

Workshop Manual

Audi A4 2008 ➤ ,
Audi A5 Cabriolet 2009 ➤ ,
Audi A5 Coupé 2008 ➤ ,
Audi Q5 2008 ➤ , Audi Q5 China 2010 ➤

6-speed manual gearbox 0B2, four-wheel drive

Edition 06.2014



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List of Workshop Manual Repair Groups

Repair Group

00 - Technical data

30 - Clutch

34 - Controls, housing

35 - Gears, shafts

39 - Final drive - front differential



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

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00 – Technical data

1 Identification

(ARL003873; Edition 06.2014)

⇒ [“1.1 Gearbox identification”, page 1](#)

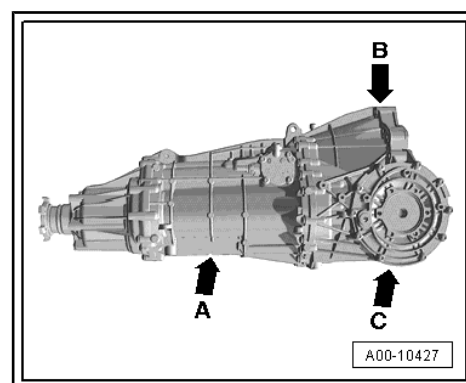
⇒ [“1.2 Identification of final drive”, page 2](#)

1.1 Gearbox identification

⇒ [“2.1 Allocation of gearbox to engine”, page 5](#)

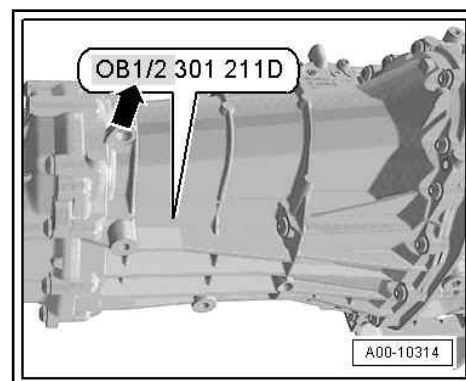
Location on gearbox

- ◆ -Arrow A- Manual gearbox 0B1/2 ⇒ [page 1](#)
- ◆ -Arrow B- Code letters and production date ⇒ [page 1](#)
- ◆ -Arrow C- Code letters and production date on underside of gearbox housing (not on all versions)



Manual gearbox 0B1 or 0B2 -arrow-

- ◆ 0B1 = gearbox version for front-wheel drive
- ◆ 0B2 = gearbox version for four-wheel drive (can be identified by flange shaft for propshaft)



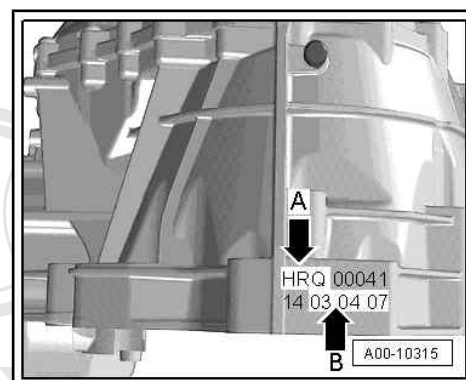
Code letters -arrow A- and production date of gearbox -arrow B-

Example:	HRQ	03 04 07
	Code letters	Production date:
		03.04.07



Note

- ◆ *Additional data are manufacture-related.*
- ◆ *The code letters for the gearbox are also given on the vehicle data stickers.*



1.2 Identification of final drive

⇒ **"1.2.1 Identification of final drive - rear final drive 0BC",**
page 2

⇒ **"1.2.2 Identification of final drive - rear final drive 0BD",**
page 3

1.2.1 Identification of final drive - rear final drive 0BC



Note

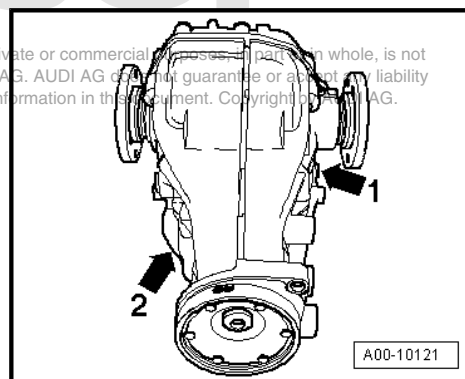
- ◆ *Code letters, allocation, ratio, capacities ⇒ Rear final drive;
Rep. gr. 00; Technical data*
- ◆ *For repairs on the propshaft or the rear final drive, refer to
Workshop Manual ⇒ Rear final drive; Rep. gr. 39; Propshaft,
or ⇒ Rear final drive; Rep. gr. 39; Final drive .*

Location of identification on final drive

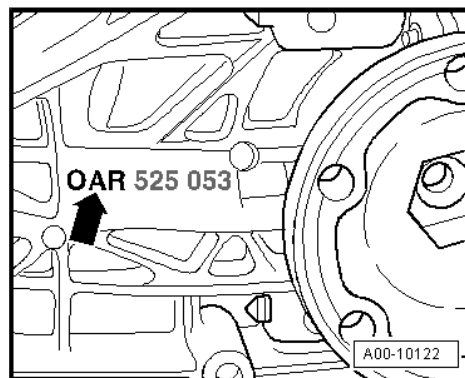
Final drive 0BC -arrow 1- and 0AR

Code letters and date of manufacture -arrow 2-

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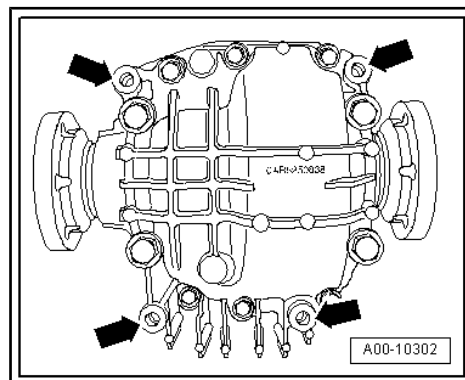


Final drive 0BC -arrow- and 0AR



Note

- ◆ *The designation "0AR" always appears on the rear final drive housing. The distinguishing features for final drives "0BC" and "0AR" are housing modifications.*
- ◆ *An additional distinguishing feature is the position of the tapped holes -arrows- used to secure the cross member to the rear final drive.*
- ◆ *On the final drive unit "0BC" there are 4 tapped holes -arrows- in the final drive housing for securing the cross member. There is also an additional tapped hole below the propshaft flange, for securing the final drive to the subframe.*



Code letters and date of manufacture for rear final drive

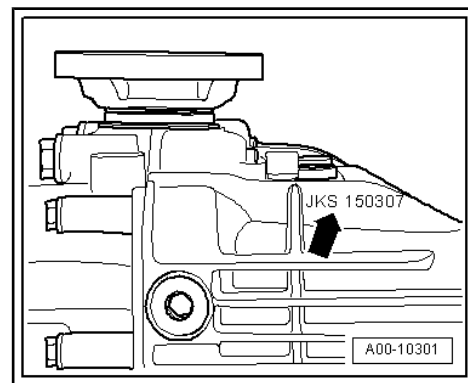
Example:	JKS	15	03	07
	Code letters	Day	Month	Year -2007- of manufacture

Other information can be disregarded.



Note

When installing a new rear final drive unit, it is important to verify not only the code letters on the final drive but also the PR No. and the engine code of the vehicle in the ⇒ Electronic parts catalogue. This is necessary to ensure that the correct version is installed.



1.2.2 Identification of final drive - rear final drive 0BD

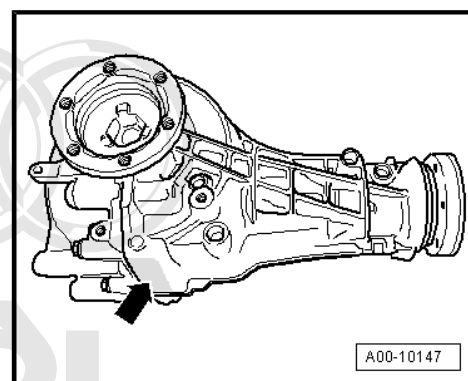


Note

- ◆ *Code letters, allocation, ratio, capacities ⇒ Rear final drive; Rep. gr. 00; Technical data*
- ◆ *For repairs on the propshaft or the rear final drive, refer to Workshop Manual ⇒ Rear final drive; Rep. gr. 39; Propshaft, or ⇒ Rear final drive; Rep. gr. 39; Final drive.*

Location on rear final drive

Final drive 0BD, code letters and date of manufacture -arrow-



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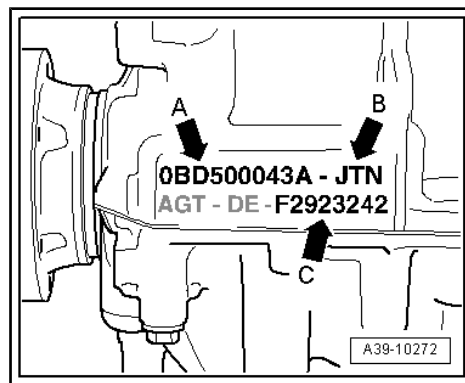


-Arrow A- Final drive 0BD with Part No. (in this example 0BD 500 043A)

-Arrow B- Code letters "JTN"

-Arrow C- Manufacturing data of rear final drive

Example:	F	292	3242
	Year of manufacture -2006-	Day of manufacture	Serial number on day of manufacture
	F = 2006,	-292nd day of year-	
	G = 2007,	(always specified	
	H = 2008 ...	in three digits)	



Other information can be disregarded.



Note

When installing a new rear final drive unit, it is important to verify not only the code letters on the final drive but also the PR No. and the engine code of the vehicle in the ➔ Electronic parts catalogue. This is necessary to ensure that the correct version is installed.



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2 Technical data

⇒ "2.1 Allocation of gearbox to engine", page 5

⇒ "2.2 Capacities", page 12

2.1 Allocation of gearbox to engine

⇒ "2.1.1 Allocation of gearbox to engine - Audi A4 2008 ►", page 5

⇒ "2.1.2 Allocation of gearbox to engine - Audi A4 allroad 2008 ►", page 7

⇒ "2.1.3 Allocation of gearbox to engine, Audi A5 Coupé 2008 ►", page 8

⇒ "2.1.4 Allocation of gearbox to engine - Audi A5 Sportback 2010 ►", page 9

⇒ "2.1.5 Allocation of gearbox to engine - Audi A5 Cabriolet 2009 ►", page 10

⇒ "2.1.6 Allocation of gearbox to engine - Audi Q5 2008 ►", page 11

2.1.1 Allocation of gearbox to engine - Audi A4 2008 ►

The following data can be found in the ⇒ Electronic parts catalogue .

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- ◆ Date of manufacture
- ◆ Gear oil specification
- ◆ Individual gear ratios
- ◆ Correct type of flange shafts
- ◆ Correct type of dual-mass flywheel
- ◆ Correct type of clutch plate and pressure plate
- ◆ Correct type of rear final drive according to code letters and PR number

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		HRQ	KCA	KXM
Allocation	Model Engine	Audi A4 2008 ► 3.2 ltr. FSI - 195 kW	Audi A4 2008 ► 2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 155 kW	Audi A4 2008 ► 2.0 ltr. TDI - 125 kW
Ratio	Final drive	37 : 9 = 4.111	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		KXN	LHM	LLP
Allocation	Model Engine	Audi A4 2008 ► 1.8 ltr. TFSI - 118 kW	Audi A4 2008 ► 2.0 ltr. TDI - 105 kW	Audi A4 2008 ► 2.0 ltr. TDI - 105 kW
Ratio	Final drive	31 : 8 = 3.875	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	35 : 31 = 1.129	31 : 29 = 1.069	31 : 29 = 1.069



Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LLR	LLT	LLX
Allocation	Model	Audi A4 2008 ►	Audi A4 2008 ►	Audi A4 2008 ►
	Engine	2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW	3.2 ltr. FSI - 195 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	31 : 8 = 3.875
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LRU	LRV	LRW
Allocation	Model	Audi A4 2008 ►	Audi A4 2008 ►	Audi A4 2008 ►
	Engine	3.2 ltr. FSI - 195 kW	2.0 ltr. TDI - 125 kW	2.0 ltr. TDI - 105 kW
Ratio	Final drive	31 : 8 = 3.875	38 : 11 = 3.455	29 : 8 = 3.625
	Intermediate drive	35 : 31 = 1.129	31 : 29 = 1.069	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LRX	LRY	MRR
Allocation	Model	Audi A4 2008 ►	Audi A4 2008 ►	Audi A4 2008 ►
	Engine	1.8 ltr. TFSI - 118 kW	2.0 ltr. TFSI - 155 kW	2.0 ltr. TFSI - 155 kW
Ratio	Final drive	31 : 8 = 3.875	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	35 : 31 = 1.129	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		MVZ	NCU	NEK
Allocation	Model	Audi A4 2008 ►	Audi A4 2008 ►	Audi A4 2008 ►
	Engine	2.0 ltr. TDI - 105 kW	1.8 ltr. TFSI - 118 kW	2.0 ltr. TDI - 130 kW
Ratio	Final drive	38 : 11 = 3.455	31 : 8 = 3.875	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	35 : 31 = 1.129	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		NSN	NSP	PJA
Allocation	Model	Audi A4 2008 ►	Audi A4 2008 ►	Audi A4 2008 ►
	Engine	1.8 ltr. TFSI - 125 kW 2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 155 kW 2.0 ltr. TFSI - 165 kW	2.0 ltr. TFSI - 155 kW	1.8 ltr. TFSI - 125 kW 2.0 ltr. TFSI - 165 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		PJE	PNH	

Manual gearbox		6-speed 0B2, four-wheel drive		
Allocation	Model	Audi A4 2008 ►	Audi A4 2008 ►	
	Engine	2.0 ltr. TDI - 140 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 110 kW	
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	

2.1.2 Allocation of gearbox to engine - Audi A4 allroad 2008 ►

The following data can be found in the → Electronic parts catalogue .

- ◆ Date of manufacture
- ◆ Gear oil specification
- ◆ Individual gear ratios
- ◆ Correct type of flange shafts
- ◆ Correct type of dual-mass flywheel
- ◆ Correct type of clutch plate and pressure plate
- ◆ Correct type of rear final drive according to code letters and PR number

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		KLV	KVS	LLY
Allocation	Model	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►
	Engine	2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW	2.0 ltr. TFSI - 155 kW
Ratio	Final drive	29 : 8 = 3.625	29 : 8 = 3.625	29 : 8 = 3.625
	Intermediate drive	35 : 31 = 1.129	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LLZ	LMA	LSC
Allocation	Model	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►
	Engine	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 105 kW	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW
Ratio	Final drive	29 : 8 = 3.625	29 : 8 = 3.625	29 : 8 = 3.625
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	31 : 29 = 1.069

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Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LSD	LSE	MRS
Allocation	Model	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►
	Engine	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 105 kW	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW
Ratio	Final drive	29 : 8 = 3.625	29 : 8 = 3.625	29 : 8 = 3.625
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	31 : 29 = 1.069



Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		MVV	MVY	NEL
Allocation	Model	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►
	Engine	2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 105 kW 2.0 ltr. TDI - 110 kW	2.0 ltr. TDI - 130 kW
Ratio	Final drive	29 : 8 = 3.625	29 : 8 = 3.625	29 : 8 = 3.625
	Intermediate drive	31 : 29 = 1.069	35 : 31 = 1.129	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		PJB	PJG	PNK
Allocation	Model	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►	Audi A4 allroad 2008 ►
	Engine	2.0 ltr. TFSI - 165 kW	2.0 ltr. TDI - 140 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 110 kW
Ratio	Final drive	29 : 8 = 3.625	29 : 8 = 3.625	29 : 8 = 3.625
	Intermediate drive	31 : 29 = 1.069	35 : 31 = 1.129	35 : 31 = 1.129

2.1.3 Allocation of gearbox to engine, Audi A5 Coupé 2008 ►

The following data can be found in the → Electronic parts catalogue .

- ◆ Date of manufacture
- ◆ Gear oil specification
- ◆ Individual gear ratios
- ◆ Correct type of flange shafts
- ◆ Correct type of dual-mass flywheel
- ◆ Correct type of clutch plate and pressure plate
- ◆ Correct type of rear final drive according to code letters and PR number

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		HRQ	KCA	KXM
Allocation	Model	Audi A5 2008 ►	Audi A5 2008 ►	Audi A5 2008 ►
	Engine	3.2 ltr. FSI - 195 kW	2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 125 kW
Ratio	Final drive	37 : 9 = 4.111	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	31 : 29 = 1.069

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Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LLR	LLT	LLX
Allocation	Model	Audi A5 2008 ►	Audi A5 2008 ►	Audi A5 2008 ►
	Engine	2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW	3.2 ltr. FSI - 195 kW
Ratio		38 : 11 = 3.455	38 : 11 = 3.455	31 : 8 = 3.875

Manual gearbox	6-speed 0B2, four-wheel drive		
Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	35 : 31 = 1.129

Manual gearbox	6-speed 0B2, four-wheel drive		
Code letters	LRU	LRV	LRY
Allocation	Model	Audi A5 2008 ►	Audi A5 2008 ►
Engine	3.2 ltr. FSI - 195 kW	2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW
Ratio	Final drive	31 : 8 = 3.875	38 : 11 = 3.455
	Intermediate drive	35 : 31 = 1.129	31 : 29 = 1.069

Manual gearbox	6-speed 0B2, four-wheel drive		
Code letters	MRR	NEK	NSN
Allocation	Model	Audi A5 2008 ►	Audi A5 2008 ►
Engine	2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 130 kW	2.0 ltr. TFSI - 155 kW 2.0 ltr. TFSI - 165 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox	6-speed 0B2, four-wheel drive		
Code letters	NSP	PJA	PJE
Allocation	Model	Audi A5 2008 ►	Audi A5 2008 ►
Engine	2.0 ltr. TFSI - 155 kW 2.0 ltr. TFSI - 162 kW	2.0 ltr. TFSI - 165 kW	2.0 ltr. TDI - 140 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069

2.1.4 Allocation of gearbox to engine - Audi A5 Sportback 2010 ►

The following data can be found in the ⇒ Electronic parts catalogue .

- ◆ Date of manufacture
- ◆ Gear oil specification
- ◆ Individual gear ratios
- ◆ Correct type of flange shafts
- ◆ Correct type of dual-mass flywheel
- ◆ Correct type of clutch plate and pressure plate
- ◆ Correct type of rear final drive according to code letters and PR number

Manual gearbox	6-speed 0B2, four-wheel drive		
Code letters	KCA	KXM	LLR



Manual gearbox		6-speed 0B2, four-wheel drive		
Allocation	Model	Audi A5 Sportback 2010 ►	Audi A5 Sportback 2010 ►	Audi A5 Sportback 2010 ►
	Engine	2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 125 kW	2.0 ltr. TDI - 125 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LLT	LRV	LRY
Allocation	Model	Audi A5 Sportback 2010 ►	Audi A5 Sportback 2010 ►	Audi A5 Sportback 2010 ►
	Engine	2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 155 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		NEK	NSN	PJA
Allocation	Model	Audi A5 Sportback 2010 ►	Audi A5 Sportback 2010 ►	Audi A5 Sportback 2010 ►
	Engine	2.0 ltr. TDI - 130 kW	2.0 ltr. TFSI - 155 kW 2.0 ltr. TFSI - 165 kW	2.0 ltr. TFSI - 165 kW
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	38 : 11 = 3.455
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	31 : 29 = 1.069

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		PJE		
Allocation	Model	Audi A5 Sportback 2010 ►		
	Engine	2.0 ltr. TDI - 140 kW		
Ratio	Final drive	38 : 11 = 3.455		
	Intermediate drive	31 : 29 = 1.069		

2.1.5 Allocation of gearbox to engine - Audi A5 Cabriolet 2009 ►

The following data can be found in the ⇒ Electronic parts catalogue .

- ◆ Date of manufacture
- ◆ Gear oil specification
- ◆ Individual gear ratios
- ◆ Correct type of flange shafts
- ◆ Correct type of dual-mass flywheel

- ◆ Correct type of clutch plate and pressure plate
- ◆ Correct type of rear final drive according to code letters and PR number

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		NEK	PJE	
Allocation	Model	Audi A5 Cabriolet 2009 ►	Audi A5 Cabriolet 2009 ►	
	Engine	2.0 ltr. TDI - 130 kW	2.0 ltr. TDI - 140 kW	
Ratio	Final drive	38 : 11 = 3.455	38 : 11 = 3.455	
	Intermediate drive	31 : 29 = 1.069	31 : 29 = 1.069	

2.1.6 Allocation of gearbox to engine - Audi Q5 2008 ►

The following data can be found in the ⇒ **Electronic parts catalogue** .

- ◆ Date of manufacture
- ◆ Gear oil specification
- ◆ Individual gear ratios
- ◆ Correct type of flange shafts
- ◆ Correct type of dual-mass flywheel
- ◆ Correct type of clutch plate and pressure plate
- ◆ Correct type of rear final drive according to code letters and PR number

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Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		KWT	KXR	LDA
Allocation	Model	Audi Q5 2008 ►	Audi Q5 2008 ►	Audi Q5 2008 ►
	Engine	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 125 kW
Ratio	Final drive	33 : 8 = 4.125	31 : 8 = 3.875	33 : 8 = 4.125
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LHU	LRZ	LSA
Allocation	Model	Audi Q5 2008 ►	Audi Q5 2008 ►	Audi Q5 2008 ►
	Engine	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 105 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 105 kW	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 125 kW
Ratio	Final drive	31 : 8 = 3.875	31 : 8 = 3.875	31 : 8 = 3.875
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		LSB	NAG	NAH
Allocation	Model	Audi Q5 2008 ►	Audi Q5 2008 ►	Audi Q5 2008 ►



Manual gearbox		6-speed 0B2, four-wheel drive		
Engine		2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 155 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 105 kW 2.0 ltr. TDI - 110 kW	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 130 kW
Ratio	Final drive	31 : 8 = 3.875	31 : 8 = 3.875	31 : 8 = 3.875
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		NAJ	NBQ	PJC
Allocation	Model	Audi Q5 2008 ►	Audi Q5 2008 ►	Audi Q5 2008 ►
	Engine	2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 165 kW	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 125 kW	2.0 ltr. TFSI - 132 kW 2.0 ltr. TFSI - 165 kW
Ratio	Final drive	31 : 8 = 3.875	33 : 8 = 4.125	31 : 8 = 3.875
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	35 : 31 = 1.129

Manual gearbox		6-speed 0B2, four-wheel drive		
Code letters		PJF	PNJ	
Allocation	Model	Audi Q5 2008 ►	Audi Q5 2008 ►	
	Engine	2.0 ltr. TDI - 120 kW 2.0 ltr. TDI - 140 kW	2.0 ltr. TDI - 100 kW 2.0 ltr. TDI - 110 kW	
Ratio	Final drive	31 : 8 = 3.875	31 : 8 = 3.875	
	Intermediate drive	35 : 31 = 1.129	35 : 31 = 1.129	

2.2 Capacities

Manual gearbox	6-speed 0B2, four-wheel drive
Capacity of manual gearbox	4.5 ltr.
◆ Gear oil specifications ⇒ Electronic parts catalogue	



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3 Repair instructions

⇒ **"3.1 General repair instructions", page 13**

3.1 General repair instructions

Proper tools and the maximum possible care and cleanliness are essential for satisfactory repairs to the transmission units. The usual basic safety precautions also naturally apply when carrying out repair work.

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

Special tools

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

Gearbox

- ◆ Servicing ⇒ Servicing manual gearbox; Rep. gr. 34 ; Dismantling and assembling gearbox
- ◆ Allocate bolts and other components according to gearbox code letters, refer to ⇒ Electronic parts catalogue ⇒ [page 5](#) .
- ◆ When installing a new gearbox, check the oil level and fill up with oil if necessary ⇒ [page 199](#) .
- ◆ Capacities and specifications ⇒ [page 12](#)
- ◆ Thoroughly clean all joints and connections and the surrounding areas before dismantling.
- ◆ When installing gearbox ensure dowel sleeves are correctly seated.

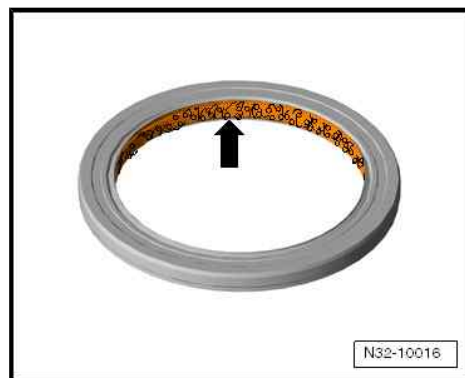
Sealants

- ◆ Thoroughly clean joint surfaces on gearbox housing etc. before applying sealing paste.
- ◆ Apply sealing paste - AMV 188 001 02- evenly and not too thickly.
- ◆ Breather holes must remain free of sealing paste.

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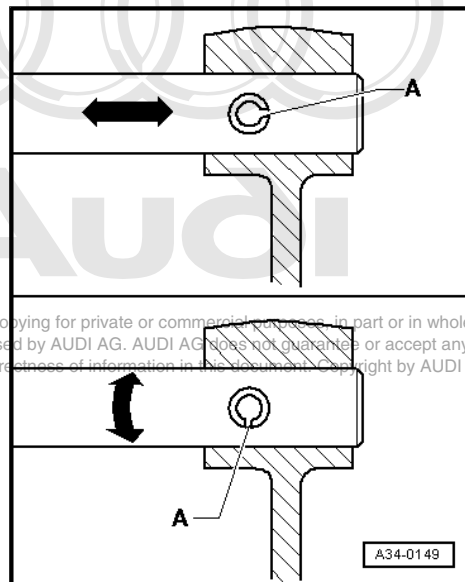
O-rings, seals, oil seals and gaskets

- ◆ Always renew O-rings, seals and gaskets.
- ◆ After removing gaskets and seals, always inspect the contact surface on the housing or shaft for burrs resulting from removal or for other signs of damage.
- ◆ Thoroughly clean housing joint surfaces before assembling.
- ◆ Before installing oil seals, lightly oil the outer circumference of the seal and fill the space between the sealing lips -arrow- about half full with grease - G 052 128 A1- .
- ◆ The open side of the oil seal should face the side containing the fluid.
- ◆ When installing a new oil seal, position the seal such that the sealing lip does not contact the shaft in the same place as the old seal (make use of installation depth tolerances).
- ◆ Lightly lubricate O-rings before installation to prevent them from being trapped and damaged during assembly.
- ◆ After renewing gaskets and oil seals, check and, if necessary, top up oil level in gearbox ⇒ [page 199](#) .



Locking elements

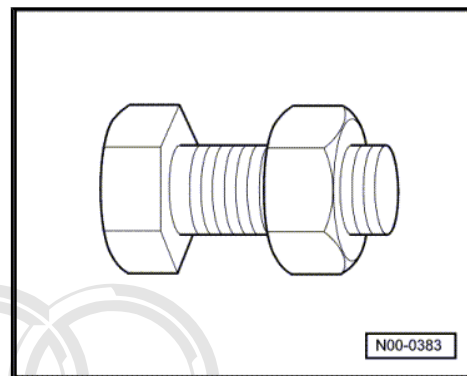
- ◆ Do not over-stretch circlips.
- ◆ Always renew circlips which have been damaged or over-stretched.
- ◆ Circlips must be properly seated in the base of the groove.
- ◆ Renew spring pins. Position: the slit -A- should be in line with the line of force -arrow-.



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Nuts, bolts

- ◆ Loosen the nuts and bolts in reverse sequence to the specified tightening sequence.
- ◆ Nuts and bolts which secure covers and housings should be loosened and tightened in diagonal sequence and in stages if no tightening sequence is specified.
- ◆ Loosen and tighten particularly sensitive parts in diagonal sequence and in stages, taking care to keep them straight.
- ◆ The tightening torques stated apply to non-oiled nuts and bolts.
- ◆ Always renew self-locking bolts and nuts.
- ◆ Use a wire brush to clean the threads of bolts which are secured with locking fluid. Then apply locking fluid - AMV 185 101 A1- to bolt threads before installing.
- ◆ Threaded holes which take self-locking bolts or bolts coated with locking fluid must be cleaned (using a tap or similar). Otherwise there is a danger of the bolts shearing off the next time they are removed.



Clutch mechanism

- ◆ When removing gearbox, ~~remove clutch slave cylinder without~~ disconnecting pipes. ... for commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- ◆ Do not depress the clutch pedal after removing the clutch slave cylinder if the hydraulic pipe is still connected. Otherwise the piston will be pressed out of the clutch slave cylinder. As a result the clutch slave cylinder will be destroyed.
- ◆ If the clutch pedal does not return to its initial position after releasing it - clutch pedal in rest position-, you must bleed the clutch system. Further measures
⇒ ["1.6 Notes on removing and installing clutch master cylinder and slave cylinder", page 27](#) .
- ◆ If the clutch has burnt out, thoroughly clean the gearbox housing in area of clutch and parts of the engine facing the gearbox in order to prevent odours.
- ◆ Blow out clutch module with compressed air only.
- ◆ The brake fluid in the clutch system should be changed at the same intervals as the brake fluid in the brake system ⇒ Maintenance ; Booklet 405 ; Description of work; Brake fluid: changing (every 2 years) .

4 Safety precautions

⇒ **"4.1 Safety precautions when working on vehicles with start/stop system", page 16**

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



WARNING

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

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

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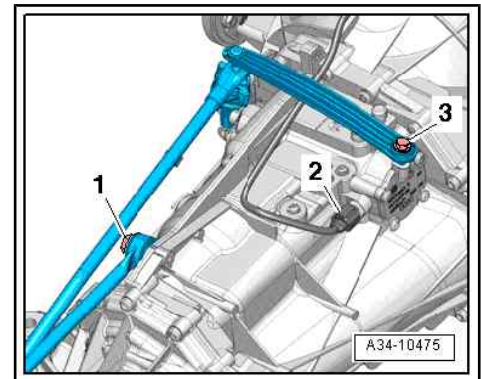
5 Electrical components

⇒ [“5.1 Overview of fitting locations - electrical components”, page 17](#)

5.1 Overview of fitting locations - electrical components

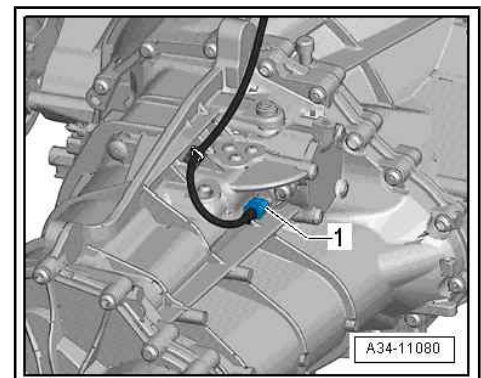
Gear detector switch - F208- item -2-

- ⇒ [“1.9 Removing and installing gear detector switch F208 ”, page 65](#)



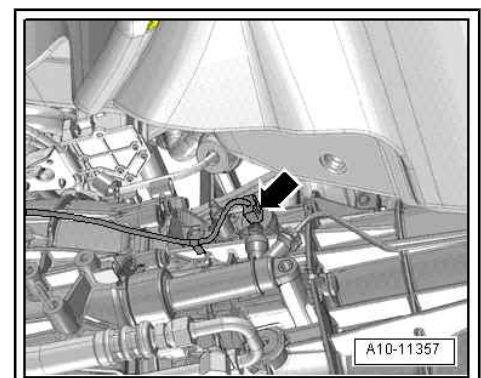
Gear detection sensor - G604- item -1-

- ⇒ [“1.10 Removing and installing gear detection sensor G604 ”, page 69](#)



Gearbox neutral position sender - G701- -arrow-

- ⇒ [“1.11 Removing and installing gearbox neutral position sender G701 ”, page 73](#)



30 – Clutch

1 Clutch mechanism

- ⇒ [“1.1 Exploded view - pedal cluster”, page 18](#)
- ⇒ [“1.2 Exploded view - clutch hydraulics”, page 22](#)
- ⇒ [“1.3 Exploded view - clutch release mechanism”, page 23](#)
- ⇒ [“1.4 Removing and installing over-centre spring”, page 24](#)
- ⇒ [“1.5 Removing and installing clutch pedal”, page 26](#)
- ⇒ [“1.6 Notes on removing and installing clutch master cylinder and slave cylinder”, page 27](#)
- ⇒ [“1.7 Checking clutch master cylinder and clutch slave cylinder”, page 27](#)
- ⇒ [“1.8 Removing and installing clutch master cylinder”, page 28](#)
- ⇒ [“1.9 Removing and installing clutch slave cylinder”, page 32](#)
- ⇒ [“1.10 Bleeding clutch hydraulics”, page 34](#)

1.1 Exploded view - pedal cluster

- ⇒ [“1.1.1 Exploded view - pedal cluster, LHD vehicles”, page 18](#)
- ⇒ [“1.1.2 Exploded view - pedal cluster, RHD vehicles”, page 20](#)

1.1.1 Exploded view - pedal cluster, LHD vehicles



Caution

Risk of accident.

- ◆ *The travel of the brake pedal must not be restricted with additional floor mats or the like.*



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Note

- ◆ *Apply grease - G 000 450 02- to all bearings and contact surfaces.*
- ◆ *Make sure that no brake fluid escapes into the footwell, the plenum chamber or onto the gearbox below. If this does happen, clean the affected area thoroughly.*

1 - Mounting bracket

- ☐ With brake pedal
- ☐ Removing and installing
⇒ Brake system; Rep.
gr. 46 ; Brake pedal;
Removing and installing
mounting bracket

2 - Bearing bush

3 - Clutch pedal

- ☐ Removing and installing
⇒ [page 28](#)

4 - Clutch pedal stop

5 - Locking pin

- ☐ For clutch master cylinder
- ☐ Grease bearing surface

6 - Pivot pin for clutch pedal

- ☐ Grease bearing surface

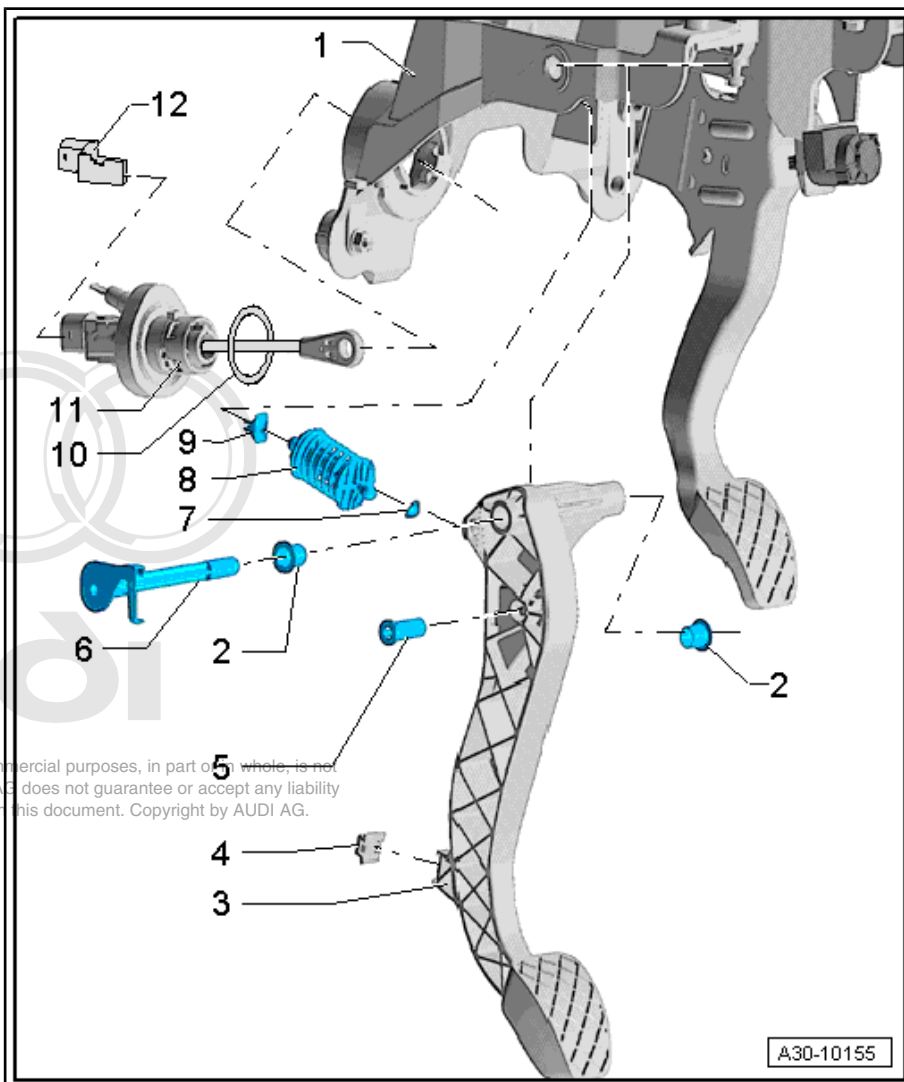
7 - Bearing shell

- ☐ Located in clutch pedal

8 - Over-centre spring

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- ☐ Black side points towards clutch pedal
- ☐ Note different bearing positions in mounting bracket ⇒ [page 25](#)
- ☐ Removing and installing
⇒ [page 24](#)
- ☐ Allocate according to engine code ⇒ Electronic parts catalogue



9 - Bearing shell

- ☐ Note different bearing positions in mounting bracket ⇒ [page 25](#)

10 - Seal

- ☐ Renew

11 - Clutch master cylinder

- ☐ Removing and installing ⇒ [page 28](#)
- ☐ Grease mounting eye of pushrod

12 - Clutch position sender - G476-

- ☐ Clutch pedal switch - F36- and clutch pedal switch for engine start - F194- are integrated
- ☐ Can only be renewed together with clutch master cylinder ⇒ [Item 11 \(page 19\)](#)

1.1.2 Exploded view - pedal cluster, RHD vehicles



Caution

Risk of accident.

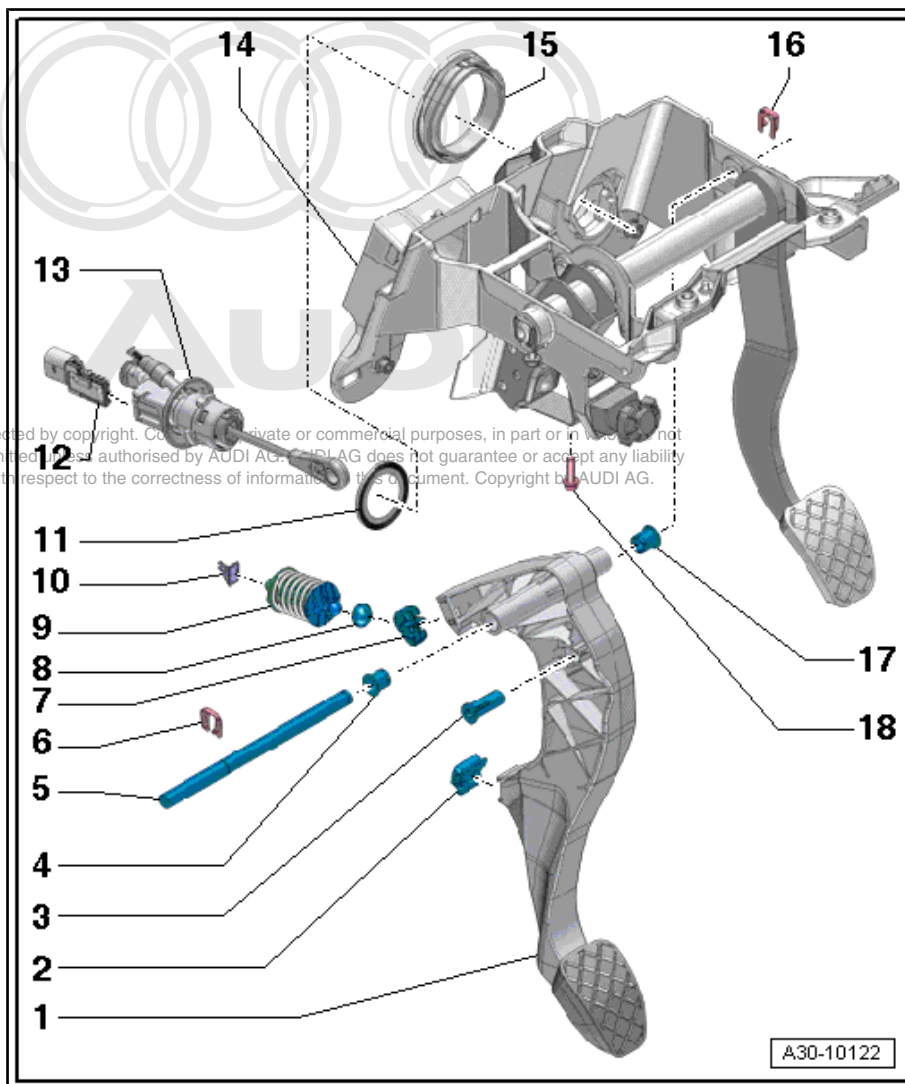
- ◆ *The travel of the brake pedal must not be restricted with additional floor mats or the like.*



Note

- ◆ *Apply grease - G 000 450 02- to all bearings and contact surfaces.*
- ◆ *Make sure that no brake fluid escapes into the footwell, the plenum chamber or onto the gearbox below. If this does happen, clean the affected area thoroughly.*

- 1 - Clutch pedal
- 2 - Clutch pedal stop
- 3 - Locking pin
 - ☐ For clutch master cylinder
 - ☐ Grease bearing surface
- 4 - Bearing bush
- 5 - Pivot pin for clutch pedal
 - ☐ Grease bearing surface
- 6 - Retaining clip
- 7 - Bearing
 - ☐ Note different bearing positions in clutch pedal
⇒ [page 25](#)
- 8 - Bearing shell
- 9 - Over-centre spring
 - ☐ Black side points towards clutch pedal
 - ☐ Note different bearing positions in clutch pedal
⇒ [page 21](#)
 - ☐ Allocate according to engine code ⇒ Electronic parts catalogue
- 10 - Bearing shell
- 11 - Seal
 - ☐ Renew
- 12 - Clutch position sender - G476-
 - ☐ Clutch pedal switch - F36- and clutch pedal switch for engine start - F194- are integrated
 - ☐ Can only be renewed together with clutch master cylinder ⇒ [Item 13 \(page 21\)](#)



13 - Clutch master cylinder

- ☐ Grease mounting eye of pushrod

14 - Mounting bracket

- ☐ With brake pedal

15 - Seal

16 - Retaining clip

17 - Bearing bush

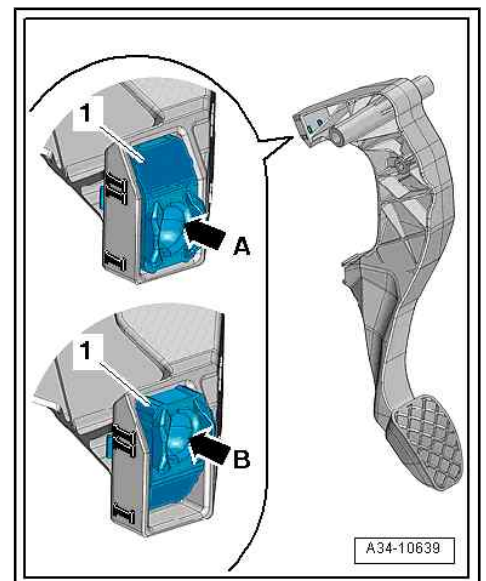
18 - Bolt

- ☐ 2x
- ☐ 8 Nm

Installing over-centre spring

- Clip bearing -1- into corresponding position on clutch pedal.

Bearing position	Colour of over-centre spring
• "I" -arrow A-	◆ Green ◆ Blue ◆ Red/purple
• "II" -arrow B-	◆ White



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1.2 Exploded view - clutch hydraulics

Observe notes on removing and installing clutch master cylinder and slave cylinder ➔ [page 27](#) .

1 - Clutch slave cylinder

- ☐ Do not operate clutch pedal after slave cylinder has been removed
- ☐ Removing and installing ➔ [page 32](#)
- ☐ After working on hydraulic clutch mechanism, bleed clutch system ➔ [page 34](#)
- ☐ Do not allow brake fluid to come into contact with gearbox.

2 - Bleeder screw

- ☐ 5.5 Nm
- ☐ Follow correct procedure when bleeding ➔ [page 34](#)
- ☐ If bleeder screw has broken off, it can be removed with 3 mm Allen key

3 - Dust cap

4 - Pipe/hose assembly

- ☐ With frequency modulator (vibration damper)



Note

A one-piece pipe/hose assembly without frequency modulator is installed on Audi A5 vehicles up to Chassis No. 8T-8-000100.

- ☐ For correct version, refer to ➔ Electronic parts catalogue
- ☐ Connecting and disconnecting ➔ [page 23](#)
- ☐ Allocation for LHD and RHD vehicles ➔ Electronic parts catalogue

5 - Retaining clip

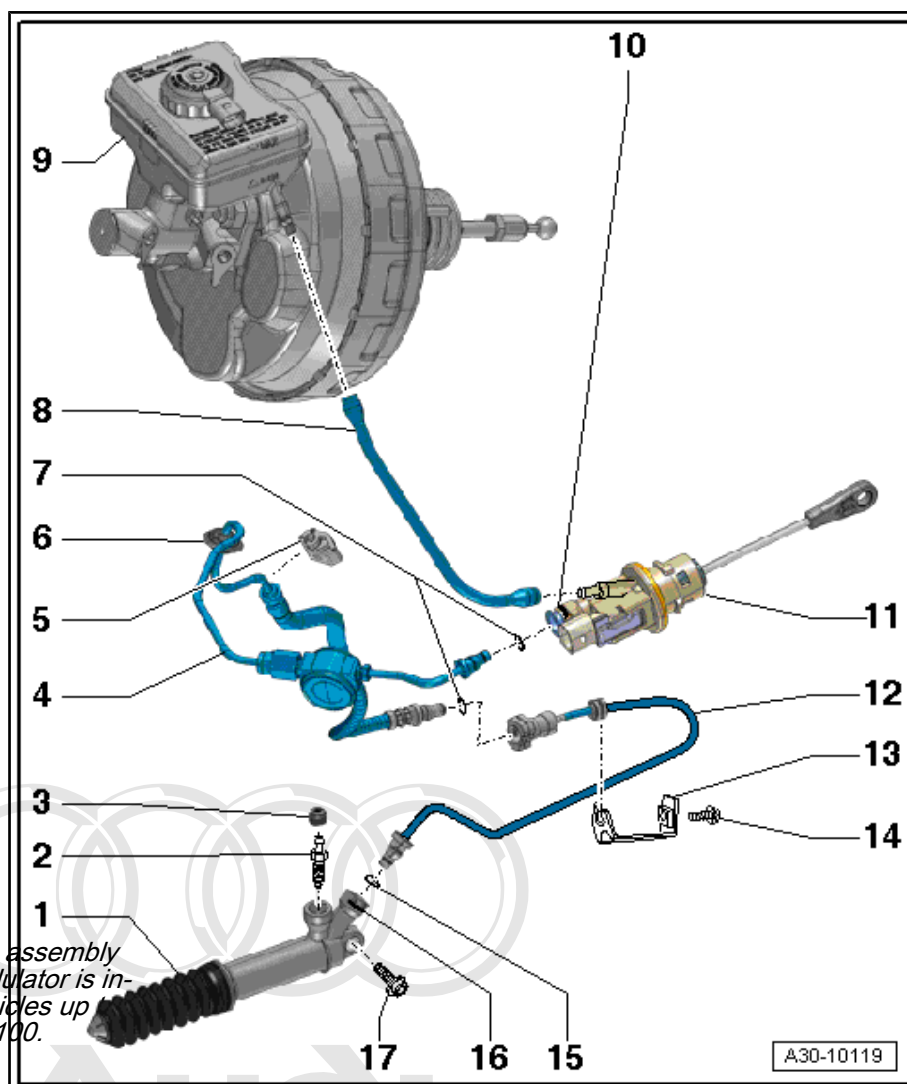
6 - Grommet

7 - O-rings

- ☐ Renew if damaged
- ☐ Lubricate with brake fluid before installing

8 - Supply hose

- ☐ For clutch master cylinder
- ☐ With integrated sealing grommets
- ☐ Renew supply hose if sealing grommets are damaged



9 - Brake fluid reservoir

10 - Retaining clip

- ☐ To remove pipe/hose assembly, pull out clip as far as stop ⇒ [page 23](#) .

11 - Clutch master cylinder

- ☐ Removing and installing ⇒ [page 28](#)
- ☐ Grease mounting eye of pushrod
- ☐ After working on hydraulic clutch mechanism, bleed clutch system ⇒ [page 34](#)

12 - Pipe

- ☐ Connecting and disconnecting ⇒ [page 23](#)
- ☐ Allocation for LHD and RHD vehicles ⇒ Electronic parts catalogue

13 - Bracket

- ☐ For pipe
- ☐ Attached to gearbox

14 - Bolt

- ☐ 20 Nm

15 - O-ring

- ☐ Renew if damaged
- ☐ Lubricate with brake fluid before installing

16 - Retaining clip

- ☐ To remove pipe/hose assembly, pull out clip as far as stop ⇒ [page 23](#) .

17 - Bolt

- ☐ Clutch slave cylinder to gearbox
- ☐ 20 Nm

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Connecting and disconnecting pipe/hose assembly

Disconnecting

- Release retaining clip -A- using a screwdriver and pull out as far as stop.
- Pull off pipe/hose assembly.

Connecting



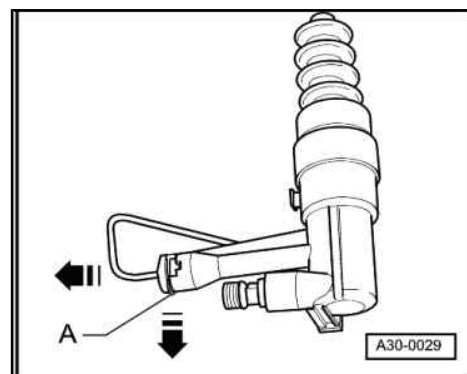
Note

Renew O-ring if damaged.

- Press retaining clip -A- in as far as it will go.
- Push pipe/hose assembly into connection until it engages audibly.
- Pull on pipe/hose assembly to check it is secure.

1.3 Exploded view - clutch release mechanism

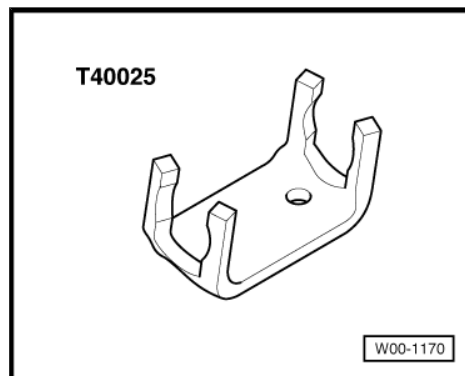
- For a detailed description please refer to the Workshop Manual ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch mechanism; Exploded view - clutch release mechanism .



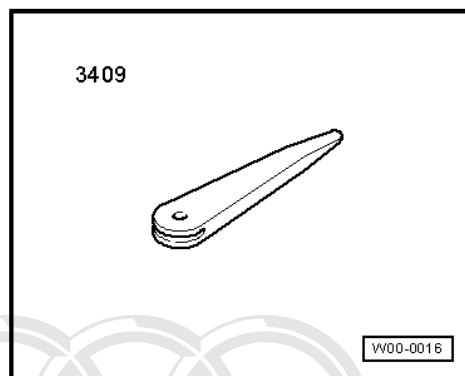
1.4 Removing and installing over-centre spring

Special tools and workshop equipment required

- ◆ Assembly clip - T40025-

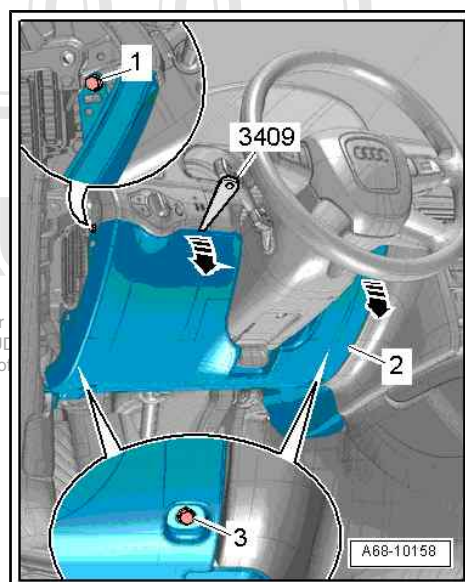


- ◆ Removal wedge - 3409-



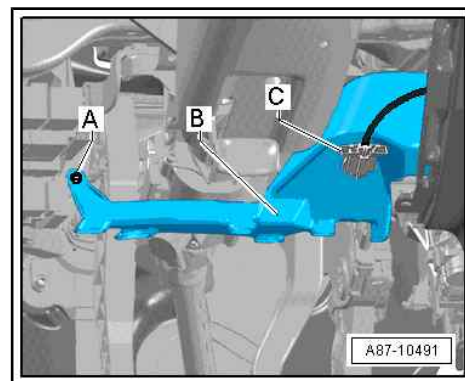
Removing

- Remove dash panel cover (driver side) ⇒ General body repairs, interior; Rep. gr. 68 ; Shelves / trim panels; Removing and installing dash panel cover (driver side) .

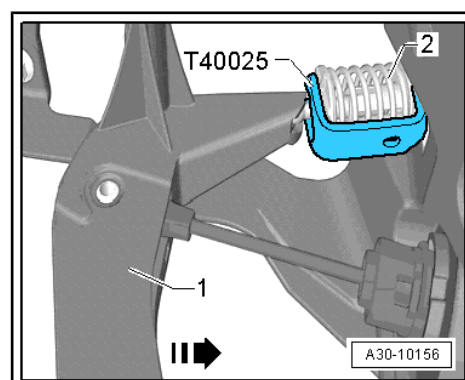


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- Remove footwell vent (left-side) ⇒ Heating, air conditioning; Rep. gr. 87 ; Air duct system; Removing and installing footwell vent (driver side) .



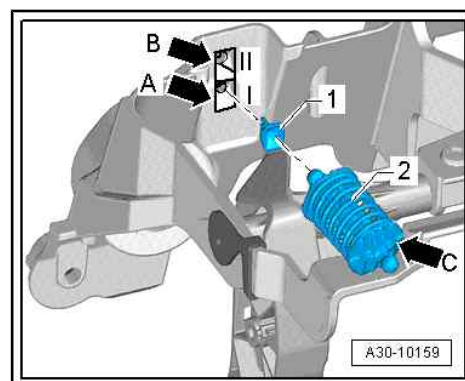
- Move clutch pedal -1- slightly in direction of -arrow-. Press assembly clip - T40025- onto over-centre spring -2- while over-centre spring is compressed.
- Depress clutch pedal fully to stop and remove over-centre spring downwards with assembly clip.



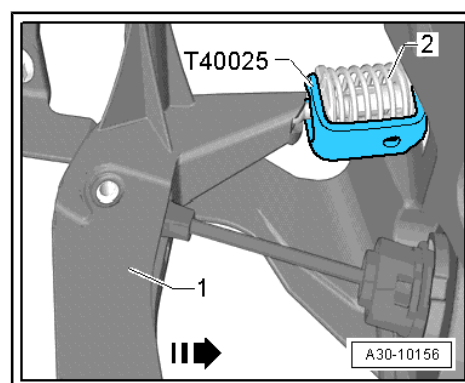
Installing over-centre spring

- Clip bearing shell -1- into appropriate bearing position.

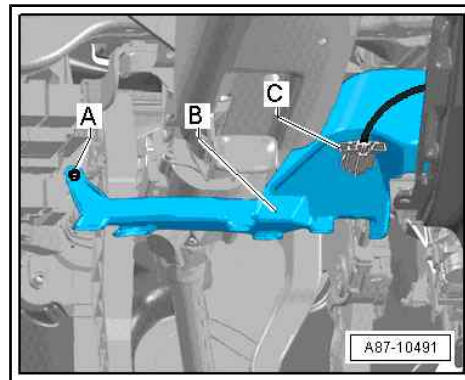
Bearing position	Colour of over-centre spring
• "I" -arrow A-	♦ Green ♦ Blue ♦ Red/purple
• "II" -arrow B-	♦ White



- Insert over-centre spring -2-.
- Black side -arrow C- faces clutch pedal.
- Depress clutch pedal -1- fully to stop and install over-centre spring -2- with assembly clip - T40025- .
- Pull clutch pedal back to rest position. Take assembly clip off over-centre spring while over-centre spring is compressed.



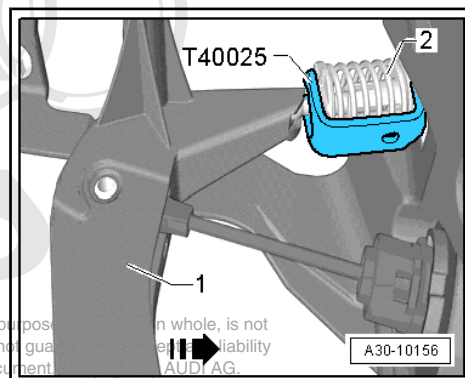
- Install footwell vent ⇒ Heating, air conditioning; Rep. gr. 87 ; Air duct system; Removing and installing footwell vent (driver side) .
- Install dash panel cover (driver side) ⇒ General body repairs, interior; Rep. gr. 68 ; Shelves / trim panels; Removing and installing dash panel cover (driver side) .



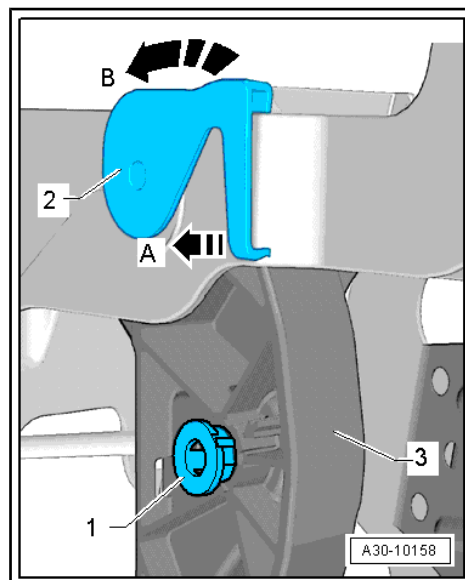
1.5 Removing and installing clutch pedal

Removing

- Remove mounting bracket ⇒ Brake system; Rep. gr. 46 ; Brake pedal; Removing and installing mounting bracket .
- Remove over-centre spring -2- ⇒ [page 24](#) .



- Remove locking pin -1-.
- Remove pivot pin -2- by lifting retaining tab -arrow A- and turning pivot pin in direction of -arrow B-.
- Pull out pivot pin -2- and remove clutch pedal -3-.



Installing

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

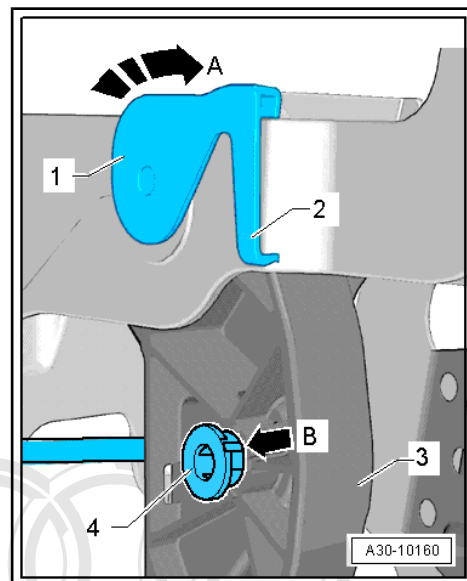


Caution

Grating/creaking noises can occur when clutch is operated.

- ◆ *Lack of grease at the bearings on the clutch pedal and in particular on the mounting eye of the master cylinder pushrod can cause creaking/grating noises when the clutch is operated.*
- ◆ *Apply grease - G 000 450 02- to all bearings and contact surfaces.*

- Install clutch pedal -3-, push in pivot pin -1- and lock in direction of -arrow A-. Bottom of retaining tab -2- should engage at pedal bracket.
- Insert locking pin -4-. Shoulder on pin -arrow B- must be introduced into groove on clutch pedal.
- Install over-centre spring ⇒ [page 25](#) .
- Install mounting bracket ⇒ Brake system; Rep. gr. 46 ; Brake pedal; Removing and installing mounting bracket .



1.6 Notes on removing and installing clutch master cylinder and slave cylinder

- ◆ Before renewing the clutch master cylinder or slave cylinder on the assumption that it is defective, you must first carry out the appropriate function check ⇒ [page 27](#) .
- ◆ If the slave cylinder is removed from gearbox with the pipe/hose assembly still attached, make sure you do not press the clutch pedal. Otherwise, the piston will be pressed out of the slave cylinder and be destroyed.
- ◆ After installing the slave cylinder carefully press the clutch pedal. If you feel an unusually strong point of resistance when depressing the clutch pedal, you must not press it down further. The plunger of the slave cylinder is likely to have been guided past the clutch release lever. The slave cylinder would then be destroyed once pedal force exceeds approx. 300 N.

1.7 Checking clutch master cylinder and clutch slave cylinder

Before you renew the clutch master cylinder or slave cylinder you must - in the case of the following faults - first carry out the appropriate checks.

Noises when operating the clutch:

- ◆ First check the over-centre spring / clutch pedal switch for noise.
- ◆ If you hear a noise, remove over-centre spring and repeat check.
- ◆ Renew relevant component.

After releasing clutch pedal it still remains depressed / does not return to its initial position.

- ◆ Check whether the clutch pedal returns all the way to its initial position, thereby uncovering the vent opening in the master cylinder.

- ◆ Check that footwell trim and/or floor mats are not trapped and that clutch pedal switch is not blocked.
- ◆ Make the customer aware that the driver must NOT rest his/her foot on the clutch pedal for long periods of time.
- ◆ This could impair the self-bleeding function of the clutch system as the vent opening in the clutch master cylinder can no longer function.
- ◆ The vent opening must be uncovered, otherwise the permanent self-bleeding function for the hydraulic clutch system will no longer be effective.
- ◆ The vent opening is integrated in the clutch master cylinder. It is not visible from the outside.

Check the complete hydraulic system for leaks.

- ◆ Check brake fluid level in brake fluid reservoir.
- ◆ Check clutch master cylinder and slave cylinder as well as the pipe/hose assembly including connections for external leaks (visual inspection).
- ◆ If you identify any leaks you must renew the leaking component.
- ◆ Bleed clutch system ⇒ [page 34](#)

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High pedal force:

- ◆ Mechanical fault on clutch plate or pressure plate ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Exploded view - clutch

Pedal forces:

- ◆ approx. 140 N for complete service life of the clutch

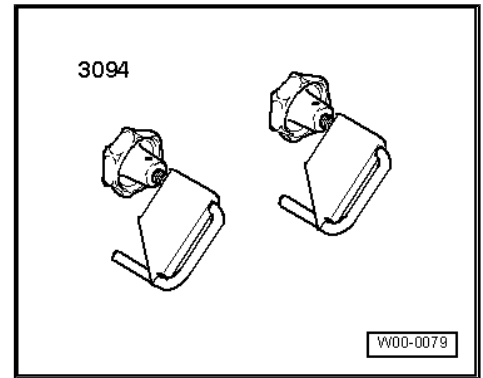
Clutch does not disengage or does not disengage fully:

- ◆ Air in hydraulic system: bleed clutch system ⇒ [page 34](#) and check hydraulic system for external and internal leaks.
- ◆ Clutch plate does not run smoothly on input shaft splines
- ◆ Needle bearing in drive plate defective (centring bearing for input shaft); renew needle bearing ⇒ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate .
- ◆ Foreign body in clutch system
- ◆ Mechanical fault on clutch plate or pressure plate ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Exploded view - clutch
- ◆ Wrong components used or components forgotten when carrying out repair work (e.g. intermediate plate or dowel sleeves between engine and gearbox).

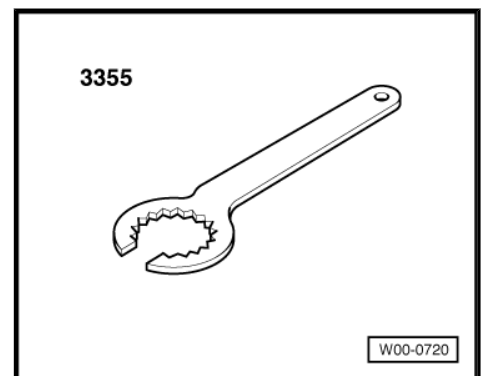
1.8 Removing and installing clutch master cylinder

Special tools and workshop equipment required

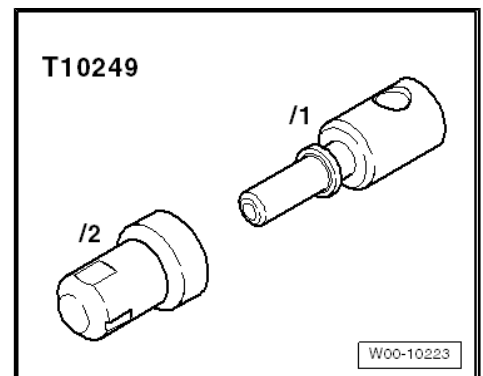
- ◆ Hose clamps, up to Ø 25 mm - 3094-



- ◆ Open ring spanner, 32 mm - 3355-



- ◆ Sealing tool - T10249-



- ◆ Grease - G 000 450 02-

Removing

- Observe notes on removing and installing clutch master cylinder and slave cylinder ➔ [page 27](#) .

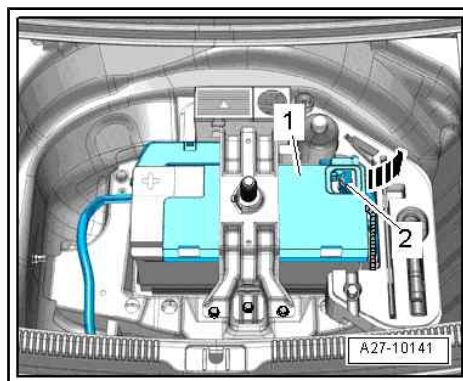


Caution

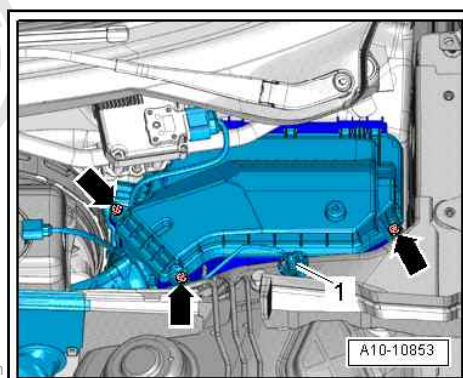
Risk of damage to electronic components.

- ◆ *Observe the correct procedure for disconnecting the battery.*

- Disconnect earth wire -2- from battery terminal ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



- Remove electronics box in engine compartment ⇒ Electrical system; Rep. gr. 97 ; Relay carriers, fuse carriers, electronics boxes; Removing and installing electronics box .



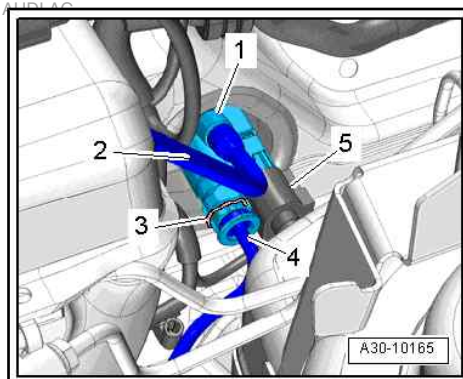
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Note

In the following steps make sure that no brake fluid escapes into the plenum chamber or onto the gearbox below. If this does happen, clean the affected area thoroughly.

- Using hose clamp - 3094- , clamp off supply hose -2- to clutch master cylinder.



Note

- ◆ *Clamping off the supply hose with the hose clamp - 3094- will cause a permanent deformation.*
- ◆ *However, this does not damage the supply hose.*
- ◆ *After removing the hose clamp -3094- , the supply hose must be returned to its original shape.*

- Place lint-free cloth under clutch master cylinder.
- Disconnect supply hose -2- from clutch master cylinder and plug hose using sealing tool - T10249/1- .
- Release retaining clip -3- using a screwdriver and pull out to limit stop.
- Pull off pipe/hose assembly -4-.



Note

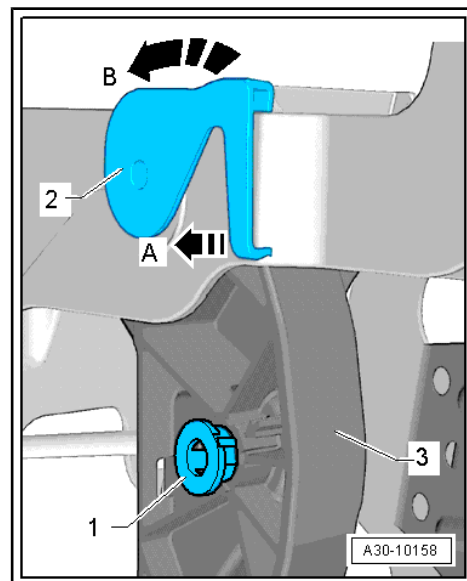
Leave connector -item 5- connected.

- Remove over-centre spring ⇒ [page 24](#) .
- Pull locking pin -1- out of clutch pedal -3-.

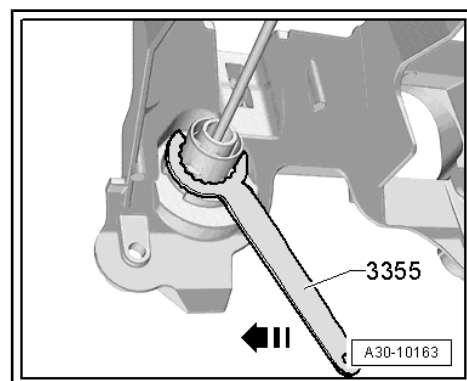


Note

-Item 2- and -arrows A, B- can be disregarded.



- Release clutch master cylinder in direction of -arrow- using open ring spanner, 32 mm - 3355- .



- Pull out clutch master cylinder -1- and guide it out through opening for engine wiring harness.
- Release electrical connector -5- and unplug.

Installing

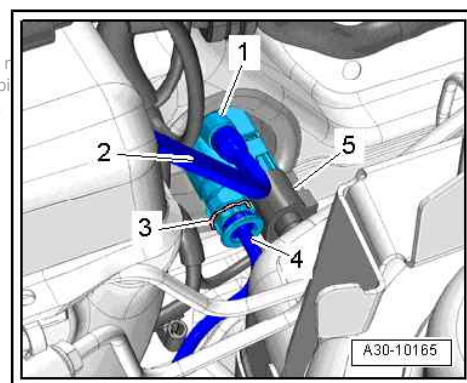
Installation is carried out in reverse sequence; note the following:



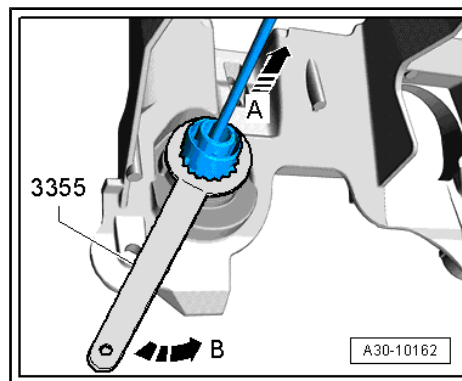
Note

Renew O-ring if damaged.

- Attach electrical connector -5-.
- Install clutch master cylinder -1-.



- Pull clutch master cylinder into footwell in direction of -arrow A-. At the same time lock clutch master cylinder in direction of -arrow B- using open ring spanner, 32 mm - 3355- .

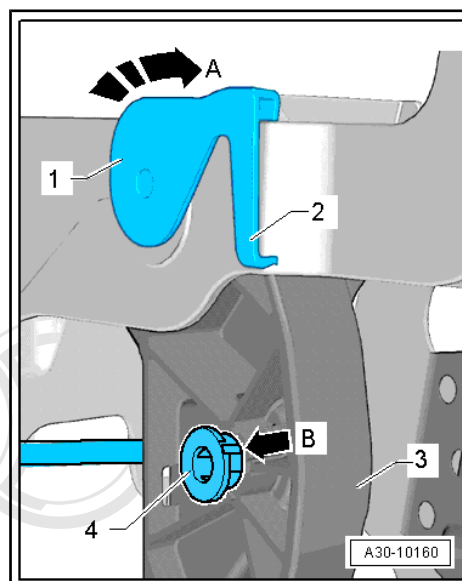


Caution

Grating/creaking noises can occur when clutch is operated.

- ◆ *Lack of grease at the bearings on the clutch pedal and in particular on the mounting eye of the master cylinder pushrod can cause creaking/grating noises when the clutch is operated.*
- ◆ *Apply grease - G 000 450 02- to all bearings and contact surfaces.*

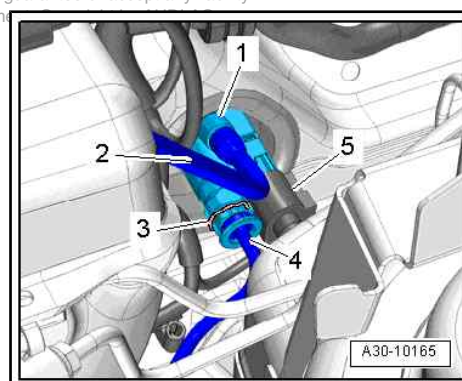
- Lubricate locking pin -4- and mounting eye of master cylinder push rod.
- Insert locking pin -4-. Shoulder on pin -arrow B- must be introduced into groove on clutch pedal.



Note

-Items 1, 2, 3- and -arrow A- can be disregarded.

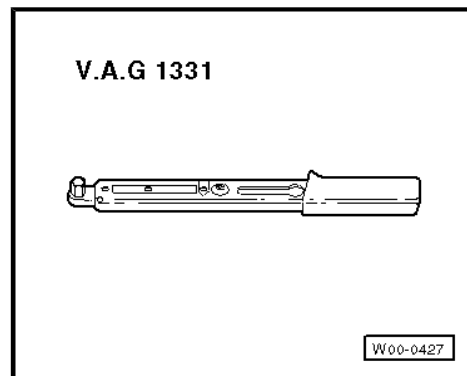
- Install over-centre spring ➔ [page 25](#).
- Press in retaining clip -3- as far as stop.
- Insert pipe/hose assembly -4- into clutch master cylinder and make sure that it engages audibly.
- Pull on pipe/hose assembly to check it is secure.
- Slide on supply hose -2- as far as stop.
- After removing the hose clamp - 3094- , the supply hose -2- must be returned to its original shape.
- Bleed clutch system ➔ [page 34](#) .
- Install electronics box in engine compartment ➔ Electrical system; Rep. gr. 97 ; Relay carriers, fuse carriers, electronics boxes; Removing and installing electronics box .
- Observe measures required after connecting battery ➔ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



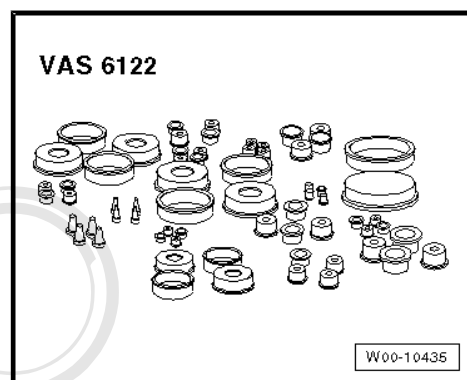
1.9 Removing and installing clutch slave cylinder

Special tools and workshop equipment required

◆ Torque wrench - V.A.G 1331-



◆ Engine bung set - VAS 6122-



◆ Safety goggles

Removing

- Observe notes on removing and installing clutch master cylinder and slave cylinder ➔ [page 27](#) .

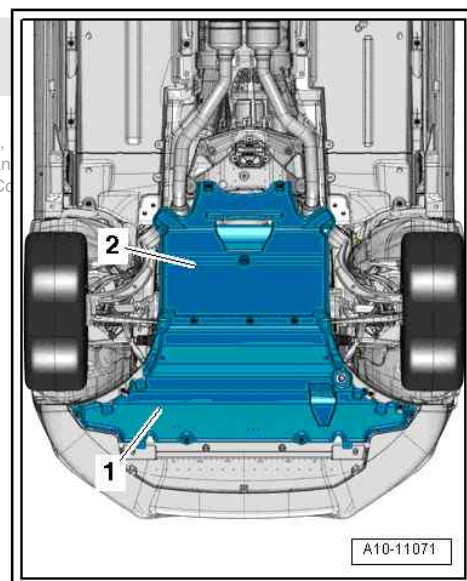


Note

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Do not allow brake fluid to come into contact with the gearbox. If necessary, clean the gearbox housing.

- If fitted, remove rear noise insulation -2- ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .





WARNING

Risk of eye injury.

- ◆ *Wear safety goggles.*

- Release retaining clip -2- using a screwdriver and pull out to limit stop.
- Disconnect pipe/hose assembly from clutch slave cylinder and plug pipe/hose.
- Remove bolt -3- and pull out clutch slave cylinder -1- to the rear.



