



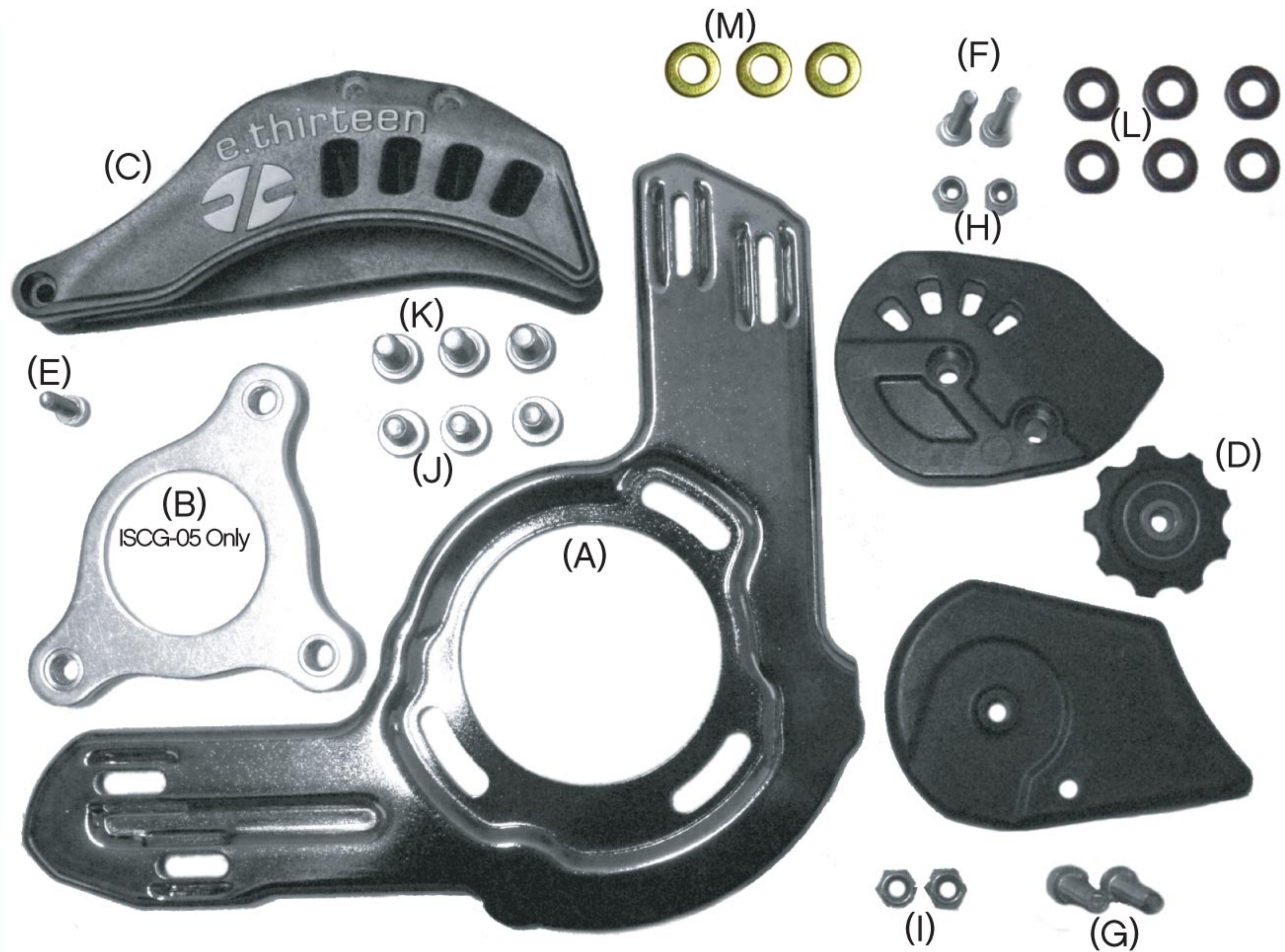
e*thirteen components

2010 LS-FS/LS-HT Chain Retention System

The following instructions are for the 2010 LS-FS and LS-HT. If in doubt about the correct ISCG configuration and installation of our LS1 chain retention system please contact us at:
www.e13components.com/support.html support@e13components.com

