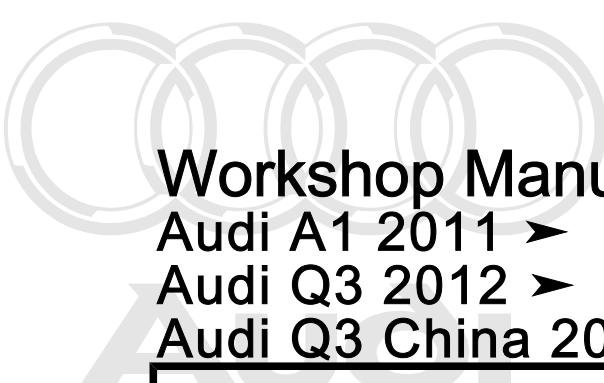




Workshop Manual

Audi A1 2011 ➤

Audi Q3 2012 ➤

Audi Q3 China 2013 ➤

Rear final drive 0AY, 0BR, 0BS, 0CR

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Edition 11.2017

List of Workshop Manual Repair Groups

Repair Group

00 - Technical data

39 - Final drive - rear 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

(ARL005528; Edition 11.2017)

⇒ [“1.1 Identification of final drive”, page 1](#)

⇒ [“1.2 Four-wheel drive coupling identification”, page 2](#)

1.1 Identification of final drive

Identification marking on rear final drive, in this example “final drive 0AV”

-Arrow A- Part number of final drive

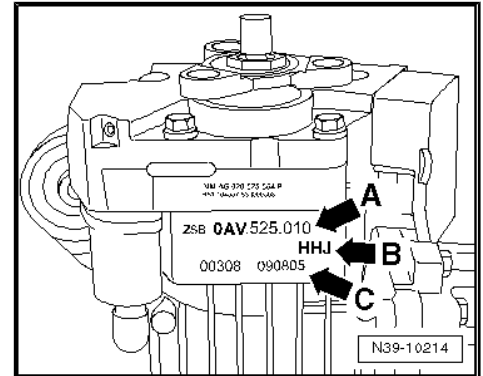
-Arrow B- Code letters of final drive

◆ If the code letters are not shown, the unit can be identified via the Part No. ⇒ Electronic parts catalogue .

-Arrow C- Production date of final drive

Example:

HHJ	09	08	05
Code letters	Day	Month	Year of manufacture
			-2005-



Additional data depend on manufacture.



Note

- ◆ The »four-wheel drive coupling« is incorporated in the rear final drive.
- ◆ The final drive and the four-wheel drive coupling have separate oil circuits.
- ◆ Final drive unit “0BS” is equipped with »four-wheel drive coupling generation IV«. Identification ⇒ [page 2](#) .
- ◆ Final drive units “0AY” and “0CR” are equipped with »four-wheel drive coupling generation V«. Identification ⇒ [page 2](#) .
- ◆ On the Audi A1 quattro, final drive unit “0BR” is equipped with »four-wheel drive coupling generation IV«. On the Audi S1, »four-wheel drive coupling generation V« is fitted. Identification ⇒ [page 2](#)

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Identification example: "0BS"



Note

The identification -arrow- on the underside of the final drive unit indicates which final drive version is installed.

The rear final drive 0BS was installed in the Audi Q3 until 04.11.2013 and fitted in conjunction with the following gearbox types:

- ◆ 6-speed manual gearbox 02Q, four-wheel drive
- ◆ 6-speed manual gearbox 0A6, four-wheel drive
- ◆ 7-speed dual clutch gearbox 0BH (S tronic)

The rear final drive 0AY has been installed in the Audi Q3 since 04.11.2013 and is fitted in conjunction with the following gearbox types:

- ◆ 6-speed manual gearbox 02Q, four-wheel drive
- ◆ 6-speed manual gearbox 0A6, four-wheel drive
- ◆ 7-speed dual clutch gearbox 0BH (S tronic)
- ◆ 6-speed automatic gearbox 09M

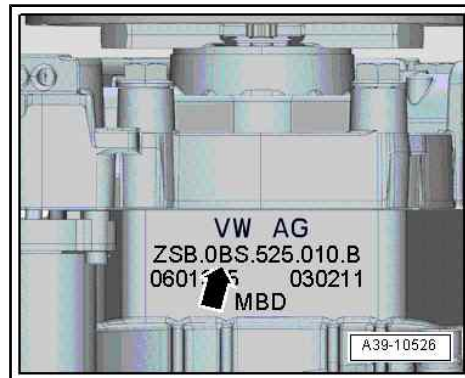
The rear final drive 0CR has been installed in the Audi RS Q3 since 19.01.2015 and is fitted in conjunction with the following gearbox types:

- ◆ 7-speed dual clutch gearbox 0BH (S tronic)

The rear final drive 0BR is installed in the Audi A1 and is fitted in conjunction with the following gearbox types:

- ◆ 6-speed manual gearbox 0A8, four-wheel drive

Rear final drive allocation ➔ [page 4](#)



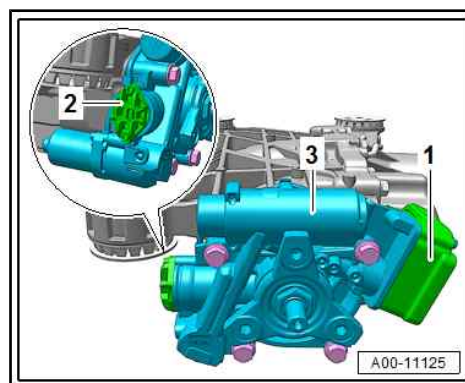
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1.2 Four-wheel drive coupling identification

Different generations of the four-wheel drive coupling may be fitted (this is not linked to the rear final drive version). The distinguishing features of the different generations are as follows:

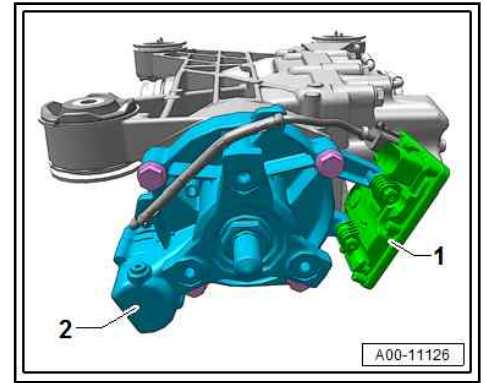
Four-wheel drive coupling, generation 4

- ◆ -1- Control unit with pressure regulating valve (bolted on at side)
- ◆ -2- High-pressure pump with filter
- ◆ -3- Accumulator



Four-wheel drive coupling, generation 5

- ◆ -1- Control unit (bolted on at front)
- ◆ -2- High-pressure pump



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2 Technical data

⇒ "2.1 Allocation: rear final drive - engine", page 4

⇒ "2.2 Capacities", page 6

2.1 Allocation: rear final drive - engine

⇒ "2.1.1 Audi Q3 with rear final drive 0BS", page 4

⇒ "2.1.2 Audi Q3 with rear final drive 0AY", page 5

⇒ "2.1.3 Audi RS Q3 with rear final drive 0CR", page 5

⇒ "2.1.4 Audi A1 with rear final drive 0BR", page 5

⇒ "2.1.5 Audi S1 with rear final drive 0BR", page 6

2.1.1 Audi Q3 with rear final drive 0BS

Rear final drive 0BS				
with four-wheel drive coupling generation IV				
Part No.		0BS.525.010.B	0BS.525.010.C	0BS.525.010.J
Code letters		MBD	NVK	PYF
Manufactured	from	06.11	06.11	05.13
	to	09.11	11.13	11.13
Allocation	Model	Audi Q3 2012 ►	Audi Q3 2012 ►	Audi Q3 2012 ►
Ratio: Z ₂ : Z ₁	Final drive (rear)	27 : 17 = 1.588	27 : 17 = 1.588	27 : 17 = 1.588
The following data can be found in the ⇒ Electronic parts catalogue				
◆ Allocation of gearbox				
◆ Allocation of drive shaft flanges				

Rear final drive 0BS				
with four-wheel drive coupling generation IV				
Part No.		0BS.525.010.K	0BS.525.010.H	0BS.525.010.L
Code letters		PYX	PYN	QMA
Manufactured	from	11.13	01.14	01.15
	to	03.15	01.15	01.16
Allocation	Model	Audi Q3 2012 ►	Audi Q3 2012 ►	Audi Q3 2012 ►
Ratio: Z ₂ : Z ₁	Final drive (rear)	27 : 17 = 1.588	27 : 17 = 1.588	27 : 17 = 1.588
The following data can be found in the ⇒ Electronic parts catalogue				
◆ Allocation of gearbox				
◆ Allocation of drive shaft flanges				

2.1.2 Audi Q3 with rear final drive 0AY

Rear final drive 0AY			
with four-wheel drive coupling generation V			
Part No.	0AY.525.010.F	0AY.525.010.N	0AY.525.010.Q
Code letters	PGA	QLY	QLZ
Manufactured from to	11.13 06.15	11.13	08.15
Allocation Model	Audi Q3 2012 ►	Audi Q3 2012 ►	Audi Q3 2012 ►
Ratio: Z ₂ : Z ₁ Final drive (rear)	27 : 17 = 1.588	27 : 17 = 1.588	27 : 17 = 1.588
The following data can be found in the ⇒ Electronic parts catalogue			
◆ Allocation of gearbox			
◆ Allocation of drive shaft flanges			

2.1.3 Audi RS Q3 with rear final drive 0CR

Rear final drive 0CR			
with four-wheel drive coupling generation V			
Part No.	0CR.525.010.D		
Code letters	QPG		
Manufactured from to	01.15		
Allocation Model	Audi Q3 2012 ►		
Ratio: Z ₂ : Z ₁ Final drive (rear)	27 : 17 = 1.588		
The following data can be found in the ⇒ Electronic parts catalogue			
◆ Allocation of gearbox			
◆ Allocation of drive shaft flanges			

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2.1.4 Audi A1 with rear final drive 0BR

Rear final drive 0BR			
with four-wheel drive coupling generation IV			
Part No.	0BR.525.010.D		
Code letters	NVD		
Manufactured from to	03.12 11.12		
Allocation Model	Audi A1 2011 ►		
Engine	2.0 ltr. TFSI - 188 kW		
Ratio: Z ₂ : Z ₁ Final drive (rear)	27 : 17 = 1.588		



Rear final drive 0BR			
with four-wheel drive coupling generation IV			
Part No.	0BR.525.010.D		
Code letters	NVD		
The following data can be found in the ⇒ Electronic parts catalogue			
◆ Allocation of gearbox			
◆ Allocation of drive shaft flanges			

2.1.5 Audi S1 with rear final drive 0BR

Rear final drive 0BR			
with four-wheel drive coupling generation V			
Part No.	0BR.525.010.J	0BR.525.010.E	
Code letters	PQX	PFZ	
Manufactured from to	01.14 10.15	10.15	
Allocation Model Engine	Audi A1 2011 ► 2.0 ltr. TFSI - 170 kW	Audi A1 2011 ► 2.0 ltr. TFSI - 170 kW	
Ratio: Z ₂ : Z ₁ Final drive (rear)	27 : 17 = 1.588	27 : 17 = 1.588	
The following data can be found in the ⇒ Electronic parts catalogue			
◆ Allocation of gearbox			
◆ Allocation of drive shaft flanges			

2.2 Capacities

⇒ [“2.2.1 Capacities - rear final drive 0BS”, page 6](#)

⇒ [“2.2.2 Capacities - rear final drive 0AY”, page 7](#)

⇒ [“2.2.3 Capacities - rear final drive 0BR”, page 7](#)

⇒ [“2.2.4 Capacities - rear final drive 0CR”, page 8](#)

2.2.1 Capacities - rear final drive 0BS

Rear final drive	0BS
	(four-wheel drive coupling, generation IV)
Capacity of final drive	0.95 ltr.
Capacity of four-wheel drive coupling	0.85 ltr.
Oil change capacity in four-wheel drive coupling • For change interval, refer to ⇒ Maintenance tables	0.70 ltr.

Rear final drive	0BS
The following data can be found in the ⇒ Electronic parts catalogue	
◆ Specification of gear oil for rear final drive	
◆ Specification of high-performance oil for four-wheel drive coupling	

2.2.2 Capacities - rear final drive 0AY

Rear final drive	0AY
	(four-wheel drive coupling, generation V)
Capacity of final drive	0.95 ltr.
Capacity of four-wheel drive coupling	0.85 ltr.
Oil change capacity in four-wheel drive coupling • For change interval, refer to ⇒ Maintenance tables	0.65 ltr.
The following data can be found in the ⇒ Electronic parts catalogue	
◆ Specification of gear oil for rear final drive	
◆ Specification of high-performance oil for four-wheel drive coupling	

2.2.3 Capacities - rear final drive 0BR

Rear final drive	0BR
	(four-wheel drive coupling, generation IV in Audi A1 quattro) (four-wheel drive coupling, generation V in Audi S1)
Capacity of final drive	0.95 ltr.
Capacity of four-wheel drive coupling	0.85 ltr.
Oil change capacity in four-wheel drive coupling • For change interval, refer to ⇒ Maintenance tables	0.70 ltr.
The following data can be found in the ⇒ Electronic parts catalogue	
◆ Specification of gear oil for rear final drive	
◆ Specification of high-performance oil for four-wheel drive coupling	

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2.2.4 Capacities - rear final drive 0CR

Rear final drive	0CR
	(four-wheel drive coupling, generation V)
Capacity of final drive	0.95 ltr.
Capacity of four-wheel drive coupling	0.75 ltr.
Oil change capacity in four-wheel drive coupling • For change interval, refer to ⇒ Maintenance tables	0.65 ltr.
The following data can be found in the ⇒ Electronic parts catalogue ◆ Specification of gear oil for rear final drive ◆ Specification of high-performance oil for four-wheel drive coupling	

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3 Transmission layout

⇒ **“3.1 Transmission layout - four-wheel drive”, page 9**

3.1 Transmission layout - four-wheel drive

◆ Illustrated with 6-speed manual gearbox 02Q, four-wheel drive

Identification

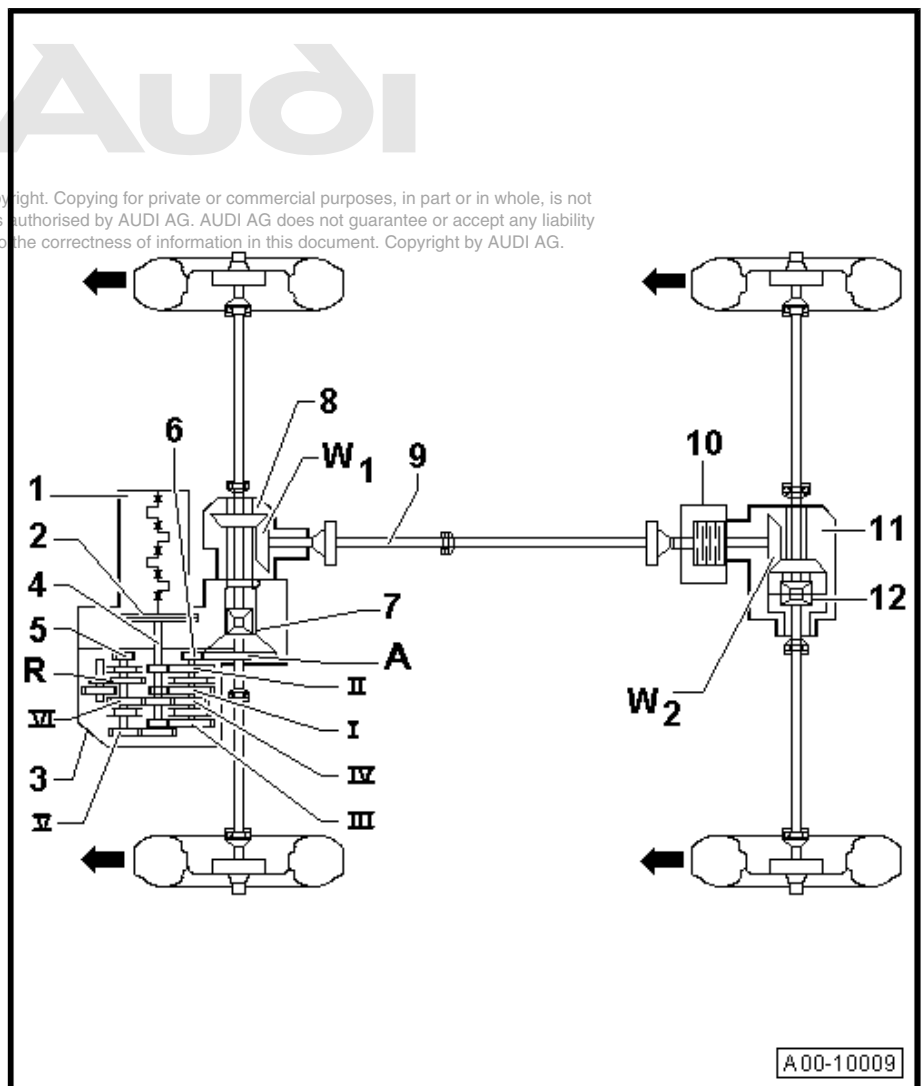


Note

-Arrows- point in direction of travel.

- 1 - Engine
- 2 - Clutch
- 3 - Manual or dual clutch gear-box
- 4 - Input shaft
- 5 - Output shaft for 5th, 6th and reverse gear
- 6 - Output shaft for 1st - 4th gear
- 7 - Differential
- 8 - Bevel box
- 9 - Propshaft
- 10 - Four-wheel drive coupling
- 11 - Rear final drive
- 12 - Differential

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Ratio

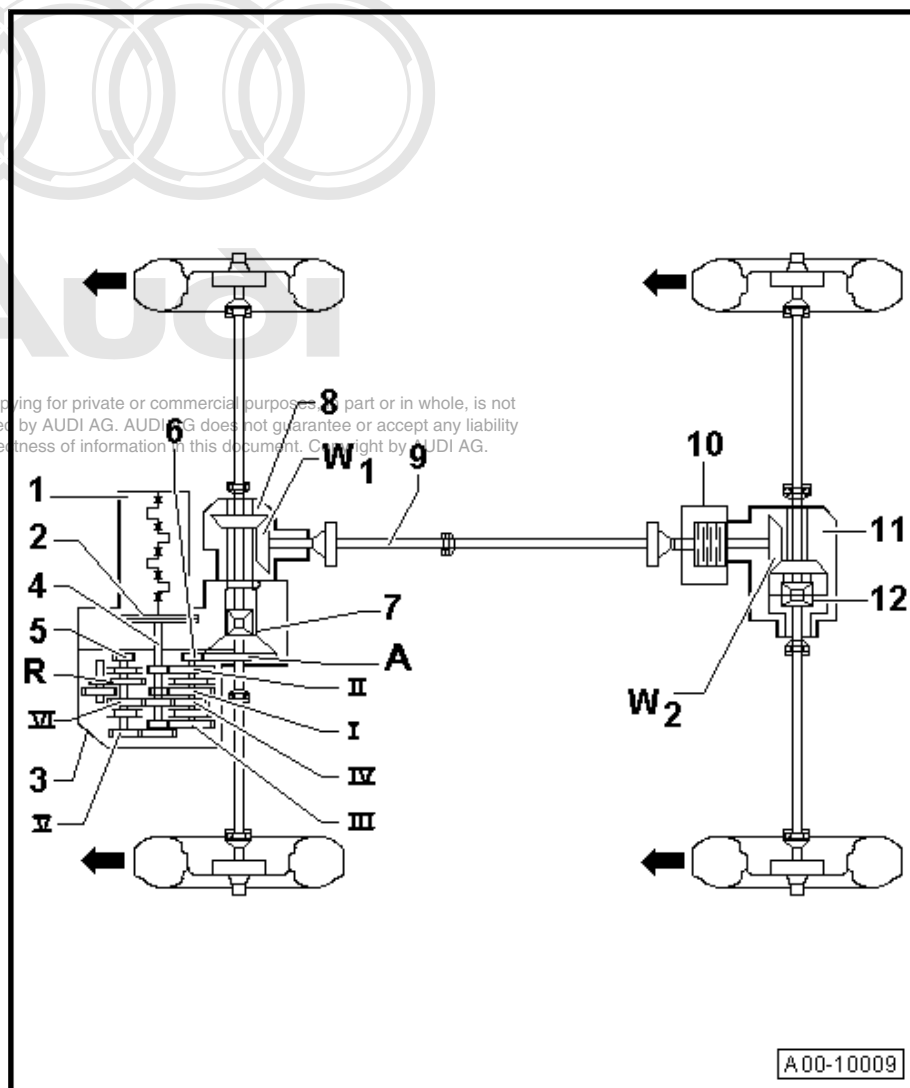


Note

-Arrows- point in direction of travel.

- I - 1st gear
- II - 2nd gear
- III - 3rd gear
- IV - 4th gear
- V - 5th gear
- VI - 6th gear
- R - Reverse gear
- A - Final drive
- W 1 - Front bevel gears
- W 2 - Rear bevel gears

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4 Repair instructions

⇒ [“4.1 General repair instructions”, page 11](#)

⇒ [“4.2 Gear oil and oil for four-wheel drive coupling”, page 13](#)

⇒ [“4.3 Contact corrosion”, page 13](#)

4.1 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.

A number of generally applicable instructions for the various repair procedures - which were previously repeated at numerous places in the Workshop Manual - are summarised here. They apply to the work described in this Manual.

Guided Fault Finding, Vehicle self-diagnosis and Test Instruments

- ◆ Before servicing the four-wheel drive coupling, the exact cause of the failure must be determined as precisely as possible via the ⇒ Vehicle diagnostic tester in the modes “Guided Fault Finding”, “Vehicle Self-Diagnosis” and “Test Instruments”.
- ◆ To avoid any risk of accident, observe the ⇒ [“5 Safety precautions”, page 15](#) when road-testing the vehicle and using test equipment.
- Connect ⇒ Vehicle diagnostic tester and select functions.

Special tools

For a complete list of special tools used in this Workshop Manual ⇒ “Workshop equipment and special tools” .

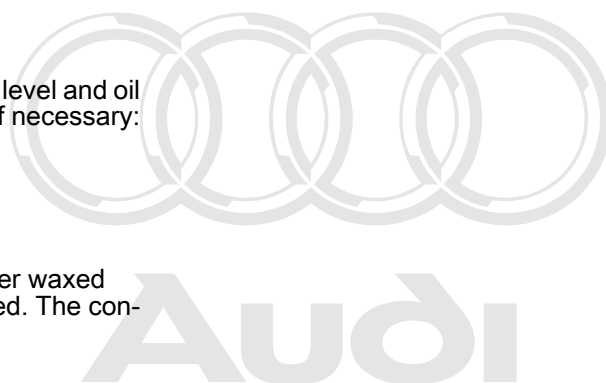
Rear final drive

- ◆ When renewing the rear final drive, check gear oil level and oil level of the four-wheel drive coupling and top up if necessary: ⇒ [page 143](#) and ⇒ [page 138](#) .
- ◆ Capacities ⇒ [page 6](#) .
- ◆ Specifications ⇒ Electronic parts catalogue
- ◆ When installing mounting brackets as well as other waxed components, the contact surfaces must be cleaned. The contact surfaces must be free of wax and grease.

Oil seals, seals, O-rings and gaskets

- ◆ Always renew O-rings, seals, oil seals and gaskets.
- ◆ After removing gaskets and oil seals, always inspect the contact surface on housings or shafts for burrs resulting from removal or for other signs of damage and rectify any damage found.
- ◆ Thoroughly clean joint surfaces.

Before installation:



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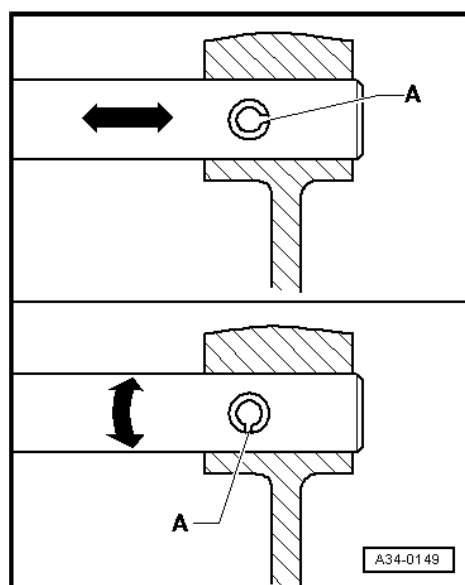
- ◆ Before installing oil seals, lightly oil the outer circumference of the seal and fill the space between the sealing lips -arrow- about half full with grease - G 052 128 A1- .
- ◆ Before installing, lightly oil outer circumference of oil seals for propshaft flange and fill space between sealing lips with high-performance oil for four-wheel drive coupling .
- ◆ The open side of the oil seal should face the side containing the fluid.

After installation:

- ◆ Check gear oil level in rear final drive ⇒ [page 143](#) .
- ◆ Check oil level in four-wheel drive coupling and top up as necessary ⇒ [page 138](#) .

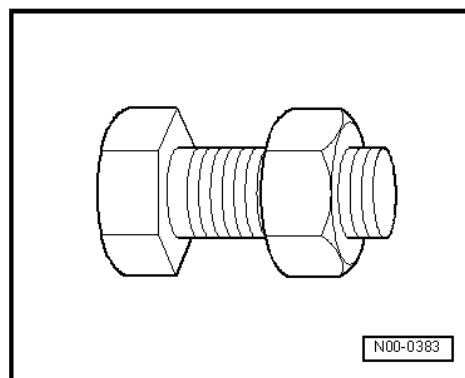
Locking elements

- ◆ Do not over-stretch circlips.
- ◆ Always renew circlips which have been damaged or over-stretched.
- ◆ Circlips must be properly seated in the base of the groove.
- ◆ Renew spring pins. Position: the slit -A- should be in line with the line of force -arrow-.



Nuts, bolts

- ◆ Nuts and bolts for securing covers and housings must be slackened and tightened in diagonal sequence.
- ◆ Loosen and tighten particularly sensitive parts in diagonal sequence and in stages, taking care to keep them straight.
- ◆ The tightening torques stated apply to non-oiled nuts and bolts.
- ◆ Always renew self-locking bolts and nuts.
- ◆ Threaded holes which take self-locking bolts or bolts coated with locking fluid must be cleaned (using a thread tap or similar). Otherwise there is a danger of the bolts shearing off the next time they are removed.
- ◆ For all threaded connections, ensure that (where applicable) the contact surfaces and the nuts and bolts are not coated with wax until after assembly is completed.

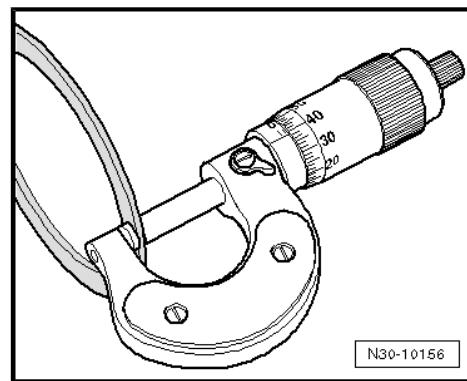


Bearings

- ◆ Install needle bearings so the lettering (side with thicker metal) faces towards the installing tool.
- ◆ Lubricate all bearings with gear oil before installing.

Shims

- ◆ Measure shims at several points with a micrometer. Tolerance variations make it possible to obtain the exact shim thickness required.
- ◆ Check for burrs and damage.
- ◆ Install only shims which are in perfect condition.



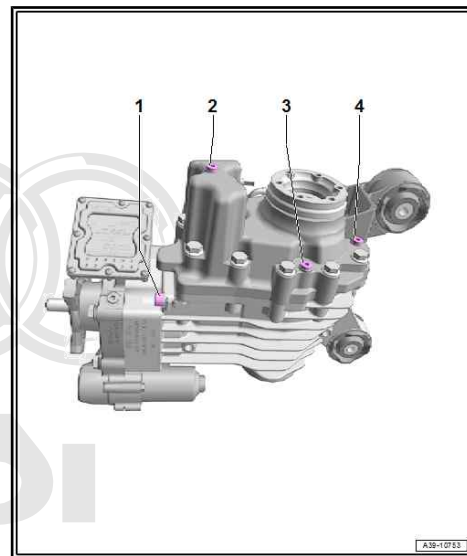
4.2 Gear oil and oil for four-wheel drive coupling

- ◆ The final drive and the four-wheel drive coupling have separate oil circuits.
- ◆ The four-wheel drive coupling is filled with high-performance oil for four-wheel drive coupling . For part number, refer to ⇒ Electronic parts catalogue .
- ◆ The final drive is filled with gear oil. For part number, refer to ⇒ Electronic parts catalogue .

Location of oil filler plugs and drain plugs

- 1 - Drain plug for high-performance oil for four-wheel drive coupling
- 2 - Filler plug for high-performance oil for four-wheel drive coupling
- 3 - Drain plug for gear oil
- 4 - Filler plug for gear oil

- ◆ Checking oil level in rear final drive and topping up ⇒ [page 143](#) .
- ◆ Checking oil level in four-wheel drive coupling and topping up ⇒ [page 138](#) .
- ◆ Do not use any »additives« in the oil.
- ◆ Do not re-use oil that has been drained off.



Disposal regulations for oils

Drained oil must be disposed of properly.

- ◆ Improper disposal of used oil endangers the environment.
- ◆ It must not be mixed with solvents, brake fluid, coolant or similar.
- ◆ Please observe the information shown on the packaging of the oil.

4.3 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.

Rubber or plastic parts and adhesives also consist of non-conductive materials.

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

Please note:

- ◆ Use only genuine spare parts: these have been fully 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.



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5 Safety precautions

⇒ ["5.1 General safety precautions", page 15](#)

⇒ ["5.2 Safety precautions when using testers and measuring instruments during a road test", page 15](#)

⇒ ["5.3 Safety precautions when working on vehicles with start/stop system", page 15](#)

5.1 General safety precautions

Accident risk; vehicle may start to move

If you select a gear while the engine is running, the vehicle may start to move.

- Move selector lever to position "P".
 - Apply parking brake.
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Risk of irreparable damage to electronic components

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

- Always switch off the ignition before disconnecting the battery.

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

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

Risk of injury if test equipment is not secured

If an accident occurs and the front passenger's airbag is triggered, test equipment which is not secured adequately may be catapulted through the vehicle with potentially serious consequences.

- Secure test equipment on the rear seat with a strap.

Or:

- Have a second mechanic operate test equipment on the rear seat.

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

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

Risk of injury - engine may start unexpectedly

The engine can start unexpectedly if the vehicle's start/stop system is activated. A message in the instrument cluster indicates whether the start/stop system is activated.

- To deactivate the start/stop system, switch off the ignition.



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6 Electrical components

⇒ [“6.1 Overview of fitting locations - electrical components”, page 17](#)

6.1 Overview of fitting locations - electrical components

⇒ [“6.1.1 Overview of fitting locations - electrical components, generation IV”, page 17](#)

⇒ [“6.1.2 Overview of fitting locations - electrical components, generation V”, page 17](#)

6.1.1 Overview of fitting locations - electrical components, generation IV

⇒ [“1.2 Four-wheel drive coupling identification”, page 2](#)

1 - All-wheel drive control unit - J492-

- ❑ Important signals are transferred to all-wheel drive control unit from the engine control unit and the ABS with EDL control unit J104 via data bus.

- ❑ Exploded view

⇒ [page 132](#)

- ❑ Removing and installing

⇒ [page 133](#)

2 - Coupling opening control valve - N373-

3 - All-wheel drive coupling pump - V181-

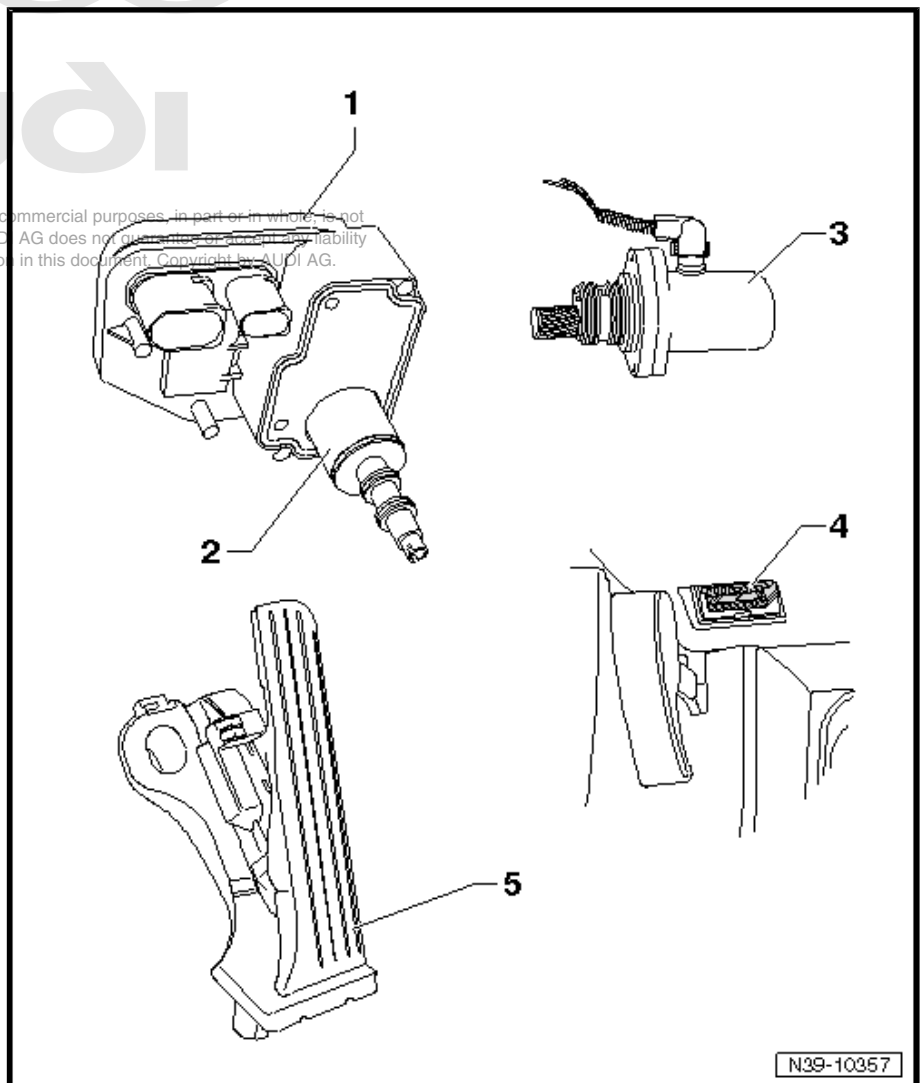
- ❑ Can be checked in “Guided fault finding” using vehicle diagnostic tester
- ❑ Removing and installing

⇒ [page 126](#)

4 - Diagnostic connection

- ❑ Fitting location: front footwell (left-side)

5 - Accelerator position sender - G79-



6.1.2 Overview of fitting locations - electrical components, generation V

⇒ [“1.2 Four-wheel drive coupling identification”, page 2](#)

1 - All-wheel drive control unit - J492-

- ❑ Important signals are transferred to all-wheel drive control unit from the engine control unit and the ABS with EDL control unit - J104- via data bus.
- ❑ Removing and installing
⇒ [page 136](#)

2 - All-wheel drive coupling pump - V181-

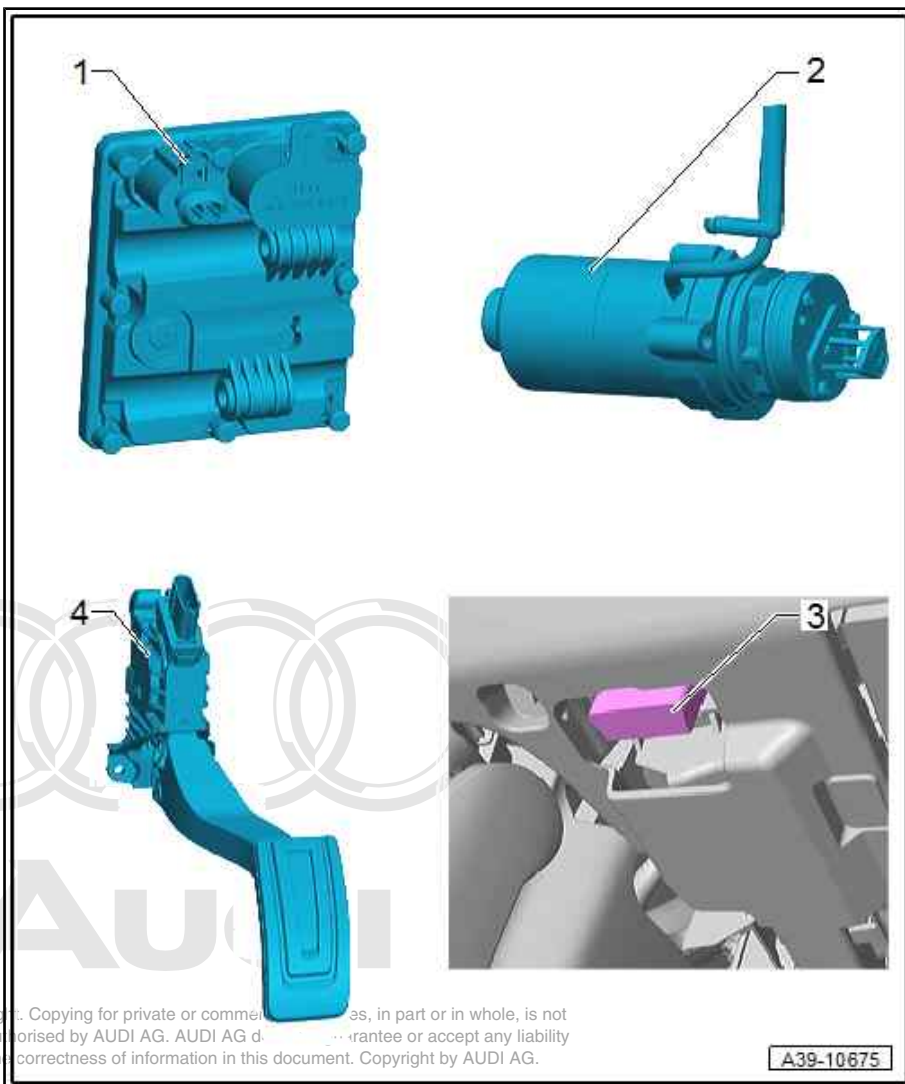
- ❑ Can be checked in "Guided fault finding" using vehicle diagnostic tester
- ❑ Removing and installing
⇒ [page 130](#)

3 - Diagnostic connection

- ❑ Fitting location: front footwell (left-side)

4 - Accelerator position sender - G79- and accelerator position sender 2 - G185-

- ❑ Removing and installing
⇒ Rep. gr. 20 ; Accelerator mechanism



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A39-10675

39 – Final drive - rear differential

1 Propshaft

⇒ [“1.1 Exploded view - propshaft”, page 19](#)

⇒ [“1.2 Removing and installing propshaft”, page 23](#)

⇒ [“1.3 Removing and installing flexible coupling \(rear\)”, page 46](#)

1.1 Exploded view - propshaft

⇒ [“1.1.1 Exploded view - propshaft, Audi Q3 \(not Audi RS Q3\)”, page 19](#)

⇒ [“1.1.2 Exploded view - propshaft, Audi RS Q3”, page 21](#)

⇒ [“1.1.3 Exploded view - propshaft, Audi A1”, page 22](#)

1.1.1 Exploded view - propshaft, Audi Q3 (not Audi RS Q3)

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Note

- ◆ *No repairs can be performed on the propshaft.*
- ◆ *The front propshaft tube cannot be separated from the rear propshaft tube.*

1 - Gearbox with bevel box

2 - Bolt

- ☐ 50 Nm and 90°
- ☐ Secures front flexible coupling to propshaft
- ☐ Always renew

3 - Flexible coupling (front)

- ☐ Installation position: open side of heat shield points towards gearbox

4 - Bolt

- ☐ 60 Nm
- ☐ Secures flexible coupling to bevel box

5 - Propshaft

- ☐ Cannot be separated at centre joint -arrow-
- ☐ Removing and installing ⇒ [page 23](#)

6 - Bolt

- ☐ 25 Nm

7 - Centre bearing

- ☐ Align so that components are free of stress

8 - Bolt

- ☐ 50 Nm and 90°
- ☐ Secures rear flexible coupling to propshaft
- ☐ Always renew

9 - Bolt

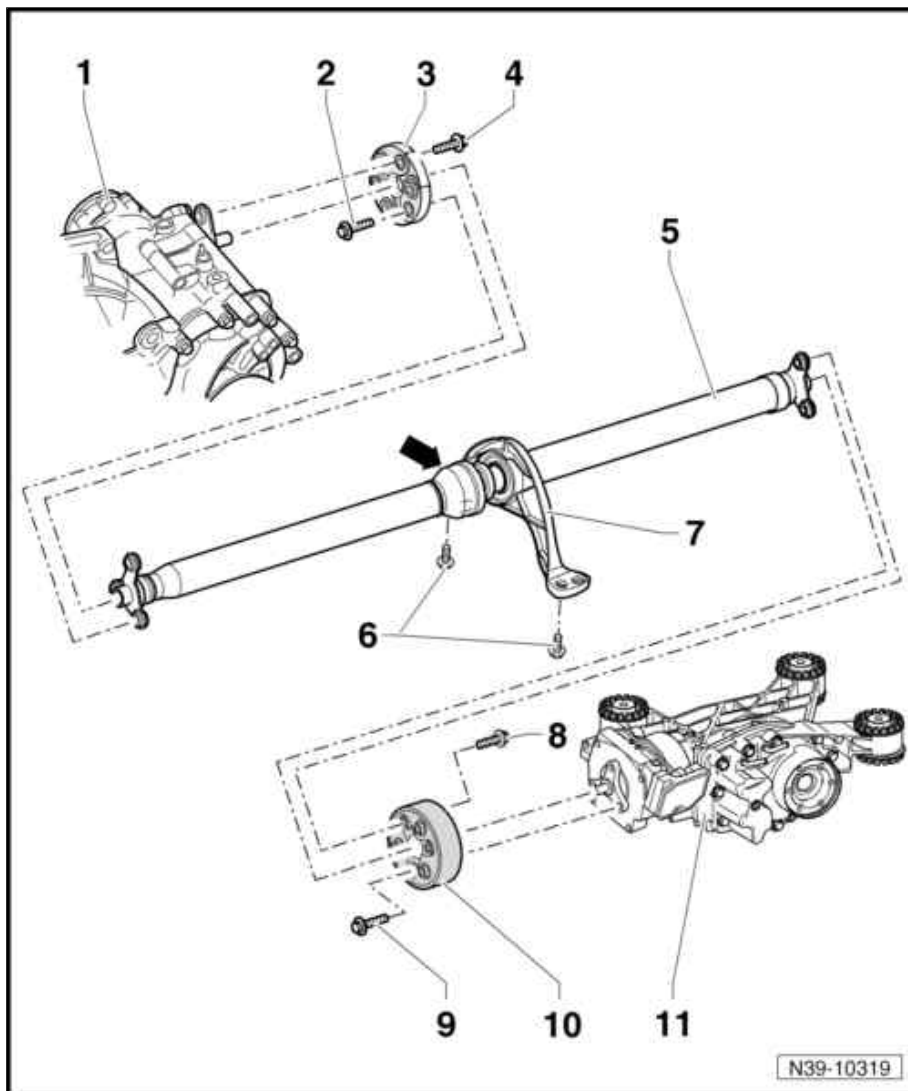
- ☐ 60 Nm
- ☐ Secures flexible coupling to final drive

10 - Flexible coupling with vibration damper

- ☐ Heat shield faces towards propshaft
- ☐ Removing and installing ⇒ [page 46](#)

11 - Rear final drive

- ☐ Removing and installing ⇒ [page 52](#)



1.1.2 Exploded view - propshaft, Audi RS Q3



No repairs can be performed on the propshaft.

1 - Gearbox with bevel box

2 - Bolt

- ☐ 60 Nm
- ☐ Secures propshaft to bevel box

3 - Propshaft

- ☐ Cannot be separated at centre joint - arrow -
- ☐ Removing and installing ⇒ [page 28](#)

4 - Bolt

- ☐ 25 Nm

5 - Centre bearing

- ☐ Align so that components are free of stress

6 - Bolt

- ☐ 50 Nm and 90°
- ☐ Secures rear flexible coupling to propshaft
- ☐ Always renew

7 - Bolt

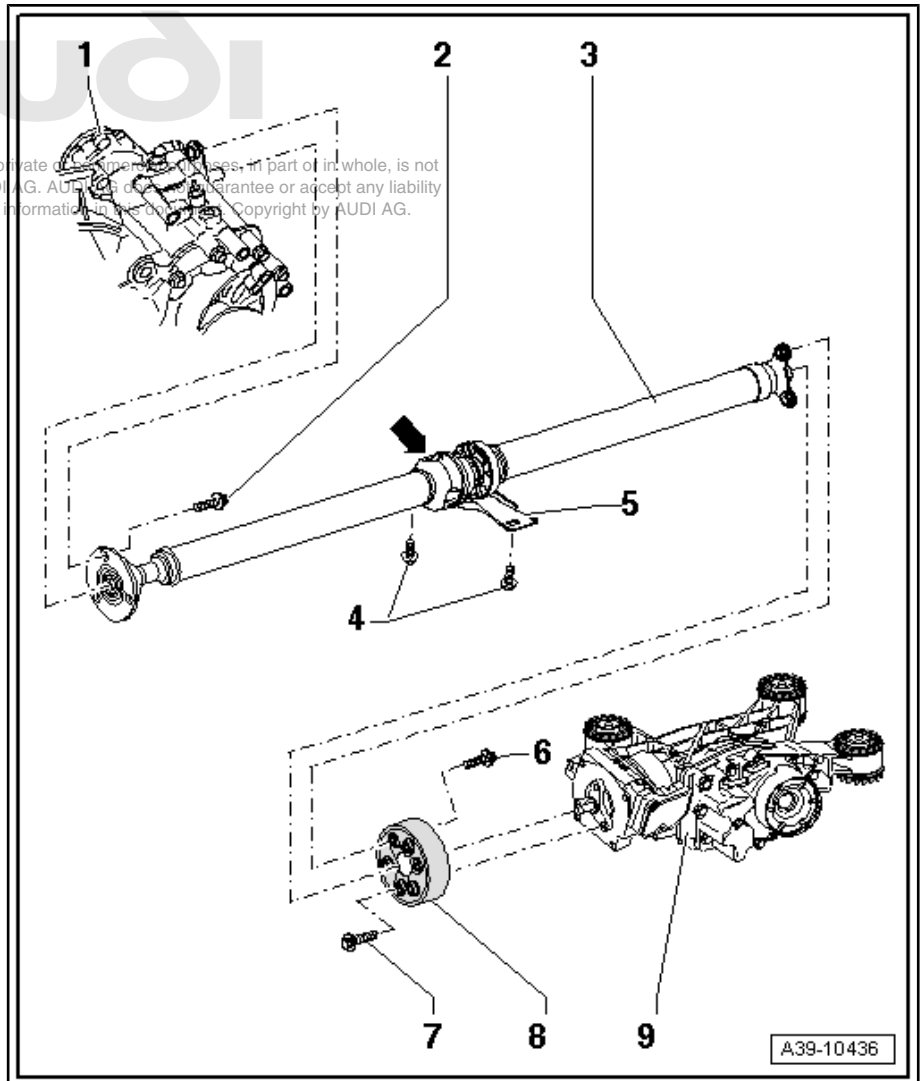
- ☐ 60 Nm
- ☐ Secures flexible coupling to final drive

8 - Flexible coupling with vibration damper

- ☐ Heat shield faces towards propshaft
- ☐ Removing and installing ⇒ [page 46](#)

9 - Rear final drive

- ☐ Removing and installing ⇒ [page 52](#)



1.1.3 Exploded view - propshaft, Audi A1



Note

- ◆ No repairs can be performed on the propshaft.
- ◆ The front propshaft tube cannot be separated from the rear propshaft tube.

