



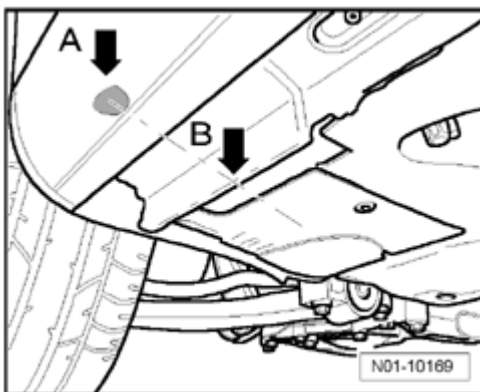
General

Lifting the vehicle using vehicle hoist and workshop trolley jack

Safety precautions

Warning!

- **Before driving on to a hoist ensure there is sufficient clearance between low lying vehicle components and hoist.**
- **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 only be lifted at points indicated in illustration in order to avoid damaging vehicle floor pan and to prevent vehicle from tipping.**
- **Never start engine and engage a gear with vehicle lifted so long as even one wheel has contact with the floor. There is a risk of an accident if this is not observed!**
- **If work is to be performed under vehicle it must be supported by suitable stands.**



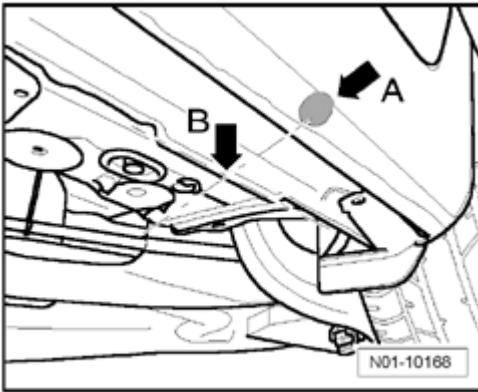
Lifting points for lifting platform and trolley jack:

Front:

- Place support plate, in area of side member marking - **arrow A** - , on vertical stiffener of floor plate - **arrow B** - .

Warning!

Make sure that side member stiffener contacts support plate of lifting platform at center.



Rear:

- Place support plate, in area of side member marking - **arrow A** - , on vertical stiffener of floor plate - **arrow B** - .

Warning!

Make sure that side member stiffener contacts support plate of lifting platform at center.

Data stickers

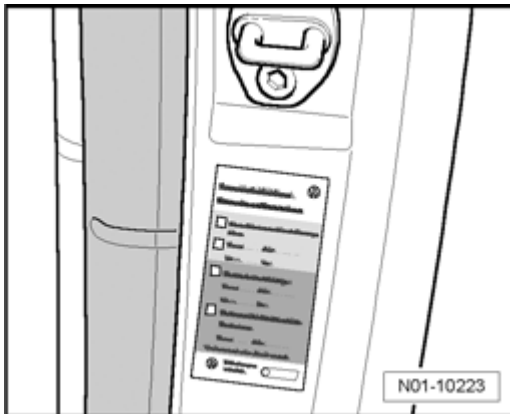


Apply sticker "First service" (at the delivery inspection)

Apply sticker "Your next service events" ⇒ [01-3, Data stickers](#)

"First service" sticker

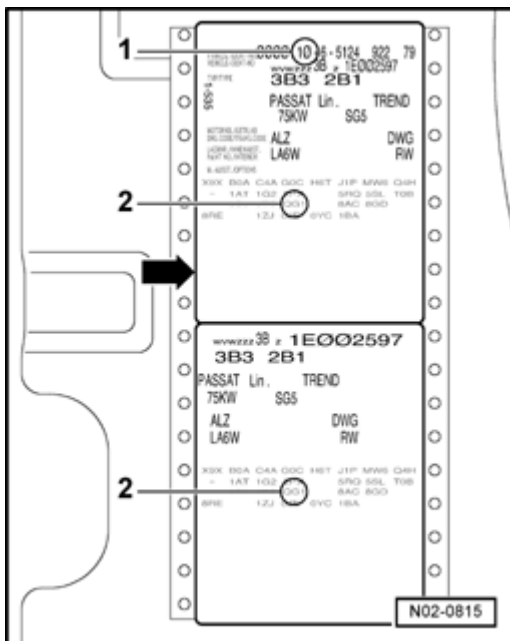
- Apply sticker on drivers side door jamb (B-pillar); the sticker is located on an instruction which is attached at front in the vehicle wallet. Destroy the instruction after attaching the sticker!



Apply sticker "Next service"

- Service sticker "Next service" : Enter a cross at the position for oil change service or inspection service (next service due) and enter date / odometer reading

- Apply sticker on drivers side door beam (B-pillar).



Applying "Data sticker" in service schedule

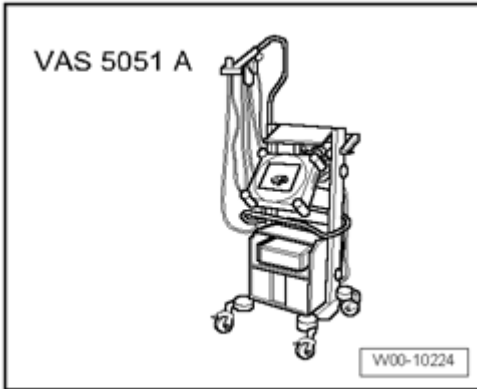
- Apply the upper of the two data stickers - **arrow** - .

1 - Planning week

2 - PR Number

Diagnostic unit, connecting

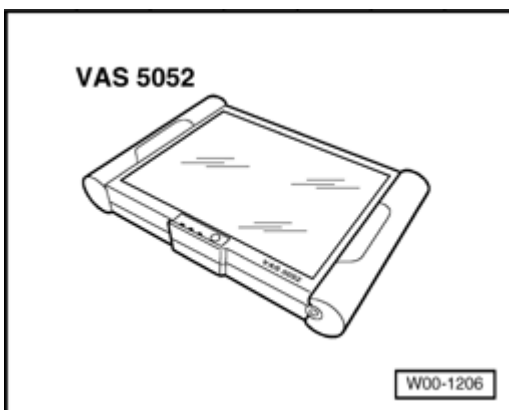
Special tools, testers and auxiliary items required



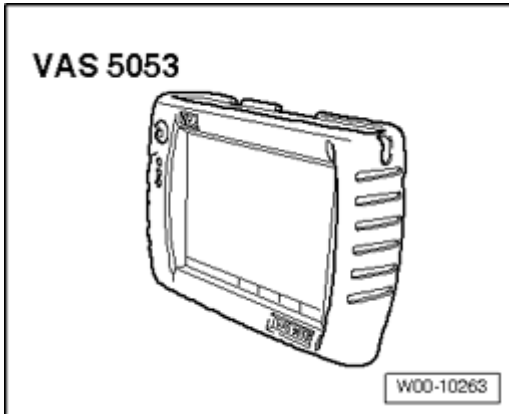
- Vehicle Diagnosis, Testing and Information System VAS 5051 A



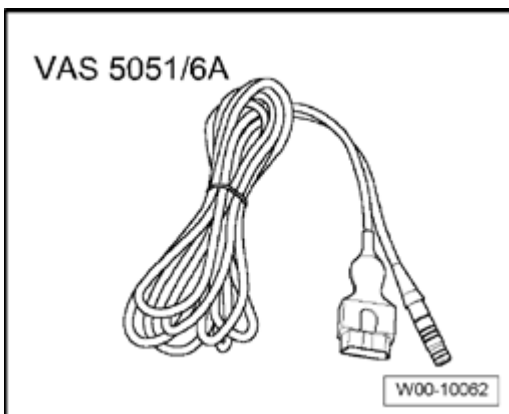
- Vehicle Diagnosis, Testing and Information System VAS 5051B



- Vehicle diagnosis service syst. VAS 5052 or later testers



- Diagnostic system VAS 5053



- Diagnostic cable VAS 5051/6A

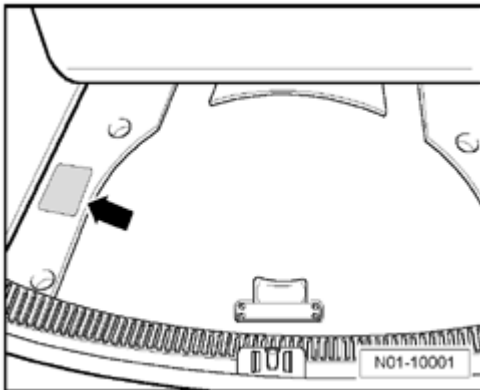
Warning!

- ***During a test drive you must always secure testing and measuring equipment on the back seat.***
- ***Drivers must NEVER operate these tools while driving.***

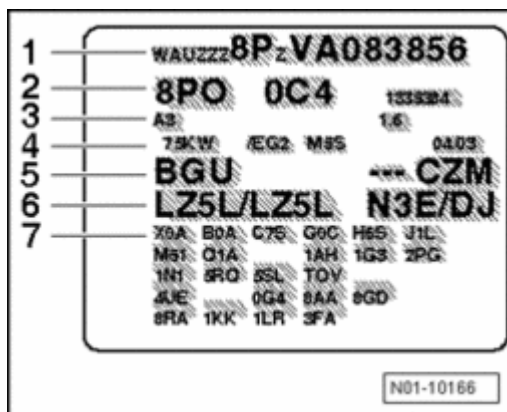
WWW	ZZZ	1K1 1)	Z	4	8	
Manufacturer code	Filler characters	Model	Filler characters	Model year 2004	Production location	Serial number

1) Rabbit/GTI 2006 ➤

Vehicle data sticker



The vehicle data sticker - **arrow** - is located in rear of vehicle on the left in the spare wheel well under foam storage tray. The vehicle data sticker can also be found in the service schedule for the customer.

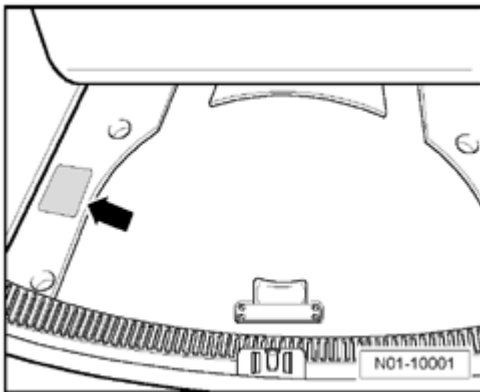


Sticker contains the following vehicle data:

- 1 - Production control number
- 2 - Vehicle Identification Number (VIN)
- 3 - Model identification number
- 4 - Model explanation/engine output
- 5 - Engine and transmission code letters
- 6 - Paint number/interior equipment identification number
- 7 - Optional extras identification numbers

Information on time or distance dependent service

Service Identification



- Check via the vehicle data plate in luggage compartment, whether the vehicle is equipped with PR number "QG0" or with PR Number "QG2" . The PR number determines the service intervals ⇒ [01-3, Service intervals](#) .

Vehicle data plate is applied at left next to spare wheel well, component location, see ⇒ [01-3, Vehicle data sticker](#) .

Vehicles marked with the following PR-number:

"QG2" indicates time or distance dependent service.

"QG0" means time or distance dependent service.

Engine oils

Approved engine oil norms for vehicles

For information regarding approved oil types please refer to: Additional Information, Fluid Capacity Charts for appropriate model and year

Engine code and engine number

Engine code and engine identification are found in:

- Gasoline engines:

⇒ *Repair Manual, 2.0 Liter 4-Cyl. 4V Turbo Engine Mechanical, Fuel Injection Ignition, Engine Code(s): BPY, Repair Group 00, Technical data, engine number*

- On vehicle data sticker ⇒ [01-3, Vehicle data sticker](#) .

Service intervals

Service intervals

So that each service is performed at the correct point in time and is not forgotten, a sticker on the door beam or service reminder indicator in the instrument cluster display serves to remind customer of the service event.

Information about the sticker can be obtained ⇒ [01-3, Data stickers](#) .

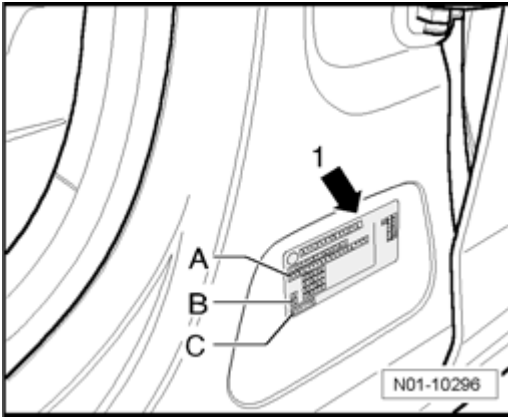
Vehicles with PR-number QG0, QG2

Oil change service	Page
- Oil change service at 5,000 miles (8,000 km) <ul style="list-style-type: none"> ■ (whichever occurs first) ■ (according to service interval display) 	⇒ 01-2, Oil change service
Inspection service (oil change service inspection service) every 10,000 miles (15,000 km) or after 1 year	Page
- Oil change service every 10,000 miles (15,000 km) or after 1 year <ul style="list-style-type: none"> ■ (whichever occurs first) ■ (according to service interval display) 	⇒ 01-2, Oil change service

Type plate

Note:

- *Vehicles for certain countries have no type plate.*



4-door vehicles

Type plate - **arrow 1** - can be seen after opening left front door, in lower area of B-pillar.

Sticker contains the following vehicle data:

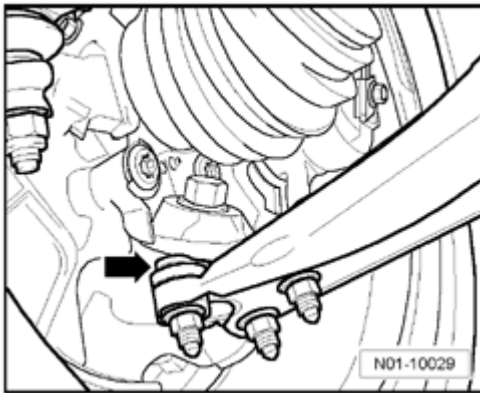
- A - Vehicle Identification Number (VIN)
- B - Axle loads
- C - Model identification number

2-door vehicles

Type plate is visible after opening right door on door beam at bottom.



Description of work (part 1 of 2)



Ball joints, visual inspection

- Check ball joint boots - **arrow** - for leaks and damage.

Automatic transmission, check ATF level, 09G - transmission

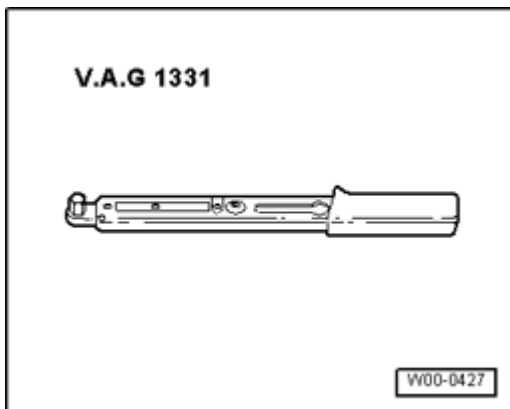
- Work procedure:

⇒ *Repair Manual, Automatic transmission 09G, Repair Group 37, ATF level, checking and topping of*

.

Battery, check battery terminals for secure seating

Special tools, testers and auxiliary items required

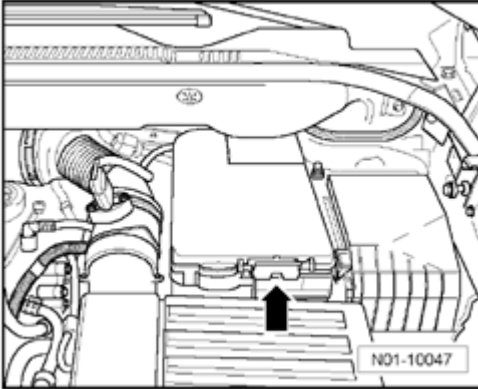


- Torque wrench V.A.G 1331

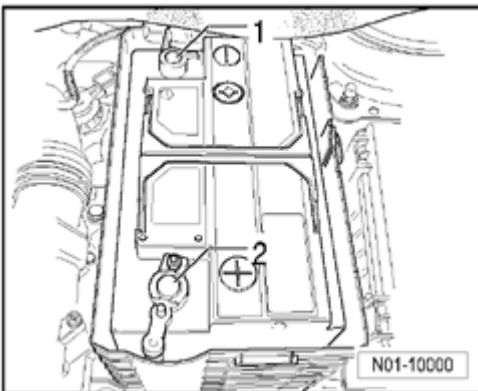
Note:

- *Tight battery connections assure trouble-free battery function and long service life.*

Perform the following work procedure:



- Operate lock - **arrow** - , fold up and remove cover toward front.

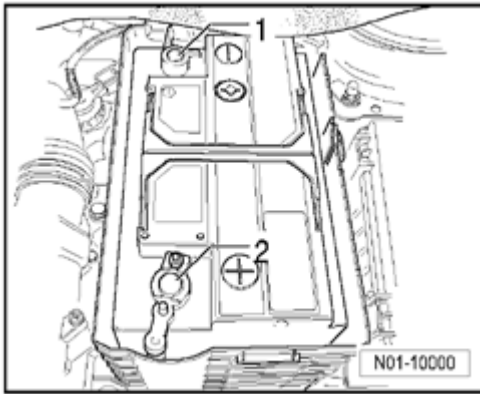


- Check battery terminal clamps are seated securely on the battery terminals by moving the battery Ground (GND) wire - **1** - and the battery positive wire - **2** - back and forth by hand.

Warning!

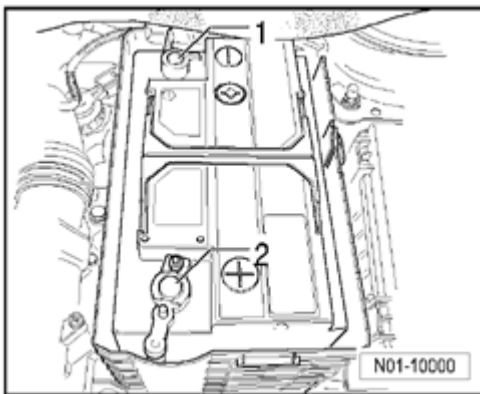
If the battery clamp is not seated securely on the positive terminal, disconnect battery Ground (GND) clamp on battery negative terminal first, to prevent possible accidents.

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



- First disconnect battery clamp - 1 - at battery negative pole.
- Tighten battery clamp - 2 - on battery positive terminal to 9 Nm.
- Re-connect battery clamp - 1 - on battery negative terminal and tighten to 9 Nm.

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



- Tighten ground connection - 1 - on battery to 9 Nm.
- Reinstall cover.

Note:

- *Once the battery is reconnected:*

⇒ [Repair Manual, Electrical Equipment, Repair Group 27,](#)

Battery, check

Battery: Checking

⇒ [Repair Manual, Electrical Equipment, Repair Group 27,](#)

Check tires, condition, tire tread, filling pressure, tread depth

Checking condition of tires, ⇒ [01-4, Tire condition, checking](#) .

Checking tire wear pattern, ⇒ [01-4, Checking tire wear pattern](#) .

Depth of tire tread (including spare wheel): Checking, ⇒ [01-4, Depth of tire tread \(including spare wheel\), check](#) .

