

## Section J4

## Rear hubs

**Hub units — To remove**

1. Position the car on a ramp and securely chock the front road wheels.
2. Remove the wheel disc and loosen, but do not remove, the wheel nuts.
3. Using a hydraulic jack with an extension piece and a hardwood block positioned beneath the final drive differential casing, raise the rear of the car until the road wheels are clear of the ramp.
4. Position blocks and sill beams beneath the body sills. Place screw jacks beneath the trailing arms of the car.
5. Lower the hydraulic jack from beneath the final drive differential casing, allowing the car to rest on the sill beams and supports.
6. Remove the rear road wheel and place a support beneath the trailing arm.
7. Remove the clevis pin from the parking brake cable end connection.
8. Remove the clevis pin from the twin link plates at the parking brake lever end and collect the waved anti-rattle washer.
9. After following the depressurising precautions for the hydraulic braking system (see Chapter G Hydraulic system) disconnect the two brake caliper pressure feed pipes; blank off the pipe ends and caliper ports.
10. Remove the fitted bolts which secure the caliper to the stub axle and remove the brake caliper.
11. Fit a distance piece between the caliper pads to ensure the pistons do not ease out of their bores.
12. Remove the setscrews securing the bearing caps to the yoke at the half-shaft universal joint (see Fig. J13). Separate the universal joint from the hub yoke by easing the half-shaft inwards towards the final drive differential unit. Care should be taken to retain the needle roller bearing caps on the universal joint during removal.
13. Tape the needle roller bearing caps in position and then using a length of cord secure the half-shaft to the final drive crossmember. This will prevent possible damage to the shaft when the hub unit is removed.
14. Remove the two lower setscrews securing the stub-axle flange to the trailing arm, together with the parking brake lever linkage. Note the positions of the brake cable adjusting washers.
15. Steady the hub unit and remove the two upper setscrews securing the stub axle flange to the trailing arm. Note the position and length of each setscrew to facilitate assembly.
16. Remove the hub unit assembly from the car.

**Hub unit — To dismantle**

1. Remove the large nut securing the yoke to the hub drive-shaft (see Fig. J18).

2. Using the extractor tools (RH 9004 and RH 9005), remove the yoke from the tapered hub drive-shaft and collect the woodruff key.
3. Remove the setscrews securing the outer end of the hub drive-shaft to the hub. Withdraw the hub drive-shaft from the hollow stub axle.
4. Unlock and remove the shrouded nut and the key washer from the stub axle.  
Remove the hub, complete with bearings, from the stub axle; collect the chamfered distance piece.
5. Remove the outer bearing inner race. Using a soft metal drift drive out the inner bearing together with the grease retainer.
6. Drive out the outer bearing.
7. Remove the retainer and felt seal from the stub axle counterbore.
8. With the hub dismantled inspect the brake disc and caliper pads for wear or damage. Ensure that the brake disc securing setscrews are correctly torque tightened in accordance with the figures quoted in Chapter P. If it is necessary to remove the brake disc remove the securing setscrews and withdraw the disc from the hub.
9. Thoroughly clean all hub components and inspect for wear or damage.

**Hub unit — To assemble**

1. Press new bearing outer races into the hub, smaller end of the taper leading. Ensure that the leading faces abut the shoulders of the hub counterbore.
2. Pack the hub with approximately 71 gm. (2 oz.) of the approved grease (see Chapter D Lubricants). The grease must be smeared on the inner wall of the hub to ensure that when the hub is fitted to the stub axle the grease remains in position.
3. Lubricate the new inner races with the approved grease and fit them to their respective outer races.
4. With the inner bearing in position, press the Acme threaded grease retainer into position. Ensure that the leading edge abuts the bearing outer race.

