

2003 Volkswagen EuroVan

SUSPENSION - FRONT

1997-2003 SUSPENSION

Front - EuroVan

IDENTIFICATION

BRAKE CALIPER IDENTIFICATION

Several different front calipers are used on EuroVan. Calipers can be identified by the PR number on the vehicle identification plate. See **Fig. 1** . See **FRONT BRAKE CALIPER IDENTIFICATION** .

FRONT BRAKE CALIPER IDENTIFICATION

PR Number ⁽¹⁾	Caliper Model
1LU ⁽²⁾	FN3
1LP ⁽²⁾	Lucas C54
1LE ⁽²⁾	Lucas RC54
1LB ⁽³⁾	FN3 Or FNR

(1) Identify brake version by reading PR number on vehicle data plate. Data plate is located on left "A" pillar, next to central electronics. See **Fig. 1** .

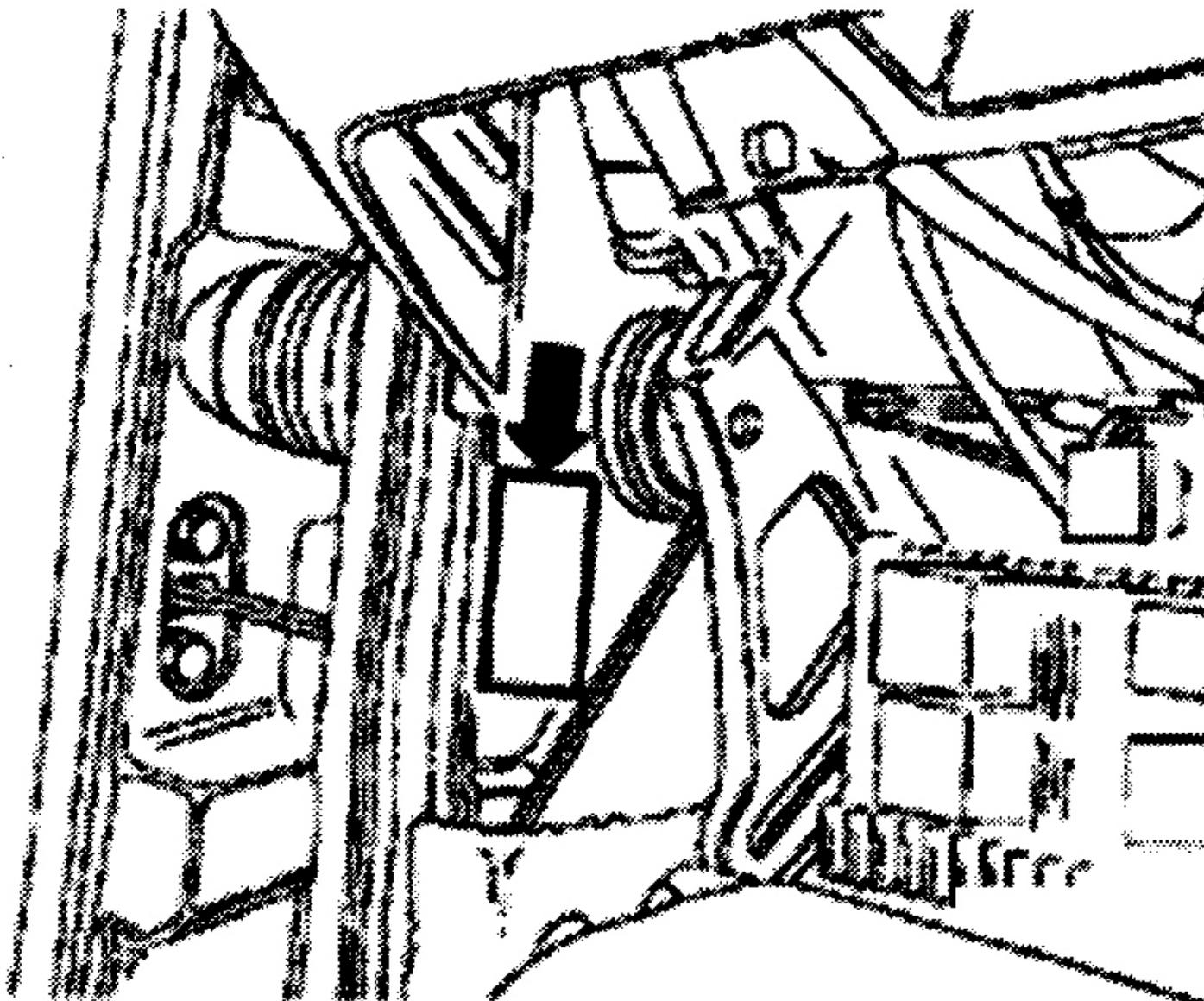
(2) Used with 15" wheels.

(3) Used with 16" wheels.

NOTE: On vehicles with knee padding, vehicle data plate is located under central electric cover (under driver's side of dash).

2003 Volkswagen EuroVan

SUSPENSION - FRONT



4189 58-5-4248 995 FR
WVZZZZ70 z MH024053
70B 1F2
T4 KO KR GRUND 1
57 KW D 5G
AAB AYF

Fig. 1: Locating & Reading Vehicle Data Plate (EuroVan)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

DESCRIPTION

FWD independent suspension is an double-wishbone type with torsion bar mounted on upper control arm. Wheel is supported by a wheel bearing housing mounted between the upper and lower control arms. Torsion bars are mounted between the upper control arms and vehicle frame. Shock absorbers are mounted between the lower control arm and frame. See **Fig. 2** .

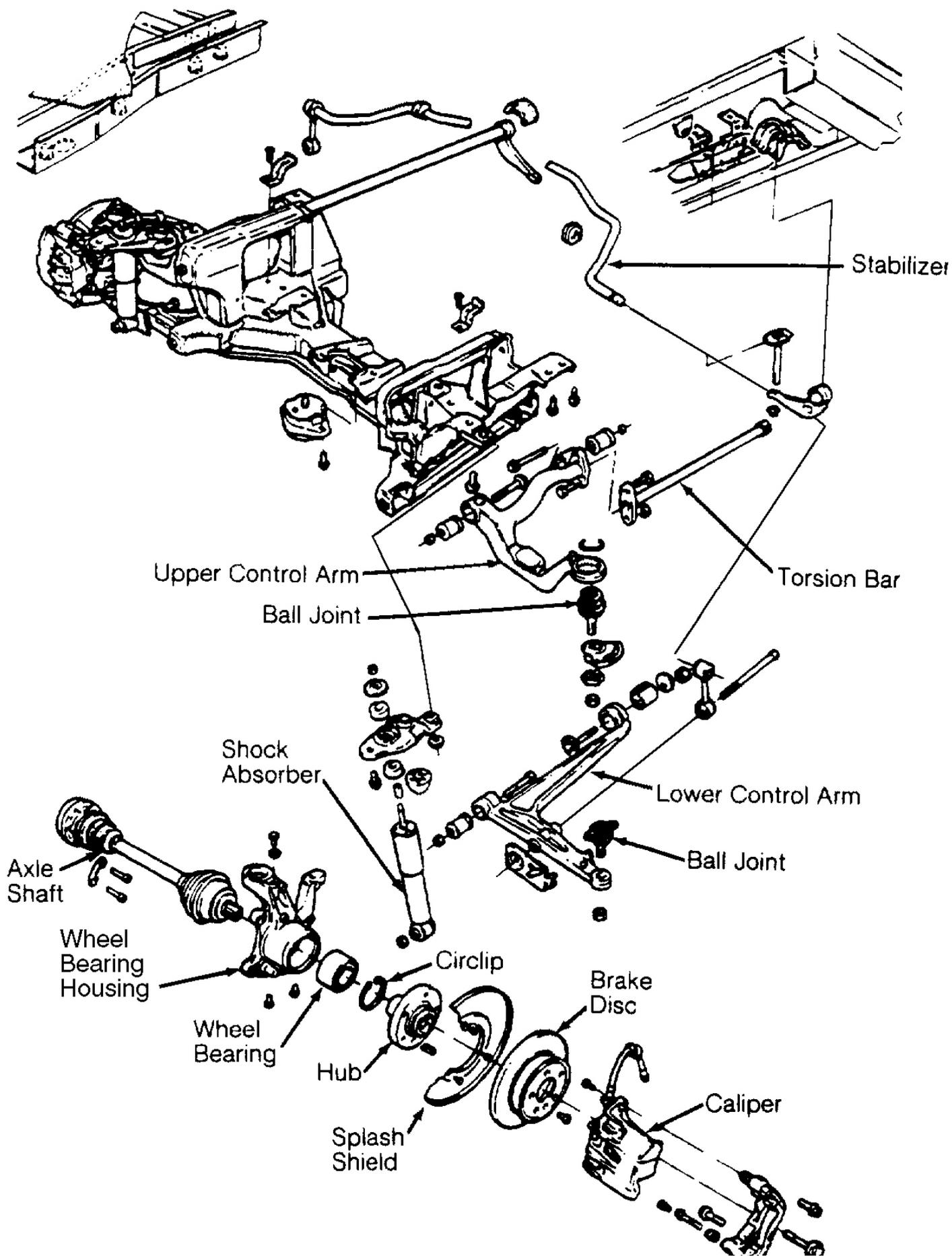


Fig. 2: Exploded View Of Front Suspension**Courtesy of VOLKSWAGEN UNITED STATES, INC.**

The upper control arm is pushed downward by the pre-tensioning strength of the torsion bar. Torsion bar must be relaxed for following services:

- Shock absorber, removing and installing.
- Removing and installing wheel bearing/wheel bearing housing.
- Removing and installing drive shaft.
- Removing and installing lower ball joint/control arm.
- Removing and installing upper ball joint.
- Removing and installing eccentric bushing at upper ball joint.
- Removing and installing stabilizer.
- Torsion bar, removing, installing, and adjusting.

ADJUSTMENTS**WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES**

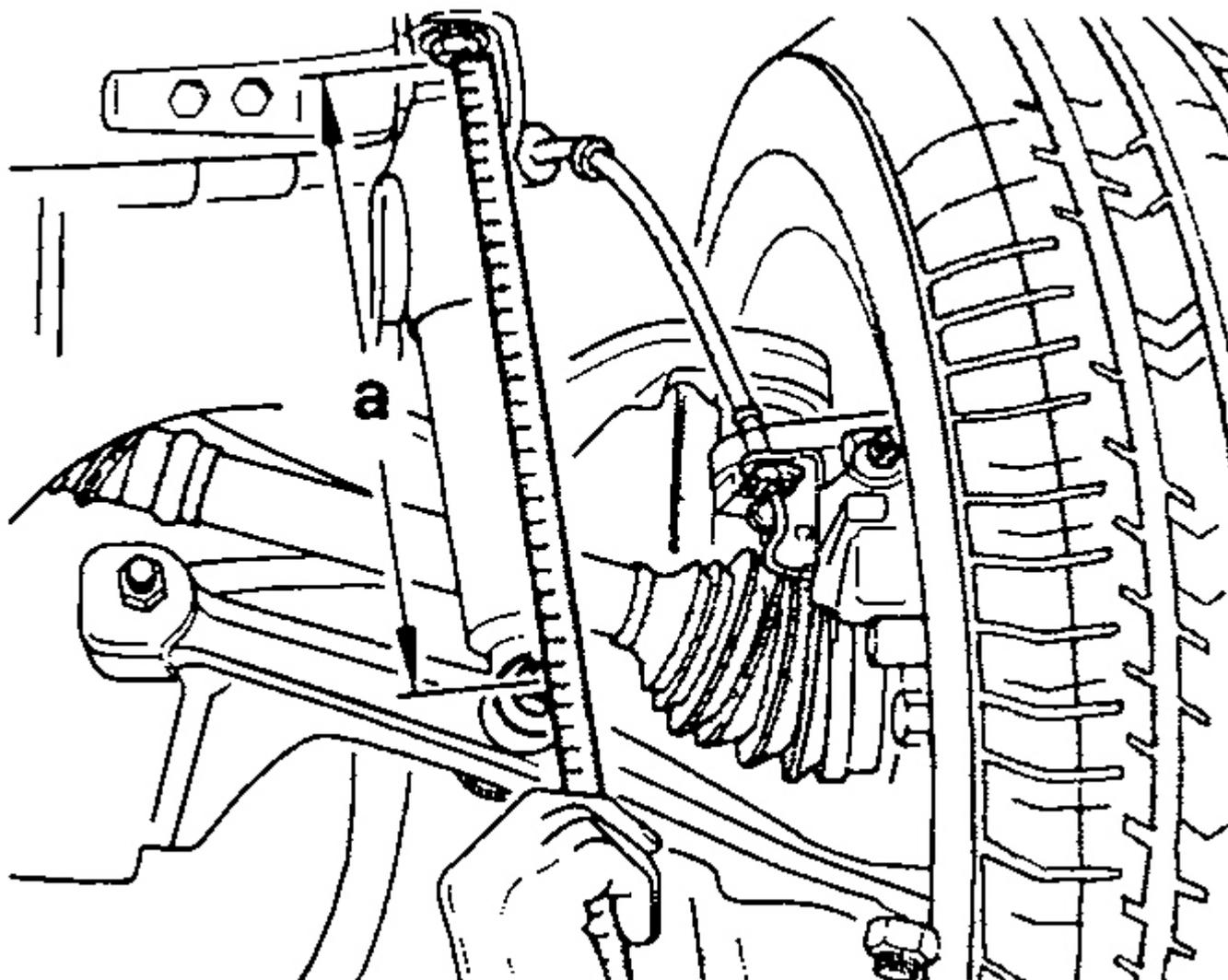
NOTE: See **SPECIFICATIONS & PROCEDURES - EUROVAN** article in **WHEEL ALIGNMENT**.

