Safety Recall
Code: 44Q9

Subject | **Wheel(s) – Lug Bolt Seat Machining**

Release Date | March 04, 2021

Affected Vehicles

Country	Beginning Model Year	Ending Model Year	Vehicle	Vehicle Count
USA	2021	2021	ATLAS	106
USA	2021	2021	ATLAS CROSS SPORT	22

Check Campaigns/Actions screen in ELSA on the day of repair to verify that a VIN qualifies for repair under this action. ELSA is the only valid campaign inquiry & verification source.

- ✓ *Campaign status must show "open."*
- ✓ *If ELSA shows other open action(s), inform your customer so that the work can also be completed at the same time the vehicle is in the workshop for this campaign.*

Problem Description | The wheel bolt seat in the affected rims may not be machined to the correct depth dimension. If this condition is present, the incorrect dimension of the lug bolt holes may cause insufficient thread engagement of the wheel bolt to the wheel bearing hub. This may result in failure of the threads, which may lead to separation of the wheel from the vehicle and may lead to a crash without warning.

Corrective Action | Inspect all four wheels. Should an affected wheel be found, the wheel, lug bolts and wheel bearing will be replaced.

Code Visibility | On or about March 04, 2021, the campaign code will be applied to affected vehicles.

Owner Notification | Owner notification took place via telephone in February 2021. Owner notification via first-class mail will take place in March 2021. An owner letter example is included in this bulletin for your reference.

Additional Information

Please alert everyone in your dealership about this action, including Sales, Service, Parts and Accounting personnel. Contact Warranty if you have any questions.

IMPORTANT REMINDER ON VEHICLES AFFECTED BY SAFETY & COMPLIANCE RECALL

New Vehicles in Dealer Inventory: It is a violation of federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied. By law, dealers must correct, prior to delivery for sale or lease, any vehicle that fails to comply with an applicable Federal Motor Vehicle Safety Standard or that contains a defect relating to motor vehicle safety.

Pre-Owned Vehicles in Dealer Inventory: Dealers should not deliver any pre-owned vehicles in their inventory which are involved in a safety or compliance recall until the defect has been remedied.

Dealers must ensure that every affected inventory vehicle has this campaign completed before delivery to consumers.

Fill out and affix Campaign Completion Label (CAMP 010 000) after work is complete. *Labels can be ordered at no cost via the Compliance Label Ordering portal at www.vwhub.com.*

Parts Information

Parts Control Type: **VIN to Order**	If parts are needed to support a vehicle repair: • US Dealers - use AVA

Parts Control Type: **Free Order**	Parts will be managed by Free Order

Initial Allocation: **NO**	Due to the small number of affected vehicles there will be no parts allocation. Please reference the Repair Projection Tool (below) to view your potential VIN population.

Repair Projection Tool: **(right click to open)**	

IMPORTANT PARTS INFORMATION

The ancillary parts required if a repair is needed vary greatly depending on if a front or rear wheel bearing requires replacement and if the vehicle is FWD or AWD. DO NOT order parts until the position of the wheel bearing being replaced has been determined.

****To prevent over-ordering without inspection, wheel part number 3CM-601-025-A 8Z8 will be on a dealer return block.****

Criteria	Quantity	Part Number	P.O.C. Part Description	Ordering Method
01	Up to 4	3CM-601-025-A 8Z8	WHEEL	Free Order **with return block**
	Up to 4	311-601-361	RUBBER VALVE	Free Order
	As needed		Wheel Balance Weights	Free Order
	Up to 20	WHT-002-438	WHEEL BOLT	Free Order
	Up to 4	3QF-598-625	BEARING (front FWD/AWD, or rear AWD)	**VIN to Order**
	Up to 2	3QF-598-611	BEARING (rear, FWD only)	Free Order
	Up to 6	N -912-332-01	HEX. NUT (front ball joint to control arm)	Free Order
	Up to 2	N -015-081-8	NUT (front sway bar link to sway bar)	Free Order
	Up to 2	N -102-058-02	NUT (front level sensor to control arm – if equipped)	Free Order
	Up to 12	N -911-082-01	BOLT (rear axle bolt – AWD only)	Free Order

Continued on next page

01	Up to 2	N -106-403-01	BOLT (rear tie rod to bearing housing)	Free Order
	Up to 4	N -101-064-02	NUT (rear control arm to bearing housing + rear shock to control arm)	Free Order
	Up to 2	N -106-405-01	BOLT (rear control arm to bearing housing)	Free Order
	Up to 2	N -106-283-01	BOLT (rear shock to control arm)	Free Order
	Up to 4	N -911-689-01	BOLT (rear caliper carrier to bearing housing)	Free Order
	Up to 1	5Q0-253-141	Exhaust clamp (if necessary – AWD only)	Free Order
	Up to 2	N -107-765-01	BOLT (rear stabilizer link to lower control arm)	Free Order
	Up to 2	N -901-838-04	NUT (rear stabilizer link to lower control arm)	Free Order

NOTE

The specified part numbers reflect the status at the start of this action. Interim updates made in ETKA can cause a listed part number to become unavailable. In this case, the new part number specified in ETKA should be used.

Claim Entry Instructions

The labor times listed here may differ from the labor operations and labor times listed in ELSA.

After campaign has been completed, enter claim as soon as possible to help prevent work from being duplicated elsewhere. Attach the ELSA screen print showing action *open on the day of repair* to the repair order.

If customer refused campaign work:

- ✓ U.S. dealers: Submit request via WISE under the *Campaigns/Update/Recall Closure* option.

Service Number	44Q9
Damage Code	0099
Parts Vendor Code	WWO
Claim Type	Sold vehicle: 7 10 Unsold vehicle: 7 90
Causal Indicator	Mark labor as causal
Vehicle Wash/Loaner	Do not claim wash/loaner under this action Loaner/rental coverage cannot be claimed under this action. However, loaner/rental may be covered under the Alternate Transportation Program. Please refer to the Volkswagen Warranty Policy and Procedures Manual for loaner claims information and reimbursement details.
Criteria I.D.	01
	Inspect all four wheels, all four wheels are ok, no further work required

LABOR

Labor Op	Time Units	Description
0183 00 99	50	Inspect all four wheels, no further work required

Continued on next page

NOTE

If wheel(s) and bearing(s) are replaced, Indicate clearly in the claim comments the position of each wheel and wheel bearing which was replaced.

	Inspect all four wheels, one or more wheels found to be machined incorrectly, replace affected wheel, lug bolts and associated wheel bearing

LABOR

Labor Op	Time Units	Description
4405 55 99	Up to 580	Replace wheel(s), lug bolts and associated wheel bearing(s) (see Replacement Details below)
# of wheels replaced	**T.U. to claim**	**Replacement Details**
4	420	FWD vehicles only
	580	AWD vehicles only
3	350	Both Front and One Rear (FWD only)
	310	Both Rear and One Front (FWD only)
	470	Both Front and Left Rear (AWD only)
	430	Both Front and Right Rear (AWD only)
	470	Both Rear and One Front (AWD only)
2	280	Both Front (FWD or AWD)
	240	One Front and One Rear (FWD only)
	200	Both Rear (FWD only)
	360	One Front and Left Rear (AWD only)
	320	One Front and Right Rear (AWD only)
	360	Both Rear (AWD only)
1	180	Left Front or Right Front
	140	Left Rear or Right Rear (FWD only)
	260	Left Rear (AWD only)
	220	Right Rear (AWD only)

PARTS

Quantity	Part Number	Description
Up to 4	3CM601025A 8Z8	WHEEL
Up to 4	311601361	RUBBER VALVE
Up to 2	3QF598611	BEARING
Up to 4	3QF598625	BEARING
Up to 2	N 0150818	NUT
Up to 4	N 10106402	NUT
Up to 2	N 10205802	NUT
Up to 2	N 10628301	BOLT
Up to 2	N 10640301	BOLT
Up to 2	N 10640501	BOLT
Up to 2	N 10776501	BOLT
Up to 2	N 90183804	NUT
Up to 12	N 91108201	BOLT
Up to 4	N 91168901	BOLT
Up to 6	N 91233201	HEX. NUT
Up to 20	WHT002438	WHEEL BOLT

Continued on next page

	Outside Material		
	Quantity	**Part Number**	**Max. Dollar Amount**
	As Required	BALANCEWEIGHTS	$5.00 per wheel

-ADD- (AWD ONLY- if required)	ONLY if rear muffler required removal in order to remove a rear drive axle		
	LABOR		
	Labor Op	**Time Units**	**Description**
	2633 19 99	40	Remove and install rear muffler
	PARTS		
	Quantity	**Part Number**	**Description**
	1.00	5Q0253141	Exhaust clamp (if necessary)

-ADD- (if required)	Add as needed only if one or more rear wheel bearings were replaced		
	LABOR		
	Labor Op	**Time Units**	**Description**
	4495 03 99	100	Vehicle front + rear measure
	4488 15 99	20	Front wheel track adjust
	4493 15 99	20	Rear wheel track adjust
	4494 15 99	20	Rear wheel camber adjust
-AND- ONLY IF REAR AXLE TOE REQUIRES ADJUSTMENT	Add as needed; depending on vehicle equipment and only if vehicle requires driver assist calibration		
	LABOR		
	Labor Op	**Time Units**	**Description**
	9163 15 99	40	Adaptive Cruise Control (ACC) System Adjust
	9638 15 99	50	Camera Driver Assist System Adjust
	0150 00 00	Time stated on diagnostic protocol	GFF operations

Customer Letter Example (USA)

<MONTH YEAR>

<CUSTOMER NAME>
<CUSTOMER ADDRESS>
<CUSTOMER CITY STATE ZIPCODE>

This notice applies to your vehicle: <MODEL YEAR> <BRAND> <CARLINE>, <VIN>

NHTSA: Pending

Subject: Safety Recall 44Q9 - Wheel(s) – Lug Bolt Seat Machining

Dear Volkswagen Owner,

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act. Volkswagen has decided that a defect, which relates to motor vehicle safety, exists in certain 2021 model year Volkswagen vehicles. Our records show that you are the owner of a vehicle affected by this action.

What is the issue?	The wheel bolt seat in the affected rims may not be machined to the correct depth dimension. If this condition is present, the incorrect dimension of the lug bolt holes may cause insufficient thread engagement of the wheel bolt to the wheel bearing hub. This may result in failure of the threads, which may lead to separation of the wheel from the vehicle and may lead to a crash without warning.
What will we do?	To correct this defect, your authorized Volkswagen dealer will inspect all four wheels. Should an affected wheel be found, the wheel, lug bolts and wheel bearing will be replaced. The inspection will take about half an hour to complete. If parts are needed, repairs may take up to one day. This will all be performed for you free of charge. Please keep in mind that your dealer may need additional time for the preparation of the repair, as well as to accommodate their daily workshop schedule.
What should you do?	Please contact your authorized Volkswagen dealer without delay to schedule this recall repair. To set up an appointment online, please visit www.vw.com/find-a-dealer.
Lease vehicles and address changes	If you are the lessor and registered owner of the vehicle identified in this action, the law requires you to forward this letter immediately via first-class mail to the lessee within ten (10) days of receipt. If you have changed your address or sold the vehicle, please fill out the enclosed prepaid Owner Reply card and mail it to us so we can update our records.
Can we assist you further?	If your authorized Volkswagen dealer fails or is unable to complete this work free of charge within a reasonable time, or if you should have any questions about this communication, please reach out to us using your preferred method of communication at www.vw.com/contact or by calling us at 800-893-5298.
Checking your vehicle for open Recalls and Service Campaigns	To check your vehicle's eligibility for repair under this or any other recall/service campaign, please visit www.vw.com/owners/recalls and enter your Vehicle Identification Number (VIN) into the Recall/Service Campaign Lookup tool.

If you still cannot obtain satisfaction, you may file a complaint with: The Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153); or go to http://www.safercar.gov.

We apologize for any inconvenience this matter may cause; however we are taking this action to help ensure your safety and continued satisfaction with your vehicle.

Sincerely,

Volkswagen Customer Protection

Repair Overview

- Inspect all four wheels.
- Replace wheel, lug bolts and wheel bearing if necessary.

NOTE

- These repair instructions may differ from the labor operations and labor times listed in ELSA.
- Damages resulting from improper repair or failure to follow these work instructions are the dealer's responsibility and are not eligible for reimbursement under this action.
- This procedure must be read in its entirety prior to performing the repair.
- Due to variations in vehicle equipment and options, the steps/illustrations in this work procedure may not identically match all affected vehicles.
- Diagnosis and repair of pre-existing conditions in the vehicle are not covered under this action.
- When working during extreme temperatures, it is recommended that the vehicle be allowed to acclimate inside the shop to avoid temperature-related component damage/breakage.