General notes, ⇒ [01-4, General notes](#) .

Check tire inflation pressure using tire inflation device VAS 5216 and correct it if necessary, Rabbit/GTI 2006 ➤ , ⇒ [01-4, Tire pressures, Rabbit/GTI 2006](#) .

Special tools, testers and auxiliary items required



- Tire filling unit VAS 5216

Tire condition, checking

Warning!

If damage is discovered, the tire must be examined to determine whether a new one must be installed.

Tests during delivery inspection:

- Check tires (tread and side walls) for damage and remove foreign material for example nails and glass splinters if necessary.

Tests during inspection service

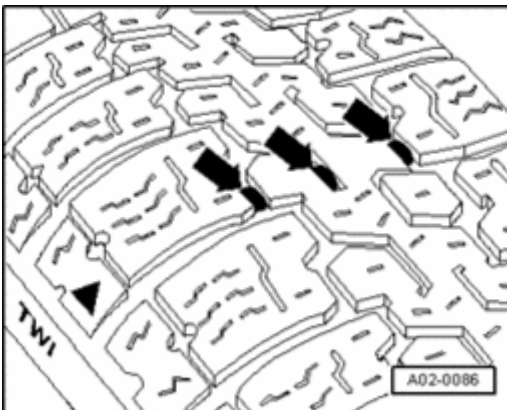
- Check tires (tread and side walls) for damage and remove foreign material for example nails and glass splinters if necessary.
- Check tires for scuffing, one sided wear, porous side walls, cuts and fractures.

Checking tire wear pattern

The wear pattern of the front wheels can be used to assess whether a check of the track and camber is necessary:

- Feathered edges of the treads may indicate faulty toe adjustment.
- One-sided tread wear is mainly attributed to incorrect camber.

When wear of this nature is noticed determine cause by performing alignment checks (repair measure).



Depth of tire tread (including spare wheel), check

- Check tire tread depth

Minimum depth: 1.6 mm

Note:

- *This value may vary for individual countries due to different legislative regulations.*
- *The minimum tread depth is reached when the tires have worn down level with the 1.6 mm high tread wear indicators - **arrows** - positioned at intervals around the tire.*

- *If the tread depth is approaching the legal minimum permissible depth, the customer must be informed.*

General notes

Warning!

- ***For reasons of safety only tires of same type and tread pattern should be fitted on a vehicle!***

Note:

- *Tire inflation pressure table applies to normal tires, for all tire sizes installed at factory.*
- *Observe that the inflation pressure specifications refer to the air pressure of cold tires. Do not reduce increased pressures on warm tires.*
- *Tires pressures for the relevant model are on a sticker attached to the inside of fuel tank flap.*
- *Adapt tire pressure corresponding to load.*
- *The spare wheel receives the highest tire pressure designated for the vehicle.*
- *Note that a basic setting should be performed after every change in pressure in vehicles with tire pressure control indicator ⇒ [01-5, Tire pressure control indicator, performing basic setting](#) .*

Winter tires

Note:

- *Important information on the recommended winter tires can be found in*

*⇒ Repair Manual, Suspension, Wheels, Brakes, Steering ,
Repair Group 00, Wheels and Tires Guide*

- *For winter tires, tire inflation pressure must be increased approx. 0.2 bar.*

Tire pressures, Rabbit/GTI 2006 ➤

Gasoline engine

Displacement / output				
		2.0L / 147 kW		
Tire sizes	half load		full load	
	front (bar)	rear (bar)	front (bar)	rear (bar)
205/55 R 16 91 W	2.4	2.4	2.6	3.0
225/45 R 17 91 W, Y	2.4	2.4	2.6	3.0
225/40 R 18 92 Y (XL)	2.4	2.4	2.6	3.0
Spare wheel (collapsible spare wheel)				
	4.2	4.2	4.2	4.2

Brake and clutch systems, changing fluid

Notes on application and safety, ⇒ [01-4, Notes on application and safety precaution](#) .

Specification of brake fluid, ⇒ [01-4, Specification of brake fluid](#) .

Work procedure, changing brake fluid, ⇒ [01-4, Work procedure, changing brake fluid](#) .

Notes on application and safety precaution

Note:

- *From model year 2006, a new brake fluid is introduced.*
- *The new brake fluid can also be used for older vehicles.*
- *New brake fluid can be mixed with previous brake fluid.*
- *For vehicles from model year 2006, "only" new brake fluid must be used.*

Warning!

- ***Brake fluid must never come into contact with fluids containing mineral oils (oil, gas, cleaning solutions). Oils containing minerals damage seals and sleeves on brake systems.***
- ***Brake fluid is poisonous. Due to its caustic nature, it must also never be brought into contact with paint.***
- ***Brake fluid is hygroscopic, which means that it absorbs moisture from the air. Always store brake fluid in air-tight containers.***
- ***Wash off brake fluid spillage using plenty of water.***
- ***Do not reuse, (used) extracted brake fluid.***
- ***Observe waste disposal regulations!***

Specification of brake fluid

Permissible specifications of brake fluid for vehicles up to model year 2005:

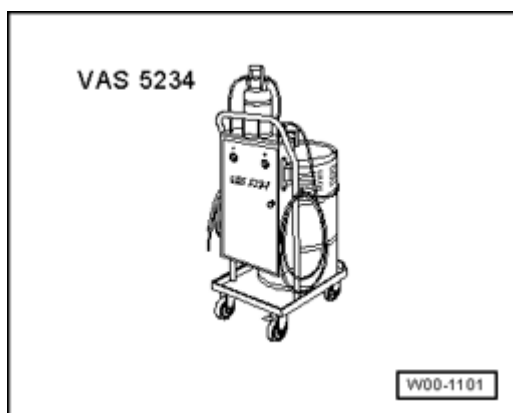
- Brake fluid corresponding to US standard FMVSS 116 DOT 4 (previous brake fluid).
- Brake fluid corresponding to VW standard, VW 501 14 (new brake fluid).

Permissible specifications of brake fluid for vehicles from model year 2006:

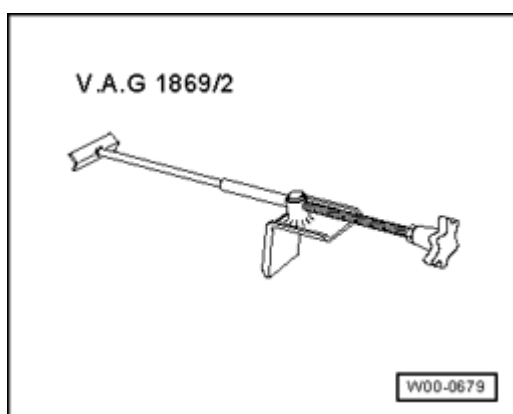
- Brake fluid corresponding to VW standard, VW 501 14 (new brake fluid).

Work procedure, changing brake fluid

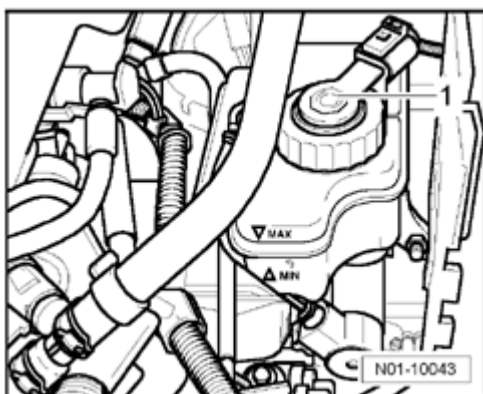
Special tools, testers and auxiliary items required



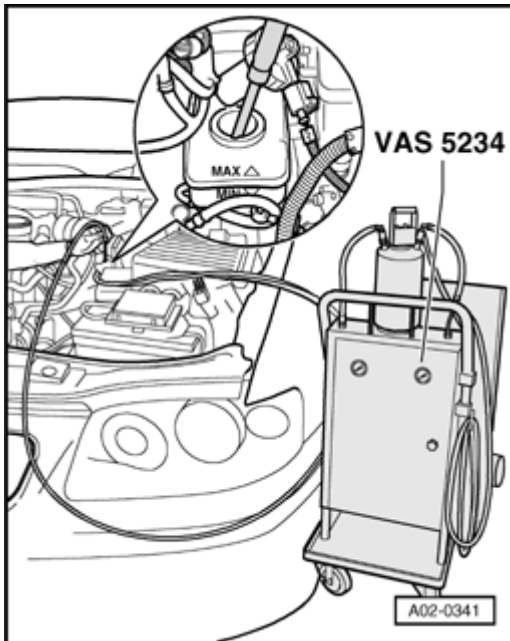
- Brake charger/bleeder unit VAS 5234



Brake pedal depressor V.A.G 1869/2



- Unscrew brake fluid reservoir cap - 1 - .



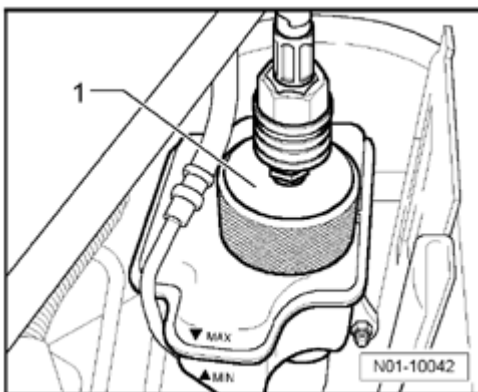
- Extract as much brake fluid as possible using intake hose Brake charger/bleeder unit VAS 5234 .

Note:

- *The strainer in the brake fluid reservoir must not be removed.*

Warning!

Extracted brake fluid must not be re-used!



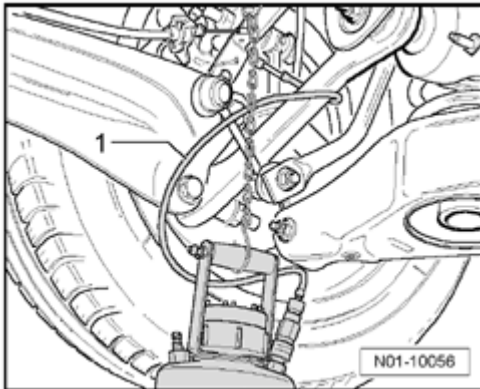
- Screw adapter - 1 - onto brake fluid reservoir.

⇒ *Observe operating instructions for VAS 5234 !*

- Install brake pedal depressor V.A.G 1869/2 between drivers seat and brake pedal and apply tension.

- Connect charger hose of brake charger/bleeder unit VAS 5234 to adapter.

- Unscrew both wheels at rear axle in order to reach the bleed screws.
- Pull cover caps off bleeder screws of brake calipers.

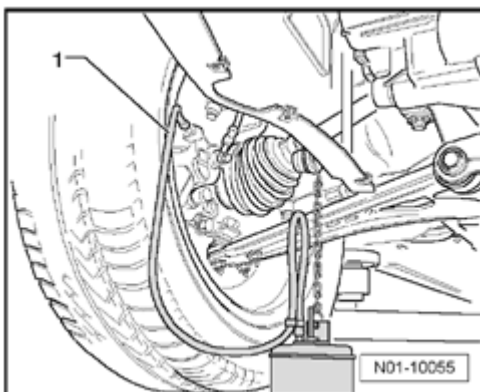


- Connect collector bottle bleeder hose - **1** - to right rear bleed screw.
- Open bleeder screw and let the corresponding amount of brake fluid (see table) flow out. Close bleeder screw.

Note:

- *Use a suitable bleed hose. It must seat tightly on bleed screw so that no air can enter brake system.*

Repeat work procedure on left side of vehicle at rear.



- Connect collector bottle bleeder hose - **1** - to right front bleeder screw, open bleed screw and allow the corresponding quantity to flow out (see table). Close bleeder screw.

Repeat work procedure on left side of vehicle at front.

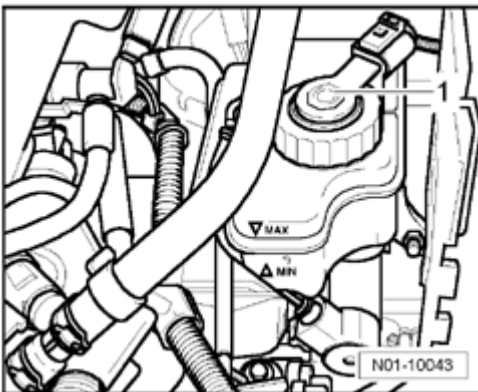
Table - Sequence / quantity of brake fluid

Sequence:	Brake fluid quantity which must flow out of wheel brake cylinders or brake
-----------	--

brake wheel cylinder, brake caliper	calipers:	
Left front		0.25 liter
Right front		0.25 liter
Left rear		0.25 liter
Right rear		0.25 liter

Total quantity: approx. 1 liter

- Fit cover caps to brake caliper bleed screws.
- Move filler lever on brake charger/bleeder unit VAS 5234 to position "B" (see operating instructions).
- Take filler hose off adapter.
- Unscrew adapter from brake fluid reservoir.
- Check brake fluid level and correct if necessary.



- Screw in cap - 1 - for brake fluid reservoir.
- Remove brake pedal depressor.
- Check pedal pressure and brake pedal free play. Free play: Max. $\frac{1}{3}$ of pedal travel

Brake fluid level, check

Brake fluid level at delivery inspection:

Brake fluid level at Inspection Service:

Warning!

If fluid level is below MIN. marking - 2 - , brake system must be checked before brake fluid is added "repair

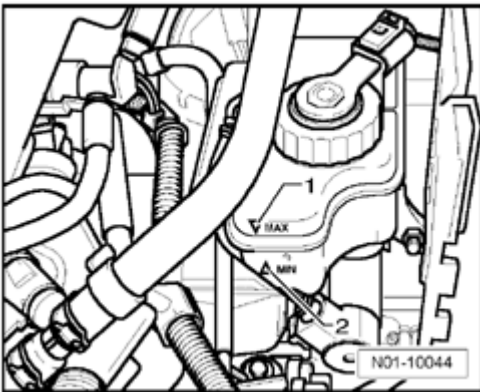
measure" .

Notes on application and safety, ⇒ [01-4, Notes on application and safety precaution](#) .

Specification of brake fluid, ⇒ [01-4, Specification of brake fluid](#) .

Work procedure, brake fluid level (depending on brake pad wear): Checking, ⇒ [01-4, Work procedure, brake fluid level \(depending on brake pad wear\), check](#) .

Work procedure, brake fluid level (depending on brake pad wear), check

Brake fluid level at delivery inspection:

- At time of delivery inspection, brake fluid level must be at MAX mark - 1 - .

Note:

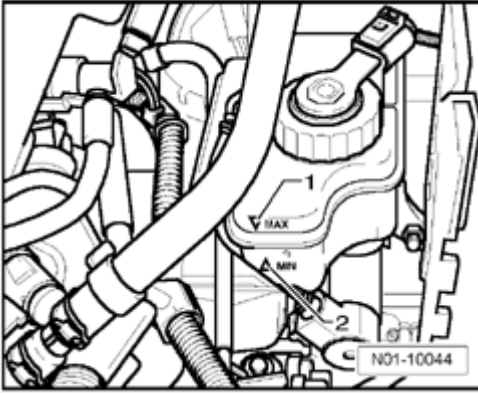
- *To prevent the brake fluid from overflowing from the reservoir, the level must not be over the MAX mark - 1 - .*

Brake fluid level at Inspection Service:

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

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

- Recommended brake fluid level when brake pad wear limit has almost been reached:



"At MIN-marking and slightly above it" - **2** - , "NO TOPPING OFF REQUIRED" .

- Recommended brake fluid level when brake pads are new or are far removed from the brake pad wear limit:

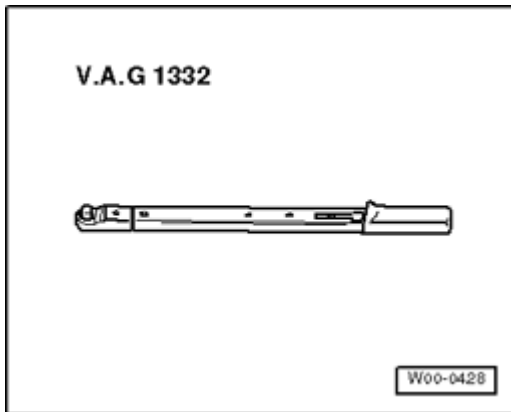
"Between MIN- and MAX-Marking" .

Brake system, visual check for leaks and damage

Check the following components for leaks and damage:

- Brake master cylinder
 - Brake booster (on anti-lock braking system: Hydraulic unit)
 - Brake pressure regulator and
 - Brake calipers
- Check that brake hoses are not twisted.
 - Turn steering to left stop and to right stop. During this operation no brake hose must touch any vehicle components.
 - Check brake hoses are not porous or brittle.
 - Check brake hoses and pipes for chafing.
 - Check brake connections and methods of securing for correct seating, leaks and corrosion.

Warning!

Malfunctions found must be rectified (repair measure).**Brake linings front and rear, checking thickness****Special tools, testers and auxiliary items required**

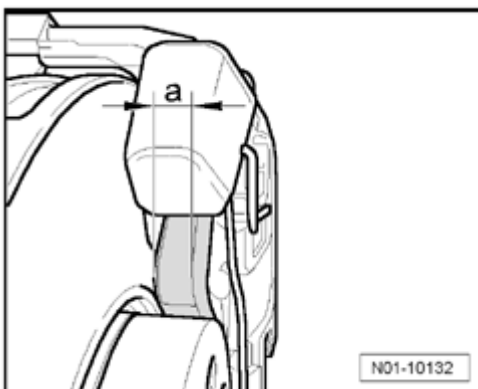
- Torque wrench V.A.G 1332
- Electric flashlight and mirror

Perform the following work procedure:

The adapter to loosen/tighten the anti-theft wheel bolts is located in the vehicle tool kit ⇒ [01-5, Tire repair kit](#) .

Front disc brake pads

- For better judgement of remaining pad thickness remove the front wheel on the drivers side.
- Pull off wheel bolt covers if necessary ⇒ [01-5, Wheel securing bolts, tighten to correct torque setting](#) .
- Mark position of wheel in relation to brake disc.
- Unbolt wheel securing bolts and remove wheel.



- Measure inner and outer pad thickness.

a - Pad thickness not including backing plate

Wear limit: 2 mm

With pad thickness (not including backing plate) of 2 mm, the brake pads have reached their wear limit and must be replaced (repair procedure). Inform customer!

Note:

- *When replacing brake pads, it is absolutely necessary to check brake discs for wear! Checking and if necessary replacing brake discs is a repair measure.*

- Check brake disc for wear

⇒ *Repair Manual, Suspension, Wheels, Brakes, Steering, Repair Group 46, Front brakes, servicing*

- Install wheel to marked position.