Note

Seal off open lines and connections with clean plugs from engine bung set - VAS 6122- to prevent dirt from entering.

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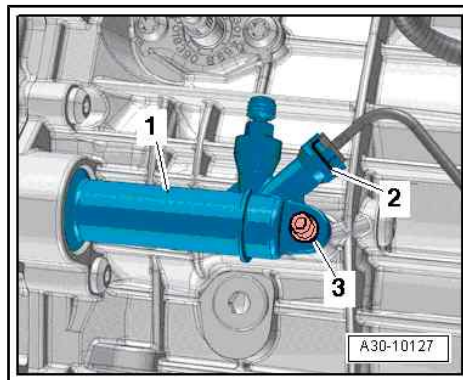
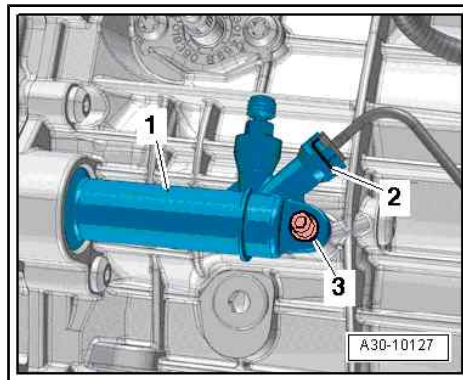
Installing clutch slave cylinder

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



Note

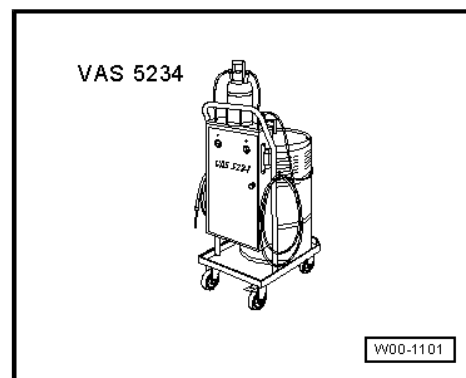
- ◆ *Renew O-ring if damaged.*
- ◆ *If the clutch slave cylinder is inserted at an angle, there is a danger that the operating rod will be guided past the clutch release lever.*
- When installing, press in clutch slave cylinder -1- so that securing bolt -3- can be fitted easily. Tightening torque ➔ [Item 17 \(page 23\)](#)
- Press in retaining clip -2- as far as stop.
- Push hose/pipe assembly into clutch slave cylinder until it engages audibly.
- Pull on pipe/hose assembly to check it is secure.
- Bleed clutch system ➔ [page 34](#) .
- If originally fitted, install rear noise insulation ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



1.10 Bleeding clutch hydraulics

Special tools and workshop equipment required

- ◆ Brake filling and bleeding equipment - VAS 5234- or brake filling and bleeding equipment - V.A.G 1869-



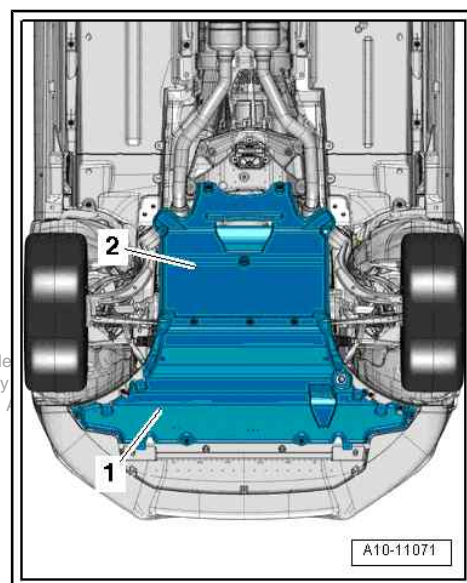
- ◆ Brake fluid specification ⇒ Brake system; Rep. gr. 47 ; Hydraulic system

Procedure



Note

- ◆ *The clutch system must be bled after performing work on the hydraulic clutch mechanism.*
- ◆ *When performing the following steps, make sure that no brake fluid escapes onto the gearbox.*
- ◆ *Before bleeding the clutch system, pull back the clutch pedal to the normal position and top up brake fluid to "Max" marking on brake fluid reservoir.*
- ◆ *Open the bleeder screw before switching on the bleeding appliance.*
- ◆ *The brake fluid in the clutch system should be changed at the same intervals as the brake fluid in the brake system ⇒ Maintenance ; Booklet 405 ; Description of work; Brake fluid: changing (every 2 years) .*
- Connect brake filling and bleeding equipment - VAS 5234- , but do not switch on at this stage ⇒ Brake system; Rep. gr. 47 ; Hydraulic system; Bleeding hydraulic system (normal bleeding procedure) .
- If fitted, remove rear noise insulation -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



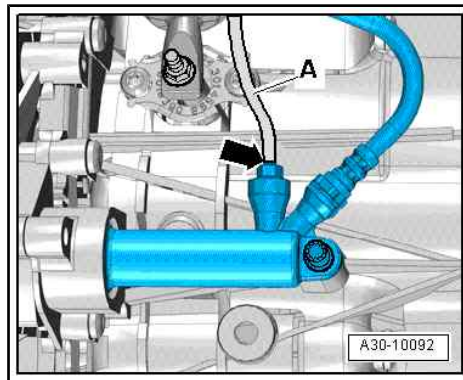
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- Connect bleeder hose -A- to clutch slave cylinder and open bleeder screw -arrow-.
- Connect bleeder hose to pressure hose of fluid collector bottle.
- Switch on bleeding appliance and allow about 100 cm³ of brake fluid to drain out.
- Operating pressure 2.0 bar



Note

Ensure bleeder hose is correctly fitted during bleeding operation.



- Tighten bleeder screw. Tightening torque ➔ [Item 2 \(page 22\)](#)
- Depress clutch pedal several times after bleeding process is completed.
- Repeat bleeding procedure if necessary.
- Install noise insulation ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



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2 Clutch

⇒ "2.1 Exploded view - clutch module", page 37

⇒ "2.2 Exploded view - clutch unit", page 38

⇒ "2.3 Tightening sequence - clutch module to drive plate", page 38

2.1 Exploded view - clutch module



Note

Servicing clutch module -2- ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch

A - Locating pins

- ☐ Not fitted in all vehicles, discontinued completely from approx. 09.07 onwards
- ☐ When clutch module -2- is bolted onto drive plate -1-, locating pins -A- (if provided) must engage in locating holes -B-

B - Locating hole

- ☐ When clutch module -2- is bolted onto drive plate -1-, locating pins -A- (if provided) must engage in locating holes -B-



Caution

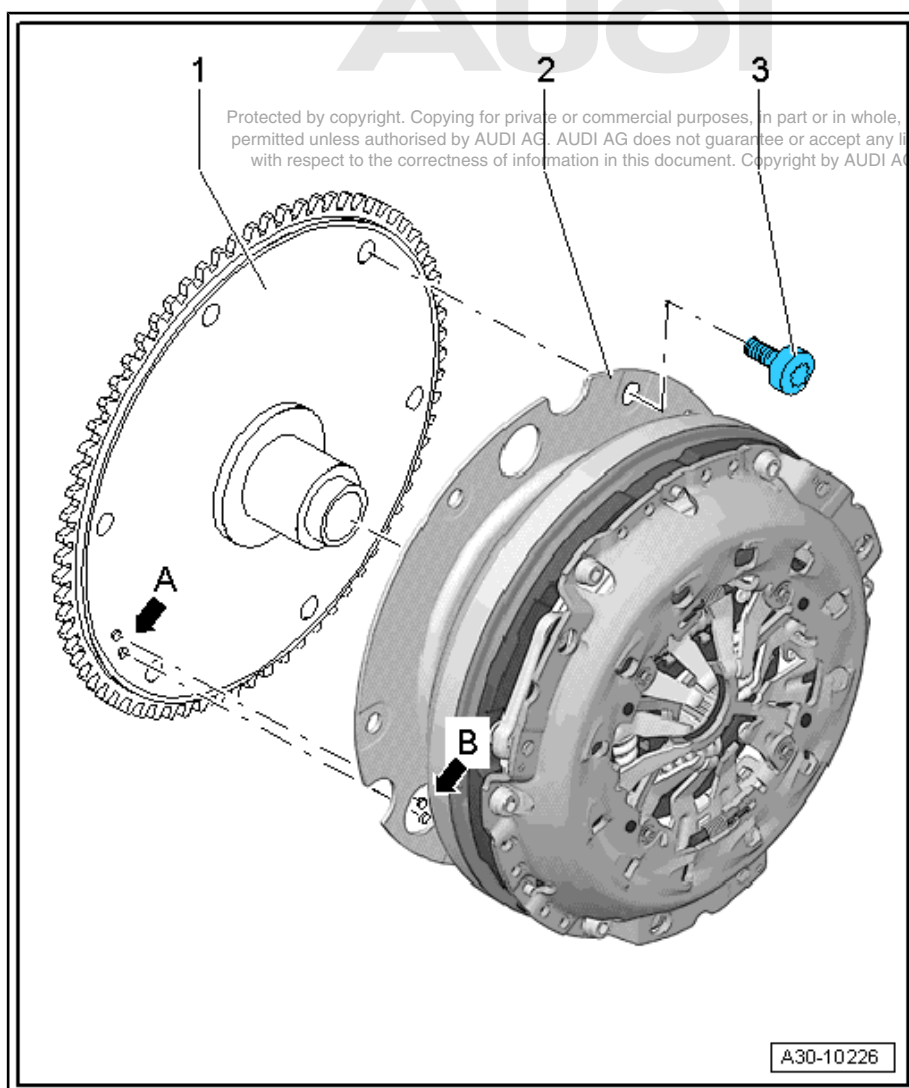
An incorrectly installed clutch causes functional problems.

! the locating pins on the drive plate -A- are not located in the holes on the clutch module -B-, this will cause serious clutch malfunctions.

Locating pins -A- discontinued from approx. 09.2007 onwards

1 - Drive plate

- ☐ 4-cylinder engine:
3 holes with threaded



sleeves

- ☐ 6-cylinder or 8-cylinder
engine: 6 holes with threaded sleeves
- ☐ With needle bearing
- ☐ Removing and installing ⇒ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate

2 - Clutch module

- ☐ With flange for drive plate
- ☐ Components: dual-mass flywheel, clutch plate and clutch pressure plate
- ☐ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module
- ☐ Servicing ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch

3 - Bolt

- ☐ 60 Nm
- ☐ Secures dual-mass flywheel to drive plate
- ☐ 4-cylinder engine: 3x
- ☐ 6-cylinder or 8-cylinder engine: 6x
- ☐ Always renew
- ☐ Follow correct tightening sequence ⇒ [page 38](#)

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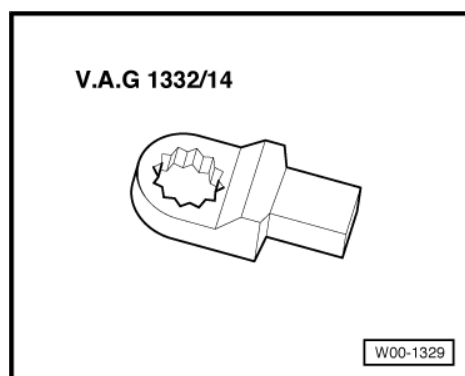
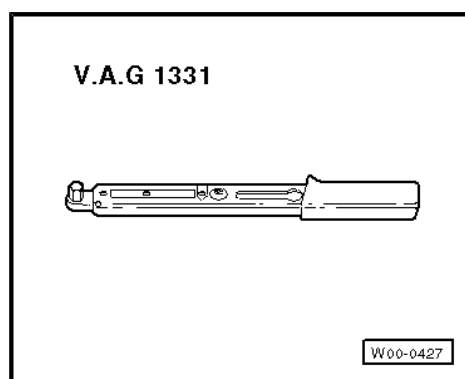
2.2 Exploded view - clutch unit

- For a detailed description please refer to the Workshop Manual ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Exploded view - clutch mechanism .

2.3 Tightening sequence - clutch module to drive plate

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331-
- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-



- Use new bolts.
- Tightening torque ➔ [Item 3 \(page 38\)](#)
- Tighten bolts using ring spanner insert, 16 mm - V.A.G 1332/14- .
- Operate electromechanical parking brake or counterhold propshaft using counterhold tool - T10172- and adapters - T10172/5- .



Note

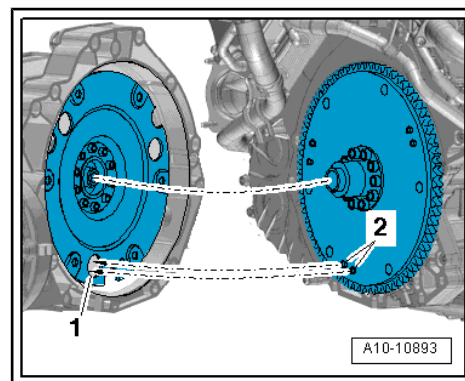
The next step is only required if a drive plate with locating pins -2- is installed.



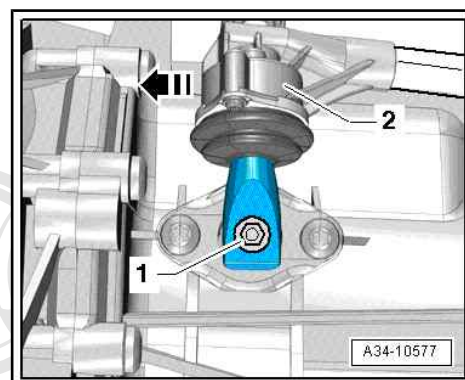
Caution

An incorrectly installed clutch causes functional problems.

- ◆ ***If the locating pins on the drive plate -2- are not located in the holes on the clutch module -1-, this will lead to considerable functional problems of the clutch.***



- In addition, align drive plate with clutch module so that locating pins -2- (if provided) on drive plate can engage in large holes -1- on clutch module.
- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.

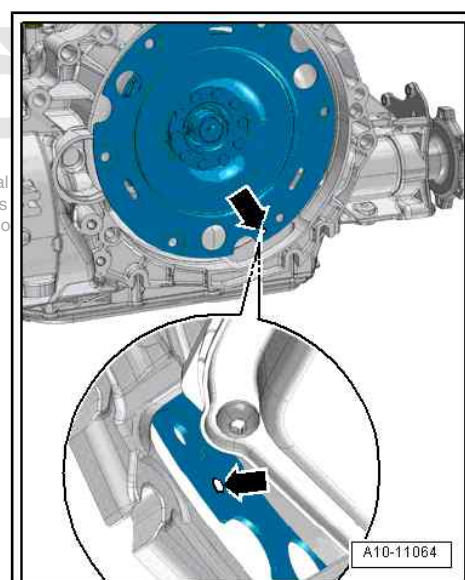


Note

The following step is essential to ensure that the clutch module makes even and proper contact on the drive plate and does not cant.

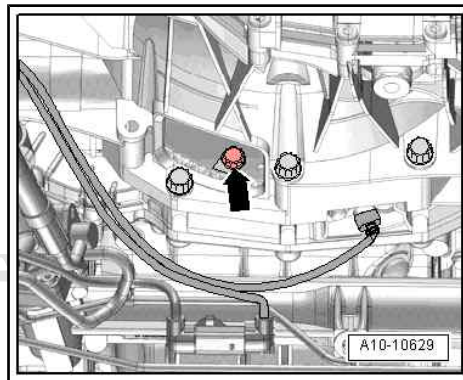
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- Turn both front wheels together in one direction until the clutch module has turned through one complete revolution (360°).
- The inspection hole -arrow- should be visible again in the recess on the gearbox housing.



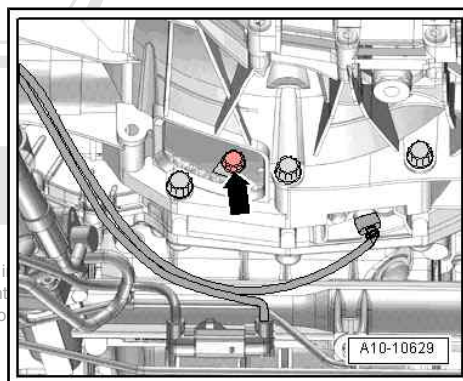
Vehicles with 4-cylinder engine

- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 120° further in direction of engine rotation and install second bolt hand-tight (2 Nm).
- Turn clutch module 120° further in direction of engine rotation.
- Now install third bolt and tighten to specified torque
⇒ [Item 3 \(page 38\)](#) .
- Now tighten the remaining two bolts to specified torque
⇒ [Item 3 \(page 38\)](#) .



Vehicles with 6-cylinder engine

- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 180° further in direction of engine rotation.
- Install second bolt and tighten to specified torque
⇒ [Item 3 \(page 38\)](#) .
- Tighten remaining five bolts to specified torque (including first bolt installed), turning clutch module 60° further each time
⇒ [Item 3 \(page 38\)](#) .



34 – Controls, housing

1 Selector mechanism

⇒ [“1.1 Overview - selector mechanism”, page 41](#)

⇒ [“1.2 Exploded view - gear knob and cover”, page 43](#)

⇒ [“1.3 Exploded view - selector mechanism”, page 44](#)

⇒ [“1.4 Removing and installing gear knob”, page 46](#)

⇒ [“1.5 Removing and installing noise insulation”, page 47](#)

⇒ [“1.6 Removing and installing selector mechanism”, page 48](#)

⇒ [“1.7 Adjusting selector mechanism”, page 59](#)

⇒ [“1.8 Renewing selector shaft oil seal”, page 62](#)

⇒ [“1.9 Removing and installing gear detector switch F208 ”, page 65](#)

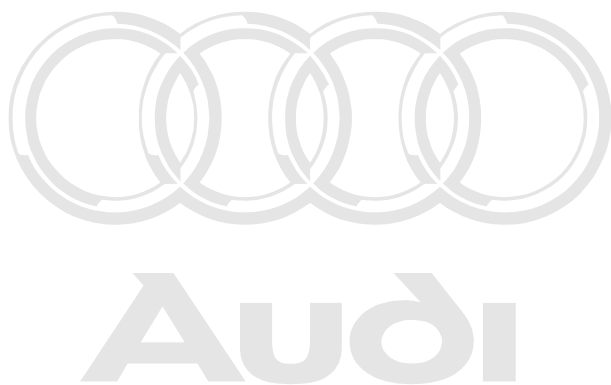
⇒ [“1.10 Removing and installing gear detection sensor G604 ”, page 69](#)

⇒ [“1.11 Removing and installing gearbox neutral position sender G701 ”, page 73](#)

1.1 Overview - selector mechanism

-Arrow A- gear selection movement

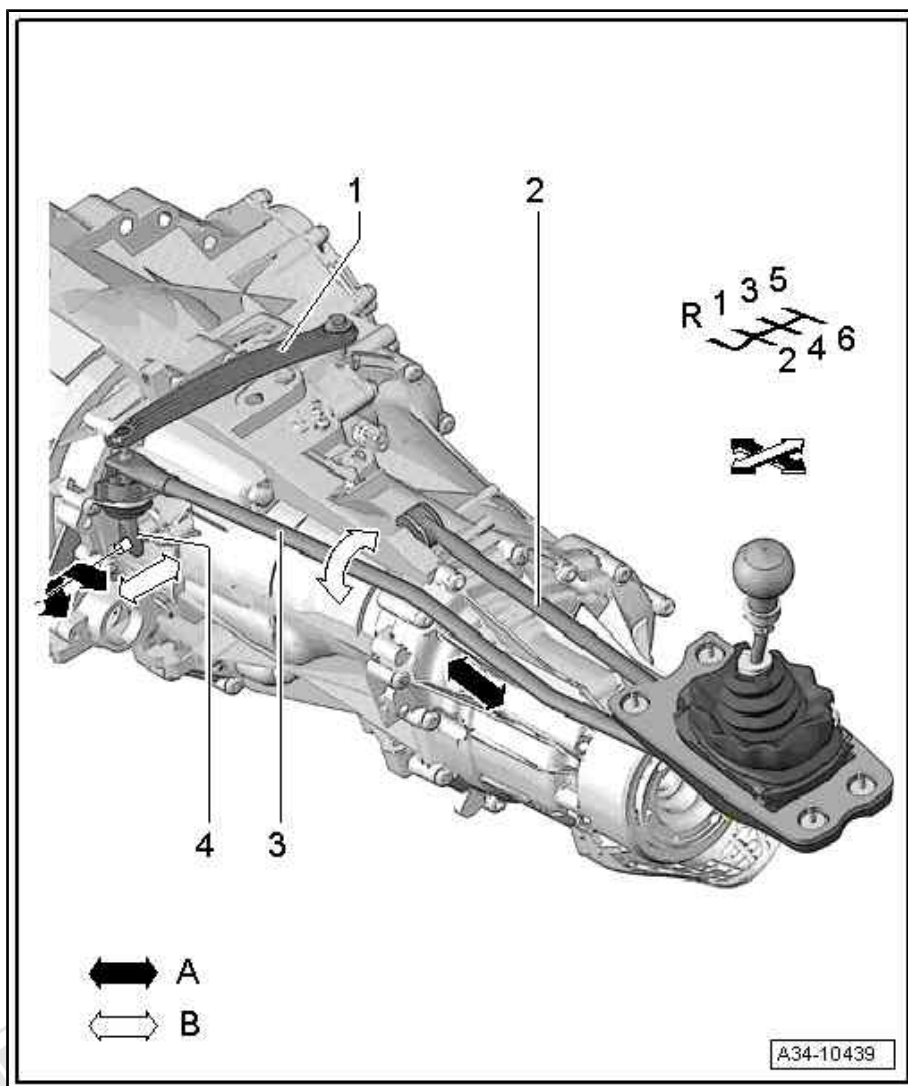
-Arrow B- gate selection movement



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- 1 - Connecting rod
- 2 - Push rod
- 3 - Selector rod
- 4 - Gearbox selector lever



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1.2 Exploded view - gear knob and cover

1 - Gear knob

- ☐ With gear lever boot
- ☐ Removing and installing
⇒ [page 46](#)

2 - Clip

- ☐ Secures gear knob to gear lever
- ☐ Secure with hose clip pliers - V.A.G 1275-

3 - Boot

- ☐ Only supplied together with support ring
⇒ [Item 4 \(page 43\)](#)
- ☐ Removing and installing
⇒ [page 47](#) together with noise insulation
⇒ [Item 5 \(page 43\)](#)

4 - Support ring

- ☐ Only supplied together with boot
⇒ [Item 3 \(page 43\)](#)

5 - Noise insulation

- ☐ Removing and installing
⇒ [page 47](#)

6 - Gasket

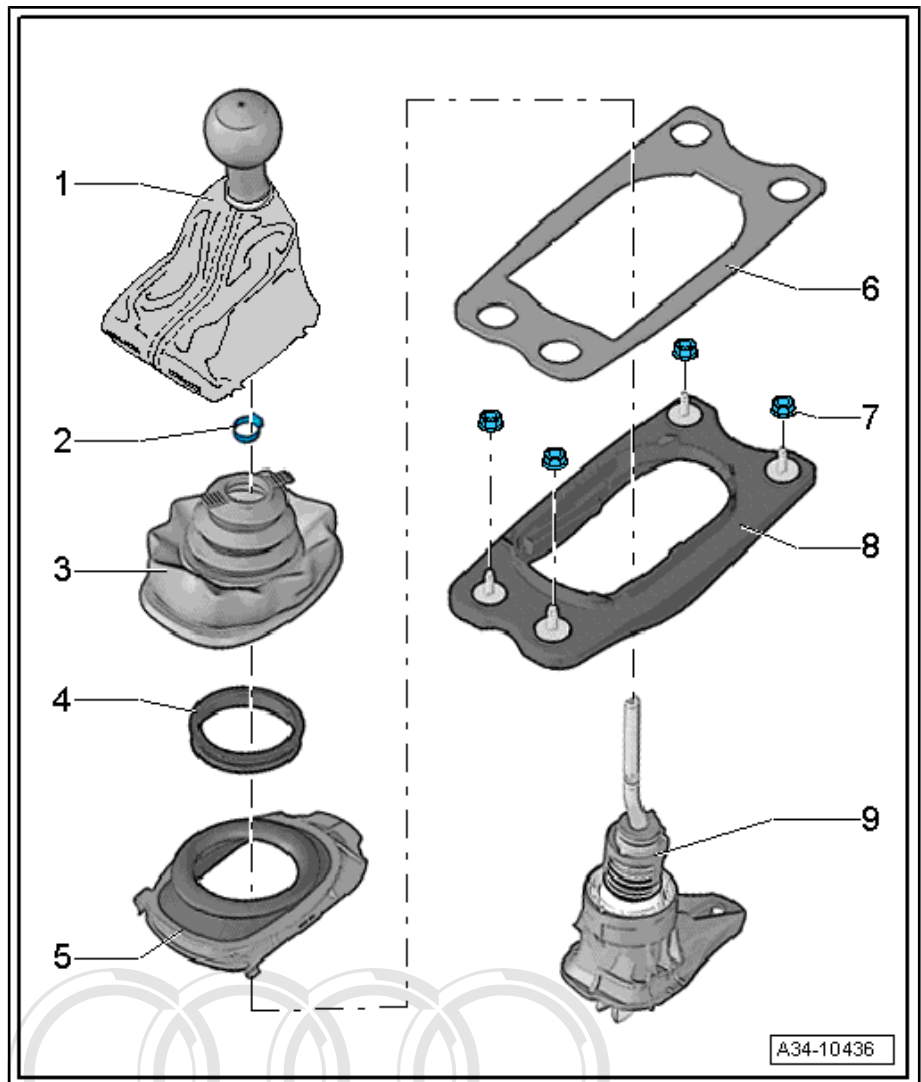
7 - Nut

- ☐ 8 Nm

8 - Mounting bracket

- ☐ For gear lever bearing

9 - Gear lever with gear lever bearing



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1.3 Exploded view - selector mechanism

1 - Circlip

- ☐ Take out before removing ball

2 - Spacer bush

3 - Spring

4 - Ball guide

- ☐ Do not grease

5 - Ball

- ☐ Do not grease

6 - Damper

- ☐ For gear lever bearing
⇒ [Item 11 \(page 44\)](#)
- ☐ Do not grease

7 - Bolt

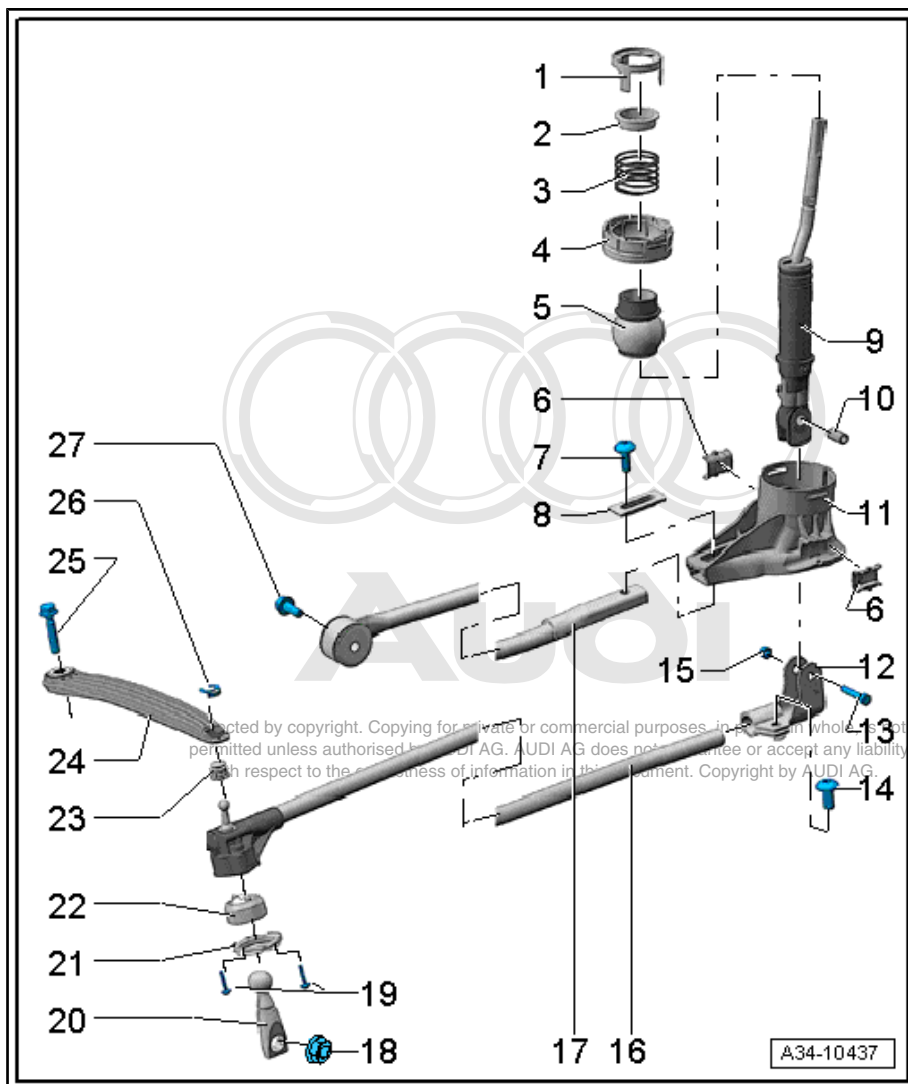
- ☐ 23 Nm

8 - Clamping plate

- ☐ Do not grease

9 - Gear lever

- ☐ Bend points towards rear
- ☐ Grease gear lever stops and gear lever contact surfaces; for grease refer to ⇒ [Electronic parts catalogue](#)
- ☐ Grease contact surfaces for joint
⇒ [Item 12 \(page 44\)](#) ;
for grease refer to ⇒ [Electronic parts catalogue](#)



10 - Bush

- ☐ Grease outside circumference; for grease refer to ⇒ [Electronic parts catalogue](#)

11 - Gear lever bearing

- ☐ Removing and installing ⇒ [page 48](#)
- ☐ Do not grease

12 - Joint

- ☐ Between selector rod and gear lever
- ☐ Grease contact surfaces for gear lever; for grease refer to ⇒ [Electronic parts catalogue](#)

13 - Bolt

- ☐ For joint ⇒ [Item 12 \(page 44\)](#)

14 - Bolt

- ☐ 23 Nm

15 - Nut

- ☐ 10 Nm

16 - Selector rod

17 - Push rod

- ☐ With bolt and washer
- ☐ Installation position: Audi A4, A5 and A5 Cabriolet ⇒ [page 46](#)
- ☐ Installation position: Audi Q5 ⇒ [page 46](#)
- ☐ For correct version, refer to ⇒ Electronic parts catalogue

18 - Nut

- ☐ 20 Nm
- ☐ Renew

19 - Bolt

- ☐ 4 Nm

20 - Gearbox selector lever



Caution

*Risk of damage to selector shaft in gearbox.
Do not prise off or knock off the gearbox selector lever with a lever or hammer.*

Always use puller - T40160- when removing the gearbox selector lever.

- ☐ Pulling off ⇒ [page 46](#)
- ☐ Install so that gap in splines aligns with selector shaft

21 - Sealing collar

22 - Ball socket

- ☐ Grease pivot for gearbox selector lever ⇒ [Item 20 \(page 45\)](#) if necessary; for grease refer to ⇒ Electronic parts catalogue

23 - Bearing bush

- ☐ To remove, pull off retaining clip ⇒ [Item 26 \(page 45\)](#)

24 - Connecting rod

- ☐ To remove, pull off retaining clip ⇒ [Item 26 \(page 45\)](#)

25 - Bolt

- ☐ 20 Nm

26 - Retaining clip

27 - Bolt

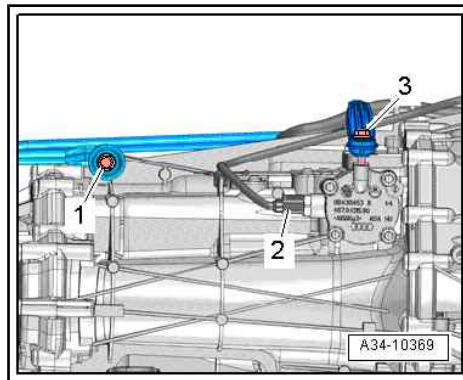
- ☐ 20 Nm



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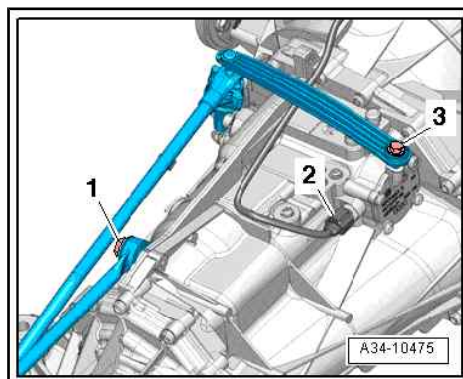
Installation of pushrod for Audi A4, A5

- Push rod -1- is bolted to right side of gearbox cover.



Installation of pushrod for Audi Q5

- Push rod -1- is bolted to left side of gearbox cover.



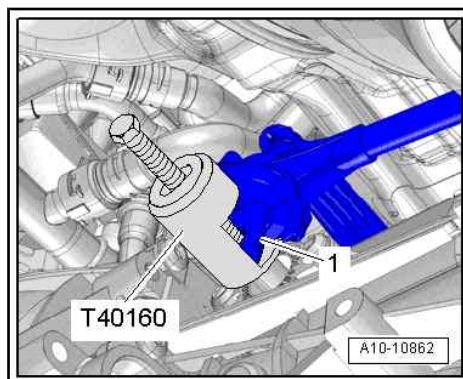
Detaching gearbox selector lever -1-



Caution

Risk of damage to selector shaft in gearbox.

- ◆ Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.
- ◆ Always use puller - T40160- when removing the gearbox selector lever.



- Apply puller - T40160- and pull off gearbox selector lever -1-.

1.4 Removing and installing gear knob



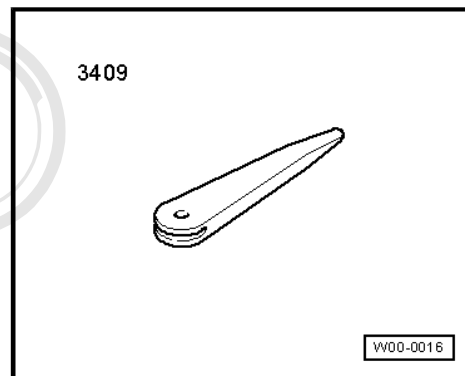
Note

The gear knob is removed together with the gear lever boot.

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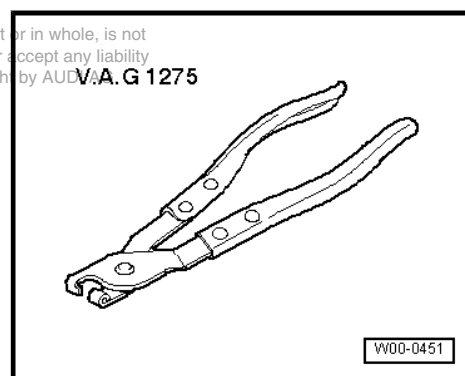
Special tools and workshop equipment required

◆ Removal wedge - 3409-



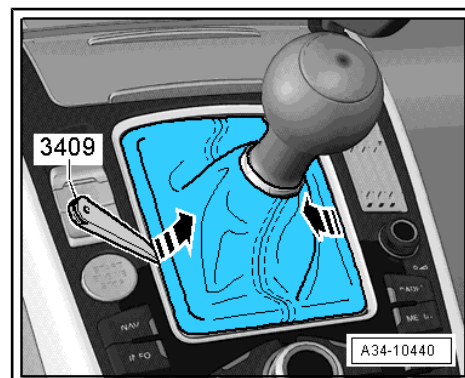
◆ Hose clip pliers - V.A.G 1275-

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Removing

- Prise out gear lever boot using removal wedge - 3409- -arrows- and pull upwards to detach.

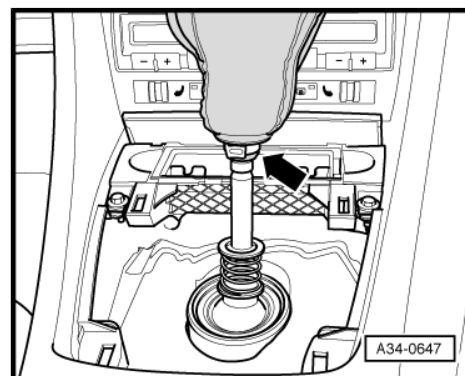


- Pull boot up and over gear knob.
- Open clip -arrow- and pull off gear knob together with boot.

Installing

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

- Secure clip -arrow- using hose clip pliers - V.A.G 1275- .

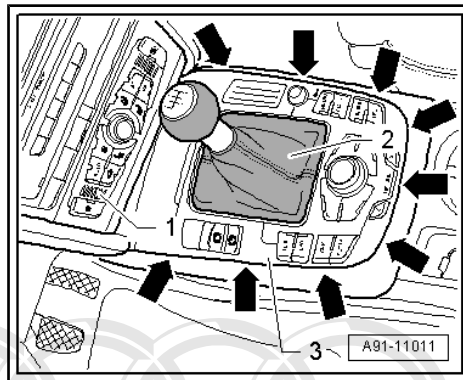


1.5 Removing and installing noise insulation

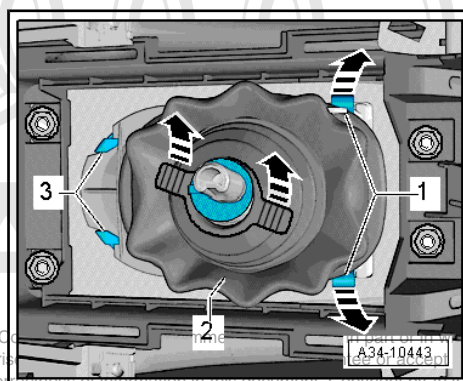
Removing

- Switch off ignition.
- Remove gear knob with gear lever boot ⇒ [page 46](#) .

- Remove multimedia system operating unit - E380- ⇒ Communication; Rep. gr. 91 ; Infotainment system; Removing and installing multimedia system operating unit - E380- .



- Release retaining tabs -1- in direction of -arrow-. At the same time, lift rear end of noise insulation slightly.
- Pull noise insulation out of tabs -3-.
- Pull boot -2- off gear lever in direction of -arrow-.



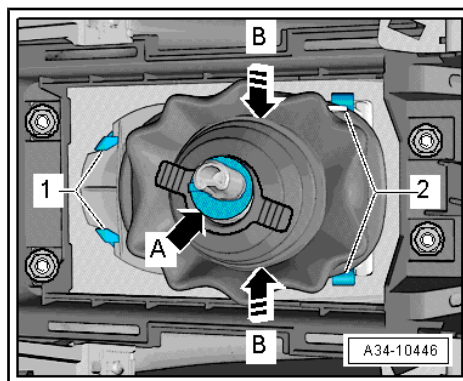
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Installing

- Insert noise insulation into tabs -1- and press down until retaining tabs -2- engage.
- Pull boot over gear lever and into rounded groove -arrow A-.
- Press support ring in boot over gear lever bearing as far as stop in direction of -arrow B-.

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

- Install multimedia system operating unit - E380- ⇒ Communication; Rep. gr. 91 ; Infotainment system; Removing and installing multimedia system operating unit - E380- .
- Install gear knob with gear lever boot ⇒ [page 46](#) .



1.6 Removing and installing selector mechanism

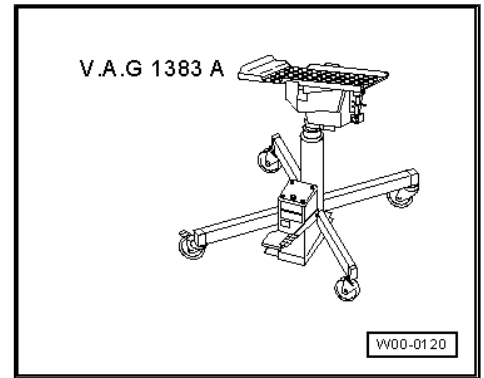
⇒ ["1.6.1 Removing and installing selector mechanism - Audi A4, A5", page 48](#)

⇒ ["1.6.2 Removing and installing selector mechanism - Audi Q5", page 55](#)

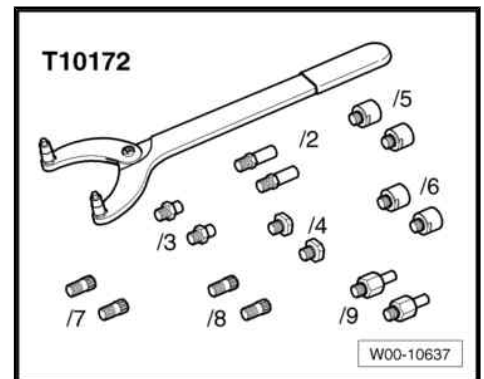
1.6.1 Removing and installing selector mechanism - Audi A4, A5

Special tools and workshop equipment required

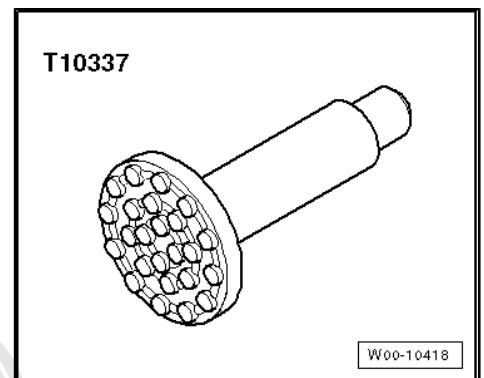
◆ Engine and gearbox jack - V.A.G 1383 A-



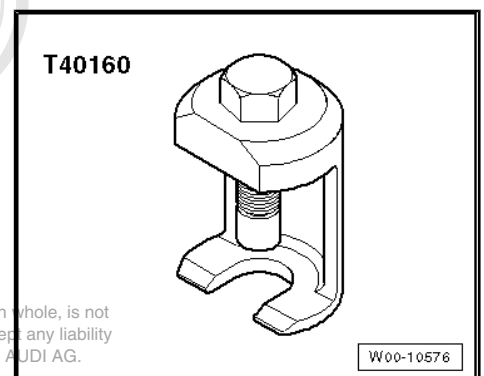
◆ Counterhold tool - T10172- with -T10172/5-



◆ Gearbox support - T10337-



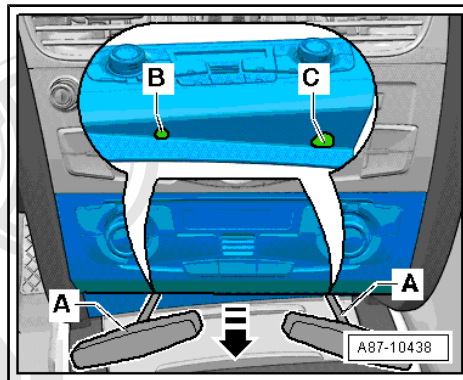
◆ Puller - T40160-



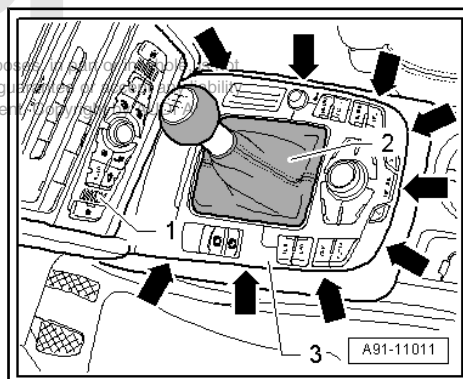
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Removing

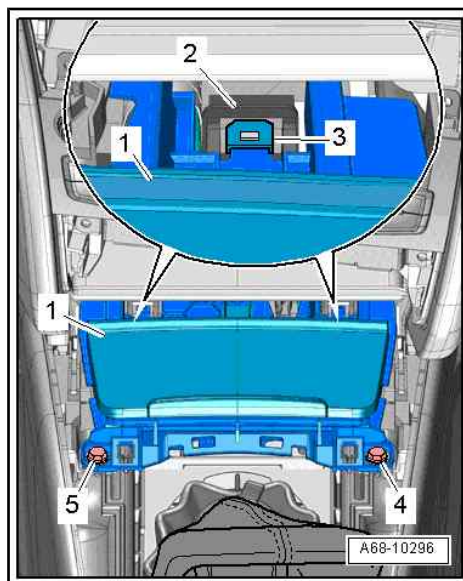
- Switch off ignition.
- Remove gear knob with gear lever boot ➔ [page 46](#) .
- Remove air conditioner operating and display unit ➔ Heating, air conditioning; Rep. gr. 87 ; Operating and display unit; Removing and installing operating and display unit .



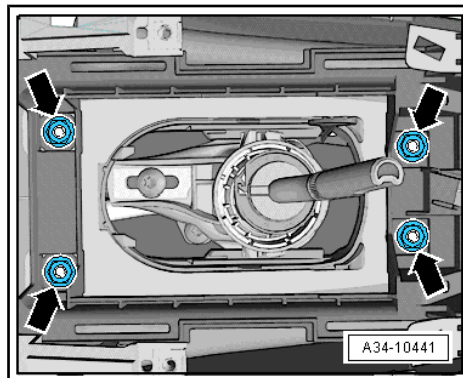
- Remove multimedia system operating unit - E380- ➔ Communication; Rep. gr. 91 ; Infotainment system; Removing and installing multimedia system operating unit - E380-



- Remove ashtray (front) -1- ➔ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing ashtray (front) .



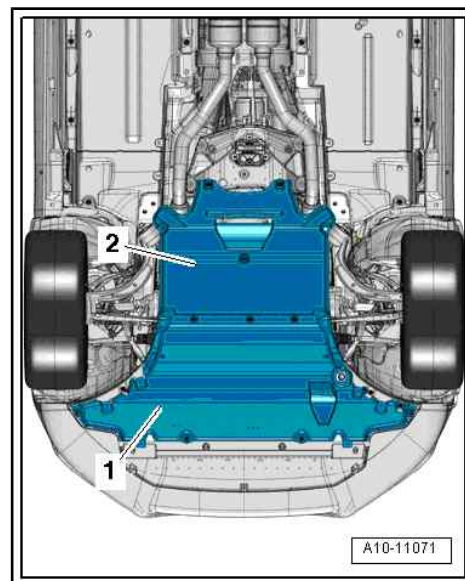
- Remove noise insulation above selector mechanism ➔ [page 47](#) .
- Remove nuts -arrows-.



- Remove rear noise insulation -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .

Vehicles with diesel engine and torque reaction support

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

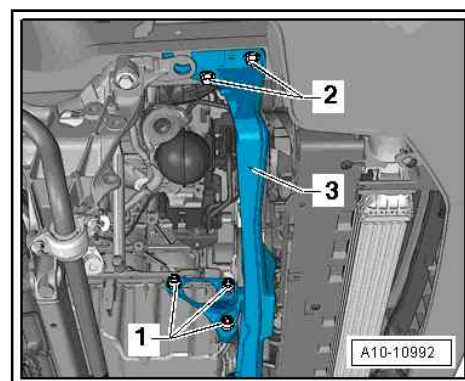


- If fitted, remove bolts -1- and detach torque reaction support from engine.



Note

-Items 2 and 3- can be disregarded.



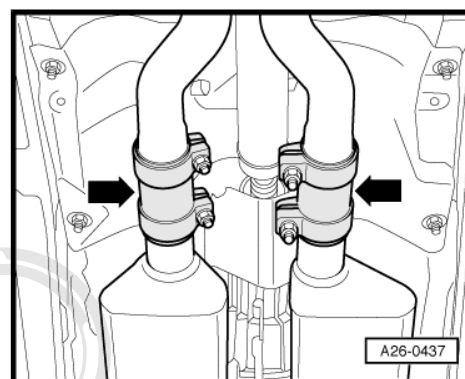
Continued for all vehicles



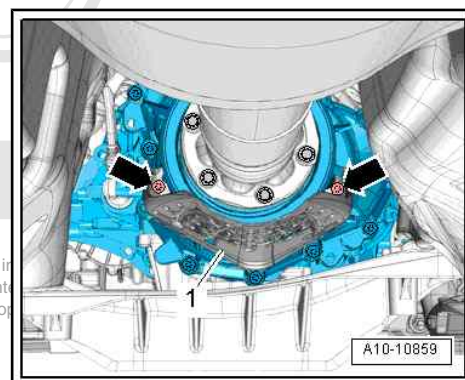
Note

The flexible pipe connection (de-coupling element) in the front exhaust pipe must not be bent more than 10° - otherwise it can be damaged.

- Disconnect exhaust system at clamp(s) -arrows-.



- Remove bolts -arrows- and detach heat shield for propshaft -1-.



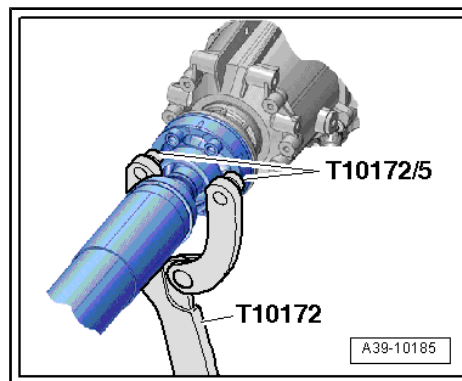
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Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

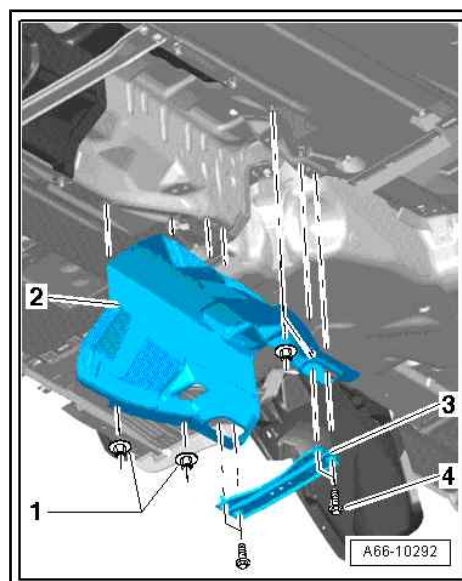
Propshaft with splined connection at gearbox end:

- Remove propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .

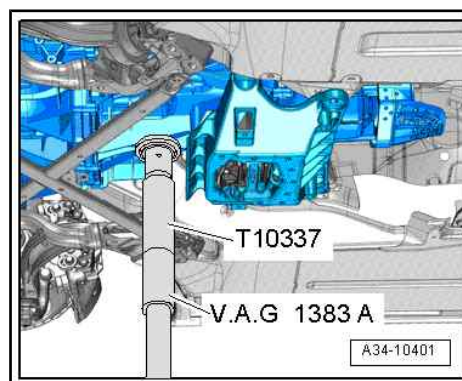


Continued for all vehicles

- Remove bolts -4- and detach cross piece -3-.
- Remove nuts -1- and detach heat shield -2-.



- Support gearbox using engine and gearbox jack - V.A.G 1383 A- with gearbox support - T10337- attached.
- Slightly lift gearbox with engine and gearbox jack - V.A.G 1383 A- .

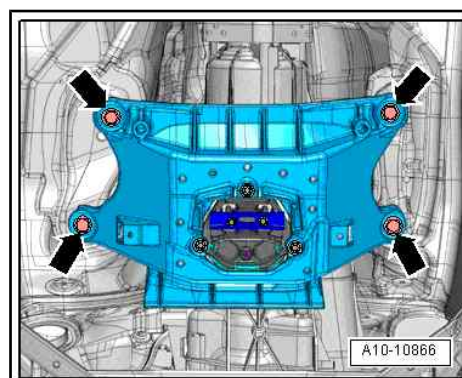


WARNING

Risk of accident.

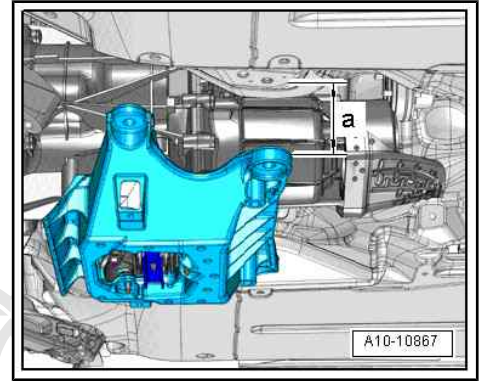
- ♦ *Engine and gearbox jack - V.A.G 1383 A- must remain in position when work is being carried out and must not be left unattended.*

- Remove bolts -arrows- for tunnel cross member.



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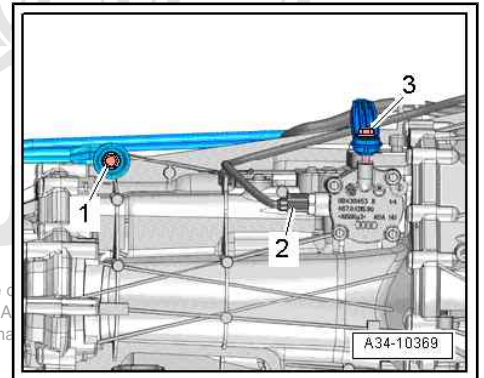
- Lower gearbox by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)



- Remove bolt -1- for push rod and bolt -3- for connecting rod.



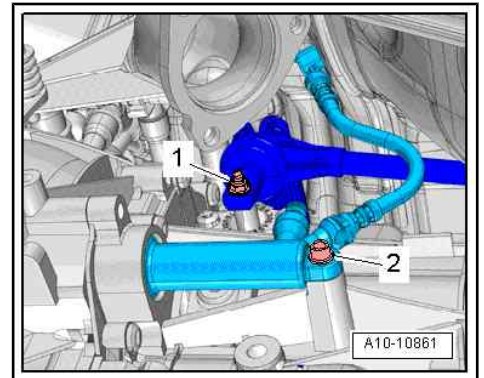
-Item 2- can be disregarded.



- Remove nut -1-.



-Item 2- can be disregarded.

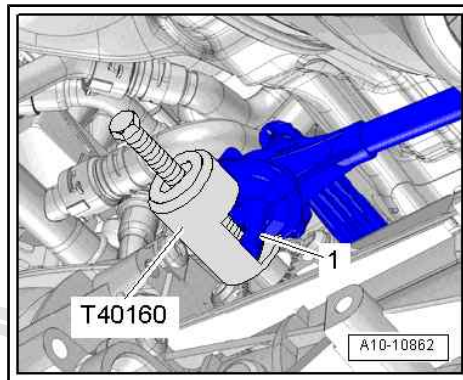




Caution

Risk of damage to selector shaft in gearbox.

- ◆ ***Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.***
- ◆ ***Always use puller - T40160- when removing the gearbox selector lever.***



- Apply puller - T40160- and pull off gearbox selector lever -1-.
- If fitted, remove heat shield under shift unit ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Exploded view - heat shield .
- Take out selector mechanism towards rear.

Installing

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

- Tightening torques ⇒ [page 44](#) and ⇒ [page 43](#) .



Note

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Always renew seals, gaskets and self-locking nuts.

- Install tunnel cross member ⇒ [page 195](#) .

Vehicles with diesel engine and torque reaction support

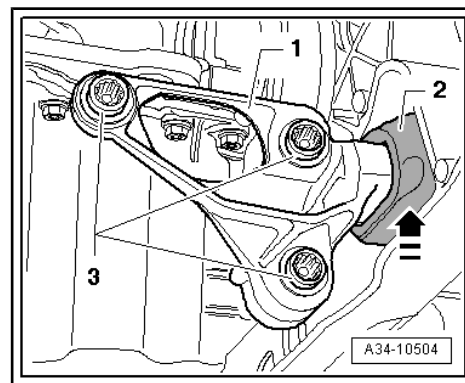
- Push torque reaction support -1- upwards in direction indicated by -arrow- until it makes contact with cross member.



Note

Bump stop -2- must be in contact with cross member without play, but must not be under tension.

- Then tighten bolts -3- to specified torque ⇒ Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings .



Continued for all vehicles

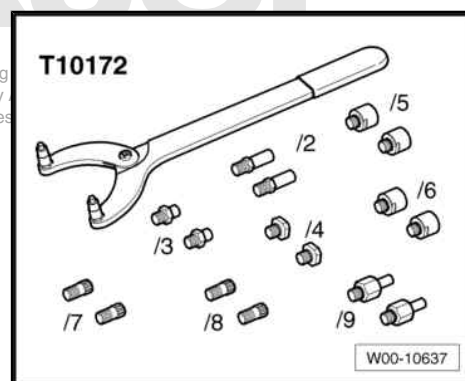
- Install heat shield under shift unit ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Exploded view - heat shield .
- Install propshaft/secure to gearbox ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .
- Install exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Adjust selector mechanism ⇒ [page 59](#) .
- Install multimedia system operating unit - E380- ⇒ Communication; Rep. gr. 91 ; Infotainment system; Removing and installing multimedia system operating unit - E380- .
- Install air conditioner operating and display unit ⇒ Heating, air conditioning; Rep. gr. 87 ; Operating and display unit; Removing and installing operating and display unit .

1.6.2 Removing and installing selector mechanism - Audi Q5

Special tools and workshop equipment required

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

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◆ Puller - T40160-



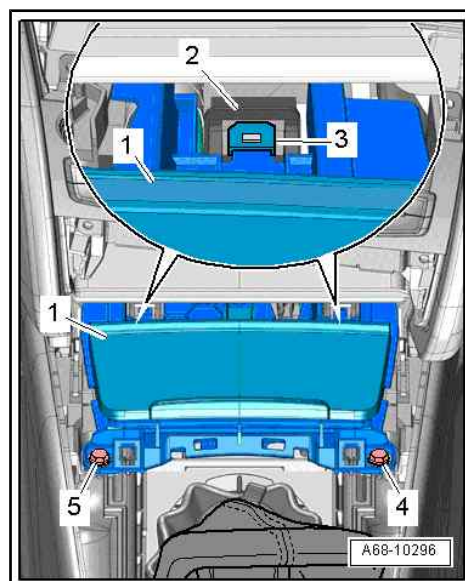
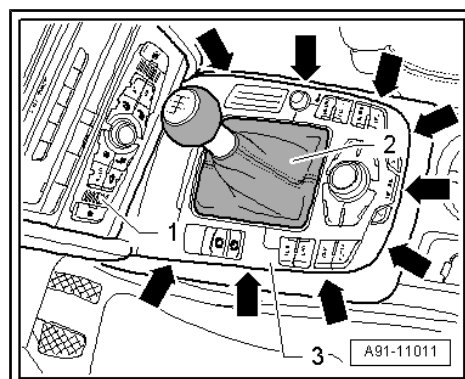
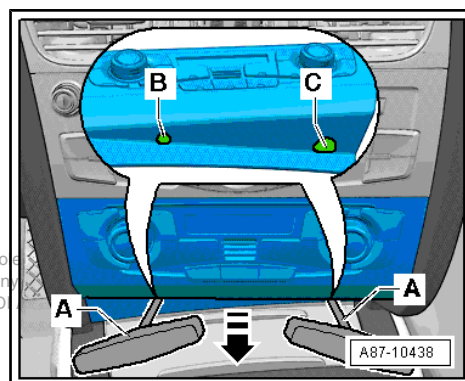
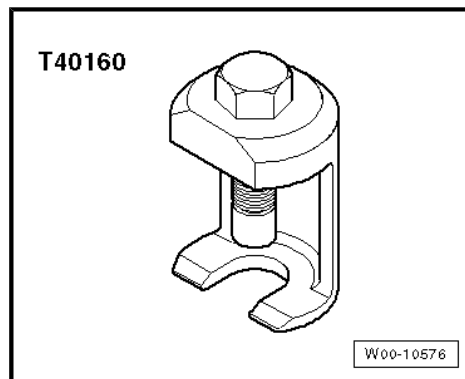
Removing

- Switch off ignition.
- Remove gear knob with gear lever boot ➔ [page 46](#) .
- Remove air conditioner operating and display unit ➔ Heating, air conditioning; Rep. gr. 87 ; Operating and display unit; Removing and installing operating and display unit .

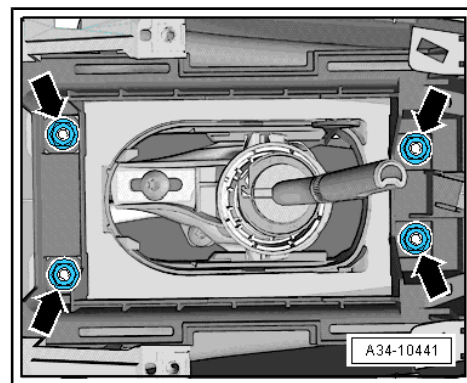
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- Remove multimedia system operating unit - E380- ➔ Communication; Rep. gr. 91 ; Infotainment system; Removing and installing multimedia system operating unit - E380- .

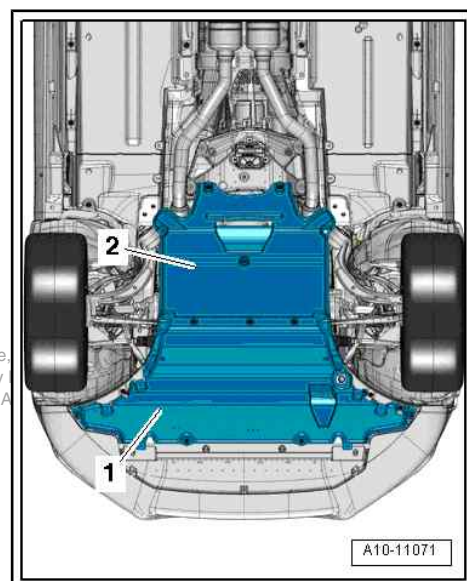
- Remove ashtray (front) -1- ➔ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing ashtray (front) .



- Remove noise insulation above selector mechanism
⇒ [page 47](#) .
- Remove nuts -arrows-.



- Remove rear noise insulation -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .

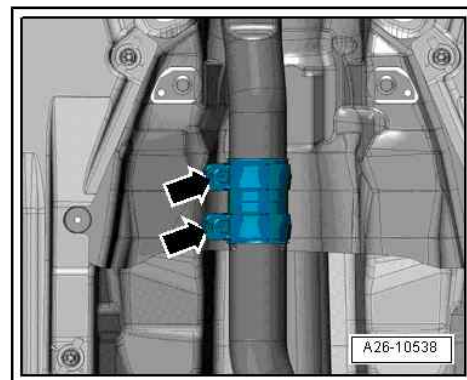


- Disconnect exhaust system at clamp -arrow- and remove front exhaust pipe ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .

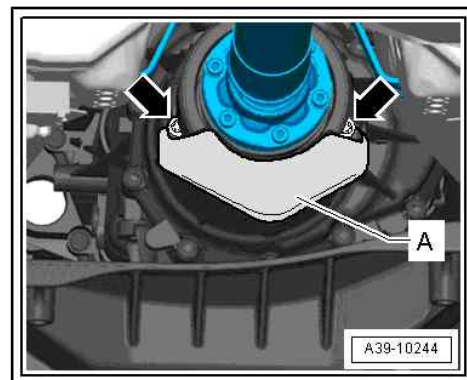


Note

The flexible pipe connection (de-coupling element) in the front exhaust pipe must not be bent more than 10° - otherwise it can be damaged.



- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.

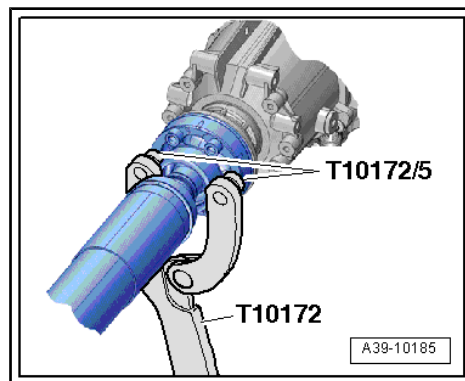


Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

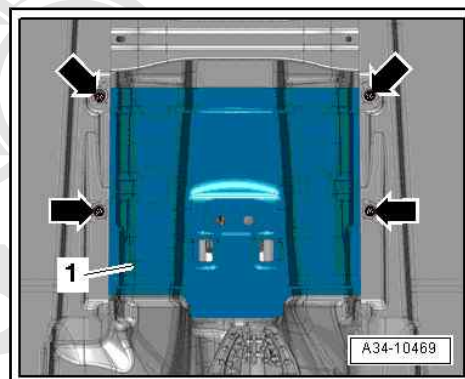
Propshaft with splined connection at gearbox end:

- Remove propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .



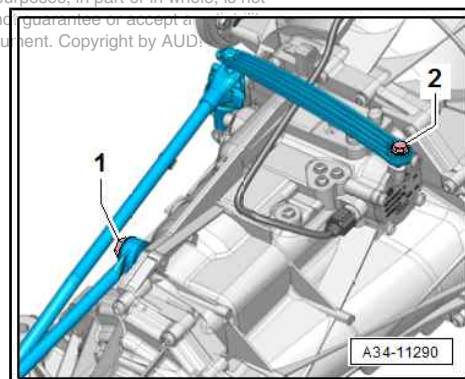
Continued for all vehicles

- Remove nuts -arrows-.
- Lower cover for vehicle underbody (on inside) until heat shield -1- for centre tunnel can be removed.



- Remove bolt -1- for push rod and bolt -3- for connecting rod.

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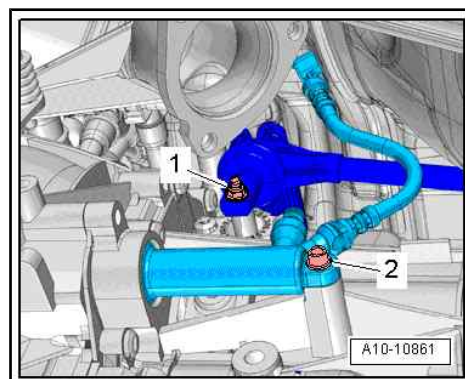


- Remove nut -1-.



Note

-Item 2- can be disregarded.





Caution

Risk of damage to selector shaft in gearbox.

- ◆ *Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.*
- ◆ *Always use puller - T40160- when removing the gearbox selector lever.*

- Apply puller - T40160- and pull off gearbox selector lever -1-.
- If fitted, remove heat shield under shift unit ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Exploded view - heat shield .
- Take out selector mechanism towards rear.

Installing

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

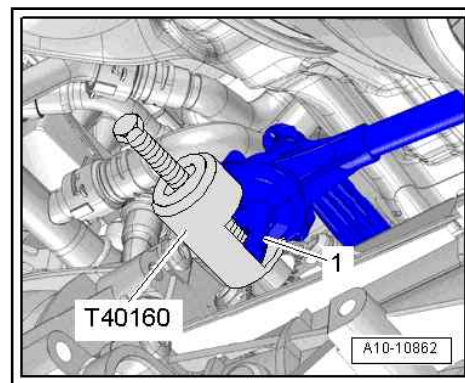
- Tightening torques ⇒ [page 44](#) and ⇒ [page 43](#) .



Note

Always renew seals, gaskets and self-locking nuts.

- Install heat shield under shift unit ⇒ General body repairs, exterior; Rep. gr. 66 ; Strips / trim panels / extensions; Exploded view - heat shield .
- Install propshaft/secure to gearbox ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .
- Install exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Adjust selector mechanism ⇒ [page 59](#) .
- Install multimedia system operating unit - E380- ⇒ Communication; Rep. gr. 91 ; Infotainment system; Removing and installing multimedia system operating unit - E380- .
- Install air conditioner operating and display unit ⇒ Heating, air conditioning; Rep. gr. 87 ; Operating and display unit; Removing and installing operating and display unit .



1.7 Adjusting selector mechanism

The following are prerequisites for correct gear lever alignment:

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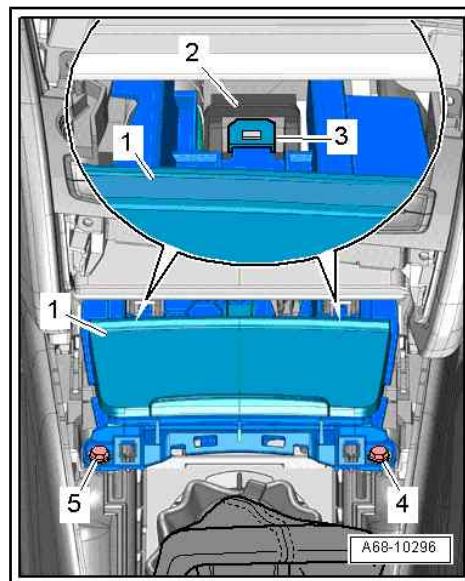


Note

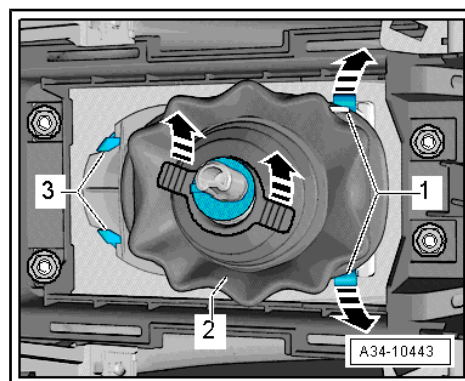
- ◆ *Gear selector linkage must be in proper condition and undamaged.*
- ◆ *Selector mechanism must move freely.*
- ◆ *Gearbox, clutch and clutch mechanism must be in proper condition.*
- ◆ *Gearbox in neutral.*

Procedure

- Remove gear knob together with boot ➔ [page 46](#) .
- Remove ashtray (front) -1- ➔ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing ashtray (front) .



- Remove noise insulation above selector mechanism ➔ [page 47](#) .



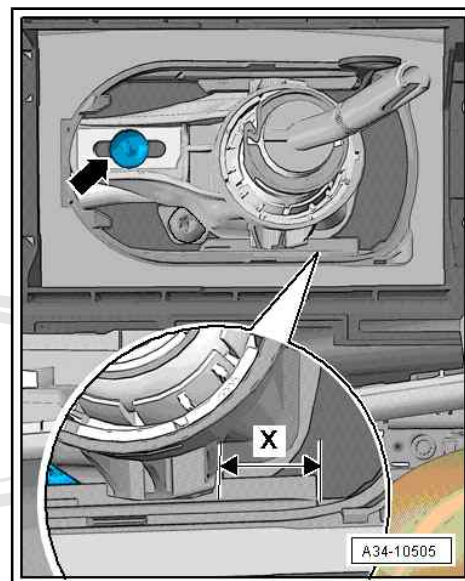
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- Check adjustment of push rod: dimension -x-.

- Specification: distance -x- = 25 mm

If distance measured is not correct, adjust dimension -x- as follows:

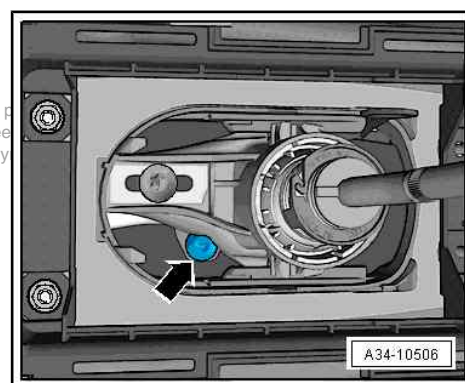
- Loosen bolt -arrow- for push rod.
- The gear lever bearing should move freely in both directions on slide
- Set dimension -x- by moving gear lever bearing.
- Tighten bolt for push rod -arrow- in that position. Tightening torque ⇒ [Item 7 \(page 44\)](#)



- Slacken off bolt for selector rod -arrow-.

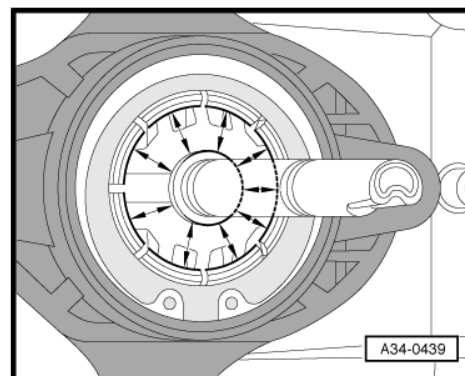
- ◆ Connection between selector rod and selector mechanism should move freely.

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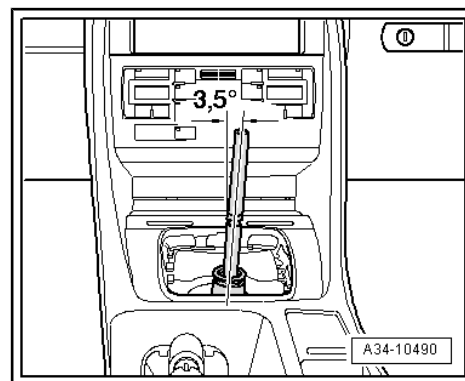


Align the gear lever as follows:

- Position bottom of gear lever in centre of gear lever bearing.
- Distance between gear lever bearing and bottom of gear lever -arrows- must be the same at all points.



- Align gear lever so that it points slightly (3.5°) to the right (as seen in direction of travel).
- Hold gear lever in this position.



- Tighten bolt for selector rod -arrow-. Tightening torque
⇒ [Item 14 \(page 44\)](#)

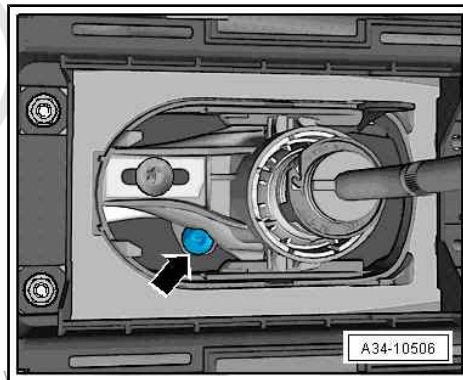


Note

The gear lever must remain in the same position while the bolt is being tightened.

Checking gear lever setting

- Start engine.
- Press clutch pedal
- Select all gears **several times**.
- Operate reverse gear detent (press gear lever downwards) and move gear lever all the way to the left into reverse gear gate.
- Now move gear lever forwards and engage reverse gear.



Note

Do not exert any sideways pressure on the gear lever while engaging reverse.

- Check that reverse gear has actually been engaged, and not 1st gear.
- If 1st gear has been engaged instead of reverse, the gear lever is set too far to the left. Adjust appropriately ⇒ [page 61](#) .
- Disengage reverse gear.
- Now engage 2nd gear, but at the same time exert increased pressure towards the left.
- If the gear lever sticks when engaging 2nd gear, it is set too far to the right. Adjust appropriately ⇒ [page 61](#) .



Note

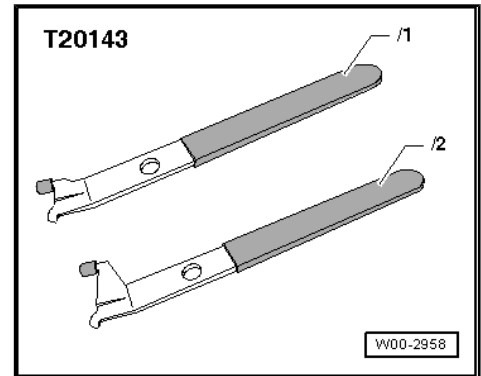
- ◆ *It should only be possible to engage reverse gear after pressing the gear lever down to overcome the reverse gear detent.*
- ◆ *The gear lever should return by itself from the reverse gear gate to the 3rd/4th gear gate.*
- ◆ *If the gear lever sticks or baulks repeatedly when engaging a gear, perform the adjustment procedure again ⇒ [page 61](#) .*
- Install noise insulation ⇒ [page 47](#) .
- Install ashtray (front) ⇒ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing ashtray (front) .
- Install gear knob together with boot ⇒ [page 46](#) .

1.8 Renewing selector shaft oil seal

- Gearbox installed

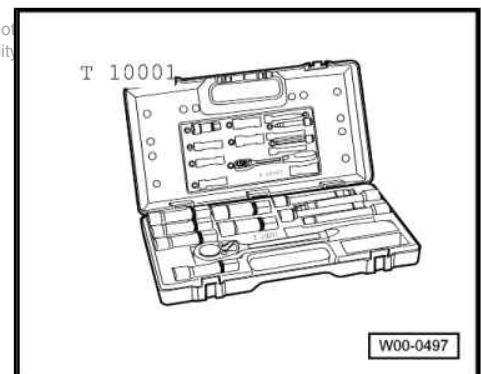
Special tools and workshop equipment required

◆ Extractor tool - T20143/1-

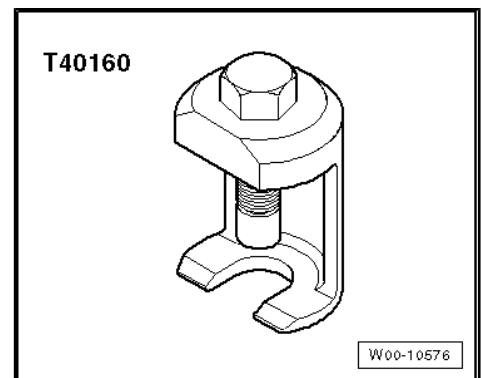


◆ Shock absorber set - T10001/1-

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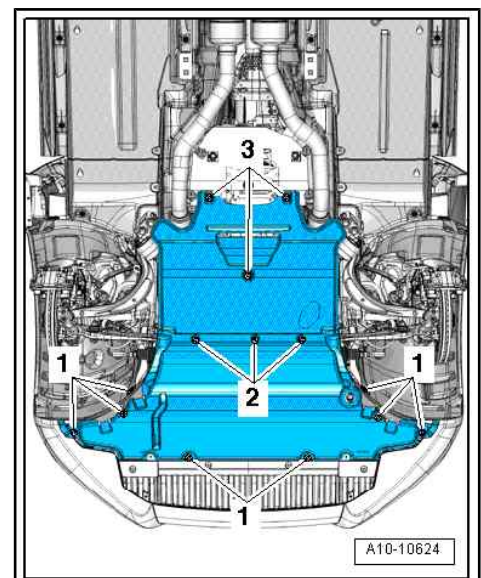
◆ Puller - T40160-



◆ Sealing grease - G 052 128 A1-

Removing

- Engage 1st gear.
- Remove rear noise insulation (loosen fasteners -2- and -3-).



