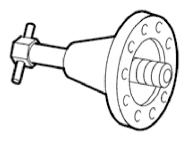
Wheel Knuckle Bushing 64.15.24

**Special Service tools** 

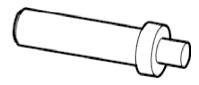


E36452

Hub Puller 204-011 (JD 1D)

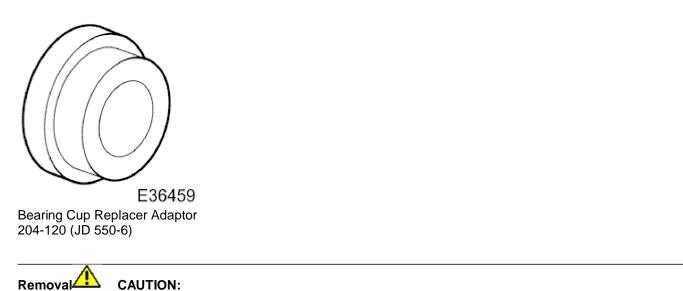


Hub Holding Tool 204-195 (JD227)



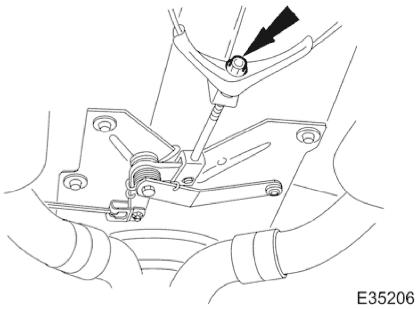
E36457

Driver Handle 100-013 (18G 134)

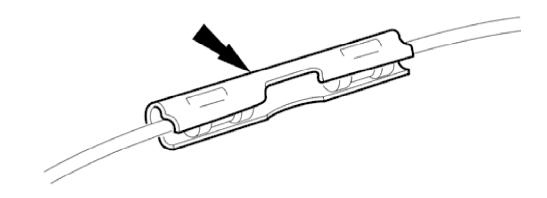


Replacement of nuts and bolts: Various thread-locking devices are used on nuts and bolts throughout the vehicle. These devices restrict the number of times a nut or bolt can be used. See section <<100-00>> for information.

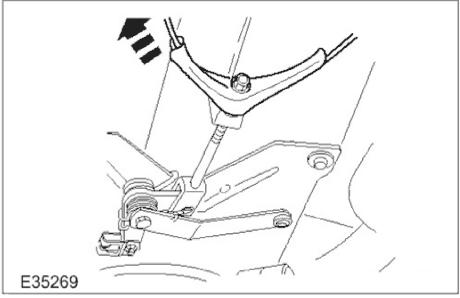
- 1. Release parking brake.
- 2. Raise the vehicle on a four-post lift.



