

Selector lever mechanism, servicing

WARNING!

Shift selector lever into position "P" and engage parking brake before working with the engine running.

Notes:

- ◆ *Lubricate bearing areas and slide surfaces with polycarbamide grease G 052 142 A2.*
- ◆ *Center console must be removed for service work:*

Ignition key removal lock, checking

- Switch ignition key to driving position (ignition on).
- Depress brake pedal and hold.
 - Shifting selector lever out of position "P" must be possible with the button at shift lever depressed without "sticking".
 - It must not be possible to remove ignition

key with selector lever in any position other than "P".

- Shift selector lever into position "P".
- It must be possible to move ignition key into removal position without "sticking".
- Remove ignition key.
- Selector lever cannot be shifted out of position "P" with the button pressed and foot brake operated.

Shift mechanism, checking

Selector lever in position "P" and ignition switched on:

- Brake pedal is not being operated:

Selector lever is locked and cannot be shifted out of position "P" with the button at selector lever pressed. Shift lock solenoid is locking the selector lever.

- Brake pedal is being operated:

Shift lock solenoid enables the selector lever. Selecting a driving mode must be possible with the button at shift handle pressed without "sticking".

Slowly shift selector lever through "P" via " R, N, D, 4, 3, 2", while checking if the selector lever position in instrument cluster matches with the selector lever position.

Selector lever in position "N" and ignition switched on:

- Brake pedal is not being operated:

Selector lever is locked and cannot be shifted out of position "N" with the button at selector lever handle pressed. Shift lock solenoid is locking the selector lever.

- Brake pedal is being operated:

Shift lock solenoid enables the selector lever. Selecting a driving mode must be possible with the button at shift handle pressed without "sticking".

Additional test only for shift mechanisms with Tiptronic: Selector lever in position "D", ignition and lights switched on

- Start engine and let run at idle
- Engage parking brake and operate brake pedal

Guide selector lever out of selector lever position "D" into Tiptronic gate. Brightening of

"D" symbol on the shift mechanism cover must turn off and the "+" and "-" symbols must light up.

The display of the selector lever position in the instrument cluster must change from "PRND432" to "54321" when shifting selector lever into the Tiptronic gate.

Notes:

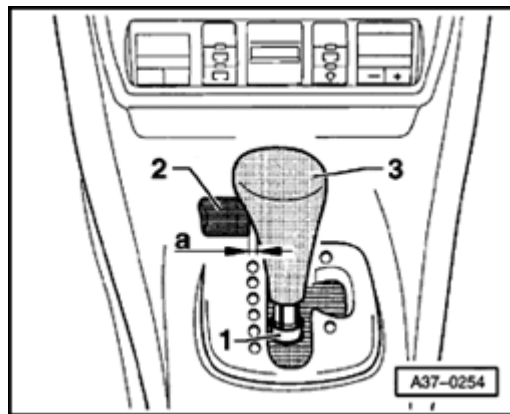
- ◆ *Starter must not start with selector lever in positions "2", "3", "4", "D" and "R".*
- ◆ *For Right Hand Drive (RHD) vehicles, it must only be possible to start the starter with the selector lever positions "P" and "N" with the locking button in selector lever handle not pressed.*
- ◆ *For speeds exceeding 5 km/h and shifting into selector lever position "N", the shift lock solenoid must not engage to lock the selector lever. Selector lever can be shifted into a driving mode.*
- ◆ *For speeds below 2 km/h (almost standstill) and shifting into selector lever position "N", the shift lock solenoid must only engage after approx. 1 second. Selector lever can only be shifted out of position "N" with the brake pedal operated.*

Shift operations, overview

A distinction is made between shift mechanisms with and without Tiptronic.

Notes:

- ◆ For shift mechanisms with Tiptronic, the selector lever position D can be shifted into the Tiptronic gate by hand. In this gate, the next highest or lowest gear can be selected by pressing the selector lever forward or backward by hand.
- ◆ This additional Tiptronic gate is not installed in shift mechanisms without Tiptronic.



Description of the Tiptronic shift mechanism ⇒ [page 37-6](#) .

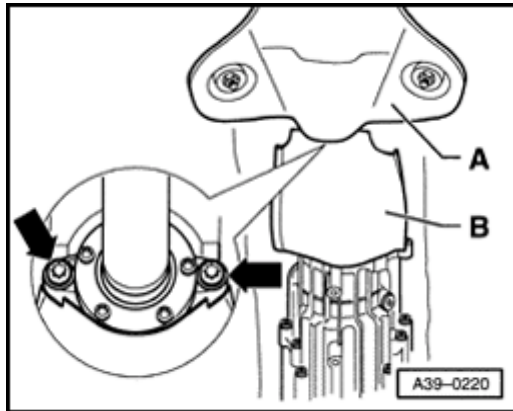
Description of the shift mechanism (without Tiptronic) ⇒ [page 37-52](#) .

Tiptronic shift mechanism, removing and installing

Removing

- Shift selector lever into position "P".
- Note radio code (for vehicles equipped with coded anti-theft radio).
- Disconnect Ground (GND) strap from battery.
- Selector lever handle, removing ⇒ [page 37-22](#) .
- Remove shift mechanism cover ⇒ [page 37-24](#) .
- Raise vehicle.
- Disconnect front exhaust pipes with catalytic converter from the rear exhaust system and tie them up on side.

⇒ *Repair Manual, Engine Mechanical, Repair Group 26, removing and installing exhaust system.*



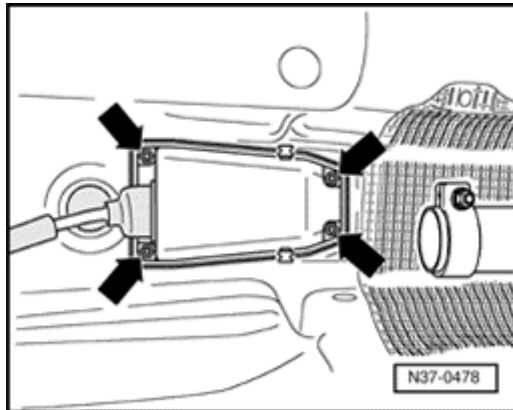
A

All-wheel-drive vehicles

- Remove heat shield -A- above driveshaft.
- Remove heat shield -2- for driveshaft from cover for Torsen differential (arrows).
- Unbolt driveshaft from transmission and hang or support.

Continuation for all vehicles

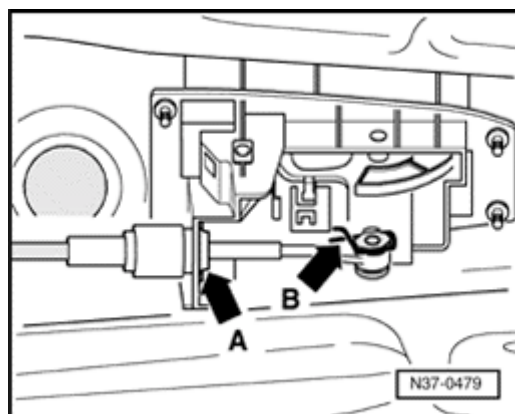
- Loosen boot of selector lever cable from shift mechanism cover and slide back.



A

- Remove bolts (arrows) and remove shift mechanism cover.

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A

- Press ends of locking clip -B- together and remove.
- Remove securing plate -A- for selector lever cable at shift mechanism downward.
- Remove selector lever cable from selector lever.

from top:

- Unclip locking cable from securing spring at shift mechanism housing, slightly lift up securing spring to do so.
- Remove nuts (4 pieces).

from below:

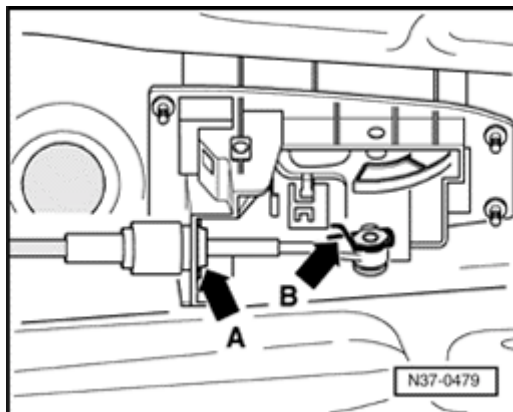
- Remove shift mechanism housing downward.
- Pull selector lever cable out of shift mechanism at the same time, and do not bend.

Installing

- Installation is the reverse order of removal.

In addition, the following test steps must be performed and observed.

- Selector lever and lever/shift rod in position "P" (park lock must engage).
- Raise vehicle.
- Guide selector lever cable into shift mechanism.
- Do not bend selector lever cable.
- Mount shift mechanism on chassis.
- Tighten nuts (4 pieces) to 10 Nm from top.
- Secure boot of selector lever cable to shift mechanism cover.
- Installing and adjusting locking cable ⇒ [page 37-49](#) .



- Connect selector lever cable to selector lever.

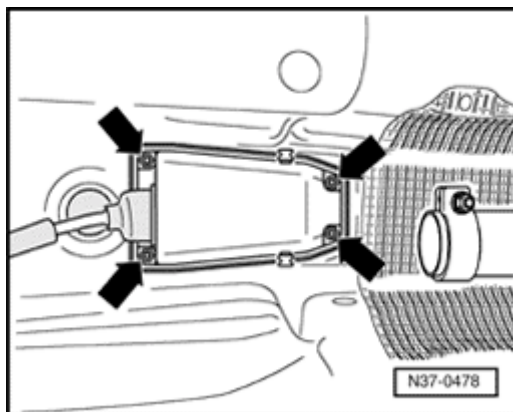
A

- Install securing plate -A- for selector lever cable to shift mechanism.

Installation position:

Angled end of securing plate points toward the end of the selector lever cable.

- Press ends of locking clip -B- together and slide onto the end of the selector lever cable.



A

- Attach cover.
- Tighten nuts (arrows, 4 pieces) to 10 Nm.
- Check adjustment of selector lever cable and adjust if necessary ⇒ [page 37-45](#) .
- Ignition key removal lock, checking ⇒ [page 37-1](#) .

All-wheel-drive vehicles

- Bolt driveshaft to transmission flange ⇒ [page 39-79](#) , Driveshaft, removing and installing.
- Install heat shield.

Continuation for all vehicles

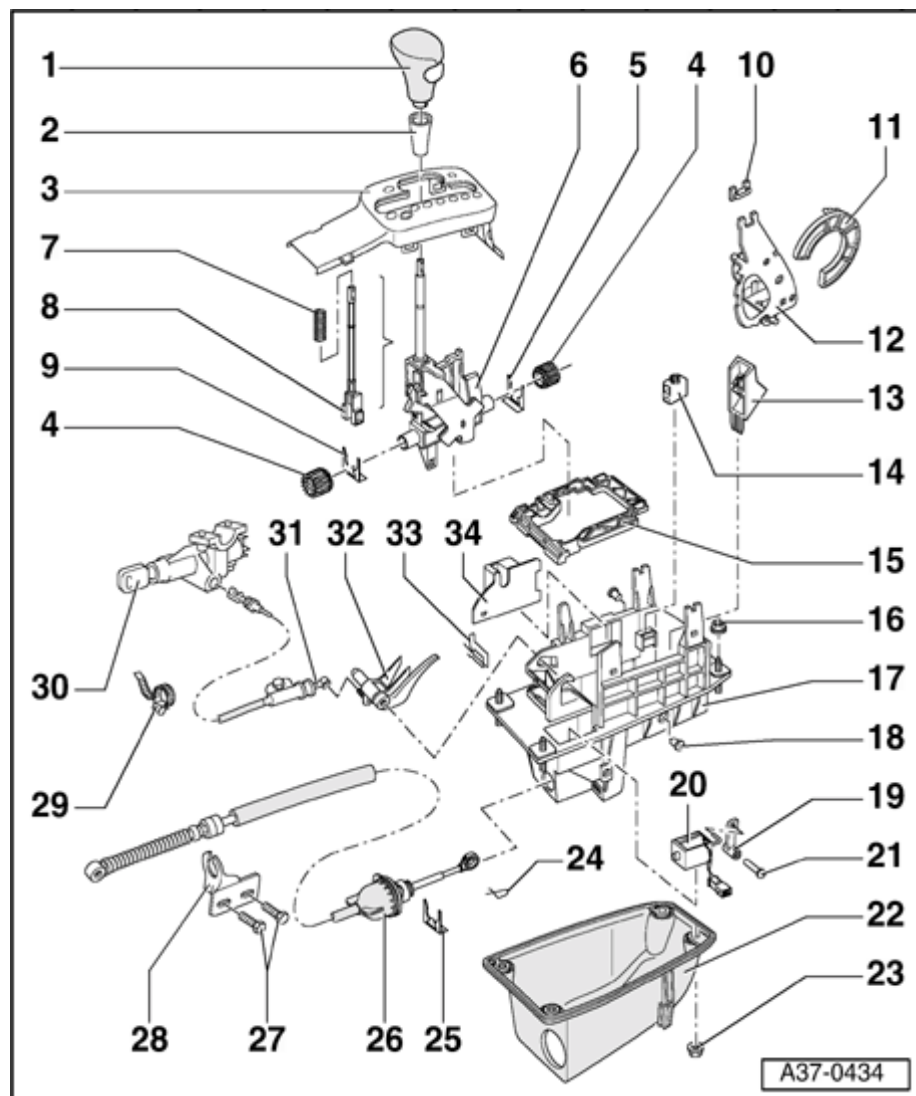
- Connecting front exhaust pipe to rear exhaust system.

⇒ *Repair Manual, Engine Mechanical, Repair Group 26; removing and installing exhaust system.*

- Installing shift mechanism cover ⇒ [page 37-24](#) .
- Selector lever handle, installing ⇒ [page 37-22](#) .
- Connect battery Ground (GND) strap.
- For vehicles equipped with coded anti-theft radio, activate code.
- Check shift mechanism ⇒ [page 37-2](#) .

Tightening torques:

Components	Tightening torques
Selector lever cable to mounting bracket	12 Nm
Mounting bracket to transmission (2 x M8)	23 Nm
Heat shield/selector lever cable to transmission, M6	9 Nm
Heat shield/selector lever cable to transmission, M8	23 Nm
Selector lever mechanism to chassis M6	8 Nm



Tiptronic shift mechanism, assembly overview

Assembly sequence ⇒ [page 37-32](#)

Lubricate bearing areas and slide surfaces with polycarbamide grease Part No. G 052 142 A2.

1 - Selector lever handle

◆ Removing and installing ⇒ [page 37-22](#)

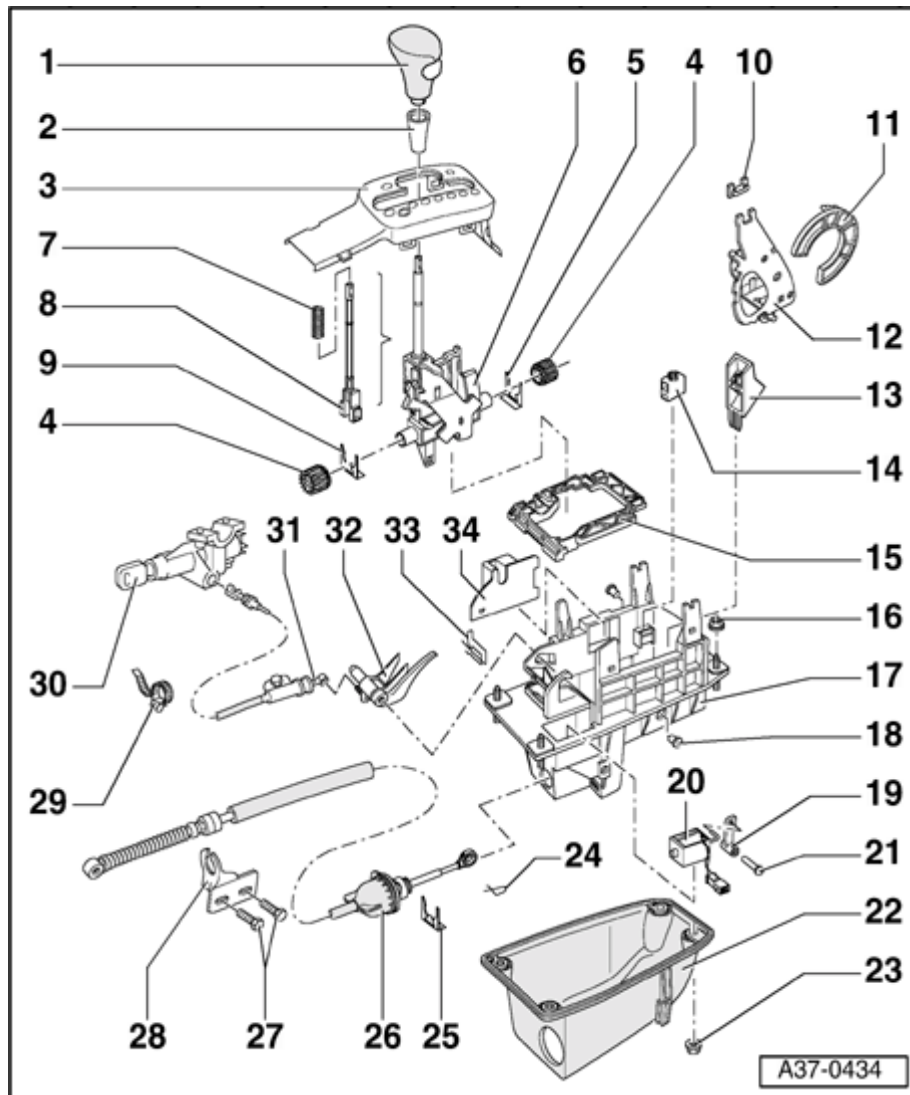
2 - Sleeve

◆ Engages in the selector lever handle

3 - Cover

◆ Removing and installing ⇒ [page 37-24](#)

◆ Disassembling and assembling ⇒ [page 37-27](#)



4 - Bearing bushing

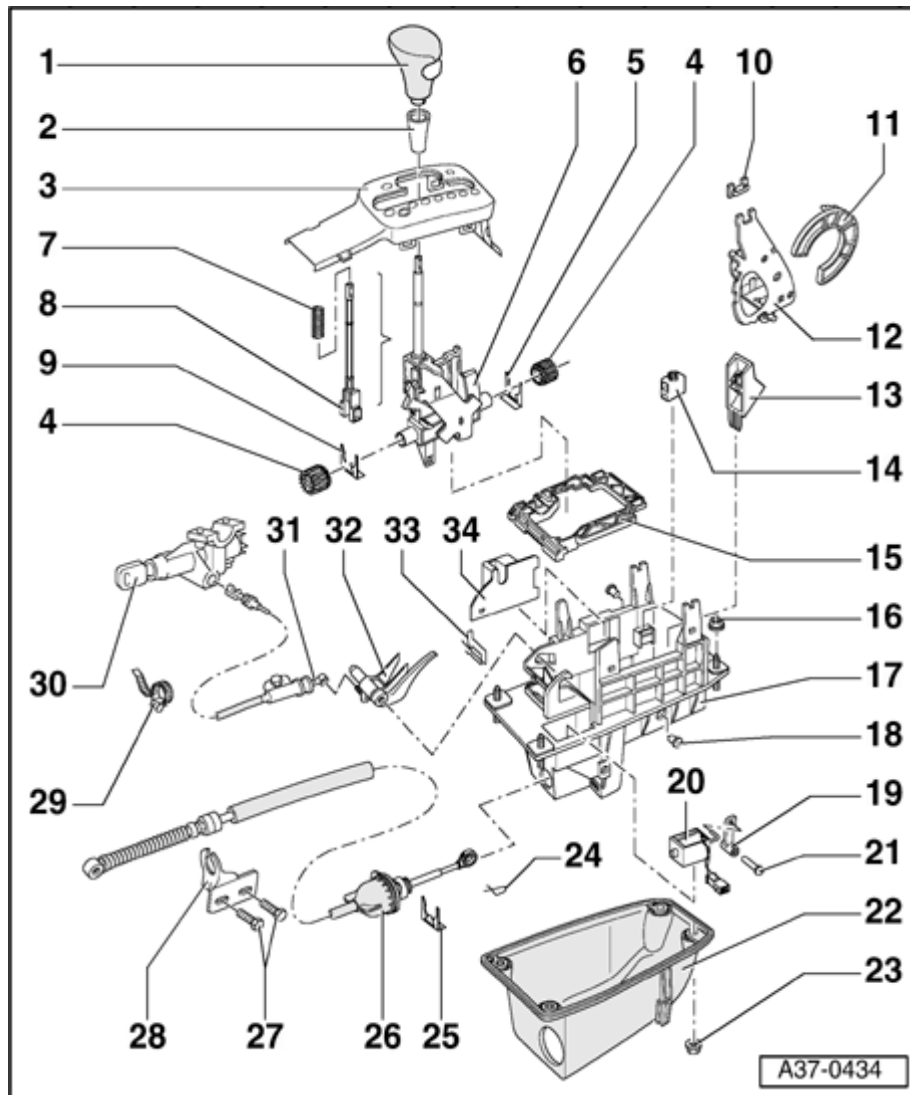
- ◆ Use securing device - 5 - or secure 9 - in shift mechanism - 17
- ◆ Removing and installing ⇒ [page 37-32](#)

