

2001 XJ RANGE - Front Suspension - 204-01

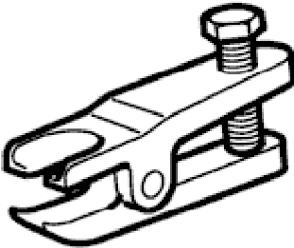
Rear Lower Arm 60.35.54

Special Service tools



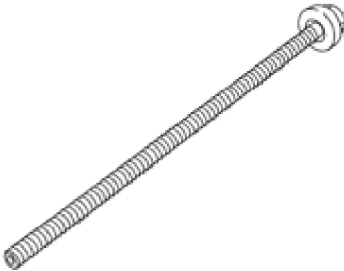
E36463

Road spring compressor
204-111 (JD115)



E36397

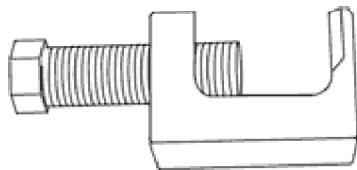
Taper separator
211-098 (JD 100)



E36462

Ball Joint Taper Separator
204-192 (JD 219)

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E31837

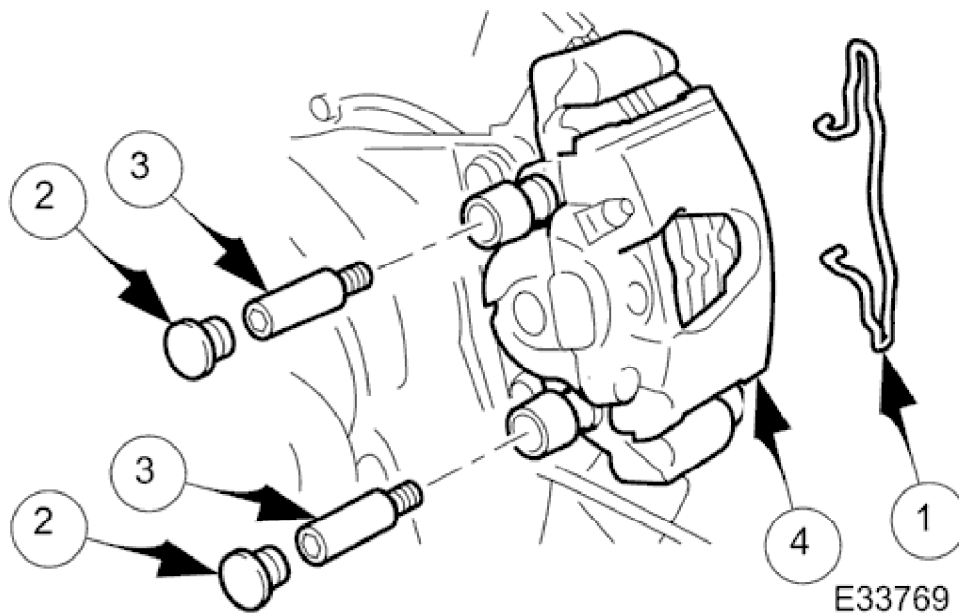
Ball joint splitter
204-293

Removal

CAUTION:

Replacement of nuts and bolts: Various thread-locking devices are used on nuts and bolts throughout the vehicle. These devices restrict the number of times a nut or bolt can be used. Refer to Section <<100-00>> for further information.

1. Raise front of vehicle and support on stands. Refer to Section <<100-02>>.
2. Remove appropriate road wheel. Refer to Section <<100-02>>.



3.

CAUTION:

Do not suspend caliper from brake hose as this will damage the hose.

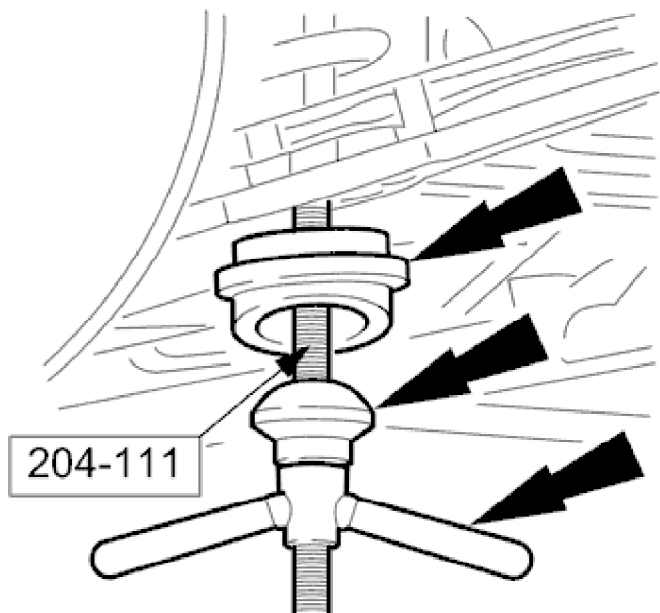
Remove brake calipers from carriers.

1. Remove caliper spring clip.
2. Remove guide pin dust caps.

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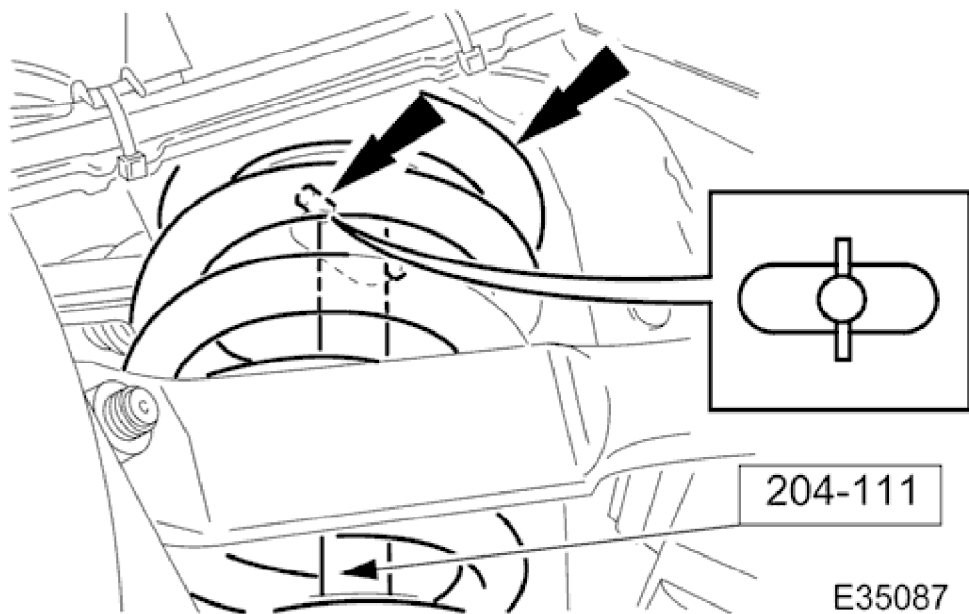
- 3. Slacken and withdraw guide pins.
- 4. Remove caliper from carrier and tie to suspension mounting bracket.

4. Raise vehicle further to provide access for Special Tool 204-111 and support on stands. Refer to Section <<100-02>>.



E35086

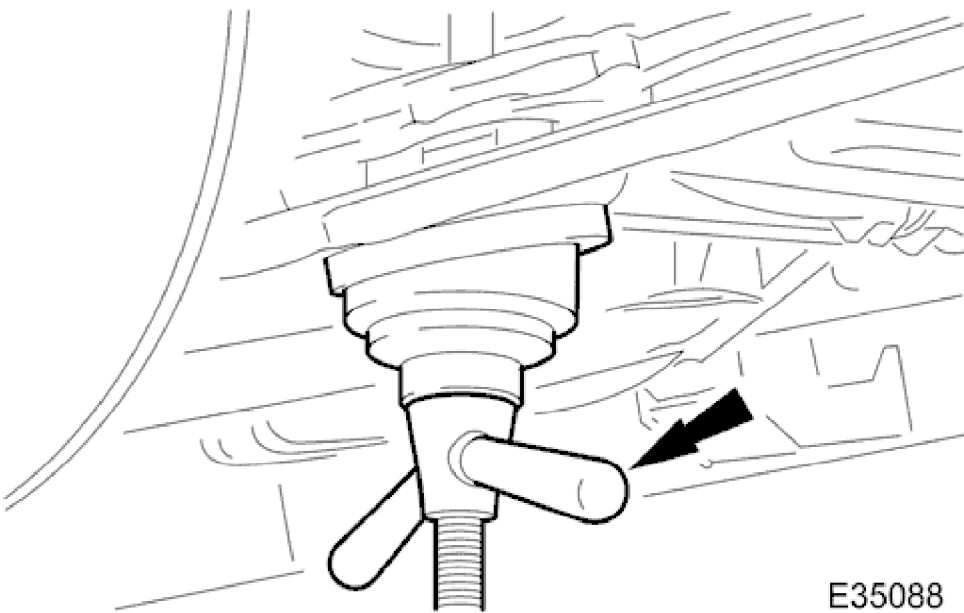
- 5. Install Special Tool 204-111 in road spring.
 - Slacken tool adjuster to suit spring length.
 - Install adaptor and thrust collar.
 - Position stem of tool in center of spring passing dowel through slot in suspension turret.




E35087

6. Rotate stem of Special Tool to position dowel across slot.

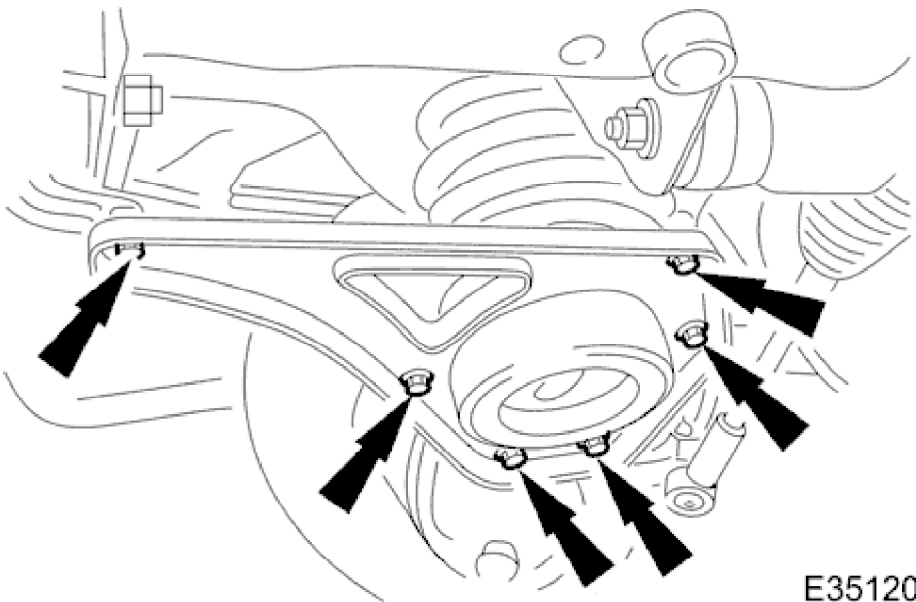
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E35088

- 7.  **WARNING:**
WHEN TURNING TOOL ADJUSTER, ENSURE THAT TOOL STEM DOES NOT ROTATE AND DISTURB POSITION OF DOWEL IN SUSPENSION TURRET.

