

SUSPENSION - FRONT

Article Text

1996 Volkswagen Golf
For Volkswagen Technical Site
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Thursday, August 19, 1999 11:59PM

ARTICLE BEGINNING

1995-96 SUSPENSION
Front

Golf III

DESCRIPTION

FWD suspension system is equipped with MacPherson struts. Steering knuckles are supported by lower control arms and vertically mounted strut assemblies. See Fig. 1.

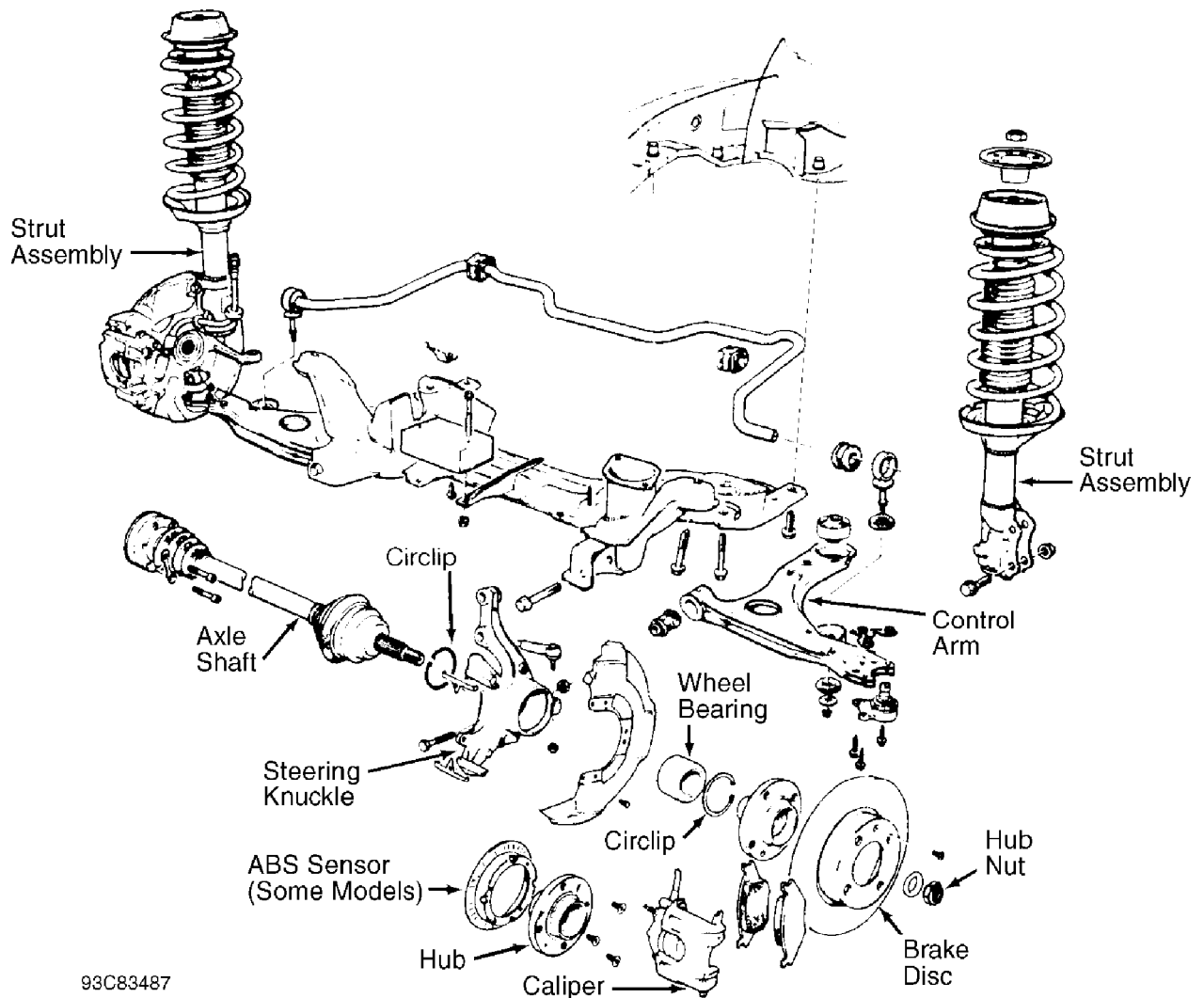


Fig. 1: Exploded View Of Front Suspension (Typical)
Courtesy of Volkswagen United States, Inc.

ADJUSTMENTS & INSPECTION

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WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

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

WHEEL BEARING

Wheel bearing is not adjustable.

