

# TRANSMISSION SERVICING - A/T

## Article Text

1998 Volkswagen Passat

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### ARTICLE BEGINNING

1997-98 TRANSMISSION SERVICING

Automatic Transmission

Cabrio, Golf, GTI, Jetta, Passat, Beetle

### IDENTIFICATION

#### AUTOMATIC TRANSAXLE APPLICATIONS

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Application	Transaxle Model
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1997 (Cabrio, Golf, GTI, Jetta & Passat)	101M
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1998

Beetle, Cabrio, Jetta, Golf, GTI & Passat	101M
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Passat	101N
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Passat	101V
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### LUBRICATION

#### SERVICE INTERVALS

Check fluid level at each oil change. Change fluid every 30,000 miles under severe driving conditions. Replace filter if needed during fluid change.

#### CHECKING FLUID LEVEL

NOTE: VW ATF (G 052 162 A2) is light yellow color.

##### 01M Transaxle

1) Set selector lever to Park. Start engine and allow it to idle. Raise and support vehicle. With transaxle at normal operating temperature, remove ATF level plug from oil pan. Any ATF present in overflow tube (inside plug hole) will run out.

2) If only a small amount, or no ATF flows from overflow tube, filling is required. Go to next step. If ATF continues to run out, fluid level is okay. Install ATF level plug with a NEW seal and tighten to 11 ft. lbs. (15 N.m).

3) Pry off fill plug securing cap and discard. See Fig. 1. Spring retainer type caps may be reused. Pull plug from filler pipe. Fill with VW ATF (G 052 162 A2) using Filler (VAG 1924) until ATF runs out of level plug hole.

4) Install ATF level plug with a NEW seal and tighten to 11 ft. lbs. (15 N.m). Install filler plug with a NEW securing cap if needed. Shift through all selector lever positions once. Recheck fluid level.

##### 01M Final Drive

Park vehicle on level surface. Remove speedometer drive. Wipe

clean and reinstall. Remove speedometer drive and check oil level. Oil must be between MIN and MAX markings. If addition fluid is required, add VW ATF (G 052 162 A2).

#### 01N Transaxle

1) Park vehicle on level surface, with transaxle at normal operating temperature. Set selector lever to Park. Apply parking brake. Allow engine to idle. Remove noise insulation tray. Connect ATF reservoir from VAG 1924 filling system to vehicle.

2) Connect Scan Tool VAG 1551. Enter 02 transmission electronics. Advance until SELECT FUNCTION XX is displayed. Turn ignition switch to RUN position. Start engine.

3) Raise and support vehicle. Place drain pan under transmission. Using scan tool, press zero and 08. RAPID DATA TRANSFER, 08-READ MEASURED VALUE BLOCK should be displayed. Confirm entry with "Q" key. Enter 0 0 5 to select display group. Confirm with "Q" key. First display indicates ATF temperature. Allow temperature to reach 95-113°F (35-45°C).

4) Remove ATF inspection plug from oil pan. A small amount of ATF should drip from inspection hole with engine running. If level is okay, install NEW seal on inspection plug and tighten to 11 ft. lbs. (15 N.m). Turn engine off.

5) If additional fluid is required, pry out plug securing cap using screwdriver. Pull plug out of pipe. Fill with VW ATF fluid only and add until fluid runs out of level hole. See Fig. 1. Install sealing plug on fill tube and install NEW lock cap. DO NOT use any lubricant additives.

#### 01N Final Drive

Raise and support vehicle. Remove plug on side of final drive. Gear oil level should be at lower edge of hole. If addition fluid is required, add 75 W90 synthetic gear oil (G 052 145 A2). Install fill plug and tighten fill plug to 18 ft. lbs. (25 N.m).

#### 01V Transaxle

1) Park vehicle on level surface, with transaxle at normal operating temperature. Set selector lever to Park. Apply parking brake. Allow engine to idle. Remove noise insulation tray. Connect ATF reservoir from VAG 1924 filling system to vehicle.

2) Connect Scan Tool VAG 1551. Enter 02 transmission electronics. Advance until SELECT FUNCTION XX is displayed. Turn ignition switch to RUN position. Start engine.

