

# Technical Service Bulletin



## 37H5 UPDATE – Multitronic (NVLW)

May 13, 2014

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A4, A5 Cab, A6	2012 - 2013	See Campaign/Action screen in Elsa	None

## Condition

This Update has been proactively released to prevent the following condition from occurring in the vehicle:

Due to a process fault, the gearbox was filled with ATF fluid containing sulphur on Audi vehicles with multitronic manufactured within a specific period. As a result, a copper sulphide layer may form on the conductor tracks of the gearbox control unit and cause electrical faults.

This Update is in effect until removed.

Vehicle must meet all of the following criteria:

- Procedure is valid only for vehicles that show the **37H5** code in the Elsa Campaign/Action Information screen on the day of repair.
- Vehicle must be within the New Vehicle Limited Warranty.
- Procedure must be performed within the allotted time frame stated in this Technical Service Bulletin.
- Procedure must be performed on applicable vehicles in dealer inventory prior to sale.

## Technical Background

Due to a process fault, the gearbox was filled with ATF fluid containing sulphur on Audi vehicles with multitronic manufactured within a specific period. As a result, a copper sulphide layer may form on the conductor tracks of the gearbox control unit and cause electrical faults.

## Service

### Overview of Steps

All steps must be performed in the following order.

1. Drain ATF
2. Fill ATF
3. First purging procedure
4. Drain ATF
5. Fill ATF
6. Second purging procedure
7. Drain ATF
8. Replace gearbox control unit
9. Fill ATF and then check and correct ATF level
10. Adapt gearbox control unit.



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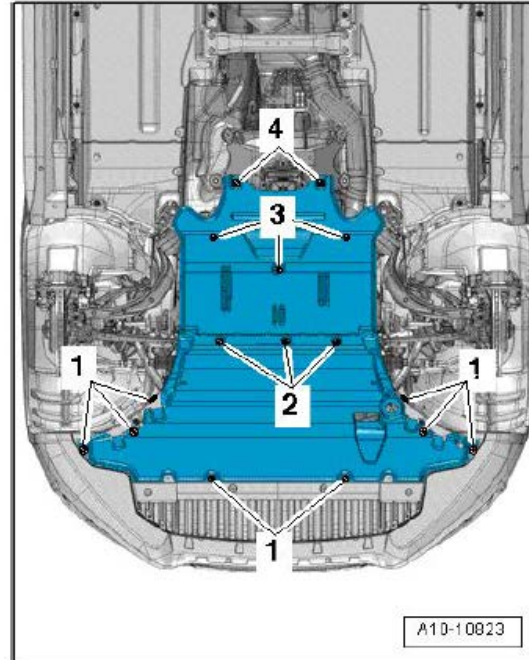
# Technical Service Bulletin

## Draining ATF (Step 1, Step 4, Step 7)

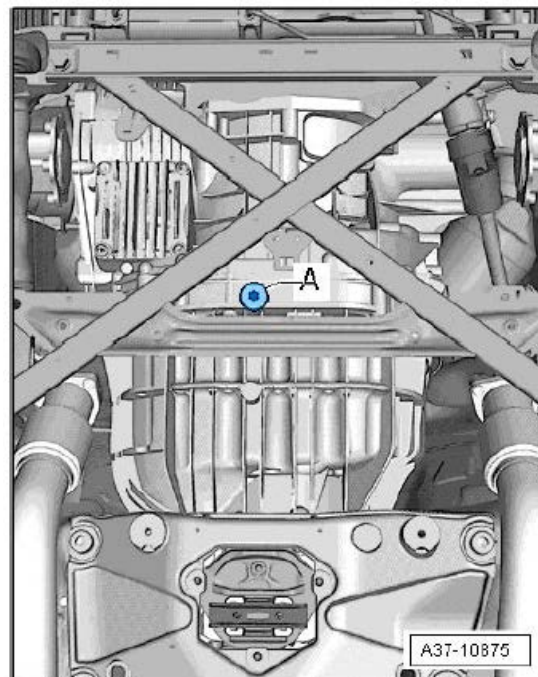


**Caution!** Risk of damage to gearbox. The engine must not be started if there is only a small amount or no ATF in the gearbox.

1. Put vehicle on hoist and ensure vehicle is level.
2. Remove rear noise insulation.



3. Remove ATF inspection plug <A>.
4. Allow ATF to drain into used oil collection and extraction unit.

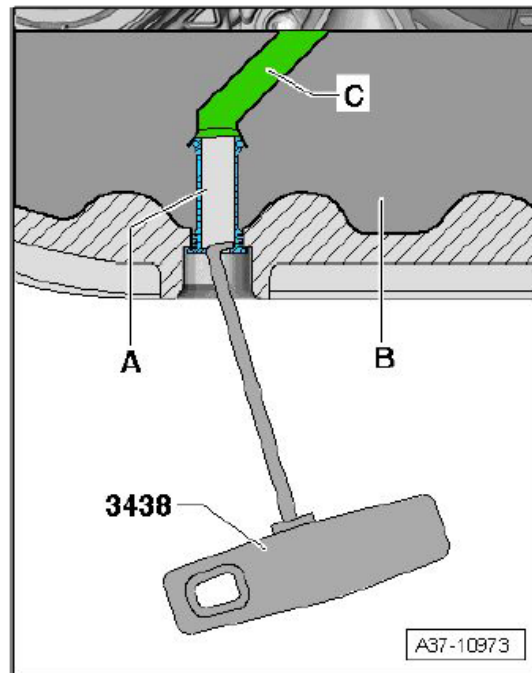




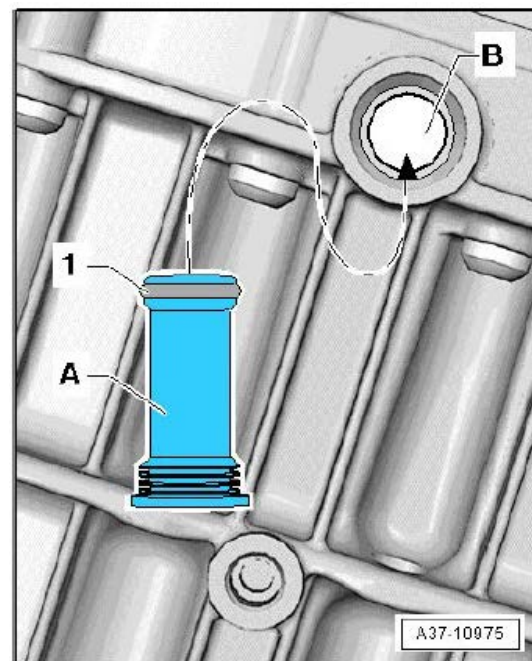
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5. Pull fluid level pipe <A> out of the ATF inspection hole using hook <3438> and drain off remaining ATF.