5 - Locking clip (thin, with tensioning spring)

- ◆ Secures bushing 17 - in shift mechanism- 4
-
- ◆ Installation position: Angled ends point to the inner shift mechanism housing

6 - Selector lever

- ◆ With pull-lever, compression spring, link and Tiptronic-spring system
- ◆ Removing and installing ⇒ [Page 37-22](#) onward
- ◆ Disassembling and assembling ⇒ [page 37-36](#)



7 - Compression spring

- ◆ Removing and installing ⇒ [Page 37-36](#) onward

8 - Pull-lever

- ◆ Removing and installing ⇒ [Page 37-36](#) onward

9 - Locking clip (thick, with compression spring)

- ◆ Secures bushing 17 - in shift mechanism - 4 -
- ◆ Installation position: Angled ends point to the inner shift mechanism housing

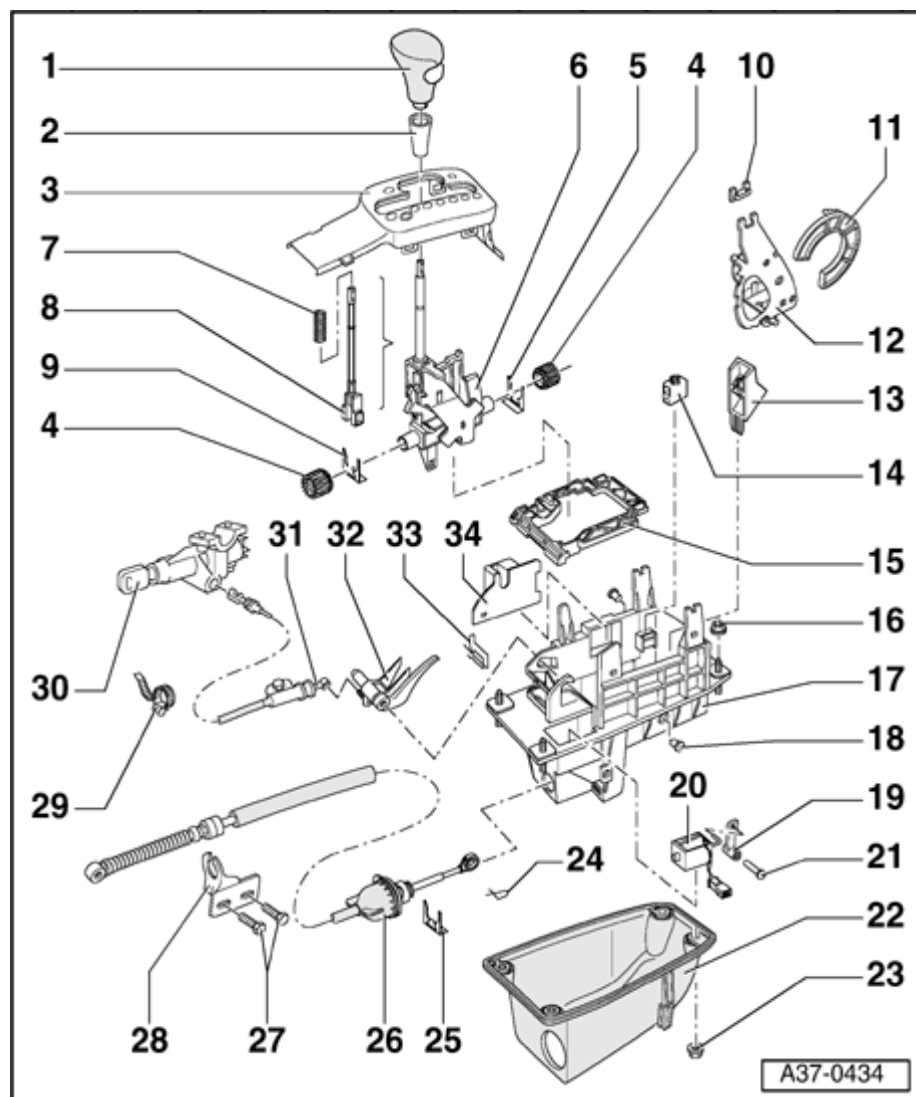
10 - Stop buffer

- ◆ Clip into cable lever - 12 -
- ◆ Installation position: Large contact surface to selector lever

11 - Catch

- ◆ Clip into cable lever - 12 -
- ◆ Removing and installing ⇒ [page 37-32](#)

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**12 - Cable lever**

- ◆ With pivot pin - 18 - secured in shift mechanism housing - 17 -

13 - Catch spring with roller

- ◆ For shift positions
- ◆ Removing and installing ⇒ [Page 37-32](#) onward

14 - Catch spring with roller

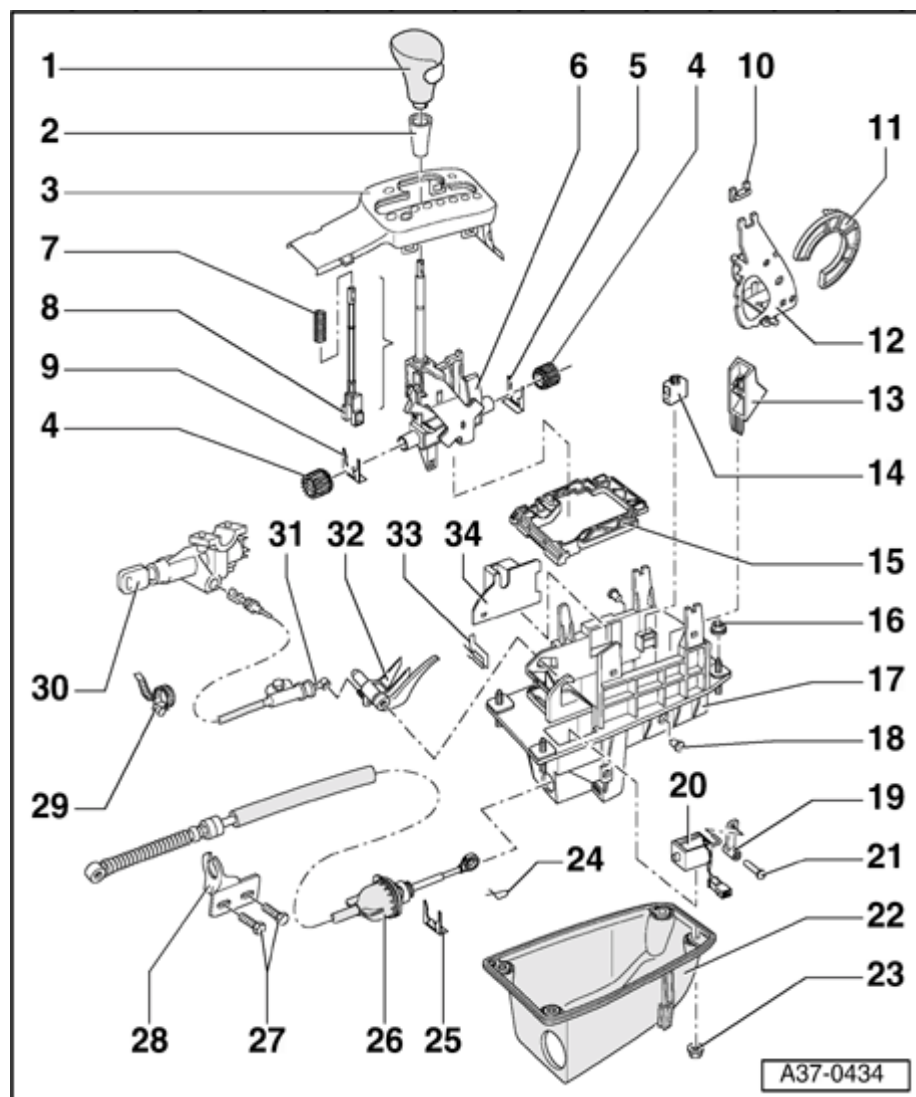
- ◆ For Tiptronic position
- ◆ Removing and installing ⇒ [Page 37-32](#) onward

15 - Frame

- ◆ Clip or bolt onto shift mechanism housing
- ◆ Installation position: Ribs toward top

16 - Nut, 10 Nm**17 - Shift mechanism housing**

- ◆ Removing and installing ⇒ [Page 37-6](#) onward



18 - Pivot pin

- ◆ Secures cable lever - 12 - in shift mechanism housing - 17 -

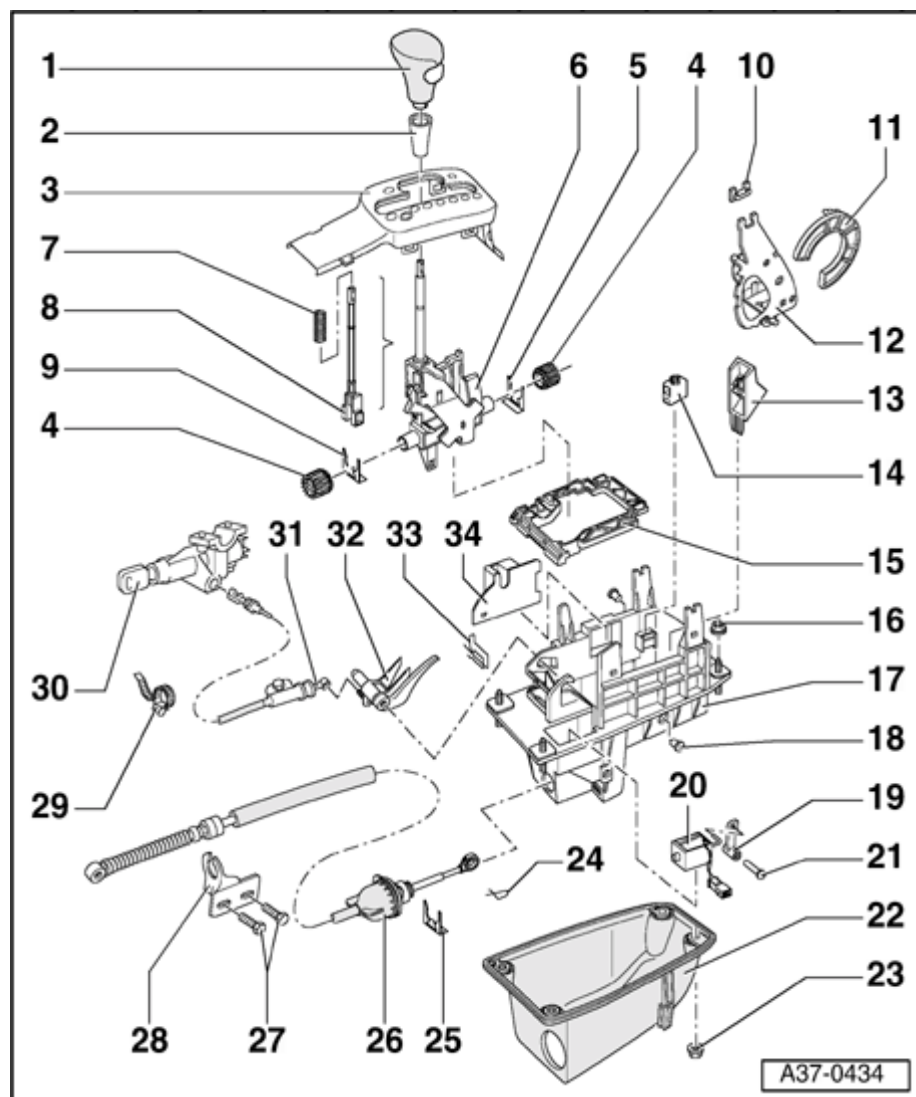
19 - Locking latch

- ◆ For shift lock solenoid
- ◆ Removing and installing ⇒ [Page 37-32](#) onward

20 - Shift Lock Solenoid -N110-

- ◆ Removing and installing ⇒ [Page 37-32](#) onward
- ◆ Can be checked via electrical test and read measuring value block

⇒ [Repair Manual, 5 Spd. Automatic Transmission 01V On Board Diagnostic \(OBD\), Repair Group 01; Performing On Board Diagnostic \(OBD\)](#)

**21 - Pivot pin**

- ◆ For locking latch
- ◆ Removing and installing ⇒ [Page 37-32](#) onward

22 - Cover

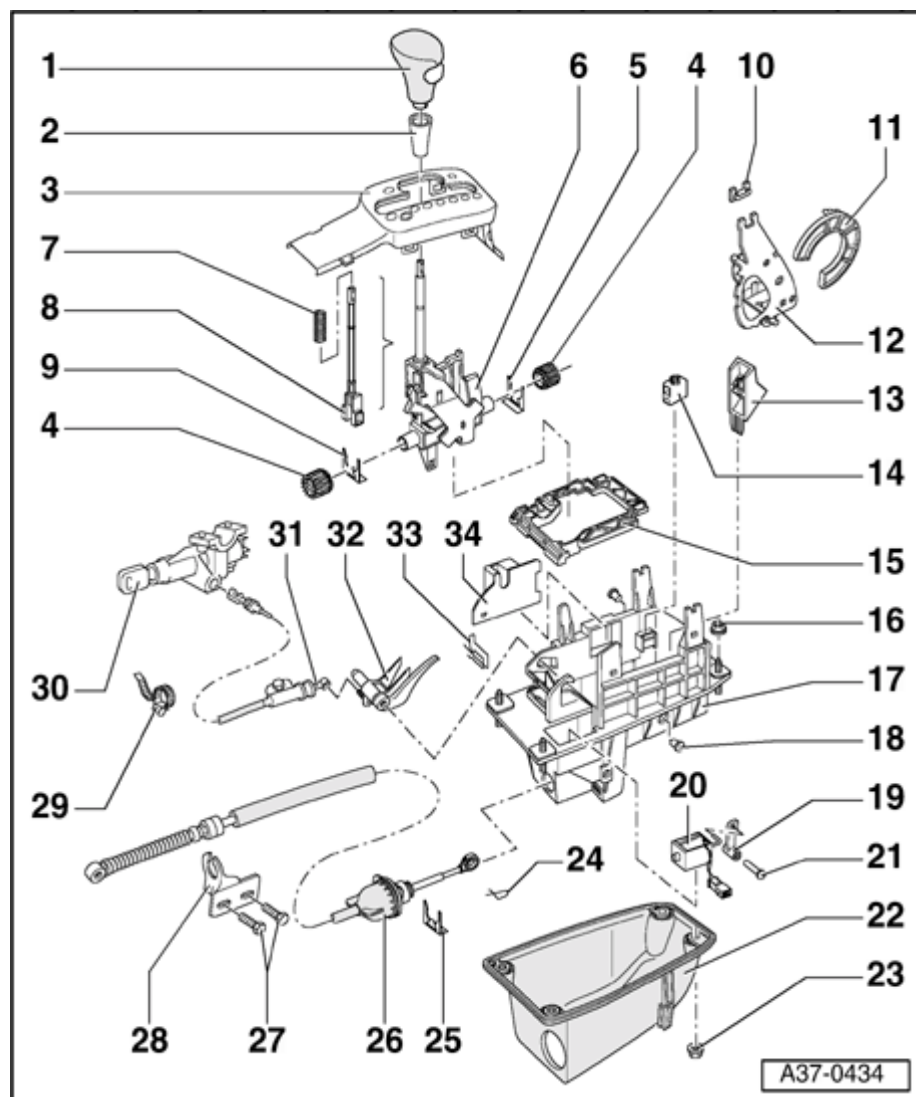
- ◆ With seal for shift mechanism housing
- ◆ Removing and installing ⇒ [Page 37-6](#) onward

23 - Nut, 10 Nm**24 - Locking clamp**

- ◆ For selector lever cable to cable lever - 12 -
- ◆ Install angled end toward front

25 - Locking plate

- ◆ For selector lever cable to shift mechanism housing
- ◆ Install angled end toward the inner shift mechanism housing



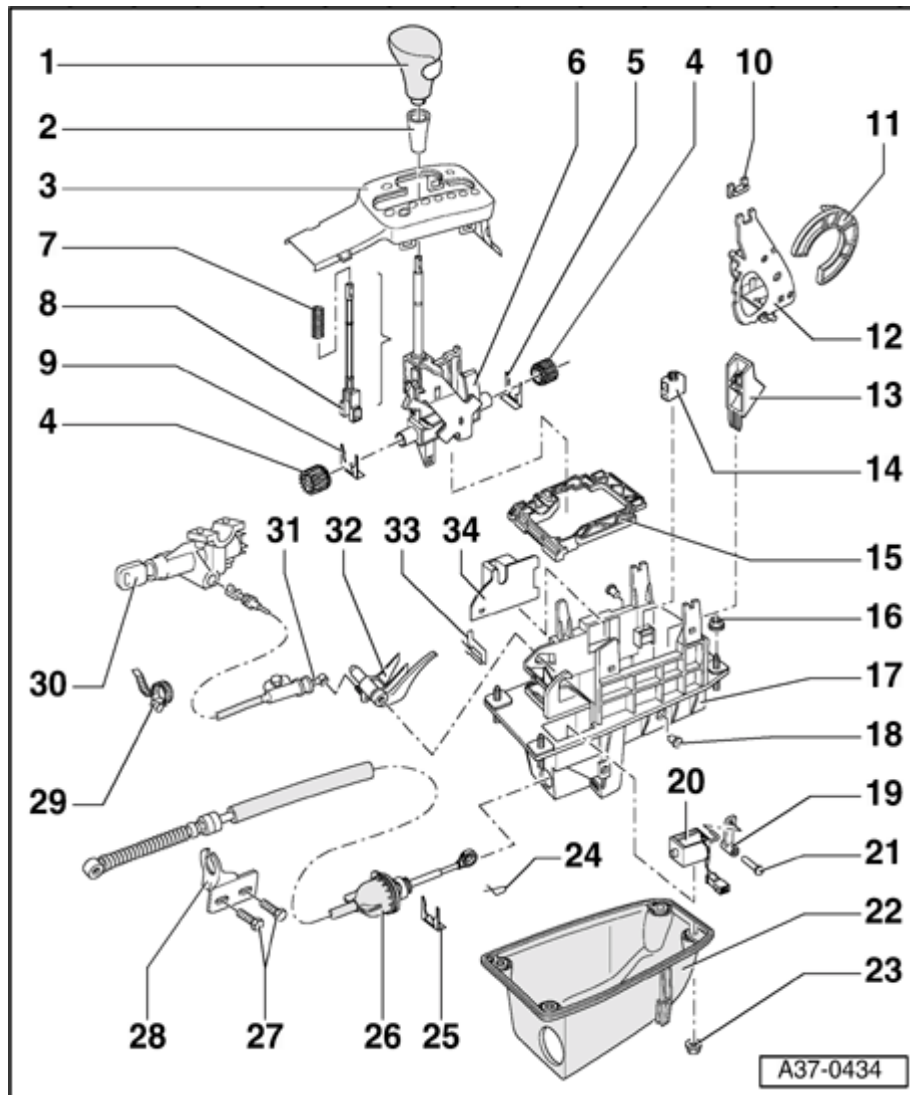
26 - Selector lever cable

- ◆ Do not bend or kink, lightly grease coupling ring and ball socket before installing
- ◆ Removing and installing ⇒ [page 37-40](#)
- ◆ Adjusting ⇒ [page 37-45](#)
- ◆ In case of damaged rubber boots, the selector lever cable must be replaced
- ◆ Do not install rubber boot on transmission side twisted