Parts List:

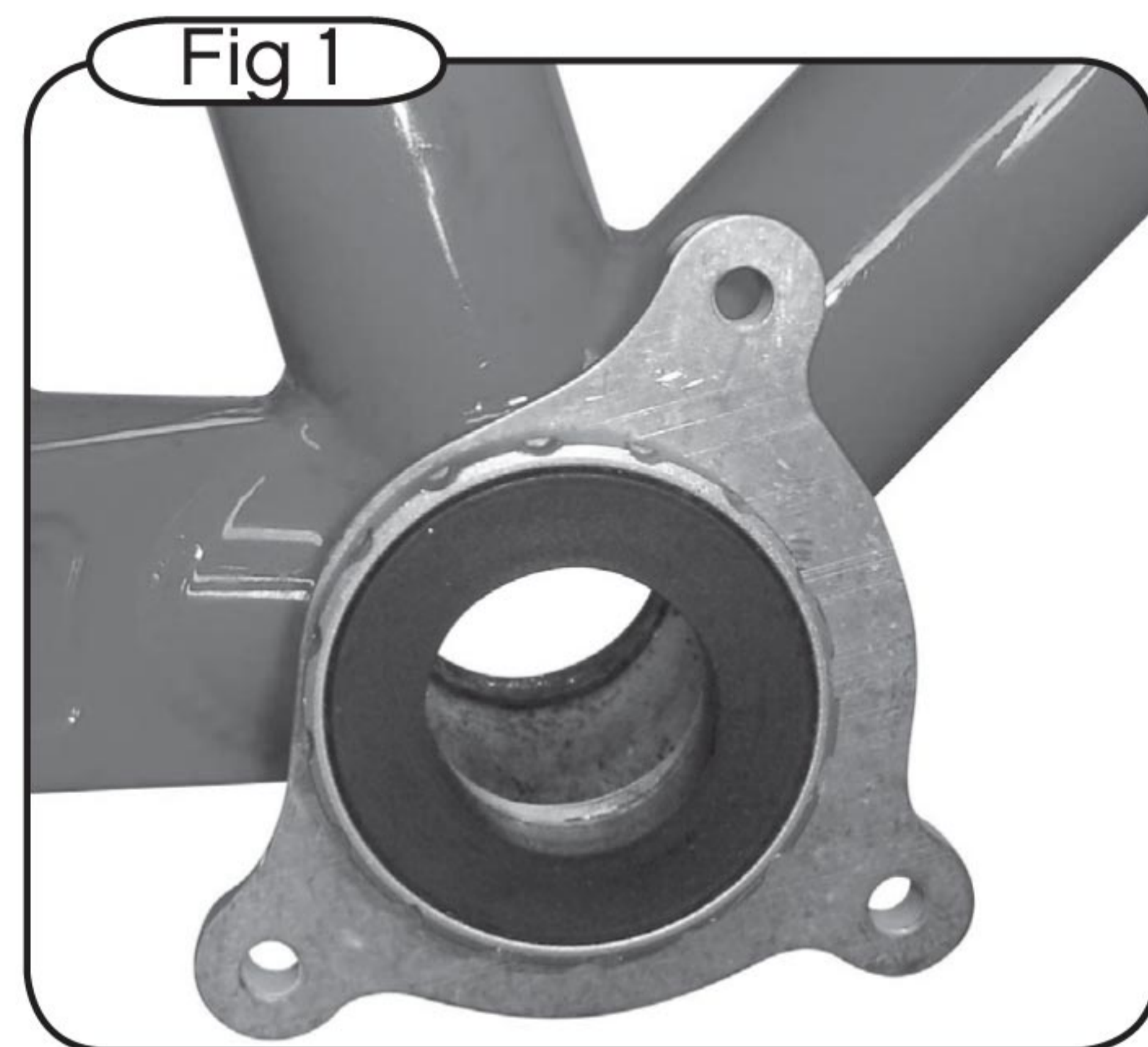
- A. (1) LS1 backplate (ISCG-05 version shown)
- B. (1) ISCG steel adapter plate (ISCG-05 only)
- C. (1) Parts tree (upper sliders, lower slider, outer slider)
- D. (1) Tech 2 sealed bearing idler
- E. (1) M4 x 14 mm cap screw
- F. (2) M4 x 20 mm cap screws
- G. (2) M5 x 25 mm cap screws
- H. (2) M4 nylon insert locking nuts
- I. (2) M5 nylon insert locking nuts
- J. (3) M6 x 8 mm button head cap screws
- K. (3) M6 x 12mm button head cap screws
- L. (6) M6 x 2.5 mm washers (black)
- M. (3) M6 x 1.25 mm washers (gold)



