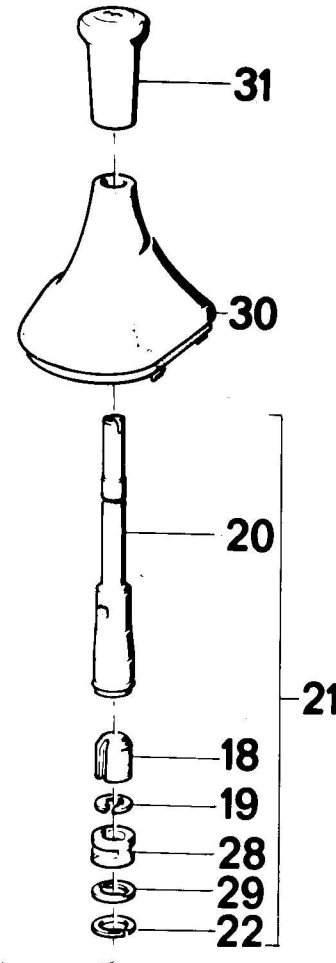
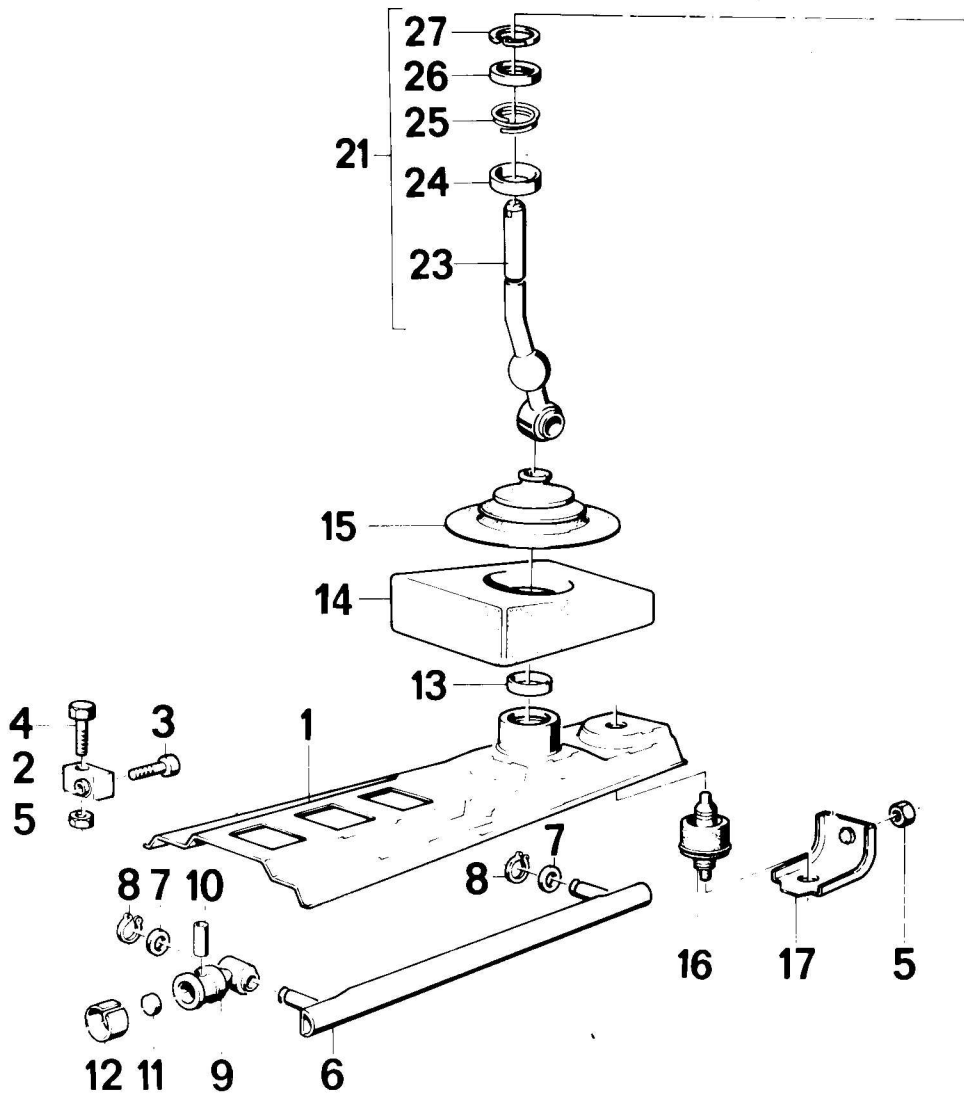


25 Gear Shift Mechanism

	SHIFT LAYOUT DRAWING – MANUAL TRANSMISSION	
	– Sheet metal shift console	25 - 1
	– Aluminum shift console	25 - 2
25 11 000	Shift lever – remove and install	
	– Sheet metal shift console	25 - 3
	– Aluminum shift console	25 - 4
	– All wheel drive cars	25 - 5
003	Shift lever – disassemble and assemble	
	– Sheet metal shift console	25 - 7
	– Aluminum shift console	25 - 8
081	Shift lever dust cover – replace	25 - 8
111	Shift rod joint – replace	
	– Sheet metal shift console	25 - 9
	– Aluminum shift console	25 - 10
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	SHIFT LAYOUT DRAWING – AUTOMATIC TRANSMISSION	
	– Version with shift rod	25 - 15
	– Version with cable	25 - 16
25 16 050	Selector lever complete with base – remove and install	
	– Version with shift rod	25 - 17
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080	Selector lever – remove and install	
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	– Version with cable (all wheel drive)	25 - 20
202	Cable for range selector lever – replace	25 - 21
...	Cable for range selector lever – adjust	25 - 22

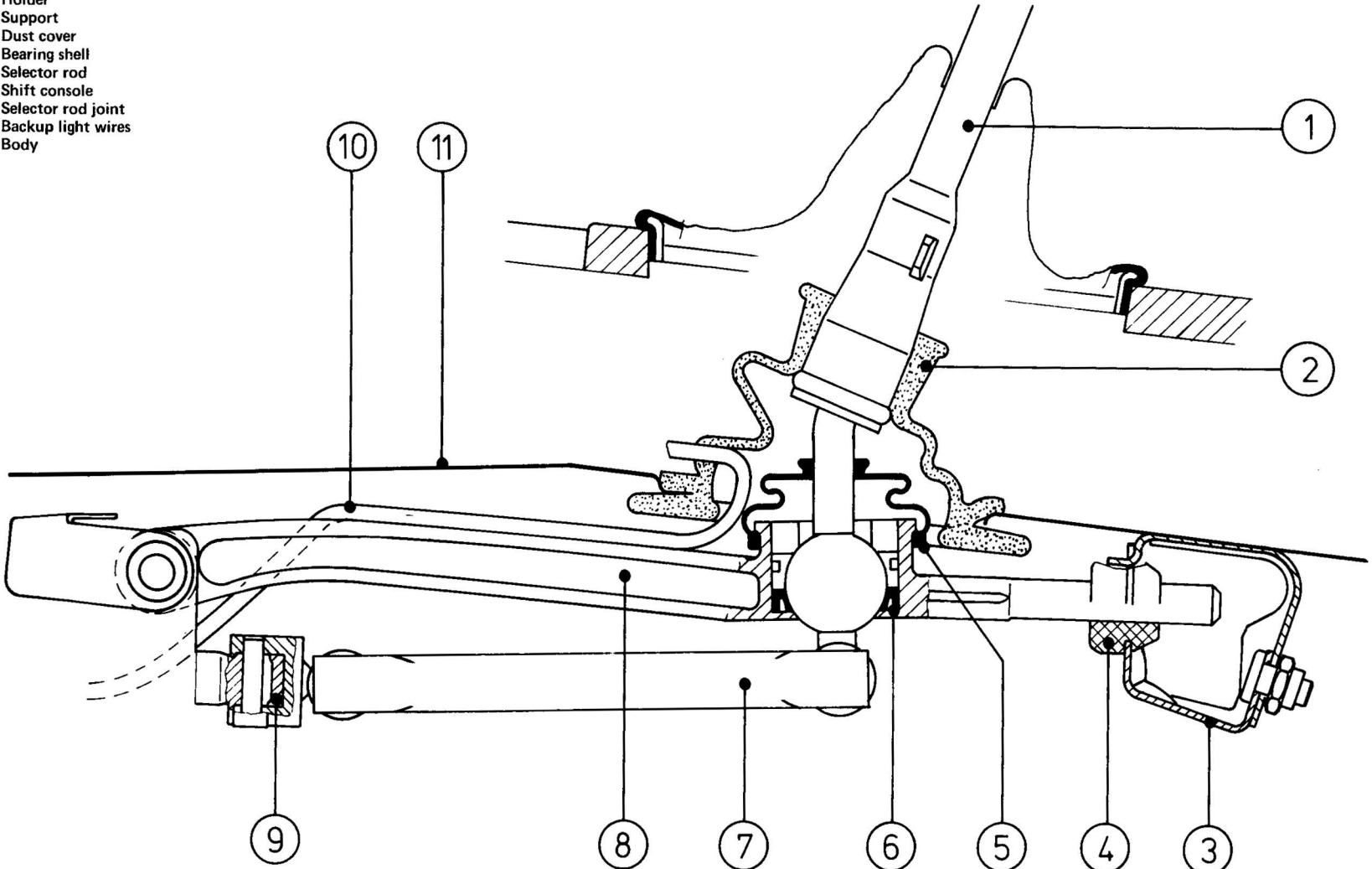
SHIFT LAYOUT FOR MANUAL TRANSMISSION
 - Sheet Metal Shift Console -