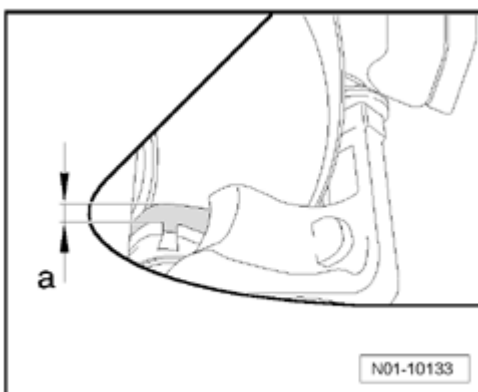
- Tighten wheel securing bolts, using diagonal sequence to tightening torque ⇒ [01-5, Wheel securing bolts, tighten to correct torque setting](#) .

- Place adapter with vehicle tool kit after completing work.

- Reinstall wheel bolt covers if necessary.

Rear disc brake pads

- Illuminate area behind hole in wheel using an electric flashlight.



- Determine thickness of outer pad by checking visually.

- Illuminate inner pad using an electric flashlight and mirror.
 - Determine thickness of inner pad by checking visually.
- a - Pad thickness inner and outer, not including backing plate

Wear limit: 2 mm

With pad thickness (not including backing plate) of 2 mm, the brake pads have reached their wear limit and must be replaced (repair procedure). Inform customer!

Note:

- *When replacing brake pads, it is absolutely necessary to check brake discs for wear! Checking and if necessary replacing brake discs is a repair measure.*

- Check brake disc for wear

⇒ *Repair Manual, Suspension, Wheels, Brakes, Steering, Repair Group 46, Rear brakes, servicing*

6 speed Direct Shift Gearbox (02E), Oil and filter, changing

Work procedure:

⇒ *Repair Manual, 6 Spd. Direct Shift Automatic Transmission 02E Front Wheel Drive, Repair Group 34,*

Electric windows, check positioning

Note:

- *After disconnecting and reconnecting the battery, the run-up and run-down function of the power window regulators will not function. Therefore, the electric windows must be positioned again immediately, before a new vehicle is delivered. The vehicle battery must not be disconnected after the electric windows have been positioned.*

Warning!

After disconnecting and reconnecting the battery, pinch protection of the power window regulators will not function. This can cause serious injuries if e.g. fingers are caught in the window!

Perform the following work sequence to position the electric windows:

Note:

- *The following work sequence is for the front left window. The positioning for the remaining windows is performed in the same manner using the respective switch in the drivers door.*

- Switch ignition on.
- Close all doors and windows completely.
- Hold left front side-window in position "Close" by pulling and holding switch for longer than 1 second.
- Lift button again for 1 second. Now when the button is pressed briefly the window will lower fully and when the button is lifted briefly the window will raise fully.
- Switch off ignition

Vehicle system test, perform

- Connect diagnostic tester ⇒ [01-3, Diagnostic unit, connecting](#) .
- Switch ignition on.
- Select operating mode "Guided Fault Finding" on the display.
- Then perform vehicle identification on tester.

Program now performs a vehicle system test automatically and checks for all possible control modules for this vehicle type.

- Press Continue > button.

Now all DTCs will be listed.

Note:

- *At this point it makes sense to switch into operating mode Guided Functions in order to perform further work using VAS 5051/5052 and to prevent a second*

vehicle identification on the tester.

- *To do so, press operating mode button and then Guided Functions.*
- *Refer to the corresponding work descriptions for the continued sequence.*
- *In order to return to Guided Fault Finding, press the operating mode button and then Guided Fault Finding.*

Caution!

In any case, the vehicle must be returned to the customer with DTC memory erased.

Static malfunction

If one or more static malfunctions are stored in data memory, it is recommended to arrange with the customer to repair this malfunction via Guided Fault Finding.

Sporadic malfunctions

In the event only sporadic malfunctions or notes are stored in DTC memory and the customer has made registered no complaint in conjunction with an electronic vehicle system, erase DTC memory.

- Press the Continue > button again to enter the test plan.

- Now end Guided Fault Finding via Go to button and then End.

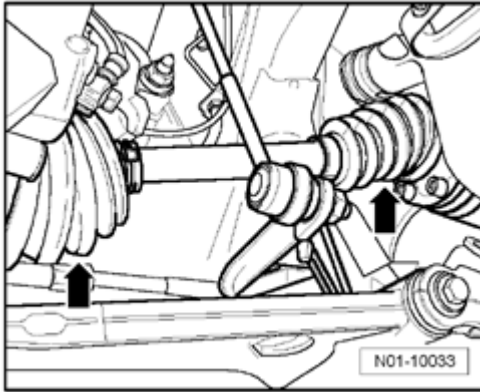
All DTC memories will be checked now once more.

In the window now appearing, it will be confirmed that all sporadic DTCs were erased, diagnostic protocol is sent "online" automatically.

Vehicle system test is completed.

CV joint boots, visual inspection

Perform the following work procedure:

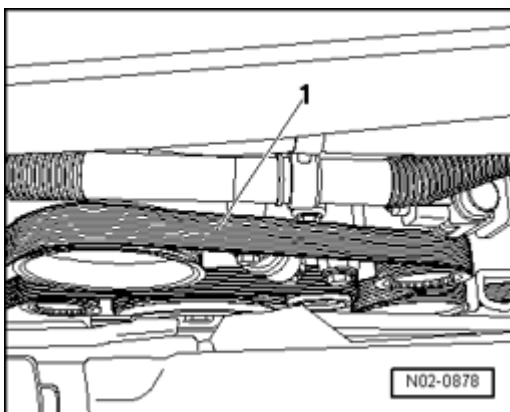


- Check outer and inner CV joint boots - **arrows** - for leaks and damage.

Ribbed belt, checking condition

Perform the following work procedure:

- Crank engine at vibration damper/belt pulley using a socket wrench.



Check ribbed belt - **1** - for:

- Sub-surface 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, flank brittleness -glassy flanks-, surface cracks)

- Traces of oil and grease

Note:

- *Replace the belt if any damage is found. This will avoid possible break-downs or operating problems. The replacement of a ribbed belt is a repair measure.*

Calibrate compass (USA/Canada)**Note:**

- *It should not take more than 30 seconds to calibrate compass.*
 - *Vehicle must be standing still during calibration procedure.*
- Switch ignition on.
 - Wait 10 seconds.
 - Switch on rear window defroster.
 - Wait 10 seconds.
 - Switch off rear window heater.
 - Turn off ignition.

Cooling system, freeze protection and coolant level, checking**Note:**

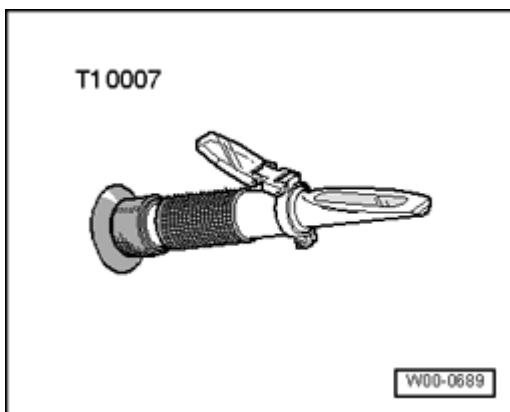
- *All engines are filled with coolant additive G 12 Plus according to TL VW 774 F (color purple). G 12 Plus can be mixed with the previous coolant additives G 11 and G 12 (red). Ensure that the system is replenished only with G12 Plus (due to its positive properties).*
- *G 12 Plus is suitable as a filled-for-life filling for cast iron and all-aluminum engines and gives optimum protection against frost, corrosion damage, scaling and over-heating.*
- *G 12 Plus increases the boiling point to 275 ° F*

(135 ° C) and ensures for a better heat dissipation.

- *The coolant portion of the mixture must amount to at least 40% (freeze protection to -13 ° F [-25 ° C]) and should not exceed 60% (freeze protection to -40 ° F [-40 ° C]). Otherwise the freeze protection will be reduced and the cooling efficiency will be worsened.*
- *The freeze protection must be ensured to approximately -13 ° F (-25 ° C).*

Checking freeze protection and adding coolant additive if necessary

Special tools, testers and auxiliary items required

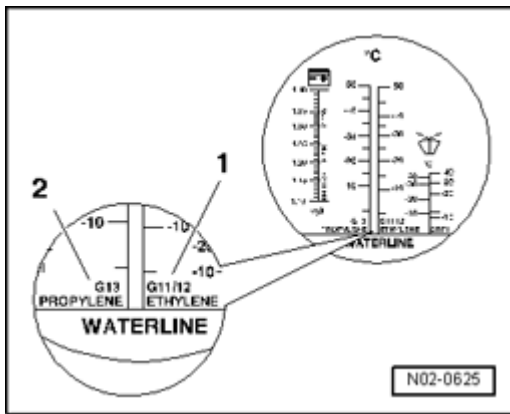


- Refractometer T10007

Note:

- *Read the bright/dark boundary to obtain an accurate reading for the following tests. Place a drop of water on the glass to improve the readability of the bright/dark boundary. The bright/dark boundary can be clearly recognized on the "WATERLINE" .*

- Check the concentration of the coolant additive using refractometer T10007 (operating instructions).



The scale - 1 - of the refractometer is designed for coolant additives G 12; G12 Plus and G11.

Scale - 2 - refers only to coolant additive G 13. (previously L80)

Note:

- *The freeze protection must be ensured to approximately $-13^{\circ} F$ [$-25^{\circ} C$].*
- *If for climatic reasons greater freeze protection is required, the amount of G 12 Plus can be increased, but only up to 60% (freeze protection to about $-40^{\circ} F$ [$-40^{\circ} C$]), otherwise freeze protection and cooling effectiveness will be reduced.*

- If freeze protection is insufficient, drain off required quantity shown in freeze protection table and add coolant additive G 12 Plus.

Note:

- *Observe waste disposal regulations!*

Freeze protection to $^{\circ} C$		Difference amount in liters
Actual value	Specified value	4-cylinder engines
0	-25	3,5
	-35	4,0
-5	-25	3,0
	-35	3,5
-10	-25	2,0
	-35	3,0
-15	-25	1,5

	-35	2,0
-20	-25	1,0
	-35	1,5
-25	-35	1,0
-30	-35	0,5
-35	-40	0,5

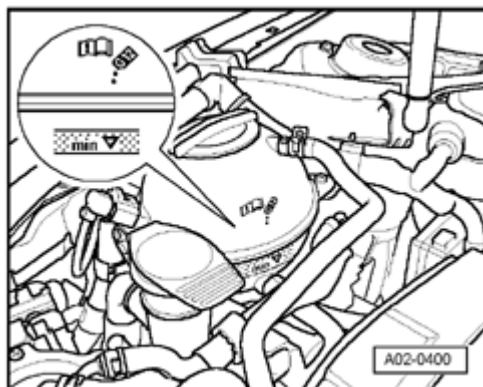
- Check coolant additive concentration after test drive again.

Checking coolant level and adding coolant if necessary

- Check coolant level in expansion tank with engine cold.

Note:

- *Check coolant level and top off if necessary. With engine at operating temperature, coolant level must be at top marking, with engine cold, it must be in center of hatched area.*



- Delivery inspection: Coolant level above the "MIN marking" - **arrow** - .
- Inspection service: Coolant level above the "MIN marking" - **arrow** - .

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

Note:

- *Determine cause of fluid loss which cannot be attributed to normal use and rectify (repair measure).*

Mixture ratio:

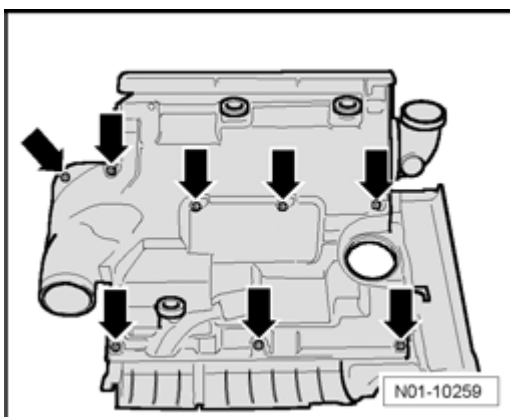
Freeze protection to	Coolant additive G 12 Plus / TL VW 774 F	Water
-25 ° C	approx. 40%	approx. 60 %
-35 ° C	approx. 50 %	approx. 50 %
-40 ° F	approx. 60 %	approx. 40%

Note:

- *Coolant additive G 12 Plus conforming to TL VW 774 F prevents freeze and corrosion damage, scaling, and raises the boiling point. For these reasons, the cooling system must be filled with radiator freeze and corrosion protection fluid all year round.*
- *Especially in countries with tropical climates or when vehicle is driven under heavy load, the coolant improves the engine reliability by its increased boiling point.*
- *The coolant concentration must not be reduced by adding water, even during the warmer season. The coolant additive ratio must be at least 40%.*

Air cleaner, clean housing and replace filter element**Removing and installing air filter element (2.0 L TFSI engines)****Removing**

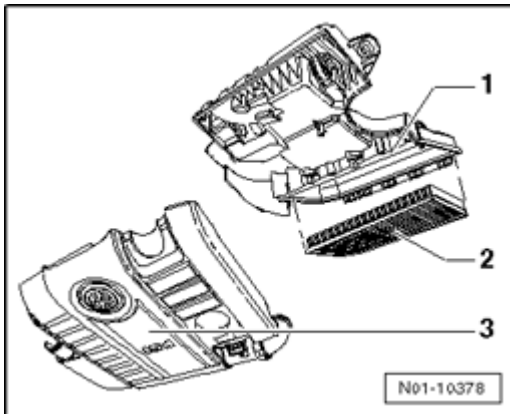
- Remove engine cover ⇒ [01-4, Upper engine cover, removing and installing](#) .



- Place engine cover with upper side on a soft surface,

prevent damage to chrome applications.

- Unscrew bolts - **arrows** - on lower side of engine cover.

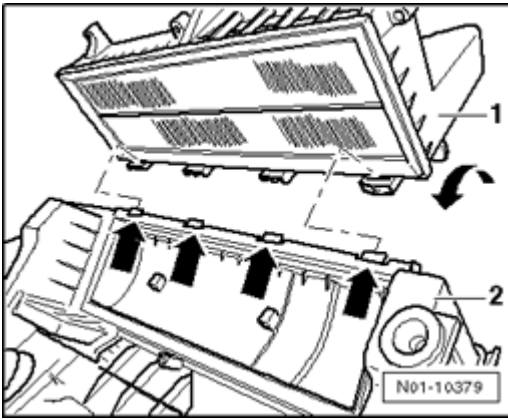


- Separate lower part of air filter housing - **1** - from upper part - **3** - .
- Remove air filter insert - **2** - from lower part of air filter housing - **1** - .

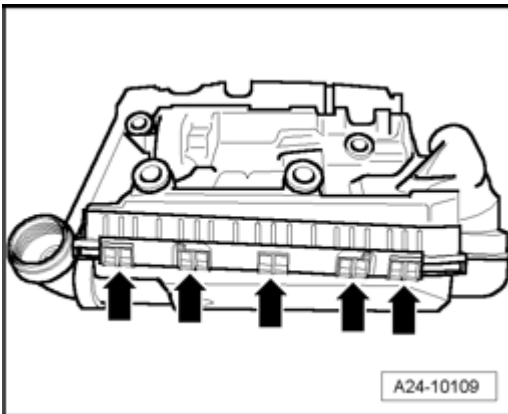
Installing

Note:

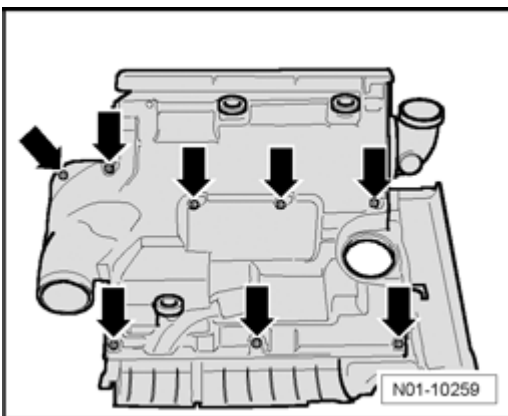
- *Self-locking bolts are equipped for fastening the upper part of the air filter housing to the lower part of air filter housing as well as the intake supports. If these bolts are loosened or tightened using a drill motor, the threads in the upper part of air filter housing can be damaged.*
- *For this reason, a drill motor may only be used when the following prerequisites are met:*
- *The drill motor RPM is max. 200 / min.*
- *The torque must be adjustable to max. 3 Nm.*



- Engage upper part of air filter housing - **1** - on retaining tabs - **arrows** - on upper part of air filter housing - **2** - and pivot in direction of arrow, then lightly press on.



- Both housing halves must fit together flush, - **arrows** - .



- Tighten bolts - **arrows** - to maximum 3 Nm.

Upper engine cover, removing and installing

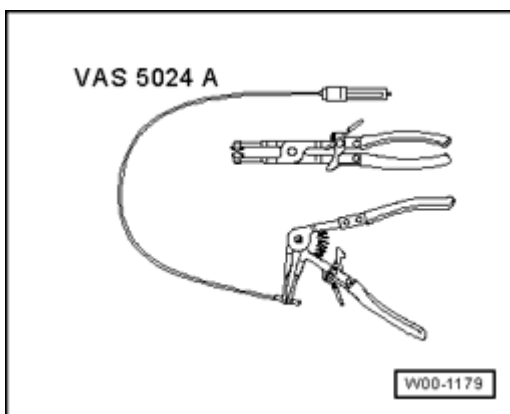
Caution!

- **Be sure to not strike the engine cover with a fist or a tool when installing it and engaging the fastening points. There is a risk of damage.**

Removing and installing engine cover, 2.0 L TFSI gasoline Direct Fuel Injection engines, ⇒ [01-4, Removing and installing engine cover \(2.0L TFSI gasoline engines\)](#) .

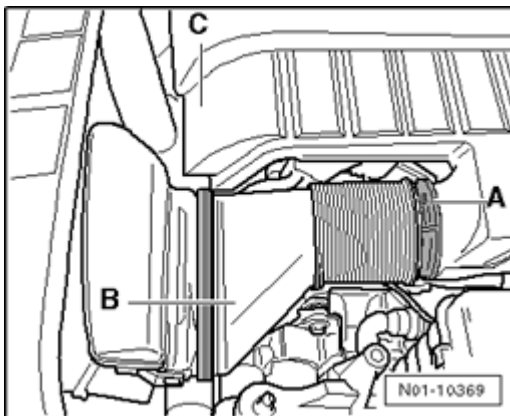
Removing and installing engine cover (2.0L TFSI gasoline engines)

Special tools, testers and auxiliary items required

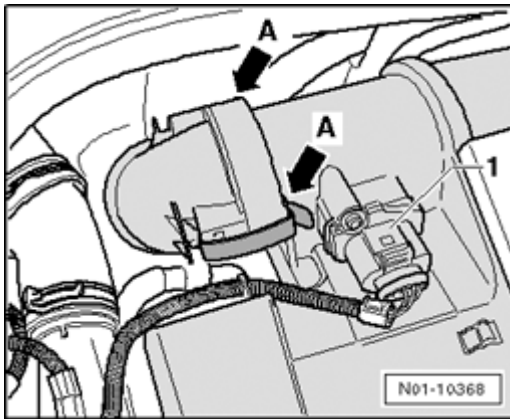


- Spring type clip pliers VAS 5024A

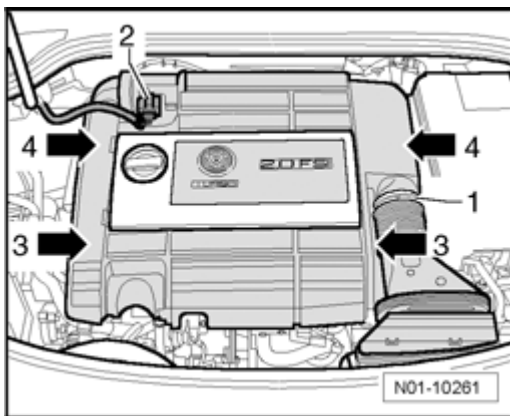
Removing



- Release spring clip - **A** - using spring-type clip pliers VAS 5024A and slide air intake - **B** - from engine compartment cover - **C** - .



