Maintenance

Golf Variant 2007 ➤
Golf Variant 2010 ➤
Jetta 2005 ➤

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Maintenance

Heading

1. Engine list
2. Service work
3. General
4. Descriptions of work
5. Exhaust emissions test
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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.

Contents

1 Engine list

Petrol and diesel engines are listed separately.

The engine codes are listed in alphabetical order.

- Petrol engines ⇒ page 1
- Diesel engines ⇒ page 4

Petrol engines

Engine codes ⇒ page 48	AXX	BGP	BGQ
Capacity in litres	**2.0**	**2.5**	**2.5**
Number of cylinders	4	5	5
Valves per cylinder	4	4	4
Output/kW at rpm	147/5700	110/5200	110/5200
Torque/Nm at rpm	280/2000	228/4000	228 / 4000
Compression ratio	10.5	9.5	9.5
Injection/ignition	MPI Bosch Motronic TFSI	MPI Bosch Motronic SRE	MPI Bosch Motronic SRE
RON unleaded, at least	95 also 91 RON, but with reduced output	91 also 87 RON, but with reduced output	91 also 87 RON, but with reduced output
Camshaft drive	Toothed belt	Timing chain	Timing chain

Petrol engines

Engine codes ⇒ page 48	BLG	BLF	BLR
Capacity in litres	**1.4**	**1.6**	**2.0**
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at rpm	125/6000	85/5800	110/6000
Torque/Nm at rpm	240/1750...4500	155/4000	200/3500
Compression ratio	10.0	12.0	11.5
Injection/ignition	Motronic MED 9.5.10 FSI	Motronic MED 9.5.10 FSI	MPI Bosch-Motronic FSI
RON unleaded, at least	95 also 91 RON, but with reduced output	98 also 95 RON, but with reduced output	95 also 91 RON, but with reduced output
Camshaft drive	Timing chain	Toothed belt	Toothed belt

Petrol engines

Engine codes ⇒ page 48	BMY	BLY	BSE
Capacity in litres	**1.4**	**2.0**	**1.6**
Number of cylinders	4	4	4
Valves per cylinder	4	4	2

Engine codes ⇒ page 48	BMY	BLY	BSE
Capacity in litres	**1.4**	**2.0**	**1.6**
Output/kW at rpm	103/5600	110/6000	75/5600
Torque/Nm at rpm	220/2000 to 4000	200/3500	148/3800
Compression ratio	10	10.5	10.5
Injection/ignition	Motronic MED 17.5.1 TSI	MPI Bosch-Motronic FSI	SIMOS 7.1 SRE
RON unleaded, at least	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output
Camshaft drive	Timing chain	Toothed belt	Toothed belt

Petrol engines

Engine codes ⇒ page 48	BSF	BPY	BTK
Capacity in litres	**1.6**	**2.0**	**2.5**
Number of cylinders	4	4	5
Valves per cylinder	2	4	4
Output/kW at rpm	75/5600	147/5700	110/5200
Torque/Nm at rpm	148/3800	280/2000	228/4000
Compression ratio	10.5	10.5	9.5
Injection/ignition	SIMOS 7.1 SRE	MPI Bosch Motronic TFSI	MPI Bosch Motronic SRE
RON unleaded, at least	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output	91 also 87 RON, but with reduced output
Camshaft drive	Toothed belt	Toothed belt	Timing chain

Petrol engines

Engine codes ⇒ page 48	BUD	BVY	BVZ
Capacity in litres	**1.4**	**2.0**	**2.0**
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at rpm	59/5000	110/6000	110/6000
Torque/Nm at rpm	130/4200	200/3500	200/3500
Compression ratio	10.5	11.5	10.5
Injection/ignition	4VH SRE	MPI Bosch-Motronic FSI	MPI Bosch-Motronic FSI
RON unleaded, at least	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output
Camshaft drive	Toothed belt	Toothed belt	Toothed belt

Petrol engines

Engine codes ⇒ page 48	BWA	CAXA	CAVD
Capacity in litres	**2.0**	**1.4**	**1.4**
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at rpm	147/5700	90/5600	118/5800
Torque/Nm at rpm	280/2000	210/1750...4500	240/1500...4000
Compression ratio	10.5	10	10
Injection/ignition	MPI Bosch Motronic TFSI	Motronic MED 17.5.20 TSI twincharger	Motronic MED 17.5.10 TSI twincharger
RON unleaded, at least	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output
Camshaft drive	Toothed belt	Timing chain	Timing chain

Petrol engines

Engine codes ⇒ page 48	CAWB	CBFA	CBTA
Capacity in litres	**2.0**	**2.0**	**2.5**
Number of cylinders	4	4	5
Valves per cylinder	4	4	4
Output/kW at rpm	147/5100...6000	147/5100...6000	125/5700
Torque/Nm at rpm	280/1700...5000	280/1700...5000	240/4250
Compression ratio	10.3	10.3	9.5
Injection/ignition	Motronic MED 17.1 TSI turbocharger	Motronic MED 17.1 TSI turbocharger	MPI Bosch Motronic SRE
RON unleaded, at least	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output	91 also 87 RON, but with reduced output
Camshaft drive	Timing chain	Timing chain	Timing chain

Petrol engines

Engine codes ⇒ page 48	CBUA	CCSA	CCTA
Capacity in litres	**2.5**	**1.6**	**2.0**
Number of cylinders	5	4	4
Valves per cylinder	4	2	4
Output/kW at rpm	125/5700	75/5600	147/5100...6000
Torque/Nm at rpm	240/4250	148/3800	280/1700...5000
Compression ratio	9.5	10.5	10.2
Injection/ignition	MPI Bosch Motronic SRE	MPI Simos “flex fuel”	Motronic MED 17.5 TSI turbocharger
RON unleaded, at least	91 also 87 RON, but with reduced output	95 also 91 RON, but with reduced output	95 also 91 RON, but with reduced output

Engine codes ⇒ page 48	CBUA	CCSA	CCTA
Capacity in litres	**2.5**	**1.6**	**2.0**
Camshaft drive	Timing chain	Toothed belt	Timing chain

Diesel engines

Engine codes ⇒ page 48	AZV	BKC	BKD
Capacity in litres	**2.0**	**1.9**	**2.0**
Number of cylinders	4	4	4
Valves per cylinder	4	2	4
Output/kW at rpm	100/4000	77/4000	103/4000
Torque/Nm at rpm	320/1750...2500	250/1900	320/1750...2500
Compression ratio	18.5	19.0	18.5
Injection/ignition	TDI unit injector	TDI unit injector	TDI unit injector
Fuel conforming to	DIN EN 590	DIN EN 590	DIN EN 590
Diesel particulate filter	no	no	no
Camshaft drive	Toothed belt	Toothed belt	Toothed belt

Diesel engines

Engine codes ⇒ page 48	BLS	BMN	BMM[1)]
Capacity in litres	**1.9**	**2.0**	**2.0**
Number of cylinders	4	4	4
Valves per cylinder	2	4	4
Output/kW at rpm	77/4000	125/4200	103/4000
Torque/Nm at rpm	250/1900	350/1800	320/1750...2500
Compression ratio	19.0	18.5	18.5
Injection/ignition	TDI unit injector	TDI unit injector	TDI unit injector
Fuel conforming to	DIN EN 590	DIN EN 590	DIN EN 590
Diesel particulate filter	yes[2]	yes[2]	yes[2]
Camshaft drive	Toothed belt	Toothed belt	Toothed belt

1) RME fuel (biodiesel) must not be used! 2) When using fuels with elevated sulphur content the service life of the diesel particulate filter may be reduced.

Diesel engines

Engine codes ⇒ page 48	BRM[3)]	BXE[3)]	CBDA[3)]
Capacity in litres	**1.9**	**1.9**	**2.0**
Number of cylinders	4	4	4
Valves per cylinder	2	2	4
Output/kW at rpm	74 / 4000	77/4000	100/4200

Engine codes ⇒ page 48	BRM[3]	BXE[3]	CBDA[3]
Capacity in litres	**1.9**	**1.9**	**2.0**
Torque/Nm at rpm	250/1900	250/1900	320/1750...2500
Compression ratio	19	19.0	18.5
Injection/ignition	TDI unit injector	TDI unit injector	TDI common rail
Fuel conforming to	DIN EN 590	DIN EN 590	DIN EN 590
Diesel particulate filter	no	no	yes[4]
Camshaft drive	Toothed belt	Toothed belt	Toothed belt

3) RME fuel (biodiesel) must not be used! 4) When using fuels with elevated sulphur content the service life of the diesel particulate filter may be reduced.

Note

Vehicles with retrofitted diesel particulate filter are allocated in the table to diesel engines without diesel particulate filter. Vehicles with diesel particulate filter (fitted at the factory) can be identified by PR No. 7GG on the vehicle data sticker.

Engine codes ⇒ page 48	CBDB[4]	CBEA[4]
Capacity in litres	**2.0**	**2.0**
Number of cylinders	4	4
Valves per cylinder	4	4
Output/kW at rpm	103/4200	103/4000
Torque/Nm at rpm	320/1750...2500	320/1750...2500
Compression ratio	18.5	18.5
Injection/ignition	TDI common rail	TDI common rail
Fuel conforming to	DIN EN 590	DIN EN 590
Diesel particulate filter	yes[4]	yes[4]
Camshaft drive	Toothed belt	Toothed belt

4) RME fuel (biodiesel) must not be used! 4) When using fuels with elevated sulphur content the service life of the diesel particulate filter may be reduced.

Note

Vehicles with retrofitted diesel particulate filter are allocated in the table to diesel engines without diesel particulate filter. Vehicles with diesel particulate filter (fitted at the factory) can be identified by PR No. 7GG on the vehicle data sticker.

2 Service work

In this chapter you will obtain information on the following subjects:

- Service tables for “Rest of World” markets ⇒ page 6
- Service scope for North American and Canadian markets ⇒ page 11
- Service scope for “Rest of World” markets up to model year 2007 ⇒ page 17
- Service scope for “Rest of World” markets from model year 2008 ⇒ page 25
- Service intervals for North American and Canadian markets ⇒ page 35
- Service intervals for “Rest of World” markets up to model year 2007 ⇒ page 6
- Service intervals for “Rest of World” markets from model year 2008 ⇒ page 6
- Information on LongLife service or time or distance dependent service ⇒ page 36

2.1 Service tables for “Rest of World” markets

VW engine oil standards ⇒ page 7

Filter change intervals ⇒ page 8

Toothed belt change intervals ⇒ page 6

Service intervals ⇒ page 10

Spark plugs ⇒ page 9

2.1.1 Toothed belt change intervals

- If the engine is fitted with toothed belt or timing chain can be found in the engine list ⇒ page 1

Note

The camshaft drive with timing chain is maintenance-free!

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣				
Toothed belt change intervals, tensioning roller change intervals				
♦ DIESEL ENGINES				
ENGINE TYPE	Engine code	Period	Toothed belt change intervals	Tensioning roller change intervals
TDI-PD	AZV, BKC, BKD, BLS, BMN, BMM, BRM, BXE	Since introduction up to model year 2006	Every 120,000 km	Up to model year 2006 every 240,000 km
TDI-PD	AZV, BKC, BKD, BLS, BMN, BMM, BRM, BXE	From model year 2007	Every 150,000 km	From model year 2007 every 300,000 km

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣				
Toothed belt change intervals, tensioning roller change intervals				
TDI CR	CBDA, CBDB, CBEA	Since introduction	every 180,000 km	---

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣			
Toothed belt change intervals			
♦ PETROL ENGINES			
Engine type	Engine code	Period	Toothed belt change intervals
1.4 l	BUD	---	No prescribed change interval, toothed belt drive with test interval
1.6 l	BLF, BSE, BSF, CCSA	---	No prescribed change interval, toothed belt drive with test interval
2.0 FSI, 110 kW 2.0 TFSI, 147 kW	AXX, BLR, BLY, BWA BPY, BVY, BVZ	Since introduction	Every 180,000 km

2.1.2 VW engine oil standards

Caution

Only engine oils approved by VW may be used, up-to-date information ⇒ ServiceNet, Technical information, Inspections and Servicing, Approved oils .

Note

- *If no LongLife engine oil is filled or replenished, the time or distance dependent service applies.*
- *In this case an oil change service must be performed every 15,000 km or after 1 year* *⇒ page 10* *.*
- *For vehicles with LongLife service (PR number QG1) which are serviced according to "time- or distance-dependent" intervals, the service interval display must be recoded to "non-flexible"* *⇒ page 154* *.*

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣			
VW ENGINE OIL STANDARDS			
♦ PETROL ENGINES			
• "With LongLife service (QG1)"		• "Without LongLife service (QG0, QG2)"	
Engine type	Engine oil standards	Engine type	Engine oil standards
4-cylinder incl. FSI	504 00[1] alternative 503 00 [2)]	4-cylinder engines incl. FSI ‣2007	501 01/502 00
		4-cylinder engines incl. FSI 2008‣	502 00
4-cylinder TSI	504 00[1]	4-cylinder TSI	502 00

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣			
VW ENGINE OIL STANDARDS			
DIESEL ENGINES ♦ Without diesel particulate filter ♦ And diesel engines with retrofitted diesel particulate filter			
• “With LongLife service QG1”		• “Without LongLife service QG0, QG2”	
Engine type	Engine oil standards	Engine type	Engine oil standards
4-cylinder TDI-PD	507 00[1] alternative 506 01 [3]	4-cylinder TDI-PD	505 01
♦ DIESEL ENGINES with factory-fitted diesel particulate filter			
• “With LongLife service QG1”		• “Without LongLife service QG0, QG2”	
Engine type	Engine oil standards	Engine type	Engine oil standards
4-cylinder TDI-PD	507 00[1]	4-cylinder TDI-PD	507 00[1]
4-cylinder TDI-CR	507 00[1]	4-cylinder TDI-CR	507 00[1]

[1] Combination product: 504 00/ 507 00

[2] Combination product: 503 00/ 506 00

[3] Combination product: 503 00/506 00/506 01

Note

Vehicles with retrofitted diesel particulate filter are allocated in the table to diesel engines without diesel particulate filter. Vehicles with diesel particulate filter (fitted at the factory) can be identified by PR No. 7GG on the vehicle data sticker.

2.1.3 Filter change intervals

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣	
FILTER CHANGE INTERVALS	
♦ ENGINE OIL FILTER	
SERVICE TYPE	CHANGE INTERVALS
Vehicles with LongLife service QG1	According to service interval display from 15,000 km or 1 year to max. 30,000 km or 2 years
All remaining vehicles without LongLife service QG0, QG2	Every 15,000 km or 1 year whichever occurs first

♦ AIR FILTER	
ENGINE TYPE	CHANGE INTERVALS

♦ AIR FILTER	
All engine types	EVERY 6 years ♦ Vehicles driving < than 90,000 km in 6 years
	EVERY 90,000 km ♦ Vehicles driving > than 90,000 km in 6 years whichever occurs first

♦ FUEL FILTER			
ENGINE TYPE	DIESEL STANDARDS / CHANGE INTERVALS		
All diesel engines	Diesel conforming to EN 590	Diesel not conforming to EN 590	Biodiesel RME for vehicles up to 05.2006
	Every 90,000 km	Every 30,000 km	Every 30,000 km
	Draining water is deleted		

♦ DUST AND POLLEN FILTER	
ENGINE TYPE	CHANGE INTERVALS
All engine types	EVERY 60,000 km ♦ Vehicles driving > than 60,000 km in 2 years
	EVERY 2 years ♦ Vehicles driving < than 60,000 km in 2 years whichever occurs first

♦ OIL FILTER OF DUAL CLUTCH GEARBOX	
GEARBOX TYPE	CHANGE INTERVALS
6-speed DSG, 02E	Every 60,000 km

2.1.4 Spark plugs

- Spark plug designation: see “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣		
Spark plug change intervals		
Engine type	Engine code	Change intervals
1.4 SRI, FSI,TSI 1.6 SRI, FSI 2.0 FSI, 110 kW	BLG, BMY, BUD, CAVD, CAXA BLF, BSE, BSF, CCSA BLR, BLY, BVY, BVZ,	EVERY 60,000 km ♦ Vehicles driving > than 60,000 km in 4 years
		EVERY 4 years ♦ Vehicles driving < than 60,000 km in 4 years

Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣		
Spark plug change intervals		
2.0 TSI 2.0 TFSI, 147 kW	AXX, BPY, BWA, CAWB, CBFA, CCTA	EVERY 90,000 km ◆ Vehicles driving > than 90,000 km in 6 years
		EVERY 6 years ◆ Vehicles driving < than 90,000 km in 6 years

2.1.5 Service intervals

- ◆ Service intervals: Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣ ⇒ page 10
- ◆ Service intervals: Jetta 2008‣, Bora 2008‣, Golf Variant 2008‣ ⇒ page 10

Service intervals: Jetta 2005‣, Bora 2006‣, Golf Variant 2007‣			
Petrol and diesel engines			
From - to	**Service type Engine codes/PR No/ Remarks**	**Service**	**Intervals**
Since introduction	Diesel engines with elevated sulphur content in fuel • Countries with elevated sulphur content in fuel ⇒ page 47	Oil change service	Every 7,500 km /1 year:
Since introduction - ‣2007	Time or distance dependent QG0/QG2/QG3 or QG1 vehicles coded to non-flexible interval	Oil change service	Every 15,000 km / 1 year: whichever occurs first
		Interval service	Every 30,000 km / 2 years whichever occurs first
	Flexible/LongLife QG1	Interval service	Flexible from 15,000 to max. 30,000 km / max. 2 years whichever occurs first
	Time or distance dependent flexible/LongLife QG0/QG2/QG1	Interval service inspection	Every 60,000 km / 4 years:whichever occurs first

Service intervals: Jetta 2008‣, Bora 2008‣, Golf Variant 2008‣			
Petrol and diesel engines			
From - to	**Service type Engine codes/PR No/ Remarks**	**Service**	**Intervals**
Since introduction	Diesel engines with elevated sulphur content in fuel • Countries with elevated sulphur content in fuel ⇒ page 47	Oil change service	Every 7,500 km /1 year:

Service intervals: Jetta 2008 ▸, Bora 2008 ▸, Golf Variant 2008 ▸			
Petrol and diesel engines			
From - to	**Service type Engine codes/PR No/ Remarks**	**Service**	**Intervals**
2008 ▸	Time or distance dependent QG0/QG2/QG3 or QG1 vehicles coded to non-flexible interval	Oil change service	According to service interval display every 15,000 km / 1 year: whichever occurs first
		Interval service	Every 30,000 km / 2 years whichever occurs first
	Flexible/LongLife QG1	Interval service	According to flexible service interval display from 15,000 km / 1 year to max. 30,000 km / 2 years
	Time or distance dependent flexible/LongLife QG0/QG2/QG1	Inspection service	♦ First interval after 3 years or 60,000 km ♦ then ♦ Every 2 years

Note

For combined kilometre and time display applies: whichever occurs first.

2.2 Service scope for North American and Canadian markets

- First oil change service at 5,000 miles/8,000 km, for North American and Canadian markets ⇒ page 11
- Inspection service at 10,000 miles/15,000 km, 30,000 miles/ 45,000 km, 50,000 miles/75,000 km, etc. for North American and Canadian markets ⇒ page 12 .
- Inspection service at 20,000 miles/30,000 km, 40,000 miles/ 60,000 km, 60,000 miles/90,000 km etc. for North American and Canadian markets ⇒ page 13
- Additional work at 95,000 miles/152,000 km, 285,000 miles/ 304,000 km, etc. for North American and Canadian markets ⇒ page 15
- Delivery inspection for North American and Canadian markets ⇒ page 16

2.2.1 First oil change service at 5,000 miles/ 8,000 km for North American and Canadian markets

Caution

- *For vehicles from model year 2009 there is no oil change service at 5,000 miles/8,000 km.*
- *In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content* *⇒ page 47* *.*

Note

Inform the customer if faults are found during service and repair measures are necessary.

– Ask the customer if he requires:

• New wiper blades

• Replenish Windscreen Clear G 052 164, cleanser and anti-freeze.

– Removing and installing engine compartment cover -bottom- “noise insulation tray” ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Service interval display: Recode 5,000 miles/8,000 km intervals to inspection service at (10,000 miles/15,000 km), 30,000 miles/ 45,000 km), (50,000 miles/75,000 km), etc.	⇒ page 158
– Enter date of next service on sticker and attach sticker to driver side door pillar (B-pillar).	⇒ page 41

2.2.2 Inspection service at 10,000 miles/ 15,000 km, 30,000 miles/45,000 km, 50,000 miles/75,000 km etc. for North American and Canadian markets

Note

Inform the customer if faults are found during service and repair measures are necessary.

Caution

- ***In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .***

– Ask the customer if he requires:

• New wiper blades

• Replenish Windscreen Clear G 052 164, cleanser and anti-freeze.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Service interval display: Reset	⇒ page 153
– Window wash/wipe system: Replenish with Windscreen Clear -G 052 164-	
– Window wash/wipe system and headlight washer system: Check function and settings	⇒ page 160
– Automatic shift lock: Check function including park/neutral position and illumination	
– Brake fluid level (dependent upon brake pad/lining wear): Check	⇒ page 71
– Front and rear brake pads/linings: Check thickness	⇒ page 72
– Brake system: Perform visual check for leaks and damage	⇒ page 72
– Tyres: Change front tyres and rear tyres	
– Airbag system: Visual check every 12 months independent of mileage	
– Check battery using battery tester with printer -VAS 5097A- , always see workshop manual.	⇒ page 58
– Check tread depth and tyre inflation pressure	⇒ page 59
– Enter date of next service on sticker and attach sticker to driver side door pillar (B-pillar) - service intervals ⇒ page 41	⇒ page 41

2.2.3 Inspection service at 20,000 miles/ 30,000 km, 40,000 miles/60,000 km, 60,000 miles/90,000 km etc. for North American and Canadian markets

Note

Inform the customer if faults are found during service and repair measures are necessary.

Caution

- ***In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .***

– Ask the customer if he requires:

- New wiper blades
- Replenish Windscreen Clear G 052 164, cleanser and anti-freeze.

– Removing and installing engine compartment cover -bottom-, noise insulation tray ⇒ page 116 .

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117

Work to be completed	Page
– Service interval display: Reset	⇒ page 153
– Engine and components in engine compartment (from above): Perform visual check for leaks and damage	⇒ page 105
– Exhaust system: Visual check for leaks, security and damage	
– Door arrester and securing pins: Grease	⇒ page 170
– Cooling system: check frost protection and coolant level. Specification -25 °C ◆ in countries with arctic climate -35 °C	⇒ page 88
– Window wash/wipe system: Replenish with Windscreen Clear -G 052 164-	
– Window wash/wipe system and headlight washer system: Check function and settings	⇒ page 160
– Wiper blades: Check for damage and park position ◆ Every 40,000 miles (60,000 km)	⇒ page 165
– Automatic shift lock: Check function including park/neutral position and illumination	
– Automatic gearbox: Check ATF level, replenish if necessary, 09G gearbox ◆ Every 40,000 miles (60,000 km)	⇒ page 56
– Automatic gearbox: Check for leaks	
– Manual gearbox: Check for leaks, check oil level, replenish if necessary	
– Tyres: Change front tyres and rear tyres	
– Check tyre pressure, including spare wheel	⇒ page 59
– Brake fluid level (dependent upon brake pad/lining wear): Check	⇒ page 71
– Front and rear brake pads/linings: Check thickness	⇒ page 72
– Brake system: Perform visual check for leaks and damage	⇒ page 72
– Fuel filter: “RENEW” - for diesel engines ◆ Every 20,000 miles (30,000 km)	⇒ page 91
– Camshaft drive toothed belt: Check ◆ Only 4-cylinder TDI unit injector engines ◆ At 60,000 miles (90,000 km), then every 20,000 miles (30,000 km)	⇒ page 174
– Camshaft drive toothed belt: Renew ◆ Only 4-cylinder TDI unit injector engines up to model year 2006 ◆ Every 80,000 miles (120,000 km)	⇒ page 174
– Camshaft drive toothed belt tensioning roller: Renew ◆ Only 4-cylinder TDI unit injector engines up to model year 2006 ◆ Every 150,000 miles (240,000 km)	⇒ page 174
– Spark plugs: Renew ◆ Every 40,000 miles (60,000 km) ◆ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175
– Spark plugs: Renew ◆ Vehicles driving more than 60,000 miles (90,000 km) in 6 years ◆ Only 2.0 l, TFSI 147 kW engine ◆ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175
– Air filter element: Renew and clean housing ◆ Every 60,000 miles (90,000 km)	⇒ page 95
– Poly V-belt: Check condition ◆ Every 40,000 miles (60,000 km)	⇒ page 82

Work to be completed	Page
– Diesel particulate filter: Check ♦ Every 120,000 miles/180,000 km ♦ Further checks every 10,000 miles/15,000 km • Only valid for vehicles with factory-fitted diesel particulate filter • Vehicles with diesel particulate filter ⇒ page 4	⇒ page 74
– Track rod ends: Check play, security and boots	⇒ page 169
– Performing vehicle system test	⇒ page 75
– Panorama sliding roof: Check function, clean guide rails if necessary and grease with special grease, clean wind deflector, Golf Variant	⇒ page 134
– Sunroof: Check function, clean guide rails and lubricate with special grease	⇒ page 160
– 6-speed direct shift gearbox “DSG” 02E: Change oil and filter ♦ Every 40,000 miles (60,000 km)	⇒ page 74
– Final drive and protective bellows: Perform visual check for leaks and damage	⇒ page 76
– Underbody sealant: Visual check for damage to underbody sealant, underbody panels, routing of lines and plugs ♦ Every 40,000 miles (60,000 km)	⇒ page 172
– Headlights: Check adjustment	⇒ page 147
– Spare wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Front left wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Rear left wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Front right wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Rear right wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Breakdown set, if fitted: Renew tyre sealant; observe expiry date.	⇒ page 133
– Performing road test (driving behaviour, noises, air conditioner etc.)	⇒ page 135

2.2.4 Additional work for North American and Canadian markets

Work to be completed	Page
– Changing brake fluid ♦ Additional work as a separate charge!	⇒ page 67
– Dust and pollen filter: Clean housing and renew filter element	⇒ page 146
– Camshaft drive toothed belt tensioning roller: Renew ♦ Only 4-cylinder TDI unit injector engines from model year 2007 ♦ Every 190,000 miles/300,000 km	⇒ page 174
– Camshaft drive toothed belt: Renew ♦ Only 4-cylinder TDI unit injector engines from model year 2007 ♦ Every 150,000 miles (240,000 km)	⇒ page 174
– Camshaft drive toothed belt: Renew ♦ Only 4-cylinder CR TDI unit injector engines ♦ Every 120,000 miles (180,000 km)	⇒ page 174

2.2.5 Delivery inspection for North American and Canadian markets

- The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.
- For stock vehicles and vehicles in storage perform measures according to stock vehicles and vehicles in storage ⇒ Maintenance tables Elsa 3.1 .

Work to be completed	Page
Vehicle interior	
– All switches, electrical consumers, gauges and other controls: Check function	
– Transportation mode: Switch off	⇒ page 170
– Clearing fault memory	⇒ page 75
– Electric windows: Check positioning (open and close functions)	⇒ page 75
– Compass: Set compass zone and calibrate compass	⇒ page 84
– Service interval display: Recode for first oil change service at 5,000 miles/8,000 km • Jetta USA, model year 2006 from chassis number 3VWRG71K06M705377 to 3VWSG81K86M732351 • Jetta Canada, model year 2006 from chassis number 3VWST71K36M705628 to 3VWRT81K96M732482	⇒ page 156
– Dash panel insert: Adapt menu language versions	⇒ page 83
– Clock: Set to correct time	⇒ page 173
– Radio card, part of radio operating instructions: Stick radio serial number and fixed code number sticker onto radio card	
– Tyre pressure monitoring: Perform basic setting	⇒ page 144
– Check vehicle interior for cleanliness: Front and rear seats, interior trim, carpets/mats, windows	
– Seat and carpet protective coverings: Remove	
Vehicle exterior	
– Install all equipment (if any) which has been packed inside vehicle: mats, wheel trims or hub caps.	
– Edge protection -plastic foil- on doors: Remove	
– Check vehicle exterior for cleanliness: Paintwork, decorative parts, windows, wiper blades, surfaces	
– Wheel securing bolts: Tighten to prescribed torque setting	⇒ page 136
Tyres	
– Tyre inflation pressure of all 4 wheels and spare wheel: Set to correct pressures (in the factory the tyres are inflated to 3.5 bar).	⇒ page 59
– Optional equipment “Spare wheel package”: Check condition and inflation pressure.	⇒ page 59
Vehicle from below	
– Vehicle from below: Perform visual check for leaks and damage without removing engine noise insulation: Engine, steering, protective bellows, hoses and fluid reservoirs.	⇒ page 172
– Transport devices, vehicles with sports running gear: Remove blocking pieces from front axle springs	⇒ page 172
– Underbody sealant: Visual check for damage to underbody sealant, underbody panels, routing of lines and plugs	⇒ page 172
Engine compartment	
– Battery: Check battery terminals by hand for tightness	⇒ page 56
– Window wash/wipe system and headlight washer system: Check function and settings; replenish with Windscreen Clear -G 052 164- to maximum	⇒ page 160

Work to be completed	Page
– Engine oil level: Check, top-up with engine oil if necessary; observe oil specifications!	⇒ page 117
– Engine and components in engine compartment (from above): Perform visual check for leaks and damage	⇒ page 105
– Coolant level: Check that it is at maximum	⇒ page 88
– Brake fluid: Check that it is at maximum	⇒ page 71
Documentation/final checks	
– “Your first service” sticker: Apply to driver side door pillar (B-pillar), sticker can be found on an instruction attached at front of vehicle wallet. Destroy the instruction after attaching the sticker!	⇒ page 41
– Service schedule: Enter delivery inspection	
– Check number and functions of keys, if necessary remove grease	
– Check literature for vehicle is complete and prepare literature for delivery to customer	
– Performing road test (driving behaviour, noises, air conditioner etc.)	⇒ page 135

2.3 Service scope for “Rest of World” markets up to model year 2007

- Service intervals ⇒ page 6 .
- Oil change service for “Rest of World” markets up to model year 2007 ⇒ page 17
- Interval service for “Rest of World” markets up to model year 2007 ⇒ page 18
- Interval service inspection for “Rest of World” markets up to model year 2007 ⇒ page 19
- Time or distance dependent additional work for “Rest of World” markets, up to model year 2007 ⇒ page 22
- Information on LongLife service or time or distance dependent service ⇒ page 36

2.3.1 Oil change service for “Rest of World” markets up to model year 2007

Note

Inform the customer if faults are found during service and repair measures are necessary.

Caution

- *If RME fuel (biodiesel) is used, always note the information on RME fuel (biodiesel) ⇒ page 49 .*
- *When using RME (biodiesel) according to “EN 14214”, the fuel filter must be renewed every 30,000 km.*

Caution

- *In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .*

– Ask the customer if he requires:

- New wiper blades
- Replenish Windscreen Clear G 052 164 (cleanser and anti-freeze).

– Check if storage life date of first aid box has been exceeded and if warning triangle is fitted.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Front and rear brake pads/linings: Check thickness	⇒ page 72
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Service interval display: Reset	⇒ page 153
– Enter date of next service on sticker and attach sticker to driver side door pillar (B-pillar).	⇒ page 41

2.3.2 Interval service for “Rest of World” markets up to model year 2007

Note

- *Inform the customer if faults are found during service and repair measures are necessary.*
- *The prerequisites for the interval service with a running period of max. 2 years or 30,000 km can only be fulfilled if engine oil for LongLife service is used or replenished.*

Caution

- *If RME fuel (biodiesel) is used, always note the information on RME fuel (biodiesel) ⇒ page 49 .*
- *When using RME (biodiesel) according to “EN 14214”, the fuel filter must be renewed every 30,000 km.*

Caution

- *In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .*

– Ask the customer if he requires:

- New wiper blades

- Replenish Windscreen Clear G 052 164 (cleanser and anti-freeze).

– Check if storage life date of first aid box has been exceeded and if warning triangle is fitted.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Check battery and second battery (if fitted) using battery tester with printer -VAS 5097A- (strictly adhere to workshop manual)	⇒ page 58
– Vehicle system test: Perform test	⇒ page 75
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Tyres (including spare wheel): Check tread depth, wear pattern and inflation pressure	⇒ page 59
– Tyre pressure monitoring: Perform basic setting • If fitted	⇒ page 144
– Tyre repair set: Check and enter expiry date of tyre filler bottle: _____ • If fitted	⇒ page 133
– Front and rear brake pads/linings: Check thickness	⇒ page 72
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Service interval display: Reset	⇒ page 153
– Enter date of next service on sticker and attach sticker to driver side door pillar (B-pillar) - service intervals ⇒ page 6	⇒ page 41

2.3.3 Interval service inspection for “Rest of World” markets up to model year 2007

Note

- *Inform the customer if faults are found during service and repair measures are necessary.*
- *If service work has been performed for the interval service at least 10,000 km before the 60,000 km inspection, it is not necessary to carry out this work again at the 60,000 km inspection.*
- *The service work for “Interval service” is marked with a footnote*

Caution

- *If RME fuel (biodiesel) is used, always note the information on RME fuel (biodiesel) ⇒ page 49 .*
- *When using RME (biodiesel) according to "EN 14214", the fuel filter must be renewed every 30,000 km.*

Caution

- *In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .*

– Ask the customer if he requires:

• New wiper blades

• Replenish Windscreen Clear G 052 164 (cleanser and anti-freeze).

– Check if storage life date of first aid box has been exceeded and if warning triangle is fitted.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
Electrics	
– Checking battery using battery tester with printer -VAS 5097A- • Always see workshop manual 1)	⇒ page 58
– Front lights - check function: Side lights, dipped beam, main beam, fog lights, turn signals, hazard warning lights	
– Rear lights - check function: Brake lights (including 3rd brake light), tail lights, reversing lights, rear fog light, number plate light, turn signals, hazard warning lights, luggage/load compartment lights	
– Interior and glove compartment lights, cigarette lighter, warning lamps and horn: Check function	
– Static cornering light (cornering light) and driving light assist: Check function • If fitted	⇒ page 55
– Vehicle system test: Perform test	⇒ page 75
– Service interval display: Reset 1)	⇒ page 153
Vehicle exterior	
– Door arrester: Grease	⇒ page 170
– Panorama sliding roof: Check function, clean guide rails if necessary and grease with special grease, clean wind deflector (Golf Variant)	⇒ page 134
– Sunroof: Check function, clean guide rails and lubricate with special grease	⇒ page 160
– Window wash/wipe system and headlight washer system: Check function, adjustment and for damage	⇒ page 160

Work to be completed	Page
Tyres	
– Summer tyres [1], winter tyres [2], all-season tyres [3]: enter type of tyre ____	
– Front left wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm 1)	⇒ page 59
– Rear left wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm 1)	⇒ page 59
– Front right wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm 1)	⇒ page 59
– Rear right wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm 1)	⇒ page 59
– Spare wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm 1)	⇒ page 59
Vehicle from below	
– Engine oil: Drain or extract, renew oil filter 1)	⇒ page 117
– Engine and components in engine compartment (from below): Visual check for leaks and damage	⇒ page 105
– Gearbox, final drive and drive shaft bellows: Visual check for leaks and damage	⇒ page 76
– Brake system: Perform visual check for leaks and damage	⇒ page 72
– Front and rear brake pads/linings: Check thickness 1)	⇒ page 72
– Exhaust system: Visual check for leaks, security and damage	
– Underbody sealant: Visual check for damage to underbody sealant, underbody panels, routing of lines and plugs	⇒ page 172
– Track rod ends: Check play, security and boots	⇒ page 169
– Swivel joints: Visual check of swivel joint boots for leaks and damage	⇒ page 55
Engine compartment	
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Engine and components in engine compartment (from above): Perform visual check for leaks and damage	⇒ page 105
– Window wash/wipe system: Replenish with Windscreen Clear -G 052 164-	
– Automatic gearbox: Check ATF level	⇒ page 56
– Cooling system: Check frost protection and coolant level ♦ Frost protection specification -25 °C. In countries with arctic climate -35 °C ♦ Enter actual value (measured value) _____°C	⇒ page 88
– Poly V-belt: Check condition	⇒ page 82
– Poly V-belt: Check tension ♦ For engines without automatic tensioning roller	⇒ page 82
– Brake fluid level (dependent upon lining/pad wear): Check	⇒ page 71
Final checks	
– Tyre inflation pressure of all 4 wheels and spare wheel: Correct 1)	⇒ page 59

Work to be completed	Page
– Tyre pressure monitoring: Perform basic setting 1) • If fitted	⇒ page 144
– Tyre repair set: Check and enter expiry date of tyre filler bottle: _____ • If fitted	⇒ page 133
– Headlights: Check adjustment	⇒ page 147
– “Your next service” sticker: Enter next due date and attach sticker to driver side B-pillar - service intervals ⇒ page 6	⇒ page 41
– Performing road test (driving behaviour, noises, air conditioner etc.)	⇒ page 135
1) If these procedures have been already performed during the interval service, they do not need to be performed again for the 60,000 km inspection.	

2.3.4 Time or distance dependent additional work for “Rest of World” markets, up to model year 2007

Depending on conditions under which the vehicle is used ⇒ page 47 and vehicle equipment, extra service work must be performed in addition to the interval service or interval service inspection.

It is also possible, to perform additional work outside the service intervals with regard to the entries in the service schedule (or sticker: next service).

Every 30,000 km

Additional work	Page
– Fuel filter: “RENEW” - when using diesel: • “NOT” conforming to EN 590 • When using RME (biodiesel) conforming to “EN 14214” • For models up to 05.2006	⇒ page 91

Every 60,000 km

Additional work	Page
– 6-speed dual clutch gearbox (DSG) 02E: Change oil and filter	⇒ page 74
– Haldex coupling (Jetta 4motion): Change oil	⇒ page 78
– Renew dust and pollen filter (cabin filter) ◆ Vehicles driving more than 60,000 km in 2 years	⇒ page 146
– Spark plugs: Renew ◆ Vehicles driving more than 60,000 km in 4 years ◆ Not valid for 2.0 l TFSI 147 kW engine ◆ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

Every 90,000 km

Additional work	Page
– Air filter element: Renew and clean housing ◆ Vehicles driving more than 90,000 km in 6 years	⇒ page 95
– Fuel filter: “RENEW” - when using diesel: • Conforming to EN 590	⇒ page 91
– Spark plugs: Renew ◆ Vehicles driving more than 90,000 km in 6 years ◆ Only 2.0 l, TFSI 147 kW engine ◆ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

At 90,000 km then every 30,000 km

Additional work	Page
– Camshaft drive toothed belt: Check ◆ 4-cylinder petrol engines (1.4 l and 1.6 l)	⇒ page 175

Every 120,000 km

Additional work	Page
– Camshaft drive toothed belt: Renew • Valid for 4-cylinder TDI unit injector engines up to ▸2006 • It is not necessary to renew before the current interval	⇒ page 174

Every 150,000 km

Additional work	Page
– Camshaft drive toothed belt: Renew ◆ Only 4-cylinder unit injector engines from model year 2007	⇒ page 174

At 150,000 km then every 30,000 km

– Diesel particulate filter: Check • Only valid for vehicles with factory-fitted diesel particulate filter • Vehicles with diesel particulate filter ⇒ page 4	⇒ page 74

Every 180,000 km

Additional work	Page
– Camshaft drive toothed belt: Renew ◆ Only 2.0 l FSI 110, 147 kW	⇒ page 175

Every 240,000 km

Additional work	Page
– Camshaft drive toothed belt tensioning roller: Renew • Valid for 4-cylinder TDI unit injector engines up to ‣2006 • It is not necessary to renew before the current interval	⇒ page 174

Every 300,000 km

Additional work	Page
– Toothed belt tensioning roller: Renew ◆ Only 4-cylinder TDI unit injector engines from model year 2007 ◆ It is not necessary to renew before the current interval	⇒ page 174

Every 12 months (only valid for Germany)

Additional work	Page
– Exhaust emissions test: Perform test • For vehicles with commercial passenger transport, e.g. taxis • Additional work as a separate charge!	⇒ page 191

Every 2 years

Additional work	Page
– Brake and clutch system: Change brake fluid • Additional work as a separate charge! – Perform at interval service or interval service inspection, if possible	⇒ page 67
– Renew dust and pollen filter (cabin filter) ◆ Vehicles driving less than 60,000 km in 2 years	⇒ page 146

3 years after initial registration and then every 2 years / only valid for Germany

Additional work	Page
– Exhaust emissions test (EET): Perform test • Additional work as a separate charge!	⇒ page 191

Every 4 years

Additional work	Page
– Spark plugs: Renew ◆ Vehicles driving less than 60,000 km in 4 years ◆ Not valid for 2.0 l TFSI 147 kW engine ◆ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

Additional work	Page
– Renew tyre filler bottle of breakdown set (if fitted) - observe expiry date. ◆ If fitted	⇒ page 133

Every 6 years

Additional work	Page
– Air filter: Clean housing and renew filter element ◆ For vehicles driving less than 90,000 km in 6 years	⇒ page 95
– Spark plugs: Renew ◆ Vehicles driving less than 90,000 km in 6 years ◆ Only 2.0 l, TFSI 147 kW engine ◆ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

2.4 Service scope for “Rest of World” markets from model year 2008

- ◆ Service intervals ⇒ page 6 .
- • Oil change service 2008‣ ⇒ page 25 .
- • Interval service 2008‣ ⇒ page 27 .
- • Inspection service 2008‣ ⇒ page 28 .
- • Time or distance dependent additional work for “Rest of World” markets from model year 2008 ⇒ page 30
- • Delivery inspection for “Rest of World” markets ⇒ page 33

2.4.1 Oil change service 2008‣

- • The oil change service is a time or distance dependent service.
- • The oil change service also applies to vehicles with LongLife service, which were recoded to time or distance dependent service.
- • For vehicles with time or distance dependent service, PR No. „QG0 or QG2“ is entered in the vehicle data sticker ⇒ page 46 .
- • If no LongLife engine oil is filled or replenished, the time or distance dependent service applies ⇒ page 10 . In this case an oil change service must be performed every 15,000 km or after 1 year according to service interval display.

Caution

- ◆ *When using diesel fuel with elevated sulphur content the oil and fuel filter must be changed at 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .*
- ◆ *The service life of the diesel particulate filter could be reduced considerably if diesel fuels with a high sulphur content are used.*

Caution

- *The vehicle is not suitable for use with biodiesel and must not be filled up or driven with biodiesel.*
- *If you use biodiesel fuel, the engine and fuel system could be damaged.*
- *Some diesel manufacturers blend biodiesel with diesel fuel in compliance with European Standard 590. This diesel is suitable for use in your vehicle and will not damage the engine and fuel system.*

Note

Inform the customer if faults are found during service and repair measures are necessary.

– Ask the customer if he requires:

• New wiper blades

• Replenish Windscreen Clear G 052 164 (cleanser and anti-freeze).

– Check if storage life date of first aid box has been exceeded and if warning triangle is fitted.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Front and rear brake pads/linings: Check thickness	⇒ page 72
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Service interval display: Recode to non-flexible intervals ♦ Vehicles with PR No. QG1	⇒ page 154
– Service interval display: Reset	⇒ page 153
– Enter date of next service on sticker and attach sticker to driver side door pillar (B-pillar).	⇒ page 41

2.4.2 Interval service 2008 ▸

Caution

- *In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .*
- *The service life of the diesel particulate filter could be reduced considerably if diesel fuels with a high sulphur content are used.*

Caution

- *The vehicle is not suitable for use with biodiesel and must not be filled up or driven with biodiesel.*
- *If you use biodiesel fuel, the engine and fuel system could be damaged.*
- *Some diesel manufacturers blend biodiesel with diesel fuel in compliance with European Standard 590. This diesel is suitable for use in your vehicle and will not damage the engine and fuel system.*

Note

Inform the customer if faults are found during service and repair measures are necessary.

– Ask the customer if he requires:

• New wiper blades

• Replenish Windscreen Clear G 052 164 (cleanser and anti-freeze).

– Check if storage life date of first aid box has been exceeded and if warning triangle is fitted.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
– Checking battery using battery tester with printer -VAS 5097A- • Always see workshop manual	⇒ page 58
– Summer tyres [1], winter tyres [2], all-season tyres [3]: enter type of tyre ____	
– Tyre inflation pressure of all 4 wheels and spare wheel: Check	⇒ page 59
– Spare wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Tyre repair set: Check and enter expiry date of tyre filler bottle: ____ • If fitted	⇒ page 133

Work to be completed	Page
– Tyre pressure monitoring: Perform basic setting • If fitted	⇒ page 144
– Front left wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Rear left wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Rear right wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Front right wheel: Check condition and wear pattern of tyre; enter tread depth: _____ mm	⇒ page 59
– Engine oil: Drain or extract, renew oil filter	⇒ page 117
– Front and rear brake pads/linings: Check thickness	⇒ page 72
– Brake system: Perform visual check for leaks and damage	⇒ page 72
– Engine oil: Replenish, observe oil specifications ⇒ page 48	⇒ page 117
– Brake fluid level (dependent upon lining/pad wear): Check	⇒ page 71
– Service interval display: Reset	⇒ page 153
– Enter date of next service on sticker and attach sticker to driver side door pillar (B-pillar) - service intervals ⇒ page 6	⇒ page 41

2.4.3 Inspection service 2008 ▸

Note

Inform the customer if faults are found during service and repair measures are necessary.

Caution

- ***In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .***
- ***The service life of the diesel particulate filter could be reduced considerably if diesel fuels with a high sulphur content are used.***

> ⚠ Caution
>
> ♦ *The vehicle is not suitable for use with biodiesel and must not be filled up or driven with biodiesel.*
>
> ♦ *If you use biodiesel fuel, the engine and fuel system could be damaged.*
>
> ♦ *Some diesel manufacturers blend biodiesel with diesel fuel in compliance with European Standard 590. This diesel is suitable for use in your vehicle and will not damage the engine and fuel system.*

– Ask the customer if he requires:

- New wiper blades
- Replenish Windscreen Clear G 052 164 (cleanser and anti-freeze).

– Check if storage life date of first aid box has been exceeded and if warning triangle is fitted.

– Removing and installing engine compartment cover -bottom- (noise insulation tray) ⇒ page 116

The sequence of the individual service tasks has been tested and optimised. Therefore, it should be followed to avoid unnecessary interruptions in the work.

Work to be completed	Page
Electrics	
– Front lights - check function: Side lights, dipped beam, main beam, fog lights, turn signals, hazard warning lights	
– Static cornering light (cornering light) and driving light assist: Check function • If fitted	⇒ page 55
– Rear lights - check function: Brake lights (including 3rd brake light), tail lights, reversing lights, rear fog light, number plate light, turn signals, hazard warning lights, luggage/load compartment lights	
– Interior and glove compartment lights, cigarette lighter, warning lamps and horn: Check function	
Vehicle exterior	
– Window wash/wipe system and headlight washer system: Check function and settings	⇒ page 160
– Door arrester: Grease	⇒ page 170
– Panorama sliding roof: Check function, clean guide rails if necessary and grease with special grease, clean wind deflector (Golf Variant)	⇒ page 134
– Sunroof: Check function, clean guide rails and lubricate with special grease	⇒ page 160
Tyres	
– Summer tyres [1], winter tyres [2], all-season tyres [3]: enter type of tyre ____	
– Tyre inflation pressure of all 4 wheels and spare wheel: Correct	⇒ page 59
– Tyre repair set: Check and enter expiry date of tyre filler bottle: _______ • If fitted	⇒ page 133
– Tyre pressure monitoring: Perform basic setting • If fitted	⇒ page 144
– Spare wheel: Check condition and wear pattern of tyre; enter tread depth: _______ mm	⇒ page 59
– Rear right wheel: Check condition and wear pattern of tyre; enter tread depth: _______ mm	⇒ page 59

Work to be completed	Page
– Rear left wheel: Check condition and wear pattern of tyre; enter tread depth: _______ mm	⇒ page 59
– Front left wheel: Check condition and wear pattern of tyre; enter tread depth: _______ mm	⇒ page 59
– Front right wheel: Check condition and wear pattern of tyre; enter tread depth: _______ mm	⇒ page 59
Vehicle from below	
– Automatic gearbox: Check ATF level, replenish if necessary	⇒ page 56
– Engine and components in engine compartment (from below): Visual check for leaks and damage	⇒ page 105
– Poly V-belt: Check condition	⇒ page 82
– Poly V-belt: Check tension ♦ For engines without automatic tensioning roller	⇒ page 82
– Gearbox, final drive and drive shaft bellows: Visual check for leaks and damage	⇒ page 76
– Swivel joints: Visual check of swivel joint boots for leaks and damage	⇒ page 55
– Track rod ends: Check play, security and boots	⇒ page 169
– Exhaust system: Visual check for leaks, security and damage	
– Underbody: Visual check for damage to underbody sealant, underbody panels, routing of lines, plugs	⇒ page 172
Engine compartment	
– Engine and components in engine compartment (from above): Perform visual check for leaks and damage	⇒ page 105
– Windscreen wash/wipe system: Check fluid level and frost protection, replenish (only if customer requires) • Use Windscreen Clear -G 052 164-	
– Cooling system: Check frost protection and coolant level ♦ Frost protection specification -25 °C. In countries with arctic climate -35 °C ♦ Enter actual value (measured value) _______ °C	⇒ page 88
Final checks	
– Headlights: Check adjustment	⇒ page 147
– “Your next service” sticker: Enter next due date and attach sticker to driver side B-pillar - service intervals ⇒ page 6	⇒ page 41
– Performing road test (driving behaviour, noises, air conditioner etc.)	⇒ page 135

2.4.4 Time or distance dependent additional work for “Rest of World” markets 2008 ▸

Depending on conditions under which the vehicle is used ⇒ page 47 and vehicle equipment, extra service work must be performed in addition to the interval service, inspection service or interval service inspection.

It is also possible, to perform additional work outside the service intervals with regard to the entries in the service schedule (or sticker: next service).

Every 7,500 km

Additional work	Page
– Fuel filter: Renew • Only valid when using diesel with sulphur content ≥2000 ppm.	⇒ page 91

Every 30,000 km

Additional work	Page
– Fuel filter: Renew • When using diesel “NOT” conforming to EN 590	⇒ page 91

Every 60,000 km

Additional work	Page
– Dual clutch gearbox (DSG) 02E: Renew gear oil and filter	⇒ page 74
– Renew dust and pollen filter (cabin filter) • Applies to vehicles driving more than 60,000 km in 2 years	⇒ page 146
– Haldex coupling (Jetta 4motion): Change oil	⇒ page 78
– Spark plugs: Renew • Vehicles driving more than 60,000 km in 4 years ♦ Only valid for 1.4 l and 1.6 l engines ♦ Only valid for 2.0 l FSI 110 kW engines ♦ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

Every 90,000 km

Additional work	Page
– Air filter element: Renew and clean housing ♦ Vehicles driving more than 90,000 km in 6 years	⇒ page 95
– Fuel filter: Renew • When using diesel conforming to EN 590	⇒ page 91
– Spark plugs: Renew • Vehicles driving more than 90,000 km in 6 years ♦ Only valid for 2.0 l TFSI 147 KW engines ♦ Only valid for 2.0 l TSI 147 KW engines ♦ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

At 90,000 km then every 30,000 km

Additional work	Page
– Camshaft drive toothed belt: Check • Valid for 4-cylinder petrol engines (1.4 l and 1.6 l)	⇒ page 175

Every 150,000 km

Additional work	Page
– Camshaft drive toothed belt: Renew ◆ Only 4-cylinder unit injector engines • Generally it is not necessary to renew the toothed belt before the actual change interval is reached. Especially cracks on the belt side are not relevant for service life	⇒ page 174

At 150,000 km then every 30,000 km

Additional work	Page
– Diesel particulate filter: Check • Only valid for vehicles with factory-fitted diesel particulate filter • Vehicles with diesel particulate filter ⇒ page 4	⇒ page 74

Every 180,000 km

Additional work	Page
– Camshaft drive toothed belt: Renew • Valid for 2.0 l FSI and TFSI engines • It is not necessary to renew before the current interval	⇒ page 175

Every 300,000 km

Additional work	Page
– Camshaft drive toothed belt tensioning roller: Renew • Valid for 4-cylinder TDI unit injector engines from 2007 ▸ • It is not necessary to renew before the current interval	⇒ page 174

Every 12 months (only valid for Germany)

Additional work	Page
– Exhaust emissions test: Perform test • For vehicles with commercial passenger transport, e.g. taxis • Only valid for Germany	⇒ page 191

Every 2 years

Additional work	Page
– Renew dust and pollen filter (cabin filter) ◆ Vehicles driving less than 60,000 km in 2 years	⇒ page 146

3 years after initial registration and then every 2 years

Additional work	Page
– Brake and clutch system: Change brake fluid	⇒ page 67
– Exhaust emissions test (EET): Perform test • Only valid for Germany	⇒ page 191

Every 4 years

Additional work	Page
– Spark plugs: Renew • Vehicles driving less than 60,000 km in 4 years ♦ Only valid for 1.4 l and 1.6 l engines ♦ Only valid for 2.0 l FSI 110 kW engines ♦ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175
– Breakdown set: Renew tyre sealant ♦ If fitted	⇒ page 133

Every 6 years

Additional work	Page
– Tyre pressure sensors: Change • If fitted	⇒ page 146
– Air filter: Clean housing and renew filter element ♦ For vehicles driving less than 90,000 km in 6 years	⇒ page 95
– Spark plugs: Renew ♦ Vehicles driving less than 90,000 km in 6 years ♦ Only 2.0 l, TFSI 147 kW engine ♦ Spark plug designation: “Power unit” ⇒ Rep. Gr. 28 “Test data, spark plugs”	⇒ page 175

2.4.5 Delivery inspection for “Rest of World” markets

Work to be completed	Page
Engine compartment	
– Battery: Check battery terminals by hand for tightness	⇒ page 56
– Check battery and second battery (if fitted) using battery tester with printer -VAS 5097A- (strictly adhere to workshop manual)	⇒ page 58
– Transportation mode: Switch off	⇒ page 170
Vehicle interior	
– Service interval display: Reset ♦ Only valid for stock vehicles and vehicles in storage	⇒ page 153
– Reading radio code with fault reader	⇒ page 139
– Radio/radio navigation system: Activate anti-theft coding, store local radio stations to station buttons	⇒ page 140

Work to be completed	Page
– Dash panel insert: Recode • In countries with sulphur content in diesel fuel ⇒ page 47	⇒ page 154
– All switches, electrical consumers, gauges and other controls: Check function	
– Clock and date: Set to correct time	⇒ page 173
– Front passenger front airbag: Check activation / deactivation – Position switch at “On”	⇒ page 58
– Electric windows: Check positioning (open and close functions)	⇒ page 75
– Memory seat: Perform initialisation • If fitted	⇒ page 104
– Auxiliary heater: Set weekday in menu of combi-instrument • Only valid for vehicles with auxiliary heater	⇒ page 169
– Check vehicle interior for cleanliness: Front and rear seats, interior trim, carpets/mats, windows	
– Seat and carpet protective coverings: Remove	
Vehicle exterior	
– Install all equipment (if any) which has been packed inside vehicle: mats, wheel trims or hub caps.	
– Edge protection on doors (plastic foil): Remove	
– Check vehicle exterior for cleanliness: Paintwork, decorative parts, windows, wiper blades, surfaces	
– Wiper blade protection: Remove	⇒ page 166
– Wheel securing bolts: Tighten to prescribed torque setting	⇒ page 136
Tyres	
– Tyre inflation pressure of all 4 wheels and spare wheel: Set to correct pressures (in the factory the tyres are inflated to 3.5 bar).	⇒ page 59
– Tyre pressure monitoring: Perform basic setting • If fitted	⇒ page 144
– Optional equipment “Spare wheel package”: Check condition and inflation pressure.	⇒ page 59
Vehicle from below	
– Vehicle from below, visual check for leaks and damage (without removing engine noise insulation cover): Engine, steering, protective bellows/boots, hoses and fluid reservoirs.	⇒ page 172
– Transport devices (vehicles with sports running gear): Remove blocking pieces from front axle springs.	⇒ page 172
– Underbody sealant: Visual check for damage to underbody sealant, underbody panels, routing of lines and plugs	⇒ page 172
Engine compartment	
– Window wash/wipe system and headlight washer system: Check function and settings; replenish with Windscreen Clear -G 052 164- to maximum	⇒ page 160
– Engine oil level: Check, top-up with engine oil if necessary; observe oil specifications!	⇒ page 117
– Engine and components in engine compartment (from above): Perform visual check for leaks and damage	⇒ page 105
– Coolant level: Check that it is at maximum	⇒ page 88
– Brake fluid: Check that it is at maximum	⇒ page 71
Documentation/final checks	

Work to be completed	Page
– "Your first service" sticker: Apply to driver side door pillar (B-pillar); sticker can be found on an instruction attached at front of vehicle wallet. Destroy the instruction after attaching the sticker! [1]	⇒ page 41
– LongLife engine oil sticker: Apply to left side of lock carrier ♦ Vehicles with LongLife service - PR number QG1 Note: Gradual deletion from week 04/07	⇒ page 41
– Hotline sticker: Apply to the inside of glove box cover • Only valid for Germany Note: Gradual deletion	⇒ page 41
– Service schedule: Enter delivery inspection	
– Check number and functions of keys, if necessary remove grease	
– Check literature for vehicle is complete and prepare literature for delivery to customer	
– Performing road test (driving behaviour, noises, air conditioner etc.)	⇒ page 135

1) In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km.

2.5 Service intervals for "Rest of World" markets

Information on service intervals can be found in the service tables ⇒ page 6 .

2.6 Service intervals for North American and Canadian markets

> ⚠ Caution
>
> - *In countries with elevated sulphur content in diesel fuel, change oil every 7,500 km. Affected countries with elevated sulphur content ⇒ page 47 .*
> - *For vehicles from model year 2009 the oil change service is no longer valid at 5,000 miles (8,000 km).*

Information concerning the sticker can be found ⇒ page 41 .

Vehicles with PR number QG0, QG2

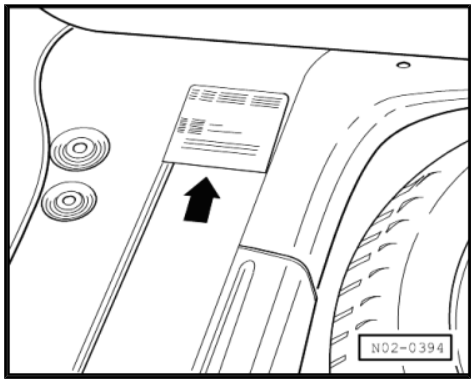
Oil change service (only valid for vehicles up to model year 2008)	Page
– Oil change service at 5,000 miles (8,000 km) ♦ (according to service sticker)	⇒ page 11

Inspection service (oil change service & inspection service) every 10,000 miles or after 1 year ♦ whichever occurs first ♦ according to service sticker	Page
– 10,000 miles (15,000 km) oil change service & inspection service	⇒ page 11
– 20,000 miles (30,000 Km) oil change service & inspection service	
– 30,000 miles (45,000 Km) oil change service & inspection service	
– 40,000 miles (60,000 Km) oil change service & inspection service	
– 50,000 miles (75,000 Km) oil change service & inspection service	
– 60,000 miles (90,000 Km) oil change service & inspection service	
– 70,000 miles (105,000 Km) oil change service & inspection service	
– 80,000 miles (120,000 Km) oil change service & inspection service	
– 90,000 miles (135,000 Km) oil change service & inspection service	
– 100,000 miles (150,000 Km) oil change service & inspection service	
– 110,000 miles (165,000 Km) oil change service & inspection service	
– 120,000 miles (180,000 Km) oil change service & inspection service	

2.7 Information on LongLife service or time or distance dependent service

2.7.1 Service identification

– Check vehicle data sticker in luggage compartment to determine whether vehicle is equipped with PR number “QG1”, “QG0” or “QG2”. The PR number is decisive for the service intervals.



The vehicle data sticker is located on left near spare wheel well.

Vehicle IDs with the following PR number:

“QG1” indicates LongLife service.

“QG2” indicates time or distance dependent service.

“QG0” indicates time or distance dependent service.

