

Gear selector mechanism up to 05.99, servicing

Installation position of gear selector mechanism

A - Gear change cable

B - Gate selector cable

C - Heat shield

◆ Remove before removing the gear selector mechanism.

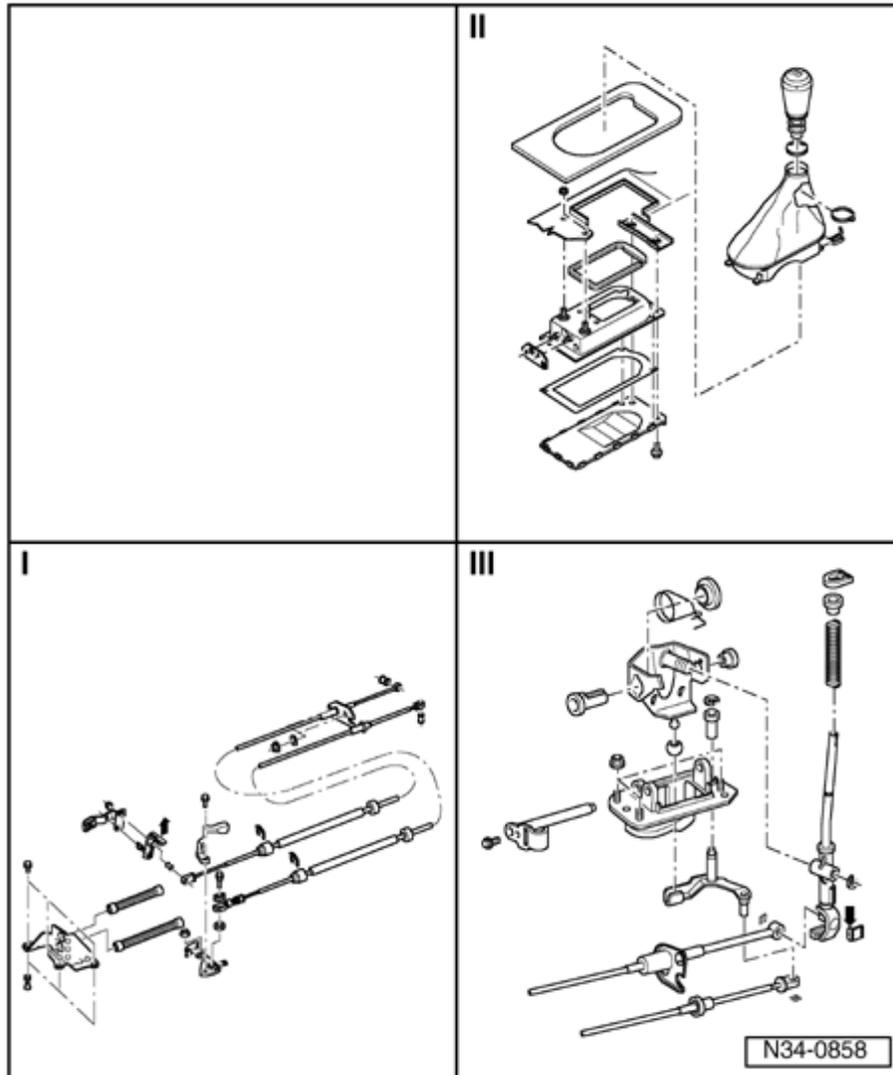
Arrow -A- Gear selection movement

Arrow -B- Gate selection movement

1 - Gear selector lever

2 - Relay lever with actuating arm/gate

**selector
cable**



I -
**Assembly overview:
 Removing and installing selector cables** ⇒
[Page 34-3](#)

II -
Servicing gear lever housing
 ⇒ [Page 34-13](#)

III -
Servicing gear lever ⇒
[Page 34-17](#)

Removing and installing selector mechanism ⇒
[Page 34-9](#)

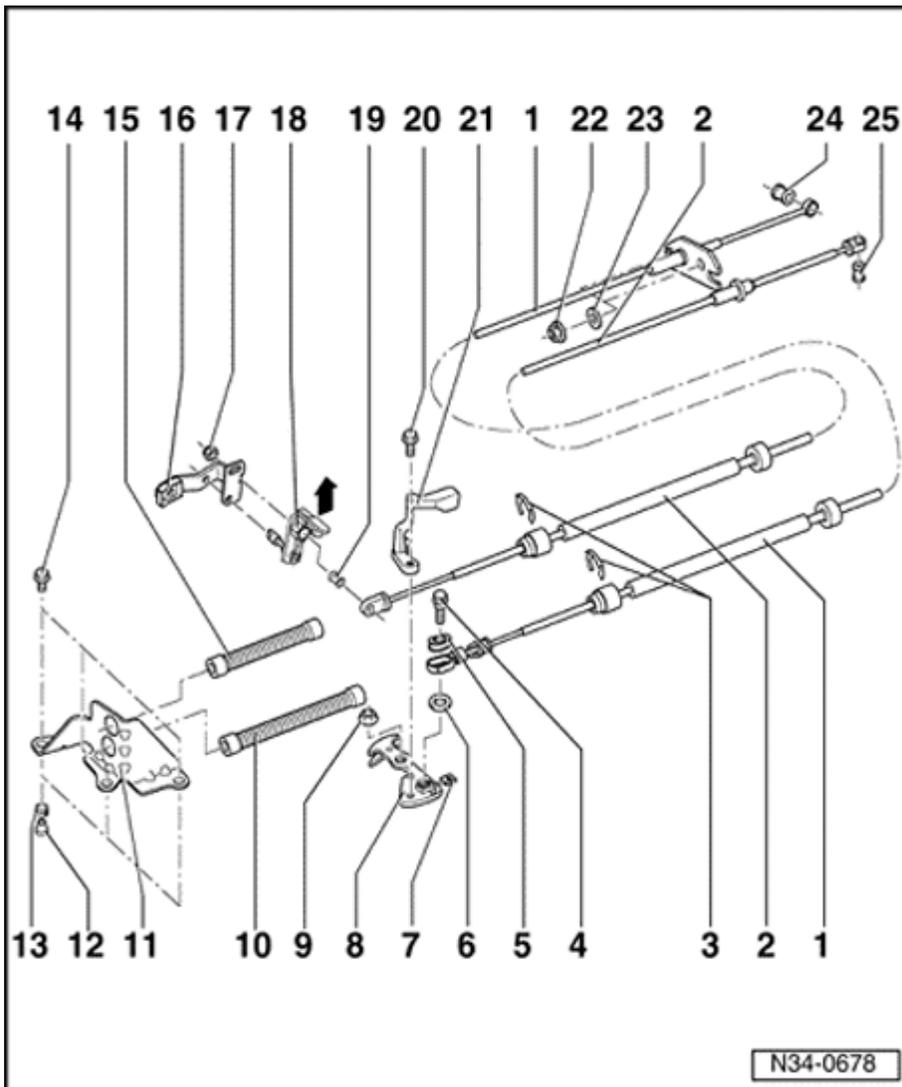
Adjusting selector mechanism ⇒
[Page 34-22](#)

Note:

- ◆ *Before working on the selector mechanism, disconnect the battery ground strap in the engine compartment.*

◆
Note

*radio
code on
vehicles
with
coded
radio.*



Selector cables, removing and installing

Note:

Lubricate all mountings and sliding surfaces with Polyurea grease Part No. G 052 142 A2.