Required Tools (for inspection)

	Digital Caliper - MCAL12A- (or equivalent)	

Required Tools (if wheel bearing(s) require replacement)

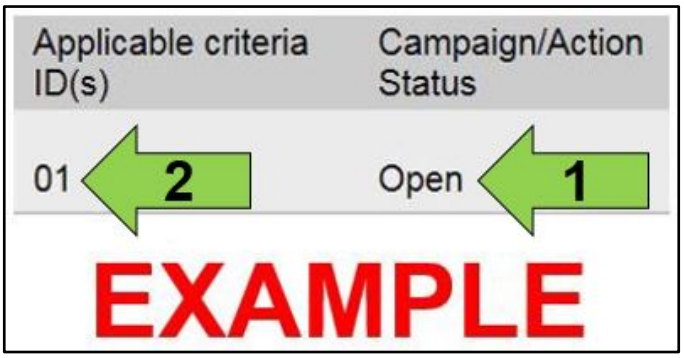
	Engine and Gearbox Jack -VAS6931- (or equivalent)		Engine/Gearbox Jack - Gearbox Support -T10337- (or equivalent)
	Heavy Duty Ratchet Strap (locally sourced)		Drive Shaft Remover Kit -T10520A-
	Spring Compressor Kit - Spring Tensioner -VAG1752/1-		Spring Compressor Kit - Spring Retainer w/Inserts -VAG1752/3A-
	Spring Compressor Kit - Adapter Blocks -VAG1752/9-		

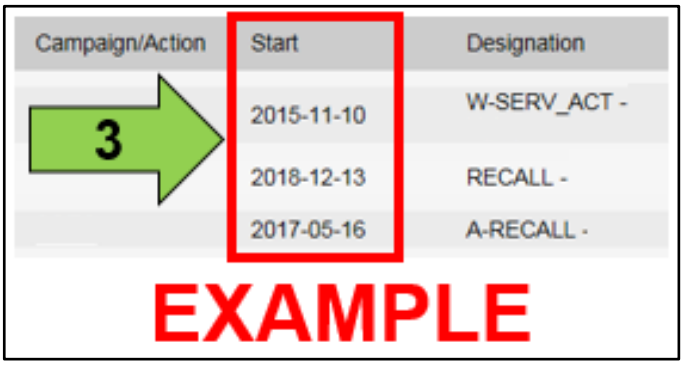
Repair Instruction

Section A - Check for Previous Repair

TIP

If Campaign Completion label is present, no further work is required.





- Enter the VIN in Elsa and proceed to the "Campaign/Action" screen.

TIP

On the date of repair, print this screen and keep a copy with the repair order.

- Confirm the Campaign/Action is open <arrow 1>. If the status is closed, no further work is required.
- Note the Applicable Criteria ID <arrow 2> for use in determining the correct work to be done and corresponding parts associated.

CRITICAL REPAIR STEP

STOP!

If multiple software update Campaign/Actions are open, they must be performed in order of the Start date <arrow 3>. The oldest should be performed first.

- **All Safety Recalls must be completed prior to completing this campaign.**
- **Proceed to Section B.**

Section B – Wheel Inspection

Inspect the wheel style:

- All four wheels must be inspected.
- The style of wheel potentially affected is the 20" silver 5-spoke wheel with PR Code V71 (as shown).
- If any other style of wheel is found AND the customer does not have a spare set of wheels that could match this style:
  - No further work is required.
  - Proceed to Section D.
- If the customer has a spare set of wheels, these also must be checked.
- If the wheels are the style shown:
  - The wheel supplier must be checked.
  - Proceed to the next step.

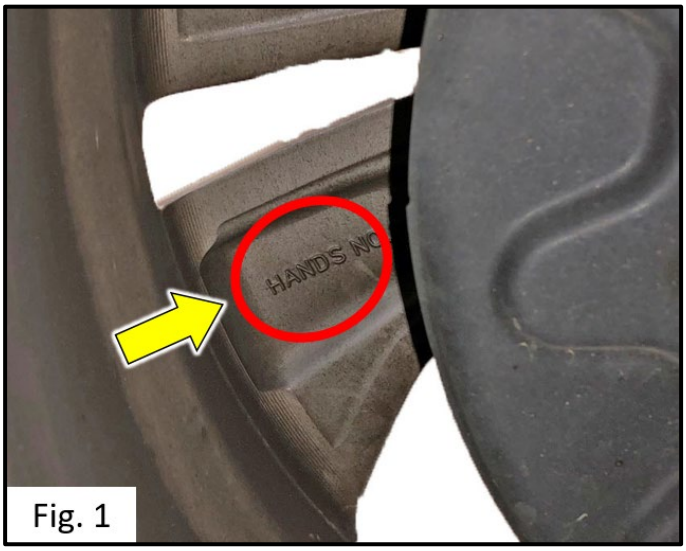
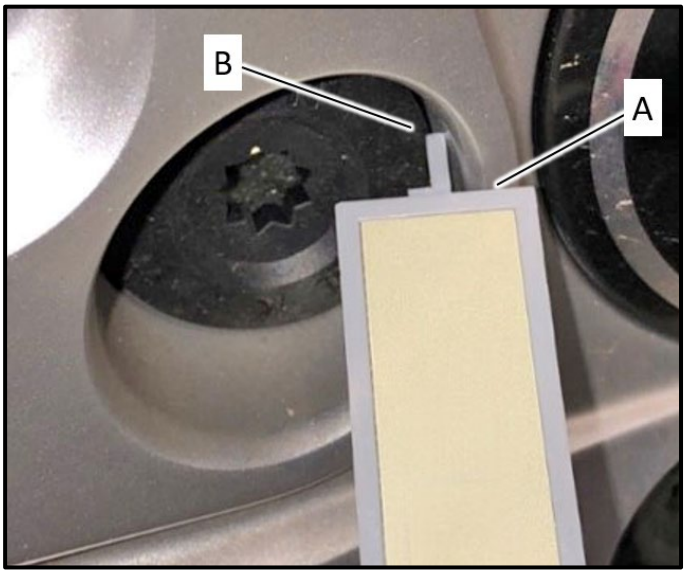


Fig. 1

Fig. 2

Inspect the wheel supplier:

- All four wheels must be inspected.
- Raise the vehicle.
- Inspect the back side of the wheel spokes for the supplier name.
- If the wheel supplier is “HANDS” (fig. 1):
  - The wheel is not affected.
- If all four wheels are found to be “HANDS”:
  - No further work is required.
  - Proceed to Section D.
- If the wheel supplier is “SUPERIOR” (fig. 2):
  - The depth of the lug bolt must be checked.
  - Proceed to the next step.



Inspecting lug bolt depth:

- ALL lug holes on ALL four wheels must be inspected.
- Ensure that each plastic wheel bolt cap is installed and fully seated on the wheel bolt. Lightly tap on the lug cap using a plastic mallet if necessary.
- Using a digital caliper or depth gauge, measure from the outer edge of the lug bolt hole at point <A> to the top of the lug bolt cap at point <B>.
- Ensure the measuring device is perpendicular to the wheel face.

NOTE

Ensure the measurement from point <A> is made at the edge of the lug hole, closest to the center cap hole. The spoke ramps up around the lug hole and could provide a false reading if measured incorrectly.

- If the measurement is greater than 6 mm:
  - The wheel(s) is/are OK.
- If the measurement is 6 mm or less:
  - The wheel(s) must be replaced.
  - The lug bolts for the affected wheel must be replaced.
  - The wheel bearing associated with the affected wheel must be replaced.
  - Proceed to Section C.
- If all four wheels are OK, or once all affected wheels, wheel bolts and wheel bearings have been replaced:
  - Proceed to Section D.

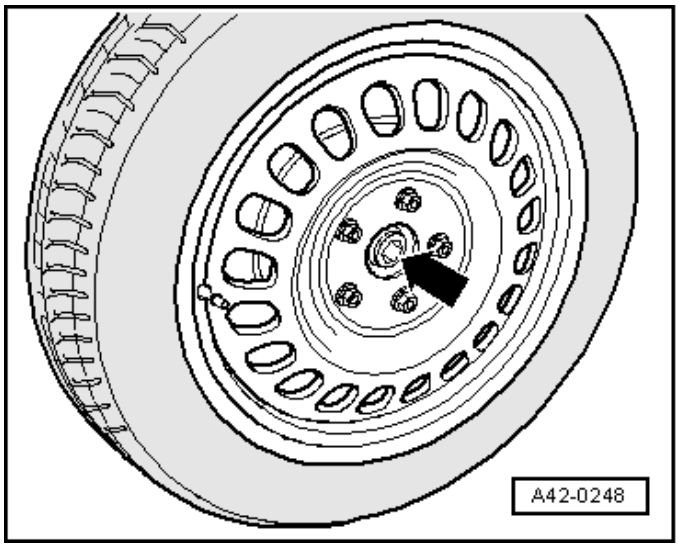
Section C – Component Replacement

Replacing Front Wheel Bearing (if necessary):

NOTE

The following describes the removal and installation procedures for one side of the vehicle. Removal and installation on the opposite side is similar.

- Mark the position and rotation direction of each tire that will be removed. This will ensure it installed the same position and direction when reinstalled.
- Indicate on the repair order the position of each wheel and wheel bearing which was replaced.

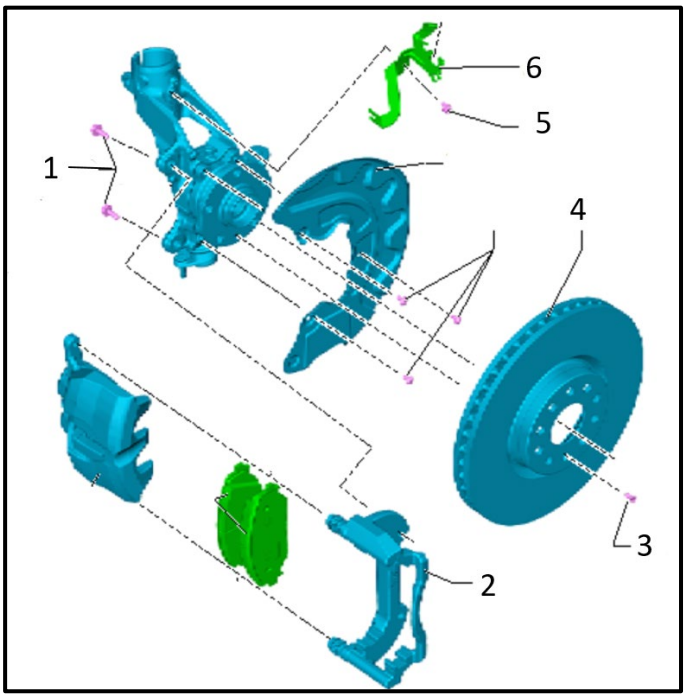


Loosen front drive axle bolt:

- Secure the front wheels from turning.
- Loosen the front axle bolt <arrow>.

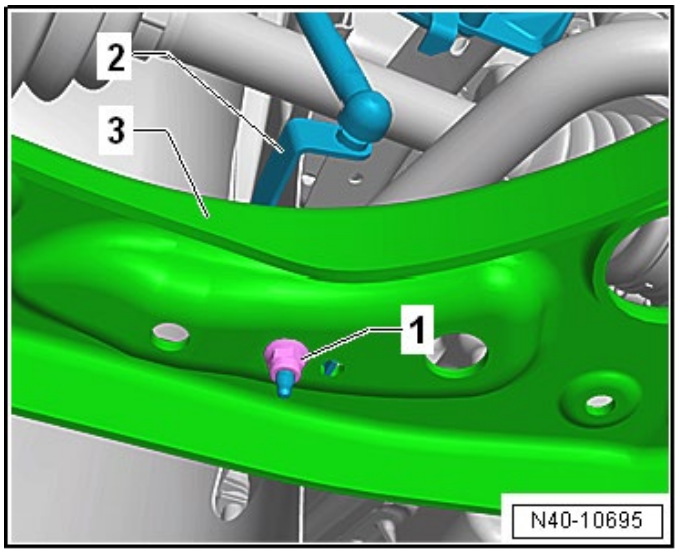
CAUTION

- The wheel bearing must not be under load when the drive axle threaded connection on the wheel side is loose.
- If the wheel bearings are under the load of the vehicle weight, the wheel bearing will be damaged. This reduces the service life of the wheel bearings.
- The drive axle bolt may be loosened maximum 90° when the vehicle is standing on its wheels.
- Vehicles without a drive axle must not be moved, otherwise the wheel bearing will be damaged. If a vehicle must be moved, be sure to note the following:
  - Install an outer joint in place of the drive axle.
  - Tighten the outer joint to 120 Nm.



