



## **AUDI/VW-BMW ZF6 SPEED MANUAL ADAPTION PROCEDURES**

ZF6HP clutch clearances in Audi, VW and BMW applications must be according to factory specifications as discussed in the 2016 seminar. Modifying clutch clearances to tighter specifications prevents the computer from being able to properly adapt the shifts. This results in clunks and bump complaints with both up-shifts and downshifts. Many times valve bodies and solenoids are changed or valve body modification kits are installed in an attempt to resolve these complaints. Albeit malfunctioning valve bodies and solenoids can be the cause of these complaints along with fluid to friction compatibility issues. Tightening clutch packs beyond specifications will trump all these possibilities. It will never allow the computer to adapt regardless of any attempts to resolve the problem shy of setting clutch clearances to specifications. Once clearances are corrected, the following manual adaptation methods can be used to complete the job making the vehicle deliverable.

### **AUDI/VW ADAPTATION PROCEDURES**

#### **Part A**

Accelerate the vehicle from standing with very low throttle (15-25%) up to 4th gear and about 50 mph (80 km/h), then free-wheel the car down to about 25 mph (40 km/h) without using the brakes. Afterwards stop the car completely and stay in drive position for about 10 seconds. Repeat cycle 6 times.

#### **Part B**

Accelerate the vehicle up to about 45 mph (70 km/h) and select manually 5th gear. Use your diagnostic tool (VW/Audi block 9) to drive with 100 Nm for about 1.8 to 2.5 miles (3-4 km).

Accelerate the vehicle up to about 53 mph (85 km/h) and select manually 6th gear. Use your diagnostic tool (VW/Audi block 9) to drive with 100 Nm for about 1.8 to 2.5 miles (3-4 km).

#### **Part C**

Accelerate 5 times with low throttle up to about 62 mph (100 km/h) and freewheel the car down to about 25 mph (40 km/h) without using the brakes.



# Technical Service Information

## AUDI/VW-BMW ZF6 SPEED

### MANUAL ADAPTION PROCEDURES

#### BMX 6 SPEED ONLY MANUAL ADAPTATION PROCEDURES

SOFTWARE A (GS19.02), SOFTWARE N (GS19.04)

SOFTWARE P (GS19.11), SOFTWARE T (GS19.11)

Adaptation procedure for:

9/01-10/03

BMW 7 Series-

Software A

The procedure begins with the vehicle being at operating temperature and all adaptaion values have been cleared.

1. From a stand still, accelerate vehicle with very light throttle (15%-25%) to 4th Gear
2. Continue to accelerate with light throttle (20%-40%) to 6th gear.
3. Let vehicle coast to approximately 25 MPH, then slow to a standstill with light brake applications.
4. With brakes applied and vehicle at a standstill, wait for 10 seconds.
5. Repeat steps 1 through 4 nine (9) times.

Adaption Procedure for:

07/03-03/05

BMW 5 Series

09/03-09/05

BMW 6 Series

10/03-03/05

BMW 7 Series

09/03-09/06

BMW X5

Software N

The procedure begins with the vehicle being at operating temperature and all adaptation values have been cleared.

Step 1:

1. From a stand still, accelerate vehicle with very light throttle (15%-25%) to 4th Gear
2. Continue to accelerate with light throttle (20%-40%) to 6th gear.
3. Let vehicle coast to approximately 25 MPH, then slow to a standstill with light brake applications
4. With brakes applied and vehicle at a standstill, wait for 10 seconds.
5. Repeat steps 1 through 4 nine (9) times.

Step 2:

1. Accelerate vehicle to approximately 45 MPH, use Steptronic to select 5th gear.
2. With light throttle application accelerate to 60 MPH and then let the vehicle coast to approximately 40 MPH without applying the brake. Repeat this sequence 4 times.
3. Accelerate vehicle to approximately 55 MPH, use Steptronic to select 6th gear.
4. With light throttle application accelerate to 65 MPH and then let the vehicle coast to approximately 50 MPH without applying the brake. Repeat this sequence 4 times.
5. Use Steptronic to select 4th gear and repeat steps 1 through 4 five (5) times



# Technical Service Information

## AUDI/VW-BMW ZF6 SPEED MANUAL ADAPTION PROCEDURES

### Step 3:

1. With vehicle at a standstill, shift from “N” into “D”, wait for 5 seconds then shift back to “N” again.
2. With vehicle at a standstill, shift from “N” into “R”, wait for 5 seconds then shift back to “N” again.
3. Repeat steps 1 and 2 four (4) times.

