

**AGRSS Compliance Checklist Rev. 8
for ANSI/AGSC/AGRSS 005-2022**

Revision date: 7/14/2023

New and revised text is shown in italics.

<p align="center">Registered Company:</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Name & Address of Company Headquarters:</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Company Contact:</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Phone:</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Email:</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Original AGRSS Registration Approval Date:</div> <p>Tech A: Temp. Degrees F: Humid. %: Urethane: SDAT: Hr. Min. Glass Primer Dry Time: Min. Sec. Metal Primer Shake Time: Min. Sec. Metal Primer Dry Time: Min. Sec.</p> <hr/> <p>Tech B: Temp. Degrees F: Humid. %: Urethane: SDAT: Hr. Min. Glass Primer Dry Time: Min. Sec. Metal Primer Shake Time: Min. Sec. Metal Primer Dry Time: Min. Sec.</p> <hr/> <p>Tech C: Temp. Degrees F: Humid. %: Urethane: SDAT: Hr. Min. Glass Primer Dry Time: Min. Sec. Metal Primer Shake Time: Min. Sec. Metal Primer Dry Time: Min. Sec.</p> <hr/> <p>Tech D: Temp. Degrees F: Humid. %: Urethane: SDAT: Hr. Min. Glass Primer Dry Time: Min. Sec. Metal Primer Shake Time: Min. Sec. Metal Primer Dry Time: Min. Sec.</p> <hr/> <p>Tech E: Temp. Degrees F: Humid. %: Urethane: SDAT: Hr. Min. Glass Primer Dry Time: Min. Sec. Metal Primer Shake Time: Min. Sec. Metal Primer Dry Time: Min. Sec.</p>	<p>Technician A: Vehicle VIN #: Vehicle Make: Vehicle Model: Vehicle Year:</p> <hr/> <p>Technician B: Vehicle VIN #: Vehicle Make: Vehicle Model: Vehicle Year:</p> <hr/> <p>Technician C: Vehicle VIN #: Vehicle Make: Vehicle Model: Vehicle Year:</p> <hr/> <p>Technician D: Vehicle VIN #: Vehicle Make: Vehicle Model: Vehicle Year:</p> <hr/> <p>Technician E: Vehicle VIN #: Vehicle Make: Vehicle Model: Vehicle Year:</p> <hr/> <p>Note: All technicians can be reviewed using one form. Letter designations will indicate which technician is being referenced. Additional technician names can be added to the back of this page.</p>
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Store Location Address:	Store Manager and Site Contact Person:
Auditor:	Audit Date:
Location ID Number: N/A	Audit Number: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Other
1. Are all assigned technicians present? Yes <input type="checkbox"/> No <input type="checkbox"/> 2. Does each technician have a windshield to install in an AGRSS covered vehicle? Yes <input type="checkbox"/> No <input type="checkbox"/> 3. Does each technician have all required products and materials on hand to conduct the windshield replacement? Yes <input type="checkbox"/> No <input type="checkbox"/> 4. Can the audit be completed? Yes <input type="checkbox"/> No <input type="checkbox"/>	

If the answer to any of the above is "No" document circumstances and resolution:

If any scheduled technicians no longer work for the location, **attach the following for this technician:**

- Evidence to demonstrate that the employee was terminated and when termination occurred. Failure by the location to provide sufficient evidence will result in a noncompliance.

If any scheduled technicians will be absent from work for the next three months, **attach the following for this technician:**

- Evidence to demonstrate that the employee is expected to miss work for at least the next three months. Failure by the location to provide sufficient evidence will result in a noncompliance.

Check box to indicate evidence is attached. **If evidence is not attached, a noncompliance must be written.**

Refer to Section 3 of the AGRSS standard for Definitions and Acronyms.

