

Compass Centerpull Brakes

Compatibility:

- ✦ Designed for tires up to 42 mm wide, with fenders.
- ✦ Without fenders, tires up to 55 mm wide can fit, but they won't clear the brake pads even with the straddle cable unhooked. You'll have to deflate your tires to remove them.
- ✦ Brazed-on pivots on fork blades and chainstays are required.
- ✦ Compatible with most brake levers:
 - ✦ Modern road bike levers.
 - ✦ Cantilever brake levers
 - ✦ Classic road bike levers
 - ✦ **Not compatible with V-brake levers.**

Important Safety Checks!

We want you to enjoy your brakes, rather than spend time in the hospital! Please perform these important safety checks.

Safety Check 1:

- ✦ Before every ride
- ✦ **Pull hard on both brake levers** to make sure your brakes work properly. It is easy to forget to hook up the straddle cable after removing a wheel. **Injury risk!**
- ✦ Make it a habit to check your brakes every time before you ride off!

Safety Check 2:

- ✦ **Every 500 km (300 miles)**
- ✦ As your brake pads wear, they will touch the rim further up. Eventually, they will extend beyond the top edge of the rim and touch the tire. This can cause a blowout. **Injury risk!**
- ✦ Every 500 km (300 miles), check that the brake pads are hitting the rim squarely. Pull hard on the brake lever. There should be at least 0.5 mm of rim showing beyond the top edge of the brake pad.
- ✦ Visually inspect the brake pad. If a ridge is appearing at the top of the pad (arrow in Fig. 2), then the pad extends beyond the top edge of the rim.
- ✦ If you hear a "jiii" noise when braking hard, your brake pad is touching your tire.
- ✦ Adjust the brake pad immediately if it touches the tire. Otherwise, it will cut through the tire, resulting in a blowout. **Injury risk!**

Safety Check 3

- ✦ **After replacing brake pads**
- ✦ Make sure the **open end of the pad holders faces toward the rear** of the bike (Fig. 1).
- ✦ If the open end faces the wrong way, the pads will be ejected from the holder during hard braking, and your brakes won't work any longer. **Injury risk!**

Warranty

Compass Bicycles Ltd. warrants the Compass centerpull brakes to be free from defects in materials or workmanship for 10 years, starting with the original date of purchase. For the full warranty policy, see www.compasscycle.com/warranty.html.

