Audi
Truth in Engineering

# Technical Service Webinar

September, 2016

# Technical Service Webinar

All information discussed is already published and is being discussed as diagnostic aids. Please always review the most current publications for current information.

We will not be discussing specific vehicles, please use TAC tickets for this.

We are using the webinars as a way to increase communication to dealerships and technicians. This is a result of feedback from the dealer sub council

Agenda:

- What's new
  - ART pass through capabilities
  - Campaign update
- TSB Tips
  - TSB 2036668
  - Repair authorization's
  - TSB 2036392
- Twin Cup
  - Program Info
- Feedback
  - Please send email to artactivation@audi.com

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# What's New
2016

# Audi Robotic Telepresence

- Latest update includes:
- Pass through interface:
  Will enable TAC to scan the vehicle remotely using ODIS
- Push software to the unit remotely
- Improved Wifi connectivity
- Improved system stability of the unit
- Latest version is 3.0.2.41383 as of 9/13/16

# Updating ART

To update: select Settings>Version Information>Check for update

If an update takes place make sure to re-start the unit for changes to take affect




# Enabling pass through function

Settings>Advanced Settings>enter password 345>scroll down to USB virtualization and set to ON. Now re-start the unit and pass through function will be available.



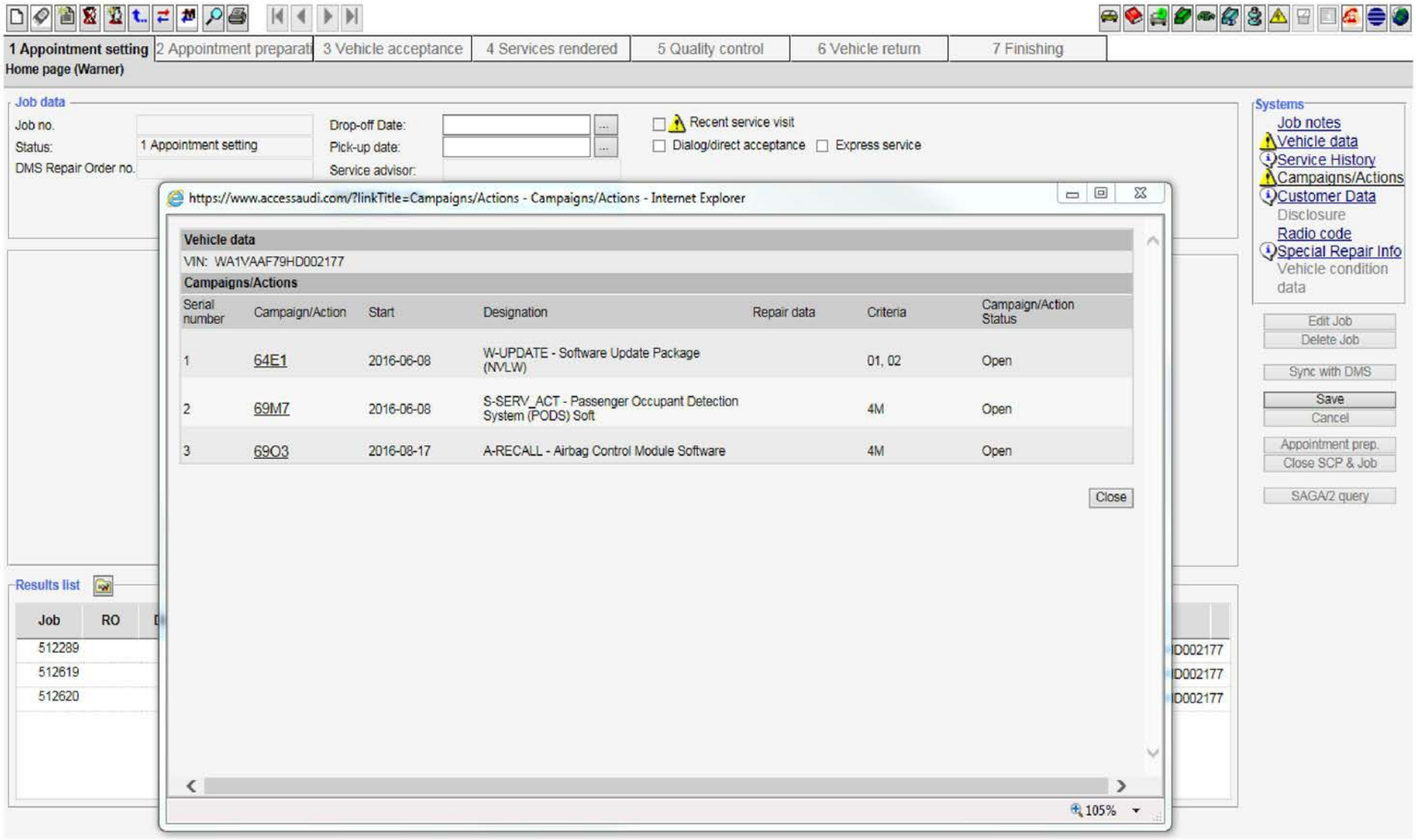

# Connection Tips

- Diagnostic head must be connected via USB2 cable to the base
- USB connections on the back of screen will not allow the pass through to connect
- 10’ USB2 cable that comes with the bore scope may be used for the diagnostic head


# Working with multiple campaigns

- The best place to find these is using ELSA, enter the VIN, click on campaigns/actions
- It is best practice to check for open campaigns any time a vehicle is in for service.
- Campaigns should be performed any time they are found to be open during a service visit so we can ensure the customer has received the latest repair for their vehicle.