3. Fully slacken but do not remove parking brake cable adjuster nut.

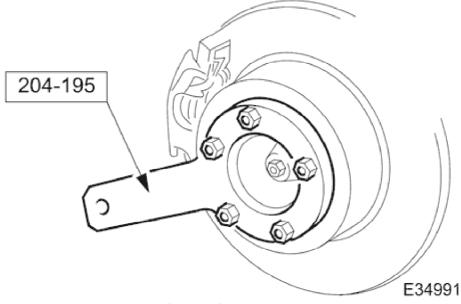


4. Release appropriate side parking brake cable from connecting clip.

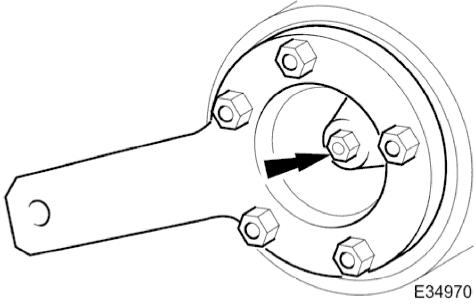


5. Withdraw parking brake cable through equalizer (LH side cable only).

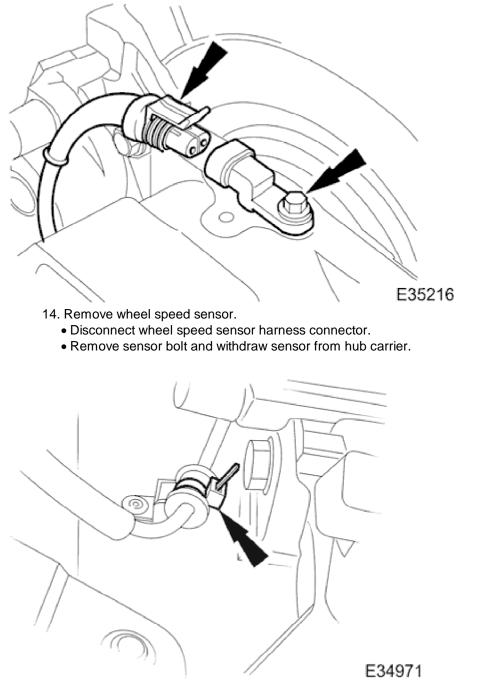
- 6. Lower four-post lift.
- 7. Raise rear of vehicle to working height and support on stands. Refer to section <<100-02>>.
- 8. Remove road wheel. Refer to section <<204-04>>.



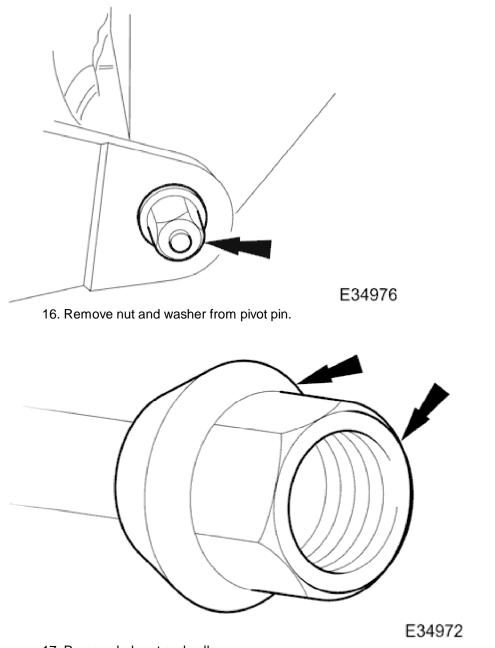
9. Position special tool (204-195) on hub studs and install securing nuts.



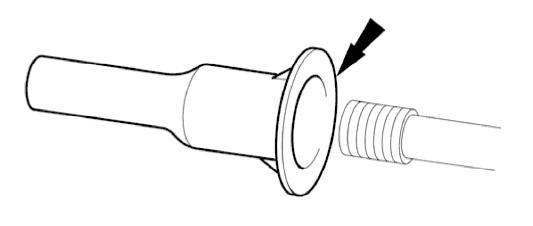
- 10. Slacken but do not remove hub to axle shaft securing nut.
- 11. Remove nuts from studs and withdraw special tool (204-195) from hub.
- 12. Remove rear brake disc. Refer to 70.10.13.
- 13. Remove handbrake shoes. Refer to <<70.40.05>>.



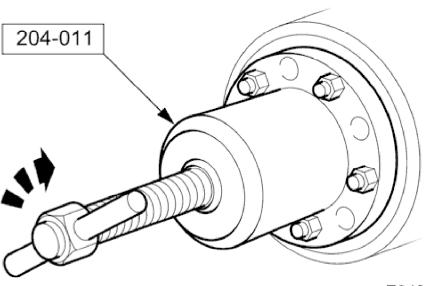
15. Remove wheel speed sensor harness tie strap and position harness for access.



- 17. Remove hub nut and collar.
  - Remove nut.
  - Remove locating collar.