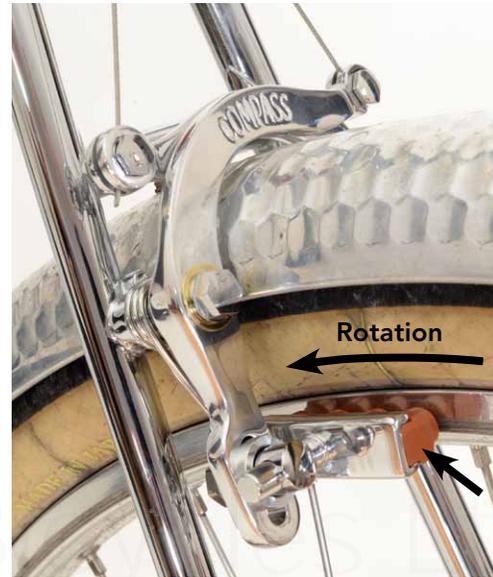
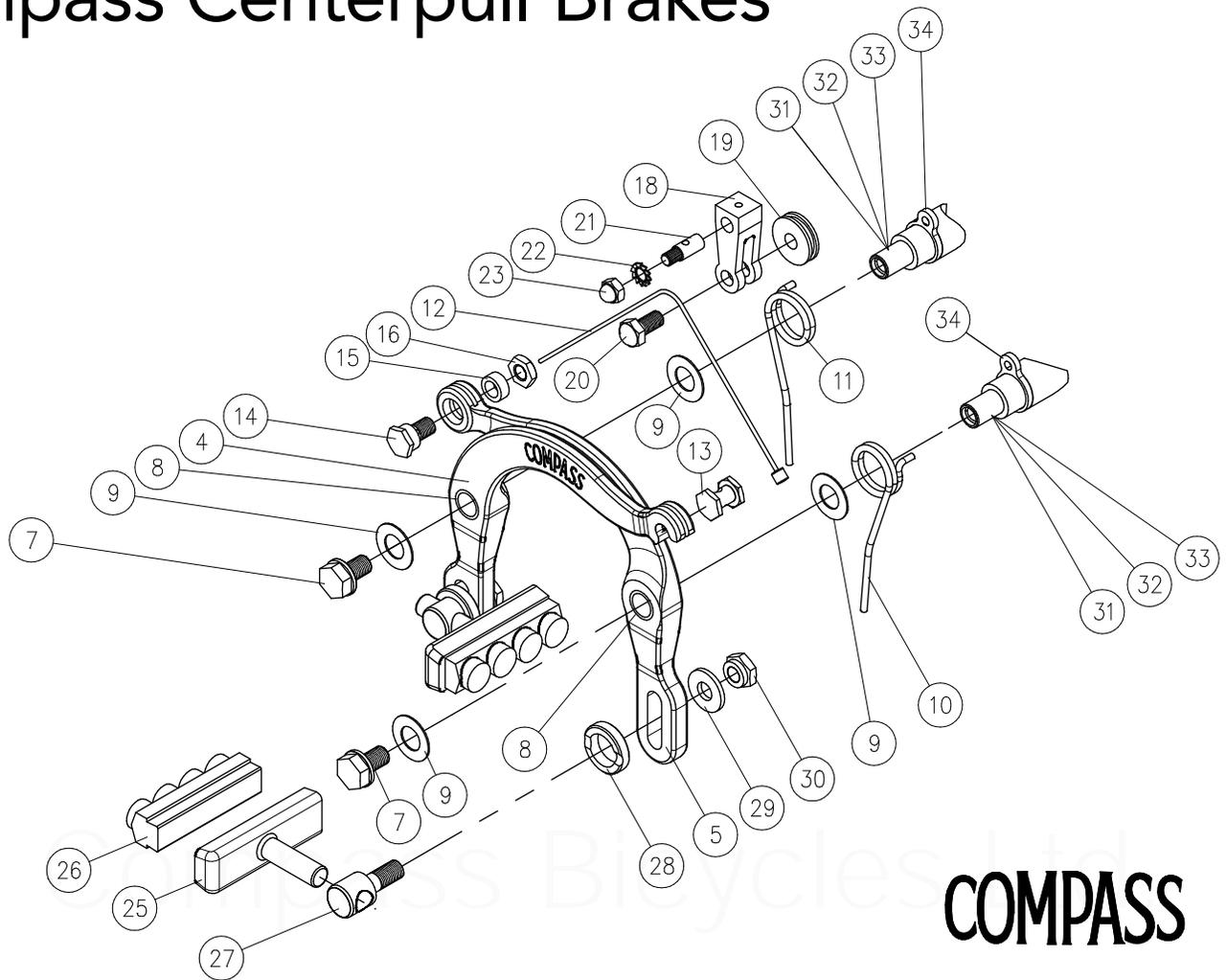


Fig. 1: Make sure the open end of the pad holders (arrow) faces toward the rear of the bike.



Fig. 2: If a ridge (arrow) appears on your brake pad, then it is not hitting the rim squarely. Adjust the brake pad immediately to prevent the tire from being cut.

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Installation

Tools Required:

A set of quality wrenches is a good investment. We recommend a set of open-end wrenches and a set of box wrenches.

To install your Compass centerpull brakes, you need:

- Box or open-end wrenches: 7 mm, 8 mm, 9 mm (2 wrenches), 10 mm
- Cable cutter

A. Brake Arms:

1. Slide the springs (10 and 11) onto the brake pivots.
2. Slide one brass washer (9) onto each pivot.
3. Slide the brake arms (4 and 5) onto the pivots.
4. Slide another brass washer (9) onto each pivot.
5. Attach the brake with a bolt (7), using a 10 mm wrench.
Torque to 8 Nm.