- Campaigns should be performed in the order that ELSA lists them. There may be changes needed from a preceding campaign to allow the next campaign to complete.

# Working with multiple campaigns



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# TSB Tips

# TSB 2036668/3 MIL on, rough running, no start (DTCs P0087, P0088, and/or P0191) (TDI only) Gen III 2.0 and Gen II 3.0

One or more of the following DTCs is stored in the ECM:

- P0087 (fuel pressure to low)
- P0088 (fuel pressure to high)
- P0191 (fuel rail pressure sensor "A" circuit range/performance).

If no root cause is found after checking all other components and following all GFF diagnostic procedures, it may be necessary to check for metallic particles in the High Pressure Fuel Pump.

Removing the N290 fuel metering valve to inspect for metallic particles should only be considered as a last step after all GFF diagnostic procedures have been performed, including testing supply volume to the high pressure fuel pump (low pressure side) and checking for internal leakage from the injectors and N276 pressure regulating valve.

Checking fuel quality is also necessary as this can cause these concerns as well.

Check the freeze frame data to see what the fuel level was when the fault set. If it set at a full tank then fuel quality is the most likely cause.

# TSB 2036668/3 continued

Before the N290 fuel metering valve is removed, the area surrounding the valve must be sprayed with a cleaner and dried with compressed air to ensure that all debris is removed from the area.

Remove the N290 fuel metering valve and inspect the valve and valve bore for the presence of metallic particles (Figure 2). Proceed with the appropriate section below.

Fuel metering valve and valve bore with metallic particles (A), and without metallic particles (B).

# TSB 2036668/3 continued

If metallic particles *are* found on the N290 fuel metering valve or in the valve bore, open a TAC ticket before continuing with the repair.

