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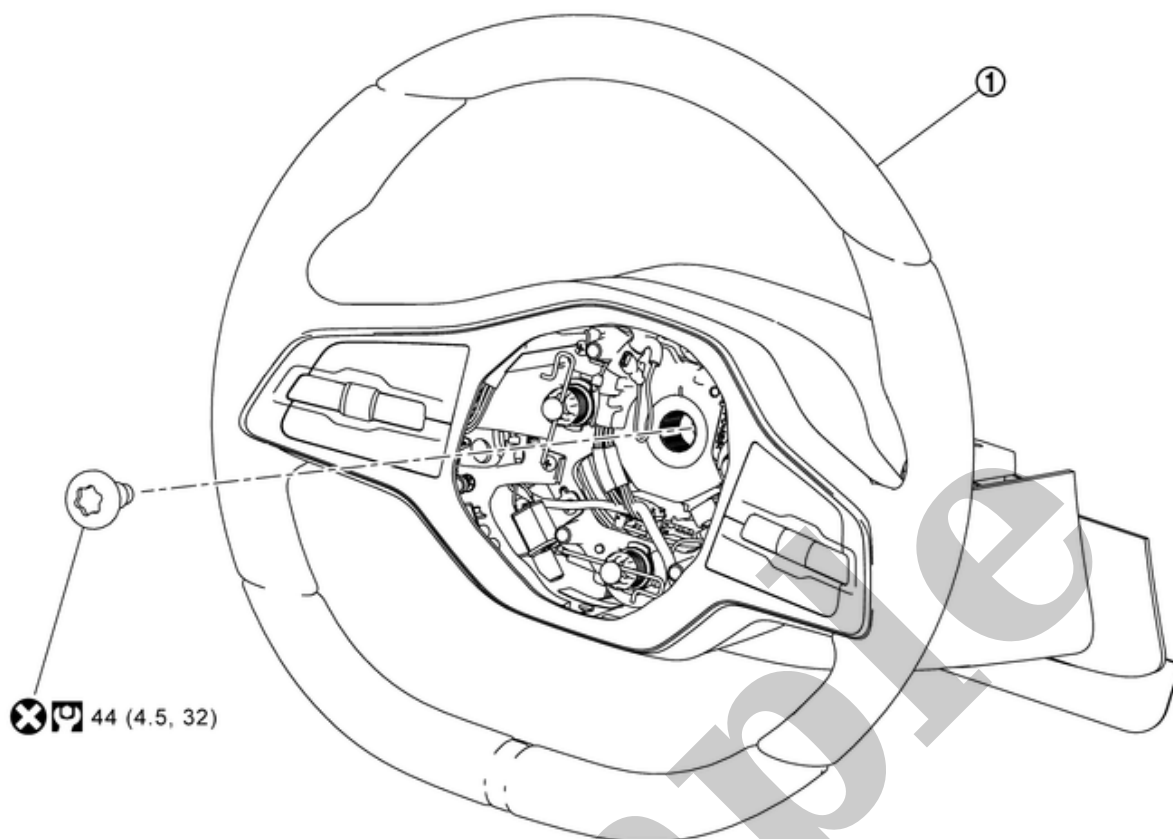
2004 NISSAN Almera / Pulsar 4 Doors OEM Service and Repair Workshop Manual

[Go to manual page](#)

STEERING WHEEL : Exploded View

RDE-001933814

SEC. 484



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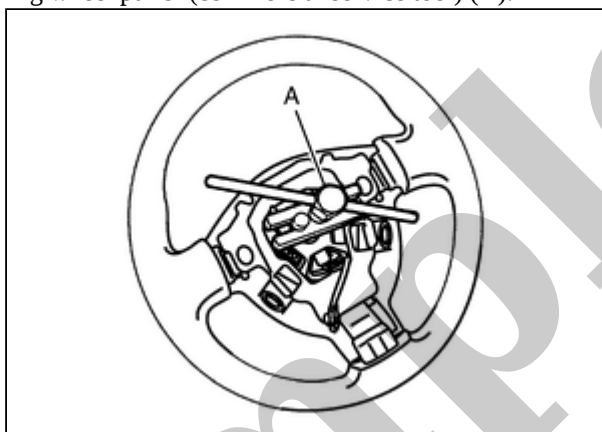
①	Steering wheel				
⌘	: N·m (kg-m, ft-lb)				
⊗	: Always replace after every disassembly.				

