

## 1994 Mazda MX-5 Miata

SUSPENSION - REAR 1994 SUSPENSION Mazda - Rear

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## DESCRIPTION

Rear suspension consists of MacPherson-type struts, crossmember, upper and lower arms and stabilizer bar with control link. Upper and lower arms attach to crossmember and knuckle. A stabilizer bar with control link is mounted to lower arm and crossmember. Rear wheel alignment is adjusted by turning adjusting cams on lower arm.

## ADJUSTMENTS

### WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

**NOTE:** See WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES article in the WHEEL ALIGNMENT section.

### WHEEL BEARING

Raise and support vehicle. Remove rear wheel assembly. Remove caliper assembly and wire aside. Remove brake rotor. Attach dial indicator to axle hub and measure bearing play. Check bearing axial play by rocking hub assembly by hand. Maximum bearing play is .002" (.05 mm). If play exceeds specification, check drive axle lock nut torque or replace wheel bearing.

## REMOVAL & INSTALLATION

### WHEEL BEARING

#### Removal

1. Raise and support vehicle. Remove rear wheel assembly. Remove drive axle lock nut. Remove brake caliper assembly and wire aside. Remove screws and rotor. Disconnect ABS speed sensor. Remove knuckle assembly from upper and lower arms.
2. Using Handle (49-G030-102), Installer (49-G030-727) and Puller (49-F026-103), remove hub from knuckle. Remove snap ring from knuckle. Using handle, installer and Puller (49-0636-145), remove wheel bearing inner race from hub. Remove wheel bearing outer race from knuckle using Handle (49-G030-797), Puller (49-F026-103) and Adapter (49-F027-005).

#### Inspection

Check wheel hub and knuckle for cracks and damage. Check dust cover for deformation. Check bearing for excessive wear or seizure.

#### Installation

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Press NEW wheel bearing into knuckle using Handle (49-G030-797), Installer (49-F027-007) and Adapter (49-F027-009). Press hub into knuckle using adapter. To install, reverse removal procedure. Tighten drive axle lock nut to specification. See **TORQUE SPECIFICATIONS** table. Stake drive axle lock nut. Check axial play. See **WHEEL BEARING** under ADJUSTMENTS.

## STRUT ASSEMBLY

### Removal & Disassembly

1. Raise vehicle and remove fuel tank filler pipe protector. Remove rear wheel assembly. Remove stabilizer bar nut and bolt from lower control arm. Remove 2 upper strut mount-to-body nuts. Remove lower strut bolt. Loosen upper and lower arm bolts. Lower arms and remove strut assembly.
2. Clamp strut securely in soft-jawed vise. Compress coil spring. Remove lock nut and washer. Remove remaining components and note order for reassembly.

### Inspection

Check strut for leaks or abnormal noise. Inspect components for wear or damage. Check for loose installation of bolts and nuts. Replace components as necessary.