- 1 Selector arm
- 2 Console
- 3 Bolt
- 4 Bolt
- 5 Nut
- 6 Selector rod
- 7 Spacer
- 8 Circlip
- 9 Selector rod joint
- 10 Pin
- 11 Lubricating felt
- 12 Spring sleeve
- 13 Lower plate
- 14 Damper plate
- 15 Rubber cover
- 16 Rubber mount
- 17 Holder
- 18 Cap
- 19 Circlip
- 20 Shift lever upper section
- 21 Shift lever assembly
- 22 Circlip
- 23 Shift lever lower section
- 24 Upper plate
- 25 Spring
- 26 Spacer
- 27 Circlip
- 28 Rubber ring
- 29 Washer
- 30 Dust cover
- 31 Shift lever knob

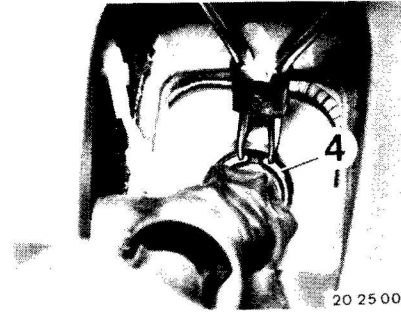
SHIFT LAYOUT FOR MANUAL TRANSMISSION - Aluminum Shift Console -

- 1 Shift lever
- 2 Dust cover
- 3 Holder
- 4 Support
- 5 Dust cover
- 6 Bearing shell
- 7 Selector rod
- 8 Shift console
- 9 Selector rod joint
- 10 Backup light wires
- 11 Body



25 11 000 REMOVING AND INSTALLING SHIFT LEVER — Sheet Metal Shift Console —

Remove retainer (1).
Take off washer (2).
Pull out selector rod (3).

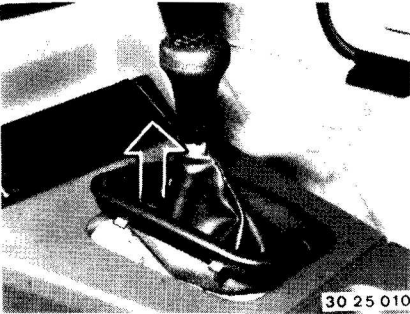


Lift out circlip (4).
Remove shift lever.
Installation:
Lubricate spherical plates with Molykote
Longterm 2.

30 25 022

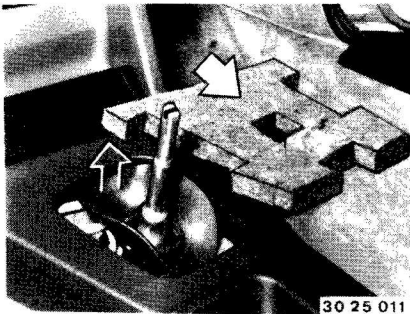
20 25 002

Remove dust cover.



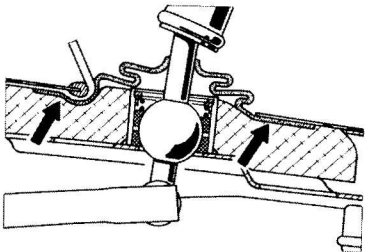
30 25 010

Remove insulating felt.
Pull out cover between body and shift
console.



30 25 011

Installation:
Check for correct fit of cover.



30 25 23

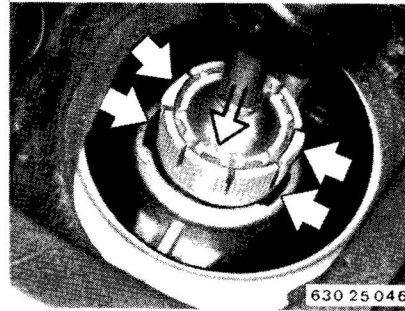
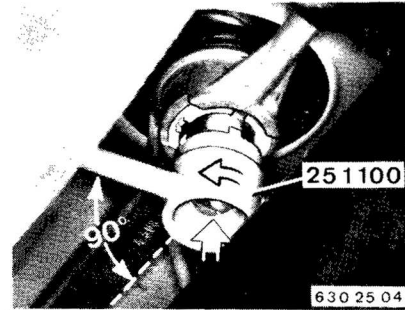
25 11 000 REMOVING AND INSTALLING SHIFT LEVER — Aluminum Shift Console —

Pull off shift lever knob.

Lift out dust cover.

Remove felt.
Disconnect plug on wires for backup lights.
Unclip dust cover (1) on body and pull off of shift lever.
Disconnect dust cover (2) on shift console.
Installation:
Inspect dust covers.
Check for correct seating.

Lift out circlip (1).
Take off washer (2).
Pull out selector rod (3).



Apply Special Tool 25 1 100.
Turn counterclockwise 90°.
Push up spherical plate.
Remove shift lever from above.

Installation:
Apply spherical plate that tabs on spherical plate are aligned with openings in shift console.
Press in shift lever until retaining tabs are heard to engage twice.

28 25 003

28 25 004

630 25 043

630 25 044

25 11 000 REMOVING AND INSTALLING SHIFT LEVER — All Wheel Drive —

Remove exhaust assembly 18 00 020.
Unscrew heat shields.

Loosen threaded sleeve several turns with Special Tool 26 1 060 or 26 1 040.
Installation:
Tighten threaded sleeve with Special Tool 26 1 060 or 26 1 040 after finishing installation.
Tightening torque*.

Support transmission.
Unscrew cross member.
Lower transmission to front axle carrier.
Installation:
Check length of bolts.

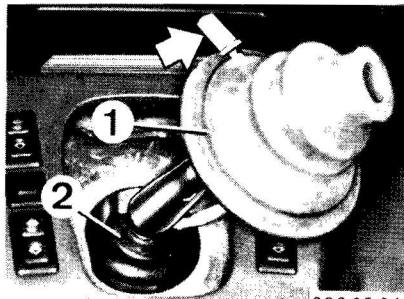
Pull off shift lever knob.

* See Specifications



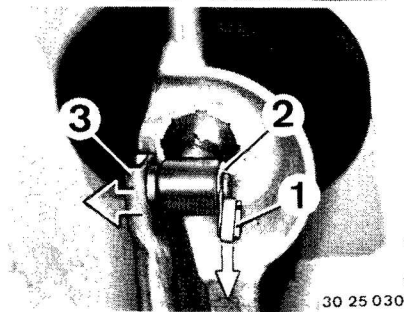
28 25 004

Lift out dust cover.



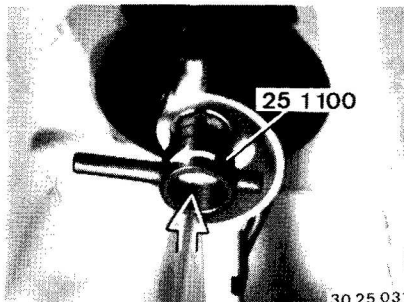
630 25 043

Remove felt.
Disconnect plug on wires for backup lights.
Unclip dust cover (1) on body and pull off of shift lever.
Disconnect dust cover (2) on shift console.
Installation:
Inspect dust covers.
Check for correct seating.



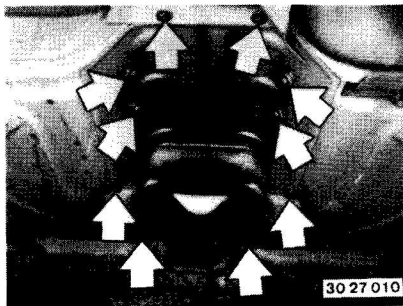
30 25 030

Lift out circlip (1).
Take off washer (2).
Pull out selector rod (3).

