PROPELLER SHAFTS

TORQUE WRENCH SETTINGS

Flange securing nuts and bolts 41 to 52 Nm (30 to 38 lbf ft).

Remove and refit

Removal

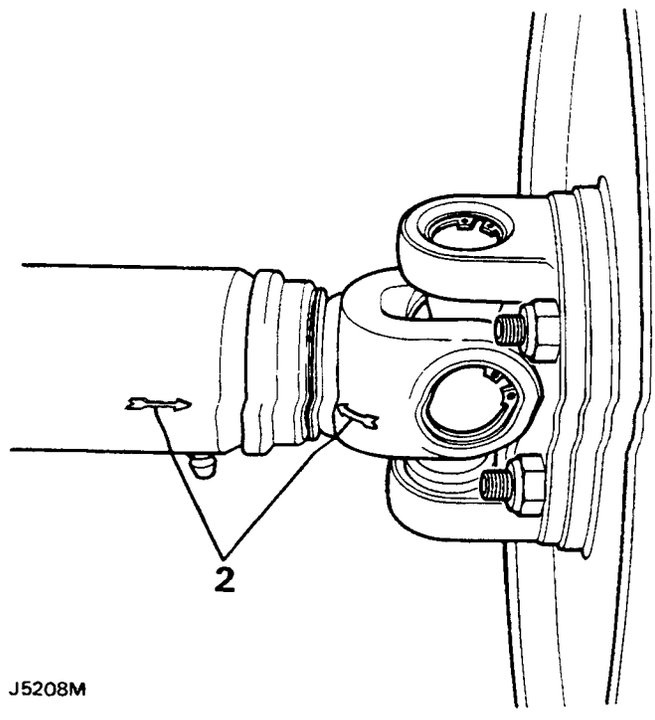
1. Place the vehicle over a pit or on a suitable hoist.
2. Remove the nuts from the gearbox end of the propeller shaft and the nuts and bolts from the differential end.
3. Compress the propeller shaft and remove from the vehicle.

Refitting

4. Refit the propeller shafts in reverse order to removal, ensuring that the splined sliding end of the the shaft is fitted toward the front of the vehicle, i.e. on front shafts, fitted to the differential and on rear shafts fitted to the parking brake drum.
5. Tighten the flange securing nuts and bolts to the required torque.

Overhaul

1. Remove the propeller shaft from the vehicle.
2. Note the alignment markings on the yoke and shaft.



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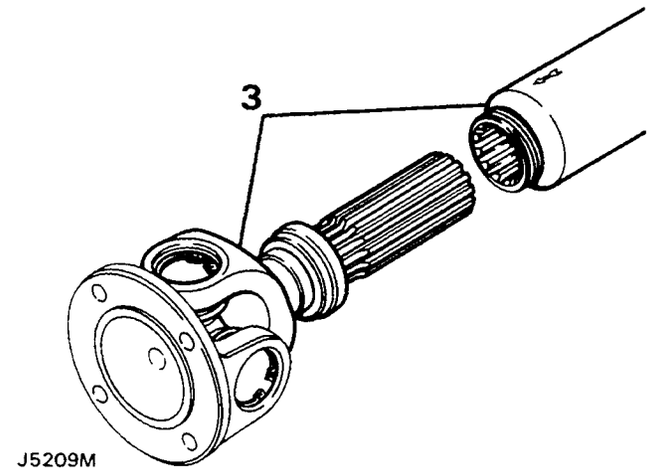

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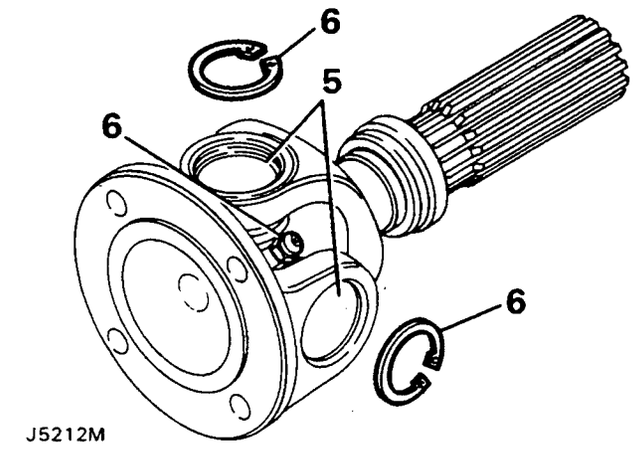
3. Unscrew the dust cap and withdraw the sliding member.
4. Clean and examine the splines for wear and excessive back-lash. Worn splines or splines having excessive back-lash will necessitate propeller shaft renewal.
5. Remove paint, rust etc. from the vicinity of the universal joint bearing cups and circlips.