6. O-ring <1> must be correctly fitted in groove on fluid level pipe.
7. Carefully push fluid level pipe <A> by hand into ATF inspection hole <B>, ensuring that it is straight.

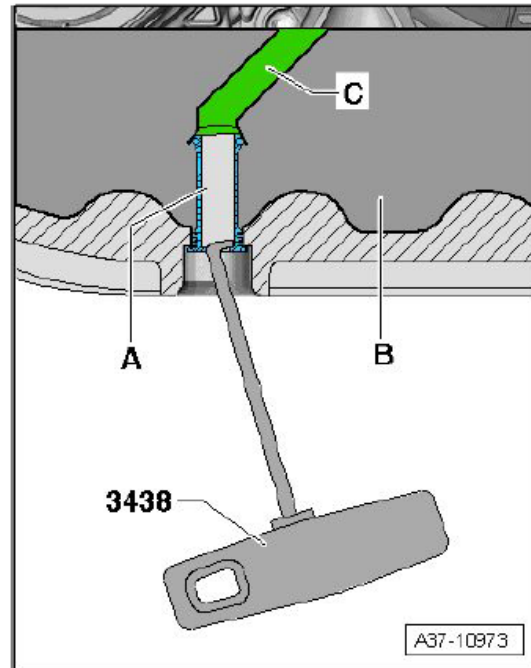




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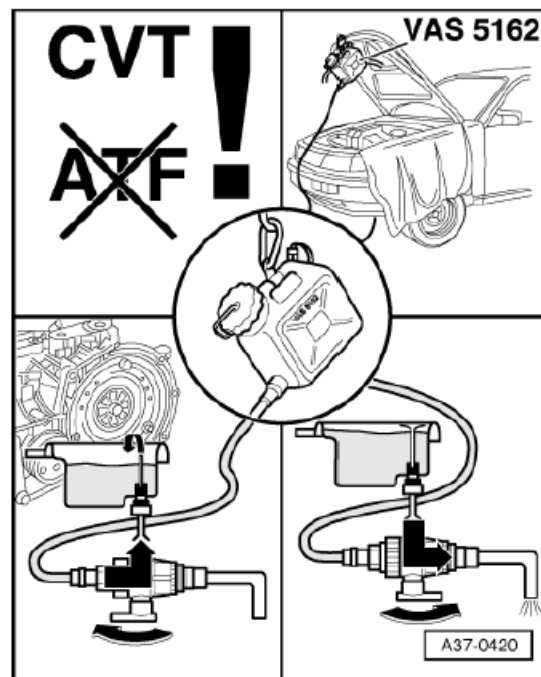
8. The O-ring on the fluid level pipe <A> provides a seal to the upper fluid level pipe <C>. The ATF level can only be adjusted correctly if this connection is properly sealed.
9. Install fluid level pipe <A> (only replace before the third filling procedure).



## Filling ATF (step 2, step 5)

The ATF charging device must be clean and the ATF must not be missed with other type of ATF fluid!

Only use ATF for the gearbox “multitronic 0AW”.

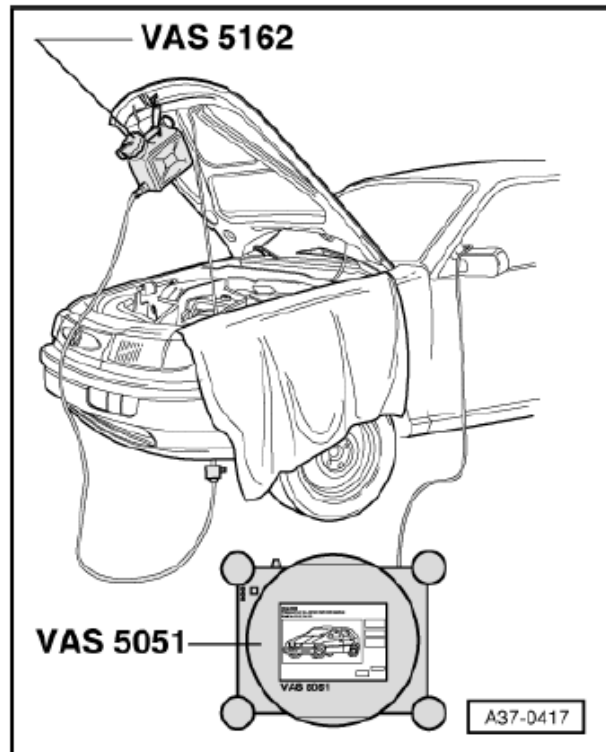




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1. Secure filled reservoir for ATF charging device as high as possible on vehicle.
2. Stopcock on ATF charging device for CVT gearboxes <VAS 5162> must be closed.



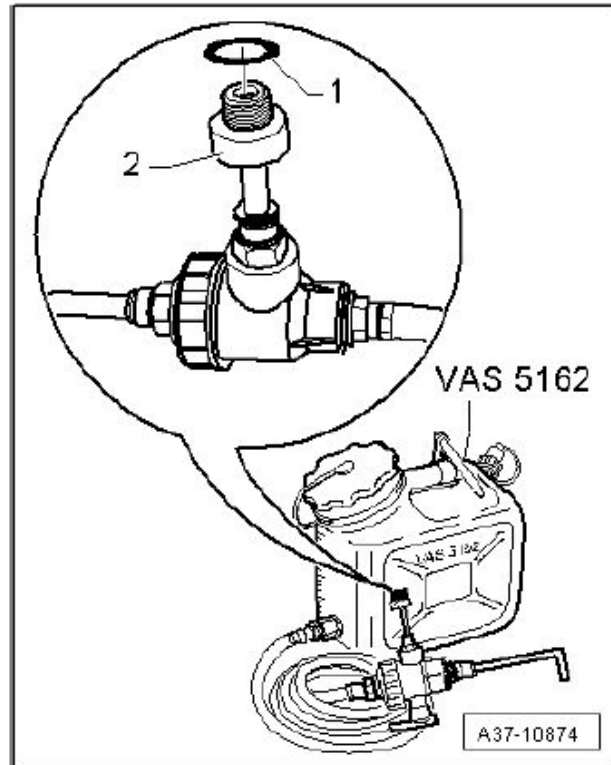
3. Remove O-ring <1> from connection <2> of the ATF charging device for CVT gearboxes <VAS 5162>.



