

1995 Volkswagen EuroVan CV

1995-03 AUTOMATIC TRANSMISSIONS Servicing - EuroVan

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Servicing - EuroVan

APPLICATION

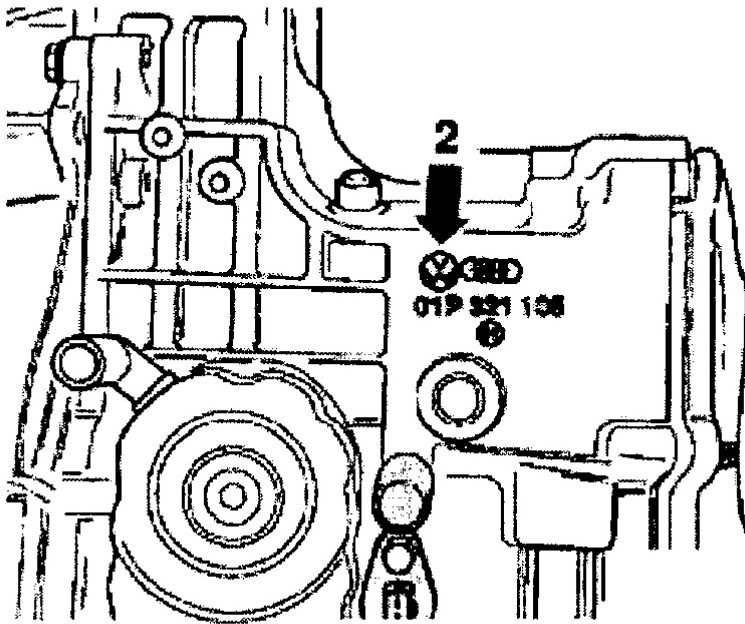
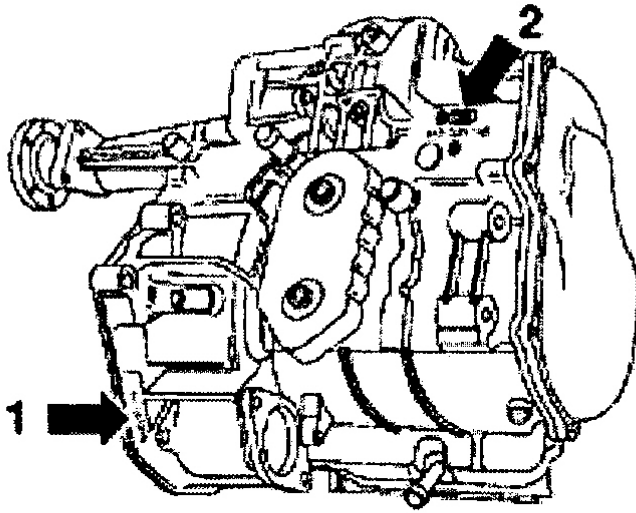
TRANSAXLE APPLICATION

Application	Transaxle Model
EuroVan (1995-1997 & 1999-2003)	01P

IDENTIFICATION

IDENTIFICATION CODE

Transmission code letters are given on type plate (arrow). See **Fig. 1** . Transmission code letters are also given on vehicle data plate.



G00387879

Fig. 1: Locating Automatic Transmission Code (01P)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

OIL PAN GASKET



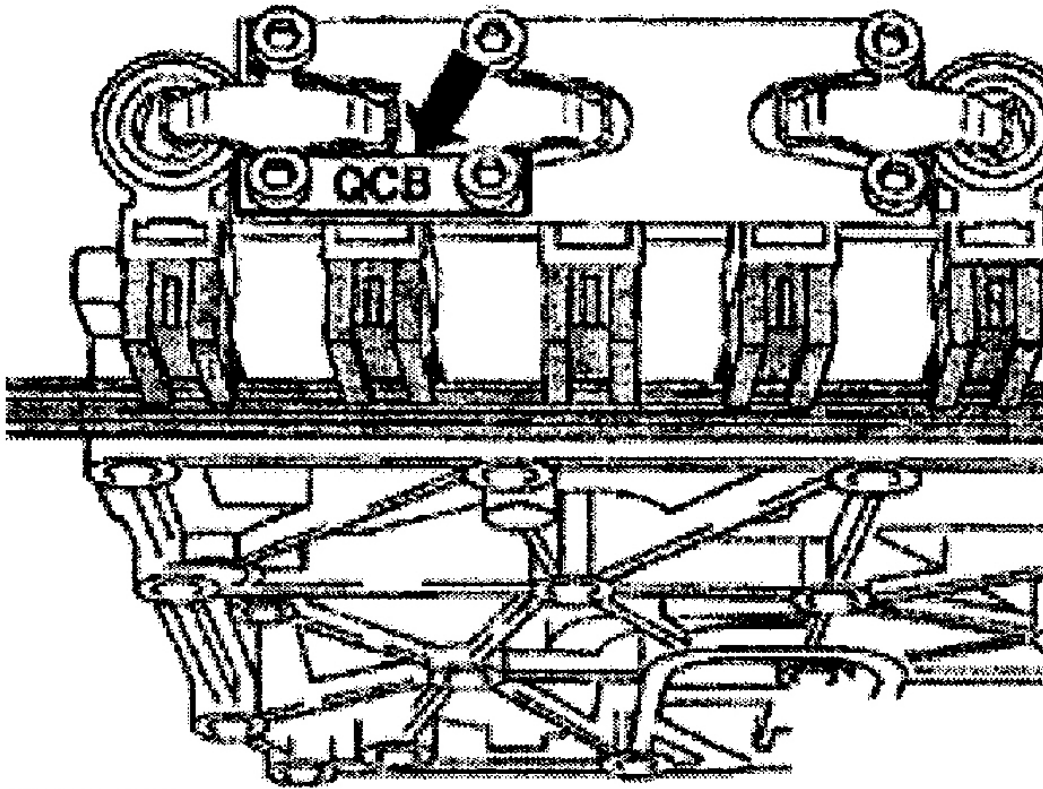
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Fig. 2: Identifying Oil Pan Gasket (01P)

Courtesy of VOLKSWAGEN UNITED STATES, INC.

VALVE BODY

Code letters are stamped on a metal tab. Metal tab must remain on the valve body. See **Fig. 3** .



G00204369

Fig. 3: Locating Valve Body Identification Tag
Courtesy of VOLKSWAGEN UNITED STATES, INC.

LUBRICATION

SERVICE INTERVALS

01P Transaxle

Lifetime fill except for transmission code EQJ. For transmission code EQJ, change every 37,383 miles (60000 km).

01P Final Drive

Lifetime fill. No change required.

CHECKING FLUID LEVELS

NOTE: VW ATF (G 052 162 A2) is Light Yellow in color.

NOTE: When ATF level is checked, the seal on the level plug must always be replaced. VAG Scan Tool (1551) and Diagnosis Cable (1551/1) are required to check ATF fluid level. Scan tool is used to measure ATF temperature. Follow aftermarket scan tool manufacturer instructions (if applicable) to check AFT temperature.

Transaxle

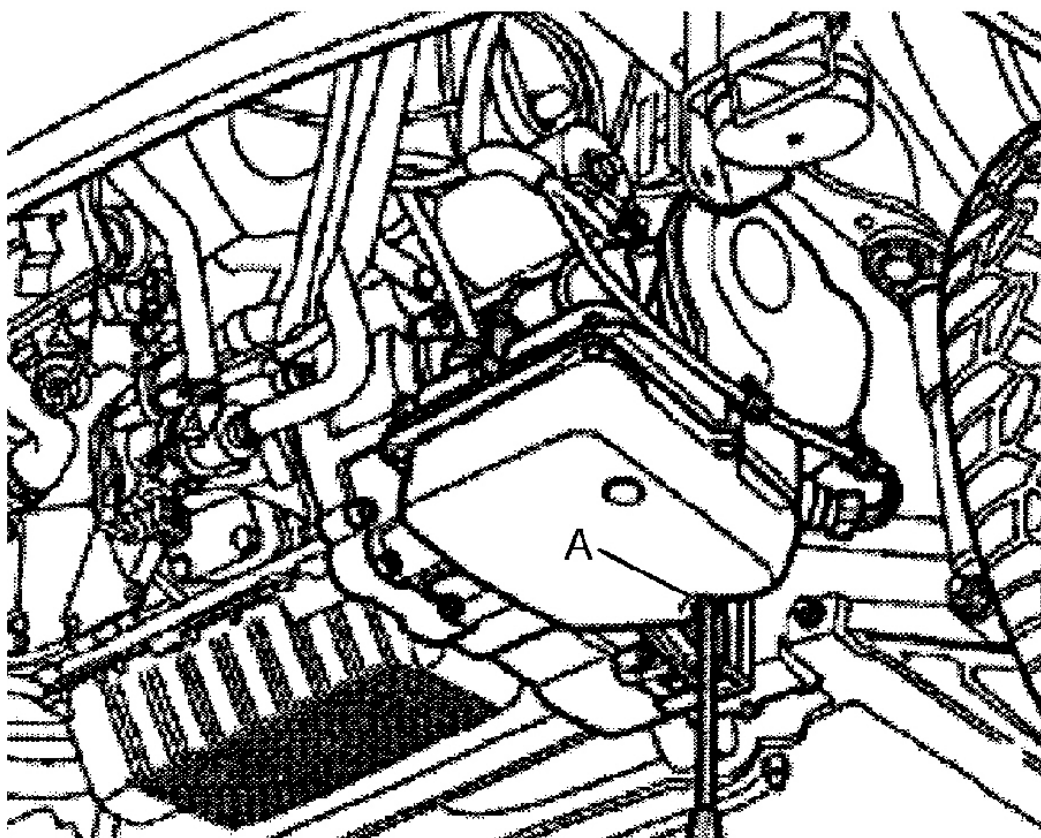
NOTE: In the following procedures, letters and numbers in parenthesis are shown in illustrations.

1. Prior to checking ATF level:
 - Ensure all fuses are okay
 - Battery voltage must be at least 11.5 volts
 - Ground connections on engine, transaxle and body must be okay
 - All electrical components must be switched off
 - Transaxle ATF temperature must not be above about 86°F (30°C)
 - Vehicle must be on level surface and selector lever must be in "P" position
2. Connect VAG 1924 ATF filling system to vehicle. Remove noise insulation tray under engine.
3. Connect vehicle diagnostic, testing and information system VAS 5051. See **ON BOARD DIAGNOSTIC (OBD), INITIATING** in DIAGNOSIS - 01P article. Select "08 - read measured value blocks" on the touch screen. Select display group 005 via "Measured value block" and "Change display group number". The first display zone shows the ATF temperature. The ATF temperature must not be more than about 86°F (30°C) at the start of test.

NOTE: The following detailed test procedures are described for VAG Scan Tool (1551).

4. Connect VAG Scan Tool (1551) and enter address word "02 Transmission electronics" and advance until "Select function XX" is indicated on display.
5. Measure ATF temperature in measured value block. Indicated on display:
 - Rapid data transfer HELP
 - Select function XX
6. Select function by pressing keys 0 and 8. (The function "Read measured value block" is selected with 08). Indicated on display:
 - Rapid data transfer Q
 - 08 - Read measured value block
7. Confirm entry with key Q. Indicated on display:
 - Read measured value block
 - Enter display group number XXX
8. Press keys 0 0 5. (005 selects the "Display group number 005"). Confirm entry with key Q. Indicated on display:
 - Read measured value block 5

- 30° C 0011011 0 900 RPM
9. The first display zone shows the ATF temperature. The ATF temperature must not be more than about 86°F (30°C) at the start of test.
 10. Start engine. Raise and support vehicle. Place drip tray under the transaxle.
 11. Bring ATF to test temperature of 95-113°F (35-45°C). Remove ATF level plug (A) from the oil pan. See **Fig. 4**.

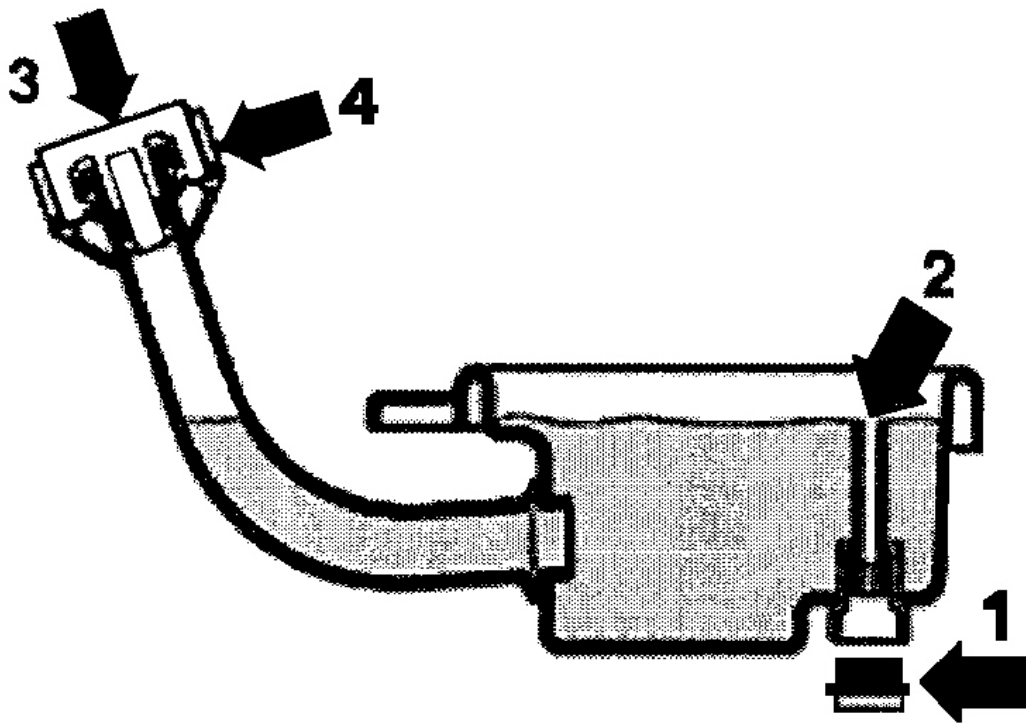


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Fig. 4: Locating ATF Level Plug In Oil Pan

Courtesy of VOLKSWAGEN UNITED STATES, INC.

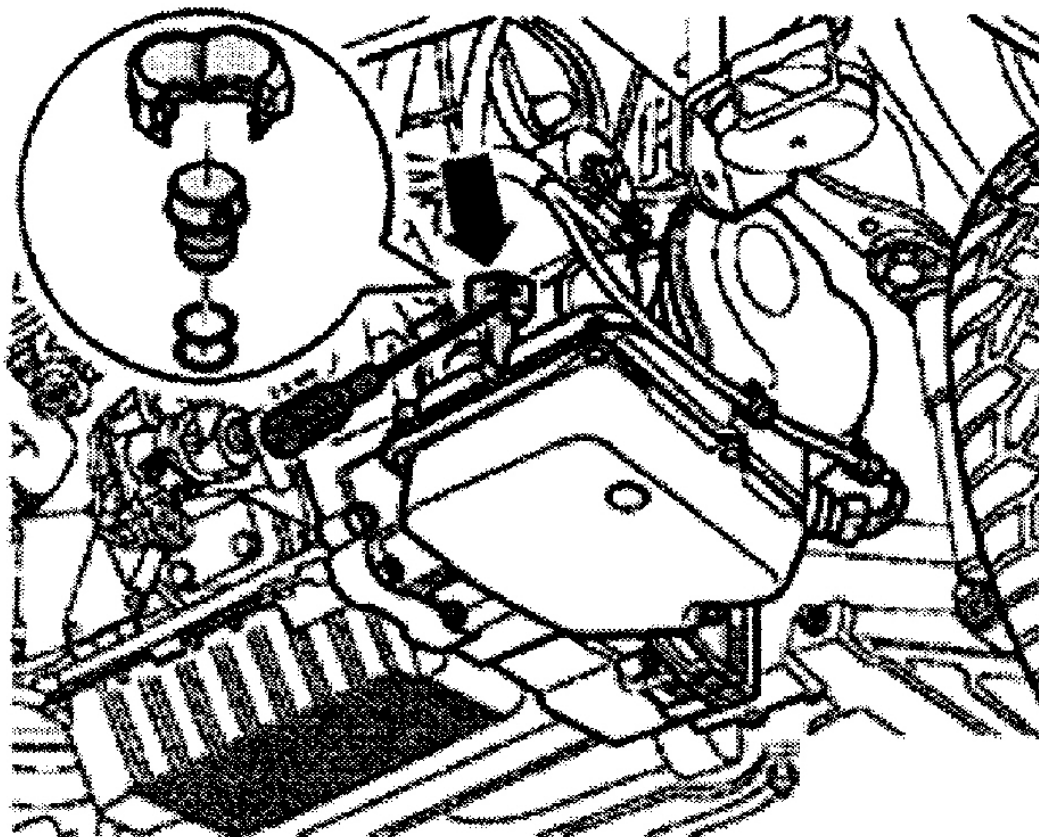
12. The ATF present in the overflow pipe (2) will run out. If ATF drips out of hole, ATF does not need to be topped off. Install NEW seal (1) to level plug and tighten to 11 ft. lbs. (15 N.m). ATF check is completed. Ensure sealing plug (3) and cap (4) remain closed. See **Fig. 5**. If only the ATF present in the overflow pipe runs out of hole, top off ATF.



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Fig. 5: Locating Plug Seal, Overfill Pipe, Sealing Plug & Cap
Courtesy of VOLKSWAGEN UNITED STATES, INC.

13. To top off ATF, pry off plug securing cap (arrow) with a screwdriver. See **Fig. 6** . The securing cap locking device will be destroyed when doing this, so always replace securing cap. Pull plug out of filler pipe. On some transaxles, a cap with a spring retainer is installed. This cap can be used again.

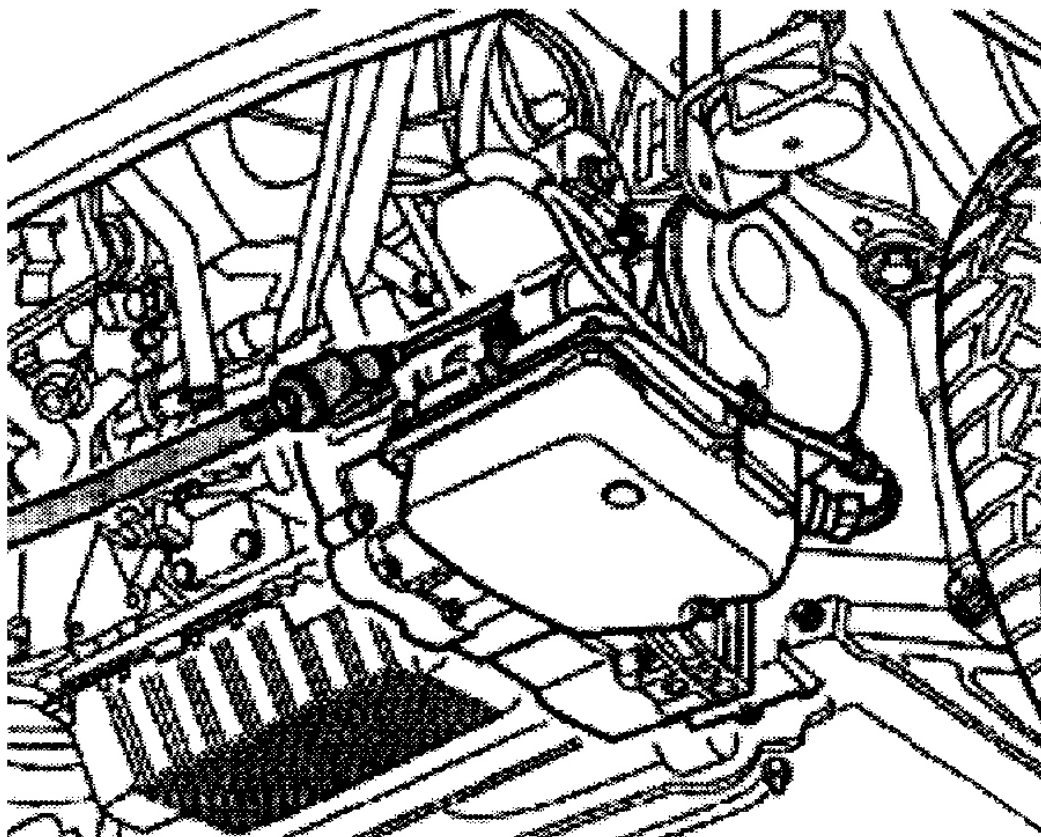


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Fig. 6: Prying Off Plug Securing Cap

Courtesy of VOLKSWAGEN UNITED STATES, INC.