Before contacting TAC, attach the following to the TAC ticket:

- GFF diagnostic log
- Clear pictures showing the metallic particles in the N290 fuel metering valve and bore.
- All related diagnostic steps performed including test plans

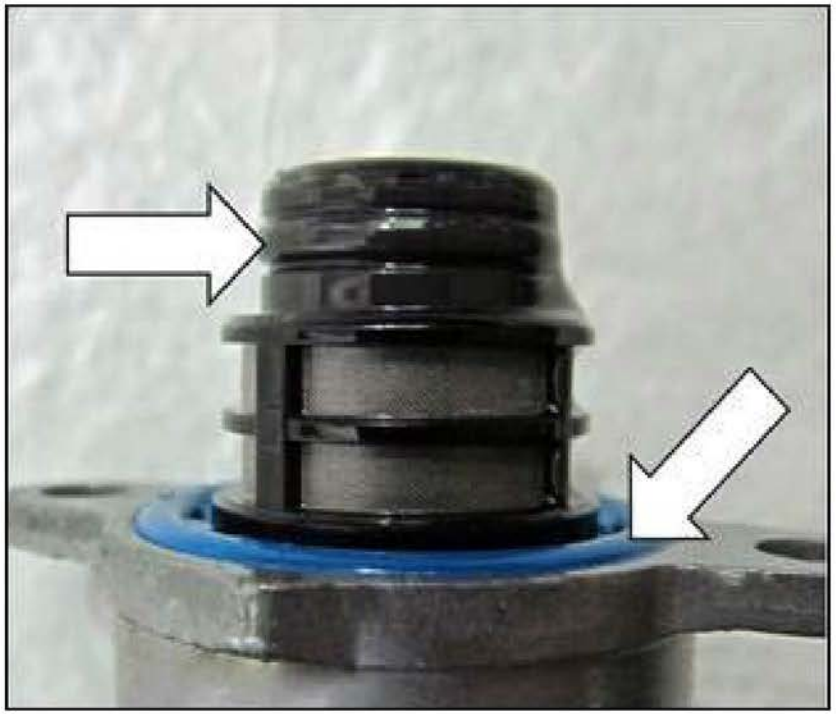
# TSB 2036668/3 continued

If metallic particles *are not* found on the N290 fuel metering valve or in the valve bore do NOT replace the high pressure fuel pump.

Ensure that neither O-ring is damaged. If either O-ring is damaged, replace the high pressure fuel pump.

To prevent damaging the O-rings when reinstalling the N290 fuel metering valve, lubricate them with diesel fuel.

Continue with diagnosis.



# Additional tips before removal of N290 valve

Check the freeze frame data for the fault. If the fuel tank was full when the fault set then suspect poor quality diesel fuel causing the faults.

Perform a delivery rate test per ELSA to verify the delivery pump and fuel lines. If the test fails then replace the delivery pump and perform the test again. If it passes after pump replacement then clear the faults and test drive the vehicle.

Use VAS 6774 to test the fuel you received from the delivery test to see if there is quality diesel fuel in the tank. If the fuel quality test fails then the fuel and filter will need to be replaced, faults cleared, and vehicle test driven to see if a fault resets.

If these tests pass, and the test plans pass or are inconclusive, then the next step in diagnosis may be to remove the N290 valve.

# Audi Repair Authorizations

Reasons to check for repair authorizations:

- Ensure claim payment
- Specific diagnostic information is gathered
- Ensure the proper/latest diagnostic test steps are performed
- Ensure the proper repair is completed

TAC tickets are not needed just because a car is new, an expensive part needs to be replaced, or the vehicle is seen on the quick reference guide