27 - Hex bolt, 23 Nm

28 - Pivot

- ◆ For selector lever cable to transmission
- ◆ Removing and installing ⇒ [page 37-40](#)

**29 - Cable ties**

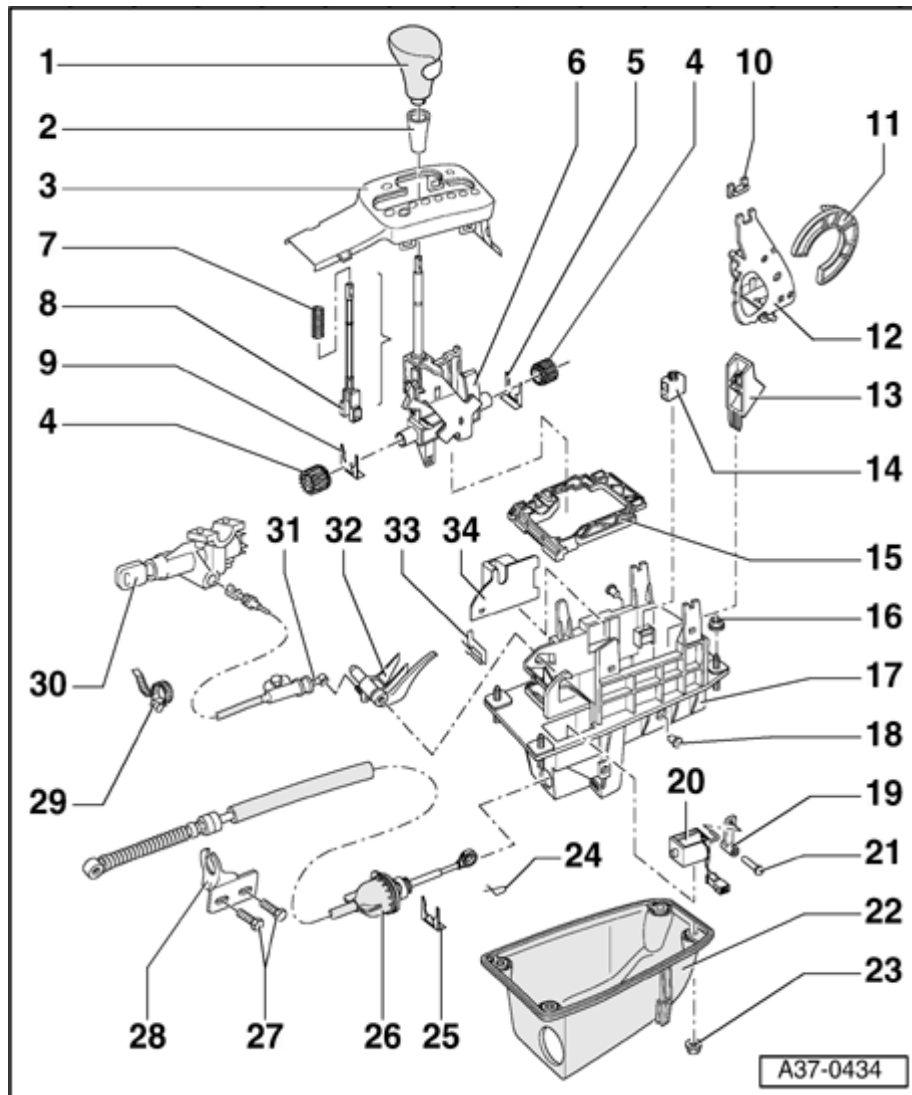
- ◆ For locking cable

30 - Ignition/Starter Switch**31 - Locking cable**

- ◆ For ignition key removal lock
- ◆ Must not be kinked
- ◆ Removing and installing ⇒ [page 37-47](#)
- ◆ Adjusting ⇒ [page 37-50](#)

32 - Catch lever

- ◆ For ignition key removal lock
- ◆ Removing and installing ⇒ [Page 37-32](#) onward

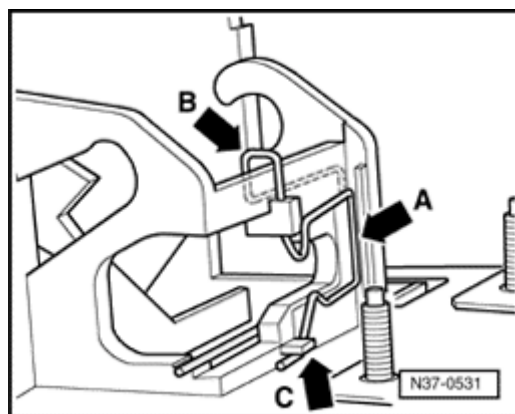


33 - Retaining spring

- ◆ For locking cable
- ◆ Removing and installing ⇒ [Fig. 1](#) , ⇒ [page 37-21](#)

34 - Storing

- ◆ For selector lever in Tiptronic position
- ◆ Removing and installing ⇒ [Page 37-32](#) onward



A Fig. 1 Securing spring for locking cable, removing and installing

Removing

- To remove locking cable, slightly lift spring at top (arrow B).
- Unhook spring (arrow A) at retaining clip (arrow C) and remove toward top.

Installing

- Insert spring (arrow B) from top and hook in at retaining clip (arrow C).
- Align spring so that it is seated evenly in groove (arrow A).
- To install locking cable, slightly lift spring at top (arrow B).

Selector lever handle, removing and installing

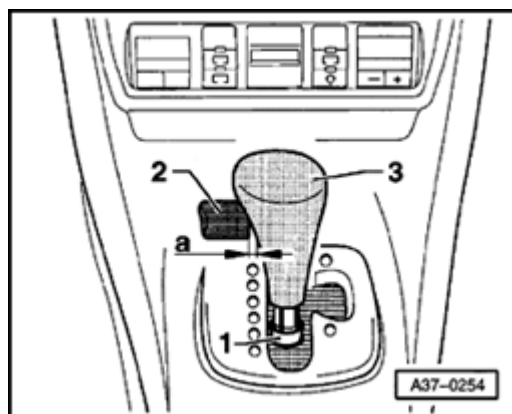
Removing

- Shift selector lever into position "3".
- A** - Slide sleeve -1- downward toward stop.
- Pull button -2- out of selector lever handle -3- up to engagement point (dimension -a-) and pull upward.

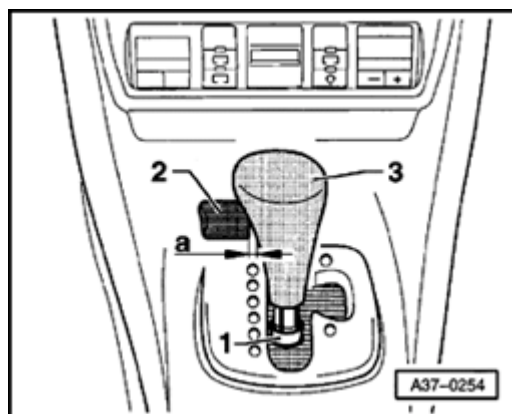
Dimension -a- = 3 mm

Installing

- Shift selector lever into position "N".
- Carefully pull button -2- out of selector lever handle -3- up to dimension -a-.
- At the same time, place handle -3- with button -2- onto selector lever up to stop in direction of travel.
- Turn handle -3- so that button -2- points toward the driver. During this, the handle engages in a vertical groove of the selector lever.



37-23



A

- Completely install handle -3- on the selector lever. During this, it must engage in a ring groove of the selector lever.
- Press button -2- into selector lever handle -3-.
- Pull up sleeve -1- until it engages in selector lever handle -3-.

Cover for Tiptronic shift mechanism, removing and installing

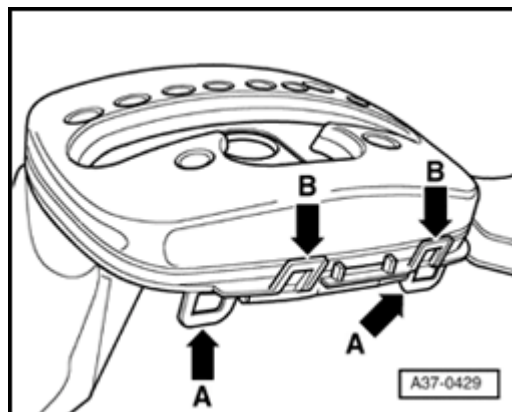
Removing:

- Remove cover of center console above shift mechanism.

⇒ [Repair Manual, Body Interior, Repair Group 68; Storage compartments, covers and trim; Center console, removing.](#)

- Selector lever handle, removing ⇒ [page 37-22](#) .
- Shift selector lever into position "P" by pulling pull rod.
- Switch off ignition.

37-25



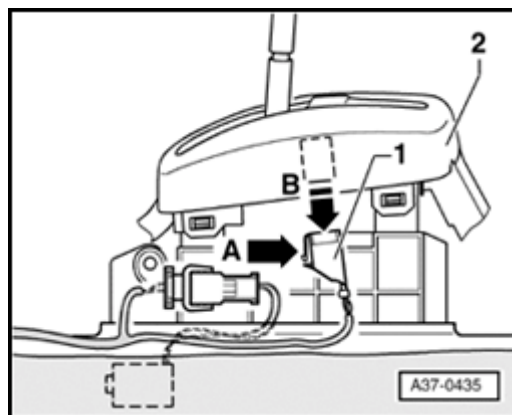
- A**
- Carefully pry out the four retaining straps (arrow A) from top using bent wire or hook (retainer strap are difficult to see from top).

Under no circumstances may the four retaining straps (arrow B) which are visible from top be pried out, otherwise the circuit board will be destroyed. In addition, the chromed upper part is permanently bonded to the upper enclosure cover.

Note:

If the four retaining straps (arrow A) cannot be pried out with bent wire or a hook, the center console must be removed to gain better access.

- Remove complete shift mechanism cover upward.



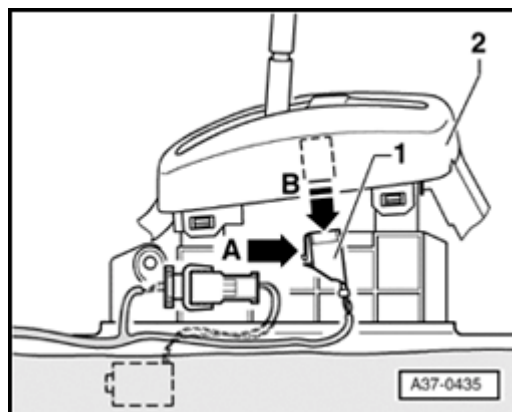
- A**
- Press release (arrow A) at connector -1- and pull it out of the cover in direction of arrow -B-.

Note:

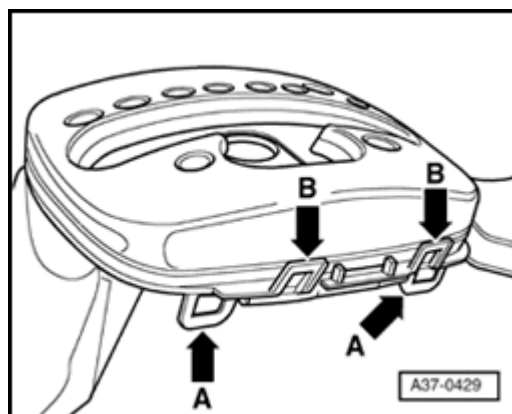
If the retaining straps are damaged, the upper cover must be replaced Item , => [page 37-27](#) .

Installing:

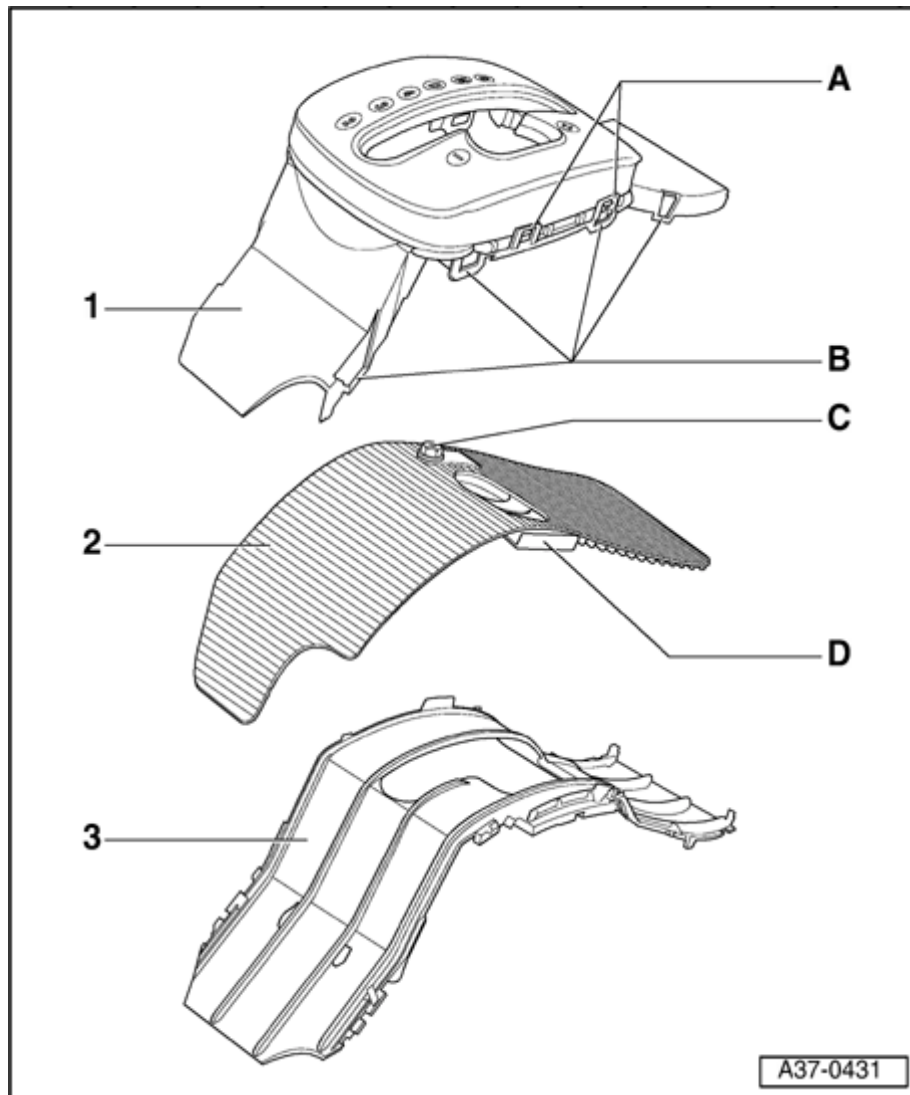
Installation is the reverse of removal. The following points must also be observed:



- A**
- Insert connector -1- into cover opposite direction of arrow -B- before they are clipped into the shift mechanism.
 - Clip cover onto shift mechanism.

Note:

- A**
- When clipping on, make sure the retaining straps (arrow A) are not being bent inward. Retaining tabs of shift mechanism must engage on outside without excessive force.*



Cover for Tiptronic shift mechanism, disassembling and assembling

Overview

1 - Upper cover

- ◆ With integrated Tiptronic Switch -F189-
- ◆ Tiptronic Switch -F189-, removing and installing ⇒ [page 37-30](#)

2 - Masking panel

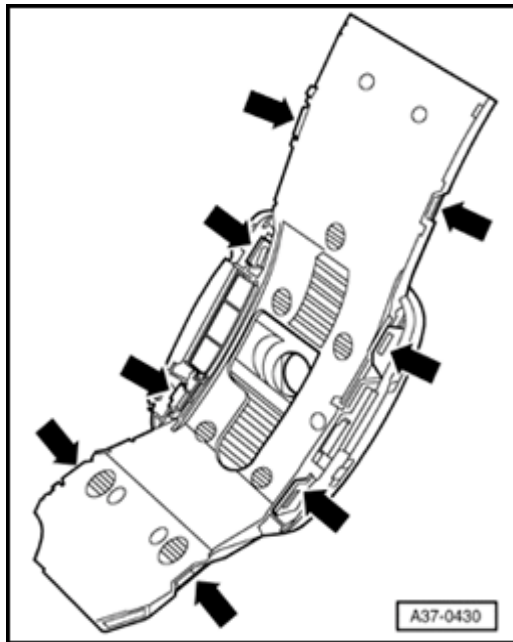
- ◆ With integrated solenoids -C- and -D-

3 - Lower cover

- ◆ Guides the masking panel

Disassembly of suspension strut

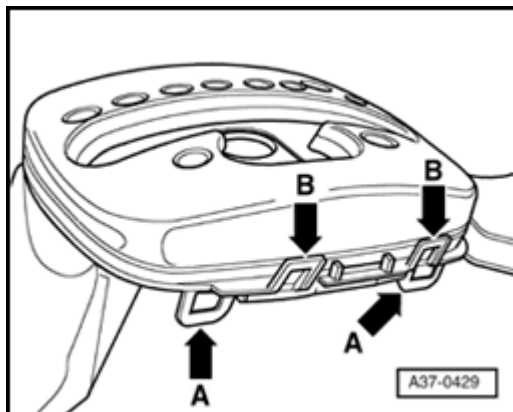
- Remove shift mechanism cover ⇒ [page 37-24](#)



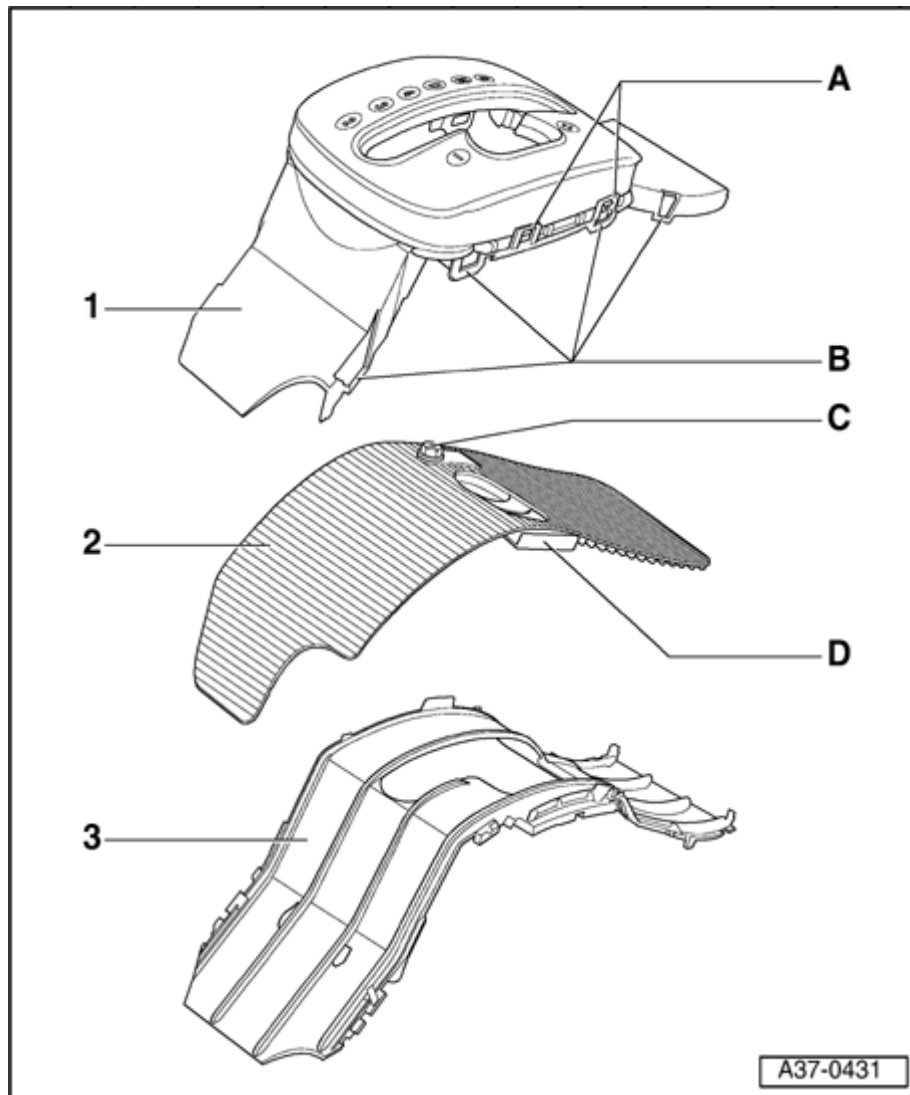
- A** - Carefully pry out retaining straps (arrows).