WHEEL BEARING

NOTE: The wheel bearing and wheel hub are installed together in a housing. Wheel bearing/hub unit is maintenance and adjustment free.

INSPECTION**RIDE HEIGHT**

Standing height dimension is measured from upper shock absorber mount bolt head to center of lower shock absorber bolt. See **Fig. 3**. If necessary, adjust to prescribed height by turning nut on torsion bar tensioning lever. For standing height specification, see **SPECIFICATIONS & PROCEDURES - EUROVAN** article in **WHEEL ALIGNMENT**.



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Fig. 3: Measuring & Adjusting Front Axle Ride Height
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

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

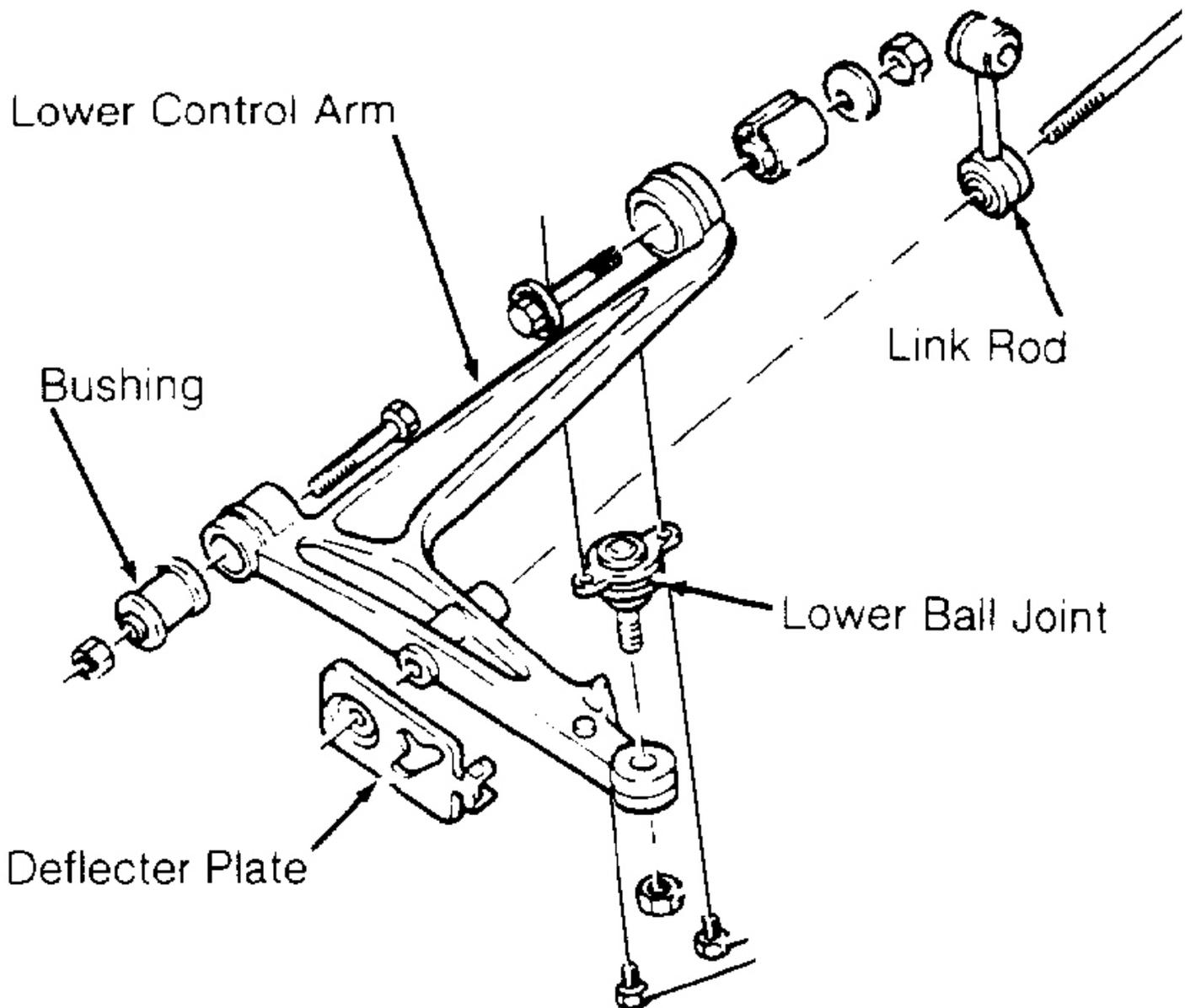
BALL JOINTS

NOTE: Use exploded view illustration when removing or installing front suspension components. See [Fig. 2](#) .

Removal & Installation (Lower Ball Joint)

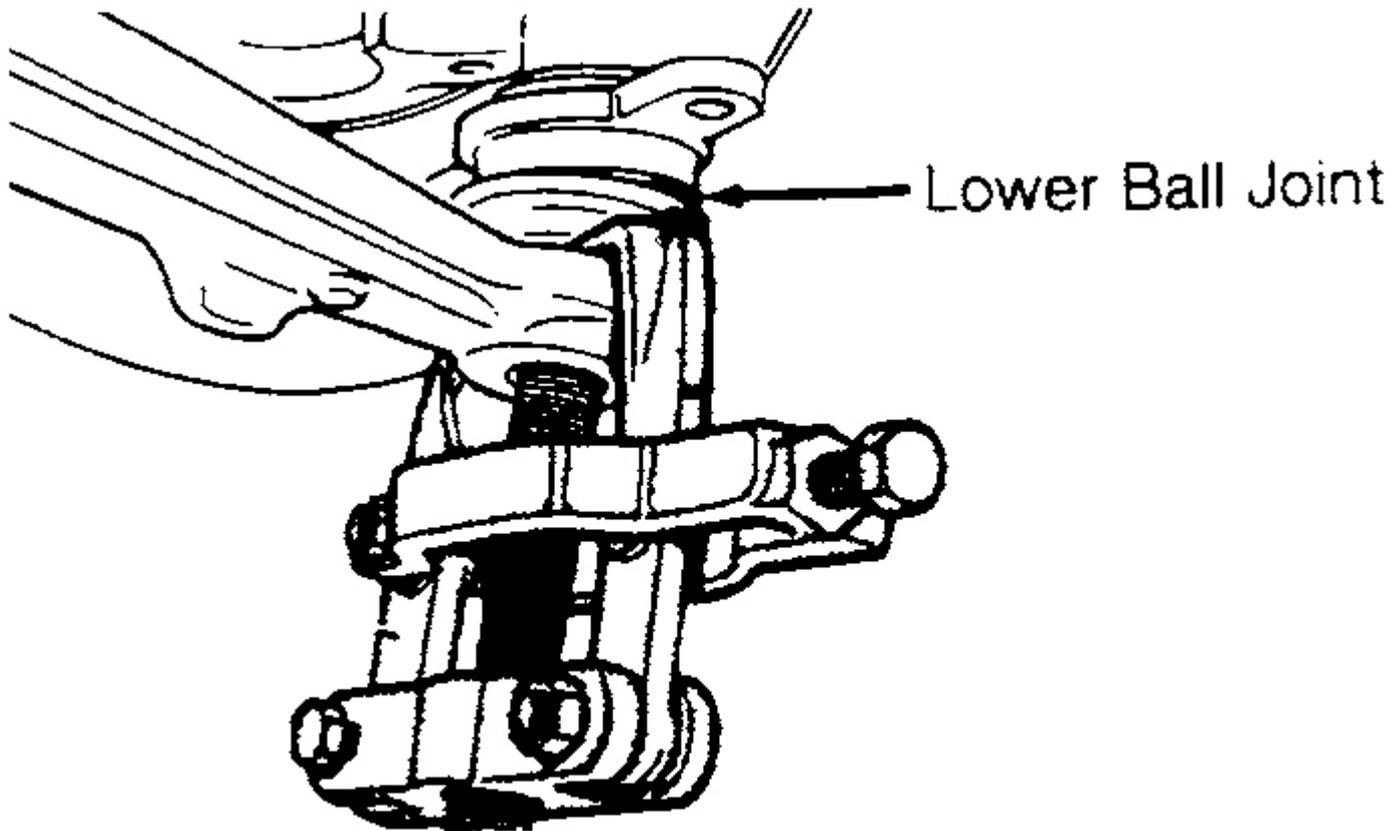
1. Raise and support vehicle. Relieve torsion bar tension. See [TORSION BAR](#) .
2. Remove lower shock absorber bolt. Remove stabilizer bar coupling link.

3. Remove ball joint-to-wheel bearing housing bolts. See **Fig. 4** .
4. Using Standard Puller (i.e. Kukko 204/2), press ball joint from control arm. See **Fig. 5** .
5. To install, reverse removal procedure. Ensure all nuts and bolts are tightened to specification. See **TORQUE SPECIFICATIONS** .



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Fig. 4: Exploded View Of Lower Control Arm Assembly
Courtesy of VOLKSWAGEN UNITED STATES, INC.



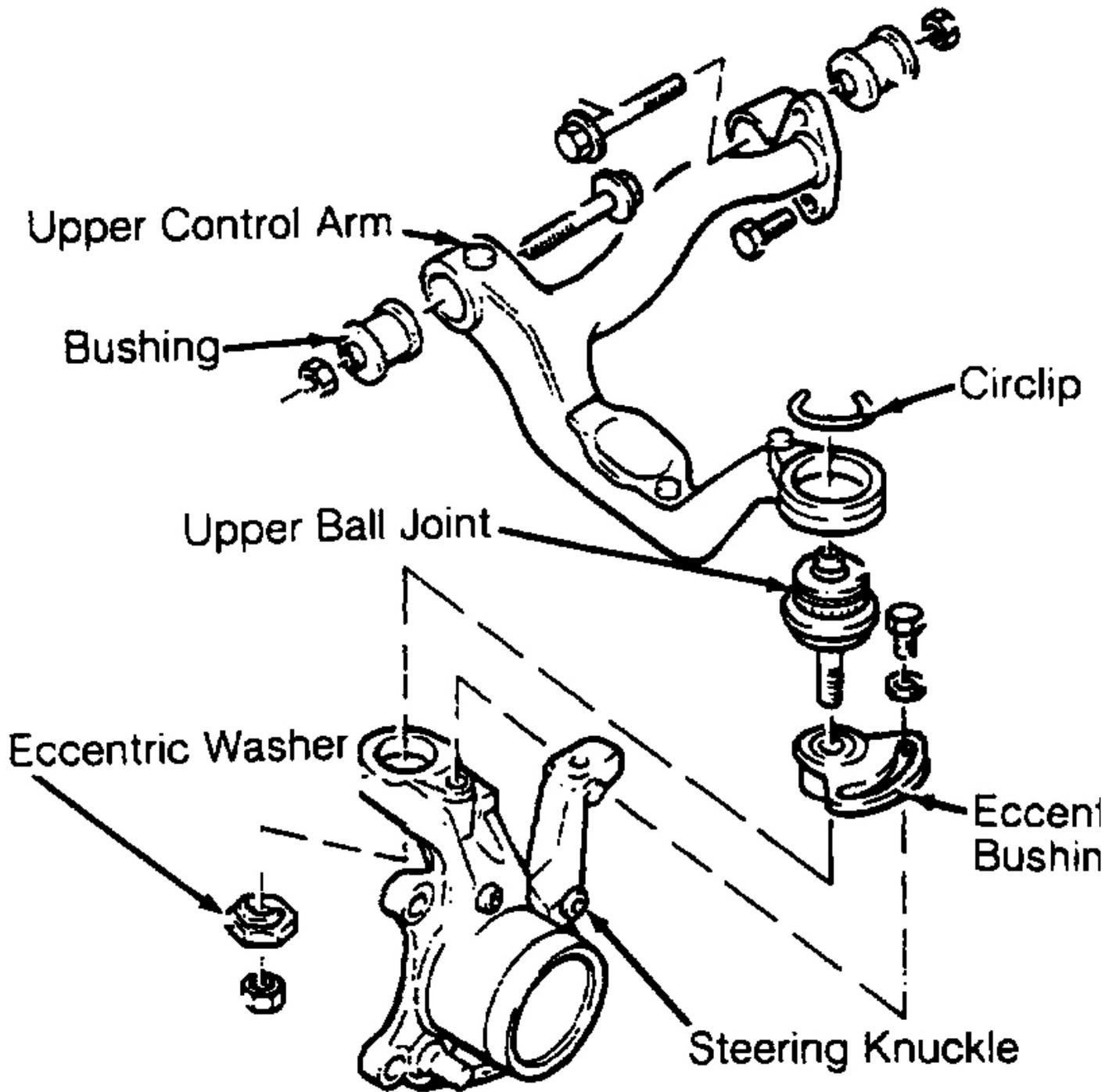
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Fig. 5: Removing Lower Ball Joint

Courtesy of VOLKSWAGEN UNITED STATES, INC.