### Reassembly & Installation

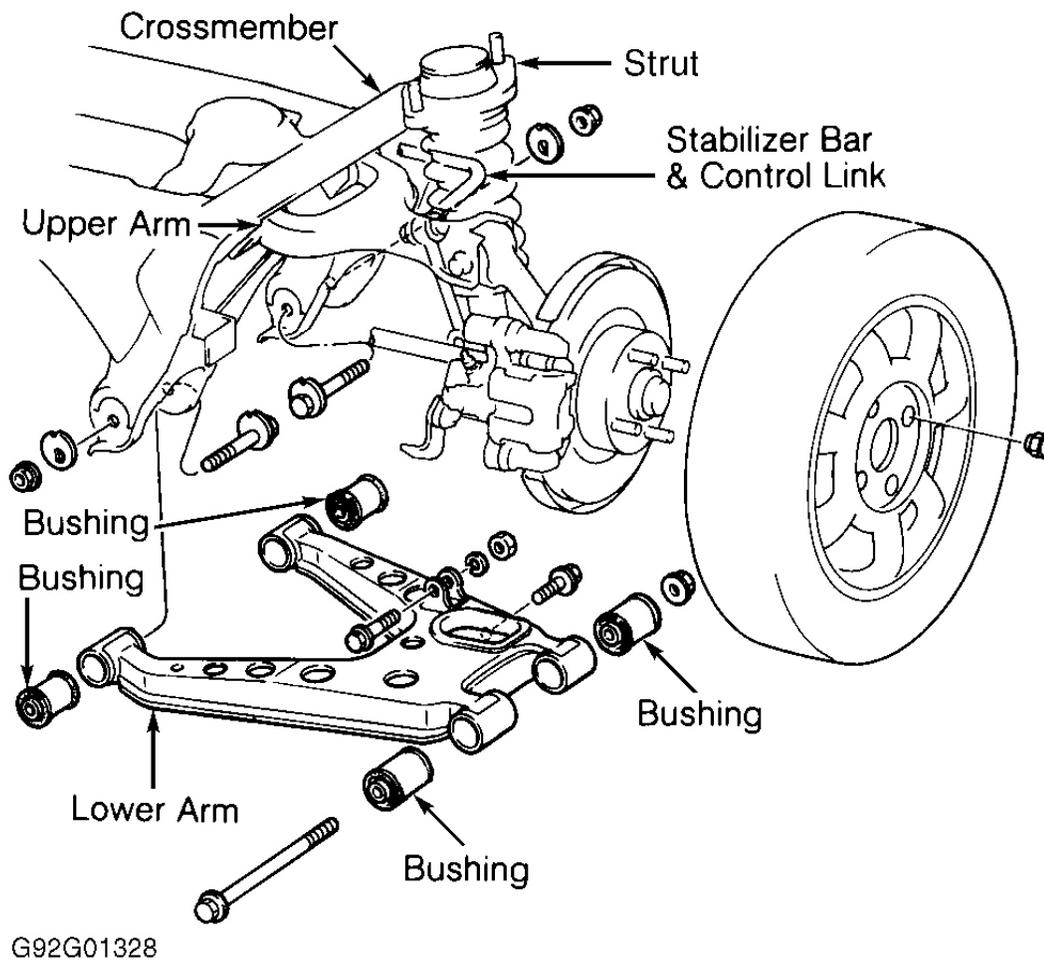
To reassemble, reverse disassembly procedure. To install, reverse removal procedure. Ensure coil spring is seated in upper and lower seats. Tighten nuts and bolts to specification with vehicle resting on ground and suspension unloaded. See **TORQUE SPECIFICATIONS** table. Check rear wheel alignment.

See **WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES** article in the WHEEL ALIGNMENT section.

## LOWER ARM

### Removal

Raise and support vehicle. Remove rear wheel assembly. Remove stabilizer bar control link nut and bolt. See **Fig. 1**. Remove lower strut bolt. Remove lower arm-to-crossmember bolts. Remove lower arm-to-knuckle bolts. Remove lower arm. Inspect arm for damage, cracks and deformation. Check for damaged or worn bushings.



**Fig. 1: Exploded View Of Rear Lower Arm Assembly**  
 Courtesy of MAZDA MOTORS CORP.

### Installation

To install, reverse removal procedure. Tighten all bolts with vehicle resting on ground and suspension unloaded. See **TORQUE SPECIFICATIONS** table. Adjust rear wheel alignment.

See **WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES** article in the WHEEL ALIGNMENT section.

### UPPER ARM

#### Removal

Raise and support vehicle. Remove rear wheel assembly. Remove upper arm-to-crossmember bolts. Remove

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upper arm-to-knuckle bolts. Remove upper arm. Inspect arm for damage, cracks and deformation. Check for damaged or worn bushings.