**Caution! Risk of filling up gearbox incorrect:**

The connection <2> must be screwed hand tight all the way into the inspection hole on the gearbox with the O-ring removed.

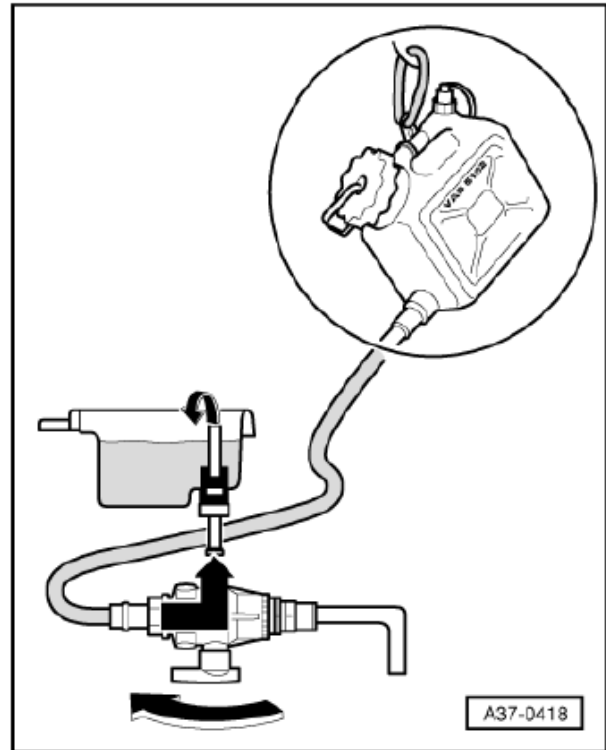
The O-ring must be removed at the connection <2> so that the fluid level pipe in the inspection hole can be pressed into the upper position. Only then can the ATF level be checked and topped up to the maximum correctly.







4. With O-ring removed, screw connection of ATF charging device for CVT gearboxes <VAS 5162> hand tighten all the way into threaded hole for ATF inspection plug. This will push the fluid level pipe into the correct installation position.
5. Turn stopcock in direction of filling hose <lower arrow>. The ATF will run into the gearbox.
6. Fill 5.5 to 6.0 L of ATF into gearbox.
7. Move selector lever to "P"
8. Start engine.
9. Briefly bring engine speed to 2500 rpm.
10. Apply brake pedal and switch through selector lever positions "P, R, N, D, S", staying in each position for 2 seconds.
11. Move selector lever to "P" and allow engine to run at idling speed.
12. Unscrew connection on stopcock of ATF charging device for CVT gearboxes <VAS 5162> from opening for ATF inspection plug.
13. Allow excess ATF to drain off.
14. Secure ATF inspection plug (reuse old plug). Tightening torque: 30 NM



## Purging procedure (step 3, step 6)



**Caution!** Risk of damage to gearbox. Do not run the engine without ATF and do not tow vehicle.

1. Start engine.

## Perform 5 times

2. Move selector lever to "D".
3. Move selector lever into "tiptronic gate".
4. Accelerate vehicle by pressing the accelerator pedal gently. Note the gear position display in the instrument cluster.
5. Change up from first gear into the highest gear by pushing the selector lever towards "+".
6. Then change back down into first gear by pulling the selector lever towards "-".
7. Brake the vehicle to a standstill.
8. Move selector lever to "R".




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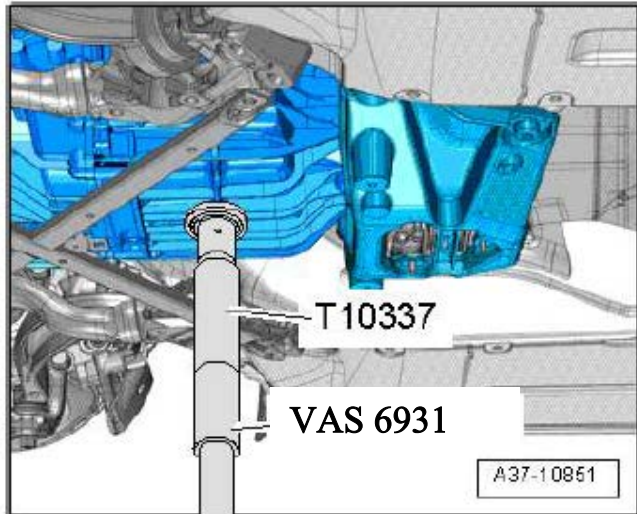
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9. Accelerate vehicle to 12 mph by pressing the accelerator pedal gently.
10. Brake the vehicle to a standstill.

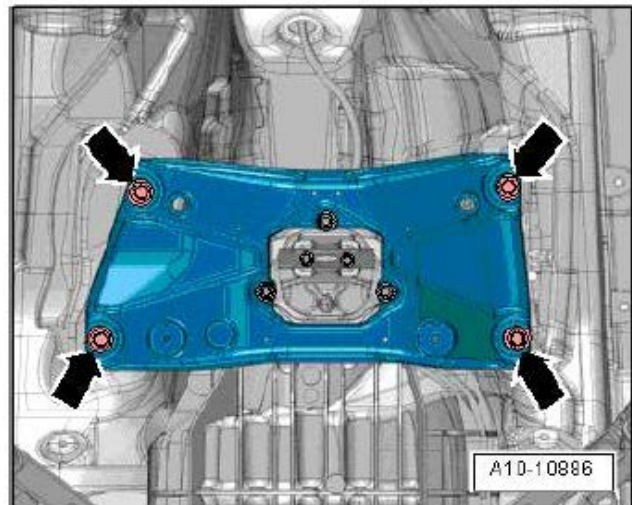
## Replacing gearbox control unit (step 8)

1. Apply lifting column of engine and gearbox jack <VAS 6931> to gearbox from below (with gearbox support <T10337> attached).

