



Workshop Manual

Arteon 2018 ➤, CC 2012 ➤,
Golf 2013 ➤, Golf 2017 ➤,
Golf Variant 2014 ➤,
Golf Variant 2017 ➤, Passat 2011 ➤,
Passat 2015 ➤, Passat Variant 2011 ➤,
Passat Variant 2015 ➤, Sharan 2016 ➤,
Tiguan 2016 ➤, Tiguan RUS 2017 ➤

Propshaft and rear final drive

Edition 07.2017





List of Workshop Manual Repair Groups

Repair Group

00 - Technical data

39 - Final drive - rear differential



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 Safety information

(VRL010605; Edition 07.2017)

⇒ **"1.1 Safety precautions when using testers and measuring instruments during a road test", page 1**

⇒ **"1.2 Safety measures when working on vehicles with a start/stop system", page 2**

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

To prevent personal injury and material damage to the vehicle, observe the following:

**WARNING**

Vehicles with dual clutch gearbox - risk of injury and accident by accidental engagement of gear while engine is running.

- ◆ *Before working on vehicle with engine running, move selector lever into position "P" and apply parking brake.*

Risk of poisoning!

- ◆ *While the engine is running, an exhaust gas extraction system must be attached to the exhaust system.*

Observe the following if test and measuring equipment is required during a road test:

**WARNING**

Risk of accident due to distraction and inadequate securing of test and measuring equipment.

Danger as a result of activation of front passenger airbag in event of an accident.

- *Operation of test and measuring equipment while driving results in distraction.*
- *Greater injury hazard as a result of unsecured test and measuring equipment.*
- ◆ *Always strap in place test and measuring equipment on rear seat and have a 2nd person sitting on the rear seat to operate them.*

Please note the following to avoid personal injury and damage to, or destruction of, electrical and electronic components:

- ◆ Connect and disconnect measuring and testing devices only with the ignition switched off.



Caution

To prevent damage to the electronic components when disconnecting the battery:

- ◆ *Observe the necessary measures when disconnecting the battery.*
- ◆ *Disconnect battery only after the ignition has been switched off.*

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

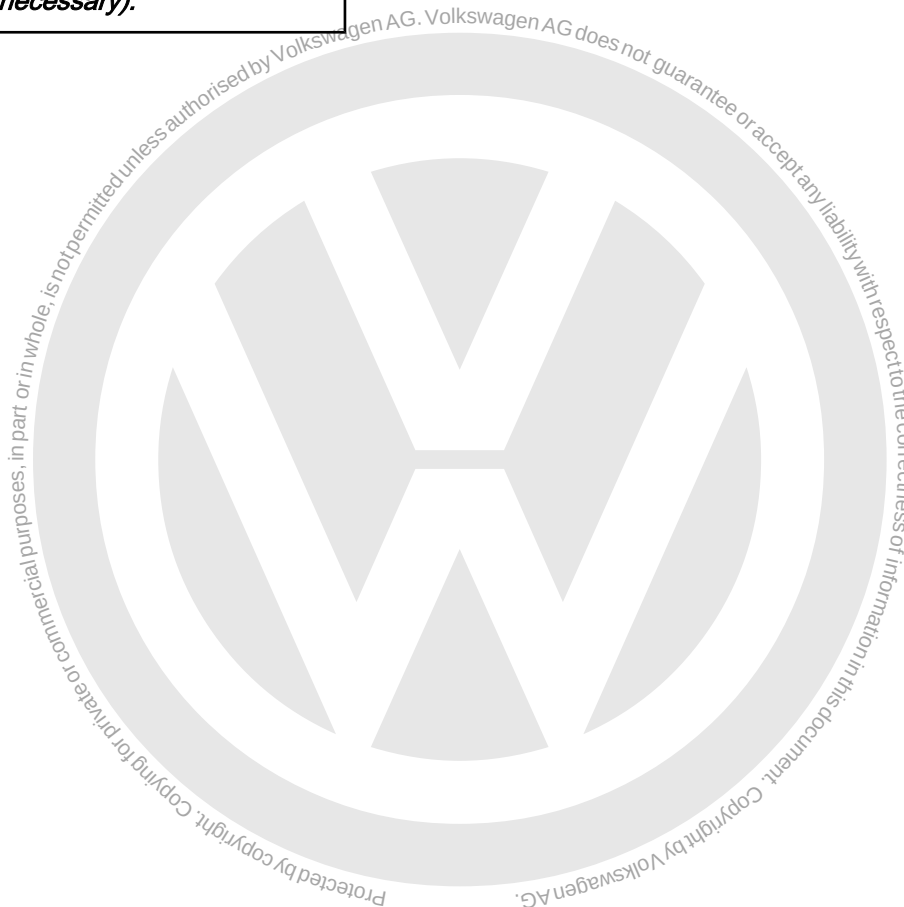
1.2 Safety measures when working on vehicles with a start/stop system



WARNING

Injury hazard as a result of automatic engine start in vehicles with start/stop system.

- ◆ *In vehicles with the start/stop system activated (identifiable by an indication in the dash panel insert), the engine can start automatically if the required conditions are met.*
- ◆ *When working on the vehicle, always make sure that the start/stop system is deactivated (switch off the ignition; switch the ignition on again if necessary).*





2 Identification

⇒ **"2.1 Identification of final drive", page 3**

2.1 Identification of final drive

⇒ **"2.1.1 Final drive code 02D/0BS/0AY", page 3**

⇒ **"2.1.2 Final drive code 0CQ/0CR/0BR", page 3**

2.1.1 Final drive code 02D/0BS/0AY



Note

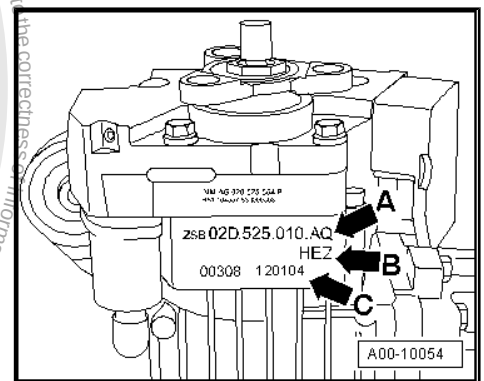
The marking on the »bottom« of the final drive provides information about which final drive is installed.

Identification example:

- Arrow A- Part number of final drive
- Arrow B- Code of final drive
- Arrow C- Date of production of final drive

Example:

HEZ	12	01	04
Codes	Day	Month	Year of manufacture
			-2004-



2.1.2 Final drive code 0CQ/0CR/0BR



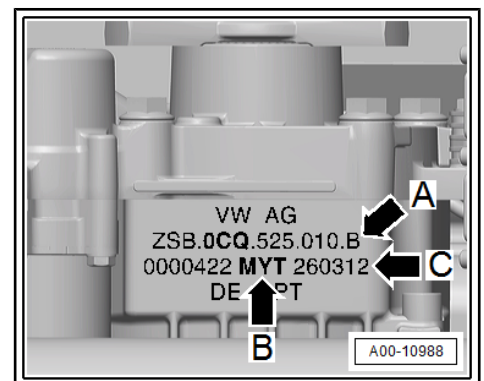
Note

The marking on the »bottom« of the final drive provides information about which final drive is installed.

Identification example:

- Arrow A- Part number of final drive
- Arrow B- Code of final drive
- Arrow C- Date of production of final drive

MYT	26	03	12
Codes	Day	Month	Year of manufacture
			-2012-





3 Repair notes

⇒ [“3.1 General repair instructions”, page 4](#)

⇒ [“3.2 Gaskets and seals”, page 5](#)

⇒ [“3.3 Nuts and bolts”, page 5](#)

3.1 General repair instructions

⇒ [“3.1.1 General information”, page 4](#)

⇒ [“3.1.2 Oil”, page 4](#)

⇒ [“3.1.3 Locking devices”, page 4](#)

⇒ [“3.1.4 Mountings”, page 5](#)

⇒ [“3.1.5 Shims”, page 5](#)

3.1.1 General information

To ensure flawless and successful gearbox repairs, the greatest care and cleanliness as well as the use of good and proper tools are essential. Also note the basic rules on safety when performing repair procedures.

A number of general notes on the individual repair procedures, which can otherwise be found in the relevant sections of the manual, are summarised here. They apply for this particular workshop manual.

- ◆ Before performing repairs on the all-wheel drive coupling, determine the cause of the fault as accurately as possible using guided fault finding, vehicle self-diagnosis and test instruments with ⇒ vehicle diagnostic tester .

3.1.2 Oil



Note

The final drive and all-wheel drive coupling have separate »oil circuits«.

The final drive is filled with “axle oil”, the all-wheel drive coupling is filled with “all-wheel drive coupling fluid”.

Oil for the “final drive” and oil for the “all-wheel drive coupling” are available as replacement parts ⇒ Electronic parts catalogue (ET-KA) .

Do not mix »additives« in oil.

Oil which has been drained out cannot be added again.



Caution

Use caution when handling oil. Dispose of used oil properly.

3.1.3 Locking devices

- ◆ Do not overstretch retaining rings.
- ◆ Always renew retaining rings which have been damaged or overstretched.
- ◆ Retaining rings must locate properly in grooves.



3.1.4 Mountings

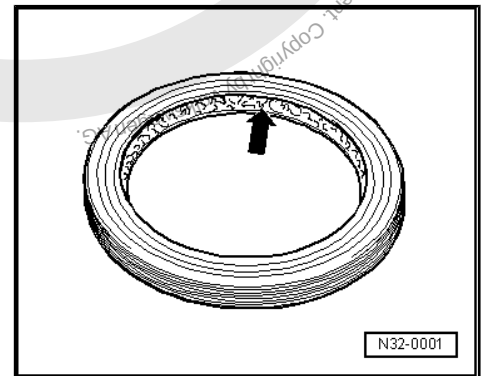
- ◆ Install needle bearings with lettered side (thicker metal) towards fitting tool.
- ◆ Lubricate all gearbox bearings with gear oil before installing.
- ◆ Tapered roller bearings fitted to one shaft must be renewed as a set. Use same make of bearings.
- ◆ Heat inner races to about 100 °C before installing.
- ◆ Do not interchange outer or inner races of bearings of the same size. The bearings are matched in pairs.

3.1.5 Shims

- ◆ Measure shims at several points with a micrometer. The various thicknesses make it possible to achieve the exact shim thickness required.
- ◆ Check for burrs and damage.
- ◆ Install only flawless shims.

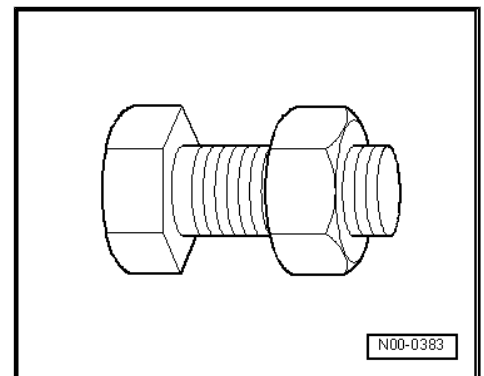
3.2 Gaskets and seals

- ◆ After removing gaskets and seals, always inspect contact surface of housing or shaft for burrs resulting from removal or for other signs of damage.
- ◆ Before installing seals, lightly oil outer diameter and half-fill space between sealing lips -arrow- with sealing grease - G 052 128 A1- .
- ◆ The open side of the oil seals faces toward the side with fluid filling.
- ◆ Only use dual clutch gearbox oil. Other lubricants will cause problems in function.
- ◆ Check oil level in all-wheel drive coupling after renewing O-rings, gaskets and seals.



3.3 Nuts and bolts

- ◆ Loosen and tighten securing bolts and securing nut for covers and housings diagonally.
- ◆ Specified torques given are for unoled nuts, bolts and screws.
- ◆ Clean threads of bolts which are to be installed with locking fluid using a wire brush. Then insert bolts with locking fluid - AMV 185 101 A1- .
- ◆ Threaded holes into which self-locking bolts or bolts with locking agent have been screwed must be cleaned (e.g. with a screw tap). Otherwise there is a danger that the bolts will shear off when refitted.
- ◆ Always renew self-locking bolts and nuts.





4 Technical data

⇒ [“4.1 Allocation gearbox - engine”, page 6](#)

⇒ [“4.2 Capacities”, page 10](#)

4.1 Allocation gearbox - engine

⇒ [“4.1.1 Allocation gearbox - engine, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►”, page 6](#)

⇒ [“4.1.2 Allocation gearbox - engine, Golf 2013 ►, Golf Estate 2014 ►”, page 6](#)

⇒ [“4.1.3 Allocation gearbox - engine, Passat 2015 ►, Passat Estate 2015 ►”, page 7](#)

⇒ [“4.1.4 Allocation gearbox - engine, Sharan 2016 ►”, page 7](#)

⇒ [“4.1.5 Allocation gearbox - engine, Tiguan 2016 ►”, page 7](#)

⇒ [“4.1.6 Allocation gearbox - engine, Golf 2017 ►”, page 9](#)

⇒ [“4.1.7 Allocation gearbox - engine, Golf Estate 2017 ►”, page 9](#)

⇒ [“4.1.8 Allocation gearbox - engine, Arteon 2018 ►”, page 9](#)

4.1.1 Allocation gearbox - engine, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►

Rear final drive	0BS				
	(All-wheel drive coupling generation IV)				
Gearbox type	6-speed dual clutch gearbox 02E		6-speed automatic gearbox 09M	6-speed manual gearbox 02Q	
Codes	MBD	MBD	MBD	MBD	MBD
Engine	3.6 l - 220 kW FSI	2.0 l - 155 kW FSI	2.0 l - 125 kW TDI	3.6 l - 220 kW FSI	2.0 l - 103 kW TDI
Drive shaft flange diameter	100 mm				

4.1.2 Allocation gearbox - engine, Golf 2013 ►, Golf Estate 2014 ►

Rear final drive	0CQ			
	(All-wheel drive coupling generation V)			
Gearbox type	6-speed manual gearbox 02Q		6-speed dual clutch gearbox 0D9	
Codes	PHF, PYP		PYP	PYP
Engine	1.6 l - 77, 81 kW TDI	2.0 l - 110 kW TDI	2.0 l - 135 kW TDI	1.8 l - 132 kW TFSI
Drive shaft flange diameter	100 mm			



4.1.3 Allocation gearbox - engine, Passat 2015 ►, Passat Estate 2015 ►

Rear final drive	0CQ				
	(All-wheel drive coupling generation V)				
Gearbox type	6-speed dual clutch gearbox 0D9	6-speed manual gearbox 02Q	6-speed dual clutch gearbox 0D9	7-speed dual clutch gearbox 0DL	7-speed dual clutch gearbox 0GC
Codes	QGP	QGP	QGP, RUU	PYP	RUU
Engine	2.0 l - 135, 140 kW TDI	1.4 l - 110 kW TSI	2.0 l - 206 kW TSI	2.0 l - 162 kW TSI	2.0 l - 140 kW TDI
Drive shaft flange diameter	100 mm				

Rear final drive	0CR		
	(All-wheel drive coupling generation V)		
Gearbox type	7-speed dual clutch gearbox 0DL	6-speed dual clutch gearbox 0D9	7-speed dual clutch gearbox 0GC
Codes	PMF, QZY, QUA	QUA	RUS, TER
Engine	2.0 l - 176 kW TDI	2.0 l - 135, 140 kW TDI	2.0 l - 140 kW TDI
Drive shaft flange diameter	100 mm		

4.1.4 Allocation gearbox - engine, Sharan 2016 ►

Rear final drive	0AY	
	(All-wheel drive coupling generation V)	
Gearbox type	6-speed manual gearbox 0A6	7-speed dual clutch gearbox 0BH
Codes	QLY	QLY
Engine	2.0 l - 110 kW TDI	2.0 l - 135 kW TDI
Drive shaft flange diameter	100 mm	

4.1.5 Allocation gearbox - engine, Tiguan 2016 ►

Rear final drive	0CQ
	(All-wheel drive coupling generation V)



Rear final drive	0CQ				
Gearbox type	7-speed dual clutch gearbox 0DL		6-speed manual gearbox 02Q	6-speed manual gearbox 0BB	6-speed manual gearbox 0A6
Codes	PYP, RUT	PYP, RUT	PYP, RUT	PYP, RUT	PYP
Engine	2.0 l - 105 and 110 kW TDI	2.0 l - 130 and 140 kW TDI	2.0 l - 132 kW TSI	2.0 l - 110 kW TDI	2.0 l - 110 kW TDI
Drive shaft flange diameter	100 mm				

Rear final drive	0CQ			
	(All-wheel drive coupling generation V)			
Gearbox type	7-speed dual clutch gearbox 0DL	6-speed dual clutch gearbox 0D9	6-speed manual gearbox 0BB	
Codes	PYP, RUT, RUU	PYP, RUT, RUU	PYP, RUT, RUU	
Engine	2.0 l - 132 kW, 162 kW TSI	1.4 l - 110 kW TSI	1.4 l - 110 kW TSI	
Drive shaft flange diameter	100 mm			

Rear final drive	0CR	
	(All-wheel drive coupling generation V)	
Gearbox type	7-speed dual clutch gearbox 0DL	
Codes	QUA, RUS	
Engine	2.0 l - 176 kW TDI	
Drive shaft flange diameter	100 mm	

Rear final drive	0BR			
	(All-wheel drive coupling generation V)			
Gearbox type	7-speed dual clutch gearbox 0DL		6-speed dual clutch gearbox 0D9	6-speed manual gearbox 0BB
Codes	RAW, SGZ	RAW, SGZ	SGZ	SGZ
Engine	2.0 l - 132 kW, 162 kW TSI	2.0 l - 110 kW TDI	1.4 l - 110 kW TSI	1.4 l - 110 kW TSI
Drive shaft flange diameter	100 mm			



4.1.6 Allocation gearbox - engine, Golf 2017 ►

Rear final drive	0CQ			
	(All-wheel drive coupling generation V)			
Gearbox type	6-speed manual gearbox 02Q			
Codes	RUT	RUT		
Engine	1.6 l - 81 kW TDI	2.0 l - 110 kW TDI		
Drive shaft flange diameter	100 mm			

4.1.7 Allocation gearbox - engine, Golf Estate 2017 ►

Rear final drive	0CQ				
	(All-wheel drive coupling generation V)				
Gearbox type	6-speed manual gearbox 02Q		6-speed dual clutch gearbox 0D9		7-speed dual clutch gearbox 0GC
Codes	RUT	RUT	RUT	RUT	PYP, RUT
Engine	1.6 l - 81 kW TDI	2.0 l - 110 kW TDI	1.8 l - 132 kW TFSI	2.0 l - 135 kW TDI	2.0 l - 135 kW TDI
Drive shaft flange diameter	100 mm				

4.1.8 Allocation gearbox - engine, Arteon 2018 ►

Rear final drive	0CQ	
	(All-wheel drive coupling generation V)	
Gearbox type	7-speed dual clutch gearbox 0GC	
Codes	RUU	RUU
Engine	2.0 l - 206 kW TSI	2.0 l - 140 kW TDI
Drive shaft flange diameter	100 mm	

Rear final drive	0CR	
	(All-wheel drive coupling generation V)	
Gearbox type	7-speed dual clutch gearbox 0DL	
Codes	RUS	
Engine	2.0 l - 176 kW TDI	
Drive shaft flange diameter	100 mm	



4.2 Capacities

⇒ [“4.2.1 Capacities, final drive 0BS”, page 10](#)

⇒ [“4.2.2 Capacities, final drive 0AY”, page 10](#)

⇒ [“4.2.3 Capacities, final drive 0CQ”, page 10](#)

⇒ [“4.2.4 Capacities, final drive 0CR”, page 11](#)

⇒ [“4.2.5 Capacities, final drive 0BR”, page 11](#)

4.2.1 Capacities, final drive 0BS

Rear final drive	0BS
	(All-wheel drive coupling generation IV)
Final drive capacity	0.95 l
Capacity of all-wheel drive coupling	0.85 l
Replacement volume in all-wheel drive coupling • Change intervals: ⇒ Maintenance tables	0.7 l

4.2.2 Capacities, final drive 0AY

Rear final drive	0AY
	(All-wheel drive coupling generation V)
Final drive capacity	0.95 l
Capacity of all-wheel drive coupling	0.75 l
Replacement volume in all-wheel drive coupling • Change intervals: ⇒ Maintenance tables	0.65 l

4.2.3 Capacities, final drive 0CQ

Rear final drive	0CQ
	(All-wheel drive coupling generation V)
Final drive capacity	0.95 l
Capacity of all-wheel drive coupling	0.75 l
Replacement volume in all-wheel drive coupling • Change intervals: ⇒ Maintenance tables	0.65 l

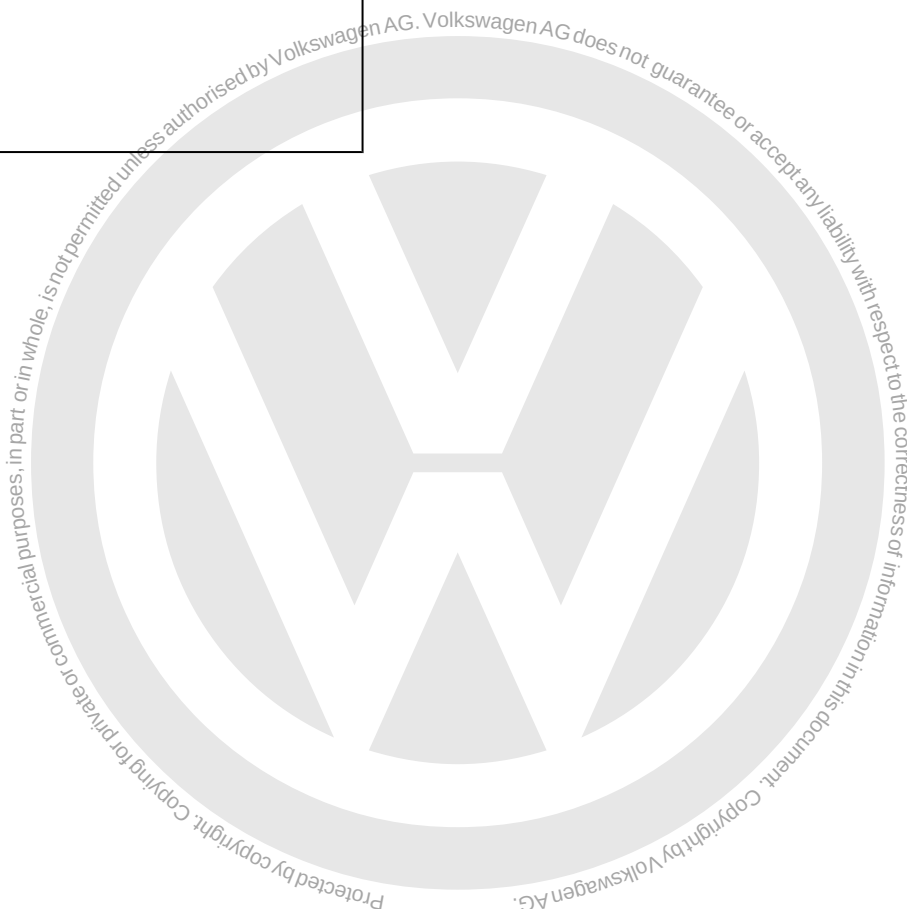


4.2.4 Capacities, final drive 0CR

Rear final drive	0CR
	(All-wheel drive coupling generation V)
Final drive capacity	0.95 l
Capacity of all-wheel drive coupling	0.75 l
Replacement volume in all-wheel drive coupling • Change intervals: ⇒ Maintenance tables	0.65 l

4.2.5 Capacities, final drive 0BR

Rear final drive	0BR
	(All-wheel drive coupling generation V)
Final drive capacity	0.90 l
Capacity of all-wheel drive coupling	0.76 l
Replacement volume in all-wheel drive coupling • Change intervals: ⇒ Maintenance tables	0.65 l



5 Electrical components

⇒ ["5.1 Overview of fitting locations - electrical components", page 12](#)

5.1 Overview of fitting locations - electrical components

⇒ ["5.1.1 Overview of fitting locations - electrical components, rear final drive 0BS with all-wheel drive coupling generation IV", page 12](#)

⇒ ["5.1.2 Overview of fitting locations - electrical components, rear final drive 0CQ/0CR/0AY/0BR with all-wheel drive coupling generation V", page 13](#)

5.1.1 Overview of fitting locations - electrical components, rear final drive "0BS" with all-wheel drive coupling generation IV

1 - All-wheel drive control unit - J492-

- ❑ All-wheel drive control unit receives important signals from engine control unit and control unit for ABS with EDL - J104- via data bus.
- ❑ Removing and installing
⇒ [page 108](#)

2 - Coupling opening control valve - N373-

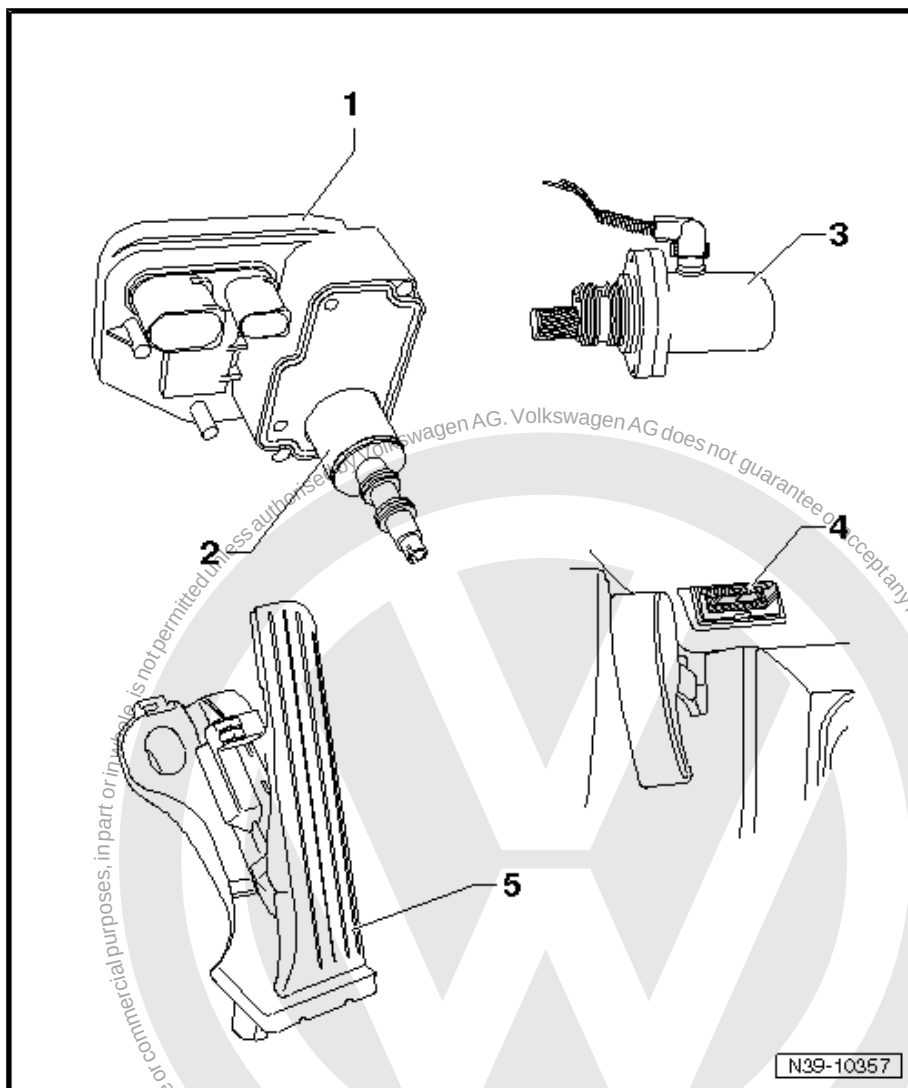
3 - All-wheel drive coupling pump - V181-

- ❑ Can be checked using "guided fault finding" of vehicle diagnosis, testing and information system - VAS 5051- .
- ❑ Removing and installing
⇒ [page 93](#)

4 - Diagnostic connection

- ❑ Location: in footwell, front left

5 - Accelerator position sender - G79-



5.1.2 Overview of fitting locations - electrical components, rear final drive "0CQ/0CR/0AY/0BR" with all-wheel drive coupling generation V

1 - All-wheel drive control unit - J492-

- ☐ All-wheel drive control unit receives important signals from engine control unit and control unit for ABS with EDL - J104- via data bus.
- ☐ Removing and installing
⇒ [page 112](#)

2 - All-wheel drive coupling pump - V181-

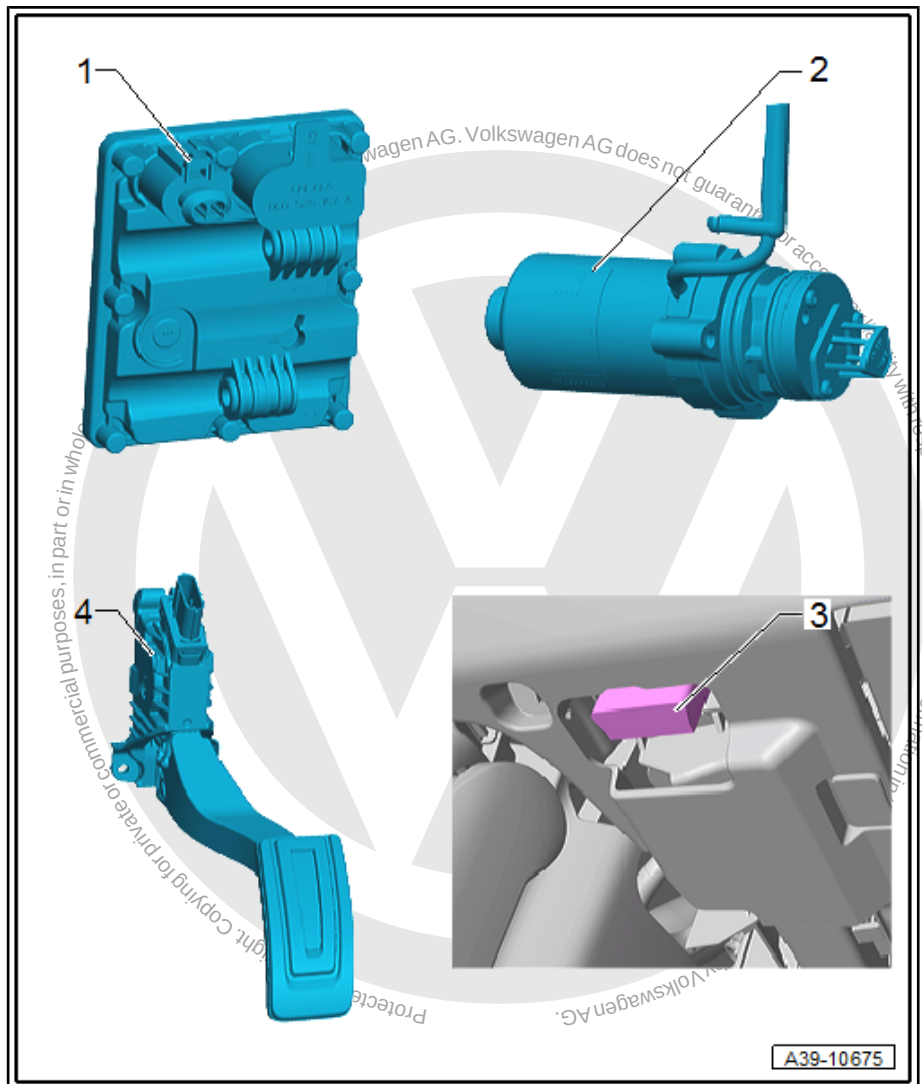
- ☐ Can be checked using "guided fault finding" of vehicle diagnosis, testing and information system - VAS 5051- .
- ☐ Removing and installing
⇒ [page 95](#)

3 - Diagnostic connection

- ☐ Location: in footwell, front left

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

- ☐ Removing and installing
⇒ Rep. gr. 20 ; Accelerator mechanism; Assembly overview - accelerator pedal module



A39-10675



39 – Final drive - rear differential

1 Final drive

⇒ ["1.1 Assembly overview - final drive", page 14](#)

⇒ ["1.2 Removing and installing final drive", page 15](#)

1.1 Assembly overview - final drive

1 - Bolt

- ☐ Renew after removal
- ☐ 60 Nm +180°

2 - Stop plate

3 - Washer

- ☐ Installation position:
chamfer (small diameter) faces towards sub-frame

4 - Bolts

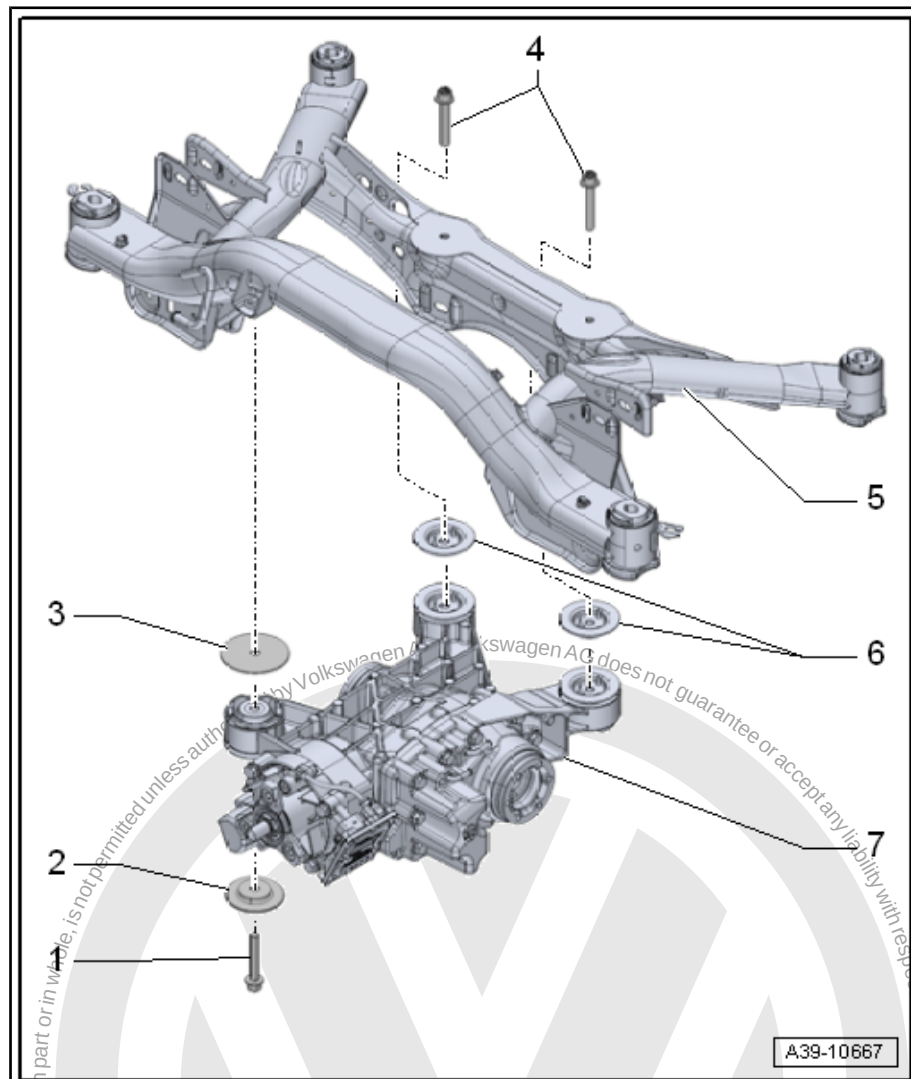
- ☐ Renew after removal
- ☐ 60 Nm +180°

5 - Rear subframe

6 - Stop plates

7 - Rear final drive

- ☐ Removing and installing
⇒ [page 15](#)
- ☐ Removing and installing
bonded rubber mounting
⇒ [page 60](#)





1.2 Removing and installing final drive

⇒ ["1.2.1 Removing and installing final drive, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►", page 15](#)

⇒ ["1.2.2 Removing and installing final drive, Golf 2013 ►, Golf 2017 ►", page 23](#)

⇒ ["1.2.3 Removing and installing final drive, Golf Estate 2014 ►, Golf Estate 2017 ►", page 30](#)

⇒ ["1.2.4 Removing and installing final drive, Passat 2015 ►, Passat Estate 2015 ►, Arteon 2018 ►", page 38](#)

⇒ ["1.2.5 Removing and installing rear final drive, Sharan 2016 ►", page 45](#)

⇒ ["1.2.6 Removing and installing final drive, Tiguan 2016 ►", page 48](#)

1.2.1 Removing and installing final drive, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►

Brief description

Two holes must be drilled in luggage compartment before the vehicle is raised. The positions at which holes have to be drilled are marked »in the factory«.

Corrosion protection must then be repaired using materials specified by manufacturer ⇒ Paint workshop manual .

The rear anti-roll bar is removed and the drive shafts are unbolted from the final drive. The electrical connections and breather lines are separated at the final drive.

The »rear section« of the exhaust system is removed and the propshaft is unbolted from the final drive.

The final drive is to be lowered with the gearbox jack diagonally »downwards« in direction of travel.

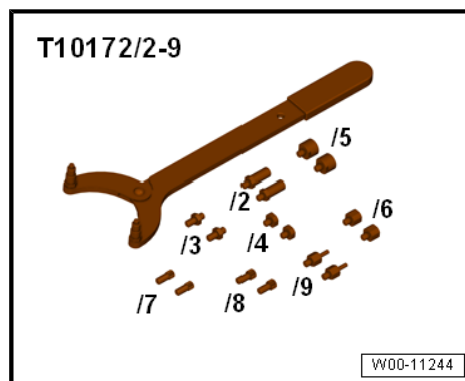
Special tools and workshop equipment required

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

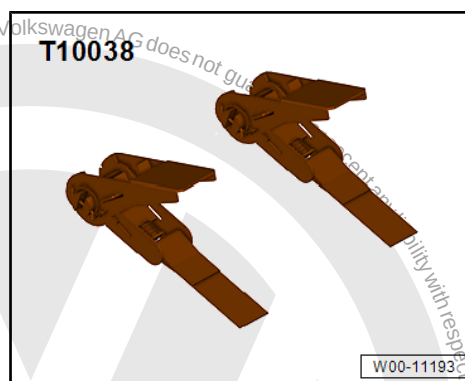




- ◆ Counter-hold tool - T10172-



- ◆ Tensioning strap - T10038-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-

Removing

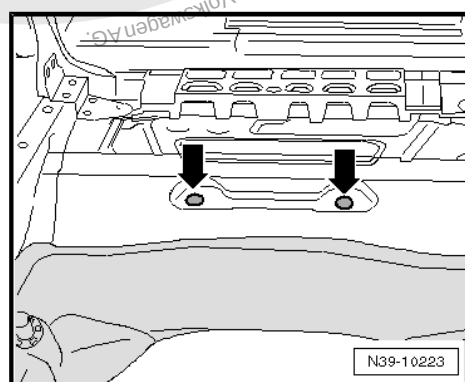
- Raise floor covering in luggage compartment.

If present:

- Remove spare tyre.
- Remove retainer and carrier for rail system ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trims; Assembly overview - luggage compartment floor .

Continued for all vehicles:

The luggage compartment floor has two markings -arrows-.



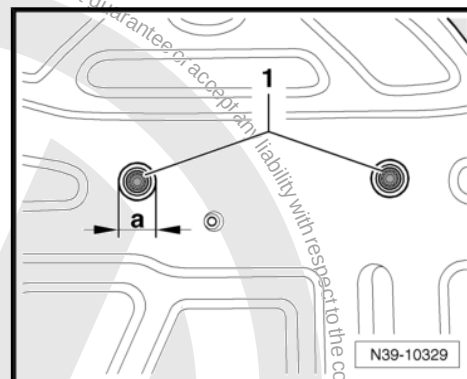


- Drill a hole through each of the two markings -1-. Vacuum up as much of the swarf as possible while drilling.

Dimension -a- = 26 mm Ø

- Deburr holes and carefully remove swarf.

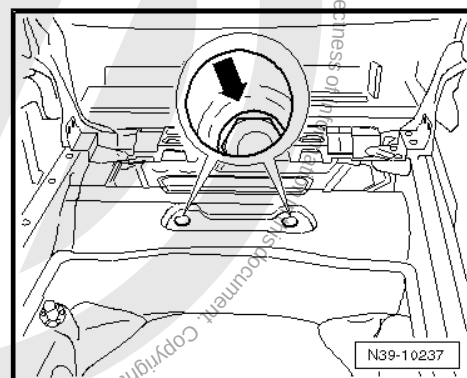
Repair corrosion protection using materials specified by manufacturer ⇒ Paint workshop manual .



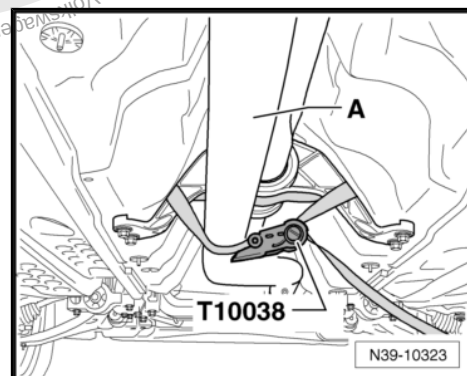
- Working through the holes, unscrew and take out bolts -arrow-.

These bolts must later be renewed.

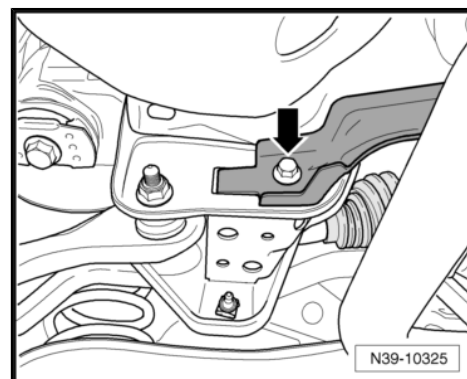
- Remove heat shield for centre tunnel beneath centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .



- Secure front exhaust pipe -A- with tensioning strap - T10038- on centre propshaft bearing.



- Unbolt exhaust pipe bracket from subframe.





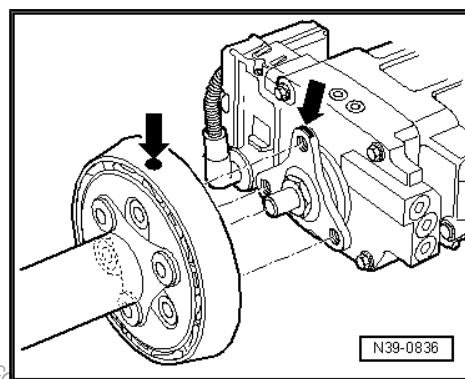
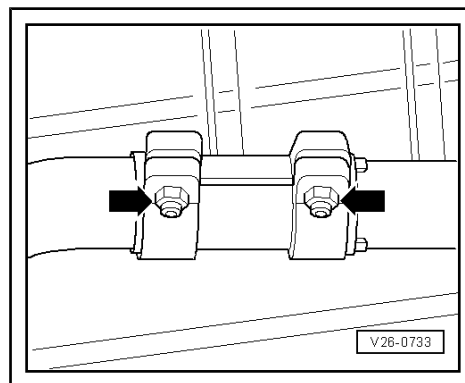
- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



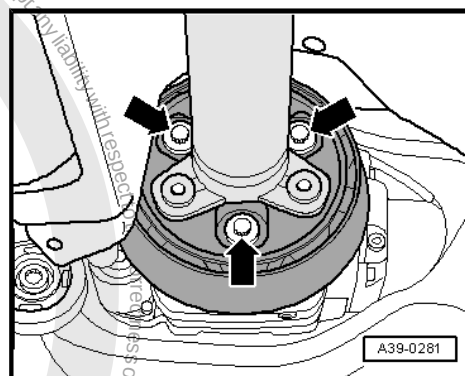
Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

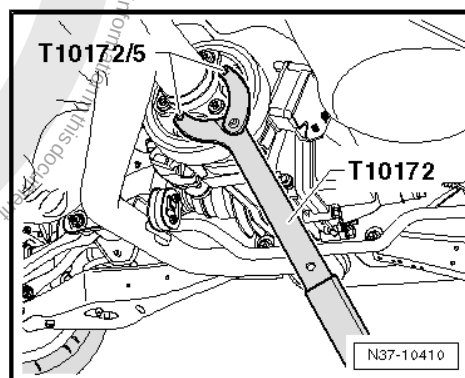
- Remove rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Unbolt left and right drive shafts from rear final drive and carefully lower drive shafts.
- Before removal, check if there are coloured marks on flexible coupling, on flange of final drive and on propshaft flange -arrows-. If not, mark installation position of flexible coupling -arrows-.



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

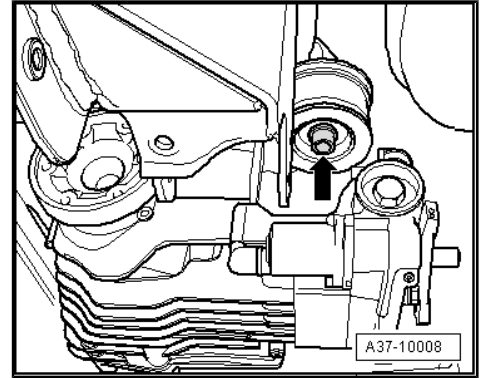


- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.
- Support rear final drive with engine and gearbox jack - V.A.G 1383 A.

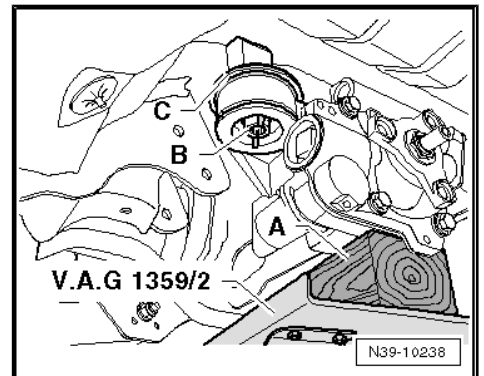




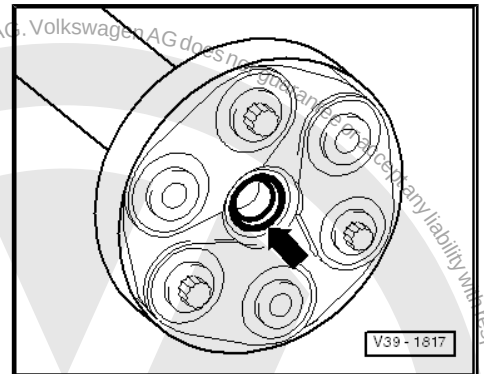
- Remove bolt -arrow- from front bonded rubber mounting.
This bolt must later be renewed.



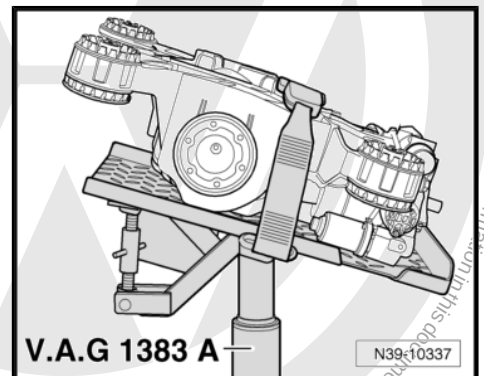
- Remove plate -C- at top from bonded rubber mounting.
- Push final drive as far back as possible.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.



- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

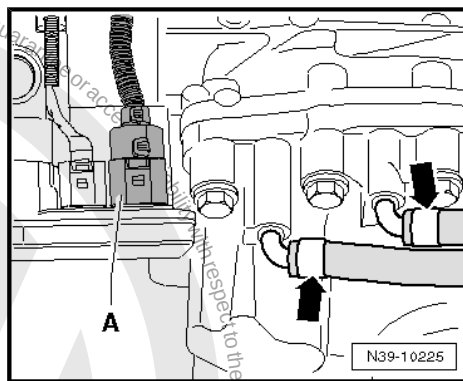


- Tilt final drive in vehicle, as shown in diagram, while lowering it slightly.

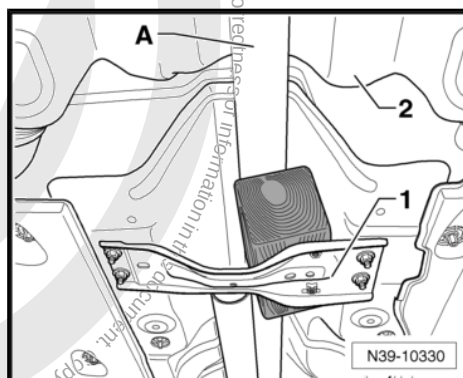




- Separate connector -A- on four-wheel drive control unit - J492- .
- Pull breather lines -arrows- off final drive.

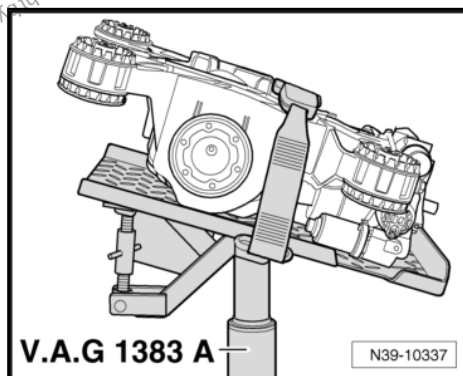


- Raise propshaft and support it in this position on tunnel cross member with an appropriate piece of wood -1-.
- Secure final drive against falling using strap from gearbox support.
- To remove final drive, lower further and then pull »forwards«, ensuring that there is sufficient »clearance« to other components.