- Disconnect connector - **1** - from Mass Air Flow (MAF) sensor and set connector aside.
- Release both fastening clips - **arrows A** - .



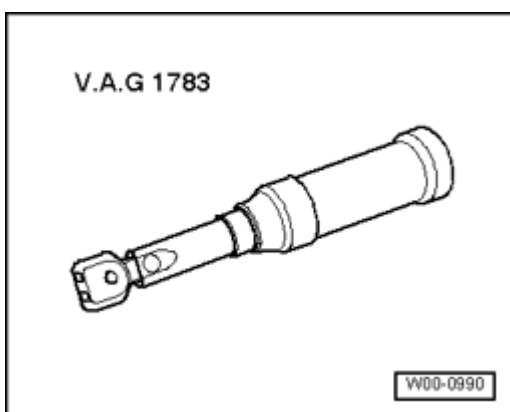
- First release engine cover at - **arrow 3** - , then - **arrow 4** - and raise.

Installing

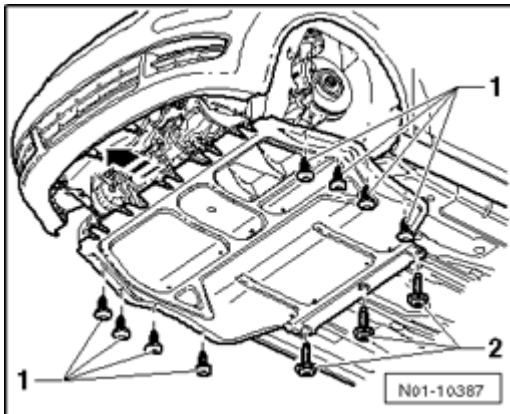
Installation is the reverse of removal.

Lower engine compartment cover (noise insulation), removing and installing

Special tools, testers and auxiliary items required



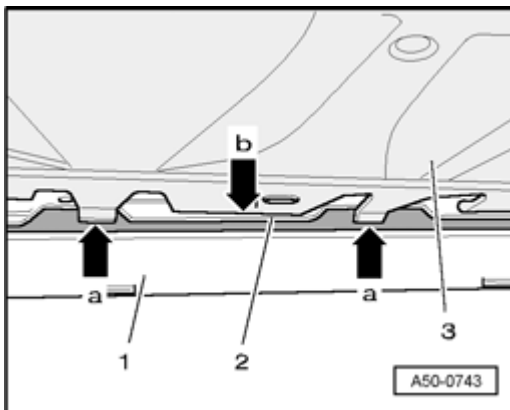
- Torque wrench V.A.G 1783



Removing

- Self-tapping screws, Qty. 8, torque specification 2 Nm.
- Combi-screws, Qty. 3, torque specification 6 Nm.

- Remove bolts - **arrows** - .
- Remove noise insulation rearward.



Installing

- Slide noise insulation - **3** - as shown into lower lock carrier - **2** - .
- The narrow latches - **arrow a** - must be slid below or wide latches - **arrow b** - slid above the lock carrier edge - **3** - .
- Retaining tabs must engage over wide tabs in lock carrier holes when doing so.
- Tighten screws - **arrows** - to correct torque specification.

Engine and components in engine compartment (from

above and below), visual check for leaks and damage

Perform visual check as follows:

- Check engine and components in engine compartment for leaks and damage.
- Check hoses, lines and connections of
 - Fuel system
 - Cooling and heating system
 - and brake system

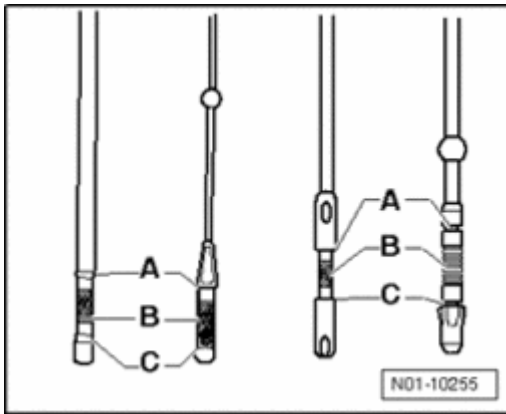
for leaks, abrasions, porosity and brittleness.

Note:

- *Ensure that all malfunctions detected are rectified within repair measures.*
- *If fluid losses are greater than can be reasonably expected, determine cause and repair (repair measure)*

Engine oil level, check**Note:**

- *Observe waste disposal regulations!*
 - *After stopping engine, wait at least 3 minutes to allow oil to flow back into oil pan.*
 - *Pull out dipstick, wipe off with a clean cloth and re-insert dipstick again up to stop.*
- Pull out dipstick again and read oil level.



If the dipstick appears as illustrated:

A - Oil must not be topped off.

B - Oil can be topped off. This will cause the oil level to be in area A .

C - Oil must be topped off. It is sufficient when oil level is in area B (grooved field).

If oil level is above area - **A** - , the catalytic converter can be damaged.

- When oil level is below marking - **C** - , top off with oil to marking - **A** - . Oil specification ⇒ [01-3, Engine oils](#) .

Engine oil, draining or extracting; changing oil filter and filling engine oil

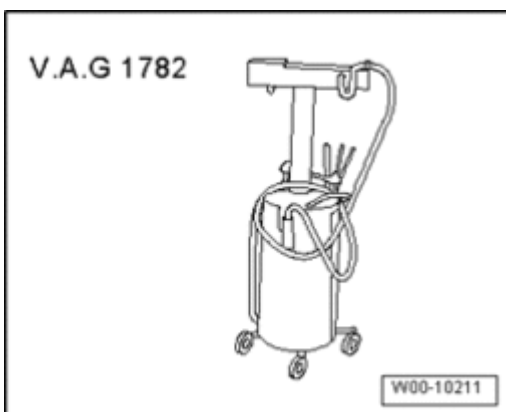
Engine oil: Drain or extract and fill, ⇒ [01-4, Engine oil, draining or extracting](#) .

Replace oil filter ⇒ [01-4, Oil filter, replacing](#) .

Filling with engine oil ⇒ [01-4, Filling engine oil](#) .

Engine oil, draining or extracting

Special tools, testers and auxiliary items required



- Oil extractor V.A.G 1782
 - Oil absorbent towel VAS 6204/1

Engine oil, draining or extracting

Perform the following work procedure:

Note:

- *In engines with standing oil filter module, oil filter should be changed before changing engine oil ⇒ [01-4, Oil filter, replacing](#) . Removing the filter element will open a valve and oil in the filter housing will flow automatically into the crankshaft housing.*
- *If engine oil is drained and not extracted using old oil extraction unit, replace oil drain plug. This prevents leaks.*
- *Observe waste disposal regulations!*

- Extract engine oil using old oil collecting and extracting unit V.A.G 1782 .

or

- Remove oil drain plug
- Drain engine oil.

Note:

- *The oil drain plug is equipped with a permanent seal, therefore the oil drain plug must always be replaced.*
- *Observe waste disposal regulations!*

- Screw in new oil drain plug with sealing ring hand-tight.
- Fill up with engine oil, specification ⇒ [01-3, Engine oils](#) .

Engine oil capacity,

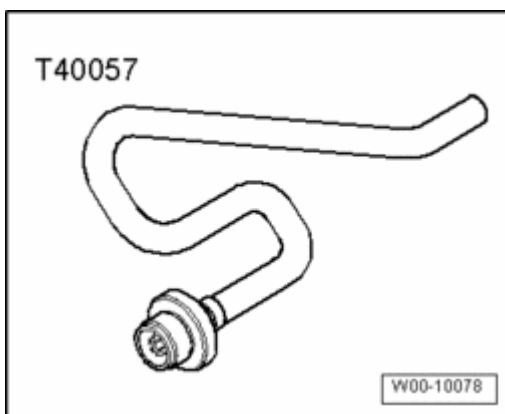
⇒ *Repair Manual, 2.0 Liter 4-Cyl. 4V Turbo Engine Mechanical, Fuel Injection Ignition, Engine Code(s): BPY, Repair Group 17,*

Torque specifications for oil drain plug:

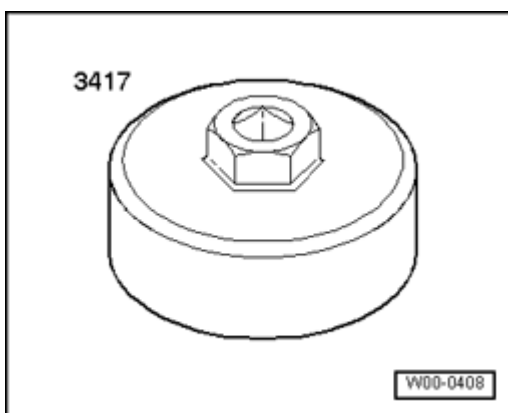
- Gasoline engines: 30 Nm

Warning!

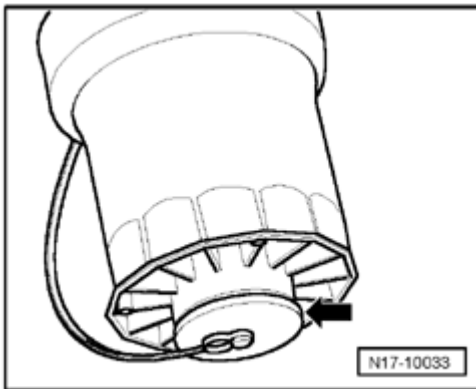
- ***Torque settings must not be exceeded***
- ***A torque figure that is too high may lead to leaks or even damage the oil pan.***

Oil filter, replacing**Replacing oil filter, 2.0L TFSI engines****Special tools, testers and auxiliary items required**

- Oil drain adapter T40057

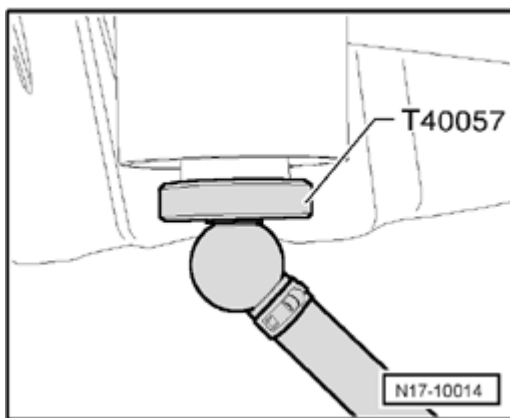


- Oil filter wrench VAS 3417
- Torque wrench V.A.G 1331/

Perform the following work procedure:

- Unscrew dust cap - **arrow** - from oil filter housing.

Oil filter housing must be drained before it is removed.

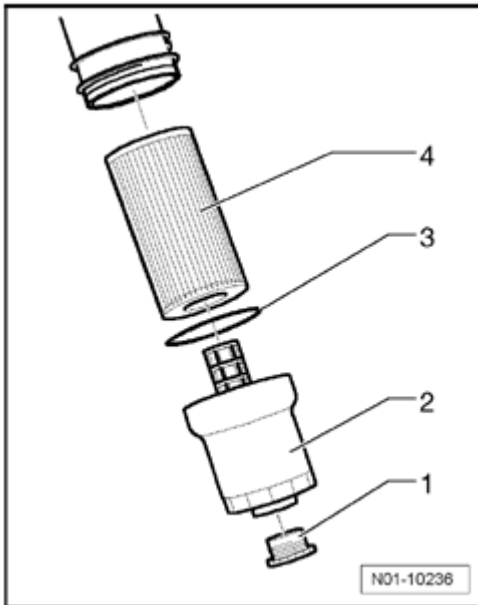


- Screw oil drain adapter T40057 into oil filter housing and hold hose into an oil collecting pan.

Note:

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

- Allow engine oil to drain.
- Unscrew oil drain adapter T40057 again.
- Oil filter housing can now be unscrewed using oil filter wrench VAS 3417 .



- Replace oil filter element - **4** - and sealing ring - **3** - .

Note:

- *Observe waste disposal regulations!*

- Tighten oil filter housing - **2** - to 25 Nm.
- Screw dust cap - **1** - hand-tight into oil filter housing - **2** - .

Filling engine oil

Oil specifications ⇒ [01-3, Engine oils](#) .

Engine oil capacities,

⇒ *Repair Manual, 2.0 Liter 4-Cyl. 4V Turbo Engine Mechanical, Fuel Injection Ignition, Engine Code(s): BPY, Repair Group 17,*

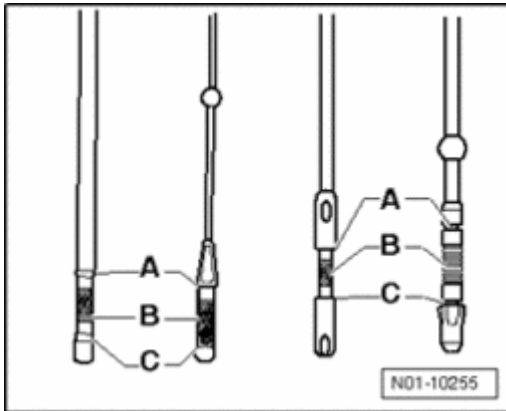
General notes

Note:

- *Observe waste disposal regulations!*

- After topping off with oil wait at least 3 minutes then check oil level.

- Pull out oil dipstick and wipe with clean rag. Replace dipstick and push down to stop.
- Pull out dipstick again and read oil level.



If the dipstick appears as illustrated:

A - Oil must not be topped off.

B - Oil can be topped off. After topping off, oil may be in range A .

C - Oil must be topped off. It is sufficient when oil level is in area B (grooved field).

If oil level is above area - **A** - , the catalytic converter can be damaged.

- When oil level is below marking - **C** - , top off with oil to marking - **A** - . Oil specification ⇒ [01-3, Engine oils](#) .



Description of work (part 2 of 2)

Perform test drive

To what extent the following can be checked is dependent upon the vehicle equipment and local conditions (urban/country).

The following should be checked by means of a road test:

- Engine: Output, misfiring, idling speed, acceleration
- Clutch: Pulling away, pedal pressure, odors
- Gear selection: Ease of operation, shift lever position
- Automatic transmission: Selector lever position, shiftlock / ignition key interlock, shift behavior, display in instrument cluster
- Foot and parking brake: Function, free travel and effectiveness, pulling to one side, juddering, squeal
- ABS function: When braking with activated ABS, the brake pedal must pulse noticeably.
- Steering: Function, steering free play, steering wheel centralized when wheels are in straight ahead position
- Sunroof: Function
- Radio, Radio/Navigation system: Function, Reception, GALA, interference
- Multifunction indicator (MFI): Functions
- A/C system: Function
- Vehicle: Moving off line when traveling straight ahead (level road)
- Imbalance: Wheels, drive shafts, prop shafts
- Wheel bearings: Noises
- Engine: Hot starting behavior

Wheel securing bolts, tighten to correct torque setting

Removing and installing wheel bolt covers

Note:

- *Depending on vehicle equipment, wheel bolts can be*

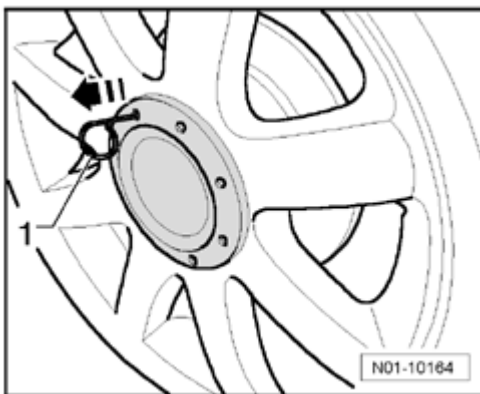
covered by the following components:

- Covers for wheel bolts
- Wheel center cover
- Full wheel cover

- If present, remove respective wheel bolt cover

Note:

- *The pulling hook for removing the cover caps or wheel center cap can be found in the vehicle tool kit.*



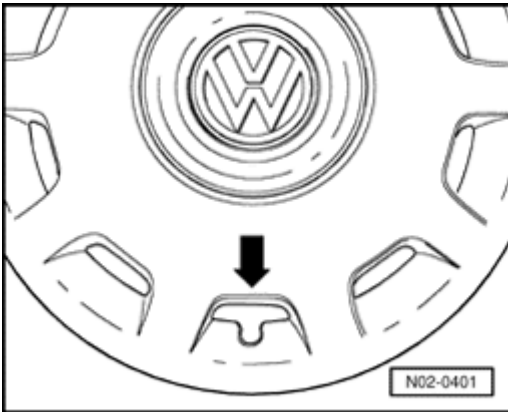
Removing wheel center cover (example)

- Insert removal hook into one of the holes of the wheel center cap and pull in - **direction of arrow** - .

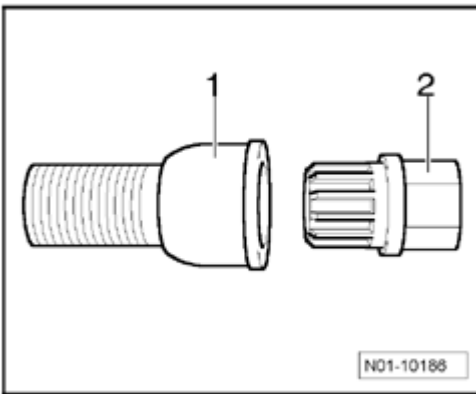
Installation notes

Note:

- *The covers protect the wheel bolts and should be reinstalled after retightening the wheel mounting bolts.*
- *Note that on some rims, the center wheel cover tab must engage in rim cut-out.*
- *After completing work, place adapter and pulling hook with vehicle tool kit.*



- On vehicles with full wheel cover, install cover so that tire inflating valve is guided through the designated recess - **arrow** - .

