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4 Disconnecting and connecting battery



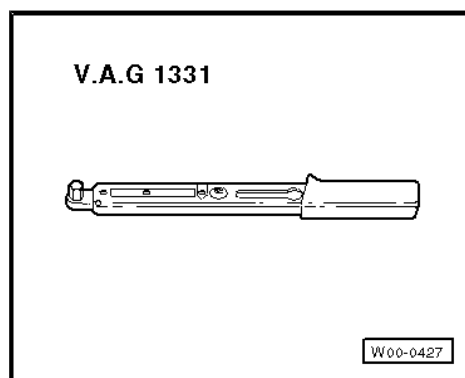
WARNING

*Danger of injury! Observe warning notices and safety regulations ➔ **page 1**!*

4.1 Disconnecting and connecting battery, vehicles with battery in engine compartment

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331-



4.1.1 Disconnecting battery

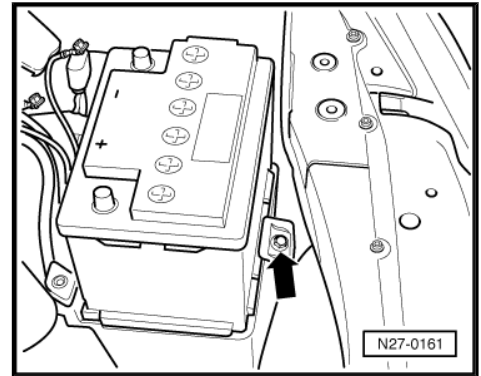


Note

- ◆ *Disconnecting the battery earth cable (open circuit) ensures safety when working on the electrical system.*
- ◆ *The battery positive wire need only be disconnected for removal of the battery.*
- ◆ *If vehicle has a security-coded radio, obtain anti-theft code before disconnecting battery.*
- ◆ *The battery is located in the luggage compartment in vehicles with engine codes ARR, AVY and ANY.*
- Switch off ignition and all electrical consumers and remove ignition key.
- Unscrew negative terminal from battery.
- Remove fuse holder ➔ **page 10**.



- Remove securing bolt -arrow-.
- Remove retaining strap.



5.1.2 Installing battery



Caution

A loosely fitted battery creates the following dangers:

- ◆ *Shortened service life caused by vibration damage (danger of explosion).*
- ◆ *The plates in the battery cells will be damaged if the battery is not secured correctly.*
- ◆ *Damage to battery casing by clamping bracket (possible leakage of acid with high consequential costs).*
- ◆ *Poor crash safety.*

Install in the reverse order of removal. When doing this, note the following:



Note

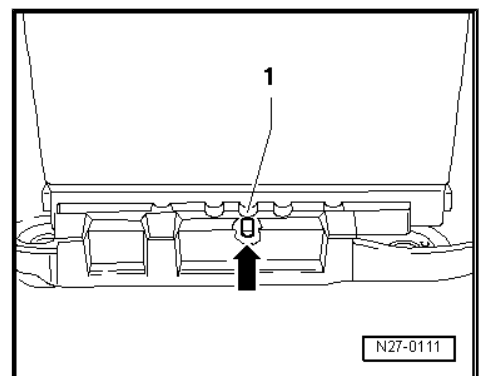
To guarantee the battery seats securely only install batteries with a 10.5 mm battery foot strip and adhere to the following work sequences.

- Install battery so that the lug of the battery tray -arrow- engages in the battery base strip recess -1-.



Note

It must not be possible to move a battery to the left or to the right.





8 Starter motor



Note

- ◆ *If vehicle has a security-coded radio, obtain anti-theft code before disconnecting battery.*
- ◆ *When disconnecting or reconnecting the battery, adhere strictly to the procedure described in the workshop manual ➔ [page 4](#).*

8.1 Checking starter - B-

- Connect the vehicle diagnosis, testing and information system - VAS 5051A- ➔ [page 167](#).

Select "Guided Fault Finding" on vehicle diagnosis, testing and information system - VAS 5051A- .