18. Install thread protector on axle shaft.



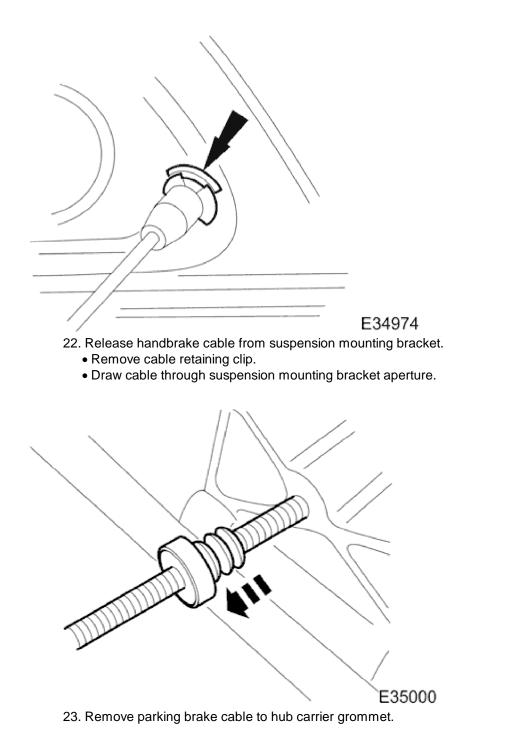
E34983

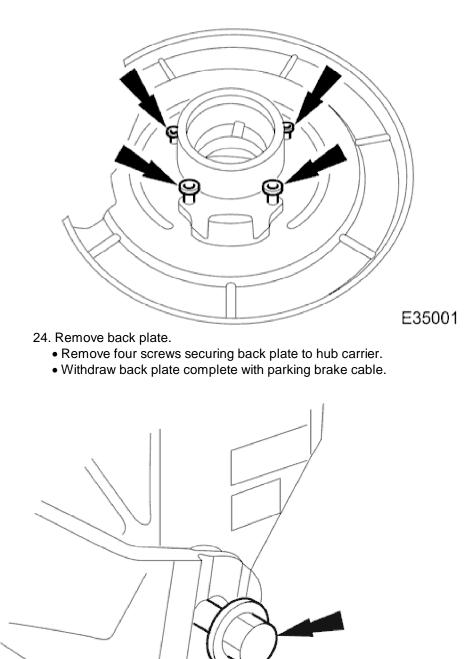
E34973

- 19. Release hub from axle shaft.
  - Position hub puller 204-011 on hub studs.
  - Install securing nuts.
  - Progressively tighten puller center bolt to release hub from axle shaft splines.

20. Remove nuts and release puller from hub.

21. Remove thread protector from axle shaft.



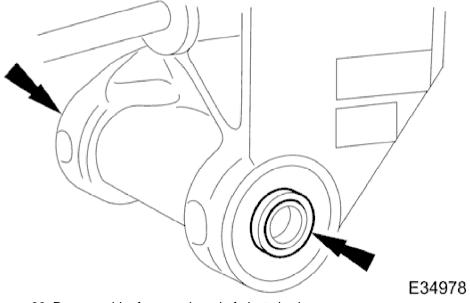


E34977

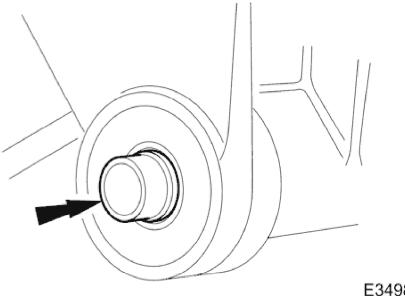
25. Remove hub and carrier.

• Withdraw pivot pin.

• Remove hub and carrier assembly from wishbone and axle shaft.



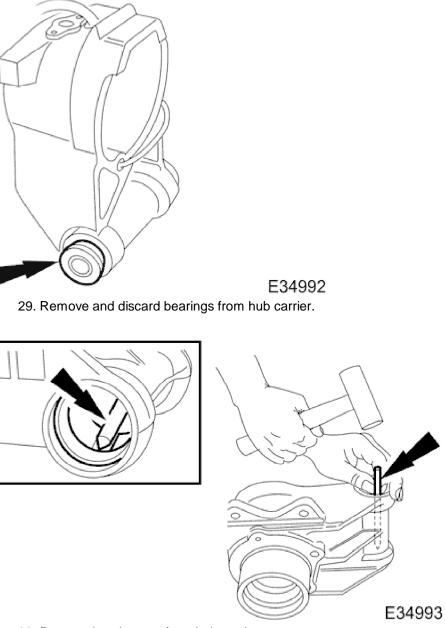
26. Remove shim from each end of pivot pin sleeve.