REMOVAL

**NOTE:**

When reconnecting spiral cable, fix cable with a tape so that fixing case and rotating part keep aligned. This will omit neutral position alignment procedure during spiral cable installation.

- 1 Set vehicle to the straight-ahead position.
- 2 Remove driver air bag module. Refer to [Removal & Installation](#).
- 3 Remove steering wheel lock nut after steering is locked.
- 4 Remove steering wheel with the steering wheel puller (commercial service tool) (A).



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**NOTE:**

Put paint marks on the steering wheel and the column shaft head for supporting accurate positioning during the installation procedure.

INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

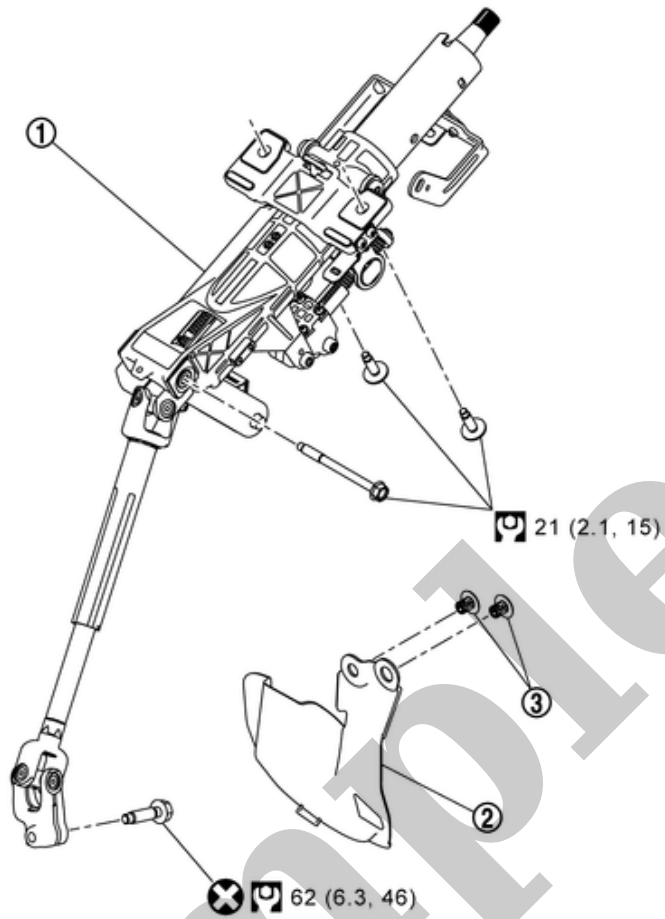
- If the steering column has been replaced or removed / installed, perform the Adjustment of steering angle sensor neutral position. Refer to [Work Procedure](#).
- If equipped with ProPILOT Assist, perform steering torque calibration after replacing or removing and installing the steering wheel. Refer to [How to check](#).
- Do not let the spiral cable run idle unnecessarily.
- Never twist spiral cable excessively after it becomes tight. (Twisting may cause the cable to be torn off.)
- Check the spiral cable neutral position after replacing or rotating spiral cable. Refer to [Removal & Installation](#).
- Never reuse steering wheel mounting bolt.

STEERING COLUMN : Exploded View

LHD models

RDE-001933816

SEC. 488



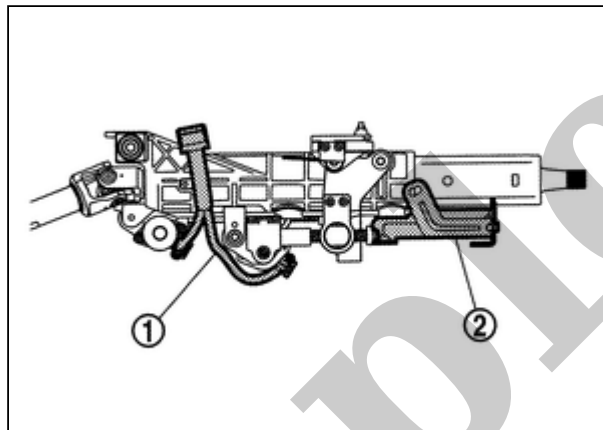
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①	Steering column assembly	②	Steering shaft lower cover	③	Clip
⊞	: N·m (kg-m, ft-lb)				
⊗	: Always replace after every disassembly.				