Pre-Audit Process

5.1 Those engaged in automotive glass replacement shall use retention systems that are produced under the ISO 9001 standard or any standard that contains the entire text of ISO 9001.		
<p>A. Does the technician and/or management present documentation, provided by their chosen ASM, indicating that all of their AGR related products are manufactured under the ISO 9001 standard or any standard that contains the entire text of ISO 9001? While they may not know or understand much about this, at a minimum, they must be able to direct you to documentation that indicates their ASM is in compliance.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
5.3 Those engaged in automotive glass replacement must use either an OEM approved retention system or equivalent retention system as certified in writing by the equivalent retention system manufacturer directly or through a private labeler.		
<p>A. Is documentation provided indicating that the retention system utilized is either approved by the original equipment manufacturer (specifically for the vehicle model being serviced) or being an equivalent product by meeting the vehicle manufacturer’s performance strength specifications? Such can be certified by the chosen adhesive system manufacturer or private labeler through written documentation. Management must be able to provide this documentation.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
5.4 Those engaged in automotive glass replacement shall obtain and follow written comprehensive and current application instructions from the retention systems manufacturer or private labeler. These instructions shall include at least the proper use of the retention system, storage specifications, minimum drive-away time charts containing temperature and humidity variables if applicable, and any special procedures required for adverse weather conditions.		
<p>A. Does the technician have within their possession, or have on-site availability to, a current copy of the retention system manufacturer’s application instructions? It can be located at the shop or on a website, provided it can be obtained when required. Note that the Auditor will have in their possession a copy of current ASM written instructions and the Retention System Provider Training Instructions And Documentation Worksheet (ASM MATRIX) for comparison.</p> <p>Proof of training on current ASM requirements does NOT meet the requirement to “obtain” ... “written comprehensive and current application instructions from the retention systems manufacturer or private labeler.”</p> <p>If the ASM has published written procedures for auto glass installation that are in addition to their training instruction manual and Retention System Provider Training Instructions and Documentation Worksheet (ASM MATRIX), these must also be available.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

5.6 Those engaged in automotive glass replacement shall use glass products compatible with the ADAS which may be affected/impacted by the glass replacement.		
A. Does the technician verify that the correct part is present? Do all ADAS attachments match the OE part required by the manufacturer?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
B. Does the technician check all ADAS mounting attachments on the replacement part to ensure that the attachments are undamaged, positioned properly, and mounted securely?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
5.7 Those engaged in automotive glass replacement shall only use equipment specifically designed and purposed for recalibration/calibration when recalibration/calibration of the ADAS is required by the vehicle manufacturer. Further: <ul style="list-style-type: none"> Recalibration/calibration must be completed using either an OEM-approved recalibration/calibration system/procedure, or equivalent recalibration/calibration procedure as assured in writing by the equivalent recalibration/calibration equipment manufacturer. Equivalent recalibration/calibration equipment -- and the procedures used in conjunction with that equipment -- must be represented in writing by the manufacturer as being suitable for and compatible with the accurate recalibration/calibration of ADAS on the vehicle specifically contained within that equipment's database. Recalibration/calibration equipment must only be used on vehicles specifically covered within the device's database/software and must never be used to recalibrate/calibrate models beyond the scope of the software. Recalibration/calibration equipment must never be altered or modified without the express permission of the manufacturer, and all regular maintenance must be sufficient to comply with the manufacturer's requirements. 		
A. Is documentation stating recalibration/calibration equipment is OEM or equivalent provided?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
B. Does the recalibration/calibration equipment database/software cover the vehicle?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
C. The recalibration/calibration equipment has not been modified or altered, correct?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
9.1 Technicians installing replacement automotive glass shall be fully qualified for the tasks they are required to perform. Such qualifications shall include, at a minimum, completion of a comprehensive training program with a final exam and an ongoing education component. The program shall include, among other things: <ol style="list-style-type: none"> AGR safety issues. An understanding of OEM installation standards and procedures. Relevant technical specifications. Adhesive System Manufacturer specific comprehensive retention system training. The opportunity to apply and demonstrate the skills technicians learn. 		

<p>A. Any of the AGSC registered training programs offered by an ASM include all four topics and the test. They all also include training on the AGRSS standard.</p> <p>For AGSC registered training programs taught by non-ASMs, AGSC will provide a matrix that includes the topics included in each course. Additional training records must be provided for any missing topics. This additional training can be offered by a non-AGSC registered training program.</p> <p>There must be one or more certificates for each technician for their training to be valid.</p> <p>Technicians should be able to explain their method of ongoing education or continuing education. All methods are acceptable.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
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Windshield Installation Process – Questions for Every Technician

