

Range reading (km → ● or MI → ●),  
checking continued

- switch ignition **OFF**
- press and hold RESET button
- switch ignition **ON**
- release RESET button
  - tank contents X 10 is indicated

If tank contents X 10 is displayed,

- check adjusted consumption correction factor

If tank contents X 10 is **NOT** displayed,

- check that fuel level is displayed on fuel gauge in instrument cluster

If fuel level is **NOT** displayed on fuel gauge in instrument cluster,

- check fuel level sending unit

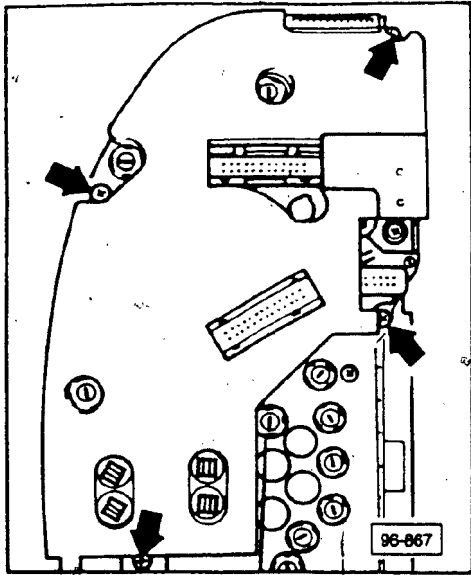
If fuel level is displayed on fuel gauge in instrument cluster,

- check voltage supply and output signals to Board Computer

If no open circuits are found,

- replace Board Computer

## Board Computer voltage supply and output signal, checking

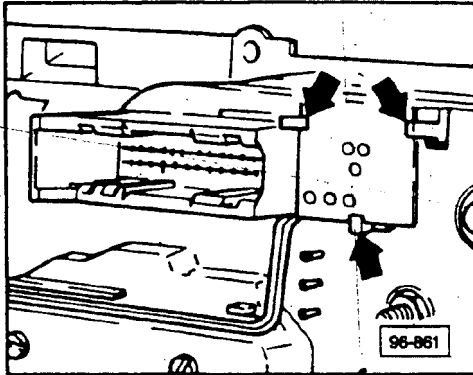


- disconnect battery ground strap
- remove instrument cluster
- remove 26-point connector (yellow)
- remove 10-point connector (black) from Board Computer

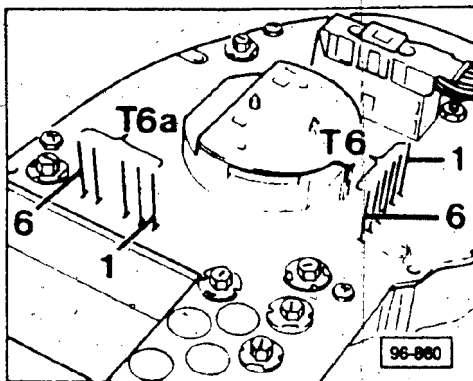
### Note

On vehicles with Auto-Check system,

- remove 26-point connector (white) from instrument cluster
- remove module retaining screws (arrows)



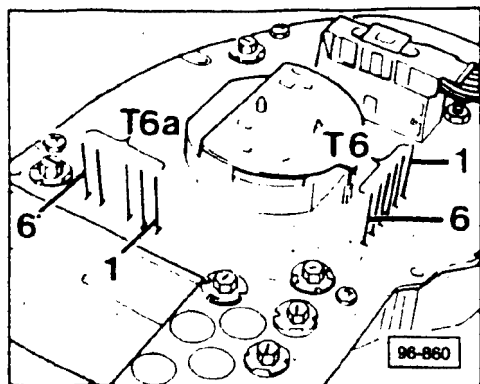
- unclip range calibration potentiometer and carefully remove Board Computer module
- attach battery ground cable
- attach 26-point connector (yellow) to instrument cluster



- connect multimeter **US 1119** set to volt range between terminals **T6/6** and **T6a/3**
  - must be approximately 12.0 V
- connect **US 1119** between terminals **T6a/2** and **T6a/3**
- switch ignition **ON** and leave **ON** during remaining tests
  - must be approximately 12.0 V
- connect **US 1119** between terminals **T6/1** and **T6a/3**
  - must be 9.75 V-10.3 V