REMOVAL

CAUTION:

- Do not cause impact to steering column or shaft during removal or installation.
- Be careful when removing steering column assembly from the vehicle because it is heavy.
- Never unlock the tilt and telescope adjustment lever when the column is not securely mounted to the vehicle.
- Do not hold. The sub-harness ① and bracket ② when carrying the steering column assembly.



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- Never disassemble steering column components or lower shaft from upper steering column. They should not be separated.
- Do not move the steering gear during removal or installation of steering column assembly.

1 Disconnect 12V battery negative terminal. Refer to [PRECAUTIONS FOR REMOVING BATTERY TERMINAL : Precautions](#)

2 Set vehicle to the straight ahead position.

3 Adjust the tilt / telescoping to the following position.

- Electric type: Unlock the tilt/telescope adjustment lever then place the tilt to the lowest level and telescope in to the longest position. Then, lock the adjustment lever.
- Manual type: Unlock the tilt/telescope adjustment lever then place the tilt to the highest level and telescope in to the center position. Then, lock the adjustment lever.

4 Remove the instrument lower panel. Refer to [Removal & Installation](#).

5 Remove the steering wheel. Refer to [STEERING WHEEL : Removal & Installation](#)

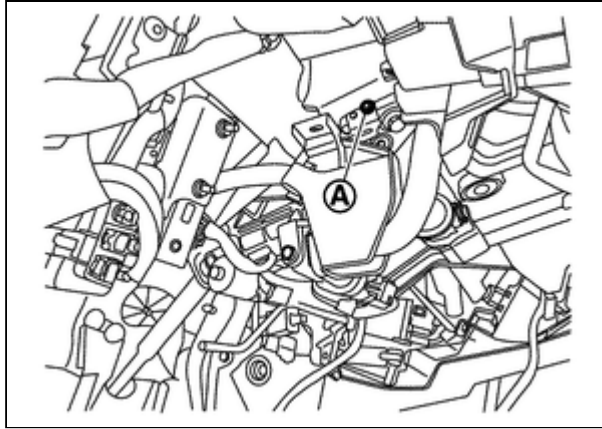
6 Remove steering column covers. Refer to [Removal & Installation](#).

7 Remove spiral cable. Refer to [Removal & Installation](#).

8 Remove the combination switch. Refer to [Removal and Installation](#).

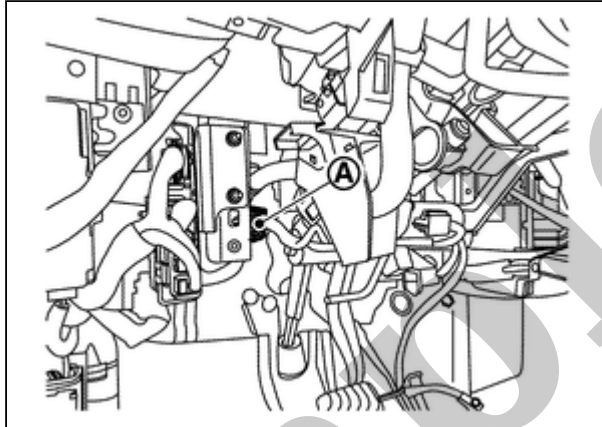
9 Remove harness clip from steering column assembly.

10 Remove harness cover mounting bolt (A), and then move the harness to a place where work is not hindered.



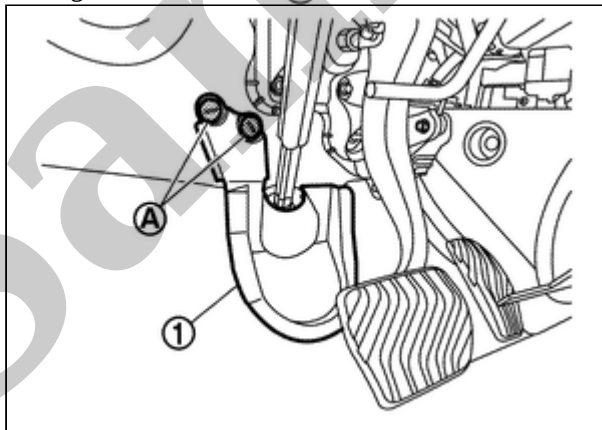
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11 Disconnect harness connector (A).



