

# TRANSMISSION SERVICING - M/T

## Article Text

1989 Volkswagen Golf  
For Volkswagen Technical Site  
Copyright © 1998 Mitchell Repair Information Company, LLC  
Tuesday, August 24, 1999 12:06AM

### ARTICLE BEGINNING

#### 1989-90 TRANSMISSION SERVICING Manual Transmission Servicing

Cabriolet, Fox, Golf, GTI, Jetta, Jetta GLI, Vanagon

### IDENTIFICATION

#### VOLKSWAGEN MANUAL TRANSMISSION APPLICATIONS

| Model             |       | Transmi ssi on          |
|-------------------|-------|-------------------------|
| Cabriolet         | ..... | 5-Speed - 020 Transaxle |
| Fox               | ..... | 4-Speed - 014 Transaxle |
| Golf              | ..... | 5-Speed - 020 Transaxle |
| GTI               | ..... | 5-Speed - 020 Transaxle |
| Jetta & Jetta GLI | ..... | 5-Speed - 020 Transaxle |
| Vanagon           | ..... | 4-Speed - 091 Transaxle |
|                   |       | 5-Speed - 094 Transaxle |

### LUBRICATION

#### SERVICE INTERVALS

No oil changes are required. Check oil every 15,000 miles.

#### CHECKING FLUID LEVEL

##### CABRIOLET, GOLF, GTI, JETTA & JETTA GLI

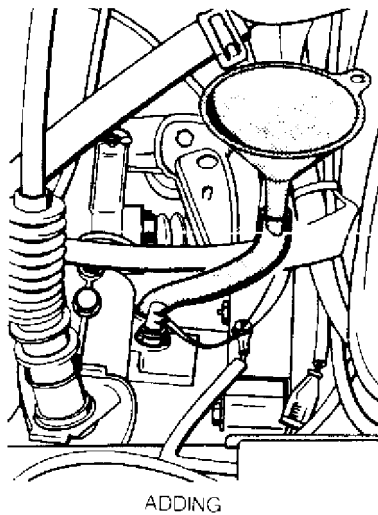
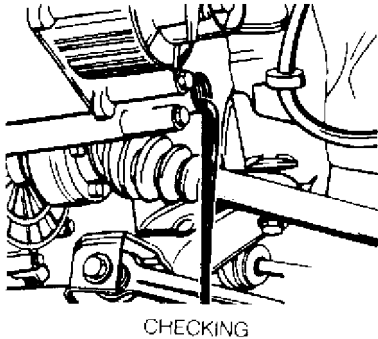
1) Because of transaxle mounting angle, oil will run out of checking hole even though transaxle is filled to capacity. To check oil level, place vehicle on level surface.

2) Remove oil filler plug. Allow oil to drain off until level is to edge of hole. See Fig. 1. Install oil filler plug. Remove speedometer cable at transaxle. Pour in .5 qt. (.5L) of fluid.

##### FOX & VANAGON

Check lubricant level at fill hole. Lubricant should be level with bottom of fill hole.

Tuesday, August 24, 1999 12:06AM



**Fig. 1: Fluid Level Check (Cabriolet, Golf, GTI & Jetta)**  
**Courtesy of Volkswagen United States, Inc.**

## RECOMMENDED FLUID

**Use API GL-4, SAE 80W or 80W-90.**

## FLUID CAPACITY ADJUSTMENT

## TRANSMISSION REFILL CAPACITIES

| Transmission |       | Qts. (L)  |
|--------------|-------|-----------|
| 020          | ..... | 2.1 (2.0) |
| 014          | ..... | 1.8 (1.7) |
| 091          | ..... | 3.2 (3.0) |
| 094          | ..... | 4.7 (4.5) |

## GEARSHIFT LINKAGE ADJUSTMENT (CABRIOLET)

1) Pull boot off housing. Loosen shift rod clamp bolt so lever moves freely on shift rod. Adjust shift finger in center of lock-out plate so that an equal distance is obtained on both sides of

## TRANSMISSION SERVICING - M/T

### Article Text (p. 3)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Tuesday, August 24, 1999 12:06AM

shift finger. See Fig. 2.