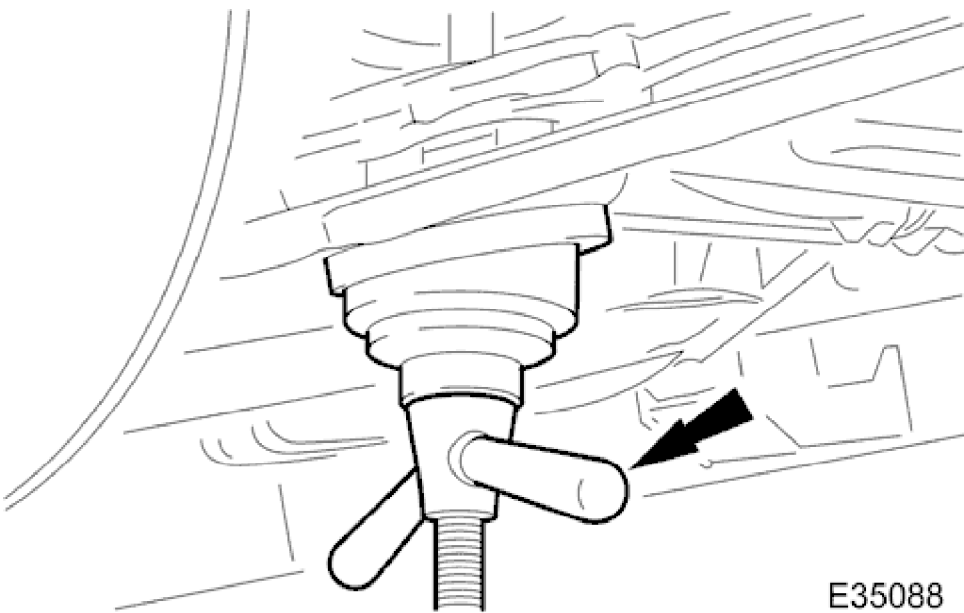
Rotate adjuster of Special Tool to tension spring.



E35120

- 8. Remove spring pan to lower wishbone securing bolts.

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E35088

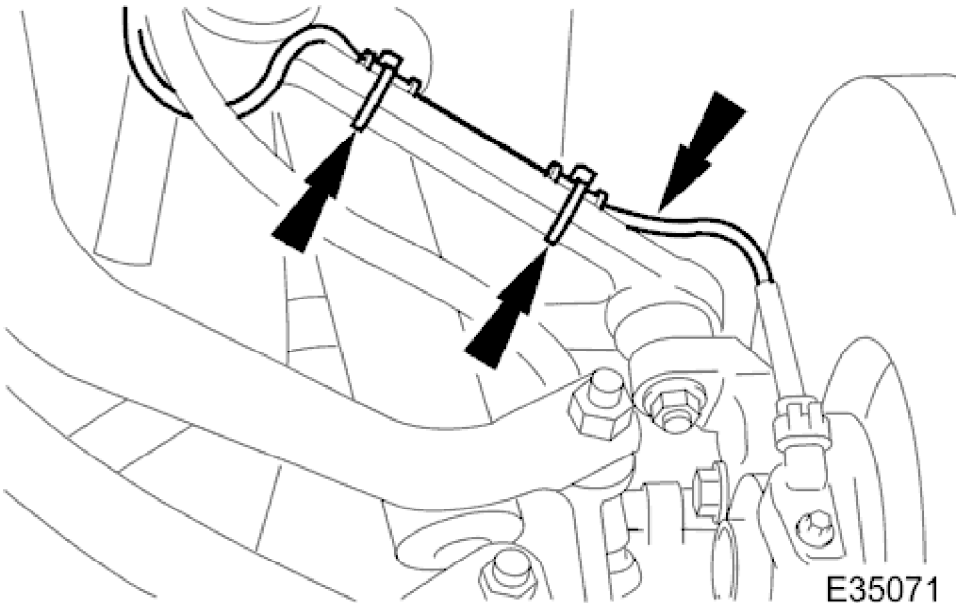
9. Rotate adjuster of Special Tool to release tension from spring.

10. NOTE:

It is not necessary to remove Special Tool from spring at this stage.

Remove spring assembly and Special Tool 204-111 from suspension turret.

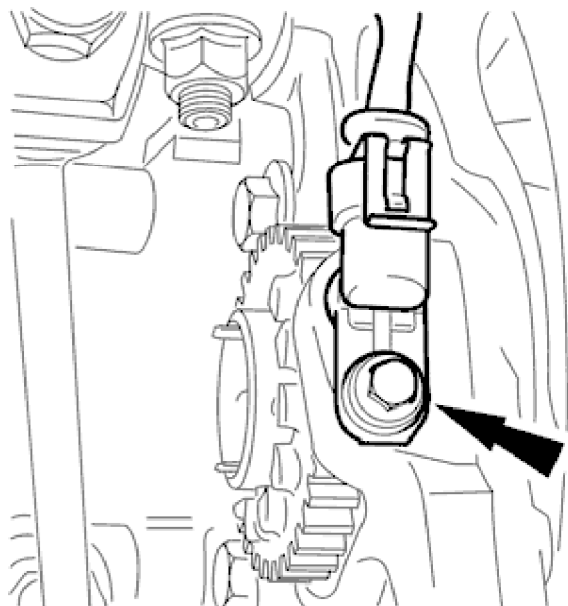
11. Lower vehicle to working height and support on stands.



E35071

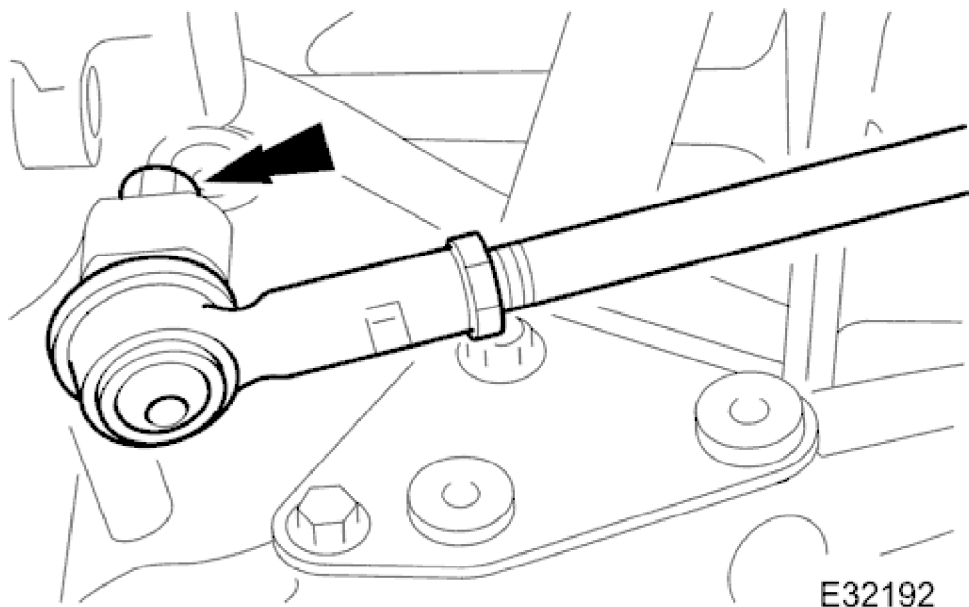
12. Remove and discard tiestraps securing wheel speed sensor harness to upper wishbone.

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E35089

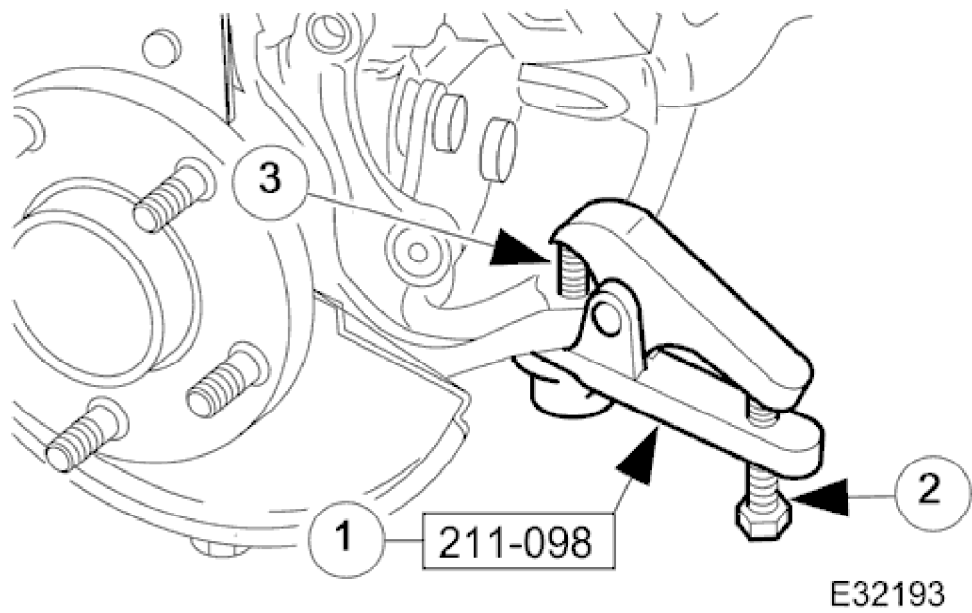
13. Remove wheel speed sensor securing screw and withdraw sensor from vertical link.