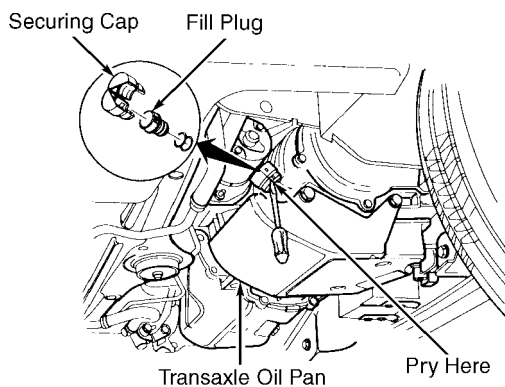
3) Raise and support vehicle. Place drain pan under transmission. Using scan tool, press zero and 08. RAPID DATA TRANSFER, 08-READ MEASURED VALUE BLOCK should be displayed. Confirm entry with "Q" key. Enter 0 0 4 to select display group. Confirm with "Q" key. First display indicates ATF temperature. Allow temperature to reach 95-113°F (35-45°C).

4) Remove ATF inspection plug from oil pan. A small amount of ATF should drip from inspection hole with engine running. If level is okay, install NEW seal on inspection plug and tighten to 59 ft. lbs. (80 N.m). Turn engine off.

5) If additional fluid is required, using ATF Fill System (VAG 1924), carefully insert fill hose through an opening in the deflector cap. See Fig. 2. Ensure deflector cap is not pushed out of position. Fill until ATF runs out of inspection hole. Use VW ATF fluid only. DO NOT use any lubricant additives.

**01V Final Drive**

Raise and support vehicle. Remove plug on side of final drive. Gear oil level should be at lower edge of hole. If addition fluid is required, add 75 W90 synthetic gear oil (G 052 145 A2). Install fill plug and tighten fill plug to 22 ft. lbs. (30 N.m).



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**Fig. 1: Removing Filler Plug Securing Cap (01M Shown, Others Similar)**  
 Courtesy of Volkswagen United States, Inc.

**RECOMMENDED FLUID**

**RECOMMENDED FLUID**

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Application	Fluid Type
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Transaxle (01M, 01N & 01V 1VW)	.....	ATF (G 052 162 A2)
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**Final Drive**

01N	.....	(1) G 50, SAE 75W - 90	(G 052 145 A2)
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01M-1VW	.....	ATF (G 052 162 A2)	
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(1) - Synthetic oil.

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**FLUID CAPACITIES**

**TRANSAXLE REFILL CAPACITIES**

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Application	Refill: Qts. (L)	Dry Fill: Qts. (L)
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01M	.....	13.2 (3.0)	.....	25.6 (5.3)
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01N	.....	13.69 (3.5)	.....	25.7 (5.5)
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01V	.....	12.7 (2.6)	.....	29.5 (9.0)
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**FINAL DRIVE REFILL CAPACITIES**

Model	Qts. (L)
All Models	1.8 (.75)

### DRAINING & REFILLING

#### 01M & 01N Transaxle

1) Remove ATF level plug from oil pan. Remove overflow tube through plug hole. Drain ATF. Install overflow tube. Screw level plug in hand-tight.

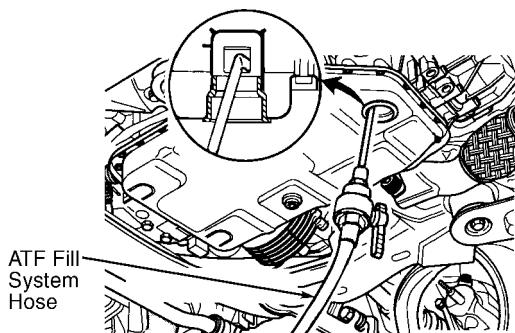
2) Add 3.2 qts. (3.0L) ATF through filler pipe. See 01M TRANSAXLE under CHECKING FLUID LEVEL. With engine running at normal operating temperature, shift through all selector lever positions once. Check fluid level. Add if necessary. Tighten ATF level plug to 11 ft. lbs. (15 N.m).

#### 01V Transaxle

1) Remove drain plug. Drain ATF. Install NEW seal on drain plug, install and tighten to 30 ft lbs. (40 N.m).

2) Remove ATF inspection plug. Using ATF Fill System (VAG 1924), carefully insert fill hose through an opening in the deflector cap. See Fig. 2. Ensure deflector cap is not pushed out of position. Fill until ATF runs out of inspection hole.

3) Shift selector lever into park position. Start engine. Press and hold brake pedal. Shift through all selector lever positions with vehicle stationary. Shift to park position. Check fluid level. Add as necessary.



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Fig. 2: Using ATF Fill System VAG 1924 (01V Transaxle)  
 Courtesy of Volkswagen United States, Inc.

### ADJUSTMENTS

#### CONTROL CABLE

##### 01M Transaxle

Loosen lock screw at gear selector lever on transaxle. Move gear selector to Park. Ensure locking lever engages in park lock and front wheels do not turn in same direction. Tighten cable housing-to-gear selector lever lock screw to 44 INCH lbs. (5 N.m).

