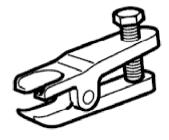
Wheel Knuckle and Wheel Hub Assembly 60.25.38.90

**Special Service tools** 



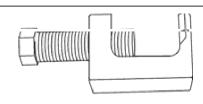
E36463 Road spring compressor 204-111 (JD115)



E36397

Taper separator 211-098 (JD 100)

E36462 Front suspension ball joint splitter 204-192 (JD 219)



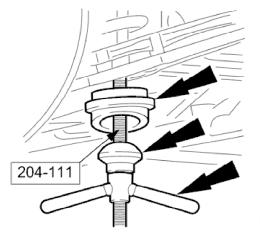
Ball joint splitter 204-293

### Removal

1. Raise front of vehicle and support on stands. Refer to Section <<100-02>>.

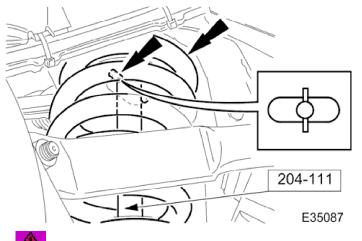
E31837

- 2. Remove appropriate road wheel. Refer to <<74.20.05>>.
- 3. Remove brake disc. Refer to 70.10.12.
- 4. Using wire or string, secure brake caliper to road spring to take weight off brake hose.
- 5. Raise vehicle sufficient to provide access for special tool 204-111.



E35086

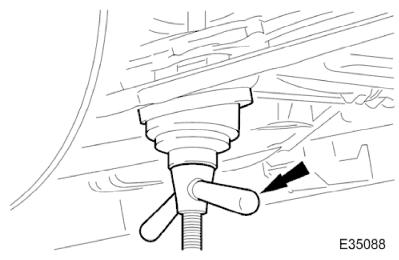
- 6. Install special tool 204-111 in road spring.
  - Slacken tool adjuster to suit spring length.
  - Fit adaptor and thrust collar.
  - Position stem of tool in center of spring passing dowel through slot in suspension turret.



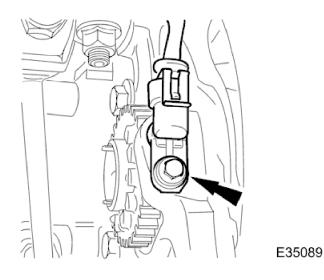
### 7. WARNING: WHEN TURNING TOOL ADJUSTER, ENSURE THAT TOOL STEM DOES NOT ROTATE AND DISTURB POSITION OF DOWEL IN SUSPENSION TURRET.

Engage dowel of special tool 204-111 in suspension turret and rotate to position across slot.

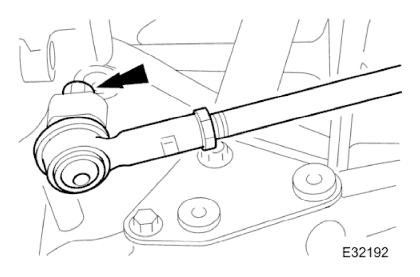
8. Lower vehicle onto stands.



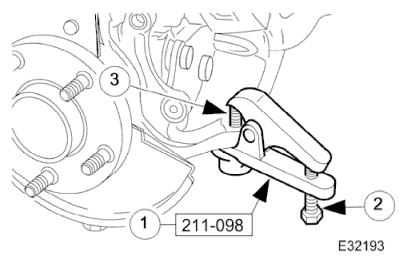
9. Rotate tool adjuster to tension spring.



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

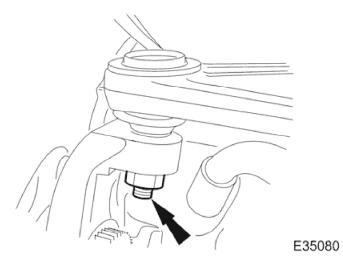


11. Remove nut securing tie rod outer ball joint to steering arm.

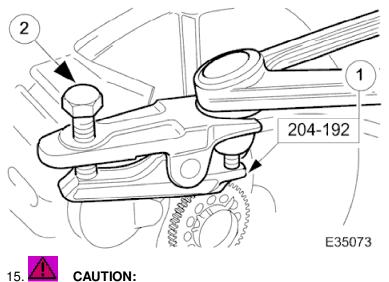


12. Release ball joint from vertical link.

- 1. Install special tool 211-098 on tie rod outer ball joint.
- 2. Tighten tool bolt to release taper pin from vertical link.
- 13. Remove special tool from ball joint and position tie rod for access.