NOTE: Before dismantling the universal joint, mark the position of the spider pin lubricator relative to the journal yoke ears to ensure that the grease nipple is reassembled in the correct running position to reduce the possibility of imbalance.



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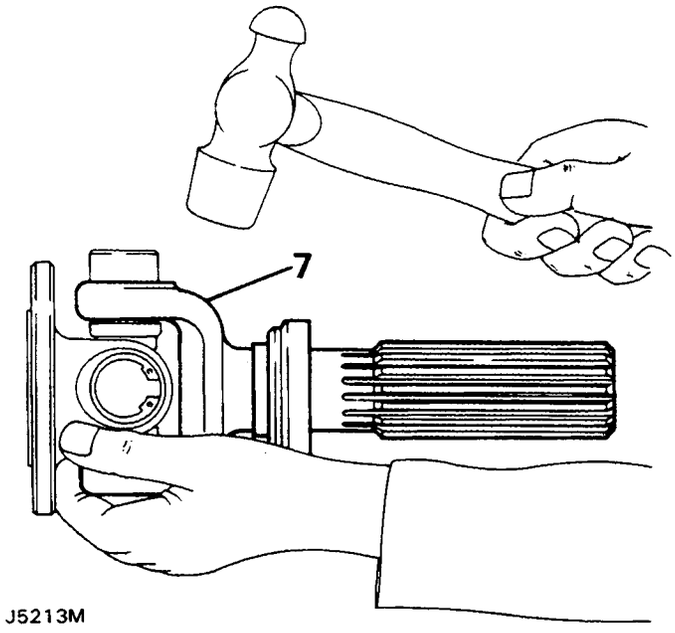
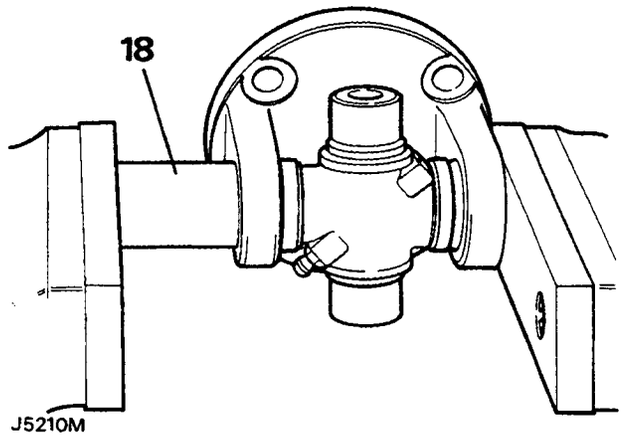
6. *Remove the grease nipple and circlips.*
7. Tap the yokes to eject the bearing cups.
8. Withdraw the bearing cups and spider and discard.
9. Repeat the foregoing operations to dismantle the universal joint at the other end of the propeller shaft.



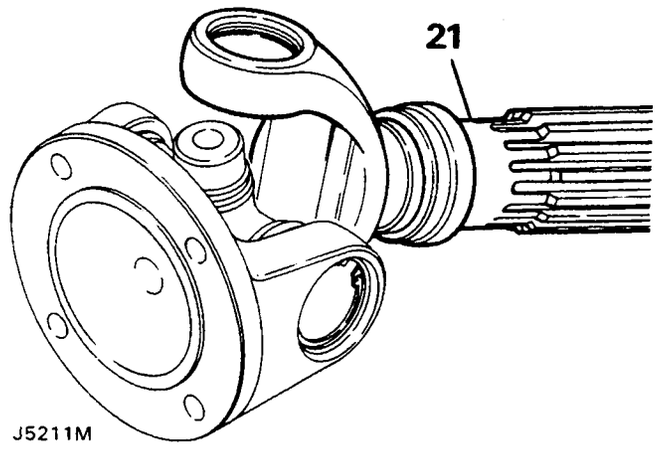
10. Thoroughly clean the yokes and bearing cup locations.