1 - Gear selector cable

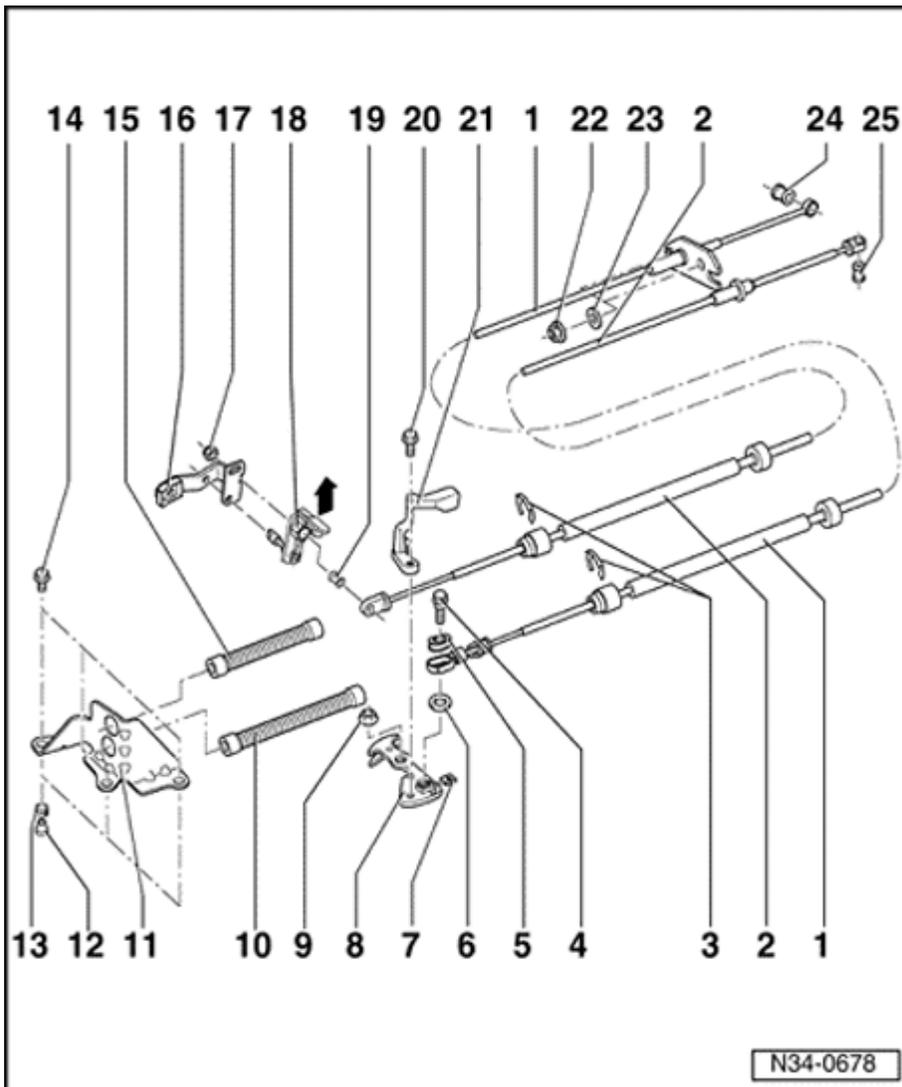
- ◆ Installation position ⇒ [Page 34-1](#)

2 - Gate selector cable

- ◆ Pull off actuating arm (item 18) by pulling lug in direction of arrow
- ◆ Installation position ⇒ [Page 34-1](#)
- ◆ Install before installing gear selector cable

3 - Circlip

- ◆ When removing do not damage boot



4 - Hex combi bolt, 25 Nm

- ◆ With shoulder
- ◆ Gear selector cable to gear change lever

5 - Rubber bushing

- ◆ For gear change cable to gear selector lever
- ◆ To replace boot press out of end piece

6 - Washer

- ◆ Install between gear selector cable and gear selector lever

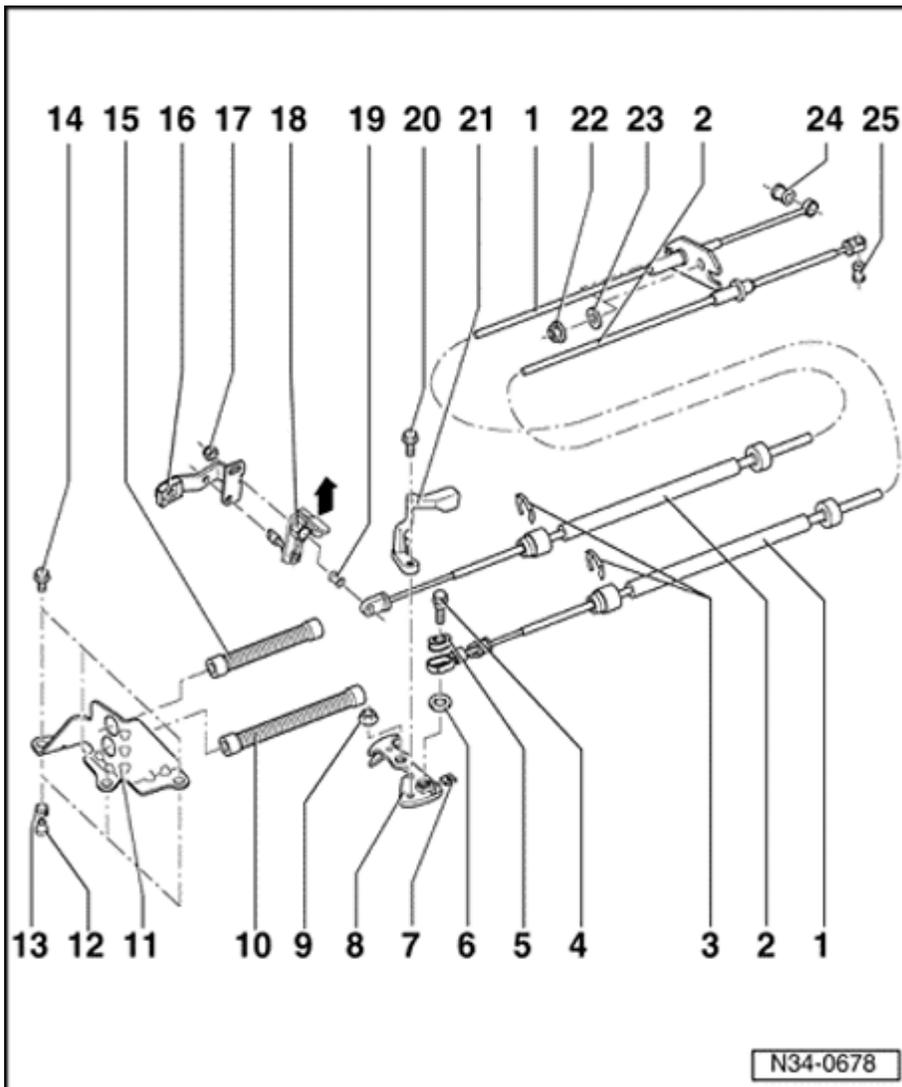
7 - Square nut

- ◆ Self-locking
- ◆ Always replace

- ◆ Insert into gear selector lever

8 - Gear selector lever

- ◆ Only fits in one position
- ◆ After installing adjust gear selector mechanism
⇒ [Page 34-22](#)
- ◆ Installation position ⇒ [Page 34-8](#)