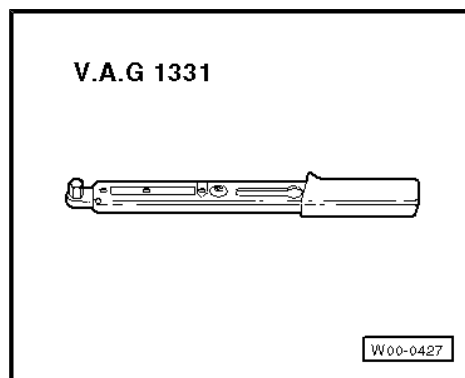
- Using the "GoTo" button, select "Function/component selection" and the following menu items in succession:
 - ◆ Body
 - ◆ Electrical system
 - ◆ 27 - Starter, current supply
 - ◆ Electrical components
 - ◆ B - Starter

8.2 Removing and installing starter, automatic gearbox

8.2.1 Models with automatic gearbox and engine codes BBY, AUA, AHW, AKQ and APE

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331-



33



1 - 32-pin connector

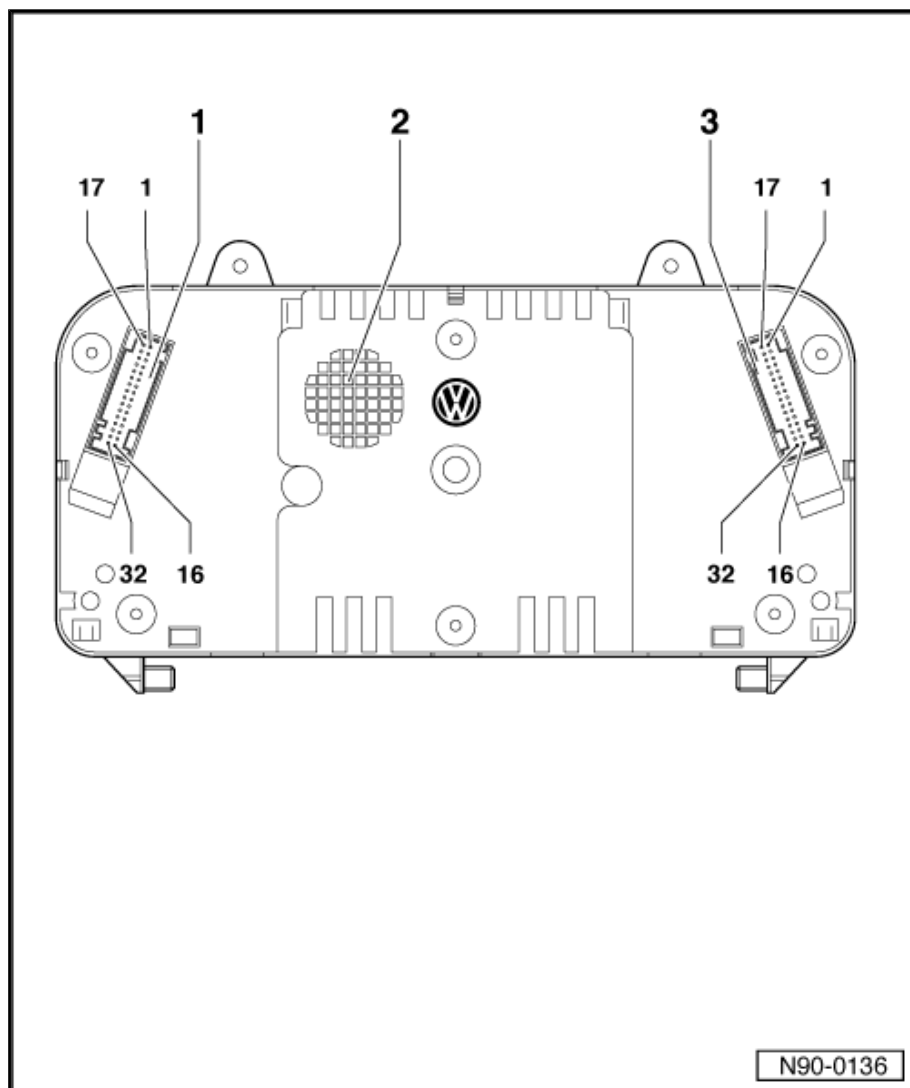
- ☐ green
- ☐ Pin assignment
⇒ [page 59](#)

2 - Warning buzzer

- ☐ Oil pressure warning
- ☐ Lights switched on warning
- ☐ Seat belt warning (only certain countries)

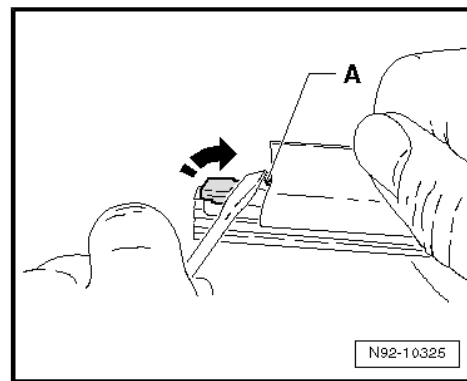
3 - 32-pin connector

- ☐ blue
- ☐ Pin assignment
⇒ [page 58](#)

