

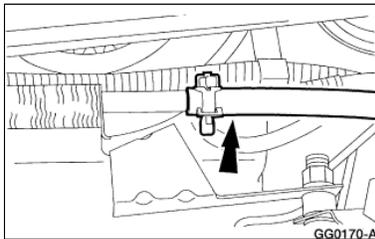
**Gear — Torsion Bar Suspension****Special Tool(s)**

 <p>ST140B-A</p>	<p>Remover, Tie Rod End 211-001 (TOOL-3290-D) or equivalent</p>
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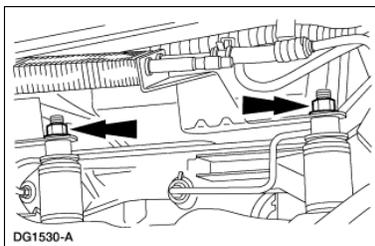
**Removal**

**CAUTION:** When repairing the power steering system, care should be taken to prevent the entry of contaminants or premature failure of the power steering components can result.

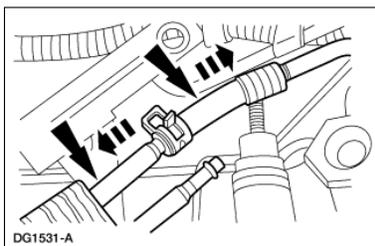
1. Turn the wheel to the straight-ahead position and turn the ignition switch to the OFF position.
2. Remove the wheel and tire assemblies. For additional information, refer to [Section 204-04](#).
3. Disconnect the power steering return hose at the power steering fluid cooler.
  - Drain the fluid into a suitable container.



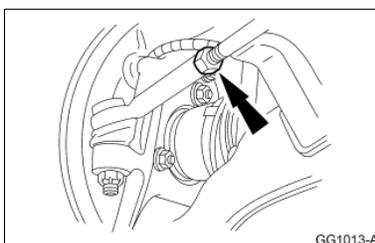
4. Remove the power steering fluid cooler to crossmember nuts.



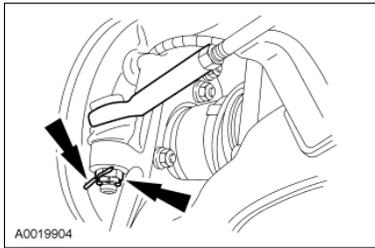
5. Disconnect the power steering return hose and remove the power steering fluid cooler.



6. Loosen the tie-rod end jam nuts.



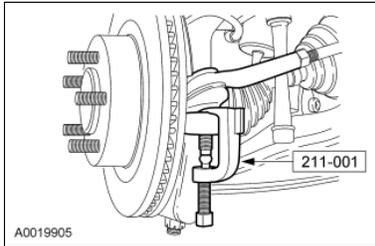
7. Remove and discard the cotter pins and nuts.



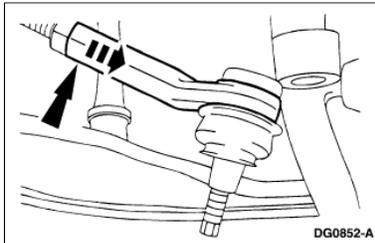
8. **⚠ CAUTION: Do not damage the tie-rod boot when installing the special tool.**

**NOTE:** Remove the adapter from the ball end of the special tool. Apply a small amount of grease to the tie-rod end stud and the ball of the special tool.

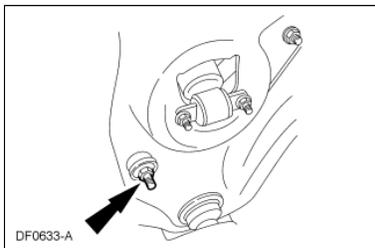
Using the special tool, separate the tie-rod ends from the wheel knuckles.



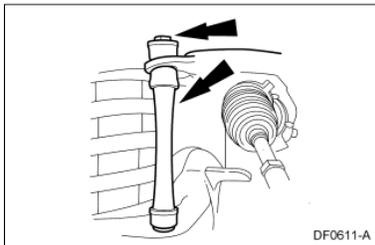
9. Remove the tie-rod ends.
- Count and record the number of turns required to remove the tie-rod end.