Note:

If the retaining straps are damaged, the upper cover must be replaced Item , => [page 37-27](#) .



- A** Under no circumstances may the four retaining straps (arrow B) which are visible from top be pried out, otherwise the circuit board will be destroyed. In addition, the chromed upper part is permanently bonded to the upper enclosure cover.



- Remove lower cover -3- and masking panel -2-.

Assembly

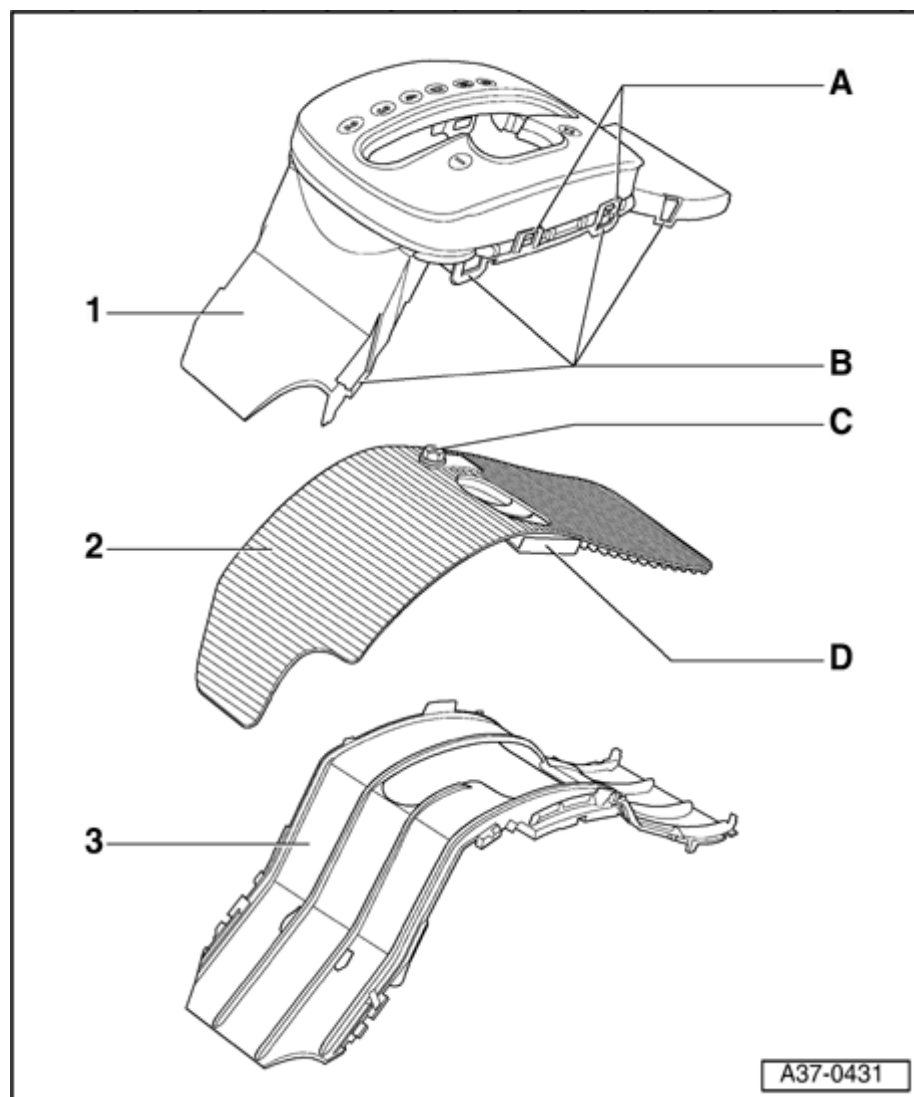
- Lay masking panel -2- into upper cover, installation position analog display.

Solenoids -C- and -D- must be securely fastened on masking panel, if necessary masking panel must be replaced.

- Carefully clip lower cover -3- into upper cover -1-.

If retaining straps -A- or -B- are damaged, the upper cover must be replaced.

- Install shift mechanism cover ⇒ [page 37-24](#)



Tiptronic Switch -F189-, removing and installing

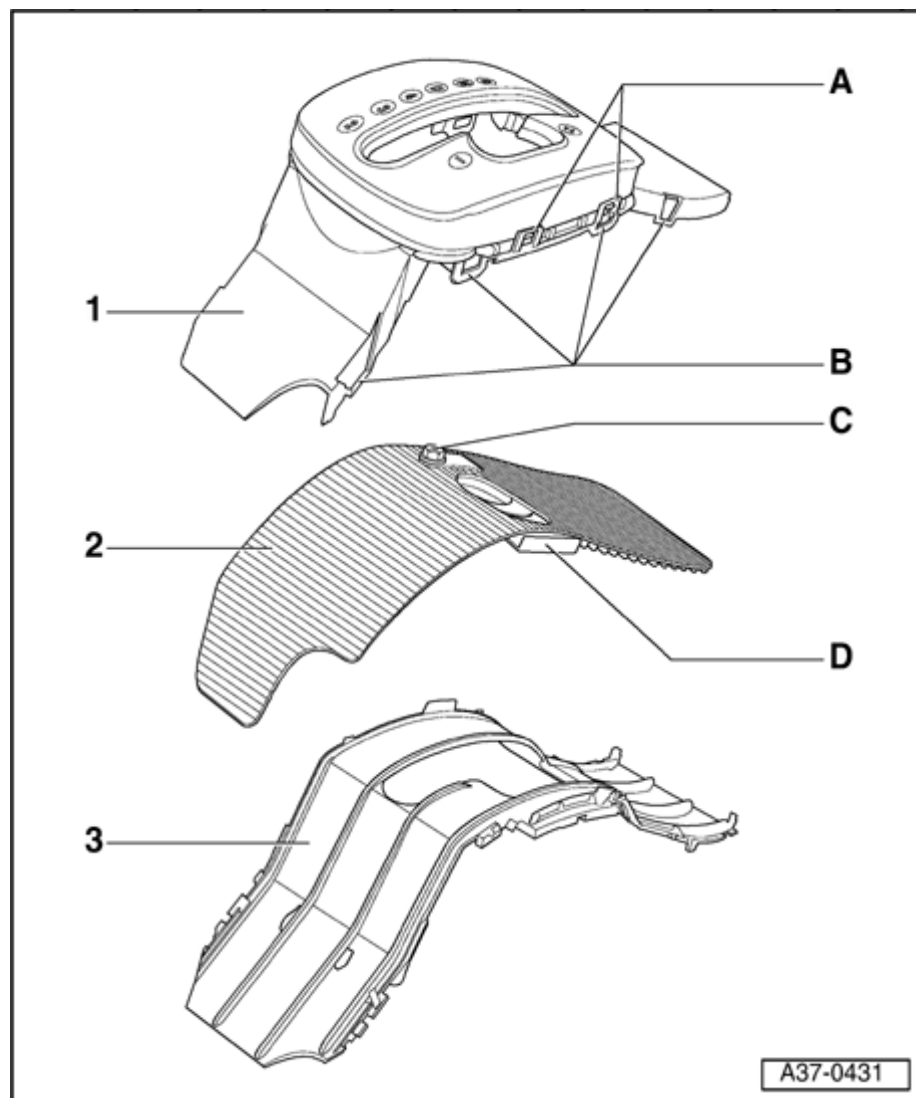
Installation location:

The Tiptronic switch is integrated into the upper cover -1- of shift mechanism.

- For occurring malfunctions, the Tiptronic switch must be checked for interference in Measuring Value Block and in the electrical test. Tiptronic switch must only be replaced after wiring test. For vehicles with Tiptronic sport steering wheel, the buttons at steering wheel and their wire connections must be checked.

⇒ [Repair Manual, 5 Spd. Automatic Transmission 01V On Board Diagnostic \(OBD\), Repair Group 01; Performing On Board Diagnostic \(OBD\)](#)

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**Removing:**

- Disassemble shift mechanism cover ⇒ [page 37-27](#)

Notes:

Solenoids -C- and -D- must be securely fastened on masking panel, if necessary masking panel must be replaced.

If solenoid -D- is missing (or has fallen out), Tiptronic switch will not work, i.e. masking panel must be replaced. In this case the Tiptronic switch must not be replaced.

- To replace Tiptronic switch, upper cover -1- must be replaced.

Installing:

- Install shift mechanism cover ⇒ [page 37-27](#)

Tiptronic shift mechanism, disassembling and assembling (sequence)

Disassembly of suspension strut

- Remove shift mechanism ⇒ [page 37-6](#) .
- First remove stop buffers from cable lever
- Shift selector lever into Tiptronic position and then remove frame.
- Shift selector lever into position "2".
- Disengage lever for locking cable by lifting it out of its bearing and remove from shift mechanism housing.
- Shift selector lever into position "D".
- Catch spring for Tiptronic position is carefully pried out of the shift mechanism housing from the outside.
- Pull out retainer for selector lever bushings.

- Using a screwdriver, press out selector lever bushings outward.

- Remove complete selector lever.
- Disassemble selector lever ⇒ [page 37-36](#) .
- To remove bearing for Tiptronic position of selector lever, unlatch retaining tabs at shift mechanism housing and remove bearing inward.
- Press out pin for locking latch using a drift.
- Remove shift lock solenoid together with locking latch upward.
- Catch spring for selector lever positions is carefully pried out of the shift mechanism housing from the outside.
- Pry out both pins of the cable lever/catch.
- Pull cable lever/catch with opening of the catch out of the shift mechanism housing upward.
- Unclip catch from the cable lever.

Assembly of suspension strut

- Clip catch into cable lever.
- Slide cable lever/catch into the shift mechanism housing with opening of the catch forward.
- Drive both pins of the cable lever/catch into the shift mechanism housing from both sides up to stop.
- Press catch spring with roller for selector lever position into its mount in shift mechanism housing up to stop.
- Shift lock solenoid together with locking latch must be slid into the shift mechanism housing from the top.
- Carefully drive in pin for locking latch.
- Using a screwdriver, mechanically check for engagement of the locking latch in position "P" and "N" of selector lever.
- Insert complete selector lever into shift mechanism housing.

- Hook selector lever into cable lever at bottom and top.

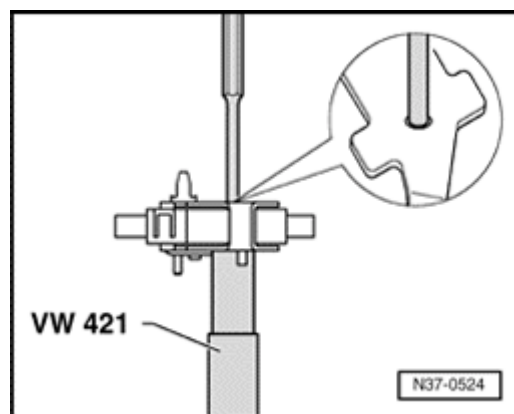
- Slide both selector lever bushings into the shift mechanism housing at front or rear.
- Install bearing bushing into shift mechanism housing so that the angled ends point inward.
- Press catch spring for Tiptronic position into its mount in shift mechanism housing up to stop.
- Shift selector lever into position "2".
- Lay cable lever into shift mechanism housing and engage it noticeably in both bearing areas.
- Check locking function of locking lever. In selector lever position "P", it must engage in the catch and lock the shift mechanism.
- Set frame onto shift mechanism housing (ribbing points upward) and insert buffer stop into cable lever.
- Install shift mechanism ⇒ [page 37-6](#) .

Selector lever, disassembling and assembling

- Remove selector lever ⇒ [page 37-32](#) .

Disassembly of suspension strut

- A** - Drive out selector lever pivot pin using a drift.
- Slide link with Tiptronic spring with raised pulling rod out of the selector lever.
- Release tension of compression spring and also remove pull-lever and compression spring from the selector lever.



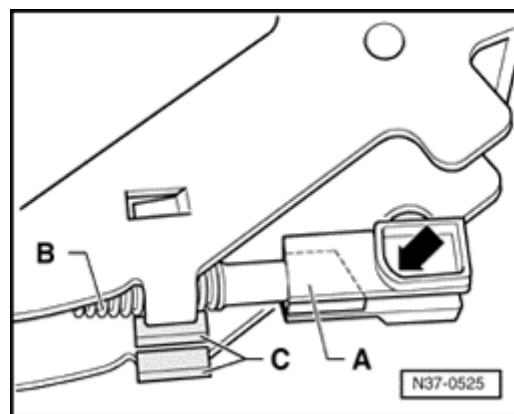
Assembly of suspension strut

- A** - Set compression spring -B- onto pull-lever -A-.
- Guide pull-rod with compression spring into the selector lever.

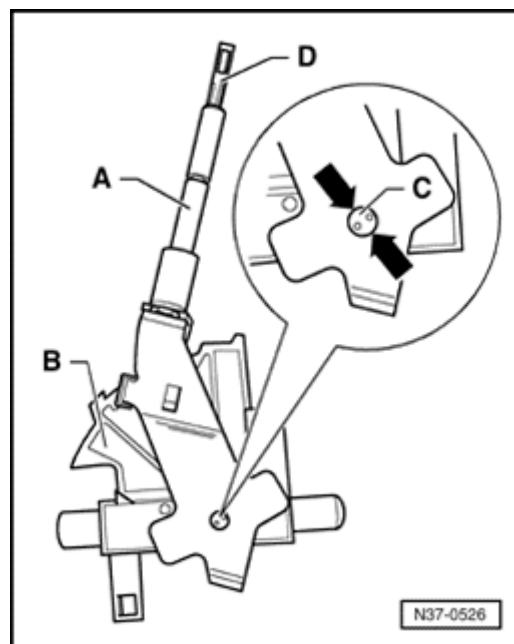
Installation position:

Curvature and edge point in direction of travel.

- Check whether the pull-lever glides on both guides -C- of selector lever.



37-37



A

- Slide link -B- with Tiptronic spring mechanism into selector lever -A- with pull-lever -D- raised.
- Drive pivot pin -C- into selector lever using a drift ⇒ [page 37-36](#) , ⇒ illustration N37-0524.
- To secure, make two new center punch marks (arrows) offset by 90° to the existing ones.

Pivot pin can have a maximum of 4 center punch marks.

- Install selector lever ⇒ [page 37-34](#) .

Shift lock solenoid, removing and installing

Removing

- Remove shift mechanism ⇒ [page 37-6](#) .
- Remove stop buffer from cable lever.
- Shift selector lever into Tiptronic position and then remove frame.
- Shift selector lever into position "2".
- Disengage lever for locking cable by lifting it out of its bearing and remove from shift mechanism housing.
- Press out pin for locking latch using a drift.
- Remove shift lock solenoid together with locking latch upward.

Installing

- Shift selector lever into position "2".
- Shift lock solenoid together with locking latch must be slid into the shift mechanism housing from the top.
- Carefully drive in pin for locking latch.
- Using a screwdriver, mechanically check for engagement of the locking latch in position "P" and "N" of selector lever.
- Lay cable lever into shift mechanism housing and engage it noticeably in both bearing areas.
- Check locking function of locking lever. In selector lever position "P", it must engage in the catch and lock the shift mechanism.
- Set frame onto shift mechanism housing (ribbing points upward) and insert buffer stop into cable lever.
- Install shift mechanism ⇒ [page 37-6](#) .

Selector lever cable for Tiptronic shift mechanism, removing and installing

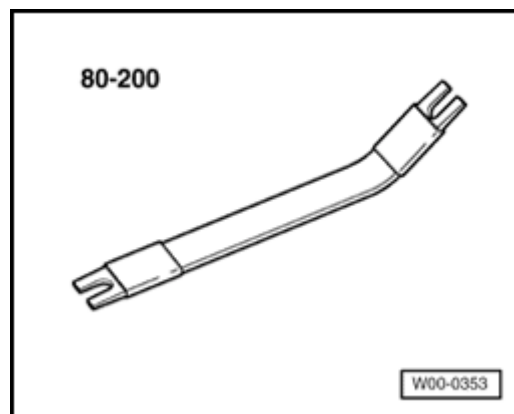
Special tools and equipment

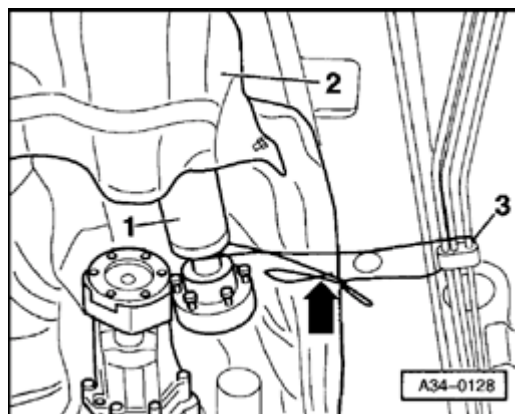
- ◆ 80-200 Pry lever

Removing

- Shift selector lever into position "P".
- Raise vehicle.
- Remove crossmember below exhaust system if installed.
- Disconnect front exhaust pipes with catalytic converter from the rear exhaust system and tie them up on side;

⇒ *Repair Manual, Engine Mechanical, Repair Group 26, removing and installing exhaust system*

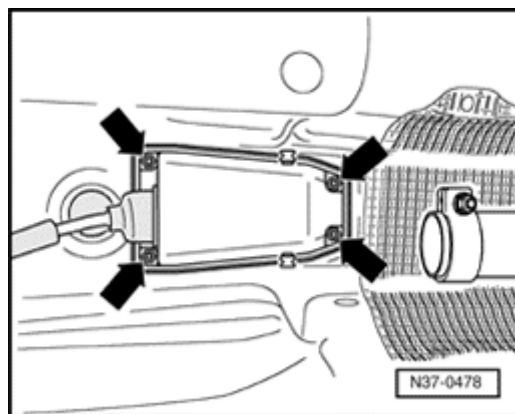


All-wheel-drive vehicles

- A**
- Unbolt driveshaft -1- from transmission and let rest on heat shield -2- ⇒ [page 39-79](#) , Driveshaft, removing and installing.
 - Secure driveshaft using wire (arrow) at bracket -3- of fuel lines.