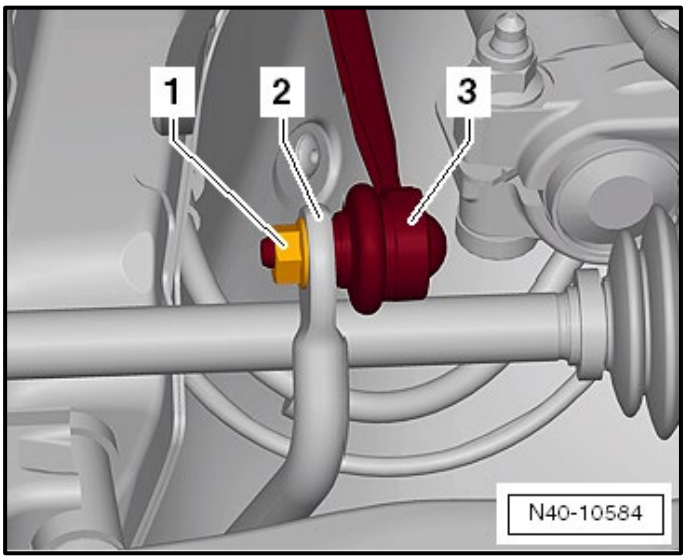
Remove brake components:

- Remove front wheel.
- Remove bolts <1> from the brake caliper carrier <2>.
- Remove brake caliper carrier <2> with brake caliper and secure it using wire to prevent damage to the brake hose.
- Remove bolt <3> and brake rotor <4>.
- Remove bolt <5> and secure bracket <6> out of the way.
- Free up wires from the wheel bearing housing, if necessary.



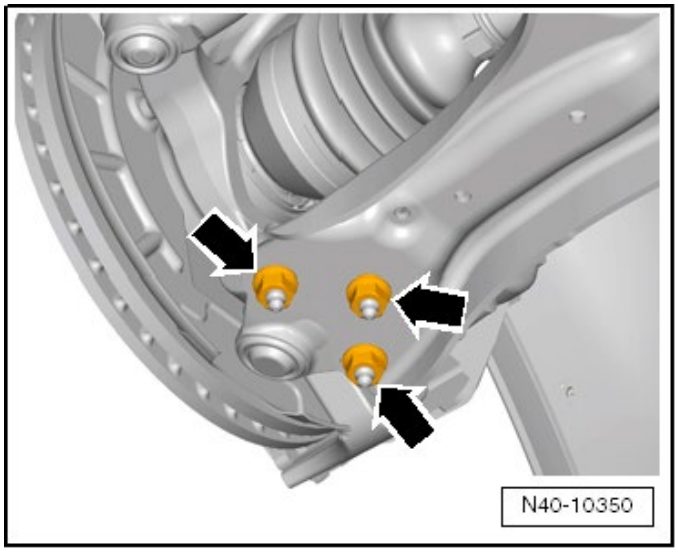
Remove level sensor bracket from control arm (if equipped):

- Remove nut <1>.
- Remove bracket <2> from control arm <3>.



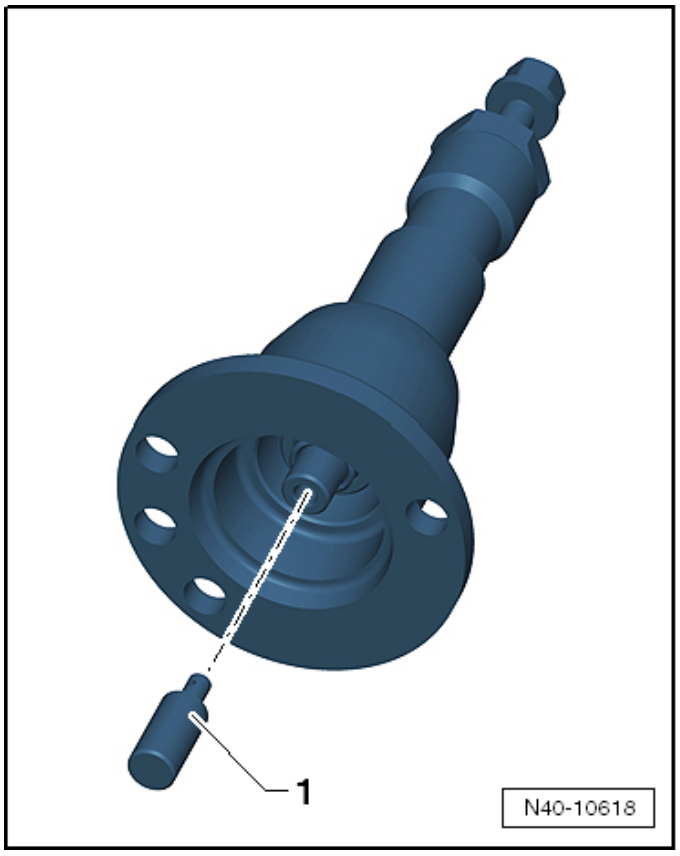
Removing coupling rod from stabilizer bar:

- Remove nut <1>.
- Remove coupling rod <3> from stabilizer bar <2>.



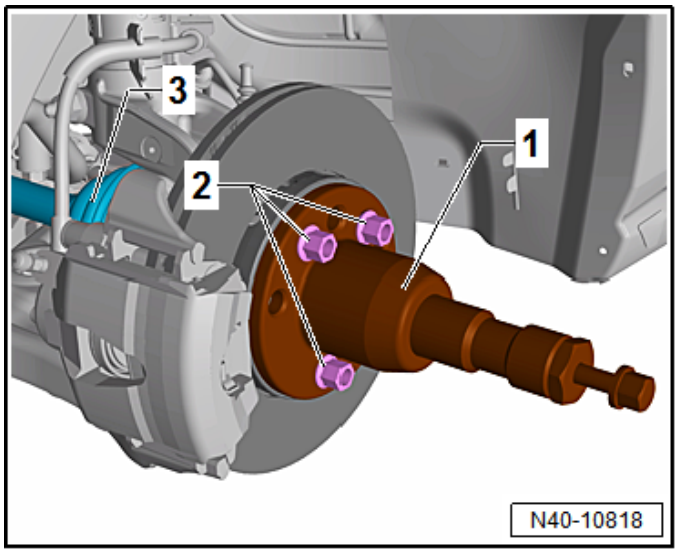
Remove ball joint from control arm:

- Remove nuts <arrows>.
- Press the drive axle outer joint out of the wheel bearing by hand.



If the Drive Axle Cannot Be Pulled out of the Wheel Bearing, Then the Drive Axle Can Be Pushed out of the Wheel Bearing Using the Drive Shaft Remover -T10520A- as follows:

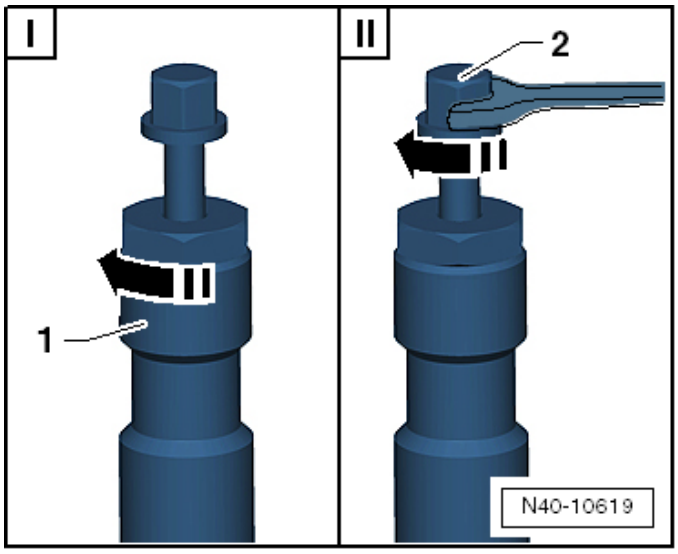
- Before using the -T10520A-, make sure that the thrust piece <1> is installed.



- Secure the -T10520A- <1> with three wheel bolts <2> on the wheel hub, so that the drive axle <3> can be pressed out.

NOTE

The brake rotor may have to be reinstalled temporarily.

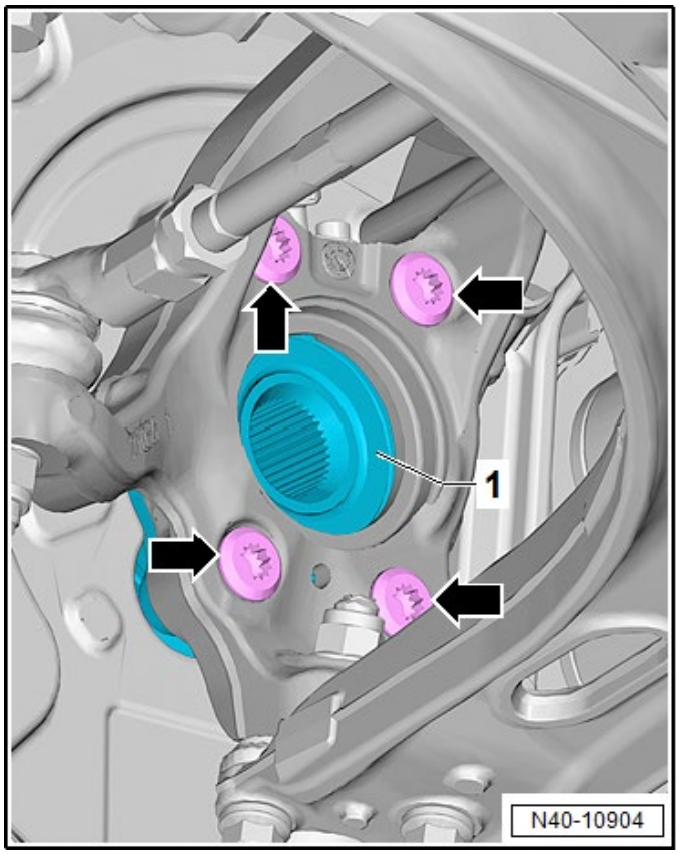


- Follow the specified sequence exactly.
  - I - Tighten the knurled nut <1> hand-tight.
  - II - Turn the bolt <2> using a wrench and press out the drive axle using the -T10520A-. DO NOT use power tools on bolt <2>.

NOTE

After the tool is used, the spindles must be brought back into the original position so that the hydraulic operation can be used again.

- Secure the drive axle to the body using a wire.



Install new wheel bearing into wheel bearing housing:

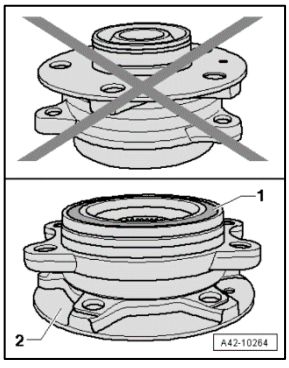
- Remove the bolts <arrows>.
- Remove the wheel bearing unit <1> from the wheel bearing housing.
- Install new wheel bearing into wheel bearing housing with new bolts <arrows>.
- Torque bolts <arrows> to 70 Nm + 90°.

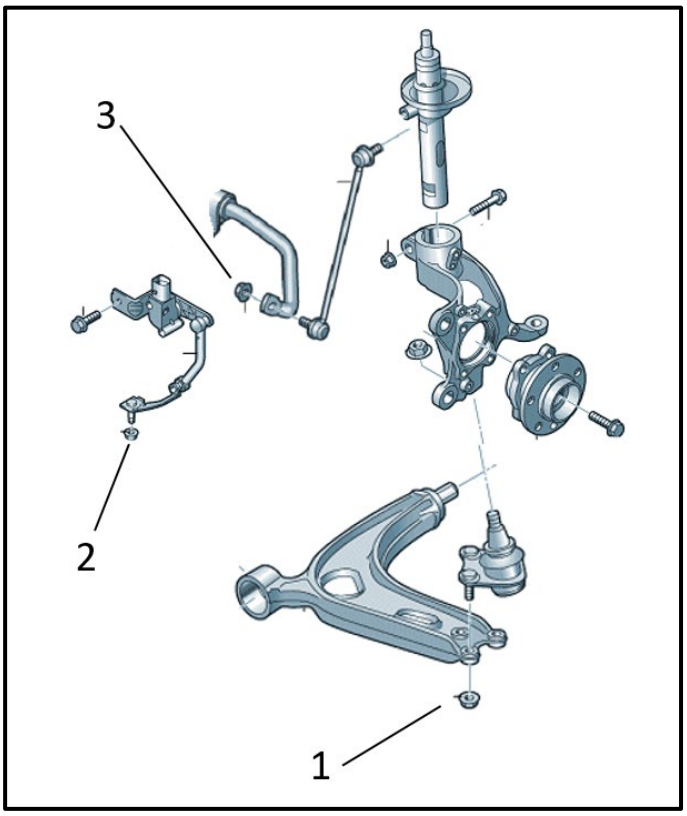
Part Number	Part Description
3QF-598-625	Wheel Bearing

NOTE

Avoid contaminating with dirt and damaging the seal <1> when lifting, setting down/storing.