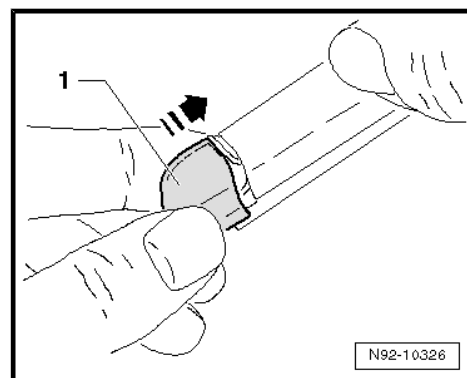




- Push wiper rubber stop -A- back down using a suitable screwdriver until wiper rubber can no longer be moved in the guide.



- Fit the new cap -1- and check that it is properly attached.
- Reinstall wiper blade ⇒ [page 69](#) .
- Check that wiper blade functions properly.





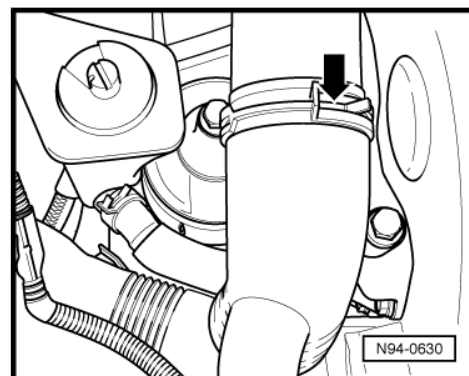
8 Specified torques: Windscreen wash/wipe system

Threaded connections		Specified torques
Wiper motor to wiper frame	M6	5 Nm
Motor crank to wiper motor shaft	M8	20 Nm
Wiper frame to body	M6	5 Nm
Windscreen wiper arms to wiper motor shaft	M8	20 Nm
Rear wiper arm to rear wiper motor shaft	M8	12 Nm
Rear wiper motor to rear lid	M6	8 Nm
Windscreen washer system reservoir hexagon nut to body		2.5 Nm
Headlight washer system reservoir rear hexagon nut to body		2.5 Nm
Headlight washer system reservoir front combination bolt to body		5.0 Nm
Pop-up cylinder bracket to plastic front end	M6	8.5 Nm
Pop-up cylinder to longitudinal member	M5	5.5 Nm

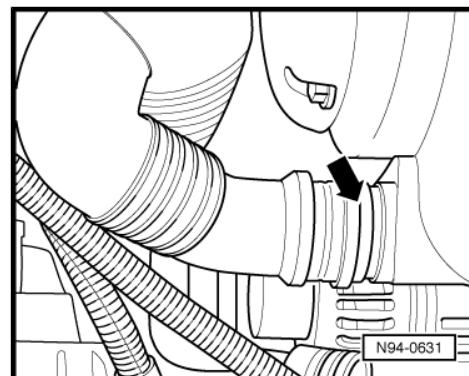


Removing

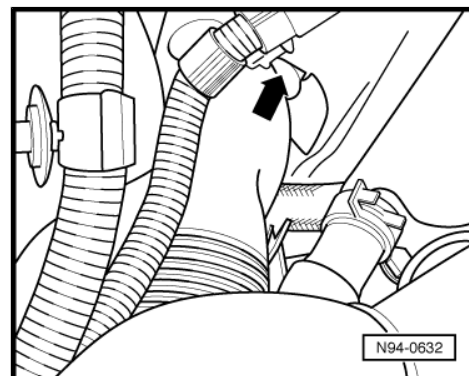
- Remove air hose spring-type clip -arrow- using spring-type clip pliers - VAS 5024- .



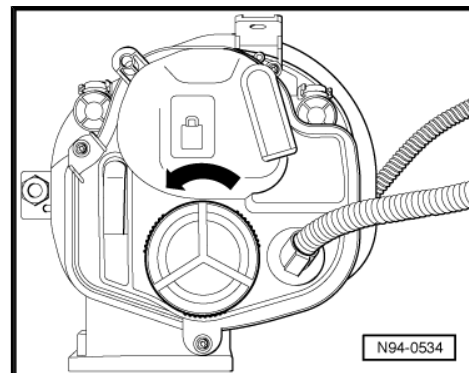
- Remove air hose spring-type clip -arrow- using spring-type clip pliers - VAS 5024- .



- Pull off air hose -arrow-.



- Release sealing cap by turning to left -arrow- and remove.