9 - Self-locking hex nut, 20 Nm

- ◆ Always replace
- ◆ For gear selector lever

10 - Boot

- ◆ Carefully pull over gear selector cable end piece
- ◆ Use MoS₂ grease

11 - Support bracket

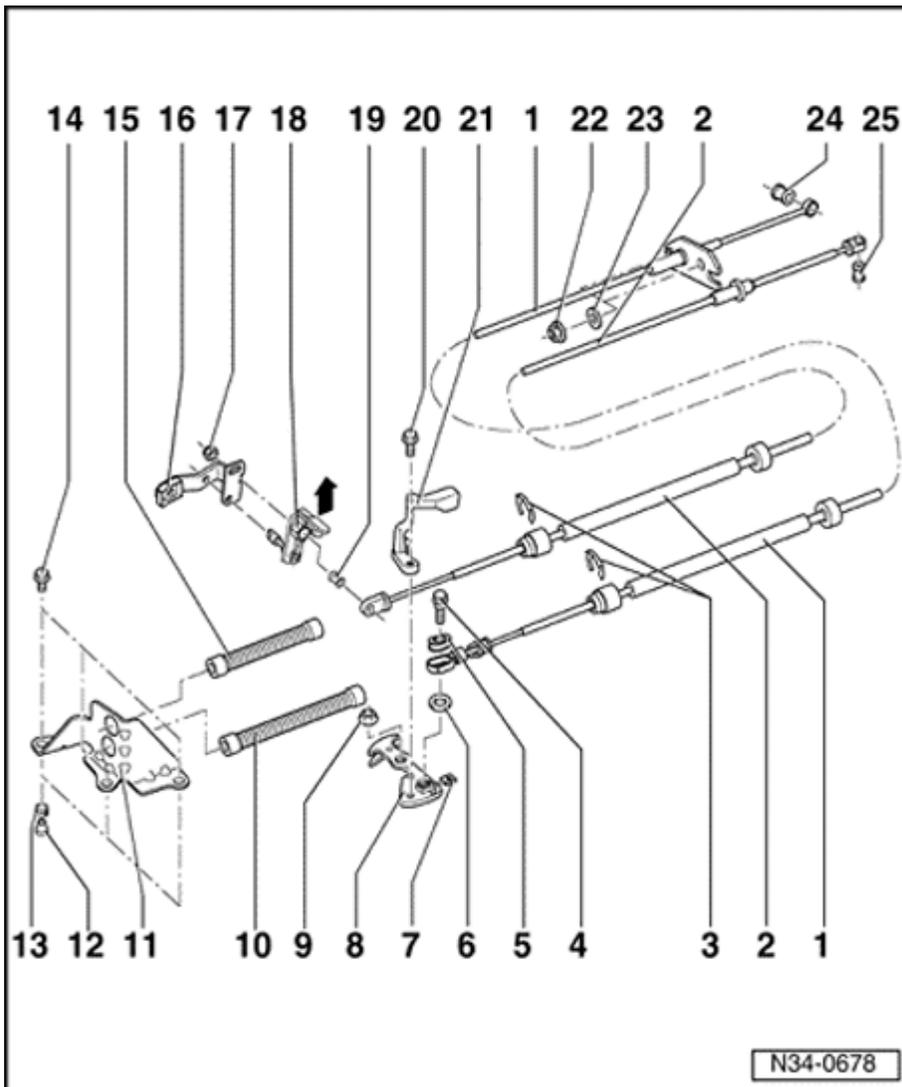
12 - Distance piece

13 - Bushing

- ◆ Support bracket mounting to transmission

14 - Hex bolt, 25 Nm

- ◆ For support bracket

**15 - Boot**

- ◆ Carefully pull over gear selector cable end piece
- ◆ Use MoS₂ grease

16 - Relay lever

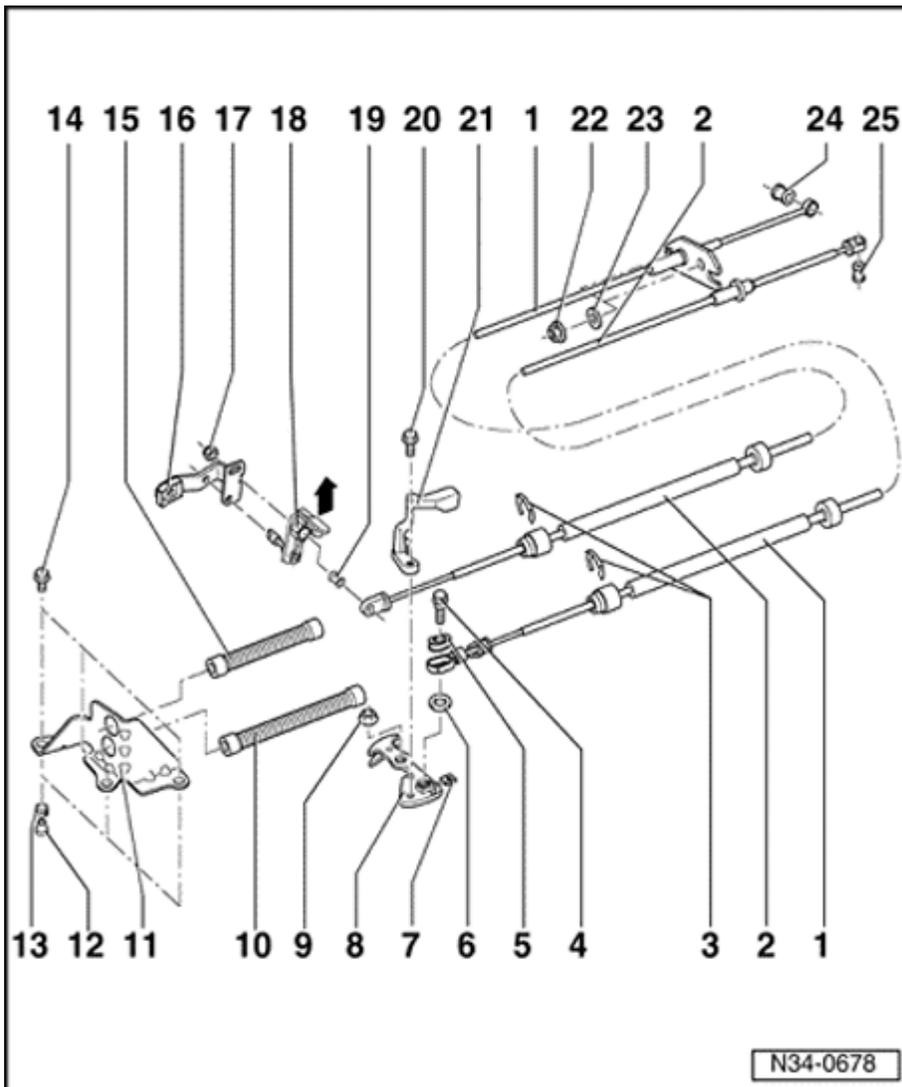
- ◆ Remove before removing clutch control
- ◆ Installation position ⇒ [Page 34-8](#)
- ◆ Servicing ⇒ [Page 34-130](#)

17 - Self-locking hex nut, 15 Nm

- ◆ For relay lever to actuating arm
- ◆ Only loosen to adjust selector mechanism

18 - Actuating arm

- ◆ With pivot pin to mount relay lever
- ◆ Installation position ⇒ [Page 34-8](#)
- ◆ Servicing ⇒ [Page 34-130](#)



19 - Rubber bushing

- ◆ For gate selector cable to actuating arm
- ◆ Press in and out with drift

20 - Hex bolt, 25 Nm

- ◆ For balance weight

21 - Balance weight

- ◆ Remove to adjust selector mechanism

22 - Self-locking hex nut, 15 Nm

- ◆ For selector cable to selector housing

23 - Rubber washer

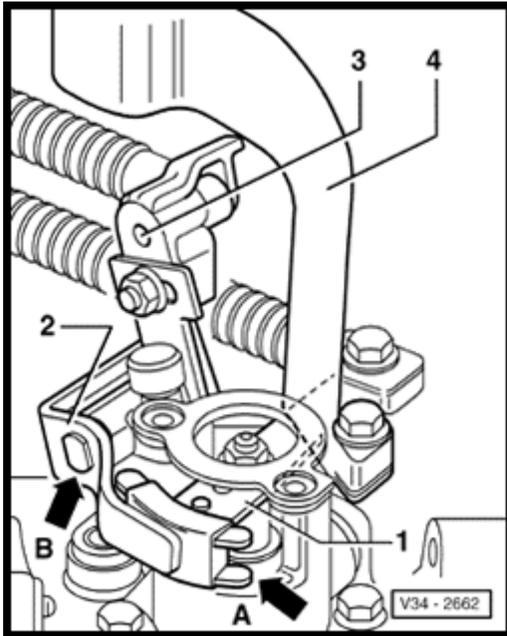
24 - Rubber bushing

- ◆ For gear selector cable/gear change lever

- ◆ Press in and out with drift

25 - Rubber bushing

- ◆ For gate selector cable/selector bracket
 - ◆ Press in and out with a drift



A Installation position - gear selector lever/relay lever actuating arm/balance weight