 **Risk of accident. Engine and gearbox jack must remain in position when work is being carried out and must not be left unattended.**



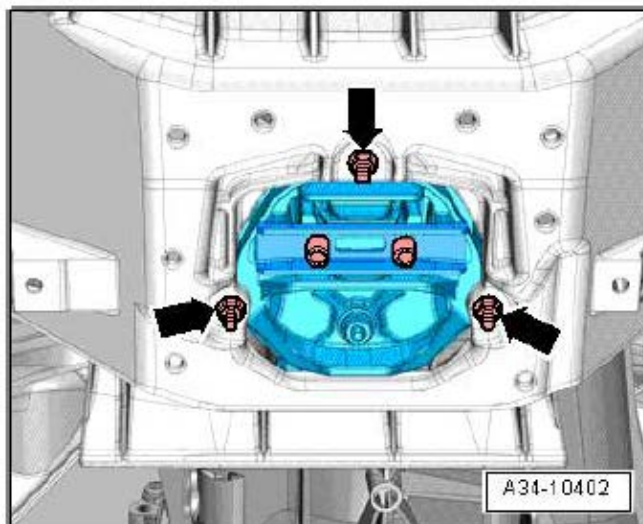
2. Remove bolts <arrows> for tunnel cross member. Tightening torque: 70 Nm



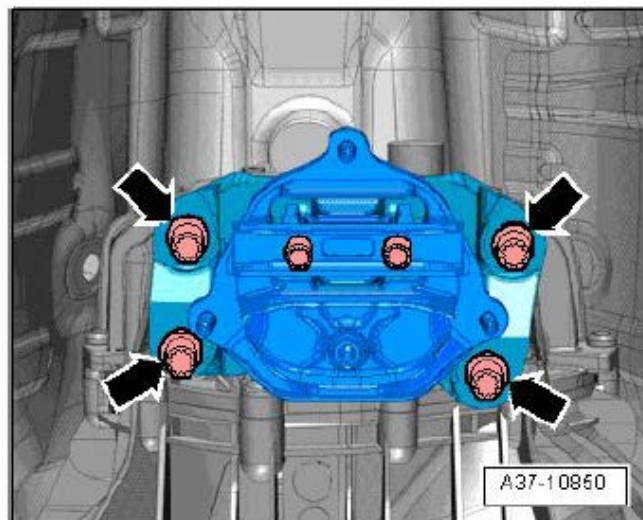




3. Remove bolts <arrows> and detach tunnel cross member. Tightening torque: 20 Nm



4. Unscrew bolts <arrows> and detach gearbox support from gearbox together with gearbox mounting. Tightening torque: 40 Nm





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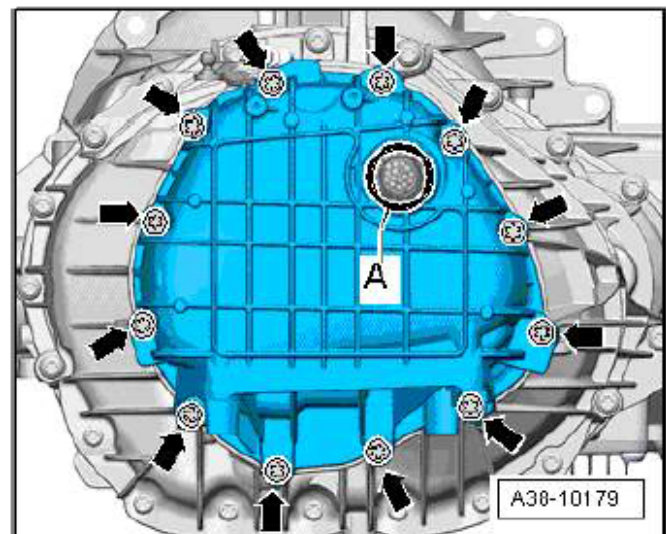
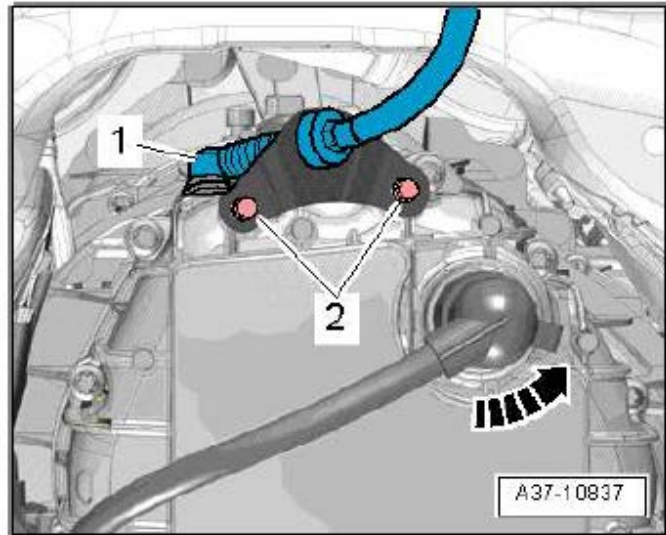
5. Use removal lever 80 – 200 to press ball socket <1> on selector lever cable off gearbox selector lever.
6. Remove bolts <2> for cable support bracket. Tightening torque: 8 NM



**Caution! Risk of irreparable damage to gearbox control unit due to static discharge.**

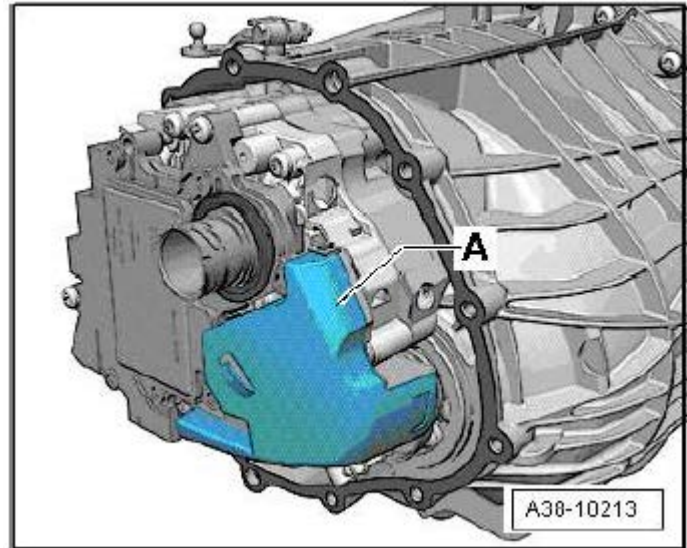
**Before toughing connectors, the mechanic must first discharge static by briefly touching vehicle ground, lifting platform or heater radiator.**

7. Unplug electrical connector on gearbox by turning fastener cap counter clockwise <arrow>
8. Place used oil collection and extraction unit <VAG 1782> under gearbox.
9. Remove bolts <arrows> and detach end cover.