3 General

In this chapter you will obtain information on the following subjects:

- Tow starting/towing for North American and Canadian markets ⇒ page 37
- Raising vehicle with lifting platform and trolley jack ⇒ page 41
- Sticker ⇒ page 41
- Connecting vehicle diagnostic tester ⇒ page 43
- Vehicle identification number ⇒ page 46
- Vehicle data sticker ⇒ page 46
- Countries with elevated sulphur content in diesel fuel ⇒ page 47
- Severe operating conditions ⇒ page 47
- Engine code and engine number ⇒ page 48
- Engine oils for North American market ⇒ page 48
- Engine oils (for “Rest of World” markets) ⇒ page 48
- RME fuel (biodiesel) for vehicles up to 05.2006 ⇒ page 49
- Type plate ⇒ page 49

3.1 Tow starting/towing for North American and Canadian markets

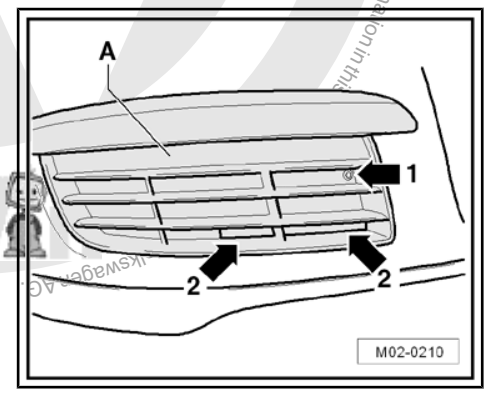
To tow the vehicle a towing eye must be screwed in first.

The towing eye is found in vehicle tool kit.

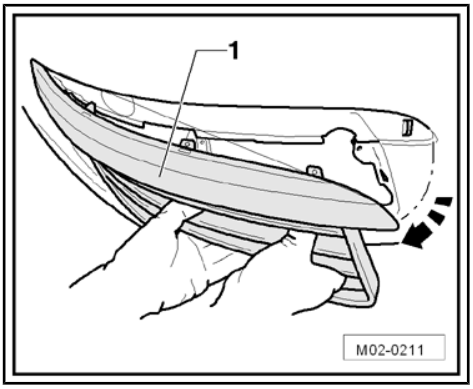
Front towing eye:

– Remove bolt -arrow 1- from air intake grille -A- using screwdriver.

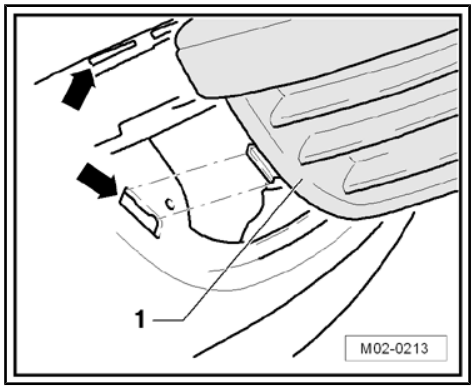
– Grasp into both openings of air intake grille -arrows 2- with both hands.



– Pull air intake grille -1- out of mounting in direction of arrow.



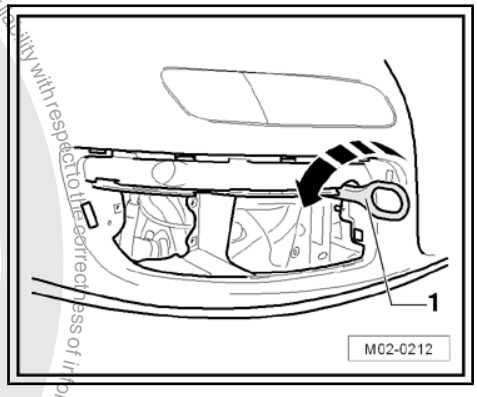
Ensure that lugs on air intake grille do not break off when removing air intake grille -1- from openings of bumper -arrows-.



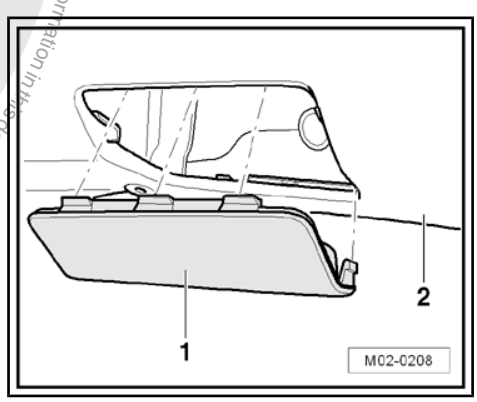
– Screw towing eye to stop in direction of arrow (left-hand thread) and tighten with wheel bolt wrench.
– Unscrew towing eye after use and place in vehicle tool kit. Reinstall cover.

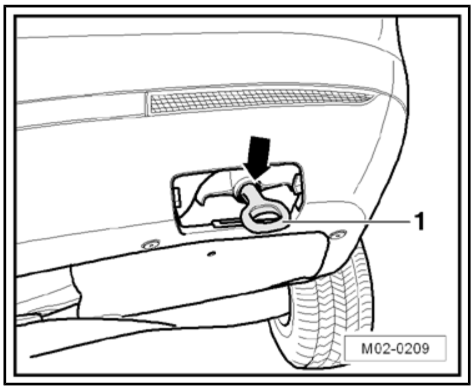
Rear towing eye:

– The threaded hole for towing eye is located at rear right of bumper -bottom-.



– Remove cover -1- before threaded hole.





– Screw towing eye -1- in to stop -left-hand thread- -arrow- and tighten securely using wheel bolt wrench.

– Unscrew towing eye after use and place in vehicle tool kit. Reinstall cover.

General notes

Note

- *Tow-ropes or bars should be attached at above mentioned points only.*
- *The tow-rope should be slightly elastic to reduce the risk of damage to both vehicles. It is advisable to use ropes only of synthetic fibre or similarly elastic material. However, it is safer to use a tow bar.*
- *Avoid excessive towing forces and do not jerk. When towing on unpaved surfaces, there is always a danger that the attachment points will be overstressed and damaged.*
- *Before trying to start engine by towing, the battery from another vehicle should be used for starting if possible.*

Notes on “Tow starting/towing”:

- Regulations concerning towing must be observed.
- Both drivers must be familiar with special considerations when towing. Inexperienced drivers should not attempt to tow start or tow.
- When using a tow rope, the driver of the towing vehicle must engage the clutch very gently when driving off or changing gear.
- The driver of the vehicle being towed must ensure that the tow rope is always taut.
- The hazard warning lights of both vehicles must be switched on unless local regulations differ.
- The ignition must be switched on so that the steering wheel is free and the turn signals, horn and windscreen wiper and washer can be used.
- Because on vehicles without ABS the brake servo only functions when the engine is running, considerably more pressure is required on the brake pedal when the engine is not running.
- On vehicles with power assisted steering more force is required to turn steering wheel when engine is not running.
- When there is no lubricant in a manual gearbox or automatic gearbox, the vehicle may only be towed with driving wheels lifted.
- On vehicles with an exhaust catalytic converter the engine must not be started by towing the vehicle over a longer distance (when catalytic converter is at operating temperature), otherwise fuel may pass into the catalytic converter and may burn. This can lead to overheat the catalytic converter.

Notes on vehicles with manual gearbox:

– Before moving off, depress and hold clutch pedal and engage 2nd or 3rd gear.

– Switch on ignition.

– When both vehicles are moving, release clutch pedal.

– As soon as engine starts, depress clutch and move gear stick into neutral to avoid running into the towing vehicle.

Notes on vehicles with automatic gearbox:

Note

For technical reasons, it is not possible to tow start a vehicle with an automatic gearbox.

- Selector lever at “N”.
- Do not tow vehicle faster than 50 km/h.
- Do not tow further than 50 km.
- If towed over greater distances, the vehicle must be suspended at the front.

Reason: When the engine is not turning, the gearbox oil pump it is not working and the gearbox is not adequately lubricated for high speeds or long distances.

If towed by a breakdown vehicle, the towed vehicle must be suspended at the front.

Reason: If vehicle is towed with rear suspended, the drive shafts turn backwards. The planetary gears in the automatic gearbox then turn at such high speeds that the gearbox will be severely damaged in a short time.

Notes on four-wheel drive vehicles:

- The vehicle can be towed in the same way as a two-wheel drive vehicle.
- Using a breakdown vehicle the vehicle may be towed suspended at front or rear.

If the vehicle has to be towed suspended at rear and the rear wheels cannot turn freely, ensure that the freewheel in the rear axle has not been bridged beforehand by driving vehicle in reverse. To reintroduce the freewheel action the gear lever must be moved briefly into first gear with ignition on and then back into neutral.

3.2 Raising vehicle with lifting platform and trolley jack

3.2.1 Safety notes:

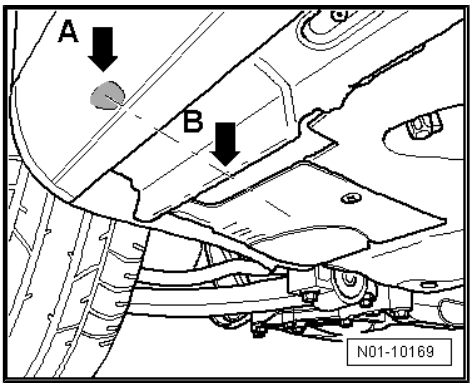
WARNING

- *Before driving onto a lifting platform, ensure that there is sufficient clearance between low-lying vehicle components and lifting platform.*
- *Before driving a vehicle onto a lifting platform it must be ensured that the vehicle weight does not exceed the permissible lifting capacity of the platform.*
- *Vehicle may be lifted only at points indicated in figure to avoid damaging vehicle floor pan or tipping vehicle.*
- *Never start engine and engage a gear with vehicle lifted as long as even one driven wheel has contact with the floor! Disregarding these warnings risks the danger of an accident!*
- *If work is to be performed under vehicle, it must be supported by suitable stands.*

3.2.2 Lifting points for lifting platform and trolley jack:

Front lifting point:

– Position support plate, in area of side member marking -arrow A-, at vertical reinforcement of floor pan -arrow B-.

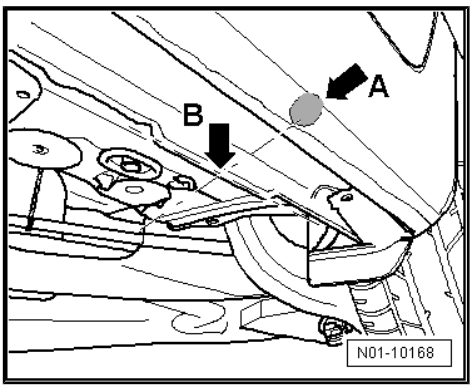


WARNING

Ensure that side member reinforcement seats centrally on support plate of hoist mounting.

Rear lifting point:

– Position support plate, in area of side member marking -arrow A-, at vertical reinforcement of floor pan -arrow B-.



WARNING

Ensure that side member reinforcement seats centrally on support plate of hoist mounting.

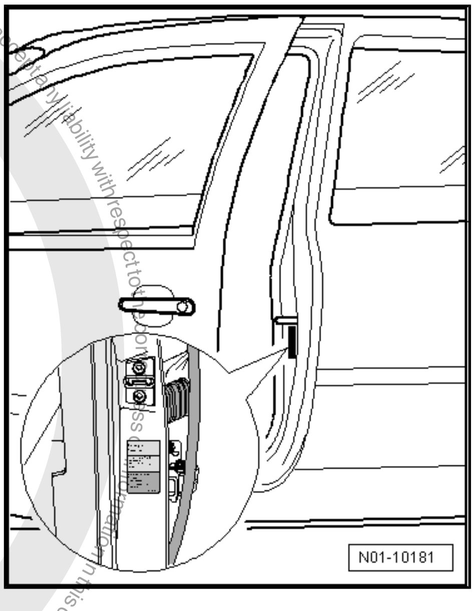
3.3 Sticker

- Attaching “Your first service” sticker at delivery inspection ⇒ page 42 .
- Attaching “LongLife engine oil” sticker ⇒ page 42
- Attach “Your next service” sticker ⇒ page 42

- Attaching “data sticker” in customer service schedule ⇒ page 43
- Attach hotline sticker ⇒ page 43

3.3.1 Attaching “Your first service” sticker at delivery inspection:

Attach “Your next service” sticker ⇒ page 41



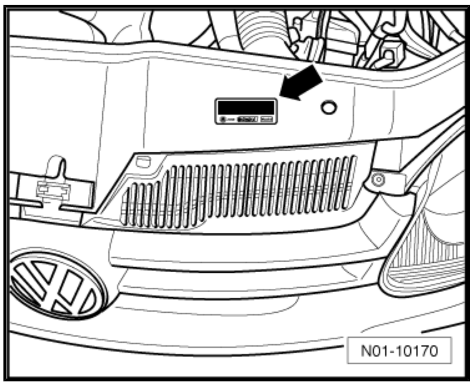
“Your first service” sticker

– Attach sticker on driver door pillar (B-pillar); the sticker is found on an instruction which is attached at front in the vehicle wallet. Destroy the instruction after attaching the sticker!

3.3.2 Attaching “LongLife engine oil” sticker:

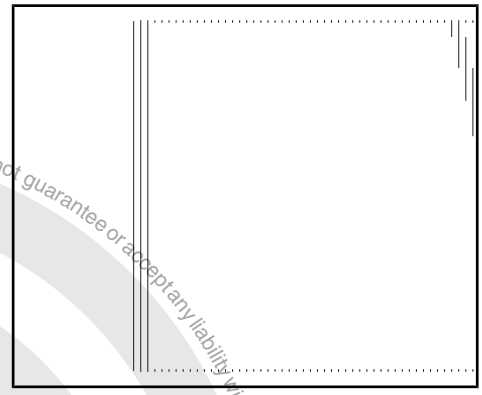
– For vehicles with LongLife service (PR number QG1), the sticker must be attached as shown below.

– Apply sticker Art. No.: -K 69.5121.50.00- -arrow- on left side of lock carrier (in direction of travel) as illustrated.



3.3.3 Attaching “Your next service” sticker:

– Service sticker “Your next service”: Enter a cross in position for next oil change service or inspection service (next service due) and enter date and mileage
– Attach sticker to driver door pillar (B-pillar).

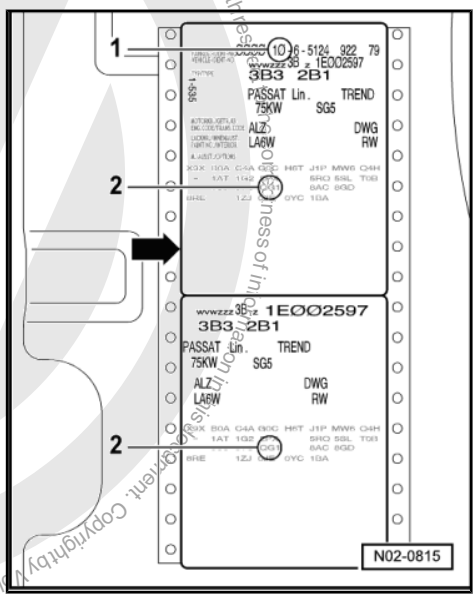


3.3.4 Attaching “data sticker” in customer service schedule

– Attach the upper of the two data stickers -arrow-.

1 - Production week

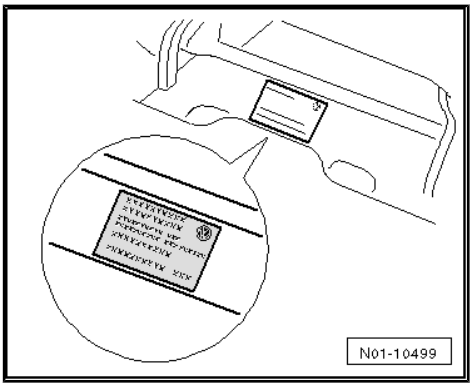
2 - PR number



3.3.5 Attaching hotline sticker

– Attach hotline sticker to the inside of glove box cover as shown.

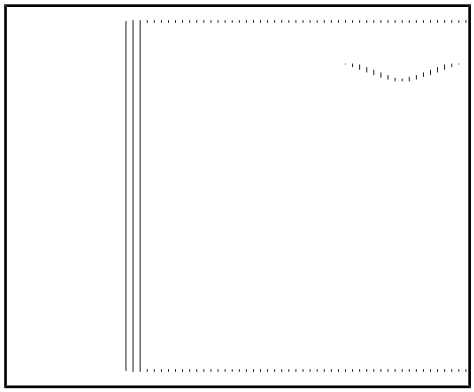
• Only valid for Germany



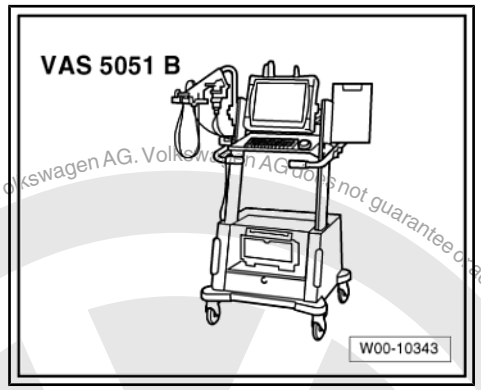
3.4 Connecting vehicle diagnostic tester

Special tools and workshop equipment required

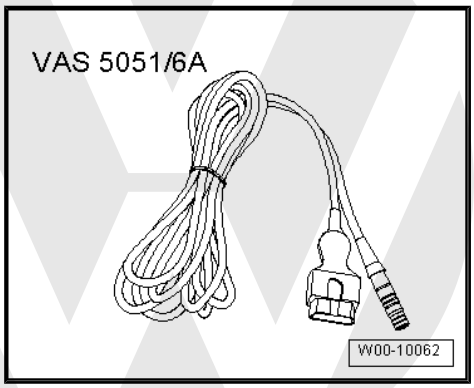
- Vehicle diagnosis, testing and information system -VAS 5051 A-



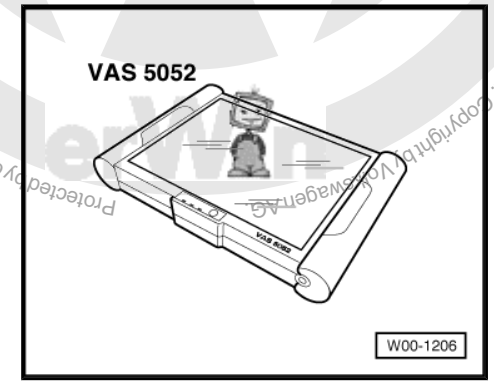
- Vehicle diagnostic, testing and information system -VAS 5051B-



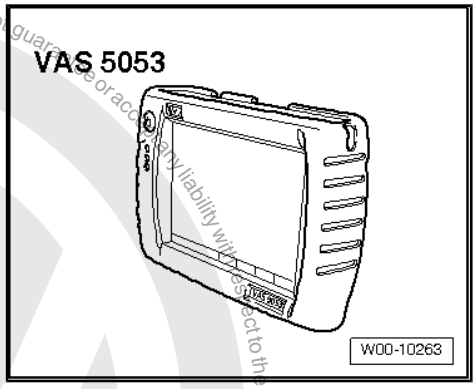
- Diagnostic cable -VAS 5051/6A-



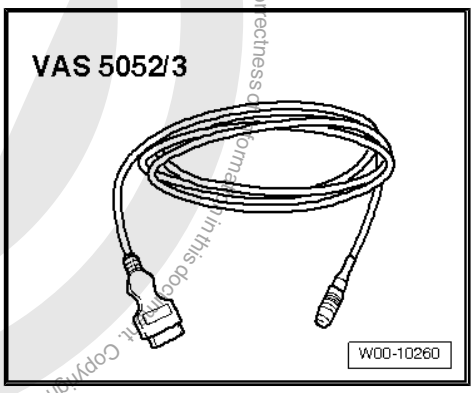
- Vehicle diagnostic and service information system -VAS 5052- or subsequent units



- Diagnostic system -VAS 5053-



- Diagnostic cable -VAS 5052/3-



Note

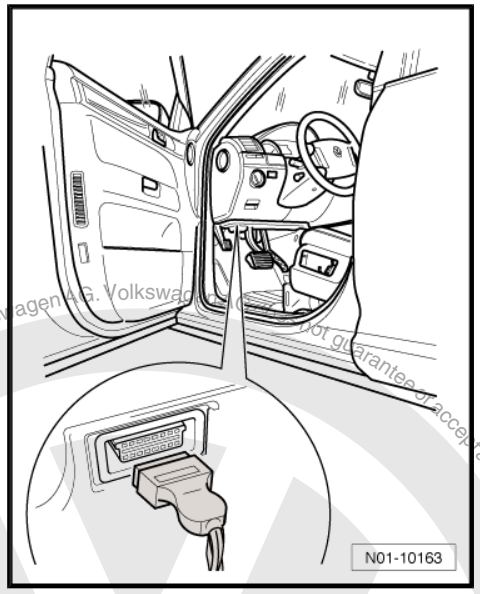
Ensure that the fault reader is only used with the respective diagnosis cable.

WARNING

- ***Always secure testing and measuring equipment on the rear seat during a road test.***
- ***Only a passenger may operate these devices during a drive.***

– Carry out the following procedure:
– Connect diagnostic cable connector to diagnostic connection.
– Switch on tester.
– Switch on ignition.

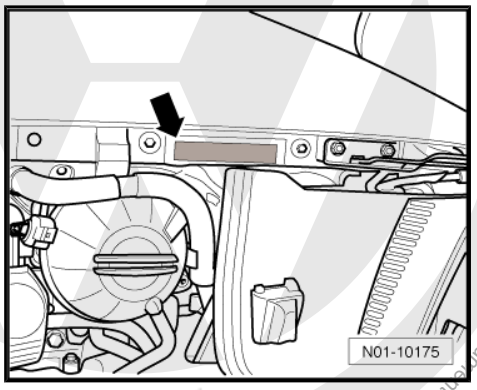
Now follow screen display to start desired functions.



3.5 Vehicle identification number

Location engine compartment

The vehicle identification number is located on the extension of longitudinal member -arrow-.

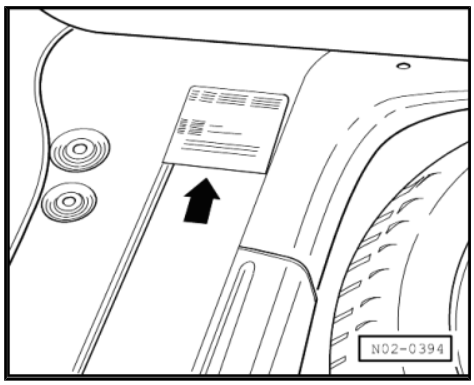


3.5.1 Interpretation of vehicle identification number:

3VW	DG7	1K2 / 1K5	X	5	M	600015
Manufacturer's code	Filler characters	Type	Filler characters	Model year 2005	Production location	Serial number

3.6 Vehicle data sticker

The vehicle data sticker -arrow- is located in rear of vehicle on the left in spare wheel recess. The vehicle data sticker is also found in the service schedule for the customer.



The sticker includes the following vehicle data:

1 - Production control number

2 - Vehicle identification number

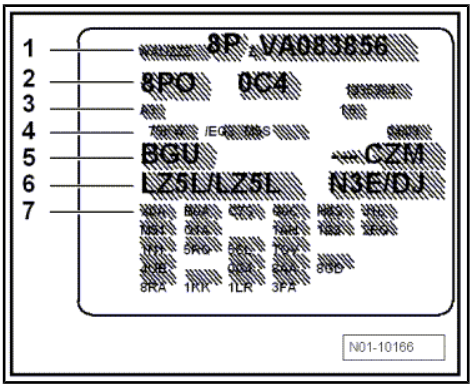
3 - Model identification number

4 - Model explanation/engine output

5 - Engine and gearbox code letters

6 - Paint number/interior equipment identification number

7 - Optional equipment identification number



3.7 Countries with elevated sulphur content in diesel fuel

Caution

For vehicles with TDI unit injector and DP engines an oil change service must always be performed "every 7,500 km" in the following countries:

Countries with elevated sulphur content in diesel fuel			
Egypt	Jamaica	Morocco	Saudi Arabia
Armenia	Jordan	Mauritius	Zimbabwe
Bahrain	Yugoslavia (Serbia, Montenegro, Vojvodina, Kosovo)	Macedonia	Sri Lanka
Bangladesh	Cambodia	Moldova	South Africa
Chile	Kazakhstan	Mozambique	Surinam
Dominican Republic	Kenya	Myanmar	Tajikistan
El Salvador	Columbia	New Caledonia	Tanzania
Ecuador	Cuba	Nigeria	Turkey
Ghana	Kuwait	Oman	Uruguay
Guatemala	Lebanon	Pakistan	Uzbekistan
Honduras	Madagascar	Panama	Venezuela
Indonesia	Malawi	Papua New Guinea	United Arab Emirates
Iraq	Malaysia	Peru	Vietnam
Iran	Mali	Russia (East & West)	

3.8 Severe operating conditions

If the vehicle is used under severe operating conditions some jobs will have to be performed before the next service due or at shorter service intervals.

Severe operating conditions

- Regular short trips or stop and go operation in urban traffic
- High percentage of cold starts
- Vehicle is used in areas with winter temperatures over a long period
- Regular long periods of idling (e.g. taxis)

- Vehicle is often driven under full load or towing a trailer
- Using diesel with elevated sulphur content
- Regular operation in areas with high levels of dust

3.9 Engine code and engine number

Note

- *As of model year 2008 4-digit engine codes will be introduced.*
- *The first 3 digits show the design of engine and are stamped on the engine as previously.*
- *The fourth digit shows the engine output and varies according to engine control unit.*
- *The four-digit engine code can be found on the type plate, the vehicle data sticker and on the engine control unit.*

- Petrol engines: “Power unit” ⇒ Rep. Gr. 00 ; Technical data, engine number “Technical data/engine number”
- Diesel engines: “Power unit” ⇒ Rep. Gr. 00 ; Technical data, engine number “Technical data/engine number”
- On vehicle data sticker ⇒ page 46

3.10 Engine oils for North American and Canadian markets

Engine oils for “Rest of World” markets ⇒ page 48

3.10.1 Approved engine oil standards

Petrol engines

PR No. QG0, QG2, QG3		
Petrol engines	VW standards	
	500 00 / 501 01/ 502 00	ACEA A2 /A3

Diesel engines

PR No. QG0, QG2, QG3		
	VW standards	
With unit injector	505 01	ACEA B3/B4
Common rail with diesel particulate filter	507 00[1)]	ACEA B4/C3

[1)]Combination product: 504 00/ 507 00

3.11 Engine oils for “Rest of World” markets

Engine oils for North American market ⇒ page 48

- Information on engine oils can be found in the service tables ⇒ page 6 .

3.12 RME fuel -biodiesel- for vehicles up to 05.2006

Note

For vehicles as of 06.2006 RME fuel must not be used.

RME fuel may be used only in vehicles which have been approved for this purpose by Volkswagen - either in the standard version or in vehicles which have had special equipment (PR No. 2G0) for this purpose.

Caution

- ***When RME fuel is used and your vehicle is not suitable for this, the fuel system can be damaged.***
- ***When filling the tank with biodiesel, only use RME fuel conforming to EN 14214 (FAME)!***
- ***When biodiesel is used which does not conform to the required standard, the fuel filter can become blocked.***

RME fuel must conform to EN 14214 (FAME).

- RME means “Rapeseed Methyl Ester”.
- EN means “Euro standard”.
- FAME means “Fatty Acid Methyl Ester”.

If the vehicle is factory fitted for RME can be recognised on the PR No. 2G0 on the vehicle data sticker ⇒ page 46 .

Characteristics of RME fuel

- Performance can slightly be lower when using biodiesel.
- Fuel consumption can slightly be higher when using biodiesel.
- RME can be used in winter at temperatures to approx. -10 °C
- At ambient temperatures below -10 °C we recommend using winter diesel fuel.

Note

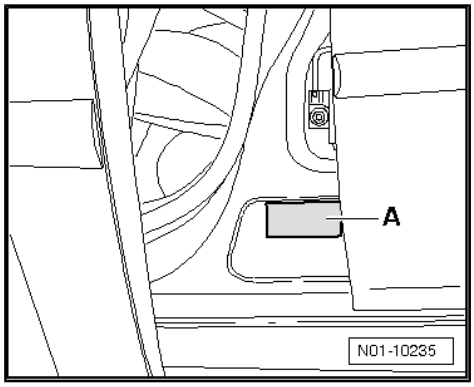
- *When using biodiesel observe the changed intervals for draining and changing the fuel filter ⇒ page 11 .*
- *If it is planned not to use the vehicle for approx. two weeks, it is recommended to fill the tank with original diesel beforehand and drive approx. 50 km, to prevent damage to the fuel injection system.*

3.13 Type plate

Note

Vehicles for certain export countries have no type plate.

The type plate -A- is visible at the lower door pillar when the left front door is opened.



4 Descriptions of work

In this chapter you will obtain information on the following subjects:

- Oil level: Check ⇒ page 117
- Engine oil: Drain or extract; renew oil filter and replenish engine oil ⇒ page 117
- Checking breakdown set ⇒ page 133
- Panorama sliding roof: Check function, clean guide rails if necessary and grease with special grease, clean wind deflector ⇒ page 134
- Performing road test (driving behaviour, noises, air conditioner etc.) ⇒ page 135
- Wheel securing bolts: Tighten to correct torque setting ⇒ page 136
- Radio/navigation system: Activate anti-theft coding ⇒ page 140
- Reading radio code with fault reader ⇒ page 139
- Tyre pressure monitoring: Perform basic setting ⇒ page 144
- Renewing tyre pressure sensors ⇒ page 146
- Dust and pollen filter: Clean housing and renew filter element ⇒ page 146
- Headlight adjustment: Check ⇒ page 147
- Service interval display: Reset ⇒ page 153
- Service interval display: Recode for “Rest of World” markets ⇒ page 154
- Service interval display: Recode at delivery inspection for North American and Canadian markets ⇒ page 156
- Service interval display: Recode at first oil change service for North American and Canadian markets ⇒ page 158
- Sunroof: Check function, clean and grease guide rails ⇒ page 160
- Window wash/wipe system and headlight washer system: Check function ⇒ page 160
- Windscreen wiper blades: Check park position ⇒ page 165
- Wiper blade protection: Remove ⇒ page 166
- Track rod ends: Check play, security and boots ⇒ page 169
- Door arrester: Grease ⇒ page 170
- Transportation mode: Switch off ⇒ page 170
- Transportation devices: Remove blocking pieces from springs on front axle ⇒ page 172
- Underbody sealant: Visual check for damage to underbody sealant, underbody panels, routing of lines and plugs ⇒ page 172
- Clock: Set to correct time ⇒ page 173
- Camshaft drive toothed belt: Check (TDI unit injector engines) ⇒ page 174
- Toothed belt and toothed belt tensioning roller: Renew (TDI engines) ⇒ page 174
- Camshaft drive toothed belt: Renew (2.0 l FSI and TFSI) ⇒ page 175
- Camshaft drive toothed belt: Check (4-cylinder petrol engines, 1.4 and 1.6 l) ⇒ page 175

♦ Spark plugs: Renew ⇒ page 175

4.1 Removable towing bracket: Check

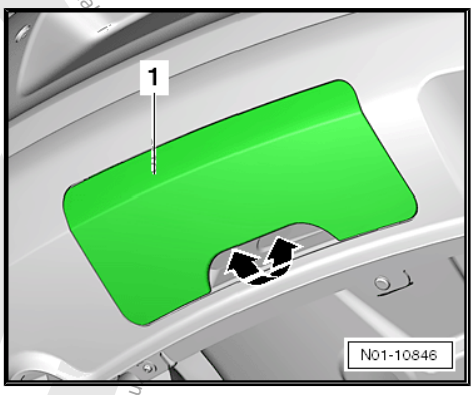
This chapter describes how to check and repair a removable towing bracket.

Note

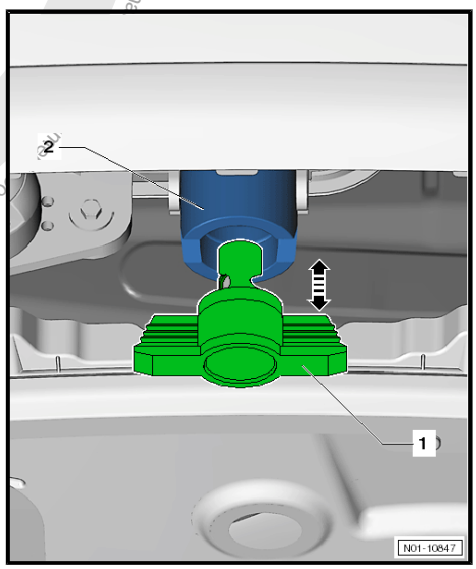
Note that checking towing bracket is included in the respective service. However, a repair is charged separately and must be required by the customer.

Check procedure

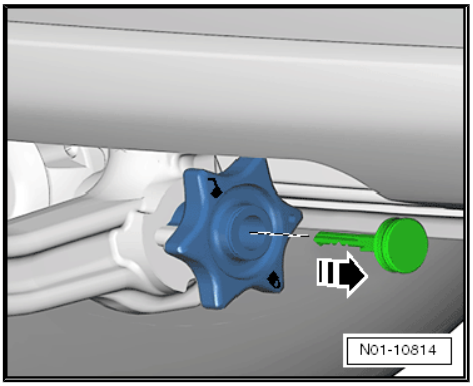
– Remove cover -1-.



– Pull off protective cap -1- from ball head mounting -2-.
– Insert ball head into mounting.



After ball head has been inserted, green mark on hand wheel must be aligned with white mark on ball head. Hand wheel must be entirely in contact. Afterwards, it must be possible to close the towing bracket lock by removing the key. If this is not possible, the following repair procedure must be performed.

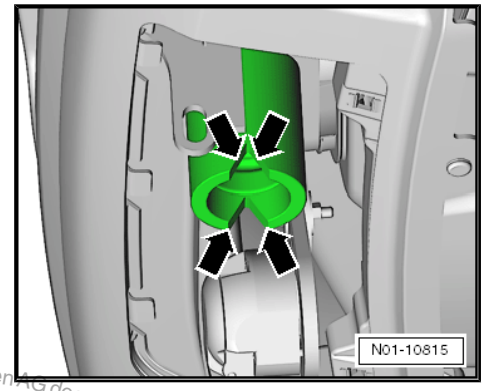


Note

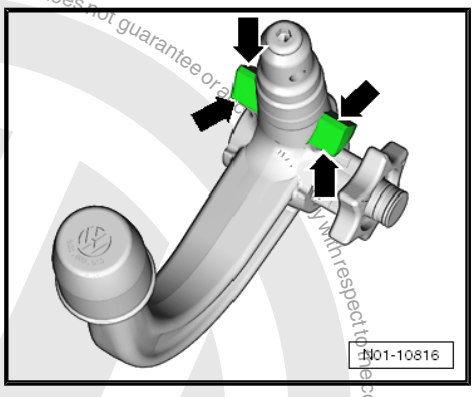
If a repair has to be performed, it has only to be in agreement with the customer. A repair must be charged separately.

Repair procedure:

– Check contact surfaces -arrows- of ball head mounting for corrosion.
– If contact surfaces are corroded, eliminate corrosion with a triangular scraper and clean the treated areas with silicone remover.
– Apply a thin coat of lubricating paste G 000 650 or G 000 150 on cleaned surfaces.



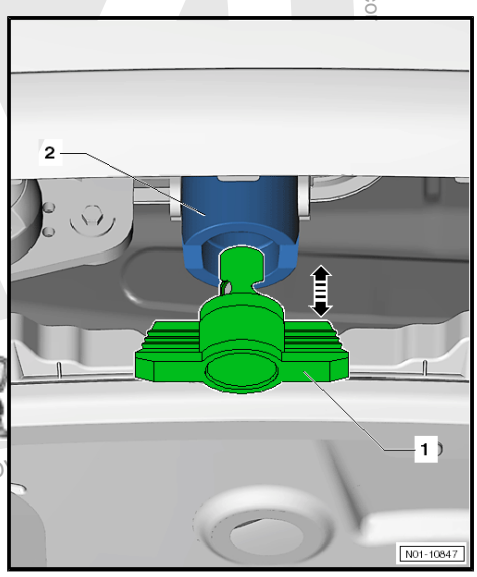
– Check contact surfaces -arrows- of ball head for corrosion.
– If contact surfaces are corroded, eliminate corrosion with a triangular scraper and clean the treated areas with silicone remover.
– Apply a thin coat of lubricating paste G 000 650 or G 000 150 on cleaned surfaces.
– Check again ball head seat in mounting ⇒ page 53 .



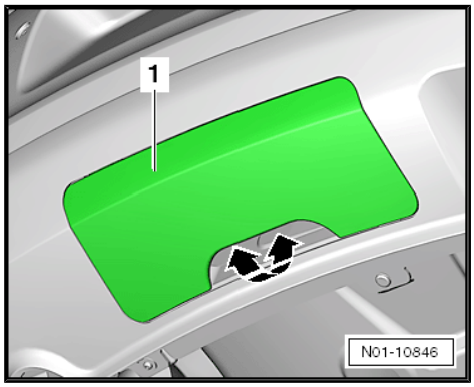
– After checking, fit protective cap -1- into ball head mounting -2-.

Note

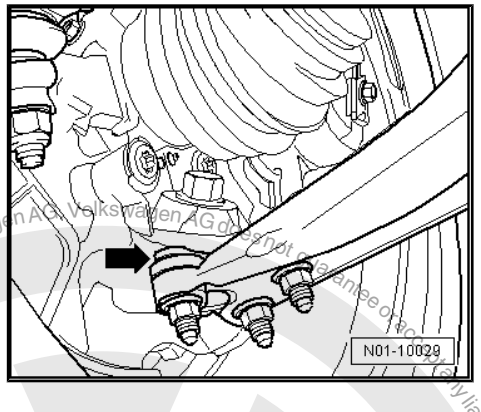
If protective cap is damaged or not available, a new protective cap must be fitted to protect ball head mounting against corrosion ⇒ ETKA .



– Insert cover -1-.



4.2 Swivel joints: Visual check



– Check swivel joint boots -arrow- for leaks and damage.

4.3 Driving light assist and cornering light: Check function

- ♦ Checking driving light assist ⇒ page 55
- ♦ Checking cornering light (static cornering light) ⇒ page 56

4.3.1 Checking driving light assist

Note

The driving light assist is also called automatic headlight control (AHC).

- Vehicle must be in natural daylight.

Checking in daylight or brightness

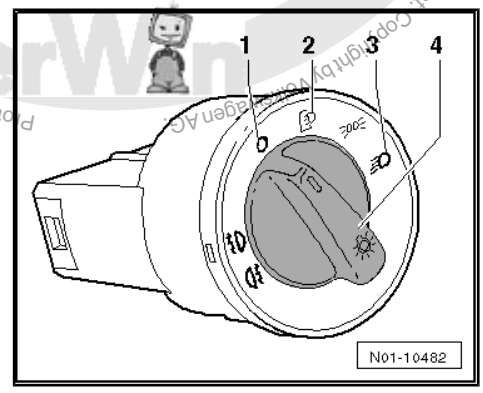
– Switch on ignition.

– Turn light switch -4- to position -2- for driving light assist.

The headlights may not light in brightness.

Checking at night or in darkness

- Ignition is switched on.
- Light switch is in position for driving light assist

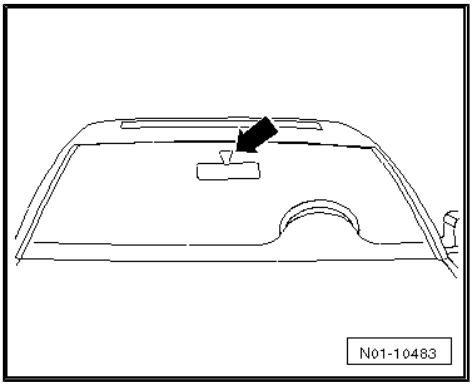


The rain and light sensor -G397- is secured on the interior mirror retainer.

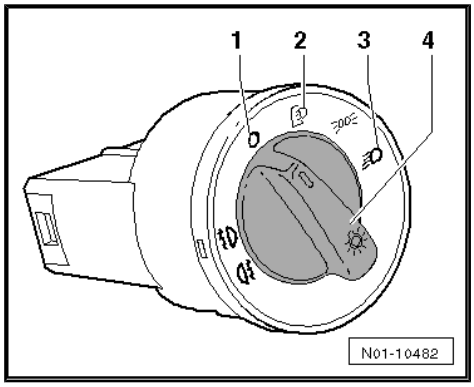
The rain and light sensor -G397- is located centrally at top of windscreen -arrow-.

– Cover the securing area for interior mirror from outside of windscreen by hand or with a suitable object -arrow-.

This measures the light incidence and the headlights are switched on.



– Turn light switch -4- to position O -1- and switch off ignition.

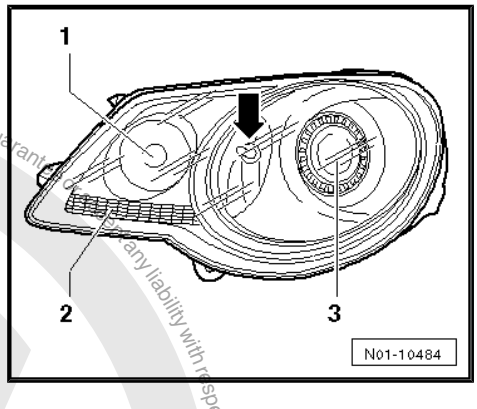


4.3.2 Checking cornering light (static cornering light)

- Vehicle stationary, steering in straight-ahead position

Note

- *Vehicles with cornering light (static cornering light) can be identified by an additional reflector -arrow- between turn signal -1- and dipped beam module -3-.*
- *The static cornering light only functions in conjunction with the dipped beam.*



– Switch on ignition and dipped beam.
– Turn steering wheel from straight-ahead position one turn to the right and check if the cornering light bulb lights up in the right headlight.
– Turn steering wheel from straight-ahead position one turn to the left and check if the cornering light bulb lights up in the left headlight.

When the steering wheel is in straight-ahead position the cornering light must not light.

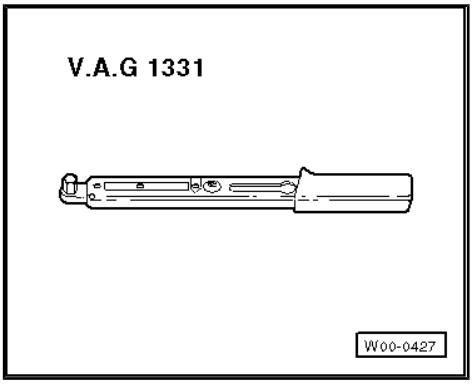
4.4 Automatic gearbox: Check ATF level, 09G gearbox

– Carry out procedure ⇒ Automatic gearbox; Rep. Gr. 37 ; Checking ATF level and topping up “Checking ATF level and topping up”

4.5 Battery: Check battery terminal clamps for secure seating

Special tools and workshop equipment required

♦ Torque wrench -V.A.G 1331-

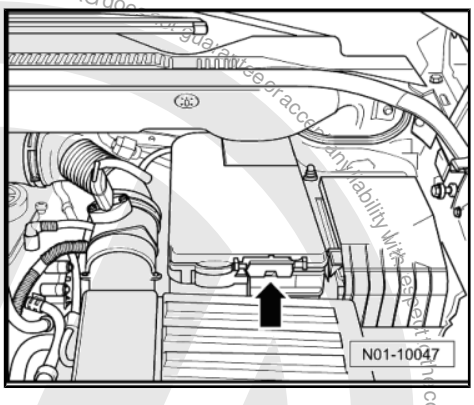


Note

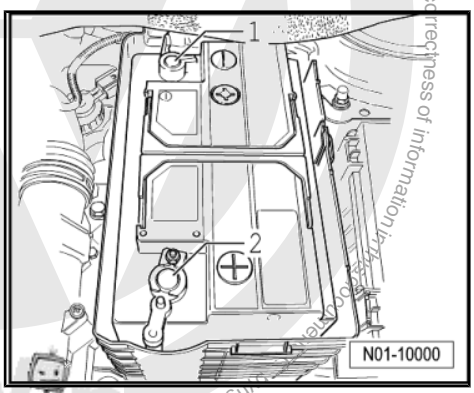
A securely seated battery clamp ensures trouble free function and long service life of the battery.

Carry out the following procedure:

– Operate fastener -arrow-, lift upwards and take out cover forwards.



– Check whether battery clamps are secure on battery terminals by moving battery negative cable -1- and battery positive cable -2- back and forth.



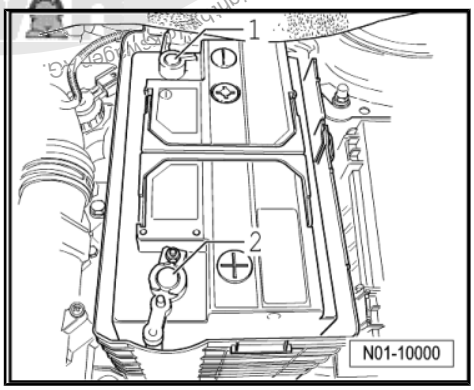
WARNING

If the battery clamp is not seated securely on the positive terminal, first disconnect battery clamp from battery negative terminal to prevent possible accidents.

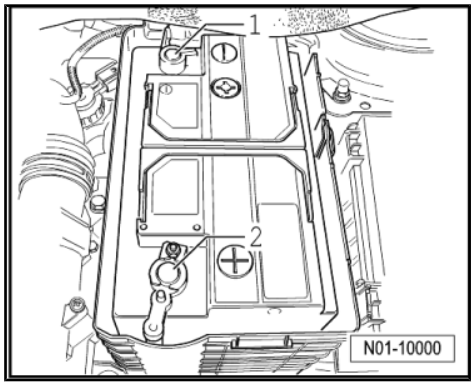
If the battery clamp is not seated securely on positive terminal:

– Disconnect battery terminal clamp -1- from battery negative terminal first.
– Tighten battery clamp -2- on battery positive terminal to 9 Nm.
– Reconnect battery clamp -1- to battery negative terminal and tighten to 9 Nm.

If the battery clamp on negative terminal is not seated securely:



– Tighten battery clamp -1- on battery negative terminal to 9 Nm.
– Install engine cover.



Note

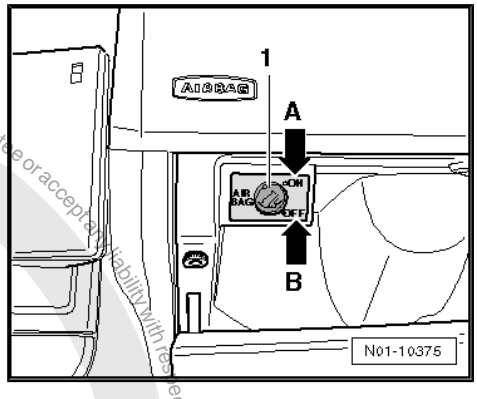
After battery has been reconnected: ⇒ Electrical system; Rep. Gr. 27 .

4.6 Battery: Check using battery tester with printer -VAS 5097A-

Procedure: “Vehicle electrics/Electrical system” ⇒ Vehicle electrics; Rep. Gr. 27 ; Checking battery “Checking battery”

4.7 Front passenger front airbag: Check activation / deactivation for vehicles without seat occupied recognition

The front airbag can be deactivated on front passenger side using key switch -1-. The front passenger side airbag and all other airbags in the vehicle remain functional.



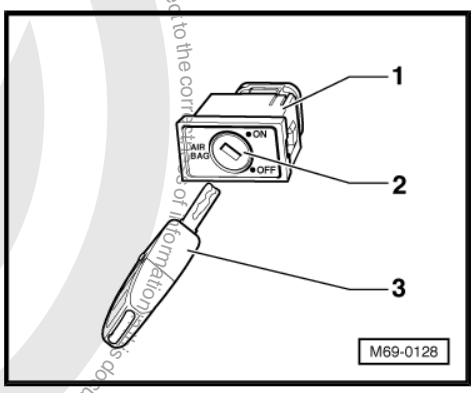
WARNING

The front passenger front airbag must only be deactivated if in exceptional cases a child is transported in a rear-facing child seat on the front passenger seat.

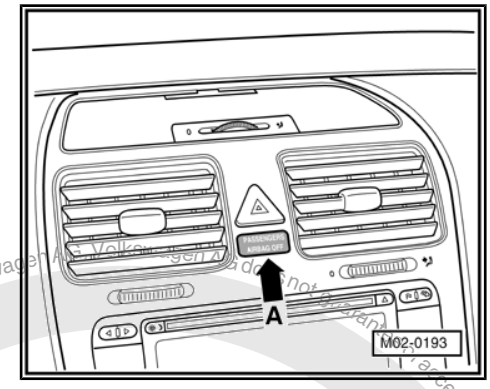
– Check “On / Off function” of key switch as follows:

Front passenger front airbag deactivated

– Switch off ignition.
– Turn key switch -2- with the vehicle key -3- in position “AIRBAG OFF”. The key slot must point to “OFF”.

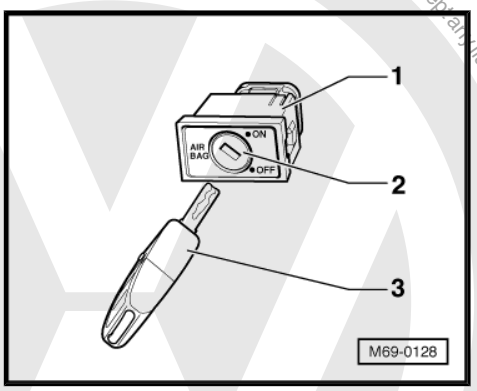


– Check whether the warning lamp -arrow A- lights up permanently in the dash panel when the ignition is switched on.
– Switch off ignition.

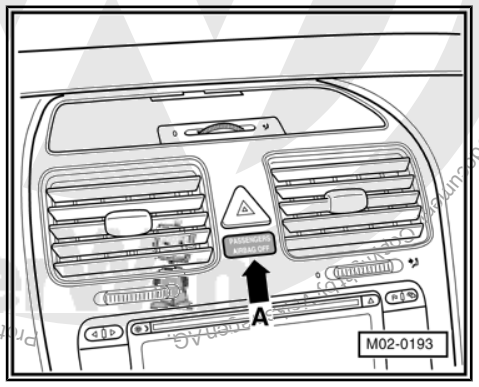


Front passenger front airbag activated

– Switch off ignition.



– Turn key switch -2- with ignition key -3- to position “ON” The key slot must show to “ON”.
– Check whether the warning lamp -arrow A- does “NOT” light up in the dash panel when the ignition is switched on.
– Switch off ignition.



4.8 Checking tyres: Condition, wear pattern, inflation pressure, tread depth

Checking condition of tyre ⇒ page 60 .

Checking wear pattern ⇒ page 60 .

Tread depth (including spare wheel): Check ⇒ page 60 .

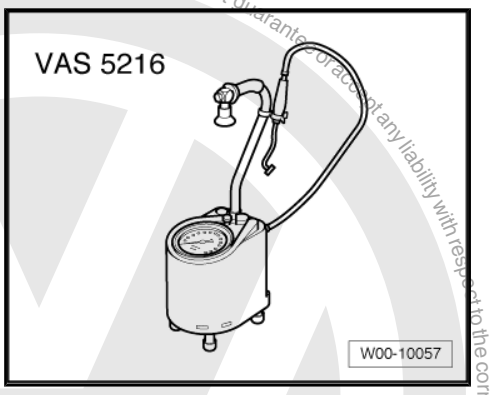
General notes ⇒ page 61 .

Checking inflation pressure and adjust if necessary, Jetta 2006 ‣, Golf Variant 2007 ‣ ⇒ page 63 .

Checking inflation pressure and adjust if necessary, Jetta 2005‣, Bora 2006‣ (for North American markets) ⇒ page 61 .

Special tools and workshop equipment required

- Tyre inflator -VAS 5216-



4.8.1 Checking condition of tyre

WARNING

If damage is determined, always check to see if a new tyre should be fitted.

Tests at delivery inspection

– Check tyre treads and side walls for damage and remove foreign bodies such as, for example, nails or glass splinters.

Tests at inspection service

– Check tyre treads and side walls for damage and remove foreign bodies such as, for example, nails or glass splinters.

– Check tyres for cupping, one-sided wear, porous side walls, cuts and punctures.

4.8.2 Checking wear pattern

The wear pattern on the front tyres will indicate, for example, if toe and camber settings should be checked:

- Feathering on tread indicates incorrect toe setting.
- One-sided tread wear is mainly attributed to incorrect camber.

When wear of this nature is detected, determine cause by checking alignment (repair measure).

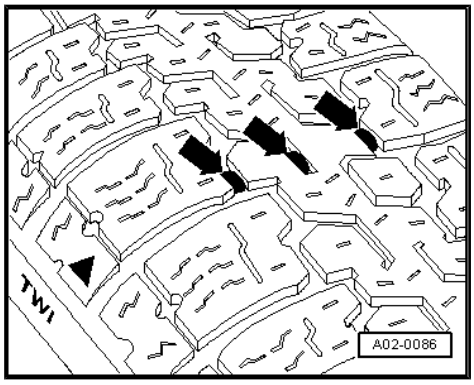
4.8.3 Tread depth (including spare wheel): Check

– Check tyre tread depth.

Minimum tread depth: 1.6 mm

Note

- *This figure may vary according to legislation in individual countries.*
- *The minimum tread depth is reached when the tyres have worn down level with the 1.6 mm high tread wear indicators -arrows- positioned at intervals around the tyre.*
- *If the tread depth is approaching the minimum allowed depth, inform the customer.*



4.8.4 General notes

WARNING

- *For safety reasons, only tyres of same type and tread pattern should be fitted on a vehicle!*
- *On four-wheel drive vehicles, tyres of the same type and tread pattern must be used. Otherwise the centre differential may be damaged.*

Note

- *The tyre pressure table is valid for standard tyres for all tyre sizes fitted at the factory.*
- *The pressures in the table apply to cold tyres. Do not reduce increased pressures of warm tyres.*
- *Tyre inflation pressures for the relevant model are on a sticker attached to the inside of fuel tank flap or on the driver side B-pillar.*
- *Adjust the tyre pressure to suit the vehicle load.*
- *The spare wheel should have the highest tyre pressure determined for the vehicle.*
- *Please note that basic setting should be performed on vehicles with tyre pressure monitoring after every pressure change* ⇒ page 144 .

Winter tyres

Note

- *Important information on recommended winter tyres can be found in ⇒ Wheels and Tyres Guide - Standard ; Rep. Gr. 44 ; Recommended winter tyres "Recommended winter tyres".*
- *For winter tyres the tyre pressures for standard tyres are valid.*

4.8.5 Checking inflation pressure and adjust if necessary, Jetta 2005 ▸, Bora 2006 ▸ Golf Variant 2007 ▸ for North American markets

Petrol engines

2.0 l / 85 kW ⇒ page 62

2.5 l / 110 kW ⇒ page 62

2.0 l / 147 kW FSI ⇒ page 62 .

Diesel engines

1.9 l / 77 kW TDI ⇒ page 63

2.0l / 125 kW TDI ⇒ page 66

Petrol engine

Capacity / output				
2.0 l/85 kW				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Capacity / output				
2.5 l/110 kW				
Tyre sizes	Half load		Full load	
	front	rear	front	rear
	(bar / kpa / psi)	**(bar / kpa / psi)**	**(bar / kpa / psi)**	**(bar / kpa / psi)**
195/65 R 15	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
205/55 R 16	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/45 R 17	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/40 R 18	2.4	2.4	2.6	3.0
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
2.0l/147 kW				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Diesel engine

Capacity / output				
1.9 l / 74 kW TDI				
Tyre sizes	Half load		Full load	
	front	rear	front	rear
	(bar / kpa / psi)	(bar / kpa / psi)	(bar / kpa / psi)	(bar / kpa / psi)
195/65 R 15	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
205/55 R 16	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
225/45 R 17	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

4.8.6 Checking inflation pressure and adjust if necessary, Jetta 2006 ▸, Golf Variant 2007 ▸

Petrol engines

1.4 l / 88, 90 kW ⇒ page 63

1.4 l / 103 kW ⇒ page 64

1.4 l / 118, 125 kW ⇒ page 64

1.6 l / 75 kW ⇒ page 64

1.6 l / 85 kW ⇒ page 64

2.0 l / 110 kW ⇒ page 65

2.0 l / 147 kW ⇒ page 65

Diesel engines

1.9 l / 77 kW TDI ⇒ page 65

2.0 l / 100 + 103 kW TDI ⇒ page 66

2.0l / 125 kW TDI ⇒ page 66

1.9 l / 77 kW TDI ⇒ page 66

Petrol engine

Capacity / output				
1.4 l / 88 kW / 90 kW				
Tyre sizes	Half load		Full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
1.4 l / 103 kW				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
1.4 l / 118, 125 kW				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
205/55 R 16	2.3	2.3	2.5	3.0
225/45 R 17	2.3	2.3	2.5	3.0
225/40 R 18	2.3	2.3	2.5	3.0
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
1.6l/75 kW				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
1.6l/85 kW				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
195/65 R 15	2.0	2.0	2.3	2.8

Capacity / output				
1.6l/85 kW				
Tyre sizes	Half load		Full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
2.0l/110 kW				
Tyre sizes	Half load		Full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Petrol engine

Capacity / output				
2.0l/147 kW				
Tyre sizes	Half load		Full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Diesel engine

Capacity / output				
1.9l / 77 kW TDI				
Tyre sizes	Half load		Full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9

Capacity / output				
1.9l / 77 kW TDI				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
225/40 R 18	2.2	2.2	2.4	2.9
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Diesel engine

Capacity / output				
2.0 l / 100 + 103 kW TDI				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Diesel engine

Capacity / output				
2.0l / 125 kW TDI				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
195/65 R 15	2.4	2.4	2.6	3.0
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Diesel engine

Capacity / output				
1.9 l / 77 kW TDI four-wheel drive				
Tyre sizes	Half load		Full load	
	front (bar)	**rear (bar)**	**front (bar)**	**rear (bar)**
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9

Capacity / output				
1.9 l / 77 kW TDI four-wheel drive				
Tyre sizes	Half load		Full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
225/40 R 18	2.2	2.2	2.4	2.9
Temporary spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

4.9 Brake and clutch system: Change brake fluid

Instructions for use and safety ⇒ page 67 .

Brake fluid specification ⇒ page 67 .

Procedure, changing brake fluid ⇒ page 68

4.9.1 Instructions for use and safety

Note

- *From model year 2006 a new brake fluid will be introduced.*
- *The new brake fluid can also be used for older vehicles.*
- *For this purpose it can be mixed with the previous brake fluid.*

WARNING

- ***Brake fluid must under no circumstances come into contact with fluids containing mineral oils (oil, petrol, cleaning solutions). Mineral oils will damage seals and sleeves of brake system.***
- ***Brake fluid is poisonous. In addition, due to its corrosive nature, it must not come into contact with paint.***
- ***Brake fluid is hygroscopic, i.e. it attracts moisture from the surrounding air and therefore must always be stored in air-tight containers.***
- ***Wash away spilt brake fluid using plenty of water.***
- ***Do not reuse extracted (used) brake fluid.***
- ***Observe disposal regulations!***

4.9.2 Brake fluid specification

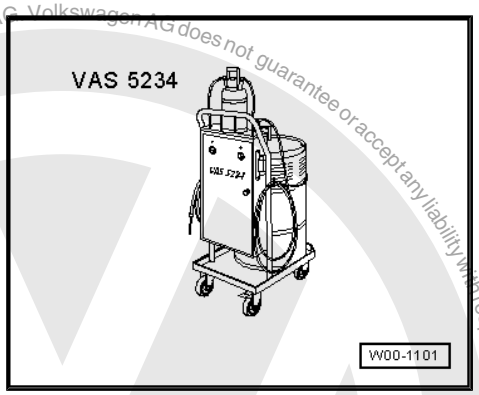
Permissible brake fluid specifications:

- Brake fluid conforming to US standard FMVSS 116 DOT 4 (previous brake fluid)
- Brake fluid conforming to VW standard, VW 501 14 (new brake fluid).

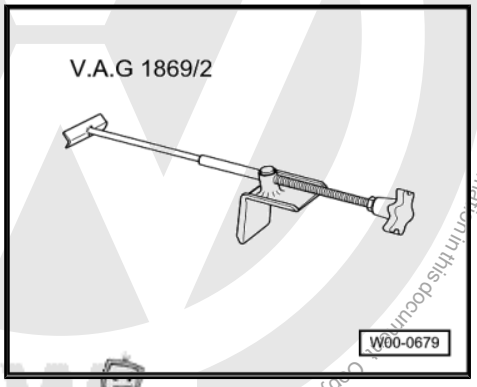
4.9.3 Procedure, changing brake fluid

Special tools and workshop equipment required

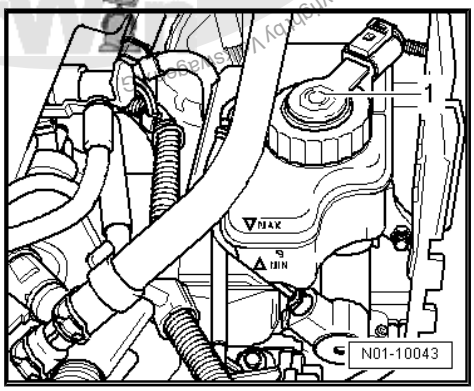
- Brake filling and bleeding equipment -VAS 5234-



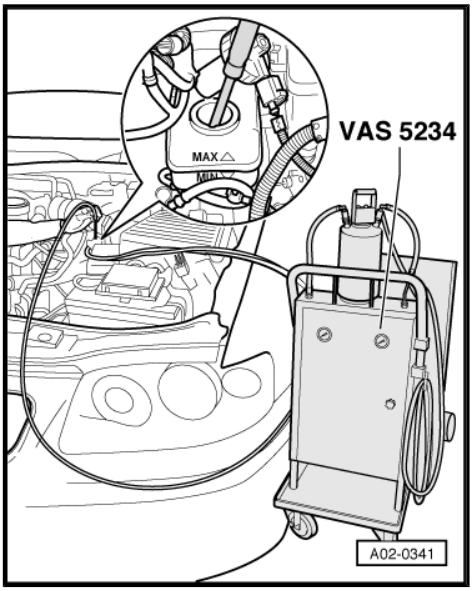
Brake pedal depressor -V.A.G 1869/2-



– Unscrew cover cap -1- from brake fluid reservoir.