B. Brake Pads:

6. Loosen the brake shoe nuts (30), using a 10 mm wrench.
7. Make sure the springs are unhooked.
8. Set the brake pads to the correct height and orientation on the rim. Tighten the brake shoe nuts (30). Torque: 8 Nm.

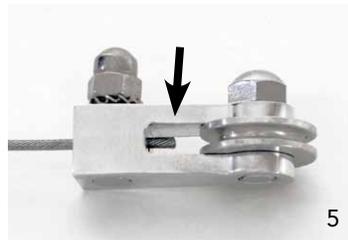
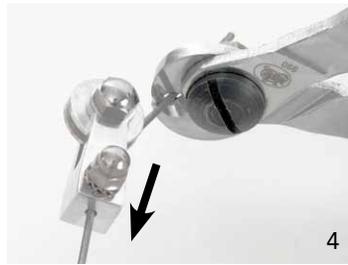
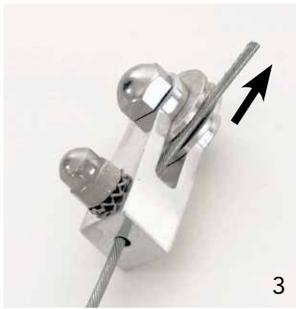
Hint: Set the pads close to the brake arms. This makes it easy to adjust for pad wear later (see below).

C. Brake Cable/Straddle Cable Hanger:

9. The straddle cable hanger (18-23) comes pre-assembled.
10. Remove the roller (19) by loosening its bolt (20) (8 mm wrench).
11. Line up the hole in the cable yoke (18) with the hole in the clamp bolt (21). Slide the brake cable through the holes.
12. Set the yoke to the desired height. Tighten the brake cable nut (23).
13. Reinstall the roller (19) and bolt (20). Flex the brake cable so it clears the roller (Fig. 3).
14. Set up the straddle cable (see D below).

D. Straddle Cable:

15. Slide the cable barbell (13) onto the straddle cable (12).
The recessed hole should be oriented to accommodate the thick end of the straddle cable.
16. Slide the straddle cable through the cable yoke.
17. Slide the straddle cable through the hole in the straddle cable bolt (14).
18. Hook the straddle cable barbell (13) into the end of the brake arm (4).
19. Set the straddle cable to the desired height. Tighten the straddle cable bolt (14) and straddle cable nut (16) (9 mm wrenches). Torque: 8 Nm.



3. Push out the cable.
4. Cut the cable, then push it back into the yoke.
5. The cable must protrude inside the yoke.

E. Complete Brake Cable Attachment:

20. Unhook the straddle cable barbell (13) from the brake arm (4).
21. Shorten the brake cable: Open the brake cable nut (23) on the straddle cable yoke. Push the brake cable a little further through the straddle cable yoke (18) (Fig. 3). Cut off the excess cable (Fig. 4). Pull the cable back into the straddle cable yoke.
22. Tighten the brake cable nut (23) (7 mm wrench).
Torque: 5 Nm.

Warning! The brake cable must protrude slightly from the hole on the inside of the straddle cable yoke (18) (see Fig. 5). Otherwise, it may not be clamped properly, and could come loose when braking hard! **Injury risk!**

23. Cut off the excess straddle cable where it protrudes from the brake arm (5).
24. Hook the springs over the brake shoe nuts (30). Hook the straddle cable barbell (13) into the end of the brake arm (4). Now your brake is ready to use.

F. Straddle Cable Roller:

The bolt hole for the roller in the straddle cable yoke (18) is threaded on one side only. By reversing the yoke, you have a choice of two settings:

- Threads facing head of screw (20): Straddle cable roller (19) rotates freely to equalize brake power.
- Threads facing end of screw (20): Straddle cable roller (19) is locked. This allows you to set the straddle cable position, and can be useful if one brake pad tends to rub on the rim.

