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## ★ **NEW INFORMATION** since last filming

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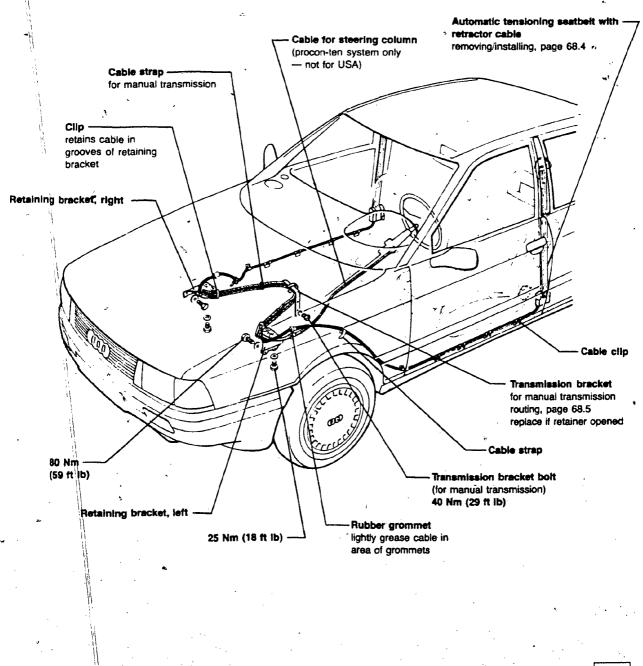
removing/installing 68.33

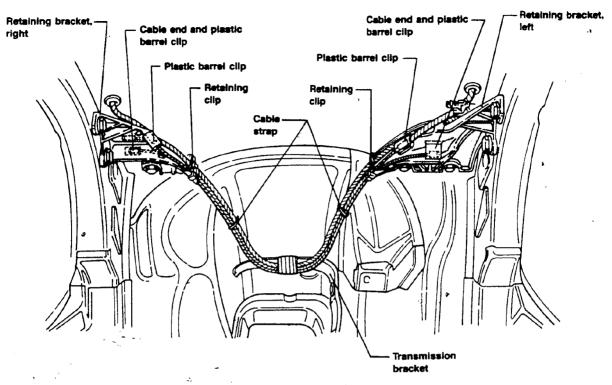
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removing/installing 68.32

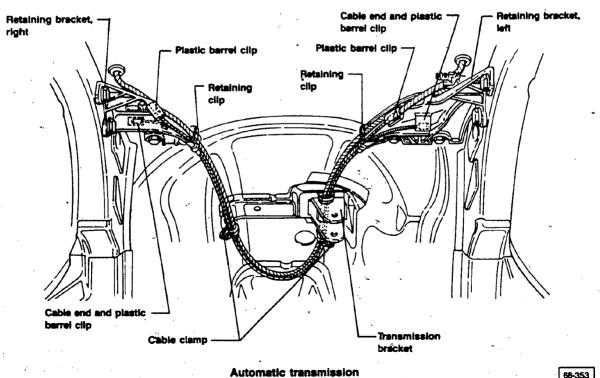
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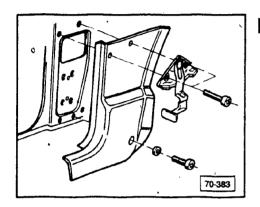




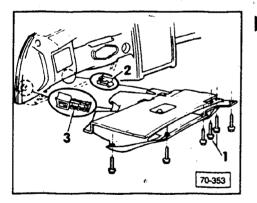
68-353

# Automatic seat belt tensioning system, removing

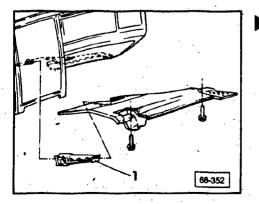
- remove sill plate inner trim and B-pillar inner trim
- unbolt seat belt and retractor from B-pillar
- pull door inner seals off flange in area of lower A-pillar



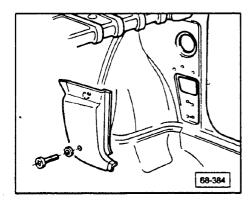
remove lower left A-pillar trim panel and hood release lever

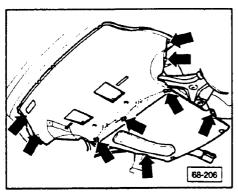


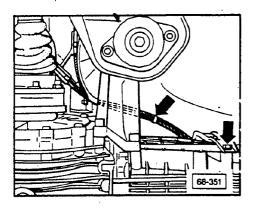
remove shelf under instrument panel on drivers side



 remove screws and take out shelf under instrument panel on passenger side







■ remove lower right A-pillar trim panel

## Note

The left side tensioning cable is routed on top of the sound deadener.

The right side tensioning cable is routed under the sound deadener.

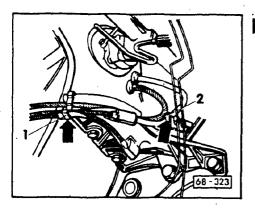
- pull carpet up and in toward center on both
- cut into deadener material on right side
- pull cable out of retaining clips along sill
- open cable strap at front floor
- remove shield under engine compartment

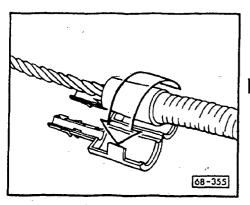
## Vehicles with manual transmission

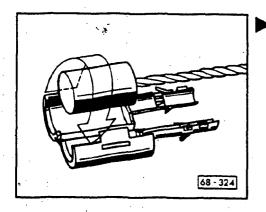
- remove bolt holding transmission bracket on transmission (right arrow)
- cut through cable straps on right and left side (left arrow)

## Vehicles with automatic transmission

- open retaining clips on transmission bracket
- unscrew cable clamps from transmission tunnel







- remove cable from clip 1 on retaining brackets (left and right)
- push cable out of brake line clip 2 on retaining bracket (left and right)
- push cable end out of slot on retaining bracket (left and right)
- pull grommets out of body and pull cables through holes

## installing

## CAUTION

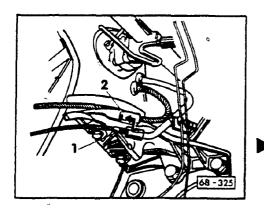
Different transmission types require different cable lengths.

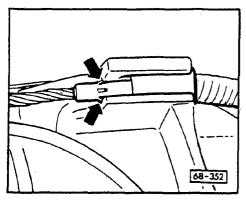
replace plastic barrel clips for cable

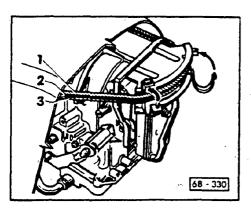
■ replace plastic barrel clips for cable ends

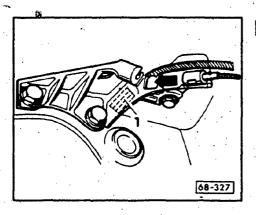
## Note

Do not use grease on plastic barrel clips, cable ends or retaining brackets.









- mount seat belt and retractor to B-pillar
- install cable into retaining clips on inner sill
- grease cable lightly in area of rubber grommet `
- install cable through hole in body panel and push grommet into hole
- pull cable plastic barrel clip 1 on cable into slot 2 of retaining bracket

#### Note

Cable plastic barrel clip is installed correctly when tabs are against retaining bracket slot. (arrows)

guide cable around bracket to transmission

## Vehicles with manual transmission

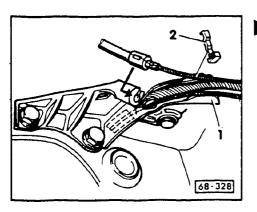
- insert cable through transmission bracket
- bolt bracket to transmission
  - torque to 40 Nm (29 ft lb)
- install new cable straps around cables

## Vehicles with automatic transmission

- fasten cable with clamps to transmission tunnel
- close retaining clips on transmission bracket around cable
  - procon. cable for steering column (not used)
  - 2 cable for left belt retractor
  - 3 cable for right belt retractor
- install cable end through hole in retaining bracket (arrow) and into slot 1

#### Note

Observe correct installation position of plastic barrel clip on cable end in slot. See illustration 68-352 for similar installed position.



■ install cable retaining clip 2

## **CAUTION**

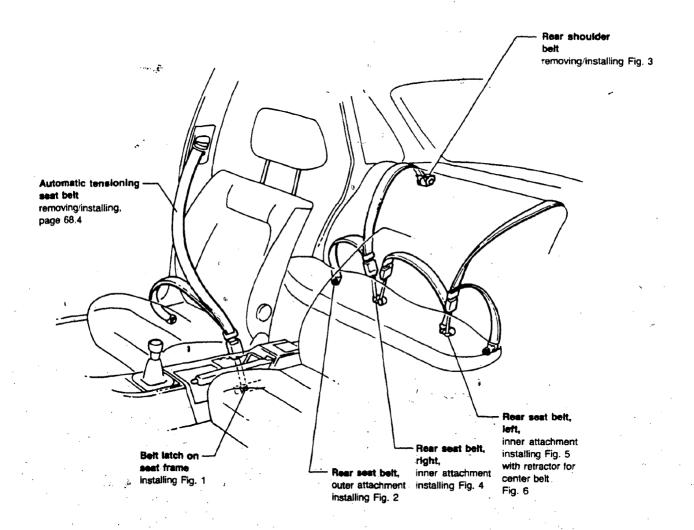
Cables must be routed at the retaining brackets so they rest in the appropriate grooves.

