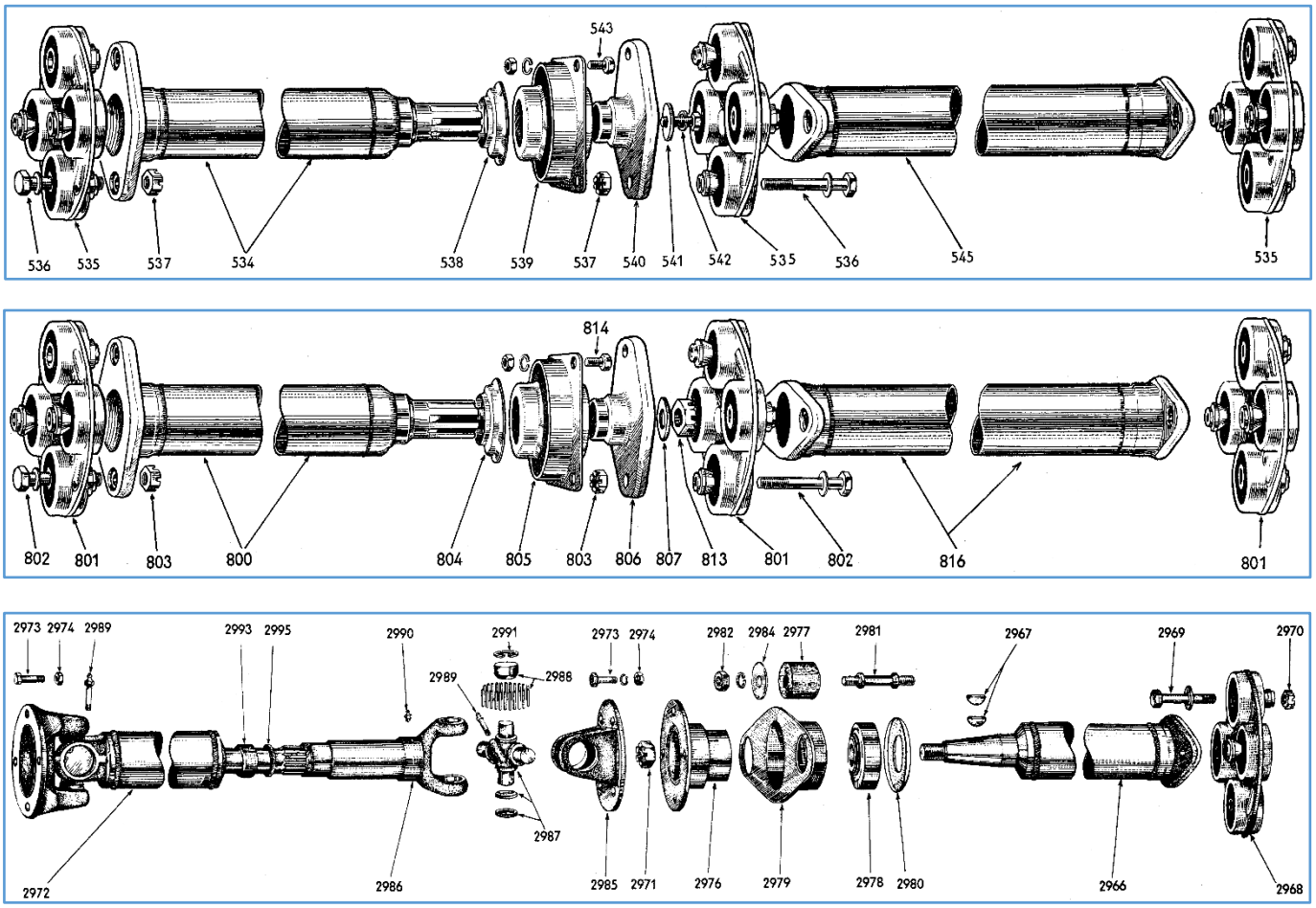
TECHNICAL NOTES SERIES

JOWETT JAVELIN – PA, PB, PC, PD & PE
JOWETT JUPITER – SA, SC



Top: Jowett Javelin PA and PB Models; Middle: Jowett Javelin PC, PD and PE Models; Lower, Jowett Jupiter SA and SC Models. Note that the Jupiter mid-ship bearing assembly is different. However, that version can also be converted.