Always set the wheel bearing unit down on the wheel hub <2>.



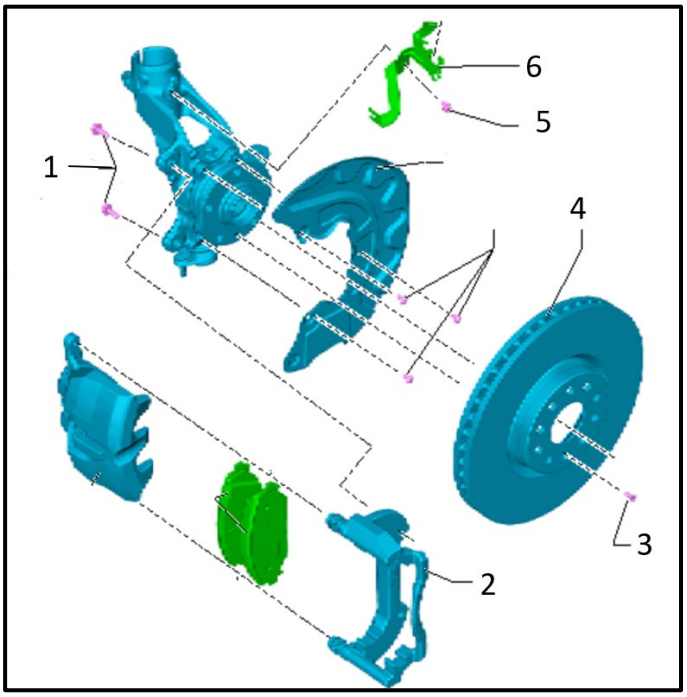


Vehicle Reassembly:

- Reassembly is the reverse order of removal.
- Replace the following fasteners and torque as indicated.

Pos.	Part Number	Part Description
1	N -912-332-01	Nut – control arm to ball joint
2	N -015-081-8	Nut - front level sensor to control arm (if equipped)
3	N -102-058-02	Nut – coupling rod to stabilizer bar

- Torque nuts <1> to 40 Nm + 45°.
- Torque nut <2> to 6 Nm (if equipped).
- Torque nut <3> to 40 Nm + 90°.



Reinstall brake components:

- Installation is the reverse order of removal.
- Torque fasteners as follows:
  - Rotor bolt <3> - 8 Nm.
  - Brake hose bracket bolt <5> - 8 Nm.
  - Brake caliper carrier bolts <1> - 200 Nm.
    - Clean bolts and mounting surfaces before installing.

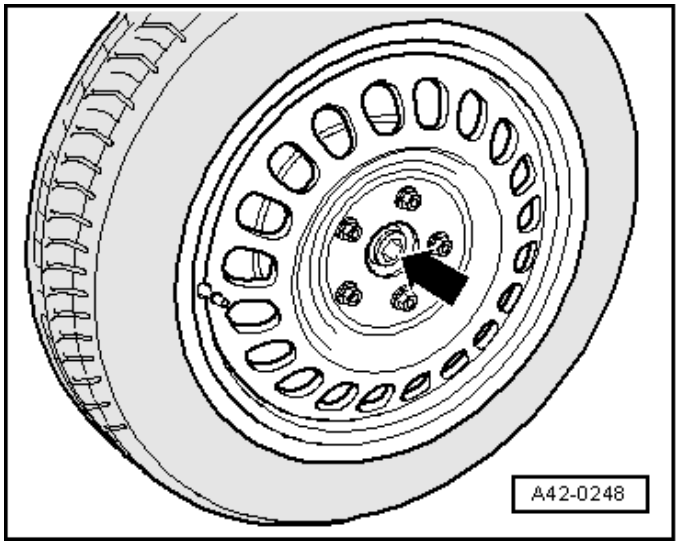
Replacing wheels:

- Indicate on the repair order the position of each wheel and wheel bearing which was replaced.
- Transfer the tire from the old wheel/tire assembly to the new wheel.
- Use a new valve stem.
- Balance wheel/tire assembly.
- Reinstall wheel and torque NEW wheel bolts to 120 Nm.

Part Number	Part Description
WHT-002-438	Wheel bolts

NOTE

If accessory wheel locks were already installed, a new wheel lock set will also be required.



Install drive axle bolt:

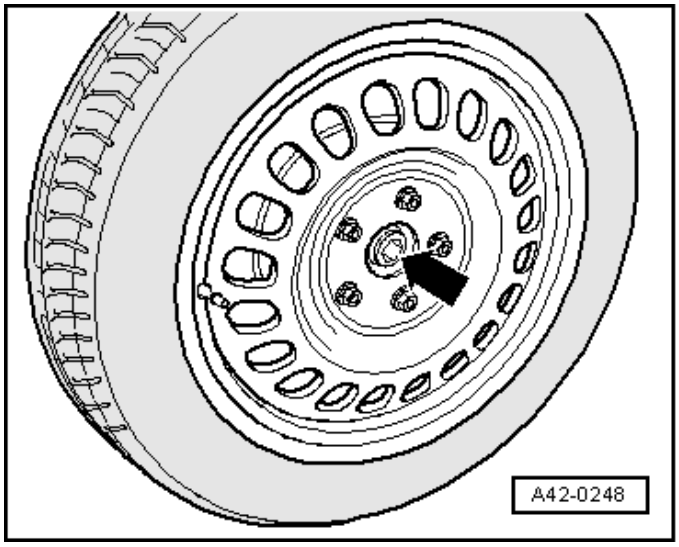
- Press the brake pedal. A second technician will be needed.
- Tighten the twelve-point bolt to 200 Nm.
- Set the vehicle on its wheels.
- Tighten the twelve-point bolt an additional 90°.
- Transfer center cap from the old wheel to the new wheel.
- If a rear wheel is also affected:
  - Proceed to the next step.
- If no rear wheels were affected:
  - Proceed to Section D.

Replacing Rear Wheel Bearing (if necessary):

NOTE

The following describes the removal and installation procedures for one side of the vehicle. Removal and installation on the opposite side is similar.

- Mark the position and rotation direction of each tire that will be removed. This will ensure it installed the same position and direction when reinstalled.
- Indicate on the repair order the position of each wheel and wheel bearing which was replaced.



Loosen rear drive axle bolt (AWD ONLY):

- Secure the rear wheels from turning.
- Loosen the rear axle bolt <arrow>.

CAUTION

- The wheel bearing must not be under load when the drive axle threaded connection on the wheel side is loose.
- If the wheel bearings are under the load of the vehicle weight, the wheel bearing will be damaged. This reduces the service life of the wheel bearings.
- The drive axle bolt may be loosened maximum 90° when the vehicle is standing on its wheels.
- Vehicles without a drive axle must not be moved, otherwise the wheel bearing will be damaged. If a vehicle must be moved, be sure to note the following:
  - Install an outer joint in place of the drive axle.
  - Tighten the outer joint to 120 Nm.

Secure vehicle on the hoist:

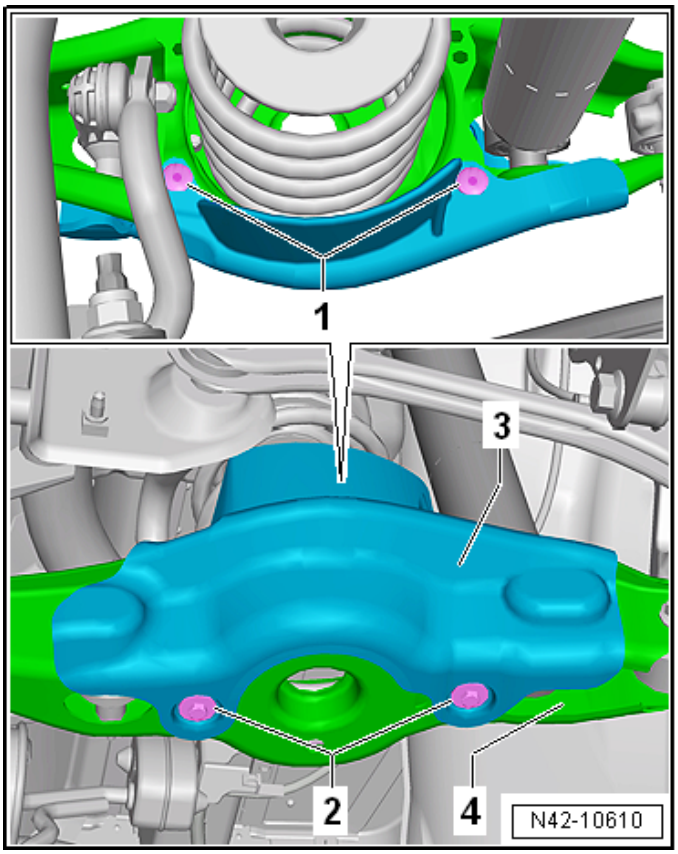
WARNING

When suspension is lifted in curb weight position, the vehicle must be secured on the hoist to prevent it from tipping off the hoist.

- Raise vehicle on hoist and remove rear wheels.
- Secure vehicle so it does not tip off the hoist.
- Remove sealing plug from hole <1>.
- Hook the ends of the ratchet strap into hole <1>.
- Secure vehicle so it does not tip off the hoist using a ratchet strap on both sides of the vehicle.

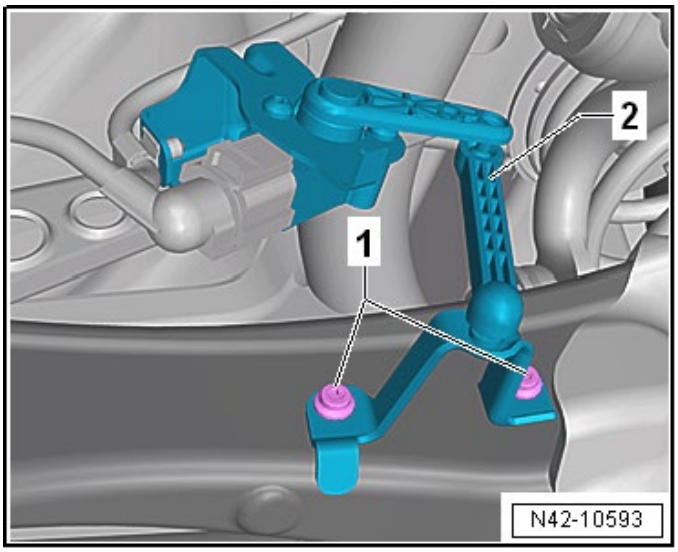
TIP

Ensure the hoist is positioned so sealing plug <1> can be accessed.



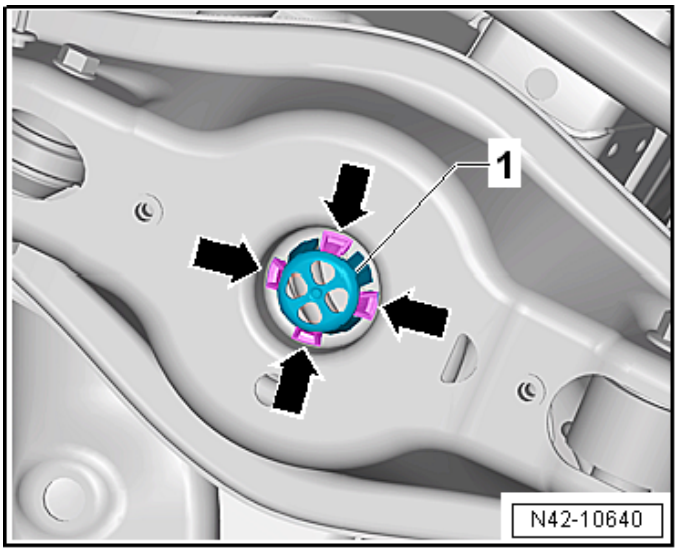
Remove stone chip protection from lower control arms:

- Remove the expanding rivets <1>.
- Remove the bolts <2> for the stone chip protection <3>.