At the apex of the curve around the transmission bracket, the cables must have approx.  $30mm \pm 10mm$  (1  $3/16 \pm 3/8$  in.) clearance to the bracket. If not:

- plastic barrel clips are not properly installed in retaining bracket slots
- belt with wrong part number installed

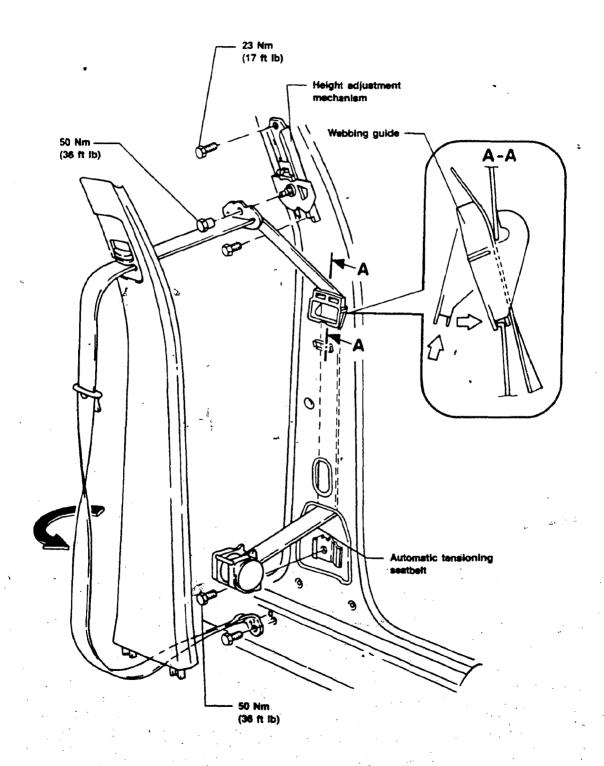
# THIS FRAME INTENTIONALLY LEFT

# **BLANK**



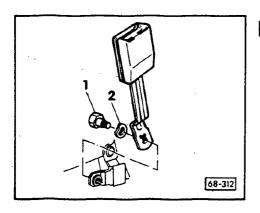
66-311

G-10

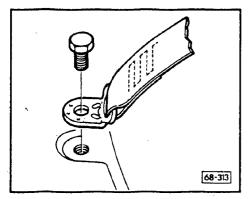


68-310

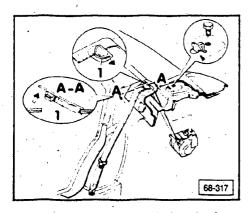
G-11



- Fig. 1 Belt latch on seat frame, installing
  - 1 50 Nm (36 ft lb)
  - 2 Spring washer



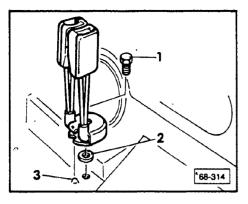
- Fig. 2 Rear seat belt, outer attachment, installing
  - torque bolt to 50 Nm (36 ft lb)



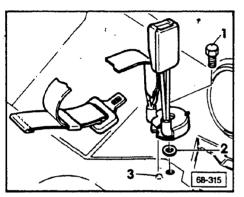
- ► Fig. 3 Rear shoulder belt, removing/installing Removing
  - remove seat bench and rear seat backrest (see Repair Group 72)
  - remove hatshelf and D-pillar trim (see Repair Group 70)
  - remove belt attachment at floor
  - pry panel 1 out with a screwdriver and remove from belt webbing.
  - remove bolt and belt/retractor

## Installing

install in reverse order and torque bolts to 50 Nm (36 ft lb)



- Fig. 4 Rear seat belt, left, inner attachment, installing
  - 1 50 Nm (36 ft lb)
  - 2 Seal
  - 3 Weld projection



- Fig. 5 Rear seat belt, left, inner attachment, installing
  - 1 50 Nm (36 ft lb)
  - 2 Seal
  - 3 Weld projection

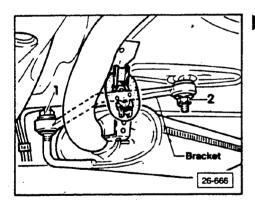
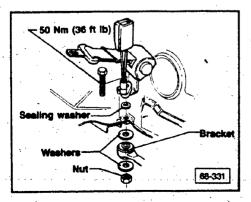


Fig. 6 Rear seat belt, left, inner attachment (with retractor), removing/installing

## Removing

- remove nut 2
  - must be taken off before retractor is removed
- remove retractor mounting (inside vehicle)



## Installing

- Fig. 7 install in reverse order, noting the following:
  - ensure that the correct length bolt is installed to secure retractor to mounting bracket of middle muffler
    - Part Number N 989 112 01, 50 Nm (36 ft lb)

G-13

## CAUTION

Seat belt assemblies must be replaced after being subjected to loading by occupants in collision.

## CAUTION

Do not bleach or redye seat belt webbing. Webbing that is severely faded will not meet strength requirements and must be replaced.

Belt assemblies must be installed in sets. Do not interchange buckle and retractor assemblies with those designated for other seating positions or other car models.

# Seat belt system, inspection procedure

A visual and functional inspection of seat belts is recommended to assure maximum protection for vehicle occupants.

The following inspection is described separately for front, rear and center seat belt positions. It includes all continuous loop, single retractor 3-point restraint systems, 2-point automatic (passive) front seat restraint systems, and all non-retractable belt systems.

## System inspection, front seat

## Webbing inspection

- check for twisted webbing due to improper alignment when connecting buckle
- fully extend webbing from retractor. Inspect webbing and replace with new assembly if following conditions are noted:
  - cut or damaged webbing
  - broken or pulled threads
  - cut loops at belt edge
  - color fading as a result of exposure to sun or chemical agents
  - bowed webbing

If webbing cannot be pulled out of retractor or will not retract to stowed position, check for the following conditions and clean or correct as necessary:

- dirty webbing coated with gum, syrup, grease or other foreign material
- twisted webbing
- retractor or loop on B-pillar out of position

## Cleaning

Clean the belt webbing only with a mild soap solution recommended for cleaning upholstery or carpets. Follow the instructions provided on soap container.

## **Buckle Inspection**

- insert tongue of seat belt into buckle until audible click is heard. Pull back on webbing quickly to assure buckle is latched properly
- replace seat belt assembly if buckle will not latch
- depress\_button on buckle to release belt
  - belt should release with a pressure of approximately 2 lbs.
- replace seat belt assembly if buckle cover is cracked, push button is loose or pressure required to release buckle is too high

## Retractor Inspection

Front retractors are dual sensing and will lock up in two modes. The unit will lock up as the belt is being withdrawn from the retractor if the inertia increases dramatically. Also, the unit will lock up with a change in vehicle motion such as rapid braking.

grasp seat belt webbing and, while pulling from retractor, give belt a fast jerk

## Note

For automatic belt vehicles this mode is difficult to inspect due to a low setting of the inertia unit.

- drive vehicle in an open area away from other vehicles at a speed of approximately
   5 to 15 mph and quickly apply footbrake
- if retractor does not lock up under these conditions, remove and replace seat belt assembly

#### Note

A passenger can be used to test the right hand retractor. The driver alone can test both retractors simultaneously by grasping the right hand webbing, extracting approximately 26 inches from the retractor and holding the belt while braking.

## Seat belt warning light/buzzer

A light in the instrument panel displaying the words "fasten seat belts" or "fasten belts" along with an audible signal that lasts for four to eight seconds should be noticed when the ignition switch is moved to the "on" or "start" position and the driver's belt is unlatched. If the driver's belt is latched the buzzer should not activate.

For 2-point automatic belts, both belts must be connected to the door in order to start the vehicle. The "fasten belts" light should activate if either automatic belt is disconnected after starting.

#### Note

Correct any malfunctions in this system if the customer desires.

## Anchorage Inspection

Seat belt mounting bolts are installed at 35.3 Nm to 47.0 Nm (20 to 35 ft lb). Retractors must be securely anchored in place. The bolts at the lower belt anchor point (not the retractor) and upper seat belt loop must be tight and still allow the hardware to swivel. Anchorage areas must be sound and uncorroded.

## Note

Reinforce bolt mounting area if necessary.

## System inspection, rear seat

Webbing/buckle Inspection same as for front seat

## **Retractor inspection**

Rear seat retractors lock automatically when the webbing is extended and allowed to feed back into the retractor.

- check retractor by extending webbing and fastening to buckle. Allow several inches to feed back into retractor and then jerk belt sharply
- if retractor does not lock up, remove and replace seat belt assembly

G-16

## Lap and shoulder belts (rear seat)

The 3-point system for the rear seat is the same as for front seat except for the light and buzzer warning system.

## Anchorage inspection.

same as for front seat

## Center seat position (and non-retractable belts)

Some models have a rear center seat belt. These belts do not have a retractor. In addition to checking the webbing and anchorages, the adjustable slide locking of the belt must be checked.

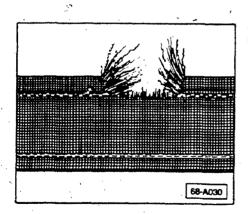
- fasten tongue to buckle and adjust by pulling webbing end at right angle to connector and buckle
- release webbing and pull upward on connector and buckle
- If slide lock does not hold, remove and replace seat belt assembly

## Center seat position (retractable belts)

same as for rear seat retractor inspection

## Webbing defects, examples

► Fig. 1 Cut or damaged webbing



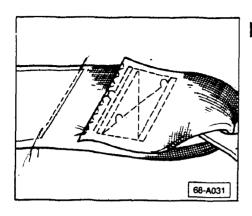


Fig. 2 Broken or pulled threads

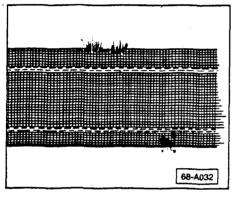


Fig. 3 Cut loops at belt edge

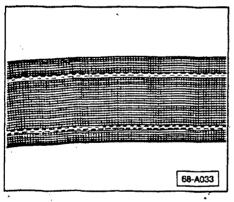
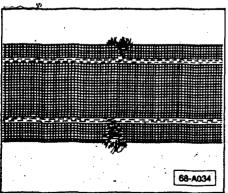
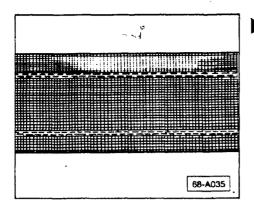