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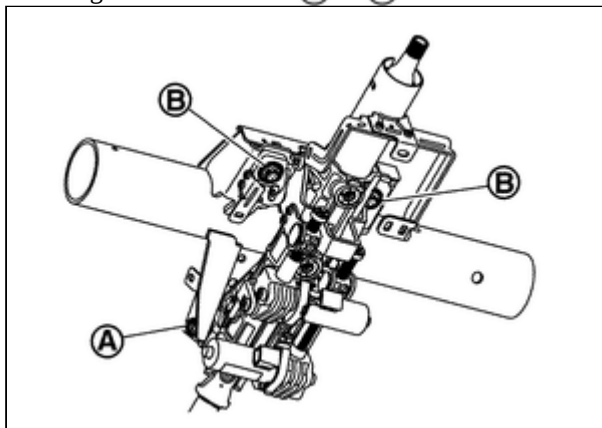
12 Remove clips (A) and then remove steering shaft lower cover (1).



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13 Remove lower shaft mounting bolt.

14 Remove steering column assembly mounting bolts in the order (B) to (A).



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CAUTION:

When removing the mounting bolts, be careful not to drop the steering column assembly.

15 Remove steering column assembly.

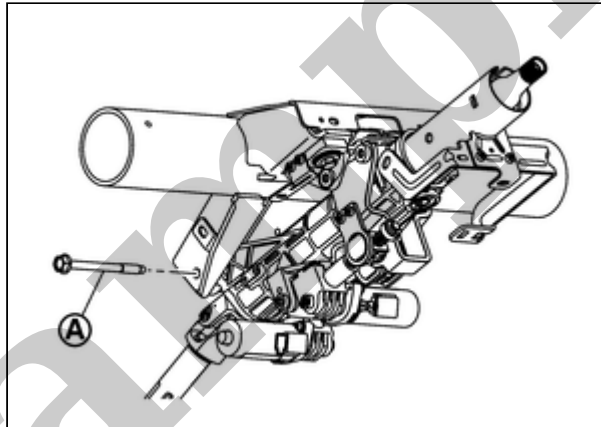
16 Perform inspection after removal. Refer to [STEERING COLUMN : Inspection](#)

INSTALLATION

CAUTION:

- **Reject and replace steering column if tilt and telescope adjustment lever is unlocked prior to install and torque to steering cross member.**
- **Do not unlock lever until mounting bolt and steering column assembly middle cross bolt are tightened to specified torque.**
- **Fit bolts by hand to ensure bolts turn smoothly without catching before tightening to specified torque.**
- **Must perform front wheel alignment resetting the steering wheel and toe.**

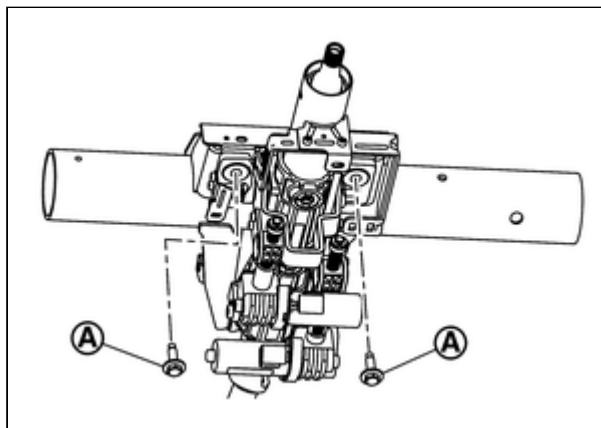
1. Insert bolt (A) through the steering column hole.



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2. Tentatively tighten bolt.

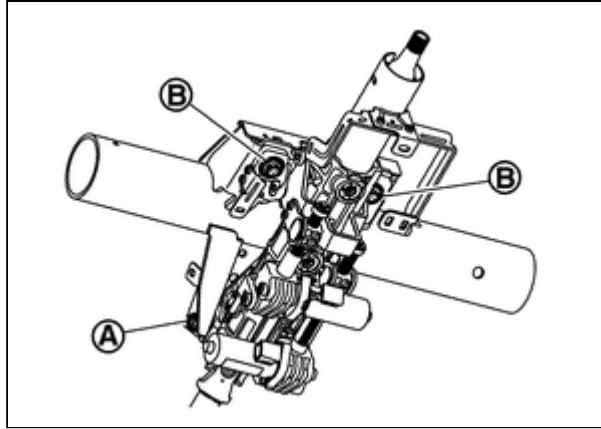
3. Insert bolt (A) through the steering column hole.