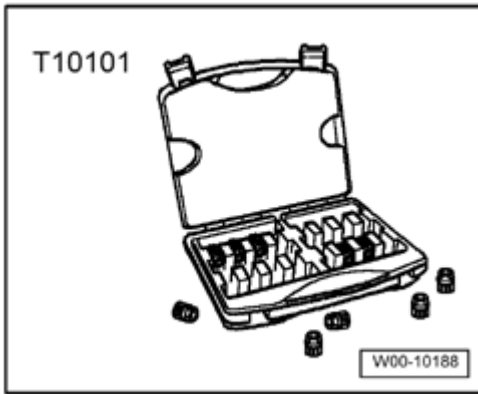


Loosen anti-theft wheel bolts and tighten

Note:

- *The adapter to loosen/tighten the anti-theft wheel bolts is located with the vehicle tool kit.*
- *If there is no adapter installed in the vehicle for loosening/tightening the anti-theft wheel bolts, use master wheel bolt key set T10101 .*
- *In case of losing the adapter, a replacement adapter can only be obtained via the code number.*
- *The adapters code number for loosening/tightening the anti-theft wheel bolts is stamped at the face of the adapter.*

Special tools, testers and auxiliary items required

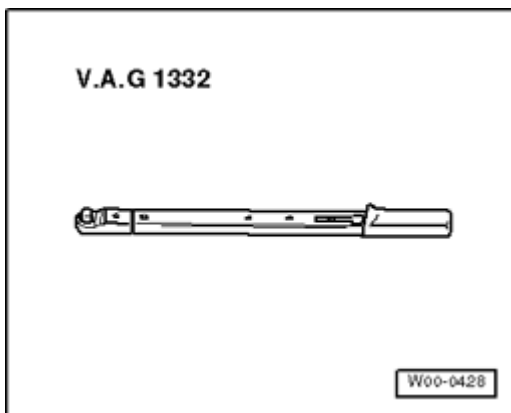


- Master wheel bolt key set T10101

- Slide adapter into anti-theft wheel bolt until it stops.
- Slide wheel wrench onto adapter until it stops.
- Retighten wheel securing bolts to the correct tightening torque.

Retighten wheel securing bolts

Special tools, testers and auxiliary items required



- Torque wrench V.A.G 1332

Note:

- *Ensure wheel bolts are retightened alternately.*

Tightening torque: 120 Nm

Radio/navigation system, activating anti-theft coding

Volkswagen Radio and Navigation units

Radio units / radio-navigation systems are shipped with a

security code.

Security code means that every unit with anti-theft coding has been programmed with its own code.

This code is not active from the factory.

Note:

- *Security code is located on card for the unit.*
- *Code number together with serial number is printed on card for the unit, located at front in owner information packet.*
- *If SAFE appears continuously in display after switching on the radio, the radio is locked! Radio must remain switched on one hour, then the lock is deactivated. Now it is possible to enter the code anew.*

To activate radio/navigation system anti-theft coding refer to

⇒ *Repair Manual, Communication, Repair Group 91, Radio, Telephone, Navigation, Trip computer*

Tire pressure control indicator, performing basic setting

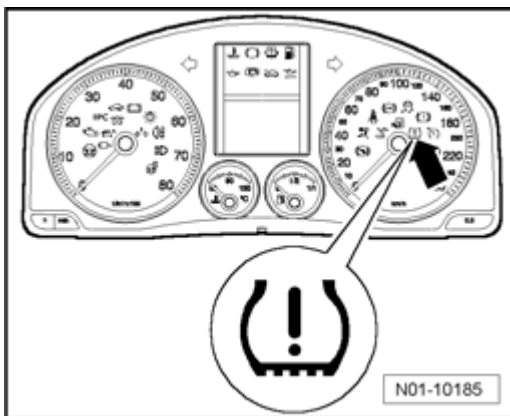
Note:

- *Basic setting of Tire Pressure Monitoring Display Indicator Lamp K220 should always only be performed, "after" tire inflation pressure values have first been corrected to the proper values.*
- *If no pressure loss and no tire damage is detected after a tire pressure warning, the erroneous warning can be eliminated by a basic setting.*

Tire Pressure Monitoring System display is a component of ABS Control Module -J104- software.

ABS Control Module compares speed and rolling circumference of individual wheels with help of ABS sensors. If rolling circumference of a wheel changes, this is displayed via tire pressure control indicator. Rolling circumference of tire may be change if:

- Tire inflation pressure is too low.
- Tires have structural damage.
- Vehicle is loaded on one side.
- Wheels of one axle are loaded higher (e.g. when towing trailer or driving uphill and downhill).
- Snow chains are installed.
- Spare wheel is installed.
- One wheel per axle was replaced.

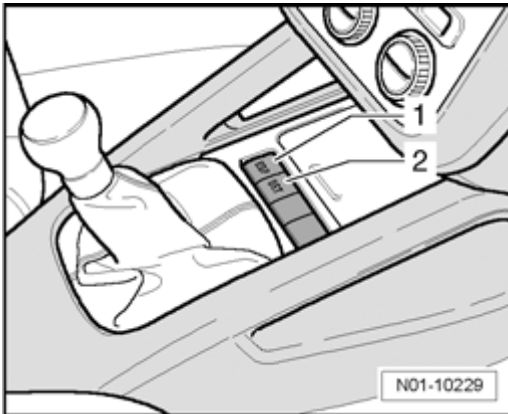


Tire Pressure Monitoring Display Indicator Lamp K220 has a yellow indicator light in instrument cluster - **arrow** - .

- "BLINKING LIGHT" means that no "INITIAL BASIC SETTING" was performed yet.
- "STEADY LIGHT" , in conjunction with warning buzzer, means "WARNING" , a loss of pressure was detected, check tire inflation pressures, perform system basic setting.

Performing "INITIAL" basic setting

- Switch ignition on.

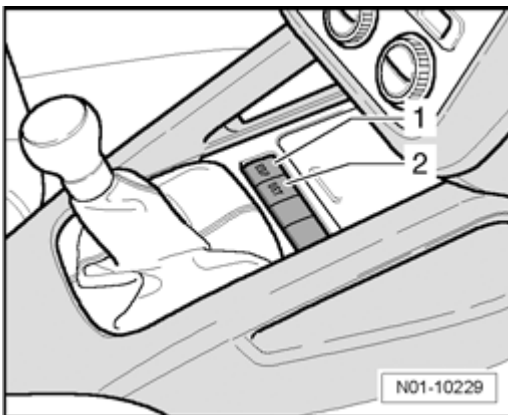


- Simultaneously press the ESP - 1 - button and SET - 2 - button in the center console for longer than 2 seconds.

If ESP is not installed, press the button for ASR .

Beginning of basic setting is confirm by a notifying tone.

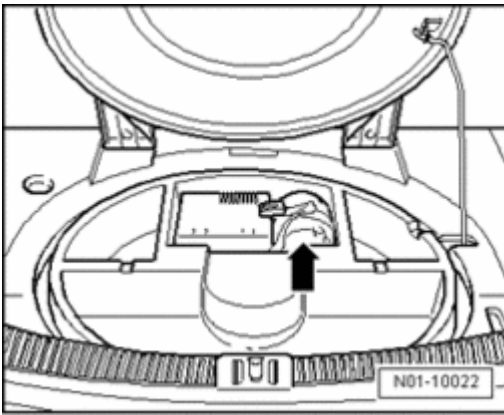
On next new ignition start, warning does not appear.



Performing basic setting

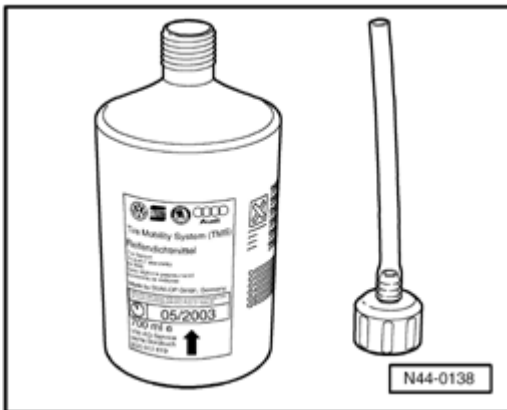
- Switch ignition on.
- After changing tire pressures or changing one or more tires, tire pressure display SET button, item - 2 - in illustration, must be pressed until a confirmation tone is heard.

Warning will no longer appear next time engine is switched on.



Tire repair kit

The tire repair kit is located in the spare wheel well - **arrow** -



In addition to the compressor, the tire repair kit contains a tire inflation cylinder with sealant.

Note:

- *The tire sealant in the bottle has a limited shelf-life.*
- *Therefore, on the bottle, the expiration date - **arrow** - is displayed.*

In this example, the expiration date 05/2003 has passed, and the bottle must then be replaced.

- Check the expiration date and enter in maintenance tables.
- Replace tire sealant, if expiration date has been reached.

Caution!

- ***Tire sealant must not be older than 4 years.***

- **If the bottle was opened, e.g. for a flat tire, it must also be replaced.**

Note:

- *Residual tire sealant or full bottles, which have expired, must be disposed of.*
- *Old tire sealant or remainder of it must not be mixed with other fluids and must be disposed of.*

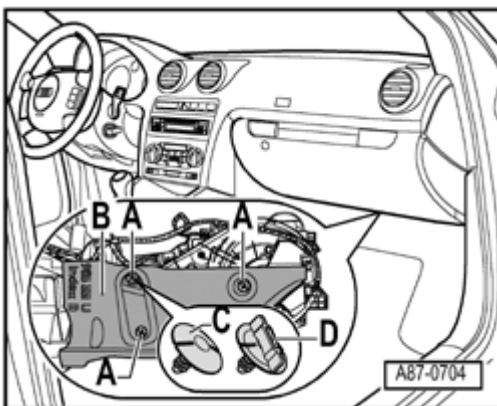
Observe disposal regulations.

Dust and pollen filter, clean housing and replace filter element

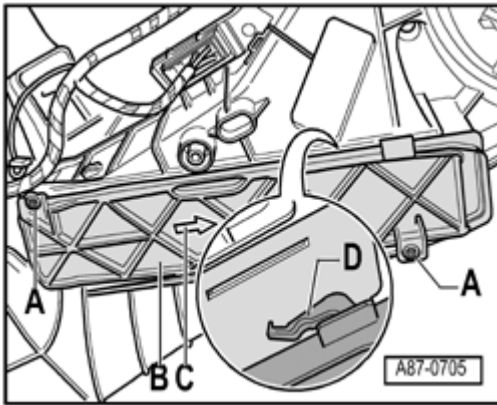
Note:

- *Clean the surrounding area of the dust and pollen filter in air conditioner shaft or heating before installing a new filter.*

- Perform the following work procedure:



- Remove screw clips - **A** - and remove insulation mat - **B**
- .

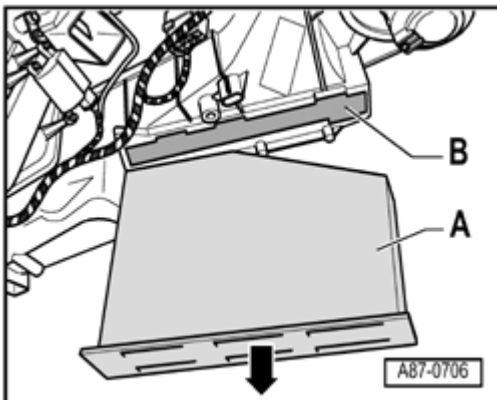


Screw clips - **A** - are available in different versions, e.g. - **C** - and - **D** - .

- Remove bolts - **A** - if necessary.

Bolt - **A** - is not installed on all vehicles. Bolts secure the cover - **B** - in the event the catches - **D** - no longer hold.

- Push cover - **B** - in direction of - **arrow C** - and remove cover.



- Remove filter element - **A** - from shaft - **B** - of air conditioner or heater.

Note:

- *Observe waste disposal regulations!*

- Using e.g. a vacuum cleaner, clean shaft - **B** - of A/C unit or heater.

- Install in reverse order of removal.

Headlight adjustment, check

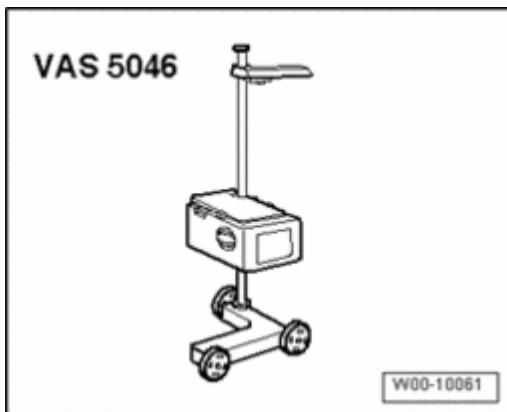
Adjusting gas discharge headlights ⇒ [01-5, Adjusting headlights with gas discharge lamps](#) .

Adjusting halogen headlights ⇒ [01-5, Adjusting headlights with halogen lamps](#) .

Adjusting fog lights and other auxiliary headlights ⇒ [01-5, Adjusting fog lights and other auxiliary lights](#) .

Test requirements:

Special tools, testers and auxiliary items required



- Head light adjusting unit VAS 5046 or
- Headlight adjuster VAS 5047

Test- and adjustment requirements:

- Tire pressure must be OK.
- Lenses must not be damaged or dirty.
- Reflectors and bulbs OK.
- Vehicle must be properly loaded.

Move vehicle back and forth for 1 meter (3 to 4 feet) or bounce front and rear of vehicle several times up and down to settle suspension.

- Vehicle and headlight adjuster must be on a level surface. ⇒ *Operating instructions of headlight adjuster VAS 5046* or ⇒ *operating instructions of headlight adjuster VAS 5047*
- Vehicle and headlight adjuster must be aligned.

- Inclination must be set.

- Following headlamp adjusting device operating instructions!

In the trim above the headlight, inclination measurements are stamped in "%". The headlights must be adjusted according to these measurements. Percentage information is based on a projection distance of 10 meters. For example: inclination of 1.0 % converts to approx. 10 cm.

Applies to vehicles with halogen headlights with manual headlight range control:

- The headlight range adjuster thumb wheel must be in basic setting - **0** - .

Load: Vehicle must be loaded with one person on the drivers seat, weighing 165 lbs (75 kg), otherwise vehicle must be empty (curb weight).

The curb weight is the weight of the vehicle ready to be operated with filled fuel tank (at least 90% filled), including the weight of all equipment usually carried in the car such as spare wheel, tools, car jack, fire extinguisher, etc.

If the fuel tank is not at least 90% full, adjust the weight as follows:

- Read fuel level from fuel gauge. Calculate additional weight needed using the following table. Place extra weight in luggage compartment.

Tank filling table

Fuel level according to fuel gauge	Additional weight in luggage compartment in lbs (kg)
1/4	66 (30)
1/2	44 (20)
3/4	22 (10)
Full	0

Example:

If the fuel tank is half full, place a weight of 44 lbs (20 kg) in the luggage compartment.

Note:

- *For additional weight use containers filled with water. A container filled with 5 liters of water weighs*

approx. 11 lbs (5 kg).

Applies to vehicles with gas discharge lamps with dynamic headlight range control:

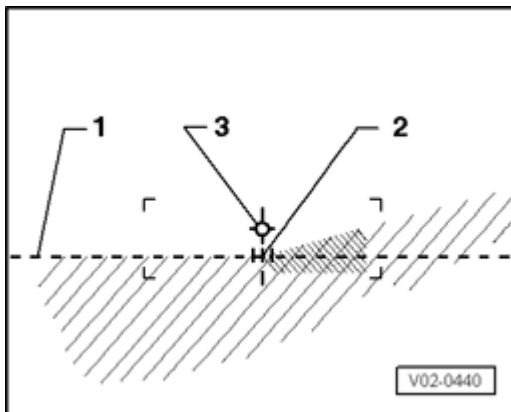
Note:

- *On vehicles with gas discharge headlights, DTC memory should be checked and erased using vehicle diagnosis, test and information system VAS 5051 or vehicle diagnosis and service system VAS 5052 and headlight range adjuster brought into Basic Setting before every headlight adjustment.*

Checking headlight setting (with new test screen without 15° - setting line)

Headlights:

Check the following:



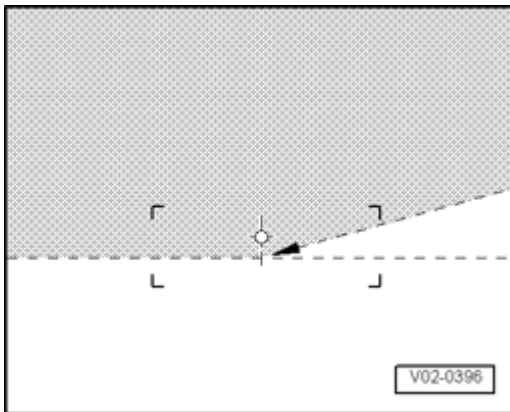
- With the low beam switched on check whether the horizontal light-dark border of the setting line - 1 - contacts the test surface.

- Check whether the break-away point - 2 - between the left horizontal part and the rising part on the right of the light-dark border runs vertically through the center point - 3 - . The bright core of the light beam must be on the right of the vertical line.

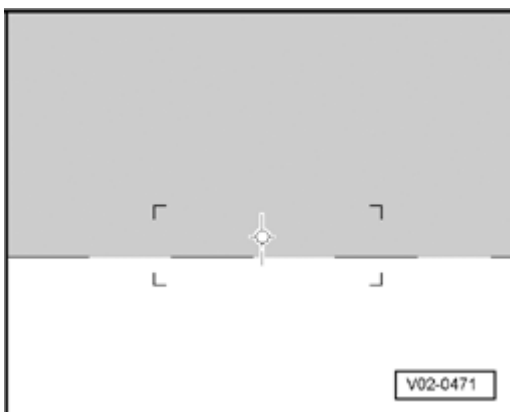
Note:

- *To make it easier to find break-away point - 2 - cover and uncover left half of headlight (as viewed when looking forward) a few times. Then check low beam again.*
- *After correct adjustment of low beams the center*

*point of the main beam must lie on the center mark -
3 - .*



- *For the previous test screen with 15° -setting line, adjust as for new test screen. To avoid incorrect settings, ignore 15° setting line.*



Fog lights:

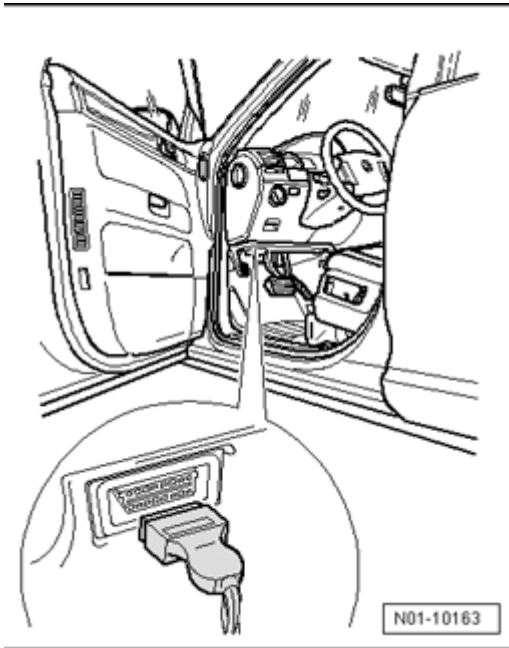
- Check whether the upper light-dark border touches the setting line horizontally over the complete test screen width.

Other additional headlights:

Accessory auxiliary light systems must be checked and adjusted according to the guidelines valid for them.

Adjusting headlights with gas discharge lamps

Perform basic setting:



- Connect diagnostic tester ⇒ [01-3, Diagnostic unit, connecting](#) .
- Switch ignition on.
- Select "Guided Fault Finding"

Enter vehicle information; all control modules are interrogated.

- Press the following selections in the order shown:
 - Go To
 - Functions and component selection
 - Body
 - Electrical Equipment
 - 01 - On Board Diagnostic (OBD) capable systems
 - 55-Dynamic Headlamp Range Control
 - J 431-Dynamic Headlamp Range Control, Functions
 - J 431-Headlamp Range Control Module, basic setting

- Press → -button.

