



# Technical Bulletin

Subject: **Automatic Transmission Shifting, Erratic, Harsh or Delayed Upshifts**

Group: **01**

Number: **98-05**

Model(s): **4 Speed Auto. Trans. with Digimat 2.1 TCM**

**1995 ▶ see below**

Date: **Apr. 21, 1998**

Supersedes T.B. Group 01 number 97-01 dated Jan. 8, 1997

## Condition

Transmission shifting is erratic, harsh or holds shifts too long (delayed upshifts) with no Diagnostic Trouble Codes (DTC) stored in DTC memory.

Condition is normally caused by improper throttle angle setting.

Only occurs up to EPROM level 4066.

## Service

If any of these conditions exist, check EPROM level and throttle angle setting (if Eprom level is below 4066) as follows:

- Connect VAG 1551 Scan Tool.
- Switch ignition ON (do not start engine).

Rapid data transfer	HELP
Insert address word XX	

◀ Indicated on display:

- Press buttons -0- and -2- to select address word "02 Transmission Electronics".

Rapid data transfer	Q
02 Transmission electronics	

◀ Indicated on display:

- Press -Q- button to confirm input.

01M927733BB AG4 Gearbox 01M	2029
Coding 00000	WSC 00000

◀ Indicated on display: Example shows EPROM level as 2029.

- Press the → button to advance program.

Rapid data transfer	HELP
Insert address word XX	

◀ Indicated on display:

- Press buttons -0- and -8- to select function 08 "Read measuring value block".

Rapid data transfer	Q
08 Read measuring value block	

◀ Indicated on display:

- Press -Q- button to confirm input.

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Reading measuring value block
Input display group number XXX

- ◀ Indicated on display:
- Press buttons -0-, -0- and -1- (to input display group 001).
  - Press -Q- button to confirm input.

Read measuring value block	1 →
P      0.21 V      0%      00000111	

- ◀ Indicated on display:
- Without pressing accelerator pedal, print screen.

**Note:**

*While performing the following steps press the accelerator pedal slowly, do not release the pedal.*

**Example of incorrect basic setting readings**

Read measuring value block	1 →
P      1.87 V      50%      00000111	

Read measuring value block	1 →
P      3.45V      95%      00000111	

01-A008

- ◀ *These 2 displays show incorrect throttle angle setting readings and should be used as examples only.*

- While observing VAG 1551 display press accelerator pedal until third display field reads 50%, then print screen.
- While observing VAG 1551 display continue pressing accelerator pedal until third display field reads 95%, then print screen.
- Continue pressing accelerator pedal to the pedal stop while observing the fourth digit in the fourth channel.

Read measuring value block	1 →
P      4.35 V      100%      00010111	

- ◀ - Fourth digit must change from 0 to 1, indicating kickdown, hold for approx. 5 seconds (sets throttle angle setting).
- Release accelerator pedal fully and press → button.

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## Example of correct basic setting readings

Read measuring value block			1 →
P	0.19 V	0%	00000111
P	2.30 V	50%	00000111
P	4.29 V	95%	00000111
P	4.35 V	100%	00010111

01-A008

– Repeat procedure again.

- ◀ – Compare first test voltage readings in second display field and throttle angle percentages in 3rd display field with readings from second test.

If readings are not within 0.05 volts, then throttle angle setting was not correct. Perform the following:

– Switch ignition OFF.

Verify that vehicle is equipped with a Digimat 2.1 TCM.

## TCM, identification

- Lift rear seat.
- Locate and inspect TCM electrical connector receptacle.

- ◀ The Digimat 2.1 TCM electrical connector receptacle (boxed area) is made of black plastic (NOT Aluminum).

