

# STEERING

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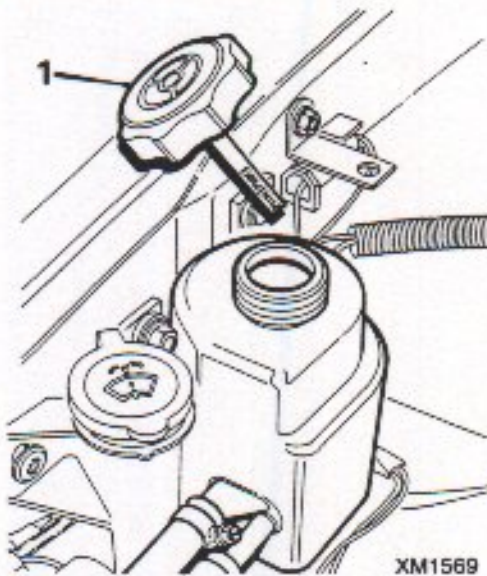
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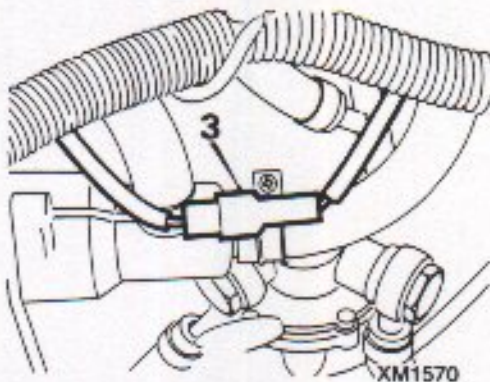


## POWER STEERING SYSTEM - HYDRAULIC BLEED

Service Repair No. 57.15.02



1. Remove reservoir filler cap.
2. Fill reservoir with fluid - see **REPAIR MANUAL - CAPACITIES, FLUIDS AND LUBRICANTS.**



3. Disconnect multiplug from fuel cut - off solenoid to prevent engine starting.
4. Crank engine for 5 seconds to prime pump.
5. Top - up reservoir to correct level.
6. Crank engine for 5 seconds.
7. Turn steering to R.H. lock.
8. Crank engine for 5 seconds.
9. Turn steering to L.H. lock.
10. Top - up reservoir to correct level.
11. Connect multiplug, fuel cut - off solenoid.
12. Start and run engine for 2 minutes.
13. Turn steering one full turn from lock to lock.
14. Stop engine.
15. Check/top - up reservoir and fit filler cap.



## STEERING RACK GAITER

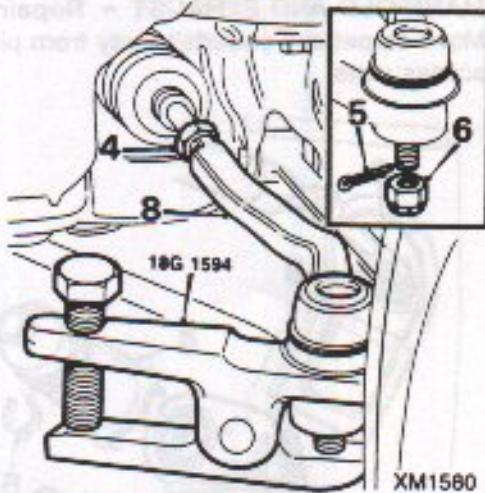
Service Repair No. 57.10.29

### Remove

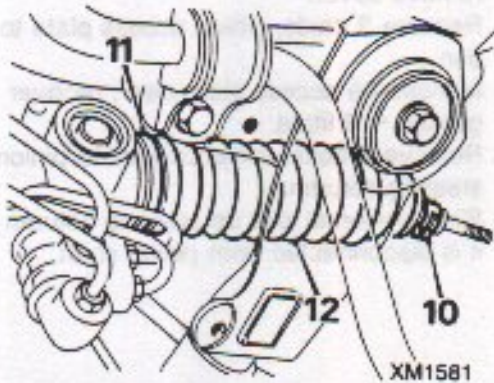
1. Raise front of vehicle.