Disconnect level control system sensor (if equipped):

- Remove the bolts <1>.
- Remove the Left Rear Level Control System Sensor -G76- <2> bracket from the lower control arm.

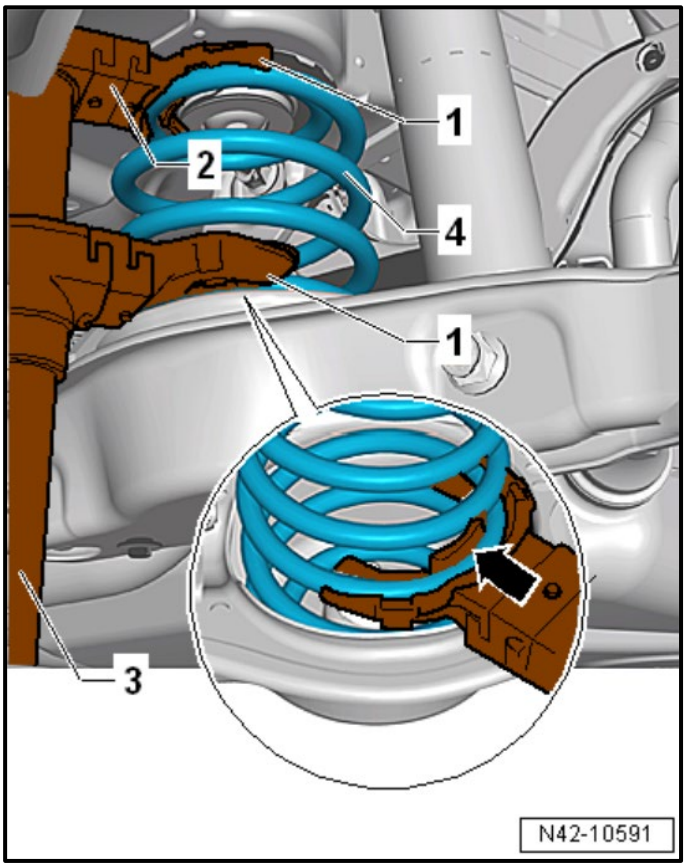


Remove assembly aid:

- Press the tabs <arrows> on the assembly aid <1> inward.
- Remove the assembly aid <1> upward.

NOTE

The assembly aid is destroyed during removal. It does not have to be reinstalled.



Insert the spring compressor <3>:

- Position the - VAS6931- or -VAG1383A- under the lower control arm and push lightly upward.
- Install the spring compressor as follows:

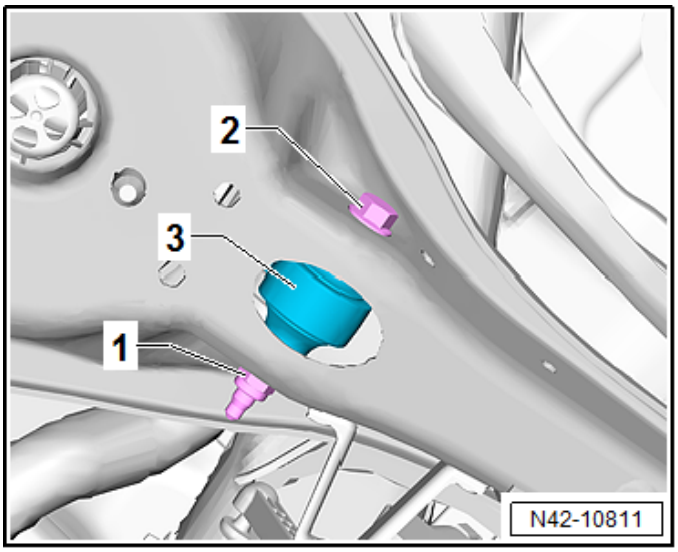
1 - -VAG1752/3A-

2 - -VAG1752/9-

3 - -VAG1752/1-

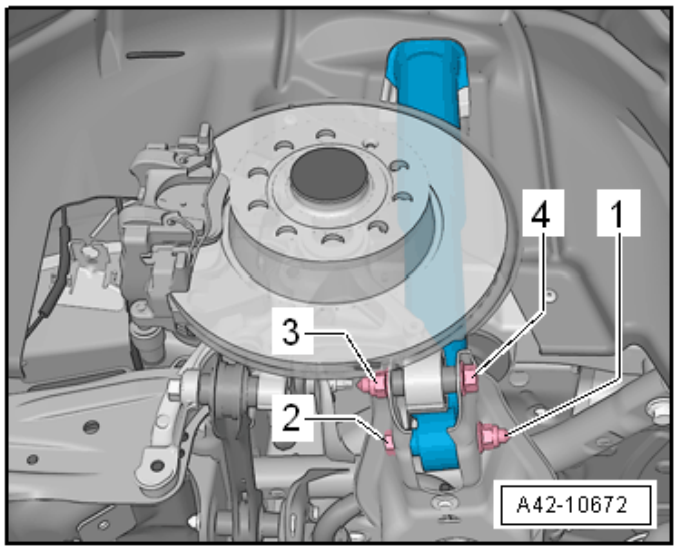
4 - Spring

- Tension the spring using hand tools. DO NOT use power tools on the spring compressor.



Disconnect stabilizer link from lower control arm:

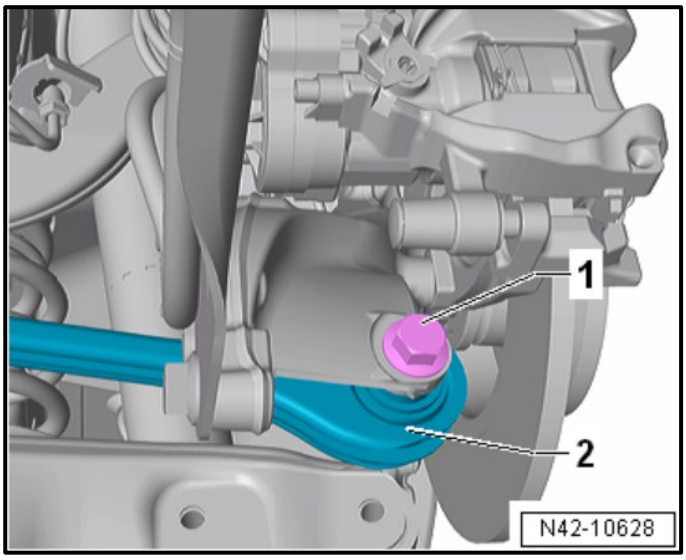
- Remove nut <1> and bolt <2> from the stabilizer link <3>.



Disconnect wheel bearing housing and lower shock bolts from lower control arm, and remove springs:

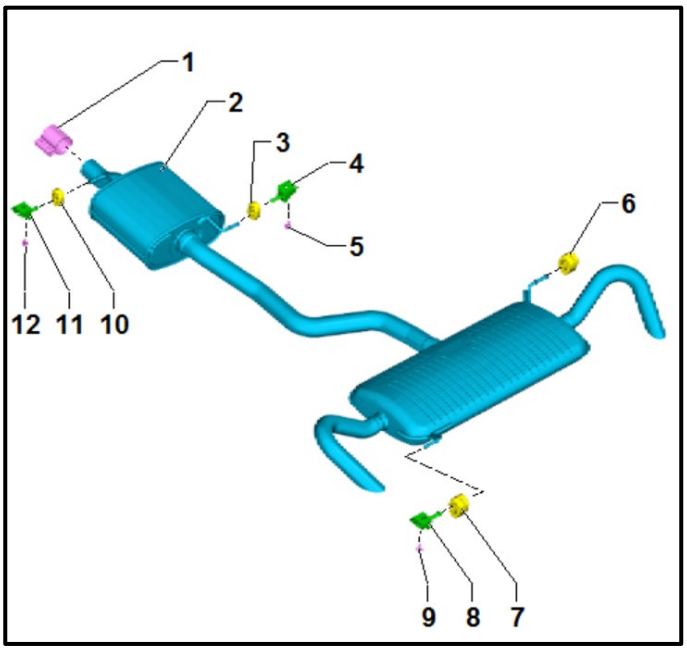
- Remove wheel bearing housing nut <3> and bolt <4>.
- Remove lower shock nut <1> and bolt <2>.
- Slowly lower the -VAS6931- or -VAG1383A- under the lower control arm, until the -VAG1752/1- with the tensioned spring can be removed.

Remove the drive axle (AWD ONLY):



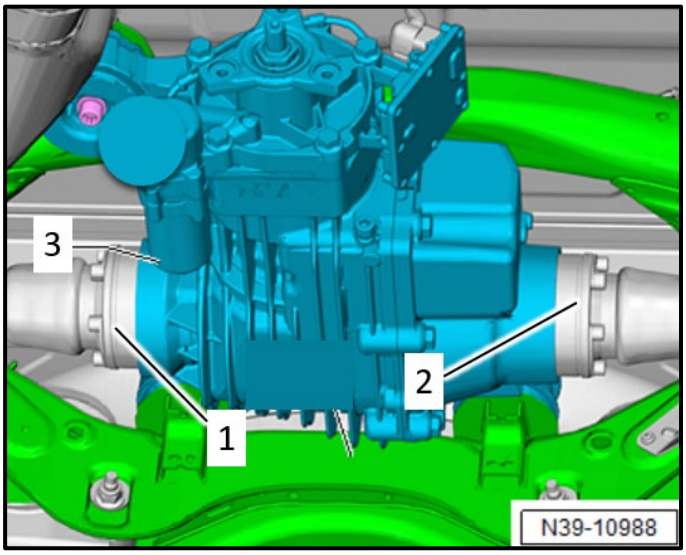
Disconnect rear tie rod:

- Remove the bolt <1> for the tie rod <2>.



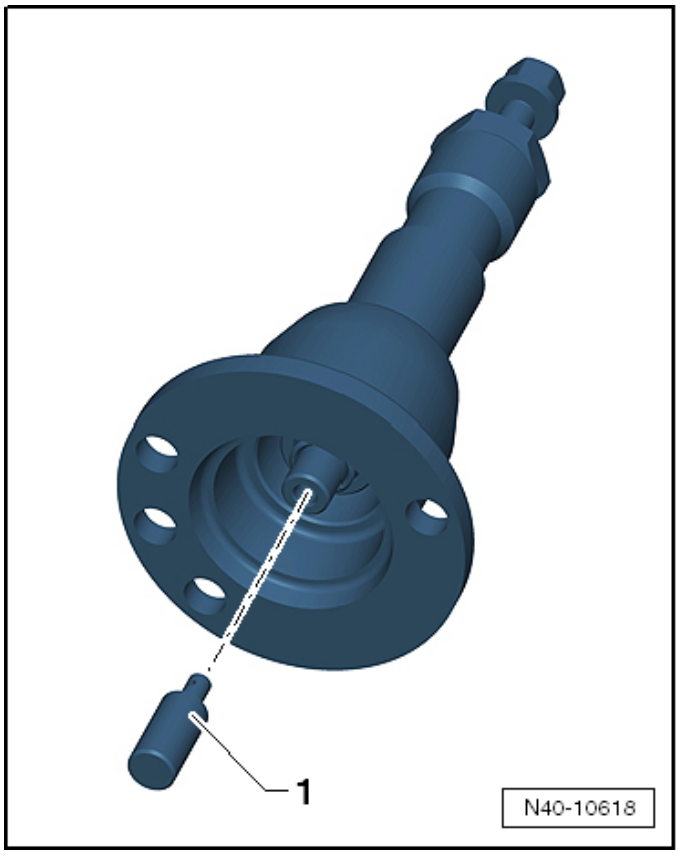
Remove the rear muffler (if necessary):

- It may be necessary to remove the muffler system in order to remove one or both rear drive axles.
- Loosen the clamp <1>.
- Unbolt the mounts from the body and lower the muffler system with the help of a second technician.