– Extract as much brake fluid as possible using suction hose from Brake filling and bleeding equipment -VAS 5234- .



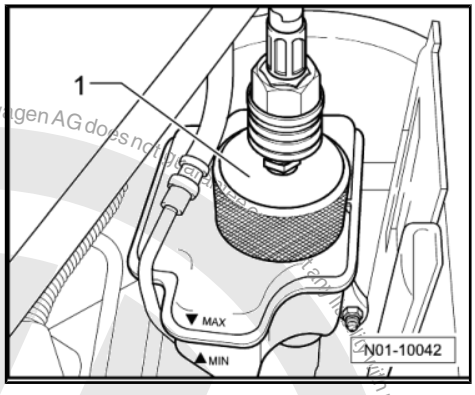
Note

The strainer in brake fluid reservoir must not be removed.

WARNING

Do not reuse extracted brake fluid!

– Screw adapter -1- onto brake fluid reservoir.



Observe ⇒ operating instructions for -VAS 5234- !

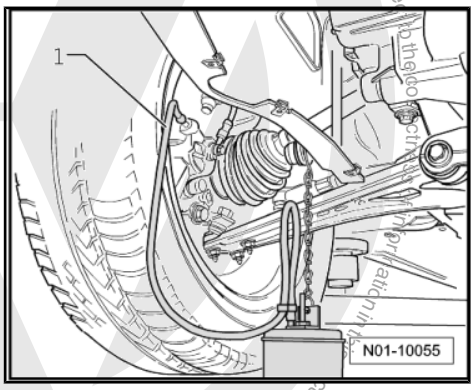
– Place brake pedal depressor -V.A.G 1869/2- between driver seat and brake pedal and tension it.

– Connect filling hose from brake filling and bleeding equipment -VAS 5234- to adapter.

Note

Use an appropriate bleed hose. It must seat tightly on bleeder screw so that no air can enter the brake system.

– Push collector bottle bleed hose -1- onto front left bleeder screw, open bleeder screw and let appropriate quantity of brake fluid run out (see table). Close bleeder screw, specified torque: ⇒ Running gear; Rep. Gr. 47 ; Servicing front brake calipers “Servicing front brake calipers”.



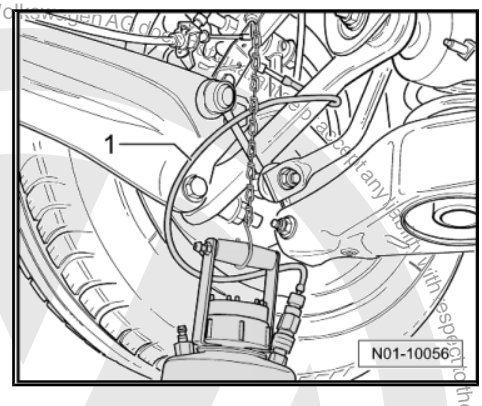
Repeat procedure on right-hand side of vehicle at front.

– Unscrew both wheels on rear axle to reach the bleeder screws.

– Remove caps from bleeder screws of brake calipers.

– Push collector bottle bleed hose -1- onto rear left bleeder screw.

– Open bleeder screw and let appropriate quantity of brake fluid run out (see table). Close bleeder screw, specified torque: ⇒ Running gear; Rep. Gr. 47 ; Servicing rear brake caliper “Servicing rear brake caliper”



Repeat procedure on right-hand side of vehicle at rear.

For vehicles with manual gearbox

– Remove air filter housing. “Mixture preparation, diesel injection system” ⇒ Mixture preparation, diesel injection system; Rep. Gr. 23 ; Air filter “Air filter” or “Mixture preparation, injection” ⇒ Mixture preparation, injection; Rep. Gr. 24 ; Air filter “Air filter”

– Push bleed hose onto bleeder valve of clutch slave cylinder.

– Open valve and allow approx. 100 ml of brake fluid to flow out.

– Close valve and depress clutch pedal 10 to 15 times quickly in succession.

– Open valve again and allow approx. 50 ml of brake fluid to flow out.

– Close valve, remove bleed hose and depress clutch pedal several times.

– Install air filter housing in reverse order.

Table - Sequence and quantity of brake fluid

Sequence bleeder valves:	Brake fluid quantity which must flow out of bleeder valves:
Brake caliper	
Front left	0.25 litre (250 ml)
Front right	0.25 litre (250 ml)
Wheel brake cylinder/ brake caliper	
Rear left	0.25 litre (250 ml)
Rear right	0.25 litre (250 ml)
Clutch slave cylinder	0.15 litre (150 ml)

Total quantity: approx. 1.15 litre

– Fit caps on bleeder screws of brake calipers.

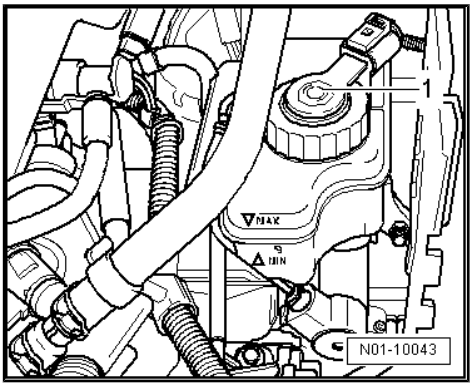
– Move fill lever of brake filling and bleeding equipment -VAS 5234- to position “B” (see operating instructions).

– Remove filler hose from adapter.

– Unscrew adapter from brake fluid reservoir.

– Check brake fluid level and correct if necessary.

– Screw on cap -1- of brake fluid reservoir.
– Remove brake pedal depressor.
– Check pressure and free travel of brake pedal. Free play: max. $^{1}/_{3}$ of pedal travel.



4.10 Brake fluid level: Check

Brake fluid level at delivery inspection:

Brake fluid level at inspection service:

> **WARNING**
>
> ***If level is below MIN. marking -2-, brake system should be checked before fluid is added (repair measure).***

Instructions for use and safety ⇒ page 67 .

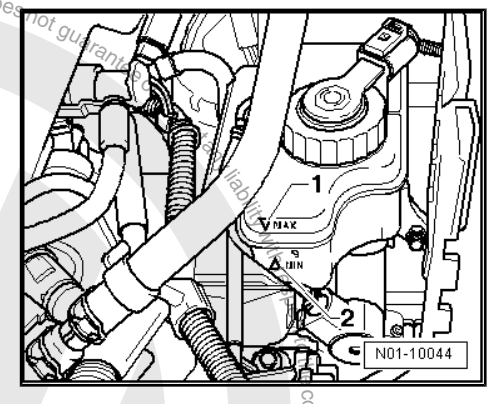
Brake fluid specification ⇒ page 67 .

Procedure, brake fluid level: Check ⇒ page 71

4.10.1 Procedure, brake fluid level: Check

Brake fluid level at delivery inspection:

At delivery inspection the fluid level must be at MAX. marking -1-.



Note

To prevent that brake fluid flows out of reservoir, the MAX marking must not be exceeded.

Brake fluid level at inspection service:

The fluid level must always be judged in conjunction with lining/pad wear.

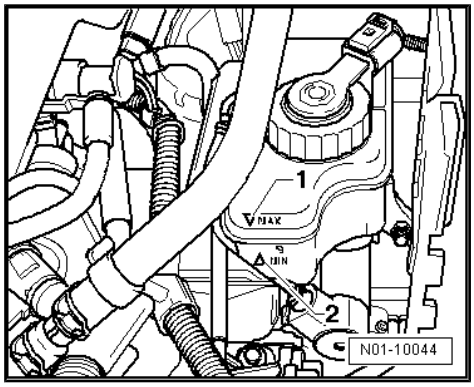
When vehicle is in use, fluid level tends to drop slightly due to lining/pad wear and automatic adjustment.

- Recommended brake fluid level, if brake pads are almost at wear limit:

“At MIN. marking or just above” “REPLENISHING IS NOT REQUIRED”.

- Recommended brake fluid level when brake pads are new or well within wear limit:

“Between MIN. and MAX. marking”.



WARNING

If the fluid level is below MIN. marking, the brake system must be checked before fluid is topped up “repair measure”.

4.11 Brake system: Perform visual check for leaks and damage

Check following components for leaks and damage:

- ♦ Brake master cylinder
- ♦ Brake servo (for anti-lock brake system: hydraulic unit)
- ♦ Brake pressure regulator and
- ♦ Brake calipers

– Ensure that brake hoses are not twisted.

– Ensure that brake hoses do not touch any vehicle components when steering is at full lock.

– Check brake hoses for porosity or brittleness.

– Check brake hoses and lines for chafing.

– Check brake connections and fastenings for correct seating, leaks and corrosion.

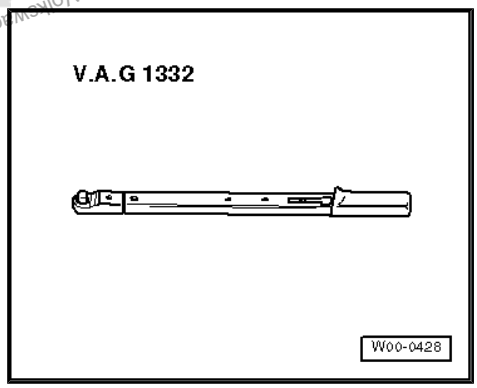
WARNING

Faults found must always be rectified (repair measure).

4.12 Front and rear brake pads/linings: Check thickness

Special tools and workshop equipment required

- ♦ Torque wrench -V.A.G 1332-



- ♦ Electric hand torch and mirror

Carry out the following procedure:

The adapter to loosen or tighten theft inhibiting wheel bolts is in the vehicle tool kit, ⇒ page 136 .

4.12.1 Front brake pads:

– For better evaluation of remaining pad thickness, remove the front wheel on the driver side.

– Pull off wheel bolt covers if necessary ⇒ page 136 .

– Mark position of wheel relative to brake disc.

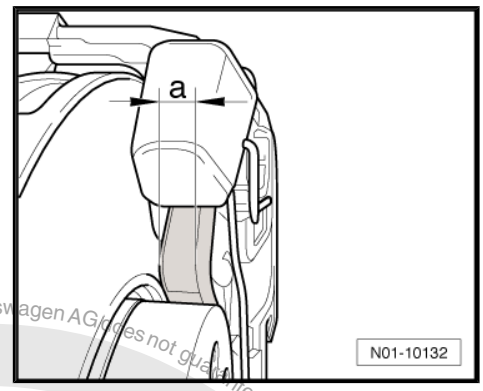
– Unbolt wheel bolts and remove wheel.

– Measure thickness of inner and outer pads.

a - Pad thickness “without” backplate

Wear limit: 2 mm

The brake pads have reached their wear limit at a pad thickness of 2 mm (without backplate) and must be renewed (repair measure). Inform customer!



Note

When replacing brake pads, always check brake discs as well for wear! Checking and if necessary replacing the brake discs is a repair measure.

– Check brake disc for wear ⇒ Brake system; Rep. Gr. 46 ; Repairing front brakes “Repairing front brakes”

– Install wheel in marked position.

– Tighten wheel bolts diagonally and alternately, torque setting ⇒ page 136 .

– Place adapter in vehicle tool kit after completing work.

– Reinstall wheel bolt covers if necessary.

4.12.2 Rear brake pads:

– Illuminate area behind hole in wheel using an electric hand torch.

– Determine thickness of outer pad by checking visually.

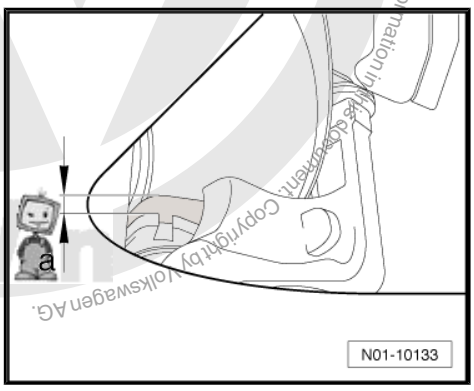
– Illuminate inner pad with an electric hand torch and mirror.

– Determine thickness of inner pad by checking visually.

a - Inner and outer pad thickness without backplate

Wear limit: 2 mm

The brake pads have reached their wear limit at a pad thickness of 2 mm (without backplate) and must be renewed (repair measure). Inform customer!



Note

When replacing brake pads, always check brake discs as well for wear! Checking and if necessary replacing the brake discs is a repair measure.

– Check brake disc for wear ⇒ Brake system; Rep. Gr. 46 ; Repairing rear brakes “Repairing rear brakes”

4.13 Checking diesel particulate filter

Note

When checking the diesel particulate filter the ash mass limit value is read.

– Connect fault reader ⇒ page 43 .
– Switch on ignition.
– Touch the field or button on the screen for “GUIDED FUNCTIONS”.

If the display is not as shown in the procedure: ⇒ Operating instructions for vehicle diagnostic, testing and information system -5051- or vehicle diagnostic and service information system -VAS 5052- .

– Confirm with [>] button.
– Select one after the other:

♦ Brand
♦ Type
♦ Model year
♦ Engine code

– Confirm vehicle identification.

“Select vehicle system or function” is shown on display.

– Select vehicle system “Engine”.
– Select “Read measured value block”.
– Confirm with “>” button (press twice).

Now follow instructions on display.

– Mark “Measured value block 68, field 2”, reading ash mass.
– Determine actual value using “Reading button”.

Follow instructions on display.

Note

♦ *If the specification “less than 60 grams” is exceeded, the diesel particulate filter must be renewed, ⇒ 4-cylinder diesel engine; Rep. Gr. 26 ; Parts of exhaust system; Assembly overview - front exhaust pipe with particulate filter .*
♦ *Renewing the diesel particulate filter is a repair measure.*

– End test.
– Switch off ignition and separate diagnostic connections.

4.14 6-speed dual clutch gearbox (DSG) 02E: Change oil and filter

– Procedure: “Power transmission/Dual clutch gearbox” ⇒ Rep. Gr. 34 “Change oil and filter of dual clutch gearbox”.

4.15 Electric windows: Check positioning (open and close functions)

Note

The automatic opening and closing features for the electric windows do not function after disconnecting and reconnecting the battery. Therefore, with immediate effect, before a new vehicle is delivered, the window adjusters must be reactivated. Once the windows have been reactivated, the battery must not be disconnected again.

WARNING

After batteries have been disconnected and reconnected the roll-back function of the electric window regulators is disabled. Severe pinching injuries could result!

Carry out the following procedure to reactivate the electric window automatic functions:

Note

The following work description applies to the front left window regulator. Reactivate the other window automatic functions in the same manner by operating the respective switch in the driver door.

- Switch on ignition.
- Close all doors and windows completely.
- Hold the front left side window in “closed” position, by pulling and holding switch (for longer than 1 second).
- Pull switch again for 1 second. The side window must now go up or down by itself when switch is briefly pulled or pressed.
- Switch off ignition

4.16 Vehicle system test: Perform test

- Connect vehicle diagnostic tester ⇒ page 43 .
- Switch on ignition.
- Select operating mode “Guided fault finding” on display.
- Then perform vehicle identification on tester.

The programme now automatically performs a vehicle system test and reads all control units available for this vehicle type.

- Press [>] button.

Now all faults are listed.

Note

- *At this point it is useful to change to operating mode guided functions to carry out further operations with VAS 5051 and to prevent a second vehicle identification on tester.*
- *To do this, press button operating mode and then guided functions.*
- *For further procedure see respective work descriptions.*
- *To return to guided fault finding, press button operating mode and then guided fault finding.*

Caution

The vehicle must always be delivered to the customer with fault memory cleared.

Static faults

If one or more static faults are found in the fault memory, we recommend in agreement with the customer to rectify these faults using guided fault finding.

Sporadic faults

If only sporadic faults or notes are stored in the fault memory and the customer has no complaints in conjunction with the electronic vehicle system, clear fault memory.

– Press [>] button again to reach the test plan.

– Now finish guided fault finding using GoTo button and then End.

All fault memories are read again.

Now it is confirmed on display that all sporadic faults have been cleared.

Then the diagnosis log is sent “online” or stored on the tester.

Note

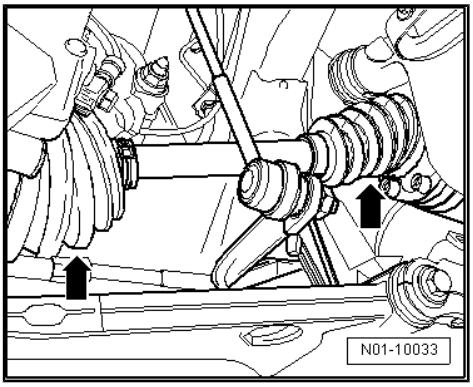
- *If the tester is not connected to the network, the diagnosis log is stored and will be sent when the tester is connected to the network.*
- *Logs stored and which are more than 40 days old will be cleared automatically.*

The vehicle system test is completed.

4.17 Protective bellows: Visual check

Carry out the following procedure:

– Check outer bellows and inner bellows -arrows- for leaks and damage.



4.18 Renewing rubber buffers for engine cover

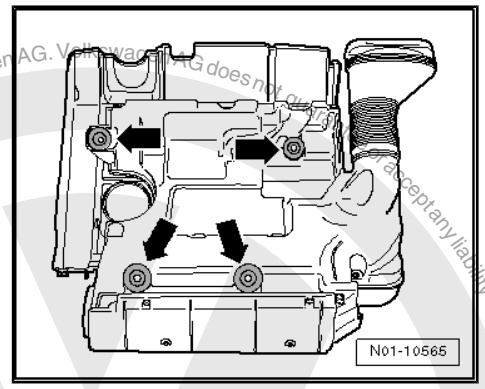
Only Jetta GTI Edition 30

Note

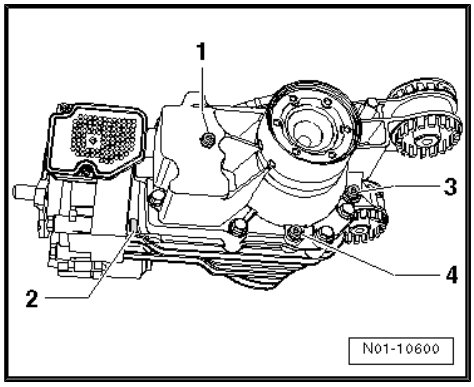
The rubber buffers for engine cover are renewed every 60,000 km in conjunction with air filter change for the Jetta GTI Edition 30.

– Remove engine cover as described ⇒ page 105
– Place engine cover with upper side on a soft surface to prevent damage to chrome applications.
– Pull rubber buffers -arrows- for engine cover out upwards.
– Then push new rubber buffers into guides again.

Install engine cover in reverse order.



4.19 Haldex coupling (Jetta 4motion): Change oil

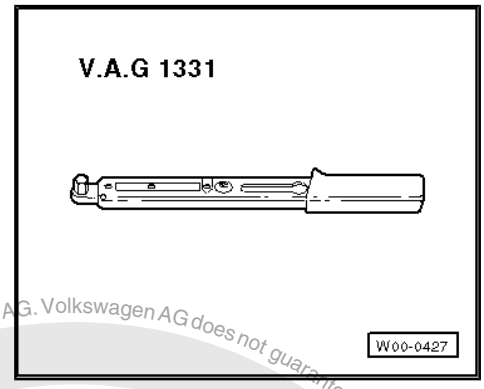


Note

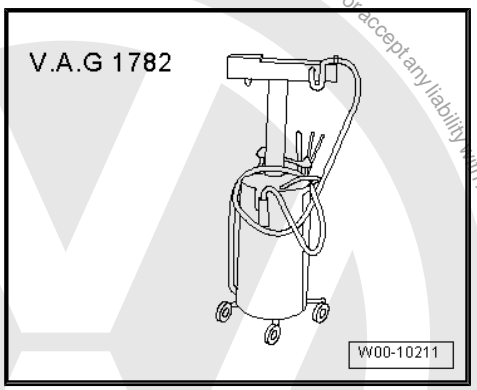
- *On vehicles with Haldex coupling the drain plugs and sealing plugs of both systems are often interchanged, due to the integrated housing construction of Haldex coupling and final drive. Caution must be exercised during maintenance and servicing, as incorrect fitting can cause the Haldex coupling and the final drive to fail.*
- *The Haldex coupling and the final drive are one system with separate oil systems.*
- *-1- Plug for Haldex oil filler hole.*
- *-2- Drain plug for Haldex oil.*
- *-3- Plug for gear oil filler hole.*
- *-4- Drain plug for gear oil.*

Special tools and workshop equipment required

- Torque wrench -V.A.G 1331-

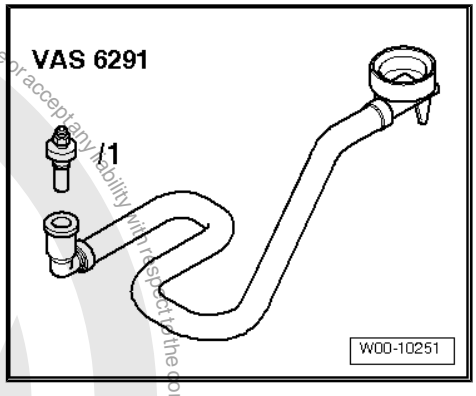


- Used oil collection and extraction unit -V.A.G 1782-

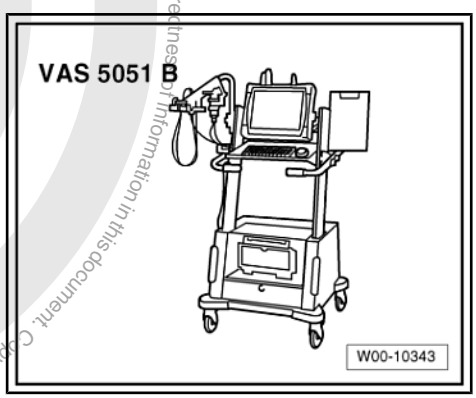


- Oil spill cloth -VAS 6204/1-

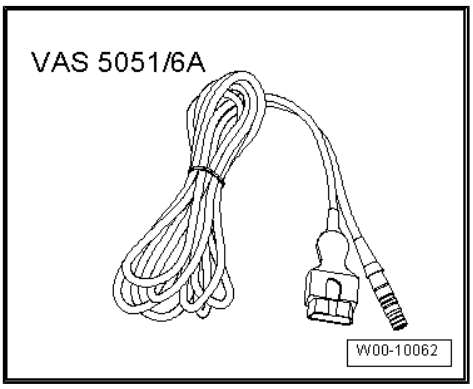
- Charging device for Haldex coupling 2 -VAS 6291-



- Vehicle diagnostic, testing and information system -VAS 5051B-



- Diagnostic cable -VAS 5051/6A-



Procedure

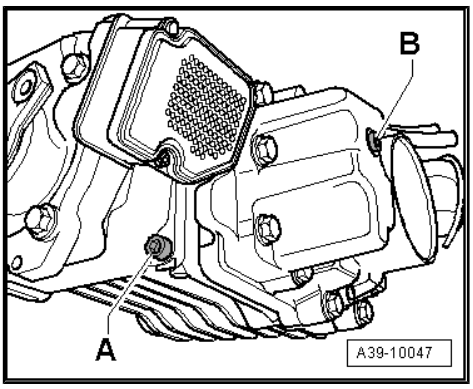
– Raise vehicle with lifting platform and place used oil collection and extraction unit -V.A.G 1782- below Haldex coupling.

– Unscrew oil drain plug -A- and fully drain high performance oil.

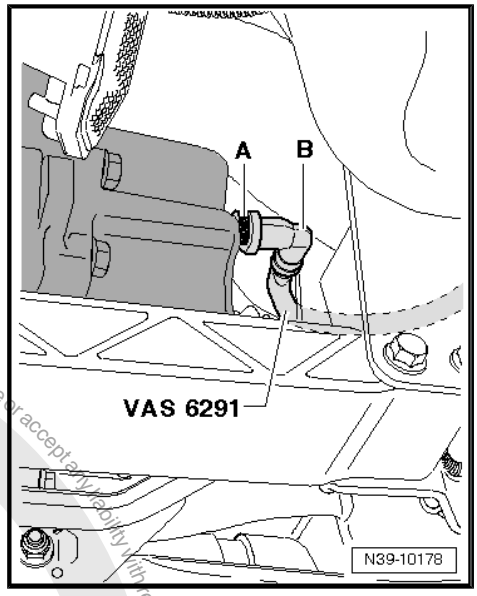
– Screw in new drain plug ⇒ Parts catalogue with new seal. The drain plug is fitted with a secure seal.

Specified torque: 30 Nm

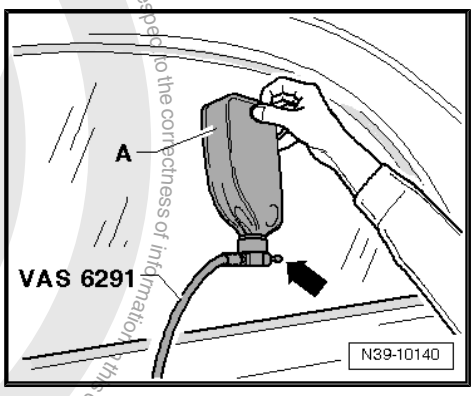
– Remove oil filler plug -B-.



– Separate angled piece -B- from adapter -A- and screw adapter fully in oil filler hole.
– Reconnect angled piece and route hose above drive shaft to prevent sagging.
– The vehicle can be lowered as soon as the hose above the rear left wheel leads away from the vehicle.



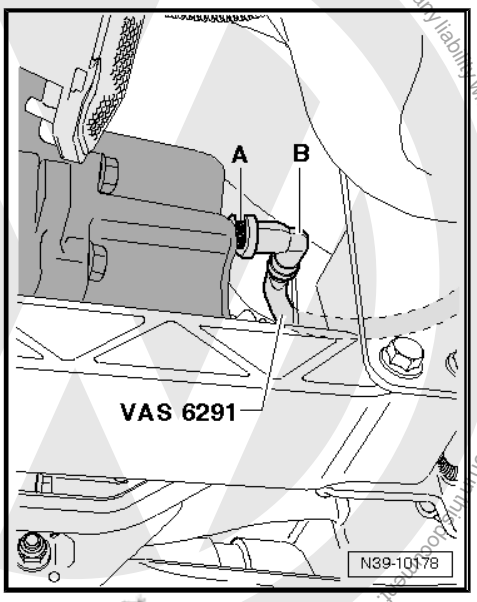
– Screw oil container -A- to charging device for Haldex coupling 2 -VAS 6291- with valve closed -arrow-.
– Open valve -arrow- and hold oil container as shown in the illustration.



Oil capacity according to maintenance: 0.65 l high performance oil for Haldex coupling -G 055 175- ⇒ Parts catalogue

– Check for correct filling by raising the vehicle again, and check if oil has flown out of adapter -A-.
– If no oil has flown out, lower the vehicle again and continue with filling.
– As soon as oil has run out, hold the oil container below the height of the Haldex coupling, so that excessive oil can flow back from the line into the container.
– Remove charging device for Haldex coupling 2 -VAS 6291- and screw in oil filler plug.

Specified torque: 15 Nm



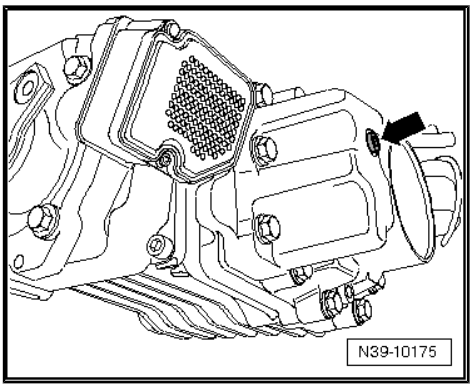
– Now check the correct oil level at prescribed temperature range.
– For this, connect vehicle diagnostic tester ⇒ page 43 .
– Select one after the other:

♦ Vehicle self-diagnosis
♦ Running gear
♦ Four-wheel drive with Haldex coupling
♦ 01 - Systems capable of self-diagnosis
♦ Four-wheel drive Haldex
♦ Electrical components
♦ Oil temperature

The oil temperature must be 20...40 °C and can be reached by carrying out a road test.

– Remove oil filler plug again -arrow-.

The oil level is correct when the Haldex coupling is filled to the lower edge of oil filler hole or at least 3 mm below oil filler hole.



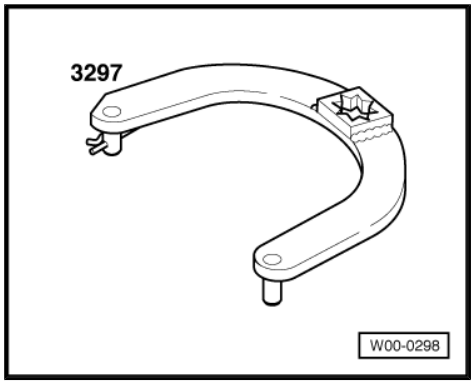
– Use a new seal and tighten oil filler plug.

Specified torque: 15 Nm

4.20 Poly V-belt: Adjust tension on engines without automatic tensioning roller

Special tools and workshop equipment required

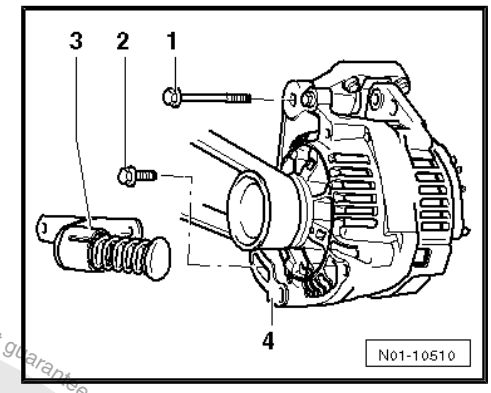
♦ Tensioning lever -3297-



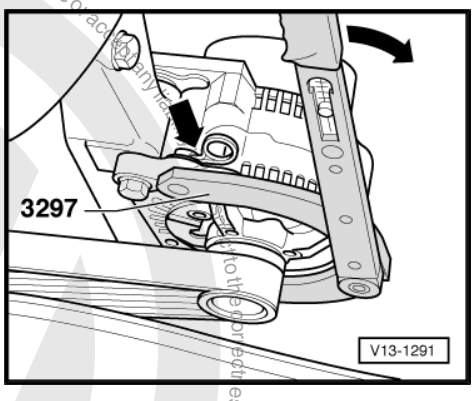
– Loosen securing bolts -1 + 2-.

3 - Tensioning arm

4 - Alternator



– Fit tensioning lever, secure with pin -arrow- and swing alternator downwards (use torque wrench as drive for 3297).
– Press alternator with tensioning lever to stop of tensioning arm at least three times, to ensure optimum ease of movement.
– First tighten lower and then upper alternator bolt to 25 Nm.



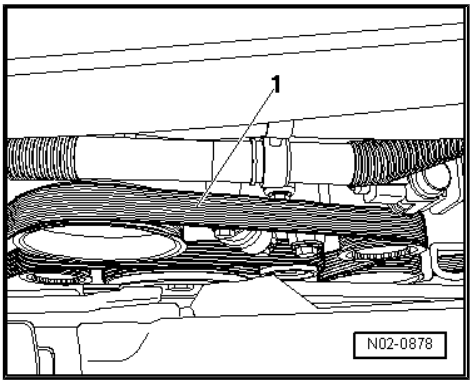
4.21 Poly V-belt: Check condition

Carry out the following procedure:

– Crank engine at vibration damper on belt pulley using a socket.

Check poly V-belt -1- for:

- Substructure cracks (cracks, core ruptures, cross sectional breaks)
- Layer separation (top layer, cord strands)
- Base break-up
- Fraying of cord strands
- Flank wear (material wear, frayed flanks, brittle flanks -glassy flanks-, surface cracks)
- Traces of oil and grease



Note

If faults are found it is absolutely necessary to renew the poly V-belt. This will avoid possible breakdowns or operating problems. Renewing the poly V-belt is a repair measure.

4.22 Dash panel insert: Adapt menu language versions

The language versions can be selected via the main menu on display of dash panel insert.

- Select main menu for vehicles without multifunction steering wheel ⇒ page 83 .
- Select main menu for vehicles with multifunction steering wheel ⇒ page 84 .

4.22.1 Selecting main menu for vehicles without multifunction steering wheel

Note

Which menus are shown on display depends on vehicle electronics and the equipment.

– Switch on ignition.

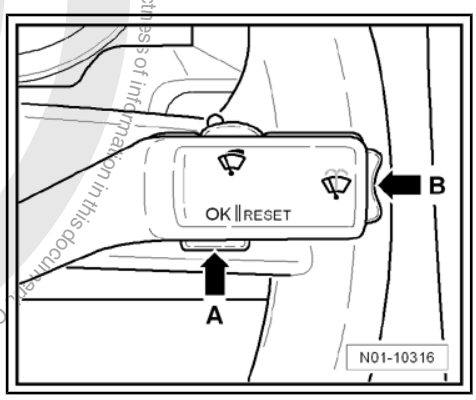
A vehicle symbol is displayed.

– Press button -A- in windscreen wiper lever once.
– To return to the main menu, press rocker switch -B- and hold for two seconds.

Repeat this procedure until the main menu appears.

2. Select menu “Settings”

– Press upper or lower rocker switch to mark a menu point.



The marked menu point can be found between the two horizontal lines; there is also a triangle on the right-hand side.

– Mark menu point “Settings”.

– Press button -A- in windscreen wiper lever.

The menu “Settings” is selected.

The setting menu will display the following:

1 - Setting time

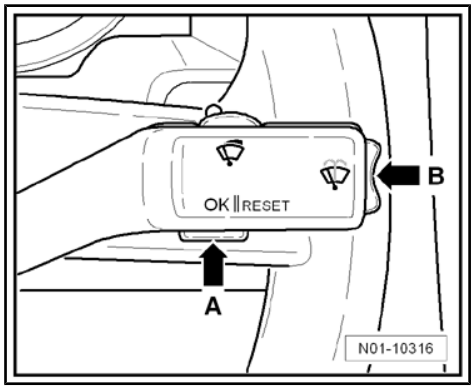
2 - Speed warning for winter tyres

3 - Units

4 - Language

5 - Auxiliary heater

6 - Light & View and Convenience



3. Select menu “language”

Select menu point “language” and confirm with -button A-.

In the menu the language can be chosen.

Select language and confirm with -button A-.

4.22.2 Selecting main menu for vehicles with multifunction steering wheel

– Switch on ignition.

A vehicle symbol is displayed.

– Press button -3- until the menu for “Settings” appears.

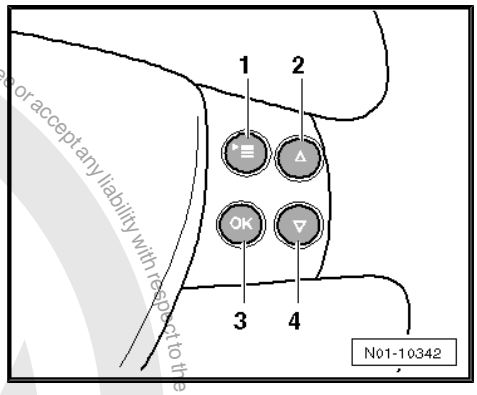
– Press buttons -4- and “Language”.

– Confirm with button -3-.

– Select respective language.

– Confirm with button -3-.

– Exit menu using button -1-.



4.23 Compass: Set compass zone and calibrate compass (for North American, Canadian and Mexican markets)

General ⇒ page 84 .

Setting compass zone ⇒ page 85 .

Calibrating compass ⇒ page 87 .

4.23.1 General

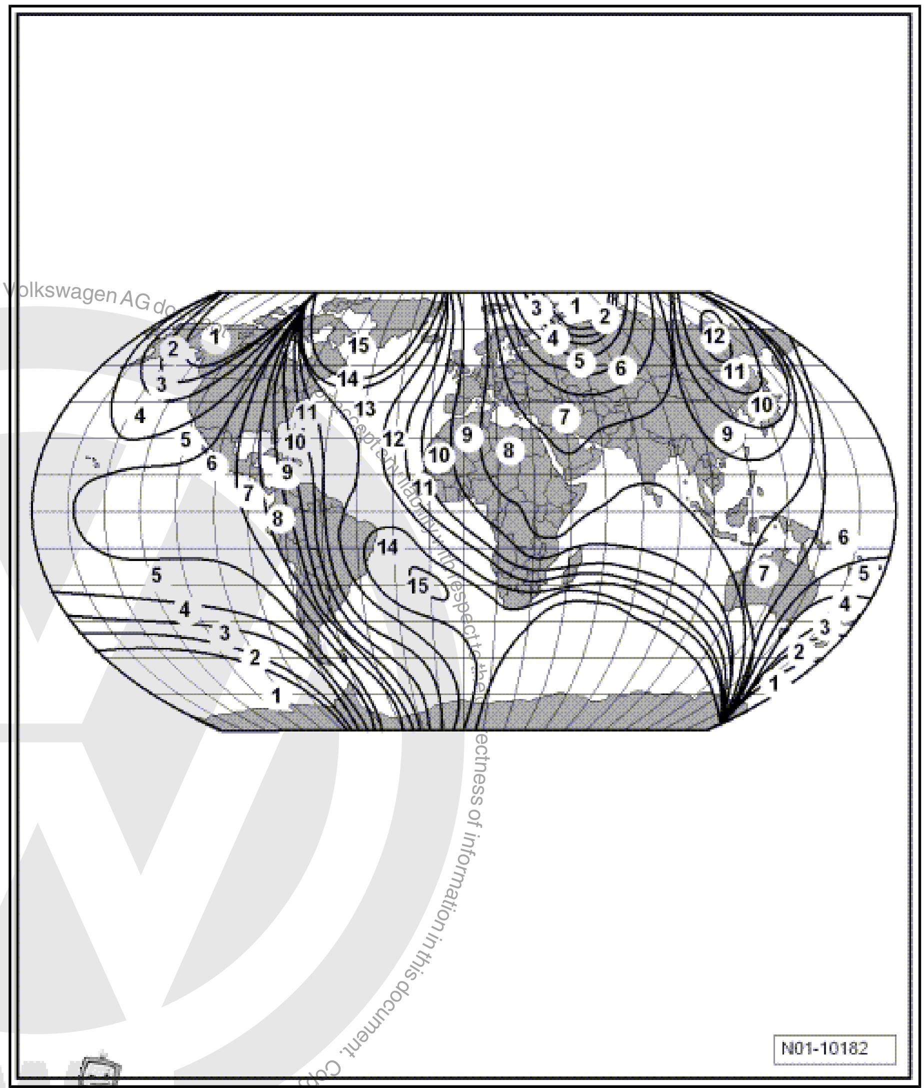
Note

Only valid for vehicles with Highline dash panel insert.

The compass indicates the direction, in which the vehicle drives.

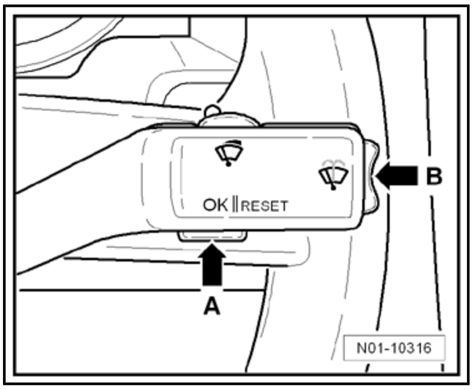
The correct geographic zone must be set for a correct display.

– Your geographic zone can be read off the zone map, e.g. zone 8 for Germany, zone 6 for Mexico.



Select compass zone and calibrate compass with button -A- and rocker switch -B- of windscreen wiper lever in “Main menu”.

- ♦ Button -A- is used to confirm the menu points.
- ♦ Rocker switch -B- is used to change the menu.



4.23.2 Setting compass zone

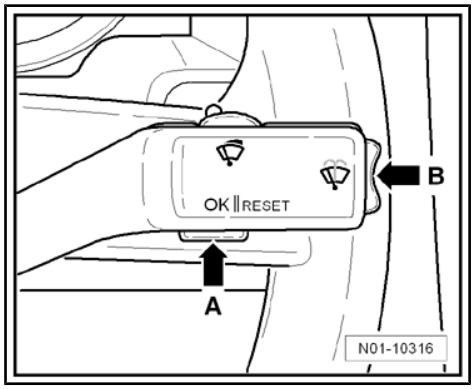
1. Select main menu

– Switch on ignition.

A vehicle symbol is displayed.

– Press button -A- in windscreen wiper lever once.
– To return to the main menu, press rocker switch -B- and hold for two seconds.

Repeat this procedure until the main menu appears.



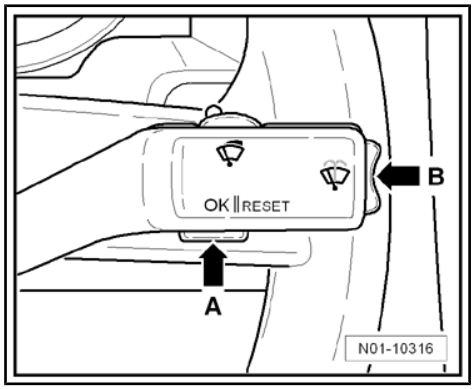
2. Select menu “Settings”

– Press upper or lower rocker switch to mark a menu point.

The marked menu point can be found between the two horizontal lines; there is also a triangle on the right-hand side.

– Mark menu point “Settings”.
– Press button -A- in windscreen wiper lever.

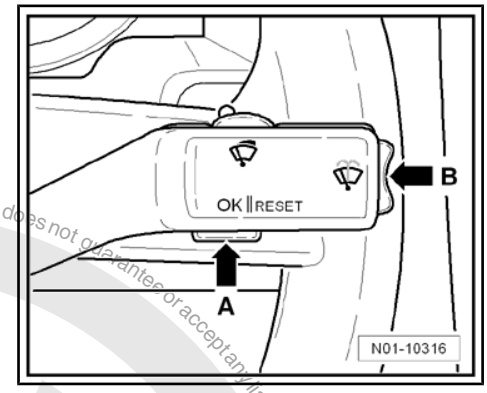
The menu “Settings” is selected.



3. Select menu “Convenience”

– Mark the menu point “Convenience” with rocker switch -B-.

The menu “Convenience” is selected.



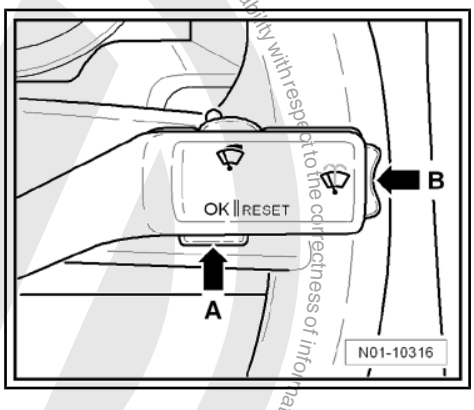
4. Select menu “Compass”

– Mark the menu point “Compass” with rocker switch -B-.

The menu “Compass” is selected.

The compass menu will display the following:

1 - Direction
2 - Zone
3 - Calibration
4 - Back



5. Select menu “Zone”

Select menu point “Zone” and confirm with -button A-.

The compass menu will display the following:

1 - Direction

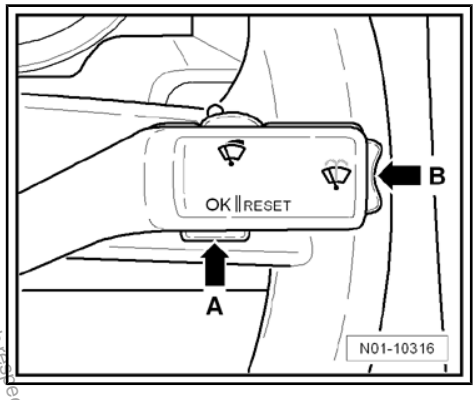
2 - Zone (e.g. zone 8 for Germany, zone 6 for Mexico,)

3 - (+1 zone) the possibility to select the next zone in each case

4 - (-1 zone) the possibility to select the previous zone in each case

5 - Back

– Mark the menu point “+ 1 zone” or “- 1 zone” with rocker switch and press button to select the compass zone in the display.

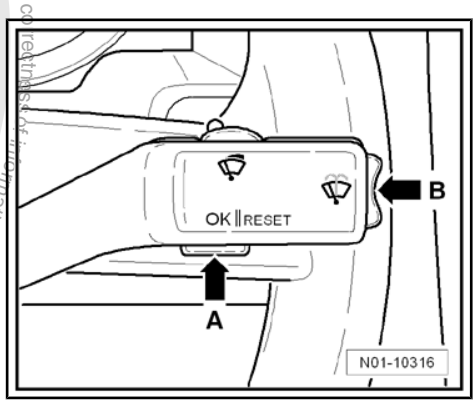


6. Exit menu

– Mark the menu point “Back” with rocker switch -B-.

– Press button -A-.

The menu point “Compass” is exited and the last shown menu is called up.



4.23.3 Calibrating compass

1. Select main menu

– Switch on ignition.

A vehicle symbol is displayed.

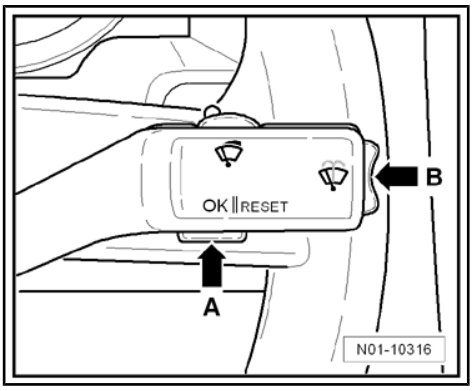
– Press button -A- in windscreen wiper lever once.

– To return to the main menu, press rocker switch -B- and hold for two seconds.

Repeat this procedure until the main menu appears.

2. Select menu “Settings”

– Press upper or lower rocker switch to mark a menu point.



The marked menu point can be found between the two horizontal lines; there is also a triangle on the right-hand side.

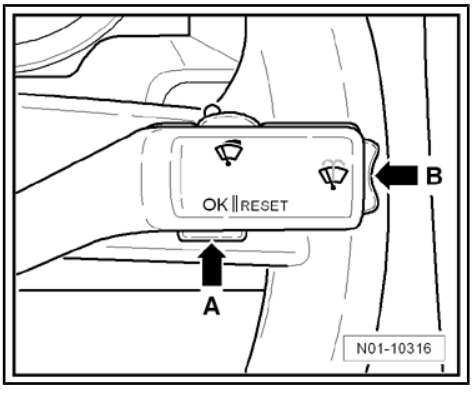
– Mark menu point “Settings”.

– Press button -A- in windscreen wiper lever.

The menu “Settings” is selected.

3. Select menu “Convenience”

– Mark the menu point “Convenience” with rocker switch -B-.



The menu “Convenience” is selected.

4. Select menu “Compass”

– Mark the menu point “Compass” with rocker switch -B-.

The menu “Compass” is selected.

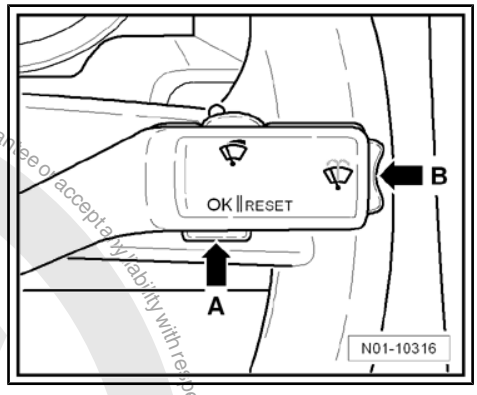
The compass menu will display the following:

1 - Direction

2 - Zone

3 - Calibration

4 - Back



5. Select menu “Calibration”

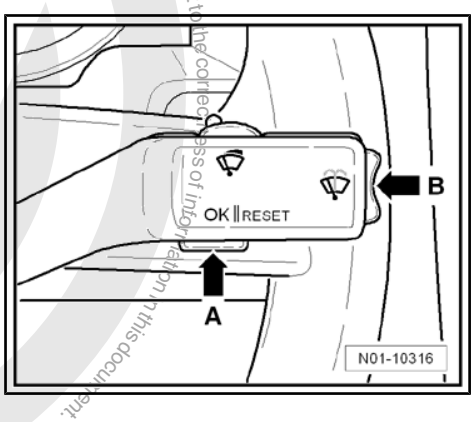
Select menu point “Calibration” and confirm with -button A-.

The compass menu will display the following:

1 - To calibrate, a complete circle must be driven

2 - Calibrate

3 - Back



6. Select menu “Calibrate”

Select menu point “Calibrate” and confirm with -button A-.

The compass menu will display the following:

1 - Drive a complete circle

Press -button A-.

– Drive a complete circle with a speed of less than 10 mph (20 Km/h).

The direction appears on the upper display next to the arrow “CAL”.

Having finished the calibration the display “CAL” is replaced by the actual direction (e.g. “N” for north).

4.24 Cooling system: Check frost protection and coolant level

- Check frost protection, if necessary replenish coolant additive ⇒ page 89
- Check coolant level and replenish coolant additive if necessary ⇒ page 90

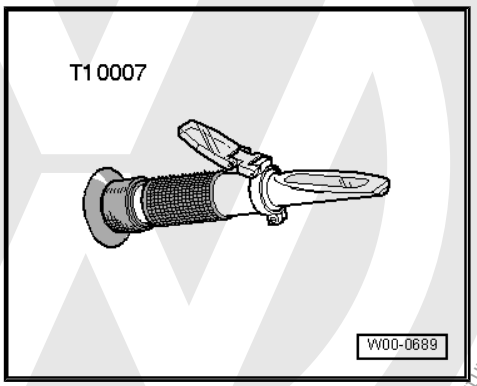
4.24.1 Checking frost protection, replenish coolant additive if necessary

Note

- *For vehicles from model year 2008 only use coolant additive -G 12 plus-plus- in accordance with TL VW 774 G.*
- *For vehicles up to and including model year 2007 use coolant additive G12 plus in accordance with TL VW 774 F and G 12 plus-plus in accordance with TL VW 774 G.*
- *Coolant additive -G 12 plus-plus- may only be mixed with -G 12 plus- . Both can be identified by their purple colour.*
- *Coolant additives marked "in accordance with TL VW 774 G" or "in accordance with TL VW 774 F" prevent frost and corrosion damage, scaling and also raise boiling point of coolant. For these reasons, the cooling system must be filled all-year-round with a frost and corrosion protection additive.*
- *Because of its high boiling point, the coolant improves engine reliability under heavy loads, particularly in countries with tropical climates.*
- *Frost protection must be assured to about -25 °C (in arctic climatic countries to about -35 °C).*
- *The coolant concentration must not be reduced by adding water even in warmer seasons and in warmer countries. The coolant additive ratio must be at least 40 %.*
- *If for climatic reasons greater frost protection is required, the amount of -G 12 plus-plus- can be increased, but only up to 60 % (frost protection to about -40°C), as otherwise frost protection is reduced again and cooling effectiveness is also reduced.*
- *The refractometer -T10007- is recommended to determine the current frost protection density.*
- *If radiator, heat exchanger, cylinder head or cylinder head gasket is replaced, do not reuse old coolant.*

Special tools and workshop equipment required

- Refractometer -T10007-



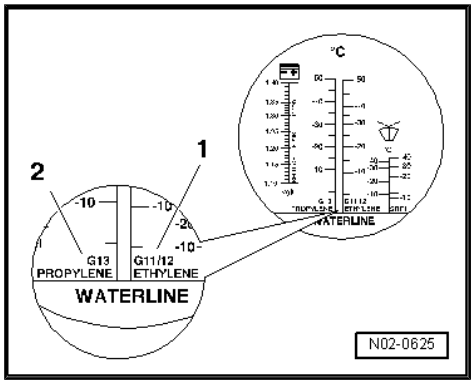
Note

Read precise value for the following tests at bright/dark boundary. Using a pipette, place a drop of water on the glass to improve the readability of the bright/dark boundary. The bright/dark boundary can be clearly recognised on the "WATERLINE".

– Check concentration of coolant additive using refractometer - T10007- (refer to operating instructions).

The scale -1- of the refractometer is calibrated for coolant additives G 11, G 12; G 12+ and G 12++.

The scale -2- is only calibrated for coolant additive G13. (originally L80)



Note

- *Frost protection must be guaranteed to approx. -25 °C.*
- *If for climatic reasons a greater frost protection is required, the amount of G 12+ or G 12++ can be increased, but only up to 60 % (frost protection to about -40 °C), as otherwise frost protection is reduced again and cooling effectiveness is also reduced.*

– If frost protection is insufficient, drain coolant and top-up with coolant additive G 12++ ⇒ page 90 .

Note

Observe disposal regulations!

Caution

Only tap water may be used for mixing. Well water does not have the required quality to ensure the effectiveness of coolant.

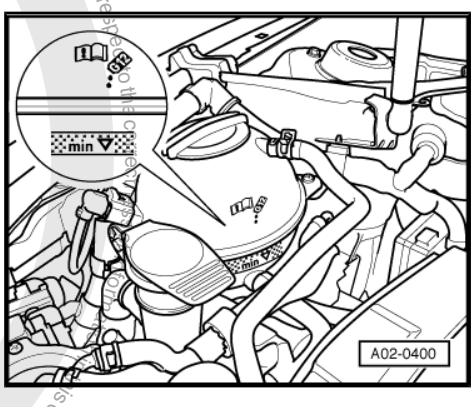
– Check coolant additive concentration after road test again.

4.24.2 Checking coolant level and replenish coolant additive if necessary

– Check coolant level in expansion tank with engine cold.

- Delivery inspection: Coolant level above “Min. marking” -arrow-.
- Inspection service: Coolant level above “Min. marking” -arrow-.

– If coolant is too low, add required amount according to mixture ratio.



Note

If fluid loss is greater than can be expected through normal use, determine source and rectify (repair measure).

4.24.3 Mixture ratio:

Caution

Only tap water may be used for mixing. Well water does not have the required quality to ensure the effectiveness of coolant.

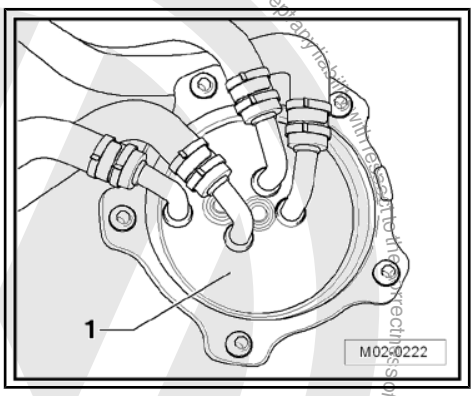
Frost protection to	Coolant additive G 12+ and G 12++	Water[1)]
-25 °C	approx. 40 %	approx. 60 %
-35 °C	approx. 50 %	approx. 50 %
-40 °C	approx. 60 %	approx. 40 %

1) Use clean tap water only.

Note

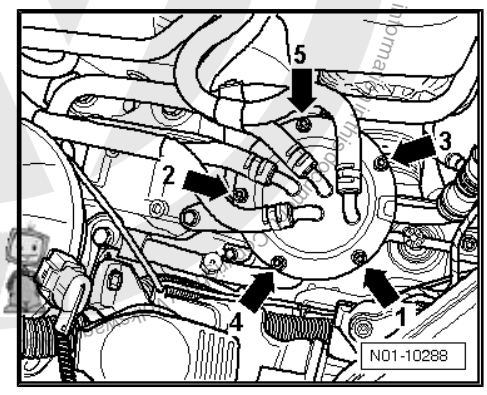
- *Coolant additive G 12+ and G 12++ prevents frost and corrosion damage, scaling and also raises boiling point of coolant. For these reasons, the cooling system must be filled all-year-round with a frost and corrosion protection additive.*
- *Because of its high boiling point, the coolant improves engine reliability under heavy loads, particularly in countries with tropical climates.*
- *The coolant concentration must not be reduced by adding water even in warmer seasons and in warmer countries. The anti-freeze portion must be at least 40 %.*

4.25 Fuel filter: Renew



Note

- *There are two different fuel filter systems.*
- *System 1, work description ⇒ page 92 .*
- *System 2, work description ⇒ page 93 .*



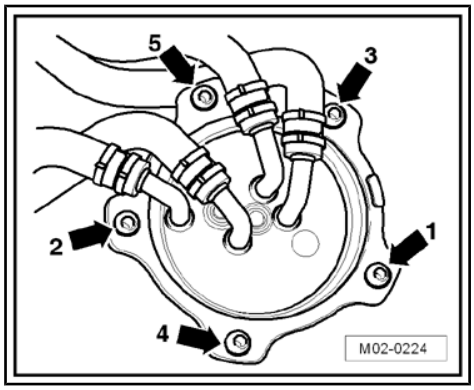
4.25.1 Renewing fuel filter, system 1

Note

- *Ensure that no diesel fuel contacts coolant hoses.*
- *Clean hoses immediately, if necessary.*
- *Observe disposal regulations!*

– Loosen all bolts -arrows- of fuel filter upper part in a diagonal pattern approx. 1.5 to 2 turns.

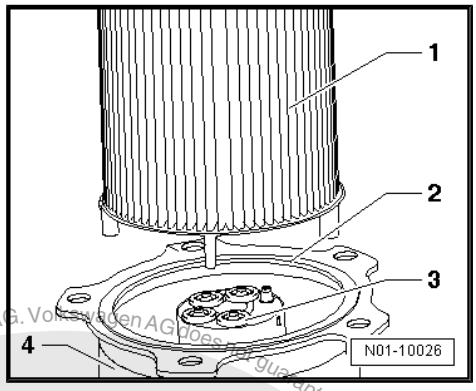
– Remove screws completely and remove fuel filter upper part.



– Remove easy change filter -1- and seal -2- from fuel filter lower part -4-.

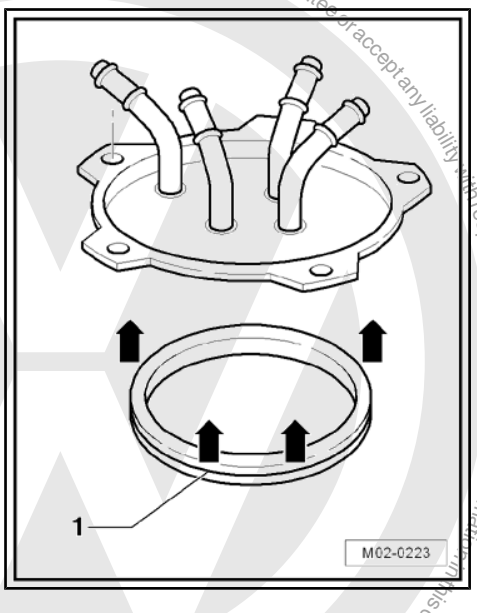
– Renew seal -3-.

– Insert new easy change filter into fuel filter lower part.



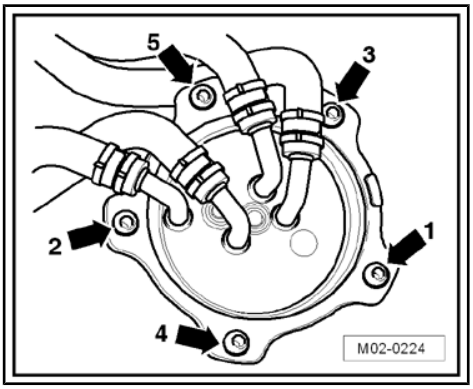
– Position new seal -1- on fuel filter upper part.

– Fit fuel filter upper part with seal to fuel filter lower part.



– Tighten fuel filter upper part to fuel filter lower part.
– Tighten bolts according to sequence shown in illustration.
– Tighten bolts to 5 Nm torque.

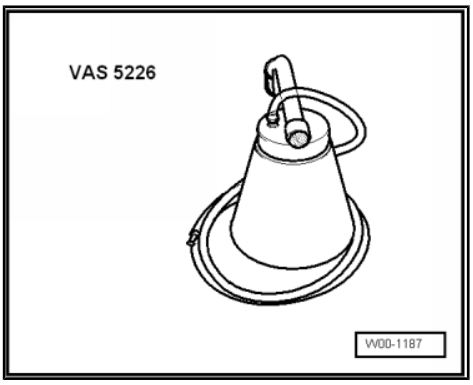
The tightening sequence prevents, that the fuel filter upper part is canted and the seal could be damaged.