Fig. 4 Bowed webbing

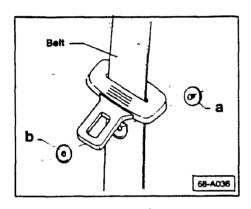


► Fig. 5 Cut loops at belt edge

from being caught in door



► Fig. 6 Color fading

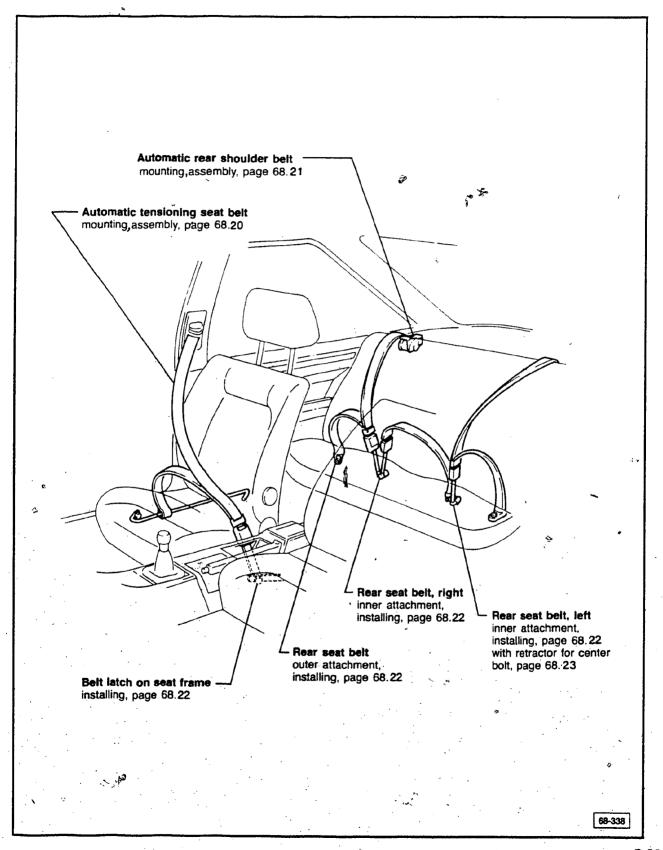


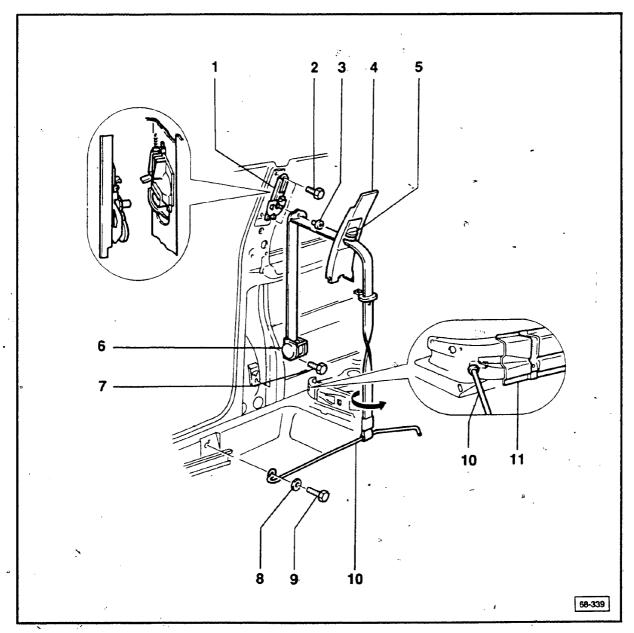
Seat belt stop button, replacing (front belt illustrated)

## Note

Check seat belt for damage and proper struction before installing stop button.

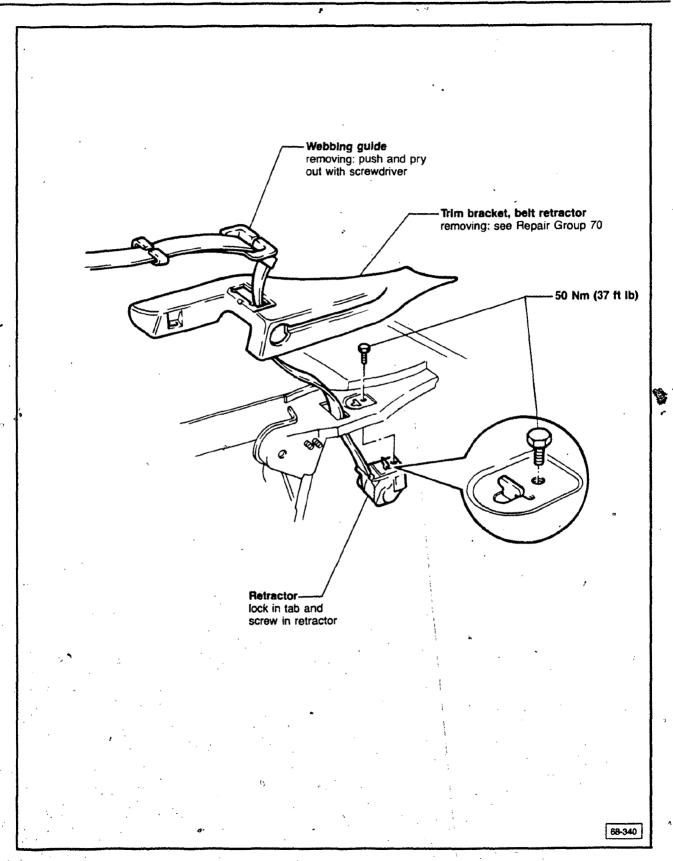
- remove all traces (residue) of old button
- warm replacement button A and eyelet B with hot air gun to 25° - 40°C (77° - 104°F)
- press button through webbing
  - hole may be prepunched with pencil or similar tool
- clip on eyelet with flat nose pliers or similar tool



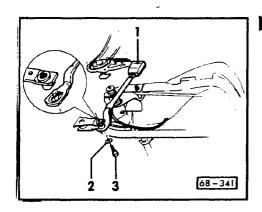


- Height adjustment mechanism must lock audibly in topmost position button must always return to topmost position after use
- 2 -23 Nm (17 ft lb)
- 3 -23 Nm (17 ft lb)
- 4 B-pillar trim
- 5 Height adjustment button

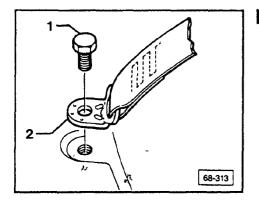
- Automatic tensioning seatbelt ensure nothing jams in mechanism
- 7 50 Nm (37 ft lb)
- 8 Washer
- 9 50 Nm (37 ft lb)
- 10 Seat belt guide rail
- 11 Floor assembly



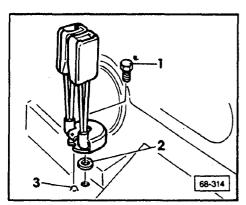
. G-22



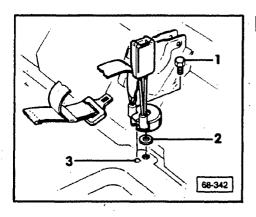
- Fig. 1 Belt latch on seat frame, installing
  - 1 belt lock
  - 2 spring washer
  - 3 60 Nm (44 ft lb)



- Fig. 2 Rear seat belt, outer attachment, installing
  - 1 50 Nm (37 ft lb)
  - 2 mounting bracket
    - must fit into cutout in floor assembly (arrow)

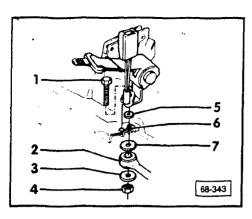


- Fig. 3 Rear seat belt, right inner attachment, installing
  - 1 50 Nm (37 ft lb)
  - 2 seal
  - 3 weld projection



- Fig. 4 Rear seat belt, left, inner attachment, installing
  - 1 50 Nm (37 ft lb)
  - 2 --- seal
  - 3 weld projection

G-23



# Fig. 5 Rear seat belt, left, inner attachment (with retractor), removing

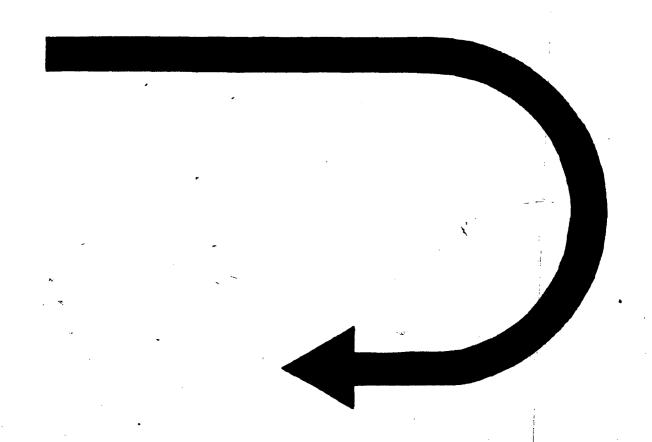
- 1 -- hex head bolt
  - 50 Nm (37 ft lb)
- 2 anchorage rod
- 3 washer
- 4 --- hex nut
  - ... 40 Nm (29 ft lb)
- **5** seal
- 6 -- weld projection
- 7 washer
- remove nut 4
  - must be removed before retractor is removed
- loosen bolt 1
- remove retractor mounting (inside vehicle)

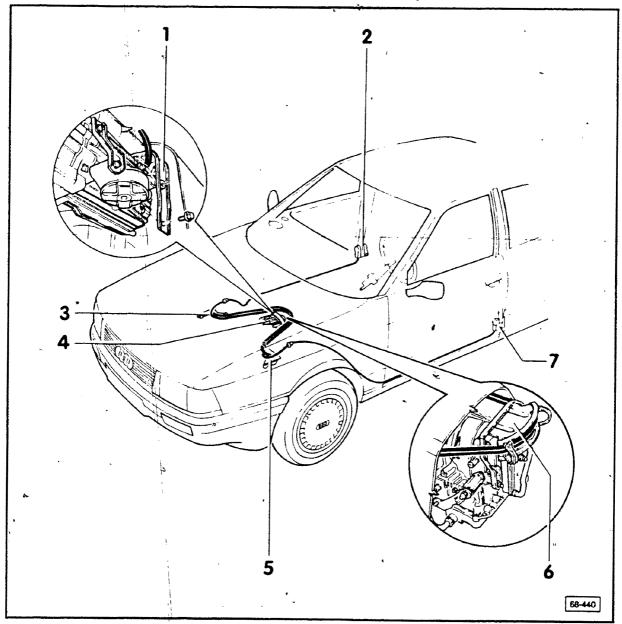
# Rear seat belt, left, inner attachment (with retractor), installing

Install all components in reverse order, noting the following:

- torque bolt 1 to 50 Nm (37 ft lb)
- torque hex nut 4 to 40 Nm (29 ft lb)

# CONTINUED IN THE BEGINNING OF NEXT ROW





- 1 Cable bracket attached to cable guide bracket
- 2 Automatic seat belt with retractor cable, right
- 3 Retaining bracket, right
- Cable guide bracket on end of transmission, also 7
- 5 Retaining bracket, left
- 6 Cable guide bracket, also 7
- 7 Automatic seat belt with retractor cable, left

## Automatic seat belt tensioning, checking

#### **Note**

After an accident, if only one portion of system operates, both cables, retaining brackets, retainer clips, and the plastic barrel clips must be replaced.