If specified values are **NOT** obtained,

- repair open in wiring according to wiring diagram or check voltage stabilizer



- connect US 1119 between terminals T6/1 and T6/2
  - must be 1.5 V-6.0 V (depends on fuel tank level)

If specified values are **NOT** obtained,

- repair open in wiring according to wiring diagram or check fuel level gauge

- connect US 1119 between terminals T6/4 and T6a/3

- switch parking lights **ON**
  - must be approximately 12.0 V

- connect US 1119 between terminals T6/5 and T6a/3

- switch parking lights **ON** and turn instrument panel light dimmer to full bright position
  - must be approximately 12.0 V

If the specified values are **NOT** obtained,

- repair open in wiring according to wiring diagram

- connect US 1119 between terminals T6a/1 and T6a/3

- must be 0.0 V-4.0 V

- start motor and let idle
  - must be 14.0 V

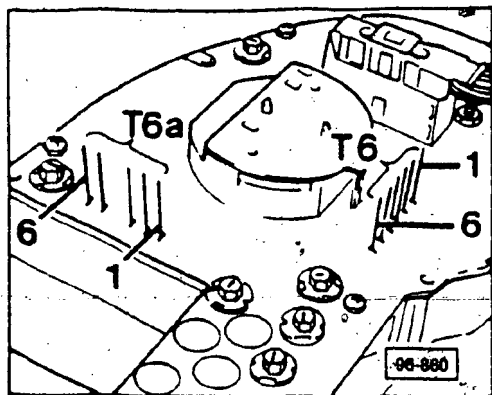
If specified values are **NOT** obtained,

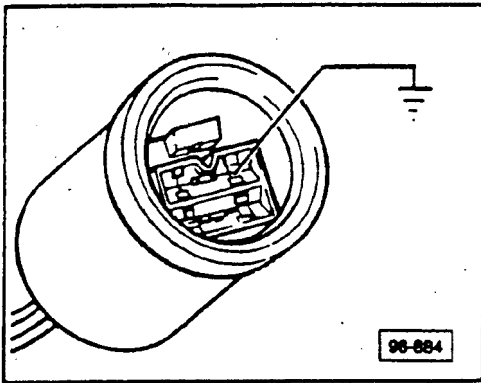
- repair open in wiring according to wiring diagram or check alternator output

## On vehicles without Auto-Check System,

- connect US 1119 between terminals T6a/2 and T6a/5 (only on vehicles without Auto-Check system)

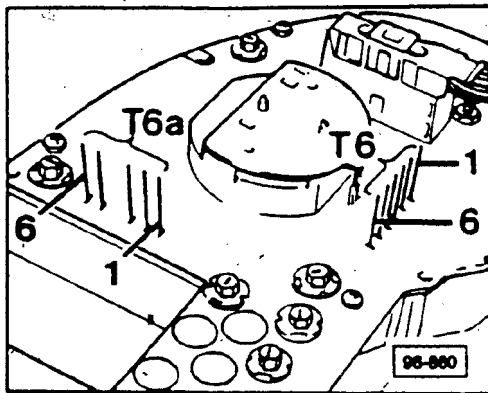
- press brake fluid level switch on brake fluid reservoir
  - must be 12.0 V





- connect US 1119 between terminals T6a/2 and T6a/6
  - remove connector from electronic thermoswitch
  - connect blue/white (BI/W) wire to ground
    - must be 12.0 V
- If the specified values are **NOT** obtained,
- repair open in wiring according to wiring diagram

## Speed signal, checking



- connect multimeter US 1119 set to ohm range between T6/3 and T6a/3
- place transmission in neutral and apply parking brake
- secure vehicle with wheel chocks to prevent rolling
- raise left front of vehicle at proper lift point until wheel turns freely
- place jack stand under vehicle for safety
- slowly rotate wheel
  - reading must alternate between 0.0 ohm (continuity) and  $\infty$  ohm (no continuity)