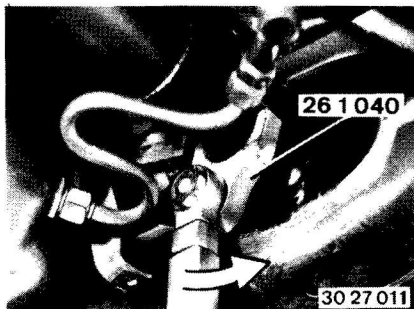


30 25 031

Apply Special Tool 25 1 100.
Turn counterclockwise 90°.
Push up spherical plate.
Remove shift lever from above.

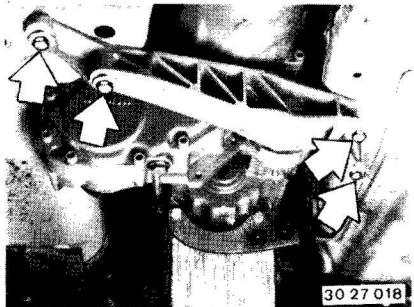


30 27 010

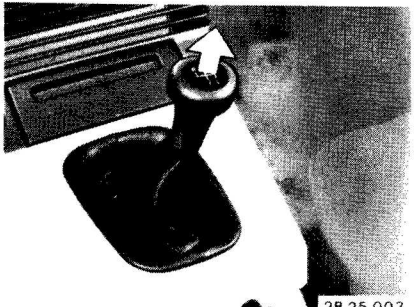


26 1 040

30 27 011



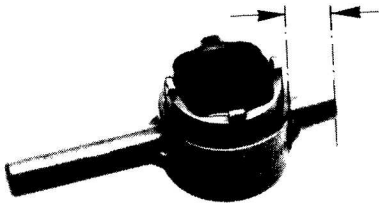
30 27 018



28 25 003

Note:

One side of the toggle must be cut off up to max. 12 mm (0.472") in cars with all wheel drive.

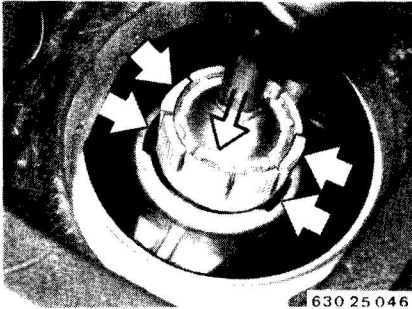


30 25 029

Installation:

Apply spherical plate that tabs on spherical plate are aligned with openings in shift console.

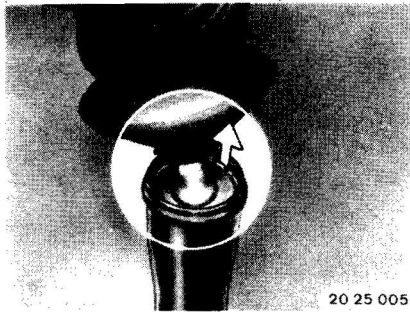
Press in shift lever until retaining tabs are heard to engage twice.



630 25 046

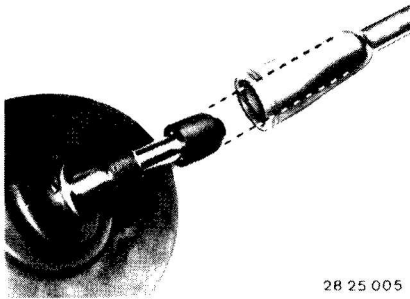
**25 11 003 DISASSEMBLING/ASSEMBLING
SHIFT LEVER
– Sheet Metal Shift Console –**

Remove shift lever 25 11 000.
Lift out wire snap ring.



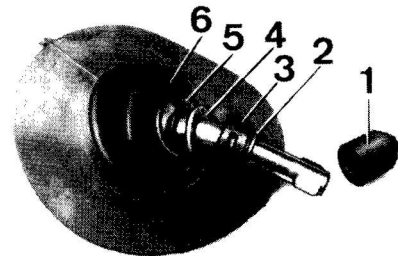
20 25 005

Pull off shift lever upper section.
Installation:
Check installed position.



28 25 005

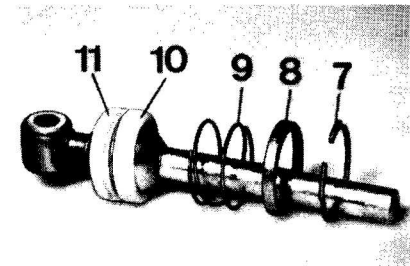
Pull off cap (1).
Remove circlip (2).
Remove rubber ring (3), washer (4), snap ring
(5) and rubber part (6).



28 25 002

Remove circlip (7), spring retainer (8),
spring (9), upper plate (10) and lower
(ribbed) plate (11).

Installation:
Lubricate upper and lower plates with
Molykote Longterm 2.

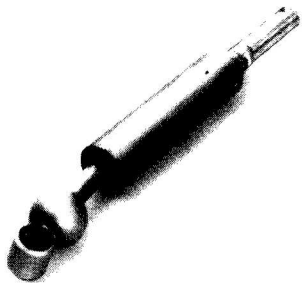


20 25 007

25 11 003 DISASSEMBLING AND ASSEMBLING SHIFT LEVER — Aluminum Shift Console —

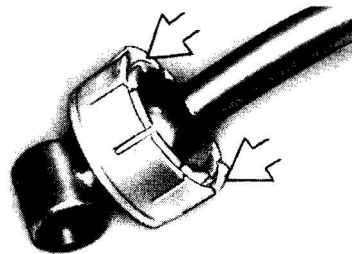
Note:

A new shift lever is installed in some cars beginning with 1988 models. It cannot be disassembled.



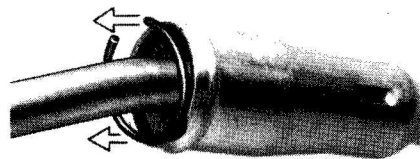
32 25 057

Remove shift lever — see 25 11 000.
Lift out wire snap ring.



Press off bearing shell downward.

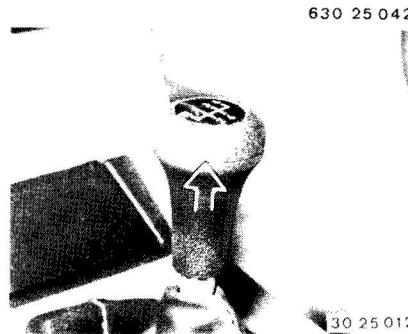
Installation:
Lubricate bearing shell and ball with Molykote Longterm 2.



32 25 039

Pull off upper shift lever section.

Installation:
Check installed direction.

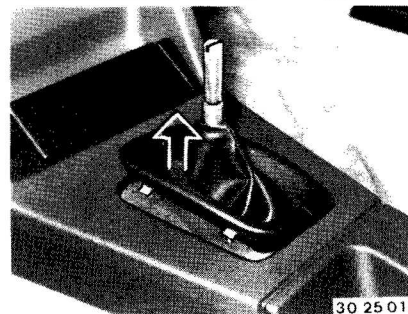


630 25 042

25 11 081 REPLACING DUST COVER FOR SHIFT LEVER

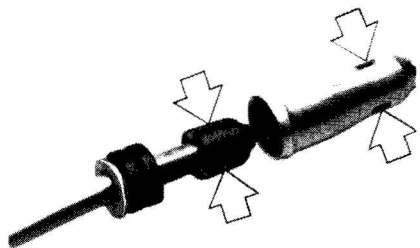
Pull off shift lever knob.

Installation:
Shift lever knob must grab in the turning lock.
Check position of shift diagram.



30 25 012

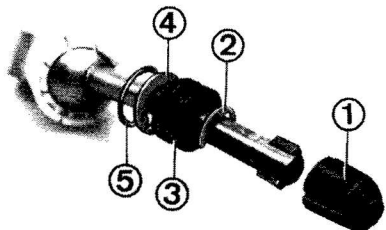
Lift out dust cover.



32 25 040

Pull off cap (1).
Remove retainer (2).
Take off rubber ring (3), washer (4) and snap ring (5).

Installation:
Coat rubber parts with relaxed water to make installation easier.