Reassembly

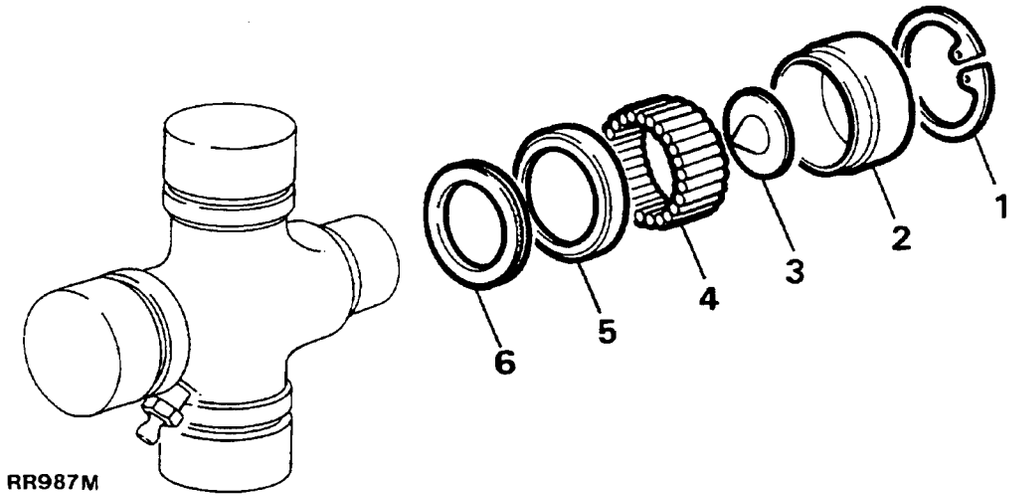
11. Remove the bearing cups from the new spider.
12. Check that all needle rollers are present and are correctly positioned in the bearing cups.
13. Ensure that the bearing cups are one third full of fresh lubricant (BP Energrease L2 or suitable alternative).
14. With the grease nipple facing away from the flange, insert the new spider, complete with seals, into the yokes of the sliding member flange.
15. Partially insert one bearing cup into a flange yoke and enter the spider trunnion into the bearing cup, taking care not to dislodge the needle rollers.
16. Insert a bearing cup into the opposite flange yoke. Using a vice, carefully press both cups into place, taking care to engage the spider trunnion without dislodging the needle rollers.
17. Remove the assembly from the vice.
18. Using a flat faced adaptor of slightly smaller diameter than the bearing cups press each cup into its respective yoke until they reach the lower land of the circlip groove. Do not press the cups below this point or damage may be caused to the cups and seals.



19. Fit new circlips to retain the bearing cups.
20. Engage the spider in the yokes of the sliding member. Fit the bearing cups and circlips as described in para's 15 to 19.
21. Repeat the complete procedure to fit the flange to the other end of the shaft.



22. Lubricate the splines of the sliding member and fit it to the propeller shaft.
23. Fit and tighten the dust cap.
24. Fit the grease nipples to the spiders and the sliding member and lubricate.
25. Refit the propeller shaft to the vehicle.



KEY TO SPIDER ASSEMBLY

1. Circlip
2. Bearing cup
3. Nylatron washer
4. Needle rollers (27 per cup)
5. Seal retainer
6. Seal

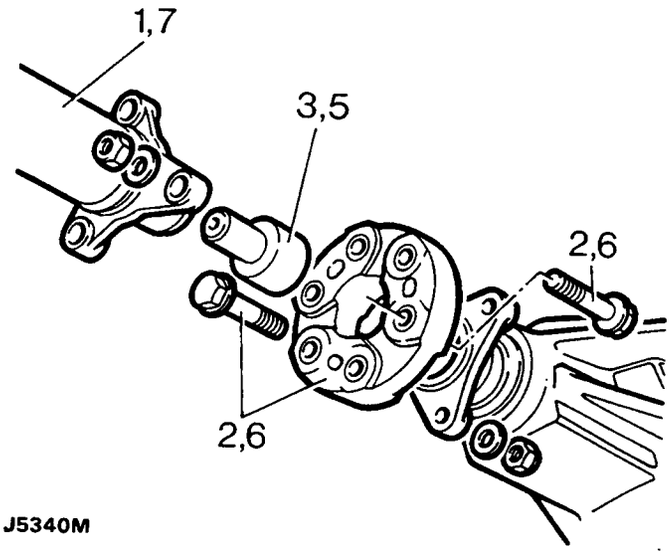
REAR PROPELLER SHAFT (Flexible coupling)

Remove

1. Scribe alignment marks on flanges at both ends of propeller shaft to ensure correct refitment.
2. Remove three nuts and bolts securing rear flange to flexible coupling.
3. Remove nuts securing propeller shaft flange to transfer gearbox.
4. Raise propeller shaft at gearbox end detach flange from spigot at differential and withdraw shaft.

Refit

5. Locate propeller shaft over spigot, align scribed marks and secure at transfer gearbox, tightening bolts to correct torque.
6. Secure to flexible coupling with three nuts and bolts, tightened to correct torque.



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FLEXIBLE COUPLING (Rear propeller shaft)

Remove

1. Remove propeller shaft.
2. Remove bolts securing flexible coupling to differential flange and detach coupling.
3. Remove spigot from differential flange using special tools LRT-99-004 Impulse Extractor and LRT-37-005 Adaptor.
4. Clean spigot and differential flange.

Refit

5. Apply Loctite to larger diameter of spigot and fit to differential flange.
6. Fit flexible coupling to differential flange and secure with bolts, washers and nuts, tightened to correct torque.
7. Refit propeller shaft.