lining up the marks and centering the tube so that both ends are even.

21. Tighten frame bracket clamp using a 3/16 allen