Maintenance

- Use a car wax to protect the polished finish of your brakes and bolts.
- Brake arms are made from corrosion-resistant 6066 aluminum and not anodized. They can be re-polished if the finish gets dull, using a metal polish like Simichrome.
- Hardware and springs made from CrMo steel. Chrome-plating protects the parts from corrosion. Wax offers further protection and maintains the shine longer.
- Periodically check that the bolts of your brakes remain tight.

Adjustment for Pad Wear

- We recommend setting the new pads so they are close to the brake arms.
- When the pads wear, loosen the brake pad nut (30) (10 mm wrench) and push the pad holder (25) closer to the rim.
- That way, there is no need to adjust the brake or straddle cables as the pads wear.
- Make sure the pads do not touch the tire (see **Safety Check 2**).
- Tighten the brake shoe nuts (30). Torque: 8 Nm.

Pad Replacement

- Remove the old pads: Insert a screwdriver between pad and holder on the “open” end of the holder. Leverage the pad out of the holder.
- Install new pads: Push the pads into the holder by hand. If necessary, use a vise to push the pads all the way into the holder. Place a piece of wood between vise jaw and pad holder to protect the polished surface.
- If you have removed the brake shoe nuts, make sure you install them with the recessed section toward the brake arm. This creates a groove into which the springs fit.
- The following pads fit: Kool-Stop Mafac Replacement Pads (supplied); Campagnolo brake pads for 1999 model year.

Rack Mounting

The Compass CP1 rack is designed for use with Compass centerpull brakes.

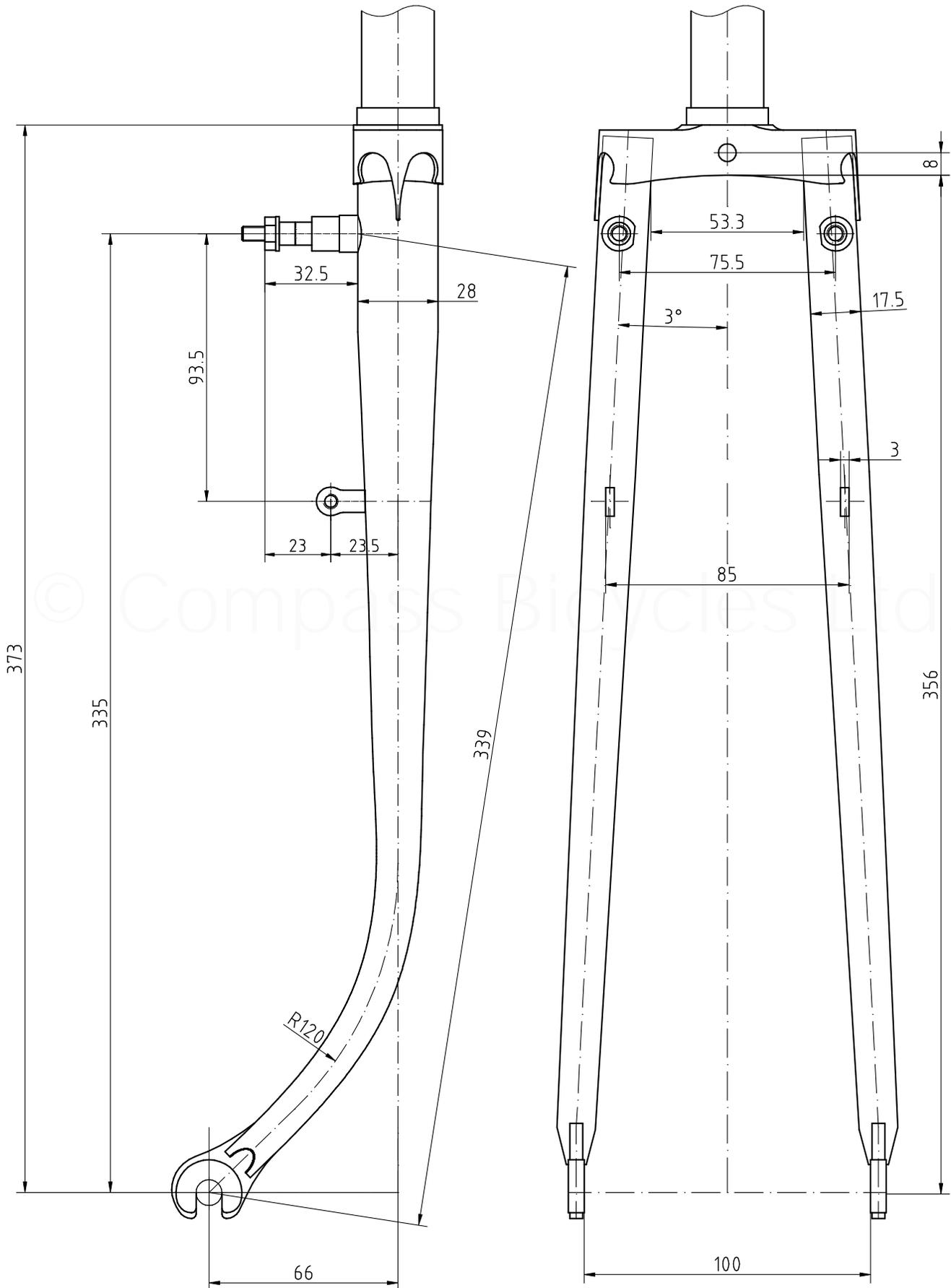
1. Remove the mounting bolts (7) from the centerpull arms and replace them with the special bolts that have a forward extension for mounting the rack (10 mm wrench).
2. Slide the rack onto the forward extensions of the bolts.
3. Attach the diagonal rack supports to their braze-ons on the fork. Use the M5 screws and lockwashers (8 mm wrench).
4. Attach the domed nuts to the forward extensions of the brake mounting bolts (8 mm wrench).