1 - Heat shield

- ☐ For centre bearing of propshaft

2 - Bolt with washer

- ☐ 25 Nm
- ☐ Secures centre bearing of propshaft and heat shield on body

3 - Flange nut

- ☐ 8 Nm
- ☐ Secures heat shield to bevel box

4 - Circlip

- ☐ Always renew
⇒ [page 23](#)
- ☐ Fit into rear groove of output shaft/shaft bevel gear in bevel box

5 - O-ring

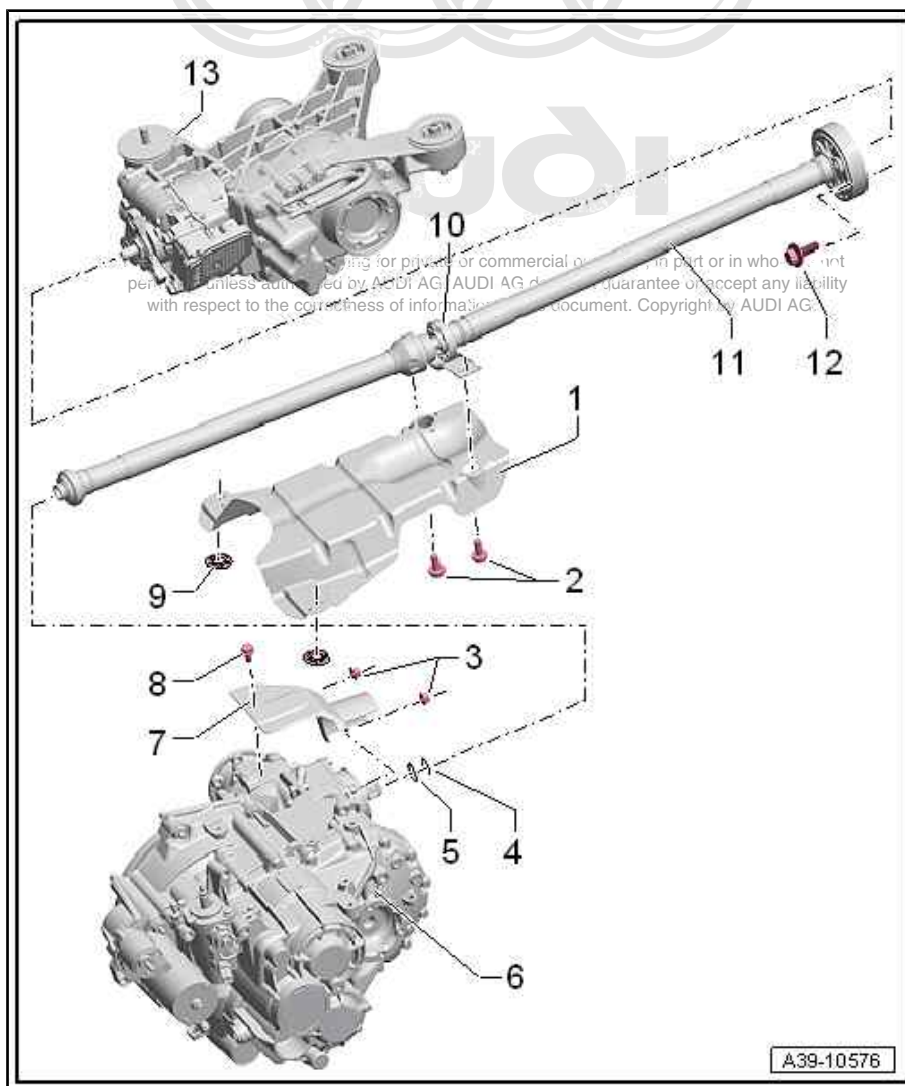
- ☐ Always renew
- ☐ Fit into front groove of output shaft/shaft bevel gear in bevel box

6 - Gearbox with bevel box

- ☐ Lubricate splines of output shaft/shaft bevel gear in bevel box with grease for clutch plate splines - G 000 100-

7 - Heat shield

- ☐ For bevel box and propshaft



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Note

Heat shield can only be removed and installed after front exhaust pipe has been removed

8 - Bolt

- ☐ 8 Nm
- ☐ Secures heat shield to gearbox carrier

9 - Clamping washer

10 - Centre bearing

- ☐ Align so that components are free of stress

11 - Propshaft

- ☐ Cannot be separated at centre joint
- ☐ Removing and installing ⇒ [page 34](#)

12 - Bolt

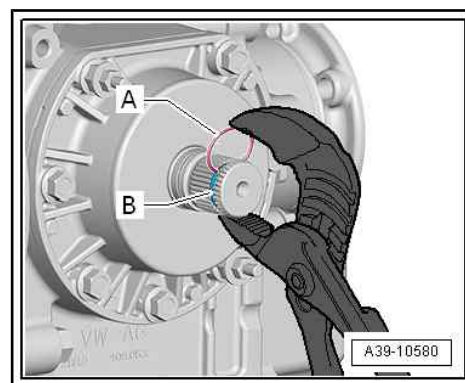
- ☐ 60 Nm
- ☐ 3x
- ☐ Secures flexible coupling of propshaft to rear final drive

13 - Rear final drive

- ☐ Removing and installing ⇒ [page 60](#)

Renewing circlip on output shaft/shaft bevel gear in bevel box

- Circlip must always be renewed after detaching propshaft.
- Use new circlip -A- to press old circlip -B- out of groove in output shaft/shaft bevel gear in bevel box.



1.2 Removing and installing propshaft

⇒ [“1.2.1 Removing and installing propshaft - Audi Q3 \(not Audi RS Q3\)”, page 23](#)

⇒ [“1.2.2 Removing and installing propshaft - Audi RS Q3”, page 28](#)

⇒ [“1.2.3 Removing and installing propshaft - Audi A1 quattro”, page 34](#)

⇒ [“1.2.4 Removing and installing propshaft - Audi S1”, page 39](#)

1.2.1 Removing and installing propshaft - Audi Q3 (not Audi RS Q3)

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1332-

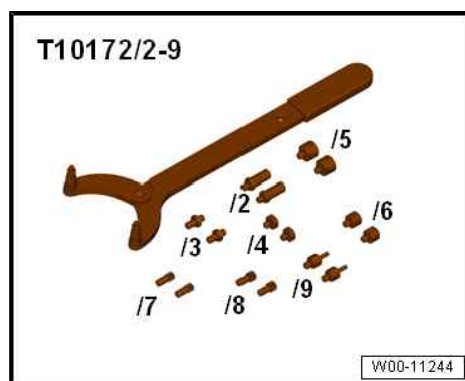


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- ◆ Engine and gearbox jack - V.A.G 1383 A-



- ◆ Counterhold tool - T10172- with adapters - T10172/5-



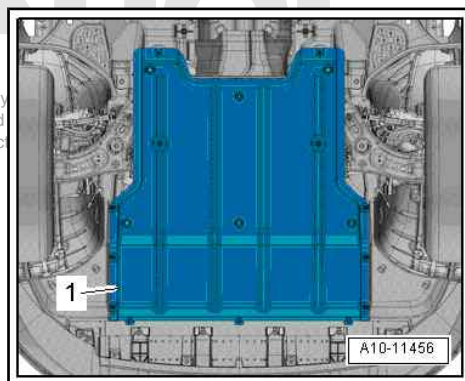
Removing



Note

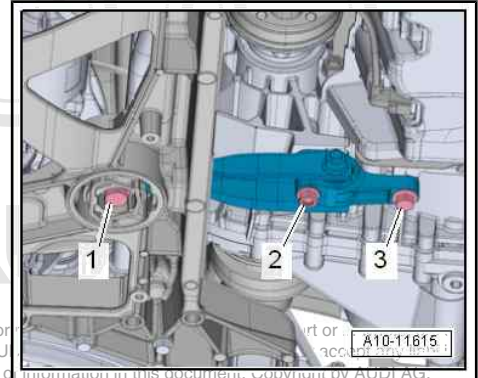
- ◆ Repairs on the propshaft should preferably be carried out on a two-pillar hoist.
 - ◆ Before removing, mark the positions of all parts in relation to each other. Reinstall in the same position to avoid excessive imbalance, which could result in bearing damage and rumbling noises.
 - ◆ Do not bend propshaft; only store and transport fully extended.
 - ◆ Always support the propshaft during removal; it must not be suspended from one of the joints.
 - ◆ Always keep the propshaft horizontal while pulling it off or fitting it on the centring pin.
- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .

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- Remove bolts -2- and -3- for pendulum support.



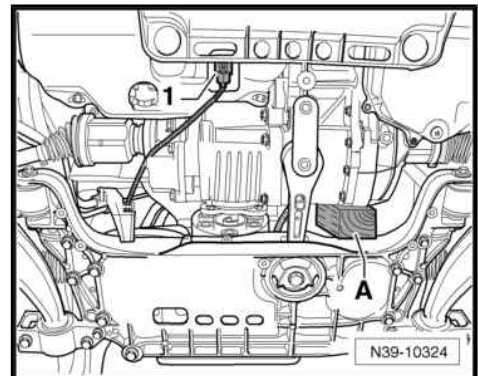
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- Push engine/gearbox assembly forwards and secure with a suitable block of wood -A-.

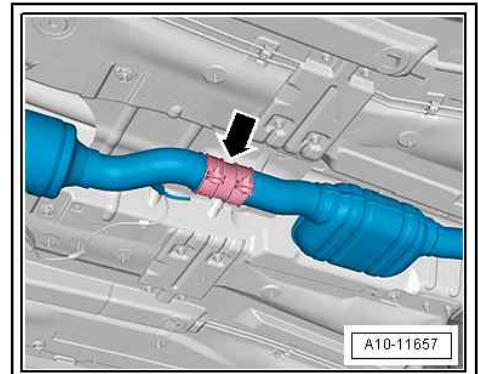


Note

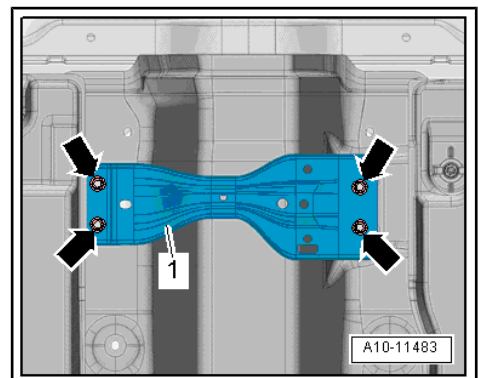
Disregard -item 1-.



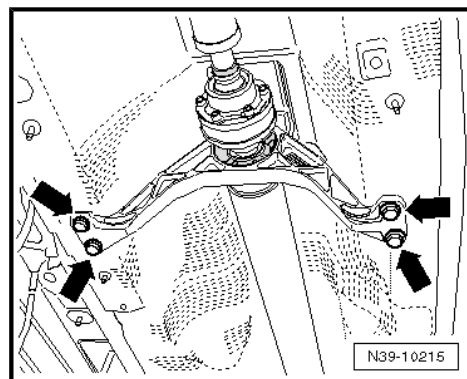
- Disconnect exhaust system at clamp -arrow- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



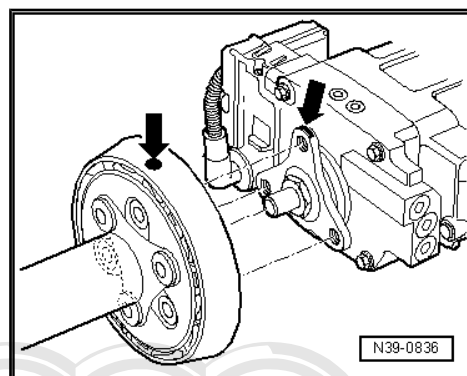
- Remove bolts -arrows- and detach cross piece -1-.
- Remove heat shield for centre tunnel ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Removing and installing heat shield for floor .



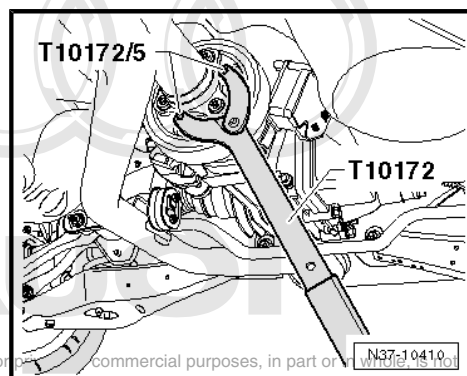
- Slacken bolts -arrows- for centre bearing 2 turns.



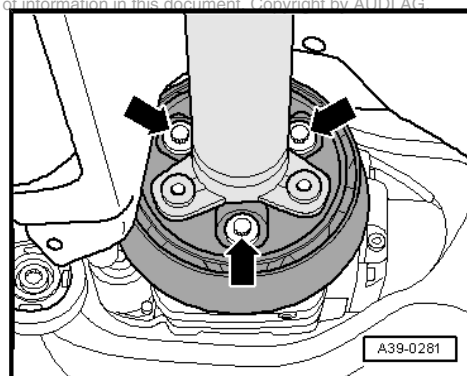
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.
- Also mark position of propshaft in relation to bevel box flange.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .
- Loosen front and rear propshaft bolts but do not remove them yet.

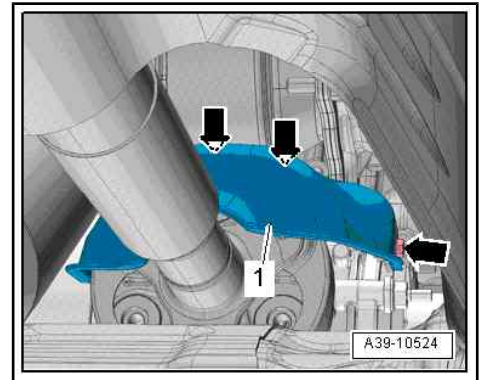


- Detach bolts -arrows- securing propshaft to rear final drive.
- Support propshaft with engine and gearbox jack - V.A.G 1383 A- .



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- If fitted, remove bolts -arrows- and detach heat shield -1-.



 Note

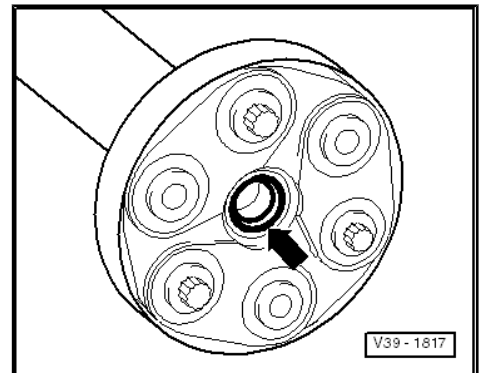
A 2nd mechanic is required for the next steps when removing the propshaft.



Caution

The seal -arrow- in the propshaft flange can be damaged.

- ◆ *Pull off propshaft horizontally from centring pin.*



 Note

The propshaft must be renewed if the oil seal is damaged.

- First pull propshaft tube off centring pin on rear final drive, then pull carefully off centring pin on bevel box.

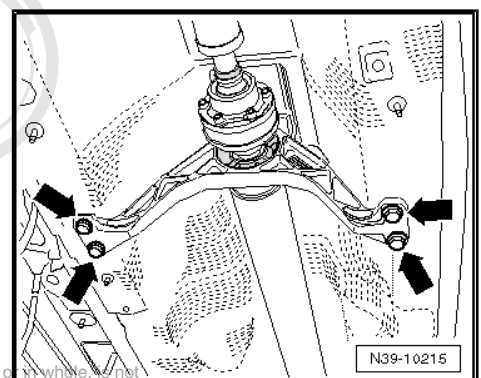


Caution

Risk of damage to protective sleeve in centre propshaft bearing.

- ◆ *The propshaft should be kept as straight as possible during removal and installation and when it is stored.*

- Remove bolts -arrows- securing centre bearing and take out propshaft towards rear.



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Installing

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

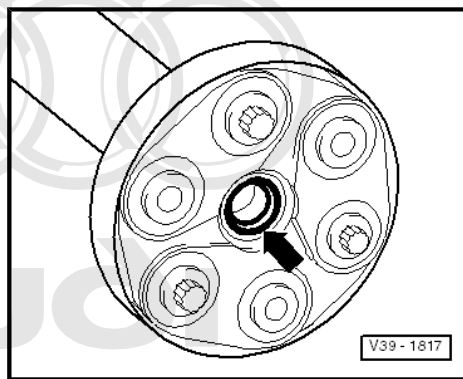
- Tightening torques
 ⇒ "1.1.1 Exploded view - propshaft, Audi Q3 (not Audi RS Q3)",
 page 19



Caution

The seal -arrow- in the propshaft flange can be damaged.

- ◆ *Ensure propshaft is horizontal when pushing it onto centring pins.*



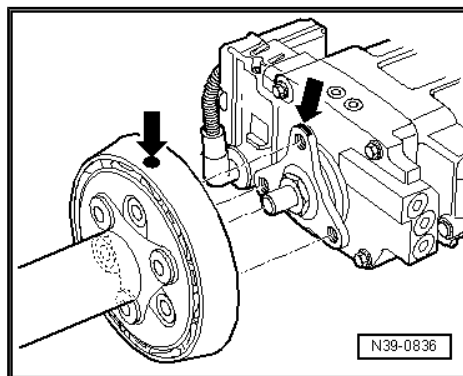
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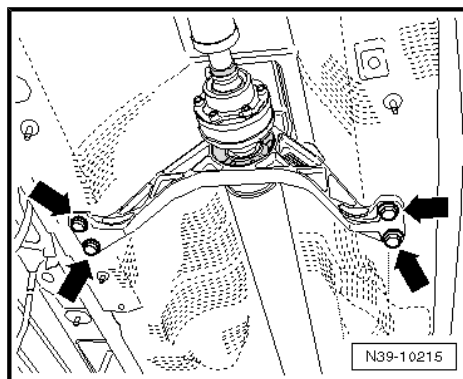
Note

Install all parts in the same relative positions, as marked before removal.

- Attach propshaft to rear final drive so that the markings -arrows- align.



- Fit bolts -arrows- for centre bearing, but do not tighten yet.
- Tighten bolts securing propshaft flexible coupling to bevel box and rear final drive.
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.
- Tighten bolts -arrows-.
- Install heat shield for centre tunnel ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Removing and installing heat shield for floor .
- Secure pendulum support with new bolts. Tightening torques ⇒ Rep. gr. 34 ; Assembly mountings; Exploded view - assembly mountings
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install cross piece and noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



1.2.2 Removing and installing propshaft - Audi RS Q3

Special tools and workshop equipment required

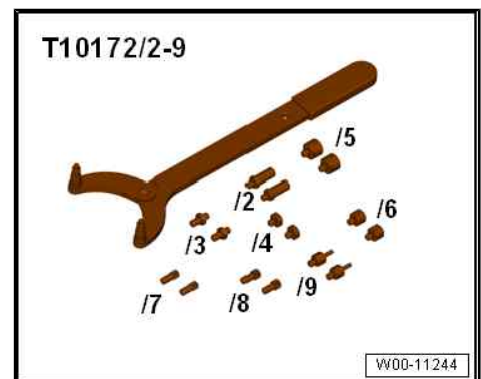
- ◆ Torque wrench - V.A.G 1332-



- ◆ Engine and gearbox jack - V.A.G 1383 A-



- ◆ Counterhold tool - T10172- with adapters - T10172/5-



Removing

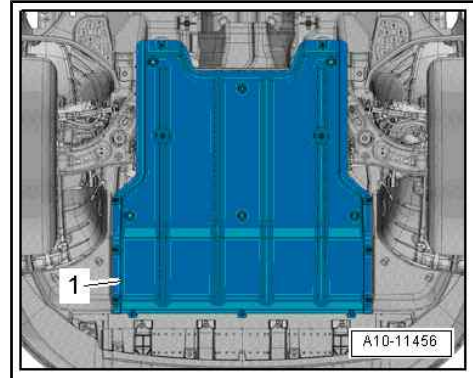


Note

- ◆ Repairs on the propshaft should preferably be carried out on a two-pillar hoist.
- ◆ Before removing, mark the positions of all parts in relation to each other. Reinstall in the same position to avoid excessive imbalance, which could result in bearing damage and rumbling noises.
- ◆ Do not bend propshaft; only store and transport fully extended.
- ◆ Always support the propshaft during removal; it must not be suspended from one of the joints.
- ◆ Always keep the propshaft horizontal while pulling it off or fitting it on the centring pin.

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- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



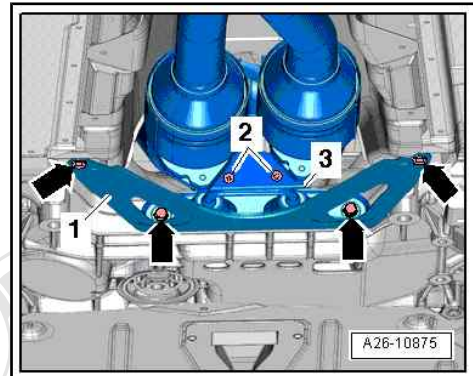
- Remove bolts -arrows- and detach cross piece -1- (if fitted).
- Unscrew bolts -2- and detach bracket -3-.



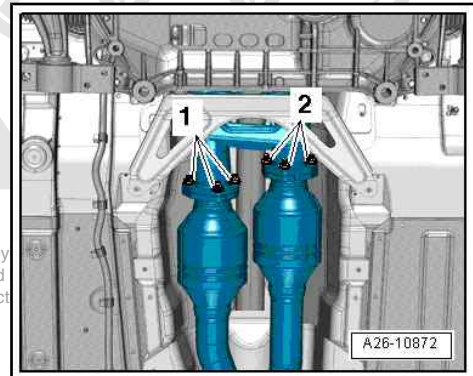
Caution

Risk of damage to flexible joint in starter catalytic converter.

♦ *The flexible joint must not be bent further than 10°.*



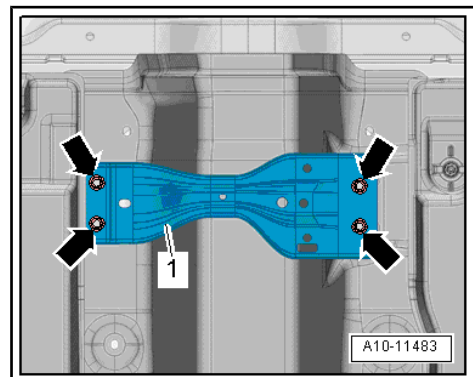
- Remove catalytic converters ⇒ Rep. gr. 26 ; Emission control system; Removing and installing catalytic converter .



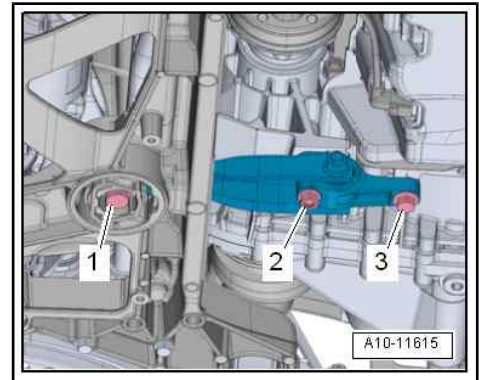
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- Remove bolts -arrows- and detach cross piece -1-.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



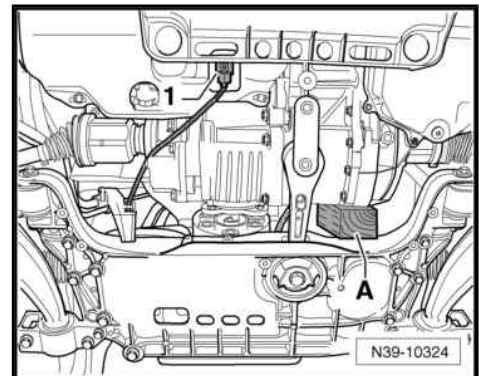
- Remove bolts -2- and -3- for pendulum support.



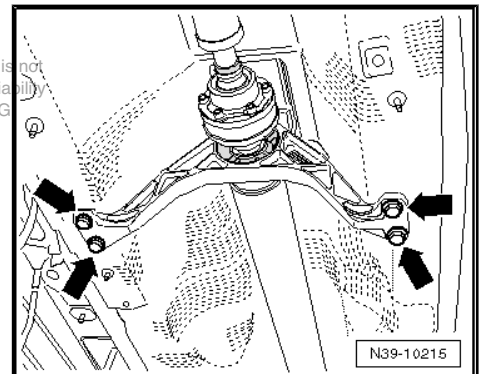
- Push engine/gearbox assembly forwards and secure with a suitable block of wood -A-.



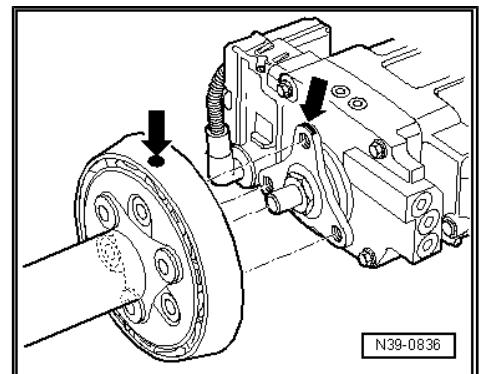
Disregard -item 1-.



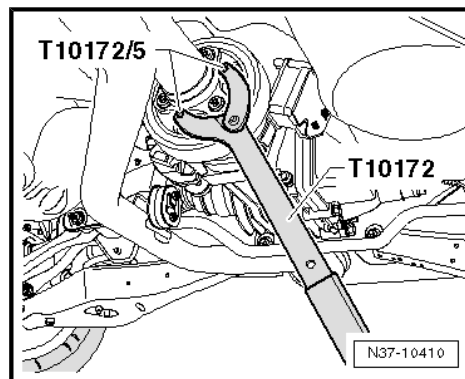
- Remove heat shield for centre tunnel ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Removing and installing heat shield for floor.
- Slacken bolts -arrows- for centre bearing 2 turns.



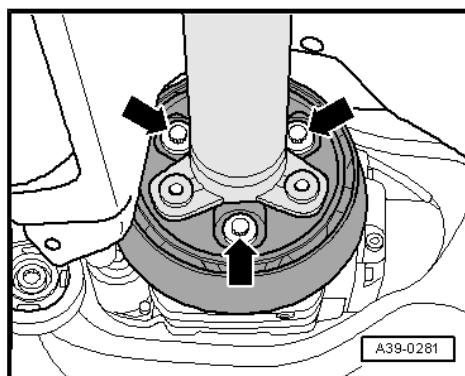
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.
- Also mark position of propshaft in relation to bevel box flange.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .
- Loosen front propshaft bolts (on gearbox) and rear propshaft bolts (on final drive) but do not remove them yet.



- Detach bolts -arrows- securing propshaft to rear final drive.



Note

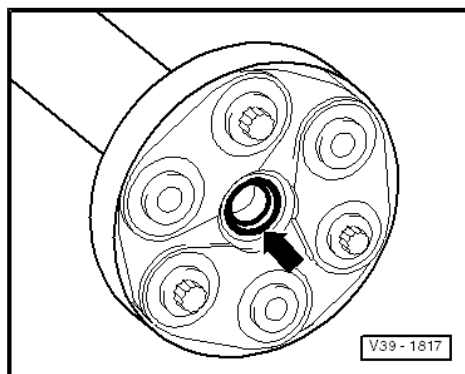
A 2nd mechanic is required for the next steps when removing the propshaft.



Caution

The seal -arrow- in the propshaft flange can be damaged.

- ◆ Pull off propshaft horizontally from centring pin.



Note

The propshaft must be renewed if the oil seal is damaged.

- Support propshaft with engine and gearbox jack - V.A.G 1383 A- .
- First pull propshaft tube off centring pin on rear final drive, then pull carefully off centring pin on bevel box.

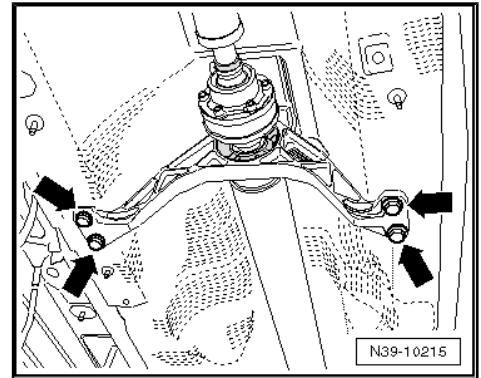


Caution

Risk of damage to protective sleeve in centre propshaft bearing.

- ◆ The propshaft should be kept as straight as possible during removal and installation and when it is stored.

- Remove bolts -arrows- securing centre bearing and take out propshaft towards rear.



Installing

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

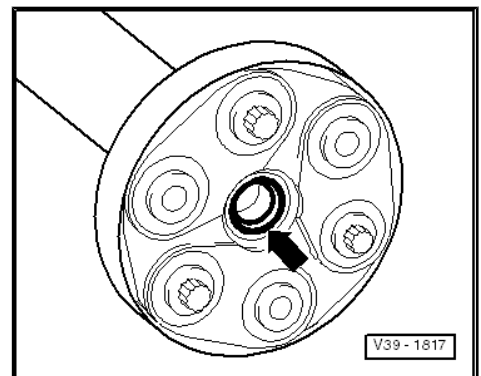
- Tightening torques
⇒ ["1.1.2 Exploded view - propshaft, Audi RS Q3", page 21](#)



Caution

The seal -arrow- in the propshaft flange can be damaged.

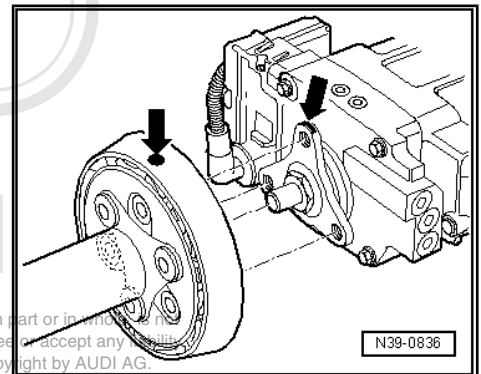
- ◆ *Ensure propshaft is horizontal when pushing it onto centring pins.*



Note

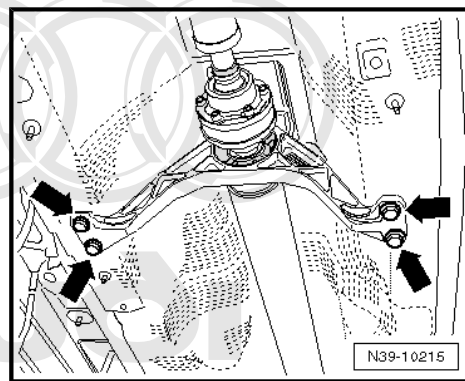
Install all parts in the same relative positions, as marked before removal.

- Attach propshaft to rear final drive so that the markings -arrows- align.

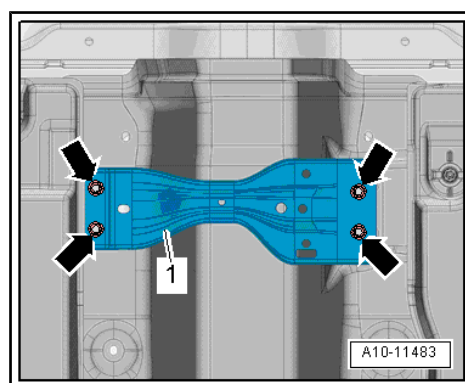


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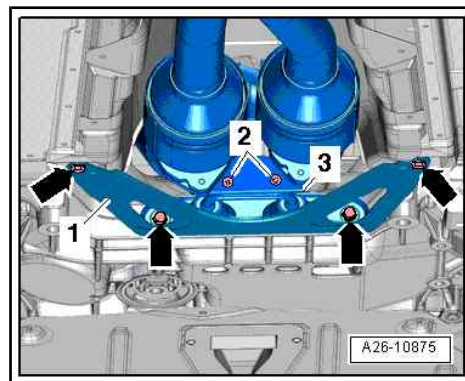
- Fit bolts -arrows- for centre bearing, but do not tighten yet.
- Tighten bolts securing propshaft flexible coupling to bevel box and rear final drive.
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.
- Tighten bolts -arrows-.
- Install heat shield for centre tunnel ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Removing and installing heat shield for floor .
- Secure pendulum support with new bolts. Tightening torques ⇒ Rep. gr. 34 ; Assembly mountings; Exploded view - assembly mountings
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install tunnel cross-piece -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .



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- Install catalytic converters, bracket -3- and cross piece -1- (if originally fitted) ⇒ Rep. gr. 26 ; Emission control system; Removing and installing catalytic converter .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



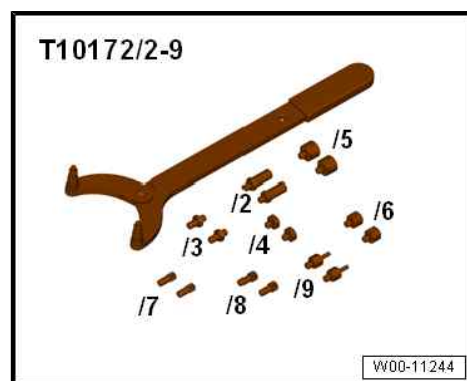
1.2.3 Removing and installing propshaft - Audi A1 quattro

Special tools and workshop equipment required

- ◆ Engine and gearbox jack - V.A.G 1383 A-



- ◆ Counterhold tool - T10172- with adapters - T10172/5-



Removing



Note

- ◆ *Repairs on the propshaft should preferably be carried out on a two-pillar hoist.*
- ◆ *Before removing, mark the positions of all parts in relation to each other. Reinstall in the same position to avoid excessive imbalance, which could result in bearing damage and rumbling noises.*
- ◆ *Do not bend propshaft; only store and transport fully extended.*
- ◆ *Always support the propshaft during removal; it must not be suspended from one of the joints.*
- ◆ *A circlip secures the propshaft on the output shaft/shaft bevel gear in bevel box.*
- ◆ *Always keep the propshaft horizontal while pulling it off or fitting it on the centring pin on the rear final drive.*

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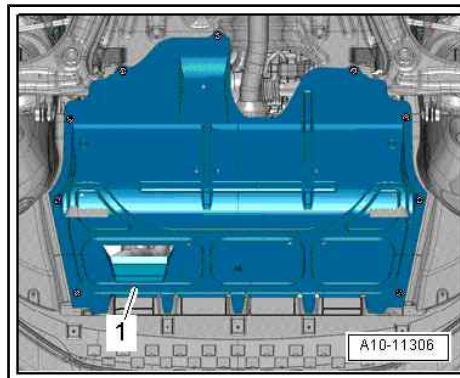
- Remove noise insulation -1- ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Remove tunnel cross-piece ➔ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Remove fuel tank ➔ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .



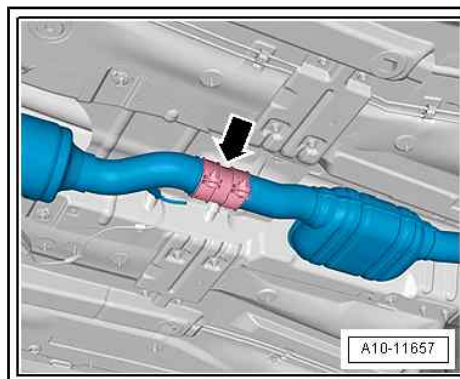
Caution

Risk of damage to flexible joint.

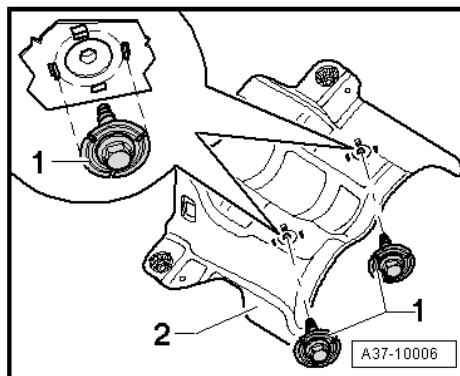
- ◆ **The flexible joint must not be bent further than 10°.**
- ◆ **Do not subject flexible joint to tensile load.**
- ◆ **Take care not to damage wire mesh on flexible joint.**



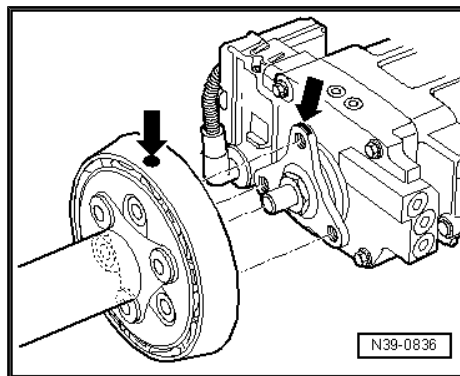
- Disconnect exhaust system at clamp -arrow- and tie up front exhaust pipe.
- Remove rear section of exhaust system ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Remove subframe with steering rack (fix position of subframe when removing) ➔ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Subframe; Removing and installing subframe with steering rack .



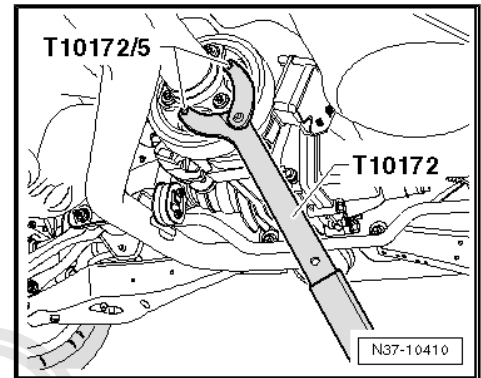
- Loosen bolts with washers -1- for centre bearing of propshaft approx. 2 turns, but do not remove.
- Remove clamping washers ➔ [Item 9 \(page 22\)](#) and detach heat shield -2- from body.



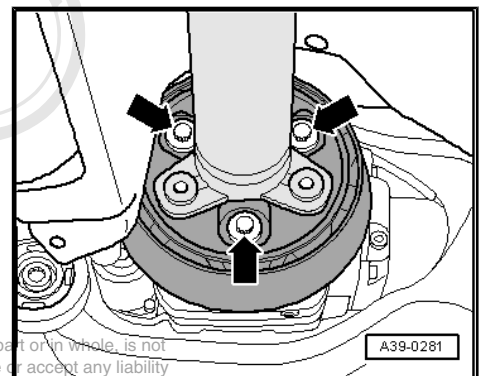
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



- Detach bolts -arrows- securing propshaft to rear final drive.



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 Note

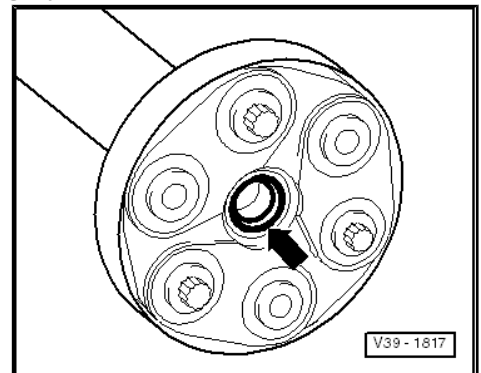
To avoid damaging the propshaft by bending it too far, have a second mechanic assist by holding the propshaft.



Caution

The seal -arrow- in the propshaft flange can be damaged.

- ◆ *Pull off propshaft horizontally from centring pin.*



 Note

The propshaft must be renewed if the oil seal is damaged.

- First pull propshaft tube off centring pin on rear final drive, pressing propshaft with engine/gearbox unit slightly towards front.

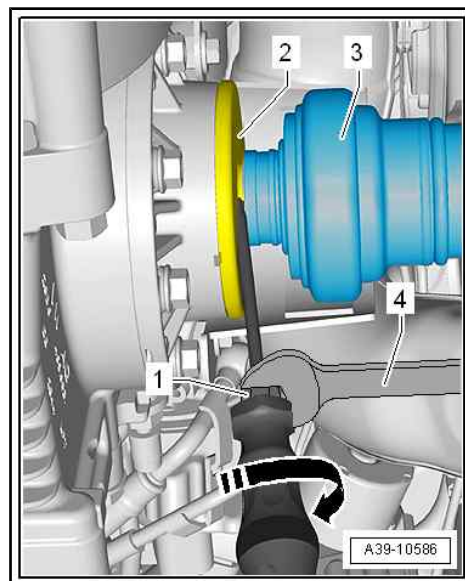


Caution

Risk of damage to protective sleeve in centre propshaft bearing.

- ◆ *The propshaft should be kept as straight as possible during removal and installation and when it is stored.*

- Apply a suitable plain slot screwdriver -1- between heat shield -2- for oil seal and propshaft -3-. Press propshaft off bevel box by turning screwdriver 90° with an open-end spanner -4- or similar tool.
- Press engine/gearbox unit slightly towards front. At the same time, detach propshaft from output shaft/shaft bevel gear in bevel box.



- Remove bolts with washers -1- for centre bearing and detach heat shield -2-.
- Take out the propshaft towards the rear, keeping it as straight as possible.

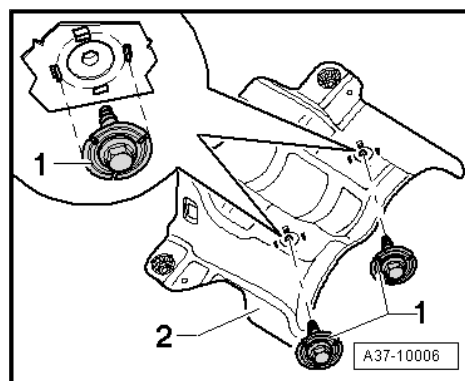
Installing

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

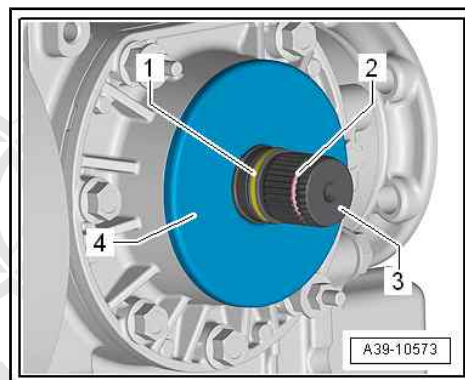
- Tightening torques
 ⇒ ["1.1.3 Exploded view - propshaft, Audi A1", page 22](#)

Note

Install all parts in the same relative positions, as marked before removal.

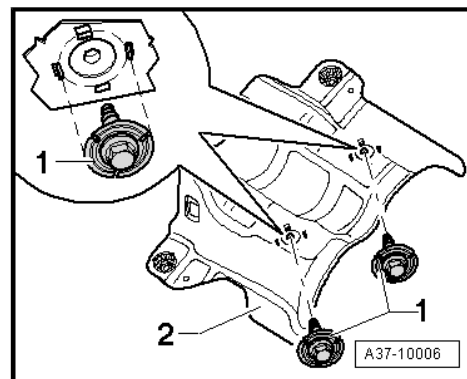


- Check heat shield -4- for oil seal at bevel box for damage and renew if necessary
- Always renew O-ring -1- and circlip -2- on output shaft/shaft bevel gear -3- ⇒ [page 23](#) .
- Lubricate splines of output shaft/shaft bevel gear in bevel box with grease for clutch plate splines - G 000 100- .
- Fit propshaft onto output shaft/shaft bevel gear in bevel box and jerk firmly in direction of front end.
- At the same time, have a second mechanic push engine/gear-box assembly towards rear (against propshaft) until circlip on output shaft/shaft bevel gear in bevel box engages on propshaft.
- Propshaft must be locked in place; it should not be possible to pull it off bevel box by hand.



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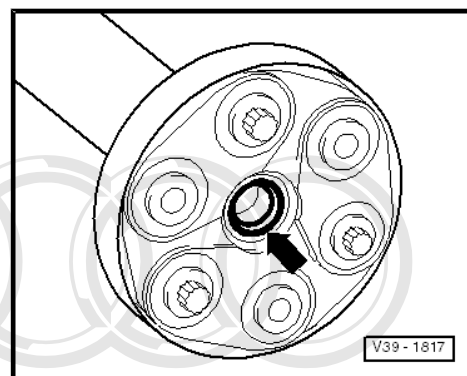
- Attach heat shield -2- to body using clamping washers.
- Fit bolts with washers -1- for centre bearing, but do not yet tighten.



Caution

The seal -arrow- in the propshaft flange can be damaged.

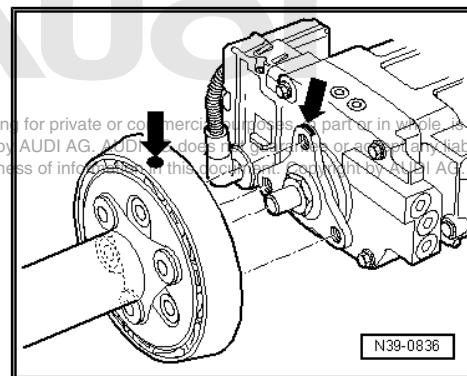
- ◆ *Ensure propshaft is horizontal when pushing it onto centring pin of rear final drive.*



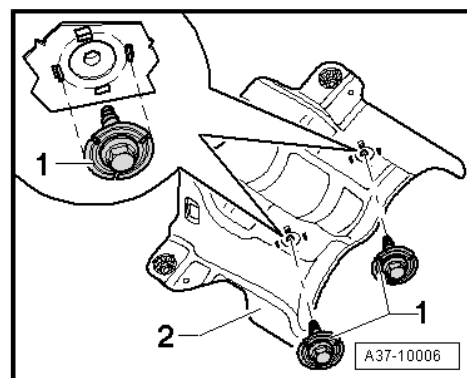
Note

The propshaft must be renewed if the oil seal is damaged.

- Attach propshaft to rear final drive so that the markings -arrows- align.
- Tighten bolts securing propshaft to rear final drive.
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.