6.14 Only the full cut method should be used for polyurethane retention systems.		
<p>A. Did the technician use full cut method?</p> <p>The two key elements of assessment are:</p> <p>1) trimming the existing bead down to 1 to 2 millimeters or 1/6 to 1/8 of an inch, as long as the existing bead is undamaged and well adhered to the pinchweld; these are approximate measurements. The key is are they using a full cut out method. If they are off an 1/8 of an inch it does not matter. Full cut out method.</p> <p>2) applying enough new urethane to allow the glass replacement to bed at the same level of position as established by the OEM. Many teach that the height of the new bead of urethane should match the roofline of the vehicle. The question to ask of the technician is, “Describe how you trim the existing bead of urethane?” The only acceptable process is the “full cut” method and the technician must report that the old bead is trimmed to the dimensions described above.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>B. Did the technician follow the rule for pulling cowls?</p> <p>Rule for pulling cowls:</p> <p>If the attached glass molding or encapsulation sits atop of the cowl panel, it does not have to be removed for glass replacement. All other cowl panels must be removed to facilitate proper glass setting and to assure proper bonding.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
6.11 When inappropriate replacement materials or methods are detected, those engaged in automotive glass replacement shall report their findings to the vehicle owner/operator.		
<p>A. Here the focus is on the discovery and reporting the use of inappropriate products, nonfunctioning products, or inappropriate auto glass installation methods from either the OEM installation or previous auto glass replacement. The vehicle owner/operator must be notified and receive such reports. The key is to identify how the technician reports such findings and if done consistently. If there is a problem, it typically relates to body damage, paint/primer loss of adhesion, inappropriate product use such as butyl and silicone, lack of surface preparation/cleaning and priming, and not enough product used to secure the glass.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
6.12 When those engaged in automotive glass replacement correct inappropriate glass installations, they shall remove any inappropriate materials that would compromise the retention system. They shall fully correct any adverse glass installation related condition(s) caused by the use of inappropriate materials or methods, and they shall use appropriate methods described elsewhere within Section 5 of this document.		