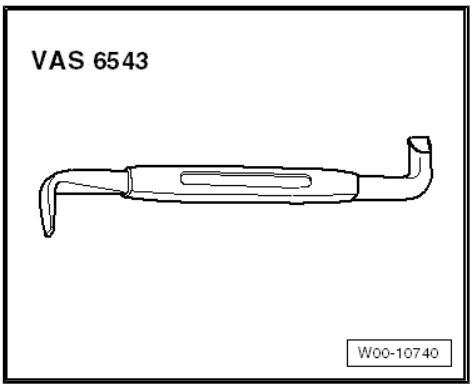
4.25.2 Renewing fuel filter, system 2

Special tools and workshop equipment required

♦ Diesel extractor -VAS 5226-



♦ Angled screwdriver -VAS 6543-



Remove engine cover ⇒ page 105 .

Removing:

Caution

♦ *Do NOT pull fuel hoses off fuel filter cover and do NOT lever at connection. Leaks could occur and the fuel filter upper part can be damaged.*

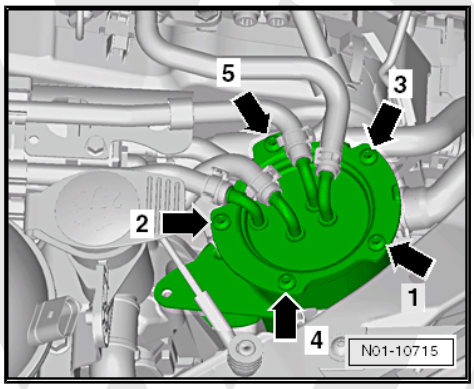
♦ *Ensure that no diesel fuel contacts other components in the engine compartment. Clean immediately, if necessary.*

Note

Observe disposal regulations!

Carry out the following procedure:

– Unscrew all bolts -arrows- from fuel filter upper part and remove fuel filter upper part.



Note

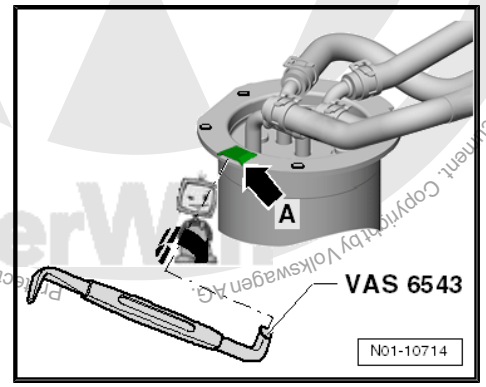
If the fuel filter upper part is stuck, loosen as follows:

The fuel filter upper part can be raised at assembly groove -arrow A- using angled screwdriver -VAS 6543- .

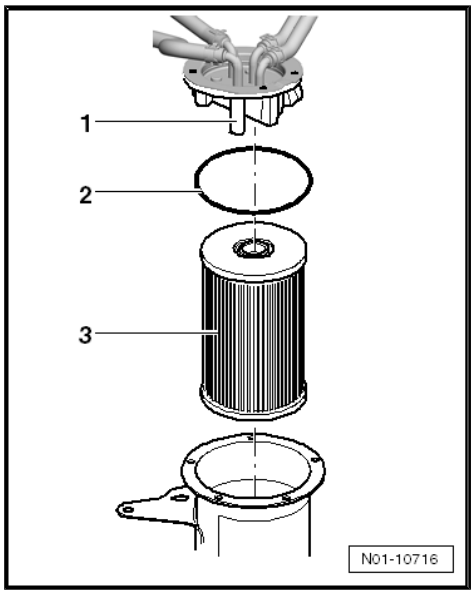
- The assembly groove can be of different size, depending on the type of upper part.

– Insert appropriate side of angled screwdriver -VAS 6543- in assembly groove -arrow A- and turn angled screwdriver -VAS 6543- .

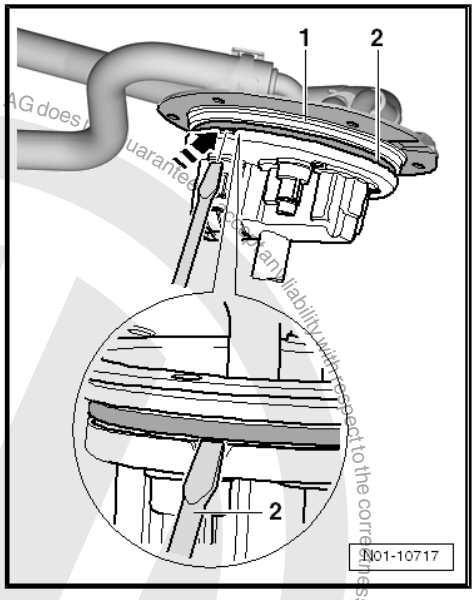
Then the fuel filter upper part is raised.



– Take filter -3- out of fuel filter lower part.



– Remove old seal -2- from fuel filter upper part -1- by levering seal out of respective groove -2-.



Caution

Remove all diesel, dirt and water residues from fuel filter lower part using diesel extractor -VAS 5226- .

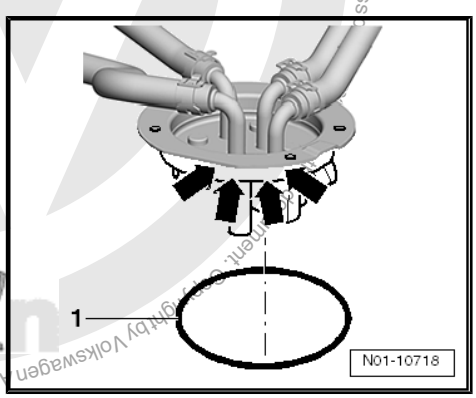
Note

Observe disposal regulations!

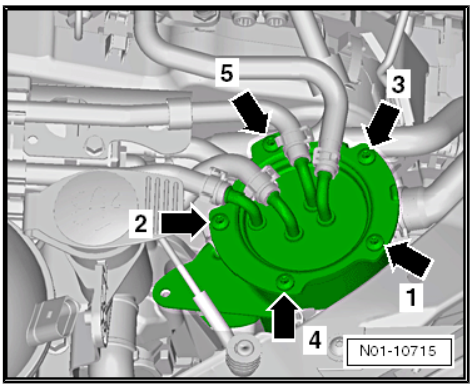
Installing:

– Insert new filter into fuel filter lower part.

– Moisten new seal -1- lightly with diesel fuel and insert fuel filter upper part -arrows-.



– Place fuel filter upper part with seal properly onto fuel filter lower part, press on firmly and evenly until the fuel filter upper part is correctly seated.



Caution

Do NOT tighten bolts for upper part, before it is correctly seated onto lower part.

– Screw all bolts into fuel filter lower part and tighten hand-tight.

– Then tighten bolts to 5 Nm according to sequence shown in illustration.

This procedure prevents the seal from being damaged.

4.26 Air filter: Clean housing and renew filter element

Removing and installing air filter element, 1.4 l SRE engine ⇒ page 96 .

Removing and installing air filter element, 1.4 l TSI engines (90 kW) ⇒ page 104 .

Removing and installing air filter element, 1.4 l TSI engines (103 kW, 118 kW, 125 kW) ⇒ page 103 .

Removing and installing air filter element: 2.5 l petrol injection engines ⇒ page 97 .

Removing and installing air filter element, 1.6 l engines
⇒ page 99 .

Removing and installing air filter element, 2.0 l FSI engines
⇒ page 101 .

Removing and installing air filter element, 2.0 l TFSI engines
⇒ page 97 .

Removing and installing air filter element, 2.0 l TSI engines
⇒ page 103 .

Removing and installing air filter element, diesel engines
⇒ page 103 .

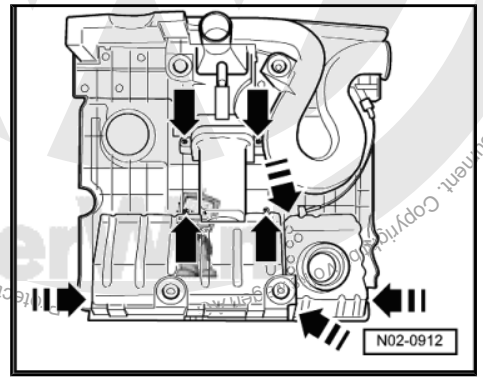
4.26.1 Removing and installing air filter element, 1.4 l SRE engine

- There are two different air filter versions:
- ♦ Air filter version 1: air filter housing integrated in engine cover
⇒ page 96
- ♦ Air filter version 2: Separate air filter housing on engine
⇒ page 97

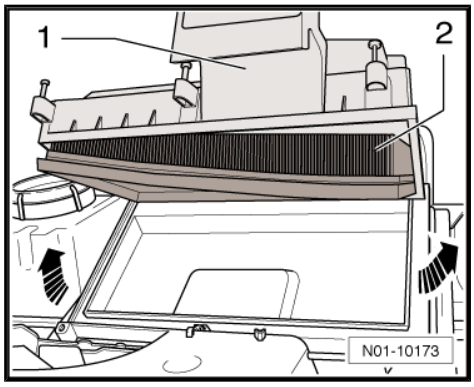
Air filter version 1

– Remove engine cover ⇒ page 105 .

– Remove bolts -arrows-.



– Remove air filter housing lower part -1- and air filter element -2-.

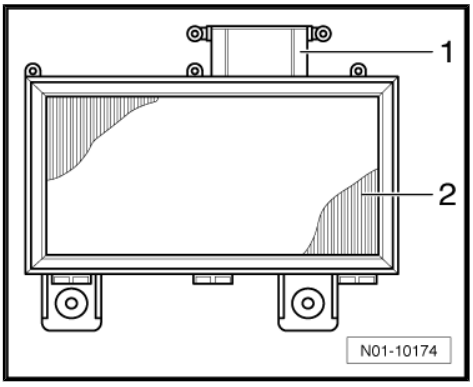


Note

Observe disposal regulations!

– Clean air filter housing lower part.

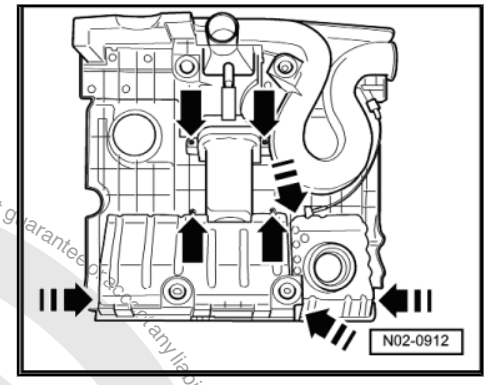
– Insert new filter element -1- into air filter housing lower part -2-.



Note

- *To secure the air filter housing upper part to air filter housing lower part and intake connection, self-tapping bolts are used as standard. If these bolts are loosened and tightened using a cordless screwdriver, the thread in the air filter housing upper part can be damaged.*
- *For this reason it is only permitted to use a cordless screwdriver, if the following prerequisites are fulfilled:*
- The speed of cordless screwdriver may be max. 200 rpm.
- A specified torque of max. 3 Nm must be adjustable.

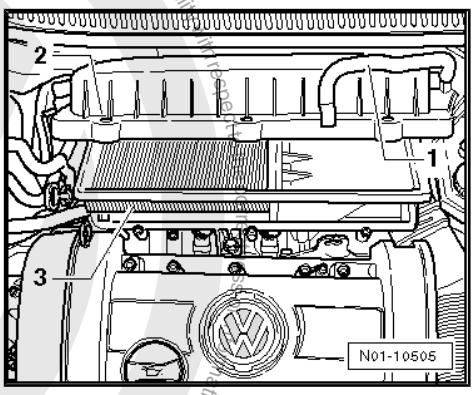
– Tighten bolts -arrows- to max. 3 Nm.



Air filter version 2

Carry out the following procedure:

– Carefully pull off hose -1-.
– Loosen bolts of air filter housing upper part -2- and fold upwards to remove the air filter -3-.



Note

Observe disposal regulations!

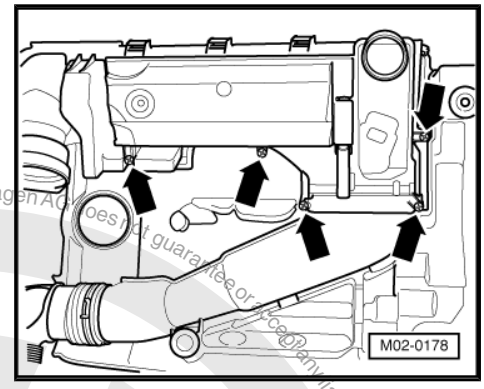
– Clean air filter housing.
– Install air filter and air filter housing in reverse order.

4.26.2 Removing and installing air filter element: 2.5 l petrol injection engine

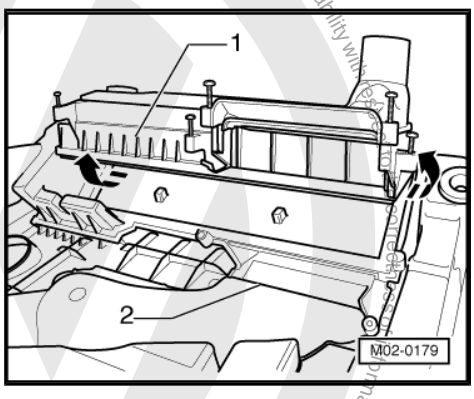
Removing

– Remove engine cover ⇒ page 105 .

– Place engine cover with upper side on a soft surface and prevent damage to the housing.



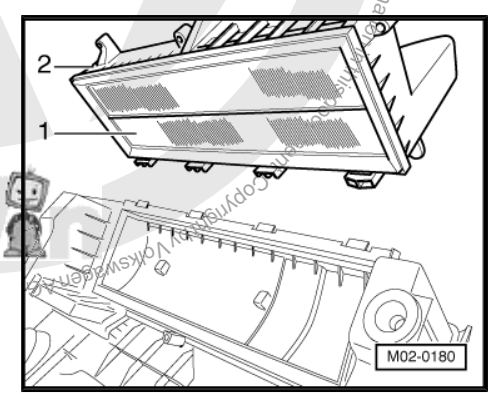
– Unscrew bolts -arrows- from engine cover lower side.



– Lift air filter housing lower part -1- upwards in direction of arrow and remove.
– Remove air filter element -1- from air filter housing lower part -2-.
– Blow out air filter housing with compressed air if necessary.

Installing

– Insert air filter element -1- into air filter housing lower part -2-.

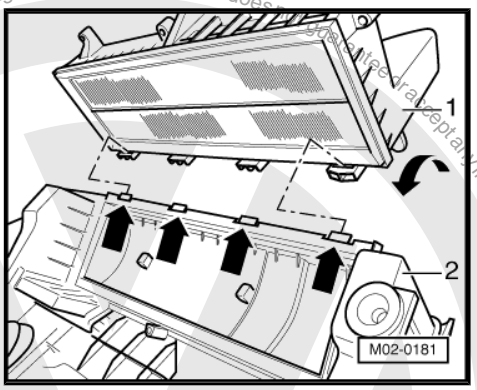


Note

Ensure that sealing surfaces of air filter housing are properly seated.

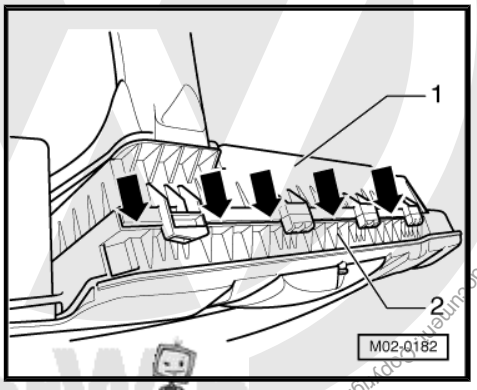
Note

- *For attaching the air filter housing upper part onto air filter housing lower part and intake connection, self-tapping bolts must be used as standard. When loosening or tightening these bolts using a power screwdriver, the thread in air filter housing upper part could be damaged.*
- *For this reason it is only permitted to use a power screwdriver, if the following prerequisites are fulfilled:*
- *The speed of power screwdriver must be max. 200 rpm.*
- *Setting torque of max. 2 Nm must be adjustable.*



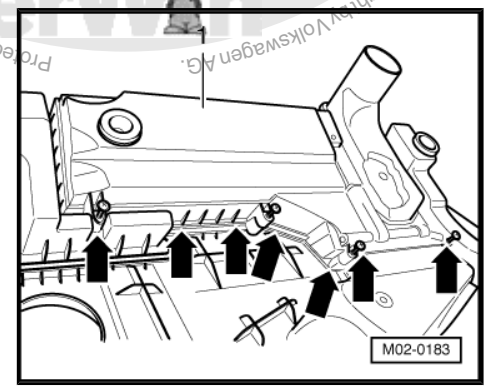
– Hook air filter lower part -1- on retaining lugs -arrows- of air filter upper part -2- and swing in direction of arrow, then press on lightly.

Check if parts of housing -1- and -2- are flush (rear part)

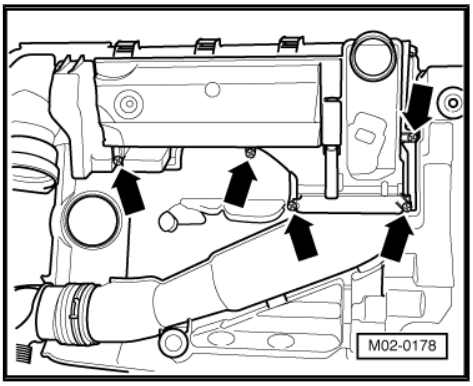


– Both parts of housing must be flush -arrows-.

Check if parts of housing -1- and -2- are flush (front part)



– Both parts of housing must be flush -arrows-.
– Tighten bolts -arrows- to max. 2 Nm.



Note

Tighten bolts evenly and alternately so that both parts of housing do not cant.

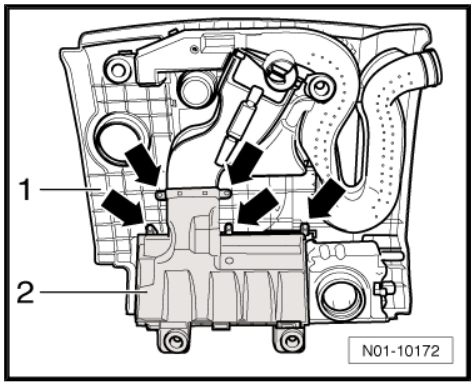
– Install engine cover ⇒ page 105 .

4.26.3 Removing and installing air filter element, 1.6 l engines

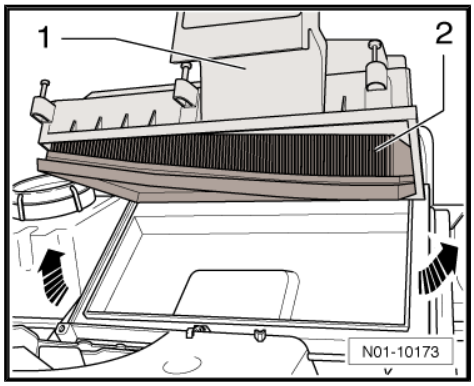
Removing

– Remove engine cover ⇒ page 105 .

– Remove bolts -arrows-.



– Remove air filter housing lower part -1- and air filter element -2-.



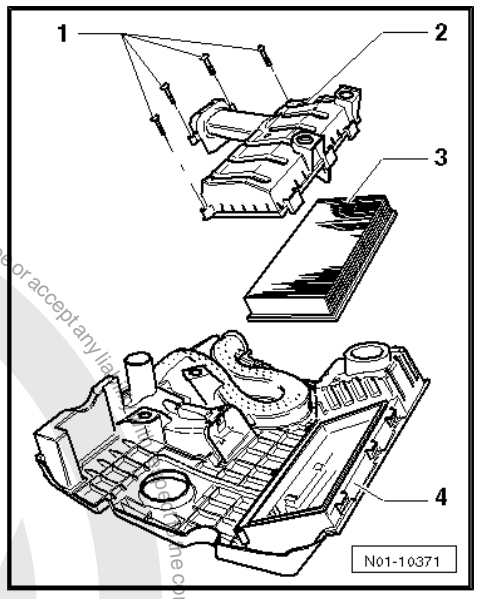
Note

Observe disposal regulations!

– Clean air filter housing lower part.

Installing

– Insert new filter element -3- into air filter housing lower part -2-.

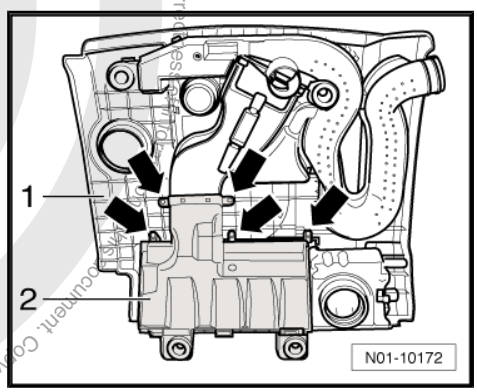


Note

- *For attaching the air filter housing upper part onto air filter housing lower part and intake connection, self-tapping bolts must be used as standard. When loosening or tightening these bolts using a power screwdriver, the thread in air filter housing upper part could be damaged.*
- *For this reason it is only permitted to use a power screwdriver, if the following prerequisites are fulfilled:*
- *The speed of power screwdriver must be max. 200 rpm.*
- *Setting torque of max. 3 Nm must be adjustable.*

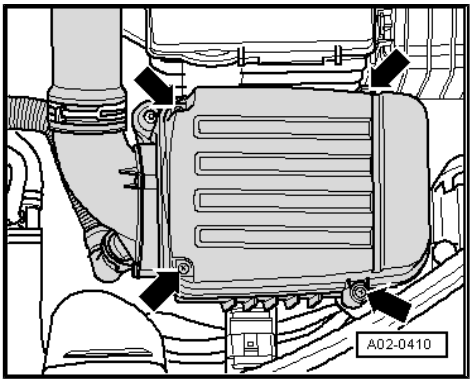
– Fit air filter housing lower part to filter housing upper part.

– Tighten bolts -arrows- to max. 3 Nm.



4.26.4 Removing and installing air filter element, 2.0 l FSI engines

– Remove the 4 screws -arrows- and remove cover.

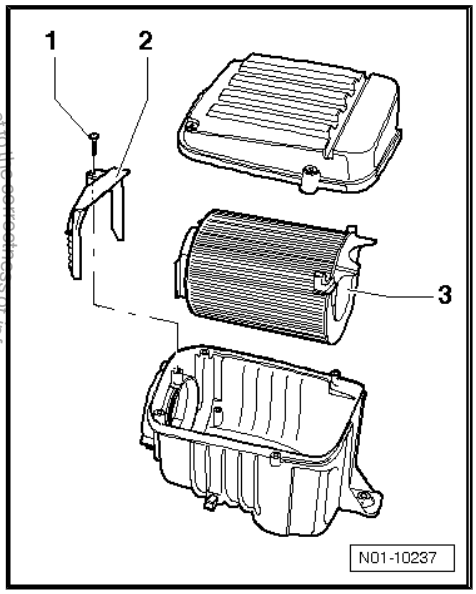


– Pull off retainer -2-.
– Take out used filter element -3-.

Note

Observe disposal regulations!

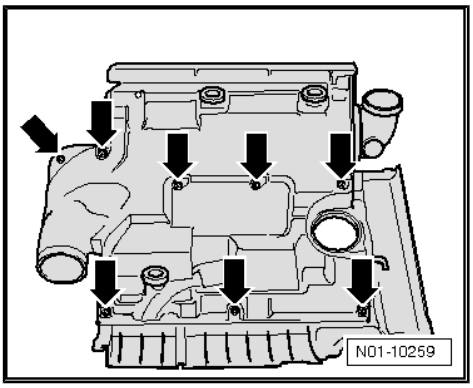
– Clean filter housing and install new filter element.
– Tighten bolt -1- of retainer to 2 Nm and bolts of cover to 3 Nm.



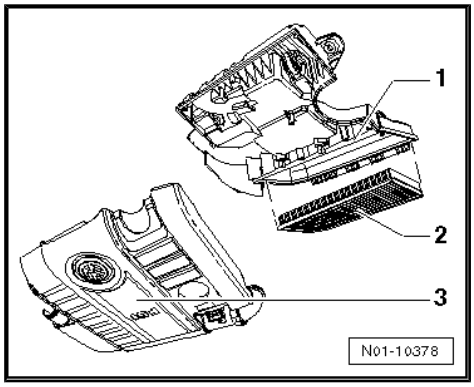
4.26.5 Removing and installing air filter element, 2.0 l TFSI engines

Removing

– Remove engine cover ⇒ page 105 .
– Place engine cover with upper side on a soft surface, prevent damage to chrome applications.
– Unscrew bolts -arrows- from engine cover lower side.



– Separate air filter housing lower part -1- from air filter housing upper part -3-.
– Remove air filter element -2- from air filter housing lower part -1-.



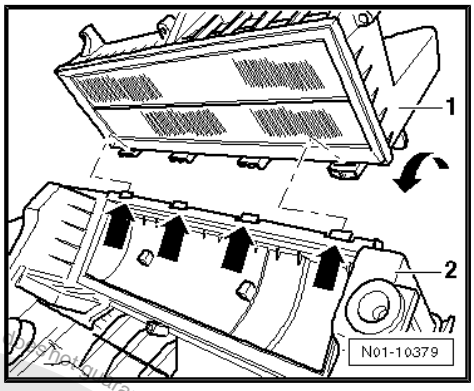
Installing

Note

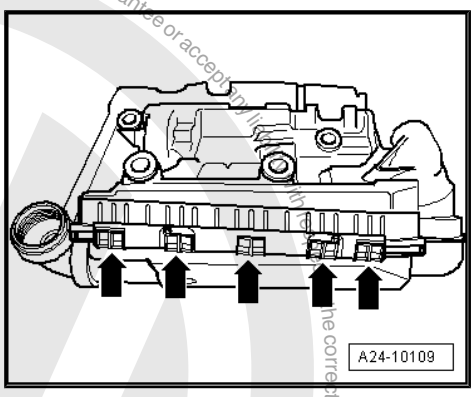
- *For attaching the air filter housing upper part onto air filter housing lower part and intake connection, self-tapping bolts must be used as standard. When loosening or tightening these bolts using a power screwdriver, the thread in air filter housing upper part could be damaged.*
- *For this reason it is only permitted to use a power screwdriver, if the following prerequisites are fulfilled:*
- *The speed of power screwdriver must be max. 200 rpm.*
- *Setting torque of max. 3 Nm must be adjustable.*

For the GTI Edition 30 the rubber buffers for engine cover must be renewed ⇒ page 77 .

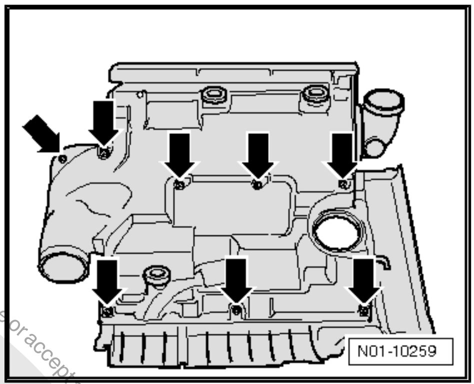
– Hook air filter housing lower part -1- on retaining lugs -arrows- of air filter housing upper part -2-, swing in direction of arrow and press on lightly.



– Both parts of housing must be flush -arrows-.

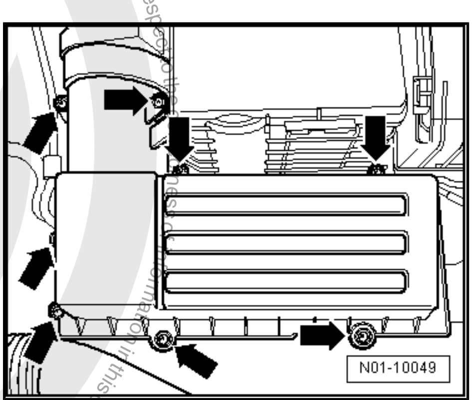


– Tighten bolts -arrows- to max. 3 Nm.

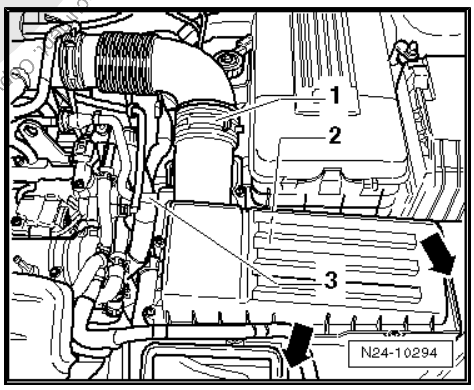


4.26.6 Removing and installing air filter element, 1.4 l TSI engines (103 kW, 118 kW, 125 kW), 2.0 l TSI engines.

– Remove bolts -arrows-.

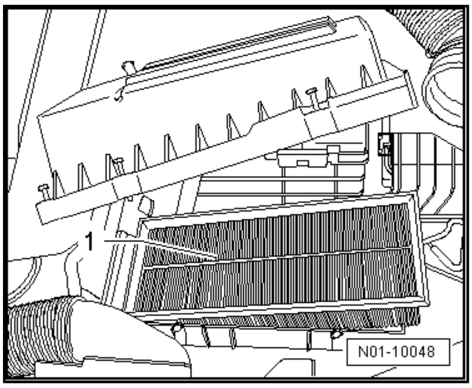


– Pull vacuum hose -3- off air filter housing.



> ⚠ **Caution**
>
> *To prevent damage to the connection and to vacuum hose, do not use sharp-edged tools when pulling hose off.*

– Remove air filter housing upper part and air filter element -1-.



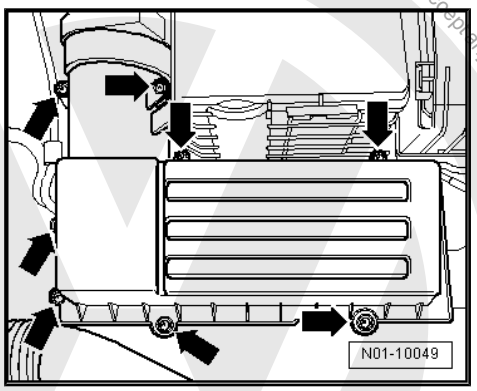
Note

Observe disposal regulations!

– Clean air filter housing lower part.

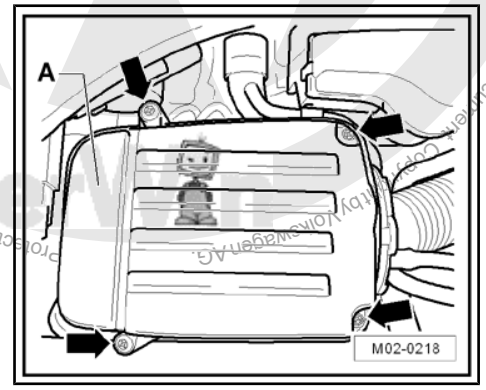
– Insert new air filter element and fit air filter housing upper part.

– Tighten air filter housing upper part with bolts -arrows- to 9 Nm.

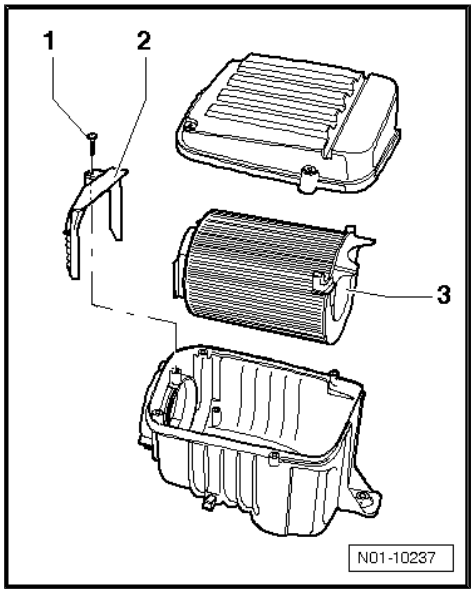


4.26.7 Removing and installing air filter element, 1.4 l TSI engines (90 kW)

– Remove the 4 screws -arrows- and remove cover -A-.



– Pull off retainer -2-.
– Take out used filter element -3-.



Note

Observe disposal regulations!

– Clean filter housing and install new filter element.
– Tighten bolt -1- of retainer to 2 Nm and bolts of cover to 3 Nm.

4.27 Memory seat: Perform initialisation

All memories and settings will be cleared during the initialisation process. The memory buttons can then be reprogrammed and resynchronised with a remote control key.

– Open driver door.
– Move the backrest as far forward as it will go.
– When the backrest is fully moved forwards, release switch and operate again until a gong signal sounds after a few seconds.

4.28 Engine and components in engine compartment (from above and below): Perform visual check for leaks and damage

Perform visual check as follows:

– Check engine and components in engine compartment for leaks and damage.

– Check lines, hoses and connections of

- Fuel system
- Cooling and heating system
- And brake system

for leaks, abrasions, porosity and brittleness.

Note

- *Arrange for defects to be rectified as repair measures.*
- *If fluid loss is greater than can be expected through normal use, determine source and rectify (repair measure).*

4.29 Engine cover -top-: Removing and installing

Caution

- ***Do not push with the fist or a tool on the engine cover when it is installed or engaged at securing points, it could be damaged.***

Removing and installing engine cover, 1.4 l petrol injection engines ⇒ page 106 .

Removing and installing engine cover, 1.4 l TSI engines (90 kW) ⇒ page 106 .

Removing and installing engine cover, 1.4 l TSI engines (103 kW, 125 kW) ⇒ page 107 .

Removing and installing engine cover, 1.4 l TSI engines (118 kW) ⇒ page 108 .

Removing and installing engine cover, 1.6 l FSI engines ⇒ page 108 .

Removing and installing engine cover, 1.8 l TSI and 2.0 l TSI petrol direct injection engines ⇒ page 109 .

Removing and installing engine cover, 2.0 l TFSI engines ⇒ page 110 .

Removing and installing engine cover, 2.0l FSI engines ⇒ page 110 .

Removing and installing engine cover, 1.6 l petrol injection engines ⇒ page 110 .

Removing and installing engine cover, 2.5l petrol injection engines ⇒ page 111 .

Removing and installing engine cover, 1.9 l PD diesel engines ⇒ page 113 .

Removing and installing engine cover, 2.0 l 103 KW PD diesel engines ⇒ page 114 .

Removing and installing engine cover, 2.0 l 125 KW PD diesel engines ⇒ page 115 .

Removing and installing engine cover, 2.0 l CR diesel engines ⇒ page 114 .

4.29.1 Removing and installing engine cover, 1.4 l petrol injection engines

- There are two different versions of engine covers:
- ♦ Engine cover version 1: air filter housing integrated in engine cover ⇒ page 106
- ♦ Engine cover version 2: engine cover on engine ⇒ page 106

Engine cover version 1

Removing:

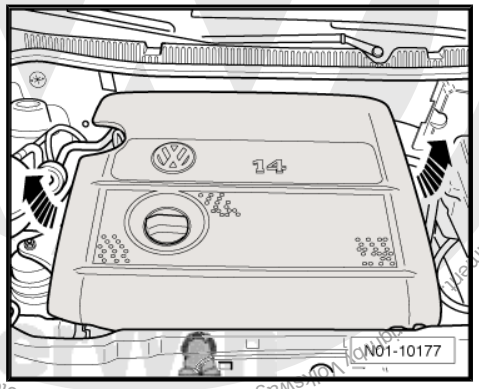
– Pull hose off oil separator or non-return valve off air filter housing upper part.

– Disengage engine cover -arrows-, pull cover off throttle valve control part and take out upwards.

Installing:

– Fit engine cover on throttle valve control part at securing points and press on, so that it engages.

– Connect hose of oil separator or non return valve of air filter housing upper part.



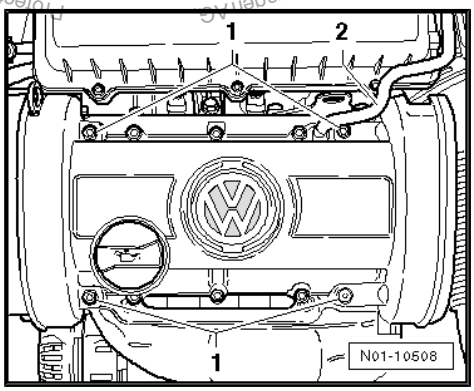
Engine cover version 2

– Carefully pull off hose -2-.

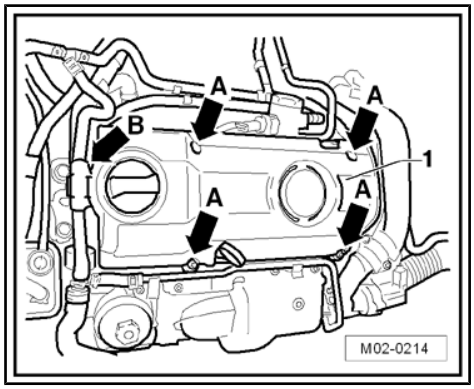
– Unscrew the four bolts -1- and remove cover.

– Install in reverse order.

Bolt torque setting 10 Nm



4.29.2 Removing and installing engine cover, 1.4 l TSI engines (90 kW)



Removing:

– Pull hose out of bracket -arrow B-.

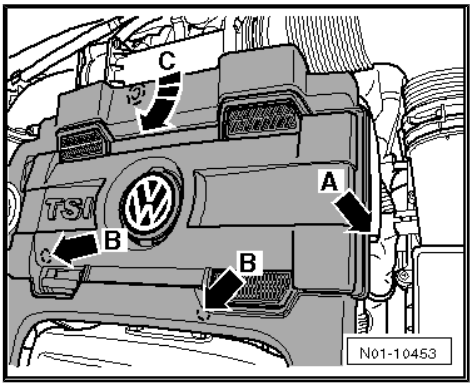
– Unscrew engine cover -1- at securing points -arrows A- and remove.

Installing:

– Install engine cover and tighten bolts -arrows- to 10 Nm.

– Insert hose in bracket -arrow B-.

4.29.3 Removing and installing engine cover, 1.4 l TSI engines



Removing:

Caution

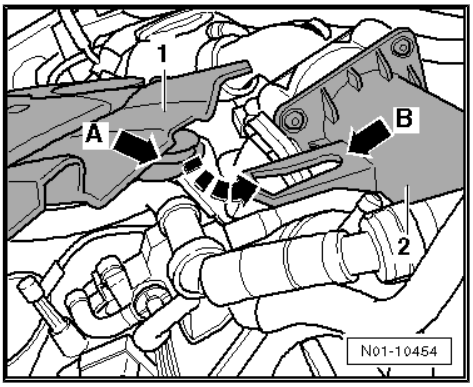
To prevent damage to the connection and to vacuum hose, do not use sharp-edged tools when pulling hose off.

– Pull hose off connection -arrow A -.

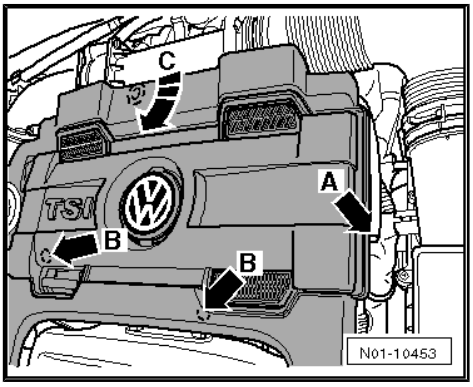
– Disengage engine cover at securing points -arrows B- and raise.

– Then pull out of bracket -arrow C-.

Installing:



– Push engine cover -1- with lug -arrow A- at securing point -2- into bracket -arrow B-.



– Then fit engine cover at the other securing points -arrows B- and press on, until they noticeably engage.

– Fit hose on connection -arrow A -.

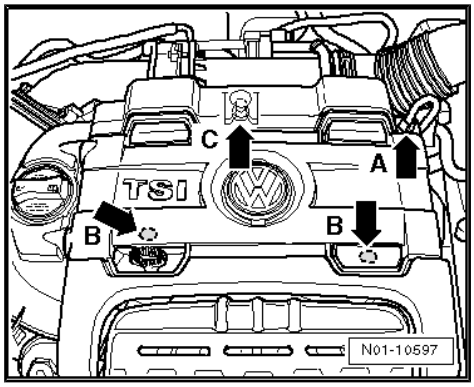
4.29.4 Removing and installing engine cover, 1.4 l TSI engines (118 kW)

Removing:

– Pull off hose -A-.

– Disengage engine cover securing points-B-.

– Pull engine cover out of guide -C-.

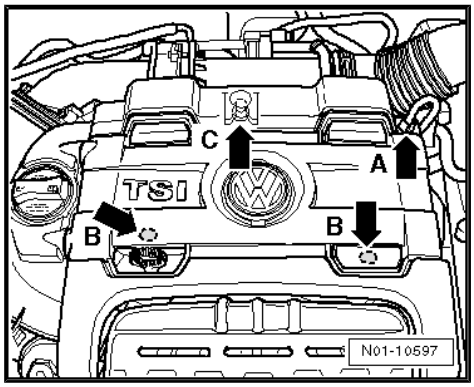


Installing:

– Push engine cover into guide -C-

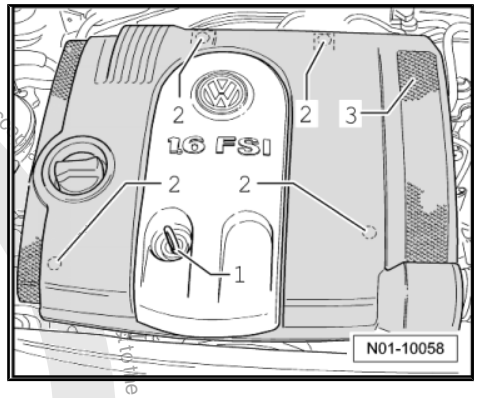
– Engage engine cover at securing points-B-.

– Connect hose -A- onto engine cover.



4.29.5 Removing and installing engine cover, 1.6 l FSI engines

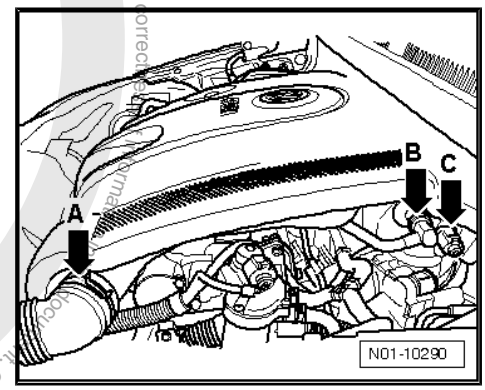
Removing:



– Pull out oil dip stick -1-.

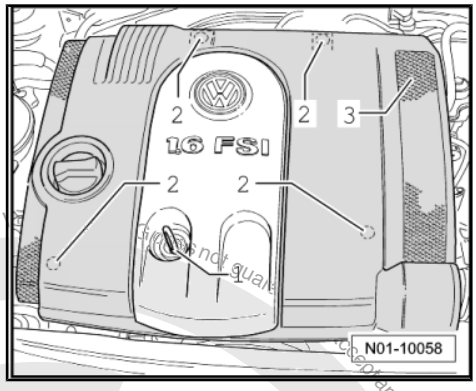
– Pull off connector -C- and hose connection -B-.

– Loosen clip -A- and pull off hose.

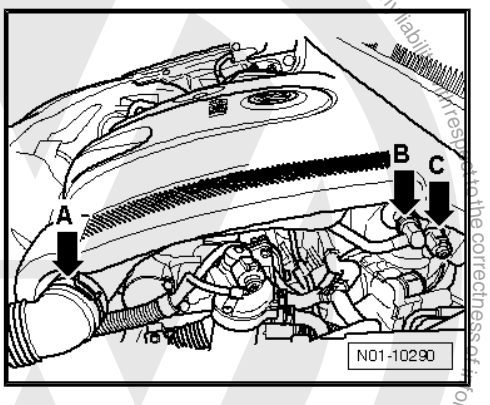


– Disengage engine cover at the securing points -2- and remove upwards.

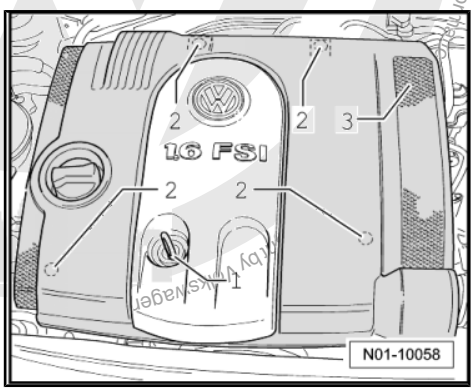
Installing:



– Fit engine cover at securing points -2- and press on, so that it engages.
– Fit connector -C- and hose connection -B-.



– Connect hose and tighten clip -A-.
– Slide oil dipstick -1- into guide tube.



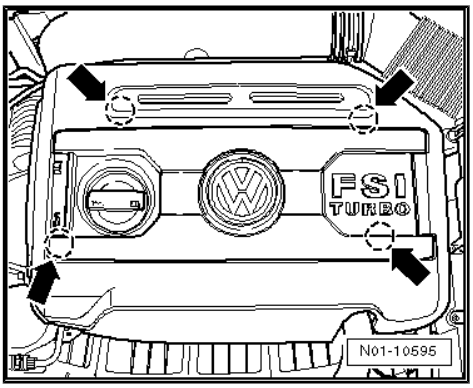
4.29.6 Removing and installing engine cover, 1.8 l TSI and 2.0 l TSI petrol direct injection engines

Removing:

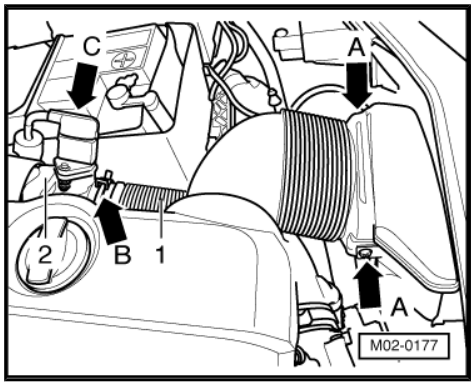
– Disengage engine cover at the securing points -arrows- and remove upwards.

Installing:

– Fit engine cover at securing points -arrows- and press on until it engages.



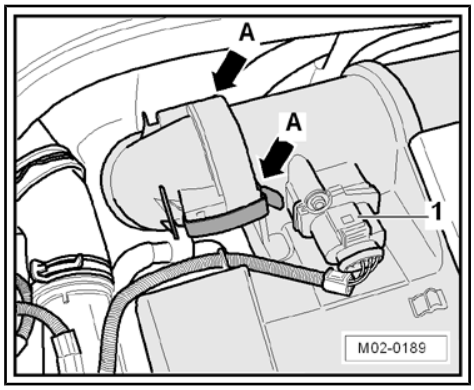
4.29.7 Removing and installing engine cover, 2.0 l TFSI engines



Removing

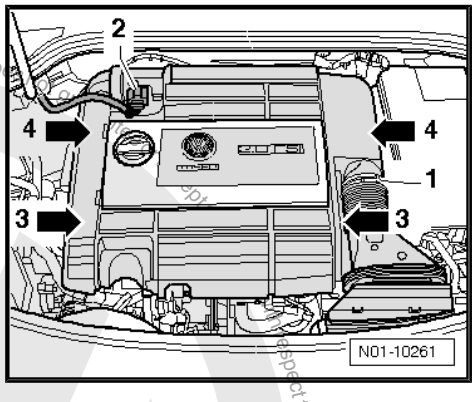
– Remove bolts of air intake system -arrows A-.

– Pull connector -1- off air mass meter, and place connector to side.



– Disengage the two securing clips -arrows A-.

– Disengage and lift engine cover first -arrows 3-, then -arrows 4-.



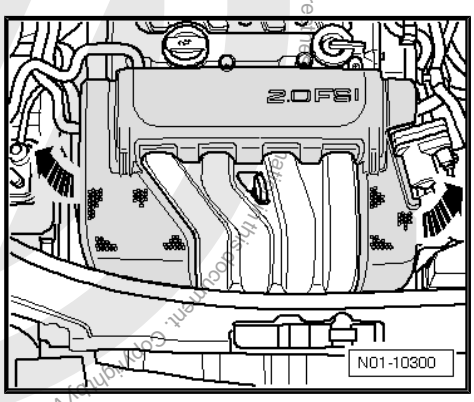
Installing

Install in reverse order.

4.29.8 Removing and installing engine cover, 2.0l FSI engines

Removing:

– Unclip engine cover at securing points -arrows- and remove upwards.



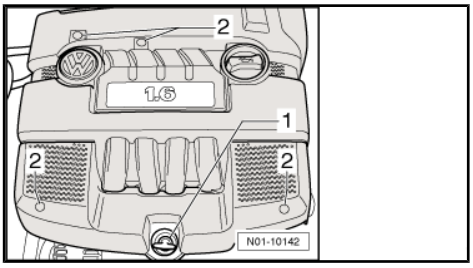
Installing:

Install in reverse order.

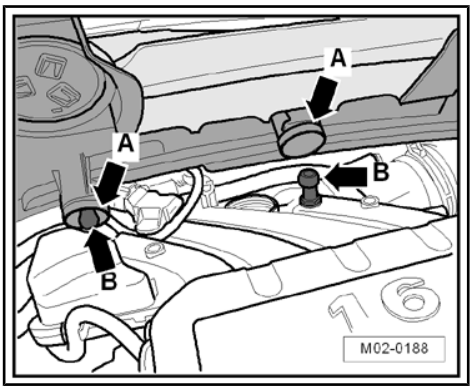
4.29.9 Removing and installing engine cover, 1.6 l petrol injection engines

Removing:

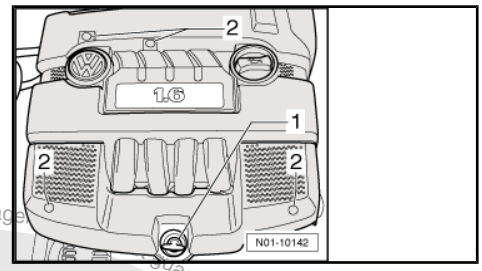
– Pull out dipstick -1-.
– Unclip engine cover at the securing points -2- and remove upwards.



Installing:



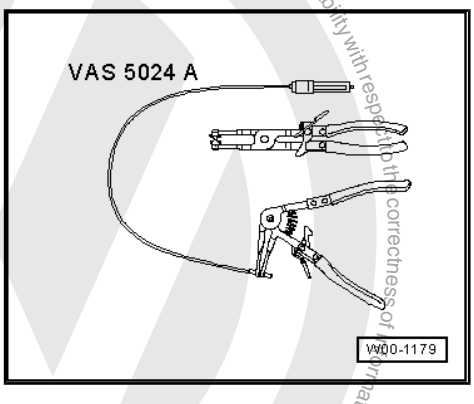
– Fit engine cover -arrows A- to securing pins -arrows B- first.
– Then fit to other securing points -2- and press on, so that it noticeably engages.



4.29.10 Removing and installing engine cover: 2.5 l petrol injection engines

Special tools and workshop equipment required

♦ Spring-type clip pliers -VAS 5024A-

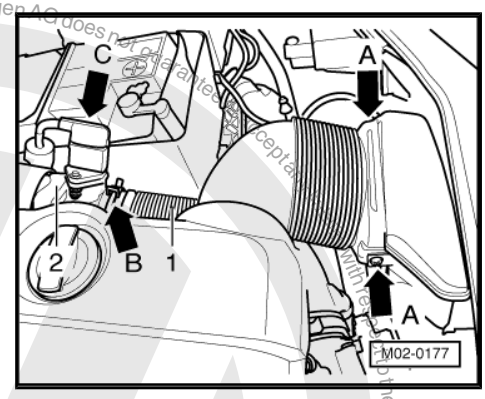


Removing

– Remove bolts of air intake system -arrows A-.

– Relieve clips on air mass meter -arrow B- using spring-type clip pliers -VAS 5024A- and push them back.

– Separate air intake hose -1- on air mass meter -2-.



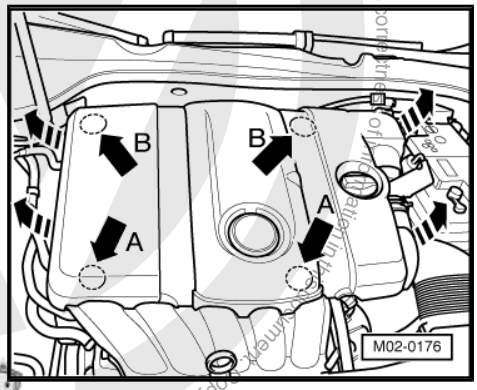
– Pull connector -C- off air mass meter, and place connector to side.

– First disengage engine cover at securing points -arrows A- and carefully remove from fastenings.

– Slightly raise engine cover at front.

– Then disengage engine cover at securing points -arrows B- and carefully remove from fastenings.

– Carefully remove engine cover upwards -movement arrows-.



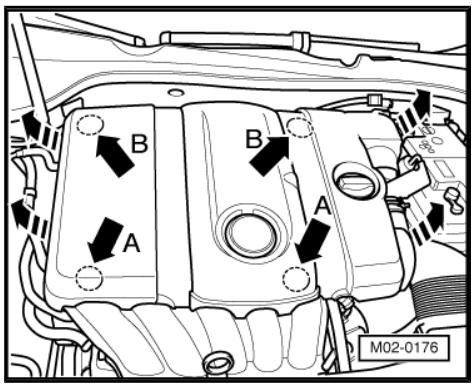
Note

Ensure that the air mass meter is not damaged when removing the engine cover.

Installing

– First fit engine cover onto rear securing points -arrows B-, then onto front securing points -arrows A-.

Carefully press on securing points by hand until the engine cover noticeably engages.



Note

- *Ensure that the air mass meter is not damaged when fitting the engine cover.*
- *The remaining assembly steps are basically a reverse of the dismantling procedure.*

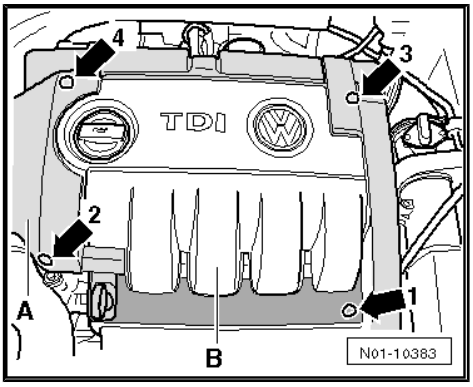
4.29.11 Removing and installing engine cover, 1.9l PD diesel engines

Removing:

Note

The engine cover consists of two individual parts.

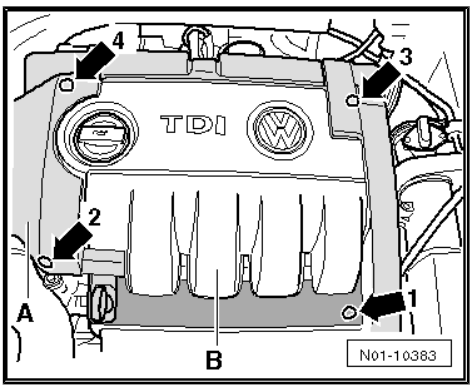
- 1. The outer part, shaded in the illustration
- 2. The centre part, not shaded in the illustration



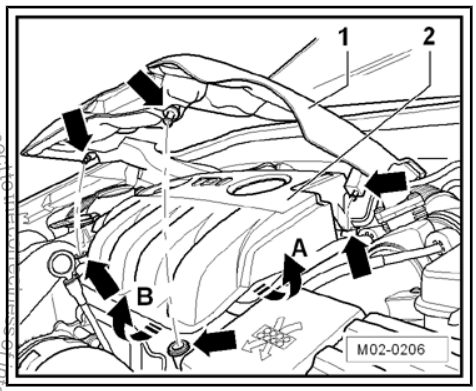
– Disengage engine cover carefully at individual securing points and raise as follows.

- -1-, -3-, -2-, -4-.

– Remove outer part -1-.

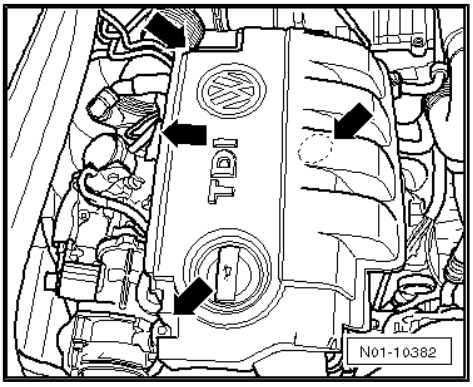


– Disengage centre part -2- also carefully and remove.

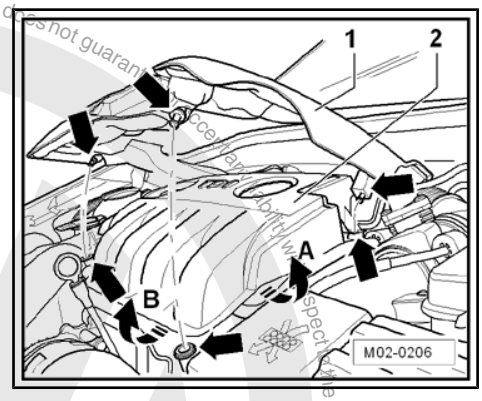


Installing:

– Fit engine cover onto securing points -arrows- and press on.



– Then fit outer part -1- onto securing points -arrows- and press on.

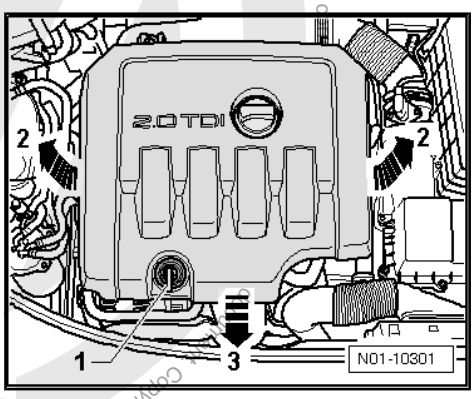


4.29.12 Removing and installing engine cover, 2.0 l 103 KW PD diesel engines

Removing:

– Pull out oil dip stick -1-.

– Disengage engine cover -arrow 2- and lift.

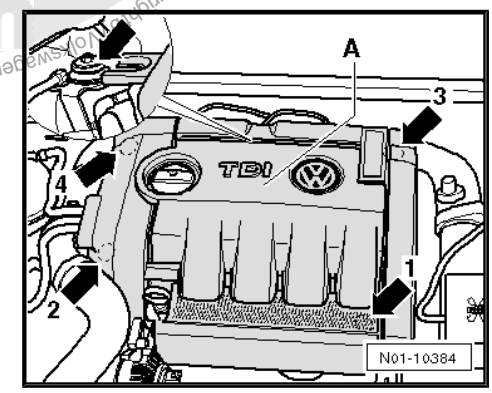


– Then pull off forwards -upper arrow in illustration-.

Installing:

– First fit engine cover -A- at securing point -upper arrow in illustration-.

– Then fit engine cover -A- at the other securing points -arrows 1 to 4- and press on, until it noticeably engages.



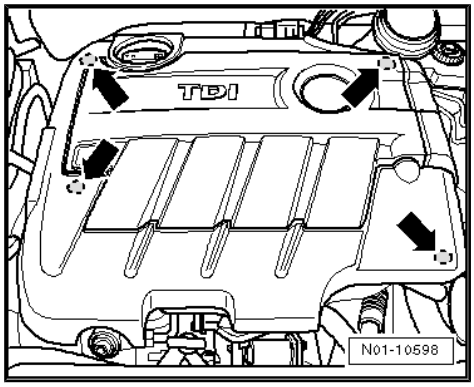
4.29.13 Removing and installing engine cover, 2.0 l CR diesel engines

Removing:

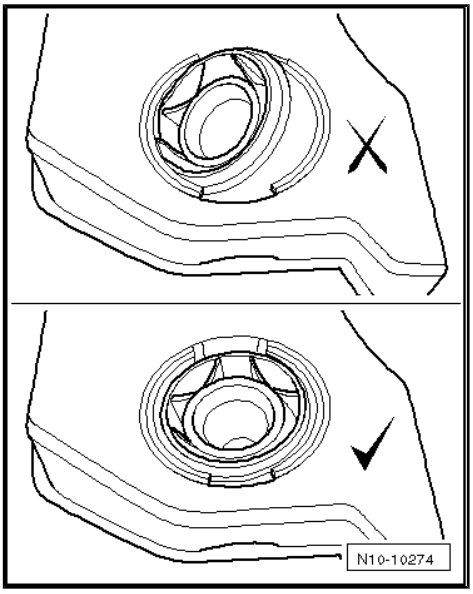
– Disengage engine cover at securing points -arrow- and raise.