- Tighten bolts with washers -1- for centre bearing.
- Install subframe with steering rack ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 40 ; Subframe; Removing and installing subframe with steering rack .
- Install rear section of exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .
- Install tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



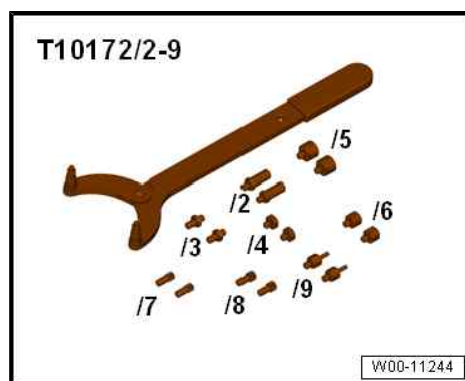
1.2.4 Removing and installing propshaft - Audi S1

Special tools and workshop equipment required

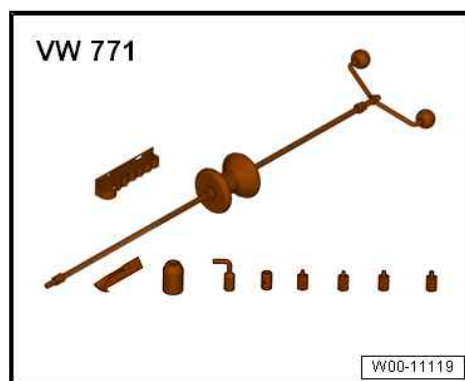
- ◆ Engine and gearbox jack - V.A.G 1383 A-



- ◆ Counterhold tool - T10172- with adapters - T10172/5-



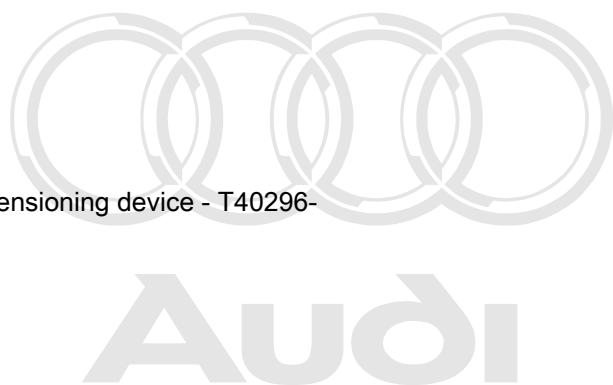
- ◆ Multi-purpose tool - VW 771- with extension -VW 771/13-



- ◆ Tensioning device - T40296-



- ◆ Socket - T10011-

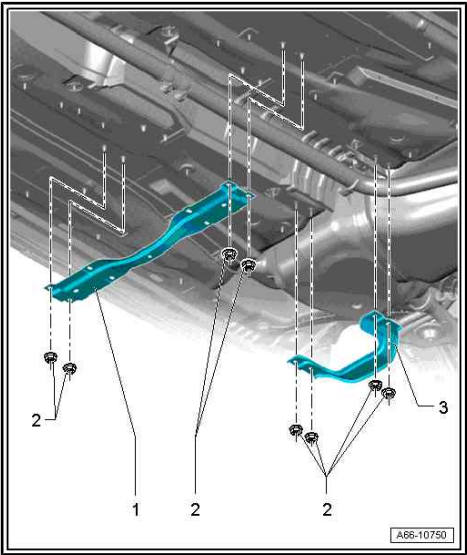
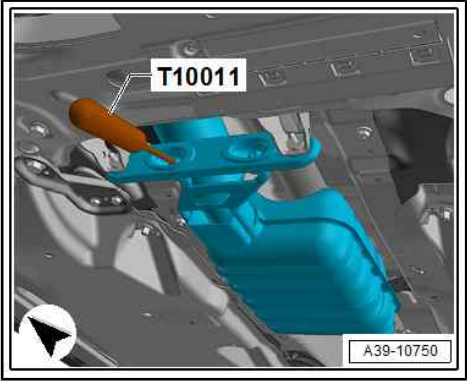


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Removing



Note

- ◆ *Repairs on the propshaft should preferably be carried out on a two-pillar hoist.*
 - ◆ *Before removing, mark the positions of all parts in relation to each other. Reinstall in the same position to avoid excessive imbalance, which could result in bearing damage and rumbling noises.*
 - ◆ *Do not bend propshaft; only store and transport fully extended.*
 - ◆ *Always support the propshaft during removal; it must not be suspended from one of the joints.*
 - ◆ *A circlip secures the propshaft on the output shaft/shaft bevel gear in bevel box.*
 - ◆ *Always keep the propshaft horizontal while pulling it off or fitting it on the centring pin on the rear final drive.*
- Remove underbody trim (centre) on both sides ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
 - Remove tunnel cross members -1- and -3- ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- 
- Insert socket - T10011- into mounting on front exhaust pipe to support front silencer.
- 

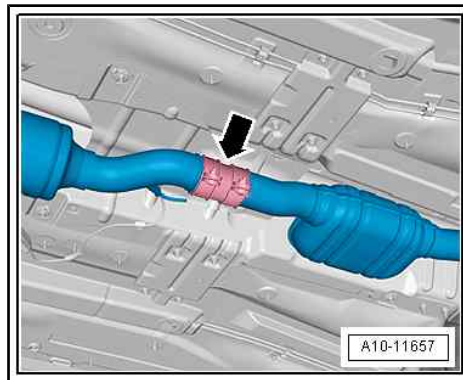
- Disconnect exhaust system at clamp -arrow-.



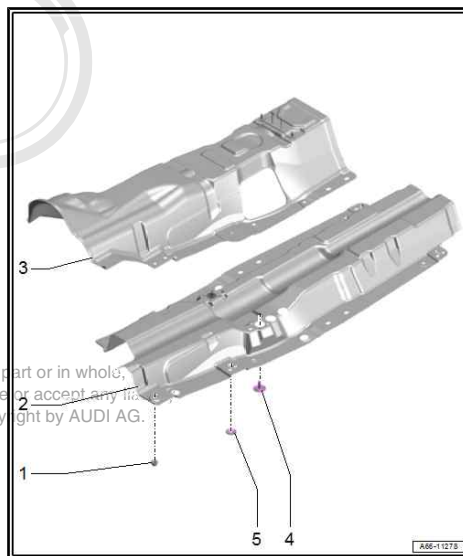
Caution

Risk of damage to flexible joint.

- ◆ *The flexible joint must not be bent further than 10°.*
- ◆ *Do not subject flexible joint to tensile load.*
- ◆ *Take care not to damage wire mesh on flexible joint.*

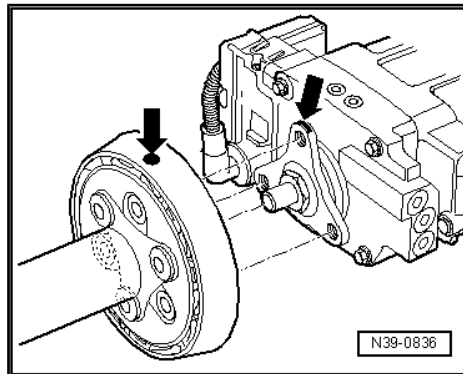


- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Removing and installing silencer .
- Remove heat shield for propshaft -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Exploded view - heat shield .

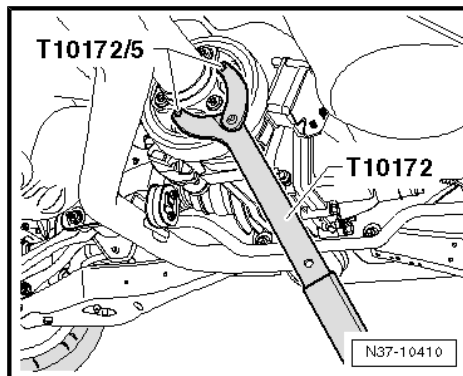


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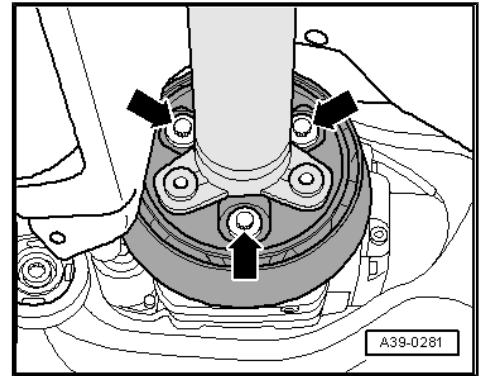
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



- Detach bolts -arrows- securing propshaft to rear final drive.



 Note

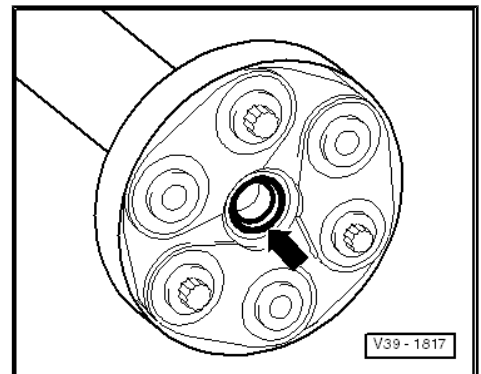
To avoid damaging the propshaft by bending it too far, have a second mechanic assist by holding the propshaft.



Caution

The seal -arrow- in the propshaft flange can be damaged.

◆ *Pull off propshaft horizontally from centring pin.*



 Note

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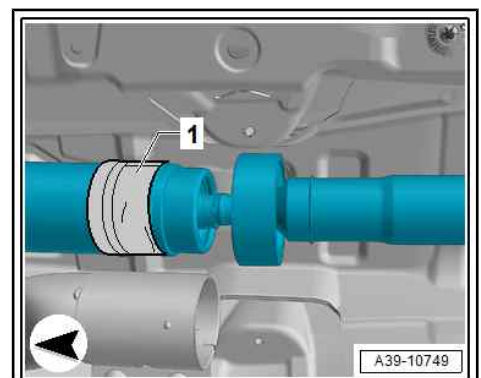
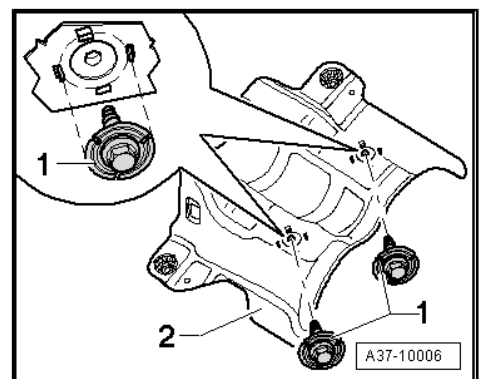
The propshaft must be renewed if the oil seal is damaged.

- Loosen bolts with washers -1- for centre bearing of propshaft approx. 2 turns.
- Slide propshaft along its axis towards front and bend propshaft at centre bearing (without load).
- Detach propshaft from rear final drive.

 Note

If clearance between propshaft and centring pin is not sufficient, rotate propshaft until maximum bending angle is reached.

- Place rear section of propshaft on engine and gearbox jack - V.A.G 1383 A- and a block of wood.
- Wrap adhesive tape around propshaft in front of centre bearing and secure clamp - T40296- .



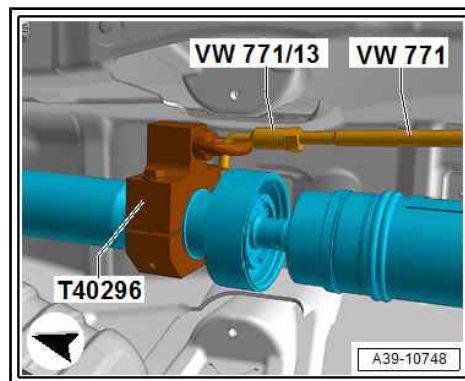
- Hook multi-purpose tool - VW 771- with extension -VW 771/13- into clamp - T40296- and knock out propshaft towards rear.



Caution

Risk of damage to protective sleeve in centre propshaft bearing.

- ◆ *The propshaft should be kept as straight as possible during removal and installation and when it is stored.*



- Take out the propshaft towards the rear, keeping it as straight as possible.

Installing

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

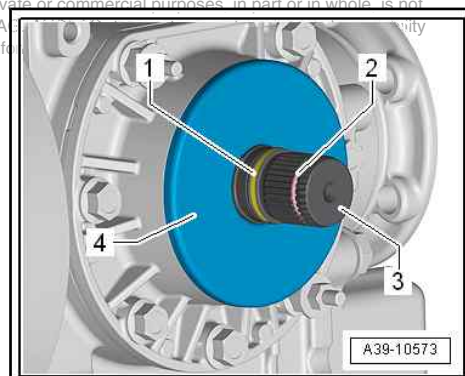
- Tightening torques
⇒ ["1.1.3 Exploded view - propshaft, Audi A1", page 22](#)



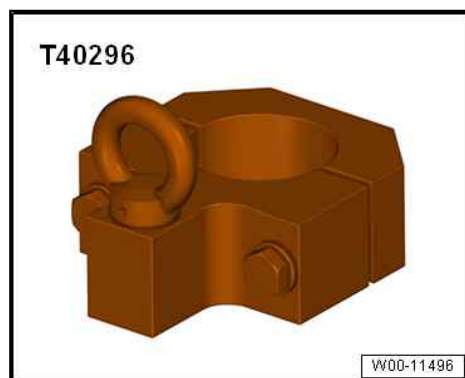
Note

Install all parts in the same relative positions, as marked before removal.

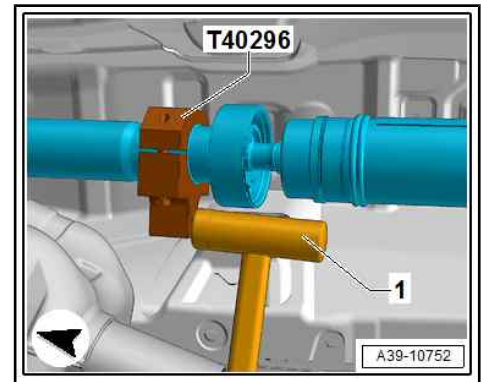
- Check heat shield -4- for oil seal at bevel box for damage and renew if necessary
- Always renew O-ring -1- and circlip -2- on output shaft/shaft bevel gear -3- ⇒ [page 23](#) .
- Lubricate splines of output shaft/shaft bevel gear in bevel box with grease for clutch plate splines - G 000 100- .



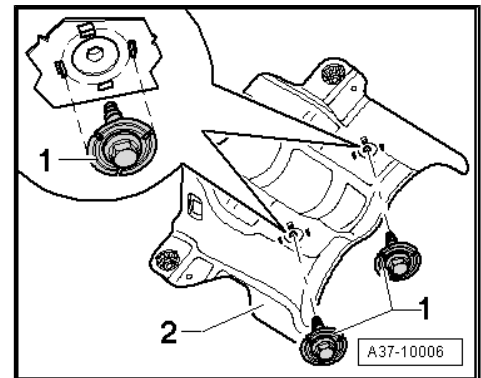
- Unscrew hook from clamp - T40296- .



- Fit propshaft onto output shaft/shaft bevel gear in bevel box.
- Using a plastic hammer -1-, strike clamp - T40296- repeatedly until propshaft engages on output shaft.
- Propshaft must be locked in place; it should not be possible to pull it off bevel box by hand.
- Detach clamp - T40296- .



- Attach heat shield -2- to body using clamping washers.
- Fit bolts with washers -1- for centre bearing, but do not yet tighten.



Caution

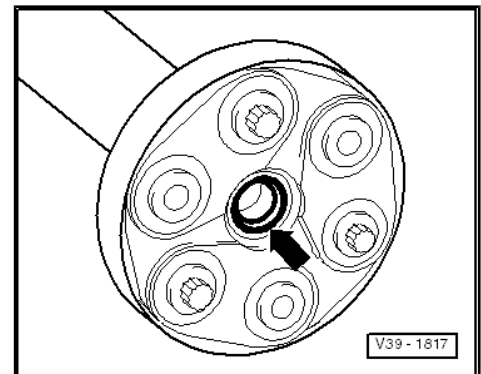
The seal -arrow- in the propshaft flange can be damaged.

- ◆ *Ensure propshaft is horizontal when pushing it onto centring pin of rear final drive.*

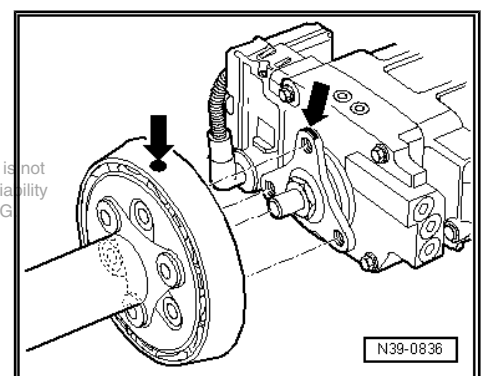


Note

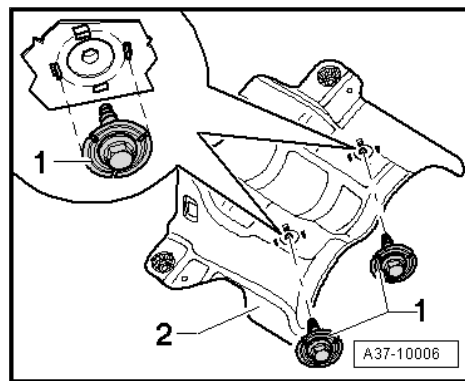
The propshaft must be renewed if the oil seal is damaged.



- Attach propshaft to rear final drive so that the markings -arrows- align.
- Tighten bolts securing propshaft to rear final drive.
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.

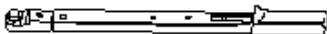
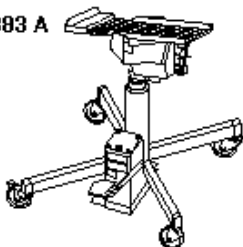


- Tighten bolts with washers -1- for centre bearing.
- Install rear section of exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Install heat shield for propshaft -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Exploded view - heat shield .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



1.3 Removing and installing flexible coupling (rear)

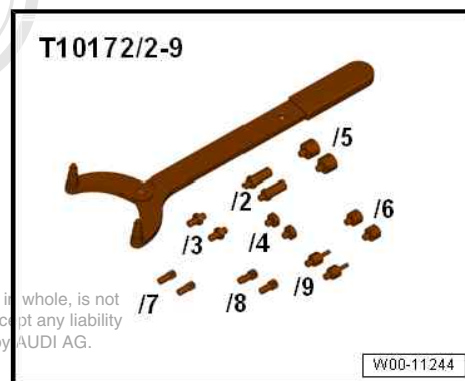
Special tools and workshop equipment required

V.A.G 1331 	V.A.G 1332 
V.A.G 1383 A 	
	W34-0092

- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-
- ◆ Engine and gearbox jack - V.A.G 1383 A- with universal gearbox support - V.A.G 1359/2-

Special tools and workshop equipment required

- ◆ Counterhold tool - T10172- with adapters - T10172/5-



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Removing



Note

- ◆ Repairs on the propshaft should be carried out on a two pillar hoist.
- ◆ Before removing, mark the positions of all parts in relation to each other. Reinstall in the same position to avoid excessive imbalance, which could result in bearing damage and rumbling noises.
- ◆ Do not bend propshaft; only store and transport fully extended.
- If fitted, remove cross member on underbody -arrows-.



Caution

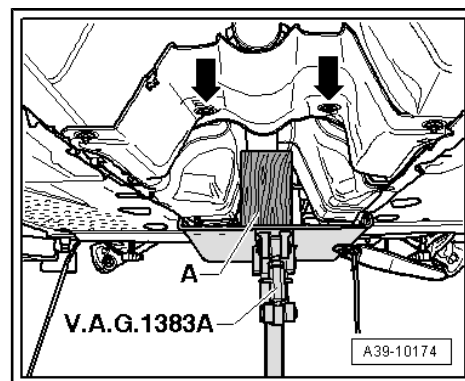
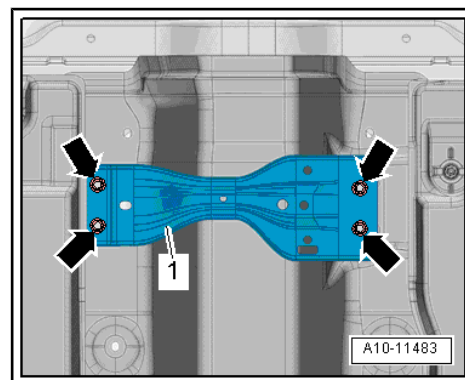
Risk of damage to flexible joints in exhaust system.

- ◆ The flexible joint in the front exhaust pipe must not be bent further than 10°.

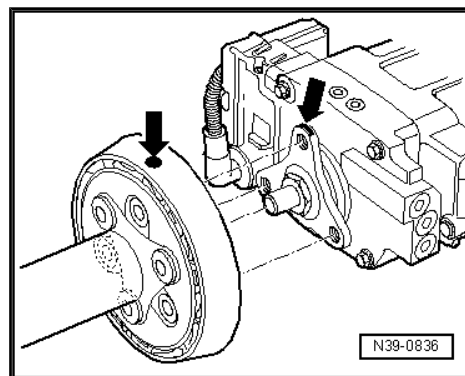
- Disconnect exhaust system at clamp -1-.
- Tie up front exhaust pipe on underbody.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Loosen bolts -arrows- on centre bearing of propshaft approx. 2 turns.
- Take up weight of propshaft at rear propshaft tube using engine and gearbox jack - V.A.G 1383 A- .

A - Wooden block

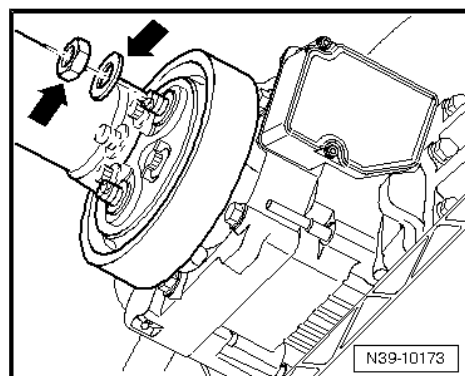
- Secure propshaft against falling using belt from universal gearbox support - V.A.G 1359/2- .



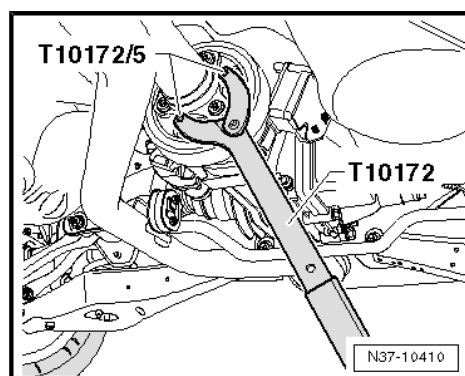
- Check whether there is a factory marking (coloured dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If not, mark position of flexible coupling and flange for propshaft on rear final drive in relation to each other -arrows-.



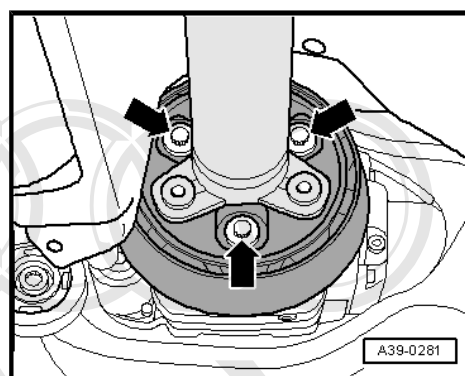
- If fitted, remove balancing nut and balancing washer -arrows-.
- Do not re-install previously fitted balancing nuts or balancing washers -arrows- after removing the flexible coupling.



- When loosening and tightening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



- Unbolt rear propshaft tube with flexible coupling and vibration damper from final drive -arrows-.



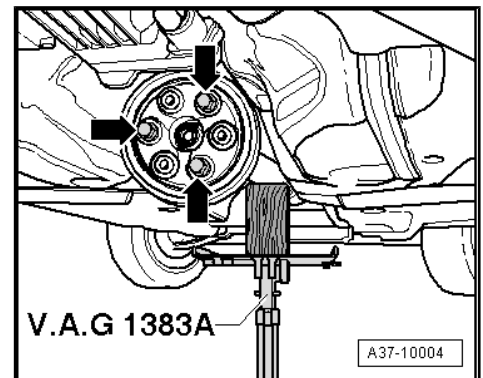
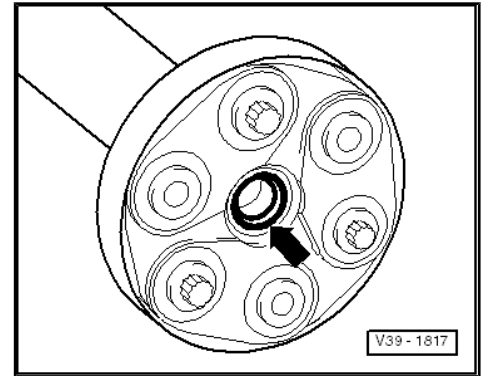
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- Carefully detach rear propshaft tube from centring pin of propshaft flange on rear final drive.

 Note

- ◆ *Do not tilt propshaft when removing; pull off centring pin horizontally. Make sure that the seal in the centring sleeve -arrow- does not become damaged.*
- ◆ *The flexible coupling and vibration damper cannot be separated from each other.*

- Mark position of flexible coupling (rear) and flange of rear propshaft tube in relation to each other.
- Unbolt flexible coupling from propshaft tube -arrows-.

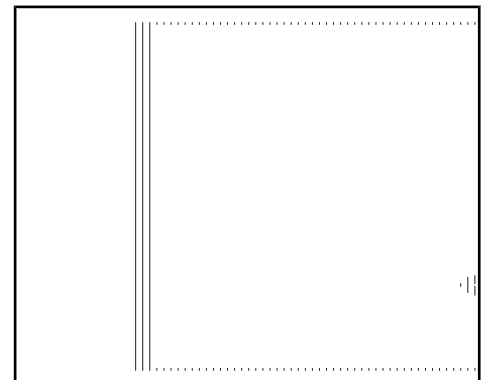


Installing

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

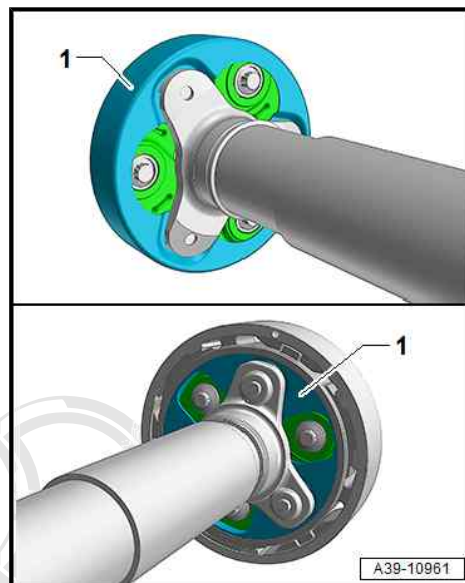
 Note

- ◆ *Seals in flanges of propshaft -arrow- must not be damaged when removing and installing.*
- ◆ *Renew propshaft if damaged.*
- ◆ *Do not tilt rear propshaft tube; push on horizontally onto centring pin.*
- ◆ *All parts of the propshaft marked in relation to each other must be reinstalled in the same position.*

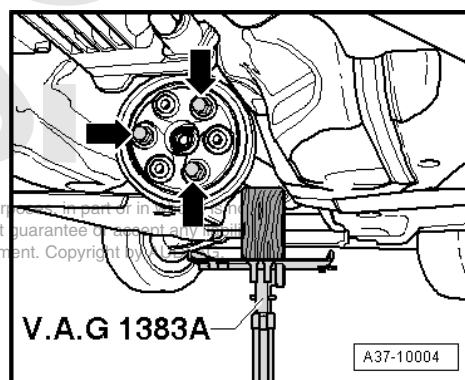


Installation position of flexible coupling

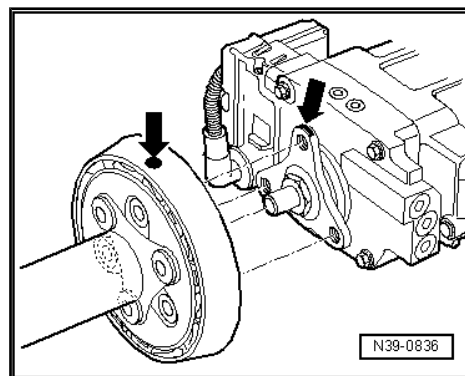
- ◆ Different heat shields -1- are fitted depending on the version.
- ◆ Heat shield -1- faces in direction of propshaft.
- ◆ The three projecting sleeves on the flexible coupling engage in the propshaft flange.



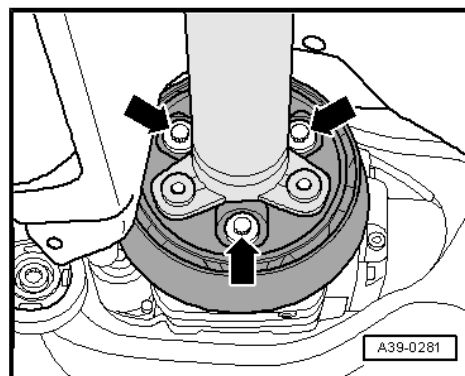
- Secure flexible coupling to propshaft tube -arrows-. Tightening torque ➔ [page 19](#)



- Attach propshaft to rear final drive so that the markings -arrows- align.

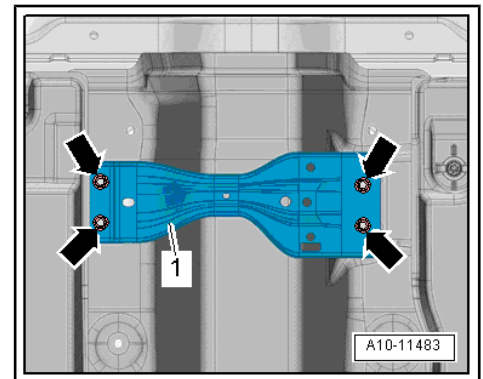
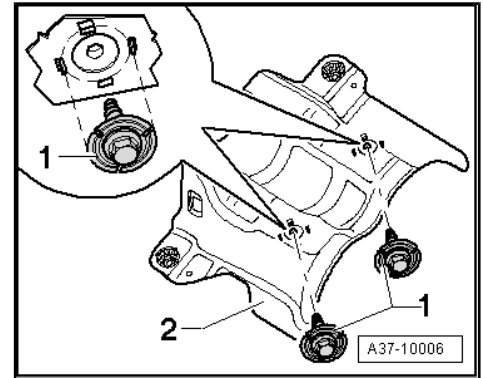


- Secure propshaft with flexible coupling to rear final drive -arrows-. Tightening torque ➔ [page 19](#)



Stress-free installation of centre bearing:

- Make sure that all propshaft bolts have been tightened.
- Position the centre bearing in its elongated holes so that the propshaft and centre bearing are not under stress.
- Tighten bolts with washers -1-. Make sure the bolts with washers -1- are within the four centring tabs on heat shield -2-.
- Tightening torque ⇒ [page 19](#)
- Install exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install cross member on underbody -arrows- ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Removing and installing tunnel cross-piece .



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2 Final drive

⇒ ["2.1 Exploded view - final drive", page 52](#)

⇒ ["2.2 Removing and installing final drive", page 52](#)

2.1 Exploded view - final drive

1 - Bolt

- ☐ 3x
- ☐ Renew after removing
- ☐ 60 Nm +180°
- ☐ 60 Nm +90° for Audi A1 quattro

2 - Stop plate

- ☐ Fit onto bonded rubber bush ⇒ [page 100](#)

3 - Washer

- ☐ Installation position: chamfer (smaller diameter) faces subframe

4 - Bolts

- ☐ Renew after removing
- ☐ 60 Nm +180°
- ☐ 60 Nm +90° for Audi A1 quattro

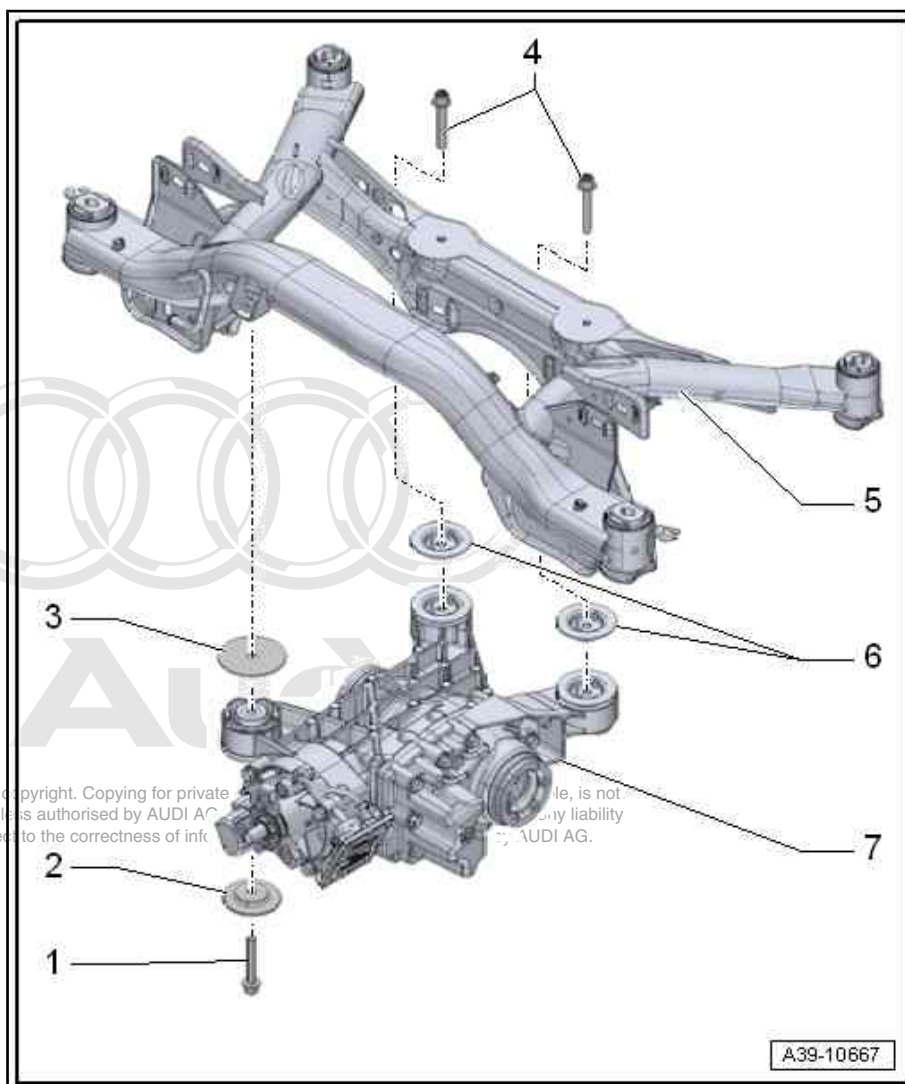
5 - Rear subframe

6 - Stop plates

- ☐ Fit onto bonded rubber bush ⇒ [page 100](#)

7 - Rear final drive

- ☐ Removing and installing ⇒ [page 52](#)
- ☐ Removing and installing bonded rubber bush ⇒ [page 100](#)



2.2 Removing and installing final drive

⇒ ["2.2.1 Removing and installing rear final drive - Audi Q3", page 52](#)

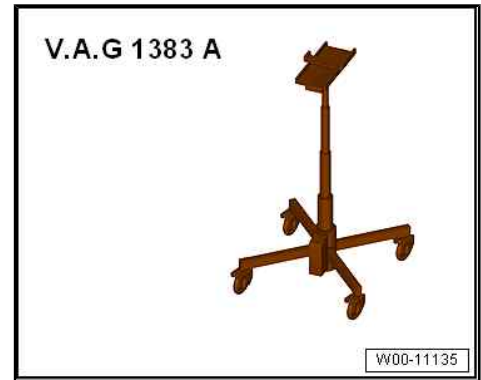
⇒ ["2.2.2 Removing and installing rear final drive, Audi A1 quattro", page 60](#)

⇒ ["2.2.3 Removing and installing rear final drive - Audi S1", page 68](#)

2.2.1 Removing and installing rear final drive - Audi Q3

Special tools and workshop equipment required

◆ Engine and gearbox jack - V.A.G 1383 A-



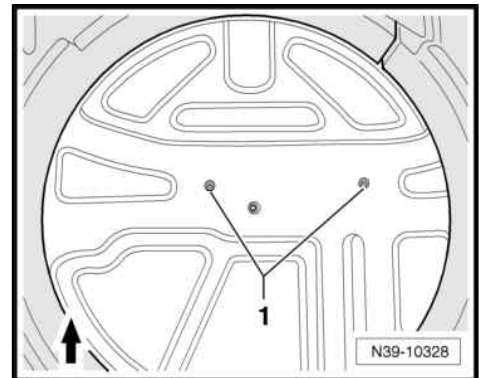
Removing

- Remove spare wheel (if fitted).
- Remove spare wheel well or foam inserts.
- Remove plugs -1- from underbody.
- Working through these apertures, unscrew bolts.



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-Arrow- points in direction of travel.



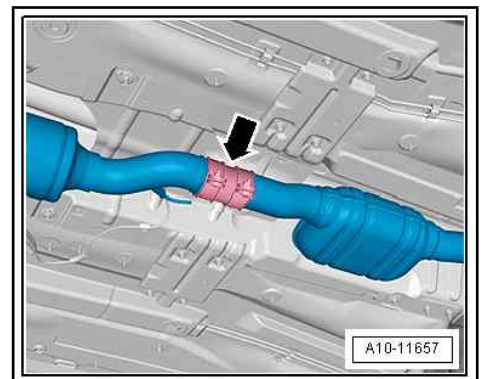
- Remove rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Remove bolt -arrow- and detach bracket for exhaust pipe from subframe.
- Disconnect exhaust system at clamp -arrow- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/ silencers; Exploded view - silencers .



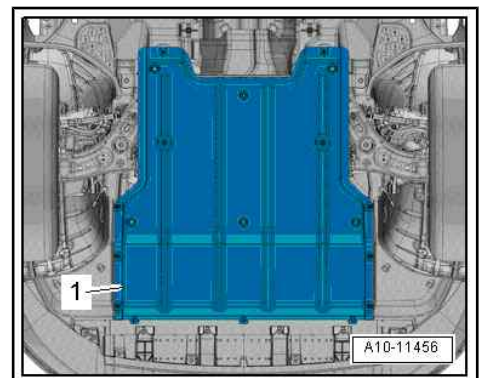
Caution

Risk of damage to flexible joint.

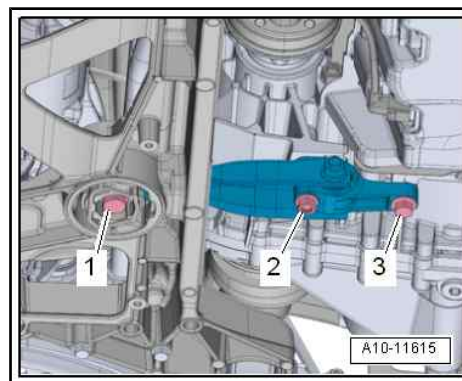
- ◆ *The flexible joint in the front exhaust pipe must not be bent further than 10°.*



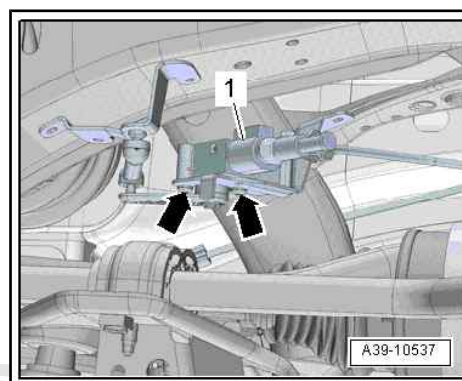
- Tie up front exhaust pipe.
- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



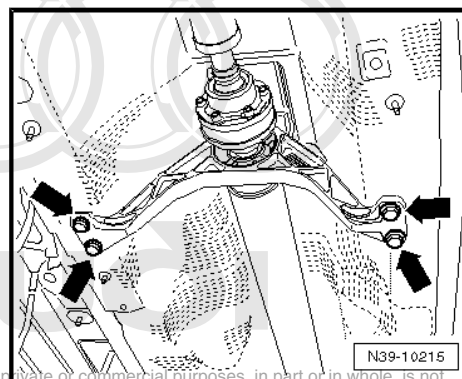
- Remove bolts -2- and -3- for pendulum support.



- Unplug electrical connector -1-.
- Unscrew bolts -arrows-, detach rear left vehicle level sender -G76- and place on top of suspension link.
- Detach rear inner covers for vehicle underside (left and right)
 ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Removing and installing underbody trim .



- Loosen bolts -arrows- securing centre propshaft bearing, but do not remove them.

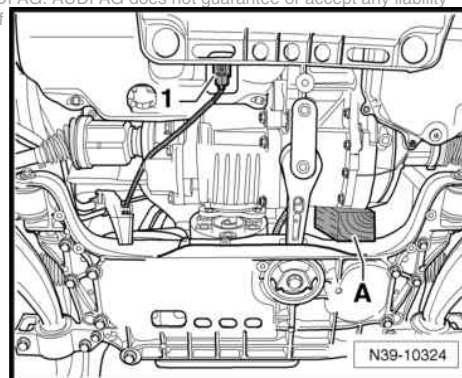


- Push engine/gearbox assembly forwards and secure with a suitable block of wood -A-.

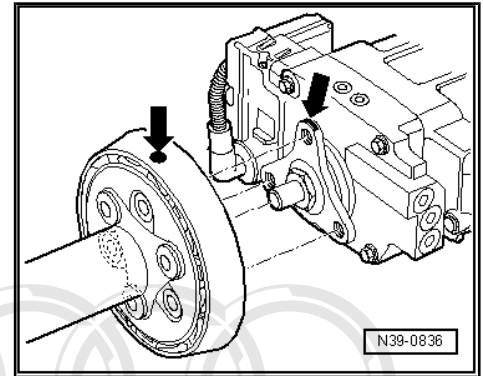


Note

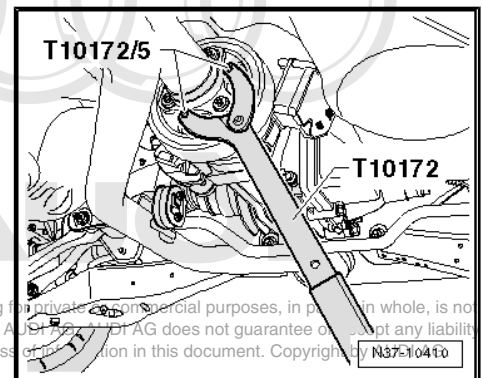
Disregard -item 1-.



- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.
- Also mark position of propshaft in relation to bevel box flange.

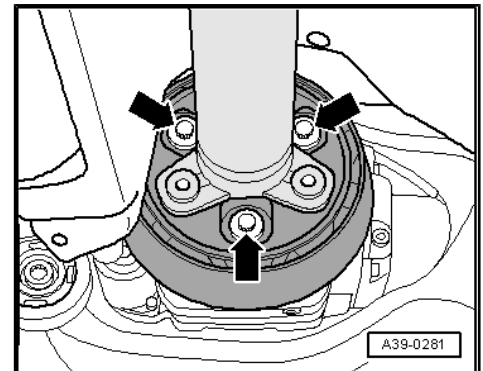


- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .
- Loosen rear propshaft bolts but do not remove them yet.



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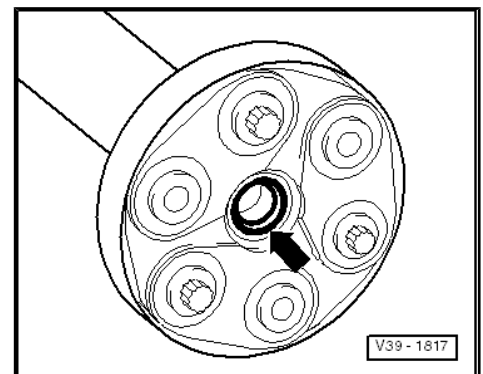
- Detach bolts -arrows- securing propshaft to rear final drive.



Caution

The seal -arrow- in the propshaft flange can be damaged.

- ◆ *Push propshaft as far forward as possible, keeping it horizontal.*



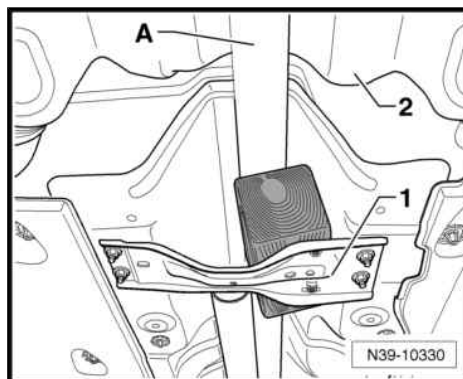


Caution

Risk of damage to the fuel tank.

◆ *Position propshaft so that it does not dent fuel tank.*

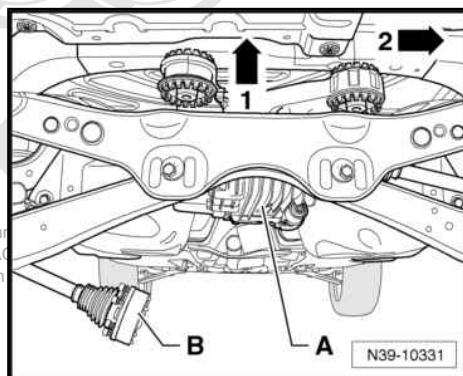
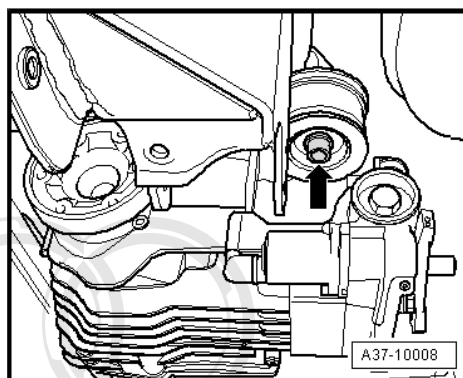
- Pull propshaft off final drive, keep propshaft centred and guide upwards to underside of fuel tank -2-. Support in this position by placing a suitable piece of wood on the cross piece -1-.



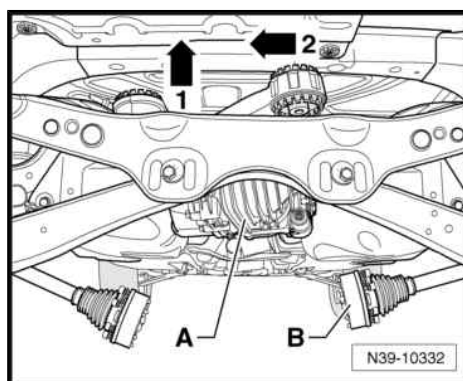
Note

To detach drive shafts, rear part of final drive must move freely.

- Slacken bolt -arrow- at front bonded rubber bush 5 turns, but do not remove.
- Unbolt drive shaft (left-side) from final drive.
- Lift rear part of final drive -A- -arrow 1- and push as far to the right as possible -arrow 2-.
- Pull drive shaft (left-side) -B- out of flange and carefully guide downwards.
- Move final drive back into installation position.
- Unbolt drive shaft (right-side) from final drive.



- Lift rear part of final drive -A- -arrow 1- and push as far to the left as possible -arrow 2-.
- Pull drive shaft (right-side) -B- out of flange and carefully guide downwards.
- Move final drive back into installation position.

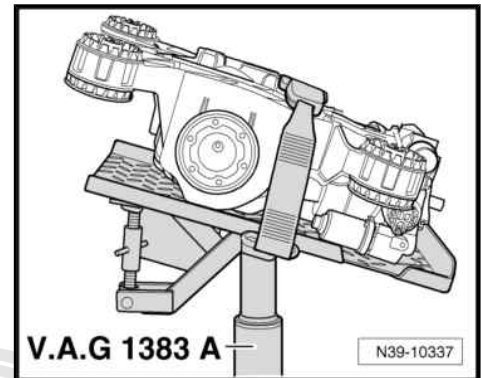


- Support final drive using engine and gearbox jack - V.A.G 1383 A- with support plate and secure final drive with strap.