NOTE: An insufficient amount of ATF, as well as filling ATF to excess, affects the function of the transaxle.



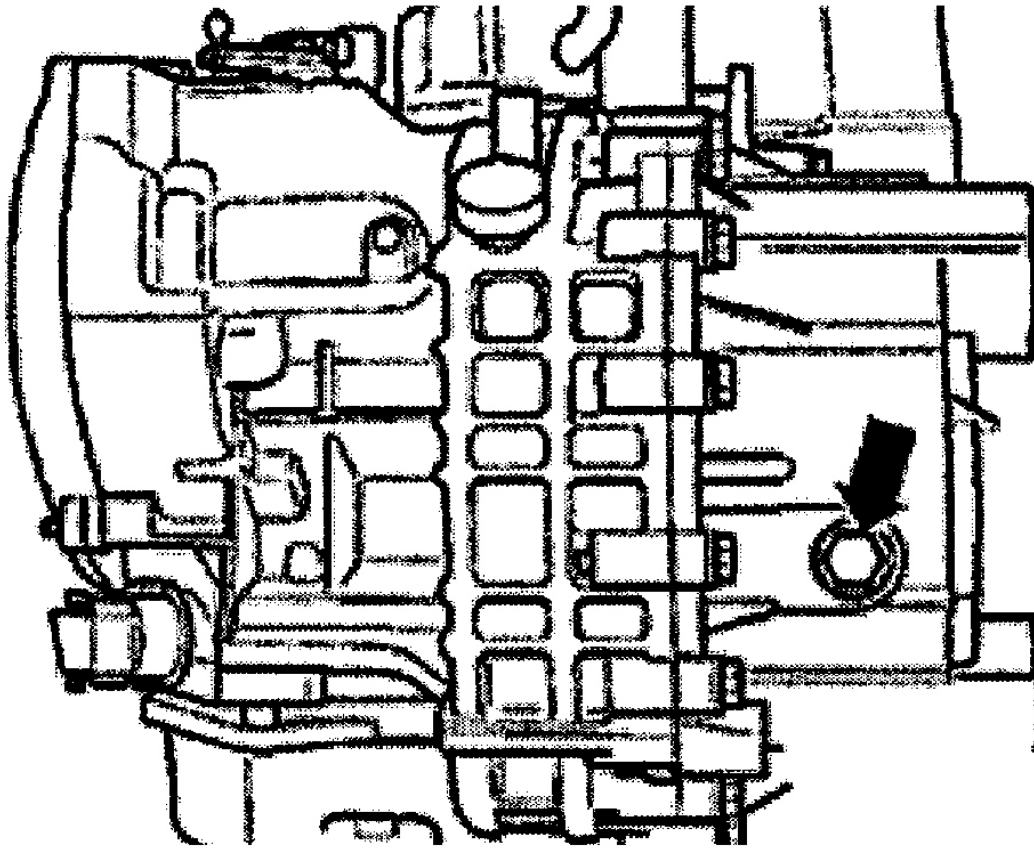
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Fig. 7: Filling Transaxle Using VAG 1924 ATF Filling System
Courtesy of VOLKSWAGEN UNITED STATES, INC.

14. Fill transaxle with ATF using VAG 1924 ATF filling system until ATF runs out of level hole. See **Fig. 7**.
15. Install NEW seal (1) to level plug and tighten to 11 ft. lbs. (15 N.m). See **Fig. 5**. Install sealing plug (3) on filler pipe until the spring retainer lock locates, or install plug on filler pipe and secure with a NEW cap. See **Fig. 5** and **Fig. 6**. Lock cap in place. The cap secures the sealing plug.
16. Ending output of VAG 1551. See **END OUTPUT (FUNCTION 06)** in DIAGNOSIS - 01P article.

Final Drive

Raise and support vehicle. Remove filler plug on side of final drive. See **Fig. 8**. Gear oil level should be at lower edge of hole. If fluid is required, add G 50, SAE 75W-90 synthetic gear oil (G 052 145 S2). Install filler plug and tighten to 15 ft. lbs. (20 N.m).



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Fig. 8: Checking Final Drive Fluid Level
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

RECOMMENDED FLUIDS

RECOMMENDED FLUIDS

Application	Fluid Type
Transaxle	VW ATF (G 052 162 A2)
Final Drive	⁽¹⁾ G 50, SAE 75W-90 (G 052 145 S2)
(1) Synthetic oil.	

FLUID CAPACITIES

TRANSAXLE FLUID CAPACITY

Application	Refill - Qts. (L)	Dry-Fill - Qts. (L)
01P	3.2 (3.0)	5.6 (5.3)

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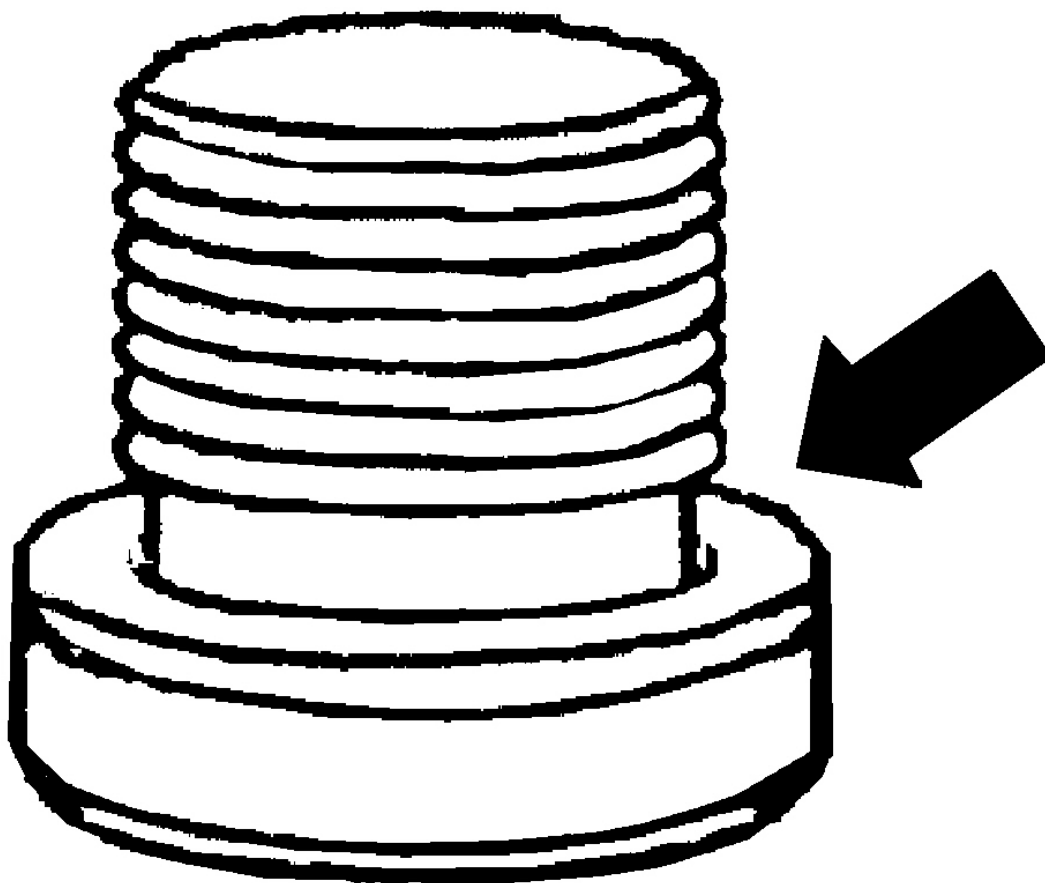
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FINAL DRIVE FLUID CAPACITY

Application	Qts. (L)
01P	1.15 ⁽¹⁾
(1) On vehicles produced from 01.96, and on, with exposed drive flange, fill with 0.75 L.	

DRAINING & REFILLING

1. To replace ATF, raise and support vehicle. Place drip tray under the transaxle. Remove ATF level plug from the oil pan. See **Fig. 4** . Remove overflow pipe through the level hole. Drain ATF. Install overflow pipe. Screw level plug in hand-tight.
2. Fill with 3 liters of ATF through filler pipe using VAG 1924 ATF filling system. See **FLUID CAPACITIES** . See **Fig. 7** .
3. Start engine and shift transaxle through all the selector lever positions with the vehicle stationary. Check and top off ATF level. See **CHECKING FLUID LEVELS** . Always replace plug seal (arrow). See **Fig. 9** . Tighten ATF level plug to 11 ft. lbs. (15 N.m).



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Fig. 9: Identifying ATF Control Plug Seal
Courtesy of VOLKSWAGEN UNITED STATES, INC.

INSPECTION

SELECTOR MECHANISM

WARNING: Before working on engine when it is running, move selector lever into position "P" and apply parking brake.

- With brake pedal not depressed, selector lever in "P" position, and ignition switched on, selector lever should lock and not be able to be shifted out of "P" position. Solenoid for Selector lever lock blocks selector lever.
- With brake pedal depressed, selector lever in "P" position, and ignition switched on, solenoid for selector lever lock releases selector lever. It is possible to shift into a driving gear.

- With brake pedal not depressed, selector lever in "N" position, and ignition switched on, selector lever is locked and cannot be shifted out of "N" position. Solenoid for selector lever lock blocks selector lever.
- With brake pedal not depressed, selector lever in "N" position, and ignition switched on, solenoid for selector lever lock releases selector lever. It is possible to shift into a driving gear.
- The starter must not operate in the selector lever positions "1", "2", "3", "D" and "R".
- On right-hand drive vehicles the starter motor must only operate in selector lever positions "P" and "N" when the locking button in the selector lever handle is not pressed.
- When travelling at speeds above 5 km/h and shifting into selector lever position "N", solenoid for selector lever lock must not engage and block selector lever. Selector lever can be shifted into a driving gear.
- When travelling at speeds below 5 km/h (almost stopped) and shifting into selector lever position "N", solenoid for selector lever lock must not engage until after approx. 1 sec. Selector lever cannot be shifted out of "N" position until brake pedal is depressed.

IGNITION KEY WITHDRAWAL LOCK

Check ignition key withdrawal lock. See **Fig. 10** and **Fig. 11** .

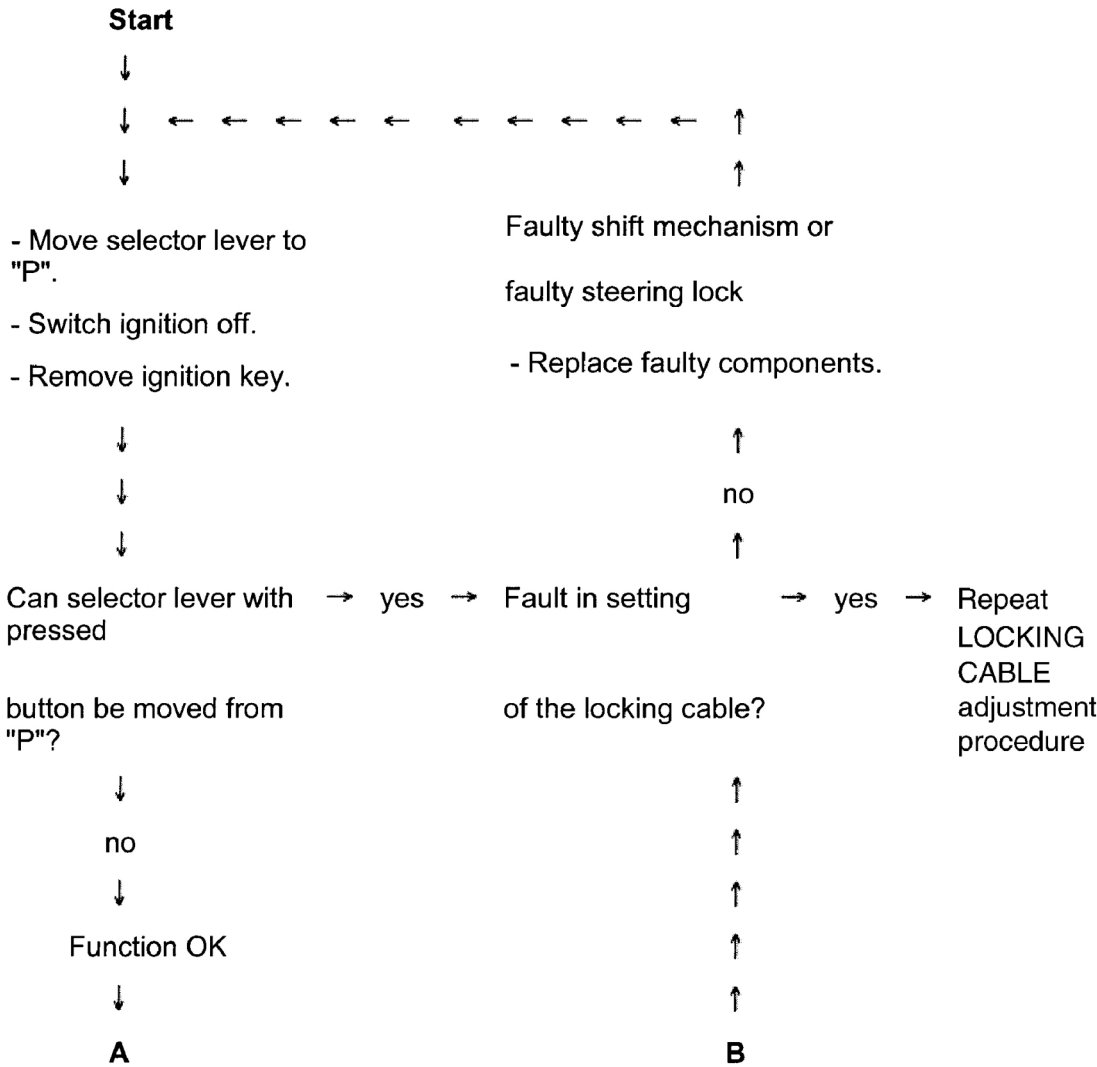
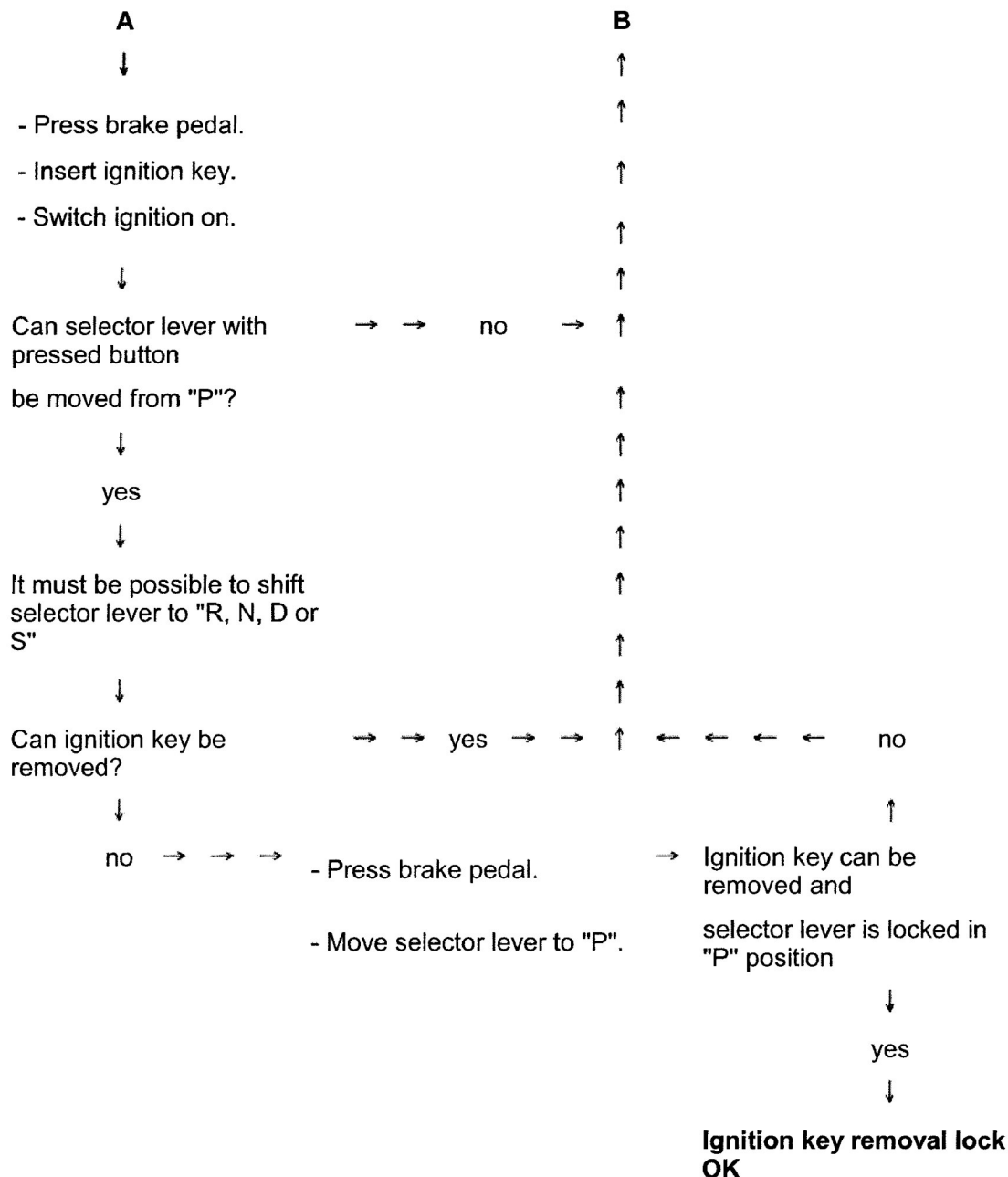


Fig. 10: Checking Key Removal Lock Function (1 Of 2)
Courtesy of AUDI OF AMERICA, INC.

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Fig. 11: Checking Key Removal Lock Function (2 Of 2)
Courtesy of AUDI OF AMERICA, INC.

ON-VEHICLE REPAIRS

NOTE: Various components may be serviced without transaxle removal. For servicing of these components, see appropriate component under ADJUSTMENTS and/or REMOVAL & INSTALLATION .

ADJUSTMENTS

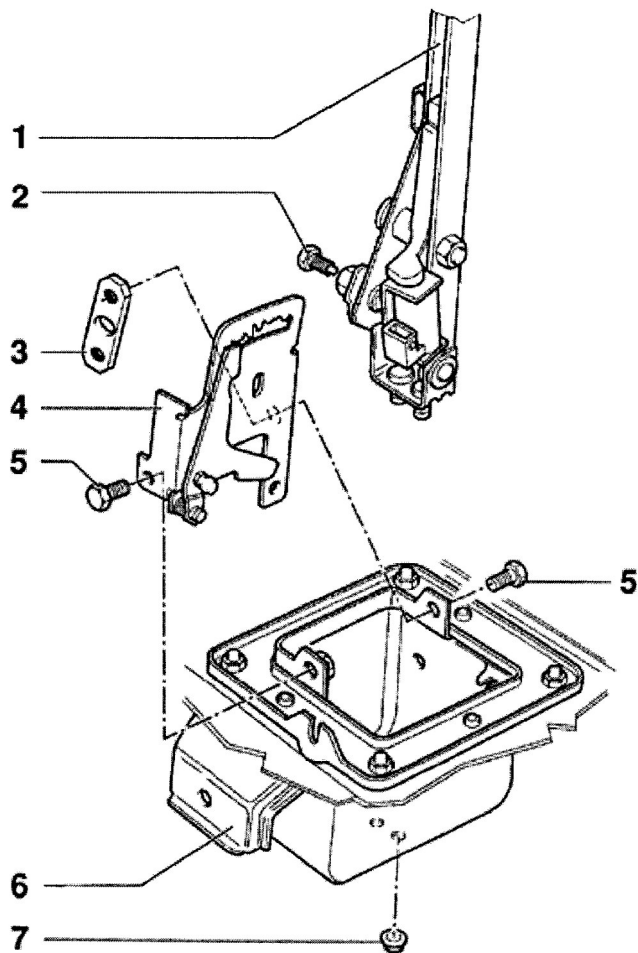
SELECTOR LEVER CABLE

Checking

1. Remove selector lever cable locking washer (6) from lever/selector shaft. See **SELECTOR LEVER CABLE** .
2. Take selector lever cable off lever. Move selector lever from "P" to "1" position.
3. Selector lever mechanism and selector lever cable must move freely. If necessary, replace selector lever cable or service selector lever mechanism. Always replace selector lever cable locking washer on transaxle support bracket after disassembling.