- Remove nut -1-.



Note

-Item 2- can be disregarded.

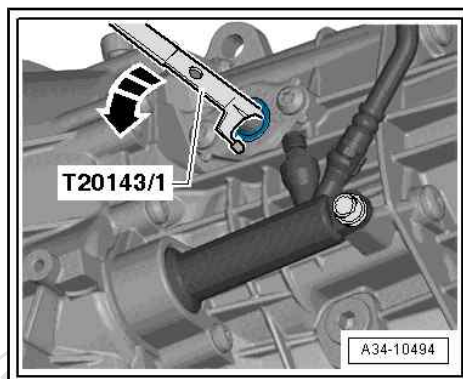
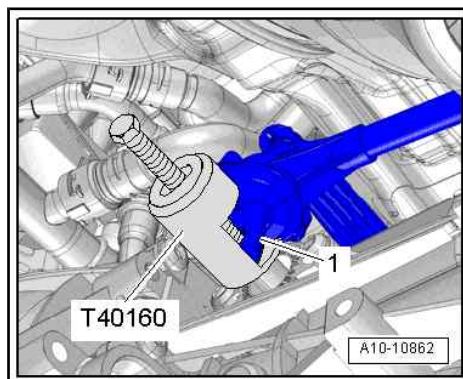
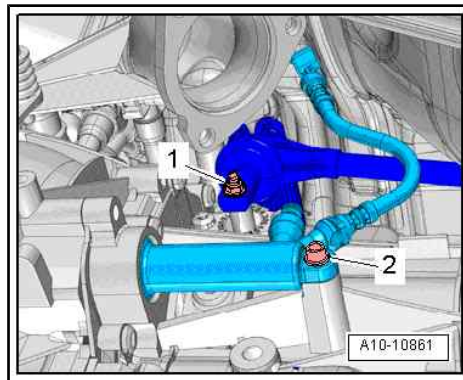


Caution

Risk of damage to selector shaft in gearbox.

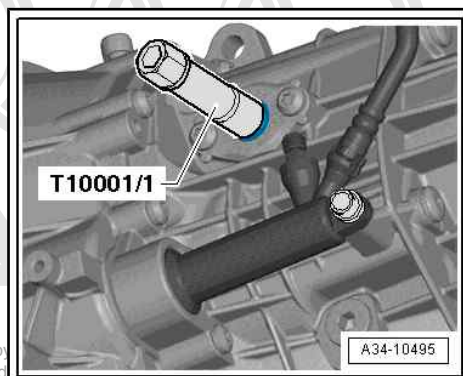
- ◆ **Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.**
- ◆ **Always use puller - T40160- when removing the gearbox selector lever.**

- Apply puller - T40160- and pull off gearbox selector lever.
- Prise out oil seal with extractor tool - T20143/1- .
- Check selector shaft for damage.



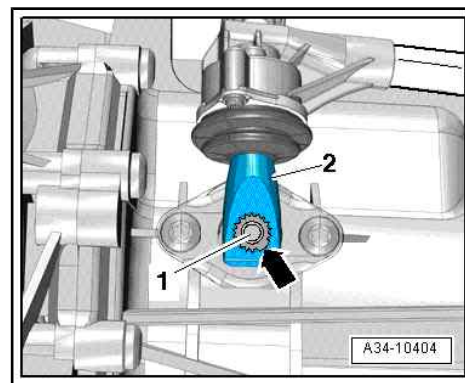
Installing

- Lightly oil outer circumference of oil seal.
- Pack space between sealing lip and dust lip half-full with sealing grease - G 052 128 A1- .
- Drive in oil seal with -T10001/1- .
- Installation depth: 2 mm below outer edge of housing



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- Install gearbox selector lever as follows:
- Gearbox selector lever -2- can only be fitted onto selector shaft -1- in one position (gap in splines -arrow-).
- Secure gearbox selector lever. Tightening torque
⇒ [Item 18 \(page 45\)](#)
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .

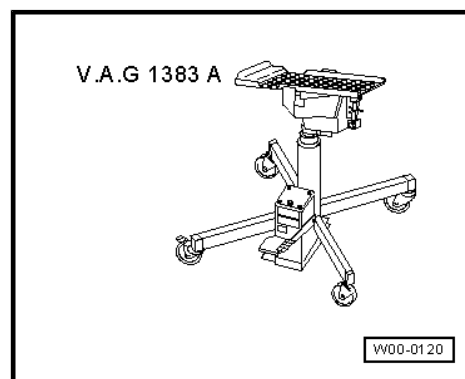


1.9 Removing and installing gear detector switch - F208-

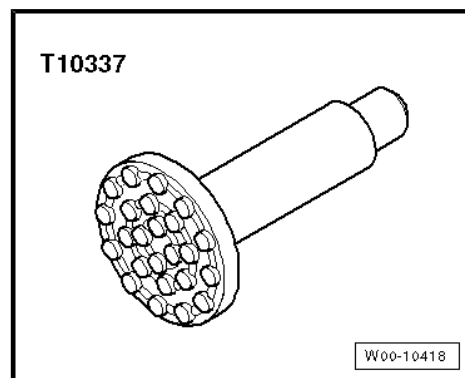
- Gearbox installed

Special tools and workshop equipment required

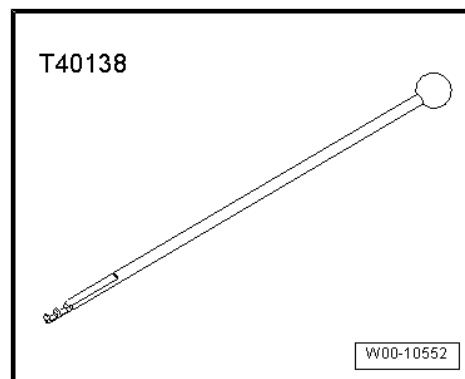
◆ Engine and gearbox jack - V.A.G 1383 A-
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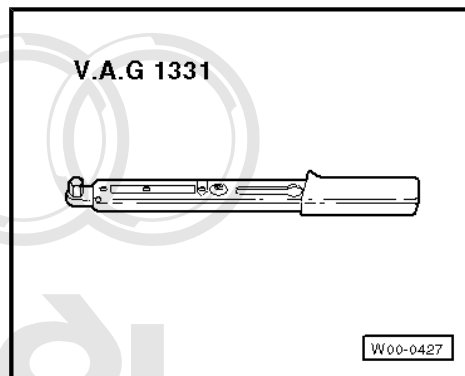
- ◆ Gearbox support - T10337-



- ◆ Release tool - T40138-



◆ Torque wrench - V.A.G 1331-



◆ Socket (24 mm) - T40284-

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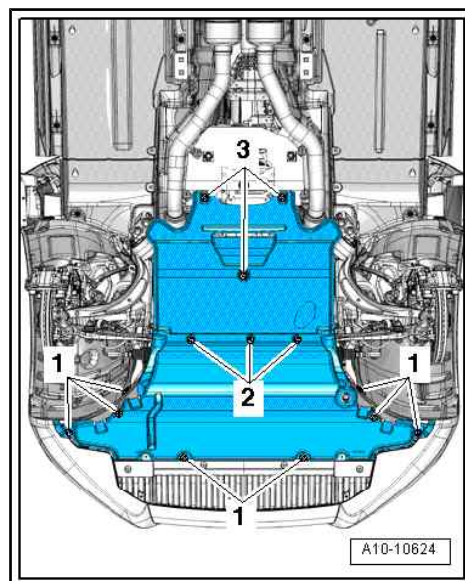


Removing

- Remove rear noise insulation (loosen fasteners -2- and -3-).

Vehicles with diesel engine and torque reaction support

- In addition, remove front noise insulation (open fasteners -1-).

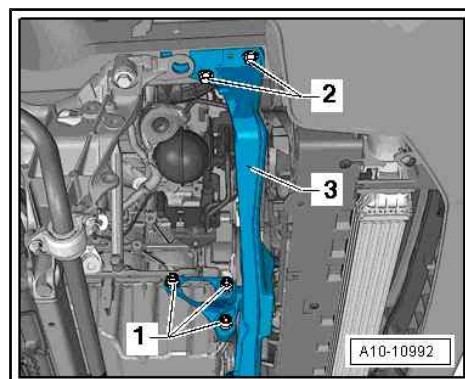


- Remove bolts -1- and detach torque reaction support from engine.



Note

Items marked -2- and -3- can be disregarded.



Continued for all vehicles



Note

The flexible pipe connection (de-coupling element) in the front exhaust pipe must not be bent more than 10° - otherwise it can be damaged.

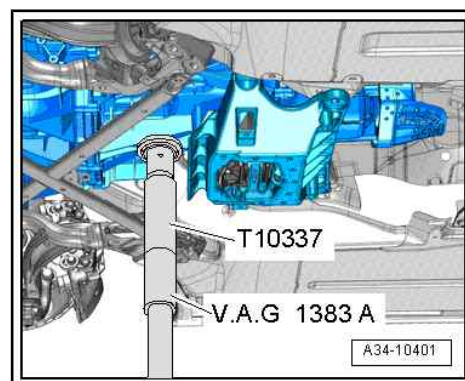
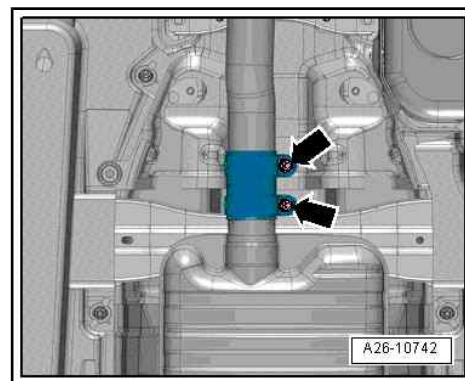
- Disconnect exhaust system at clamp -arrows-.
- Using suitable wire, tie up front exhaust pipe to one side of rear section of exhaust system (at clamp).
- Apply lifting column of engine and gearbox jack -V.A.G 1383 A- to gearbox from below (with gearbox support - T10337- attached).
- Slightly lift gearbox with engine and gearbox jack - V.A.G 1383 A- .



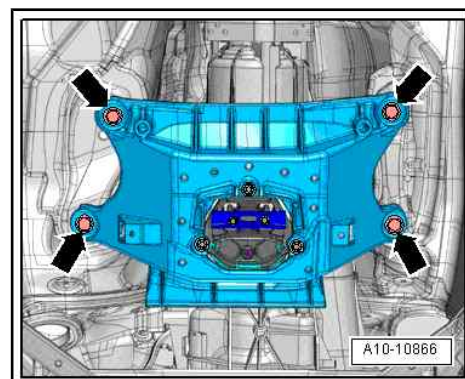
WARNING

Risk of accident.

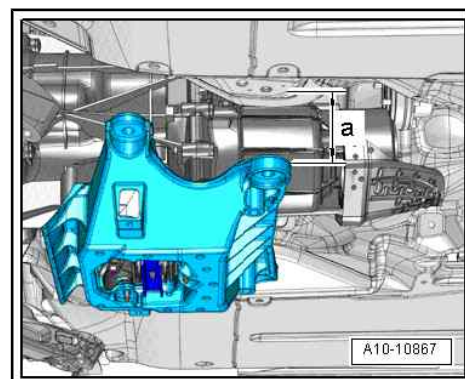
- ◆ *Engine and gearbox jack - V.A.G 1383 A- must remain in position when work is being carried out and must not be left unattended.*



- Remove bolts -arrows- for tunnel cross member.



- Lower gearbox by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)



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- Use release tool - T40138- to unplug electrical connector -arrow- and move clear.
- Use socket (24 mm) - T40284- to unscrew gear detector switch - F208- .

Installing

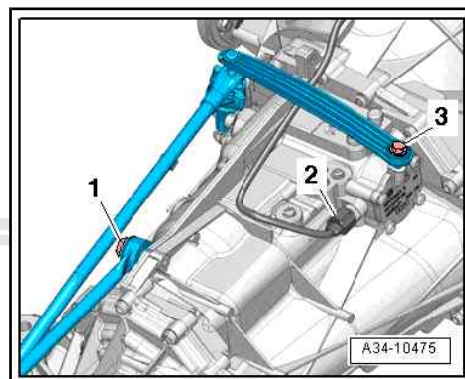
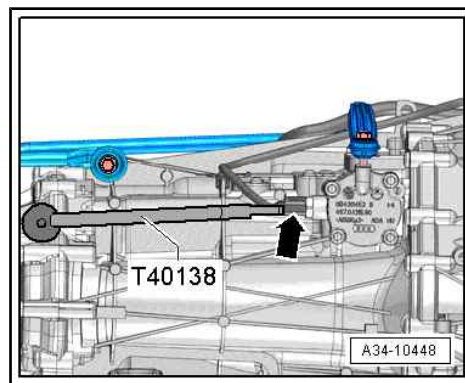
Installation is carried out in reverse sequence; note the following:

- Screw gear detector switch - F208- into selector shaft cover. Tightening torque ➔ [page 69](#)
- Attach connector -2- at gear detector switch - F208- .

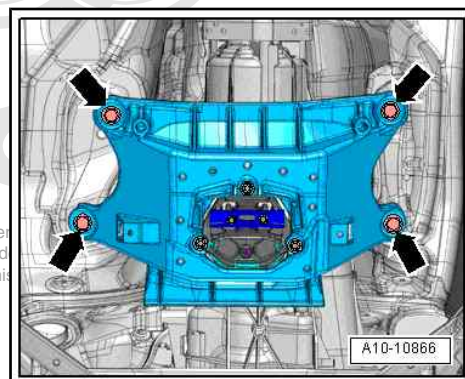


Note

-Item 1- and -item 3- can be disregarded.



- Secure tunnel cross member -arrows- ➔ [Item 2 \(page 195\)](#) .



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Vehicles with diesel engine and torque reaction support

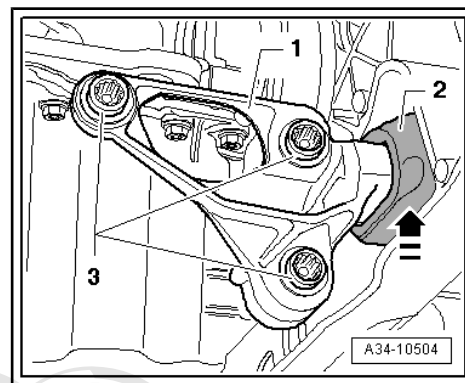
- Push torque reaction support -1- upwards in direction indicated by -arrow- until it makes contact with cross member.



Note

Bump stop -2- must be in contact with cross member without play, but must not be under tension.

- Then tighten bolts -3- to specified torque ⇒ Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings .



Continued for all vehicles

- Assemble exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .

Tightening torque

Component	Nm
Gear detector switch - F208-	20

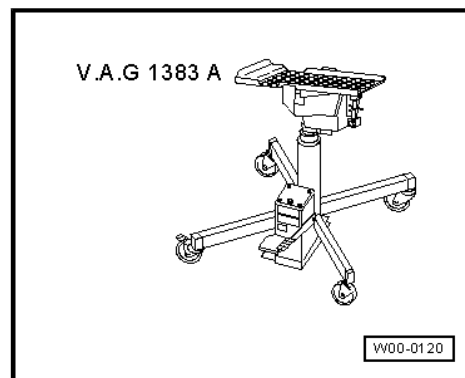
1.10 Removing and installing gear detection sensor - G604-

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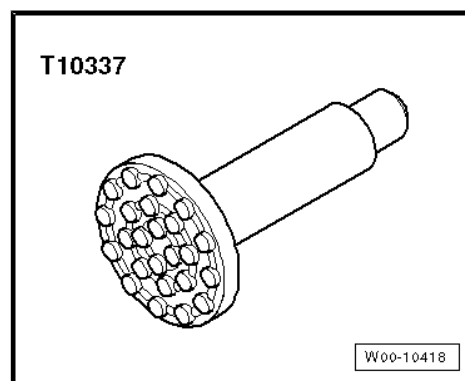
- Gearbox installed

Special tools and workshop equipment required

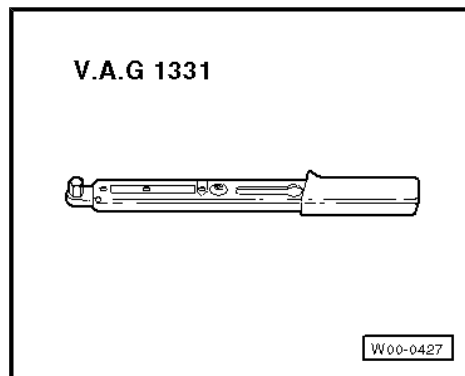
- ♦ Engine and gearbox jack - V.A.G 1383 A-



- ♦ Gearbox support - T10337-



◆ Torque wrench - V.A.G 1331-

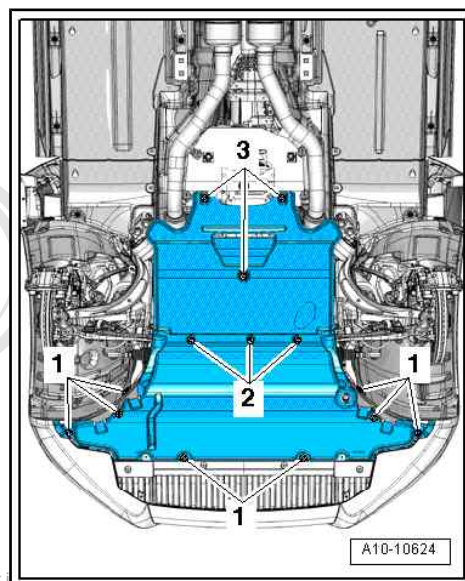


Removing

- Remove rear noise insulation (loosen fasteners -2- and -3-).

Vehicles with diesel engine and torque reaction support

- In addition, remove front noise insulation (open fasteners -1-).

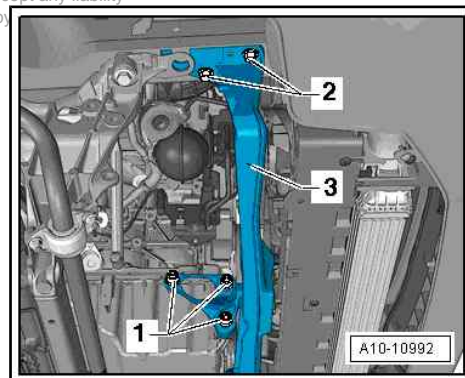


- Remove bolts -1- and detach torque reaction support from engine.



Note

Items marked -2- and -3- can be disregarded.



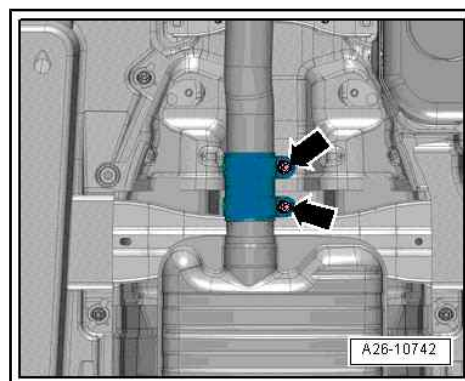
Continued for all vehicles



Note

The flexible pipe connection (de-coupling element) in the front exhaust pipe must not be bent more than 10° - otherwise it can be damaged.

- Disconnect exhaust system at clamp -arrows-.
- Using suitable wire, tie up front exhaust pipe to one side of rear section of exhaust system (at clamp).



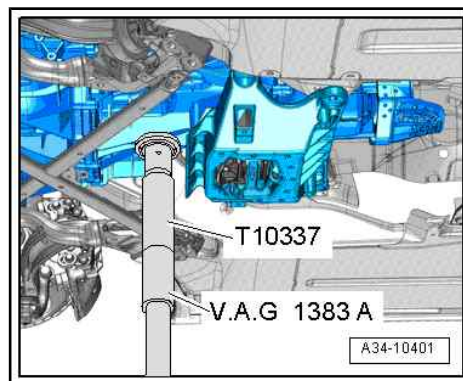
- Apply lifting column of engine and gearbox jack -V.A.G 1383 A- to gearbox from below (with gearbox support - T10337- attached).
- Slightly lift gearbox with engine and gearbox jack - V.A.G 1383 A- .



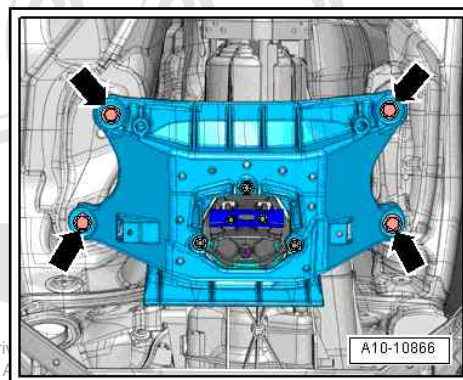
WARNING

Risk of accident.

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

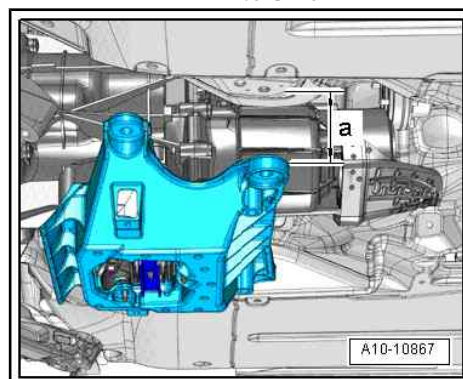


- Remove bolts -arrows- for tunnel cross member.



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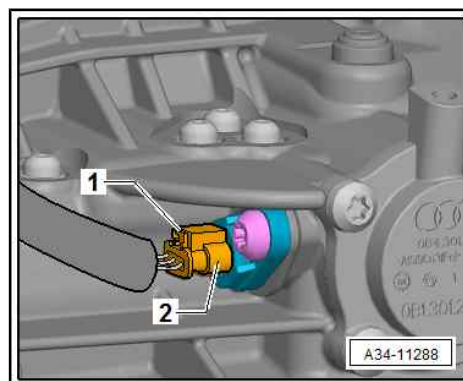
- Lower gearbox by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)



Different connectors for gear detection sensor - G604-

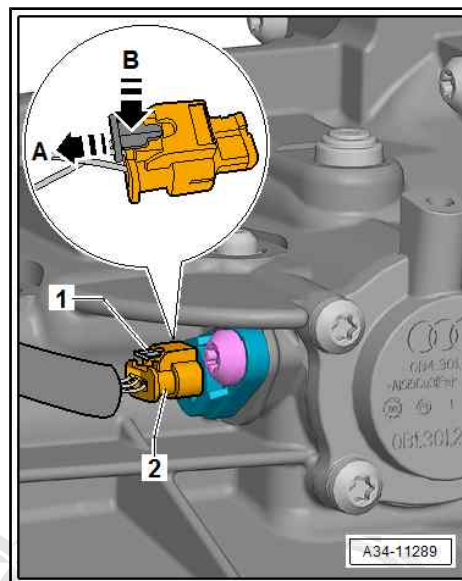
Unplug electrical connector as follows:

- Press catch -1- downwards and unplug connector -2-.



or

- Use screwdriver to pry out catch -1- approx. 3 mm in direction of -arrow A-.
- Press catch -1- downwards in direction of -arrow B- and unplug connector -2-.



- Remove bolt -1- and pull out gear detection sensor - G604- -3-.

Installing

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

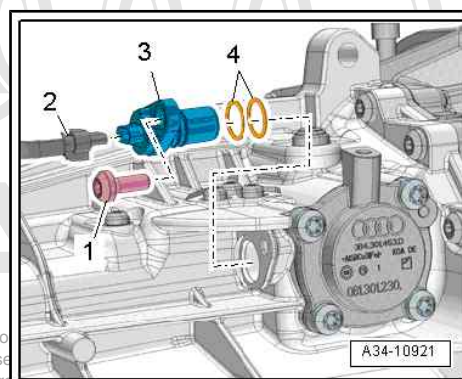
- Renew O-rings -4-.



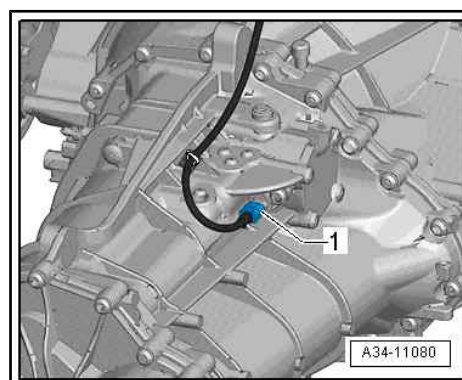
Caution

Take care when installing gear detection sensor - G604- -3-: risk of breakage or sensor malfunction

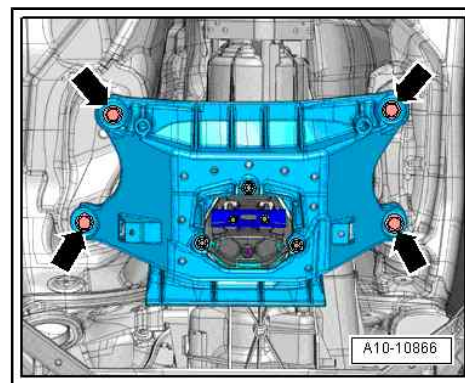
- Gear detection sensor - G604- -3- must not be knocked into the gearbox or pulled in by tightening bolt -1-.
- O-rings -4- and bore in gearbox cover must be lubricated with gear oil.
- Gear detection sensor - G604- -3- can be pushed in carefully using a suitable tool, such as a hammer handle.



- Secure gear detection sensor - G604- with bolt -1-. Tightening torque ➔ [page 73](#)
- Attach connector -1- and lock in place if necessary.



- Secure tunnel cross member -arrows- ➔ [Item 2 \(page 195\)](#) .



Vehicles with diesel engine and torque reaction support

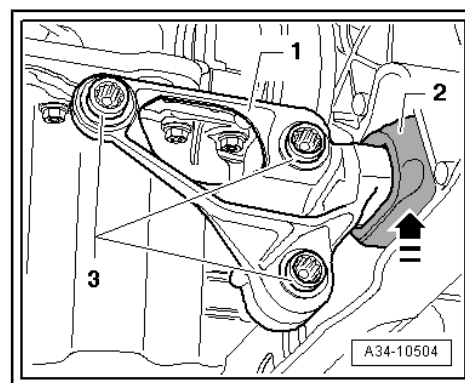
- Push torque reaction support -1- upwards in direction indicated by -arrow- until it makes contact with cross member.



Note

Bump stop -2- must be in contact with cross member without play, but must not be under tension.

- Then tighten bolts -3- to specified torque ➔ Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings .



Continued for all vehicles

- Assemble exhaust system and perform stress-free alignment ➔ [Rep. gr. 26](#) ; Exhaust pipes/silencers; Exploded view - silencers
- Install noise insulation ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .

Tightening torque

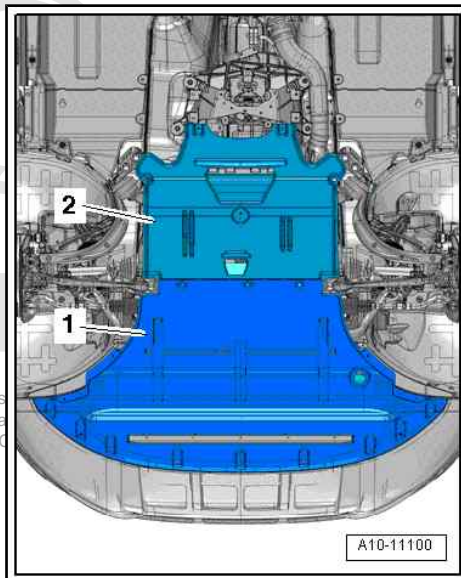
Component	Nm
Gear detection sensor - G604-	10 + 45°
• Renew bolt	

1.11 Removing and installing gearbox neutral position sender - G701-

- Only in vehicles with start/stop system
- Gearbox installed

Removing

- If fitted, remove rear noise insulation -2-.

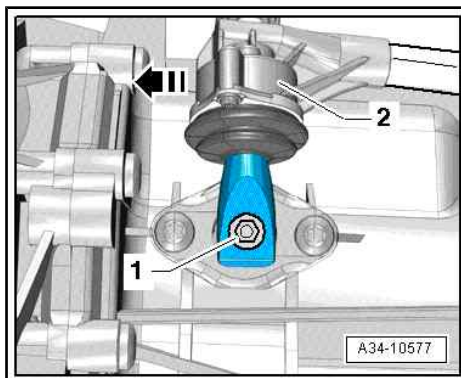


- Engage 4th gear by shifting gearbox selector lever -2- forwards in direction of -arrow-.

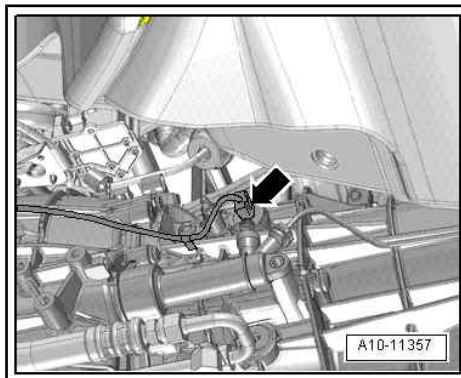


Note

-Item 1- can be disregarded.



- Unplug electrical connector from gearbox neutral position sender - G701- -arrow-.



- Remove bolt -arrow- and pull out gearbox neutral position sender - G701- -A-.

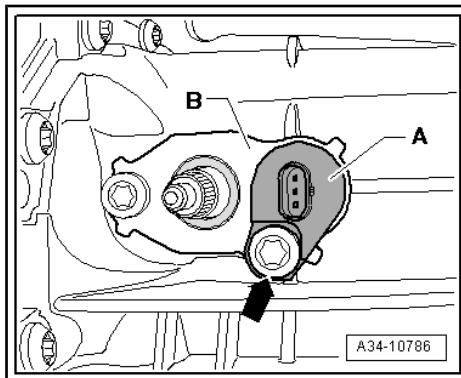


Note

Sealing cap -B- remains fitted.

Installing

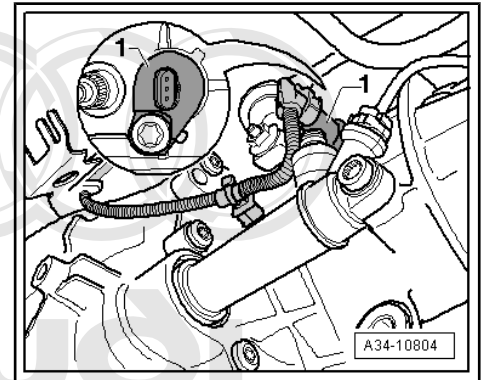
- Insert gearbox neutral position sender - G701- -A- with new O-ring in sealing cap -B- for selector shaft.
- Tighten new bolt -arrow- to specified torque ➤ [page 75](#) .



- Attach connector to gearbox neutral position sender - G701-1-.
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .

Tightening torque

Component	Nm
Gearbox neutral position sender - G701-	10 + 45°
• Renew bolt	



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2 Removing and installing gearbox

⇒ [“2.1 Removing gearbox”, page 76](#)

⇒ [“2.2 Installing gearbox”, page 146](#)

⇒ [“2.3 Tightening torques for gearbox”, page 188](#)

2.1 Removing gearbox

⇒ [“2.1.1 Removing gearbox - Audi A4, A5 with 1.8 ltr. and 2.0 ltr. TFSI engines”, page 76](#)

⇒ [“2.1.2 Removing gearbox - Audi A4, A5 with 3.2 ltr. FSI engine”, page 87](#)

⇒ [“2.1.3 Removing gearbox - Audi A4, A5 with 4-cyl. TDI engine, PR-TH3/TM4”, page 96](#)

⇒ [“2.1.4 Removing gearbox - Audi A4, A5, Q5 with 4-cyl. TDI engine \(EA 288 - generation I\), PR-TD1”, page 111](#)

⇒ [“2.1.5 Removing gearbox - Audi Q5 with 4-cyl. TDI engine, PR-TH3/TM4”, page 121](#)

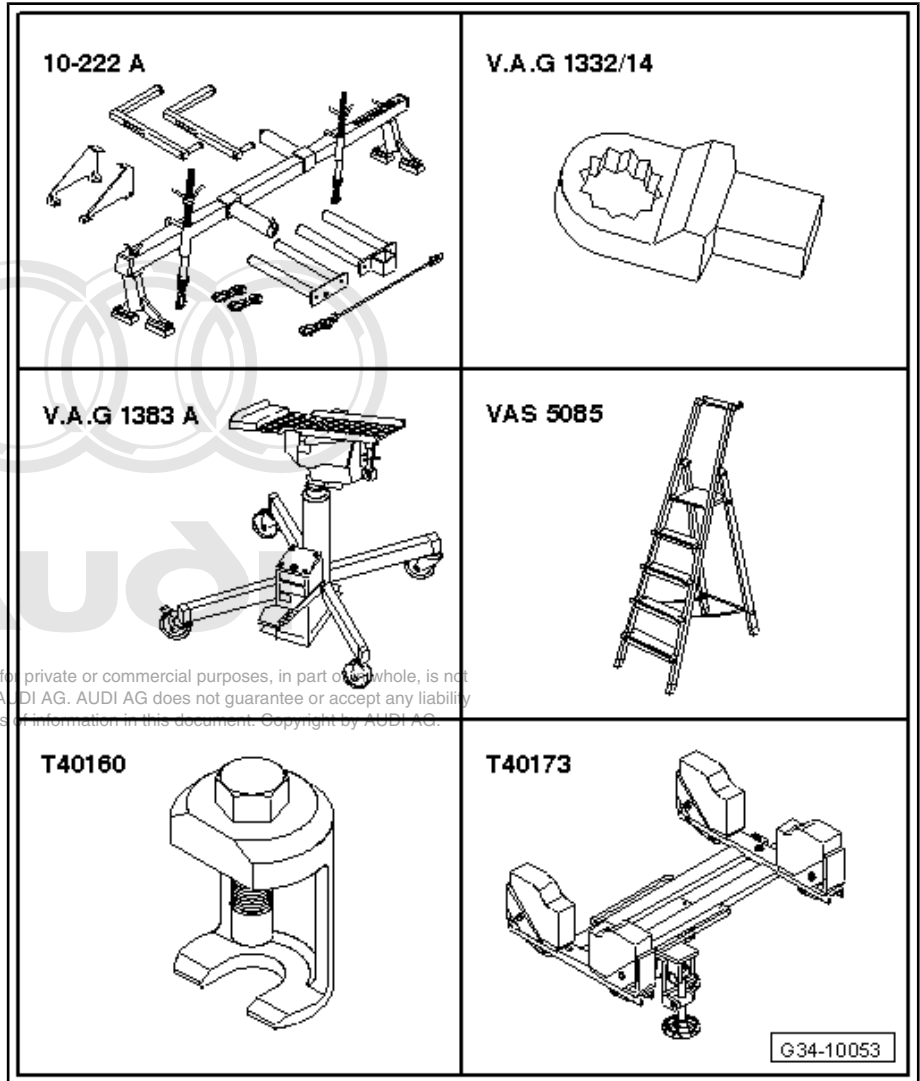
⇒ [“2.1.6 Removing gearbox - Audi Q5 with 2.0 ltr. TFSI engine”, page 134](#)

2.1.1 Removing gearbox - Audi A4, A5 with 1.8 ltr. and 2.0 ltr. TFSI engines

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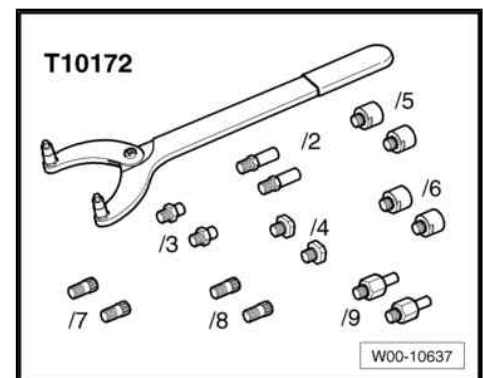
Special tools and workshop equipment required

- ◆ Support bracket - 10 - 222 A-
- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Stepladder - VAS 5085-
- ◆ Puller - T40160-
- ◆ Gearbox support - T40173-

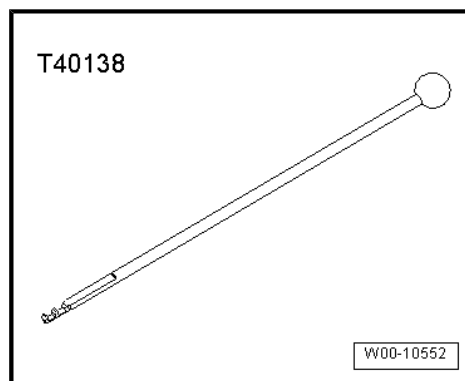


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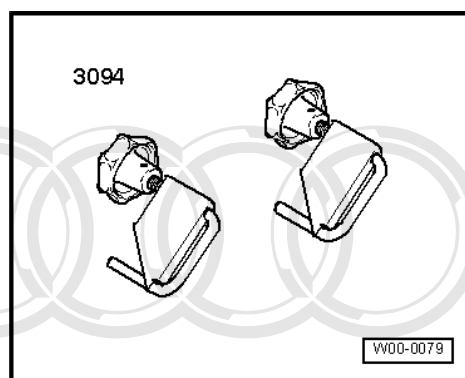
- ◆ Counterhold tool - T10172- with -T10172/5-



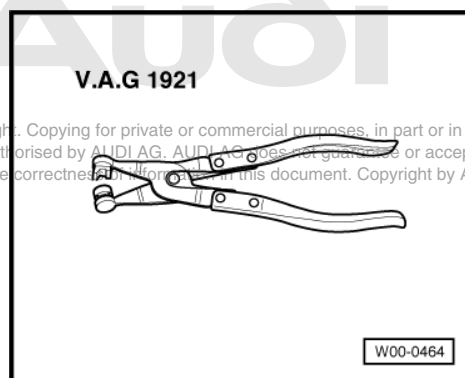
- ◆ Release tool - T40138- (not for vehicles from model year 2013 onwards)



- ◆ 2x hose clamps, up to Ø 25 mm - 3094-



- ◆ Hose clip pliers - V.A.G 1921-



Removing

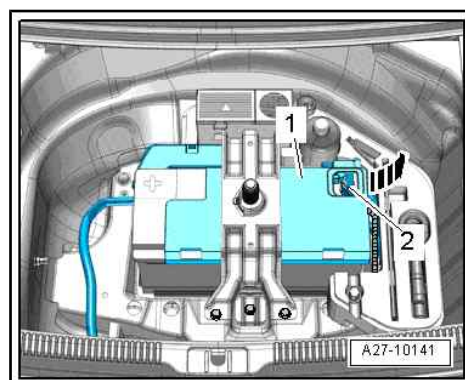
- Switch off ignition and take out ignition key.
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



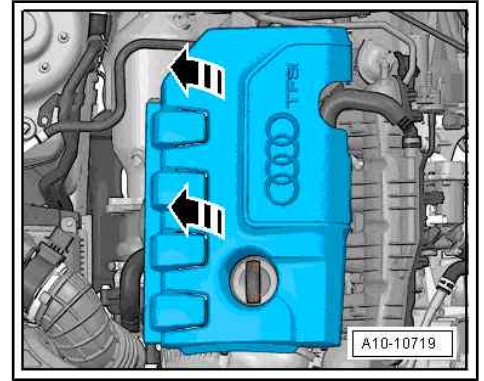
Caution

When disconnecting the battery there is a risk of serious damage to electronic components:

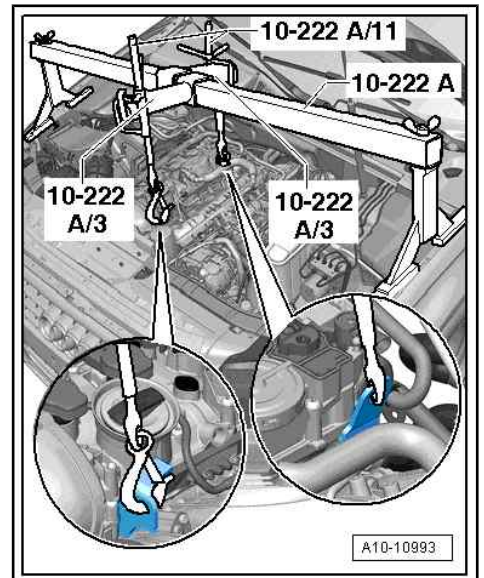
- ◆ ***Observe measures required when disconnecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .***



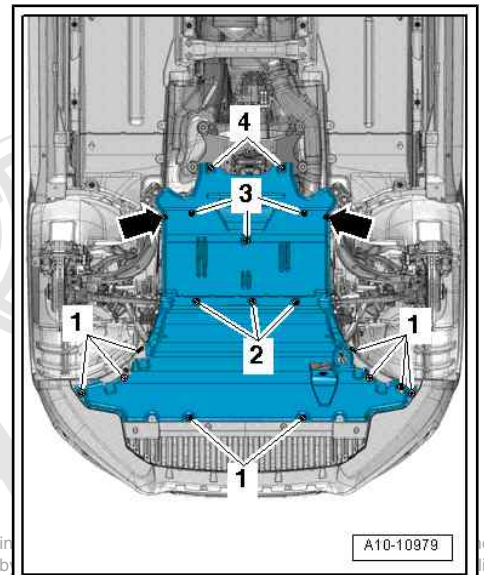
- Carefully detach engine cover panel from retaining studs in direction of -arrow-. Pull out engine cover panel evenly, without jerking.



- Set up support bracket - 10 - 222 A- with adapter - 10 - 222 A /3- on suspension turrets (left and right), as shown in illustration.
- Hook spindle - 10 - 222 A /11- onto engine lifting eyes.



- Loosen fasteners -1...4- and -arrows- and remove noise insulation panels.



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ity

- Remove subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe cross brace .

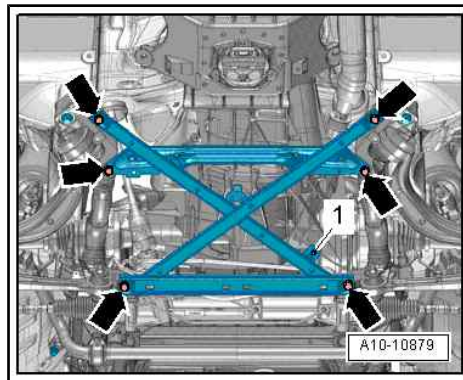


Caution

Risk of damage to parts of the running gear.

Do NOT let the vehicle down on the wheels if the subframe, steering rack or subframe cross brace are not properly installed.

Do NOT support the vehicle at the subframe or the subframe cross brace (e.g. with a trolley jack).



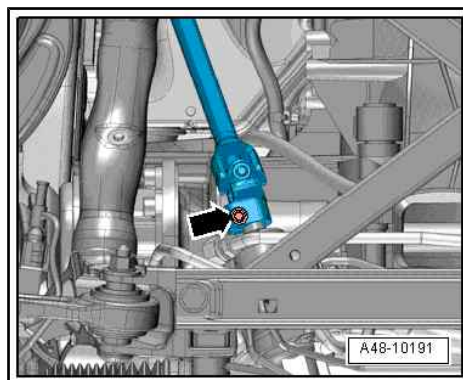
- Detach intermediate steering shaft from steering rack and telescope shaft upwards ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



Caution

Risk of damage to coil connector for airbag.

- ◆ **Front wheels must be in straight-ahead position when universal joint is detached from steering rack.**
- ◆ **Do not change position of steering wheel or steering rack after this step (if necessary, fix steering wheel in position with adhesive tape).**



Vehicles with gear oil heating



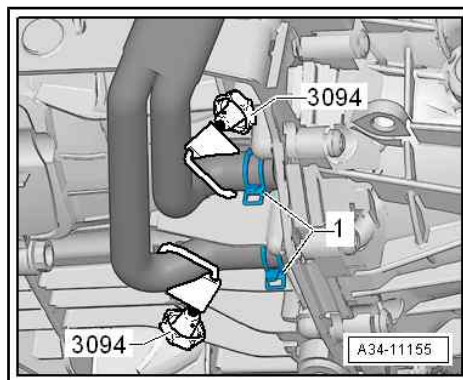
WARNING

Risk of scalding from hot steam and hot coolant.

The cooling system is under pressure when the engine is hot.

Cover filler cap on expansion tank with a cloth and open carefully to release pressure.

- Clamp off both coolant hoses on gearbox using hose clamps up to 25 mm - 3094- .
- Place drip tray below gearbox, open spring-type clip -1- and disconnect both coolant hoses.



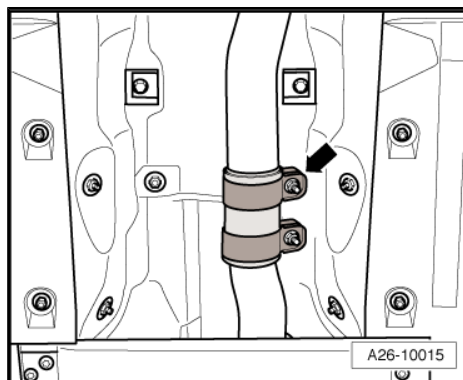
Continued for all vehicles



Note

The flexible pipe connection (de-coupling element) in the front exhaust pipe must not be bent more than 10° - otherwise it can be damaged.

- Disconnect exhaust system at clamp -arrow-.
- Tie up front exhaust pipe to heat shield below selector mechanism with wire.

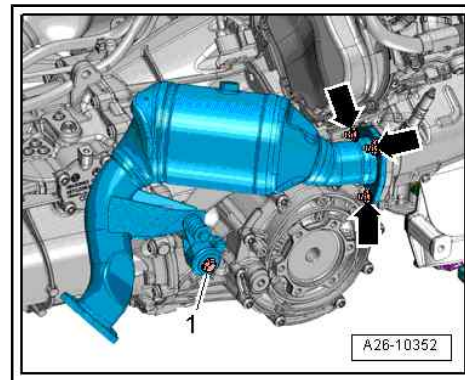


- Remove bolt -1- and swivel bracket for catalytic converter to right side.

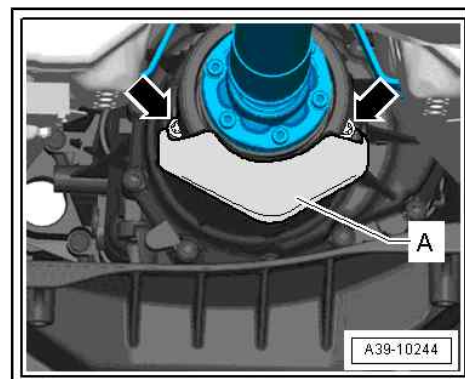


Note

Nuts -arrows- can be disregarded.



- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.

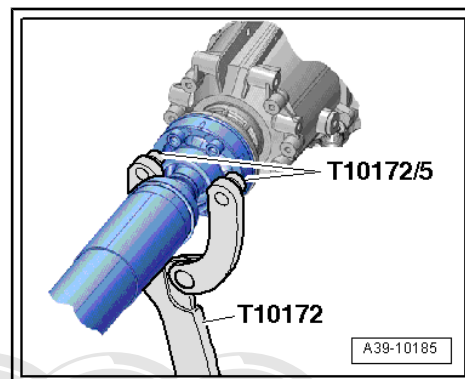


- Hold propshaft with counterhold tool - T10172- and adapters - T10172/5- to prevent it from turning.

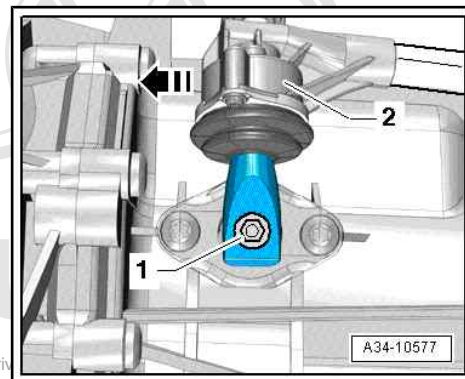


Note

On vehicles with propshaft with splines on gearbox end, counterhold at rear final drive in the same way.

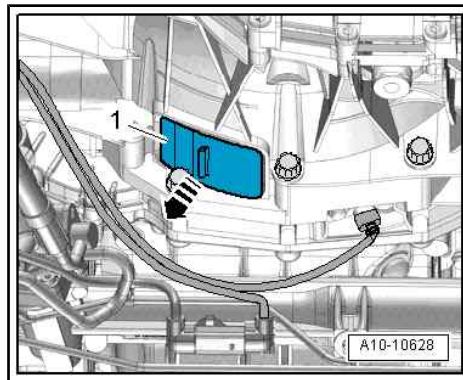


- Engage 6th gear by pulling out selector shaft -1- and shifting gear selector lever -2- forwards in direction of -arrow-.

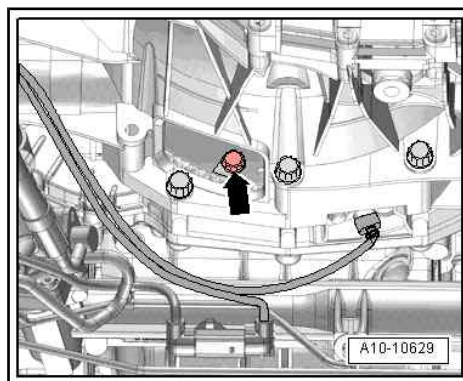


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- Pull cover -1- off bottom of gearbox -arrow-.



- Remove 3 bolts -arrow- for drive plate (turn both front wheels so that clutch module rotates 120° in direction of engine rotation each time).

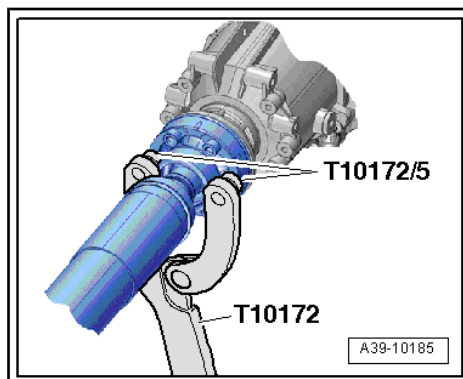


Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

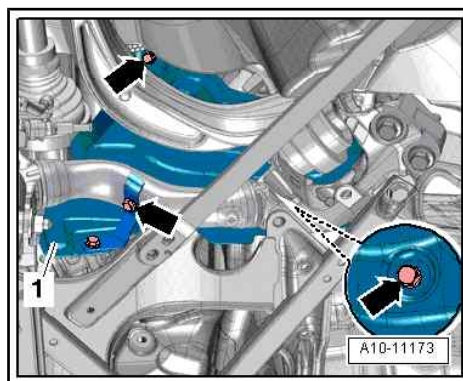
Propshaft with splined connection at gearbox end:

- Remove propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .

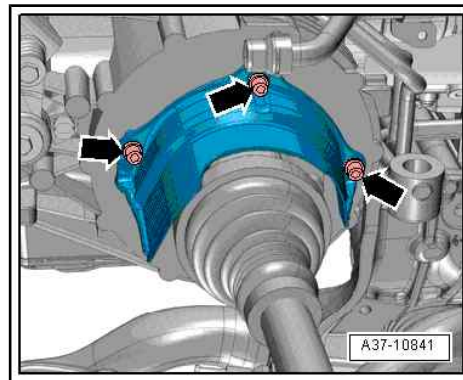


Continued for all vehicles

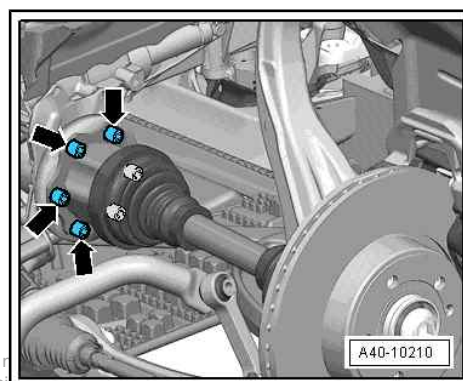
- If fitted, remove subframe shield -1- (left and right); to do so, unscrew bolts -arrows- and detach heat shields towards inside.



- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).



- Unbolt drive shafts (left and right) from flange shafts on gearbox.



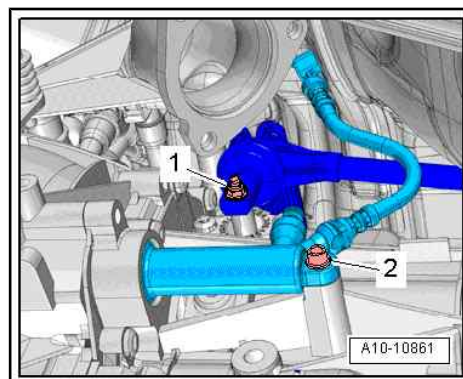
- Remove bolt -2- and tie up clutch slave cylinder to side in engine compartment.



Caution

Risk of damage to clutch slave cylinder.

- ◆ *Do not depress clutch pedal after removing slave cylinder.*



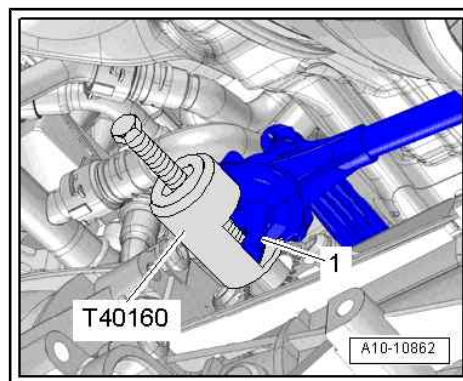
- Remove nut -1-.



Caution

Risk of damage to selector shaft in gearbox.

- ◆ *Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.*
- ◆ *Always use puller - T40160- when removing the gearbox selector lever.*



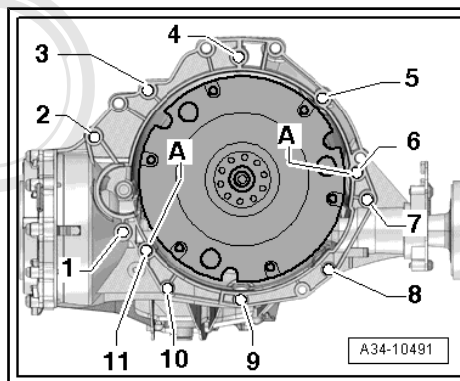
- Fit puller -T40160- and pull off selector rod -1-.

- Remove engine/gearbox securing bolts -8 ... 11-



Note

Engine/gearbox securing bolts -1 ... 7- are removed and installed from below with the gearbox lowered.

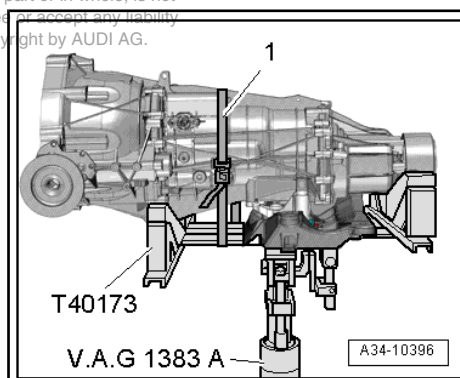


- Position engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- underneath gearbox and secure with tensioning strap -1- as shown in illustration.

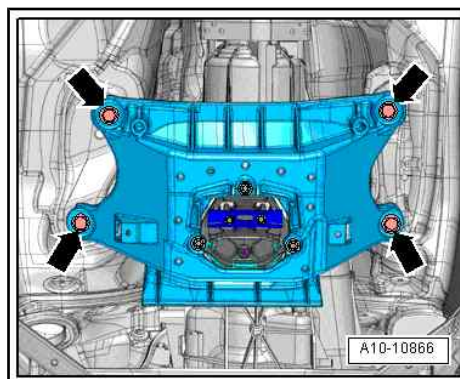


Note

Make sure no electrical wiring is trapped when attaching tensioning strap.



- Remove bolts -arrows- for tunnel cross member.

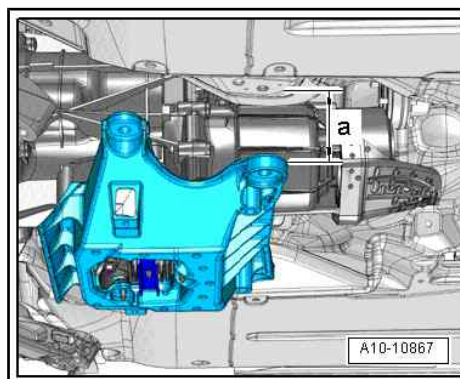


- Lower gearbox initially only by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)
- Pre-tension threaded spindles on support bracket - 10 - 222 A- slightly.



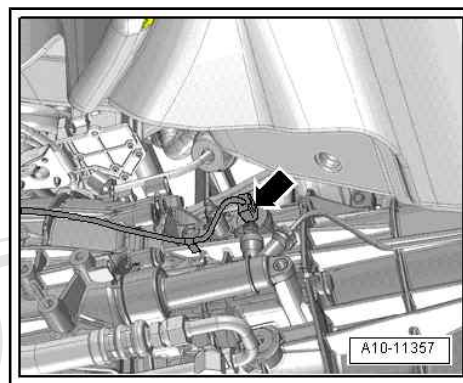
Note

Use stepladder - VAS 5085- for access to threaded spindles while vehicle is raised.



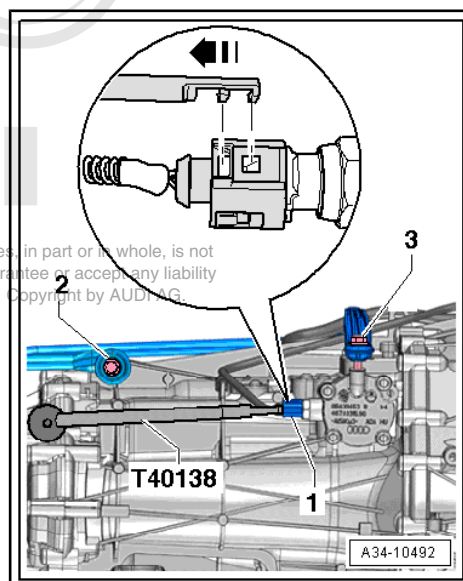
Vehicles up to model year 2012

- Unplug electrical connector from gearbox neutral position sender - G701- -arrow- and move wiring clear.



- Disconnect electrical connector -1- for gear detector switch - F208- using release tool -T40138- and move electrical wiring clear.
- Remove bolt -2- for push rod.
- Remove bolt -3- for connecting rod.

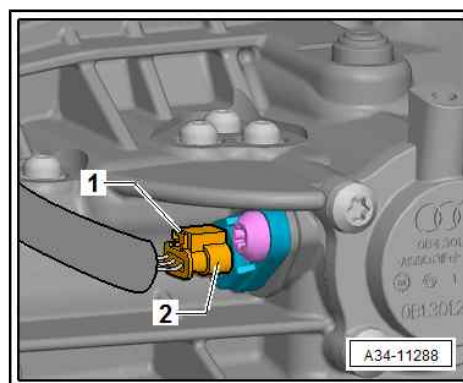
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Vehicles with gear detection sensor - G604- from model year 2013 onwards

Different connectors for gear detection sensor - G604- ! Unplug electrical connector as follows:

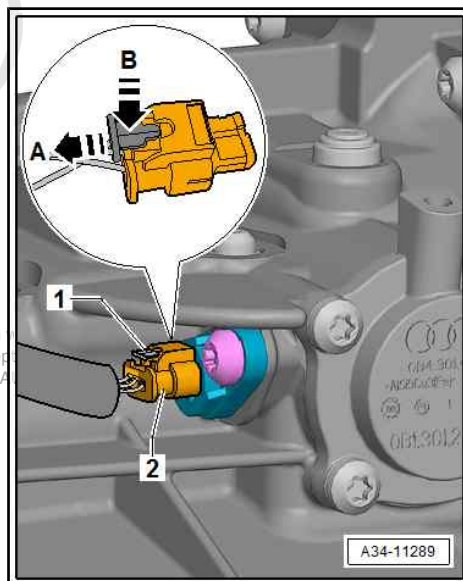
- Push catch -1- downwards, unplug connector -2- and move electrical wiring clear.



or

- Use screwdriver to pry out catch -1- approx. 3 mm in direction of -arrow A-.
- Push catch -1- downwards in direction of -arrow B-, unplug connector -2- and move electrical wiring clear.

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Continued for all vehicles

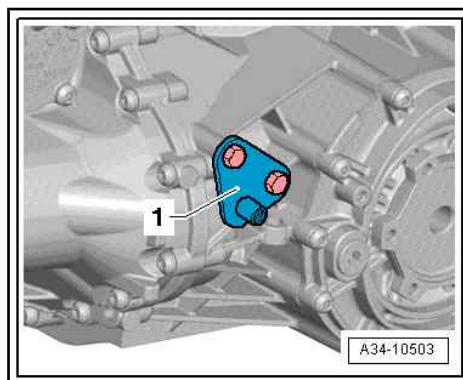
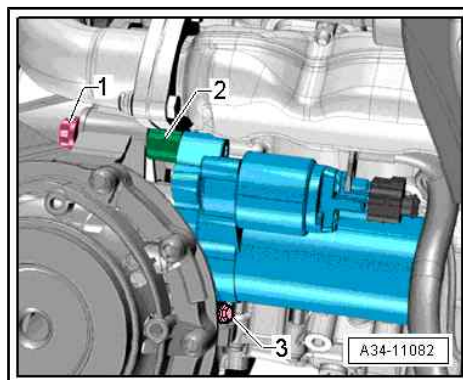
- Remove bolt -3- for starter from engine side.
- Remove bolt -1-.
- Detach spacer sleeve -2- between starter and gearbox.
- Detach starter from gearbox but do not remove starter.



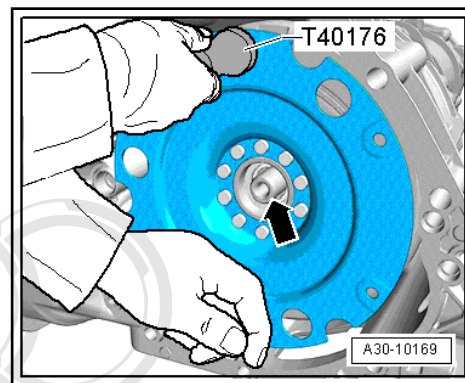
Note

Starter cables do not need to be disconnected.

- Remove remaining bolts securing engine to gearbox.
- Detach gearbox from engine and lower carefully using engine and gearbox jack - V.A.G 1383 A- .
- If the removed gearbox is being replaced, the following components must be transferred to the replacement gearbox:



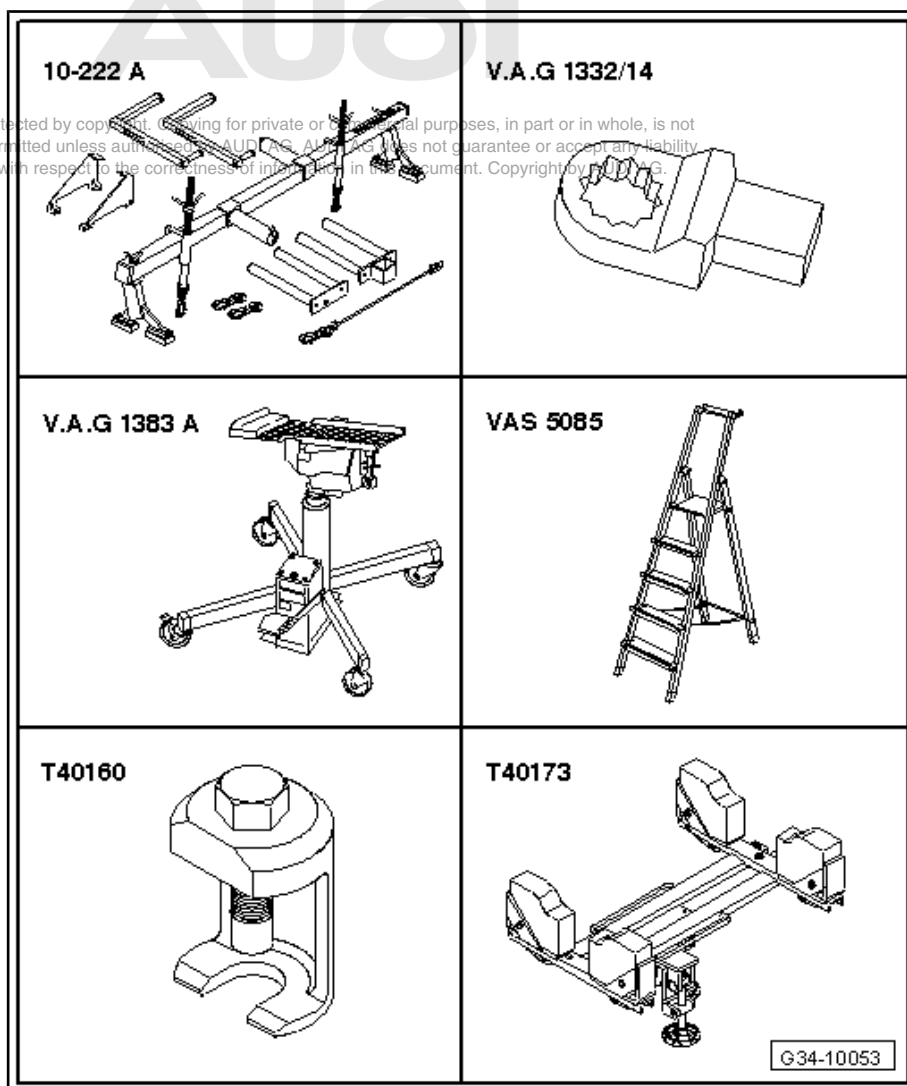
- ◆ Bracket -1- for exhaust system mounting ⇒ Rep. gr. 26 ; Emission control system; Exploded view - emission control system .
- ◆ Tunnel cross member with gearbox mounting and gearbox support ⇒ [page 195](#)
- ◆ If necessary, remove clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



2.1.2 Removing gearbox - Audi A4, A5 with 3.2 ltr. FSI engine

Special tools and workshop equipment required

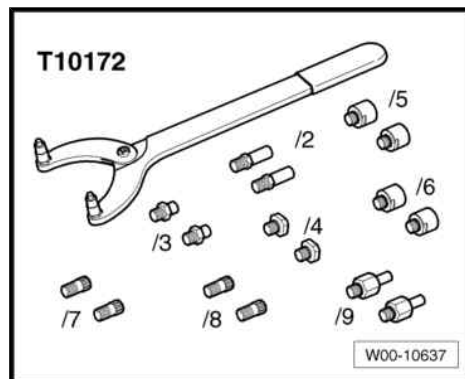
- ◆ Support bracket - 10 - 222 A-
- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Stepladder - VAS 5085-
- ◆ Puller - T40160-
- ◆ Gearbox support - T40173-



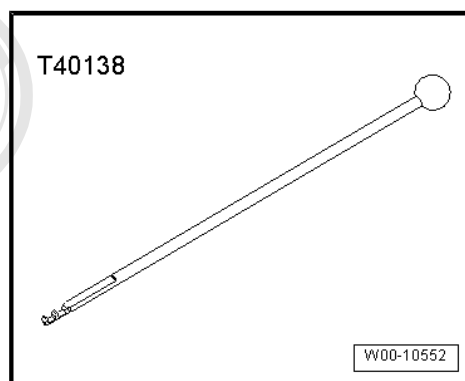
Special tools and workshop equipment required



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

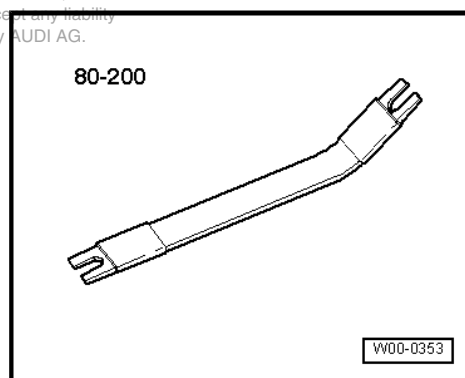


- ◆ Release tool - T40138-



- ◆ Removal lever - 80 - 200-

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- ◆ Engine support bracket, basic set - T40091-
- ◆ Engine support bracket, supplementary set - T40093-

Removing

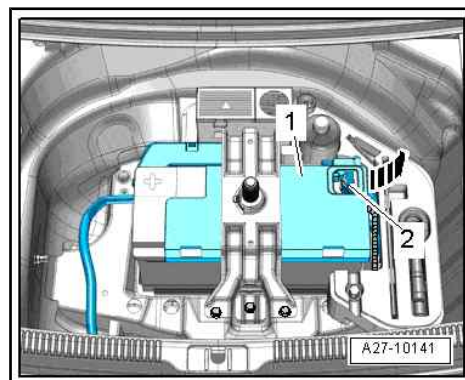
- Switch off ignition and take out ignition key.
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



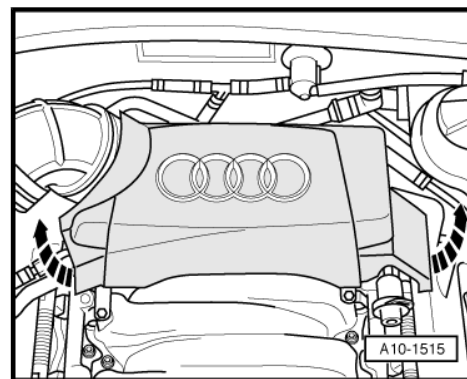
Caution

When disconnecting the battery there is a risk of serious damage to electronic components:

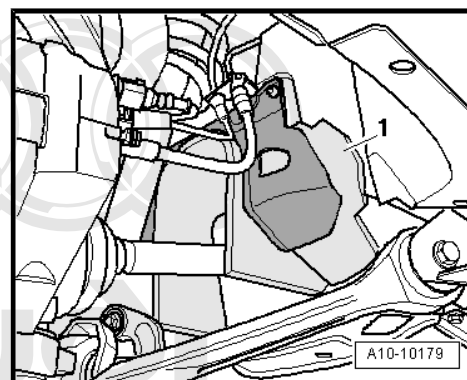
- ◆ Observe the correct procedure for disconnecting the battery.



- Remove engine cover panel (rear) -arrows-.
- Remove both front wheels.

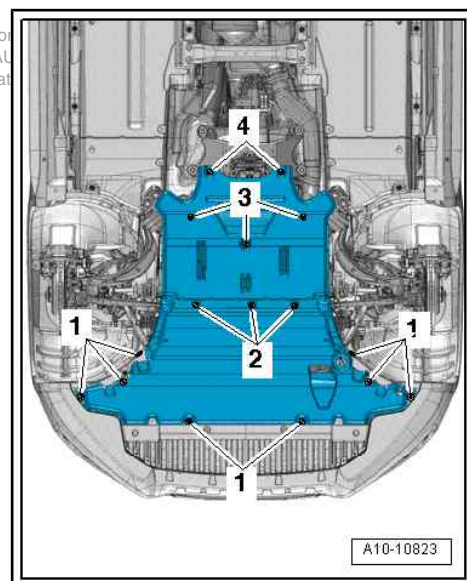


- Detach noise insulation -1- from wheel housing (both sides).



- Loosen fasteners -1, 2, 3, 4- and remove noise insulation panels.

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- Remove subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe cross brace .

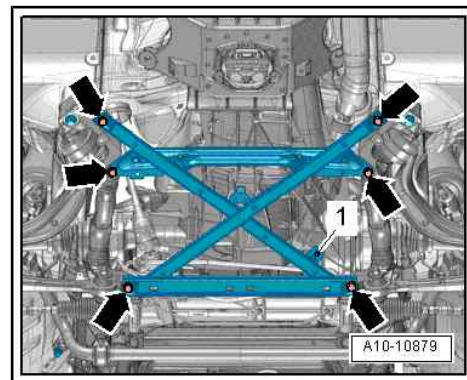


Caution

Risk of damage to parts of the running gear.

Do NOT let the vehicle down on the wheels if the subframe, steering rack or subframe cross brace are not properly installed.

Do NOT support the vehicle at the subframe or the subframe cross brace (e.g. with a trolley jack).



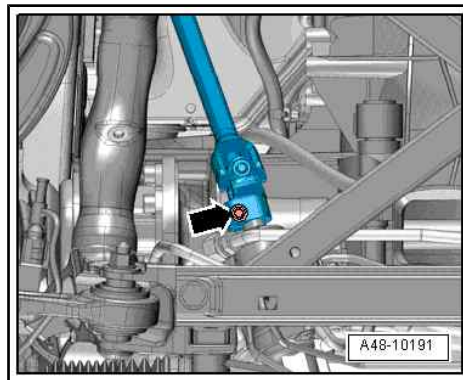
- Detach intermediate steering shaft from steering rack and telescope shaft upwards ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



Caution

Risk of damage to coil connector for airbag.

- ◆ **Front wheels must be in straight-ahead position when universal joint is detached from steering rack.**
- ◆ **Do not change position of steering wheel or steering rack after this step (if necessary, fix steering wheel in position with adhesive tape).**

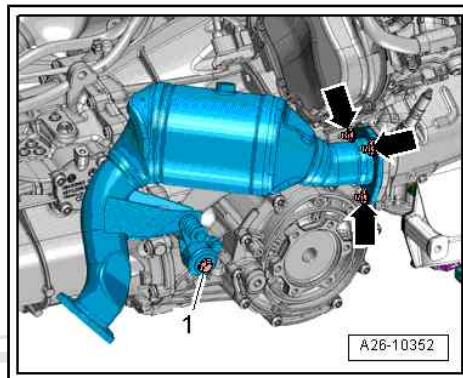


- Remove front silencers (left and right) ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Removing and installing front silencer .
- Remove plenum chamber partition panel ⇒ General body repairs, exterior; Rep. gr. 50 ; Bulkhead; Exploded view - plenum chamber partition panel .
- Remove nuts -arrows- and bolt -1- and press catalytic converter to right side.

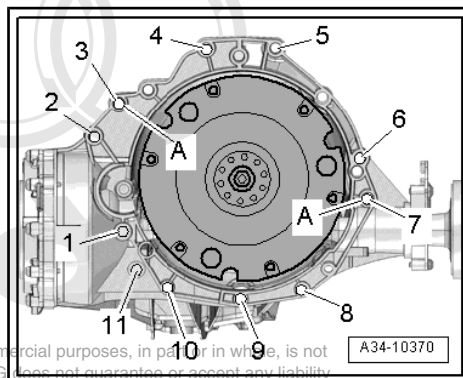


Note

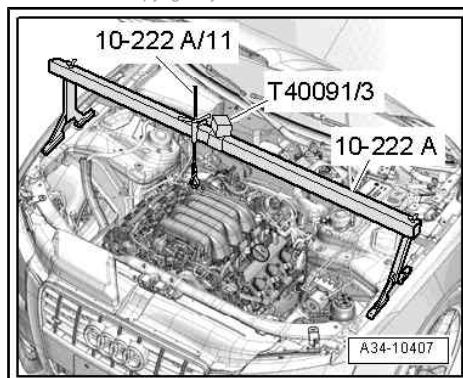
For illustration purposes, the installation position is shown with the engine removed.



- Remove bolts -2 ... 6- securing gearbox to engine (accessible from above).
- Attach a nut loosely to catalytic converter (right-side) to prevent it from dropping.

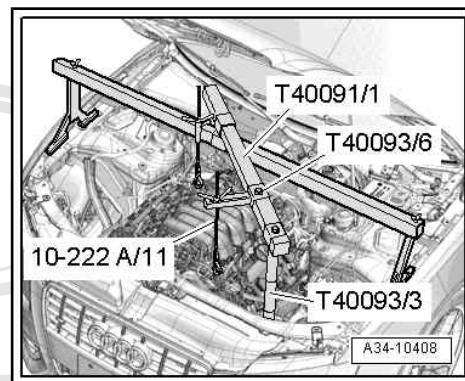


- Set up support bracket - 10 - 222 A- with connecting piece - T40091/3- on suspension turrets (left and right), as shown in illustration.
- Hook spindle - 10 - 222 A /11- onto engine lifting eye (right-side).



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- Attach remaining parts of support bracket - 10 - 222 A- as shown in illustration. Set up support -T40093/3- on metal flange of longitudinal member.
- Hook spindle - 10 - 222 A /11- onto engine lifting eye (front left).