- If specified values are **NOT** obtained,
- repair open in wiring according to wiring diagram **OR** replace speed sensor

### Note

If the specified values from the tests on previous two pages are **NOT** obtained and wiring is not damaged,

- replace Board Computer

If specified values **ARE** obtained,

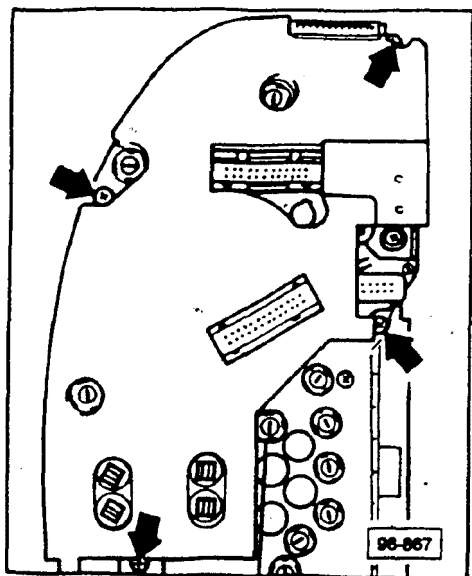
- connect modules to instrument cluster
- switch ignition **ON**

If the coolant warning temperature light or brake fluid level warning light do not flash,

- replace light bulbs

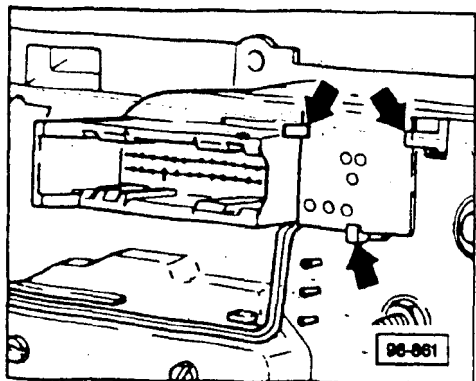
If warning lights still do not flash,

- replace Board Computer or computer module



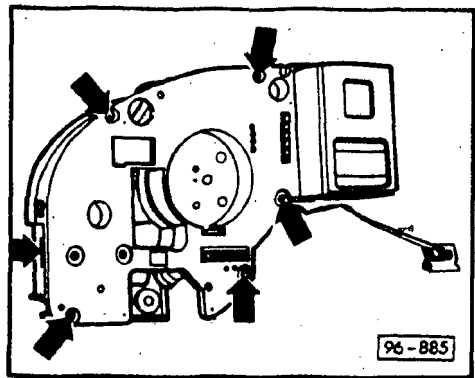
## Board Computer or computer module, removing/installing from instrument cluster

- disconnect battery ground cable
- remove instrument cluster
- remove all electrical connectors from instrument cluster
- remove Board Computer retaining screws (arrows)



