

STEERING COLUMN

1994 STEERING Mazda - Steering Column

DESCRIPTION & OPERATION

Steering columns are designed to be collapsible upon impact. The steering column consists of solid steering shaft with a lower joint assembly. Some models are equipped with tilt steering. Turn signal, headlight, ignition and windshield washer/wiper switches are mounted on column. Switches can be serviced by removing steering wheel and column covers. Miata is equipped with air bag restraint system consisting of an air bag module and clockspring connector assembly located in the steering column.

AIR BAG DISABLING & ACTIVATING

WARNING: Wait about 10 minutes after disabling air bag system before servicing. Air bag system voltage is maintained for about 10 minutes after system is disabled. Failure to wait 10 minutes before servicing system may cause accidental air bag deployment and possible personal injury.

CAUTION: When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle.

DISABLING SYSTEM

1. Obtain radio code from customer and deactivate audio anti-theft function. Turn ignition off. Disconnect and shield negative battery cable. Wait at least 10 minutes for back-up power supply to be depleted.
2. Disconnect Orange and Blue clockspring connectors located at base of steering column.

ACTIVATING SYSTEM

Reconnect clockspring connectors. Reconnect negative battery cable. Turn ignition on. Check AIR BAG warning indicator light to ensure system is operating properly.

REMOVAL & INSTALLATION

STEERING WHEEL & HORN PAD

CAUTION: DO NOT strike steering shaft with hammer, as it may collapse.

WARNING: Before servicing Miata, disconnect and shield negative battery cable. Use caution when working around steering column, as air bag could deploy.

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Removal & Installation

1. Disconnect negative battery cable. Remove 4 air bag module nuts from underside of steering wheel. Disconnect electrical connector and remove air bag module. See **AIR BAG RESTRAINT SYSTEM** article in the ACCESSORIES/EQUIPMENT section.
2. Remove steering wheel lock nut. Using a puller, remove steering wheel. To install, reverse removal procedure. Tighten steering wheel lock nut and air bag module nuts.

COMBINATION SWITCH

Removal

Remove steering wheel. See **STEERING WHEEL & HORN PAD** under REMOVAL & INSTALLATION. Remove upper and lower column covers. Disconnect combination switch connectors. Remove screws, and remove combination switch with clockspring assembly.

Installation

1. Install combination switch and clockspring assembly. Before installing steering wheel, center clockspring. To center clockspring, set front wheels in straight-ahead position. Turn clockspring connector clockwise until it stops. DO NOT force clockspring.
2. Rotate connector 2 3/4 turns (counterclockwise). Rotate clock-spring connector further (as necessary) to align marks on connector and outer housing. See **Fig. 1** .
3. Install steering wheel. Tighten steering wheel lock nut to specification. See **TORQUE SPECIFICATIONS** table. Install air bag module. See **AIR BAG RESTRAINT SYSTEM** article in the ACCESSORIES/EQUIPMENT section.