27. Withdraw pivot pin sleeve from hub carrier.

E34985

28. Secure hub carrier in a vice.

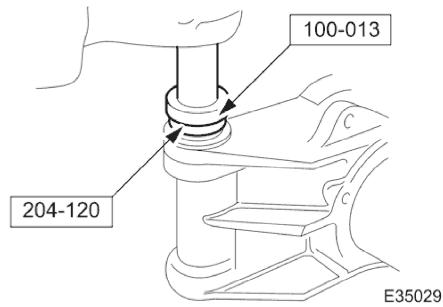


- 30. Remove bearing cup from hub carrier.
  - Position hub carrier on a piece of wood.
  - Position a long tapered drift in housing bore recess.
  - Remove bearing cup.

31. Repeat procedure to remove opposite end bearing cup and discard both cups.

- 32. Remove hub carrier from vice.
- 33. Thoroughly clean all components.

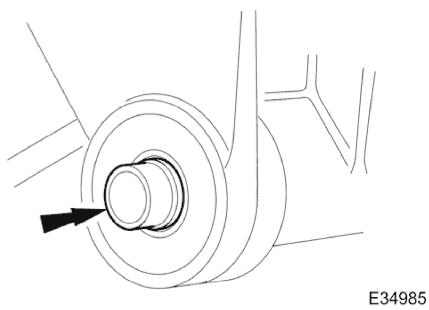
Installation



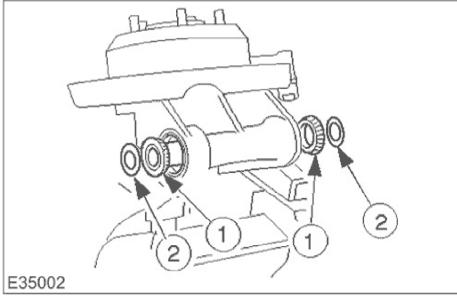
- 1. Using a hydraulic press, install new bearing cups in hub carrier.
  - Using special tool 100-013 and adapter 204-120, align bearing cup to hub carrier.

• Align assembly to ram, and operate press to fully seat bearing cup. Repeat procedure to fit other bearing cup.

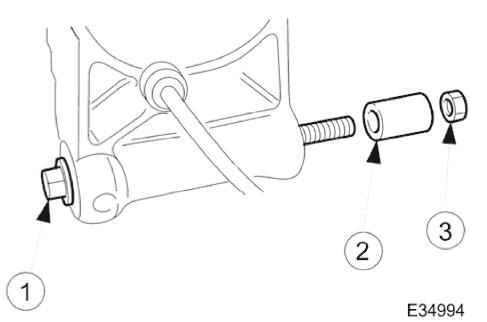
2. Secure hub carrier in a vice.



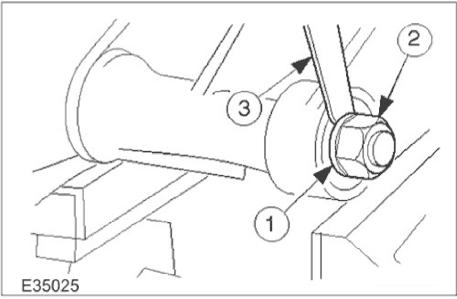
- 3. Install pivot pin sleeve in hub carrier.
- 4. Pack new pivot bearings with Shell Retinax 'A' grease.



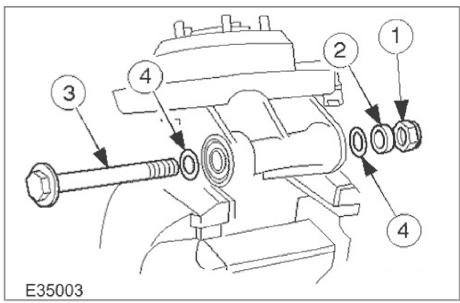
- 5. Install pivot bearings in hub carrier.
  - 1. Slide bearing over pivot sleeve and seat in bearing cup.
  - 2. Install a 3.905 mm (minimum size) shim to sleeve.
  - Repeat procedure to install opposite end bearing and shim.



- 6. Press pivot pin sleeve into hub carrier.
  - 1. Install pivot pin in sleeve.
  - 2. Position a piece of tube over part of pin thread.
  - 3. Install pivot pin nut and tighten until shims fully seat on pivot sleeve.
  - Remove nut and tube.