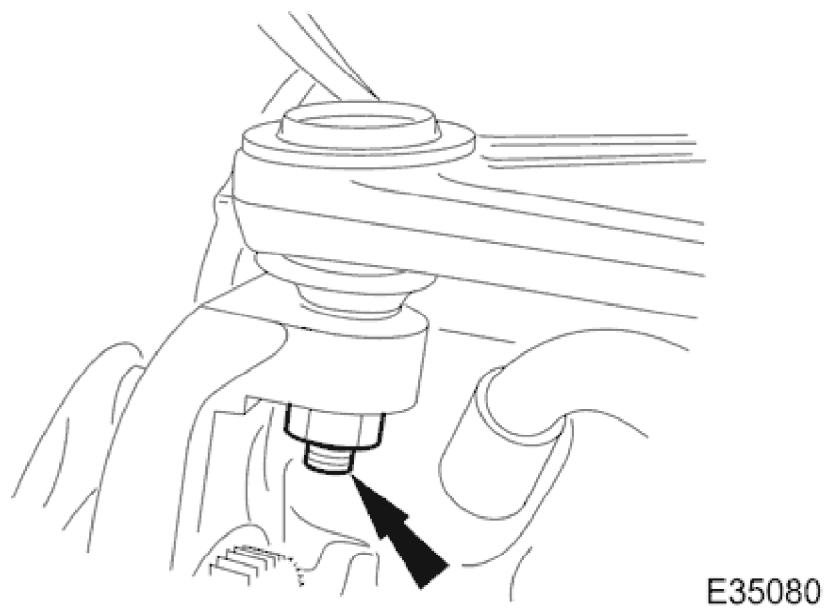
E32192

14. Remove nut securing tie rod outer ball joint to steering arm.

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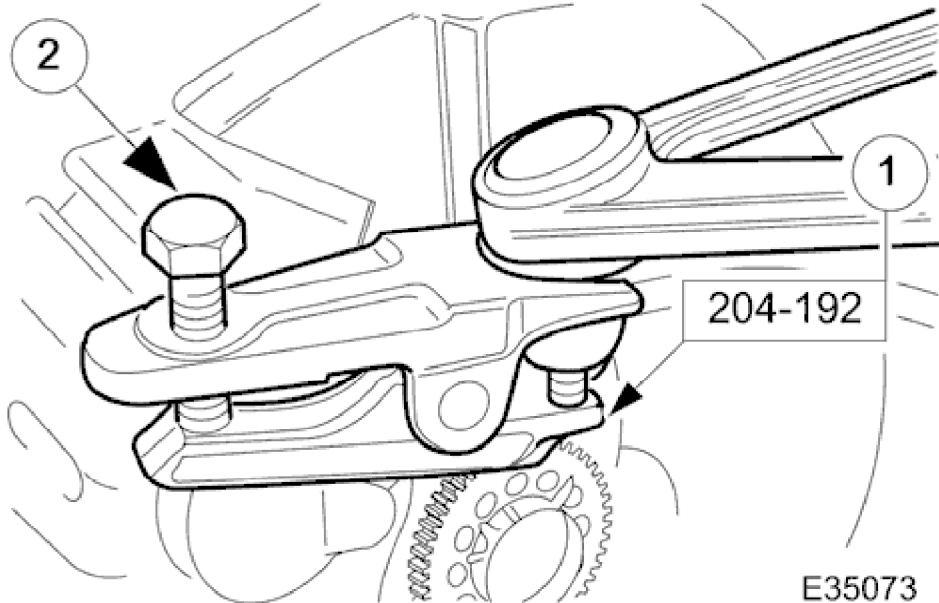


- 15. Release tie rod ball joint from vertical link.
 - 1. Install special tool 211-098 on tie rod ball joint.
 - 2. Tighten tool bolt to release taper pin from vertical link.



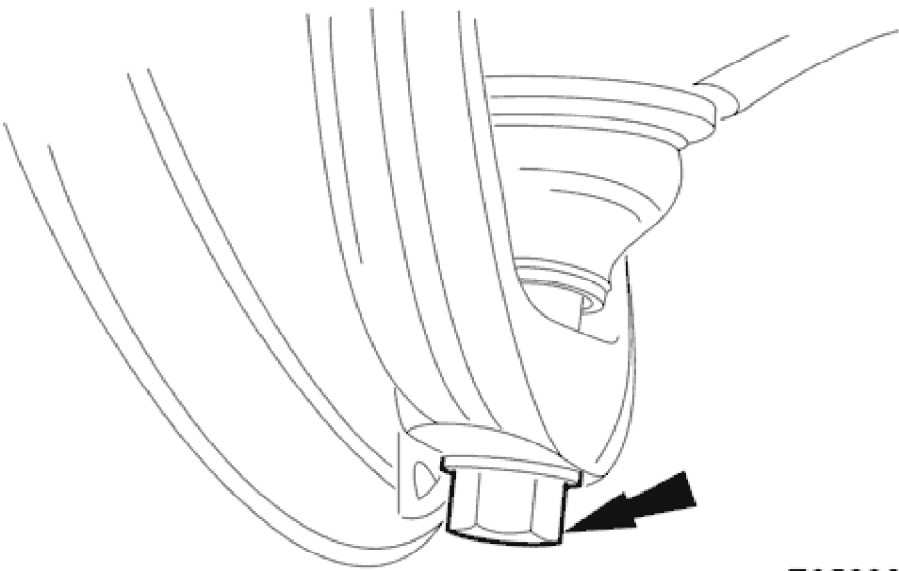
- 16. Remove nut securing upper wishbone ball joint to vertical link.

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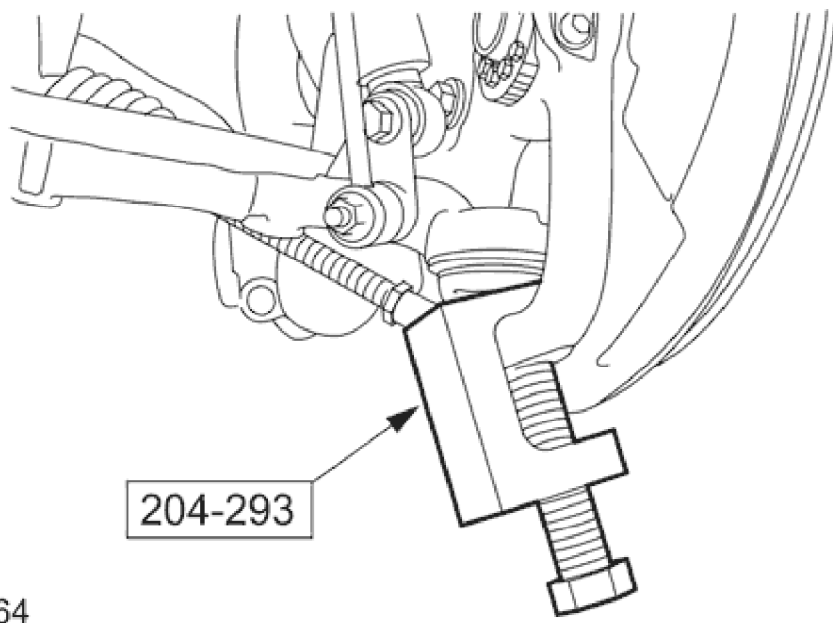
17.  **CAUTION:**
Do not use special tool 211-098 in the following procedure as this will damage the ball joint gaiter.

Release upper wishbone ball joint from vertical link/hub assembly.
1. Install special tool 204-192 on ball joint.
2. Tighten tool bolt to release ball joint taper pin from vertical link.



18. Slacken but do not remove nut securing lower wishbone ball joint to vertical link.

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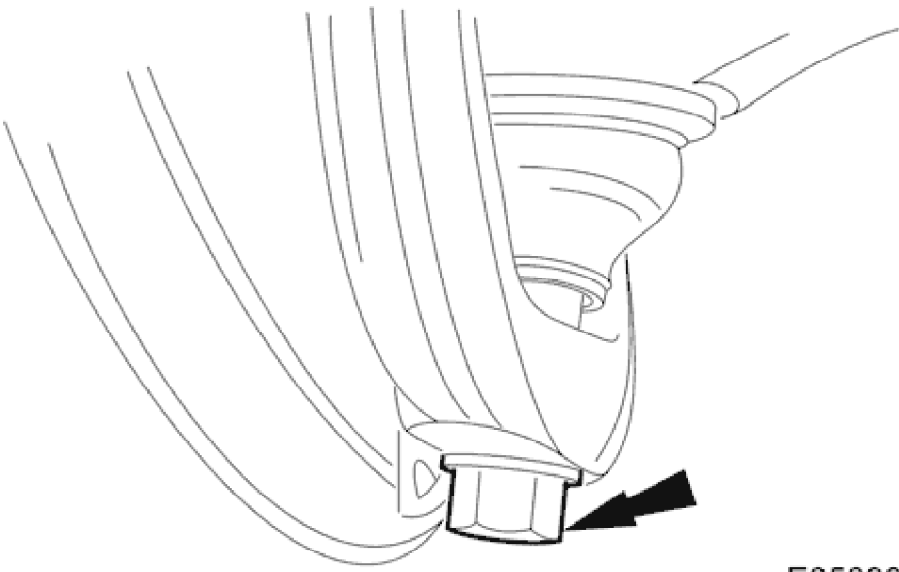


E33564

19.  **CAUTION:**
Do not use special tool 211-098 in the following procedure as this will damage the ball joint gaiter.

Release lower wishbone ball joint from vertical link/hub assembly.
1. Install special tool 204-293 on ball joint.
2. Tighten tool bolt to release ball joint taper pin from vertical link.

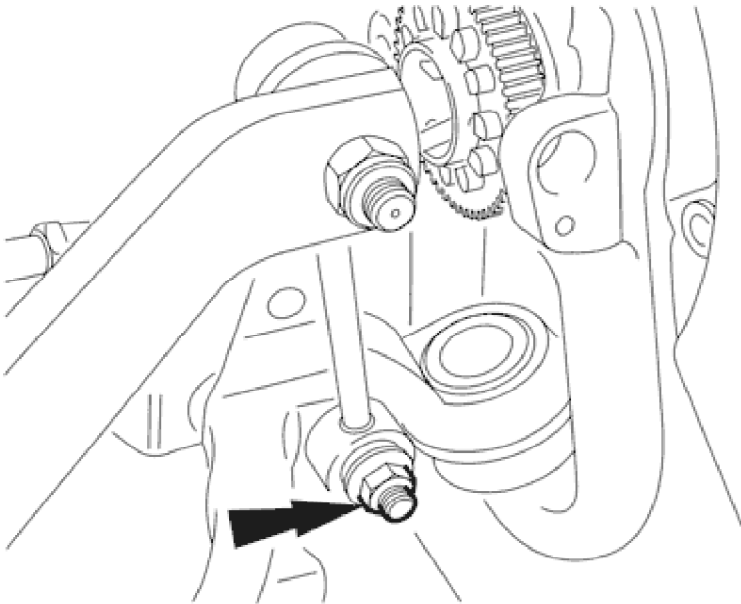
20. Remove special tool 204-293 from ball joint.