Snug bolts to **0.9 Nm** to keep plastics from moving freely. Over tightening will destroy the plastics!

1. Remove the crankset from your bike. Check your drivetrain components to be sure everything is undamaged and straight. Bent parts hinder performance!

2. If you are using the ISCG-05 version of the guide, the kit includes the ISCG-05 steel adapter plate. This plate can be installed in place of a 2.5mm bottom bracket spacer. **(Fig 1)** This method is used for frames with no ISCG tabs.



3. Remove the drive-side bottom bracket cup. Clear any grease from the BB cup threads. Apply grease to the threads inside your frame. Sandwich the ISCG steel adapter between the BB cup and the BB shell. **(Fig 2)** Typical BB spacer configurations with most 50mm chainline cranks (68/73mm) and 57.5mm cranks (83mm). Rotate the adapter plate so that the top tab is pointing in the 1 O'Clock position. Torque your BB cup to the recommended specification.

Fig 2

BB Shell Width	Typical Chainline	Left BB Cup	Right BB Cup
68mm	50mm	2.5mm spacer	ISCG-05 Adapter, 2.5mm spacer
73mm	50mm	no spacer	ISCG-05 Adapter only
83mm	57.5mm	no spacer	ISCG-05 Adapter only

4. With the guide assembled, install using the ISCG M6 button head cap screws into either the tabs on your frame, or the ISCG-05 steel adapter plate (**Fig 3**). Snug but do not tighten yet. You may need to add spacers to get correct alignment for the chainring. Most external bearing type cranksets are designed around a 50mm chainline and only need 0-1 black 2.5mm spacers. (**Fig 4**)

Fig 3



Fig 4

BB Shell Width	Chainline	Spindle Length (ISIS)	2.5mm Black Spacers Needed
68	47.5	113	-
68/73	50	113	-
68/73	52.5	118	1
68/73	55	123	2
68/73	57.5	128	3
83	57.5	128	1
83	60	133	2
100	63.5	140	0
100	65	145	1

5. Reinstall your cranks at this point. You will need to adjust or remove the top slider to clear your chainring. After tightening down your cranks, your chainring should be centered in the top guide (**Fig 5**). If it is not, add or remove black or gold spacers behind the backplate to fit. Adjust the upper and lower sliders. The upper slider should be 3mm from the top of the chain (**Fig 6**). The lower slider should be positioned so that a doubled over chain link can pass through (**Fig 7**). Torque the sliders to **0.9 Nm**. Rotate your guide so that the upper arm points to 12 O'Clock over the center of your BB spindle. Torque the three button head screws to **6 Nm**. Your guide should look like (**Fig 8**).