### Adaption Procedure for

09/04-09/07	BMW 116i	
09/04-03/07	BMW 118i	
09/04-03/07	BMW 120i	
09/04-03/07	BMW 130i	
01/05-04/07	BMW 320i	
01/05-09/07	BMW 323i	
01/05-09/07	BMW 325i	
03/05-03/07	BMW 5 Series	
09/05-09/07	BMW 6 Series	
08/05 and up	BMW 7 Series	
09/05-09/07	BMW X3	Software P

The procedure begins with the vehicle being at operating temperature and all adaptaion values have been cleared.

### Step 1:

1. From a stand still, accelerate vehicle with very light throttle (15%-25%) to 4th Gear
2. Continue to accelerate with light throttle (20%-40%) to 6th gear.
3. Slow to a standstill with light brake application.
4. With the brakes applied and the vehicle at a standstill wait for 10 seconds.
5. Repeat steps 1 through 4 four (4) times

### Step 2:

1. Accelerate vehicle to approximately 45 MPH, use Steptronic to select 5th gear.
2. With light throttle application accelerate to 60 MPH and then let the vehicle coast to approximately 40 MPH without applying the brake. Repeat this sequence 4 times.
3. Accelerate vehicle to approximately 55 MPH, use Steptronic to select 6th gear.
4. With light throttle application accelerate to 65 MPH and then let the vehicle coast to approximately 50 MPH without applying the brake. Repeat this sequence 4 times.
5. Use Steptronic to select 4th gear and repeat steps 1 through 4 five (5) times.

### Adaption Procedure for

03/07 and up	BMW 120d	
SOP and up	BMW 135i	
03/07 and up	BMW 320d	
09/07 and up	BMW 335i	
03/07 and up	BMW 5 Series	
09/07 and up	BMW 6 Series	
09/07 and up	BMW X3	
10/06 and up	BMW X5	
01/08 and up	BMW X6	Software T



# Technical Service Information

## **AUDI/VW-BMW ZF6 SPEED MANUAL ADAPTION PROCEDURES**

The procedure begins with the vehicle being at operating temperature and all adaptaion values have been cleared.

### Step 1:

1. From a stand still, accelerate vehicle with very light throttle (15%-25%) to 4th Gear
2. Continue to accelerate with light throttle (20%-40%) to 6th gear.
3. Let vehicle coast to approximately 25 MPH, then slow to a standstill with light brake applications.
4. With the brakes applied and the vehicle at a standstill wait for 10 seconds.
5. Repeat steps 1 through 4 nine (9) times.

### Step 2:

1. Accelerate vehicle to approximately 30 MPH, use Steptronic to select 3rd gear.
2. Continue driving in 3rd gear for about 2 miles
3. Accelerate vehicle to approximately 45 MPH, use Steptronic to select 5th gear.
4. With light throttle application accelerate to 60 MPH and then let the vehicle coast to approximately 40 MPH without applying the brake. Repeat this sequence 4 times.
5. Accelerate vehicle to approximately 55 MPH, use Steptronic to select 6th gear.
6. With light throttle application accelerate to 65 MPH and then let the vehicle coast to approximately 50 MPH without applying the brake. Repeat this sequence 4 times.
7. Use Steptronic to select 3rd gear and repeat steps 1 through 6 five (5) times

### Step 3:

1. With vehicle at a standstill, shift from "N" into "D", wait for 5 seconds then shift back to "N" again.
2. With vehicle at a standstill, shift from "N" into "R", wait for 5 seconds then shift back to "N" again.
3. Repeat steps 1 and 2 four (4) times.
5. Accelerate vehicle to approximately 55 MPH, use Steptronic to select 6th gear.
6. With light throttle application accelerate to 65 MPH and then let the vehicle coast to approximately 50 MPH without applying the brake. Repeat this sequence 4 times.
7. Use Steptronic to select 3rd gear and repeat steps 1 through 6 five (5) times

### Step 3:

1. With vehicle at a standstill, shift from "N" into "D", wait for 5 seconds then shift back to "N" again.
2. With vehicle at a standstill, shift from "N" into "R", wait for 5 seconds then shift back to "N" again.
3. Repeat steps 1 and 2 four (4) times.