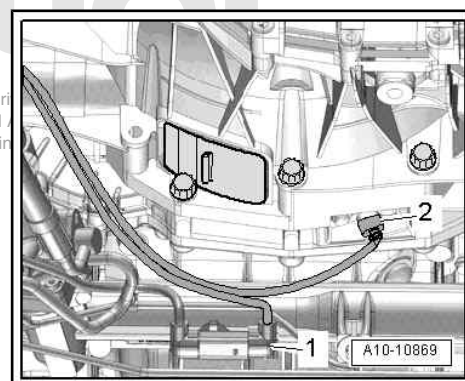
- Disconnect electrical connector -2- for engine speed sender - G28- and move wiring clear.



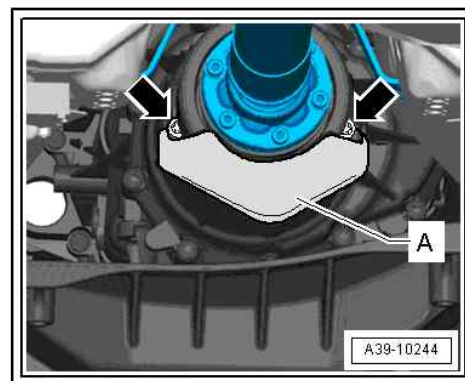
Note

-Item 1- can be disregarded.

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- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.

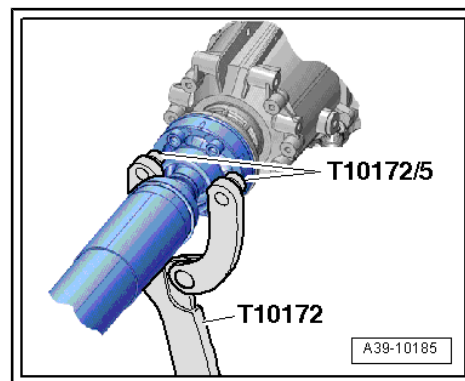


- Hold propshaft with counterhold tool - T10172- and adapters - T10172/5- to prevent it from turning.

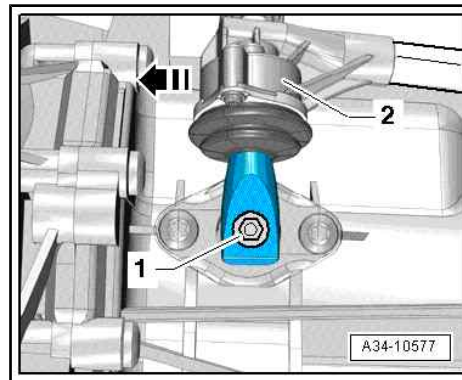


Note

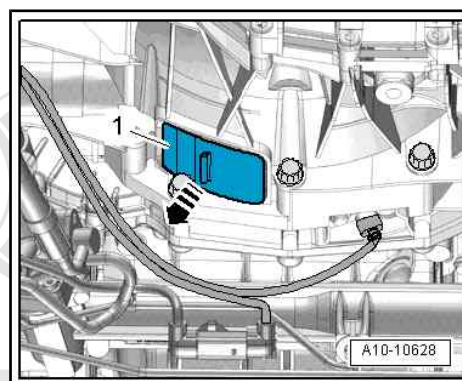
On vehicles with propshaft with splines on gearbox end, counterhold at rear final drive in the same way.



- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.

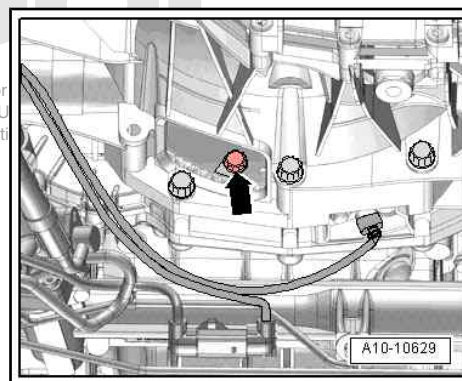


- Pull cover -1- off bottom of gearbox -arrow-.



- Remove 6 bolts -arrow- for drive plate (turn both front wheels so that clutch module rotates 60° in direction of engine rotation each time).

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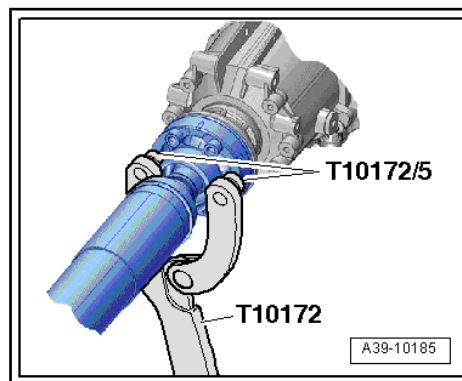


Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

Propshaft with splined connection at gearbox end:

- Remove propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .

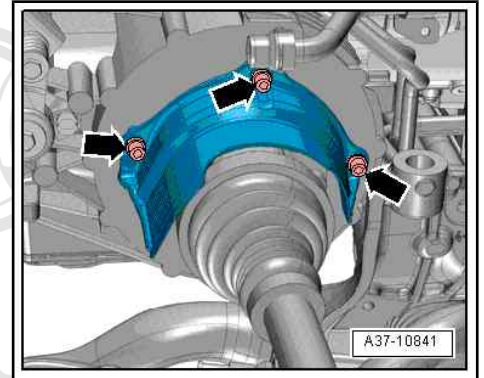


Continued for all vehicles

- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).



The installation position is shown with the gearbox removed.

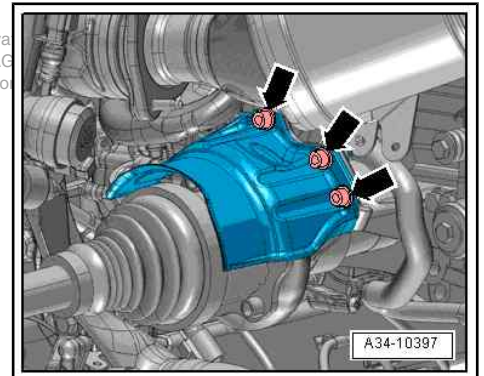


- Remove bolts -arrows- and detach heat shield for drive shaft (left-side).

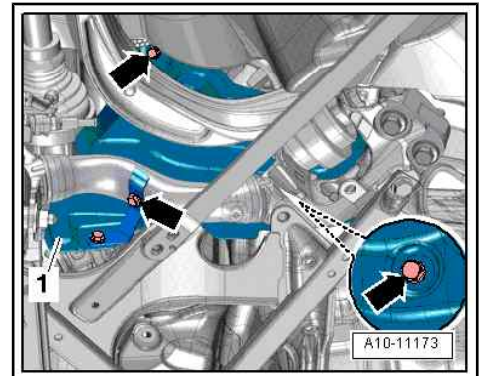
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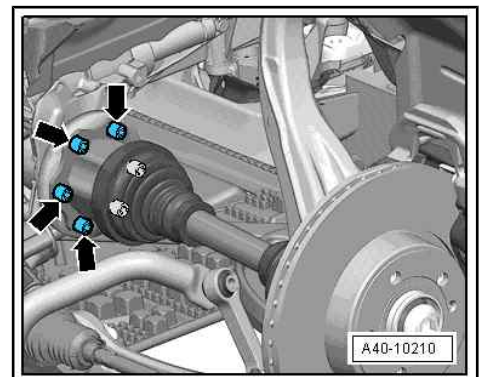
The installation position is shown with the gearbox removed.



- If fitted, remove subframe shield -1- (left and right); to do so, unscrew bolts -arrows- and detach heat shields towards inside.



- Unbolt drive shafts (left and right) from flange shafts on gearbox.



- Remove bolt -2- and tie up clutch slave cylinder to side in engine compartment.



Caution

Risk of damage to clutch slave cylinder.

- ◆ *Do not depress clutch pedal after removing slave cylinder.*

- Remove nut -1-.

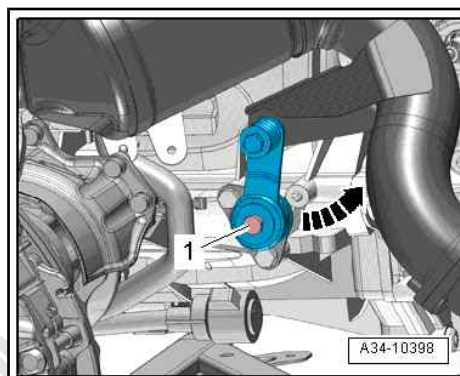
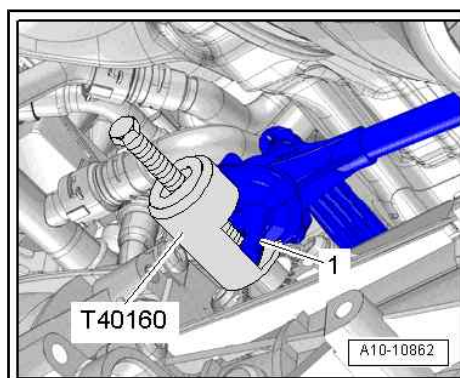
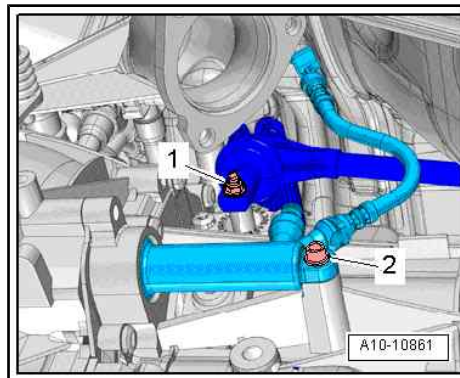


Caution

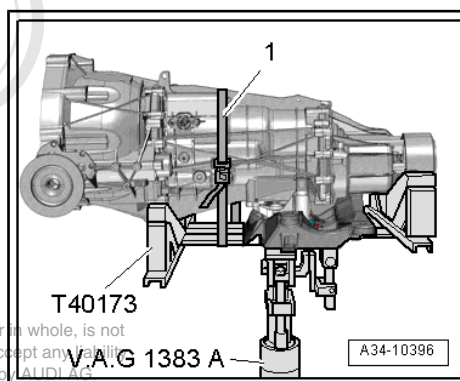
Risk of damage to selector shaft in gearbox.

- ◆ *Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.*
- ◆ *Always use puller - T40160- when removing the gearbox selector lever.*

- Fit puller -T40160- and pull off selector rod -1-.
- Remove bolt -1-, press retainer off gearbox and swivel back towards rear -arrow-.



- Position engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- underneath gearbox and secure with tensioning strap -1- as shown in illustration.

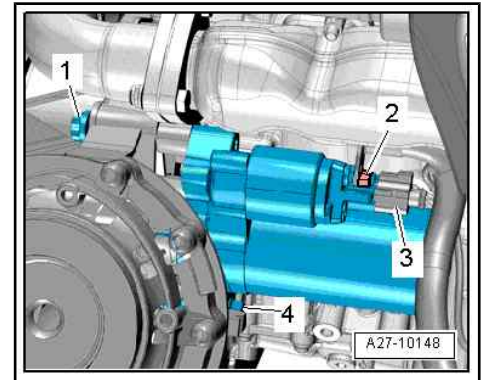


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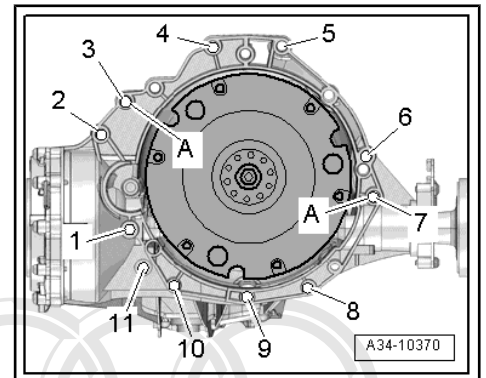
- Remove bolt -4- for starter from engine side.
- Detach starter from gearbox but do not remove starter.

 Note

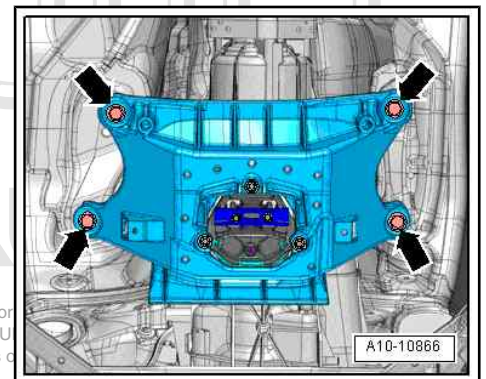
- ◆ *Starter cables -2- and -3- do not need to be disconnected.*
- ◆ *-Item 1- can be disregarded.*



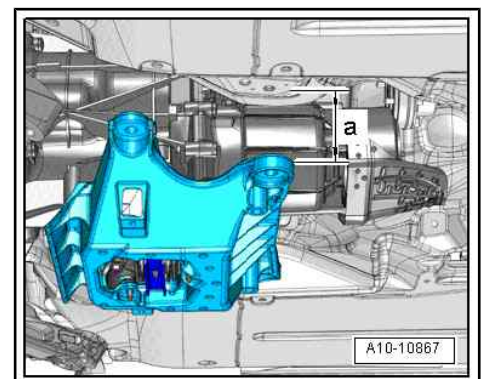
- Remove remaining engine/gearbox securing bolts -7 ... 11-.



- Remove bolts -arrows- for tunnel cross member.

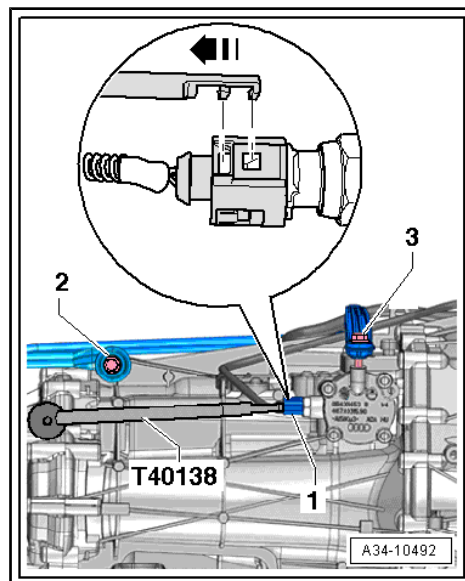


- Lower gearbox initially only by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 100 mm (maximum)
- Pre-tension threaded spindles on support bracket - 10 - 222 A- slightly.

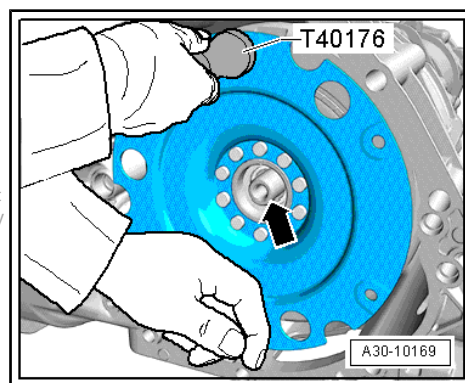


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- Disconnect electrical connector -1- for gear detector switch - F208- using release tool -T40138- and move electrical wiring clear.
- Remove bolt -2- for push rod.
- Remove bolt -3- for connecting rod.
- Detach gearbox from engine and lower carefully using engine and gearbox jack - V.A.G 1383 A- .



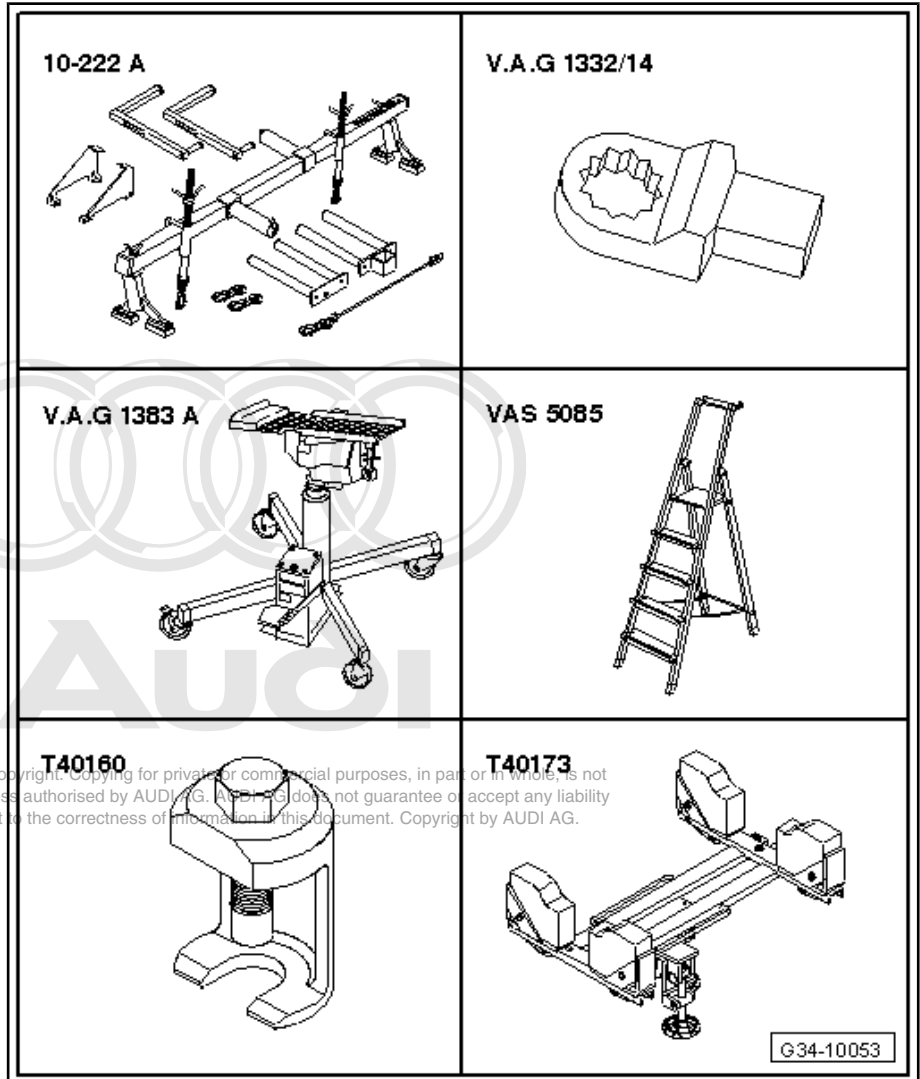
- If the removed gearbox is being replaced, the following components must be transferred to the replacement gearbox:
- ◆ If necessary, remove clutch module ➔ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .
- ◆ Tunnel cross member with gearbox mounting and gearbox support ➔ [page 195](#)



2.1.3 Removing gearbox - Audi A4, A5 with 4-cyl. TDI engine, PR-TH3/TM4

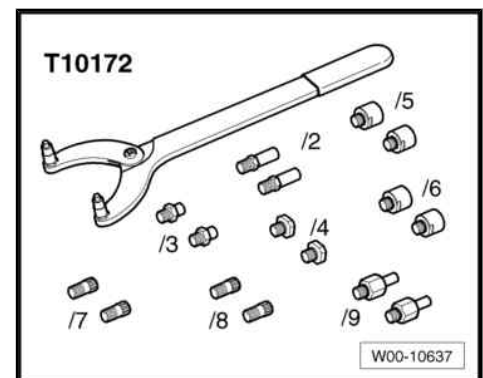
Special tools and workshop equipment required

- ◆ Support bracket - 10 - 222 A-
- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Stepladder - VAS 5085-
- ◆ Puller - T40160-
- ◆ Gearbox support - T40173-

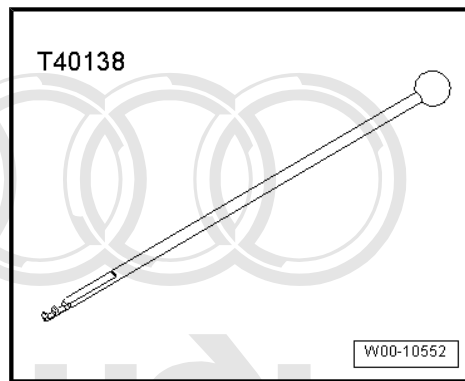


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- ◆ Counterhold tool - T10172- with -T10172/5-

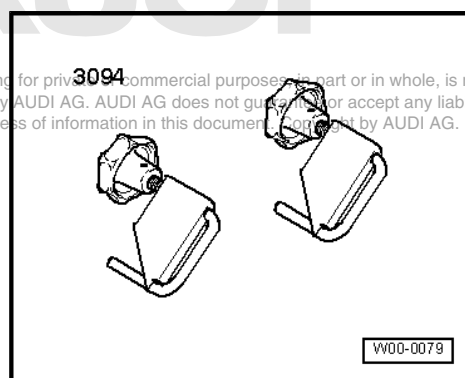


◆ Release tool - T40138-

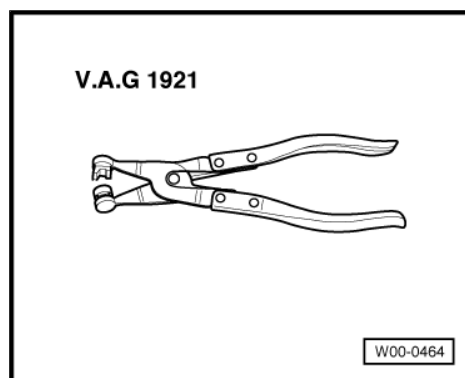


◆ 2x hose clamps, up to Ø 25 mm - 3094-

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◆ Hose clip pliers - V.A.G 1921-



Removing

Proceed as follows:

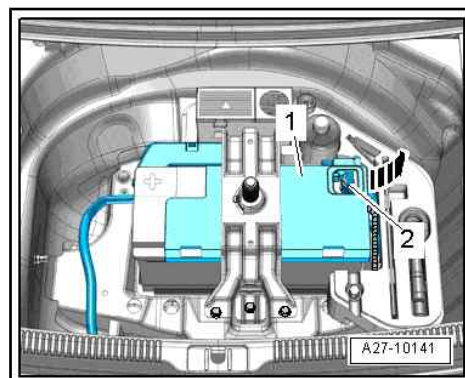
- Bring front wheels into straight-ahead position.
- Switch off ignition and take out ignition key.



Caution

When disconnecting the battery there is a risk of serious damage to electronic components:

- ◆ **Observe the correct procedure for disconnecting the battery.**



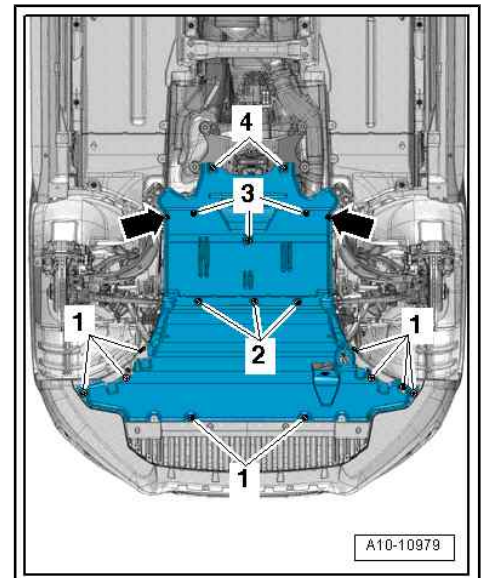
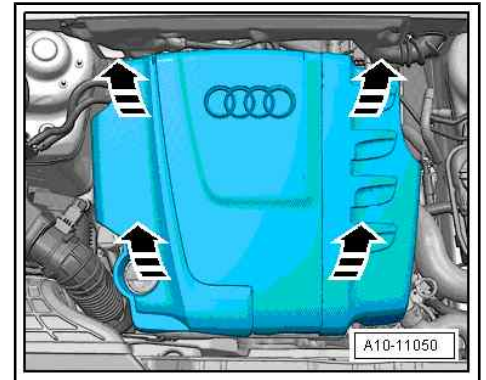
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .

- Carefully detach engine cover panel from retaining studs in direction of -arrow-. Pull out engine cover panel evenly, without jerking.

Audi

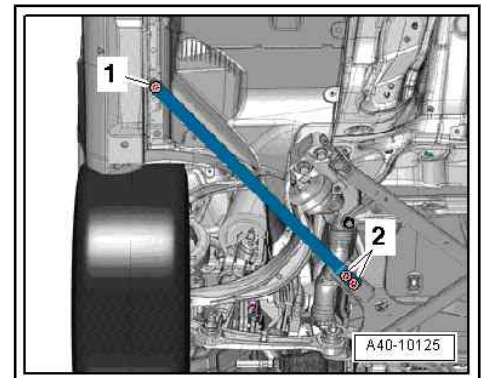
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- Loosen fasteners -1...4- and -arrows- and remove noise insulation panels.



A5 Cabriolet:

- Remove diagonal struts (left and right) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .



Continued for all vehicles:

- Remove subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe cross brace .

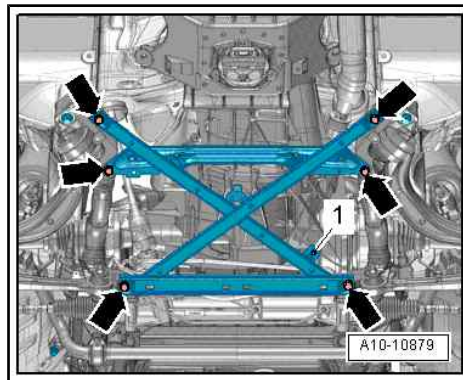


Caution

Risk of damage to parts of the running gear.

Do NOT let the vehicle down on the wheels if the subframe, steering rack or subframe cross brace are not properly installed.

Do NOT support the vehicle at the subframe or the subframe cross brace (e.g. with a trolley jack).



- Detach intermediate steering shaft from steering rack and telescope shaft upwards ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .

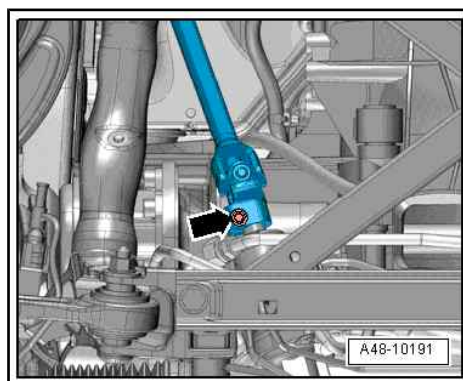


Caution

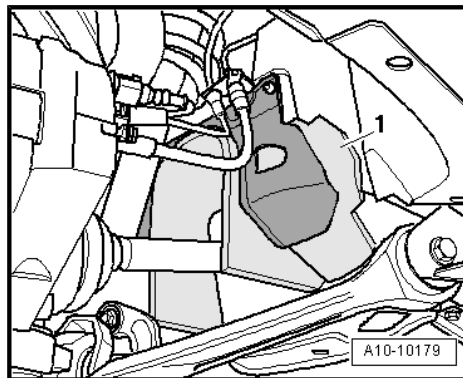
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Risk of damage to coil connector for airbag.

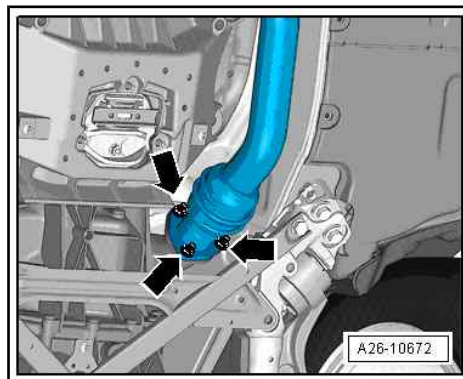
- ◆ *Front wheels must be in straight-ahead position when universal joint is detached from steering rack.*
- ◆ *Do not change position of steering wheel or steering rack after this step (if necessary, fix steering wheel in position with adhesive tape).*



- Remove noise insulation -1- from wheel housing (right-side).



- Remove nuts for front exhaust pipe -arrows-.



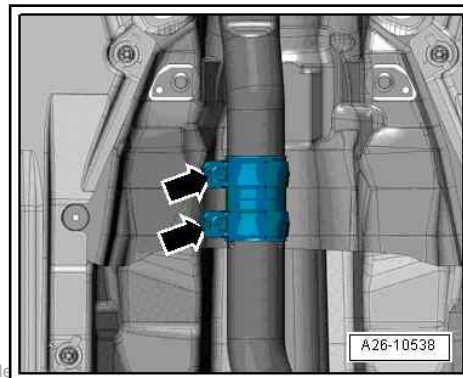


Caution

The flexible joints in the front exhaust pipe can be damaged.

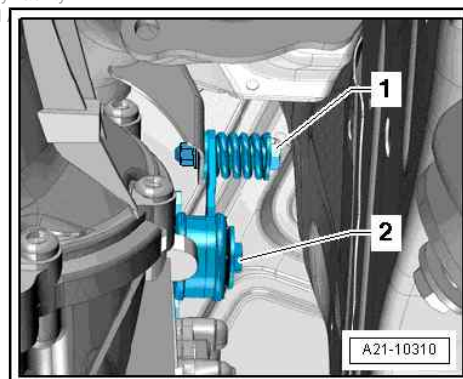
- ◆ *The flexible joints in the front exhaust pipe must not be bent further than 10 °.*

- Disconnect exhaust system at clamp -arrows- and detach front exhaust pipe.



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- Remove bolts -1- and -2- and detach mounting.



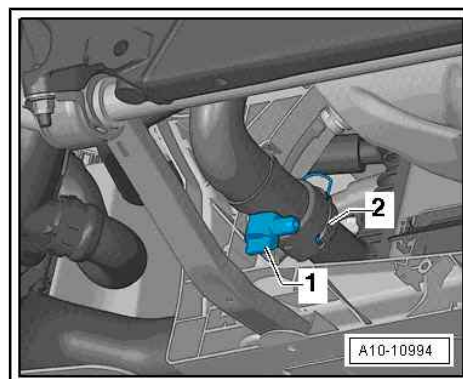
WARNING

Risk of scalding from hot steam and hot coolant.

The cooling system is under pressure when the engine is hot.

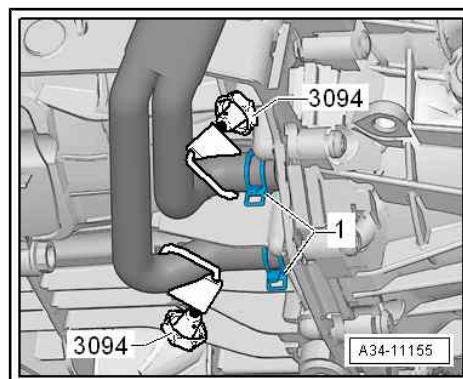
Cover filler cap on expansion tank with a cloth and open carefully to release pressure.

- Place drip tray under engine and drain off coolant ⇒ Rep. gr. 19 ; Cooling system/coolant; Draining and filling coolant .



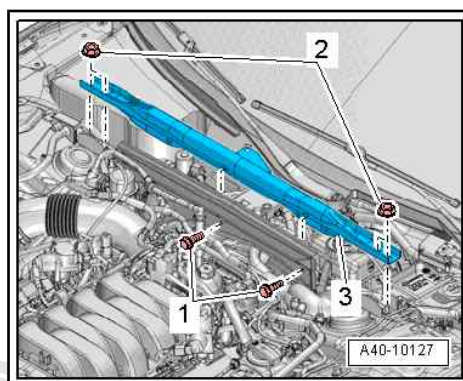
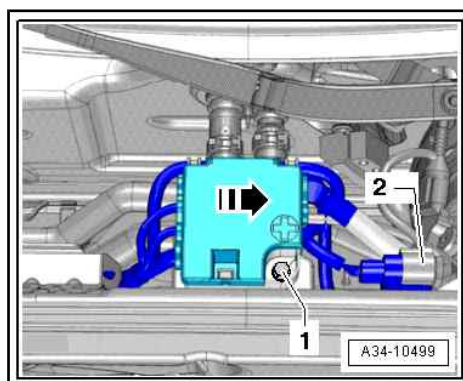
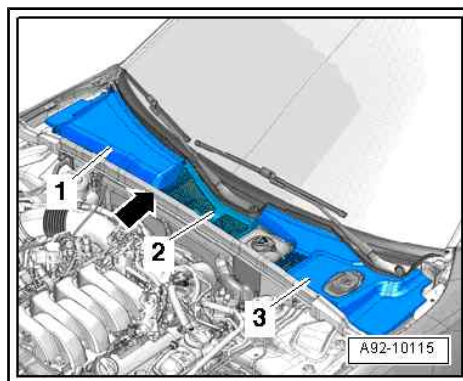
Vehicles with gear oil heating

- Clamp off both coolant hoses on gearbox using hose clamps up to 25 mm - 3094- .
- Place drip tray below gearbox, open spring-type clip -1- and disconnect both coolant hoses.



Continued for all vehicles

- Detach seal -arrow-.
- Depending on version, remove components -1, 2, 3- or entire plenum chamber cover ⇒ General body repairs, exterior; Rep. gr. 50 ; Bulkhead; Removing and installing plenum chamber cover .
- Remove bolt -1- and guide junction box off body brace in direction indicated by -arrow-.
- Unclip electrical connector -2- from body brace.
- If fitted, remove body brace -3-. To do so, remove bolts -1- and nuts -2-.

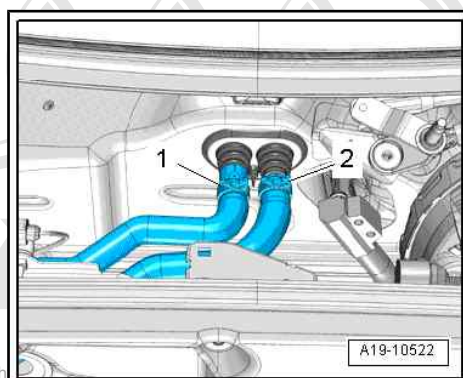


- Mark coolant hoses -1- and -2- for re-installation and disconnect hoses from connection leading to heat exchanger.
- Unclip coolant hoses together with hose protector grommet from plenum chamber partition panel and push through into engine compartment.



Note

Alternatively you can also disconnect the coolant hoses from the coolant pipes on the engine, in which case the coolant hoses can remain in their original position on the plenum chamber partition panel.



- Detach vacuum line connection leading to brake servo at plenum chamber partition panel and remove plenum chamber partition panel ⇒ General body repairs, exterior; Rep. gr. 50 ; Bulkhead; Exploded view - bulkhead .

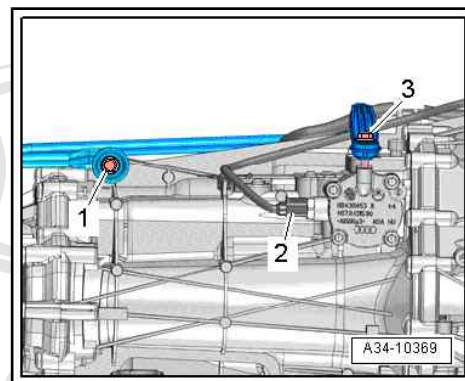
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- Working from plenum chamber cover, remove bolt -3- for connecting rod.



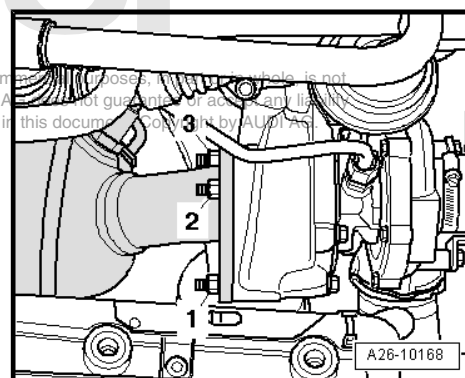
Note

-Items 1 and 2- can be disregarded.



Vehicles with particulate filter

- Remove air cleaner housing ⇒ Rep. gr. 23 : Air cleaner; Exploded view - air cleaner housing
- Unscrew nuts -1, 2 and 3- on turbocharger and tie up particulate filter.



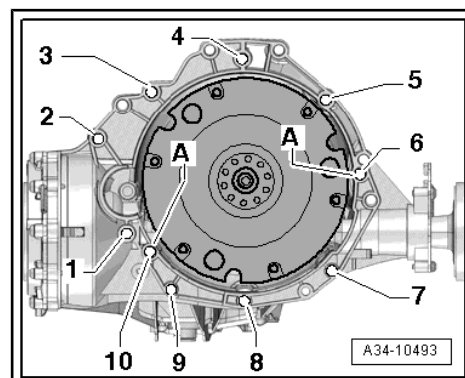
Continued for all vehicles

- Remove bolts -3 ... 6- securing gearbox to engine (accessible from above).

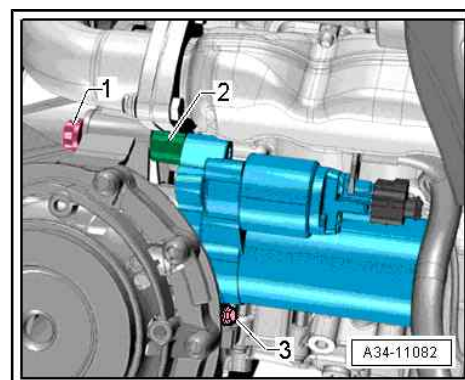


Note

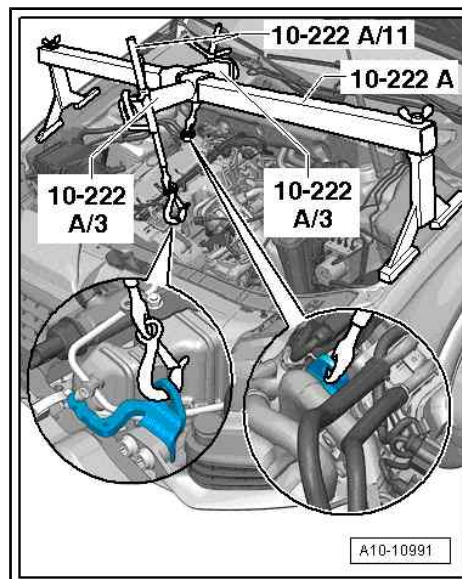
Bolts -3- and -5- also secure brackets for pipes and/or wiring. Tie these brackets onto the engine.



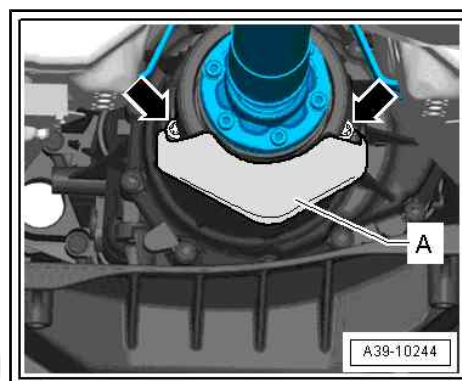
- Remove top starter bolt -1-.
- Detach spacer sleeve -2- between starter and gearbox.



- Set up support bracket - 10 - 222 A- together with racks - 10-222 A /1- and adapters - 10 - 222 A /3- on suspension turrets (left and right), as shown in illustration.
- Hook spindles - 10 - 222 A /11- onto engine lifting eyes (rear right and front left).



- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.



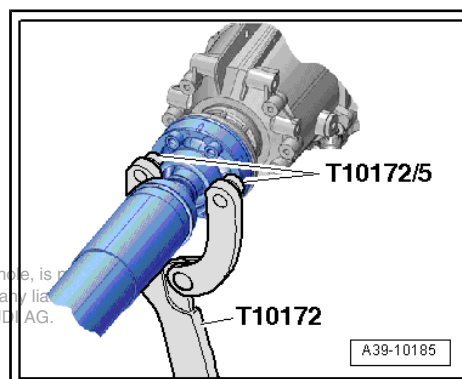
- Hold propshaft with counterhold tool - T10172- and adapters - T10172/5- to prevent it from turning.



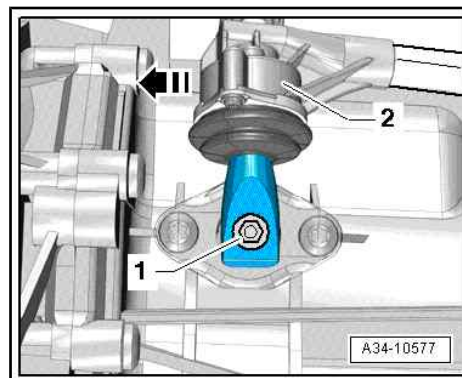
Note

On vehicles with propshaft with splines on gearbox end, counterhold at rear final drive in the same way.

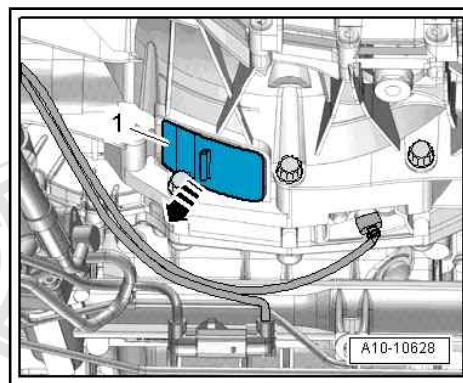
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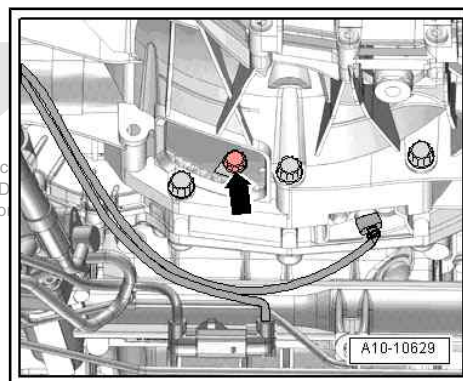
- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.



- Pull cover -1- off bottom of gearbox -arrow-.



- Remove 3 bolts -arrow- for drive plate (turn both front wheels so that clutch module rotates 120° in direction of engine rotation each time).



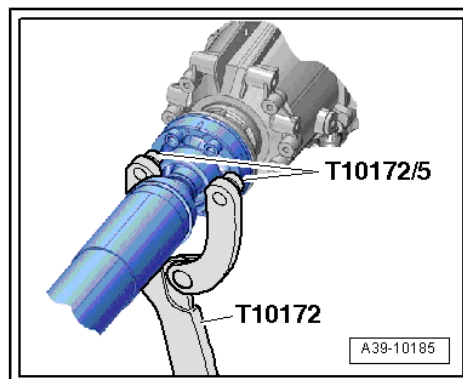
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Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

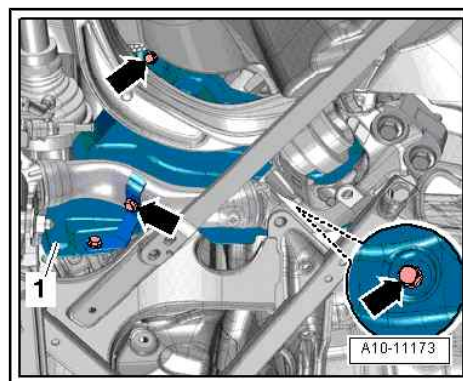
Propshaft with splined connection at gearbox end:

- Remove propshaft ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .



Continued for all vehicles

- If fitted, remove subframe shield -1- (left and right); to do so, unscrew bolts -arrows- and detach heat shields towards inside.

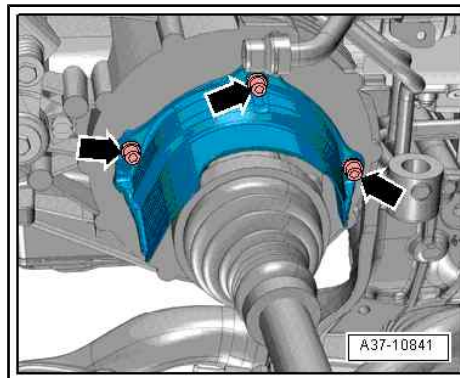


- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).

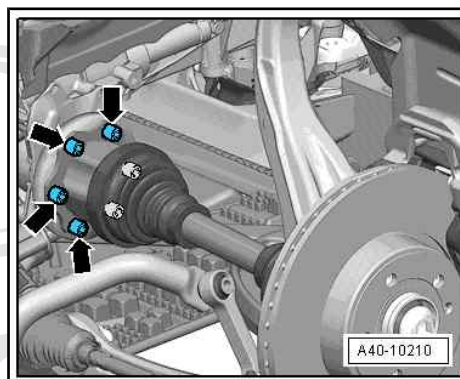


Note

The installation position is shown with the gearbox removed.

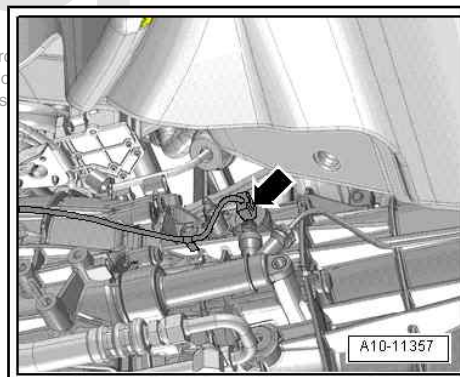


- Unbolt drive shafts (left and right) from flange shafts on gearbox.



- If fitted, unplug electrical connector from gearbox neutral position sender - G701- -arrow- and move wiring clear.

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- Remove bolt -2- and tie up clutch slave cylinder to side in engine compartment.

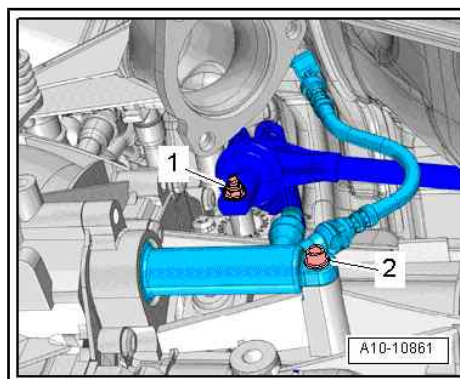


Caution

Risk of damage to clutch slave cylinder.

- ◆ **Do not depress clutch pedal after removing slave cylinder.**

- Remove nut -1-.





Caution

Risk of damage to selector shaft in gearbox.

- ◆ *Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.*
- ◆ *Always use puller - T40160- when removing the gearbox selector lever.*

- Apply puller - T40160- and pull off selector rod -1-.
- If fitted, remove bolts -1- and detach torque reaction support from engine.



Note

Items marked -2- and -3- can be disregarded.

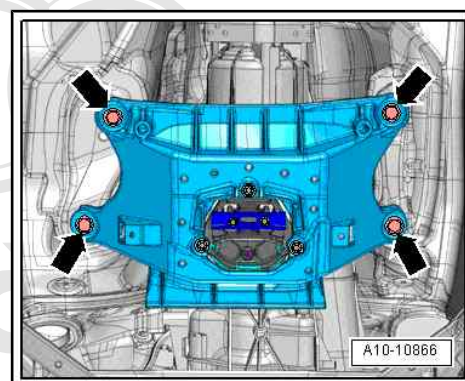
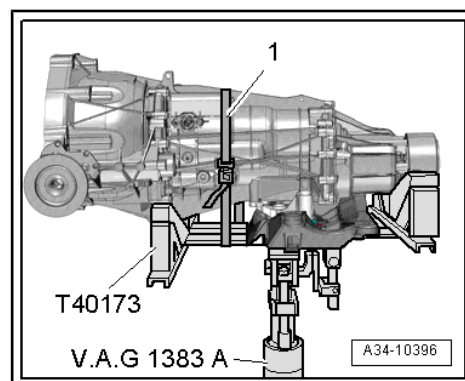
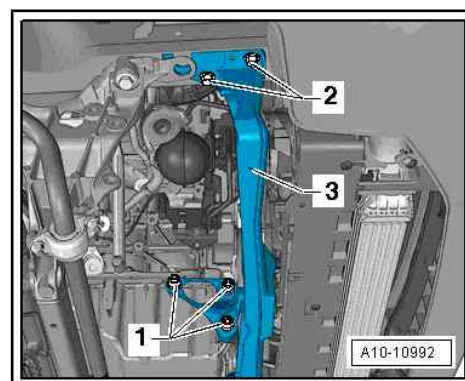
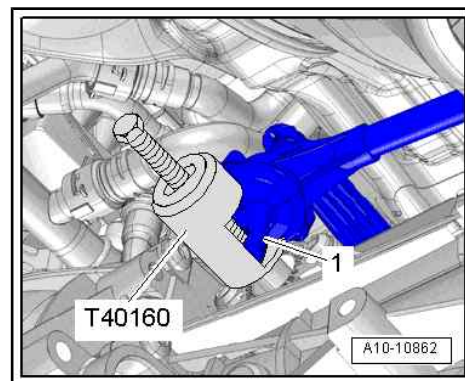
- Position engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- underneath gearbox and secure with tensioning strap -1- as shown in illustration.



Note

Make sure no electrical wiring is trapped when attaching tensioning strap.

- Remove bolts -arrows- for tunnel cross member.



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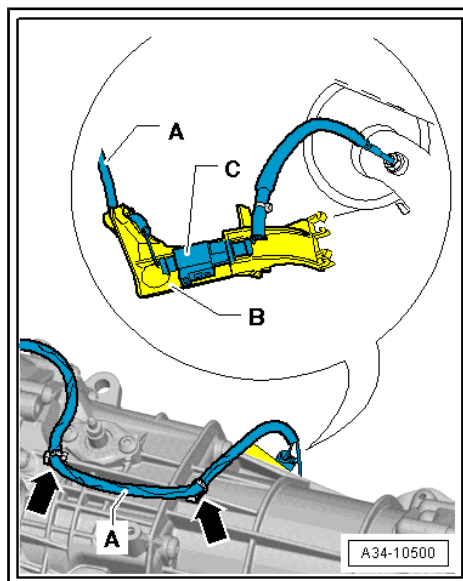
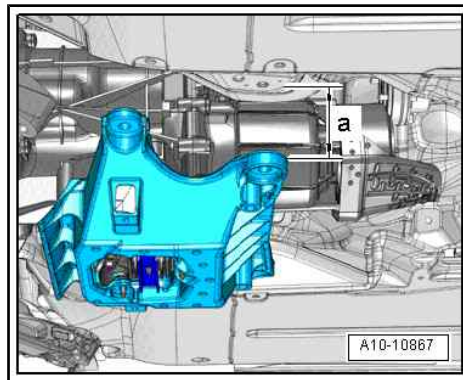
- Lower gearbox initially only by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)
- Pre-tension threaded spindles on support bracket - 10 - 222 A- slightly.



Note

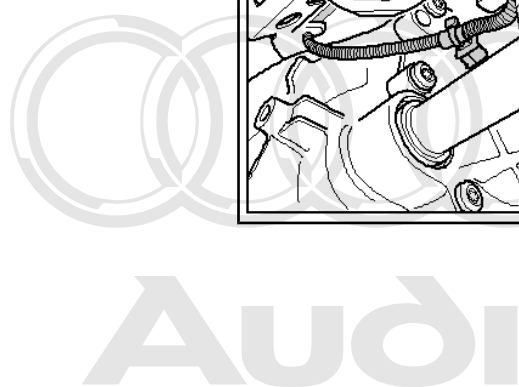
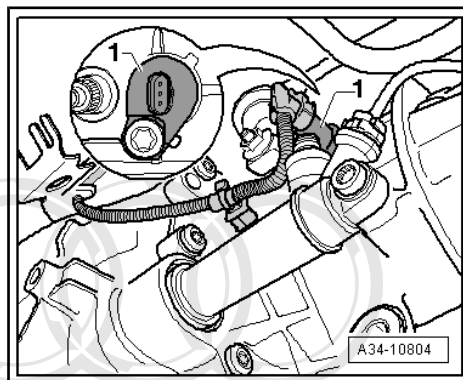
Use stepladder - VAS 5085- for access to threaded spindles while vehicle is raised.

- Unclip electrical wire -A- from gearbox -arrows-.
- Unclip bracket -B- with electrical connector -C- for exhaust gas temperature sender 4 - G648- from gearbox and tie clear.



Vehicles up to model year 2012

- Unplug electrical connector from gearbox neutral position sender - G701- -1- and move wiring clear.



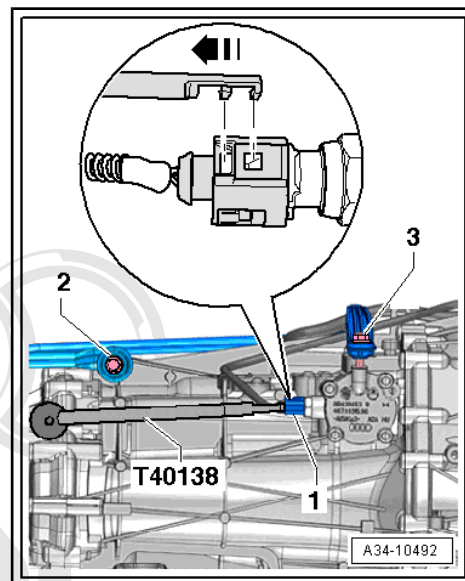
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- Disconnect electrical connector -1- for gear detector switch - F208- and gear detection sensor - G604- using release tool - T40138- and move electrical wiring clear.
- Remove bolt -2- for push rod.



Note

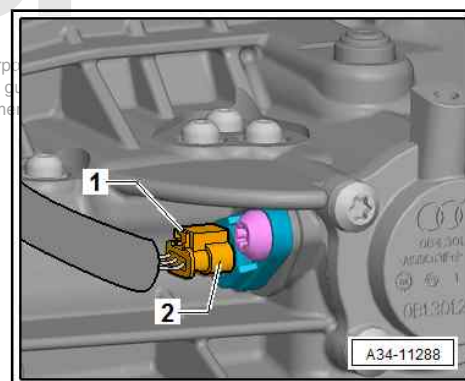
Bolt -3- was removed at an earlier stage.



Vehicles with gear detection sensor - G604- from model year 2013 onwards

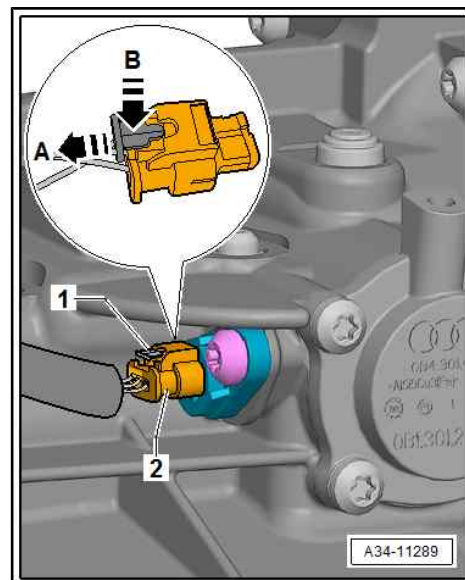
Different connectors for gear detection sensor - G604-! Unplug electrical connector as follows:

- Push catch -1- downwards, unplug connector -2- and move electrical wiring clear.



or

- Use screwdriver to pry out catch -1- approx. 3 mm in direction of -arrow A-.
- Push catch -1- downwards in direction of -arrow B-, unplug connector -2- and move electrical wiring clear.



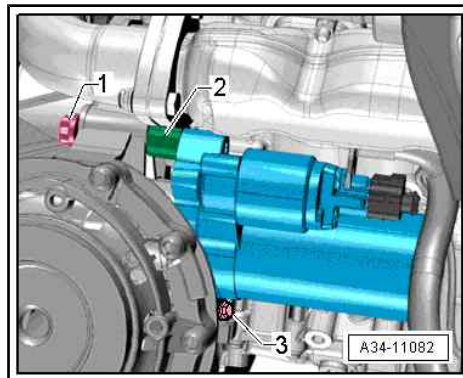
Continued for all vehicles

- Remove bolt -3- for starter from engine side.
- Detach starter from gearbox but do not remove starter.

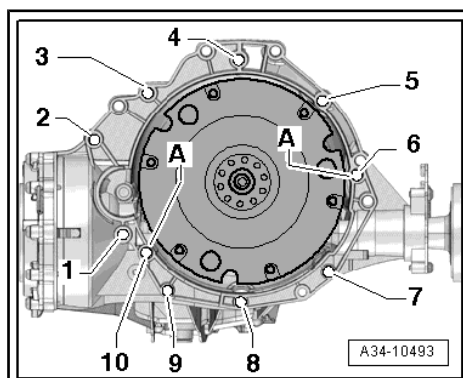


Note

Starter cables do not need to be disconnected.



- Remove remaining engine/gearbox securing bolts -7 ... 10-.
- Press gearbox off engine (approx. 20 mm).

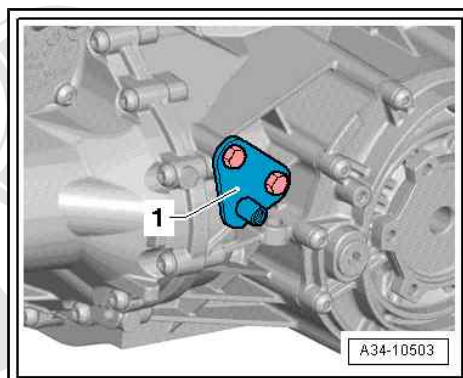
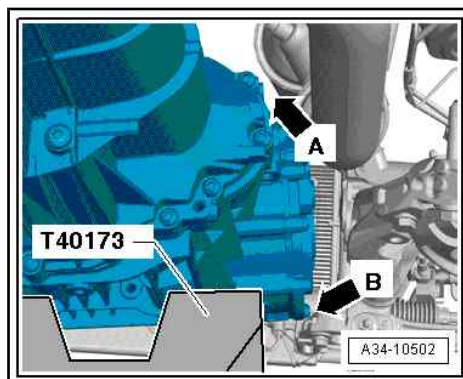


- Using left-hand spindle of gearbox support - T40173- , tilt gearbox downwards towards the right and guide past diesel particulate filter -arrow A-. At the same time push gearbox slightly to the left.
- Then lower gearbox carefully, guiding gearbox housing past steering pinion/steering rack and cover for final drive past sub-frame -arrow B-.

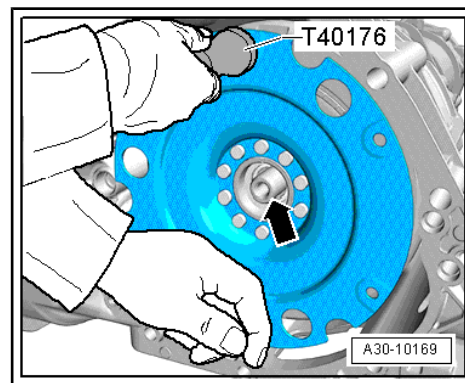


Note

- ◆ *When lowering gearbox, make sure that all wires are disconnected on the top of the gearbox.*
- ◆ *When lowering gearbox, make sure there is sufficient clearance from drive shafts.*
- If the removed gearbox is being replaced, the following components must be transferred to the replacement gearbox:



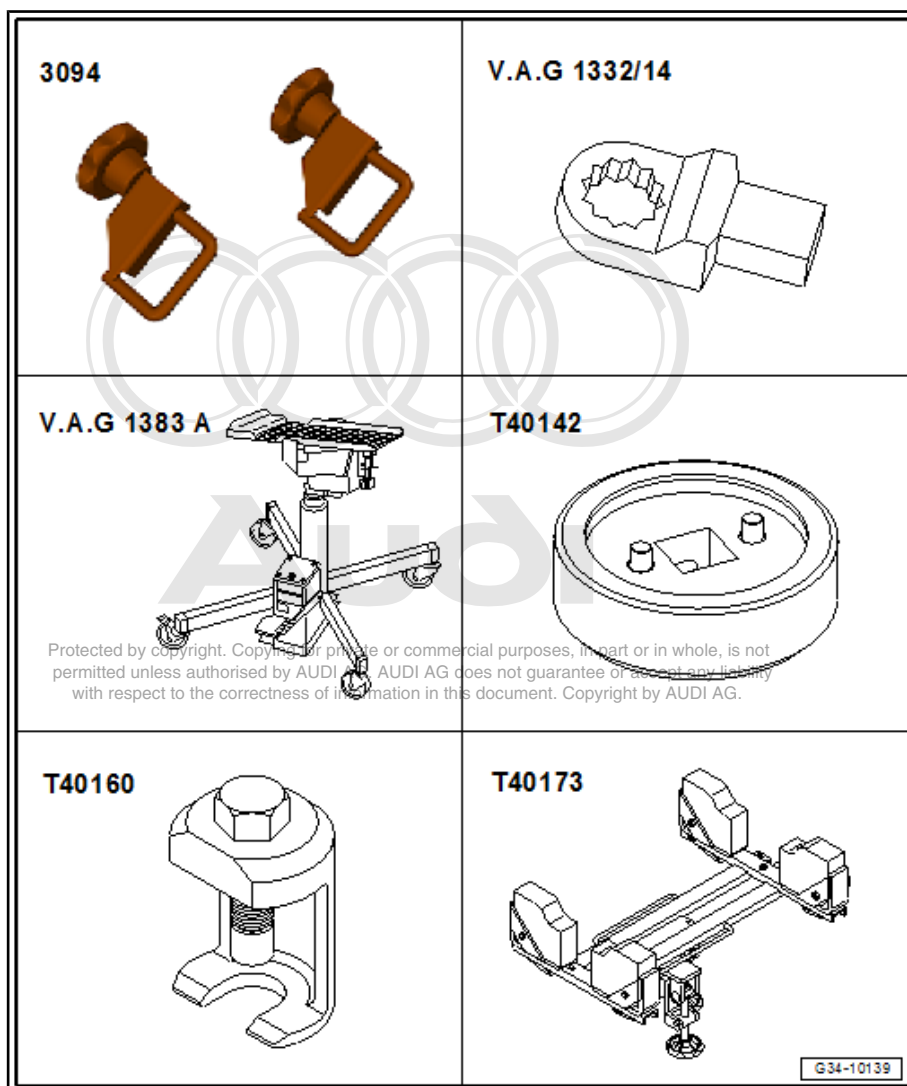
- ◆ Bracket -1- for exhaust system mounting ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- ◆ Tunnel cross member with gearbox mounting and gearbox support ⇒ [page 195](#)
- ◆ If necessary, remove clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



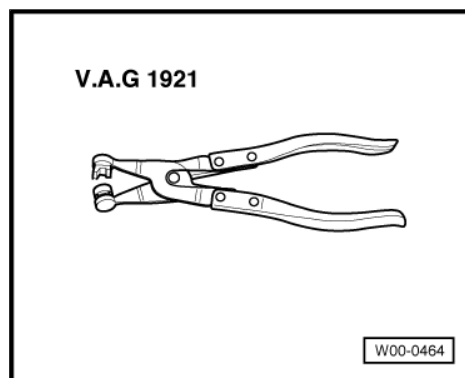
2.1.4 Removing gearbox - Audi A4, A5, Q5 with 4-cyl. TDI engine (EA 288 - generation I), PR-TD1

Special tools and workshop equipment required

- ◆ Hose clamps, up to 25 mm - 3094-
- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Piston compressing tool - T40142-
- ◆ Puller - T40160-
- ◆ Gearbox support - T40173-



◆ Hose clip pliers - V.A.G 1921-



Removing

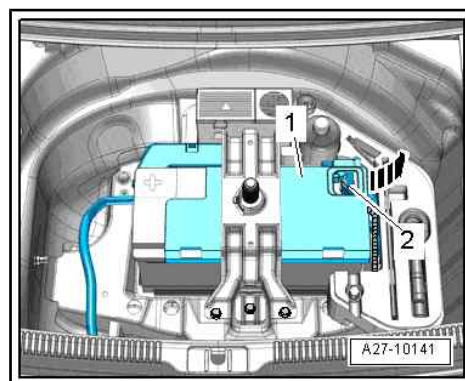
- Bring front wheels into straight-ahead position.
- Switch off ignition and take out ignition key.
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

When disconnecting the battery there is a risk of serious damage to electronic components:

- ◆ *Observe measures required when disconnecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .*



- Carefully detach engine cover panel from retaining studs one by one in direction of -arrows-. Pull out engine cover panel evenly, without jerking.



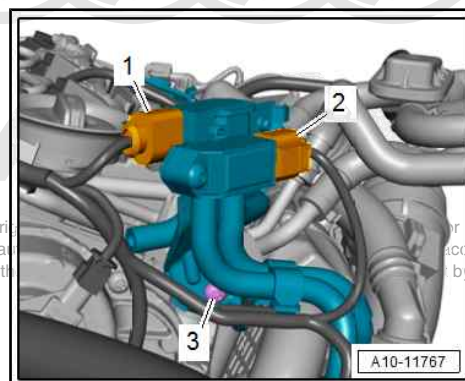
- Unplug electrical connectors -1, 2-.



Caution

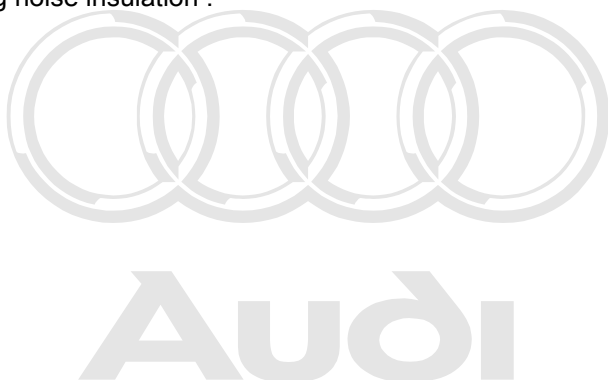
Risk of irreparable damage to exhaust gas pressure sensor 1 - G450- and pressure differential sender - G505- .

- ◆ *Connections of exhaust gas pressure sensor 1 - G450- and pressure differential sender - G505- can break off if too much pressure is applied.*

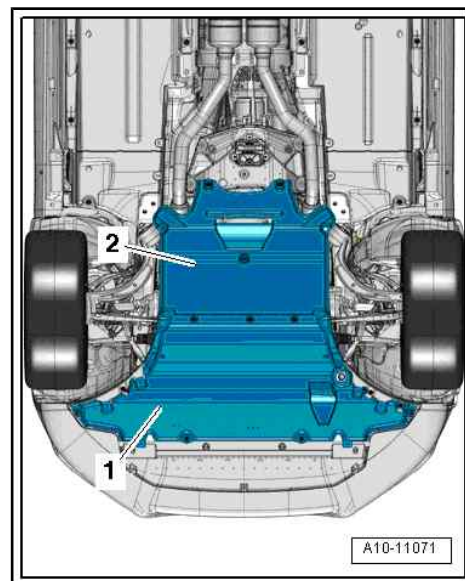


- Remove bolt -3- and carefully push bracket with exhaust gas pressure sensor 1 - G450- and pressure differential sender - G505- to the side.

- Remove noise insulation -1- and -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .

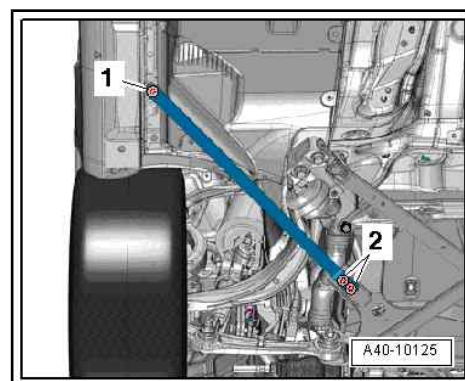


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A5 Cabriolet:

- Remove diagonal struts (left and right) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .



Continued for all vehicles:

- Remove bolts -arrows- and detach subframe cross brace.

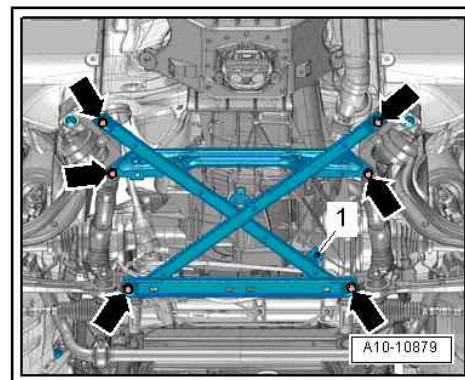


Caution

Risk of damage to parts of the running gear.

Do NOT let the vehicle down on the wheels if the subframe, steering rack or subframe cross brace are not properly installed.

Do NOT support the vehicle at the subframe or the subframe cross brace (e.g. with a trolley jack).





Caution

Risk of damage to coil connector for airbag.

- ◆ **Front wheels must be in straight-ahead position when universal joint is detached from steering rack.**
- ◆ **Do not change position of steering wheel or steering rack after this step (if necessary, fix steering wheel in position with adhesive tape).**

- Remove bolt -arrow- for universal joint ➔ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .
- Press universal joint off steering rack and push all the way up.
- Unplug electrical connector -2- from power steering control unit - J500- (to do this, push retainer towards rear -arrow- and press down release catch).
- Move electrical wiring harness clear.



Note

-Item 1- can be disregarded.

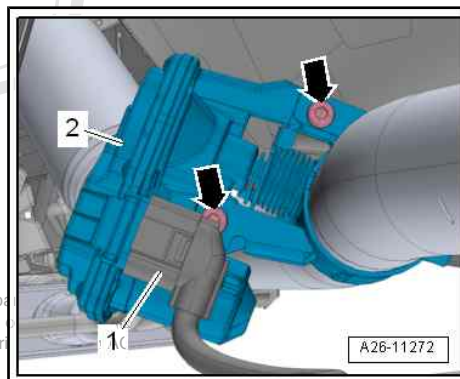
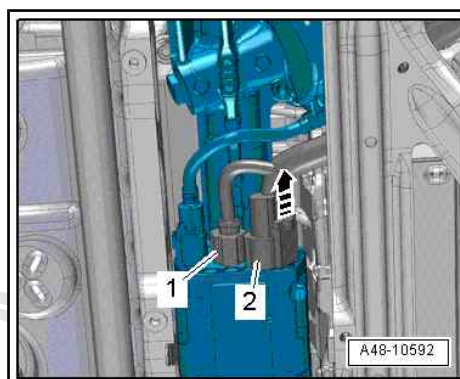
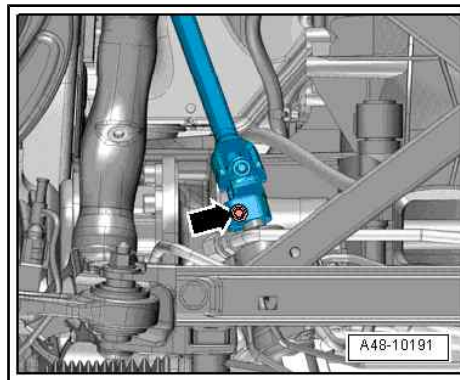
- Unplug electrical connector -1- for exhaust flap control unit - J883- -item 2- on catalytic converter.



Note

-Arrows- can be disregarded.

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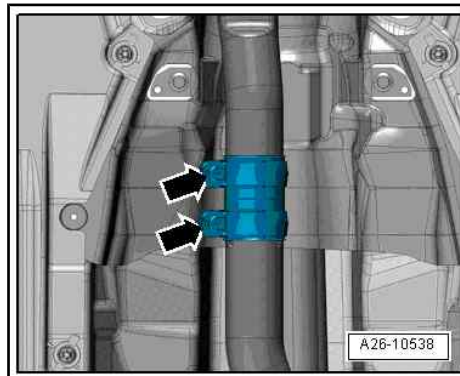


Caution

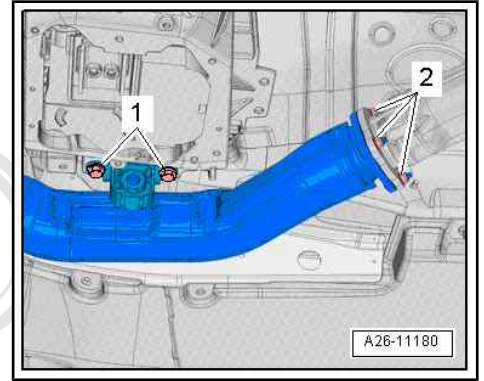
The flexible joints in the front exhaust pipe can be damaged.

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

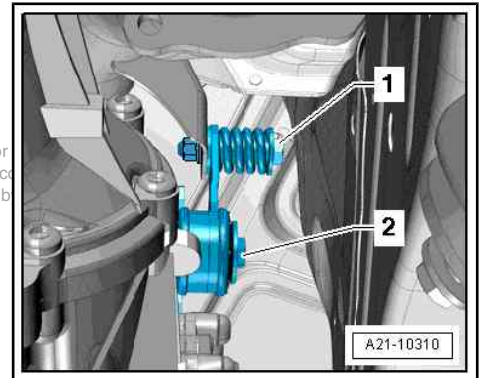
- Loosen bolted connections -arrows- and move clamp towards rear.



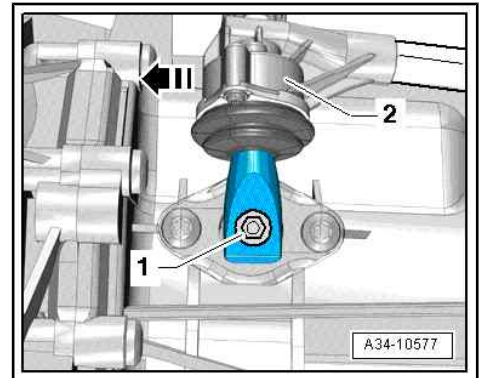
- Remove nuts -2- and detach catalytic converter.
- If fitted, remove bolts -1- and tie front exhaust pipe up to side of underbody.



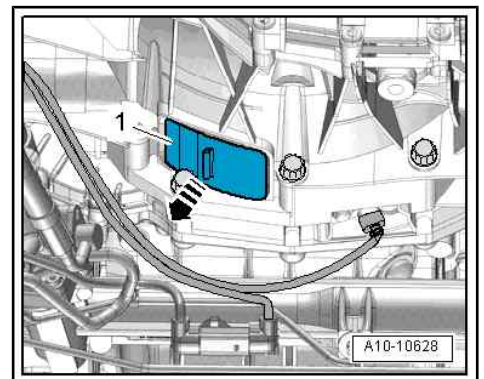
- Unfasten bolted connection -1-.



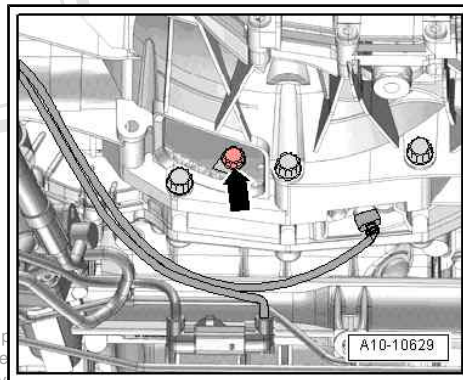
- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.



- Pull cover -1- off bottom of gearbox -arrow-.

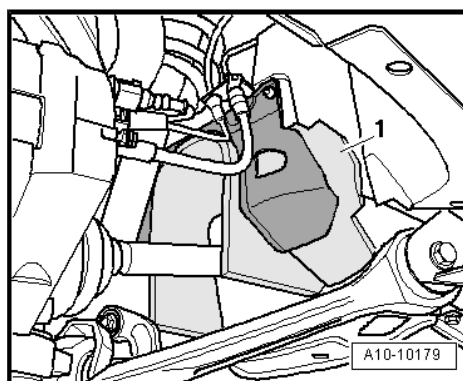


- Remove 3 bolts -arrow- for drive plate (turn both front wheels so that crankshaft rotates 120° in direction of engine rotation each time).

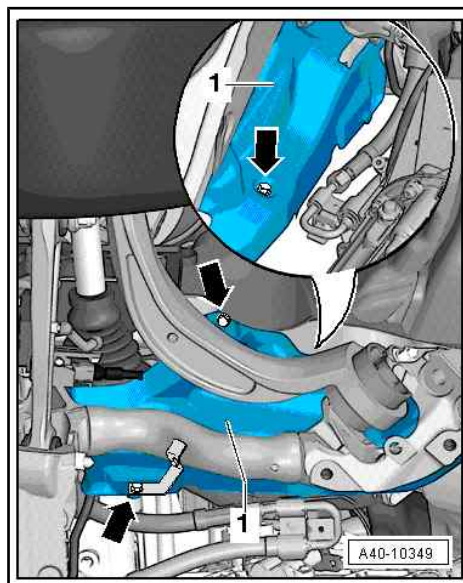


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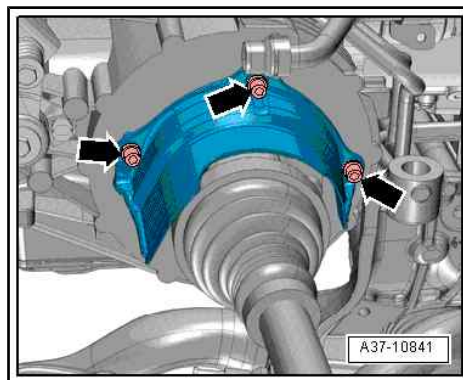
- If fitted, remove noise insulation -1- (left and right) from wheel housing.



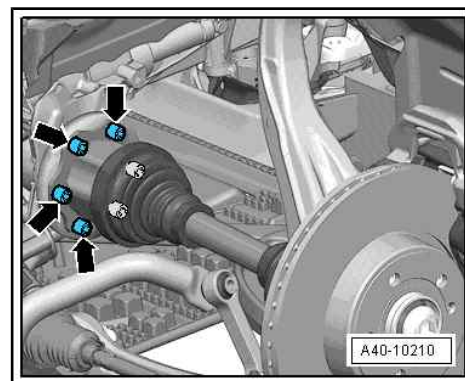
- If fitted, remove subframe shield -1- (left and right); to do so, unscrew bolts -arrows- and detach heat shields towards inside.



- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).