**WARNING: Support on safety stands.**

2. Remove road wheel.
3. Mark fitted position of track rod end.



4. Slacken track rod end locknut.
5. Remove split pin from track rod end ball joint nut; discard split pin.
6. Remove track rod end ball joint nut.
7. Break taper joint using **18G 1584**.
8. Remove track rod end from tie rod.
9. Remove locknut.



10. Remove clip securing outer end of gaiter.
11. Remove strap securing inner end of gaiter; discard strap.
12. Release gaiter from groove in end of steering rack; remove gaiter.

### Refit

1. Smear inner surface of gaiter with grease - see **REPAIR MANUAL - CAPACITIES, FLUIDS AND LUBRICANTS**.
2. Fit gaiter ensuring ridge on inner end of gaiter locates in groove in steering rack.
3. Secure inner end of gaiter using a new strap.
4. Fit clip to secure outer end of gaiter.

5. Fit track rod end locknut.

6. Fit track rod end to original fitted position.

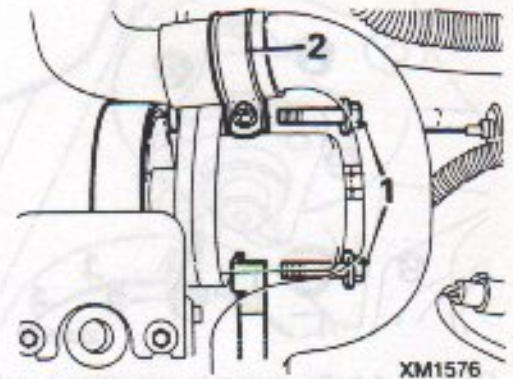
**CAUTION: Do not tighten track rod end locknut until completion of wheel alignment check.**

7. Connect track rod end ball joint to steering arm; fit and tighten track rod end ball joint nut to 44 Nm. Secure nut with new split pin.
8. Fit road wheel and tighten nuts to 110 Nm.
9. Remove stand(s) and lower vehicle.
10. Check/adjust front wheel alignment - see **REPAIR MANUAL - STEERING 2.0 - Adjustments**.