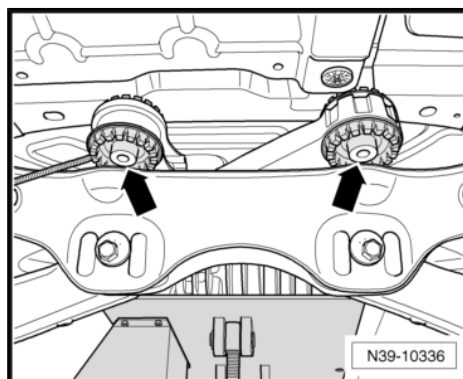


Installing

- Secure final drive against falling using strap from gearbox support.
- Bring final drive into position shown.

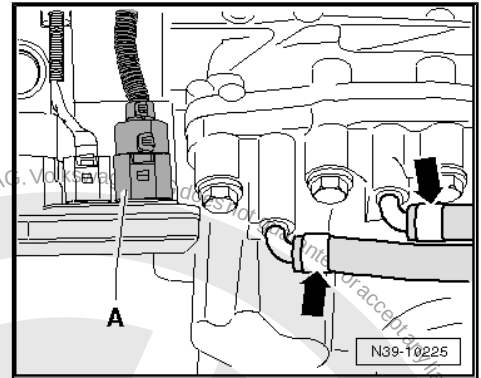


- Raise final drive and guide rear mountings -arrows- over sub-frame, observing clearance to other components.

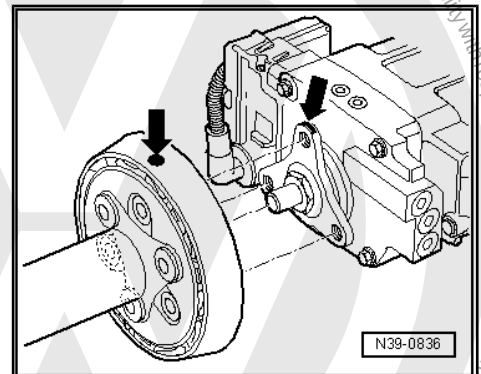




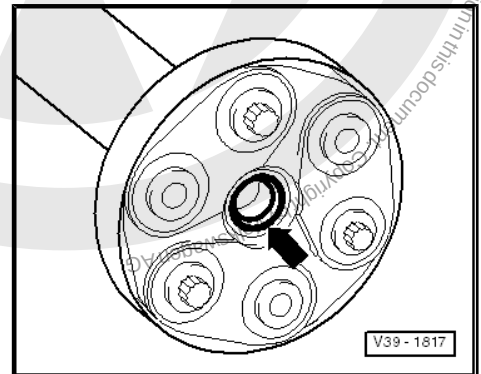
- Join connector -A- to four-wheel drive control unit - J492- .
- Fit breather lines -arrows- onto breather pipes of final drive.
- Using gearbox jack, raise final drive to installation position.
- Rest propshaft on tunnel cross member. Place cloth in between to protect propshaft.
- Push final drive as far back as possible.



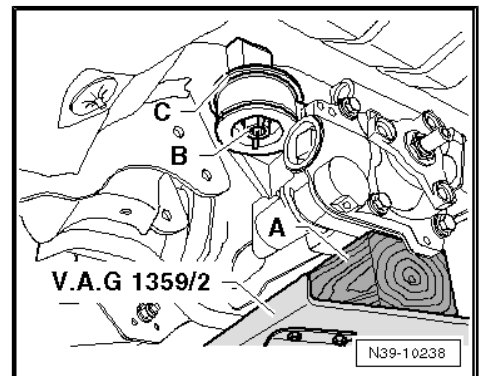
- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align. First screw in bolts and tighten them hand-tight.



- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

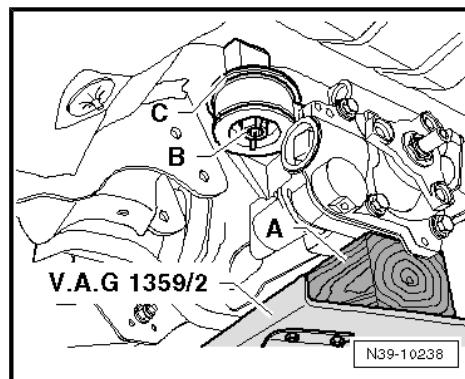


- Set plate -C- on front bonded rubber mounting.

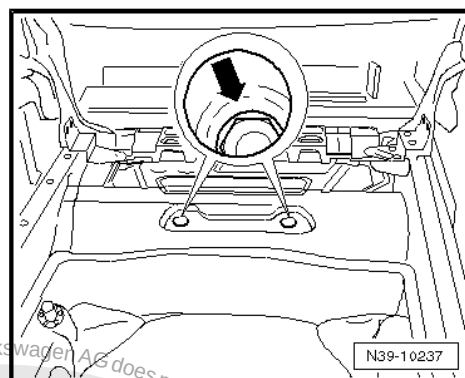




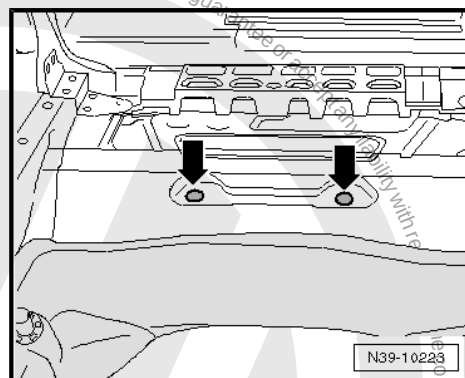
- Bolt on final drive hand-tight from »below« -B-. Do not tighten bolt to specified torque yet.
- Attach both drive shafts.



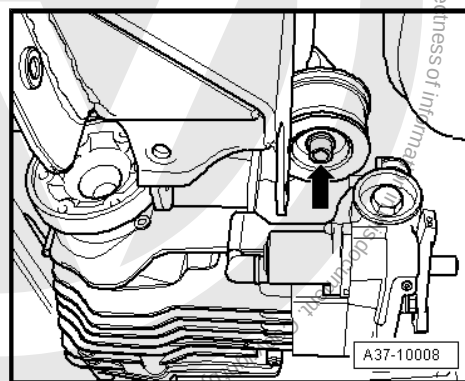
- Insert two »new« bolts -arrow- through the holes in the luggage compartment floor and tighten. Specified torque ⇒ Running gear, axles, steering; Rep. gr. 42 ; Subframe; Assembly overview - subframe .
- If not already done, repair corrosion protection around holes drilled in luggage compartment using materials specified by manufacturer ⇒ Paint workshop manual .



- Seal holes with cap - N 908 572 01- or cap - N 908 572 02- .
- Install trim and floor covering ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trims; Assembly overview - luggage compartment floor .



- Tighten bolts for final drive from »below« -arrow-. Specified torque ⇒ [page 14](#) .
- Tighten propshaft bolts. Specified torque ⇒ [page 113](#) .
- Tighten drive shafts. Specified torque ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Install heat shield for centre tunnel beneath centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .



If the final drive has been renewed:

- Check oil level in all-wheel drive coupling ⇒ [page 90](#) .
- Check oil level in final drive ⇒ [page 67](#) .



1.2.2 Removing and installing final drive, Golf 2013 ►, Golf 2017 ►

Brief description

The rear axle is lowered at the rear bearings.

The rear anti-roll bar and springs are removed, and the drive shafts are unbolted from the final drive. The electrical connections and breather lines are separated at the final drive.

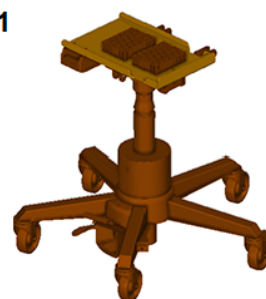
The »rear section« of the exhaust system with heat shield is removed and the propshaft is unbolted from the final drive.

The final drive is to be lowered with the gearbox jack diagonally »downwards« in direction of travel.

Special tools and workshop equipment required

- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-

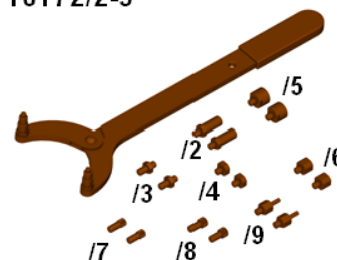
VAS 6931



W00-11607

- ◆ Counter-hold tool - T10172-

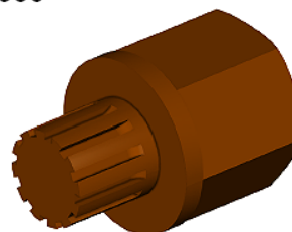
T10172/2-9



W00-11244

- ◆ Socket insert XZN 14 - T10035- and, if necessary, bits XZN 12 - T10099-

T10035



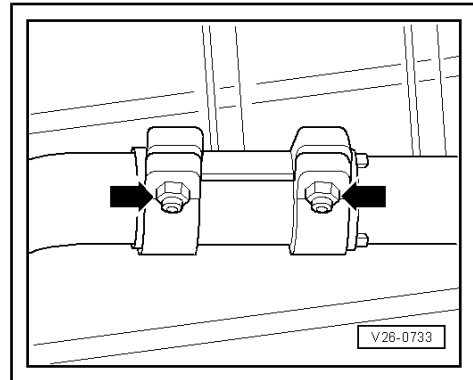
W00-11186

- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-



Removing

- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



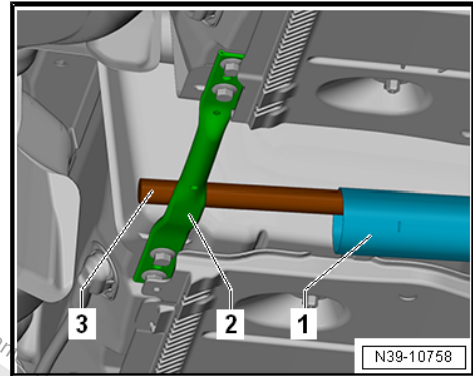
- Insert a pipe or tyre lever -3- into front exhaust pipe -1- and rest on tunnel cross member -2-.



Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

- Remove rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Unbolt drive shafts at left and right from final drive.



Note

Before carrying out the procedure described below, make sure that the multi-link suspension springs have been removed. This applies for both the right and the left side.

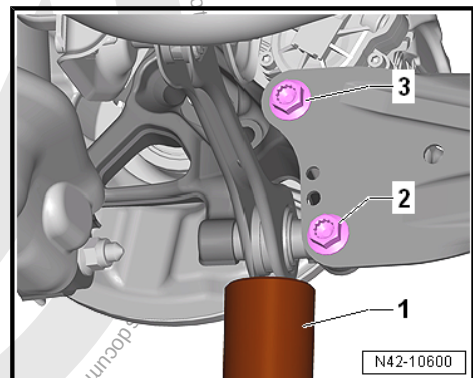
- Position engine and gearbox jack - V.A.G 1383 A- -1- under track rod, and raise it until drive shaft can be removed from final drive flange.



Note

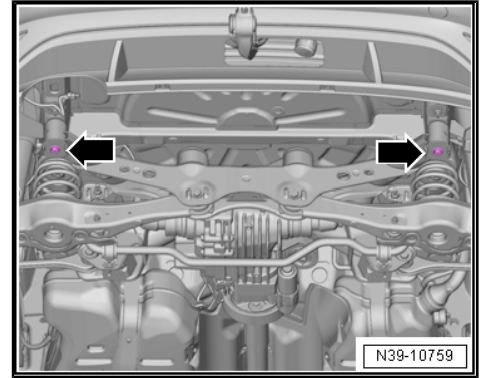
-Items 2 and 3- can be disregarded.

- Carefully guide drive shaft downwards.

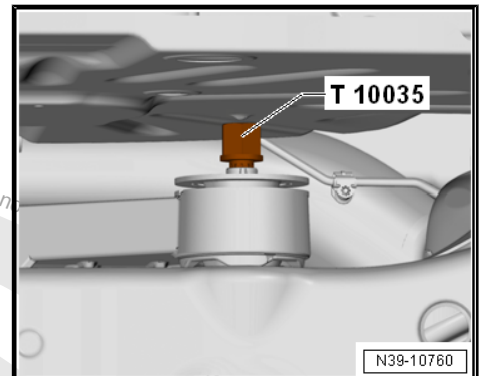




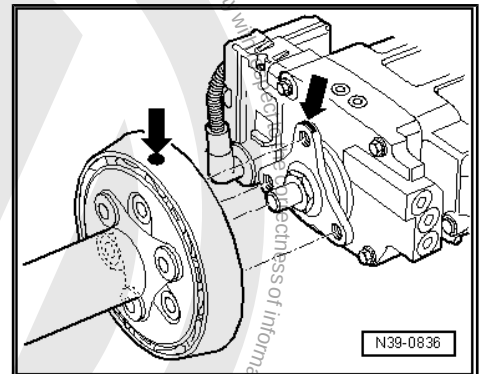
- Detach rear axle at rear bearings -arrows- and lower approx. 40 mm ➤ Running gear, axles, steering; Rep. gr. 42 ; Rear axle; Lowering rear axle .



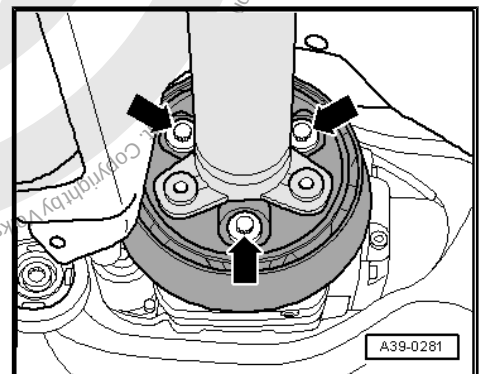
- Unscrew rear bolts for final drive with socket insert XZN 14 - T10035- from rear axle. A bit XZN 12 - T10099/1- can also be used for unscrewing the bolts.



- Before removal, check if there are coloured marks on flexible coupling, on flange of final drive and on propshaft flange -arrows-. If not, mark installation position of flexible coupling.

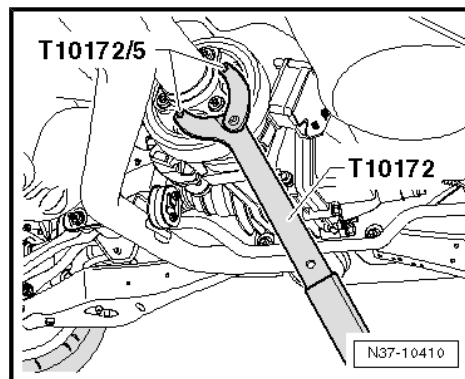


- Unbolt flexible coupling with vibration damper from rear final drive -arrows-.





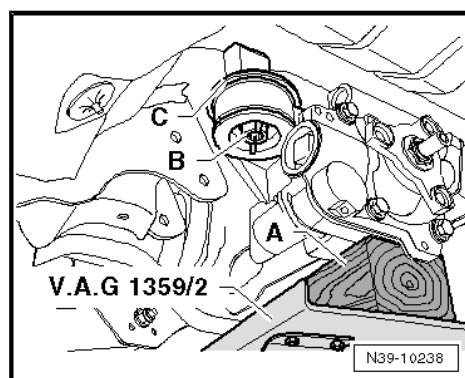
- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.



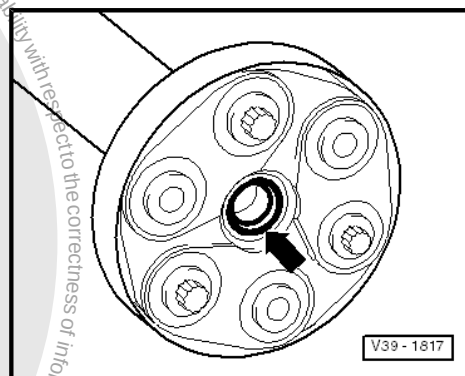
- Place a block of wood -A- on engine and gearbox jack - V.A.G 1383 A- and support rear section of final drive.
- Unscrew bolt -B- and remove washer -C- on top from mounting bracket.

Always renew bolt.

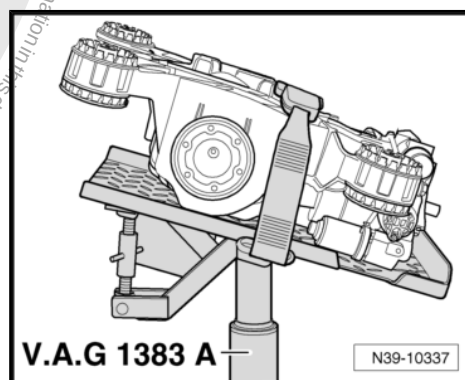
- Push final drive as far back as possible.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.



- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

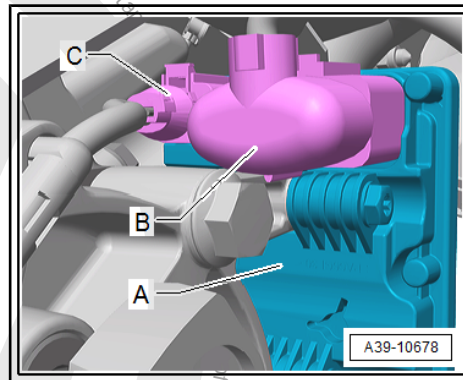


- Tilt final drive in vehicle, as shown in diagram, while lowering it slightly.
- Secure final drive against falling using strap from gearbox support.





- Pull connector -B- off all-wheel drive control unit - J492- -A-.
Disregard item -C-.

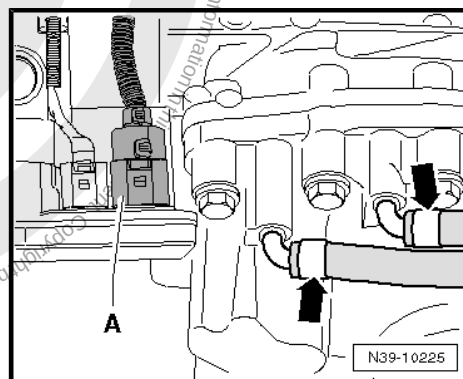


- Pull breather lines -arrows- off final drive.



Note

Disregard -item A-.



- Raise propshaft -A-, and support it in this position on tunnel cross-piece with an appropriate piece of wood -1-.



Note

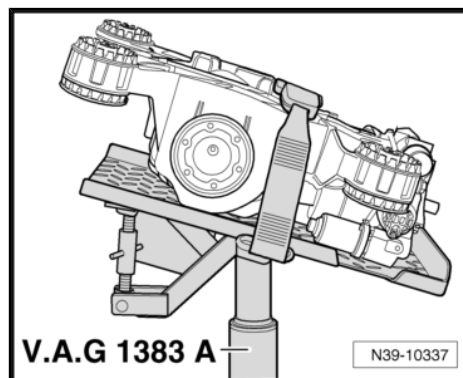
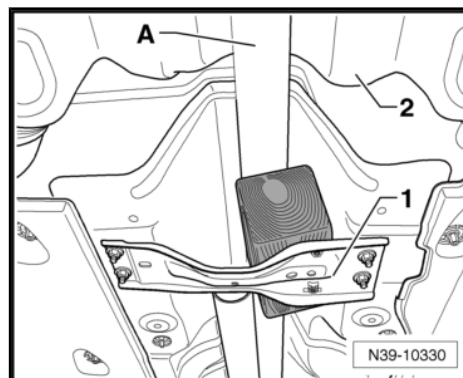
Disregard -item 2-.

- Pull final drive »forwards« while lowering it, ensuring that there is sufficient »clearance« to other components.

Installing

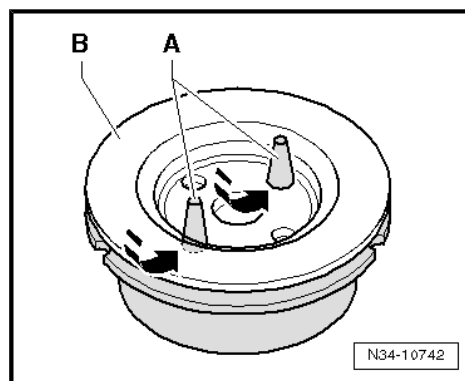
Install in reverse order of removal.

- Secure final drive against falling using strap from gearbox support.
- Bring rear final drive into position shown.

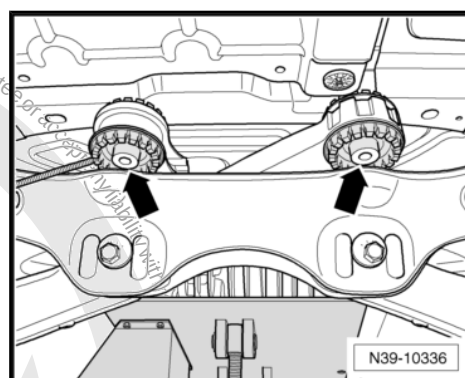




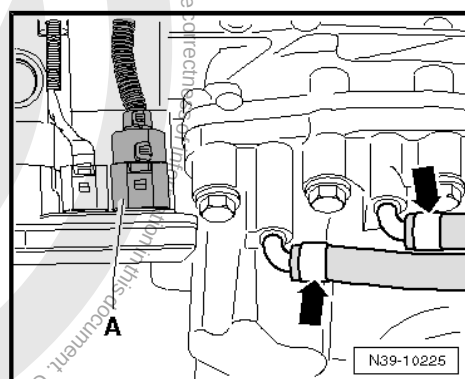
- Ensure that the limit stop washers -B- are placed as shown from above on rear bearings. When properly positioned, the rubber nipples -A- prevent the washers from slipping or falling out during installation.



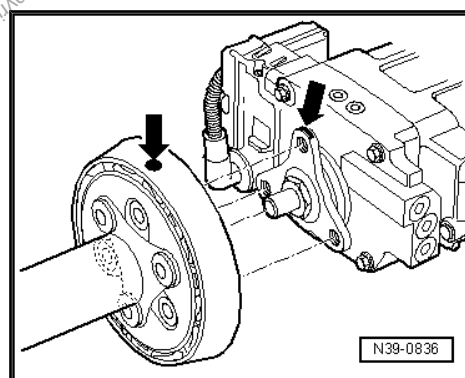
- Before installing the final drive, first insert 2 new bolts from above into the rear bearings -arrows-.
- Raise final drive and guide over rear axle. When raising, simultaneously guide drive shafts to flange shafts.



- Fit breather lines -arrows- onto breather pipes of final drive.
- Using gearbox jack, raise final drive to installation position.
- Rest propshaft on tunnel cross member. Place cloth in between to protect propshaft.
- Push final drive as far back as possible.

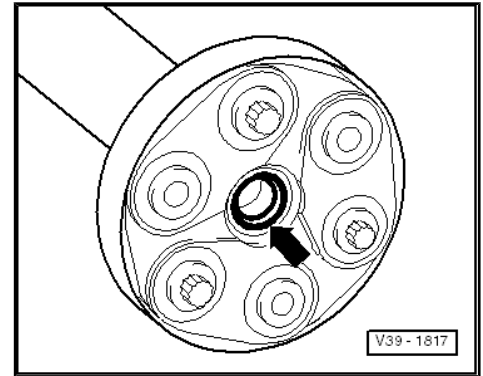


- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align. First screw in bolts and tighten them hand-tight.

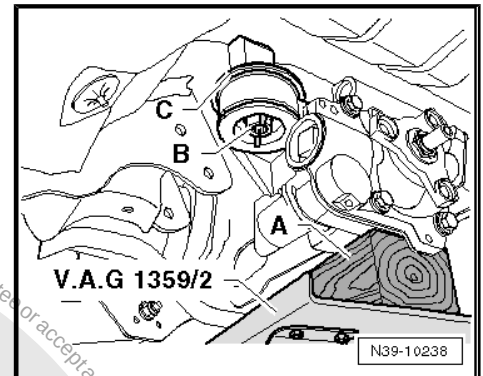




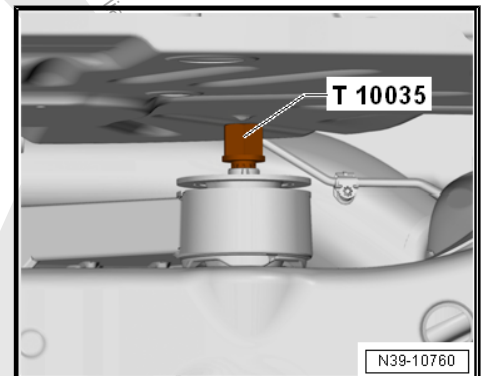
- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



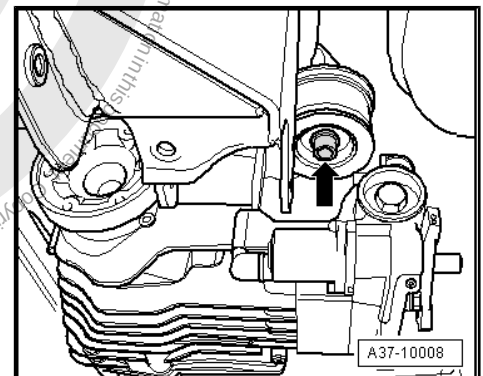
- Place washer -C- on front mounting bracket and use a new bolt -B- for tightening it hand-tight. Do not tighten bolt yet.



- Screw rear bolts for final drive with socket insert XZN 14 - T10035- to rear axle. Specified torque ⇒ [page 14](#)
- Bolt rear axle to body ⇒ Running gear, axles, steering; Rep. gr. 42 Rear axle; Removing and installing rear axle .



- Tighten bolts for final drive from »below« -arrow-. Specified torque ⇒ [page 14](#) .
- Tighten propshaft bolts. Specified torque ⇒ [page 113](#) .



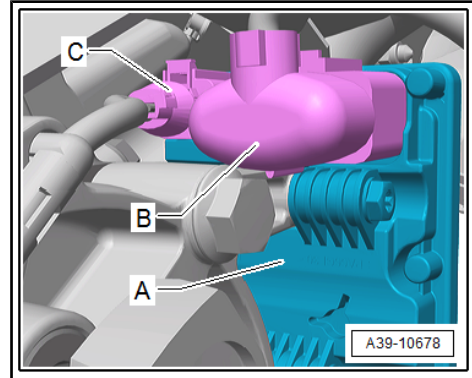


- Push connector -B- on all-wheel drive control unit - J492- -A-.
Disregard item -C-.



Note

Before carrying out the procedure described below, make sure that the multi-link suspension springs have been removed. This applies for both the right and the left side.

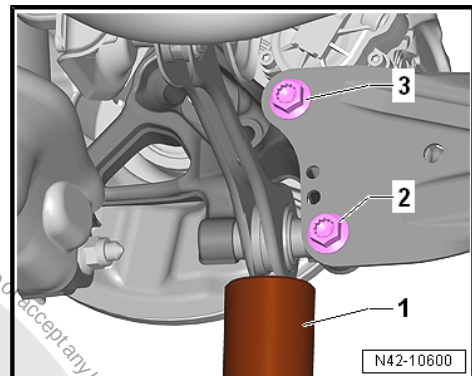


- Position engine and gearbox jack - V.A.G 1383 A- -1- under track rod and raise it until drive shaft can be inserted into final drive flange.



Note

-Items 2 and 3- can be disregarded.



- Tighten drive shafts. Specified torque ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Install rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .

If the final drive has been renewed:

- Check oil level in all-wheel drive coupling ⇒ [page 90](#) .
- Check oil level in final drive ⇒ [page 67](#) .

1.2.3 Removing and installing final drive, Golf Estate 2014 ►, Golf Estate 2017 ►

Brief description

Two holes must be drilled in luggage compartment before the vehicle is raised. The positions at which holes have to be drilled are marked »in the factory«.

Corrosion protection must then be repaired using materials specified by manufacturer ⇒ Paint workshop manual .

The rear anti-roll bar and springs are removed, and the drive shafts are unbolted from the final drive. The electrical connections and breather lines are separated at the final drive.

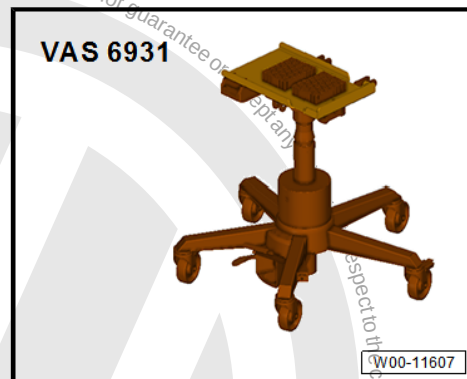
The »rear section« of the exhaust system is removed and the propshaft is unbolted from the final drive.

The final drive is to be lowered with the gearbox jack diagonally »downwards« in direction of travel.

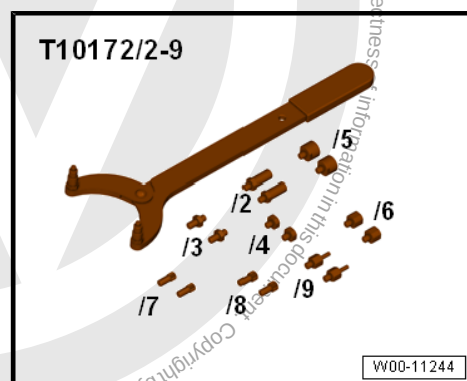
Special tools and workshop equipment required



- ◆ Engine and gearbox jack - VAS 6931- or V.A.G 1383 A-



- ◆ Counter-hold tool - T10172-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-
- ◆ »Hand drill«
- ◆ »Stepped drill bit« or »centre bit«
- ◆ Safety glasses

Removing

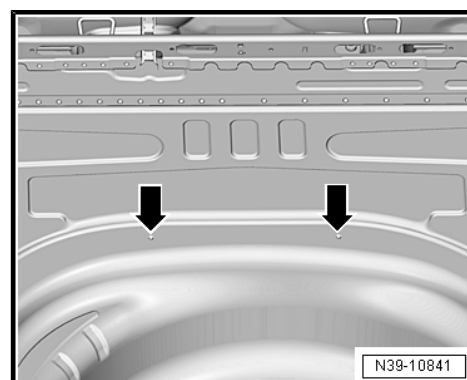
- Remove floor covering in luggage compartment.

If present:

- Remove spare tyre.
- Remove bracket and carrier for rail system. Remove floor covering from spare wheel well ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trims; Assembly overview – luggage compartment floor .

Continued for all vehicles:

The luggage compartment floor has two markings -arrows-.



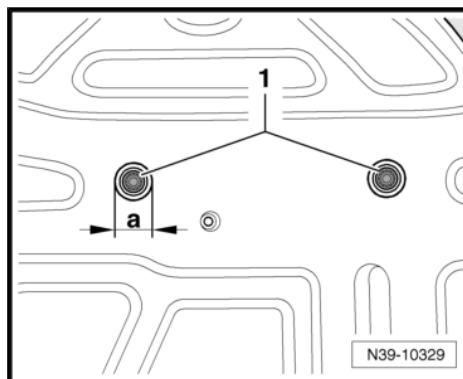


- Drill a hole through each of the two markings -1-. Vacuum up as much of the swarf as possible while drilling.

Dimension -a- = 26 mm Ø

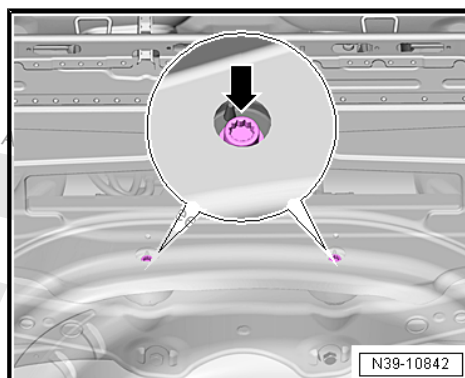
- Deburr holes and carefully remove swarf.

Repair corrosion protection using materials specified by manufacturer ⇒ Paint workshop manual .

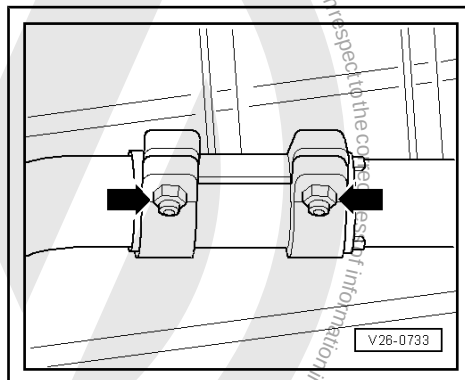


- Working through the holes, unscrew and take out bolts -arrow-.

These bolts must later be renewed.



- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



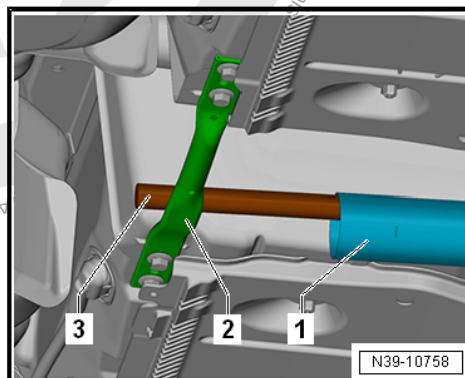
- Insert a pipe or tyre lever -3- into front exhaust pipe -1- and rest on tunnel cross member -2-.



Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

- Remove rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Unbolt drive shafts at left and right from final drive.



Note

Before carrying out the procedure described below, make sure that the multi-link suspension springs have been removed. This applies for both the right and the left side.

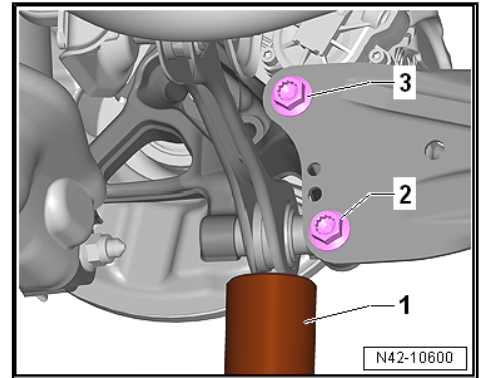


- Position engine and gearbox jack - V.A.G 1383 A- -1- under track rod, and raise it until drive shaft can be removed from final drive flange.

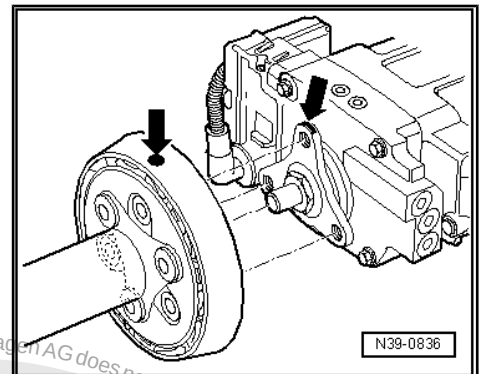
i Note

-Items 2 and 3- can be disregarded.

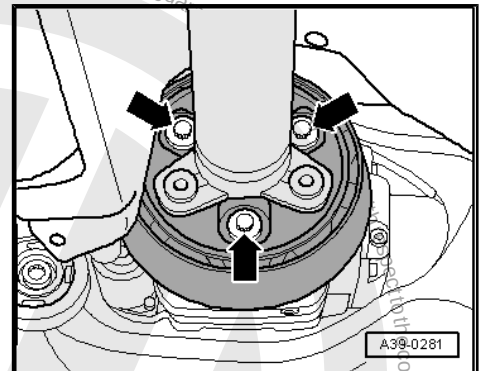
- Carefully guide drive shaft downwards.



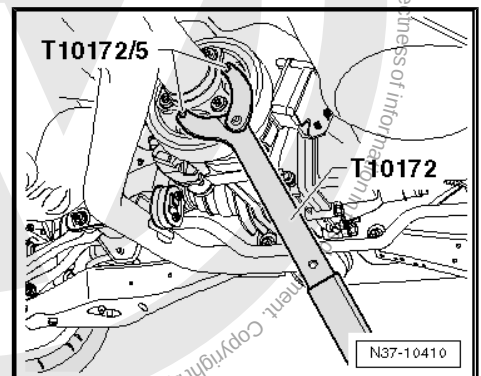
- Before unbolting propshaft from final drive, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows-. If not, mark installation position of flexible coupling.



- Unbolt propshaft from rear final drive -arrows-.



- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.

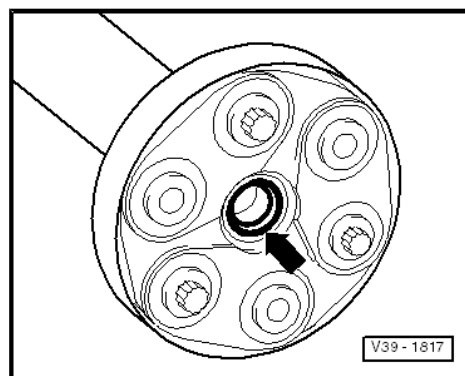
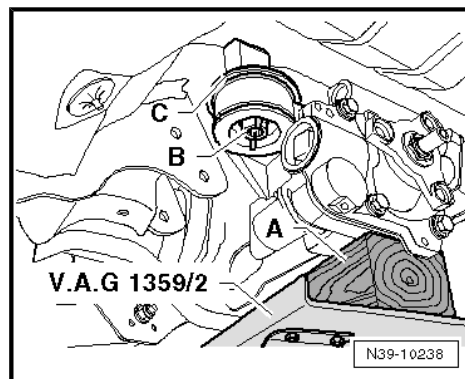




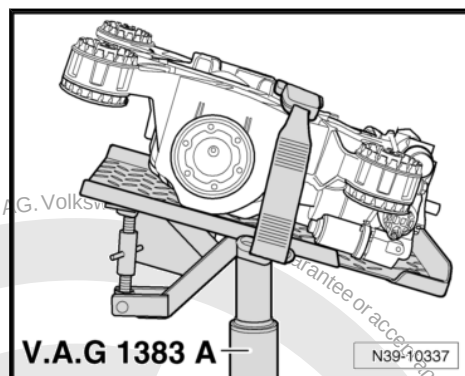
- Place a block of wood -A- on engine and gearbox jack - V.A.G 1383 A- and support rear section of final drive.
- Unscrew bolt -B- and remove washer -C- on top from mounting bracket.

Always renew bolt.

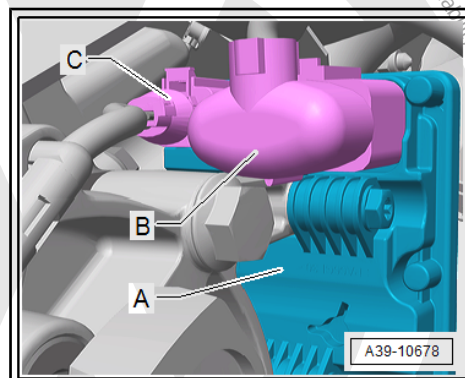
- Push final drive as far back as possible.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.
- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



- Tilt final drive in vehicle, as shown in diagram, while lowering it slightly.
- Secure final drive against falling using strap from gearbox support.



- Pull connector -B- off all-wheel drive control unit - J492- -A-. Disregard item -C-.



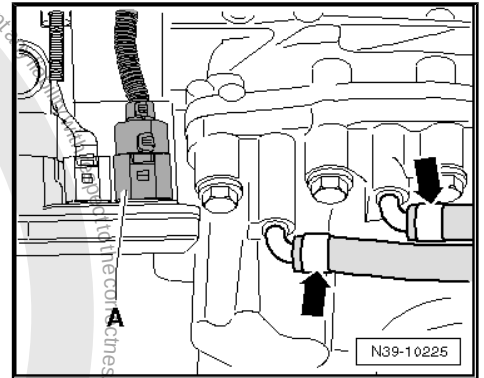


- If fitted, pull breather lines -arrows- off final drive.



Note

Disregard -item A-.

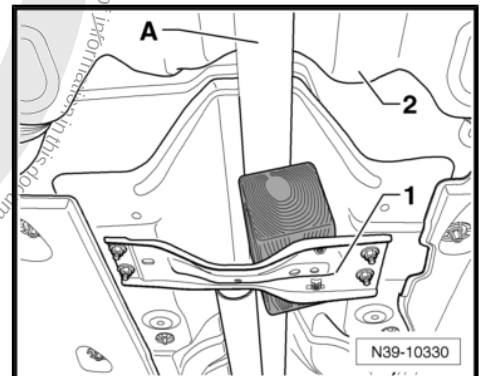


- Raise propshaft -A-, and support it in this position on tunnel cross-piece with an appropriate piece of wood -1-.



Note

Disregard -item 2-.

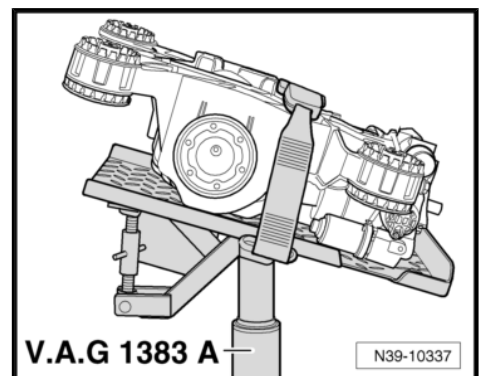


- Pull final drive »forwards« while lowering it, ensuring that there is sufficient »clearance« to other components.

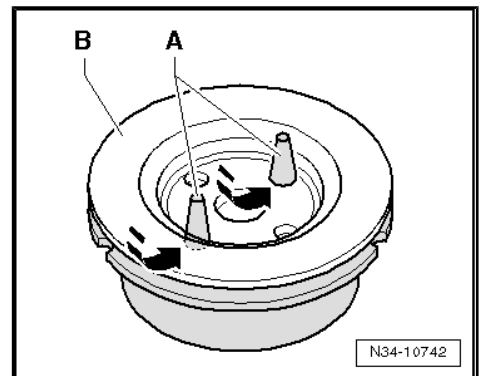
Installing

Install in reverse order of removal.

- Secure final drive against falling using strap from gearbox support.
- Bring rear final drive into position shown.

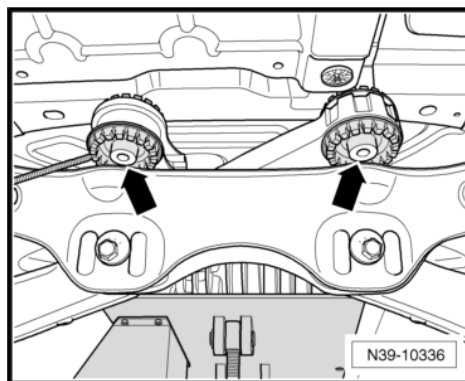


- Ensure that the limit stop washers -B- are placed as shown from above on rear bearings. When properly positioned, the rubber nipples -A- prevent the washers from slipping or falling out during installation.

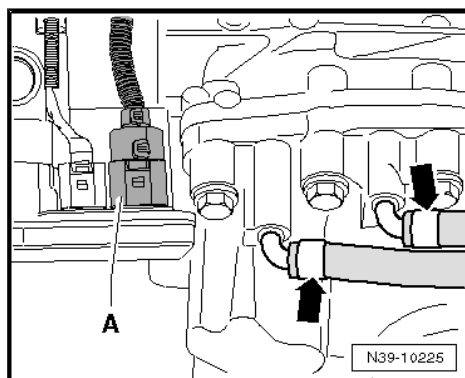




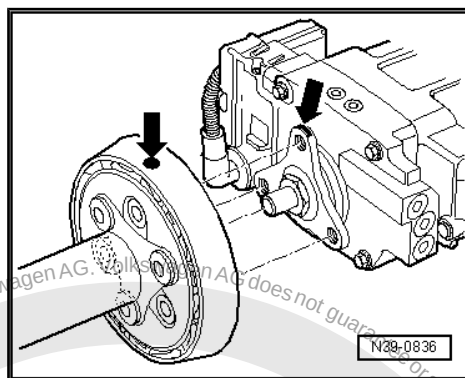
- Raise final drive and guide over rear axle. When raising, simultaneously guide drive shafts to flange shafts.



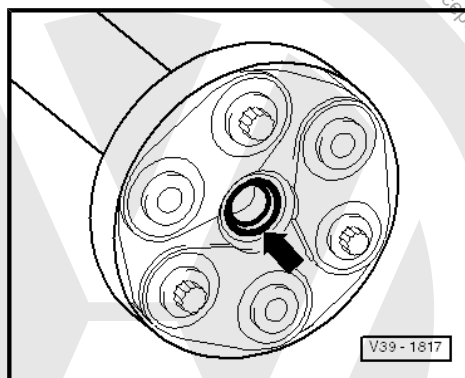
- Fit breather lines -arrows- onto breather pipes of final drive.
- Using gearbox jack, raise final drive to installation position.
- Rest propshaft on tunnel cross member. Place cloth in between to protect propshaft.
- Push final drive as far back as possible.



- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align. First screw in bolts and tighten them hand-tight.

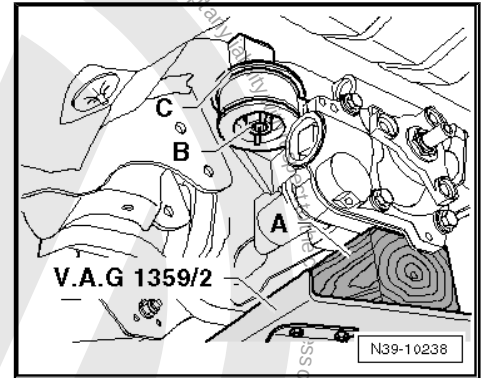


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

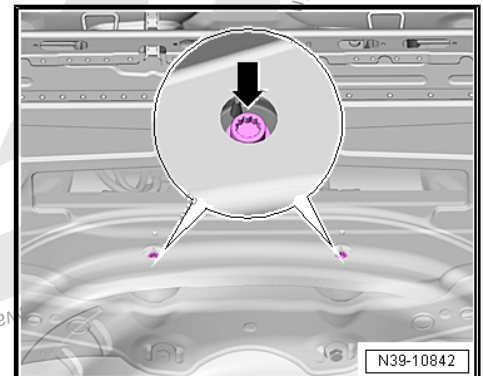




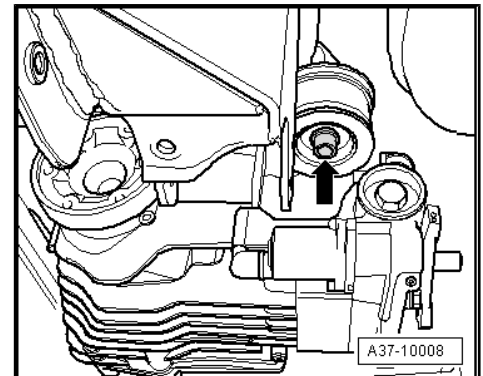
- Place washer -C- on front mounting bracket and use a new bolt -B- for tightening it hand-tight. Do not tighten bolt yet.



- Insert two »new« bolts -arrow- through the holes in the luggage compartment floor and tighten. Specified torque ⇒ [page 14](#) .
- If not already done, repair corrosion protection around holes drilled in luggage compartment using materials specified by manufacturer ⇒ Paint workshop manual .
- Seal holes with cap - N 908 572 01- or cap - N 908 572 02- .
- Install trim and floor covering -A- ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trims; Assembly overview - luggage compartment floor .



- Tighten bolts for final drive from »below« -arrow-. Specified torque ⇒ [page 14](#) .
- Tighten propshaft bolts. Specified torque ⇒ [page 113](#) .

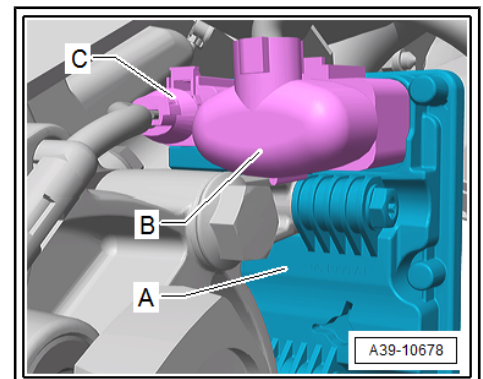


- Push connector -B- on all-wheel drive control unit - J492- -A-. Disregard item -C-.



Note

Before carrying out the procedure described below, make sure that the multi-link suspension springs have been removed. This applies for both the right and the left side.





- Position engine and gearbox jack - V.A.G 1383 A- -1- under track rod and raise it until drive shaft can be inserted into final drive flange.



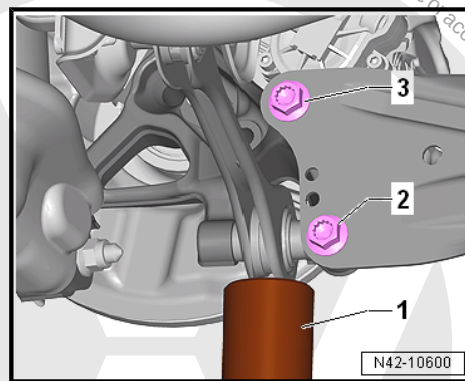
Note

-Items 2 and 3- can be disregarded.

- Tighten drive shafts. Specified torque ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .

If the final drive has been renewed:

- Check oil level in all-wheel drive coupling ⇒ [page 90](#) .
- Check oil level in final drive ⇒ [page 67](#) .



1.2.4 Removing and installing final drive, Passat 2015 ► , Passat Estate 2015 ► , Arteon 2018 ►

Brief description

Two holes must be drilled in luggage compartment before the vehicle is raised. The positions at which holes have to be drilled are marked »in the factory«.