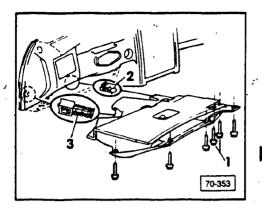
#### Seat belt will not move or retract

If the seat belt cannot be pulled out or does not roll up automatically, the automatic seat belt tensioning system has been activated.

#### Note

Seat belt and retractor cables are supplied as one unit.

Individual components may be replaced if defective and the automatic seat belt tensioning system has not been activated.



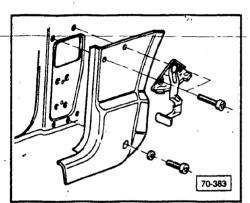
# system, removing

## Driver's side

■ remove sill plate inner trim, and rear side panel

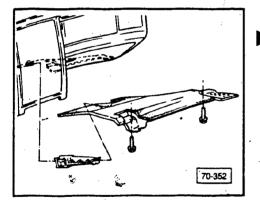
Automatic seat belt tensioning

- unbolt seat belt and retractor from B-pillar
- remove shelf from under instrument panel on driver's side \_
- pull door inner seal off flange in area of lower A-pillar
- remove lower left A-pillar trim panel and hood release lever
  - lower screw is countersunk into trim

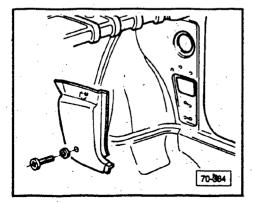


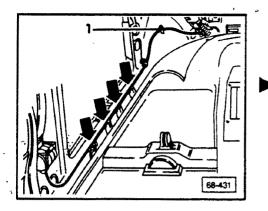
## Passenger side

- remove screws and take out shelf under instrument panel on passenger side
- pull door inner seal off flange in area of lower A-pillar



- remove lower right A-pillar trim panel
  - lower screw is countersunk
- pull carpet up and in toward center on both sides
- cut into deadener material at area of bowden cable

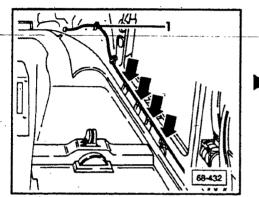




#### Note

The left side bowden cable is routed on top of the sound deadener.

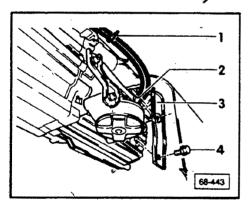
- pull bowden cable out of retaining clips (arrows) along sill
- cut off tie wrap 1



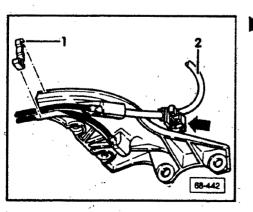
#### Note

The right side bowden cable is routed under the sound deadener.

- pull bowden cable out of retaining clips (arrows) along sill
- cut off tie wrap 1



- unscrew bolts 4, and remove cable bracket 3 from retainer 2
  - cut off tie wraps 1 on both sides



## Note

Coupe

In production the automatic seat belt tensioning cables are held to the cable bracket with adhesive tape. When repairing belt system, the adhesive tape must be removed.

- remove cable from clip 1 on retaining brackets
  - when removing left side tensioning cable, push out bowden cable 2 from brake clip (arrow) on left bracket
- unhook tensioning cable from retaining brackets
  - frozen bowden cable sleeves or tensioning cable ends may be driven out with a punch

#### Note

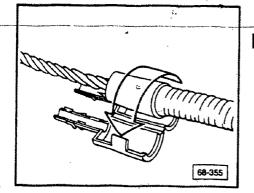
Plastic barrel clips on bowden cable and retractor cable ends must always be replaced.

Retaining clips for cables on retaining brackets must always be replaced.

- push out rubber grommet in front panel
- pull bowden cable through hole in front panel

# Automatic seat belt tensioning system, installing

 install new plastic barrel clip on end of bowden cable



■ install new plastic barrel clip on retractor cable ends

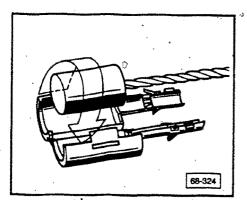
## CAUTION

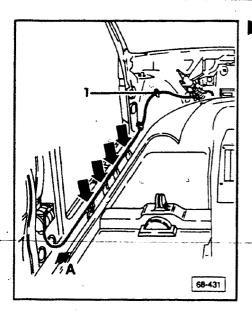
Do not apply grease to plastic barrel clips, retaining brackets, cable ends or cable mounting grooves in retaining brackets.

#### Note

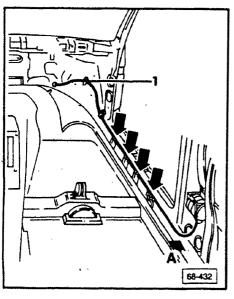
If both retractor cables are being replaced, install left cable first.

- mount automatic seat belt and retractor to B-pillar
- lightly lubricate bowden cable in area of grommet
- press grommet into hole on cowl
  - ensure grommet is properly fitted into front panel to prevent leaks

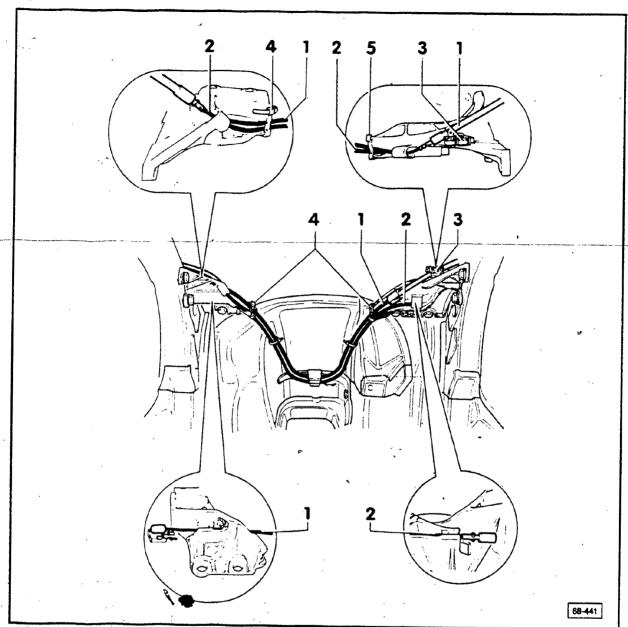




- place retractor cable on left door sill with enough slack so curve (arrow A) is smooth and kink free
  - cable goes over sound deadener material
  - install tie wrap 1



- place retractor cable on right door sill with enough slack so curve (arrow A) is smooth and kink free
  - cable goes under sound deadener material
  - install tie wrap 1

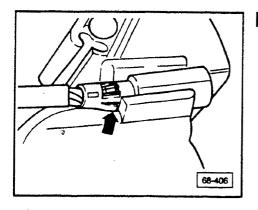


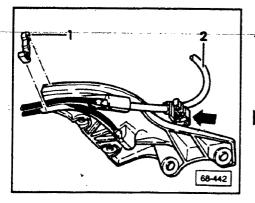
- 1 Automatic seat beit retractor cable, left routed on left retainer bracket and top of cable retaining bracket on transmission
- 2 Automatic seat belt retractor cable, right routed on right retainer bracket and bottom of cable retaining bracket on transmission

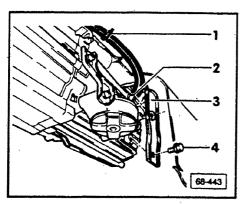
#### CAUTION

Cables must not cross when routed. Cables fit into grooves on retaining brackets.

- 3 Retaining clip, brake line
- 4 Retaining clip, cable must always be replaced when repairing an activated tensioning system, page 68.10
- 5 Retaining clip, cable must always be replaced when repairing an activated tensioning system, page 68.10







- hook left/right bowden cable onto retaining brackets so plastic barrel clip is centered against slot in retaining bracket
  - tab (arrow) must rest against slot, as shown
- insert bowden cable onto retaining bracket from top in brake line clip
- route retractor cables around cable guide bracket on transmission

#### Note:

Left retractor cable end is inserted through hole in retaining bracket then into slot.

- insert left/right cable into slots on retaining bracket
- check fit of plastic barrel clips
  - tabs must fit against retaining bracket
- install new retaining clips 1 and arrow on retaining brackets

#### **CAUTION**

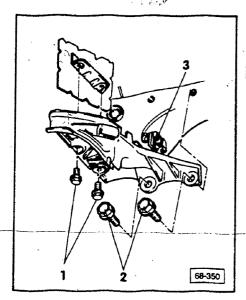
Retaining clips must be installed correctly to ensure proper function of the automatic seat belt tensioning system.