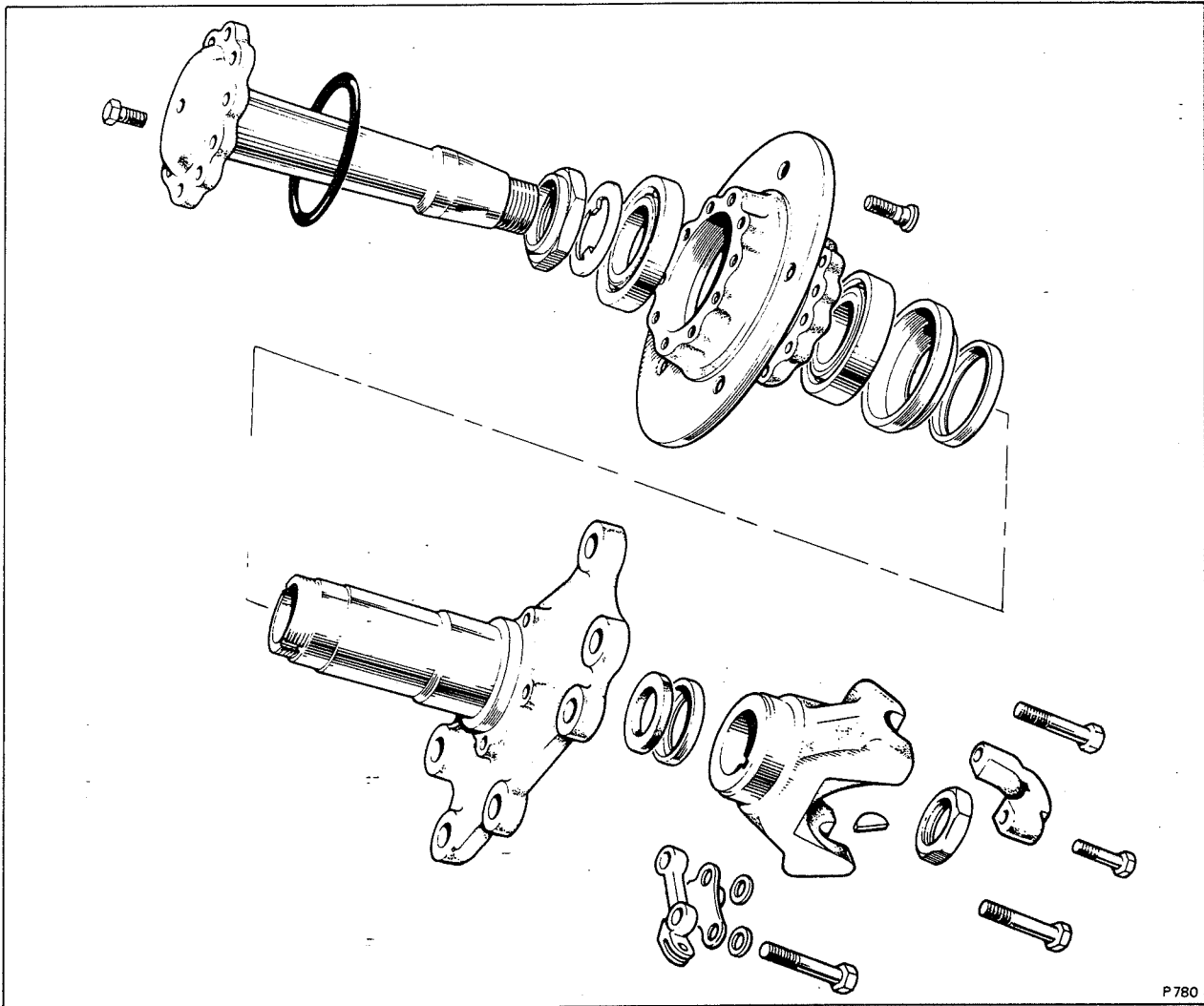
It is essential that the correct hand of grease retainer is fitted to the respective hubs. The grease retainers can be identified by the 'Acme' thread direction in the bore of the retainer. The right-hand (off-side) hub has a right-hand 'Acme' thread, the left-hand (near-side) hub has a left-hand 'Acme' thread.

**Note**

When renewing the bearing of more than one hub at the same time, always retain the inner race and roller cage together with the outer race. The inner and outer races are a matched set and should not be fitted separately.

**Hub unit — To fit**

1. Fit a new felt seal and retainer into the stub axle. Apply a small amount of approved grease (see Chapter D Lubricants) to the felt seal.



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Fig. J17 Rear hub

2. Fit the distance piece, chamfered edge leading, onto the stub axle to abut the shoulder.
3. Position the hub on the stub axle and fit the hardened key washer and new shrouded nut.
4. Tighten the nut sufficiently to remove any bearing end-float. Using a dial test indicator mounted adjacent to the brake disc, measure the run-out of the disc at the maximum possible radius.

