

Updated Pivot Bolt Installation Requirement

Introduction

BPW Axles introduced the Airlight 2 HD suspension in 2018 as a replacement for the SL suspension. One difference in these suspensions is the axle tracking method. The Airlight 2 design is an adjustable pivot bolt assembly, which has been in use on the Airlight 2 suspensions since 2002. Due to deteriorating road conditions in South Africa, BPW is implementing additional measures to improve the robustness of the assembly.

Pivot Bolt Assembly

Axle tracking is an important procedure that is used to ensure even wear on tyres and to maximise operational life and reduce operating costs associated with tyre wear. Axle tracking on trailers is typically done either using tracking plates or using adjusting plates located at the hanger brackets.

Tracking plates are used with fixed hanger brackets while adjusting plates are used with adjustable hanger brackets. The difference in the pivot bolt assemblies for fixed and adjustable hanger bracket are shown in Figure 1.

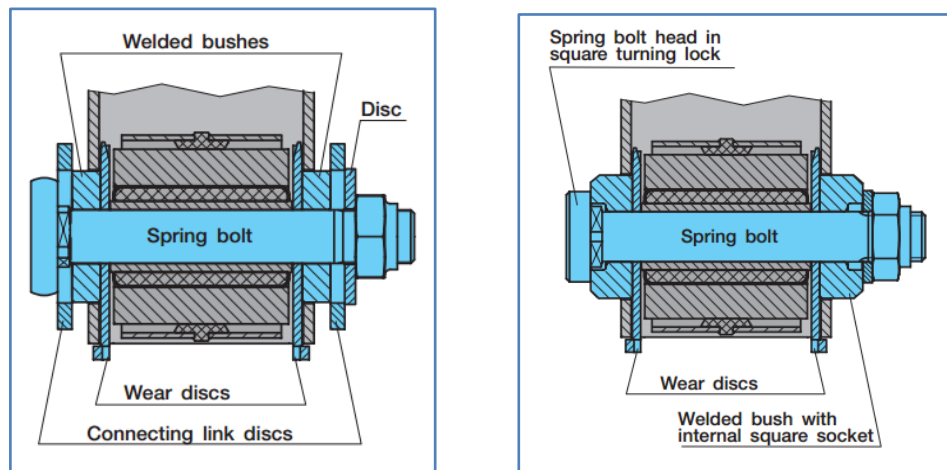


Figure 1: Adjustable hanger bracket pivot bolt assembly (Left) and Fixed hanger bracket pivot bolt assembly (Right)

Axle tracking is quicker and easier when using the adjustable hanger brackets compared to fixed hanger bracket and tracking plates, which have to be welded to the axle spring pads after adjustment as shown in Figure 2.

TECHNICAL BULLETIN

we think transport

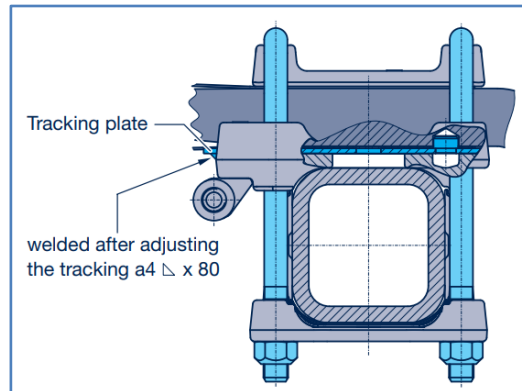


Figure 2: Illustration of the position of the tracking plate on the axle assembly

Adjusting the axle tracking on the adjustable hanger brackets is simply done by knocking the sliding plates either up or down as shown in Figure 3. Important: The inner and outer plates need to be adjusted to the same height.

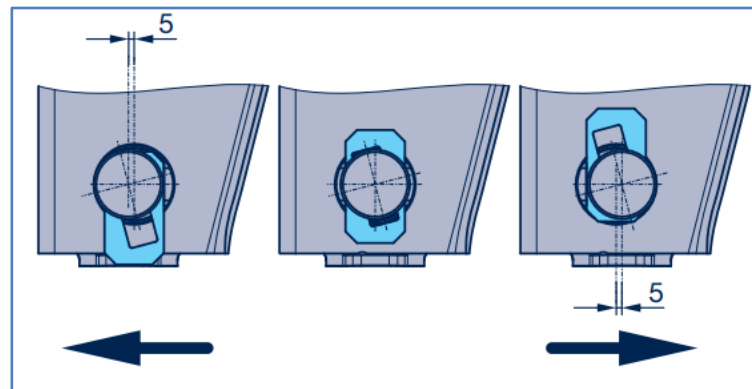


Figure 3: Axle tracking performed with sliding plates on adjustable hanger brackets

New Installation Requirement

After the axle tracking has been completed it is important to tighten the pivot bolt nut to the correct torque ($M = 650$ Nm for M24 bolts) at the correct ride height.

TACK-WELDING

BPW requires that all the adjusting plates be tack-welded as shown in Figure 4. This is valid for both on-road and off-road vehicle operations.

TECHNICAL BULLETIN

we think transport



TB42-0822

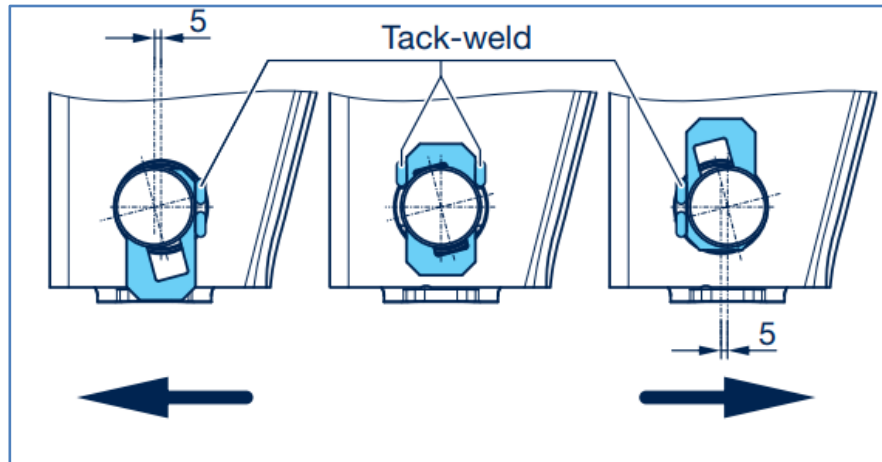


Figure 4: Illustration of tack welds on adjusting plates

As per normal maintenance instruction, it is also critical that all nuts be checked and retorqued after the first loaded operation. There after as prescribed in the service manual.

For any further information regarding the installation of BPW air suspension, please see the BPW EA Airlight II / SL 37571901e installation manual. All Installation and Workshop Manuals can be downloaded from the BPW Axles website: <https://bpw.co.za/support-services>