Mounting a Light on the Rack

The Compass CP1 rack is designed for use with modern European headlights (Schmidt Edelux, Busch & Müller IQ Cyo, etc.).

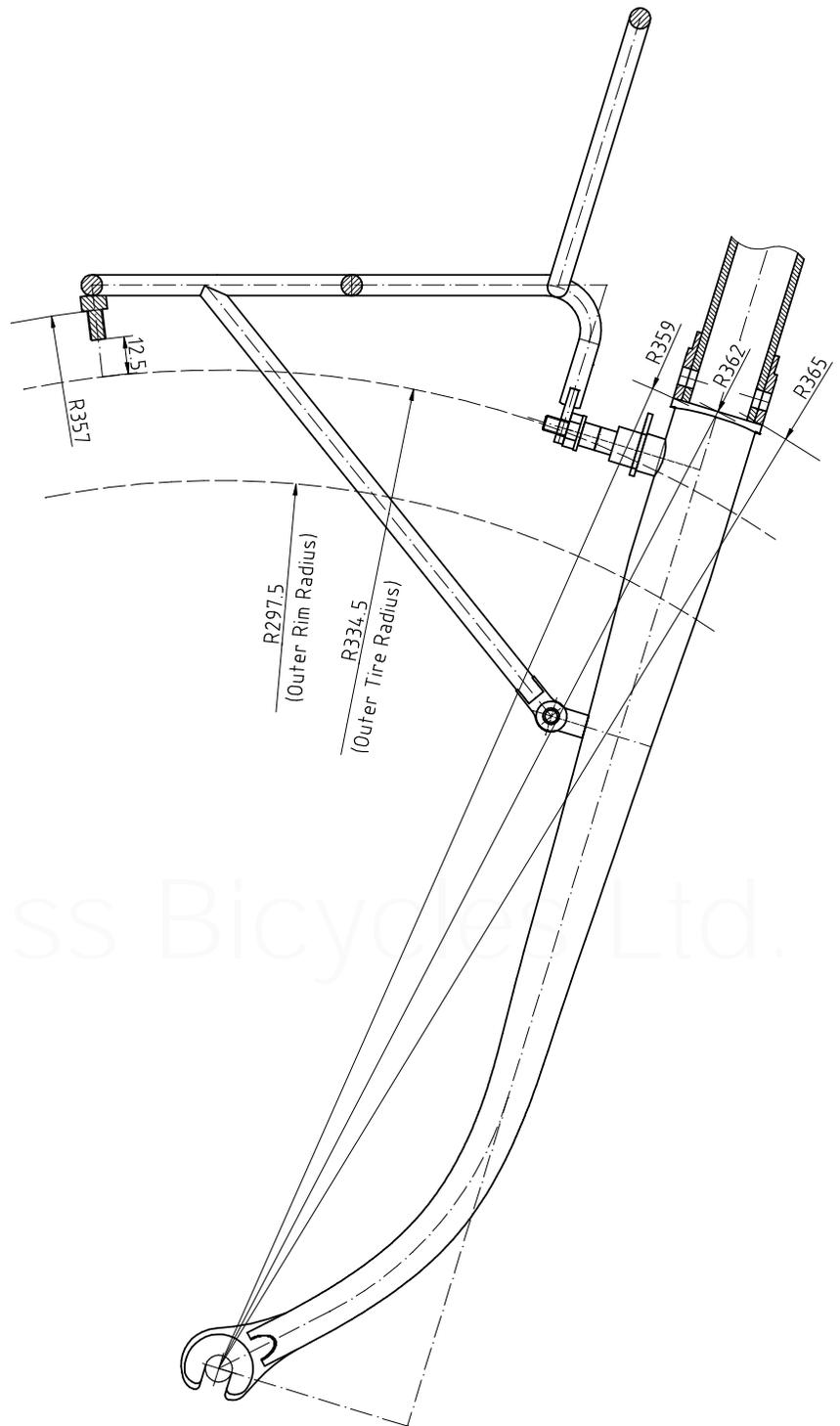
- If you prefer a completely solid connection, simply bolt the light to the rack with the supplied bolt.
- If you prefer to adjust the angle of your light without tools, tighten the bolt so that the light still can be moved. Then use the supplied locknut on the other side of the rack mount to lock in the adjustment. This prevents the light mounting bolt from coming loose as you adjust the angle of the headlight.
- Use the included 10 mm spacer to move the light outward, so that the front wheel does not cast a shadow into your path as you turn right.

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Specifications for framebuilders:

- ✦ The Compass centerpull brakes and the Compass CP1 rack are designed for 42 mm-wide tires and fenders with sufficient clearances.
- ✦ The following measurements are for 650B x 42 mm wheels (669 mm outer diameter).
- ✦ The braze-ons should be located 335 mm from the rear axle. On the front brake, you need to compensate for the fork offset. With a fork offset of 66 mm, the resulting measurement from dropout to braze-on location on the fork blade is 339 mm (see drawing).
- ✦ The placement of the brake bosses not only determines where the brake pads hit the rim, but also how high the rack sits above the front tire. The fender mount underneath the rack works only if the rack is positioned properly.
- ✦ If less clearance is desired (for example, when using narrower tires), the bosses can be moved downward a bit. Make sure the pads still hit the rim properly.
- ✦ The measurements in the drawings above are for 650B wheels, but brakes and rack will work with any size wheel (700C, 26", etc.). Adjust the axle-to-brake pivot distance according to your wheel size.
- ✦ The length of the fork blades determines the clearance under the fork crown. Make sure the clearance under the fork crown is the same as that under the front rack.
- ✦ The rack tabs for the fork blades must be threaded (M5).



Braze-on bosses:

- ✦ The Compass centerpull brake bosses come in three models:
 - Front** (pre-mitered for Kaisei "Toei Special" fork blades)
 - Rear** (pre-mitered 3 mm off-center)
 - Universal** (un-mitered)
- ✦ Place the spring holder rings on the bosses so that the hole is directly above the center of the boss.
- ✦ If more or less spring tension is desired, the spring holder rings can be rotated slightly.
- ✦ Make sure the orientation of both spring holder rings is exactly the same.
- ✦ Braze the pivots and spring holders onto the fork blades in one step.