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4. Tentatively tighten bolt.

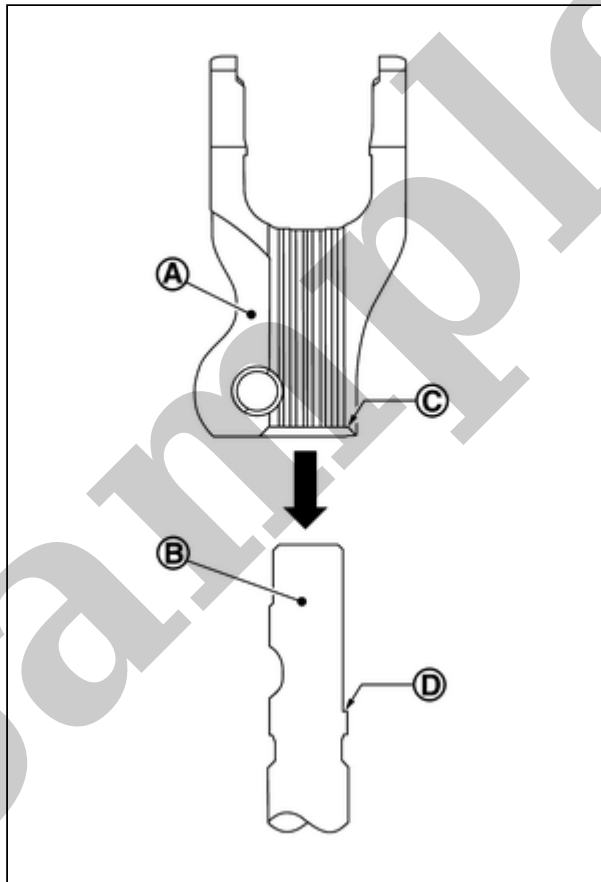
5. Tighten bolt (A) to the specified torque.



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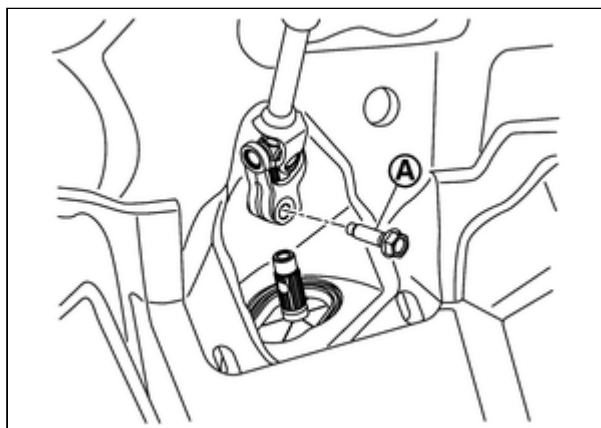
6. Tighten bolt (B) to the specified torque.

7. After aligning the blocking phase of pinion, the yoke (A) shall be inserted to the pinion shaft (B) until yoke lower surface (C) is in contact with pinion shaft surface (D).



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8. Insert bolt (A).

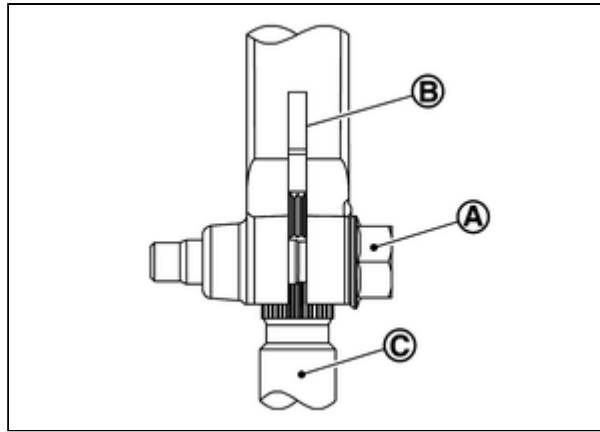


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9. Tighten bolt to the specified torque.

CAUTION:

- Do not insert the bolt (A) from the reverse direction.