- Unbolt drive shafts (left and right) from flange shafts on gear-box.



Vehicles with gear oil heating



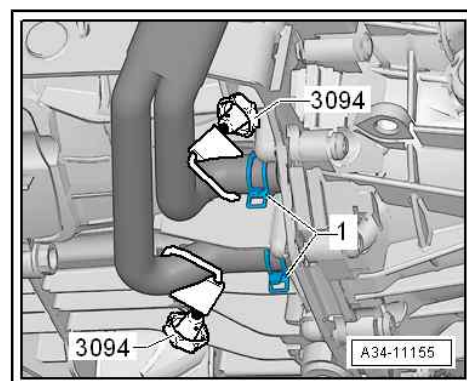
WARNING

Risk of scalding from hot steam and hot coolant.

The cooling system is under pressure when the engine is hot.

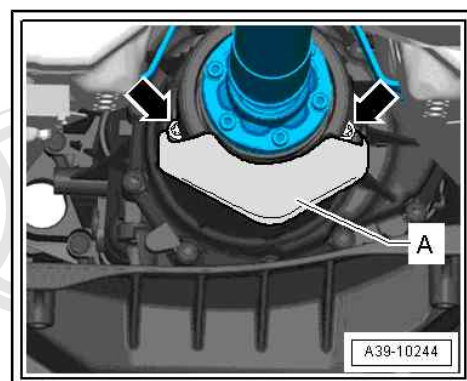
Cover filler cap on expansion tank with a cloth and open carefully to release pressure.

- Clamp off both coolant hoses on gearbox using hose clamps up to 25 mm - 3094- .
- Place drip tray below gearbox, open spring-type clip -1- and disconnect both coolant hoses.

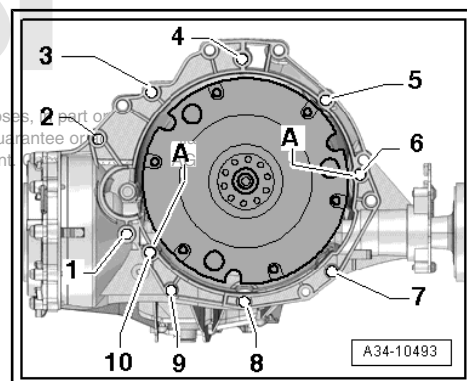


Continued for all vehicles:

- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.
- Remove propshaft ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .



- Remove bolts -1- and -6 ... 10- securing gearbox to engine.



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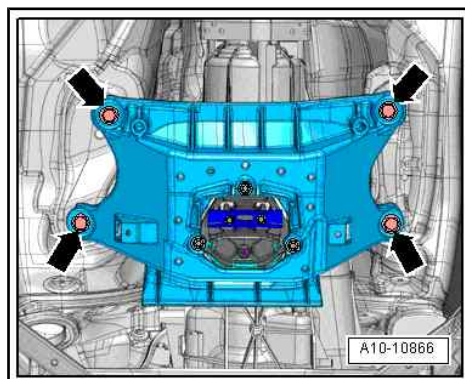
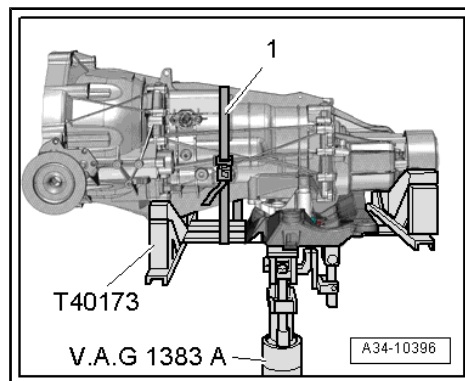
- Position engine and gearbox jack - V.A.G 1383 A- with gear-box support - T40173- underneath gearbox and secure with tensioning strap -1- as shown in illustration.



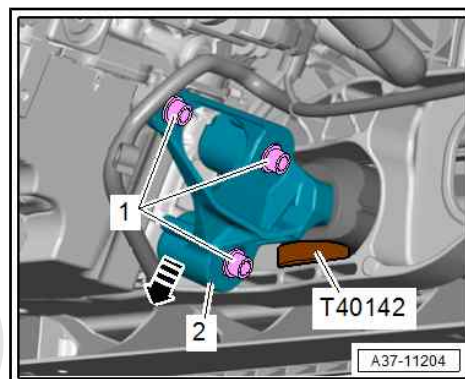
Note

Make sure no electrical wiring is trapped when attaching tensioning strap.

- Tighten tensioning strap.
- Remove bolts -arrows- for tunnel cross member.

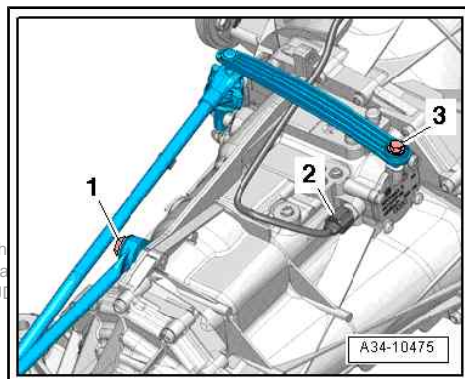


- Slacken bolts -1- for torque reaction support -2-.
- Lower gearbox using engine and gearbox jack - V.A.G 1383 A- just enough so that torque reaction support is positioned at very bottom of its adjustment range -arrow-.
- Tighten bolts for torque reaction support -1- again.
- Insert piston compressing tool - T40142- as a spacer, as shown in illustration.



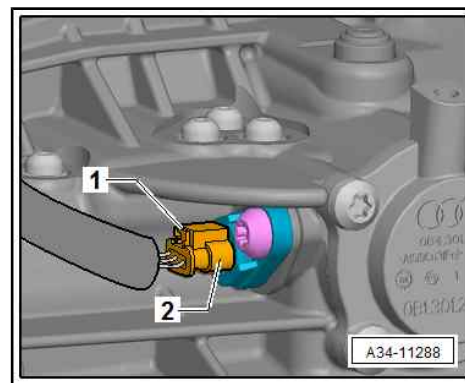
- Remove bolts -1- and -3-.

Different connectors for gear detection sensor - G604- ! Unplug electrical connector -2- as follows:



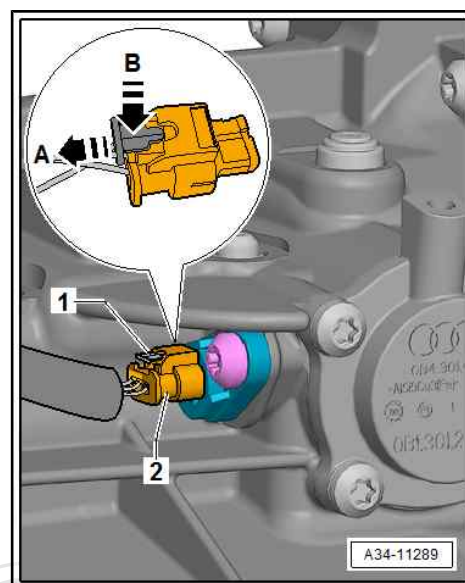
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- Push catch -1- downwards, unplug connector -2- and move electrical wiring clear.



or

- Use screwdriver to pry out catch -1- approx. 3 mm in direction of -arrow A-.
- Push catch -1- downwards in direction of -arrow B-, unplug connector -2- and move electrical wiring clear.



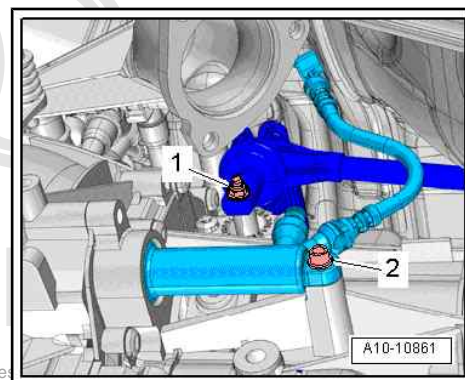
- Unscrew bolt -2-, detach pipe from bracket and pull clutch slave cylinder off gearbox.
- Tie clutch slave cylinder up to the side in engine compartment.



Caution

Risk of damage to clutch slave cylinder.

- ◆ *Do not depress clutch pedal after removing slave cylinder.*



- Remove nut -1-.

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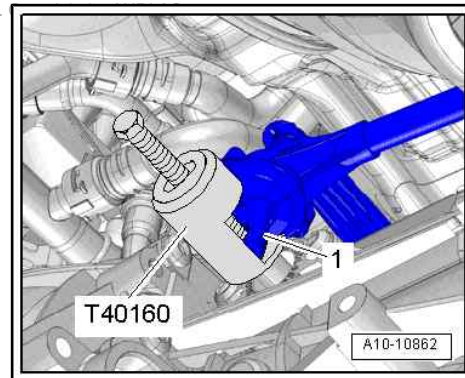


Caution

Risk of damage to selector shaft in gearbox.

- ◆ *Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.*

- Apply puller - T40160- and pull off gearbox selector lever -1-.



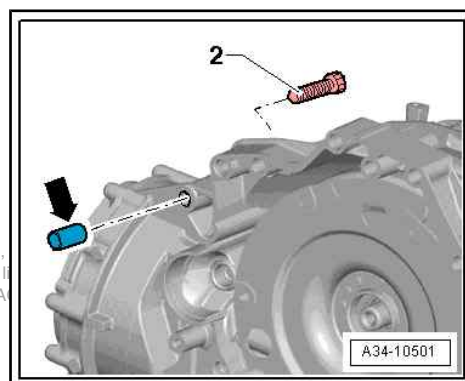
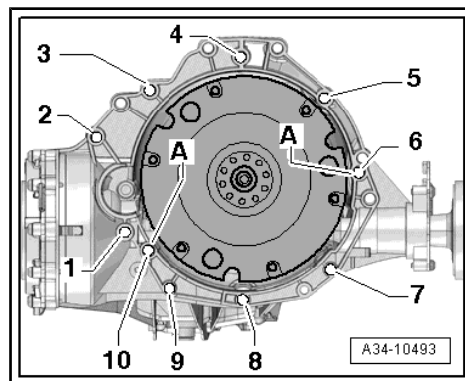
- Remove engine/gearbox securing bolts -3 ... 5-.
- Remove bolt -2- for starter.
- Detach starter from gearbox but do not remove starter.



Note

- ◆ Starter cables do not need to be disconnected.
- ◆ Bolt -2- secures starter to gearbox. A spacer sleeve is located between starter and gearbox -arrow-.

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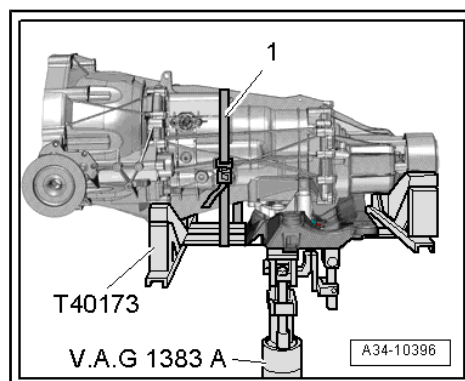


- Detach gearbox from engine and lower carefully using engine and gearbox jack - V.A.G 1383 A- .

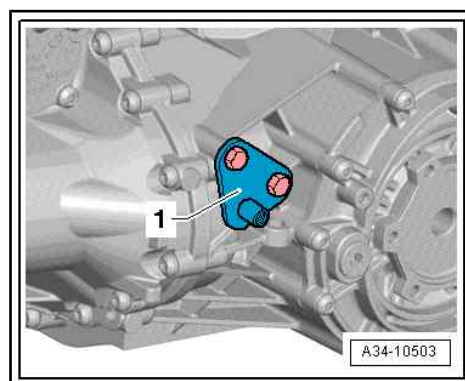


Note

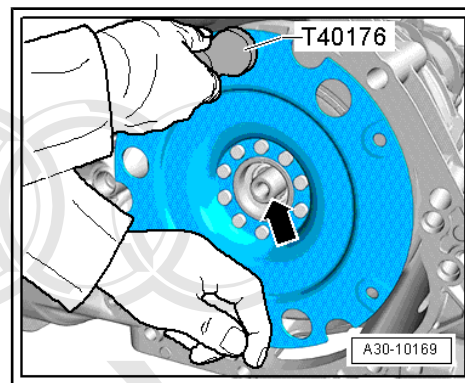
- ◆ When lowering gearbox, make sure there is sufficient clearance from drive shafts.
- ◆ Unclip electrical wire from top of gearbox.



If the removed gearbox is being replaced, the following components must be transferred to the replacement gearbox:



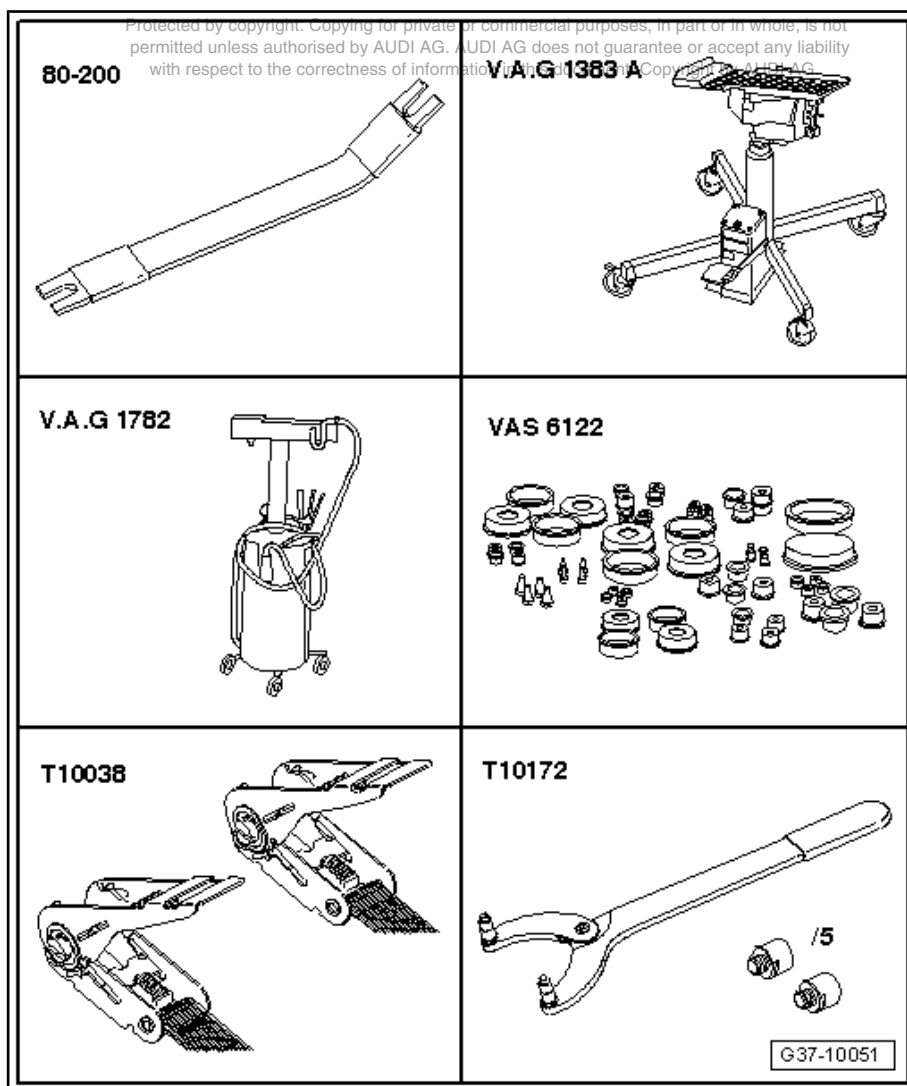
- ◆ Bracket -1- for exhaust system mounting ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- ◆ Tunnel cross member with gearbox mounting and gearbox support ⇒ [page 195](#)
- ◆ If necessary, remove clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



2.1.5 Removing gearbox - Audi Q5 with 4-cyl. TDI engine, PR-TH3/TM4

Special tools and workshop equipment required

- ◆ Removal lever - 80 - 200-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Used oil collection and extraction unit - V.A.G 1782- or -VAS 6622A-
- ◆ Engine bung set - VAS 6122-
- ◆ Tensioning strap - T10038-
- ◆ Counterhold tool - T10172- with -T10172/5-





- ◆ Release tool - T40138- (not for vehicles from model year 2013 onwards)

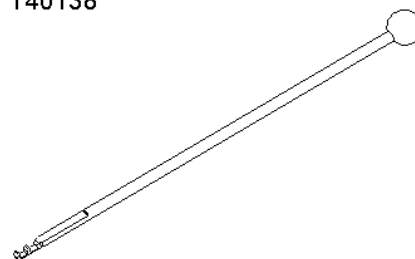


Audi

- ◆ Puller - T40160-

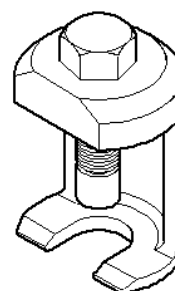
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T40138



W00-10552

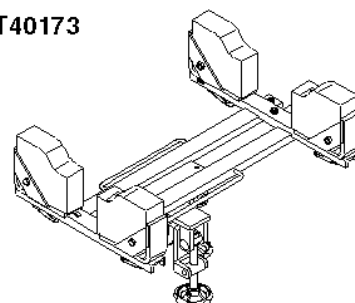
T40160



W00-10576

- ◆ Gearbox support - T40173-

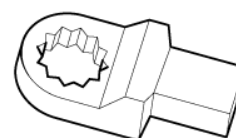
T40173



W00-10596

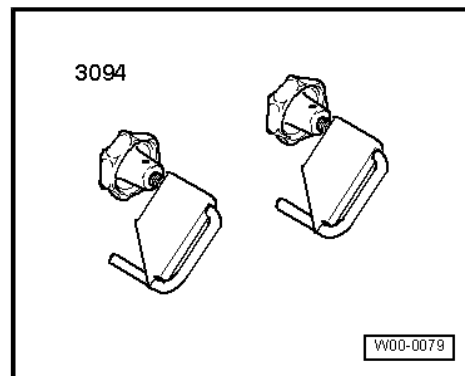
- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-

V.A.G 1332/14

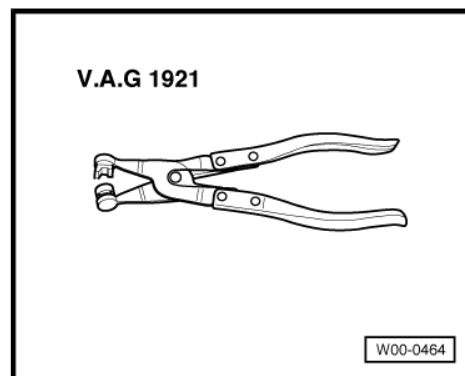


W00-1329

- ◆ 2x hose clamps, up to Ø 25 mm - 3094-



- ◆ Hose clip pliers - V.A.G 1921-



Removing

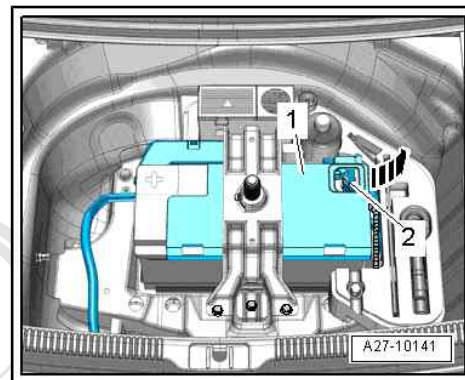
- Bring front wheels into straight-ahead position.
- Switch off ignition and take out ignition key.
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

When disconnecting the battery there is a risk of serious damage to electronic components:

- ◆ *Observe measures required when disconnecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .*



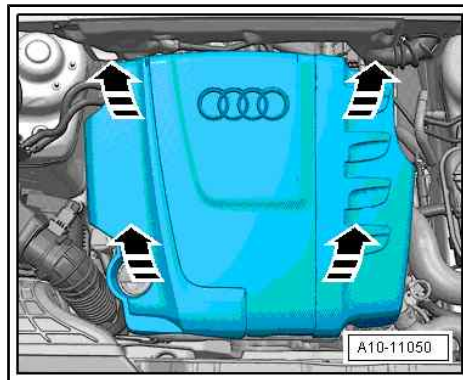
Vehicles with hydraulic power steering

- Extract power steering hydraulic fluid from reservoir with used oil collection and extraction unit - V.A.G 1782- or -VAS 6622A- .

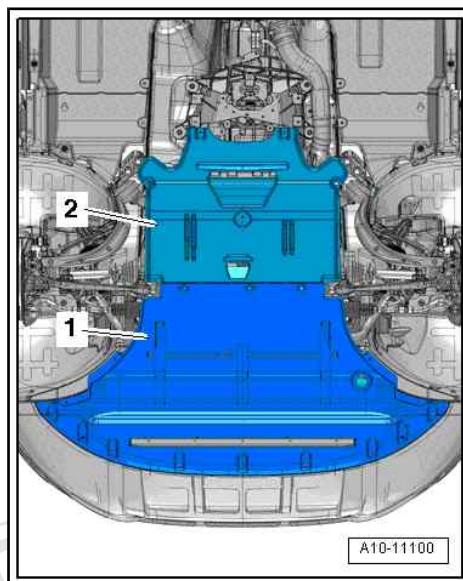
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Continued for all vehicles

- Remove engine cover panel -arrows-.



- Remove noise insulation -1- and -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



- Remove subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe cross brace .

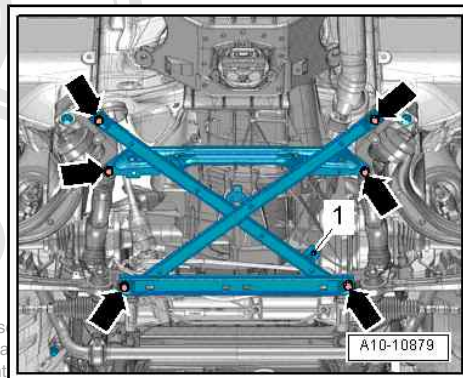


Caution

Risk of damage to parts of the running gear.

Do NOT let the vehicle down on the wheels if the subframe, steering rack or subframe cross brace are not properly installed.

Do NOT support the vehicle at the subframe or the subframe cross brace (e.g. with a trolley jack).



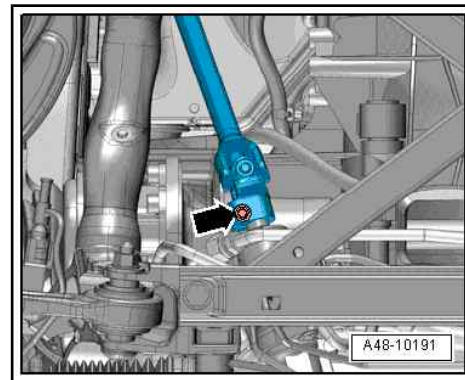
- Detach intermediate steering shaft from steering rack and telescope shaft upwards ➔ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



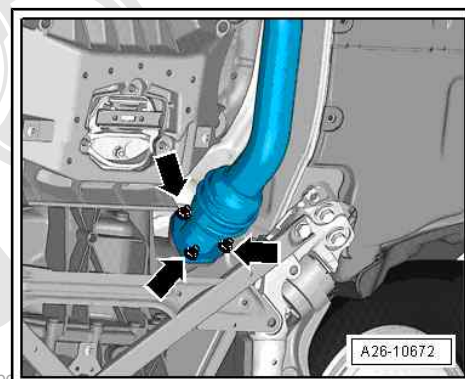
Caution

Risk of damage to coil connector for airbag.

- ◆ *Front wheels must be in straight-ahead position when universal joint is detached from steering rack.*
- ◆ *Do not change position of steering wheel or steering rack after this step (if necessary, fix steering wheel in position with adhesive tape).*



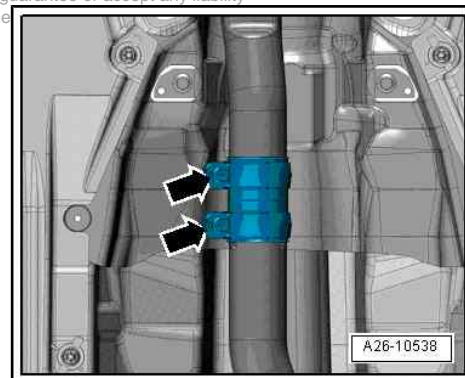
- Remove nuts for front exhaust pipe -arrows-.



Caution

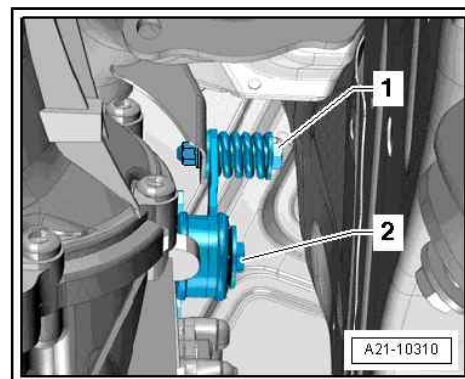
The flexible joints in the front exhaust pipe can be damaged.

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



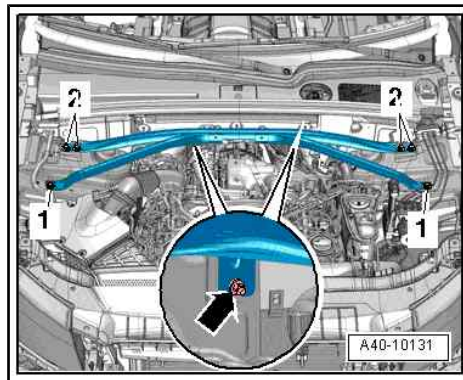
- Disconnect exhaust system at clamp -arrows- and detach front exhaust pipe.

- Remove bolts -1- and -2- and detach mounting.

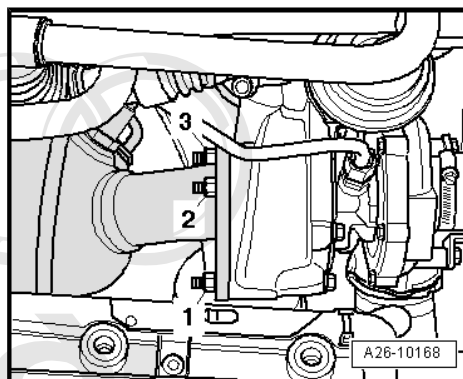


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- Remove body brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Suspension strut, upper links; Removing and installing body brace .



- Remove air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Exploded view - air cleaner housing .
- Unscrew nuts -1, 2 and 3- on turbocharger and tie up particulate filter.



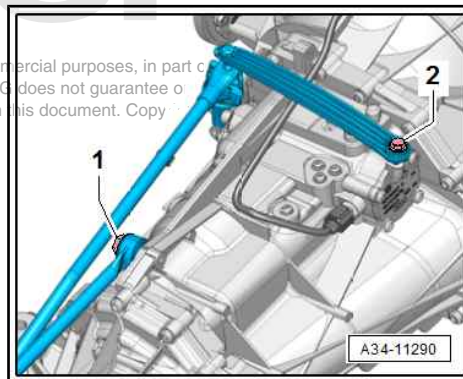
- Remove bolt -2-.



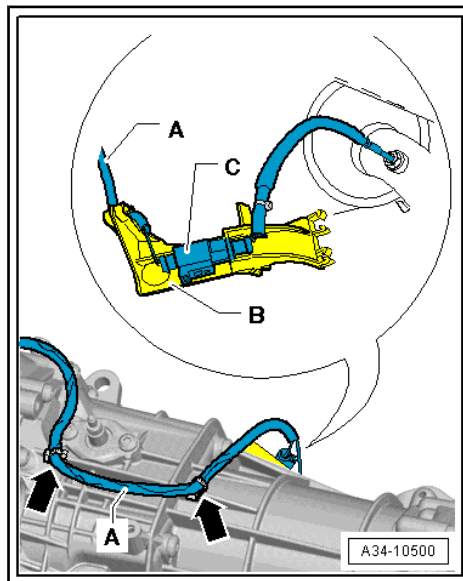
Note

-Item 1- can be disregarded.

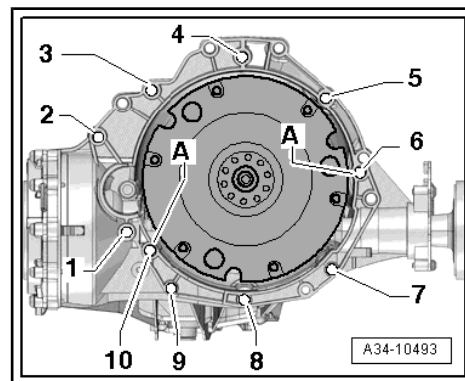
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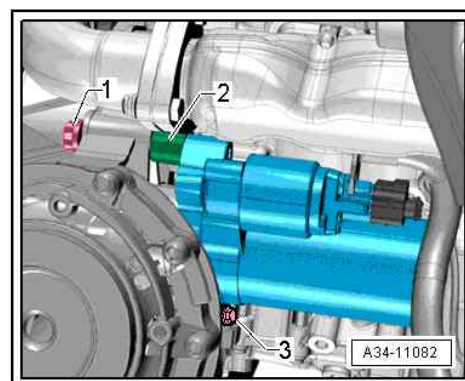
- Unclip electrical wiring -A- from top of gearbox using removal lever - 80 - 200- and unplug electrical connector -C-.



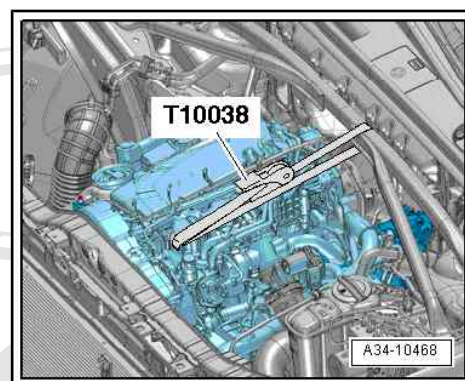
- Remove engine/gearbox securing bolts -3 ... 6-.



- Remove top starter bolt -1-.
- Detach spacer sleeve -2- between starter and gearbox.



- Install body brace and attach to engine lifting eye with tensioning strap - T10038- , as shown in illustration.
- Tighten tensioning strap.

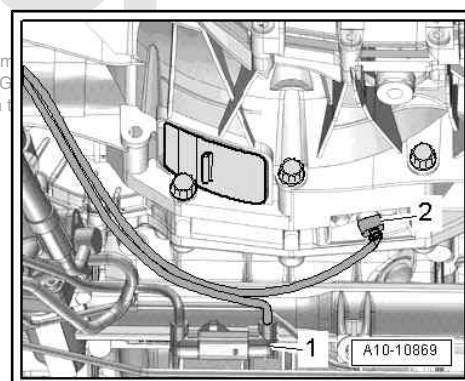


- Disconnect electrical connector -2- at engine speed sender - G28- and move wiring clear at gearbox.



Note

-Item 1- can be disregarded.



Vehicles with gear oil heating



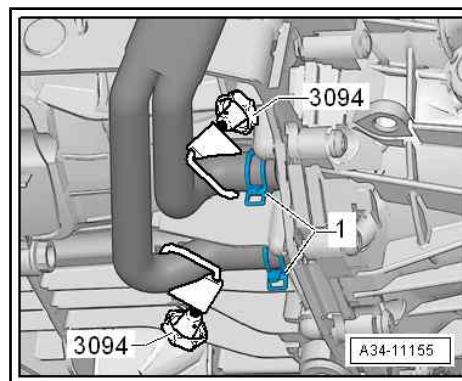
WARNING

Risk of scalding from hot steam and hot coolant.

The cooling system is under pressure when the engine is hot.

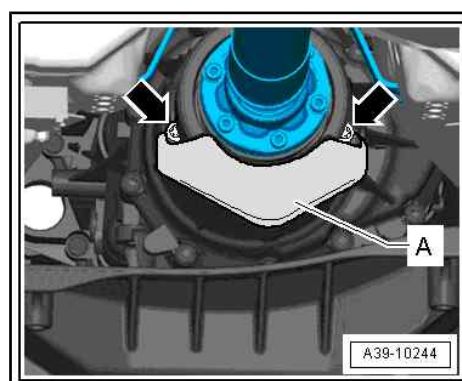
Cover filler cap on expansion tank with a cloth and open carefully to release pressure.

- Clamp off both coolant hoses on gearbox using hose clamps up to 25 mm - 3094- .
- Place drip tray below gearbox, open spring-type clip -1- and disconnect both coolant hoses.



Continued for all vehicles

- If fitted, remove bolts -arrows- and detach heat shield for propshaft -A-.



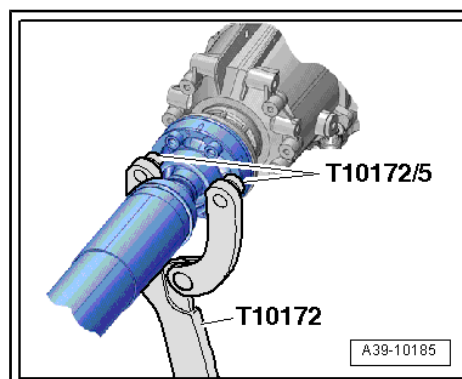
- Hold propshaft with counterhold tool - T10172- and adapters - T10172/5- to prevent it from turning.



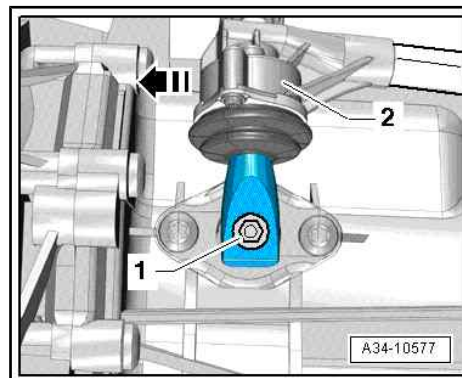
Note

On vehicles with propshaft with splines on gearbox end, counterhold at rear final drive in the same way.

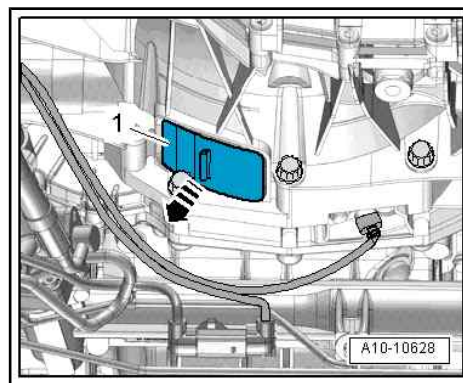
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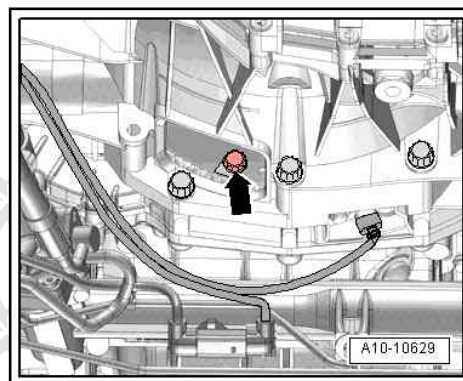
- Engage 6th gear by pulling out selector shaft -1- and shifting gear selector lever -2- forwards in direction of -arrow-.



- Pull cover -1- off bottom of gearbox -arrow-.

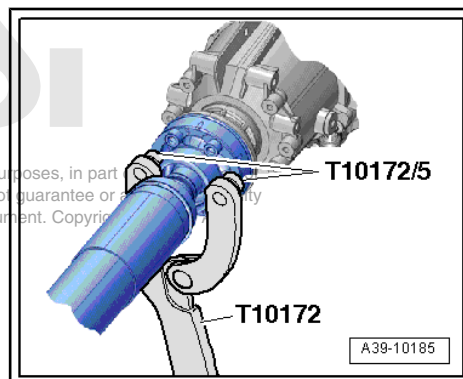


- Remove 3 bolts -arrow- for drive plate (turn both front wheels so that clutch module rotates 120° in direction of engine rotation each time).



Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

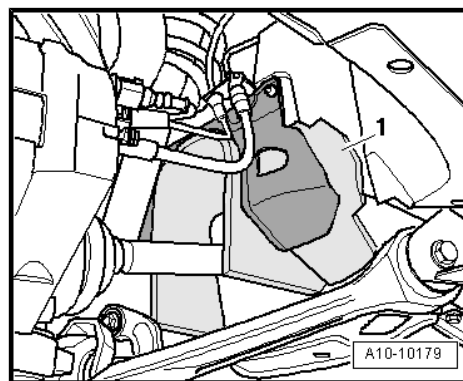


Propshaft with splined connection at gearbox end:

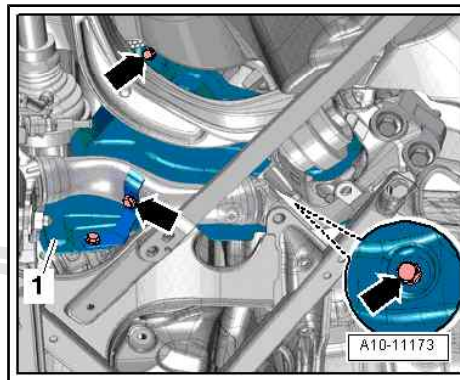
- Remove propshaft ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .

Continued for all vehicles

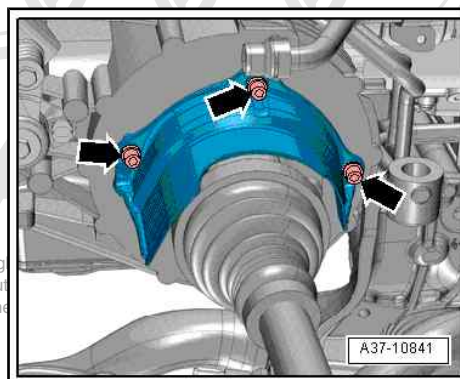
- Detach noise insulation -1- from wheel housing (both sides).



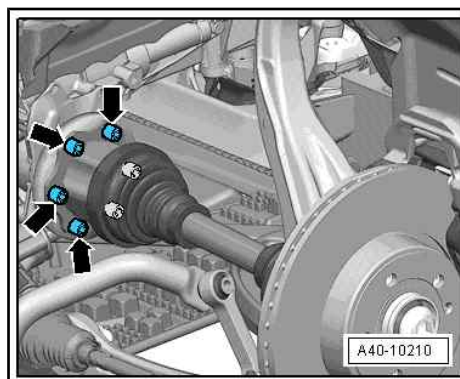
- If fitted, remove subframe shield (right-side) -1-; to do so, unscrew bolts -arrows- and detach heat shield towards inside.



- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).

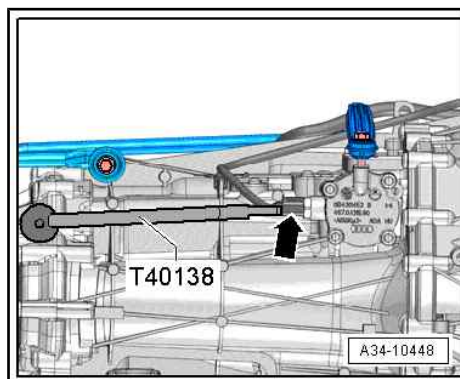


- Unbolt drive shafts (left and right) from flange shafts on gearbox.

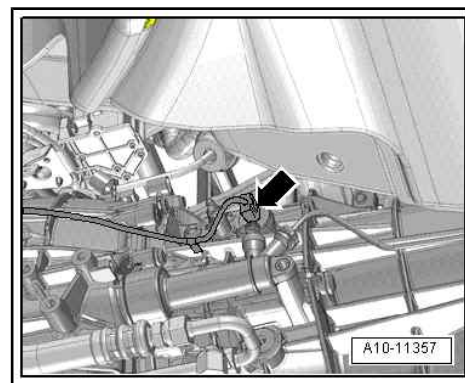


Vehicles up to model year 2012

- Disconnect electrical connector -arrow- for gear detector switch - F208- using release tool -T40138- and move electrical wiring clear.



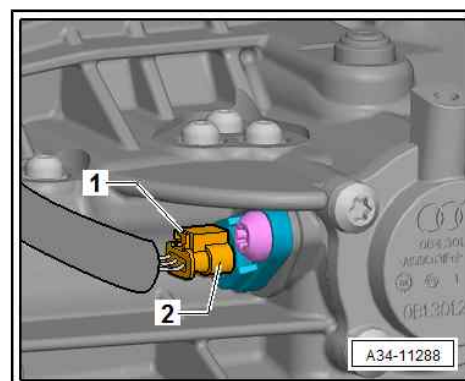
- If fitted, unplug electrical connector from gearbox neutral position sender - G701- -arrow- and move wiring clear.



Vehicles with gear detection sensor - G604- from model year 2013 onwards

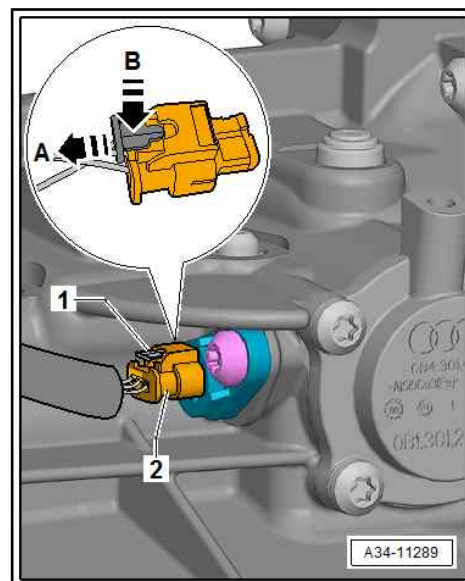
Different connectors for gear detection sensor - G604- ! Unplug electrical connector as follows:

- Push catch -1- downwards, unplug connector -2- and move electrical wiring clear.



or

- Use screwdriver to pry out catch -1- approx. 3 mm in direction of -arrow A-.
- Push catch -1- downwards in direction of -arrow B-, unplug connector -2- and move electrical wiring clear.



Continued for all vehicles

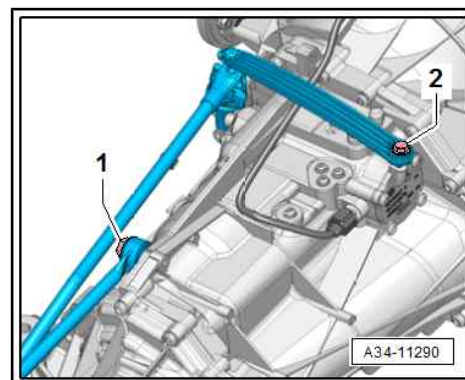
- Remove bolt -1-.



Note

-Item 2- can be disregarded.

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- Unscrew bolt -2-, detach pipe from bracket and pull clutch slave cylinder off gearbox.
- Tie clutch slave cylinder up to the side in engine compartment.



Caution

Risk of damage to clutch slave cylinder.

- ◆ *Do not depress clutch pedal after removing slave cylinder.*

- Remove nut -1-.



Caution

Risk of damage to selector shaft in gearbox.

- ◆ *Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.*
- ◆ *Always use puller - T40160- when removing the gearbox selector lever.*

- Apply puller - T40160- and pull off gearbox selector lever -1-.

Vehicles with hydraulic power steering

- Place used oil collection and extraction unit below connection.
- Remove bolts -arrows-, detach hydraulic line -1- from steering rack and place to one side.



Note

Seal off open lines and connections with clean plugs from engine bung set - VAS 6122- to prevent dirt from entering.

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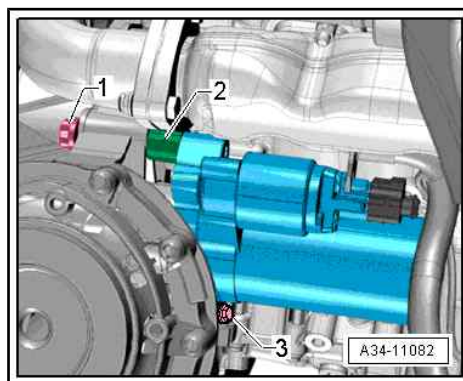
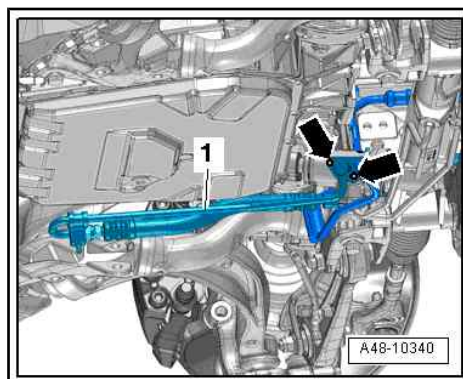
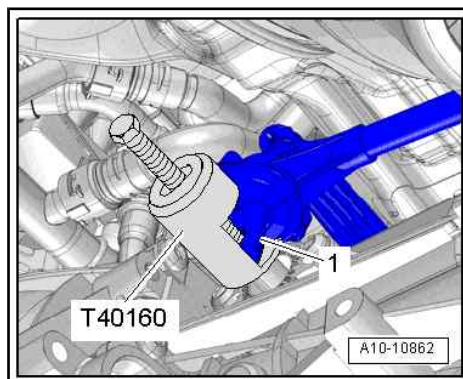
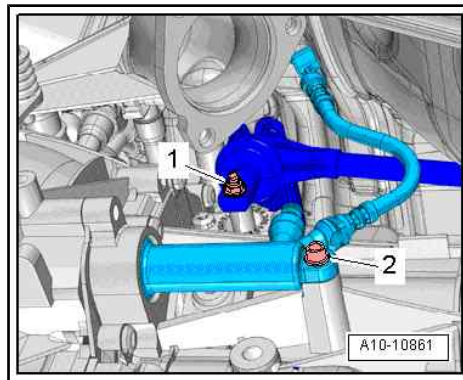
Continued for all vehicles

- Remove bolt -3- for starter from engine side.
- Detach starter from gearbox but do not remove starter.

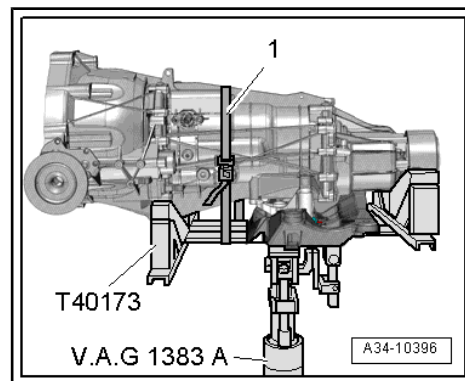


Note

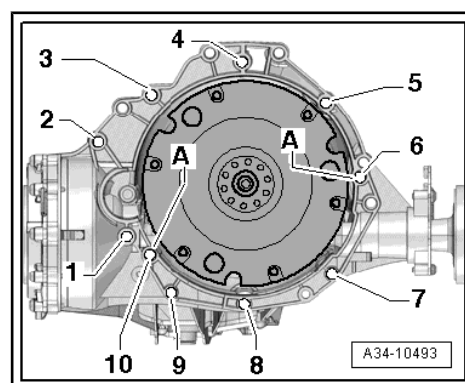
Starter cables do not need to be disconnected.



- Position engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- underneath gearbox and secure with tensioning strap -1- as shown in illustration.



- Remove remaining engine/gearbox securing bolts -7 ... 10-.

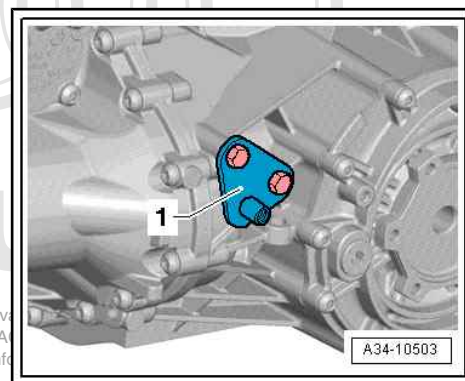
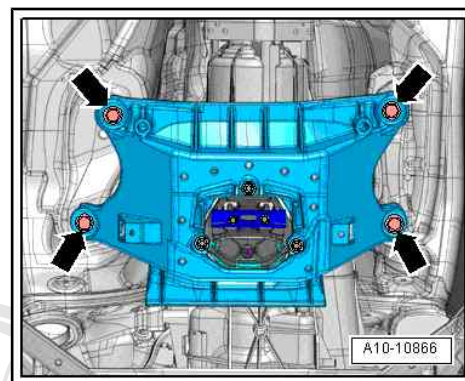


- Remove bolts -arrows- for tunnel cross member.
- Detach gearbox from engine and lower carefully using engine and gearbox jack - V.A.G 1383 A- .



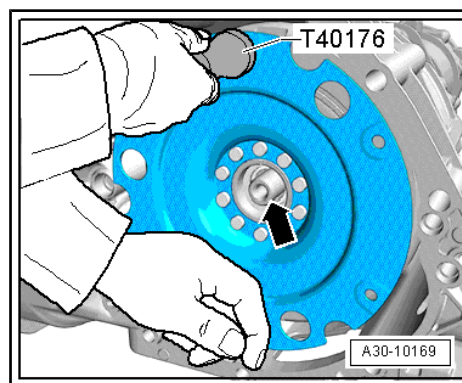
Note

- ◆ When lowering gearbox, make sure that all wires are disconnected on the top of the gearbox.
- ◆ When lowering gearbox, make sure there is sufficient clearance from drive shafts.
- If the removed gearbox is being replaced, the following components must be transferred to the replacement gearbox:



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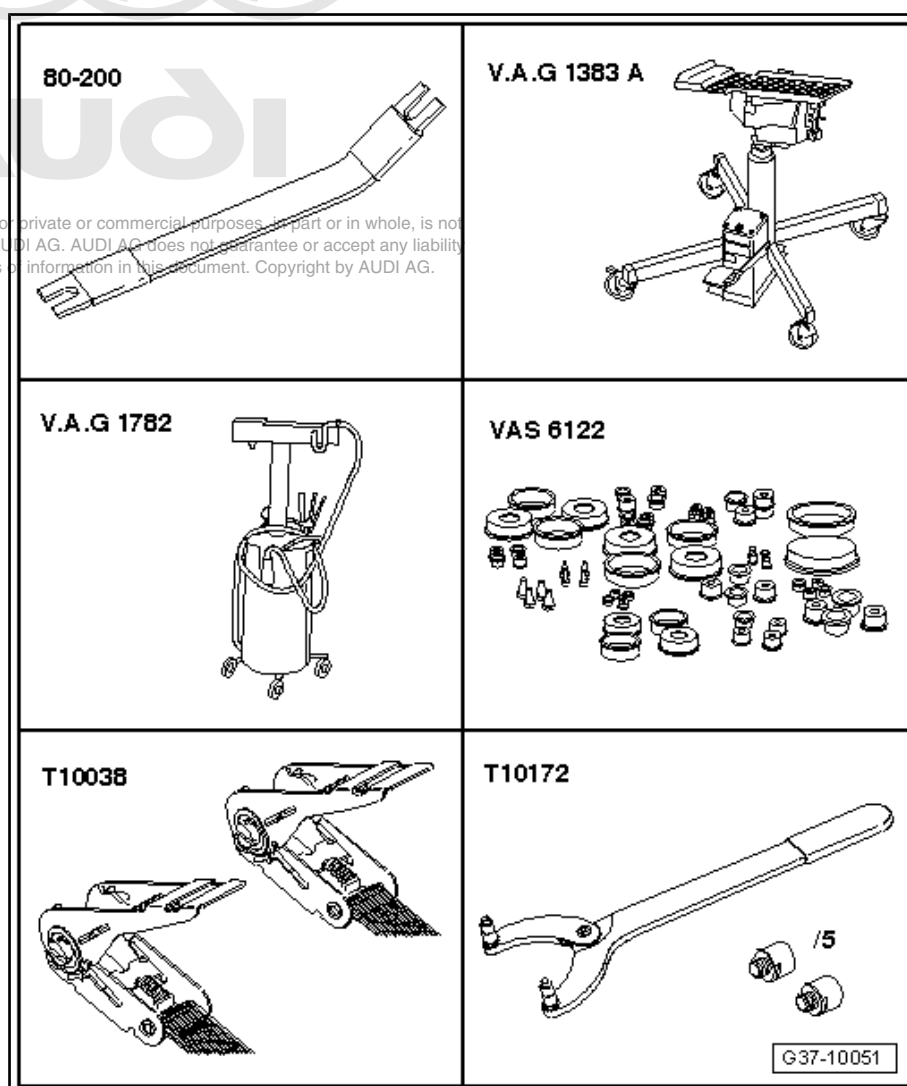
- ◆ Bracket -1- for exhaust system mounting ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- ◆ Tunnel cross member with gearbox mounting and gearbox support ⇒ [page 195](#)
- ◆ If necessary, remove clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



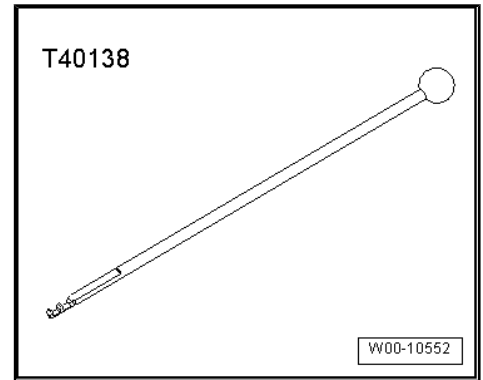
2.1.6 Removing gearbox - Audi Q5 with 2.0 ltr. TFSI engine

Special tools and workshop equipment required

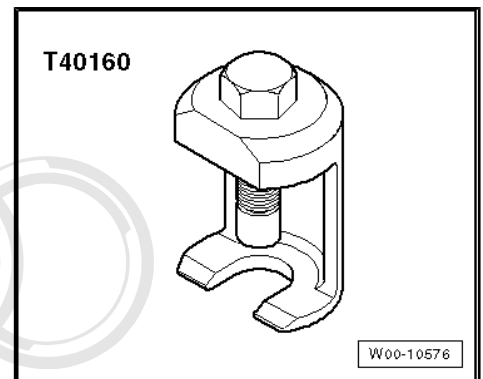
- ◆ Removal lever - 80 - 200-
- ◆ Engine and gearbox jack - V.A.G 1383 A-
- ◆ Used oil collection and extraction unit - V.A.G 1782- or -VAS 6622A-
- ◆ Engine bung set - VAS 6122-
- ◆ Tensioning strap - T10038-
- ◆ Counterhold tool - T10172- with -T10172/5-



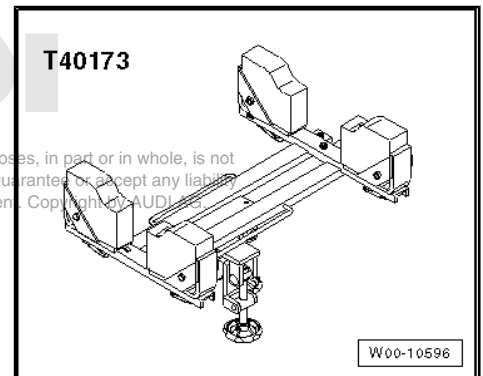
- ◆ Release tool - T40138- (not for vehicles from model year 2013 onwards)



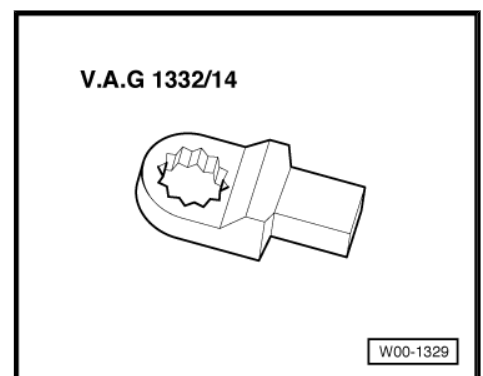
- ◆ Puller - T40160-



- ◆ Gearbox support - T40173-

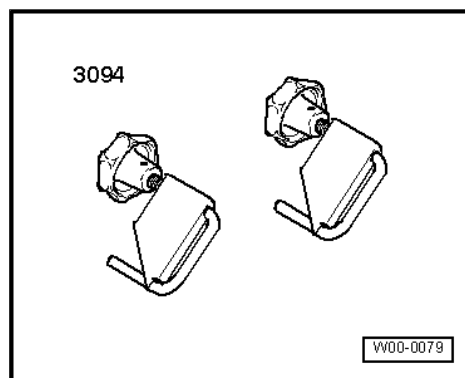


- ◆ Ring spanner insert, 16 mm - V.A.G 1332/14-

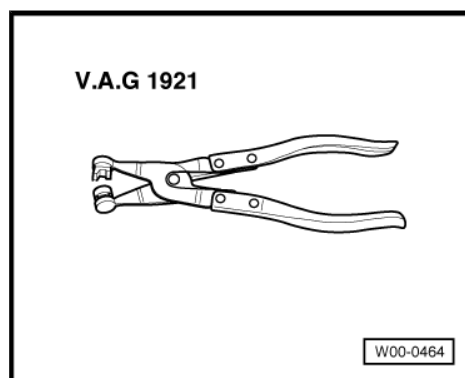


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- ◆ 2x hose clamps, up to Ø 25 mm - 3094-



- ◆ Hose clip pliers - V.A.G 1921-



Removing

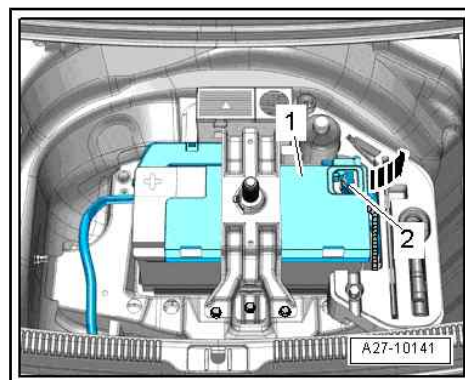
- Bring front wheels into straight-ahead position.
- Switch off ignition and take out ignition key.
- Disconnect battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

When disconnecting the battery there is a risk of serious damage to electronic components:

- ◆ *Observe measures required when disconnecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .*

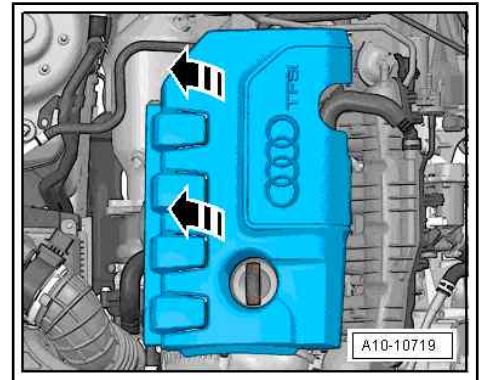


Vehicles with hydraulic power steering

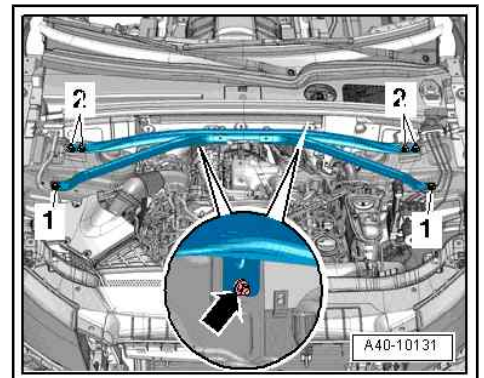
- Extract power steering hydraulic fluid from reservoir with used oil collection and extraction unit - V.A.G 1782- or -VAS 6622A- .

Continued for all vehicles

- Remove engine cover panel -arrows-.



- Remove body brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Suspension strut, upper links; Removing and installing body brace .

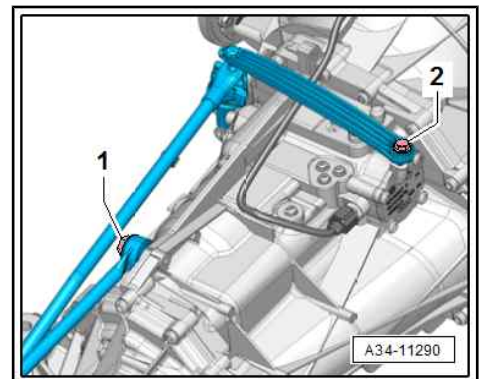


- **Remove bolt -2-.**

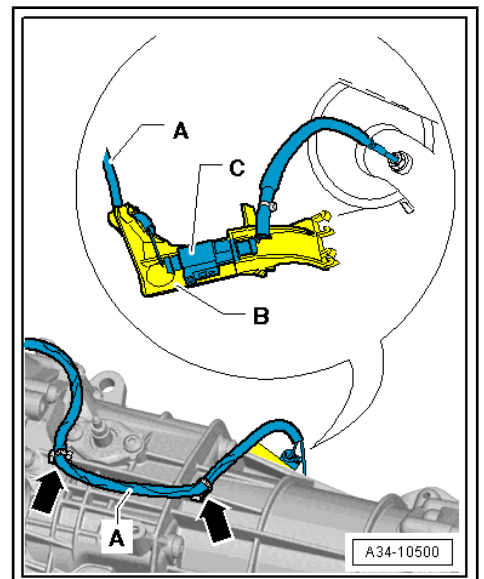


Note

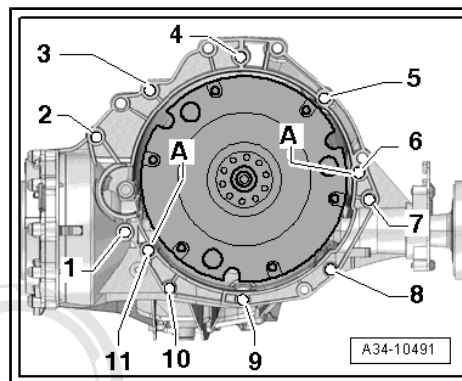
- Item 1- can be disregarded.



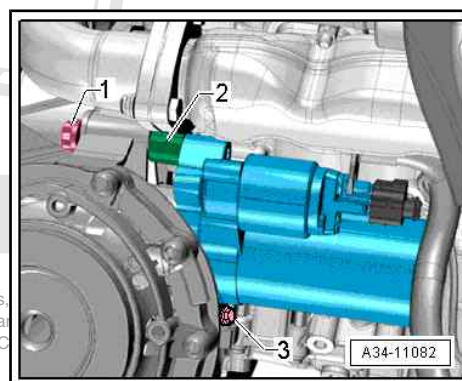
- Unclip electrical wiring -A- from gearbox using removal lever - 80 - 200- and unplug electrical connector -C-.



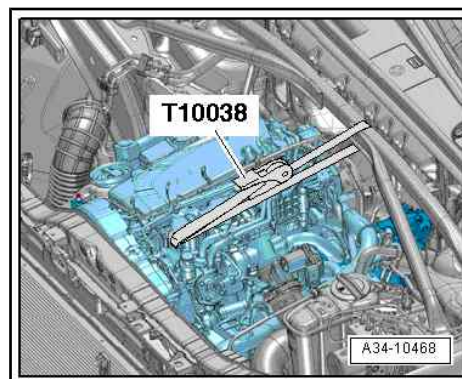
- Remove engine/gearbox securing bolts -3 ... 6-.



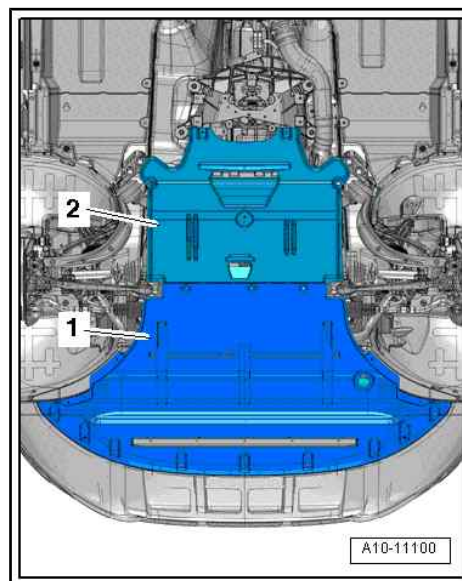
- Remove top starter bolt -1-.
- Detach spacer sleeve -2- between starter and gearbox.



- Install body brace and attach to engine lifting eye with tensioning strap - T10038- , as shown in illustration.
- Tighten tensioning strap.



- Remove noise insulation -1- and -2- ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



- Remove subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Removing and installing subframe cross brace .

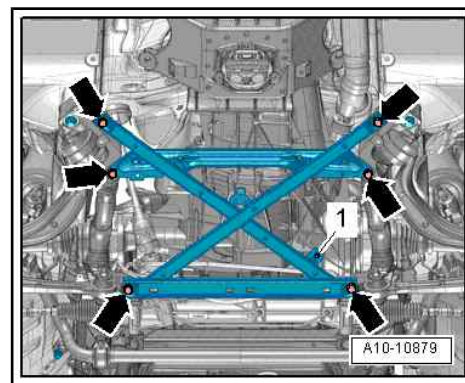


Caution

Risk of damage to parts of the running gear.

Do NOT let the vehicle down on the wheels if the subframe, steering rack or subframe cross brace are not properly installed.

Do NOT support the vehicle at the subframe or the subframe cross brace (e.g. with a trolley jack).



- Detach intermediate steering shaft from steering rack and telescope shaft upwards ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .

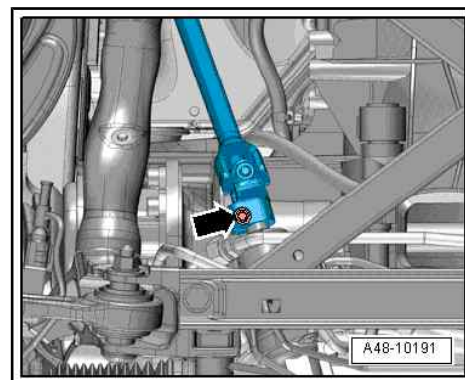


Caution

Risk of damage to coil connector for airbag.

◆ **Front wheels must be in straight-ahead position when universal joint is detached from steering rack.**

◆ **Do not change position of steering wheel or steering rack after this step (if necessary, fix steering wheel in position with adhesive tape).**



Vehicles with gear oil heating



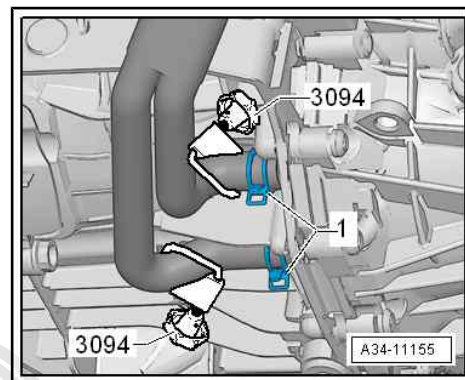
WARNING

Risk of scalding from hot steam and hot coolant.

The cooling system is under pressure when the engine is hot.

Cover filler cap on expansion tank with a cloth and open carefully to release pressure.

- Clamp off both coolant hoses on gearbox using hose clamps up to 25 mm - 3094- .
- Place drip tray below gearbox, open spring-type clip -1- and disconnect both coolant hoses.



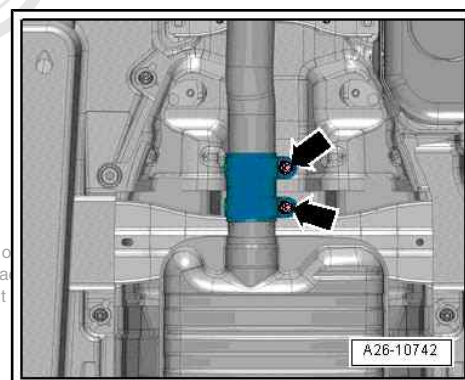
Continued for all vehicles



Note

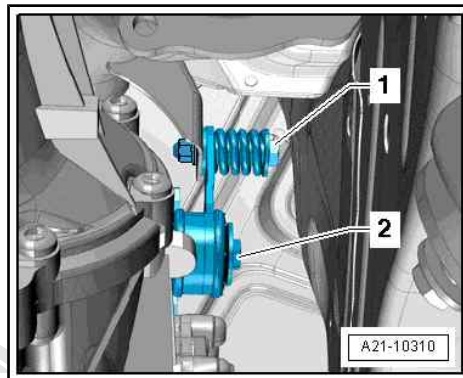
The flexible pipe connection (de-coupling element) in the front exhaust pipe must not be bent more than 10 ° - otherwise it can be damaged.

- Disconnect exhaust system at clamp -arrows-.
- Tie front exhaust pipe to side.



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- Remove bolts -1- and -2- and detach mounting.

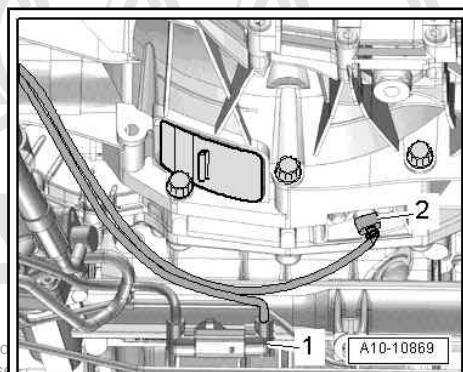


- Disconnect electrical connector -2- at engine speed sender - G28- and move wiring clear at gearbox.



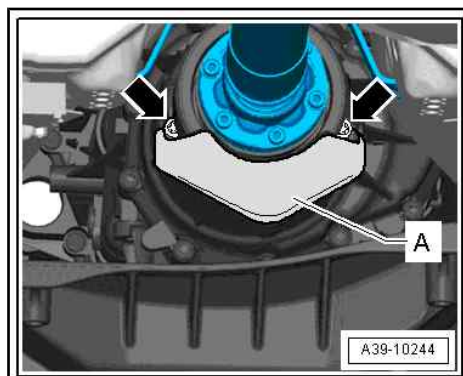
Note

-Item 1- can be disregarded.



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- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.

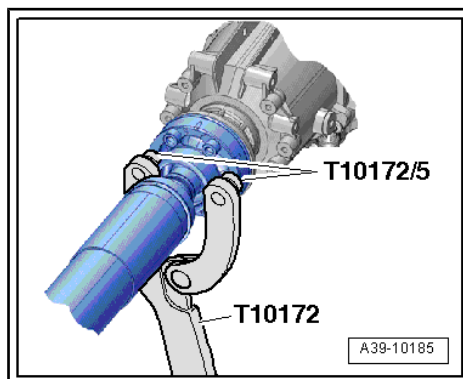


- Hold propshaft with counterhold tool - T10172- and adapters - T10172/5- to prevent it from turning.

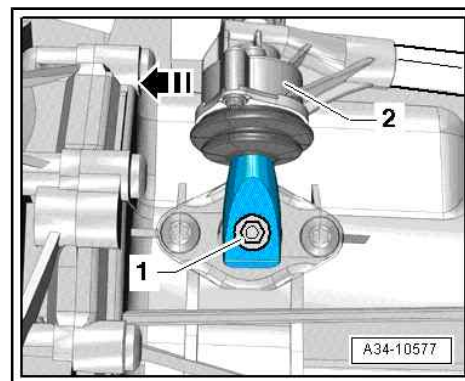


Note

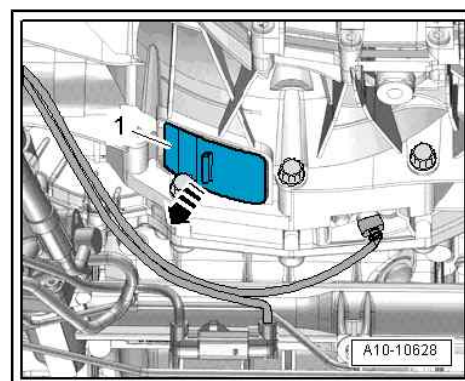
On vehicles with propshaft with splines on gearbox end, counterhold at rear final drive in the same way.



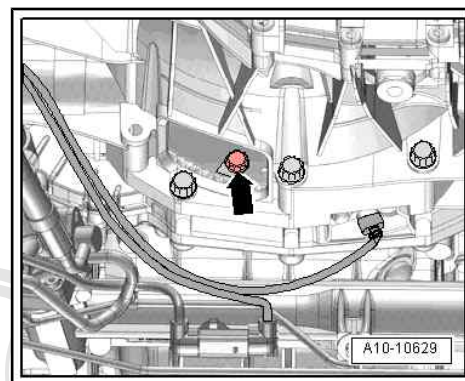
- Engage 6th gear by pulling out selector shaft -1- and shifting gear selector lever -2- forwards in direction of -arrow-.



- Pull cover -1- off bottom of gearbox -arrow-.



- Remove 3 bolts -arrow- for drive plate (turn both front wheels so that clutch module rotates 120° in direction of engine rotation each time).

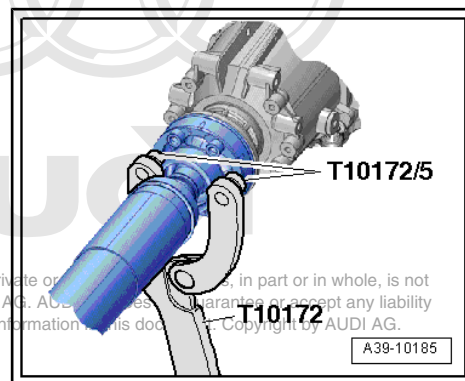


Propshaft with bolted connection at gearbox end:

- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

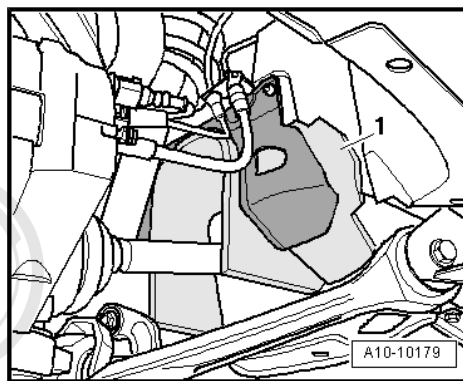
Propshaft with splined connection at gearbox end:

- Remove propshaft ⇒ Rear final drive; Rep. gr. 39; Propshaft, Removing and installing propshaft .

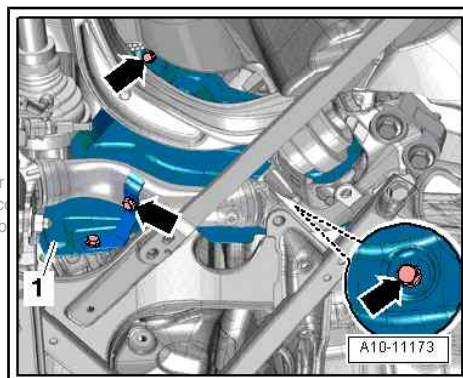


Continued for all vehicles

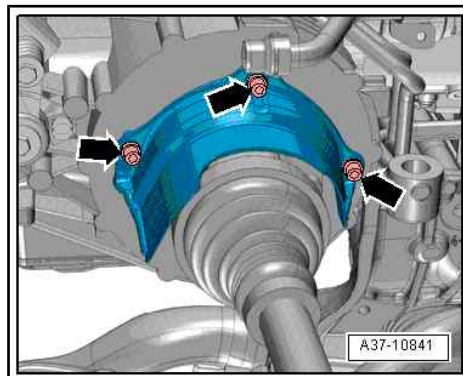
- Detach noise insulation -1- from wheel housing (both sides).



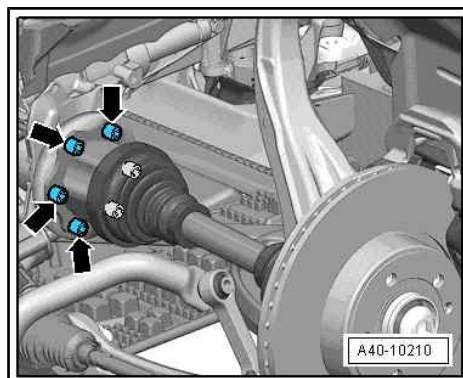
- If fitted, remove subframe shield (right-side) -1-; to do so, unscrew bolts -arrows- and detach heat shield towards inside.



- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).

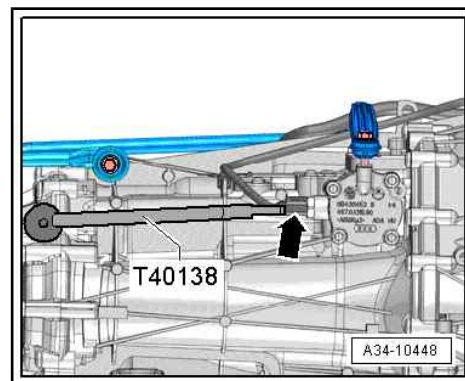


- Unbolt drive shafts (left and right) from flange shafts on gearbox.

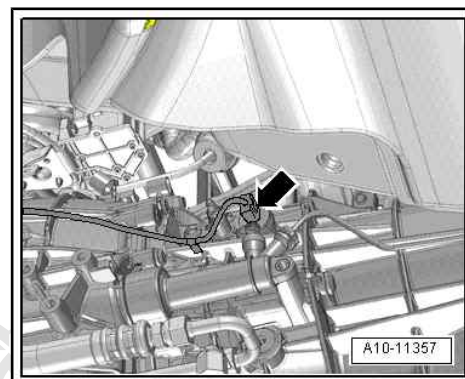


Vehicles up to model year 2012

- Disconnect electrical connector -arrow- for gear detector switch - F208- using release tool -T40138- and move electrical wiring clear.