- Follow the steps of the tester and confirm the entry until the following text appears:

J431 - Headlamp Range Control Module, basic setting

- Press → -button.

- Follow the steps of the tester and confirm the entry until the following text appears:

J431 - Headlamp Range Control Module, basic setting

- Follow procedure on tester.

- Check headlight adjustment and adjust headlights if necessary.

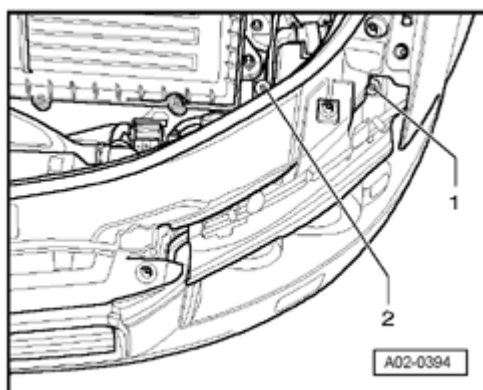
- Complete function program for J431 - Headlamp Range Control Module, basic setting.

Note:

- *Also check whether both headlights work evenly when operating the manual headlight range control.*

Adjust left headlight (Rabbit/GTI 2004 ➤):

Adjustment screws for right headlight are arranged symmetrically



- Adjustment screw - 1 - for vertical adjustment
- Adjustment screw - 2 - for height/lateral adjustment

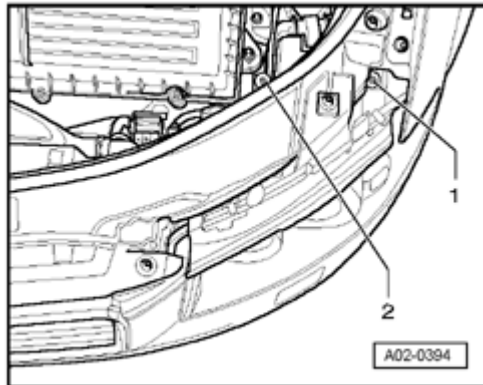
- To adjust the height, turn the adjustment screws - 1 - and - 2 - with the same number of revolutions.

- To adjust laterally, turn only the adjustment screw - 2 - .

Adjusting headlights with halogen lamps

Left headlight (Rabbit/GTI 2004 ➤):

Adjustment screws for right headlight are arranged symmetrically



- Adjustment screw - 1 - for vertical adjustment
- Adjustment screw - 2 - for height/lateral adjustment

- To adjust the height, turn the adjustment screws - 1 - and - 2 - with the same number of revolutions.
- To adjust laterally, turn only the adjustment screw - 2 - .

Adjusting fog lights and other auxiliary lights

Fog lights in headlights:

Note:

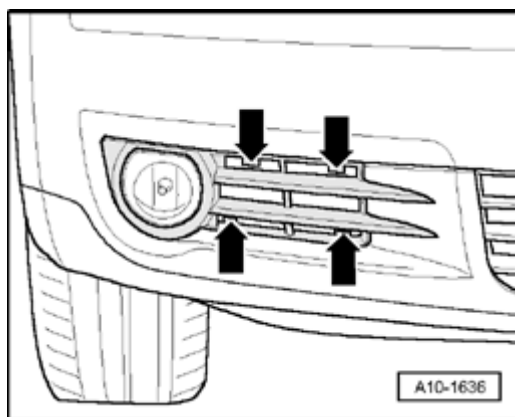
- *The adjustment of fog lights is performed automatically when adjusting headlights.*

Fog lights in bumper, right (Rabbit 2004 ➤):

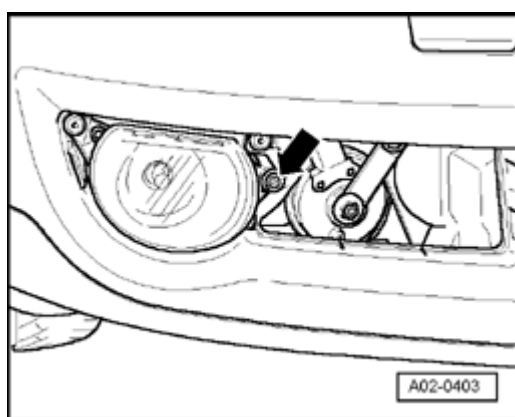
Adjusting screw on left fog light is arranged symmetrically.

Inclination figures:

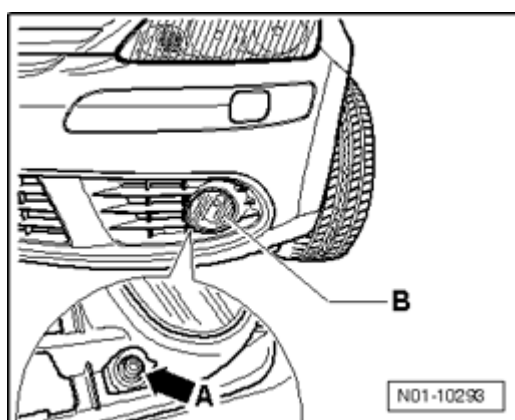
- Fog lights 20 cm



- Unclip retaining tabs - **arrows** - and remove cover on lower part of bumper.



- To adjust the lamp range, turn the adjustment screw - **arrow** - .



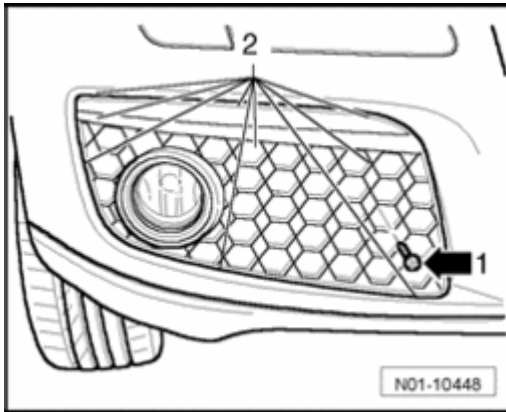
Lateral adjustment is not possible.

Fog lights in bumper, right (GTI)

Adjusting screw on left fog light is arranged symmetrically.

Inclination figures:

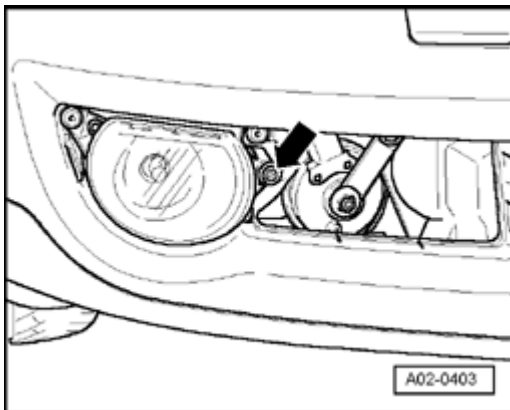
- Fog lights 20 cm



- Remove screw - 1 - .
- Unclip retaining tabs - 2 - and remove cover on lower part of bumper.

Note:

- *Retaining tabs are partially seated very securely. Therefore, be very careful when removing cover to avoid breaking retaining tabs.*



To adjust the lamp range, turn the adjustment screw - **arrow** - .

- Secure cover in reversed sequence.

Other auxiliary lights

Accessory auxiliary light systems must be checked and adjusted according to the guidelines valid for them.

Service interval display, reset

Service Reminder Indicator must for

- Vehicle release inspection

- Every service

(adapted)!

- Connect diagnostic tester ⇒ [01-3, Diagnostic unit, connecting](#) .

- Switch ignition on.

- Touch button/field on screen. "GUIDED FUNCTIONS" on screen.

If display does not appear as in work sequence: see Vehicle Diagnostic, Testing and Information System operating instructions.

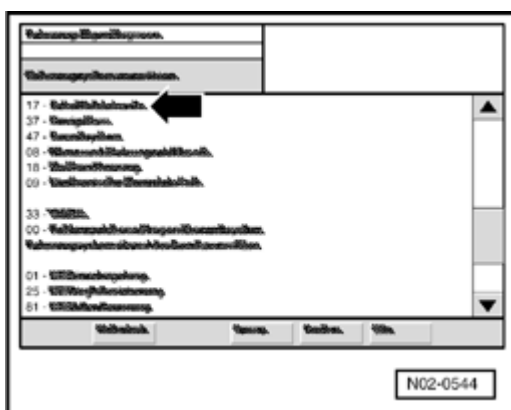
- Press > button to confirm.

- Select in succession:

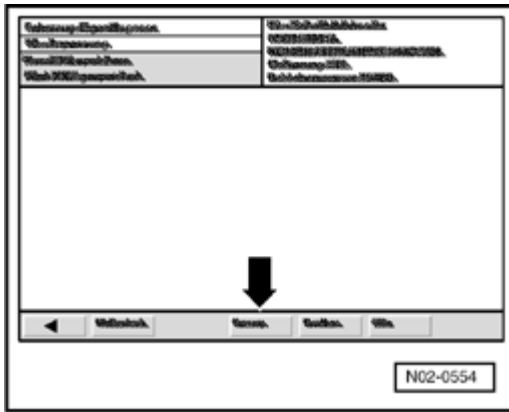
- Brand
- Model
- Model year
- Engine code

- Confirm vehicle identification.

- Select in succession:



- "Instrument cluster" - **ARROW** - .
- "Resetting Service Reminder Indicator (SRI)" .

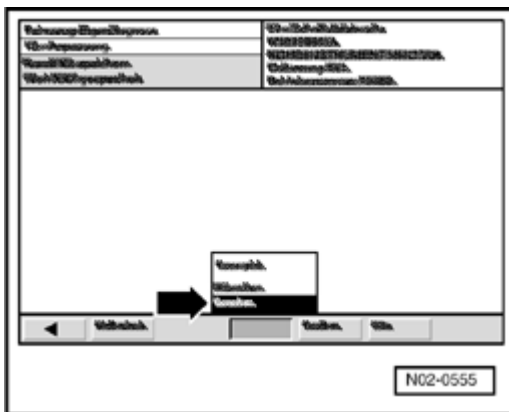


- Perform adaptation according to instructions of "GUIDED FUNCTIONS" .

End Adaptation

Indicated on display:

- Press the "Go to" button - **arrow** - on display.



Indicated on display:

- Press "exit" button - **arrow** - on display.
- Press "exit" button in exit menu.
- Turn off ignition and disconnect diagnostic connection.
- Switch ignition on.

After switching on the ignition, service event is no longer indicated in the odometer display in the instrument panel insert.

Service interval display, recoding

- Connect diagnostic tester ⇒ [01-3, Diagnostic unit, connecting](#) .
- Switch ignition on.

- Touch button/field on screen. "GUIDED FUNCTIONS" on screen.

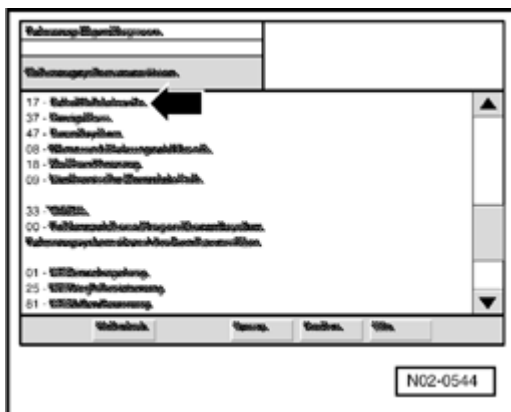
If display does not appear as in work sequence: see Vehicle Diagnostic, Testing and Information System operating instructions.

- Select in succession:
 - Brand
 - Model
 - Model year
 - Engine Code

- Confirm vehicle identification.

If the vehicle identification procedure was performed correctly, press > button for confirmation.

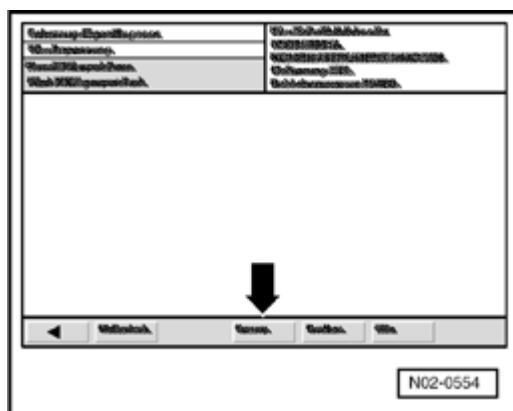
- Select in succession:



- "Instrument cluster" - **ARROW** - .
- "Adapt service interval extension" .

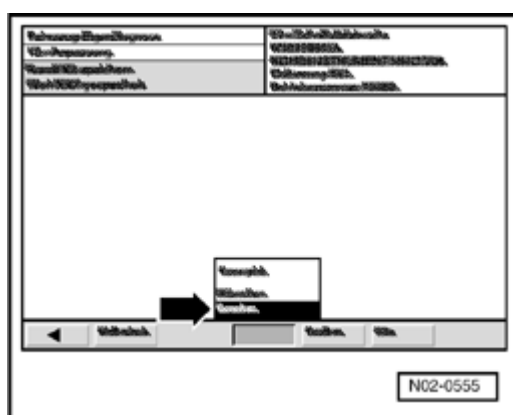
- Perform adaptation according to instructions of "GUIDED FUNCTIONS" .

End Adaptation



Indicated on display:

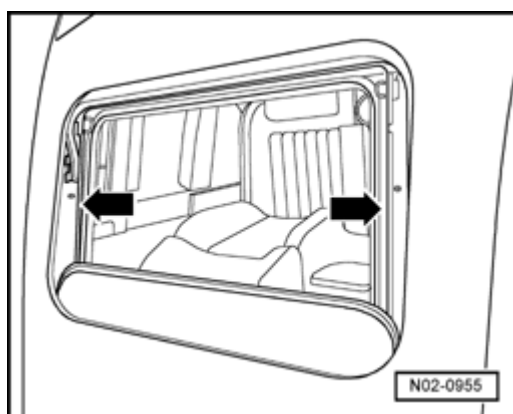
- Press the "Go to" button - **arrow** - on display.



Indicated on display:

- Press "exit" button - **arrow** - on display.
- Press "exit" button in exit menu.
- Turn off ignition and disconnect diagnostic connection.

Sunroof, checking function, cleaning and lubricating guide rails



Perform the following work procedure:

- Check function of sunroof.
- Clean guide rails - **arrows** - and lubricate with special grease.

Windshield wash/wipe system and headlight wash system, check function

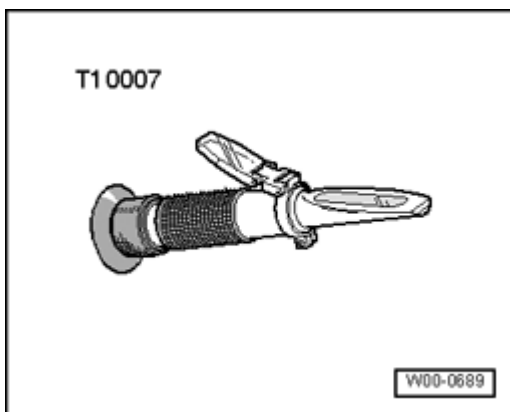
Check freeze protection content of windshield cleanser concentrate G 052 164 , fill with fluid ⇒ [01-5, Checking freeze protection content of fluid, if necessary top off with fluid](#) .

Windshield wipe-/wash system: Check spray nozzle adjustment, adjust if necessary ⇒ [01-5, Windshield wipe-/wash system, check spray nozzle adjustment, adjust if necessary](#) .

Headlight wash system: Check spray nozzle adjustment, adjust if necessary ⇒ [01-5, Headlight wash system: Spray nozzle adjustment, checking, adjusting if necessary \(Rabbit/GTI 2006\)](#) .

Checking freeze protection content of fluid, if necessary top off with fluid

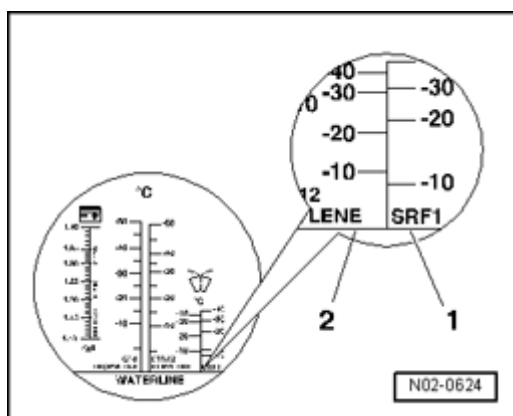
Special tools, testers and auxiliary items required



- Refractometer T10007

Read the bright/dark boundary to obtain an accurate reading for the following tests. Place a drop of water on the glass to improve the readability of the bright/dark boundary. The bright/dark boundary can be clearly recognized on the "WATERLINE" .

- Check the concentration of the anti-freeze additive using refractometer T10007 (operating instructions).



Scale - 1 - of refractometer applies to windshield cleanser concentrate G 052 164 .

The scale - 2 - is designed for commercially available windshield cleanser as well as a mixture of commercially available windshield cleanser and windshield cleanser concentrate G 052 164 .

Mixture ratio:

Freeze protection to	W/screen clear G 052 164	Water
-17/-18 ° C	1 part	3 parts
-22/-23 ° C	1 part	2 parts
-37/-38 ° C	1 part	1 part

Filling-up with fluid:

The windshield wash/wipe system fluid reservoir must be filled up fully.

Use only windshield cleanser concentrate G 052 164 all-year-round when topping-up the windshield wash/wipe system.

Note:

- *Windshield cleanser concentrate G 052 164 protects the spray nozzles, fluid reservoir and hoses from freezing.*
- *All vehicles with fan type spray jets must be filled with windshield cleanser concentrate G 052 164 as this fluid has a low viscosity at minus temperatures. The complicated spray jet system could otherwise become blocked due to crystallized washer fluid and adversely affect the fan pattern of the spray jet. Windshield cleanser concentrate G 052 164 assures that the fan type spray jets remain functional even at*

low temperatures.

- *Fill with windshield cleanser concentrate G 052 164 in the warmer season also. The powerful cleanser removes wax and oil deposits from the windows.*
- *Freeze protection (anti-freeze) must be guaranteed to approx. -25 C (approx. -35 C in countries with an arctic climate) in the washer system.*

Windshield wipe-/wash system, check spray nozzle adjustment, adjust if necessary

Note:

- *In the event contamination in spray nozzle produces an uneven spray pattern, remove spray nozzle*

⇒ [Repair Manual, Electrical Equipment, Repair Group 92,](#)

, and rinse it with water in the opposite direction of spray.

- *Subsequently blowing through in the opposite direction of the spray flow with compressed air is permitted.*

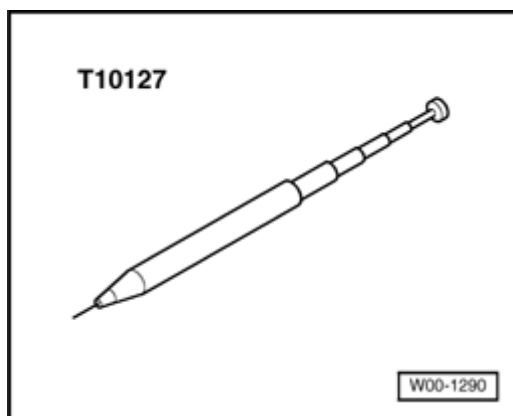
Caution!

