



Workshop Manual Audi A1 2011 ➤

7-speed dual clutch gearbox 0AM, 0CW (S tronic)

Edition 09.2018



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List of Workshop Manual Repair Groups

Repair Group

- 00 - Technical data
- 30 - Clutch
- 34 - Controls, housing
- 35 - Gears, shafts
- 39 - Final drive - differential



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.



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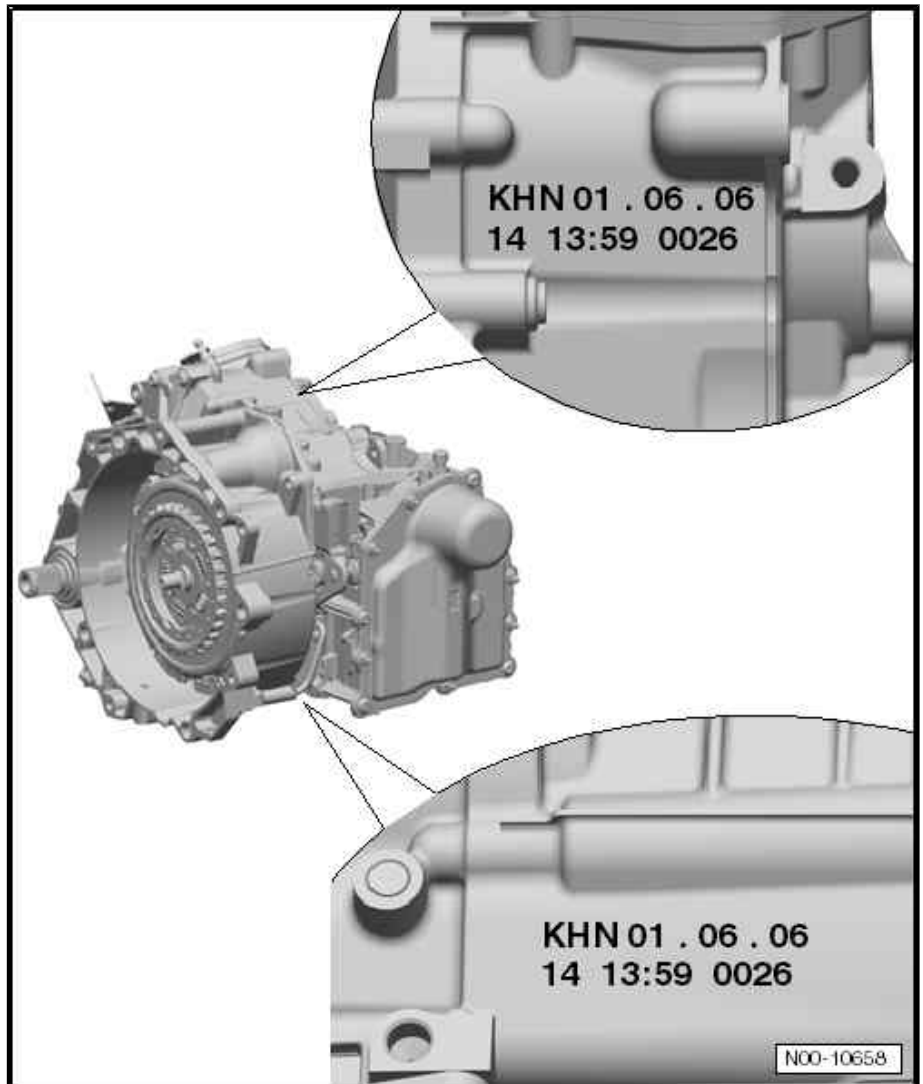
00 – Technical data

1 Identification

(ARL006058; Edition 09.2018)

⇒ **"1.1 Gearbox identification", page 1**

1.1 Gearbox identification



The following details are given at the top of the gearbox (example):

- ◆ KHN = gearbox code letters
- ◆ 01.06.06 = production date
- ◆ 14 = factory code
- ◆ 13:59 = time of production
- ◆ 0026 = serial number



Note

The gearbox code letters are also printed on the vehicle data stickers.



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2 Technical data

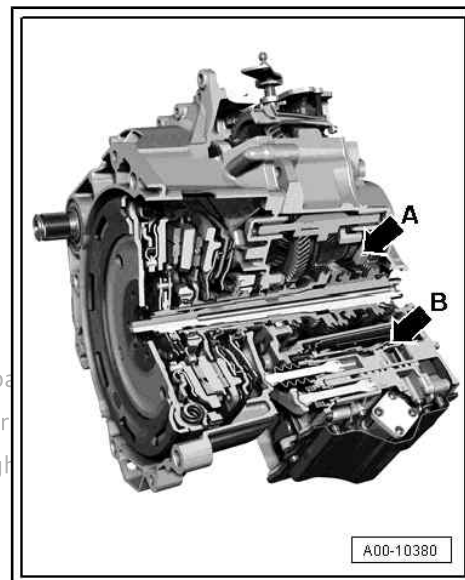
⇒ "2.1 Capacities", page 3

2.1 Capacities

The 7-speed dual clutch gearbox has separate oil and fluid fillings. One section is filled with gear oil -arrow A-, the other with hydraulic fluid -arrow B-.

Capacities	Gear oil section
Initial filling	1.9 ltr.
Oil change	No change required
Lubricant	Gear oil for dual clutch gearbox 0AM Part No. ⇒ Electronic parts catalogue

Capacities	Hydraulic fluid section with mechatronic unit for dual clutch gearbox - J743-
Initial filling	1 ltr.
Fluid change	No change required
Lubricant	Hydraulic fluid For Part No. refer to ⇒ Electronic parts catalogue



Caution

Risk of damage to gearbox

- ◆ *Use only the gear oil available as a replacement part for the 7-speed dual clutch gearbox 0AM ⇒ Electronic parts catalogue .*
- ◆ *Other types of oil cause malfunctions and/or failure of the gearbox.*
- ◆ *It is not possible to check the fluid level in the hydraulic section of the mechatronic unit for dual clutch gearbox - J743- . When performing repairs, the breather opening on the mechatronic unit for dual clutch gearbox - J743- must be sealed off ⇒ [page 83](#) . Fluid which escapes from the mechatronic unit for dual clutch gearbox - J743- cannot be replenished and the fluid level cannot be checked!*
- ◆ *If oil escapes from the gear oil section, the gear oil must be replaced completely ⇒ [page 92](#) . It is not possible to check the level.*
- ◆ *Underfilling or overfilling either of the oil/fluid sections will impair the function of the gearbox.*



3 Transmission layout

⇒ "3.1 Transmission layout - front-wheel drive", page 4

3.1 Transmission layout - front-wheel drive

The 7-speed dual clutch gearbox 0AM is equipped with 5 shafts. It consists of two input shafts and three output shafts.

A1 - Input shaft 1

A2 - Input shaft 2

B1 - Output shaft 1

B2 - Output shaft 2

B3 - Output shaft 3

C - Front final drive

K1 - Dual clutch 1

K2 - Dual clutch 2

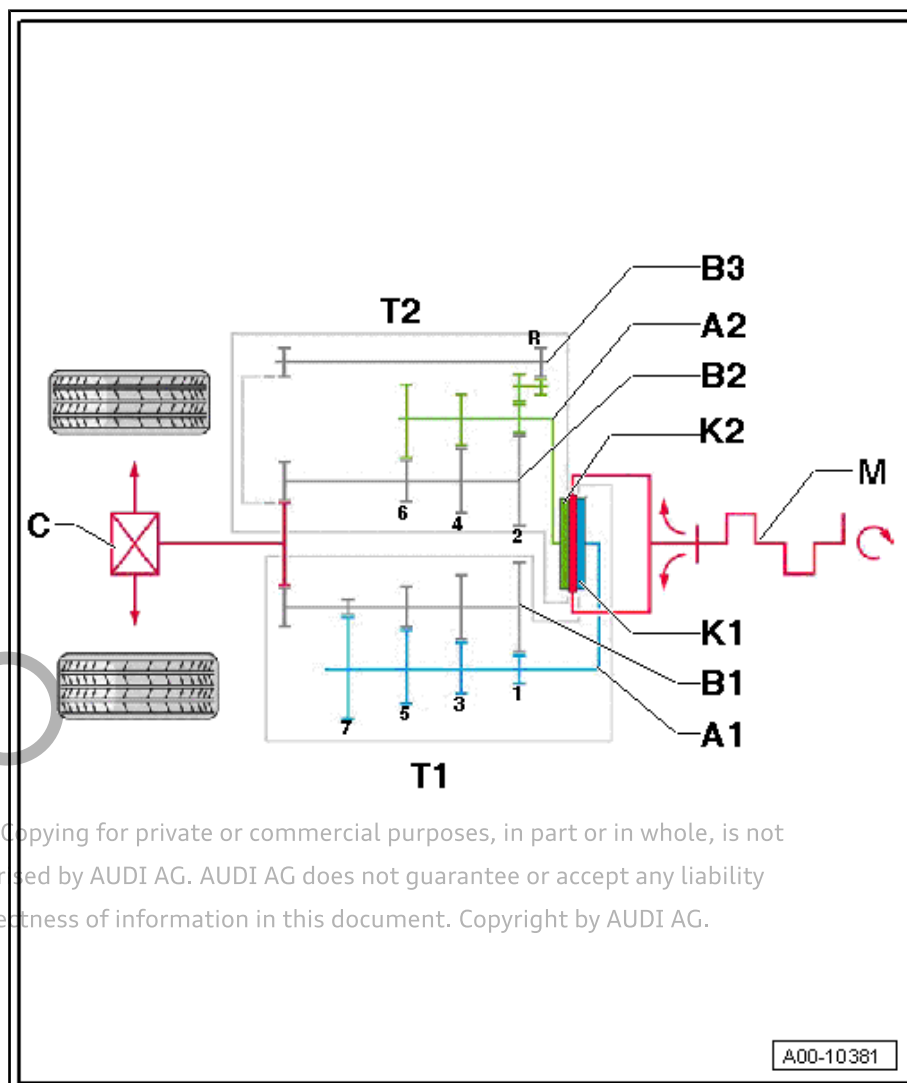
M - Engine

T1 - Gear train half 1

- With gears 1, 3, 5 and 7

T2 - Gear train half 2

- With gears 2, 4, 6 and reverse gear R



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4 Safety precautions

⇒ [“4.1 General safety precautions”, page 5](#)

⇒ [“4.2 Safety precautions when working on vehicles with start/stop system”, page 6](#)

⇒ [“4.3 Safety precautions when using testers and measuring instruments during a road test”, page 6](#)

⇒ [“4.4 Safety precautions when working on mechatronic unit for dual clutch gearbox J743”, page 6](#)

⇒ [“4.5 Safety precautions when tow-starting and towing”, page 8](#)

4.1 General safety precautions

Observe the following precautions to avoid possible injury and/or damage to the vehicle:

**WARNING**

Accidents and injury can be caused if a gear is inadvertently engaged while the engine is running.

- ◆ *Before working on the vehicle while the engine is running, shift the selector lever into position “P” and apply the parking brake.*

Observe the following precautions to avoid possible injury and/or irreparable damage to electrical and electronic components:

- ◆ Switch off ignition before disconnecting and connecting test equipment.

**Caution**

When disconnecting the battery there is a risk of irreparable damage to electronic components.

- ◆ *Observe notes on procedure for disconnecting the battery.*
- ◆ *Always switch off the ignition before disconnecting the battery.*

- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



4.2 Safety precautions when working on vehicles with start/stop system

Please note the following when working on vehicles with start/stop system:



WARNING

Risk of injury due to automatic engine start on vehicles with start/stop system.

- ◆ *On vehicles with activated start/stop system (indicated by a message in the instrument cluster), the engine may start automatically if it needs to.*
- ◆ *Therefore it is important to ensure that the start/stop system is deactivated when performing repairs (switch off ignition, if required switch on ignition again).*

4.3 Safety precautions when using testers and measuring instruments during a road test

Note the following if testers and measuring instruments have to be used during a road test:



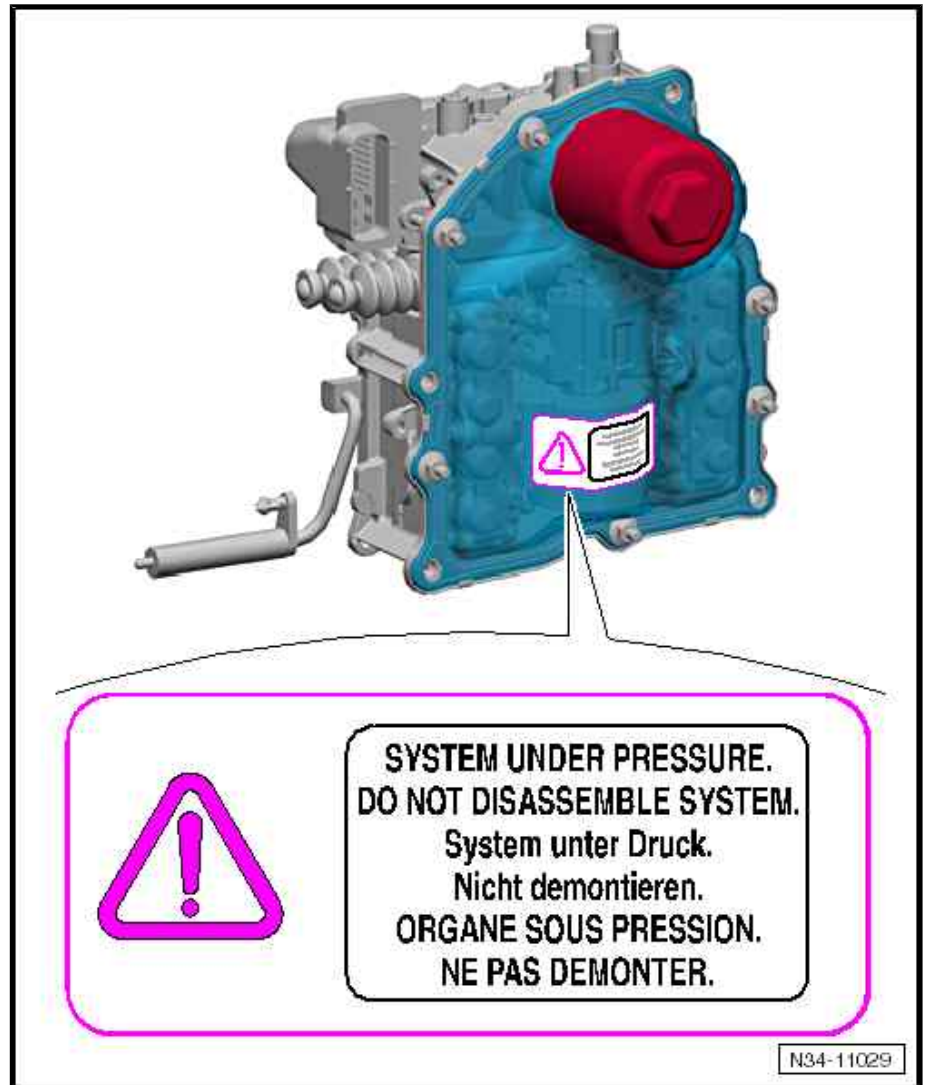
WARNING

Accidents can be caused if the driver is distracted by test equipment or if test equipment is not secured.

Injuries can be caused if the passenger's airbag is triggered in a collision.

- *The use of test equipment while driving causes distraction.*
- *There is an increased risk of injury if test equipment is not secured.*
- ◆ *Always secure test equipment to the rear seat with a strap and have it operated from there by a second person.*

4.4 Safety precautions when working on mechatronic unit for dual clutch gearbox - J743-



WARNING

System is pressurised.

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The mechatronic unit for dual clutch gearbox - J743- has an accumulator which maintains a system pressure of up to 60 bar.

The cover of the mechatronic unit for dual clutch gearbox - J743- and the accumulator must not be opened.



Note

The maximum specification for pressure in the accumulator, which is controlled by software and adjusted via the pump, is 60 bar. The pump is switched off if the pressure exceeds this value. When the pressure drops to 42 bar due to gearshifts, the pump is switched on again. In the event of a software fault, it is possible for the pressure to reach approx. 75 bar. The pressure relief valve then opens automatically.



4.5 Safety precautions when tow-starting and towing



Caution

Risk of gearbox damage if vehicle is not towed correctly.

- *Move selector lever to position N.*
- *Do not tow further than 50 km.*
- *Do not tow at speeds of over 50 km/h.*



Note

It is not possible to start the engine by means of tow-starting, for instance in the case of insufficient battery charge or if the starter is not working.

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5 Repair instructions

⇒ [“5.1 General notes”, page 9](#)

⇒ [“5.2 Rules for cleanliness”, page 10](#)

⇒ [“5.3 General repair instructions”, page 11](#)

⇒ [“5.4 Contact corrosion”, page 12](#)

5.1 General notes

Gearbox

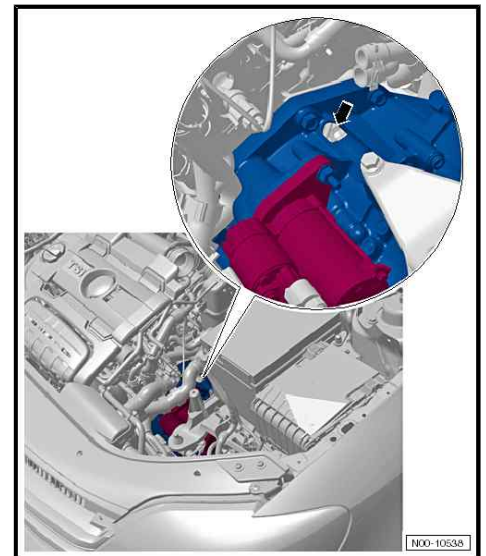
The engine torque is transferred to the dual clutch via the flywheel. The flywheel and the dual clutch are connected by splines. The two combined components perform the function of a dual-mass flywheel.

The layout of the gearbox is similar to that of a 7-speed manual gearbox. The two multi-plate dry clutches are regulated hydraulically and actuated alternately so that the gearbox is operated like an automatic gearbox. This means that the gears are engaged automatically, or can be selected manually using the tiptronic function. There is no clutch pedal.

Both clutches are disengaged when the ignition is switched off. The 1st gear on gear train half 1 and the reverse gear on gear train half 2 are engaged.

The gearbox has an opening on the housing.

- Make sure no small parts drop into the gearbox through this opening -arrow- when carrying out repairs. Cover the opening if necessary.





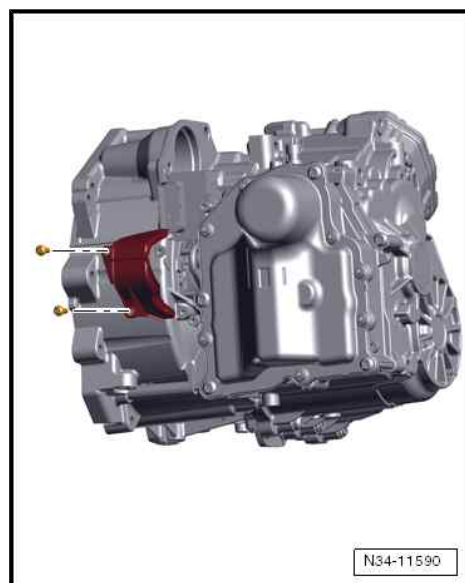
Cover above engaging levers

Some versions are fitted with a cover above the engaging levers to prevent dirt from entering.

- ⇒ [“7.1 Exploded view - mechatronic unit”, page 96](#)

Selector mechanism

The selector lever position is no longer transmitted mechanically to the gearbox via the selector lever cable and multi-function switch (gear sensor), as on the automatic gearbox. The selector lever positions and gear changes are transmitted to the gearbox control unit via CAN bus from a separate control unit in the shift unit. This means that gear shifts are effected without a cable. Exception: In selector lever position “P” the selector lever cable is used to mechanically engage the parking lock.



Gear oil

The 7-speed dual clutch gearbox has separate oil and fluid fillings. One section is filled with gear oil -arrow A-, the other with hydraulic fluid -arrow B-.

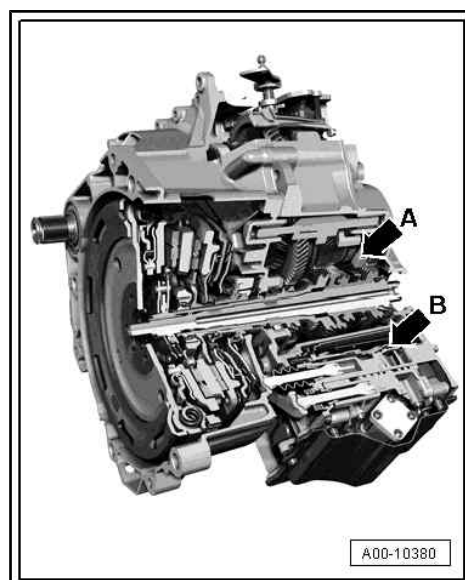
Only the types of gear oil available as a replacement part may be used for the dual clutch gearbox 0AM. Other types of oil will cause malfunctions and/or failure of the gearbox; for part number refer to ⇒ [Electronic parts catalogue](#) .

The gear oil level cannot be checked. The correct gear oil level can only be achieved by renewing the gear oil, e.g. if the gearbox is leaking. ⇒ [page 92](#)

Variation of gear-change points for gradients

An additional gear change map automatically selects gear changes for gradients depending on accelerator pedal position and driving speed.

- Gear change map for extreme uphill gradients is matched to engine output.
- Gear change map for extreme downhill gradients is matched to the braking effect of the engine.
- Increased engine braking effect can also be obtained by directly selecting a specific gear via the tiptronic function, e.g. when towing a trailer on downhill gradients



5.2 Rules for cleanliness

- ◆ Carefully clean connection points and the surrounding area with engine cleaner or brake cleaner and dry thoroughly before opening.
- ◆ Use cleaning fluid - D 009 401 04- to clean the gearbox and its components.
- ◆ Use lint-free cloths for cleaning, such as the “WYPALL X70 / WORKHORSE” cloth from Kimberly-Clark Professional.
- ◆ Seal off open lines and connections immediately with clean plugs or sealing caps from engine bung set - VAS 6122- immediately.
- ◆ After removal, place parts on a clean surface and cover them. Use sheeting and paper. Use lint-free cloths.

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- ◆ Carefully cover or seal open components if repairs cannot be carried out immediately.
- ◆ Only install clean components; replacement parts should only be unpacked immediately prior to installation.
- ◆ Protect unplugged electrical connectors against dirt and moisture and make sure connections are dry when attaching.

5.3 General repair instructions

- ◆ Proper tools and the maximum possible care and cleanliness are essential for satisfactory repairs to the transmission units. The usual basic safety precautions also naturally apply when carrying out repair work.
- ◆ To avoid repetition, a number of generally applicable instructions for the various repair procedures are summarised here. They apply to the work described in this Manual.

Guided Fault Finding, Vehicle self-diagnosis and Test Instruments

- ◆ Before servicing the gearbox, the exact cause of the failure should be identified using Guided Fault Finding, Vehicle Self-diagnosis and Test Instruments ⇒ Vehicle diagnostic tester.

Special tools

For a complete list of special tools used in this Workshop Manual please refer to ⇒ "Workshop equipment and special tools"

Environmental and waste disposal regulations for oil

- ◆ ATF, gear oil and any other type of oil must be handled with care.
- ◆ Dispose of drained oil properly.
- ◆ Always adhere to statutory environmental and waste disposal regulations.
- ◆ Observe the information shown on the packaging of the oil.

Gearbox

- ◆ Do not run the engine or tow the vehicle with the oil pan removed or when there is no gear oil in the gearbox.
- ◆ Thoroughly clean all joints and connections and the surrounding areas before disconnecting.
- ◆ When installing gearbox, ensure that dowel sleeves are fitted correctly.

O-rings, seals, oil seals and gaskets

- ◆ Always renew O-rings, seals, oil seals and gaskets.
- ◆ In certain cases, seals are also referred to as oil seals.
- ◆ After removing gaskets and seals, always inspect the contact surface on the housing or shaft for burrs resulting from removal or for other signs of damage.
- ◆ Thoroughly clean housing joint surfaces before assembling.
- ◆ Always replace paper gaskets. Completely remove old gasket and clean sealing surfaces thoroughly.
- ◆ Lightly lubricate the outer circumference and sealing lip of oil seals with gear oil before installing.
- ◆ Lightly lubricate O-rings with gear oil or vaseline before installation to prevent them from getting crushed during assembly.



- ◆ Do not use any other lubricants where gear oil is specified. Otherwise, there is a risk of problems occurring in the gearbox hydraulics.
- ◆ The open side of the oil seals faces toward the side with fluid filling.
- ◆ When installing a new oil seal, position the seal in the housing so that the sealing lip does not contact the shaft in the same place as the old seal (make use of installation depth tolerances).
- ◆ Observe rules for cleanliness → [page 10](#) .

Locking elements

- ◆ Do not over-stretch circlips.
- ◆ Renew circlips which have been damaged or over-tensioned.
- ◆ Circlips must be properly seated in the base of the groove.

Nuts, bolts

- ◆ Loosen bolts in reverse sequence to the specified tightening sequence.
- ◆ Bolts and nuts which secure covers and housings should be loosened and tightened in diagonal sequence and in stages if no tightening sequence is specified.
- ◆ Renew self-locking nuts.
- ◆ Use a wire brush to clean the threads of bolts which are secured with locking fluid. Then apply locking fluid - AMV 185 101 A1- to bolt threads before installing.
- ◆ The tightening torques stated apply to non-oiled nuts and bolts.

5.4 Contact corrosion

Contact corrosion can occur if unsuitable fasteners are used (e.g. bolts, nuts, washers, etc.).

For this reason, only fasteners with a special surface coating are fitted.

Additionally, all rubber and plastic parts and all adhesives are made of non-conductive materials.

If you are not sure whether used parts can be re-installed, always fit new parts → Electronic parts catalogue .

Please note:

- ◆ We recommend using only genuine replacement parts; these have been tested and are compatible with aluminium.
- ◆ We recommend the use of accessories approved by Audi.
- ◆ Damage caused by contact corrosion is not covered by warranty.



6 Electrical components

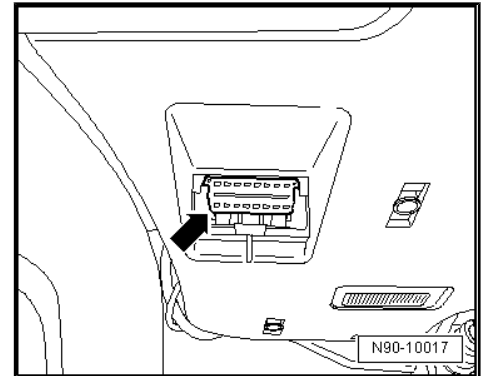
⇒ [“6.1 Overview of fitting locations - electrical components”, page 13](#)

6.1 Overview of fitting locations - electrical components

Diagnostic connection

Fitting location: The diagnostic connection for the vehicle diagnostic tester is located in the driver's footwell.

The components listed below can be tested with the **Guided Fault Finding** function in the vehicle diagnostic tester.



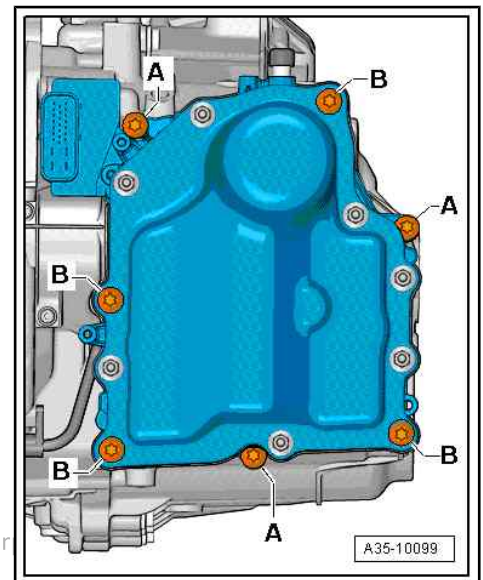
Mechatronic unit for dual clutch gearbox - J743-

◆ Fitting location: The mechatronic unit for the dual clutch gearbox - J743- is fitted to the front of the gearbox housing.

⇒ [“7.1 Exploded view - mechatronic unit”, page 96](#)



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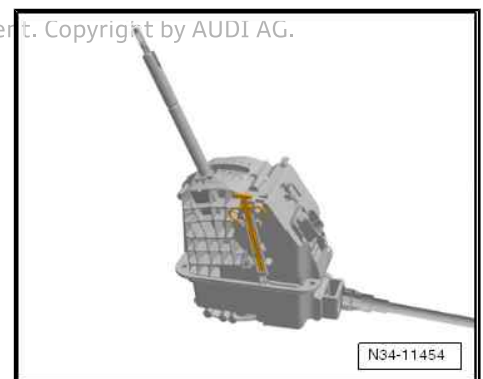
Selector lever lock solenoid - N110-

◆ Fitting location: The selector lever lock solenoid - N110- is integrated in the shift unit and cannot be renewed separately.



Note

If the selector lever lock solenoid - N110- is defective the entire shift unit has to be renewed ⇒ [page 24](#).





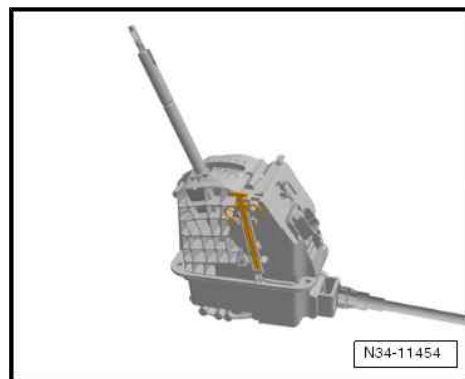
Selector lever sensors control unit - J587- with selector lever - E313- , tiptronic switch - F189- , selector lever locked in position P switch - F319-

- ♦ Fitting location: The components are integrated in the printed circuit of the shift unit; they cannot be renewed separately.



Note

The shift unit must be renewed if one of the components is defective ➔ [page 24](#) .



N34-11454

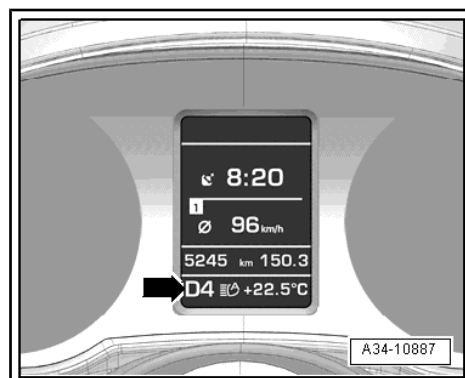
Selector lever position display - Y6-

- ♦ Fitting location: The selector lever position display - Y6- -arrow- is integrated in the instrument cluster and cannot be renewed separately.



Note

If the selector lever position display - Y6- is defective, the instrument cluster must be renewed ➔ *Electrical system; Rep. gr. 90* ; Dash panel insert; Exploded view - dash panel insert .

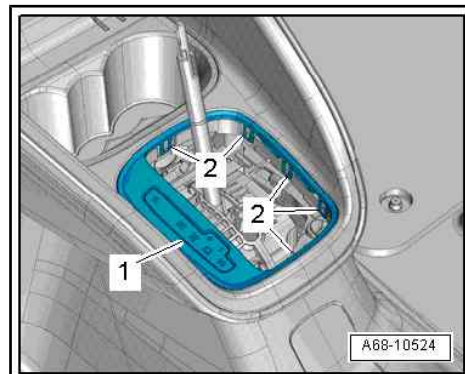


A34-10887

Selector lever position display - Y26- with selector lever display illumination bulb - L101-

- ♦ Fitting location: The selector lever position display - Y26- with selector lever display illumination bulb - L101- are incorporated in the trim frame -1-.

Removing and installing selector lever display illumination bulb - L101- with selector lever position display - Y26- ➔ *Electrical system; Rep. gr. 96* ; Lights; Removing and installing selector lever position display - Y26-



A68-10524

Kickdown switch - F8-

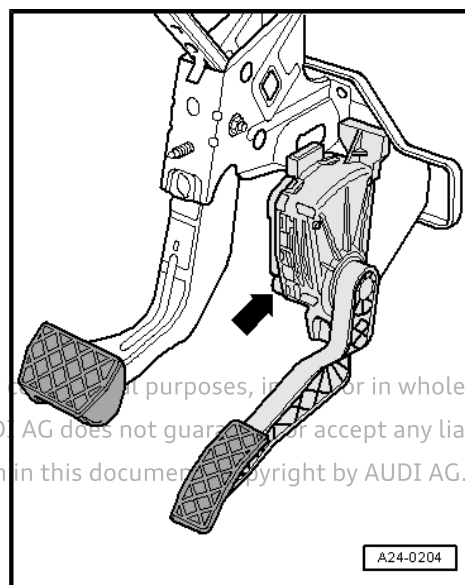
A programmed value from accelerator position sender - G79- / accelerator position sender 2 - G185- (integrated in accelerator pedal module -arrow-) is stored in the engine control unit as the kick-down signal. The accelerator position senders cannot be renewed separately.

- ♦ Signal is transmitted from engine control unit to gearbox control unit via CAN bus.



Note

The accelerator pedal module must be renewed if one of the accelerator position senders is defective ➔ *Fuel supply system, petrol engines; Rep. gr. 20* ; Accelerator mechanism; Removing and installing accelerator pedal module with accelerator position sender -G79-/G185- .



A24-0204



30 – Clutch

1 Clutch

For all repair work and tightening torques, refer to Workshop Manual "Servicing 7-speed dual clutch gearbox 0AM (S tronic)"
⇒ Servicing 7-speed dual clutch gearbox 0AM (S tronic); Rep. gr. 30 ; Clutch .



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2 Clutch mechanism

For all repair work and tightening torques, refer to Workshop Manual "Servicing 7-speed dual clutch gearbox 0AM (S tronic)"
⇒ Servicing 7-speed dual clutch gearbox 0AM (S tronic); Rep. gr. 30 ; Clutch mechanism .