E35039

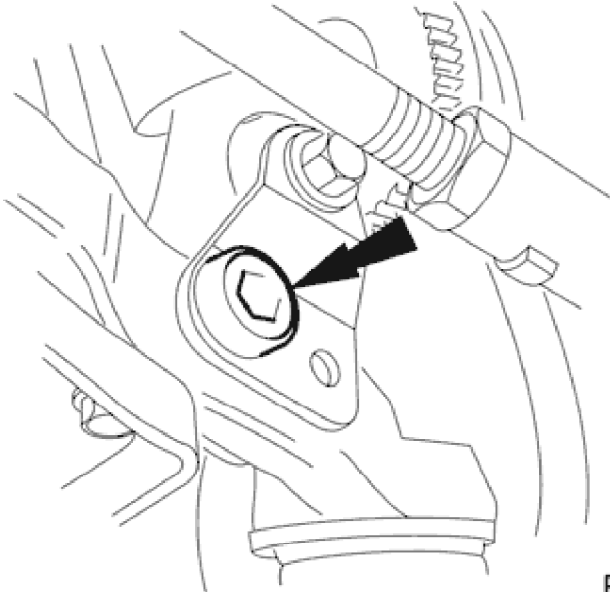
21. Remove vertical link/hub assembly.
- Supporting vertical link/ hub assembly, remove lower wishbone ball joint nut.
 - Remove vertical link /hub assembly.

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E35129

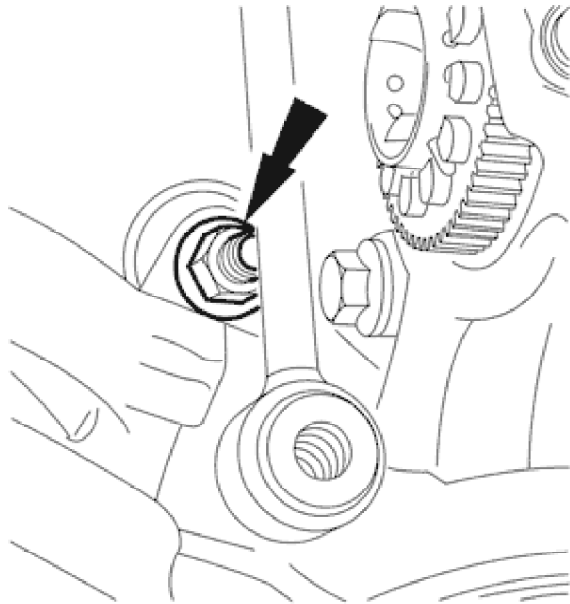
22. Remove stabilizer bar link to wishbone securing nut and bolt.



E35124

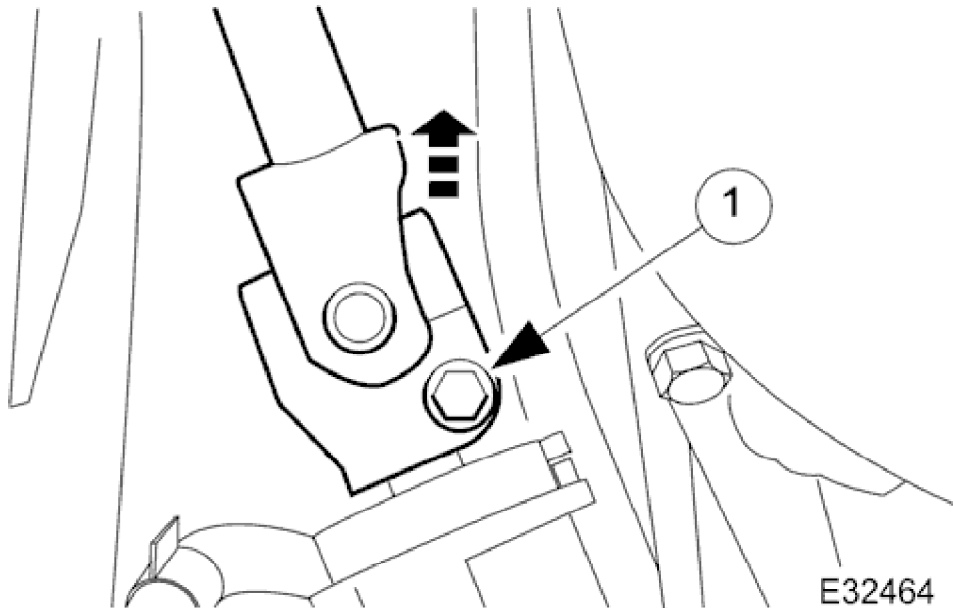
23. Remove wishbone front arm to rear arm securing bolt .

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E35125

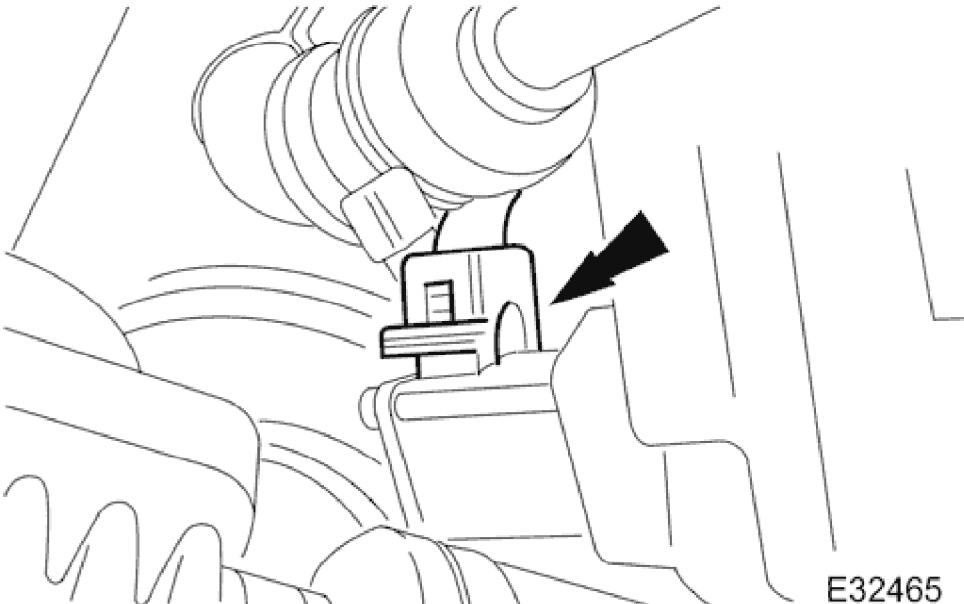
24. Slacken but do not remove shock absorber lower nut and bolt.



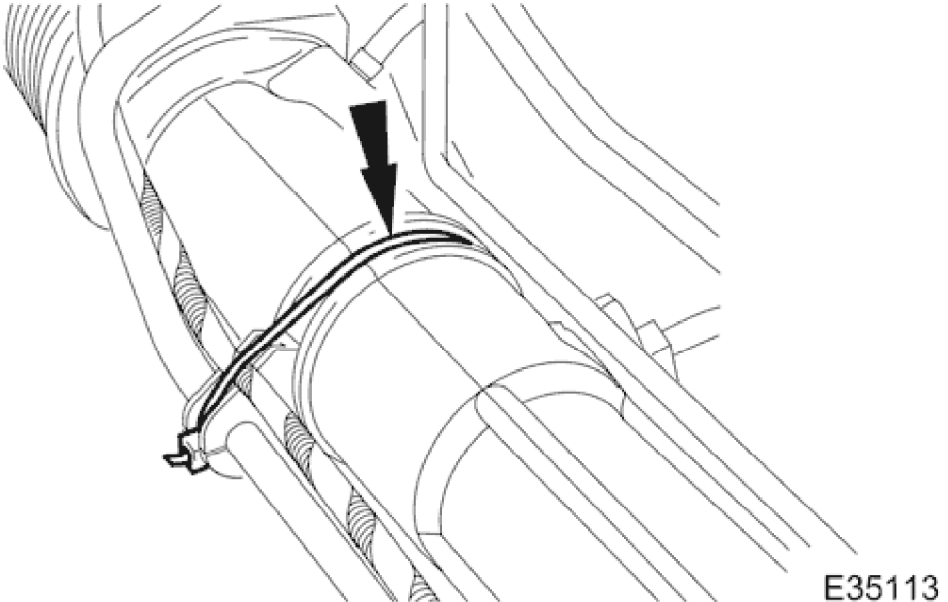
E32464

25. Release lower steering column from pinion shaft.
1. Remove lower steering column nut and bolt.
• Move column upwards to release it from pinion shaft.

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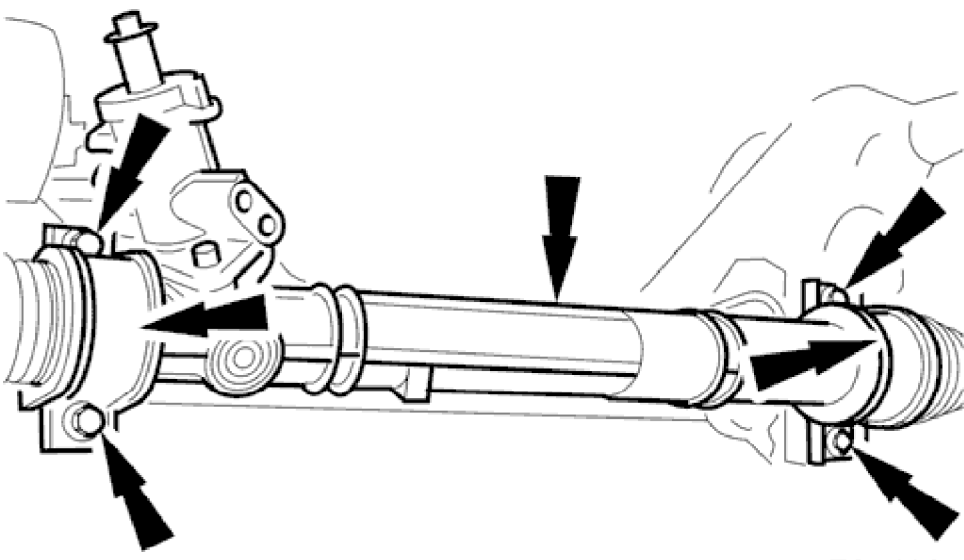


26. Disconnect harness connector from steering transducer.



27. Remove tiestrap securing return pipe, harness (RHD only) and rubber support to steering rack.

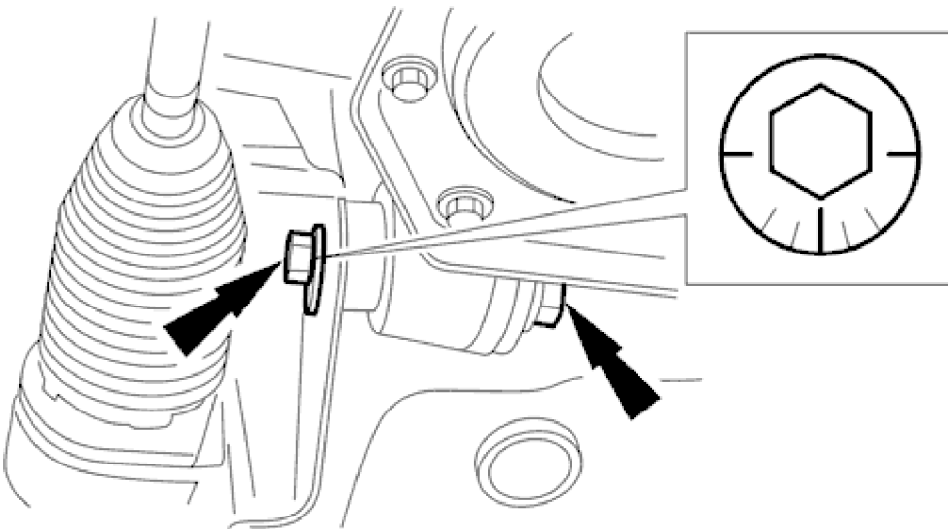
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E35100

28.  **CAUTION:**
Do not allow steering pipes to support weight of steering rack.