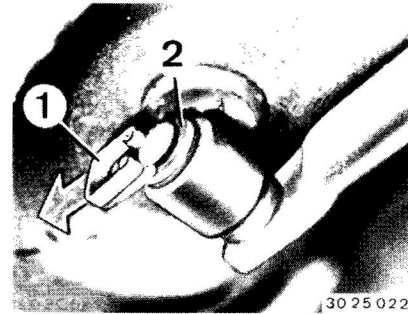


30 25 013

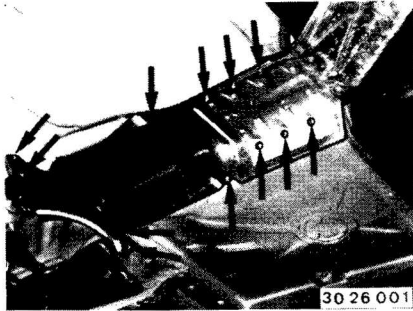
32 25 041

25 11 111 REPLACING SELECTOR ROD JOINT
 — Sheet Metal Shift Console —

Access to the selector rod joint differs in accordance with the different transmission and propeller shaft versions.
 Remove exhaust assembly 18 00 020.
 Remove heat shield with reinforcement carrier.

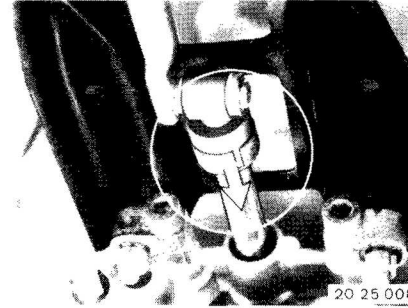


Engage reverse gear.
 Lift out circlip (1).
 Take off washer (2).
 Pull out selector rod (3).

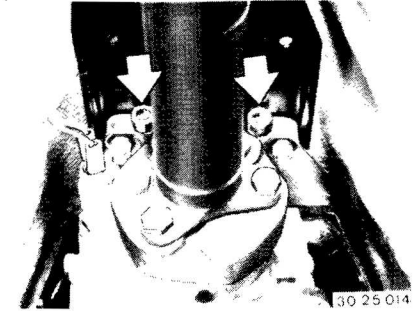


30 26 001

Version with 4 Speed Transmission:
 Unscrew console mounting bolts.
Important!
 Self-locking bolts — will be difficult to unscrew.
Installation:
 Use new bolts coated with micro-encapsulating adhesive.
 Tightening torque*.

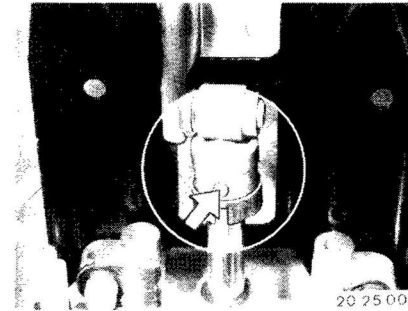


Push back locking sleeve.

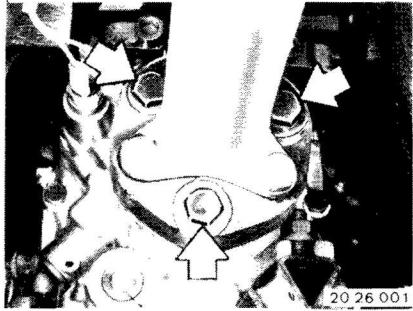


30 25 014

Version with 5 Speed Transmission:
 Unscrew propeller shaft on transmission, see 26 11 000.

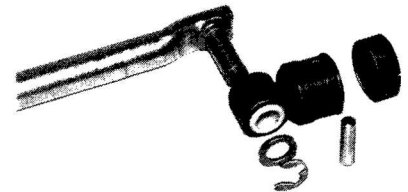


Move selector shaft to 3rd or 5th gear position.
 Drive out pin.
 Remove selector rod with joint.
Note:
 If selector rod joint has an offset bearing sleeve, install the bearing sleeve offset to the right as seen locking forward in car.
 Cars with Vibration Damper:
 Install bent selector rod offset to the left.

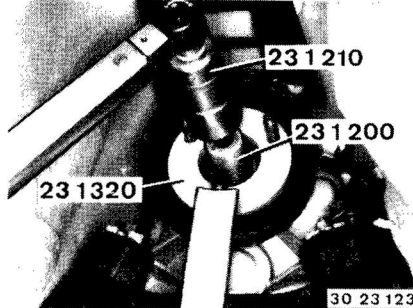


20 26 001

Version with 5 Speed Transmission and Vibration Damper:
 Unscrew propeller shaft on transmission, see 26 11 000.
 Unscrew output flange with vibration damper on transmission, see 23 12 053.



Installation:
 Lubricate bearing sleeve and joint with Molykote Longterm 2.



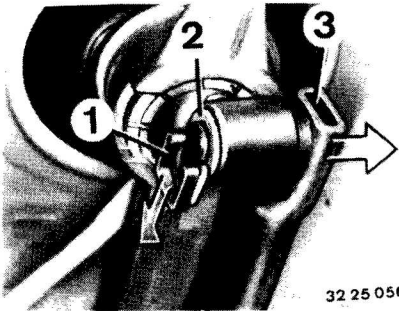
30 23 123

* See Specifications

25 11 111 REPLACING SHIFT ROD JOINT — Aluminum Shift Arm —

Unscrew propeller shaft on transmission — see 26 11 000.
Engage reverse gear.
Pull off retainer (1).
Take off washer (2).
Pull out shift rod (3).

Installation:
Check damper in joint, replacing if necessary.

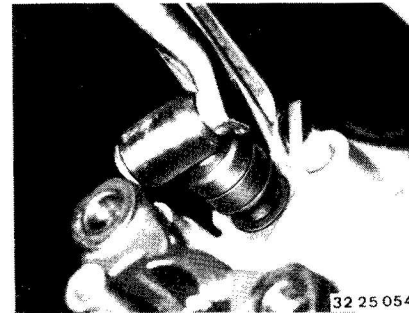


32 25 056

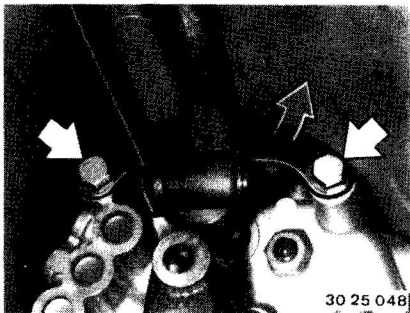
32 25 053

BMW M 3:
Loosen bolt on shift arm holder at left-hand side.
Remove bolt on right-hand side.
Swing up holder.

Installation:
Offset bearing sleeve to the left as seen looking forward in car.



32 25 054

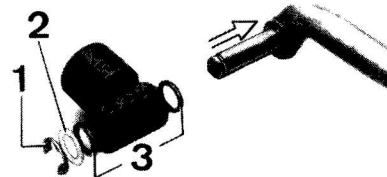


30 25 048

Lift locking sleeve out of groove and slide forward.

Lift out retainer (1).
Take off washer (2).
Pull out shift rod.

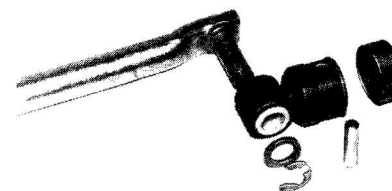
Installation:
Check rubber rings (3), replacing if necessary.
Lubricate bearing surfaces with Molykote Longterm 2.



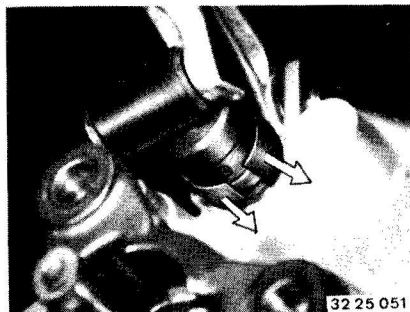
32 25 055

Drive out pin.
Pull out shift rod with joint.

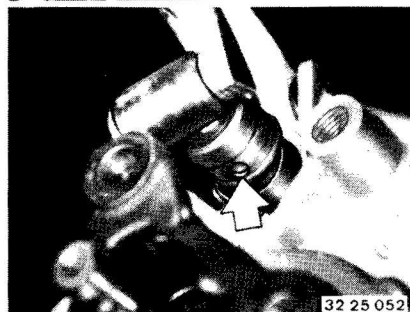
Note:
BMW M 3: the narrow shift rod joint is installed without rubber rings.