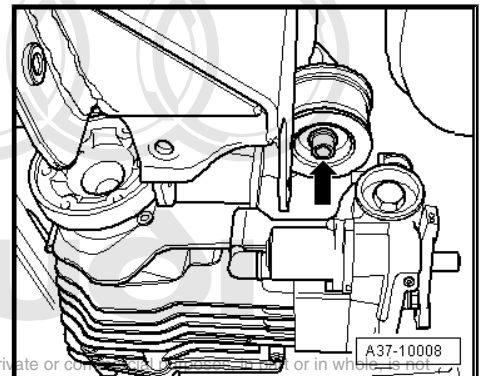


Note

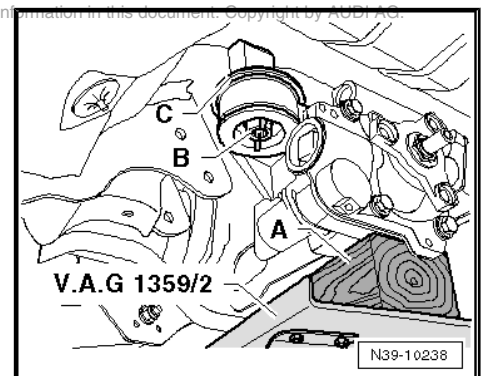
Shown in illustration with final drive removed.



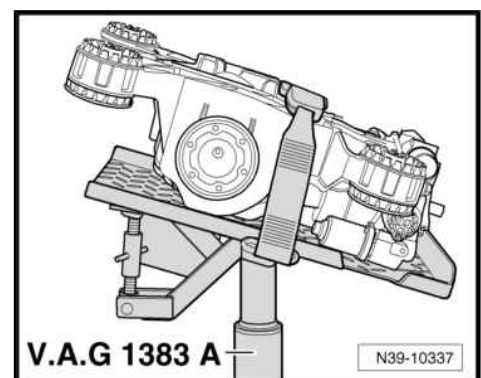
- Completely unscrew bolt -arrow- at front bonded rubber bush.



- Remove washer -C- on top of bonded rubber bush.

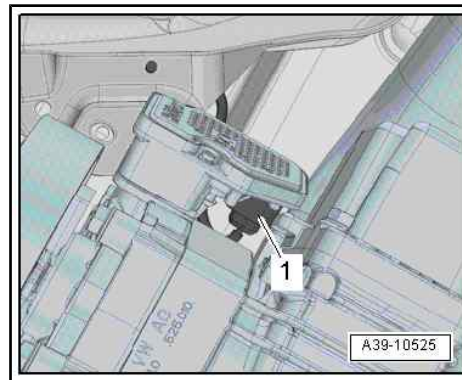


- Tilt final drive using engine and gearbox jack - V.A.G 1383 A- as shown in illustration and lower slightly.



- Unplug electrical connector -1- on all-wheel drive control unit - J492- .

Vehicles with final drive 0BS and four-wheel drive coupling generation IV:



Vehicles with final drive 0AY, 0CR and four-wheel drive coupling generation V:



Continued for all vehicles:

- Unclip breather hoses -1- and -2- at subframe.
- To remove, lower final drive further and pull to front, making sure there is sufficient clearance to other components.

Installing

Tightening torques:

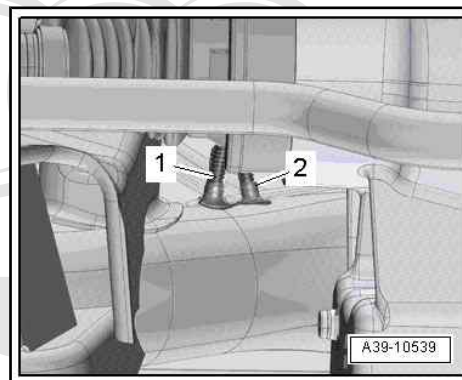
- ➔ [“2.1 Exploded view - final drive”, page 52](#)



Note

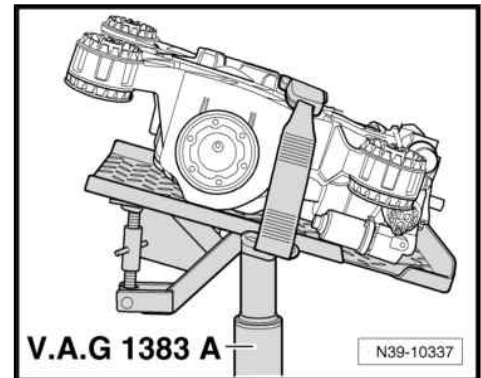
Renew bolts which are tightened by turning through a specified angle.

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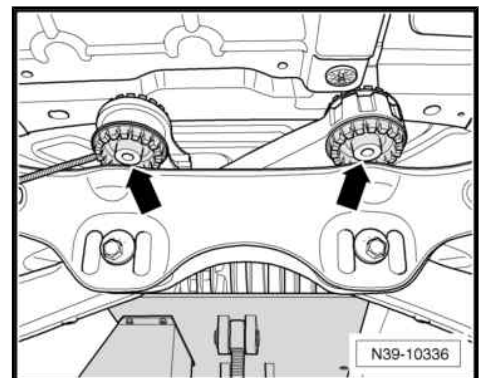


- Bring rear final drive into position under vehicle, supported by wooden block and secured with strap.

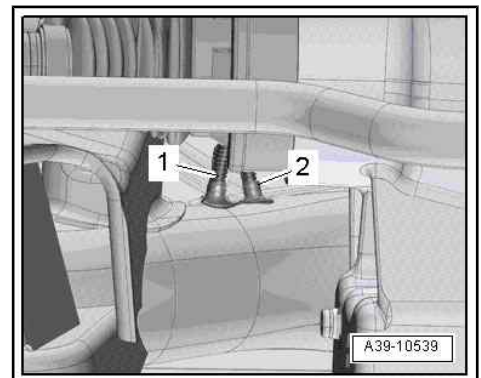
- Tilt final drive using engine and gearbox jack - V.A.G 1383 A- as shown in illustration.



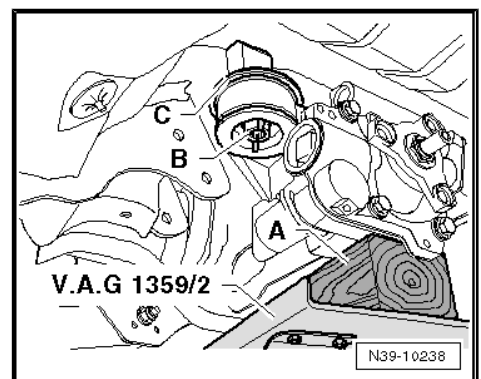
- Lift final drive and guide rear bonded rubber bushes -arrows- over the subframe, making sure there is sufficient clearance to other components.



- Clip breather hoses -1- and -2- onto subframe.

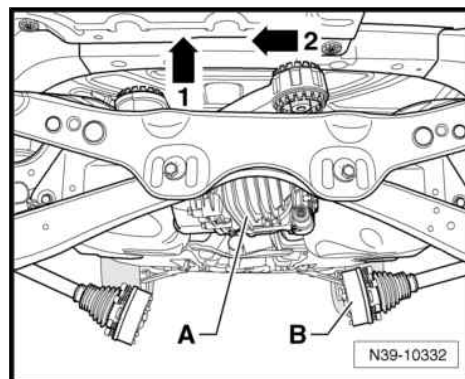


- Lift final drive with engine and gearbox jack - V.A.G 1383 A- until it reaches installation position.
- Place washer -C- onto front bonded rubber bush.
- Screw in bolt -B- by hand until it makes contact, then slacken again 5 turns.



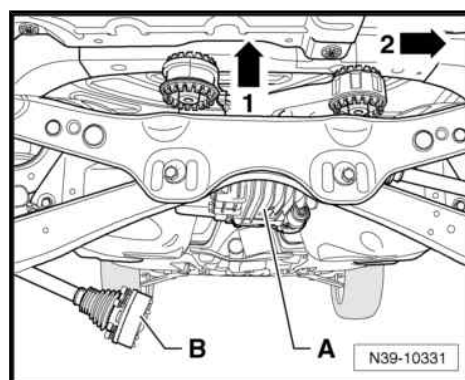
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- Lift rear part of final drive -A- -arrow 1- and push as far to the left as possible -arrow 2-.
- Carefully guide drive shaft (right-side) -B- upwards into flange.
- Move final drive back into installation position.
- Screw in bolts for drive shaft (right-side) on final drive.



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- Lift rear part of final drive -A- -arrow 1- and push as far to the right as possible -arrow 2-.
- Carefully guide drive shaft (left-side) -B- upwards into flange.
- Move final drive back into installation position.
- Screw in bolts for drive shaft (left-side) on final drive.

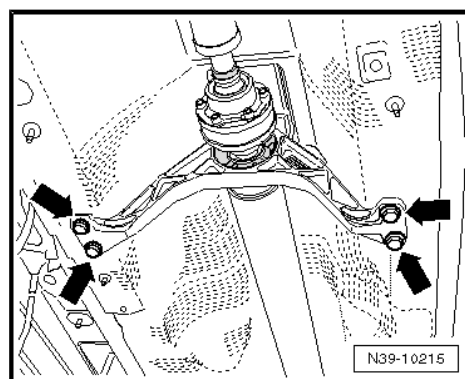


- Bolt propshaft onto rear final drive.
- Secure drive shafts ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Install pendulum support ⇒ Rep. gr. 34 ; Assembly mountings; Exploded view - assembly mountings .

- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.
- Tighten bolts -arrows-.

Remaining installation steps are carried out in reverse sequence; note the following:

- Install rear left vehicle level sender - G76- ⇒ Running gear, axles, steering; Rep. gr. 43 ; Vehicle level senders; Removing and installing rear vehicle level senders -G76- / -G77- .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .



Note

*When renewing the rear final drive, check gear oil level and oil level of the four-wheel drive coupling and top up if necessary:
⇒ [page 143](#) and ⇒ [page 138](#) .*

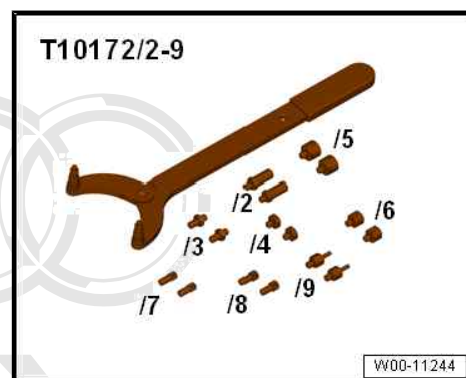
2.2.2 Removing and installing rear final drive, Audi A1 quattro

Special tools and workshop equipment required

◆ Tensioning strap - T10038-

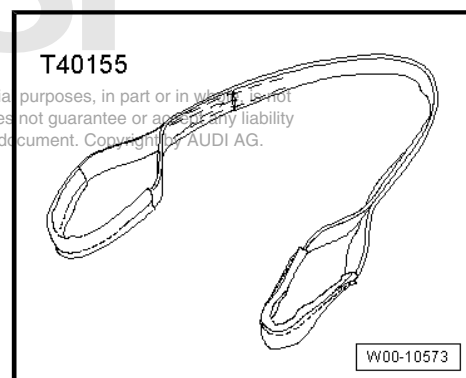


◆ Counterhold tool - T10172- with adapters - T10172/5-



◆ Retaining strap (2x), e.g. -T40155-

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◆ Engine and gearbox jack - V.A.G 1383 A-



◆ Workshop hoist - VAS 6100-



Removing

- Secure vehicle to support arms of lifting platform on both sides using tensioning straps - T10038- .

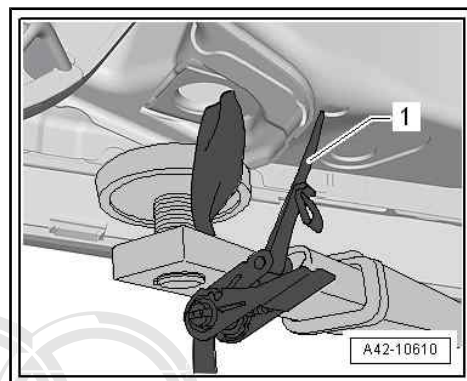
1 - Tensioning strap - T10038-



WARNING

There is a risk that the vehicle may slip off the lifting platform if it is not secured.

- Remove tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Remove fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .



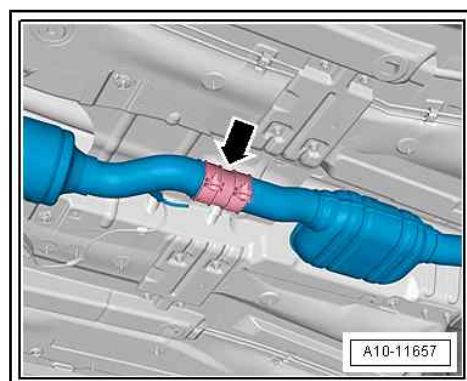
Caution

Risk of damage to flexible joint.

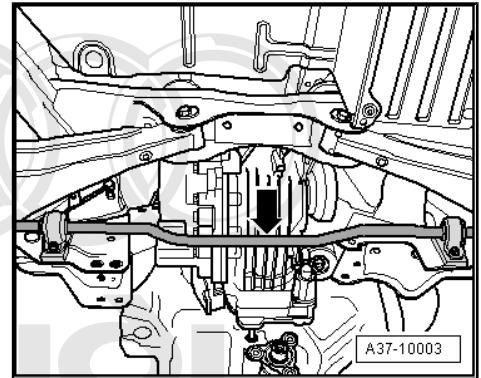
- ◆ *The flexible joint must not be bent further than 10°.*
- ◆ *Do not subject flexible joint to tensile load.*
- ◆ *Take care not to damage wire mesh on flexible joint.*

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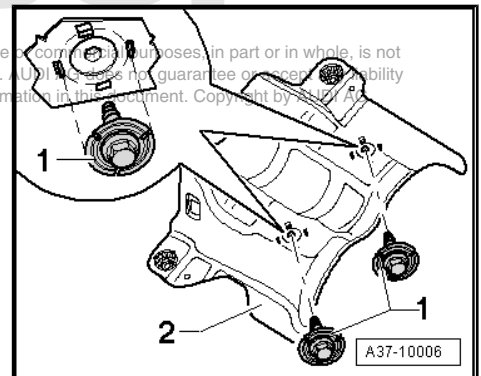
- Disconnect exhaust system at clamp -arrows- and tie up front exhaust pipe.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



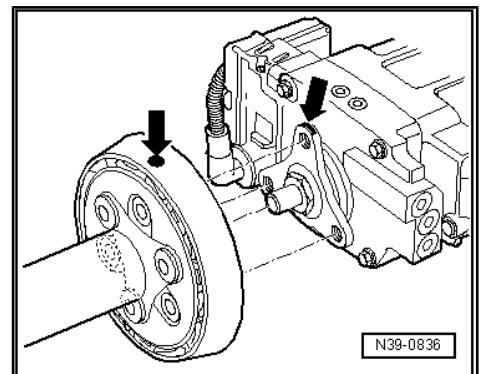
- Remove anti-roll bar -arrow- from rear axle ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .



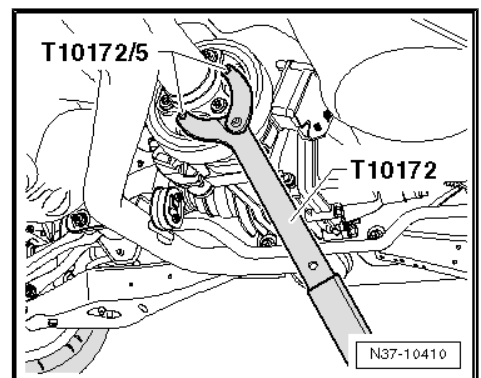
- Loosen bolts -arrows- securing centre propshaft bearing, but do not remove them.
- If necessary, detach heat shield -2- from body so that centre bearing of propshaft on body can be moved.



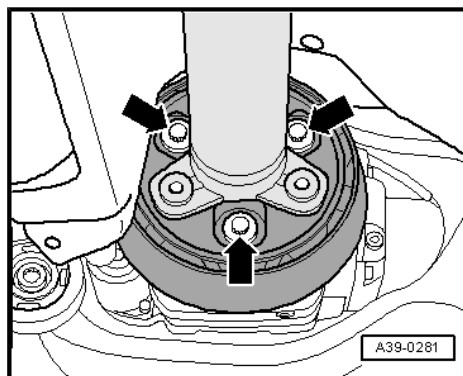
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



- Detach bolts -arrows- securing propshaft to rear final drive.



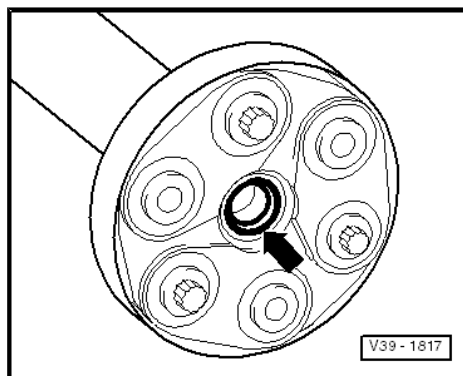
- Pull propshaft off centring pin on rear final drive, pressing propshaft slightly towards front. To do so, unscrew bolts on centre bearing of propshaft if necessary.



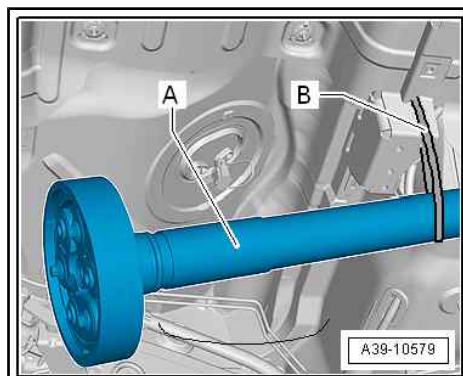
Caution

The seal -arrow- in the propshaft flange can be damaged.

- ◆ *Pull off propshaft horizontally from centring pin.*

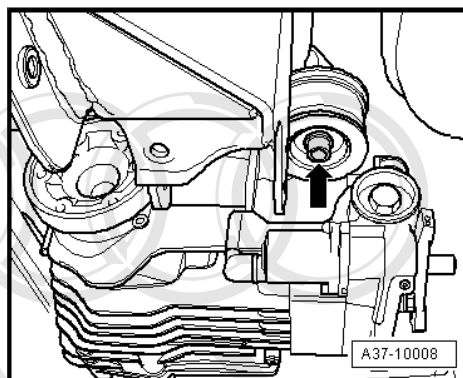


- Then tie up rear section of propshaft -A- to one side on body e.g. using wire -B-.



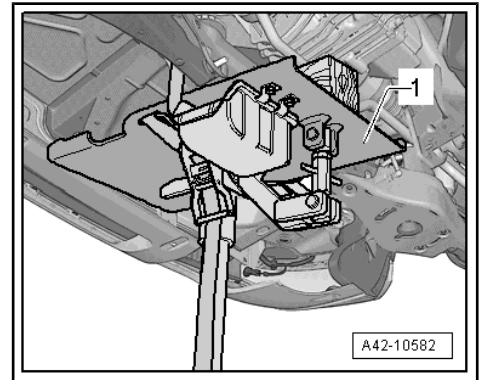
Note

- ◆ *Before removing rear axle with rear final drive, loosen bolt -arrow- at front bonded rubber bush 2 turns.*
- ◆ *This securing bolt can be loosened using special wrench - T10035- , socket, multi-point bit - T10061- or bit - T10099/1- .*

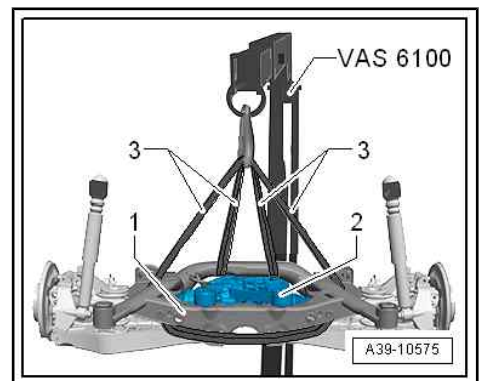


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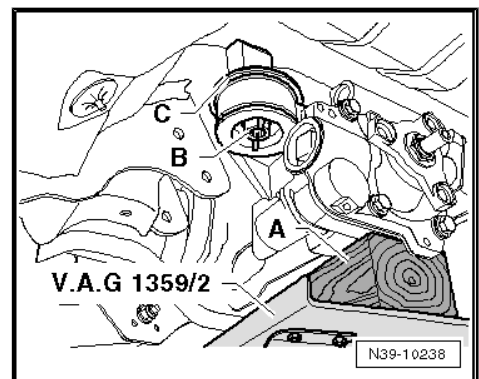
- Remove rear axle completely with rear final drive (fix position of subframe when removing) ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 42 ; Rear axle; Removing and installing rear axle .



- Secure retaining straps -3-, e.g. -T40155- on subframe -1- (not on rear final drive -2-) as shown in illustration.
- Lift rear axle with workshop hoist - VAS 6100- .

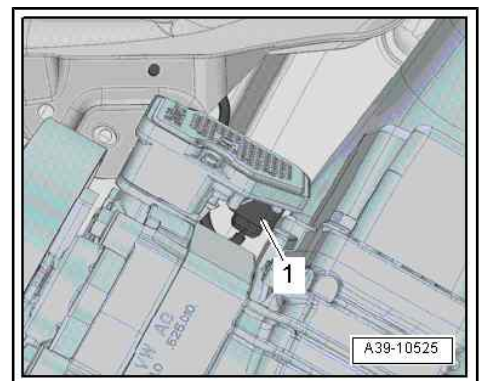


- Place a suitable block of wood -A- on universal gearbox support - V.A.G 1359/2- and support final drive with engine and gearbox jack - V.A.G 1383 A- .
- Secure rear final drive to universal gearbox support with a strap to prevent it from dropping.
- Detach final drive from below; to do so, unscrew bolt -B- and remove washer -C-.

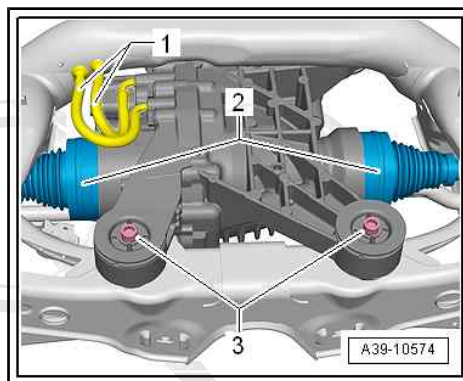


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- Unplug electrical connector -1- on all-wheel drive control unit - J492- .

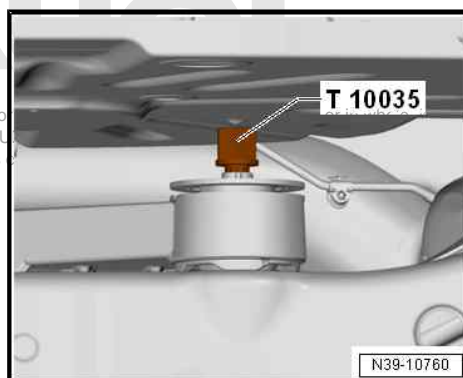


- Unclip the two breather hoses -1- and -2- at subframe.
- Detach drive shafts -2- from rear final drive and tie up on subframe.
- Remove bolts -3- securing rear final drive to subframe.



Note

These securing bolts can be loosened using special wrench T10035- , socket, multi-point bit - T10061- or bit - T10099/1-



- Tilt final drive using engine and gearbox jack - V.A.G 1383 A- as shown in illustration and pull forwards slightly.
- Lower final drive, making sure there is sufficient clearance from other components.

Installing

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

Tightening torques:

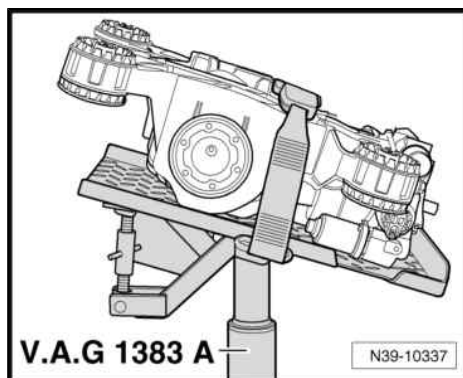
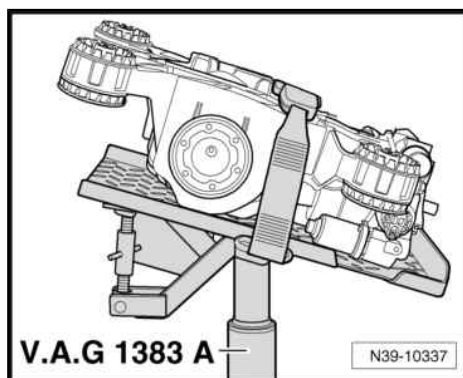
- ➔ ["2.1 Exploded view - final drive", page 52](#)



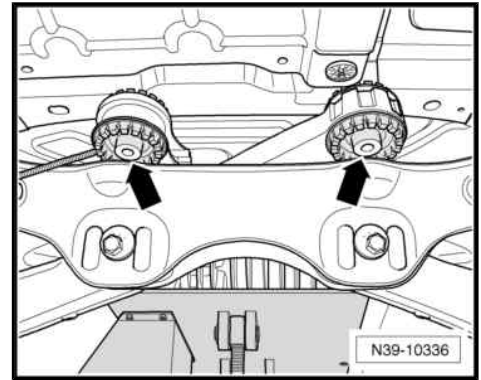
Note

Renew bolts which are tightened by turning through a specified angle.

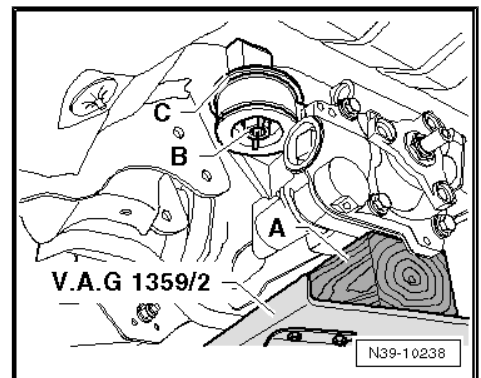
- Lift rear axle with workshop hoist - VAS 6100- ➔ [page 65](#) .
- Tilt final drive using engine and gearbox jack - V.A.G 1383 A- as shown in illustration.



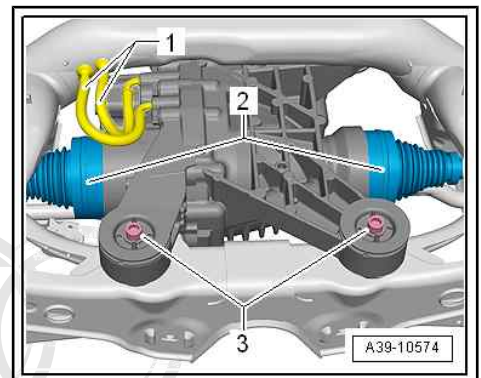
- Lift final drive and guide rear bonded rubber bushes -arrows- over the subframe, making sure there is sufficient clearance to other components.
- Lift final drive with engine and gearbox jack - V.A.G 1383 A- until it reaches installation position.



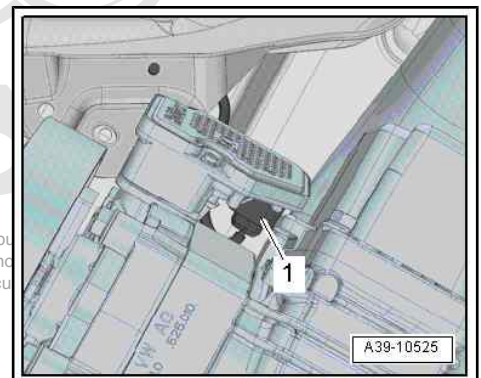
- Place washer -C- onto front bonded rubber bush.
- Screw in new bolt -B- by hand until it makes contact, but do not yet tighten completely.



- Fit drive shafts -2- into flange shafts of rear final drive.
- Secure rear final drive with new bolts -3- to subframe.
- Secure drive shafts -2- ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Loosening and tightening bolt securing drive shaft .
- Clip breather hoses -1- and -2- onto subframe.

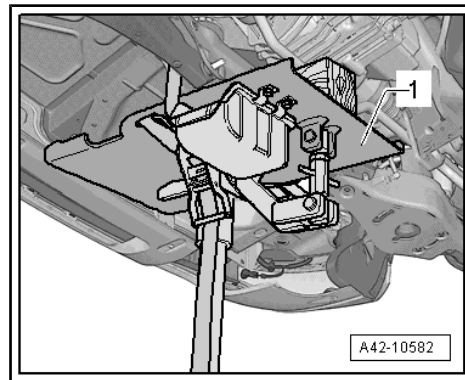


- Plug in electrical connector -1- on all-wheel drive control unit - J492- .



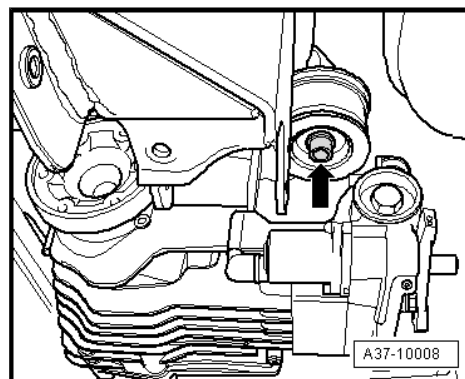
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- Place rear axle complete with rear final drive on engine and gearbox jack - V.A.G 1383 A--1-. Then remove workshop hoist - VAS 6100- .
- Install rear axle (complete unit) ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 42 ; Rear axle; Removing and installing rear axle .

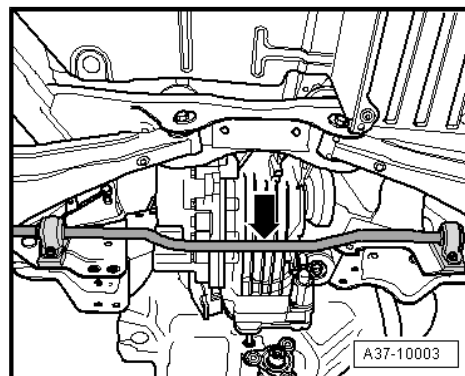


Note

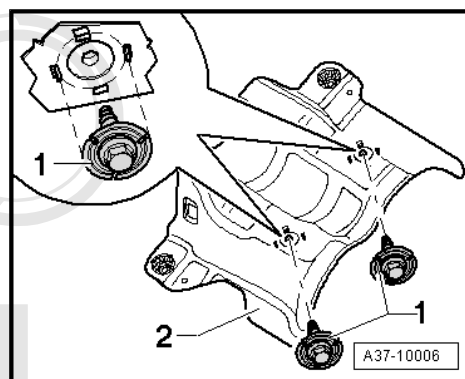
- ◆ After installing rear axle, tighten bolt -arrow- on front bonded rubber bush to specified torque.
- ◆ This securing bolt can be tightened using special wrench - T10035- , socket, multi-point bit - T10061- or bit - T10099/1- .
- Remove engine and gearbox jack from underneath vehicle.



- Install anti-roll bar -arrow- on rear axle ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Attach propshaft to rear final drive ⇒ [page 34](#) .
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.



- Tighten bolts with washers -1- for centre bearing.
- Install rear section of exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .
- Install tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .



Note

When renewing the rear final drive, check gear oil level and oil level of the four-wheel drive coupling and top up if necessary:

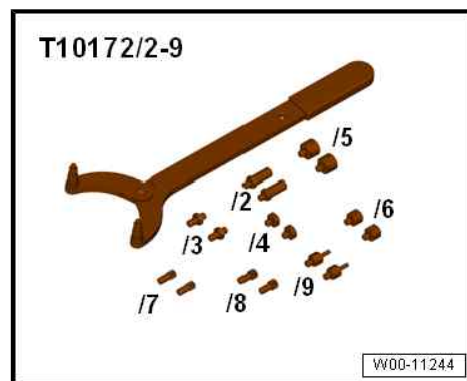
⇒ [page 143](#) and ⇒ [page 138](#)

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2.2.3 Removing and installing rear final drive - Audi S1

Special tools and workshop equipment required

- ◆ Counterhold tool - T10172- with adapters - T10172/5-

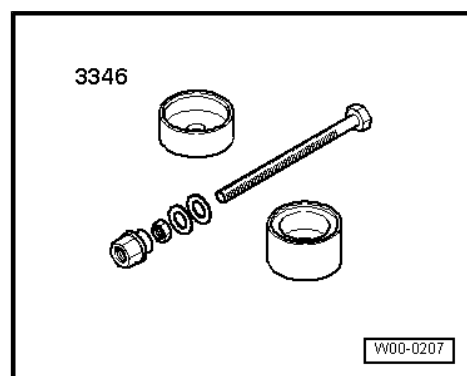


- ◆ Engine and gearbox jack - V.A.G 1383 A-



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- ◆ Socket - T40312-
- ◆ Spindle - 3346/2- and nut - 3346/3-

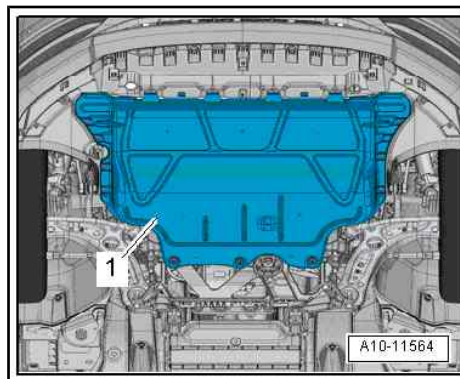


- ◆ Assembly tool - 3301- and -3301/2-

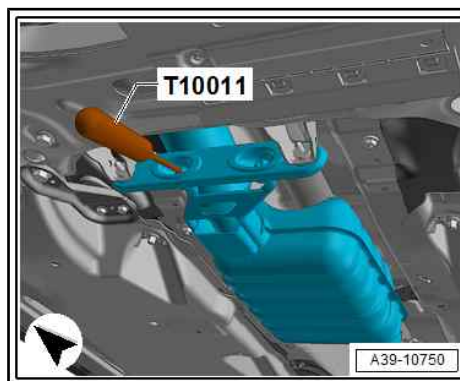


Removing

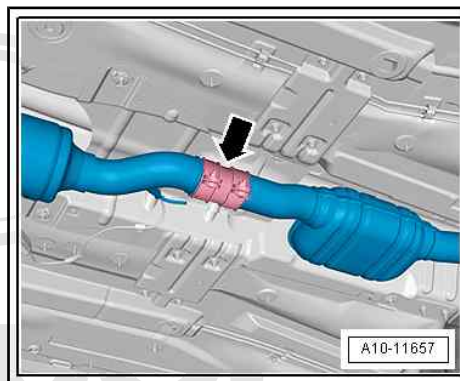
- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



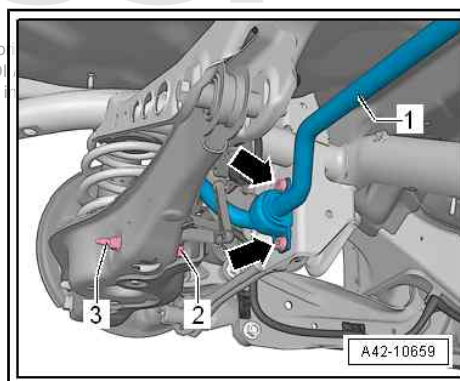
- Insert socket - T10011- into mounting on front exhaust pipe to support front silencer.



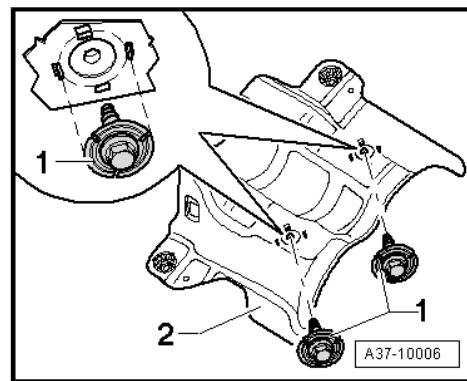
- Disconnect exhaust system at clamp -arrows- and tie up front exhaust pipe.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



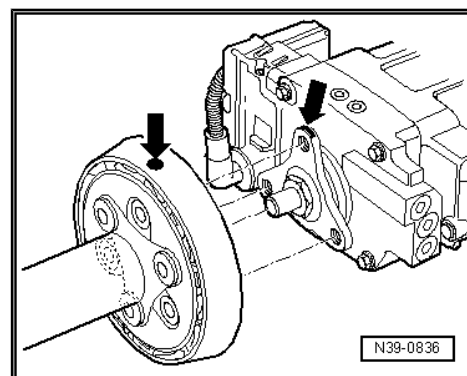
- Remove anti-roll bar -arrow- from rear axle ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .



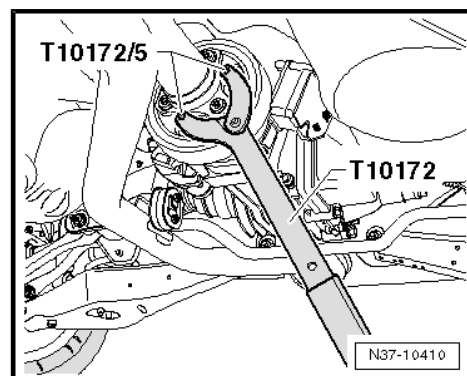
- Loosen bolts -arrows- securing centre propshaft bearing, but do not remove them.



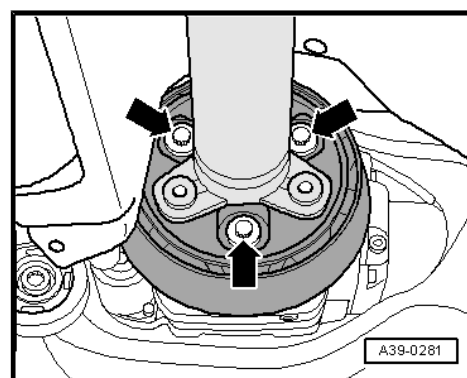
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .

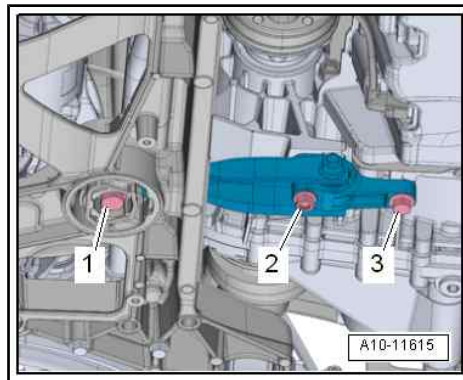


- Detach bolts -arrows- securing propshaft to rear final drive.

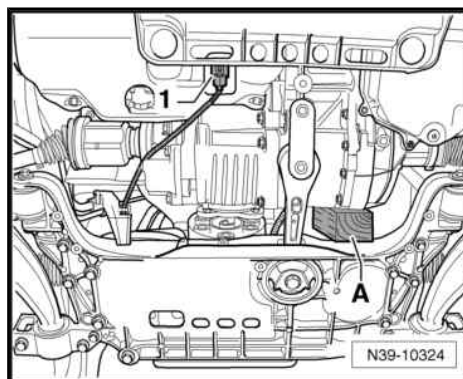


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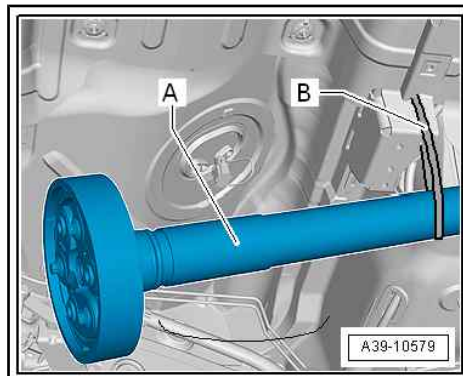
- Remove bolts -2, 3- for pendulum support.



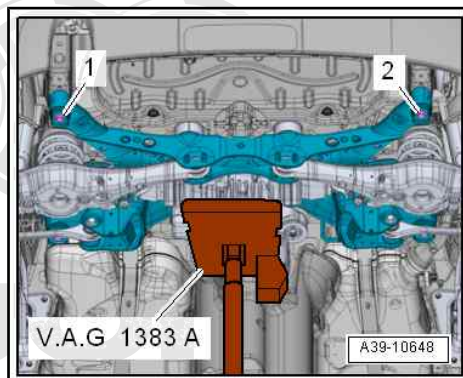
- Push engine/gearbox assembly forwards and secure with a suitable block of wood -A-.



- Pull propshaft -A- off centring pin on rear final drive then tie up to one side on body e.g. using wire -B-.
- Unbolt drive shafts -2- from rear final drive ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .



- Position engine and gearbox jack - V.A.G 1383 A- on a piece of wood below rear final drive.
- Remove bolts -1, 2-.



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- Screw spindle -3346/2- 15 mm into body with assembly tool - 3301- , -3301/2- and nut -3346/3- as shown in illustration.
- 1 - Assembly tool - 3301- , -3301/2-
- 2 - Nut -3346/3-
- 3 - Spindle -3346/2-
- Screw nut -3346/3- as far onto spindle -3346/2- as is necessary to reach dimension -a- = 35 mm.



Note

Do not lower subframe by more than 35 mm.

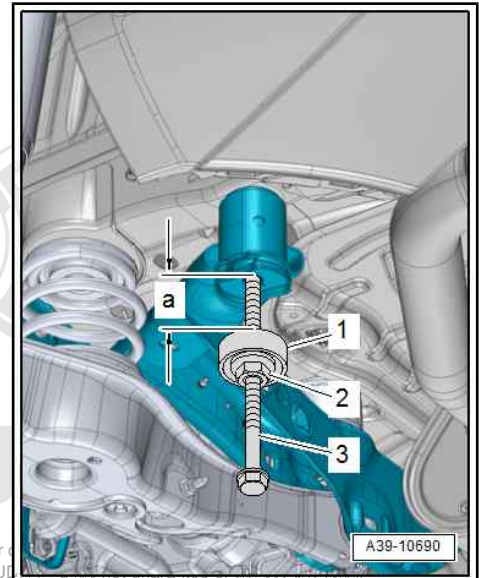
- Lower engine and gearbox jack - V.A.G 1383 A- as far as necessary for subframe to make contact with assembly tool - 3301- .



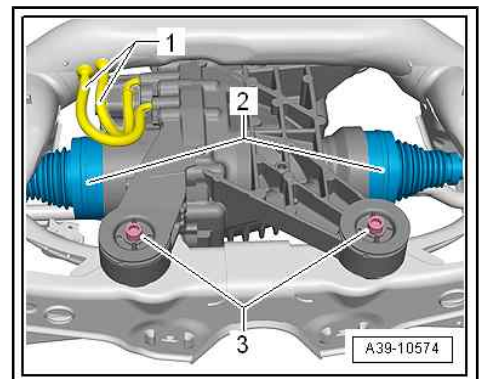
WARNING

Risk of accident.

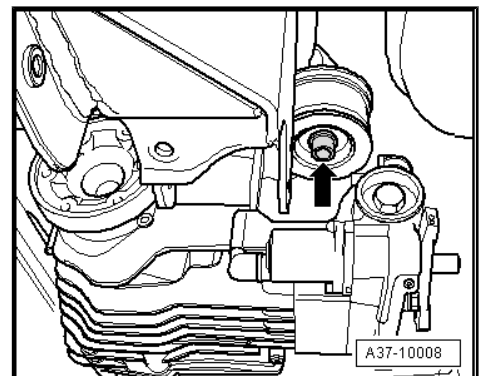
- ◆ **Engine and gearbox jack - V.A.G 1383 A- must remain in position when work is being carried out and must not be left unattended under the vehicle.**



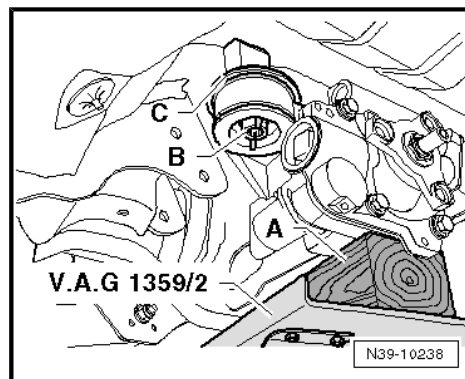
- Unclip breather hose -1- at subframe.
- Unbolt drive shafts -2- from rear final drive.
- Remove bolts -3- for rear final drive using socket - T40312- .



- Slacken bolt at front bonded rubber bush -arrow- 2 turns.



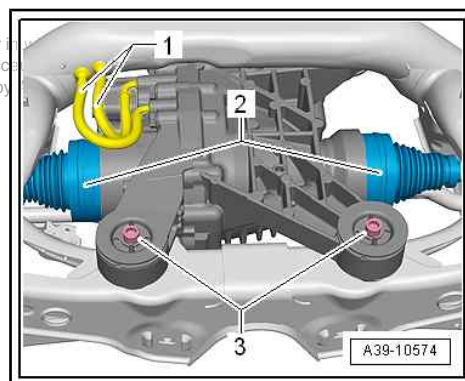
- Place a suitable block of wood -A- on universal gearbox support - V.A.G 1359/2- and support final drive with engine and gearbox jack - V.A.G 1383 A- .
- Secure rear final drive to universal gearbox support with a strap to prevent it from dropping.
- Detach final drive from below; to do so, unscrew bolt -B- and remove washer -C-.



- Unplug electrical connector -1- on all-wheel drive control unit - J492- .



- Unclip breather hoses -1- at subframe.
- Remove bolts -3- securing rear final drive to subframe.
- Slide rear final drive towards left, detach drive shaft (right-side) and tie up on subframe.
- Repeat procedure for drive shaft (left-side).



- Tilt final drive using engine and gearbox jack - V.A.G 1383 A- as shown in illustration and pull forwards slightly.
- Lower final drive, making sure there is sufficient clearance from other components.

Installing

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

Tightening torques:

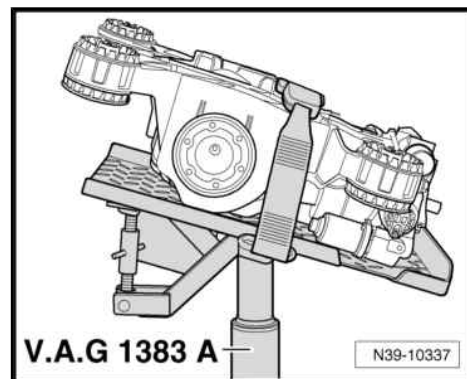
- ⇒ [“2.1 Exploded view - final drive”, page 52](#)



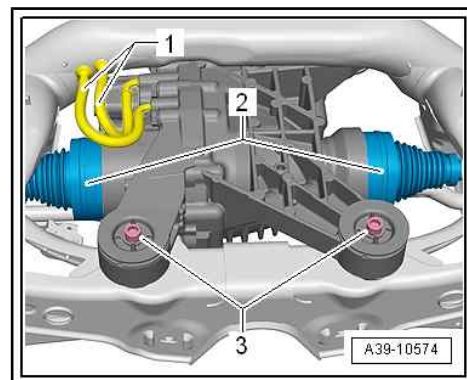
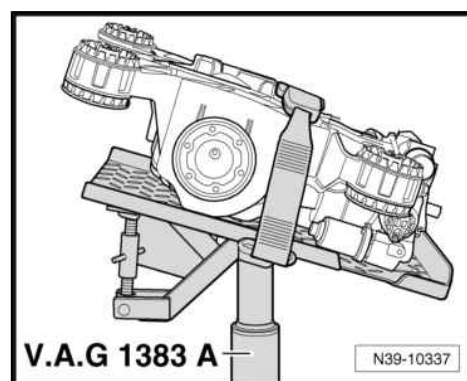
Note

Renew bolts which are tightened by turning through a specified angle.

