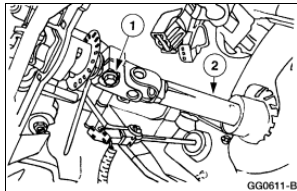


Steering Column Sensor Ring  [Printable View \(187 KB\)](#)**Removal**

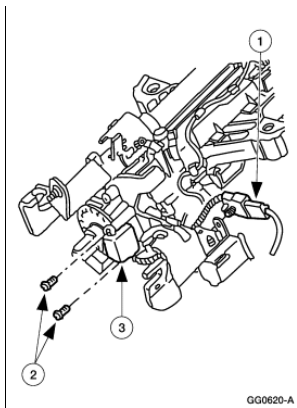
⚠ CAUTION: The steering column must be in the locked position, or the lower end of the column wired in such a way that the steering column does not rotate, resulting in damage to the air bag sliding contact.

NOTE: Discard the upper intermediate shaft to steering column shaft bolt upon removal. Do not reuse; install a new bolt.

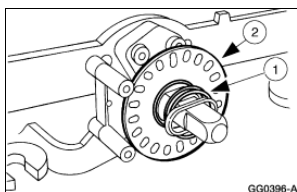
1. Remove the upper intermediate steering shaft to column shaft bolt.
 1. Remove and discard the steering column shaft pinch bolt.
 2. Slide the intermediate shaft yoke from the steering column.



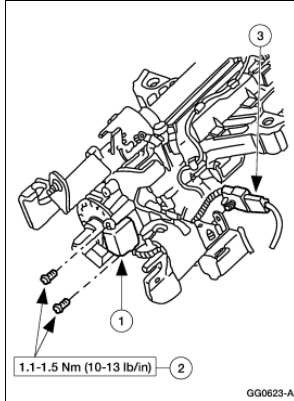
2. Remove the steering wheel rotation sensor.
 1. Disconnect the electrical connector.
 2. Remove the screws.
 3. Remove the steering wheel rotation sensor.



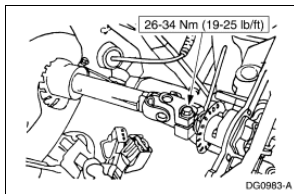
3. Remove the sensor ring.
 1. Remove the steering column lower bearing spring.
 2. Remove the sensor ring.

**Installation**


1. To install, reverse the removal procedure.
2. Install the steering wheel rotation sensor.
 1. Position the steering wheel rotation sensor.
 2. Install the screws.
 3. Connect the electrical connector.



3. Use a new pinch bolt.



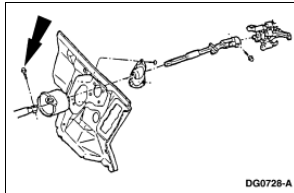
Steering Column Shaft  [Printable View \(62 KB\)](#)**Removal**

1.  **CAUTION:** The steering column must be in the locked position, or the lower end of the steering column is to be secured or wired in such a way as to prevent the steering column from rotating, resulting in damage to the air bag sliding contact (14A664).

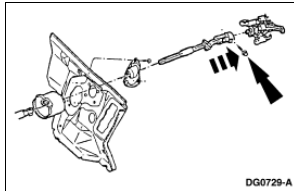
NOTE: Discard the upper intermediate shaft to steering column shaft bolt and the upper intermediate shaft to lower steering column shaft bolt upon removal. Do not reuse; install new bolts.

Remove the bolt securing the upper intermediate shaft to the lower intermediate shaft, at the midpoint connection. Collapse the lower shaft. Discard original bolt.

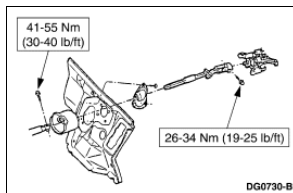
- Use a new pinch bolt.



2. Remove the bolt securing the upper intermediate shaft to the steering column assembly. Remove the intermediate shaft from inside the vehicle. Discard the original bolt.

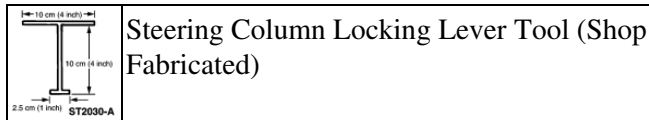
**Installation**

1. To install, reverse the removal procedure.



Steering Column Manual Transmission  [Printable View \(835 KB\)](#)

Special Tool(s)



Material

Item	Specification
Premium Long-Life Grease XG-1-C	ESA-M1C75-B

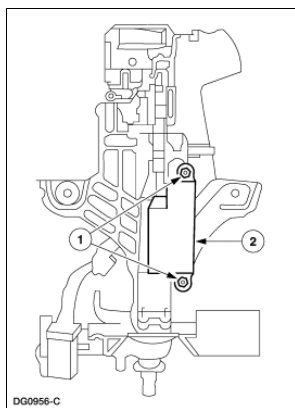
Disassembly

All vehicles

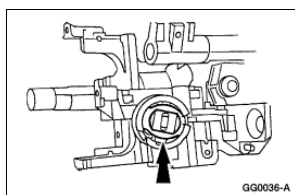
1. **⚠ WARNING:** To reduce the risk of serious personal injury, read and follow all warnings, cautions, notes and instructions in the steering column removal and installation procedure.