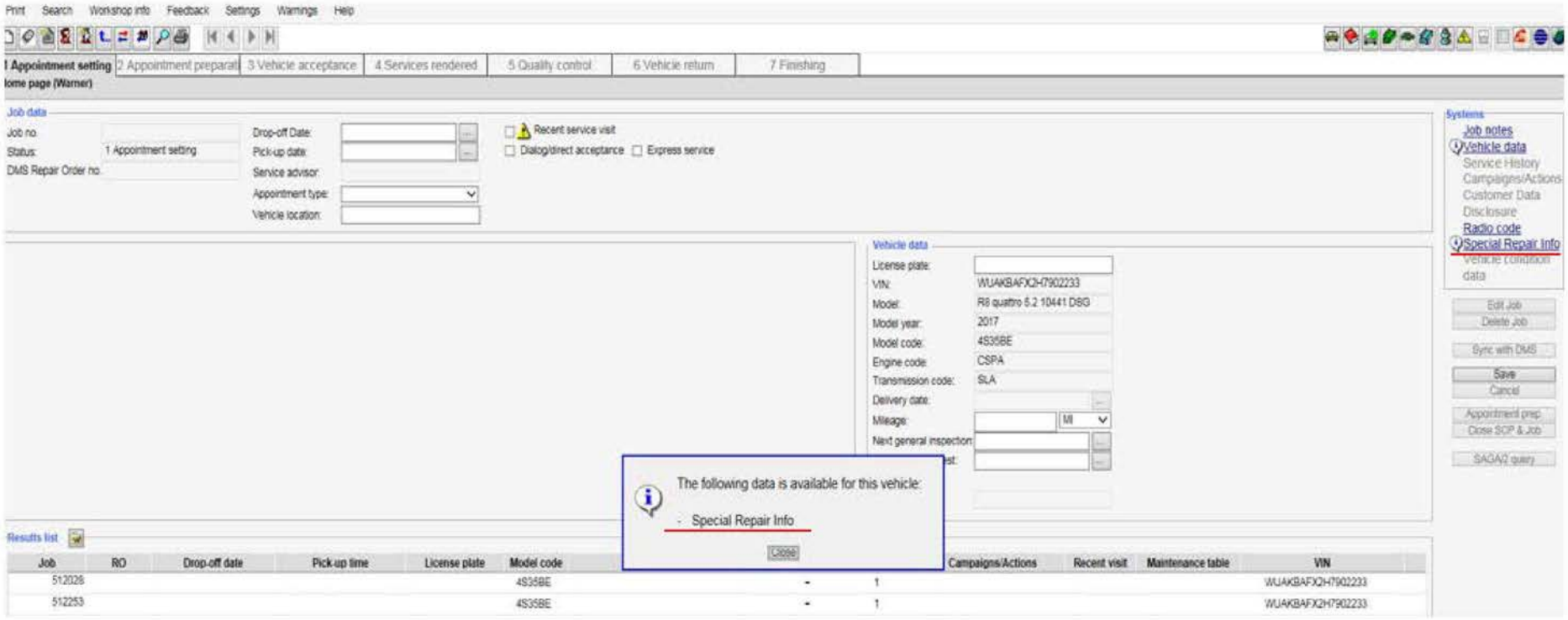
Only the components listed in the VIN specific repair authorizations need TAC approval. An example would be the Q5 Hybrid. A faulty climate control module does not require authorization, however the A/C compressor would.

Creating a TAC ticket does not guarantee warranty claim payment. Standard warranty policies still apply.