1 - Gear selector lever

2 - Relay lever

Locates in guide rail of gear shift lever (arrow -A-)

Lubricate with MoS₂ grease

3 - Actuating arm

Flats (arrow -B-) of axis face mounting, relay lever only fits in one position

4 - Balance weight

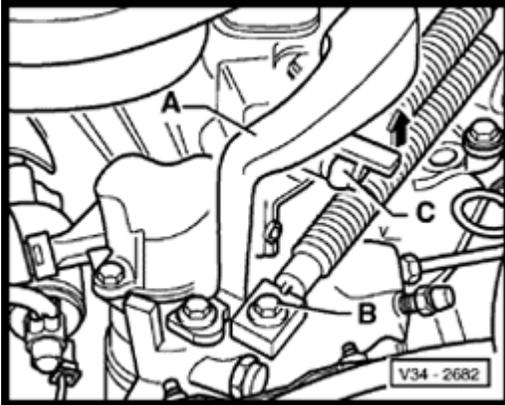
Bolt on to gear selector lever

Note:

For ease of illustration the linkage and switch for reverse light have been removed.

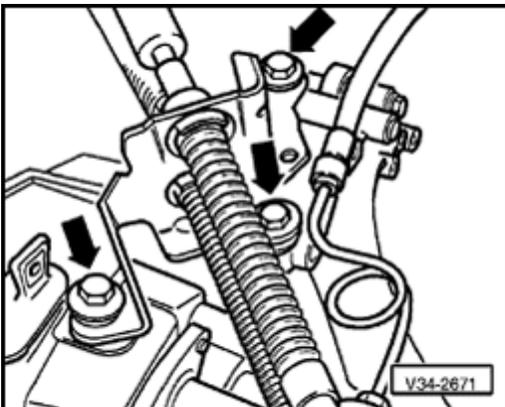
Selector mechanism, removing and installing

Removing



A

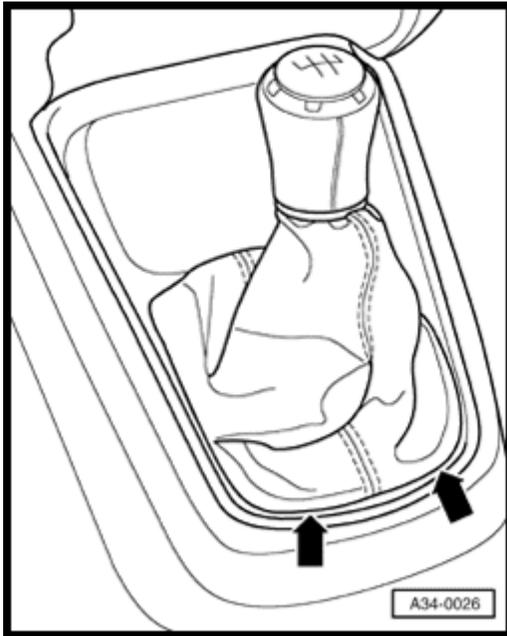
- Remove balance weight -A- and gear selector cable -B- from gear selector lever.
- Take off gear selector cable with washer and square nut (self-locking).
- Lift lug in direction of arrow and pull gate selector cable off actuating arm/relay lever -C-.



A

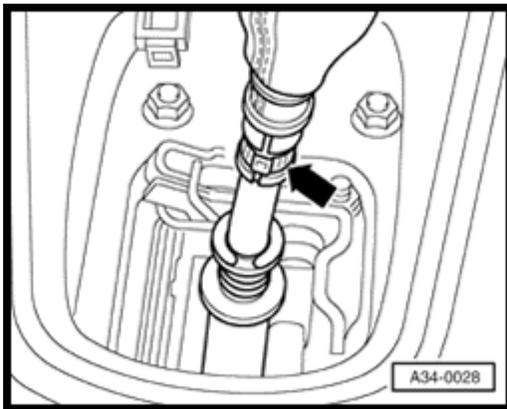
- Remove cable support bracket from transmission (arrows), if necessary unclip hose at cable support bracket first.

34-10



A

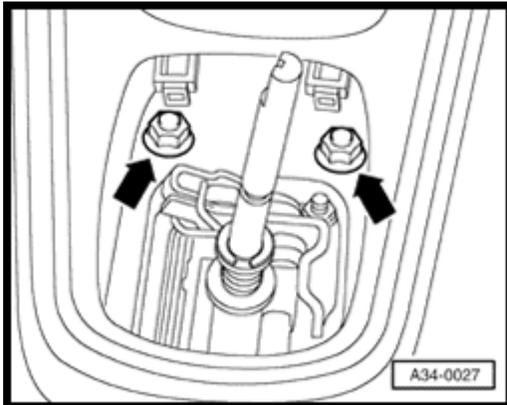
- Carefully lever cover off center console (arrows).
- Pull cover to rear off center console.



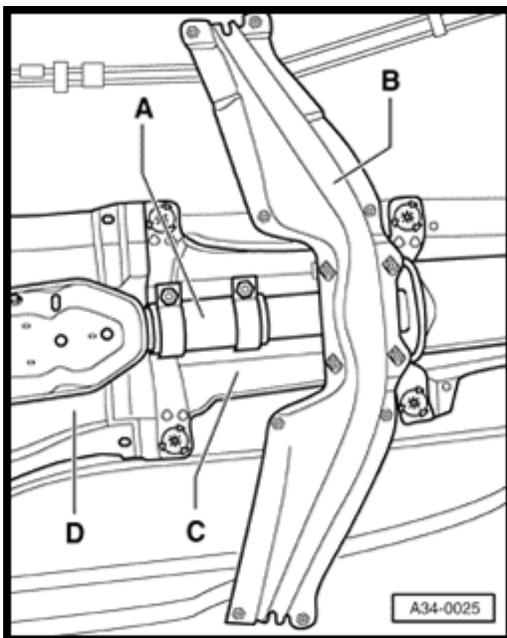
A

- Destroy clip (arrow) and pull gear shift knob off with cover.
- Remove rubber cover, if fitted.

34-11



- A**
- Remove gear lever housing securing nuts (arrows).



- A**
- Separate front exhaust pipe -A-.
 - ⇒ *Repair Manual, Engine Mechanical, Repair Group 26*
 - Remove cross support -B- below exhaust system.
 - Loosen heat shield -C- in forward area.
 - Remove heat shield -D-.
 - Unbolt selector housing from body.
 - Swing gear lever housing down and remove with selector cables.