- Position steering rack for access.
- Pivot steering arm fully downwards
 - Remove steering rack securing bolts.
 - Carefully move steering rack downwards for access to wishbone eccentric bolt.



E35126

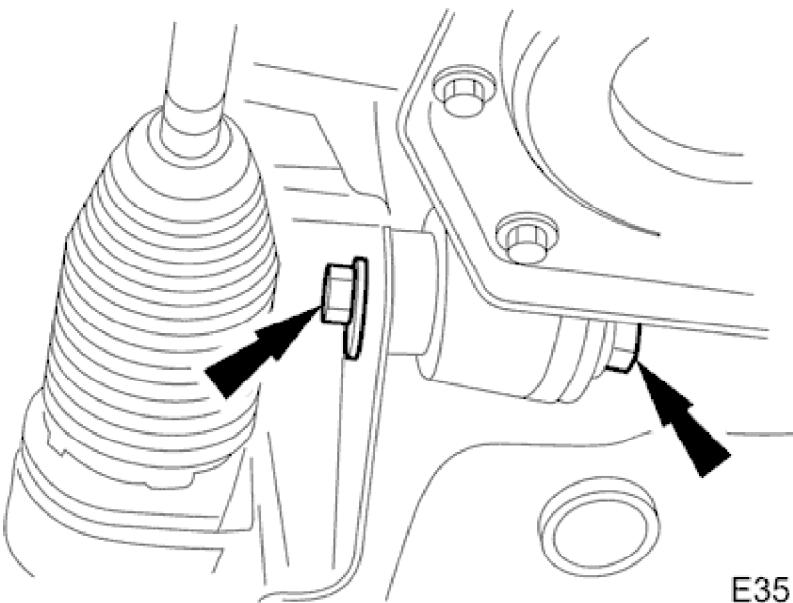
29. Remove lower wishbone rear arm eccentric bolt and nut.

- Mark position of eccentric bolt large graduation mark on crossbeam.
- Remove wishbone rear eccentric bolt and nut.

30. Remove lower wishbone rear arm/ball joint assembly from crossbeam.

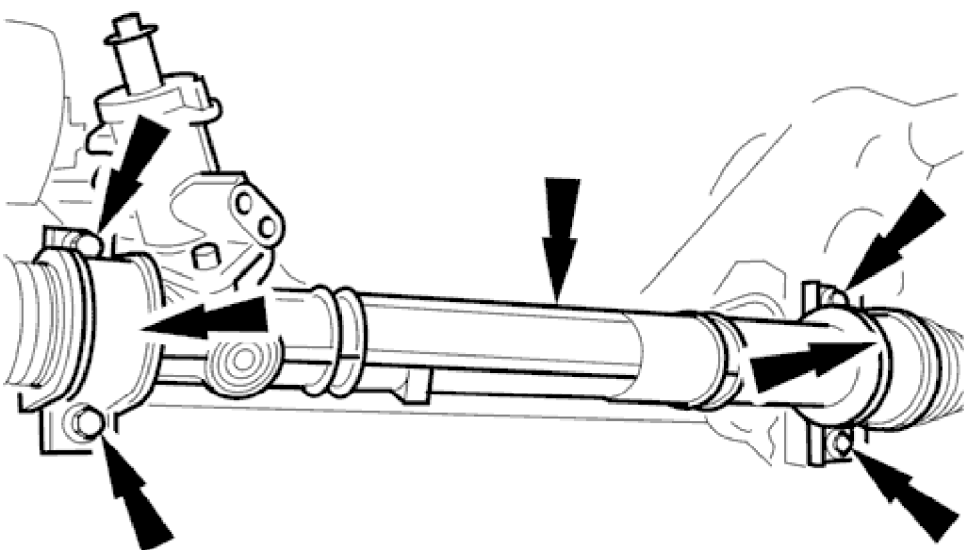
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Installation



E35127

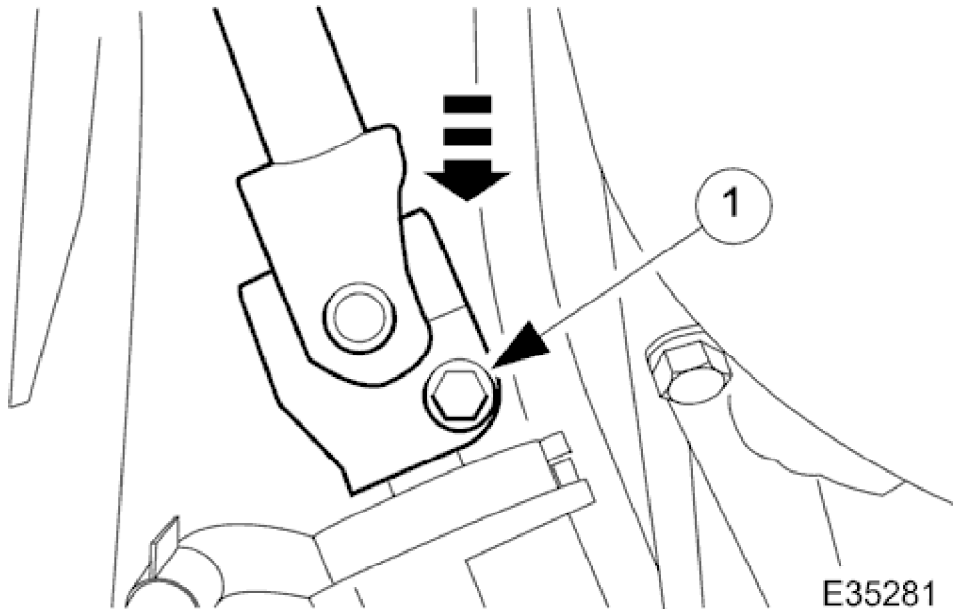
1. Position wishbone rear arm on crossbeam and install but do not tighten eccentric bolt.



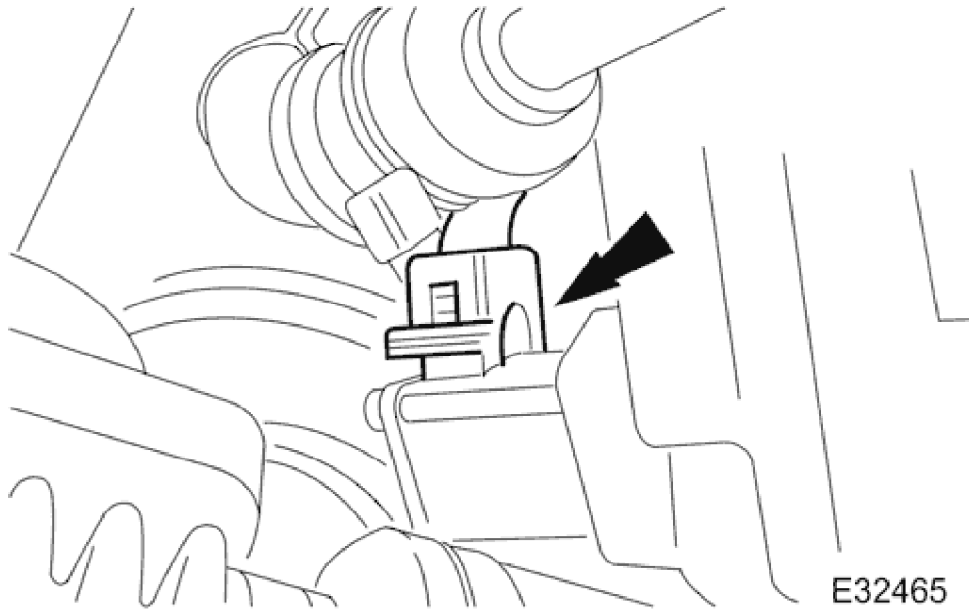
E35100

2. Install steering rack on crossbeam.
- Ensure that bushes are correctly positioned on steering rack.
 - Position steering rack on crossbeam.
 - Position support brackets over bushes.
 - Install mounting bracket bolts and tighten to 41-54Nm.

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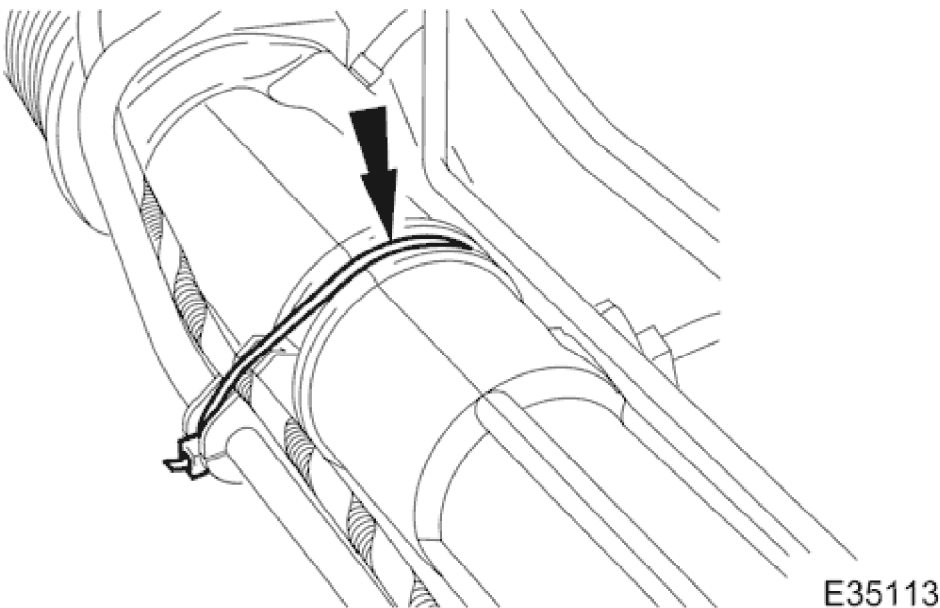


- 3. Install lower steering column on pinion shaft.
 - Move column downwards to engage coupling splines on pinion shaft.
 - 1. Install nut and bolt and tighten to 22-28Nm.