Repair authorizations can be found in ELSA and the Warranty portal

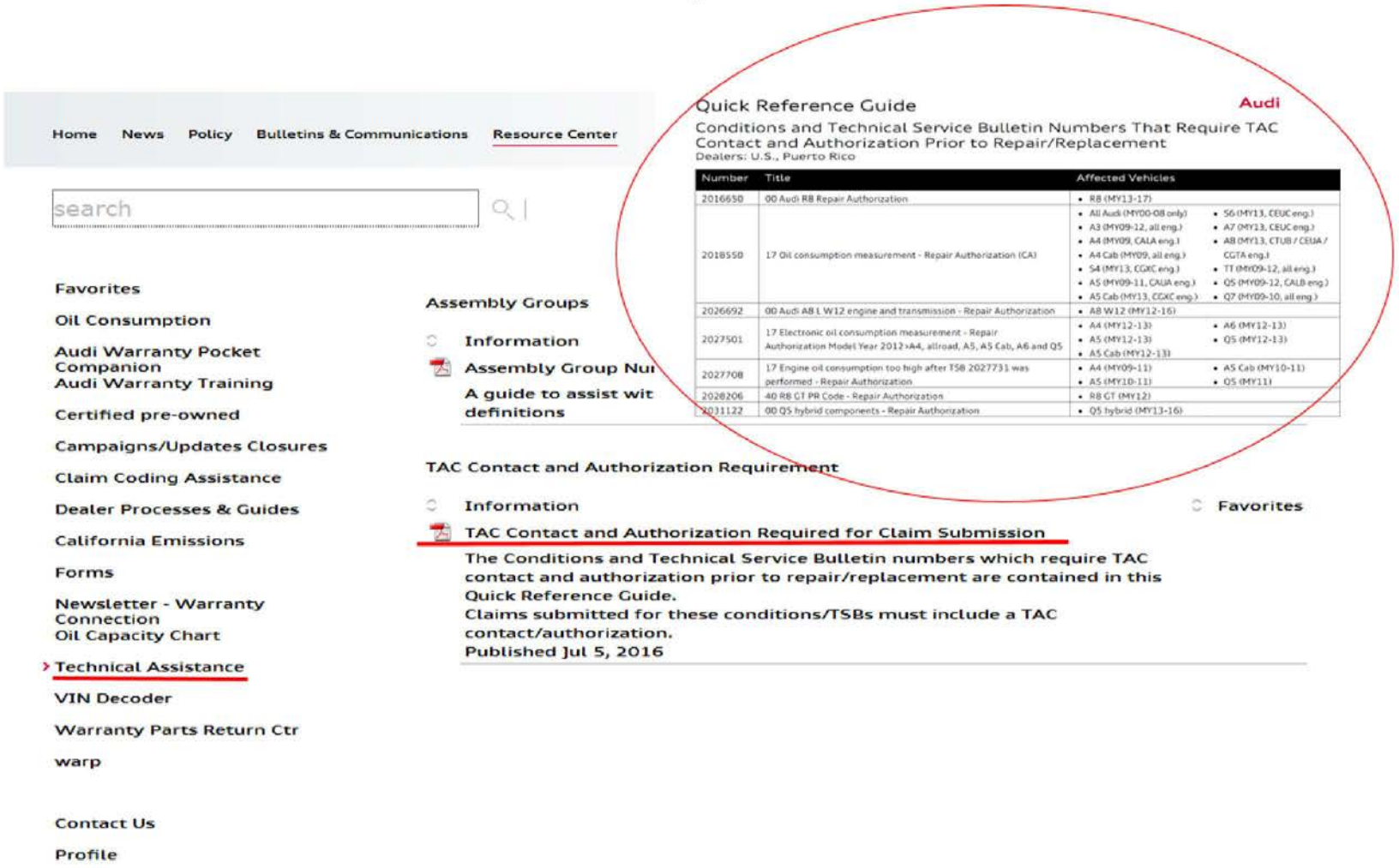
# Audi Repair Authorizations

## To check a specific VIN, look in ELSA under Special Repair Info




# Audi Repair Authorizations

## Warranty online>Resource center>Technical assistance>TAC contact and Authorization Requirement



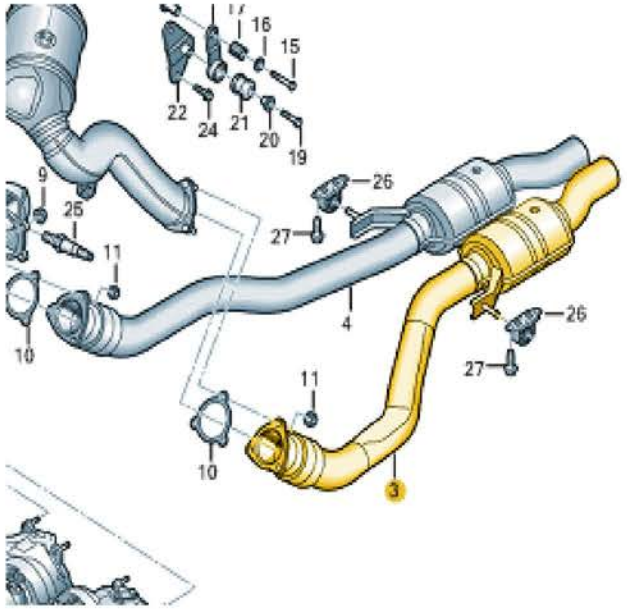
# TSB 2036392/4 Vibrations felt at 1,000 and 3,000 RPM

- This TSB applies to 4.0 engine only.
- Production Solution - Optimized J931 (subframe mount) control module software.
- Before updating, verify the vibration concern by performing a test drive, observe the vehicle in the following conditions:

  In 3rd or 4th gear (tip mode)

  at 2500 to 3200RPM.