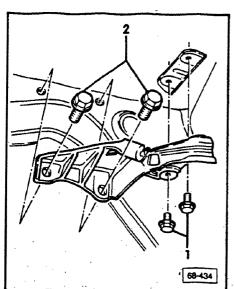
- push cable bracket 3 from behind over both cables up to stop on cable guide bracket
- push cable bracket 3 onto retainer 2 on cable guide bracket and secure with bolt 4 • 40 Nm (29 ft lb)
- ensure both cables are in slots on cable guide bracket, under cable bracket 3
- secure cables on both sides with tie ° wraps 1

#### Note

Both cables must be a distance of 30  $\pm$ 10 mm (1.2  $\pm$ 25/64 in.) from cable retainer on transmission. If not, check and correct positioning of plastic barrel clips in slots on retainer brackets and verify correct cables are installed.

instailing





# Retaining brackets, removing/installing

## Left, removing

■ remove bolts 1, 2, and brake line clip 3

## Left, installing

Reinstall in reverse order, noting the following:

- torque bolts 1
  - 25 Nm (18 ft lb)
- torque bolts 2-
  - 75 Nm (55 ft lb)
- reinstall brake line clip 3

## Right, removing

remove bolts 1, 2

## Right, installing

Reinstall in reverse order, noting the following:

- torque bolts 1
  - 25 Nm (18 ft lb)
- torque bolts 2
  - 75 Nm (55 ft lb)

## Inside rear view mirror, removing

■ remove mirror from base with 2.0 mm (5/64 in.) hexagon socket wrench

## Inside rear view mirror, installing

Reinstall in reverse order of removal.

## Inside rear view mirror mounting plate, installing

Parts required

#### CAUTION

Part numbers are listed for reference only. Always consult with the Parts Department for latest information.

## Description Mirror repair kit

Part Number 175.898 587

#### Note

Use adhesive at room temperature only and note instructions on container. Adhesive hardens fully after several hours.

- mark location for plate on outside of windshield
  - a = 130 mm (approx. 5.0 in.)
- clean contact area on inside of windshield and contact side of plate with activator

#### Note

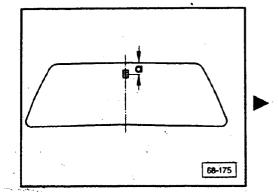
Previously used mirror mounting plates must have the contact surface ground lightly-before reuse.

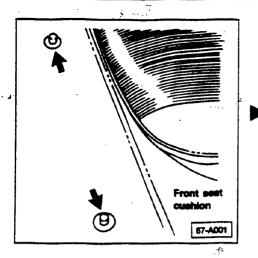
- spray on activator and wipe dry
- spray activator onto cleaned contact area of windshield and let dry for approximately one-two minutes
- apply one drop of metal adhesive to center of cleaned contact area of plate
- press plate onto prepared contact area of windshield and hold in position for approximately 30 seconds
- attach mirror to plate and tighten socket head screw with 2.0 mm (5/64 in.) hexagon wrench

Inside rear view mirror, removing/installing

Inside rear view mirror mounting plate, installing

■ remove surplus activator





## Accessory floor mats, installing

Audi vehicles are equipped with floor mat retention posts in both front foot wells.

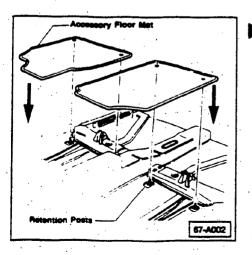
Specially designed floor mats must be attached to these posts (arrows).

- place front seats into rear most position
- remove factory installed mats, where applicable
- turn off ignition switch

## CAUTION

Do not use protective floor mats other than Audi approved mats.

Be sure to have the mats engaged to the retention posts and secured. Do not install more than one set of floor mats as they may shift forward and interfere with the floor pedals. Restricted pedal movement may cause loss of vehicle control and personal injury.



- place accessory floor mat over retention posts (as shown)
- press mats firmly downward (arrows)

# Accessory floor mats, removing

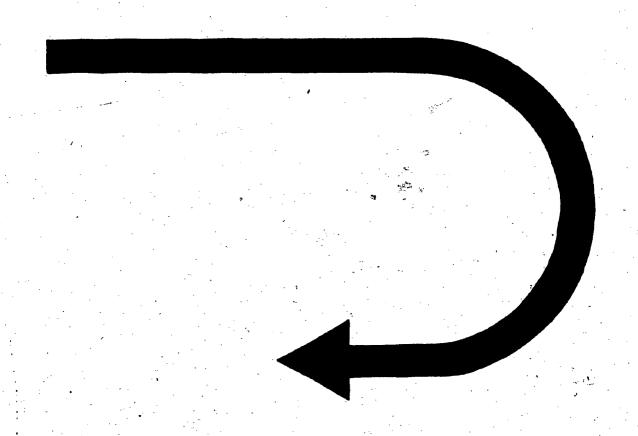
- grasp corner of mat and pull straight up off retention post
- repeat procedure at opposite corner

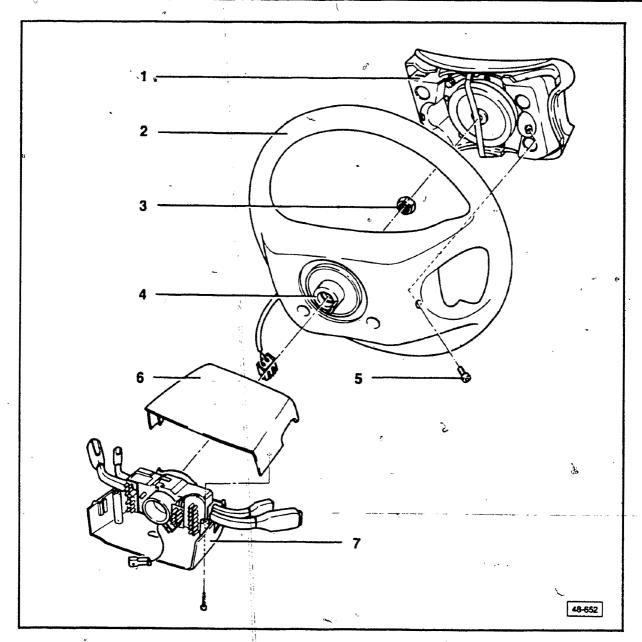
#### Note

Leave all instruction sheets with owner's manual for future reference.

# CONTINUED IN THE

BEGINNING OF NEXT ROW





## WARNING

Airbag System

To prevent personal injury or airbag system failure, ONLY TRAINED PERSONNEL should disassemble, assemble, or service the airbag system.

#### CAUTION

Always disconnect the voltage supply to the airbag system when doing repairs requiring the removal of airbag components.

#### Note

Beginning with model year 1990, all Audi 80/90/Coupe vehicles are equipped with a driver airbag housed in the steering wheel assembly.

Do not weld or straighten steering components.

Replace all self-locking fasteners.

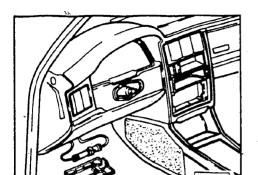
٤.

- 1 -- Airbag unit
  - removing/installing, page 68.38
- 2 Steering wheel
  - install in centered position, with turn signal lever in Neutral and front road wheels straight ahead
  - · replacement steering wheel must be factoryreleased, and equipped with canceling ring and contact ring

#### CAUTION

Do not place any stickers or covering on a steering wheel equipped with an airbag.

- 3 Hex nut 40 Nm (30 ft lb)
- 4 Canceling ring/contact ring assembly
  - · can be replaced separately from wheel
- 5 Mounting bolt for airbag unit 6 Nm (53 in. lb)
- 6 Cover, steering column switch
- 7 Steering column switch in mount



# Connector for voltage supply, installed position

- connector color: red
- "airbag" marked on connector

# **CAUTION**

Always disconnect the voltage supply connector when doing repairs requiring removal of parts of the airbag system.

# Safety measures, airbag system

# CAUTION

Testing, assembly and repair work on the airbag system must only be conducted by trained Service Department personnel.

Always observe the following safety measures when working on the airbag system:

- testing of the airbag system is never conducted with a test light or voltmeter. Use the special airbag tester VAG 1619 and test the system only in an installed condition
- airbag system components must not be opened or repaired. Always use new parts
- the airbag unit has an expiration date.
   The date can be found on a sticker behind the driver's sun visor. After ten years the airbag unit must be replaced, see page 68.48. For safety reasons all other component parts of the airbag system must also be replaced at this time
- if the āirbag unit or triggering unit has been dropped from a height of 0.45 meters (18 in.) or more, do not install the component into a vehicle
- always replace airbag system components which have been mechanically damaged (bubbles, cracks, etc.)
- disconnect the negative battery cable and cover the battery terminal during all work on the airbag system. Also, separate the red, single-pin connector (marked with the word "airbag") for the power supply behind the instrument panel
- before installing a computer memory saver device on cars with an electronic radio lock, separate the airbag power supply connector. Failure to do so may result in accidental activation of the airbag

#### CAUTION

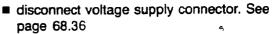
- do not leave an undeployed airbag unit unattended if work is interrupted. Install into vehicle as soon as unit is removed from packaging.
- always place a removed airbag unit so that the horn pad is facing upwards
- the airbag unit must not be exposed to grease, or cleaned with any type of cleaning agent
- do not expose airbag units to temperatures above 100°C (212°F) even for brief periods while handling them during the repair process. Keep the airbag unit clear of heat sources such as heating plates, soldering irons, heat lamps, welding equipment and the like
- if the airbag has been deployed during an accident, replace the triggering unit, the airbag, and the spiral spring.
   Check all other components for damage and replace if necessary
- the storage, transportation and disposal of airbag units are subject to the laws for flammable solids

# Disposal of airbag and triggering units

- active airbag gas generators: Remove an active (unit which has not been deployed) airbag gas generator carefully from the vehicle, and return to the Warranty Parts Test Center for proper disposal. DO NOT deploy in vehicle, see page 68.49
- deployed airbag gas generators do not have to be disposed of as a "hazardous waste" but can be disposed of with other trash, although it is recommended that for conservation reasons it be sent out with automotive metal scrap for recycling
- triggering units contain a mercury switch and must be disposed of in an approved manner

