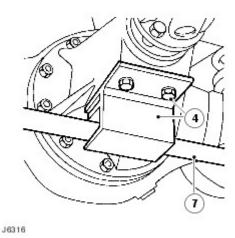
Published: May 23, 2008

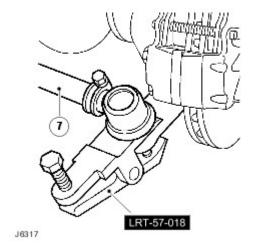
Tie Rod End (57.55.07)

Removal

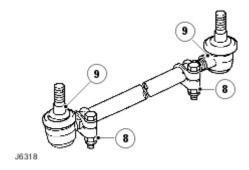
- 1 . Park vehicle on level ground and chock rear wheels.
- 2 . Raise vehicle and locate axle stands or use a ramp.
- 3 . Centralise steering. For additional information, refer to <u>Steering Gear Centralization</u>
- 4 . Unscrew 2 bolts and remove tie rod protection bracket from axle differential housing.
- 5 . Remove split pin and castellated nut securing tie rod to swivel housing arms.
- 6 . Disconnect tie rod ends using LRT-57-018.



7. Remove tie rod.



- 8 . Slacken clamp bolts.
- 9. Unscrew tie rod ends.



Installation

- 1 . Fit new tie rod ends to tie rod and loosely tighten clamp bolts.
- 2 . Screw in tie rod ends to full extent of threads and fully tighten clamp bolts.

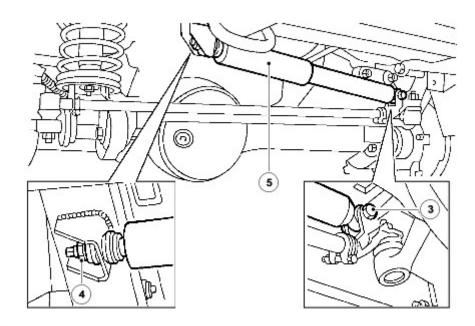
CAUTION: A tie rod that is damaged or bent must be renewed. DO NOT attempt to repair or straighten it.

- 3 . Fit tie rod to swivel housing arms and tighten tie rod end nuts to 44 Nm (32 lbf/ft). Fit new split pin.
- 4 . Fit tie rod protection bracket to axle differential housing and tighten to 30 Nm (22 lbf/ft).
- 5 . Check wheel alignment.
 For additional information, refer to Front Toe Adjustment (57.65.01 or 57.65.14)
- 6 . Remove axle stands or vehicle from ramp.

Steering Linkage Damper

Removal

- 1 . Park vehicle on level ground and chock rear wheels.
- 2 . Raise vehicle and locate axle stands or use a ramp.
- 3 . Remove bolt securing steering linkage damper to drag link bracket.
- 4. Remove retaining nuts, washers and rubber bush securing steering linkage damper to chassis mounting.
- 5. Withdraw steering linkage damper.



J6315

6. Check rubber bushes and washers, renew if necessary.

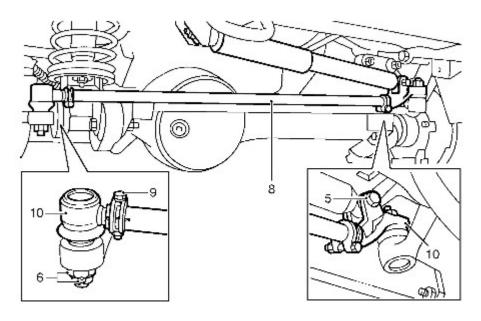
Installation

- 1 . Ensuring rubber bushes and washers are correctly positioned, fit steering linkage damper to chassis mounting.
- 2. Instal steering linkage damper to drag link bracket.
- 3 . Remove axle stands or vehicle from ramp.