#### 01N & 01V Transaxle

1) Disconnect selector lever cable from selector shaft lever at transaxle. Move selector lever into Park. Move selector shaft lever into Park. Parking lock should engage and front wheels should not be able to turn in the same direction.

2) Loosen transaxle cable support bracket bolts. Press selector lever cable onto selector shaft lever. Align selector lever in support bracket. Tighten support bracket bolts to 17 ft. lbs. (23 N.m).

#### SHIFT LOCK CABLE

##### 01M Transaxle (Beetle)

1) Ensure cable is routed correctly. Remove center console. Ensure selector lever is in Park. Remove ignition key.

2) Slide sliding sleeve "1" forward. Release clip "2" by pushing up. See Fig. 3. Pry up 4 corners of retaining bracket and remove. Use caution not to damage contact spring for shift lever position indicator.

3) Slide .03" (0.8 mm) feeler gauge between locking lever and selector lever roller. Pull outer sleeve of locking cable slightly toward front of vehicle and push Red clip down until it engages. Push sliding sleeve over clip. Ensure selector lever cannot be moved out of park with key removed from ignition.

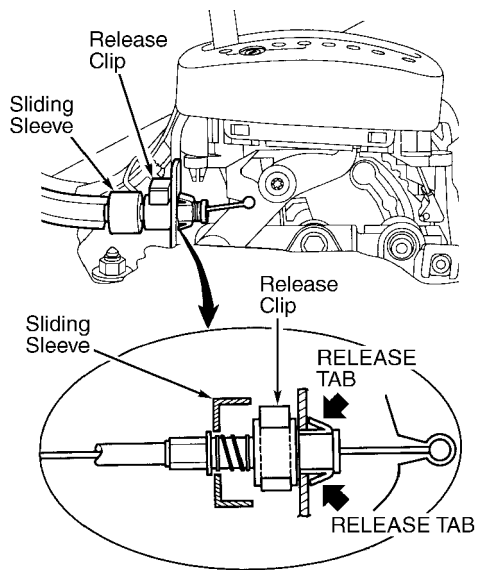
##### 01M Transaxle

1) Move gear selector to "1" position. Remove steering column covers. Turn ignition switch to START position and release. Check clearance between shift lock cable lever and ignition switch locking pin.

2) Clearance should be .028" (.70 mm). If clearance is not correct, loosen lock nut on shift lock cable sheath. Position shift lock cable lever to obtain correct clearance. Tighten lock nut. See Fig. 4. Tighten gear selector housing screws and install steering column covers.