6 Tail lights

6.1 Assembly overview - tail light

- Specified torques

⇒ [page 125](#)

1 - Housing

- ☐ Removing and installing
⇒ [page 124](#)

2 - Rear fog light bulb - L20-

12 V, 21 W

Only installed on left-hand side

3 - Rear left turn signal bulb - M6- or right - M8-

12 V, 21 W

4 - Left brake and tail light bulb - M21- or right - M22-

12 V, 21 W / 5 W

5 - Bulb carrier

- ☐ Removing and installing
⇒ [page 125](#)

6 - Cross-head screw

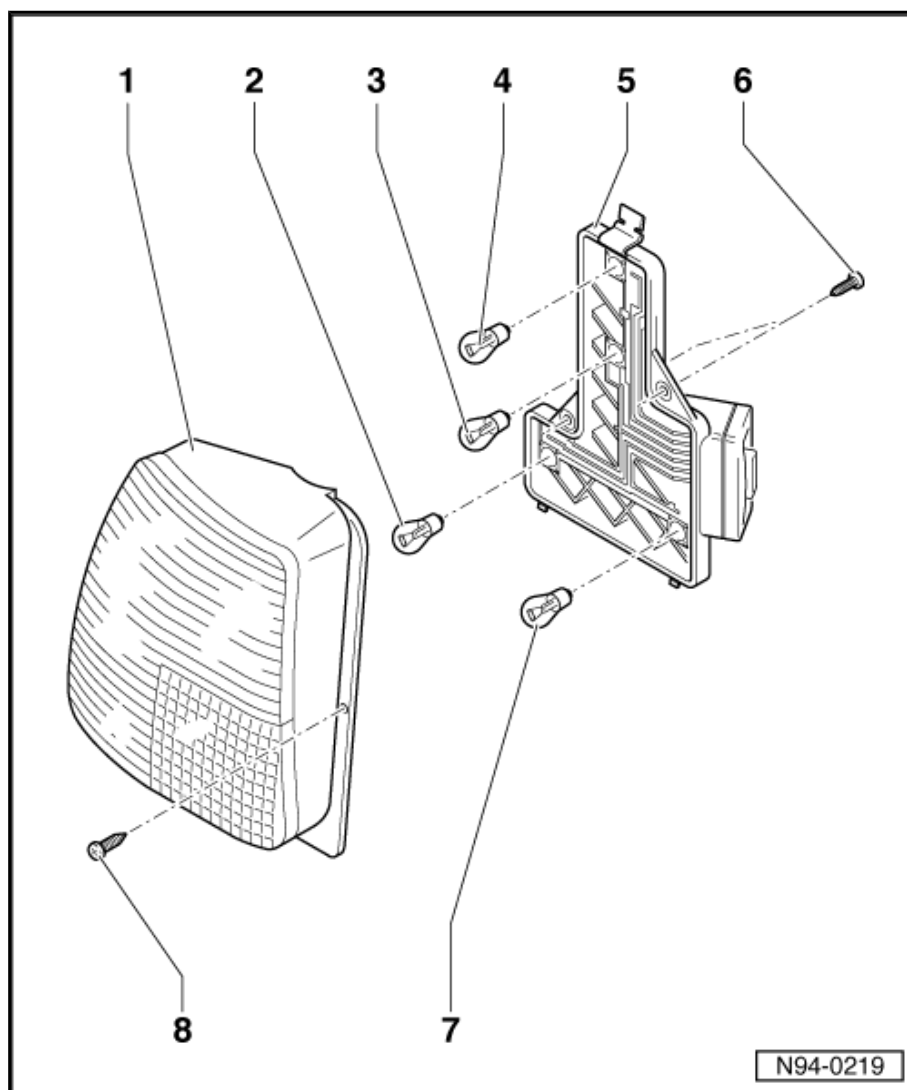
- ☐ For bulb holder

7 - Left reversing light bulb - M16- and right reversing light bulb - M17-

12 V, 21 W

8 - Cross-head screw

- ☐ For tail light



N94-0219

6.2 Removing and installing tail light cluster

Removing

- Switch off ignition and all electrical consumers and remove ignition key.



9.6 Removing and installing ignition/starter switch

Removing



Note

- ◆ If the vehicle has a security-coded radio, obtain the anti-theft code from customer before disconnecting the battery.
- ◆ When disconnecting or reconnecting the battery, adhere strictly to the procedure described in the workshop manual ⇒ [page 4](#).

- Disconnect battery ⇒ [page 4](#).
- Remove steering lock housing ⇒ [page 137](#)
- Remove securing bolt -arrow- and pull ignition/starter switch out of steering lock housing.