Adjusting

1. To adjust cable, place selector lever in "P" position. Loosen adjustment bolt (2) on selector lever in selector lever housing. See **Fig. 12** .
2. Place selector shaft lever in "P" position on transaxle. Locking lever must engage in park lock wheel, with both front wheels locked. Tighten adjustment bolt on selector lever in selector lever housing to 15 ft. lbs. (20 N.m).



1. Selector Lever
Assemble before installing in selector lever housing
2. Bolt, 20 Nm
For securing the selector lever cable
3. Plate With Threaded Holes
4. Detent plate
Insert into selector lever housing before installing selector lever
5. Bolt, 25 Nm
6. Selector Lever Housing
Need not be removed to replace selector lever cable or individual parts of selector mechanism
7. Nut, 15 Nm
Qty. 2
Selector lever to selector lever housing

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Fig. 12: Exploded View Of Selector Lever Components
Courtesy of VOLKSWAGEN UNITED STATES, INC.

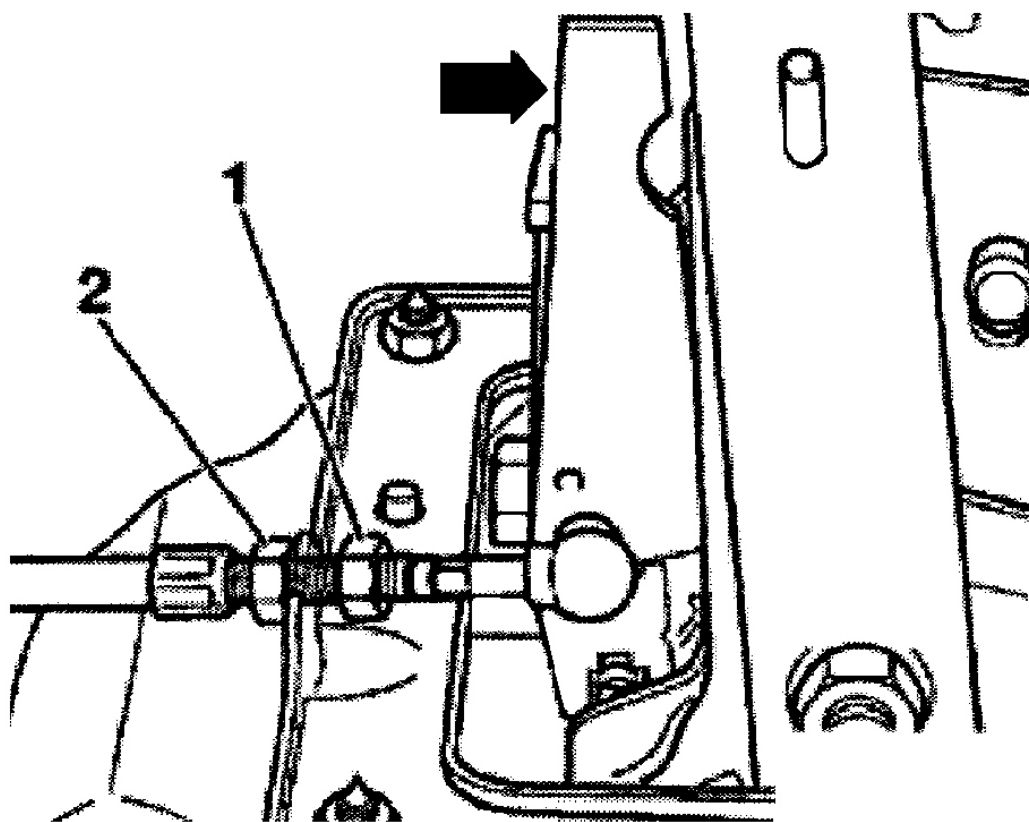
LOCKING CABLE

NOTE: In the following procedure, numbers in parenthesis are shown in illustration.

NOTE: Locking cable must only be adjusted in its installation position. See Fig. 35 .

Shift selector lever into "P" position and turn ignition key to end (ignition off) position. Loosen locking cable nuts (1) and (2) at frame. See Fig. 13 .

Push locking lever (arrow) until it touches selector lever. Secure locking cable in this position on frame. After adjustment, ensure ignition key operates properly. See IGNITION KEY WITHDRAWAL LOCK under INSPECTION.



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Fig. 13: Adjusting Locking Cable

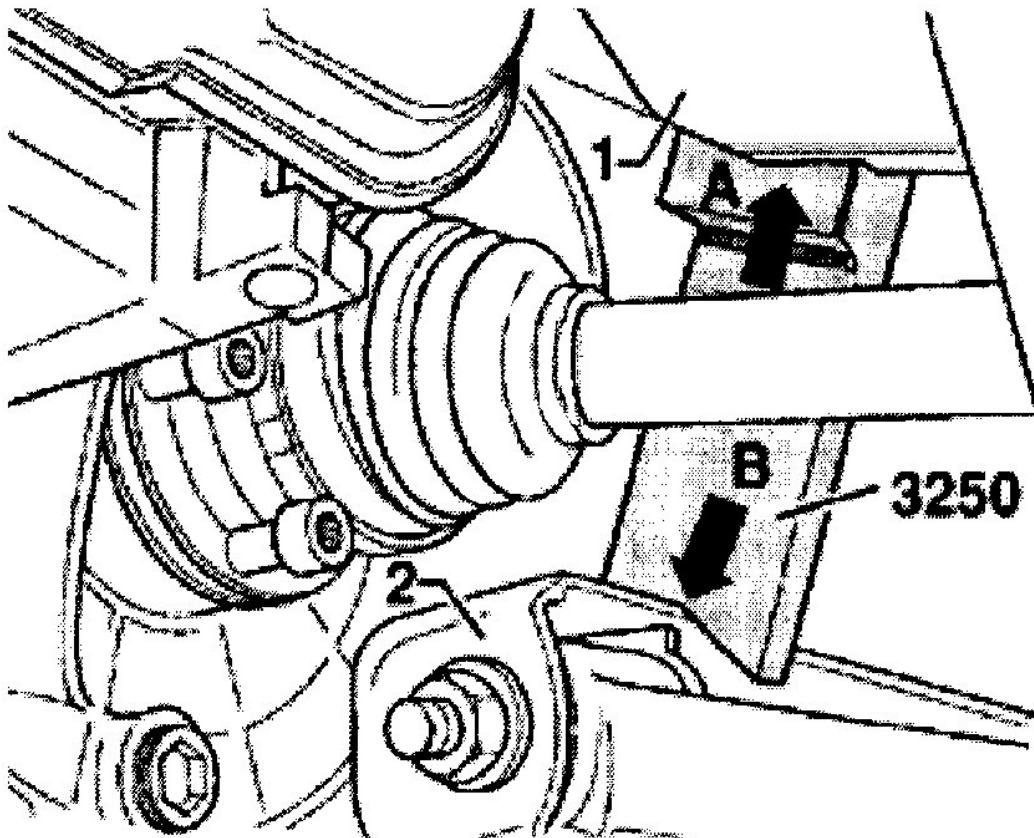
Courtesy of VOLKSWAGEN UNITED STATES, INC.

REMOVAL & INSTALLATION

FLANGE SHAFT OIL SEAL (LEFT)

Removal & Installation

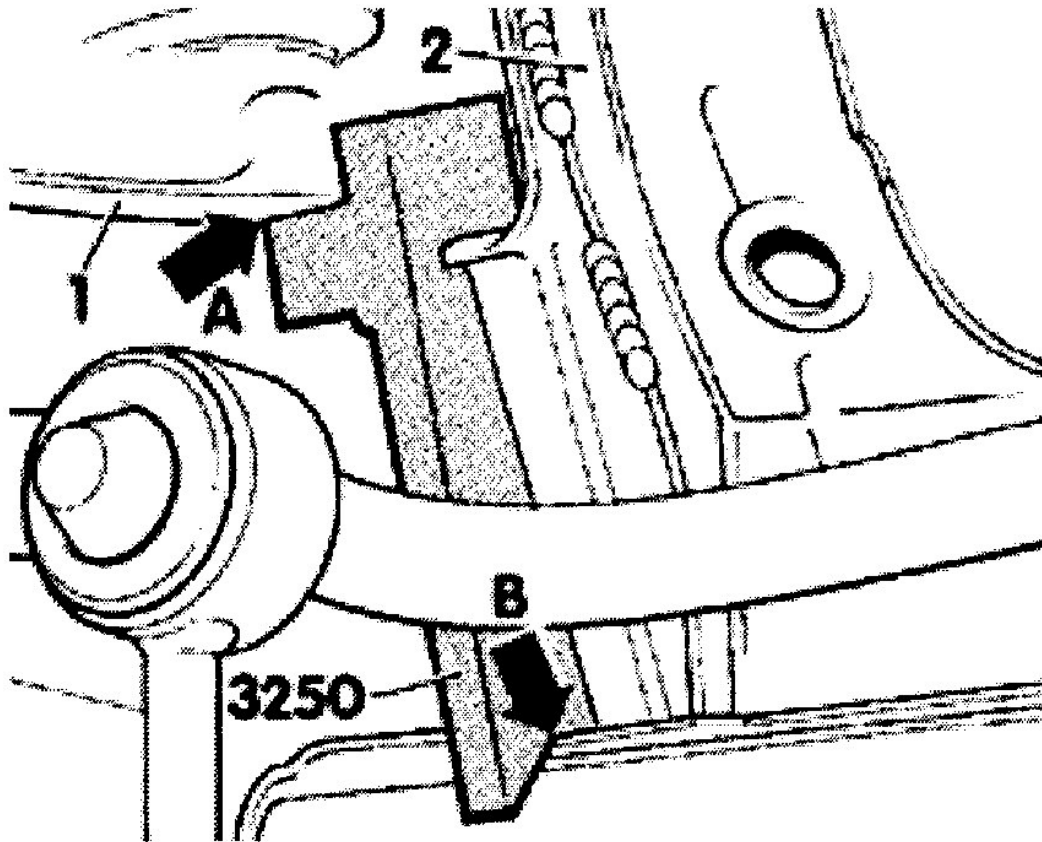
1. On vehicles produced from December 1995, install support device 3250 so that surface (arrow A) is positioned under control arm -1- and V-shaped cut-out (arrow B) is resting on subframe -2-. See **Fig. 14** . If vehicle is fully loaded, raise it on a hoist just far enough to install the support. See **Fig. 15** .



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Fig. 14: Installing Support 3250

Courtesy of VOLKSWAGEN UNITED STATES, INC.



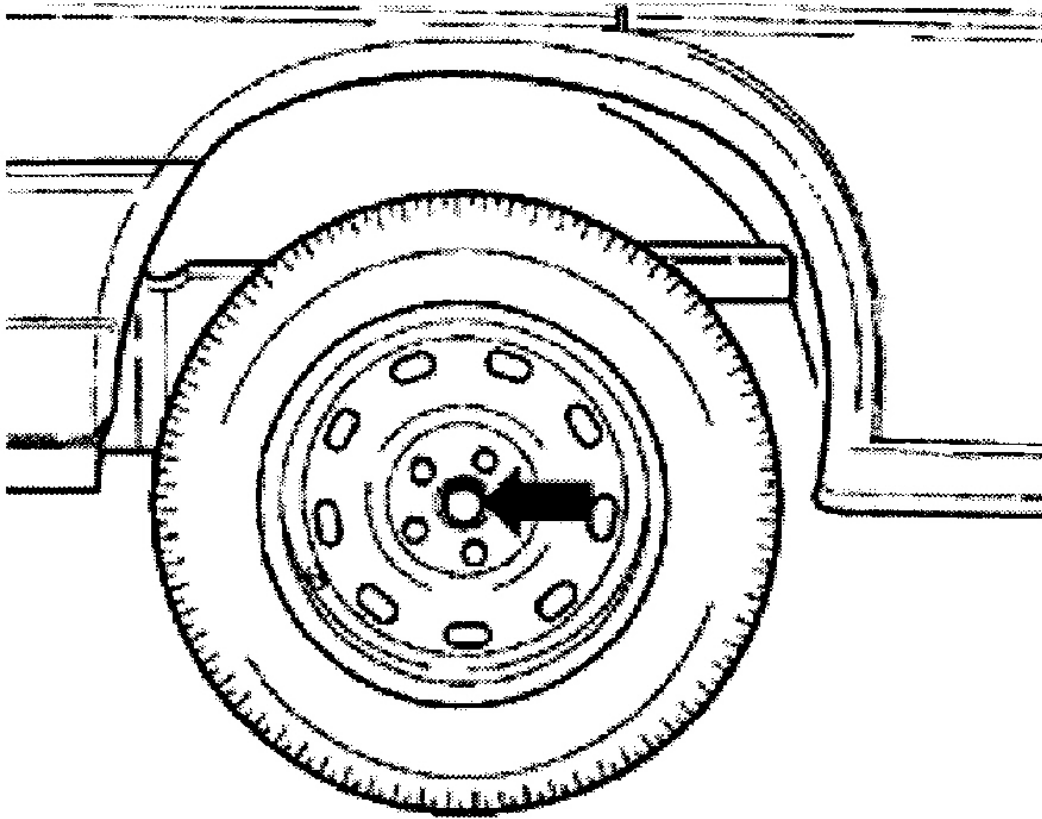
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Fig. 15: Installing Support 3250 (Vehicle Fully Loaded)

Courtesy of VOLKSWAGEN UNITED STATES, INC.

NOTE: If the support 3250 cannot be installed, even after loading the vehicle, torsion bar tension must be relieved.

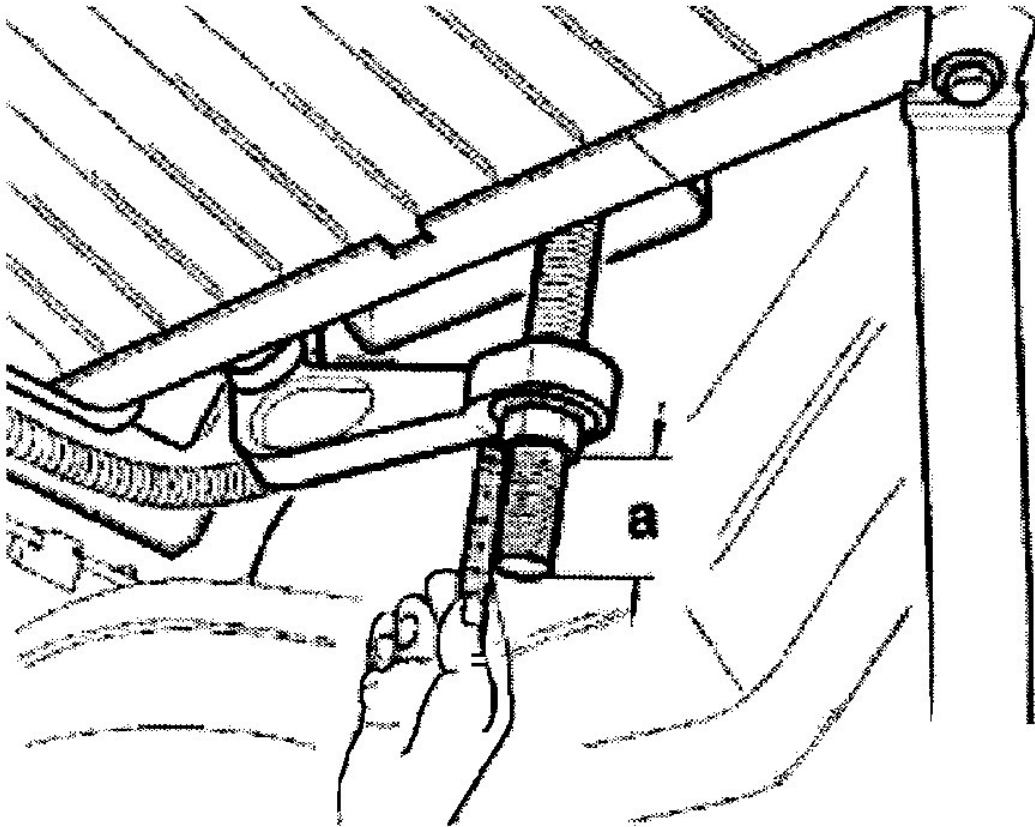
2. On all vehicles, with the vehicle level ground, loosen left-hand drive axle/wheel hub bolt -arrow- and left-hand wheel securing bolts. See **Fig. 16** . Lift vehicle until the load on the front axle is relieved. Remove left wheel. Remove hex bolt for drive axle/wheel hub.



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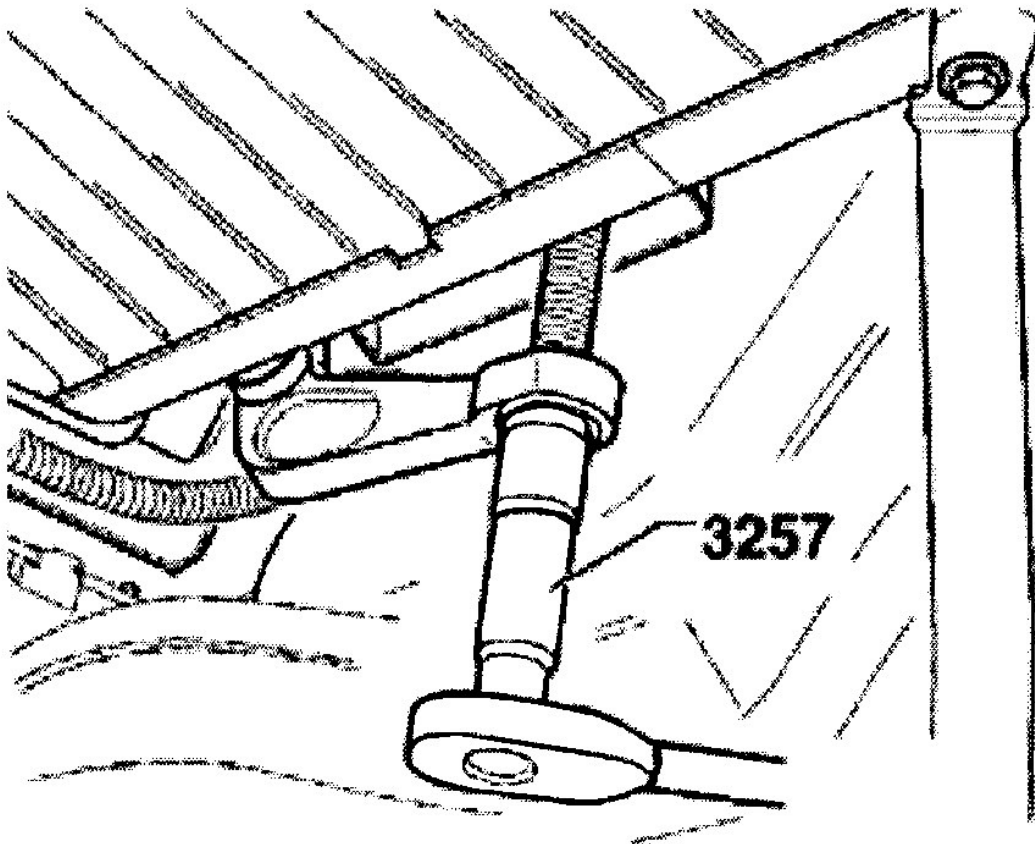
Fig. 16: Locating Axle Shaft-To-Wheel Hub Bolt
Courtesy of VOLKSWAGEN UNITED STATES, INC.

3. On vehicles produced from Jan. 1, 1996 and on, support device 3250 can no longer be used. The torsion bars are relieved when vehicle is raised. Measure distance from nut face to end of torsion bar threaded rod -a- and note. See **Fig. 17** . Relieve tension on torsion bar by turning nut with special tool (socket) 3257. See **Fig. 18** .



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Fig. 17: Measuring Torsion Bar Installation Position
Courtesy of VOLKSWAGEN UNITED STATES, INC.