BALL JOINT CHECKING

Raise and support vehicle. Inspect ball joints for excessive play and damaged rubber boots. There should be no vertical or horizontal ball joint play. Replace ball joint if any play is present.

REMOVAL & INSTALLATION

HUB & KNUCKLE ASSEMBLY

Use exploded view illustration when removing or installing hub and knuckle assembly. See Fig. 1.

LOWER CONTROL ARM & BALL JOINT

Removal

1) Raise and support vehicle. Remove ball joint-to-steering knuckle bolts. Separate ball joint from housing. Leave control arm hanging in mounts at subframe.

NOTE: On vehicles with automatic transmission, engine may have to be lifted slightly to gain access to pivot bolts.

2) If ball joint is to be removed, remove ball joint bolts. Remove ball joint. If control arm is to be removed from vehicle, remove stabilizer bar link rod nut, washers, and bushings. Remove pivot bolt and "U" bracket housing inner pivot pin. Slide out control arm.

Inspection

Check lower control arm bushings for excessive wear, cracks or contamination. Replace bushings if necessary. To replace bushings, press out worn bushing. Select new bushing and press into position. Ensure bushing does not twist when seating into place.

Installation

Slide new ball joint into slot in control arm. Install and tighten ball joint bolts. Install lower control arm to subframe. Install ball joint into steering knuckle. To complete installation, reverse removal procedure. Tighten control arm bolts with vehicle on ground. Tighten all bolts and nuts to specification. See **TORQUE SPECIFICATIONS**. Check wheel alignment. See **WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES** article in **WHEEL ALIGNMENT** section.

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STRUT ASSEMBLY

Removal

1) Raise and support vehicle. Remove wheel. Disconnect and wire caliper aside. Remove strut-to-steering knuckle bolts.

2) Support front suspension arm and components. Pry strut from steering knuckle. Remove upper strut nuts from inside engine compartment. Remove strut.

Installation

To install, reverse removal procedure. Tighten bolts and nuts to specification. See TORQUE SPECIFICATIONS. Check wheel alignment. See WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES article in WHEEL ALIGNMENT section.

FRONT SUSPENSION ASSEMBLY

Removal

1) Raise and support vehicle at center with safety stands. Disconnect brake line and plug openings. Leave flex line in place. Remove stabilizer link rod nut, bushings and washers.

2) Remove tie rod nut. Separate tie rod from steering knuckle. Disconnect inner portion of constant velocity joint from transaxle drive flange.

NOTE: On vehicles with automatic transmission, engine may have to be lifted slightly to gain access to pivot bolts.

3) Remove lower control arm front pivot bolt. Remove "U" shaped bracket bolts at control arm rear pivot.

4) Support suspension assembly. Remove upper strut nuts. Remove suspension assembly from vehicle.

Installation

To install, reverse removal procedure. Ensure convex side of thrust washer faces pivot bolt head. Tighten bolts and nuts to specification. See TORQUE SPECIFICATIONS. Check wheel alignment. See WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES article in WHEEL ALIGNMENT section.

WHEEL BEARING

Removal

1) Remove axle shaft nut with front wheels on ground. Raise and support vehicle. Allow suspension to hang free. Remove wheel. Remove brake caliper bolts. Remove caliper and wire aside. Remove brake disc screw and remove disc.

2) Disconnect tie rod from steering knuckle. Remove ball joint clamp nut and bolt. Disconnect ball joint from steering knuckle. Remove steering knuckle.