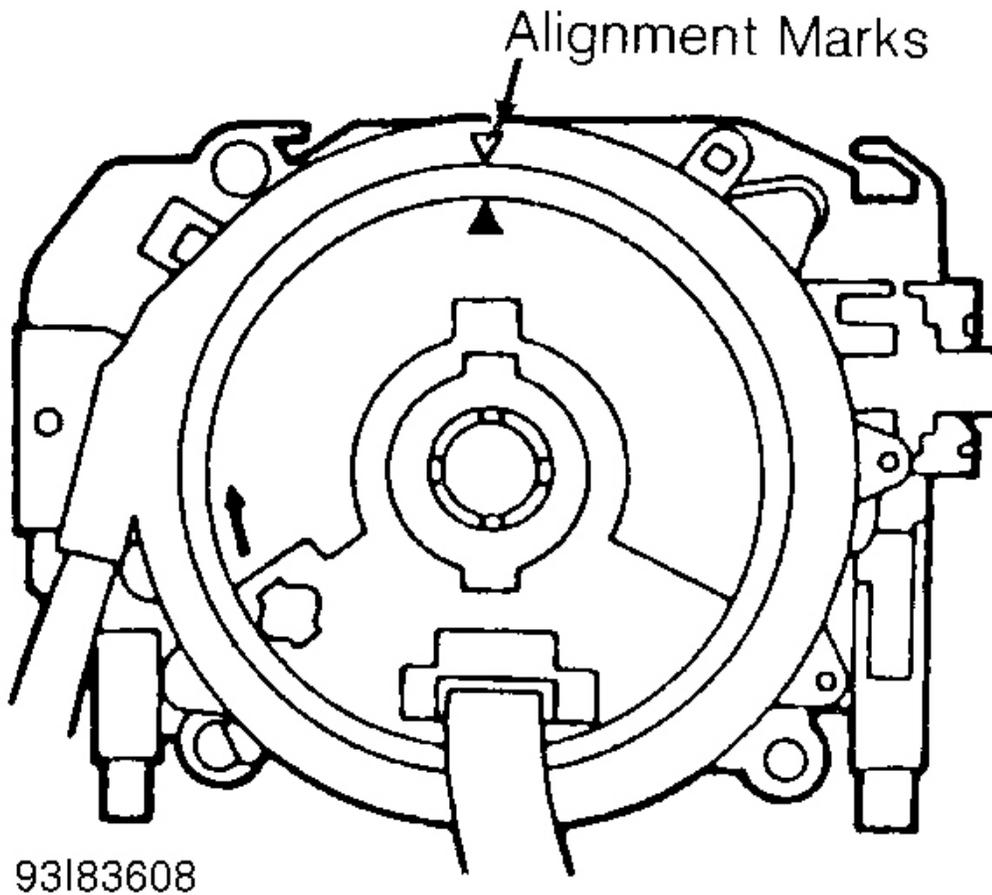


Fig. 1: Aligning Clockspring Connector Alignment Marks
Courtesy of MAZDA MOTORS CORP.

IGNITION SWITCH/STEERING LOCK ASSEMBLY

Removal & Installation

1. Remove steering wheel and combination switch. See **STEERING WHEEL & HORN PAD** and **COMBINATION SWITCH** . Disconnect ignition switch connectors. Remove key interlock cable from ignition switch/steering lock assembly (if equipped).
2. Using a hammer and chisel, make a groove in ignition switch/steering lock assembly shear screws. Remove 2 shear screws with screwdriver. Remove ignition switch/steering lock assembly. To install, reverse removal procedure. Tighten NEW shear screws until heads break off.

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CAUTION: Excessive pressure or impact to steering shaft assembly during service may cause column to collapse.

Removal & Installation

1. Remove steering wheel and combination switch. See **STEERING WHEEL & HORN PAD** and **COMBINATION SWITCH** under REMOVAL & INSTALLATION. See **Fig. 2** . Remove ignition switch/steering lock assembly. See **IGNITION SWITCH/STEERING LOCK ASSEMBLY** under REMOVAL & INSTALLATION.
2. Remove lower panel. Remove air duct (if equipped). Remove "U" joint dust boot (if equipped). Remove steering shaft assembly-to-intermediate shaft "U" joint bolt. Remove lower steering shaft assembly-to-firewall nuts. Separate steering shaft from intermediate shaft. Remove steering column upper bracket bolts. Remove steering column.
3. To install, reverse removal procedure. Tighten bolts and nuts to specification. See **TORQUE SPECIFICATIONS** table.

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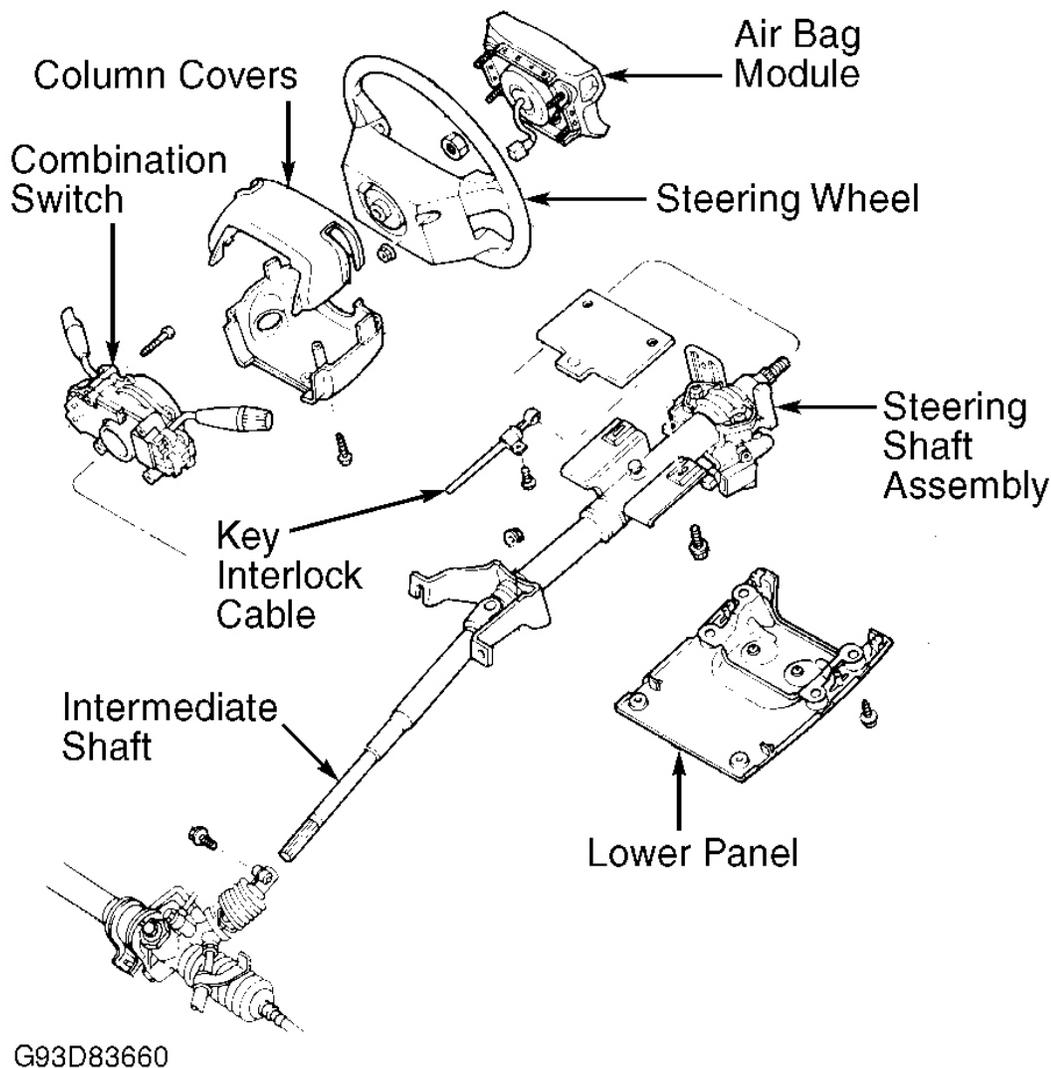


