

WORK INSTRUCTION

Fitment of AL-KO Outback springs to chassis

STEP 1 Spring hangers are welded to the main chassis rails of the trailer. Each manufacturer needs to determine the axle position(s) prior to welding the hangers. AL-KO provides nominal dimensions for the spring and axle positions.



Figure 1

STEP 2 Welding the hanger pieces square to one another is essential. Figure 1 shows a jig that is used to replicate the spring for high volume production. Pins are chained to the jig and fit in the hangers to replicate the shackle pins, as shown in figure 2. An actual spring set may be used in the same way. AL-KO recommends tack welding all hangers first before fully welding.



Figure 2



Figure 3

STEP 3 Assemble the spring onto the front hanger using the pin and nyloc nut. The spring is required to rotate about the pin. Over tightening will cause a friction lock between the spring hanger and the spring eye, rendering the spring inoperable.

AL-KO recommends maintaining a 0.5mm gap between the spring eye and the hanger (see figure 4a and 4b). Use a feeler gauge to set this gap.

*NB: Because the nut is theoretically not tight, no torque setting can be established.

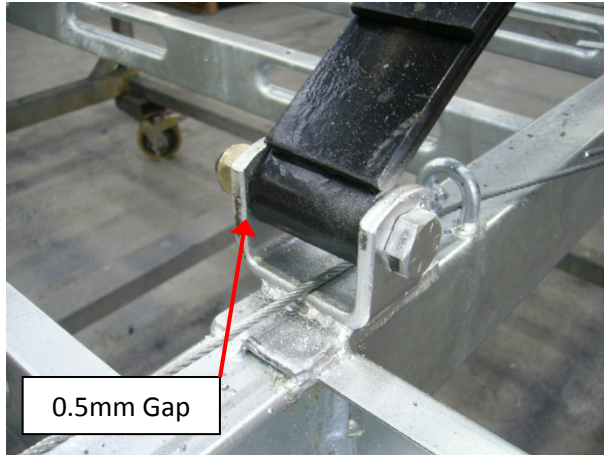


Figure 4a

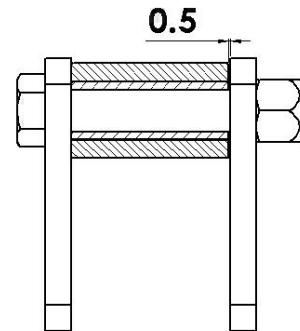


Figure 4b

STEP 4 Assemble the rear shackle into the rear hanger and rear spring eye simultaneously as shown in figure 5. The same articulation about these pins is also required and thus a 0.5mm gap as per figure 4a and 4b should be maintained and secured with nyloc nuts.

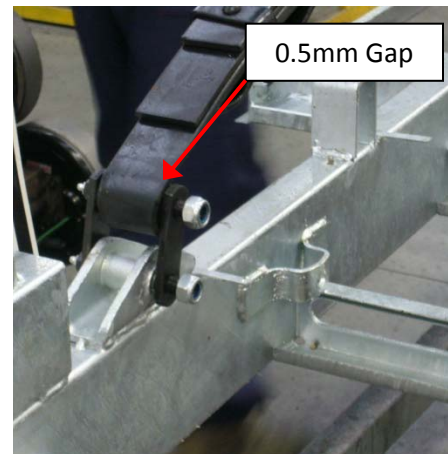


Figure 5

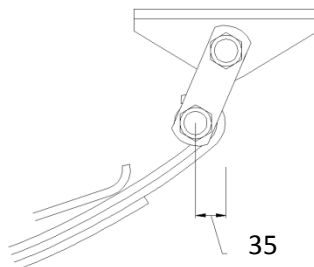


Figure 6

For optimum performance of the outback spring the shackle offset required is 35mm (figure 6) toward the axle. Too far either side of this measurement may affect spring rate.

STEP 5 The spring assembly is now complete and ready for axle fitment.



Figure 7