Remove the steering column. For additional information, refer to [Steering Column](#) in this section.

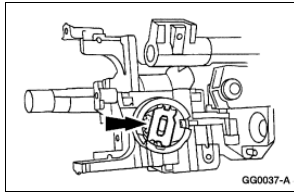
2. Remove the ignition switch.
 1. Remove the ignition switch bolts.
 2. Remove the ignition switch.



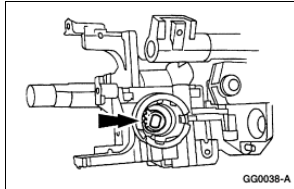
3. Remove the bearing retainer.



4. Remove the steering column lock housing bearing.

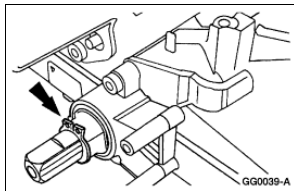


5. Remove the steering column lock gear.



Vehicles with fixed steering columns

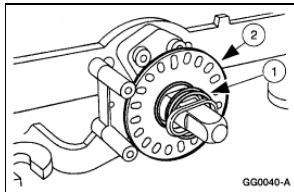
6. Remove the snap ring from the bottom of the steering column shaft.



Vehicles with tilt steering columns

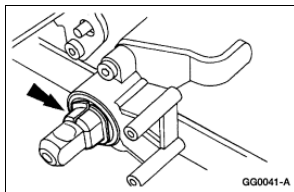
7. Remove the sensor ring.

1. Remove the steering column lower bearing spring.
2. Remove the sensor ring.



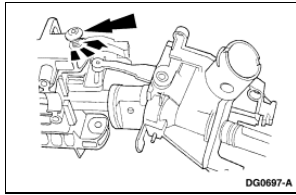
All vehicles

8. Remove the steering column bearing tolerance ring from the steering column shaft.



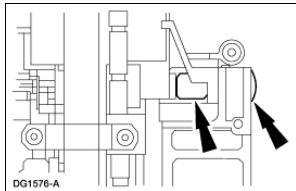
Vehicles with tilt steering columns

9. Remove the lock cylinder housing screws.



Vehicles with fixed steering columns

10. Remove the two lock cylinder housing screws and the steering column spacer.

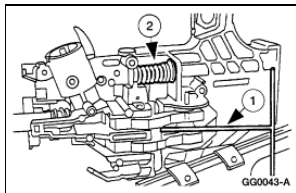


All vehicles

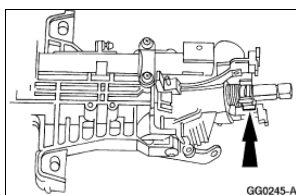
11. **⚠ WARNING: Steering column position spring is under tension and can come out with great force.**

Remove the lock cylinder housing and the steering column shaft from the steering actuator housing.

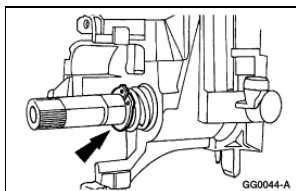
1. Pry up on the steering column lock left hand levers using a shop fabricated tool.
2. On tilt steering columns, remove the steering column position spring.



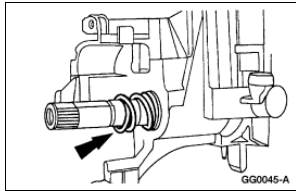
12. Remove the turn signal cancel cam.



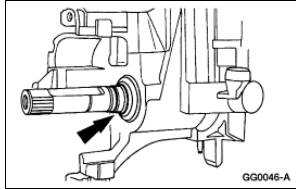
13. Remove the snap ring.



14. Remove the steering column upper bearing spring.

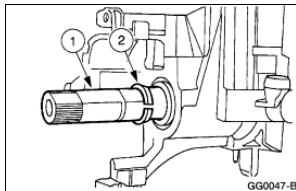


15. Remove the steering column bearing sleeve.

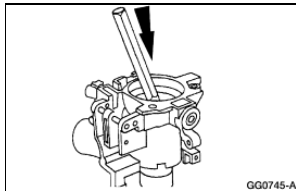


16. Remove the steering column bearing tolerance ring.

1. Slide the steering column shaft in toward the steering column lock cylinder housing, then out.
2. Slide the steering column bearing tolerance ring off the steering column shaft.