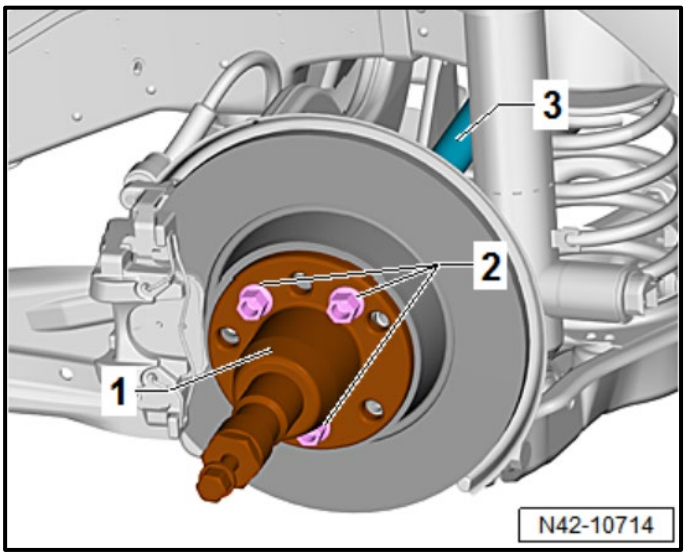
Remove the drive axle:

- Remove the bolts from the drive axle <1> and/or <2>.
- Tilt the wheel bearing housing outward and remove the drive axle from the transmission flange.
- Pivot the drive axle downward and remove it from the wheel bearing.

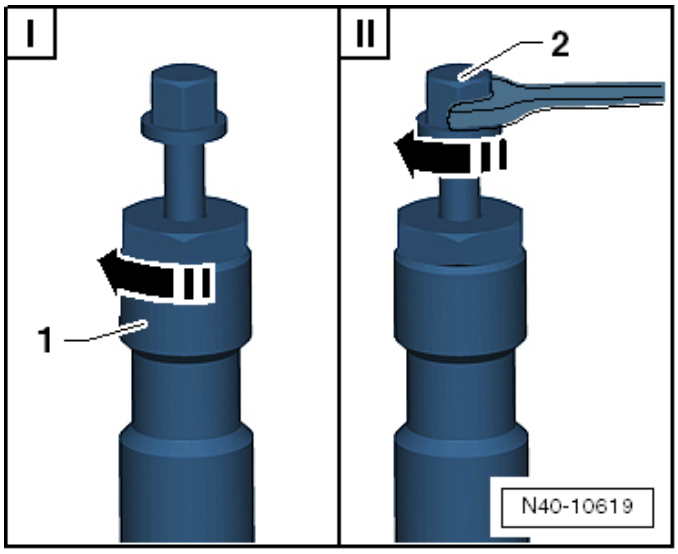


If the Drive Axle Cannot Be Pulled out of the Wheel Bearing, Then the Drive Axle Can Be Pushed out of the Wheel Bearing Using the Drive Shaft Remover -T10520A- as follows:

- Before using the -T10520A-, make sure that the thrust piece <1> is installed.



- Secure the -T10520A- <1> with three wheel bolts <2> on the wheel hub, so that the drive axle <3> can be pressed out.



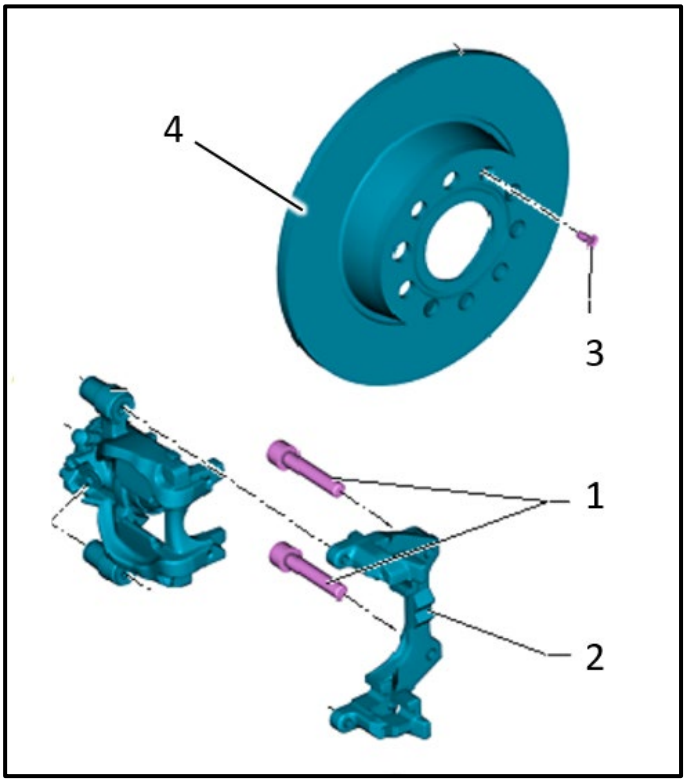
- Follow the specified sequence exactly.
  - I - Tighten the knurled nut <1> hand-tight.
  - II - Turn the bolt <2> using a wrench and press out the drive axle using the -T10520A-. DO NOT use power tools on bolt <2>.

NOTE

After the tool is used, the spindles must be brought back into the original position so that the hydraulic operation can be used again.

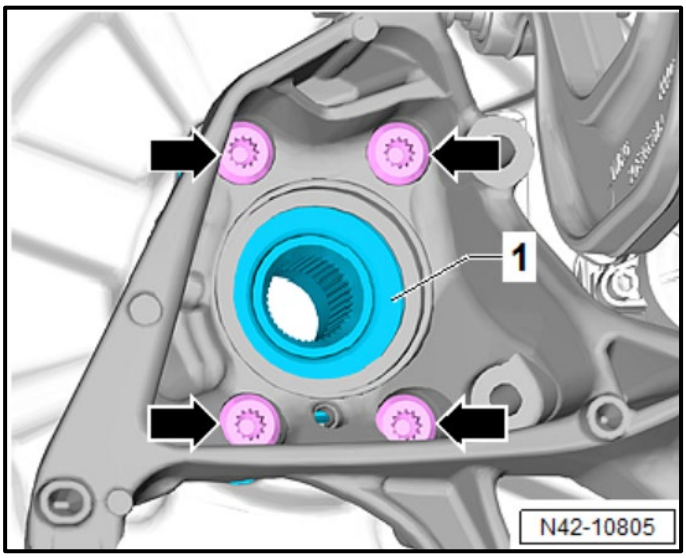
- Remove the drive axle.

Continued for AWD OR FWD:



Remove brake components:

- Remove bolts <1> and remove brake carrier <2> off of brake rotor.
- The brake caliper does not have to be removed from the carrier.
- Secure the brake caliper assembly with wire.
- Remove the bolt <3> and remove the brake rotor <4>.



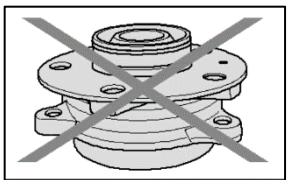
Install new wheel bearing into wheel bearing housing:

- Remove the bolts <arrows>.
- Remove the wheel bearing unit <1> from the wheel bearing housing.
- Install new wheel bearing into wheel bearing housing with new bolts <arrows>.
- Torque bolts <arrows> to 70 Nm + 90°.

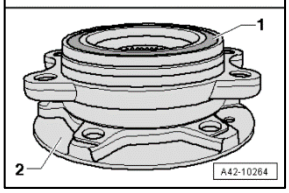
Part Number	Part Description
3QF-598-625	Wheel Bearing (AWD)
3QF-598-611	Wheel Bearing (FWD)

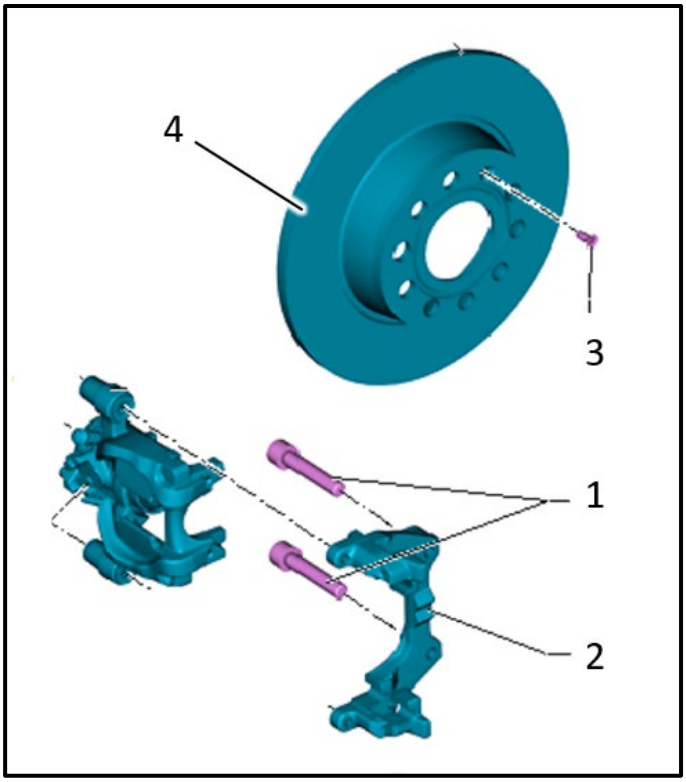
NOTE

Avoid contaminating with dirt and damaging the seal <1> when lifting, setting down/storing.



Always set the wheel bearing unit down on the wheel hub <2>.



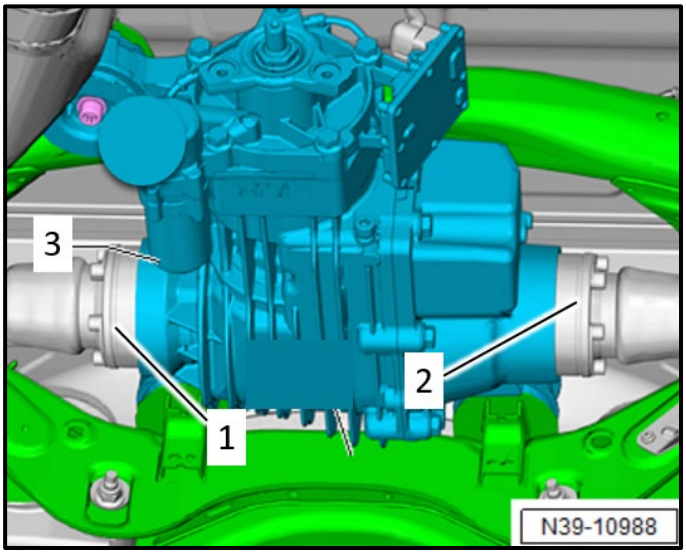


Vehicle Reassembly:

- Reassembly is the reverse order of removal.
- Torque nut <3> to 8 Nm.
- Install new bolts <1> and torque to 90 Nm + 90°.

Part Number	Part Description
N -911-689-01	Bolt – Caliper Carrier

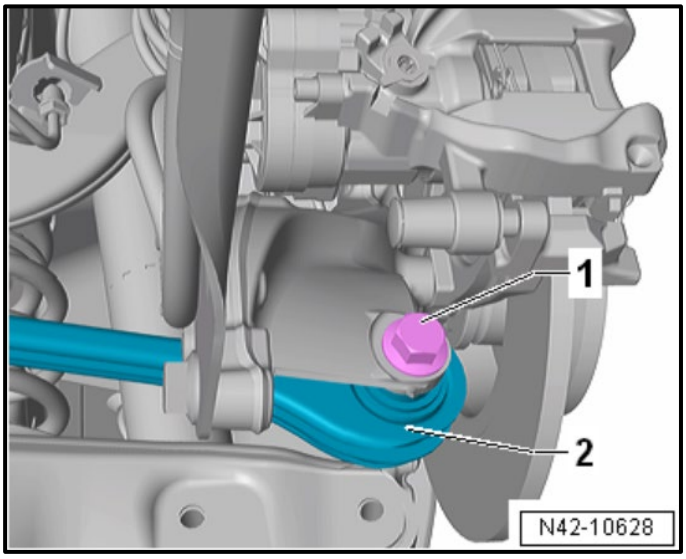
AWD Vehicles:



Install drive axle:

- Install drive axle into wheel bearing.
- Install drive axle into flange.
- Install new bolts and torque as follows:
  - Diagonally to 10 Nm.
  - Diagonally again to 40 Nm.