PART XXIX – MIDSHIP BEARING CONVERSION

THIS DOCUMENT HAS BEEN PREPARED SOLELY FOR PROVIDING TECHNICAL ADVICE

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Compiled by Mike Allfrey – January, 2007.
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MIDSHIP BEARING CONVERSION KIT

Introduction

A number of years ago the genuine midship bearing assembly (AS50918) became impossible to obtain. The Jowett Car Club of Australia designed and developed a suitable conversion which is easily fitted by the car's owner. The conversion kit consists of the following individual components:

Part Number	Description	Qty In Kit
JK-50919	Aluminium Housing	1
JK-50918	Bearing (RLS-8)	1
JK-50924	Circlip (1300-57)	2
JK-50923	Seal (P3196)	2
JK-50917	Rubber Mounting	4
JK-50920	Nuts (8 mm)	8

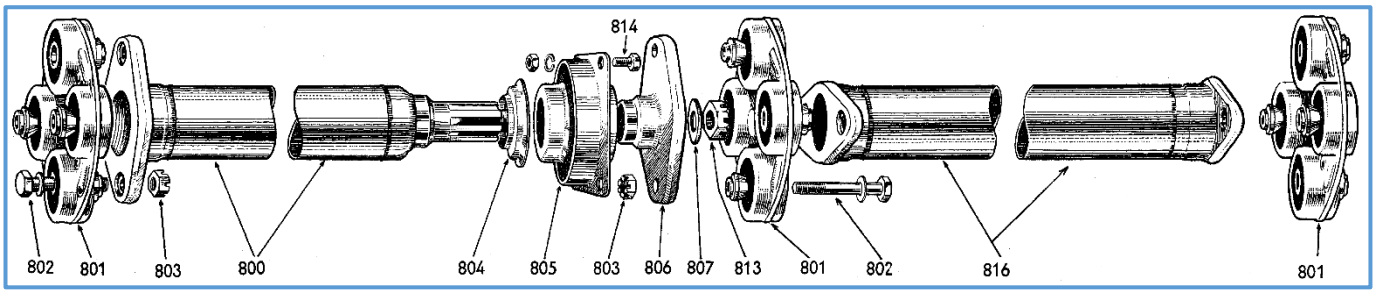
Kit Installation (Javelin)

In the illustration below, the rear of the vehicle is at the right hand side (i.e. Item 816 is the rear propeller shaft).

Note: Item and part numbers are shown in brackets after the description.

1. Park the car on a firm level surface.
2. Jack up the car and place suitable chassis stands to provide a suitable safe working height. If only two chassis stands are used, chock the front wheels and jack up the rear of the car so that the rear wheels are off the floor.

   DANGER! DO NOT WORK UNDER VEHICLE SUPPORTED ONLY WITH A JACK.
3. Release the handbrake, have gear shift in neutral.
4. Mark each component of the propeller shaft, with a white marker pen, so that shaft can be reassembled in correct alignment to maintain balance of the assembly.



Above: Jowett Javelin midship bearing assembly.

5. Remove the centre Layrub coupling (Item 801, P/N 50916). Place a support stand under the rear section of the propeller shaft (Item 816, P/N 54106) to prevent damage to the rear Layrub coupling. Gently tie the shaft to one side for better access.
6. Remove the four bolts (Item 814, P/N FS105/4) that secure the midship bearing to the cross-chassis support channel (not illustrated P/N 52324).
7. Detach the front Layrub coupling at the gearbox companion flange (not illustrated here P/N 50120).
8. Rotate the front shaft (50324) until the midship companion flange (Item 806, P/N 50927) lies in a horizontal plane and remove the shaft by drawing the flange through the opening in the midship bearing support (52324).
9. Remove the split pin from the slotted nut (Item 813, P/N FN410/K), or setscrew in early cars, and pull the companion flange (50927) from the propeller shaft spline. Do not forcefully clamp the shaft in a vice.
10. Using a press, or a suitable puller, remove the midship bearing (Item 805, P/N AS50918) from the propeller shaft.
11. **IMPORTANT!** Remove the dust slinger (Item 804, P/N 50917) from the propeller shaft because it is not required with the new bearing.
12. Install one circlip (JK-50924) into a groove in the bearing housing (JK-50919).