<p>A. A good question to ask is, “What kind of things have you witnessed where previous glass installations were not done properly and, if you fixed the problem, what did you do?” Key is that inappropriate products are removed and that the bonding surfaces are restored in accordance with the ASM’s instruction. In severe cases, the vehicle may be required to have restoration conducted by a certified body shop.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p><i>Vehicle Assessment before Replacement</i> Those engaged in automotive glass replacement shall not undertake or complete any installation <i>unless first a thorough assessment of the vehicle has been made. If, after such assessment, it has been determined that:</i></p>		
<p><i>4.1 Any discovered condition(s) on the vehicle could compromise the vehicle’s retention system, the technician shall not undertake or complete the installation. The owner/operator then shall be so notified verbally and in writing.</i></p>		
<p>A. Does the technician inspect the area of the vehicle where the glass part is going to be replaced and determine whether any condition exists that would not allow for proper installation, as defined within the current written installation instructions of the utilized ASM? Such conditions pertain to corrosion, deformation of the vehicle pinchweld or other bonding areas, and any previous improper repair work done to the vehicle that could not be remedied by the auto glass technician. Poor paint systems could apply as well. Key here is to be certain that inspections are completed prior to any work being done on the car. At times, some negative conditions will not be noticed until the glass is removed. This still suffices as part of the inspection.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>B. If such conditions are discovered and not able to be remedied, is the owner/operator of the vehicle notified and informed of such conditions? The answer must be yes. Some technicians will report that the owner/operator is not always available. This may be true but there must be evidence that some form of contact was made and, at minimum, by phone.</p> <p>Special Notice: A noncompliance is to be registered ONLY if the condition discovered is not remedied and the replacement glass part is installed, or re-installed.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p><i>4.2 The vehicle has an ADAS which could require recalibration after any automotive glass replacement, and the technician chooses not to follow the guidelines in 8.9, the technician shall not undertake or complete the installation. The owner/operator then shall be so notified verbally and in writing.</i></p>		
<p>A. The technician must be able to perform each step listed below, or the installation must not take place.</p> <ul style="list-style-type: none"> • Commence Dynamic recalibrations/ calibrations only once the minimum drive-away time requirement has been achieved; • Commence Static recalibrations/ calibrations only in accordance with the he 	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p><i>guidelines provided by the manufacturer of the adhesive used for the glass replacement;</i></p> <ul style="list-style-type: none"> • <i>Perform the recalibration/calibration only if they obtain and use proper equipment, use trained personnel, and provide the outcome of the recalibration/calibration to the owner/operator.</i> 		
<p>4.3 <i>The following are exempt from the requirements of 4.1 and 4.2: egress applications, antique/classic or collector vehicle (as defined by the state in which it is licensed) restorations, or cases in which the requirements of this Standard conflict with current vehicle manufacturer specifications.</i></p>		
<p><i>A. If the vehicle is exempt as stated above, does the technician identify the exempt status?</i></p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>8.9 <i>If the vehicle being serviced has an ADAS, and requires recalibration/calibration, those engaged in automotive glass replacement who elect to provide recalibration/calibration services shall:</i></p> <ul style="list-style-type: none"> • <i>only commence Dynamic recalibrations/calibrations once the minimum drive-away time requirement has been achieved;</i> • <i>only commence Static recalibrations/calibrations according to the guidelines provided by the manufacturer of the adhesive used for the glass replacement;</i> • <i>only perform the recalibration/calibration if they obtain and use proper equipment, use trained personnel, and provide the outcome of the recalibration/calibration to the owner/operator.</i> <p><i>If these conditions cannot be met, or if the automotive glass company does not provide recalibration/calibration services, the owner/operator shall be advised prior to and at the completion of the installation, that:</i></p> <ol style="list-style-type: none"> 1) <i>The vehicle has an ADAS.</i> 2) <i>After automotive glass replacement, the vehicle manufacturer requires recalibration/calibration of the ADAS.</i> 3) <i>The replacement glass company will not recalibrate/calibrate the ADAS.</i> 4) <i>There are locations where recalibration/calibration may be obtained.</i> 5) <i>The replacement glass company is not responsible for the selection of any recalibration/calibration location.</i> <p><i>Documentation of recalibration/calibration records and customer notifications shall be kept as record pursuant to 8.7.</i></p>		
<p><i>A. Will the recalibration technician perform the calibration according to the vehicle manufacturer's guidelines using proper equipment or advise the customer of a location where a recalibration/calibration may be obtained.</i></p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>5.5 <i>Those engaged in automotive glass replacement shall only use retention systems that have lot numbers and expiration dates printed on appropriate products.</i></p>		
<p><i>A. Lot numbers and expiration dates are imprinted either on the carton or the container. If each product has the number and expiration date printed directly on the container, they are in compliance. However, if the lot number and expiration date is written on the carton, and the container is not housed in that carton</i></p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p>that is considered non-compliant because the product cannot be traced to the installation.</p> <p>Appropriate products include:</p> <ul style="list-style-type: none"> • Glass preps/primers • Pinchweld preps/primers • Adhesives 		
<p>6.9 No product that has exceeded the manufacturer or private labeler’s stated expiration date, open shelf life, or active shelf life shall be used.</p>		
<p>A. Inspect the urethane adhesive, cleaners, and primers in use by the technician to compare the current date of inspection to the expiration date noted on the product package. Be mindful that bottles of products utilizing a reseal-able lid have an “open shelf life,” meaning that the product expires sooner than the printed “unopened shelf life.” It will be important that the technician know the “open shelf life” of such containers, if being utilized (some techs us single-shot-applicators where only the unopened shelf life applies) and prove that the product is being utilized prior to that expiration date.</p> <p>Special Notation: It is okay to use a system instead of writing open shelf life dates on products if the system is effective in keeping expired products from being used.</p> <p>Special Notation: It is NOT a noncompliance if past due materials are found on site; only if they are about to be used or are used during audit.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>5.2 Those engaged in automotive glass replacement shall use glass products meeting the requirements of ANSI Z26.1 as required by Federal Motor Vehicle Safety Standard 205.</p>		
<p>A. Do the manufactured automotive glass replacement products used meet ANZI Z26.1, as dictated by FMVSS 205, validated by either the presence of a glass mark insignia indicating a DOT number or a letter of validation provided by the glass manufacturer? Technicians should understand how to direct your attention to the “bug” on the glass which validates this standards compliance. Such glass markings pertain to all automotive glass parts. DOT # and ASI are required.</p> <p>Special Notice: The assessment pertains to all glass parts, whether stationary or movable. This requirement is to be audited in conjunction with the AGRSS interpretation of the use of used glass.</p> <p>If non-clear film is applied to the windshield by those involved in the glass replacement before the windshield is installed, the company is considered non-compliant to the Standard. If non-clear film is applied to the windshield after the windshield is installed, and then the audit is successfully completed, the company is considered compliant, but</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p>the auditor must advise the shop that what was done may be illegal and note that the shop was advised.</p>		