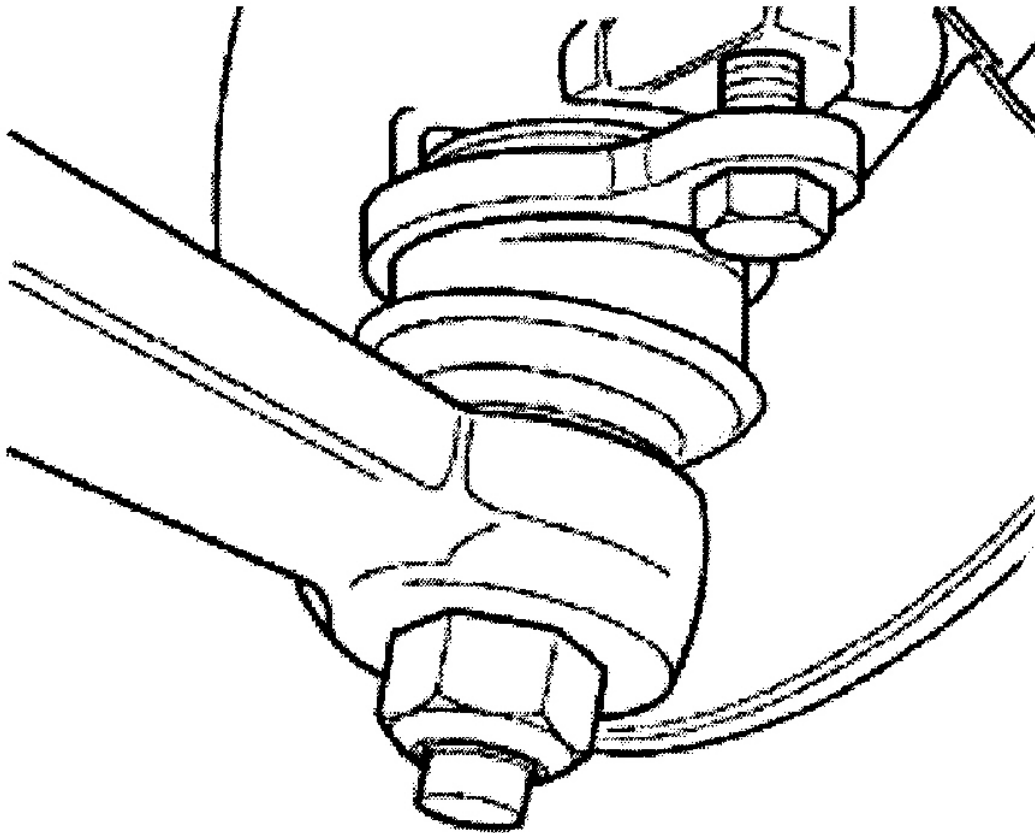


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Fig. 18: Releasing Torsion Bar Tension

Courtesy of VOLKSWAGEN UNITED STATES, INC.

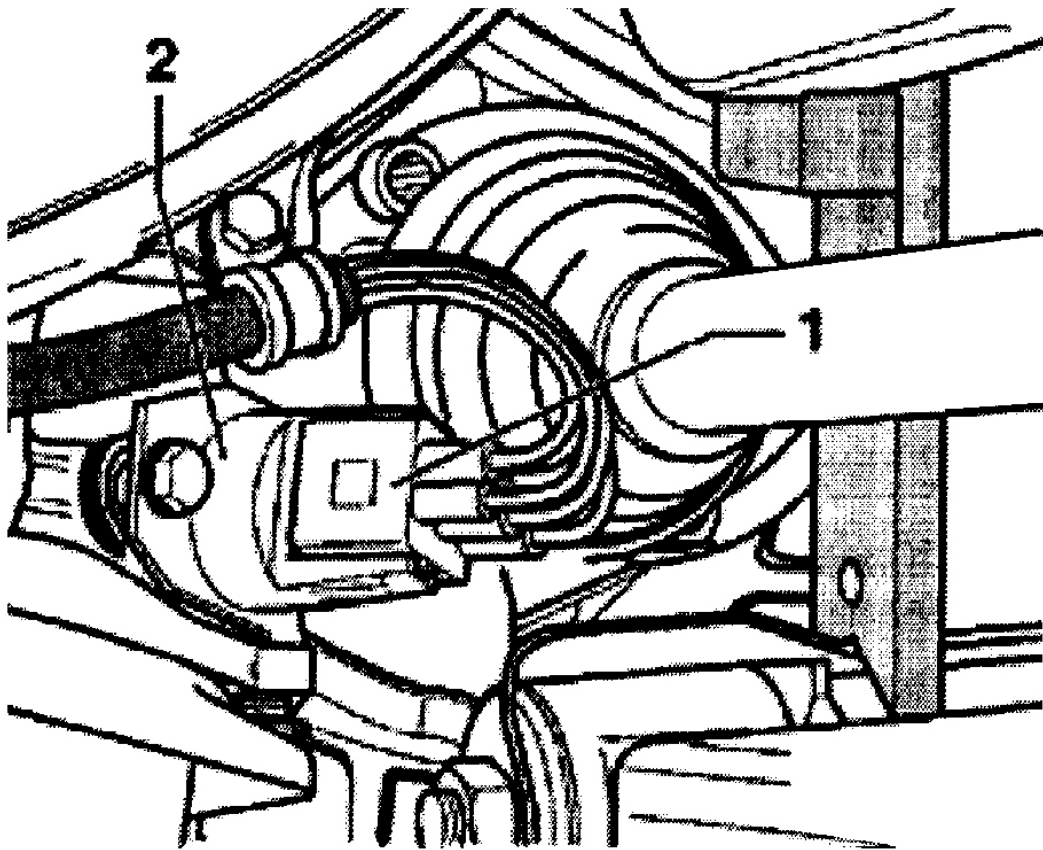
4. On all vehicles, remove noise insulation tray. Disconnect wheel bearing housing/lower ball joint bolted connection. See **Fig. 19** . ALWAYS replace bolts.



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Fig. 19: Removing Shock Absorber-To-Stabilizer Bar Bolt
Courtesy of VOLKSWAGEN UNITED STATES, INC.

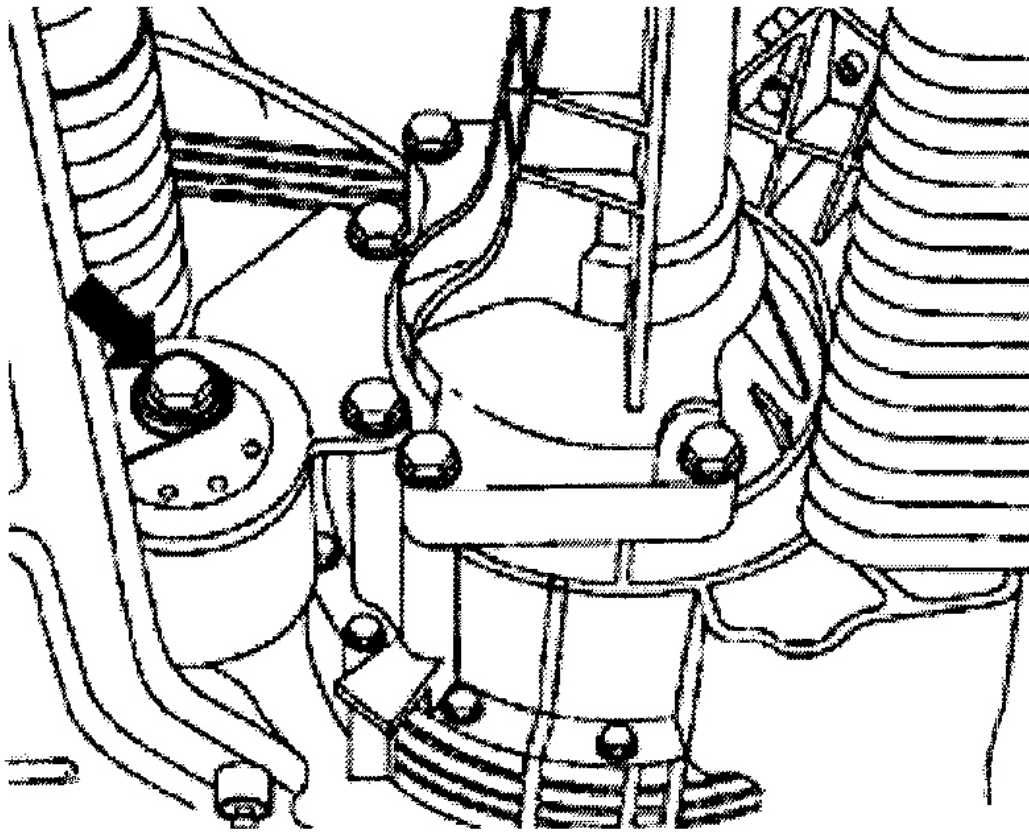
5. Remove bolt for left-hand shock absorber/stabilizer bar coupling rod. Disconnect drive axle shaft from flanged shaft.
6. Pull connector -1- from multi function switch -2-. See **Fig. 20** .



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Fig. 20: Locating Multi Function Switch & Harness Connector
Courtesy of VOLKSWAGEN UNITED STATES, INC.

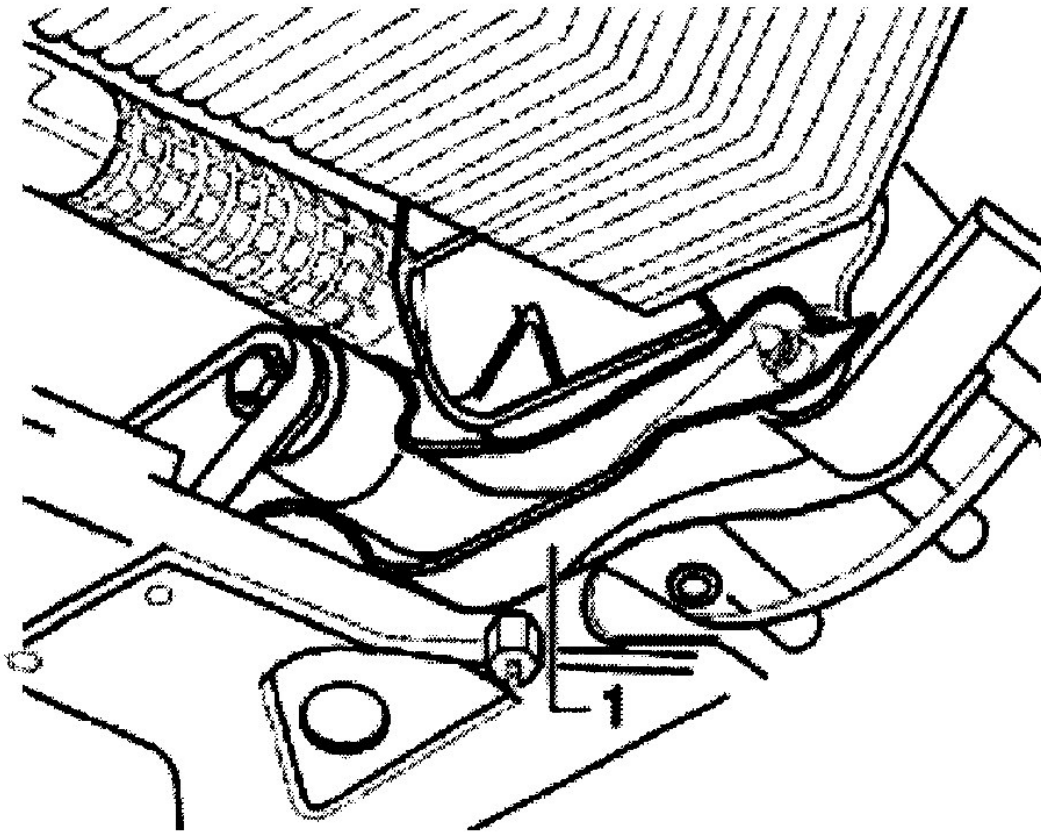
7. On vehicles produced up to December 1995, remove mounting bolt (arrow). See **Fig. 21** .



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Fig. 21: Removing Mounting Bolt (Vehicles Produced Up To December, 1995)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

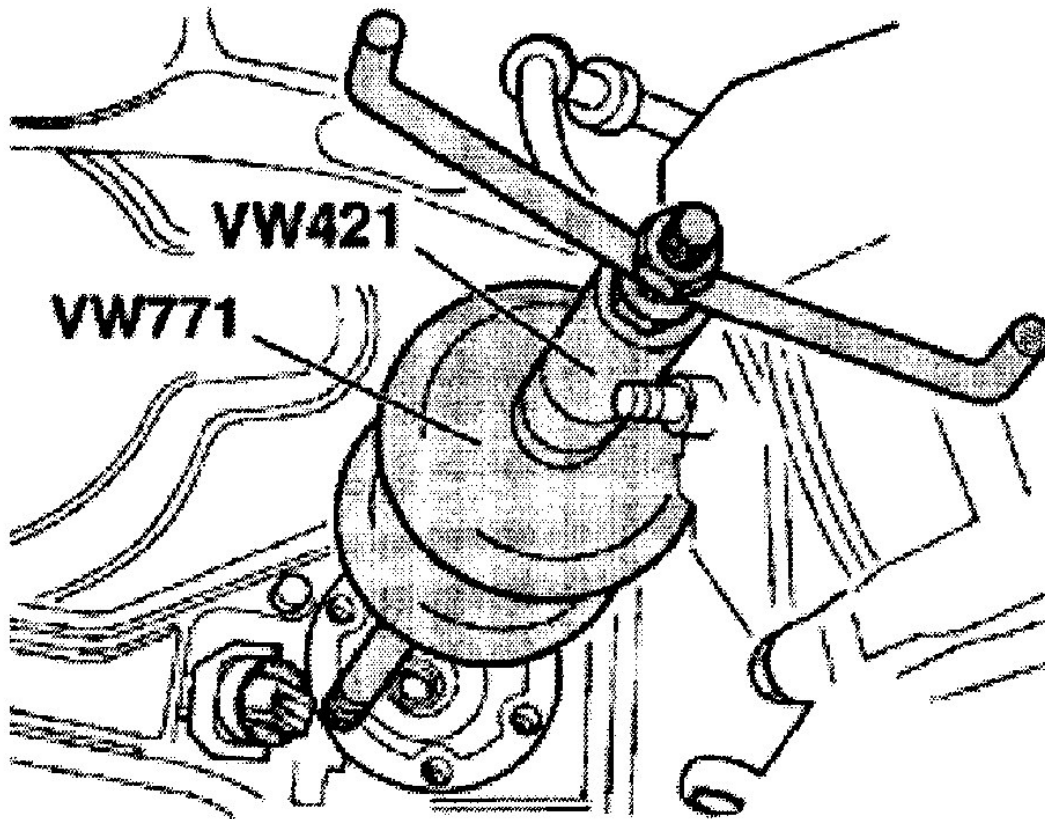
8. On vehicles produced from January 1, 1996 and on, unbolt pendulum support -1- from transmission. See **Fig. 22** .



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Fig. 22: Locating Pendulum Support (From January 1, 1996 & On)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

9. On all models, press drive axle out of wheel bearing housing. Press shock absorber together. Take out drive axle, to do this push engine/transmission slightly forward. Remove left flange shaft using VW 771 and VW 421. See [Fig. 23](#) .

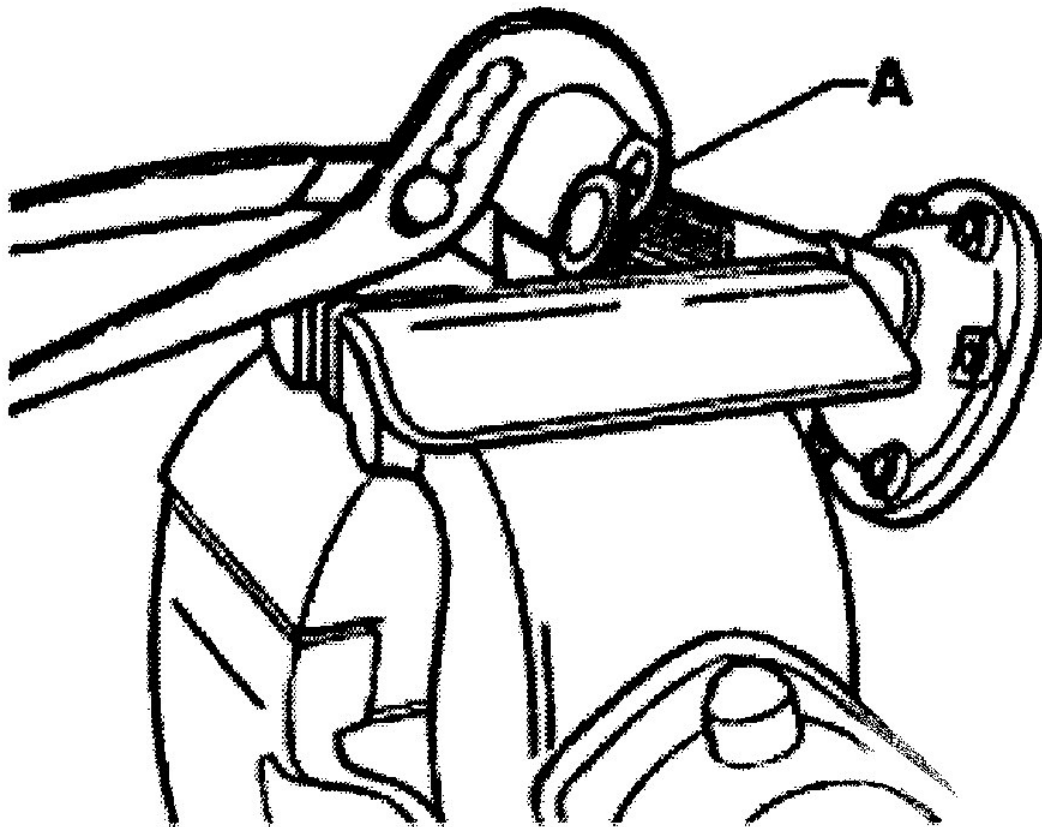


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Fig. 23: Removing Flange Shaft (Left)

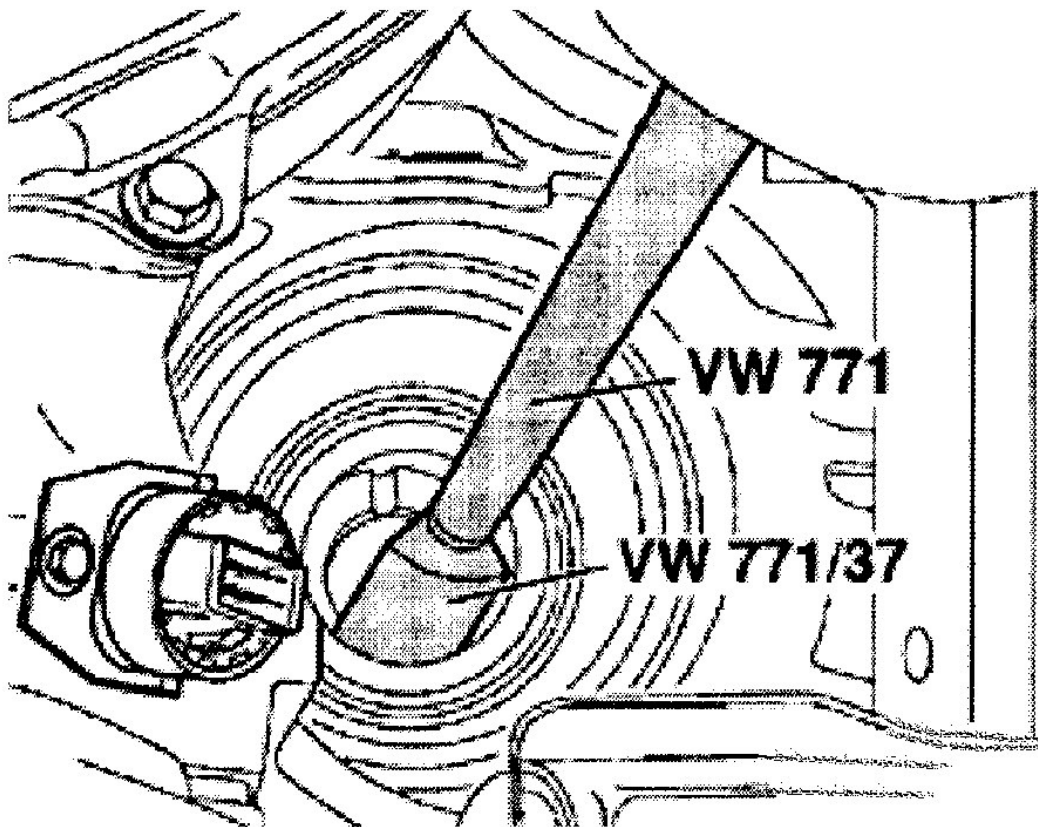
Courtesy of VOLKSWAGEN UNITED STATES, INC.

