Brake Booster Brackets and Pushrod Lengths

BPW Axles offers a variety of brake booster mounting positions to accommodate the multitude of trailer designs, which may require brake boosters to be fitted in a non-standard layout due to space constraints. Some require the brake booster’s standard pushrod length of 227 mm to be shortened.

The correct pushrod length is critical to the functioning of the braking system. Together with the slack adjuster, the pushrod length ensures that when the brakes are applied the angle between the pushrod and the slack adjuster is about 90° (Figure 1), thus the maximum torque is applied to the brakes. If the pushrod is too long, the angle will increase above 90°, greatly reducing the effectiveness of the braking action, exhausting the effective stroke and reducing brake efficiency.

Figure 1: Correct Angle between Pushrod and Slack Adjuster

To cut the pushrod:
1. Make sure the brake booster is in the FULLY RETRACTED position.
2. Measure the length from the base of the brake booster to the centre of the clevis pin.
3. Cut the pushrod so that there is a minimum clearance of 40 mm between it and the clevis pin, as shown in Figure 4.

Table 1 gives the tightening torques required to correctly mount the brake booster:

<table>
<thead>
<tr>
<th></th>
<th>Torque</th>
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<tbody>
<tr>
<td>Brake Booster Mounting Nut</td>
<td>210 Nm</td>
</tr>
<tr>
<td>Clevis Nut</td>
<td>80 Nm</td>
</tr>
</tbody>
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Please Note: BPW brake boosters DO NOT require the fitment of any washer (spring or flat) under the nut!

DO NOT ATTEMPT TO DISSAGEMBLE THE BRAKE BOOSTER – DANGER OF FATAL INJURY!

BPW’s brake booster bracket layouts and corresponding pushrod lengths are shown on the next page.
BPW Brake Booster Brackets and Pushrod Lengths

120 Square Hollow Axles with SN 3020 Brakes (NH)
- Type = Ü, L = 170
- Type = N, L = 227
- Type = H, L = 155

120 Square Hollow Axles with SN 3620 Brakes (KH)
- Type = N, L = 227
- Type = Ü, L = 180

120 Square Hollow Axles with SN 4218 Brakes (H)
- Type = N, L = 227
- Type = R, L = 227
- Type = F, L = 110
- Type = U, L = 190

150 Square Hollow Axles with SN 4220 Brakes (H)
- Type = F, L = 110
- Type = N, L = 227

120 Square Hollow Steering Axles with SN 4218 Brakes (H...LL)
- L = 195