<p>B. It is important to determine whether the glass shop and/or technician ever utilize “used” or “recycled” stationary automotive glass parts (this does not pertain to the removing and replacing the same part from the same vehicle, referred to as either an “R&R” or “R&I”). If so, the shop management and technician must report that they follow the 3 mandates defined by AGRSS in the Standard interpretation, “Allows use of used/recycled glass in very limited cases” which are:</p> <ol style="list-style-type: none"> 1. The glass is in a condition that will permit a safe installation and must be free of obvious structural or visually objectionable flaws. Unacceptable flaws include delamination, edge chips, cracks/breaks, or distortion in the acute vision area. (Notable by the naked eye). The ASM guidelines must be followed in regards to the use of any scratched or clam shelled windshields for installation. If the glass has a scratch perpendicular to the glass edge and you can feel it with your fingernail, it is unsafe to install. If the glass has an edge chip where pulverized glass chips are present in the chip, it is unsafe to install. 2. The glass is installed with a retention system compatible with the original equipment (OE) design. (Validated by ASM documentation indicating their products are either OEM approved or equivalent). 3. For adhesive bonded glass, the adhesive manufacturer’s application instructions must permit its use in connection with the installation of “recycled” or “used” adhesive bonded, stationary automotive glass. (ASM instructions must provide directions for use of their system with this type of glass product). 	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.6 If the OEM installation was polyurethane, then the glass must be replaced with polyurethane or an equivalent adhesive bonding system. If the OEM installation was butyl, polysulfide, or other non-polyurethane, and the vehicle is licensed for highway use, adhesive bonded stationary glass installations shall be performed using polyurethane or an equivalent retention system unless in conflict with current OEM specifications.</p>		
<p>A. The key here is to determine if the technician uses polyurethane based adhesives on all stationary adhesive bonded auto glass part replacements, on vehicles licensed for highway use. This applies to all vehicles listed in the definitions section of this document. The exceptions to this are vehicles where current OEM specifications require a different retention system.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p>8.4 Whenever OEM retention systems are modified on later production models without body style modification, the most current retention system shall be used in the replacement unless otherwise specified by the OEM.</p>		
<p>A. There is the occasion where a particular model vehicle is built for many consecutive years and the style of the vehicle does not change but the glass retention system has changed. The key is that the technician only uses the most current retention system type specified by the OE on all the models. The newest process must be used on every model. A good question would be, “When you see urethane introduced on later year models, what do you do when replacing the same windshield on an older model?” If the system was upgraded to urethane, urethane must be used on all the vehicles, as long as there is no conflicting written evidence provided by the OEM.</p> <p>Examples: 1) 1986 or older Chevy van and 2) 1986 Ford pickup that went from DW911 to DW1003.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>5.4 Those engaged in automotive glass replacement shall obtain and follow written comprehensive and current application instructions from the retention systems manufacturer or private labeler. These instructions shall include at least the proper use of the retention system, storage specifications, minimum drive-away time charts containing temperature and humidity variables if applicable, and any special procedures required for adverse weather conditions.</p>		
<p>A. Does the technician have within their possession, or have onsite access to a current copy of the retention system manufacturer’s application instructions? It can be located at the shop or on a website, provided it can be obtained when required. Note that the Auditor will have a copy of current ASM written instructions and Retention System Provider Training Instructions and Documentation Worksheet (ASM MATRIX) in their possession for comparison.</p> <p>Proof of training on current ASM requirements does NOT meet the requirement to “obtain” ... “written comprehensive and current application instructions from the retention systems manufacturer or private labeler.”</p> <p>If the ASM has published written procedures for auto glass installation that are in addition to their training instruction manual and Retention System Provider Training Instructions and Documentation Worksheet (ASM MATRIX) these must also be available.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>B. Are the current written application instructions followed by the technician?</p> <p>These requirements will be summarized in each Retention System Provider Training Instructions and Documentation Worksheet (ASM MATRIX). This document, for each ASM, will list the minimum</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p>steps that must be performed. If a step is not performed, or is performed incorrectly, this will be a noncompliance.</p> <p>If an interviewee does not answer correctly, but does the right thing (or vice versa), compliance determination is made based on their actions.</p> <p>Note that contact names and phone numbers for each ASM is noted on their Matrix and can be used to answer any questions.</p> <p>Concerning bare metal, or corrosion treatment, it is permissible for technicians to use full corrosion treatment instructions provided by ASM when area being repaired is LESS than the minimum area designated.</p>		
<p>C. Do the records demonstrate a pattern that the activator, pinchweld primer and urethane, if applicable, all came from the same Adhesive System Manufacturer?</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.1 Those engaged in automotive glass replacement shall follow the adhesive manufacturer's application instructions as provided by the manufacturer directly, or through the private labeler. All in-shop or mobile installations shall be performed under environmental and other conditions that are compatible with the application instructions required in Section 5.</p>		
<p>A. The specific assessment here pertains to the technician's adherence to the written instructions from the ASM, pertaining to working within the prescribed environmental conditions during auto glass installation. These will be summarized on the AMS Requirements Matrix. This Matrix will list the minimum steps that must be performed. Do be aware that the complete ASM training document may need to be referenced to complete this section of assessment in that not all conditions will be defined within the Matrix. If a step is not performed, or is performed incorrectly, this will be a noncompliance. Is the installation compromised by environmental conditions such as temperature, humidity, windborne particles, rain, snow, etc.?</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.5 Adhesive must be applied so that the finished bead cross section profile and dimensions meet or exceed original equipment configuration or recommendation of adhesive system manufacturer.</p>		
<p>A. Is the technician able to report to you where the new bead of adhesive must be located on the vehicle and how to determine the width and height dimension of the new bead? The technician's response needs to match the Retention System Provider Training Instructions and Documentation Worksheet (ASM Matrix).</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>8.6 Those engaged in automotive glass replacement shall not introduce any chemical agents, such as cleaners, solvents, lubricants, release agents, or utilize any installation practice, which will adversely affect the glass retention system.</p>		