Removal & Installation (Upper Ball Joint)

1. Remove wheel bearing housing. See **WHEEL BEARING HOUSING**.
2. Remove eccentric bushing. See **Fig. 6** and **Fig. 7**. Using a flat-bladed tool pry out securing ring.
3. Using ball joint puller, remove ball joint from upper control arm. See **Fig. 8**.
4. Place NEW ball joint into control arm. Using Two-Arm Puller (Kukko 20/2) or equivalent, install ball joint into upper control arm. See **Fig. 9**.
5. Reverse remaining removal procedure to complete installation. Ensure all nuts and bolts are tightened to specification. See **TORQUE SPECIFICATIONS**.



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Fig. 6: Exploded View Of Upper Control Arm Assembly
Courtesy of VOLKSWAGEN UNITED STATES, INC.

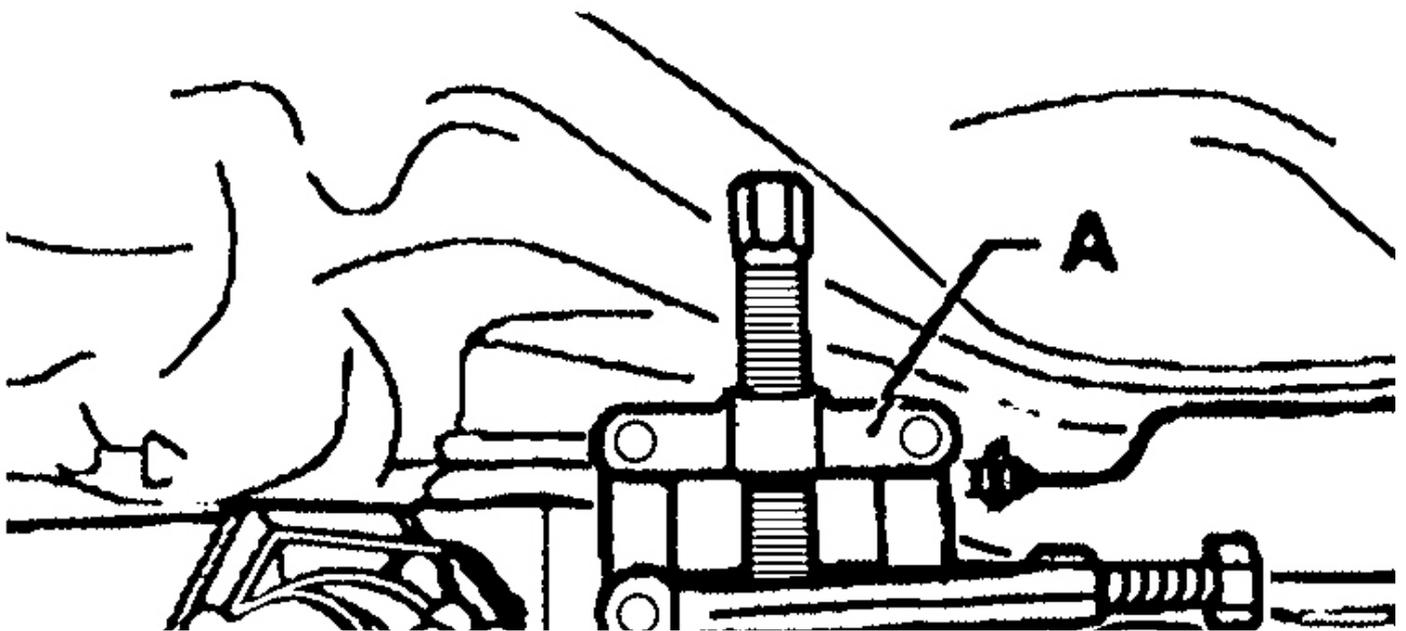
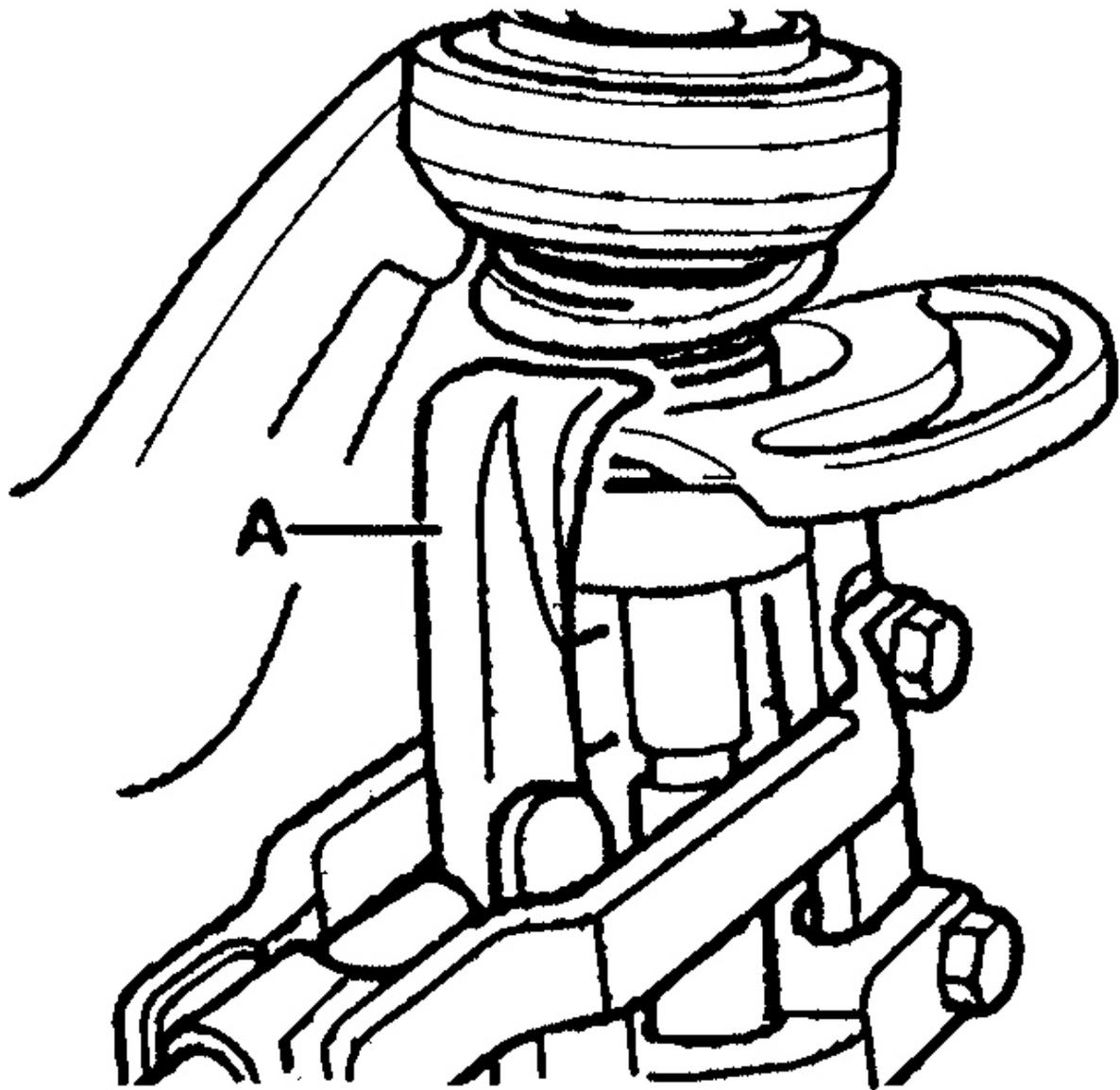
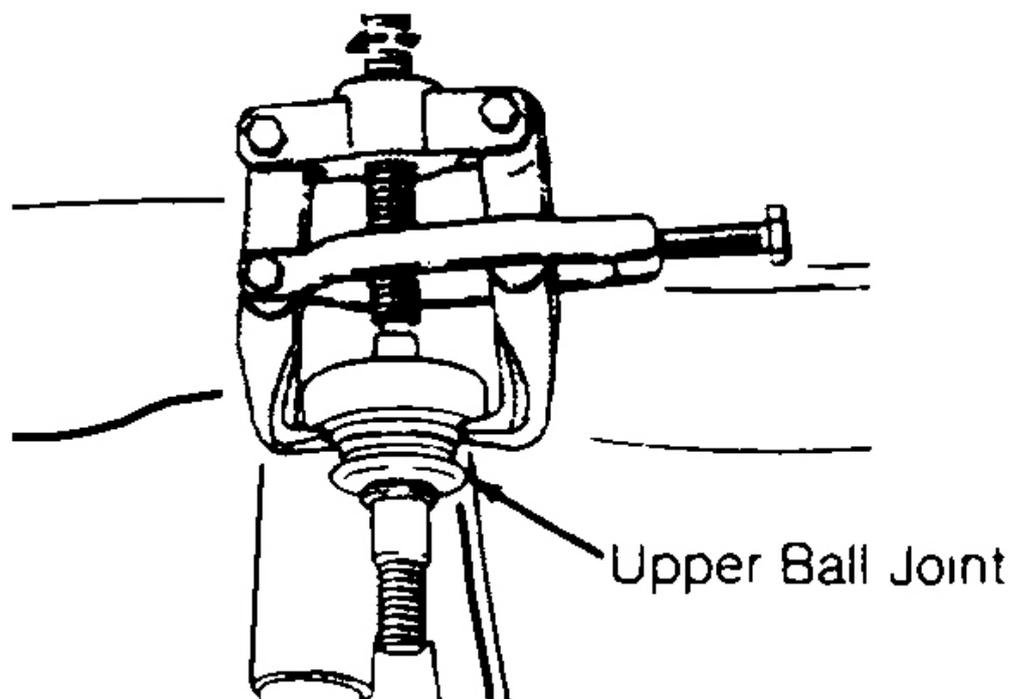