Corrosion protection must then be repaired using materials specified by manufacturer ⇒ Paint workshop manual .

The rear anti-roll bar and springs are removed, and the drive shafts are unbolted from the final drive. The electrical connections and breather lines are separated at the final drive.

The »rear section« of the exhaust system is removed and the propshaft is unbolted from the final drive.

The final drive is to be lowered with the gearbox jack diagonally »downwards« in direction of travel.

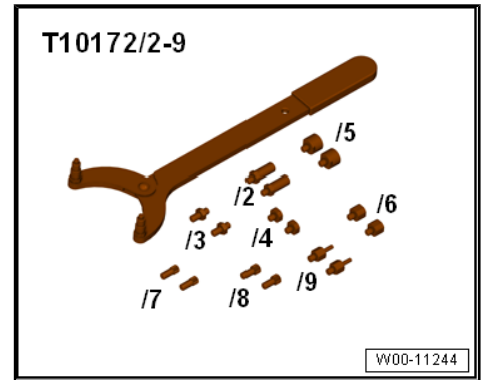
Special tools and workshop equipment required

- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-





- ◆ Counter-hold tool - T10172-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-
- ◆ »Hand drill«
- ◆ »Stepped drill bit« or »centre bit«
- ◆ Safety glasses

Removing

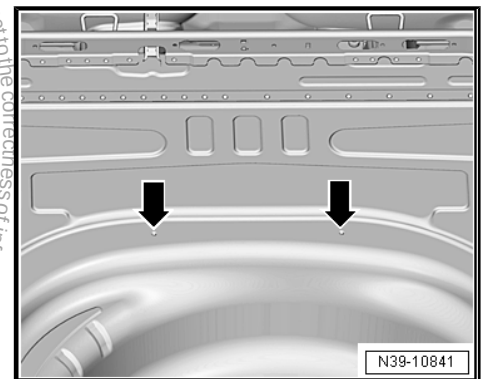
- Remove floor covering in luggage compartment.

If present:

- Remove spare tyre.
- Remove bracket and carrier for rail system. Remove floor covering from spare wheel well ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trims; Assembly overview
- luggage compartment floor .

Continued for all vehicles:

The luggage compartment floor has two markings -arrows-.

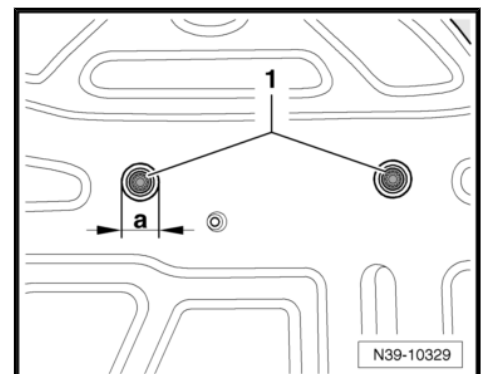


- Drill a hole through each of the two markings -1-. Vacuum up as much of the swarf as possible while drilling.

Dimension -a- = 26 mm Ø

- Deburr holes and carefully remove swarf.

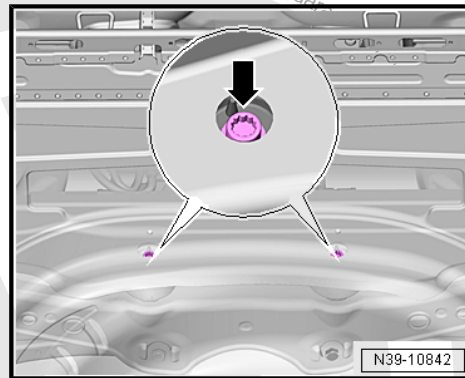
Repair corrosion protection using materials specified by manufacturer ⇒ Paint workshop manual .



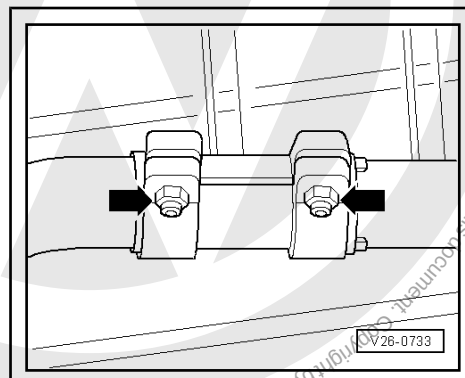


- Working through the holes, unscrew and take out bolts -arrow-.

These bolts must later be renewed.



- Separate exhaust system at clamp arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



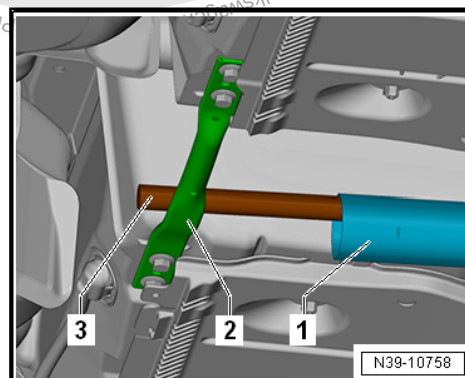
- Insert a pipe or tyre lever -3- into front exhaust pipe -1- and rest on tunnel cross member -2-.



Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

- Remove rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Unbolt drive shafts at left and right from final drive.



Note

Before carrying out the procedure described below, make sure that the multi-link suspension springs have been removed. This applies for both the right and the left side.

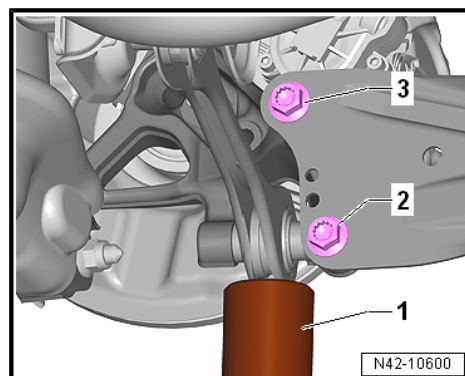
- Position engine and gearbox jack - V.A.G 1383 A - -1- under track rod, and raise it until drive shaft can be removed from final drive flange.



Note

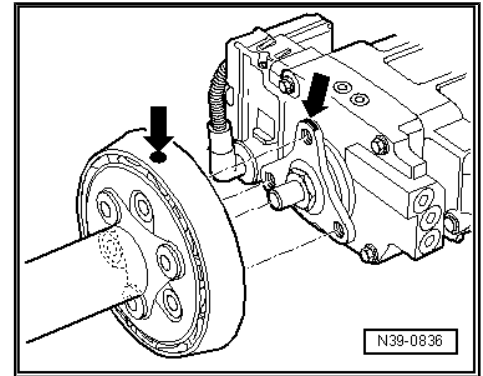
-Items 2 and 3- can be disregarded.

- Carefully guide drive shaft downwards.

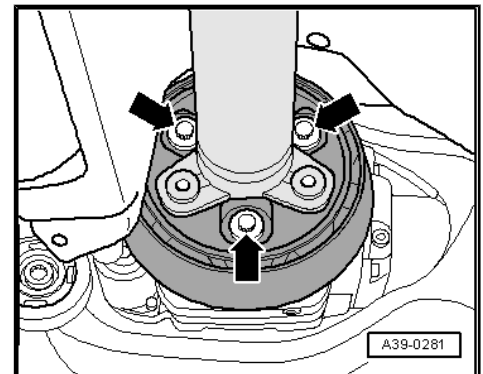




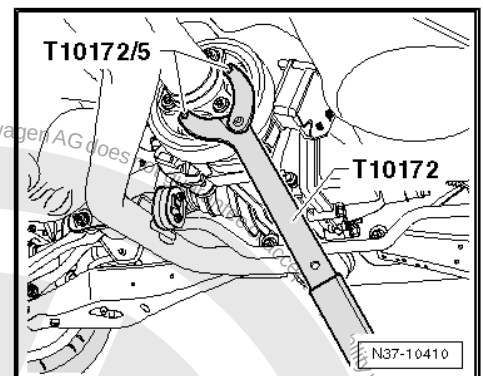
- Before unbolting propshaft from final drive, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows-. If not, mark installation position of flexible coupling.



- Unbolt propshaft from rear final drive -arrows-.



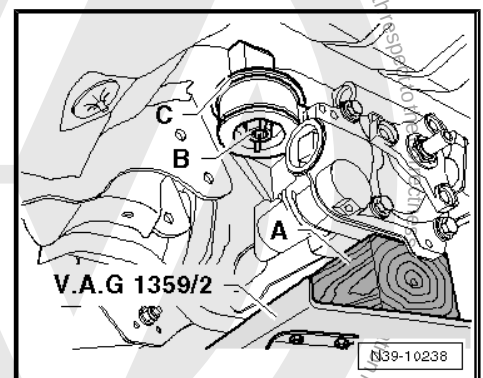
- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.



- Place a block of wood -A- on engine and gearbox jack - V.A.G 1383 A- and support rear section of final drive.
- Unscrew bolt -B- and remove washer -C- on top from mounting bracket.

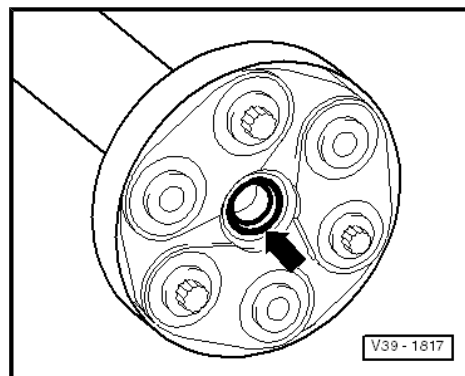
Always renew bolt.

- Push final drive as far back as possible.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.

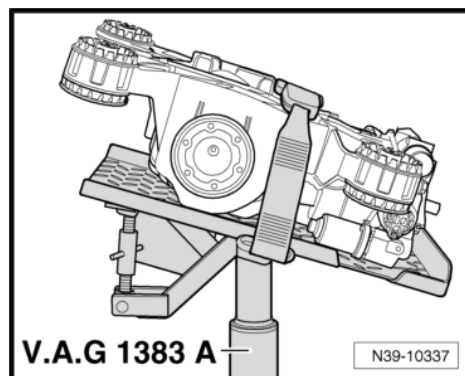




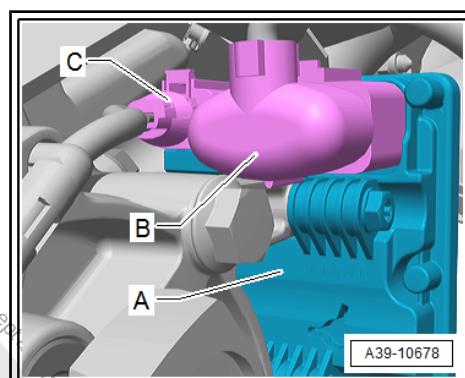
- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



- Tilt final drive in vehicle, as shown in diagram, while lowering it slightly.
- Secure final drive against falling using strap from gearbox support.



- Pull connector -B- off all-wheel drive control unit - J492- -A-. Disregard item -C-.

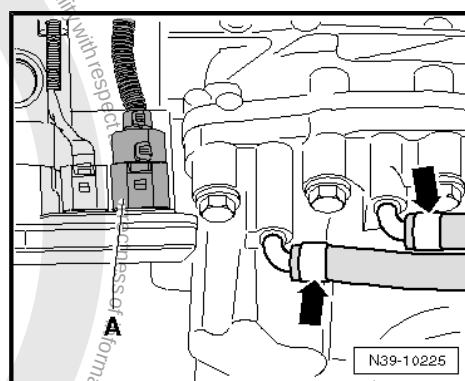


- If fitted, pull breather lines -arrows- off final drive.



Note

Disregard -item A-.





- Raise propshaft -A-, and support it in this position on tunnel cross-piece with an appropriate piece of wood -1-.



Note

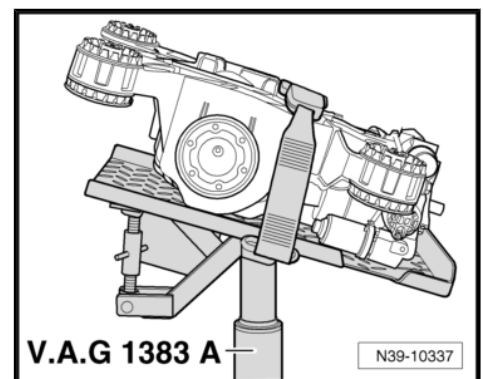
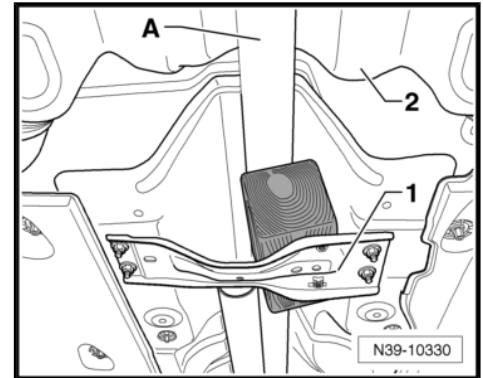
Disregard -item 2-.

- Pull final drive »forwards« while lowering it, ensuring that there is sufficient »clearance« to other components.

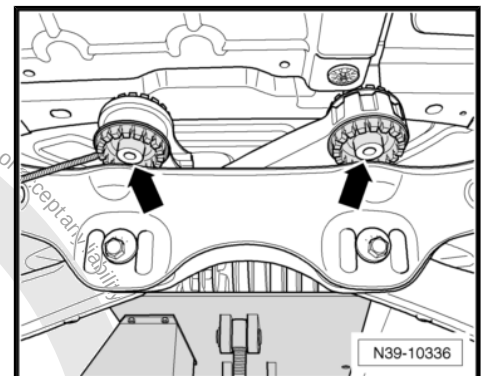
Installing

Install in reverse order of removal.

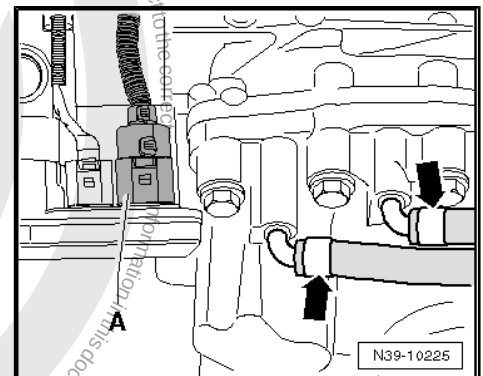
- Secure final drive against falling using strap from gearbox support.
- Bring rear final drive into position shown.



- Raise final drive and guide over rear axle. When raising, simultaneously guide drive shafts to flange shafts.

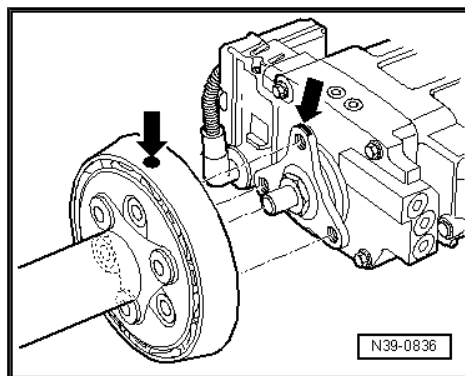


- Fit breather lines -arrows- onto breather pipes of final drive.
- Using gearbox jack, raise final drive to installation position.
- Rest propshaft on tunnel cross member. Place cloth in between to protect propshaft.
- Push final drive as far back as possible.

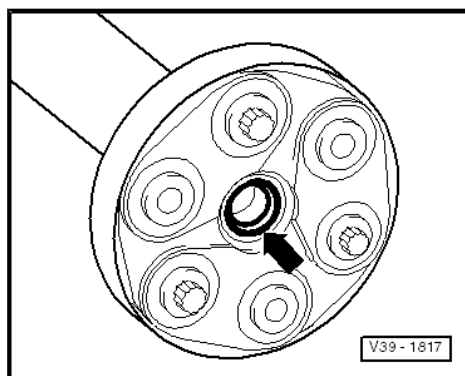




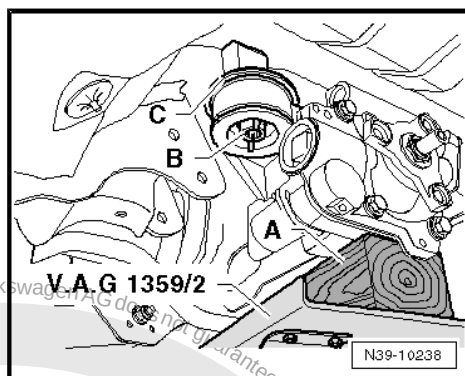
- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align. First screw in bolts and tighten them hand-tight.



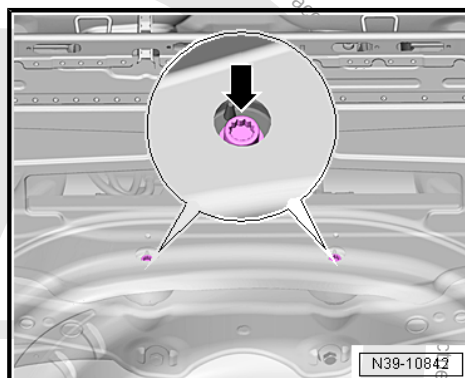
- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



- Place washer -C- on front mounting bracket and use a new bolt -B- for tightening it hand-tight. Do not tighten bolt yet.

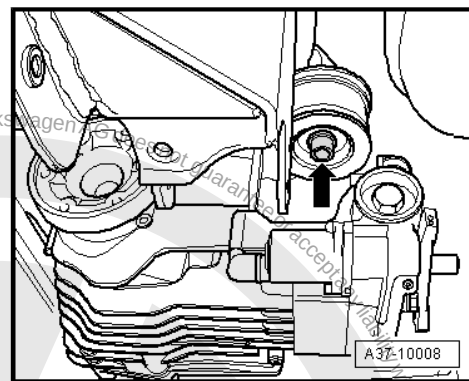


- Insert two »new« bolts -arrow- through the holes in the luggage compartment floor and tighten. Specified torque ⇒ [page 14](#) .
- If not already done, repair corrosion protection around holes drilled in luggage compartment using materials specified by manufacturer ⇒ Paint workshop manual .
- Seal holes with cap - N 908 572 01- or cap - N 908 572 02- .
- Install trim and floor covering -A- ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trims; Assembly overview - luggage compartment floor .





- Tighten bolts for final drive from »below« -arrow-. Specified torque ⇒ [page 14](#) .
- Tighten propshaft bolts. Specified torque ⇒ [page 113](#) .

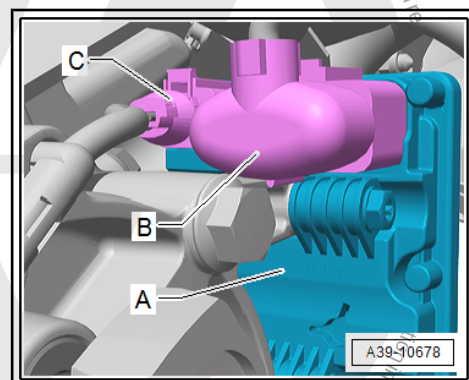


- Push connector -B- on all-wheel drive control unit - J492- -A-. Disregard item -C-.



Note

Before carrying out the procedure described below, make sure that the multi-link suspension springs have been removed. This applies for both the right and the left side.

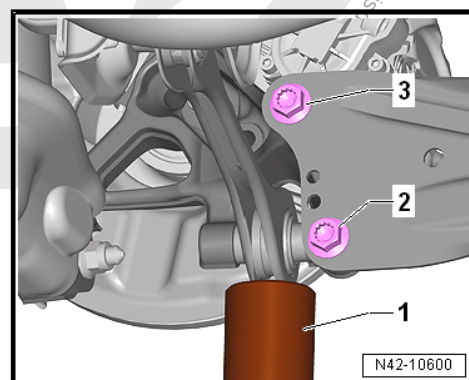


- Position engine and gearbox jack V.A.G 1383 A- -1- under track rod and raise it until drive shaft can be inserted into final drive flange.



Note

-Items 2 and 3- can be disregarded.



- Tighten drive shafts. Specified torque ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .

If the final drive has been renewed:

- Check oil level in all-wheel drive coupling ⇒ [page 90](#) .
- Check oil level in final drive ⇒ [page 67](#) .

1.2.5 Removing and installing rear final drive, Sharan 2016 ►

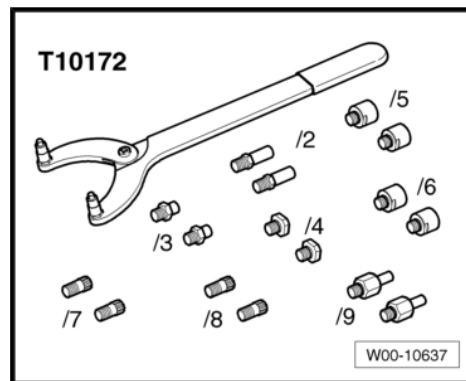
Brief description

In the case of the Sharan, the rear final drive is removed together with the rear axle and only then is it detached from the rear axle.

Special tools and workshop equipment required

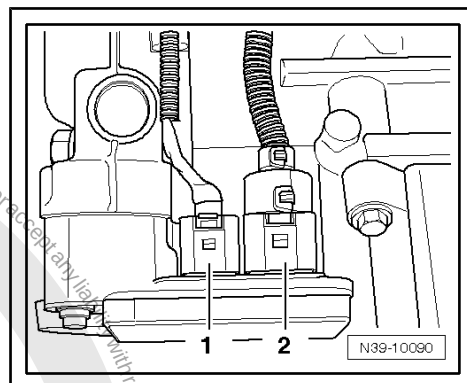


◆ Counter-hold tool - T10172-

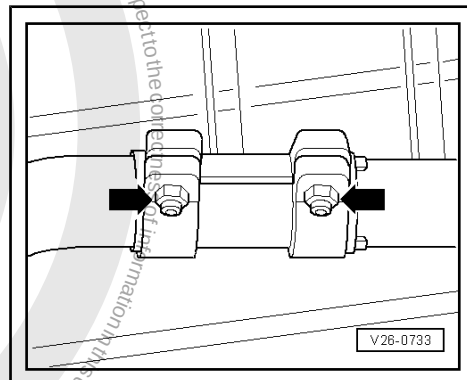


Removing:

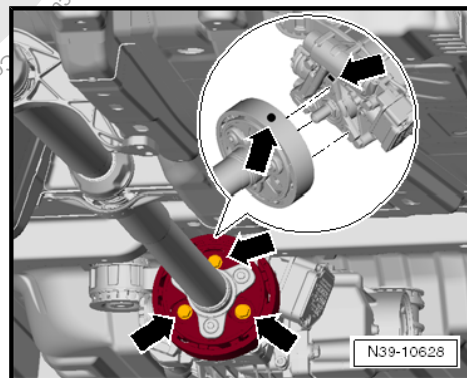
- Separate connectors -1- and -2- on control unit for all-wheel drive - J492- .



- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .

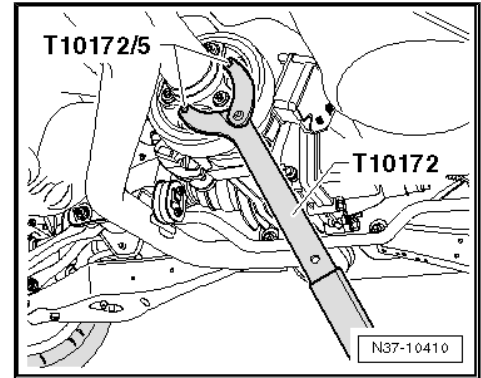


- Before unbolting propshaft from final drive, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows in enlargement-. If not, mark installation position of flexible coupling.
- Unbolt propshaft from rear final drive -arrows-.

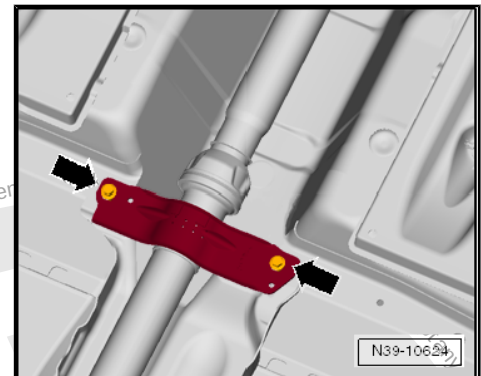




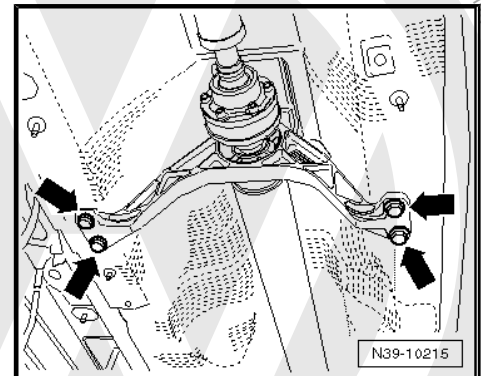
- Counterhold at rear final drive when loosening or tightening propshaft.
- Remove heat shield for centre tunnel beneath centre propshaft bearing ➔ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .



- Unbolt rear centre bearing -arrows-.



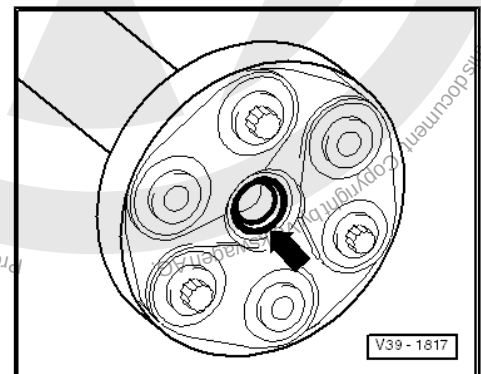
- Unscrew centre propshaft bearing bolts -arrows-.



Note

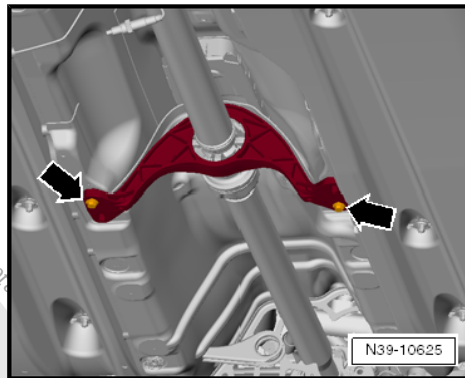
Do not cant propshaft during removal; pull horizontally off centring pin. Seal in centring sleeve -arrow- must not be damaged.

- Pull propshaft with flexible joint off final drive and place on tank.





- In order to avoid placing unnecessary strain on the flexible coupling, secure centre propshaft bearing to body using two bolts.



- Loosen bolt -arrow- in front bonded rubber mounting. This makes it easier to detach final drive from rear axle later.
- Remove rear axle ⇒ Running gear, axles, steering; Rep. gr. 42 ; Removing and installing rear axle .
- Undo bolts attaching drive shafts to rear final drive and then remove shafts ⇒ Running gear, axles, steering; Rep. gr. 42 ; Removing and installing drive shaft .
- Unbolt rear final drive from rear axle and remove rear final drive.

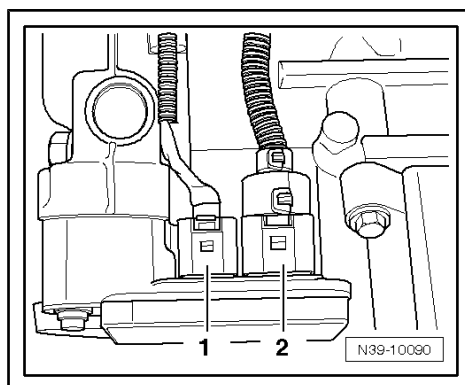
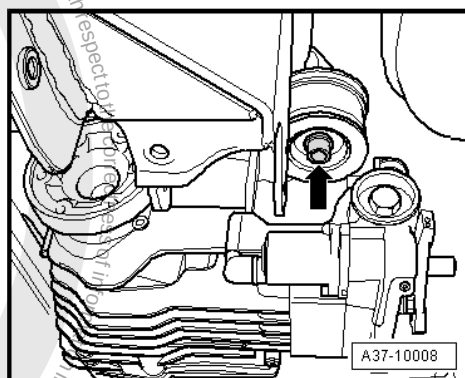
Installing

Install in the reverse order of removal, observing the following.

- Install all parts which were marked in relation to each other in their original positions.

Bolt rear final drive onto rear axle, using new bolts. Specified torque ⇒ Running gear, axles, steering; Rep. gr. 42 ; Assembly overview - subframe, final drive .

- Install rear axle ⇒ Running gear, axles, steering; Rep. gr. 42 ; Removing and installing rear axle .
- Bolt drive shafts onto rear final drive ⇒ Running gear, axles, steering; Rep. gr. 42 ; Removing and installing drive shaft .
- Install propshaft. Specified torques ⇒ [page 113](#) .
- Attach connectors -1- and -2- to control unit for all-wheel drive - J492- .
- Install heat shield for centre tunnel beneath centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



1.2.6 Removing and installing final drive, Tiguan 2016 ►

Brief description

The rear axle is lowered at the rear bearings.

The rear anti-roll bar is removed and the drive shafts are unbolted from the final drive. The electrical connections and breather lines are separated at the final drive.



The »rear section« of the exhaust system with heat shield is removed and the propshaft is unbolted from the final drive.

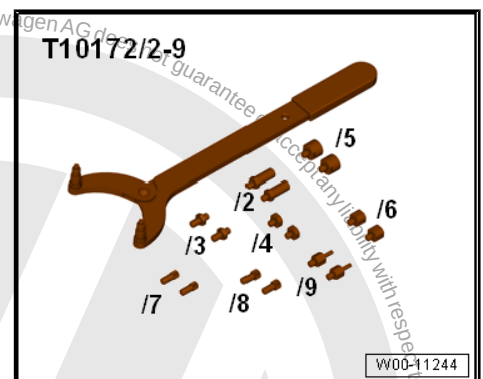
The final drive is to be lowered with the gearbox jack diagonally »downwards« in direction of travel.

Special tools and workshop equipment required

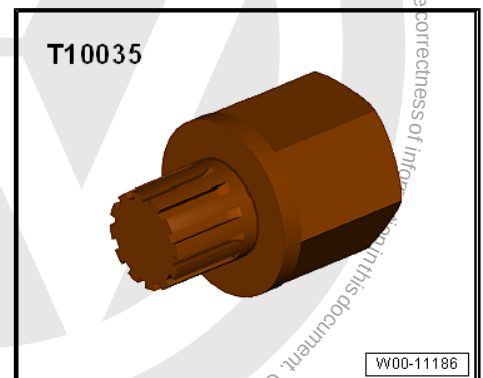
- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



- ◆ Counter-hold tool - T10172-



- ◆ Socket insert XZN 14 - T10035- and, if necessary, bits XZN 12 - T10099-

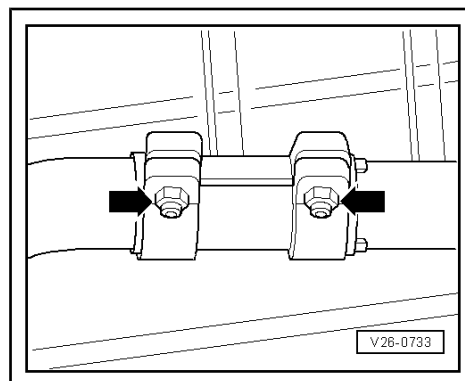


- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-



Removing

- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .

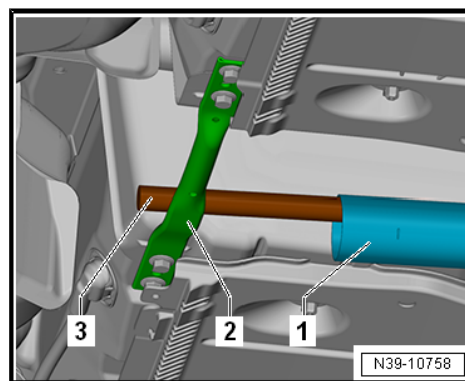


- Insert a pipe or tyre lever -3- into front exhaust pipe -1- and rest on tunnel cross member -2-.

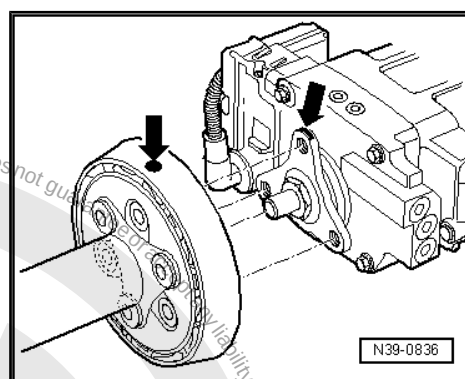


Note

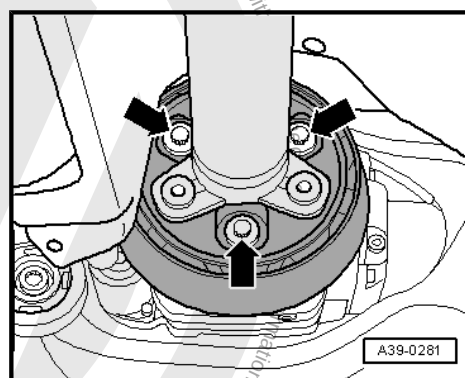
The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.



- Remove rear anti-roll bar ⇒ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Unbolt drive shafts at left and right from final drive.
- Before removal, check if there are coloured marks on flexible coupling, on flange of final drive and on propshaft flange -arrows-. If not, mark installation position of flexible coupling.

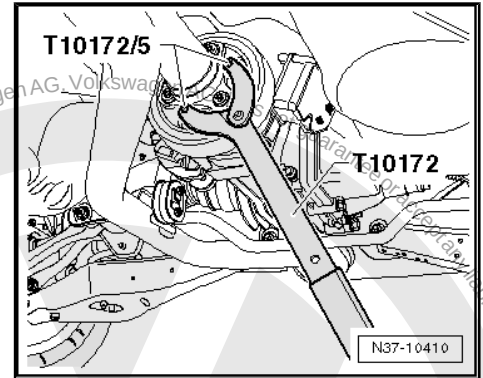


- Unbolt flexible coupling with vibration damper from rear final drive -arrows-.

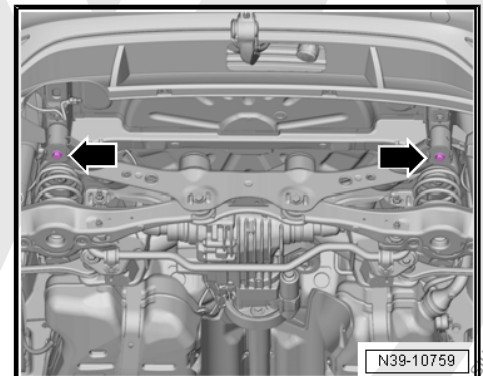




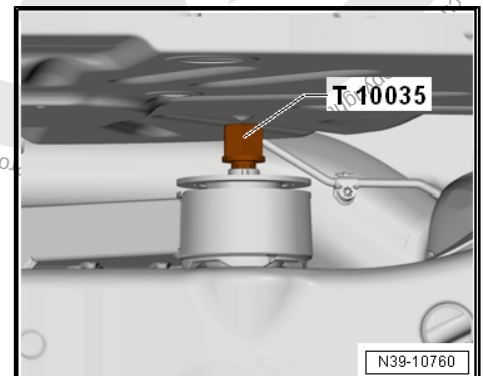
- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.



- Detach rear axle at rear bearings -arrows- and lower approx. 40 mm ➤ Running gear, axles, steering; Rep. gr. 42 ; Rear axle; Lowering rear axle .



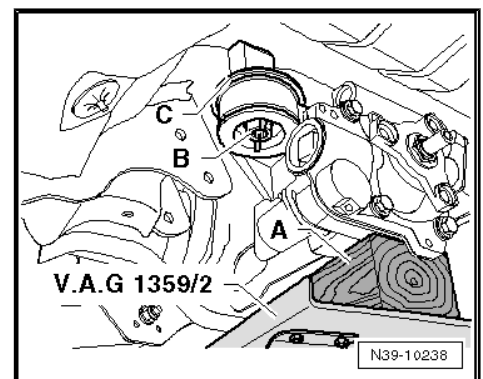
- Unscrew rear bolts for final drive with socket insert XZN 14 - T10035- from rear axle. A bit XZN 12 - T10099/1- can also be used for unscrewing the bolts.



- Place a block of wood -A- on engine and gearbox jack and support rear section of final drive.
- Unscrew bolt -B- and remove washer -C- on top from mounting bracket.

Always renew bolt.

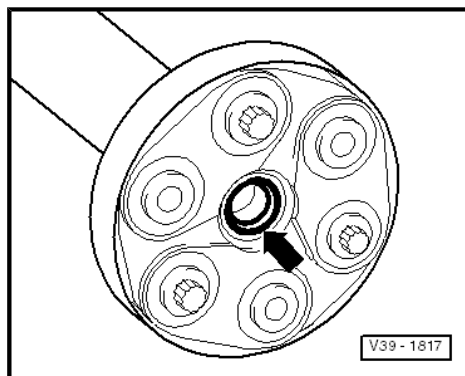
- Push final drive as far back as possible.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.



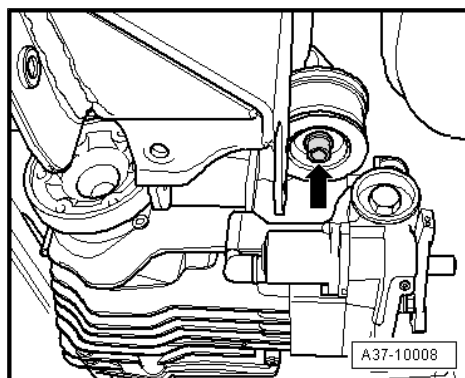


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

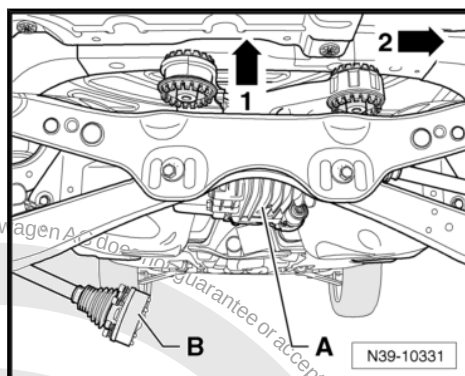
The rear section of the final drive must be free to move in order to remove or install the drive shafts.



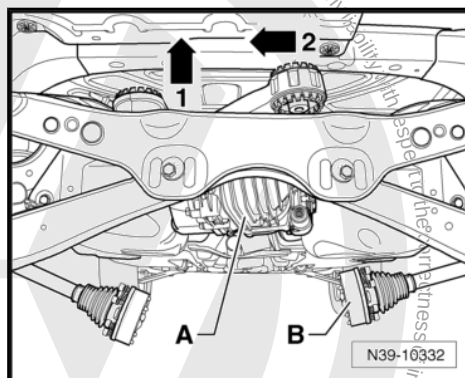
- To do this, screw front securing bolt into front mounting bracket -arrow- again by hand onto stop. To ensure that final drive can still be moved, loosen bolt again but by no more than 5 rotations.
- Remove gearbox jack from beneath vehicle.



- Raise rear section of final drive -A- -arrow 1- and push as far to right as possible -arrow 2-.
- Remove left drive shaft -B- from flange and carefully lower.
- Return final drive to installation position.

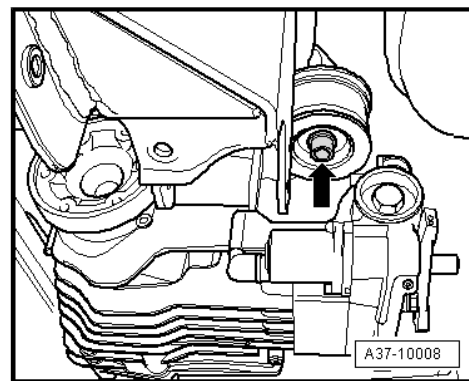


- Raise rear section of final drive -A- -arrow 1- and push as far to left as possible -arrow 2-.
- Remove right drive shaft -B- from flange and carefully lower.

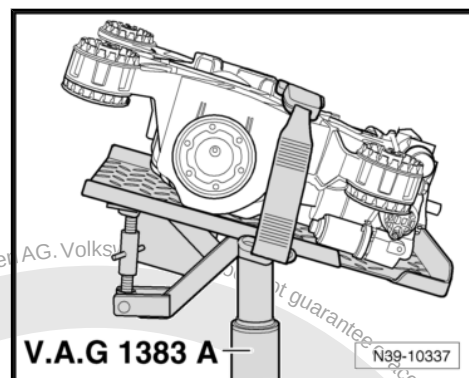




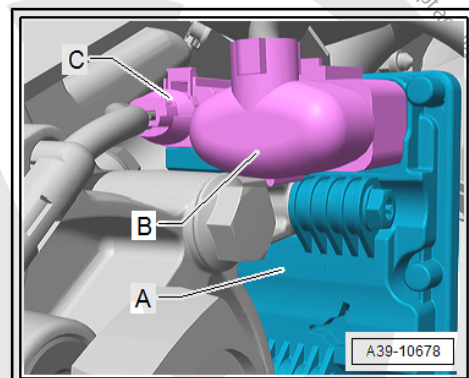
- Take up weight of final drive using engine and gearbox jack and unscrew bolt -arrow- of front mounting bracket. Secure final drive with a strap to prevent it from falling down.



- Tilt final drive in vehicle, as shown in diagram, while lowering it slightly.



- Pull connector -B- off all-wheel drive control unit - J492- -A-. Disregard item -C-.

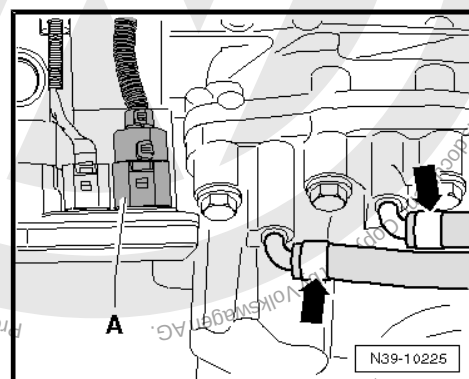


- Pull breather lines -arrows- off final drive.



Note

Disregard -item A-.





- Raise propshaft -A-, and support it in this position on tunnel cross-piece with an appropriate piece of wood -1-.



Note

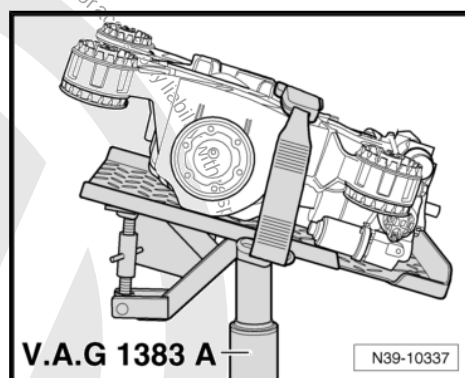
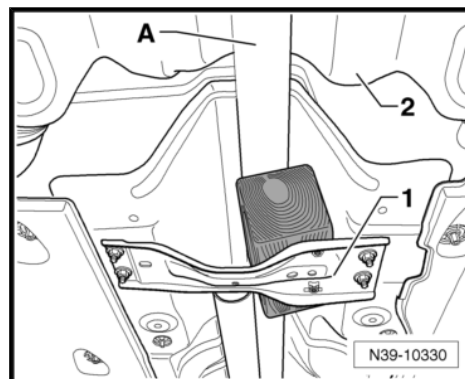
Disregard -item 2-.

- Pull final drive »forwards« while lowering it, ensuring that there is sufficient »clearance« to other components.

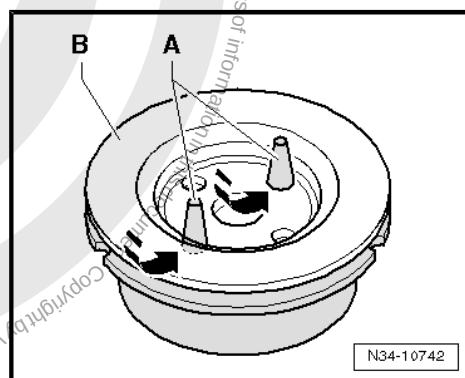
Installing

Install in reverse order of removal.

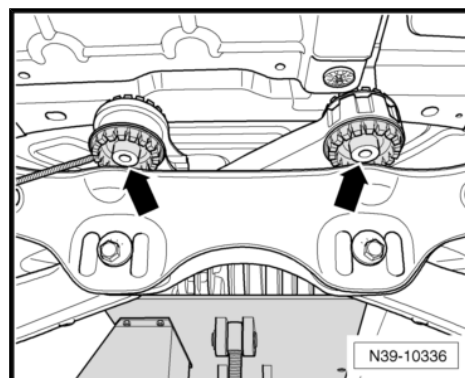
- Secure final drive against falling using strap from gearbox support.
- Bring rear final drive into position shown.



- Ensure that the limit stop washers -B- are placed as shown from above on rear bearings. When properly positioned, the rubber nipples -A- prevent the washers from slipping or falling out during installation.

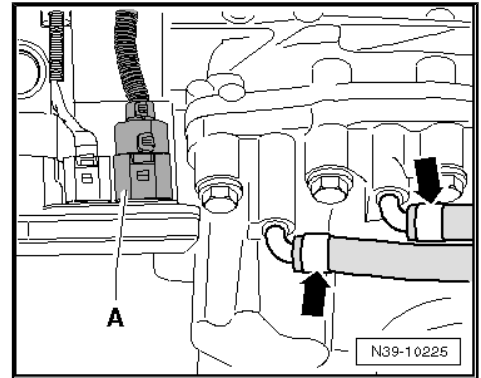


- Before installing the final drive, first insert 2 new bolts from above into the rear bearings -arrows-.
- Raise final drive and guide over rear axle.



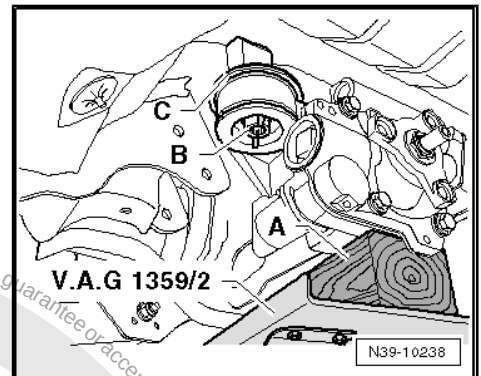


- Fit breather lines -arrows- onto breather pipes of final drive.
- Using gearbox jack, raise final drive to installation position.

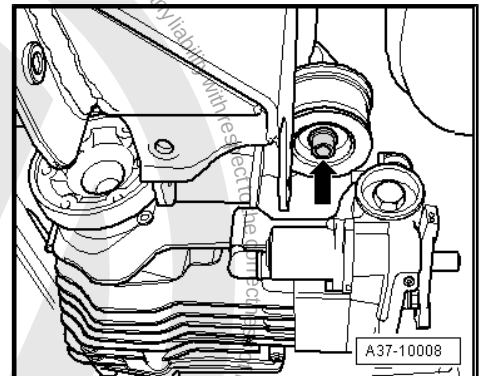


- Set plate -C- on front bonded rubber mounting.

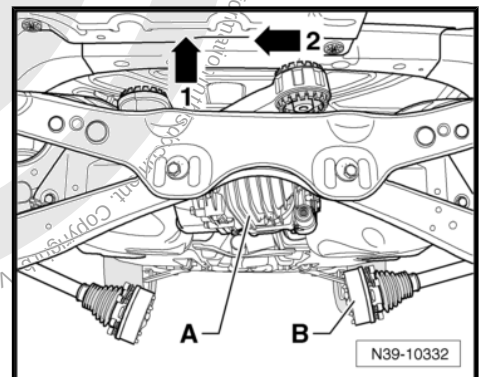
The rear section of the final drive must be free to move in order to remove or install the drive shafts.



- To do this, screw bolt into front mounting bracket -arrow- by hand onto stop. To ensure that final drive can still be moved, loosen bolt again but by no more than 5 rotations.
- Remove gearbox jack from beneath vehicle.

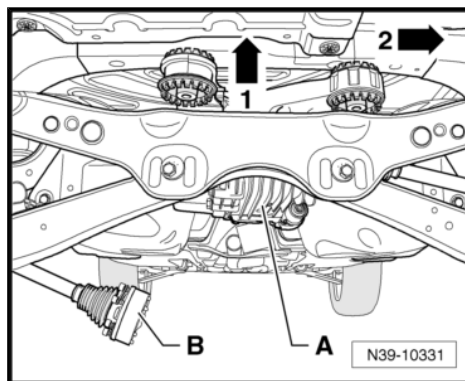


- Raise rear section of final drive -A- -arrow 1- and push as far to left as possible -arrow 2-.
- Carefully guide right drive shaft -B- upwards into flange.
- Return final drive to installation position.
- Bolt right drive shaft to final drive.