Installing

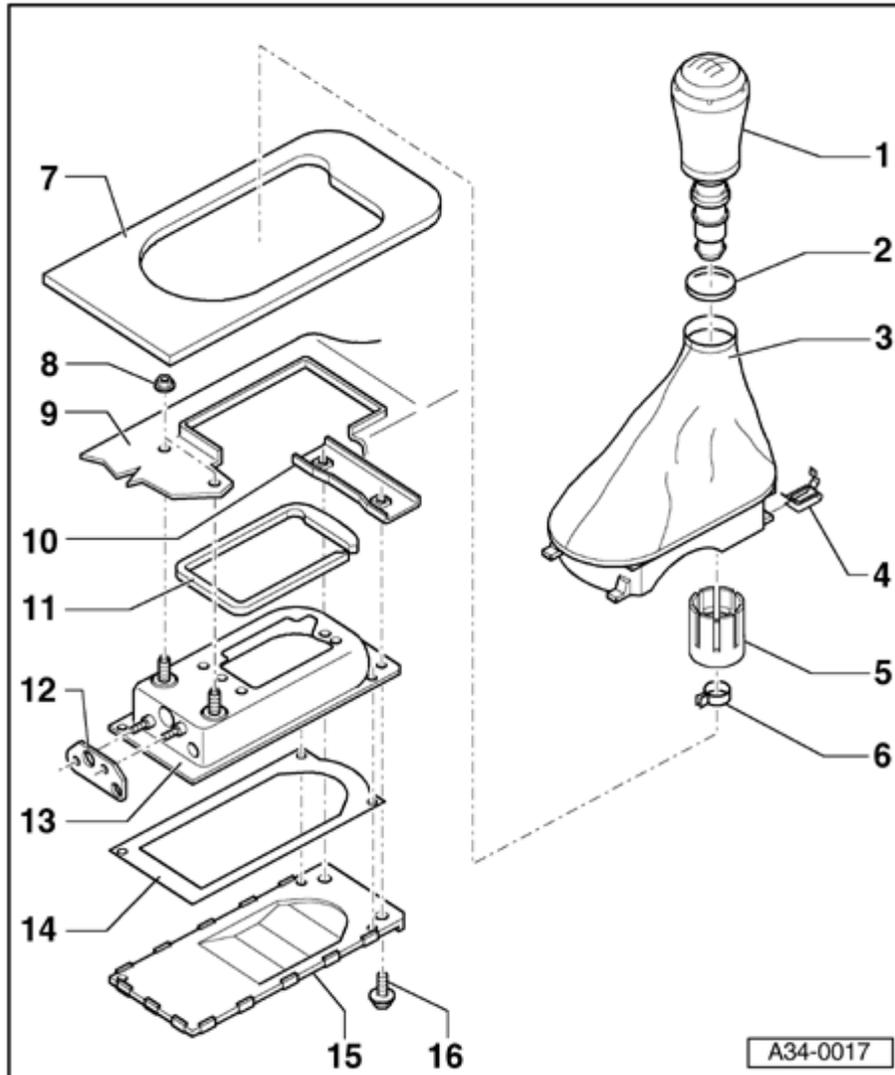
Installation is carried out in the reverse sequence. Also, note the following:

- Align gear lever housing parallel to body.
- Distance to body must be same on both sides.

Adjusting selector mechanism ⇒ [Page 34-22](#)

Tightening torques

Selector housing to body	25 Nm
Cross support to body	25 Nm
Selector cable support bracket to transmission	25 Nm
Selector cable bolt to transmission selector lever	25 Nm
Balance weight to transmission selector lever	25 Nm



Gear lever housing, servicing

1 - Gear shift knob

- ◆ Screw on and off together with boot

2 - Boot collar

3 - Boot with frame

- ◆ Remove and install together with gear shift knob

- ◆ Separating from gear shift knob ⇒ [Fig. 1](#)

- ◆ Connect to gear shift knob before installing ⇒ [Fig. 1](#)