10. Always replace flange shaft circlip. Clamp flange shaft in vice using protective vice clamps. See **Fig. 24** . Press circlip out of flange shaft groove using a new circlip -A-. Pull flange shaft oil seal out using VW 771 and VW 771/37. See **Fig. 25** .



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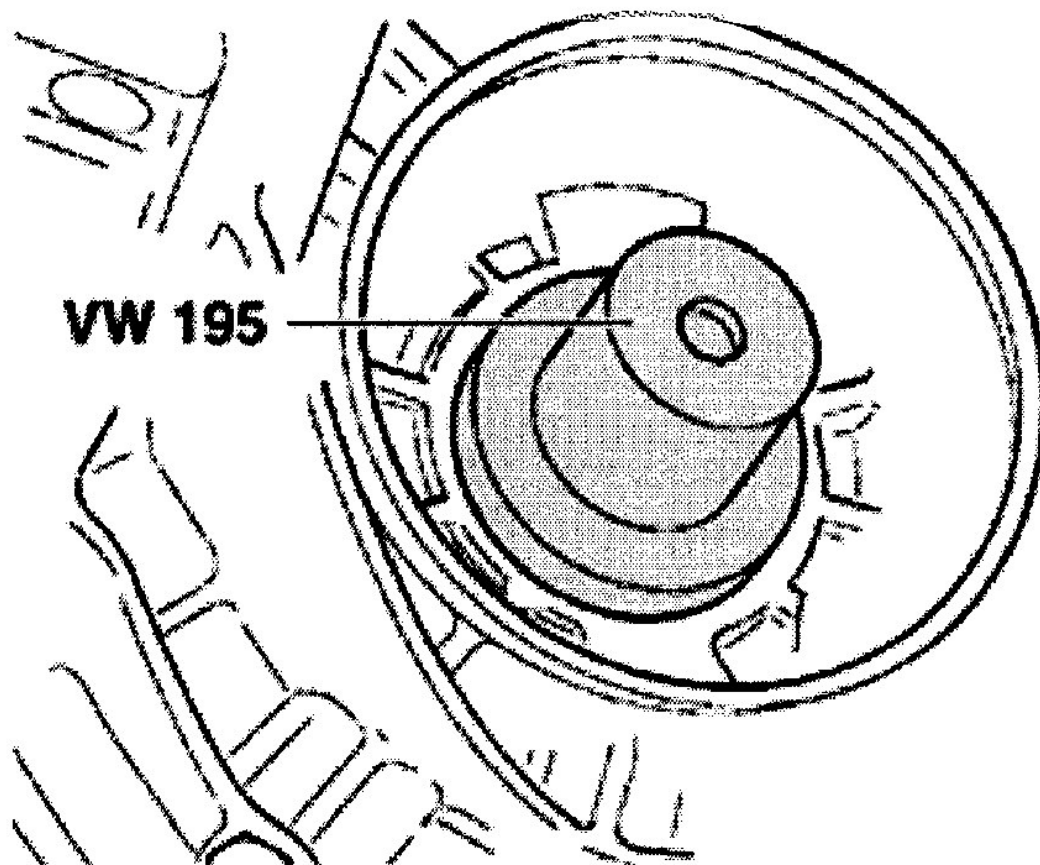
Fig. 24: Pressing Circlip Out Of Left Flange Shaft Groove
Courtesy of VOLKSWAGEN UNITED STATES, INC.



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Fig. 25: Pulling Left Flange Shaft Oil Seal Out
Courtesy of VOLKSWAGEN UNITED STATES, INC.

11. To install, half fill space between sealing lip and dust lip with grease G 052 128 A1. Drive in oil seal as far as stop with VW 195. See **Fig. 26** .



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Fig. 26: Driving In Left Flange Shaft Oil Seal
Courtesy of VOLKSWAGEN UNITED STATES, INC.

12. Install flange shaft. See **TORQUE SPECIFICATIONS** .
13. Install drive axle shaft. See **TORQUE SPECIFICATIONS** .
14. If torsion bar tension was relieved, place torsion bar setting back to original tension.
15. With transmission installed, check final drive oil level. See **CHECKING FLUID LEVELS** . Install wheel. Install noise insulation tray.

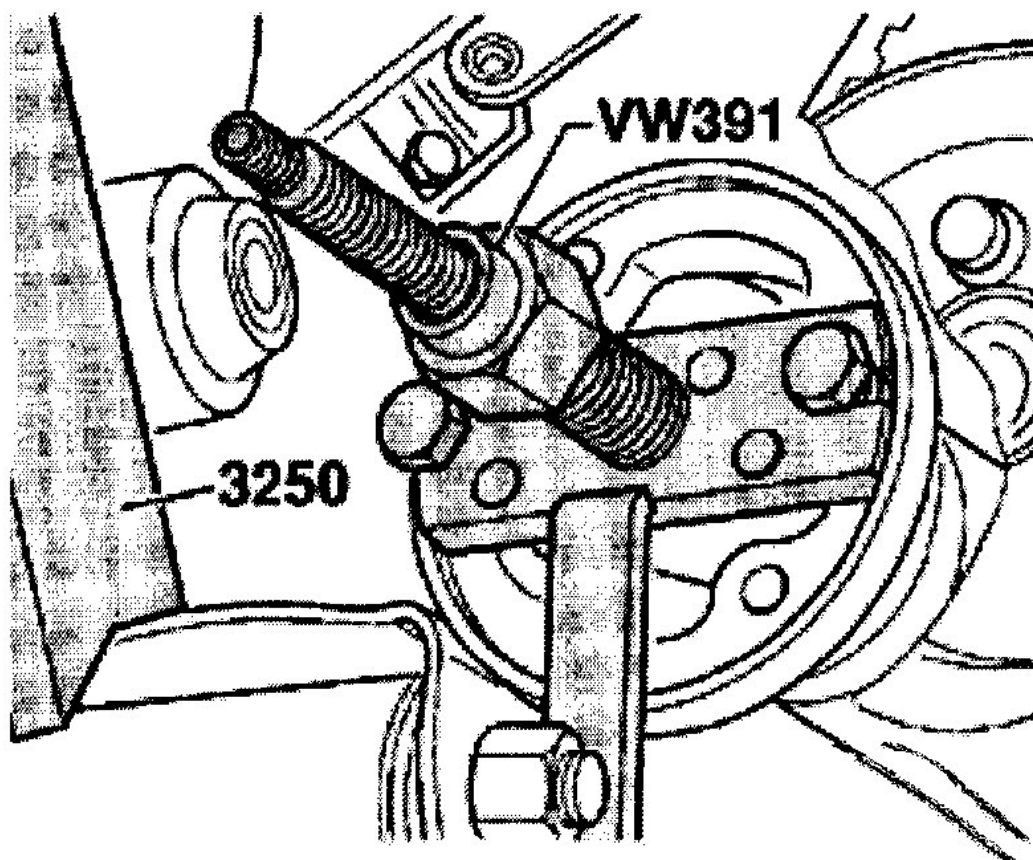
FLANGE SHAFT OIL SEAL (RIGHT)

Removal & Installation (Up To December, 1995)

1. Install support device 3250 so that surface (arrow A) is positioned under control arm -1- and V-shaped cut-out (arrow B) is resting on subframe -2-. See **Fig. 14** . If vehicle is fully loaded, raise it on a hoist just

far enough to install the support. See **Fig. 15** .

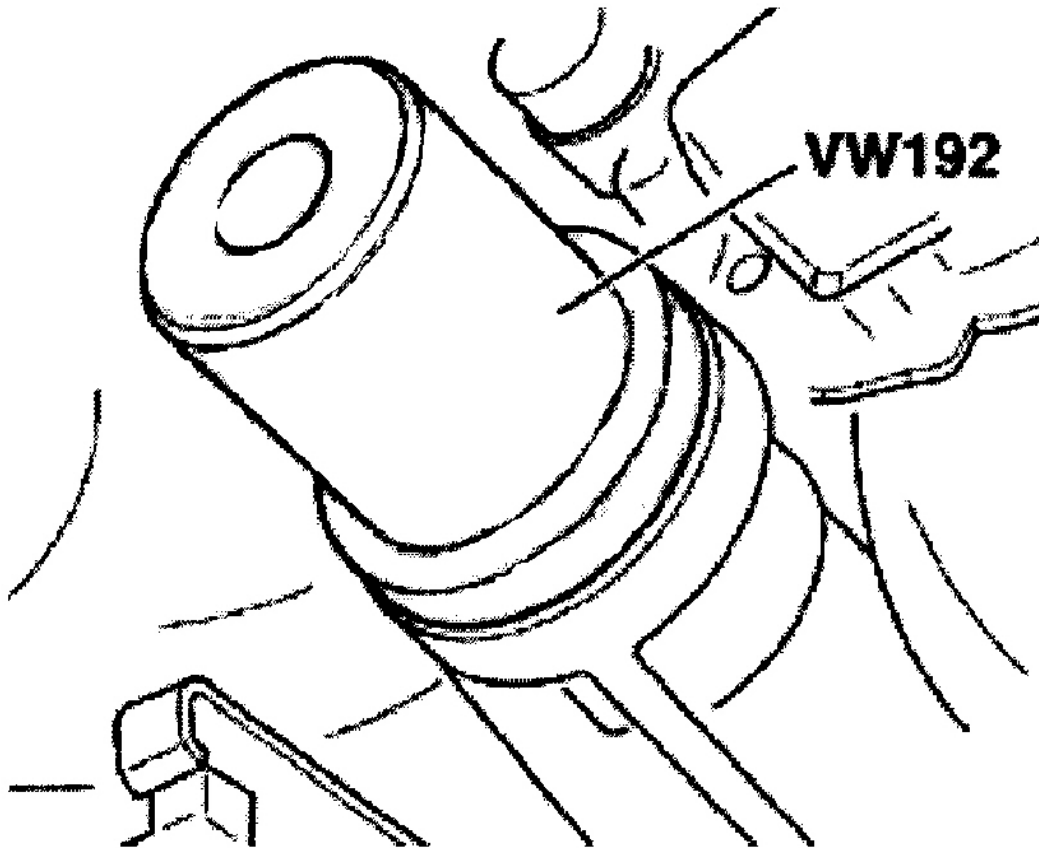
2. With the vehicle standing on level ground, loosen right-hand drive axle/wheel hub bolt -arrow- and right-hand wheel securing bolts. See **Fig. 16** .
3. Lift vehicle until the load on the front axle is relieved. Remove right-hand wheel. Remove hex bolt for drive axle/wheel hub. Remove noise insulation tray under engine.
4. Disconnect wheel bearing housing/lower ball joint bolted connection. See **Fig. 19** . Always replace bolts. Remove bolt for right-hand shock absorber/anti-roll bar coupling rod. Disconnect drive axle from drive flange.
5. Press drive axle out of wheel bearing housing. Press shock absorber together. Remove drive axle.
6. Pierce sealing cap in drive flange with a screwdriver and lever out. Remove drive flange circlip. Pull off drive flange with VW 391. See **Fig. 27** . Pull out drive flange oil seal with VW 681.



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Fig. 27: Pulling Out Drive Flange (Right Side - Up To December, 19955)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

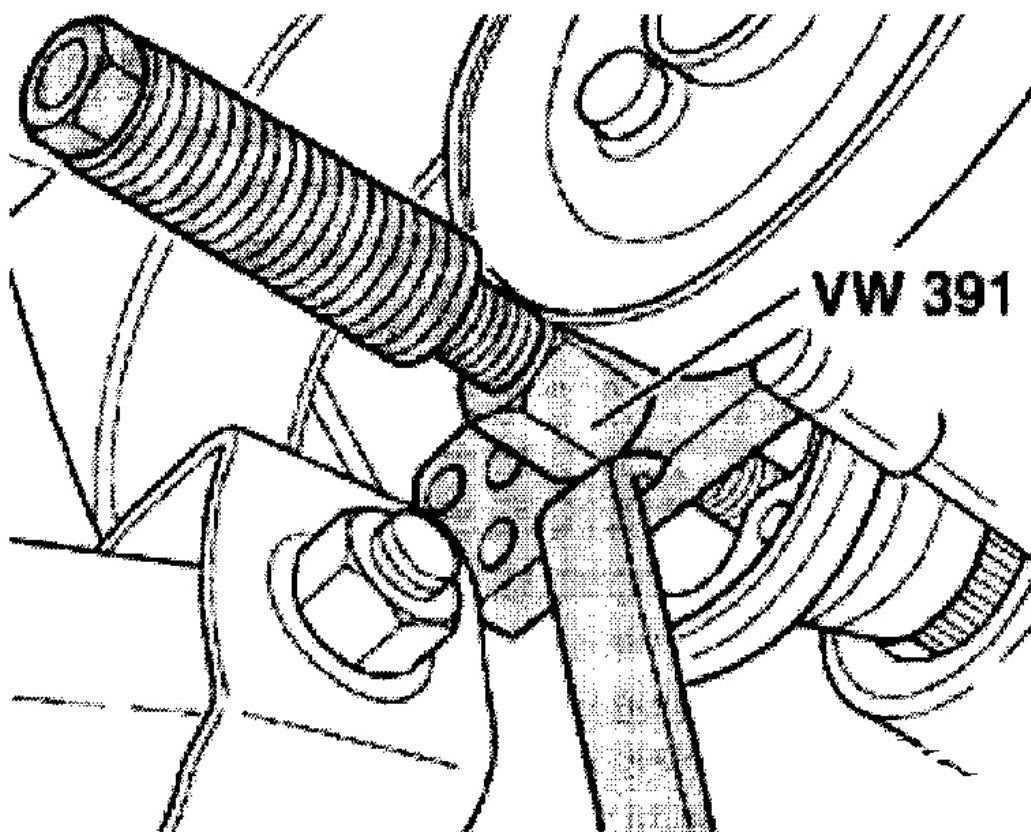
7. To install, half fill space between sealing lip and dust lip with grease G 052 128 A1. Drive in oil seal as far as stop with VW 192. See **Fig. 28**.



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Fig. 28: Driving In Oil Seal (Right Side - Up To December, 1995)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

8. Pull off drive flange with VW 391. See **Fig. 29**. Install new circlip and new sealing cap.



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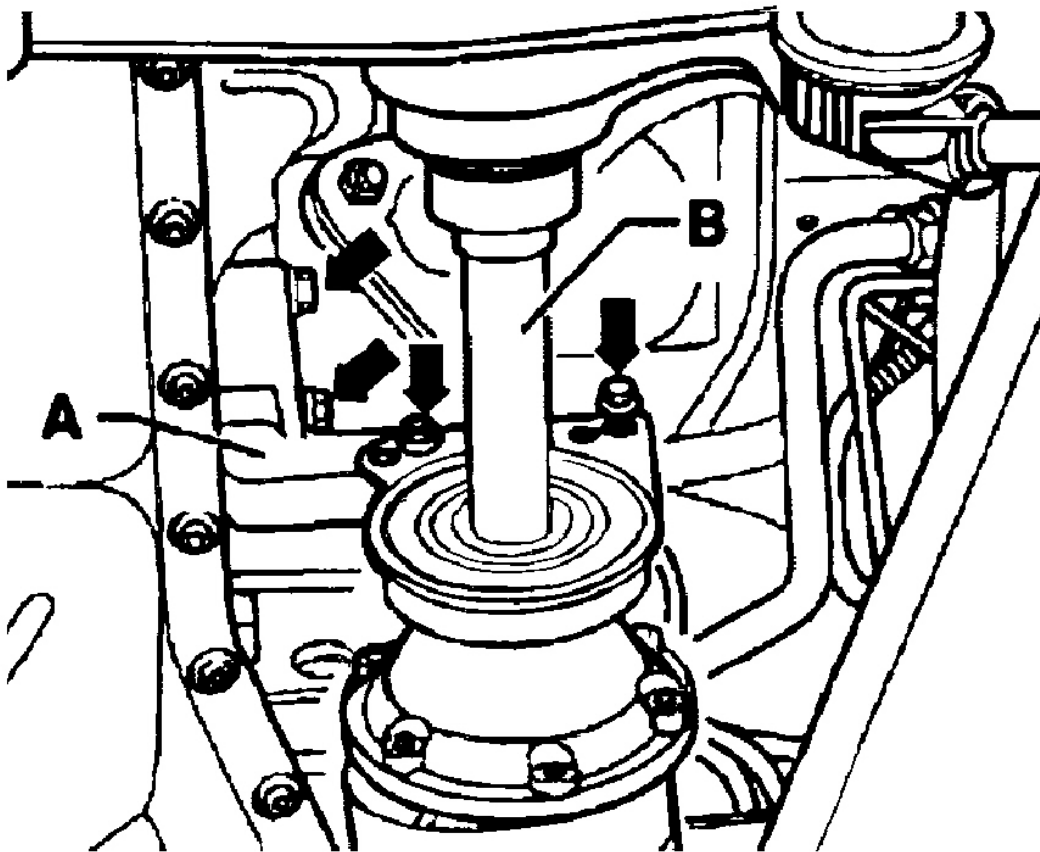
Fig. 29: Pulling Off Drive Flange (Right Side - Up To December, 1995)

Courtesy of VOLKSWAGEN UNITED STATES, INC.

9. Install drive axle. See **TORQUE SPECIFICATIONS** .
10. Tighten suspension components. See **TORQUE SPECIFICATIONS** .
11. With transmission installed, check final drive oil level. See **CHECKING FLUID LEVELS** .
12. Install wheel. See **TORQUE SPECIFICATIONS** . Install noise insulation tray.

Removal & Installation (From January 1, 1996 & Up)

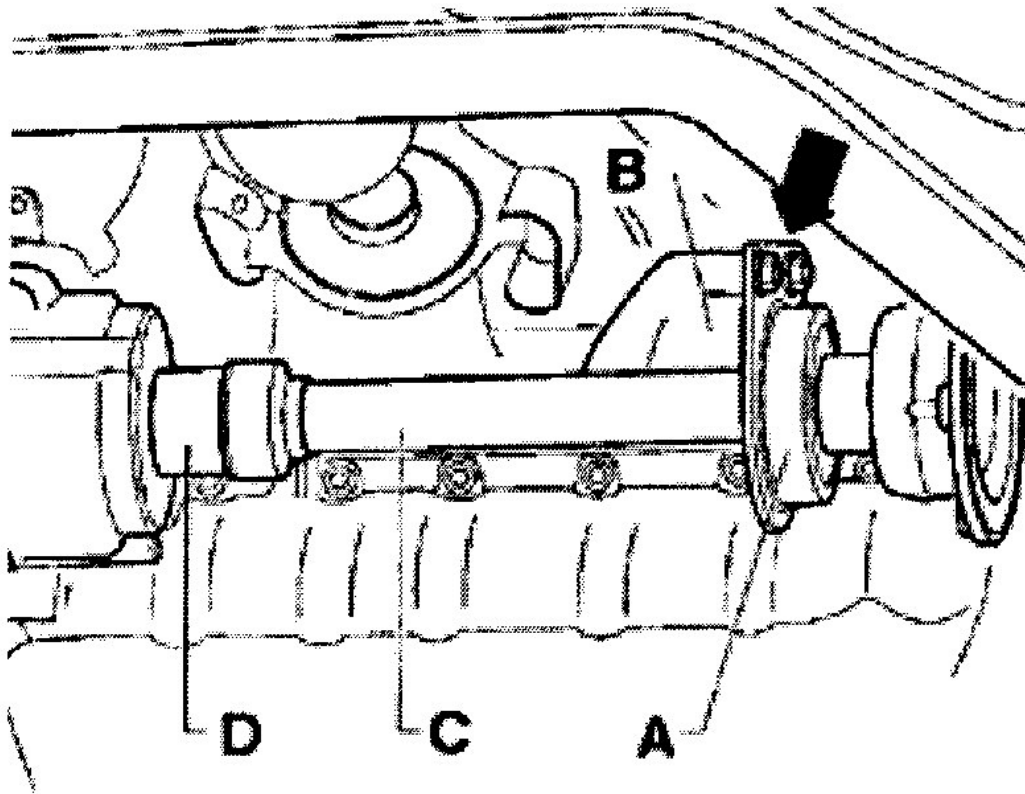
1. Remove noise insulation tray under engine. Turn steering to right onto full lock stop. Disconnect drive axle from flanged shaft.
2. On vehicles with 6-cyl. injection engines, remove transmission carrier -A- for bearing of right-hand flanged shaft -B- (arrows). See **Fig. 30** . Pull out flanged shaft.