Part Number	Part Description
N -911-082-01	Bolt – Drive Axle to Differential

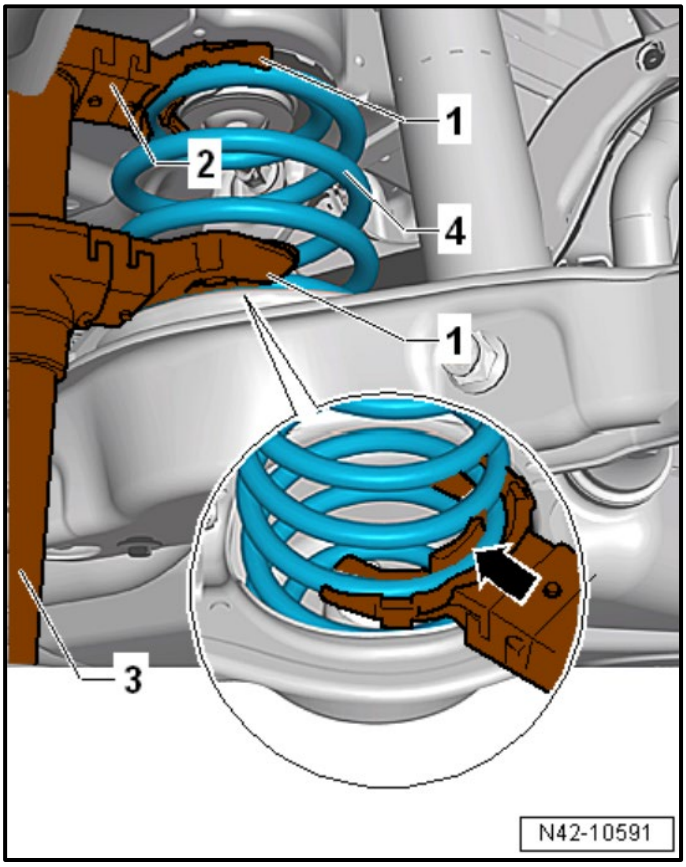


Install rear tie rod:

- Install tie rod <2> with new bolt <1>, but do not tighten.

Part Number	Part Description
N -106-403-01	Bolt – Tie rod to bearing housing

Continued for AWD or FWD vehicles:



Install the spring:

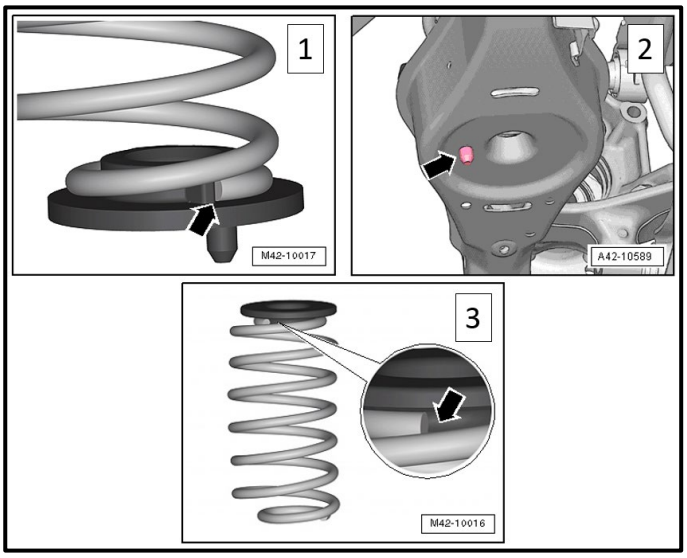
- Install in the reverse order of removal.
- Tension the spring using hand tools. DO NOT use power tools on the spring compressor.
- Install the spring compressor as follows:

1 - -VAG1752/3A-

2 - -VAG1752/9-

3 - -VAG1752/1-

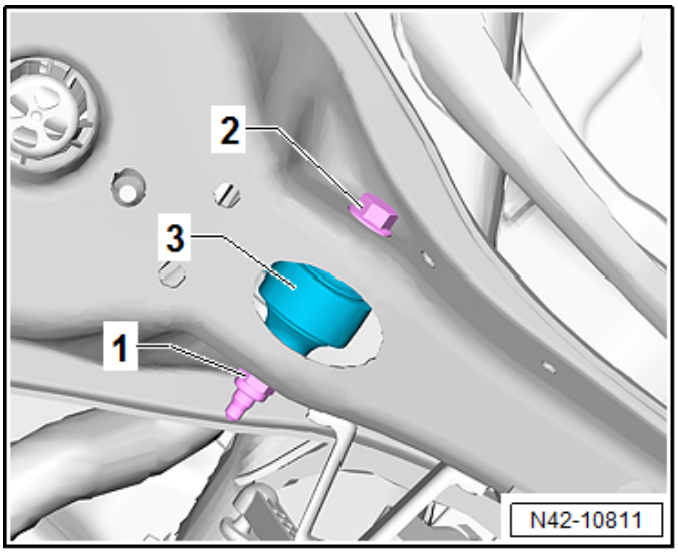
4 - Spring



NOTE

The lower spring support may stay attached to the lower control arm. If it does, ensure the lower spring support is transferred to the spring.

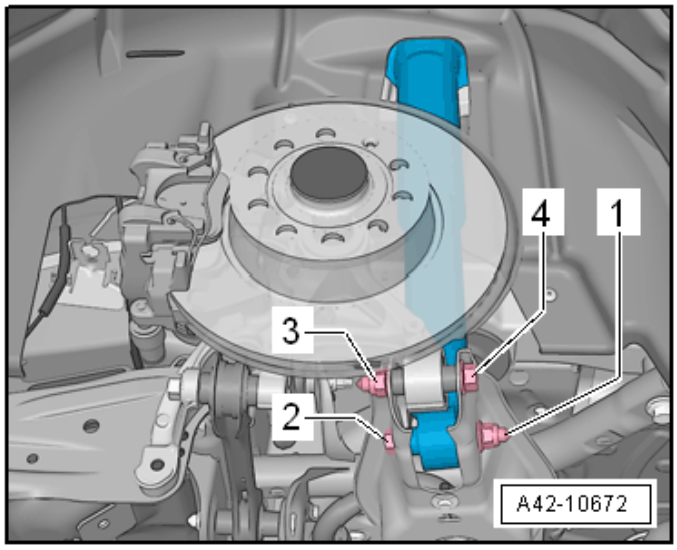
- Note the following when installing the spring:
  1. The end of the spring coil <arrow> must rest against the stop on the lower spring support.
  2. The lower spring support pin <arrow> must go through the hole in the lower control arm.
  3. The upper spring support must be fully seated on the upper spring coil <arrow>.



Connecting stabilizer link fasteners to lower control arm:

- Start new nut <1> and bolt <2> by hand, but do not tighten.

Part Number	Part Description
N -107-765-01	Bolt - Stabilizer link to control arm
N -901-838-04	Nut - Stabilizer link to control arm



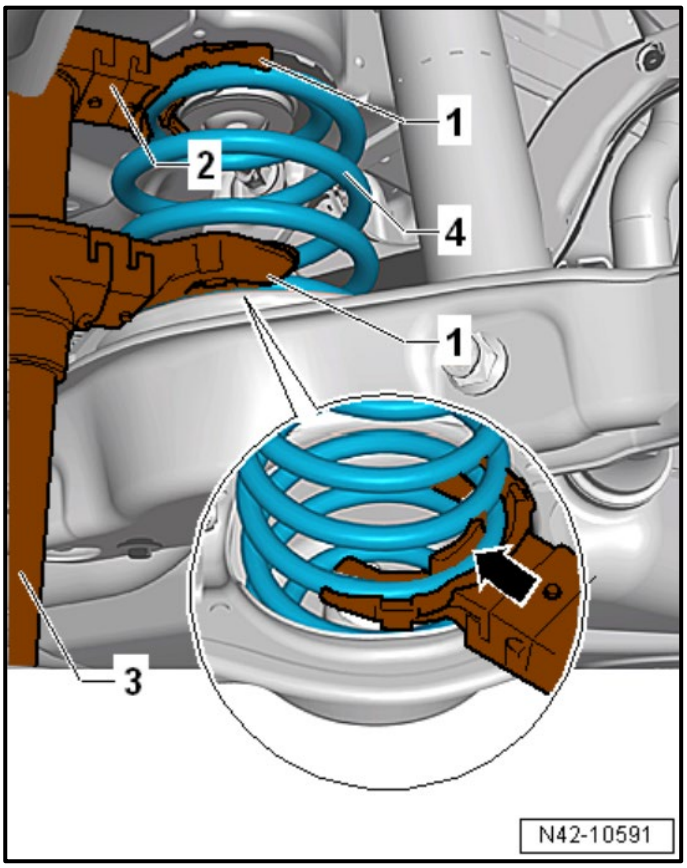
Installing wheel bearing housing and shock fasteners to lower control arm:

- Start new lower shock bolt <2> and nut <1> by hand, but do not tighten.

Part Number	Part Description
N -106-283-01	Bolt - Shock to control arm
N -101-064-02	Nut - Shock to control arm

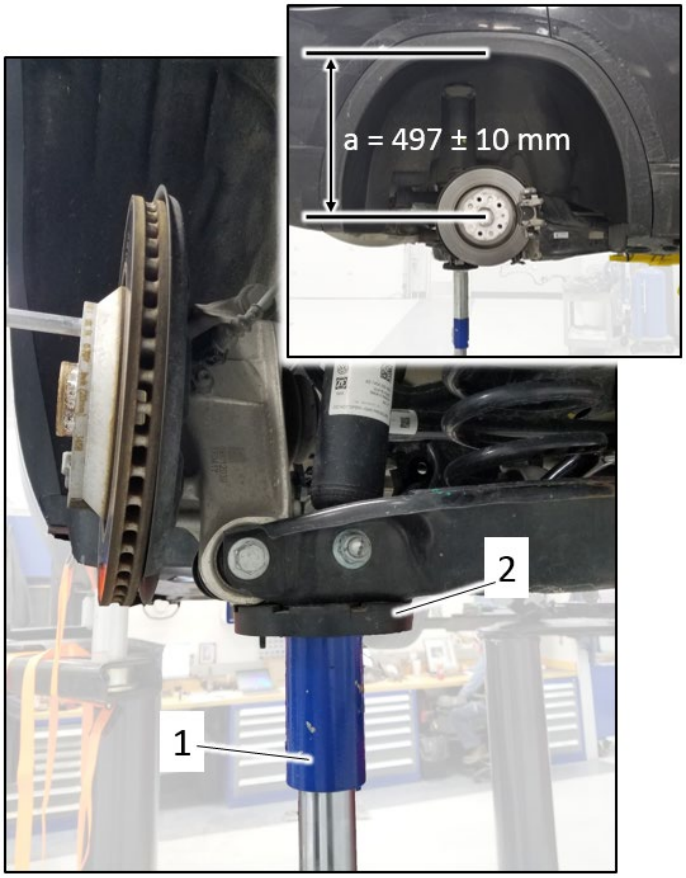
- Start new wheel bearing housing bolt <4> and nut <3> by hand, but do not tighten.

Part Number	Part Description
N -106-405-01	Bolt - Wheel bearing housing to control arm
N -101-064-02	Nut - Wheel bearing housing to control arm



Release spring tension:

- Slowly release tension on the -VAG1752/1-<3> using hand tools.



Raising/supporting suspension in curb weight position :

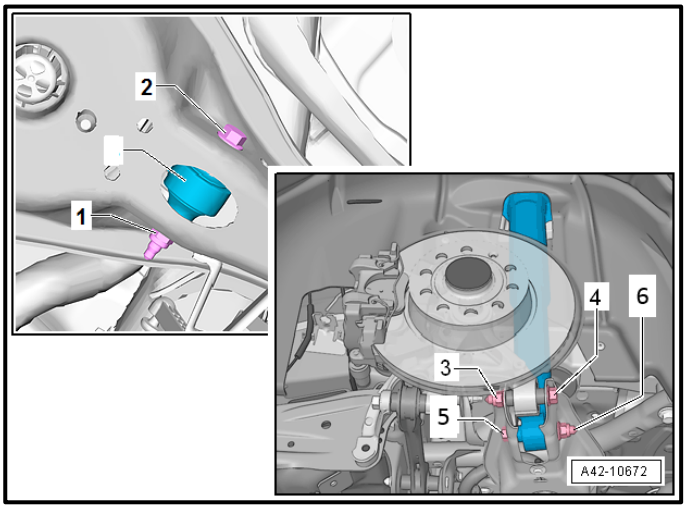
⚠ WARNING

When suspension is lifted in curb weight position, the vehicle must be secured on the hoist to prevent it from tipping off the hoist.

- Position the -VAS6931- <1> with Engine/Gearbox Jack - Gearbox Support -T10337- <2> under the lower control arm.
- Raise the suspension with the -VAS6931- until dimension <a> is achieved.
  - Dimension <a> = 497 ± 10 mm.