4 - Clip

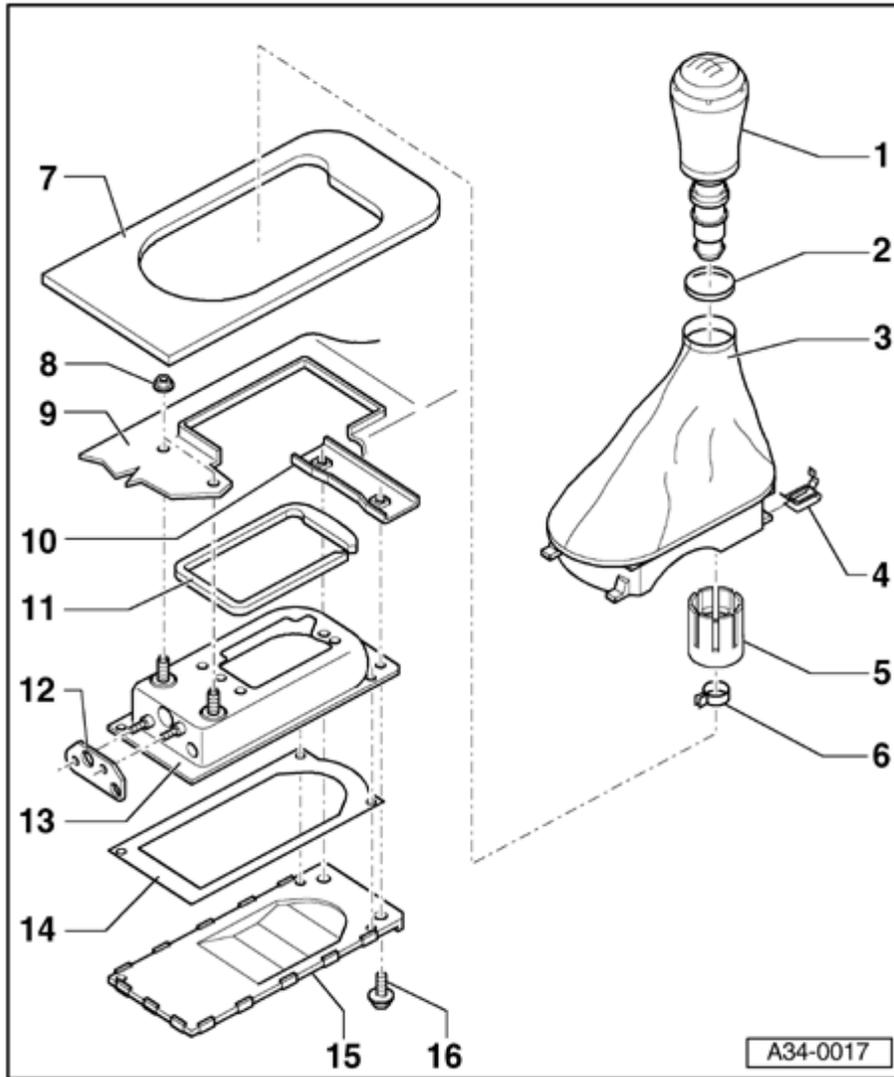
5 - Bushing

6 - Clamp

- ◆ To secure gear shift knob on gear

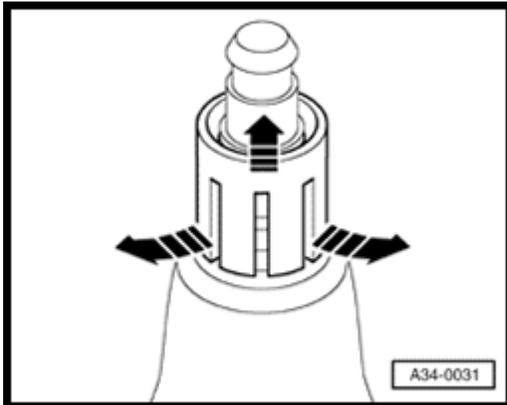
lever

7 - Cover



15 - Cover plate

16 - Hex combi bolt, 25 Nm



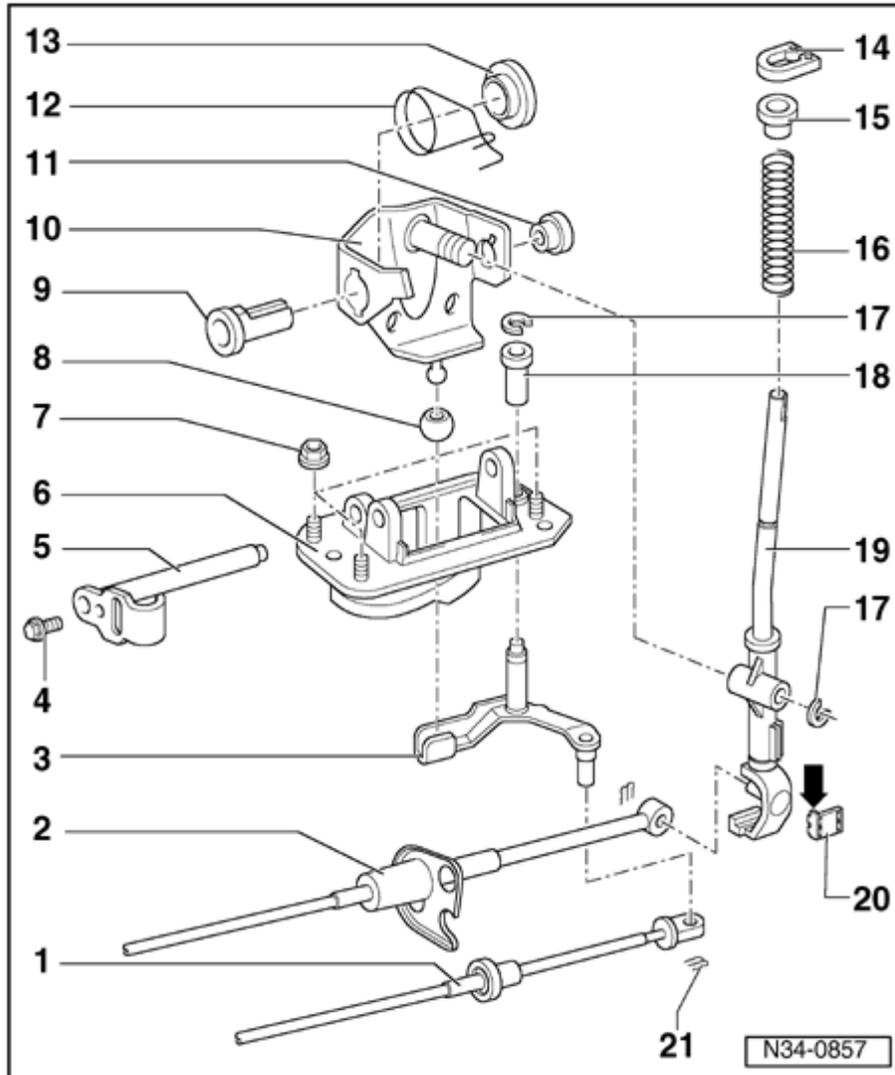
A

Fig. 1 Separating cover from gear shift knob and assembling to gear shift knob

- Turn boot inside out.
- Carefully pry segment with a screwdriver in direction of arrow and simultaneously pull gear shift knob out.

Installation is carried out in the reverse sequence. Also, note the following:

- Insert gear shift knob in cover.
- Push sleeve onto gear shift knob and engage.
- Install gear shift knob and boot together.



Gear lever , servicing

Note:

*Lubricate all
mountings and
sliding surfaces
with Polyurea
grease Part No.
G 052 142 A2.*

1 - Gate selector cable

- ◆ On gate selector bracket

2 - Gear selector cable

- ◆ On gear lever

3 - Gate selector bracket

4 - Hex bolt, 15 Nm

- ◆ For fulcrum pin to mounting plate

5 - Fulcrum pin

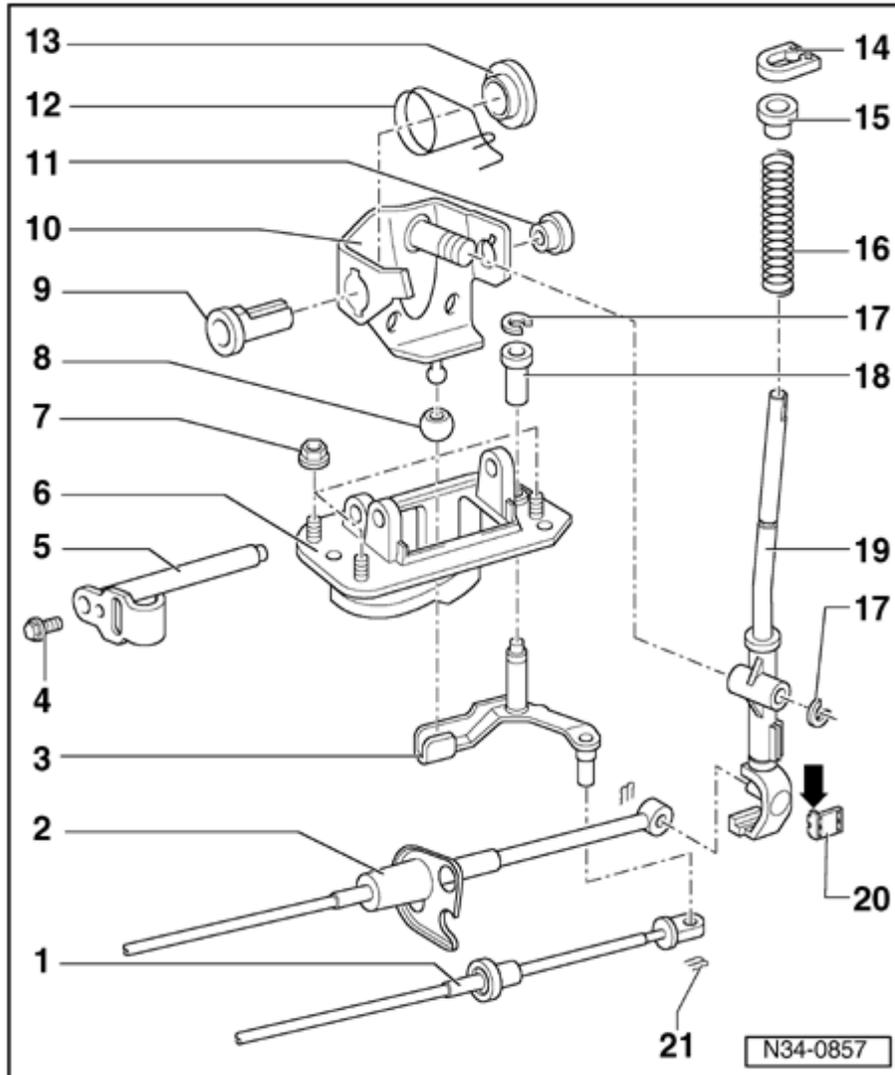
6 - Mounting plate

7 - Hex nut, 20 Nm

- ◆ For

mounting
plate to
gear
lever
housing

- ◆ Self-locking
- ◆ Always replace

**8 - Cap**

- ◆ Fitting ⇒ [Fig. 1](#)

9 - Bushing

- ◆ Only fits in one position

10 - Gate selector housing

- ◆ Fit into mounting plate after fitting the complete gear lever

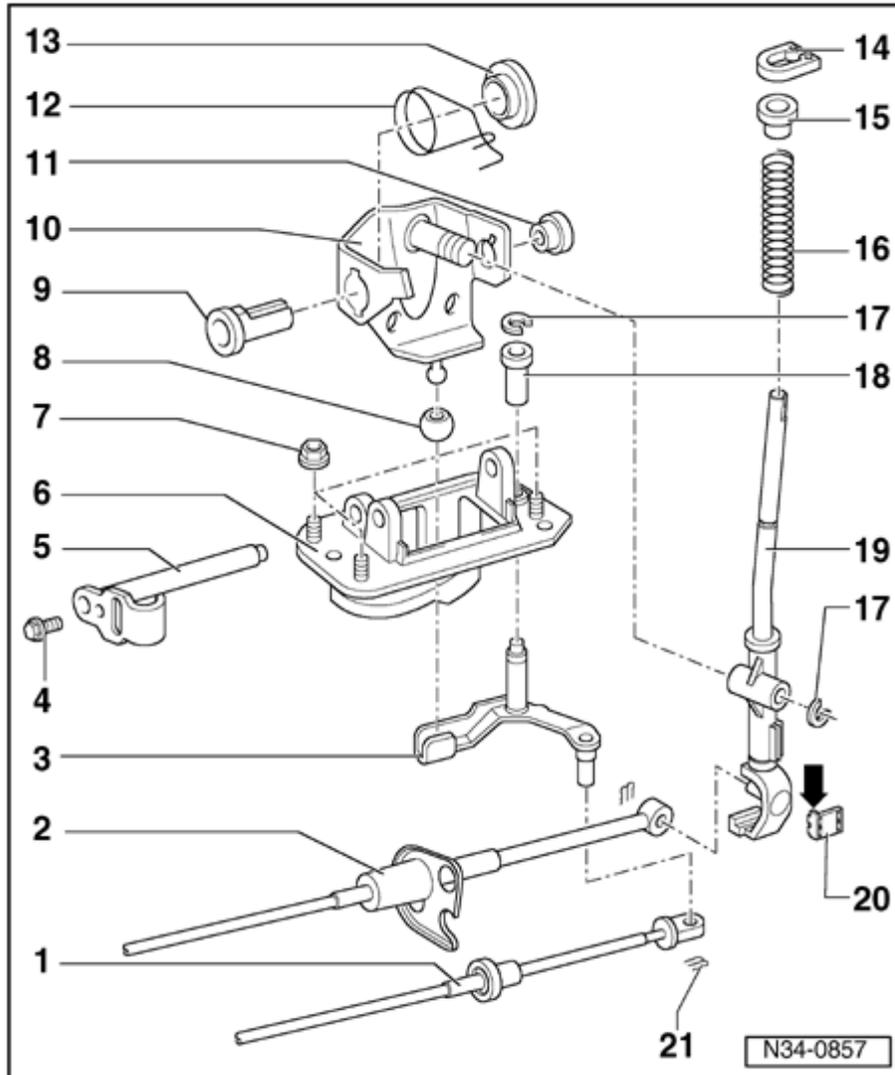
11 - Bushing**12 - Spring****13 - Guide bushing**