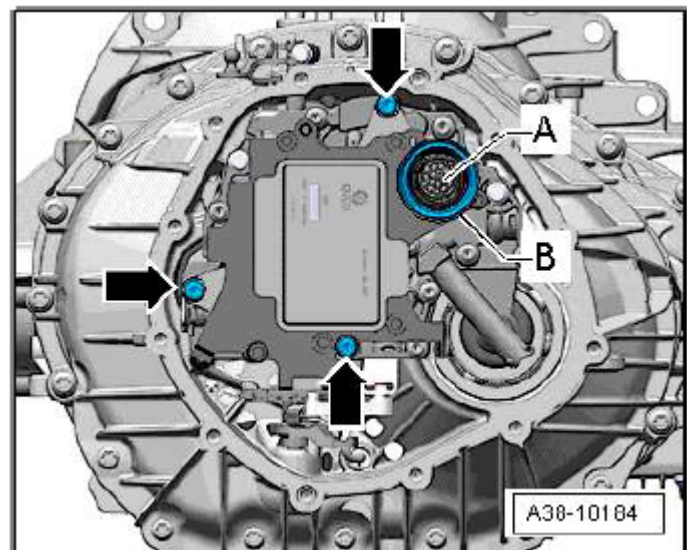


10. If fitted, detach displacer plate <A>.



11. Unscrew bolts <arrows> and pull automatic gearbox control unit <J217> out without tilting it.

12. Remove twin-lip seal <B>.



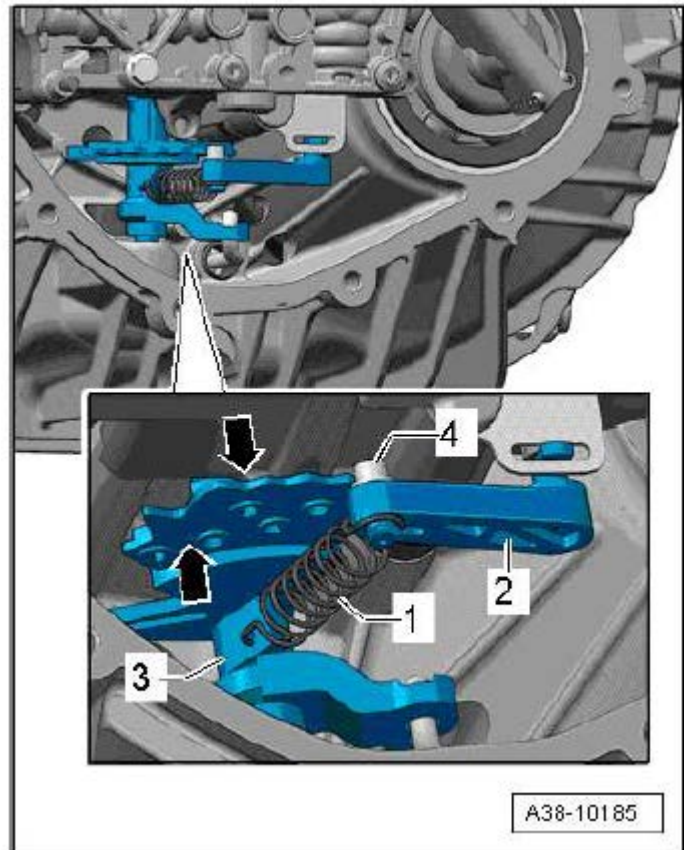




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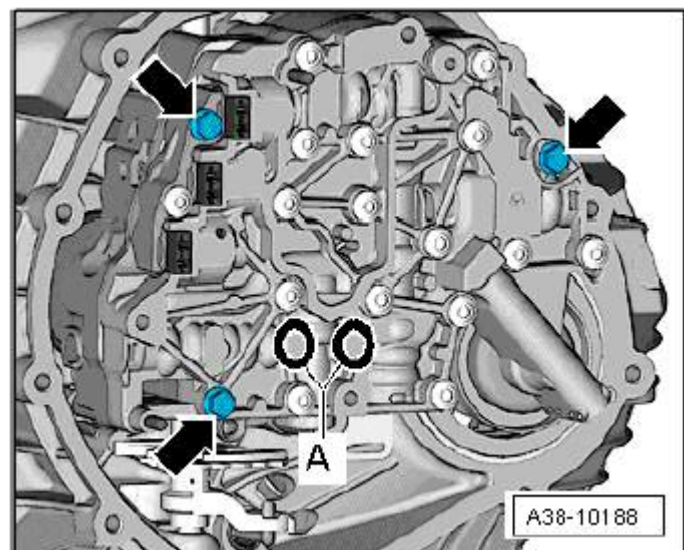
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13. Clean selector shaft detents <arrows>. Only use lint-free cloths. When doing so, take particular care to remove metal swarf or the like from the contact surfaces of the magnets.



14. Before fitting automatic gearbox control unit <J217> lubricate new O-rings <A> on hydraulic control unit with ATF.

**Ignore arrows.**

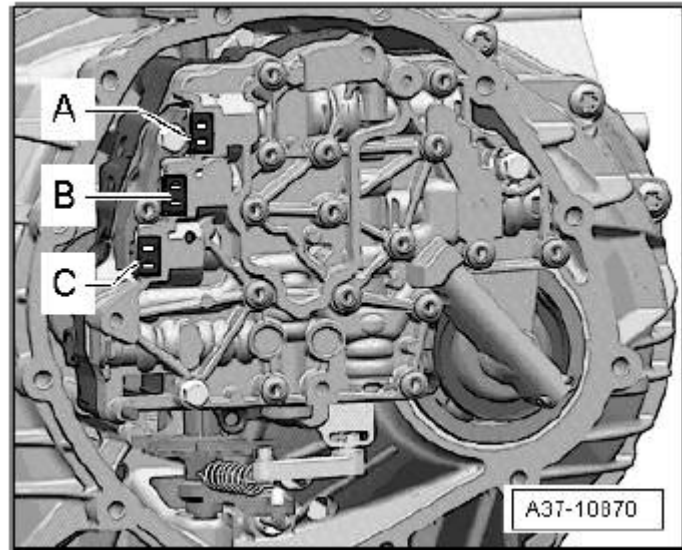




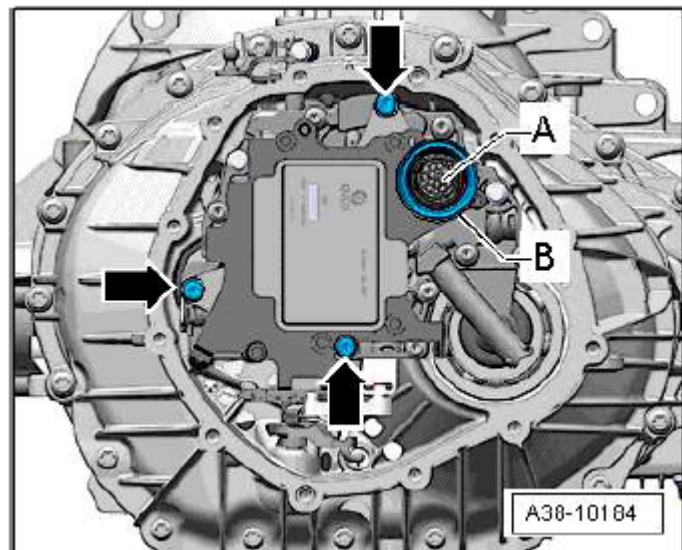
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- Slide control unit on, taking care not to tilt it. Make sure that connectors on back of control unit mate correctly with connectors <A>, <B> and <C> on hydraulic control unit.