Installing

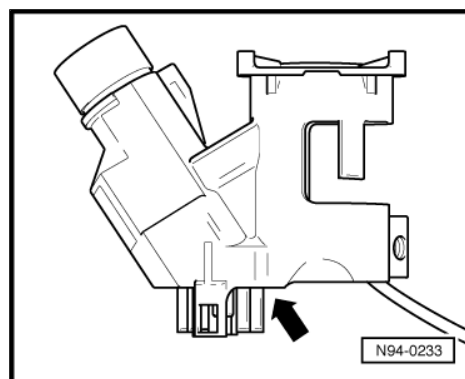
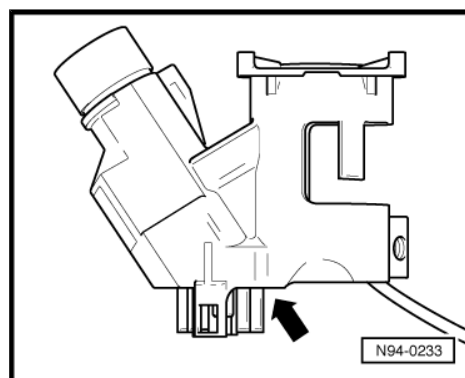
- Push ignition switch into steering lock housing.



Note

When installing the ignition/starter switch ensure that the ignition/starter switch and the lock cylinder are in the same position, e.g. "ignition on".

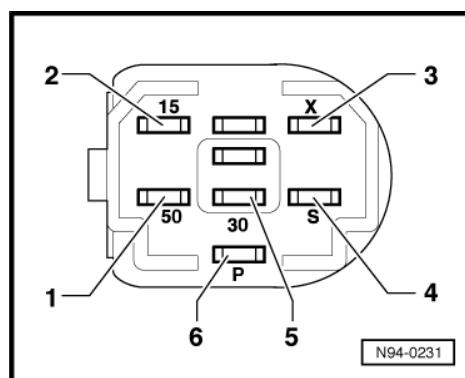
- Tighten securing bolt -arrow-.
- Install steering lock housing ⇒ [page 137](#)



9.7 Pin assignment for ignition switch

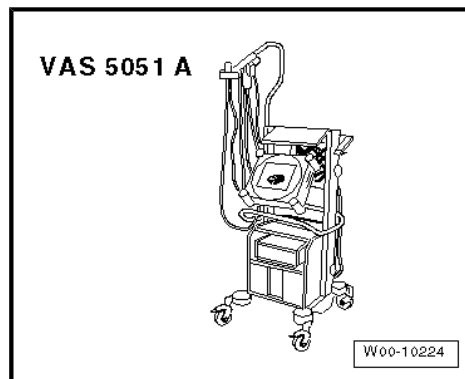
Connector, 8-pin

- 1 - Terminal 50
- 2 - Terminal 15
- 3 - Terminal X
- 4 - Terminal S
- 5 - Terminal 30
- 6 - Terminal 50b

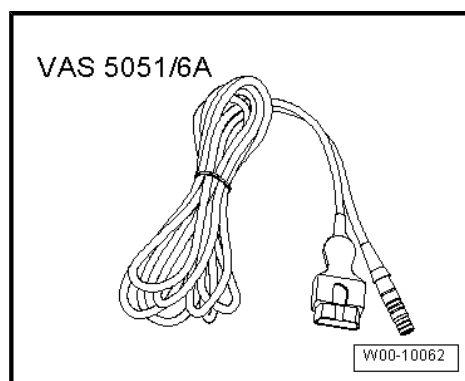




◆ Vehicle diagnosis, testing and information system - VAS 5051A-



◆ Diagnostic cable - VAS 5051/6A- (5 m)



◆ Diagnostic cable - VAS 5051/5A- (3 m)



Note

Only these cables are to be used for diagnosis, as they are the only ones fitted with CAN wiring and therefore allowing CAN diagnosis and/or CAN communication.

Connecting vehicle diagnosis, testing and information system - VAS 5051A- :

- Apply handbrake.
- Vehicles with automatic gearbox, move selector lever to position "P" or "N".
- In vehicles with Direct-Shift Gearbox, move selector lever to position "N" or "STOP".
- Vehicles with manual gearbox, move gear lever to neutral position.

Vehicles ➤ 08.00 with engine code AER, AFK, AHT, AHW, AKU, AKQ, ALD, ALL, ANV, AMF, APE, AQQ, AUA, AUB, AUC, AUD

- Lever cover out of centre console.