- ◆ Locate on bushing

14 - Circlip

- ◆ Removing and installing ⇒ [Fig. 2](#)

15 - Spacer sleeve**16 - Spring**



17 - Lock washer

- ◆ Removing
⇒ [Fig. 3](#)

18 - Bushing

- ◆ Only fits
in one
position

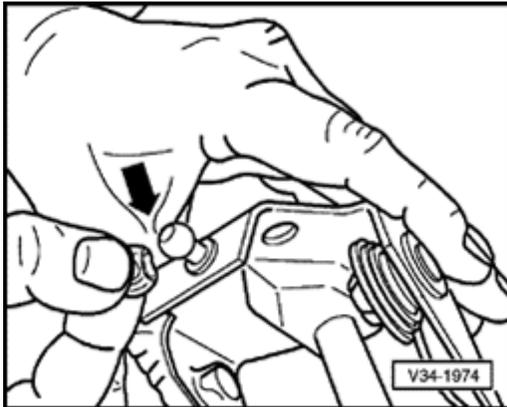
19 - Selector lever

- ◆ With
gear
lever
guide
and
damping
ring

20 - Damper

- ◆ Installation
position:
the lug
(arrow)
faces gear
lever
guide

21 - Spring clip



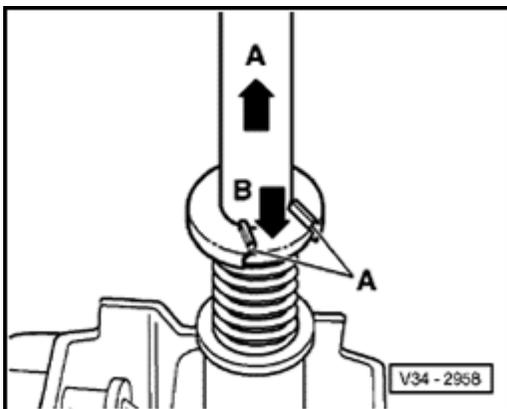
A

Fig. 1 Fitting cap

- Press on from side (arrow -1-).
- Press opening together to form a slot.

Note:

If necessary heat cap (e.g. hot water).



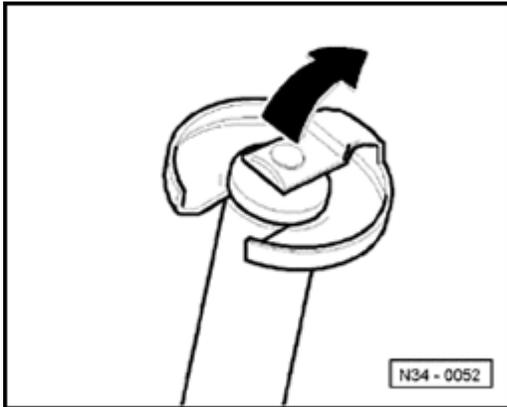
A

Fig. 2 Removing and installing circlip

- To remove and install circlip pull gear lever in direction of arrow -A- while pushing down spacer bushing onto stop with a screwdriver in arrow direction -B-.

Note:

Do not tilt spacer bushing when pushing down. Carefully release pressure at groove in gear lever for circlip.



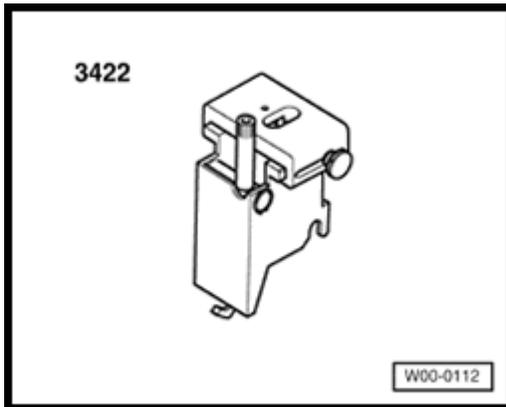
A

Fig. 3 Removing lock plate for gate selector bracket and gear lever guide/gate selector housing

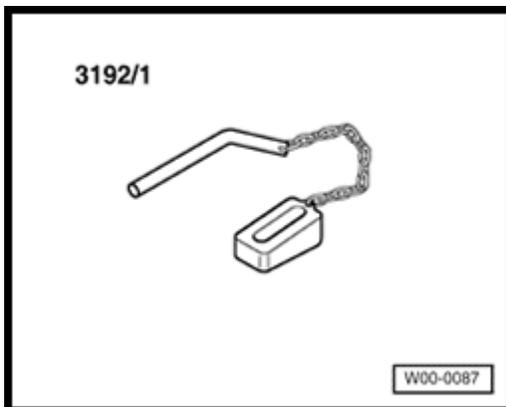
- Lift tab in direction of arrow.

Gear selector mechanism up to 05.99, adjusting

Special tools and equipment



- ◆ 3422 Gear lever gauge



- ◆ 3192/1 Wedge

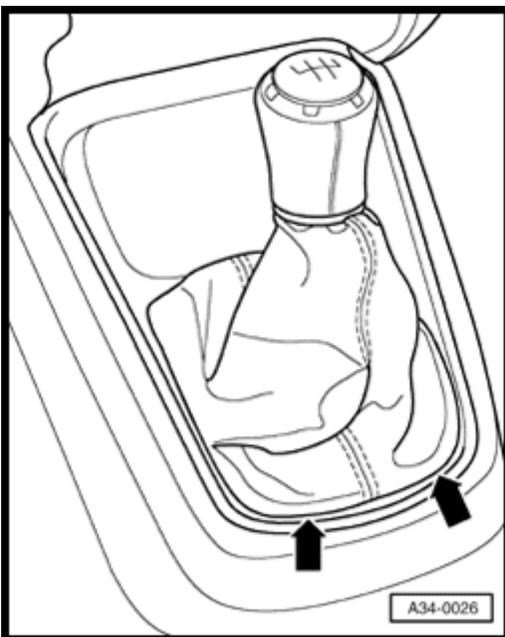
Note:

The following points are essential to ensure correct selector adjustment:

- ◆ *Moving parts of selector mechanism and transmission elements must be in proper condition.*
- ◆ *Selector mechanism must move freely.*

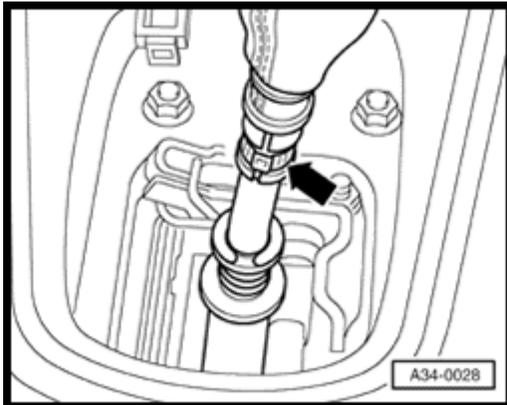
The transmission, clutch and clutch mechanism must also be in proper condition.