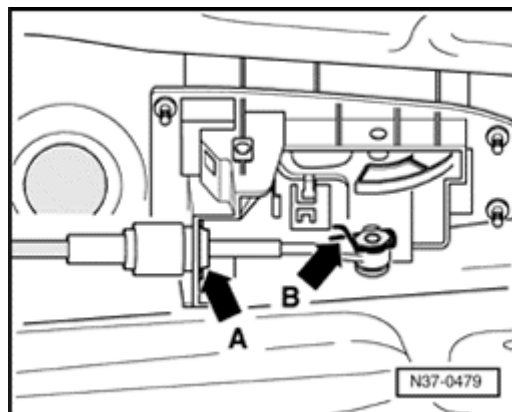
Continuation for all vehicles

- Unbolt heat shield from below shift mechanism housing.

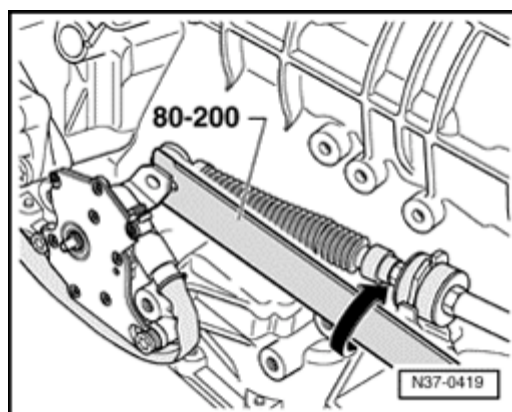


- A**
- Remove cover from shift mechanism housing (arrows).

Disconnect selector lever cable from shift mechanism housing:



- A**
- Press ends of locking clip -B- together and remove.
 - Remove securing plate -A- for selector lever cable at shift mechanism downward.
 - Remove selector lever cable from selector lever.

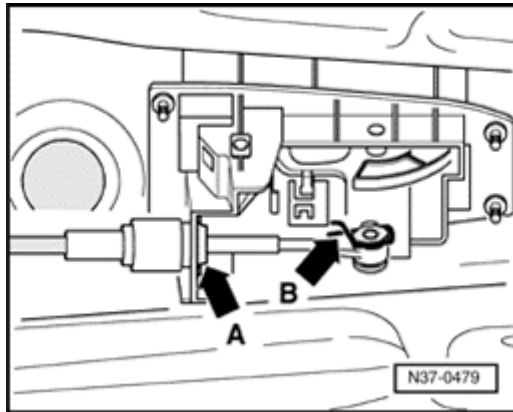


- A**
- Pry off selector lever cable from lever/shift rod using 80-200 pry lever (arrow).
 - Remove bracket from transmission.
 - Loosen selector lever cable from bracket.
 - Pull selector lever cable out of shift mechanism housing without kinking.

Installing

- Selector lever and lever/shift rod in position "P" (park lock must engage).
- Do not bend or kink selector lever cable, lightly grease coupling ring and ball socket before installing

- Guide selector lever cable into shift mechanism housing.
- Connect selector lever cable to selector lever.



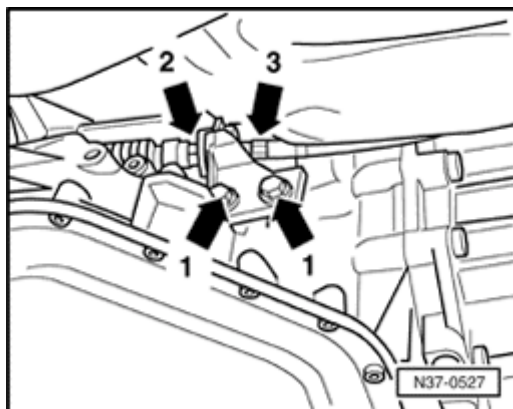
A

- Press ends of locking clip -B- together and secure selector lever cable.
- Install securing plate -A- for selector lever cable to shift mechanism.

Installation position:

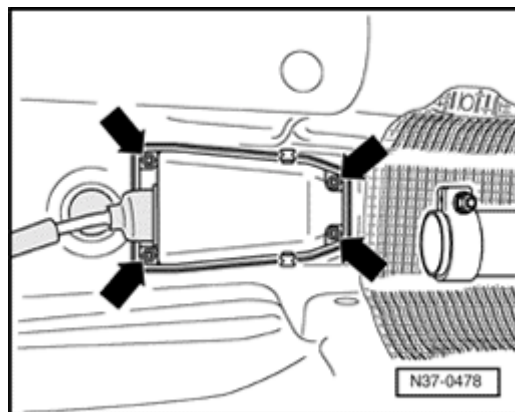
Angled end of securing plate points toward the end of the selector lever cable.

- Connect selector lever cable to bracket by hand.
- Bolt bracket to transmission by hand.
- Press selector lever cable onto lever/shift rod.
- Align selector lever cable in bracket.



A

- Tighten bracket/transmission (arrows 1) and selector lever cable/bracket (arrow 2) to tightening torque. During this, counterhold at hex socket (arrow 3).



A

- Tighten nuts (arrows, 4 pieces) to 10 Nm.
- Check adjustment of selector lever cable and adjust if necessary ⇒ [page 37-45](#) .
- Install heat shield.

All-wheel-drive vehicles

- Bolt driveshaft to transmission flange ⇒ [page 39-79](#) , Driveshaft, removing and installing.

Continuation for all vehicles

- Connecting front exhaust pipe to rear exhaust system:

⇒ *Repair Manual, Engine Mechanical, Repair Group 26, removing and installing exhaust system.*

- Install front crossmember below exhaust system.

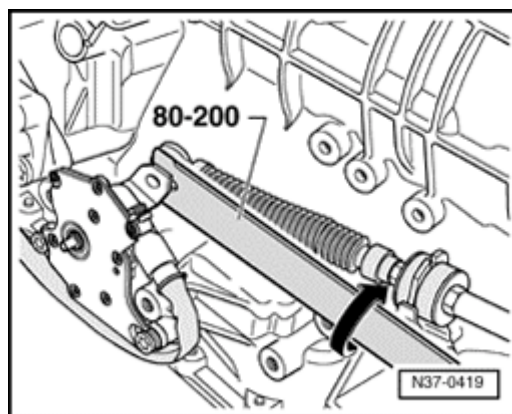
Tightening torques

Bracket/selector lever cable to transmission	23 Nm
Selector lever cable to mounting bracket	12 Nm

Selector lever cable for Tiptronic shift mechanism, checking and adjusting

Checking

- Shift selector lever into position "P".
- Raise vehicle.
- Remove shielding plate/selector lever cable.
- Pry off selector lever cable from lever/shift rod (arrow).
- Shift selector lever from "P" to "2".
 - Shift mechanism and selector lever cable must have freedom of movement during this, if necessary, replace selector lever cable or service shift mechanism.
- Shift selector lever into position "P".
- Shift lever/shift rod to "P", parking lock must engage, both front wheels cannot be turned in one direction.
 - It must be possible to push selector lever cable onto lever/shift rod, if necessary adjust selector lever cable.

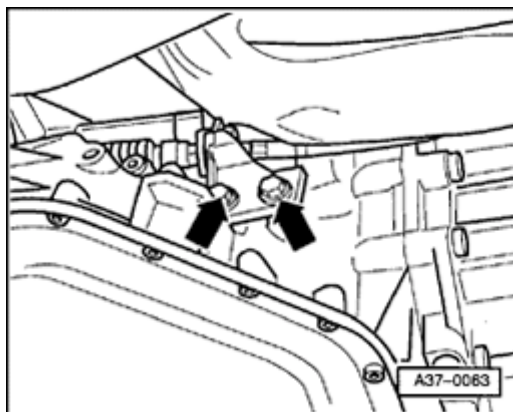


Adjusting

- Selector lever cable has been loosened from lever/shift rod.

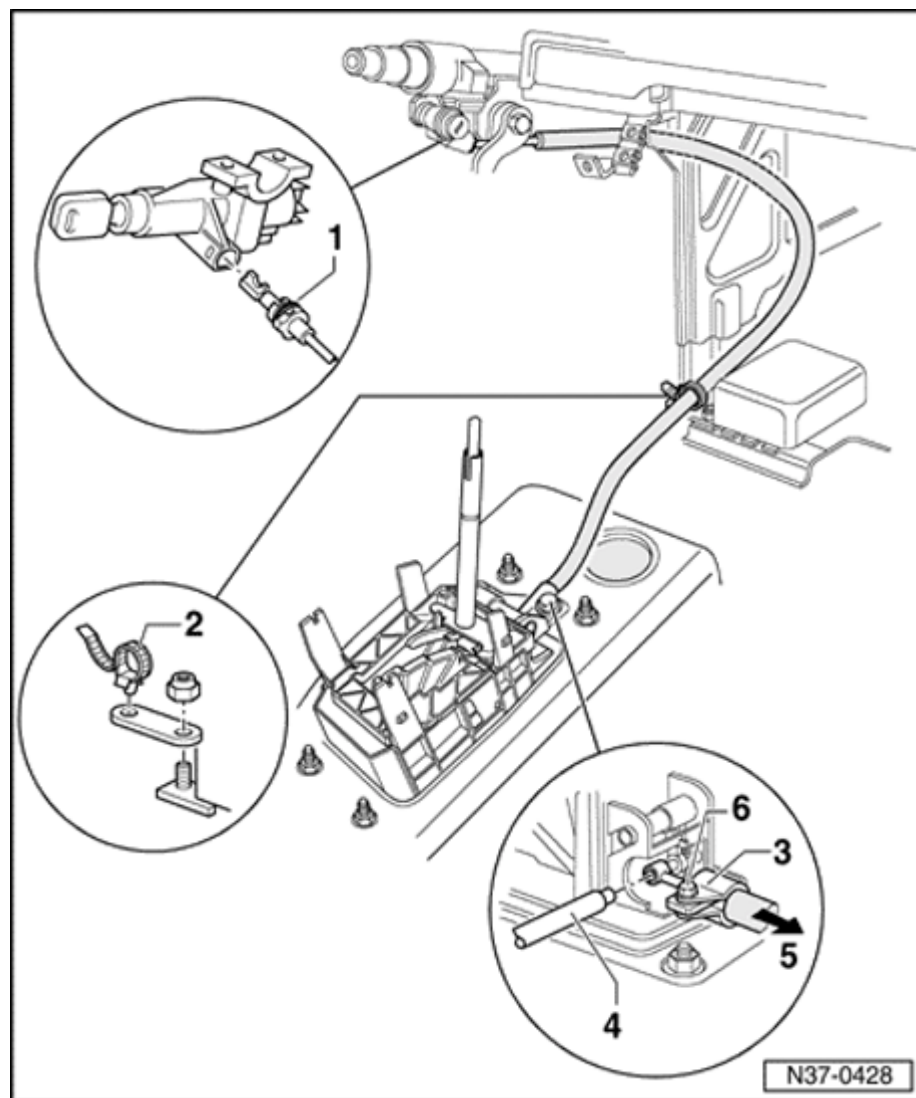
- Shift selector lever into position "P".

- Shift lever/shift rod to "P", parking lock must engage, both front wheels cannot be turned in one direction.



A

- Loosen mounting bolts (arrows) of bracket at transmission.
- Press selector lever cable onto lever/shift rod.
- Align selector lever cable in bracket.
- Tighten mounting bolts (arrows) of bracket at transmission to 23 Nm.
- Install shielding plate/selector lever cable
- Check shift mechanism ⇒ [page 37-2](#) .

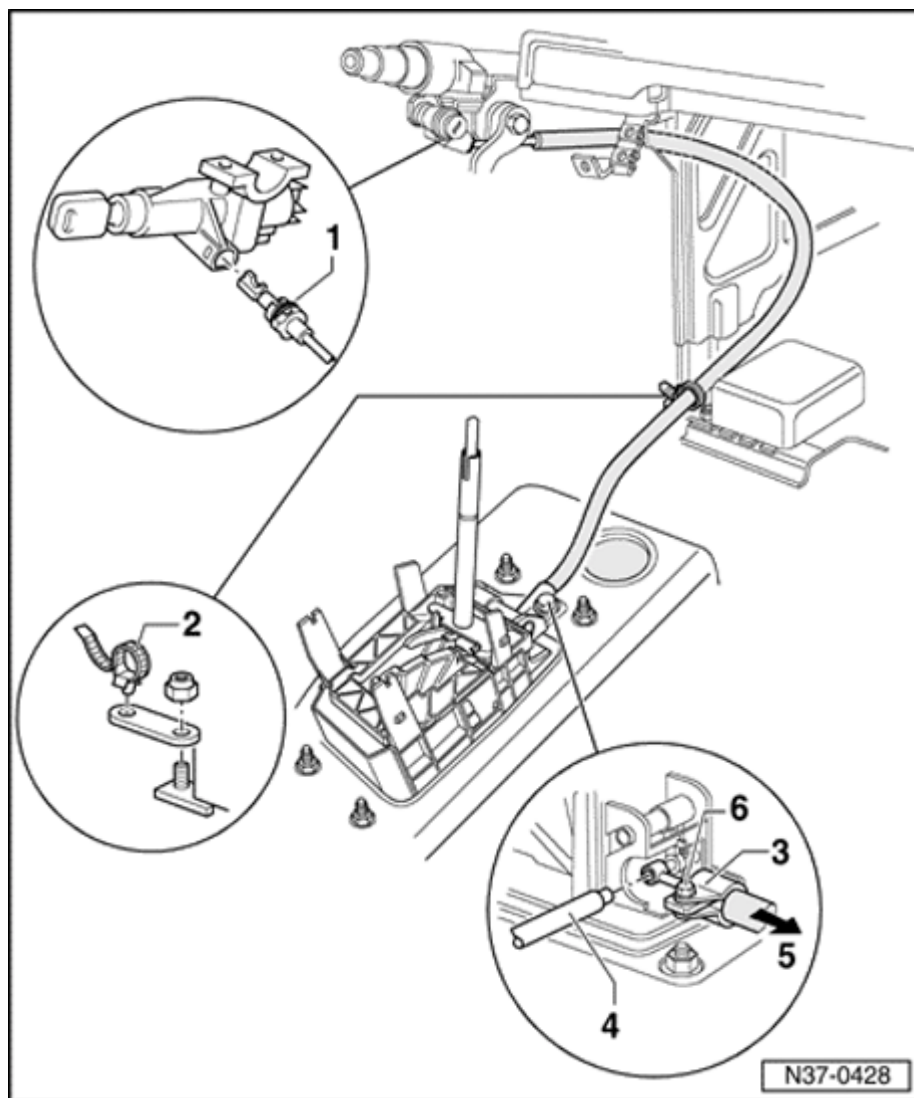


Locking cable for Tiptronic shift mechanism, removing and installing

Removing

- Shift selector lever into position "2".
- Note radio code (for vehicles equipped with coded anti-theft radio).
- Disconnect Ground (GND) strap from battery.
- Selector lever handle, removing ⇒ [page 37-22](#)
- Front center console, removing

⇒ [Repair Manual, Body Interior, Repair Group 68; storage compartments/covers; front center console, removing and installing](#)



- Remove steering wheel.

⇒ [Repair Manual, Body Interior, Repair Group 69; Airbag; Steering wheel, removing and installing](#)

- Switch ignition key to driving position (ignition on).

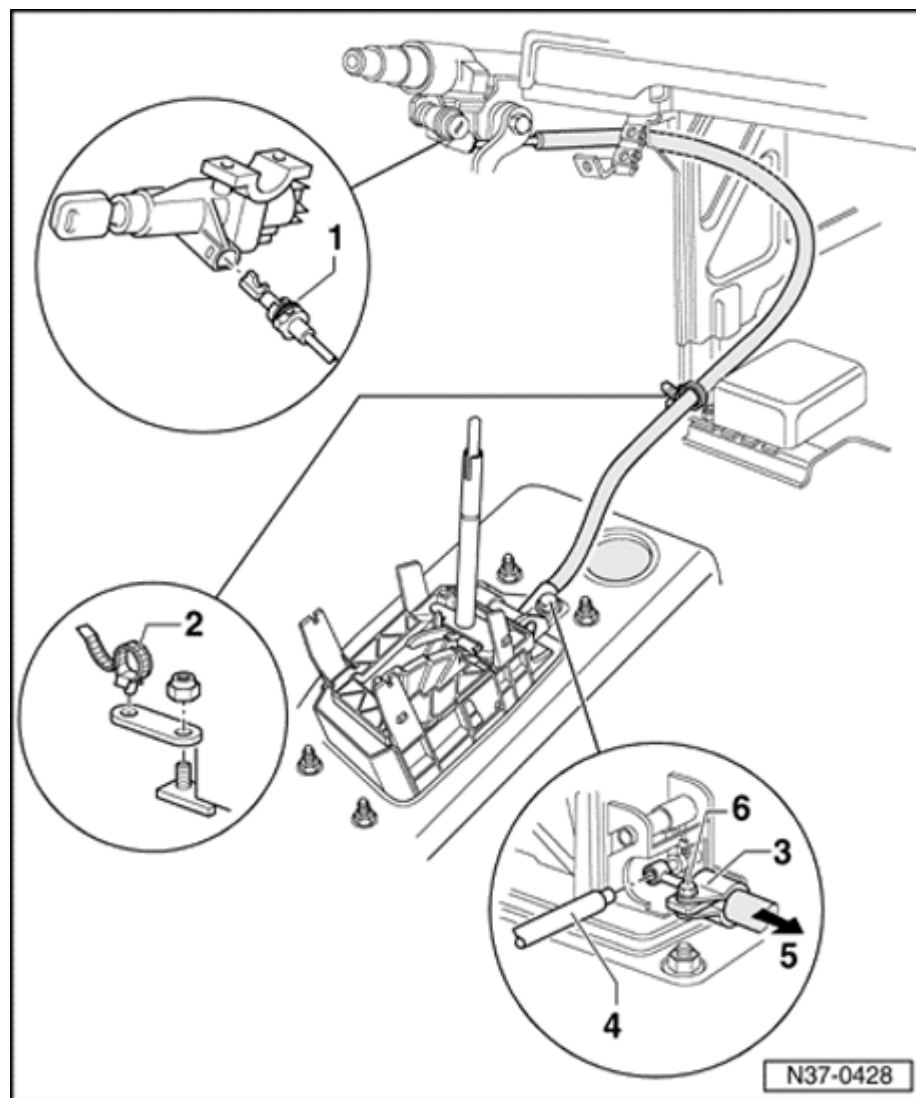
- Shift selector lever into position "P".

- Lift up retaining clip of interlock lever -1- and pull locking cable out of ignition/starter switch.

- Remove cover with guide (selector lever mechanism) ⇒ [page 37-5](#) .