  Approximately 50% throttle input.
- After the update align the exhaust system according to Elsa
- If condition *is* eliminated, release vehicle.
- If condition *is not* eliminated, open a TAC ticket and attach the diagnostic log showing that the SVM and basic settings have been completed.



# Vibrations after TSB 2036392/4

If the vibration is felt after the TSB has been completed then perform a stand still adaptation of the transmission and re-evaluate the vibration.

If still present then the exhaust down pipes will need to be replaced.

Updated down pipes are available. The new pipes will have a 500 gram weight on the pipe that acts as a vibration damper, there will be a superseded part number as well. The old pipes do not have a vibration damper.

The down pipes are separate from the catalytic converters, do not replace the converters.

If pipes are replaced make sure the new pipes have the retainers securely installed around the flex joint. This retainer must remain on the pipe through the install process and be the last part removed. The retainers must be transferred to the old pipes to be returned for warranty. It is crucial for the retainer to be on the pipes when they arrive and through the install process because if the pipe flexes more than 10* the flex joint may be damaged.

Once the pipes are installed perform the basic settings again along with a standstill transmission adaptation, drive the vehicle 5 miles and reevaluate the concern.

# Updated Pipe

- Superseded part number.
- Vibration damper installed.
- Old pipes have been purged from parts stock as of March 2016, any pipe ordered by VIN will be the updated version.
- The collars must be transferred to the old pipes and sent back for warranty.

# Damaged Pipe

Example of an improperly packaged pipe received at the dealership

The clamps are not installed which can cause over extension of the flex joint.

Create a TAC case with the following info:

1. Sales doc number
2. Part number
3. How the part arrived at the dealer, in a box, bubble wrap, no protection. (picture)
4. If in a box and the sleeve came off, how many tie wraps were found in the box?
5. Part warranty the pipe as damaged part.

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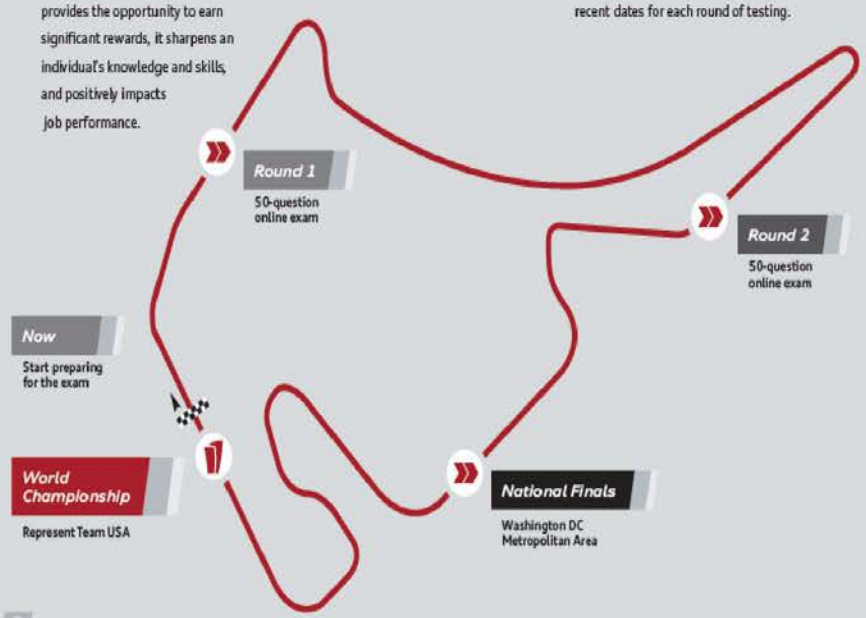
# Twin Cup Challenge