<p>A. A catchall for covering any topics of concern not already specifically addressed. The key here is for the technicians to not devise short-cuts or installation processes that do not remain in conformance with written comprehensive instructions provided by their adhesive system manufacturer or private labeler. The best way to measure compliance is to review the ASM written training instructions and witness what cleaners/primers and methods the tech is using. The ASM written instructions that endorse their procedures and products should be available and provided to the auditor.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.7 All adhesive system component lot numbers must be traceable to each job.</p>		
<p>A. Learn from the technician the process used to record lot numbers of product categories listed in Section 4.5. Such records may be written in, scanned from bar codes, or stickers may be applied to the work order, or some other filed document utilized by the glass shop. Adhesive system manufacturers provide instruction in how to interpret lot numbers and maintain records of traceability.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.8 All glass parts must be traceable to the installation by a DOT number and part number.</p>		
<p>A. Learn from the technician the process used to record both the DOT number and part number for each glass part used for replacement. In most cases, these two numbers are written by hand onto a common document and kept on file by the company.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.10 All supplemental mechanical glass retention devices must be replaced to original equipment specifications.</p>		
<p>A. When mechanical glass retention devices are encountered during a glass replacement (such as a non-adhesive related attachment product), technicians must utilize the same type devices and the installation procedure as specified by the vehicle manufacturer in the restoration and replacement of the glass part. A simple review of this topic and oral declaration of following such procedure by the technician is sufficient.</p> <p>Special Notation: This only applies to components that come with the glass. Examples of this include 1) a Ford backlite that is bolted to the vehicle body and 2) a panel van side window that involves a frame with studs that go through the wall and are attached with a nut.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.13 When sealing air or water leaks within a polyurethane retention system, only compatible polyurethane adhesive shall be used. (No silicone or butyl may be used).</p>		
<p>A. The question of a technician is, "On vehicles having glass parts installed with urethane, how do you seal air and water leaks?" To be compliant, the technician must use a compatible polyurethane product to seal leaks. The brand only becomes important if and when primers are required, then, only the same brand of urethane can be used.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p>6.3 No automotive glass replacement shall be undertaken using an adhesive glass retention bonding system that would not achieve minimum drive-away strength by the time the vehicle may be reasonably expected to be operated.</p>		
<p>A. The vehicle may be reasonably expected to be operated once it has achieved a minimum drive-away time.</p> <p>For the AGR installation being observed, identify the brand and specific adhesive that is going to be applied and then have the technician report as to what time the vehicle will be ready for driving operation. Compare the technician’s response to the drive-away-chart pertaining to the specific adhesive used. The ambient temperature and humidity, where the vehicle will be parked, determines the amount of time the vehicle must remain out of service. Note that the technician may refer to the chart to determine their answer. For all installations, the appropriate personnel must advise the vehicle owner how long the car should remain stationary before being driven.</p> <p>Drive-Away Time (DAT) is NOT affected by:</p> <ul style="list-style-type: none"> • Absence of passenger • Turning off passenger-side airbag <p>Technicians must use passenger-side airbag portion of table if the vehicle has a passenger side airbag.</p> <p>If the DAT table only has DAT for vehicles with passenger side airbags, then this time must also be used for vehicles without passenger-side airbags.</p> <p>For technicians using an adhesive product that is affected by temperature and/or humidity, they must have a way to determine current temperature and humidity. A forecast is not sufficient; a real-time reading (even on website) is okay. Important is determining DAT based upon where the vehicle will be stored following the installation and the temperature and humidity at that given site.</p> <p>Auditors must determine current temperature and humidity to determine if tech is meeting requirements. AGSC has purchased hygrometers/thermometers for the Auditor’s use.</p> <p>The vehicle may be driven from the location of installation to a location of storage prior to the DAT. It may not be released for use on public roads.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>6.4 The vehicle owner/operator shall be notified prior to and after the installation process of the minimum drive-away time under the circumstances of the replacement.</p>		

