

Trailer Couplings and Tow-eyes– Wear limits

Introduction

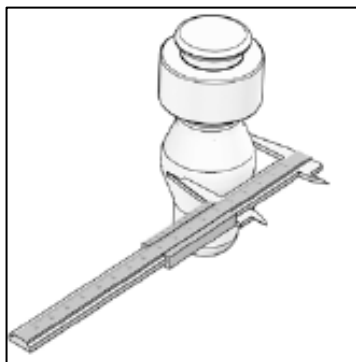
The components used to couple vehicles and trailers are exposed to very high stress, even during normal use. Regular service and maintenance are a prerequisite if the coupling is to function well for the duration of its service life. Daily inspection or safety checks must always be completed to ensure that the wear limits have not been exceeded or that the functioning of the product has not been impaired.

The wear limit of the coupling and tow-eye needs to be inspected on a monthly basis to prevent possible play between the vehicle and trailer as constant jolting between vehicle and trailer can occur.

Wear limits of the Coupling and Tow-eye

The following wear checks need to be done once a month:

1. Table 1 shows the minimum thickness of the coupling bolt, using a Vernier calliper measure the coupling bolt at the thickest part. If the measured value is lower than the values given in Table 1 the coupling bolt needs to be replaced.



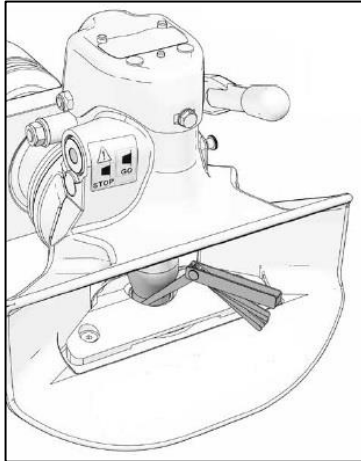
40 mm coupling \geq 36.5 mm

50 mm coupling \geq 47 mm

57 mm coupling \geq 55 mm

Table 1

2. The clearance between wear plate and coupling bolt needs to be measured using a feeler gauge. Table 2 gives allowable maximum clearance.



40 mm coupling ≤ 2.5 mm

50 mm coupling ≤ 2.5 mm

57 mm coupling ≤ 2.5 mm

Table 2

3. The wear limit of the two types of wear plate is shown in Figure 1. Using a depth gauge measure the wear of the wear plate. If the measured value is either less than 1 mm or greater than 4 mm the wear plate needs to be replaced.

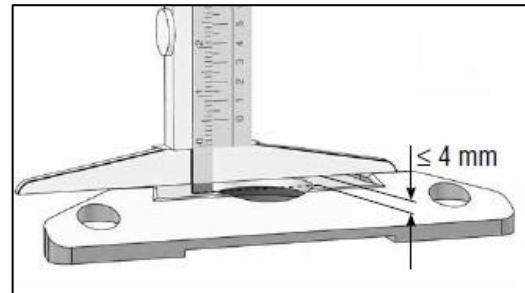
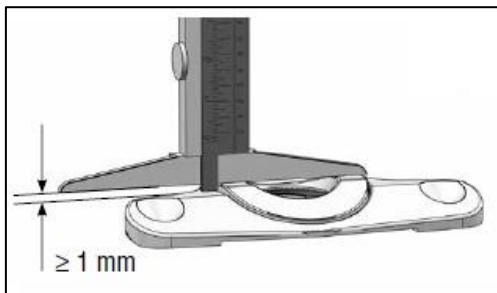
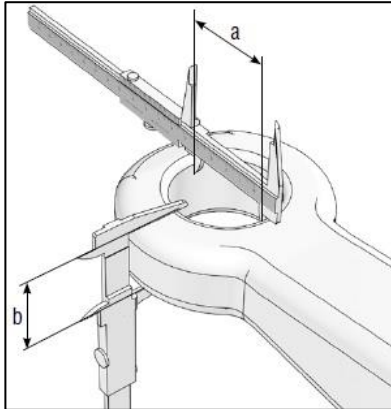


Figure 1

4. Measure the internal diameter and thickness of the tow-eye using a Vernier calliper. If the measured values “a”, of the internal diameter, are greater than the values given in Table 3, the tow-eye bush needs to be replaced. If, however, the measured thickness values “b”, are less then the values given in Table 3 the tow-eye needs to be replaced.



a	b
40 mm Tow-eye \leq 42 mm	40 mm Tow-eye \geq 28 mm
50 mm Tow-eye \leq 52 mm	50 mm Tow-eye \geq 42.5 mm
57 mm Tow-eye \leq 59.5 mm	57 mm Tow-eye \geq 19 mm

Table 3

Conclusion

Basic safety checks, such as inspecting for wear on the coupling and tow-eye, should be carried out on a regular basis. This will ensure the safe operation of the vehicle and safety on the road. VBG and RINGFEDER couplings are well-known for their high quality, high reliability, and long service life with low maintenance costs. They offer you peace of mind, year in and year out when the correct services and safety checks are carried out.