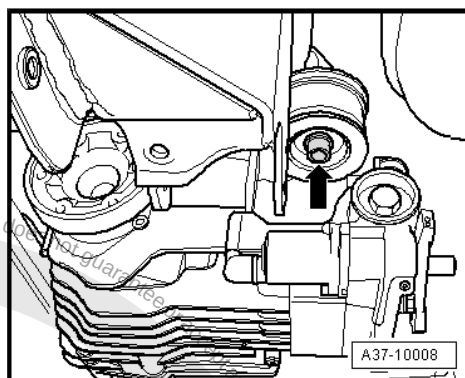




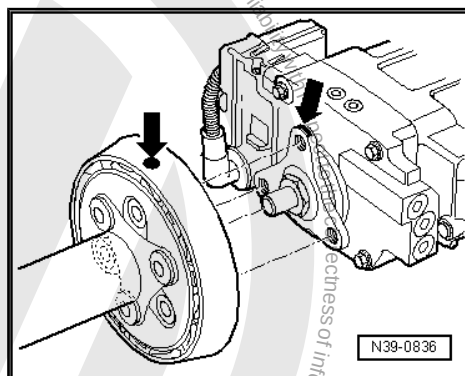
- Raise rear section of final drive -A- -arrow 1- and push as far to right as possible -arrow 2-.
- Carefully guide left drive shaft -B- upwards into flange.
- Return final drive to installation position.
- Bolt left drive shaft to final drive.
- Place a block of wood on engine and gearbox jack and support rear section of final drive.



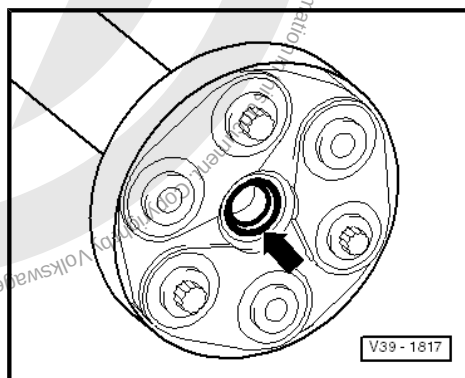
- Remove bolt -arrow- from front bonded rubber mounting.
- Rest propshaft on tunnel cross member. Place cloth in between to protect propshaft.
- Push final drive as far back as possible.



- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align. First screw in bolts and tighten them hand-tight.

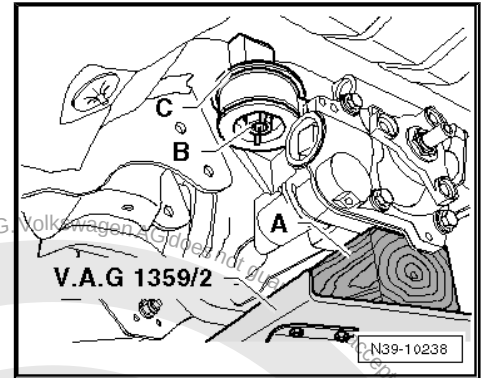


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

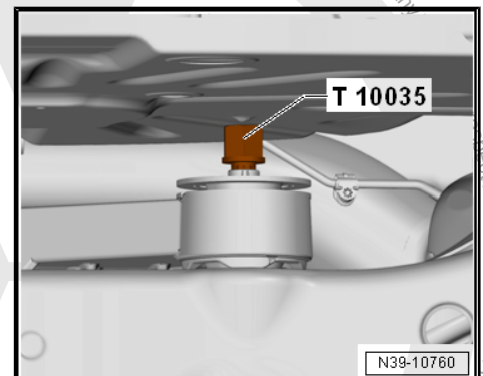




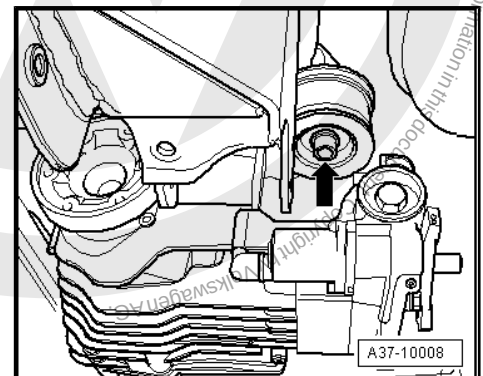
- Ensure that washer -C- lies on front mounting bracket. Screw on mounting bracket hand-tight using a new bolt -B-. Do not tighten bolt yet.



- Screw rear bolts for final drive with socket insert XZN 14 - T10035- to rear axle. Specified torque ➤ [page 14](#)
- Bolt rear axle to body ➤ Running gear, axles, steering; Rep. gr. 42 ; Rear axle; Removing and installing rear axle .



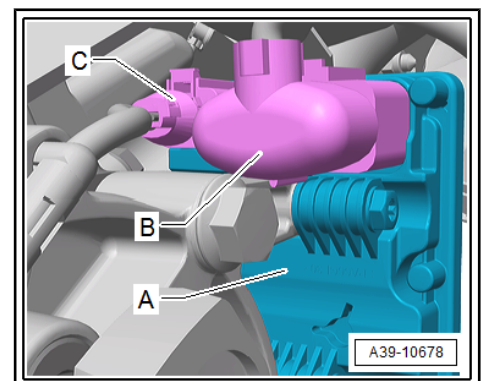
- Tighten bolts for final drive from »below« -arrow-. Specified torque ➤ [page 14](#) .
- Tighten propshaft bolts. Specified torque ➤ [page 113](#) .



- Push connector -B- on all-wheel drive control unit - J492- -A-. Disregard item -C-.
- Tighten drive shafts. Specified torque ➤ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Install rear anti-roll bar ➤ Running gear, axles, steering; Rep. gr. 42 ; Anti-roll bar; Removing and installing anti-roll bar .
- Install rear section of exhaust system ➤ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .

If the final drive has been renewed:

- Check oil level in all-wheel drive coupling ➤ [page 90](#) .
- Check oil level in final drive ➤ [page 67](#) .





2 Assembly mountings

⇒ [“2.1 Assembly overview - assembly mountings”, page 58](#)

⇒ [“2.2 Removing and installing bonded rubber bush”, page 60](#)

2.1 Assembly overview - assembly mountings

⇒ [“2.1.1 Assembly overview - subframe, rear final drive 0BS, 0CR, 0AY”, page 58](#)

⇒ [“2.1.2 Assembly overview - subframe, rear final drive 0CQ, 0BR”, page 59](#)

2.1.1 Assembly overview - subframe, rear final drive 0BS, 0CR, 0AY

Assembly overview - bonded rubber bushes in rear final drive



Note

Renew bonded rubber mountings »in pairs« (upper and lower mountings).

1 - “Rear upper” bonded rubber mounting

- ☐ With stop plate
- ☐ Allocation ⇒ Electronic parts catalogue
- ☐ To remove or install, remove stop plate
- ☐ Removing and installing
⇒ [page 60](#)

2 - “Rear lower” bonded rubber mounting

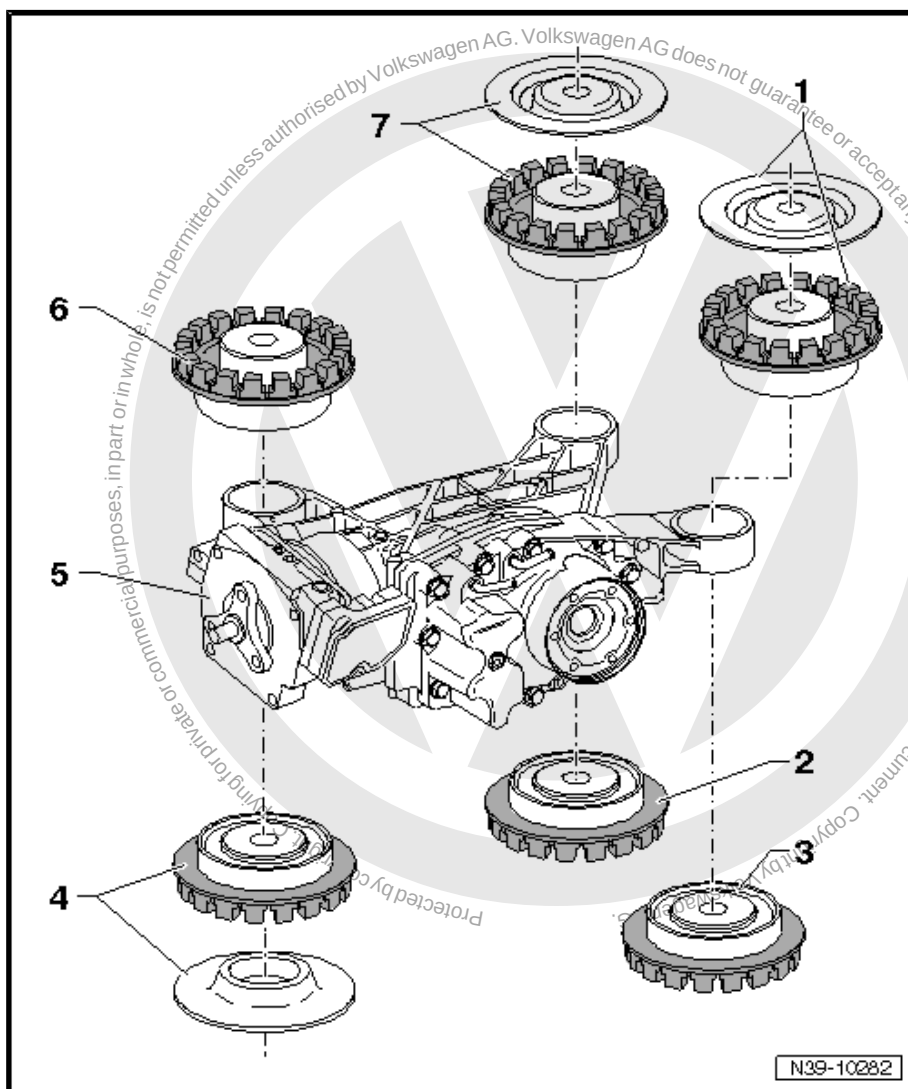
- ☐ Without stop plate
- ☐ Allocation ⇒ Electronic parts catalogue
- ☐ Removing and installing
⇒ [page 60](#)

3 - “Rear lower” bonded rubber mounting

- ☐ Without stop plate
- ☐ Allocation ⇒ Electronic parts catalogue
- ☐ Removing and installing
⇒ [page 60](#)

4 - “Front lower” bonded rubber mounting

- ☐ With stop plate
- ☐ Allocation ⇒ Electronic parts catalogue
- ☐ To remove or install, remove stop plate
- ☐ Removing and installing
⇒ [page 60](#)





5 - Rear final drive

- ☐ Remove to renew bonded rubber mountings ➔ [page 15](#)

6 - "Front upper" bonded rubber mounting

- ☐ Without stop plate
- ☐ Allocation ➔ Electronic parts catalogue
- ☐ Removing and installing ➔ [page 60](#)

7 - "Rear upper" bonded rubber mounting

- ☐ With stop plate
- ☐ Allocation ➔ Electronic parts catalogue
- ☐ To remove or install, remove stop plate
- ☐ Removing and installing ➔ [page 60](#)

2.1.2 Assembly overview - subframe, rear final drive 0CQ, 0BR

Assembly overview - bonded rubber bushes in rear final drive

1 - Stop plate

- ☐ Pull off before removing bonded rubber mounting
➔ [Item 2 \(page 59\)](#) .
- ☐ attach onto bonded rubber mounting
➔ [Item 2 \(page 59\)](#)
➔ [page 62](#)

2 - "Rear upper" bonded rubber mounting

- ☐ Removing and installing
➔ [page 62](#)
- ☐ Identifying "rear upper" and "front lower" bonded rubber mountings
➔ [page 65](#)
- ☐ Fitting position
➔ [page 66](#)

3 - "Rear lower" bonded rubber mounting

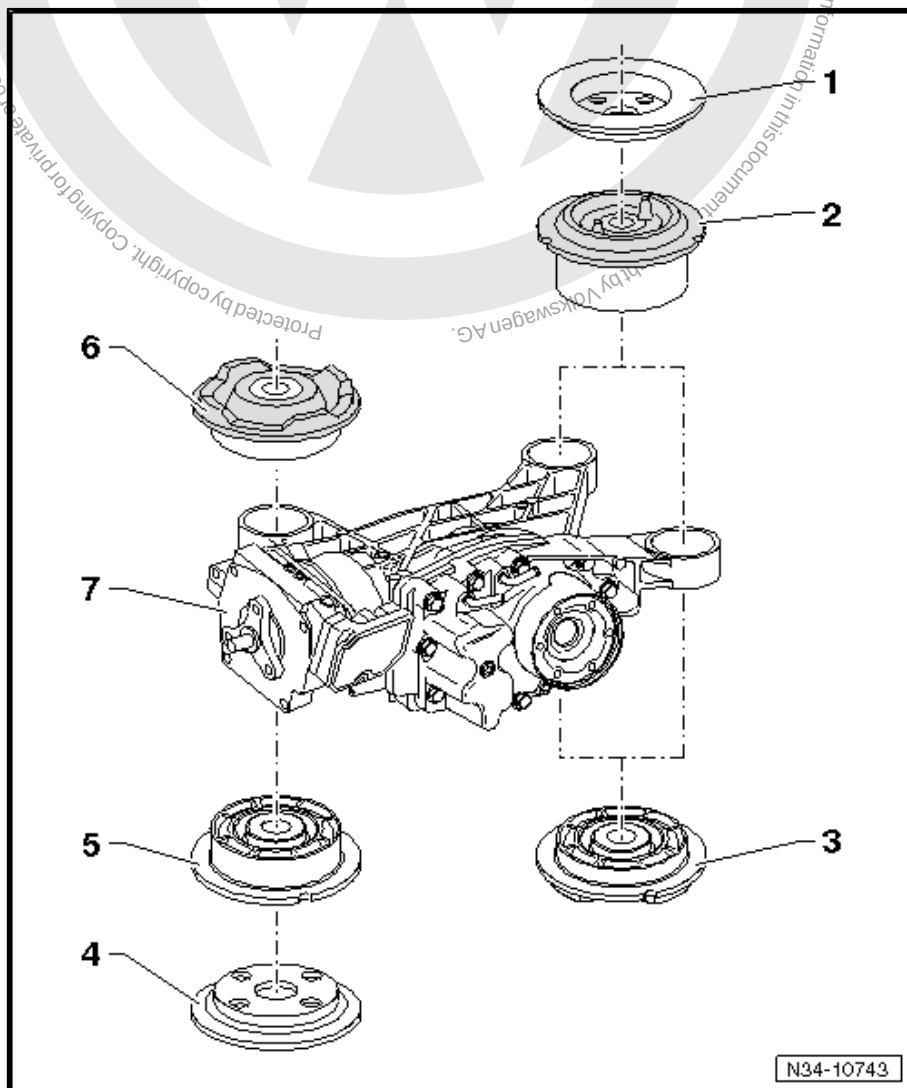
- ☐ Removing and installing
➔ [page 62](#)

4 - Stop plate

- ☐ Pull off before removing bonded rubber mounting
➔ [Item 5 \(page 59\)](#) .
- ☐ attach onto bonded rubber mounting
➔ [Item 5 \(page 59\)](#)
➔ [page 62](#)

5 - "Front lower" bonded rubber mounting

- ☐ Removing and installing
➔ [page 62](#)
- ☐ Identifying "rear upper" and "front lower" bonded rubber mountings ➔ [page 65](#)





- ❑ Fitting position ⇒ [page 66](#)

6 - "Front upper" bonded rubber mounting

- ❑ Removing and installing ⇒ [page 62](#)

7 - Rear final drive

- ❑ Removing and installing ⇒ [page 15](#)

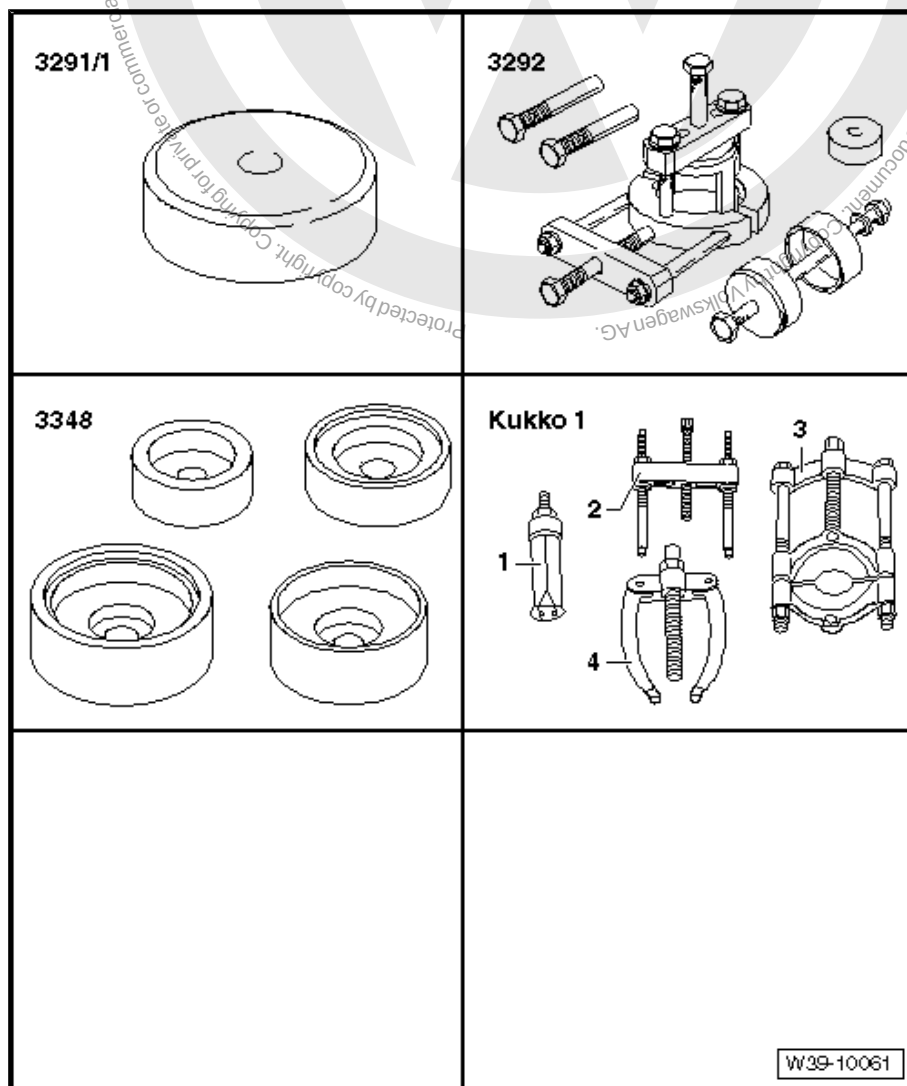
2.2 Removing and installing bonded rubber bush

⇒ "2.2.1 Removing and installing bonded rubber bush, rear final drive 0BS, 0CR, 0AY", page 60

⇒ "2.2.2 Removing and installing bonded rubber bush, rear final drive 0CQ, 0BR", page 62

2.2.1 Removing and installing bonded rubber bush, rear final drive 0BS, 0CR, 0AY

Special tools and workshop equipment required



- ◆ Press piece 329/1 from assembly device - 3291-
- ◆ Spindle from assembly tool - 3292-



- ◆ Press pieces 3348 and 3348/1 from assembly device - 3348-
- ◆ -1- Internal puller - Kukko 21/7-
- ◆ -4- Counter support - Kukko 22/2-

Removing

Pull out »upper« mounting.

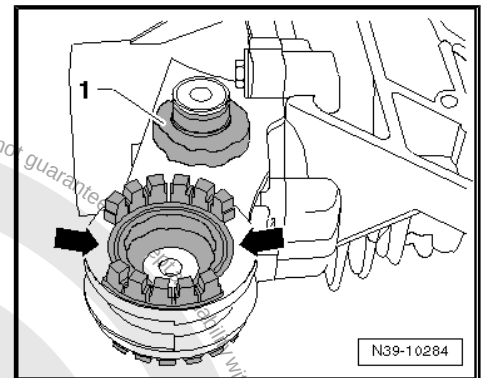


WARNING

Wear protective gloves.

In order to fit the counter support :

- Break two pieces -arrows- out of collar of mounting.
- Separate metal core -1-.

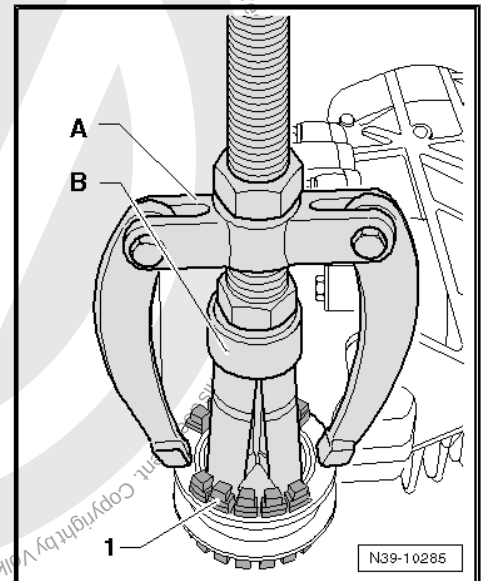


- Pull out bonded rubber mounting -1-.

A - Counter support - Kukko 22-2-

B - Internal puller - Kukko 21-7-

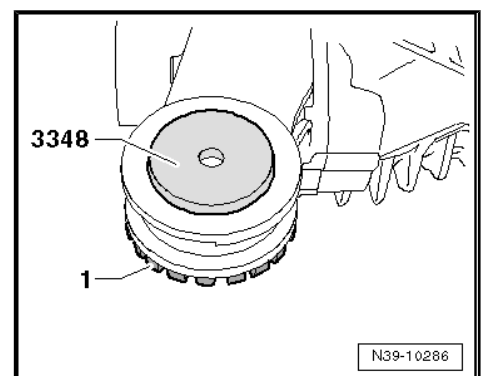
Driving out "lower" bonded rubber mounting



- Drive out bonded rubber mounting -1- using thrust piece - 3348- and plastic mallet.

Installing

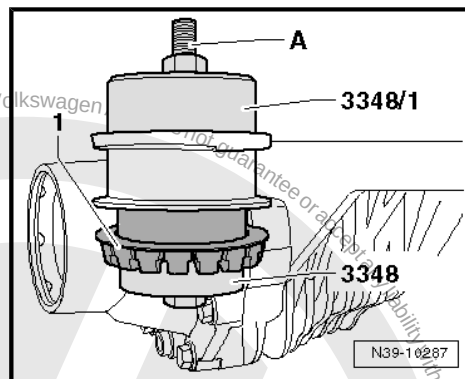
Pulling in "lower" bonded rubber mounting



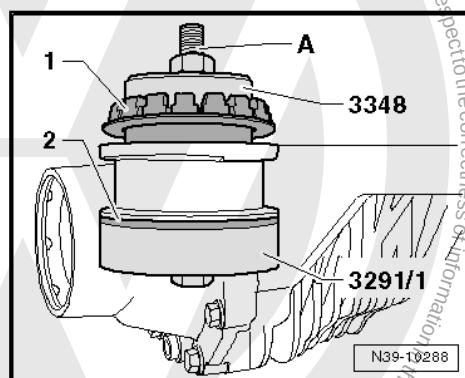


- Pull in mounting sufficiently until collar is in contact with final drive around whole circumference.

Pulling in “upper” bonded rubber mounting



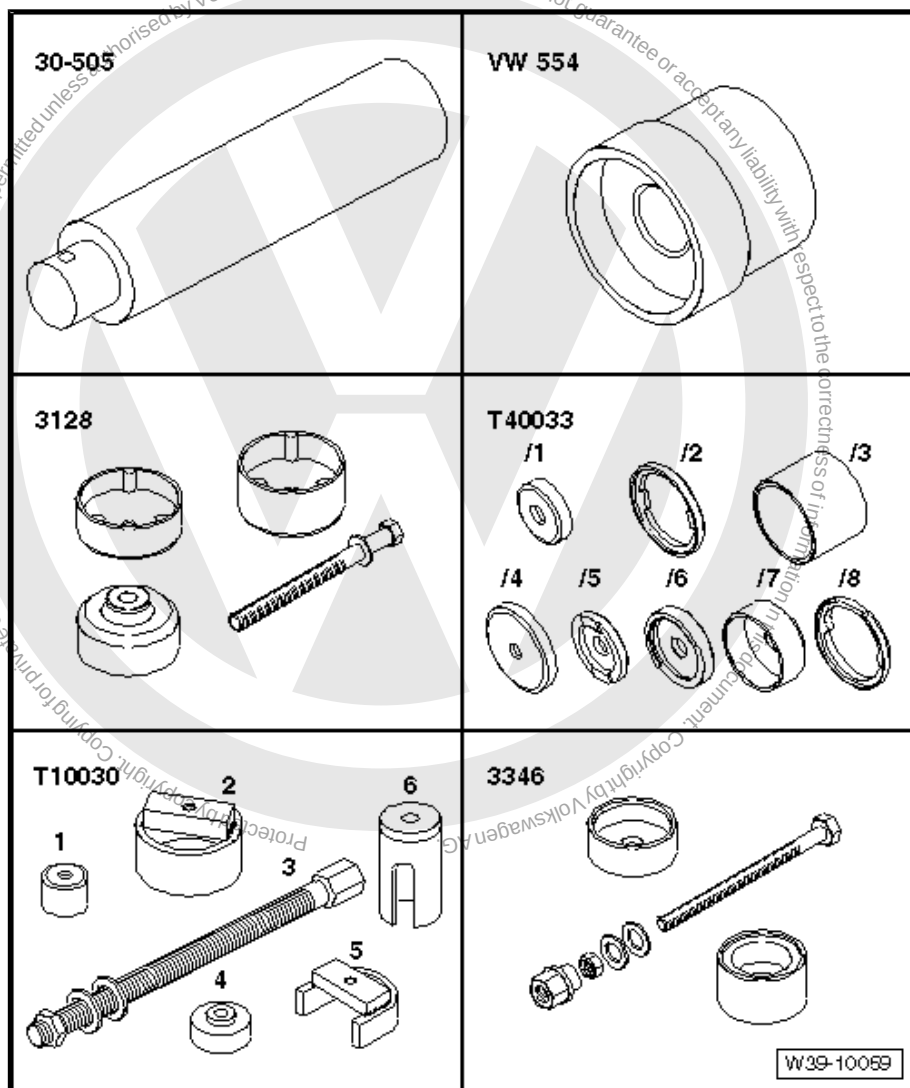
- Pull in mounting sufficiently until collar is in contact with final drive around whole circumference.
- Fit stop plates, fitting location ➤ [page 58](#) .



2.2.2 Removing and installing bonded rubber bush, rear final drive 0CQ, 0BR



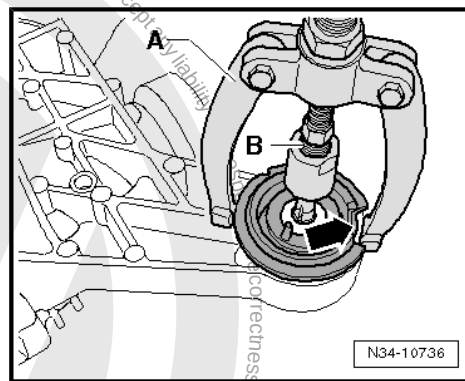
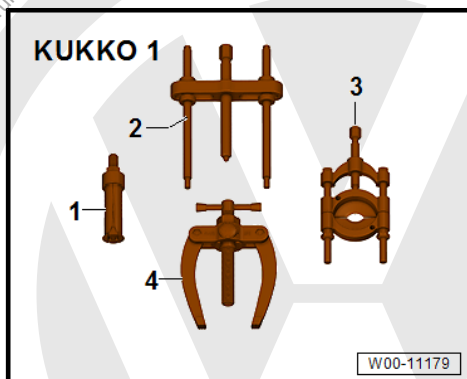
Special tools and workshop equipment required



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



- ◆ -1- Internal puller -
Kukko 21/1-



- ◆ -4- Counter support -
Kukko 22/1-

Pulling out "rear upper" bonded rubber mounting

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

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

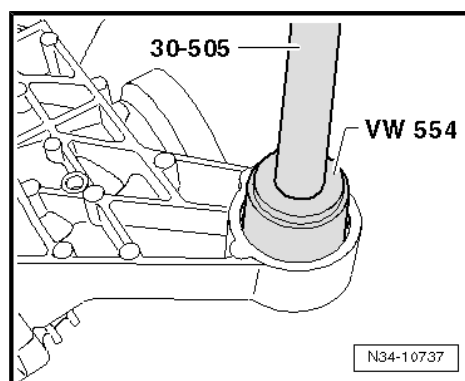
- In order to set counter support in place,
break out a piece of
collar of bonded rub-
ber mounting -arrow-.
- Set internal puller in
parting seam of upper
and lower bonded
rubber mounting and
tighten it.

Driving out "rear lower" bonded rubber mounting



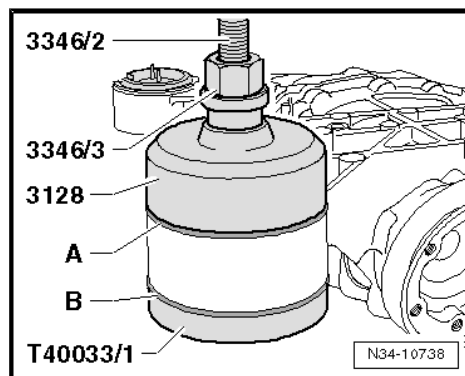
Note

*If the bonded rubber mounting is to be renewed separately, it can
also be pulled out using counter support , e.g. -Kukko 22/1- and
inner puller 12-16 mm , e.g. -Kukko 21/1- ⇒ [page 64](#)*



Pulling in "rear upper" -A- and "rear lower" -B- bonded rubber mountings

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





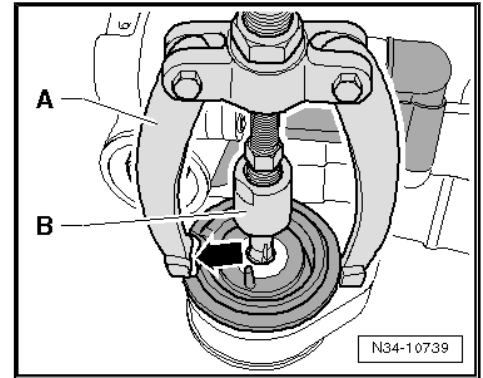
Pulling out "front lower" bonded rubber mounting

- To prevent oil escaping from final drive during the following step, seal both breather pipes.
- Then lay final drive upside down on workbench and pull out bonded rubber mounting.

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

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

- In order to set counter support in place, break out a piece of collar of bonded rubber mounting -arrow-.
- Set internal puller in parting seam of upper and lower bonded rubber mounting and tighten it.

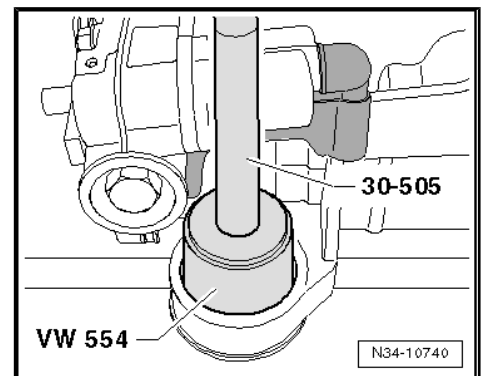


Driving out "front upper" bonded rubber mounting



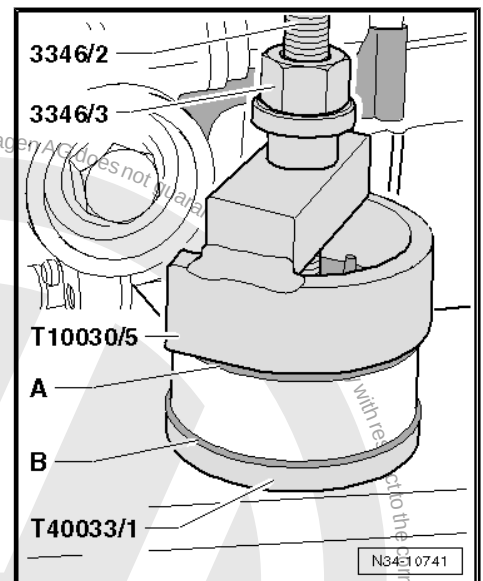
Note

If the bonded rubber mounting is to be renewed separately, it can also be pulled out using counter support , e.g. -Kukko 22/1- and inner puller 12-16 mm , e.g. -Kukko 21/1- ➔ [page 65](#)



Pulling in "front lower" -A- and "front upper" -B- bonded rubber mountings

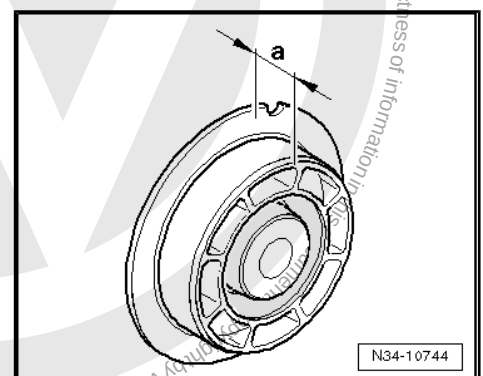
- Fit a washer (inside diameter 15 mm, outside diameter not less than 27 mm) onto spindle - 3346/2- before attaching spindle.



Identifying "rear upper" and "front lower" bonded rubber mountings

The "rear upper" and "front lower" bonded rubber mountings differ in height.

Dimension "a" mm	Bonded rubber bush
22	"Rear upper"
17	"Front, lower"





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

- Final drive in installation position

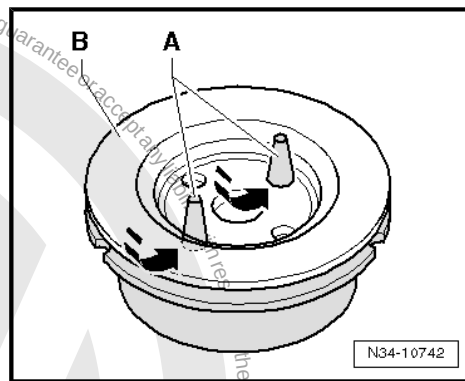
Installation position of "rear upper" and "front lower" bonded rubber mountings:

- ◆ The pins -A- of the "rear upper" bonded rubber mountings
⇒ [Item 2 \(page 59\)](#) face upwards.
- ◆ The pins -A- of the "front lower" bonded rubber mounting
⇒ [Item 5 \(page 59\)](#) face downwards.

Attachment of stop plate -B-

- Pull pins -A- into holes of stop plate -arrows-.

The stop plate -B- is then permanently joined to the bonded rubber mounting.



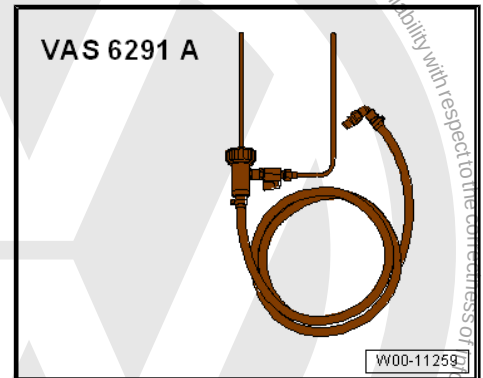
3 Gear oil

⇒ ["3.1 Checking gear oil level", page 67](#)

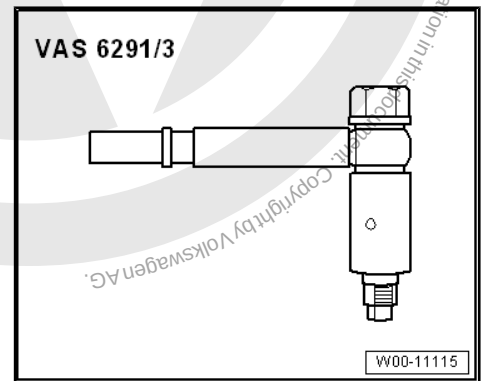
3.1 Checking gear oil level

Special tools and workshop equipment required

- ◆ Filling device - VAS 6291 A-



- ◆ Adapter - VAS 6291/3-



- ◆ Not illustrated: Torque wrench - V.A.G 1331-

Conditions for testing

- Vehicle level, all supports in lifting platform at same height.

Check oil level.

- Place drip tray - VAS 6208- under final drive.

The oil inspection plug is located on the left side of the rear final drive as seen when looking forwards.



- Remove oil plug -arrow-

The oil level is correct, if the rear final drive is filled up to lower edge of filler plug drilling.

- Screw in plug -arrow- and tighten. Specified torque: 15 Nm

Topping up oil:

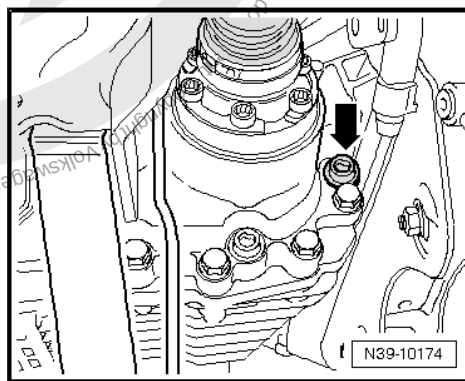
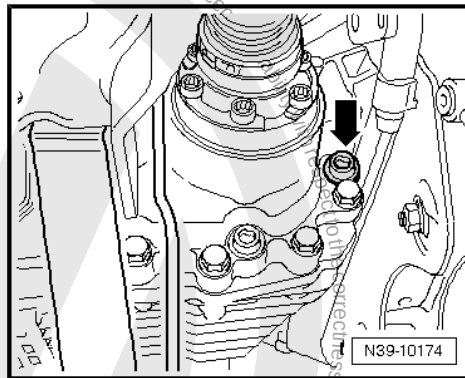
- Screw adapter - VAS 6291/3- hand-tight in inspection hole.
- Using filling device - VAS 6291 A- , add enough oil so that it runs out between the adapter of the filling device and the final drive housing.

Gear oil for the rear final drive is available as a replacement part
⇒ Electronic parts catalogue (ETKA) .

- Remove filling device and adapter; excess oil may still run out.

The oil level is correct, if the rear final drive is filled up to lower edge of filler plug drilling.

- Screw in plug -arrow- and tighten. Specified torque: 15 Nm





4 Oil seals

⇒ ["4.1 Overview of fitting locations - seals", page 69](#)

⇒ ["4.2 Renewing right oil seal", page 70](#)

⇒ ["4.3 Renewing left oil seal", page 75](#)

⇒ ["4.4 Renewing seal for propshaft flange on rear final drive", page 80](#)

4.1 Overview of fitting locations - seals

1 - Nut

- ☐ Secure with locking fluid
- D 000 600-
- ☐ Specified torque
⇒ [page 86](#)

2 - Flange for propshaft

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

3 - Seal for propshaft flange

Renewing ⇒ [page 80](#)

4 - Seal, right

- ☐ For right flange shaft
- ☐ Renewing ⇒ [page 70](#)

5 - Retaining ring

- ☐ Renew after removing
flange shaft.

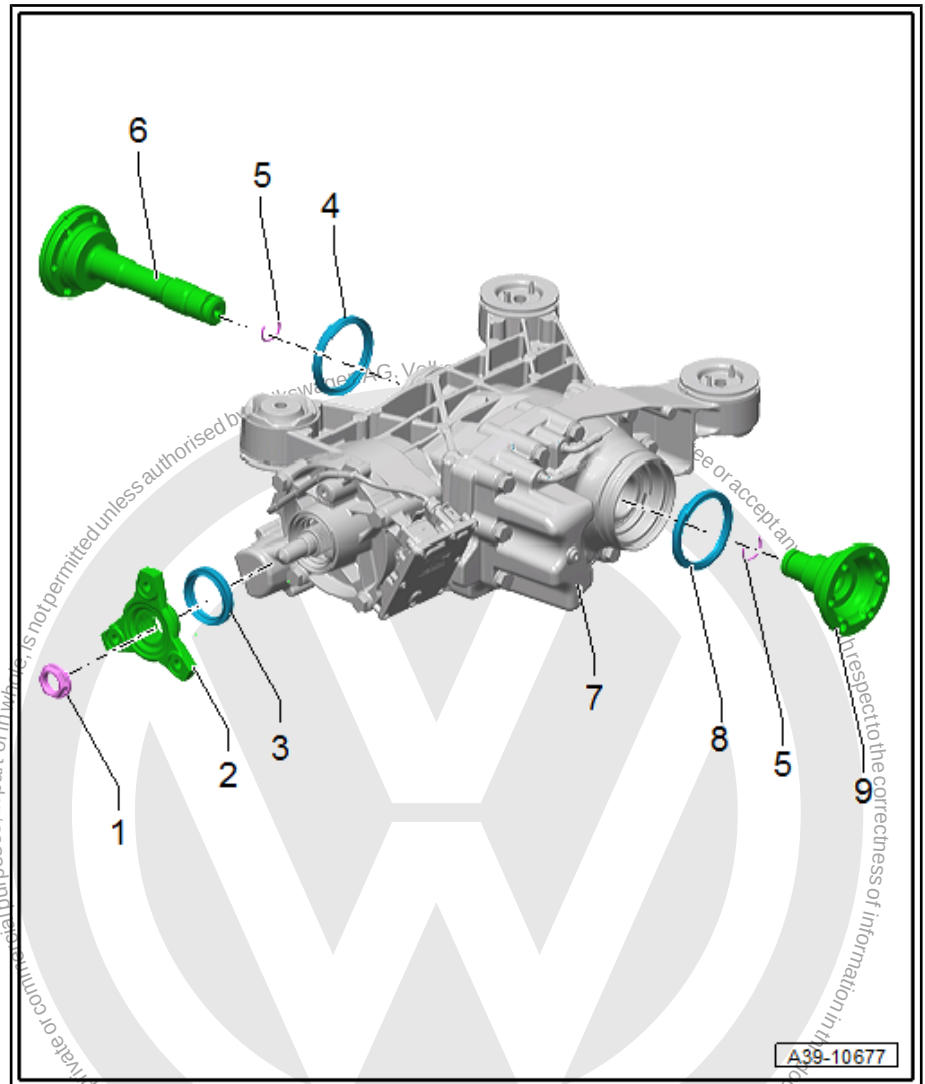
6 - Right flange shaft

7 - Rear final drive

8 - Seal, left

- ☐ For left flange shaft
- ☐ Renewing ⇒ [page 75](#)

9 - Left flange shaft





4.2 Renewing right oil seal

⇒ [“4.2.1 Renewing right oil seal, rear final drive 0BS”, page 70](#)

⇒ [“4.2.2 Renewing right oil seal, rear final drive 0CQ, 0CR, 0AY, 0BR”, page 72](#)

4.2.1 Renewing right oil seal, rear final drive 0BS

Special tools and workshop equipment required



- ◆ Removal tool - VW 681-
- ◆ Plate from extractor - T10037-
- ◆ Thrust piece - T10049-
- ◆ Drip tray for workshop hoist - VAS 6208-
- ◆ Sealing grease - G 052 128 A1-

Removing

- Remove rear final drive ⇒ [page 15](#) .



- Bolt plate -A- of extractor - T10037- to flange hand-tight using two M8 x 30 bolts -1-

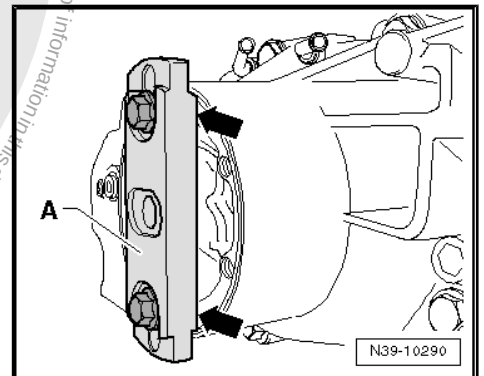
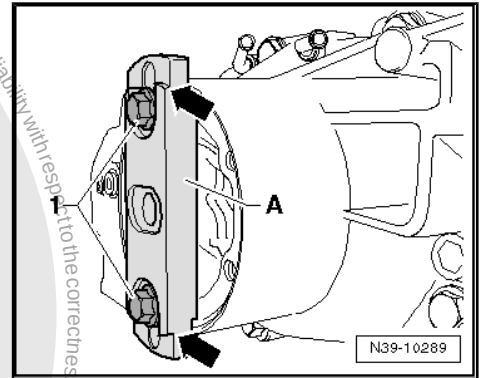
The shoulders -arrows- for greater flange diameters face outwards.

Tighten bolts alternately one turn each until flange contacts plate -arrows-, but no further!



WARNING

Wear protective gloves and hold flange securely.

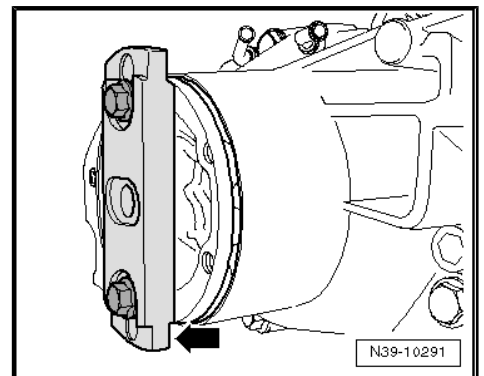


Drive flange out of final drive by striking the plate -arrow- gently.



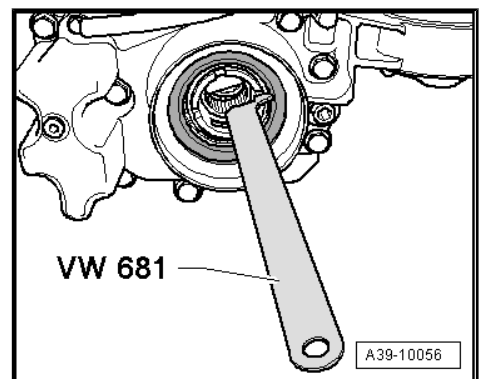
Caution

To avoid damage to the final drive and the tools, use only a plastic-headed mallet.



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

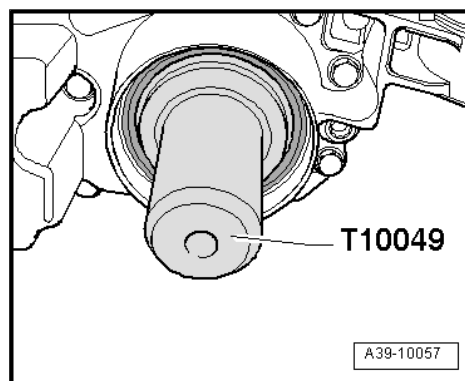
Installing



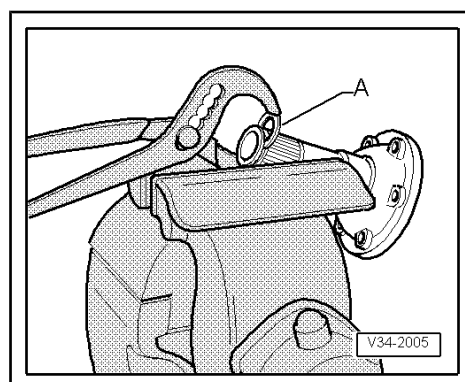


- Lightly oil new seal around outside circumference and drive in to stop with thrust piece - T10049- , taking care not to cant seal.
- Half-fill space between sealing lip and dust lip with sealing grease - G 052 128 A1- .

Renew retaining ring.



- Clamp flange shaft in vice with protective jaw covers.
- Use new retaining ring -A- to press old retaining ring out of groove in flange shaft.
- Drive in flange shaft using plastic mallet and, if necessary, a drift.
- Install rear final drive ⇒ [page 15](#) .
- Checking gear oil level in rear final drive ⇒ [page 67](#) .