### Note:

*Whenever a Digimat 2.0 TCM is replaced with a Digimat 2.1 TCM (with EPROM level below 4066), the resistor wire modification below MUST be performed.*

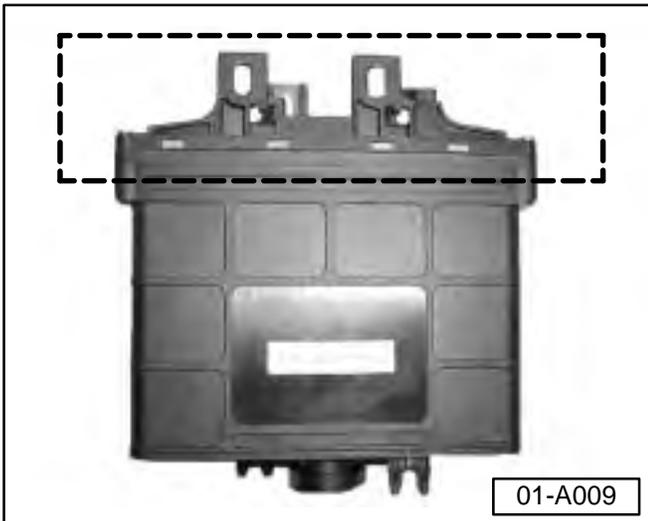
*DO NOT perform procedure if the electrical connector receptacle is made of aluminum.*

*DO NOT perform procedure if EPROM level of Digimat 2.1 TCM is above 4066.*

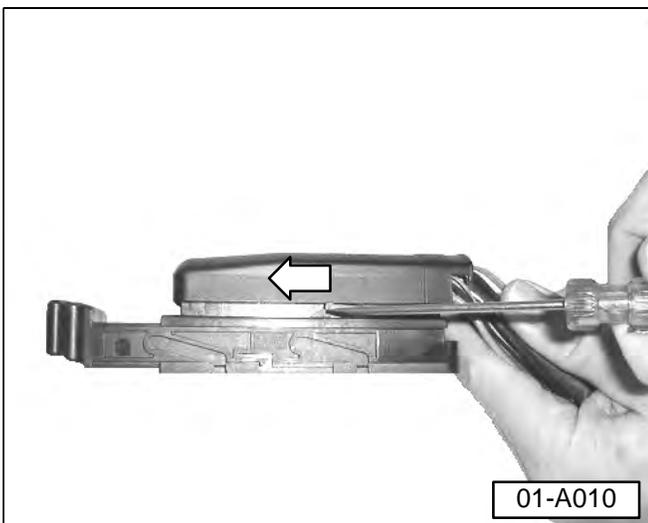
## Resistor wire, installing

- ◀ – Disconnect 68 pin connector from TCM.
- Cut tie wrap at end of connector and remove cover from connector by depressing tab with small screwdriver while pushing cover in direction of -arrow-.

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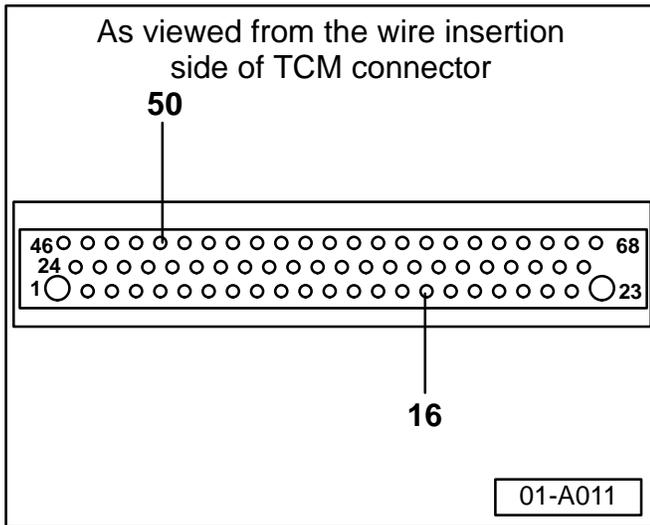
01-A009



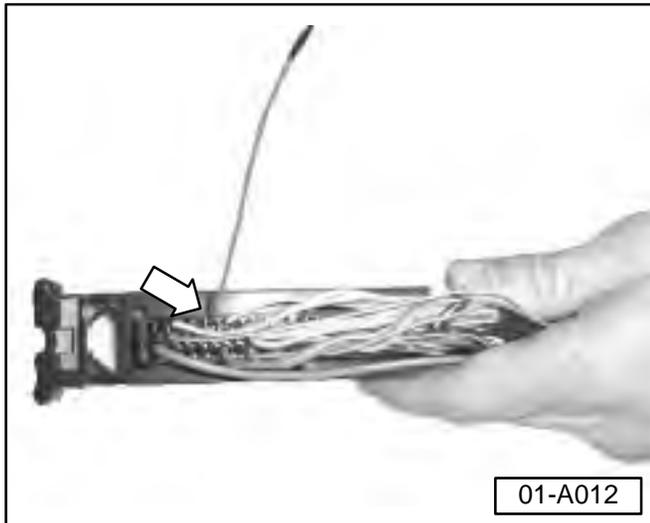
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- ◀ – Locate cavity 50 of TCM connector -arrow- (cavity should be empty).