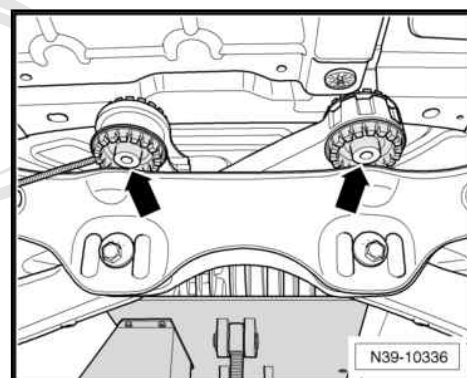
- Tilt final drive using engine and gearbox jack - V.A.G 1383 A- as shown in illustration.



- Before installing final drive, fit new bolts -3-.

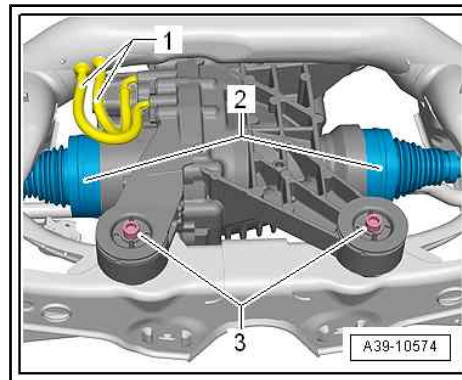


- Lift final drive and guide rear bonded rubber bushes -arrows- over the subframe, making sure there is sufficient clearance to other components.
- Lift final drive with engine and gearbox jack - V.A.G 1383 A- until it reaches installation position.

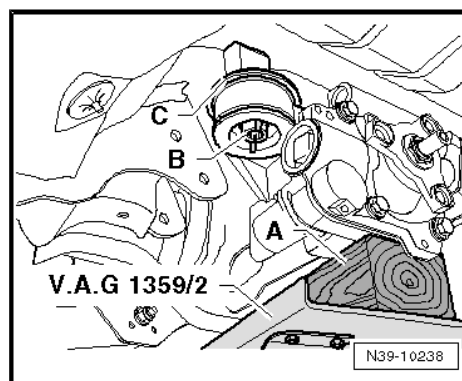


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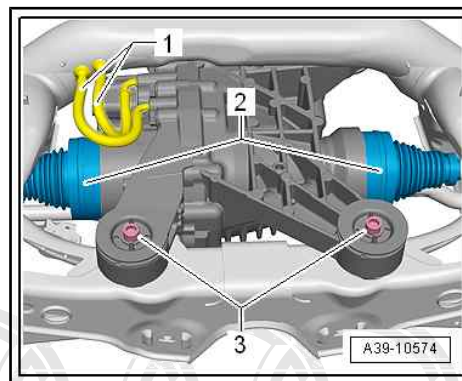
- Insert drive shafts (left and right) -2- into flange shafts.
- Clip breather hoses -1- onto subframe.



- Place washer -C- onto front bonded rubber bush.
- Screw in new bolt -B- by hand until it makes contact, but do not yet tighten completely.



- Secure rear final drive to subframe with bolts -3-.
- Secure drive shafts -2- ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Loosening and tightening bolt securing drive shaft .



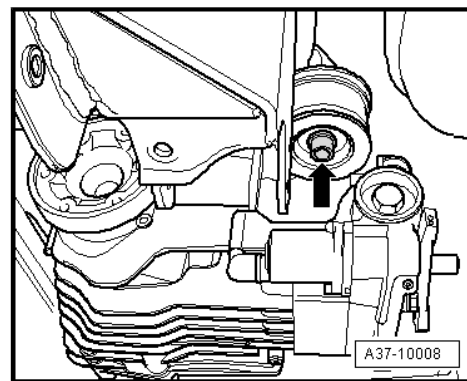
- Plug in electrical connector -1- on all-wheel drive control unit - J492- .



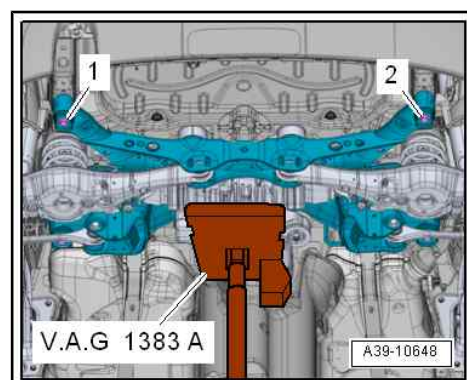
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- After installing rear axle, tighten bolt -arrow- on front bonded rubber bush to specified torque.

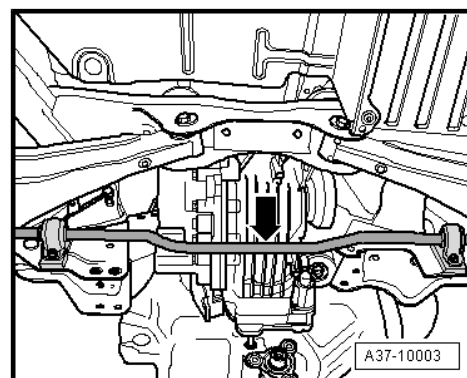


- Lift rear final drive and secure subframe with bolts -1 and 2-.
- Remove engine and gearbox jack from underneath vehicle.

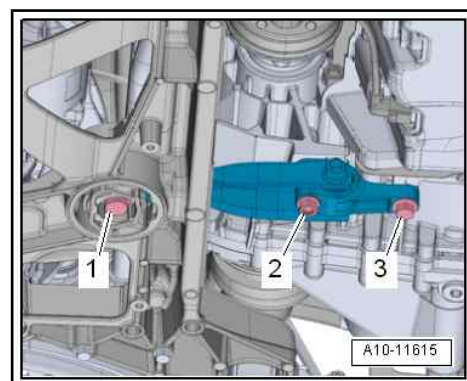


- Install anti-roll bar -arrow- on rear axle ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Attach propshaft to rear final drive ⇒ [page 34](#) .

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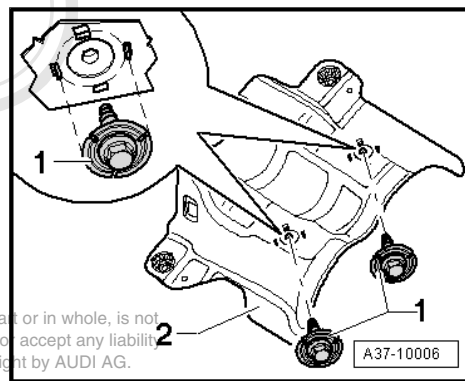
- Tighten bolts -2, 3- for pendulum support ⇒ Rep. gr. 34 ; Assembly mountings; Exploded view - assembly mountings .



- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.
- Tighten bolts with washers -1- for centre bearing.
- Install rear section of exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .


Note

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When renewing the rear final drive, check gear oil level and oil level of the four-wheel drive coupling and top up if necessary:

⇒ [page 143](#) and ⇒ [page 138](#) .

3 Oil seals

⇒ [“3.1 Overview of fitting locations - oil seals”, page 79](#)

⇒ [“3.2 Renewing oil seal \(left-side\)”, page 80](#)

⇒ [“3.3 Renewing oil seal \(right-side\)”, page 85](#)

⇒ [“3.4 Renewing oil seal for propshaft flange”, page 90](#)

3.1 Overview of fitting locations - oil seals

1 - Nut

- ☐ Apply locking fluid -
D 000 600- when fitting
- ☐ Tightening torque
⇒ [page 109](#)

2 - Flange for propshaft

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

3 - Oil seal for propshaft flange

Renewing ⇒ [page 90](#)

4 - Oil seal (right-side)

- ☐ For flange shaft (right-side)
- ☐ Renewing ⇒ [page 85](#)

5 - Circlip

- ☐ Renew after removing
flange shaft
⇒ [page 80](#)

6 - Flange shaft (right-side)

- ☐ Removing and installing
⇒ [page 85](#)

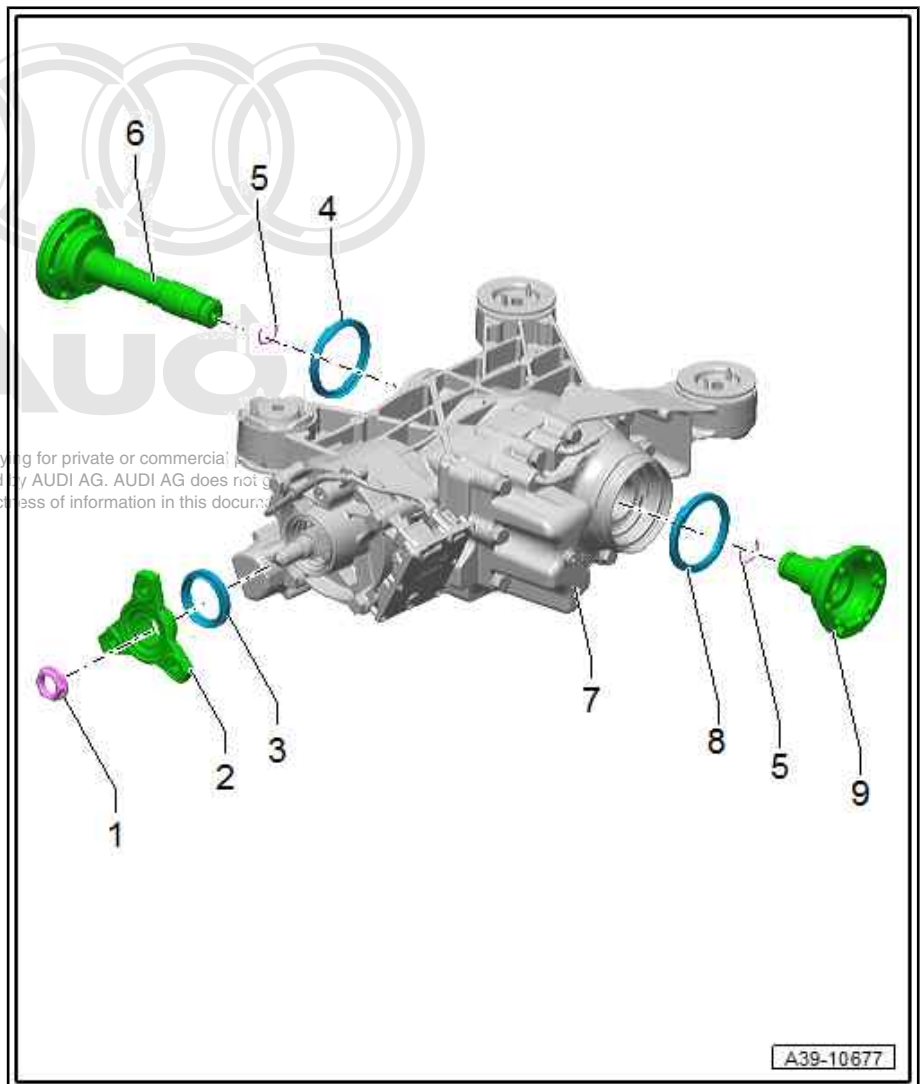
7 - Rear final drive

8 - Oil seal (left-side)

- ☐ For flange shaft (left-side)
- ☐ Renewing ⇒ [page 80](#)

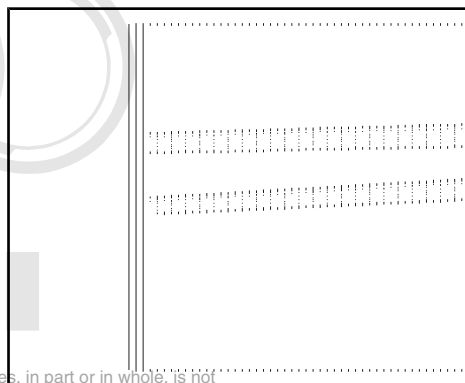
9 - Flange shaft (left-side)

- ☐ Removing and installing
⇒ [page 80](#)



Renewing circlip for flange shaft

- Clamp flange shaft in vice, using jaw protectors.
- Use new circlip -A- to press old circlip out of groove in flange shaft.



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3.2 Renewing oil seal (left-side)

⇒ ["3.2.1 Renewing oil seal \(left-side\) - Audi A1", page 80](#)

⇒ ["3.2.2 Renewing oil seal \(left-side\) - Audi Q3", page 82](#)

3.2.1 Renewing oil seal (left-side) - Audi A1

Special tools and workshop equipment required

VW 681 	T10037 
T10049 	VA S 6208 
	

W39-10147

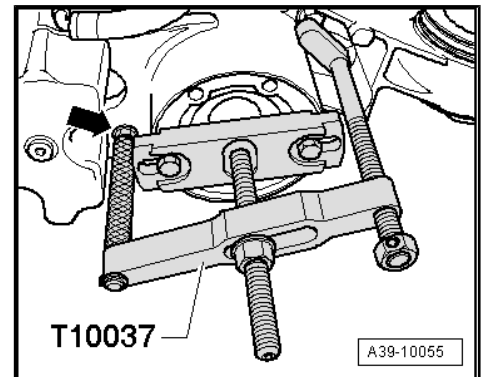
- ◆ Extractor lever - VW 681-
- ◆ Thrust piece - T10049-

- ◆ Drip tray for workshop hoist - VAS 6208-
- ◆ Puller - T10037-
- ◆ Sealing grease - G 052 128 A1-

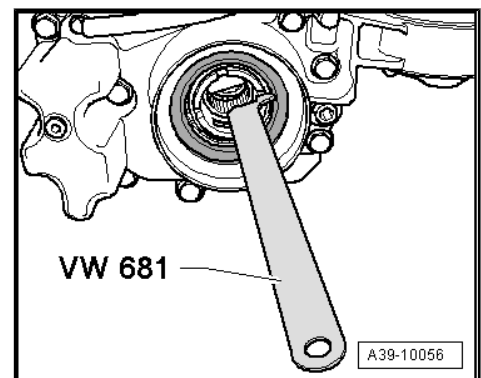
Removing

- Remove drive shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Place drip tray under rear final drive.
- Screw knurled nut - T10037- or an M8 nut -arrow- onto thread of puller - T10037/1- .
- Knurled nut - T10037/1- or M8 nut -arrow- is flush with beginning of thread.
- Remove flange shaft using puller - T10037 - .

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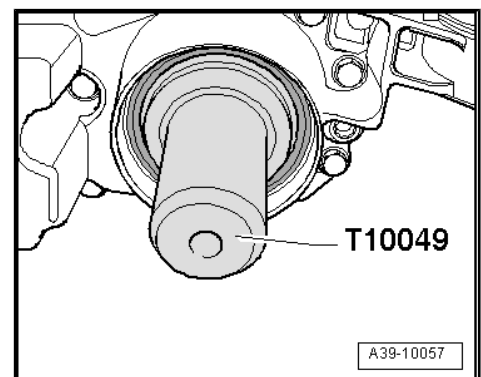


- Lever out flange shaft oil seal using oil seal extractor lever - VW 681- .



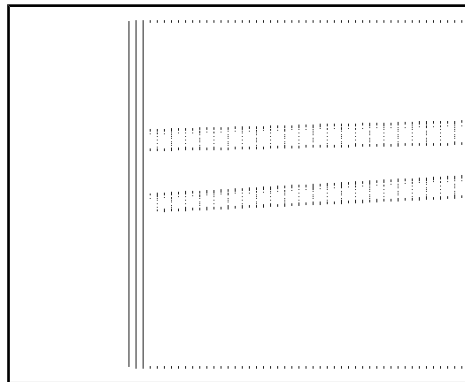
Installing

- Lightly lubricate outside circumference of new oil seal and drive in onto stop using thrust piece - T10049- . Make sure seal remains straight.
- Pack space between sealing lip and dust lip half full with sealing grease - G 052 128 A1- .





- Clamp flange shaft in vice, using jaw protectors.
- Use new circlip -A- to press old circlip out of groove in flange shaft.
- Drive in flange shaft using a plastic-headed hammer and, if necessary, a drift.
- Attach drive shaft to flange shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Check gear oil level in rear final drive ⇒ [page 143](#) .



3.2.2 Renewing oil seal (left-side) - Audi Q3



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Special tools and workshop equipment required



◆ Extractor lever - VW 681-

◆ Thrust piece - T10049-
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◆ Torque wrench - V.A.G 1331-

◆ Drip tray for workshop hoist - VAS 6208-

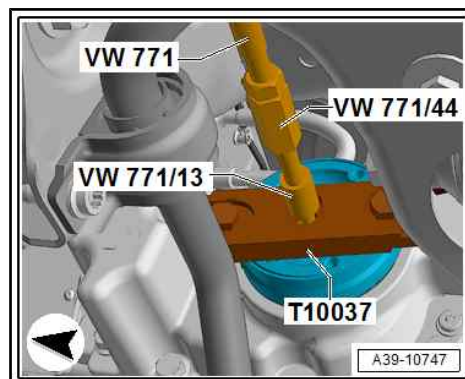
◆ Puller - T10037-

◆ Sealing grease - G 052 128 A1-

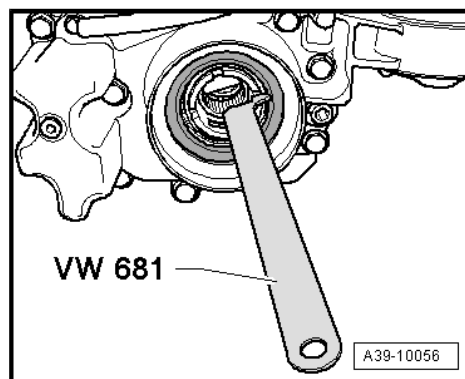
◆ Multi-purpose tool - VW 771- with extension -VW 771/13- and -VW 771/44-

Removing

- Remove left rear wheel.
- Detach drive shaft (left-side) from flange shaft and place to one side ➔ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Loosening and tightening bolt securing drive shaft .
- Place drip tray under rear final drive.
- Remove bottom section of puller - T10037- and bolt it to flange shaft (left-side).
- Guide multi-purpose tool - VW 771- with extension -VW 771/13- and -VW 771/44- into hole on puller - T10037- .
- Pull out flange shaft with multi-purpose tool - VW 771- .



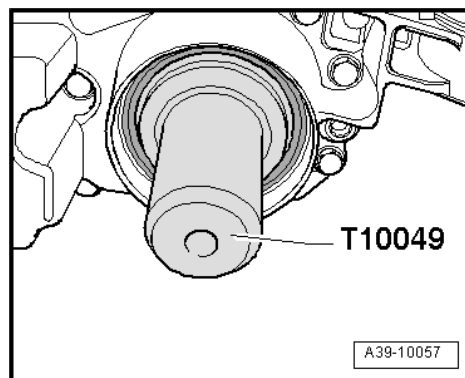
- Lever out flange shaft oil seal using oil seal extractor lever - VW 681- .



Installing

Vehicles with rear final drive 0AY, 0BS:

- Lightly lubricate outside circumference of new oil seal and drive in onto stop using thrust piece - T10049- . Make sure seal remains straight.



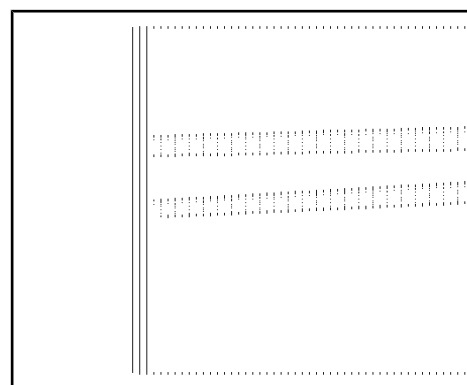
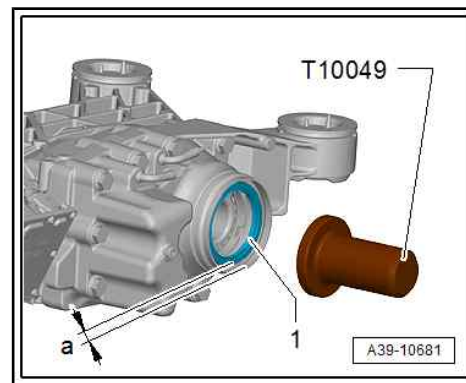
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Vehicles with rear final drive 0CR:

- Lightly lubricate outside circumference of new oil seal -1- and drive in as far as dimension -a- using thrust piece - T10049- . Take care to keep seal straight when installing.
- Dimension -a- = 4.8 ± 0.1 mm (measured from flat surface of housing to oil seal)
- Do not drive oil seal onto stop.
- The oil seal -1- and the flat surface of the housing must be parallel to within 0.25 mm.

Continued for all vehicles:

- Pack space between sealing lip and dust lip half full with sealing grease - G 052 128 A1- .
- Clamp flange shaft in vice, using jaw protectors.
- Use new circlip -A- to press old circlip out of groove in flange shaft.
- Drive in flange shaft using a plastic-headed hammer and, if necessary, a drift.
- Attach drive shaft to flange shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Loosening and tightening bolt securing drive shaft .
- Fit left rear wheel.
- Check gear oil level in rear final drive ⇒ [page 143](#) .



3.3 Renewing oil seal (right-side)

⇒ [“3.3.1 Renewing oil seal \(right-side\) - Audi A1”, page 85](#)

⇒ [“3.3.2 Renewing oil seal \(right-side\) - Audi Q3”, page 87](#)

3.3.1 Renewing oil seal (right-side) - Audi A1



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Special tools and workshop equipment required



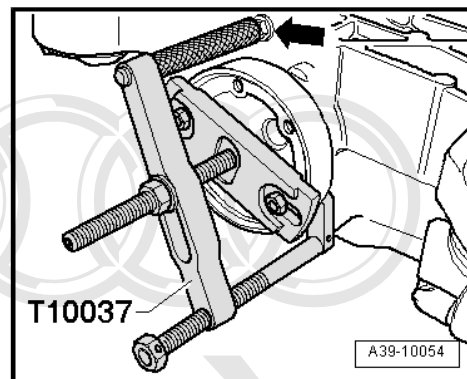
- ◆ Extractor lever - VW 681-
- ◆ Thrust piece - T10049-
- ◆ Drip tray for workshop hoist - VAS 6208-
- ◆ Puller - T10037-
- ◆ Sealing grease - G 052 128 A1-

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Removing

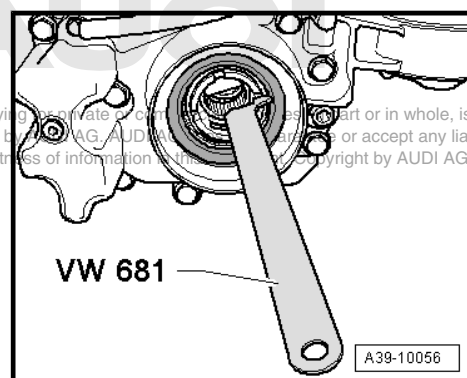
- Remove drive shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Place drip tray under rear final drive.

- Screw knurled nut - T10037- or an M8 nut -arrow- onto thread of puller - T10037/1- .
- Knurled nut - T10037/1- or M8 nut -arrow- is flush with beginning of thread.
- Remove flange shaft using puller - T10037 - .



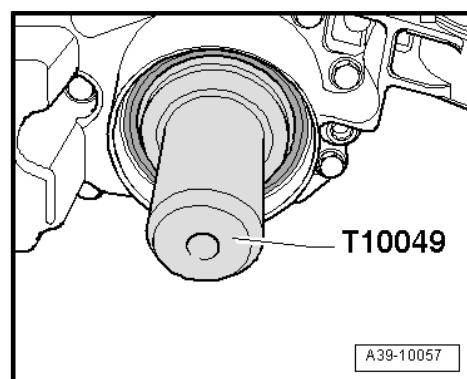
- Lever out flange shaft oil seal using oil seal extractor lever - VW 681- .

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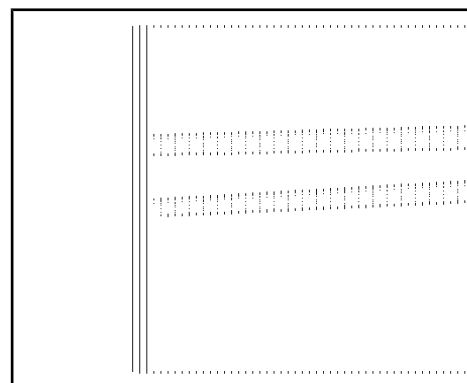


Installing

- Lightly lubricate outside circumference of new oil seal and drive in onto stop using thrust piece - T10049- . Make sure seal remains straight.
- Pack space between sealing lip and dust lip half full with sealing grease - G 052 128 A1- .



- Clamp flange shaft in vice, using jaw protectors.
- Use new circlip -A- to press old circlip out of groove in flange shaft.
- Drive in flange shaft using a plastic-headed hammer and, if necessary, a drift.
- Attach drive shaft to flange shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Check gear oil level in rear final drive ⇒ [page 143](#) .



3.3.2 Renewing oil seal (right-side) - Audi Q3

Special tools and workshop equipment required



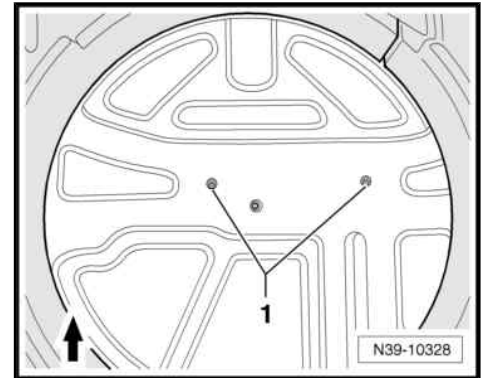
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- ◆ Extractor lever - VW 681-
- ◆ Thrust piece - T10049-
- ◆ Drip tray for workshop hoist - VAS 6208-
- ◆ Puller - T10037-
- ◆ Sealing grease - G 052 128 A1-

Removing

- Remove spare wheel (if fitted).
- Remove spare wheel well or foam inserts.

- Remove plugs -1- from underbody.
- Working through these apertures, unscrew bolts for final drive.
- Detach drive shaft (right-side) from flange shaft and place to one side ➔ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Loosening and tightening bolt securing drive shaft .
- Place drip tray under rear final drive.



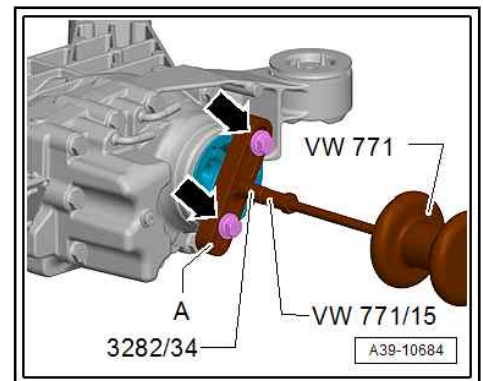
- Remove spindle from bridge of puller - 18/0- and screw in bolt - 3282/34- in its place.
- Screw bridge -A- onto flange shaft using two bolts M8 x 30 -arrows-.

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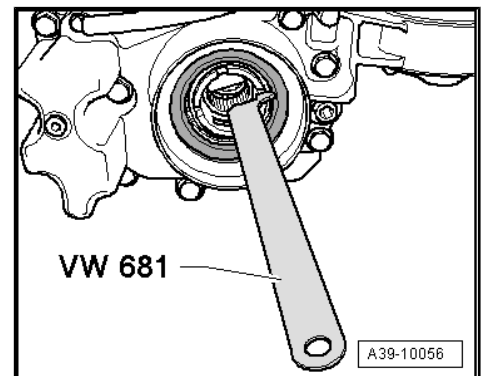


Note

When removing flange shaft, tie drive shaft up to one side and move rear final drive until flange shaft no longer makes contact with subframe.



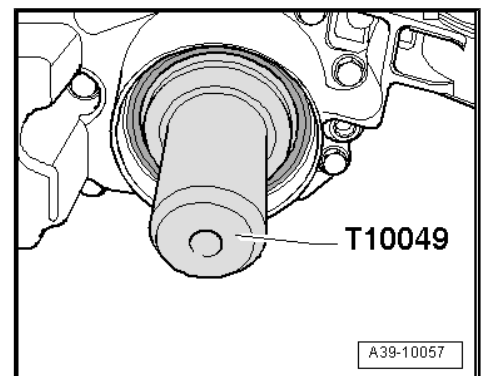
- Lever out flange shaft oil seal using oil seal extractor lever - VW 681- .



Installing

Vehicles with rear final drive 0AY, 0BS:

- Lightly lubricate outside circumference of new oil seal and drive in onto stop using thrust piece - T10049- . Make sure seal remains straight.

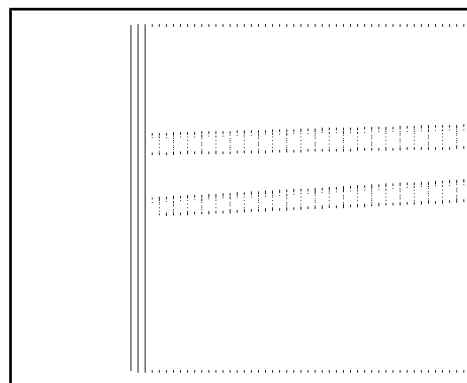
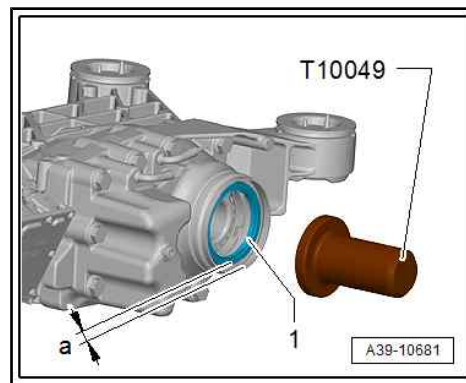


Vehicles with rear final drive 0CR:

- Lightly lubricate outside circumference of new oil seal -1- and drive in as far as dimension -a- using thrust piece - T10049- . Take care to keep seal straight when installing.
- Dimension -a- = 4.8 ± 0.1 mm (measured from flat surface of housing to oil seal)
- Do not drive oil seal onto stop.
- The oil seal -1- and the flat surface of the housing must be parallel to within 0.25 mm.

Continued for all vehicles:

- Pack space between sealing lip and dust lip half full with sealing grease - G 052 128 A1- .
- Clamp flange shaft in vice, using jaw protectors.
- Use new circlip -A- to press old circlip out of groove in flange shaft.
- Drive in flange shaft using a plastic-headed hammer and, if necessary, a drift.
- Attach drive shaft to flange shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Loosening and tightening bolt securing drive shaft .
- Tighten bolts for rear final drive ⇒ [page 52](#) .
- Install plugs -1- on underbody.
- Install spare wheel well or foam inserts.
- Fit spare wheel (if applicable).
- Check gear oil level in rear final drive ⇒ [page 143](#) .



3.4 Renewing oil seal for propshaft flange

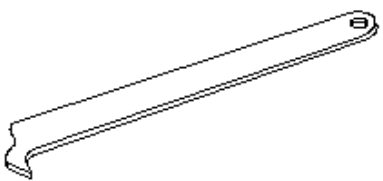
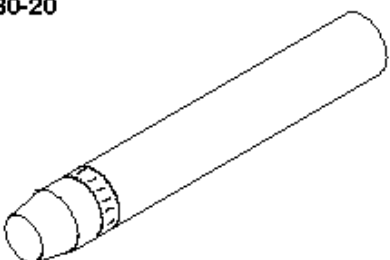
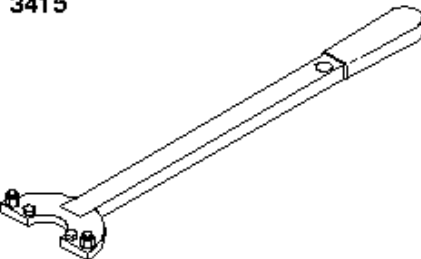
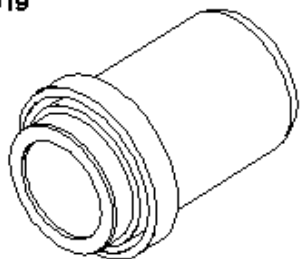
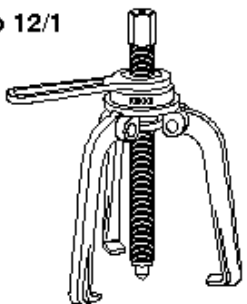
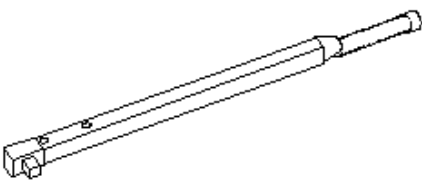
⇒ [“3.4.1 Renewing oil seal for propshaft flange - Audi Q3”, page 90](#)

⇒ [“3.4.2 Renewing oil seal for propshaft flange - Audi A1”, page 93](#)

3.4.1 Renewing oil seal for propshaft flange - Audi Q3

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Special tools and workshop equipment required

VW 681 	30-20 
3415 	T10019 
Kukko 12/1 	V.A.G 1601  G39-10014

- ◆ Extractor lever - VW 681-
- ◆ Drift sleeve - 30-20-
- ◆ Counterhold tool - 3415-
- ◆ Thrust piece - T10019-
- ◆ Puller - Kukko 12/1-
- ◆ Torque wrench - V.A.G 1601-
- ◆ Drip tray for workshop hoist - VAS 6208-

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- ◆ Locking fluid - D 000 600-
- ◆ Bolt M10 x 25
- ◆ Hexagon socket head bolt M8 x 15

Removing



Caution

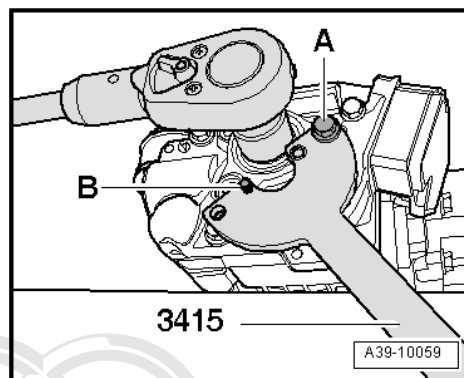
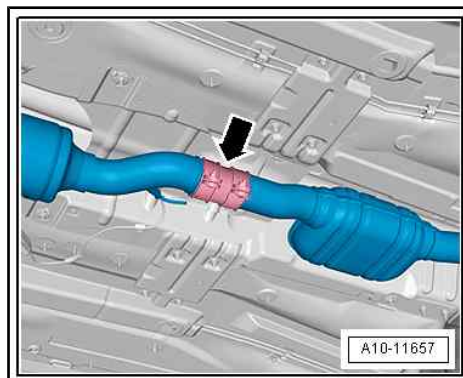
Risk of damage to flexible joints in exhaust system.

- ◆ *The flexible joint in the front exhaust pipe must not be bent further than 10°.*

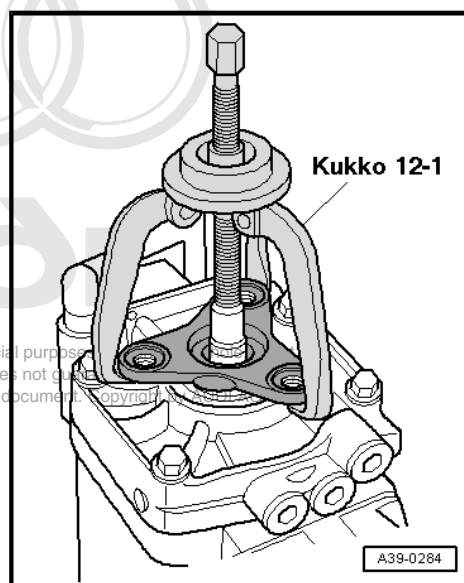
- Disconnect exhaust system at clamp -arrow-.
- Tie up front exhaust pipe on underbody.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Remove flexible coupling (rear) ⇒ [page 46](#) .
- Unscrew hexagon nut for propshaft flange.

A - Bolt M10 x 25

B - Hexagon socket head bolt M8 x 15 (screwed into counterhold tool - 3415- from the rear)

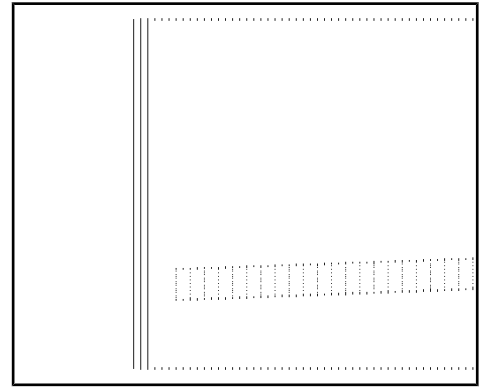


- Pull off propshaft flange. Use three-arm puller (e.g. -Kukko 12-1-) if flange is difficult to remove.



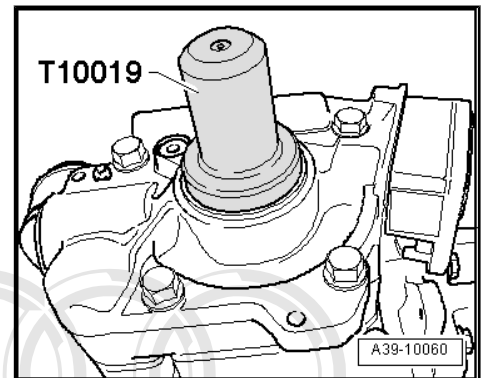
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- Pull seal out with oil seal extractor lever - VW 681- .



Installing

- Before installing, lightly oil outer circumference of new oil seal and space between sealing lips with high-performance oil for four-wheel drive coupling .
- Drive in new oil seal as far as stop using thrust piece - T10019- . Make sure seal remains straight.
- Drive on propshaft flange using drift sleeve - 30 - 20- .

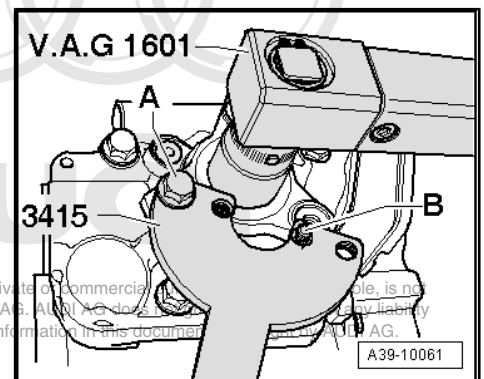


- Apply locking fluid - D 000 600- to new hexagon nut and tighten nut. Tightening torque ⇒ [Item 7 \(page 111\)](#)

A - Bolt M10 x 20

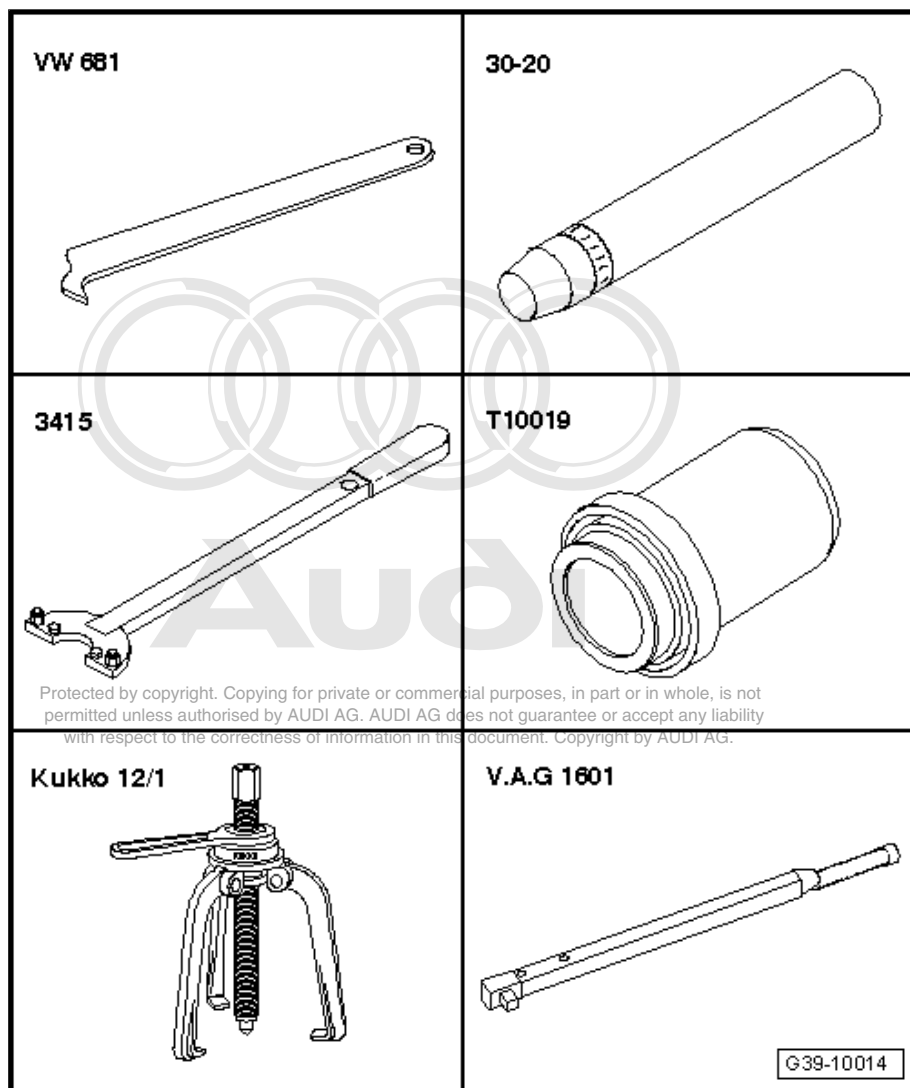
B - Hexagon socket head bolt M8 x 15 (screwed into counterhold tool - 3415- from the rear)

- Install flexible coupling (rear) ⇒ [page 46](#) .
- Install exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; **Exploded view - silencers** .
- Check oil level in four-wheel drive coupling ⇒ [page 138](#) .

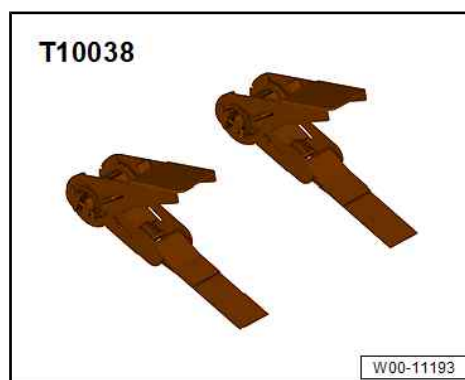


3.4.2 Renewing oil seal for propshaft flange - Audi A1

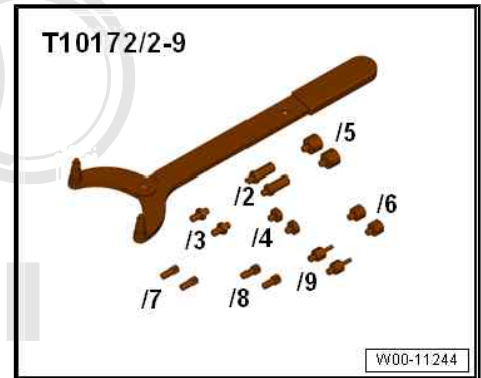
Special tools and workshop equipment required



- ◆ Extractor lever - VW 681-
- ◆ Drift sleeve - 30-20-
- ◆ Counterhold tool - 3415-
- ◆ Thrust piece - T10019-
- ◆ Puller - Kukko 12/1-
- ◆ Torque wrench - V.A.G 1601-
- ◆ Tensioning strap - T10038-



- ◆ Counterhold tool - T10172- with adapters - T10172/5-



- ◆ Used oil collection and extraction unit - V.A.G 1782-



- ◆ Locking fluid - D 000 600-
- ◆ Bolt M10 x 25
- ◆ Hexagon socket head bolt M8 x 15

Removing

- Secure vehicle to support arms of lifting platform on both sides using tensioning straps - T10038- .

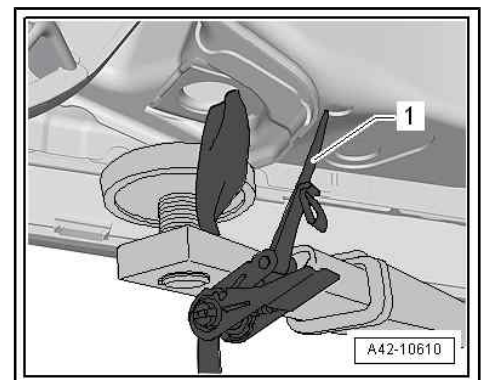
1 - Tensioning strap - T10038-



WARNING

There is a risk that the vehicle may slip off the lifting platform if it is not secured.

- Remove tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Remove fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .

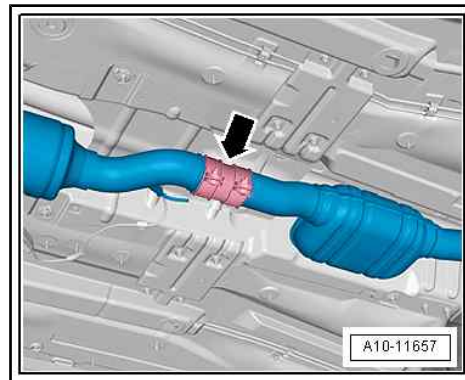


Caution

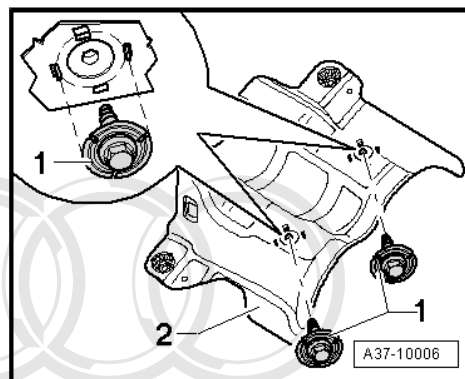
Risk of damage to flexible joint.

- ◆ *The flexible joint must not be bent further than 10°.*
- ◆ *Do not subject flexible joint to tensile load.*
- ◆ *Take care not to damage wire mesh on flexible joint.*

- Disconnect exhaust system at clamp -arrow- and tie up front exhaust pipe.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .

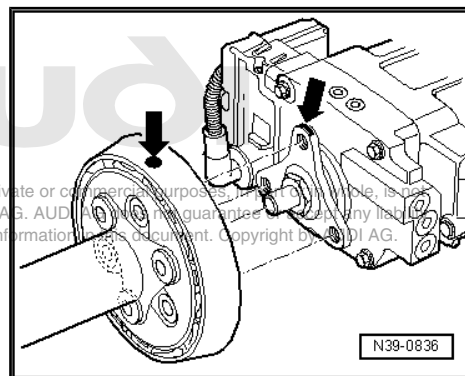


- Loosen bolts -arrows- securing centre propshaft bearing, but do not remove them.
- If necessary, detach heat shield -2- from body so that centre bearing of propshaft on body can be moved.

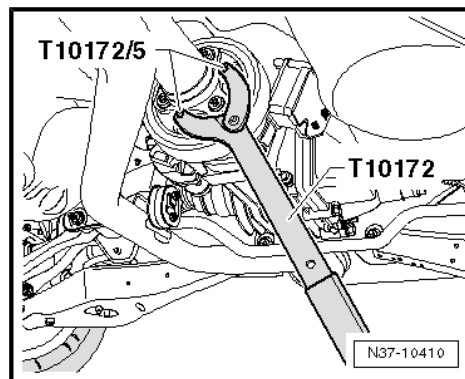


- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.

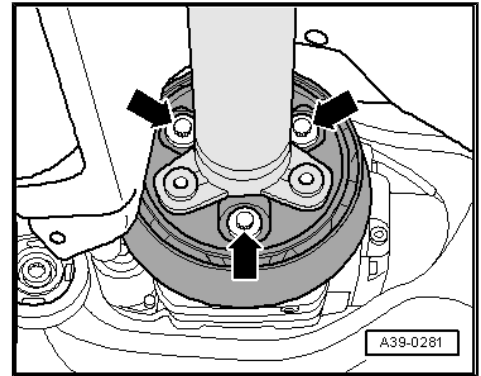
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- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



- Detach bolts -arrows- securing propshaft to rear final drive.



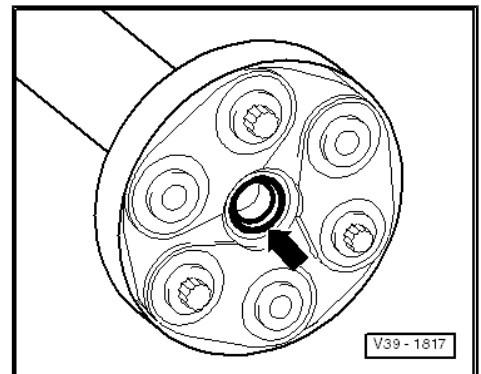
- Pull propshaft off centring pin on rear final drive, pressing propshaft slightly towards front. To do so, unscrew bolts on centre bearing of propshaft if necessary.



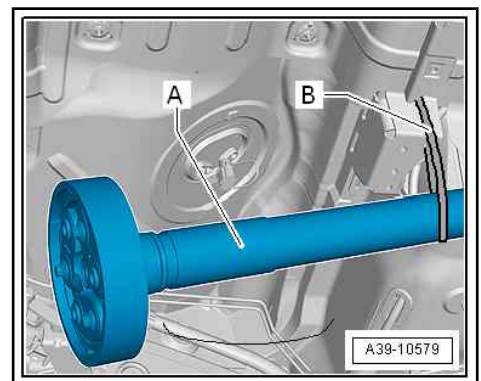
Caution

The seal -arrow- in the propshaft flange can be damaged.

◆ *Pull off propshaft horizontally from centring pin.*



- Then tie up rear section of propshaft -A- to one side on body e.g. using wire -B-.



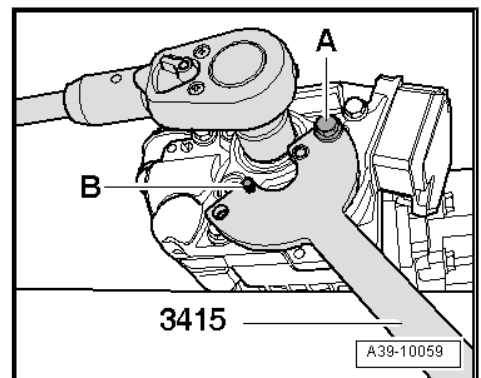
- Remove hexagon nut for propshaft flange.

A - Bolt M10 x 25

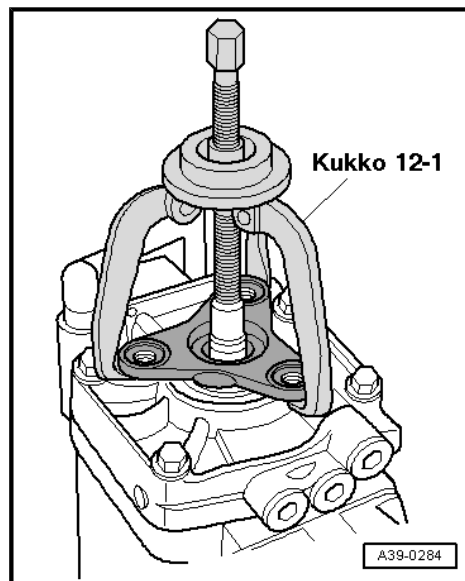
B - Hexagon socket head bolt M8 x 15 (screwed into counterhold tool - 3415- from the rear)

Place used oil collection and extraction unit V.A.G 1782- below rear final drive!

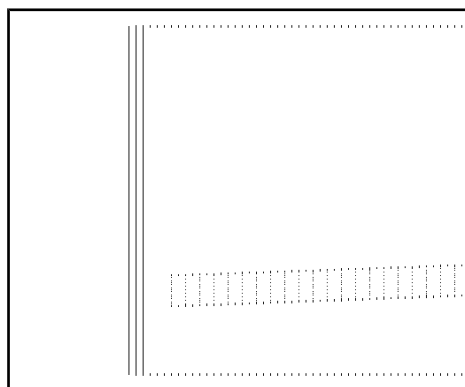
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- Pull off propshaft flange. Use three-arm puller (e.g. -Kukko 12-1-) if flange is difficult to remove.

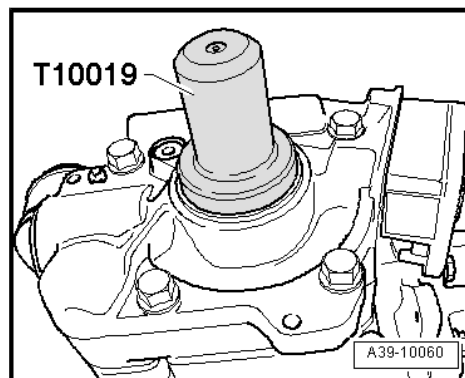


- Pull seal out with oil seal extractor lever - VW 681- .



Installing

- Before installing, lightly oil outer circumference of new oil seal and space between sealing lips with high-performance oil for four-wheel drive coupling .
- Drive in new oil seal as far as stop using thrust piece - T10019- . Make sure seal remains straight.
- Drive on propshaft flange using drift sleeve - 30-20- .

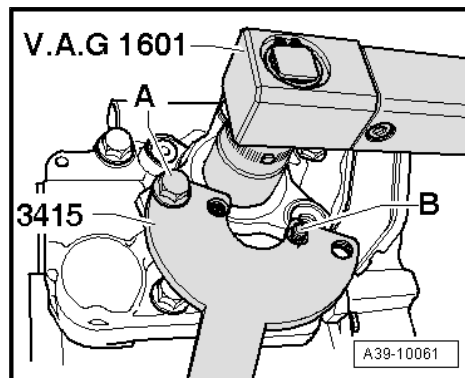


- Apply locking fluid - D 000 600- to new nut and tighten nut. Tightening torque ➤ [Item 7 \(page 111\)](#)

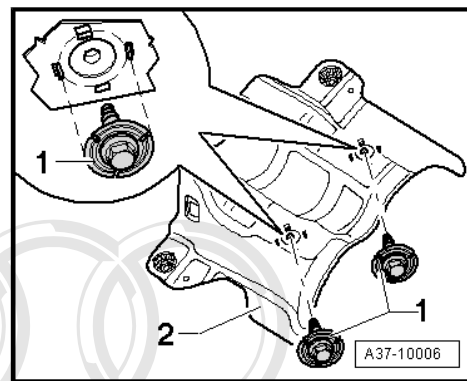
A - Bolt M10 x 20

B - Hexagon socket head bolt M8 x 15 (screwed into counterhold tool - 3415- from the rear)

- Attach propshaft to rear final drive ➤ [page 34](#) .
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.



- Tighten bolts with washers -1- for centre bearing.
- Install rear section of exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .
- Install tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Check oil level in four-wheel drive coupling ⇒ [page 138](#) .



Audi

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4 Assembly mountings

⇒ ["4.1 Exploded view - assembly mountings", page 100](#)

⇒ ["4.2 Removing and installing bonded rubber bushes", page 102](#)

4.1 Exploded view - assembly mountings

⇒ ["4.1.1 Exploded view - assembly mountings, Audi Q3", page 100](#)

⇒ ["4.1.2 Exploded view - assembly mountings, Audi A1", page 101](#)

4.1.1 Exploded view - assembly mountings, Audi Q3



Note

Renew bonded rubber bushes in pairs (top and bottom bush).

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1 - Bonded rubber bush "top rear"

- ☐ With stop plate
- ☐ For correct version, refer to ⇒ Electronic parts catalogue
- ☐ Detach stop plate to remove and install
- ☐ Removing and installing ⇒ [page 102](#)

2 - Bonded rubber bush "bottom rear"

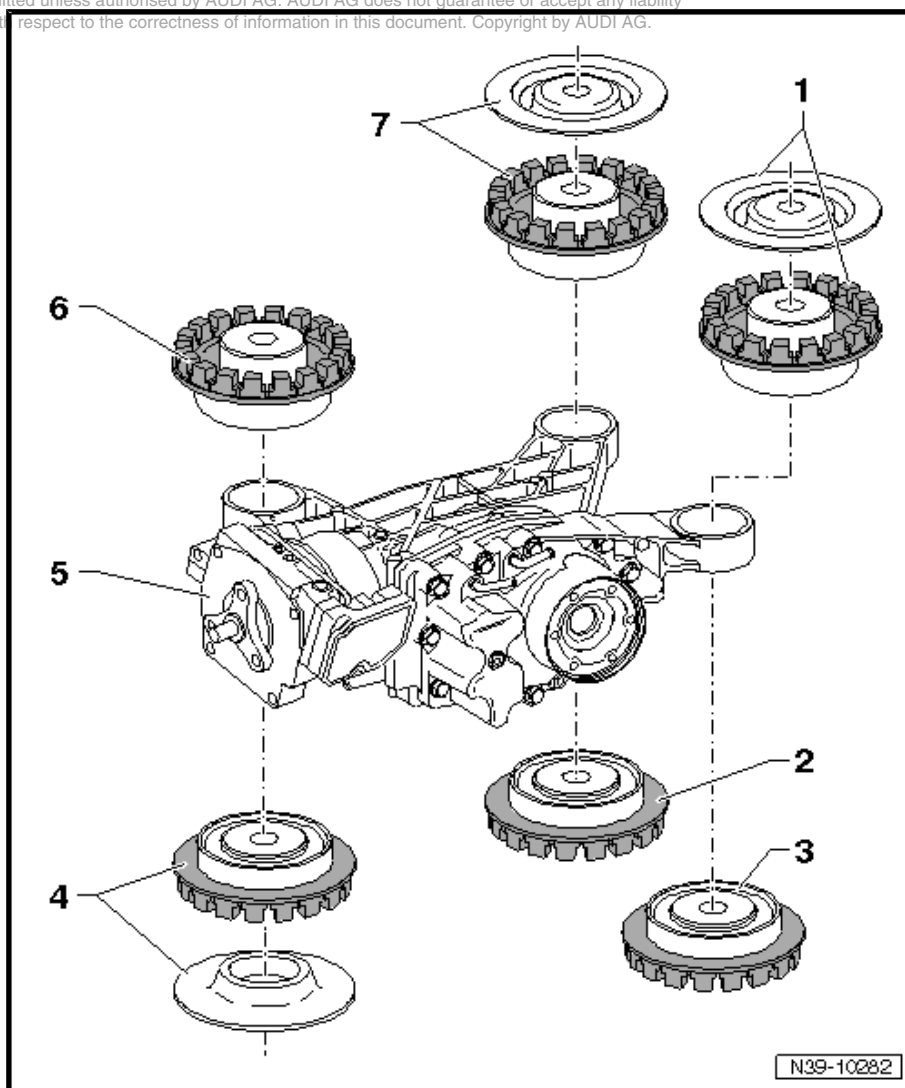
- ☐ Without stop plate
- ☐ For correct version, refer to ⇒ Electronic parts catalogue
- ☐ Removing and installing ⇒ [page 102](#)

3 - Bonded rubber bush "bottom front"

- ☐ Without stop plate
- ☐ For correct version, refer to ⇒ Electronic parts catalogue
- ☐ Removing and installing ⇒ [page 102](#)

4 - Bonded rubber bush "bottom front"

- ☐ With stop plate
- ☐ For correct version, refer to ⇒ Electronic parts catalogue
- ☐ Detach stop plate to remove and install
- ☐ Removing and installing ⇒ [page 102](#)



5 - Rear final drive

- ☐ Must be removed to renew bonded rubber mountings ⇒ [page 52](#)

6 - Bonded rubber bush "top front"

- ☐ Without stop plate
- ☐ For correct version, refer to ⇒ Electronic parts catalogue
- ☐ Removing and installing ⇒ [page 102](#)

7 - Bonded rubber bush "top rear"

- ☐ With stop plate
- ☐ For correct version, refer to ⇒ Electronic parts catalogue
- ☐ Detach stop plate to remove and install
- ☐ Removing and installing ⇒ [page 102](#)

4.1.2 Exploded view - assembly mountings, Audi A1

1 - Stop plate

- ☐ Pull off before removing bonded rubber bushes ⇒ [Item 2 \(page 101\)](#)
- ☐ Fitting onto bonded rubber bush ⇒ [Item 2 \(page 101\)](#) ⇒ [page 104](#)

2 - Bonded rubber bush "top rear"

- ☐ Removing and installing ⇒ [page 104](#)
- ☐ Identification of bonded rubber bushes "top rear" and "bottom front" ⇒ [page 108](#)
- ☐ Installation position ⇒ [page 108](#)

3 - Bonded rubber bush "bottom rear"

- ☐ Removing and installing ⇒ [page 104](#)

4 - Stop plate

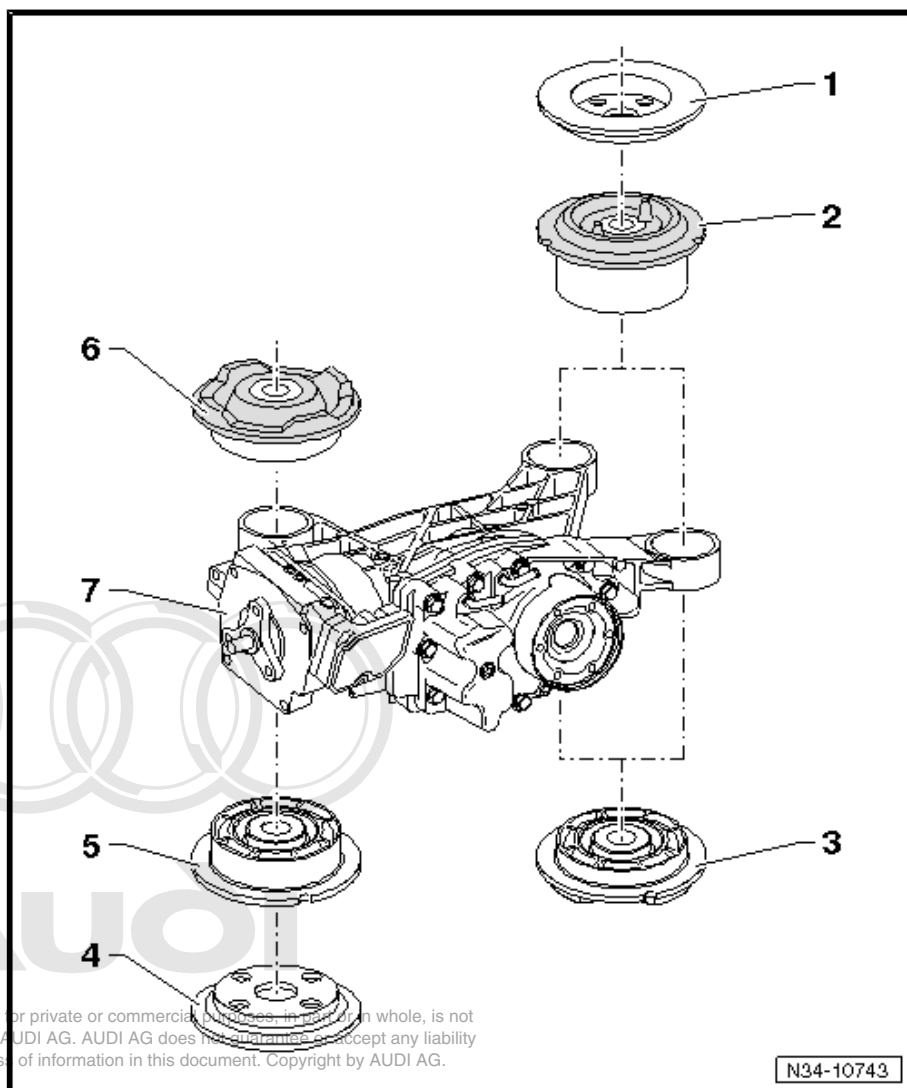
- ☐ Pull off before removing bonded rubber bush ⇒ [Item 5 \(page 101\)](#)
- ☐ Fitting onto bonded rubber bush ⇒ [Item 5 \(page 101\)](#) ⇒ [page 104](#)

5 - Bonded rubber bush "bottom front"

- ☐ Removing and installing ⇒ [page 104](#)
- ☐ Identification of bonded rubber bushes "top rear" and "bottom front" ⇒ [page 108](#)
- ☐ Installation position ⇒ [page 108](#)

6 - Bonded rubber bush "top front"

- ☐ Removing and installing ⇒ [page 104](#)



7 - Rear final drive

- Removing and installing ➔ [page 60](#)

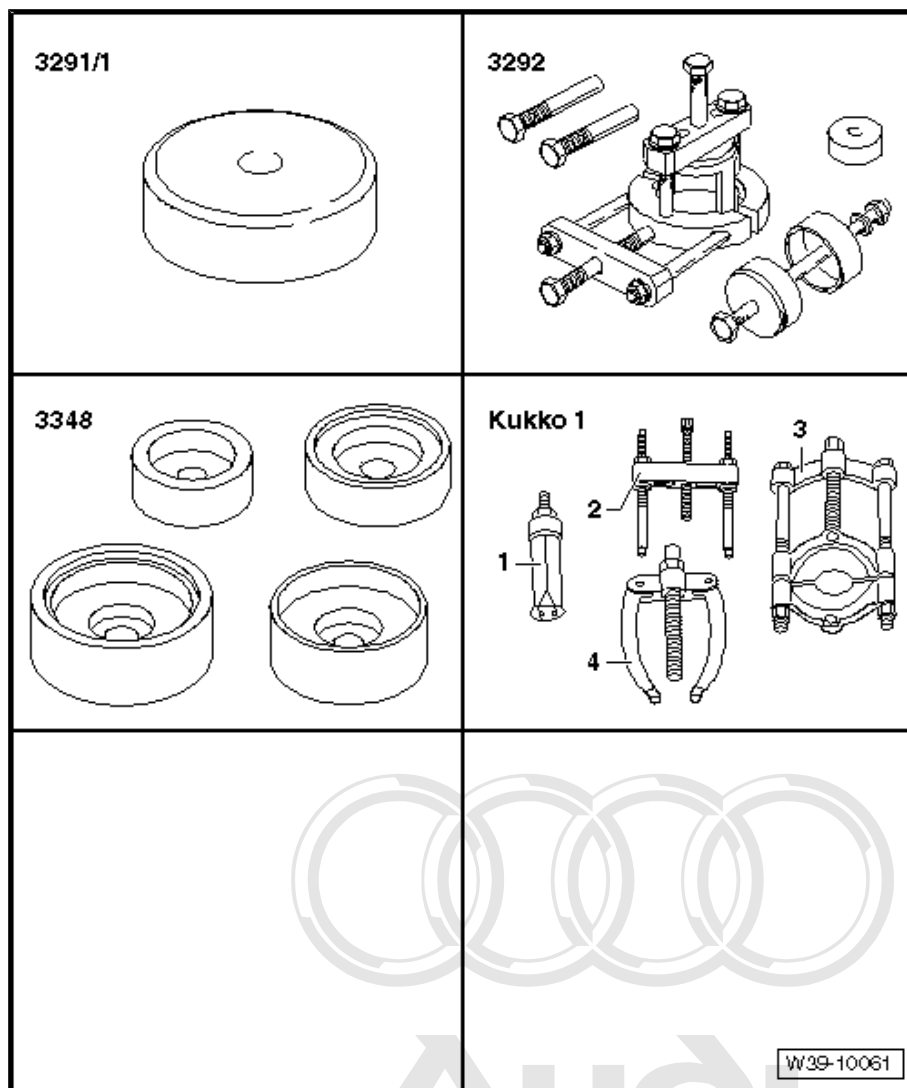
4.2 Removing and installing bonded rubber bushes

➔ ["4.2.1 Removing and installing bonded rubber bushes, Audi Q3", page 102](#)

➔ ["4.2.2 Removing and installing bonded rubber bushes, Audi A1", page 104](#)

4.2.1 Removing and installing bonded rubber bushes, Audi Q3

Special tools and workshop equipment required



- ◆ Thrust piece 3291/1 from assembly tool - 3291-
- ◆ Spindle from assembly tool - 3292-
- ◆ Thrust piece 3348 3348/1 from assembly tool - 3348-
- ◆ -1- Internal puller - Kukko 21/7-
- ◆ -4- Counter-support - Kukko 22/2-

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Removing

Extracting bush (top)



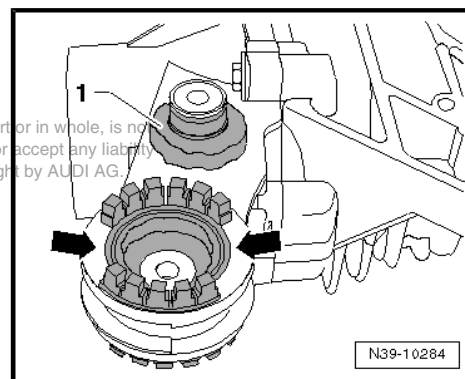
WARNING

Put on protective gloves.

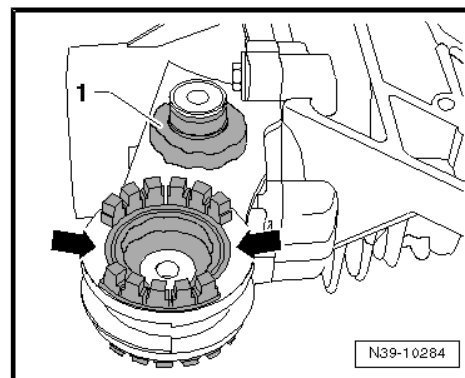
To facilitate attachment of counter-support :

- Break off two pieces -arrows- out of collar on bush.

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- Remove metal core -1-.

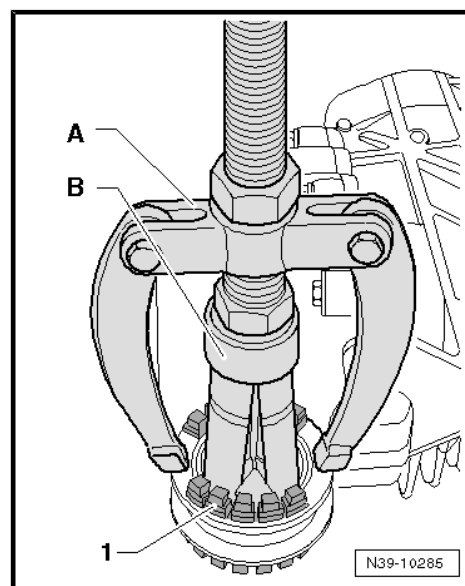


- Pull out bonded rubber bush -1-.

A - Counter-support - Kukko 22-2-

B - Internal puller - Kukko 21-7-

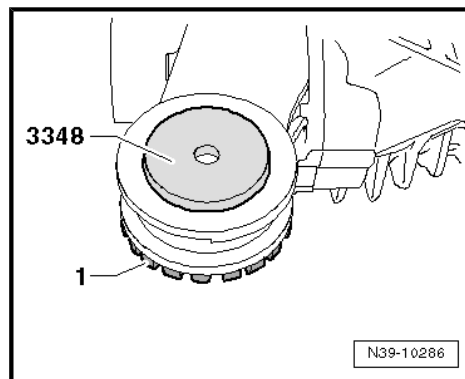
Driving out bonded rubber bush "bottom"



- Drive out bonded rubber bush -1- using thrust piece - 3348- and plastic hammer.

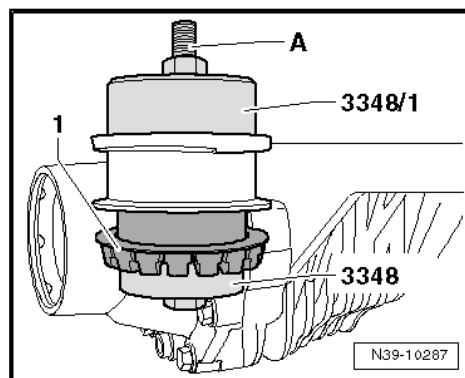
Installing

Pull in bonded rubber bush “bottom”.

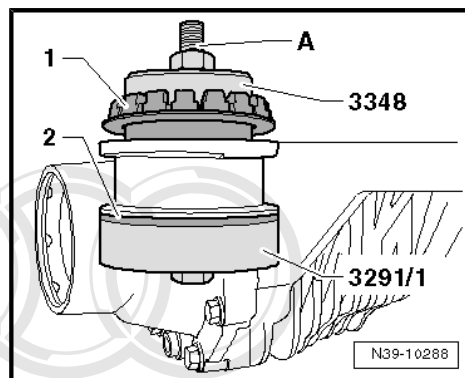


- Pull in bush until full circumference of collar makes contact with final drive.

Pull in bonded rubber bush “top”.



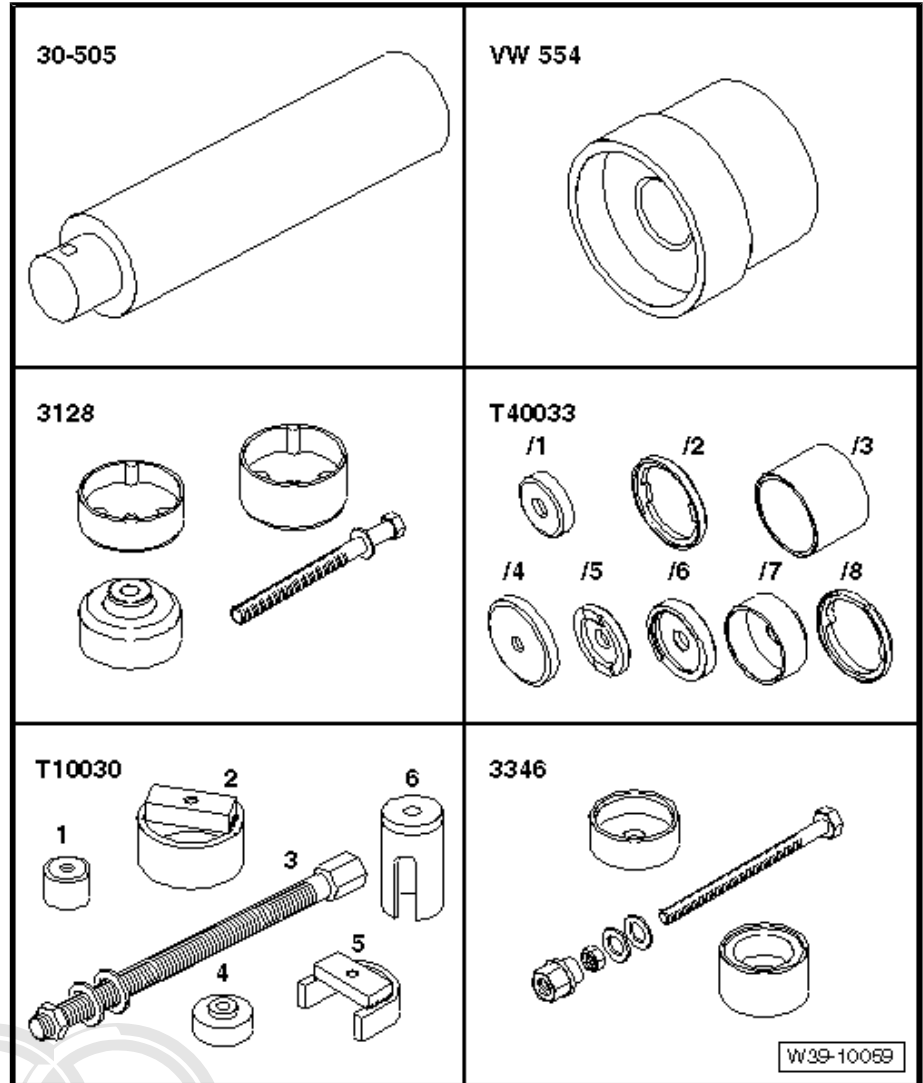
- Pull in bush until full circumference of collar makes contact with final drive.
- Fit stop plates, fitting location ➔ [page 100](#) .



4.2.2 Removing and installing bonded rubber bushes, Audi A1

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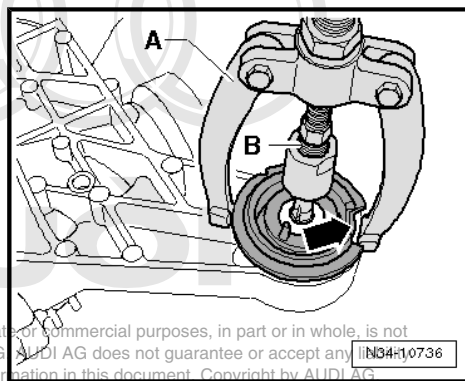
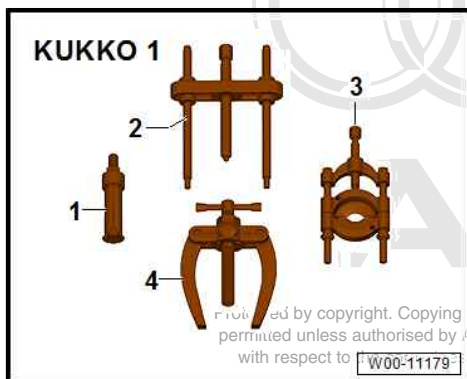
Special tools and workshop equipment required



- ◆ Mandrel - 30 - 505-
- ◆ Thrust piece - VW 554-
- ◆ Fitting tool - 3128-
- ◆ Thrust piece - T40033/1-
- ◆ Cross-piece - T10030/5-
- ◆ Spindle - 3346/2-
- ◆ Nut - 3346/3-

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- ◆ -1- Internal puller -
Kukko 21/1-



- ◆ -4- Counter-support -
Kukko 22/1-

Pulling out bonded rubber bush "top rear"

A - Counter-support ,
e.g. -Kukko 22/1-

B - Internal puller 12 ...
16 mm , e.g. -Kukko
21/1-

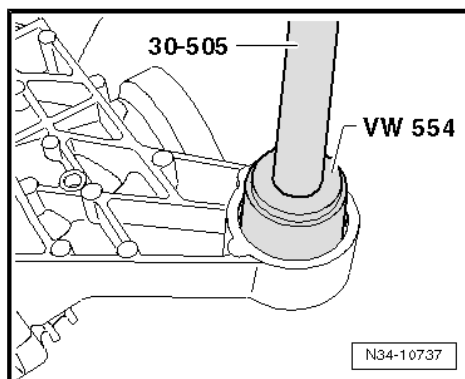
- Break off a small piece out of collar on bonded rubber bush -arrow- so you can apply counter-support .
- Apply internal puller in joint between top and bottom bonded rubber bush and apply tension to puller.

Driving out bonded rubber bush "bottom rear"



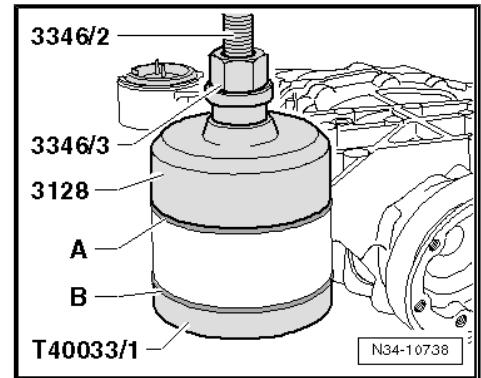
Note

If the bonded rubber bush is to be replaced separately, it can also be pulled out using counter-support , e.g. -Kukko 22/1- and internal puller 12... 16 mm , e.g. -Kukko 21/1- ➔ [page 106](#) .



Installing bonded rubber bushes "top rear" -A- and "bottom rear" -B-

- Fit a washer (inside diameter 15 mm, outside diameter not less than 27 mm) onto spindle - 3346/2- before attaching spindle.



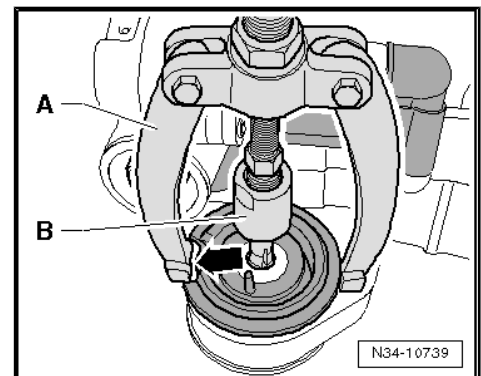
Pulling out bonded rubber bush "bottom front"

- Seal off both breather pipes before performing the next step to prevent oil escaping from final drive.
- Then place final drive upside down on workbench and pull out bonded rubber bush:

A - Counter-support , e.g. -Kukko 22/1-

B - Internal puller 12 ... 16 mm , e.g. -Kukko 21/1-

- Break off a small piece out of collar on bonded rubber bush -arrow- so you can apply counter-support .
- Apply internal puller in joint between top and bottom bonded rubber bush and apply tension to puller.

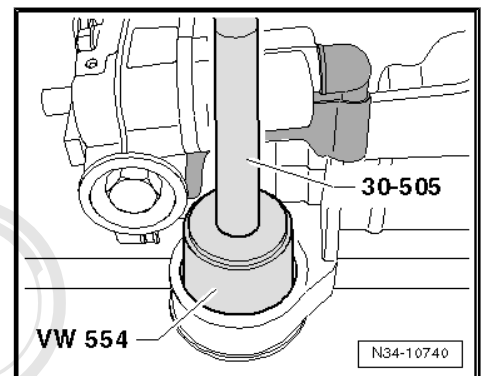


Driving out bonded rubber bush "top front"



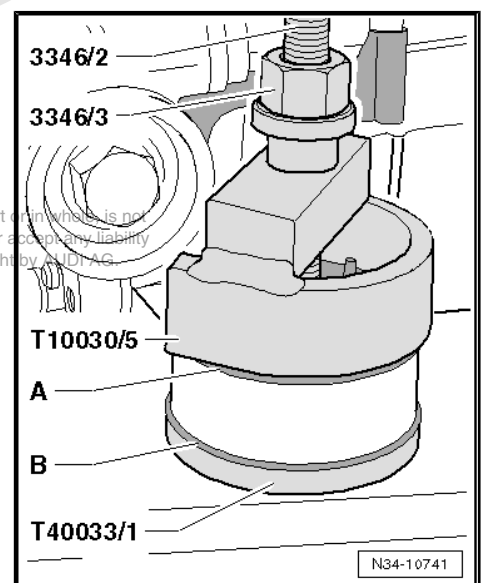
Note

If the bonded rubber bush is to be replaced separately, it can also be pulled out using counter-support , e.g. -Kukko 22/1- and internal puller 12... 16 mm , e.g. -Kukko 21/1- ➔ [page 107](#) .



Installing bonded rubber bushes "bottom front" -A- and "top front" -B-

- Fit a washer (inside diameter 15 mm, outside diameter not less than 27 mm) onto spindle - 3346/2- before attaching spindle.

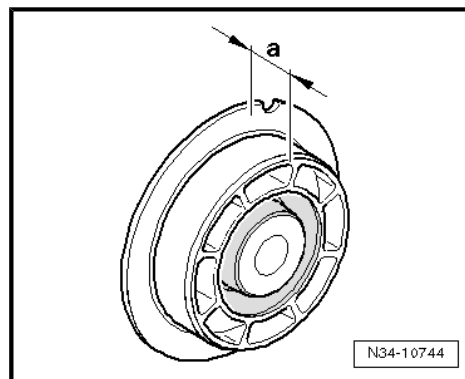


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Identification of bonded rubber bushes "top rear" and "bottom front"

The bonded rubber bushes "top rear" and "bottom front" are of different thickness.

Dimension "a" (mm)	Bonded rubber bush
22	"Top rear"
17	"Bottom front"



Installation position of bonded rubber bushes "top rear" and "bottom front" when fitting stop plate -B-

- Final drive in installation position

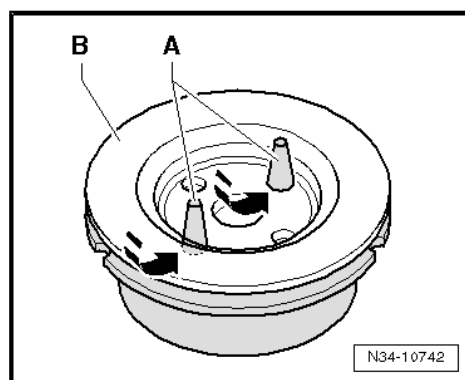
Installation position of bonded rubber bushes "top rear" and "bottom front":

- ◆ Pins -A- on bonded rubber bushes "top rear"
⇒ [Item 2 \(page 101\)](#) face upwards.
- ◆ Pins -A- on bonded rubber bush "bottom front"
⇒ [Item 5 \(page 101\)](#) face downwards.

Installing stop plate -B-

- Fit pins -A- in holes on stop plate -arrows-.

The stop plate -B- is then captive on the bonded rubber bush.



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5 Four-wheel drive coupling

⇒ [“5.1 Function test”, page 109](#)

⇒ [“5.2 Exploded view - four-wheel drive coupling”, page 109](#)

⇒ [“5.3 Removing and installing four-wheel drive coupling”, page 113](#)

⇒ [“5.4 Removing and installing all-wheel drive coupling pump”, page 126](#)

⇒ [“5.5 Removing and installing control unit”, page 132](#)

5.1 Function test

The four-wheel drive coupling can be checked by road-testing the vehicle and using the vehicle diagnostic tester .



WARNING

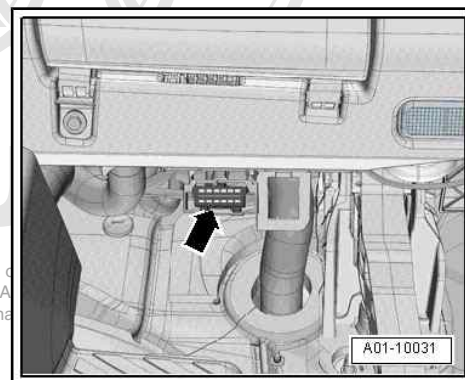
To avoid any risk of accident, observe the ⇒ [“5 Safety precautions”, page 15](#) when road-testing the vehicle and using test equipment.

- With ignition switched off, connect ⇒ Vehicle diagnostic tester to diagnostic connection -arrow-.

Fitting location: footwell (front left), next to bonnet release lever.

Starting “Guided Functions”:

- Switch on ignition.
- Select the options on the tester in this sequence:
- Identify vehicle using **Guided Functions**.
- Select **22 - 4WD electronics**.
- Select **Final control diagnosis**.
- Start final control diagnosis and follow instructions appearing on tester.



5.2 Exploded view - four-wheel drive coupling

⇒ [“5.2.1 Exploded view - four-wheel drive coupling, generation IV”, page 109](#)

⇒ [“5.2.2 Exploded view - four-wheel drive coupling, generation V”, page 112](#)

5.2.1 Exploded view - four-wheel drive coupling, generation IV

⇒ [“1.2 Four-wheel drive coupling identification”, page 2](#)

Exploded view of removal and installation ⇒ [page 109](#)

Exploded view of dismantling and assembling ⇒ [page 110](#)

Exploded view of removal and installation:

1 - Hexagon bolt

- ☐ 50 Nm
- ☐ 4x

2 - Four-wheel drive coupling

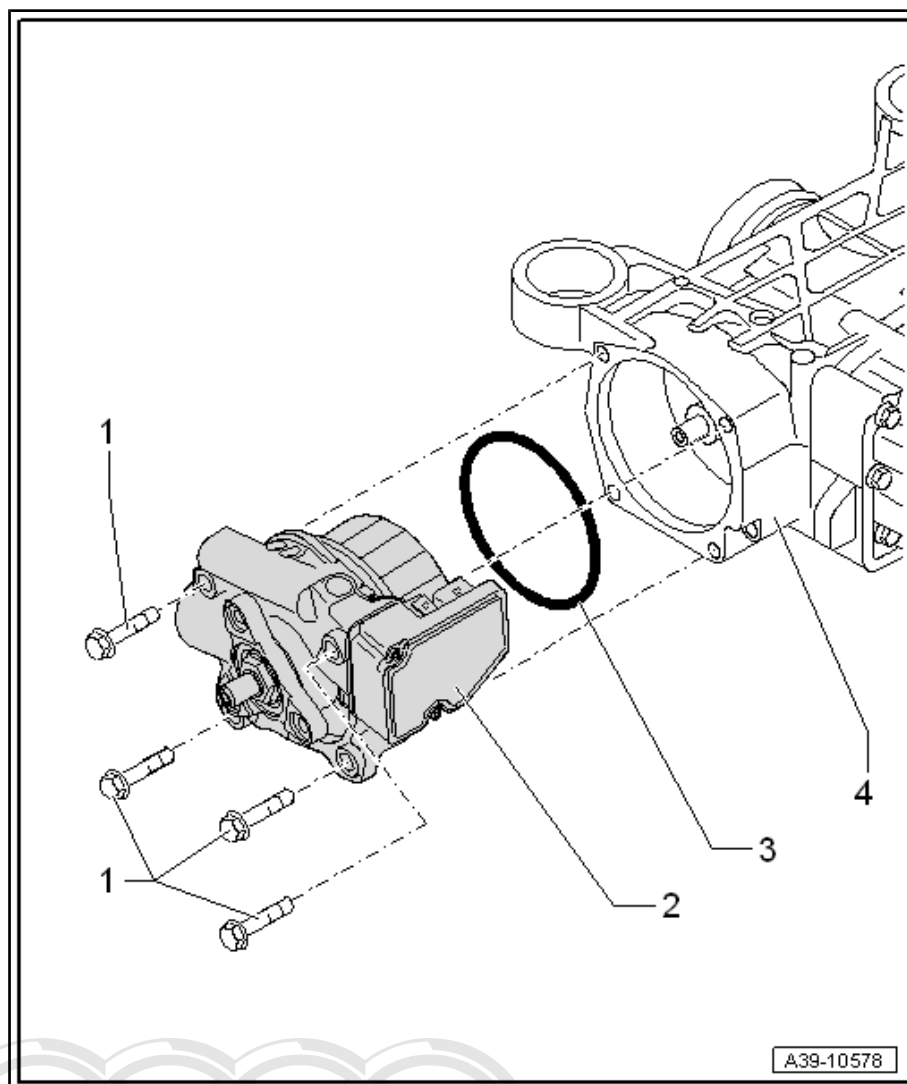
- ☐ With control unit
- ☐ Removing and installing
⇒ [page 113](#)
- ☐ Dismantling and assembling
⇒ [page 110](#)

3 - O-ring

- ☐ Renewing ⇒ [page 113](#)
- ☐ Lubricate with high-performance oil for four-wheel drive coupling before fitting

4 - Rear final drive

- ☐ Removing and installing
⇒ [page 52](#)



Exploded view of dismantling and assembling:

For more detailed information refer to:

- ◆ ⇒ Self-study programme No. 414 ; 4Motion with Four-Wheel-Coupling Generation IV



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1 - Seal

- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Always renew

2 - Housing for four-wheel drive coupling

- ☐ Removing and installing four-wheel drive coupling ⇒ [page 113](#)

3 - All-wheel drive control unit - J492-

- ☐ With coupling opening control valve - N373-
- ☐ Removing and installing ⇒ [page 133](#)

4 - Bolts

- ☐ 6 Nm

5 - Oil seal for propshaft flange

Renewing ⇒ [page 90](#)

6 - Flange for propshaft

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

7 - Nut

- ☐ 210 Nm
- ☐ Apply locking fluid - D 000 600- when fitting

8 - Bolts

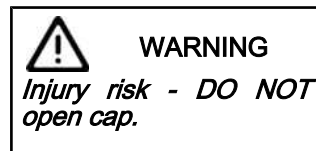
- ☐ 4x
- ☐ Tightening torque: 50 Nm

9 - Sealing cap

- ☐ For oil filter housing
- ☐ Filter does not have to be changed

10 - Sealing cap

- ☐ For pressure accumulator

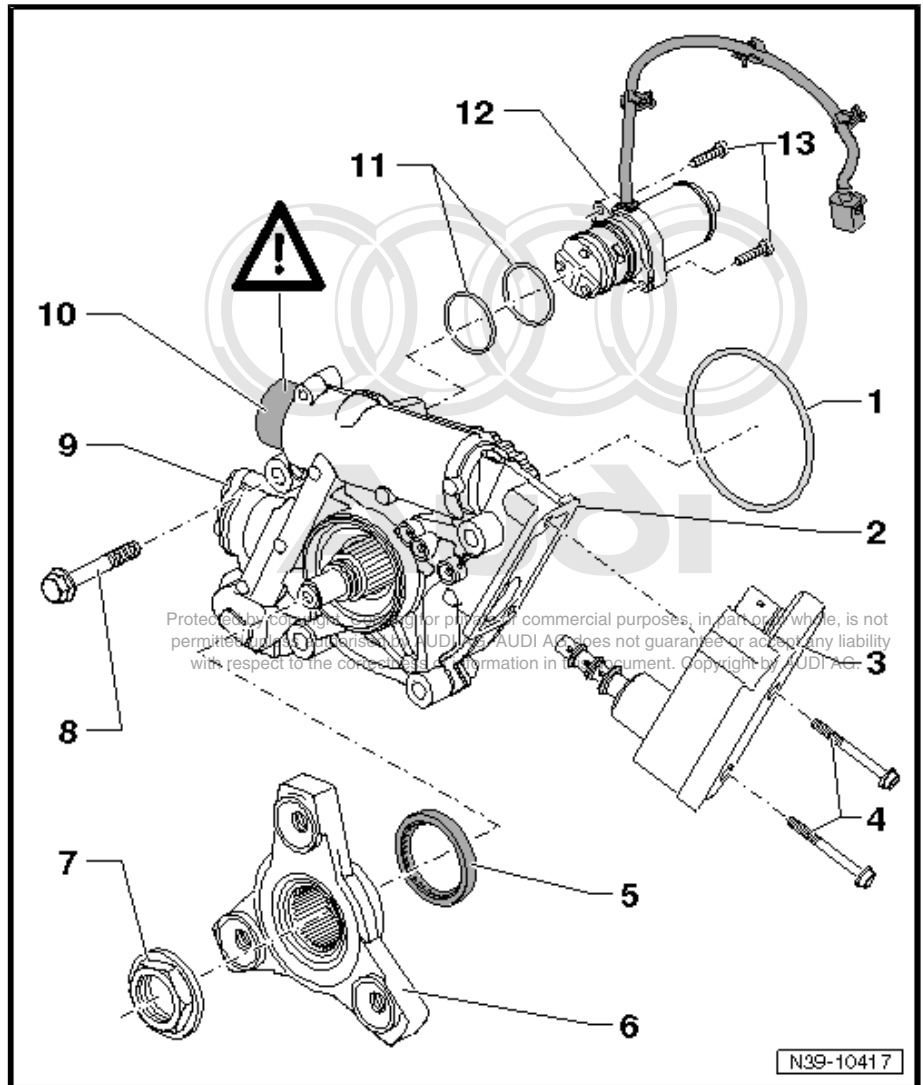


11 - Seal

- ☐ 2x
- ☐ Diameter 34 mm
- ☐ For four-wheel drive coupling pump - V181-
- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Always renew