Fig 5



Fig 6

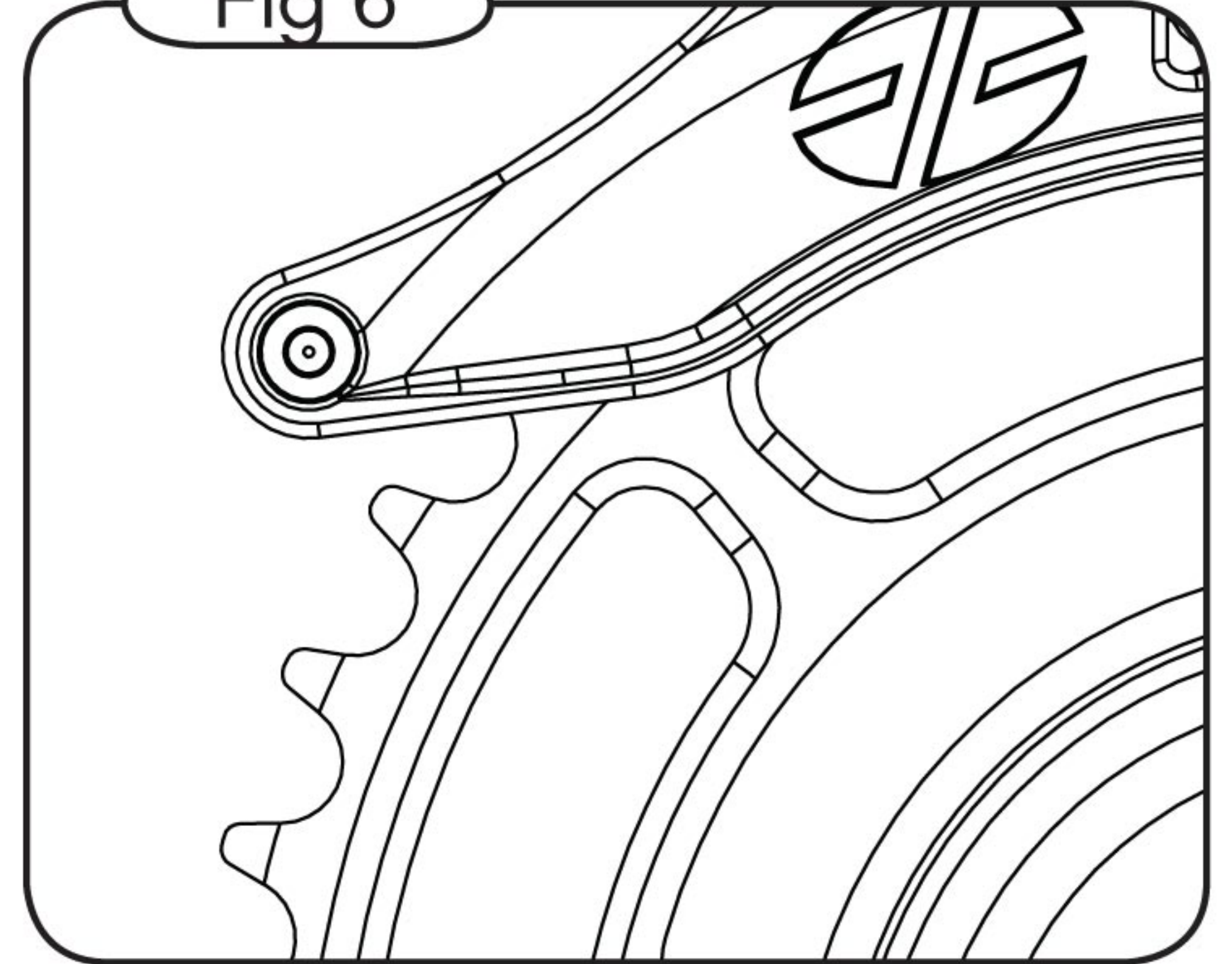


Fig 7