Installing:

> **Caution**
>
> ***Before installing engine cover, check the correct position of the 4 securing elements (ball sockets); if necessary reset to original positions. Otherwise the engine cover will be damaged.***



– Push ball sockets of engine cover to correct installation position, if necessary.
– Fit engine cover onto securing points and press on at edges to engage.



4.29.14 Removing and installing engine cover, 2.0 l 125 KW PD diesel engines

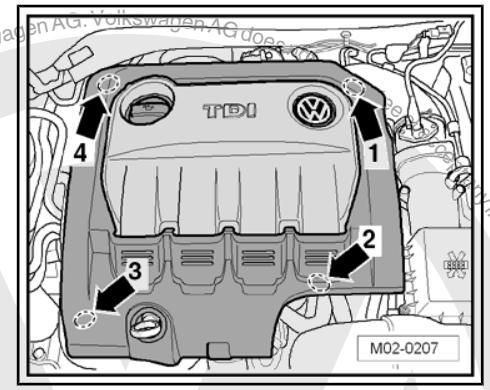
Removing:

Note

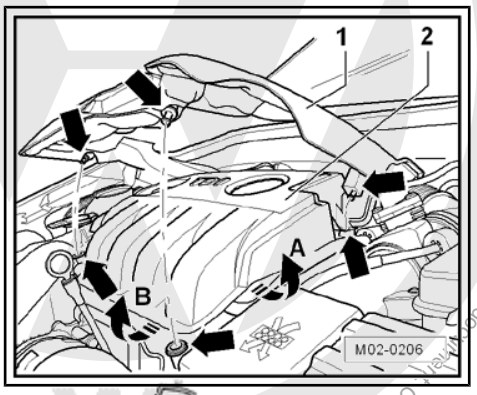
The engine cover consists of two individual parts.

- 1. The outer part, darker shading in the illustration
- 2. The centre part, lighter shading in the illustration

– Disengage engine cover carefully at individual securing points and raise as follows.

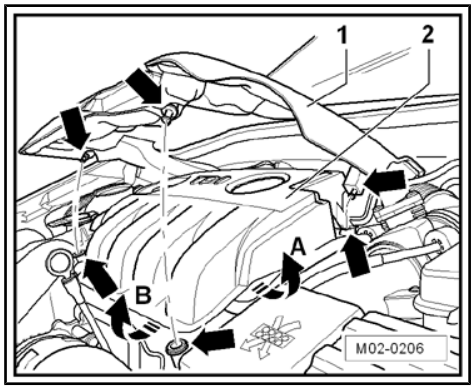


– Remove outer part -1-.
– Disengage centre part -2- also carefully and remove.



Installing:

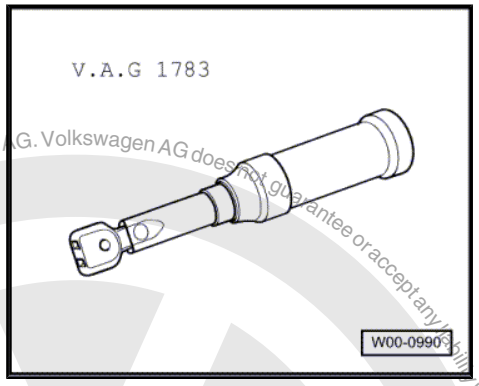
– First fit centre part -2- onto securing points and press on.
– Then fit outer part -1- onto securing points -arrows- and press on.



4.30 Removing and installing engine compartment cover -bottom- (noise insulation)

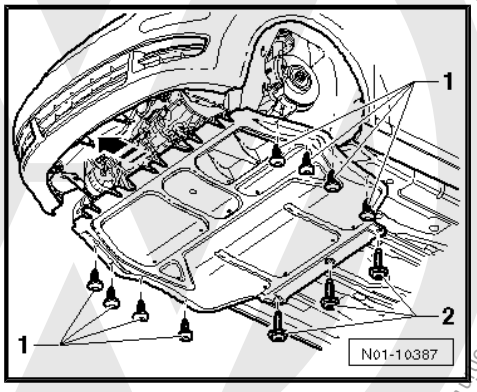
Special tools and workshop equipment required

♦ Torque wrench -V.A.G 1783-



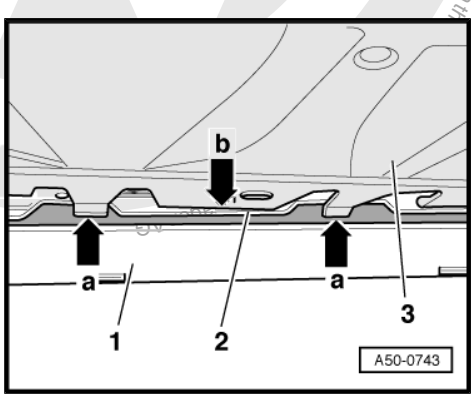
Removing

1 - Panel bolts, Qty. 8, torque setting 2 Nm.
2 - Combi-bolts, Qty. 3, torque setting 6 Nm.
– Remove bolts -arrows-.
– Remove noise insulation.



Installing

– Push noise insulation -3- into lock carrier -2- at bottom as shown.
– The smaller lugs -arrow a- must be pushed in underneath and the wider lugs -arrow b- must be pushed in over the edge of lock carrier -2-.
– The retaining lugs on wider lugs must engage in holes of lock carrier.
– Tighten bolts -arrows- to the correct torque setting.



4.31 Engine oil level: Check

Please note the following:

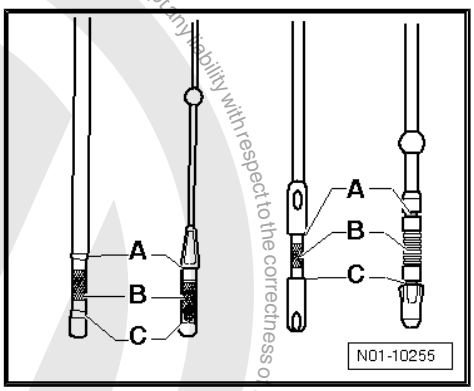
– After shutting off engine, wait at least 3 minutes so that the oil can flow back into the sump.

– Pull out dipstick and clean with a clean cloth and then push dipstick in again onto stop.

Note

Observe disposal regulations!

– Pull dipstick out again and read oil level.



For dipstick as illustrated:

A - Oil must not be replenished.

B - Oil may be replenished. It may happen that the oil level afterwards is in the -A- region.

C - Oil must be replenished. It is sufficient if the oil level is in the -B- region (hatched area) afterwards.

There is a danger of damaging the catalytic converter if the oil level is above the -A- marking.

– If oil level is below -C- marking, replenish oil to -A- marking. Oil specification ⇒ page 48 .

4.32 Engine oil: Drain or extract; renew oil filter and replenish engine oil

Engine oil capacities, “Power unit” ⇒ Rep. Gr. 17 “Engine oil” or in “Maintenance table”.

Engine oil: Drain or extract and replenish ⇒ page 117 .

Renew oil filter ⇒ page 118 .

Engine oil: Replenish ⇒ page 133

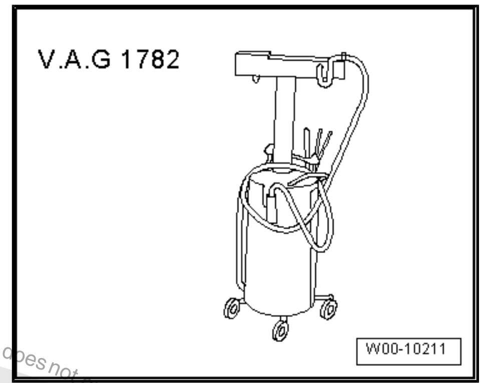
4.32.1 Draining or extracting engine oil

Caution

- *For engines with standing oil filter the oil filter must be renewed before changing the engine oil ⇒ page 121 , ⇒ page 130 . When removing the filter element a valve is opened, the oil in the filter housing automatically flows into crankcase.*
- *The oil drain plug is fitted with a secure seal, therefore the oil drain plug must always be renewed.*

Special tools and workshop equipment required

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



♦ Oil spill cloth -VAS 6204/1-

Draining or extracting engine oil

Carry out the following procedure:

– Extract engine oil using used oil collection and extraction unit -V.A.G 1782- .

Or

– Remove oil drain plug.

– Let engine oil drain.

– Screw in new oil drain plug with seal hand-tight.

– Replenish engine oil. Specification ⇒ page 6 .

Engine oil capacity: “Power unit” ⇒ Rep. Gr. 17 “Engine oil” or in “Maintenance table”.

Specified torques for oil drain plug:

♦ Petrol engines: 30 Nm

♦ Diesel engines: 30 Nm

> ⚠ WARNING
>
> ♦ *Torque specifications must not be exceeded.*
>
> ♦ *Excessive torque can cause leaks in the area of the oil drain plug or even damage.*

4.32.2 Renewing oil filter

Renewing oil filter, 1.4 l petrol injection engines ⇒ page 119 .

Renewing oil filter, 1.4 l TSI engines (90 kW) ⇒ page 119 .

Renewing oil filter, 1.4 l TSI engines (103 kW, 125 kW) ⇒ page 121 .

Renewing oil filter, 1.4 l TSI engines (118 kW) ⇒ page 122 .

Renewing oil filter, 1.6 l injection engines ⇒ page 123 .

Renewing oil filter, 2.0 l FSI and TFSI engines ⇒ page 127 .

Renewing oil filter, 1.6 l FSI engines ⇒ page 124 .

Renewing oil filter, 2.0 l TSI engines ⇒ page 125 .

Renewing oil filter, 2.5 l petrol injection engines ⇒ page 127 .

Renewing oil filter, PD diesel engines ⇒ page 130 .

Renewing oil filter, CR diesel engines ⇒ page 132 .

4.32.3 Renewing oil filter, 1.4 l petrol injection engines

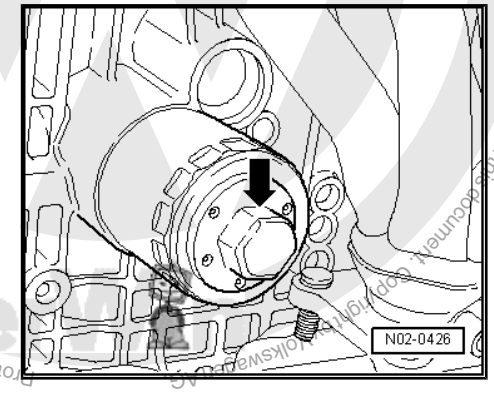
Removing

Note

- *Observe disposal regulations!*
- *Oil new O-rings before installing.*
- *Prevent engine oil from dripping onto components in engine compartment.*

– Loosen oil filter -arrow- e.g. using combination spanner, AF 30 -VAS 5399- or ring spanner, 30x32mm -VAS 5410- and remove oil filter.

– Clean engine sealing surface.

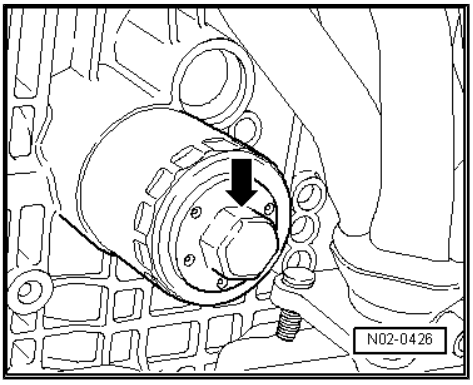


Installing

– Oil rubber seal lightly on new filter.

– Screw in filter and tighten hand-tight.

The remaining assembly steps are basically a reverse of the dismantling procedure.



4.32.4 Renewing oil filter, 1.4 l TSI engines (90 kW)

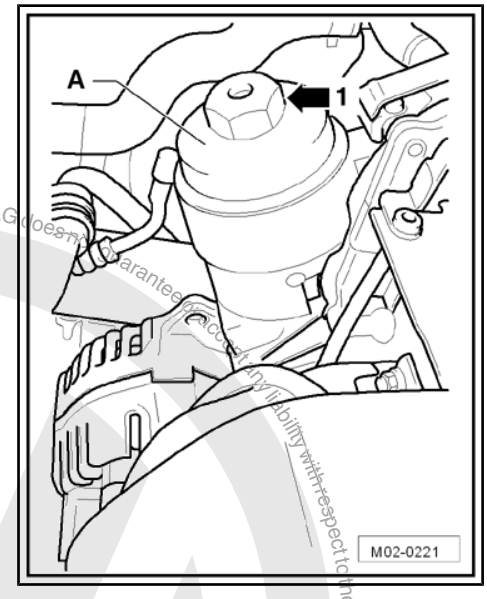
Note

- *Observe disposal regulations!*
- *Oil new O-rings before installing.*
- *Prevent engine oil from dripping onto vehicle parts.*

Removing

Remove engine cover ⇒ page 105 .

– Unscrew oil filter cover -A- from hexagon -arrow- using e.g.socket insert 36 mm.



– Remove oil filter cover -1- with oil filter element -4- and valve -5-.

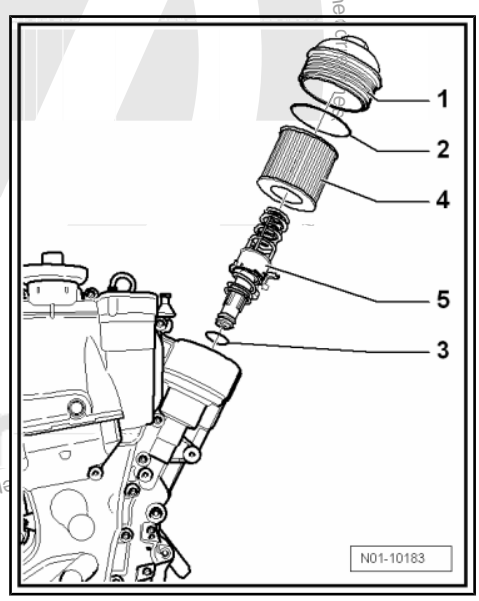
Installing

– Renew O-ring -2- of oil filter cover and O-ring -3- of valve.

– Renew used oil filter element by new filter element -4-.

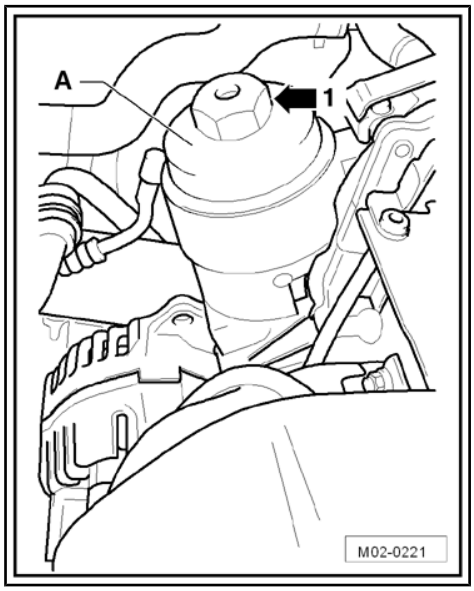
Note

Observe disposal regulations!



– Tighten oil filter cover -A- to 25 Nm.

The remaining assembly steps are basically a reverse of the dismantling procedure.



4.32.5 Renewing oil filter, 1.4 l TSI engines (103 kW, 125 kW)

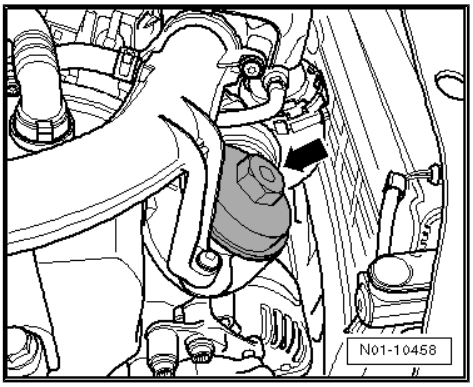
Note

- *Observe disposal regulations!*
- *Oil new O-rings before installing.*
- *Prevent engine oil from dripping onto vehicle parts.*

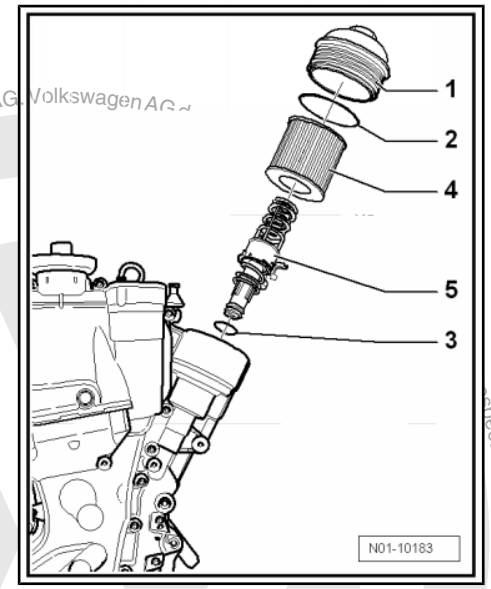
Removing

Remove engine cover ⇒ page 105 .

– Unscrew oil filter cover -arrow- using e.g.socket insert 36 mm.



– Remove oil filter cover -1- with oil filter element -4- and valve -5-.



Installing

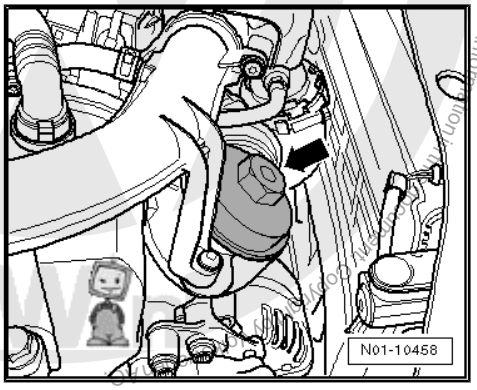
– Renew O-ring -2- of oil filter cover and O-ring -3- of valve.

– Renew used oil filter element by new filter element -4-.

Note

Observe disposal regulations!

– Tighten oil filter cover -arrow- to 25 Nm.

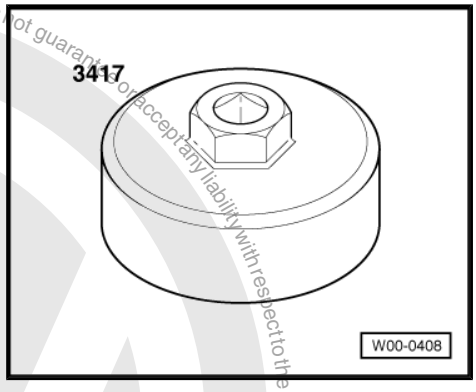


The remaining assembly steps are basically a reverse of the dismantling procedure.

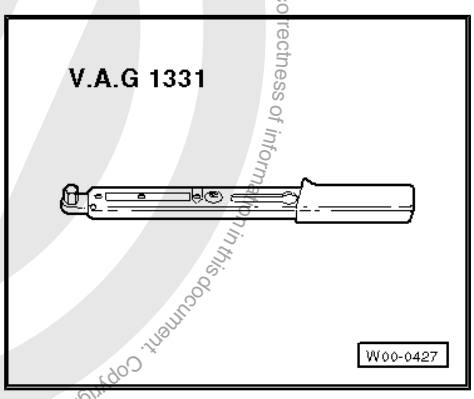
4.32.6 Renewing oil filter, 1.4 l TSI engines (118 kW)

Special tools and workshop equipment required

- Oil filter tool -VAS 3417-



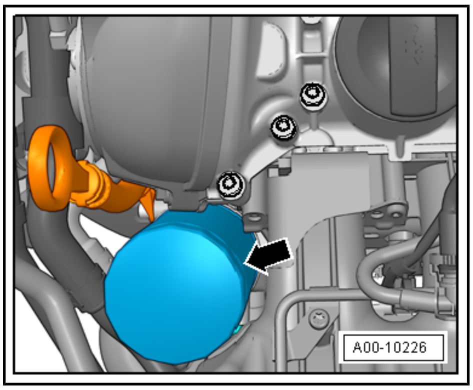
- Torque wrench -V.A.G 1331-



Removing

Note

- *Prevent engine oil from dripping onto vehicle parts.*
- *Cover alternator with cloth before removing.*



– Loosen oil filter -arrow- first, using a strap or oil filter tool -3417- before removing oil filter completely.

– Wait a minute, so that engine oil can flow back from filter into engine.

– Then remove oil filter.

> ⚠ Caution
>
> *Ensure that no engine oil drips onto poly V-belt or alternator.*

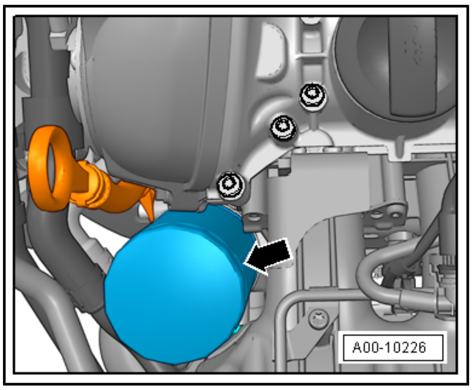
Installing

Note

- *Observe fitting instructions on oil filter*
- *Observe disposal regulations!*

– Clean oil filter sealing surface on control housing.

– Lightly oil seal on new filter.



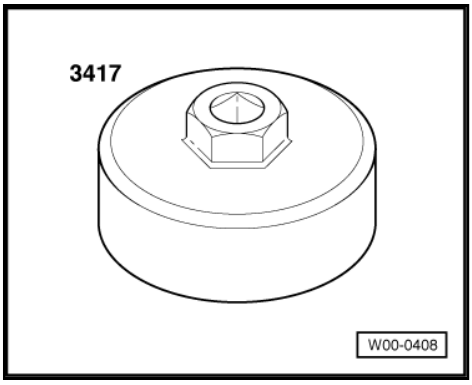
– Screw new oil filter -arrow- in by hand.

– Then tighten to 20 Nm.

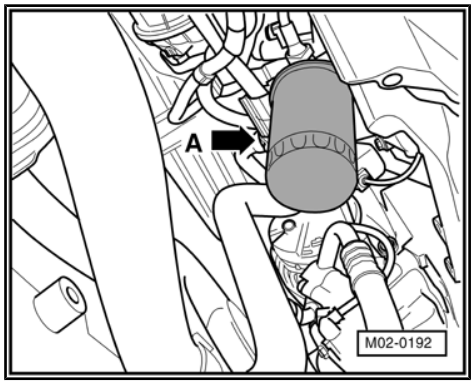
4.32.7 Renewing oil filter, 1.6 l petrol injection engines

Special tools and workshop equipment required

- Oil filter tool -VAS 3417-



– Loosen oil filter -arrow- from below using a strap or oil filter tool -3417-



Note

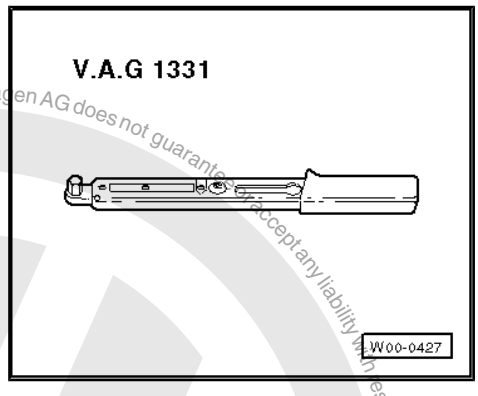
Observe disposal regulations!

– Clean oil cooler sealing surface.
– Oil rubber seal lightly on new filter. This ensures best possible sealing when the filter is tightened.
– Tighten filter by hand.

4.32.8 Renewing oil filter, 1.6 l FSI engines

Special tools and workshop equipment required

♦ Torque wrench -V.A.G 1331-



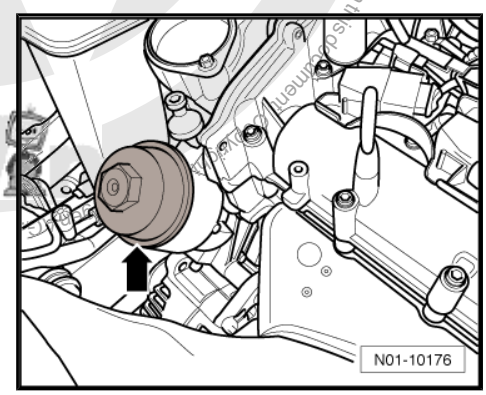
Note

♦ *Observe disposal regulations!*
♦ *Oil new O-rings before installing.*
♦ *Prevent engine oil from dripping onto subframe.*

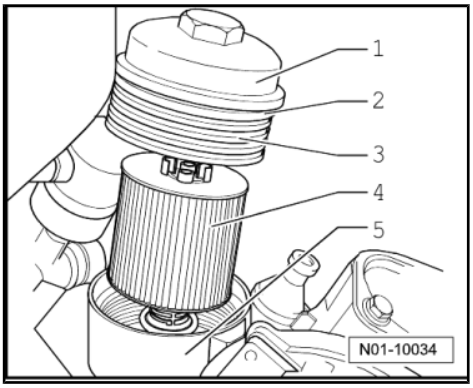
Removing

Remove engine cover ⇒ page 105 .

– Loosen threaded cap -arrow- on hexagonal flats and remove.

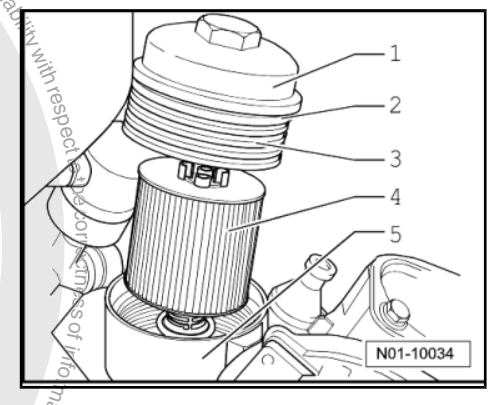


– Take oil filter -4- out of threaded cap -1-.
– Clean sealing surfaces on threaded cap and oil filter housing.



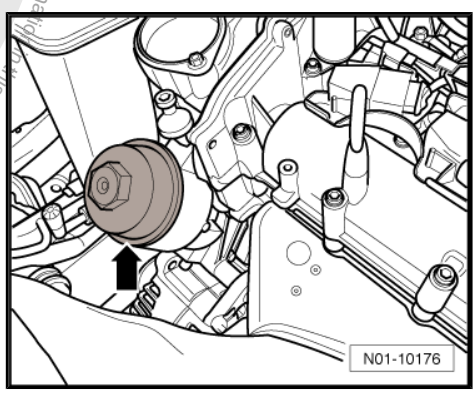
Installing

– Insert new filter element -4- into threaded cap.
– Renew sealing ring -2-.
– Lightly oil seal.
– Clean thread -3- and lightly moisten with oil.



– Tighten threaded cap -arrow- to 25 Nm.

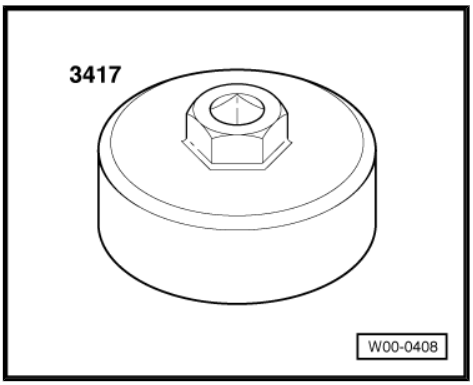
The remaining assembly steps are basically a reverse of the dismantling procedure.



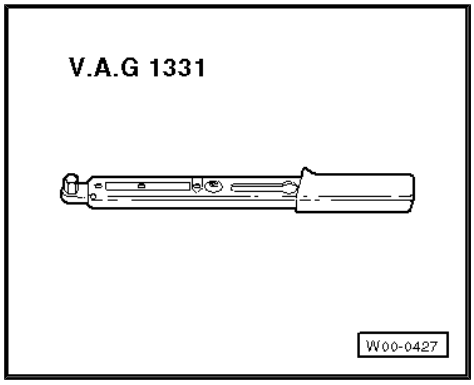
4.32.9 Renewing oil filter, 2.0 l TSI engines

Special tools and workshop equipment required

♦ Oil filter tool -VAS 3417-



- Torque wrench -V.A.G 1331-



Removing

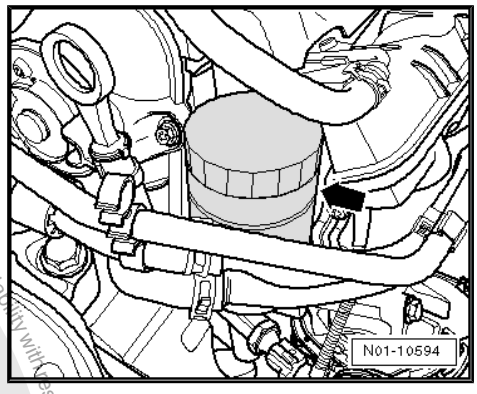
Note

- *Prevent engine oil from dripping onto vehicle parts.*
- *Cover alternator with cloth before removing.*

– Loosen oil filter -arrow- first, using a strap or oil filter tool -3417- before removing oil filter completely.

– Wait a minute, so that engine oil can flow back from filter into engine.

– Then remove oil filter.



Caution

Ensure that no engine oil drips onto poly V-belt or alternator.

Installing

Note

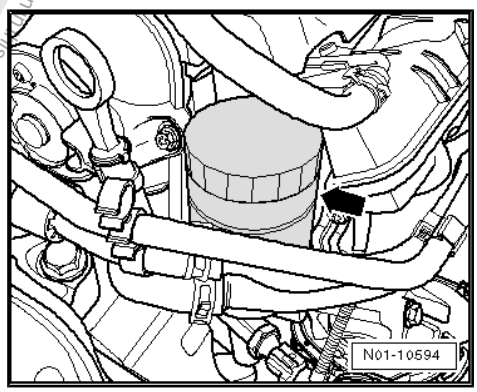
- *Observe fitting instructions on oil filter*
- *Observe disposal regulations!*

– Clean oil filter sealing surface on ancillary bracket.

– Lightly oil seal on new filter.

– Screw new oil filter -arrow- in by hand.

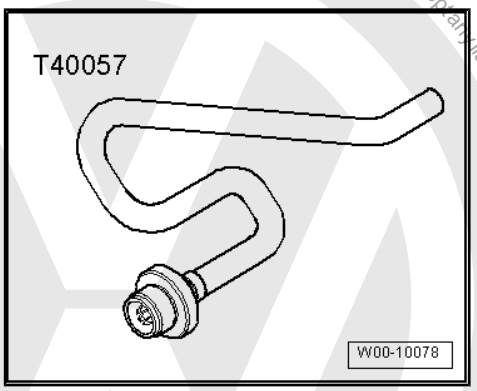
– Then tighten to 20 Nm.



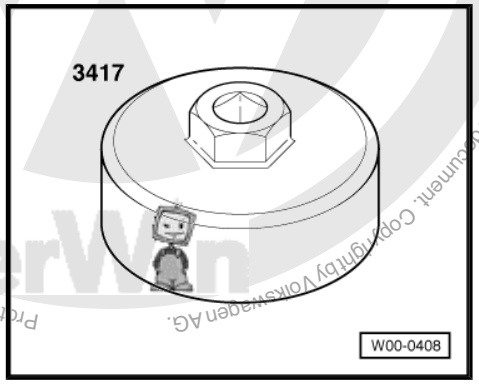
4.32.10 Renewing oil filter, 2.0 l FSI and TFSI engines, 2.5 l petrol injection engines

Special tools and workshop equipment required

- Oil drain adapter -T40057-



- Oil filter tool -VAS 3417-



- Torque wrench -V.A.G 1331/-
- Pointed pliers

Drain oil filter housing

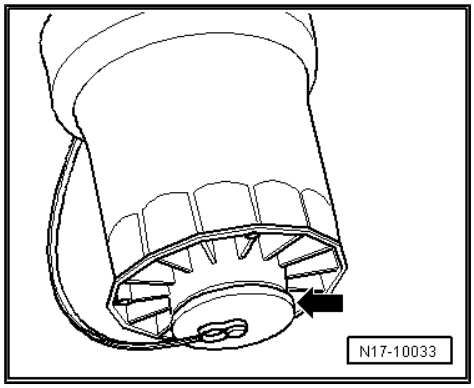
Caution

- ***Before removing the oil filter housing, it must be drained.***

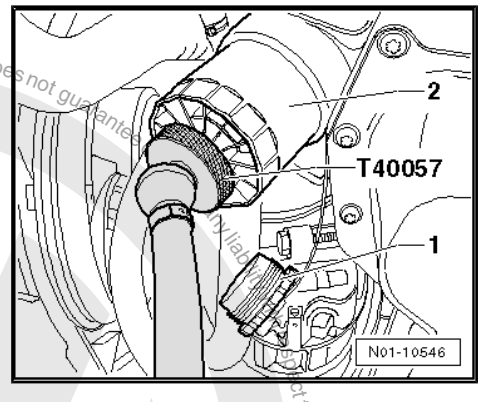
Note

- *When the oil drain adapter -T40057- is screwed in, a valve is opened in oil filter housing.*
- *When the oil drain adapter -T40057- is removed again, the valve closes automatically.*

– Remove dust cap -arrow- from oil filter housing.



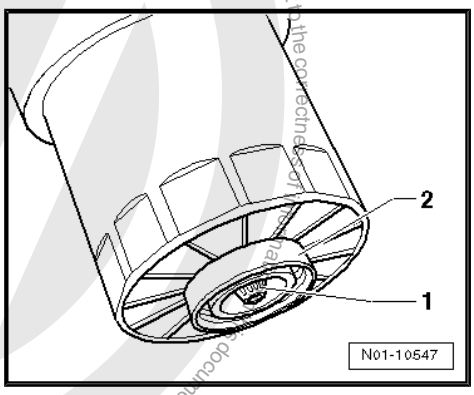
– Insert oil drain adapter -T40057- into oil filter housing and hold hose in oil drip tray.
– Drain engine oil.
– Unscrew oil drain adapter -T40057- again.



The drain valve -1- should be flush with oil filter housing lower part -2-.

Removing oil filter element

– Loosen oil filter housing using oil filter tool -VAS 3417- .
– Then unscrew by hand and remove together with oil filter element.



– Remove oil filter element -2- from centre pipe of oil filter housing -4-.

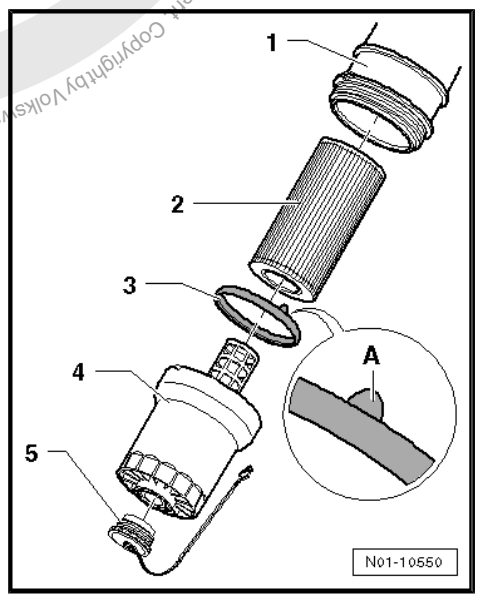
Removing seal

Caution

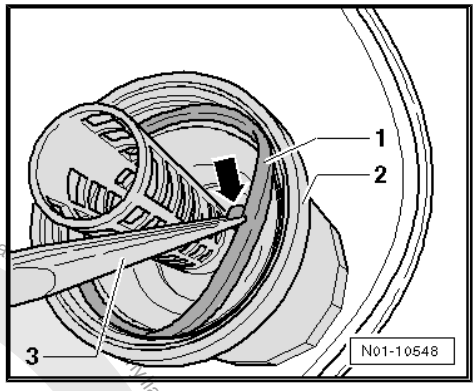
The seal of oil filter housing -3- must be renewed every time the oil filter element -2- is changed or the oil filter housing is loosened.

The seal is fitted with a so-called "service tag" -A-.

- *Using a suitable tool the seal can be pulled out of sealing groove at the "service tag" -A-.*



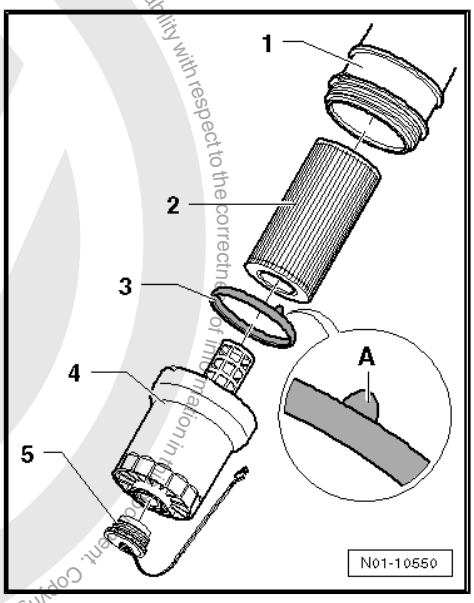
– Remove seal -1- from sealing groove of oil filter housing -2- by pulling seal out at the “service tag” -arrow-, using pointed pliers -3-.



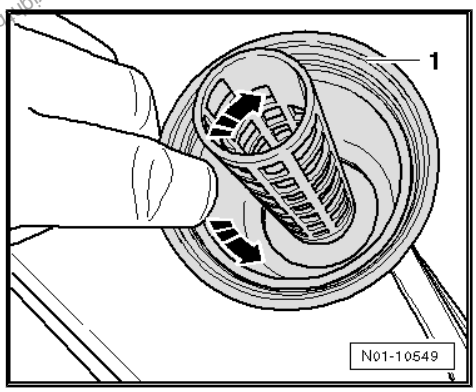
Installing seal

– Oil seal -3-.

– Place seal into sealing groove of oil filter housing, so that the service tag -A- faces upwards.



– Push seal into sealing groove and check by touching with finger, if the seal in sealing groove contacts evenly -arrows-.

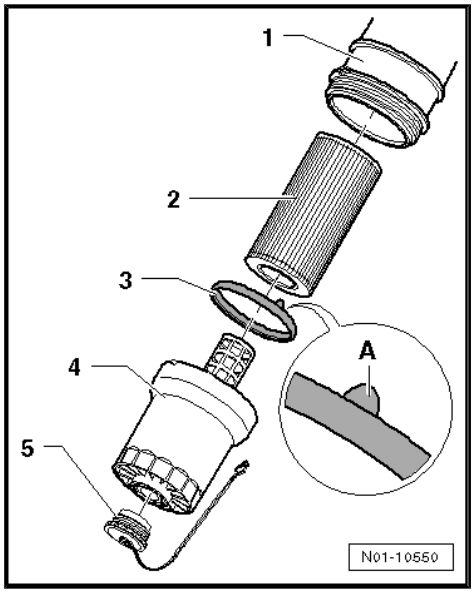


Installing oil filter element

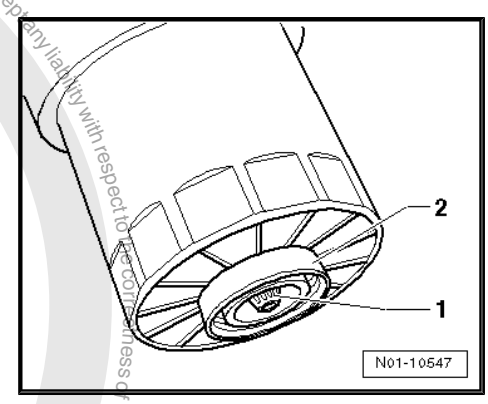
– Press new oil filter element -2- on centre pipe of oil filter housing -4- until limit stop.

Installing oil filter housing

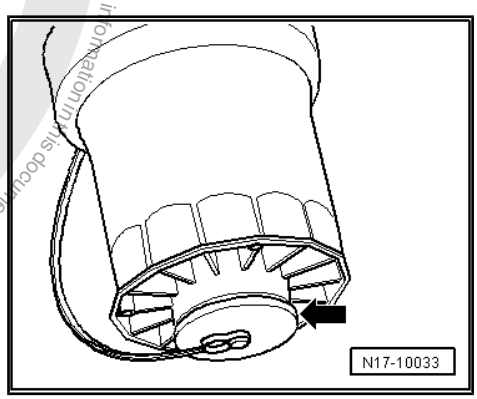
– Screw oil filter housing -4- with new seal -3- and new oil filter element -2- nearly onto stop of oil filter bracket -1- by hand.



– Tighten oil filter housing -2- to 25 Nm.



– Insert dust cap -arrow- into oil filter housing hand-tight.



4.32.11 Renewing oil filter, PD diesel engines

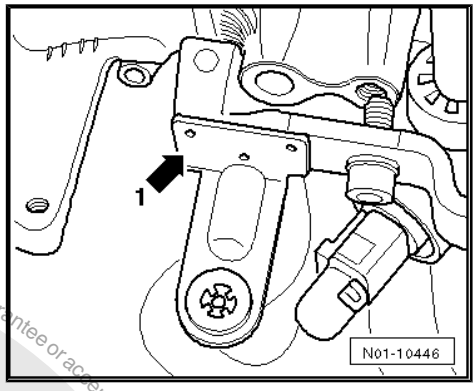
Removing

Note

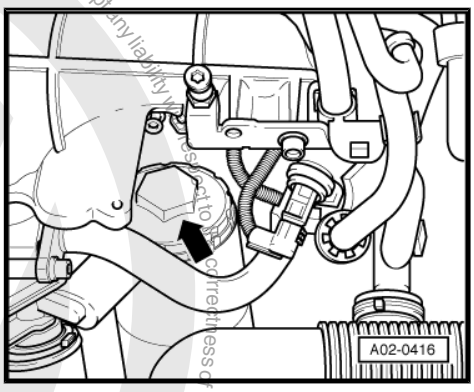
- *Observe disposal regulations!*
- *Oil new O-rings before installing.*

– Unscrew retainer from intake manifold -1-, if fitted.

– If necessary, unclip cable so that there is sufficient room to remove the oil filter cover.



– Remove threaded cover -arrow-.



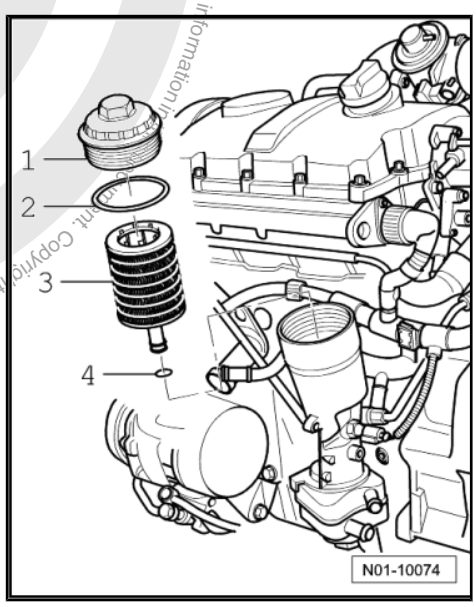
Note

Before draining or extracting release sealing cap, so that the engine oil can flow out of filter housing.

– Clean sealing surfaces on threaded cap and oil filter housing.

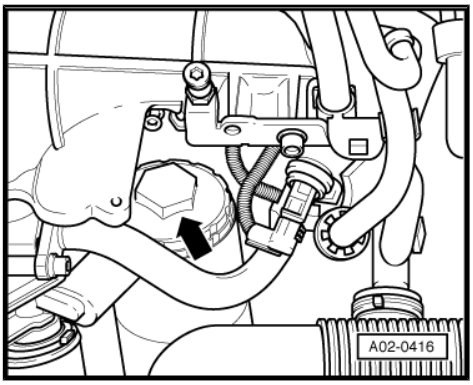
Installing

– Renew filter element -3-.
– Renew O-rings -2 and 4-.



– Install threaded cap -arrow- and tighten to 25 Nm.

The remaining assembly steps are basically a reverse of the dismantling procedure.



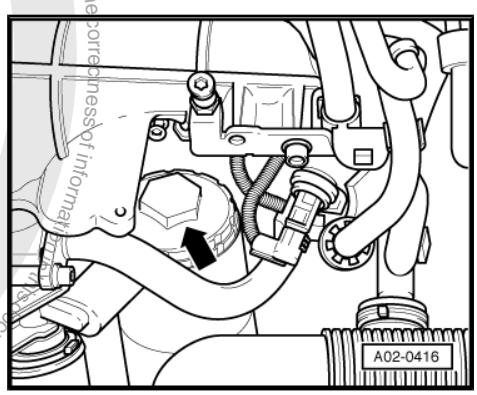
4.32.12 Renewing oil filter, CR diesel engines

Removing

Note

- *Observe disposal regulations!*
- *Oil new O-rings before installing.*

– Remove threaded cover -arrow-.



Note

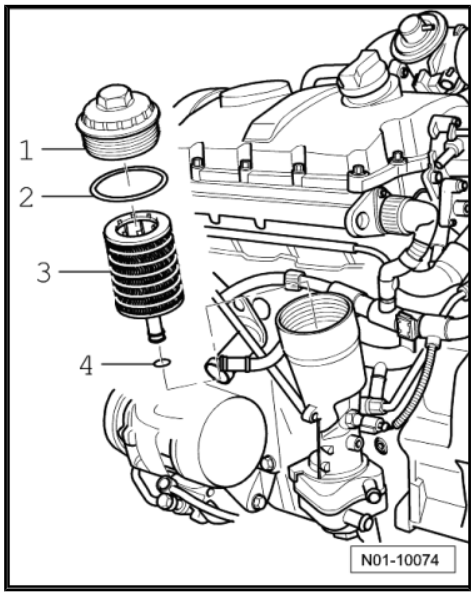
Before draining or extracting release threaded cap, so that the engine oil can flow out of filter housing.

– Clean sealing surfaces on threaded cap and oil filter housing.

Installing

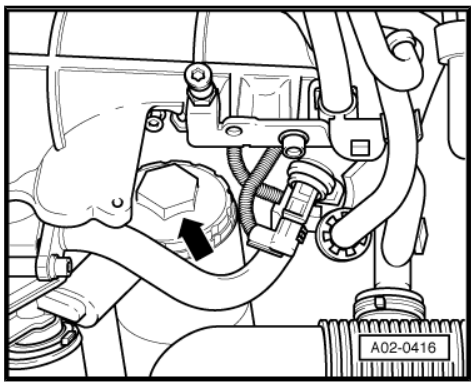
– Renew filter element -3-.

– Renew O-rings -2 and 4-.



– Install threaded cap -arrow- and tighten to 25 Nm.

The remaining assembly steps are basically a reverse of the dismantling procedure.



4.32.13 Replenishing engine oil

Oil specifications:

- Information on engine oils for North American and Canadian markets ⇒ page 48
- Information on engine oils for “Rest of World” markets can be found in the service tables ⇒ page 6 .

Engine oil capacity:

Engine oil capacity: ⇒ Power unit; Rep. Gr. 17 ; Lubrication; Oil capacities or “Maintenance tables” ⇒ Maintenance tables .

General notes

Note

Observe disposal regulations!

– After replenishing with oil, wait at least 3 minutes and then check oil level.
– Pull out dipstick, wipe with a clean cloth and push dipstick in again to limit stop.
– Pull dipstick out again and read oil level.

For dipstick as illustrated:

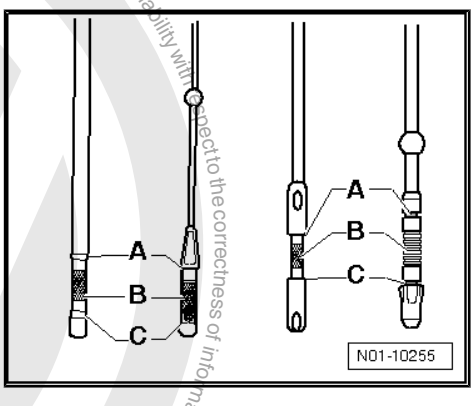
A - Oil must not be replenished.

B - Oil may be replenished. It may happen that the oil level afterwards is in the -A- region.

C - Oil must be replenished. It is sufficient if the oil level is in the -B- region (hatched area) afterwards.

There is a danger of damaging the catalytic converter if the oil level is above the -A- marking.

– If oil level is below -C- marking, replenish oil to -A- marking.

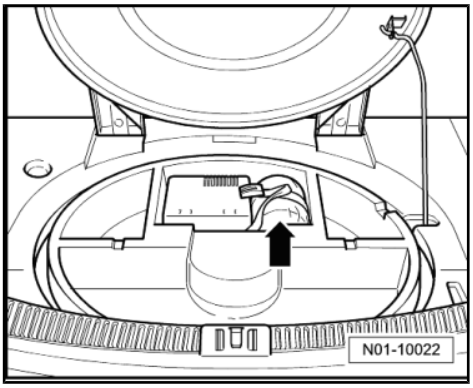


4.33 Checking breakdown set

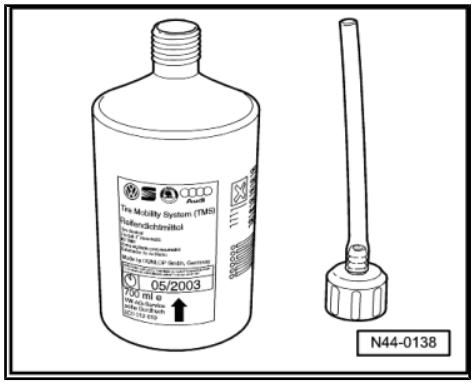
Note

The breakdown set is also called “Tyre repair set” or “Tire Mobility System TMS”.

The tyre repair set is located in the spare wheel well -arrow-



The tyre repair set consists of the compressor and a tyre filler bottle with sealant.



Note

- *The tyre sealant in the bottle has a limited expiry date.*
- *Therefore the expiry date is indicated on the bottle -arrow-.*

This example shows that the expiry date 05/2003 has been exceeded, then the bottle has to be renewed.

– Check the expiry date and enter this in maintenance tables.

– Renew tyre sealant if the expiry date has been reached.

Caution

- ***The tyre sealant must not be more than 4 years old.***
- ***If the bottle was opened e.g. at a "flat tyre", it must also be renewed.***

Note

- *Residual tyre sealant or bottles which are filled and the expiry date has been exceeded, must be disposed of.*
- *Old tyre sealant or residual sealant must not be mixed and disposed of with other fluids.*

4.34 Panorama sliding roof: Check function, clean guide rails if necessary and grease with special grease, clean wind deflector

Special tools and workshop equipment required

- Wet and dry cleaner -VAS 5128-
- Lithium grease -G 052 147 A2-

Note

- *PSD means panorama sliding roof.*
- *Servicing at regular intervals is generally not required for the panorama sliding roof.*
- *If during functional check noises occur or when heavily soiled, clean and grease the surfaces and areas according to the following description.*
- *The prescribed grease is Lithium grease -G 052 147 A2- . Other types of grease must not be used.*

Check function, if necessary clean guide rails and grease with special grease

– Check the panorama sliding roof for damage.

– Check the panorama sliding roof function and for noises.

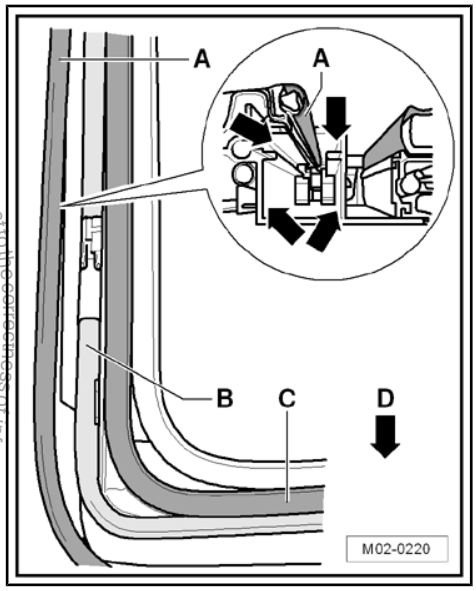
– Open the panorama sliding roof.
– Clean guide rails below outer seal -A-, -arrows-.
– Apply a thin coat of lithium grease -G 052 147 A2- on all sealing surfaces of guide rail -arrows-.

A - Outer seal

B - Wind deflector

C - Inner seal

D - Arrow points forwards



Note

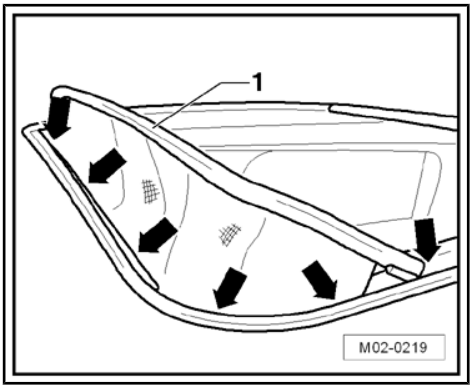
Ensure that no other components are soiled.

Caution

Faults found must always be rectified (repair measure).

Cleaning wind deflector

– Check wind deflector -1- for soiling. Thoroughly check lower part of wind deflector for soiling -arrows-.
– Remove soiling e.g. using wet and dry cleaner -VAS 5128- .
– To remove insects and particles from the net and wind deflector frame, use a sponge and a soapy solution.



Mixture ratio for soapy solution: 3 drops of washing-up liquid to 1 litre of water

Caution

Do not use a commercially available insect remover or other removal agents, because these products are not tested and approved.

– Then remove insects and particles using a vacuum cleaner with a suitable nozzle.

Caution

- ***The net on the wind deflector could be damaged if a wrong nozzle is used.***

– When doing this, ensure that no dirt drops into vehicle interior.

4.35 Performing road test (driving behaviour, noises, air conditioner etc.)

Which of the following can be checked depends on vehicle equipment and local conditions (urban/country).

Check the following during a road test:

– Engine: Output, misfiring, idling speed, acceleration.
– Clutch: Pulling away, pedal pressure, odours.

- Gear selection: Ease of operation, stick position.
- Automatic gearbox: Selector lever position, shift lock/ignition key removal lock, shift behaviour, dash panel insert display.
- Foot brake and handbrake: Function, free travel and effectiveness, pulling to one side, juddering, squeal.
- ABS function: Pulsing must be felt at the brake pedal during ABS-regulated braking.
- Steering: Function, steering free play, steering wheel centred when vehicle is travelling straight ahead.
- Tilting roof: Function
- Radio/radio navigation system: Function, reception, GALA, interference noise
- Multifunction display (MFI): Air conditioner functions: Check function. (At low temperatures the function of air conditioner must be checked in a workshop) Air conditioner: Function
- Vehicle: Pulling to one side when travelling straight-ahead (level road)
- Imbalance: Wheels, drive shafts, propshaft
- Wheel bearings: Noises
- Engine: Hot starting behaviour

4.36 Wheel securing bolts: Tighten to prescribed torque setting

Removing and installing wheel bolt caps

- Pulling off wheel hub trim: ⇒ page 136
- Pulling off wheel trim ⇒ page 137
- Pulling off wheel bolt caps: ⇒ page 137
- Loosening/tightening anti-theft wheel bolts ⇒ page 137
- Tightening wheel bolts ⇒ page 138
- Installing wheel centre cover, wheel bolt cover caps and wheel cover ⇒ page 138

Pulling off wheel hub trim

Caution

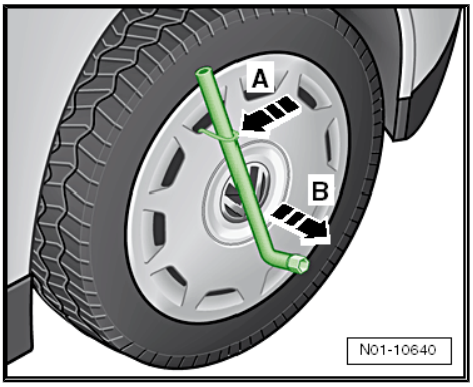
On vehicles with light alloy wheels do not lever wheel hub trim off with screwdriver, only use the special tool for this purpose (puller hook in vehicle tool kit).

The puller hook -1- to remove the cover caps is located with the vehicle tool kit.

- Hook puller hook into one drilling of wheel hub trim and pull off in -direction of arrow-.

Pulling off wheel trim

– On vehicles with wheel trim, loosen wheel trim all around as shown, e.g. using puller hook and wheel bolt wrench from vehicle tool kit -A- and pull off -arrow B-.



Pulling cover caps off wheel bolts

Caution

On vehicles with light alloy wheels do not lever wheel bolt caps off with screwdriver, only use the special tool for this purpose (puller hook in vehicle tool kit).

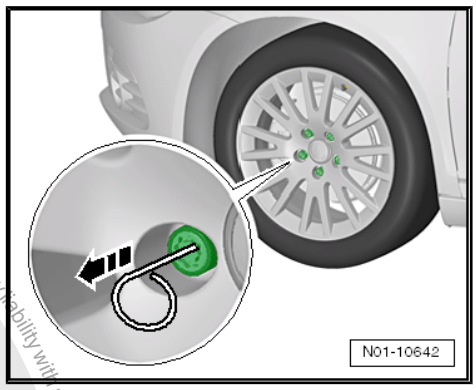
Note

Before loosening or tightening the wheel bolts, remove the cover caps.

The puller hook to remove the cover caps is located with the vehicle tool kit.

– Place the puller hook through opening in cover cap.

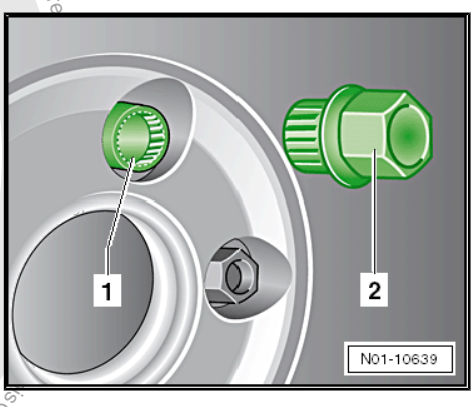
– Pull off cap using the puller hook.



Loosening/tightening anti-theft wheel bolts

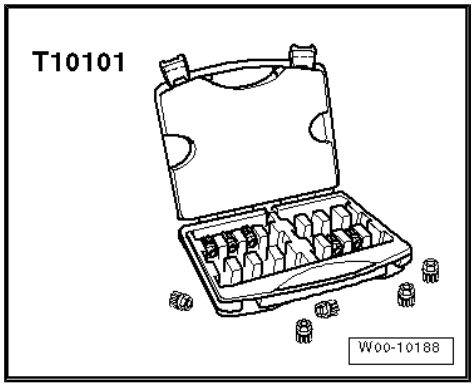
Note

- *To loosen/tighten the anti-theft wheel bolts a special adapter, located in vehicle tool kit, is required.*
- *To loosen the anti-theft wheel bolts (lockable wheel bolts) do not use an impact screwdriver.*
- *If the adapter to loosen or tighten the anti-theft wheel bolts is not available in the vehicle, use the corresponding adapter set for tamper-proof wheel bolts.*

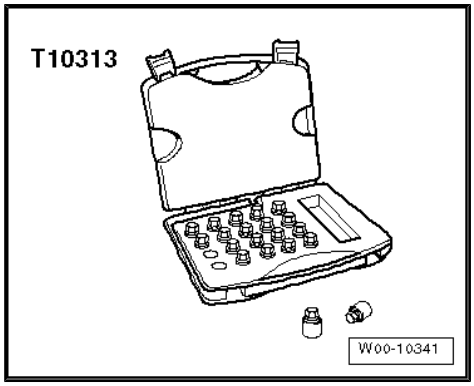


Special tools and workshop equipment required

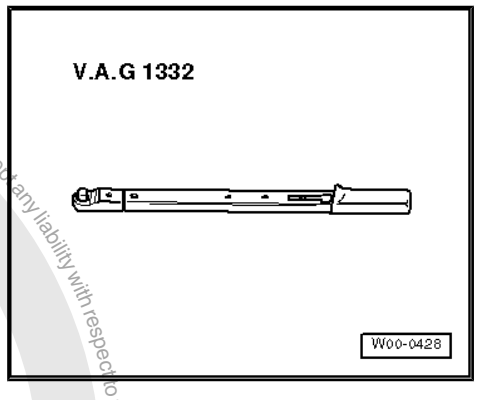
♦ Adapter set for tamper-proof wheel bolts -T10101-



♦ Adapter set for tamper-proof wheel bolts -T10313-



♦ Torque wrench -V.A.G 1332-

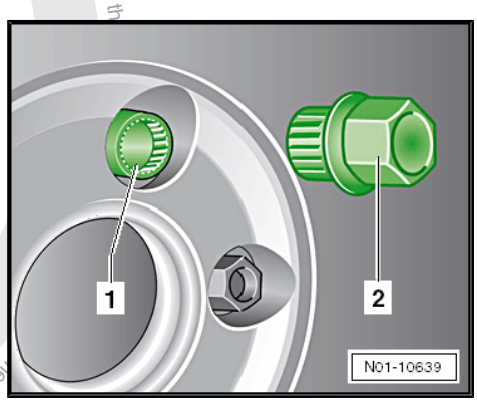


– Slide adapter -2- into anti-theft wheel bolt -1- onto stop.
– Slide the wheel bolt wrench onto adapter -2- onto stop.