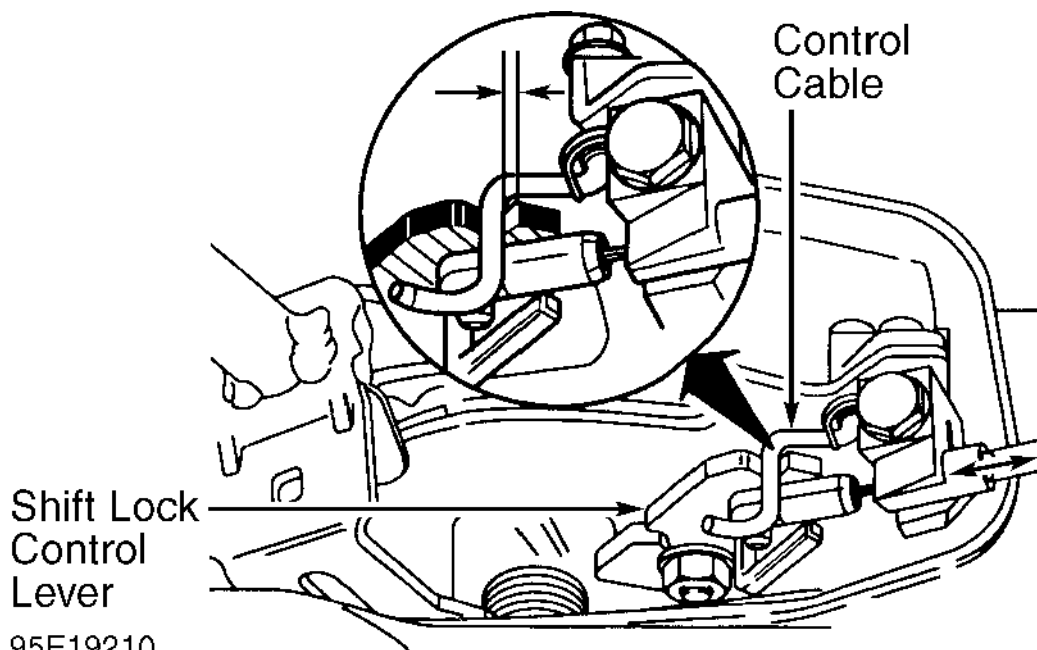
##### 01N & 01V Transaxle

1) Remove steering column trim. Remove center console. Place gear selector lever in Park position. Loosen shift lock cable support bracket bolt. Move steering column down. Position Setting Bar (3352) between lever and locking cable eye. See Fig. 5. Pull locking cable away from gear shift lever (toward front of vehicle) and tighten shift lock cable support bracket bolt to 84 INCH lbs. (10 N.m). Remove setting bar. Ensure ignition lock key can be easily removed after each adjustment of locking cable.



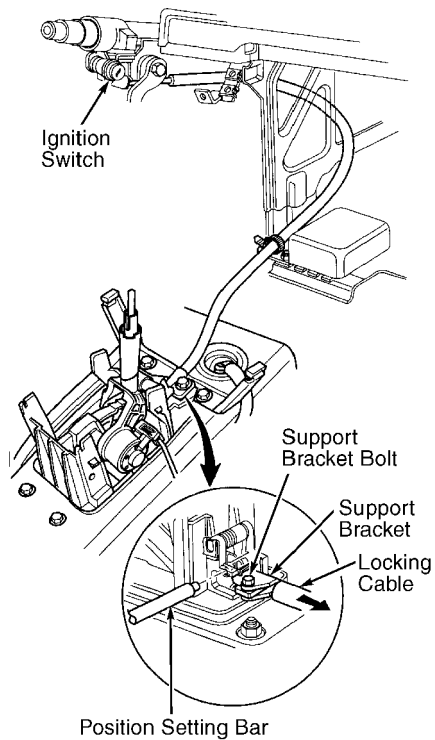
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**Fig. 3: Adjusting Shift Lock Cable (01M Transaxle - Beetle)**  
 Courtesy of Volkswagen United States, Inc.



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**Fig. 4: Adjusting Shift Lock Cable (01M Transaxle - Except Beetle)**  
 Courtesy of Volkswagen United States, Inc.



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**Fig. 5: Adjusting Shift Lock Cable (01N & 01V Transaxle)**  
 Courtesy of Volkswagen United States, Inc.

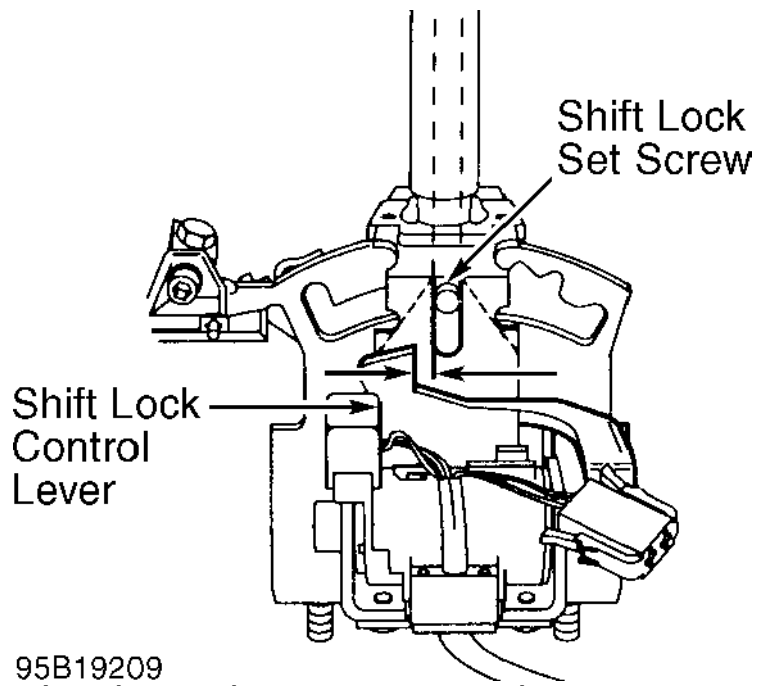
#### SHIFT LOCK SOLENOID

##### 01M Transaxle

Place gear selector in Neutral or Park. Loosen shift lock solenoid mounting screws. Insert a .019" (.30 mm) feeler gauge between shift lock solenoid push rod and shift lever. See Fig. 6. If necessary, move shift lock solenoid and tighten screws.

##### 01N & 01V Transaxle

Adjustment is not necessary. Function can be check using Scan Tool (VAG 1551).



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Fig. 6: Adjusting Shift Lock Solenoid (01M Transaxle)  
Courtesy of Volkswagen United States, Inc.

END OF ARTICLE