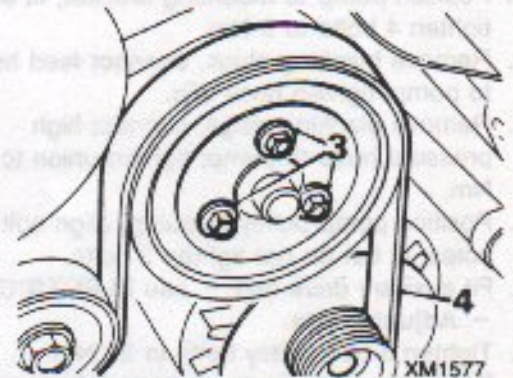
## POWER STEERING PUMP

Service Repair No. 57.20.14

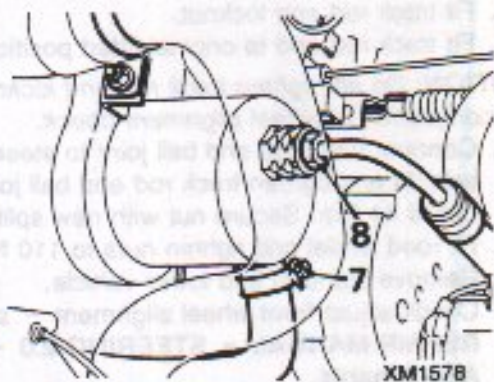
### Remove



1. Remove 2 bolts securing pump pulley cover.
2. Release hose clip and remove pulley cover

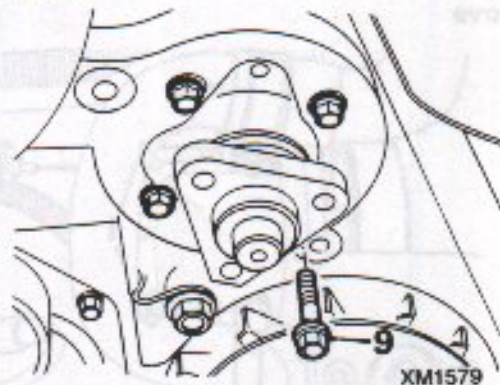


3. Slacken but do not remove 3 bolts, pump pulley to steering pump.
  4. Remove auxiliary drive belt - see **ELECTRICAL - Adjustments**.
  5. Remove 3 bolts, pump pulley to pump; remove pulley.
- Do not carry out further dismantling if component is removed for access only**
6. Position drip tray beneath pump.



7. Slacken clip, disconnect feed hose from pump.
8. Release union, disconnect high pressure hose from pump.

**CAUTION:** Plug all open connections to prevent ingress of dirt.



9. Remove 4 bolts, pump to mounting bracket; remove pump.

### Refit

1. Position pump to mounting bracket, fit and tighten 4 bolts to 8 Nm.
2. Remove blanking plugs, connect feed hose to pump; tighten hose clip.
3. Remove blanking plugs, connect high pressure hose to pump; tighten union to 20 Nm.
4. Position pump pulley to pump, align bolt holes; fit but do not tighten 3 bolts.
5. Fit auxiliary drive belt - see **ELECTRICAL - Adjustments**.
6. Tighten 3 belt pulley bolts to 26 Nm.
7. Fit pump pulley cover, position 2 hose clips; fit and tighten 2 bolts to 15 Nm.
8. Remove drip tray.
9. Bleed steering - see **Adjustments**.

## STEERING RACK

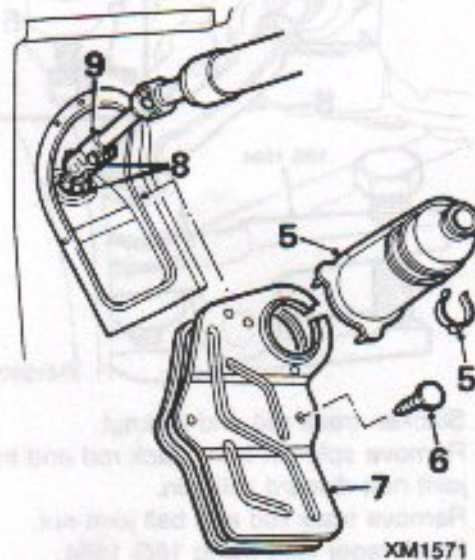
Service Repair No. 57.10.01

### Remove

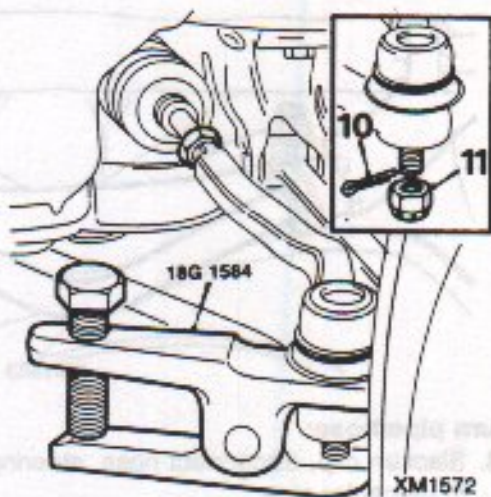
1. Raise front of vehicle.