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Fig. 30: Removing Transmission Carrier (Vehicles With 6-Cyl. Injection Engines)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

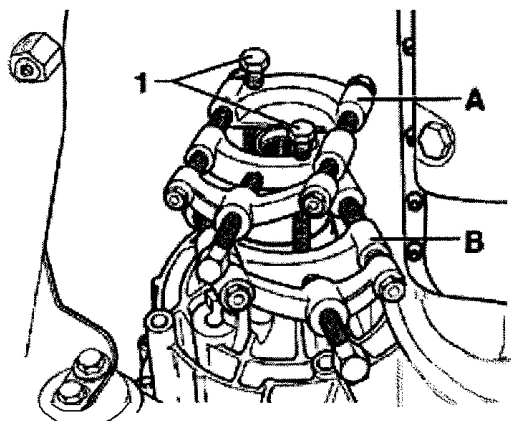
3. On vehicles with 5-Cyl. engines, unbolt flanged shaft bearing -A- from transmission mount -B- (arrow). See **Fig. 31** . Pull right-hand flanged shaft -C- out from intermediate shaft -D-.



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Fig. 31: Locating Flanged Shaft Bearing (Vehicles With 5-Cyl. Engines)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

4. On all vehicles, take O ring out from intermediate shaft. Remove stub shaft. See **Fig. 32** . Turn bolts -1- evenly against separating device -B-. Pull out oil seal with VW 681. Half fill space between sealing lip and dust lip with grease G 052 128 A1.



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A - Separating device Kukko 17/0

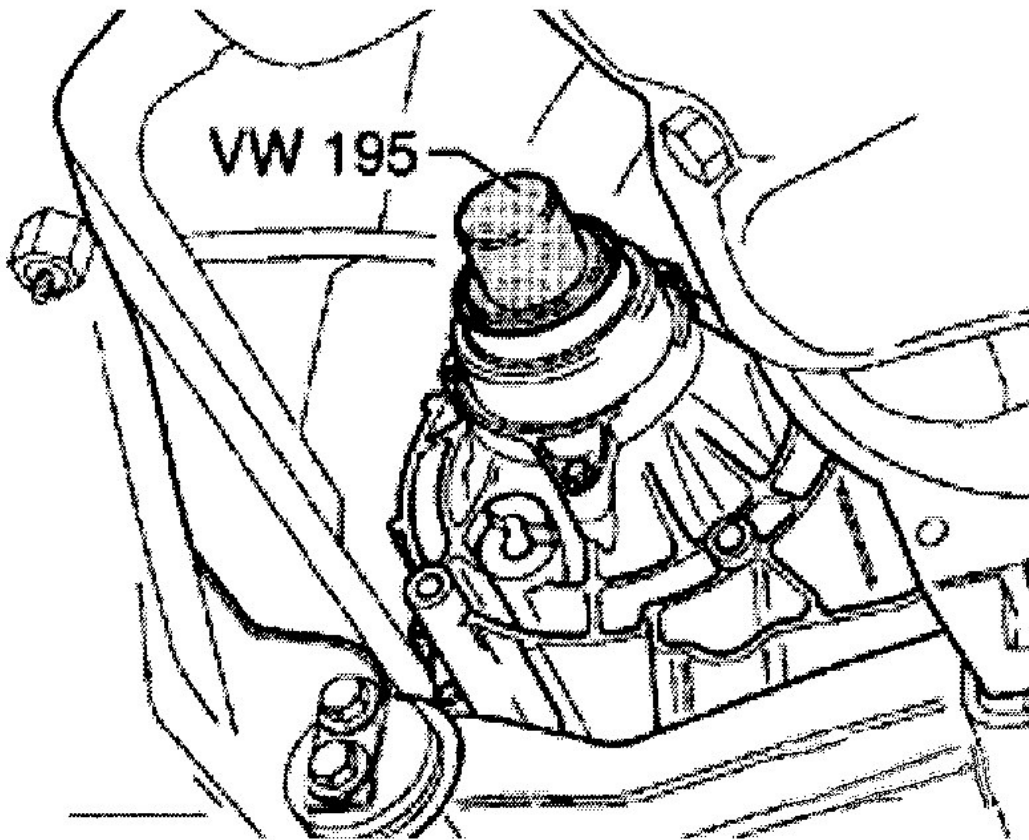
B - Separating device Kukko 17/1

1 - Bolt M10 x 80 (Qty. 2)

Fig. 32: Removing Stub Shaft

Courtesy of VOLKSWAGEN UNITED STATES, INC.

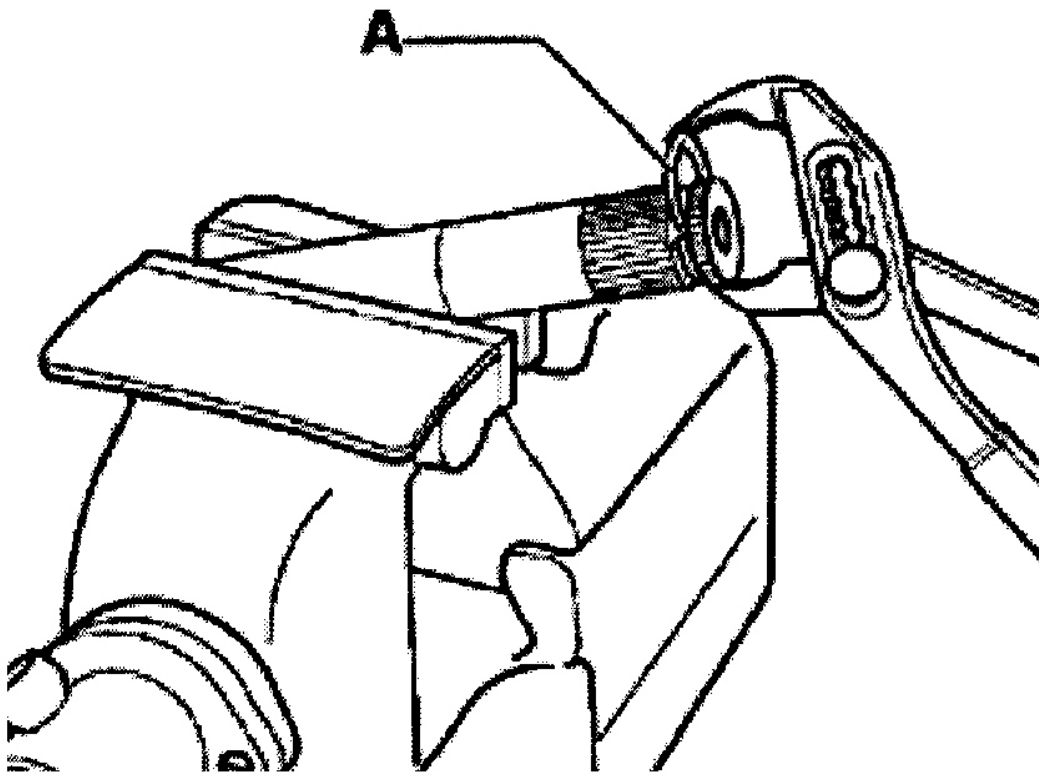
5. Drive in oil seal as far as stop with VW 195. See **Fig. 33** . Clamp stub shaft in vice using protective pads.



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Fig. 33: Driving In Oil Seal (From January 1, 1996 & Up)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

6. Press circlip out of stub shaft groove using new circlip -A-. See **Fig. 34** . Drive in stub shaft with a new circlip and O-ring using a synthetic head hammer.



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Fig. 34: Removing Stub Shaft Circlip

Courtesy of VOLKSWAGEN UNITED STATES, INC.

7. Install flange shaft.
8. Install transmission carrier. Bolt drive axle to flange shaft. See **TORQUE SPECIFICATIONS** .
9. With transmission installed, check final drive oil level. See **CHECKING FLUID LEVELS** . Install noise insulation tray. Tighten all nuts and bolts to specification. See **TORQUE SPECIFICATIONS** .

LOCKING CABLE

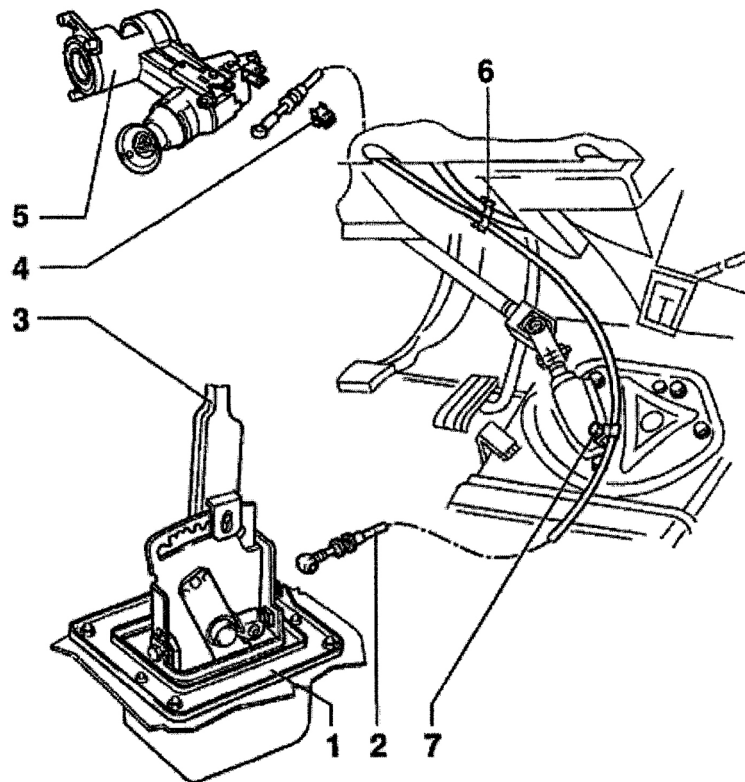
NOTE: When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle.

CAUTION: Radio/cassette or radio/CD player is equipped with an anti-theft protection circuit. Whenever battery is disconnected, radio will go into anti-theft mode. When battery is reconnected, radio will display CODE, and will be

inoperative until proper code number is entered. Obtain security code before disconnecting battery.

Removal & Installation

1. Place selector lever in "P" position. Obtain radio security code (if equipped). Disconnect negative battery cable.
2. Remove selector lever handle, trim, cover, cover strips and selector lever console. See **SELECTOR LEVER** .
3. Remove locking cable from frame and take off from locking lever ball head. Remove ignition switch trim. See **STEERING COLUMN SWITCH & TRIM** .
4. Press locking cable clip (4) out of ignition switch support and remove locking cable (2) from ball head. See **Fig. 35** .



From 01.96 all vehicles have been equipped with an ignition key removal lock.

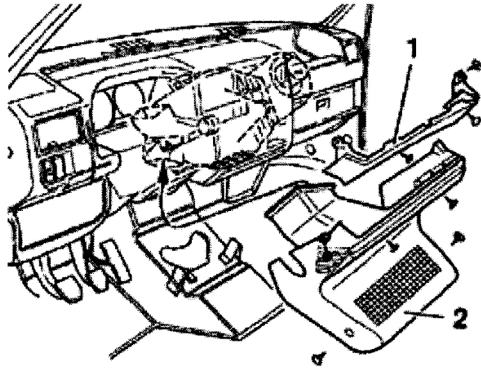
After installing adjust locking cable

1. Frame
2. Locking Cable
Must not be kinked
3. Selector Lever
4. Clip
To secure Locking Cable
Always replace
5. Ignition/Starter Switch
6. Mount
For locking cable
Secure to heater hose
On RHD vehicles, secure mount to pedal cluster assembly plate hole using cable tie
7. Mount
For locking cable
Secure to base plate and pull locking cable through mounting eye

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Fig. 35: Exploded View Of Locking Cable Assembly
Courtesy of VOLKSWAGEN UNITED STATES, INC.

5. Remove footwell vent console. See **Fig. 36** . Take out locking cable.



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- Remove cover -1-
- Detach and remove footwell air outlet console -2-

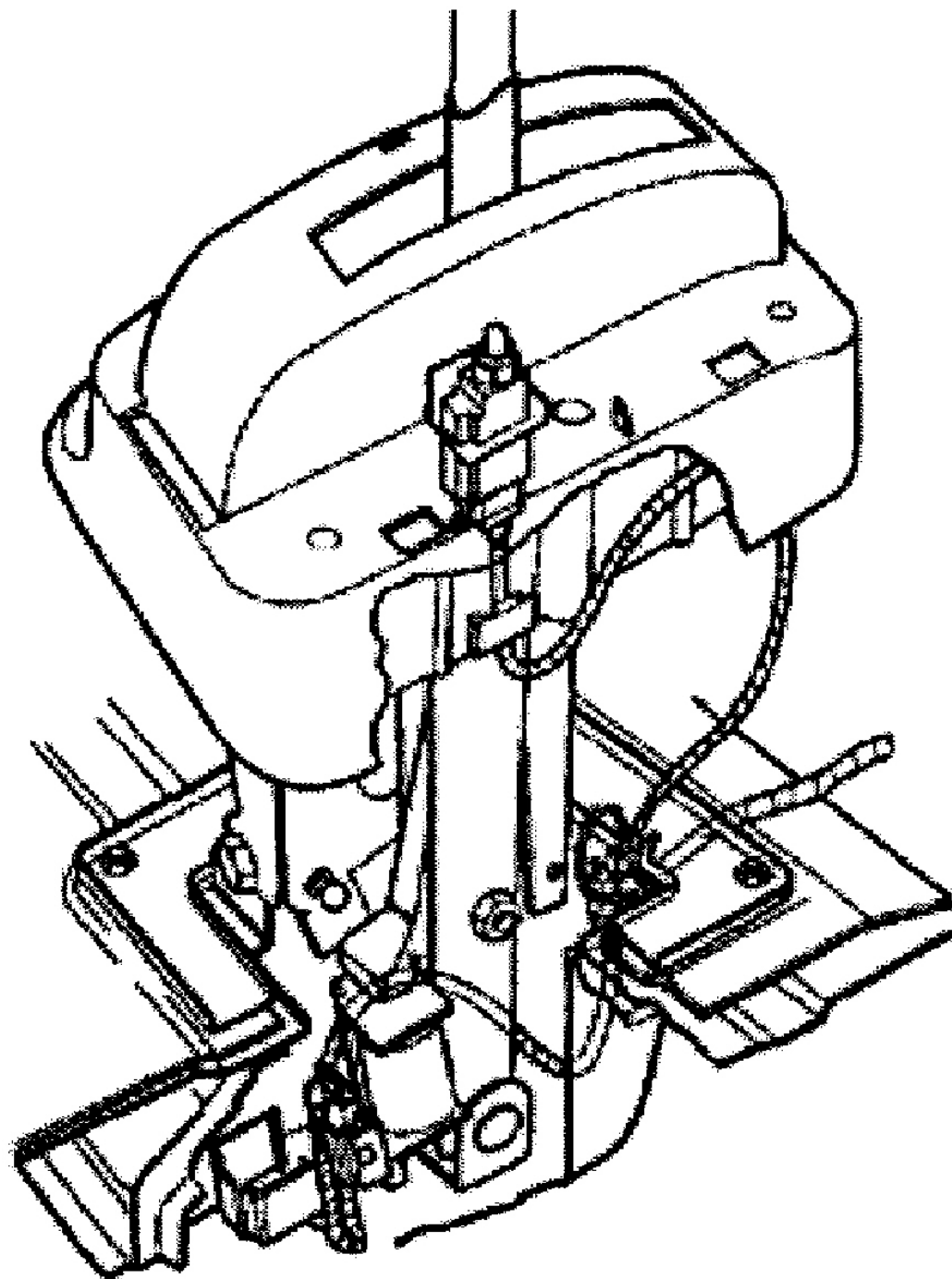
Fig. 36: Removing Footwell Air Outlet Console
Courtesy of VOLKSWAGEN UNITED STATES, INC.

6. To install, reverse removal procedure. Ensure proper routing of locking cable when installing. Adjust locking cable after installation. See **LOCKING CABLE** under ADJUSTMENTS.

SELECTOR LEVER

Manufacturer does not provide specific procedure for removal and installation. As an aid, see **Fig. 12** . See **Fig. 38** as an aid to removal and installation.

Indicator Lighting & Shift Lock Solenoid Wiring Routing



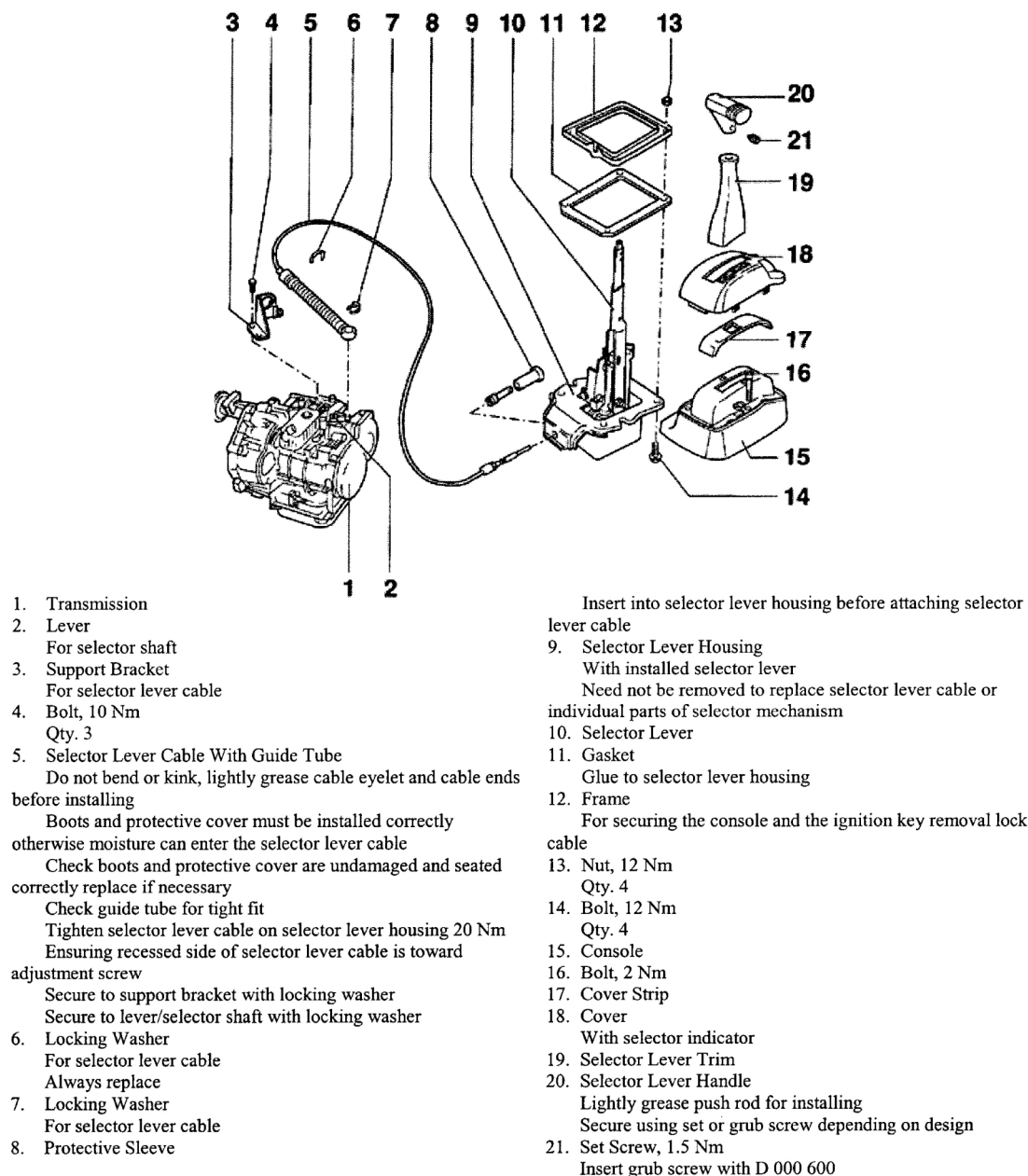
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Fig. 37: Indicator Lighting & Shift Lock Solenoid Wiring Routing
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

SELECTOR LEVER CABLE

Removal & Installation

Manufacturer does not provide specific procedure for removal & installation. As an aid, see **Fig. 38**.