12 - All-wheel drive coupling pump - V181-

- ☐ Removing and installing ⇒ [page 126](#)



13 - Bolts

- ☐ 6 Nm

5.2.2 Exploded view - four-wheel drive coupling, generation V

⇒ ["1.2 Four-wheel drive coupling identification", page 2](#)

1 - O-ring

- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Renew

2 - All-wheel drive control unit - J492-

- ☐ Removing and installing ⇒ [page 136](#)

3 - Bolts

- ☐ 2x
- ☐ 9.5 ± 0.5 Nm

4 - Oil seal for propshaft flange

Renewing ⇒ [page 90](#)

5 - Propshaft flange

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

6 - Nut

- ☐ Renew
- ☐ Apply locking fluid - D 000 600- when fitting
- ☐ 210 Nm

7 - Bolts

- ☐ 4x
- ☐ 50 Nm

8 - Housing for four-wheel drive coupling

- ☐ Removing and installing four-wheel drive coupling ⇒ [page 113](#)

9 - O-ring

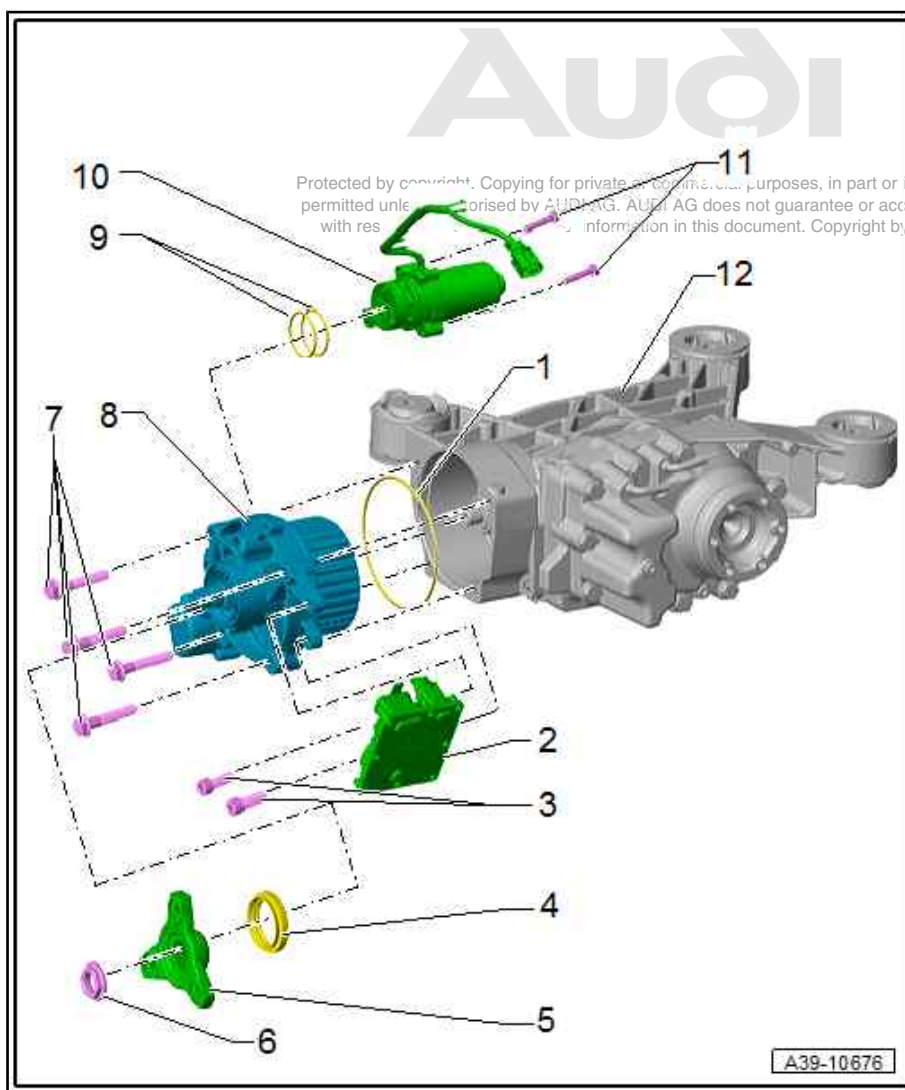
- ☐ 2x
- ☐ Diameter 43.5 mm
- ☐ For four-wheel drive coupling pump - V181-
- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Renew

10 - All-wheel drive coupling pump - V181-

- ☐ Removing and installing ⇒ [page 130](#)

11 - Bolt

- ☐ 2x
- ☐ 9.5 ± 0.5 Nm



12 - Rear final drive

- ❑ Removing and installing ⇒ [page 52](#)

5.3 Removing and installing four-wheel drive coupling

⇒ [“5.3.1 Removing and installing four-wheel drive coupling - Audi Q3 with generation IV”, page 113](#)

⇒ [“5.3.2 Removing and installing four-wheel drive coupling - Audi Q3 with generation V”, page 116](#)

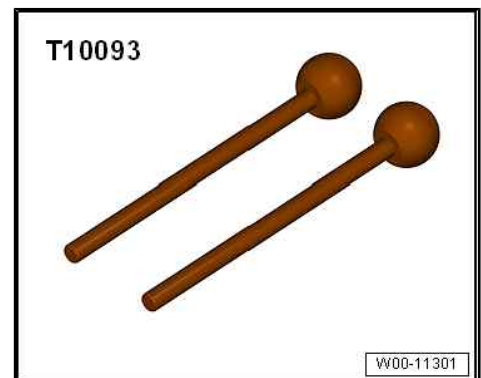
⇒ [“5.3.3 Removing and installing four-wheel drive coupling - Audi A1”, page 121](#)

5.3.1 Removing and installing four-wheel drive coupling - Audi Q3 with generation IV

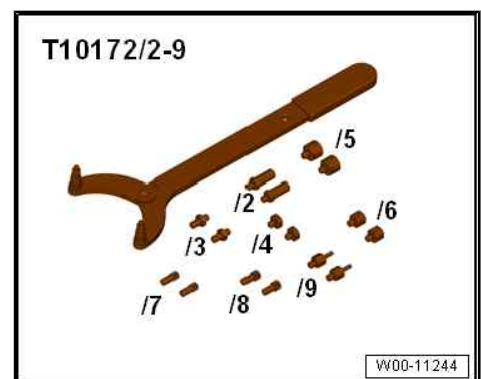
⇒ [“1.2 Four-wheel drive coupling identification”, page 2](#)

Special tools and workshop equipment required

- ◆ Guide pins - T10093-



- ◆ Counterhold tool - T10172- with adapters - T10172/5-



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◆ Used oil collection and extraction unit - V.A.G 1782-



Removing

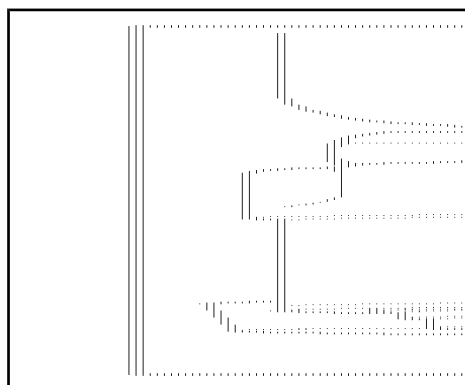
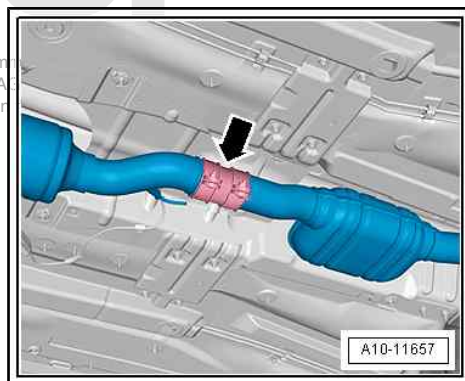


Caution

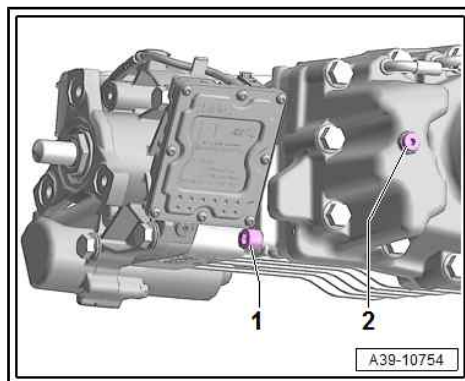
Risk of damage to flexible joints in exhaust system.

- ◆ **The flexible joint in the front exhaust pipe must not be bent further than 10°.**

- Disconnect exhaust system at clamp -arrow-.
- Tie up front exhaust pipe on underbody.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Remove flexible coupling (rear) ⇒ [page 46](#) .
- Unplug connector -2- on all-wheel drive control unit - J492- .
- Place used oil collection and extraction unit - V.A.G 1782- below rear final drive.



- Remove drain plug -1- and drain high-performance oil for four-wheel drive coupling completely.
- Screw in drain plug -1- with new seal ⇒ [page 143](#) .



- Unscrew securing bolts -arrows- and remove four-wheel drive coupling from rear final drive.

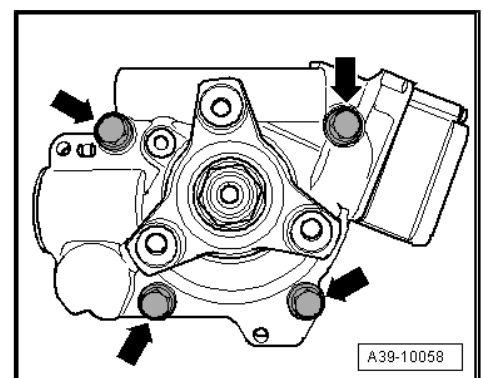
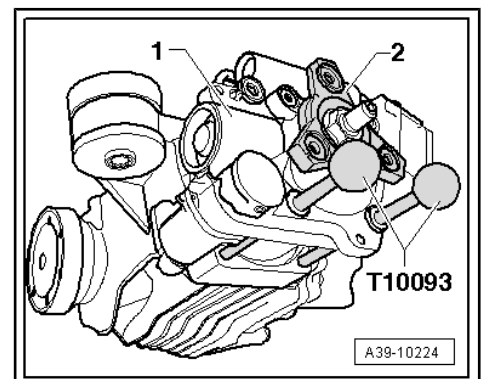
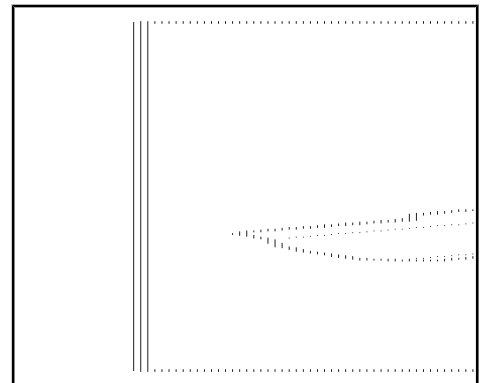
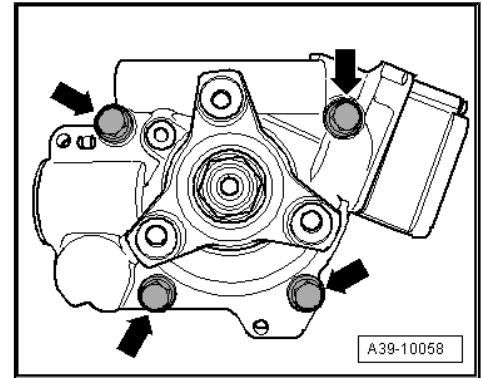


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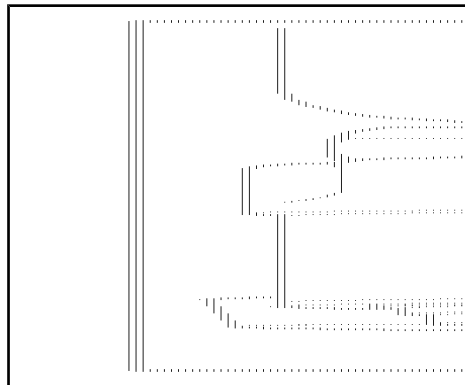
Installing four-wheel drive coupling

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

- Remove old O-ring -arrow- from four-wheel drive coupling.
- Insert new O-ring -arrow- and lubricate lightly with high-performance oil for four-wheel drive coupling .
- Insert four-wheel drive coupling -1- into rear final drive. Screw in guide pins - T10093- for exact fitting.
- Insert four-wheel drive coupling as far as stop (turn propshaft flange -2-).
- Tighten bolts -arrows- to specified torque
⇒ [Item 1 \(page 110\)](#) .



- Plug connector -2- into all-wheel drive control unit - J492- .
- Install flexible coupling (rear) ➔ [page 46](#) .
- Install exhaust system and perform stress-free alignment ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Fill up with high-performance oil for four-wheel drive coupling and check oil level in four-wheel drive coupling ➔ [page 138](#) .



5.3.2 Removing and installing four-wheel drive coupling - Audi Q3 with generation V

➔ ["1.2 Four-wheel drive coupling identification", page 2](#)

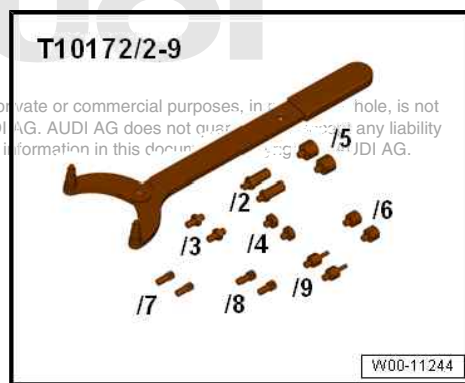
Rear final drive is installed.

Special tools and workshop equipment required

- ◆ Guide pins - T10093-

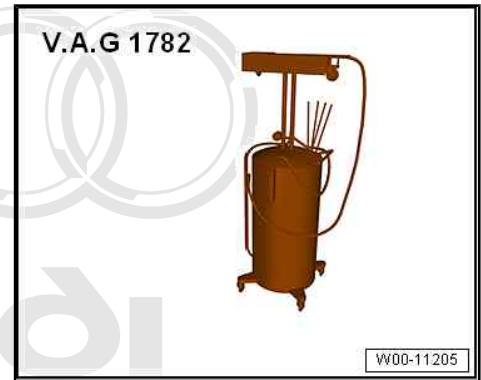


- ◆ Counterhold tool - T10172- with adapters - T10172/5-



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- ◆ Used oil collection and extraction unit - V.A.G 1782-



Removing

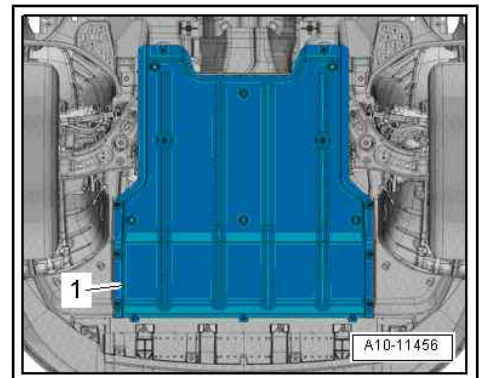
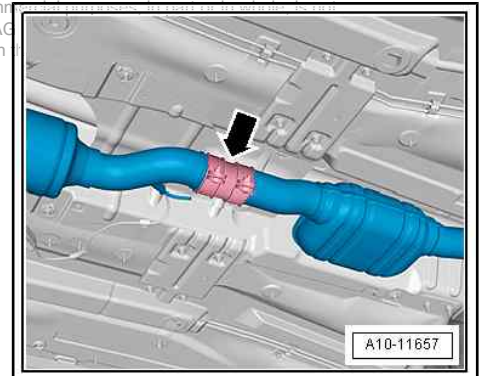


Caution

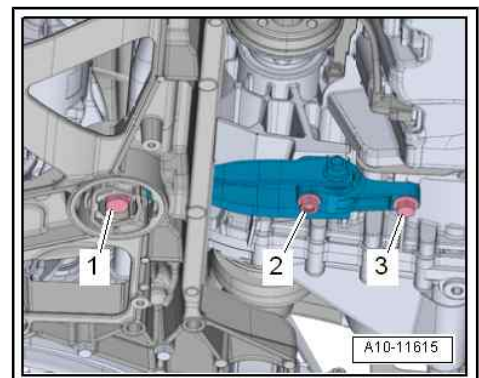
Risk of damage to flexible joint.

- ◆ *The flexible joint must not be bent further than 10°.*
- ◆ *Do not subject flexible joint to tensile load.*
- ◆ *Take care not to damage wire mesh on flexible joint.*

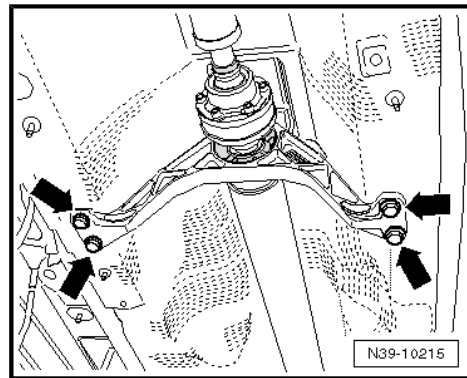
- Loosen nuts for clamp -arrow- and move clamp towards rear.
- Tie up front exhaust pipe on underbody.
- Remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Remove noise insulation -1- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



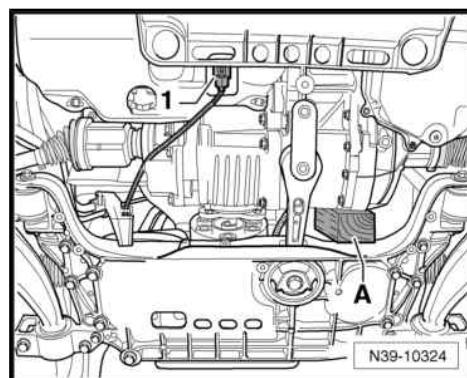
- Remove bolts -2- and -3- for pendulum support.



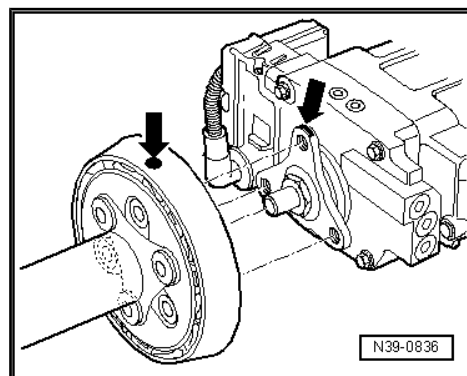
- Loosen bolts -arrows- securing centre propshaft bearing, but do not remove them.



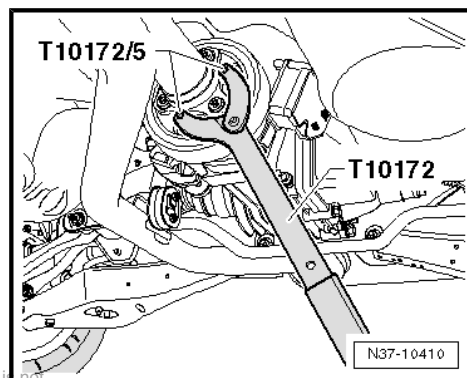
- Push engine/gearbox assembly forwards and secure with a suitable block of wood -A-.



- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.

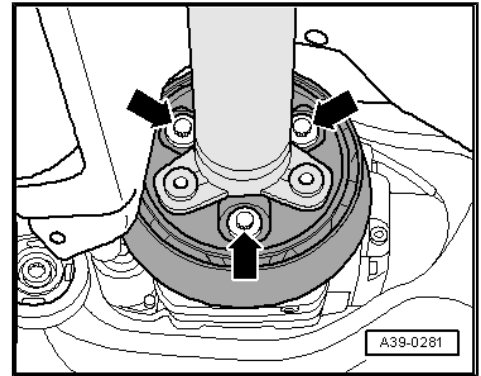


- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



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- Detach bolts -arrows- securing propshaft to rear final drive.



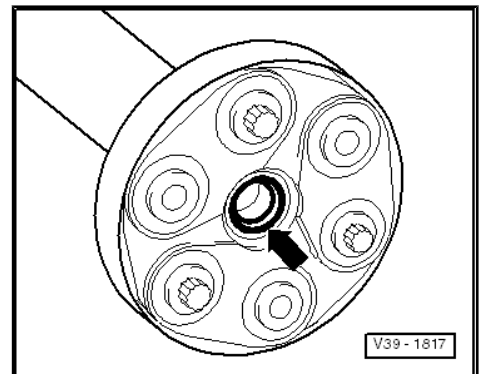
- Pull propshaft off centring pin on rear final drive, pressing propshaft slightly towards front. To do so, unscrew bolts on centre bearing of propshaft if necessary.



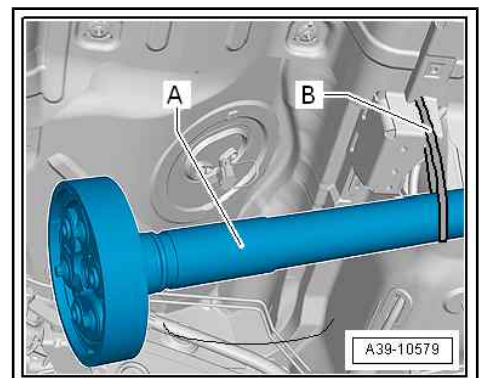
Caution

The seal -arrow- in the propshaft flange can be damaged.

◆ *Pull off propshaft horizontally from centring pin.*



- Then tie up rear section of propshaft -A- to one side on body e.g. using wire -B-.



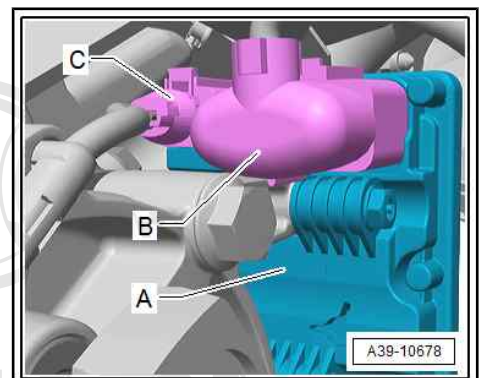
- Unplug electrical connector -B- on all-wheel drive control unit - J492- -A-.



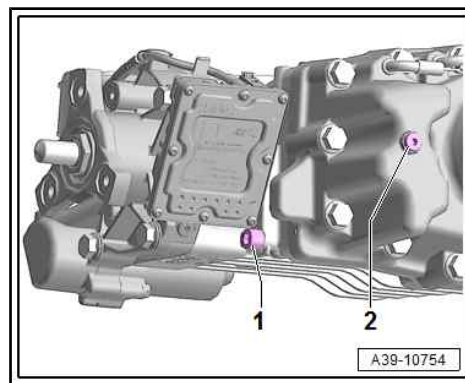
Note

Do not unplug electrical connector -C-.

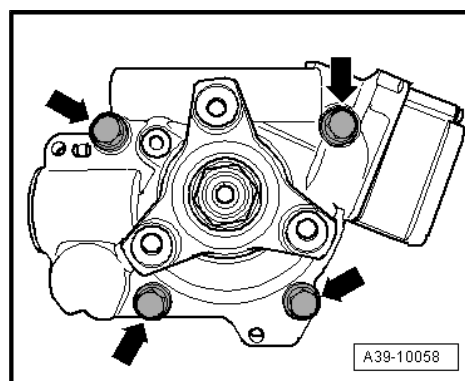
- Place used oil collection and extraction unit - V.A.G 1782- below rear final drive.



- Remove drain plug -1- and drain high-performance oil for four-wheel drive coupling completely.
- Screw in new drain plug -arrow- with new seal.



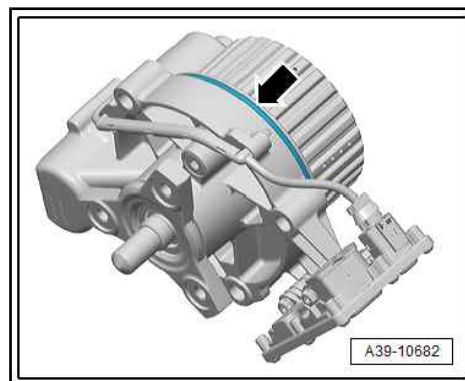
- Unscrew securing bolts -arrows- and remove four-wheel drive coupling from rear final drive.



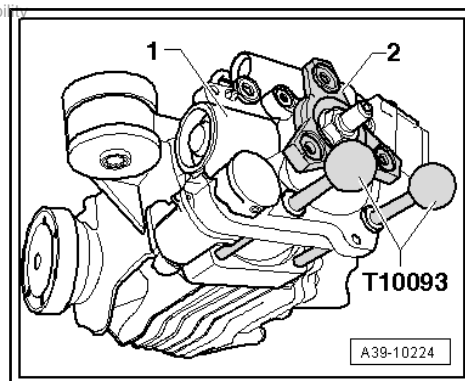
Installing

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

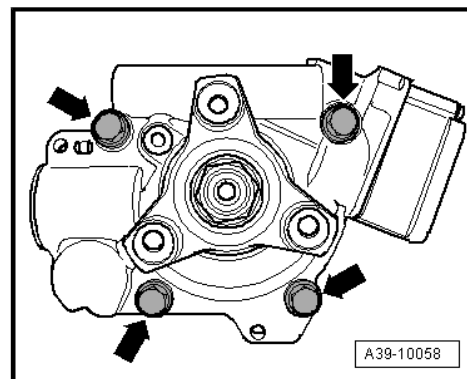
- Remove old O-ring -arrow- from four-wheel drive coupling.
- Insert new O-ring -arrow- and lubricate lightly with high-performance oil for four-wheel drive coupling .



- Insert four-wheel drive coupling -1- into rear final drive. Screw in guide pins - T10093- for exact fitting.
- Insert four-wheel drive coupling as far as stop (turn propshaft flange -2-).



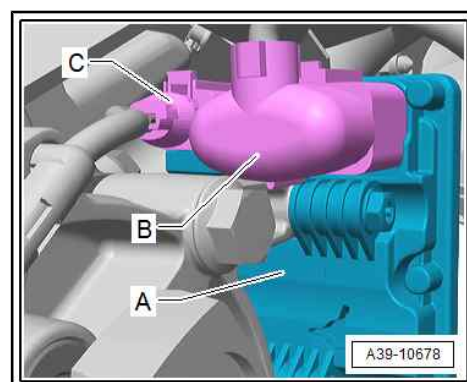
- Tighten bolts -arrows- to specified torque.



- Plug in electrical connector -B- on all-wheel drive control unit - J492- -A-.

Electrical connector -C- must also be plugged in.

- Attach propshaft to rear final drive ⇒ [page 23](#) .
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.
- Install exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Fill up with high-performance oil for four-wheel drive coupling and check oil level in four-wheel drive coupling ⇒ [page 138](#) .



Tightening torques

- ◆ Four-wheel drive coupling to final drive ⇒ [Item 7 \(page 112\)](#)
- ◆ Drain plug for four-wheel drive coupling ⇒ [page 143](#)

5.3.3 Removing and installing four-wheel drive coupling - Audi A1

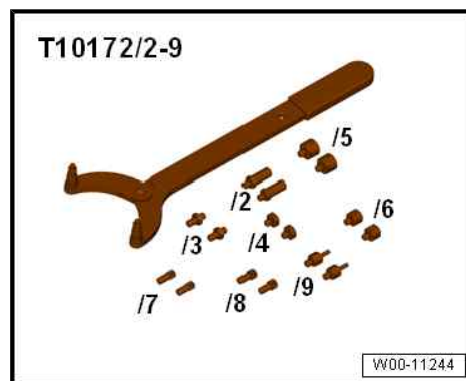
Special tools and workshop equipment required

- ◆ Guide pins - T10093-



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- ◆ Counterhold tool - T10172- with adapters - T10172/5-



- ◆ Used oil collection and extraction unit - V.A.G 1782-



Removing

- Remove tunnel cross-piece ➔ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Remove fuel tank ➔ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank .

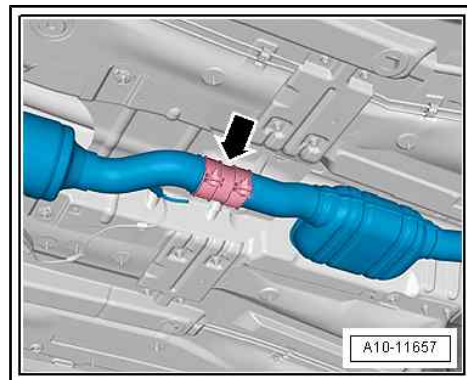


Caution

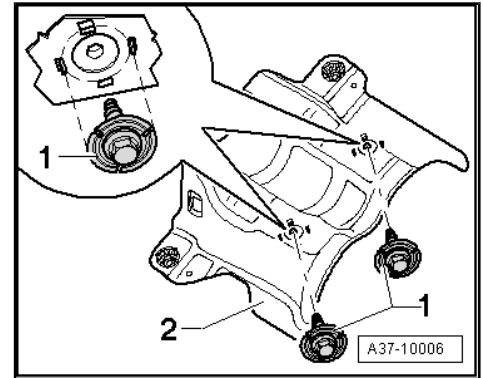
Risk of damage to flexible joint.

- ◆ *The flexible joint must not be bent further than 10°.*
- ◆ *Do not subject flexible joint to tensile load.*
- ◆ *Take care not to damage wire mesh on flexible joint.*

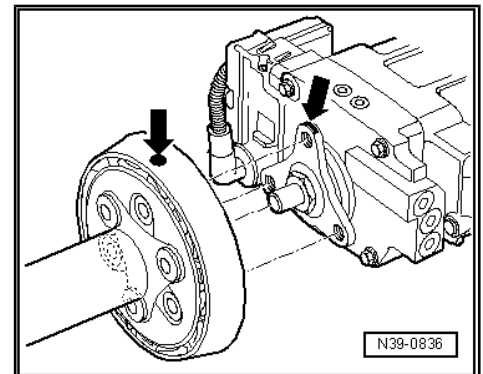
- Disconnect exhaust system at clamp -arrows- and tie up front exhaust pipe.
- Remove rear section of exhaust system ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



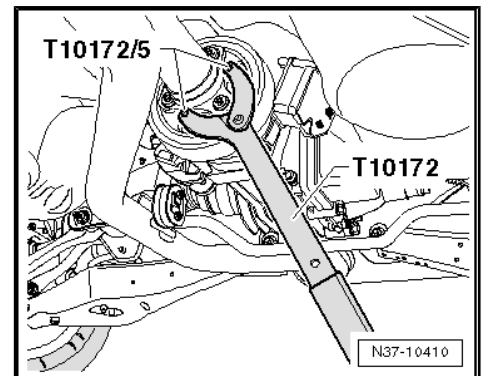
- Loosen bolts -arrows- securing centre propshaft bearing, but do not remove them.
- If necessary, detach heat shield -2- from body so that centre bearing of propshaft on body can be moved.



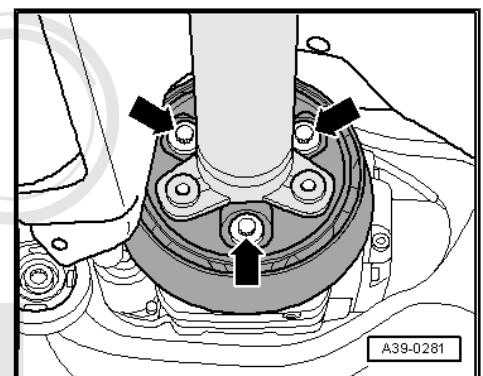
- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.



- When loosening propshaft bolts, counterhold at rear final drive using counterhold tool - T10172- and adapters - T10172/5- .



- Detach bolts -arrows- securing propshaft to rear final drive.



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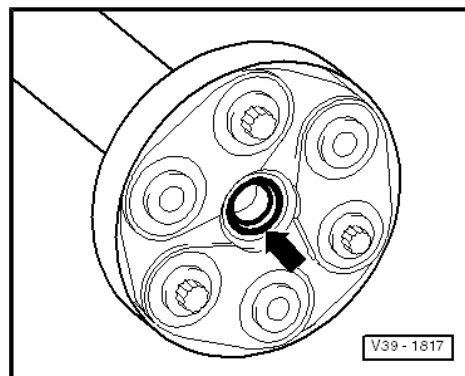
- Pull propshaft off centring pin on rear final drive, pressing propshaft slightly towards front. To do so, unscrew bolts on centre bearing of propshaft if necessary.



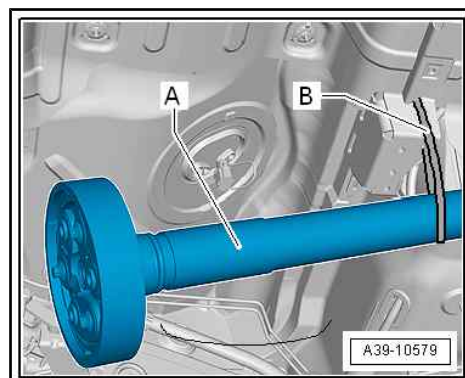
Caution

The seal -arrow- in the propshaft flange can be damaged.

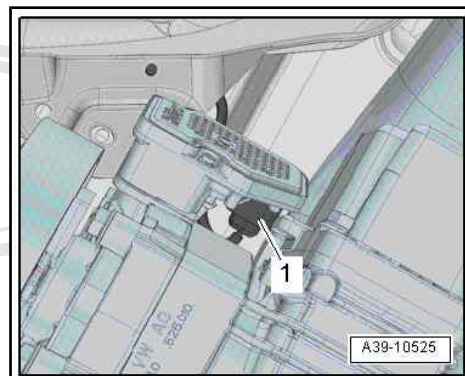
- ◆ *Pull off propshaft horizontally from centring pin.*



- Then tie up rear section of propshaft -A- to one side on body e.g. using wire -B-.



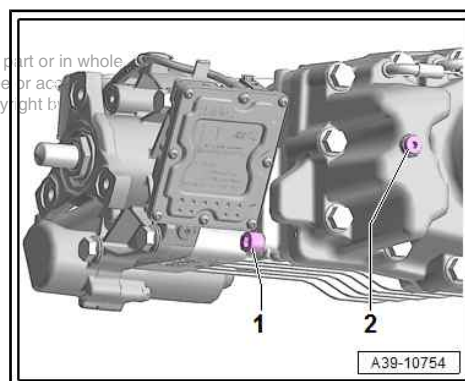
- Unplug electrical connector -1- on all-wheel drive control unit - J492- .



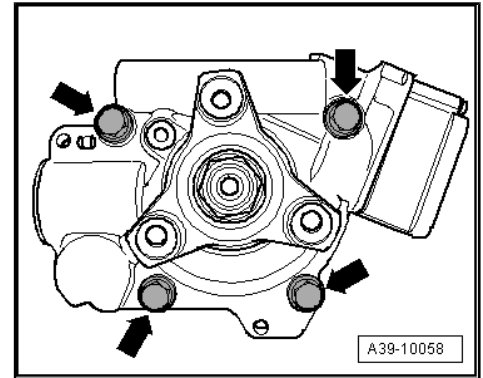
- Place used oil collection and extraction unit - V.A.G 1782- below rear final drive.

- Remove drain plug -1- and drain high-performance oil for four-wheel drive coupling completely.

- Screw in drain plug -1- with new seal ⇒ [page 143](#) .



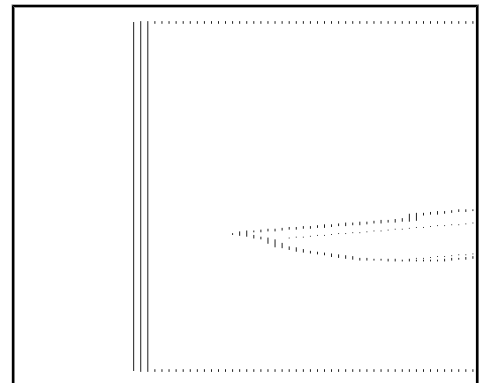
- Unscrew securing bolts -arrows- and remove four-wheel drive coupling from rear final drive.



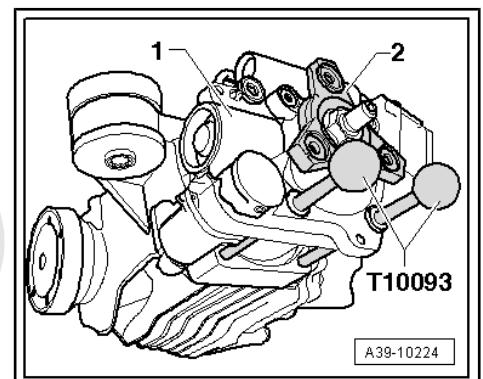
Installing four-wheel drive coupling

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

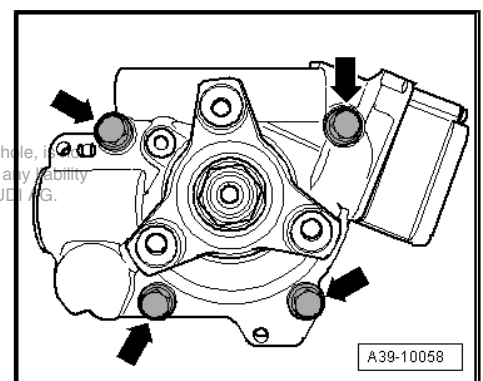
- Remove old O-ring -arrow- from four-wheel drive coupling.
- Insert new O-ring -arrow- and lubricate lightly with high-performance oil for four-wheel drive coupling .



- Insert four-wheel drive coupling -1- into rear final drive. Screw in guide pins - T10093- for exact fitting.
- Insert four-wheel drive coupling as far as stop (turn propshaft flange -2-).

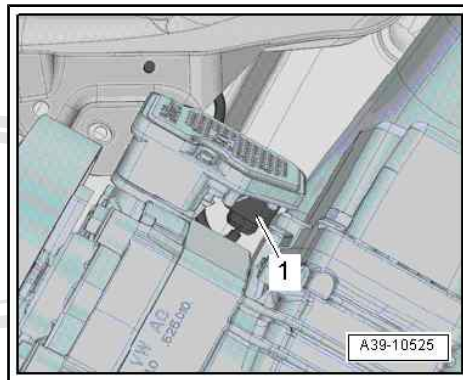


- Tighten bolts -arrows- to specified torque
⇒ [Item 1 \(page 110\)](#) .

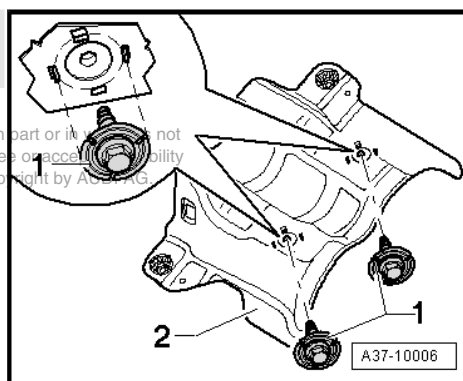


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- Plug in electrical connector -1- on all-wheel drive control unit - J492- .
- Attach propshaft to rear final drive ➔ [page 34](#) .
- Align centre bearing within elongated holes so that neither propshaft nor centre bearing are under stress.



- Tighten bolts with washers -1- for centre bearing.
- Install rear section of exhaust system and perform stress-free alignment ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install fuel tank ➔ [Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank](#) .
- Install tunnel cross-piece ➔ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Fill up with high-performance oil for four-wheel drive coupling and check oil level in four-wheel drive coupling ➔ [page 138](#) .



5.4 Removing and installing all-wheel drive coupling pump

➔ ["5.4.1 Removing and installing all-wheel drive coupling pump V181 - generation IV", page 126](#)

➔ ["5.4.2 Removing and installing all-wheel drive coupling pump V181 - generation V", page 130](#)

5.4.1 Removing and installing all-wheel drive coupling pump - V181- - generation IV

➔ ["1.2 Four-wheel drive coupling identification", page 2](#)

Special tools and workshop equipment required

- ♦ Torque wrench (2 ... 10 Nm) - V.A.G 1783-

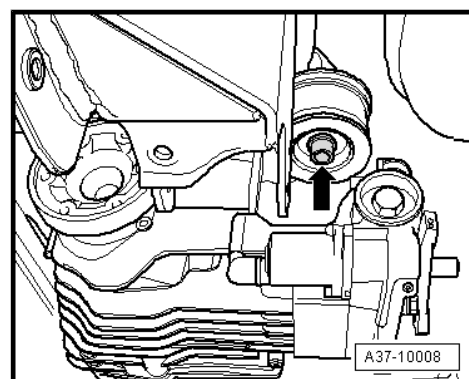
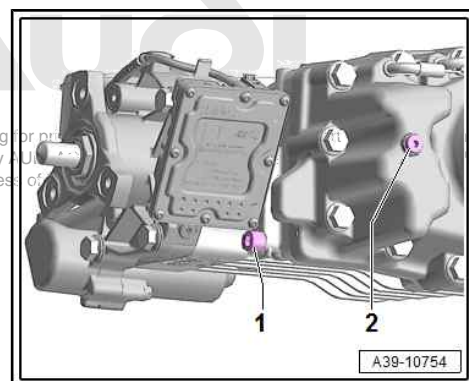


- ◆ Drip tray for workshop hoist - VAS 6208-

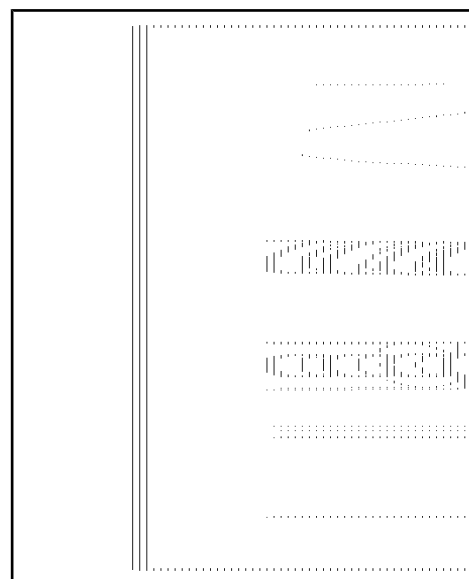


Removing

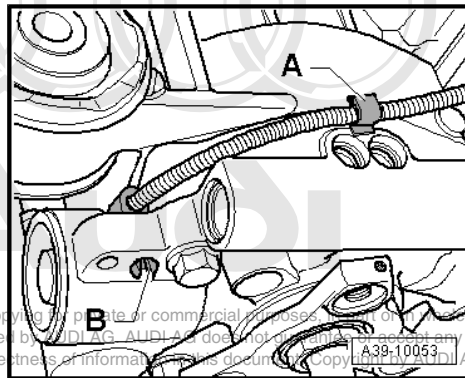
- Switch off ignition.
- Place drip tray underneath.
- Remove drain plug -1- and drain high-performance oil for four-wheel drive coupling completely.
- Screw in drain plug -1- with new seal ⇒ [page 143](#).
- Loosen securing bolt -arrow- at front mounting bracket for final drive approx. 7 turns and lower final drive slightly.



- Unplug connector -arrow- for pump from control unit.

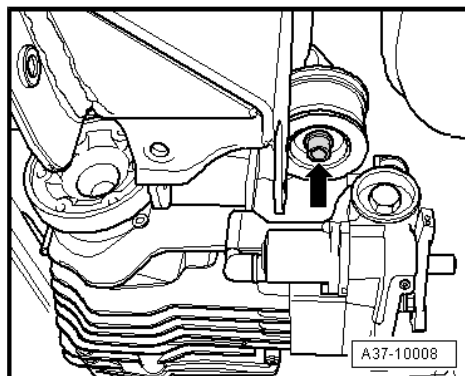


- Detach electrical wiring harness together with retainer -A- from housing and move clear.
- Press retainer tabs -B- together and push into hole in housing as far as possible.

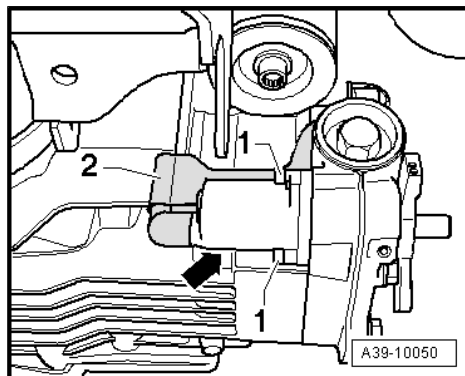


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- Re-tighten securing bolt -arrow- hand-tight.
- Position drip tray under final drive.



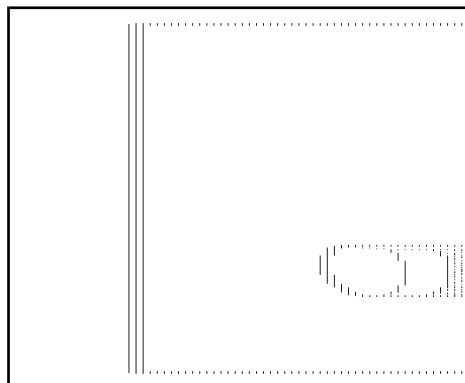
- Unscrew securing bolts for pump -1-.
- Pull out pump -arrow- together with the wiring protection -2- from four-wheel drive coupling housing.



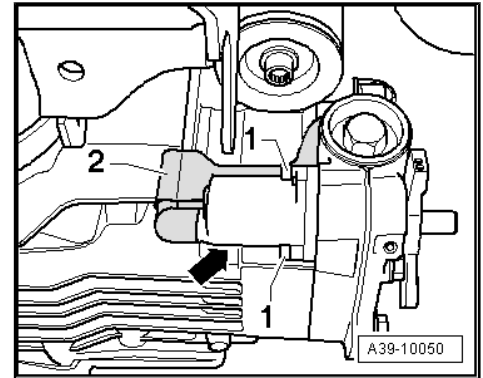
Installing

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

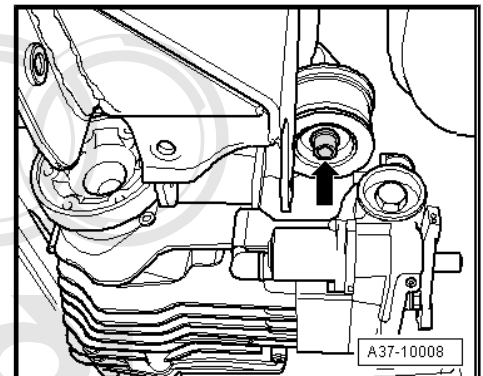
- Renew O-rings -1- and -2-.
- Lightly lubricate O-rings -1- and -2- with high-performance oil for four-wheel drive coupling .