Fig. 7: Removing Eccentric Bushing

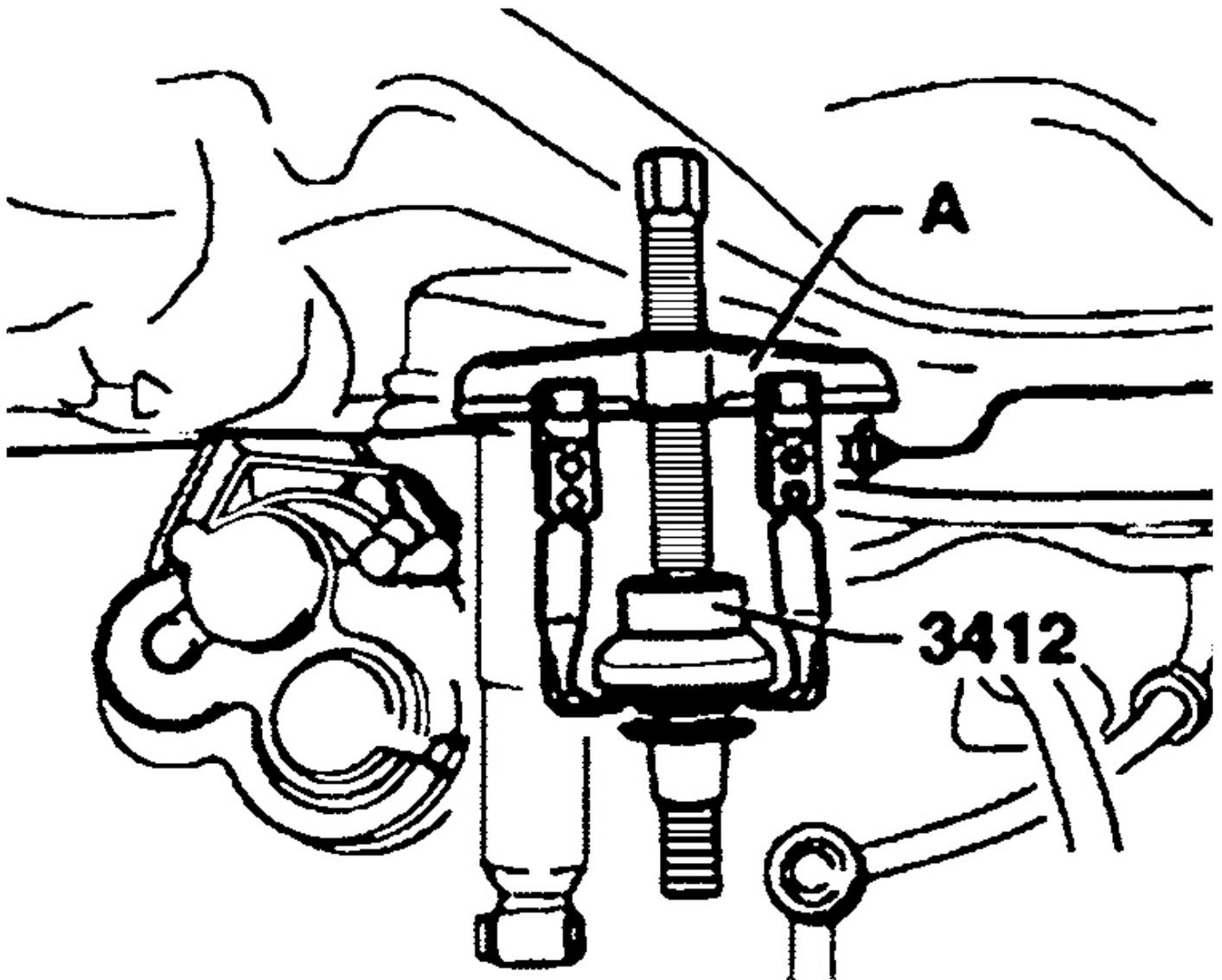
Courtesy of VOLKSWAGEN UNITED STATES, INC.



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Fig. 8: Removing Upper Ball Joint

Courtesy of VOLKSWAGEN UNITED STATES, INC.



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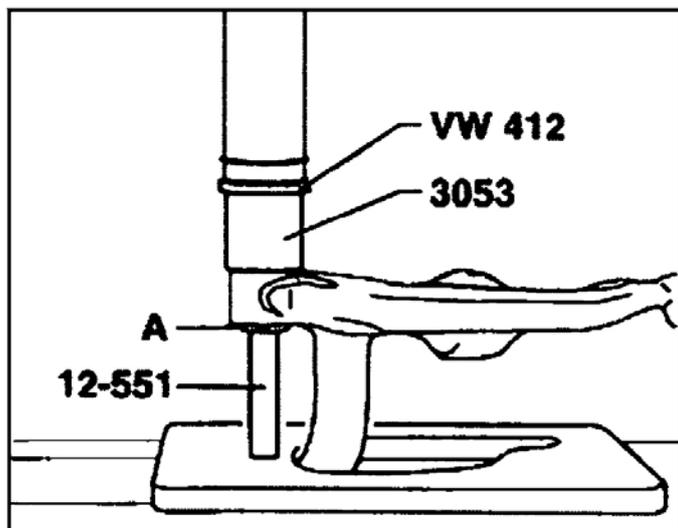
Fig. 9: Installing Upper Ball Joint

Courtesy of VOLKSWAGEN UNITED STATES, INC.

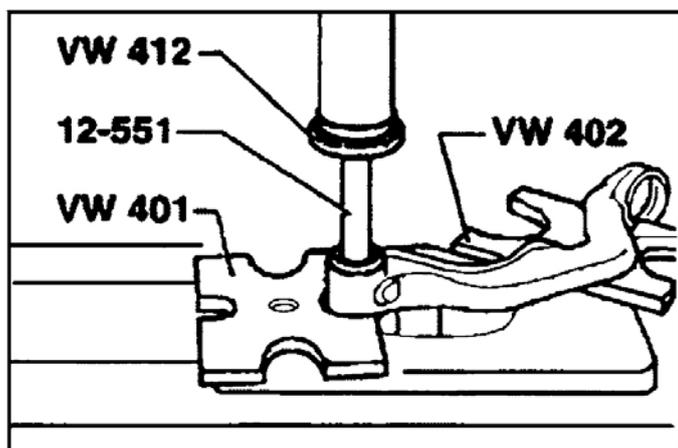
CONTROL ARM BEARINGS & BUSHINGS

NOTE: Use exploded view illustration when removing or installing front suspension components. See [Fig. 2](#) .

Use following illustrations to replace upper and lower control arm bearings (bushings). See [Fig. 10](#) -[Fig. 15](#) .



Pressing out front bearing -A- for upper control arm

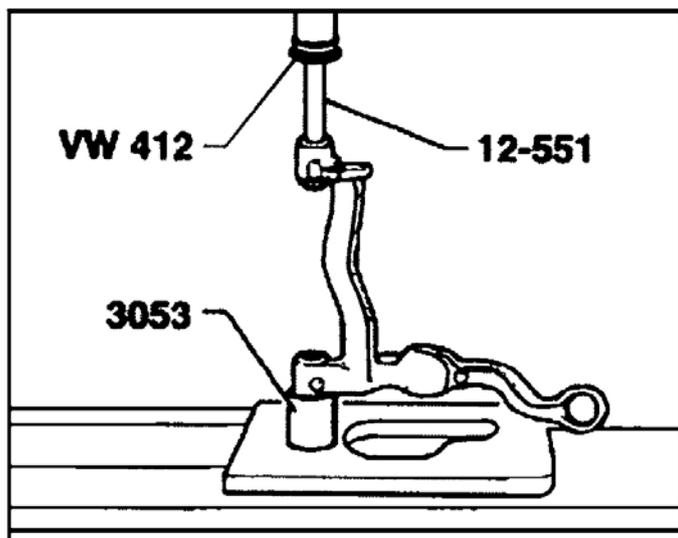


Pressing in front bearing for upper control arm

- Press in far enough so that the collar of the bearing protrudes evenly on both sides.

Note:

Before pressing in, coat using lubricant, e.g. lubricating



Rear bearing for upper control arm, pressing out and pressing in

- Press in far enough so that the collar of the bearing protrudes evenly on both sides.

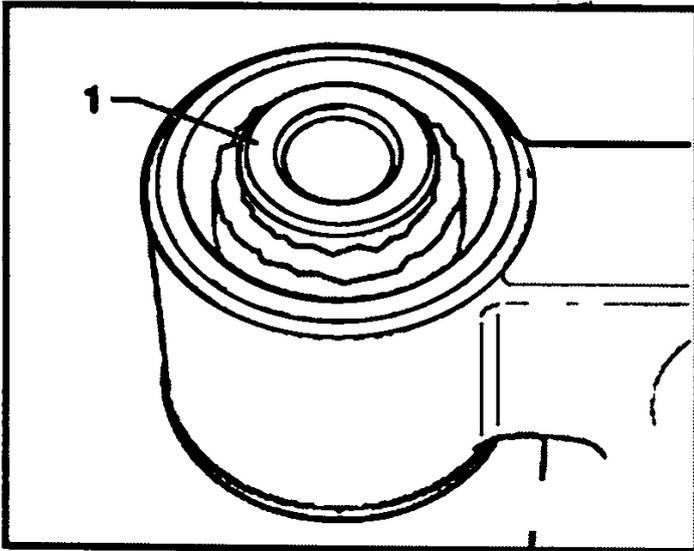
Note:

Before pressing in, coat using lubricant, e.g. lubricating

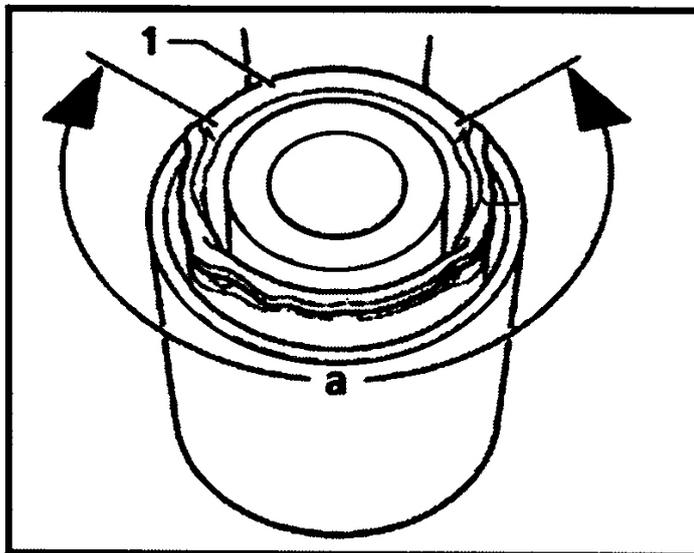
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Fig. 10: Removing & Installing Bearings For Upper Control Arm

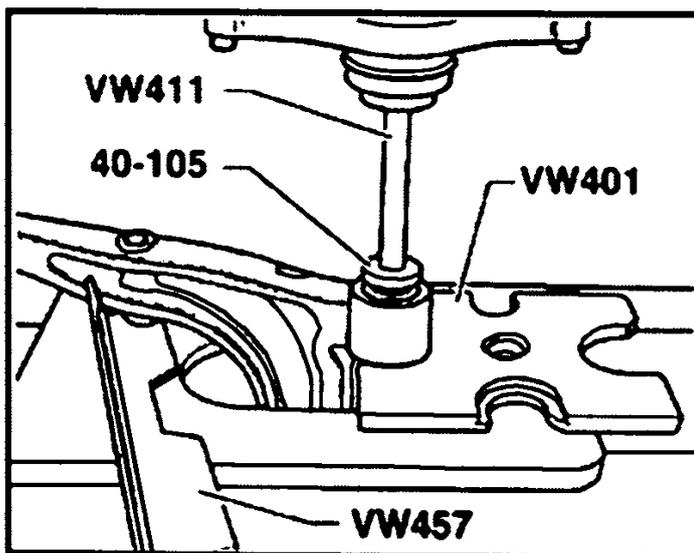
Courtesy of VOLKSWAGEN UNITED STATES, INC.



Remove rubber collar from bonded rubber bushin



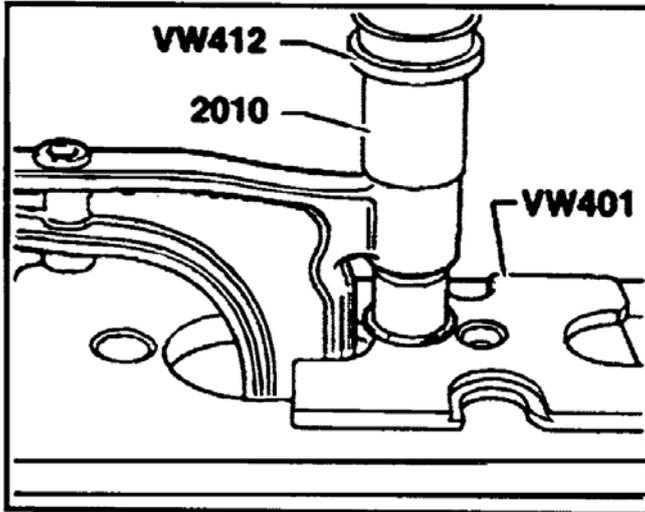
Bend up metal collar -1- in area -a-.



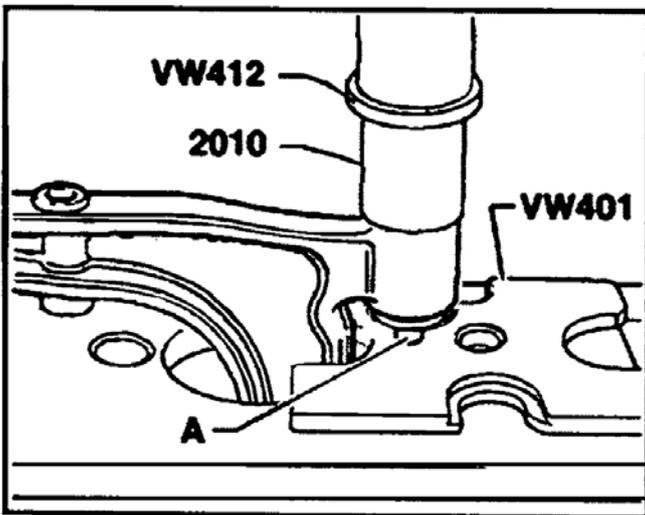
Pressing out front bearing for lower control arm.