Sector Shaft Arm Drag Link

Removal

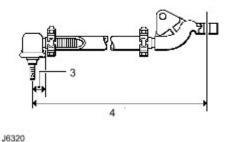
- 1 . Park vehicle on level ground and chock rear wheels.
- 2 . Set road wheels in straight ahead position.
- 3. Raise vehicle and fit axle stands or use a ramp.
- 4. Remove front road wheel.
- 5 . Disconnect steering damper at sector shaft arm drag link bracket.
- 6 . Remove split pin and castellated nut securing sector shaft arm drag link ball joint to swivel housing arm.
- 7 . Disconnect sector shaft arm drag link ball joints using LRT-57-018.
- 8 . Remove sector shaft arm drag link.
- 9 . Slacken clamp bolts.
- 10 . Unscrew ball joints and remove from sector shaft arm drag link.



J6319

Installation

- 1 . Clean internal threads of sector shaft arm drag link.
- 2. Fit new ends to sector shaft arm drag link and loosely fit clamp bolts.
- 3 . Set ball joints to sector shaft arm drag link measurement to 28,5 mm.
- 4 . Adjust ball pin centres to nominal length of 924 mm, this length is adjusted during refit.

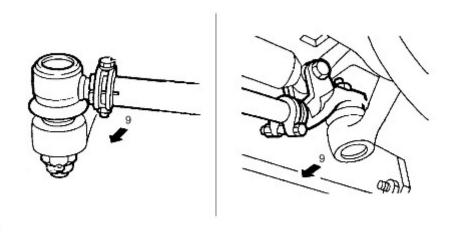


- Centralise steering box.
 For additional information, refer to <u>Steering Gear Centralization</u>
- 6 . Align steering wheel, if necessary.
- 7 . CAUTION: A sector shaft arm drag link that is damaged or bent must be renewed. DO NOT attempt repair.

Fit sector shaft arm drag link to swivel housing arms and tighten nuts to 40 Nm (30 lbf/ft). Fit new split pins.

- 8 . Ensure full steering travel is obtained between lock stops.

 For additional information, refer to <u>Steering Lock Stop Adjustment</u> Adjust sector shaft arm drag link length to suit.
- 9. Tap ball joints in direction shown so both pins are in same angular plane.



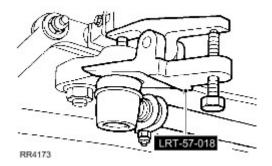
- E77138
- 10 . Tighten clamp bolts to 14 Nm (10 lbf/ft).
- 11. Refit road wheel and remove axle stands or vehicle from ramp.
- 12 . Road test vehicle.
- WARNING: To correct steering wheel deviations greater than ± 5° remove and reposition steering wheel.

If driving straight ahead and steering wheel is offset by $0^{\circ} \pm 5^{\circ}$ in either direction, correct by adjusting sector shaft arm drag link length.

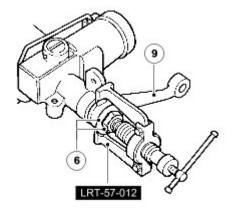
Steering Gear Drop Arm

Removal

- 1 . Park vehicle on level surface and chock rear wheels.
- 2. Raise vehicle and locate axle stands or use a ramp.
- 3 . Disconnect steering linkage damper from drag link. For additional information, refer to Steering Linkage Damper
- 4 . Disconnect drag link ball joint from drop arm using extractor LRT-57-018.



- 5. Mark drop arm and steering box for reassembly.
- 6. Bend back tabs on locking washer, slacken retaining nut, but do not remove.
- 7 . Fit extractor LRT-57-012 and release drop arm from steering box spline.
- 8 . Remove nut and discard locking washer.
- 9. Remove drop arm.



J6314

Installation

- 1 . Centralise steering box.
 For additional information, refer to Steering Gear Centralization
- 2 . Align reassembly marks and fit drop arm onto steering box splines.

- 3 . Install new tab washer and retaining nut. Tighten to 176 Nm (130 lbf.ft) and bend over tab washer.
- 4 . Install drag link to drop arm. Tighten ball joint nut to 40 Nm (30 lbf.ft).
- ${\bf 5}$. Remove axle stands or vehicle from ramp.