3) Remove 2 wheel bearing circlips. Using Hub Remover (VW

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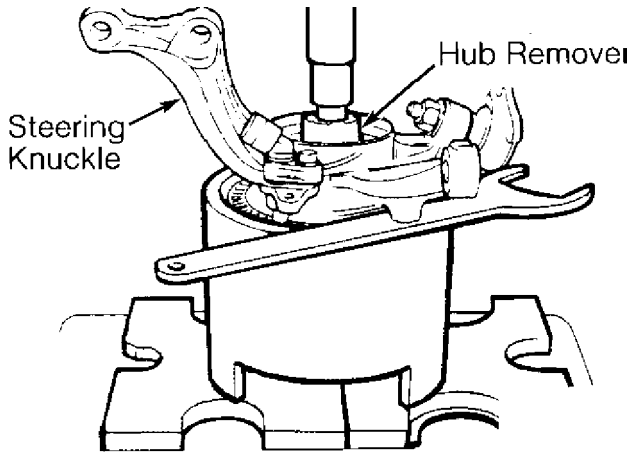
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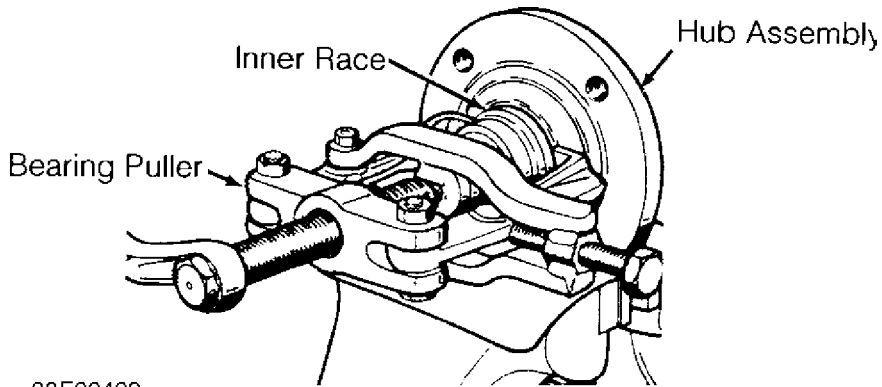
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295a), press wheel bearing out of steering knuckle. See Fig. 2. Using a bearing puller, remove wheel bearing inner race from hub assembly. See Fig. 3. Using Bearing Remover (40-105), press wheel bearing from outboard side of steering knuckle.



93D83488

Fig. 2: Pressing Wheel Bearing Out Of Steering Knuckle
Courtesy of Volkswagen United States, Inc.



93E83489

Fig. 3: Removing Wheel Bearing Inner Race
Courtesy of Volkswagen United States, Inc.

NOTE: When installing hub, ensure press adapter contacts inner bearing race only.

Installation

1) Press new wheel bearing race onto hub. Using Bearing & Hub Installer (VW 412), and Adapter (VW 472/1), press new bearing into steering knuckle from outboard side. Using same installer and adapter, press wheel hub into steering knuckle. See Fig. 4. Apply a small bead of locking compound to axle splines before installing axle into hub.

2) To complete installation, reverse removal procedure. Always replace self-locking axle shaft nut. Tighten bolts and nuts to specification. See **TORQUE SPECIFICATIONS**. Check wheel alignment. See **WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES** article in **WHEEL ALIGNMENT** section.

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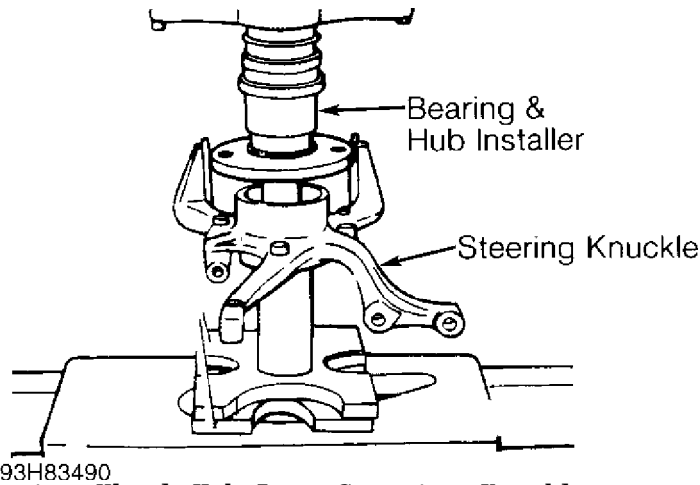


Fig. 4: Pressing Wheel Hub Into Steering Knuckle
Courtesy of Volkswagen United States, Inc.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

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Application	Ft. Lbs. (N.m)
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Axle Nut

4-Cyl.	195 (265)
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VR6	66 (90) plus 1/8 turn
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Axle Shaft-To-Transaxle Bolt	33 (45)
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Ball Joint Clamp Bolt (4-Cyl.)	37 (50)
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Ball Joint Nut (VR6)	33 (45)
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Ball Joint-To-Control Arm Bolt	26 (35)
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Caliper Pin Bolt	26 (35)
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Caliper Bracket Bolts	92 (125)
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Control Arm Front Bushing Bolt

4-Cyl.	52 (70)
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VR6	37 (50) plus 1/4 turn
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Control Arm-To-Subframe Rear Bushing Bolt	96 (130)
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Strut Piston Rod Nut	44 (60)
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Strut-To-Steering Knuckle Bolt	70 (95)
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Subframe Bolts

4-Cyl.	47 (65)
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VR6	52 (70) plus 1/4 turn
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Tie Rod Castle Nut	26 (35)
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Wheel Lug Bolt	81 (110)
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END OF ARTICLE