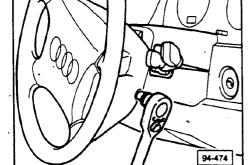
# Airbag unit, removing/installing

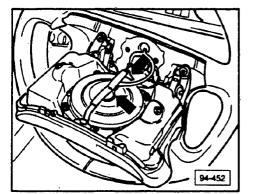
# Removing



 unscrew Torx-head retaining bolts on either side of steering wheel

• use standard Torx 30 bit





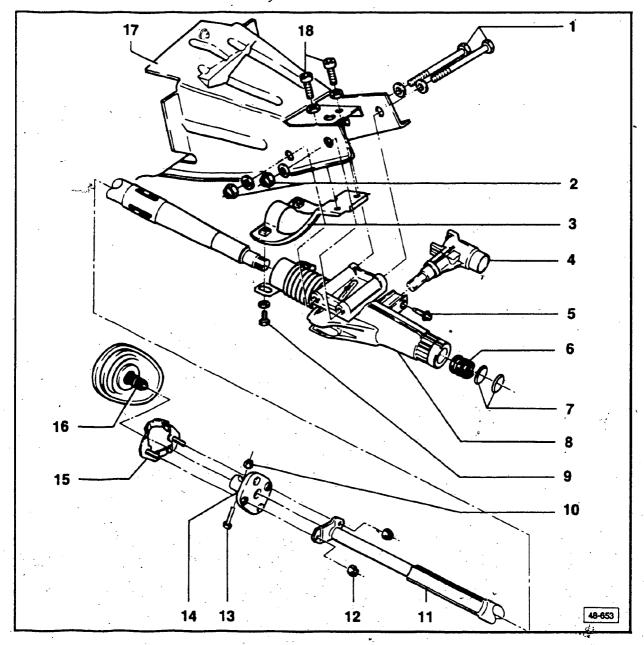
- detach airbag unit from steering wheel, carefully, and tilt downward
- lift up safety clamp (top arrow)
- disconnect wiring terminal (lower arrow) from airbag unit

# CÁUTION

DO NOT place removed airbag unit face down on vinyl horn pad side. Audi rings must be facing upward.

# installing

- connect wiring terminal to airbag unit
- position airbag unit in steering wheel
- fasten clamp securing airbag wiring terminal
- tighten Torx-head bolts
  - tightening torque: 6 Nm (53 in. lb)
- connect voltage supply connector



#### CAUTION

Always disconnect the voltage supply to the airbag system when doing repairs requiring the removal of airbag components.

#### Note

Beginning with the 1990 model year, all Audi 89/90/Coupe vehicles are equipped with a collapsible steering column, as well as an airbag system.

- 1 Hex head bolts
- 2 Self-locking nuts 35 Nm (26 ft lb)
- 3 Mounting plate install to the support bracket (top) and to steering column tube (bottom)
- 4 Steering lock housing
  - position at steering column tube and fasten
  - connect to ignition wiring connector
- 5 Torx bolt 7 Nm (62 in. ib)
- 6 Spring install on steering column (see page 68.45)

#### 7 - Lock washers

· removing: grind down (carefully), then pry out with screwdriver

#### CAUTION

Grinding may create sparks. Protect instrument panel and windshield.

Note during removal that washers are pre-tensioned.

- → installing, page 68.45
- 8 Steering column tube
  - · consists of upper and lower sections

#### CAUTION

Upper and lower sections of column tube have a red dot. Always replace the column tube if the red dot is worn or sheared off.

If any play exists between upper/lower sections, replace column tube. Inspect for play, when repairing accident damage.

- the following may loosen upper/lower section connection: lubricants, solvents, temperatures over 100°C
- do not hammer any part of the steering column
- bearing included as replacement part
- 9 Hex head bolt 25 Nm (18 ft lb)
- 10 Self-locking nut 25 Nm (18 ft lb) always replace
- 11 -- Steering column, collapsible
  - removing/installing, page 68.41
  - install up to stop, on column tube
  - · install free of strain
- 12 Self-locking nut 25 Nm (18 ft lb)
- 13 Bolt always replace
- 14 Flange tube
  - to install, slide onto steering pinion and bolt to steering column and retaining bracket
  - as replacement part, has coupling disc riveted on
- 15 Retaining bracket
- 16 Steering pinion
- 17 Support bracket
- 18 25 Nm (18 ft lb)

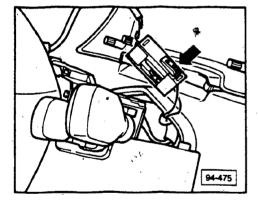
# Steering column, collapsible, removing/installing

# Removing

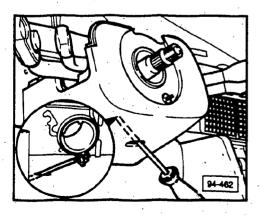
- disconnect battery ground cable to disable airbag system
- place front road wheels in straight-ahead position
- remove airbag unit. See page 68.38
- remove fasteners (arrows) retaining cover for steering column switch assembly



- disconnect airbag connector
  - located behind steering column switch cover
  - using screwdriver, press tab (arrow) on edge of casing
- remove steering wheel. See page 68.34

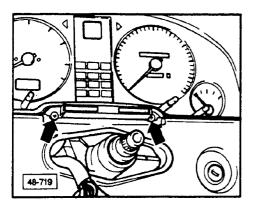


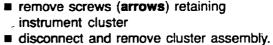
 loosen clamp on steering column switch and remove switch



1-10

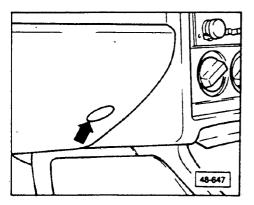
Airbag



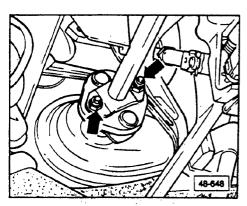


See Repair Group 90

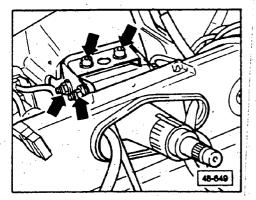
■ disconnect ignition wiring terminal from lock assembly



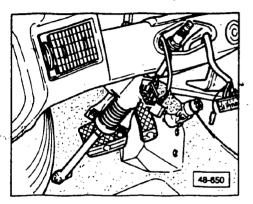
- unfasten knee bar (four bolts)
  - pry out capping (arrow)
- unclip diagnostic connectors from knee bar
  - position connectors aside
- remove knee bar

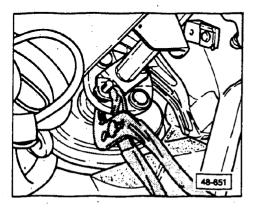


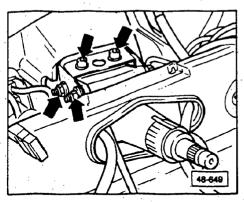
- detach base of steering column (arrows) from retaining bracket
- pry steering column away from boot, carefully
  - using screwdriver (approximately 15 mm)



remove fasteners (arrows) securing column tube/mounting plate to mounting bracket







push steering column downward, turning assembly until it can be removed from beneath instrument panel

## installing -

- insert column assembly, from below, up through instrument panel
- position column assembly/mounting plate at mounting bracket. Insert bolts
- insert ignition key in ignition lock for steering column
- unlock steering column lock so that column can be turned as needed
- clamp base of steering column against flange tube and retaining bracket, using pliers. Bolt together

- tighten mounting hardware (arrows) for column assembly and bracket
- connect ignition wiring terminal to steering lock assembly

Steering column, collapsible,

removing/installing

#### Note

For procedures to install spring and new lock washers, see page 68.45.

- install instrument cluster
- connect airbag wiring
- install steering column switch and cover
- install steering wheel. See page 68.34.

# **CAUTION**

Do not place any stickers or covering on a steering wheel equipped with an airbag.

## Note

Steering wheel must be centered, when front wheels are in a straight-ahead position.

- connect battery ground cable
- check function of steering column switch
- position wiring behind knee bar panel and install panel

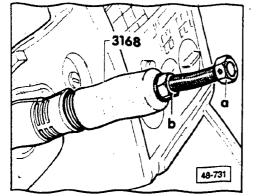
Steering column, collapsible,

removing/installing

# Lock washers/spring for collapsible steering column, pressing on



- place new lock washers on column
- install tensioner 3168 onto steering column up to stop (i.e. nut b threaded down)
- hold spindle a while tightening nut b until spring is compressed



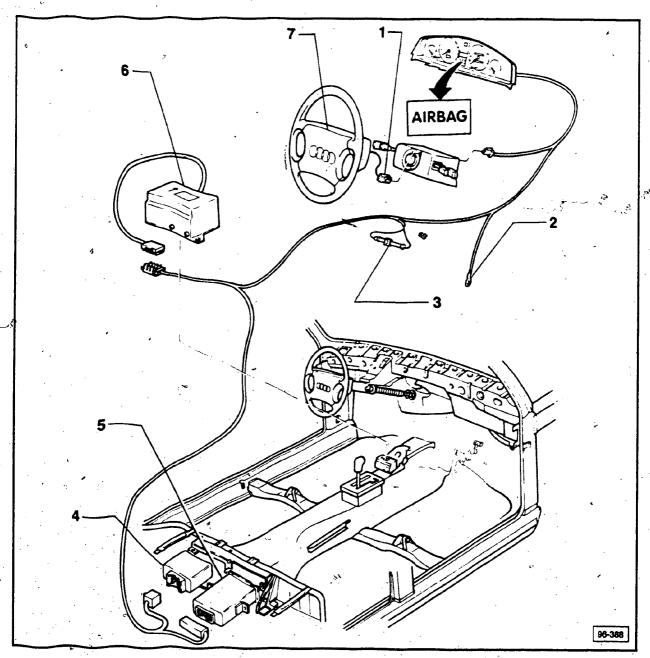
# CAUTION

Do not over-tighten spring, or bearing damage could result.

- loosen nut b
- remove tool from steering column

# THIS FRAME INTENTIONALLY LEFT

# **BLANK**



#### Note

Beginning with model year 1990, all Audi 80/90/Coupe vehicles are equipped with a driver airbag, housed in the steering wheel assembly.

After switching the ignition ON, the airbag warning light will light up for approximately 10 seconds while an electronic test cycle is completed. The airbag system is ready when the light goes out.