**WARNING:** Support on safety stands.

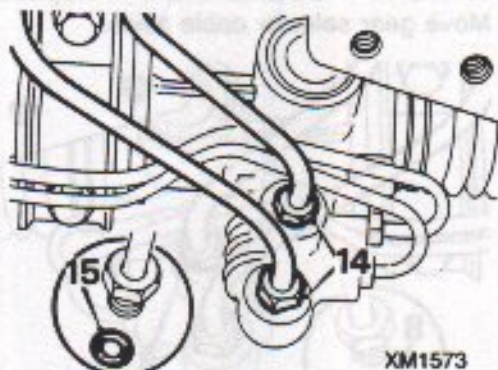
2. Remove road wheel(s).
3. Remove exhaust down pipe - see **MANIFOLD AND EXHAUST - Repairs**.
4. Move carpet and underfelt away from pinion access plate.



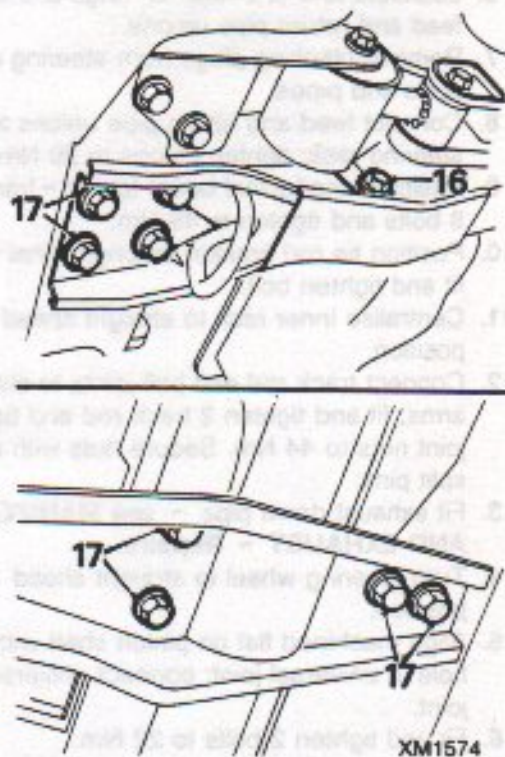
5. Release clip retaining universal joint cover; remove cover.
6. Remove 3 studs, pinion access plate to floor pan.
7. Manoeuvre access plate clear; recover gasket - if fitted.
8. Remove 2 bolts, universal joint to pinion and steering column.
9. Slide universal joint up steering column until it is disconnected from pinion shaft.



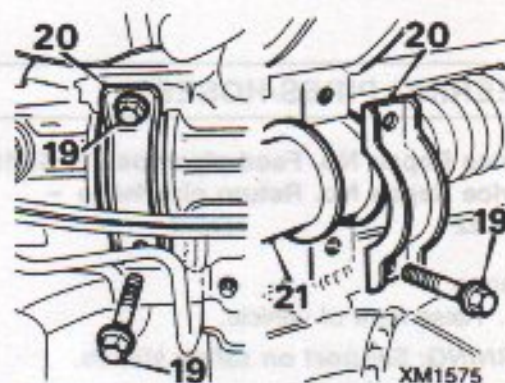
10. Remove split pins from track rod end ball joint nuts; discard split pins.
11. Remove 2 track rod end ball joint nuts.
12. Break taper joints using 18G 1584.
13. Position drain tin beneath steering rack.



14. Disconnect feed and return pipes from steering rack; plug ends of pipes.
15. Remove and discard 2 'O' rings.



16. Remove bolt, tie rod bracket to longitudinal beam.
17. Remove 8 bolts, longitudinal beam to sub - frames, remove longitudinal beam.
18. Extend inner rack to passenger side as far as possible.