20 25 010



32 25 051



32 25 052

25-11

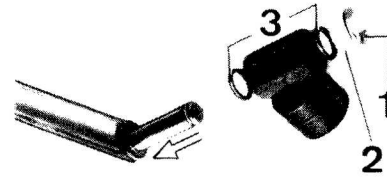
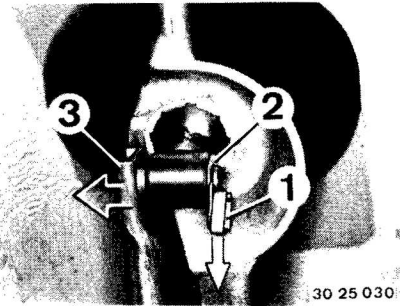
25 11 111 REPLACING SHIFT ROD JOINT — All Wheel Drive —

Remove and install transfer box — see 27 10 010.

Lift out retainer (1).

Take off washer (2).

Pull out shift rod (3).



Lift out retainer (1).

Take off washer (2).

Pull out shift rod.

Installation:

Check rubber rings (3), replacing if necessary.

Lubricate bearing surfaces with Molykote Longterm 2.

Push back locking sleeve.

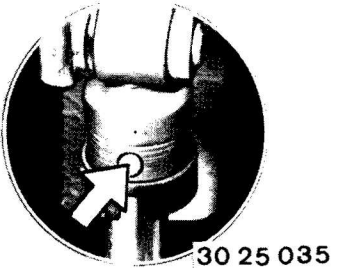


Drive out pin.

Remove shift rod with joint.

Note:

Bearing sleeve is offset to the right as seen looking forward in car.



Installation:

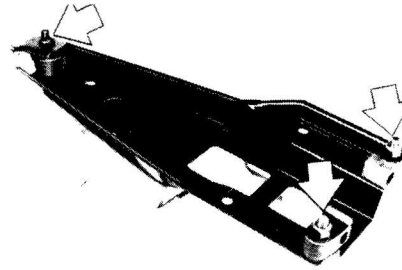
Check damper in joint, replacing if necessary.



25-12

25 11 211 REPLACING SHIFT LEVER CONSOLE – Sheet Metal Shift Console –

Remove exhaust assembly 18 00 020.
Remove heat shield and reinforcement
carrier.
Remove shift lever 25 11 000.



Remove console.

Installation:
Check rubber mounts, replacing if necessary.

30 26 001

20 25 013

Disconnect plug.

20 25 014

Pull off wires for backup lights.
Unscrew console mounting screws.
Important!
Self-locking screws – will be difficult to
unscrew.
Installation:
Use new screws coated with micro-encapsulat-
ing adhesive.
Tightening torque*.

20 25 011

Unscrew mounting bracket.
Installation:
Install the shift lever first to make installation
of the rubber cover easier.

20 25 012

* See Specifications

25 11 211 REPLACING SHIFT LEVER CONSOLE

— Aluminum Shift Console —

Remove exhaust assembly 18 00 020.
 Uncrew heat shield and reinforcement carrier.
 Remove shift lever 25 11 000.

Uncrew threaded sleeve several turns with Special Tool 26 1 040.

Installation:

Tighten threaded sleeve with Special Tool 26 1 040 after finishing installation.
 Tightening torque*.

Uncrew center mount.

Installation:

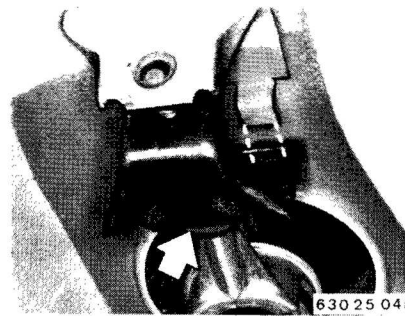
Preload center mount forward by distance A = 4 to 6 mm (0.157 to 0.236").

Support transmission.

Uncrew cross member.

Lower transmission to front axle carrier.

* See Specifications

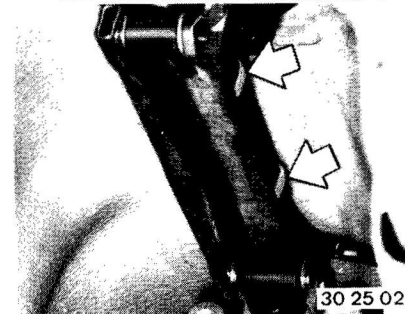


630 25 048

Uncrew bracket.

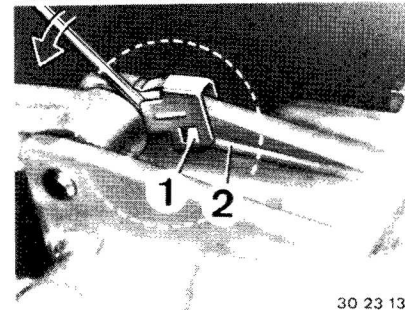
Installation:

Lubricate support with grease.
 Engage bracket in retaining tabs.



30 25 025

Take wires for backup lights out of holder.

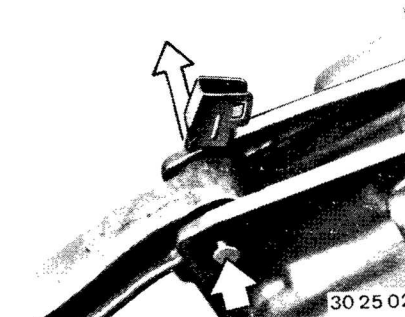


30 23 134

Lift out clip on shaft bolt.

Note:

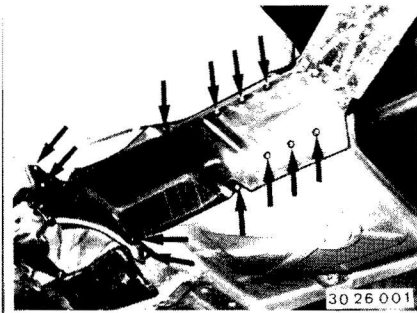
Clip is accessible with a screwdriver.
 Disconnect clip in retaining tab by turning and swing up.



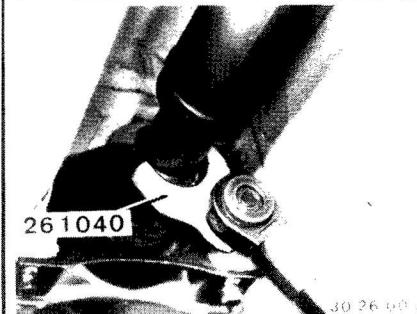
30 25 027

Pull out shaft bolt.

Take off shift console.