    Note: The holes provided in the circlip, for the pliers, are tapered. Be sure to install the circlip with the plier's prongs entering the smaller diameter of the holes, and, in this manner, install both circlips from each end of the bearing housing (JK-50919).
13. Using a sharp instrument, flick the protection seals out of the bearing (JK-50918) front and rear faces.
14. Press the bearing (JK-50918) into the housing against the installed circlip (JK-50924) and install the second circlip to secure the bearing in the centre of the housing.
15. Press into position the two seals (JK-50923), with their 'open' sides towards the bearing.
16. Lightly pack the new bearing with multi-purpose grease, do not fill to capacity.
17. Apply a smear of multi-purpose grease to the seal lips
18. Press the assembled bearing housing on to the shaft, with the mounting flange facing the front end of the propeller shaft.

19. Thoroughly clean the companion flange, make sure that the grease fitting is in good condition.
20. Install the companion flange, taking note of the marks made at step 4. Tighten the slotted nut to 60 lb. ft. and, if necessary, tighten further to install a new split pin. Or on early cars, tighten the setscrew to 28 lb. ft. against a new spring washer.
21. Replacement of the shaft assembly into the car is the reverse of the removal procedure given above.

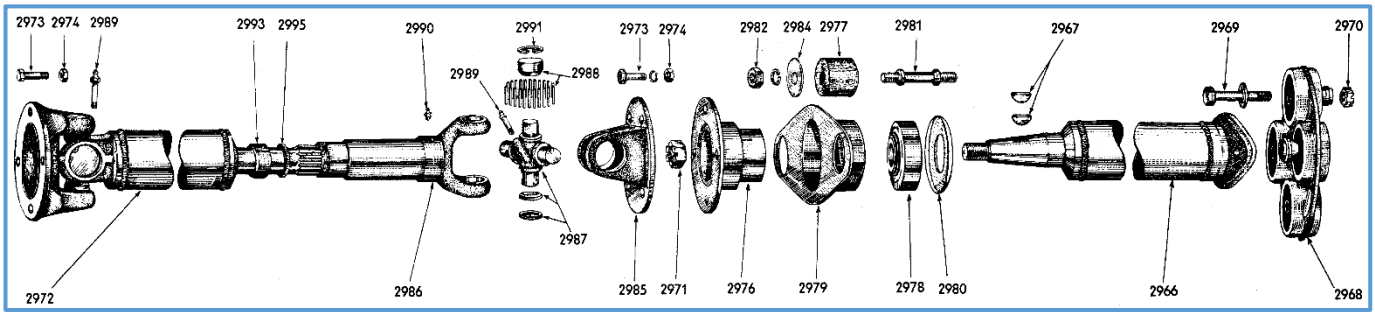
    NOTE: The four rubber mounts (JK-50917) are fitted between the bearing housing flange and the front face of the cross-chassis midship bearing support (52324). Secure the $^{5}/_{16}$" UNF nuts with spring washers.
22. At 5,000 mile intervals, apply two shots of multi-purpose grease. Do not over grease this bearing assembly.

Kit Installation (Jupiter)

In the illustration below, the rear of the vehicle is at the left hand side (i.e. Item 2972 is the rear propeller shaft).

1. Park the car on a firm level surface.
2. Jack up the car and place suitable chassis stands to provide a suitable safe working height. If only two chassis stands are used, chock the front wheels and jack up the rear of the car so that the rear wheels are off the floor.