The run-out must not exceed 0,178 mm. (0.007 in.) total indicator reading as this is a measure of the stack tolerance of all the components. If the run-out exceeds this figure, it will be necessary to dismantle the hub and brake disc to investigate the cause.

5. After checking the run-out slacken the shrouded nut. Using a feeler gauge placed between the outer bearing and the key washer; tighten the nut sufficiently to lightly grip the feeler gauge to obtain a bearing end-float of between 0,05 mm. and 0,10 mm. (0.002 in. and 0.004 in.) when the feeler gauge is removed.

Alternatively, to obtain the required end-float use suitable dial test indicator equipment secured to the stub axle.

Continuous rotation of the hub is essential during this operation to ensure that the taper rollers seat correctly in the outer races.

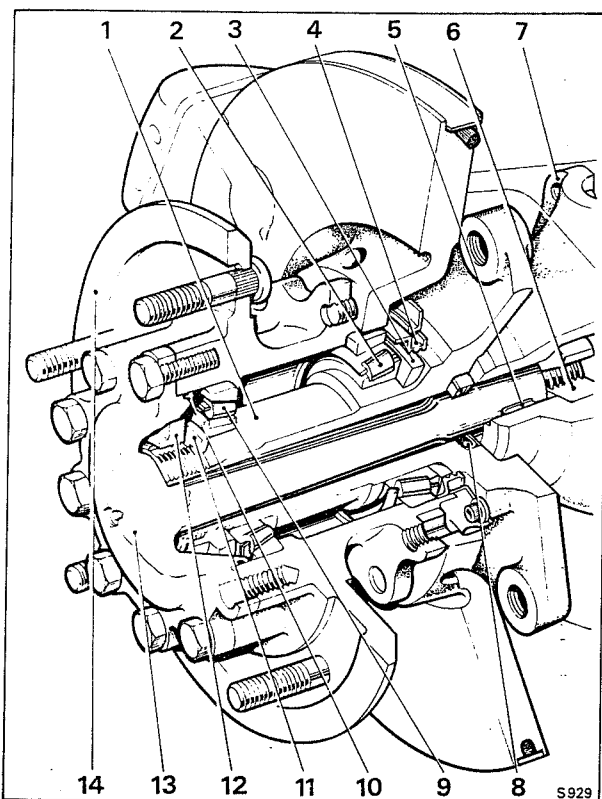
6. Peen the shroud of the nut to locate into the grooves of the stub axle; remove the feeler gauge or dial test indicator.

**Note**

Incorrect setting i.e. exerting a load on the bearings or giving excessive end-float, will promote premature bearing wear.

The remaining operations for fitting the rear hub unit are a careful reversal of the procedure given for the removal and dismantling, noting the following operations.

7. Fit a new rubber 'O' ring onto the hub drive-shaft, apply a small amount of grease to the ring before fitting.
8. Fit the key to the hub drive-shaft taper before fitting the hub unit yoke.
9. Apply Rocol MTS 1000 grease or equivalent to the threads and abutment face of the yoke retaining nut and torque tighten to 69,50 kgf.m. (500 lbf.ft.) using torque spanner (RH 8014) and socket (RH 8026).



**Fig. J18 Rear hub**

- 1 Stub axle
- 2 Inner taper roller bearing
- 3 Distance piece
- 4 Acme thread seal
- 5 Key
- 6 Nut
- 7 Yoke
- 8 Felt seal and retainer
- 9 Outer taper roller bearing
- 10 Seal
- 11 Keyed adjusting washer
- 12 Shrouded nut
- 13 Drive-shaft (hub)
- 14 Hub

10. When fitting the half-shaft universal joint to the hub yoke ensure that the bearing caps seat correctly in the yoke and that the bearing cap setscrews are torque tightened in position (see Chapter P).

11. When fitting the brake feed pipe and parking brake linkage refer to Chapter G Hydraulics, for information regarding bleeding procedure and precautions to be taken.

12. Check the parking brake adjustment and operation.

13. Fit the road wheel and remove the supports from beneath the body and trailing arms.

14. Tighten the wheel nuts and fit the wheel disc.