- Tighten bolts <arrows>. Tightening torque: 5 Nm +90°
- Slide seal <B> onto connector <A> with twin lips facing outwards. Do not touch the pins in connector <A> with your fingers.

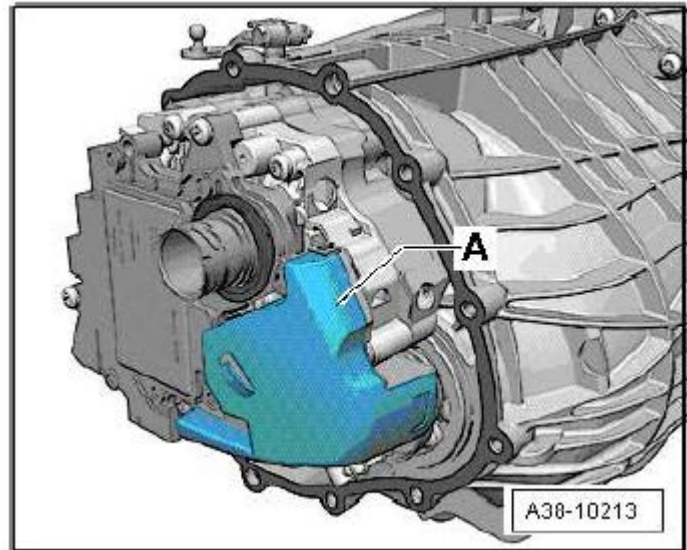




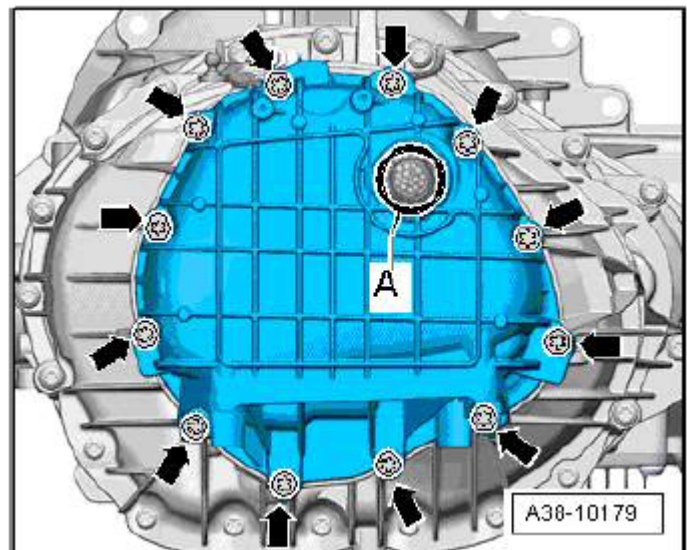
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18. If fitted, attach displacer plate <A> to automatic gearbox control unit <J217>.
19. Clean sealing surfaces on gearbox housing and end cover.
20. Dowel sleeves in gearbox housing or end cover must be re-fitted in same places.
21. Place gasket for end cover onto gearbox housing.



22. Fit end cover, ensuring that gasket is seated correctly.
23. Check installation position of seal <A>. The seal must be flush; the sealing lips must not be kinked.
24. Tighten bolts <arrows> in diagonal sequence until hand-tight and then tighten to specified torque. Tightening torque: 10 Nm +90°.



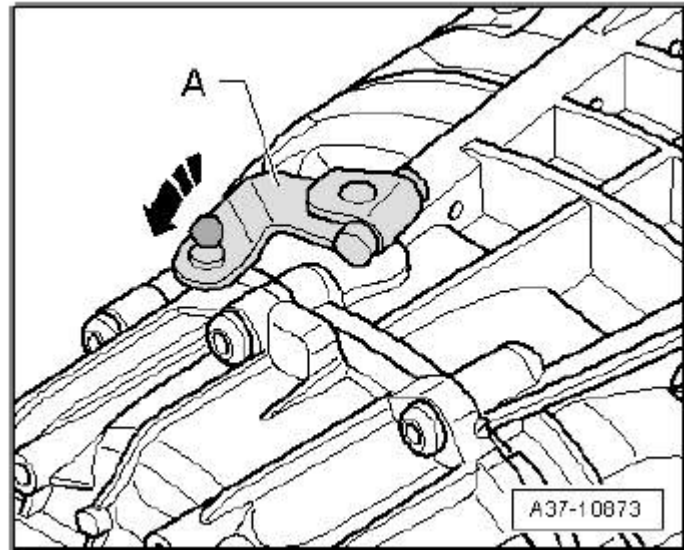




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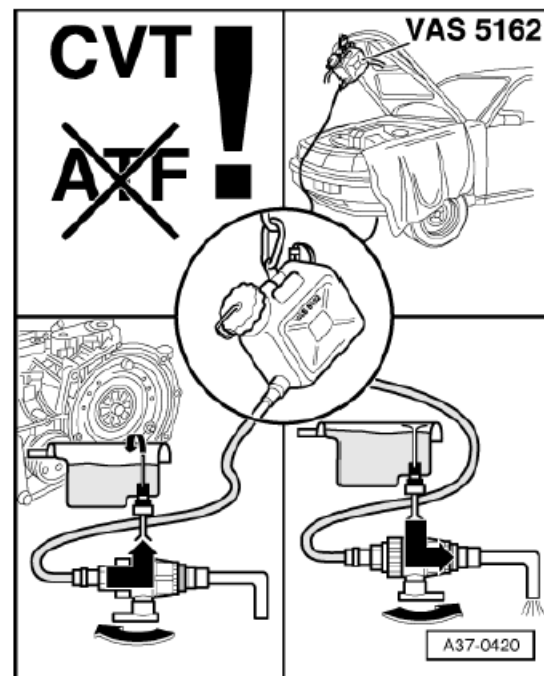
25. Shift gearbox selector lever towards rear as far as it will go <arrow> to "P".
26. Carefully press ball socket of selector lever cable onto gearbox selector lever in this position.