If the warning light does not go out; test airbag system with diagnostic unit **VAG 1619**, as described on page 68.58.

If the warning light fails to light: check bulb. If bulb is O.K., test airbag system with diagnostic unit VAG 1619, as described on page 68.57

When working on the airbag system, observe the safety measures listed on pages 68.37

For steering system repairs involving the airbag, see also Repair Group 48.

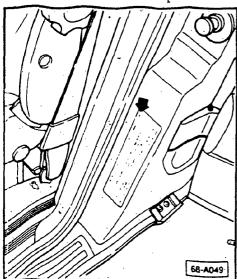
- 1 Connector, spiral spring spiral spring, removing/installing, page 68.55
- 2 Grounding point behind instrument panel
- 3 Connector, voltage supply always disconnect when working on airbag components installed position, page 68.51

- 4 Energy reserve installed position, page 68.51
- 5 Voltage transformer installed position, page 68.51
- 6 Triggering unit installed position, page 68.51
- 7 Steering wheel with airbag unit removing/installing, page 68:53

#### CAUTION

Always disconnect the voltage supply to the airbag system when doing repairs requiring the removal of airbag components.





# Airbag date sticker, replacing

# Airbag has been deployed or replaced

- remove original airbag sticker from sunvisor
- use new airbag sticker and punch or cut out the month and year when airbag next requires renewal (10 years from date of replacement)
- install new label on driver's side sunvisor

# Example

If airbag was renewed in August of 1990, punch out the month 08, and the year 2000 as date of next renewal of airbag.

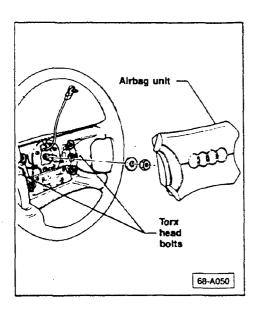
# Replacing airbag sticker to new sunvisor

If, for any reason, sunvisor needs to be replaced:

- use new airbag sticker
- transfer correct month and year from original sticker to new sticker
- affix sticker to new sunvisor

# Note

If the airbag sticker on sunvisor is missing, use the vehicle manufacture date (arrow), found on label on driver's side B-pillar as the original airbag installation date.



# Disposal of active airbag unit

Active airbag gas generators present a potential danger. The units are classified as "Hazardous Materials" and must be disposed of in accordance with applicable regulations.

Remove an active (unit which has not been deployed) airbag gas generator carefully from the vehicle, and return to the Warranty Parts Test Center for proper disposal. For removal instructions, refer to Section 48 and 68 of the applicable Repair Manuals.

In situations where the airbag unit cannot be safely removed from the vehicle, contact your DSM.

Shipment of active airbag gas generators must be in accordance with 49 CFR 107.113 and 107.105 of the Department of Transportation (DOT) Hazardous Materials Regulations. In addition, a copy of the DOT exemption must be attached to the unit being shipped.

#### Note

A copy of the Department of Transportation (DOT) exemption is included with the replacement airbag unit supplied to the dealer from the Parts Depot. If exemption paper is missing, contact the Parts Depot.

Always use original box for shipping airbag unit to the Warranty Parts Testing Center.

# Airbag system components, when to replace

- airbag system must be replaced 10 years after date of manufacture, see page 68.48.
- replace airbag components that have fallen or have been dropped more than 18 inches, even if they appear undamaged
- replace parts of airbag system which are visibly damaged (dented, split, etc.) or have been exposed to grease or chemicals
- do not use airbag units that have been exposed to temperatures above 100°C (212°F) even if only for a brief period.
   Such exposure can be caused by heating plates, soldering irons, heat lamps, welding equipment and the like
- if airbag system has been triggered in an accident, replace triggering unit, airbag unit, and spiral spring. If airbag system has undergone previous unauthorized repair, replace components involved
- replace any components determined defective through diagnostic procedures (using airbag tester VAG 1619).

# CAUTION

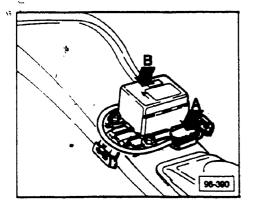
Always disconnect the voltage supply connector when doing repairs requiring fremoval of parts of the airbag system.

# Triggering unit, installed position

• behind center console

A = connector

B = triggering unit



# Energy reserve/voltage transformer, installed position

• under rear seat bench

A = voltage transformer

B = energy reserve

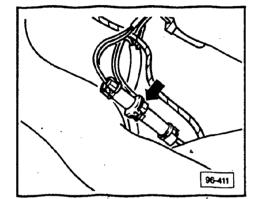
# Computer memory saver, installing

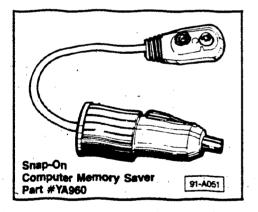
The computer memory saver tool is used on vehicles with theft protected radios to prevent the radio from electronically locking when battery power is disconnected. Using the tool eliminates the need to re-activate (code) the radio after reconnecting battery power. See Service Circular, Tools — Equipment dated April 27, 1988.

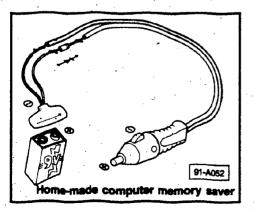
#### WARNING

ALWAYS separate airbag power supply connector before using computer memory saver. Failure to do so may result in accidental activation of the airbag.

- disconnect airbag power supply connector (arrow)
  - located under kneebar, driver's side
- install computer memory saver into cigarette lighter
- disconnect battery







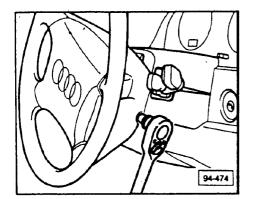
# Airbag unit/steering column switches, removing/installing

# Removing

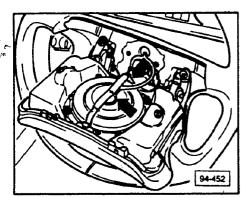
# **CAUTION**

Before removing the steering wheel or steering column switches, disconnect the airbag voltage supply connector.

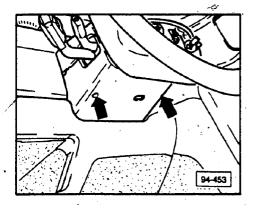
- turn steering wheel to straight ahead position
- remove mounting bolts with Torx handle (e.g. Hazet T 30)

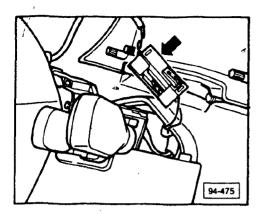


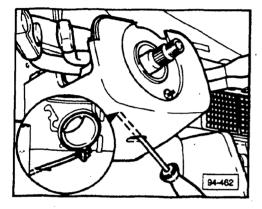
- detach airbag unit from steering wheel, carefully, and tilt unit downward
- lift up safety clamp (top arrow)
- disconnect wiring terminal (lower arrow)



remove screws (arrows) and upper trim for steering column







- separate connector for airbag unit (arrow)
- remove steering wheel.

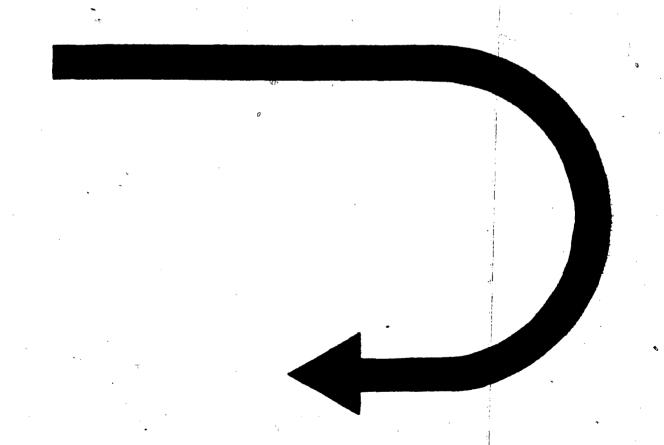
- loosen clamp of steering column switch
- remove switch

# Installing

Install in reverse order of removal

■ tighten airbag unit Torx bolts to 6 Nm (53 in. lb)

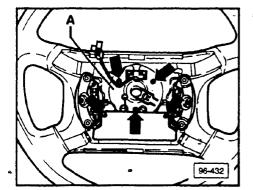
# CONTINUED IN THE BEGINNING OF NEXT ROW



# Spiral spring, removing/installing

# Removing

- turn steering wheel to straight ahead position
- disconnect voltage supply connector. See page 68.36
- remove airbag unit and steering wheel



- remove screws (arrows)
- remove lock plate A
- pull back spiral spring to remove

#### **Note**

Do not twist spiral spring after removal

# Installing

Install in reverse order of removal.

#### **CAUTION**

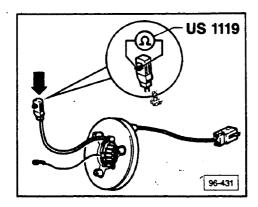
Steering wheel must be centered (wheels straight ahead) before installing spiral spring. Failure to do so will damage spiral spring.

# Spiral spring, checking

# Note

The spiral spring must only be checked after it has been disconnected and removed.