- Transmission in neutral position

**A**

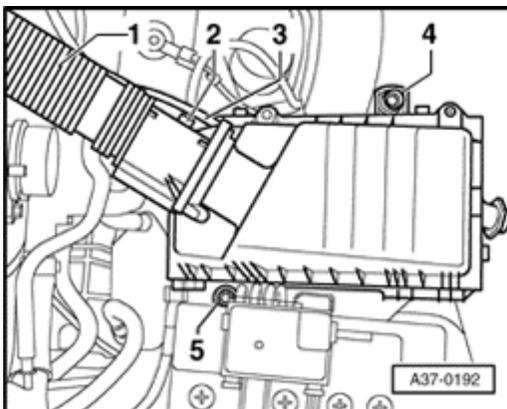
- Carefully pry cover off center console (arrow)
- Pull cover to rear off center console.

34-24



A

- Destroy clip (arrow) and pull gear shift knob off with cover.
- Remove rubber cover, if fitted.

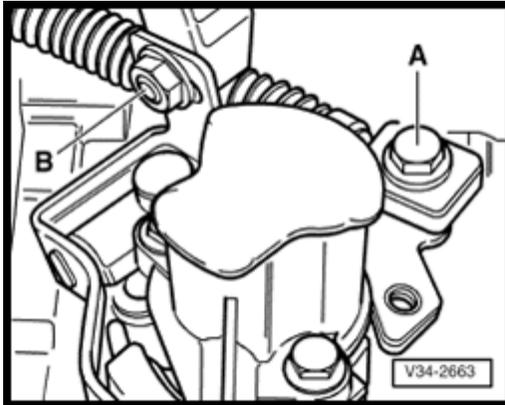


A

- Remove intake hose -1- , connector -2- and hose -3- from mass air flow sensor.
- Remove complete air cleaner housing by unscrewing bolts -4- and -5-.

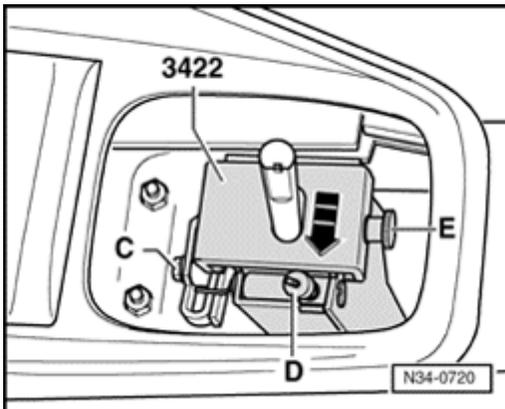
⇒ *Repair Manual, Fuel Injection & Ignition, Repair Group 24*

- Remove balance weight ⇒ [Page 34-7](#).



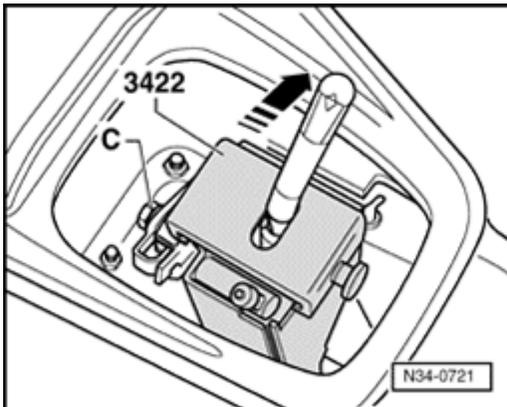
A

- Loosen bolt -A- and nut -B-, until gear selector cable and actuating arm/gate selector cable are free to move in elongated holes.

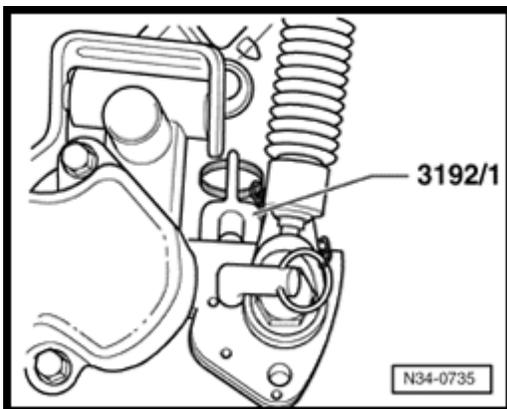


A

- Loosen bolt -C-, pull off foam seal in area of bolt -C- if necessary.
- Insert gear lever jig.
- Swing jig securing hook under mounting plate and tighten nut -D-.
- Press gear lever into left-hand detent of sliding piece.
- Press gear lever together with sliding piece to left onto stop (direction of arrow) and tighten sliding piece with bolt -E-.



- A**
- Press gear lever into right-hand detent (direction of arrow).
 - Tighten bolt -C-.
 - Insert wedge and pin.



- A**
- Slide wedge between gear selector lever and selector cover plate, ensuring no play.

Note:

Wedge must not lift gear lever.

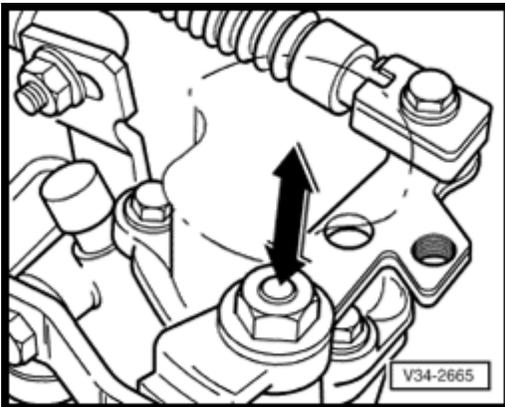
- In this position secure gear selector cable and actuating arm/gate selector cable. When doing this, check position of wedge.
- Remove gear lever jig.
- Fit balance weight ⇒ [Page 34-7](#) .
- Fit gear shift knob and boot.

Functional check

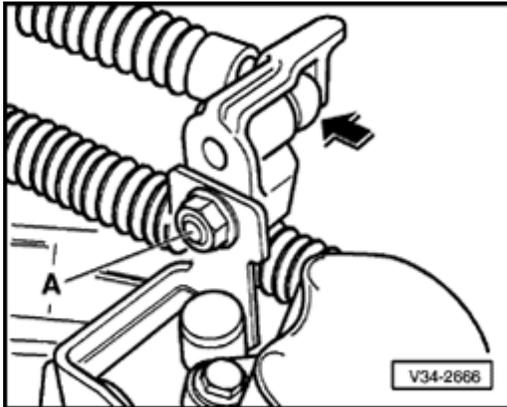
- The gear shift lever must rest in the 3rd/4th gear gate with transmission in neutral.
- Operate clutch.
 - Select all gears several times. Pay particular attention to operation of reverse gear lock.

Should a gear fail to engage smoothly after repeated selection, the selector shaft play (lift) should be checked as follows:

- Engage 1st gear.
- Press gear lever to left onto stop and release same time observe selector shaft in gear box (2nd mechanic).



When moving gear lever, selector shaft must move approx. 1 mm (in direction of arrow).



A

- If not, disengage first gear and again loosen nut -A- for actuating arm/gate selector cable mounting. (gate selector cable has a certain amount of play at mounting due to transfer elements).
- Take up gate selector cable play by lightly pressing mounting toward bulkhead (direction of arrow).
- Tighten nut -A- in this position.