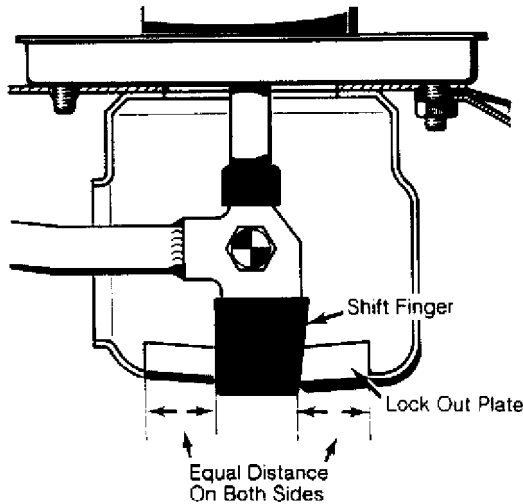


Fig. 2: Adjusting Cabriolet Shift Finger  
Courtesy of Volkswagen United States, Inc.

2) Adjust shift rod end so distance "A" is  $\frac{9}{16}$ ". See Fig. 3. Tighten shift rod clamp to 14 ft. lbs (19 N.m). If shift linkage is spongy or jamming after adjustment, change distance "A" to  $\frac{1}{2}$ ". If shift linkage will not stay adjusted, install a new clamp bolt and lock nut.

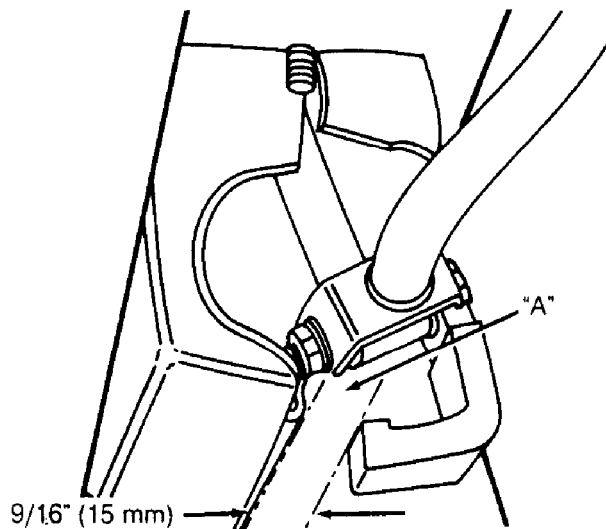


Fig. 3: Adjusting Cabriolet Shift Rod End  
Courtesy of Volkswagen United States, Inc.

## TRANSMISSION SERVICING - M/T

### Article Text (p. 4)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Tuesday, August 24, 1999 12:06AM

### GEARSHIFT LINKAGE ADJUSTMENT (FOX)

1) Shift transaxle into 1st gear. Push gearshift lever to left stop. Release lever. If lever does not spring back 1/4-3/8" (5-10 mm) to right, move gearshift lever very slightly in elongated holes. If adjustment does not correct hard shifting, go to step 2).

2) Place gearshift lever in the "Neutral" position. Place lever bearing housing in center of elongated hole. Loosen shift rod clamp nut. See Fig. 4. Ensure that shift finger slides freely on shift rod. Remove gearshift lever knob and shift boot.

3) Align centering holes of gearshift lever housing and gearshift lever bearing housing. Tighten bolts. Install Gearshift Aligner (3014) with locating pin toward front of vehicle. See Fig. 5.

4) Move gearshift lever into left cutout of slide. Secure tool position by tightening lower knurled knob on tool. Move slide with gearshift lever to the left side stop and tighten upper knurled knob.

5) Push gearshift lever into right cutout of slide (shift position for 3rd/4th gears). Align shift rod and shift finger (with transmission in Neutral) and tighten clamp nut. Remove tool and move gearshift lever into 1st gear. Press gearshift lever to left side stop. When gearshift lever is released, it must spring back approximately 1/4-3/8" (5-10 mm).