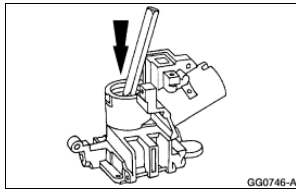


17. Using a suitable punch, remove the steering column bearing from the steering column lock cylinder housing.



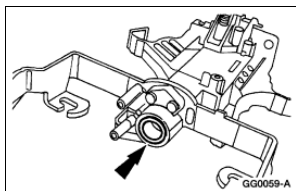
Vehicles with tilt steering columns

18. Use a suitable punch to remove the steering column bearing from the steering column lock cylinder housing.

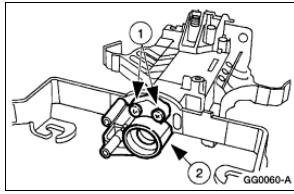


All vehicles

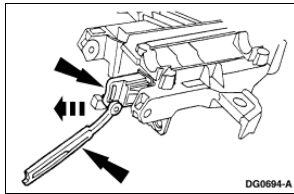
19. Remove the steering column bearing and sleeve.



20. Remove the steering column lower bearing retainer.
 1. Remove the three bolts.
 2. Remove the steering column lower bearing retainer.



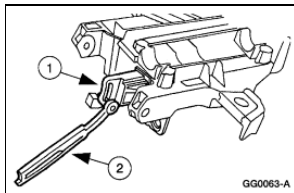
21. Remove the upper steering column lock lever actuator and the lower steering column lock lever actuator.



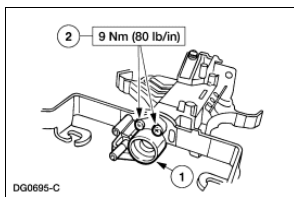
Assembly

All vehicles

1. Install the steering column lock lever actuator.
 1. Lubricate the steering column lock lever actuator with grease.
 2. Install the steering column lock lever actuator.



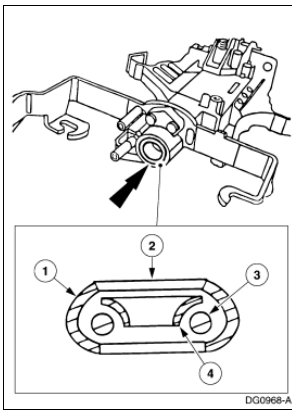
2. Install the steering column lower bearing retainer.
 1. Position the steering column lower bearing retainer.
 2. Install the three bolts.



3. **NOTE:** The "UP" position of the bearing must be facing forward, toward the engine.

NOTE: Install the steering column bearing and sleeve so that the inner race is visible when installed.

Install the steering column bearing and sleeve.

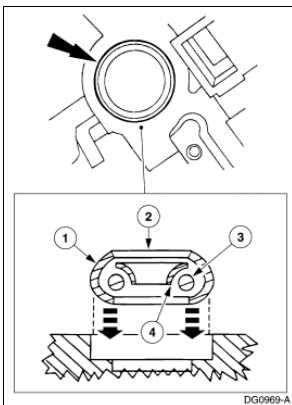


Item	Part Number	Description
1		Outer race
2	3517	Bearing (in the "UP" position)
3		Ball
4		Inner race

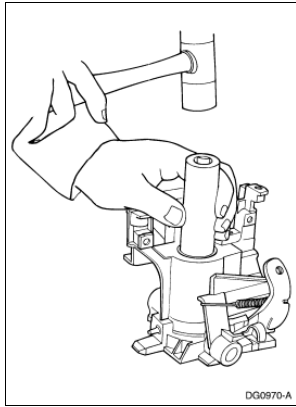
4. **⚠ CAUTION:** Install the steering column bearing so that the inner race is visible when installed.

NOTE: Use an appropriate bearing installer or socket.

Install the steering column bearing on the steering column lock cylinder housing.



Item	Part Number	Description
1		Outer race
2		Bearing (in the "UP" position)
3		Ball
4		Inner race

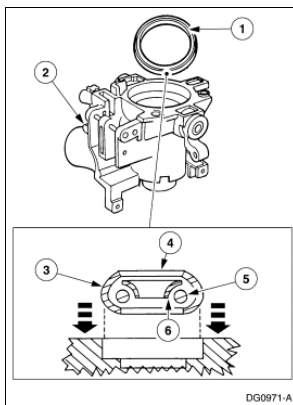


Vehicles with tilt steering columns

5. **⚠ CAUTION:** Install the steering column bearing so that the inner race is visible when installed.

NOTE: Use an appropriate bearing installer or socket.

Install the steering column bearing on the steering column lock cylinder housing.



Item	Part Number	Description
1		Bearing slot
2	3511	Steering column lock cylinder housing
3		Outer race
4		Bearing (in the "UP" position)
5		Ball
6		Inner race