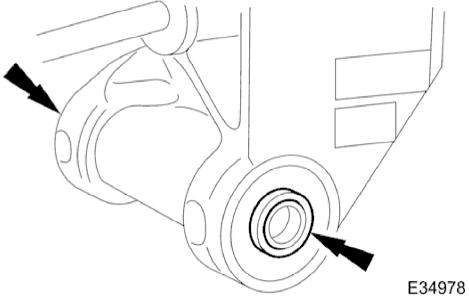


- 7. Measure bearing pre-load.
  - 1. Position a flat washer to abut shim.
  - 2. Install pivot pin nut.
  - 3. Using a feeler gauge measure and record gap between shim and washer.

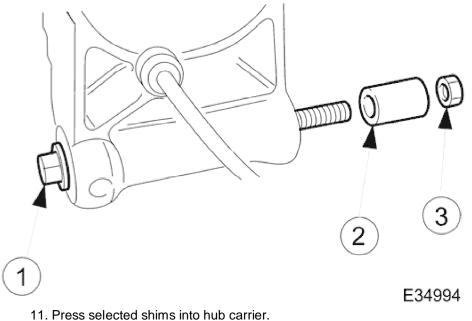


- 8. Remove shims from hub carrier.
  - 1. Remove nut.
  - 2. Remove washer.
  - 3. Remove pivot pin.
  - 4. Remove both shims from pivot sleeve.

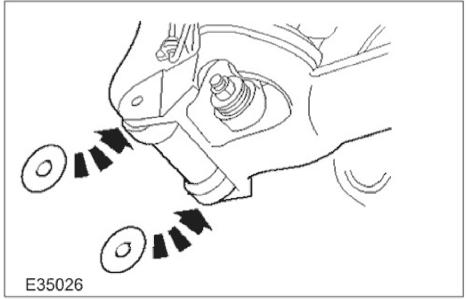
9. Using 3.905mm shim and pre-load measurements as a datum, select two new shims of equal thickness to provide a pre-load measurement of 0.076 mm.



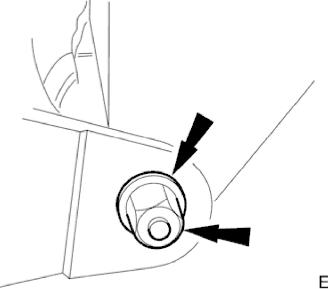
10. Position shims on pivot sleeve.



- Install pivot pin in sleeve.
  Position piece of tube over part of pivot pin thread.
  Install nut to fully seat shims on sleeve.
- 12. Remove nut, tube and pivot pin from hub carrier.