- ◀ – Install electrical connector of resistor wire Part No. ZVW 311 100 into this cavity (50).

**CAUTION!**  
*Part numbers are for reference only. Always check with your Parts Dept. for the latest parts information.*

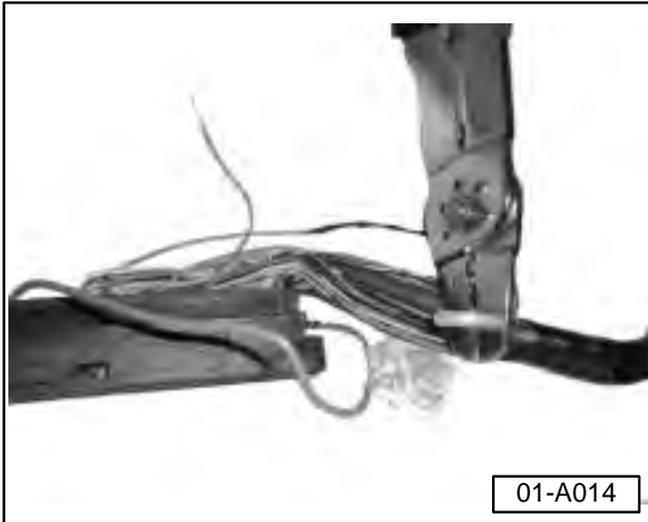


- Remove enough tape to expose 125mm (approx. 5 in.) wire harness.
- Locate gray/green wire in cavity 16 of TCM connector -arrow-.
- Follow wire from cavity 16 back into harness approx. 100mm (4 in.), cut wire at this location.
- Strip insulation from both ends of wire.
- ◀ – Route resistor wire along wiring harness to cut wire.

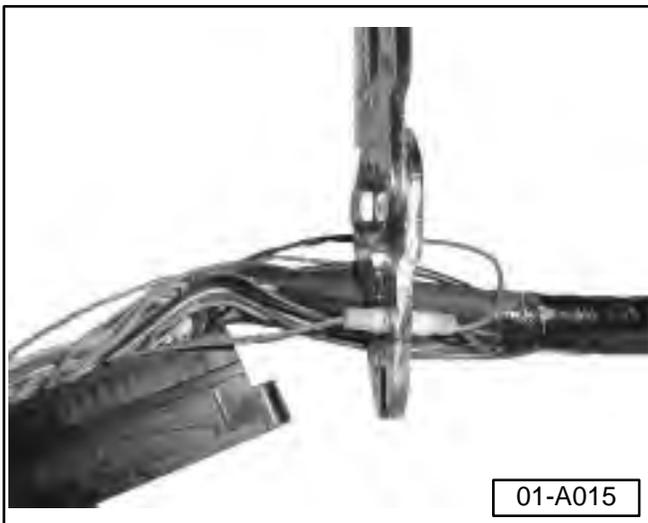
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- ◀ – Twist stripped end of resistor wire with end of (gray/green) wire coming from harness, install butt-splice and crimp as shown.



- ◀ – Crimp remaining end of gray/green wire (from TCM connector end into other end of butt-splice as shown).
- Re-tape wiring harness.
- Reinstall TCM connector cover and install new tie-wrap.
- Reinstall connector onto TCM.
- Verify throttle angle setting using Function 08 display group 001 ⇒ page 1 (IMPORTANT! kickdown switch activation must be verified during throttle angle setting).

**When procedure applies to vehicles within the New Vehicle Limited Warranty, use the following:**

**Part Identifier: 3730**

**Labor Operation: 3730510 50TU**