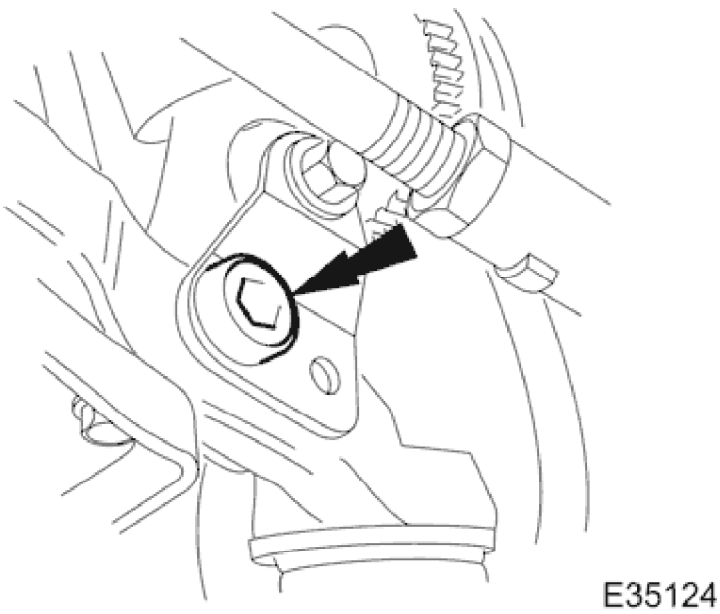


- 4. Position and connect harness to steering transducer.
 - RHD vehicles. Position steering harness behind return pipe.
 - Connect harness to transducer.

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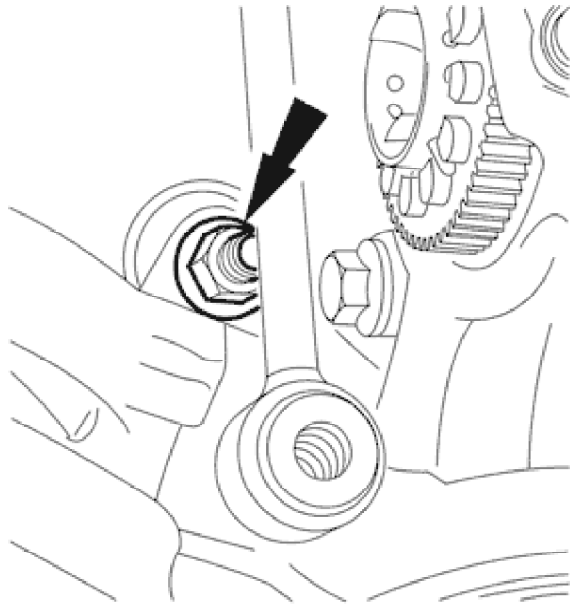


5. Secure return pipe on steering rack.
- 1. Position pipe rubber support on steering rack.
 - 2. Position pipe on support .
 - 3. RHD vehicles. Position harness on pipe support rubber.
 - 4. Secure pipe and harness to support with new tiestrap.



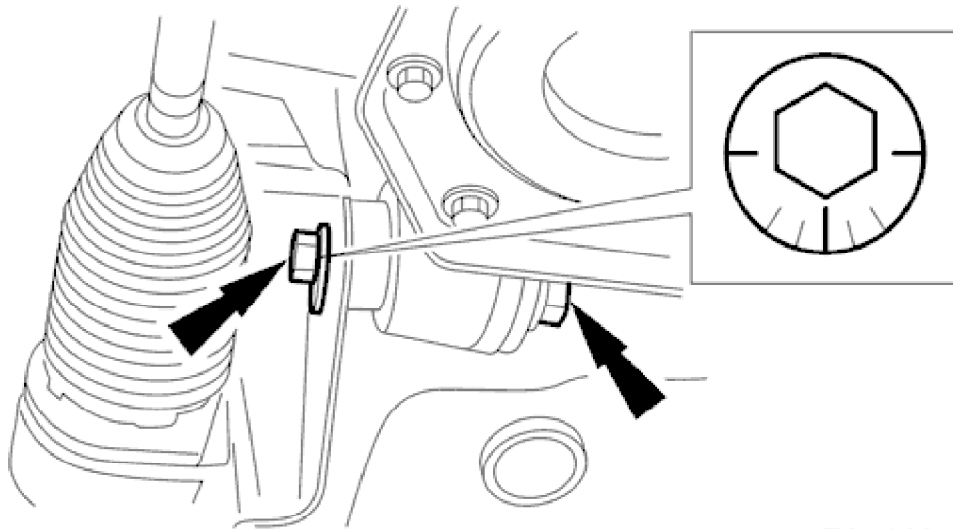
6. Install shock absorber and mounting bracket.
- Position shock absorber mounting bracket on wishbone rear arm.
 - Install wishbone front arm to rear arm bolt and tighten to 77-103Nm.

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E35125

7. Tighten shock absorber lower bolt and nut to 43-57Nm.

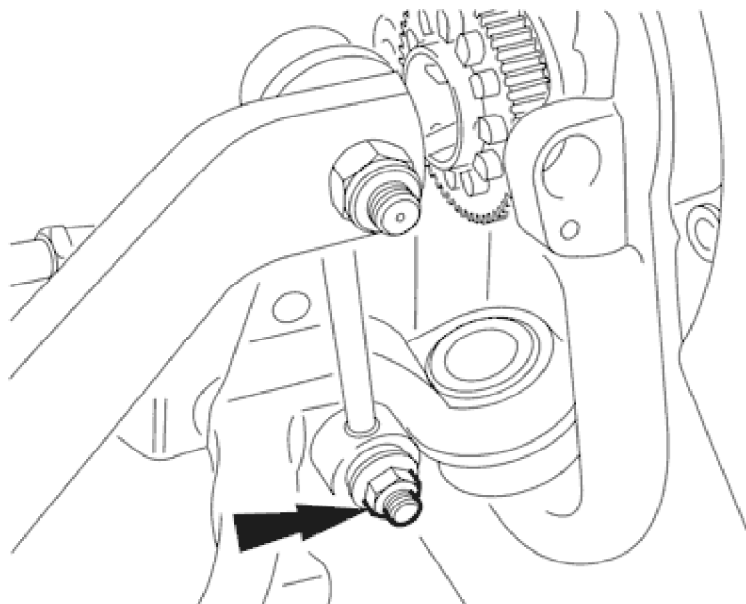


E35126

8. Position and partially tighten wishbone rear eccentric bolt.

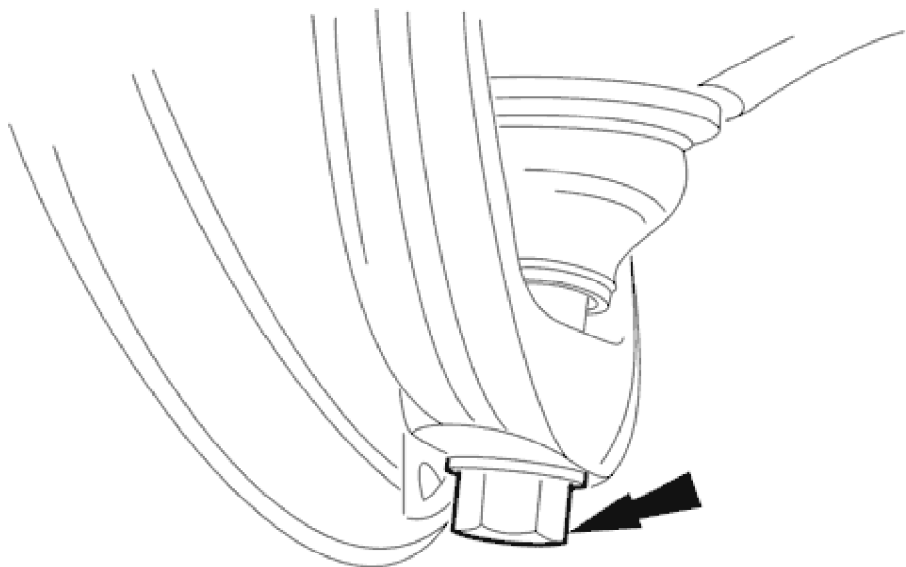
- Rotate eccentric bolt to align large graduation with mark made during removal.
- Ensuring bolt remains in position, partially tighten nut.

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E35129

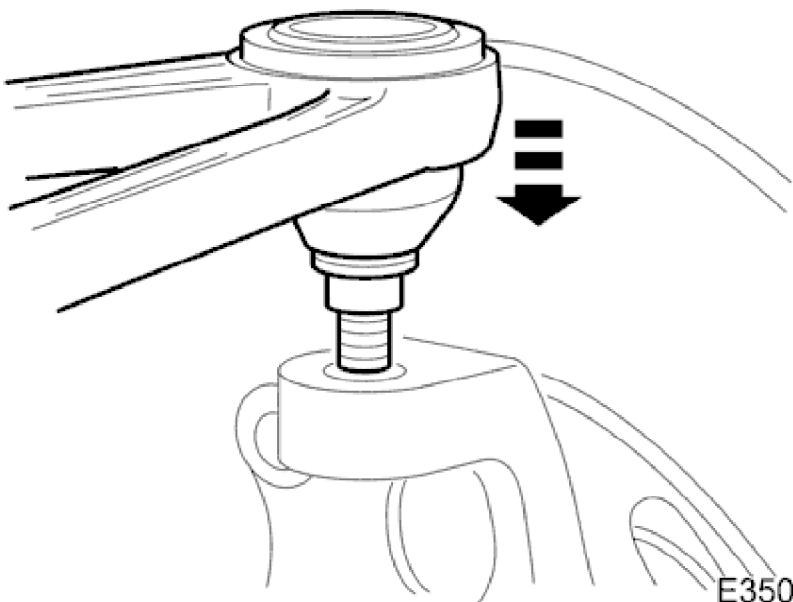
9. Install stabilizer bar link to wishbone securing nut and bolt and tighten to 41-54Nm.