- ***Do not use solid objects to clean the spray nozzles!***
- ***Do not use a needle or similar under any circumstance to adjust spray nozzles, otherwise the water hoses in the spray nozzles may be damaged!***

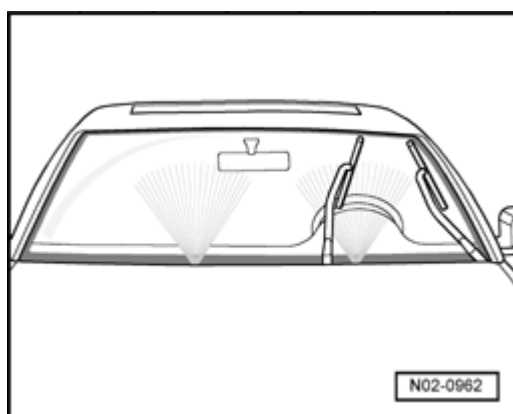
Windshield washer system spray jets, ⇒ [Topic 01-5](#) .

Rear window washer nozzle adjustment: ⇒ [Topic 01-5](#) .

Special tools, testers and auxiliary items required

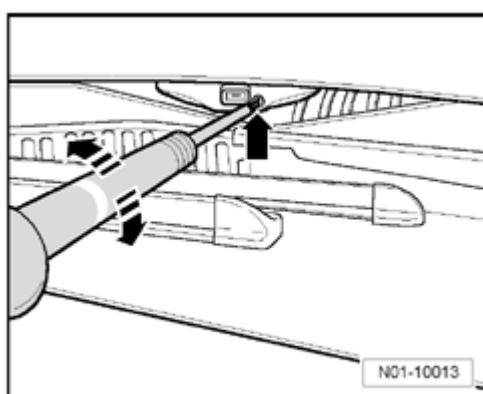


- Adjustment tool T10127 equipped with needle 3125/5 A



Windshield washer system spray jets:

The washer nozzles are preset. Small height adjustments can be made.



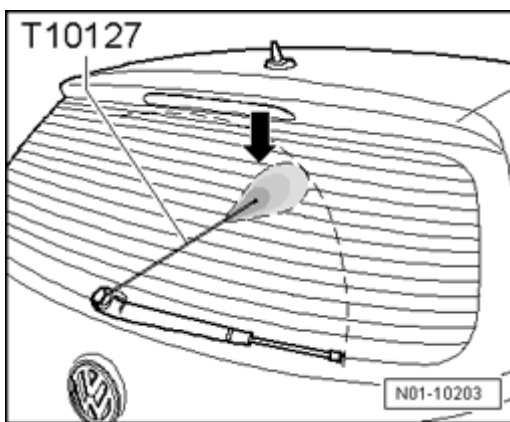
- If both spray fields are not at same height, adjust spray direction upward or downward as follows:
- Adjust the spray stream by turning at the adjuster - **arrow** - with a screwdriver.
 - "Clockwise" deeper adjustment.

- "Counterclockwise" higher adjustment.

Rear window washer nozzle adjustment:

Note:

- *It is only possible to adjust spray nozzles diagonally, that is, in direction of rear window or opposite. A lateral adjustment in direction of wiper arm rotation is not possible. Spray nozzles are secured in this direction at the factory.*



- Adjust nozzle with adjustment tool T10127 so that fluid sprays onto upper third of rear window, as shown.

Headlight wash system: Spray nozzle adjustment, checking, adjusting if necessary (Rabbit/GTI 2006 ➤)

Note:

- *In the event contamination in spray nozzle produces an uneven spray pattern, remove spray nozzle*

⇒ [Repair Manual, Electrical Equipment, Repair Group 92.](#)

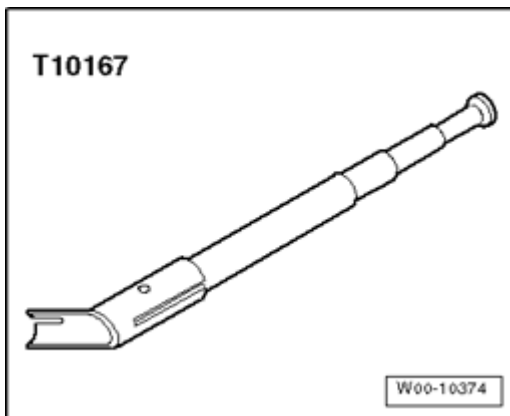
, and rinse it with water in the opposite direction of spray.

- *Subsequently blowing through in the opposite direction of the spray flow with compressed air is permitted.*

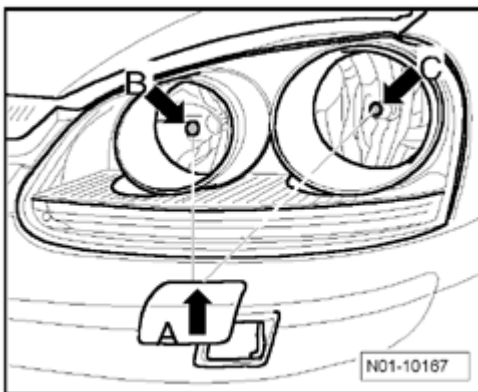
Caution!

- **Do not use solid objects to clean the spray nozzles!**
- **Do not use a needle or similar under any circumstance to adjust spray nozzles, otherwise the water hoses in the spray nozzles may be damaged!**

Special tools, testers and auxiliary items required



- Adjustment device T10167



Spray jet adjustment for left headlight (right headlight is identical but reversed)

Check spray jet setting.

- Switch on driving lights.
- Operate windshield washer system for front window.

Headlights are washed when windshield washer lever is held in "wipe position" at least 1.5 seconds.

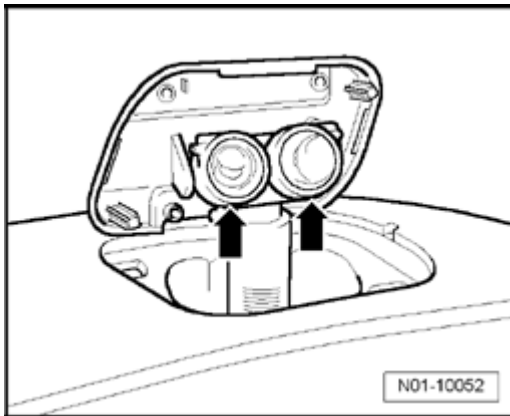
Spray pattern should encounter headlight lamps at center,

see - **B** - and - **C** - .

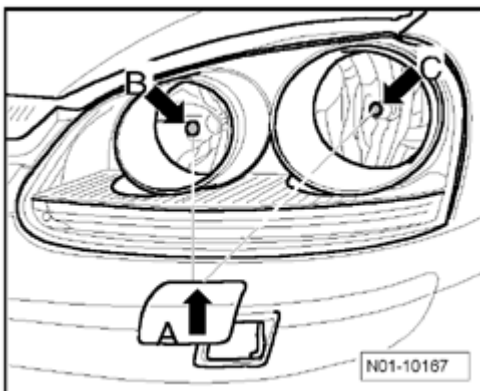
Adjusting nozzles

- Switch on driving lights.
- Operate windshield washer system for front window.

Headlights are washed when windshield washer lever is held in "wipe position" at least 1.5 seconds.



Spray nozzles - **arrow** - are driven outward.



- Perform the following work procedure:
- Direct the spray direction of respective nozzle using adjustment tool T10167 or adjustment tool 3019A at upper edge of headlight, - **item B** - and - **item C** - .

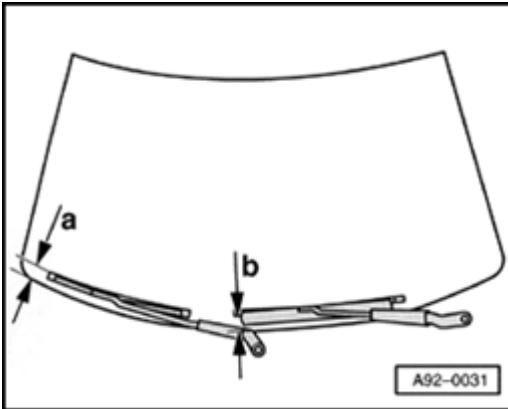
Windshield wiper blades, park position, checking

Front windshield wiper blades, check park position (Rabbit/GTI 2006 ➤)

- Deactivate APS function,

⇒ [Repair Manual, Electrical Equipment, Repair Group 92,](#)

Deactivate APS wiper motor function.



- Check if the windshield wiper blade tips are positioned with the following distances to the plenum chamber cover at the bottom of the windshield:

- Dimension - **a** - = 0 to 10 mm
- Dimension - **b** - = 0 to 10 mm

- If necessary, adjust wiper arm:

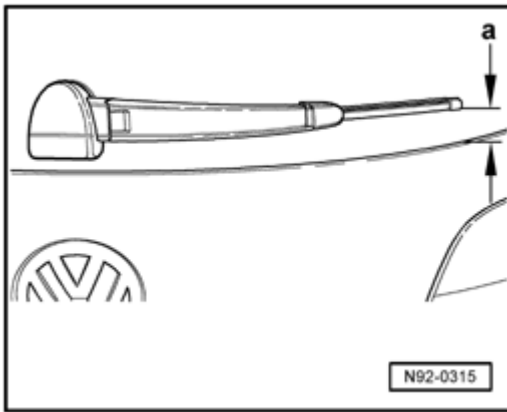
Adjust windshield wiper blades

⇒ [Repair Manual, Electrical Equipment, Repair Group 92, Windshield wiper blades - Parked position](#)

Note:

- *For right-hand drive vehicles, the placement is a mirror image!*

Rear windshield wiper blades, park position, checking



- Switch rear windshield wipers on and off and allow to run to end position.

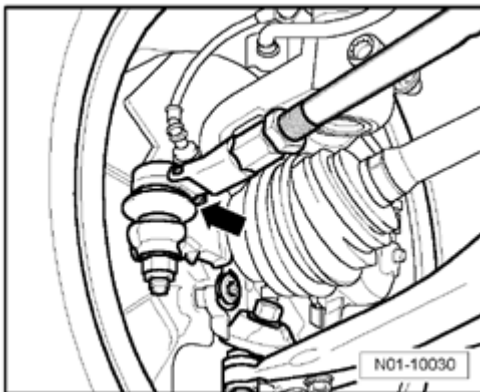
- Check whether blade points rest in with the following distance to lower edge of window.

- Dimension - **a** - = 15 + 5 mm

- If necessary, adjust wiper arm:

⇒ [Repair Manual, Electrical Equipment, Repair Group 92, Windshield wiper blades - park position](#)

Tie rod ends, check play, security and joint boots



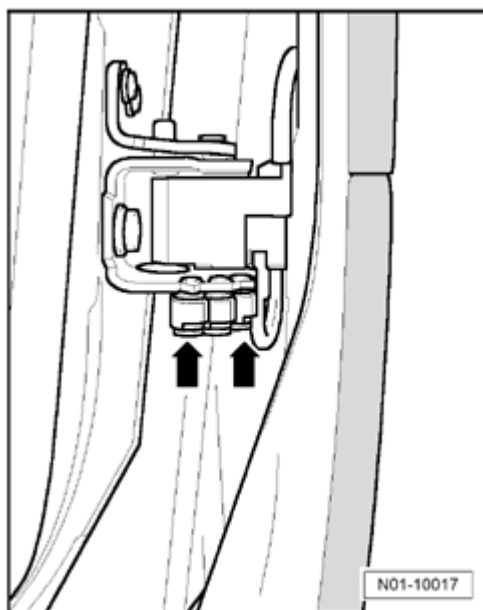
Perform the following work procedure:

- With vehicle raised (wheels hanging free), check play by moving tie rods and wheels. Play: zero play

- Check mountings.

- Check tie rod joint boots - **arrow** - for damage and proper seating.

Door arrester, lubricate



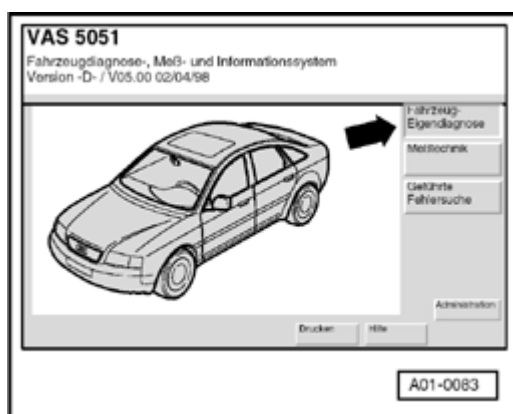
Perform the following work procedure:

- Grease door arrester at points shown - **arrows** - .

Use solid lubricant G 000 150 .

Transportation mode, deactivating

- Connect diagnostic tester ⇒ [01-3, Diagnostic unit, connecting](#) .
- Switch ignition on.



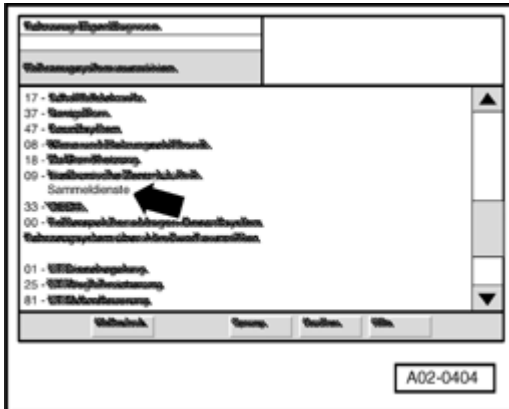
Indicated on display:

Select mode of operation:

- Press button for "Vehicle Self-Diagnosis" on display.

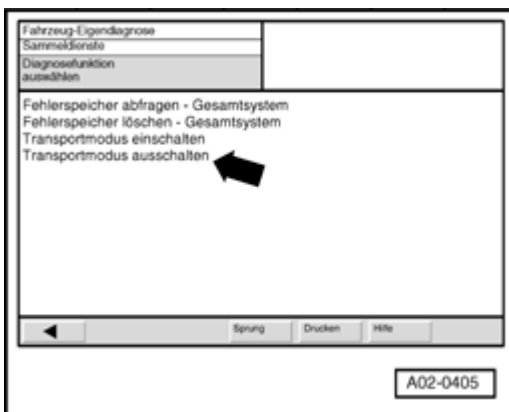
Note:

- *If the displays indicated in the work procedure are not indicated on display: ⇒ Operating instructions for Vehicle Diagnosis, Testing and Information System VAS 5051 or Vehicle Diagnosis Service Syst VAS 5052*



Indicated on display:

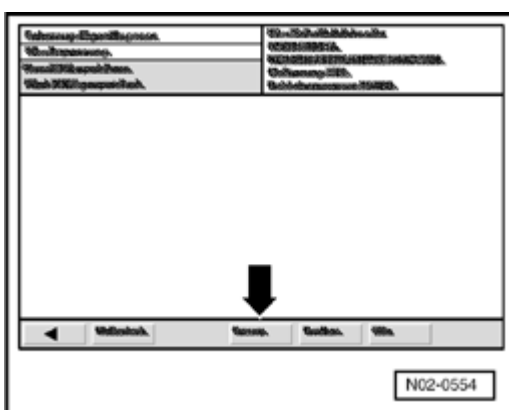
- Press "Grouped services" on display.



Indicated on display:

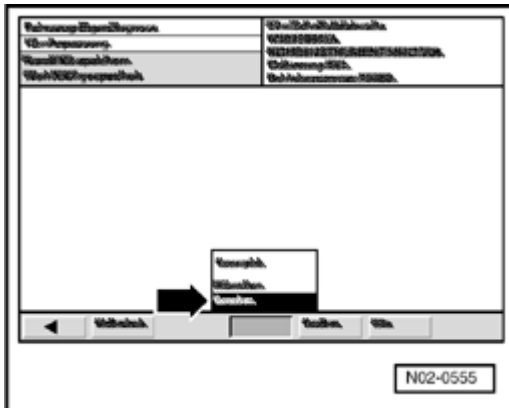
- Press "Switch off transport mode" on display.

End procedure



Indicated on display:

- Press the "Go to" button - **arrow** - on display.



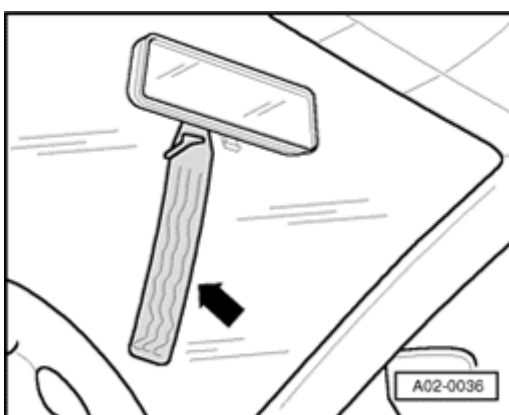
Indicated on display:

- Press "exit" button - **arrow** - on display.
- Press "exit" button in exit menu.
- Turn off ignition.

Note:

- *Diagnostic operation system VAS 5051 or Vehicle Diagnosis and Service System VAS 5052 must possibly remain connected for various tests.*

Transport protection, removing locking pieces from front axle struts



In vehicles with sport suspension, locking pieces are installed in springs of front axle. These models can be identified by a tag attached at the mirror - **arrow** - .

Note:

- *Locking pieces should prevent vehicle from bouncing when being driven on to an automobile*

transport or railroad car and thereby become damaged.

Warning!

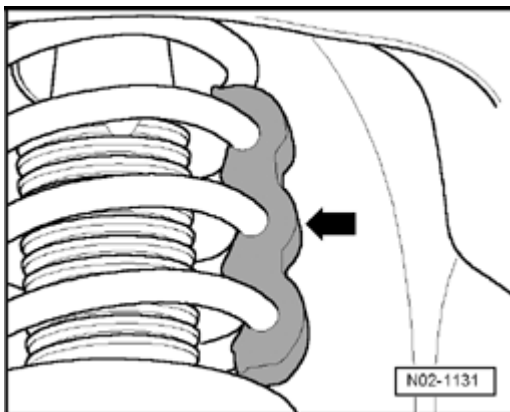
Locking pieces must always be removed before delivering the vehicle! An "WARNING!" hanging tag is secured to interior mirror to make this point absolutely clear.

Perform the following work procedure:

Note:

- *It is not necessary to remove the wheels.*
- *Be careful not to damage surface of coil springs.*

- Relieve load on coil spring by raising vehicle on lifting platform.



- Press locking piece - **arrow** - from coil spring.

Underbody protection, perform visual check for damage

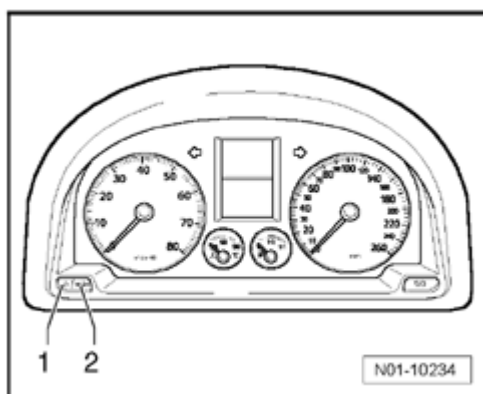
During visual check, observe floor pan, wheel housings and sills!