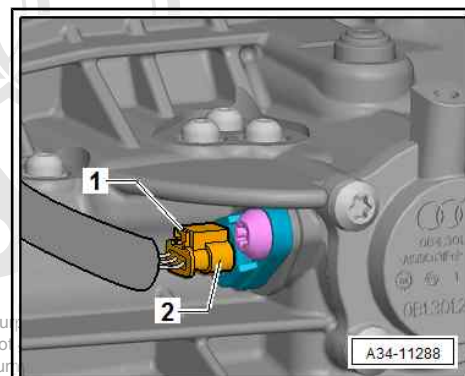
- If fitted, unplug electrical connector from gearbox neutral position sender - G701- -arrow- and move wiring clear.



Vehicles with gear detection sensor - G604- from model year 2013 onwards

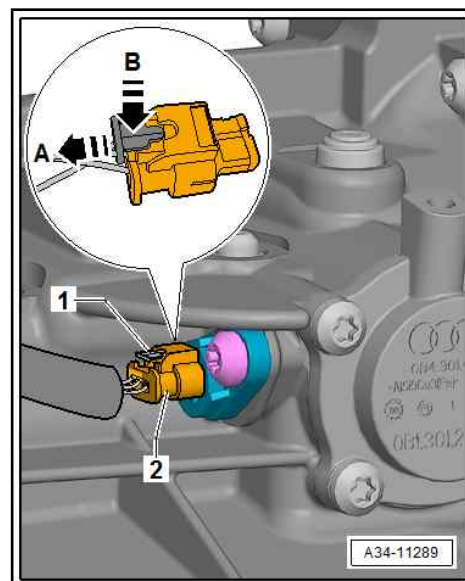
Different connectors for gear detection sensor - G604- ! Unplug electrical connector as follows:

- Push catch -1- downwards, unplug connector -2- and move electrical wiring clear.



or

- Use screwdriver to pry out catch -1- approx. 3 mm in direction of -arrow A-.
- Push catch -1- downwards in direction of -arrow B-, unplug connector -2- and move electrical wiring clear.



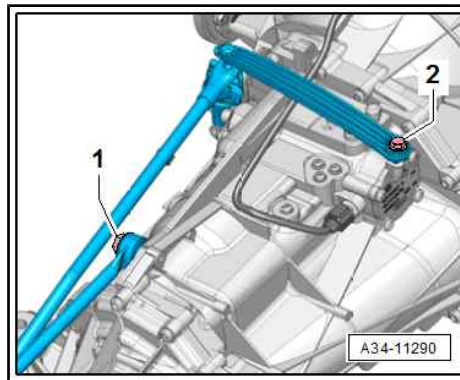
Continued for all vehicles

- Remove bolt -1-.



Note

-Item 2- can be disregarded.



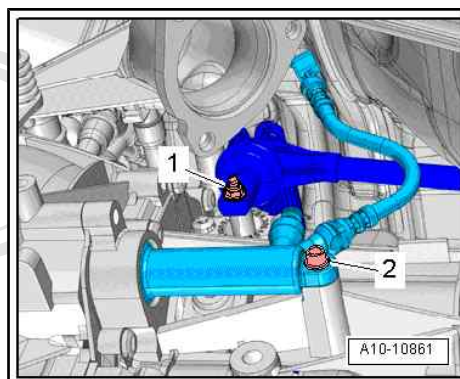
- Unscrew bolt -2-, detach pipe from bracket and pull clutch slave cylinder off gearbox.
- Tie clutch slave cylinder up to the side in engine compartment.



Caution

Risk of damage to clutch slave cylinder.

- ◆ Do not depress clutch pedal after removing slave cylinder.



- Remove nut -1-.

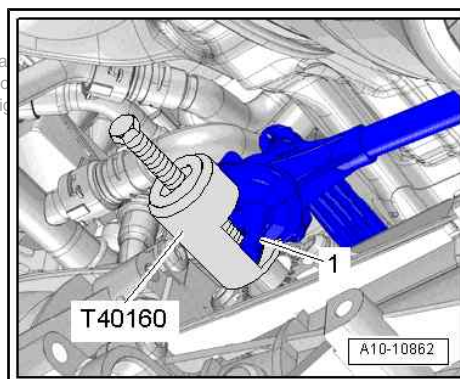


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Risk of damage to selector shaft in gearbox.

- ◆ Do not prise off or knock off the gearbox selector lever -1- with a lever or hammer.
- ◆ Always use puller - T40160- when removing the gearbox selector lever.



- Apply puller - T40160- and pull off gearbox selector lever -1-.

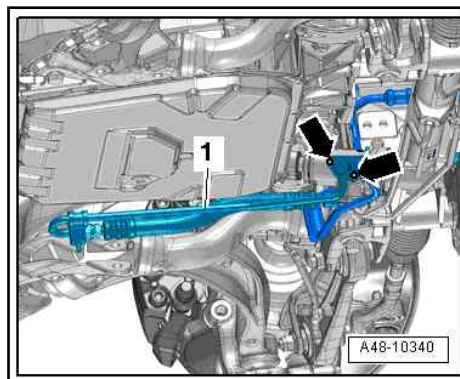
Vehicles with hydraulic power steering

- Place used oil collection and extraction unit below connection.
- Remove bolts -arrows-, detach hydraulic line -1- from steering rack and place to one side.



Note

Seal off open lines and connections with clean plugs from engine bung set - VAS 6122- to prevent dirt from entering.



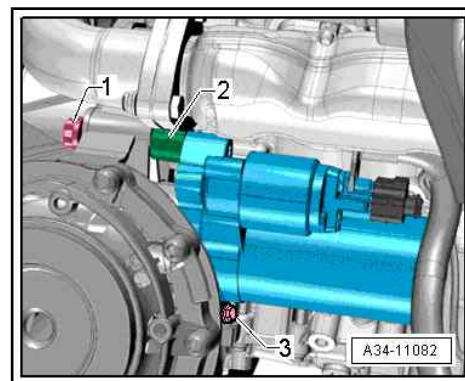
Continued for all vehicles

- Remove bolt -3- for starter from engine side.
- Detach starter from gearbox but do not remove starter.

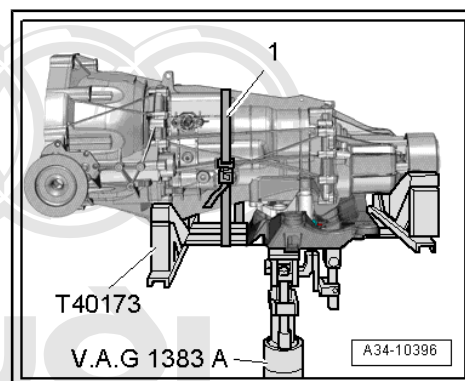


Note

Starter cables do not need to be disconnected.

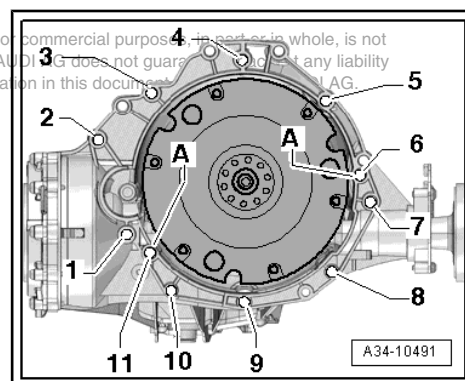


- Position engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- underneath gearbox and secure with tensioning strap -1- as shown in illustration.

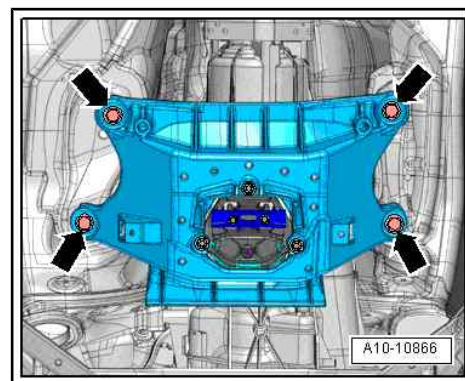


- Remove remaining engine/gearbox securing bolts -7 ... 11-.

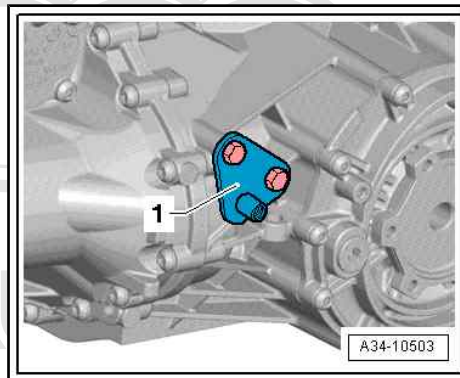
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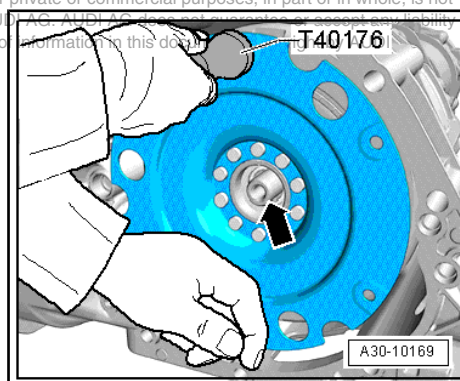
- Remove bolts -arrows- for tunnel cross member.
- Detach gearbox from engine and lower carefully using engine and gearbox jack - V.A.G 1383 A- .



- If the removed gearbox is being replaced, the following components must be transferred to the replacement gearbox:



- ◆ Bracket -1- for exhaust system mounting ⇒ Rep. gr. 26; Emission control system; Exploded view - emission control system .
- ◆ Tunnel cross member with gearbox mounting and gearbox support ⇒ [page 195](#)
- ◆ If necessary, remove clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



2.2 Installing gearbox

⇒ [“2.2.1 Installing gearbox - Audi A4, A5 with 1.8 ltr. and 2.0 ltr. TFSI engines”, page 146](#)

⇒ [“2.2.2 Installing gearbox - Audi A4, A5 with 3.2 ltr. FSI engine”, page 154](#)

⇒ [“2.2.3 Installing gearbox - Audi A4, A5 with 4-cyl. TDI engine, PR-TH3/TM4”, page 162](#)

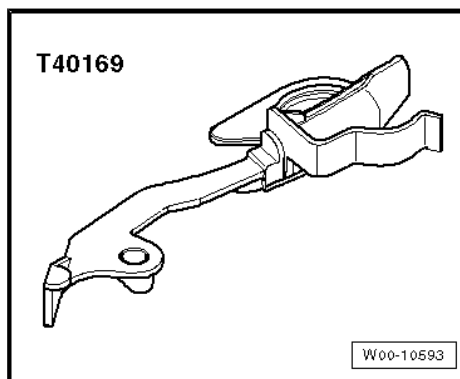
⇒ [“2.2.4 Installing gearbox - Audi A4, A5, Q5 with 4-cyl. TDI engine \(EA 288 - generation I\), PR-TD1”, page 171](#)

⇒ [“2.2.5 Installing gearbox - Audi Q5 with 2.0 ltr. TFSI engine and 4-cyl. TDI engine, PR-TH3/TM4”, page 179](#)

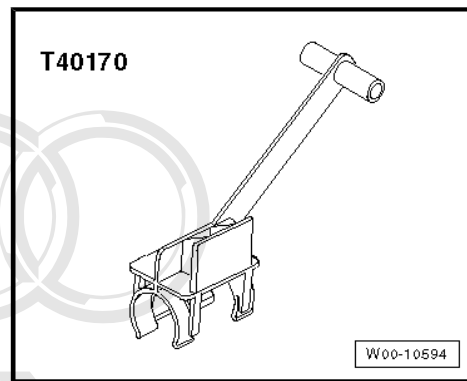
2.2.1 Installing gearbox - Audi A4, A5 with 1.8 ltr. and 2.0 ltr. TFSI engines

Special tools and workshop equipment required

- ◆ Assembly aid - T40169-



◆ Transportation lock - T40170-



Procedure



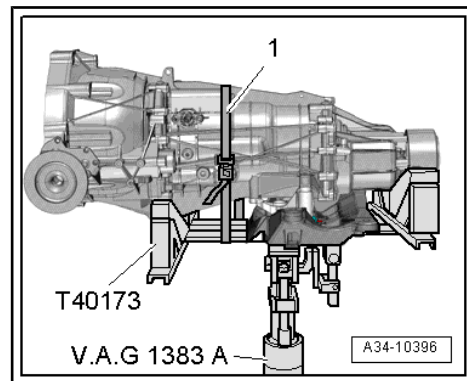
Note

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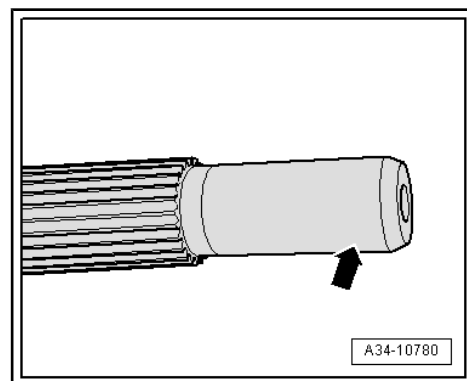
- ◆ *Renew bolts which are tightened by turning through a specified angle. The aluminium bolts securing the engine to the gearbox can be used twice only.*
- ◆ *Renew self-locking nuts and bolts, and seals, O-rings and gaskets.*
- ◆ *Secure all hose connections with the correct hose clips (as original equipment); refer to ⇒ Electronic parts catalogue .*
- ◆ *Re-attach all cable ties at the same locations when re-installing.*

Tightening torques for installing gearbox ⇒ [page 188](#)

- Position gearbox on gearbox support - T40173- and secure with tensioning strap -1-, as shown in illustration.



- Check input shaft for scoring around bearing in drive plate -arrow-. Renew needle bearing in drive plate if necessary ⇒ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate .

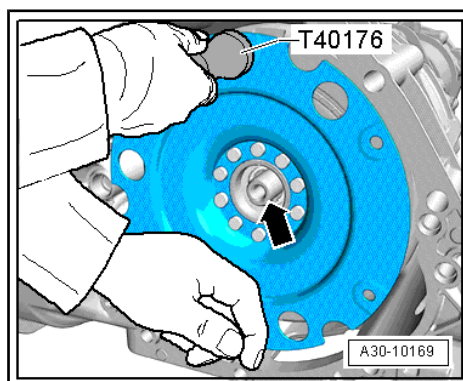
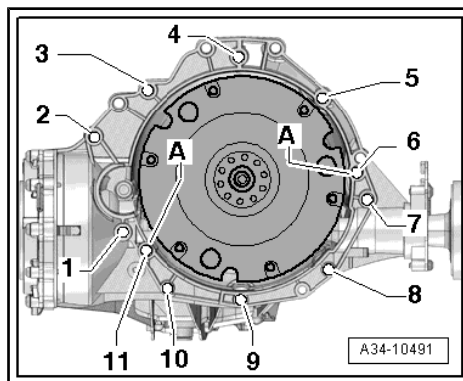


- Check that dowel sleeves -A- for centralising engine/gearbox are in the cylinder block; install any missing dowel sleeves.
- Check whether aluminium bolts -2 ... 11- can be reused for engine/gearbox connection and mark bolts if necessary
⇒ [page 189](#) .

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- If removed previously, install clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



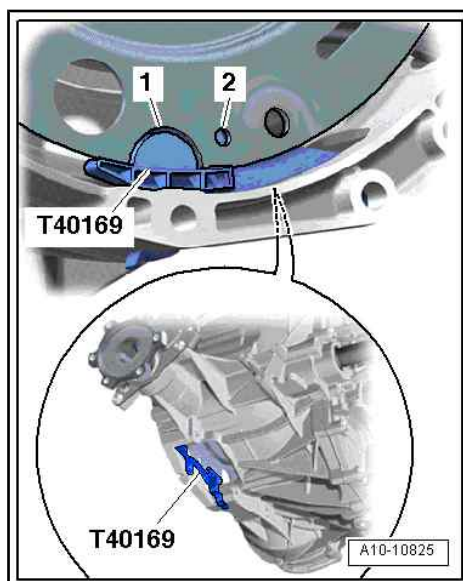
- The following preparations must be made before joining the engine and gearbox:
- Insert assembly aid - T40169- between gearbox housing and clutch module from below, as shown in illustration.
- The assembly aid - T40169- must engage in the semi-circular recess -1- and in the inspection hole -2-.



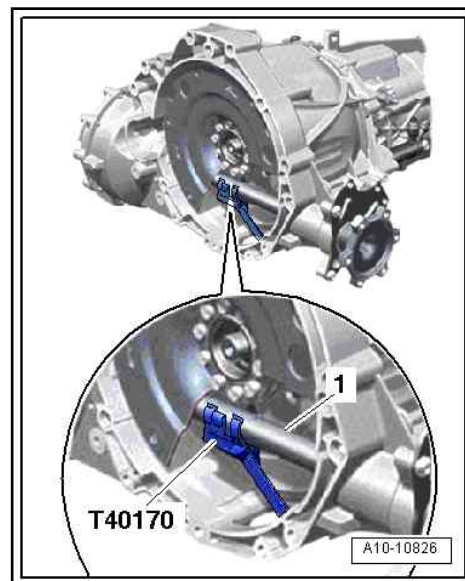
Note

There is only one inspection hole at the periphery; turn the clutch module accordingly.

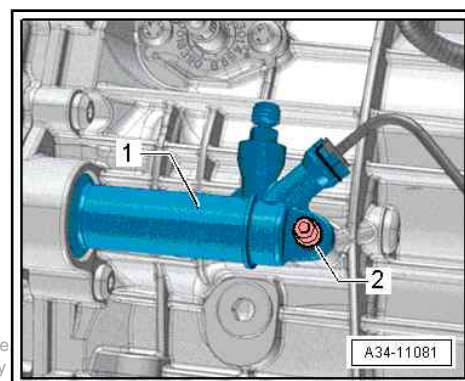
- Insert pin of assembly aid into hole on gearbox housing.



- Insert transportation lock - T40170- into gearbox housing from below and clamp onto flange shaft -1-.



- Raise gearbox just far enough to be able to insert clutch slave cylinder -1-.
- Tighten bolt -2-. Tightening torque ➔ [Item 17 \(page 23\)](#)



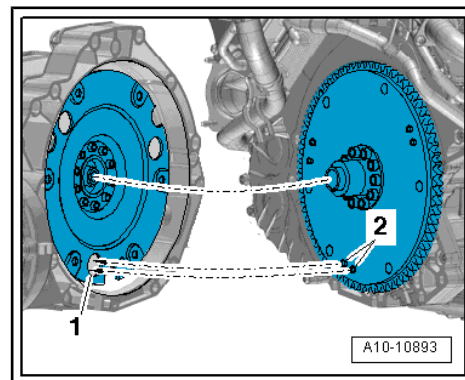
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Note

The next step is only required if a drive plate with locating pins -2- is installed.

- In addition, align drive plate with clutch module so that locating pins -2- (if provided) on drive plate can engage in large holes -1- on clutch module.

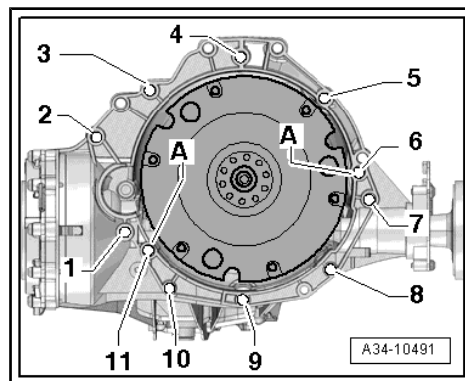


Caution

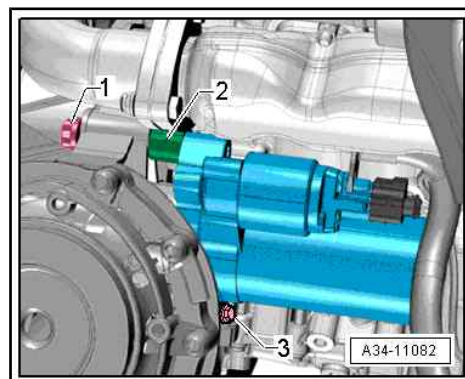
An incorrectly installed clutch causes functional problems.

- ◆ ***If the locating pins on the drive plate -2- are not located in the holes on the clutch module -1-, this will lead to considerable functional problems of the clutch.***

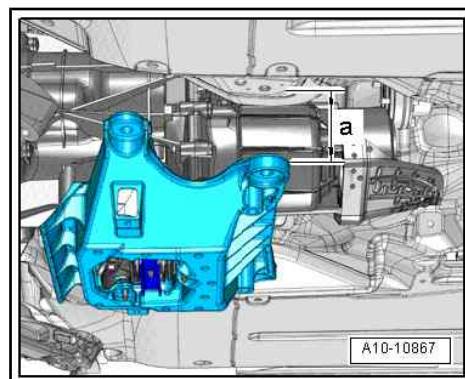
- Join gearbox to engine and tighten bolts -3 ... 11-; tightening torques ➔ [page 189](#) .



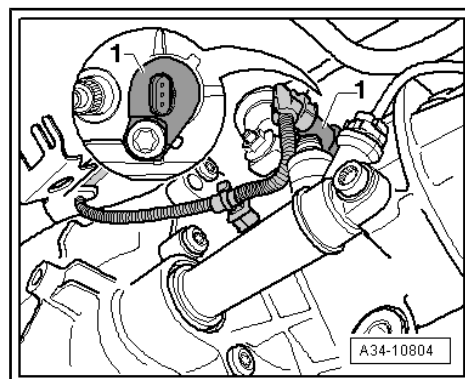
- Fit starter and install bolt -3- from engine side hand-tight.
 - Fit spacer sleeve -2- between starter and gearbox, push through bolt -1- and tighten.
 - Tighten starter bolts -1- and -3-. Tightening torques ➔ [page 189](#)
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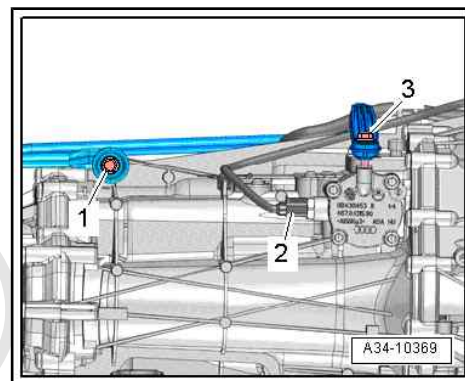
- Raise gearbox using engine and gearbox jack - V.A.G 1383 A- initially only until dimension -a- is reached between tunnel cross member and body.
- Dimension -a- = 80 mm (minimum)



- Secure all electrical wiring in original position on gearbox again.
- If fitted, attach connector to gearbox neutral position sender - G701- -1-.



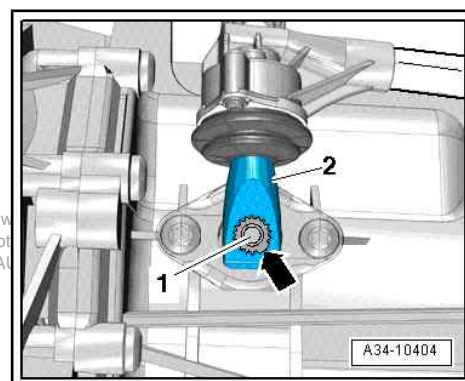
- Plug in connector -2- at gear detector switch - F208- or gear detection sensor - G604- .
- Secure push rod -1- ➔ [Item 27 \(page 45\)](#) .
- Secure connecting rod -3-. Tightening torque ➔ [Item 25 \(page 45\)](#)
- Plug in electrical connector -2- at gear detector switch - F208- and gear detection sensor - G604- .



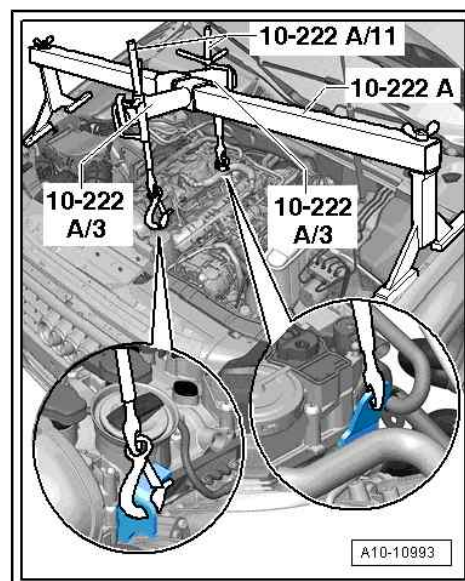
Install gearbox selector lever -2- as follows:

- Gearbox selector lever -2- can only be fitted onto selector shaft -1- in one position (gap in splines -arrow-).
- Secure gearbox selector lever. Tightening torque ➔ [Item 18 \(page 45\)](#)

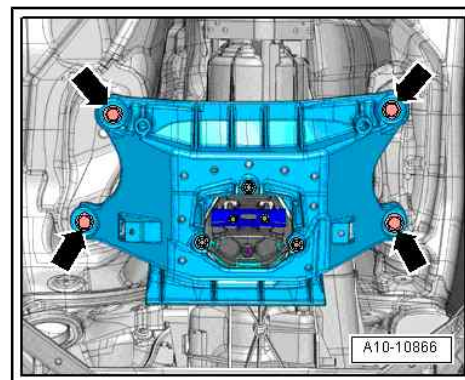
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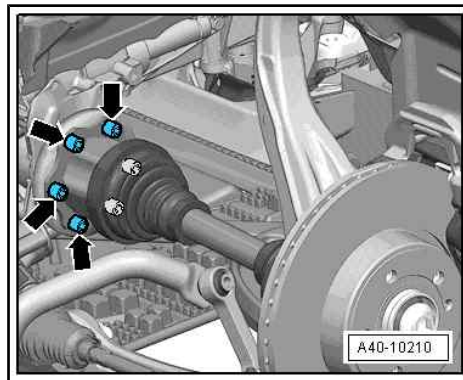
- Disengage spindles - 10 - 222 A /11- .



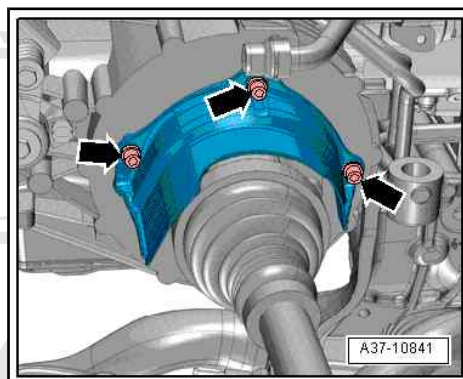
- Raise gearbox further and tighten bolts -arrows- for tunnel cross member ➔ [page 195](#) .
- Remove engine and gearbox jack - V.A.G 1383 A- and gearbox support - T40173- .



- Secure drive shafts (left and right) to flange shafts of gearbox
⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft;
Exploded view - drive shaft .



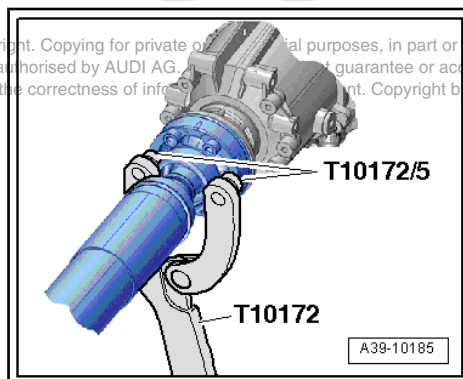
- Install heat shield for drive shaft ⇒ [page 189](#) .
- If previously removed, install subframe shield (left and right).



- Install propshaft/secure to gearbox ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .

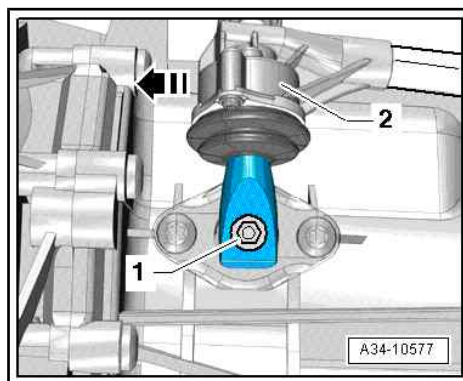
Block the propshaft. To do so, apply counterhold tool - T10172- with -T10172/5- to propshaft bolts on gearbox or rear final drive.

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Tightening sequence – clutch module to drive plate

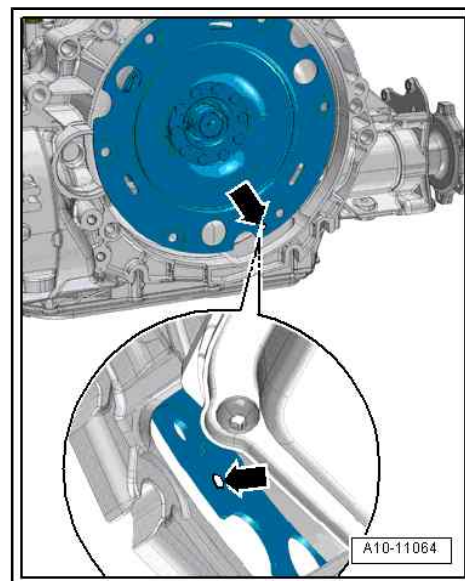
- Remove assembly aid - T40169- and transportation lock - T40170- .
- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.



 Note

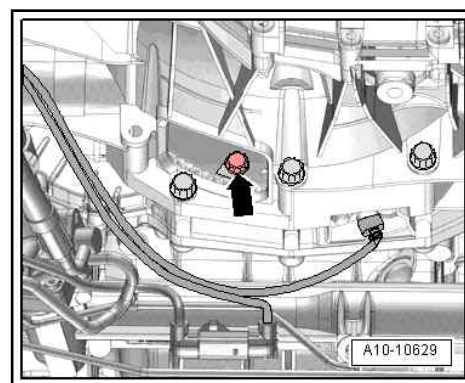
The following step is essential to ensure that the clutch module makes even and proper contact on the drive plate and does not cant.

- Turn both front wheels together in one direction until the clutch module has turned through one complete revolution (360°).
- The inspection hole -arrow- should be visible again in the recess on the gearbox housing.



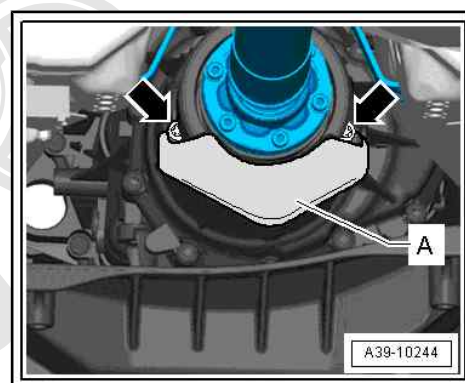
Secure clutch module to drive plate as follows:

- Use new bolts.
- Tightening torque ➔ [Item 3 \(page 38\)](#)
- Tighten bolts using ring spanner insert, 16 mm - V.A.G 1332/14- .
- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 120° further in direction of engine rotation and install second bolt hand-tight (2 Nm).
- Turn clutch module 120° further in direction of engine rotation.
- Then screw in and tighten third bolt. Tightening torque ➔ [Item 3 \(page 38\)](#)
- Now tighten the remaining two bolts. Tightening torque ➔ [Item 3 \(page 38\)](#)



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

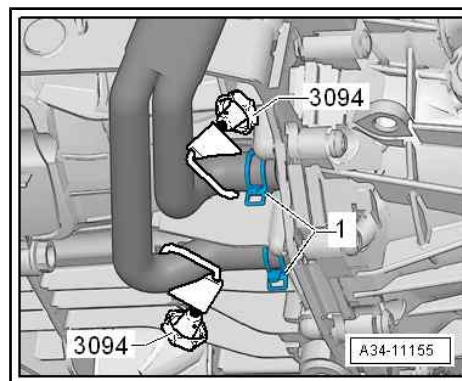
- If fitted, install heat shield for propshaft -A- and tighten bolts -arrows- to 25 Nm.
- Align exhaust system so that it is stress-free ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .



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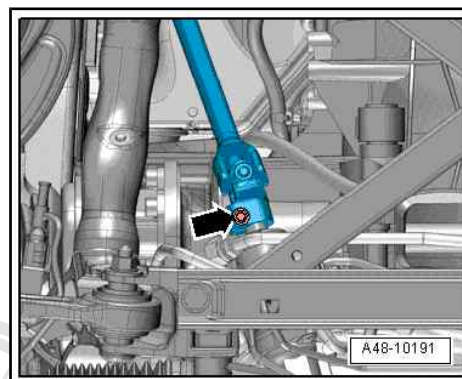
Vehicles with gear oil heating

- Fit coolant hoses onto connections on gearbox and secure with spring-type clips -1-.
- Remove hose clamps, up to 25 mm - 3094- .
- Fill up with coolant ⇒ Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .

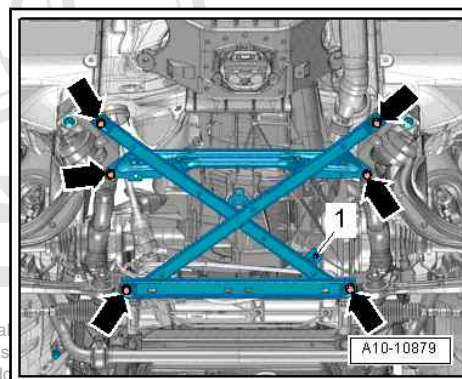


Continued for all vehicles

- Secure intermediate steering shaft to steering rack ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



- Install subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .
- Check gear oil level in gearbox ⇒ [page 199](#) .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Observe measures required after connecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

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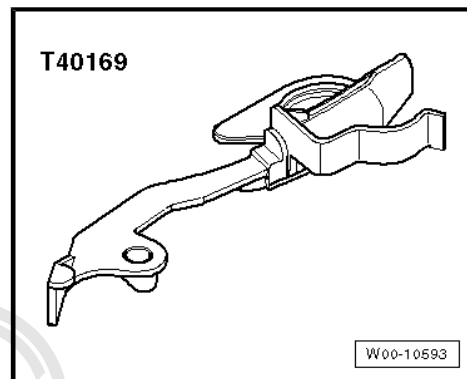
Overvoltage can cause irreparable damage to control units.

- ◆ **Do not use charger for boost starting.**

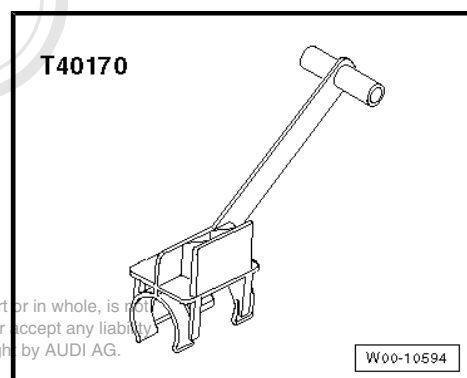
2.2.2 Installing gearbox - Audi A4, A5 with 3.2 ltr. FSI engine

Special tools and workshop equipment required

◆ Assembly aid - T40169-



◆ Transportation lock - T40170-



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Procedure

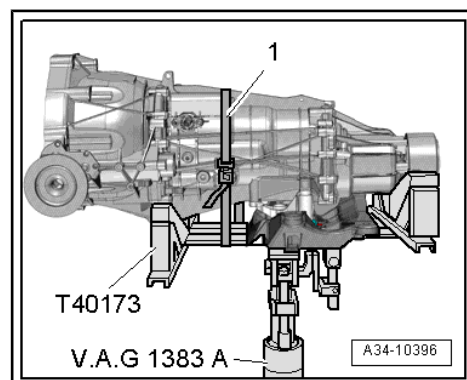


Note

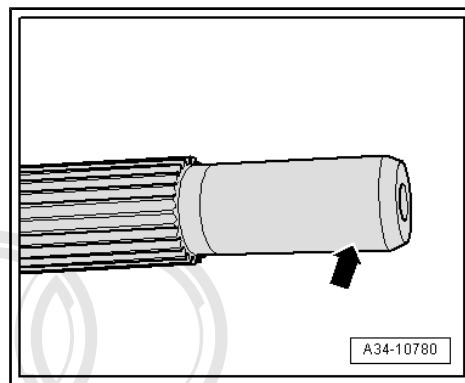
- ◆ *Renew bolts which are tightened by turning through a specified angle. The aluminium bolts securing the engine to the gearbox can be used twice only.*
- ◆ *Renew self-locking nuts and bolts, and seals, O-rings and gaskets.*
- ◆ *Secure all hose connections with the correct hose clips (as original equipment); refer to ⇒ Electronic parts catalogue .*
- ◆ *To ensure that the charge air hoses can be connected securely, you must spray the screws on used screw-type clips with rust remover prior to installation.*
- ◆ *Re-attach all cable ties at the same locations when re-installing.*

Tightening torques for installing gearbox ⇒ [page 188](#)

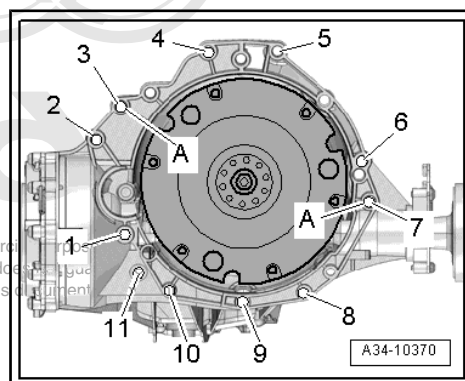
- Position gearbox on gearbox support - T40173- and secure with tensioning strap -1-, as shown in illustration.



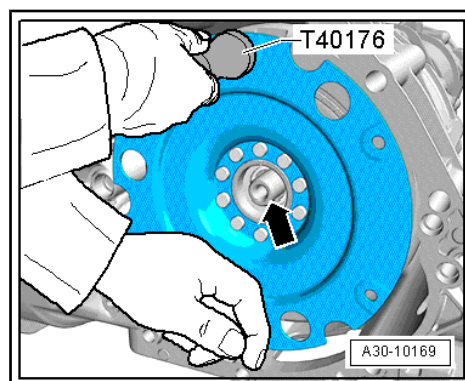
- Check input shaft for scoring around bearing in drive plate -arrow-. Renew needle bearing in drive plate if necessary ➔ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate .



- Check that dowel sleeves -A- for centralising engine/gearbox are in the cylinder block; install any missing dowel sleeves.
- Check whether aluminium bolts -2 ... 11- can be reused for engine/gearbox connection and mark bolts if necessary ➔ [page 191](#) .



- If removed previously, install clutch module ➔ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



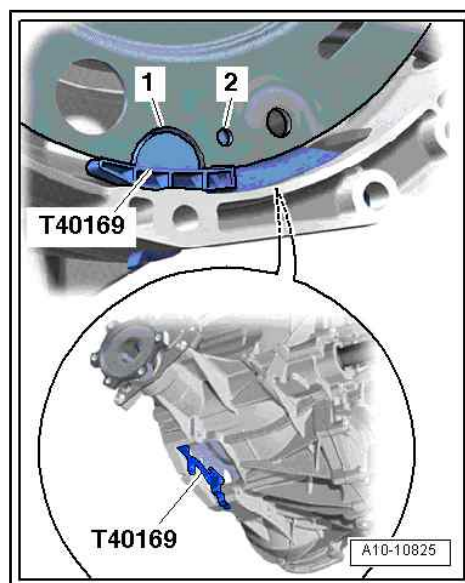
- The following preparations must be made before joining the engine and gearbox:
- Insert assembly aid - T40169- between gearbox housing and clutch module from below, as shown in illustration.
- The assembly aid - T40169- must engage in the semi-circular recess -1- and in the inspection hole -2-.



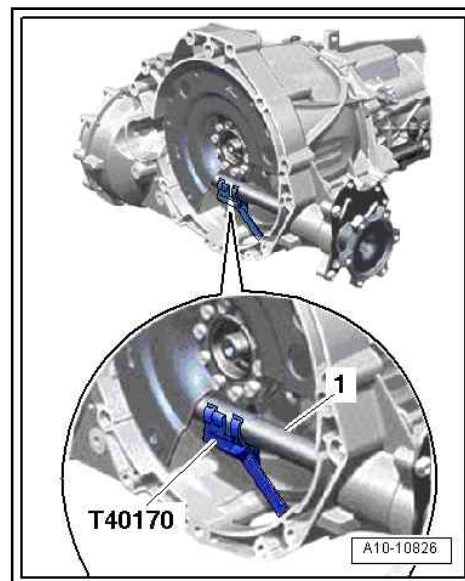
Note

There is only one inspection hole at the periphery; turn the clutch module accordingly.

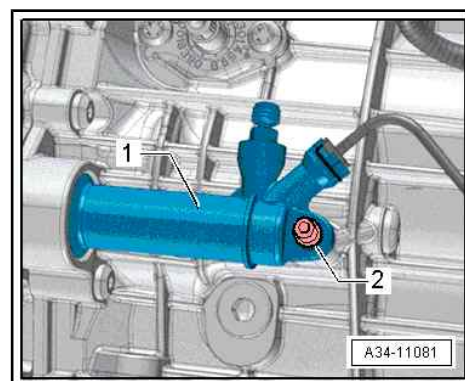
- Insert pin of assembly aid into hole on gearbox housing.



- Insert transportation lock - T40170- into gearbox housing from below and clamp onto flange shaft -1-.



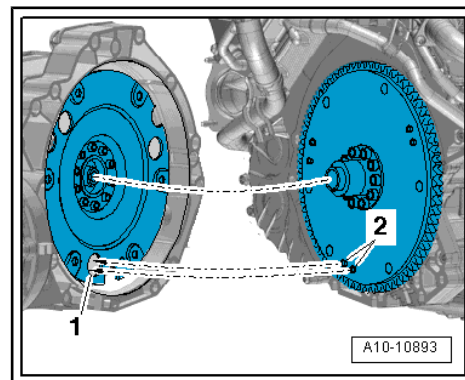
- Raise gearbox just far enough to be able to insert clutch slave cylinder -1-.
- Tighten bolt -2-. Tightening torque ⇒ [Item 17 \(page 23\)](#)



Note

The next step is only required if a drive plate with locating pins -2- is installed.
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- In addition, align drive plate with clutch module so that locating pins -2- (if provided) on drive plate can engage in large holes -1- on clutch module.

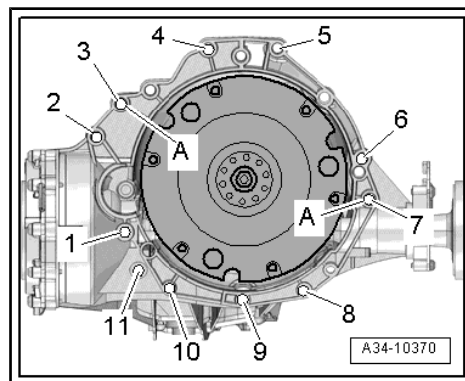


Caution

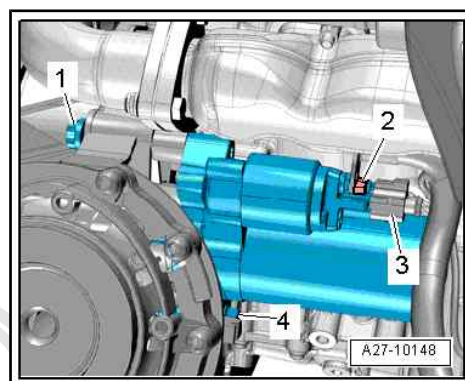
An incorrectly installed clutch causes functional problems.

- ◆ ***If the locating pins on the drive plate -2- are not located in the holes on the clutch module -1-, this will lead to considerable functional problems of the clutch.***

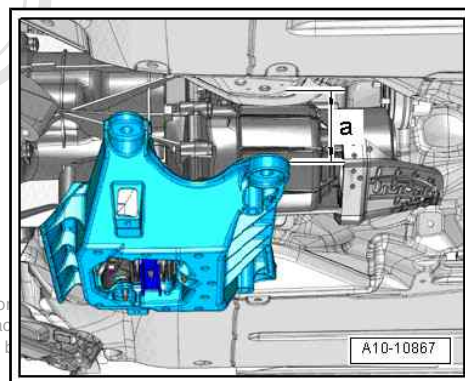
- Join gearbox to engine and tighten bolts -3 ... 11-; tightening torques ➔ [page 191](#) .



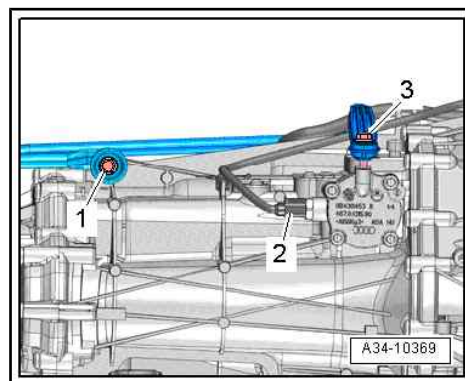
- Fit starter and tighten bolts -1- and -4-. Tightening torque ➔ [page 191](#)



- Raise gearbox using engine and gearbox jack - V.A.G 1383 A- initially only until dimension -a- is reached between tunnel cross member and body.
- Dimension -a- = 100 mm (minimum)

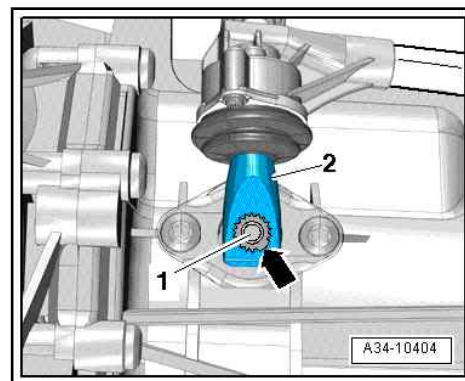


- Secure push rod -1- ➔ [Item 27 \(page 45\)](#) .
- Secure connecting rod -3-. Tightening torque ➔ [Item 25 \(page 45\)](#)
- Plug in electrical connector -2- at gear detector switch - F208- .

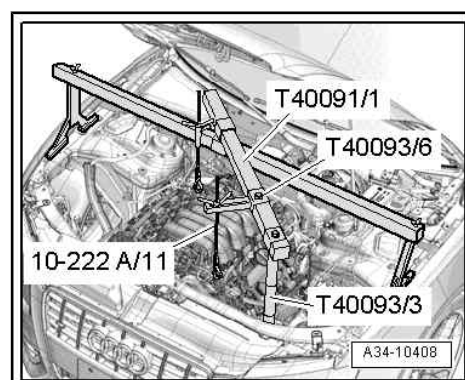


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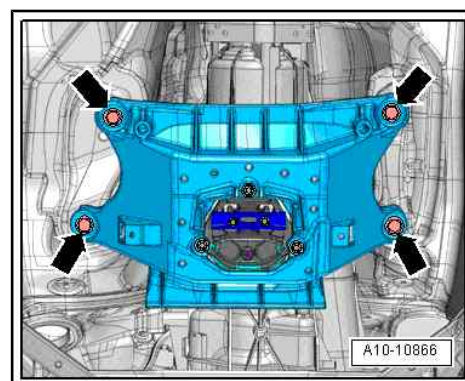
- Install gearbox selector lever -2- as follows:
 - Gearbox selector lever -2- can only be fitted onto selector shaft -1- in one position (gap in splines -arrow-).
- Secure gearbox selector lever -2-. Tightening torque
⇒ [Item 18 \(page 45\)](#)



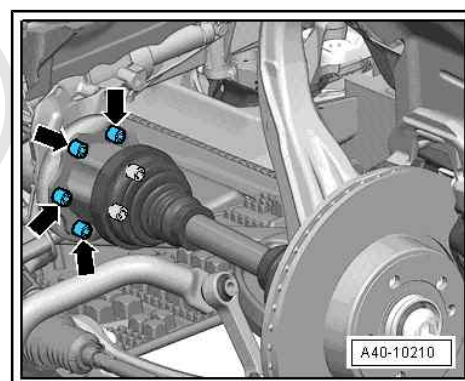
- Release spindle - 10 - 222 A /11- .



- Raise gearbox further and tighten bolts -arrows- for tunnel cross member. Tightening torques ⇒ [page 195](#)
- Remove engine and gearbox jack - V.A.G 1383 A- and gearbox support - T40173- .

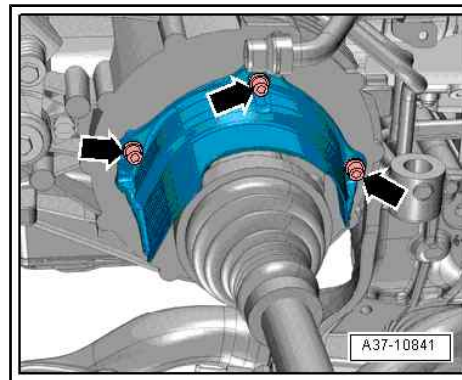


- Secure drive shafts (left and right) to flange shafts of gearbox
⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft;
Exploded view - drive shaft .



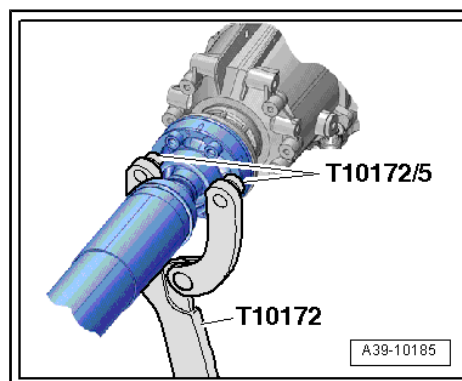
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- Install heat shield for drive shaft ➔ [page 189](#) .



- Install propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .
- If originally fitted, install subframe shield (left and right) ➔ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .

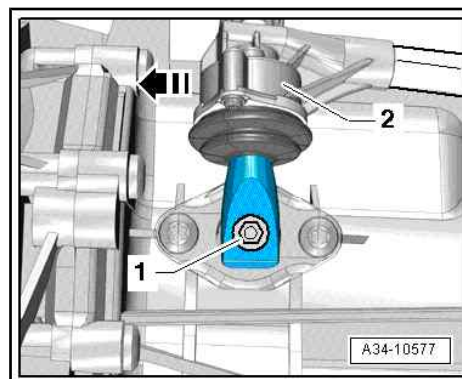
Block the propshaft. To do so, apply counterhold tool - T10172- with -T10172/5- to propshaft bolts on gearbox or rear final drive.



Tightening sequence – clutch module to drive plate

- Remove assembly aid - T40169- and transportation lock - T40170- .
- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.

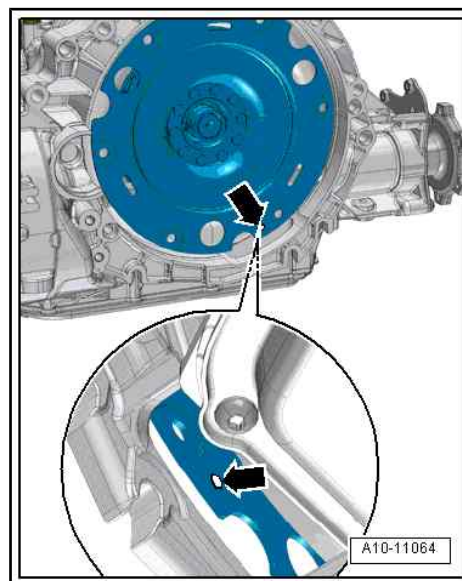
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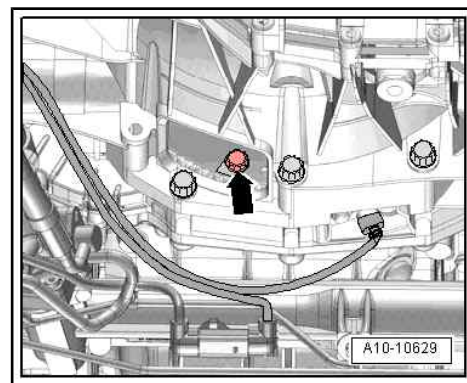
Note

The following step is essential to ensure that the clutch module makes even and proper contact on the drive plate and does not cant.

- Turn both front wheels together in one direction until the clutch module has turned through one complete revolution (360°).
- The inspection hole -arrow- should be visible again in the recess on the gearbox housing.

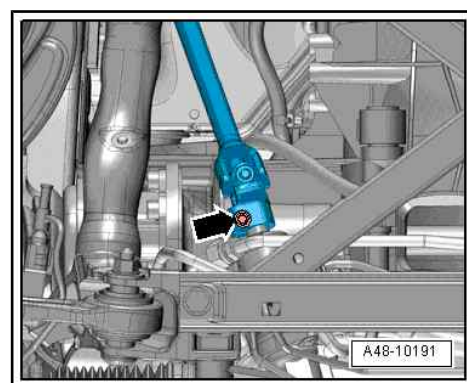


- Secure clutch module to drive plate as follows:
 - Use new bolts.
 - Tightening torque ⇒ [Item 3 \(page 38\)](#)
 - Tighten bolts using ring spanner insert, 16 mm - V.A.G 1332/14- .
- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 180° further in direction of engine rotation.
- Then screw in and tighten second bolt. Tightening torque ⇒ [Item 3 \(page 38\)](#)
- Now install remaining bolts all round, and tighten immediately (also tighten the first bolt installed). Tightening torque ⇒ [Item 3 \(page 38\)](#)

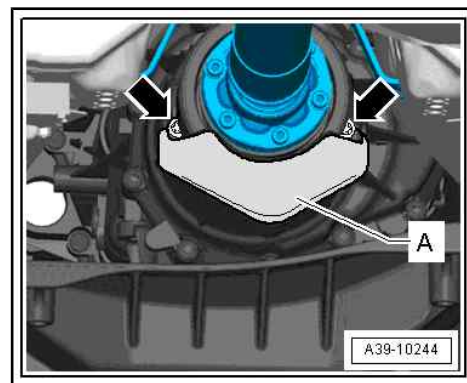


The remaining installation steps are carried out in reverse sequence; note the following:

- Secure universal joint to steering rack ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



- If fitted, install heat shield for propshaft -A- and tighten bolts -arrows- to 25 Nm.
- Install catalytic converter (right-side) ⇒ Rep. gr. 26 ; Emission control system; Removing and installing catalytic converter .
- Install front silencers (left and right) ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Removing and installing front silencer .
- Perform stress-free alignment of exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Stress-free alignment of exhaust system .



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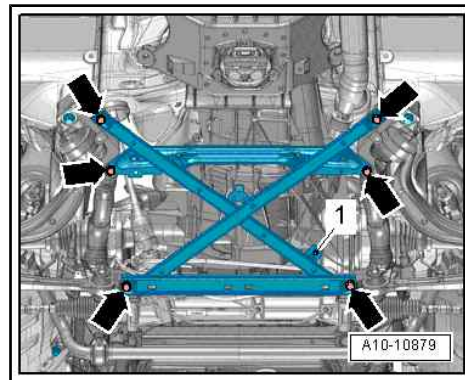
- Install subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .
- Check gear oil level in gearbox ⇒ [page 199](#) .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Install plenum chamber partition panel ⇒ General body repairs, exterior; Rep. gr. 50 ; Bulkhead; Exploded view - plenum chamber partition panel .
- Observe measures required after connecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

Overvoltage can cause irreparable damage to control units.

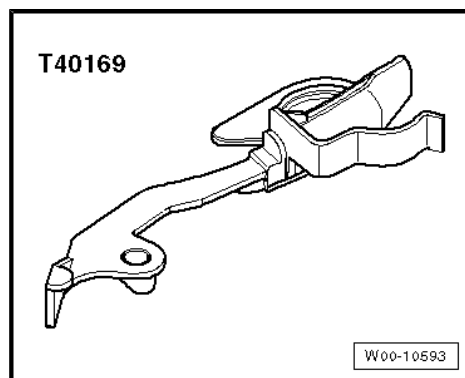
- ◆ *Do not use charger for boost starting.*



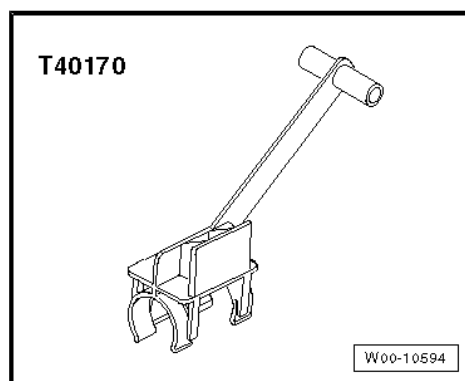
2.2.3 Installing gearbox - Audi A4, A5 with 4-cyl. TDI engine, PR-TH3/TM4

Special tools and workshop equipment required

- ◆ Assembly aid - T40169-



- ◆ Transportation lock - T40170-



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Procedure



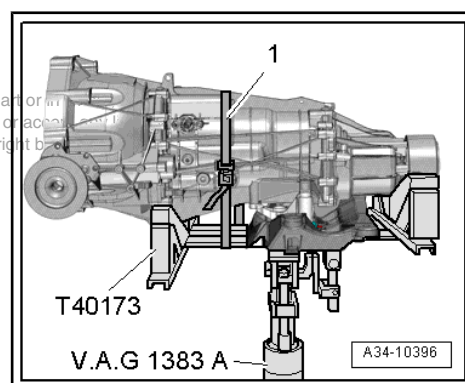
Note

- ◆ *Renew bolts which are tightened by turning through a specified angle. The aluminium bolts securing the engine to the gearbox can be used twice only.*
- ◆ *Renew self-locking nuts and bolts, and seals, O-rings and gaskets.*
- ◆ *Secure all hose connections with the correct hose clips (as original equipment); refer to ⇒ *Electronic parts catalogue* .*
- ◆ *Re-attach all cable ties at the same locations when re-installing.*

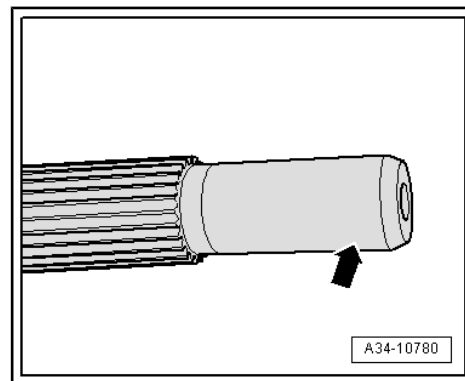
Tightening torques for installing gearbox ⇒ [page 188](#)

- Position gearbox on gearbox support - T40173- and secure with tensioning strap -1-, as shown in illustration.

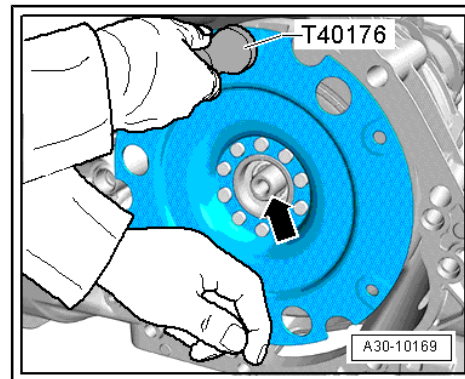
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- Check input shaft for scoring around bearing in drive plate -arrow-. Renew needle bearing in drive plate if necessary ⇒ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate .



- If removed previously, install clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



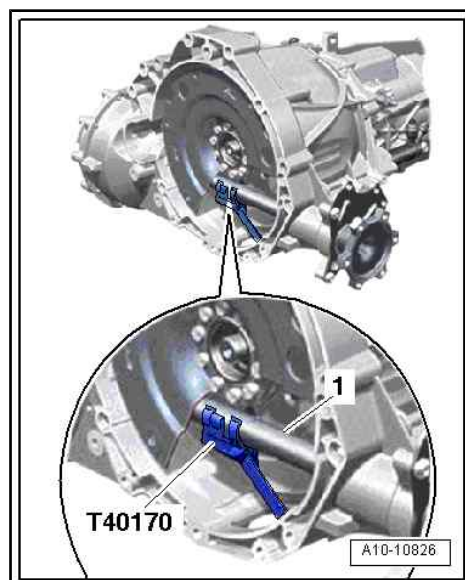
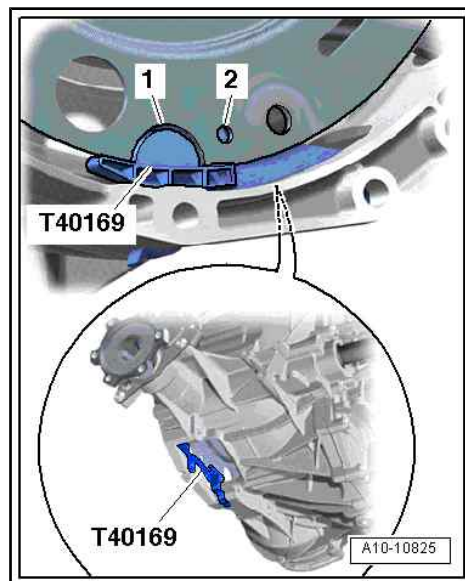
- The following preparations must be made before joining the engine and gearbox:
- Insert assembly aid - T40169- between gearbox housing and clutch module from below, as shown in illustration.
- The assembly aid - T40169- must engage in the semi-circular recess -1- and in the inspection hole -2-.



Note

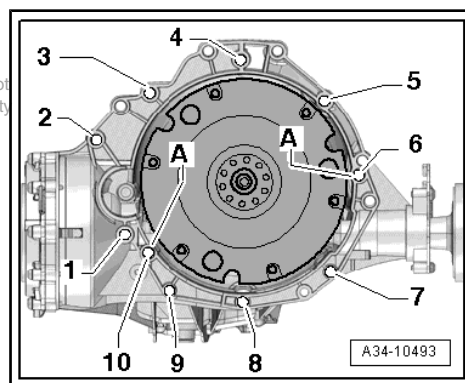
There is only one inspection hole at the periphery; turn the clutch module accordingly.

- Insert pin of assembly aid into hole on gearbox housing.
- Insert transportation lock - T40170- into gearbox housing from below and clamp onto flange shaft -1-.

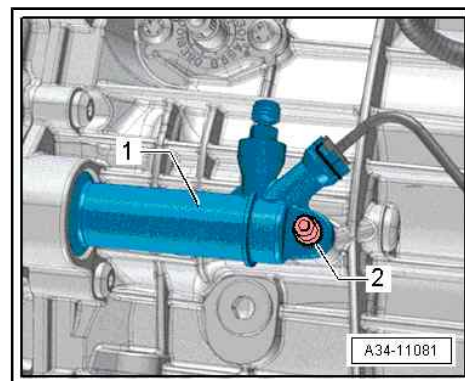


- Check that dowel sleeves -A- for centralising engine/gearbox are in the cylinder block; install any missing dowel sleeves.

- Check whether aluminium bolts -2...10- can be reused for engine/gearbox connection and mark bolts if necessary
⇒ [page 190](#) .



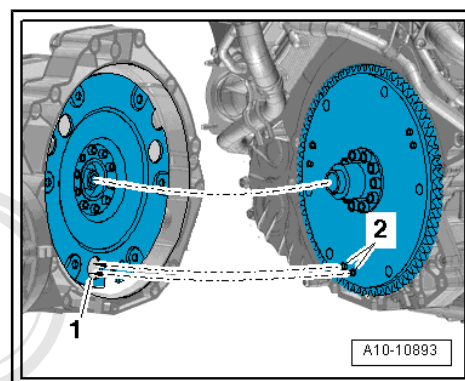
- Raise gearbox just far enough to be able to insert clutch slave cylinder -1-.
- Tighten bolt -2-. Tightening torque ➔ [Item 17 \(page 23\)](#)



Note

The next step is only required if a drive plate with locating pins -2- is installed.

- In addition, align drive plate with clutch module so that locating pins -2- (if provided) on drive plate can engage in large holes -1- on clutch module.

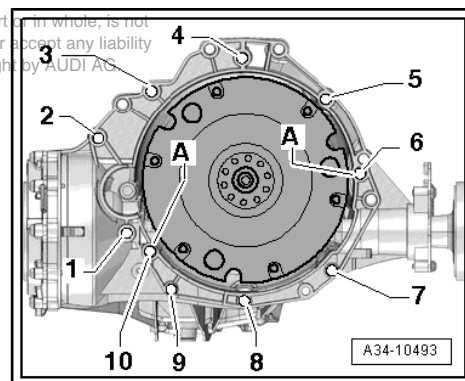


Caution

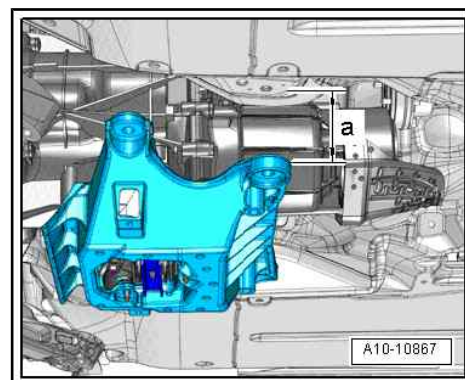
An incorrectly installed clutch causes functional problems.

- ◆ **If the locating pins on the drive plate -2- are not located in the holes on the clutch module -1-, this will lead to considerable functional problems of the clutch.**

- Join gearbox with engine and tighten bolts -7...10-. Tightening torques ➔ [page 190](#)



- Raise gearbox using engine and gearbox jack - V.A.G 1383 A- initially only until dimension -a- is reached between tunnel cross member and body.
- Dimension -a- = 80 mm (minimum)

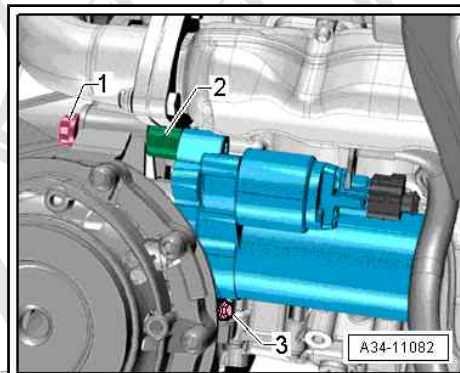


- Fit starter and install bolt -3- from engine side hand-tight.
- Fit spacer sleeve -2- between starter and gearbox, push through bolt -1- and screw in.
- Tighten starter bolts -1- and -3-. Tightening torques
⇒ [page 190](#)



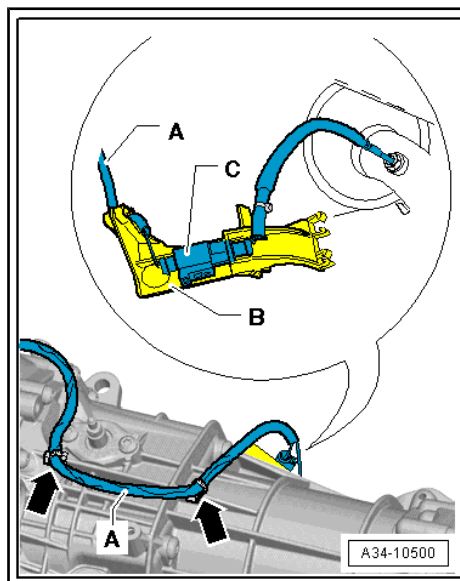
Note

- ◆ Install bolt -1- and spacer sleeve -2- from above, from where plenum chamber partition panel was previously removed.
- ◆ Use stepladder - VAS 5085- .

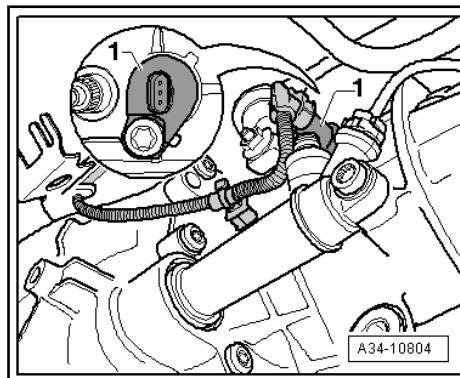


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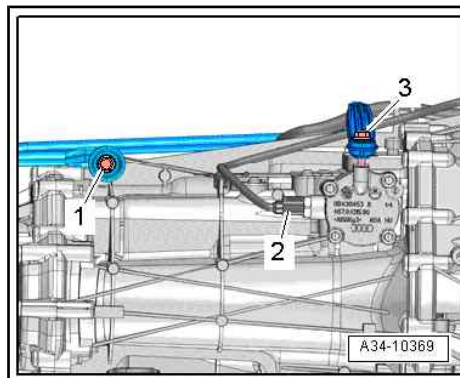
- Clip bracket -B- with electrical connector -C- for exhaust gas temperature sender 4 - G648- onto gearbox.
- Secure electrical wire -A- on gearbox -arrows-.



- Secure all electrical wiring in original position on gearbox again.

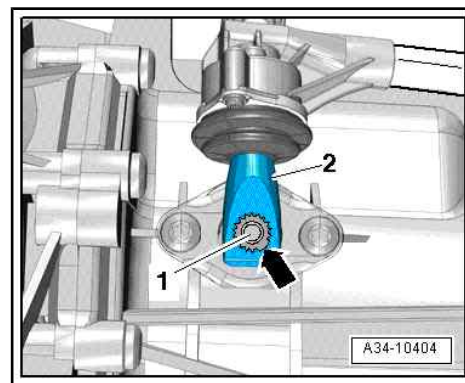


- Secure push rod -1- ⇒ [Item 27 \(page 45\)](#) .
- Plug in electrical connector -2- at gear detector switch - F208- and gear detection sensor - G604- .

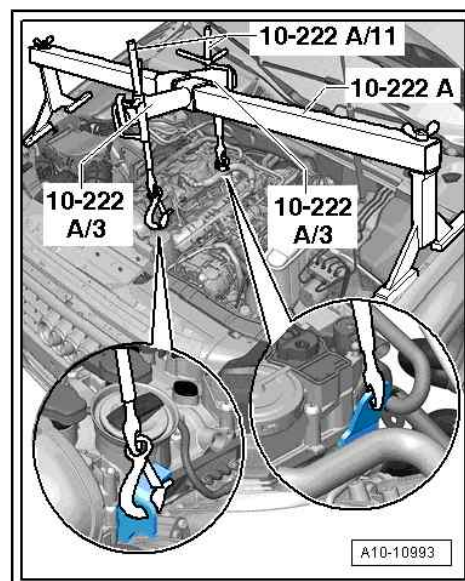


Install gearbox selector lever as follows:

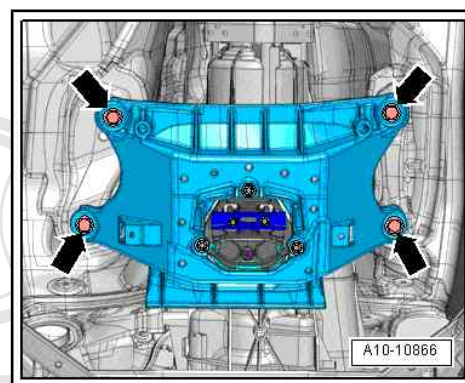
- Gearbox selector lever -2- can only be fitted onto selector shaft -1- in one position (gap in splines -arrow-).
- Secure gearbox selector lever -2-. Tightening torque
⇒ [Item 18 \(page 45\)](#)



- Disengage spindles - 10 - 222 A /11- .



- Raise gearbox further and tighten bolts -arrows- for tunnel cross member ⇒ [page 195](#) .
- Detach engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- from gearbox.
- Remove support bracket - 10 - 222 A- .



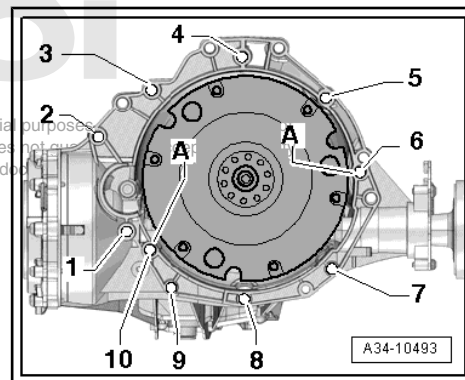
- Insert and tighten remaining engine/gearbox securing bolts -3 ... 6-. Tightening torques ⇒ [page 190](#)



Note

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Bolts -3- and -5- also secure brackets for pipes and/or wiring.

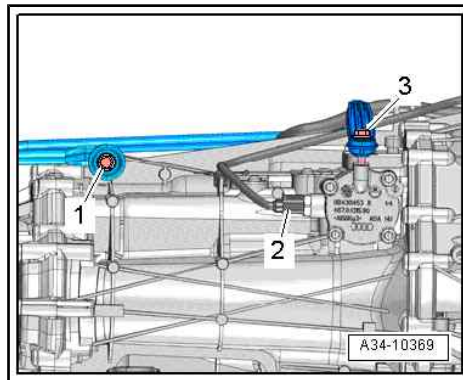


- Secure connecting rod -3- from above, from where plenum chamber partition panel was previously removed ⇒ [page 44](#) .



Note

Items marked -2- and -3- can be disregarded.

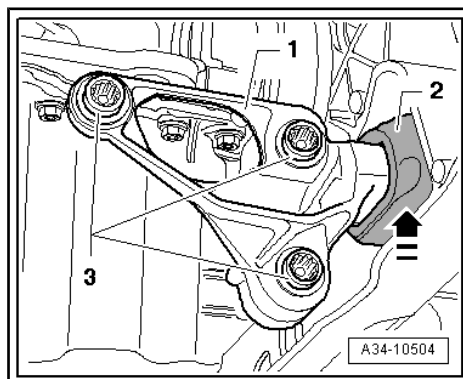


- If fitted, push torque reaction support -1- upwards in direction of -arrow- until it makes contact with cross member.



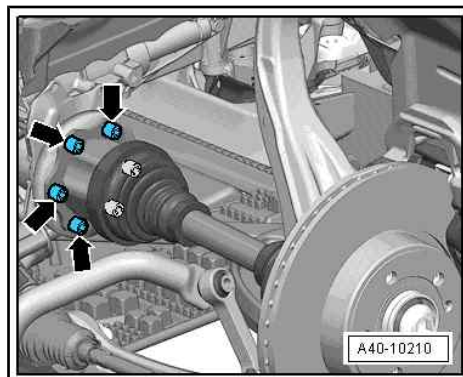
Note

Bump stop -2- must be in contact with cross member without play, but must not be under tension.

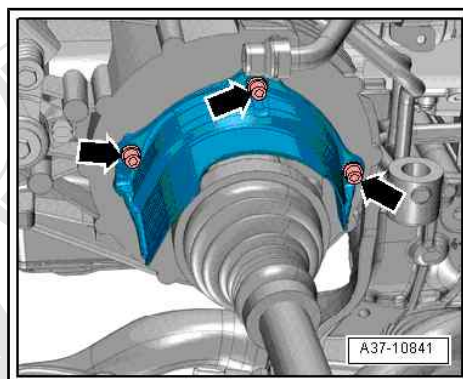


- Then tighten bolts -3- to specified torque ⇒ Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings .

- Secure drive shafts (left and right) to flange shafts of gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Exploded view - drive shaft .



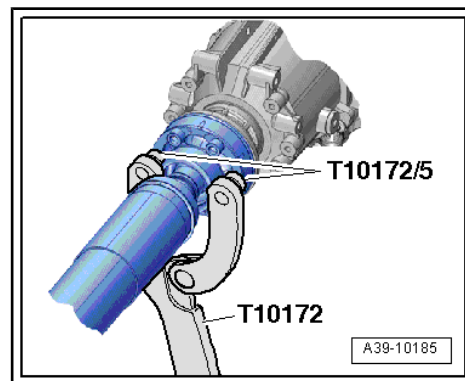
- Install heat shield for drive shaft ⇒ [page 189](#) .
- If previously removed, install subframe shield (left and right).



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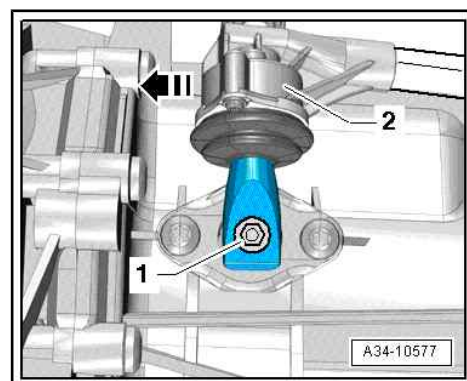
- Install propshaft/secure to gearbox ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .

Block the propshaft. To do so, apply counterhold tool - T10172- with -T10172/5- to propshaft bolts on gearbox or rear final drive.



Tightening sequence – clutch module to drive plate

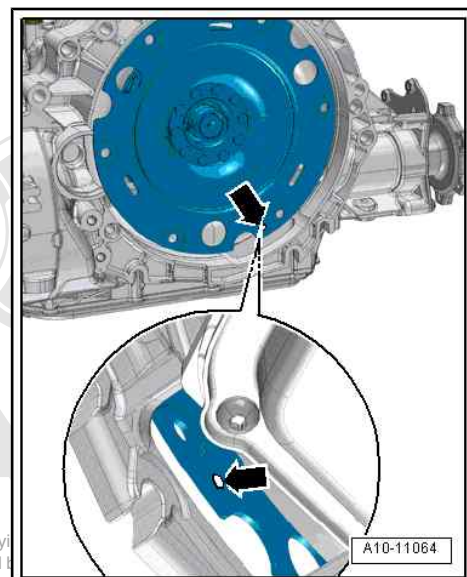
- Remove transportation lock - T40170- and assembly aid - T40169- .
- Engage 6th gear by pulling out selector shaft -1- and shifting gearbox selector lever -2- forwards in direction of -arrow-.