Tightening wheel bolts

– Tighten the wheel bolts diagonally and alternately to the following torque setting:

♦ 120 Nm

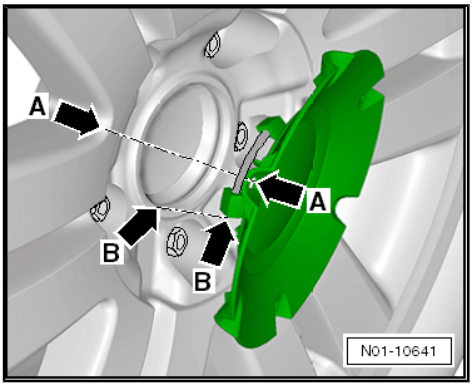


WARNING

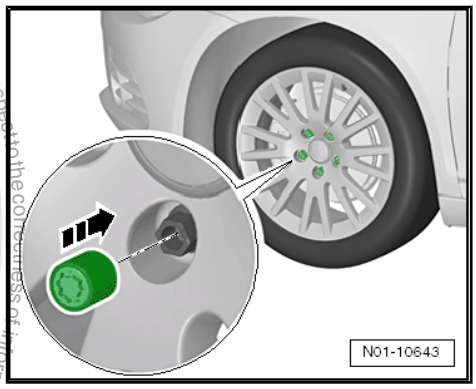
Never use an impact screwdriver to tighten the wheel bolts!

Installing wheel centre cover, wheel bolt cover caps and wheel cover

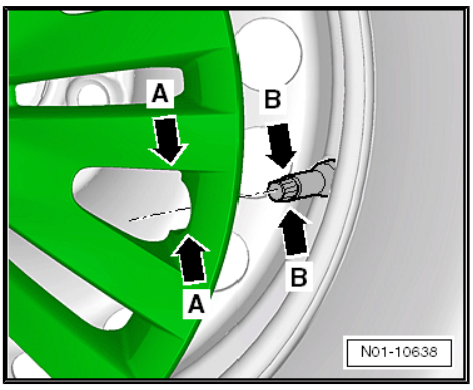
– Push wheel hub trim into opening of wheel hub. Ensure that -A and B- are accurately fitted on rim.



Fit cover caps on wheel bolts.



Install wheel trim by inserting trim evenly into steel wheel. Ensure that valve -B- seats in cut-out -A- of wheel trim.



Note

Place adapter and puller hooks properly in vehicle tool kit after completing work.

Specified torque: 120 Nm

4.37 Reading radio code with fault reader

Authorization prerequisites for fault reader

- The fault reader is connected via the Central Partner Network (CPN) with the central database (Carport, Fazit).
- Available access for the user of the system “GeKo” (secrecy and component protection)

Note

- *The radio codes can be read in the central database and can be displayed on fault reader.*
- *For radio activation the codes must be entered via radio buttons, as previously ⇒ page 140 .*

Procedure

– Connect fault reader ⇒ page 43 .

– Switch on ignition.

– Touch the field or button on the screen for “GUIDED FUNCTIONS”.
– Confirm with [>] button.
– Select one after the other:
♦ Brand
♦ Type
♦ Model year
♦ Engine code
– Confirm vehicle identification.
– Select one after the other:
♦ “Radio system”.
♦ “Reading radio code”
– Read code according to the information of “GUIDED FUNCTIONS”.
– Finish code reading as follows:
– Press “GoTo” button on display -arrow-.
– Press the “End” button on display.
– Press “End” button in End menu.
– Switch off ignition and separate diagnostic connections.

4.38 Radio/navigation system: Activate anti-theft coding

4.38.1 Volkswagen radio and navigation systems

The radio units and radio-navigation systems are supplied with a security code.

Security code means that each unit with an anti-theft coding is programmed with its own code number.

This fixed code is not active when leaving the factory.

Note

♦ *The safety code can be read from a central database using the vehicle diagnostic tester* *⇒ page 139* *.*
♦ *If SAFE appears on display when the radio is switched on, the radio is locked! The radio must remain switched on for one hour, the lock will then be released. The code can now be entered again.*

Activate fixed code on “radio system RCD 200” as follows:

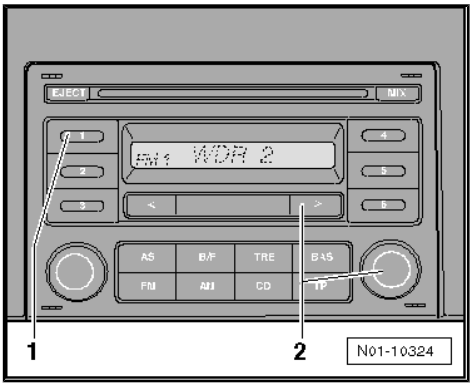
– Switch radio on.

On display appears “SAFE” and after three seconds “1000”.

– Enter first digit of four-digit code using station button 1 -1-. Enter 2nd digit using station button 2, etc.

– Confirm code entry by pressing the two buttons -2- for 2 seconds.

The radio is ready for use.



Note

- *If the radio is removed or the vehicle battery disconnected, you will not have to enter the anti-theft coding manually, as the code number is stored in the vehicle when first entered.*
- *If the radio is installed in another vehicle, the code numbers do not match and the code must be entered manually again.*

Activate fixed code on “radio system RCD 300” and “radio system RCD 500” as follows:

– Switch on radio navigation system using press button -1-.

– “SAFE” appears on digital display.

– After approx. 3 seconds “1000” appears on display.

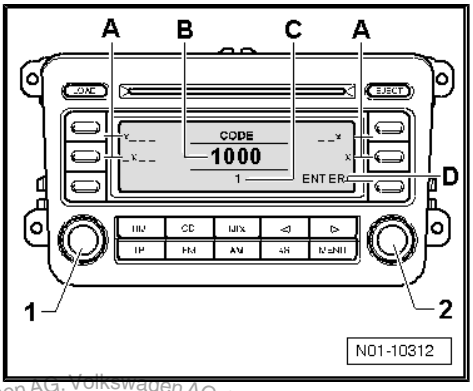
– With the help of multi-function buttons -A- enter code number applied on radio card.

On display the position of the code number digit to be entered will be shown next to the four multi-function buttons, by a -X-.

– Press the multi-function button until the correct number appears in the centre of the display -B-.

– Once the number has been entered correctly, operate multi-function button -D- next to the word ENTER.

The radio is ready for use again and switches to the previous operating mode.



Activate fixed code on "radio-navigation system MFD 2" as follows:

– Switch on radio navigation system using press button -1-.

The security code can be found on the unit card.

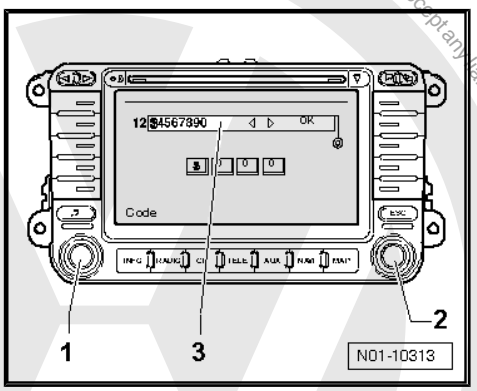
– Enter code by turning rotary/push button -2- until number required on number list -3- is highlighted and confirm each number by pressing the button briefly.

– Confirm code by turning rotary/push button -2- until “OK” on number list -3- is highlighted and confirm by pressing the button briefly.

If the correct code has been entered, the actual radio frequency will appear after a short “learning phase”.

The LED on the top right of the radio-navigation system must flash when the ignition key is removed.

If the diode flashes, the radio navigation system is ready-for-use and the anti-theft coding is activated.



4.38.2 Blaupunkt navigation and radio system “TravelPilot DX-R4/RN S4”

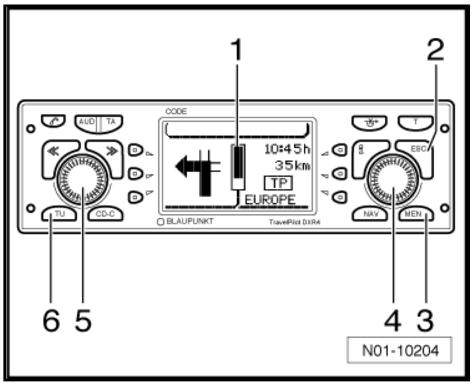
The radio units and radio-navigation systems are supplied with a fixed code. Fixed code means that each unit with an anti-theft

coding is programmed with its own code number. This fixed code must be activated after installing.

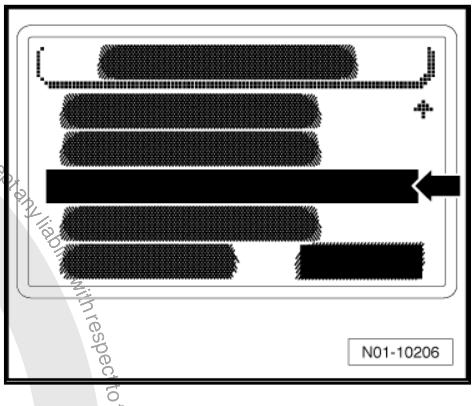
On the Blaupunkt system “TravelPilot DX-R4/RN S4” activate the fixed code as follows:

The security coding of the ready to play radio is not activated until the fixed code is entered. The fixed code is to be activated as follows:

– Switch on radio navigation system using press button -5-.



– The coding is to be activated in the set-up menu “SECURITY” -arrow- as follows:



A “basic” or “function menu” appears.

– Press button MEN -3- “TWICE”.

The system switches to the set-up menu.

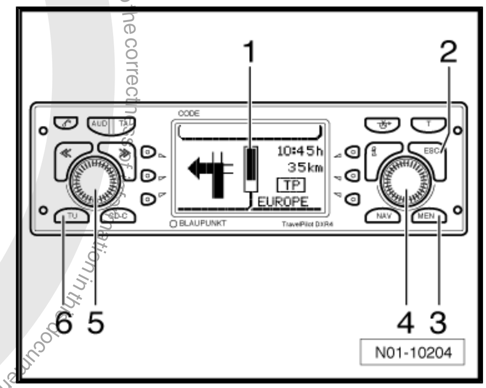
If the setting menu of an audio source or navigation menu is already active:

– Press button MEN -3- “ONCE”.

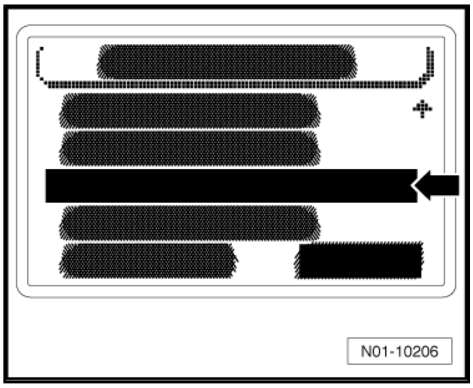
The system switches to the set-up menu.

To perform settings and to select menu options,

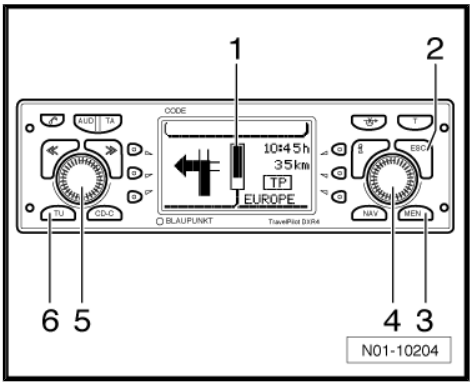
– Move the selection bar using the right rotary/push button -4-.



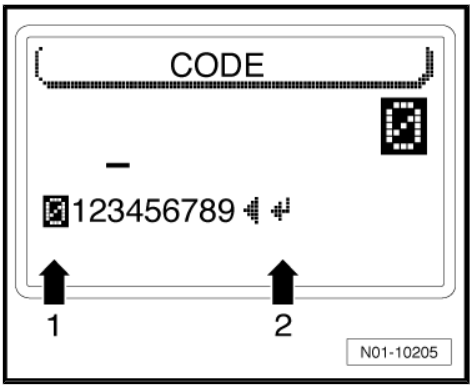
– Select the menu option “SECURITY” -arrow-.



– Select the menu option “CODE” in the set-up menu “SECURITY” and press rotary/push button -4-.



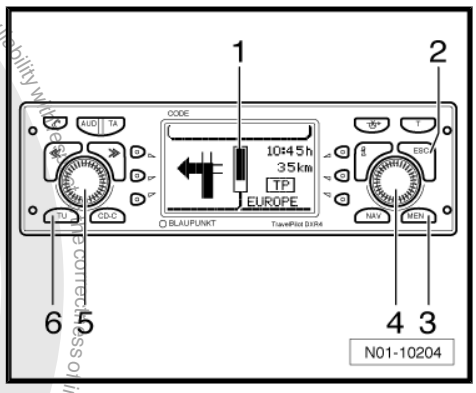
– Enter number code by turning the right rotary/press button in the number display -arrow 1-, mark the numbers one after the other and confirm entry after each number by pressing the right rotary/press button briefly.



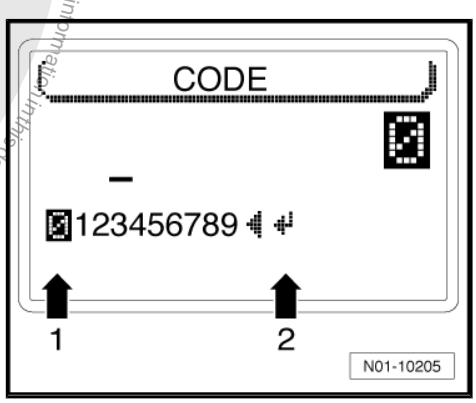
Note

If an incorrect number has been entered, select the “Reset symbol ←” and press ESC button -2 -.

– Perform the following procedure:



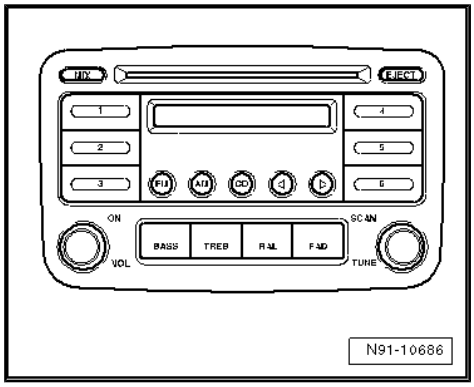
– If the code has been entered completely, confirm entry by selecting the “Return symbol” -2- with the rotary/push button and by pressing the button.



If the correct code number has been entered, the actual status will appear after a short “learning phase” behind “CODE”.

- Basic setting is “OFF”, means the code is not activated.
- Basic setting is “ON”, means the code is activated.

On the radio system "Sound System" for vehicles for USA and Canada, activate the fixed code as follows:



– Switch radio on.

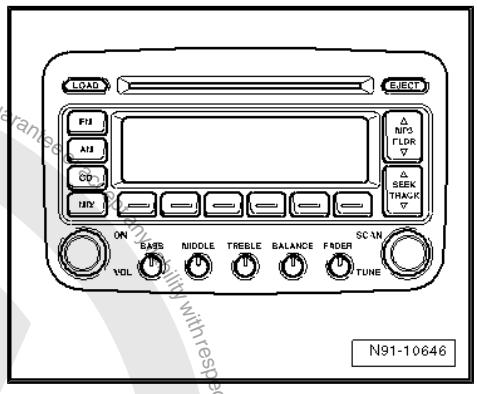
The unit automatically displays "SAFE" and then "1000". For this no buttons are used.

– With the help of station buttons 1 to 4 enter code number applied on the radio card. Use button 1 to enter the first digit of the code number, button 2 to enter the 2nd digit and so on.

– Then press arrow button located above FAD button and hold, until the anti-theft coding is activated. This is indicated by a brief sound.

If the code number has been entered correctly into the radio unit, a radio frequency appears on display.

On the radio system "Premium Sound System" for vehicles for USA and Canada, activate the fixed code as follows:



– Switch radio on.

The unit automatically displays "SAFE" and then "1000". For this no buttons are used.

– With the help of station buttons 1 to 4 enter code number applied on the radio card. Use button 1 to enter the first digit of the code number, button 2 to enter the 2nd digit and so on.

– Then press the station button, located below "OK" indicated on display (usually this is the last station button) and hold until the anti-theft coding is activated. This is indicated by a brief sound.

If the code number has been entered correctly into the radio unit, a radio frequency appears on display.

4.39 Tyre pressure monitoring: Perform basic setting

Tyre pressure monitoring (TPM) for NAR ⇒ page 145

Note

- *The basic setting of Tyre pressure monitoring -K220- must only be performed, "after" the tyre inflation pressure has been corrected to the prescribed values.*
- *If no pressure loss and tyre damage are found after a tyre pressure warning, the incorrect warning can be rectified by a basic setting.*

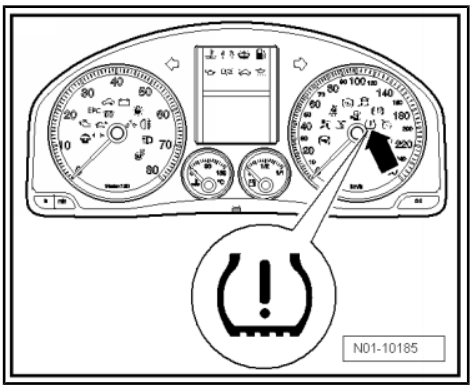
The tyre pressure monitoring system is part of the software in the ABS control unit -J104-.

The ABS control unit compares the speed and the rolling circumference of the individual wheels via the ABS sensors. When the rolling circumference of one wheel is changed this is displayed by the tyre pressure monitoring. The rolling circumference of tyre can change if:

- The tyre pressure is too low.
- The tyre has structural damage.
- The vehicle is loaded more heavily on one side.
- The wheels on one axle are loaded more heavily (e.g. when towing a trailer or when driving in mountains).

- Snow chains are fitted.
- The temporary spare wheel is fitted.
- One wheel per axle has been changed.

The tyre pressure monitoring warning lamp -K220- has a yellow warning lamp in the dash panel insert -arrow-.

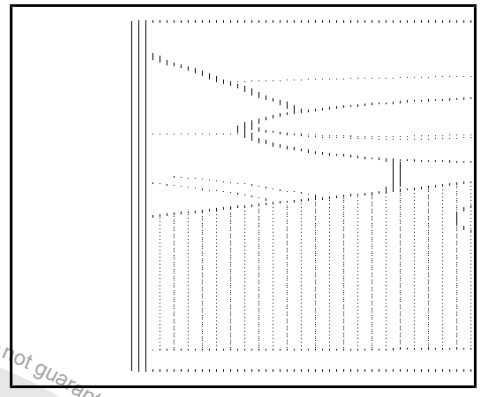


- “FLASHING LIGHT” means that the “INITIAL BASIC SETTING” has not been performed.
- A “permanent lighting-up” in conjunction with a warning tone, means “Warning”, pressure loss has been recognised, check inflation pressure, performing system basic setting.

Perform “INITIAL” basic setting

– Switch on ignition.

– Press button ESP -1- and button SET -2- simultaneously and for longer than 2 seconds in the centre console.



If ESP is not fitted, press TCS button.

The start of basic setting will be confirmed by an acoustic signal.

When switching on ignition again, no warning is indicated.

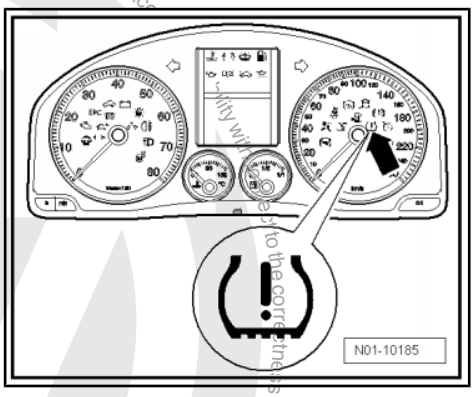
Perform basic settings

– Switch on ignition.

– Press button ESP -1- and button SET -2- simultaneously and for longer than 2 seconds in the centre console.

If ESP is not fitted, press TCS button.

The tyre pressure monitoring warning lamp -K220- in combi-instrument -arrow- lights up, as long as the button is pressed.



The start of basic setting will be confirmed by an acoustic signal.

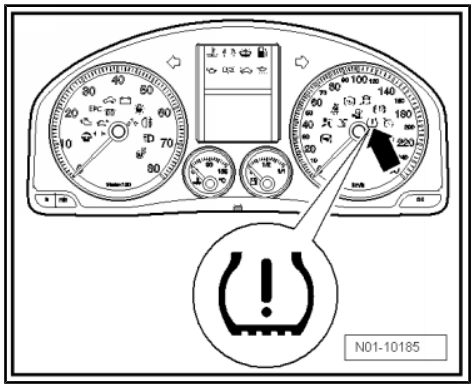
When switching on ignition again, no warning is indicated.

4.39.1 Tyre pressure monitoring (TPM) for NAR

Note

- *The basic setting of tyre pressure monitoring should only be performed after the tyre inflation pressures have been corrected to the prescribed values.*
- *If no pressure loss and tyre damage are found after a tyre pressure warning, the incorrect warning can be rectified by a basic setting.*

The tyre pressure monitoring warning lamp -K220- has a yellow warning lamp in the dash panel insert -arrow-.



After changing the tyre pressures or after changing one or more wheels the following adaption must be performed:

– Connect vehicle diagnosis, testing and information system -5051- or subsequent units ⇒ page 43 .
– Switch on ignition.
– Touch the field or button on the screen for `Guided fault finding`.
– Select vehicle data.

All control units in vehicle are read.

– Follow instructions of vehicle diagnosis, testing and information system -5051- or subsequent units in “Guided fault finding”.

4.40 Renewing tyre pressure sensors

Tyre pressure sensors must only be renewed on “tyre pressure monitoring system” with PR number 7K3. The “tyre pressure monitoring” system offered alternatively with PR number 7K6, has no tyre pressure sensors. The tyre pressure monitoring compares the speed and the rolling circumference of the individual wheels via the ABS sensors.

See also self-study programme ⇒ Self-study programme No. 347 ;

Note

- *The tyre pressure sensor is located inside the disc wheel or (rim).*
- *To remove and install the tyre pressure sensor the tyre must be removed.*

– Work sequence: “Running gear, axles, steering” ⇒ Running gear, axles, steering; Rep. Gr. 44 ; Removing and installing tyre pressure sensor “Removing and installing tyre pressure sensor”

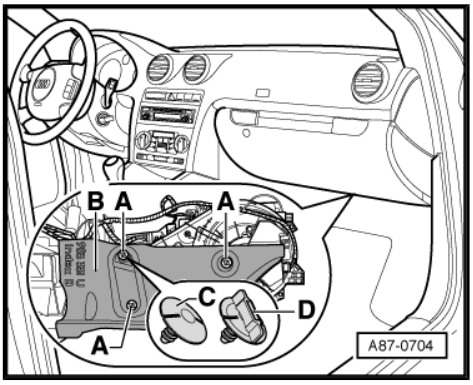
4.41 Dust and pollen filter: Clean housing and renew filter element

Note

Before installing the new filter, clean area around the dust and pollen filter in air conditioner unit duct or heater.

– Perform the following procedure:

– Unscrew the clips -A- and remove insulation -B-.

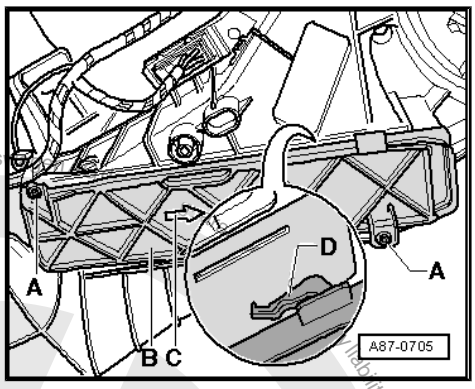


The clips -A- are available in different versions, e.g. -C- and -D-.

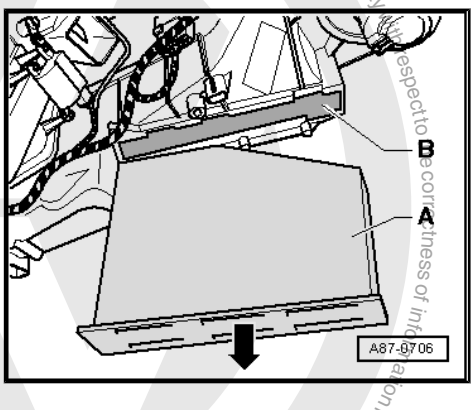
– If necessary remove bolts -A-.

The bolt -A- is not fitted on all vehicles. The bolts secure the cover -B-, if catches -D- do not hold.

– Slide cover -B- in direction of arrow -C- and remove the cover.



– Take filter element -A- out of duct -B- of air conditioner unit or heater.



Note

Observe disposal regulations!

– Clean duct -B- of air conditioner unit or heater e.g. with a vacuum cleaner.

– Install in reverse order.

4.42 Headlight adjustment: Check

- Checking headlight adjustment ⇒ page 147
- Headlights with gas discharge bulbs, perform basic setting ⇒ page 150 .
- Adjusting headlights ⇒ page 151
- Adjusting fog lights and other additional lights ⇒ page 153.

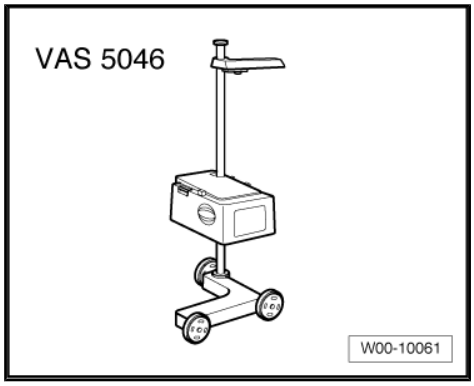
4.42.1 Checking headlight adjustment

Note

Vehicles with gas discharge bulbs are equipped with automatic headlight range control. On these vehicles, the procedure "Basic setting" for adjusting headlights must be carried out.

Special tools and workshop equipment required

- Headlight adjustment unit -VAS 5046- or



- Headlight adjustment unit -VAS 5047-

Checking and adjusting prerequisites:

- Tyre pressures OK.
- Lenses must not be damaged or dirty.
- Reflectors and bulbs OK.
- Vehicle must be loaded.
- The vehicle must be rolled forward or backward several metres or front and rear springs must be bounced fully several times so that springs settle.
- Vehicle and headlight adjuster must be on a level surface. ⇒ Operating instructions for headlight adjustment unit -VAS 5046- or ⇒ Operating instructions for headlight adjustment unit -VAS 5047-
- Inclination must be set.

Note

For NAR vehicles the side adjustment of headlight is not permitted, therefore the adjustment bolt is secured against turning.

Inclination information in “%” is stamped into trim above headlight. Headlights must be adjusted according to this information. Percentage given is based on a projection distance of 10 metres. For example: inclination of 1.0 % converts to approx. 10 cm.

Notes on vehicles with halogen headlights with manually regulated headlight range control

Note

For certain export markets halogen headlights with manually regulated headlight range control are not offered.

- The headlight range adjuster thumb wheel must be in basic setting -0-.

Loading: With one person or 75 kg on the driver seat and the vehicle otherwise unloaded (unladen weight).

The unladen weight is the weight of vehicle ready for operation with a full fuel tank (at least 90 %) including weight of all equipment usually carried (e.g. spare wheel, tools, jack, fire extinguisher etc.).

If the fuel tank is not at least 90 % full, then load as follows:

– Read level of fuel in fuel tank on fuel gauge. Determine additional weight from following table and place weight in luggage compartment.

Fuel gauge table

Fuel gauge	Additional weight in kg
1/4	30
1/2	20
3/4	10
Full	0

Example:

When the fuel tank is half full an additional weight of 20 kg must be placed in the luggage compartment.

Note

The additional weight is best produced using fuel canisters filled with water (a 5 litre fuel canister filled with water weighs approx. 5 kg).

Notes on vehicles with headlights with gas discharge bulbs

Note

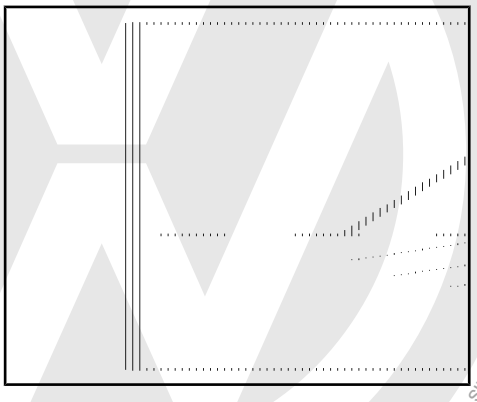
Before adjusting headlights on vehicles with headlights with gas discharge bulbs, the fault memory must be read, cleared and the headlight range control must be set to basic setting using vehicle diagnostic, testing and information system -VAS 5051- or vehicle diagnostic and service information system -VAS 5052-
⇒ page 150 .

Checking headlight adjustment:

Please check the following:

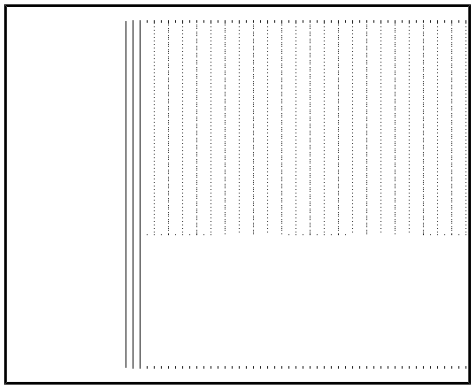
– Whether, with the dipped beam switched on, the horizontal bright/dark boundary contacts the dividing line -1- of the test area and

– Whether the breaking point -2- between the horizontal part of the blight/dark boundary on the left and the rising part on the right lies on the vertical line of the central point -3-. The bright core of the light beam must be to the right of the vertical line.



Note

- *To simplify finding the breaking point -2-, cover and uncover left (from driver perspective) half of the headlight a few times. Then check dipped beam again.*
- *After correct adjustment of dipped beams, the centre point of the main beam must lie on the centre mark -3-.*
- *For the previous test screen with 15° setting line, adjust as for new test screen. To avoid incorrect settings, ignore the 15 ° setting line.*

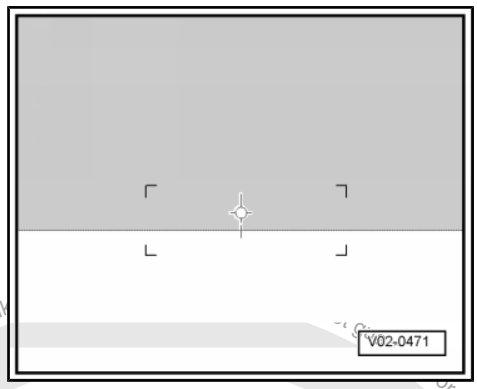


Checking headlight adjustment on fog lights:

– Check whether the upper bright/dark boundary touches the setting line and runs horizontally over the entire width of the test screen.

Other additional lights:

Additionally retrofitted lights of other systems must be checked and set according to valid guidelines.



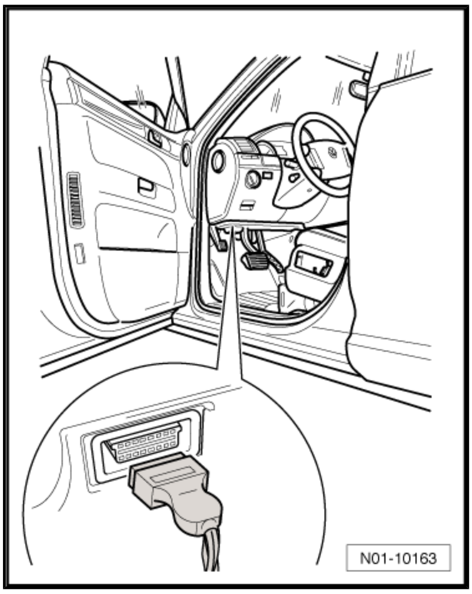
4.42.2 Headlights with gas discharge bulbs, perform basic setting

Basic setting

Because the automatic headlight range control does not have a manual adjustment, the basic setting procedure must be performed to adjust the headlights.

The adjusting mechanism in the headlight housing will be damaged if the automatic range control basic settings are not performed.

After the headlights have been adjusted, the fault memory must be read. Therefore, the procedure described here must be strictly followed.



– Connect vehicle diagnostic tester ⇒ page 43 .

– Switch on ignition.

– Press “Guided fault finding”.

Enter vehicle data, all control units will be read.

– Press following keys/designations in sequence given:

- GoTo
- Function/Component Selection
- Body
- Electrical system
- 01 - Systems capable of self-diagnosis
- 55 - Dynamic headlight range control
- J 431 - Dynamic headlight range control, functions
- J 431 - Control unit for headlight range control, basic setting
- Press → button.

– Follow the sequence of tester and confirm entry until the following text appears:

J 431 - Control unit for headlight range control, basic setting

- Press → button.

– Follow the sequence of tester and confirm entry until the following text appears:

J 431 - Control unit for headlight range control, basic setting

– Follow the sequence of tester.

– Now check headlight adjustment and adjust if necessary.

– Complete the function programme J431 - control unit for headlight range control, basic setting.

Note

Please check also that both headlights move evenly when the manually operated headlight range control is operated.

– Adjusting headlights ⇒ page 151

4.42.3 Adjusting headlights

- General information on gas discharge bulb lighting systems ⇒ page 151
- Adjusting left headlight ⇒ page 152

General information on gas discharge bulb lighting systems

The gas discharge bulb system uses xenon-filled bulbs.

For this reason the headlights with gas discharge bulbs are also called xenon headlights.

There are different headlight versions:

- “Xenon” headlights

“Xenon” headlights means that the dipped beam is generated from “one” gas discharge bulb.

“Xenon” headlights have an “additional main beam”.

- “Bi-xenon” headlights

“Bi-xenon” means that both the dipped beam and the main beam are generated from a “single” gas discharge bulb.

Therefore on “bi-xenon” headlights the main beam is automatically adjusted together with the dipped beam.

“Bi-xenon lighting systems” are always fitted with a headlight range control and a headlight washer system.

- AFS headlight system

The AFS system is a lighting system with headlights, gas discharge bulbs and static cornering light.

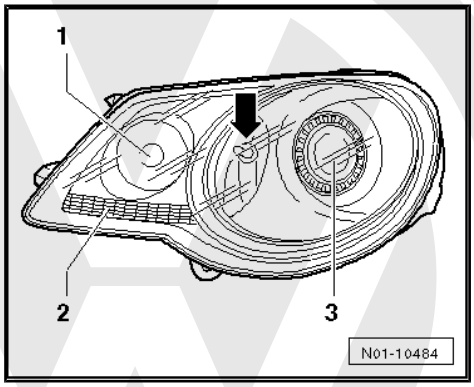
Note

- *Vehicles with cornering light (static cornering light) can be identified by an additional reflector -arrow- between turn signal -1- and dipped beam module -3-.*
- *The static cornering light only functions in conjunction with the dipped beam.*

AFS means Adaptive Front Lighting System

The headlights with gas discharge bulbs and cornering light have no “additional main beam”.

Therefore on the “AFS headlight system” the main beam is automatically adjusted together with the dipped beam.



Note

Before adjusting headlights on vehicles with gas discharge headlights, perform basic setting using vehicle diagnostic tester *⇒ page 150* .

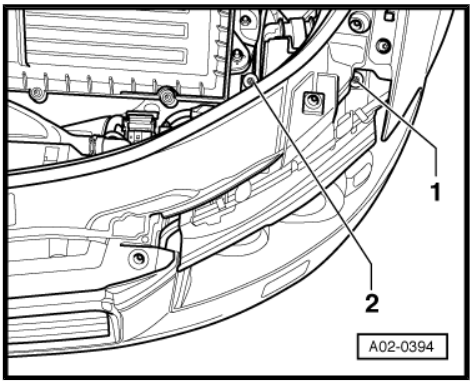
Adjusting left headlight:

Note

- *For NAR vehicles the side adjustment of headlight is not permitted.*
- *For this reason the adjustment bolt -1- is secured against turning.*
- *Adjustment is only allowed once when the headlight is to be exchanged.*
- *When the side adjustment bolt has been adjusted once, it must be secured with a cap ⇒ Electronic parts catalogue ETKA .*
- *In this case, push securing cap into opening of side adjustment until it is securely seated.*
- *Please check that both headlights move evenly when the manually operated headlight range control is operated.*
- *If the vehicle is equipped with separate dipped and main beam, adjust main beam additionally. When adjusting main beam ensure that the adjustment unit is set to 0 %.*

The adjustment bolts for the right headlight are a mirror image.

- First adjust the height adjustment bolt -2- for dipped beam and main beam, to bright/dark boundary of test area in display of tester.
- Then adjust the lateral adjustment bolt -1- for dipped beam and main beam, to bright/dark boundary of test area in display of tester.



4.42.4 Adjusting fog lights and other additional lights

- Fog lights in headlights ⇒ page 153
- Fog light in bumper, left ⇒ page 153
- Other additional lights ⇒ page 153

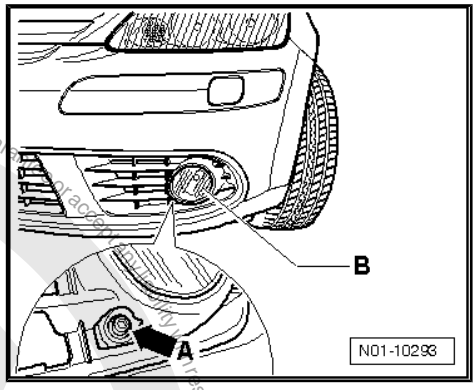
Fog lights in headlights

Note

Adjustment of fog lights is performed automatically when adjusting headlights.

Fog light in bumper, left

– To adjust the fog light headlight range -B-, turn adjustment screw -arrow A-.



Other additional lights

Additionally retrofitted lights of other systems must be checked and set according to valid guidelines.

4.43 Service interval display: Reset

The service interval display must be reset (adapted) at

- delivery inspection
- Every service

– Connect vehicle diagnostic tester ⇒ page 43 .
– Switch on ignition.
– Touch the field or button on the screen for “GUIDED FUNCTIONS”.

If the display is not as shown in the procedure: ⇒ Operating instructions for vehicle diagnostic, testing and information system -5051- or vehicle diagnostic and service information system -VAS 5052- .

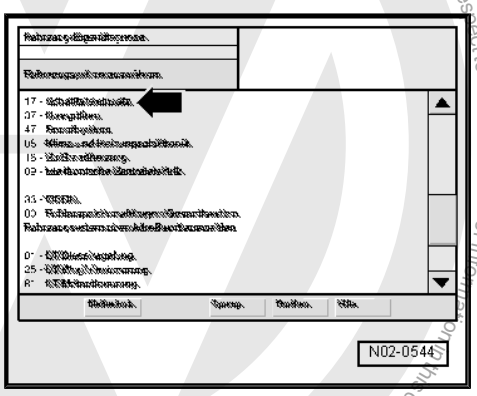
– Confirm with [>] button.
– Select one after the other:

- ♦ Brand
- ♦ Type
- ♦ Model year
- ♦ Engine code

– Confirm vehicle identification.

– Select one after the other:

- ♦ “Dash panel insert” -ARROW-.
- ♦ “Resetting the service interval display”.

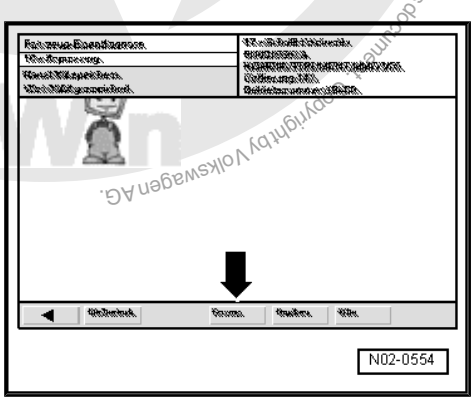


– Perform adaption according to the information of “GUIDED FUNCTIONS”.

Ending adaption

Indicated on display:

– Press “GoTo” button on display -arrow-.



Indicated on display:

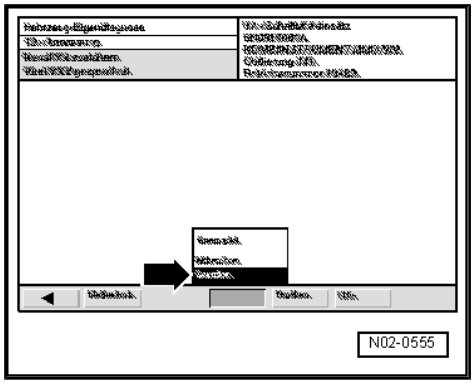
– Press the “End” button on display -arrow-.

– Press “End” button in End menu.

– Switch off ignition and separate diagnostic connections.

– Switch on ignition.

After the ignition is switched on, the type of service is no longer displayed in the distance display in the dash panel insert.



4.44 Service interval display: Recode (for “Rest of World” markets)

– Connect vehicle diagnostic tester ⇒ page 43 .

– Switch on ignition.

– Touch the field or button on the screen for “GUIDED FUNCTIONS”.

Note

If the display is not as shown in the procedure: ⇒ Operating instructions for vehicle diagnostic, testing and information system -VAS 5051- or vehicle diagnostic and service information system -VAS 5052- .

– Select one after the other:

- Brand
- Type
- Model year
- Engine code

– Confirm vehicle identification.

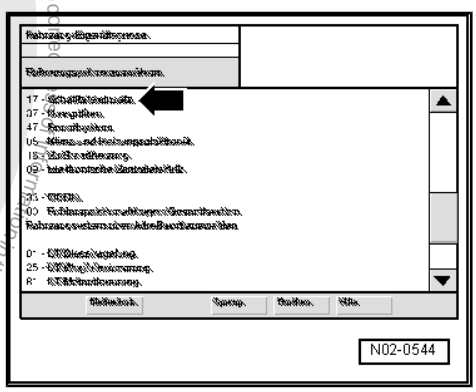
If the vehicle identification has been performed correctly, confirm with [>] button.

– Select one after the other:

- “Dash panel insert” -ARROW-.
- “Adapting service interval extension”.

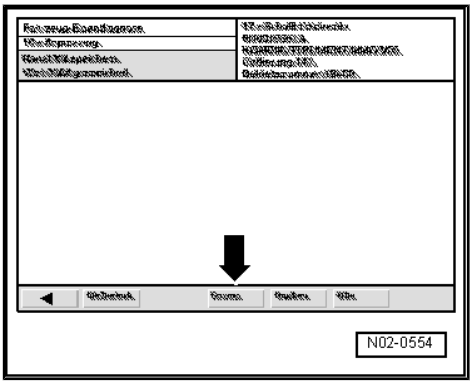
– Perform adaption according to the information of “GUIDED FUNCTIONS”.

Ending adaption



Indicated on display:

– Press “GoTo” button on display -arrow-.

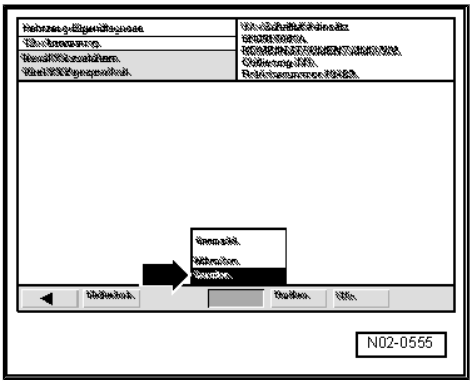


Indicated on display:

– Press the “End” button on display -arrow-.

– Press “End” button in End menu.

– Switch off ignition and separate diagnostic connections.



4.45 Service interval display: Recode at delivery inspection (for North American and Canadian markets)

– Connect vehicle diagnostic tester ⇒ page 43 .

– Switch on ignition.

– Touch the field or button on the screen for: “GUIDED FAULT FINDING”.

Note

If the display is not as shown in the procedure: ⇒ Operating instructions for vehicle diagnostic, testing and information system -VAS 5051- or vehicle diagnostic and service information system -VAS 5052- .

– Select one after the other:

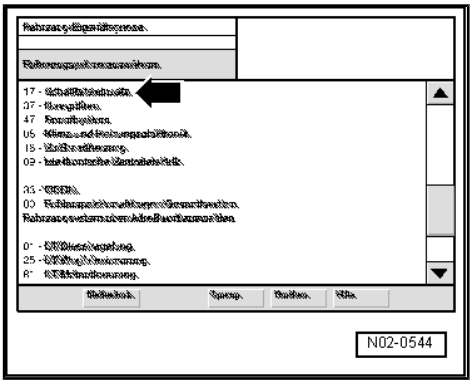
- Brand
- Type
- Model year
- Engine code

– Confirm vehicle identification.

If the vehicle identification has been performed correctly, confirm with [>] button.

– Select one after the other:

- Body
- Electrical system
- 01 - Systems capable of self-diagnosis
- “Dash panel insert” -ARROW-.
- Dash panel insert functions
- “Adapt service interval display”.



Note

- *Check which intervals are set.*
- *The intervals must be set or recoded for the first oil change service at 5,000 miles/8,000 km.*

– Perform adaption according to the information of “GUIDED FAULT FINDING”.

Note for vehicles from model year 2007:

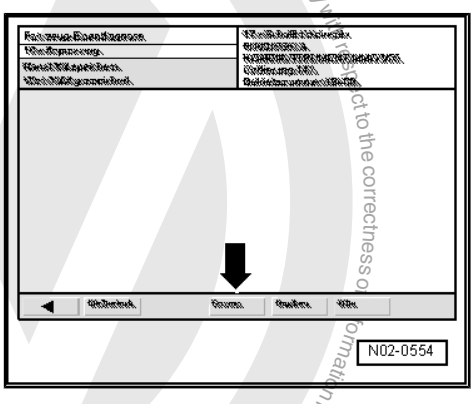
Note

- *For vehicles designated for USA and Canada:*
- *Channel 50: 50 (= 5000 miles) for USA*
- *Channel 50: 80 (= 8000 km) for CDN*
- *Channel 51: 372 (= 372 days) for USA and CDN*
- *For coding to QG0 or QG2: channels 42 + 49 are not available and are replaced by 50 + 51.*
- *Channels 43, 44 and 49 are also deactivated for coding to QG0 and QG2.*

Ending adaption

Indicated on display:

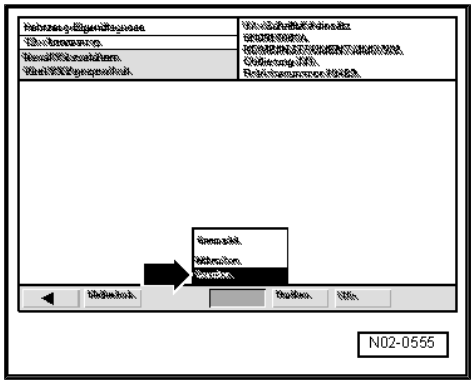
– Press “GoTo” button on display -arrow-.



Indicated on display:

– Press the “End” button on display -arrow-.

– Switch off ignition and separate diagnostic connections.



4.46 Service interval display: Recode at first oil change service (for North American and Canadian markets)

– Connect vehicle diagnostic tester ⇒ page 43.

– Switch on ignition.

– Touch the field or button on the screen: “SELF DIAGNOSIS”.

Note

If the display is not as shown in the procedure: ⇒ Operating instructions for vehicle diagnostic, testing and information system -VAS 5051- or vehicle diagnostic and service information system -VAS 5052- .

– Select one after the other:

- Brand
- Type
- Model year
- Engine code

– Confirm vehicle identification.

If the vehicle identification has been performed correctly, confirm with [>] button.

– Select one after the other:

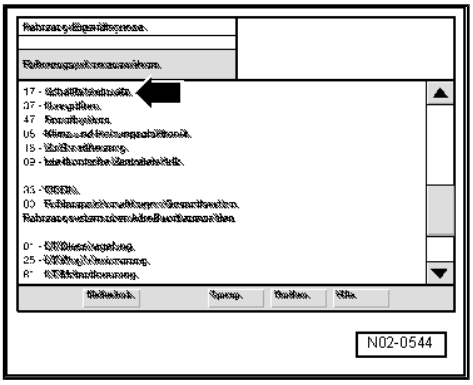
- 17 “Dash panel insert” -ARROW-.
- 10 “Adaption”

– Select channel 49.

– Enter 372.

– Select channel 42.

– Perform adaption according to the information of “SELF-DIAGNOSIS”.



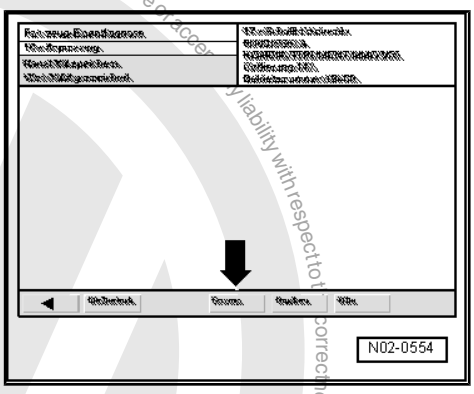
Note

- *For vehicles designated for USA and Canada:*
- *Channel 42: 100 (= 10,000 miles) for USA*
- *Channel 42: 160 (= 16,000 km) for CDN*
- *Channel 49: 372 (= 372 days) for USA and CDN*

Ending adaption

Indicated on display:

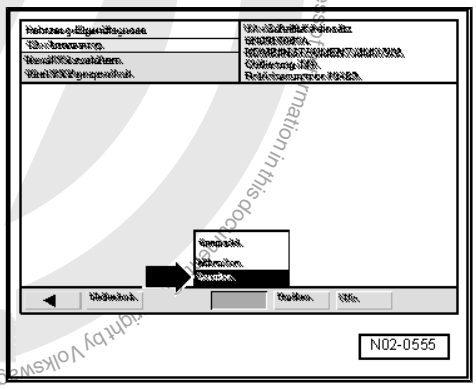
– Press “GoTo” button on display -arrow-.



Indicated on display:

– Press the “End” button on display -arrow-.

– Switch off ignition and separate diagnostic connections.

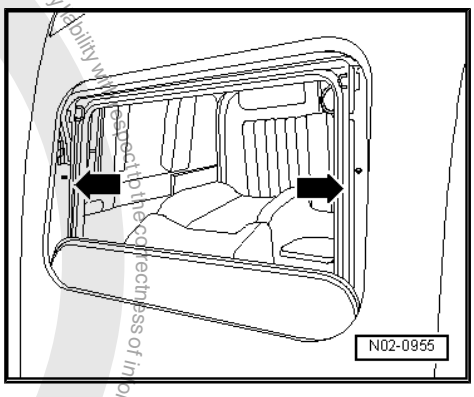


4.47 Sunroof: Check function, clean and grease guide rails

Carry out the following procedure:

– Check function of sunroof.

– Clean guide rails -arrows- and lubricate with special grease.



4.48 Window wash/wipe system and headlight washer system: Check function

Check anti-freeze concentration of Windscreen Clear -G 052 164- , replenish with fluid ⇒ page 160 .

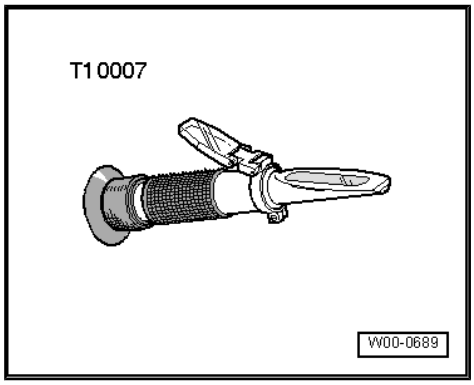
Window wash/wipe system: Check spray jet settings and adjust if necessary ⇒ page 162 .

Headlight washer system: Check spray jet settings and adjust if necessary ⇒ page 163 .

4.48.1 Checking anti-freeze concentration of fluid, replenishing fluid if necessary

Special tools and workshop equipment required

♦ Refractometer -T10007-

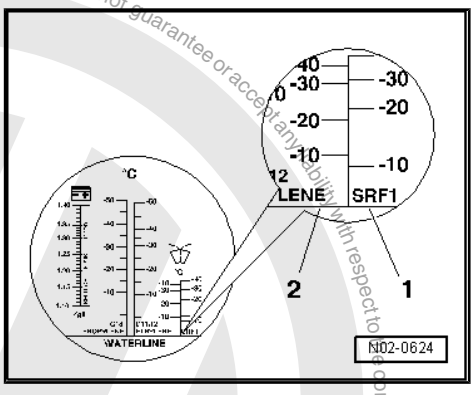


Read precise value for the following tests at bright/dark boundary. Using a pipette, place a drop of water on the glass to improve the readability of the bright/dark boundary. The bright/dark boundary can be clearly recognised on the “WATERLINE”.

– Check concentration of anti-freeze additive using refractometer -T10007- (refer to operating instructions).

The scale -1- of the refractometer is calibrated for Windscreen Clear -G 052 164- .

The scale -2- is designed for commercially available windscreen cleanser as well as a mixture of commercially available windscreen cleanser and Windscreen Clear -G 052 164- .



Mixture ratio:

Frost protection to	Windscreen Clear G 052 164	Water
In summer	1 part	4 parts
-16 °C	1 part	2 parts
-35 °C	1 part	1 part
-40 °C	2 parts	1 part

Replenishing fluid:

The fluid reservoir of the window washer system must be filled completely.

Starting immediately, use only Windscreen Clear -G 052 164- all-year-round when replenishing the window wash/wipe system.

Note

- *Windscreen Clear -G 052 164- protects the spray jets, fluid reservoir and connecting hoses from freezing.*
- *For all vehicles having fan-type spray jets, the reservoir must be filled with Windscreen Clear -G 052 164- , as this fluid has a low viscosity at temperatures below freezing. Otherwise the complicated spray jet system can become blocked by the crystallised washer fluid, which affects the spray pattern of the spray jet. Windscreen Clear -G 052 164- ensures that the fan type spray jets remain fully functional also at low temperatures.*
- *Replenish Windscreen Clear -G 052 164- also in the warmer periods of the year. The powerful cleanser removes wax and oil residue from the glass.*
- *Frost protection must be guaranteed to approx. -25 °C (approx. -35 °C in countries with an arctic climate) in the washer system.*

4.48.2 Window wash/wipe system: Check spray jet settings and adjust if necessary

Note

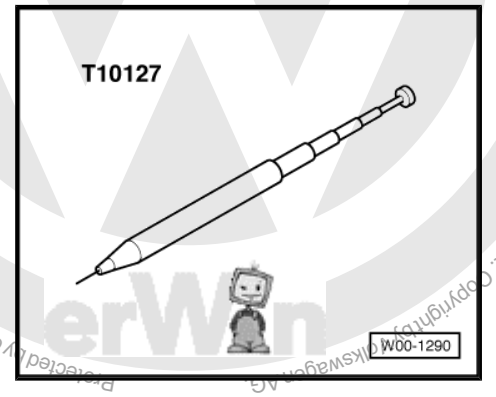
- *If the spray field is uneven due to soiling in the spray jet, remove spray jet "Vehicle electrics/Electrical system" ⇒ Rep. Gr. 92 "Removing windscreen washer system/Removing spray jets" and rinse with water opposite to direction of spray.*
- *Then it is permitted to blow out opposite to direction of spray with compressed air.*

Caution

- ***Never use items to clean the spray jets!***
- ***Never use a needle or a similar object to adjust the spray jets, otherwise the water passages in the spray jet will be damaged!***

Special tools and workshop equipment required

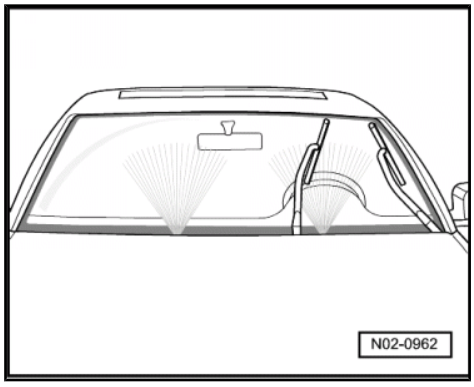
- Setting tool -T10127- equipped with needle 3125/5 A



Windscreen spray jet settings:

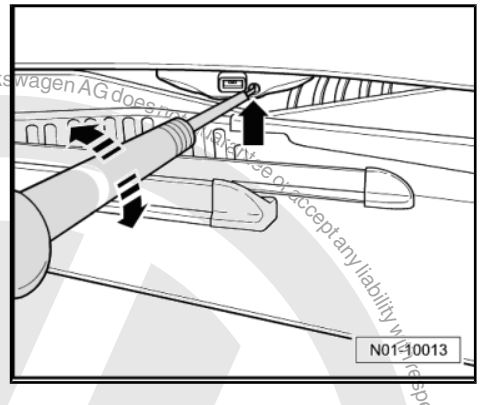
The washer jets are preset. However, small height differences can be compensated for.

– If both spray fields are not at same height, adjust spray direction upwards or downwards as follows:



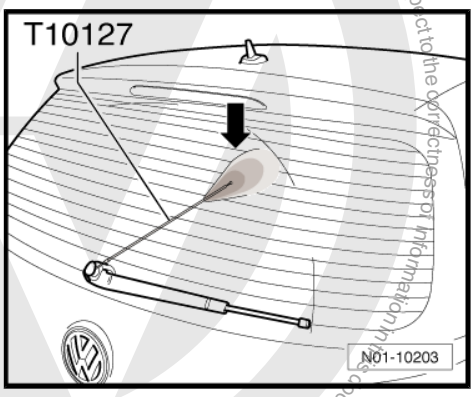
– Adjust spray direction at adjuster -arrow- using a screwdriver.

- “Clockwise” lower.
- “Anti-clockwise” higher.



Rear window spray jet setting:

– Adjust spray jet using adjusting tool -T10127- so that the water jet sprays onto the upper third of rear window.



4.48.3 Headlight washer system: Check spray jet settings, adjust if necessary

Note

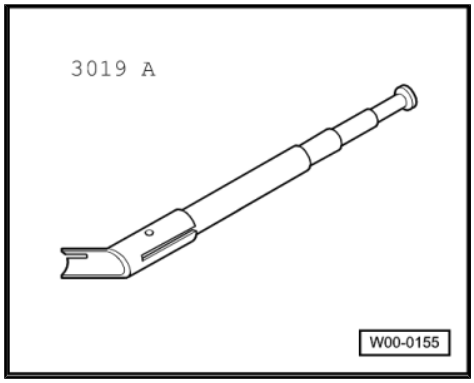
- *If the spray field is uneven due to soiling in the spray jet, remove spray jet “Vehicle electrics/Electrical system” ⇒ Rep. Gr. 92 “Removing headlight washer system/Removing and installing spray jet retainer” and rinse with water opposite to direction of spray.*
- *Then it is permitted to blow out opposite to direction of spray with compressed air.*

Caution

- ***Never use items to clean the spray jets!***
- ***Never use a needle or a similar object to adjust the spray jets, otherwise the water passages in the spray jet will be damaged!***

Special tools and workshop equipment required

- Adjusting tool -3019A- or



- Adjusting tool -T10167-

The jet adjustment dimensions are for the left-hand headlight (right-hand headlight mirror image)

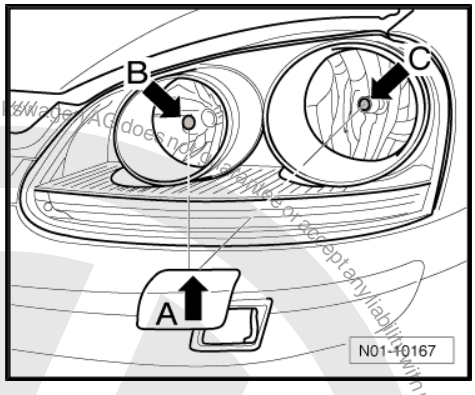
Checking jet setting

– Switch on dipped headlight.

– Operate windscreen washer system.

The headlights are washed if the windscreen wiper lever is hold in “Wipe position” for at least 1.5 seconds.

The spray jet must spray to centre of headlights, see -B- and -C-.



Adjusting jets

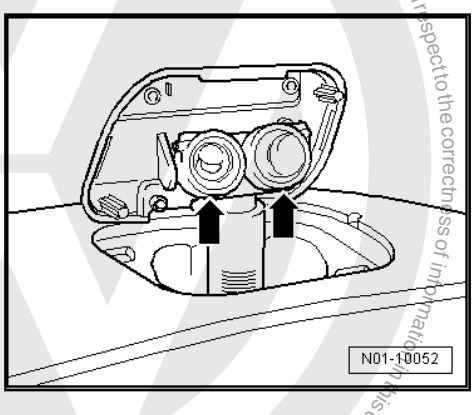
– Switch on dipped headlight.

– Operate windscreen washer system.