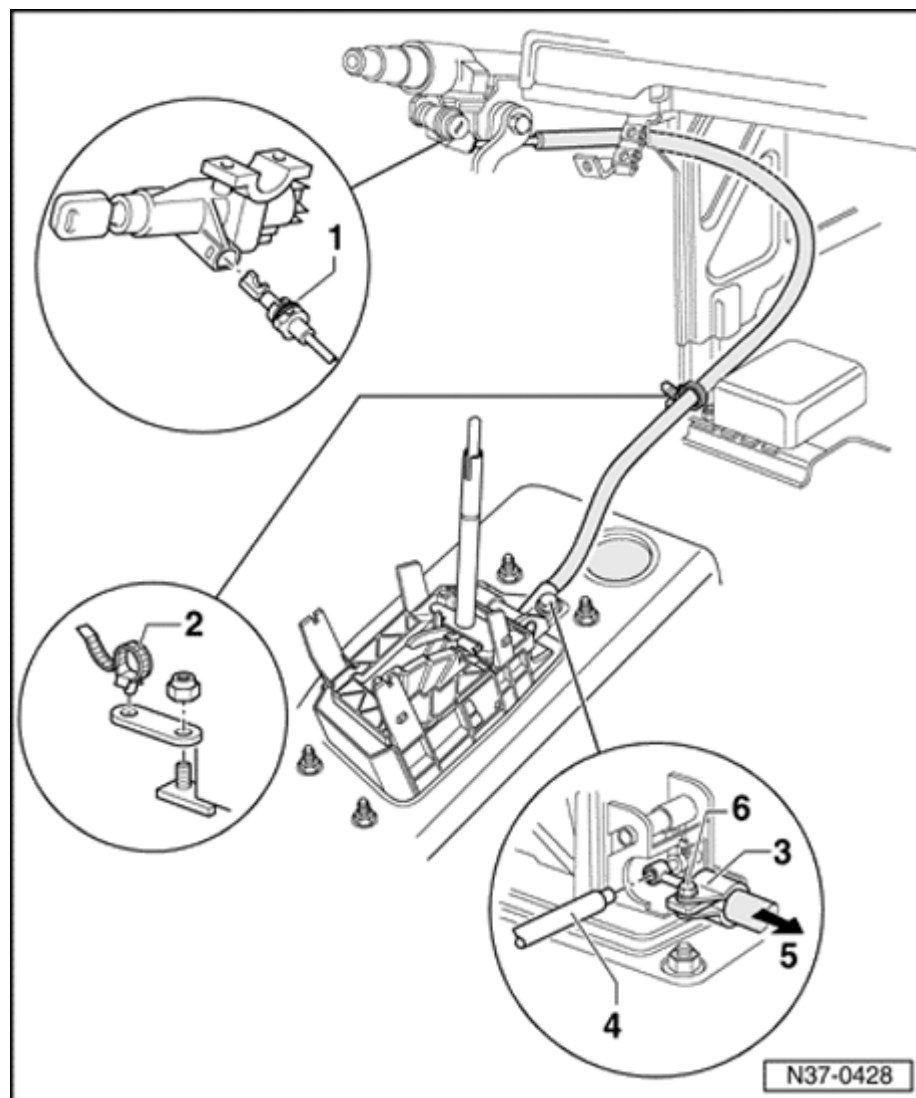
- Unclip locking cable from securing spring at shift mechanism housing, slightly lift up securing spring to do so ⇒ [Fig. 1](#) , ⇒ [page 37-21](#) .

- Loosen and remove locking cable from cable tie -2-.



Installing

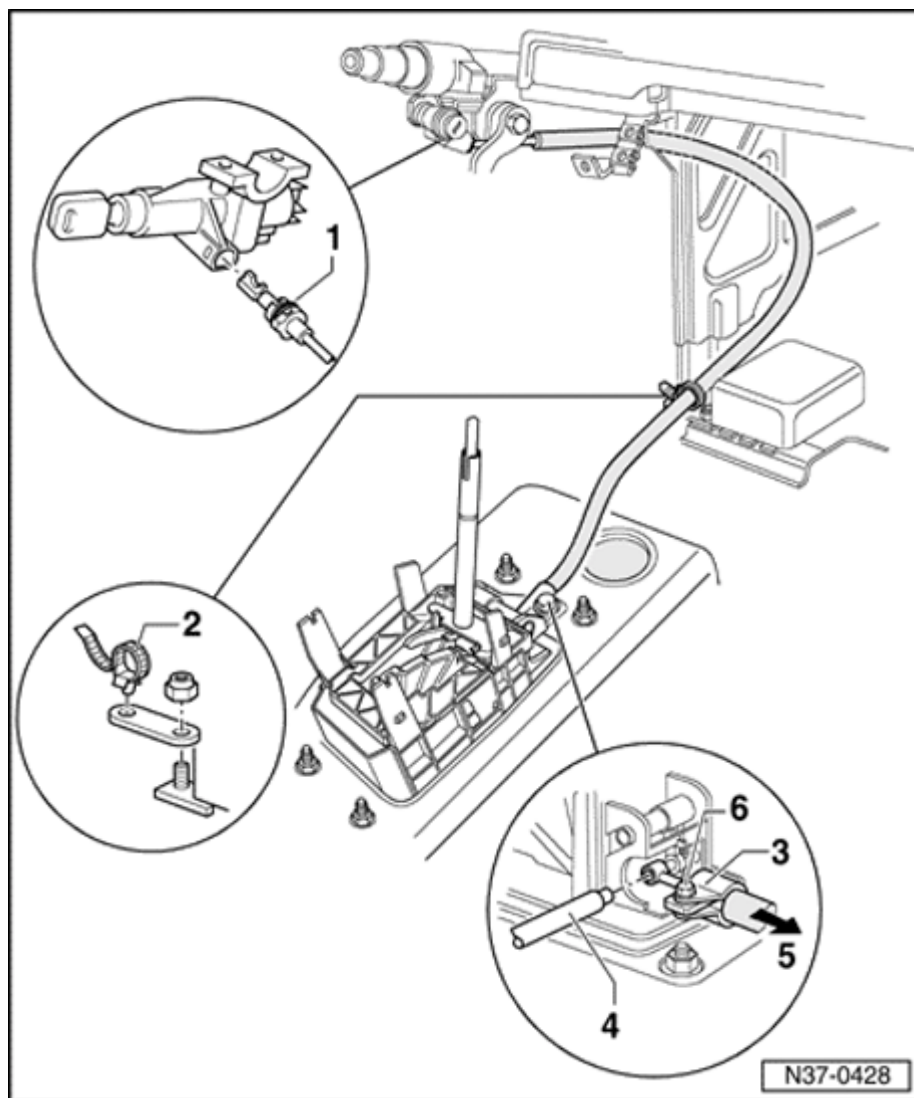
- Route locking cable without kinking.
- Switch ignition key to driving position (ignition on).
- Insert locking cable into ignition/starter switch.
- Check locking mechanism of interior lever -1-.
- Secure locking cable to airbag sensor using cable tie -2-.
- Bring ignition/starter switch into locking position (ignition off).
- Shift selector lever into position "P".
- Clip locking cable into securing spring of shift mechanism housing ⇒ [Fig. 1](#) , ⇒ [page 37-21](#) .
- Hook locking cable bracket -3- into shift mechanism and locking coupling ring in lever (for locking cable).



Adjusting

- Shift selector lever into position "P".
- Loosen bolt -6-.
- It must be possible to slide bracket -3- in direction of arrow -5-.
- Adjust steering column downward.
- Connect 3352 A adjustment pin for shift lock 3 - item 4- between lever (for locking cable) and locking coupling ring.
- Pull locking cable in direction of arrow -5- and tighten bolt -6- to 10 Nm.
- Remove adjusting gauge.
- Check ignition key removal lock after every adjustment of the locking cable ⇒ [page 37-1](#) .

37-51



- Install steering wheel.

⇒ [Repair Manual, Body Interior, Repair Group 69; Airbag; Steering wheel, removing and installing](#)

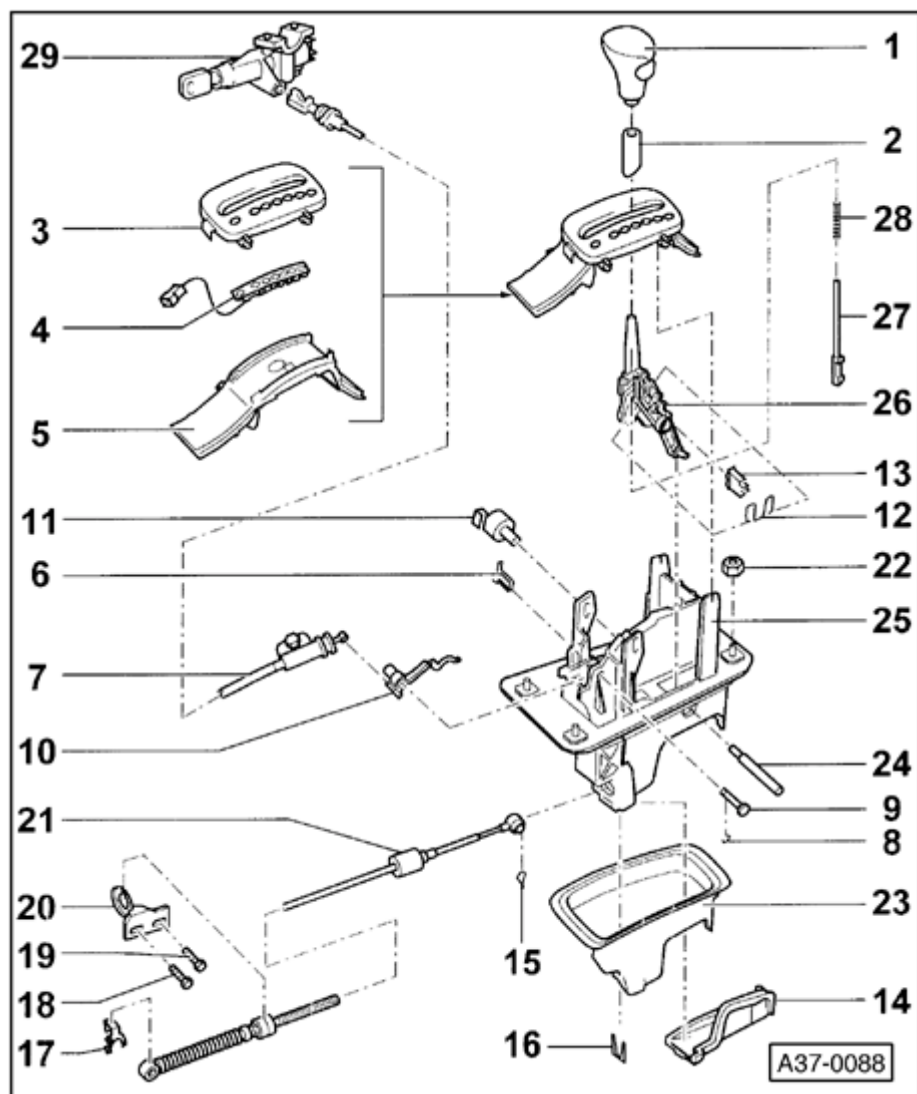
- Front center console, installing

⇒ [Repair Manual, Body Interior, Repair Group 68; storage compartments/covers; front center console, removing and installing](#)

- Selector lever handle, installing ⇒ [page 37-22](#)

- Connect battery Ground (GND) strap.

- For vehicles equipped with coded anti-theft radio, activate code.



Shift mechanism (without Tiptronic), disassembling and assembling

The Tiptronic shift mechanism is described on ⇒ [page 37-6](#) .

1 - Selector lever handle

- ◆ Press casing item 2 downward, pull out button at handle up to stop and pull off handle upward.

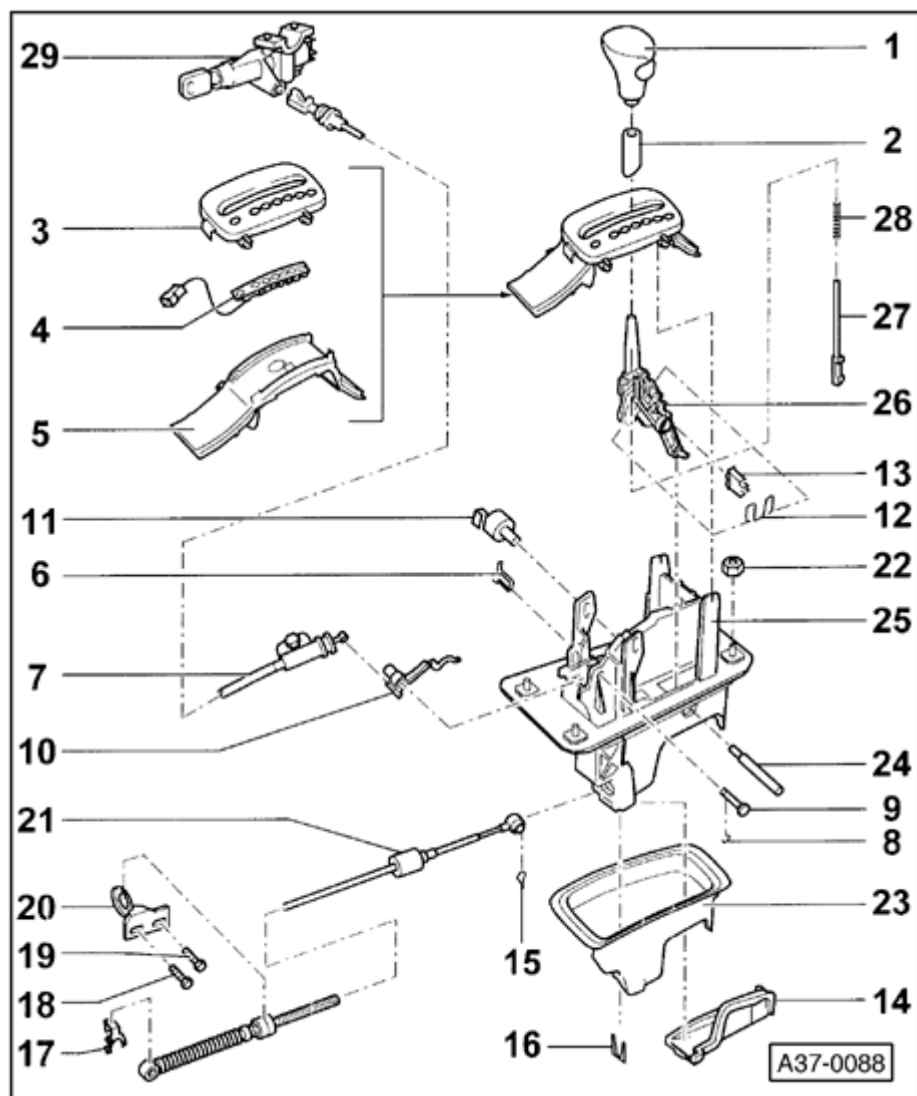
2 - Sleeve

- ◆ Engages in the selector lever handle

Note:

For all further work on the shift mechanism, the front center console must be removed.

⇒ [Repair Manual, Body Interior, Repair Group 68; storage compartments/covers; front center console, removing and installing](#)



3 - Cover

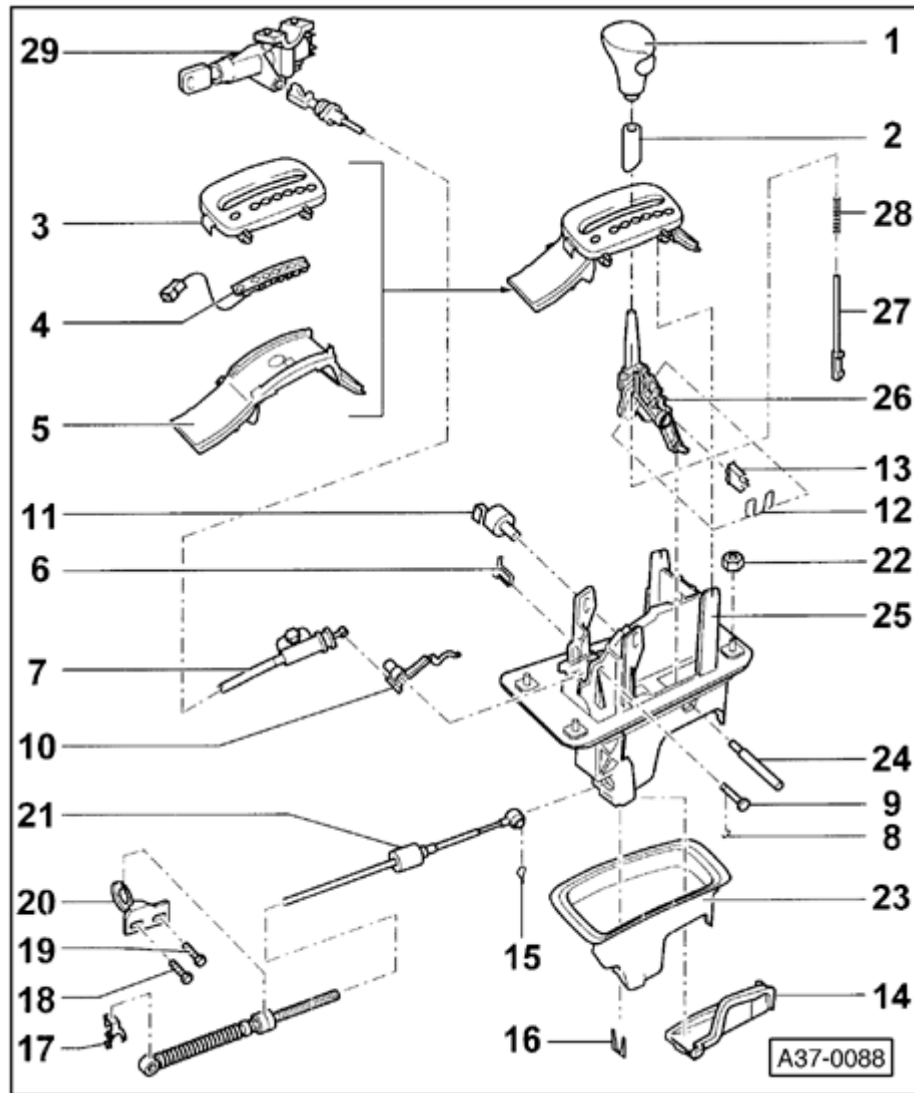
- ◆ With gear display and display for shift lock solenoid
- ◆ To remove, disengage retaining tabs for shift mechanism housing
- ◆ Remove upward together with item 4 and 5 .

4 - Light track

- ◆ With wiring harness and LEDs for base illumination
- ◆ Wire routing ⇒ [Fig. 4](#) , ⇒ [page 37-61](#)

5 - Guide

- ◆ With masking panel and mirror for individual gear display
- ◆ Mechanism can be loosened from the cover by disengaging the four retaining tabs at interior.