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Fig. 11: Removing Front Bearing For Lower Control Arm
Courtesy of VOLKSWAGEN UNITED STATES, INC.

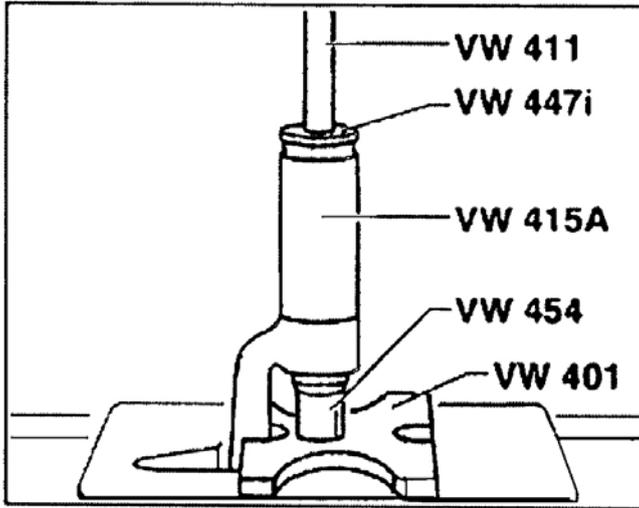


Pressing in front bearing for lower control arm
 - Press in bearing up to stop.



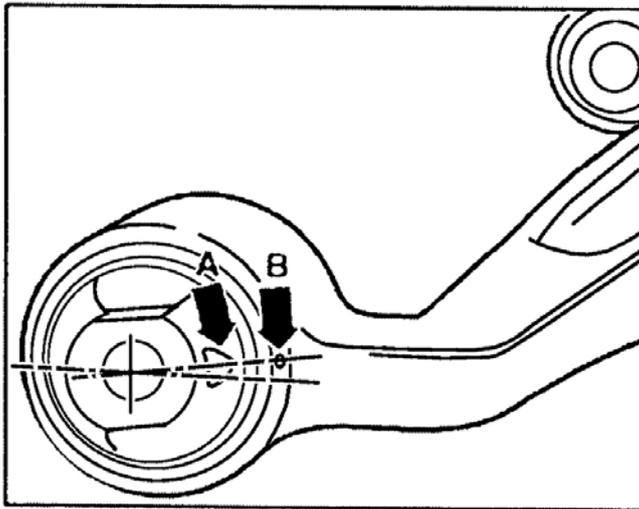
Re-pressing in front bearing for lower control arm
 The larger inner diameter of 20100 sleeve points toward center
 - Insert a bolt -A- into bearing for re-pressing (e.g. 10-203).
 - Re-press until the rubber collar jumps out from the control arm

Fig. 12: Installing Front Bearing For Lower Control Arm
 Courtesy of VOLKSWAGEN UNITED STATES, INC.



Pressing out rear bonded rubber bushing from lower control arm

- Mark installation position beforehand, e.g. via punch indentati arrow B.



Installation of rear bonded rubber bushings

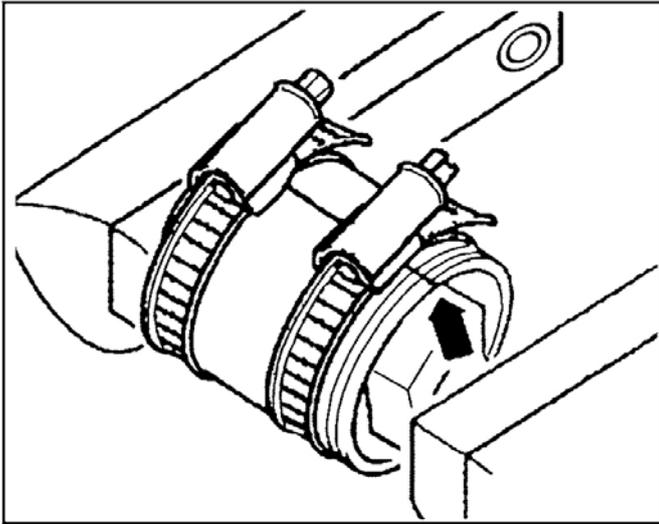
Bonded rubber bushing must be pressed in so that the lug (arrow points upward and is offset by 11° to symmetrical axis of control arm (left and right).

Note:

Control arm must be held in installation position to do so.

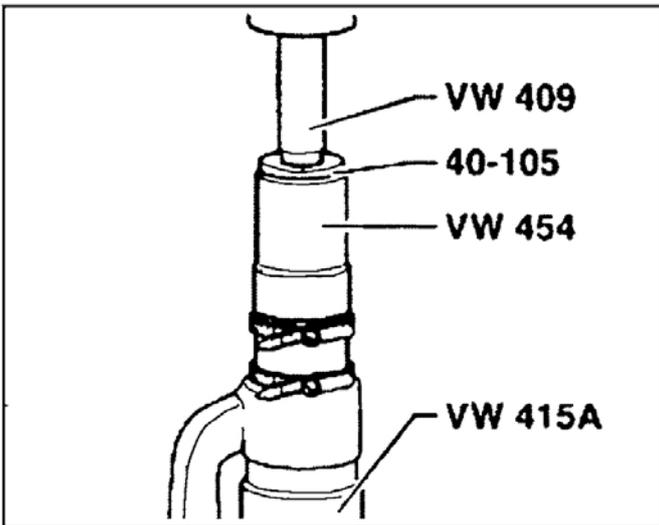
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Fig. 13: Removing & Installing Rear Bushing For Rear Lower Control Arm (1 Of 3)
 Courtesy of VOLKSWAGEN UNITED STATES, INC.



Pre-tension rear bonded rubber bushing for lower control arm

-Next, pre-tighten bonded rubber bushings using hose clamp seen in illustration, until both metal shells of the bearing cc each other (arrow).

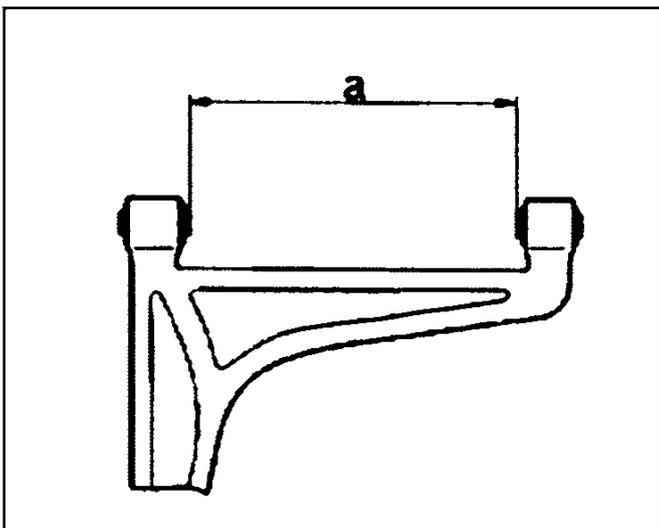


Press in rear bonded rubber bushing into lower control arm.

- Press in pre-tightened bonded rubber bushings in installa position far enough so that a distance of 371 ± 1 mm is cr between inner tube of front bonded rubber bushing and in tube of rear bonded rubber bushing.

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Fig. 14: Removing & Installing Rear Bushing For Rear Lower Control Arm (2 Of 3)
 Courtesy of VOLKSWAGEN UNITED STATES, INC.



Installation measurement of bonded rubber bushi lower control arm.

Dimension a = 371 ± 1 mm

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Fig. 15: Removing & Installing Rear Bushing For Rear Lower Control Arm (3 Of 3)

Courtesy of VOLKSWAGEN UNITED STATES, INC.

LOWER CONTROL ARM

NOTE: Use exploded view illustration when removing or installing front suspension components. See Fig. 2 .

Removal

1. Relieve torsion bar tension. See TORSION BAR .
2. Raise and support vehicle. Remove wheels. Remove shock absorber bolt. Remove stabilizer bar coupling rod.
3. Remove ball joint-to-wheel bearing housing bolts. See Fig. 4 .
4. Remove control arm-to-subframe pivot bolts. Slide out control arm.

Inspection

Check lower control arm bushings for excessive wear, cracks or contamination. Replace bushings if necessary. See CONTROL ARM BEARINGS & BUSHINGS .

Installation

Installation is reverse of removal procedure. Tighten control arm bolts with vehicle on ground. Tighten all bolts and nuts to specification. See TORQUE SPECIFICATIONS . Check wheel alignment. See SPECIFICATIONS & PROCEDURES - EUROVAN article in WHEEL ALIGNMENT.

SHOCK ABSORBER

NOTE: Use exploded view illustration when removing or installing front suspension components. See Fig. 2 .

Removal & Installation

1. Relieve torsion bar tension. See TORSION BAR .
2. Raise and support vehicle. Remove wheel. Remove nuts and bolts securing shock absorber to lower control arm.
3. Remove shock absorber mount from body. Remove washers and cushions from shaft of shock absorber. Compress shock absorber and remove from vehicle. To install, reverse removal procedure. Tighten all bolts and nuts to specification. See TORQUE SPECIFICATIONS .

STABILIZER BAR

NOTE: Use exploded view illustration when removing or installing front suspension components. See Fig. 2 .

Removal & Installation

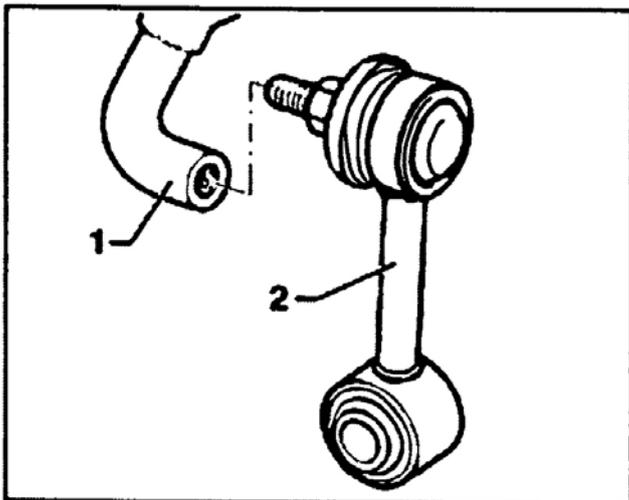
1. Relieve torsion bar tension. See TORSION BAR .
2. Raise and support vehicle. Remove wheels. Unbolt shock absorbers from control arms, and push

completely upwards.

3. Disconnect coupling links from lower control arm.
4. Disconnect clamp and push steering rack boot from steering rack. Unscrew tie rods from steering gear.
5. Unclip wire for oxygen sensor at bracket. Separate exhaust system behind front exhaust pipe. Remove exhaust system heat shield (loosen exhaust system as necessary).
6. On vehicles equipped with heavy duty stabilizer bar 1.1" (27 mm), remove universal joint bolt on steering pinon and separate steering gear from steering column. Remove steering gear from subframe assembly. Go to next step. On vehicles NOT equipped with heavy duty stabilizer bar, go to next step.
7. Remove stabilizer bar mounting clamp bolts. Remove stabilizer bar by turning bar 90 degrees upwards, and remove bar to left in one motion.
8. Installation is reverse of removal. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS** . Check toe in. See **SPECIFICATIONS & PROCEDURES - EUROVAN** article in WHEEL ALIGNMENT.

Bushing Replacement

Use illustrations to aid in replacing stabilizer bar bushings. See **Fig. 16** and **Fig. 17** .



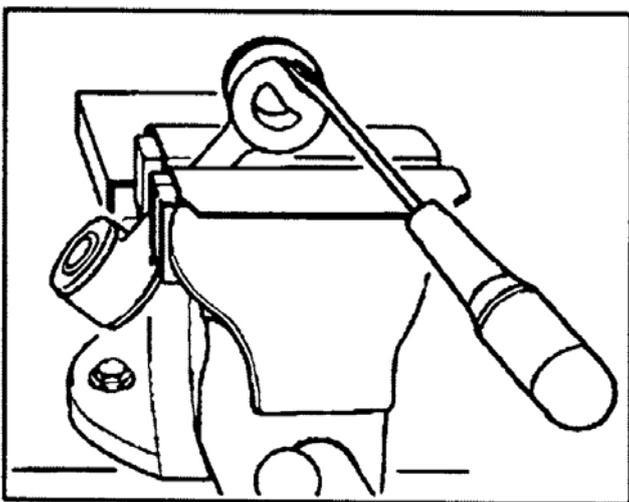
Unbolt and bolt on coupling rod at stabilizer (27 mm diameter)

1 - Reinforced stabilizer 27 mm -2- coupling rod

Tightening torque of coupling rod to stabilizer: 100 Nm

Note:

After mounting coupling rod, make sure the rubber joint of coupling rod is not twisted.