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34 – Controls, housing

1 Selector mechanism

⇒ [“1.1 Exploded view - selector lever handle”, page 17](#)

⇒ [“1.2 Exploded view - selector mechanism”, page 18](#)

⇒ [“1.3 Manual release from position P”, page 19](#)

⇒ [“1.4 Removing and installing selector lever handle”, page 20](#)

⇒ [“1.5 Bringing interlock button in handle into installation position”, page 22](#)

⇒ [“1.6 Removing and installing selector mechanism”, page 24](#)

⇒ [“1.7 Checking selector mechanism”, page 26](#)

⇒ [“1.8 Checking and adjusting selector lever cable”, page 28](#)

⇒ [“1.9 Basic settings”, page 30](#)

⇒ [“1.10 Renewing selector shaft oil seal”, page 32](#)

1.1 Exploded view - selector lever handle

1 - Trim frame

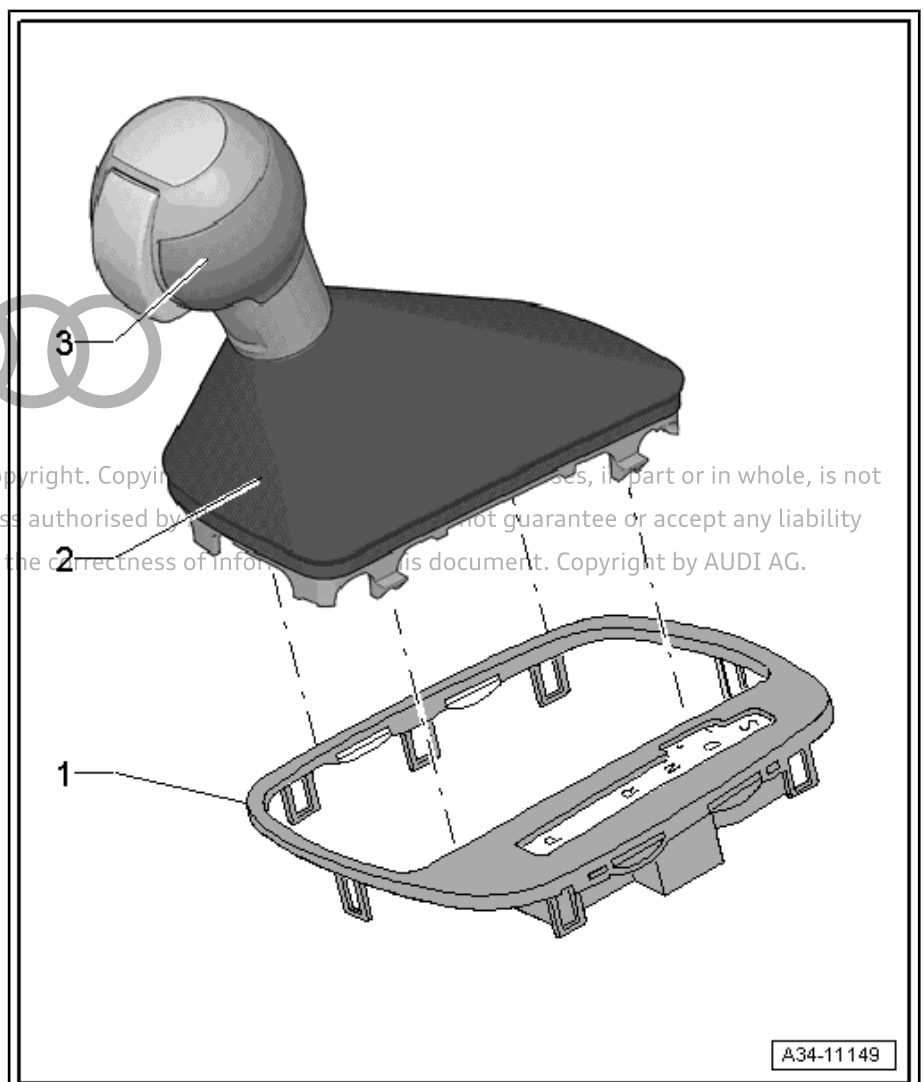
- ☐ With selector lever display illumination bulb - L101- and selector lever position display - Y26-
- ☐ Removing and installing
⇒ Electrical system;
Rep. gr. 96 ; Lights; Removing and installing selector lever position display - Y26-

2 - Selector lever boot

- ☐ Combined in one unit with selector lever handle; not available separately

3 - Selector lever handle

- ☐ Removing and installing
⇒ [page 20](#)
- ☐ ⇒ [“1.5 Bringing interlock button in handle into installation position”, page 22](#)





1.2 Exploded view - selector mechanism

1 - Bracket

- For selector lever cable

2 - Retaining clip

- Secures selector lever cable to cable support bracket
- Renew

3 - Shift unit

- Incorporates the following components: selector lever sensors control unit - J587- with selector lever - E313- , tiptronic switch - F189- , selector lever locked in position P switch - F319- and selector lever lock solenoid - N110- (do not touch these components)

- Can be checked via Guided Fault Finding function ⇒ Vehicle diagnostic tester

- Selector lever sensors control unit - J587- with selector lever - E313- , tiptronic switch - F189- , selector lever locked in position P switch - F319- and selector lever lock solenoid - N110- can only be renewed together with shift unit as a complete unit ⇒ [page 24](#)

- Selector lever cable can only be renewed together with complete shift unit ⇒ [page 24](#)

- Checking and adjusting selector lever cable ⇒ [page 28](#)

- Do not grease selector lever cable

4 - Nut

- 4x
- 8 Nm

5 - Cable support bracket

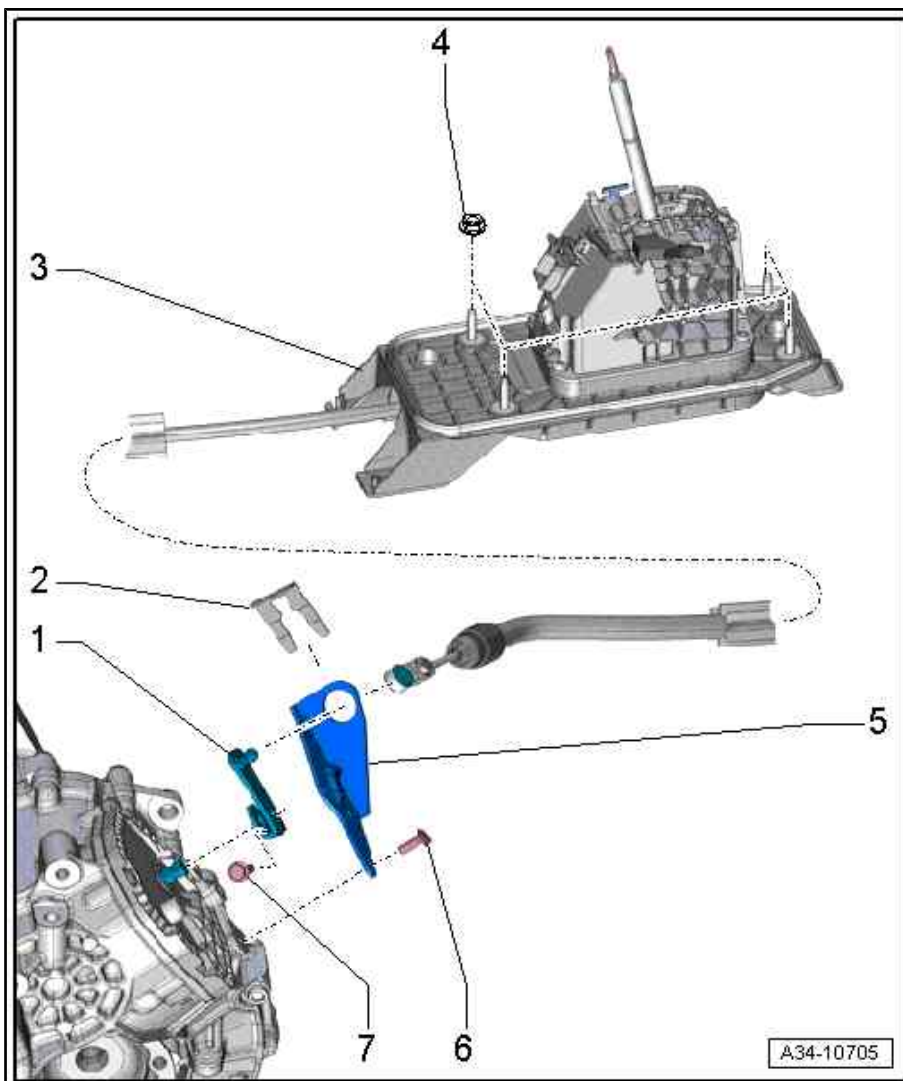
- For selector lever cable

6 - Bolt

- 2x
- 23 Nm

7 - Bolt

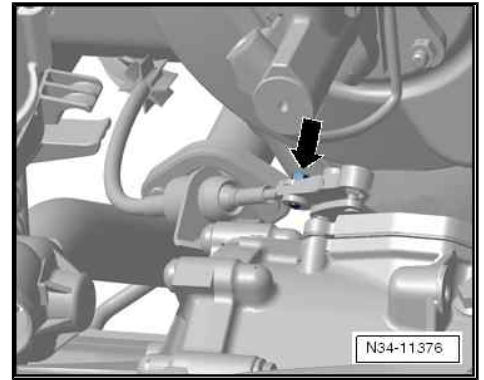
- 2x
- 13 Nm





Clamping bolt for selector lever cable - tightening torque

- Tighten clamping bolt -arrow- to 13 Nm.



1.3 Manual release from position P

- ◆ The selector lever lock solenoid - N110- locks the selector lever in position "P". The selector lever can then only be shifted out of position P when the ignition is on / the engine is running, the brake pedal is depressed and the button on the selector lever handle is pressed in ⇒ [page 26](#) .
- ◆ In the event of malfunctions in the supply voltage to the selector lever lock solenoid (discharged battery or defective fuse) or if the solenoid is defective the selector lever cannot be shifted out of position "P", i.e. the vehicle cannot be moved, as the parking lock is engaged.

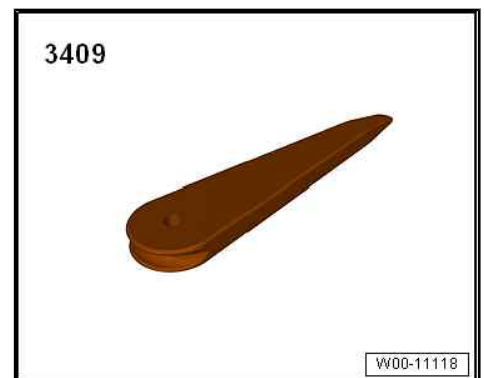
In this case:

- Check fuses ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.
- Check battery voltage ⇒ Electrical system; General information; Rep. gr. 27 ; Battery; Checking battery .

If fault finding has not been successful and selector lever can still not be shifted from "P" the solenoid can be released manually. However, if the selector lever is then moved back to "P" it will remain locked in position "P" once again.

Special tools and workshop equipment required

- ◆ Removal wedge - 3409-



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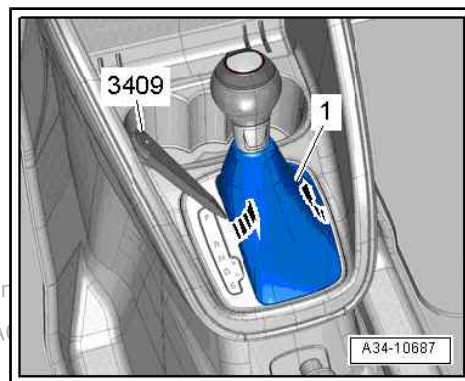


Procedure

- Lift up selector lever boot -1- using removal wedge - 3409- -arrows-.



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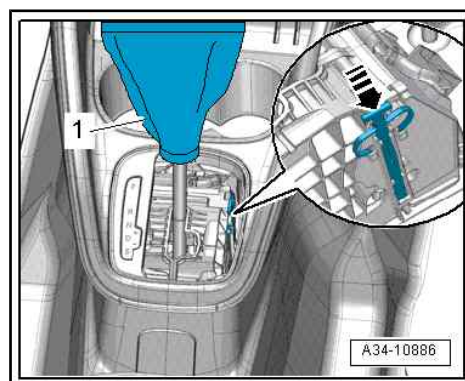
- Turn selector lever boot -1- inside out over selector lever handle.



Caution

Risk of damage

- ◆ If parts of the shift unit are damaged, the shift unit has to be renewed as a complete unit.



Note

The selector mechanism is shown without the selector lever handle for ease of illustration. However, it is not necessary to remove the selector lever handle to operate the manual release mechanism.

- Using a suitable screwdriver or similar, release selector lever lock solenoid - N110- -arrow-.
- At the same time, press interlock button and shift selector lever out of position "P".



Note

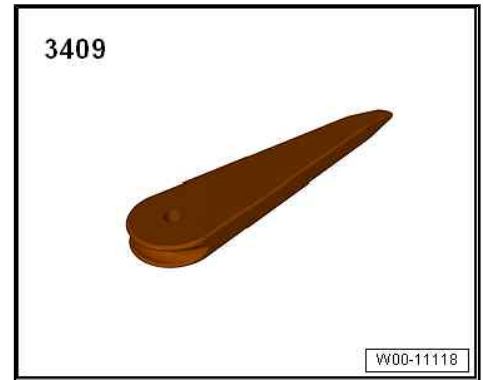
However, if the selector lever is now moved back to "P" the selector lever lock solenoid will once again mechanically lock it in position "P". The solenoid must be released once again.

1.4 Removing and installing selector lever handle

Special tools and workshop equipment required



◆ Removal wedge - 3409-



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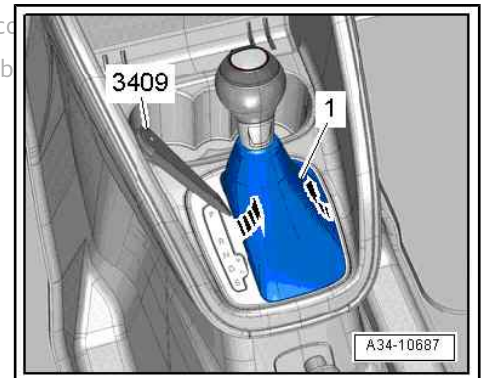
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Note

The selector lever handle is removed together with the selector lever boot.

- Apply handbrake.
- Shift selector lever into position "N".
- Lift up selector lever boot -1- using removal wedge - 3409-
-arrows-.
- Turn selector lever boot -2- inside out over selector lever handle -3-.
- Turn locking ring in direction of -arrow- as far as stop.
- Raised lug -b- on locking ring is moved away from lug -a-.

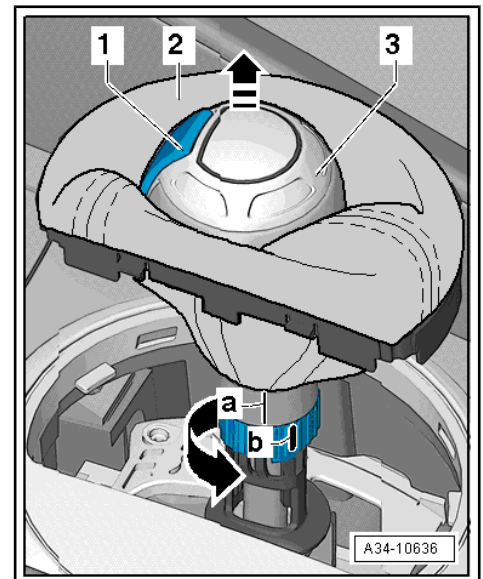


Caution

Risk of damage to the selector mechanism.

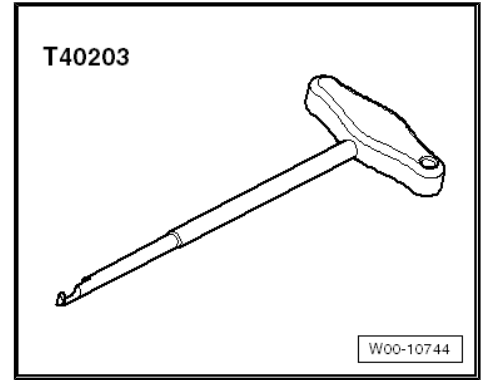
- ◆ ***Do not touch the interlock button -1- on the selector lever handle when pulling off the handle.***
- ◆ ***Otherwise the selector lever handle or the pull rod of the selector mechanism will be damaged when the handle is pulled off.***

- Pull off selector lever handle together with selector lever boot upwards -arrow-, taking care not to touch interlock button -1-.





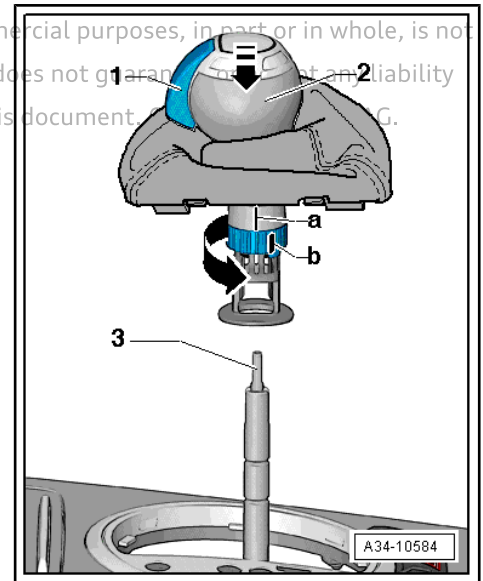
◆ Release tool - T40203-



Procedure

- Installation position: The interlock button -1- must protrude from the selector lever handle.

If the interlock button has been pressed in, it must be moved back into its installation position so that the selector lever handle can be installed.



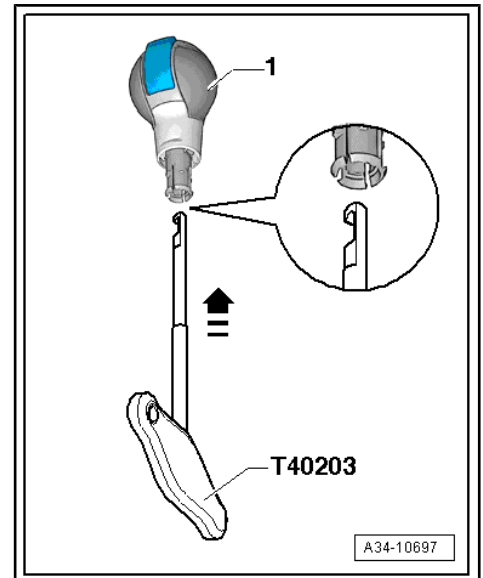
- Carefully insert release tool - T40203- into selector lever handle -1- as far as stop.



Note

For illustration purposes, the handle is shown without selector lever boot.

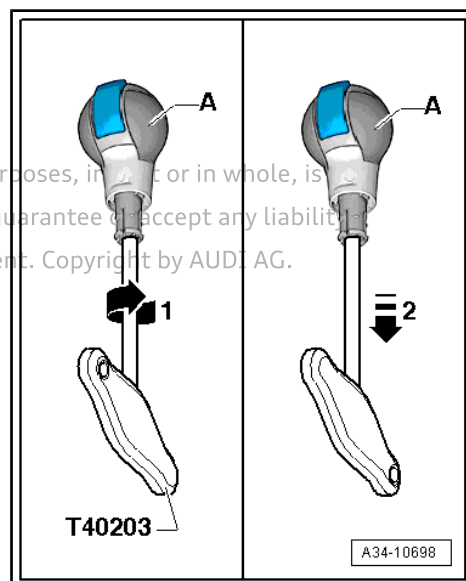
- Recess on release tool - T40203- should face interlock button, hook should point towards left.



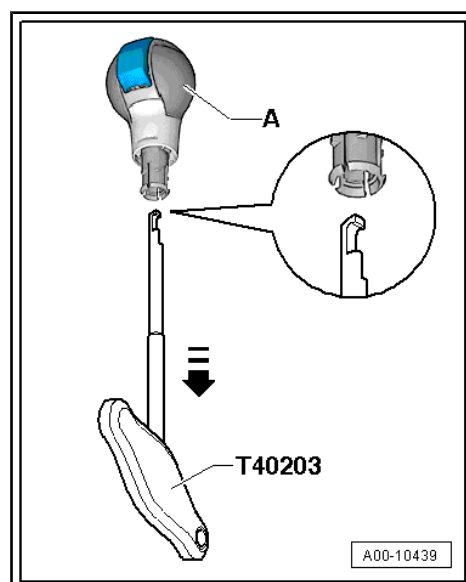


- Hold selector lever handle -A- and turn release tool - T40203- 180° in direction of -arrow 1-.
- Hold handle and carefully pull out release tool - T40203- -arrow 2-.

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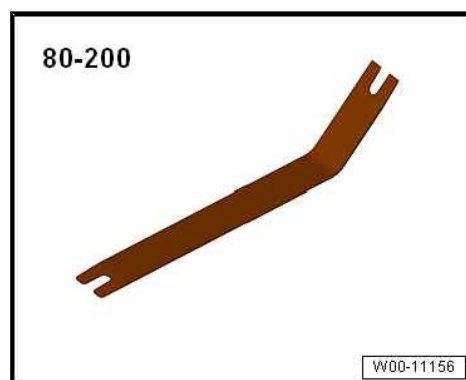
- When pulling out release tool - T40203- , interlock button -A- on selector lever handle is pressed out and locked in position.
- Do not touch interlock button on selector lever handle before installing handle so that interlock button is not pressed in again.



1.6 Removing and installing selector mechanism

Special tools and workshop equipment required

- ◆ Removal lever - 80-200-





Removing

- Remove selector lever handle ⇒ [page 20](#) .
- Remove centre console -1- ⇒ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing centre console .
- Remove air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing or ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Remove heat shield in centre tunnel ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Removing and installing heat shield for floor .
- Unplug electrical connector -1- between shift unit and vehicle wiring harness.



Note

Disregard -item 2-.

- Move selector lever to position “P”.

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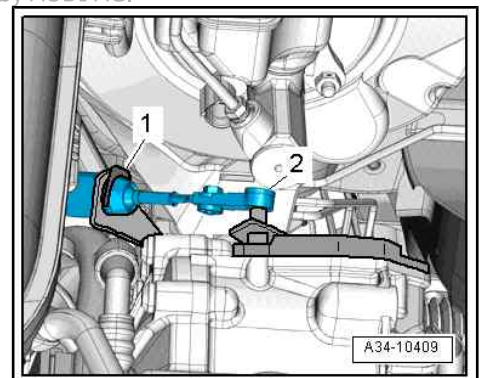
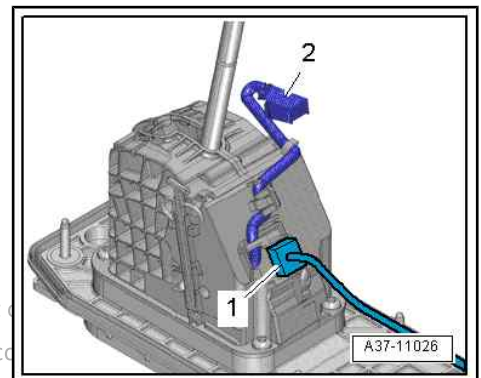
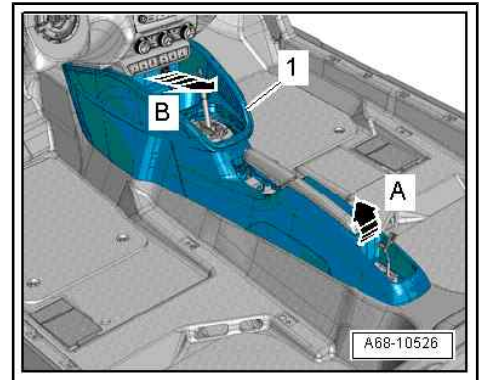
- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.



Caution

Risk of damage to selector lever cable.

- ◆ **Do not press selector lever cable towards rear out of cable support bracket. The selector lever cable is only guided out of the cable support bracket when the shift unit is detached.**

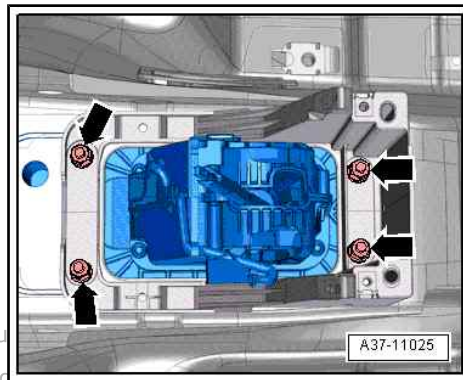




Note

The assistance of a second mechanic is required to detach the shift unit from below.

- Remove nuts -arrows- in vehicle interior.
- Detach shift unit together with selector lever cable from below. Guide selector lever cable out of cable support bracket.



Note

Do not to bend or kink selector lever cable.

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Installing

Installation is carried out in reverse sequence; note the following:

- Tightening torque ⇒ [page 18](#)
- Install heat shield in centre tunnel ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Removing and installing heat shield for floor .
- Install air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing or ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Install centre console ⇒ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing centre console .
- Install selector lever handle ⇒ [page 20](#) .
- Check selector mechanism ⇒ [page 26](#) .

1.7 Checking selector mechanism



WARNING

Accidents and injury can be caused if a gear is inadvertently engaged while the engine is running.

- ◆ ***Before working on the vehicle while the engine is running, shift the selector lever into position "P" and apply the parking brake.***



Note

On the Audi A1 with 1.4 ltr. TFSI engine and supercharger, the engine idling speed increases automatically when the selector lever is moved to position "S". This allows a quicker response when the vehicle moves off from a standstill.

Overview:

- ◆ 1. Checking operation of selector mechanism ⇒ [page 27](#)
- ◆ Check 2: Checking ignition key removal lock ⇒ [page 27](#)
- ◆ 3. Checking interlock button on selector lever handle ⇒ [page 28](#)



1. Checking operation of selector mechanism

- ◆ It should not be possible to operate the starter while the selector lever is in position "S", "D" or "R" or in the tiptronic position.
- ◆ When travelling at speeds above 5 km/h and shifting into selector lever position "N", the solenoid for the selector lever lock must not engage and block the selector lever. The selector lever can be shifted into a driving gear.
- ◆ When travelling at speeds below 5 km/h (almost stationary), the solenoid for the selector lever lock should only engage about 1 second after you shift into selector lever position "N". Selector lever cannot be shifted out of position "N" until brake pedal is depressed.

Selector lever in position "P":

- Apply handbrake.
- Do not press brake pedal.
- Switch on ignition.
- The selector lever is locked and cannot be shifted out of "P" position, even when the interlock button on the handle is pressed in. Selector lever lock solenoid - N110- blocks selector lever.
- Press and hold brake pedal.
- Selector lever lock solenoid - N110- releases selector lever. It is possible to shift into a driving gear. With interlock button on selector lever handle pressed, shift selector lever slowly from "P" position through "R, N, D and S" and check whether the selector lever position display - Y6- in the instrument cluster shows the correct selector lever position in each case.

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

- Do not press brake pedal.
- After a short delay: Selector lever is locked and cannot be shifted out of "N" position even when pressing the interlock button on the selector lever handle. Selector lever lock solenoid - N110- blocks selector lever.
- Depress brake pedal.
- Selector lever lock solenoid - N110- releases selector lever. Shifting into position "D" is possible.

Selector lever in position "D", ignition switched on:

- Shift selector lever into "tiptronic gate".
- The illuminated "D" symbol in the selector lever position display - Y26- should go out and the "+" and "-" symbols should light up.
- The selector lever position display - Y6- in the instrument cluster should change from "D" to "M1" when the selector lever is moved into the "tiptronic gate".
- If the specified results are not obtained, perform Guided Fault Finding ⇒ Vehicle diagnostic tester.
- Adjust selector lever cable ⇒ [page 29](#) .
- Check interlock button on selector lever handle ⇒ [page 28](#) .
- Check ignition key removal lock.

2. Checking ignition key removal lock

- Apply handbrake.



- Press and hold brake pedal.
- When interlock button in selector lever handle is pressed, it should be possible to move selector lever out of position “P” without “catching”.
- Switch off ignition.
- It should not be possible to remove the ignition key when the selector lever is in any position other than “P”.
- Move selector lever to position “P”.
- Pull out ignition key.
- It should only be possible to remove ignition key in selector lever position “P”.
- It should not be possible to shift selector lever out of “P” position with interlock button pressed and foot brake depressed.

If the ignition key removal lock does not function as described, perform [Guided Fault Finding](#) ⇒ Vehicle diagnostic tester.

3. Checking interlock button on selector lever handle

Check that interlock button moves freely:

- Interlock button should move easily when pressed without force.
- Interlock button should spring back fully on its own when released.
- If specified results are not obtained, check that selector lever handle is correctly installed ⇒ [page 20](#) .
- Check whether selector lever is bent.

Functional check:

- Ignition switched on

Press the interlock button on the selector lever handle to move the handle into the positions listed below; it should not be possible to move the selector lever into these positions unless the interlock button is pressed.

- ◆ “P” to “R” (also depress brake pedal)
- ◆ “D” to “S”
- ◆ “N” to “R” (brake pedal also has to be depressed after a short delay when vehicle is stationary)
- ◆ “R” to “P”
- If specified results are not obtained, check that selector lever handle is correctly installed ⇒ [page 20](#) .
- Perform [Guided Fault Finding](#) ⇒ Vehicle diagnostic tester and check selector lever lock solenoid N110.
- Adjust selector lever cable ⇒ [page 29](#) .

1.8 Checking and adjusting selector lever cable

Checking adjustment of selector lever cable

- Selector mechanism checked ⇒ [page 26](#) .
- Keep button pressed, while pulling selector lever approx. 5 mm to the rear out of position “P”. Then keep lever in this position, do not move it into “R”.
- Release selector lever.



- The selector lever should spring back into position "P" automatically.
- If this is not the case, adjust selector lever cable
⇒ [page 29](#) .
- Shift selector lever into position "N".
- Keep button pressed, while pulling selector lever approx. 5 mm to the rear out of position "N". Then keep lever in this position, do not move it into "D".
- Release selector lever.
- The selector lever should spring back into position "N" automatically.
- If this is not the case, adjust selector lever cable
⇒ [page 29](#) .
- Keep button pressed, while pushing selector lever approx. 5 mm to the front out of position "N". Then keep lever in this position, do not move it into "R".
- Release selector lever.
- The selector lever should spring back into position "N" automatically.
- If this is not the case, adjust selector lever cable
⇒ [page 29](#) .

Adjusting selector lever cable

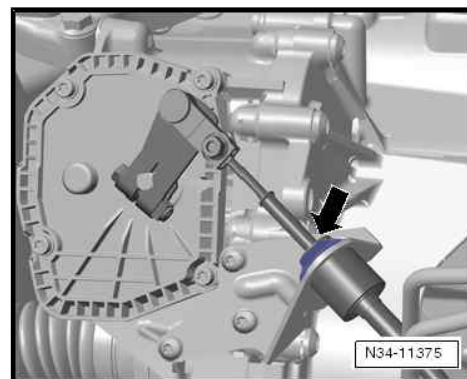
- Tightening torque ⇒ [page 19](#)
- Remove air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing or ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Make sure that securing clip -arrow- is pressed all the way down and properly seated.



Note

Always renew securing clip -arrow- after removal.

- Move selector lever from "P" to "S".
- Check front protective sleeve on selector lever cable for damage.
- Move selector lever to position "P".
- The selector mechanism and selector lever cable should operate smoothly.
- If the protective sleeve is damaged or if the selector mechanism does not move freely, the selector mechanism must be renewed ⇒ [page 24](#) .
- Switch off ignition.

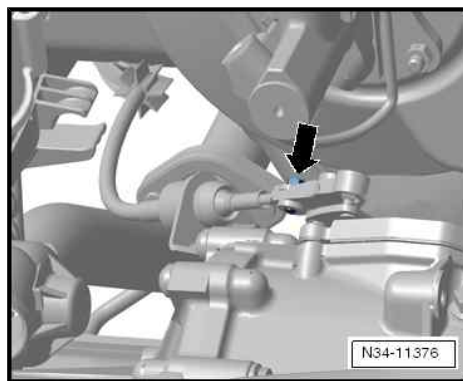




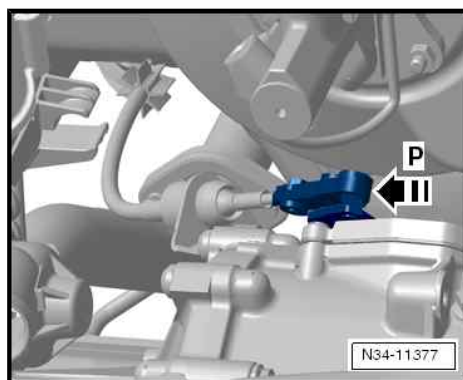
- Loosen bolt -arrow-.

**Note**

The selector lever in the selector mechanism must remain in position "P" when the bolt -arrow- is loosened, otherwise the adjustment will not be correct.



- Move gearbox selector lever into position "P" on gearbox by pushing lever towards cable support bracket -arrow-.
- Turn both front wheels in one direction, e.g. by pushing the vehicle forwards, until the detent lever in the gearbox engages in the parking lock gear.
- The parking lock has engaged when it is no longer possible to rotate both wheels in the same direction.
- Carefully move selector lever forwards and backwards slightly, but without shifting to another selector lever position.

**Note**

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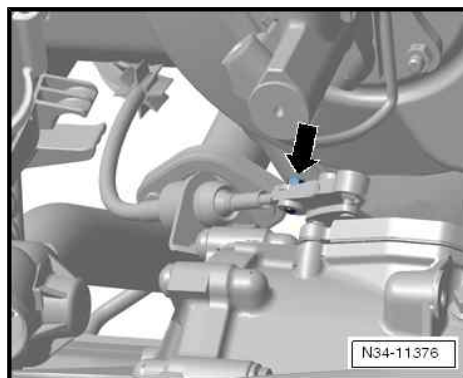
The selector lever cable is then relieved of strain. AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

- Tighten bolt -arrow- on selector lever cable without jerking the cable.

**Note**

When tightening the bolt -arrow-, make sure the selector lever cable does not move out of position.

- Install air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing or ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .



1.9 Basic settings

Special tools and workshop equipment required

- ◆ Vehicle diagnostic tester

Requirements for Basic setting:

- Vehicle diagnostic tester is connected.
- Selector lever is in position "P".
- Using vehicle diagnostic tester in **Guided Functions** mode, select **02 - Gearbox electronics** and then select the appropriate basic setting function.
- It is important to follow all the instructions given by the vehicle diagnostic tester exactly in order to complete the basic setting successfully.

The following "basic settings" are currently available:

- ◆ 1. **Basic setting complete**



- ◆ 2. Basic setting neutral
- ◆ 3. Basic setting removal position

Description of basic settings:

1. Basic setting complete

Basic setting complete must be performed after the following operations:

- ◆ When the dual clutch has been removed
- ◆ When the mechatronic unit for dual clutch gearbox - J743- with control unit has been renewed
- ◆ When gearbox repairs have been performed



Note

- ◆ The basic setting complete function on the vehicle diagnostic tester achieves a fast and comprehensive self-adaption of the clutch system. The clutch and gear actuators are re-adapted. The current clutch engagement point, the current degree of wear, the synchronisation points and the end positions of the gear actuators with gears engaged are detected and stored.
- ◆ Clutch self-adaption is performed regularly during normal driving, according to the amount of clutch wear. However, this adaption is only possible under specific driving conditions. For this reason a "Basic setting" of the clutch must be performed after certain repairs, as listed above. This achieves optimum adjustment for gearshifts and clutch engagement when moving off.

2. Basic setting neutral

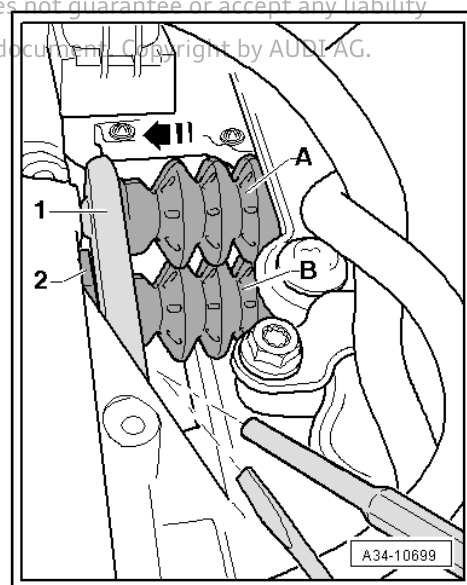
Basic setting neutral moves the gear actuators into the removal position. This ensures that the mechatronic unit does not "catch" during removal.

Basic setting neutral also attempts to shift out of all gears so that the vehicle can be pushed, e.g. if the clutch is defective.

3. Basic setting removal position

In the Basic setting removal position it is possible to check that the bellows of the clutch actuators -A- and -B- are correctly seated and not leaking or damaged.

- ◆ In the Basic setting removal position the two clutch actuators -A- and -B- are also moved all the way out in the direction of the -arrow-. The two clutch actuator levers -1- and -2- are thus pressed away from the mechatronic unit.
- ◆ The gear actuators are also moved to the removal position.
- ◆ When the ignition is switched off, the force is no longer applied to the two clutch actuators -A- and -B-. The clutch engaging levers -1- and -2- press the clutch actuators back into the mechatronic unit.



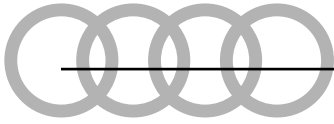


1.10 Renewing selector shaft oil seal

The selector shaft oil seal can only be renewed in conjunction with cover for parking lock → [page 110](#) .