**6 - Retaining spring**

- ◆ For locking cable
- ◆ Clip into shift mechanism housing ⇒ [page 37-47](#)

7 - Locking cable

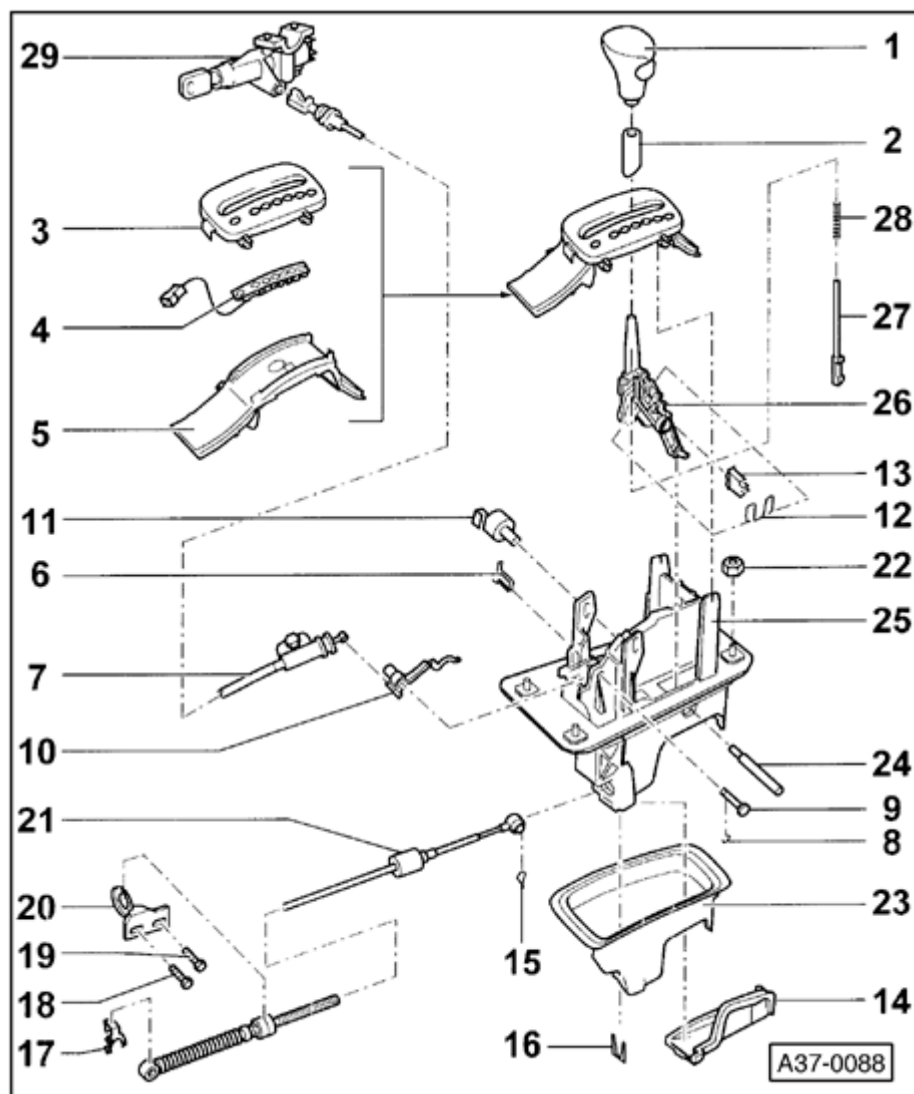
- ◆ Must not be kinked
- ◆ Removing ⇒ [page 37-47](#)
- ◆ Installing and adjusting ⇒ [page 37-69](#)

8 - Locking washer

- ◆ For pin item 9

9 - Pin

- ◆ For lever item 10

**10 - Locking cable lever****11 - Shift lock solenoid -N110-**

- ◆ Removing and installing ⇒ [Fig. 3](#) , ⇒ [page 37-61](#)
- ◆ Unclip connector from wiring harness (at center console) item , ⇒ [page 37-61](#)
- ◆ Can be checked via electrical test and read measuring value block

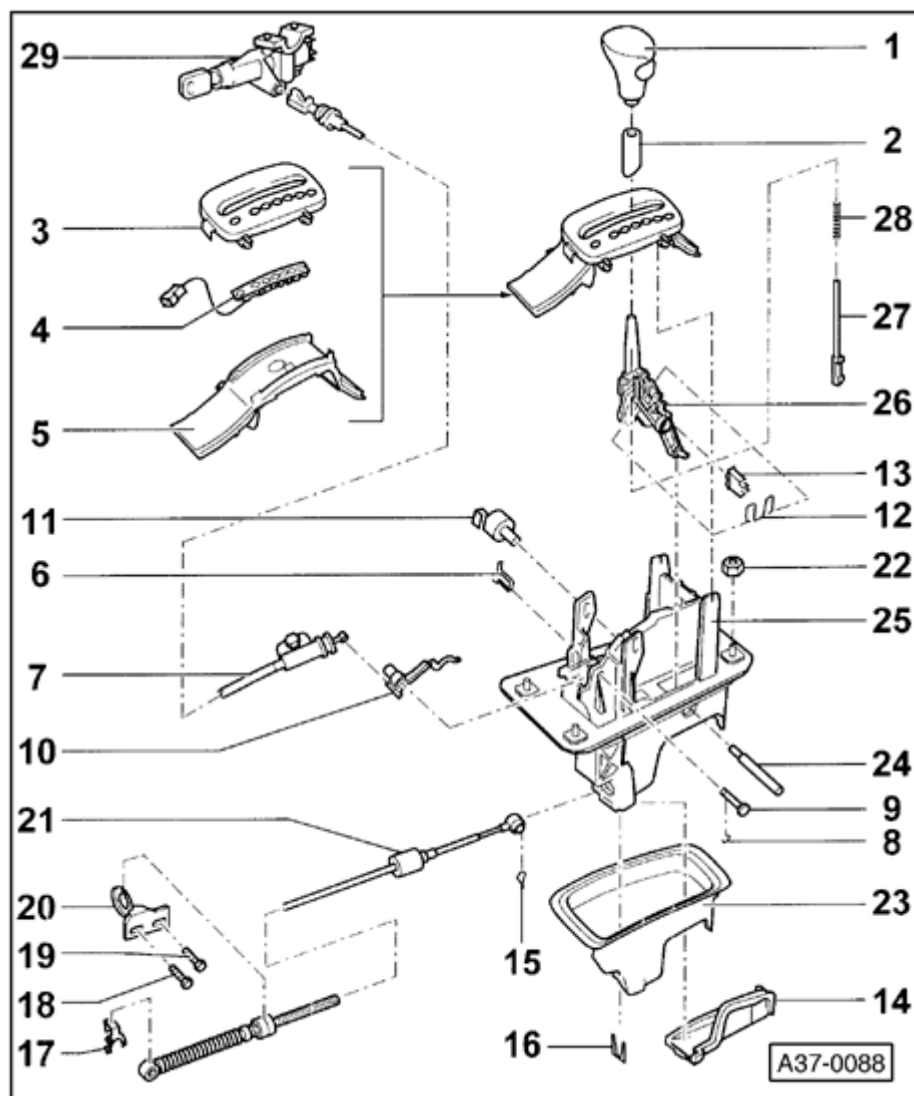
⇒ [Repair Manual, 5 Spd. Automatic Transmission 01V On Board Diagnostic \(OBD\), Repair Group 01; On Board Diagnostic \(OBD\); Read measuring value block](#)

12 - Spring bracket

- ◆ Insert both ends into selector lever

13 - Locking segment

- ◆ Insert into selector lever together with spring bracket

**14 - Cover**

- ◆ For shift mechanism housing
- ◆ Removing and installing ⇒ [Fig. 1](#) , ⇒ [page 37-59](#)

15 - Locking clamp

- ◆ For selector lever cable to selector lever

16 - Locking plate

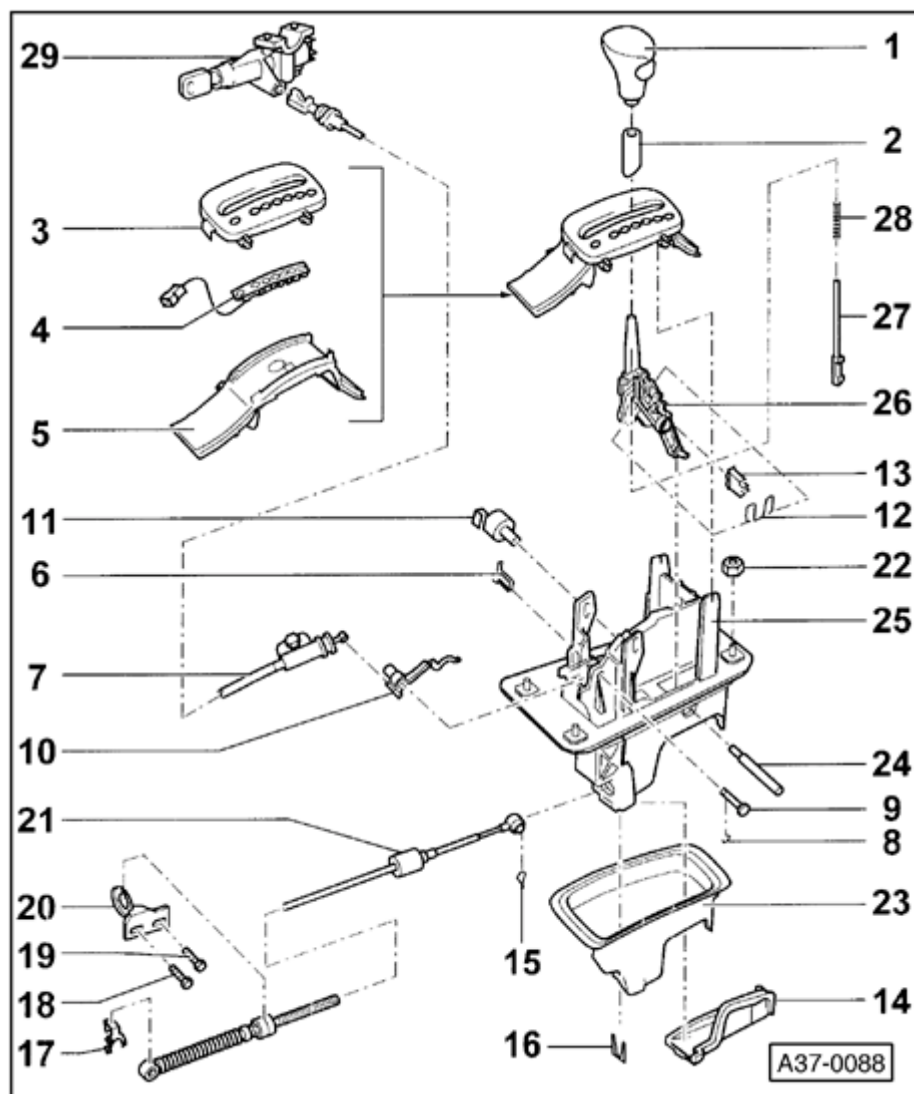
- ◆ For selector lever cable to shift mechanism housing ⇒ [Fig. 2](#) , ⇒ [page 37-60](#) item E

17 - Clip

- ◆ For selector lever cable to transmission shift lever

18 - Hex-bolt, 23 Nm**19 - Hex-bolt, 23 Nm****20 - Pivot**

- ◆ For selector lever cable at transmission



21 - Selector lever cable

- ◆ Removing and installing ⇒ [page 37-62](#)
- ◆ Adjusting ⇒ [page 37-45](#)

Note:

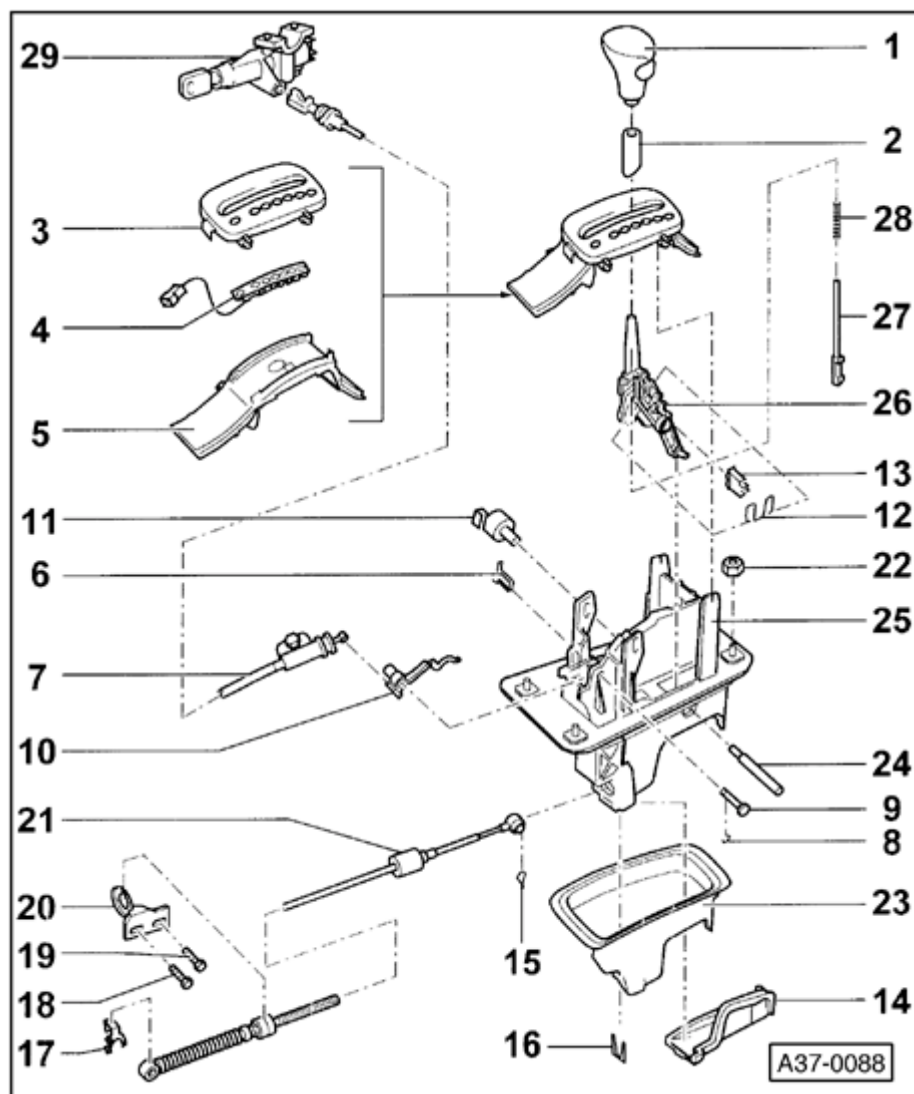
For all further work, shift mechanism must be removed completely from the vehicle.

22 - Nut - 9 Nm

- ◆ 4x

23 - Rubber housing

- ◆ Must only be separated from shift mechanism housing item 25 if damaged or to remove selector lever.
- ◆ Installation and installation position ⇒ [Fig. 2](#), ⇒ [page 37-60](#)

**24 - Pivot pin**

- ◆ Removing: carefully press out using screwdriver

25 - Shift mechanism housing

- ◆ Removing and installing ⇒ [Fig. 2](#) , ⇒ [page 37-60](#)

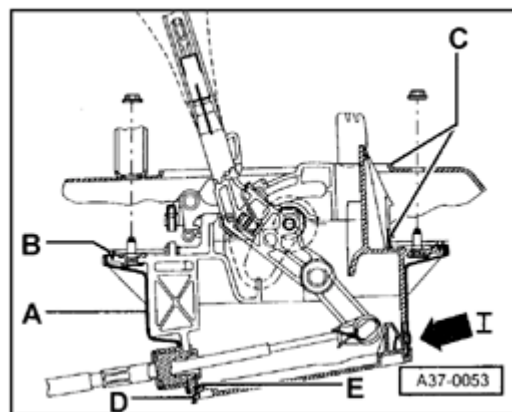
26 - Selector lever**27 - Pull-lever**

- ◆ Insert into selector lever together with spring item 28

28 - Spring

- ◆ For pull-lever

29 - Ignition/Starter Switch



A Fig. 1 Cover, removing and installing

Note:

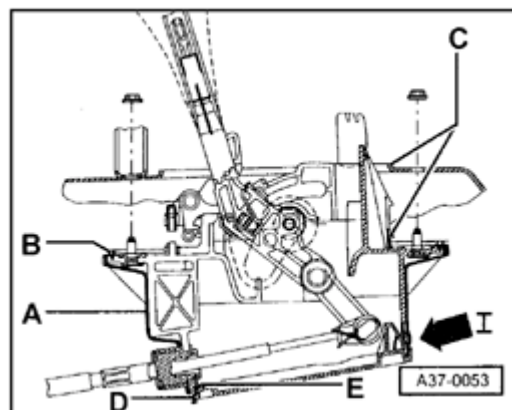
Cover can be removed and installed from below with the shift mechanism installed.

Removing

- Press in direction of (arrow I) and disengage snap-lock to shift mechanism housing.

Installing

- Guide cover into groove -D- and then engage snap-lock.
- Check cover for proper seating and seal.



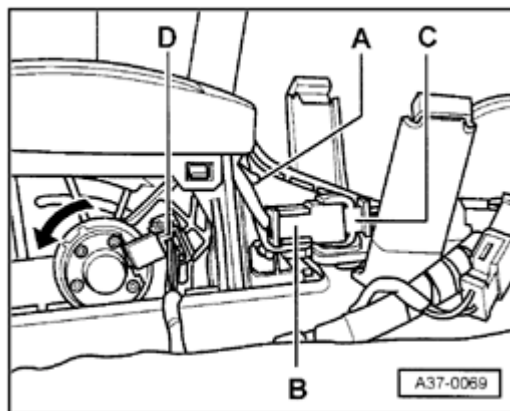
A

Fig. 2 Shift mechanism housing, removing and installing

- Remove bottom shielding plate and catalytic converter.
- Disconnect selector lever cable from shift mechanism housing.
- Before installing, secure rubber housing -A- to shift mechanism housing.
- Tighten nut - 9 Nm

Note:

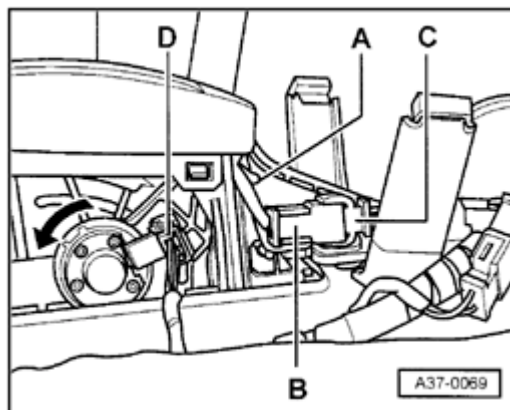
- ◆ Rubber housing -A- must seal shift mechanism housing to chassis (sealing lip -B-).
- ◆ Do not rout any cables between chassis and mounting bracket.



A

Fig. 3 Shift Lock Solenoid -N110-, removing and installing

- Unclip connector -D- (console wiring harness).
- Turn lift solenoid in direction of arrow approx. 90°.
- Check shift mechanism after removing lift solenoid ⇒ [page 37-2](#)



A

Fig. 4 Route wire for base illumination

- Route wire for base illumination below guide and secure in notch -A- (left/right).
- Clip connector -B- in bracket onto guide.
- Clip in wiring harness connector (console).

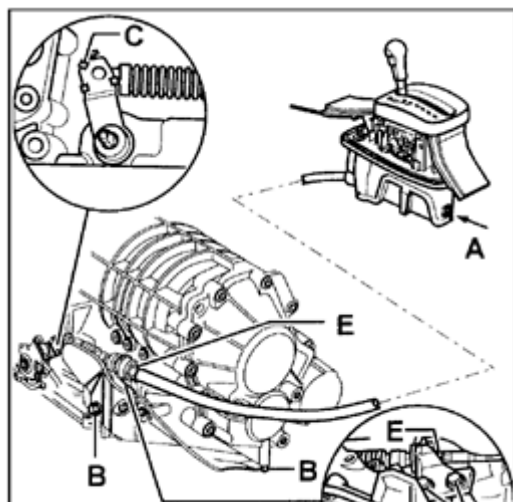
Selector lever cable for shift mechanism (without Tiptronic), removing and installing

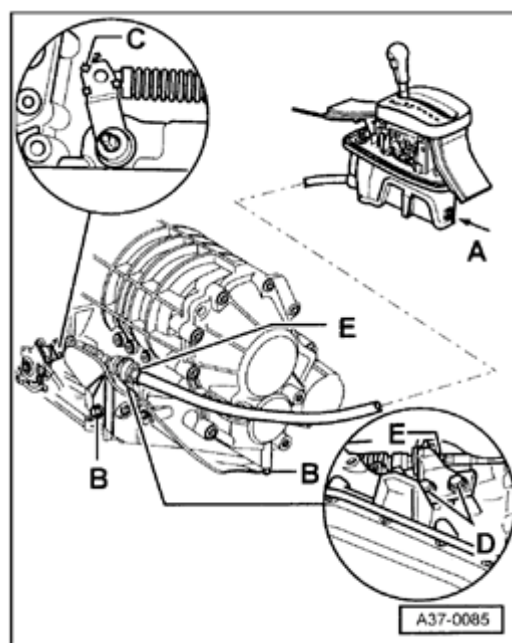
Note:

- ◆ Do not bend or kink selector lever cable, lightly grease coupling ring and coupling ends before installing
- ◆ Selector lever cable can best be removed in selector lever position "P".