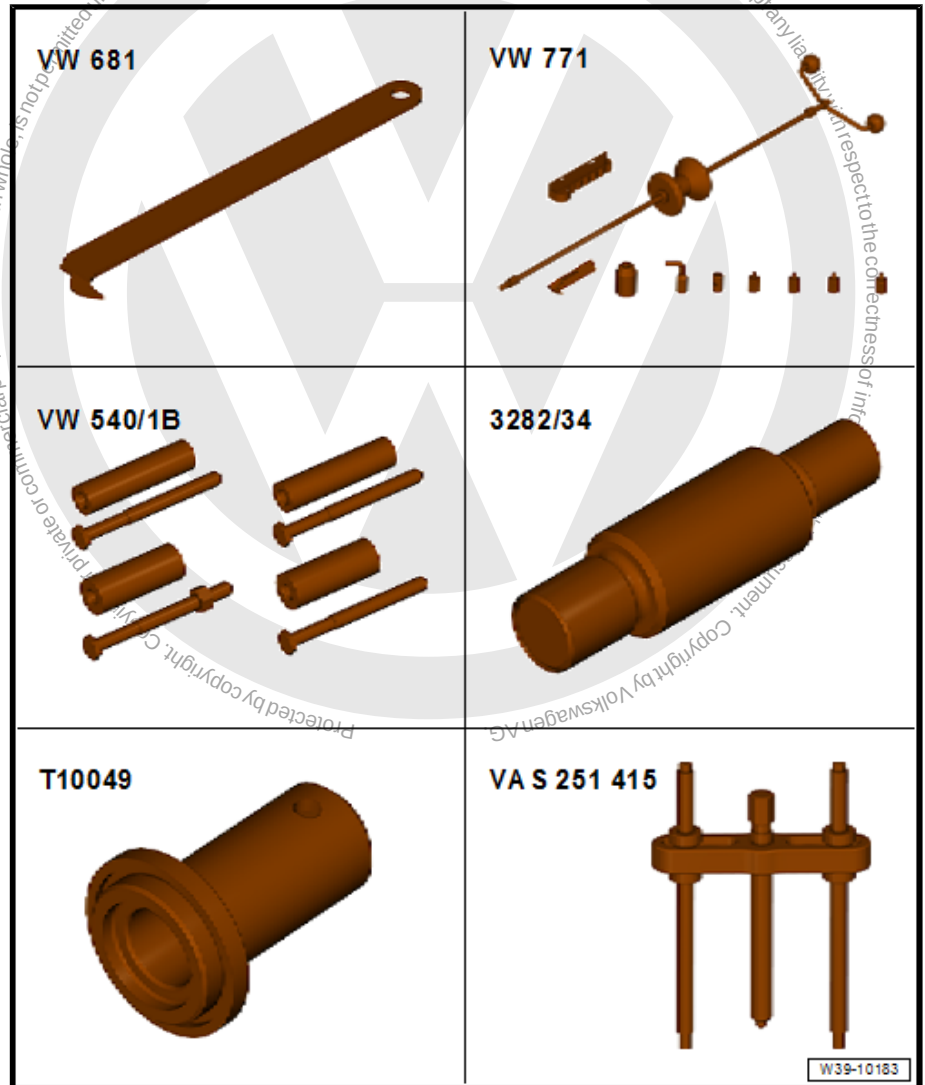


4.2.2 Renewing right oil seal, rear final drive 0CQ, 0CR, 0AY, 0BR





Special tools and workshop equipment required



- ◆ Removal tool - VW 681-
- ◆ Multipurpose tool - VW 771-
- ◆ Supplementary set for engine and gearbox support - VW540/1B-
- ◆ Pin - 3282/34-
- ◆ Thrust piece - T10049-
- ◆ Bridge from puller, e.g. KUKKO 18-0 - VAS 251 415-

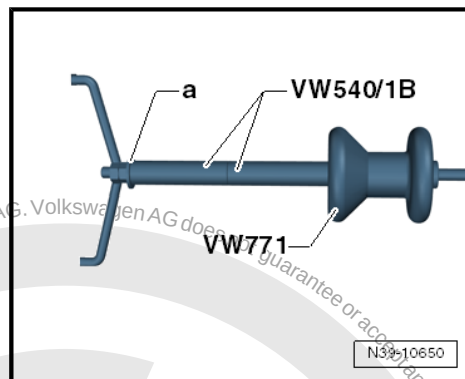
Removing

- Remove right drive shaft ⇒ Running gear, axles, steering;
Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .

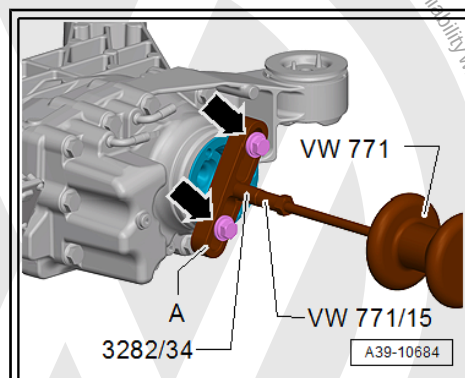


- Prepare multi-purpose tool - VW 771- with a washer -a- and 2 sleeves from the supplementary set for engine and gearbox support - VW 540/1 B- as shown in the illustration.

In the following illustrations, the left side of the final drive is shown removed. The procedure for the right side is the same.

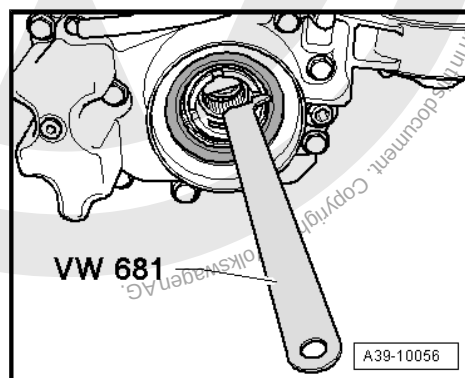


- Unscrew spindle from bridge of puller -18/0- and screw in pin - 3282/34- instead.
- Bolt bridge -A- to flange shaft using 2 bolts M8 x 30 -arrows-.
- Mount multi-purpose tool - VW 771- and pull out flange shaft.



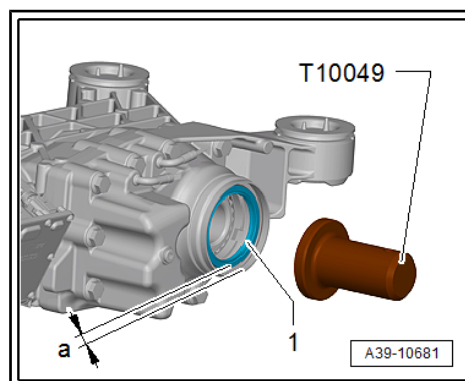
- Lever out flange shaft oil seal using oil seal extractor - VW 681- .

Installing



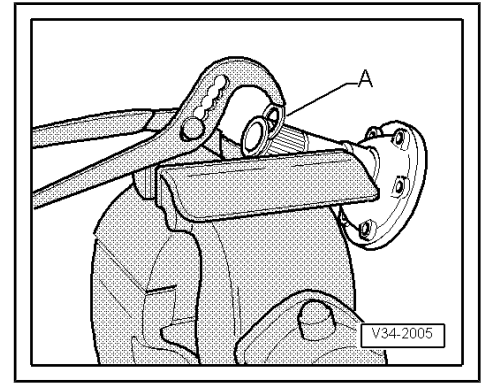
- Lightly lubricate outer diameter of the new sealing ring -1- and drive in seal with thrust piece - T10049- until dimension -a- is reached without canting it.
- Dimension -a- = 4.8 ± 0.1 mm; measured from end face of housing to seal.
- Do not drive in seal to stop.
- Ensure seal -1- is parallel to end face of housing of 0.25 mm max.
- Half-fill space between sealing lip and dust lip with sealing grease - G 052 128 A1- .

Renew retaining ring.





- Clamp flange shaft in vice with protective jaw covers.
- Use new retaining ring -A- to press old retaining ring out of groove in flange shaft.
- Drive in flange shaft using plastic mallet and, if necessary, a drift.
- Install drive shaft ⇒ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shafts .
- Checking gear oil level in rear final drive ⇒ [page 67](#) .



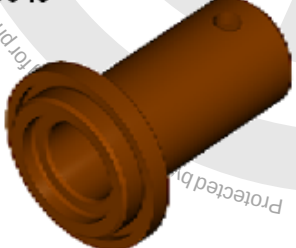
4.3 Renewing left oil seal

⇒ [“4.3.1 Renewing left oil seal, rear final drive 0BS”, page 75](#)

⇒ [“4.3.2 Renewing left oil seal, rear final drive 0CQ, 0CR, 0AY, 0BR”, page 77](#)

4.3.1 Renewing left oil seal, rear final drive 0BS

Special tools and workshop equipment required

VW 681 	T10037 
T10049 	VAS 6208 
	W39-10147

◆ Removal tool - VW 681-

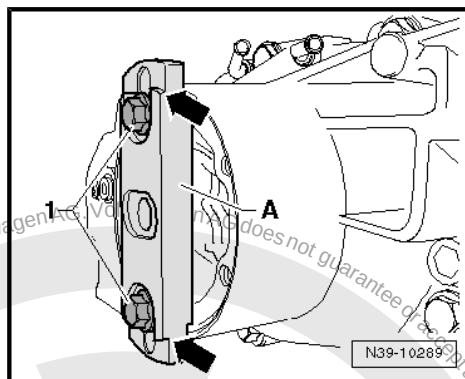


- ◆ Plate from extractor - T10037-
- ◆ Thrust piece - T10049-
- ◆ Drip tray for workshop hoist - VAS 6208-
- ◆ Sealing grease - G 052 128 A1-

Removing

- Remove rear left drive shaft ⇒ Running gear, axles, steering;
Rep. gr. 42 ; Drive shaft; Removing and installing drive shaft .
- Bolt plate -A- of extractor - T10037- to flange hand-tight using
two M8 x 30 bolts -1-

The shoulders -arrows- for greater flange diameters face out-wards.

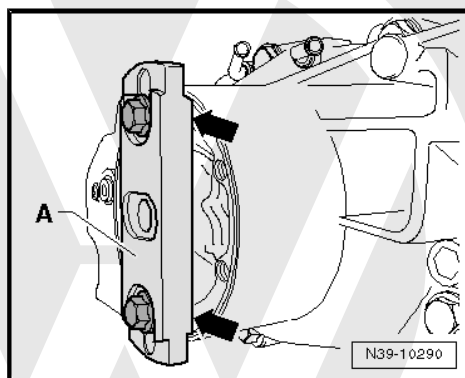


- Tighten bolts alternately one turn each until flange contacts
plate -arrows-, but no further!



WARNING

Wear protective gloves and hold flange securely.

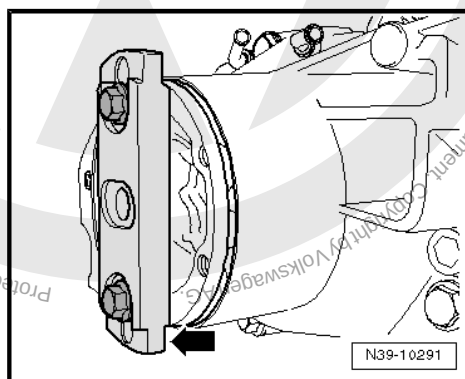


Drive flange out of final drive by striking the plate -arrow- gently.



Caution

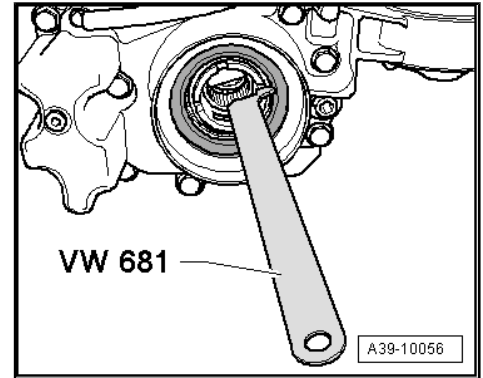
To avoid damage to the final drive and the tools, use only a plastic-headed mallet.





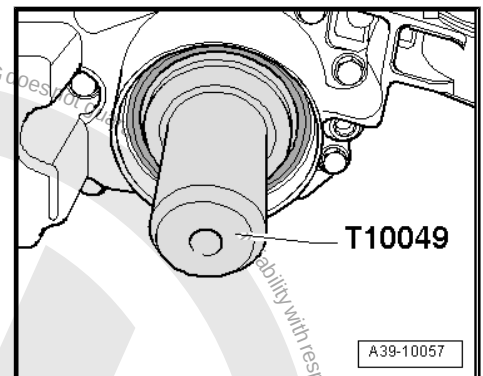
- Lever out flange shaft oil seal using oil seal extractor - VW 681- .

Installing

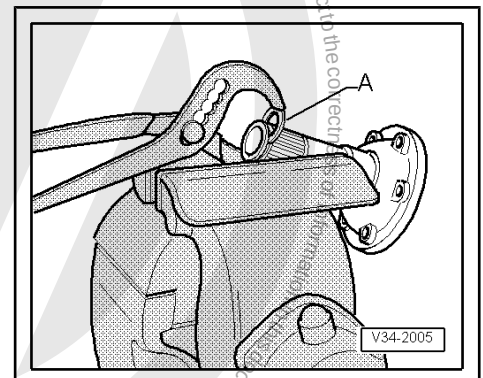


- Lightly oil new seal around outside circumference and drive in to stop with thrust piece - T10049- , taking care not to cant seal.
- Half-fill space between sealing lip and dust lip with sealing grease - G 052 128 A1- .

Renew retaining ring.



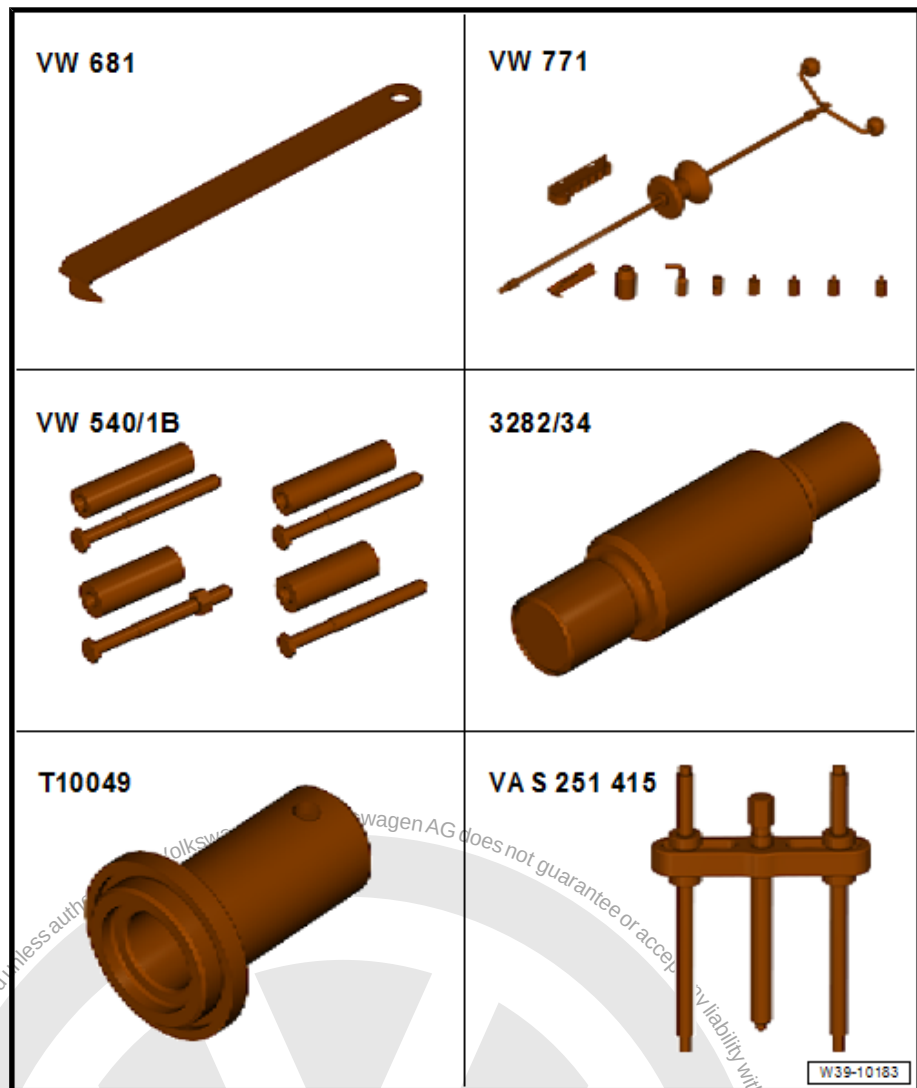
- Clamp flange shaft in vice with protective jaw covers.
- Use new retaining ring -A- to press old retaining ring out of groove in flange shaft.
- Drive in flange shaft using plastic mallet and, if necessary, a drift.
- Install drive shaft ➤ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shafts .
- Checking gear oil level in rear final drive ➤ [page 67](#) .



4.3.2 Renewing left oil seal, rear final drive 0CQ, 0CR, 0AY, 0BR



Special tools and workshop equipment required



- ◆ Removal tool - VW 681-
- ◆ Multipurpose tool - VW 771-
- ◆ Supplementary set for engine and gearbox support - VW540/1B-
- ◆ Pin - 3282/34-
- ◆ Thrust piece - T10049-
- ◆ Bridge from puller, e.g. KUKKO 18-0 - VAS 251 415-

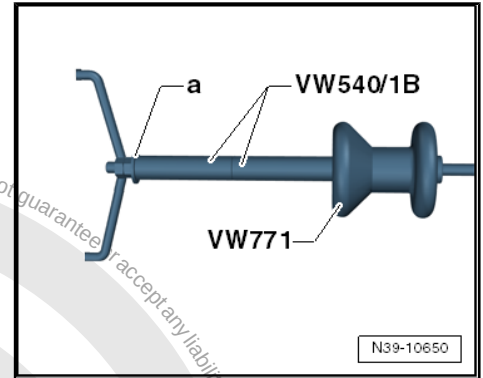
Removing

- Remove left drive shaft ➤ Running gear, axles, steering; Rep. gr. 42 ; Drive shafts; Removing and installing drive shafts .

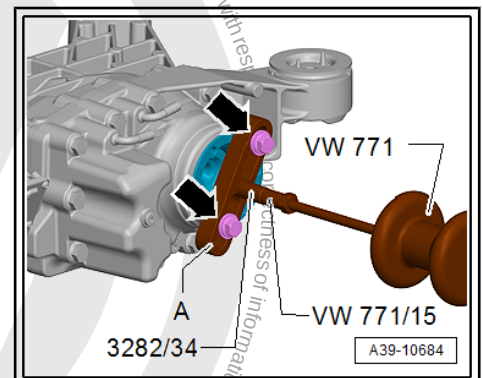


- Prepare multi-purpose tool - VW 771- with a washer -a- and 2 sleeves from the supplementary set for engine and gearbox support - VW 540/1 B- as shown in the illustration.

In the following illustrations, the final drive is shown removed.

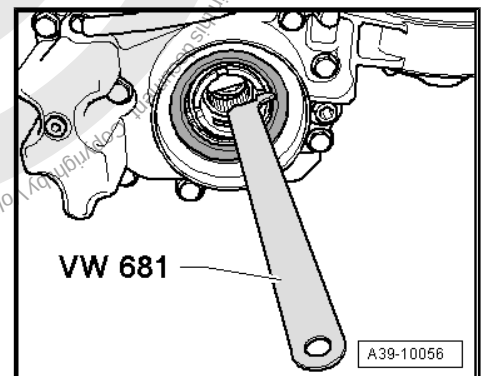


- Unscrew spindle from bridge of puller - 18/0- and screw in pin - 3282/34- instead.
- Bolt bridge -A- to flange shaft using 2 bolts M8 x 30 -arrows-.
- Mount multi-purpose tool - VW 771- and pull out flange shaft.



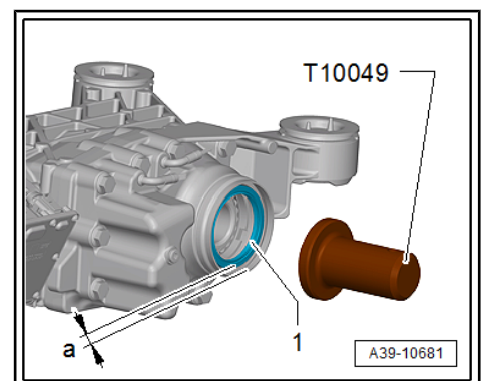
- Lever out flange shaft oil seal using oil seal extractor - VW 681- .

Installing



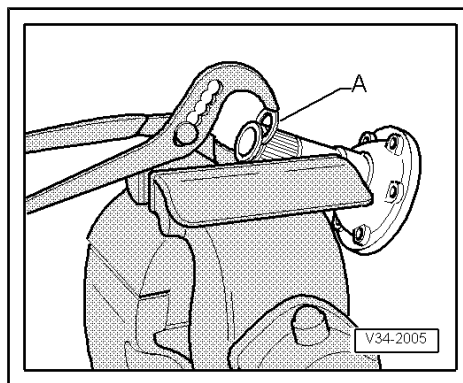
- Lightly lubricate outer diameter of the new sealing ring -1- and drive in seal with thrust piece - T10049- until dimension -a- is reached without canting it.
- Dimension -a- = 4.8 ± 0.1 mm; measured from end face of housing to seal.
- Do not drive in seal to stop.
- Ensure seal -1- is parallel to end face of housing of 0.25 mm max.
- Half-fill space between sealing lip and dust lip with sealing grease - G 052 128 A1- .

Renew retaining ring.



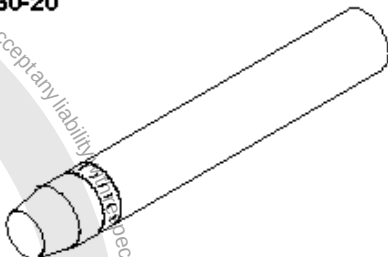
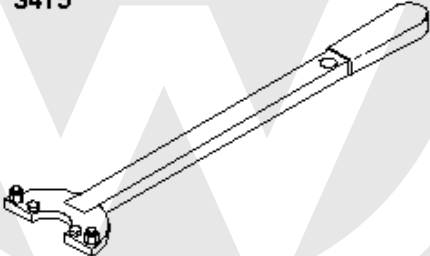
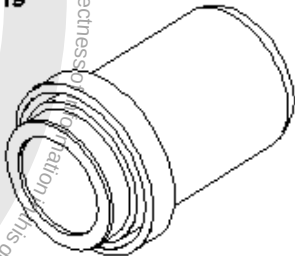
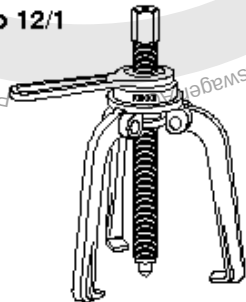
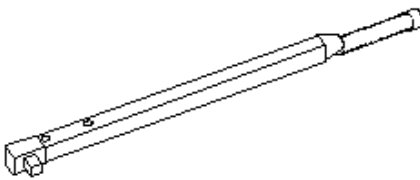


- Clamp flange shaft in vice with protective jaw covers.
- Use new retaining ring -A- to press old retaining ring out of groove in flange shaft.
- Drive in flange shaft using plastic mallet and, if necessary, a drift.
- Install drive shaft ➔ Running gear, axles, steering; Rep. gr. 42 ; Drive shaft; Removing and installing drive shafts .
- Checking gear oil level in rear final drive ➔ [page 67](#) .



4.4 Renewing seal for propshaft flange on rear final drive

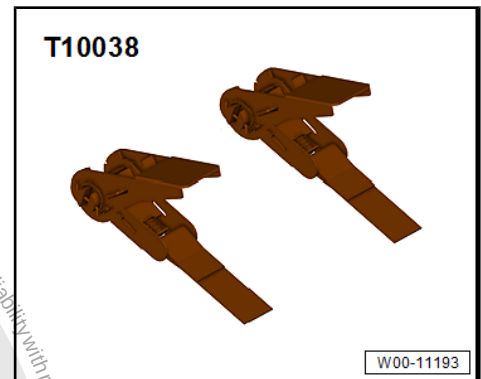
Special tools and workshop equipment required

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

- ◆ Removal tool - VW 681-
- ◆ Drift sleeve - 30-20-
- ◆ Counter-hold tool - 3415-
- ◆ Thrust piece - T10019-
- ◆ Puller - Kukko 12/1-



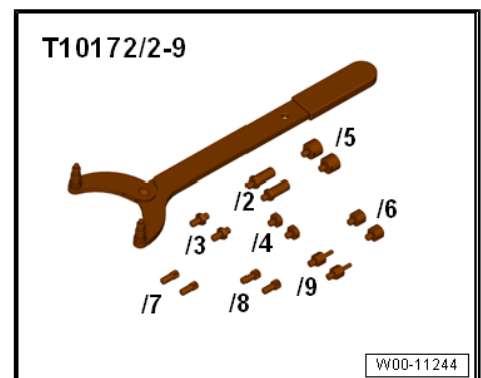
- ◆ Torque wrench - V.A.G 1601-
- ◆ Tensioning strap - T10038-



- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



- ◆ Counter-hold tool - T10172-



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

Removing

- Remove noise insulation ⇒ General body repairs, exterior;
Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Support front section of exhaust system with engine and gearbox jack - V.A.G 1383 A- .



- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



Note

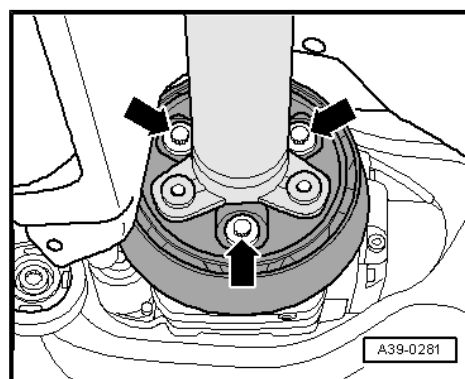
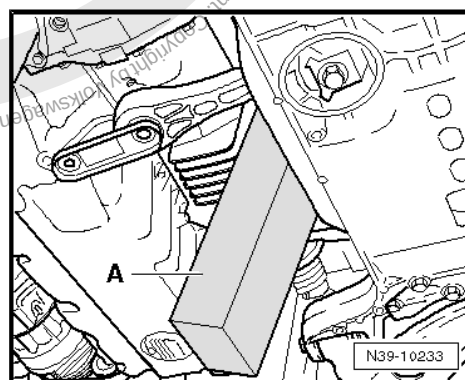
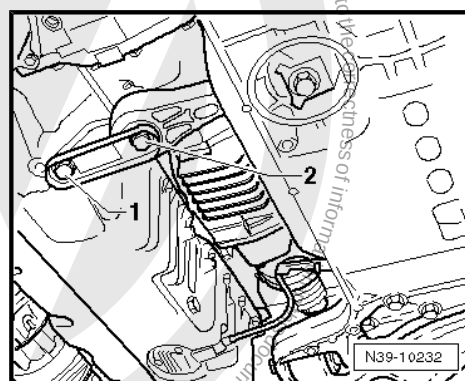
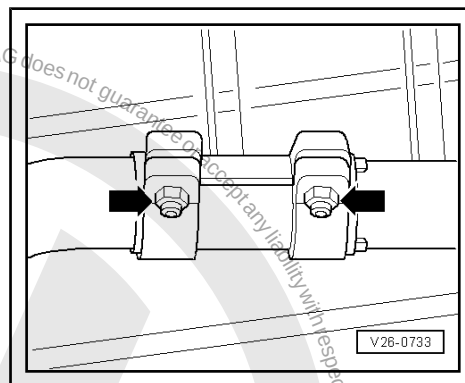
The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

- Unscrew bolts -1- and -2- of pendulum support.

- Press »engine and gearbox« slightly forwards and secure in position with an appropriate piece of wood -A-.

- Remove heat shield for centre tunnel beneath centre propshaft bearing ⇒ General body repairs, exterior, Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .

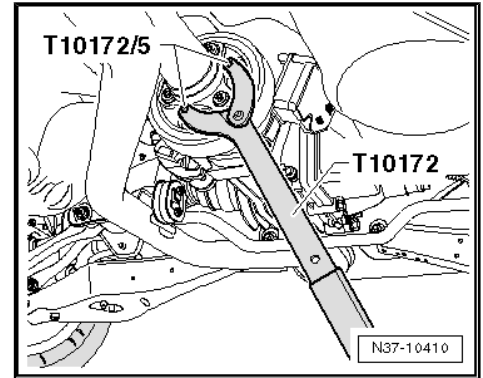
- Unbolt propshaft at rear from final drive -arrows-.





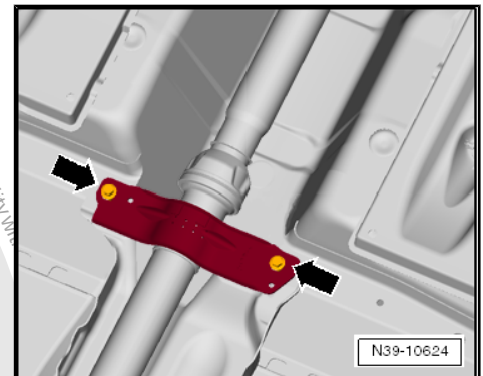
- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.

Sharan:

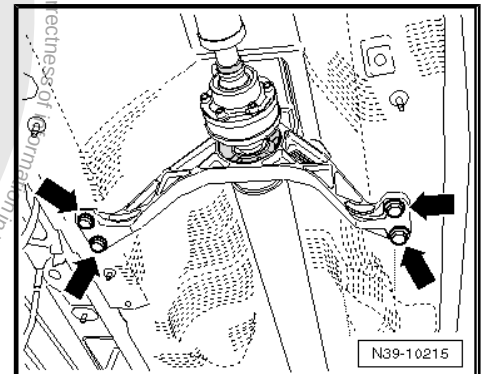


- Unbolt rear centre bearing -arrows-.

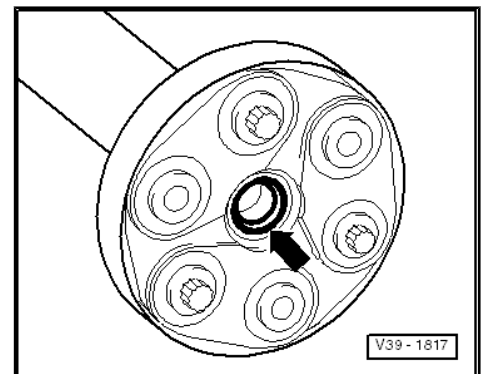
Continuation for all:



- Unscrew bolts for front bearing of centre propshaft -arrows-.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.

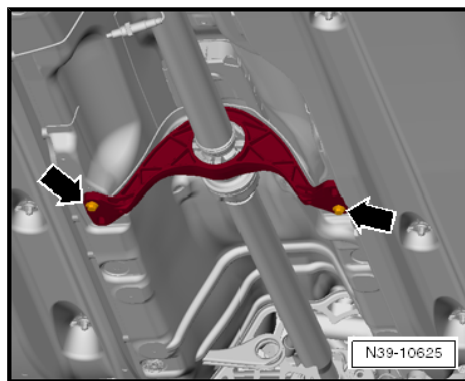


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.





- In order to avoid placing unnecessary strain on the flexible coupling, secure centre propshaft bearing to body using two bolts.

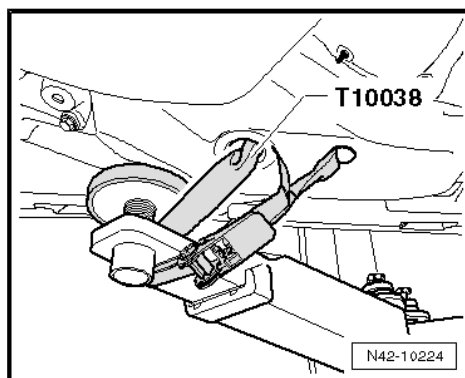


- Secure vehicle with tensioning straps - T10038- to lifting platform.



WARNING

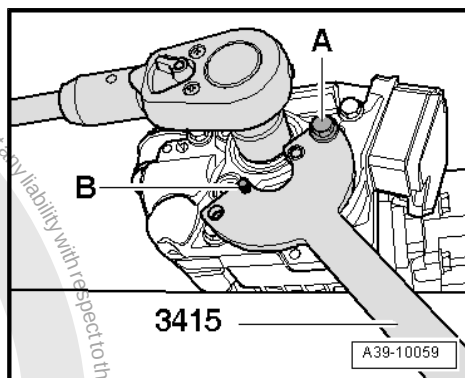
If the vehicle is not strapped down, it may slip off the lifting platform.



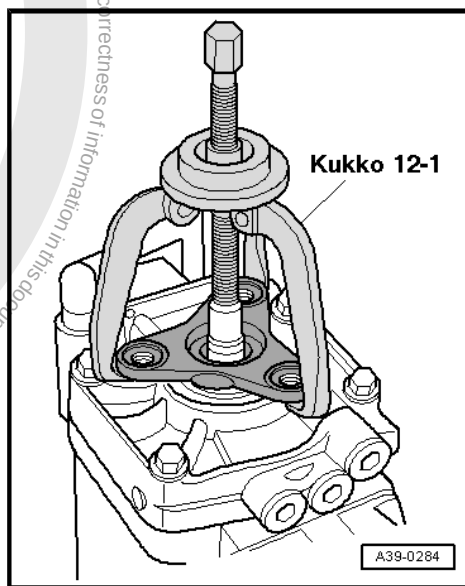
- Remove propshaft flange hexagon nut.

A - Hexagon bolts M10 x 25

B - Hexagon socket bolt M8 x 15 (screwed from back side into counterhold - 3415-).



- Pull off propshaft flange. Use puller - Kukko 12/1- if part is difficult to move.

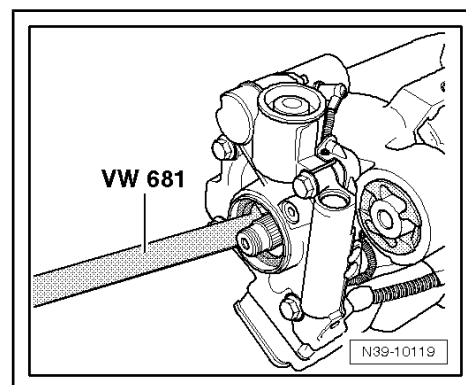




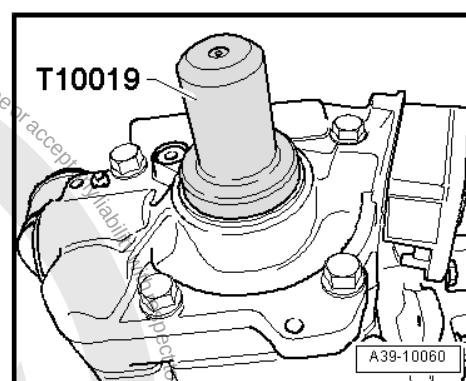
- Pull out seal using oil seal extractor lever - VW 681- .

Installing

- Lightly oil new seal around outer circumference and between sealing lips with all-wheel drive coupling fluid before installing.



- Drive in new oil seal to stop using thrust piece - T10019- . Do not cant oil seal in the process.
- Drive on propshaft flange using drift sleeve - 30 - 20- .



- Insert new hexagon nuts with locking fluid - D 000 600- and tighten.

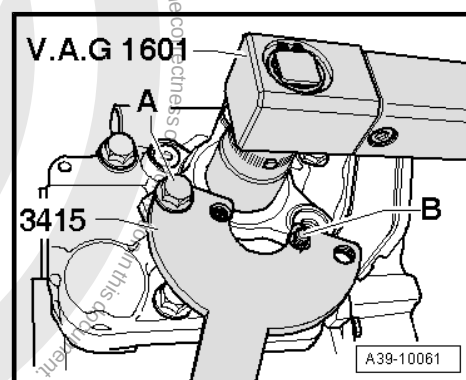
Specified torque: ➤ [page 86](#)

A - Hexagon bolts M10 x 20

B - Hexagon socket bolt M8 x 15 (screwed from back side into counterhold - 3415-).

Install in reverse order of removal, observing the following:

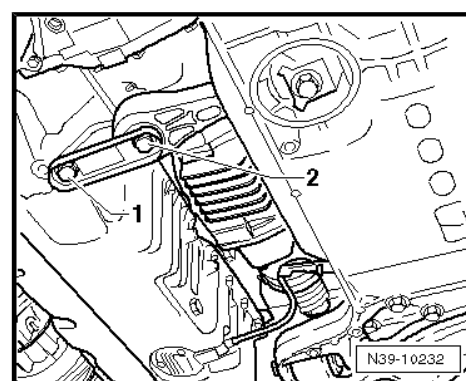
- Install all parts which were marked in relation to each other in their original positions.



Installing centre bearing free of tension.

- Align intermediate bearing in its elongated holes so that neither propshaft nor intermediate bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.
- Tighten bolts for propshaft and centre propshaft bearing.
Specified torques ➤ [page 113](#) .

- Bolt on pendulum support using »new« bolts. Specified torques ➤ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Assembly overview - subframe .
- Install heat shield for centre tunnel beneath centre propshaft bearing ➤ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .
- Install rear section of exhaust system ➤ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install noise insulation ➤ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .



- Check oil level of all-wheel drive coupling ➤ [page 90](#) .



5 All-wheel drive coupling

⇒ [“5.1 Assembly overview - all-wheel drive coupling”, page 86](#)

⇒ [“5.2 Checking function”, page 90](#)

⇒ [“5.3 Checking oil level in all-wheel drive coupling”, page 90](#)

⇒ [“5.4 Draining and filling high performance oil for all-wheel drive coupling”, page 91](#)

⇒ [“5.5 Removing and installing all-wheel drive coupling pump V181”, page 93](#)

⇒ [“5.6 Removing and installing all-wheel drive coupling”, page 97](#)

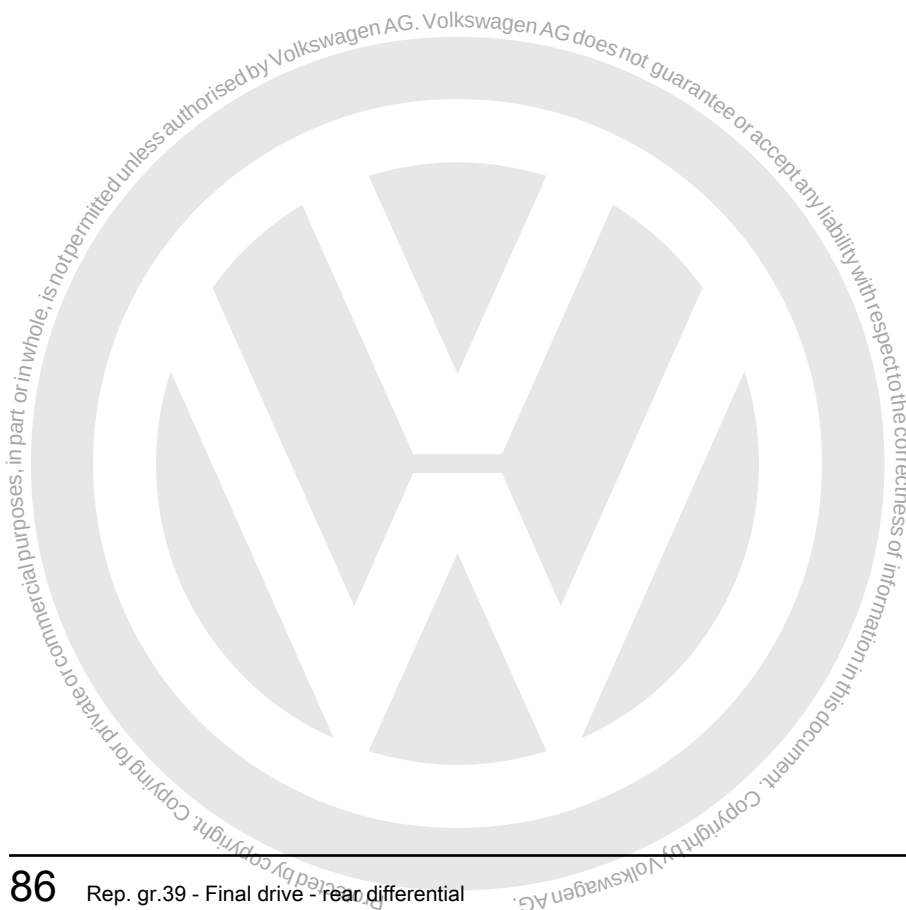
⇒ [“5.7 Removing and installing all-wheel drive control unit J492”, page 108](#)

5.1 Assembly overview - all-wheel drive coupling

⇒ [“5.1.1 Assembly overview - all-wheel drive coupling, generation IV”, page 86](#)

⇒ [“5.1.2 Assembly overview - all-wheel drive coupling, generation V”, page 88](#)

5.1.1 Assembly overview - all-wheel drive coupling, generation IV





1 - Seal

- ☐ Coat with all-wheel drive coupling fluid and insert.
- ☐ Always renew.

2 - Housing for all-wheel drive coupling

- ☐ Removing and installing all-wheel drive coupling
⇒ [page 97](#)

3 - All-wheel drive control unit - J492-

- ☐ For coupling opening control valve - N373- .
- ☐ Removing and installing
⇒ [page 108](#)

4 - Bolts

- ☐ 6 Nm

5 - Seal for propshaft flange

Renewing ⇒ [page 80](#)

6 - Flange for propshaft

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

7 - Nut

- ☐ 210 Nm
- ☐ Secure with locking fluid - D 000 600- .

8 - Bolts

- ☐ Qty. 4
- ☐ Specified torque: 50 Nm

9 - Sealing cover

- ☐ For oil filter housing
- ☐ It is not necessary to change the filter.

10 - Sealing cover

- ☐ For pressure accumulator



WARNING

Never open cover. Danger of injury!

11 - Seal

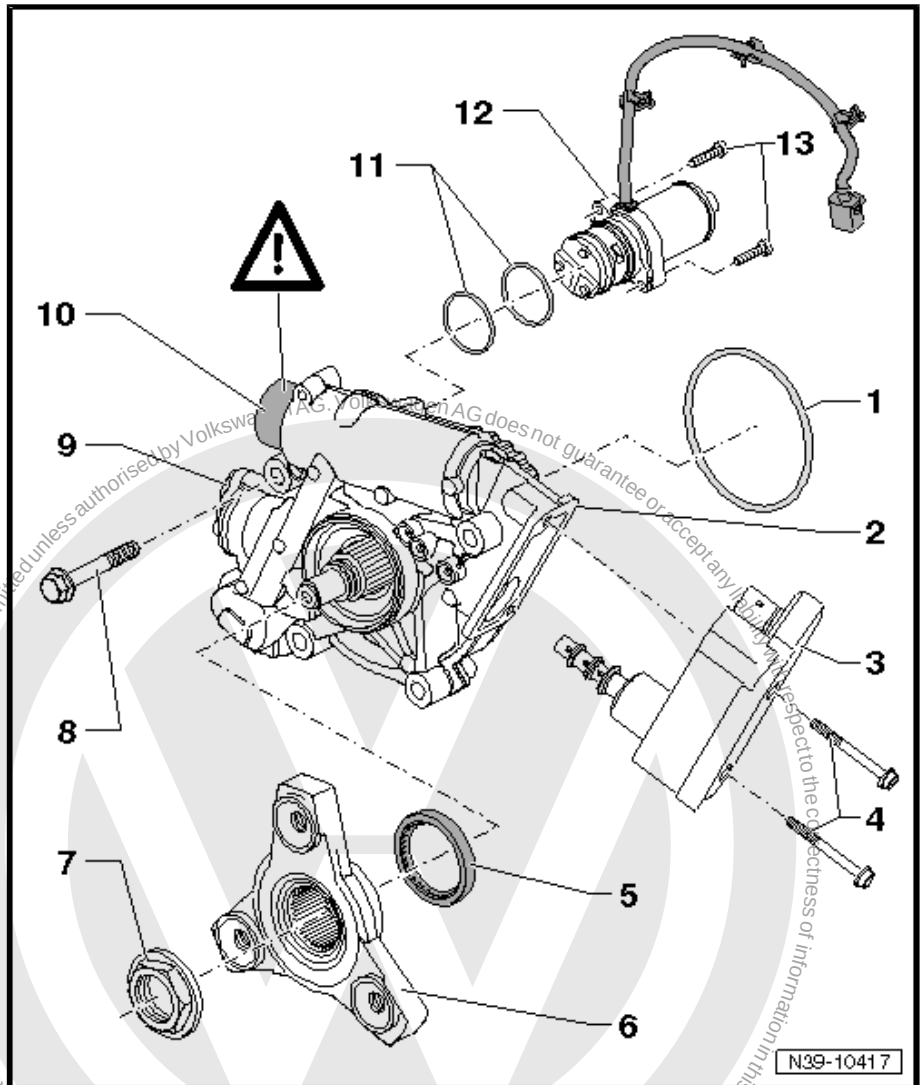
- ☐ Qty. 2
- ☐ Diameter 34 mm
- ☐ For all-wheel drive coupling pump - V181-
- ☐ Coat with all-wheel drive coupling fluid and insert.
- ☐ Always renew.

12 - All-wheel drive coupling pump - V181-

- ☐ Removing and installing ⇒ [page 93](#)

13 - Bolts

- ☐ 6 Nm





Assembly overview - control unit, generation IV

1 - All-wheel drive control unit - J492-

- ☐ Calibrated with coupling opening control valve - N373- .
- ☐ Always renew together with valve.
- ☐ Removing and installing
⇒ [page 108](#)

2 - Bolt, 6 Nm

3 - Cover

- ☐ With vulcanised seal
- ☐ Remains on control unit or housing of all-wheel drive coupling when control unit is removed.
- ☐ Always renew.

4 - Coupling opening control valve - N373-

- ☐ Calibrated with all-wheel drive control unit - J492- .
- ☐ Always renew together with control unit.
- ☐ Removing and installing
⇒ [page 108](#)

5 - Seal

- ☐ Observe proper seating of centring lips in the groove.
- ☐ Coat with all-wheel drive coupling fluid and insert.
- ☐ Always renew.

6 - Seal

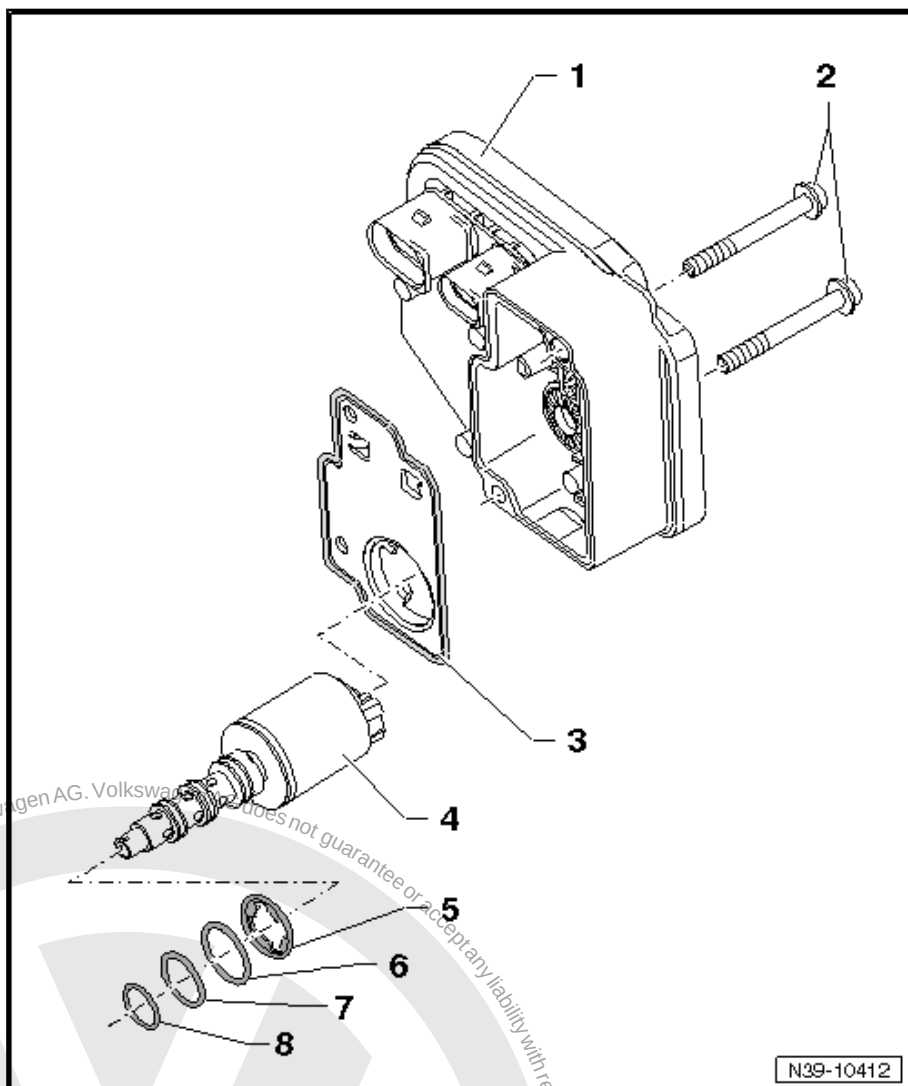
- ☐ Diameter 12 mm
- ☐ Coat with all-wheel drive coupling fluid and insert.
- ☐ Always renew.

7 - Seal

- ☐ Diameter 11 mm
- ☐ Coat with all-wheel drive coupling fluid and insert.
- ☐ Always renew.

8 - Seal

- ☐ Diameter 10 mm
- ☐ Coat with all-wheel drive coupling fluid and insert.
- ☐ Always renew.



5.1.2 Assembly overview - all-wheel drive coupling, generation V

All-wheel drive coupling is removed and installed with final drive in situ.