Note

The following step is essential to ensure that the clutch module makes even and proper contact on the drive plate and does not cant.

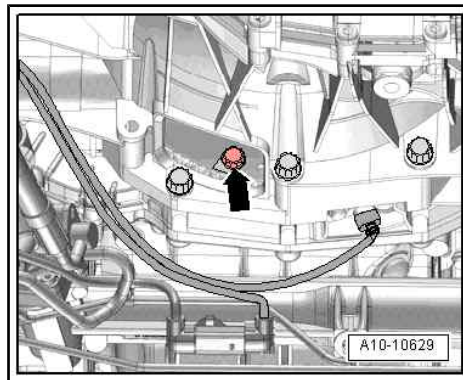
- Turn both front wheels together in one direction until the clutch module has turned through one complete revolution (360°).
- The inspection hole -arrow- should be visible again in the recess on the gearbox housing.



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Secure clutch module to drive plate as follows:

- Use new bolts.
- Tightening torque ⇒ [Item 3 \(page 38\)](#)
- Tighten bolts using ring spanner insert, 16 mm - V.A.G 1332/14- .
- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 120° further in direction of engine rotation and install second bolt hand-tight (2 Nm).
- Turn clutch module 120° further in direction of engine rotation.
- Then screw in and tighten third bolt. Tightening torque ⇒ [Item 3 \(page 38\)](#)
- Now tighten the remaining two bolts. Tightening torque ⇒ [Item 3 \(page 38\)](#)



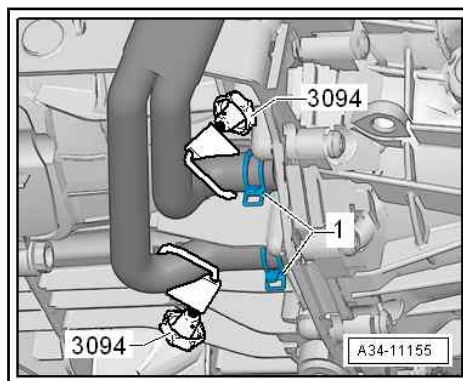
Vehicles with gear oil heating

- Fit coolant hoses onto connections on gearbox and secure with spring-type clips -1-.
- Remove hose clamps, up to 25 mm - 3094- .

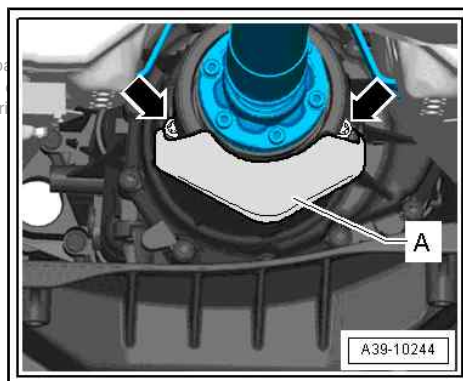
Continued for all vehicles

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

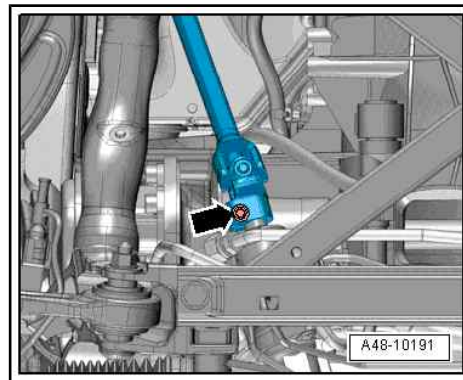
- Assemble exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install plenum chamber partition panel ⇒ General body repairs, exterior; Rep. gr. 50 ; Bulkhead; Exploded view - plenum chamber partition panel .
- If removed previously, install body brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Suspension strut, upper links; Exploded view - suspension strut, upper links .
- If removed previously, install air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Exploded view - air cleaner housing .
- Fill up with coolant ⇒ Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .
- If fitted, install heat shield for propshaft -A- and tighten bolts -arrows- to 25 Nm.



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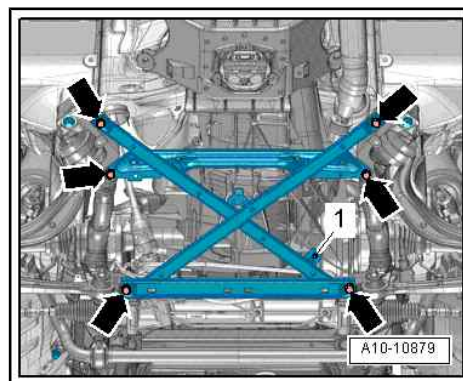
- Secure intermediate steering shaft to steering rack ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



- Install subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .

A5 Cabriolet:

- Install diagonal struts (left and right) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .



Continued for all vehicles:

- Check gear oil level in gearbox ⇒ [page 199](#) .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Observe measures required after connecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

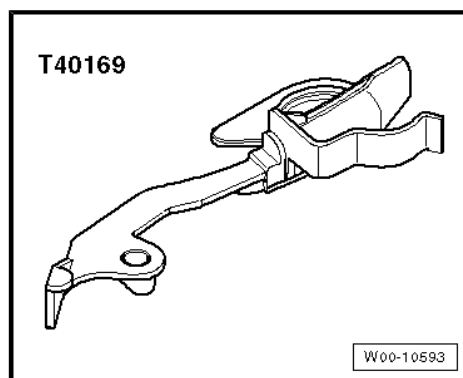
Overvoltage can cause irreparable damage to control units.
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◆ **Do not use charger for boost starting.**

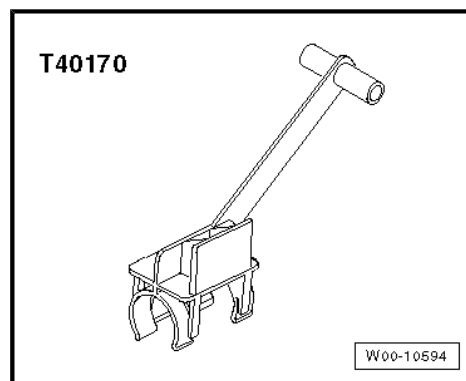
2.2.4 Installing gearbox - Audi A4, A5, Q5 with 4-cyl. TDI engine (EA 288 - generation I), PR-TD1

Special tools and workshop equipment required

- ◆ Assembly aid - T40169-



◆ Transportation lock - T40170-



Procedure

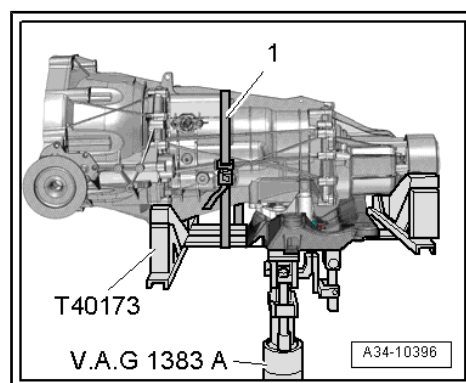


Note

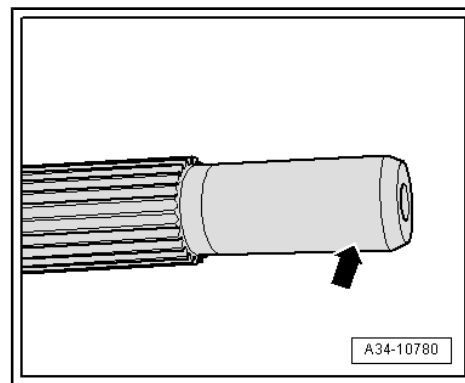
- ◆ *Renew bolts which are tightened by turning through a specified angle. The aluminium bolts securing the engine to the gearbox can be used twice only.*
- ◆ *Renew self-locking nuts and bolts, and seals, O-rings and gaskets.*
- ◆ *Hose connections and air pipes and hoses must be free from oil and grease before fitting.*
- ◆ *Secure all hose connections with the correct hose clips (as original equipment); refer to ➔ Electronic parts catalogue .*
- ◆ *To ensure that the charge air hoses can be connected securely, you must spray the screws on used screw-type clips with rust remover prior to installation.*
- ◆ *Re-attach all cable ties at the same locations when re-installing.*

Tightening torques for installing gearbox ➔ **page 188**

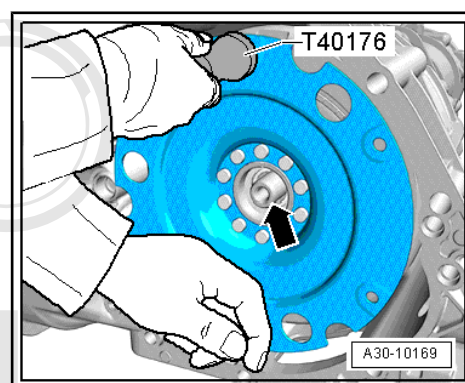
- Position gearbox on gearbox support - T40173- and secure with tensioning strap -1-, as shown in illustration.



- Check input shaft for scoring around bearing in drive plate -arrow-. Renew needle bearing in drive plate if necessary ⇒ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate .



- If removed previously, install clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



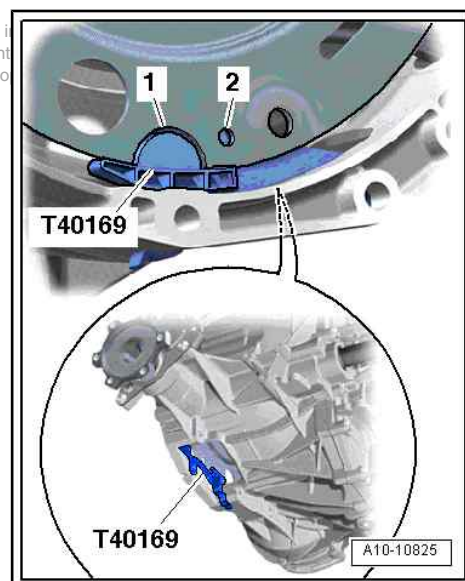
- The following preparations must be made before joining the engine and gearbox: permitted unless authorised by AUDI AG. AUDI AG does not guarantee with respect to the correctness of information in this document. Co
- Insert assembly aid - T40169- between gearbox housing and clutch module from below, as shown in illustration.
- The assembly aid - T40169- must engage in the semi-circular recess -1- and in the inspection hole -2-.



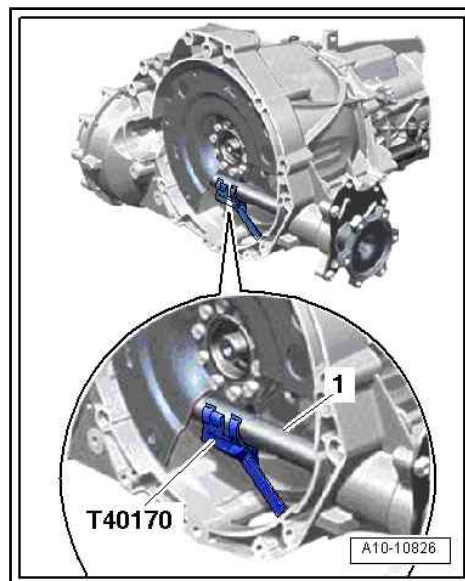
Note

There is only one inspection hole at the periphery; turn the clutch module accordingly.

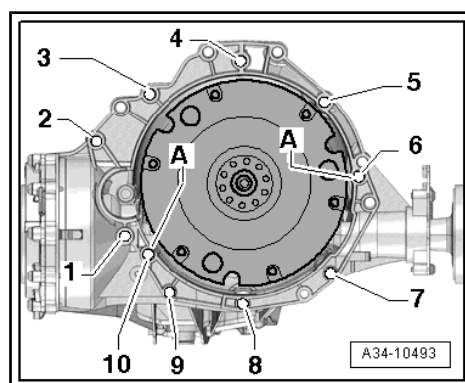
- Insert pin of assembly aid into hole on gearbox housing.



- Insert transportation lock - T40170- into gearbox housing from below and clamp onto flange shaft -1-.



- Check that dowel sleeves -A- for centralising engine/gearbox are in the cylinder block; install any missing dowel sleeves.
- Check whether aluminium bolts -2 ... 10- can be reused for engine/gearbox connection and mark bolts if necessary
⇒ [page 190](#) .



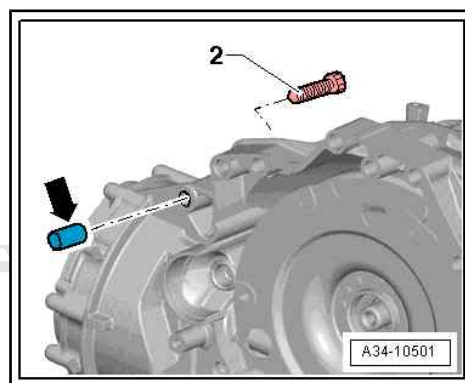
- Insert top starter bolt -2- in gearbox and slide on spacer sleeve -arrow-.



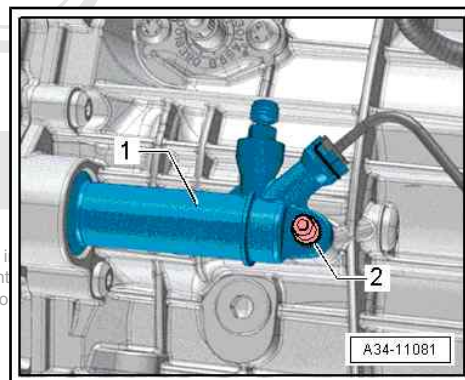
Caution

The spacer sleeve -arrow- can no longer be fitted after the gearbox has been installed!

- The spacer sleeve -arrow- must be in its installation position when the gearbox is installed.



- Raise gearbox just far enough to be able to insert clutch slave cylinder -1-.
- Tighten bolt -2-. Tightening torque ⇒ [Item 17 \(page 23\)](#)



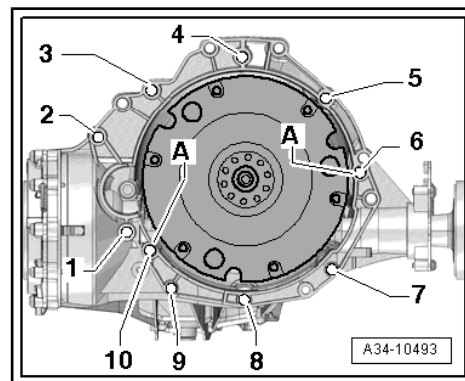
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- Join gearbox with engine and tighten bolts -3 ... 10-. Tightening torques ➔ [page 190](#)

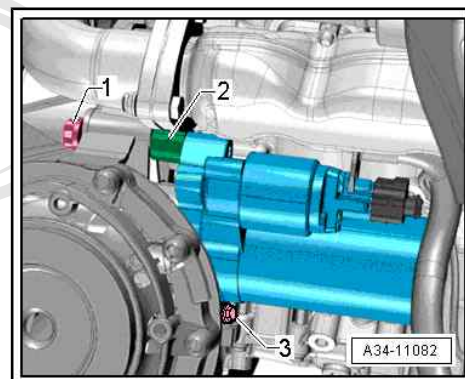


Note

Bolts -3- and -5- can also be used to secure brackets for pipes and/or wiring.

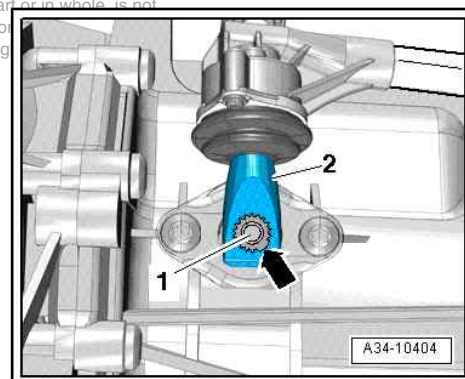


- Position starter and screw in bolt -1- (hand-tight).
- Spacer sleeve -2- should be located between starter and gearbox.
- Screw in starter bolts -3-.
- Tighten starter bolts -1- and -3-. Tightening torques ➔ [page 190](#)

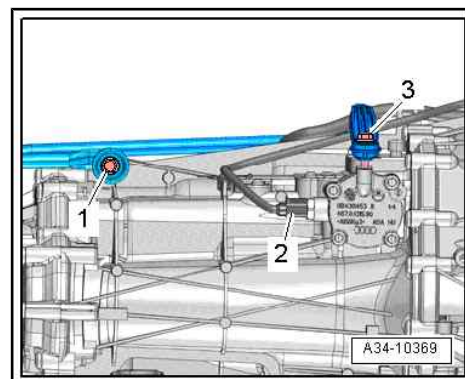


Install gearbox selector lever as follows:

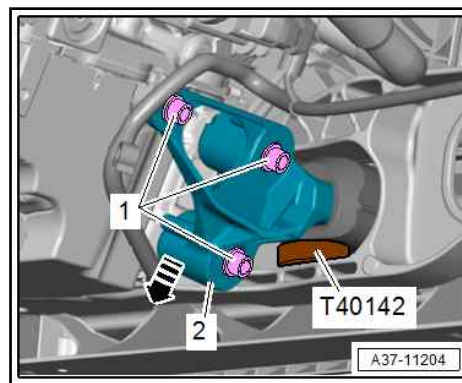
- Gearbox selector lever -2- can only be fitted onto selector shaft -1- in one position (gap in splines -arrow-).
- Secure gearbox selector lever -2-. Tightening torque ➔ [Item 18 \(page 45\)](#)



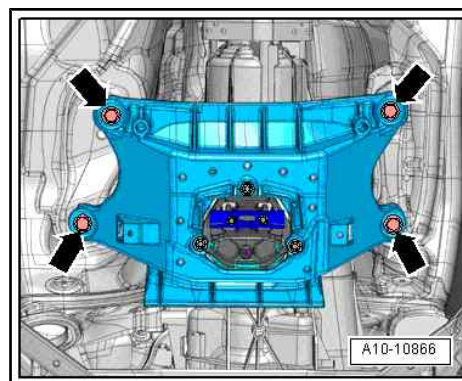
- Secure all electrical wiring in original position on gearbox again.
- Attach connector -2- at gear detection sensor - G604- .
- Secure push rod -1- ➔ [Item 27 \(page 45\)](#) .
- Secure connecting rod -3- ➔ [Item 25 \(page 45\)](#) .



- Take out piston compressing tool - T40142- .
- Slacken bolts -1- for torque reaction support -2-.



- Raise gearbox and tighten bolts -arrows- for tunnel cross member ➔ [page 195](#) .
- Detach engine and gearbox jack - V.A.G 1383 A- with gearbox support - T40173- from gearbox.



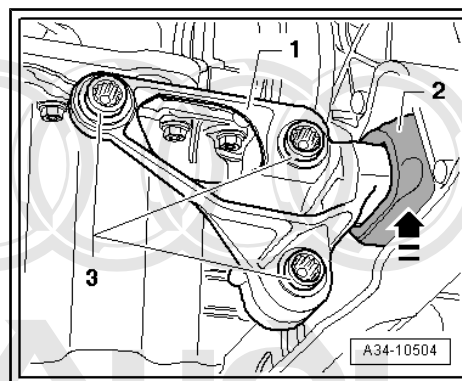
- Push torque reaction support -1- upwards in direction indicated by -arrow- until it makes contact with cross member.



Note

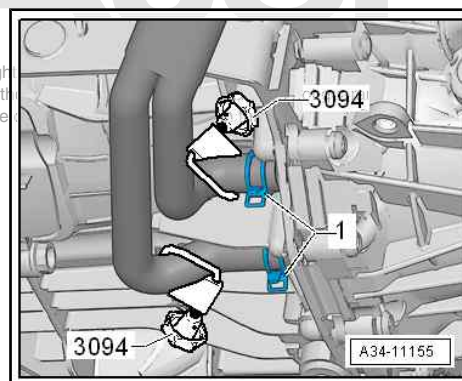
Bump stop -2- must be in contact with cross member without play, but must not be under tension.

- Then tighten bolts -3- to specified torque ➔ Rep. gr. 10 ; Assembly mountings; Exploded view - assembly mountings .



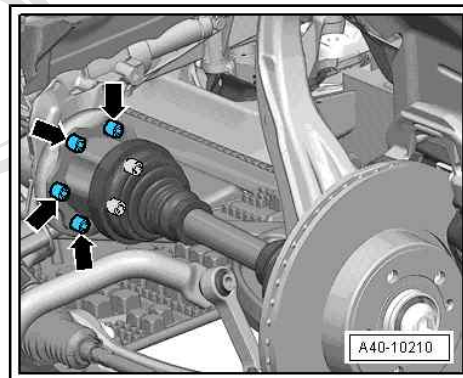
Vehicles with gear oil heating

- Fit coolant hoses onto connections on gearbox and secure by copyright permitted unless authorisation is granted by Audi AG. with respect to the whole, is not liable for any liability AUDI AG.
- Remove hose clamps, up to 25 mm - 3094- .

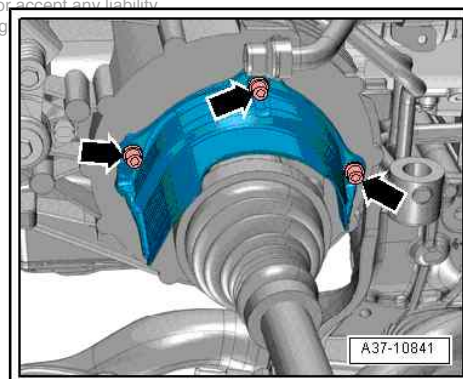


Continued for all vehicles

- Secure drive shafts (left and right) to flange shafts of gearbox
⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft;
Exploded view - drive shaft .

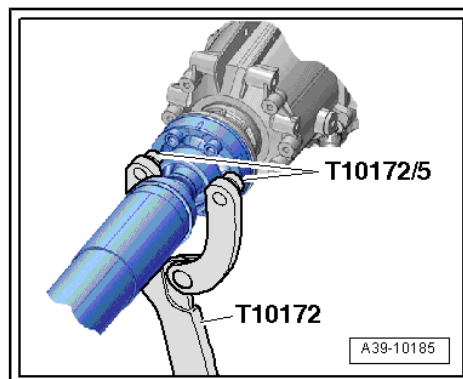


- Install heat shield for drive shaft ➤ [page 192](#)
- If originally fitted, install subframe shield (left and right) ⇒
Running gear, axles, steering; Rep. gr. 40 ; Subframe; Ex-
ploded view - subframe .



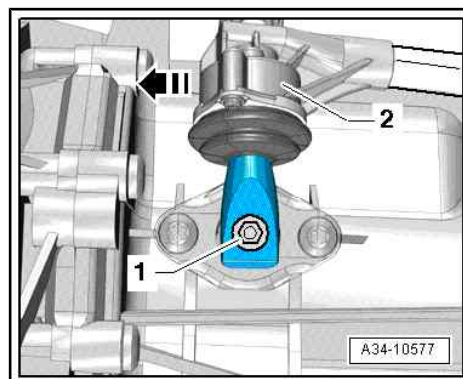
- Install propshaft/secure to gearbox ⇒ Rear final drive; Rep.
gr. 39 ; Propshaft; Exploded view - propshaft .

Block the propshaft. To do so, apply counterhold tool - T10172-
with -T10172/5- to propshaft bolts on rear final drive.



Tightening sequence – clutch module to drive plate

- Remove transportation lock - T40170- and assembly aid -
T40169- .
- Engage 6th gear by pulling out selector shaft -1- and shifting
gearbox selector lever -2- forwards in direction of -arrow-.

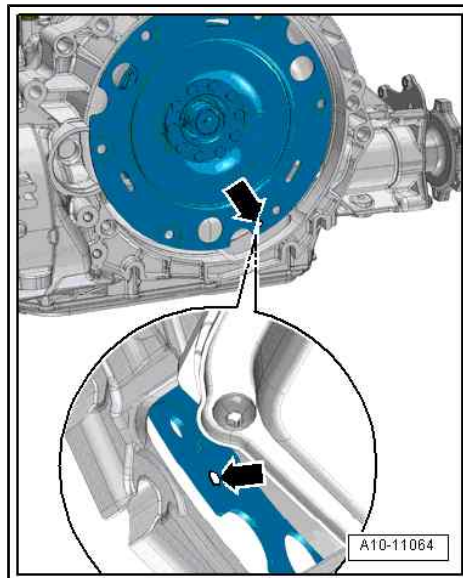




Note

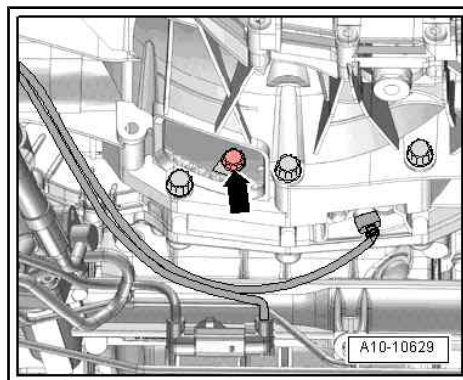
The following step is essential to ensure that the clutch module makes even and proper contact on the drive plate and does not cant.

- Turn both front wheels together in one direction until the clutch module has turned through one complete revolution (360°).
- The inspection hole -arrow- should be visible again in the recess on the gearbox housing.



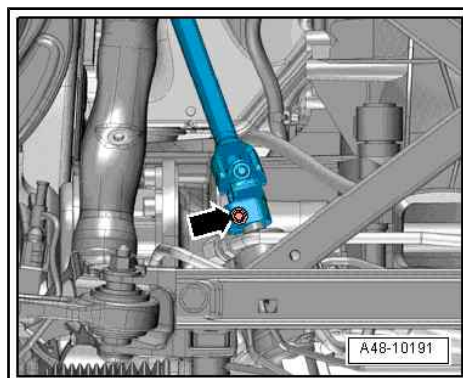
Secure clutch module to drive plate as follows:

- Use new bolts.
- Tightening torque ⇒ [Item 3 \(page 38\)](#)
- Tighten bolts using ring spanner insert, 16 mm - V.A.G 1332/14- .
- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 120° further in direction of engine rotation and install second bolt hand-tight (2 Nm).
- Turn clutch module 120° further in direction of engine rotation.
- Then screw in and tighten third bolt. Tightening torque ⇒ [Item 3 \(page 38\)](#)
- Now tighten the remaining two bolts. Tightening torque ⇒ [Item 3 \(page 38\)](#)



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

- Assemble exhaust system and perform stress-free alignment ⇒ Rep. gr. 26; Exhaust pipes/silencers; Exploded view - silencers .
- Secure intermediate steering shaft to steering rack ⇒ Running gear, axles, steering; Rep. gr. 48; Steering column; Exploded view - steering column .



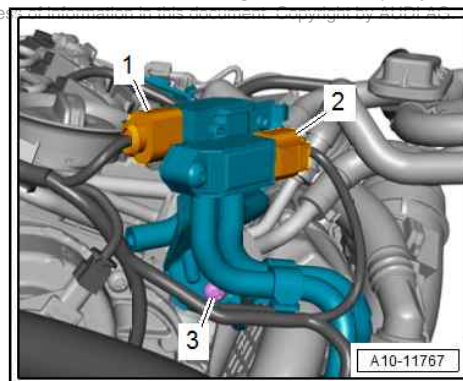
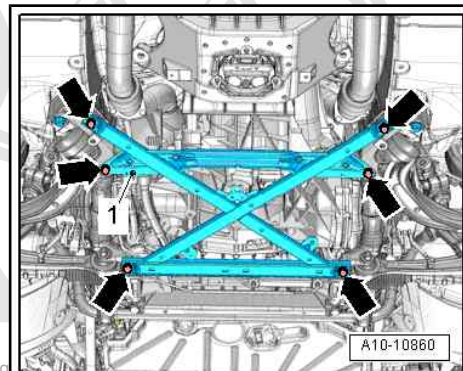
- Install subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .

A5 Cabriolet:

- Install diagonal struts (left and right) ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .

Continued for all vehicles:

- Check gear oil level in gearbox ⇒ [page 199](#) .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Secure bracket for exhaust gas pressure sensor 1 - G450- and pressure differential sender - G505- with bolt -3-; tightening torque 8 Nm.
- Plug in electrical connectors -1, 2-.
- Fill up with coolant ⇒ Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .
- Install engine cover panel.
- Observe measures required after connecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

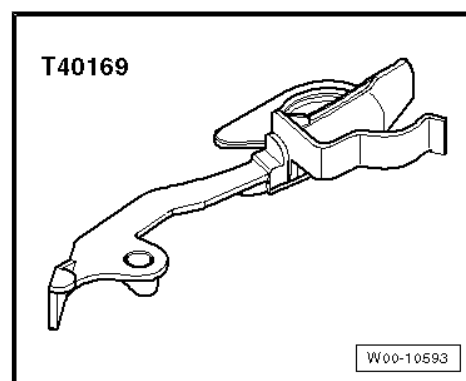
Overvoltage can cause irreparable damage to control units.

- ◆ *Do not use charger for boost starting.*

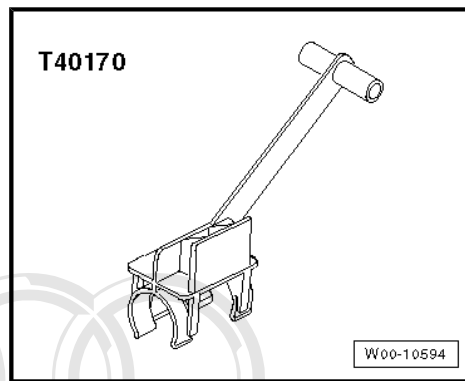
2.2.5 Installing gearbox - Audi Q5 with 2.0 ltr. TFSI engine and 4-cyl. TDI engine, PR-TH3/TM4

Special tools and workshop equipment required

- ◆ Assembly aid - T40169-



◆ Transportation lock - T40170-



Procedure



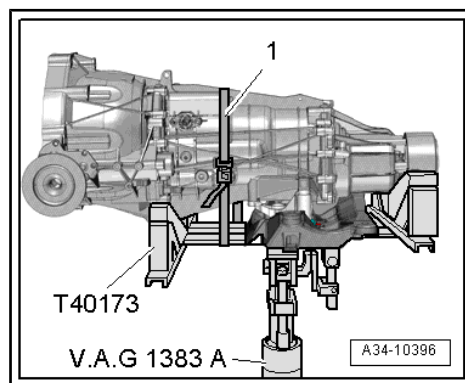
Note

- ◆ *Renew bolts which are tightened by turning through a specified angle. The aluminium bolts securing the engine to the gearbox can be used twice only.*
- ◆ *Renew self-locking nuts and bolts, and seals, O-rings and gaskets.*
- ◆ *Hose connections and air pipes and hoses must be free from oil and grease before fitting.*
- ◆ *Secure all hose connections with the correct hose clips (as original equipment); refer to ➔ Electronic parts catalogue .*
- ◆ *To ensure that the charge air hoses can be connected securely, you must spray the screws on used screw-type clips with rust remover prior to installation.*
- ◆ *Re-attach all cable ties at the same locations when re-installing.*

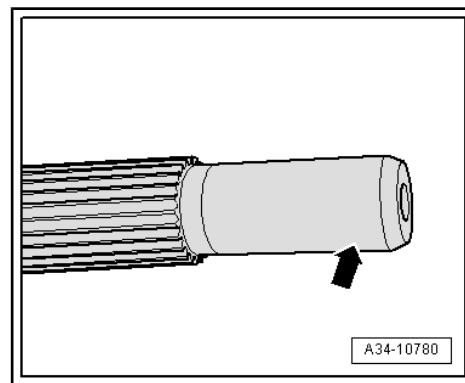
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Tightening torques for installing gearbox ➔ **page 191**

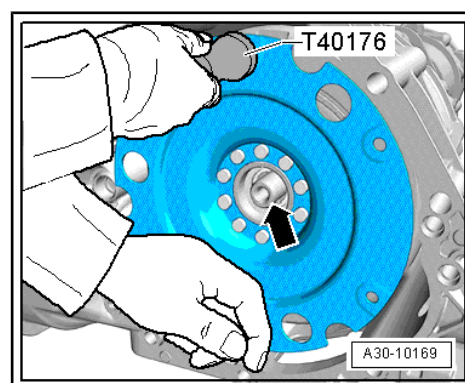
- Position gearbox on gearbox support - T40173- and secure with tensioning strap -1-, as shown in illustration.



- Check input shaft for scoring around bearing in drive plate -arrow-. Renew needle bearing in drive plate if necessary ⇒ Rep. gr. 13 ; Cylinder block (gearbox end); Renewing needle bearing in drive plate .



- If removed previously, install clutch module ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module .



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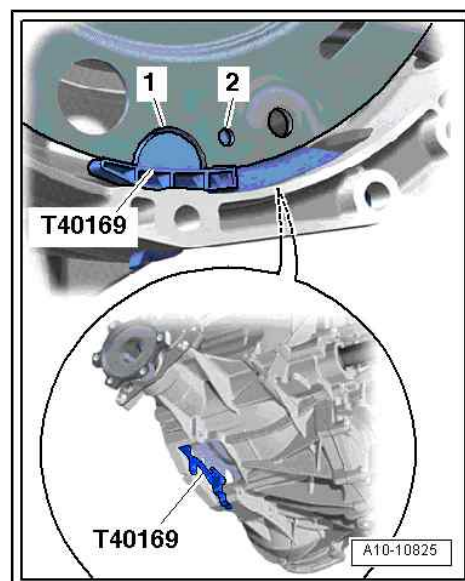
- The following preparations must be made before joining the engine and gearbox:
- Insert assembly aid - T40169- between gearbox housing and clutch module from below, as shown in illustration.
- The assembly aid - T40169- must engage in the semi-circular recess -1- and in the inspection hole -2-.



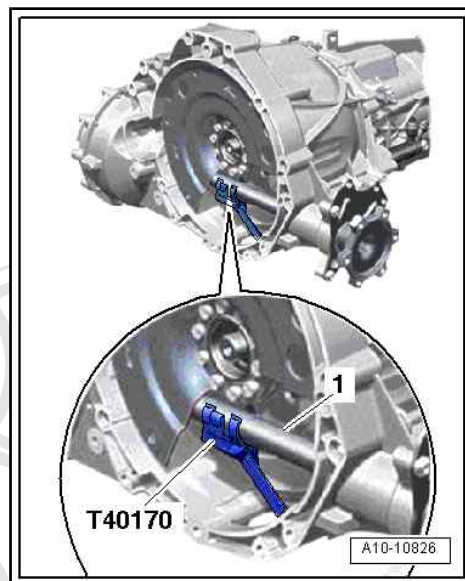
Note

There is only one inspection hole at the periphery; turn the clutch module accordingly.

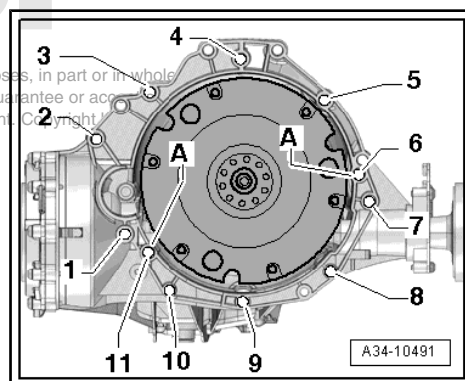
- Insert pin of assembly aid into hole on gearbox housing.



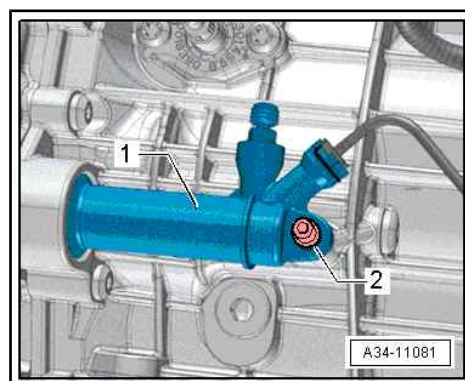
- Insert transportation lock - T40170- into gearbox housing from below and clamp onto flange shaft -1-.



- Check that dowel sleeves -A- for centralising engine/gearbox are in the cylinder block; install any missing dowel sleeves.
- Check whether aluminium bolts -2- can be reused for engine/gearbox connection and mark bolts if necessary
⇒ [page 193](#) .



- Raise gearbox just far enough to be able to insert clutch slave cylinder -1-.
- Tighten bolt -2-. Tightening torque ⇒ [Item 17 \(page 23\)](#)



 Note

The next step is only required if a drive plate with locating pins -2- is installed.

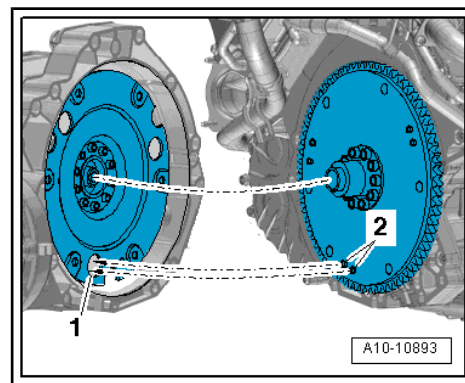
- In addition, align drive plate with clutch module so that locating pins -2- (if provided) on drive plate can engage in large holes -1- on clutch module.



Caution

An incorrectly installed clutch causes functional problems.

- ◆ ***If the locating pins on the drive plate -2- are not located in the holes on the clutch module -1-, this will lead to considerable functional problems of the clutch.***

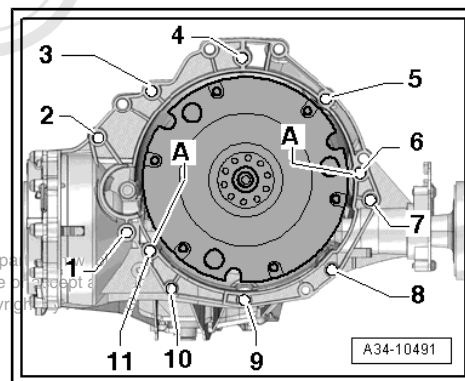


- Join gearbox with engine and tighten bolts -7 ... 11-. Tightening torques ➔ [page 191](#)

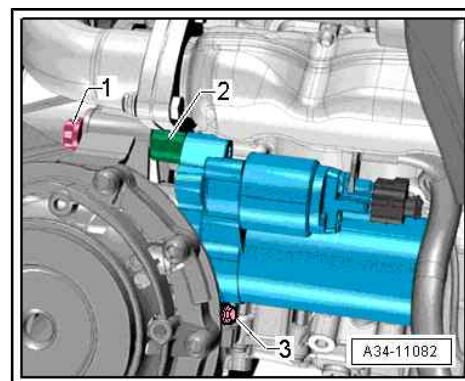
 Note

Bolt -7- is only installed on 4-cylinder TDI engine.

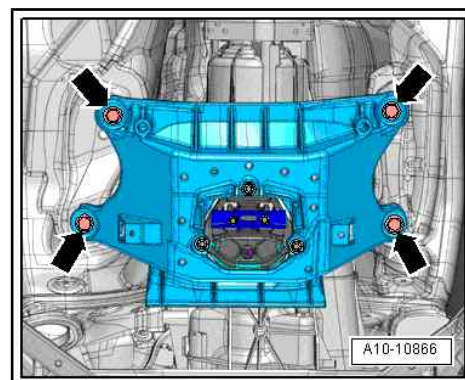
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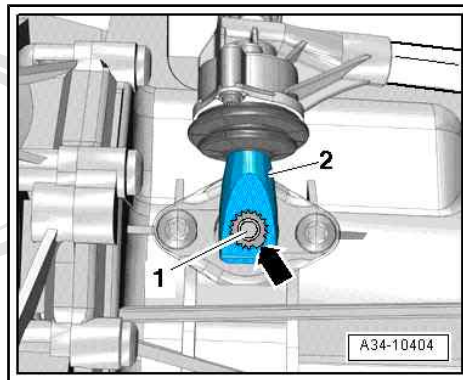
- Fit starter and install bolt -3- from engine side hand-tight.
- Fit spacer sleeve -2- between starter and gearbox, push through bolt -1- and tighten.
- Tighten starter bolts -1- and -3-. Tightening torques ➔ [page 191](#)
- Tighten remaining engine/gearbox securing bolts. Tightening torques ➔ [page 191](#)



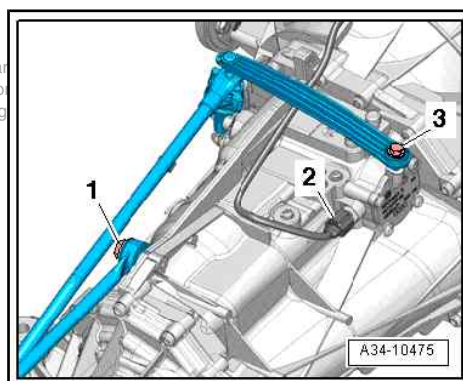
- Tighten bolts for tunnel cross member -arrows- ➔ [page 195](#) .



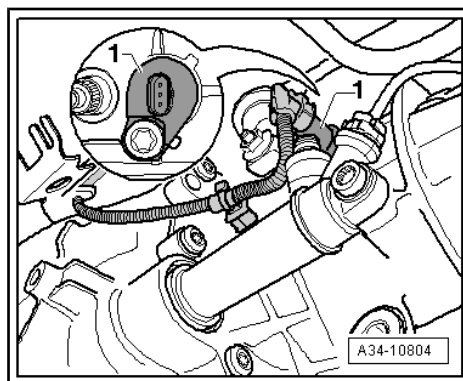
- Install gearbox selector lever -2- as follows:
 - Gearbox selector lever -2- can only be fitted onto selector shaft -1- in one position (gap in splines -arrow-).
- Secure gearbox selector lever -2-. Tightening torque
⇒ [Item 18 \(page 45\)](#)



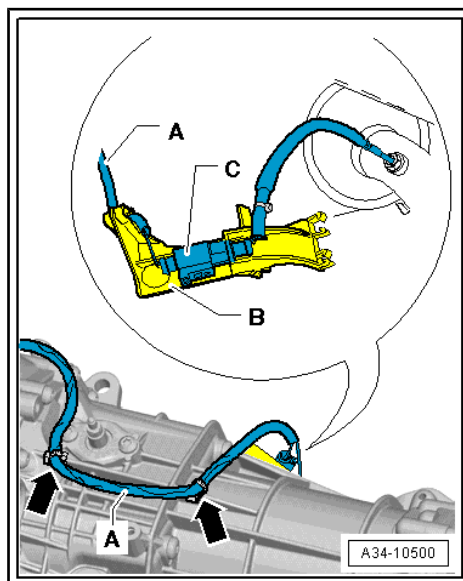
- Secure push rod -1- ⇒ [Item 27 \(page 45\)](#) .
- Secure connecting rod -3- ⇒ [Item 25 \(page 45\)](#) .
- Attach electrical connector -2- at gear detector switch - F208- or gear detection sensor - G604- , and lock in place if necessary.



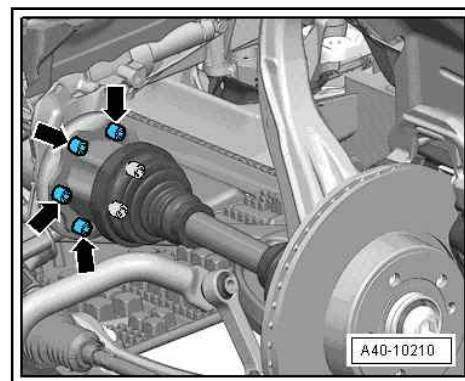
- If fitted, attach connector to gearbox neutral position sender - G701- -1-.



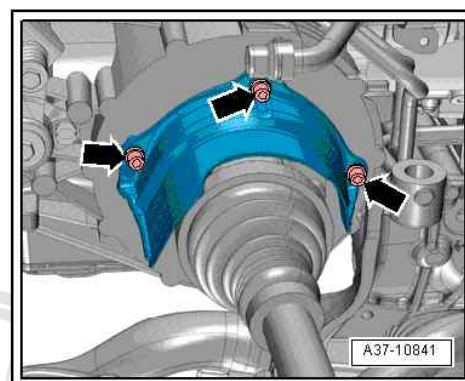
- If fitted, clip bracket -B- with electrical connector -C- for exhaust gas temperature sender 4 - G648- onto gearbox.
- Secure electrical wire -A- on gearbox -arrows-.



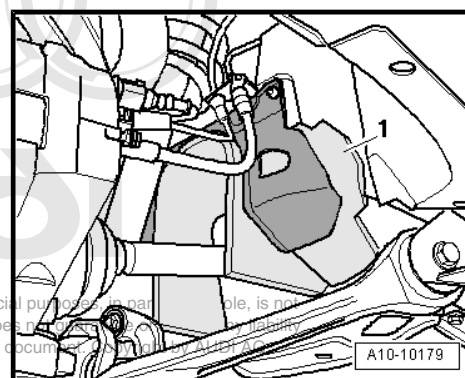
- Secure drive shafts to flange shafts of gearbox ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Exploded view - drive shaft .



- Install heat shield for drive shaft ⇒ [page 192](#) .
- If previously removed, install subframe shield (right-side).

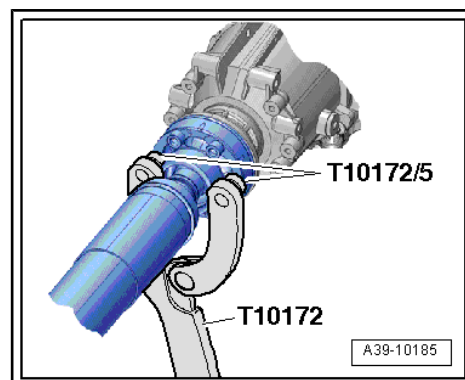


- Install noise insulation -1- in wheel housing (right-side).



- Install propshaft/secure to gearbox ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .

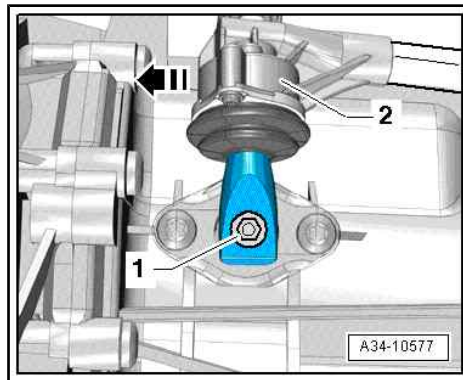
Block the propshaft. To do so, apply counterhold tool - T10172- with -T10172/5- to propshaft bolts on gearbox or rear final drive.



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Tightening sequence – clutch module to drive plate

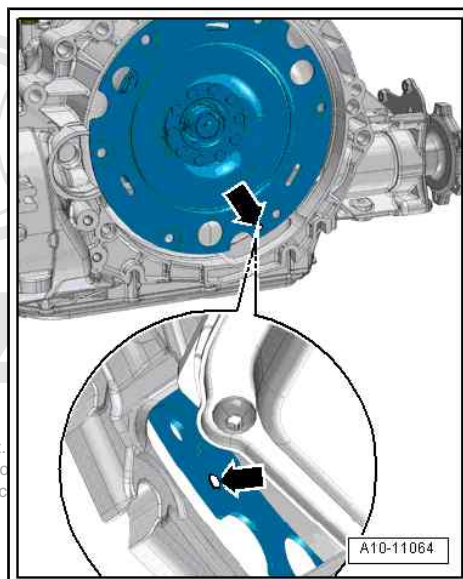
- Remove assembly aid - T40169- and transportation lock - T40170- .
- Engage 6th gear by pulling out selector shaft -1- and shifting gear selector lever -2- forwards in direction of -arrow-.



Note

The following step is necessary to ensure that the clutch module makes even and proper contact on the drive plate and does not cant.

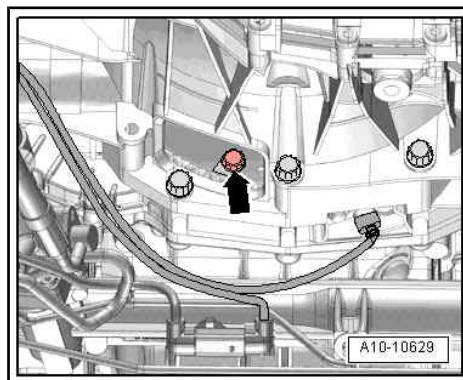
- Turn both front wheels together in one direction until the clutch module has turned through one complete revolution (360°).
- The inspection hole -arrow- should be visible again in the recess on the gearbox housing.



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- Secure clutch module to drive plate as follows:
 - Use new bolts.
 - Tightening torque ⇒ [Item 3 \(page 38\)](#)
 - Tighten bolts using ring spanner insert, 16 mm - V.A.G 1332/14- .
- Install first bolt -arrow- and tighten hand-tight (2 Nm).
- Turn both front wheels so that clutch module turns 120° further in direction of engine rotation and install second bolt hand-tight (2 Nm).
- Turn clutch module 120° further in direction of engine rotation.
- Then screw in and tighten third bolt. Tightening torque ⇒ [Item 3 \(page 38\)](#)
- Now tighten the remaining two bolts. Tightening torque ⇒ [Item 3 \(page 38\)](#)

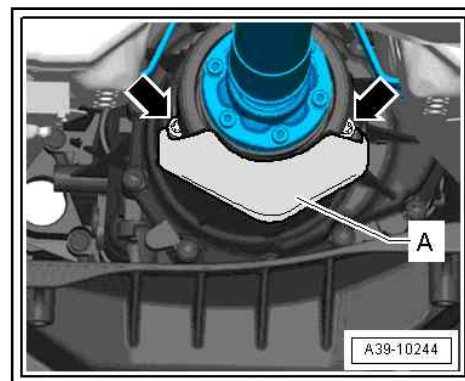


The remaining installation steps are carried out in reverse sequence; note the following:

- If fitted, install heat shield for propshaft -A- and tighten bolts -arrows- to 25 Nm.

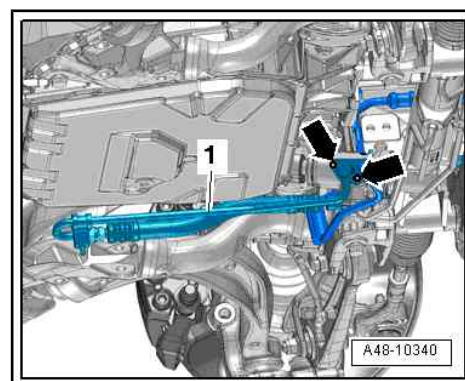
Vehicles with 2.0 ltr. TDI engine

- Install particulate filter and front exhaust pipe ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install air cleaner housing ⇒ Rep. gr. 23 ; Air cleaner; Exploded view - air cleaner housing .



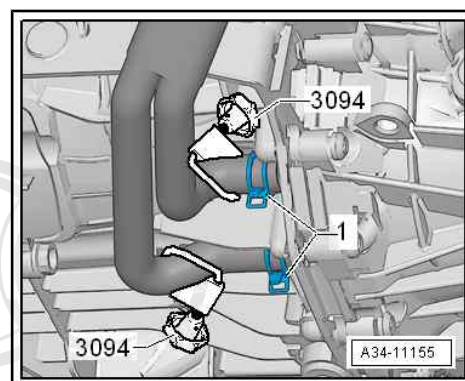
Vehicles with hydraulic power steering

- Install hydraulic lines for power steering ⇒ Running gear, axles, steering; Rep. gr. 48 ; Hydraulic power steering; Exploded view - hydraulic lines, reservoir .



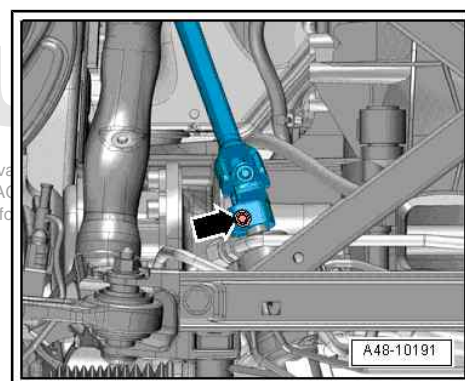
Vehicles with gear oil heating

- Fit coolant hoses onto connections on gearbox and secure with spring-type clips -1-.
- Remove hose clamps, up to 25 mm - 3094- .
- Fill up with coolant ⇒ Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .



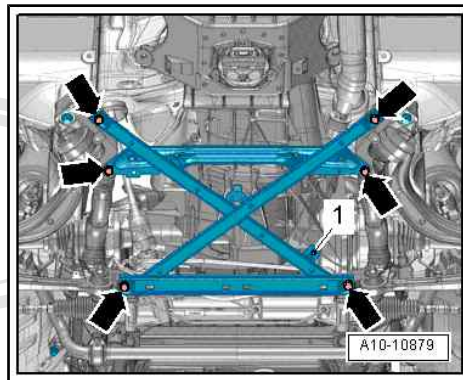
Continued for all vehicles

- Secure intermediate steering shaft to steering rack ⇒ Running gear, axles, steering; Rep. gr. 48 ; Steering column; Exploded view - steering column .



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- Install subframe cross brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Subframe; Exploded view - subframe .
- Check gear oil level in gearbox ⇒ [page 199](#) .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .
- Install body brace ⇒ Running gear, axles, steering; Rep. gr. 40 ; Suspension strut, upper links; Exploded view - suspension strut, upper links .
- Observe measures required after connecting battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .



Caution

Overvoltage can cause irreparable damage to control units.

- ◆ **Do not use charger for boost starting.**

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2.3 Tightening torques for gearbox

⇒ ["2.3.1 Tightening torques for gearbox - Audi A4, Audi A5", page 188](#)

⇒ ["2.3.2 Tightening torques for gearbox - Audi Q5", page 191](#)

2.3.1 Tightening torques for gearbox - Audi A4, Audi A5



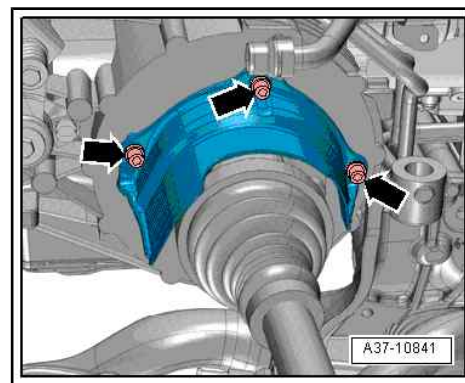
Note

- ◆ *Tightening torques apply only to lightly greased, oiled, phosphated or black-finished nuts and bolts.*
- ◆ *Additional lubricant such as engine or gear oil may be used, but do not use graphite lubricant.*
- ◆ *Do not use parts which have been degreased.*
- ◆ *Tolerance for tightening torques is $\pm 15\%$.*

Component		Nm
Bolts and nuts	M6	9
	M7	15
	M8	20
	M10	40
	M12	65
Except for the following:		

Heat shield for drive shaft - tightening torque

- Tighten bolts -arrows- for drive shaft heat shield to 23 Nm.

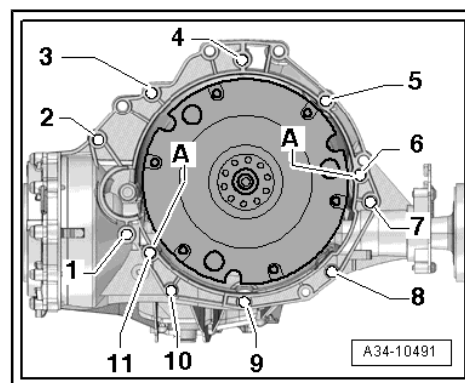


Engine/gearbox attachment (1.8 ltr. and 2.0 ltr. TFSI engines)

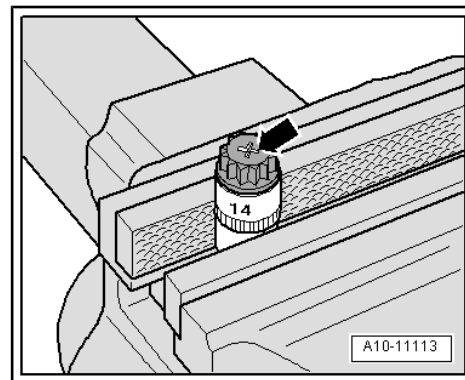
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Item	Bolt	Nm
1 ¹⁾	M10x50 ²⁾	65
2 ³⁾ , 7	M12x100 ⁴⁾⁵⁾	30 + 90°
3 ⁶⁾ , 6	M12x75 ⁴⁾⁵⁾	30 + 90°
4, 5 ⁶⁾	M12x120 ⁴⁾⁵⁾	30 + 90°
8 ... 10	M10x75 ⁴⁾⁵⁾	15 + 90°
11	M12x50 ⁴⁾⁵⁾	30 + 90°
A	Dowel sleeves for centralising	

- 1) Also secures starter.
- 2) Property class 10.9; the steel bolt can be re-used any number of times.
- 3) Also secures starter, with additional spacer sleeve between starter and gearbox.
- 4) Audi A4 vehicles up to vehicle identification no. 8K-9-066499 and Audi A5 vehicles up to vehicle identification no. 8T-9-007999: renew aluminium bolts.
- 5) Audi A4 vehicles from vehicle identification no. 8K-9-066500 onwards and Audi A5 vehicles from vehicle identification no. 8T-9-008000 onwards: aluminium bolts can be used twice only ⇒ [page 189](#).
- 6) Also secures bracket for electrical wiring.

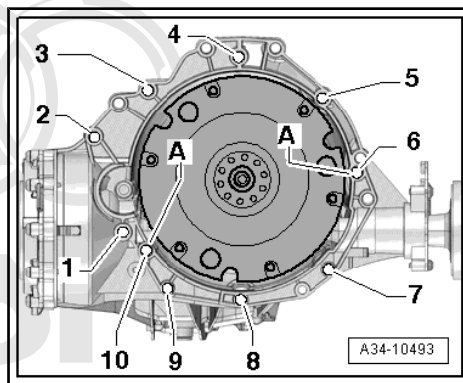


- ◆ Audi A4 vehicles from vehicle identification no. 8K-9-066500 onwards and Audi A5 vehicles from vehicle identification no. 8T-9-008000 onwards: aluminium bolts -2 ... 11- can be used twice only. After they have been used once, an "X" -arrow- must therefore be chiselled onto the bolts.
- ◆ To prevent damage to the bolts, they must not be clamped in a vice when marking them. Clamp a 14 mm socket with 1/2" drive in the vice instead, and insert the bolt into the socket, as shown in illustration.
- ◆ Bolts marked with an "X" must not be used again.
- ◆ Audi A4 vehicles up to vehicle identification number 8K-9-066499: always renew aluminium bolts.
- ◆ Audi A5 vehicles up to vehicle identification number 8T-9-007999: always renew aluminium bolts.



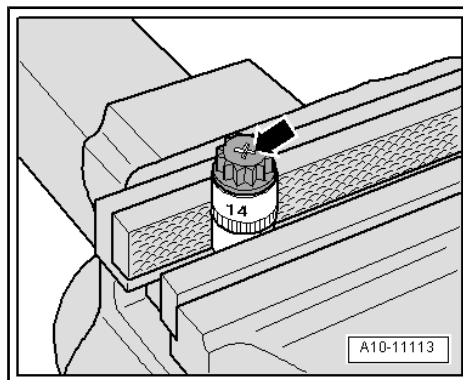
Engine/gearbox attachment (4-cylinder diesel engine)

Item	Bolt	Nm
1 1)	M10x50 2)	65
2 1)	M12x100 3)4)	30 + 90°
3 5), 6	M12x75 3)4)	30 + 90°
4, 5 5)	M12x120 3)4)	30 + 90°
7 ... 9	M10x75 3)4)	15 + 90°
10	M12x50 3)4)	30 + 90°
A	Dowel sleeves for centralising	



- 1) Also secures starter.
- 2) Property class 10.9; the steel bolt can be re-used any number of times.
- 3) Audi A4 vehicles up to vehicle identification no. 8K-9-066499 and Audi A5 vehicles up to vehicle identification no. 8T-9-007999: renew aluminium bolts.
- 4) Audi A4 vehicles from vehicle identification no. 8K-9-066500 onwards and Audi A5 vehicles from vehicle identification no. 8T-9-008000 onwards: aluminium bolts can be used twice only ➔ [page 190](#).
- 5) Also secures bracket for electrical wiring.

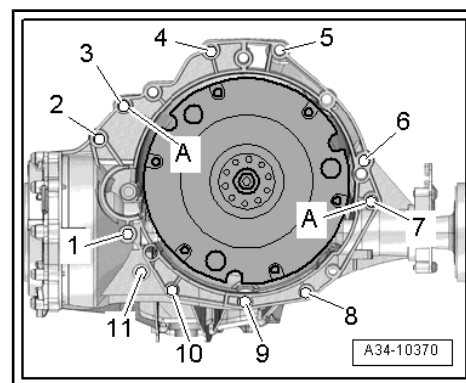
- ◆ Audi A4 vehicles from vehicle identification no. 8K-9-066500 onwards and Audi A5 vehicles from vehicle identification no. 8T-9-008000 onwards: aluminium bolts -2 ... 11- can be used twice only. After they have been used once, an "X" -arrow- must therefore be chiselled onto the bolts.
- ◆ To prevent damage to the bolts, they must not be clamped in a vice when marking them. Clamp a 14 mm socket with 1/2" drive in the vice instead, and insert the bolt into the socket, as shown in illustration.
- ◆ Bolts marked with an "X" must not be used again.
- ◆ Audi A4 vehicles up to vehicle identification number 8K-9-066499: always renew aluminium bolts.
- ◆ Audi A5 vehicles up to vehicle identification number 8T-9-007999: always renew aluminium bolts.



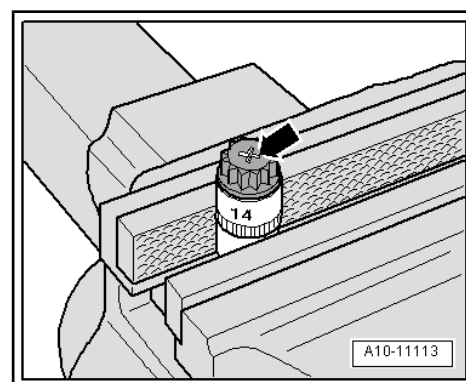
Engine/gearbox attachment (3.2 ltr. FSI engine)

Item	Bolt	Nm
1 ¹⁾	M10x50 ²⁾	65
2 ¹⁾ , 3 ... 6	M12x100 ³⁾	30 + 90°
7	M12x125 ³⁾	30 + 90°
8, 11	M10x60 ³⁾	15 + 90°
9, 10	M10x95 ³⁾	15 + 90°
A	Dowel sleeves for centralising	

- ¹⁾ Also secures starter.
- ²⁾ Property class 10.9; the steel bolt can be re-used any number of times.
- ³⁾ Check whether aluminium bolts can be reused and renew if necessary ➤ [page 191](#) .



- ◆ Audi A4 vehicles from vehicle identification no. 8K-9-066500 onwards and Audi A5 vehicles from vehicle identification no. 8T-9-008000 onwards: aluminium bolts -2 ... 11- can be used twice only. After they have been used once, an "X" -arrow- must therefore be chiselled onto the bolts.
- ◆ To prevent damage to the bolts, they must not be clamped in a vice when marking them. Clamp a 14 mm socket with 1/2" drive in the vice instead, and insert the bolt into the socket, as shown in illustration.
- ◆ Bolts marked with an "X" must not be used again.
- ◆ Audi A4 vehicles up to vehicle identification number 8K-9-066499: always renew aluminium bolts.
- ◆ Audi A5 vehicles up to vehicle identification number 8T-9-007999: always renew aluminium bolts.



2.3.2 Tightening torques for gearbox - Audi Q5



Note

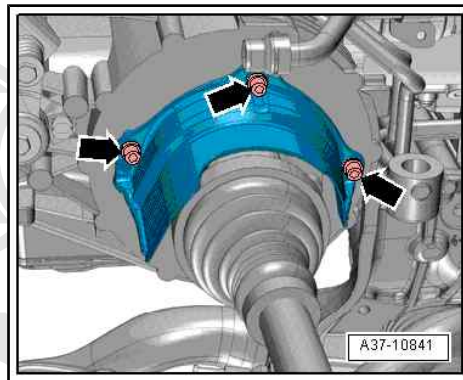
- ◆ *Tightening torques apply only to lightly greased, oiled, phosphated or black-finished nuts and bolts.*
- ◆ *Additional lubricant such as engine or gear oil may be used, but do not use graphite lubricant.*
- ◆ *Do not use parts which have been degreased.*
- ◆ *Tolerance for tightening torques is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

Other tightening torques:

Component	Nm
Bolts and nuts	M6 9
	M7 15
	M8 20
	M10 40
	M12 65

Heat shield for drive shaft - tightening torque

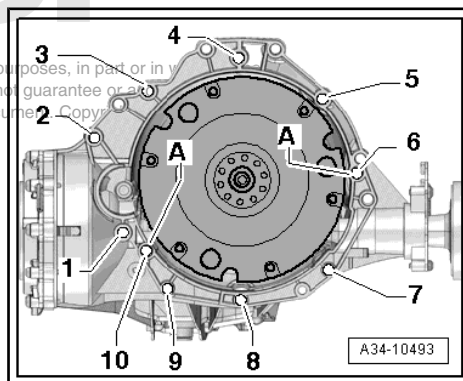
- Tighten bolts -arrows- for drive shaft heat shield to 23 Nm.



Engine/gearbox attachment (2.0 ltr. TDI engine)

Item	Bolt	Nm
1 ¹⁾	M10x50 ²⁾	65
2 ³⁾	M12x100 ⁴⁾	30 + 90°
3 ⁵⁾ , 6	M12x75 ⁴⁾	30 + 90°
4, 5 ⁵⁾	M12x120 ⁴⁾	30 + 90°
7...9	M10x75 ⁴⁾	15 + 90°
10	M12x50 ⁴⁾	30 + 90°
A	Dowel sleeves for centralising	

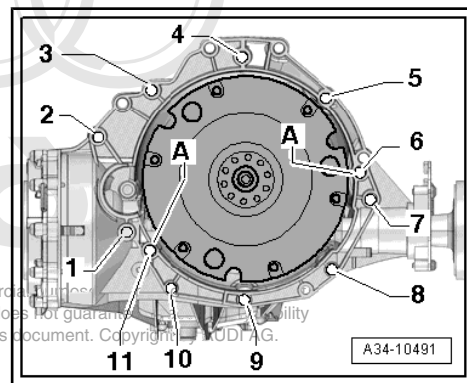
- ¹⁾ Also secures starter.
- ²⁾ Steel bolt - do not renew.
- ³⁾ Also secures starter, with additional spacer sleeve between starter and gearbox.
- ⁴⁾ Check whether aluminium bolts can be reused
⇒ [page 193](#) and renew if necessary.
- ⁵⁾ Also secures bracket for electrical wiring.



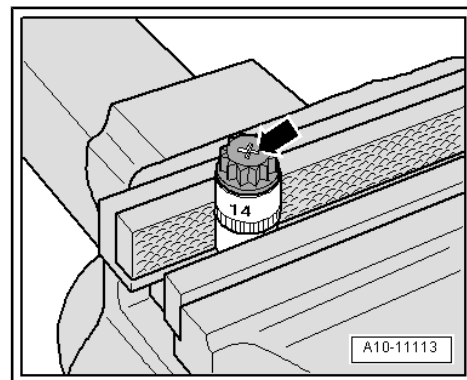
Engine/gearbox attachment (2.0 ltr. TFSI engine)

Item	Bolt	Nm
1 ¹⁾	M10x50 ²⁾	65
2 ³⁾	M12x100 ⁴⁾	30 + 90°
3 ⁵⁾	M12x75 ⁴⁾	30 + 90°
4, 5 ⁵⁾	M12x120 ⁴⁾	30 + 90°
6	M12x75 ⁴⁾	30 + 90°
7	M12x100 ⁴⁾	30 + 90°
8...10	M10x75 ⁴⁾	15 + 90°
11	M12x50 ⁴⁾	30 + 90°
A	Dowel sleeves for centralising	

- ¹⁾ Also secures starter.
- ²⁾ Steel bolt - do not renew.
- ³⁾ Also secures starter, with additional spacer sleeve between starter and gearbox.
- ⁴⁾ Check whether aluminium bolts can be reused
⇒ [page 193](#) and renew if necessary.
- ⁵⁾ Also secures bracket for electrical wiring.



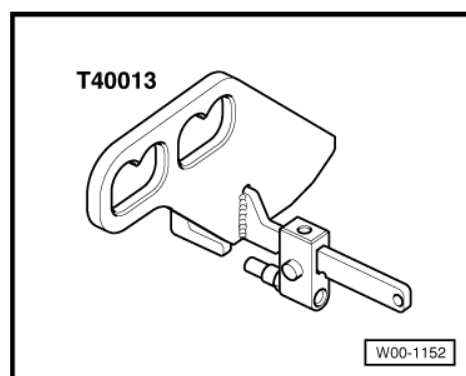
- ◆ Aluminium bolts -2 ... 10- can be used twice only. After they have been used once, an "X" -arrow- must therefore be chiselled onto the bolts.
- ◆ To prevent damage to the bolts, they must not be clamped in a vice when marking them. Clamp a 14 mm socket with 1/2" drive in the vice instead, and insert the bolt into the socket, as shown in illustration.
- ◆ Bolts marked with an "X" must not be used again.
- ◆ The steel bolt -1- can be re-used any number of times.



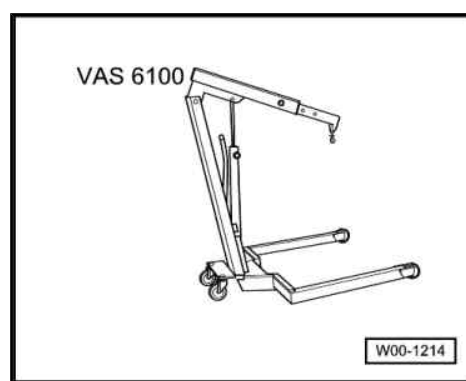
3 Transporting gearbox

Special tools and workshop equipment required

- ◆ Lifting aid - T40013-

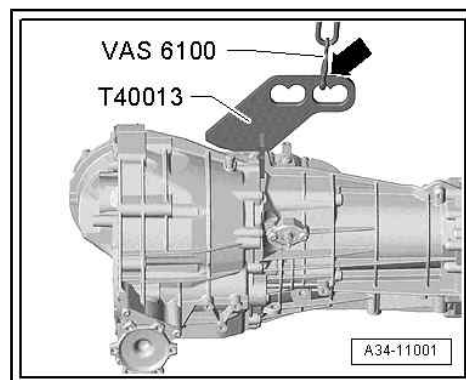


- ◆ Workshop hoist - VAS 6100-



Procedure

- Insert lifting aid - T40013- in lifting eye on gearbox and secure.
- Engage hook of workshop hoist - VAS 6100- in 3rd notch -arrow- on lifting aid .
- Lift gearbox with workshop hoist - VAS 6100- and lifting aid - T40013- .



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4 Assembly mountings

⇒ [“4.1 Exploded view - assembly mountings”, page 195](#)

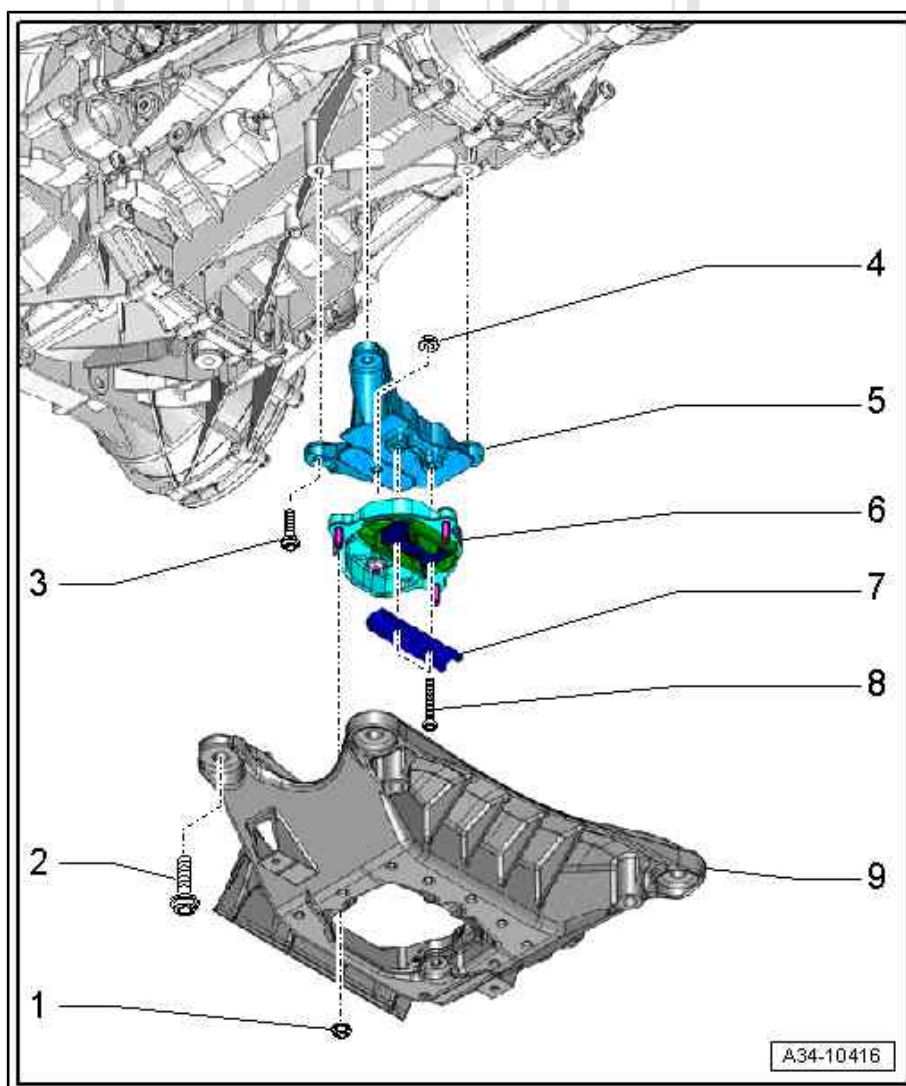
⇒ [“4.2 Removing and installing tunnel cross member”, page 195](#)

⇒ [“4.3 Removing and installing gearbox support with gearbox mounting”, page 197](#)

⇒ [“4.4 Removing and installing gearbox mounting”, page 198](#)

4.1 Exploded view - assembly mountings

- 1 - Nut
 - ☐ 20 Nm
- 2 - Bolt
 - ☐ 70 Nm
- 3 - Bolt
 - ☐ 40 Nm
- 4 - Nut
 - ☐ 20 Nm
- 5 - Gearbox support
 - ☐ Removing and installing
⇒ [page 197](#)
- 6 - Gearbox mounting
 - ☐ Removing and installing
⇒ [page 198](#)
- 7 - Stop (bottom)
 - ☐ For gearbox mounting
- 8 - Bolt
 - ☐ 20 Nm + 90°
 - ☐ Renew
- 9 - Tunnel cross member
 - ☐ Removing and installing
⇒ [page 195](#)

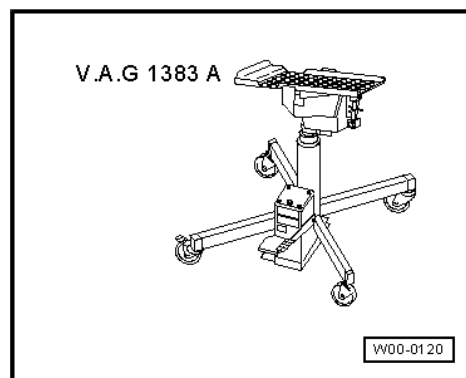


4.2 Removing and installing tunnel cross member

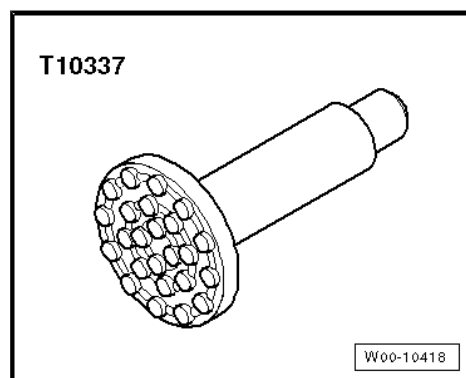
Special tools and workshop equipment required



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

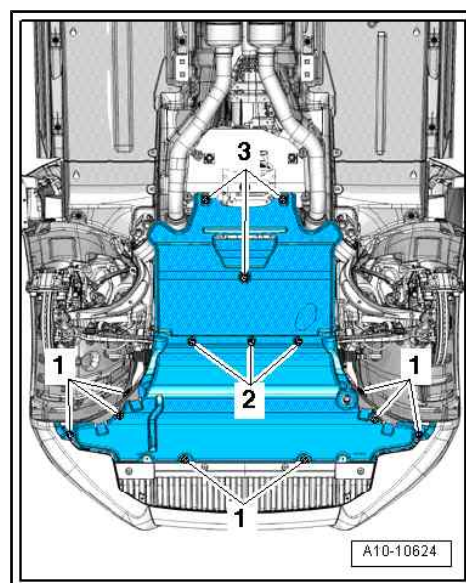


◆ Gearbox support - T10337-



Removing

- Remove rear noise insulation (loosen fasteners -2- and -3-).