<p>The technician will not know the MDAT until the time that the windshield installation begins and notifying the owner of the vehicle of the MDAT at that time fulfills the requirement of item 6.4 of the Standard.</p> <p>A. Location must show evidence of how staff informs customer of minimum drive away time before and after the replacement is done. The evidence of how staff informs customers of MDAT at the beginning of the installation can be verbal, by telemarketing phone-script or by written record. The technician may advise the vehicle owner/ operator of a time that is longer than the minimum proper drive-away time.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
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8.5 Notification of defective product:

- A failure or defect in any product used or intended for use in the automotive glass replacement process that could jeopardize customer safety shall be reported promptly to the manufacturer or supplier of the product.
- Any product installed by those engaged in automotive glass replacements that is discovered to be defective or which is determined could jeopardize customer safety must be immediately reported to the customer with an offer to remedy the situation.

<p>A. This includes glass cleaners, primers and adhesive products used in auto glass replacements. At times, one or more of these products may not perform properly. Often, this can be detected by technicians during the application process. It is important that when they detect such products not performing as specified, this must be reported immediately. This can result in a national recall of products. This too can occur with glass products if they do not follow required break patterns during an accident.</p> <p>The question to ask technicians is, “Have you ever witnessed a product not seeming to perform as specified during a glass installation and, if so, what did you do about it?” Technicians must know to report this to management and management must contact the manufacturer or supplier of that product for investigation and must notify the customer and provide a proper remedy to the situation. Verbal or written evidence is okay. If notification in writing is provided to the customer, then a copy should be retained with the customer records.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
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9. Education

9.1 Technicians installing replacement automotive glass shall be fully qualified for the tasks they are required to perform. Such qualifications shall include, at a minimum, completion of a comprehensive training program with a final exam and an ongoing education component. The program shall include, among other things:

- AGR safety issues.*
- An understanding of OEM installation standards and procedures.*
- Relevant technical specifications.*
- Adhesive System Manufacturer specific comprehensive retention system training.*
- The opportunity to apply and demonstrate the skills technicians learn.*