Removing and Installing rubber bushing for coupling rod, on stabilizer side.

- Pry out rubber bushing using screwdriver as shown in illustration
- Press in new rubber bushing.

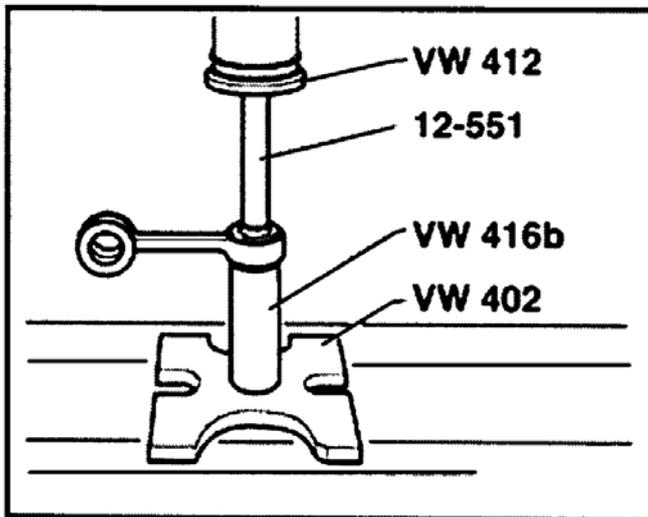
Note:

Before pressing in, coat using lubricant, e.g. lubricating soap.

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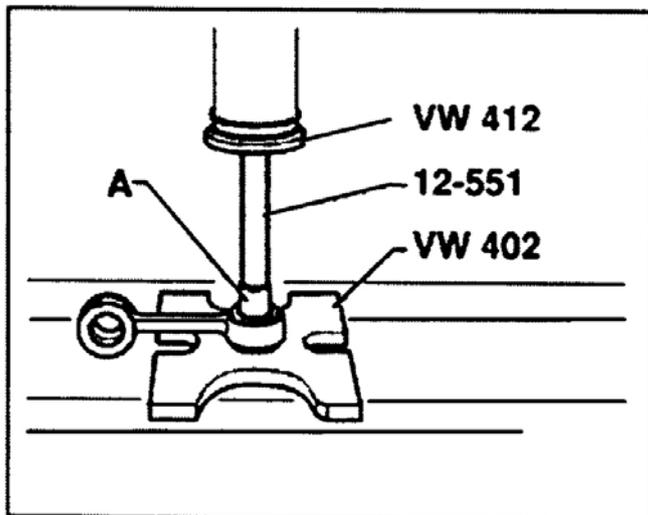
Fig. 16: Replacing Stabilizer Bar Bushings (1 Of 2)

Courtesy of VOLKSWAGEN UNITED STATES, INC.



Remove rubber bushing for coupling rod on control arm side

- Press out bushing as shown in illustration.
- Pry out rubber bushing using screwdriver.



Install rubber bushing for coupling rod on control arm side

- Press rubber bushing into coupling rod.
- Press in bushing -A- as shown in illustration.

Note:

Before pressing in, coat parts using lubricant, e.g. lubricating

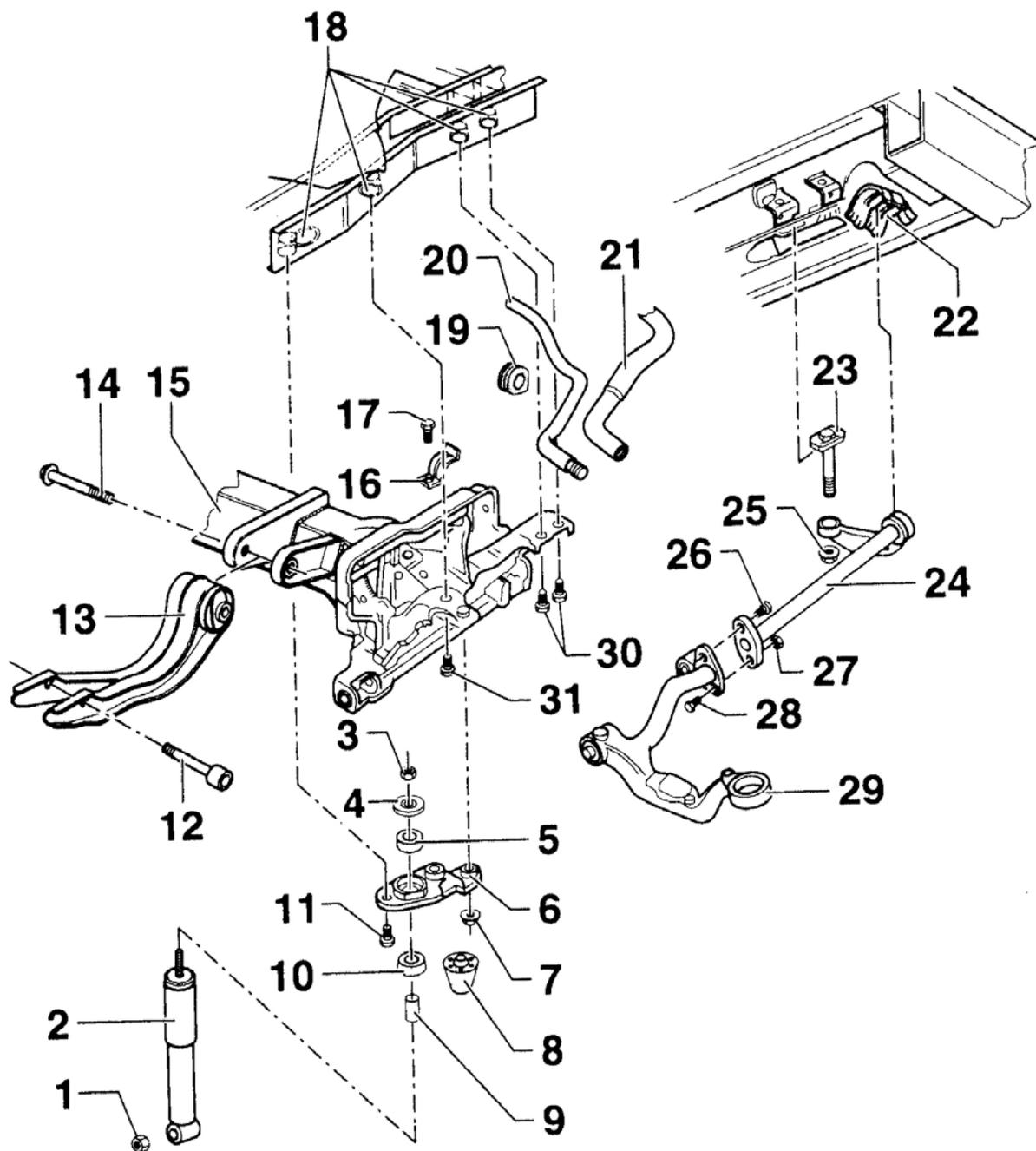
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Fig. 17: Replacing Stabilizer Bar Bushings (2 Of 2)
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

SUBFRAME ASSEMBLY

2003 Volkswagen EuroVan

SUSPENSION - FRONT



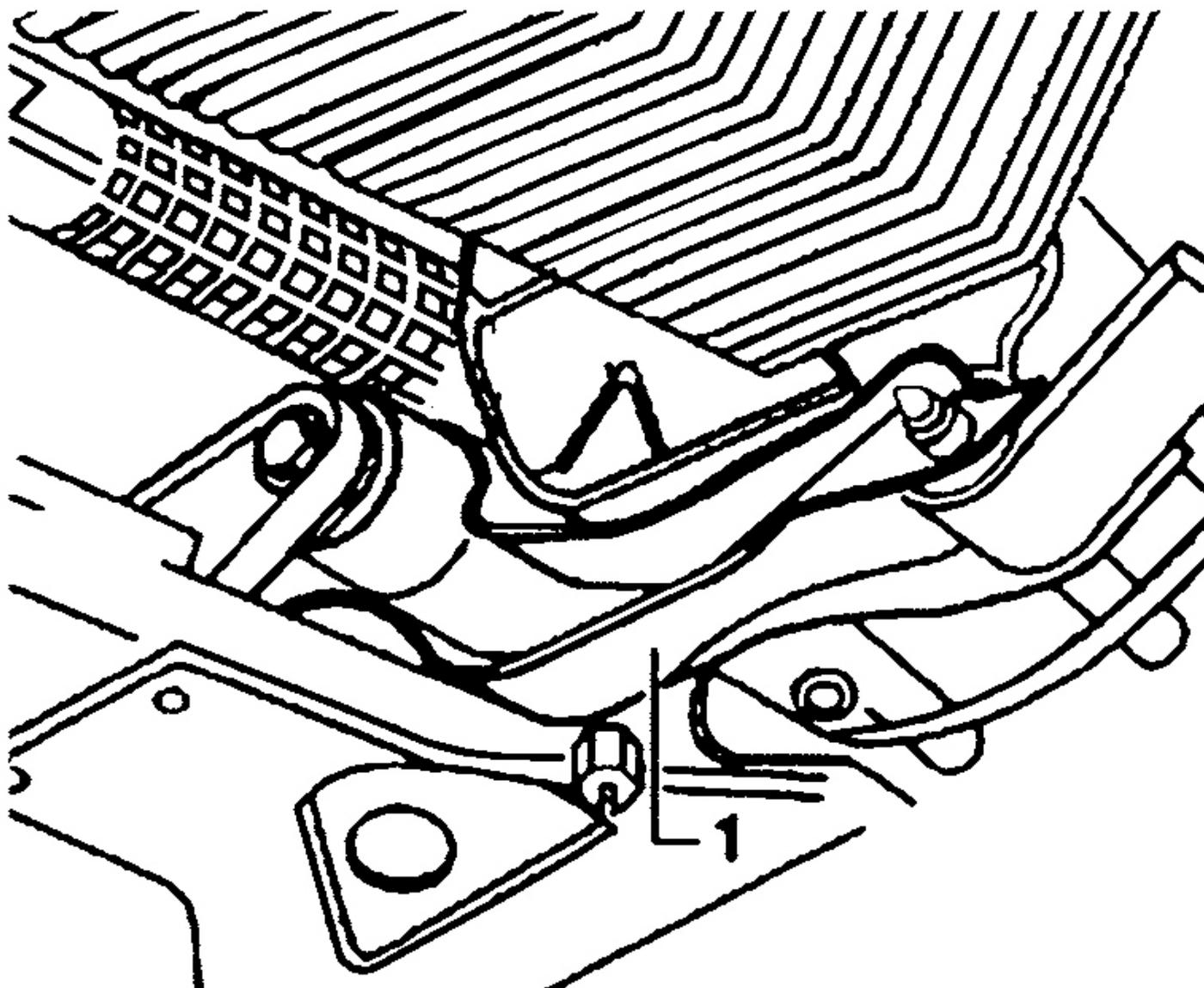
- | | |
|--|---|
| 1. Shock Absorber Lower Hex Nut | 17. Hex Bolt |
| 2. Shock Absorber | 18. Weld Nut |
| 3. Shock Absorber Upper Hex Nut | 19. Stabilizer Bar Bearing |
| 4. Washer | 20. Stabilizer Bar (23.5 mm) |
| 5. Shock Absorber Upper Bearing Ring | 21. Stabilizer Bar (27 mm) |
| 6. Shock Absorber Mount | 22. Rubber Bushing |
| 7. Shock Absorber Mount-To-Subframe Hex Nut | 23. Torsion Bar Adjustment Bolt |
| 8. Stop Buffer | 24. Torsion Bar (Right Side Marked Blue; Left Side Marked ` |
| 9. Spacer Tube | 25. Torsion Bar Tensioning Nut (Always Replace) |
| 10. Shock Absorber Lower Bearing Ring | 26. Torsion Bar-To-Upper Control Arm Bolt (M14 x 1.5 x 30) |
| 11. Shock Absorber Mount-To-Subframe Bolt | 27. Torsion Bar-To-Upper Control Arm Nut |
| 12. Pendulum Support Cylinder Bolt (Always Replace) | 28. Torsion Bar-To-Upper Control Arm Bolt (M14 x 1.5 x 42) |
| 13. Pendulum Support | 29. Upper Control Arm |
| 14. Pendulum Support-To-Subframe Hex Bolt (Always Replace) | 30. Subframe-To-Body Bolt (M12 x 1.5 x 32) |
| 15. Subframe | 31. Subframe-To-Body Bolt (M14 x 1.5 x 40) |
| 16. Clamp | |

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Fig. 18: Exploded View Of Subframe & Pendulum Support
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Removal

1. Raise and support vehicle. Remove wheels. Remove brake calipers. Support brake calipers with mechanics wire. DO NOT allow caliper to hang by it's own weight.
2. Disconnect ABS wheel speed sensor harness connectors.
3. Remove fuel tank.
4. Unclip wire for oxygen sensor at bracket. Separate exhaust system behind front exhaust pipe. Remove exhaust system heat shield (loosen exhaust system as necessary).
5. Relieve torsion bar tension. See **TORSION BAR** .
6. Remove bolt for drive axle at steering gear and remove wires from power steering gear as necessary. Remove drive axles from final drive. Unbolt pendulum support from transmission. See **Fig. 19** .
7. Place Transmission Jack (VAG1383) with Front Axle Support (VAG1712) or equivalent, below subframe. See **SPECIAL TOOLS** . Remove bolts for subframe. Lower subframe using transmission jack. Guide torsion bar between separated location of exhaust pipe front/catalytic converter and also guide drive axle past left side of transmission.