## Filling up ATF and then checking and correcting ATF level (step 9)

The ATF charging device must be clean and the ATF must not be missed with other type of ATF fluid!

Only use ATF for the gearbox "multitronic 0AW".

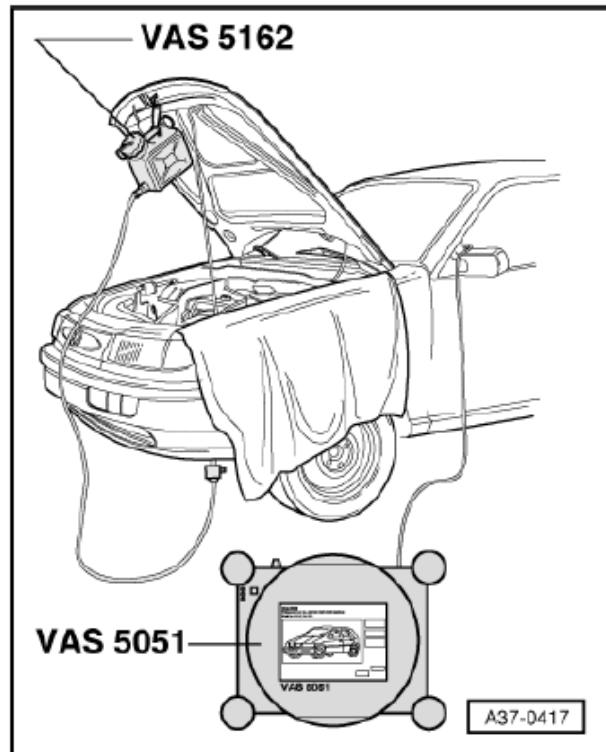




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1. Secure filled reservoir for ATF charging device as high as possible on vehicle.
2. Stopcock on ATF charging device for CVT gearboxes <VAS 5162> must be closed.



3. Connect diagnostic tester.
4. Select Guided Functions:
  - a. Powertrain
  - b. 01 – Self-diagnosis compatible systems
  - c. 02 – Gearbox electrics
  - d. 02 – Gearbox electrics, functions
  - e. 02 – Measured values
  - f. Select the measure value **Gearbox oil temperature** from the list.
5. Read off ATF temperature.



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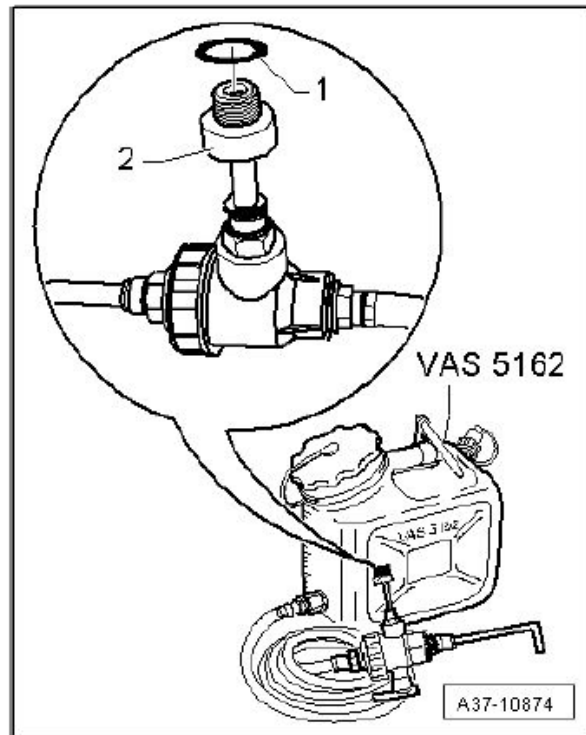
6. Remove O-ring <1> from connection <2> of the ATF charging device for CVT gearboxes <VAS 5162>.



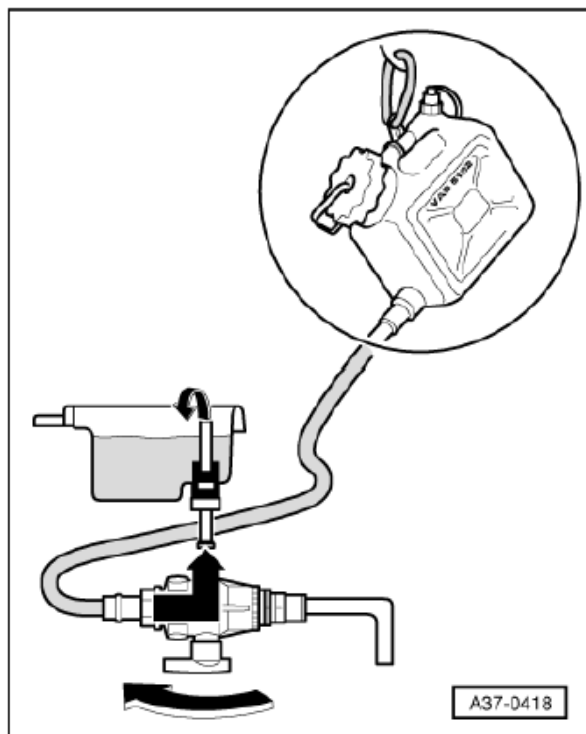
**Caution! Risk of filling up gearbox incorrect:**

The connection <2> must be screwed hand tight all the way into the inspection hole on the gearbox with the O-ring removed.

The O-ring must be removed at the connection <2> so that the fluid level pipe in the inspection hole can be pressed into the upper position. Only then can the ATF level be checked and topped up to the maximum correctly.



7. With O-ring removed, screw connection of ATF charging device for CVT gearboxes <VAS 5162> hand tight all the way into threaded hole for ATF inspection plug. This will push the fluid level pipe into the correct installation position.
8. Turn stopcock in direction of filling hose <lower arrow>. The ATF will run into the gearbox.
9. Fill 5.5 to 6.0 L of ATF into gearbox.
10. Move selector lever to "P".
11. Start engine.
12. Briefly bring engine speed to 2500 rpm.
13. Apply brake pedal and switch through selector lever positions "P, R, N, D, S", staying in each position for 2 seconds.
14. Move selector lever to "P" and allow engine to run at idling speed.