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Fig. 38: Exploded View Of Selector Mechanism

Courtesy of VOLKSWAGEN UNITED STATES, INC.

SELECTOR MECHANISM

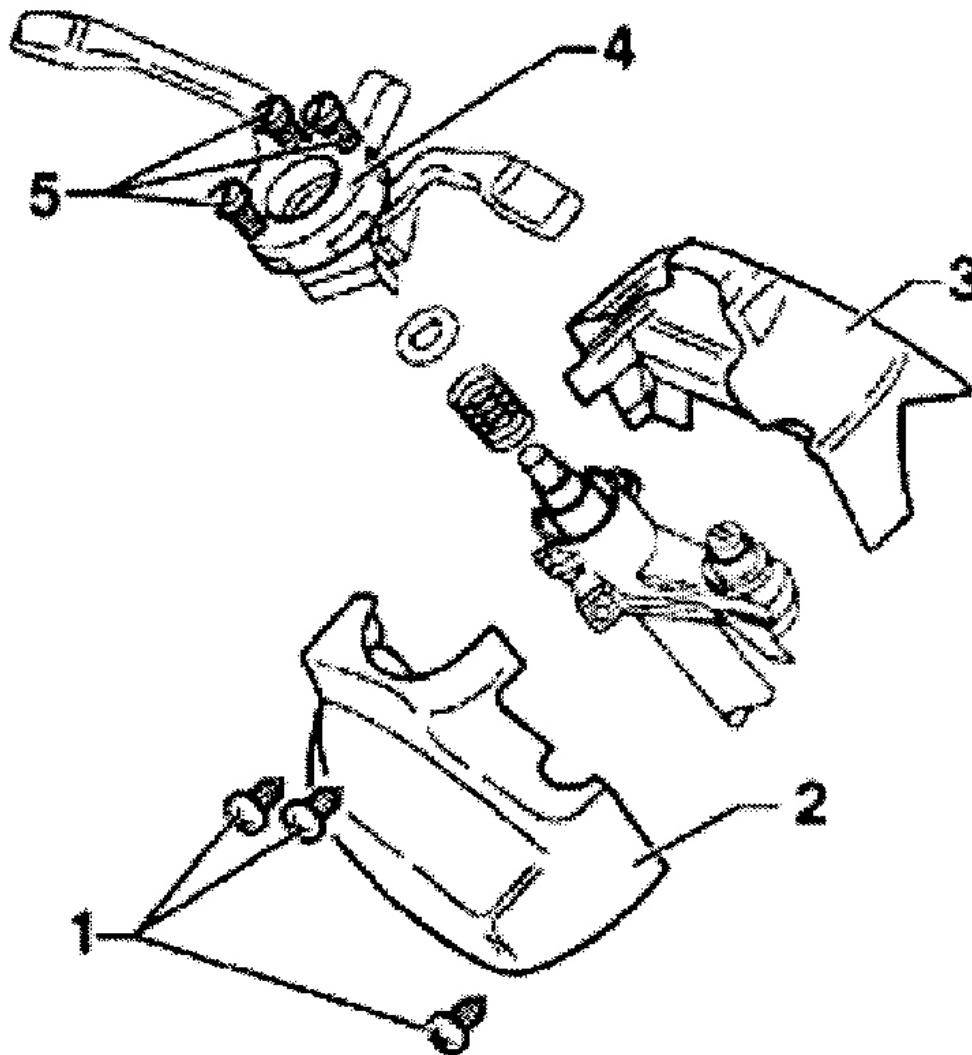
Disassembly & Assembly

Manufacturer does not provide specific procedure for disassembly and assembly. As an aid, see **Fig. 38** .

STEERING COLUMN SWITCH & TRIM

Removal & Installation (Up To May, 1996)

Remove Phillips screws -1- and take off trim -2-. See **Fig. 39** . Pull connectors off steering column switch -4-. Remove screws -5- and pull off steering column switch -4-. Take off trim -3-. Installation is reverse of removal procedure.



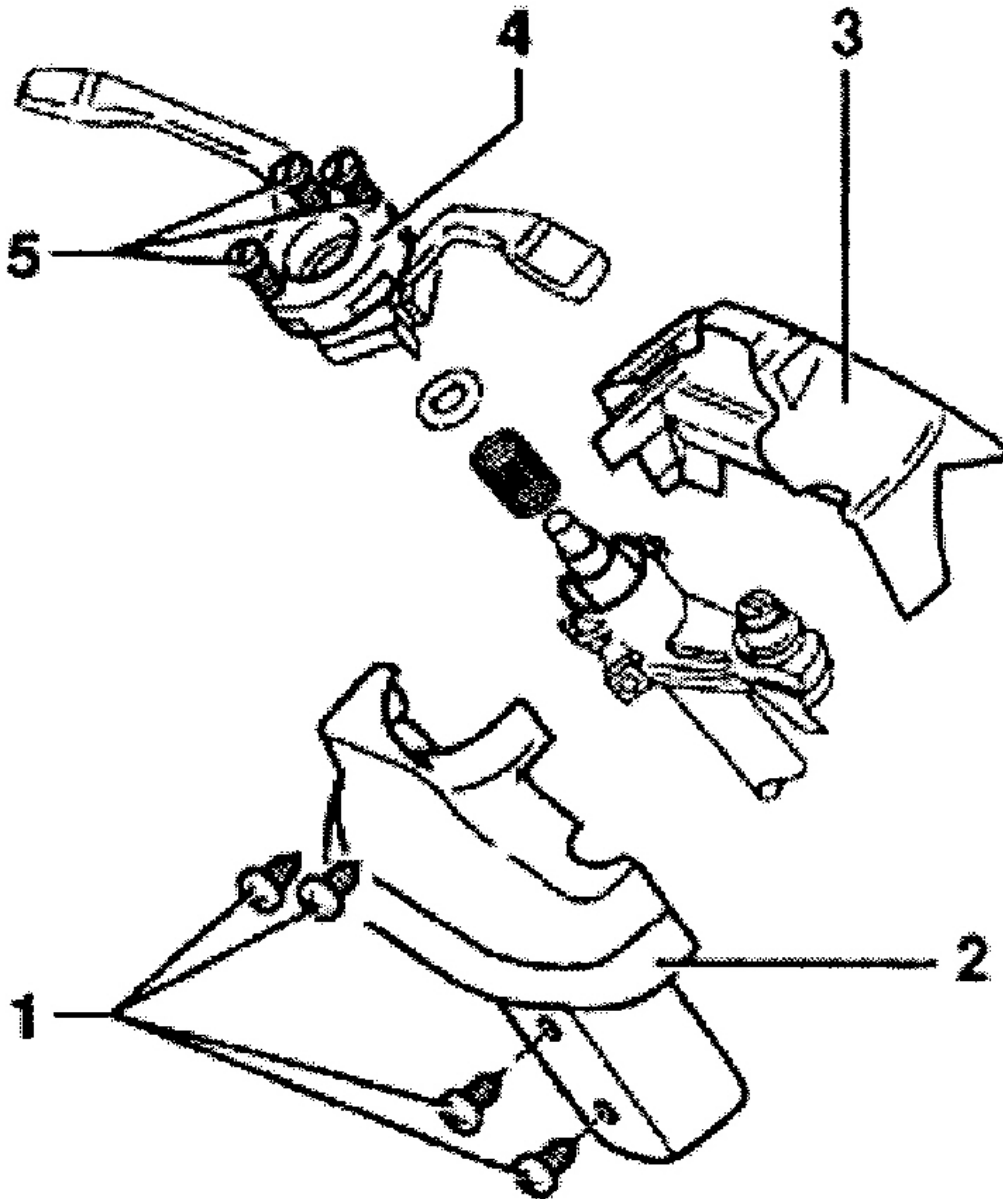
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Fig. 39: Removing & Installing Steering Column Switch & Trim (Up To May, 1996)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Removal & Installation (From May, 1996)

Remove Phillips screws -1- and take off trim -2-. See **Fig. 40** . Pull connectors off steering column switch -4-. Remove screws -5- and pull off steering column switch -4-. Take off trim -3-. Installation is reverse of removal

procedure.



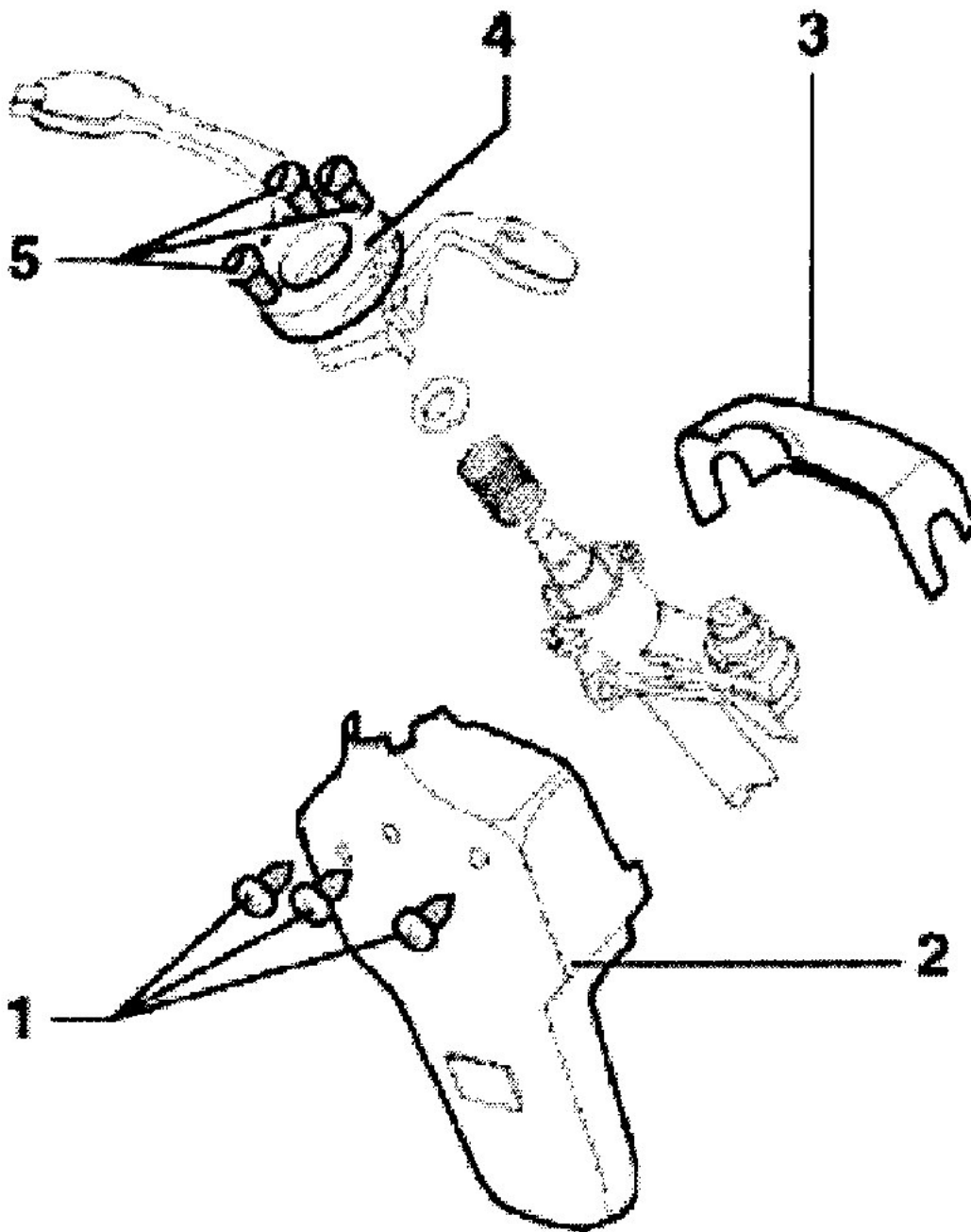
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Fig. 40: Removing & Installing Steering Column Switch & Trim (From May, 1996)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Removal & Installation (Models With DLC In Trim)

NOTE: On some models, the Data Link Connector (DLC) may be installed on the lower trim. Remove connector only when necessary.

Remove screws -1-. See **Fig. 41** . Unclip trim -2- and set aside. Disconnect electrical connections from steering column switch assembly -4-. Remove screws -5- and remove steering column switch assembly -4-. Remove trim -3- upwards.



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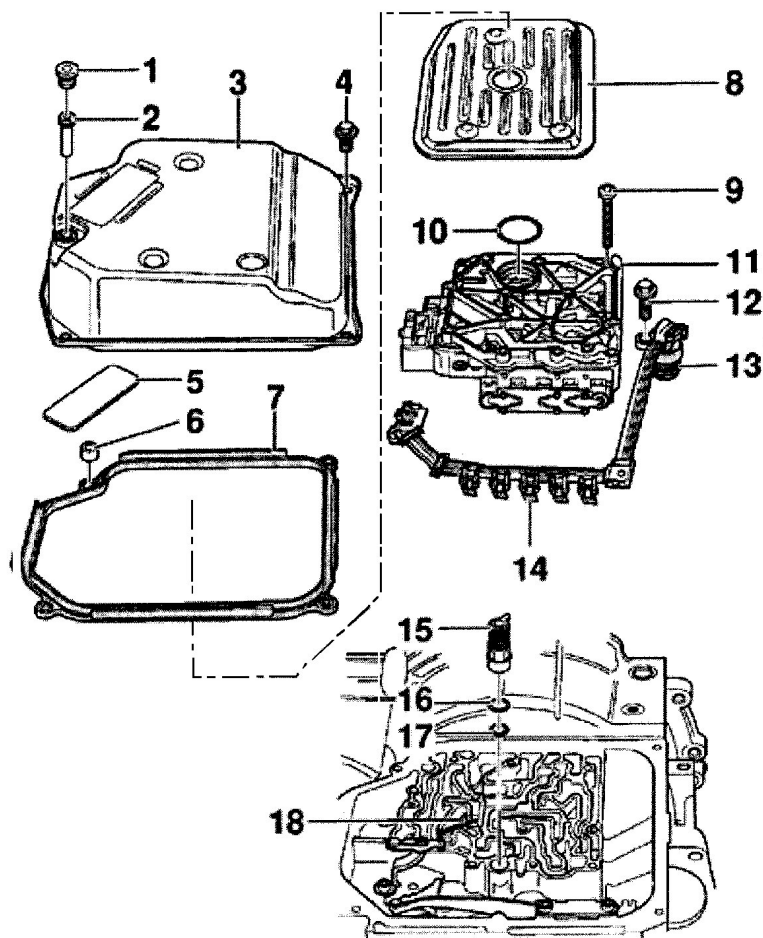
Fig. 41: Removing & Installing Steering Column Switch & Trim (Models With DLC In Trim)
 Courtesy of VOLKSWAGEN UNITED STATES, INC.

VALVE BODY ASSEMBLY

Valve Body Notes

- The valve body or the conductor strip can also be removed when the transmission is installed. The conductor strip can be removed individually.
- Always replace a valve body which is fouled or defective.
- Use only lint-free cloths.
- After re-installing the oil pan, fill with ATF. See **DRAINING & REFILLING** .

Removal & Installation



1. Plug, 15 Nm (Always replace seal)
2. Overflow Pipe, 2 Nm
Remove to drain ATF
Screw in onto stop
3. Oil Pan
4. Bolt, 12 Nm
5. Magnet
Insert in the recess in oil pan
6. Spacer Bushing
Press into gasket
7. Gasket (Always replace)
Press spacer bushings into gasket
8. ATF Screen
9. Bolt, 5 Nm
Valve body to transmission housing
10. Gasket (Always replace)
Insert in valve body
11. Valve Body
12. Bolt, 10 Nm
13. O-Ring (Always replace)
For cable transition piece
14. Conductor Strip W/Connector For Solenoid Valves
With cable transition piece and connector
Can be removed and installed with transmission installed
Pull off solenoid valves with 3373
15. Sealing Plug
Take out before removing and installing free wheel
Insert so that the lug is located in the groove on housing
Place O-rings onto sealing plug
16. O-Ring (Always replace)
17. O-Ring (Always replace)
18. Operating Rod For Manual Selector Valve
Install with stepped side facing manual selector valve
Always replace steel spring and bolt for manual selector valve operator

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Fig. 42: Exploded View Of Valve Body

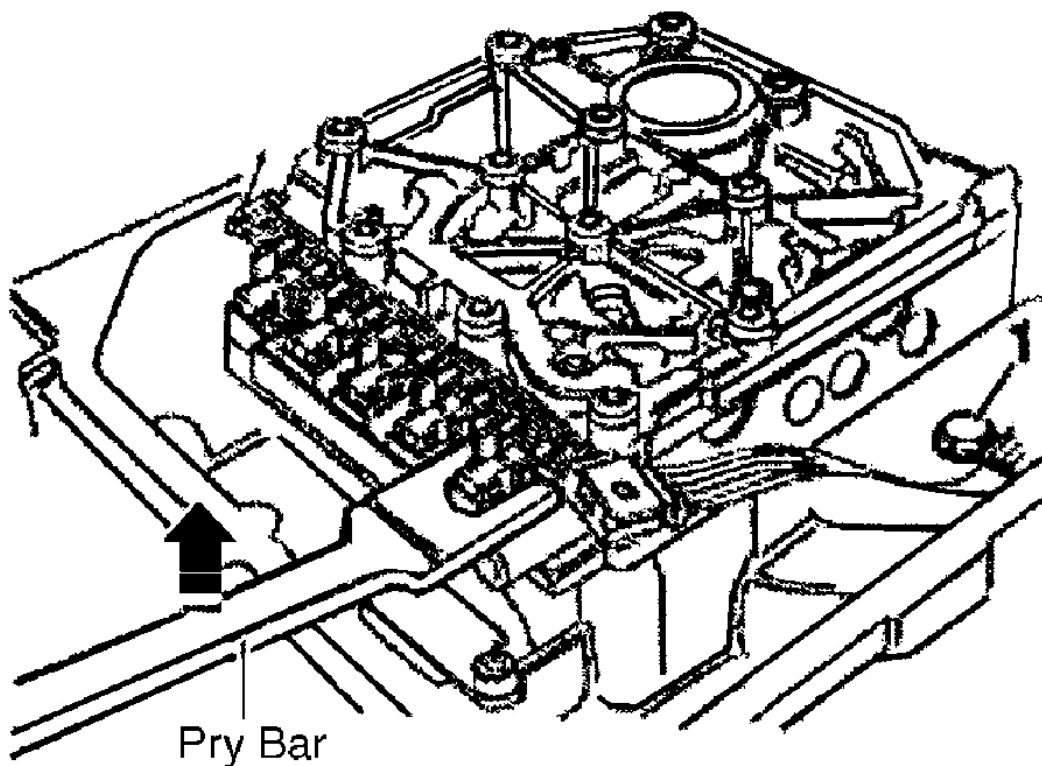
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Draining ATF

For ATF draining procedure, see **DRAINING & REFILLING** .

Removing Conductor Strip

- Place 3373 onto stop under the solenoid valve plug. See **Fig. 43** .
- Pull plug off with 3373 in direction of arrow.
- Remove bolt -1-.