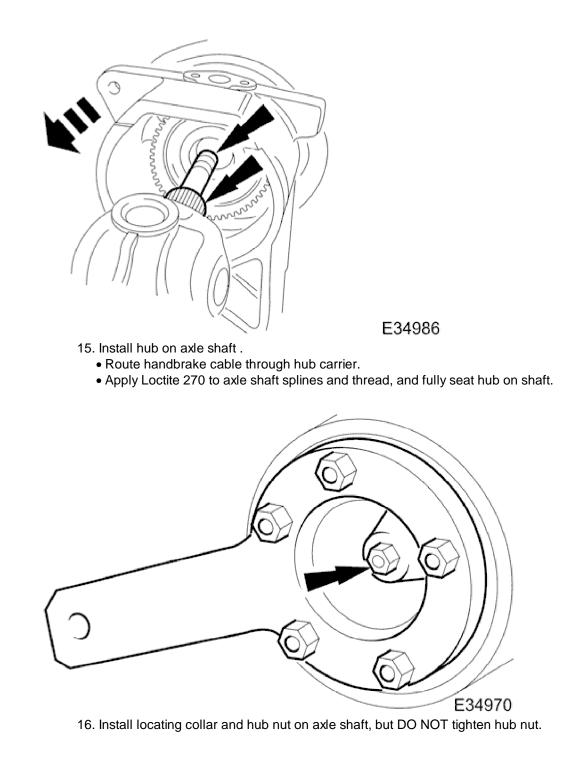


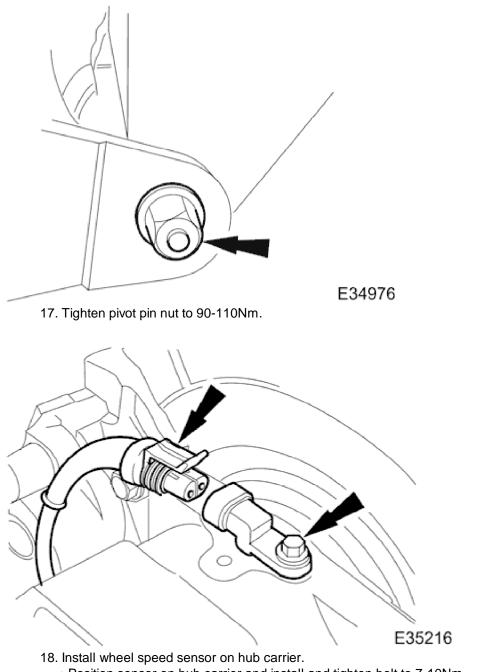
13. Position hub carrier assembly on wishbone.1. Ensuring shims remain positioned on sleeve, position hub carrier assembly on wishbone.



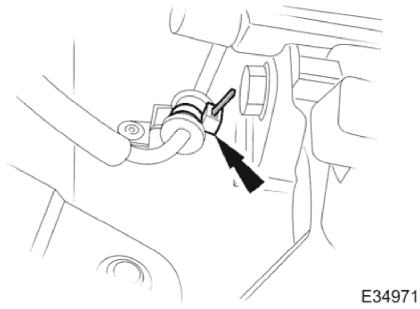
E34998

- 14. Secure hub carrier to wishbone.
  - Install pivot pin.
  - Install pivot pin washer
  - Install but do not tighten pivot pin nut.

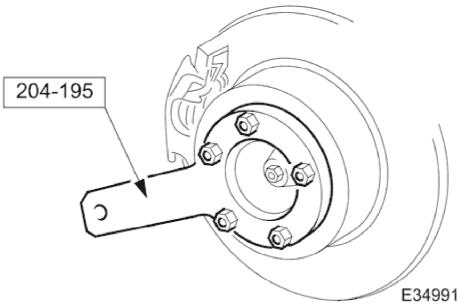




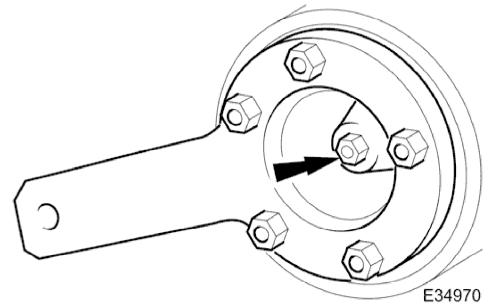
- Position sensor on hub carrier and install and tighten bolt to 7-10Nm.
- Connect wheel speed sensor harness to sensor.



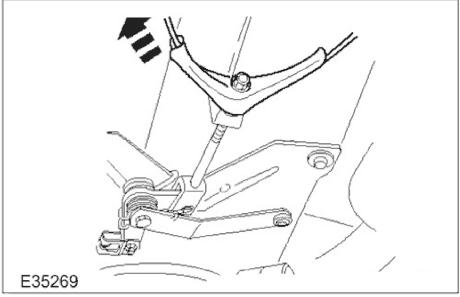
- 19. Using new tie strap, secure wheel speed sensor harness to hub carrier.
- 20. Install parking brake shoes. Refer to <<70.40.05>>.
- 21. Install brake disc. Refer to operation 70.10.13.



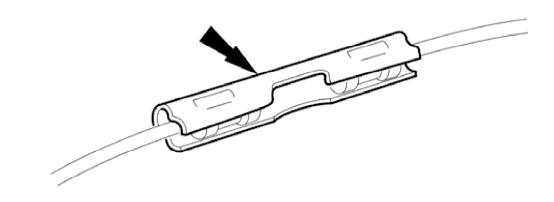
22. Install special tool (204-195) on studs and install nuts.



- 23. Tighten hub nut to 304-336Nm.
- 24. Remove nuts and withdraw special tool (204-195) from hub studs.
- 25. Install rear wheel. Refer to section <<204-04>>.
- 26. Raise rear of vehicle, remove stands and lower vehicle. Refer to section <<100-02>>.
- 27. Raise vehicle on four-post lift.



28. Route parking brake cable through equalizer (LH side cable only).



E34975

- 29. Install cable in connecting clip.
- 30. Adjust parking brake cable. Refer to <<70.35.10>>.
- 31. Lower four-post lift.
- 32. Apply parking brake.