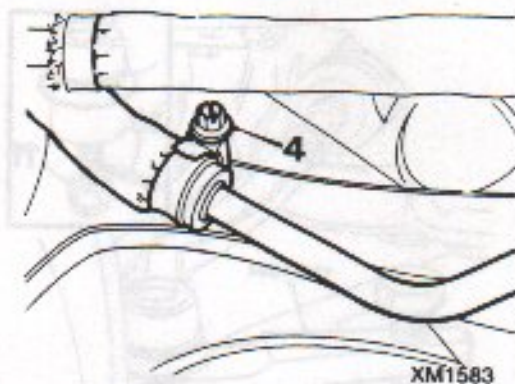
19. Remove 4 bolts securing steering rack mounting brackets.
20. Remove 2 mounting brackets and bushes.
21. Move steering rack clear of sub - frame and towards passenger side; remove steering rack.

### Refit

1. Extend inner rack to passenger side as far as possible.
2. Manoeuvre steering rack past sub - frame and into position.
3. Fit bushes to each mounting bracket.
4. Position 2 mounting brackets, fit and tighten 4 securing bolts to 45 Nm.
5. Ensure feed and return pipe unions are clean.

# STEERING

6. Lubricate and fit 2 new 'O' rings and fit to feed and return pipe unions.
7. Remove blanking plugs from steering rack ports and pipes.
8. Connect feed and return pipe unions to steering rack; tighten unions to 20 Nm.
9. Position longitudinal beam to sub-frame; fit 8 bolts and tighten to 45 Nm.
10. Position tie rod bracket to longitudinal beam, fit and tighten bolt.
11. Centralise inner rack to straight ahead position.
12. Connect track rod end ball joints to steering arms; fit and tighten 2 track rod end ball joint nuts to 44 Nm. Secure nuts with new split pins.
13. Fit exhaust down pipe - see **MANIFOLD AND EXHAUST - Repairs**.
14. Turn steering wheel to straight ahead position.
15. Align machined flat on pinion shaft with bolt hole in universal joint; connect universal joint.
16. Fit and tighten 2 bolts to 22 Nm.
17. Position pinion access plate and gasket to floor pan; fit 3 studs.
18. Position cover over universal joint, secure with clip. Position carpet and underfelt.
19. Fit road wheel and tighten nuts to 110 Nm.
20. Remove stand(s) and lower vehicle.
21. Bleed power steering - see **Adjustments**.



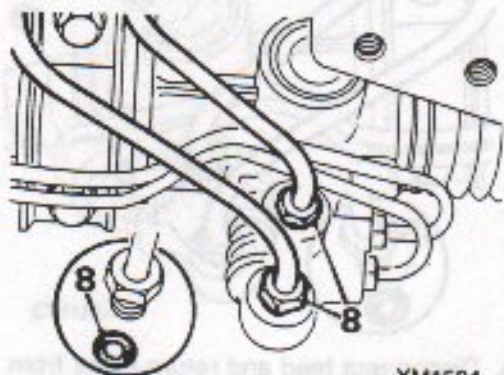
## Return pipe/hose:

4. Slacken clip, disconnect hose, steering rack to oil cooler pipe.
5. Remove clip.

**CAUTION:** Plug open connections to prevent ingress of dirt.

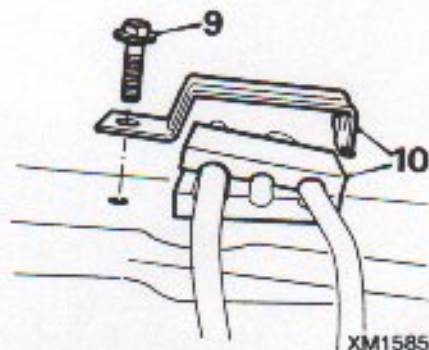
## Feed and return pipes/hoses:

6. Remove anti-roll bar - see **REPAIR MANUAL - SUSPENSION - Repairs**.
7. Move gear selector cable aside.



8. Disconnect 2 pipe unions from steering rack; remove and discard 2 'O' rings.

**CAUTION:** Plug open connections to prevent ingress of dirt.



9. Remove bolt securing pipe lower bracket.
10. Release bracket from pipe, remove rubber ferrule from pipe.

## STEERING PIPES/HOSES

Service Repair No. Feed pipe/hose - 57.15.21

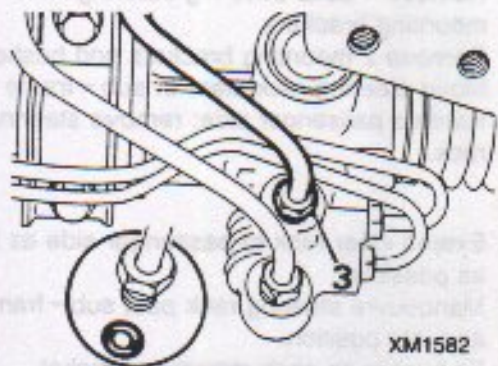
Service Repair No. Return pipe/hose - 57.15.22

### Remove

1. Raise front of vehicle.

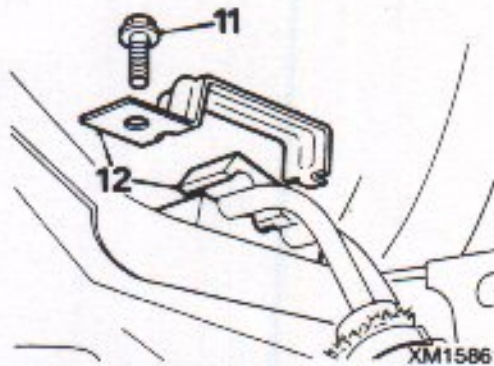
**WARNING:** Support on safety stands.

2. Position drip tray.



3. Feed pipe/hose: Disconnect union, pipe to rack feed hose.

**CAUTION:** Plug open connections to prevent ingress of dirt.



11. Remove bolt securing pipe upper bracket.
12. Release bracket from pipe, remove rubber ferrule from pipe.
13. Manoeuvre pipe/hose clear.

#### Reft

##### Feed and return pipes/hoses:

1. Position pipe/hose.
2. Clean area around connections.
3. Lubricate and fit 2 new 'O' rings to feed and return pipe unions.
4. Remove blanking plugs from steering rack ports and pipes.
5. Connect feed and return pipe unions to steering rack.

**CAUTION:** Do not tighten unions at this stage.

6. Fit ferrules to pipes.
7. Position feed and return pipes, fit upper and lower brackets.
8. Fit and tighten bracket securing bolts to 10 Nm.
9. Tighten feed and return pipe unions at rack to 20 Nm.
10. Fit anti-roll bar - see **REPAIR MANUAL - SUSPENSION - Repairs.**

##### Return pipe/hose:

11. Remove blanking plugs from hose and rack to oil cooler pipe.
12. Position clip to hose.
13. Connect hose to pipe; tighten clip.

##### Feed pipe/hose:

14. Remove blanking plugs from pipe and rack feed hose.
15. Connect pipe to hose, tighten union to 20 Nm.

##### Feed and return pipes/hoses:

16. Remove drip tray.
17. Position gear selector cable.
18. Bleed system - see **Adjustments.**
19. Remove stand(s) and lower vehicle.

**TORQUE SETTINGS**

Track rod ball joint steering arm nut .....	44 Nm
Road wheel nuts .....	110 Nm
Steering pump mounting bolts .....	8 Nm
High pressure hose pump union .....	20 Nm
Auxiliary belt pulley bolts .....	26 Nm
Pump pulley cover bolts .....	15 Nm
Steering rack mounting securing bolts .....	45 Nm
Return pipe union unions .....	20 Nm
Longitudinal sub - frame bolts .....	45 Nm
Universal joint bolts .....	22 Nm
Feed and return pipe securing bolts .....	10 Nm
Feed return pipe rack unions .....	20 Nm
Feed pipe union .....	20 Nm

**TOOL NUMBERS**

18G 1584      Ball joint separator