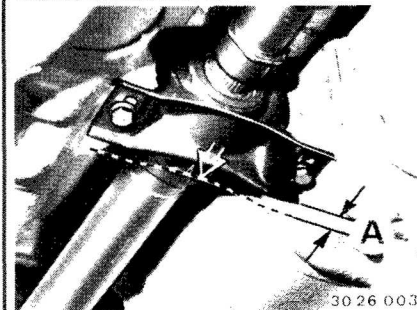


30 26 001

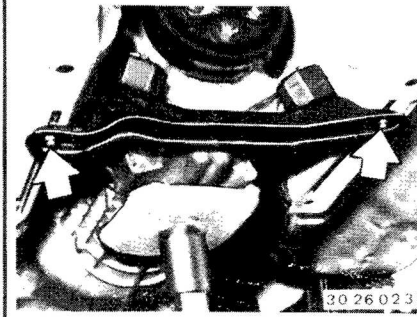


26 1 040

30 26 000



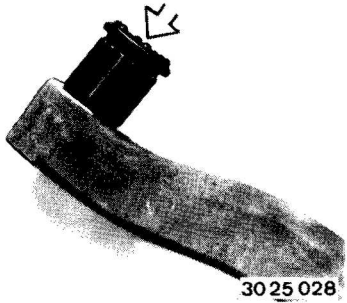
30 26 003



30 26 023

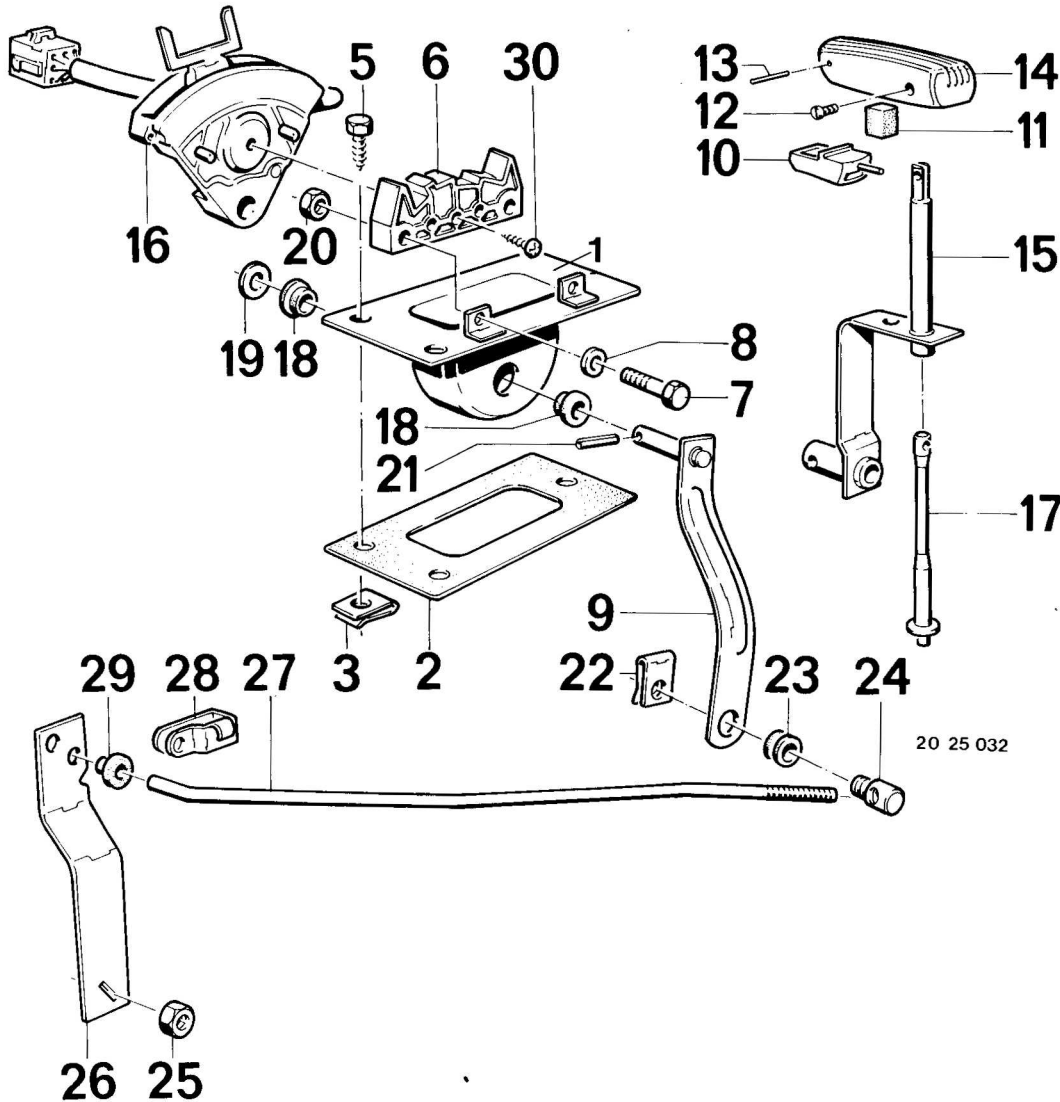
25 - 14

Lubricate bearing sleeve with grease and press it into new console.



25 - 15

SHIFT LAYOUT DRAWING FOR AUTOMATIC TRANSMISSION - Version with Selector Rod -

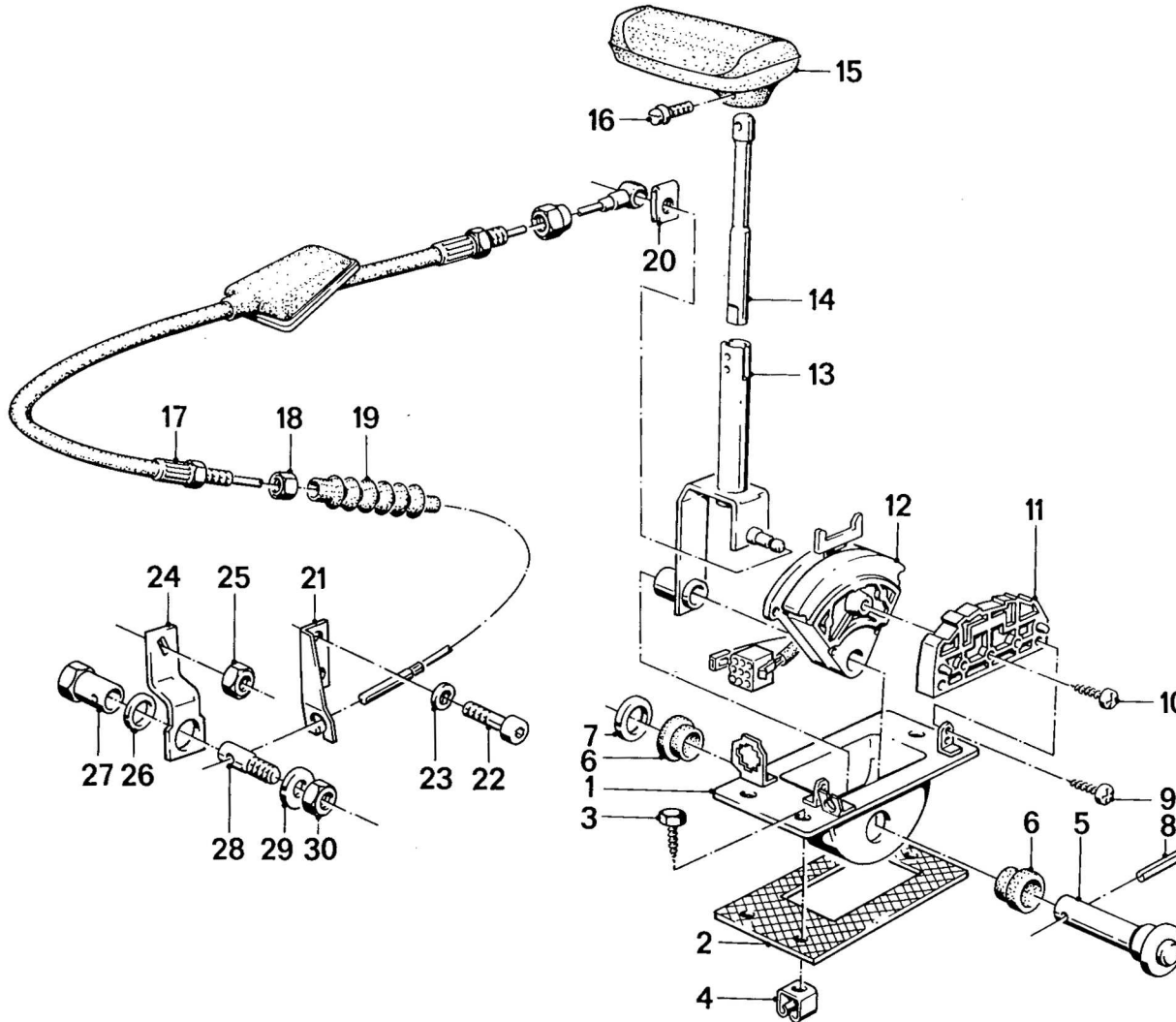


- 1 Mount
- 2 Insulator
- 3 Self-tapping nut
- 5 Self-tapping screw
- 6 Shift gate
- 7 Bolt
- 8 Washer
- 9 Selector lever lower section
- 10 Push button
- 11 Spring element
- 12 Stud
- 13 Cyl. pin
- 14 Handle
- 15 Selector lever
- 16 Transmission switch
- 17 Pull rod
- 18 Bearing sleeve
- 19 Shim
- 20 Nut
- 21 Key
- 22 Retainer
- 23 Pivot sleeve
- 24 Shaft pin
- 25 Nut
- 26 Selector lever bar
- 27 Selector rod
- 28 Spring retainer
- 29 Sleeve
- 30 Oval head screw

20 25 032

25-16

SHIFT LAYOUT DRAWING FOR AUTOMATIC TRANSMISSION — Version with Cable / All Wheel Drive Cars —



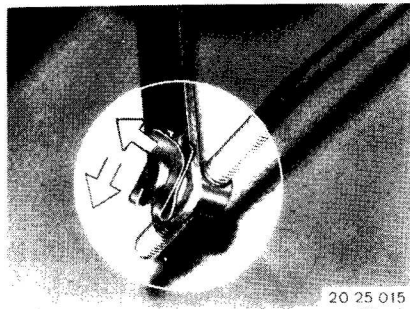
- 1 Mount
- 2 Insulator
- 3 Self-tapping screw
- 4 Self-tapping nut
- 5 Shaft
- 6 Bearing sleeve
- 7 Shim
- 8 Key
- 9 Self-tapping screw
- 10 Self-tapping screw
- 11 Shift gate
- 12 Transmission switch
- 13 Selector lever
- 14 Pull rod
- 15 Handle
- 16 Stud
- 17 Cable
- 18 Nut
- 19 Dust cover
- 20 Retainer
- 21 Holder
- 22 Screw
- 23 Washer
- 24 Transmission lever
- 25 Nut
- 26 Washer
- 27 Sleeve
- 28 Clamping bolt
- 29 Washer
- 30 Nut

25 16 050 REMOVING AND INSTALLING SELECTOR LEVER COM- PLETE WITH BASE - Version with Shift Rod -

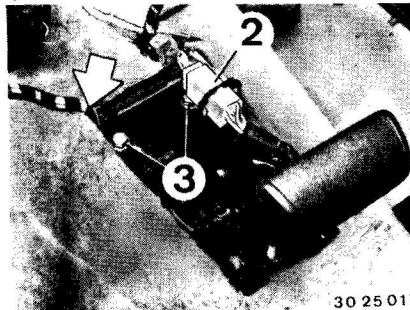
Remove center console - see 51 16 200.
Lift out retainer.
Disengage shift rod.