1 - O-ring

- ☐ Coat with high performance oil for all-wheel drive coupling and insert.
- ☐ Renew after all-wheel drive coupling has been removed

2 - All-wheel drive control unit - J492-

- ☐ Removing and installing ➔ [page 108](#)

3 - Bolts

- ☐ Qty. 2
- ☐ 9.5 ± 0.5 Nm

4 - Seal for propshaft flange

Renewing ➔ [page 80](#)

5 - Propshaft flange

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

6 - Nut

- ☐ Renew after removal
- ☐ Secure with locking fluid - D 000 600-
- ☐ 210 Nm

7 - Bolts

- ☐ Qty. 4
- ☐ 50 Nm

8 - Housing for all-wheel drive coupling

- ☐ Removing and installing all-wheel drive coupling ➔ [page 97](#)

9 - O-ring

- ☐ Qty. 2
- ☐ Diameter 43.5 mm
- ☐ For all-wheel drive coupling pump - V181-
- ☐ Coat with high performance oil for all-wheel drive coupling and insert.
- ☐ Always renew

10 - All-wheel drive coupling pump - V181-

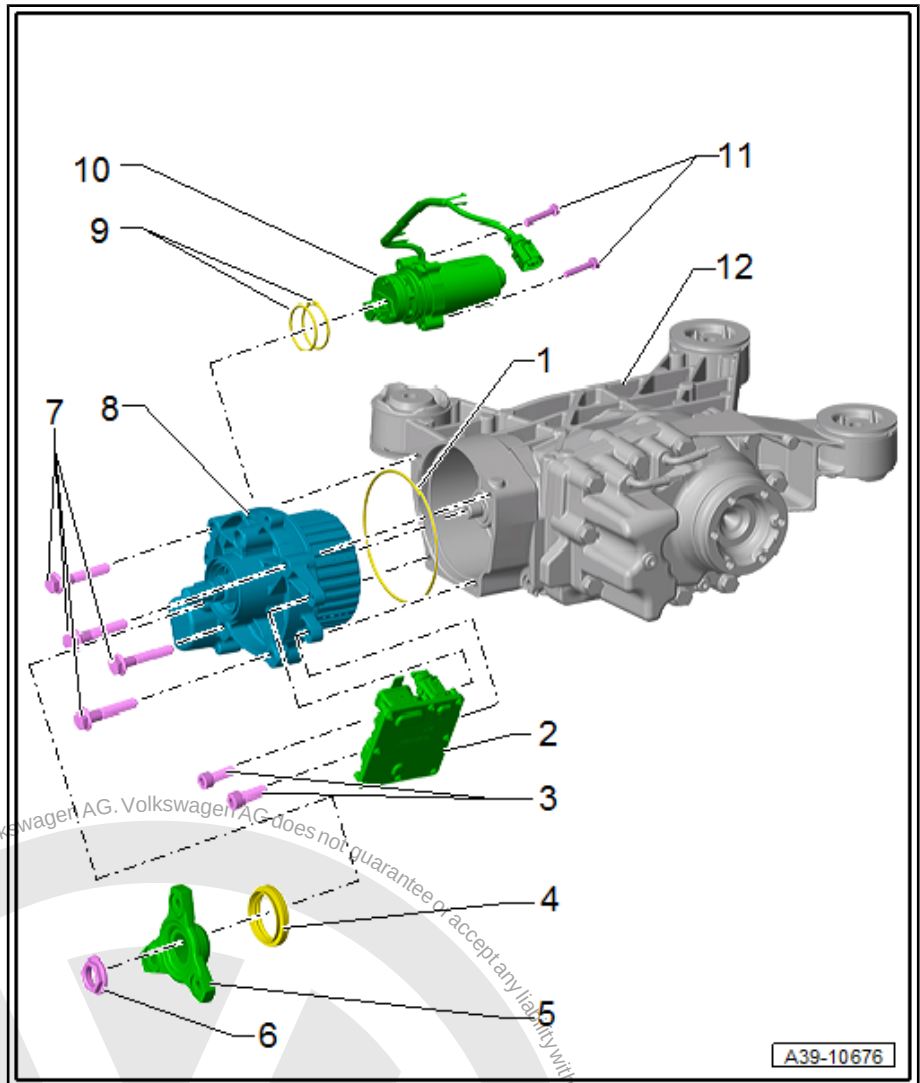
- ☐ Removing and installing ➔ [page 93](#)

11 - Bolt

- ☐ Qty. 2
- ☐ 9.5 ± 0.5 Nm

12 - Rear final drive

- ☐ Removing and installing ➔ [page 15](#)





5.2 Checking function



Note

All-wheel drive coupling is checked during a road test using Vehicle diagnosis and service information system - VAS 5052- .



WARNING

To avoid accidents, observe the
⇒ "1 Safety information", page 1 for measuring and road tests.

- Checking function ⇒ Vehicle diagnostic tester Guided functions.

Starting "Guided functions":

- Switch on ignition.
- Touch "Guided functions" section/button on screen.
- Select one after the other on the display of vehicle diagnostic tester:
 - ◆ Brand
 - ◆ Model
 - ◆ Model year
 - ◆ Version
 - ◆ Engine code
 - ◆ Confirm data entered.
 - ◆ 22 - All-wheel electronics
 - ◆ 22 - Final control diagnosis
- Start final control diagnosis and proceed by following the instructions on the display of vehicle diagnostic tester.

5.3 Checking oil level in all-wheel drive coupling

Fluid for all-wheel drive coupling is available as a replacement part ⇒ Electronic parts catalogue (ETKA) .

Special tools and workshop equipment required

- ◆ Not illustrated: Vehicle diagnostic tester
- ◆ Torque wrench - V.A.G 1331-
- ◆ Acid-resistant protective gloves

Conditions for testing

- Observe safety data sheet.
- The oil temperature must be between 20 and 40 °C.
- Vehicle is level.
- In order to perform the oil level check, the final drive must be in installation position.
- Read oil temperature ⇒ Vehicle diagnostic tester Guided functions.



Starting "Guided functions":

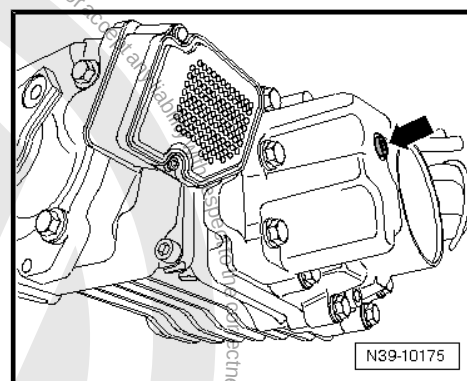
- Switch on ignition.
- Touch "Guided functions" section/button on screen.
- Select one after the other on the display of vehicle diagnostic tester:
 - ◆ Brand
 - ◆ Model
 - ◆ Model year
 - ◆ Version
 - ◆ Engine code
 - ◆ Confirm input data.
 - ◆ 22 - All-wheel electronics
 - ◆ 22 - Read measured value block
 - ◆ Oil temperature
- Read oil temperature.
- Oil temperature must be 20 to 40°C.

Check oil level.

- Unscrew oil filler plug - arrow-. (For sake of clarity, shown with final drive removed.)

Oil level is correct when all-wheel drive coupling is filled to lower edge or at least to within about 3 mm of lower edge of filler hole.

- Tighten bolt - arrow- to 15 Nm.
- If the oil level is not correct, top up oil ⇒ [page 92](#) .



5.4 Draining and filling high performance oil for all-wheel drive coupling

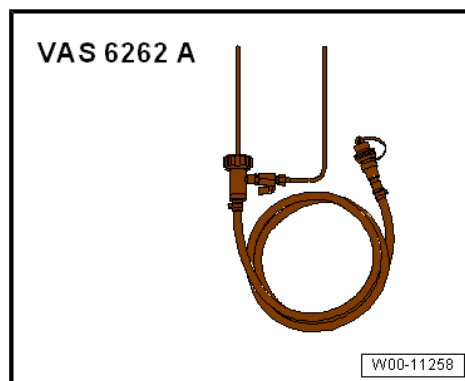
Special tools and workshop equipment required

- ◆ Used oil collector and extractor - V.A.G 1782-

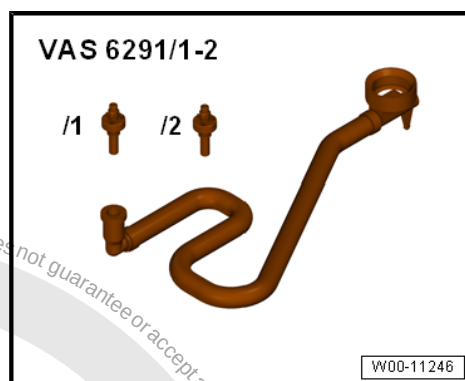




- ◆ Filling device - VAS 6262 A-



- ◆ Adapter - 6291/1-2-



- ◆ Not illustrated: Torque wrench - V.A.G 1331-
- ◆ Acid-resistant protective gloves

Draining oil

- Observe safety data sheet.
- Vehicle is level.



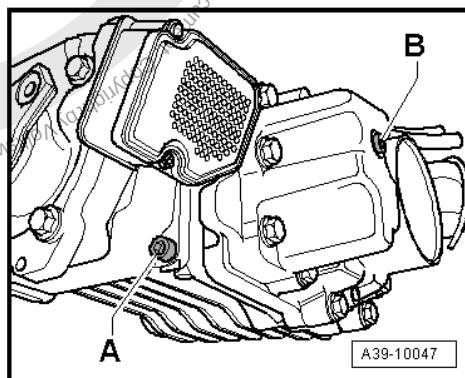
Caution

Risk of injury

- ***Wear acid-resistant gloves***

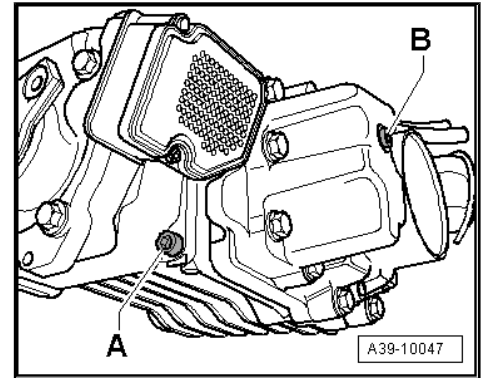
- Position used oil collection and extraction unit - V.A.G 1782- under final drive.
- Unscrew drain plug -A- and drain fluid for all-wheel drive coupling completely.
- Install drain plug -A- with new seal and tighten to 30 Nm.

Topping up with oil



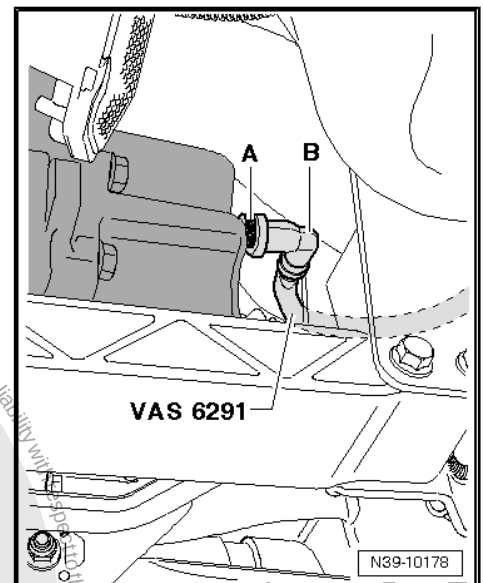


- Unscrew oil filler plug -B-. (For sake of clarity, shown with final drive removed.)

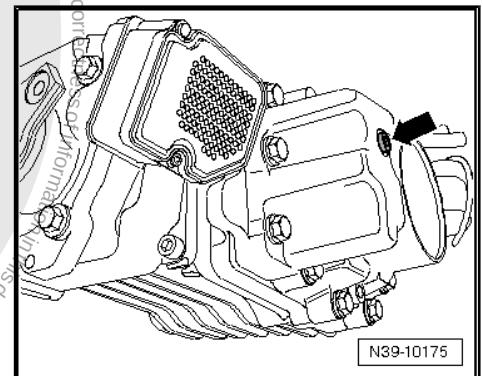


- Screw adapter - 6291/1-2- -A- in to stop.
- Engage elbow -B- in adapter -A-.
- Using filling device - VAS 6262 A- , add enough oil so that it runs out between the adapter of the filling device and the final drive housing.
- Remove filling device and adapter; excess oil may still run out.

Oil level is correct when all-wheel drive coupling is filled to lower edge of filler hole.



Screw in plug -arrow- and tighten. Specified torque: 15 Nm



5.5 Removing and installing all-wheel drive coupling pump - V181-

⇒ ["5.5.1 Removing and installing all-wheel drive coupling pump V181 , generation IV", page 93](#)

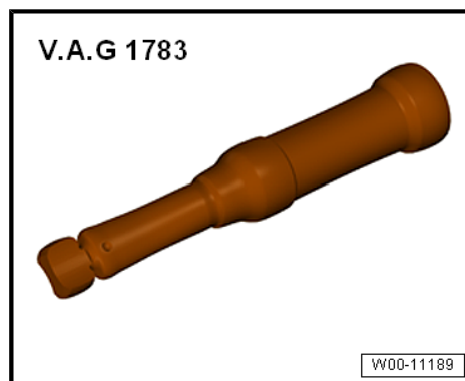
⇒ ["5.5.2 Removing and installing all-wheel drive coupling pump V181 , generation V", page 95](#)

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

Special tools and workshop equipment required

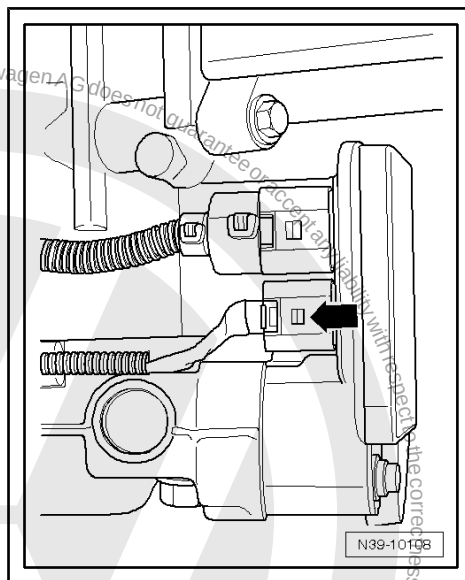


- ◆ Torque wrench 2 ... 10 Nm - V.A.G 1783-



Removing

- Switch off ignition.
- Drain all-wheel drive coupling fluid ➔ [page 91](#)
- Pull connector -arrow- for pump off control unit.
- Pull wiring harness off housing.
- Place drip tray under final drive.



- Remove securing bolts -1- for pump.
- Pull out pump -arrow- from all-wheel drive coupling housing.

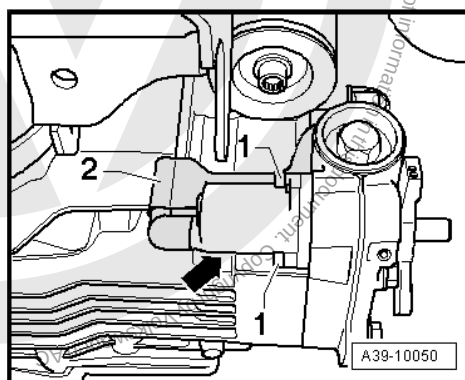
Installing

Install in the reverse order of removal, observing the following.



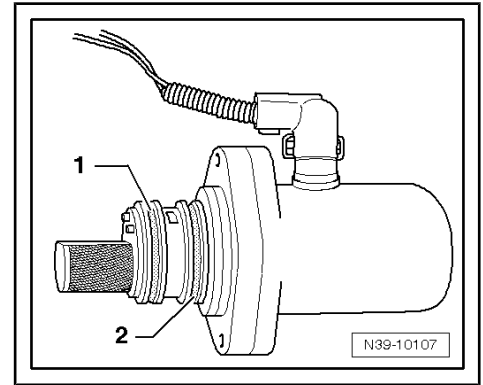
Note

If a new all-wheel drive coupling pump - V181- is to be installed, a basic setting must be performed after installation.



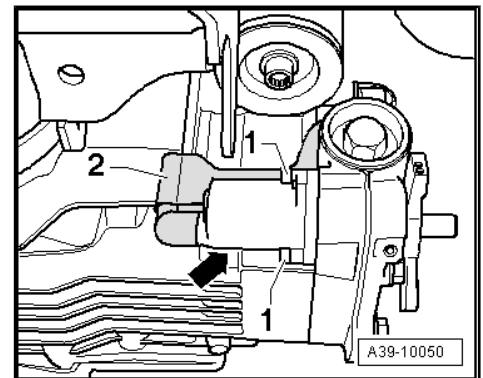


- Renew O-rings -1- and -2-.
- Lightly coat O-rings -1- and -2- with all-wheel drive coupling fluid .

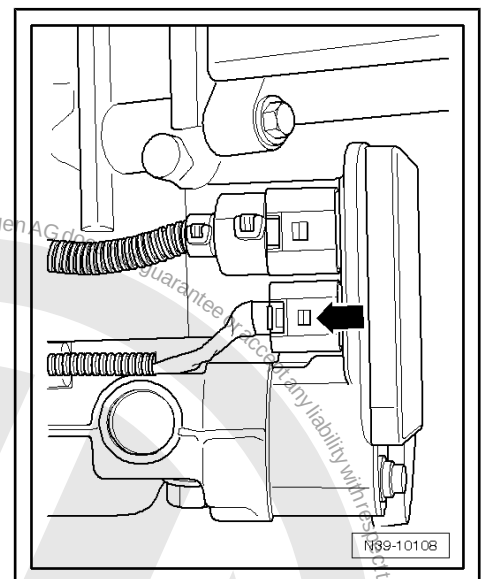


- Press pump -arrow- into all-wheel drive coupling housing onto stop.
- Tighten bolts -1-.

Specified torque: 6Nm



- Clip wiring harness to top of all-wheel drive coupling and join connector -arrow- to control unit.
- Replenish with new all-wheel drive coupling fluid ➔ [page 91](#) .
- Perform basic setting of “new” all-wheel drive coupling pump - V181- following installation.

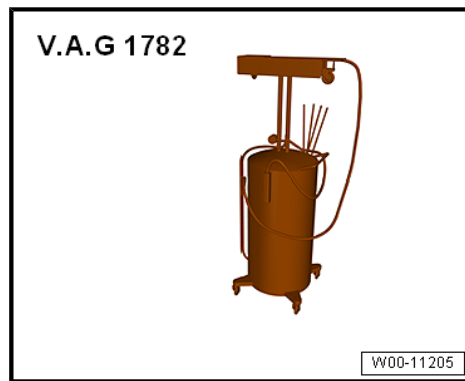


5.5.2 Removing and installing all-wheel drive coupling pump - V181- , generation V

Special tools and workshop equipment required

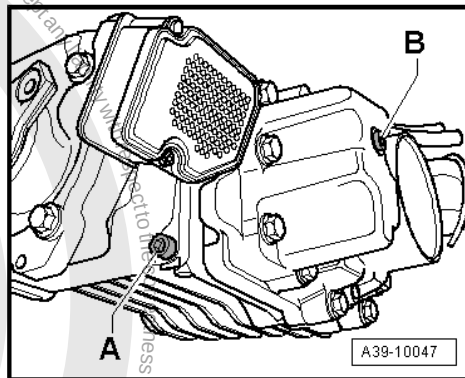


- ◆ Used oil collector and extractor - V.A.G 1782-

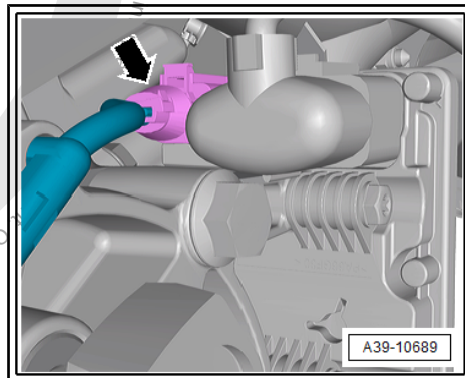


Removing

- Switch off ignition.
- Position used oil collection and extraction unit - V.A.G 1782- under rear final drive.
- Unscrew drain plug -A- and drain high performance fluid for all-wheel drive coupling completely.
- Install drain plug -A- with new seal and tighten to 30 Nm.



- Pull off electrical connector -arrow- for all-wheel drive coupling pump from all-wheel drive control unit .



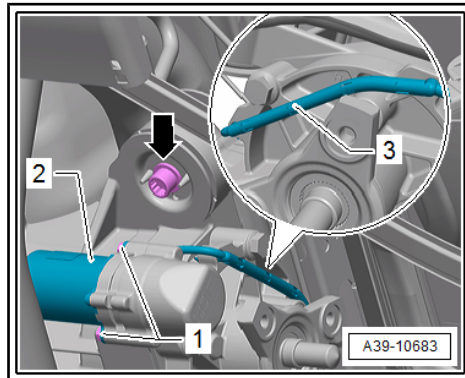
- Unclip wiring harness -3- for all-wheel drive coupling pump from housing and move aside.



Note

Disregard bolt -arrow-.

- Position used oil collection and extraction unit - V.A.G 1782- under rear final drive.
- Unscrew bolts -1- of all-wheel drive coupling pump .
- Pull out all-wheel drive coupling pump -2- from housing of all-wheel drive coupling.





Installing

Install in the reverse order of removal, observing the following.



Note

If a new all-wheel drive coupling pump - V181- is to be installed, a basic setting must be performed after installation.

- When installing removed all-wheel drive coupling pump again, renew O-rings -1- and -2-.
- Lightly coat O-rings -1- and -2- with high performance fluid for all-wheel drive coupling .
- Push all-wheel drive coupling pump -2- into housing for all-wheel drive coupling onto stop. When doing so, ensure that the wiring harness is properly routed -3-.



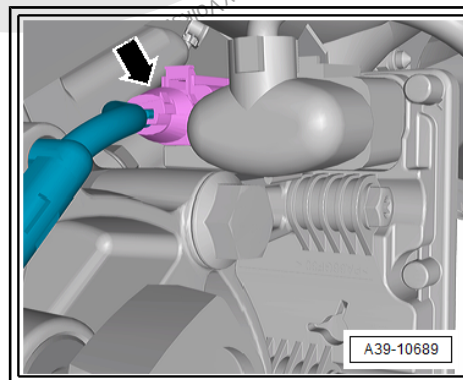
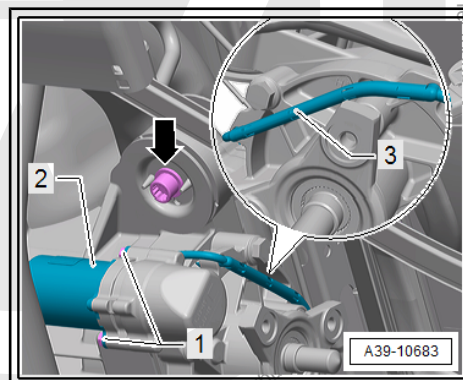
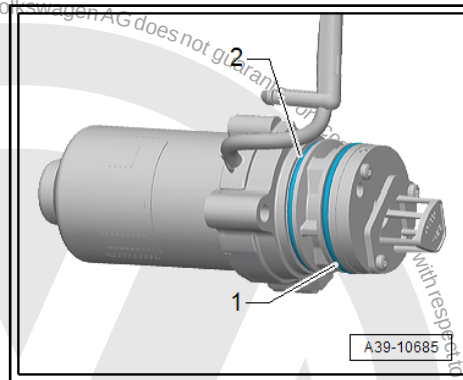
Note

Disregard bolt -arrow-.

- Tighten bolts -1-.
- Fit electrical connector -arrow- for all-wheel drive coupling pump on all-wheel drive control unit .
- Replenish all-wheel drive coupling with high performance fluid for all-wheel drive coupling and check fluid level ➔ [page 91](#) .
- Perform basic setting of “new” all-wheel drive coupling pump - V181- following installation.

Specified torques

- ♦ All-wheel drive coupling pump to all-wheel drive coupling
➔ [Item 11 \(page 89\)](#) .



5.6 Removing and installing all-wheel drive coupling

➔ [“5.6.1 Removing and installing all-wheel drive coupling, generation IV”, page 97](#)

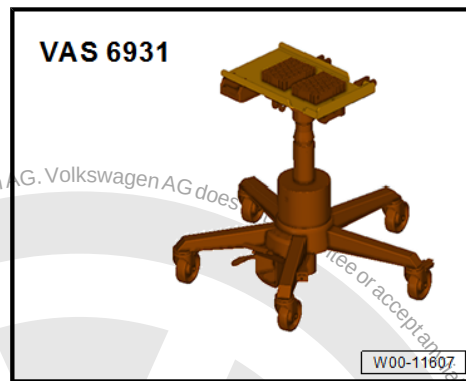
➔ [“5.6.2 Removing and installing all-wheel drive coupling, generation V”, page 103](#)

5.6.1 Removing and installing all-wheel drive coupling, generation IV

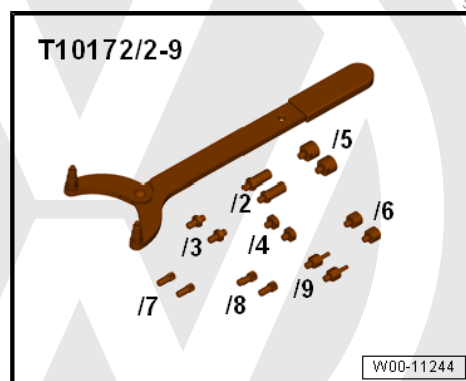
Special tools and workshop equipment required



- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



- ◆ Counter-hold tool - T10172-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-

Removing



Note

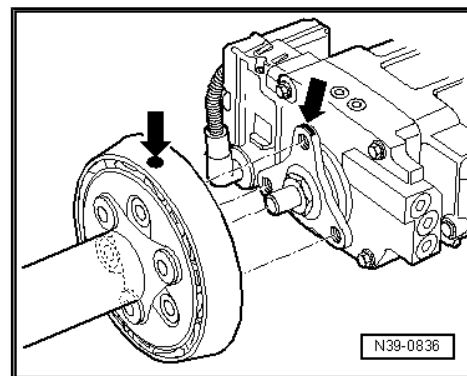
- ◆ *A twin pillar lifting platform should be used when working on the propshaft.*
- ◆ *Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.*
- ◆ *Keep propshaft straight; store and transport fully extended only.*

- Drain all-wheel drive coupling fluid ➔ [page 91](#)

The procedure described below is only applicable for reinstallation of previously removed parts.

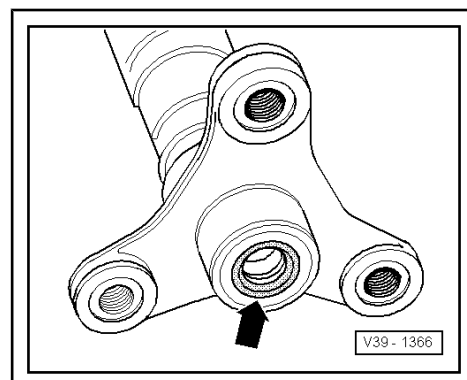


- Before removal, check if there are coloured marks on flexible coupling, on flange of final drive and on propshaft flange -arrows-. If not, mark installation position of flexible coupling -arrows-.



Note

- ◆ Do not damage seals in propshaft flanges -arrow- during removal and installation.
- ◆ Renew propshaft if damaged.
- ◆ Do not cant rear propshaft tube; push horizontally onto centring pin.
- ◆ All parts of propshaft which have been marked relative to each other must be reinstalled in the same positions.

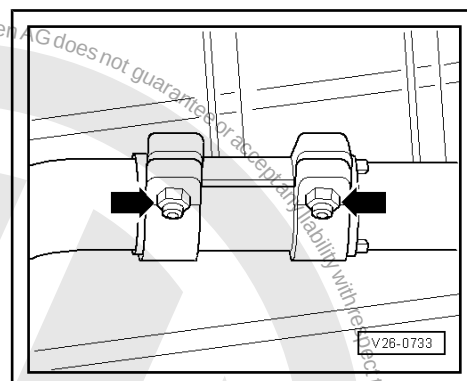


- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Support front section of exhaust system with engine and gear-box jack - V.A.G 1383 A- .
- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/ silencers; Assembly overview - silencer

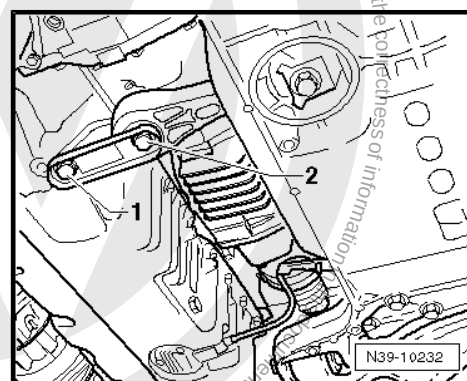


Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

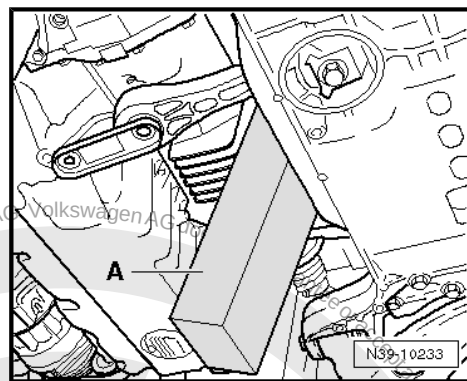


- Unscrew bolts -1- and -2- of pendulum support.

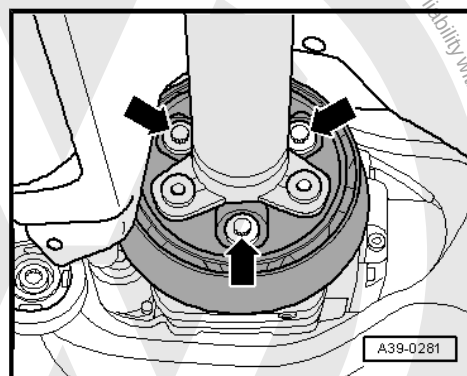




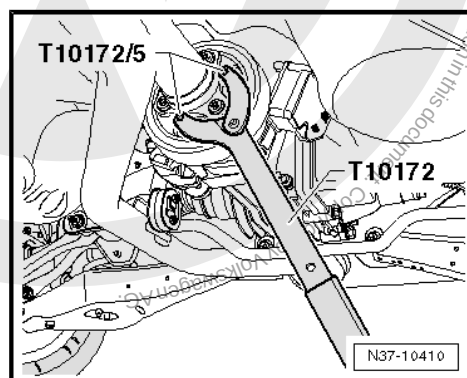
- Press »engine and gearbox« slightly forwards and secure in position with an appropriate piece of wood -A-.
- Remove heat shield for centre tunnel beneath centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .



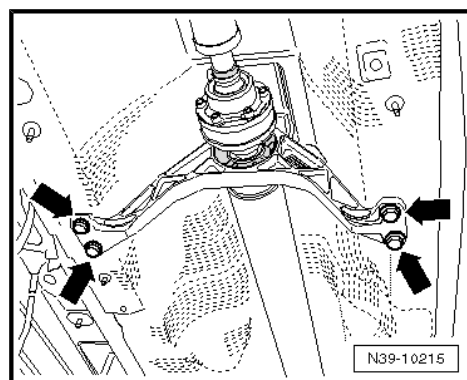
- Unbolt flexible coupling with vibration damper from rear final drive -arrows-.



- Counterhold with counterhold tool -T10172- when loosening or tightening bolts.

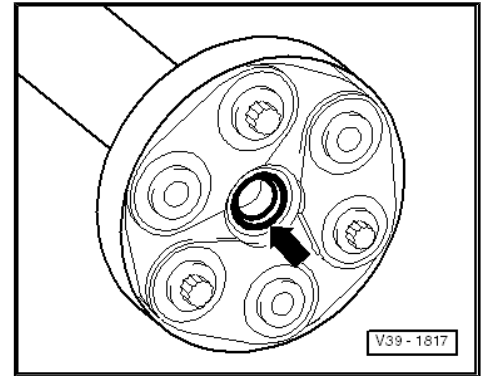


- Unscrew centre propshaft bearing bolts -arrows-.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.

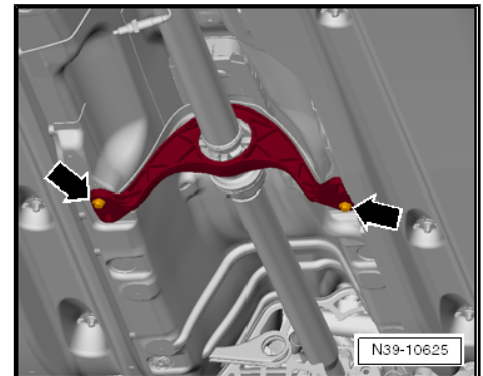




- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



- After propshaft has been pulled off rear final drive secure centre bearing on body using two bolts -arrows-. This prevents the flexible coupling from being unnecessarily exposed to strain.



- Separate connector -A- on four-wheel drive control unit - J492- .

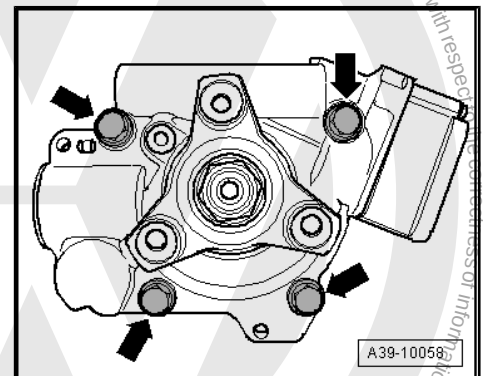


- Unscrew securing bolts -arrows- and pull out all-wheel drive coupling from rear final drive.

Installing

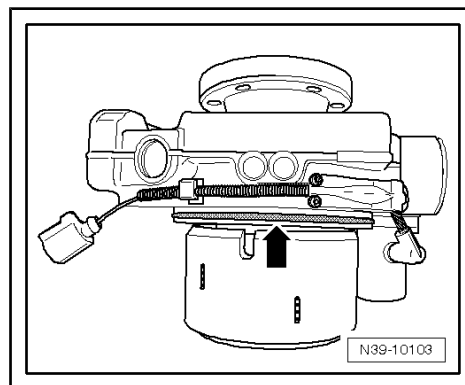
Install in the reverse order of removal, observing the following.

- Install all parts which were marked in relation to each other in their original positions.



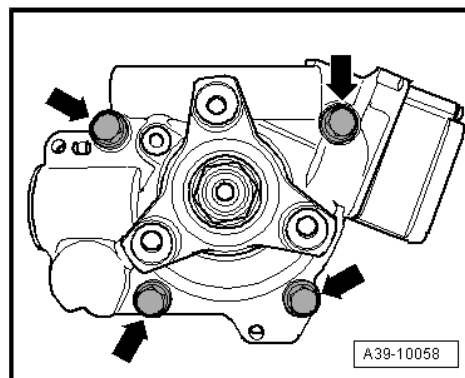


- Insert new O-ring -arrow- and lightly oil with all-wheel drive coupling fluid .



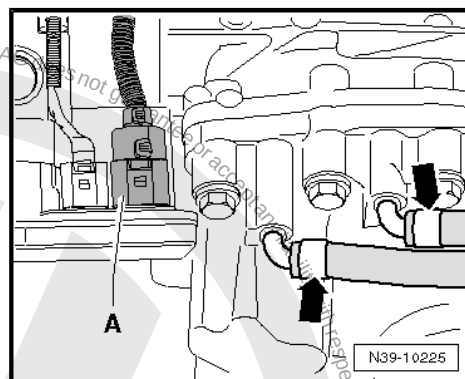
- Insert all-wheel drive coupling in rear final drive.
- Tighten bolts -arrow-.

Specified torque: ➔ [Item 7 \(page 89\)](#)

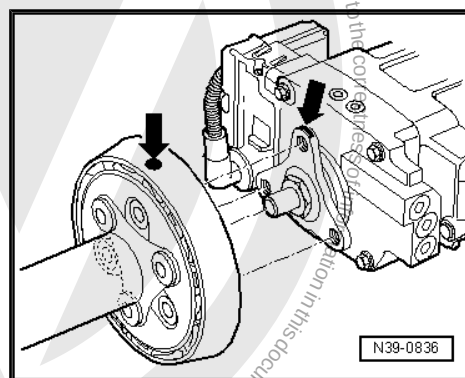


- Join connector -A- to four-wheel drive control unit - J492- .

The procedure described below is only applicable for reinstallation of previously removed parts.



- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align.

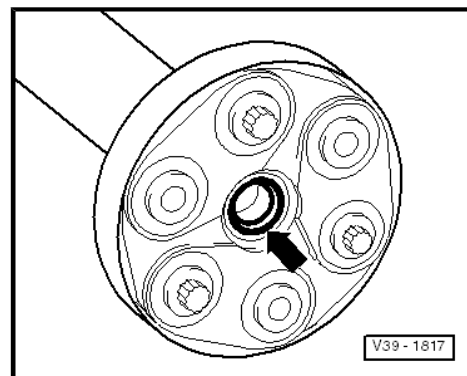




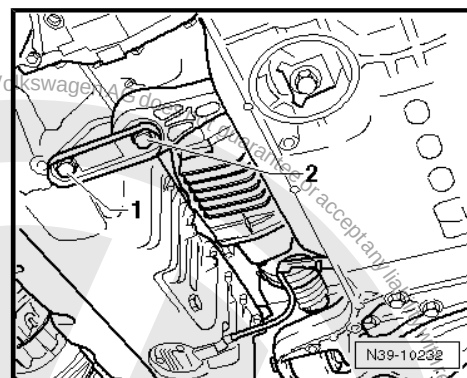
- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

Installing centre bearing free of tension.

- Align centre bearing in its elongated holes so that neither propshaft nor centre bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.



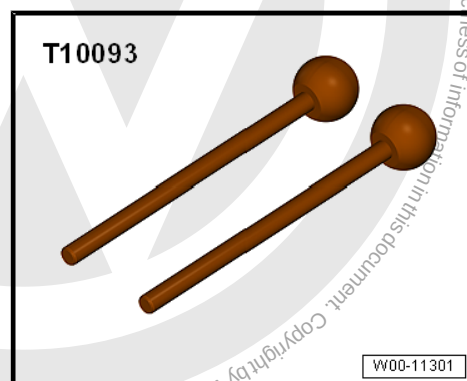
- Attach pendulum support to gearbox with new bolts -1- and -2- and tighten ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly mountings .
- Tighten propshaft and centre bearing bolts. Specified torques ⇒ [page 113](#) .
- Continue installation in reverse order of removal.
- Replenish with new all-wheel drive coupling fluid ⇒ [page 91](#) .



5.6.2 Removing and installing all-wheel drive coupling, generation V

Special tools and workshop equipment required

- ◆ Guide pins - T10093-

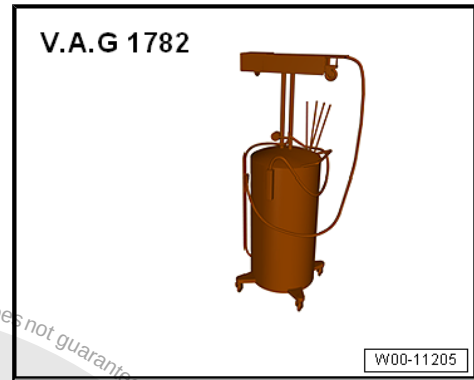


- ◆ Counter-hold tool - T10172-





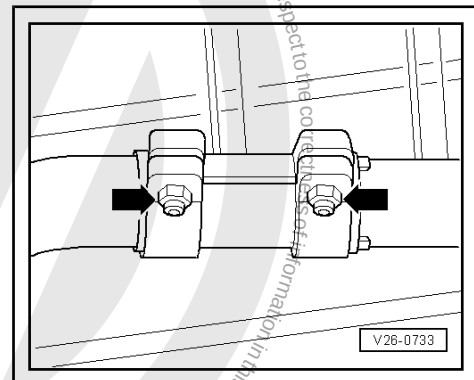
- ◆ Used oil collector and extractor - V.A.G 1782-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-

Removing

- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



- Insert a pipe or tyre lever -3- into front exhaust pipe -1- and rest on tunnel cross member -2-.

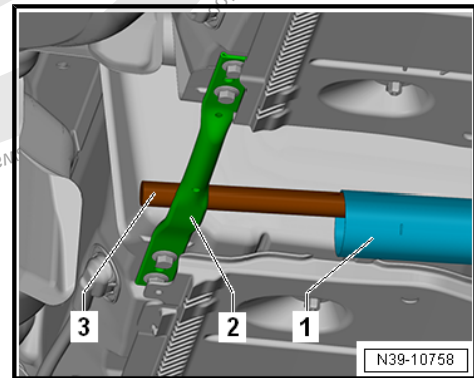


Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

Golf, Passat, Sharan:

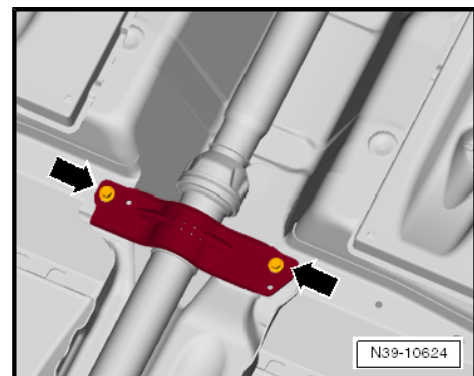
- Remove heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .



Sharan:

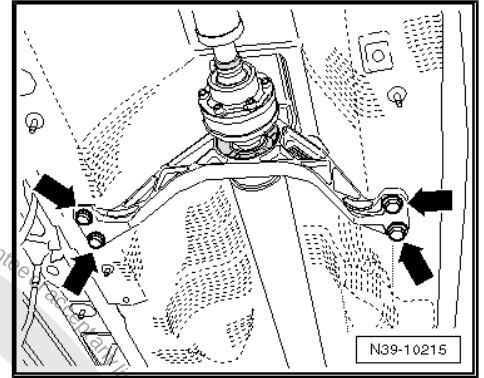
- Unbolt rear centre bearing -arrows-.

Continuation for all:

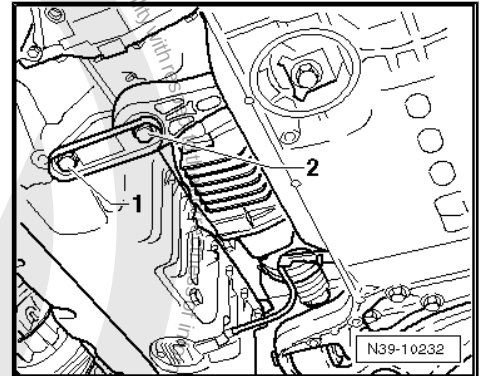




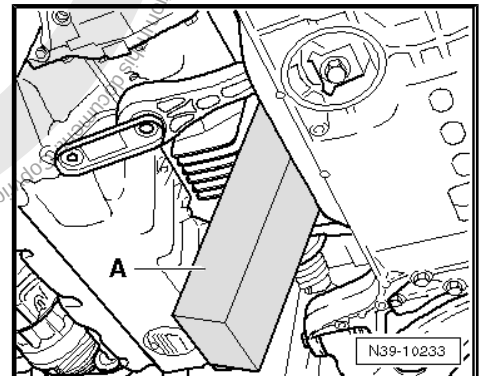
- Loosen bolts -arrows- for front centre propshaft bearing, but do not remove them.



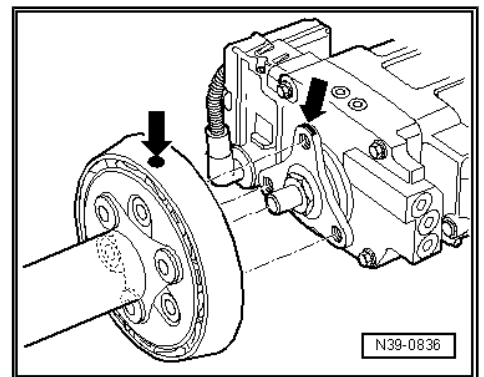
- Unscrew bolts -1- and -2- of pendulum support.



- Press »engine and gearbox« slightly forwards and secure in position with an appropriate piece of wood -A-.

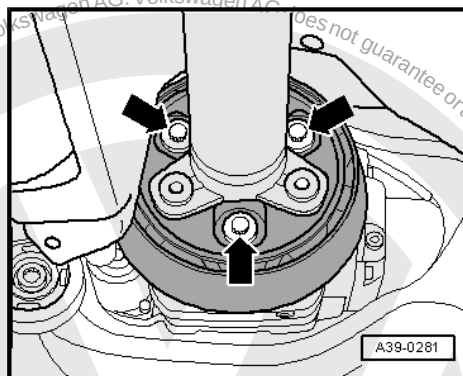


- Check whether there is a factory marking (paint dot) on the flexible coupling and on the flange for the propshaft on the rear final drive -arrows-.
- If there is no marking, mark position of flexible coupling relative to flange for propshaft on rear final drive.

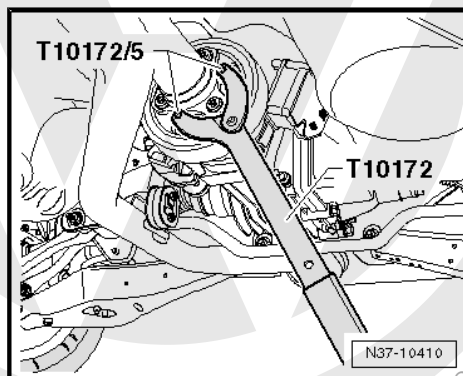




- Unscrew bolts -arrows- securing propshaft to rear final drive.



- For loosening screw joints of propshaft, counterhold at rear final drive with counterhold tool - T10172- and adapter - T10172/5- .



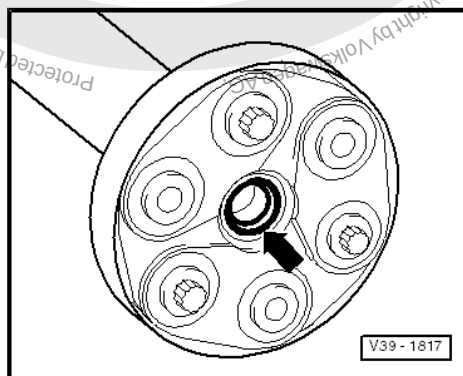
- Pull propshaft off centring pin on rear final drive, pressing propshaft slightly towards front. To do so, unscrew bolts on centre propshaft bearing if necessary.



Caution

Risk of damage to seal -arrow- in propshaft flange.

- ◆ Pull propshaft horizontally off centring pin.



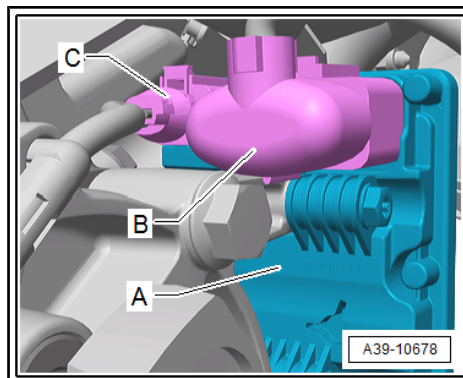
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.
- Separate electrical connector -B- on all-wheel drive control unit - J492- -A-.



Note

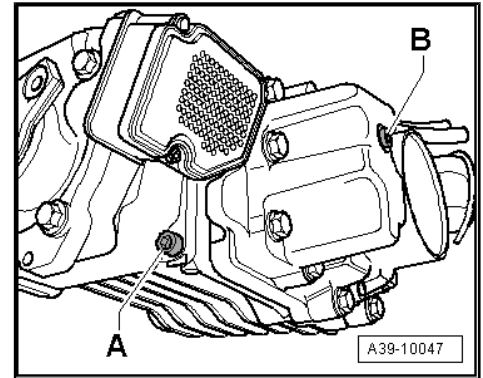
Do not pull off electrical connector -C-.

- Position used oil collection and extraction unit - V.A.G 1782- under rear final drive.

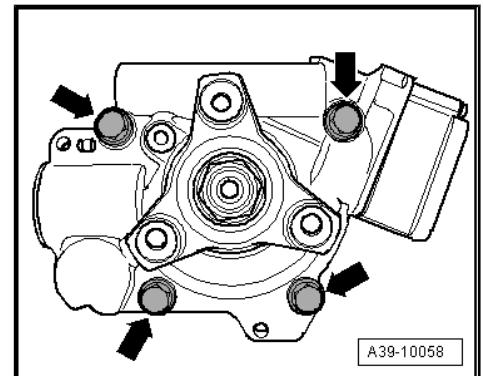




- Unscrew drain plug -A- and drain high performance fluid for all-wheel drive coupling completely.
- Install drain plug -A- with new seal and tighten to 30 Nm.



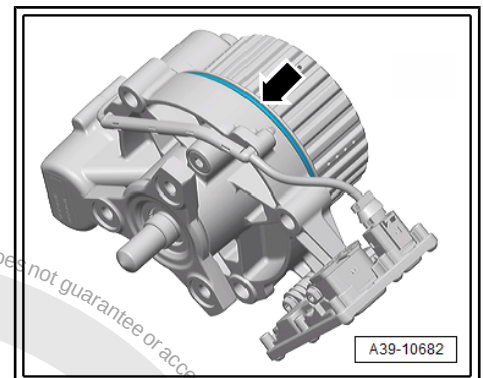
- Unscrew securing bolts -arrows- and pull out all-wheel drive coupling from rear final drive.



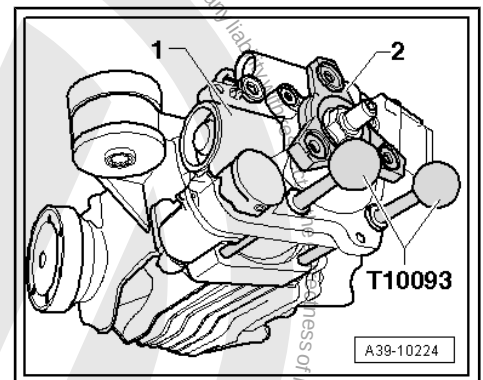
Installing

Install in the reverse order of removal, observing the following.

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

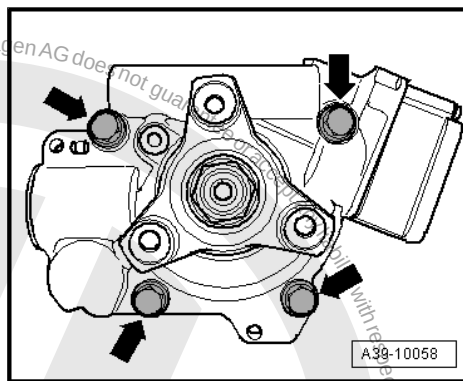


- Insert all-wheel drive coupling -1- in rear final drive. In order to obtain exact guidance, screw in guide pins - T10093- .
- Turn propshaft flange -2- and insert all-wheel drive coupling as far as it will go.