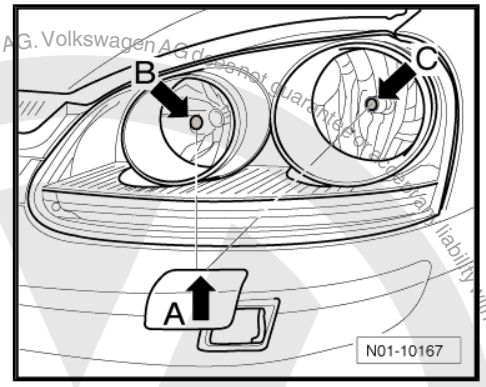
The headlights are washed if the windscreen wiper lever is hold in “Wipe position” for at least 1.5 seconds.

The spray jets -arrows- are extended.

– Carry out the following procedure:



– Align spray direction of respective jet to upper edge of headlight -item B- and -item C- using adjusting tool -T10167- or adjusting tool -3019A- .



4.49 Wiper blades: Check park position

Windscreen wiper blades: Check park position ⇒ page 165 .

Rear wiper blades: Check park position, Golf Variant 2007‣: ⇒ page 165 .

4.49.1 Windscreen wiper blades: Check park position

Note

- *Every other time that the wiper motor is switched off, it moves to a reverse-park position which ensures that the wiper blade is flipped over in the other direction.*
- *To do this, the wiper motor runs downwards into park position and then slightly upwards again. This reverse-park position must not be used for adjusting or checking the wiper crank.*
- *When checking, use the normal park position, not the reverse-park position. If necessary, operate touch-wipe function again.*

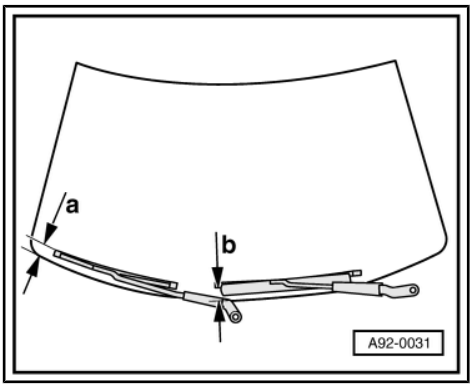
– Switch windscreen wiper off and on and let it move into park position.

– Switch off ignition.

– Check that the distance of the wiper blade ends to plenum chamber cover on lower edge of windscreen are as follows:

- Dimension -a- = 0...10 mm
- Dimension -b- = 10...20 mm

– Adjust wiper arms if necessary:



Adjusting windscreen wiper blades ⇒ Electrical system; Rep. Gr. 92 ; Windscreen wiper blades - park position .

Note

For right-hand drive vehicles the placement is a mirror image!

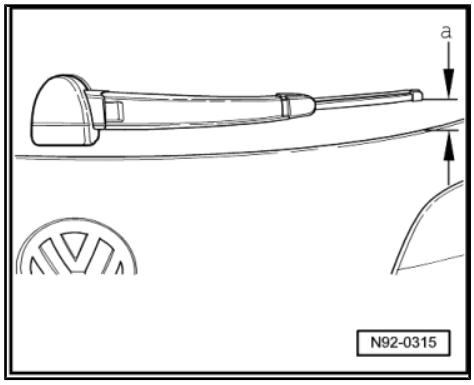
4.49.2 Rear wiper blades: Check park position, Golf Variant 2007‣

– Switch rear window wiper on and off and let it move into park position.

– Check that the distance of wiper blade ends to the lower edge of window is as follows.

♦ Dimension -a- = 15 + 5 mm

– Adjust wiper arm if necessary: “Vehicle electrics/Electrical system” ⇒ Electrical system; Rep. Gr. 92 ; Wiper blade park position “Rear window wiper system/Adjusting rear window wiper park position”.



4.50 Wiper blade protection: Remove

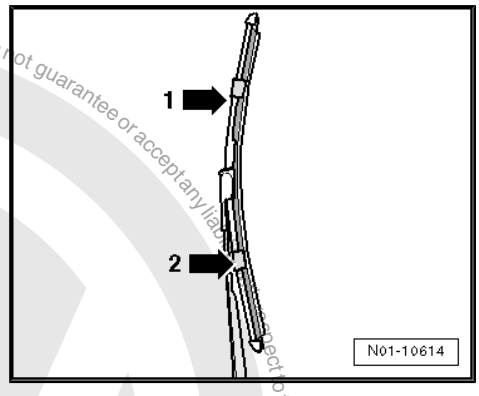
Note

There are 3 different versions of wiper blade protection:

1. Blade protector with 2 securing clips

♦ Identification, blade protector with two securing clips -arrows 1 + 2-.

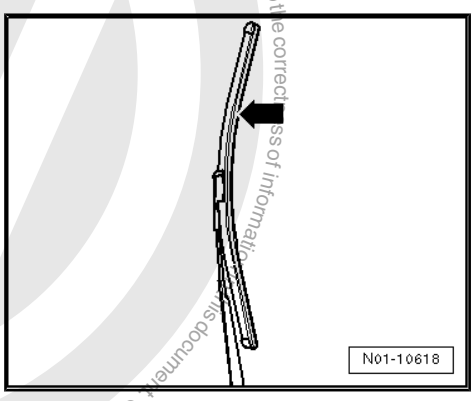
⇒ “4.50.1 Removing wiper blade protection, version 1”, page 167



2. Blade protector to slide on

♦ Identification, the blade protector -arrow- is slid on the wiper blade.

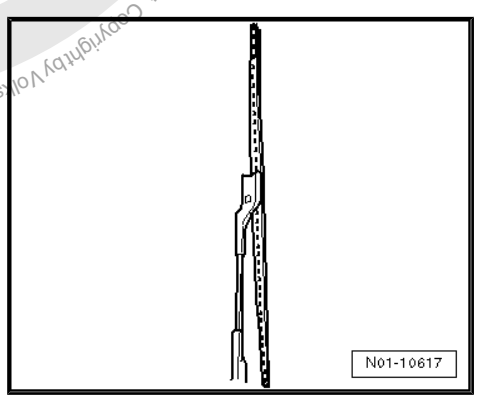
⇒ “4.50.2 Removing wiper blade protection, version 2”, page 167



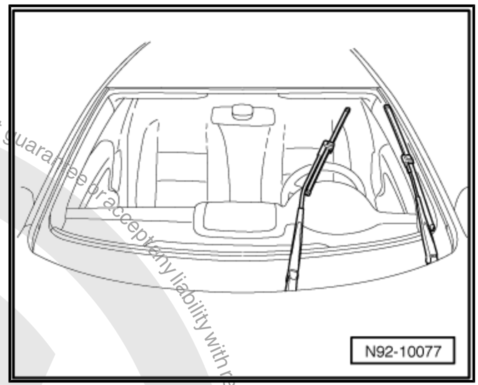
3. Transport wiper blade

♦ Identification, the transport wiper blade is fitted without wind deflector, it must be replaced by the standard wiper blade.

⇒ “4.50.3 Changing wiper blade protection, version 3 -transport wiper blade-”, page 168



4.50.1 Removing wiper blade protection, version 1



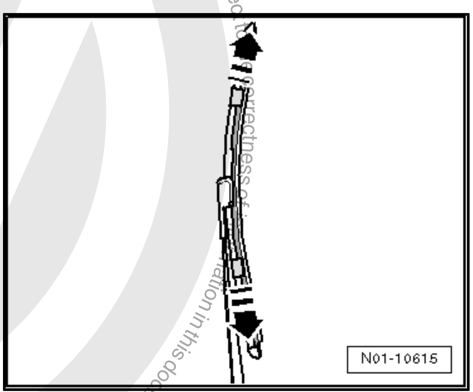
– Switch ignition on and off briefly with bonnet closed.

– When engine is switched off move wiper lever down to touch-wipe function within 10 seconds.

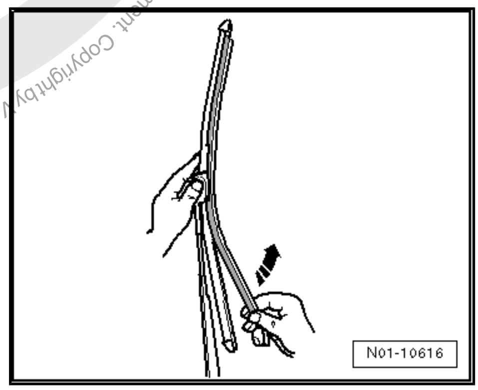
The wipers move in service position.

– Lift the wiper arm away from windscreen.

> ⚠ **Caution**
>
> *When doing this, do not touch the wiper blade to prevent damage.*



– Remove upper securing clip upwards and lower securing clip downwards -arrows-.

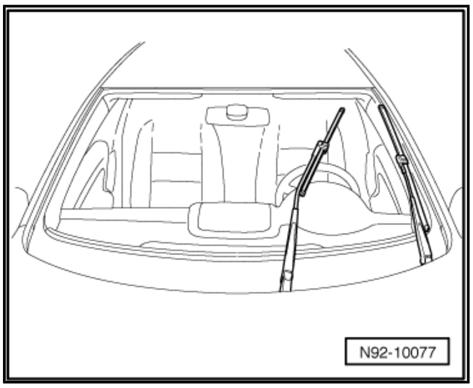


– Pull blade protector off wiper blade from bottom to top, as shown in illustration.

– Carefully place wiper arm back onto windscreen.

– Switch ignition on and briefly operate the wiper lever to move the wipers back to park position. Switch ignition off again.

4.50.2 Removing wiper blade protection, version 2



– Switch ignition on and off briefly with bonnet closed.

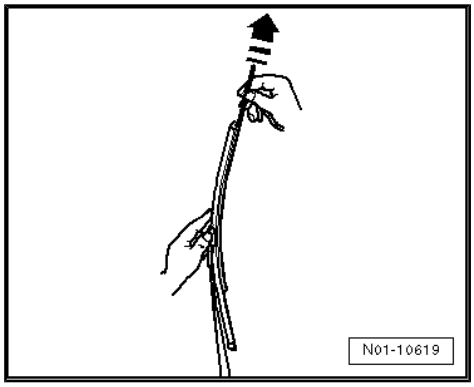
– When engine is switched off move wiper lever down to touch-wipe function within 10 seconds.

The wipers move in service position.

– Lift the wiper arm away from windscreen.

> ⚠ **Caution**
>
> *When doing this, do not touch the wiper blade to prevent damage.*

– Pull blade protector off wiper blade upwards, as shown in illustration.
– Carefully place wiper arm back onto windscreen.
– Switch ignition on and briefly operate the wiper lever to move the wipers back to park position. Switch ignition off again.

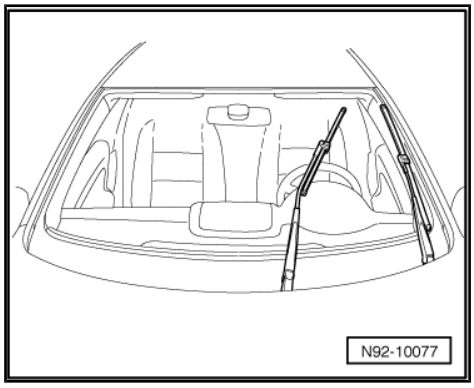


4.50.3 Changing wiper blade protection, version 3 -transport wiper blade-

– Switch ignition on and off briefly with bonnet closed.
– When engine is switched off move wiper lever down to touch-wipe function within 10 seconds.

The wipers move in service position.

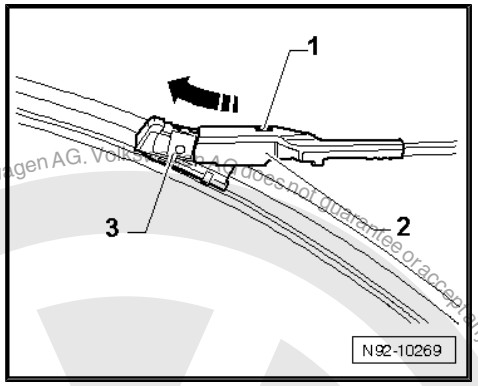
– Lift the wiper arm away from windscreen.



– Depending on version, turn wiper blade with lip upwards and pull off, or release wiper blade at joint -3- by pushing locking device -1- into mounting -2- and pull wiper blade out.
– Slide standard wiper blade into mounting and ensure that it audibly engages, or turn wiper blade with lip down onto stop.

Caution

When doing this, do not touch the wiper blade to prevent damage.

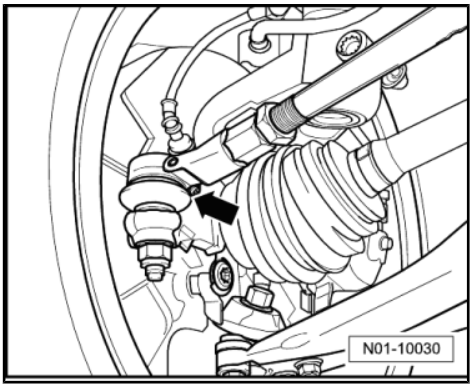


– Carefully place wiper arm back onto windscreen.
– Switch ignition on and briefly operate the wiper lever to move the wipers back to park position. Switch ignition off again.

4.51 Track rod ends: Check play, security and boots

Carry out the following procedure:

- With vehicle raised (wheels hanging free), check play by moving track rods and wheels. Play: Zero play
- Check mountings.
- Check that boots -arrow- are not damaged and are seated correctly.

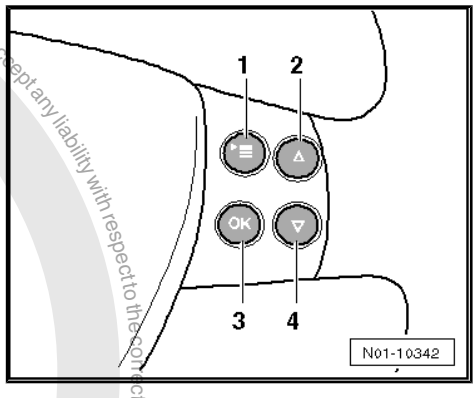


4.52 Auxiliary heater: Set weekday in menu of combi-instrument

As the weekday in the menu for the auxiliary heater is not part of the time and date setting for the combi-instrument, it must be set separately.

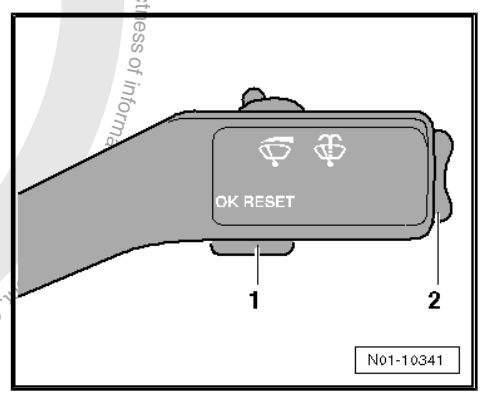
Setting weekday using buttons on multifunction steering wheel

- Press button -1- until the menu for auxiliary heater appears.
- Press button -4- until “Weekday” is shown and select using button -3-.
- Now set weekday using buttons -4- and -2- and confirm with button -3-.
- Exit menu using button -1-.



Setting weekday using buttons on windscreen wiper lever

- Setting in the menu is performed respectively with buttons on the steering wheel.

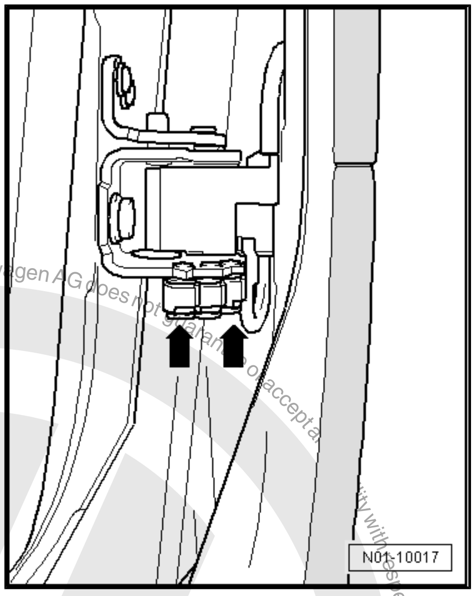


4.53 Door arrester: Grease

Carry out the following procedure:

– Grease door arrester at points shown -arrows-.

Use grease -G 000 150- .



4.54 Transportation mode: Switch off

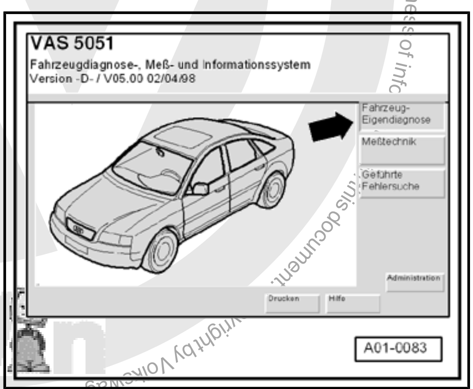
– Connect vehicle diagnostic tester ⇒ page 43 .

– Switch on ignition.

Indicated on display:

Selecting operating mode

– Press button for “Vehicle self-diagnosis” on display.

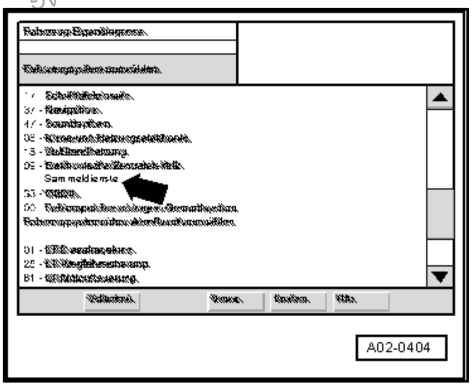


Note

If the display is not as shown in the procedure: ⇒ Operating instructions for vehicle diagnostic, testing and information system -VAS 5051- or vehicle diagnostic and service information system -VAS 5052- .

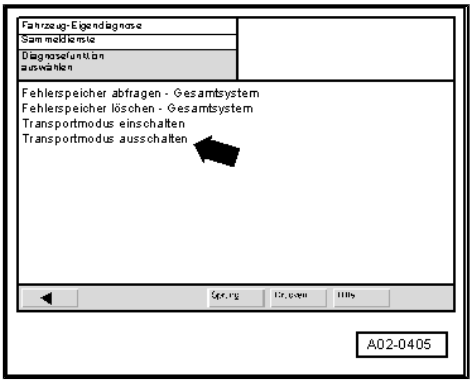
Indicated on display:

– Press the button on display for “Collection services”.



Indicated on display:

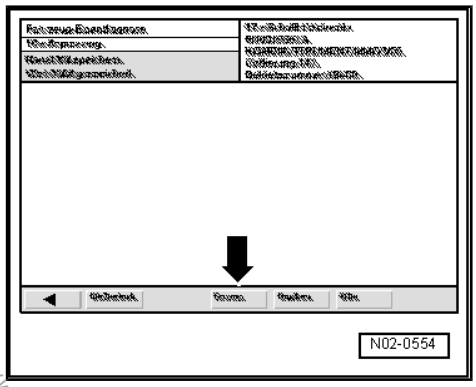
– Press the button on display for “Switch off transportation mode”.



Ending output

Indicated on display:

– Press “GoTo” button on display -arrow-.

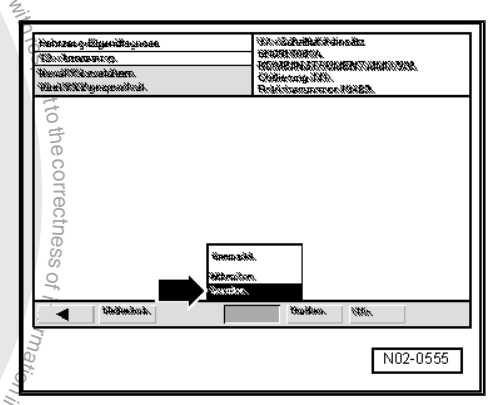


Indicated on display:

– Press the “End” button on display -arrow-.
– Press “End” button in End menu.
– Switch off ignition.

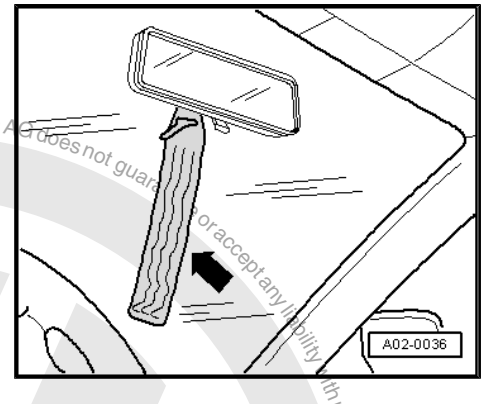
Note

The vehicle diagnostic, testing and information system -VAS 5051- or vehicle diagnostic and service information system -VAS 5052- must remain connected for various tests, if required.



4.55 Transportation devices: Remove blocking pieces from front axle springs

Blocking pieces are fitted to front axle springs of vehicles with sports running gear. These vehicles can be identified by a label hanging on the mirror -arrow-.



Note

The blocking pieces prevent the springs compressing and possible damage to the vehicle when being driven onto a vehicle transporter or railway wagon.

WARNING

The blocking pieces must be removed without reservation before delivering the vehicle. A "Warning" notice, attached to the interior mirror, specifically reminds of this.

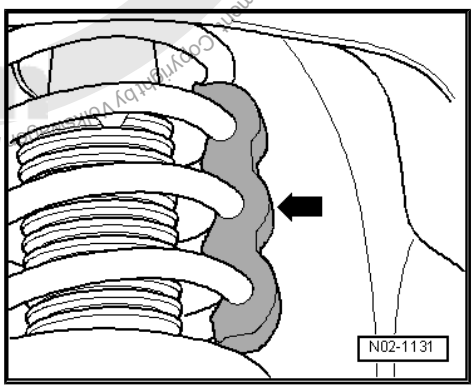
Carry out the following procedure:

Note

- *There is no requirement to remove the wheels.*
- *Ensure that the surface of the springs is not damaged.*

– Relieve weight on springs by raising vehicle with a hoist.

– Push blocking piece -arrow- off coil spring.

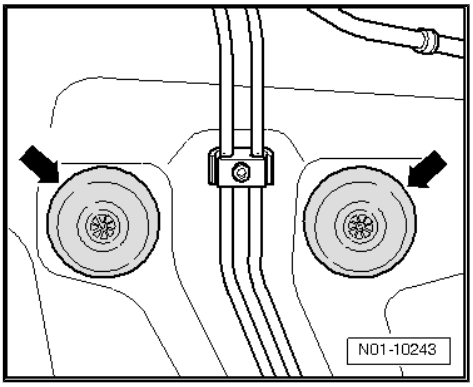


4.56 Underbody sealant: Perform visual check for damage to underbody sealant, underbody panels, routing of lines and plugs

During visual check, also check floor pan, wheel housings and sills.

Always ensure that all lines are secured in their mountings, all plugs are available and that there is no visible damage on the underbody.

Always ensure that there are no cracks, detachments and corrosion of underbody protection on the sealing caps -arrows-.



Note

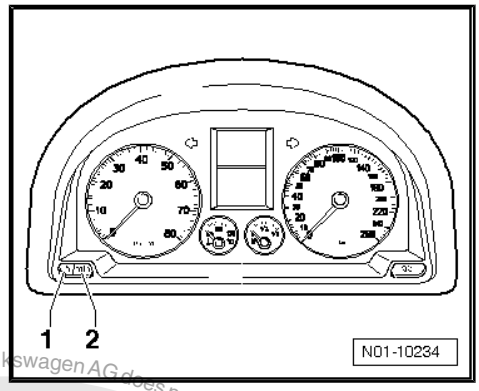
Faults found must always be rectified (repair measure). This inhibits corrosion and rusting through.

4.57 Clock and date: Set to correct time

Setting clock with buttons below rev. counter

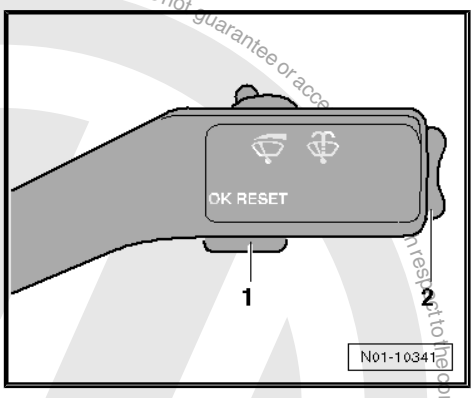
The setting buttons are located on the left below the rev. counter.

- Press the left button -1- to set the hours. Press the button only briefly to advance the time one hour.
- Press the right button -2- to set the minutes. Press the button briefly to advance the time one minute.

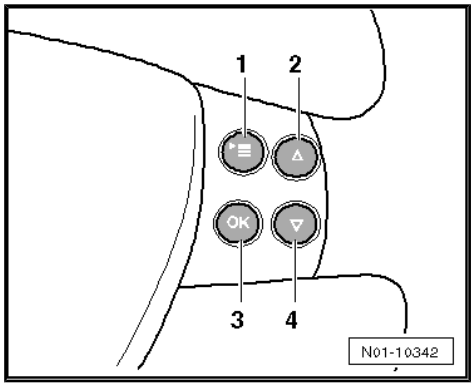


Setting clock and date using buttons on windscreen wiper lever

- Switch on ignition.
- Press button -2- for 2 seconds to open the main menu.
- Press button -2- to select the menu “Settings” and confirm using button -1-.
- Press button -2- to select the menu “Time” and confirm using button -1-.
- Now mark the menu option “Hours” by pressing button -1-, set correct hour using button -2- and confirm with button -1-.
- For the menu option “Minutes” it is the same procedure.
- The menu “Settings” can be closed via the menu option “back”.
- Now select “MFI” for actual display and confirm this using button -1-.
- Switch off ignition.



Setting clock and date using buttons on multifunction steering wheel

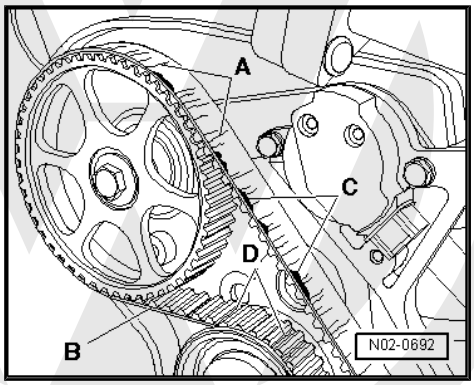


– Switch on ignition.
– Press button -1- until the menu “Settings” appears.
– Then select menu option “Time” with buttons -2- and -4-.
– Confirm the selection with button -3-.
– When “Hours” is marked, the marked menu option is found between the two horizontal lines, confirm with button -3- and set the correct hour with buttons -2- and -4-.
– Press button -3- again and set the minutes, which is the same procedure as for setting the hours.
– The menu can be closed with button -1-.
– Switch off ignition.

4.58 Camshaft drive toothed belt: Check (TDI unit injector engines)

4.58.1 Checking toothed belt condition

– Remove toothed belt guard ⇒ diesel engine; Rep. Gr. 15 ; Removing and installing cylinder head .
– Check condition of toothed belt for:



- -A- Cracks, cross-sectional breaks, cracks (coating)
- -B- Side contact
- -C- Fraying of cord strands
- -D- Cracks (in teeth base)
- Layer separation (toothed belt body, draw strands)
- Surface cracks (synthetic coating)
- Traces of oil and grease

Note

If faults are found always renew toothed belt. This will avoid possible breakdowns or operating problems. The replacement of a toothed belt is a repair measure.

4.59 Toothed belt and toothed belt tensioning roller: Renew (TDI engines)

Note

Generally it is not necessary to renew the toothed belt before the actual change interval is reached. Especially cracks on the belt side are not relevant for service life and cannot be covered by goodwill or warranty processing.

– Removing and installing toothed belt, ⇒ Power unit; Rep. Gr. 15 ; Cylinder head, valve gear / removing and installing toothed belt .

4.60 Camshaft drive toothed belt: Renew (2.0 l FSI and TFSI)

Note

Generally it is not necessary to renew the toothed belt before the actual change interval is reached. Especially cracks on the belt side are not relevant for service life and cannot be covered by goodwill or warranty processing.

– Removing and installing toothed belt, ⇒ Power unit; Rep. Gr. 15 ; Cylinder head, valve gear / removing and installing toothed belt .

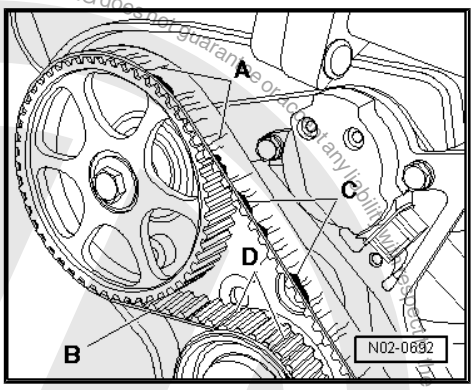
4.61 Camshaft drive toothed belt: Check (4-cylinder petrol engines 1.4 l and 1.6 l)

4.61.1 Checking toothed belt condition

– Remove toothed belt cover ⇒ 4-cylinder injection engine; Rep. Gr. 15 ; Removing and installing cylinder head .

– Check condition of toothed belt for:

- -A- Cracks, cross-sectional breaks, cracks (coating)
- -B- Side contact
- -C- Fraying of cord strands
- -D- Cracks (in teeth base)
- Layer separation (toothed belt body, draw strands)
- Surface cracks (synthetic coating)
- Traces of oil and grease



Note

If faults are found always renew toothed belt. This will avoid possible breakdowns or operating problems. The replacement of a toothed belt is a repair measure.

4.62 Spark plugs: Renew

Renewing spark plugs, 1.4 l injection engine ⇒ page 177 .

Renewing spark plugs, 1.4 l TSI engines (90 kW) ⇒ page 181 .

Renewing spark plugs, 1,4 l TSI engines (103 kW, 118 kW, 125 kW) ⇒ page 179 .

Renewing spark plugs, 1.6l petrol injection engines ⇒ page 188 .

Renewing spark plugs, 1.6 l FSI engines ⇒ page 183 .

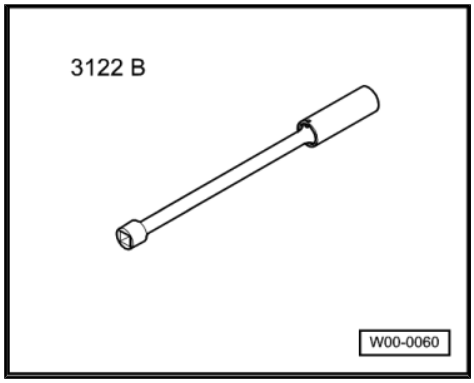
Renewing spark plugs, 2.0 l FSI / 2.0 l TSI engines ⇒ page 184 .

Renewing spark plugs, 2.0 l TFSI engines ⇒ page 186 .

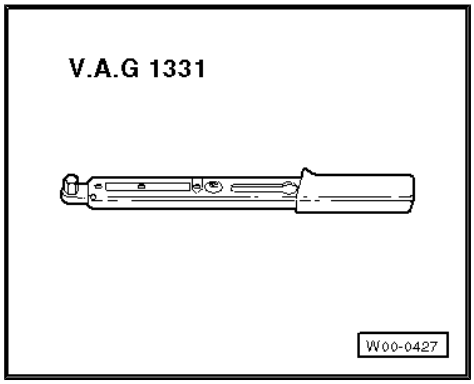
Renewing spark plugs, 2.5 l petrol injection engines ⇒ page 189 .

Special tools and workshop equipment required

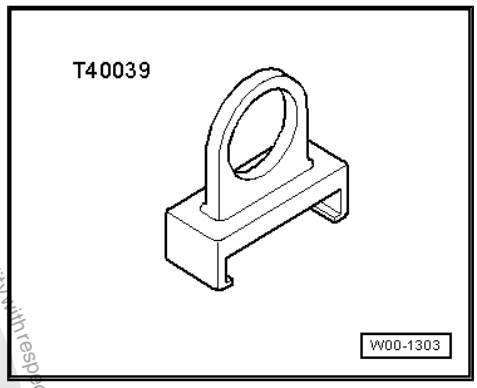
- Spark plug socket and extension -3122 B-



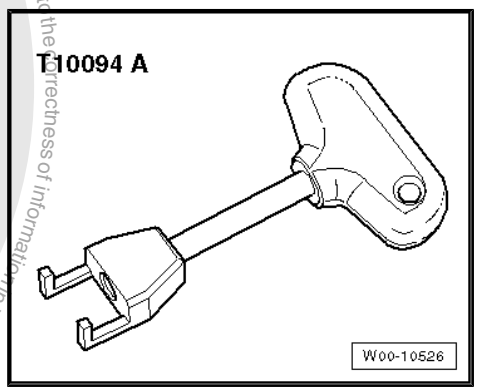
- Torque wrench -V.A.G 1331-



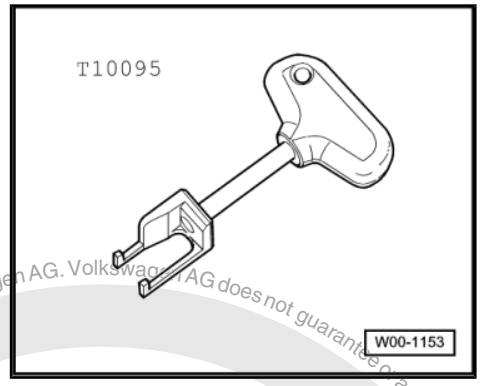
- Puller -T40039-



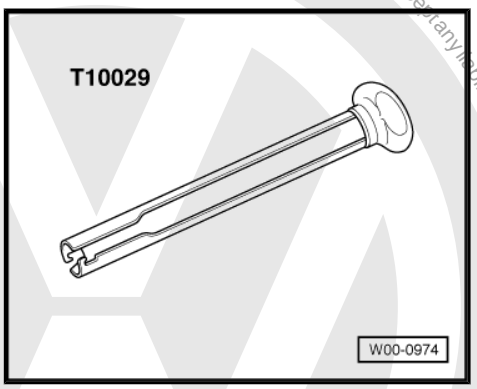
- Puller -T10094 A-



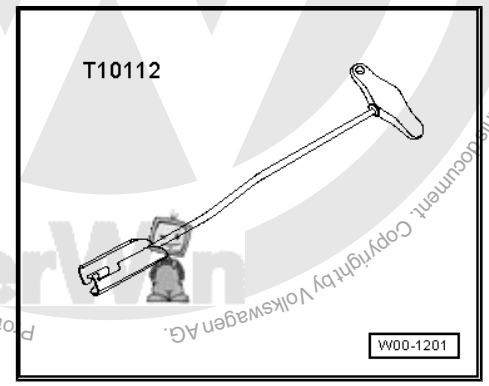
- Puller -T10095-



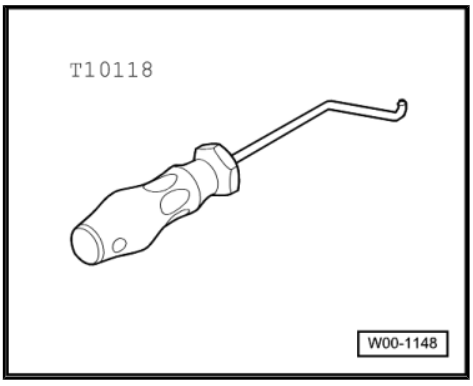
- Assembly tool -T10029-



- Puller -T10112-



- Seal puller -T10118-

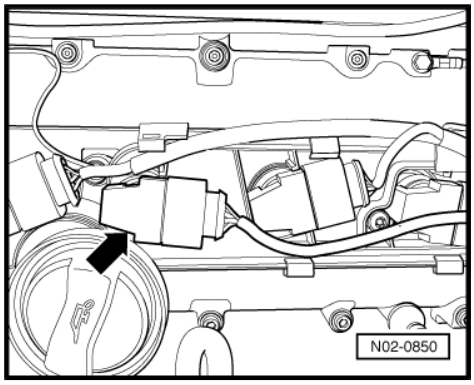


4.62.1 Renewing spark plugs, 1.4 l petrol injection engine

Removing

– Remove engine cover ⇒ page 105 .

The spark plugs are located under ignition coils with output stages -arrow-.

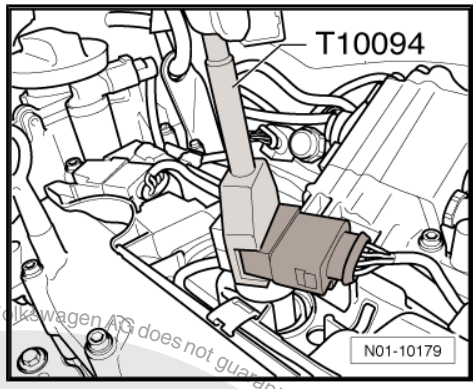


Note

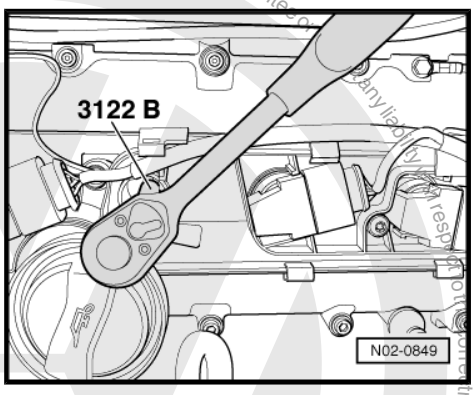
Note installation position of ignition coils with output stages.

– Pull ignition coils with output stages off spark plugs using the puller -T10094 A- .

– Press connector in direction of ignition coils with output stage, press onto catch by hand and pull off.



– Unscrew spark plugs using spark plug socket and extension -3122 B- .



Note

- *Spark plug designation and torque setting: “Power unit” ⇒ Rep. Gr. 28 “Repairing ignition system/test data”.*
- *Observe disposal regulations!*

Installing

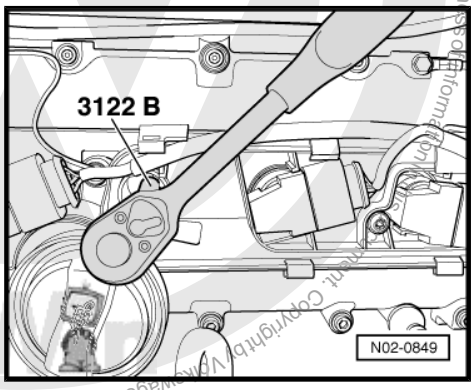
– Screw in new spark plugs using spark plug socket and extension -3122 B- .

– Connect connector to ignition coils with output stage and guide ignition coils with output stage into cylinder head.

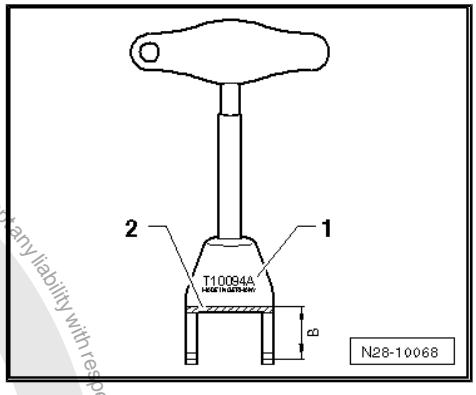
– Align ignition coils with output stages in respective recesses of cylinder head cover.

– Connect ignition coils with output stages onto spark plugs by hand. They must be felt to engage.

– Install engine cover.



4.62.2 Renewing spark plugs, 1.4 l TSI engines (103 kW, 118 kW, 125 kW)



Note

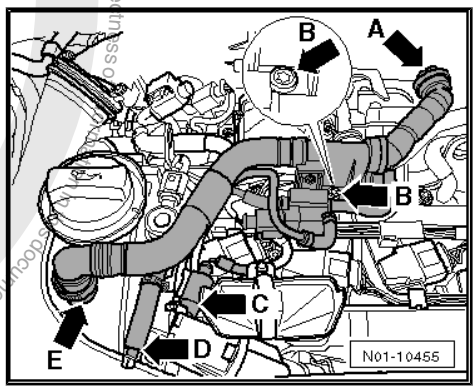
The ignition coil housings with output stages have changed. As a result, these ignition coils can only be removed and installed with puller -T10094 A-. The previous puller -T10094- can further be used if adapted as described below.

– Using suitable workshop tools mill marked area -2- to reach new nominal dimension -B- of 18 mm.

– Also mark tool identification with letter A -1-.

Removing:

– Remove engine cover ⇒ page 105 .



Note

To simplify removing and installing spark plugs, loosen some components and place them to side.

Caution

To prevent damage to the connection and to vacuum hose, do not use sharp-edged tools when pulling hose off.

– Pull off connector -arrow C-.

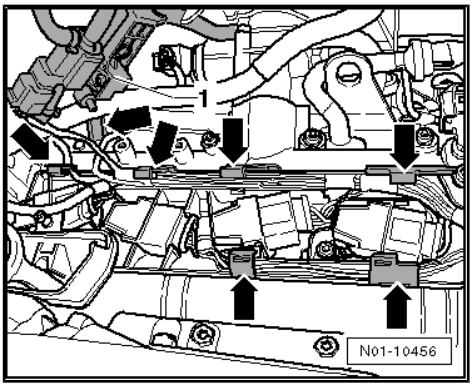
– Pull off hose ends -arrow A- and -arrow E- (press together to release).

– Pull off hose -arrow D-.

– Remove bolt -arrow B-.

– Raise hose with bracket and charge pressure control solenoid valve -1- and place to side.

– Disengage clamps of cable guide -arrows-.



Note

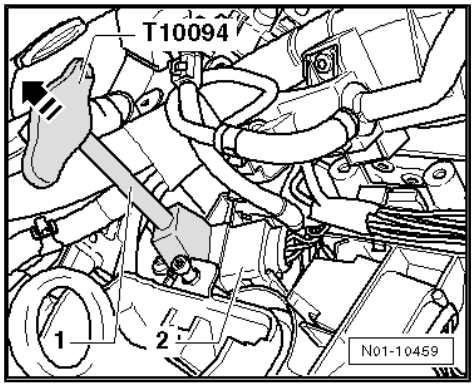
- *When pulling out the ignition coils with output stages, the cables or the ignition coil connectors can remain connected.*
- *Note installation position of ignition coils with output stages.*

– Carefully place ignition coils with output stages and cables connected to side.

Caution

Ensure that the cables are not kinked or damaged.

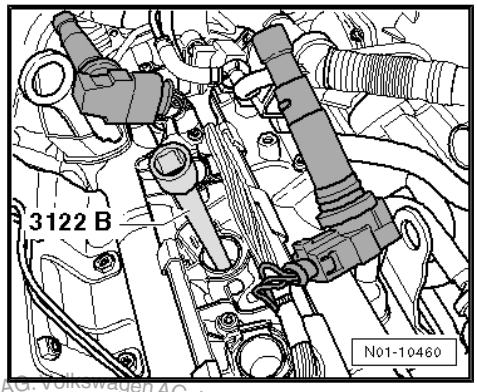
– Seat puller -T10094 A- on ignition coil with output stage.
– Pull out ignition coil with output stage and carefully place to side.



– Unscrew spark plugs using spark plug socket and extension -VAS 3122B- .

Installing:

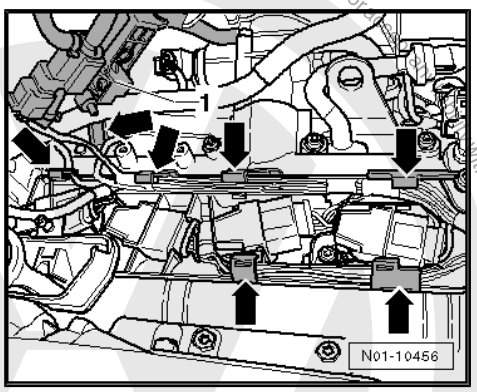
– Screw in new spark plugs using spark plug socket and extension -VAS 3122B- .



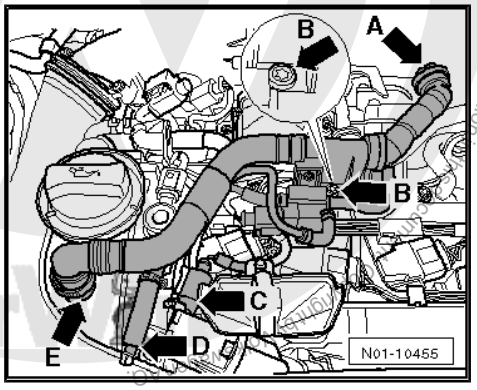
Note

- *Spark plug designation and torque setting ⇒ Power unit; Rep. Gr. 28 ; Test data, spark plugs*
- *Observe disposal regulations!*

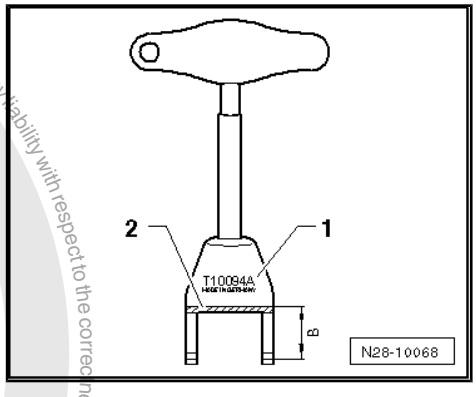
– Place puller -T10094- on ignition coil with output stage.
– Push ignition coil with output stage into cylinder head until they noticeably engage.
– Route cables properly in cable guide.
– Engage clamps of cable guide -arrows-.
– Set hose with bracket and charge pressure control solenoid valve -1- to original installation position.



– Connect connector -arrow C-.
– Connect hose ends -arrow A- and -arrow E-.
– Connect hose -arrow D-.
– Tighten bolt -arrow B-.
– Install engine cover ⇒ page 105 .



4.62.3 Renewing spark plugs, 1.4 l TSI engines (90 kW)



Note

The ignition coil housings with output stages have changed. As a result, these ignition coils can only be removed and installed with puller -T10094 A-. The previous puller -T10094- can further be used if adapted as described below.

– Using suitable workshop tools mill marked area -2- to reach new nominal dimension -B- of 18 mm.

– Also mark tool identification with letter A -1-.

Removing:

– Remove engine cover ⇒ page 105 .

Note

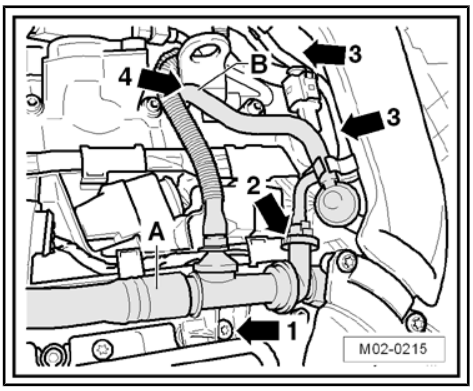
To simplify removing and installing spark plugs, loosen some components and place them to side.

– Remove bolt -arrow 1-.

– Pull off line -arrow 2-, (press together to release).

– Pull hoses -arrows 3- out of bracket.

– Pull hose -B- off connection -arrow 4-.

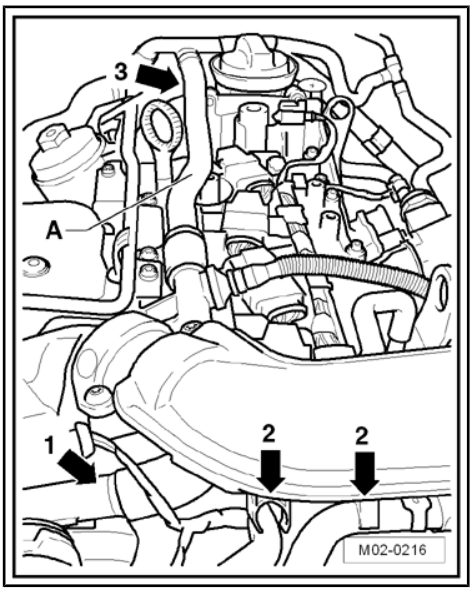


– Pull hose off connection -arrow 1-.

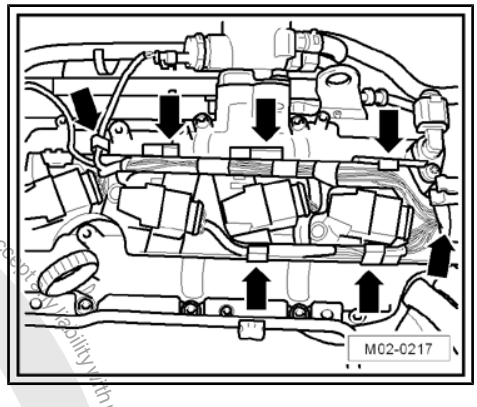
– Pull hoses -arrows 2- out of bracket.

– Pull line -A- off connection -arrow 3-.

– Place line -A- to side.



– Disengage clamps of cable guide -arrows-.



Note

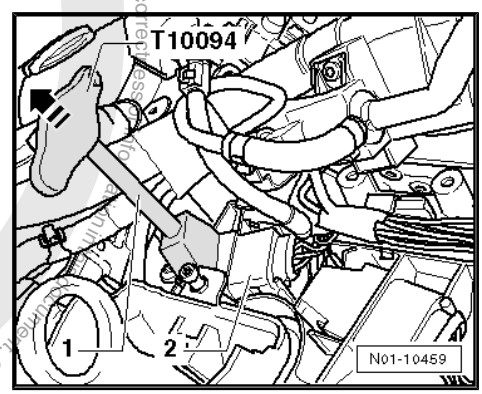
- *When pulling out the ignition coils with output stages, the cables or the ignition coil connectors can remain connected.*
- *Note installation position of ignition coils with output stages.*

– Carefully place ignition coils with output stages and cables connected to side.

Caution

Ensure that the cables are not kinked or damaged.

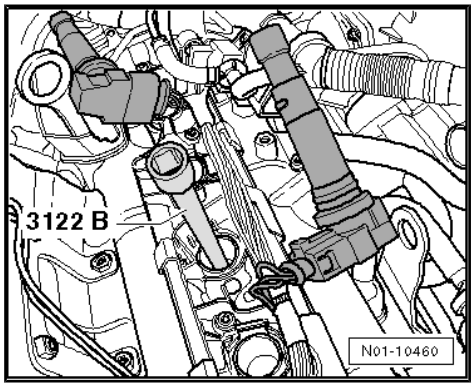
– Seat puller -T10094 A- on ignition coil with output stage.
– Pull out ignition coil with output stage and carefully place to side.



– Unscrew spark plugs using spark plug socket and extension -VAS 3122B- .

Installing:

– Screw in new spark plugs using spark plug socket and extension -VAS 3122B- .

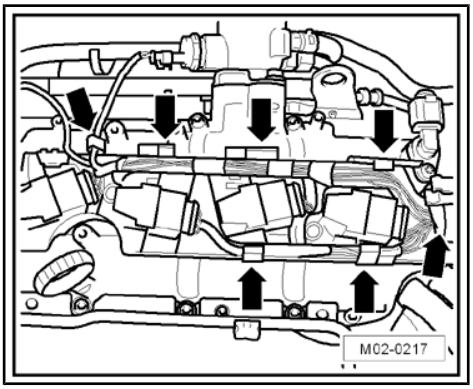


Note

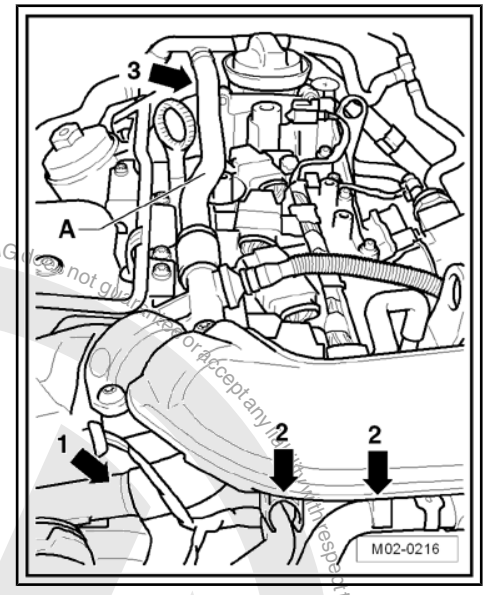
- *Spark plug designation and torque setting ⇒ Power unit; Rep. Gr. 28 ; Test data, spark plugs*
- *Observe disposal regulations!*

– Place puller -T10094 A- on ignition coil with output stage.
– Push ignition coil with output stage into cylinder head until they noticeably engage.
– Route cables properly in cable guide.

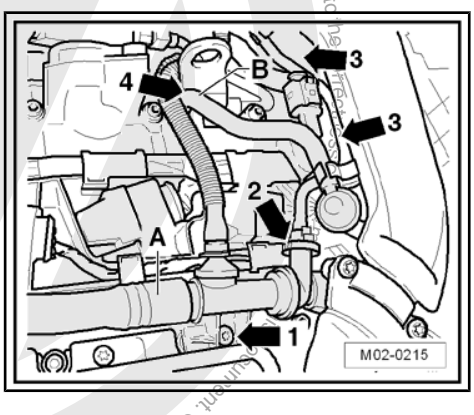
– Engage clamps of cable guide -arrows-.



– Connect line -A- on connection -arrow 3-.
– Fit hose on connection -arrow 1-.
– Insert hoses -arrows 2- into bracket.



– Fit bolt -arrow 1- and tighten to 10 Nm.
– Connect line -arrow 2-.
– Insert hoses -arrows 3- into brackets.
– Fit hose -B- on connection -arrow 4-.
– Install engine cover ⇒ page 105 .

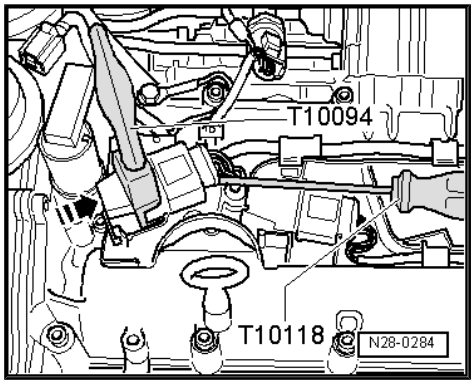


4.62.4 Renewing spark plugs, 1.6 l FSI engines

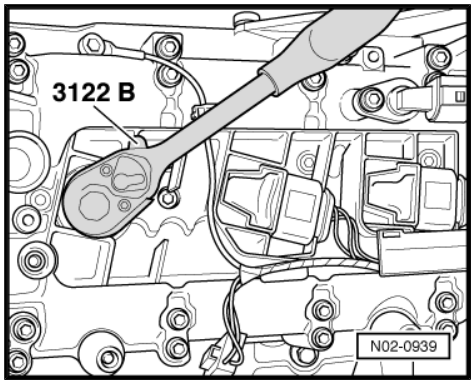
Carry out the following procedure:

– Remove engine cover ⇒ page 105 .

– Place puller -T10094- on ignition coil with output stage -arrow-.
– Slightly pull out ignition coil with output stage.
– Fit assembly tool -T10118- as illustrated.
– Release connection locking device carefully and pull off connector.
– Pull out ignition coil with output stage.



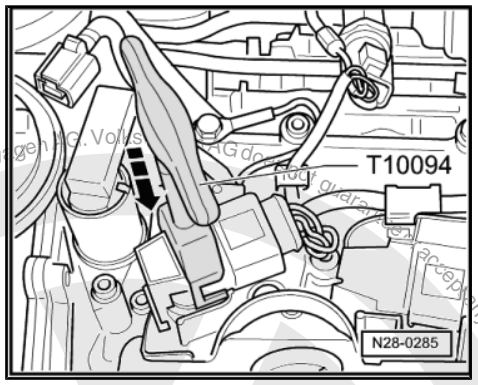
– Unscrew spark plug using spark plug wrench -3122 B- .
– Screw in new spark plugs using spark plug socket and extension -3122 B- .



Note

- *Spark plug designation and torque setting ⇒ Power unit; Rep. Gr. 28 ; Test data, spark plugs*
- *Observe disposal regulations!*

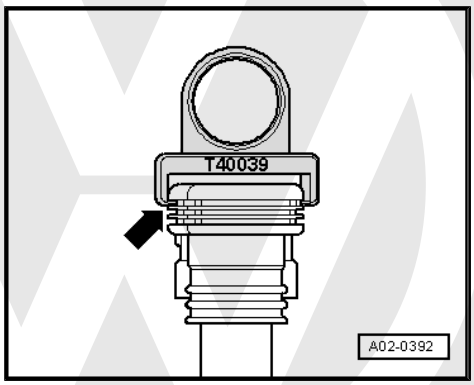
– Place puller -T10094- on ignition coil with output stage.
– Slide connector on ignition coil with output stage until it audibly engages.
– Push ignition coil with output stage -arrow- into cylinder head.
– Install engine cover ⇒ page 105 .



4.62.5 Renewing spark plugs, 2.0 l FSI / 2.0 l TSI engines

Removing:

Carry out the following procedure:

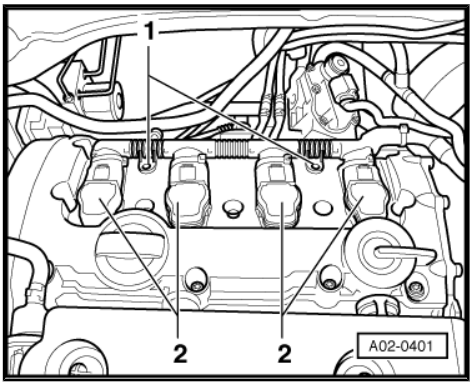


Note

- *To pull off spark plugs, fit puller -T40039- on top, thick rib -arrow- of ignition coils with output stages.*
- *If the lower ribs are used, they could be damaged.*

– Remove engine covers ⇒ page 105 .

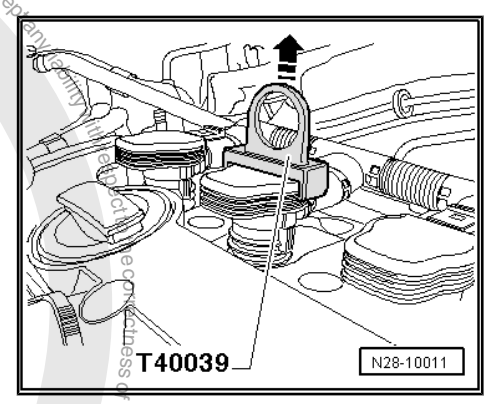
The spark plugs are located below the ignition coils with output stages -2-.



Note

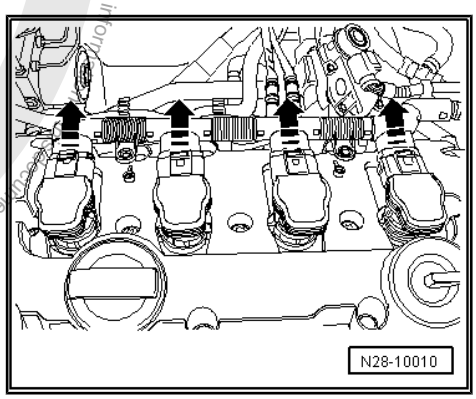
Note installation position of ignition coils with output stages.

– Remove the two bolts -1-.

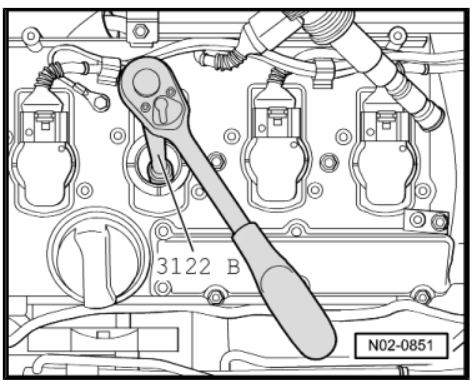


– Pull all ignition coils out of cylinder head approx. 30 mm in direction of arrow using puller -T40039- .

– Press connectors in direction of ignition coils with output stages, press onto catch by hand and pull connectors -arrows- off.



– Unscrew spark plugs using spark plug socket and extension -3122 B- .

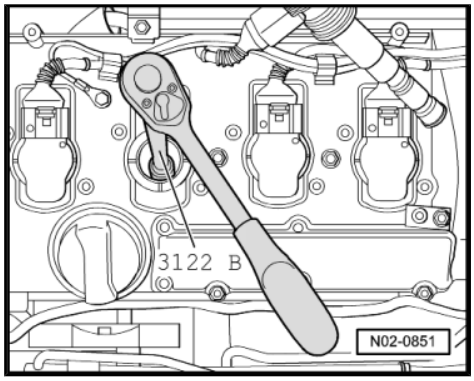


Note

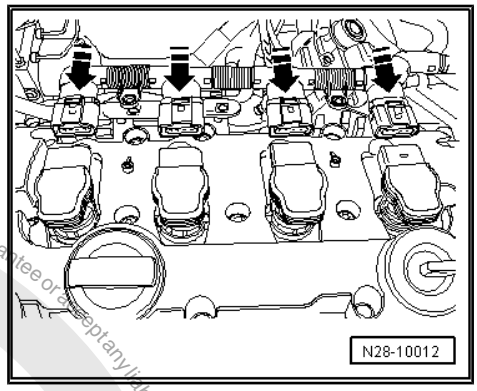
- *Spark plug designation and torque setting ⇒ Power unit; Rep. Gr. 28 ; Test data, spark plugs*
- *Observe disposal regulations!*

Installing

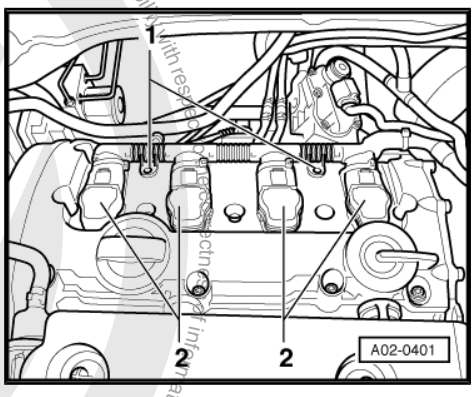
– Screw in new spark plugs using spark plug socket and extension -3122 B- .