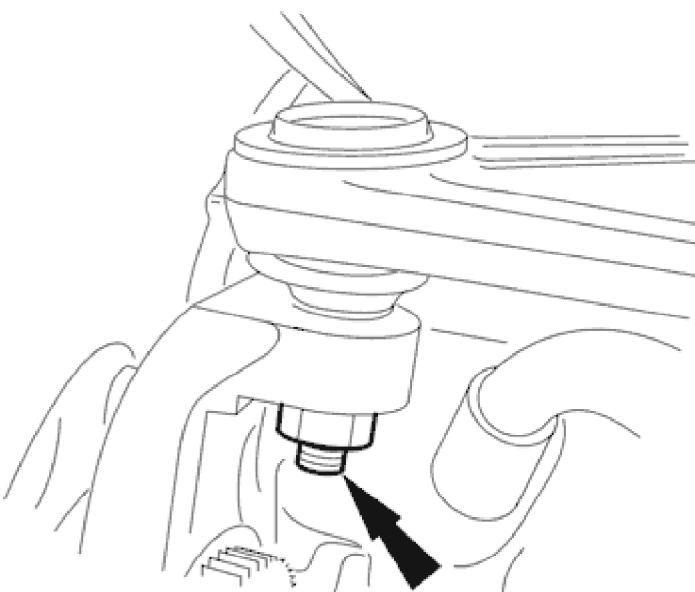
E35039

10. Position vertical link/ hub assembly on lower ball joint taper pin, install nut and tighten to 60-80Nm.

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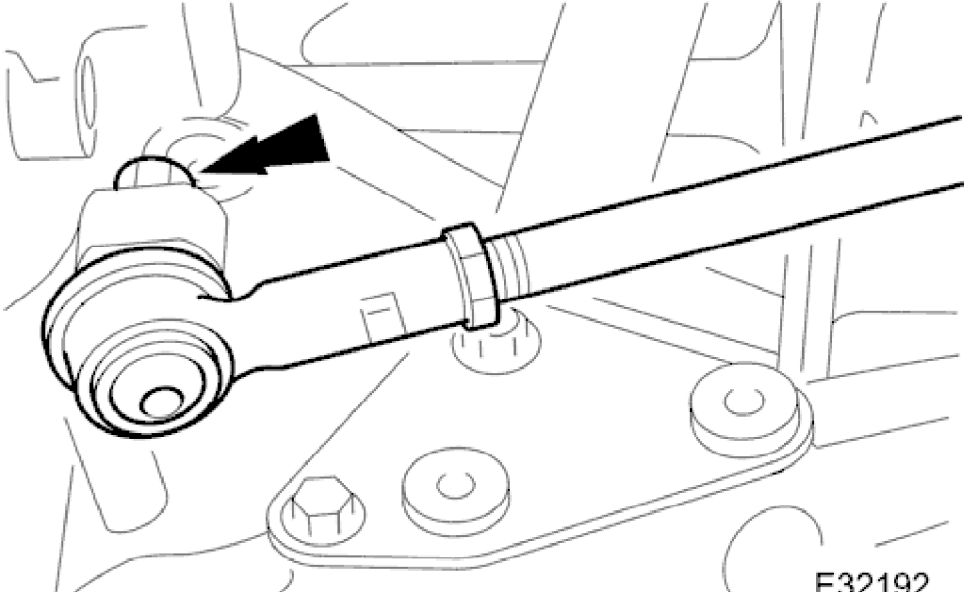


E35079
11. Position vertical link/ hub assembly on upper ball joint taper pin.



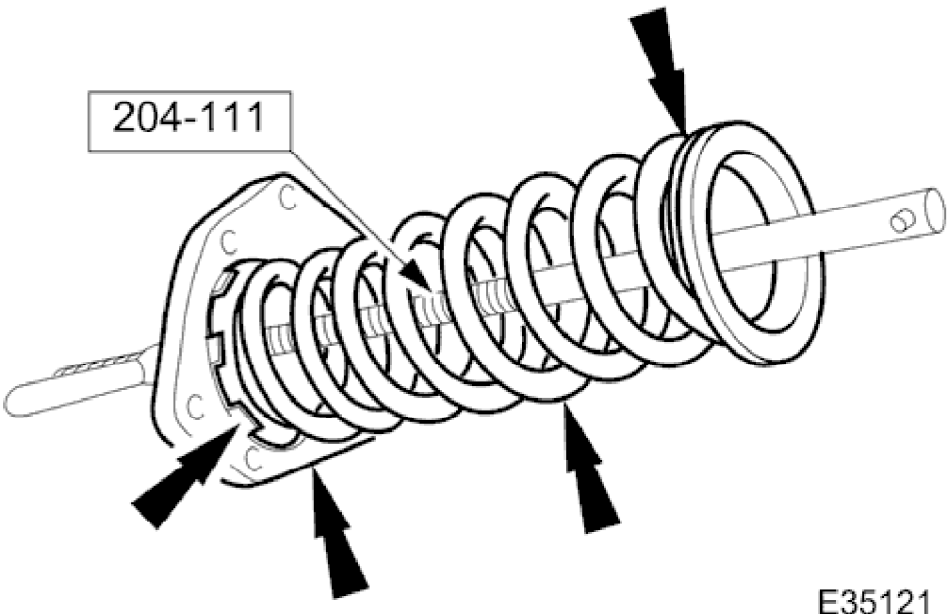
E35080
12. Install nut securing upper ball joint to vertical link and tighten to 60-80Nm.

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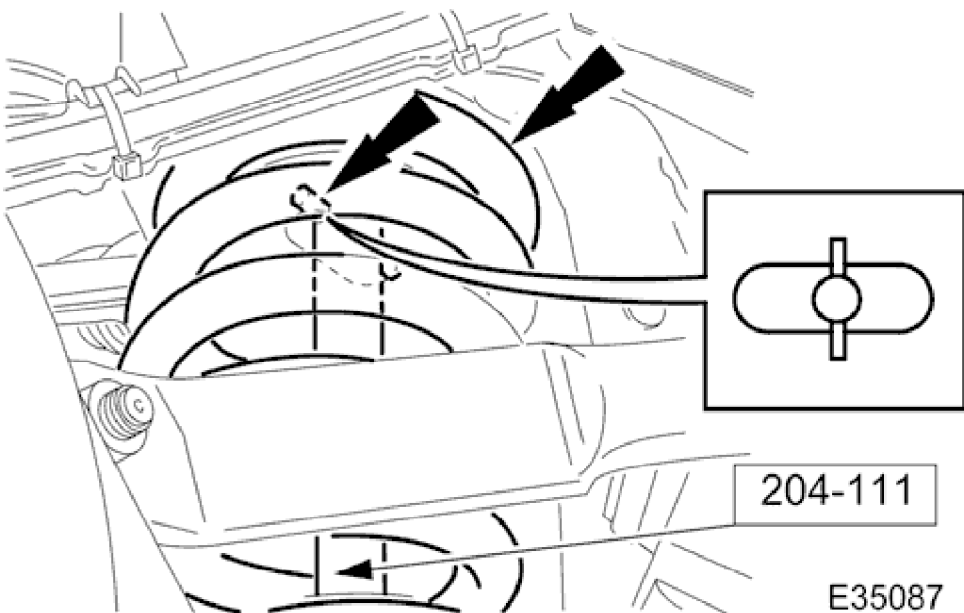
13. Position tie rod ball joint taper pin on steering arm and install and tighten nut to 71-85Nm.

14. Raise vehicle and support on stands to provide access for Special Tool 204-111 and road spring.

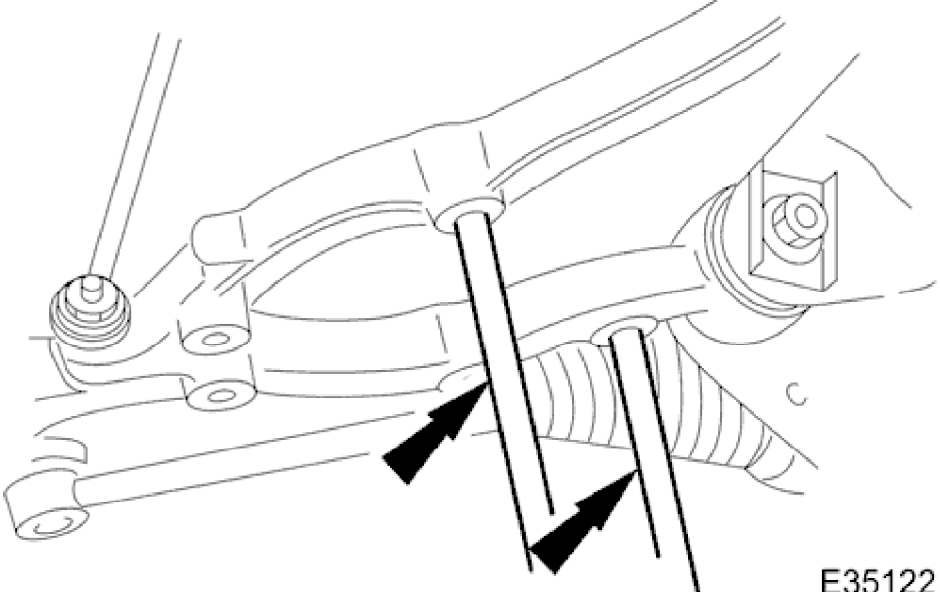


15. Install spring pan, rubber lower seat, spring and rubber upper seat on Special Tool 204-111.

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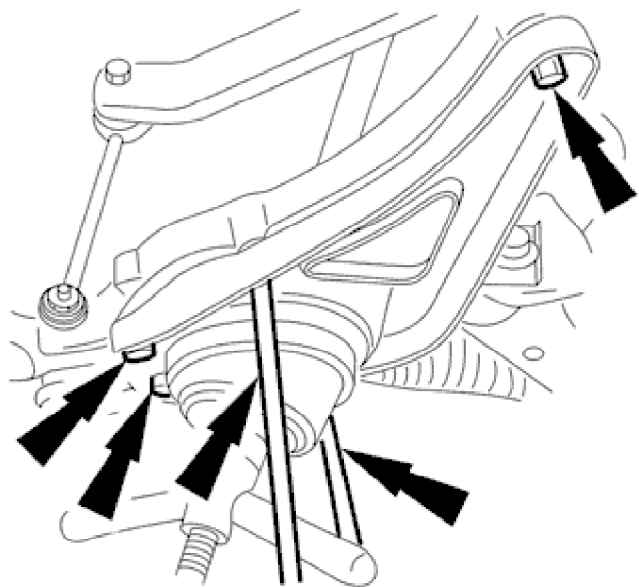


16. Install road spring in suspension turret.
- Install spring pan/spring assembly and Special Tool 204-111 in suspension turret.
 - Ensure spring upper seat is correctly positioned in turret.
 - Engage tool dowel in turret slot.
 - Rotate adjuster of Special Tool 204-111 to lightly tension spring.