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## ATF temperature at 35°C:

15. Check ATF level by turning stopcock in direction of drain pipe <lower Arrow>.

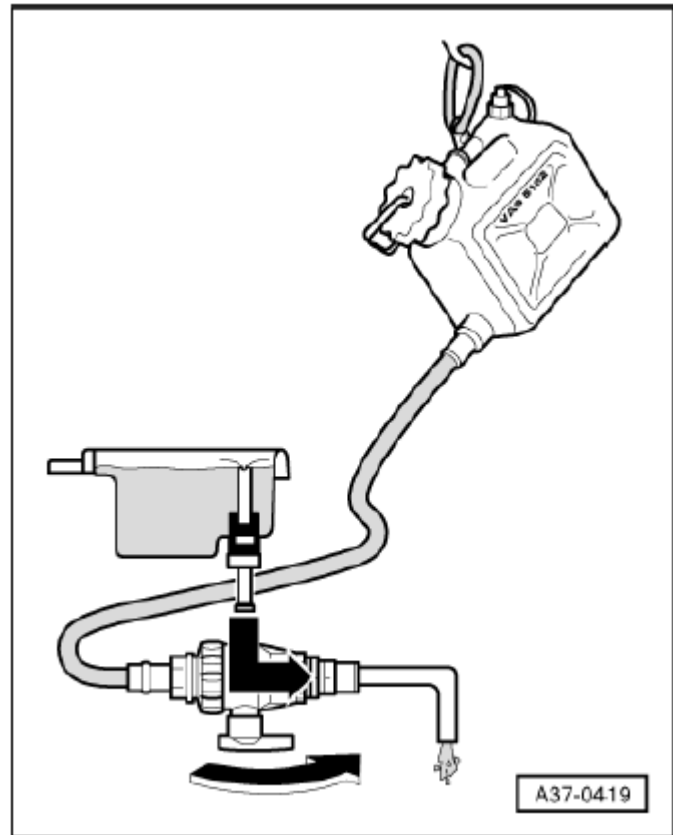
At 35°C, there should be a flow of ATF from the inspection hole (strong at first, then steady); repeat filling procedure if necessary.

The ATF level varies according to the ATF temperature.

- Temperature too low will result in over filling.
  - Temperature too high will result in under filling.
16. Wait until only a small amount of ATF can be seen emerging.
  17. Unscrew connection on stopcock of ATF charging device for CVT gearboxes <VAS 5162> from opening for ATF inspection plug.

## 45°C ATF temperature at the latest:

18. Screw in new ATF inspection plug and tighten. Tightening torque: 30 Nm



## Adapting control unit (step 10)

1. Select Guided Function:
  - a. Powertrain
  - b. 0AW gearbox
  - c. 01 – Self-diagnosis compatible systems
  - d. 02 – Gearbox electronics
  - e. 02 – Gearbox electronics, functions
  - f. 02 – Replace control unit – Run program.

# Technical Service Bulletin



## Warranty

<b>Update Time Requirements/ Reimbursement</b>	To ensure prompt and proper payment, be sure to immediately enter the applicable reimbursement code listed below upon completion of the repair work. Claims will be paid only for vehicles that show the <b>37H5</b> code in the Elsa Campaign/Action Information screen on the day of repair.		
<p><b>37H5 Saga Claim Entry Procedure</b></p> <p>Check Elsa to determine whether Update <b>37H5</b> is open.</p> <p><b>Service No.:</b> 37H5  <b>Damage Code:</b> 0099  <b>Parts Manufacturer - Removed part:</b> 002</p> <p><b>Claim Type</b></p> <p>Sold vehicle = 7 10                  Unsold vehicle = 7 90</p> <p><b>Saga Accounting Instructions</b></p>			
<b>Criteria ID</b>	<b>Repair operation</b>	<b>Labor Operation Number</b>	<b>TU</b>
06 or 12	Purge multitronic, replace and adapt gearbox control unit	3730 4199	330
<b>Criteria ID</b>	<b>Part Number</b>	<b>Part Description</b>	<b>Quantity</b>
06	4G2 927 155	Gearbox control unit	1
12	8K9 927 155	Gearbox control unit	1
06 or 12	0AW 301 685 C	Fluid level pipe	1
	WHT 005 623 A	Sealing plug	1
	01T 927 213 A	Seal for connector	1
	0AW 301 475 B	Gasket for housing cover	1
	01J 325 413	O-ring (hydraulic control unit)	2
	WHT 002 459	Bolt M8x40	12
	G 052 516 A6	ATF (20L container)	1

There is no reimbursement for vehicle wash or loaner vehicle.

**If the vehicle is outside of the specified warranty period OR if customer refused repairs.**

**U.S. dealers:** Submit the request through Audi Warranty Online under the Campaigns/Update option.

**Canadian dealers:** Fax the Repair Order to Warranty at (905) 428-4811 and provide VIN, applicable Service Number, Customer Information, Dealer Number and Date.

**Additional Actions** Some of the affected vehicles may be involved in additional Actions. Please check your Elsa Campaign/Action Information screen so that any *additional required work can be done simultaneously.*

**Verifying Vehicle Eligibility** To verify vehicle eligibility for this Update, *always* check the Elsa Campaign/Action Information screen. The Elsa system is the *only* binding inquiry and verification system; other systems are not valid and *may result in non-payment* of a claim.

**Help for Claim Entry** For questions regarding claim entry, contact Audi Warranty.

**Required Customer Notification** Inform your customer in writing by recording on the Repair Order any and all work that was conducted on the vehicle, including any and all updates completed under this Update.



## Required Parts and Tools

Criteria	Part Number	Part Description	Quantity
06	4G2 927 155	Gearbox control unit	1
12	8K9 927 155	Gearbox control unit	1
06 or 12	0AW 301 685 C	Fluid level pipe	1
	WHT 005 623 A	Sealing plug	1
	01T 927 213 A	Seal for connector	1
	0AW 301 475 B	Gasket for housing cover	1
	01J 325 413	O-ring (hydraulic control unit)	2
	WHT 002 459	Bolt M8x40	12
	G 052 516 A6	ATF (20L container)	1

- Properly destroy and dispose of removed parts in accordance with all state and local requirements, unless otherwise indicated and/or requested through SAGA.
- If you have exhausted your allocated parts and you require additional parts for vehicles affected by this Update but have exceeded your Upper Order Limit, please submit your requests for additional parts via email to [upperorderlimits@audi.com](mailto:upperorderlimits@audi.com). Be sure to include the affected VINs with your order. Prior to submitting your request, ensure that each vehicle has the **37H5** code open in Elsa. Your order will be reviewed and processed accordingly.

## Additional Information

All parts and service references provided in this Update are subject to change and/or removal. Always check Elsa for the most current version of this document.