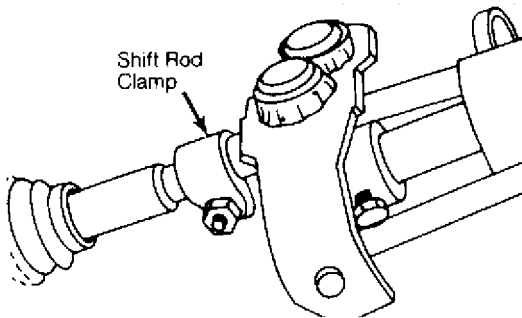


Fig. 4: Shift Rod Clamp Nut  
Courtesy of Volkswagen United States, Inc.

## TRANSMISSION SERVICING - M/T

### Article Text (p. 5)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Tuesday, August 24, 1999 12:06AM

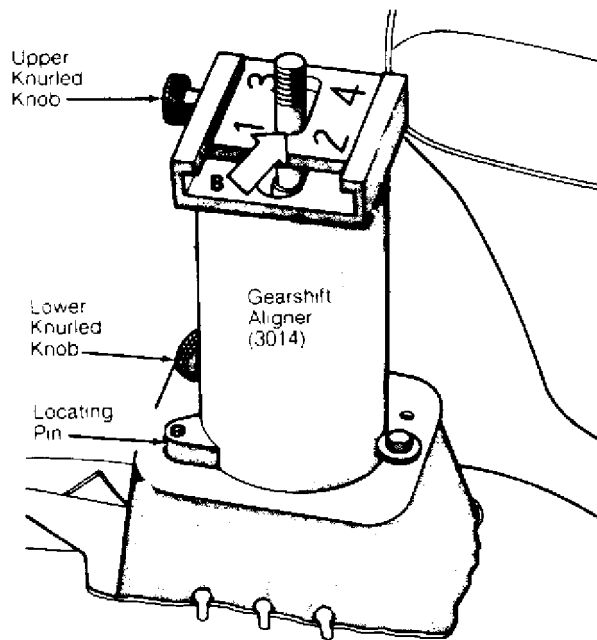


Fig. 5: Gearshift Aligner (3014) Installed On Fox  
Courtesy of Volkswagen United States, Inc.

### GEARSHIFT LINKAGE ADJUSTMENT (GOLF, GTI, JETTA)

#### GOLF, GTI, JETTA & JETTA GLI

1) Place shift lever in the "Neutral" position. Ensure that transaxle is also in the "Neutral" position. Loosen lower shifter rod clamp. See Fig. 6. Selector lever must move freely on shifter rod.

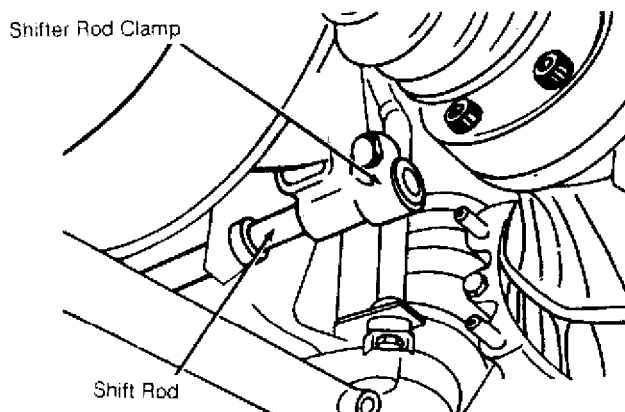


Fig. 6: Shift Rod Clamp (Golf, GTI, Jetta & Jetta GLI)  
Courtesy of Volkswagen United States, Inc.

2) Remove gearshift knob and boot. Position Adjustment Gauge (3104) over shift rod. See Fig. 7. With transaxle in Neutral, align shift rod with selector lever. Tighten shifter rod clamp to 19 ft.