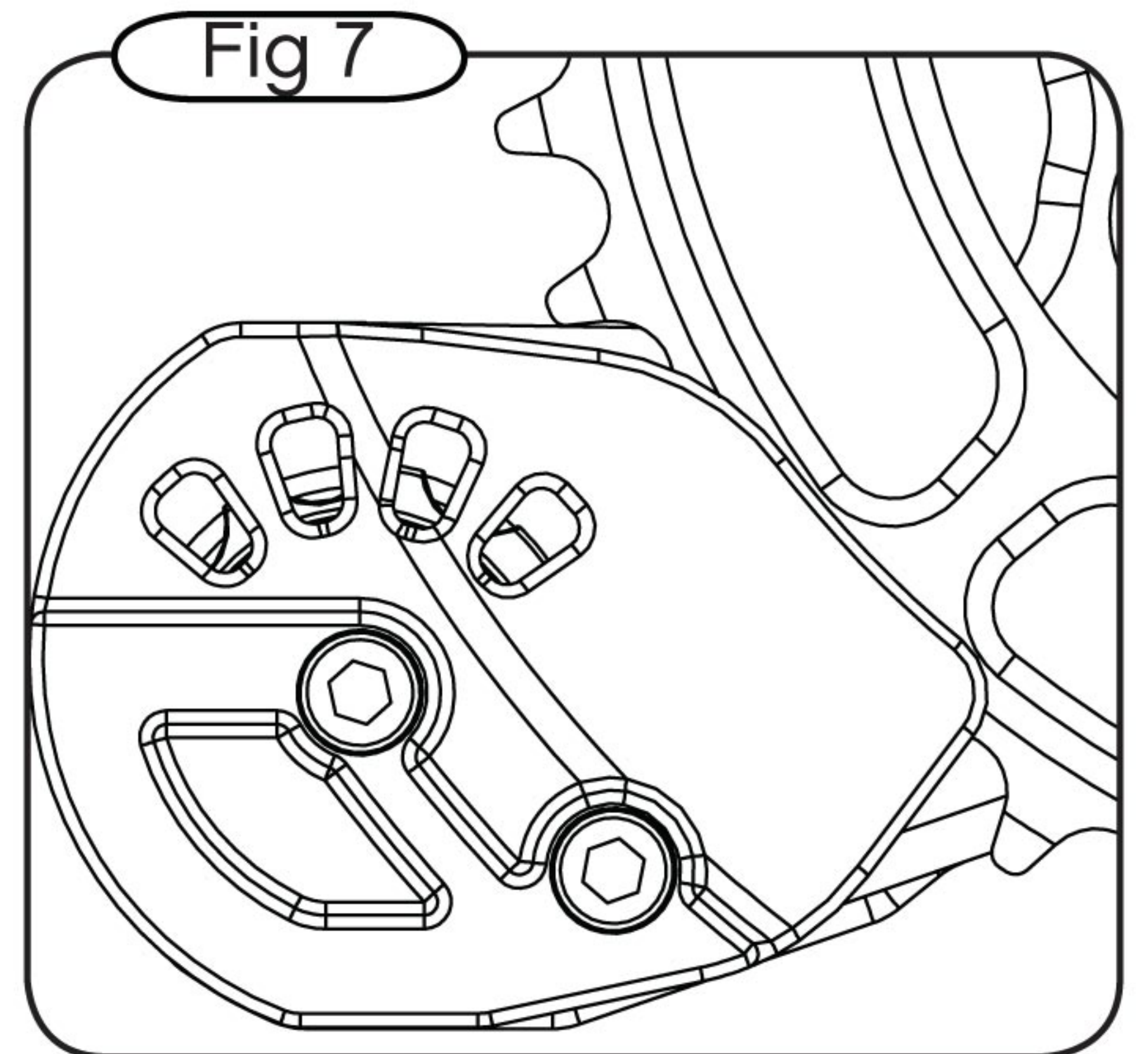
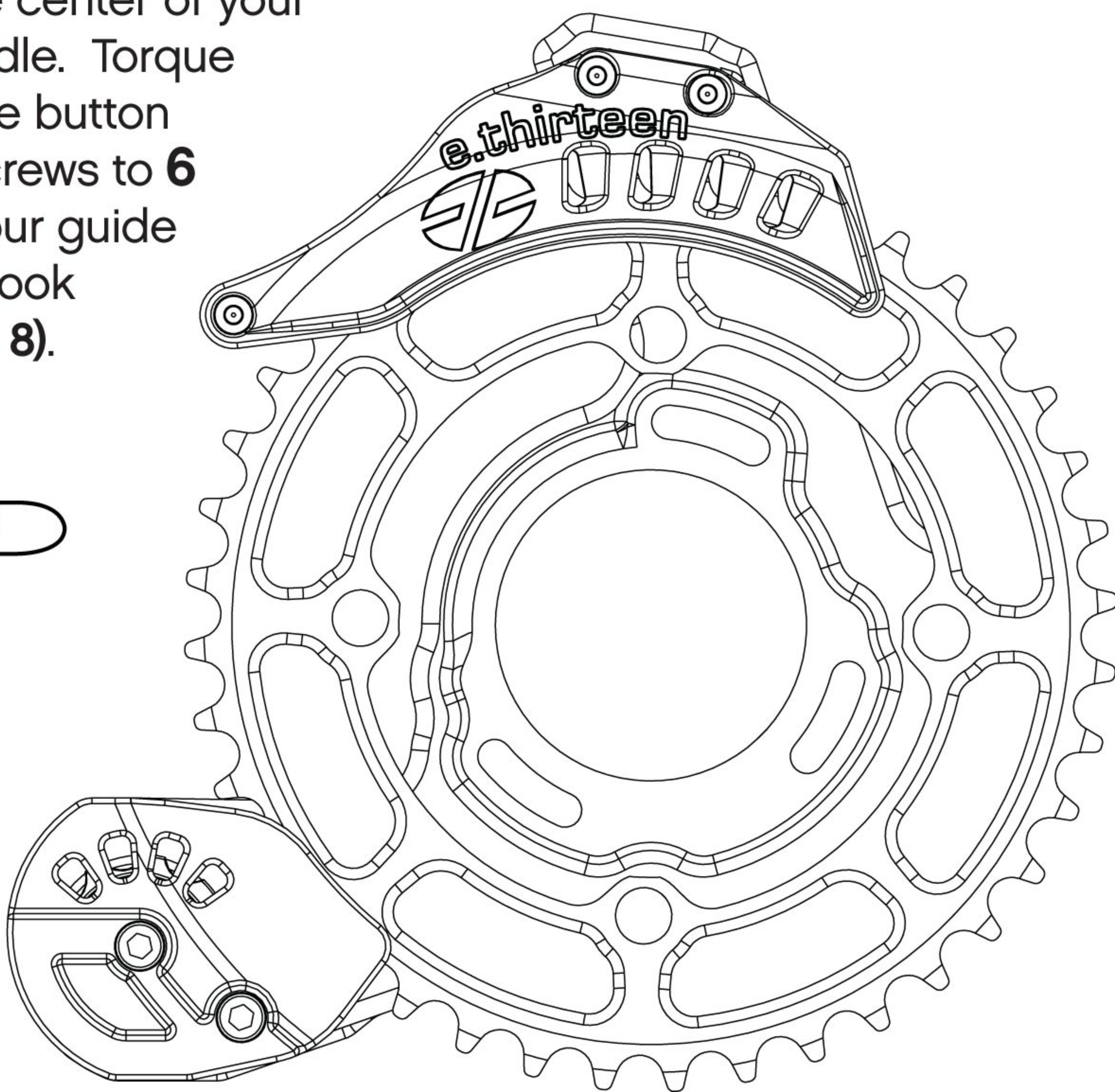


Fig 8



e*thirteen components



405 East D St. Ste.C
Petaluma, CA 94952
1.800.801.9936