- unclip (arrow) range calibration potentiometer and remove

## Board Computer, removing/installing from module (only vehicles with Auto-Check system and defective Board Computer)



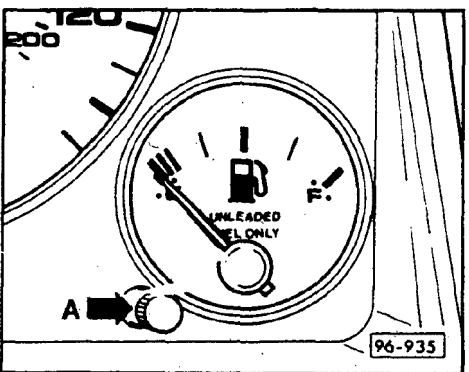
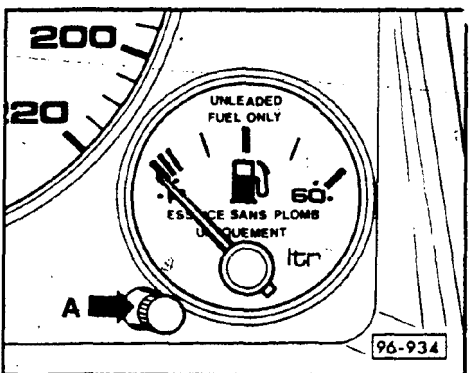
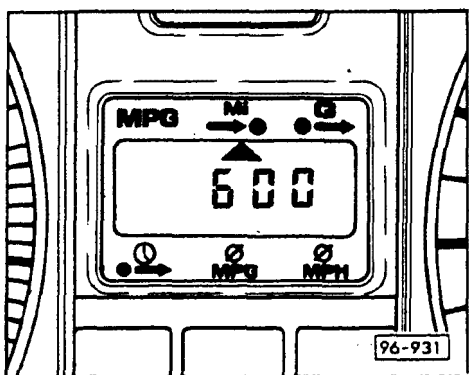
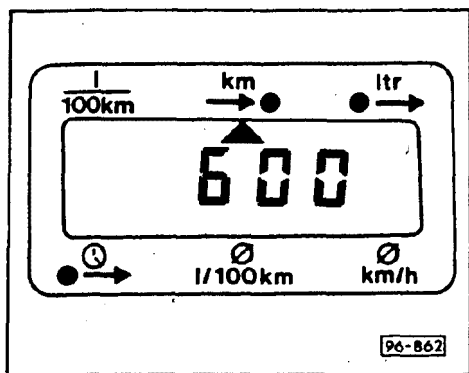
- remove coding terminal Board Computer
- remove nuts (arrows)
- carefully separate module halves without twisting

### Note

Store module halves so they are not damaged or become contaminated.

During installation, be sure that module halves are not damaged or distorted.

## Board Computer, range calibration



### CAUTION

Range calibration is done **ONLY** after the following repair work:

- replacing fuel gauge or fuel gauge sender
- replacing computer

The range calibration is done **ONLY** with a full fuel tank.

The computer calculates fuel consumption based on 10 L/100 km regardless if the computer display is in US or metric measurement units.

- switch ignition **OFF**
- press and hold **RESET** button
- switch ignition **ON** (while holding **RESET** button down)\*
- release **RESET** button
  - Board Computer display must show 500-700 (depending on vehicle)

If specified value is **NOT** displayed,

- adjust range calibration as follows:
- remove cap **A** from instrument cluster
- insert small flat blade screwdriver and turn adjusting screw

### CAUTION

Range calibration screw can only be turned 1/2 turn at a time between stops.

- adjust range calibration value according to following:

Audi 90	= approximately 550
Audi 80/90 Quattro	= approximately 650
Audi 90 Quattro 20 V	= approximately 650
Audi Coupe Quattro 20 V	= approximately 650

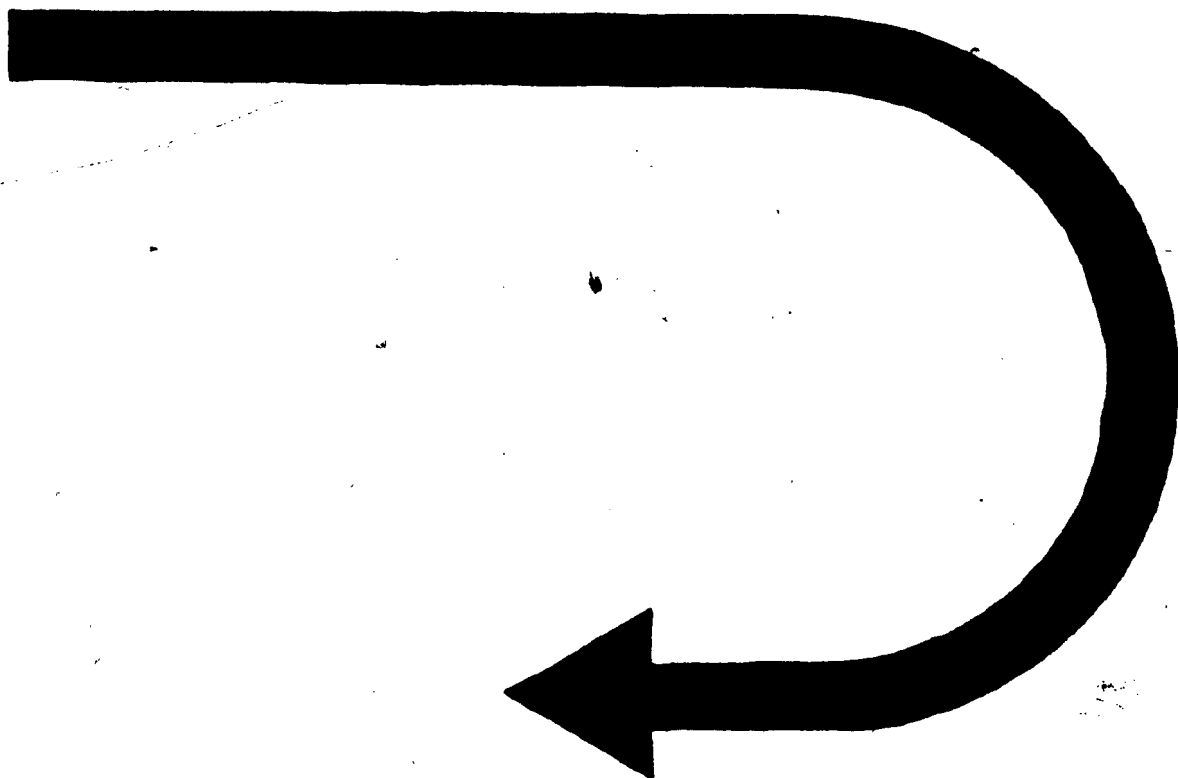
If the range calibration was not correct during first measurement,