Note:

- *Malfunctions found must be rectified (repair measure). This inhibits corrosion and rusting through.*

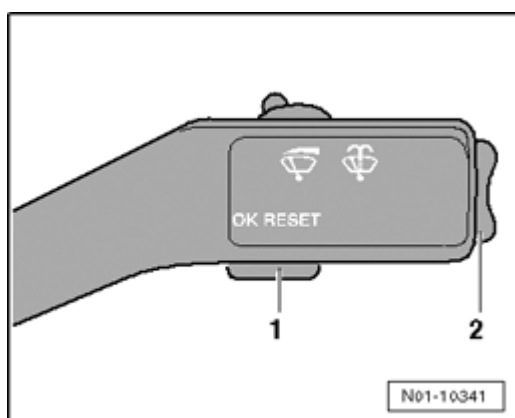
Clock, setting

Set clock with buttons below tachometer



Adjustment buttons are located at left under tachometer.

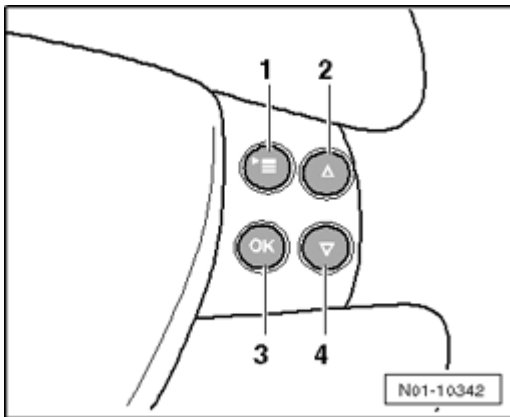
- Press the left button - **1** - to set the hour. Press button only briefly to advance by one hour.
- Press the right button - **2** - to set the minutes. Press button only briefly to advance by one minute.



Set hour and date with buttons on windshield wiper lever

- Switch ignition on.
- Press button - **2** - for 2 seconds to go to main menu.
- Select "Settings" menu with button - **2** - and confirm with button - **1** - .
- Select "Clock" menu with button - **2** - and confirm with button - **1** - .
- Now mark menu time "Hours" by pressing button - **1** - , set correct hour with button - **2** - and then confirm with button - **1** - .
- Do the same with menu item "Minutes" .
- You can leave the "Settings" menu using menu item "back" .

- Now select "MFD" as actual display and confirm with button - **1** - .
- Switch ignition off.



Set hour and date with buttons on multi-function steering wheel

- Switch ignition on.
- Press button - **1** - until "Settings" menu appears.
- Then select menu item "Clock" with buttons - **2** - and - **4** - .
- Confirm selection with button - **3** - .
- If "Hour" is marked, marked menu item is located between both horizontal lines, confirm again with button - **3** - and set correct hour with buttons - **2** - and - **4** - .
- Confirm again with button - **3** - and change to minute setting which is done the same as when setting the hour.
- You can leave the menu again with button - **1** - .
- Switch ignition off.

Toothed belt for camshaft drive: Replacing (2.0 L TFSI only)

Note:

- *Generally, it is not necessary to replace the belt before reaching the next replacement interval. In particular, cracks on the back side of the belt do not affect service life and cannot be claimed as goodwill or warranty measures.*

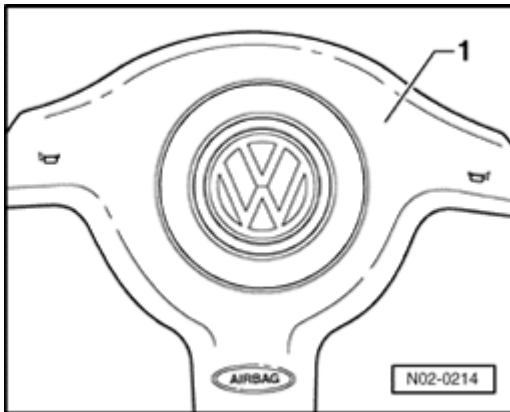
- Toothed belt, removing and installing

⇒ *Repair Manual, 2.0 Liter 4-Cyl. 4V Turbo Engine Mechanical, Fuel Injection Ignition, Engine Code(s): BPY, Repair Group 15,*

Airbag for driver and passenger, visual inspection of airbag components

Driver side airbag

Identification of airbag is embossed as "AIRBAG" on upholstered cover of steering wheel.



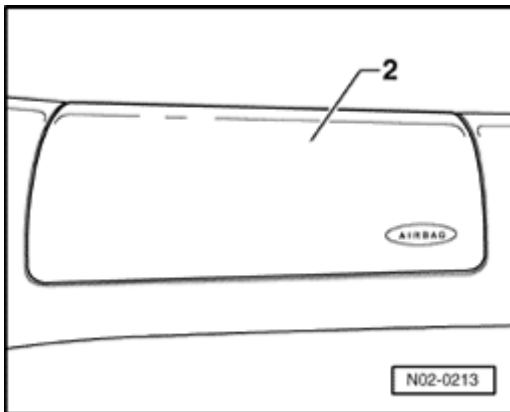
- Perform a visual inspection for any damages to upholstered cover - **1** -

Warning!

- ***Adhesive from tape, stickers, etc. and other residues or unauthorized work on airbag units can affect airbag function. So that future airbag function is ensured. make certain the customer is aware of this.***
- ***Upholstered cover of steering wheel may only be cleaned with a dry or damp cloth.***

Front passenger side airbag

Identification of airbag is embossed as "AIRBAG" on right side of instrument panel.



- Perform a visual inspection for any damages to surface of instrument panel - 2 - .

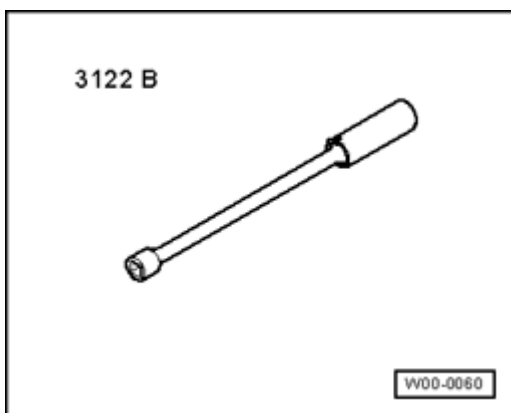
Warning!

- **Adhesive from tape, stickers, etc. and other residues or unauthorized work on airbag units can affect airbag function. So that future airbag function is ensured. make certain the customer is aware of this.**
- **Upholstered cover of steering wheel may only be cleaned with a dry or damp cloth.**

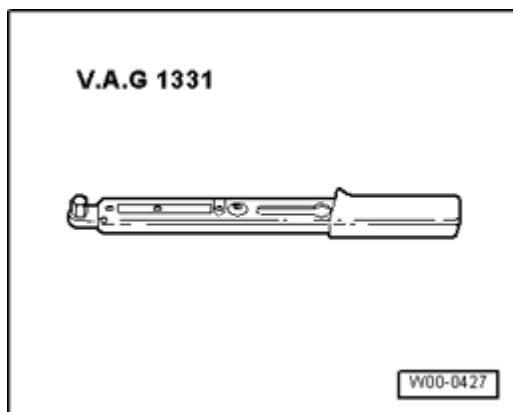
Spark plugs, replacing

Replacing spark plugs, 2.0 L TFSI engine ⇒ [01-5, Replacing spark plugs \(2.0 L TFSI engine\)](#) .

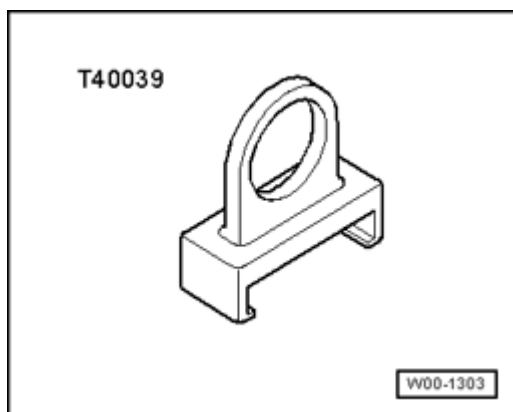
Special tools, testers and auxiliary items required



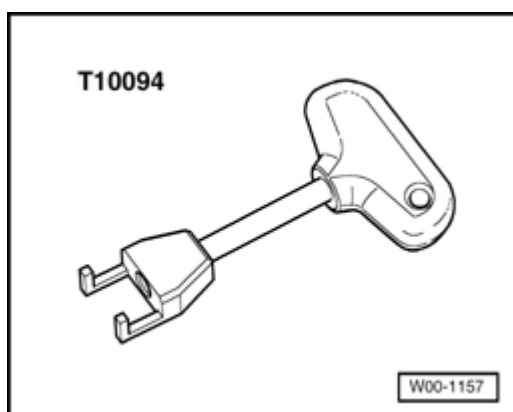
- Spark plug wrench 3122 B



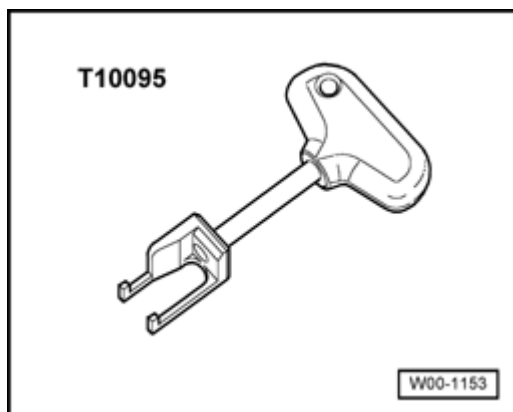
- Torque wrench V.A.G 1331



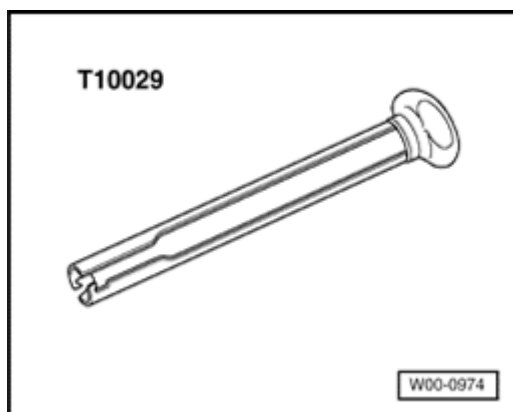
- Puller T40039



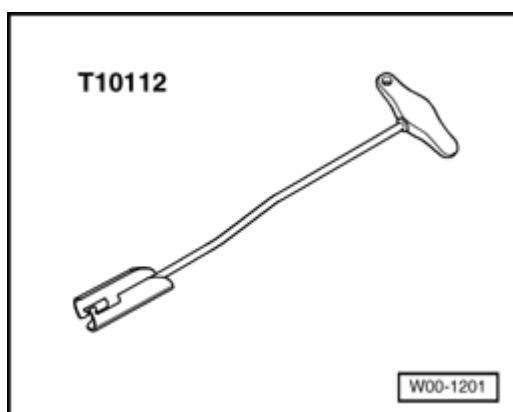
- Puller T10094



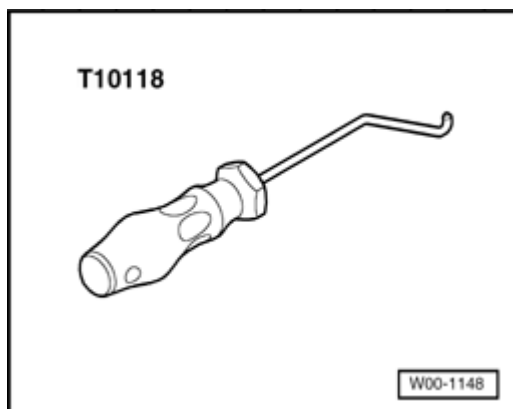
■ Puller T10095



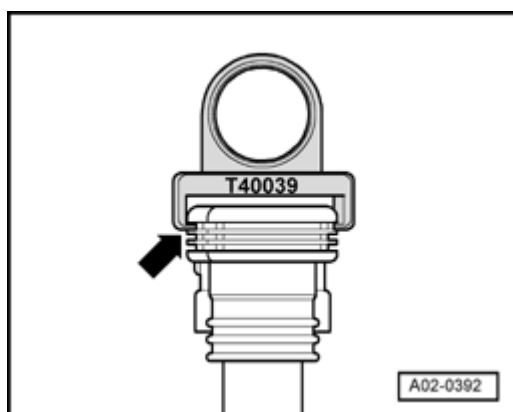
■ Removal/installation tool T10029



■ Puller T10112



- Removal/installation tool T10118



Replacing spark plugs (2.0 L TFSI engine)

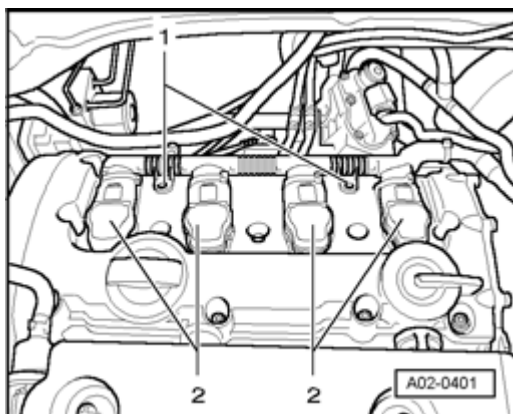
Removing:

Perform the following work procedure:

Note:

- *To pull off spark plugs, place ignition coil puller T40039 on topmost thick rib - **arrow** - of ignition coils with power output stages.*
- *If lower ribs are used, these can be damaged*

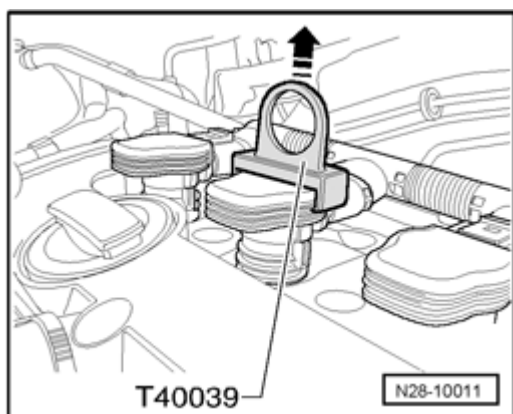
- Remove engine covers ⇒ [01-4, Upper engine cover, removing and installing](#) .



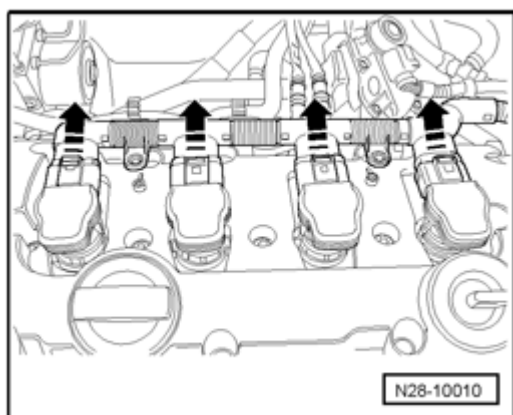
Spark plugs are located under ignition coils with power output stages - 2 - .

Note:

- Note installation position of ignition coils with power output stages!



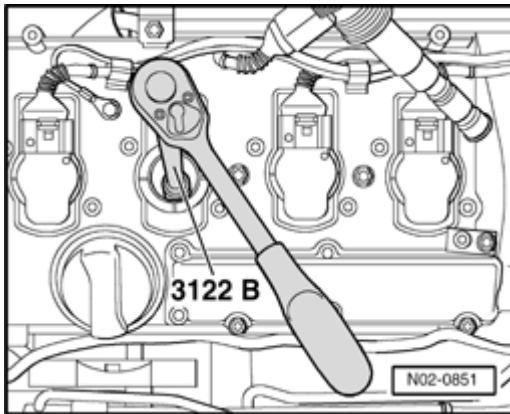
- Remove both bolts - 1 - .



- Pull all ignition coils approx. 30 mm out of cylinder head in direction of arrow using ignition coil puller T40039 .

- Push connector in direction of ignition coils with power output stages, press catch down by hand and disconnect

connectors - **arrows** - .



- Remove spark plugs using spark plug wrench 3122 B .

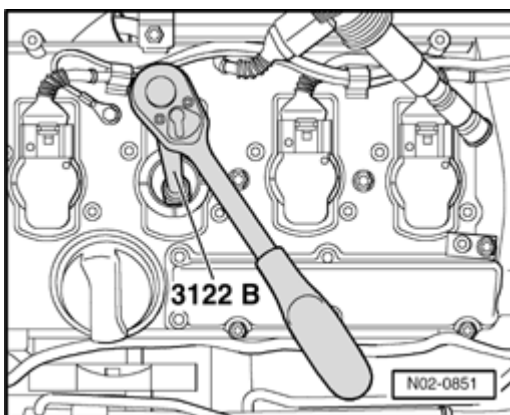
Note:

- *Spark plug identification and tightening torque,*

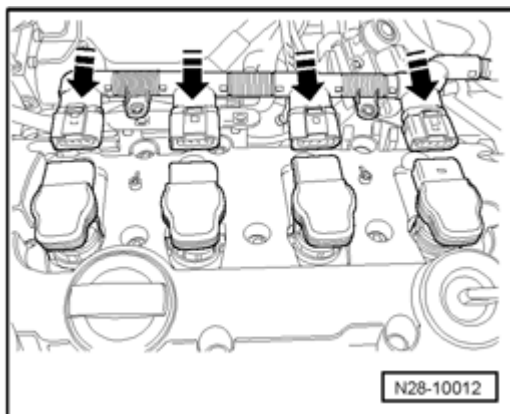
⇒ *Repair Manual, 2.0 Liter 4-Cyl. 4V Turbo Engine
Mechanical, Fuel Injection Ignition, Engine Code(s): BPY,
Repair Group 28,*

- *Observe waste disposal regulations!*

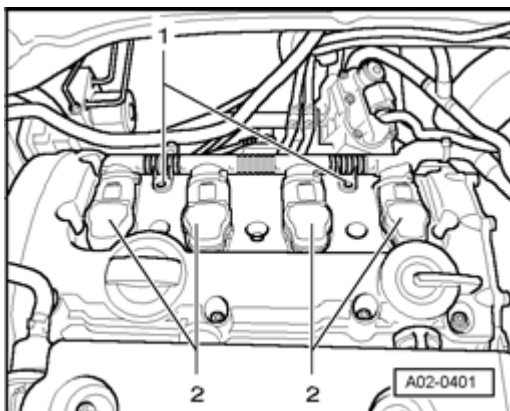
Installing



- Install new spark plugs using spark plug wrench 3122 B .



- Guide ignition coils with power output stages into cylinder head.
- Align ignition coils with power output stages into designated recesses of cylinder head cover.
- Connect all connectors to ignition coils - **arrows** - .



- Press ignition coils with power output stages onto spark plugs by hand until stop. They must engage audibly.
- Secure wiring using bolts - **1** - .
- Install engine cover.