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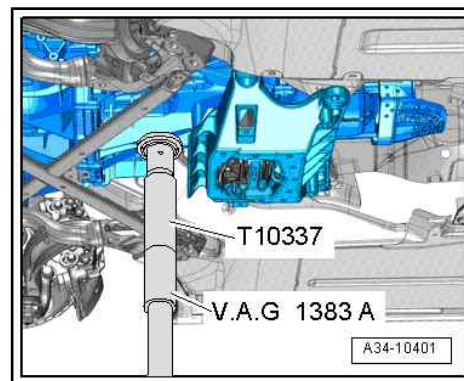
- Apply lifting column of engine and gearbox jack -V.A.G 1383 A- to gearbox from below (with gearbox support - T10337- attached).
- Slightly lift gearbox with engine and gearbox jack - V.A.G 1383 A- .



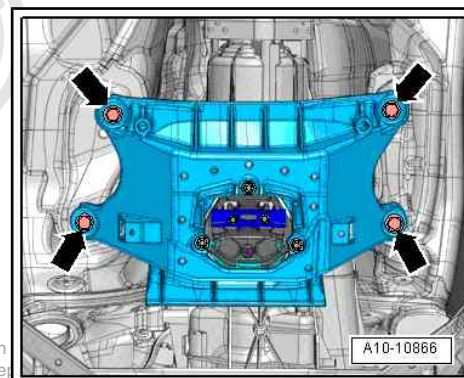
WARNING

Risk of accident.

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



- Remove bolts -arrows- for tunnel cross member.



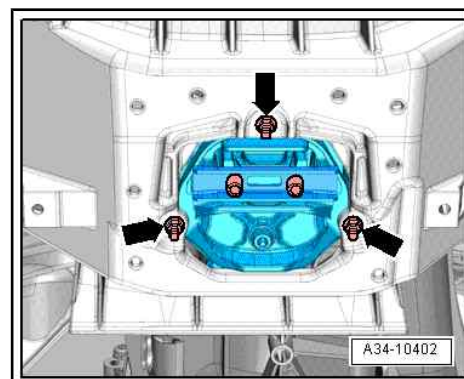
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- Unscrew nuts -arrows- and remove tunnel cross member.

Installing

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

- Tightening torques ⇒ [page 195](#)
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



4.3 Removing and installing gearbox support with gearbox mounting

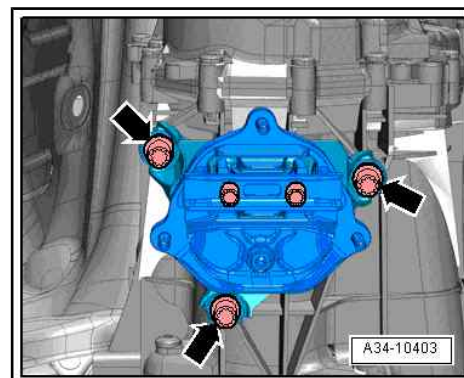
Removing

- Remove tunnel cross member ⇒ [page 195](#) .
- Remove bolts -arrows- and detach gearbox support from gearbox together with gearbox mounting.

Installing

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

- Tightening torques ⇒ [page 195](#)
- Secure gearbox support to gearbox together with gearbox mounting -arrows-.
- Install tunnel cross member ⇒ [page 195](#) .



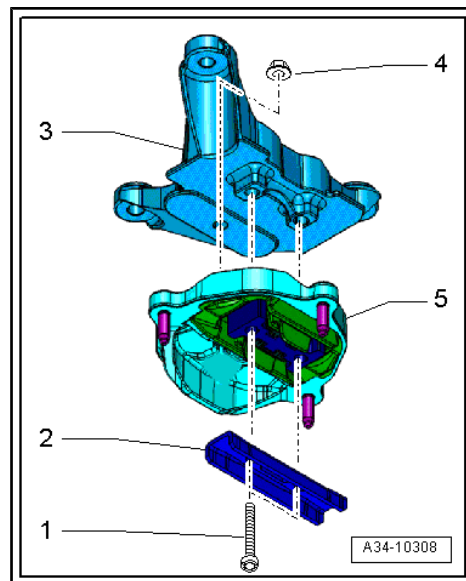
4.4 Removing and installing gearbox mounting

Removing

- Remove gearbox support together with gearbox mounting ➔ [page 197](#) .
- Remove bolts -1- and detach stop -2- (bottom) for gearbox mounting.
- Remove nut -4- and detach gearbox mounting -5- from gearbox support -3-.

Installing

- Tightening torques ➔ [page 195](#)
- Fit gearbox support -3- onto gearbox mounting -5- and tighten nut -4- hand-tight.
- Secure stop (bottom) -2- with bolts -1-.
- Tighten nut -4-.
- Install gearbox support with gearbox mounting ➔ [page 197](#) .



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5 Gear oil

⇒ ["5.1 Checking gear oil level", page 199](#)

5.1 Checking gear oil level

Procedure

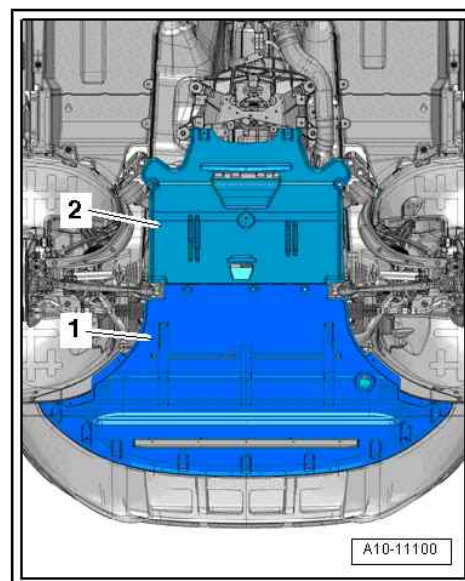


Note

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The vehicle must be horizontal when checking gear oil level.

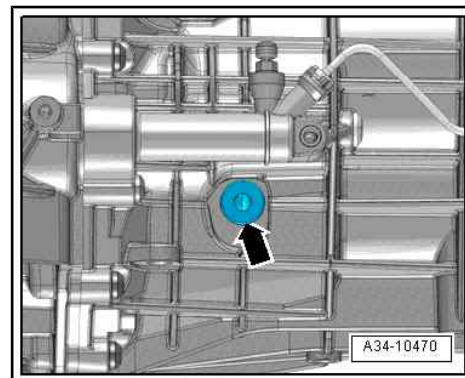
- If fitted, remove rear noise insulation -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



- To check gear oil level, unscrew oil filler plug -arrow-.
- Specification: Oil level is correct when gearbox oil is up to lower edge of filler hole.
- Top up with gear oil if necessary. Specification ⇒ [page 5](#) .
- Screw in oil filler plug.

Tightening torque

Component	Nm
Oil filler plug	45





6 Dismantling and assembling gearbox

Dismantling and assembling gearbox ⇒ Servicing manual gearbox; Rep. gr. 34 ; Dismantling and assembling gearbox



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35 – Gears, shafts

1 Dismantling and assembling gears and shafts

Dismantling and assembling gears and shafts ⇒ Servicing manual gearbox; Rep. gr. 35 ; Dismantling and assembling gears and shafts

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39 – Final drive - front differential

1 Oil seals

⇒ "1.1 Overview of fitting locations - oil seals", page 202

⇒ "1.2 Renewing oil seal (right-side)", page 203

1.1 Overview of fitting locations - oil seals

The oil seals -A- and -B- can only be renewed with the gearbox removed from the vehicle ⇒ Servicing manual gearbox; Rep. gr. 39 ; Oil seals; Overview of fitting locations - oil seals .

The oil seals -C-, -D- and -E- can be renewed with the gearbox installed in the vehicle.

A - Oil seal

- ☐ For input shaft
- ☐ Renewing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Oil seals; Renewing oil seal for input shaft

B - Oil seal

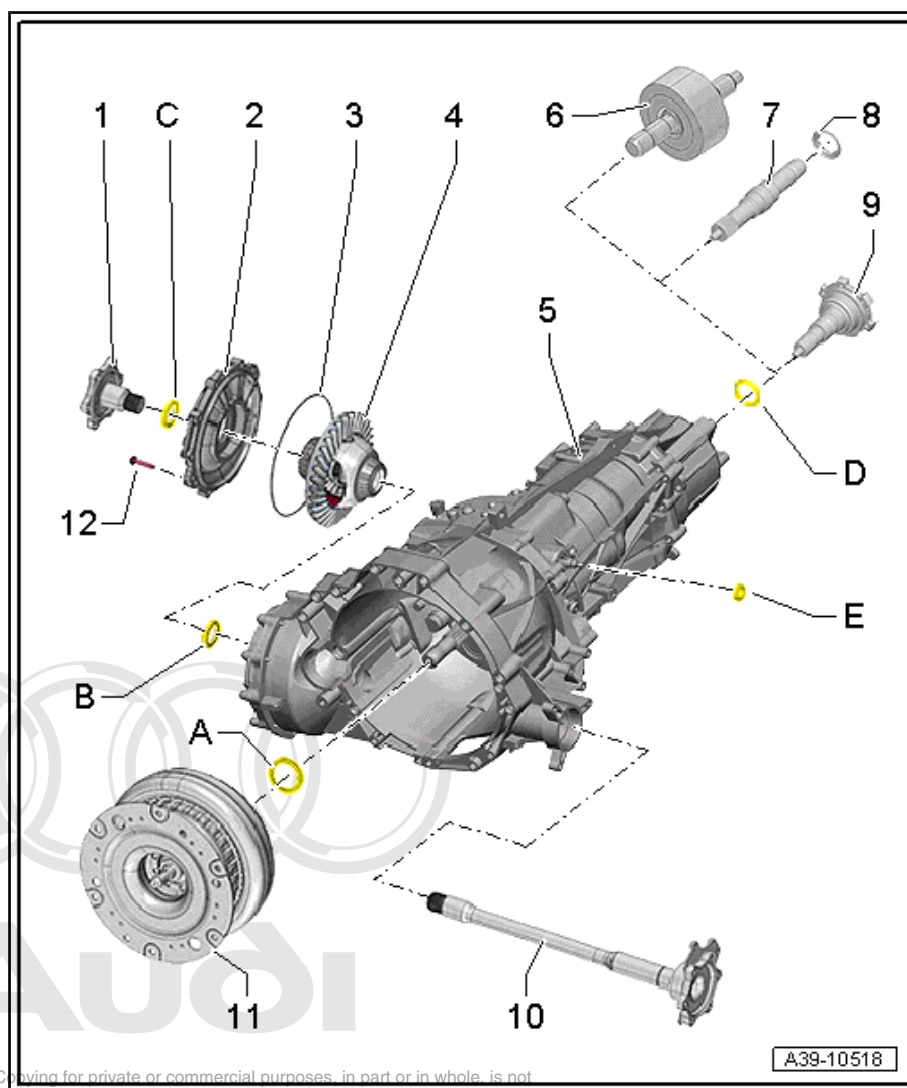
- ☐ For flange shaft (left-side)
- ☐ Renewing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Oil seals; Renewing oil seal (left-side)

C - Oil seal

- ☐ For flange shaft (right-side)
- ☐ Renewing ⇒ [page 203](#)

D - Oil seal

- ☐ For rear flange shaft or rear splined shaft
- ☐ Renewing on rear splined shaft without vibration damper ⇒ [page 224](#)
- ☐ Renewing on rear splined shaft with vibration damper ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential; Renewing oil seal for rear splined shaft
- ☐ Renewing on rear



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flange shaft ⇒ Servicing
manual gearbox; Rep. gr. 39 ; Centre differential

E - Oil seal

- ☐ For selector shaft
- ☐ Renewing ⇒ [“1.8 Renewing selector shaft oil seal”, page 62](#)

1 - Flange shaft (right-side)

- ☐ Removing and installing ⇒ [“1.2 Renewing oil seal \(right-side\)”, page 203](#)

2 - Cover for final drive

- ☐ Renewing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Final drive

3 - O-ring

- ☐ On cover for final drive
- ☐ Renewing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Final drive

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4 - Differential

5 - Gearbox

- ☐ Removing and installing ⇒ [page 76](#)

6 - Rear splined shaft

- ☐ With vibration damper; for correct version, refer to ⇒ Electronic parts catalogue
- ☐ Renew oil seal -D- when renewing rear splined shaft
- ☐ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

7 - Rear splined shaft

- ☐ Without vibration damper; for correct version, refer to ⇒ Electronic parts catalogue
- ☐ Renew oil seal -D- when renewing rear splined shaft
- ☐ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

8 - Dust ring

- ☐ Renew if removed
- ☐ Renewing ⇒ [Item 14 \(page 211\)](#)

9 - Flange shaft (rear)

- ☐ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

10 - Flange shaft (left-side)

- ☐ Renewing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Differential; Removing and installing flange shaft (left-side)

11 - Clutch module

- ☐ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 30 ; Clutch; Removing and installing clutch module

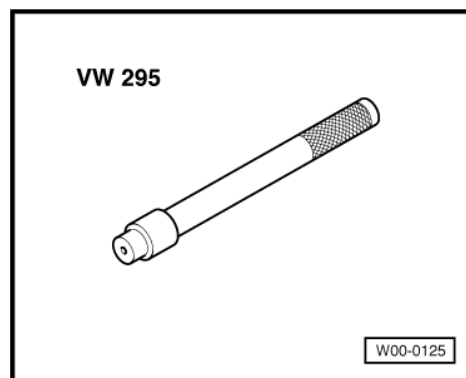
12 - Bolt

- ☐ For cover for final drive
- ☐ Tightening torque ⇒ Servicing manual gearbox; Rep. gr. 39 ; Final drive

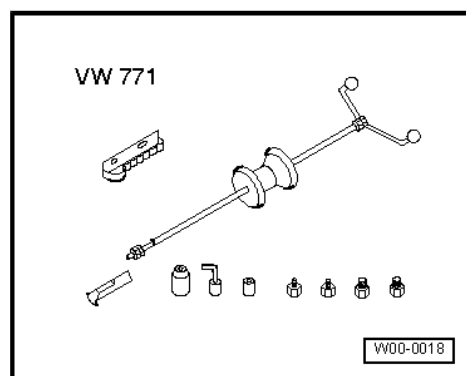
1.2 Renewing oil seal (right-side)

Special tools and workshop equipment required

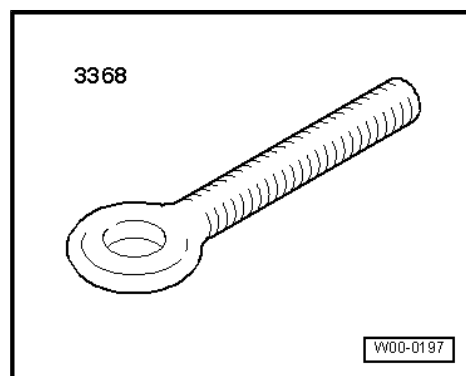
◆ Drift - VW 295-



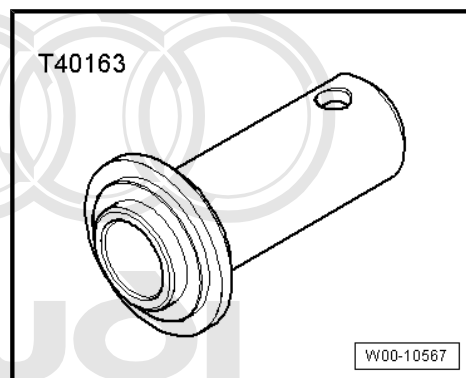
◆ Multi-purpose tool - VW 771-



◆ Eye-head bolt - 3368-

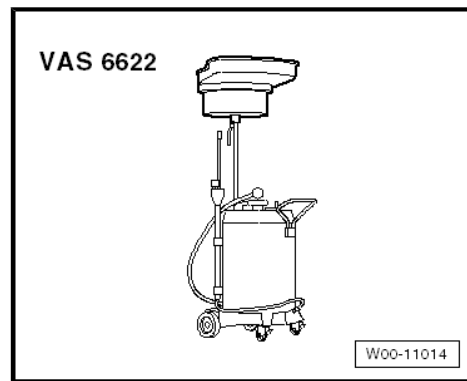


◆ Thrust piece - T40163-



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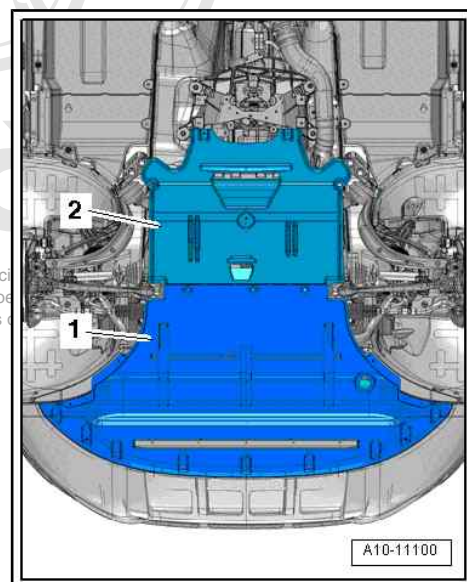
- ◆ Used oil collection and extraction unit - VAS 6622A-



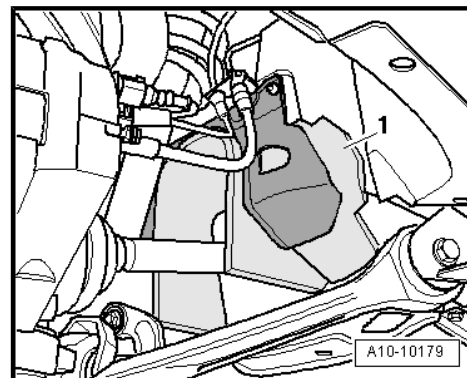
- ◆ Lever
- ◆ Sealing grease - G 052 128 A1-

Removing

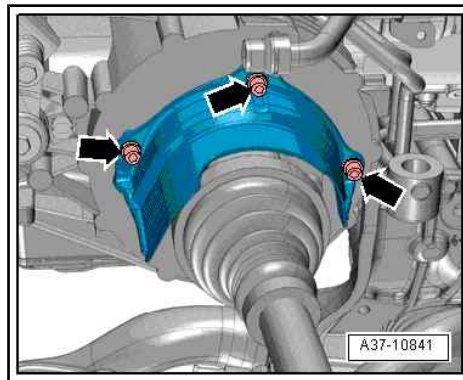
- Gearbox is installed.
- Refer to general repair instructions ➔ [page 13](#) .
- Remove front right wheel.
- Remove rear noise insulation -2- ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



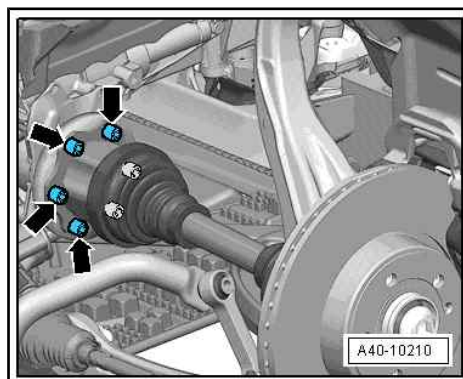
- If fitted, remove noise insulation -1- from wheel housing (right-side).



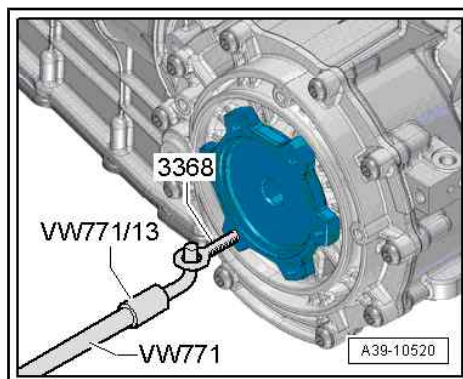
- Remove bolts -arrows- and detach heat shield for drive shaft (right-side).



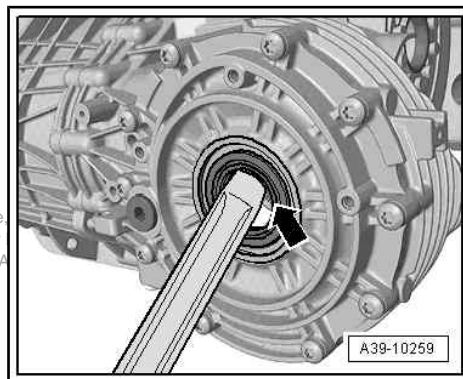
- Unbolt drive shaft (right-side) from gearbox and place to one side ➤ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .



- Place used oil collection and extraction unit - VAS 6622A- below gearbox.
- Screw eye-head bolt - 3368- into threaded hole in flange shaft (right-side).
- Attach multi-purpose tool - VW 771- with -VW 771/13- to eye-head bolt and pull flange shaft off gearbox.



- Lever out flange shaft oil seal.

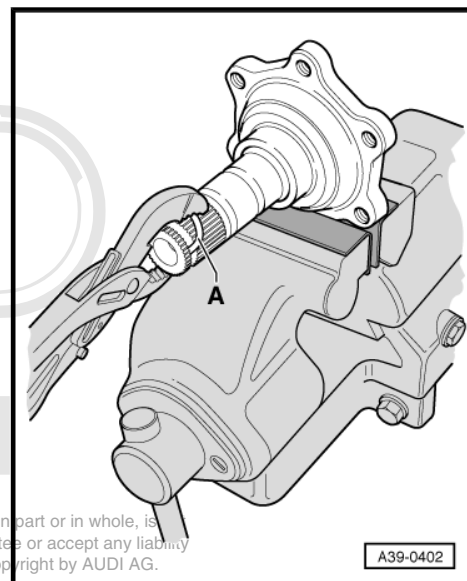


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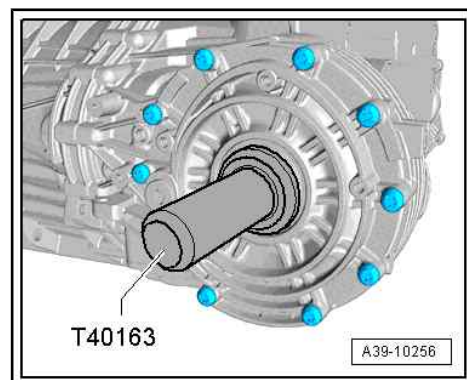
Installing

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

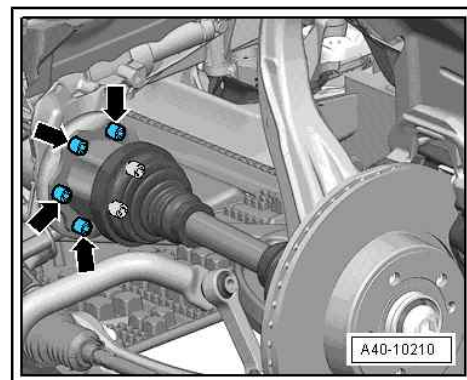
- Always renew circlip for flange shaft -A-.
- Clamp flange shaft in vice, using jaw protectors. Use new circlip -A- to press old circlip out of groove in flange shaft.



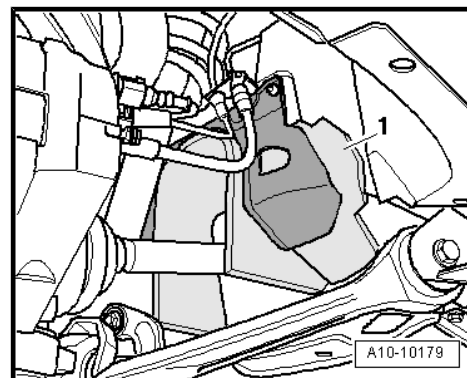
- Lightly oil outer circumference of new oil seal.
- Drive in new flange shaft oil seal (right-side) as far as stop; keep seal straight when installing.
- Pack space between sealing lip and dust lip half-full with sealing grease - G 052 128 A1- .
- Knock flange shaft in with drift - VW 295- .



- Fit drive shaft heat shield.
- Bolt drive shaft to flange shaft ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Exploded view - drive shaft .



- If fitted, install noise insulation -1- in wheel housing (right-side).
- Fill up oil in gearbox and check oil level ⇒ [page 199](#) .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



Tightening torque

Component	Nm
Heat shields for drive shafts to gearbox	23



2 Front differential

Dismantling and assembling differential ⇒ Servicing manual
gearbox; Rep. gr. 39 ; Differential; Dismantling and assembling
differential



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3 Centre differential

⇒ [“3.1 Exploded view - centre differential housing”, page 209](#)

⇒ [“3.2 Removing and installing centre differential housing”, page 212](#)

⇒ [“3.3 Renewing oil seal for rear splined shaft”, page 224](#)

⇒ [“3.4 Renewing oil seal for flange shaft \(rear\)”, page 226](#)

3.1 Exploded view - centre differential housing

⇒ [“3.1.1 Exploded view - centre differential housing with flange shaft \(bolted propshaft\)”, page 209](#)

⇒ [“3.1.2 Exploded view - centre differential housing with rear splined shaft \(propshaft with splines on gearbox end\)”, page 210](#)

3.1.1 Exploded view - centre differential housing with flange shaft (bolted propshaft)

The centre differential housing can be removed and installed with the gearbox installed in the vehicle ⇒ [page 212](#) .

1 - Centre differential housing

- ☐ With or without vibration damper, depending on design
- ☐ Removing and installing (with gearbox installed)
⇒ [“3.2 Removing and installing centre differential housing”, page 212](#)
- ☐ Servicing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential
- ☐ Renewing flange shaft oil seal ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

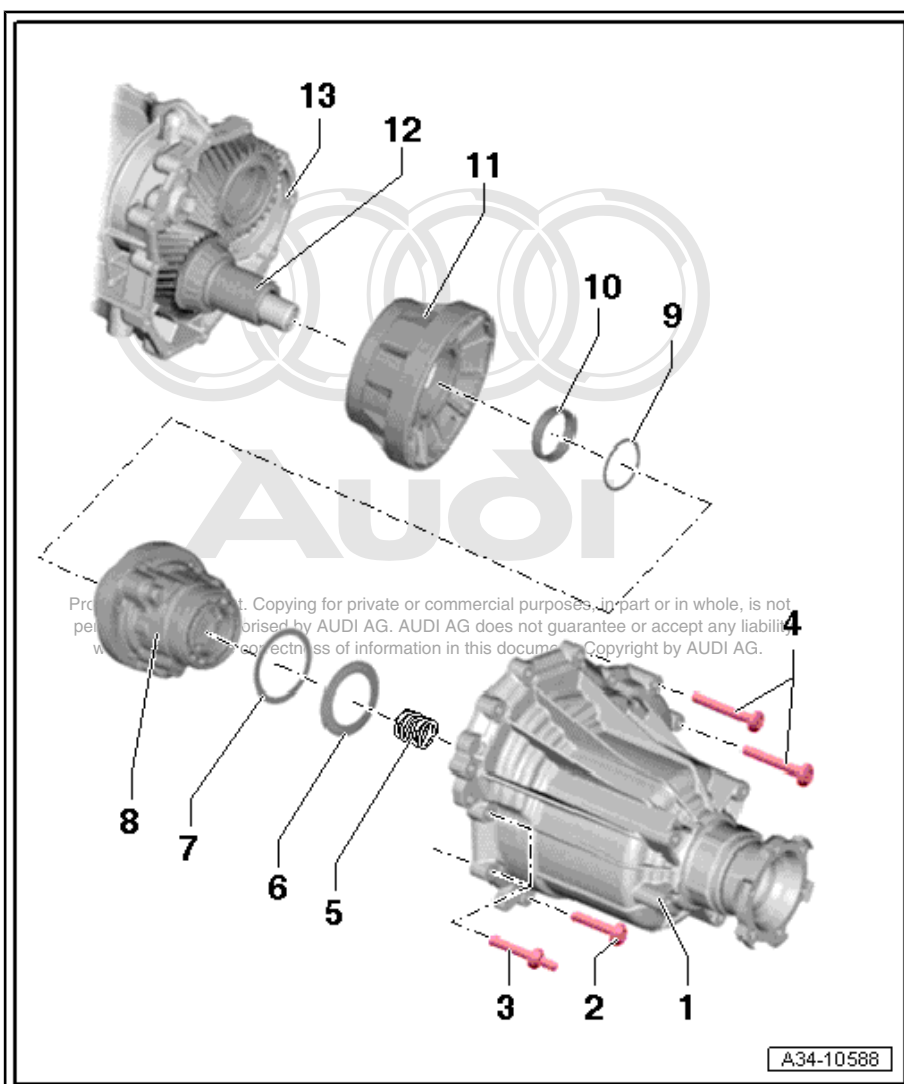
2 - Bolt

- ☐ 10 Nm and then turn 90° further
- ☐ Aluminium bolts (M8; 35 mm long)
- ☐ 9 or 11x
- ☐ Always renew

3 - Bolt

Aluminium bolts

- ☐ 10 Nm and then turn 90° further
- ☐ 2x
- ☐ Always renew





or

Steel studs (38 mm long, some versions M8)

- ☐ 15 Nm and then turn 90° further
- ☐ 2x

4 - Bolt

- ☐ 15 Nm and then turn 90° further
- ☐ Steel bolts (M8; 55 mm long)
- ☐ 2x

5 - Spring

6 - Dished spring

- ☐ Installation position: Inner diameter (convex side) faces flange shaft

7 - Shim

8 - Centre differential

- ☐ Cannot be serviced
- ☐ Renewing bearing for centre differential ⇒ Servicing manual gearbox; Rep. gr. 35 ; Dismantling and assembling gears and shafts
- ☐ Removing and installing ⇒ [“3.2 Removing and installing centre differential housing”, page 212](#)

9 - Shim

- ☐ Sets position of centre differential
- ☐ Determining thickness ⇒ Servicing manual gearbox; Rep. gr. 35 ; Dismantling and assembling gears and shafts

10 - Spacer sleeve

11 - Bearing plate

- ☐ Note correct installation position in relation to gearbox cover ⇒ [page 217](#)

12 - Spur gear

- ☐ Drive gear for side shaft / pinion shaft (spur gearing)

13 - Gearbox cover / gearbox

3.1.2 Exploded view - centre differential housing with rear splined shaft (propshaft with splines on gearbox end)

The centre differential housing can be removed and installed with the gearbox installed in the vehicle ⇒ [page 212](#) .

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1 - Bolt

- ☐ 20 Nm and then turn 90° further
- ☐ 3x
- ☐ Always renew

2 - Bolt

- ☐ Aluminium bolts
- ☐ 8 Nm and then turn 120° further
- ☐ 11x

3 - Housing

- ☐ For centre differential
- ☐ Servicing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

4 - Bearing plate

- ☐ Installation position: lug must engage in recess in gearbox cover
⇒ [page 223](#)

5 - Centre differential

- ☐ Cannot be serviced
- ☐ Removing and installing
⇒ [page 212](#)

6 - Spring

7 - Assembly sleeve

- ☐ Does not have to be re-installed

8 - Circlip

- ☐ Secures ball bearing
⇒ [Item 10 \(page 211\)](#) in centre differential housing

9 - Circlip

- ☐ Secures rear splined shaft in ball bearing

10 - Ball bearing

- ☐ For rear splined shaft
- ☐ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

11 - Bolt

- ☐ 15 Nm and then turn 90° further
- ☐ Steel bolts
- ☐ 2x

12 - Damper weight

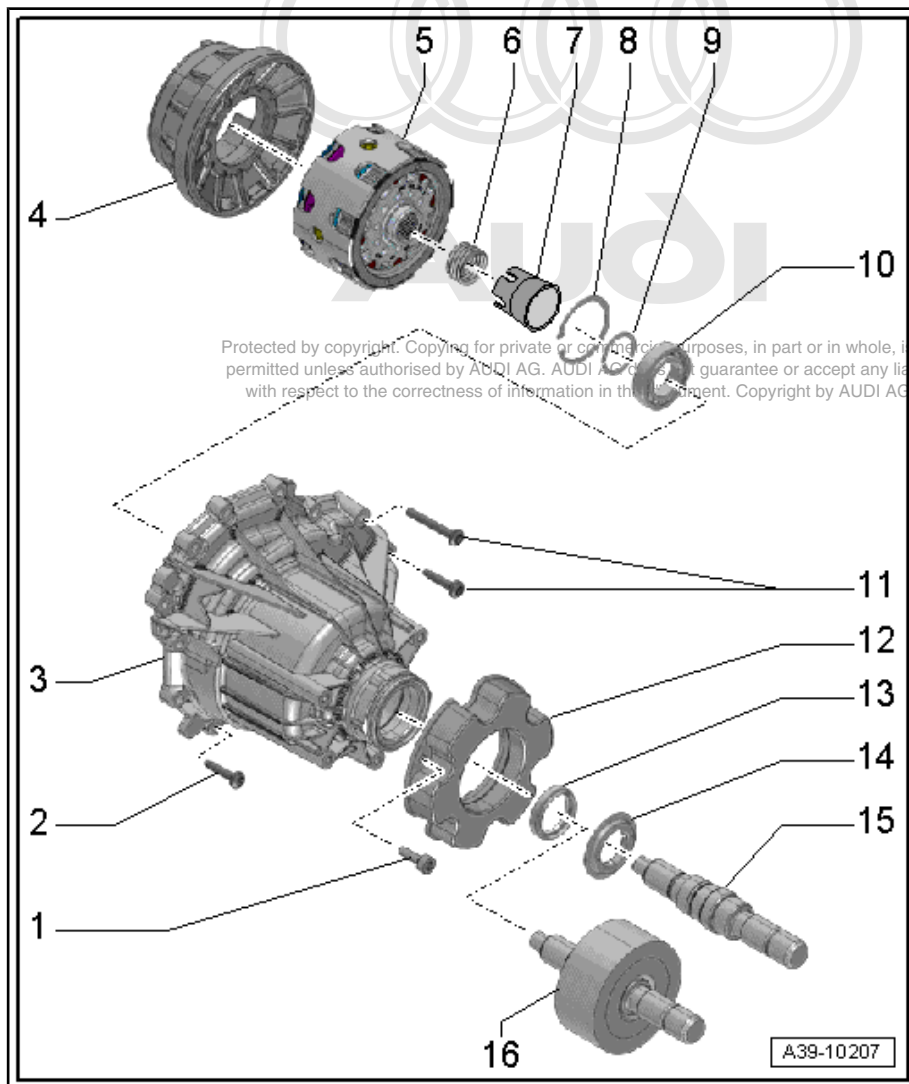
- ☐ Depending on version

13 - Oil seal

- ☐ Renewing on rear splined shaft without vibration damper ⇒ [page 224](#)
- ☐ Renewing on rear splined shaft with vibration damper ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

14 - Dust ring

- ☐ Renew if removed



15 - Rear splined shaft without vibration damper

- ❑ For correct version, refer to ⇒ Electronic parts catalogue
- ❑ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

16 - Rear splined shaft with vibration damper

- ❑ For correct version, refer to ⇒ Electronic parts catalogue
- ❑ Removing and installing ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential
- ❑ Pressing on vibration damper ⇒ Servicing manual gearbox; Rep. gr. 39 ; Centre differential

3.2 Removing and installing centre differential housing

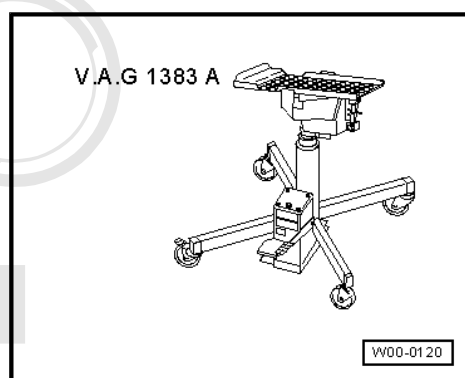
⇒ ["3.2.1 Removing and installing centre differential housing - bolted propshaft", page 212](#)

⇒ ["3.2.2 Removing and installing centre differential housing - propshaft with splines", page 218](#)

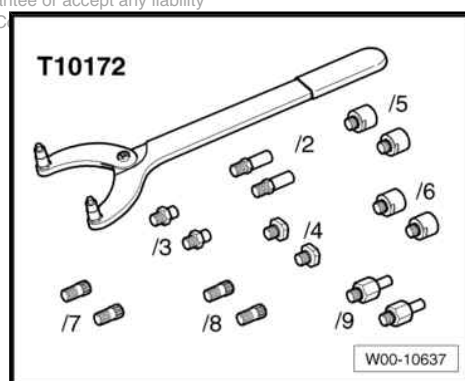
3.2.1 Removing and installing centre differential housing - bolted propshaft

Special tools and workshop equipment required

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



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

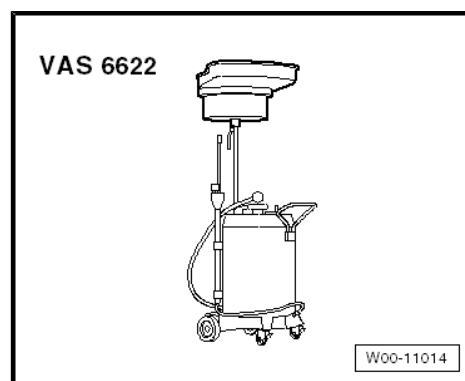
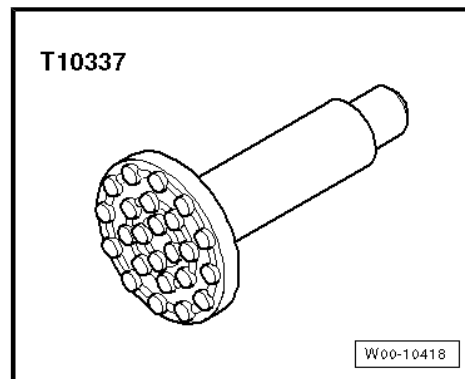


◆ Gearbox support - T10337-



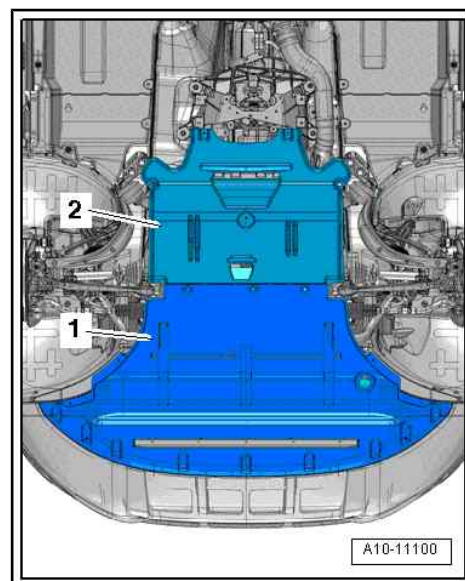
◆ Used oil collection and extraction unit - VAS 6622A-

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Removing

- Remove rear noise insulation -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .

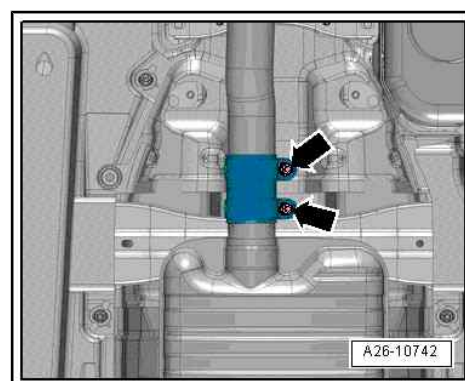


Caution

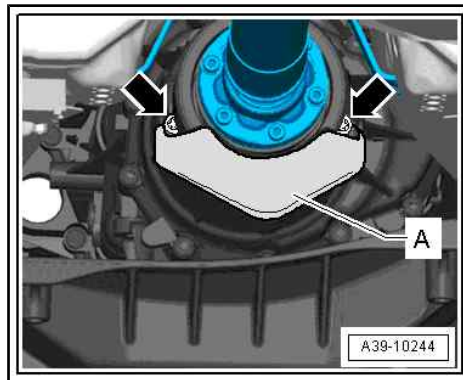
Risk of damage to flexible joint in front exhaust pipe.

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

- Disconnect exhaust system at clamp -arrows-.

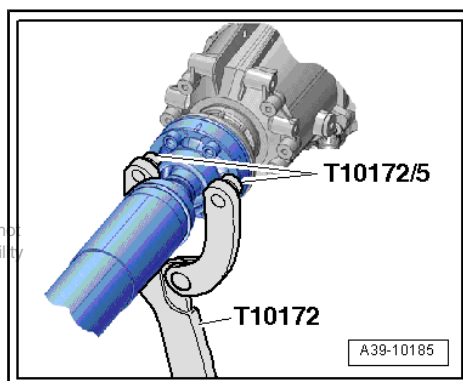


- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.



- Remove securing bolts from connection between propshaft and gearbox (counterhold using counterhold tool - T10172- and -T10172/5-).
- Slide propshaft together towards rear final drive. The constant velocity joints can be moved axially.
- Tie propshaft up to one side.

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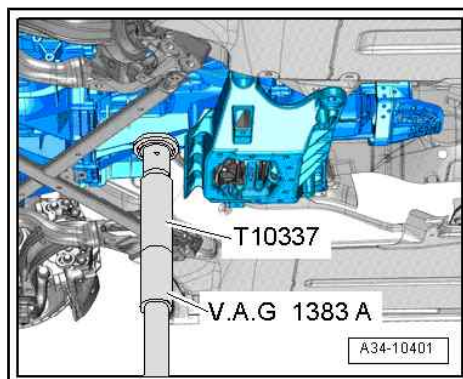
- Support gearbox using engine and gearbox jack - V.A.G 1383 A- with gearbox support - T10337- attached.



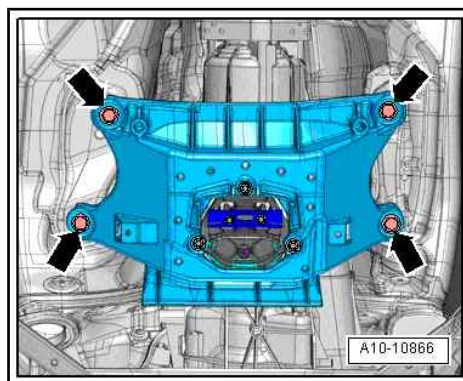
WARNING

Risk of accident.

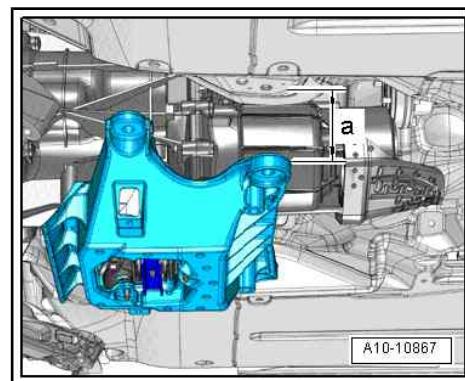
- ◆ **Engine and gearbox jack - V.A.G 1383 A- must remain in position when work is being carried out and must not be left unattended.**



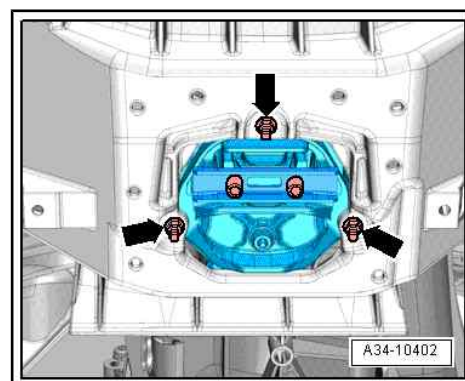
- Remove bolts -arrows- for tunnel cross member.



- Lower gearbox by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)



- Unscrew nuts -arrows- and remove tunnel cross member.

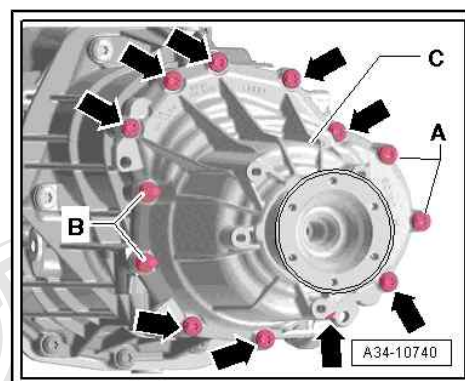


- Place used oil collection and extraction unit - VAS 6622A- below gearbox.
- Remove bolts -A-, -B- and -arrows-.



Note

The centre hex studs -B- are not fitted on all versions.

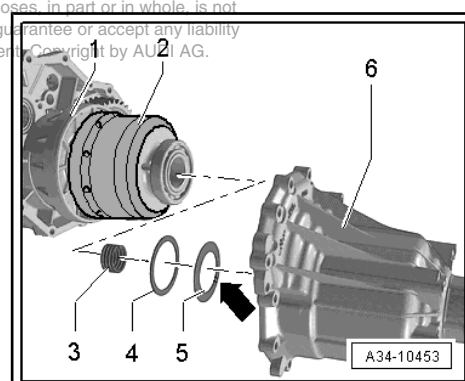


Caution

Risk of damage to the centre differential.

- ◆ Pull the centre differential housing -C- slowly and carefully towards the rear off the gearbox. The centre differential may otherwise fall out of the gearbox.
- ◆ A centre differential which has fallen to the ground can no longer be installed. It must be renewed.

- Carefully pull off centre differential housing -6-, together with spring -3-, shim -4- and dished spring -5-.
- Detach centre differential -2- and bearing plate -1-.



If bearing plate -1- remains behind in centre differential housing, proceed as follows:



Caution

Risk of damage to the sealing surface of the centre differential housing.

- ◆ **Carefully tap the housing in several places with a hammer.**

- Grip one of side ribs on bearing plate -1- with pliers and pull off in direction of -arrow A-.
- While doing so, carefully tap alternate sides of housing -arrows B- with a rubber-headed hammer .
- Remove centre differential, spring, shim and dished spring from centre differential housing.

Installing centre differential housing

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

Tightening torques

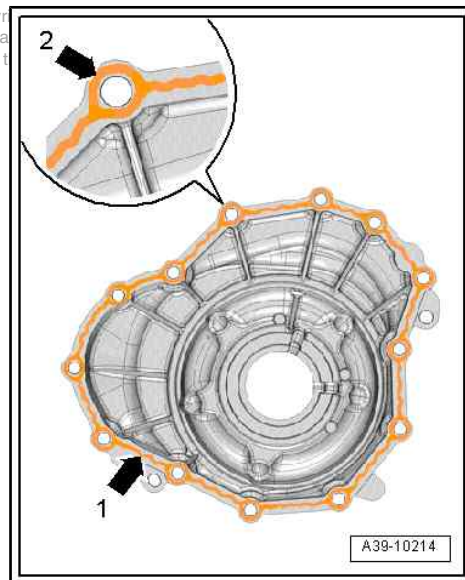
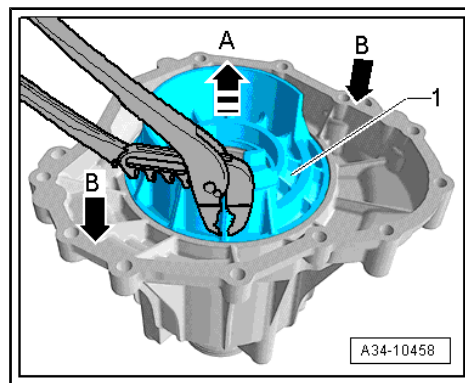
- ◆ ⇒ [“3.1.1 Exploded view - centre differential housing with flange shaft \(bolted propshaft\)”, page 209](#)



Note

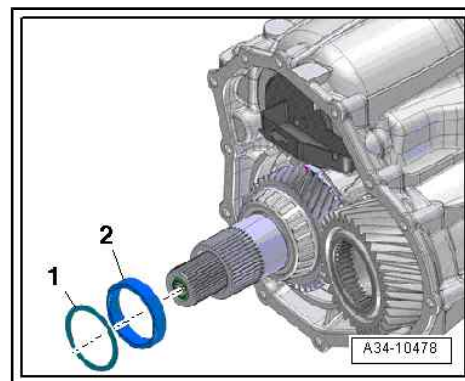
Renew the aluminium bolts for the centre differential housing.

- In housing, lightly lubricate fitting surfaces for bearing plate with gear oil.
- Thoroughly clean both housing joint surfaces; they must be free from oil and grease.
- Apply bead of sealant -arrow 1- evenly and not too thick on housing joint surface; use sealing paste - AMV 188 001 02- .
- To avoid contact corrosion, apply a ring of sealant around each bolt hole -arrow 2-.



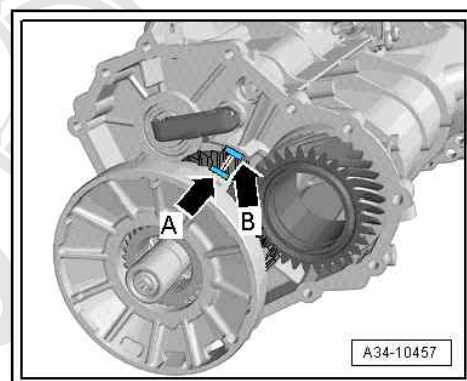
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- Check that spacer sleeve -2- and shim -1- are fitted on output shaft.

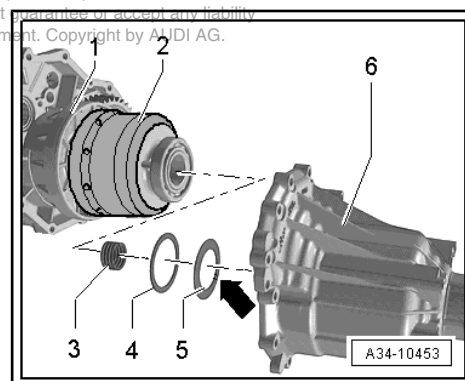


Install bearing plate on gearbox as follows:

- Lightly lubricate surfaces of both races on outside of bearing plate with a small quantity of gear oil.
- Insert bearing plate.
- Installation position: lug on bearing plate -arrow A- must engage in slot in gearbox cover -arrow B-.



- Slide on centre differential -2- towards bearing plate -1- as far as stop.
- Insert dished spring -5-, shim(s) -4- and spring -3- into centre differential housing -6-.
- Installation position of dished spring -5-: inner diameter (convex side) -arrow- faces centre differential housing -6-.
- Fit centre differential housing -6- onto gearbox.

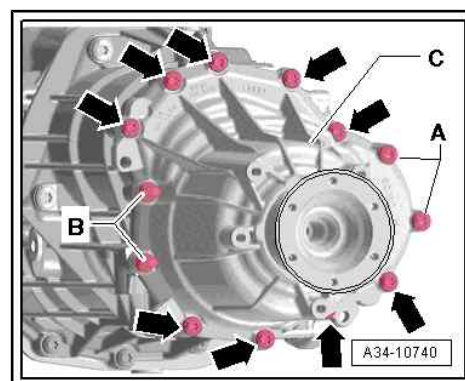


- Press centre differential housing -C- fully onto gearbox cover and hold in place.
- Fit and tighten bolts -A-, -B- and -arrows-.

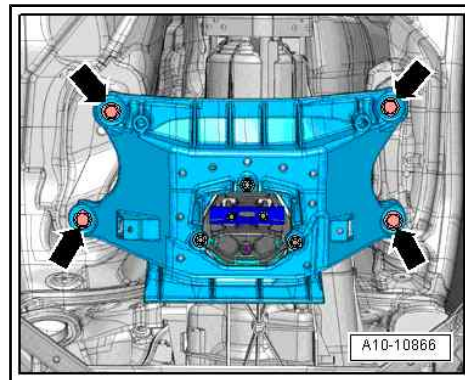


Note

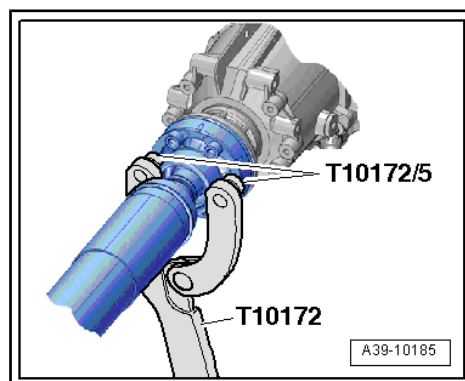
- ◆ The centre hex studs -B- are not fitted on all versions.
- ◆ In this case, aluminium bolts ⇒ [Item 2 \(page 209\)](#) are fitted in place of the centre hex studs.



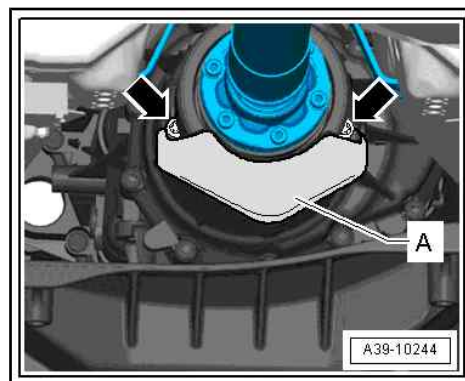
- Install tunnel cross member and tighten
⇒ ["4.1 Exploded view - assembly mountings", page 195](#) .



- Secure propshaft to gearbox ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .



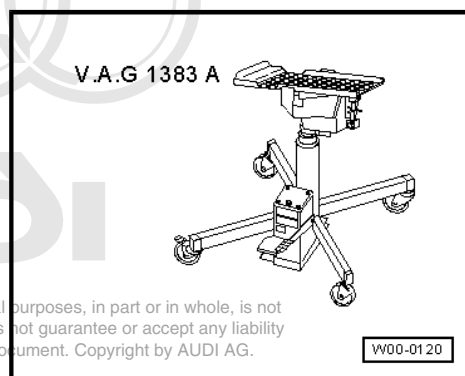
- If fitted, install heat shield for propshaft -A- and tighten bolts -arrows- to 25 Nm.
- Fill up with gear oil and check gear oil level ⇒ [page 199](#) .
- Assemble exhaust system and perform stress-free alignment ⇒ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



3.2.2 Removing and installing centre differential housing - propshaft with splines

Special tools and workshop equipment required

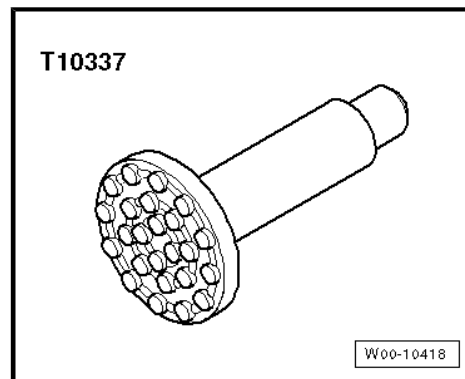
- ♦ Engine and gearbox jack - V.A.G 1383 A-



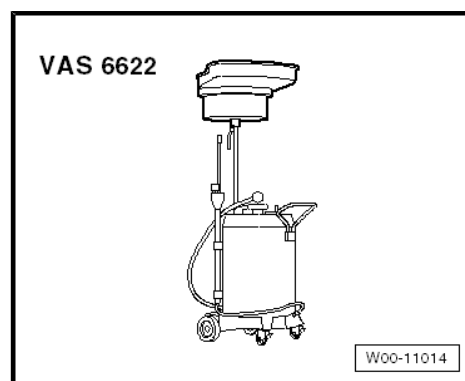
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W00-0120

◆ Gearbox support - T10337-

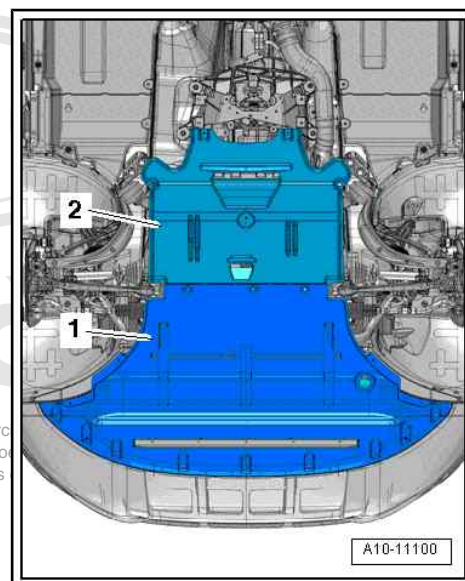


◆ Used oil collection and extraction unit - VAS 6622A-



Removing

- Remove rear noise insulation -2- ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .



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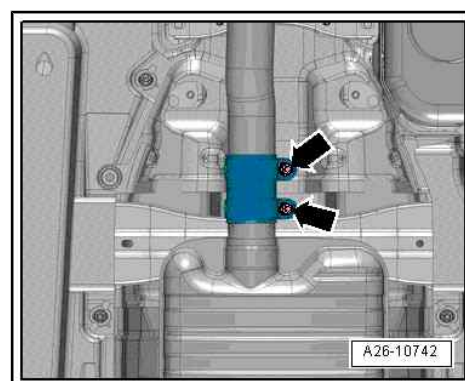


Caution

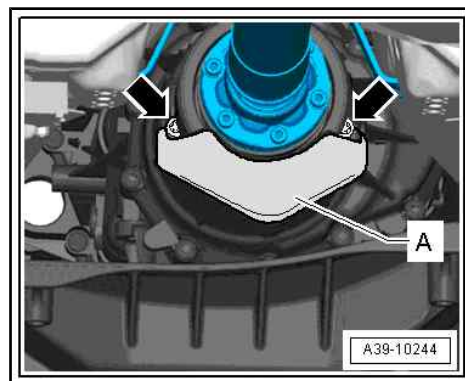
Risk of damage to flexible joint in front exhaust pipe.

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

- Disconnect exhaust system at clamp -arrows-.



- If fitted, remove bolts -arrows- and detach heat shield -A- for propshaft.
- Remove propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .



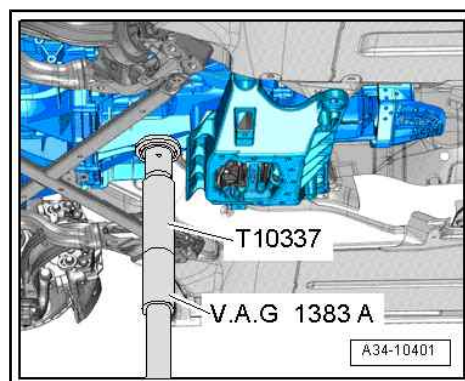
- Support gearbox using engine and gearbox jack - V.A.G 1383 A- with gearbox support - T10337- attached.



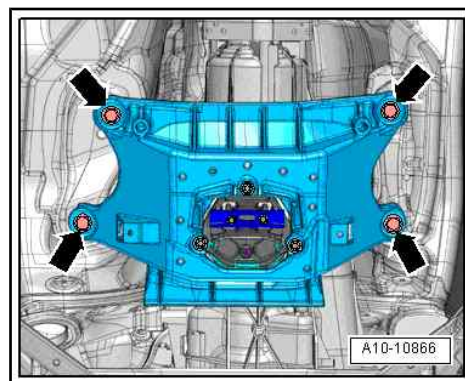
WARNING

Risk of accident.

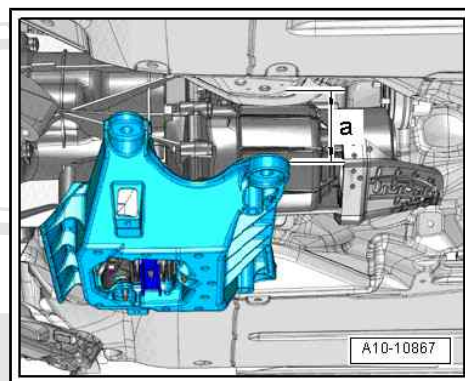
- ◆ *Engine and gearbox jack - V.A.G 1383 A- must remain in position when work is being carried out and must not be left unattended.*



- Remove bolts -arrows- for tunnel cross member.

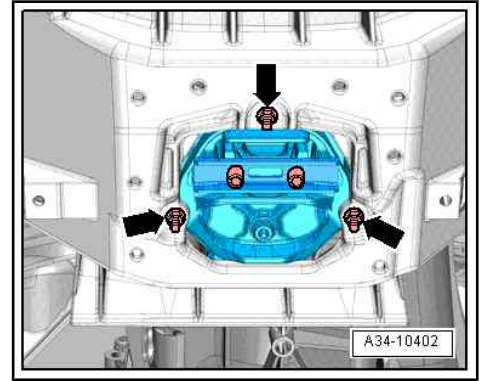


- Lower gearbox by dimension -a- using engine and gearbox jack - V.A.G 1383 A- .
- Dimension -a- = 80 mm (maximum)



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- Unscrew nuts -arrows- and remove tunnel cross member.



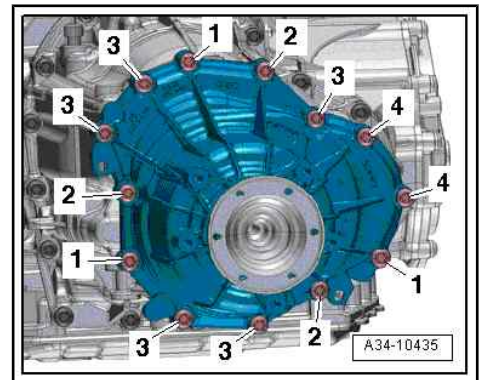
- Place used oil collection and extraction unit - VAS 6622A- below gearbox.
- Remove bolts -1 ... 4-.



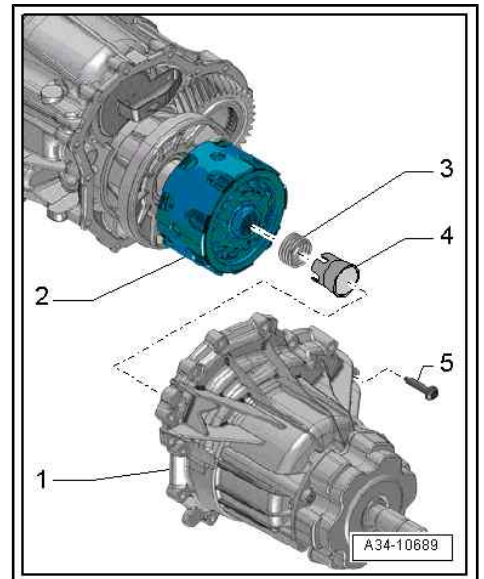
Caution

Risk of damage to the centre differential.

- ◆ *Pull the centre differential housing slowly and carefully towards the rear off the gearbox. The centre differential may otherwise fall out of the gearbox.*
- ◆ *A centre differential which has fallen to the ground can no longer be installed.*



- Carefully detach centre differential housing -1-; gear oil will drain off.
- Remove assembly sleeve -4-, spring -3- and centre differential -2-.



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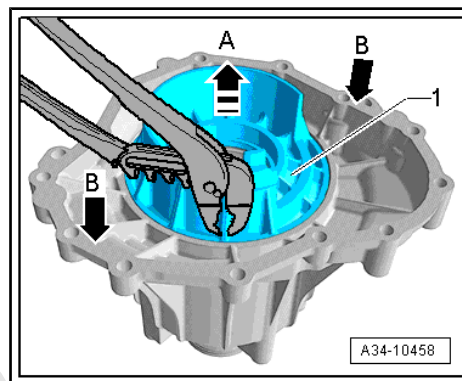
If bearing plate -1- and centre differential remain behind in centre differential housing, proceed as follows:



Caution

Risk of damage to the sealing surface of the centre differential housing.

- ◆ **Carefully tap the housing in several places with a hammer.**



- Grip one of side ribs on bearing plate -1- with pliers and pull off in direction of -arrow A-.
- While doing so, carefully tap alternate sides of housing -arrows B- with a rubber-headed hammer .
- Remove centre differential, assembly sleeve and spring from centre differential housing.

Installing centre differential housing

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

Tightening torques

- ◆ ⇒ ["3.1.2 Exploded view - centre differential housing with rear splined shaft \(propshaft with splines on gearbox end\)"](#), [page 210](#)

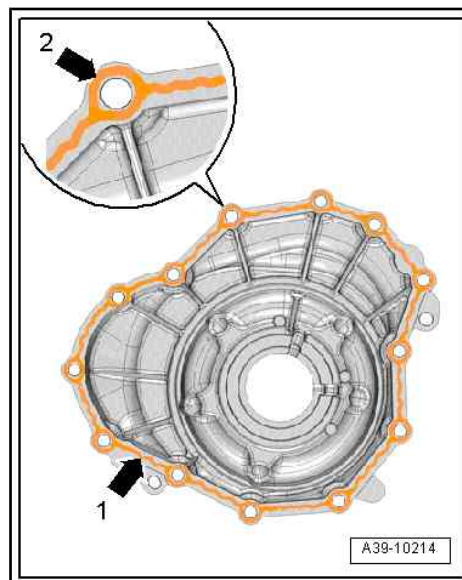
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Note

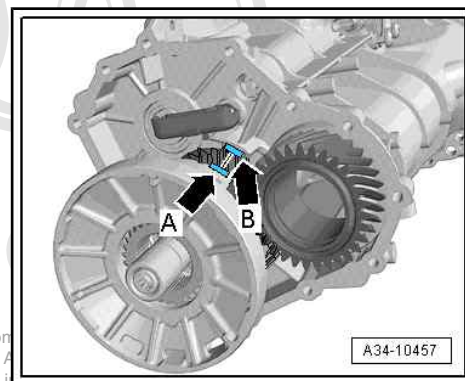
Renew the aluminium bolts for the centre differential housing.

- In housing, lightly lubricate fitting surfaces for bearing plate with gear oil.
- Thoroughly clean both housing joint surfaces; they must be free from oil and grease.
- Apply bead of sealant -arrow 1- evenly and not too thick on housing joint surface; use sealing paste - AMV 188 001 02- .
- To avoid contact corrosion, apply a ring of sealant around each bolt hole -arrow 2-.



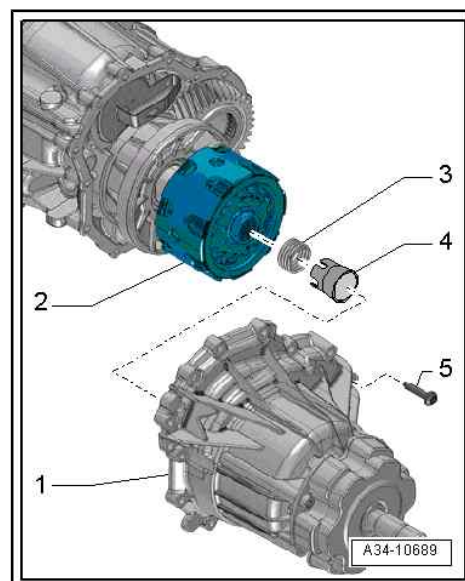
Install bearing plate on gearbox as follows:

- Lightly lubricate surfaces of both races on outside of bearing plate with a small quantity of gear oil.
- Insert bearing plate.
- Installation position: lug on bearing plate -arrow A- must engage in slot in gearbox cover -arrow B-.

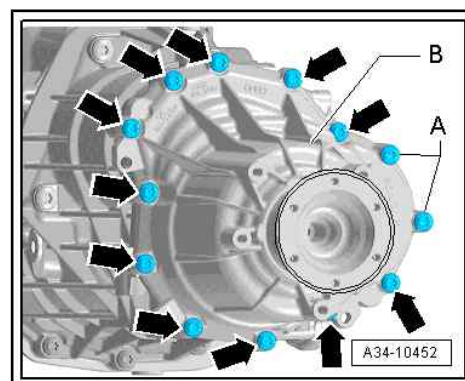


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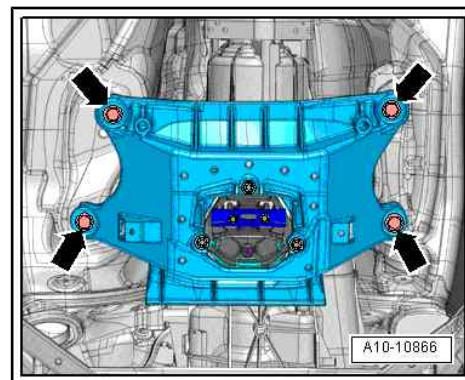
- Fit centre differential -2- onto gearbox.
- Fit assembly sleeve -4- on centre differential.
- Insert spring -3- in centre differential.



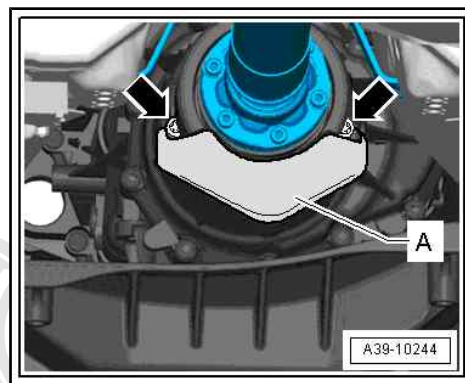
- Press centre differential housing -B- fully onto gearbox housing, keeping it centred, and hold in place.
- Fit steel bolts -A- and new aluminium bolts -arrows- and tighten to secure centre differential housing.



- Install tunnel cross member and tighten
⇒ ["4.1 Exploded view - assembly mountings", page 195](#).



- Install propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .
- If fitted, install heat shield for propshaft -A- and tighten bolts -arrows- to 25 Nm.
- Fill up with gear oil and check gear oil level ➔ [page 199](#) .
- Assemble exhaust system and perform stress-free alignment ➔ Rep. gr. 26 ; Exhaust pipes/silencers; Exploded view - silencers .
- Install noise insulation ➔ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Exploded view - noise insulation .



3.3 Renewing oil seal for rear splined shaft

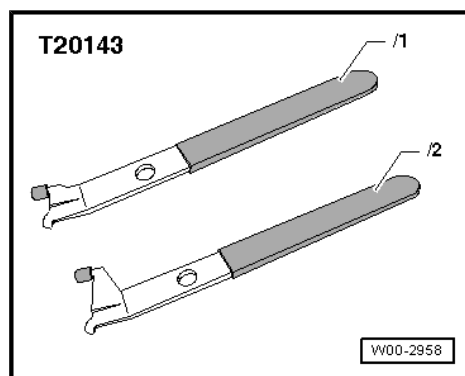
➔ ["3.3.1 Renewing oil seal for rear splined shaft - rear splined shaft without vibration damper", page 224](#)

➔ ["3.3.2 Renewing oil seal for rear splined shaft - rear splined shaft with vibration damper", page 226](#)

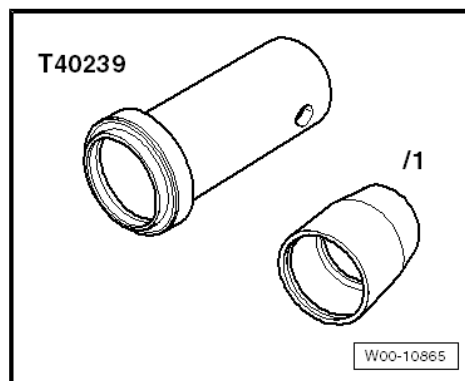
3.3.1 Renewing oil seal for rear splined shaft - rear splined shaft without vibration damper

Special tools and workshop equipment required

- ◆ Extractor tool - T20143-



- ◆ Assembly tool - T40239-



- ◆ Sealing grease - G 052 128 A1-

Procedure

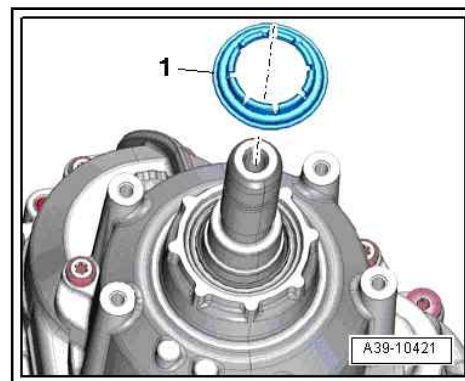
- Remove propshaft ➔ Rear final drive; Rep. gr. 39 ; Propshaft; Removing and installing propshaft .

- Pry off dust ring -1-.

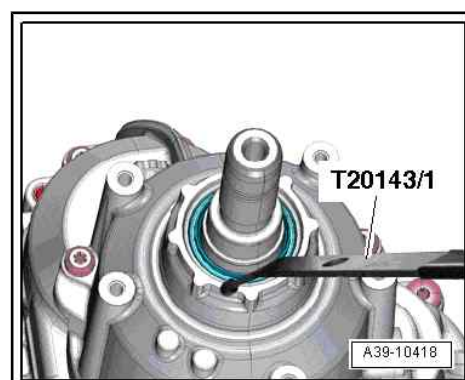


Note

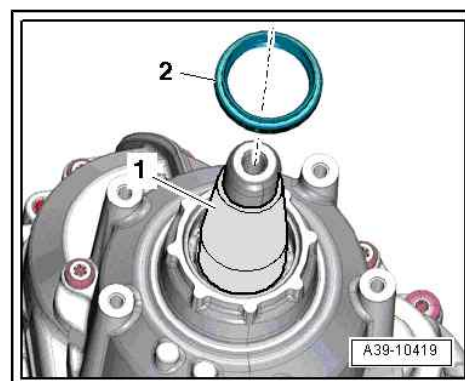
The dust ring cannot be removed without being damaged.



- Pull out oil seal for rear splined shaft.
- Clean contact surface and sealing surface.
- Lightly lubricate outer circumference of oil seal with gear oil.



- Fit guide sleeve - T40239/1- -item 1- onto rear splined shaft.
- Pack space between sealing lip and dust lip half-full with sealing grease - G 052 128 A1- .
- Push oil seal -2- over guide sleeve -item 1- and onto rear splined shaft.
- Installation position: the open side of the seal should face the gearbox housing.

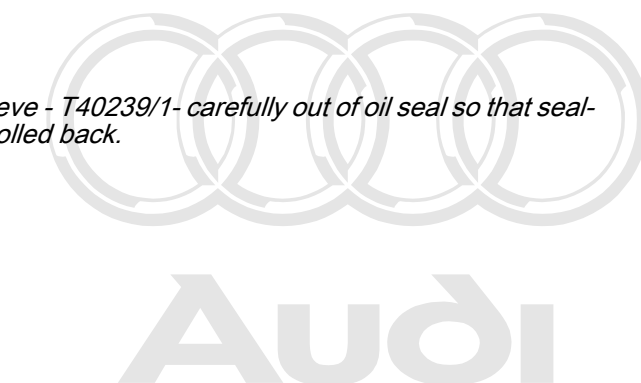
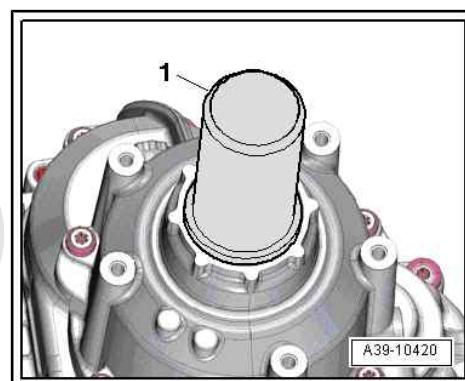


- Drive in oil seal as far as stop using thrust piece - T40239- , -item 1- of assembly tool - T40239- . Make sure oil seal remains straight.



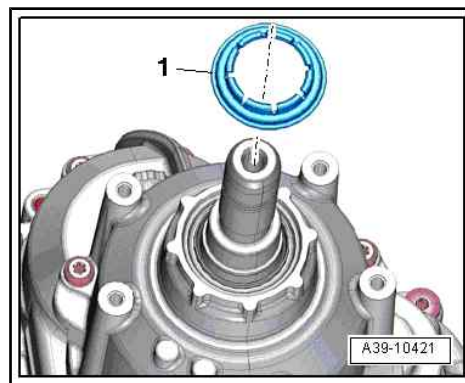
Note

Pull guide sleeve - T40239/1- carefully out of oil seal so that sealing lip is not rolled back.



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- Clip on new dust ring -1-.
- Install propshaft ⇒ Rear final drive; Rep. gr. 39 ; Propshaft; Exploded view - propshaft .
- Check gear oil level ⇒ [page 199](#) .



3.3.2 Renewing oil seal for rear splined shaft - rear splined shaft with vibration damp- er

On vehicles with vibration damper the centre differential housing must be removed in order to renew the oil seal for the rear splined shaft

⇒ [“3.2.2 Removing and installing centre differential housing - propshaft with splines”](#), [page 218](#) .

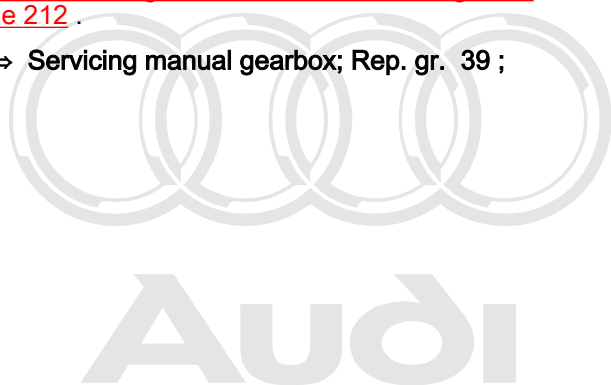
Renewing oil seal ⇒ Servicing manual gearbox; Rep. gr. 39 ;
Centre differential; Renewing oil seal for rear splined shaft

3.4 Renewing oil seal for flange shaft (rear)

Centre differential housing must be removed in order to renew oil seal for rear flange shaft

⇒ [“3.2.1 Removing and installing centre differential housing - bolted propshaft”](#), [page 212](#) .

Renewing oil seal ⇒ Servicing manual gearbox; Rep. gr. 39 ;
Centre differential



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