

SUSPENSION - REAR (FWD)

Article Text

1987 Volkswagen Quantum/Quantum Syncro
For Volkswagen Technical Site
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Sunday, March 19, 2000 01:54AM

ARTICLE BEGINNING

1987 Rear Suspension
VOLKSWAGEN

Quantum, Quantum Syncro

DESCRIPTION

Rear suspension is link type with MacPherson type suspension struts. Suspension uses control arms and axle beam for stabilization. Control arms and axle beam are combined as one unit. Brake drums or discs ride on stub axles bolted to control arms. See Fig. 1.

ADJUSTMENTS & INSPECTION

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES in WHEEL ALIGNMENT section.

WHEEL BEARING

Tighten hub nut to 7.5 ft. lbs. (10 N.m), while rotating brake drum by hand. Determine the bearing play by testing the force needed to move thrust washer. Light pressure should move thrust washer. Turn hub nut until correct pressure is obtained.

REMOVAL & INSTALLATION

STRUT ASSEMBLY

NOTE: DO NOT remove both suspension struts at same time as this would overload bushings in axle beam.

Removal

- 1) With vehicle on floor, take off plastic cap covering strut upper retaining nuts and remove nuts.
- 2) Slowly raise vehicle until weight is off spring. Remove bolt retaining lower end of strut shock absorber to axle beam mount. Raise vehicle until strut can be removed.

Disassembly

Place strut assembly in vise. Hold piston rod and remove strut retaining nut. Take off components down to slotted nut. Remove slotted nut. Take off spacer and coil spring.

NOTE: Some models do not have the slotted nut on shock absorber shaft.

Inspection

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Hand check shock absorbers for even resistance through entire piston stroke. Worn shock absorbers cannot be overhauled. If coil spring is being replaced, ensure that paint stripe color code on replacement spring matches original spring code.

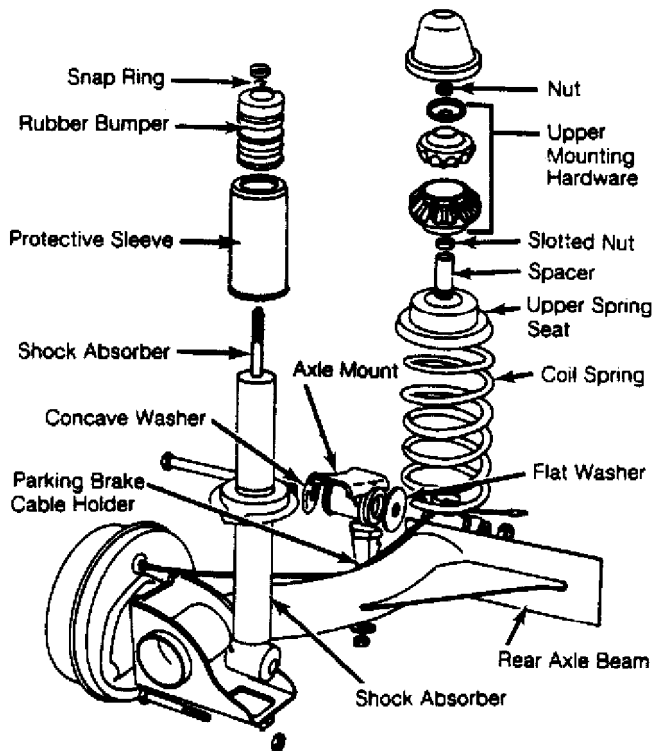


Fig. 1: Exploded View of Rear Suspension Components
Courtesy of Volkswagen United States, Inc.

Reassembly

1) Fit protective cap and tube on shock absorber. Install rubber buffer, with small diameter end downward. Insert snap ring and washer.

2) Place spring into lower seat. Fit upper retainer with spacer sleeve. Tighten slotted nut retaining piston rod. Put on upper mounting hardware and tighten piston rod.

Installation

To install, reverse removal procedure. Tighten all bolts and nuts to specification. See TIGHTENING SPECIFICATIONS table in this article.

SUSPENSION ASSEMBLY

Removal

1) With vehicle on floor, disconnect upper strut mount. Raise vehicle and support with safety stands.

2) Disconnect parking brake at holder near axle mount. Disconnect and plug brake lines. Leave flex hose attached to suspension.

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3) Separate brake pressure regulator spring from axle beam (if equipped). Remove both nuts retaining axle beam on each side to body.

NOTE: Do not install bolts and nuts coated with undercoating wax. With waxy coating on threads, true torque tightening cannot be reached. Clean or replace bolts and nuts.

Installation

1) If axle beam mounting has been removed, adjust mounting pad. See Fig. 2. If pad is not correctly aligned, torsional preload of mounting bushings will be incorrect.

2) Position rear suspension on body. Install nuts retaining axle beam to body. Raise wheel and guide upper end of strut into body mount.

3) Connect parking brake cables. Connect brake lines. Lower vehicle and tighten upper strut retaining nuts. Tighten all bolts and nuts to specification. Bleed brake system.

AXLE BEAM PIVOT BUSHING

Removal

1) This procedure is for replacing bushing with axle beam installed in vehicle. Raise vehicle and support with safety stands under vehicle body.

2) With no pressure on beam, remove nuts retaining axle beam to body and tap out pivot bolt.

3) Using Bushing Remover (VW 3111), press out bushing. Select new bushing and press bushing into place.

Installation

1) Loosely install mounting pad on axle beam. On Quantum models, use Bushing Installer (VW 3111) to install bushing (with power tool if possible). Install bushing to a depth of 2.42-2.44" (61.5-62.0 mm). Concave washer and bolt head must face toward outside of vehicle. Bolt head must recess into washer.

2) Using Mounting Bracket Aligner (VW 261 or 3021), align mount. See Fig. 2. Tighten pivot bolt nut to specification with vehicle on ground.

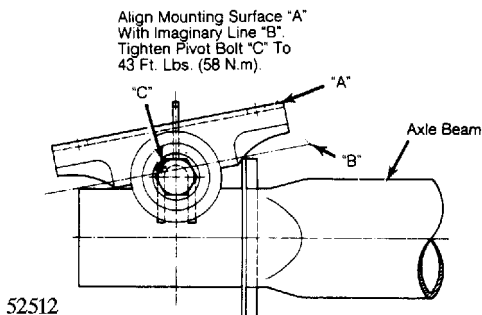


Fig. 2: Correct Alignment of Axle Beam Mounting Pad
Courtesy of Volkswagen United States, Inc.

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TORQUE SPECIFICATIONS

TIGHTENING SPECIFICATIONS TABLE

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Application	Ft. Lbs. (N.m)
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Brake Caliper Bolts	48 (65)
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Coil Spring Retainer-to-Piston Rod Nut	11 (15)
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Rear Axle Beam Pivot Bushing Bolt	43 (58)
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Rear Axle Mounting Pad-to-Body Bolts	63 (85)
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Shock Absorber-to-Axle Beam Nut	52 (70)
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Shock Absorber-to-Body Bolt	26 (35)
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Shock Absorber Slot Nut	15 (20)
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Stub Axle-to-Control Arm Bolts	44 (60)
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Wheel Lug Bolts	81 (110)
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END OF ARTICLE