

MODELS AFFECTED

1948-52 LAND-ROVER

UNIT AFFECTED

FRONT AXLE

This bulletin replaces Service Bulletin F1—issued 8.3.50, which should be removed from your file and destroyed.

SWIVEL PIN DAMPING

On Land-Rovers fitted with front axles bearing serial numbers 06113205 (R.H.D.) and 06113116 (L.H.D.) onwards, the front axle design was altered to incorporate cone damping bearings at the upper swivel pins, in place of the original taper roller bearings.

At a later date, on vehicles fitted with front axles numbered 26108221 and 26133681 onwards, the design has been modified to improve the oil feed to the bearings; oil wiped off the tracta joint housing is forced up a vertical hole in the cone bearing into the well of the cone and out through four radial drillings to the cone seat.

If considered necessary, the latest pattern bearings can be incorporated in earlier vehicles, originally fitted with taper roller or cone bearings, as described below; a convenient time would be at routine front axle overhaul.

PARTS REQUIRED

Part No.	Description	Quantity
237236	Steering lever L.H.	1 R.H.D. models only
237237	Steering lever R.H.	1 R.H.D. models only
237238	Steering lever L.H.	1 L.H.D. models only
237239	Steering lever R.H.	1 L.H.D. models only
230858	Cone seat	2
237240	Cone bearing	2
230896	Spring	2

Proceed as follows:—

1. Jack up the front of the vehicle.
2. Remove the road wheels.
3. Disconnect the front brake pipes.
4. Disconnect the track and steering rods.
5. Remove the complete half shaft and swivel housing assemblies from the axle casing (six bolts, nuts and spring washers on each side). Strip each assembly as follows:
6. Drain off the oil from the tracta joint housing.
7. Remove the swivel pin housing oil seal (five set bolts and spring washers and one adjustable lock stop bolt).
8. Remove the swivel pin and steering lever complete with shims (four nuts and spring washers).
9. Remove the bottom swivel pin bracket complete with shims, which should be preserved (four nuts and spring washers).
10. Remove the half shaft and tracta joint complete from the housing.
11. Remove the upper roller bearing and discard.

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12. Press the bronze cone seat (230858) into the swivel pin bearing housing or renew the seat.
13. Smear the steel cone bearing (237240) with oil and insert it in the cone seat, so that the vertical oil hole in the bearing is towards the centre-line of the vehicle and 30° behind the centre-line of the front axle.
14. Re-assemble the bottom swivel pin bracket with the original shims (at least .020 in. should be used).
15. Insert the coil spring (230896) in the top bearing.
16. Fit the swivel pin and steering lever assembly at the top of the swivel pin housing, WITHOUT the shims removed on stripping.
NOTE: The double steering lever is fitted to the L.H. assembly on R.H.D. models and to the R.H. assembly on L.H.D. vehicles.
17. Either—Pull down the top swivel pin securing nuts evenly in rotation; after every few turns of the nuts, check the resistance by moving the steering lever from lock to lock. A sudden increase in resistance will indicate that the spring has become coilbound. At this stage the nuts should be slackened and carefully re-tightened gradually, to find the exact point at which the spring becomes coilbound. Measure the gap between the flange on the steering lever and the swivel pin housing with feeler gauges. Suitable shims .005 in. (0,13 mm.) in excess of this figure should be inserted and the swivel pin securing nuts pulled down tightly.
18. Or—Fit a suitable "G" clamp along the axis of the swivel pins, so that the cone spring can be gradually compressed. Tighten the clamp until the resistance to rotation of the steering lever is 7-8 lb. (3-3,5 kg.) measured at the track rod hole in the lever. Measure the gap between the flange on the steering lever and the swivel pin housing with feeler gauges. Insert shims to this value and pull the steering lever nuts down tightly.
19. Re-check the resistance to ensure that the spring is not quite coilbound; this should be approximately 7-8 lb. (3-3,5 kg.) at the track rod hole in the steering lever.
NOTE: To ensure that the spring is correctly compressed when ascertaining the number of shims to be fitted, it may be necessary to use a suitable packing washer under the spring. The shims are available .003 in., .005 in., .010 in. and .020 in. thick, so that the bearing setting can be adjusted very accurately.
20. Finally equalise the spacing of the shims, i.e. the shims required should be shared as equally as possible between the upper and lower swivel pins. The object of equalisation is to ensure that the swivel pin housing oil seal wipes the surface of the bearing housing over its full range of travel.
21. Complete assembly by reversing the sequence of stripping operations; bleed the brake system and re-fill the tracta joint housings with the correct grade of oil.