– Insert ignition coils with output stages into cylinder head.
– Align ignition coils with output stages in respective recesses of cylinder head cover.
– Fit all connectors onto ignition coils -arrows-.



– Press ignition coils with output stages on spark plugs until stop by hand. They must be felt to engage.
– Secure cable guides with bolts -1-.
– Install engine cover.



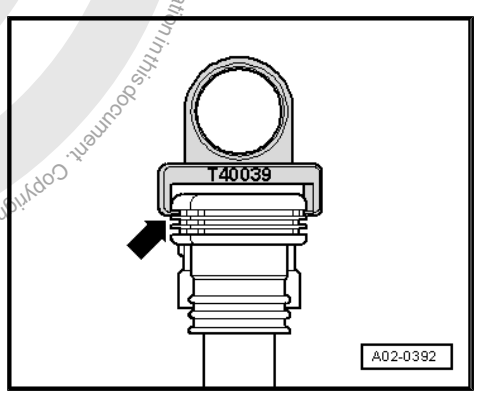
4.62.6 Renewing spark plugs, 2.0 l TFSI engines

Removing:

Carry out the following procedure:

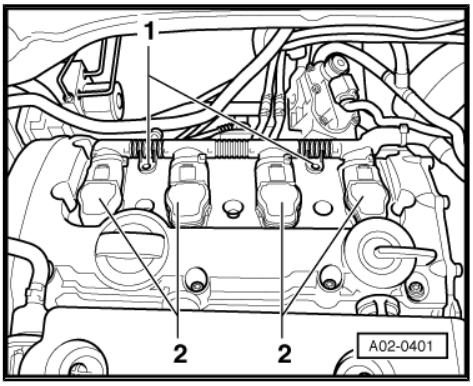
Note

- *To pull off spark plugs, fit puller -T40039- on top, thick rib -arrow- of ignition coils with output stages.*
- *If the lower ribs are used, they could be damaged.*



– Remove engine covers ⇒ page 105 .

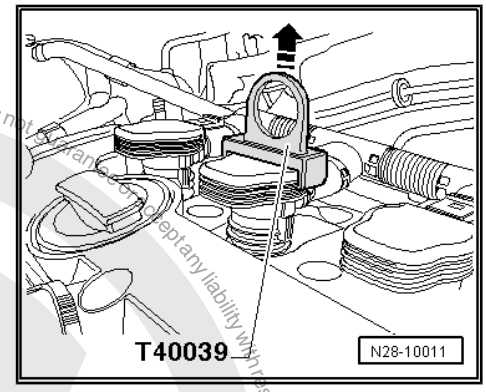
The spark plugs are located below the ignition coils with output stages -2-.



Note

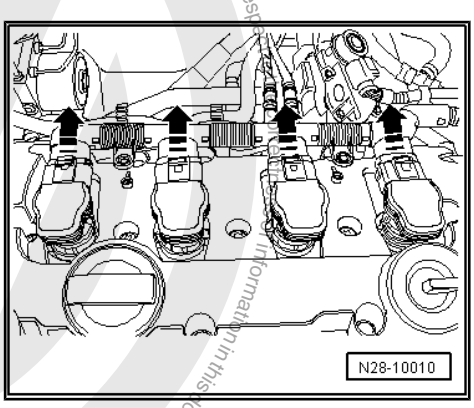
Note installation position of ignition coils with output stages.

– Remove the two bolts -1-.

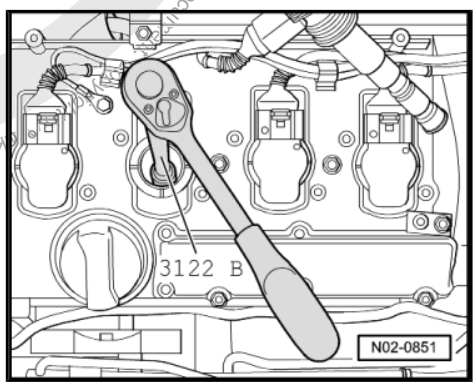


– Pull all ignition coils out of cylinder head approx. 30 mm in direction of arrow using puller -T40039- .

– Press connectors in direction of ignition coils with output stages, press onto catch by hand and pull connectors -arrows- off.



– Unscrew spark plugs using spark plug socket and extension -3122 B- .

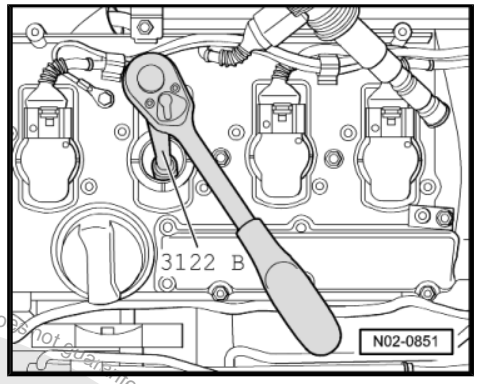


Note

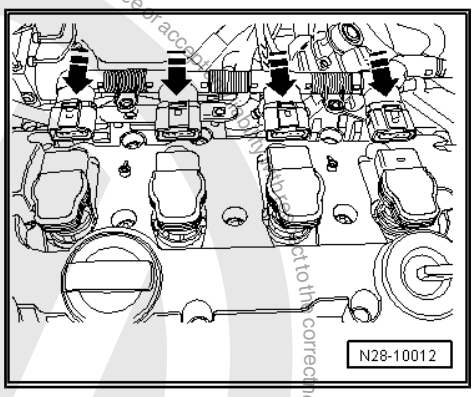
- *Spark plug designation and torque setting ⇒ Power unit; Rep. Gr. 28 ; Test data, spark plugs*
- *Observe disposal regulations!*

Installing

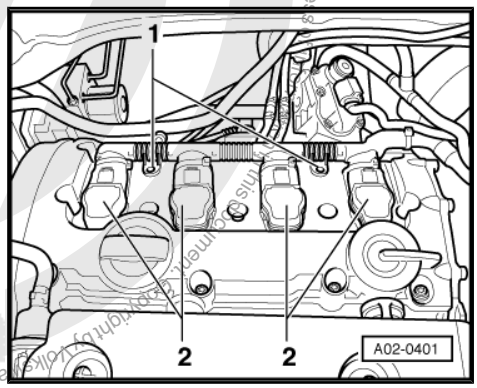
– Screw in new spark plugs using spark plug socket and extension -3122 B- .



– Insert ignition coils with output stages into cylinder head.
– Align ignition coils with output stages in respective recesses of cylinder head cover.
– Fit all connectors onto ignition coils -arrows-.



– Press ignition coils with output stages on spark plugs until stop by hand. They must be felt to engage.
– Secure cable guides with bolts -1-.
– Install engine cover.



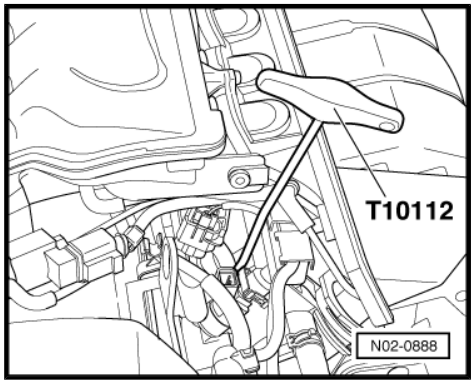
4.62.7 Renewing spark plugs, 1.6l petrol injection engines

Carry out the following procedure:

– Remove engine cover ⇒ page 105 .

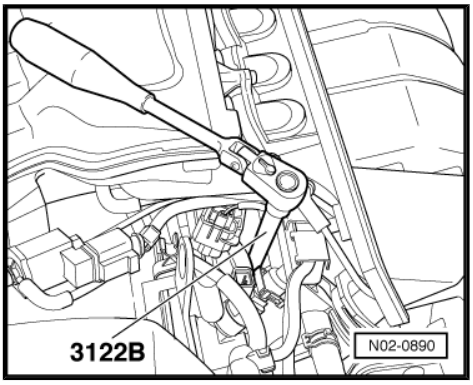
Removing:

– Pull off injector connectors of first and fourth cylinder.



– Pull off spark plug connector with assembly tool -T10112- .

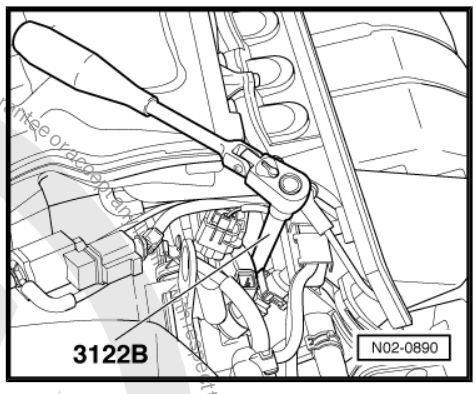
– Remove spark plug with spark plug socket and extension -3122 B- .



Note

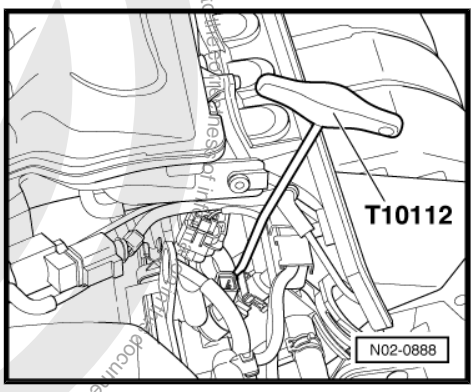
- *Spark plug designation and torque setting ⇒ Power unit; Rep. Gr. 28 ; Test data, spark plugs*
- *Observe disposal regulations!*

Installing:



– Screw in new spark plugs using spark plug socket and extension -3122 B- .

– Fit spark plug connectors using puller -T10112- .



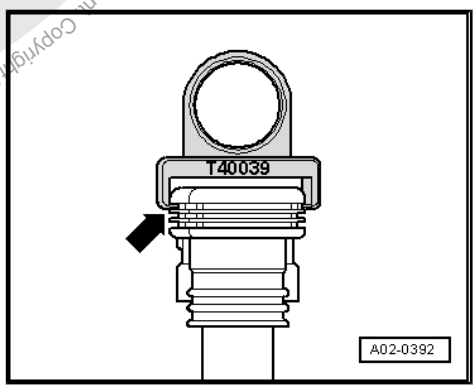
– Fit connectors of injectors.

– Check that injector connectors, ignition cables and spark plug connectors are fitted securely.

– Install engine cover again.

4.62.8 Renewing spark plugs, 2.5 l petrol injection engines

Removing:



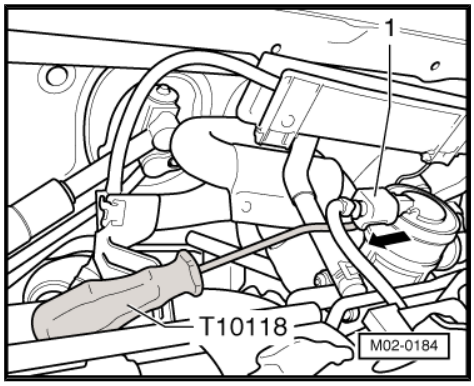
Note

- *To pull off spark plugs, fit puller -T40039- on top, thick rib -arrow- of ignition coils with output stages.*
- *If the lower ribs are used, they could be damaged.*

– Remove engine cover ⇒ page 105 .

The spark plugs are located below the ignition coils with output stages.

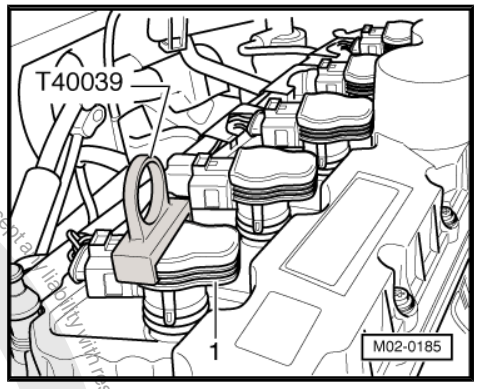
– Remove connector -1- in direction of arrow, using assembly tool -T10118- .



Note

It is necessary to remove the connector so that the ignition coils with output stages, cables connected and the cable guide can be laid to side.

– Remove all ignition coils with output stages -1- upwards using puller -T40039- .



Note

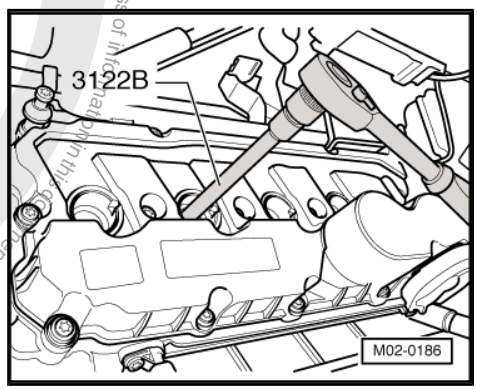
- *When pulling out the ignition coils with output stages, the cables or the ignition coil connectors can remain connected.*
- *Note installation position of ignition coils with output stages.*

– Carefully place ignition coils with output stages and cables connected to side.

Caution

Ensure that the cables are not kinked or damaged.

– Unscrew spark plugs using spark plug socket and extension -3122 B- .



Installing

– Screw in new spark plugs using spark plug wrench -3122 B- and tighten to 20 Nm.

– Insert ignition coils with output stages in cylinder head and align ignition coils in respective recesses of cylinder head cover.

– Push ignition coils with output stages onto spark plugs until stop, they must be felt to engage.

– Connect connector onto exhaust recirculation valve until it noticeably engages.

Note

Ensure that the cable guide for ignition coils with output stages is routed correctly.

– Install engine cover ⇒ page 105 .

5 Exhaust emissions test

Emissions test intervals:

Vehicles with regulated catalytic converter or vehicles with diesel engine:

Note

- *Please observe the country specific legal regulations.*
- *The exhaust emissions test described below has been created according to the legal regulations valid in Germany.*

- 3 years after initial registration and then every 2 years.
- Vehicles for commercial passenger transport, e.g. taxis: every 12 months.

- Exhaust emissions test for petrol engines with OBD ⇒ page 191
- Exhaust emissions test for diesel engines ⇒ page 199

5.1 Exhaust emissions test for petrol engines with OBD

Caution

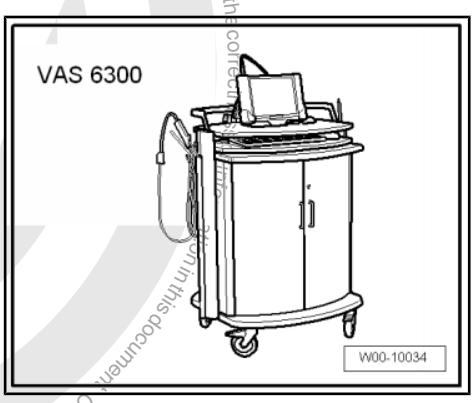
- *Observe "SAFETY AND DAMAGE AVOIDANCE PRECAUTIONS" in the operating instructions for VAS 6300.*

Note

- *The following description refers to vehicles fitted with "On-board diagnosis" OBD with regulated catalytic converter.*
- *The OBD monitors all components and part systems influencing the exhaust emissions quality.*

Special tools and workshop equipment required

- Emissions testing station -VAS 6300-



- OBD adapter cable -VAS 5052/16-

Note

- ♦ *It is only possible to carry out an exhaust emissions test when all units of the emissions testing station -VAS 6300- are connected properly and combined with each other according to operating instructions.*
- ♦ *All work to be performed is displayed by the emissions testing station -VAS 6300- .*

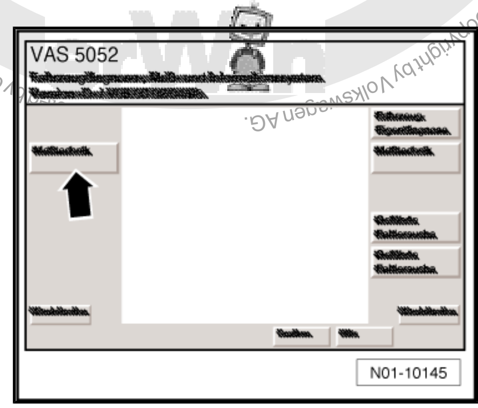
Test prerequisites:

- All test conditions and data required for exhaust emissions test are found on EET data sheet for the respective engine.
- For bar code reading of specified data for EET, the EET data sheet must be printed out.
- Automatic gearbox: Selector lever in position “P” or “N”.
- Manual gearbox: Gear lever in neutral
- Handbrake pulled on

– Perform exhaust emissions test according to instructions on display.

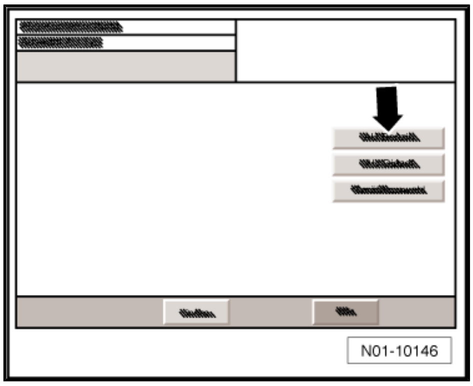
Initial screen:

– Select button -arrow- “exhaust emissions test”.

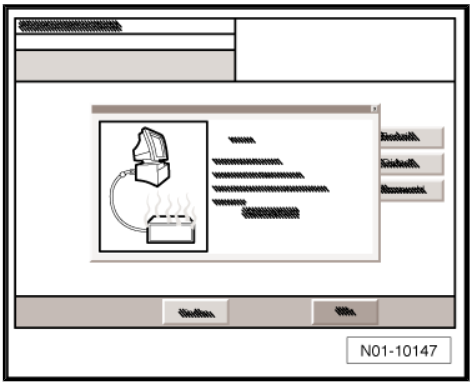


An overview is displayed to select the respective EET type.

– Select “EET petrol” -arrow-.



The display for warm-up phase appears.



– Continue exhaust emissions test according to instructions on display.
– If the EET specification selection is displayed, select respective “EET specification selection”, -arrow-.

♦ When exhaust emissions test is performed for the first time, either select “Standard values”,
♦ Or “Last vehicle” when an exhaust emissions test is to be carried out again.

– Select “Continue” on display, see -item 1-.

Vehicle data input:

The vehicle data input menu is displayed.

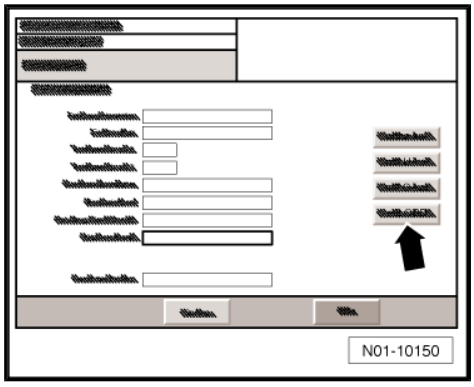
– Enter the following data:

♦ Registration number
♦ Key numbers
♦ Vehicle identification number
♦ Type of fuel
♦ Odometer reading

The following vehicle data can be found in the vehicle registration certificate part 1:

♦ Registration number: “e.g. WOB-HH 1234”
♦ Emission key No. “Field 14.1 (code for field 14)”
♦ Manufacturer: “Field 2”, “Field 2.1 (code for field 2)”
♦ Vehicle identification number “field E”
♦ Type and version “Field D2 (type only)”, “Field 2.2 (code for field D.2)”

– Select “with OBD”, -arrow-.



Specified data input for EET:

There are different ways to enter the specified data:

- 1. Manual input
- 2. Bar code input of EET data sheet
- 3. ELSA web service

Note

- *To use the ELSA web service, the VAS 5052 which is used for the exhaust emissions test, must be integrated in the workshop network.*
- *For the ELSA web service the vehicle specified data are automatically transmitted via the network to the respective mask.*

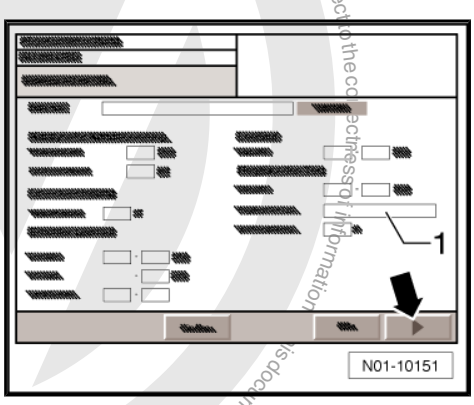
Manual specified data input for EET:

Note

All test conditions and data required for exhaust emissions test
⇒ Data sheets for exhaust emission test for respective engine

– Perform manual data input according to instructions on display.

– Enter displayed values on EET data sheet in column “Test values for exhaust emissions test” on display as follows:



1 - Test speed (idling speed)
2 - Warm-up phase for catalytic converter
3 - Engine temperature
4 - Increased idling speed
5 - CO content at increased idling speed
6 - Lambda at increased idling speed
7 - Idling speed
8 - Select regulating probe type, either “step-type probe”, or “broad-band probe” -item 1-.
9 - Lambda probe value

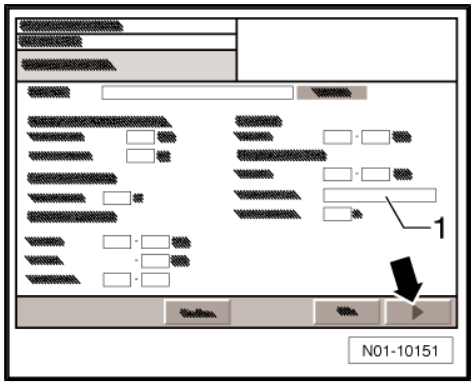
– When all data have been entered properly, press “Continue” button -arrow-.

Specified data input for EET as bar code:

– If specified data for EET are available as bar code, read bar code of EET data sheet with bar code reader.

All data required are shown on display.

– Press □ -arrow- button to continue procedure.

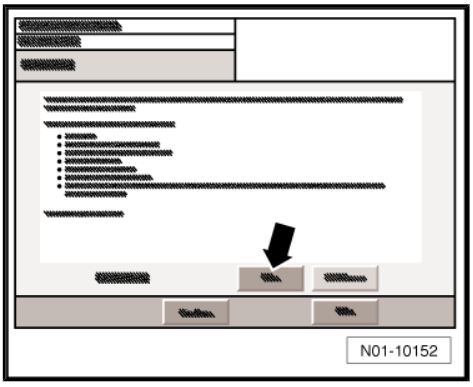


Visual check:

– Follow instructions on display.

– Perform visual check.

– If visual check is OK press “OK” button. -arrow-.



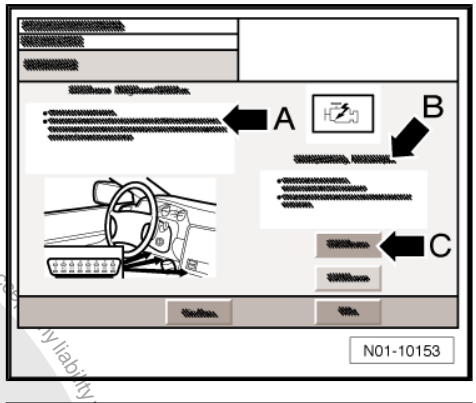
Note

When "not OK" button is pressed a check will be carried out

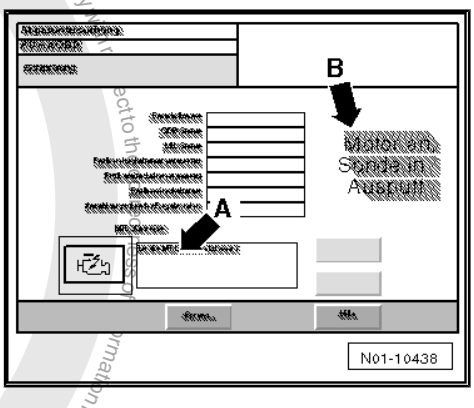
Connecting diagnostic connector:

• Ignition is switched off.

The visual check is displayed with the request to connect the diagnostic connector -arrow A- and to check the MI lamp -arrow B-.



– Follow instructions on display -arrow A- and -arrow B-.

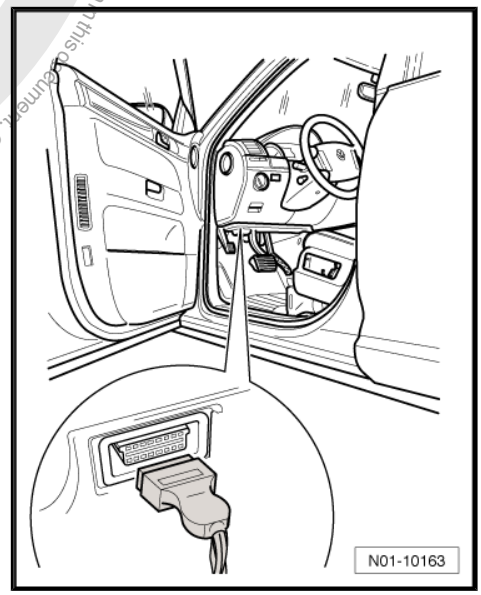


– Connect diagnostic cable connector to EOBD connection.

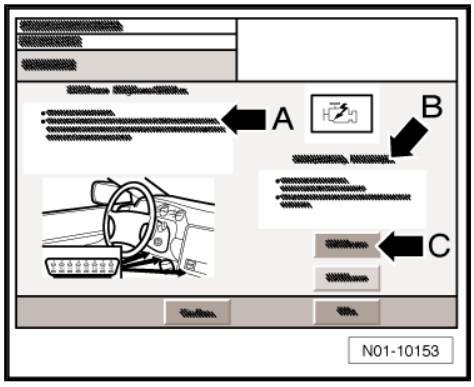
Visual check of MI lamp with ignition switched off:

– Switch on ignition.

– Perform visual check of “MI lamp”.



– If lamp lights up, press “Lamp On” button -arrow C-.



Note

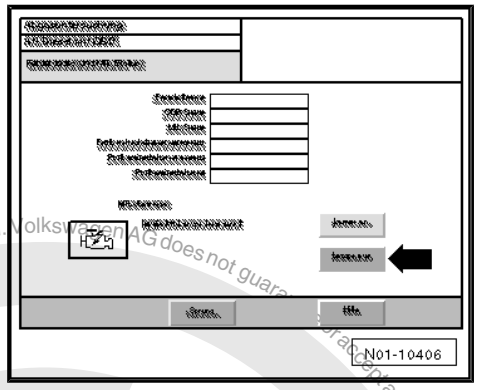
If the MI lamp does not light up during visual check, the result of the exhaust emissions test is “Failed”.

Visual check of MI lamp with engine running:

– Start engine and confirm engine running on display with “Yes”.

– Perform visual check of “MI lamp”, lamp must no longer light up or flash.

– Confirm condition of “MI lamp” -arrow-.



It is automatically switched to test for readiness of operation.

It is checked here if all tests for readiness of operation supported by the control unit have been performed.

– Insert emission probe in exhaust tail pipe.

Note

The exhaust emissions test is only continued when the test probe is in the exhaust tail pipe.

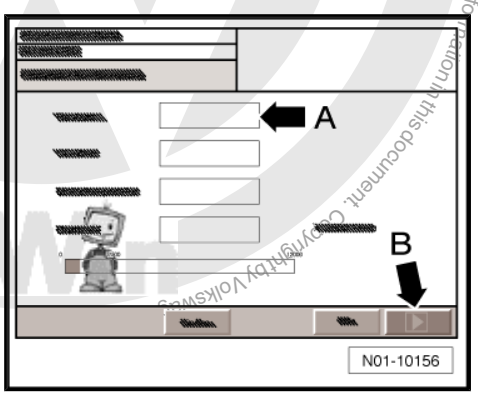
Note

- *If all display values are set to zero, a regulating probe test is not performed.*
- *If not all display values are set to zero, a regulating probe test will be performed later.*

Catalytic converter conditioning:

It is automatically switched to warm-up phase of catalytic converter.

– Follow instructions on display.



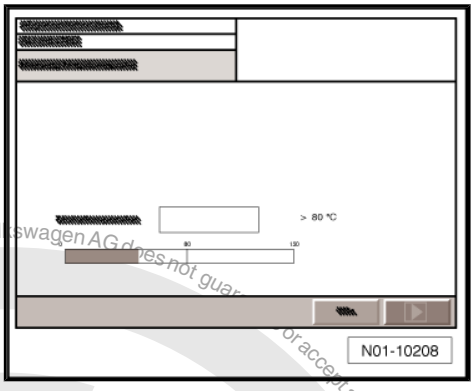
Measurement starts when the engine speed has reached the required level.

– Maintain engine speed in required engine speed range.

The remaining time to perform the warm-up phase is displayed - arrow A -.

Warm-up phase:

It is automatically switched to display for measuring engine temperature.



– Follow instructions on display.

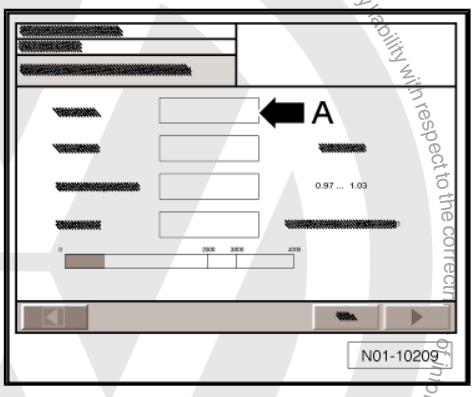
Note

This is only indicated on display if engine temperature has not reached 80 °C.

– Bring engine to required temperature.

Measurement at increased idling speed:

It is automatically switched to display for measuring increased idling speed.



– Follow instructions on display.

Measurement starts when the engine speed has reached the required level.

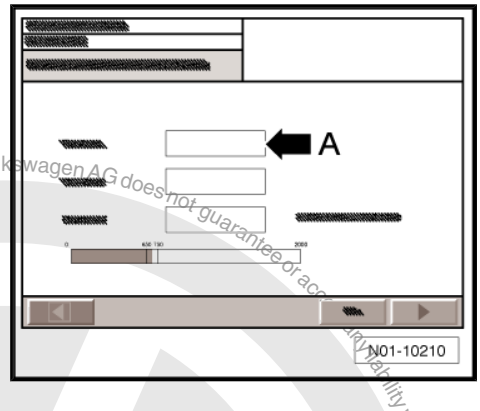
Note

- *Measurement can be skipped using □ button, i.e. the exhaust emissions test has failed.*
- *Measured values are reset using ← button and the test can be repeated.*

– Maintain engine speed in required engine speed range.

The remaining time to perform measurement is displayed -arrow A-.

Measuring idling speed and CO content:



It is automatically switched to display for measuring the idling speed and CO content.

Measurement starts when the engine speed has reached the required level.

The remaining time to perform measurement is displayed -arrow A-.

Regulating probe test:

Note

The regulating probe test is only performed, when "NOT" all display values are set to zero at the test for readiness of operation.

It is automatically switched to display for regulating probe test.

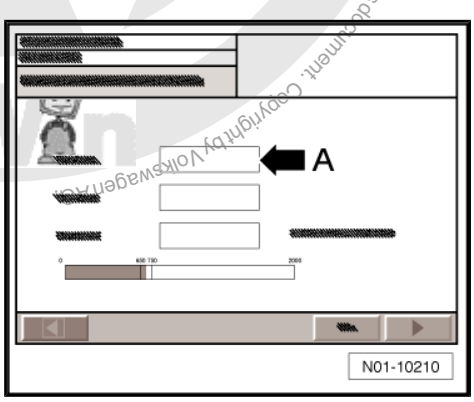
Note

The regulating probe test is performed for every lambda probe individually.

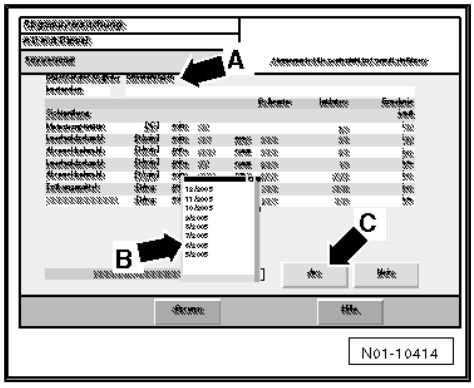
Measurement starts when the engine speed has reached the required level.

– Maintain engine speed in required engine speed range.

The remaining time to perform measurement is displayed -arrow A-.



Evaluation:



When the exhaust emissions test has been performed, the log is shown on display.

The test result is displayed.

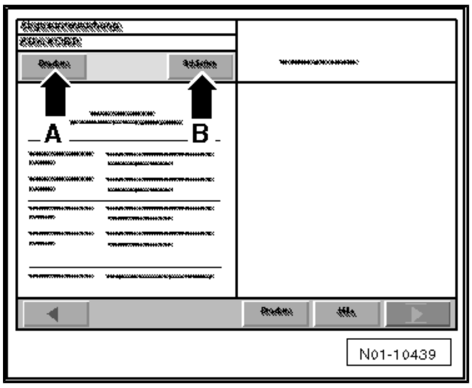
Now remarks concerning the exhaust emissions test can be entered -arrow A-. They will then be included in the test log.

– When the exhaust emissions test is classed as passed, select -arrow B- "EET sticker issued" in drop-down menu and date.

– Then confirm with "Yes" -arrow C-.

The exhaust emissions test log is shown on display and can be printed out as often as required in the menu "Print preview" using "Print" button -arrow A-.

– Press button “Close” -arrow B- to close the menu “Print preview ”.
– Follow instructions on display.
– Take emission probe out of exhaust tail pipe.



– Then press → button -arrow B-

The exhaust emissions test is completed, a new exhaust emissions test can be performed.

5.2 Exhaust emissions test for diesel engines with OBD

Exhaust emissions test for diesel engines with OBD with exhaust emissions station VAS 6300 ⇒ page 199

Vehicles which are fitted with or without “Onboard diagnosis” can be found in the engine list ⇒ page 1 .

> ⚠ **Caution**
>
> • *Observe “SAFETY AND DAMAGE AVOIDANCE PRECAUTIONS” in the operating instructions for VAS 6300.*

5.2.1 Exhaust emissions test for diesel engines with OBD with emissions testing station VAS 6300

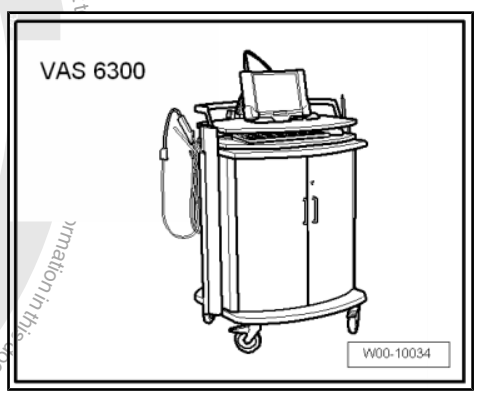
> ⚠ **Caution**
>
> • *Observe “SAFETY AND DAMAGE AVOIDANCE PRECAUTIONS” in the operating instructions for VAS 6300.*

Note

- *The following description refers to vehicles fitted with "On-board diagnosis", OBD.*
- *The OBD monitors all components and part systems influencing the exhaust emissions quality.*

Special tools and workshop equipment required

- Emissions testing station -VAS 6300-



- OBD adapter cable -VAS 5052/16-

Note

- *It is only possible to carry out an exhaust emissions test when all units of the emissions testing station -VAS 6300- are connected properly and combined with each other according to operating instructions.*
- *All work to be performed is displayed by the emissions testing station -VAS 6300- .*

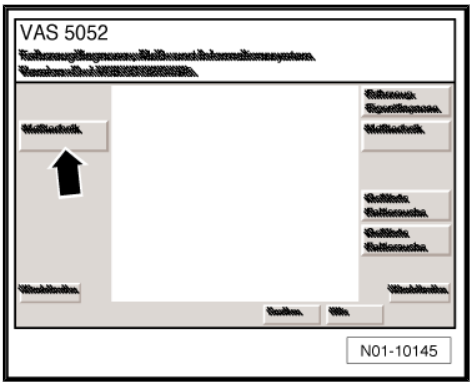
Test prerequisites:

- All test conditions and data required for exhaust emissions test are found on EET data sheet for the respective engine.
- For bar code reading of specified data for EET, the EET data sheet must be printed out.
- Automatic gearbox: Selector lever in position "P" or "N".
- Manual gearbox: Gear lever in neutral
- Handbrake pulled on

– Perform exhaust emissions test according to instructions on display.

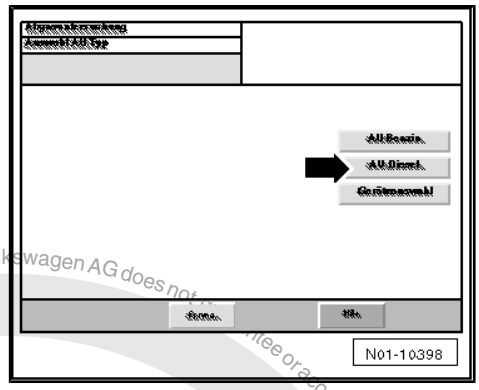
Initial screen:

– Select button “Exhaust emissions test” -arrow-.

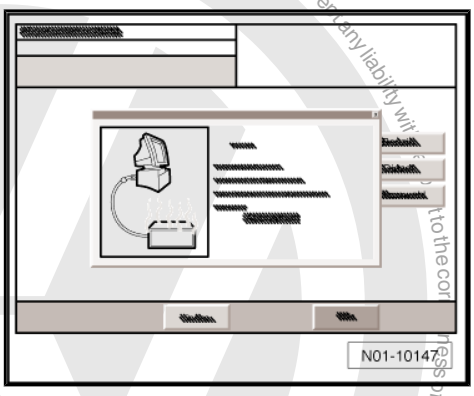


An overview is displayed to select the respective EET type.

– Select “EET diesel” -arrow-.



The display for warm-up phase appears.



– Continue exhaust emissions test according to instructions on display.
– If the EET specification selection is displayed, select respective “EET specification selection” -arrow-.

♦ When exhaust emissions test is performed for the first time, either select “Standard values”,
♦ Or “Last vehicle” when an exhaust emissions test is to be carried out again.

– Select “Continue” -item 1- on display.

Vehicle data input:

The vehicle data input menu is displayed.

– Enter the following data:

♦ Registration number
♦ Key numbers
♦ Vehicle identification number
♦ Type of fuel
♦ Odometer reading

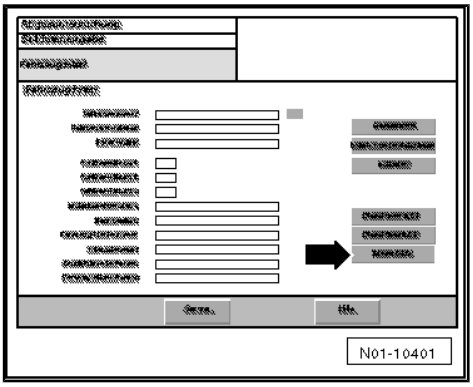
The following vehicle data can be found in the vehicle registration certificate part 1:

♦ Registration number: “e.g. WOB-HH 1234”
♦ Emission key No. “Field 14.1 (code for field 14)”
♦ Manufacturer: “Field 2”, “Field 2.1 (code for field 2)”
♦ Vehicle identification number “field E”
♦ Type and version “Field D2 (type only)”, “Field 2.2 (code for field D.2)”

Note

♦ *Further functions can be called up using GoTo button.*
♦ *The test can be interrupted using GoTo button.*

– Select “Diesel OBD”, -arrow-.



Specified data input for EET:

There are different ways to enter the specified data:

- 1. Manual input
- 2. Bar code input of EET data sheet
- 3. ELSA web service

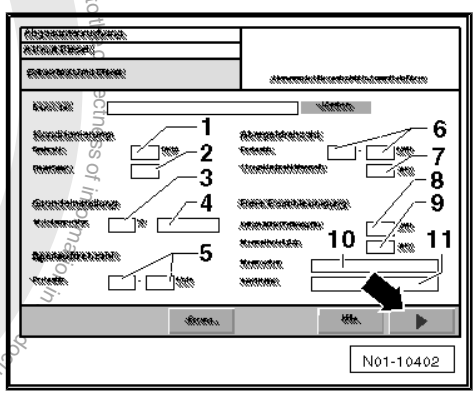
Note

- *To use the ELSA web service, the VAS 5052 which is used for the exhaust emissions test, must be integrated in the workshop network.*
- *For the ELSA web service the vehicle specified data are automatically transmitted via the network to the respective mask.*

Manual specified data input for EET:

Note

All test conditions and data required for exhaust emissions test
⇒ Data sheets for exhaust emission test for respective engine



– Perform manual data input according to instructions on display.

– Enter displayed values on EET data sheet in column “Test values for exhaust emissions test” on display as follows:

1 - Speed for conditioning

2 - Number of throttle bursts for conditioning

3 - Engine oil temperature (min. value)

4 - Select engine oil temperature measurement procedure

5 - Idling speed

6 - Rev limit

7 - Rev limit measuring period (1 second)

8 - Opacity figure (average)

9 - Select probe type (No. of probe)

10 - Select measuring mode

11 - Measured period portion

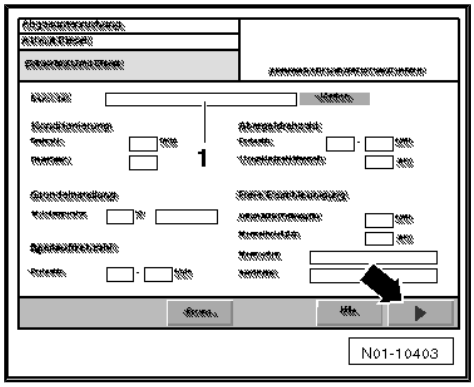
– When all data have been entered properly, press ⏎ button -arrow-.

Specified data input for EET as bar code:

– If specified data for EET are available as bar code, read bar code of EET data sheet with bar code reader.

All data required are shown on display -1-.

– Press ⇨ button -arrow- to continue procedure.

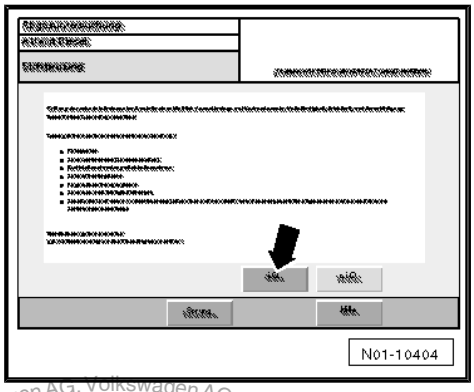


Visual check:

– Follow instructions on display.

– Perform visual check.

– If visual check is OK press “OK” button. -arrow-.



Note

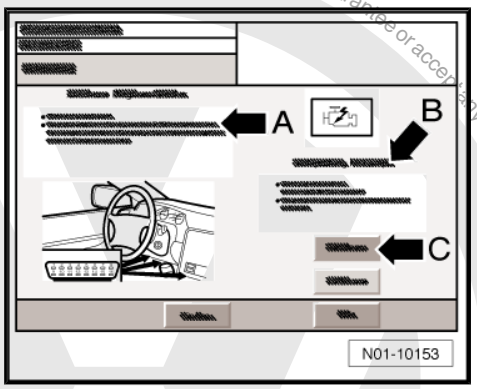
When "not OK" button is pressed a check will be carried out.

Connecting diagnostic connector:

• Ignition is switched off.

The visual check is displayed with the prompt to connect the diagnostic connector -arrow A- and to check the “MI lamp” -arrow B-.

– Follow instructions on display.

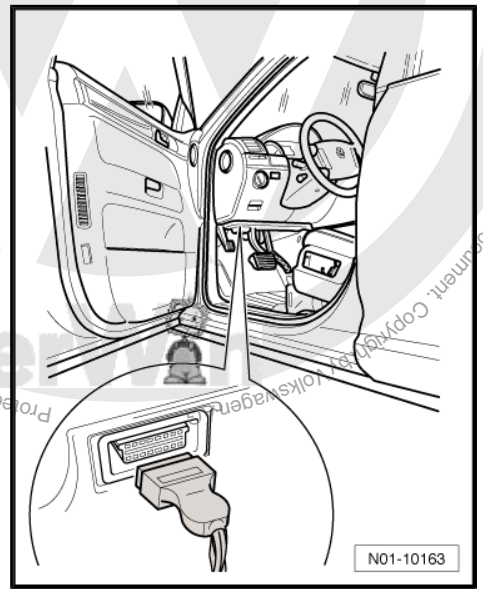


– Connect diagnostic cable connector to EOBD connection.

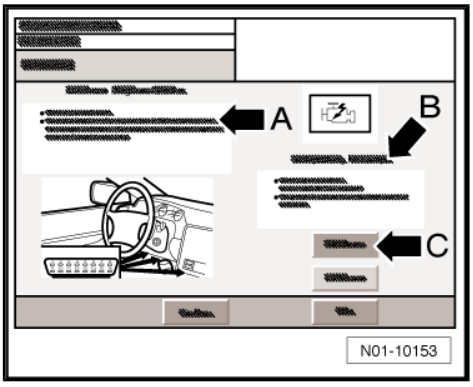
Visual check of MI lamp with ignition switched off:

– Switch on ignition.

– Perform visual check of “MI lamp”.



– If lamp lights up, press button “Lamp On” -arrow C-.



Note

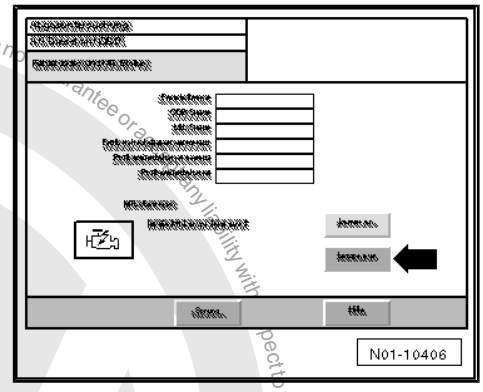
If the MI lamp does not light up during visual check, the result of the exhaust emissions test is “Failed”.

Visual check of MI lamp with engine running:

– Start engine and confirm engine running on display with “Yes”.

– Perform visual check of “MI lamp”, lamp must no longer light up or flash.

– Confirm condition of “MI lamp” -arrow-.



It is automatically switched to test for readiness of operation.

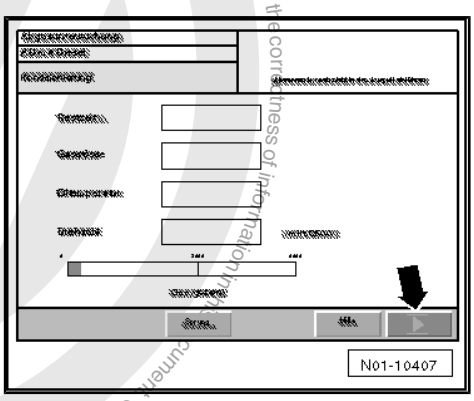
It is checked here if all tests for readiness of operation supported by the control unit have been performed.

Conditioning:

In the conditioning phase the engine and, if necessary, the emission control systems are brought to operating temperature by throttle bursts and are prepared for the exhaust emissions test.

– Follow instructions on display.

– Maintain engine speed in required engine speed range.



If no conditioning is necessary, press → button -arrow- for the next measurement.

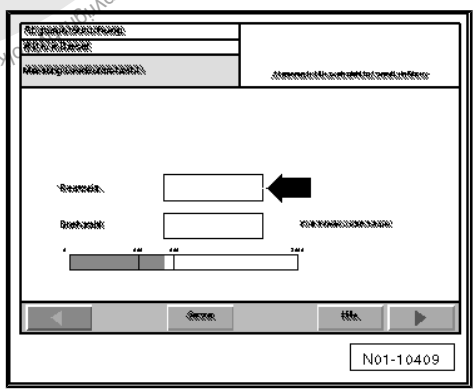
Reading engine temperature:

The engine temperature is read via the diagnostic connector of engine control unit.

When the required engine temperature is reached, it is automatically switched to display for measuring the idling speed.

Measuring idling speed:

– Follow instructions on display.



Measurement starts when the engine speed has reached the required level.

Note

- *Do not insert emission probe into exhaust tail pipe.*
- *Measurement can be skipped using → button, i.e. the exhaust emissions test has failed.*
- *Measured values are reset using ← button and the test can be repeated.*

– Maintain engine speed in required engine speed range.

The remaining time to perform measurement is displayed -arrow-.

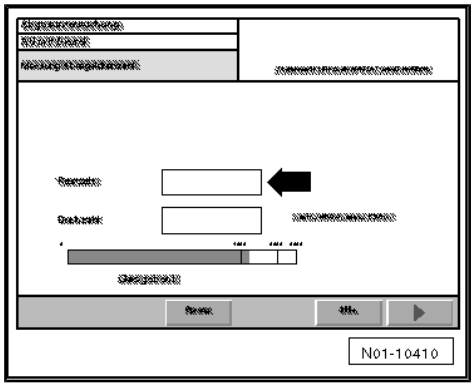
Measuring rev limit:

It is automatically switched to display for measuring rev limit.

Measurement starts when the engine speed has reached the required level.

– Operate throttle until the measurement is carried out. To do this, immediately depress accelerator pedal.

The remaining time to perform measurement is displayed -arrow-.



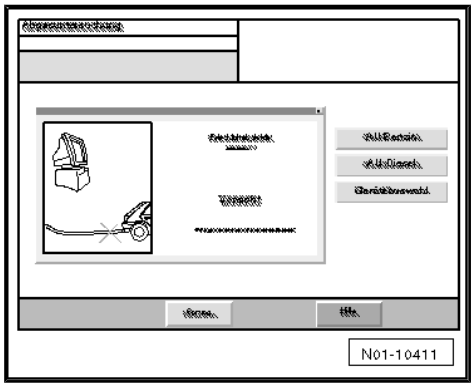
Note

- *Do not insert emission probe into exhaust tail pipe.*
- *Measurement can be skipped using button, i.e. the exhaust emissions test has failed.*

Air quality check:

An air quality check is carried out before starting the free acceleration. When doing this, no emission probe must be in the exhaust tail pipe. Otherwise measuring errors or faulty signals could occur during further measurements.

– When the air quality check is carried out, insert emission probe into exhaust tail pipe



Free acceleration:

It is automatically switched to display for “Free acceleration”.

During “Free acceleration” the engine is revved up to rev limit without load as quickly as possible.

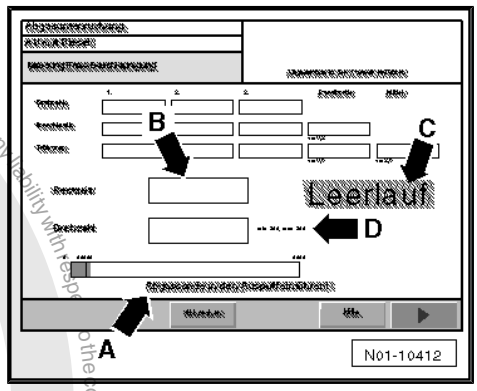
The “Free acceleration” test consists of at least four throttle bursts.

Free acceleration - phase 1:

– Follow instructions on display -arrow A- and -arrow C-

– Maintain idling speed in engine speed range indicated -arrow D-.

The remaining time to perform measurement is displayed -arrow B-.



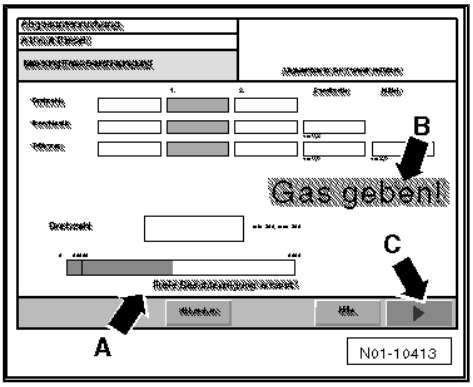
Note

- *The emissions probe must be in the exhaust tail pipe.*
- *If the speed deviates from engine speed range indicated, the measurement starts again.*
- *Measurement can be skipped using button, i.e. the exhaust emissions test has failed.*

Free acceleration - phase 2:

– Follow instructions on display -arrow B-.

– Depress accelerator pedal fully when prompted and hold until the prompt for idling is shown on display.



Free acceleration - phase 3:

– Remove foot from accelerator pedal as soon as the prompt for idling is shown on display -arrow B- and run engine at idling speed.

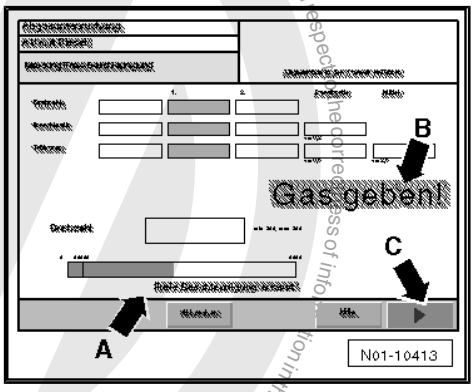
The test results and information on the latest “Free acceleration” are shown on display -arrow A-. If the measured values are not OK, here you can obtain information why the “Free acceleration” has failed.

Note

- *If the field is coloured white the measured value is within tolerance.*
- *If the field is coloured red the measured value is outside tolerance.*
- *If the field is coloured yellow the measured value is outside tolerance, but can be assessed by the operator.*

Further throttle bursts:

– Follow instructions on display -arrow B-.



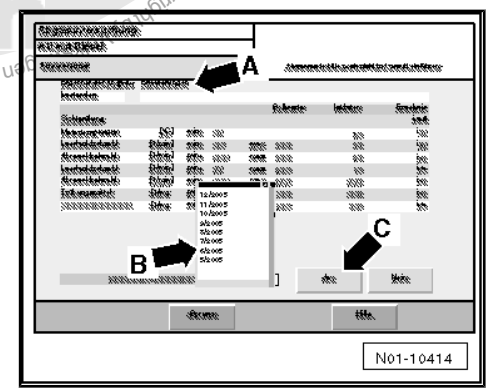
Now the next throttle burst follows, starting with phase 1 of “Free acceleration”.

Many “Free accelerations” can be carried out until:

- Three “Free accelerations” have been completed in succession and the range of acceleration is OK.
- All values are OK, with the exception of range of acceleration, and the test is continued by pressing the → button -arrow C-. (In this case, the operator assesses if the value is OK.)
- The values are not OK and the measurement is skipped by pressing the → button -arrow C-.

If the measured values are OK after three throttle bursts in succession, i.e. all fields are coloured white, the exhaust emissions test is completed.

Evaluation:



When the exhaust emissions test has been performed, the log is shown on display.

The test result is displayed.

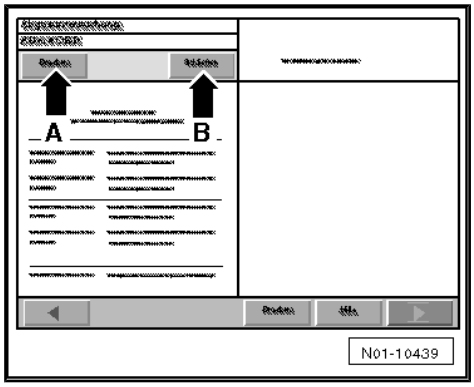
Now remarks concerning the exhaust emissions test can be entered -arrow A-. They will then be included in the test log.

– When the exhaust emissions test is classed as passed, select -arrow B- EET sticker issued in drop-down menu and date.

– Then confirm with “Yes” -arrow C-.

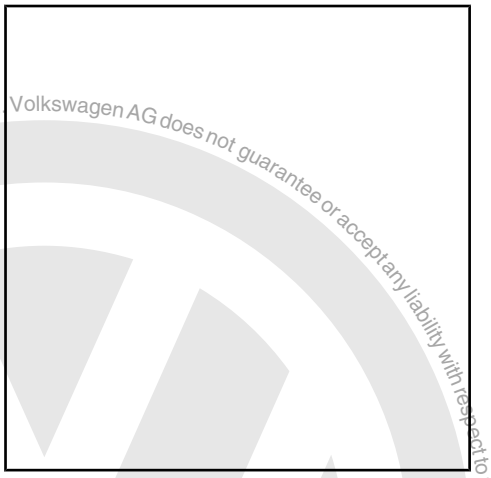
The exhaust emissions test log is shown on display and can be printed out as often as required in the menu “Print preview” using “Print” button -arrow A-.

– Press button “Close” -arrow B- to close the menu “Print preview ”.
– Follow instructions on display.
– Take emission probe out of exhaust tail pipe.



– Then press ⏎ button -arrow B-

The exhaust emissions test is completed, a new exhaust emissions test can be performed.



6 Glossary

These explanations only apply to “Maintenance Manual”. They are not necessarily generally valid!

Term	Explanation
ABS	“Anti-lock brake system”, the ABS is a regulating system in the brake system that prevents locking when braking. This helps to maintain directional stability and steerability.
ATF	“Automatic Transmission Fluid” gear oil for automatic gearboxes
ATF level	“Filling level” of ATF in gearbox.
ACF	Activated charcoal filter
CO	“Carbon monoxide:” occurs when fuels containing carbon are not combusted completely.
Common rail “CR”	Refers to a common high-pressure injection line “rail”, which supplies all cylinders of the relevant cylinder bank with fuel
DIN	Deutsches Institut für Normung e.V (German institute for standardization)
DS	Direct shift
DSG	Dual clutch gearbox
ATA	Anti-theft alarm system
Part No.	Abbreviation for part number
EN	European standard
ETKA	Electronic parts catalogue - successor to microfiche
EOBD	European onboard diagnosis
FAME	Fatty acid methyl ester
FSI	“Fuel Stratified Injection”, see also TSI ⇒ page 210 , TFSI ⇒ page 210
MM	Maintenance Manual
LongLife service	The LongLife service enables extremely long inspection or oil change intervals depending on personal driving style and corresponding operating conditions. LongLife service requires special engine oil.
LED	Light emitting diode
MIL	“Malfunction indicator light” American designation for exhaust emissions warning lamp K83
MPI	Multi-point injection
NAR	North american region
OBD	Onboard diagnosis, the OBD monitors all components influencing the exhaust emissions quality.
OBD-II	American onboard diagnosis
PD	Unit injector for diesel engines
PR No.	Abbreviation for production control number. Identifies among other things optional equipment and country-specific deviations
PM	“Particulate matter:” soot particulate value for diesel engine emissions
PPM	“Parts per million” e.g. for sulphur content in diesel fuel
QG0	Vehicles are “not” factory-fitted with components for LongLife service. For maintenance, the time and distance dependent intervals “non-flexible intervals” apply.
QG1	Vehicles are factory-fitted with active LongLife service. This means, vehicles have a flexible service interval display and are fitted with the following components: ♦ Flexible service interval display in dash panel insert ♦ Engine oil level sensor ♦ Brake pad wear indicator

Term	Explanation
QG2	The LongLife service is not active at the factory. This means that vehicles have a non-flexible service interval display “time and distance dependent service intervals” and are fitted with the following components: ♦ Non-flexible service interval display in dash panel insert ♦ Engine oil level sensor ♦ Brake pad wear indicator
Readiness code	8-digit binary code which indicates if all exhaust relevant diagnoses have been performed by the engine management.
RON	“Research Octane Number” measurement of the knock resistance of petrol
RME	Biodiesel
SPF	Soot particulate filter
RDK, RKA	Tyre pressure monitoring, tyre monitor display
SAE	“Society of Automotive Engineers”, society which prepares proposals/guidelines on how the legal requirements can be implemented, e.g. standards
SD	Naturally aspirated diesel engine
SDI	Naturally aspirated diesel engine - direct injection
SRE	Intake manifold injection system
TFSI	Turbo “fuel stratified injection”
TSI	From model year 2008 the designation TFSI is replaced by TSI. Therefore the designation TSI is given to TSI turbocharger and TSI twincharger.
	TSI turbocharger: charging only with turbocharger
	TSI twincharger: charging with turbocharger and compressor
TDI	Turbo diesel engine - direct injection
DP	Distributor injection pump
ULEV	Ultra-low emission vehicle
ESI	Extended service interval
ASSY	Assembly