## TRANSMISSION SERVICING - M/T

### Article Text (p. 6)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Tuesday, August 24, 1999 12:06AM

lbs. (26 N.m).

3) Move gearshift lever through entire range of gear selection, including Reverse. Gears must engage smoothly and without jamming. Reinstall gearshift knob and boot.

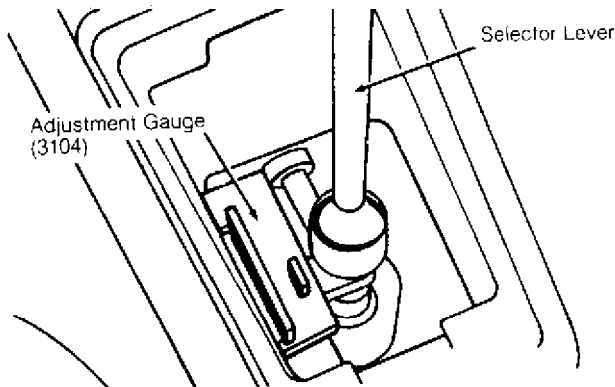


Fig. 7: Adjustment Gauge Location  
Courtesy of Volkswagen United States, Inc.

### GEARSHIFT LINKAGE ADJUSTMENT (VANAGON 4-SPEED)

1) Place gearshift lever in the "Neutral" position. Align round centering holes of upper gearshift lever housing plate with holes in lower lever bearing plate.

2) Loosen nut on clamp that connects front and rear shift rods. Ensure joints of shift rods slide freely. Remove spare tire. Set shift lever on transaxle in vertical "Neutral" position.

3) At gearshift lever end of front shift rod, ensure stop finger of front shift rod is in center of shift mechanism housing.

4) Adjust front shift rod end so there is 29/32" (23 mm) clearance between front shift rod end and stop plate. Tighten shift rod clamp.

5) Check for proper operation. Ensure shift lever does not rub against heater pipe insulation.

### GEARSHIFT LINKAGE ADJUSTMENT (VANAGON 5-SPEED 2WD)

1) Place gearshift lever in the "Neutral" position. Align round centering holes of upper gearshift lever housing plate with holes in lower lever bearing plate.

2) Loosen nut on clamp that connects front and rear shift rods. Ensure joints of shift rods slide freely. Remove spare tire. Set shift lever on transaxle in vertical "Neutral" position.

3) Push shift rod into transmission until spring tension is felt. Keep shift rod in this position (2/3 shift position). Push shift rod to right (shift position for 1st/reverse) and move in lengthwise direction.

4) Measure between reverse gear lock and stop shift rod. Clearance should be 1/8" (3 mm). Let shift rod spring back to 2/3 shift position. Push shift rod slightly to the right. Boot must touch

## **TRANSMISSION SERVICING - M/T**

### **Article Text (p. 7)**

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Tuesday, August 24, 1999 12:06AM

inside of shift housing.

5) Tighten shift rod bolt. With transmission engaged in 2nd gear, measure distance between gear shift lever and heater covering. Clearance should be 5/8" (16 mm).

6) If clearance is not to specification, adjust gearshift lever bearing by pushing backward in slotted holes. Ensure all gears engage without jamming.

### **GEARSHIFT LINKAGE ADJUSTMENT (VANAGON 5-SPEED SYNCRO)**

1) Place gearshift lever in the "Neutral" position. Align round centering holes of upper gearshift lever housing plate with holes in lower lever bearing plate.

2) Loosen nut on clamp that connects front and rear shift rods. Ensure joints of shift rods slide freely. Remove skid plate. Set shift lever on transaxle in vertical "Neutral" position.

3) Measure between reverse gear lock and stop shift rod. Clearance should be 29/32" (23 mm). Tighten clamp in this position. Ensure all gears engage without jamming. Check reverse lockout operation. With transmission engaged in 1st gear, measure distance between gear shift lever and heater covering. Clearance should be 19/32" (15 mm).

**END OF ARTICLE**