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Fig. 19: Removing Pendulum Support

Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation

Installation is reverse of removal. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS**. Check wheel alignment. See **SPECIFICATIONS & PROCEDURES - EUROVAN** article in WHEEL ALIGNMENT.

TORSION BAR

NOTE: Use exploded view illustration when removing or installing front suspension components. See **Fig. 2**.

Removal

1. Raise and support vehicle. Remove wheels. Remove fuel tank.

2. Unclip wire for oxygen sensor at bracket. Separate exhaust system behind front exhaust pipe. Remove exhaust system heat shield (loosen exhaust system as necessary).
3. Measure length of torsion bar stud thread below adjustment nut for installation reference. Loosen adjusting nut. Remove bolts attaching torsion bar to upper control arm. Remove torsion bar.

Installation

1. To install, reverse removal procedure. Tighten adjusting nut so stud protrusion is equal to original measurement. Check and adjust ride height as necessary. See **RIDE HEIGHT** under INSPECTION.
2. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS**. Check wheel alignment. See **SPECIFICATIONS & PROCEDURES - EUROVAN** article in WHEEL ALIGNMENT.

UPPER CONTROL ARM

NOTE: Use exploded view illustration when removing or installing front suspension components. See Fig. 2.

Removal

NOTE: Upper control arm can only be removed after subframe has been removed from vehicle.

1. Remove subframe assembly. See **SUBFRAME ASSEMBLY**.
2. Disconnect upper ball joint from wheel bearing housing. See **REMOVAL & INSTALLATION (UPPER BALL JOINT)** under BALL JOINTS.
3. Remove upper control arm-to-subframe bolts. Remove control arm.

Inspection

Check upper control arm bushings for excessive wear, cracks or contamination. Replace bushings if necessary. See **CONTROL ARM BEARINGS & BUSHINGS**.

Installation

Installation is reverse of removal. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS**. Check wheel alignment. See **SPECIFICATIONS & PROCEDURES - EUROVAN** article in WHEEL ALIGNMENT.

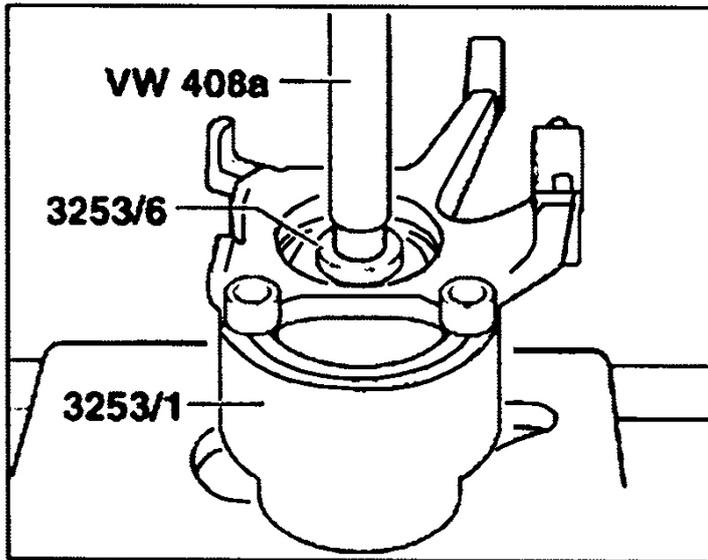
WHEEL BEARING

NOTE: Use exploded view illustration when removing or installing front suspension components. See Fig. 2.

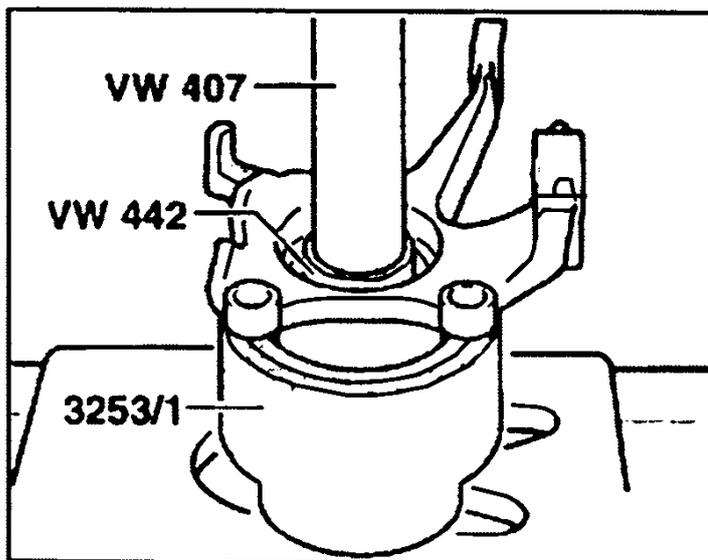
Removal & Installation

1. Remove wheel bearing housing. See **WHEEL BEARING HOUSING**.
2. Use illustrations to aid in removal and installation of wheel bearing. See **Fig. 20 -Fig. 22**. To identify special tools used during procedure, see **SPECIAL TOOLS**.
3. Installation is reverse of removal. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS**. Check wheel alignment. See **SPECIFICATIONS & PROCEDURES -**

EUROVAN article in WHEEL ALIGNMENT.



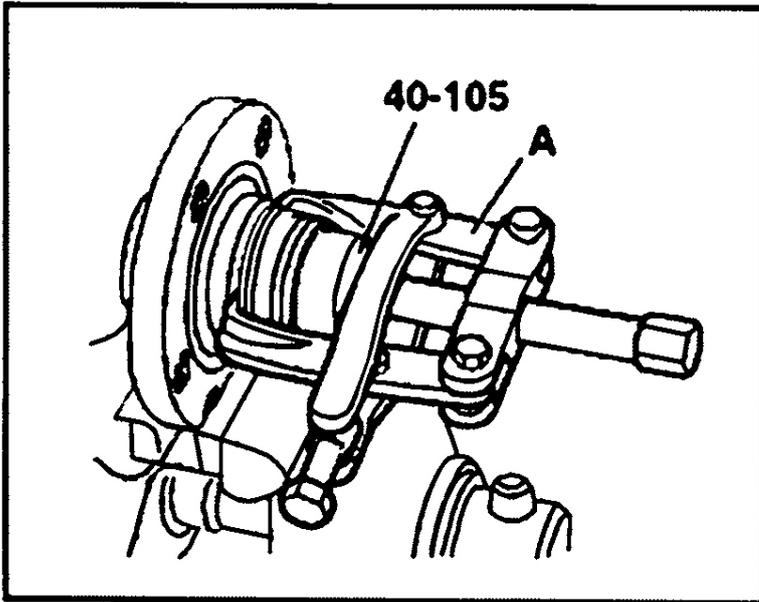
Press out wheel hub.
Remove securing ring.



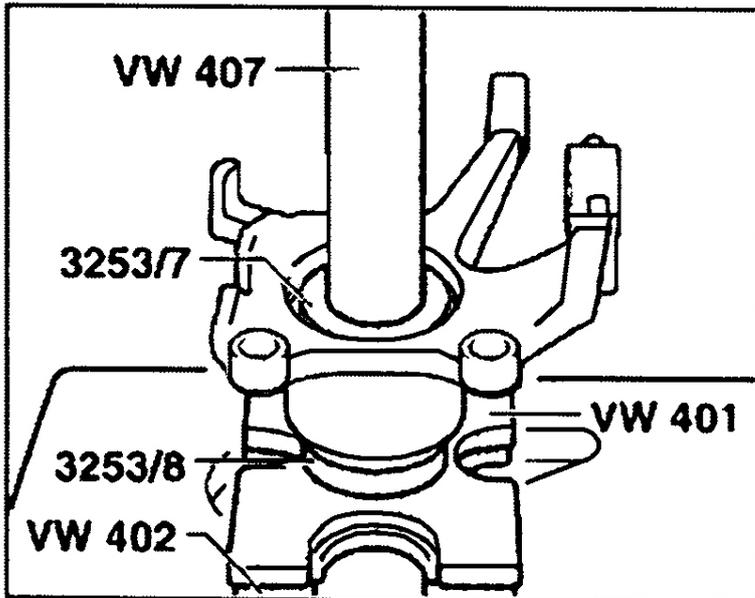
Pressing out wheel bearing from wheel bearing housing

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Fig. 20: Removing & Installing Wheel Bearing (1 Of 3)
Courtesy of VOLKSWAGEN UNITED STATES, INC.



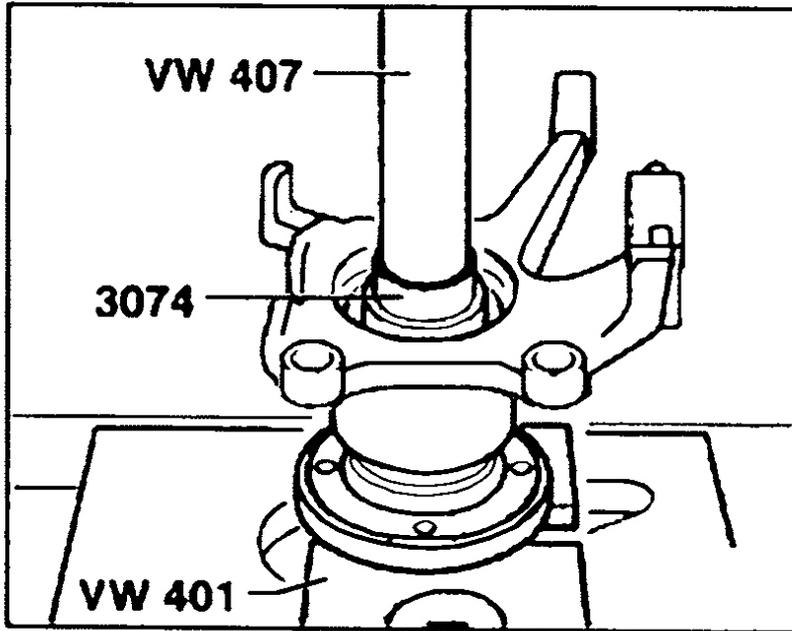
Remove bearing inner race from wheel hub



Press wheel bearing into wheel bearing housing.
Install securing ring.

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Fig. 21: Removing & Installing Wheel Bearing (2 Of 3)
Courtesy of VOLKSWAGEN UNITED STATES, INC.



Press wheel hub into wheel bearing hou

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Fig. 22: Removing & Installing Wheel Bearing (3 Of 3)
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

WHEEL BEARING HOUSING

NOTE: Use exploded view illustration when removing or installing front suspension components. See [Fig. 2](#) .

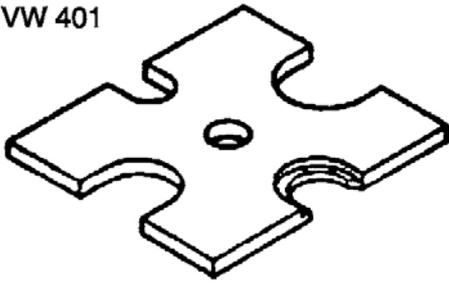
Removal & Installation

1. Relieve torsion bar tension. See [TORSION BAR](#) . Remove hubcap and loosen drive axle bolt 90°.
2. Raise and support vehicle. Remove brake calipers. Support brake calipers with mechanics wire. DO NOT allow caliper to hang by it's own weight. Remove drive axle bolt completely.
3. Remove lower ball joint-to-wheel bearing housing bolts. Remove shock absorber bolt. Remove stabilizer bar coupling rod.
4. Mark position of eccentric bushing to wheel bearing housing. See [Fig. 6](#) . Remove upper ball joint nut.
5. Disconnect tie rod from wheel bearing housing. Unbolt eccentric washer securing bolt from wheel bearing housing. Remove wheel bearing housing.
6. Installation is reverse of removal. Tighten all fasteners to specification. See [TORQUE SPECIFICATIONS](#) . Counter-hold upper ball joint with 7-mm Allen wrench while torquing nut. Check wheel alignment. See [SPECIFICATIONS & PROCEDURES - EUROVAN](#) article in WHEEL ALIGNMENT.