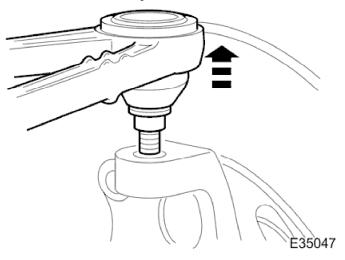
14. Remove nut securing upper wishbone ball joint to vertical link.



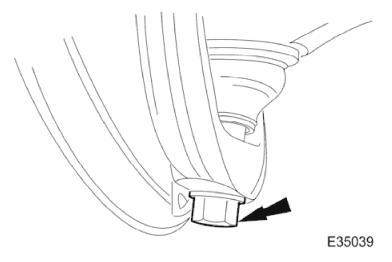
### Do not use special tool 211-098 in the following procedure as this will damage the ball joint gaiter.

Release upper wishbone ball joint from vertical link/hub assembly.

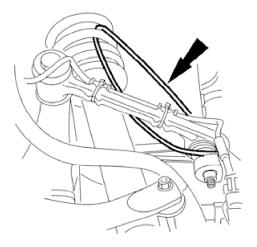
- 1. Install special tool 204-192 on ball joint.
- 2. Tighten tool bolt to release ball joint taper pin from vertical link.



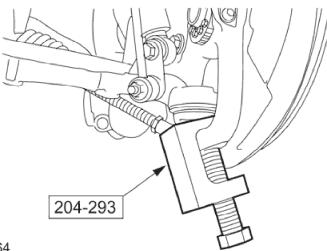
16. Raise upper wishbone to release ball joint pin from vertical link.



17. Remove nut securing lower wishbone ball joint to vertical link.



E35037 18. To prevent damage to lower ball joint, secure vertical link to road spring using strong wire.



E33564

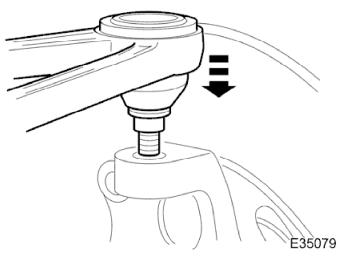
### 19. **CAUTION:**

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

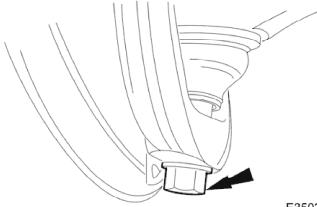
Release lower wishbone ball joint from vertical link/hub assembly.

- 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.
- 21. Clean all suspension to vertical link/hub assembly mating surfaces.

### Installation

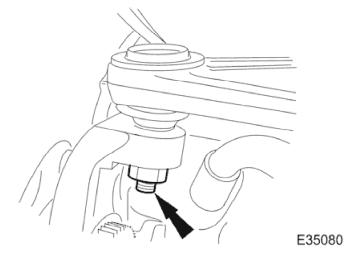


1. Position vertical link/ hub assembly on upper ball joint taper pin.

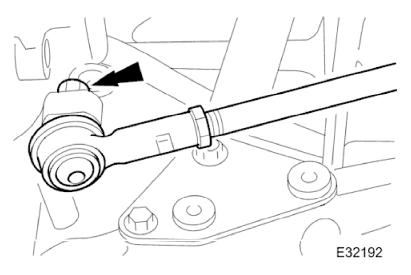


E35039

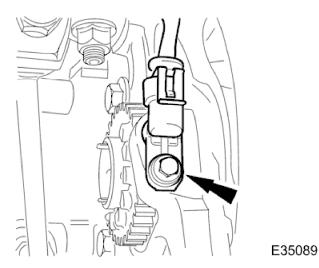
2. Position vertical link/ hub assembly on lower ball joint taper pin, install securing nut and tighten to 60-80Nm.



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



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

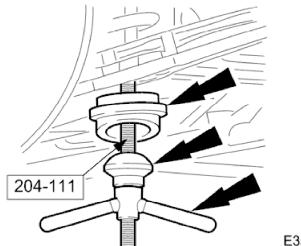


5. Install wheel speed sensor.

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

6. Remove wire temporarily securing vertical link to road spring.

7. Install brake disc.



E35086

- 8. Release tension on road spring.
  - Rotate adjuster of special tool 204-111 to release spring tension.
  - Remove special tool and adaptor from spring.

9. Install road wheel. Refer to <<74.20.05>>.

10. Raise front of vehicle, remove stands and lower vehicle.

11. Carry out steering geometry and wheel alignment checks and if necessary adjust. Refer to <<57.65.01>>.