Removing:

- Remove shielding plate (below shift mechanism) for exhaust system.
- Remove cover:
 - Disengage snap lock of cover by pressing in direction of arrow A ⇒ [page 37-59](#) .
- Disengage locking clip by pressing both ends together and pull selector lever cable off selector lever.
- Pull out securing plate for selector lever cable at shift mechanism housing downward.
- Insert with angled end toward the rear and in groove at selector lever cable ⇒ [Fig. 1](#) , ⇒ [page 37-64](#) .





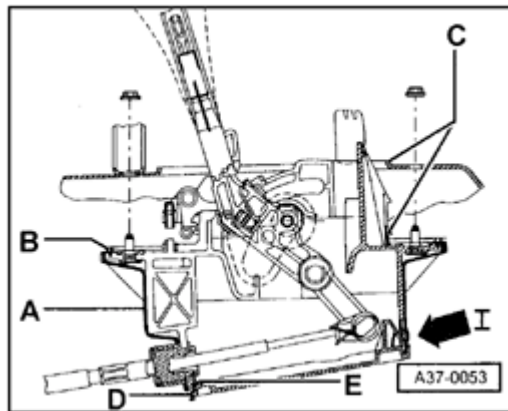
- Pull selector lever cable out of shift mechanism housing.
- Remove shielding plate for selector lever cable (item B).
- Press retaining clip off of lever/shift lever (item C).
- Press ball socket of selector lever cable off of lever/shift rod.
- Loosen bracket from transmission (item D).
- If necessary, loosen selector lever cable from bracket (item E).

Installing

- Selector lever and lever/shift rod in position "P" (park lock must engage).
- Installation is the reverse order of removal.
- Lightly grease coupling ring and ball socket of selector lever cable.
- Selector lever cable, checking and adjusting ⇒ [page 37-45](#) .

Tightening torques:

Components	Tightening torques
Selector lever cable to mounting bracket	12 Nm
Bracket to right transmission mount	23 Nm
Shielding plate to transmission, M8	23 Nm



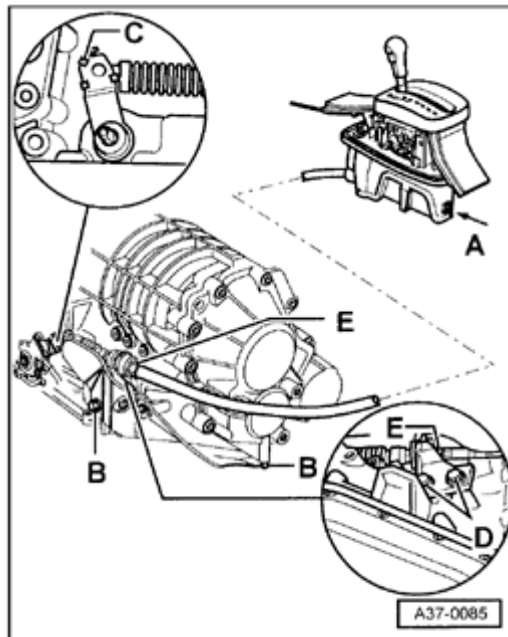
A

Fig. 1 Installing securing plate

- Installation of the securing plate (item E).
Insert with angled end toward rear.

Selector lever cable for shift mechanism (without Tiptronic), checking and adjusting

Checking:

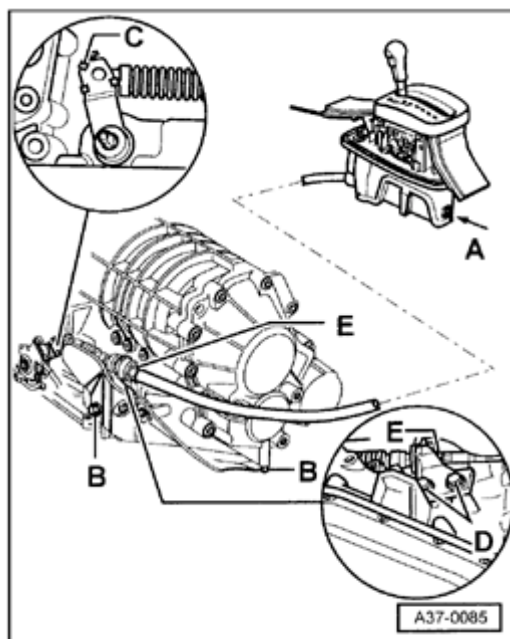


A

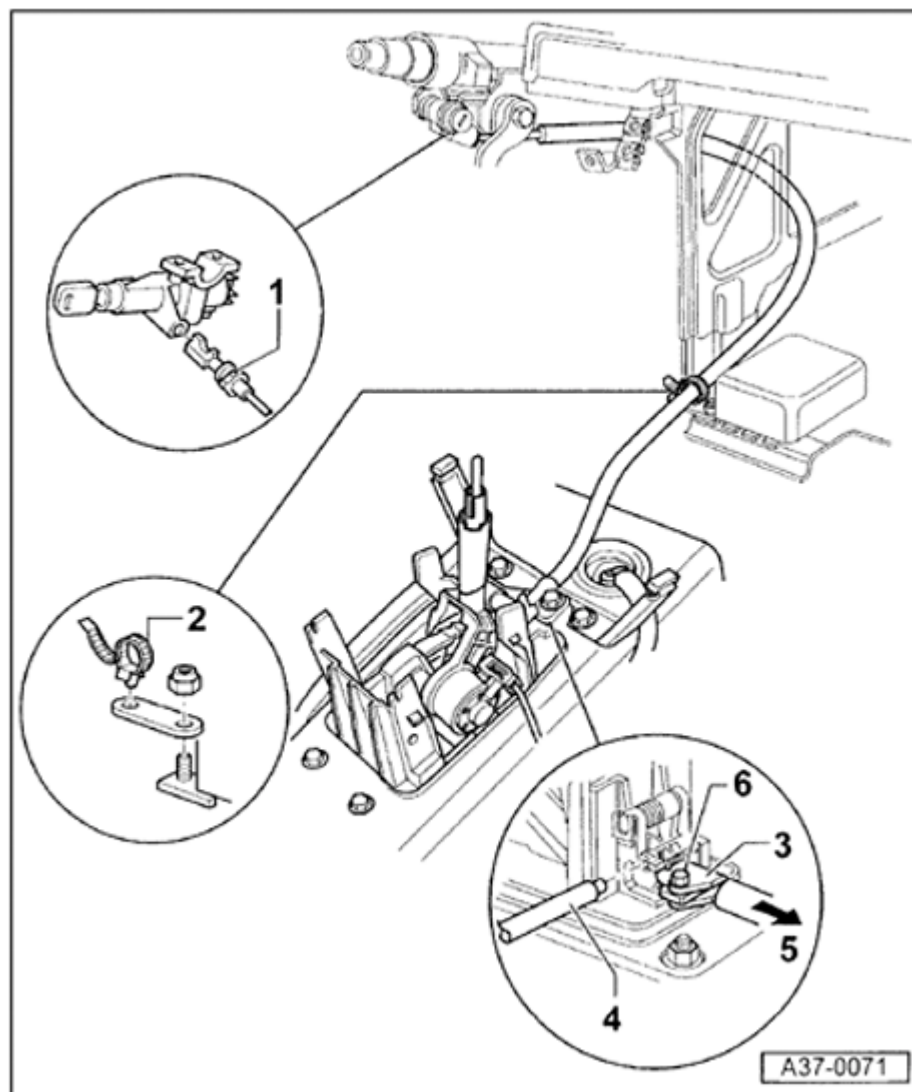
- Removing retaining clip -C- for selector lever cable at lever/shift lever
⇒ [page 37-62](#) .
- Press selector lever cable off of lever/shift lever.
- Shift selector lever from "P" to "2".
 - Shift mechanism and selector lever cable must have freedom of movement during this, if necessary, replace selector lever cable or service shift mechanism.
- Switch selector lever to "P".
- Shift lever/shift lever to "P" (last position, shift lock solenoid must engage).
 - It must be possible to push selector lever cable onto lever/shift rod, if necessary adjust selector lever cable.

Adjusting

- Place selector lever in position "P".
- Shift lever/shift lever to "P" (last position, shift lock solenoid must engage).
- Slightly loosen mounting bolt at bracket to transmission.
 - Check freedom of stress of selector lever cable, if necessary eliminate stress.
- Tighten mounting bolt of bracket to 23 Nm.
- Check shift mechanism ⇒ [page 37-2](#) .



37-67



Locking cable for shift mechanism (without Tiptronic), removing and installing

Note:

- ◆ Locking cable must not be kinked.

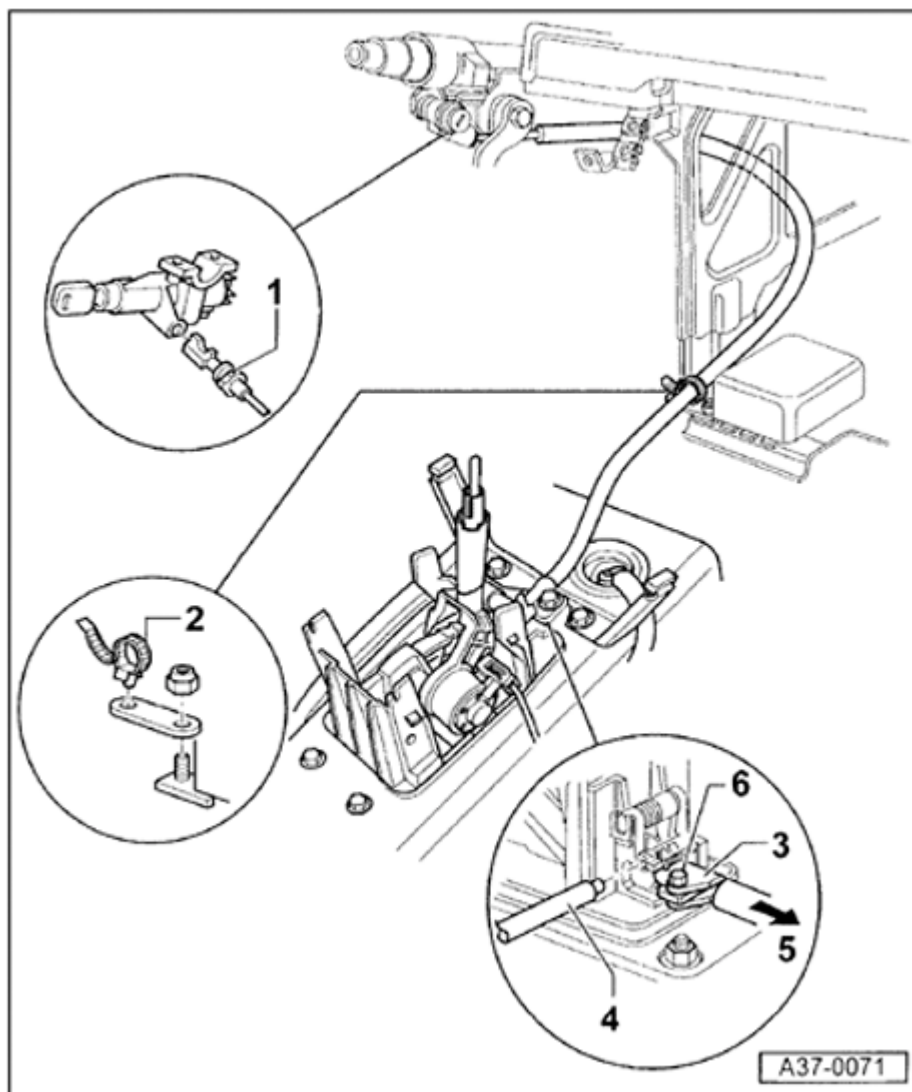
Removing:

- Disconnect Ground (GND) strap from battery.
- Remove driver-side storage compartment below steering wheel.

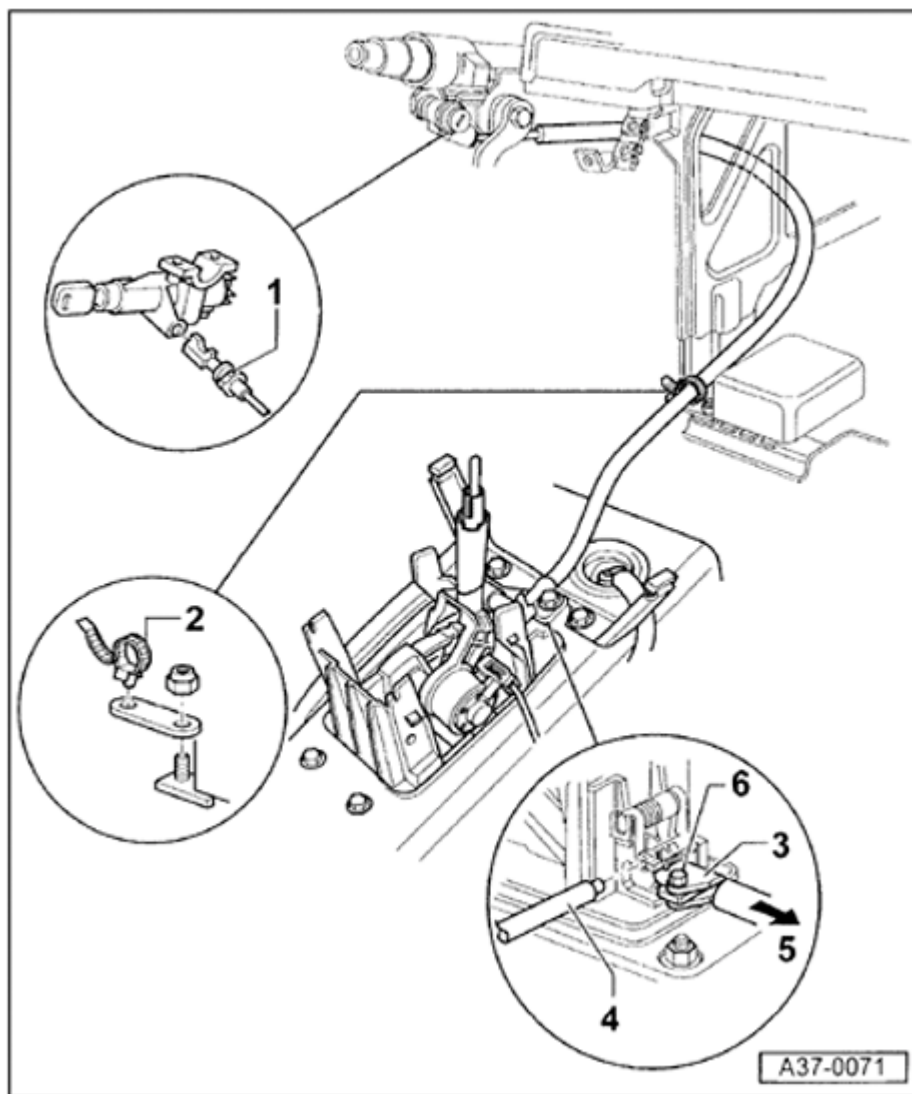
⇒ [Repair Manual, Body Interior, Repair Group 68; storage compartments/paneling; removing storage bin on driver's side](#)

- Remove steering column switch.

⇒ [Repair Manual, Electrical Equipment, Repair Group 92; Steering column switches, servicing; Steering column switches, removing and installing](#)



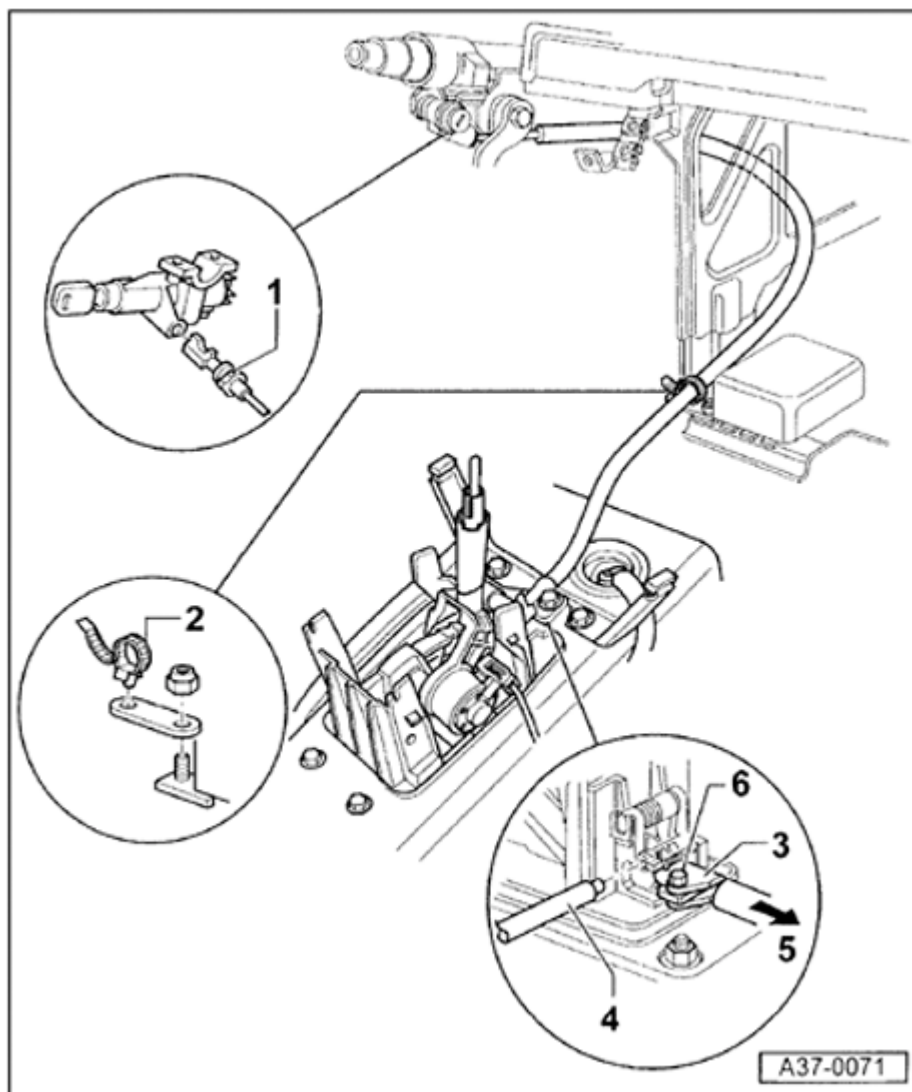
- Set ignition/starter lock in "Drive" position.
- Shift selector lever into position "P".
- Lift up locking bracket -1- and pull locking cable out of ignition/starter lock.
- Remove cover with guide (selector lever mechanism) ⇒ [page 37-5](#) .
- Unclip locking cable from securing spring at shift mechanism housing, slightly lift up securing spring to do so.
- Loosen cable tie -2- and remove locking cable.



Installing and Adjusting

- Installation is the reverse of removal.
- Install locking cable without kinking and secure at indicated position using cable tie -2-.
- Adjust steering column rearward/downward.
- Check locking mechanism of interior lever -1-.
- Slightly loosen bolt -6-.
- It must be possible to slide bracket -3- in direction of arrow -5-.
- Make sure securing spring is correctly seated in shift mechanism housing.
- Hook locking cable bracket -3- into shift mechanism and locking coupling ring in lever (for locking cable).

37-70



- Connect 3352A adjustment pin for shift lock 3 - item 4- between lever (for locking cable) and locking coupling ring.
- Pull locking cable in direction of arrow -5- and tighten bolt -6- to 8 Nm.
- Check locking cable after every new adjustment of the locking cable ⇒ [page 37-1](#) .