⚠ CAUTION

- All bolts on suspension components with bonded rubber bushings must always be tightened in curb weight position (unloaded condition).
- Bonded rubber bushings have a limited range of rotation.
- Axle components with bonded rubber bushings must be brought into the position they will be in when driving before they are tightened (curb weight position). Otherwise, the bonded rubber bushing will have tension, which will reduce the service life.



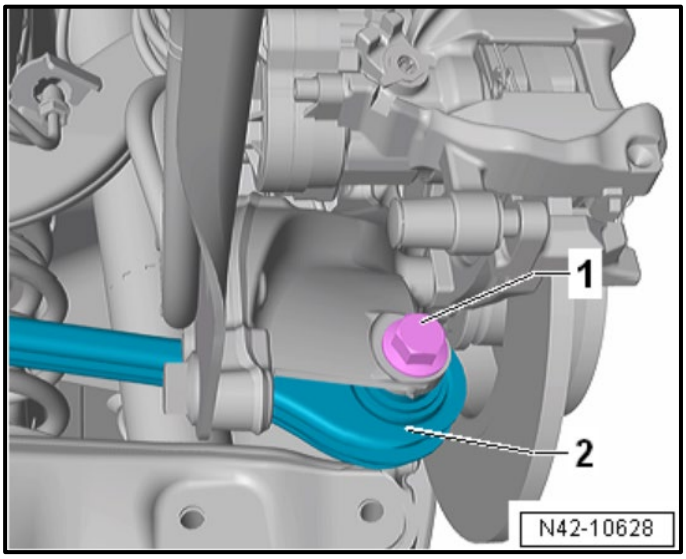
Torqueing suspension fasteners:

⚠ WARNING

When suspension is lifted in curb weight position, the vehicle must be secured on the hoist to prevent it from tipping off the hoist.

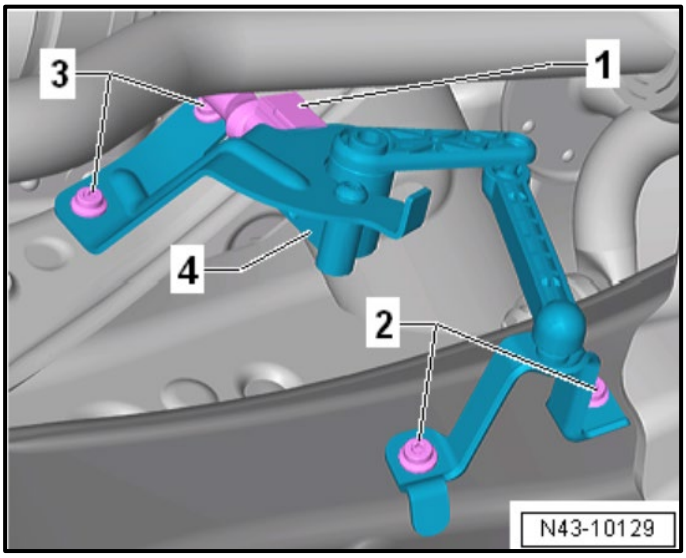
- Counter-hold bolts and torque fasteners as follows:

Connection	Position	Torque value
Stabilizer link	<1 and 2>	20 Nm +180°
Wheel bearing housing	<3 and 4>	70 Nm +180°
Shock	<5 and 6>	70 Nm +180°



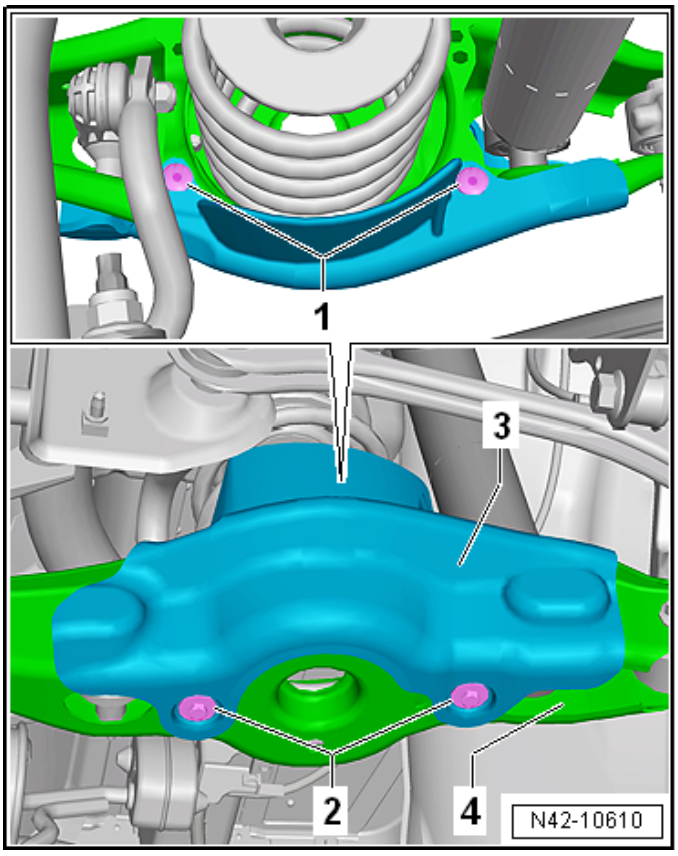
Torque tie rod bolt (AWD ONLY):

- Torque bolt <1> to 70 Nm +180°.



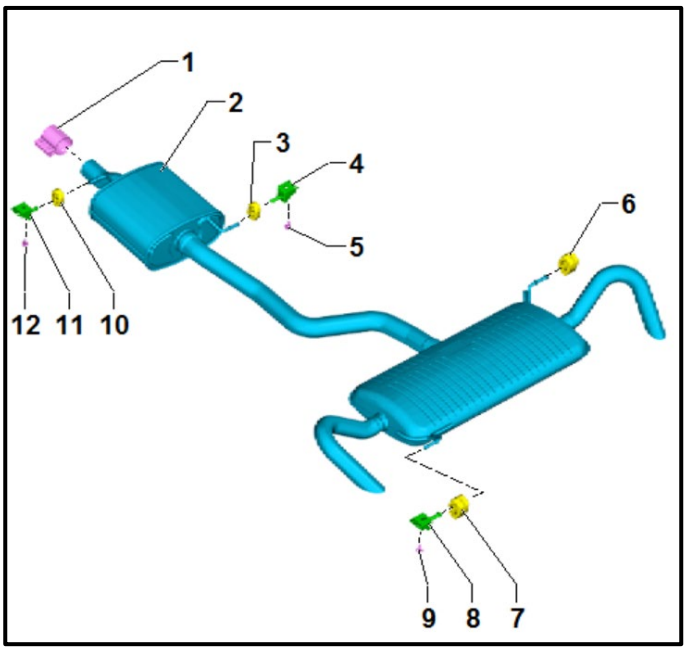
Install level control sensor (if removed):

- Installation is the reverse order of removal.
- ENSURE THE SENSOR ARM POINTS TO THE OUTSIDE OF THE VEHICLE.
- Torque bolts to 5 Nm.



Install stone chip protection:

- Install the bolts <2> for the stone chip protection <3> and torque to 8 Nm.
- Install the expanding rivets <1>.
- Remove any tools that were used to secure the vehicle on the hoist.
- Install sealing plugs.

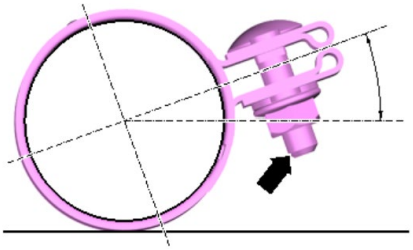


Install muffler (if necessary):

- Raise the muffler system with the help of a second technician.
- Position the mounts.
- Install the bolts and torque to 20 Nm.
- Install clamp <1> (replace if damaged) and torque clamp nuts evenly to 30 Nm.

NOTE

Install the clamping sleeve so that the end of the bolt does not extend past the lower edge of the clamping sleeve.



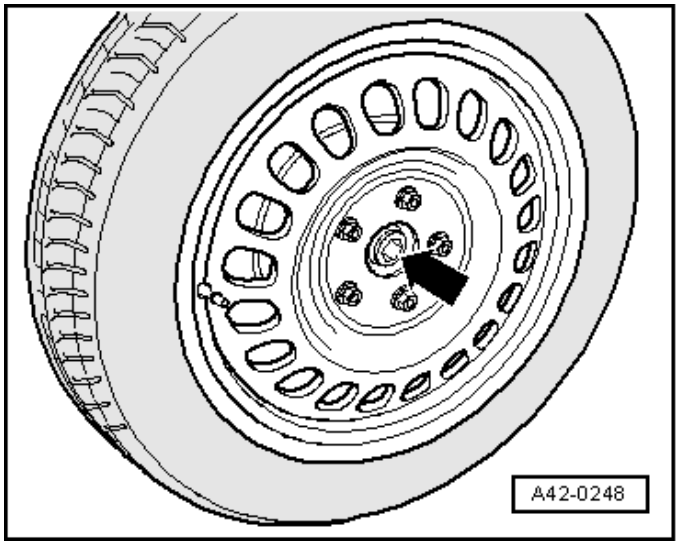
Replacing wheels:

- Indicate on the repair order the position of each wheel and wheel bearing which was replaced.
- Transfer the tire from the old wheel/tire assembly to the new wheel.
- Use a new valve stem.
- Balance wheel/tire assembly.
- Reinstall wheel and torque NEW wheel bolts to 120 Nm.

Part Number	Part Description
WHT-002-438	Wheel bolts

NOTE

If accessory wheel locks were already installed, a new wheel lock set will also be required.



Install drive axle bolt:

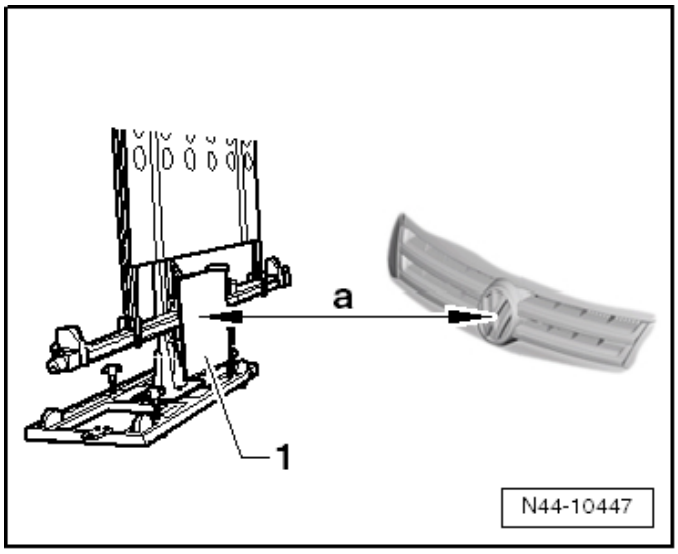
- Press the brake pedal. A second technician will be needed.
- Tighten the twelve-point bolt to 200 Nm.
- Set the vehicle on its wheels.
- Tighten the twelve-point bolt an additional 90°.
- Transfer center cap from the old wheel to the new wheel.

Perform four-wheel vehicle alignment:

NOTE

An alignment is only required if a rear wheel bearing was replaced.

- Follow the ELSA Repair Manual and wheel aligner equipment directions as needed.
- Was the rear axle toe adjusted?
  - If YES, proceed to the next step.
  - If NO and all affected wheels, wheel bearings and wheel bolts have been replaced:, Proceed to Section D.



Calibrate driver assist systems depending on vehicle equipment:

- Calibrate *Adaptive Cruise Control (ACC)* only if rear axle toe required adjustment.
- Calibrate *Driver Assistance Systems Front Camera* only if rear axle toe required adjustment.
- Follow the ELSA repair manual procedures, GFF test plan directions and wheel aligner software directions as needed.

- Once all affected wheels, wheel bearings and wheel bolts have been replaced:
  - Proceed to Section D.

Section D – Campaign Completion Label

Install Campaign Completion Label

- Fill out and affix Campaign Completion Label, part number CAMP 010 000, next to the vehicle emission control information label.

TIP

Ensure Campaign Completion Label does not cover any existing label(s).

Proceed to Section E

Section E - Parts Return/Disposal

Properly store (retain), destroy or dispose of removed parts in accordance with all state/province and local requirements, unless otherwise indicated and/or requested through the Warranty Parts Portal (WPP) for U.S. and the Part Destruction and Core Disposition Report for Canada.

CRITICAL STEP

STOP! STOP!

Any wheels that were replaced MUST be destroyed. This can be accomplished by drilling multiple holes in the barrel of the wheel.