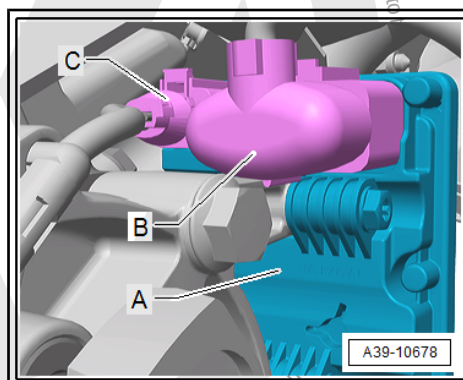
- Tighten bolts -arrows- to specified torque.



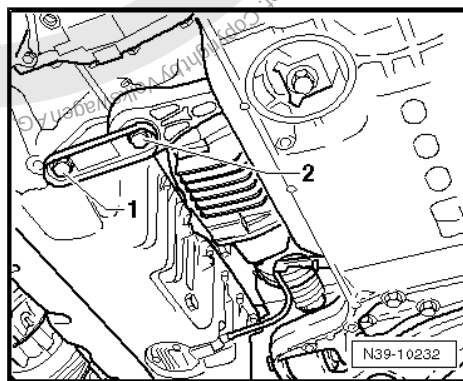
- Push electrical connector -B- onto all-wheel drive control unit - J492- -A-.

Electrical connector -C- must also be pushed on.

- Attach propshaft to rear final drive ⇒ [page 116](#) .



- Attach pendulum support to gearbox with new bolts -1- and -2- and tighten ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly mountings .
- If removed, install heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Install exhaust system and align it free of tension ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Replenish all-wheel drive coupling with high performance fluid for all-wheel drive coupling and check fluid level ⇒ [page 91](#) .



Specified torques

- ◆ Drain plug for all-wheel drive coupling ⇒ [page 91](#)
- ◆ All-wheel drive coupling to final drive ⇒ [Item 7 \(page 89\)](#)

5.7 Removing and installing all-wheel drive control unit - J492-

⇒ [“5.7.1 Removing and installing all-wheel drive control unit J492, generation IV”, page 108](#)

⇒ [“5.7.2 Removing and installing all-wheel drive control unit J492, generation V”, page 112](#)

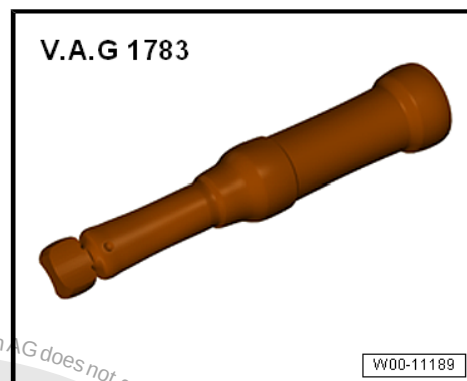
5.7.1 Removing and installing all-wheel drive control unit - J492- , generation IV

Special tools and workshop equipment required

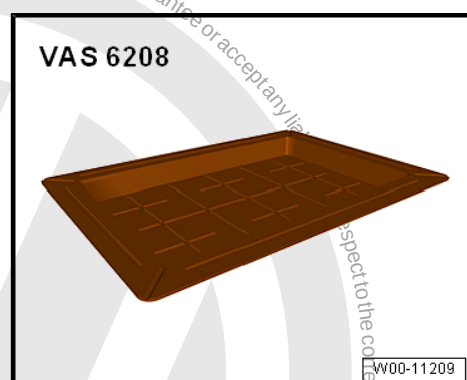
- ◆ Hexagon key 4 mm



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

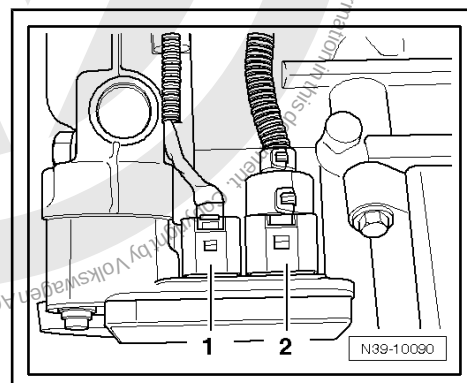


- ◆ Drip tray for workshop hoist - VAS 6208-

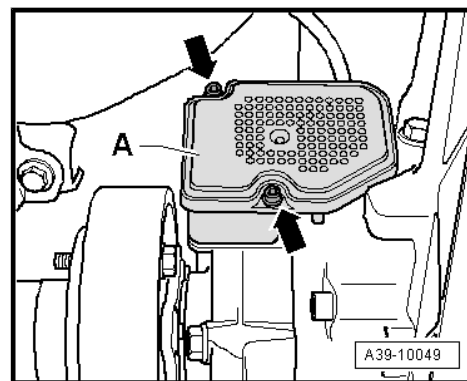


Removing

- Switch off ignition.
- Separate connectors -1- and -2- of control unit on top.
- Place drip tray under final drive.

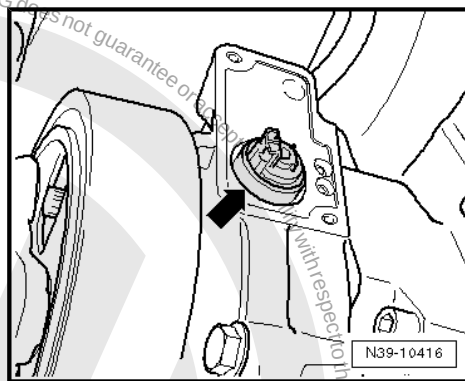


- Remove bolts -arrows-
- Carefully remove control unit -A-.





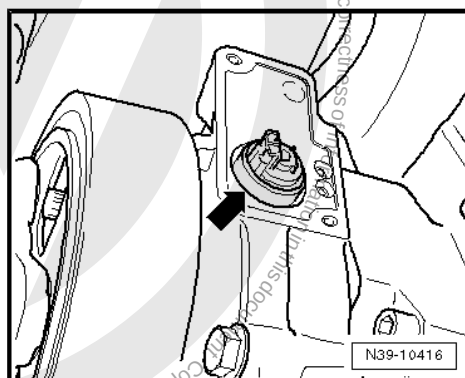
- If necessary, remove cover ⇒ **Item 3 (page 88)** from all-wheel drive coupling housing, holding valve -arrow- securely.



- Cover coupling opening control valve - N373- -arrow- with a cloth, grasp valve body with pliers and pull it out.

Installing

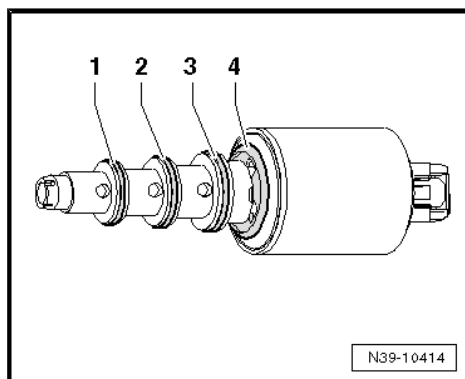
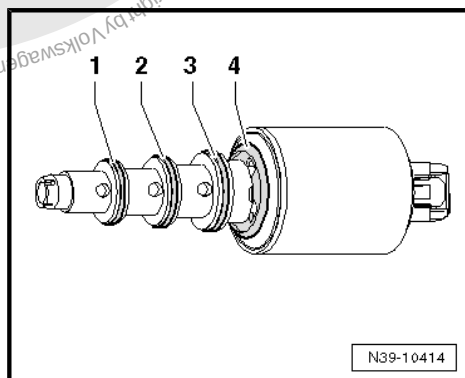
Install in the reverse order of removal, observing the following.



Note

Valve seals have different inner diameters.

- ◆ -1- Inner diameter 10 mm
 - ◆ -2- Inner Ø 11 mm
 - ◆ -3- Inner diameter 12 mm
 - ◆ -4- Seal on valve body
- First moisten seal -1- with Haldex oil and set coupling opening control valve - N373- .
 - Then seals -2-, -3- and -4-.
 - Press centring lips (qty. 4) of seal -4- into groove.



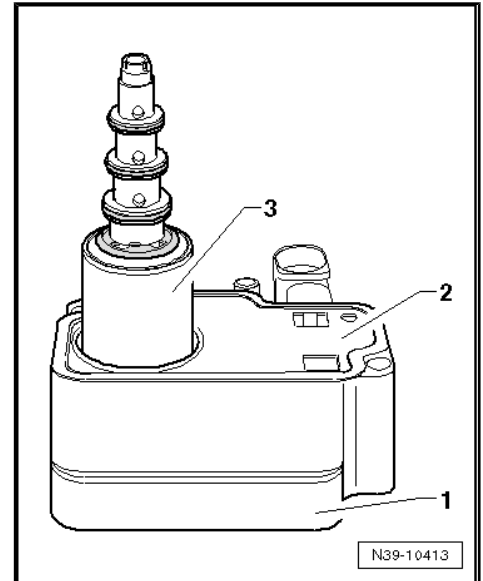


- Set new cover -2- on control unit -1-.



Note

The cover fits in only one position.

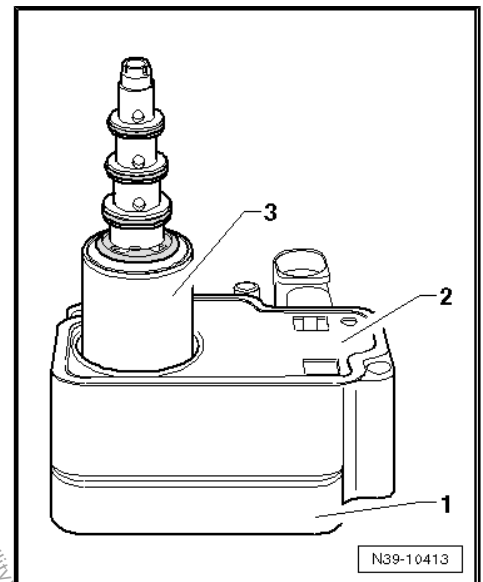


- Insert coupling opening control valve - N373- -3- into control unit -1-.



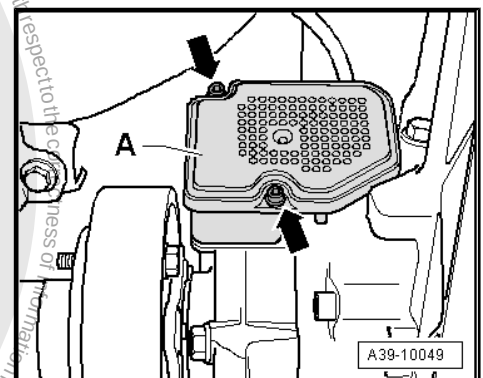
Note

The valve fits only in one position.



Carefully set control unit -A- in place and tighten bolts -arrows- to specified torque ➤ [Item 2 \(page 88\)](#) .

- Check oil level of all-wheel drive coupling ➤ [page 90](#) .

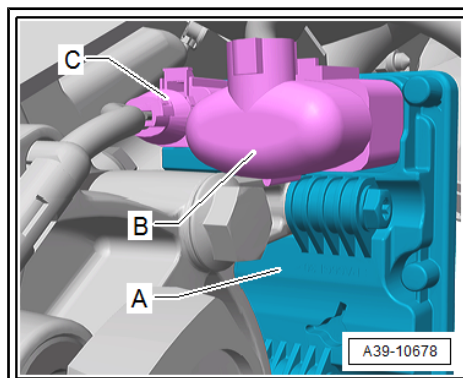




5.7.2 Removing and installing all-wheel drive control unit - J492- , generation V

Removing

- Pull electrical connectors -B- and -C- off all-wheel drive control unit -A-.



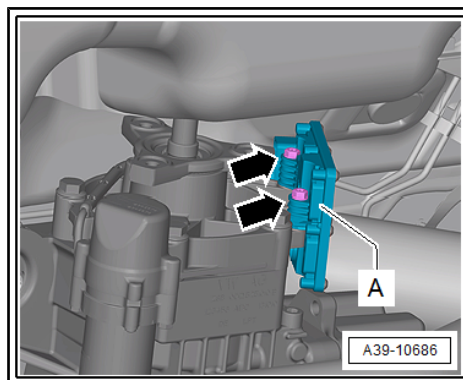
- Unscrew bolts -arrows- for all-wheel drive control unit on all-wheel drive coupling and remove all-wheel drive control unit -A-.

Installing

Install in reverse order of removal.

Specified torques

- ♦ All-wheel drive control unit to all-wheel drive coupling
⇒ [Item 3 \(page 89\)](#)





6 Propshaft

⇒ [“6.1 Assembly overview - propshaft”, page 113](#)

⇒ [“6.2 Removing and installing propshaft”, page 116](#)

⇒ [“6.3 Removing and installing front flexible coupling”, page 139](#)

⇒ [“6.4 Removing and installing rear flexible coupling”, page 141](#)

6.1 Assembly overview - propshaft

⇒ [“6.1.1 Assembly overview - propshaft, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►, Golf 2013 ►, Golf Estate 2014 ►, Passat 2015 ►, Passat Estate 2015 ►, Tiguan 2016 ►, Golf 2017 ►, Golf Estate 2017 ►, Arteon 2018 ►”, page 113](#)

⇒ [“6.1.2 Assembly overview - propshaft, Sharan 2016 ►”, page 115](#)

6.1.1 Assembly overview - propshaft, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►, Golf 2013 ►, Golf Estate 2014 ►, Passat 2015 ►, Passat Estate 2015 ►, Tiguan 2016 ►, Golf 2017 ►, Golf Estate 2017 ►, Arteon 2018 ►



Note

No repairs can be made to the propshaft.





1 - Gearbox with bevel box

2 - Bolt

- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)
- ☐ For flexible coupling to propshaft.
- ☐ Renew after removal
- ☐ 50 Nm and then turn 90° further.

3 - Front flexible coupling

- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)

4 - Bolt

- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)
- ☐ For flexible coupling to bevel box.
- ☐ Renew after removal
- ☐ 50 Nm and then turn 90° further.

5 - Propshaft

- ☐ Cannot be separated at joint -arrow-.
- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)
- ☐ Removing and installing ⇒ [page 116](#)

6 - Bolt

- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)
- ☐ 25 Nm.

7 - Centre bearing

- ☐ Align free of tension.

8 - Bolt

- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)
- ☐ For flexible coupling to propshaft.
- ☐ Renew after removal
- ☐ 50 Nm and then turn 90° further.

9 - Bolt

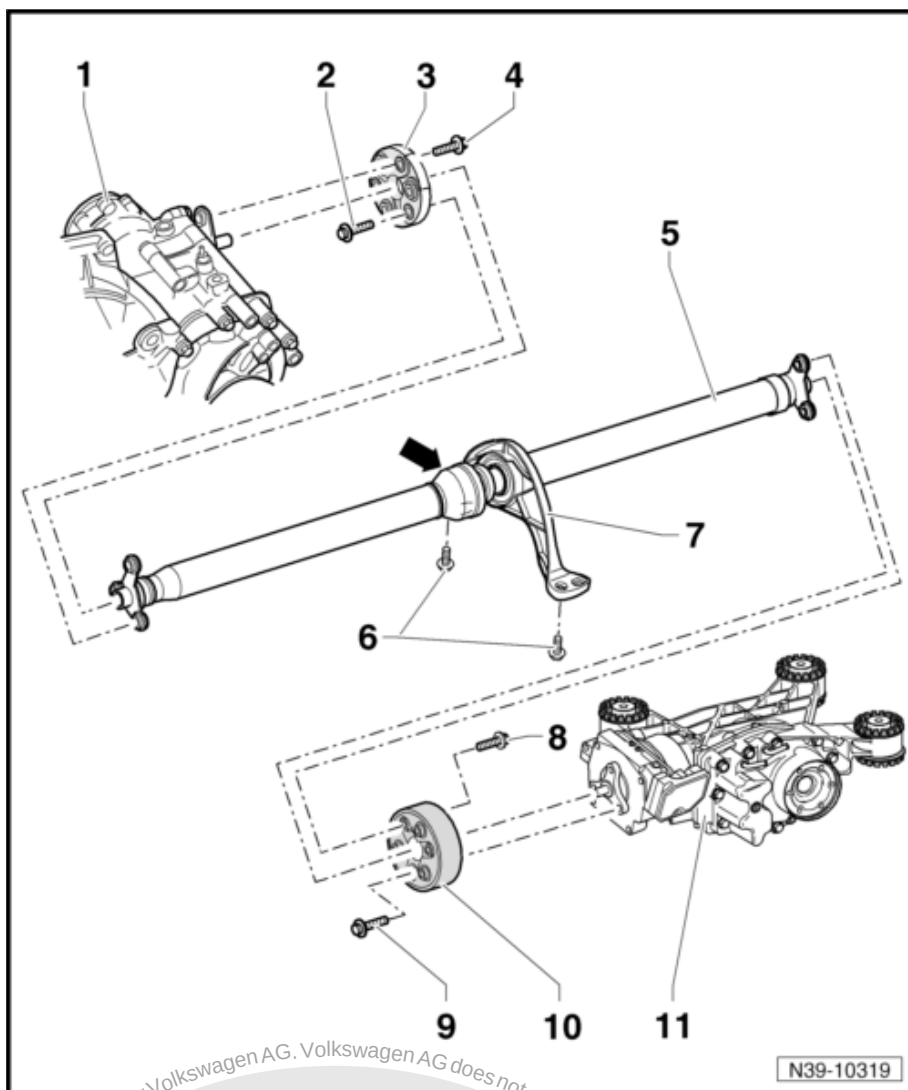
- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)
- ☐ For flexible coupling to final drive.
- ☐ Renew after removal
- ☐ 50 Nm and then turn 90° further.

10 - Flexible coupling with vibration damper

- ☐ For allocation refer to ⇒ Electronic parts catalogue (ETKA)

11 - Rear final drive

- ☐ Removing and installing ⇒ [page 15](#)





6.1.2 Assembly overview - propshaft, Sharan 2016 ➤



Note

No repairs can be made to the propshaft.

1 - Rear final drive

2 - Flexible coupling with vibration damper

- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"

3 - 12-point flange bolt

- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"
- ☐ For flexible coupling to rear final drive
- ☐ 60 Nm

4 - Bolt

- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"
- ☐ For flexible coupling to propshaft
- ☐ Always renew
- ☐ 50 Nm and turn 90° further

5 - Propshaft

- ☐ Can not be separated at joints
- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"
- ☐ Removing and installing ⇒ [page 130](#)

6 - Front intermediate bearing

- ☐ Align free of tension

7 - Bolt

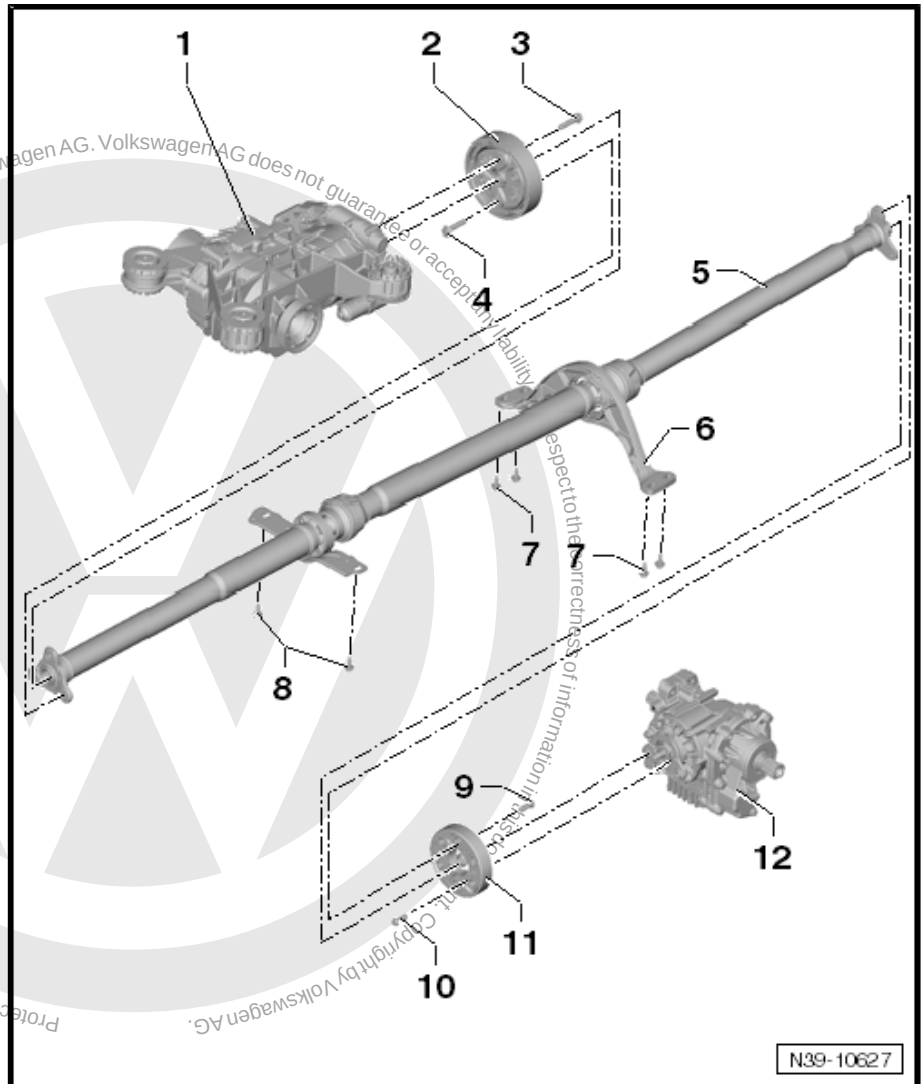
- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"
- ☐ 25 Nm

8 - Bolt

- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"
- ☐ 25 Nm

9 - Bolt

- ☐ Allocation ⇒ Electronic Parts Catalogue "(ETKA)"
- ☐ For flexible coupling to propshaft
- ☐ Always renew
- ☐ 50 Nm and turn 90° further





10 - 12-point flange bolt

- ☐ Allocation ⇒ Electronic Parts Catalogue “(ETKA)”
- ☐ For flexible coupling to bevel box
- ☐ 60 Nm

11 - Front flexible coupling

12 - Bevel box

6.2 Removing and installing propshaft

⇒ [“6.2.1 Removing and installing propshaft, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►”, page 116](#)

⇒ [“6.2.2 Removing and installing propshaft, Golf 2013 ►, Golf Estate 2014 ►, Golf 2017 ►, Golf Estate 2017 ►”, page 120](#)

⇒ [“6.2.3 Removing and installing propshaft, Passat 2015 ►, Passat Estate 2015 ►, Arteon 2018 ►”, page 124](#)

⇒ [“6.2.4 Removing and installing propshaft, Sharan 2016 ►”, page 130](#)

⇒ [“6.2.5 Removing and installing propshaft, Tiguan 2016 ►”, page 133](#)

6.2.1 Removing and installing propshaft, CC 2012 ►, Passat 2011 ►, Passat Estate 2011 ►



Note

- ◆ *If possible, use a twin pillar lifting platform when working on the propshaft.*
- ◆ *Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.*
- ◆ *Keep propshaft straight; store and transport fully extended only.*
- ◆ *Do not let propshaft »hang« during removal; always support it.*
- ◆ *Always pull propshaft from or push it onto drive flange horizontally.*

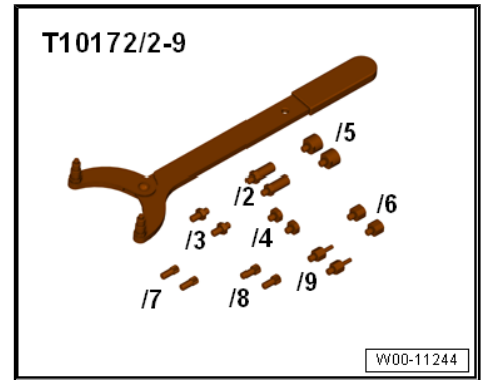
Special tools and workshop equipment required

- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-





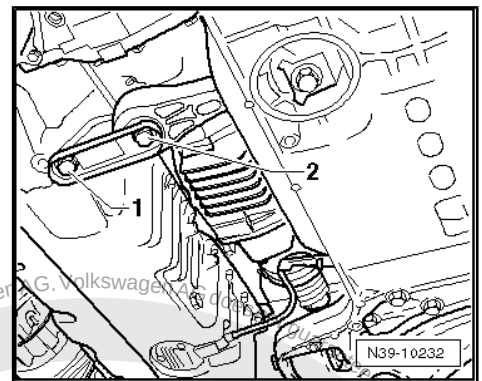
- ◆ Counter-hold tool - T10172-



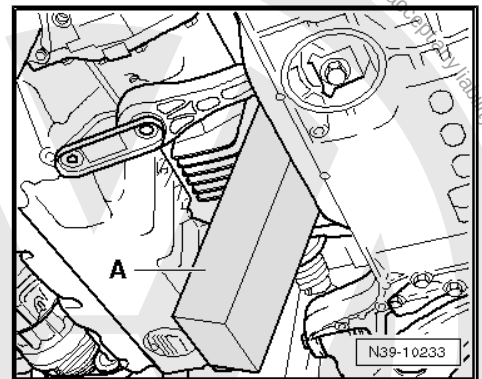
- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-

Removing

- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Unscrew bolts -1- and -2- of pendulum support.



- Press »engine and gearbox« forwards and secure in position with an appropriate piece of wood -A-.
- Support front section of exhaust system with engine and gearbox jack - V.A.G 1383 A- .





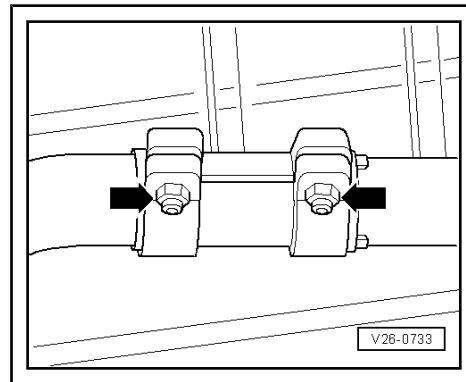
- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .



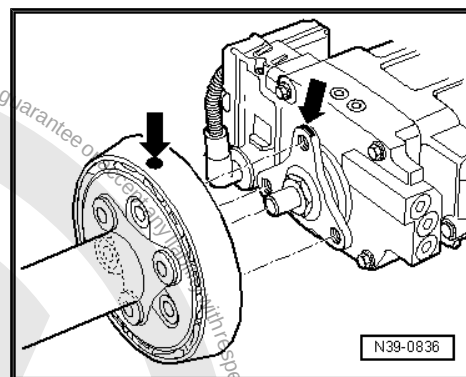
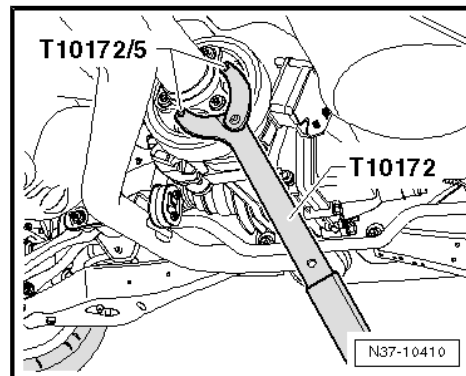
Note

The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

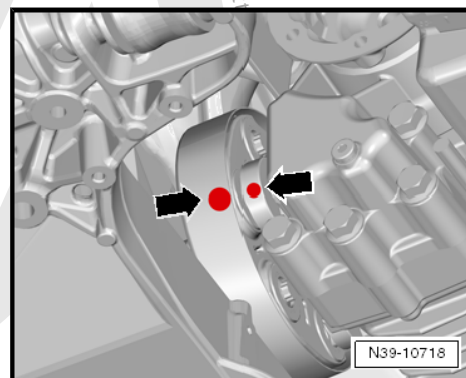
- Remove heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Remove rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing tunnel cross-piece .
- Loosen, but do not remove, propshaft from bevel box at front and from final drive at rear.
- Counterhold at rear final drive when loosening or tightening propshaft.



- Before removal, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows-. If not, mark positions of flexible coupling and propshaft flange of final drive relative to each other -arrows-.



- Also mark position of propshaft relative to bevel box flange.





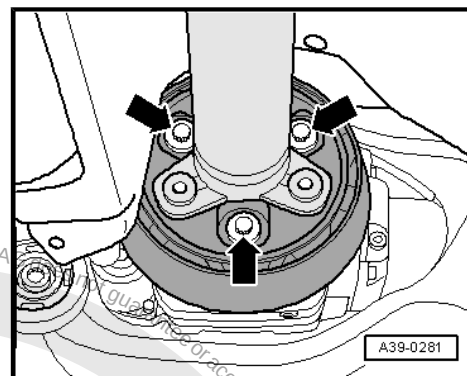
- Unscrew propshaft bolts from bevel box at front and from rear final drive -arrows-.

Renew bolts after removing.

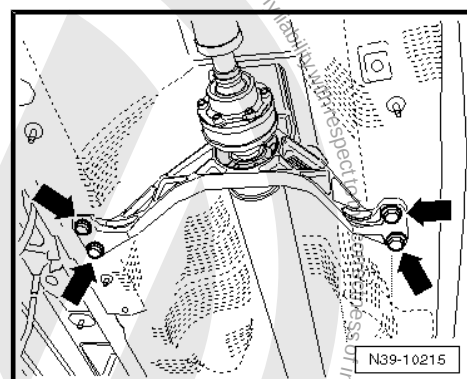


Note

- ◆ Now, the propshaft is held in position solely by the centring pins on bevel box and final drive as well as by the centre propshaft bearing in the middle.
- ◆ From now on a second mechanic is required for the further removal of the propshaft.



- While a second mechanic is holding the propshaft in installation position, remove centre propshaft bearing -arrows- and remove propshaft towards rear with the joint as straight as possible.

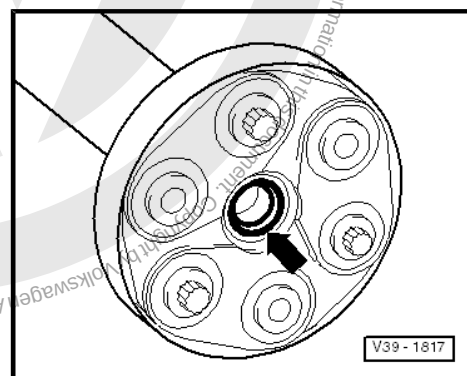


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



WARNING

To avoid damaging the protective boot in the centre propshaft bearing, remove, store and install the propshaft with the joint as straight as possible.



Installing

Install in the reverse order of removal, observing the following.

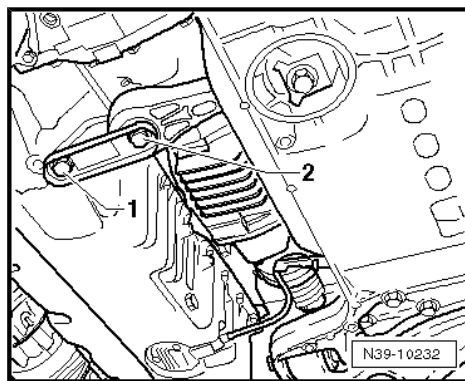
- Install all parts which were marked in relation to each other in their original positions.

Installing centre bearing free of tension.

- Align centre propshaft bearing in its elongated holes so that neither propshaft nor centre propshaft bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.
- Tighten propshaft and centre bearing bolts. Specified torques ➤ [page 113](#).



- Bolt on pendulum support using »new« bolts. Specified torques: ⇒ Running gear, axles, steering; Rep. gr. 40 ; Sub-frame; Assembly overview - subframe .
- Install heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trim/ extensions; Assembly overview - heat shield .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .
- Install rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing underbody cladding .



6.2.2 Removing and installing propshaft, Golf 2013 ►, Golf Estate 2014 ►, Golf 2017 ►, Golf Estate 2017 ►

Special tools and workshop equipment required

- ◆ Counter-hold tool - T10172-



- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



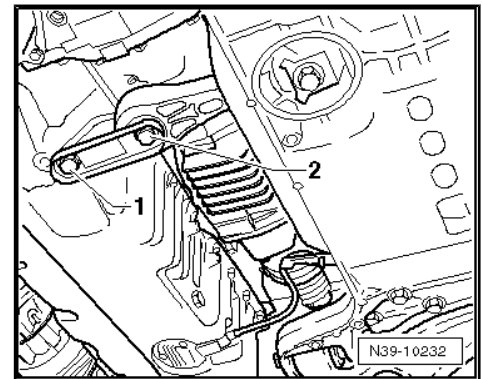


Note

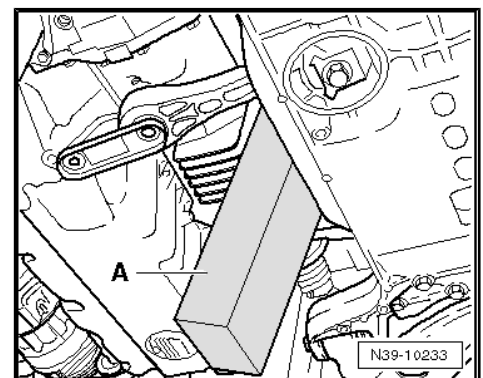
- ◆ *If possible, use a twin pillar lifting platform when working on the propshaft.*
- ◆ *Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.*
- ◆ *Keep propshaft straight; store and transport fully extended only.*
- ◆ *Do not let propshaft »hang« during removal; always support it.*
- ◆ *Always pull propshaft from or push it onto drive flange horizontally.*

Removing

- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Remove exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes, silencers; Assembly overview - silencer .
- Unscrew bolts -1- and -2- of pendulum support.

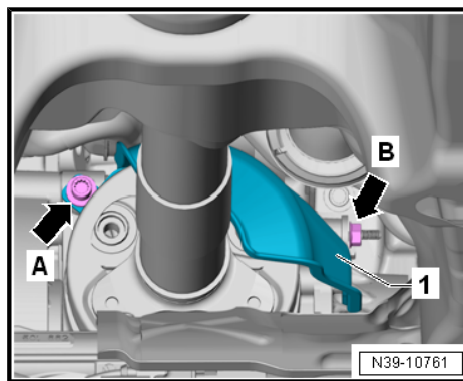


- Press »engine and gearbox« forwards and secure in position with an appropriate piece of wood -A-.

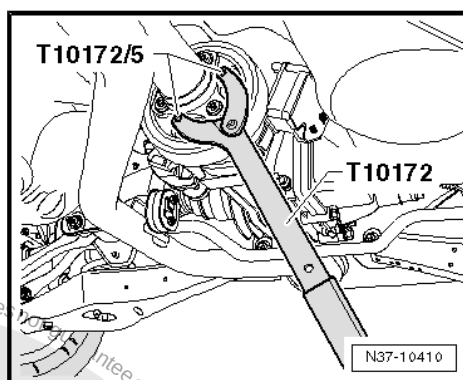




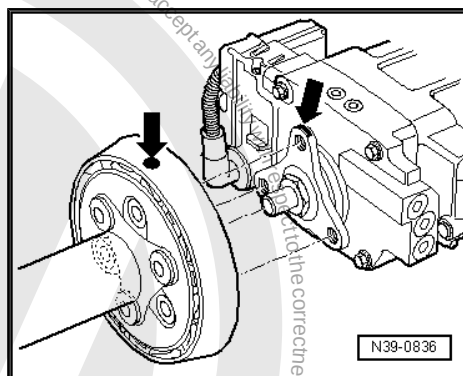
- Unscrew bolts -A- and -B- from bevel box and remove heat shield -1-.
- Remove heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Remove rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing tunnel cross-piece .
- Loosen, but do not remove, propshaft from bevel box at front and from final drive at rear.



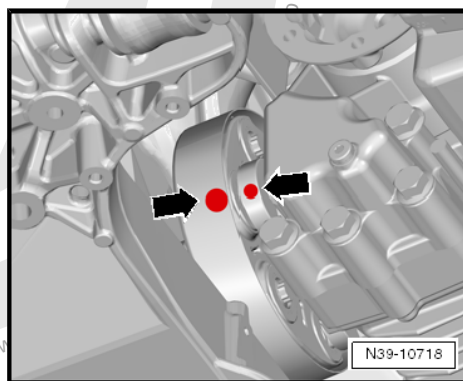
- Counterhold at rear final drive when loosening or tightening propshaft.



- Before removal, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows-. If not, mark positions of flexible coupling and propshaft flange of final drive relative to each other -arrows-.



- Also mark position of propshaft relative to bevel box flange.





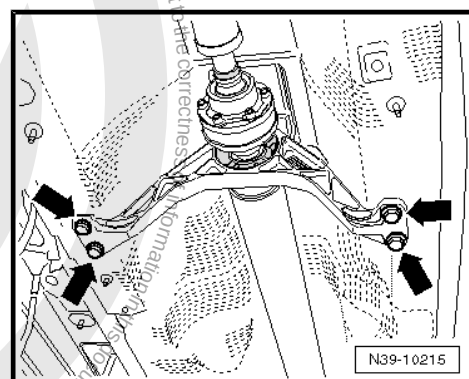
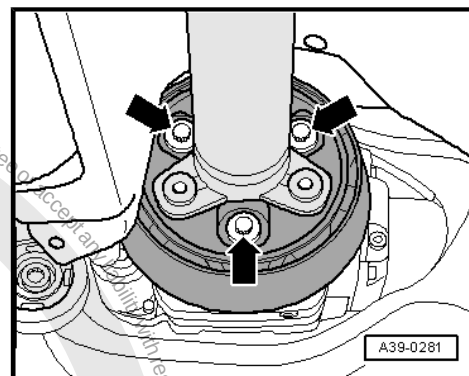
- Unscrew propshaft bolts from bevel box at front and from rear final drive -arrows-.

Renew bolts after removing.



Note

- ◆ Now, the propshaft is held in position solely by the centring pins on bevel box and final drive as well as by the centre propshaft bearing in the middle.
- ◆ From now on a second mechanic is required for the further removal of the propshaft.
- While a second mechanic is holding the propshaft in installation position, remove centre propshaft bearing -arrows- and remove propshaft towards rear with the joint as straight as possible.

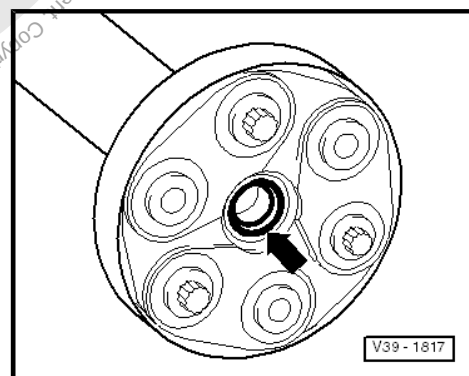


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



WARNING

To avoid damaging the protective boot in the centre propshaft bearing, remove, store and install the propshaft with the joint as straight as possible.



Installing

Install in the reverse order of removal, observing the following.

- Install all parts which were marked in relation to each other in their original positions.

Installing centre bearing free of tension.

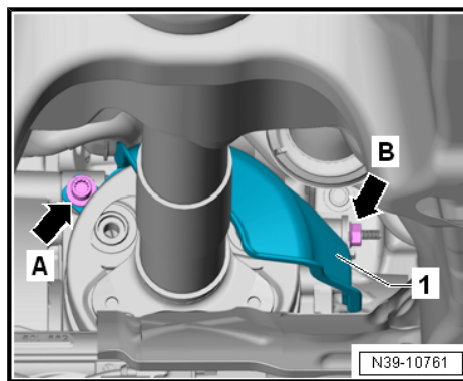
- Align centre propshaft bearing in its elongated holes so that neither propshaft nor centre propshaft bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.
- Tighten propshaft and centre bearing bolts. Specified torques ➤ [page 113](#) .



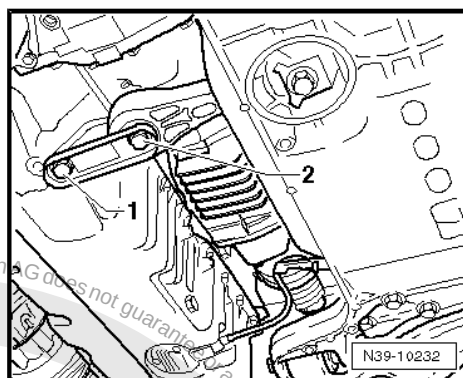
- Bolt heat shield -1- on bevel box.

Specified torque:

- ◆ Bolt -A- 20 Nm
- ◆ Bolt -B- 40 Nm



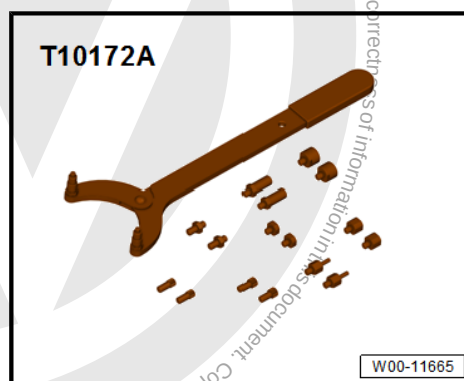
- Bolt on pendulum support using »new« bolts. Specified torques: ⇒ Running gear, axles, steering; Rep. gr. 40 ; Sub-frame; Assembly overview - subframe .
- Install heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Install exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing underbody cladding .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .



6.2.3 Removing and installing propshaft, Passat 2015 ►, Passat Estate 2015 ►, Arteon 2018 ►

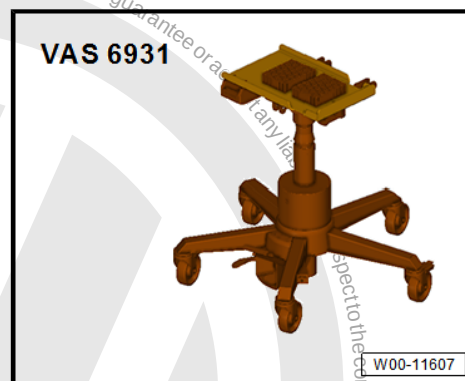
Special tools and workshop equipment required

- ◆ Counter-hold tool - T10172-

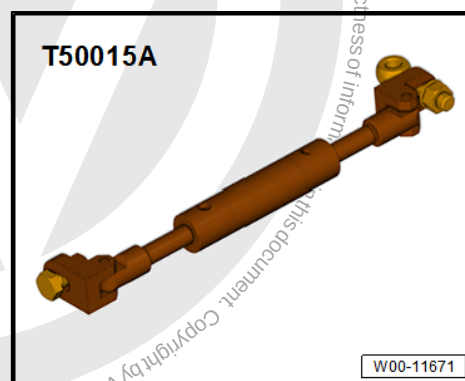




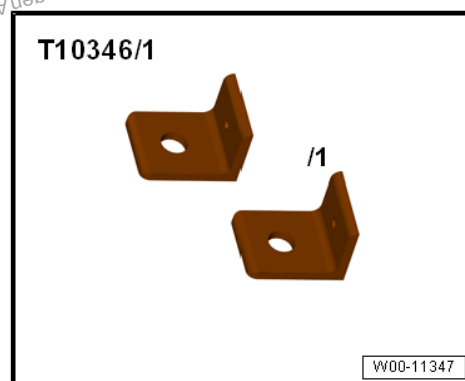
- ◆ Engine and gearbox jack - VAS 6931 or -V.A.G 1383 A-



- ◆ Engine support - T50015A-



- ◆ Bracket - T10346/1-



Note

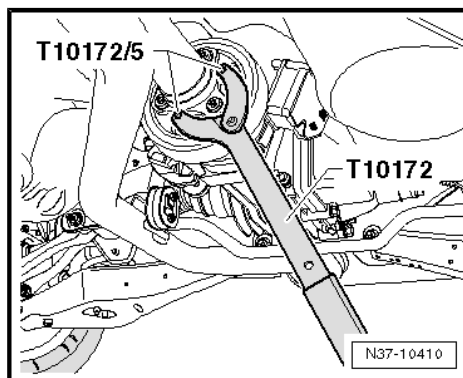
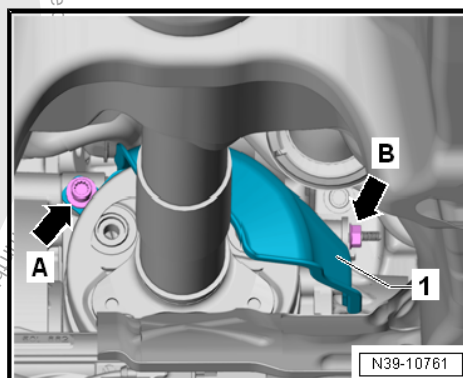
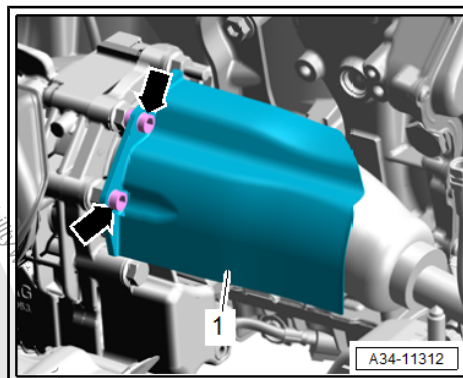
- ◆ *If possible, use a twin pillar lifting platform when working on the propshaft.*
- ◆ *Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.*
- ◆ *Keep propshaft straight; store and transport fully extended only.*
- ◆ *Do not let propshaft »hang« during removal; always support it.*
- ◆ *Always pull propshaft from or push it onto drive flange horizontally .*



Removing

- Raise vehicle. All 4 supports of lifting platform must be at same height.
- Move selector lever to »N« position.
- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Remove exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes, silencers; Assembly overview - silencer .
- Remove drive shaft heat shield -1-, if present, from bevel box (-arrows-) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft .

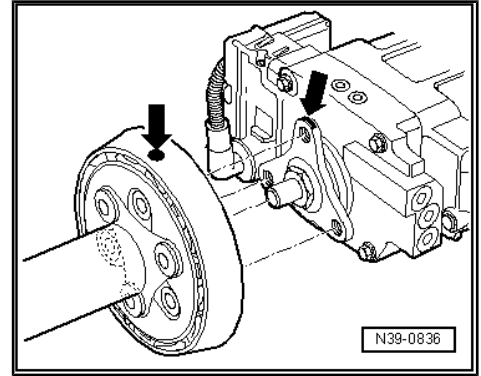
Right drive shaft heat shield is secured with 2 or 3 nuts.



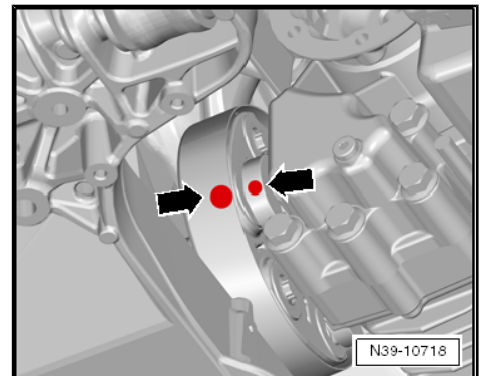
- Unscrew bolts -A- and -B- from bevel box and remove heat shield -1-.
- Remove heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Remove rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing tunnel cross-piece .
- Loosen, but do not remove, propshaft from bevel box at front and from final drive at rear.
- Counterhold at rear final drive when loosening or tightening propshaft.



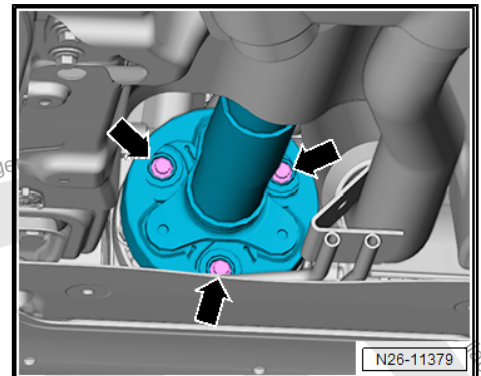
- Before removing propshaft, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows-. If not, mark positions of flexible coupling and propshaft flange of final drive relative to each other -arrows-.



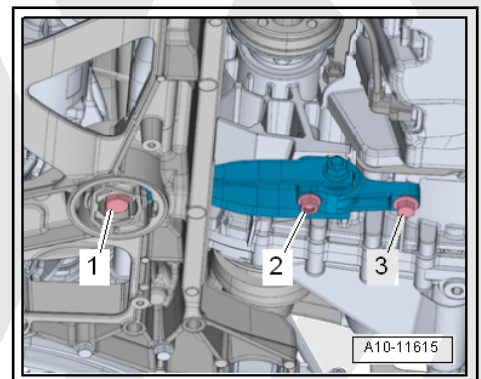
- Also mark position of propshaft relative to bevel box flange.



- Unscrew propshaft bolts from bevel box at front -arrows-.
Renew bolts after removing.

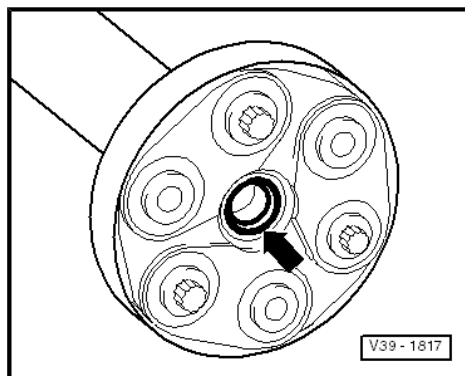


- Remove pendulum support. First remove bolt -1-, followed by bolts -2- and -3-.
- Place a cloth on subframe to avoid damaging paint of propshaft when it is placed on subframe.