Fig. 2: Exploded View Of Steering Column
Courtesy of MAZDA MOTORS CORP.

OVERHAUL

STEERING COLUMN

Disassembly

Remove steering wheel and combination switch. See **STEERING WHEEL & HORN PAD** and **COMBINATION SWITCH** under REMOVAL & INSTALLATION. See **Fig. 2** . Remove ignition switch/steering lock assembly. See **IGNITION SWITCH/STEERING LOCK ASSEMBLY** under

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REMOVAL & INSTALLATION. Remove steering column. See **STEERING COLUMN** under REMOVAL & INSTALLATION. Turn steering shaft to remove.

Inspection

Inspect all components for damage and wear. Check steering shaft for bends, damage or sheared plastic pins. Check bearings for excessive play. Replace components as necessary. Measure length of steering shaft. See **STEERING SHAFT DIMENSIONS** table. See **Fig. 3**.

Reassembly

To reassemble, reverse disassembly procedure. Grease steering shaft, bushings and bearings. Use NEW shear screws.

STEERING SHAFT DIMENSIONS ⁽¹⁾

Application	Length - In. (mm)
Miata	23.77-23.85 (603.7-605.7)

(1) For measuring points, see **Fig. 3**.

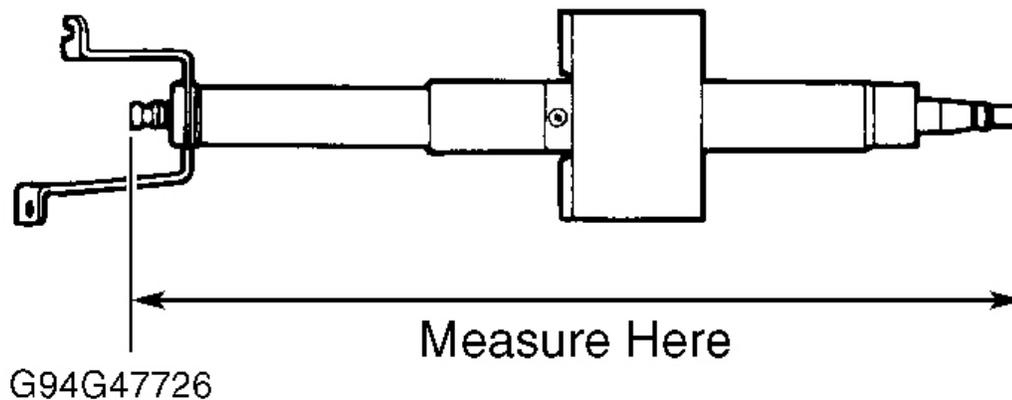


Fig. 3: Measuring Steering Shaft Dimensions
Courtesy of MAZDA MOTORS CORP.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Column Upper Bracket Mounting Bolts	12-18 (16-25)
Steering Shaft Assembly-To-Firewall Nuts	13-20 (18-27)

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Steering Shaft "U" Joint Bolts	13-19 (18-26)
Steering Wheel Lock Nut	30-36 (40-49)
	INCH Lbs. (N.m)
Key Interlock Cable Bolt	35-53 (4-6)