17. Install guide pins (supplied with Special Tool 204-111) in spring pan/wishbone bolt locations.

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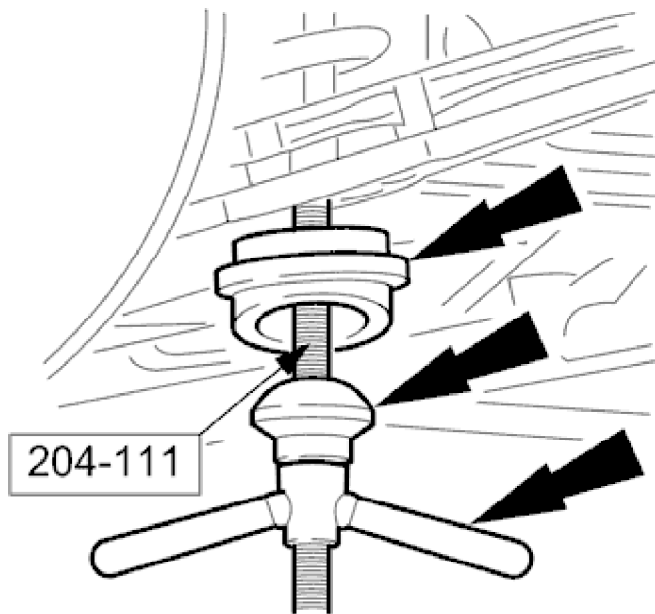


E35123

18.  **WARNING:**
WHEN ROTATING TOOL ADJUSTER, ENSURE THAT TOOL STEM DOES NOT TURN AND DISTURB POSITION OF DOWEL IN SUSPENSION TURRET.

Install spring pan to wishbone securing bolts.

- Rotate tool adjuster to gradually increase spring tension.
- Progressively install but do not tighten spring pan securing bolts.
- Tighten spring pan bolts to 70-90Nm.
- Ensure spring lower seat is correctly positioned in spring pan.



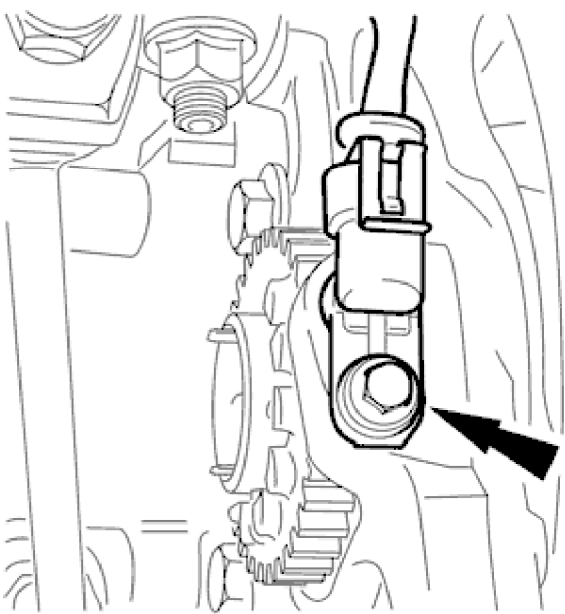
E35086

19.  **WARNING:**
WHEN ROTATING TOOL ADJUSTER, ENSURE THAT TOOL STEM DOES NOT TURN AND DISTURB POSITION OF DOWEL IN SUSPENSION TURRET.

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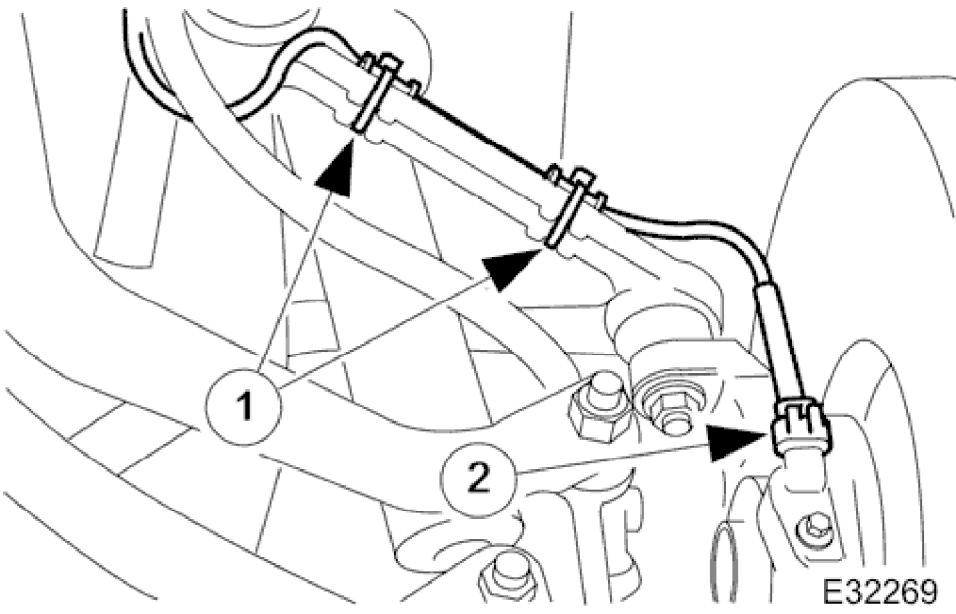
- Remove Special Tool 204-111 from suspension.
- Rotate adjuster of Special Tool to release tension on spring.
 - Rotate tool stem to release dowel from turret.
 - Withdraw tool and adaptor .assembly.

20. Lower vehicle to working height and support on stands.



E35089

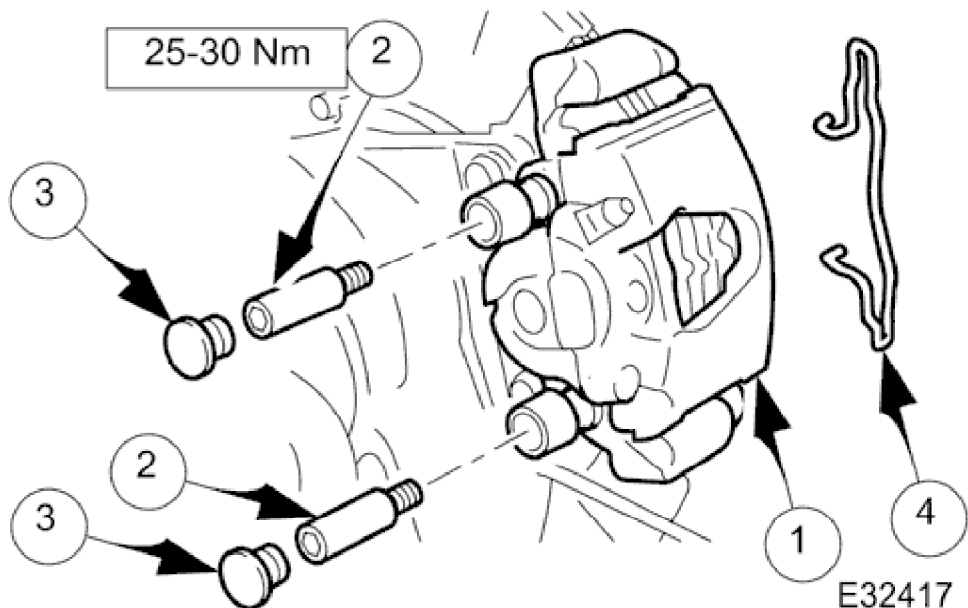
21. Install wheel speed sensor.
- Position wheel speed sensor on vertical link.
 - Install sensor bolt and tighten to 8-10Nm.



E32269

22. Connect wheel speed sensor harness.
1. Connect wheel speed sensor harness to sensor.
 2. Using new tiestraps secure wheel speed sensor harness to upper wishbone.

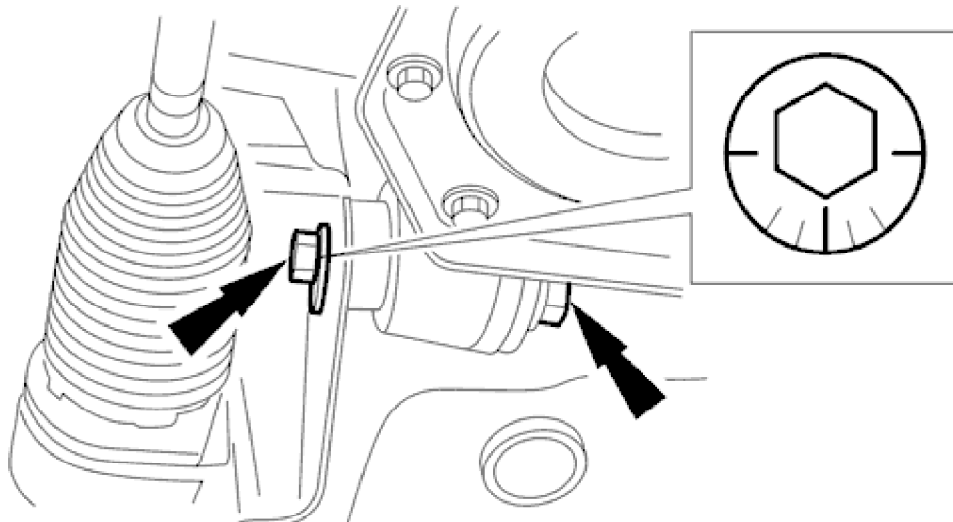
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- 23. Install brake calipers.
 - Remove tie supporting brake caliper.
 - 1. Install caliper on carrier.
 - 2. Install guide pins.
 - 3. Install guide pin dust caps.
 - 4. Install caliper spring clip.

24. Install road wheel. Refer to Section <<100-02>>.

25. Raise vehicle, remove stands and lower vehicle onto road wheels.



26. Ensuring graduation mark remains aligned, finally tighten wishbone rear eccentric bolt to 113-153Nm.

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27. Check wheel alignment and if necessary adjust. Refer to <<**57.65.01**>>.