Installation:

Adjust shift rod - see 24 00 004.



20 25 015

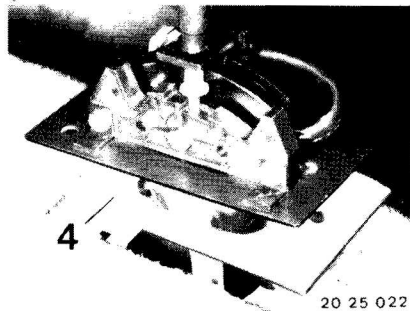


30 25 017

Disconnect plug (2).
Remove bolts (3).
Remove base.

Installation:

Be careful not to pinch the wire harness.



20 25 022

Installation:

Insert insulator (4).

**25 16 050 REMOVING AND INSTALLING
SELECTOR LEVER
COMPLETE WITH BASE
— Version with Cable —
(All Wheel Drive Cars)**

Remove center console — see 51 16 200.
Lift out retainer.
Unscrew eye on pin.
Important!
Don't bend the steel wire.

Unscrew nut.
Disengage cable sleeve in holder.

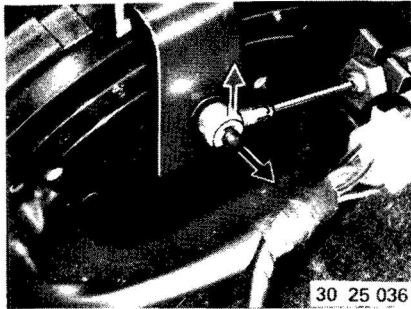
Disconnect plugs.

Unscrew bolts.
Remove base.

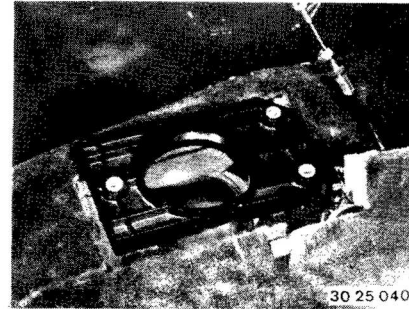
Installation:
Check installed direction of transfer plate.
Check for correct seating of rubber cover and
foam rubber seal.

Installation:
Check for correct seating of rubber seals after
finishing installation.

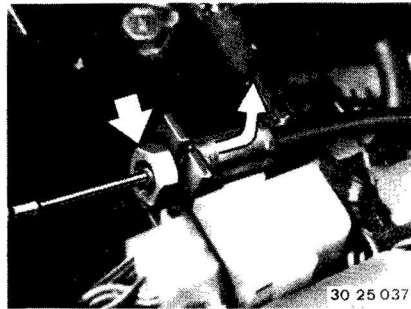
Installation:
Adjust cable.
Shift lever in "P" (most forward position).
Press cable rod opposite forward direction.
Clamp cable rod without tension.
Important!
Tightening torque = 10 to 12 Nm (7 to 9
ft. lbs.).
Don't bend the cable.



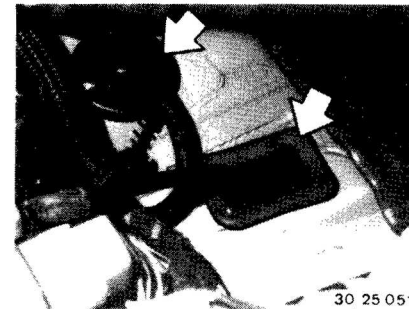
30 25 036



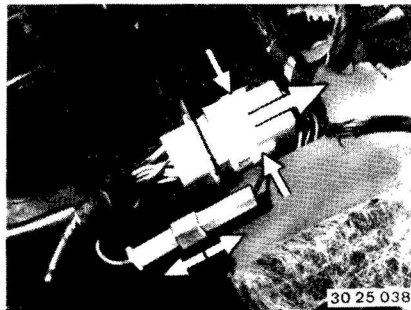
30 25 040



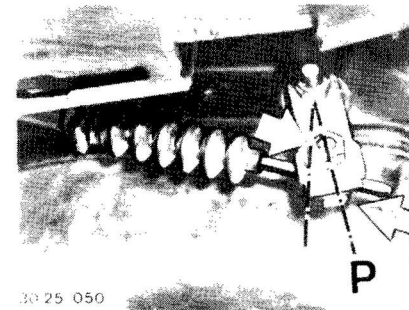
30 25 037



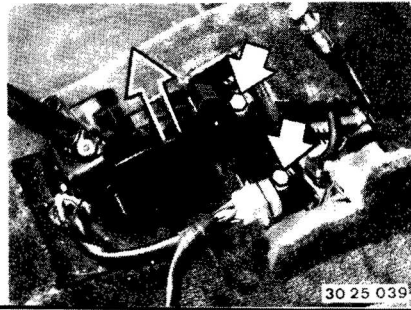
30 25 051



30 25 038



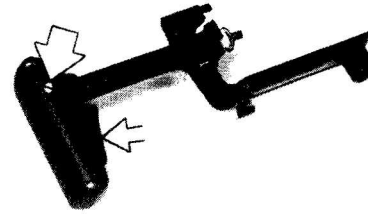
30 25 050



30 25 039

25 16 080 REMOVING AND INSTALLING SELECTOR LEVER — Version with Shift Rod —

Remove selector lever complete with base — see 25 16 050.
Drive out pin.



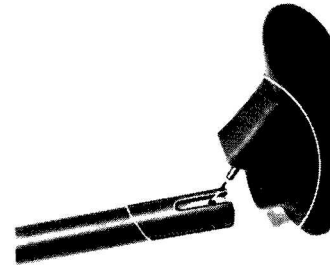
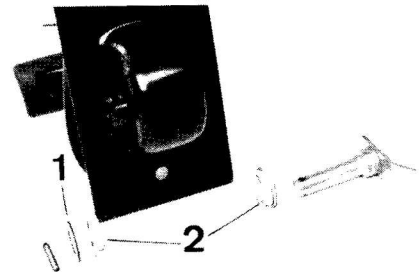
Unscrew screw on handle.
Pull off handle.

20 25 023

Pull out selector lever lower section.
Remove washer (1) and bearing sleeves (2).
Installation:
Check bearing sleeves, replacing if necessary and lubricating with Molykote Longterm 2.

30 25 019

Installation:
Guide pin of push button into pull rod hole.

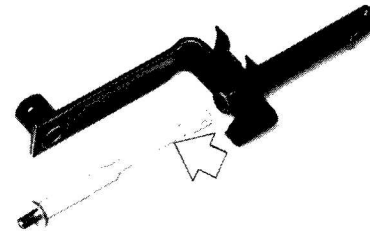
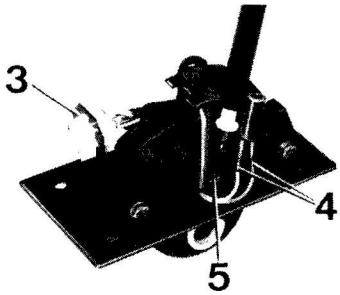


20 25 024

Pull off plug (3).
Disconnect scale light wire (4).
Unscrew screw (5).
Remove transmission switch together with the upper selector lever section.

20 25 028

Take pull rod out of selector lever upper section.