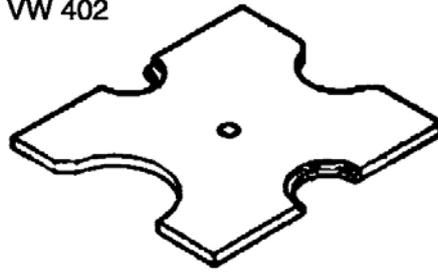
SPECIAL TOOLS

Use following illustrations to identify special tools. See [Fig. 23](#) -[Fig. 26](#) .

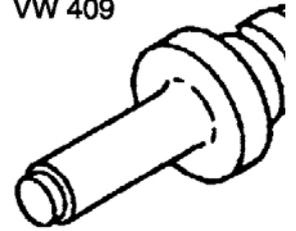
VW 401



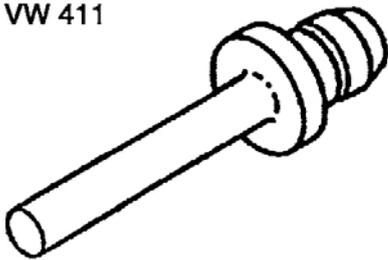
VW 402



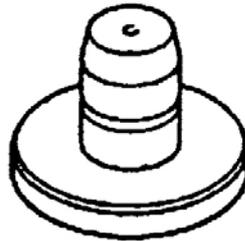
VW 409



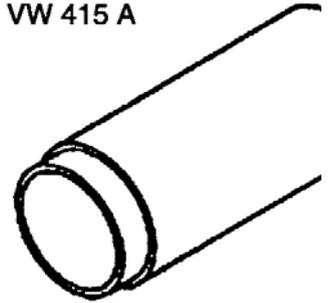
VW 411



VW 412



VW 415 A

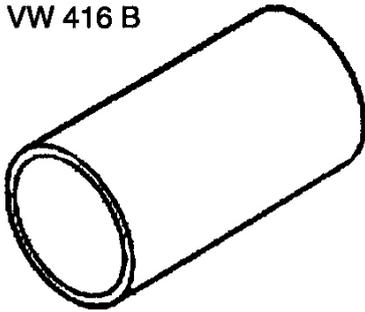


G00222140

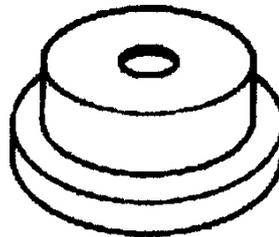
Fig. 23: Identifying Special Tools (1 Of 4)

Courtesy of VOLKSWAGEN UNITED STATES, INC.

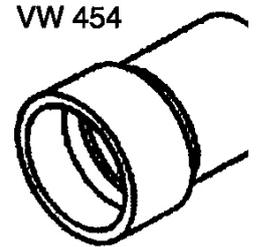
VW 416 B



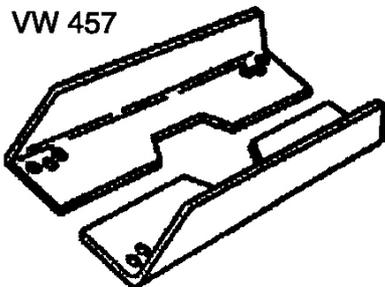
VW 4471



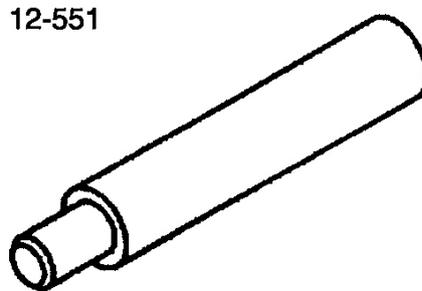
VW 454



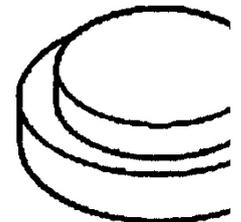
VW 457



12-551



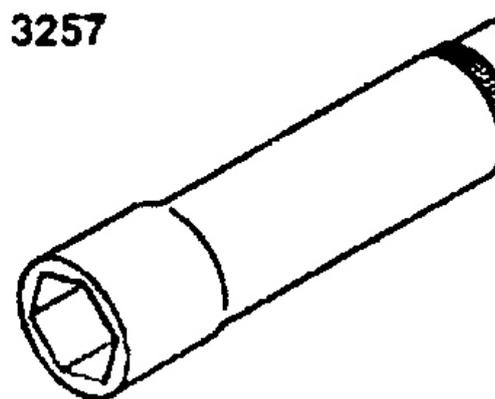
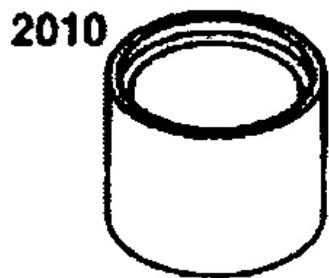
40-105



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Fig. 24: Identifying Special Tools (2 Of 4)

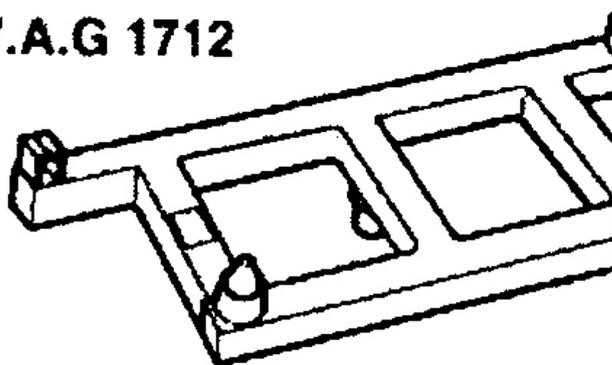
Courtesy of VOLKSWAGEN UNITED STATES, INC.



V.A.G 1332

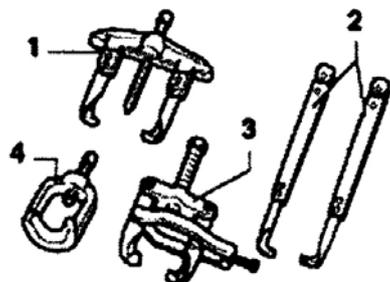
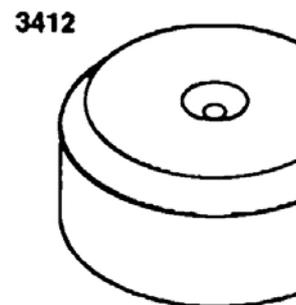
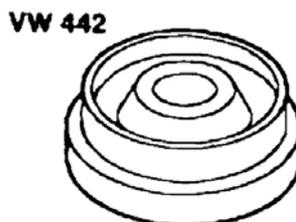
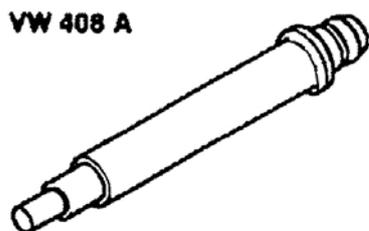
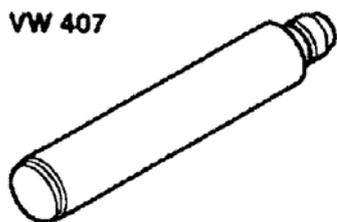


V.A.G 1712

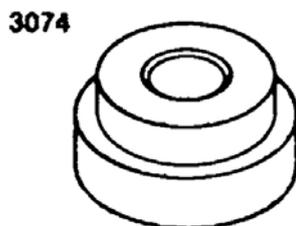


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Fig. 25: Identifying Special Tools (3 Of 4)
 Courtesy of VOLKSWAGEN UNITED STATES, INC.



1. 20/10 Kukko two-arm puller
2. Extension arms
3. 204/2 Kukko puller
4. 128/2 Kukko ball joint separator



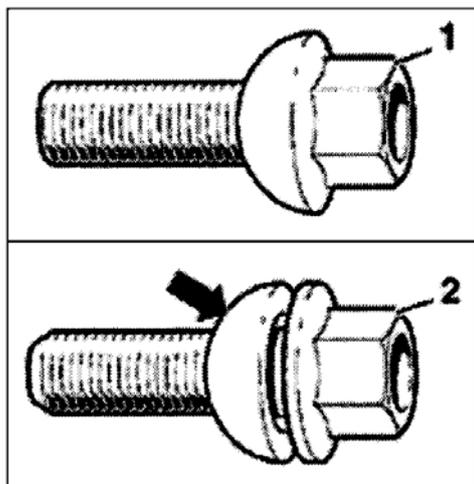
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Fig. 26: Identifying Special Tools (4 Of 4)

Courtesy of VOLKSWAGEN UNITED STATES, INC.

WHEEL LUG BOLT APPLICATIONS

From 2001 and up models, a new version of lug bolts has been installed. The dimensions and tightening torques of the previous and changed lug bolts are the same. New version lug bolts are not permissible on vehicles which were produced up to model year 2000. Wheel rims of vehicles which were produced up to model year 2000 are not permissible on vehicles 2001 and up. To identify wheel lugs, see **Fig. 27**.



1. Previous wheel bolt

For vehicles up to m.y. 2000.

Surface coated in black.

Part nr. 701 601 139 B

2. Wheel bolt for vehicles as of m.y. 2001

Collar (arrow) is not tightly connected to the hex h

Surface is layered in silver.

Part nr. 7M3 601 139 B

Tightening torque:

Wheel bolt to wheel hub for all vehicles: 125 ft.lbs (170 N.m)

G00222186

Fig. 27: Identifying Wheel Lug Bolts

Courtesy of VOLKSWAGEN UNITED STATES, INC.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Axle Shaft Outer Bolt ⁽¹⁾	
Step 1	111 (150)
Step 2	Plus Additional 90 Degree Turn
Axle Shaft-To-Final Drive Flange ⁽¹⁾	
M10 x 48	59 (80)
M12 x 1.5 x 55	74 (100)
Ball Joint-To-Control Arm Nut (Lower & Upper) ⁽¹⁾	
Step 1	44 (60)
Step 2	Plus Additional 90 Degree Turn
Ball Joint Eccentric Clamp Bolt	44 (60)
Ball Joint (Lower)-To-Wheel Bearing Housing Bolts ⁽¹⁾	
Step 1	66 (90)
Step 2	Plus Additional 90 Degree Turn
Brake Caliper-To-Wheel Bearing Housing ⁽²⁾	
Lucas C54 (1LP, 15" Wheel)	207 (280)

2003 Volkswagen EuroVan

SUSPENSION - FRONT

Lucas RC54 (1LE, 15" Wheel)	207 (280)
FN3 (1LU, 15" Wheel)	207 (280)
Brake Caliper Self-Locking Bolt-To-Caliper Carrier ⁽¹⁾ , ⁽²⁾	
C54 (1LP, 15" Wheel)	26 (35)
Brake Caliper Guide Pins-To-Caliper Carrier ⁽²⁾	
FN3 (1LU, 15" Wheel)	18 (25)
FN3 (1LB, 16" Wheel)	18 (25)
FNR (1LB, 16" Wheel)	18 (25)
Control Arm Pivot Hex Nut ⁽¹⁾ , ⁽³⁾	
Lower	96 (130)
Upper	74 (100)
Pendulum Support-To-Subframe Bolt ⁽¹⁾	148 (200)
Pendulum Support-To-Transmission Bolt ⁽¹⁾	
Step 1	59 (80)
Step 2	Plus Additional 90 Degree Turn
Shock Absorber-To-Lower Control Arm Nut	118 (160)
Shock Absorber-To-Mounting Bracket Nut	18 (25)
Shock Absorber Mounting Bracket-To-Subframe Bolt/Nut	74 (100)
Stabilizer Bar Mounting Bracket Bolts	41 (55)
Subframe Mounting Bolts (M12 x 1.5 X 32)	74 (100)
Subframe Mounting Bolts (M14 x 1.5 x 40)	118 (160)
Tie Rod Castle Nut	48 (65)
Torsion Bar-To-Upper Control Arm Bolt (M14 x 1.5)	118 (160)
Torsion Bar-To-Upper Control Arm Nut	96 (130)
Wheel Lug Bolt ⁽⁴⁾	125 (170)

(1) Always replace with NEW fastener.

(2) Five different styles of front brake calipers can be used on this vehicle. To identify calipers, see **BRAKE CALIPER IDENTIFICATION** under IDENTIFICATION.

(3) Tighten only when vehicle is standing on its own weight.

(4) Note lug bolt version change for vehicles produced for 2001 and later models. See **WHEEL LUG BOLT APPLICATIONS**.