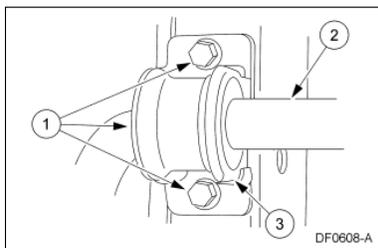
10. Remove the front stabilizer bar link nuts from the front suspension lower arms.



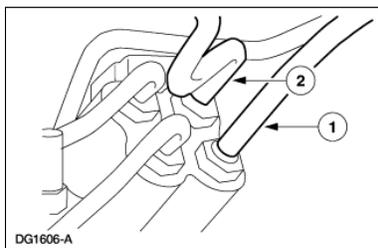
11. Remove the front stabilizer bar bolts and the front stabilizer bar links.



12. Remove the front stabilizer bar.
1. Remove the four bolts and two brackets.
  2. Remove the front stabilizer bar.
  3. Remove the stabilizer bar insulators.

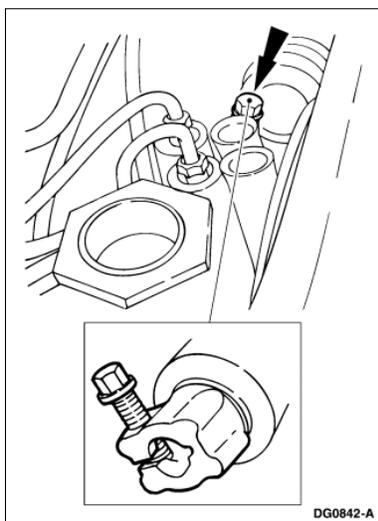


13. Disconnect the lines at the gear.
  1. Disconnect the high pressure line.
  2. Disconnect the return line.



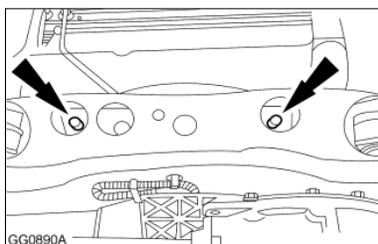
14. **⚠ CAUTION:** Do not allow the intermediate shaft to rotate while it is disconnected from the steering gear or damage to the clockspring can result. If there is evidence that the intermediate shaft has rotated, the clockspring must be removed and re-centered. For additional information, refer to [Section 501-20B](#).

Remove the pinch bolt and detach the intermediate shaft from the gear.

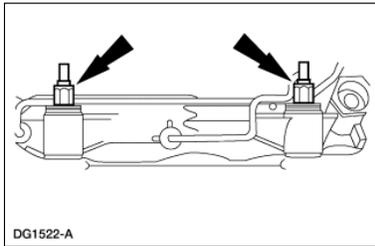


15. **⚠ CAUTION:** Hold the tops of the steering gear to crossmember stud bolts to avoid damaging the steering gear fluid transfer tubes.

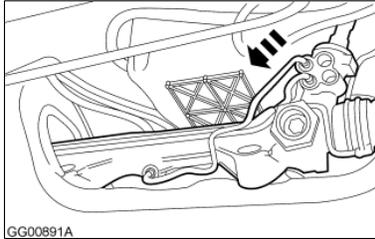
Remove the nuts.



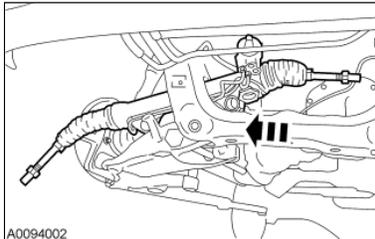
16. Remove the stud bolts and washers.



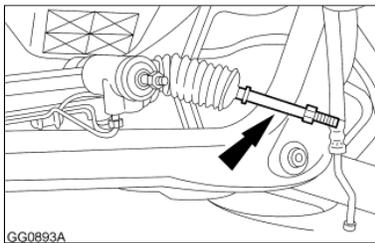
17. Rotate the steering gear control valve housing toward the front of the vehicle.



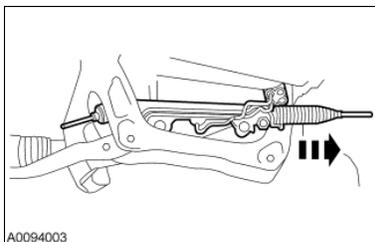
18. Turn the steering gear input shaft to the right until the stop is reached.  
19. Move the steering gear as far to the RH side of the vehicle as possible.