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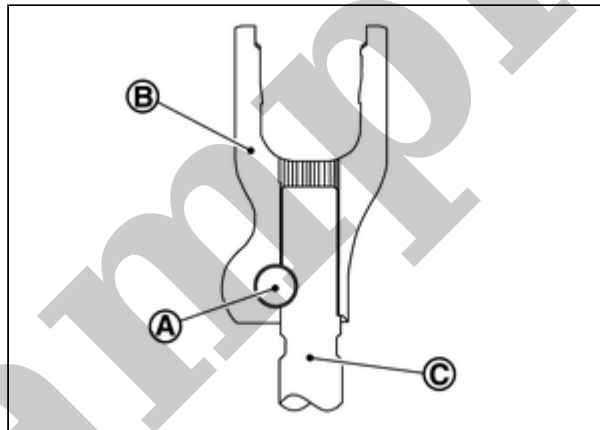
(B)

: Yoke

(C)

: Pinion shaft

- Be sure to insert the bolt (A) in the correct position before fastening.



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(B)

: Yoke

(C)

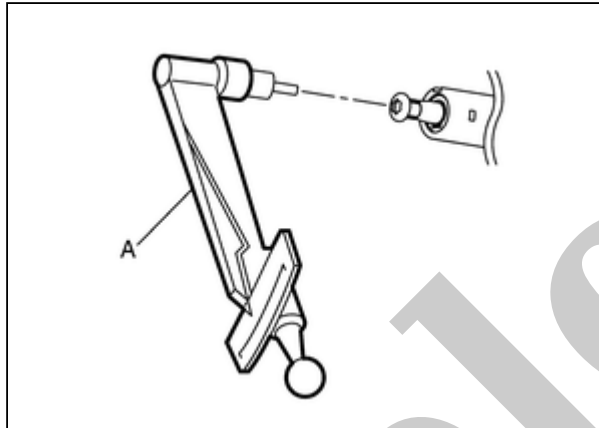
: Pinion shaft

10. Unlock the tilt and telescope adjustment lever, move steering column up down smoothly without any catching or noise.
11. Perform alignment resetting the front wheel toe with steering wheel on center. Refer to [WHEEL ALIGNMENT : Inspection](#)
12. Reset steering angle sensor. Refer to [Work Procedure](#).

INSPECTION AFTER REMOVAL

Check the following items and replace, if necessary.

- Check each part of steering column assembly for damage or other malfunctions. Replace if there are any abnormal conditions.
- Measure steering column rotating torque using a preload gauge (commercial service tool) (A). Replace steering column assembly if the rotating torque is outside the standard.

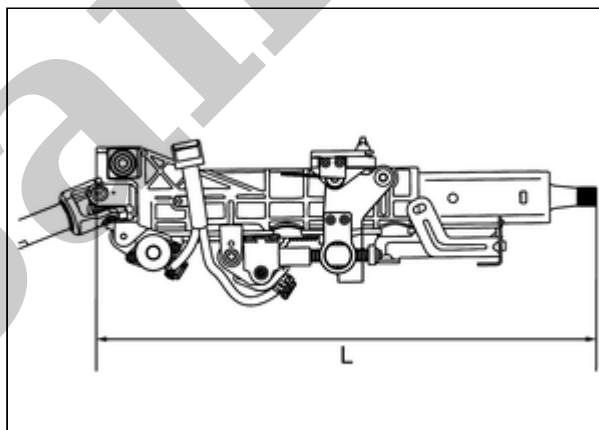


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Rotating torque

: Refer to [STEERING COLUMN : Service Data](#).

- With the column telescope set to the shortest position, measure the length “L” shown in the figure, if vehicle has been involved in a minor collision. Replace steering column assembly (with motor, reduction gear, sensor) if “L” is less than the minimum length.



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Steering column length minimum (telescope in) L

: Refer to [STEERING COLUMN : Service Data](#).

CAUTION:

- Before completing this measurement, the steering column telescope must be set to the longest position, the steering wheel will be farthest away from the driver.
- Do not unlock the tilt and telescope adjustment lever if the steering column assembly is removed from the vehicle.
- If the column telescope is not set to the shortest position, first reinstall the column, move the telescope to the shortest position, then complete the measurement.

INSPECTION AFTER INSTALLATION

Check the following items and replace, if necessary.