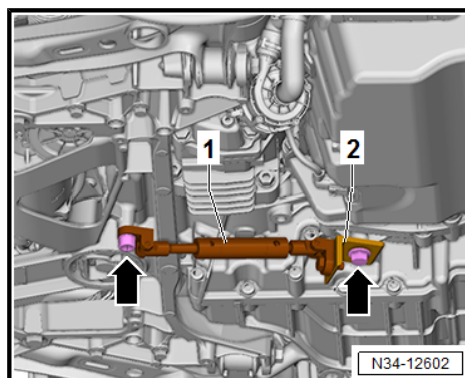




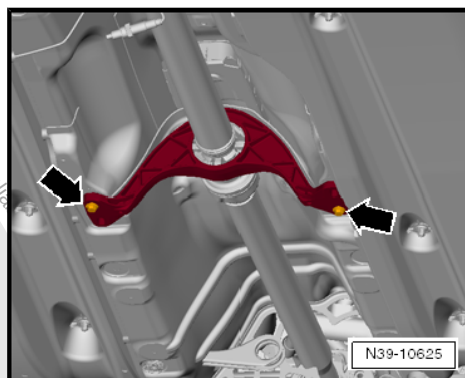
To pull off propshaft from centring pin on bevel box, »gearbox« must be pushed forwards slightly. When pushing forwards, ensure that seal -arrow- in centring bush is not damaged.



- Bolt bracket - T10346/1- -2- to front threaded connection for pendulum support -right arrow-.
- Secure engine support - T50015A- -1- with bolt to subframe -left arrow- and bracket - T10346/1- -2- as shown.
- Force engine/gearbox as far forwards as possible by turning spindle of engine support - T50015A- . Avoid collisions between components and radiator cowl.
- Place propshaft on subframe until final removal.
- Remove rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing tunnel cross-piece .



- Loosen all bolts for centre bearing. Remove 2 bolts. The 2 remaining bolts -arrows- hold the propshaft in place until it is finally removed.

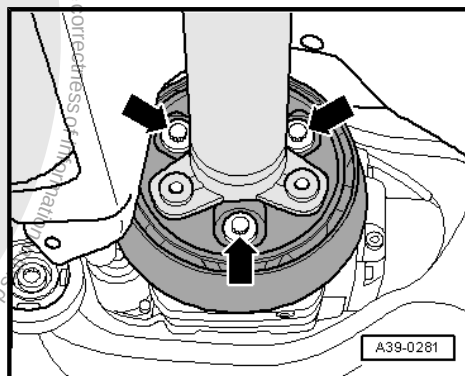


Unscrew propshaft bolts from rear final drive -arrows-.
Renew bolts after removing.



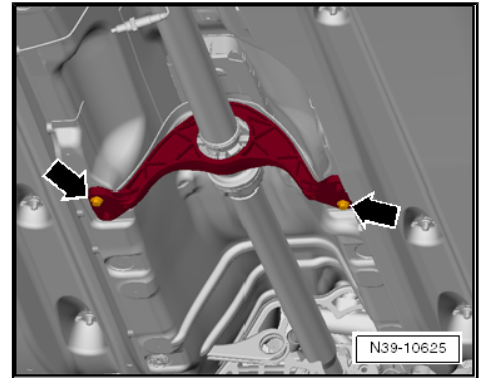
Note

- ◆ *Now, the propshaft is held in position solely by the centring pins on the rear final drive as well as by the centre propshaft bearing in the middle.*
- ◆ *From now on a second mechanic is required for the further removal of the propshaft.*





- While a second mechanic is holding the propshaft in installation position, unscrew remaining 2 bolts -arrows- of centre bearing and remove propshaft towards rear with the joint as straight as possible.

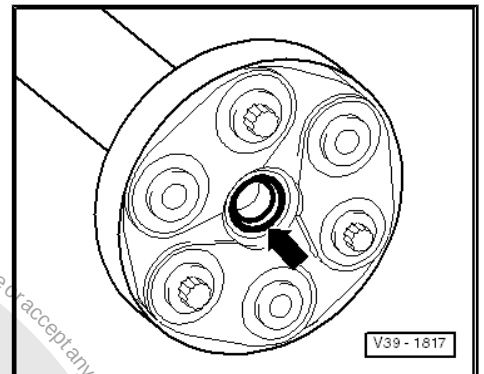


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



WARNING

To avoid damaging the protective boot in the centre propshaft bearing, remove, store and install the propshaft with the joint as straight as possible.



Installing

Install in the reverse order of removal, observing the following.

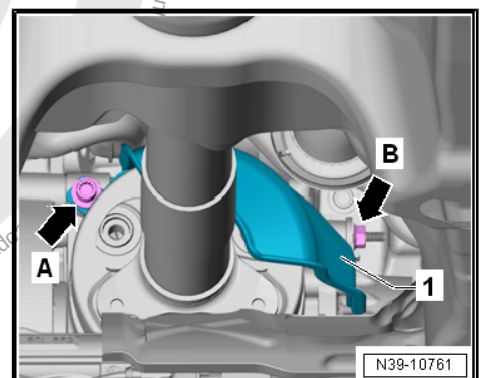
- Install all parts which were marked in relation to each other in their original positions.

Installing centre bearing free of tension.

- Align centre propshaft bearing in its elongated holes so that neither propshaft nor centre propshaft bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.
- Tighten propshaft and centre bearing bolts. Specified torques ➤ [page 113](#).
- Bolt heat shield -1- on bevel box.

Specified torque:

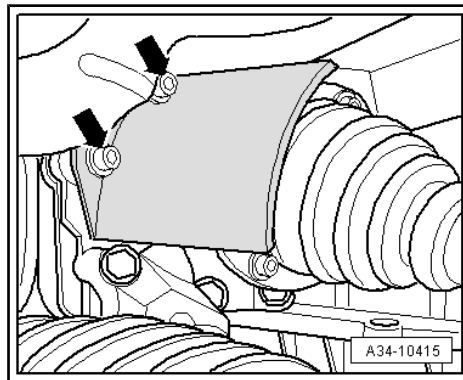
- ◆ Bolt -A- 20 Nm
- ◆ Bolt -B- 40 Nm



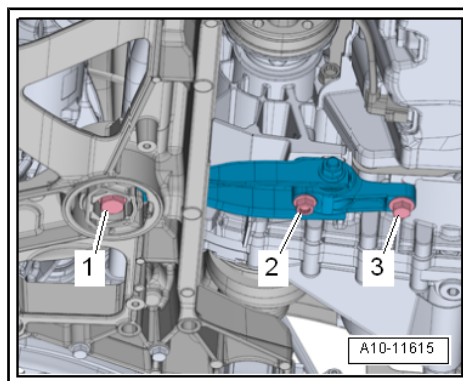


- If previously removed, install drive shaft heat shield on bevel box -arrows- ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft .

Right drive shaft heat shield is secured with 2 or 3 nuts.



- Install pendulum support with new bolts. First tighten bolts -2- and -3- and finally -1-. Specified torques ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Assembly overview - subframe .
- Install heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Install exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing underbody cladding .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .



6.2.4 Removing and installing propshaft, Sharan 2016 ►



Note

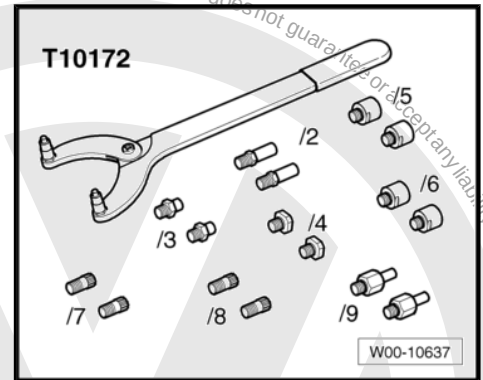
- ◆ If possible, use a twin pillar lifting platform when working on the propshaft.
- ◆ Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.
- ◆ Keep propshaft straight; store and transport fully extended only.
- ◆ Do not let propshaft »hang« during removal; always support it.
- ◆ Always pull propshaft from or push it onto drive flange horizontally .

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1332-
- ◆ Engine and gearbox jack - V.A.G 1383 A-

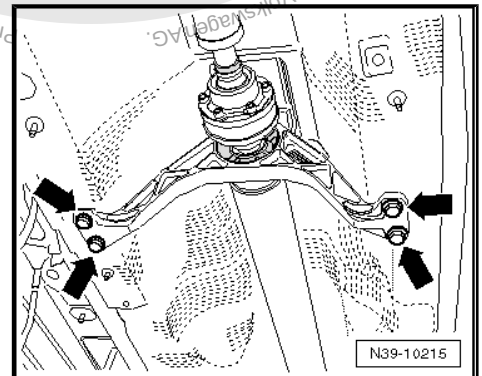


◆ Counter-hold tool - T10172-

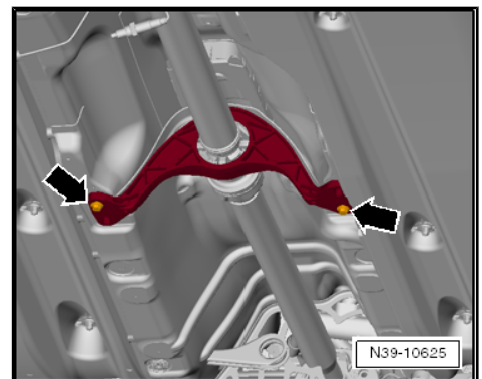


Removing

- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Remove front exhaust pipe ⇒ Rep. gr. 26 ; Exhaust pipes and silencers; Removing and installing front exhaust pipe .
- Remove fuel tank ⇒ Fuel supply - diesel engines; Rep. gr. 20 ; Fuel tank; Removing and installing fuel tank
- Remove heat shield for centre tunnel beneath centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Assembly overview - underbody cladding .
- Loosen bolts -arrows- for front centre propshaft bearing.

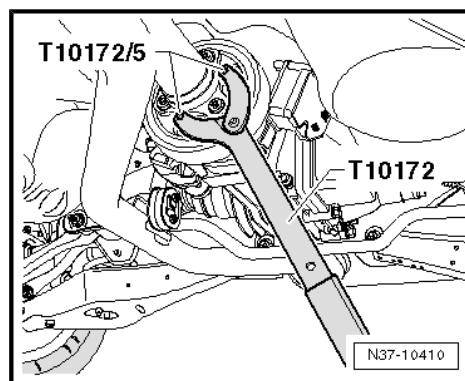


- Remove 2 bolts. 2 bolts -arrows- remain fitted for the present.
- Loosen, but do not remove, front and rear propshaft bolts.

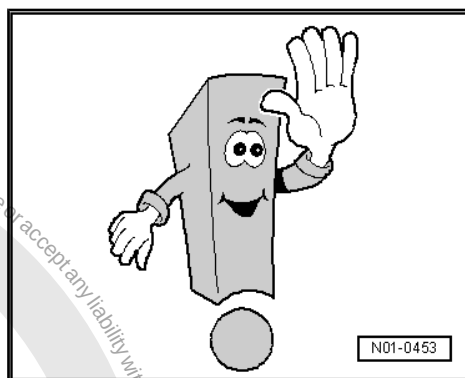




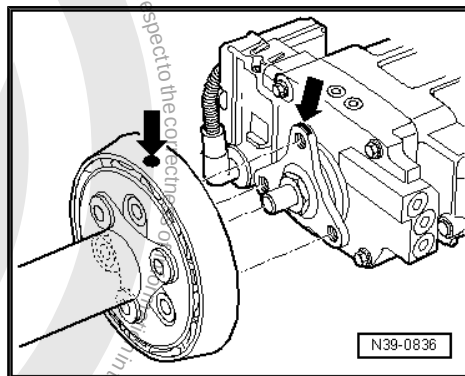
- Counterhold at rear final drive when loosening or tightening propshaft.



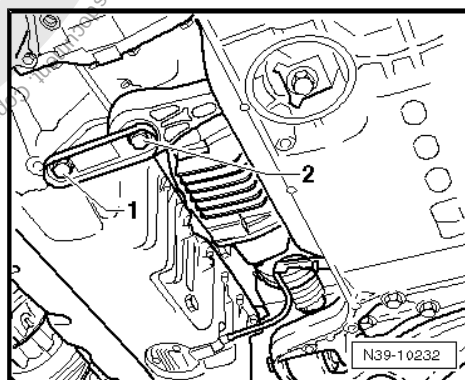
To prevent later noise due to imbalance:



- If there are no markings -arrows-, mark position of propshaft relative to final drive flange.
- Also mark position of propshaft relative to bevel box flange.
- Unbolt propshaft from bevel box.

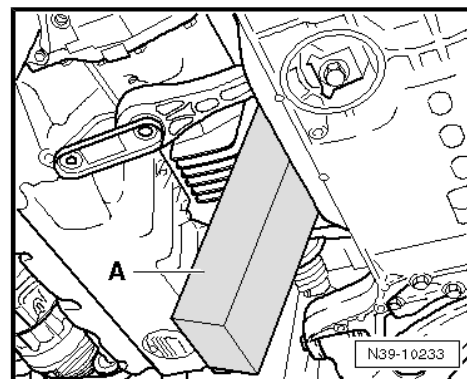


- Unscrew bolts -1- and -2- of pendulum support.





- Press »engine and gearbox« forwards and secure in this position with an appropriate piece of wood -A-.
- Unbolt propshaft from rear final drive and rest it on engine and gearbox jack - V.A.G 1383 A- .



- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



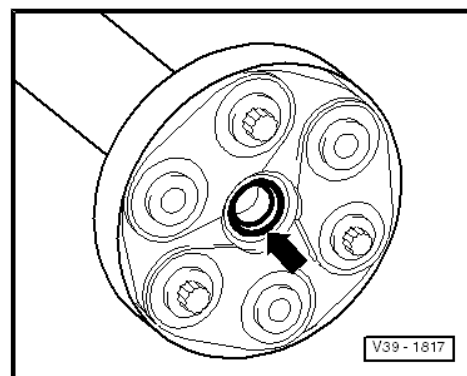
Note

A second mechanic is required for the further removal of the propshaft.



WARNING

To prevent damage to the protective boots in the centre bearings, remove, store and install the propshaft with the joint as straight as possible.

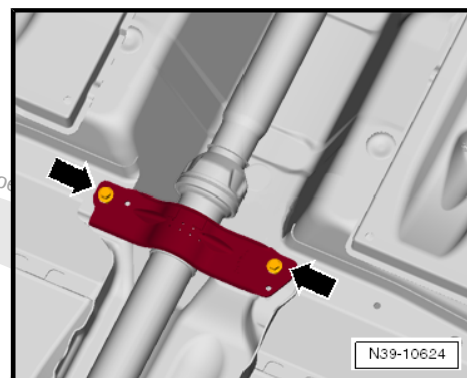


- Unbolt rear centre bearing -arrows- and the two bolts of the front centre bearing and then take out the propshaft, keeping it as straight as possible.

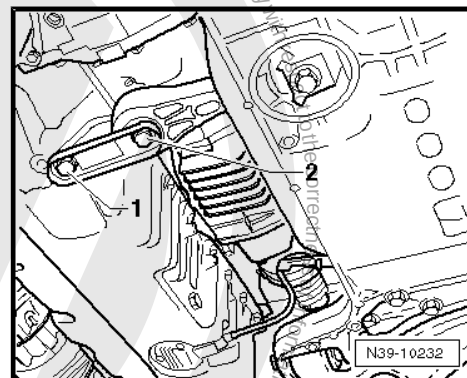
Installing

Install in the reverse order of removal, observing the following:

- Install all parts which were marked in relation to each other in their original positions.
- Tighten propshaft bolts. Specified torques ➔ [page 113](#) .



- Bolt on pendulum support using »new« bolts. Specified torques ➔ Running gear, axles, steering; Rep. gr. 40 .
- Install fuel tank ➔ Fuel supply - diesel engines; Rep. gr. 20 ; Fuel tank; Removing and installing fuel tank .
- Install front exhaust pipe ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Removing and installing front exhaust pipe .
- Install noise insulation ➔ General body repairs, exterior; Rep. gr. 50 ; Noise insulation .



6.2.5 Removing and installing propshaft, Tiguan 2016 ➤

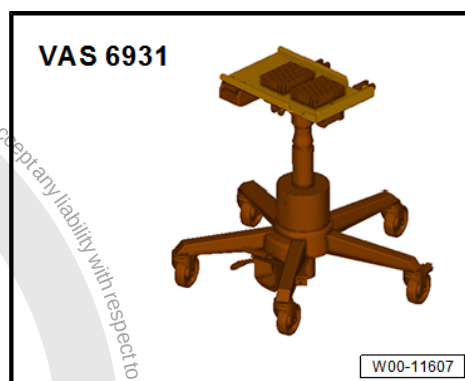
Special tools and workshop equipment required



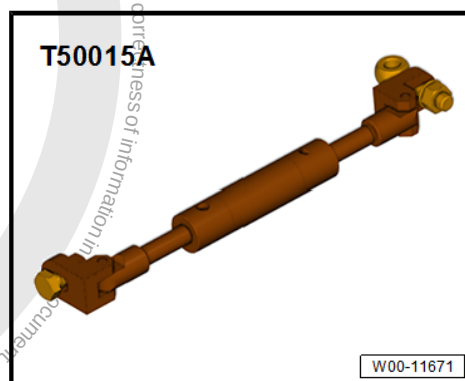
- ◆ Counter-hold tool - T10172-



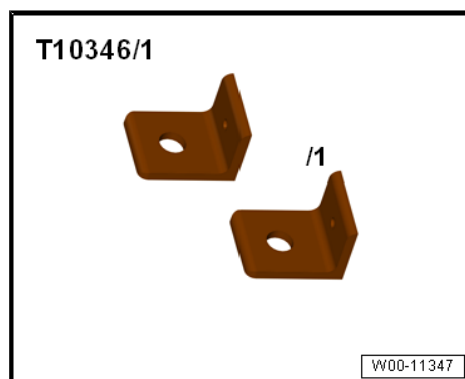
- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



- ◆ Engine support - T50015A-



- ◆ Bracket - T10346/1-





Note

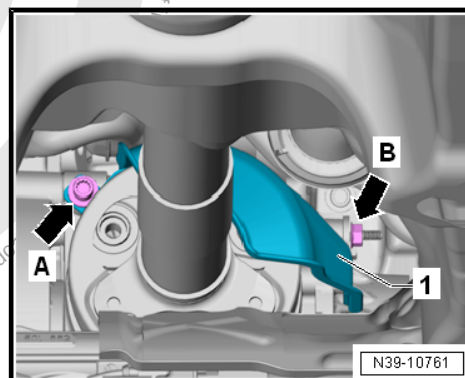
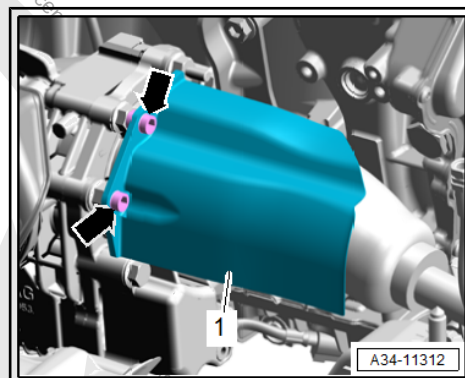
- ◆ *If possible, use a twin pillar lifting platform when working on the propshaft.*
- ◆ *Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.*
- ◆ *Keep propshaft straight; store and transport fully extended only.*
- ◆ *Do not let propshaft »hang« during removal; always support it.*
- ◆ *Always pull propshaft from or push it onto drive flange horizontally.*

Removing

- Raise vehicle. All 4 supports of lifting platform must be at same height.
- Move selector lever to »N« position.
- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Remove exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes, silencers; Assembly overview - silencer .
- Remove drive shaft heat shield -1-, if present, from bevel box (-arrows-) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft .

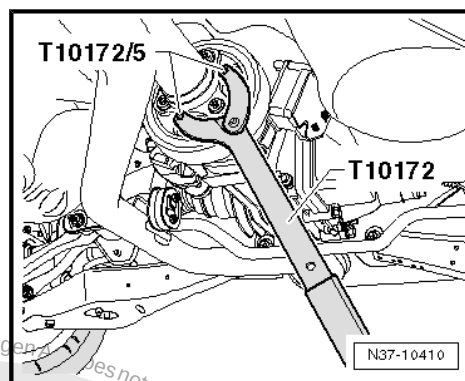
Right drive shaft heat shield is secured with 2 or 3 nuts.

- Unscrew bolts -A- and -B- from bevel box and remove heat shield -1-.
- Remove heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trim/extensions; Assembly overview - heat shield .
- Loosen, but do not remove, propshaft from bevel box at front and from final drive at rear.

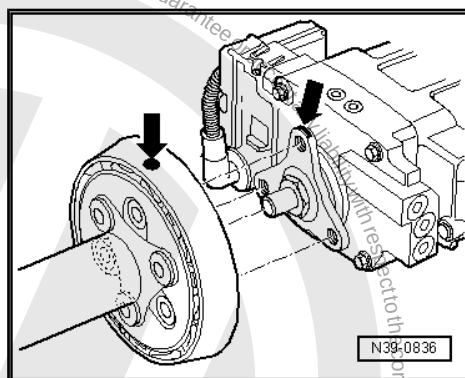




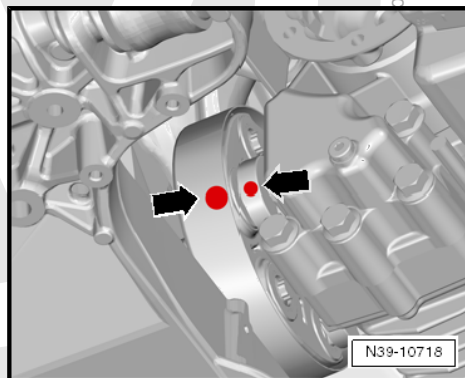
- Counterhold at rear final drive when loosening or tightening propshaft.



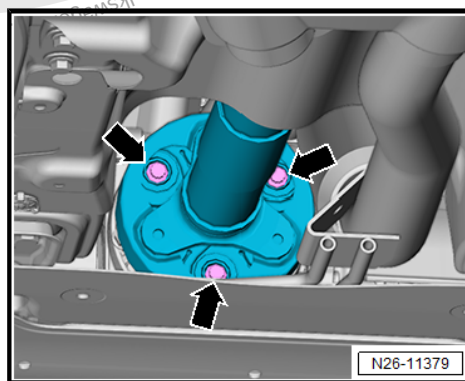
- Before removal, check if there are coloured marks on flexible coupling and on flange of rear final drive -arrows-. If not, mark positions of flexible coupling and propshaft flange of final drive relative to each other -arrows-.



- Also mark position of propshaft relative to bevel box flange.

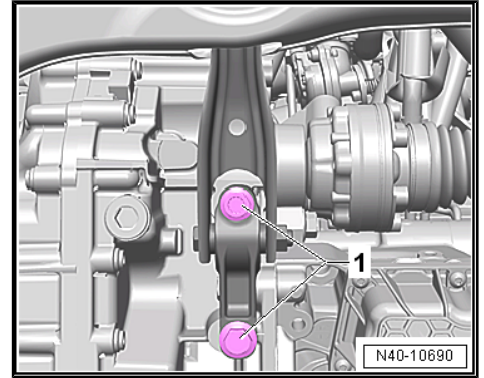


- Unscrew propshaft bolts from bevel box at front -arrows-.
Renew bolts after removing.

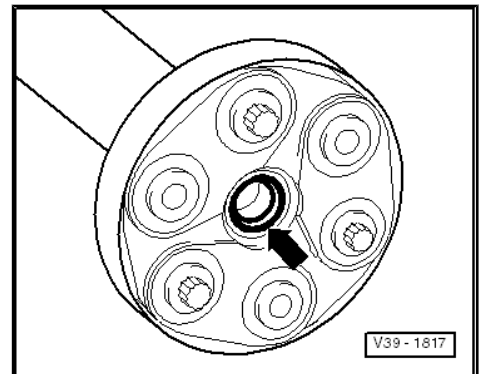




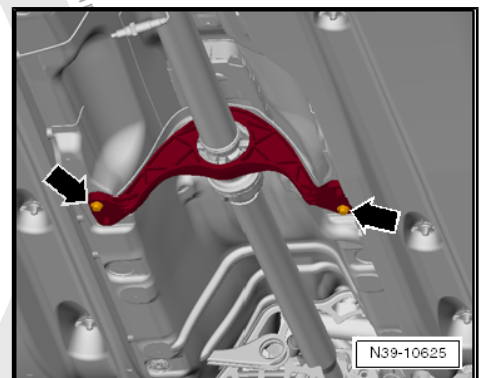
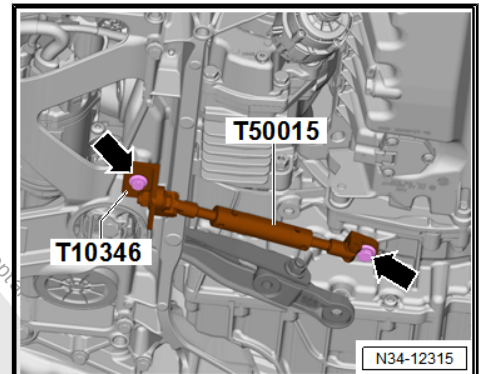
- Remove bolts -1- securing pendulum support to gearbox.
- Place a cloth on subframe to avoid damaging paint of propshaft when it is placed on subframe.



To pull off propshaft from centring pin on bevel box, »gearbox« must be pushed forwards slightly. When pushing forwards, ensure that seal -arrow- in centring bush is not damaged.



- Secure bracket - T10346/1- to subframe as shown in illustration using an M 8 x 25 bolt.
- Bolt engine support - T50015- to bracket - T10346/1- and to gearbox at front threaded connection for pendulum support.
- Force engine/gearbox as far forwards as possible by turning spindle of engine support - T50015- . Avoid collisions between components and radiator cowl.
- Place propshaft on subframe until final removal.
- Remove rear tunnel cross-piece ⇒ General body repairs, exterior, Rep. gr. 66 ; Underbody cladding; Removing and installing tunnel cross-piece .
- Loosen all bolts for centre bearing. Remove 2 bolts. The 2 remaining bolts -arrows- hold the propshaft in place until it is finally removed.





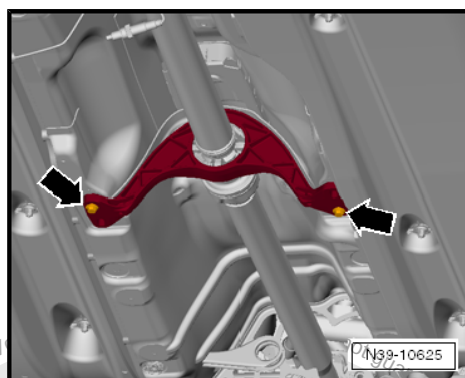
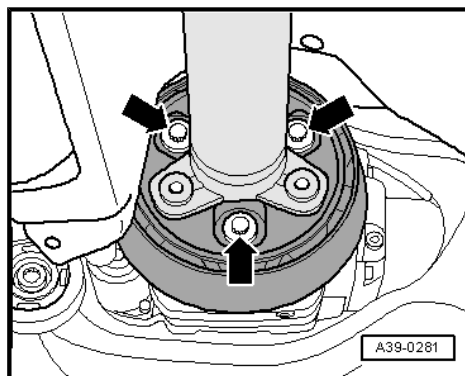
- Unscrew propshaft bolts from rear final drive -arrows-.

Renew bolts after removing.



Note

- ◆ *Now, the propshaft is held in position solely by the centring pins on the rear final drive as well as by the centre propshaft bearing in the middle.*
 - ◆ *From now on a second mechanic is required for the further removal of the propshaft.*
- While a second mechanic is holding the propshaft in installation position, unscrew remaining 2 bolts -arrows- of centre bearing and remove propshaft towards rear with the joint as straight as possible.

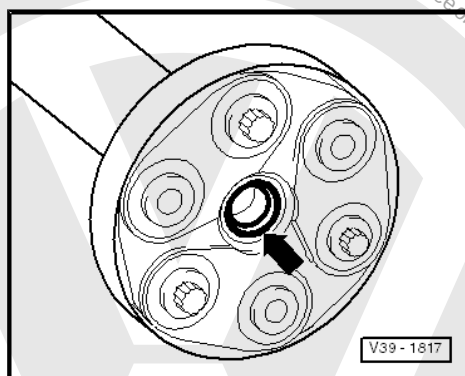


- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.



WARNING

To avoid damaging the protective boot in the centre propshaft bearing, remove, store and install the propshaft with the joint as straight as possible.



Installing

Install in the reverse order of removal, observing the following.

- Install all parts which were marked in relation to each other in their original positions.

Installing centre bearing free of tension.

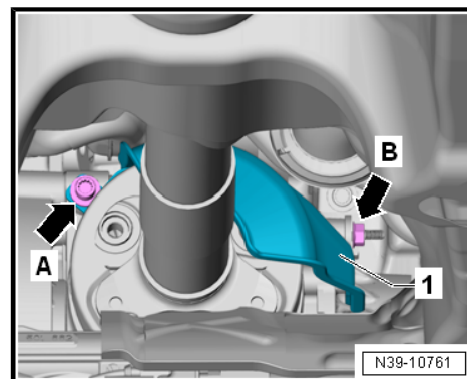
- Align centre propshaft bearing in its elongated holes so that neither propshaft nor centre propshaft bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.
- Tighten propshaft and centre bearing bolts. Specified torques ⇒ [page 113](#).



- Bolt heat shield -1- on bevel box.

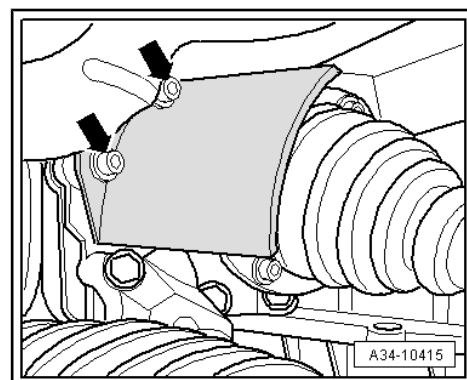
Specified torque:

- ◆ Bolt -A- 20 Nm
- ◆ Bolt -B- 40 Nm

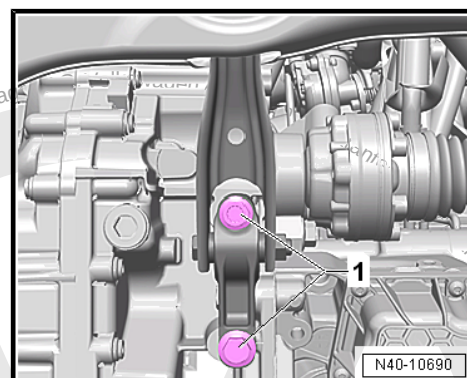


- If previously removed, install drive shaft heat shield on bevel box -arrows- ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft .

Right drive shaft heat shield is secured with 2 or 3 nuts.



- Bolt on pendulum support using »new« bolts -1-. Specified torques: ⇒ Running gear, axles, steering; Rep. gr. 40 ; Sub-frame; Assembly overview - subframe .
- Install heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Install exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install rear tunnel cross-piece ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody cladding; Removing and installing underbody cladding .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .



6.3 Removing and installing front flexible coupling

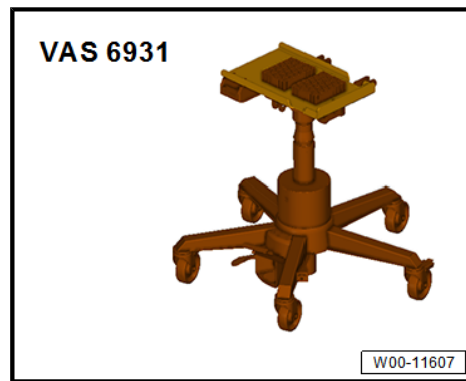
Brief description

The front flexible coupling can only be removed and installed with propshaft removed.

Special tools and workshop equipment required



- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



- ◆ Counter-hold tool - T10172-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-

Removing



Note

- ◆ *A twin pillar lifting platform should be used when working on the propshaft.*
- ◆ *Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.*
- ◆ *Keep propshaft straight; store and transport fully extended only.*

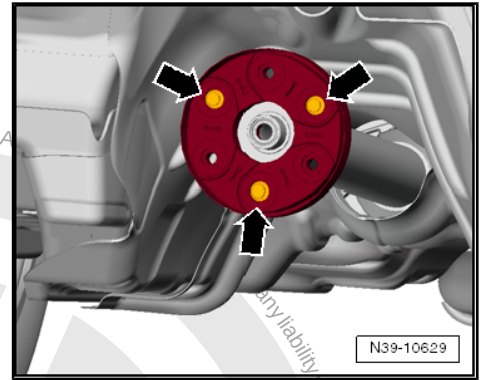
Remove propshaft ➔ [page 116](#) .

Place propshaft down with the joint as straight as possible.

In the following illustrations the flexible coupling is shown in installed condition.



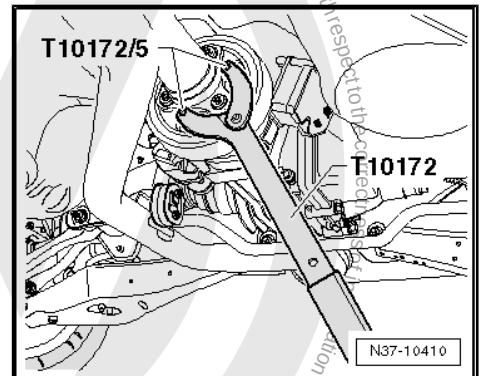
Unbolt front flexible coupling from propshaft -arrows-.



- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.

Installing

Install in the reverse order of removal, observing the following.



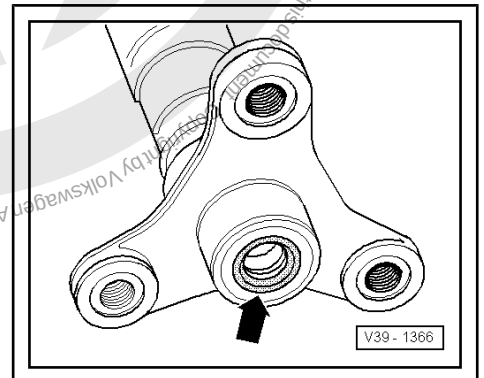
Note

- ◆ Do not damage seals in propshaft flanges -arrow- during removal and installation.
- ◆ Renew propshaft if damaged.
- ◆ Do not cant propshaft, push horizontally onto centring pin.
- ◆ All parts of propshaft which have been marked relative to each other must be reinstalled in the same positions.

- Attach flexible coupling to propshaft using new bolts. Specified torques: ➔ [page 113](#)

Installation position of flexible coupling with guard plate:

- ◆ The open side of the guard plate faces away from propshaft tube.
- ◆ Install flexible coupling so that the guard plate lies against the propshaft flange.
- Install propshaft ➔ [page 116](#) .



6.4 Removing and installing rear flexible coupling

Special tools and workshop equipment required



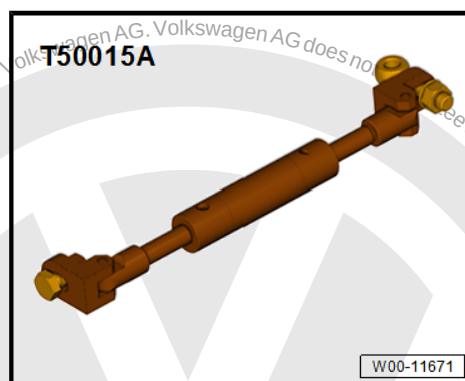
- ◆ Engine and gearbox jack - VAS 6931- or -V.A.G 1383 A-



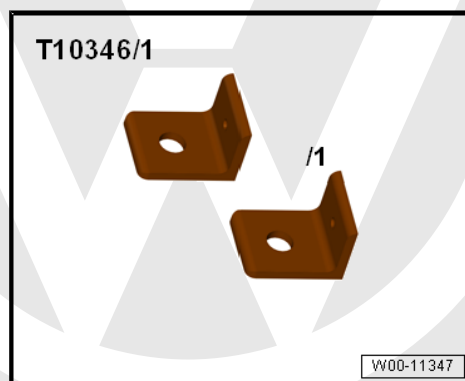
- ◆ Counter-hold tool - T10172-



- ◆ Engine support - T50015A-



- ◆ Bracket - T10346/1-



- ◆ Not illustrated:
- ◆ Torque wrench - V.A.G 1331-
- ◆ Torque wrench - V.A.G 1332-



Removing



Note

- ◆ A twin pillar lifting platform should be used when working on the propshaft.
- ◆ Before removing, mark positions of all parts relative to each other. Reinstall in the same position otherwise imbalance will be excessive, the mountings could be damaged causing rumbling noises.
- ◆ Keep propshaft straight; store and transport fully extended only.

The procedure described below is only applicable for reinstallation of previously removed parts.

Before removal, check if there are coloured marks on flexible coupling, on flange of final drive and on propshaft flange -arrows-. If not, mark installation position of flexible coupling -arrows-.

Continuation for all:

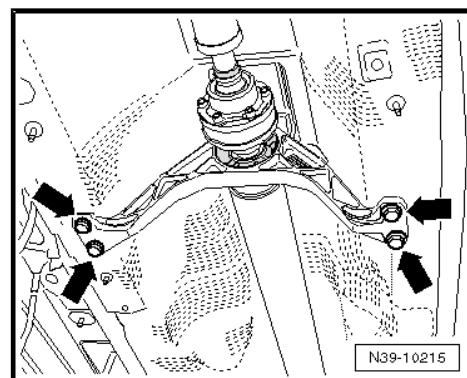
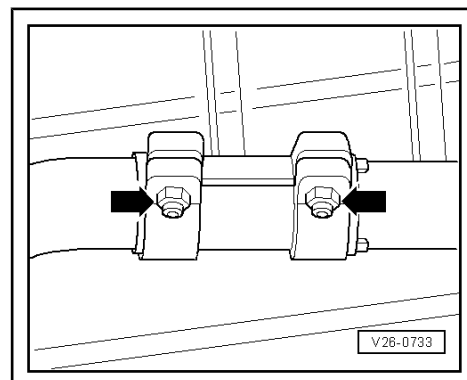
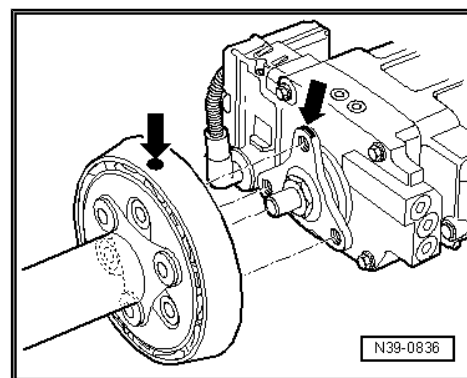
- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .
- Support front section of exhaust system with engine and gear-box jack - V.A.G 1383 A- .



Note

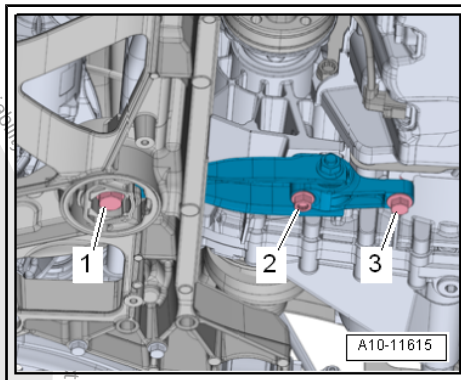
The flexible joint of the exhaust system must not be bent more than 10° – danger of damage.

- Separate exhaust system at clamp -arrows- and remove rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Remove heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trim/ extensions; Assembly overview - heat shield .
- Loosen all bolts for centre bearing.





- Remove pendulum support. First remove bolt -1-, followed by bolts -2- and -3-.



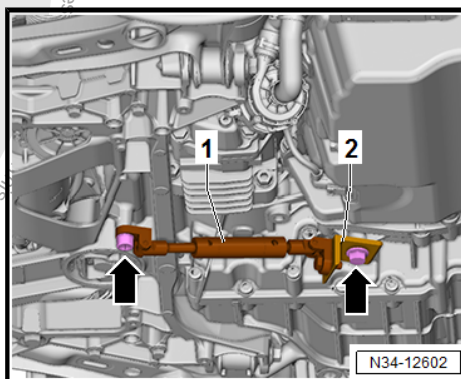
Bolt bracket - T10346/1- -2- to front threaded connection for pendulum support -right arrow-.

- Secure engine support - T50015A- -1- with bolt to subframe -left arrow- and bracket - T10346/1- -2- as shown.



Note

When moving engine/gearbox forwards, observe flexible joint of the exhaust system. Do not stretch it; it may be damaged.

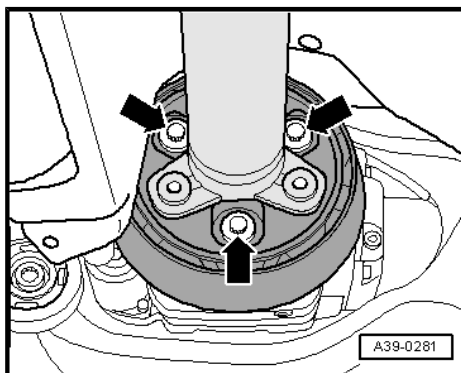


- Carefully move engine/gearbox slightly forwards by turning spindle of engine support - T50015- .
- Unbolt flexible coupling with vibration damper from rear final drive -arrows-.

Golf, Passat, Tiguan:

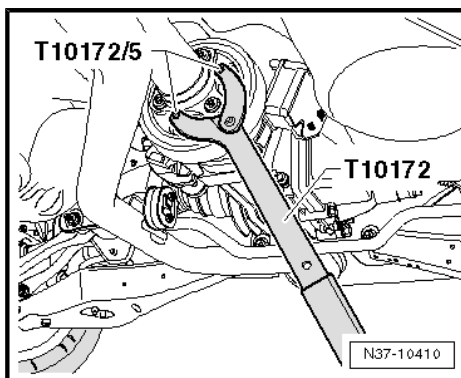
Renew bolts after removing.

Continuation for all:



- Counterhold with counterhold tool - T10172- when loosening or tightening bolts.

Sharan:





- Unbolt rear centre bearing -arrows-.

Continuation for all:

- Unscrew bolts for front bearing of centre propshaft -arrows-.
- Pull propshaft off final drive and rest on tunnel cross member, first laying a cloth on the tunnel cross member to protect the shaft.

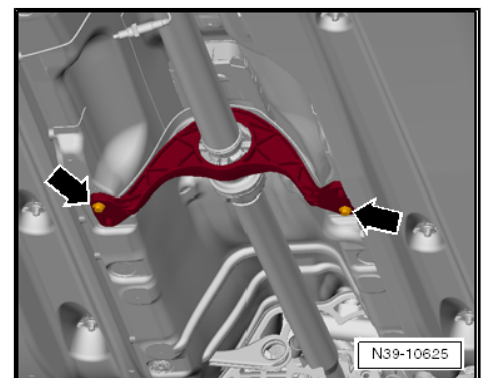
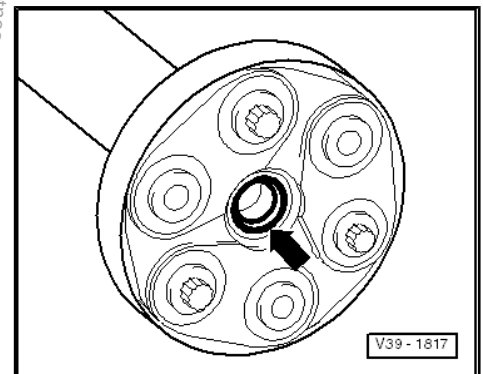
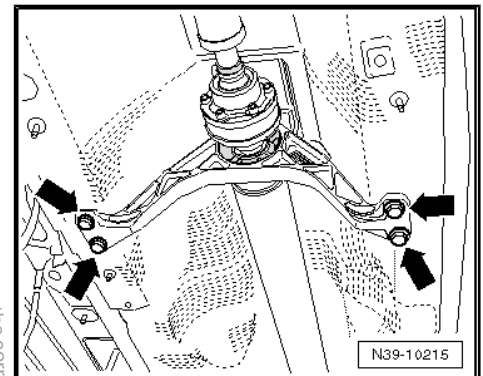
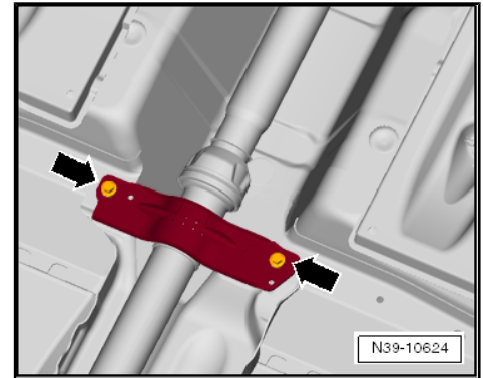
- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

- After propshaft has been pulled off, secure centre propshaft bearing on body using two bolts -arrows-. This prevents the flexible coupling from being unnecessarily exposed to strain.

Unbolt rear flexible coupling with vibration damper from propshaft.

Installing

Install in the reverse order of removal, observing the following.





Note

- ◆ Do not damage seals in propshaft flanges -arrow- during removal and installation.
- ◆ Renew propshaft if damaged.
- ◆ Do not cant rear propshaft tube; push horizontally onto centring pin.
- ◆ All parts of propshaft which have been marked relative to each other must be reinstalled in the same positions.

- Attach flexible coupling to propshaft using new bolts. Specified torques: ➔ [page 113](#)

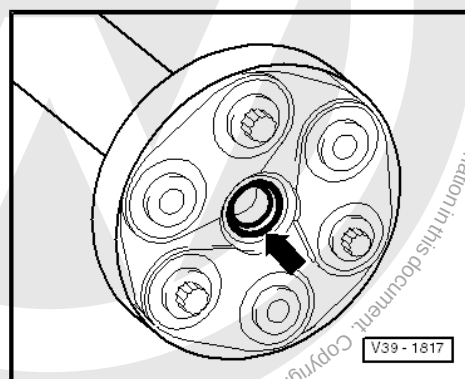
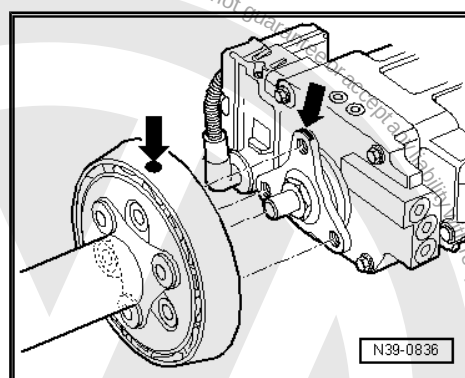
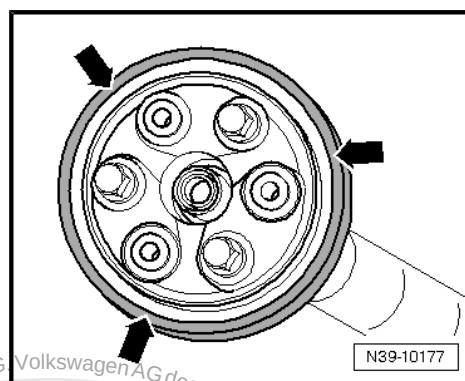
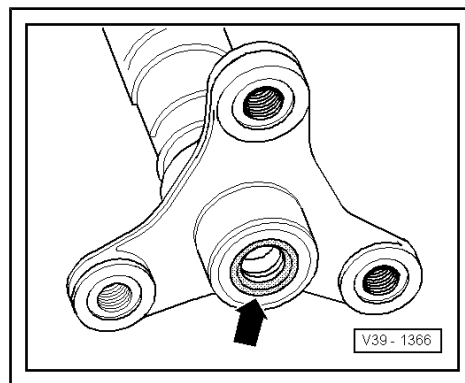
Installation position, flexible coupling with vibration damper:

- ◆ Collar on outer circumference -arrows- faces away from propshaft tube.
- ◆ 3 projecting sleeves each on propshaft flange and flange of final drive engage in flexible coupling mounting holes.

The procedure described below is only applicable for reinstallation of previously removed flexible coupling.

- Attach propshaft to propshaft flange of rear final drive so that marks -arrows- align.

- When pulling off or pushing on propshaft, always ensure that sleeve -arrow- is not damaged.

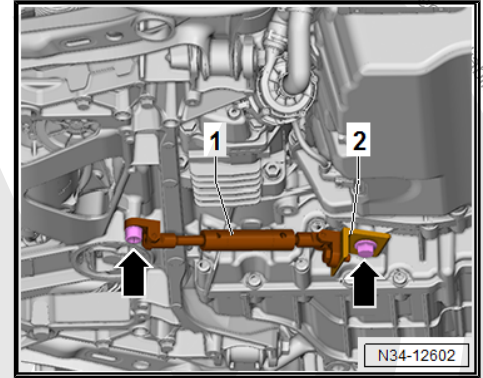




- Remove engine support - T50015- together with bracket - T10346/1- .

Installing centre bearing free of tension.

- Align centre propshaft bearing in its elongated holes so that neither propshaft nor centre propshaft bearing is under tension.
- Do not tighten centre bearings until propshaft has been fitted.
- Tighten propshaft and centre bearing bolts. Specified torques ⇒ [page 113](#) .



- Install pendulum support with new bolts. First tighten bolts -2- and -3- and finally -1-. Specified torques ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Assembly overview - subframe .
- Install heat shield for centre tunnel below centre propshaft bearing ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trims/extensions; Assembly overview - heat shield .
- Install rear section of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Assembly overview - silencer .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .

