

Riley Stub Axles, Swivel Pins and Bushes

This note documents the RRSL understanding of these components and their combinations largely based on information contained in the part books. If you have feedback re the content, please email any of the RRSL Directors or contact the Stores.

Car & model	source	Stub axle	Swivel pin	Upper bush	Lower bush	Notes on swivel pins and bushes
9hp Mk 1-3	Mk 1-4 parts book	8FA6	8FA 22 Stepped swivel pin $\frac{3}{4}$ " to 1"	8FA19	8FA20	Repair kit comprising swivel pin, bushes, shims, wear cup and new ball available
9hp Mk 4 - 7	Mk 1-4 & Mk 5 – 7 parts book	A2101	A2110 $\frac{7}{8}$ " swivel pin	A2111	A2112	Universal $\frac{7}{8}$ " stub axle available. Swivel pin, bushes and thrust washer available
Later non Merlin 9hp	1933 – 35 parts book	A2233	A2246 $\frac{7}{8}$ " swivel pin	A2111	A2112	Universal $\frac{7}{8}$ " stub axle available. Swivel pin, bushes and thrust washer available
Merlin	Merlin	A2409 A2410	A2414 $\frac{3}{4}$ " swivel pin	A2413	A2411	Swivel pin and bushes and thrust washer available
6 cylinder except Stelvio & Winchester	6 cylinder parts book	A2101	A2110 $\frac{7}{8}$ " swivel pin	A2111	A2112	Universal $\frac{7}{8}$ " stub axle available. Swivel pin and bushes available
6 cylinder Stelvio & Winchester Only	6 cylinder parts book	A2152	A2205 1" swivel pin	A2007	A2006	Not available
12/4	Parts book	A2394	Original A2398 (LH) and A2397 (RH)	A2111	A2249	Universal $\frac{7}{8}$ " stub axle available. Swivel pin, bushes and thrust washer available
Big 4	No part details		1" swivel pin			Investigating what is required.

A2112 and A2249 Lower Bushes

The bottom bushes A2112 and A2249 are now combined into a single design.

It is likely that some proportion of cars being repaired have had stub axles swapped from other models in the past. To ensure we cover most eventualities the bottom bushes A2112 and A2249 have been combined into a single design. When comparing this new bush with removed components there are some differences you will note: -

- The underside of the flange has now been relieved with a chamfer on the side facing the kingpin. This is to allow a common bush to be used for both original and RRSL replacement stub axles that have larger fillet radii to reduce the stresses.
- A small circumferential relief has been added at the junction between the flange and main body of the bush. This is to ensure that the bushes sit down firmly on the flange when pressed into the boss.

If your stub axle has a grease nipple in the lower boss just above the steering arm and you wish to continue to use that lubricant point you will need to drill a hole in the bush once it is fitted into the stub axle. This lower grease point will be more effective if you line up the figure of eight grooves machined inside the bush with the tapping on the outside of the bush so the lubricant goes into the groove rather than in at a point where the bush is plain.

This bush alignment is best done by working out how far down from the top of the bush the hole needs to be.

- First measure the distance from the top surface of the lower boss on the stub axle to the centreline of the lubricant hole. On most stub axle's this is around ¼". To this dimension add the thickness of the new bush flange giving typically a dimension of around 3/8".
- Then use this new dimension to locate the point in the bore of the bush where the figure-of-eight groove is the same distance down from the top of the flange. Mark this point on the top or outer edge of the flange with say a marker pen.
- When locating the bush prior to pushing home orientate this mark towards the lubricant tapping. Please refer to the attached picture to help illustrate the process.
- After fitting the bush and before fitting the king pin drill a hole through new bush using the existing tapped hole in the stub axle as a guide. Obviously, select a drill size that will not damage the thread for the greaser in the stub axle. Note this is best done before reaming the bush and obviously only needs to break through into the bush.