#### **Installation**

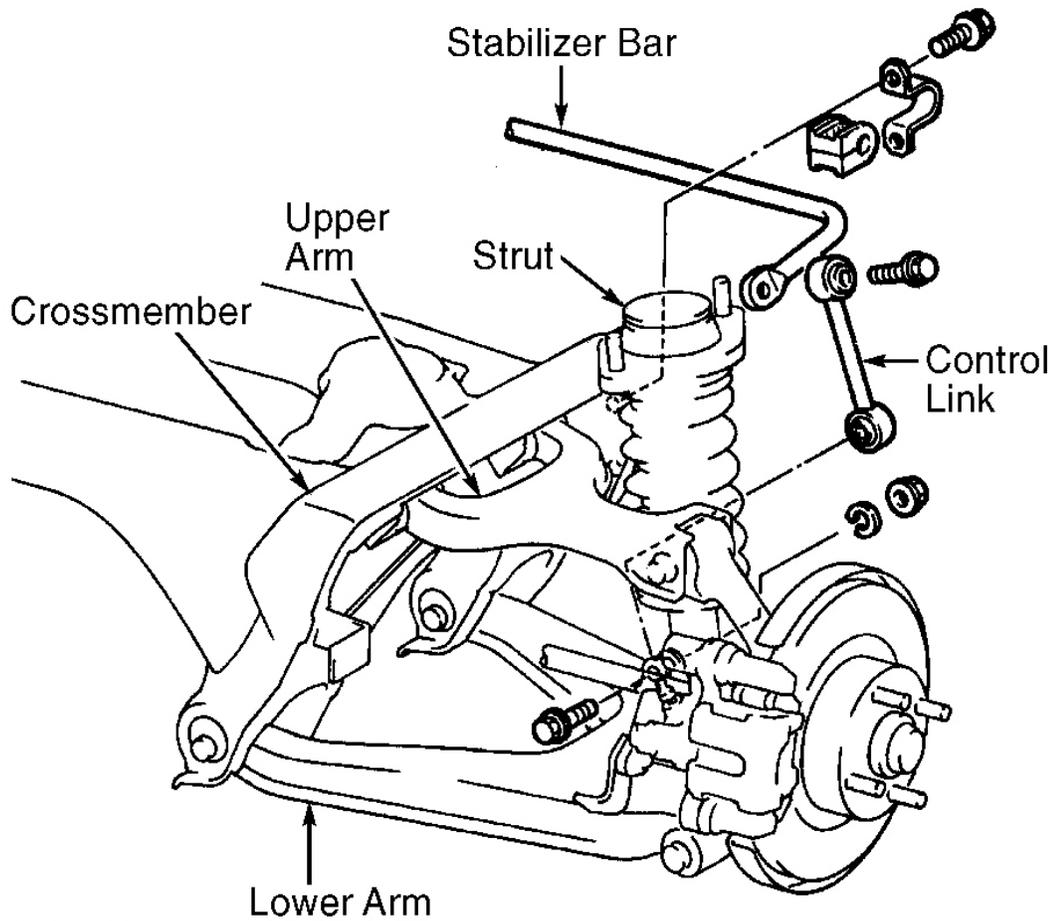
To install, reverse removal procedure. Tighten all bolts with vehicle resting on ground and suspension unloaded. See **TORQUE SPECIFICATIONS** table. Adjust rear wheel alignment.

See **WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES** article in the WHEEL ALIGNMENT section.

#### **STABILIZER BAR**

##### **Removal**

Raise and support vehicle. Remove rear wheel assembly. Remove stabilizer bar-to-crossmember bolts, brackets and bushings. See **Fig. 2**. Remove stabilizer bar control link-to-lower arm nut and bolt. Remove stabilizer bar and control link from vehicle. Separate stabilizer bar from control link. Inspect stabilizer bar and components for damage, cracks and deterioration.



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**Fig. 2: Exploded View Of Rear Stabilizer Bar & Control Link**  
 Courtesy of MAZDA MOTORS CORP.

**Installation**

To install, reverse removal procedure. Ensure bushing is aligned with White line on stabilizer. Ensure seam faces front of vehicle. Tighten nuts and bolts to specification with vehicle resting on ground and suspension unloaded. See **TORQUE SPECIFICATIONS** table.

**TORQUE SPECIFICATIONS**

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Application	Ft. Lbs. (N.m)
ABS Speed Sensor Harness Bracket Bolts	12-17 (16-23)
Caliper Assembly-To-Knuckle Bolt	36-51 (49-69)

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Control Link-To-Lower Arm Nut	27-40 (36-54)
Lower Arm-To-Crossmember Nuts	54-70 (73-95)
Lower Arm-To-Knuckle Nut	46-55 (63-75)
Drive Axle Lock Nut	159-217 (216-294)
Stabilizer Bar Brackets Bolts	15-21 (20-28)
Stabilizer Bar-To-Control Link Bolt	27-40 (36-54)
Strut Piston Rod Lock Nut	22-27 (30-36)
Strut-To-Body Nuts	22-27 (30-36)
Strut-To-Lower Arm Bolt	54-69 (73-93)
Upper Arm-To-Crossmember Nuts	34-49 (46-67)
Upper Arm-To-Knuckle Bolt	34-49 (46-67)
Wheel Lug Nuts	65-87 (88-118)