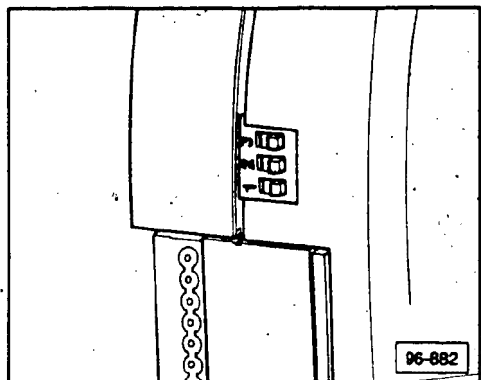
- check fuel gauge calibration
- repeat range calibration test

If specified range calibration is still **NOT** obtained,

- replace Board Computer

CONTINUED IN THE  
BEGINNING OF NEXT ROW



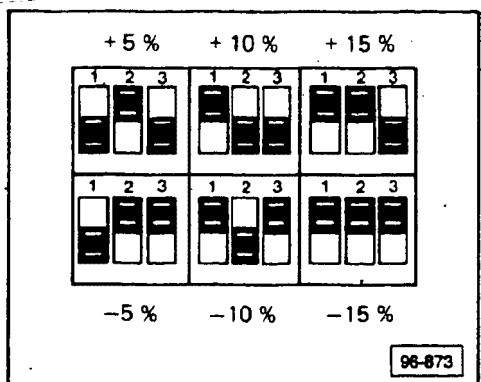


## Fuel consumption factor, correcting

It is possible to adjust the Board Computer if average fuel consumption measured by the driver varies by more than 5% from the average fuel consumption calculated by the Board Computer.

A total  $\pm 15\%$  correction can be made.

- remove instrument cluster but do not remove electrical connectors
- select corresponding correction range with the three sliding switches



## Fuel gauge display, checking

- remove trim cover from luggage compartment floor
- remove cover from fuel gauge sender
- remove connector from fuel gauge sender
- connect multimeter **US 1119** set to 20 V range between connector terminals
- switch ignition **ON**
  - must be 9.75 V-10.3 V

If specified values are **NOT** obtained,  
 ■ repair open in wiring according to wiring diagram **OR**

- replace voltage stabilizer
- connect **VW 1301** to fuel gauge sender connector terminals
- remove instrument cluster (leave electrical connectors connected)
- remove Board Computer module
- connect multimeter **US 1119** set to 20 V range between terminals **T6/1** and **T6/2**
- switch ignition **ON**
- adjust **VW 1301** as follows:
  - 544 - **US 1119** reads 1.5 V
  - 60 - **US 1119** reads 5.5 V