2016

## The Challenge begins

The Twin Cup Challenge tests participants' knowledge of the Audi brand and his or her job role. In addition to online testing, participants must perform hands-on activities, such as installing a roof rack or selling accessories. Refer to page 5 for actions you should be taking to prepare for round 1. Competing in the Twin Cup Challenge not only provides the opportunity to earn significant rewards, it sharpens an individual's knowledge and skills, and positively impacts job performance.

Following are the testing details for the Twin Cup Challenge. Official rules can be found on the Audi Top Service Winner's Circle, accessible via iAudi. Be sure to look for upcoming emails with the most recent dates for each round of testing.




### Round 1 (Starts in July)

- Qualifier: Must be certified by fulfilling all Audi Academy requirements.
- 50-question online exam.
- Individualized tests for Service Technicians/Shop Foremen and Service Consultants.
- Two-minute time limit on each question.
- Participants may pause the exam, then resume later.
- Contestants will have 12 days to complete the exam.

The 200 top-scoring Technicians/Shop Foremen and 125 top-scoring Service Consultants will be awarded a $50 debit card and advance to Round 2 of the competition. All participants will receive a thank you award for taking the test.

### Round 2 (Starts in August)

- 50-question online exam.
- Higher level of difficulty.
- Contestants will receive test-prep materials by email prior to exam.
- Review of various SSPs, TSBs, web-based study programs or vehicles.
- 12 days to complete the exam.

The top 40 Service Technicians/Shop Foremen and top 20 Service Consultants will receive a $100 debit card reward.

### National Finals (October)

- Location: Washington, D.C., metropolitan area
- Qualifier: All CSI qualifiers must be met by the end of the appeals period for Round 2
- Hands-on proficiency testing.
- Event evaluates the entire Audi Top Service experience.
- Service Consultants
  - Customer service and product knowledge will be emphasized.
  - Simulations of customer situations will be implemented.
  - Proficiency in role-defined activities.
  - Scoring based on accumulating the most points for each category.
- Technicians and Shop Foremen
  - Series of timed repair events.
  - Proficiency in performing repairs thoroughly and correctly according to proper Audi-specified repair procedures.
  - Scoring based on accumulating the most points for each category.

### World Championship (2017)

- Top three Technicians/Shop Foremen and top three Service Consultants from National Finals will represent Team USA and compete in the 2017 Audi Twin Cup World Championship, hosted by Audi AG.
- The World Championship date and location will be communicated by early spring 2017.
- Participants' dealerships must pass the technical fault-finding portion of the Mystery Shop in Wave 1 or 2 in 2017
- Participants' dealerships must be at or above National Average for CSI for a period of time determined by Audi AG

Failure to achieve the qualifiers set by Audi AG may result in removal from the team. AoA reserves the right to move the next qualified participant onto Team USA.

# Twin Cup Challenge

2016 Audi Twin Cup Challenge – tentative program schedule

Program Announcement – June 17, 2016

Round 1 – Complete, Winners announced

Round 2 – Complete as of 9/9/16

National Finals – estimating Oct. 22 – 26

Round 2 is over, The top 20 service consultants and 40 technicians/shop foremen, after all appeals, CSI requirements, and tie-breakers have been applied, will move into the 2016 US National Finals! The competition will be held in McLean and Herndon, VA on October 24 and 25. The top 10 winners in each category will earn a luxury Italian cruise in April 2017 and the top 3 winners in each category will represent the US at the 13th Audi Twin Cup World Championship in Europe!

For more information on the Twin Cup Challenge:

iAudi > Service > Audi Top Service Winner's Circle > select Programs > Twin Cup Challenge


## Feedback

Please send email to artactivation@audi.com