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2 Removing and installing gearbox

⇒ **"2.1 Removing gearbox", page 33**

⇒ **"2.2 Installing gearbox", page 78**

2.1 Removing gearbox

⇒ **"2.1.1 Removing gearbox - vehicles with 1.4 ltr. TFSI engine (EA111)", page 33**

⇒ **"2.1.2 Removing gearbox - vehicles with 1.4 ltr. TFSI engine (EA211)", page 40**

⇒ **"2.1.3 Removing gearbox - vehicles with 1.4 ltr. TFSI engine with supercharger", page 46**

⇒ **"2.1.4 Removing gearbox - vehicles with 1.8 ltr. TFSI engine", page 55**

⇒ **"2.1.5 Removing gearbox - vehicles with 1.0 ltr. TFSI engine", page 60**

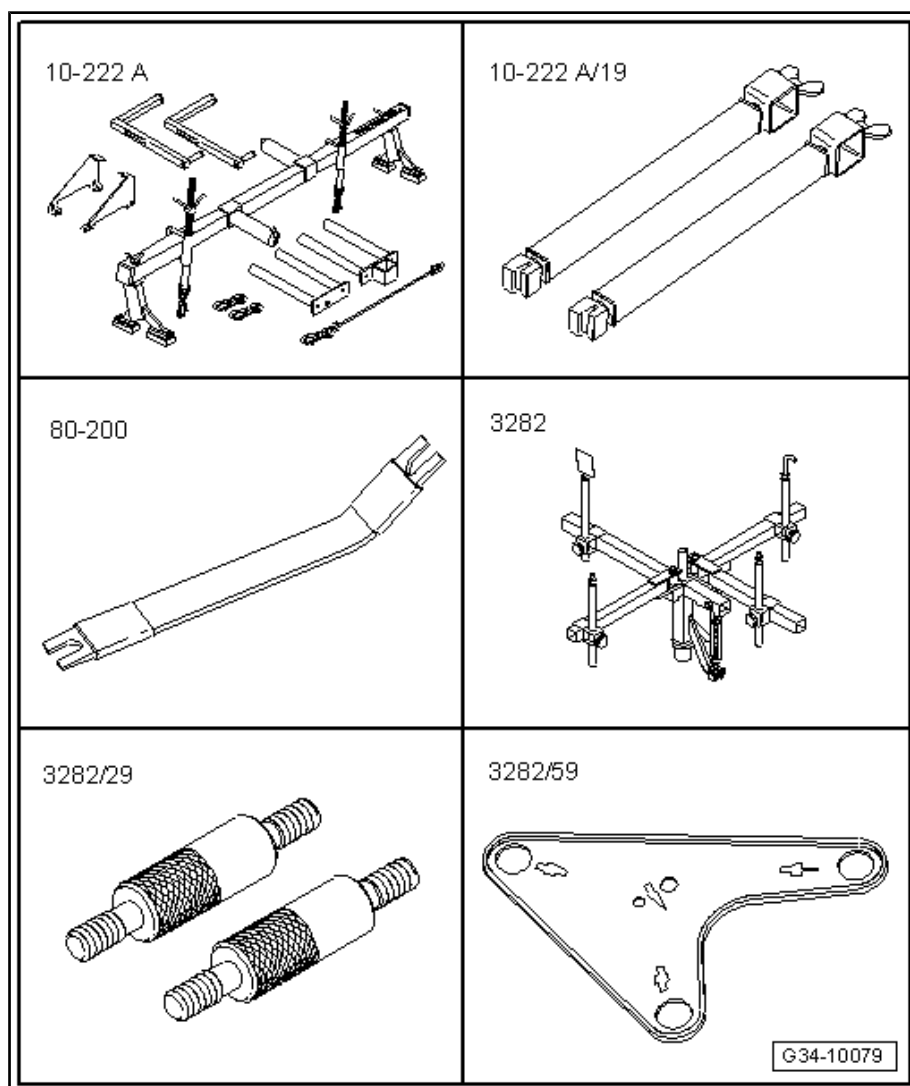
⇒ **"2.1.6 Removing gearbox - vehicles with 1.6 ltr. TDI engine (EA189)", page 66**

⇒ **"2.1.7 Removing gearbox - vehicles with 1.4 ltr./1.6 ltr. TDI engine (EA288)", page 72**

2.1.1 Removing gearbox - vehicles with 1.4 ltr. TFSI engine (EA111)

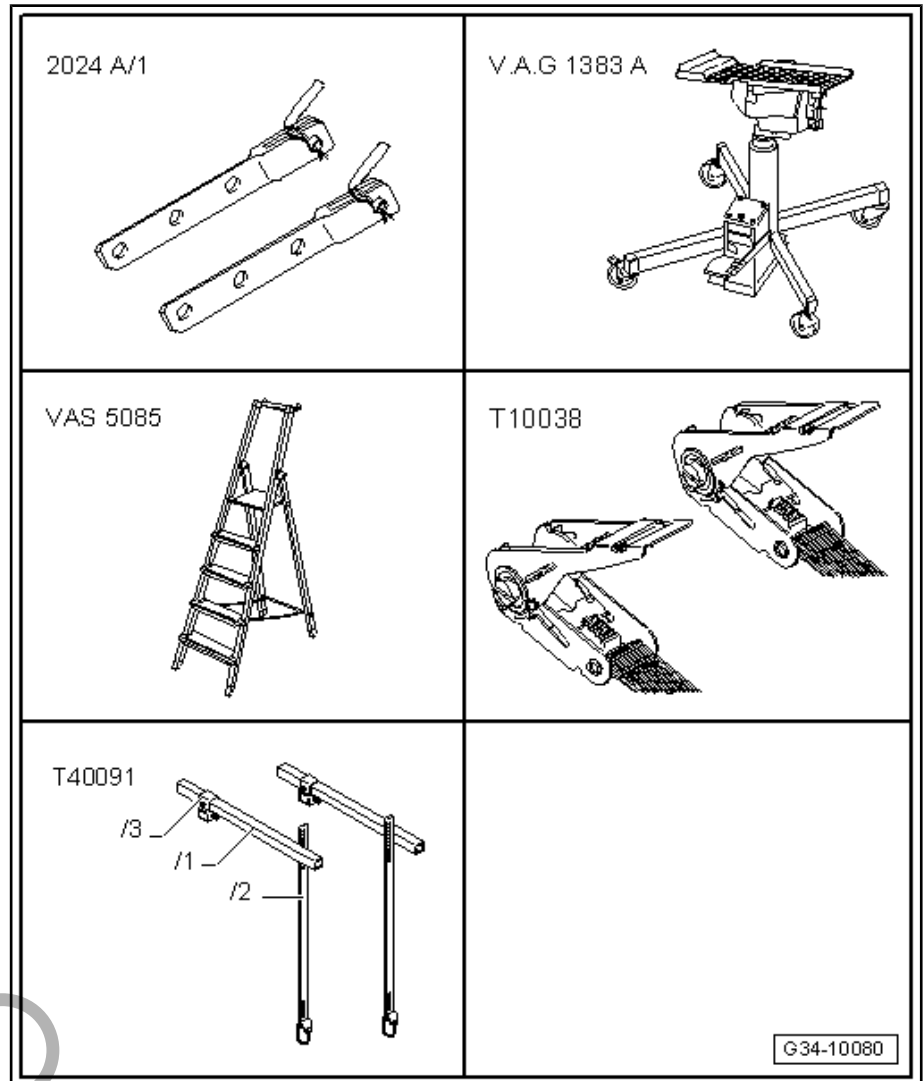


Special tools and workshop equipment required



- ◆ Support bracket - 10 - 222 A-
- ◆ Adapters - 10 - 222 A /19-
- ◆ Removal lever - 80 - 200-
- ◆ Gearbox support - 3282-
- ◆ Pin - 3282/29-
- ◆ Adjustment plate - 3282/59-

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- ◆ Extension -2024 A /1-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Stepladder - VAS 5085-
- ◆ Tensioning strap - T10038-
- ◆ Engine support basic set - T40091-

Procedure



Note

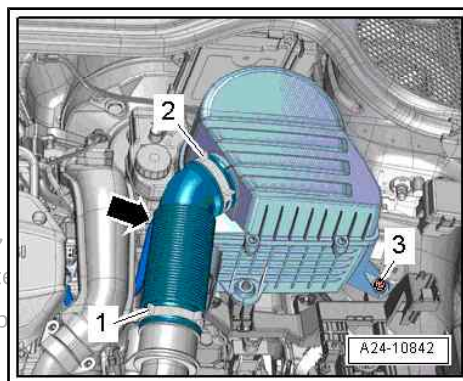
- ◆ ⇒ *"5 Repair instructions", page 9*
- ◆ ⇒ *"5.2 Rules for cleanliness", page 10*
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ page 9 .*
- ◆ *Fit all cable ties in the original positions when installing.*
- Move selector lever to position "P".



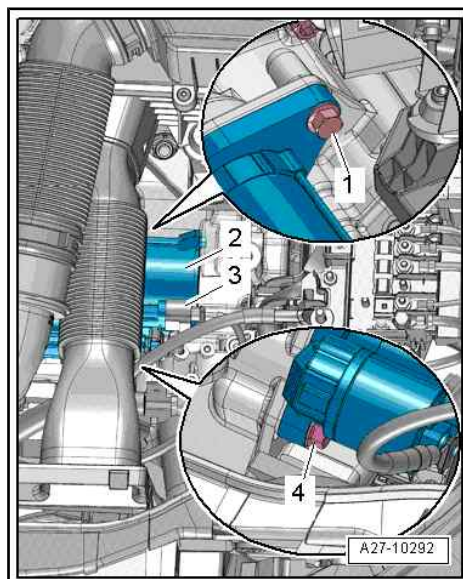
- Remove air cleaner housing ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .



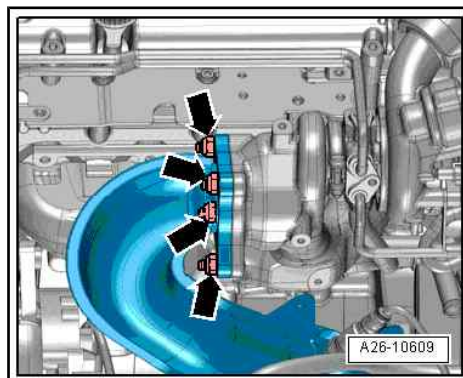
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- Remove starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .



- Remove catalytic converter ⇒ Engine, mechanics; Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .

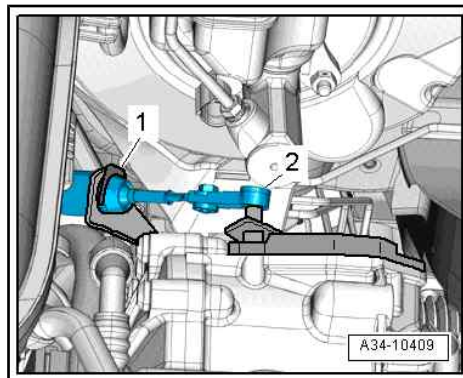


- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.
- Detach selector lever cable from cable support bracket and move clear to one side.



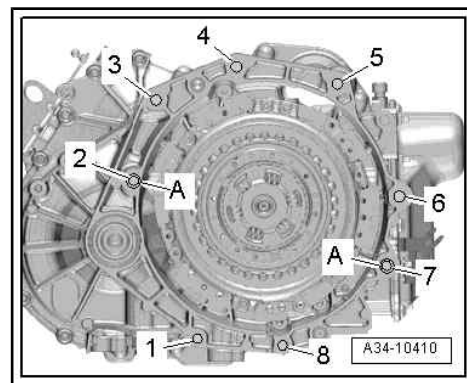
Note

Do not to bend or kink selector lever cable.

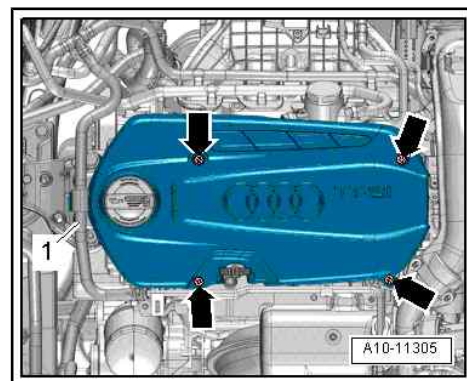




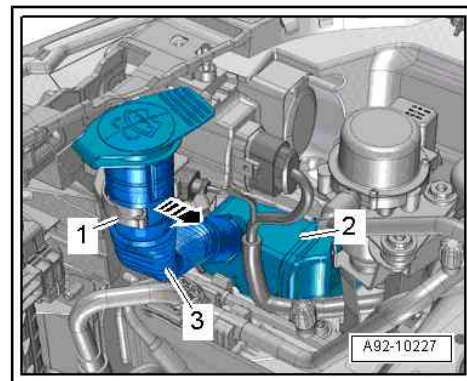
- Remove bolts -3, 4, 5- securing gearbox to engine.



- Disengage coolant hose -1- at engine cover panel.
- Unscrew bolts -arrows- and detach engine cover panel.



- Pull filler neck -3- for washer fluid reservoir out of retaining clip -1- -arrow- and move clear to one side.
- Remove wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .



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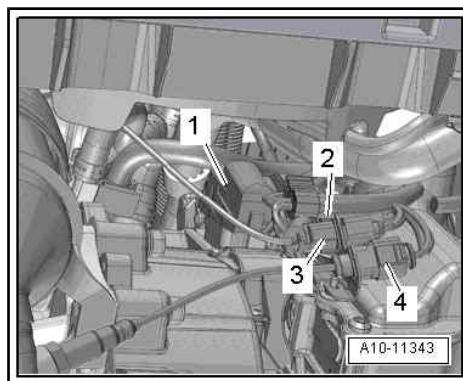
- Take electrical connector -2- out of bracket.



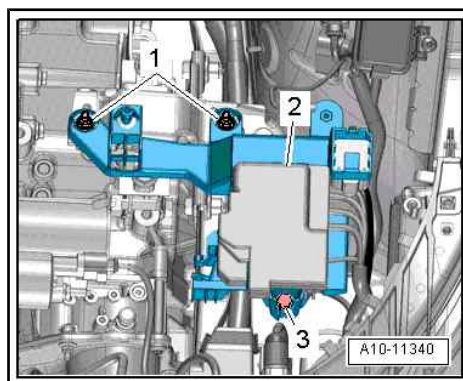
Caution

Risk of irreparable damage to gearbox components.

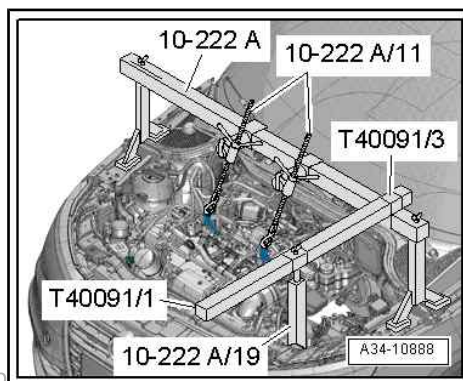
- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



- Touch vehicle earth with bare hands to eliminate any static charge.
- Unplug electrical connector -1- for mechatronic unit for dual clutch gearbox - J743- .
- Take electrical connectors -2- and -3- out of bracket and unplug.
- Remove all retainers from mechatronic unit for dual clutch gearbox - J743- .
- Move electrical wiring harness clear at gearbox.
- Remove subframe without steering rack ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Sub-frame; Removing and installing subframe without steering rack .
- Detach drive shaft (both sides) from gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- Remove flange shaft (right-side) ⇒ [page 117](#) .
- Remove nut -1- and bolt -3- and press electronics box -2- clear to one side.



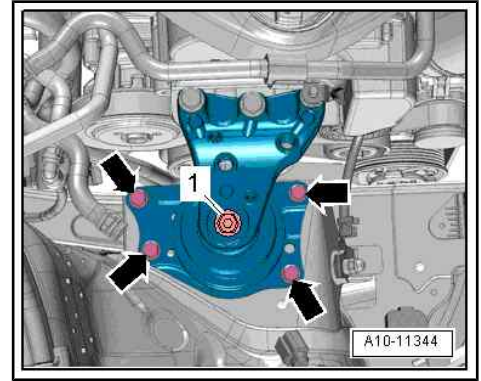
- Set up support bracket - 10 - 222 A- on top edges of body flanges (left and right) and on longitudinal member (left-side), as shown in illustration.
- Attach hooks of spindles -10 - 222 A /11- to engine lifting eyes.
- Take up weight of engine with spindles; do not lift.



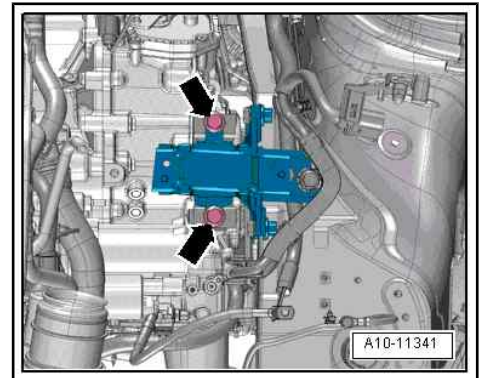
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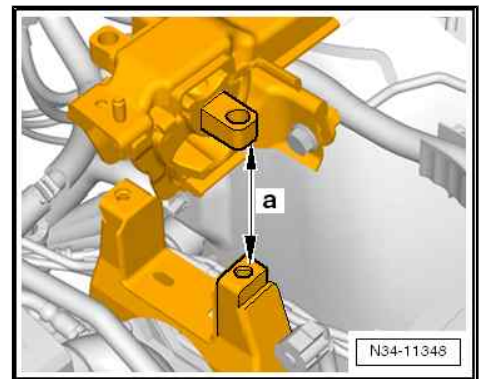
- Remove engine mounting ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Removing and installing engine mountings .



- Remove bolts -arrows- securing gearbox mounting.



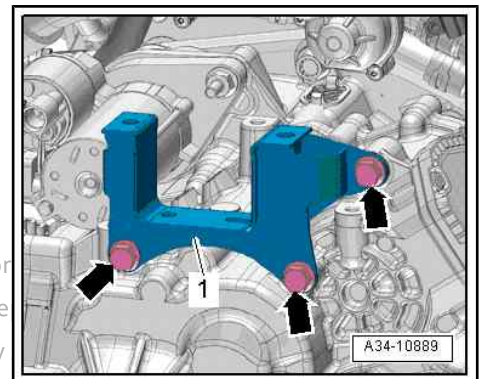
- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.
- Dimension -a- = 100 ... 110 mm



- Remove bolts -arrows- and detach gearbox support -1-.



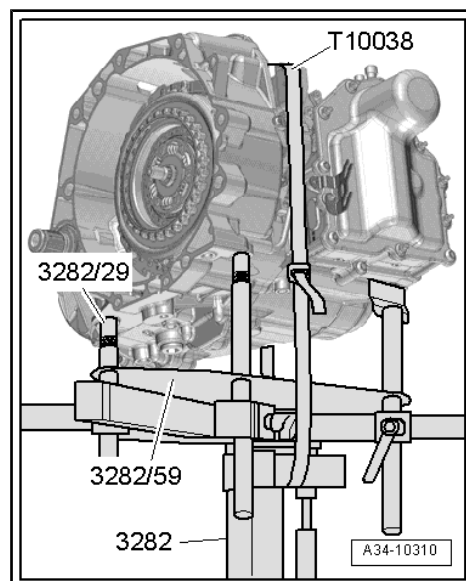
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To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

- Set up gearbox support - 3282- on engine and gearbox jack .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .



- Secure support elements as illustrated on adjustment plate - 3282/59- .

- Place engine and gearbox jack underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.

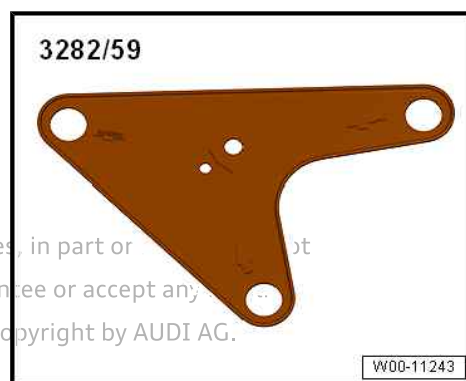
- Align gearbox support - 3282- parallel with gearbox.

- Screw pin - 3282/29- into gearbox.

- Insert last support element in gearbox as illustrated.

- Use tensioning strap - T10038- to secure gearbox.

- Support gearbox by lifting from underneath with engine and gearbox jack .



- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.

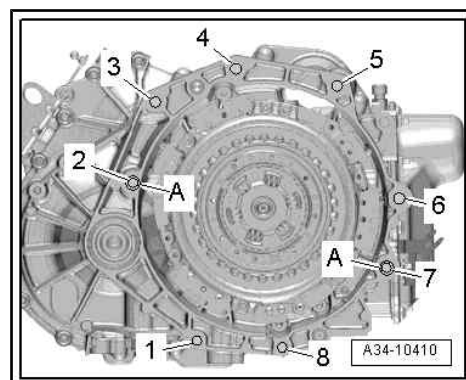
- Press gearbox off dowel sleeves.

- Detach gearbox from engine.

- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.

- Carefully lower gearbox using engine and gearbox jack .

- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .

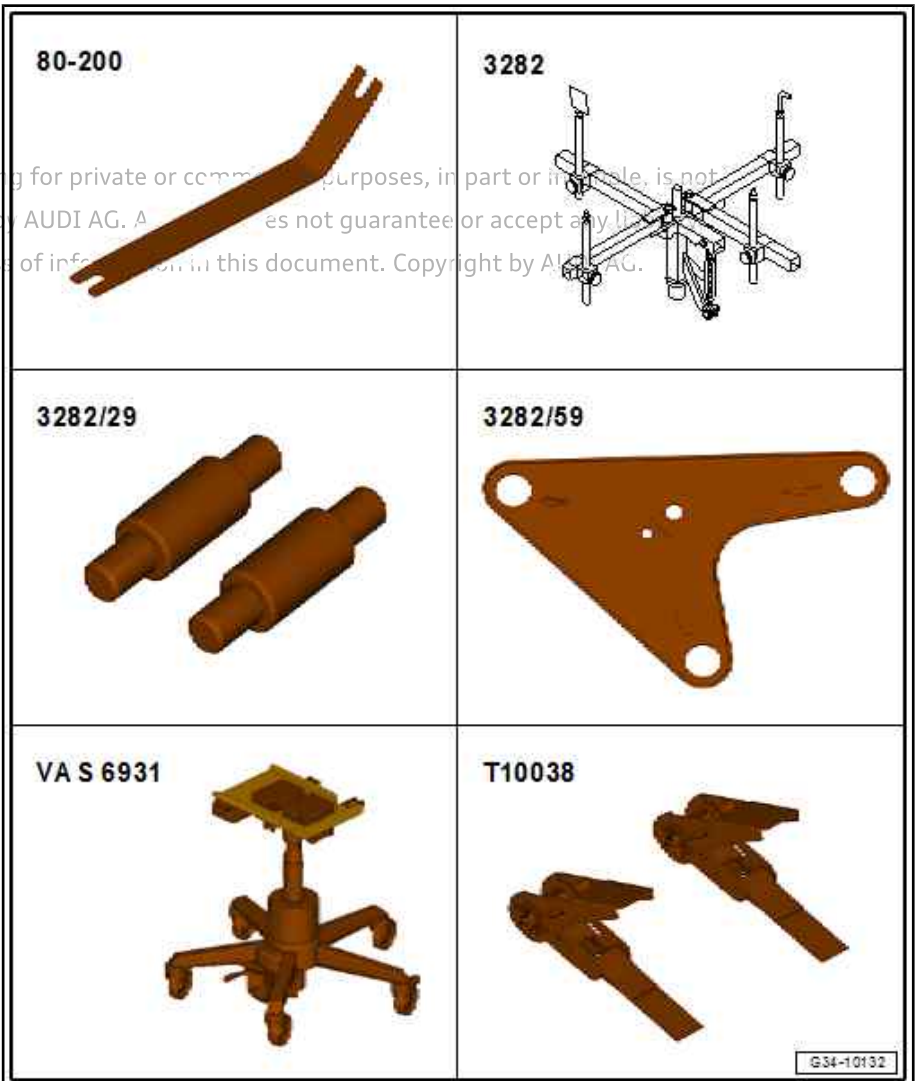


2.1.2 Removing gearbox - vehicles with 1.4 ltr. TFSI engine (EA211)

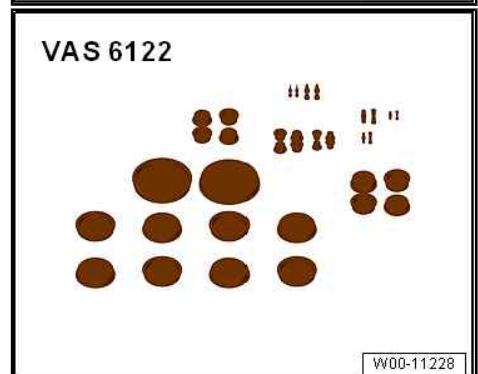
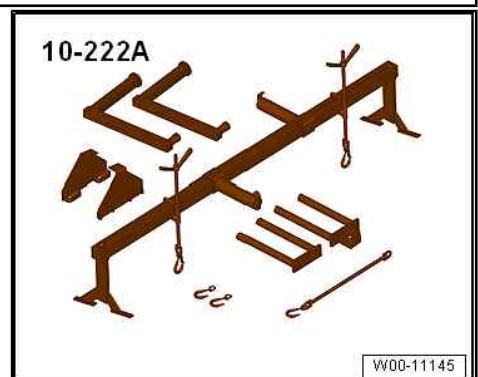


Special tools and workshop equipment required

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G34-10132





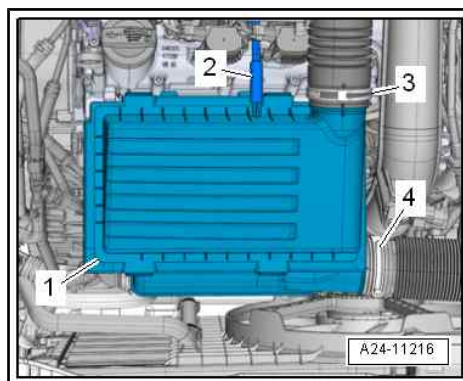
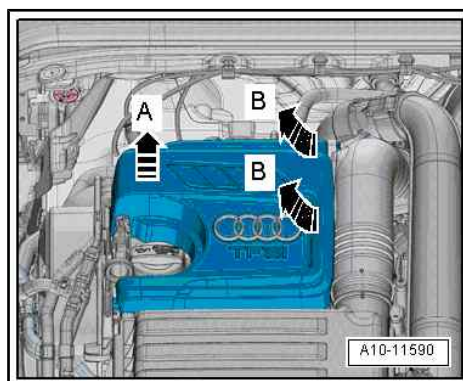
- ◆ Removal lever - 80-200-
- ◆ Gearbox support - 3282-
- ◆ Pin - 3282/29-
- ◆ Adjustment plate - 3282/59-
- ◆ Engine and gearbox jack - VAS 6931-
- ◆ Tensioning strap - T10038-
- ◆ Support bracket - 10 - 222 A-
- ◆ -10 - 222 A/8-
- ◆ -10 - 222 A/17-
- ◆ Engine bung set - VAS 6122-
- ◆ Stepladder (commercially available)

Procedure



Note

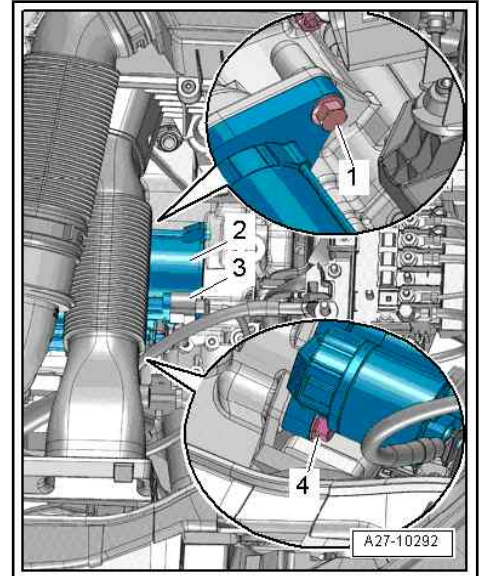
- ◆ ⇒ *["5 Repair instructions", page 9](#)*
- ◆ ⇒ *["5.2 Rules for cleanliness", page 10](#)*
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ [page 9](#).*
- ◆ *Fit all cable ties in the original positions when installing.*
- Move selector lever to position "P".
- Remove engine cover panel ⇒ Engine, mechanics; Rep. gr. 10 ; Engine cover panel; Removing and installing engine cover panel .
- Remove air cleaner housing ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Remove battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .



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- Remove starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .

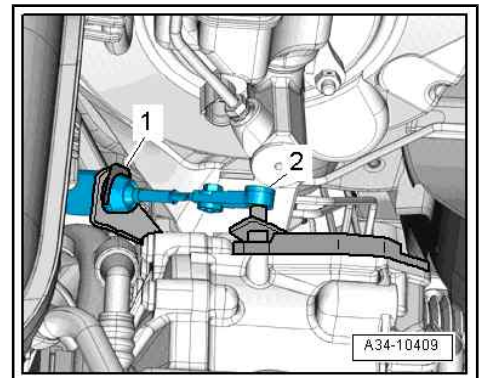


- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.
- Detach selector lever cable from cable support bracket and move clear to one side.



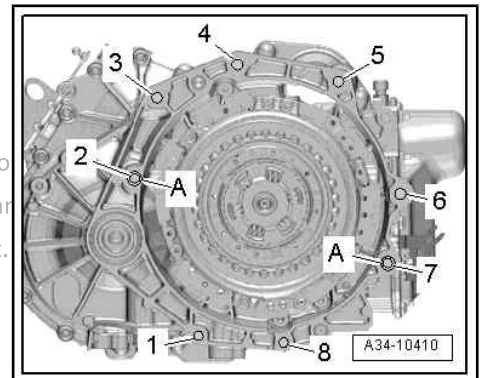
Note

Do not to bend or kink selector lever cable.



- Remove bolts -3, 4, 5- securing gearbox to engine.
- Remove wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .

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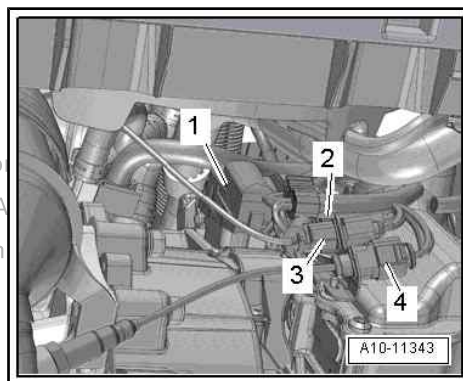
- Take electrical connector -2- out of bracket.



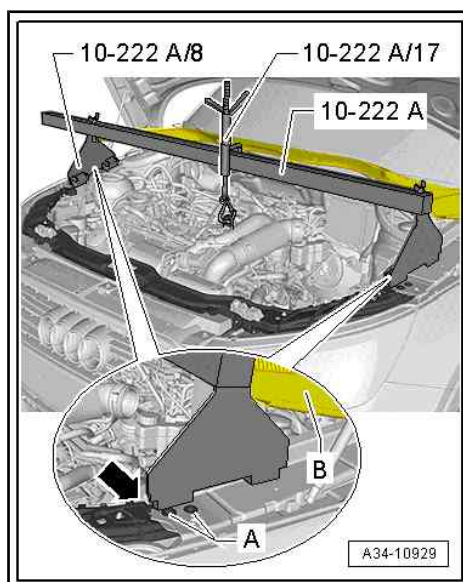
Caution

Risk of irreparable damage to gearbox components.

- ◆ ***Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.***

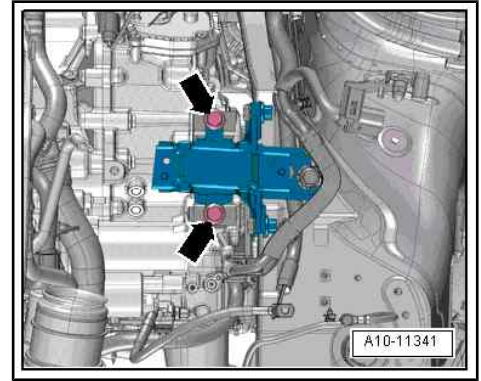


- Touch vehicle earth with bare hands to eliminate any static charge.
- Unplug electrical connector -1- for mechatronic unit for dual clutch gearbox - J743- .
- Take electrical connectors -2- and -3- out of bracket and unplug.
- Remove all retainers from mechatronic unit for dual clutch gearbox - J743- .
- Move electrical wiring harness clear at gearbox.
- Remove subframe without steering rack ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Sub-frame; Removing and installing subframe without steering rack .
- Detach drive shaft (both sides) from gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- Remove flange shaft (right-side) ⇒ [page 117](#) .
- Set up support bracket - 10 - 222 A- on top edges of body flanges (left and right) and on longitudinal member (left-side), as shown in illustration.
- Attach hooks of spindles -10 - 222 A /11- to engine lifting eyes.
- Take up weight of engine with spindles; do not lift.



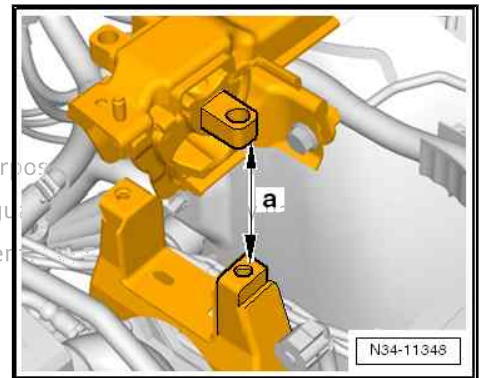


- Remove bolts -arrows- securing gearbox mounting.

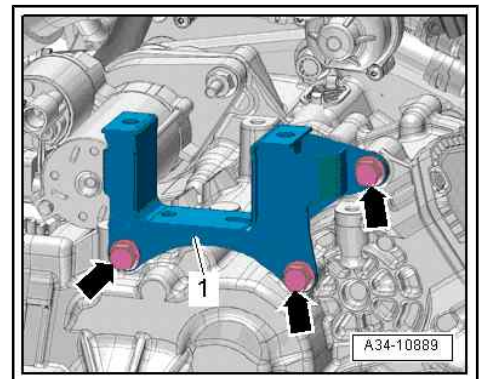


- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.
- Dimension -a- = 100 ... 110 mm

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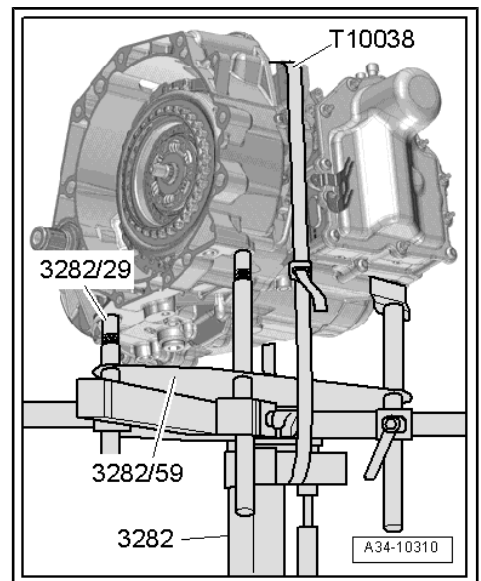


- Remove bolts -arrows- and detach gearbox support -1-.



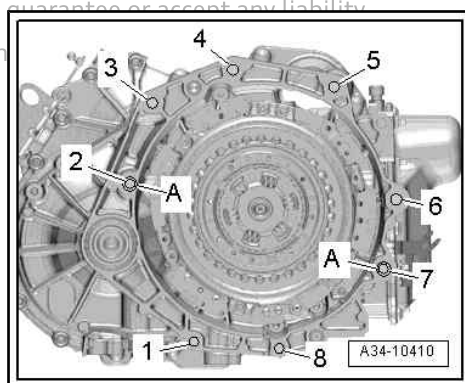
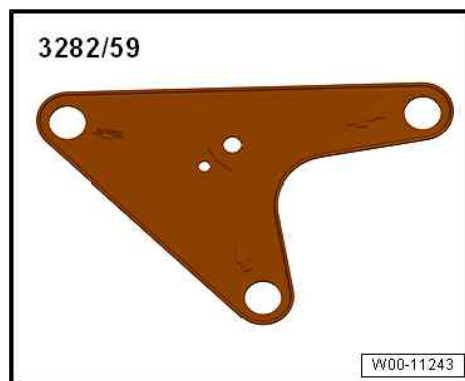
To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

- Set up gearbox support - 3282- on engine and gearbox jack .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .





- Secure support elements as illustrated on adjustment plate - 3282/59- .
- Place engine and gearbox jack underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.
- Align gearbox support - 3282- parallel with gearbox.
- Screw pin - 3282/29- into gearbox.
- Insert last support element in gearbox as illustrated.
- Use tensioning strap - T10038- to secure gearbox.
- Support gearbox by lifting from underneath with engine and gearbox jack.
- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.
- Press gearbox off dowel sleeves.
- Detach gearbox from engine.
- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.
- Carefully lower gearbox using engine and gearbox jack .
- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .



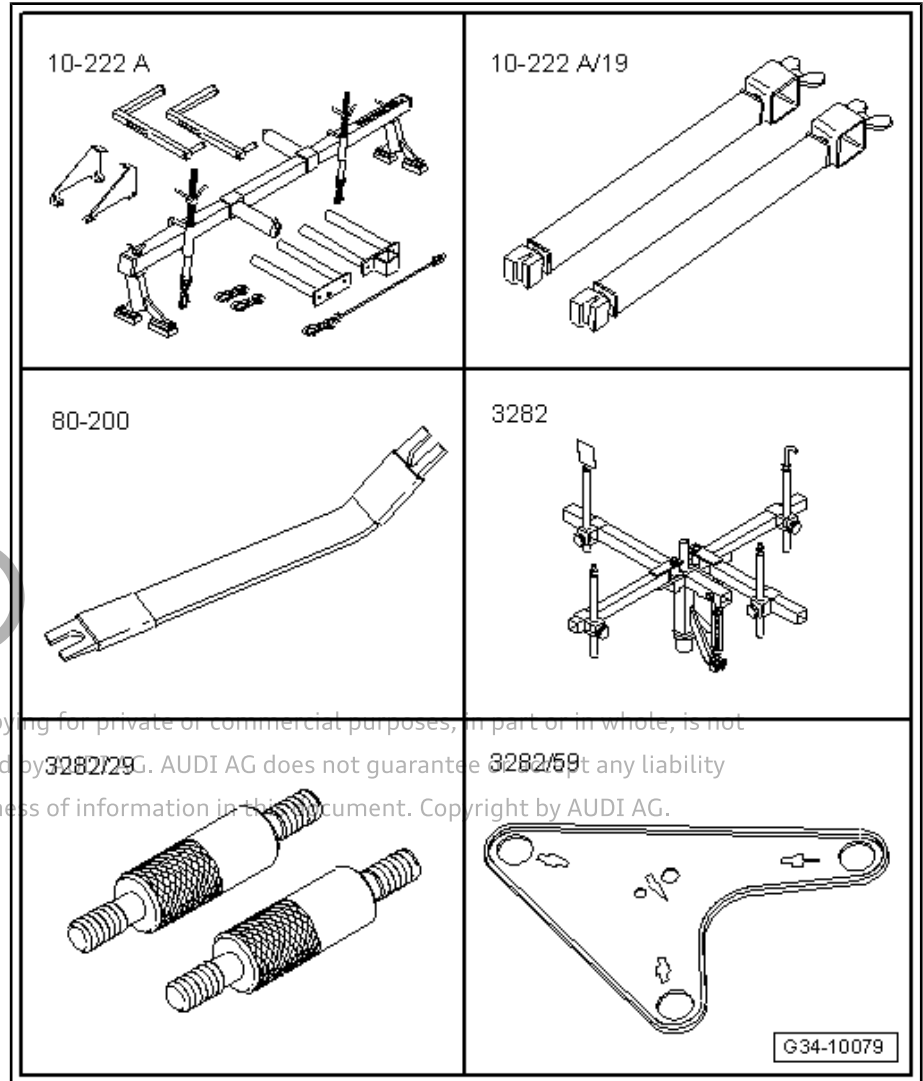
2.1.3 Removing gearbox - vehicles with 1.4 ltr. TFSI engine with supercharger



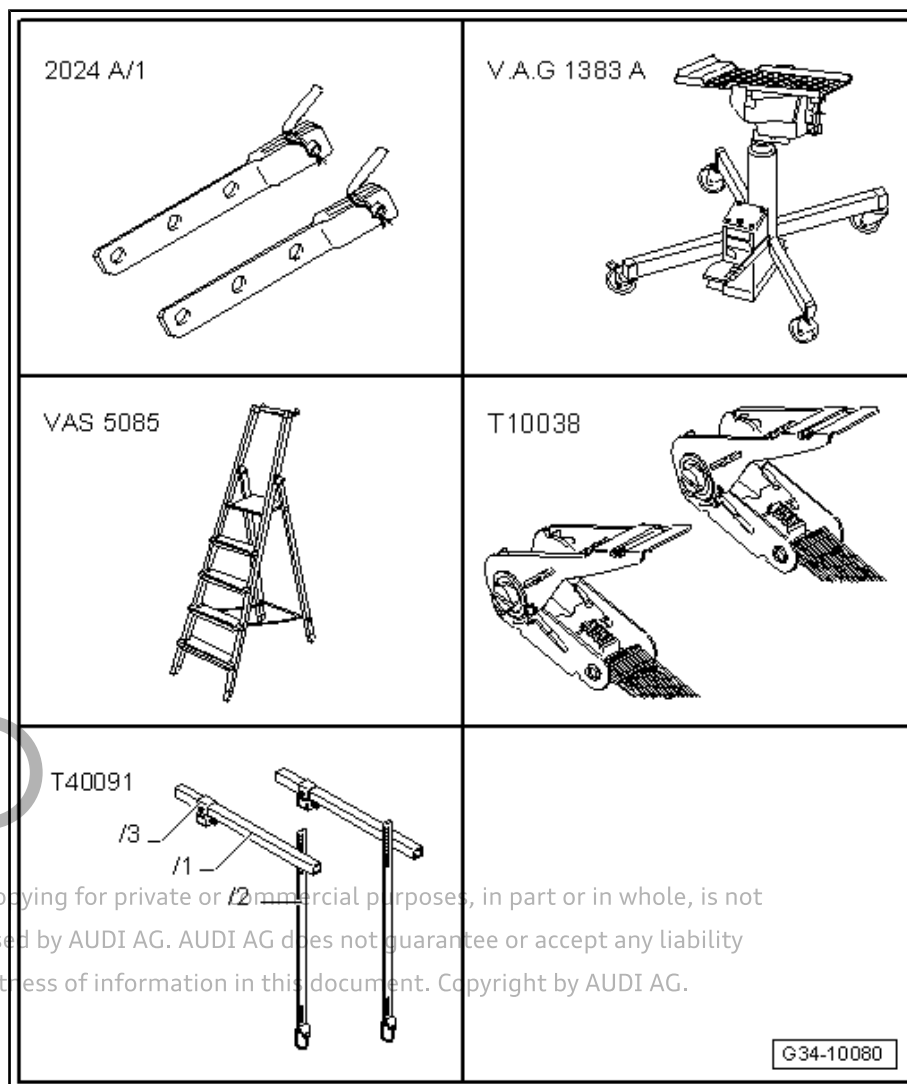
Special tools and workshop equipment required



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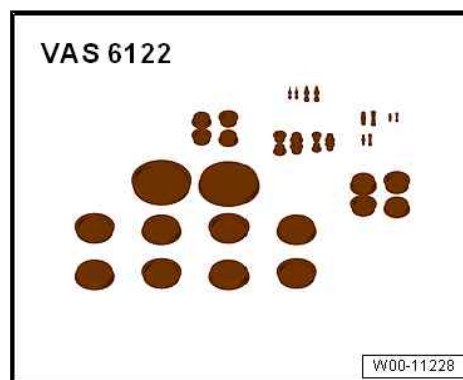


- ◆ Support bracket - 10 - 222 A-
- ◆ Adapters - 10 - 222 A /19-
- ◆ Removal lever - 80 - 200-
- ◆ Gearbox support - 3282-
- ◆ Pin - 3282/29-
- ◆ Adjustment plate - 3282/59-



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- ◆ Extension -2024 A /1-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Stepladder - VAS 5085-
- ◆ Tensioning strap - T10038-
- ◆ Engine support basic set - T40091-
- ◆ Engine bung set - VAS 6122-





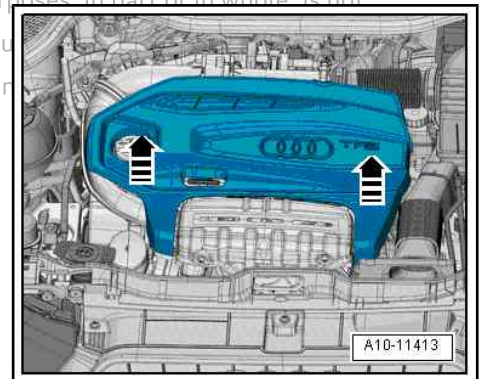
Procedure



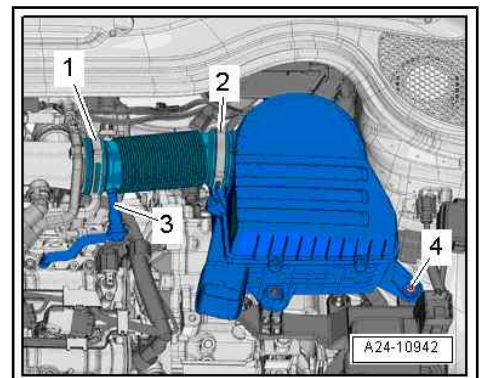
Note

- ◆ ⇒ *"5 Repair instructions", page 9*
- ◆ ⇒ *"5.2 Rules for cleanliness", page 10*
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ page 9.*
- ◆ *Fit all cable ties in the original positions when installing.*

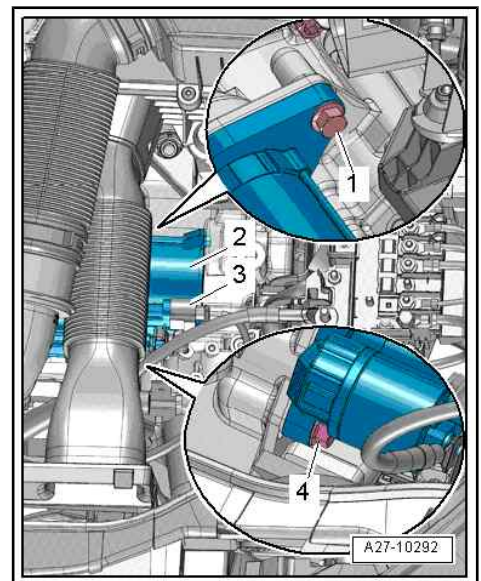
- Move selector lever to position "P".
- Detach engine cover panel (front) -arrows- and remove towards front.



- Remove air cleaner housing ⇒ Engine, mechanics; Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .

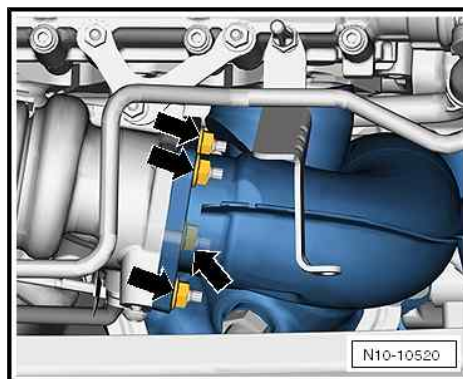


- Remove starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .

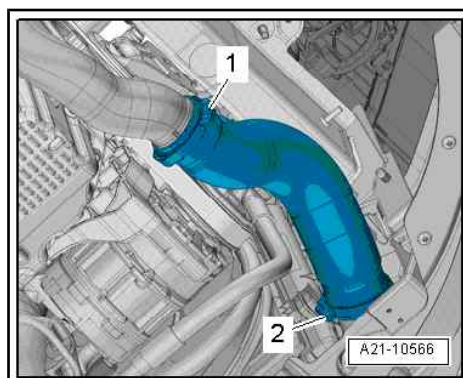




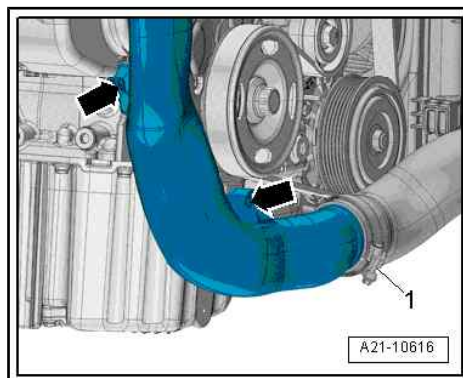
- Remove catalytic converter with centre silencer ⇒ Engine, mechanics; Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



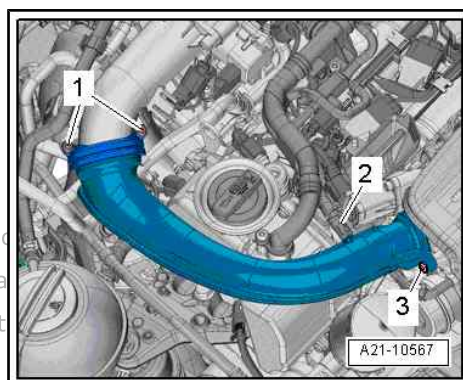
- Release hose clips -1 and 2- and remove air intake hose.
- Seal off open lines and connections with clean plugs from engine bung set - VAS 6122- .



- Remove bolts -arrows- and press air pipe (right-side) to side.



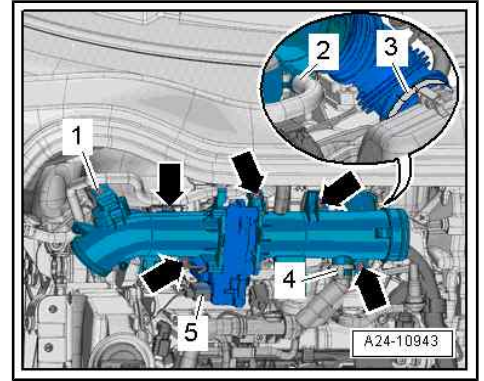
- Remove bolts -1, 3-.
- Release hose clip -2-, detach air pipe (top right) and remove air intake hose.



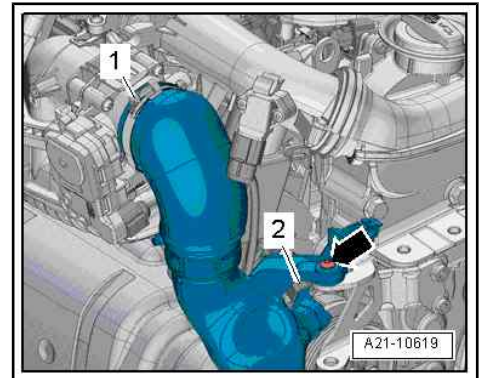
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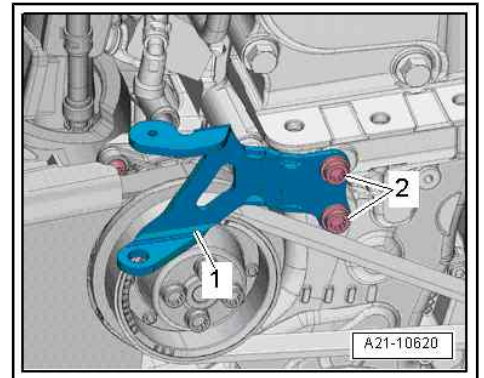
- Unplug electrical connectors:
- 1 - Intake air temperature sender 3 - G520-
- 5 - Regulating flap control unit - J808-
- Release hose clip -3- and move fuel hose -2- clear.
- Remove bolts -arrows- and detach intake connecting pipe.
- Press release tabs and detach crankcase breather hose -4-.



- Unplug electrical connector -2- and release hose clip -1-.
- Remove bolt -arrow-.



- Unscrew bolts -2- and detach bracket -1- and air pipe (right-side).



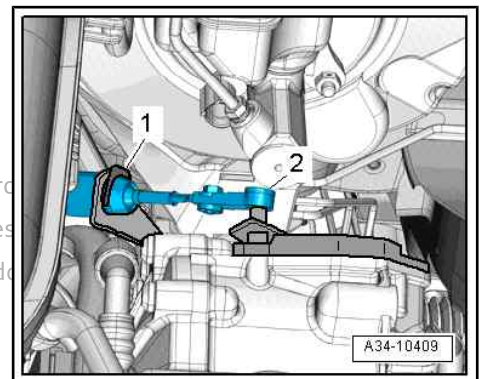
- Pry selector lever cable -2- off gearbox selector lever using removal lever -80-200-.
- Pull off retaining clip -1- for selector lever cable.
- Detach selector lever cable from cable support bracket and move clear to one side.



Note

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Do not to bend or kink selector lever cable.



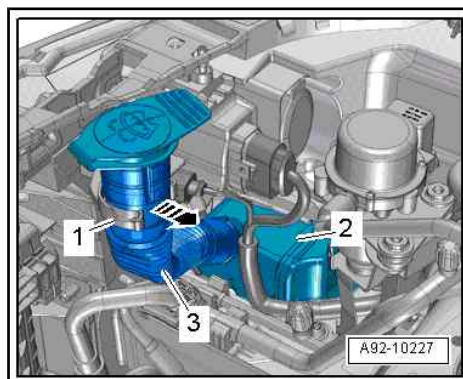
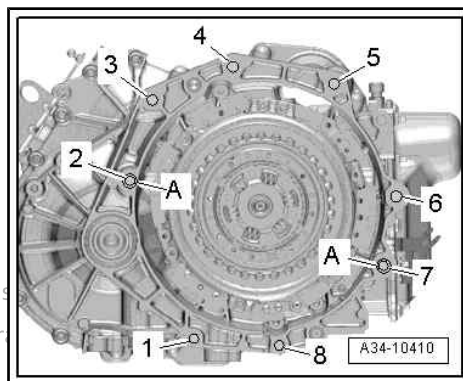


- Remove bolts -3, 4, 5- securing gearbox to engine.



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- Pull filler neck -3- for washer fluid reservoir out of retaining clip -1- -arrow- and move clear to one side.
- Remove wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .



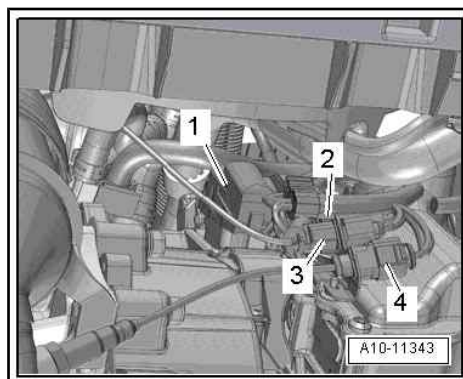
- Take electrical connector -2- out of bracket.



Caution

Risk of irreparable damage to gearbox components.

- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



- Touch vehicle earth with bare hands to eliminate any static charge.
- Unplug electrical connector -1- for mechatronic unit for dual clutch gearbox - J743- .
- Take electrical connectors -2- and -3- out of bracket and unplug.
- Remove all retainers from mechatronic unit for dual clutch gearbox - J743- .
- Move electrical wiring harness clear at gearbox.
- Remove subframe without steering rack ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Sub-frame; Removing and installing subframe without steering rack .
- Detach drive shaft (both sides) from gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- Remove flange shaft (right-side) ⇒ [page 117](#) .

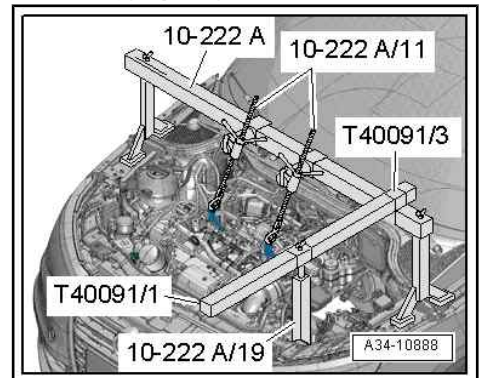
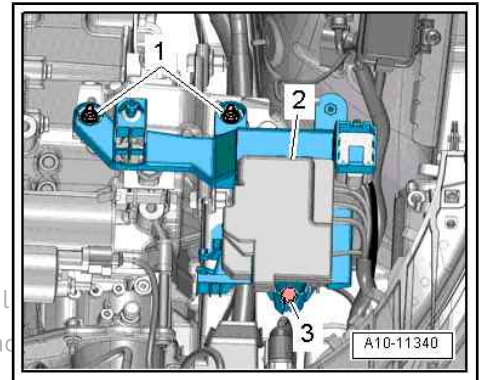


- Remove nut -1- and bolt -3- and press electronics box -2- clear to one side.

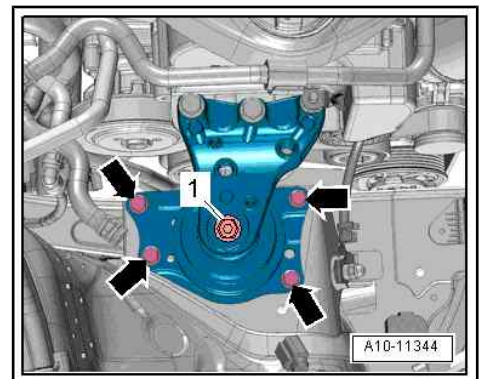


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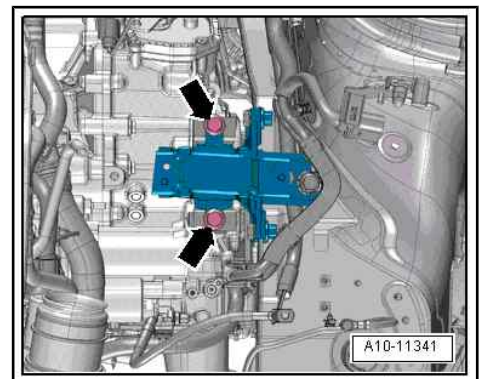
- Set up support bracket - 10 - 222 A- on top edges of body flanges (left and right) and on longitudinal member (left-side), as shown in illustration.
- Attach hooks of spindles -10 - 222 A /11- to engine lifting eyes.
- Take up weight of engine with spindles; do not lift.



- Remove engine mounting ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Removing and installing engine mountings .

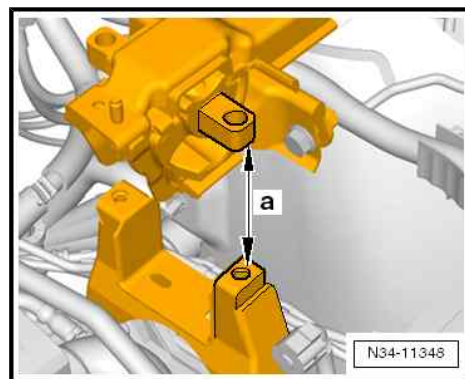


- Remove bolts -arrows- securing gearbox mounting.

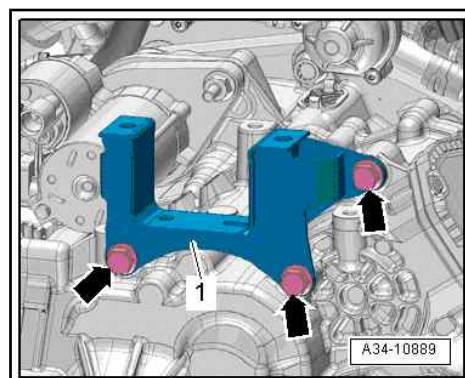




- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.
- Dimension -a- = 100 ... 110 mm



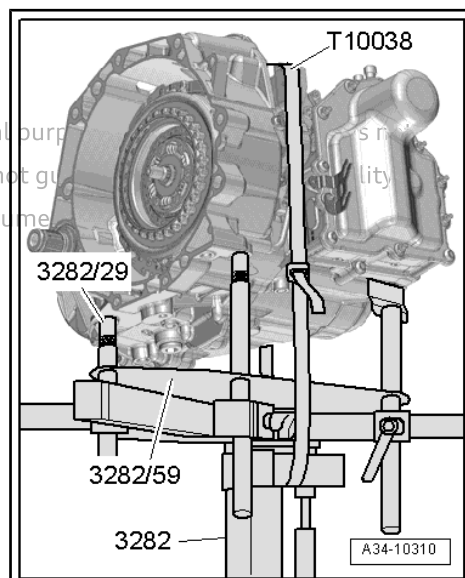
- Remove bolts -arrows- and detach gearbox support -1-.



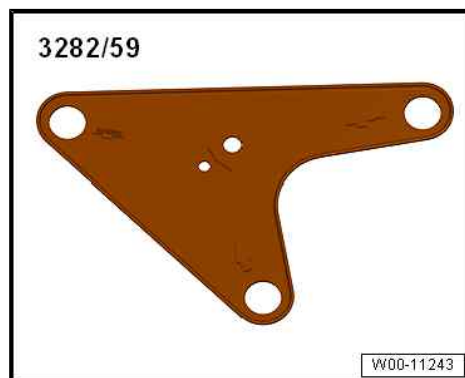
To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

- Set up gearbox support - 3282- on engine and gearbox jack .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .

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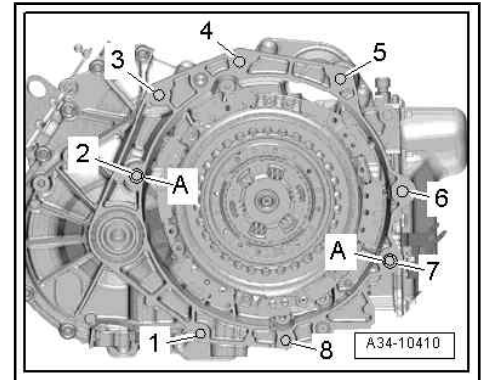


- Secure support elements as illustrated on adjustment plate - 3282/59- .
- Place engine and gearbox jack underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.
- Align gearbox support - 3282- parallel with gearbox.
- Screw pin - 3282/29- into gearbox.
- Insert last support element in gearbox as illustrated.
- Use tensioning strap - T10038- to secure gearbox.
- Support gearbox by lifting from underneath with engine and gearbox jack .





- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.
- Press gearbox off dowel sleeves.
- Detach gearbox from engine.
- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.
- Carefully lower gearbox using engine and gearbox jack .
- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .



2.1.4 Removing gearbox - vehicles with 1.8 ltr. TFSI engine

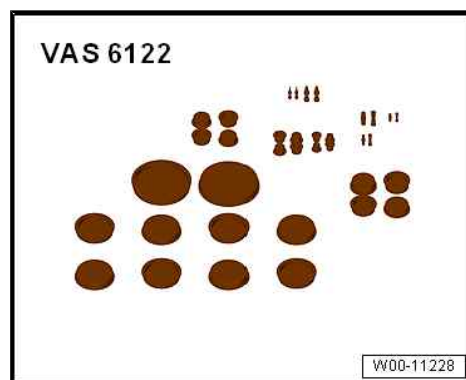
Special tools and workshop equipment required



- ◆ Removal lever - 80-200-
- ◆ Gearbox support - 3282-
- ◆ Pin - 3282/29-
- ◆ Adjustment plate - 3282/59-
- ◆ Engine and gearbox jack - VAS 6931-



- ◆ Tensioning strap - T10038-
- ◆ Engine bung set - VAS 6122-



- ◆ Stepladder (commercially available)

Procedure



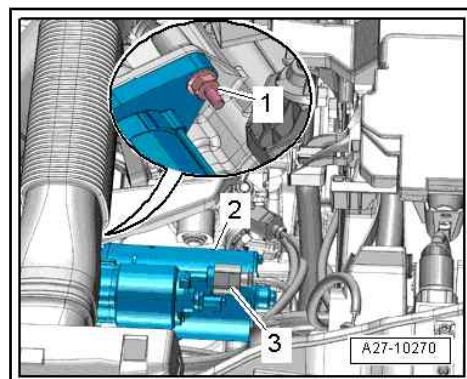
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- ◆ ⇒ ["5 Repair instructions", page 9](#)
- ◆ ⇒ ["5.2 Rules for cleanliness", page 10](#)
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ [page 9](#).*
- ◆ *Fit all cable ties in the original positions when installing.*
- Move selector lever to position "P".
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- Remove air cleaner housing ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Remove subframe with steering rack ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe with steering rack .
- Remove wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .
- Unplug electrical connector -3- for starter -2- (to do so, push retainer towards rear and press down release catch).



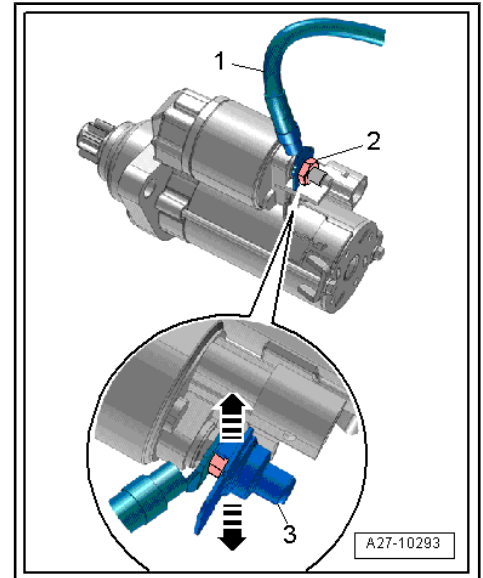
Note

Disregard -item 1-.





- Release retaining tabs -arrows- and remove cap -3-.
- Unscrew nut -2- and detach B+ wire -1-.

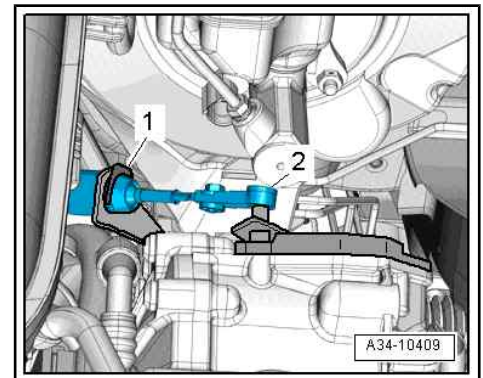


- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.
- Detach selector lever cable from cable support bracket and move clear to one side.

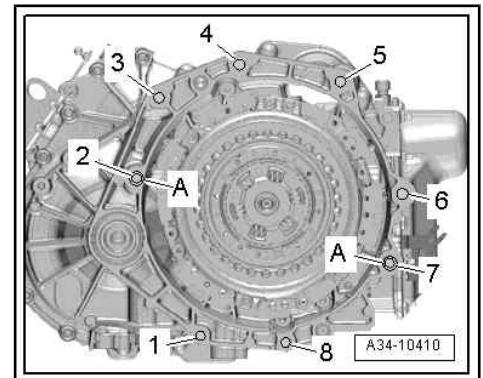


Note

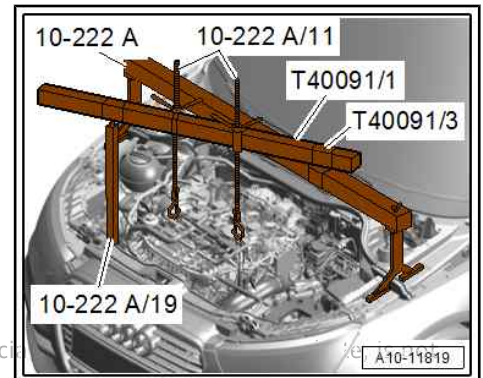
Do not to bend or kink selector lever cable.



- Remove bolts -3, 4, 5- securing gearbox to engine.



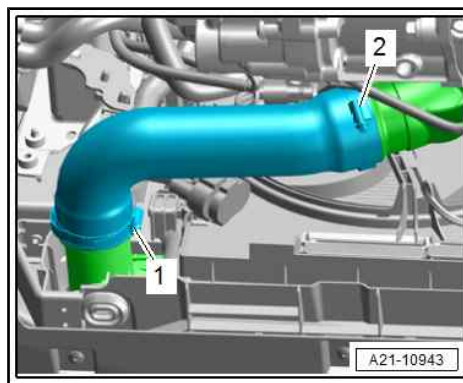
- Support engine in installation position ⇒ Rep. gr. 10 ; Assembly mountings; Supporting engine in installation position .



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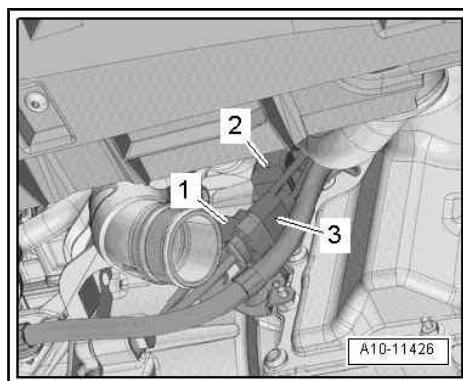
- Release hose clips -1 and 2- and disconnect air hose.
- Seal off open lines and connections with clean plugs from engine bung set - VAS 6122- .



Caution

Risk of irreparable damage to gearbox components.

- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



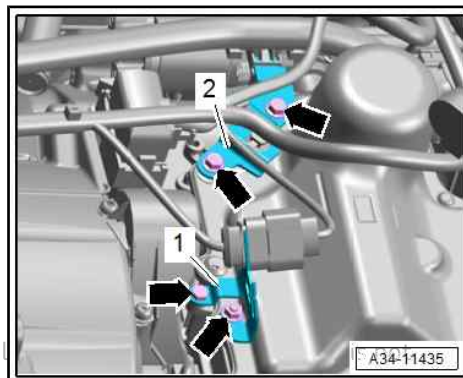
- Touch vehicle earth with bare hands to eliminate any static charge.
- Unplug electrical connector -2- for mechatronic unit for dual clutch gearbox - J743- .



Note

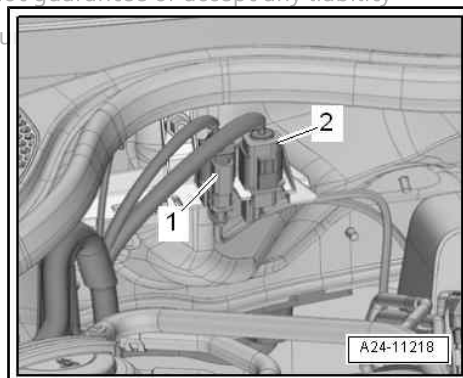
Disregard items -1 and 3-.

- Remove bolts and nuts -arrows- and push brackets -1 and 2- to one side.
- Move electrical wiring harness clear at gearbox.
- Detach drive shaft (both sides) from gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft.
- Remove flange shaft (right-side) ⇒ [page 117](#) .



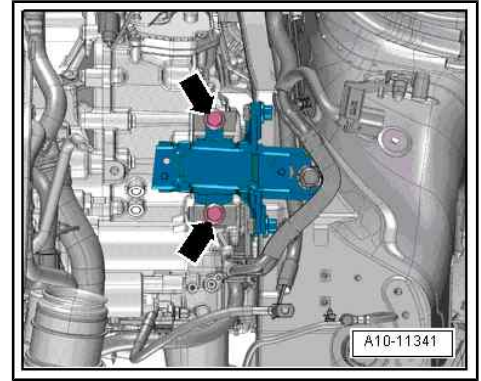
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- Move electrical wire -1- for Lambda probe after catalytic converter - G130- clear.

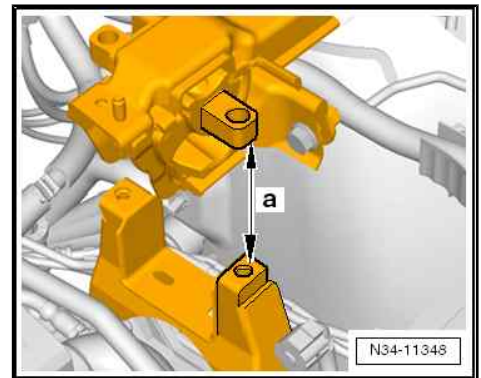




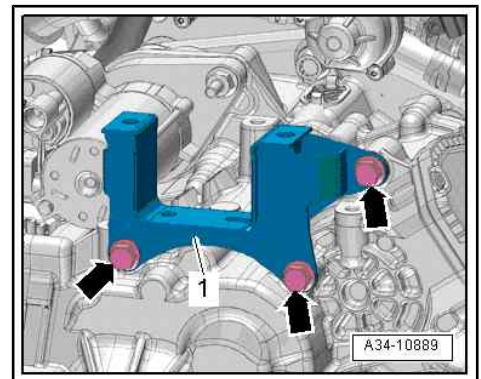
- Remove bolts -arrows- securing gearbox mounting.



- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.
- Dimension -a- = 55 mm

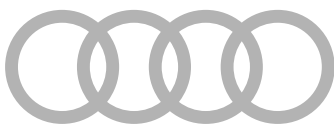
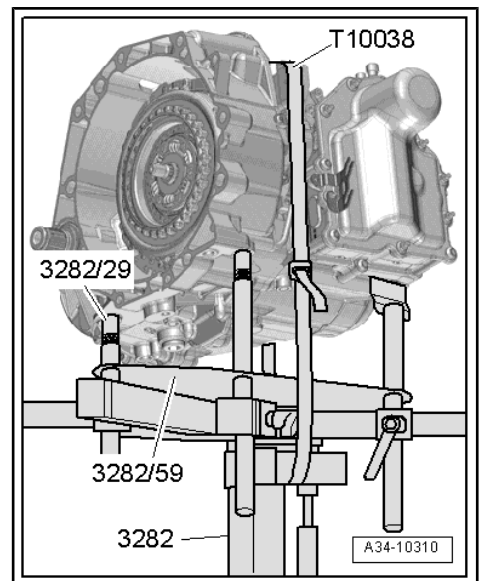


- Remove bolts -arrows- and detach gearbox support -1-.



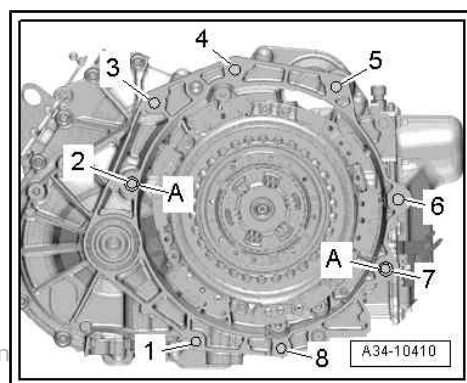
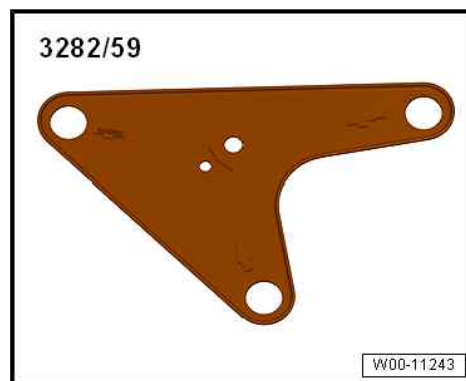
To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

- Set up gearbox support - 3282- on engine and gearbox jack .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .





- Secure support elements as illustrated on adjustment plate - 3282/59- .
- Place engine and gearbox jack underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.
- Align gearbox support - 3282- parallel with gearbox.
- Screw pin - 3282/29- into gearbox.
- Insert last support element in gearbox as illustrated.
- Use tensioning strap - T10038- to secure gearbox.
- Support gearbox by lifting from underneath with engine and gearbox jack .
- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.
- Press gearbox off dowel sleeves.
- Detach gearbox from engine.
- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.
- Carefully lower gearbox using engine and gearbox jack .
- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .



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2.1.5 Removing gearbox - vehicles with 1.0 ltr. TFSI engine

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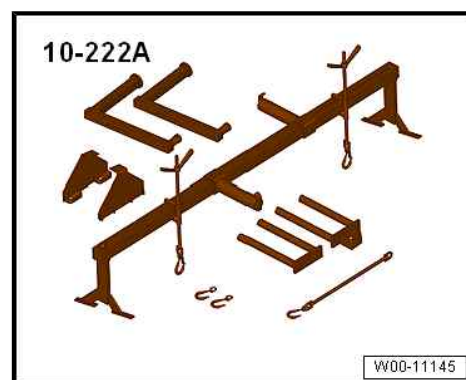
Special tools and workshop equipment required



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- ◆ Removal lever - 80-200-
- ◆ Gearbox support - 3282-
- ◆ Pin - 3282/29-
- ◆ Adjustment plate - 3282/59-
- ◆ Engine and gearbox jack - VAS 6931-
- ◆ Tensioning strap - T10038-
- ◆ Support bracket - 10-222A-





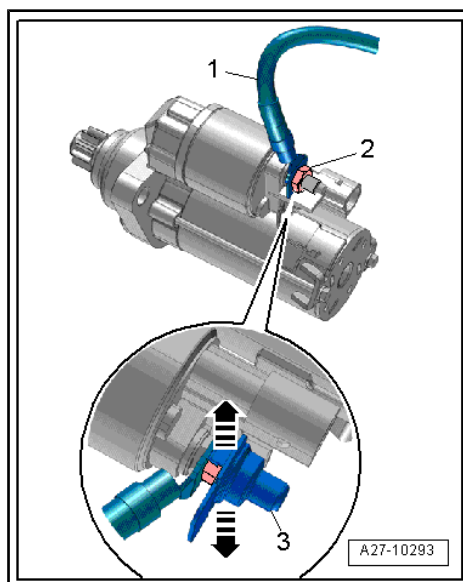
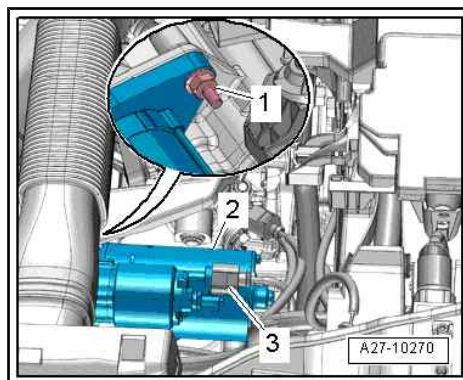
- ◆ -10-222A/8-
- ◆ -10-222A/17-
- ◆ Stepladder (commercially available)

Procedure



Note

- ◆ ⇒ *"5 Repair instructions", page 9*
- ◆ ⇒ *"5.2 Rules for cleanliness", page 10*
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ page 9.*
- ◆ *Fit all cable ties in the original positions when installing.*
- Move selector lever to position "P".
- Remove air cleaner housing ⇒ Engine, mechanics; Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Remove battery tray ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery tray .
- Unplug electrical connector -3- for starter -2- (to do so, push retainer towards rear and press down release catch).
- Release retaining tabs -arrows- and remove cap -3-.
- Unscrew nut -2- and detach B+ wire -1-.
- Remove wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .





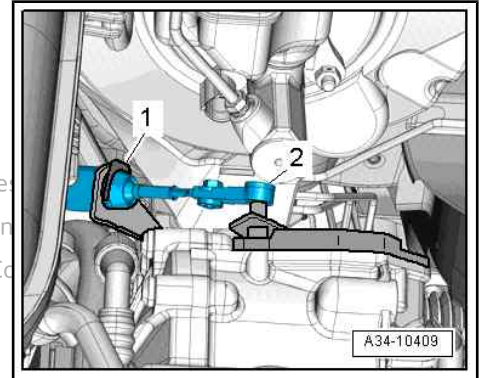
- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.
- Detach selector lever cable from cable support bracket and move clear to one side.

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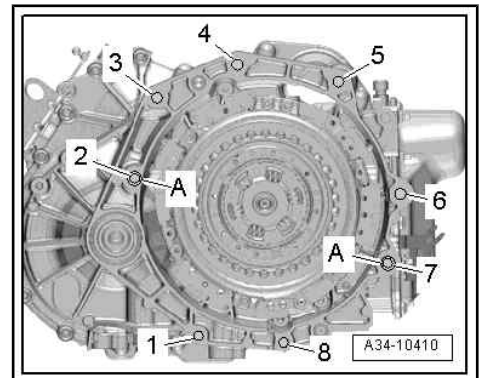


Note

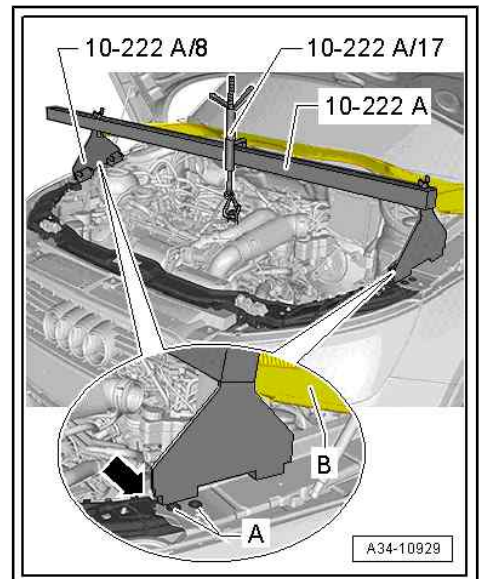
Do not to bend or kink selector lever cable.



- Remove bolts -3, 4, 5- securing gearbox to engine.



- Support engine in installation position ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Supporting engine in installation position .
- Seal off open lines and connections with clean plugs from engine bung set - VAS 6122- .





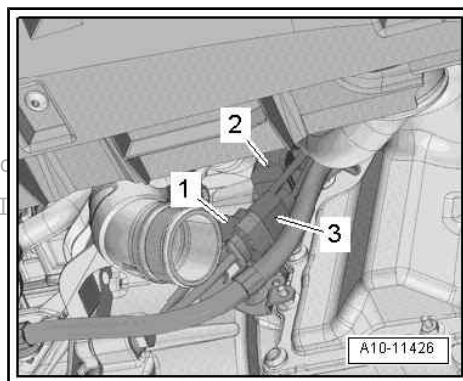
- Unplug electrical connector -2- for mechatronic unit for dual clutch gearbox - J743- .



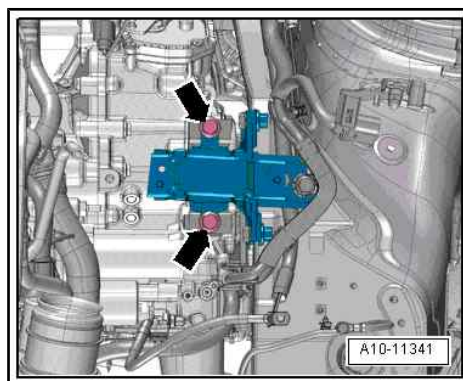
Caution

Risk of irreparable damage to gearbox components.

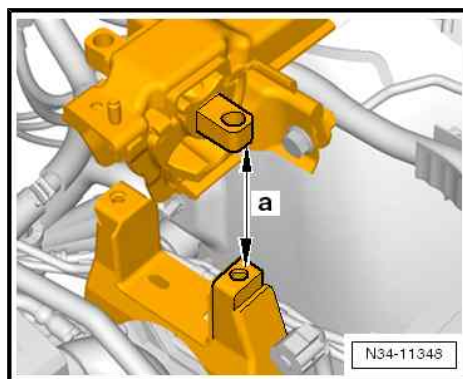
- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



- Move electrical wiring harness clear at gearbox.
- Remove subframe without steering rack ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Sub-frame; Removing and installing subframe without steering rack .
- Detach drive shaft (both sides) from gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- Remove flange shaft (right-side) ⇒ [page 117](#) .
- Remove bolts -arrows- securing gearbox mounting.

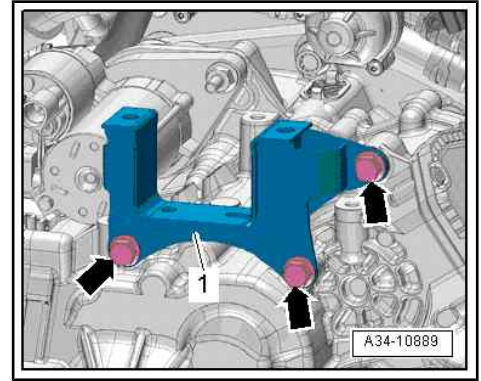


- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.
- Dimension -a- = 100 ... 110 mm



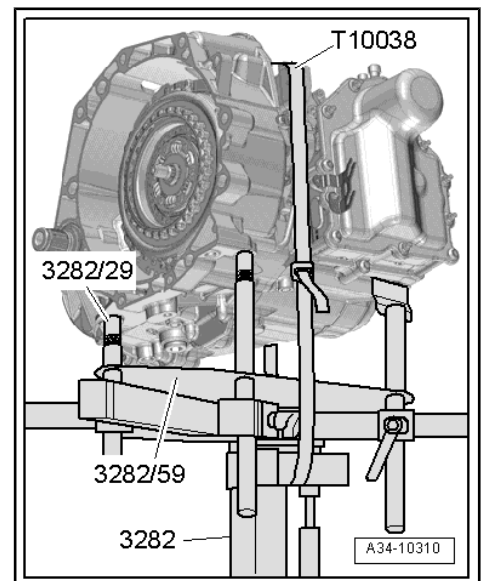


- Remove bolts -arrows- and detach gearbox support -1-.

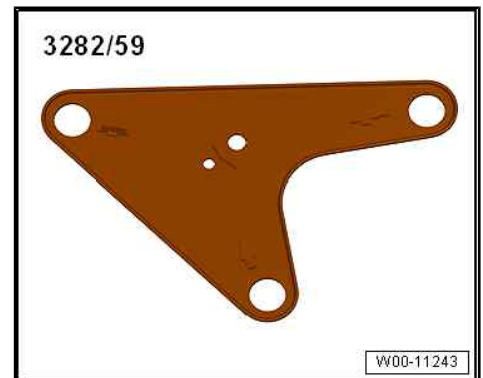


To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

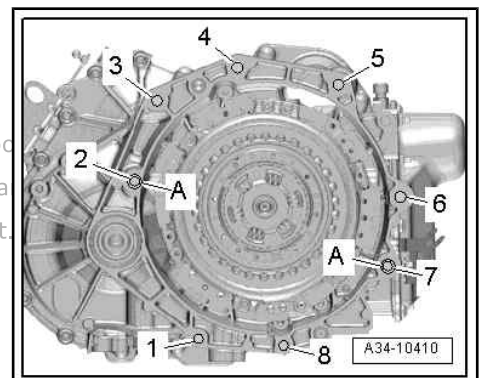
- Set up gearbox support - 3282- on engine and gearbox jack .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .



- Secure support elements as illustrated on adjustment plate - 3282/59- .
- Place engine and gearbox jack underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.
- Align gearbox support - 3282- parallel with gearbox.
- Screw pin - 3282/29- into gearbox.
- Insert last support element in gearbox as illustrated.
- Use tensioning strap - T10038- to secure gearbox.
- Support gearbox by lifting from underneath with engine and gearbox jack .



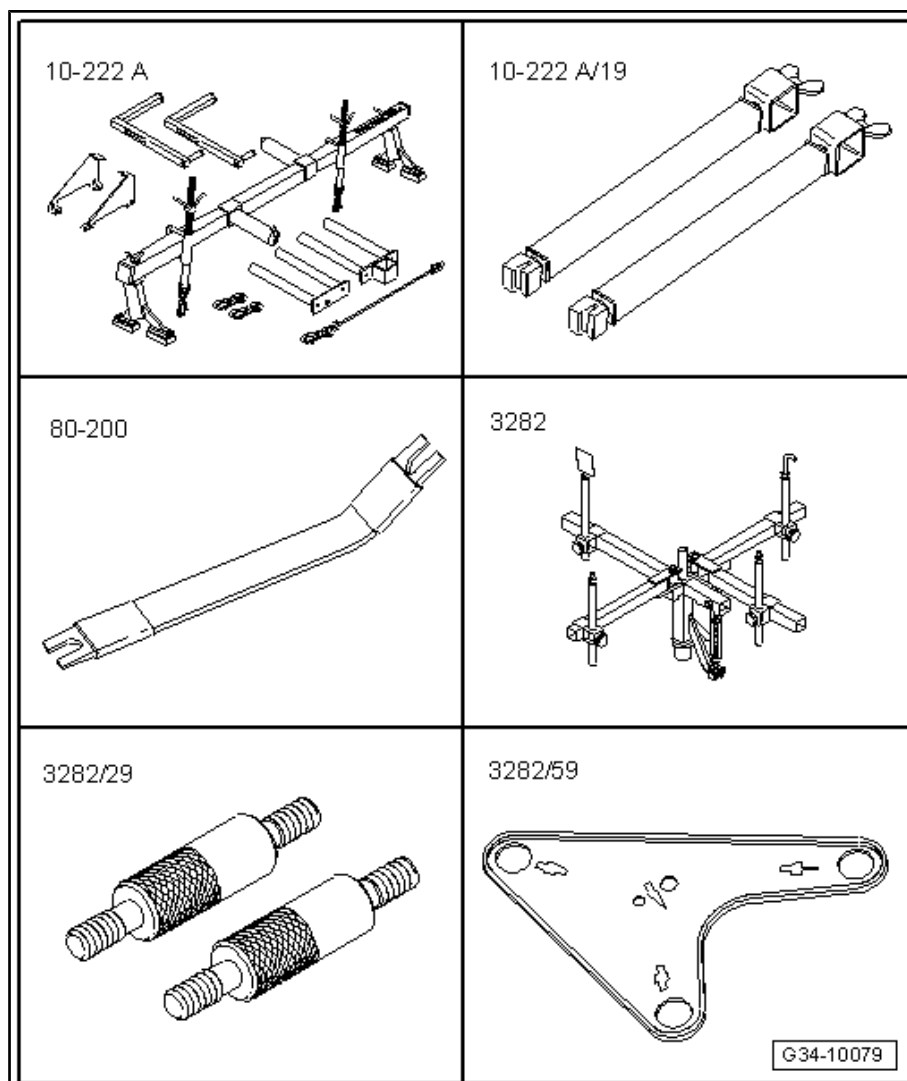
- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.
- Press gearbox off dowel sleeves.
- Detach gearbox from engine.
- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.
- Carefully lower gearbox using engine and gearbox jack .
- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .





2.1.6 Removing gearbox - vehicles with 1.6 ltr. TDI engine (EA189)

Special tools and workshop equipment required



◆ Support bracket - 10-222A-

◆ Adapters - 10-222A/19-

◆ Removal lever - 80-200-

◆ Gearbox support - 3282-

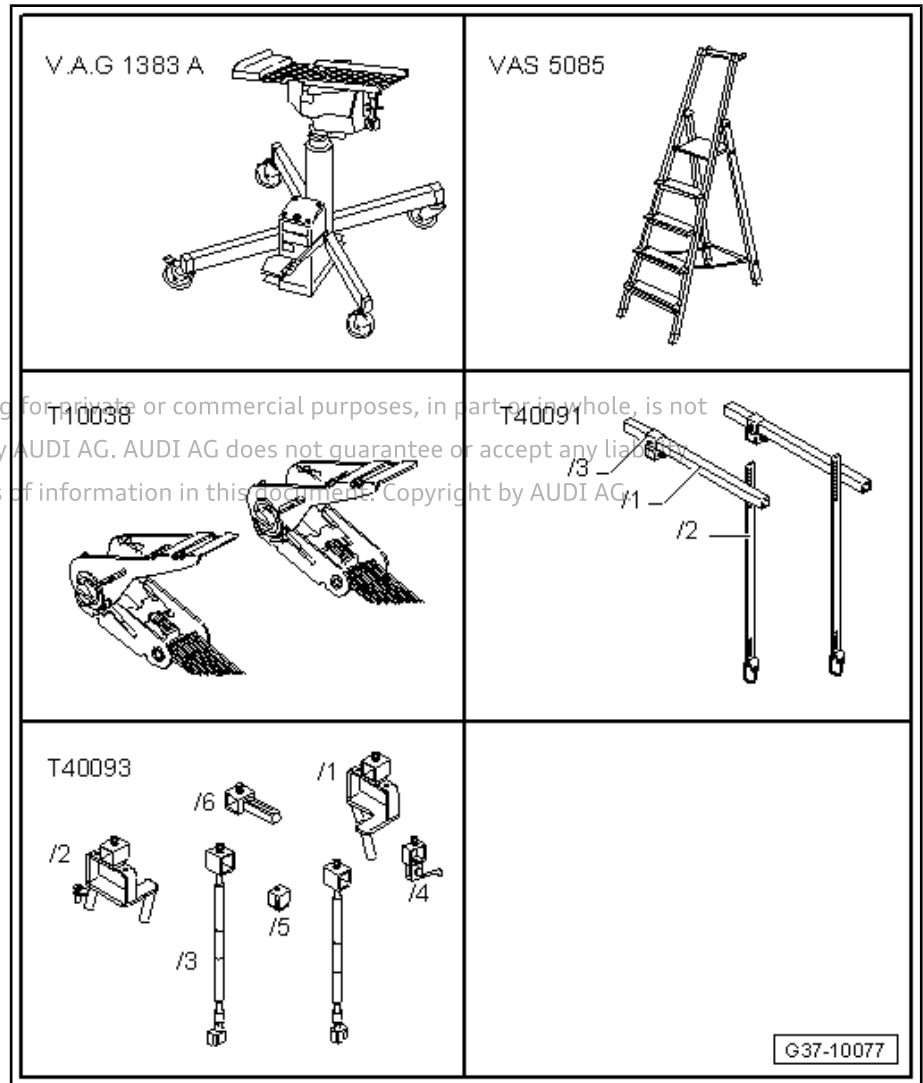
◆ Pin - 3282/29-

◆ Adjustment plate - 3282/59-

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- ◆ Engine/gearbox jack - VAS 6931- or -V.A.G 1383 A-
- ◆ Stepladder (commercially available) or -VAS 5085-
- ◆ Tensioning strap - T10038-
- ◆ Engine support (basic set) - T40091-
- ◆ Engine support bracket (supplementary set) - T40093-

Procedure

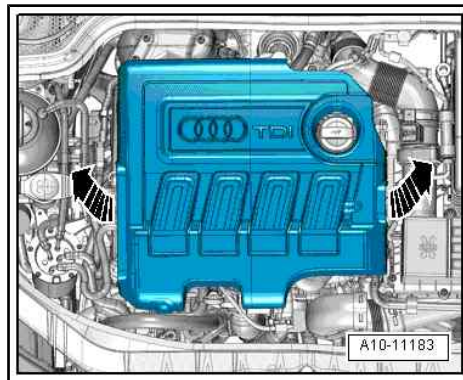


Note

- ◆ ⇒ *"5 Repair instructions", page 9*
- ◆ ⇒ *"5.2 Rules for cleanliness", page 10*
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ page 9.*
- ◆ *Fit all cable ties in the original positions when installing.*
- Move selector lever to position "P".

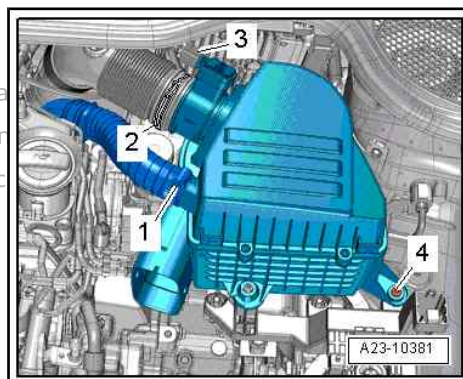


- Remove engine cover panel -arrows-.

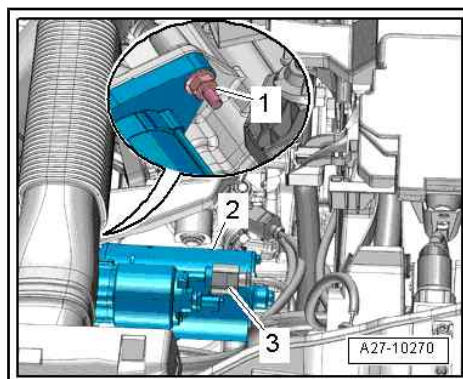


- Remove air cleaner housing ⇒ Engine, mechanics; Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing .

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- Remove starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .
- Remove subframe without steering rack ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Sub-frame; Removing and installing subframe without steering rack .
- Detach drive shaft (both sides) from gearbox and tie up to rear ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- Remove flange shaft (right-side) ⇒ [page 117](#) .



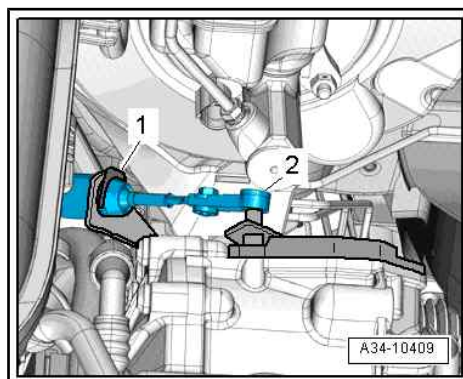
- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.



Caution

Risk of damage to selector lever cable.

- ◆ Guide selector lever cable out of cable support bracket when lowering engine/gearbox assembly.

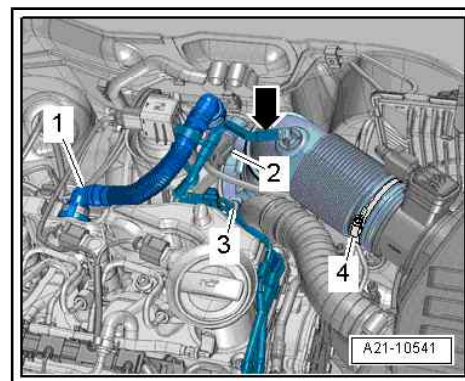


Note

Do not to bend or kink selector lever cable.



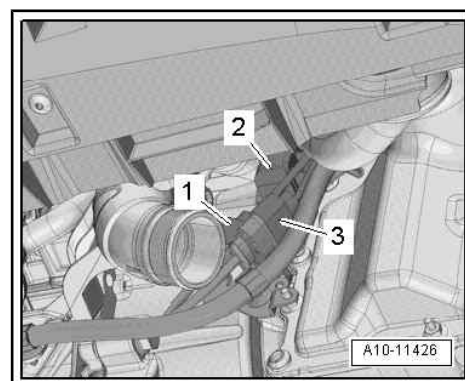
- Version for cold countries: unplug electrical connector -2-.
- Press release tabs and detach crankcase breather hose -1-.
- Detach vacuum hose -arrow-.
- Remove bolt -3-, swivel air pipe and connection to rear and detach from turbocharger.



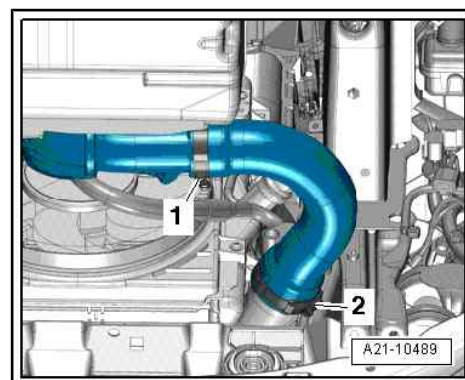
Caution

Risk of irreparable damage to gearbox components.

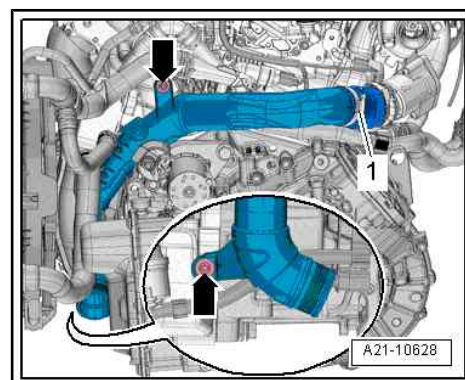
- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



- Touch vehicle earth with bare hands to eliminate any static charge.
- Unplug electrical connector -3- for mechatronic unit for dual clutch gearbox - J743-.
- Take electrical connectors -1- and -3- out of bracket.
- Remove all retainers from mechatronic unit for dual clutch gearbox - J743-.
- Move electrical wiring harness clear at gearbox.
- Release hose clips -1- and -2- and remove air hose.
- Seal off open lines and connections with clean plugs from engine bung set - VAS 6122-.

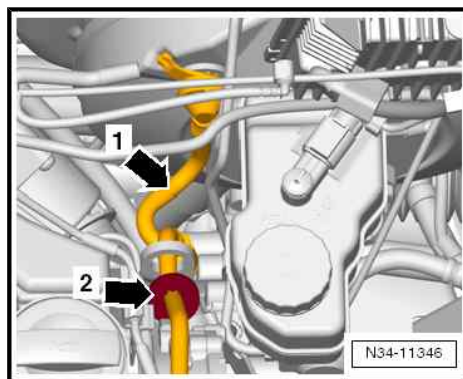


- Remove bolts -arrows-.
- Move electrical wiring and hoses clear at air pipe (left-side) using removal lever - 80-200-.
- Release hose clip -1- and detach air pipe (left-side).





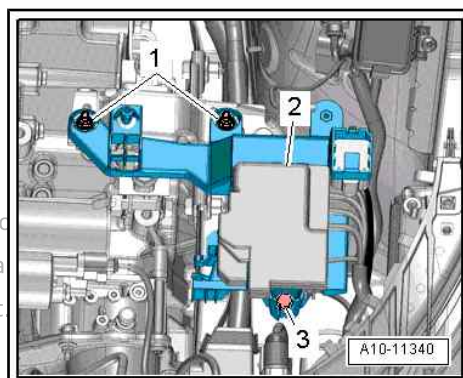
- Remove vacuum hose -arrow 1- (leading to brake servo) together with grommet -arrow 2-.



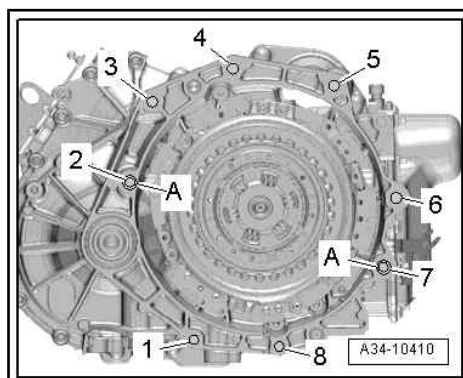
- Remove nuts -1- and bolt -3- and press electronics box -2- to one side.



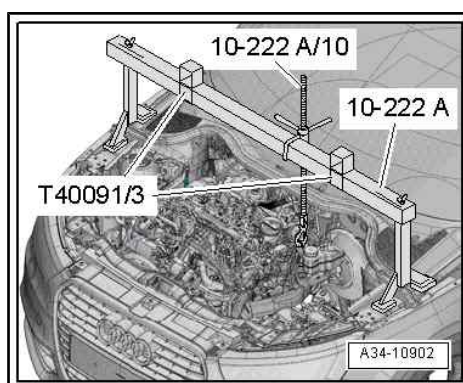
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- Remove bolts -3, 4, 5- securing gearbox to engine.

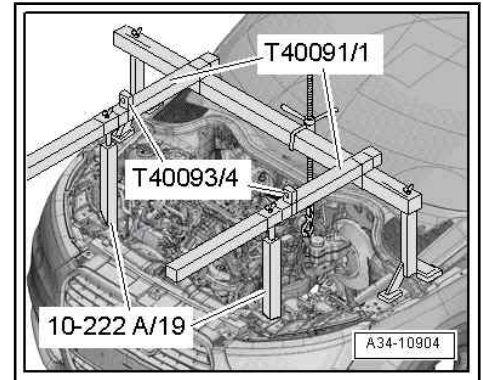


- Set up support bracket - 10 - 222 A- on wing mounting flanges, as shown in illustration.
- Engage hook of -10 - 222 A /10- in engine lifting eye (rear left).

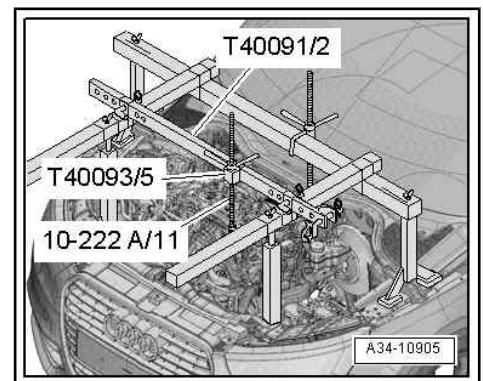




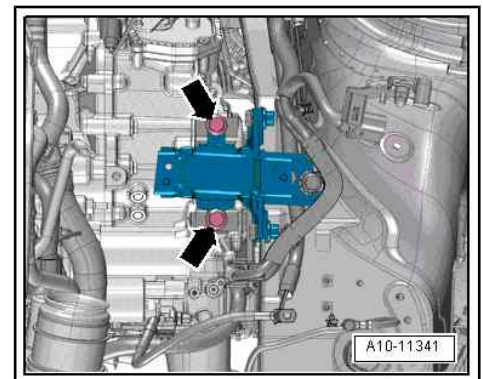
- Attach remaining parts of support bracket as shown in illustration.



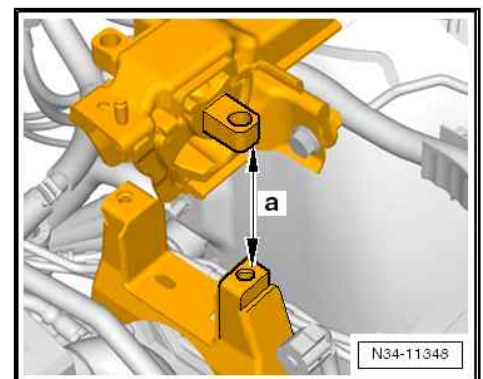
- Attach remaining parts of support bracket as shown in illustration.
- Engage hook of spindle - 10 - 222 A /11- in engine lifting eye (front left).
- Pre-tension hook - 10 - 222 A /10- and spindle - 10 - 222 A / 11- .



- Remove bolts -arrows- securing gearbox mounting.
- Remove bolts -arrows- and detach pendulum support ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Removing and installing pendulum support .



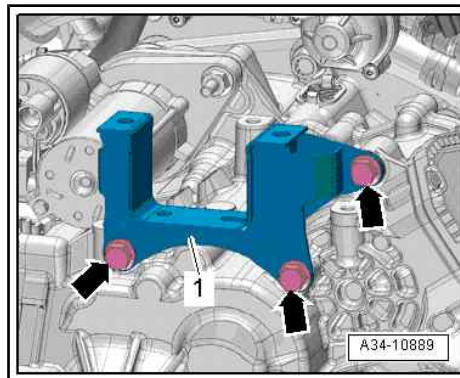
- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.
- Dimension -a- = 100 ... 110 mm



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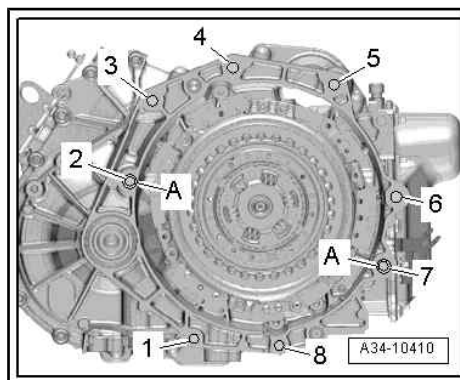
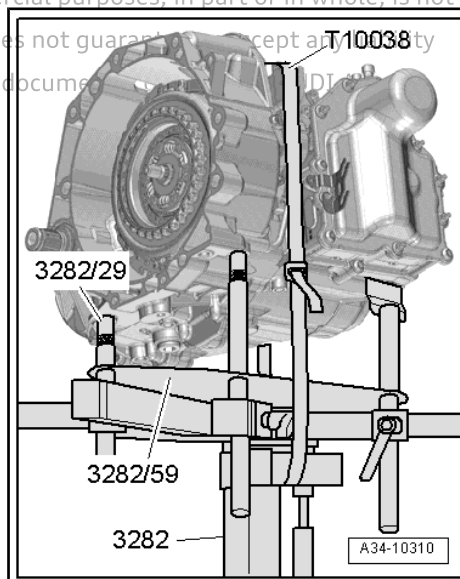


- Remove bolts -arrows- and detach gearbox support -1-.



To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

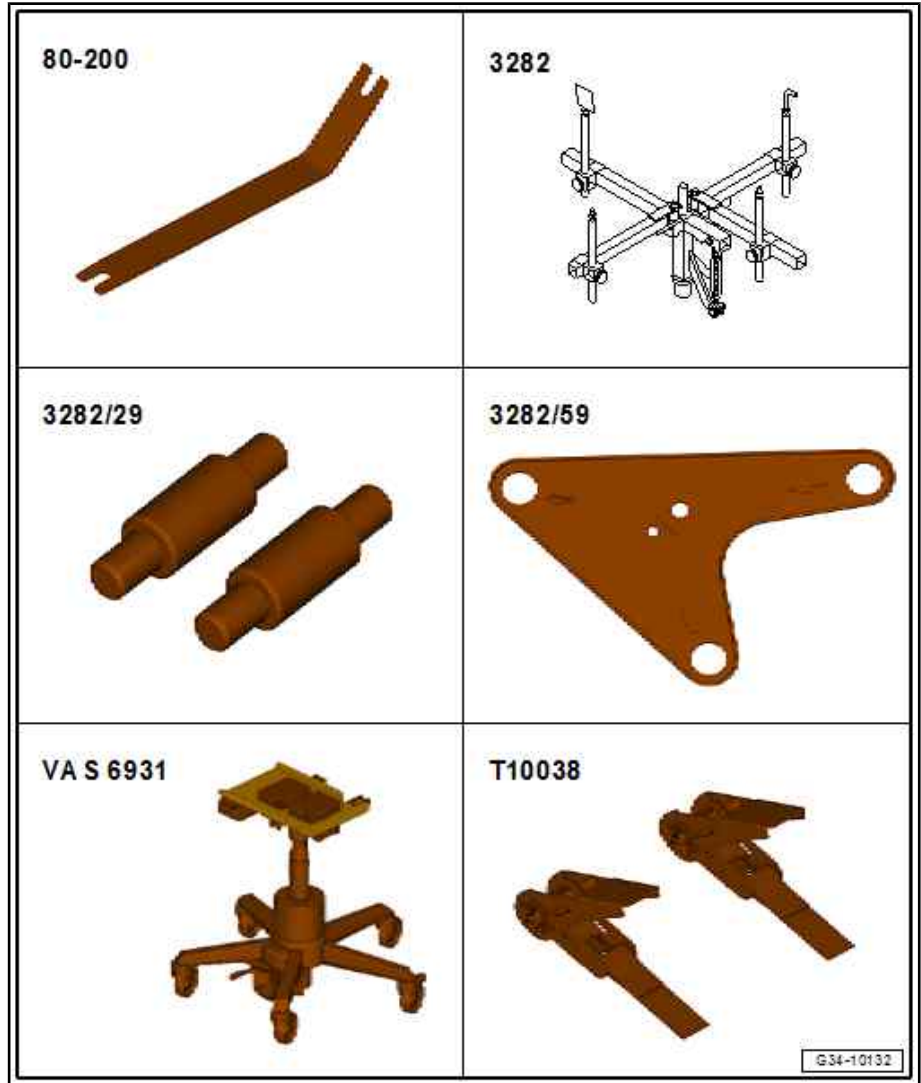
- Set up gearbox support - 3282- on engine and gearbox jack .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .
- Secure support elements as illustrated on adjustment plate - 3282/59- .
- Place engine and gearbox jack underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.
- Align gearbox support - 3282- parallel with gearbox.
- Screw pin - 3282/29- into gearbox.
- Insert last support element in gearbox as illustrated.
- Use tensioning strap - T10038- to secure gearbox.
- Support gearbox by lifting from underneath with engine and gearbox jack .
- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.
- Press gearbox off dowel sleeves.
- Detach gearbox from engine.
- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.
- Carefully lower gearbox using engine and gearbox jack .
- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .



2.1.7 Removing gearbox - vehicles with 1.4 ltr./1.6 ltr. TDI engine (EA288)



Special tools and workshop equipment required



- ◆ Removal lever - 80-200-
- ◆ Gearbox support - 3282-
- ◆ Pin - 3282/29-
- ◆ Adjustment plate - 3282/59-
- ◆ Engine and gearbox jack - VAS 6931-
- ◆ Tensioning strap - T10038-
- ◆ Stepladder (commercially available)

Procedure



Note

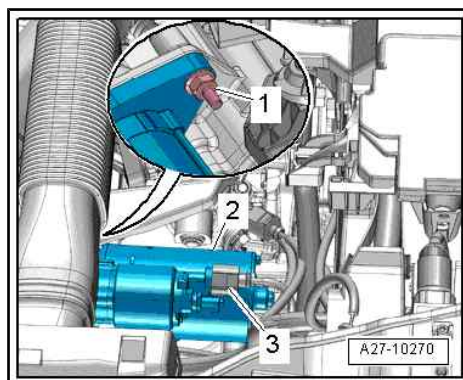
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- ◆ ⇒ "5 Repair instructions", page 9 authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- ◆ ⇒ "5.2 Rules for cleanliness", page 10 with respect to the correctness of information in this document. Copyright by AUDI AG.
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ page 9.*
- ◆ *Fit all cable ties in the original positions when installing.*

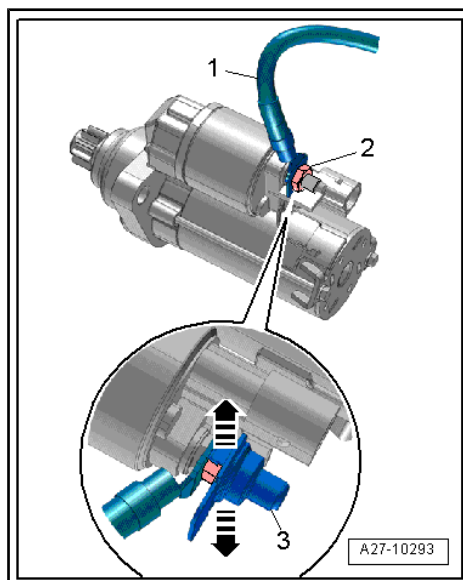
- Move selector lever to position "P".



- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- Remove air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing .
- Remove vibration damper ⇒ Rep. gr. 13 ; Cylinder block (pulley end); Removing and installing vibration damper .
- Detach air conditioner compressor from bracket and tie up ⇒ Heating, air conditioning; Rep. gr. 87 ; Air conditioner compressor; Detaching and attaching air conditioner compressor at bracket .
- Remove tensioner for poly V-belt ⇒ Rep. gr. 13 ; Cylinder block (pulley end); Removing and installing tensioner for poly V-belt .
- Remove subframe with steering rack ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe with steering rack .
- Unplug electrical connector -3- for starter -2- (to do so, push retainer towards rear and press down release catch).



- Release retaining tabs -arrows- and remove cap -3-.
- Unscrew nut -2- and detach B+ wire -1-.



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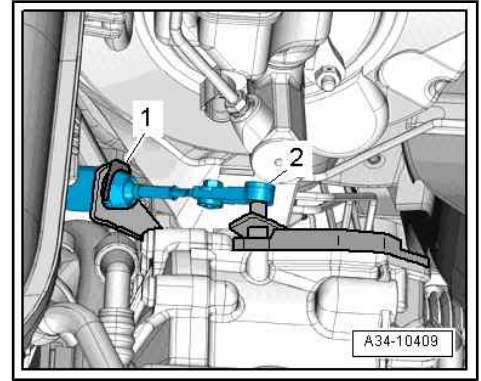
- Pry selector lever cable -2- off gearbox selector lever using removal lever - 80-200- .
- Pull off retaining clip -1- for selector lever cable.



Caution

Risk of damage to selector lever cable.

- ◆ **Guide selector lever cable out of cable support bracket when lowering engine/gearbox assembly.**



Note

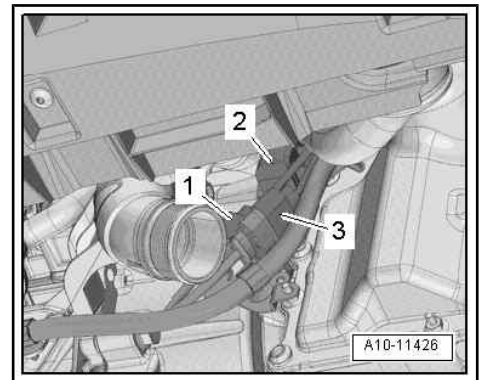
Do not to bend or kink selector lever cable.



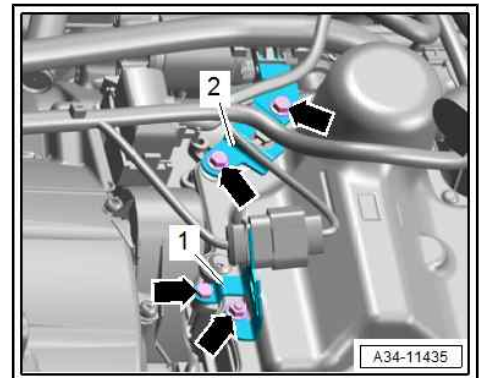
Caution

Risk of irreparable damage to gearbox components.

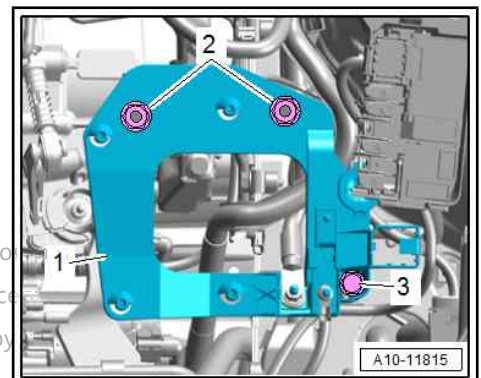
- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



- Touch vehicle earth with bare hands to eliminate any static charge.
- Unplug electrical connector -1- for mechatronic unit for dual clutch gearbox - J743- .
- Remove bolts and nuts -arrows- and push brackets -1 and 2- to one side.
- Move electrical wiring harness clear at gearbox.



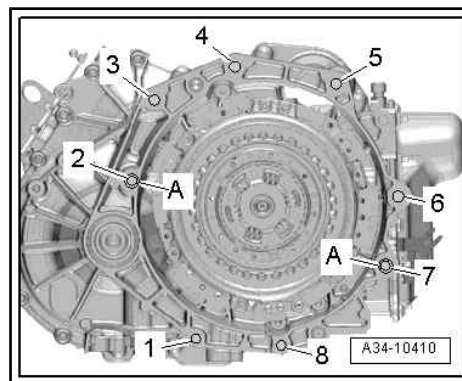
- Move electrical wiring clear.
- Unscrew nuts -2- and bolt -3-.
- Push mounting -1- for jump start terminal and air cleaner housing slightly to one side.



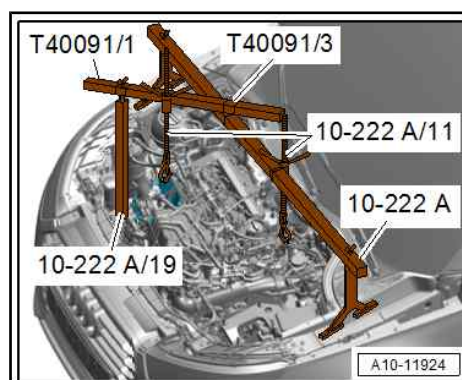
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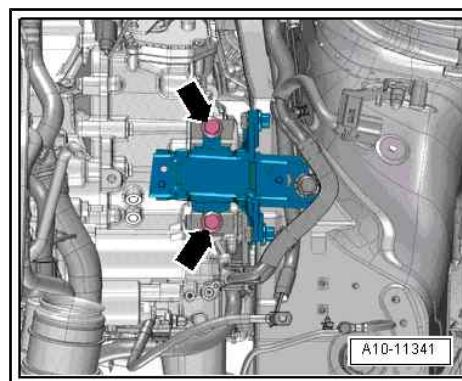
- Remove bolts -3, 5- securing gearbox to engine.



- Support engine in installation position ⇒ Rep. gr. 10 ; Assembly mountings; Supporting engine in installation position .

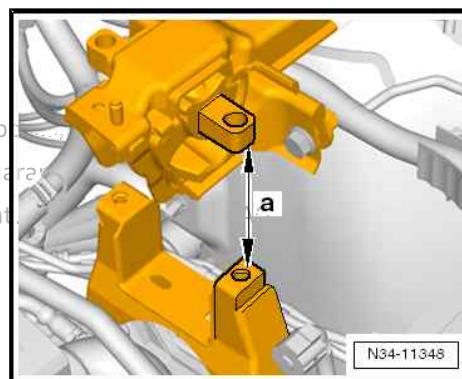


- Remove bolts -arrows- securing gearbox mounting.



- Lower engine/gearbox assembly using spindles of support bracket - 10 - 222 A- until distance -a- is obtained between gearbox housing and gearbox mounting.

- Dimension -a- = 100, 110 mm



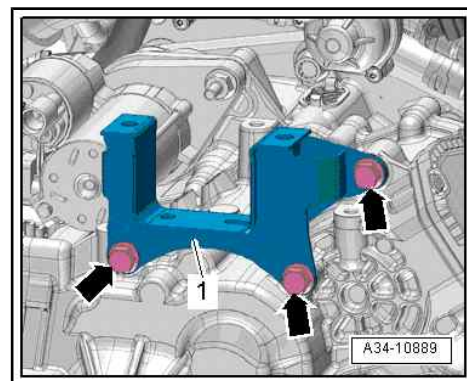


- Remove bolts -arrows- and detach gearbox support -1-.
- Detach drive shaft (both sides) from gearbox and tie up to rear
⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft;
Removing and installing drive shaft .
- Remove flange shaft (right-side) ⇒ [page 117](#) .



Note

Take care not to damage the surface coating of the drive shaft.

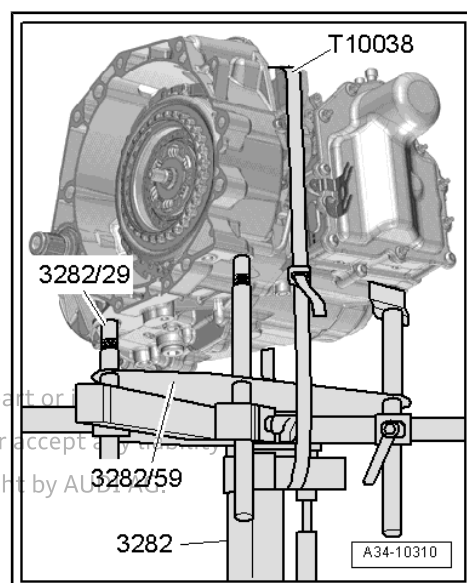


To remove dual clutch gearbox 0AM, set up gearbox support - 3282- with adjustment plate - 3282/59- .

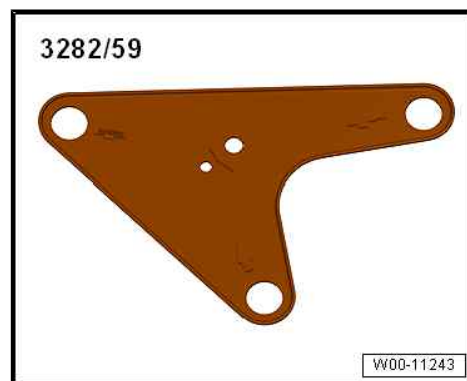
- Set up gearbox support - 3282- on engine and gearbox jack - VAS 6931- .
- Align arms of gearbox support according to holes in adjustment plate - 3282/59- .



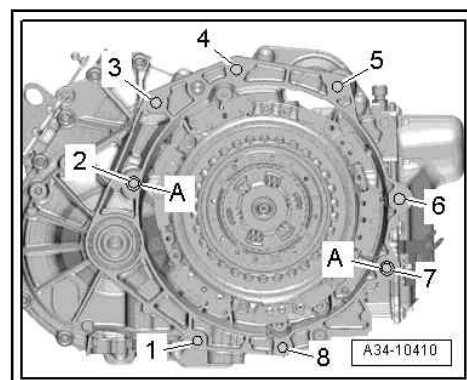
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- Secure support elements as illustrated on adjustment plate - 3282/59- .
- Place engine and gearbox jack - VAS 6931- underneath vehicle. The -arrow symbol- on the adjustment plate - 3282/59- points in the direction of travel.
- Align gearbox support - 3282- parallel with gearbox.
- Screw pin - 3282/29- into gearbox.
- Insert last support element in gearbox as illustrated.
- Use tensioning strap - T10038- to secure gearbox.
- Support gearbox by lifting from underneath with engine and gearbox jack - VAS 6931- .



- Remove remaining bolts -1, 2, 6, 7, 8- securing gearbox to engine.
- Press gearbox off dowel sleeves.
- Detach gearbox from engine.
- Lift engine slightly with spindles and push towards right side of vehicle, paying attention to refrigerant lines.
- Carefully lower gearbox using engine and gearbox jack - VAS 6931- .
- While lowering gearbox, adjust position of gearbox using spindles on gearbox support - 3282- .





2.2 Installing gearbox

Procedure

Installation is carried out in reverse sequence; note the following:

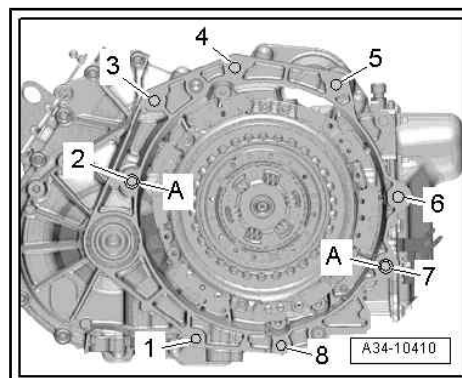
- Tightening torques for installing gearbox ⇒ [page 80](#)



Note

- ◆ *Renew bolts which are tightened by turning through a specified angle.*
- ◆ *Renew seals, gaskets and self-locking bolts and nuts.*
- ◆ *Secure all hose connections with the correct type of hose clips (same as original equipment) ⇒ Electronic parts catalogue .*
- ◆ *Fit all cable ties in the original positions when installing.*

- Clean input shaft splines and splines of torsion damper. Remove corrosion and lubricate splines with only a very thin coating of grease ⇒ Electronic parts catalogue . Remove any excess grease.
- If not already fitted, install dowel sleeves -A- for centralising engine/gearbox in cylinder block.



- Renew needle bearing -arrow- in crankshaft ⇒ Engine, mechanics; Rep. gr. 13 ; Crankshaft; Renewing needle bearing in crankshaft .

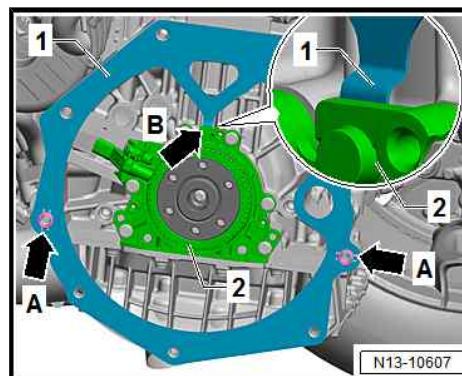


Note

If the needle bearing in the crankshaft is damaged, the gears cannot be shifted correctly because the clutch is supported by this bearing.



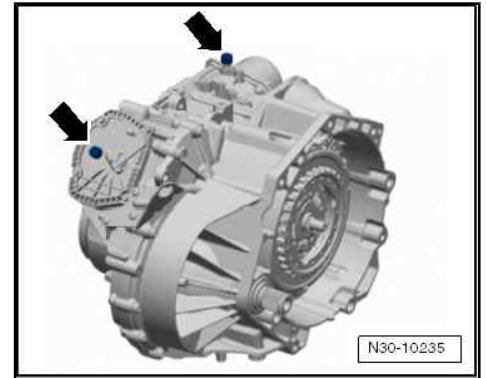
- Ensure that intermediate plate -1- is engaged on sealing flange -2- -arrow B- and pushed onto dowel sleeves -arrows A-.
- Carefully raise gearbox using engine and gearbox jack and position correctly using gearbox support - 3282- .
- Secure gearbox to engine.





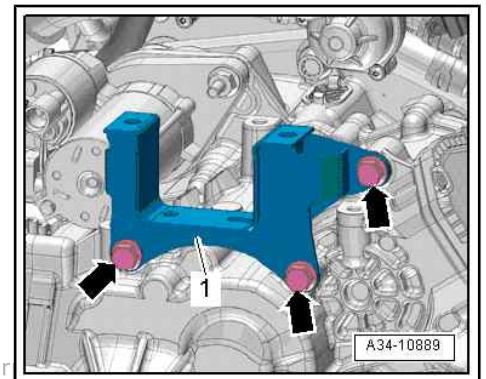
If the gearbox was sealed with oil-tight plugs, e.g. after a gearbox repair or when installing a replacement gearbox:

- Remove both plugs from breathers -arrows- and install breather caps.



Install assembly mounting as follows:

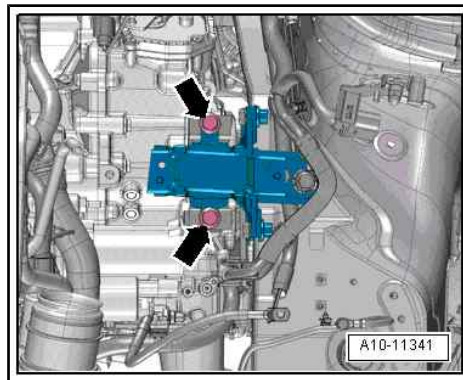
- Fit gearbox support -1- between gearbox and support arm of gearbox mounting.
- Bolt gearbox support to gearbox ⇒ [page 88](#) .



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- Pull gearbox up to support arm of gearbox mounting using spindle of support bracket.
- Hand-tighten bolts -arrows- securing gearbox mounting to gearbox support initially; then tighten to bolts to specified torque ⇒ [page 87](#) .
- If removed, install engine mounting ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Removing and installing engine mountings .
- Detach gearbox support - 3282- from gearbox.
- Secure drive shafts to flange shafts of gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Exploded view - drive shaft .
- Install swivel joints ⇒ Running gear, front-wheel drive; Rep. gr. 40 ; Lower wishbone, swivel joint; Removing and installing swivel joint .
- Install wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .
- Install catalytic converter with centre silencer ⇒ Engine, mechanics; Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install air pipe (right-side) ⇒ Engine, mechanics; Rep. gr. 21 ; Charge air system .
- Install starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .
- Check adjustment of assembly mountings ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Checking adjustment of assembly mountings .
- Detach support bracket - 10-222A- from engine.
- Install intake connecting pipe and air cleaner housing: TDI ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing , or TFSI ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Check adjustment of selector lever cable and adjust if necessary ⇒ [page 28](#) .
- Install engine cover panel ⇒ Engine, mechanics; Rep. gr. 10 ; Engine cover panel .



Tightening torques (installing gearbox)



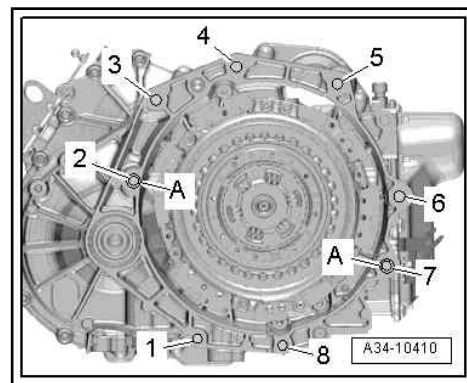
Note

- ◆ *Tightening torques apply only to lightly greased, oiled, phosphated or black-finished nuts and bolts.*
- ◆ *Additional lubricants such as engine or gearbox oil may be used, but do not use lubricants containing graphite.*
- ◆ *Do not use degreased parts.*
- ◆ *Tolerance for tightening torques: ± 15%*



Dual clutch gearbox to TFSI and TDI engines

Item	Bolt	Nm
1, 8	M10x50	40
2, 6, 7	M12x65	80
3, 4, 5	M12x55	80
A	Dowel sleeves for centralising	



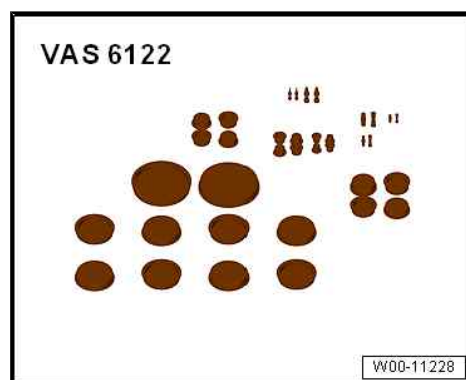
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3 Transporting gearbox

Special tools and workshop equipment required

- ◆ Workshop hoist - VAS 6100-
- ◆ Shackle - 10 - 222 A /12-
- ◆ Engine bung set - VAS 6122-



- ◆ 2x protective cap - 02M 409 120- (alternative to engine bung set - VAS 6122-)
- ◆ 1x protective cap - 0AM 325 120 A-





Sealing gearbox

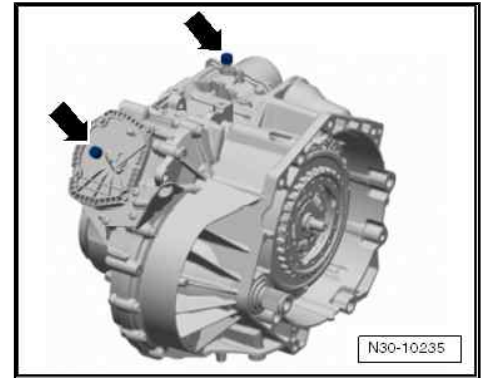


Caution

Risk of damage to gearbox

When performing repairs, the breather opening on the mechatronic unit for dual clutch gearbox - J743- (-rear arrow-) and gearbox breather (-front left arrow-) must be sealed off to avoid loss of fluid.

- ◆ ***Fluid which escapes from the mechatronic unit for dual clutch gearbox - J743- cannot be replenished and the fluid level cannot be checked! It is not possible to check the fluid level in the hydraulic section of the mechatronic unit for dual clutch gearbox - J743-.***
- ◆ ***If oil escapes from the gear oil section, the gear oil must be replaced completely. It is not possible to check the level.***
- ◆ ***Underfilling or overfilling either of the oil/fluid sections will impair the function of the gearbox.***



- Pull off both breather caps -arrows- (different types according to version).

If both breather caps are the same size:

- Seal gearbox breather and breather opening for mechatronic unit for dual clutch gearbox - J743- with clean plugs from engine bung set - VAS 6122- . Two protective caps - 02M 409 120- can also be used to seal the breather openings ⇒ Electronic parts catalogue

If the breather cap for the mechatronic unit for dual clutch gearbox - J743- (-rear arrow-) is larger than the gearbox breather cap (-front left arrow-):

- Order new breather cap for mechatronic unit for dual clutch gearbox - J743- ; breather cap must be renewed ⇒ Electronic parts catalogue .
- Seal off breather opening of mechatronic unit for dual clutch gearbox - J743- with protective cap - 0AM 325 120 A- to prevent fluid from escaping.

Both:

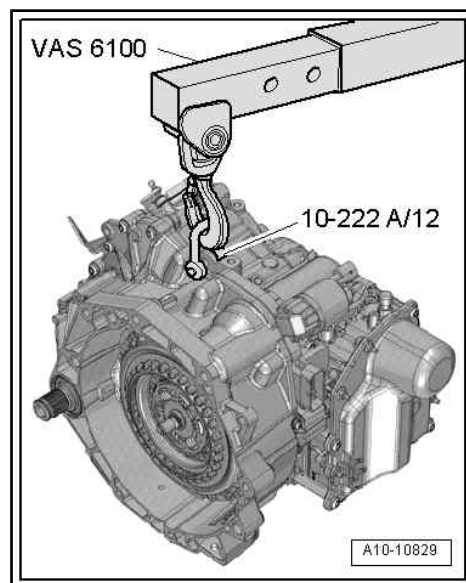
- After installing gearbox in vehicle, remove plugs and re-fit or renew breather caps.



Transporting gearbox

Requirement:

- Gearbox is sealed ⇒ [page 83](#) .



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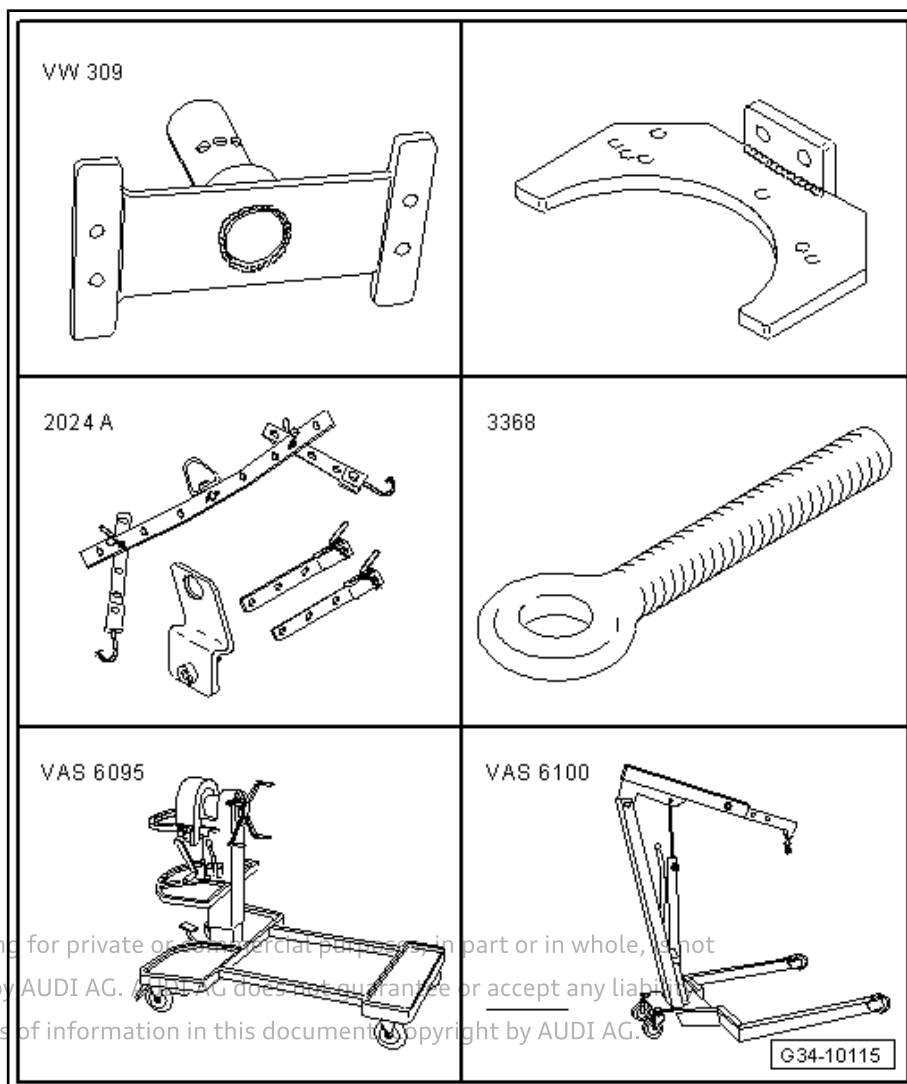


4 Securing to engine and gearbox support

Special tools and workshop equipment required



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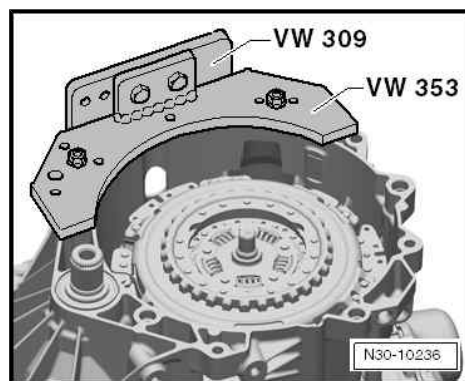
- ◆ Support plate - VW 309-
- ◆ Gearbox support - VW 353-
- ◆ Lifting tackle - 2024 A-
- ◆ 2x eye-head bolt - 3368-
- ◆ Engine and gearbox support - VAS 6095-
- ◆ Workshop hoist - VAS 6100-



Securing gearbox on gearbox support - VW 353-

Requirement:

- Gearbox is sealed ⇒ [page 83](#) .

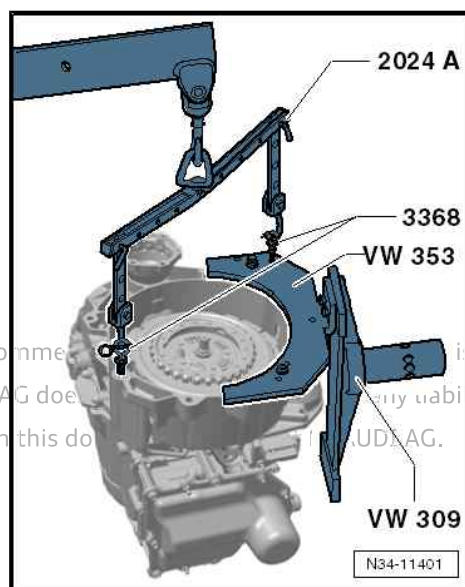


Lifting gearbox into engine and gearbox support

Requirement:

- Gearbox is sealed ⇒ [page 83](#) .

The gearbox is lifted onto the engine and gearbox support - VAS 6100- together with the gearbox support - VW 353- using the workshop hoist - VAS 6095- .



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5 Assembly mountings

⇒ ["5.1 Exploded view - assembly mountings", page 87](#)

5.1 Exploded view - assembly mountings

⇒ ["5.1.1 Exploded view - assembly mountings, version 1", page 87](#)

⇒ ["5.1.2 Exploded view - assembly mountings, version 2", page 89](#)

⇒ ["5.2 Removing and installing pendulum support", page 90](#)

5.1.1 Exploded view - assembly mountings, version 1

1 - Bolt

- ☐ Gearbox mounting to body
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 88](#)

2-7 - Engine mounting

- ☐ Refer to ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings

8 - Pendulum support

- ☐ Removing and installing ⇒ [page 90](#)

9 - Bolt

- ☐ Renew

e

- ☐ 40 Nm +90°

10 - Bolt

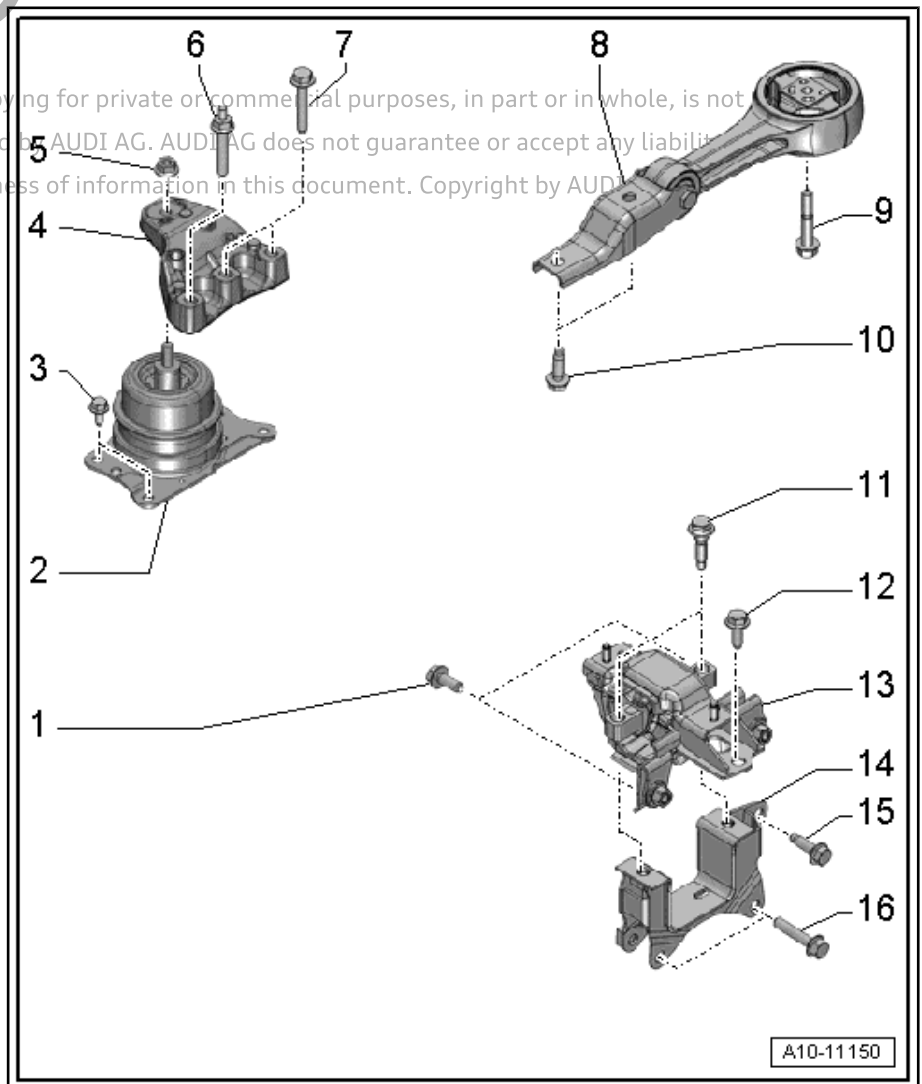
- ☐ Renew
- ☐ 30 Nm +90°

11 - Bolt

- ☐ Gearbox mounting to gearbox support
- ☐ Renew
- ☐ 40 Nm +90°

12 - Bolt

- ☐ Gearbox mounting to





body

- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 88](#)

13 - Gearbox mounting

- ☐ Removing and installing ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Removing and installing gearbox mounting

14 - Gearbox support**15 - Bolt**

- ☐ Gearbox support to gearbox
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 88](#)

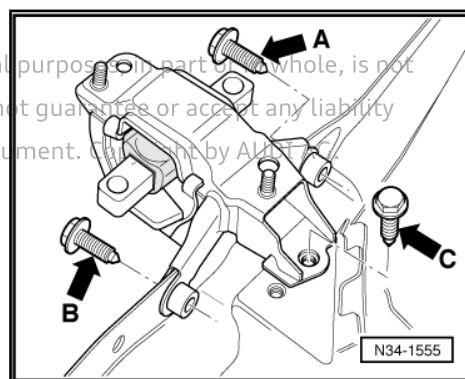
16 - Bolt

- ☐ Gearbox support to gearbox
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 88](#)

Gearbox mounting - tightening torque and sequence

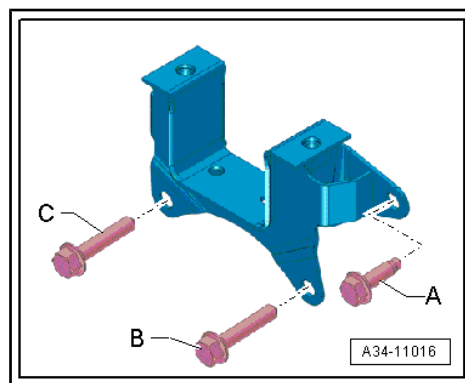
– Tighten bolts in 3 stages in the sequence shown:

Stage	Bolts	Tightening torque/angle specification
1.	-A, B, C-	Screw in by hand until contact is made
2.	-A, B, C-	50 Nm
3.	-A, B, C-	Turn 90° further

**Gearbox support - tightening torque and sequence**

– Tighten bolts in 3 stages in the sequence shown:

Stage	Bolts	Tightening torque/angle specification
1.	-A, B, C-	Screw in by hand until contact is made
2.	-A, B, C-	40 Nm
3.	-A, B, C-	Turn 90° further





5.1.2 Exploded view - assembly mountings, version 2

1-6 - Engine mounting

- ☐ Refer to ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings

7 - Pendulum support

- ☐ Removing and installing ⇒ [page 90](#)

8 - Bolt

- ☐ Renew
- ☐ 40 Nm +90°

9 - Bolt

- ☐ Renew
- ☐ 30 Nm +90°

10 - Bolt

- ☐ Gearbox mounting to gearbox support
- ☐ Renew
- ☐ 40 Nm +90°

11 - Bolt

- ☐ Gearbox mounting to body
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 90](#)

12 - Gearbox mounting

- ☐ With support arm
- ☐ Removing and installing ⇒ Engine, mechanics; Rep. gr. 10 ; Assembly mountings; Removing and installing gearbox mounting

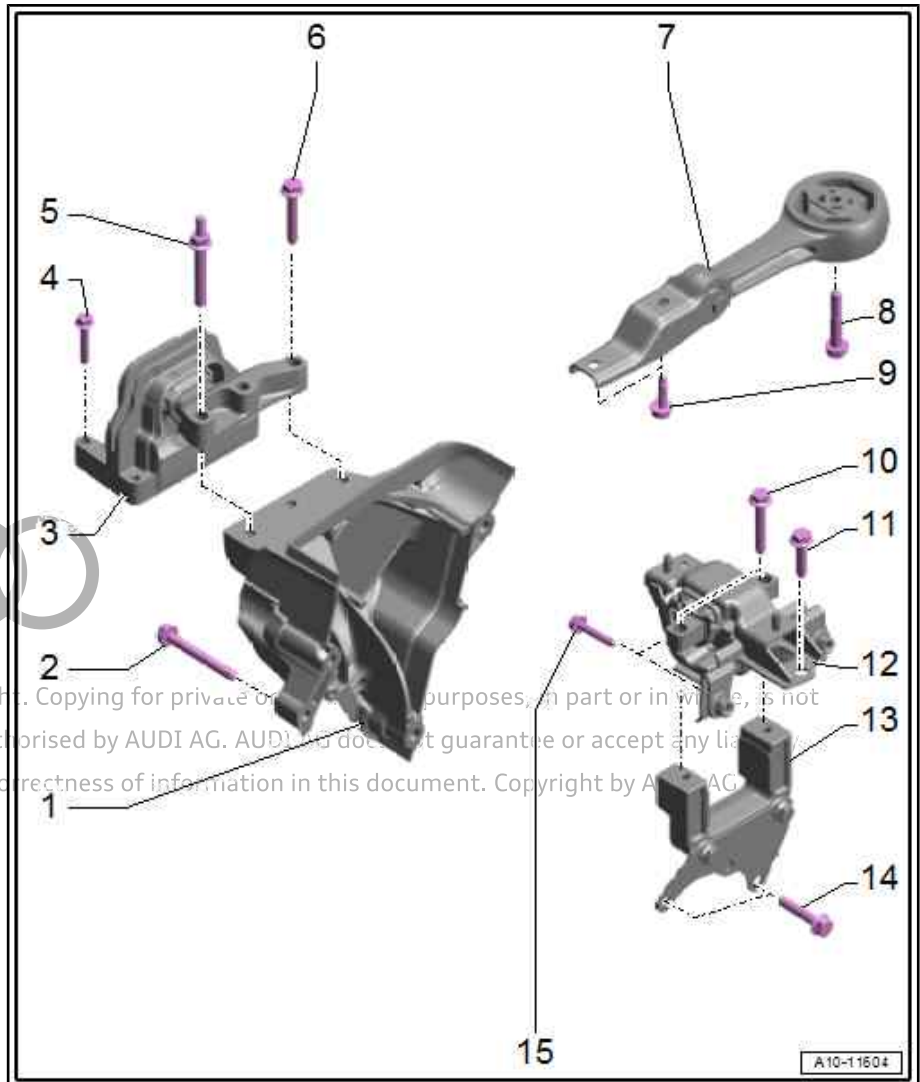
13 - Gearbox support

14 - Bolt

- ☐ Gearbox support to gearbox
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 90](#)

15 - Bolt

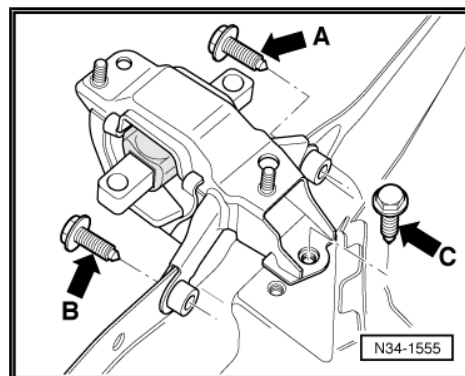
- ☐ Gearbox mounting to body
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 90](#)



**Gearbox mounting - tightening torque and sequence**

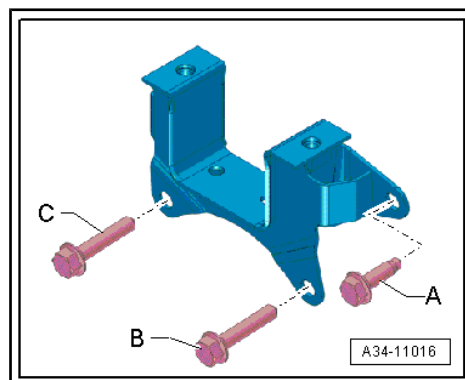
- Tighten bolts in 3 stages in the sequence shown:

Stage	Bolts	Tightening torque/angle specification
1.	-C, A, B-	Screw in by hand until contact is made
2.	-C, A, B-	50 Nm
3.	-C, A, B-	Turn 90° further

**Gearbox support - tightening torque and sequence**

- Tighten bolts in 3 stages in the sequence shown:

Stage	Bolts	Tightening torque/angle specification
1.	-C, B, A-	Screw in by hand until contact is made
2.	-C, B, A-	40 Nm
3.	-C, B, A-	Turn 90° further



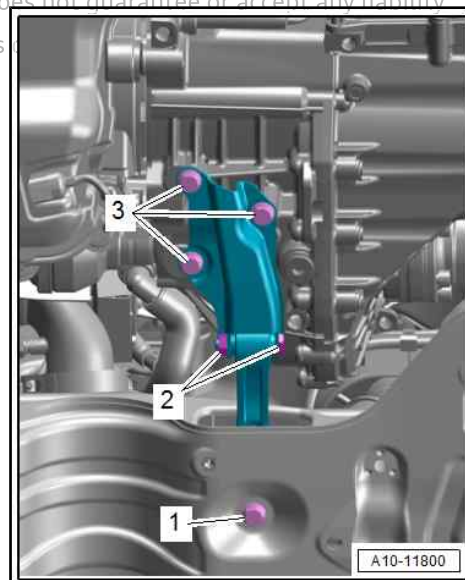
5.2 Removing and installing pendulum support

Removing

- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .

Vehicles with 1.4 ltr. TDI engine

- The bolted connection -2- must not be slackened.
- Remove bolts -1, 3- and detach pendulum support.





Vehicles without 1.4 ltr. TDI engine

- The bolted connection -1- must not be slackened.
- Remove bolts -arrows- and detach pendulum support.

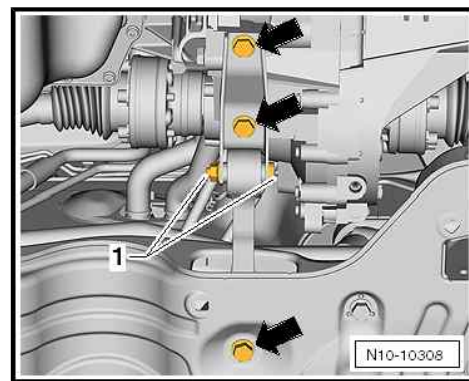
Installing

Installation is carried out in reverse order; note the following:

- Secure pendulum support first onto gearbox, then onto sub-frame.

Tightening torques

- ♦ [⇒ page 87](#)



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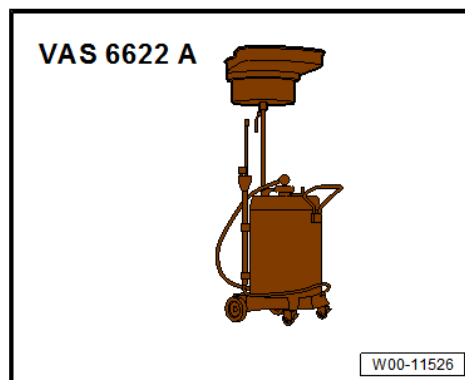
6 Gear oil

⇒ ["6.1 Draining and filling gear oil", page 92](#)

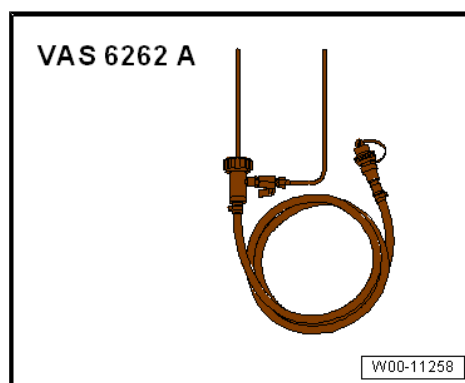
6.1 Draining and filling gear oil

Special tools and workshop equipment required

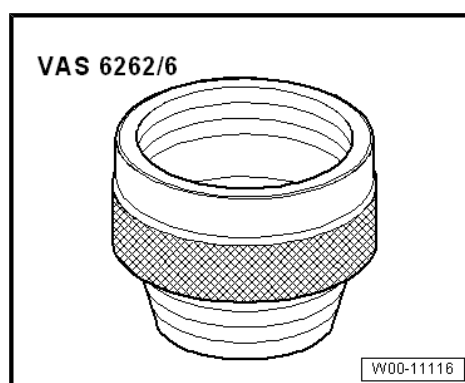
◆ Used oil collection and extraction unit - VAS 6622A-



◆ Adapter for oil filling - VAS 6262 A- with -VAS 6262/4-



◆ If necessary, adapter - VAS 6262/6-



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Measure length of breather pipe on adapter for oil filling - VAS 6262 A- and shorten if necessary.

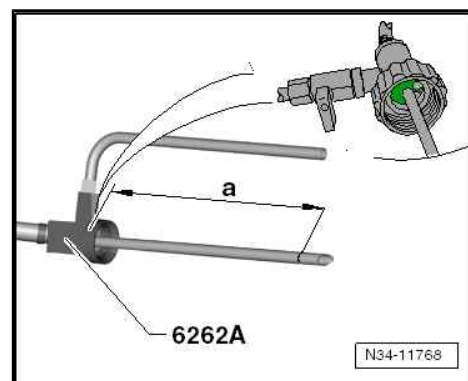
To ensure that breather pipe of adapter for oil filling -VAS 6262 A- does not make contact with bottom of oil container, breather pipe must be shortened to dimension -a-.

- Dimension -a- = 210 mm



Note

Dimension -a- is measured from stem (green area in magnified view) of adapter for oil filling -VAS 6262 A-.



If dimension -a- is greater than 210 mm:

- Mark length on breather pipe and shorten breather pipe using pipe cutter -VAS 6056/2-.
- Clean adapter for oil filling - VAS 6262 A-.

Procedure

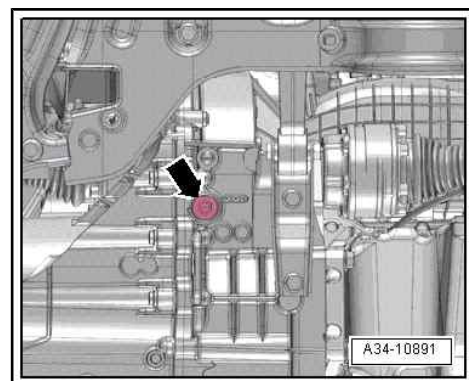
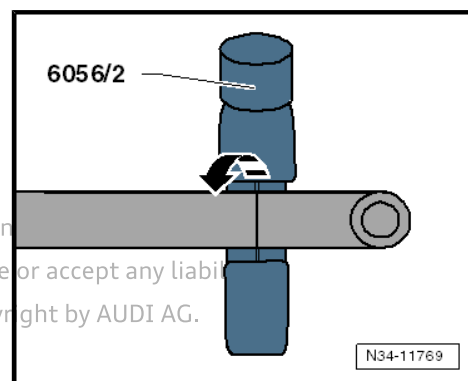


Note

- ♦ Please refer to ⇒ ["5 Repair instructions", page 9](#).
- ♦ Please refer to ⇒ ["5.2 Rules for cleanliness", page 10](#).

- ♦ Please refer to general notes on "Environmental and waste disposal regulations for oil" ⇒ [page 11](#).
- ♦ The gearbox is filled for life.
- ♦ The gear oil level cannot be checked.
- ♦ If the gearbox is leaking, trace the cause of the leak and repair as required.
- ♦ Then the gear oil must be completely drained off and the gearbox filled with new gear oil.

- Engine not running.
- Move selector lever to position "P".
- Remove air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing or ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .
- Place used oil collection and extraction unit - VAS 6622A- below gearbox.
- Remove oil drain plug -arrow- from gearbox.

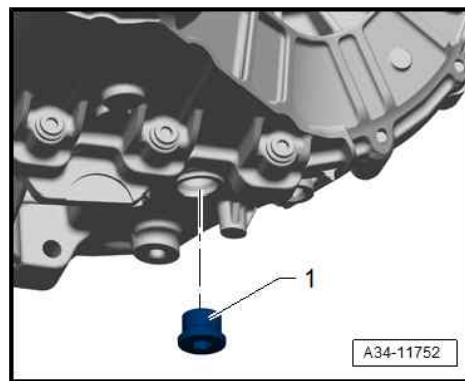




- Allow oil to drain off, then retighten oil drain plug.
- Tightening torque: 40 Nm

**Note**

- ◆ *The gear oil level cannot be checked.*
- ◆ *It is important to fill in exactly the amount of gear oil specified.*
- ◆ *This is the only way to ensure the gearbox is filled correctly.*
- ◆ *Both overfilling and underfilling impair the function of the gearbox.*

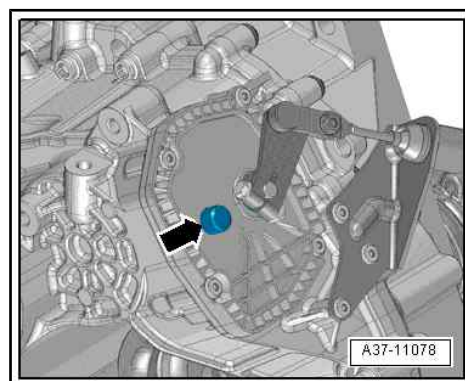
**Caution****Risk of damage to gearbox**

- ◆ *Use only the ATF available as a replacement part for the 7-speed dual clutch gearbox 0AM ⇒ Electronic parts catalogue .*
- ◆ *Other types of oil cause malfunctions and/or failure of the gearbox.*

- Pull off breather cap -arrow- next to gearbox selector lever.

**Note**

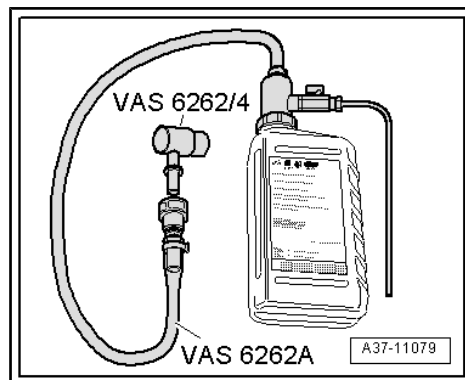
For illustration purposes, the installation position is shown with the gearbox removed.

**Caution****Risk of damage to gearbox**

- ◆ *The adapter for oil filling - VAS 6262 A- with -VAS 6262/4- must be clean; the gear oil must not be mixed with any other types of oil.*

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- Screw container of gear oil for 7-speed dual clutch gearbox onto adapter for oil filling - VAS 6262 A- ; for part number refer to ⇒ Electronic parts catalogue .
- Put down oil container so that oil does not run into filler hose.



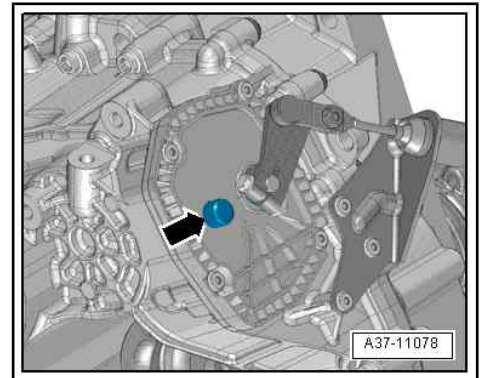
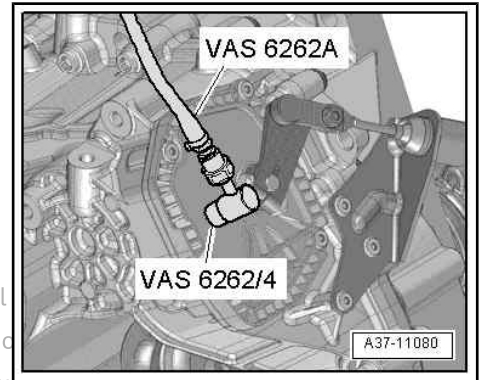


- Attach adapter -VAS 6262/4- to filler hose and connect to breather opening on gearbox.
- Turn oil container upside down and fill gearbox with the exact amount of oil required; see specified capacity ⇒ [page 3](#) .



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- Disconnect adapter -VAS 6262/4- and fit breather cap -arrow-.
- Install air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Removing and installing air cleaner housing or ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .





7 Mechatronic unit

⇒ [“7.1 Exploded view - mechatronic unit”, page 96](#)

⇒ [“7.2 Removing and installing mechatronic unit”, page 97](#)

⇒ [“7.3 Moving mechatronic unit for dual clutch gearbox J743 into removal position by hand”, page 109](#)

7.1 Exploded view - mechatronic unit

1 - Bolt

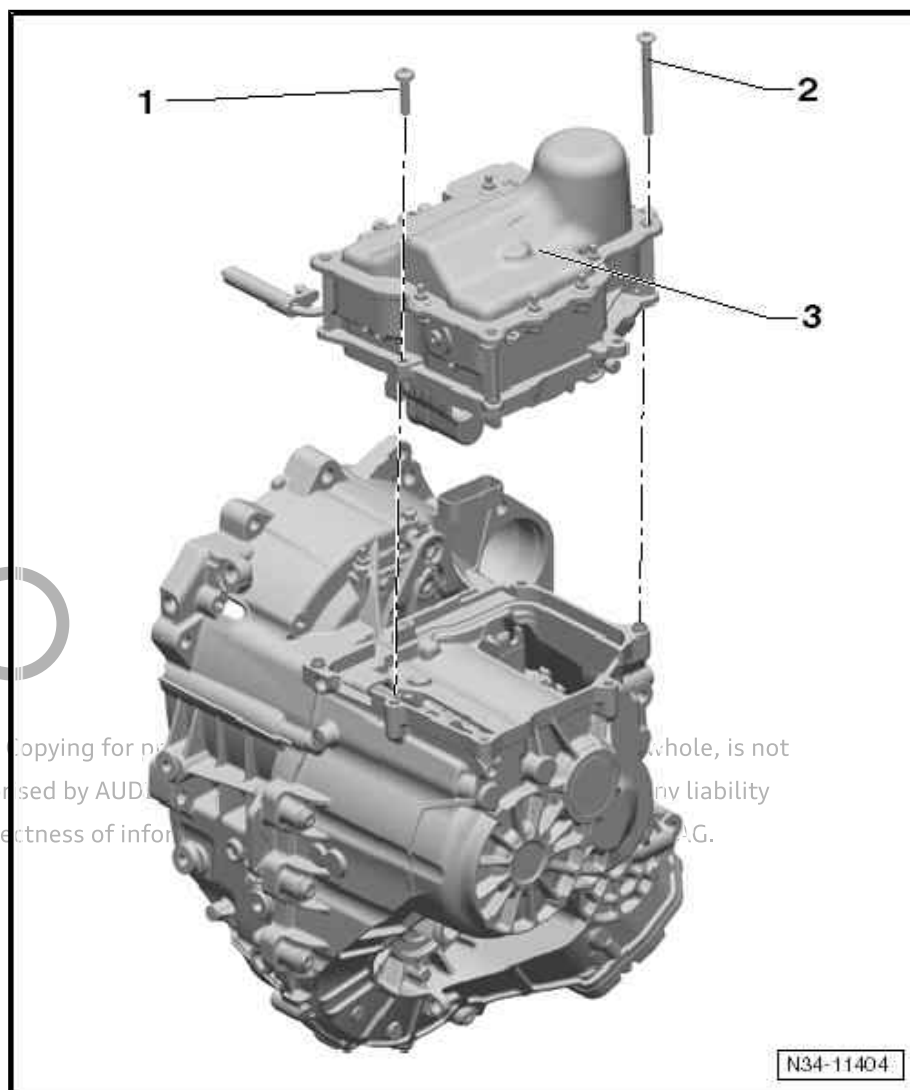
- ☐ 3x, M8x35
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 97](#)

2 - Bolt

- ☐ 4x, M8x90
- ☐ Renew
- ☐ Tightening torque and sequence ⇒ [page 97](#)

3 - Mechatronic unit for dual clutch gearbox - J743-

- ☐ ⇒ [“4.4 Safety precautions when working on mechatronic unit for dual clutch gearbox J743”, page 6](#)
- ☐ ⇒ [“7.2 Removing and installing mechatronic unit”, page 97](#)
- ☐ ⇒ [“7.3 Moving mechatronic unit for dual clutch gearbox J743 into removal position by hand”, page 109](#)





Cover for mechatronic unit

- ◆ Tightening torque for bolts: 8 Nm
- ◆ Cover prevents dirt from entering



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Mechatronic unit for dual clutch gearbox - J743- : tightening torque and sequence

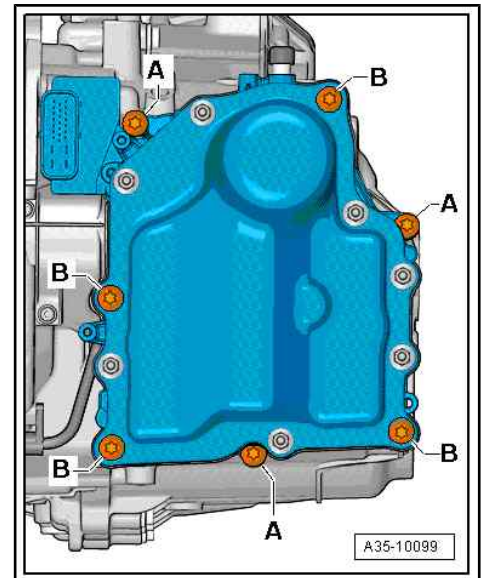


Note

Renew bolts.

- Tighten bolts in 4 stages as follows:

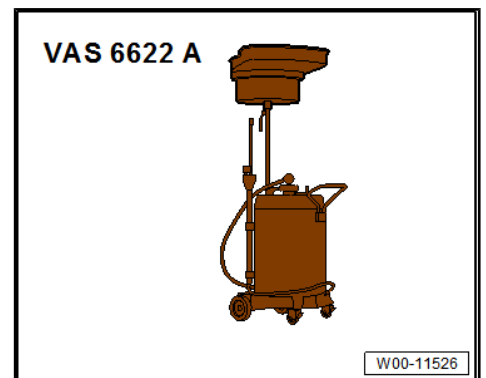
Stage	Bolts	Tightening torque
1.	-A-	Screw in by hand until contact is made
2.	Remove guide pin - T10406-	
3.	-B-	Screw in by hand until contact is made
4.	-A, B-	10 Nm in diagonal sequence



7.2 Removing and installing mechatronic unit

Special tools and workshop equipment required

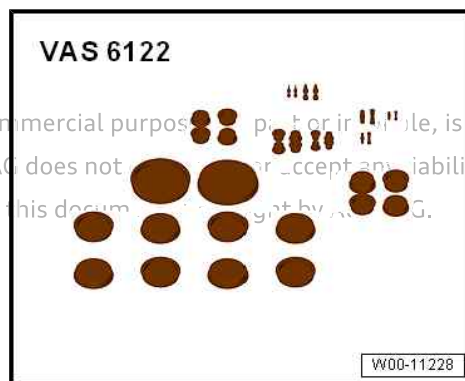
- ◆ Used oil collection and extraction unit - VAS 6622A-





◆ Engine bung set - VAS 6122-

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◆ Guide pin - T10406-



◆ Assembly lever - T10407-



◆ Vehicle diagnostic tester

Removing



Caution

Do not run engine or tow vehicle with mechatronic unit for dual clutch gearbox - J743- removed or when there is no gear oil in the gearbox.



Note

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- ◆ ⇒ *"5 Repair instructions", page 9*
- ◆ ⇒ *"5.2 Rules for cleanliness", page 10*
- ◆ *Observe notes on dual clutch gearbox 0AM ⇒ page 9 .*
- ◆ *The clutch is self-adjusting. Shocks can affect the adjusting mechanism. Even if the mechatronic unit has been removed, suddenly pulling out the assembly lever - T10407- from under the engaging levers can have a negative effect on the adjusting mechanism.*
- ◆ *A new mechatronic unit is supplied with the correct oil filling. Do not drain oil.*
- ◆ *After removal, the used mechatronic unit is sent back with its oil in. The mechatronic unit remains filled with oil.*
- Remove radiator cowl ⇒ Engine, mechanics; Rep. gr. 19 ; Radiator/radiator fans; Removing and installing radiator cowl .



Note

- ◆ *The vehicle diagnostic tester moves all gear actuators into "neutral" position.*
- ◆ *In this position, insert assembly lever - T10407- between engaging lever and gearbox housing. This makes it possible to remove load from the plungers of the mechatronic unit so that they can be removed by hand from the retainers on the engaging levers.*
- Move selector lever to position "P".
- Connect vehicle diagnostic tester and switch on ignition.
- Select the following menu items:
 - ◆ Guided Functions
 - ◆ 02 - 7-speed dual clutch gearbox
 - ◆ Basic setting neutral
- Switch off ignition.



Caution

Risk of irreparable damage to gearbox components.

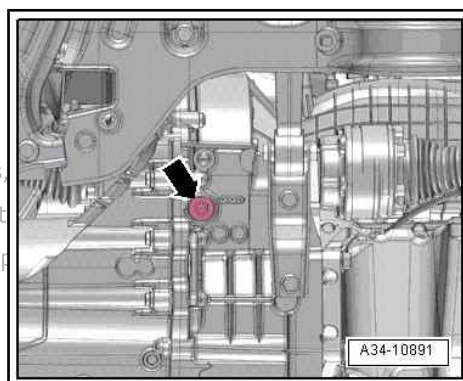
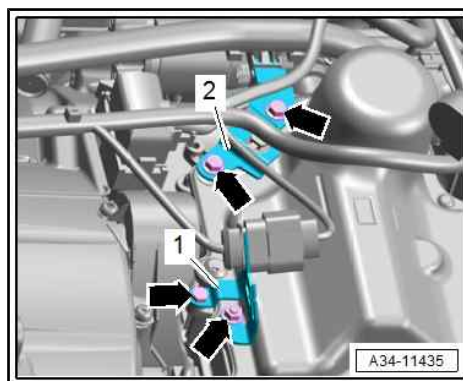
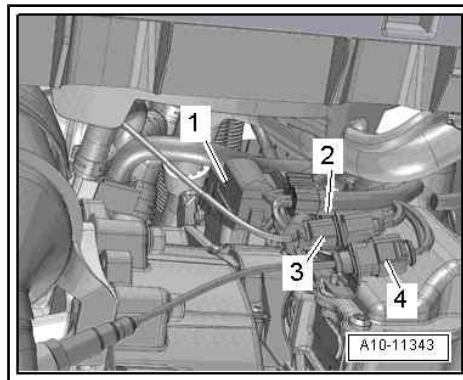
- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**

- Touch vehicle earth with bare hands to eliminate any static charge.
- Release and unplug electrical connector -1- for dual clutch gearbox.
- Take electrical connector -4- out of bracket.



Note

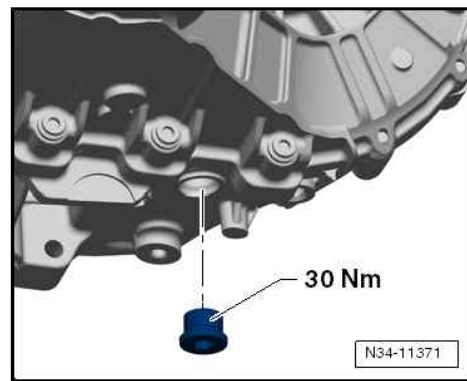
- ◆ *The installation position on a vehicle with 1.4 ltr. engine is shown as an example.*
- ◆ *Disregard items -2 and 3-.*
- Remove bolts and nuts -arrows- and push brackets -1 and 2- to one side.
- Place used oil collection and extraction unit - VAS 6622A- below gearbox.
- Remove oil drain plug -arrow- from gearbox.



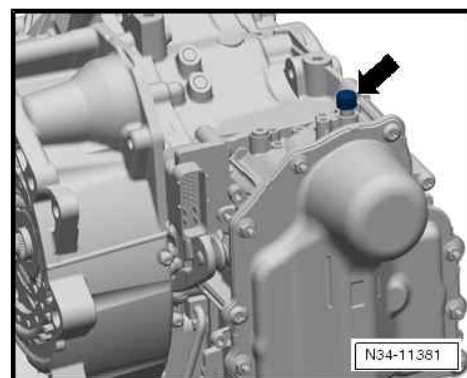
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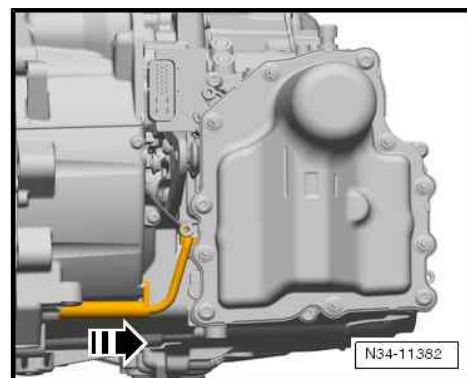
- Allow oil to drain off, then retighten oil drain plug.



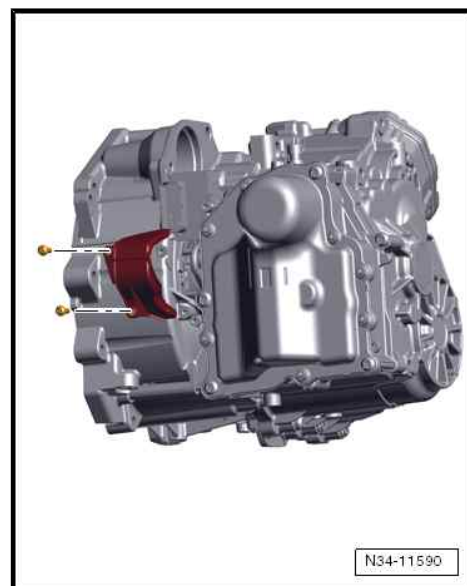
- Remove cap from breather opening and seal off with a plug from engine bung set - VAS 6122- to prevent oil from escaping.



- Carefully pull gearbox input speed sender - G182- out of gearbox.



- Unscrew bolts and detach cover above engaging levers.

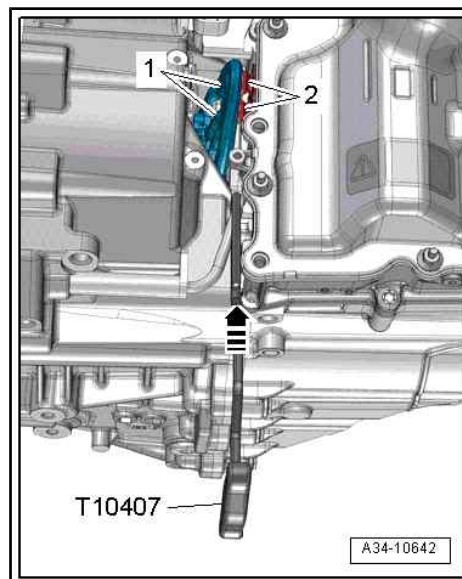


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**Note**

The following step is necessary in order to lift the two engaging levers of the dual clutch away from the plungers of the mechatronic unit. Otherwise, the levers will jam the mechatronic unit at the plungers and prevent it from being removed.

- Insert assembly lever - T10407- below plungers -2- between gearbox housing and the two engaging levers -1- -arrow-, as shown in illustration.



- Only slide in assembly lever - T10407- until groove on assembly lever is in line with rib on housing -arrows-, as shown in illustration. Do not slide it in all the way.

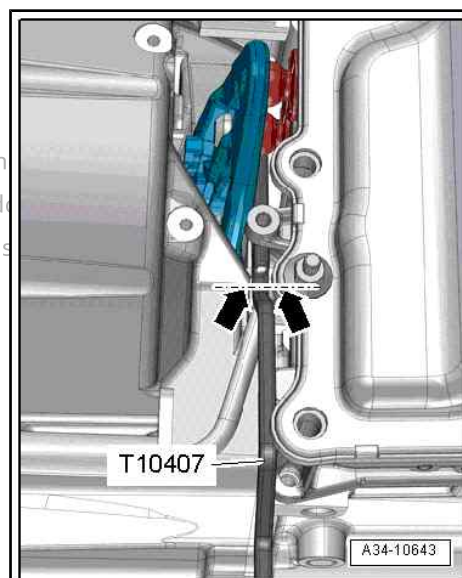
**Note**

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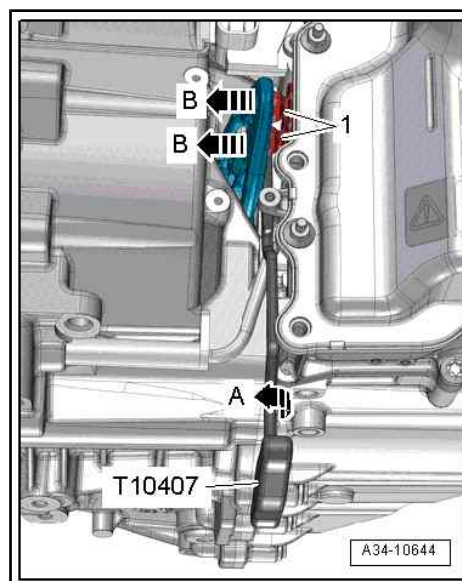
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The back of the assembly lever must make contact with the gearbox housing.

with respect to the correctness of information in this manual.



- Now rotate assembly lever - T10407- 90° anti-clockwise about its own axis -arrow A- so as to lift engaging levers away from plungers -1- -arrow B-.





- If necessary, press the assembly lever - T10407- against the gearbox housing with a screwdriver to prevent it from slipping out when it is turned.



Note

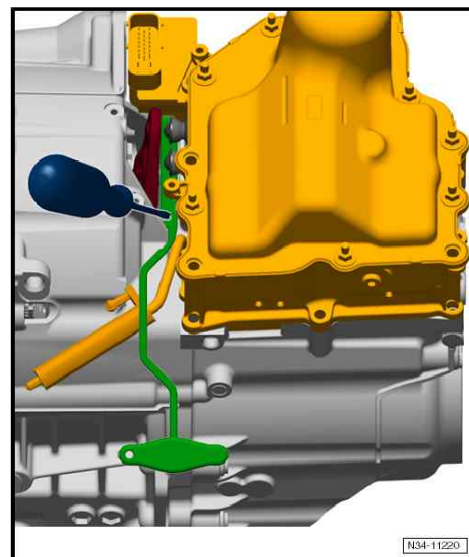
- ◆ The assembly lever - T10407- remains inserted between the engaging levers and the gearbox housing while removing and installing the mechatronic unit.
- ◆ If necessary, press the assembly lever - T10407- against the gearbox housing.



Caution

Risk of irreparable damage to gearbox components.

- ◆ Before touching or removing the mechatronic unit for dual clutch gearbox - J743- , always discharge any static electricity by touching an earthed object with your hand.
- ◆ Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.



- Touch vehicle earth with bare hands to eliminate any static charge.



Note

Make sure that the screwdriver used to support the assembly lever - T10407- does not jam against the mechatronic unit.



Caution

Risk of damage to mechatronic unit for dual clutch gearbox - J743-!

- ◆ Do not loosen bolts securing cover on mechatronic unit for dual clutch gearbox - J743- .
- ◆ Make sure that no oil escapes through the breather hole when placing down mechatronic unit for dual clutch gearbox - J743- after removal.
- ◆ Oil that has escaped cannot be refilled!



Note

The mechatronic unit is returned for reconditioning complete with oil filling.



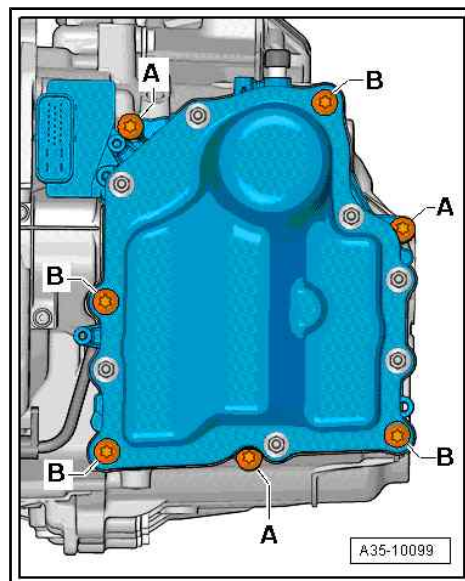
- Remove bolts -B- in diagonal sequence.
- Unscrew bolts -A-.
- Detach mechatronic unit from gearbox.



Caution

Risk of damage to mechatronic unit for dual clutch gearbox - J743- .

- ◆ *In some cases it may not be possible to remove the mechatronic unit.*
- ◆ *This can happen if the gear actuator at the top left of the mechatronic unit is stuck.*
- ◆ *Do not attempt to remove the mechatronic unit by force.*
- ◆ *The mechatronic unit must be first brought into the correct position for removal by hand ⇒ **page 109** .*



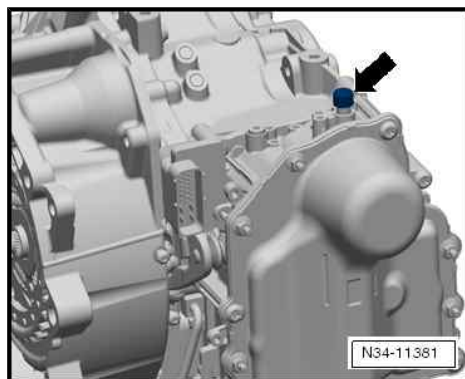
Installing



Note

A new mechatronic unit is supplied with the correct oil filling.

- Seal off breather opening of mechatronic unit with a cap from engine bung set - VAS 6122- to prevent oil from escaping.



Note

- ◆ *Make sure that all selector forks are in centre position before installing mechatronic unit for dual clutch gearbox - J743- .*
- ◆ *Centre position is position -N- (neutral) in the illustration below.*
- ◆ *No gear is engaged in this position, the gearbox is in neutral.*

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N - Neutral

R - Reverse gear

1 - First gear

2 - Second gear

3 - Third gear

4 - Fourth gear

5 - Fifth gear

6 - Sixth gear

7 - Seventh gear

- First check each of the 4 selector forks by hand.