   DANGER! DO NOT WORK UNDER VEHICLE SUPPORTED ONLY WITH A JACK.
3. Release the handbrake, have gear shift in neutral.
4. Mark each component of the propeller shaft, with a white marker pen, so that the shaft can be reassembled in correct alignment to maintain balance of the assembly.



Above: Figure 2. Jowett Jupiter midship bearing assembly.

5. Remove the centre universal joint coupling flange (Item 2985, P/N K1-2-39R). Place a support stand under the rear section of the propeller shaft (Item 2972, P/N 52999) to prevent damage to the rear universal joint coupling, so that it is held to one side.
6. Remove the front shaft (Item 2966, P/N 52991) from the front Layrub coupling.
7. Remove the split pin from the nut (Item 2971, P/N FN410K) and unscrew the nut. Use a suitable puller to pull the coupling flange (Item 2976, P/N K1-1GB1164) from the taper on the front shaft. Apply a reasonable amount of force on the puller and then, with a sharp tap on the side of the companion flange, it should release easily. Watch out for the two Woodruff keys (Item 2967, P/N BS90). Unscrew the two front nuts (Item 2982, P/N 6-74-GB11). The bearing and housing assembly (Item 2979, P/N 94-GB2286) can then be pulled from the shaft.
8. From here onwards, to Step 12, the information is from memory. The club supplied bearing housing was modified by cutting away two diametrically opposite mount lugs. The aluminium housing was filed to smooth out the cut areas so that the flange end resembled an exhaust flange.
9. A flat plate was cut to resemble the original (Item 2979) but differed in that the centre hole provided major diameter front shaft (Item 2966) clearance and two $^{5}/_{16}$" diameter holes to match those in the new midship bearing housing (P/N JK-50919). The holes at the outer ends were drilled, at $1^{15}/_{32}$" diameter, to accept two scrap shock absorber eyes that had been cut off ex-MG Magnette VB rears – the ones with the sporty looking fins at their base! These had been kept since fitting them to my Jupiter in 1964.
10. The fettled shock absorber eyes were welded into the plate, I think located centrally.
11. The mounting rubbers used were Jowett rear shock absorber cones (P/N 50469), employing two per mount eye.
12. Suitable bolts and spacers were developed to replace the insulator studs (Item 2981, P/N 94-GB2393). The spacers were machined to a length that just nipped the isolating rubbers, to allow a degree of free movement.
13. **IMPORTANT!** Remove the dust slinger (Item 2980, P/N 94-GB2146) from the propeller shaft because it is not required with the new bearing.
14. Install one circlip (JK-50924) into a groove in the bearing housing (JK-50919).

    Note: The holes provided in the circlip, for the pliers, are tapered. Be sure to install the circlip with the plier's prongs entering the smaller diameter of the holes, and, in this manner, install both circlips from each end of the bearing housing (JK-50919).
15. Using a sharp instrument, flick the protection seals out of the bearing (JK-50918) front and rear faces.
16. Press the bearing (JK-50918) into the housing against the installed circlip (JK-50924) and install the second circlip to secure the bearing in the centre of the housing.

17. Press into position the two seals (JK-50923), with their ‘open’ sides towards the bearing.
18. Lightly pack the new bearing with multi-purpose grease, do not fill to capacity.
19. Apply a smear of multi-purpose grease to the seal lips
20. Press the assembled bearing housing on to the shaft, with the mounting flange facing the rear end of the propeller shaft.
21. Thoroughly clean the companion flange, make sure that the grease fitting is in good condition.
22. Install the companion flange, taking note of the marks made at step 4. Tighten the slotted nut to 60 lb. ft. and, if necessary, tighten further to install a new split pin
23. Replacement of the shaft assembly into the car is the reverse of the removal procedure given above.

    NOTE: The four rubber mounts (JK-50917) are not used in this application.
24. At 5,000 mile intervals, apply two shots of multi-purpose grease. Do not over grease this bearing assembly.