20. Move the LH front wheel spindle tie-rod forward to clear the frame crossmember.

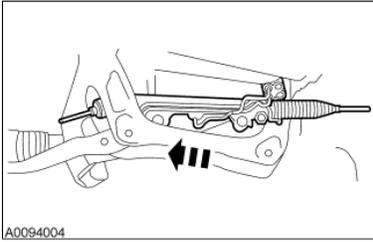


21. Remove the steering gear from the vehicle.



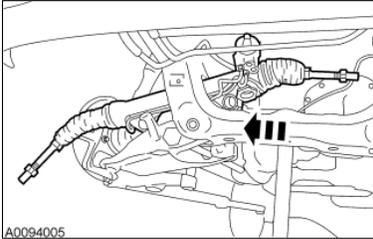
#### Installation

- NOTE:** Make sure the steering gear input shaft is turned to the left until the stop is reached.  
**NOTE:** Handle the steering gear with caution to avoid damage to fluid transfer tubes and to avoid dimples in the tie-rod boots.  
Turn the steering gear input shaft to the right until the stop is reached. Note the number of turns required.
- NOTE:** Make sure the steering gear control valve housing is turned toward the front of the vehicle.  
Install the steering gear into the RH opening of the crossmember.

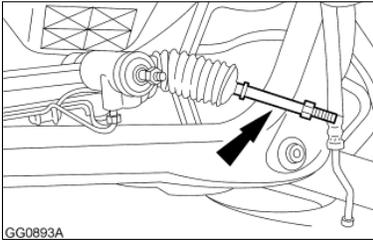


3. **CAUTION:** Take care not to scuff or tear the inner tie-rod boots.

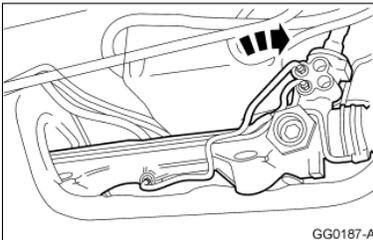
Move the steering gear as far to the RH side of the vehicle as possible.



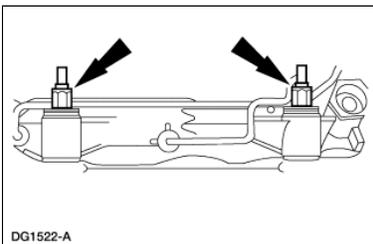
4. Move the LH front wheel spindle tie-rod into the opening in the crossmember and move the steering gear into position.



5. To place the steering gear in the straight-ahead position, turn the steering gear input shaft to the left by half the number of turns previously recorded.  
6. Rotate the steering gear control valve housing toward the rear of the vehicle.

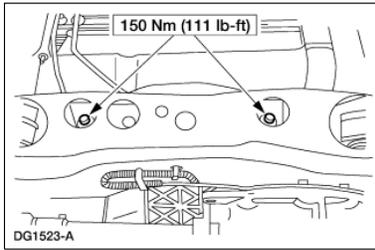


7. Install the steering gear crossmember washers and stud bolts.
- The dished side of the washer faces downward.

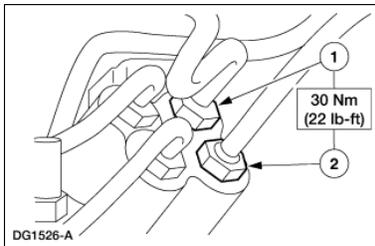


8. **CAUTION:** Hold the tops of the steering gear to crossmember stud bolts to avoid damaging the steering gear fluid transfer tubes.

Install the nuts.

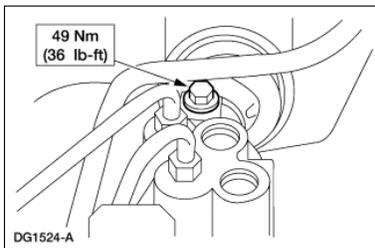


9. Connect the lines at the gear.
  1. Connect the return line.
  2. Connect the high pressure line.

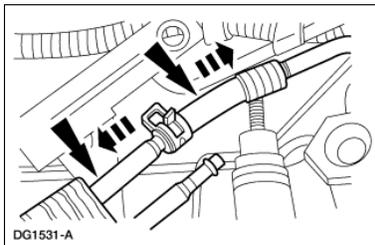


10. **⚠ CAUTION:** Do not allow the intermediate shaft to rotate while it is disconnected from the steering gear or damage to the clockspring can result. If there is evidence that the intermediate shaft has rotated, the clockspring must be removed and re-centered. For additional information, refer to [Section 501-20B](#).