Each selector fork has 3 positions:

◆ Gear engaged

◆ Neutral -N-

◆ Gear engaged

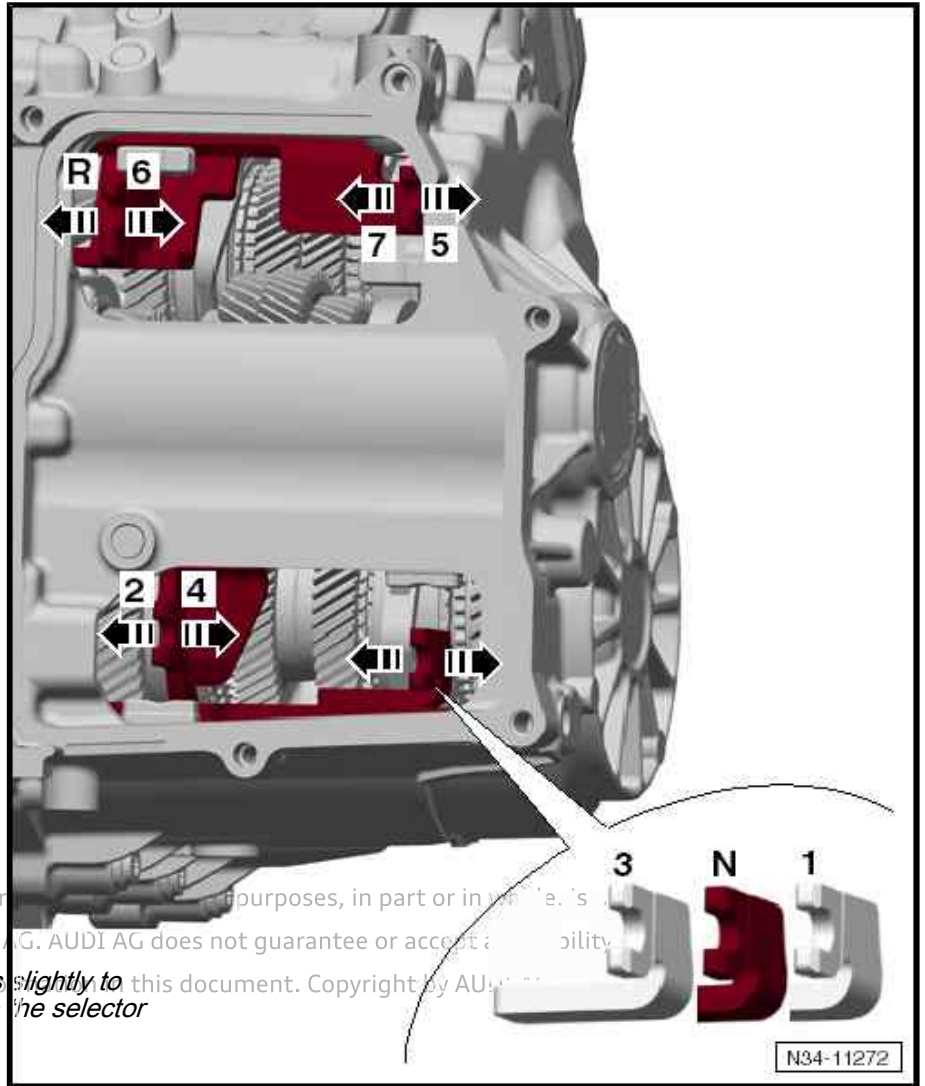
- Move the 4 selector forks once into each position -arrows-, one after the other.

- Then shift all selector forks back into »centre position«, position -N-.

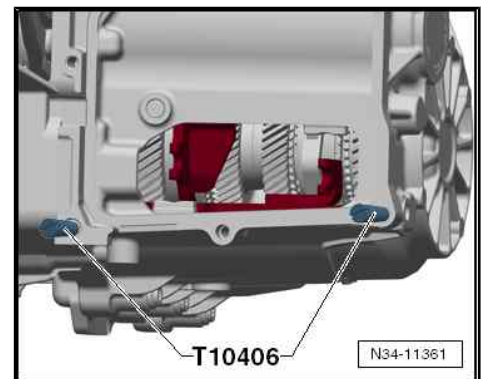


Note

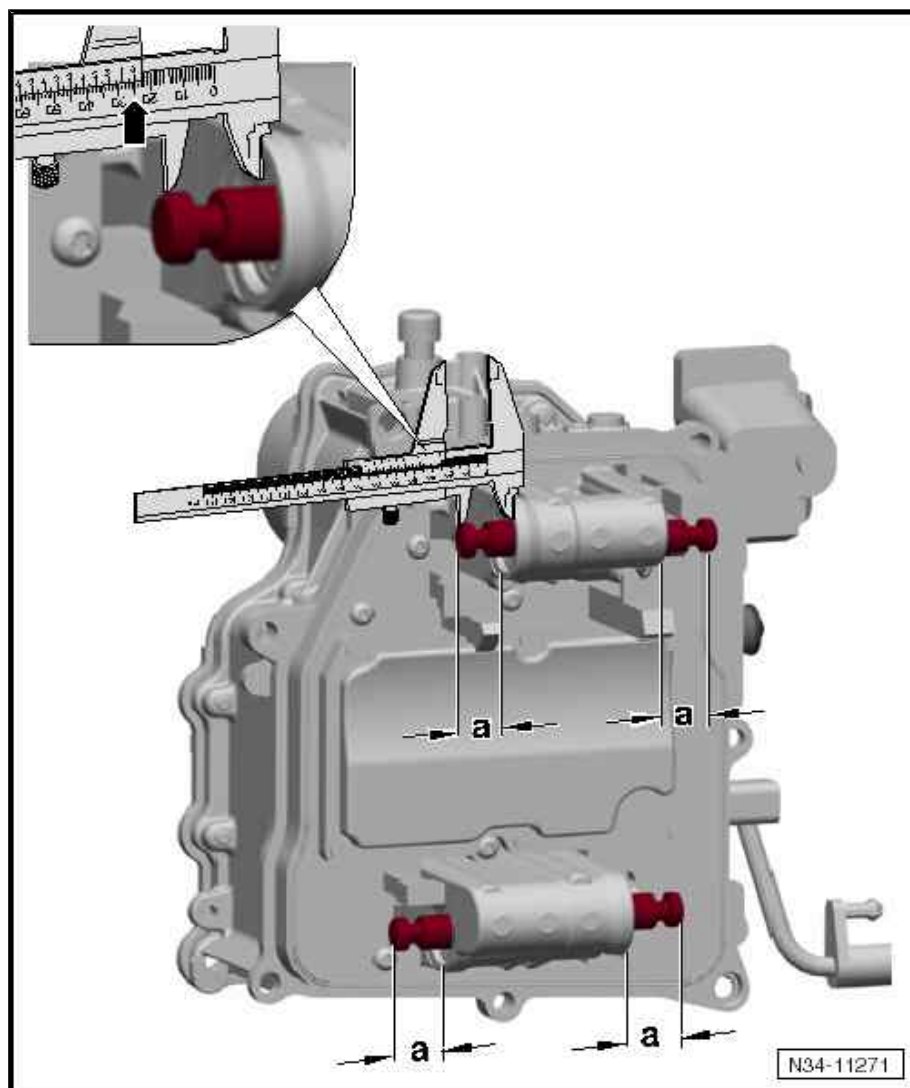
Turn one of the wheels slightly to make it easier to move the selector forks.



- Clean sealing surface on which mechatronic unit is to be installed.
- Screw in guide bolts - T10406- hand-tight.



Adjusting gear actuators:



Caution

Risk of damage to mechatronic unit for dual clutch gearbox - J743-.

Do not apply any pressure to the sensors when levering out the plungers.

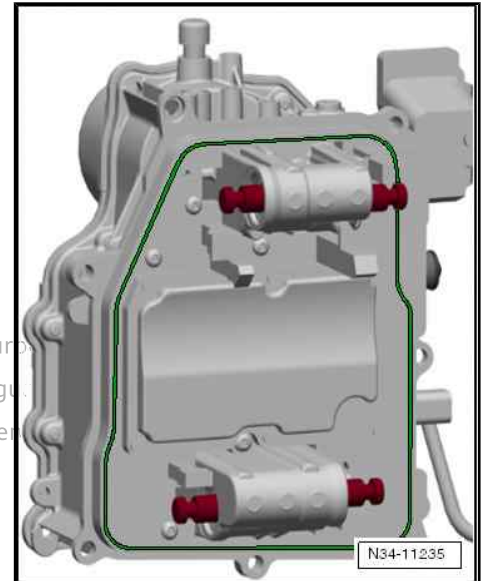
- Adjust the four gear actuators on the reverse side of mechatronic unit for dual clutch gearbox - J743- to the specified positions.
- Specified position: -a = 25 mm



- Clean sealing surface on mechatronic unit.
- The gasket positioned round the mechatronic unit for dual clutch gearbox - J743- must be properly seated in the groove all round.



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- Put on mechatronic unit.
- Tighten bolts for mechatronic unit ⇒ [page 97](#) .

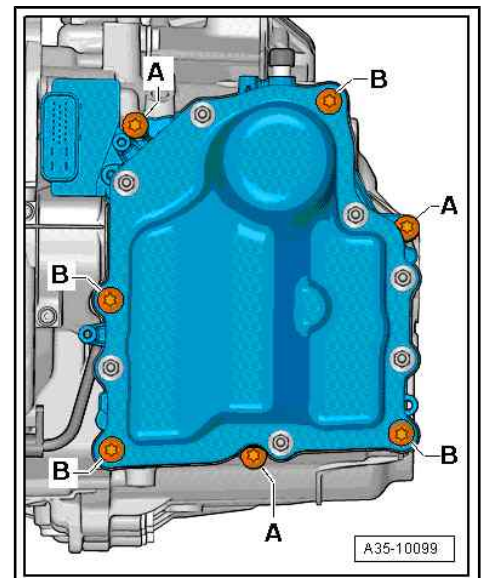


Caution

The clutches can be damaged.

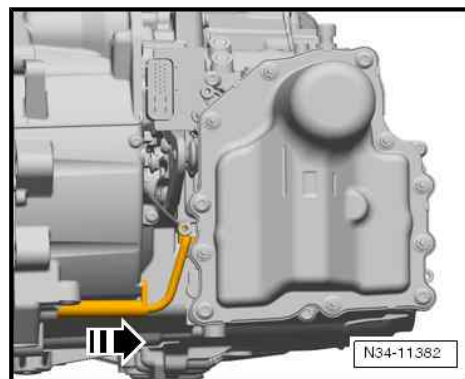
- ◆ *If the clutch engaging levers contact the clutch actuators of the mechatronic unit abruptly, this can move the actuators out of position and activate the clutch self-adjustment. The status prior to self-adjustment cannot be recovered.*

- Both clutch actuators must be properly engaged in the retainers on the clutch engaging levers.
- The rubber grommets of the clutch actuators must not be damaged.
- The rubber grommets must seal off at the mechatronic unit properly.
- Turn assembly lever - T10407- slowly and carefully in clockwise direction and remove.
- The plungers should slide slowly into the retainers.
- Pull out plungers by hand until they are seated correctly in retainers.





- Install gearbox input speed sender - G182- in opposite direction of -arrow-.



- Fit cover.



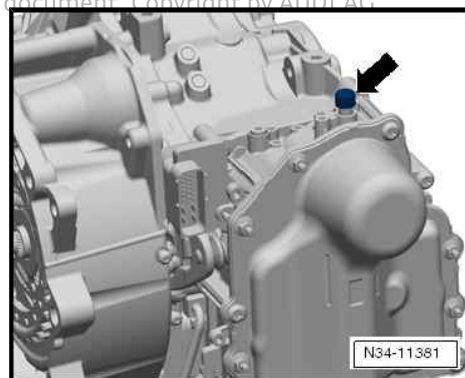
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- Remove sealing plug from breather opening of mechatronic unit and fit breather cap -arrow-.



Note

- ◆ *If the mechatronic unit is being renewed, fit the sealing plug on the old mechatronic unit so it remains oil-tight when it is returned for reconditioning.*
- ◆ *Do not drain oil out of the old mechatronic unit.*

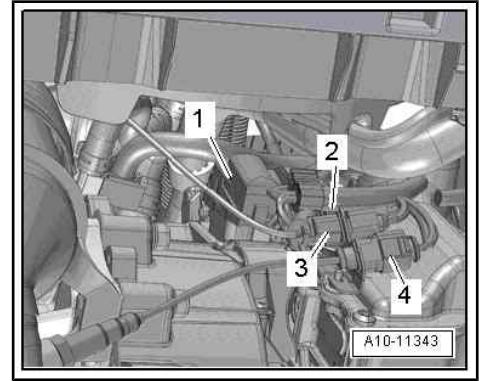




Caution

Risk of damage to gearbox components.

- ◆ **Never touch the contacts in the gearbox connector with your hands. Electrostatic discharge could cause irreparable damage to the control unit and, consequently, the mechatronic unit.**



- Touch vehicle earth with bare hands to eliminate any static charge.
- Attach electrical connector -1- for dual clutch gearbox and lock.
- Install bracket with electrical connectors -2, 3 and 4-.

Remaining assembly is carried out in reverse sequence; note the following:

- Install radiator cowl ⇒ Engine, mechanics; Rep. gr. 19 ; Radiator/radiator fans; Removing and installing radiator cowl.
- Fill up gear oil ⇒ [page 92](#).
- Check adjustment of selector lever cable and adjust if necessary ⇒ [page 28](#).
- After installing gearbox, run **Basic setting complete** function in **Guided Functions** ⇒ Vehicle diagnostic tester.

Tightening torques

- ◆ ⇒ [Fig. ““Mechatronic unit for dual clutch gearbox -J743- : tightening torque and sequence””, page 97](#)
- ◆ ⇒ [Fig. ““Cover above engaging levers””, page 10](#)

7.3 Moving mechatronic unit for dual clutch gearbox - J743- into removal position by hand



Note

The mechatronic unit can be set to the removal position by hand; this should only be done if it is not possible to move it to this position with the vehicle diagnostic tester.

Moving mechatronic unit for dual clutch gearbox - J743- into removal position by hand; refer to Workshop Manual “Servicing 7-speed dual clutch gearbox 0AM (S tronic)” ⇒ Servicing 7-speed dual clutch gearbox 0AM/0CW; Rep. gr. 34 ; Mechatronic unit .



35 – Gears, shafts

1 Parking lock

When working on parking lock, refer to Workshop Manual ⇒

Servicing 7-speed dual clutch gearbox 0AM/0CW: Rep. gr. 35 :

Parking lock .

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39 – Final drive - differential

1 Oil seals

⇒ [“1.1 Overview of fitting locations - oil seals”, page 111](#)

⇒ [“1.2 Renewing oil seal \(left-side\)”, page 111](#)

⇒ [“1.3 Renewing oil seal \(right-side\)”, page 113](#)

1.1 Overview of fitting locations - oil seals

1 - Oil seal for inner input shaft

- ❑ Renewing ⇒ Servicing
7-speed dual clutch
gearbox 0AM (S tronic);
Rep. gr. 30 ; Clutch; Ex-
ploded view - dual clutch

2 - Input shaft oil seal

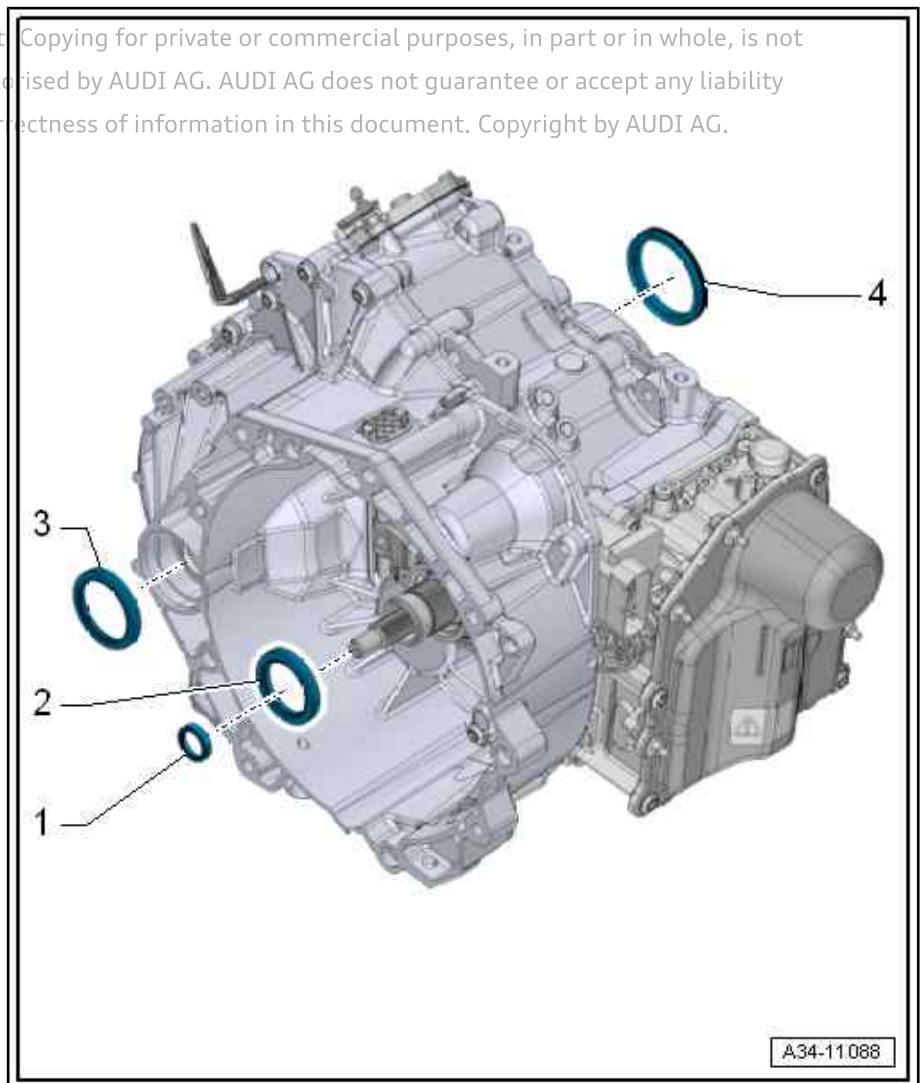
- ❑ Renewing ⇒ Servicing
7-speed dual clutch
gearbox 0AM (S tronic);
Rep. gr. 30 ; Clutch; Re-
newing input shaft oil
seal

3 - Oil seal (right-side)

- ❑ For flange shaft (right-
side)
- ❑ Renewing ⇒ [page 113](#)

4 - Oil seal (left-side)

- ❑ For flange shaft (left-
side)
- ❑ Renewing ⇒ [page 111](#)

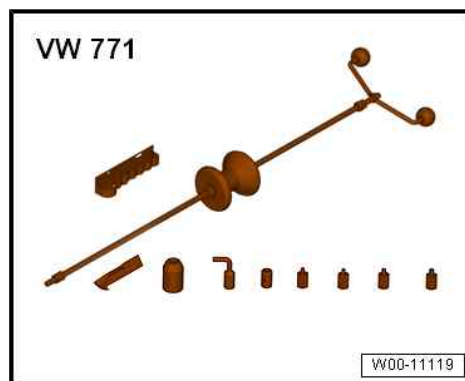


1.2 Renewing oil seal (left-side)

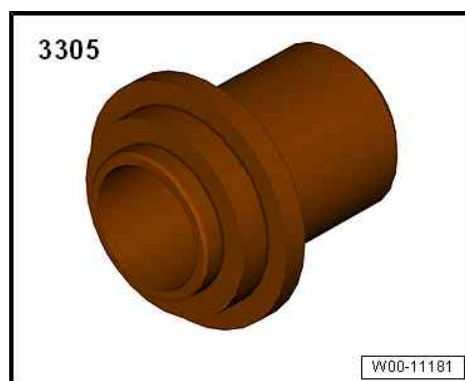
Special tools and workshop equipment required



- ◆ Multi-purpose tool - VW 771-



- ◆ Thrust piece - 3305-



- ◆ Sealing grease ⇒ Electronic parts catalogue

Procedure



Note

- ◆ ⇒ ["5 Repair instructions", page 9](#)

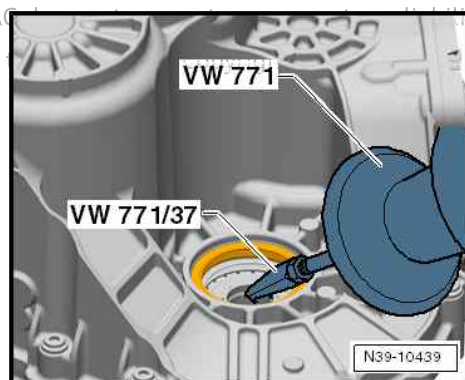
- ◆ ⇒ ["5.2 Rules for cleanliness", page 10](#)

- Remove flange shaft (left-side) ⇒ [page 115](#).
- Pull out oil seal using multi-purpose tool - VW 771- and extractor tool - VW 771/37-



Note

Oil seal can also be removed using extractor tool - T20143- .

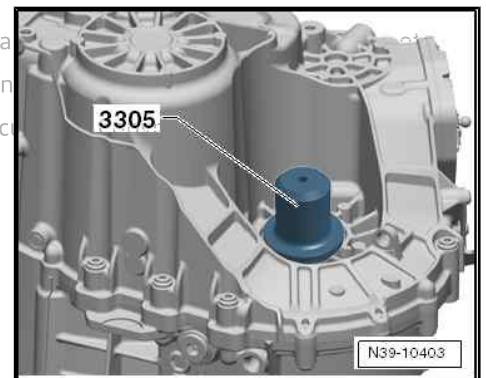
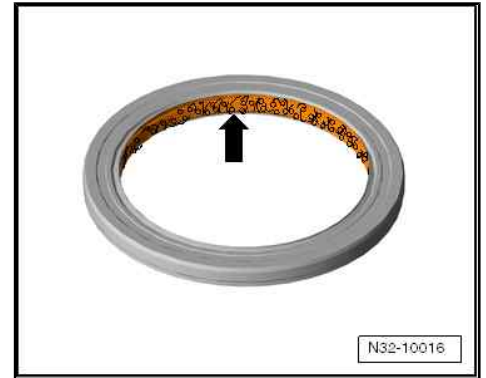




- Pack space between sealing lip and dust lip -arrow- half full with sealing grease ⇒ Electronic parts catalogue .



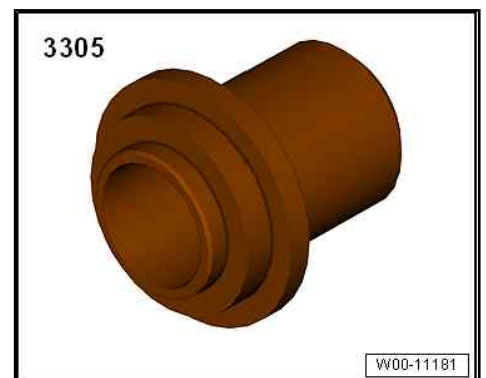
- Drive in new oil seal onto stop (take care to keep oil seal straight).
- Install flange shaft (left-side) ⇒ [page 115](#).



1.3 Renewing oil seal (right-side)

Special tools and workshop equipment required

- ◆ Thrust piece - 3305-



- ◆ Sealing grease ⇒ Electronic parts catalogue

Procedure



Note

- ◆ ⇒ [“5 Repair instructions”, page 9](#)
- ◆ ⇒ [“5.2 Rules for cleanliness”, page 10](#)
- Remove flange shaft (right-side) ⇒ [page 117](#) .
- Pry out oil seal using assembly lever.



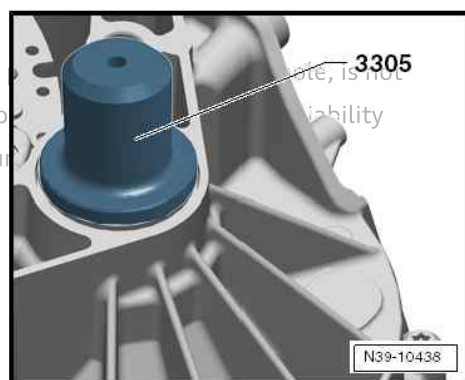
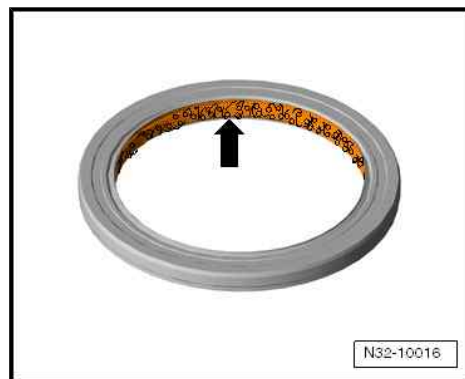
- Pack space between sealing lip and dust lip -arrow- half full with sealing grease ⇒ Electronic parts catalogue .



Note

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- ◆ *Do not drive in thrust piece - 3305- as far as stop!*
- ◆ *The oil seal contacts the stop in the gearbox earlier than the thrust piece - 3305- .*
- ◆ *It is therefore not possible to drive in thrust piece - 3305- as far as the stop.*
- Drive in new oil seal onto stop (take care to keep oil seal straight).



Note

If required, a new dust ring can be pressed onto flange shaft using tube - 2010- . Do not use a hammer.

- Install flange shaft (right-side) ⇒ [page 117](#) .



2 Differential

⇒ [“2.1 Exploded view - differential”, page 115](#)

⇒ [“2.2 Removing and installing flange shaft \(left-side\)”, page 115](#)

⇒ [“2.3 Removing and installing flange shaft \(right-side\)”, page 117](#)

2.1 Exploded view - differential

1 - Bolt

- ☐ 30 Nm

2 - Flange shaft (right-side)

- ☐ With spring
- ☐ Removing and installing
⇒ [page 117](#)

3 - Oil seal

- ☐ For flange shaft (right-side)
- ☐ Renewing ⇒ [page 113](#)

4 - Bolt

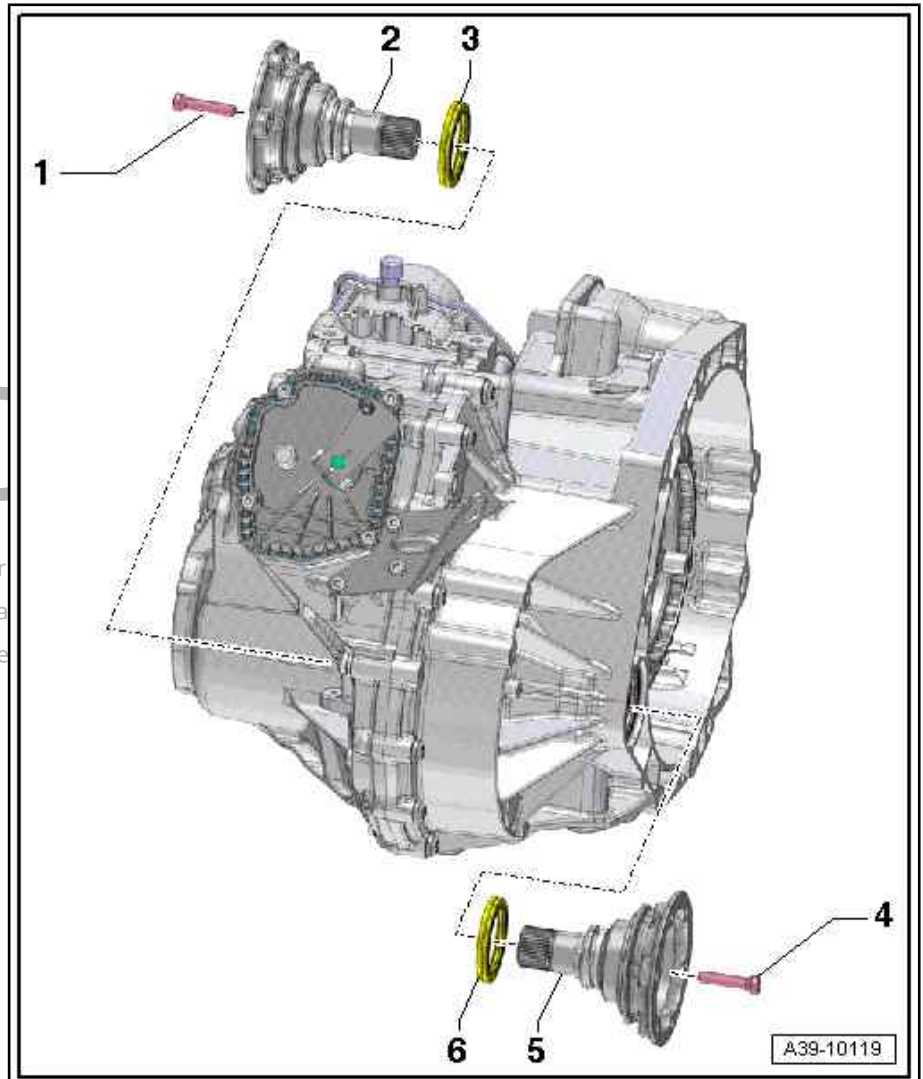
- ☐ 30 Nm

5 - Flange shaft (left-side)

- ☐ With spring
- ☐ Removing and installing
⇒ [page 115](#)

6 - Oil seal

- ☐ For flange shaft (left-side)
- ☐ Renewing ⇒ [page 111](#)



2.2 Removing and installing flange shaft (left-side)

Special tools and workshop equipment required



◆ Extension -2024A/1-



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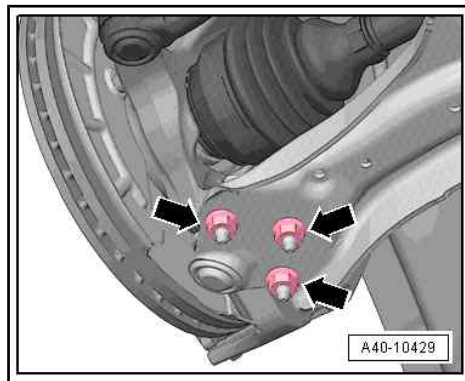
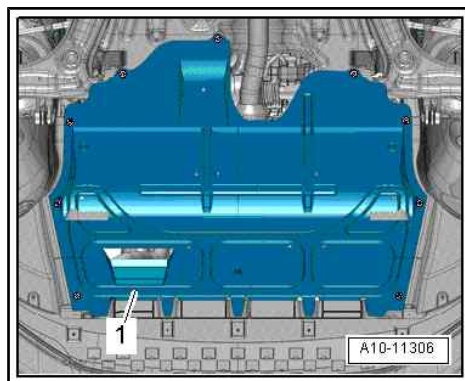


Removing



Note

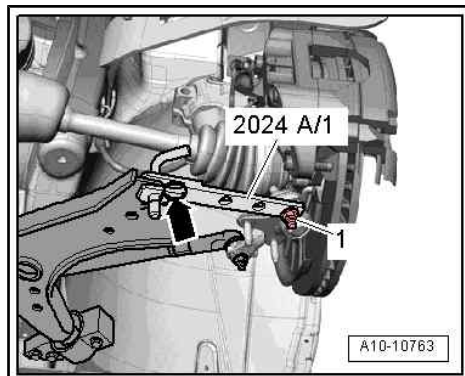
- ◆ ⇒ *"5 Repair instructions", page 9*
- ◆ ⇒ *"5.2 Rules for cleanliness", page 10*
- Remove front left wheel.
- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Remove wheel housing liner (front left) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liners; Removing and installing wheel housing liner (front) .
- Detach drive shaft (left-side) from gearbox and tie up to body ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- Remove nuts -arrows- securing swivel joint (left-side).
- If fitted, unscrew nut on bracket for front left vehicle level sender -G78- .
- Disengage swivel joint from wishbone.
- Swivel suspension strut (left-side) outwards and support with extension -2024 A /1- as shown in illustration.



WARNING

Risk of accidents if components of support are loose

- ◆ *Secure retaining pin and swivel joint with locking pin -arrow- and nut -1-.*



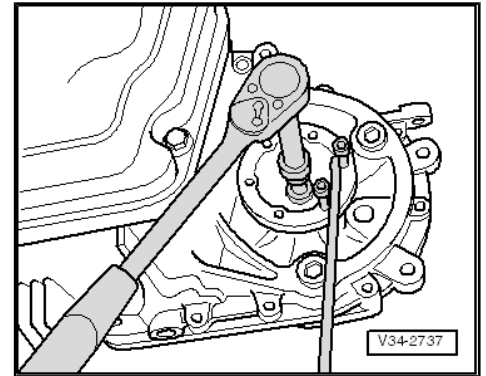


- Remove bolt -arrow- securing flange shaft (left-side). To do so, screw two bolts into flange and counterhold flange shaft with suitable lever.
- Pull out flange shaft together with spring, thrust washer and tapered ring.

Installing

Installation is carried out in reverse sequence; note the following:

- Tightening torque ⇒ [page 115](#)
- Push flange shaft in against spring pressure and secure with bolt.
- Install drive shaft (left-side) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Exploded view - drive shaft .
- Fit front wheel (left-side) ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 44 ; Wheels, tyres .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Renew gear oil ⇒ [page 92](#) .



Note

The gear oil must be renewed; the correct gear oil level cannot be achieved otherwise.

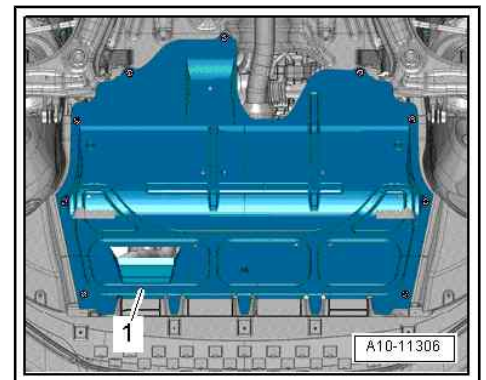
2.3 Removing and installing flange shaft (right-side)

Removing



Note

- ◆ ⇒ ["5 Repair instructions", page 9](#)
- ◆ ⇒ ["5.2 Rules for cleanliness", page 10](#)
- Remove front right wheel.
- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Turn steering to full right lock.
- Detach drive shaft (right-side) from gearbox and tie up to body ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .



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**Vehicles with 1.8 ltr. TFSI / 1.6 ltr. TDI engine (EA288)****Note**

The following illustrations show the left side of the vehicle.

- Remove nuts -arrows- securing swivel joint (right-side).
- Disengage swivel joint (right-side) from wishbone.
- Swivel suspension strut (right-side) outwards and support with extension -2024 A/1-, as shown in illustration.

**WARNING**

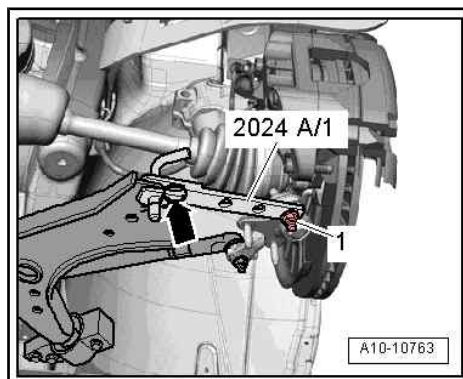
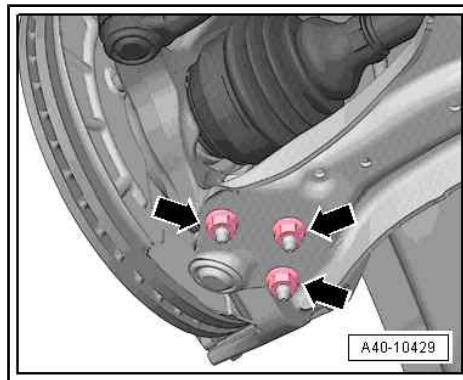
Risk of accidents if components of support are loose

- ◆ *Secure retaining pin and swivel joint with locking pin -arrow- and nut -1-.*

- Tie up drive shaft (right-side).

**Note**

Take care not to damage the surface coating of the drive shaft.

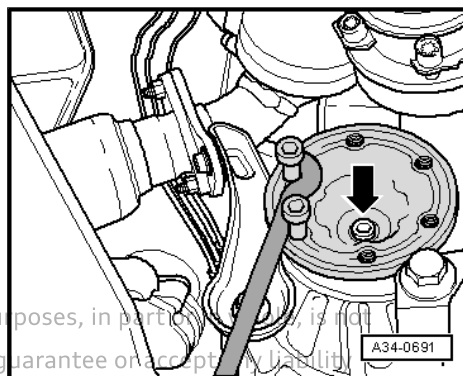
**All vehicles (continued):**

- Remove bolt -arrow- securing flange shaft (right-side). To do so, screw 2 bolts into flange and counterhold flange shaft with suitable lever.
- Pull out flange shaft together with spring, thrust washer and tapered ring.

Installing

Installation is carried out in reverse sequence; note the following:

- Tightening torque ⇒ [page 115](#)
- Push flange shaft in against spring pressure and secure with bolt.
- Install drive shaft (right-side) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Exploded view - drive shaft .
- Fit front wheel (right-side) ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 44 ; Wheels, tyres .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Renew gear oil ⇒ [page 92](#) .

**Note**

The gear oil must be renewed; the correct gear oil level cannot be achieved otherwise.