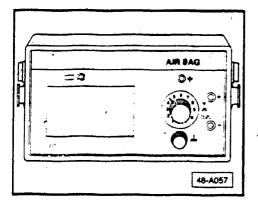
- connect multimeter US 1119 to airbag unit connector (arrow)
  - pre-set multimeter to ohm scale
  - ullet resistance must be: 0 1 $\Omega$
  - replace spiral spring if specified value is not attained



# Airbag system, testing

# Preliminary steps

- check that airbag warning light is O.K.
- disconnect battery
- remove center console trim on right side
- separate 10-point connector for triggering unit



- connect airbag tester VAG 1619 to wiring harness (triggering unit remains disconnected)
- connect battery

# **Testing**

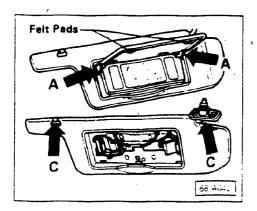
test in sequence using following chart:

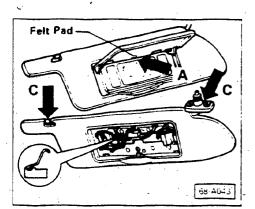
Airbag system, testing

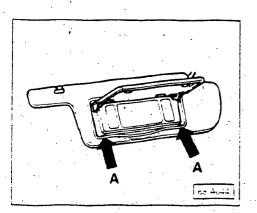
Switch position on tester	Test 🤄	Actuation	Specified result	Possible causes of deviation from specified result
1	voltage supply	ignition <b>ON</b>	tester light : <b>ON</b> Airbag warning light: <b>ON</b> tester display: battery voltage	battery charge NOT .  OK  wiring defective
2	voltage transformer	ignition ON	tester light : <b>ON</b> tester display: 11-13	wiring, voltage transformer, or energy reserve unit defective
3	resistor, ignition circuit	ignition ON turn steering wheel to left and right stops	tester light : <b>ON</b> tester display: 2.15-3.4	spiral spring defective wiring defective
3	short circuit	ignition: ON push button	tester light : ON tester display: EE-E	wiring defective
4 and 5	not used	· · ·		
6	check energy reserve charge	ignition: ON	tester light : ON o display: greater than 9.0	wiring defective energy reserve defective
7	check energy reserve	ignition: ON	tester light : <b>ON</b> then goes out display: greater than 7.0 after light goes out	energy reserve defective
8-10	not used			

# After testing

- disconnect battery
- disconnect tester VAG 1619
- reconnect 10-point connector for triggering unit
- connect battery







# Illuminated vanity mirrors, repairing

## Version I

- rounded hinge corners (arrows A)
- twin felt pads on inside of mirror cover .
- uses hinge piyots (arrows C) for voltage and ground contacts

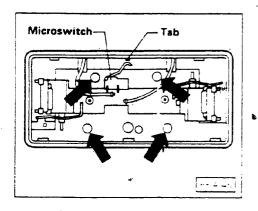
# Version II

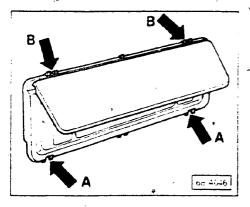
- center tab (arrow A), single felt tab
- contains microswitch activated by center tab when lid opened or closed (inset)
- uses hinge pivots (arrows C) for voltage and ground contacts

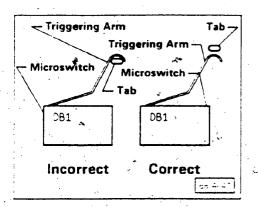
#### CAUTION

Part numbers are for reference only. Always check with your Parts Department for latest information.

- lower sunvisor, open mirror cover
- using soft cloth to protect sunvisor, pry up at points A with small screwdriver
- remove mirror/lens assembly
- using volt/ohmmeter, check light circuit for continuity
- replace light bulb(s), Part No. N 017 725 2 or repair connectors as necessary
  - microswitch is not available as a replacement part







- inspect light assembly for tight fit in visor
- if loose or falling out of sunvisor, reglue the back side with adhesive, Part No. AKD 476 KD5 05 or equivalent
  - additional glue may be added to the open vent holes (arrows) until a bead forms (Version II shown)

- reinstall mirror/lens assembly into light assembly, first at points B. then carefully apply pressure at points A, and push fully into light assembly
- check illuminated vanity mirror for proper function

#### Note

On Version II, if vanity light still does not function, or a loud clicking noise is heard when opening or closing mirror cover, the microswitch triggering arm does not meet center tab, and must be realigned.

# Triggering arm, aligning

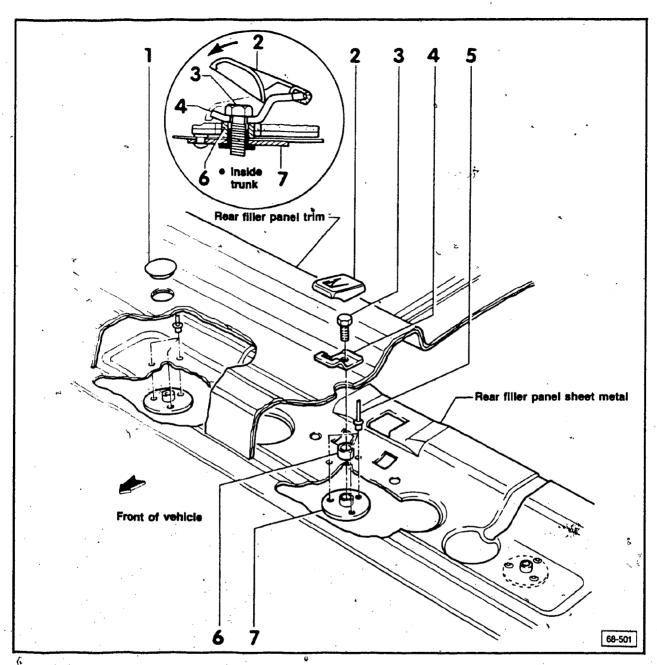
- remove mirror/lens assembly
- carefully bend microswitch triggering arm outward from light assembly
  - arm must contact center of tab to prevent slipping behind tab when opening mirror lid. as shown in illustration 68-A045
- reinstall mirror assembly into visor and test for proper function

#### CAUTION

If new sunvisor is installed, the airbag date sticker, Part No. 443 010 028F, must be replaced.

Do not transfer the original sticker onto the replacement visor.

Refer to current repair literature for airbag sticker replacement instructions.



Provision is made in the rear filler panel for the installation of up to 3 child restraint tether anchor points.

- covers hole in filler panel when anchor bracket is removed
- 2 Cover when installing, hook onto front of anchor bracket, then push down in rear (inset)
- 3 Bolt 25 Nm (18 ft lb)
- Anchor bracket

#### 5 - Pop rivet

- secures washer 7 to rear filler panel sheet metal
- install from top (inside vehicle)
- 6 Spacer sleeve
- - insert from inside trunk, secure with pop-rivets 5
  - · holes are pre-drilled in rear filler panel sheet metal

# Child restraint anchorage, installing

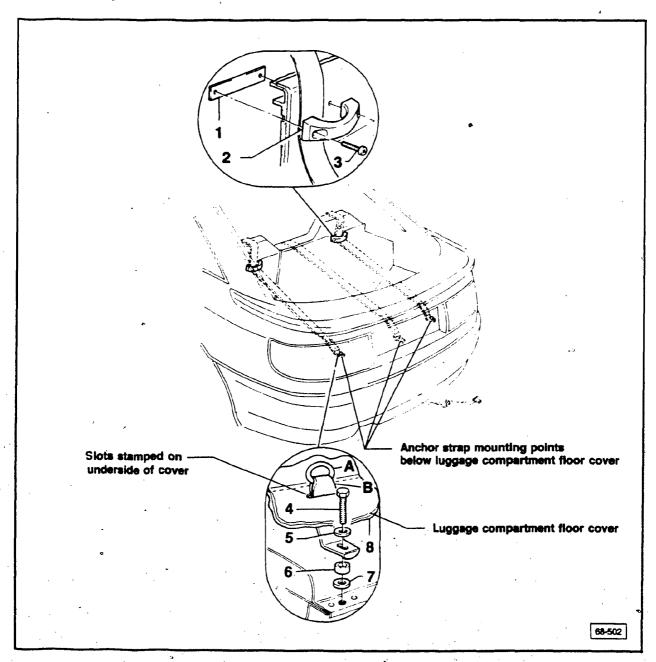
- remove rear seat bench, seatback
- open rear lid
- from inside trunk locate anchorage points for washer 7, pop-rivets 5 in rear filler panel sheet metal
  - in line between rear speakers
- mark center of anchor point hole on rear of filler panel trim
- remove rear filler trim panel
   drill a 24 + 0 mm (approx. 61/64 in) hole in panel trimat point marked
- using pop-rivets 5, mount washer 7 to underside of filler panel sheet metal
  - install pop-rivets from inside vehicle (top)

# Vehicle (top)

- mount spacer sleeve 6, anchor bracket 4
- install bolt 3
  - 25 Nm (18 ft lb)
- install cover 2 (inset) onto anchor bracket

#### Note

Cap 1 is only used to cover hole in rear filler panel trim when anchor bracket is removed.



- 1 Reinforcement plate
  - only used with the outer (left/right) anchor points
  - instailing, seé next page
- 2 Belt guide

only used with the outer (left/right) anchor points, and in conjunction with reinforcement 1

- 3 Screw 6 Nm (53 in. lb)
- 4 Bolt 25 Nm (18 ft lb)

- 5 Washei
- 6 Spacer sleeve
- 7 Washer
- 8 Luggage compartment floor 🐣
  - slots for anchoring eyes A on anchor strap B must be cut out
  - mount anchoring strap as shown (bottom inset)

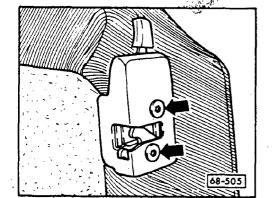
# Child restraint anchorage, installing

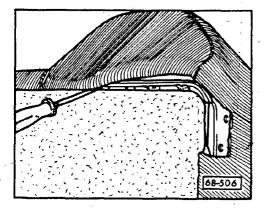
## Note

Installation of outer (left/right) anchor point is described. Center point does not require reinforcement plate, removal of seatback lock or partial removal of seatback cover.

- remove bolts (arrows), take off rear seatback lock
  - $\bullet$  9 ± 2 Nm (80 ± 18 in. lb)

■ carefully pry off seatback cover, as shown





- Seatback Headrest support
- using a 6.0 mm (15/64 in.) drill, drill through holes (arrows) stamped in seatback below headrest support
- install reinforcement plate 1, and secure with belt guide 2
- locate, by feel, slots stamped into underside of luggage compartment floor cover
- using utility knife, cut out slots for anchor belt(s) as necessary
- mount anchor strap as shown (lower inset, opposite page)