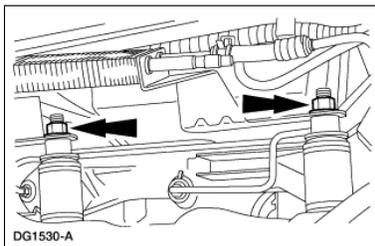
Connect the intermediate shaft to the steering gear input shaft. Install a new lower steering column pinch bolt.



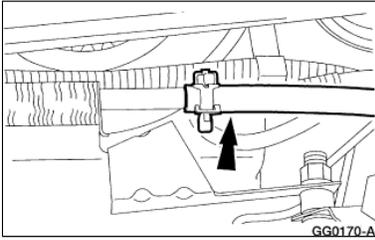
11. Install the fluid cooler, connect the hose and install the clamp



12. Install the fluid cooler nuts.



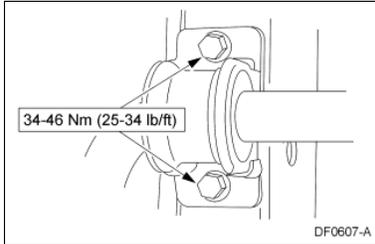
13. Connect the hose and install the clamp.



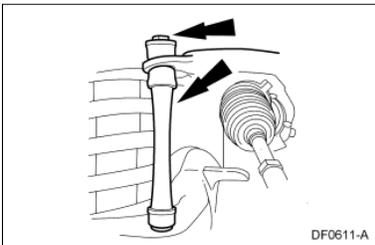
14. **NOTE:** In the event that the self-tapping bolts cannot be installed in the frame, there is a kit available with flag nuts. Consult your parts department for additional information.

Install the front stabilizer bar.

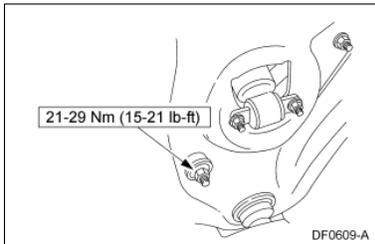
- Install the stabilizer bar insulators.
- Install the front stabilizer bar brackets.
- Install the bolts.



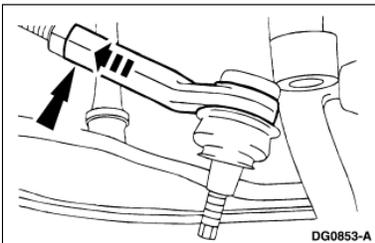
15. Install the front stabilizer bar links and the front stabilizer bar bolts.



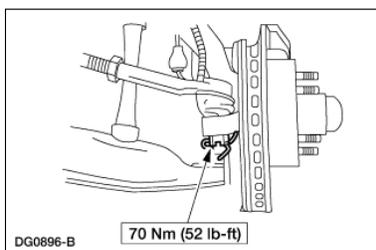
16. Install the front stabilizer bar link nuts.



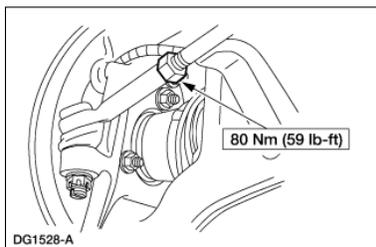
17. Install the tie-rod ends on the front wheel spindle tie-rods.
- Rotate the tie-rod ends the number of turns recorded during removal.



18. Position the tie-rod ends on the steering knuckles. Install the castellated nuts and new cotter pins.
- Check that the brake dust shields are not bent and are not in contact with the outer tie-rod boots.



19. Tighten the tie-rod end jam nuts.



20. Install the front wheel and tire assemblies. For additional information, refer to [Section 204-04](#).
21. Fill and leak check the system. For additional information, refer to [Section 211-00](#).
22. Check and, if necessary, adjust the wheel alignment. For additional information, refer to [Section 204-00](#).
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