- Press pump -arrow- in as far as stop. Ensure that wiring protection -2- is properly positioned.
- Tighten bolts -1-. Tightening torque ⇒ [Item 13 \(page 112\)](#)

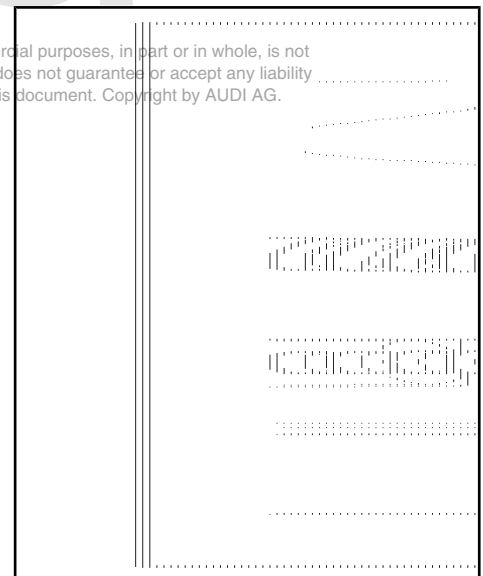


- Unscrew securing bolt -arrow- from front mounting bracket.

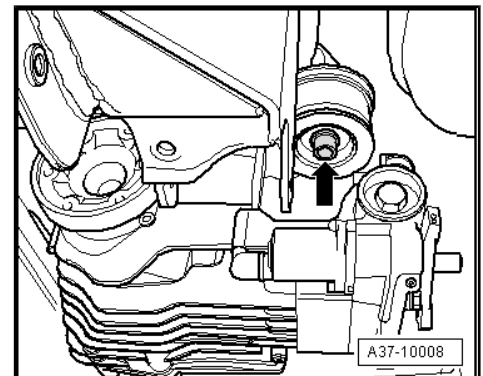


- Clip electrical wiring harness onto top of four-wheel drive coupling and plug in connector -arrow- on control unit.

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- Secure rear final drive with a new bolt -arrow- to subframe. Tightening torque ⇒ [Item 1 \(page 52\)](#)
- Fill up with high-performance oil for four-wheel drive coupling and check oil level in four-wheel drive coupling ⇒ [page 138](#) .



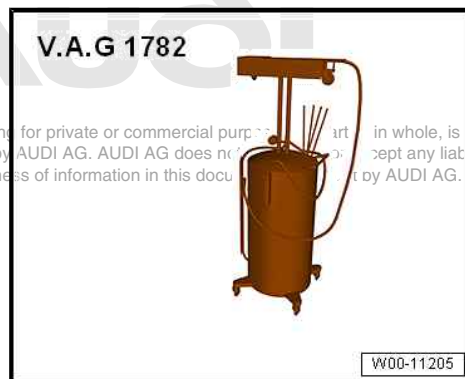
5.4.2 Removing and installing all-wheel drive coupling pump - V181- - generation V

⇒ "1.2 Four-wheel drive coupling identification", page 2

Special tools and workshop equipment required

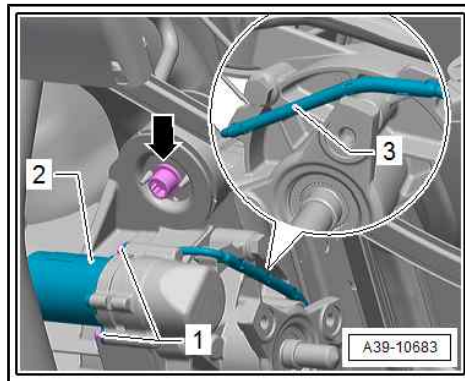
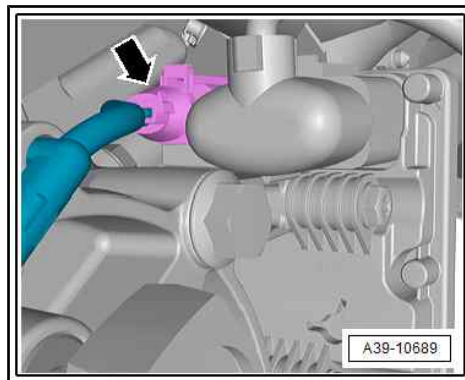
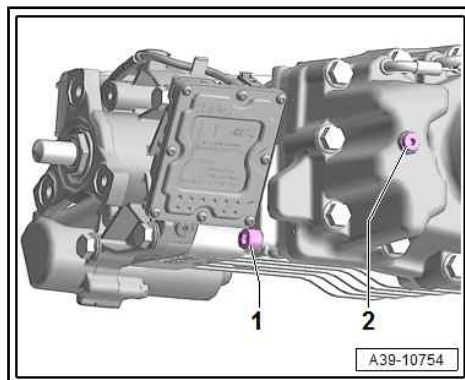
- ♦ Used oil collection and extraction unit - V.A.G 1782-

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Removing

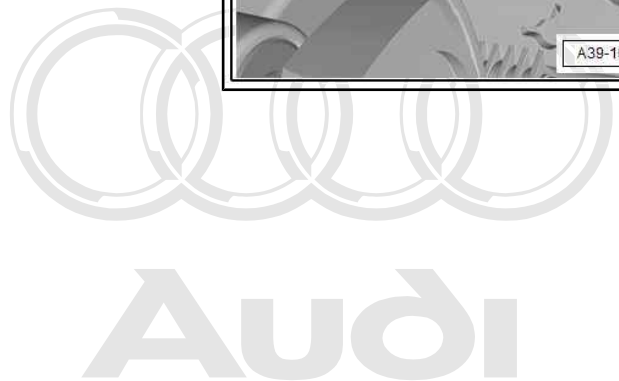
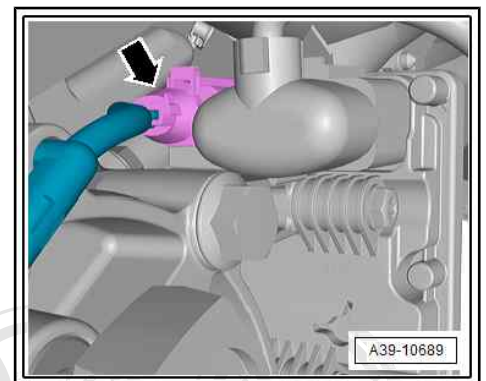
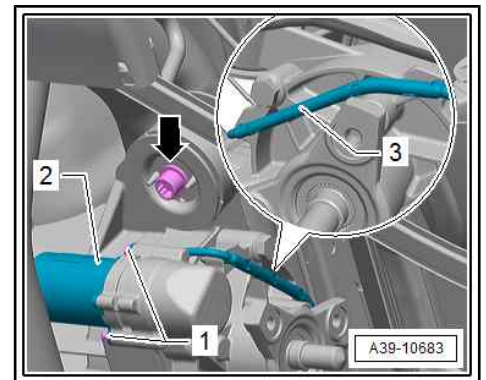
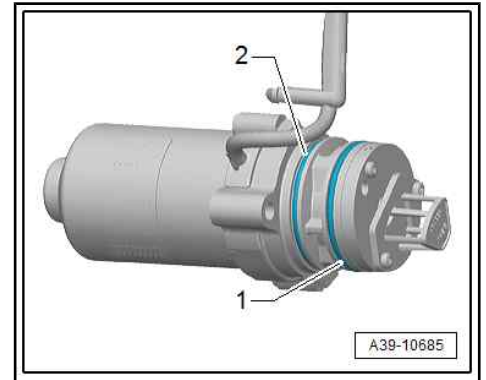
- Switch off ignition.
- Place used oil collection and extraction unit - V.A.G 1782- below rear final drive.
- Remove drain plug -1- and drain high-performance oil for four-wheel drive coupling completely.
- Screw in new drain plug -1- with new seal.
- Disconnect electrical connector -arrow- for all-wheel drive coupling pump from all-wheel drive control unit .
- Disconnect electrical wiring harness -3- for all-wheel drive coupling pump from housing and move clear.
- Unscrew securing bolt -arrow- on front mounting bracket for final drive by approximately 7 turns.
- Place used oil collection and extraction unit - V.A.G 1782- below rear final drive.
- Remove bolts -1- for all-wheel drive coupling pump .
- Pull all-wheel drive coupling pump -2- out of housing for four-wheel drive coupling.



Installing

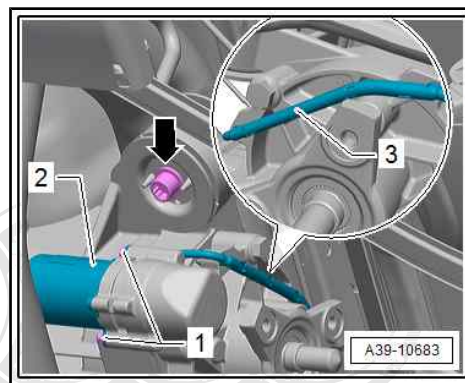
Installation is carried out in the reverse order; note the following:

- Renew O-rings -1- and -2-.
- Lightly lubricate O-rings -1- and -2- with high-performance oil for four-wheel drive coupling .
- Press all-wheel drive coupling pump -2- into housing for four-wheel drive coupling as far as stop. When doing so, ensure that electrical wiring harness -3- is routed correctly.
- Tighten bolts -1-.
- Re-tighten securing bolt -arrow- hand-tight on front mounting bracket for final drive.
- Plug electrical connector -arrow- for all-wheel drive coupling pump into all-wheel drive control unit .



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- Secure rear final drive to subframe using a new bolt -arrow-.
- Fill up with high-performance oil for four-wheel drive coupling and check oil level in four-wheel drive coupling ⇒ [page 139](#) .
- If a new pump has been installed, a basic setting must be performed.
- Connect ⇒ Vehicle diagnostic tester and start **Diagnosis** mode.
- ◆ **Select own test**
- ◆ **Four-wheel drive**
- ◆ **01 Self-diagnosis-compatible systems**
- ◆ **22 4WD electronics J492**
- ◆ **22 Four-wheel drive functions**
- ◆ **22 Basic setting**
- Follow instructions on screen.



Tightening torques

- ◆ All-wheel drive coupling pump to four-wheel drive coupling
⇒ [Item 11 \(page 112\)](#)
- ◆ Final drive to subframe ⇒ [Item 1 \(page 52\)](#)
- ◆ Drain plug for high-performance oil for four-wheel drive coupling ⇒ [page 143](#)

5.5 Removing and installing control unit

⇒ [“5.5.1 Exploded view - all-wheel drive control unit J492 , generation IV”, page 132](#)

⇒ [“5.5.2 Removing and installing all-wheel drive control unit J492 - generation IV”, page 133](#)

⇒ [“5.5.3 Removing and installing all-wheel drive control unit J492 - generation V”, page 136](#)

5.5.1 Exploded view - all-wheel drive control unit - J492- , generation IV

⇒ [“1.2 Four-wheel drive coupling identification”, page 2](#)

For more detailed information refer to:

- ◆ ⇒ Self-study programme No. 414 ; 4Motion with Four-Wheel-Coupling Generation IV

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1 - All-wheel drive control unit - J492-

- ☐ Is calibrated to match coupling opening control valve - N373-
- ☐ Always renew together with valve
- ☐ Removing and installing
⇒ [page 133](#)

2 - Bolt

- ☐ 6 Nm

3 - Cover

- ☐ With vulcanised seal
- ☐ Will remain attached to control unit or housing of four-wheel drive coupling when control unit is removed
- ☐ Always renew

4 - Coupling opening control valve - N373-

- ☐ Calibrated to match all-wheel drive control unit - J492-
- ☐ Always renew together with control unit
- ☐ Removing and installing
⇒ [page 133](#)

5 - Seal

- ☐ Make sure that centring lips are correctly seated in groove
- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Always renew

6 - Seal

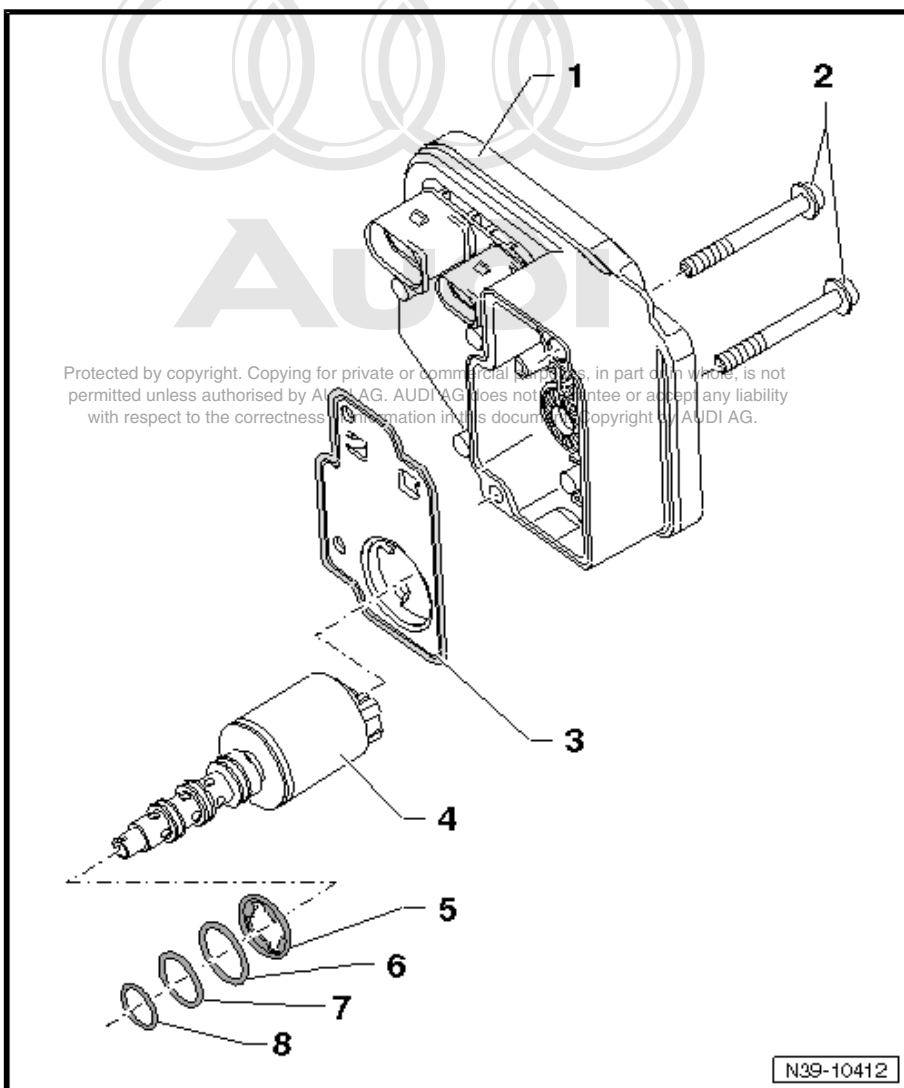
- ☐ Diameter 12 mm
- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Always renew

7 - Seal

- ☐ Diameter 11 mm
- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Always renew

8 - Seal

- ☐ Diameter 10 mm
- ☐ Lubricate lightly with high-performance oil for four-wheel drive coupling before fitting
- ☐ Always renew



5.5.2 Removing and installing all-wheel drive control unit - J492- - generation IV

⇒ ["1.2 Four-wheel drive coupling identification", page 2](#)

Special tools and workshop equipment required

- ◆ Torque wrench (2 ... 10 Nm) - V.A.G 1783-



- ◆ Drip tray for workshop hoist - VAS 6208-



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- ◆ Allen key (4 mm)

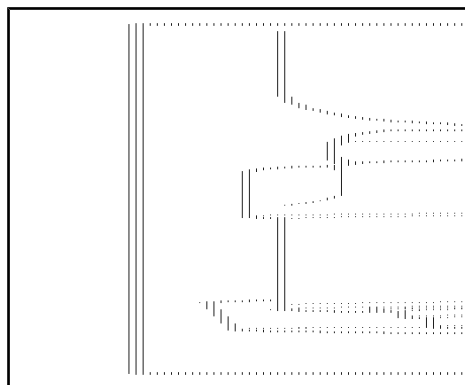
Removing

- Switch off ignition.
- Unplug connectors -1- and -2- at top of control unit.
- Position drip tray under final drive.

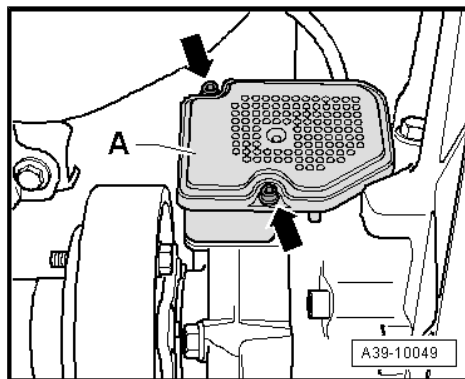


Note

It is advisable to have a workshop trolley with tools and cloths within easy reach so that removed parts can be put down safely.



- Remove bolts -arrows-.
- Carefully detach control unit -A-.



- If necessary, detach cover ➔ [Item 3 \(page 133\)](#) from housing of four-wheel drive coupling, while keeping hold of valve -arrow-.
- Place a cloth over coupling opening control valve - N373- -arrow-, take hold of valve body with pliers and pull out valve.

Installing

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



Note

The seals for the valve have different internal diameters.

- ◆ -1- Internal diameter: 10 mm
- ◆ -2- Internal diameter: 11 mm
- ◆ -3- Internal diameter: 12 mm
- ◆ -4- Seal on valve body

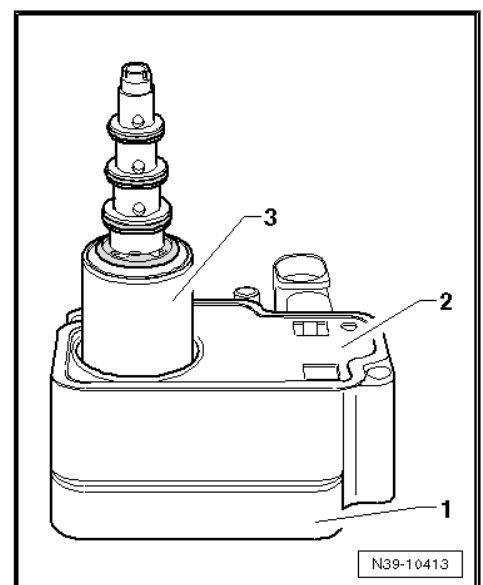
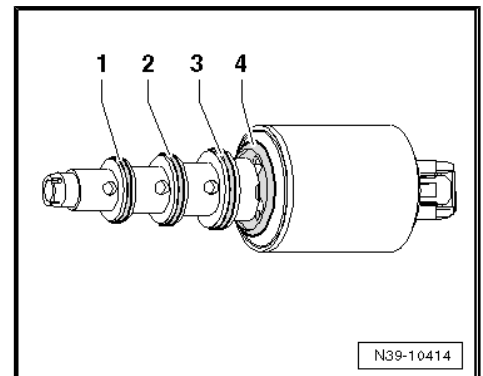
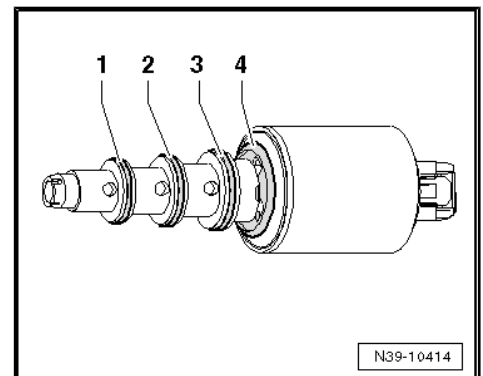
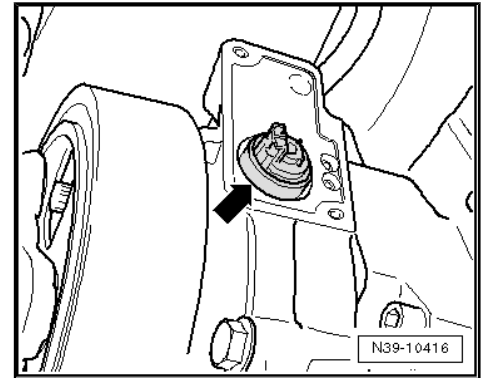
- First lubricate seal -1- with high-performance oil for four-wheel drive coupling and fit seal onto coupling opening control valve - N373- .
- Then fit seals -2-, -3- and -4-.
- Press centring lips (4x) of seal -4- into groove.

- Fit new cover -2- onto control unit -1-.



Note

The cover can only be fitted in one position.



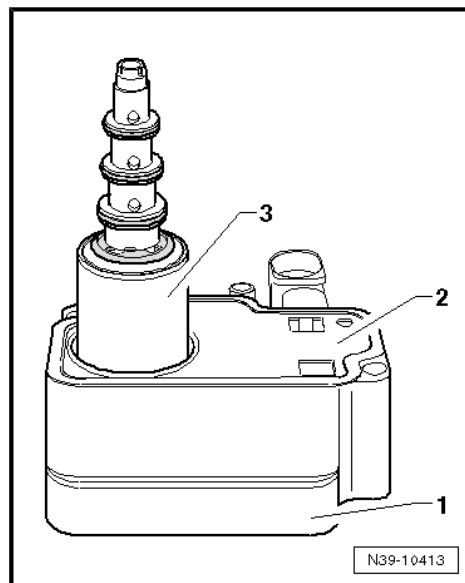
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- Insert coupling opening control valve - N373- -3- in control unit -1-.

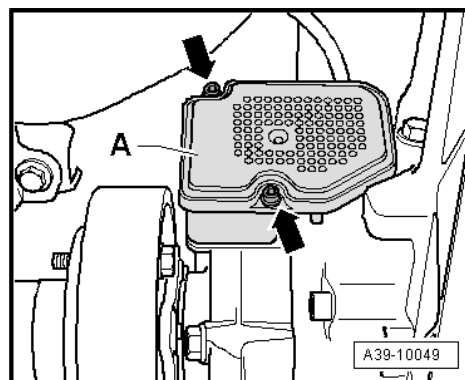


Note

The valve can only be fitted in one position.



- Carefully fit control unit -A- and tighten bolts -arrows- to torque ⇒ [Item 2 \(page 133\)](#) .
- Check oil level in four-wheel drive coupling ⇒ [page 138](#) .

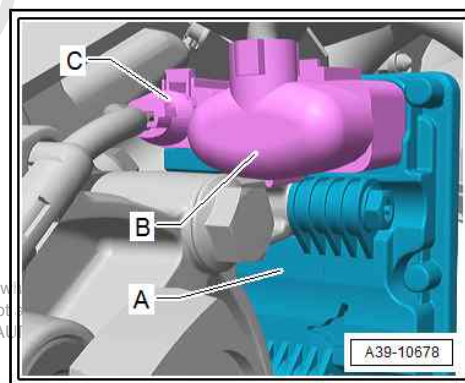


5.5.3 Removing and installing all-wheel drive control unit - J492- - generation V

⇒ ["1.2 Four-wheel drive coupling identification", page 2](#)

Removing

- Disconnect electrical connectors -B- and -C- from all-wheel drive control unit -A-.



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- Remove bolts -arrows- for all-wheel drive control unit -A- on four-wheel drive coupling and detach all-wheel drive control unit .

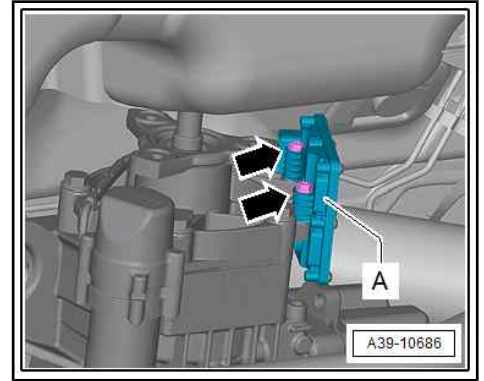
Installing

Installation is carried out in reverse sequence.

- If a new control unit has been installed, a basic setting must be performed.
- Connect ⇒ Vehicle diagnostic tester and start **Diagnosis** mode.
 - ◆ **Select own test**
 - ◆ **Four-wheel drive**
 - ◆ **01 Self-diagnosis-compatible systems**
 - ◆ **22 4WD electronics J492**
 - ◆ **22 Four-wheel drive functions**
 - ◆ **22 Replace control unit**
- Follow instructions on screen.

Tightening torques

- ◆ All-wheel drive control unit to four-wheel drive coupling
⇒ [Item 3 \(page 112\)](#)



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6 High-performance oil for four-wheel drive coupling

⇒ [“6.1 Checking oil level for four-wheel drive coupling”, page 138](#)

⇒ [“6.2 Filling up high-performance oil for four-wheel drive coupling”, page 139](#)

⇒ [“6.3 Changing high-performance oil for four-wheel drive coupling”, page 142](#)

6.1 Checking oil level for four-wheel drive coupling

Special tools and workshop equipment required

- ◆ Vehicle diagnostic tester
- ◆ Drip tray for workshop hoist - VAS 6208-

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Test conditions

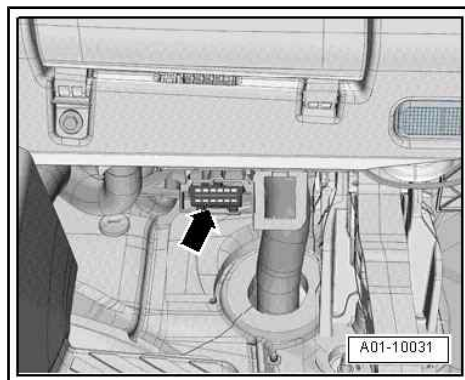
- The oil temperature must be 20 ... 40 °C.
- The oil temperature can be achieved by running the engine warm.
- Vehicle must be level (horizontal).
- The final drive must be in installation position when checking oil level.

Reading off gear oil temperature

- With ignition switched off, connect ⇒ Vehicle diagnostic tester to diagnostic connection -arrow-.

Fitting location: footwell (front left), next to bonnet release lever.

- Switch on ignition.
- Select the options on the tester in this sequence:
 - Identify vehicle using **Guided Functions**.
 - Select **22 - 4WD electronics**.
 - Select **Coupling temperature/Control unit temperature**.
- Read off oil temperature.
- The oil temperature must be 20 ... 40 °C.



Checking oil level

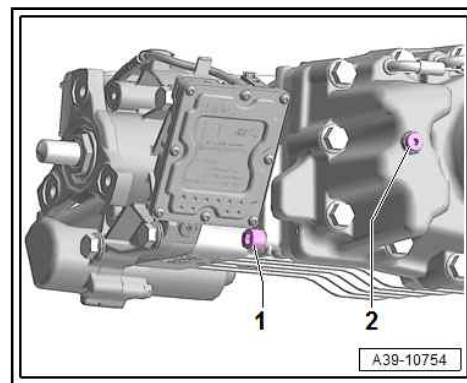
- Position drip tray - VAS 6208- under final drive.
- To check oil level, unscrew oil inspection plug -2-.

Oil level is correct if four-wheel drive coupling is filled up to bottom lip of filler hole or no more than 3 mm below bottom lip of filler hole.

- Top up high-performance oil for four-wheel drive coupling if necessary ➔ [page 139](#) .

Tightening torques

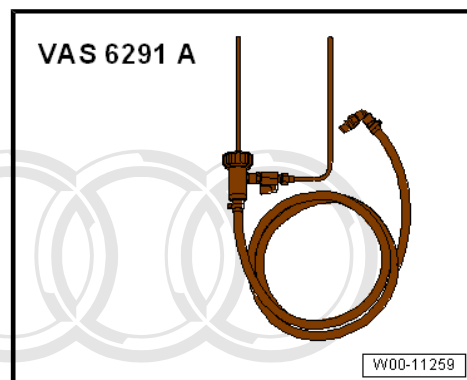
- ◆ ➔ [“7.1 Overview of fitting locations - drain and inspection plugs”, page 143](#)



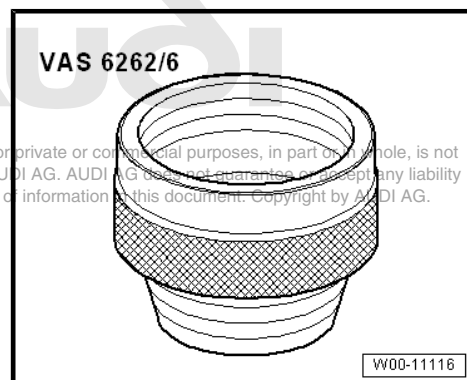
6.2 Filling up high-performance oil for four-wheel drive coupling

Special tools and workshop equipment required

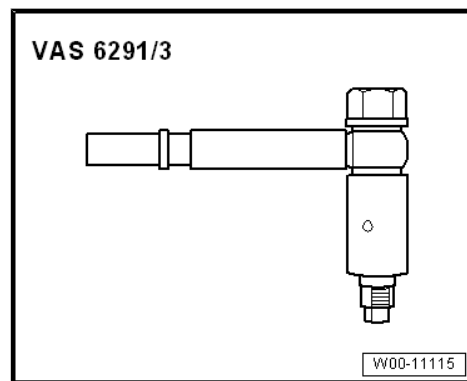
- ◆ Filling device for four-wheel coupling - VAS 6291 A-



- ◆ Adapter - VAS 6262/6- or adapter - VAS 6262/7-



- ◆ Adapter for oil filling - VAS 6291/3-



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- ◆ Drip tray for workshop hoist - VAS 6208-



- ◆ Additionally for Audi A1 quattro:
- ◆ Adapter - VAS 6617/9-
- ◆ Adapter - VAS 6617/3-
- ◆ Adapter - VAS 6617/2-
- ◆ Adapter - VAS 6291A/4-

Test requirement

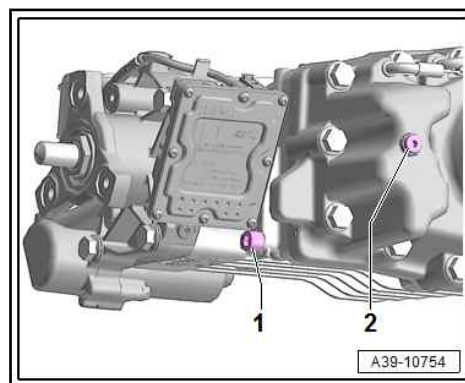
- Vehicle must be level (horizontal).

High-performance oil for four-wheel drive coupling is available as a replacement part ⇒ Electronic parts catalogue .

Filling up high-performance oil for four-wheel drive coupling

Procedure

- Position drip tray - VAS 6208- under final drive.
- Use filling device for four-wheel drive coupling 2 - VAS 6291 A- to top up.
- Unscrew filler plug -2- for high-performance oil for four-wheel drive coupling .



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- Separate adapter -A- and elbow joint -B-.
- Screw in adapter -A- as far as stop.

Audi A1 quattro

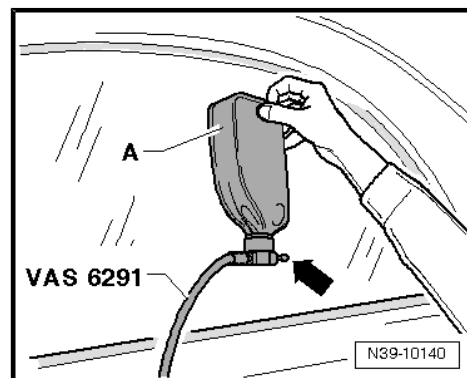
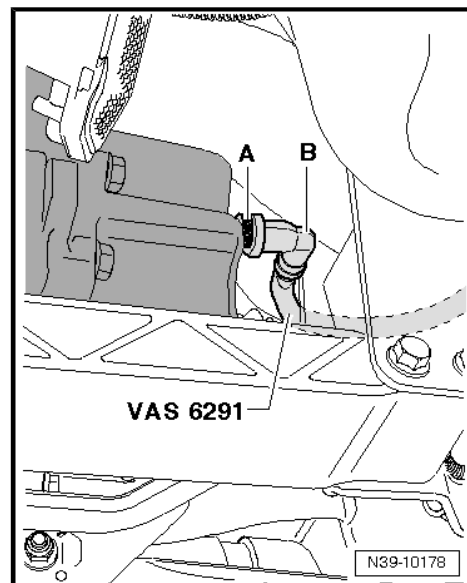
- Insert following adapters in appropriate sequence:

- ◆ Adapter - VAS 6617/9-
- ◆ Adapter - VAS 6617/3-
- ◆ Adapter - VAS 6617/2-
- ◆ Adapter - VAS 6291A/4-

Continued for all vehicles

- Connect elbow joint -B- onto adapter -A-, making sure it engages.
- Route hose of charging device above drive shaft.
- The hose must not hang down. It must emerge above left wheel at rear of vehicle.
- Lower vehicle.
- Make sure that valve -arrow- is closed.
- Screw oil container -A- onto filling device for four-wheel drive coupling 2 - VAS 6291 A- .
- Open valve -arrow- and hold oil container as shown in illustration.

The four-wheel drive coupling will now be filled.



Note

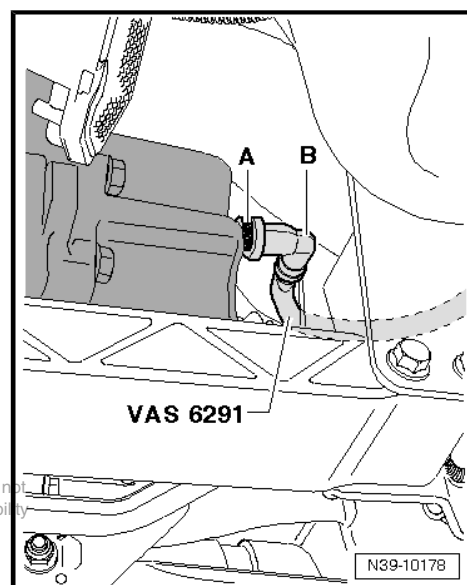
If four-wheel drive coupling is filled correctly, oil will emerge at adapter -A-.

- Raise vehicle.
- Once the oil has started to emerge, place the oil container e.g. onto a workshop trolley below the four-wheel drive coupling.

Excess oil will now flow back into the oil container.

- When oil stops flowing back, detach filling device for four-wheel drive coupling 2 - VAS 6291 A- .
- The four-wheel drive coupling is now filled up to the bottom lip of the oil filler hole.

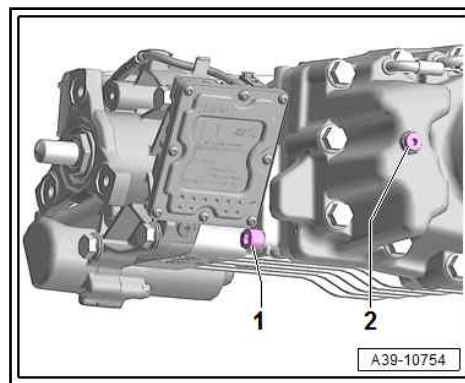
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- Screw in new oil filler plug -2-.
- Then check oil level in four-wheel drive coupling
⇒ [page 138](#) .

Tightening torques

- ◆ ⇒ [“7.1 Overview of fitting locations - drain and inspection plugs”, page 143](#)



6.3 Changing high-performance oil for four-wheel drive coupling

Special tools and workshop equipment required

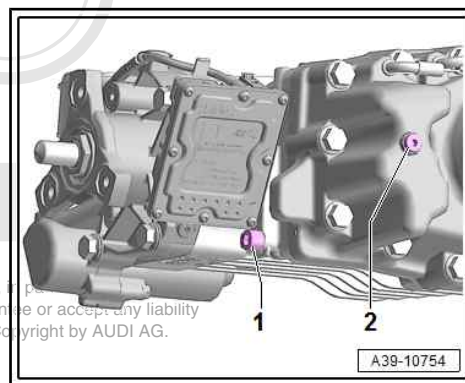
- ◆ Drip tray for workshop hoist - VAS 6208-



- ◆ High-performance oil for four-wheel drive coupling ⇒ Electronic parts catalogue

Procedure

- Place drip tray underneath.
- Remove drain plug -1- and drain high-performance oil for four-wheel drive coupling completely.
- Screw in new drain plug -1- and tighten to specified torque.
- Fill up high-performance oil for four-wheel drive coupling
⇒ [page 139](#) .
- Then check oil level in four-wheel drive coupling
⇒ [page 138](#) .



Tightening torques

- ◆ ⇒ [“7.1 Overview of fitting locations - drain and inspection plugs”, page 143](#)

7 Gear oil

⇒ [“7.1 Overview of fitting locations - drain and inspection plugs”, page 143](#)

⇒ [“7.2 Checking gear oil level”, page 143](#)

7.1 Overview of fitting locations - drain and inspection plugs

1 - Drain plug for four-wheel drive oil

☐ Renew

☐ 38 Nm

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2 - Filler plug for four-wheel drive oil

☐ Renew

☐ 15 Nm

☐ For 0CR: 20 Nm

3 - Drain plug for gear oil

☐ Renew

☐ 15 Nm

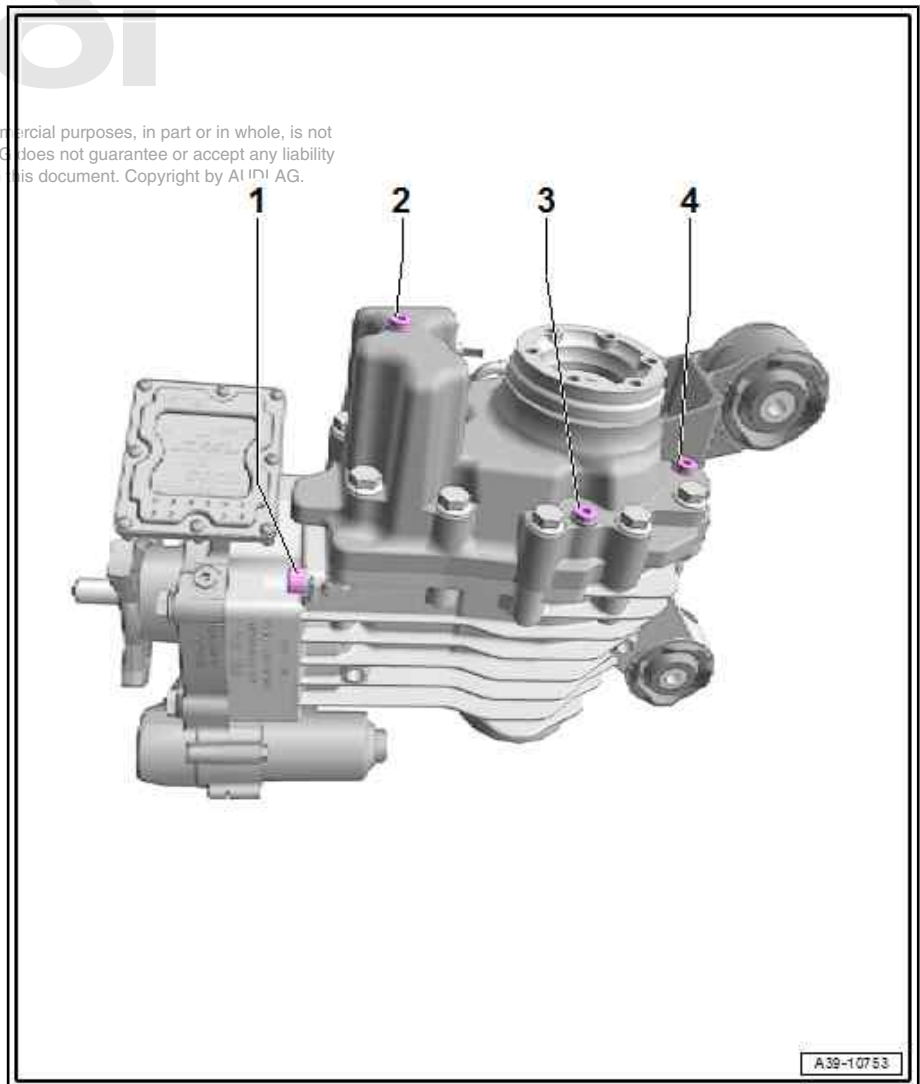
☐ For 0CR: 20 Nm

4 - Filler plug for gear oil

☐ Renew

☐ 15 Nm

☐ For 0CR: 20 Nm



7.2 Checking gear oil level

Special tools and workshop equipment required

- ◆ Drip tray for workshop hoist - VAS 6208-

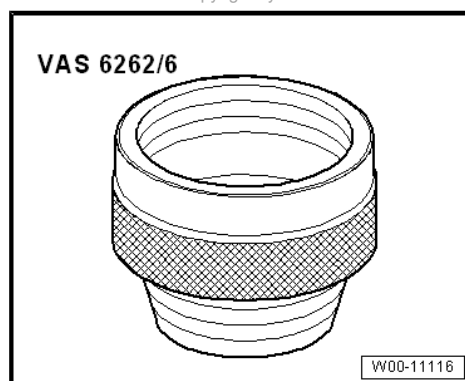


- ◆ Filling device for four-wheel coupling - VAS 6291 A-

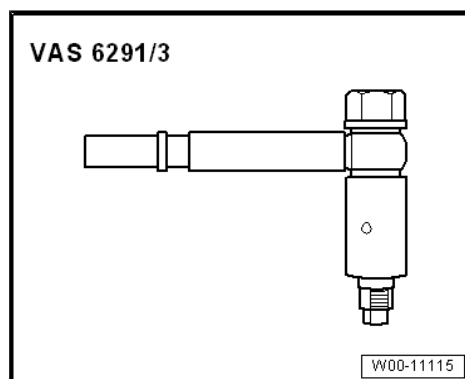


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- ◆ Adapter - VAS 6262/6- or adapter - VAS 6262/7-



- ◆ Adapter for oil filling - VAS 6291/3-



Test requirement

- Vehicle must be level (horizontal).
- For gear oil specification for rear final drive, refer to ⇒ Electronic parts catalogue .

Checking oil level

- Position drip tray - VAS 6208- under final drive.
- Unscrew oil filler plug -2- for gear oil .

The oil level is correct when the rear final drive is filled to the bottom lip of the filler hole.

- Screw in and tighten new oil filler plug -2- ⇒ [page 143](#) .

Topping up with oil:

- Using filling device for four-wheel drive coupling 2 - VAS 6291- , fill up with oil until oil comes out between final drive housing and adapter of charging device.
- Remove charging device and adapter; a certain amount of surplus oil may now come out.

The oil level is correct when the rear final drive is filled to the bottom lip of the filler hole.

- Screw in and tighten new oil filler plug -2-.

Tightening torques

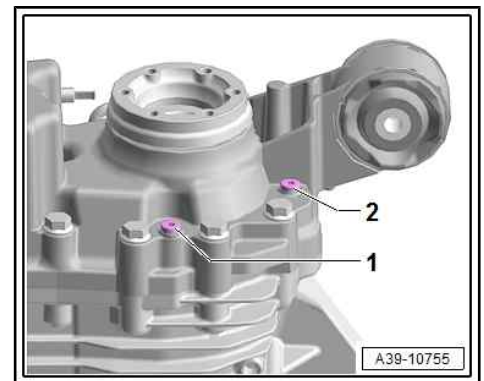
- ◆ ⇒ [“7.1 Overview of fitting locations - drain and inspection plugs”, page 143](#)

7.3 Draining and filling gear oil

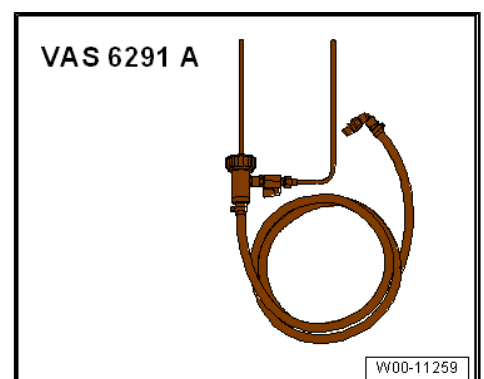
Special tools and workshop equipment required

- ◆ Drip tray for workshop hoist - VAS 6208-

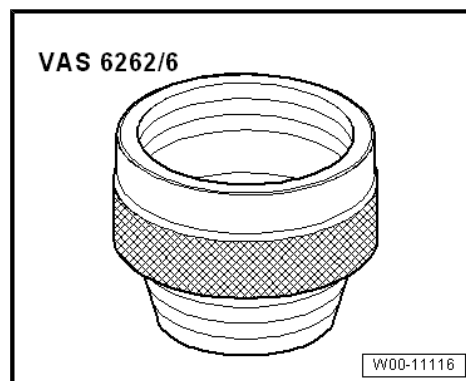
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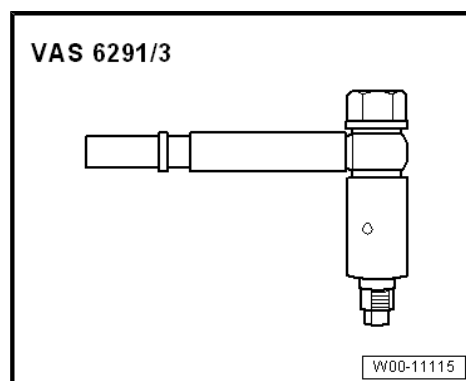
- ◆ Filling device for four-wheel coupling - VAS 6291 A-



- ◆ Adapter - VAS 6262/6- or adapter - VAS 6262/7-



- ◆ Adapter for oil filling - VAS 6291/3-



Draining oil:

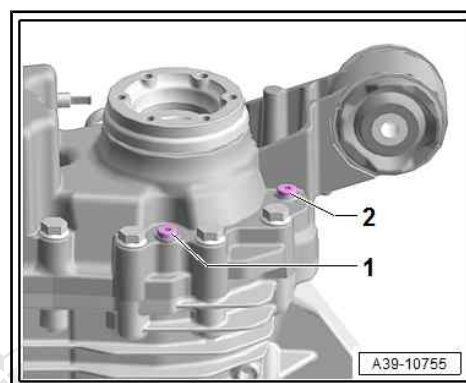
- Position drip tray - VAS 6208- under final drive.
- Unscrew drain plug -1- for gear oil .
- Drain off oil completely.
- Screw in and tighten new drain plug -1- ➔ [page 143](#) .

Filling up with oil:

- Using filling device for four-wheel drive coupling 2 - VAS 6291- , fill up with oil until oil comes out between final drive housing and adapter of charging device.
- Remove charging device and adapter; a certain amount of surplus oil may now come out.

The oil level is correct when the rear final drive is filled to the bottom lip of the filler hole.

- Screw in and tighten new oil filler plug -2-.



Tightening torques

- ◆ ➔ [“7.1 Overview of fitting locations - drain and inspection plugs”, page 143](#)