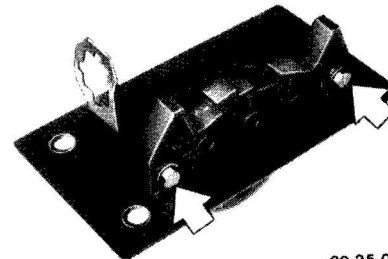
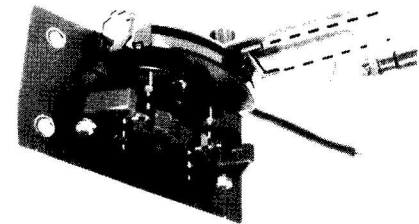


30 25 018

30 25 020

Installation:
Check installed position of transmission switch and drive.

Installation:
Check gate, replacing if necessary.



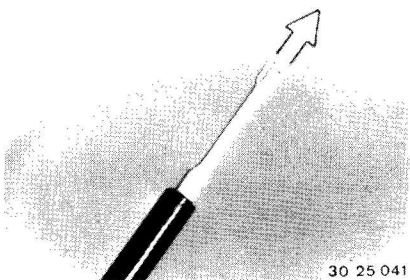
20 25 026

20 25 030

25-20

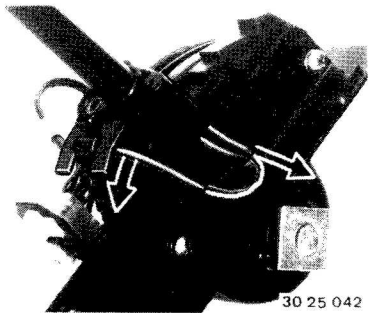
25 16 080 REMOVING AND INSTALLING SELECTOR LEVER — Version with Cable — (All Wheel Drive Cars)

Remove selector lever complete with base —
see 25 16 050.



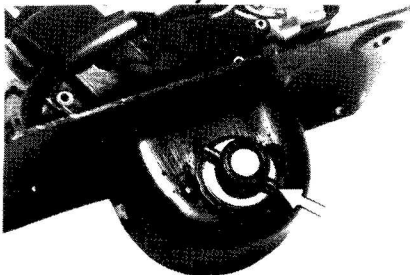
30 25 041

Pull display lamp out of holder.
Unclip wires.



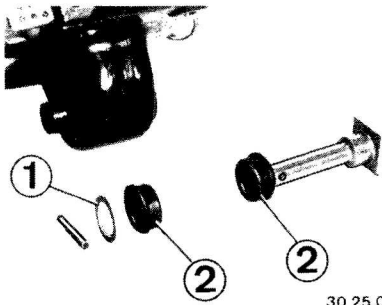
30 25 042

Drive out pin.

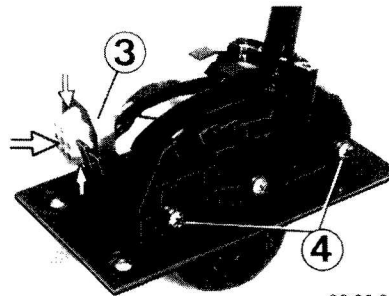


30 25 043

Pull out shaft.
Take off washer (1).
Pull bearing sleeves (2) out of housing.
Installation:
Replace bearing sleeves.
Lubricate bearing surfaces.

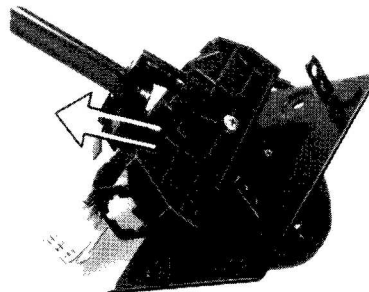


30 25 044



30 25 045

Take plug (3) out of holder.
Unscrew screws (4).

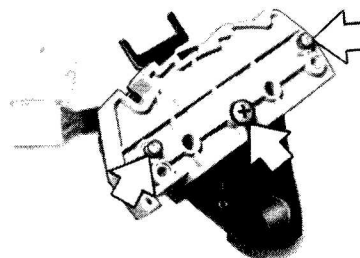


30 25 046

Tilt out selector lever together with the
transmission switch and shift gate.

Installation:

Fork of transmission switch grabs on selector
lever.



20 25 045

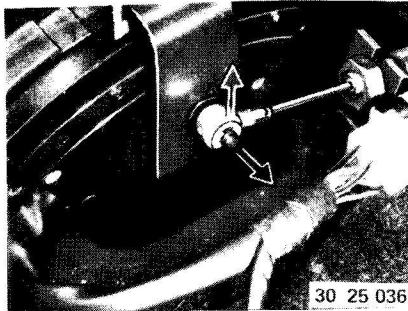
Unscrew shift gate on transmission switch.

Installation:

Make sure that pins on transmission switch
engage in holes of shift gate.

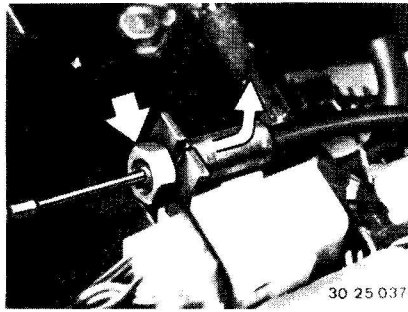
25 16 202 REPLACING CABLE FOR SELECTOR LEVER

Remove center console — see 51 16 200.
 Lift out retainer.
 Unscrew eye on pin.
Important!
 Don't bend the steel wire.



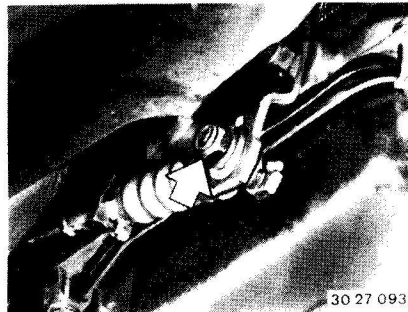
30 25 036

Unscrew nut.
 Disconnect cable sleeve in holder.



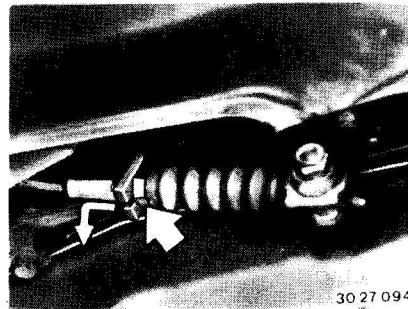
30 25 037

Loosen nuts.
Important!
 Don't bend the steel wire.

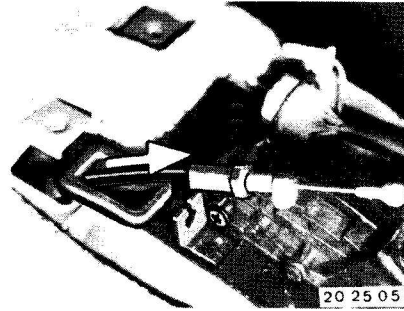


30 27 093

Unscrew nuts.
 Push back cable sleeve and disconnect in holder.
 Pull cable out of operating lever.

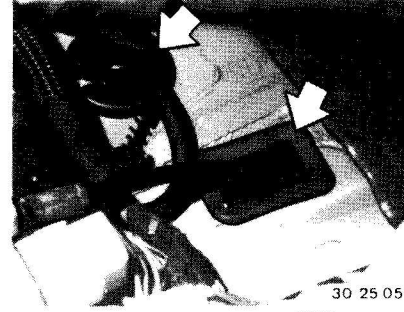


30 27 094



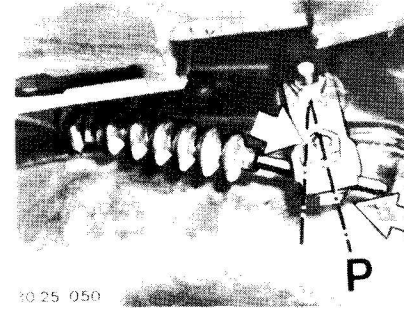
20 25 051

Pull out rubber grommet with cable upwards.



30 25 051

Installation:
 Check for correct seating of rubber seals after finishing installation.



30 25 050

Installation:
 Adjust cable.
 Shift lever in "P" (most forward position).
 Press shift lever opposite forward direction.
 Clamp cable rod without tension.
Important!
 Tightening torque = 10 to 12 Nm (7 to 9 ft. lbs.).
 Don't bend the cable.

ADJUSTING CABLE FOR RANGE SELECTION LEVER

Shift lever in "P" (most forward position).
Loosen nut until cable rod has cleared.



30 27 093

Transmission lever in "P" (most forward
position).
Press cable rod opposite forward direction.
Clamp cable rod without tension.

Important!

Tightening torque = 10 to 12 Nm (7 to 9
ft. lbs.).

Don't bend the cable.



P

30 25 050