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Fig. 43: Prying Up On Conductor Strip

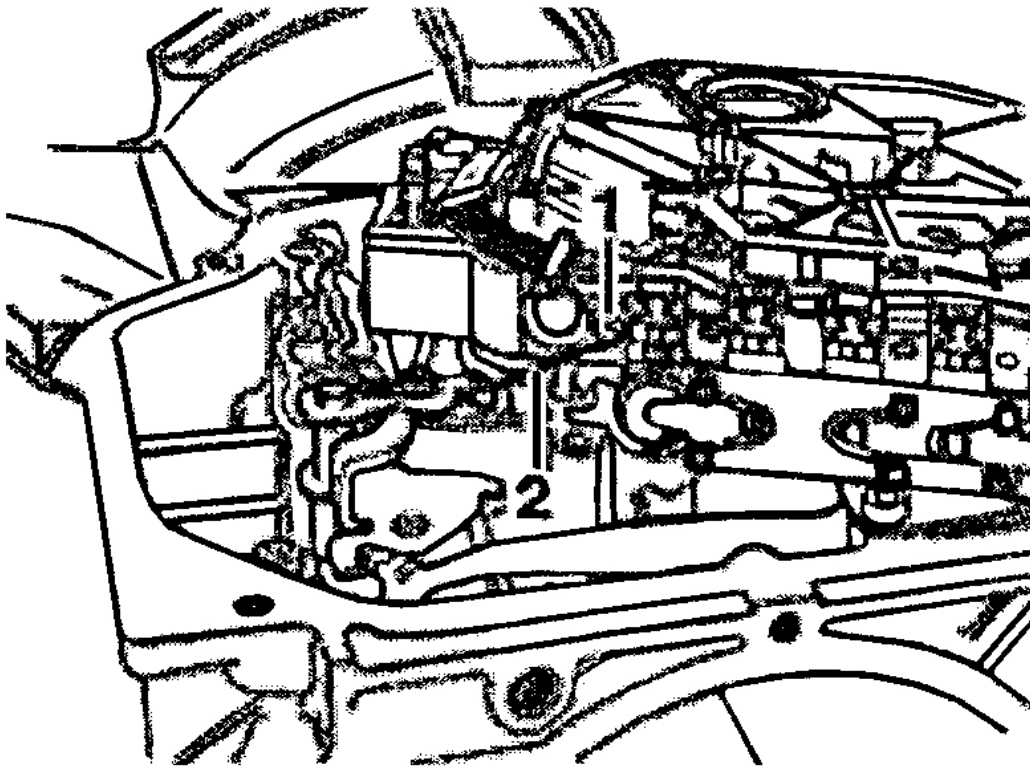
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Removing Valve Body/Unhooking Operating Rod

When removing the valve body the manual selector valve -1- remains in valve body.

- Do not interchange manual selector valves of valve bodies.
- Shift selector lever/shaft into position "1".

- Pull manual selector valve out until it is just possible to unhook the operating rod -2-. See **Fig. 44** .



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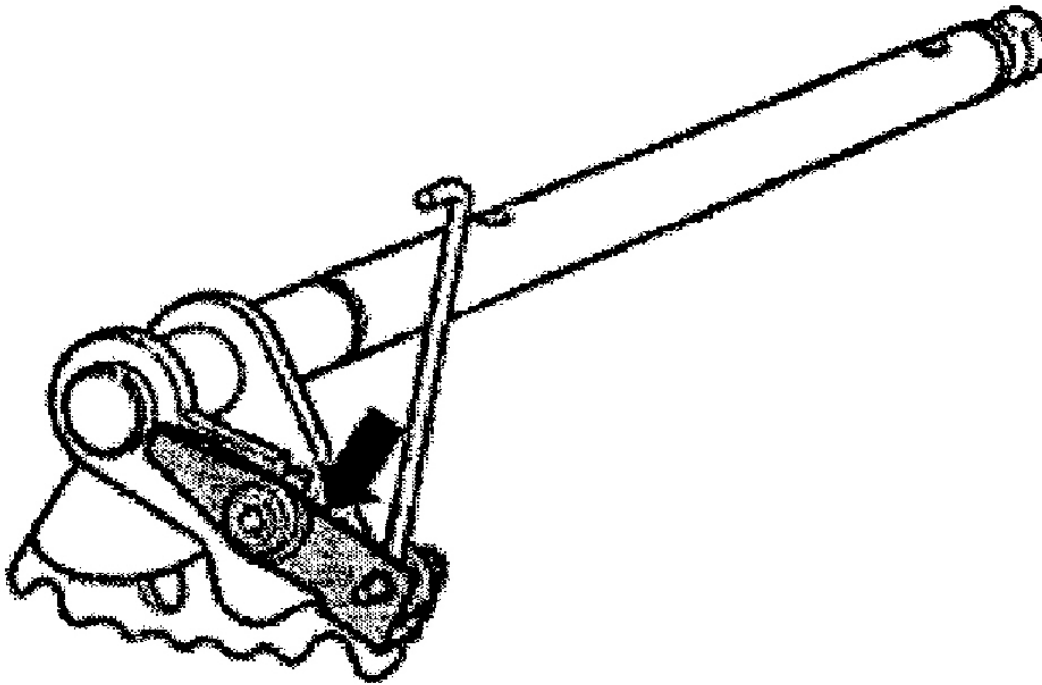
Fig. 44: Removing Valve Body & Unhooking Operating Rod
Courtesy of VOLKSWAGEN UNITED STATES, INC.

- Secure manual selector valve so that it cannot fall out.

Replacing Selector Shaft Steel Spring & Bolt

Remove steel spring -arrow- and lever from selector shaft in transmission. For better clarification the selector shaft is illustrated here in a removed state. See **Fig. 45** .

NOTE: Always replace bolt with steel spring for manual selector valve.



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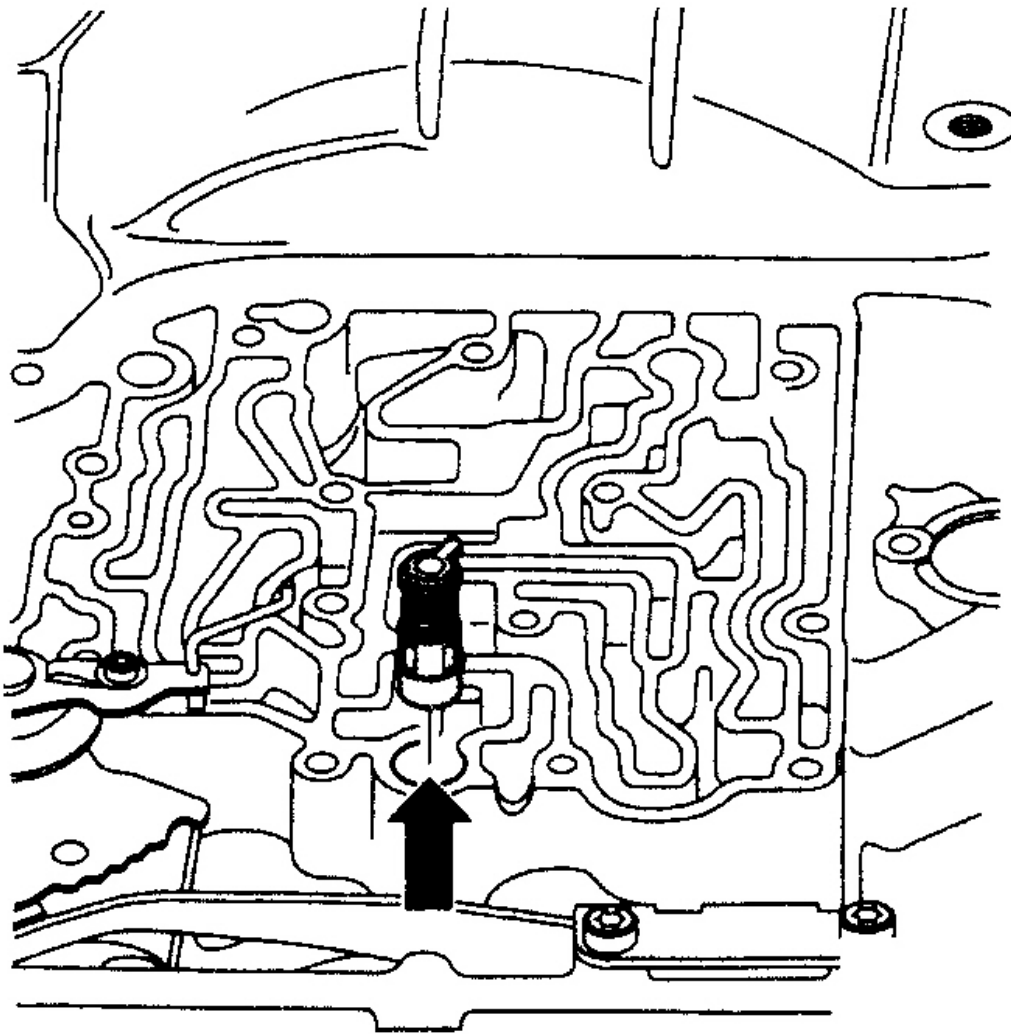
Fig. 45: Locating Steel Spring On Selector Shaft
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Install steel spring and bolt to selector shaft. Do NOT tighten yet!

Inserting Sealing Plug

Pull sealing plug out of housing before removing and installing free wheel otherwise the sealing plug and the O-ring will be damaged. See **Fig. 46** .

Moisten 2 new O-rings with ATF and install to sealing plug. Insert sealing plug in hole in transmission housing -arrow-.



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Fig. 46: Locating Valve Body Sealing Plug
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Hooking Operating Rod Onto Manual Selector Valve

Shift selector lever/shaft into position "1".

Turn manual selector valve -1- so that shoulder faces operating rod. See **Fig. 44** .

Guide operating rod -2- with manual selector valve into valve body.

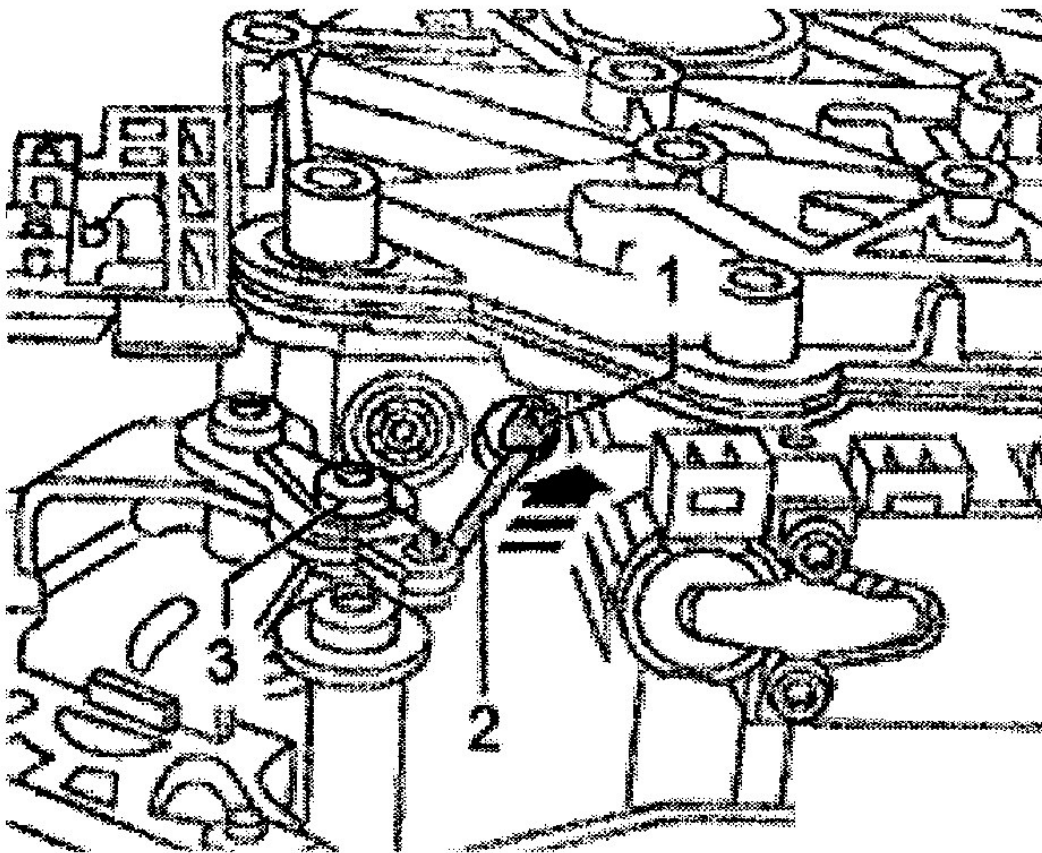
Only now should the steel spring and loosened bolt be installed to the selector shaft.

Adjusting Operating Rod For Manual Selector Valve

Move selector shaft to position "P".

Push operating rod -2- with manual selector valve -1- into valve body onto stop (direction of arrow) and tighten bolt -3- to 4 Nm. See Fig. 47 .

NOTE: Manual selector valve must always be resting against the stop. Counter-hold when tightening bolt. Always replace bolt and manual selector valve retaining clip.

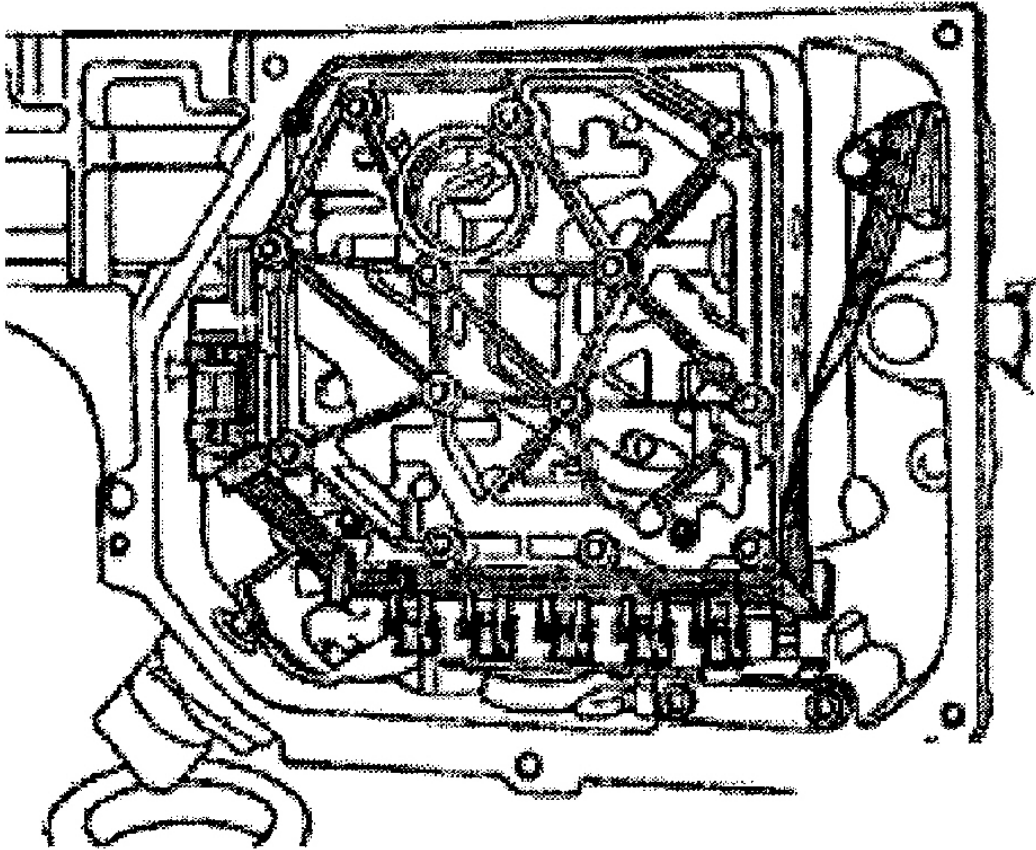


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Fig. 47: Adjusting Operating Rod For Manual Selector Valve
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installing Valve Body

Route conductor strip as illustrated. See **Fig. 48** . When installing do not kink or twist.



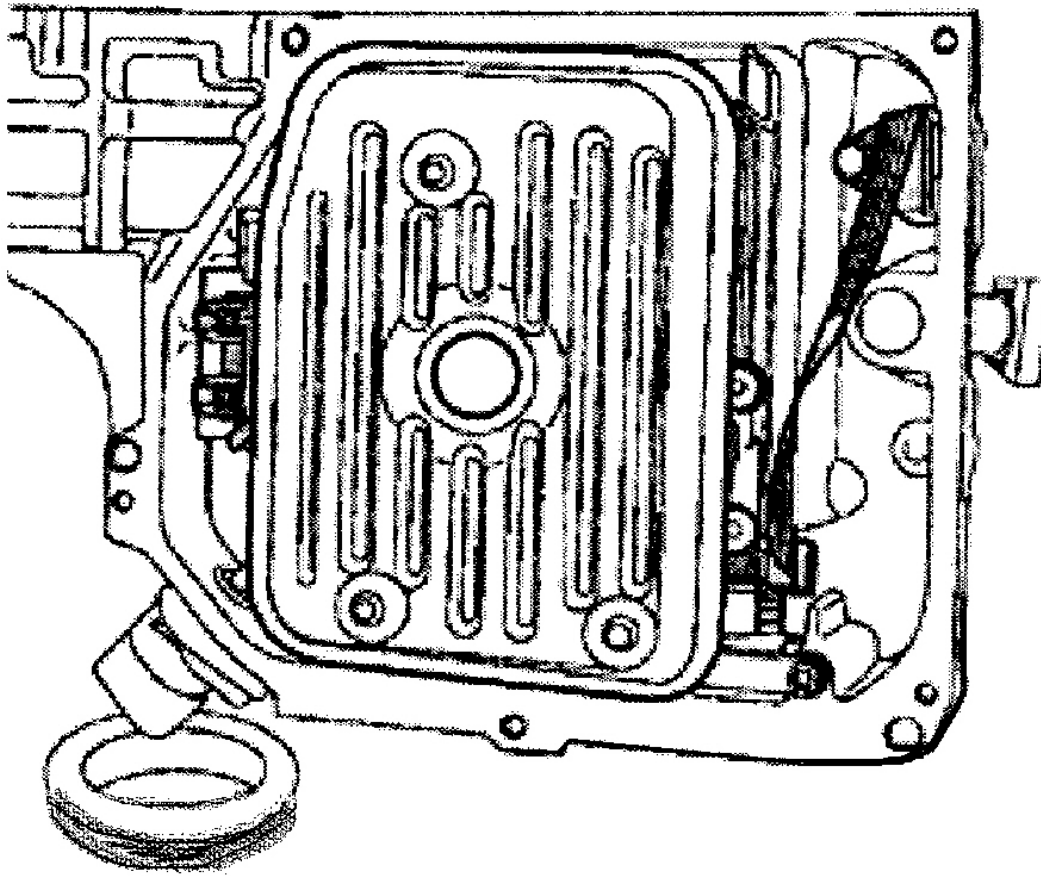
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Fig. 48: Installing Conductor Strip

Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installing ATF Screen

Before installing the ATF screen insert seal in valve body. See **Fig. 49** .



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Fig. 49: Installing ATF Screen

Courtesy of VOLKSWAGEN UNITED STATES, INC.

Firmly press ATF screen onto valve body.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Axle Shaft-To-Wheel Hub Bolt ⁽¹⁾	
Step 1	66 (90)
Step 2	Turn An Additional 90 Degrees
Axle Shaft-To-Transmission Flange Bolt ⁽¹⁾	
M10 x 48	59 (80)

1995 Volkswagen EuroVan CV

1995-03 AUTOMATIC TRANSMISSIONS Servicing - EuroVan

M12 x 1.5 x 55	74 (100)
Final Drive Filler Plug	15 (20)
Lower Ball Joint-To-Lower Control Arm Bolts ⁽¹⁾	
Step 1	66 (90)
Step 2	Turn An Additional 90 Degrees
Lower Ball Joint-To-Lower Control Arm Self-Locking Hex Nut ⁽¹⁾	
Step 1	44 (60)
Step 2	Turn An Additional 90 Degrees
Pendulum Support-To-Transmission Bolt ⁽¹⁾	
Step 1	59 (80)
Step 2	Turn An Additional 90 Degrees
Selector Lever Cable Adjustment Bolt	15 (20)
Transmission Carrier-To-Bearing/Flanged Shaft	18 (25)
Transmission Carrier-To-Engine	30 (40)
Wheel Lug Bolt ⁽²⁾	125 (170)
INCH Lbs. (N.m)	
ATF Level Plug	133 (15)
Oil Pan Bolt	106 (12)
Valve Body-To-Transmission Bolt	44 (5)

(1) Always use new fastener if original is loosened or removed.

(2) Do NOT interchange 1997-00 wheel bolts with 2001-03 wheel bolts. They are different designs.
2001-2003 wheel bolts are designed with a collar that is separate from the wheel bolt head.