<p>A. Technicians should be able to explain their method of ongoing education or continuing education. All methods are acceptable.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>9.2 <i>Technicians performing recalibration/calibration procedures shall be fully qualified for the tasks they are required to perform. Such qualifications shall include, at a minimum, completion of a comprehensive training program with a final exam and ongoing education component. Curriculum used for ADAS training must be kept on file (in an auditable format) and must contain the following elements:</i></p> <ul style="list-style-type: none"> a) <i>What ADAS are, what they do, and how they function</i> b) <i>Types of ADAS</i> c) <i>Purpose of recalibration/calibration and the need for precise execution</i> d) <i>Types of recalibration/calibration:</i> <ul style="list-style-type: none"> • <i>Static</i> • <i>Dynamic</i> • <i>Dual (static and dynamic)</i> e) <i>Comprehensive and manufacturer specific recalibration/calibration training for the system/equipment used by the automotive glass company:</i> <ul style="list-style-type: none"> • <i>Set up and operation of the equipment</i> • <i>Maintenance of the equipment</i> <p><i>Further, successful completion/mastery of the training shall be verified by a final exam which includes:</i></p> <ul style="list-style-type: none"> • <i>Knowledge assessment of ADAS and the recalibration/calibration process</i> • <i>Skill assessment to verify proper technique and use of equipment</i> 		
<p>A. Technicians should be able to explain their method of ongoing education or continuing education. All methods are acceptable.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

Unusual Windshield Installation Processes

Questions must be answered at least once per location.

7.1 If the OEM utilizes the combination of a rubber gasket and polyurethane as a retention system, an equivalent adhesive bonding system must be used in the installation. In cases when the OEM didn't include polyurethane or an equivalent adhesive system, such systems shall be used if later production models included the addition of adhesive systems without body style modification.

Special Notation: This must be audited at least once per location, noting that such work may be directed, by management, to a limited number of technicians.

A. Vehicles falling under the regulation of FMVSS 212 that utilize rubber gaskets to secure the glass to the pinchweld also require the use of compatible polyurethane to increase the bond strength between the gasket and the pinchweld and the gasket and glass. Two beads of urethane are required to complete this type of installation. Refer to the ASM's installation instructions on rubber gaskets to ensure that the technician is following the proper procedures. Asking how gasket set windshields are installed and comparing technician's answers to the written instructions provide the best means of determining compliance. Focus on the instructions of preparing the gasket and the pinchweld of the vehicle.

Example: 1973-1991 Chevy Suburban

Yes

No

7.2 If the OEM gasket installation did not include adhesive and the vehicle is licensed for highway use and is less than 10,000 lbs. Gross Vehicle Weight (GVW), the installation shall include polyurethane or an equivalent adhesive bonding system. The following are permissible exceptions: egress applications, antique or classic vehicle restorations, or in cases in which this practice conflicts with current vehicle manufacturer specifications.

Special Notation: This must be audited at least once per location, noting that such work may be directed, by management, to a limited number of technicians.

A. Same as above, in section 7.1.A. applies. Noted differently here are the exceptions, where the technician would be required to furnish documented proof that any of the three noted exceptions applies. Both egress and current OEM specifications are available for any vehicle in documented form. For vehicle restoration, the technician must be sure that the vehicle is not licensed for highway use (vehicle must be trailered).

Yes

No

<p>7.3 When sealing air or water leaks within a rubber gasket/polyurethane ADHESIVE SYSTEM only compatible polyurethane shall be used. (No silicone or butyl may be used).</p>		
<p>Special Notation: This must be audited at least once per location, noting that such work may be directed, by management, to a limited number of technicians.</p> <p>A. The vehicles falling under this requirement are those that require both the use of the rubber gasket and compatible polyurethane adhesive system in the installation of an auto glass replacement. If sealing is required, then only a polyurethane product can be used. Here, the auditor must define this type of vehicle and then ask the technician what type of product would be used to seal an air or water leak.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>8.1 All mechanically-fastened automotive glass parts shall be replaced according to original equipment specifications.</p>		
<p>Special Notation: This must be audited at least once per location, noting that such work may be directed, by management, to a limited number of technicians.</p> <p>A. Technicians need to state that, when replacing AGR parts previously mechanically fastened by the original equipment manufacturer, the replacement is done using the same, or equivalent mechanical fasteners. Furthermore, technicians must seal such glass components with similar type sealants as specified by the OEM. Any alteration to this process can cause an improper performance of such products in the event of breakage or an accident.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>8.2 Glass parts, including custom cut parts, must be marked in compliance with the certification requirements specified in FMVSS 205 and the marking requirements of ANSI Z26.1 incorporated by reference therein for those vehicles licensed for highway use.</p>		
<p>Special Notation: This must be checked at least once per location, noting that such work may be directed, by management, to a limited number of technicians.</p> <p>8.2 does not apply to mirrors.</p> <p>A. While curved glass parts were covered in section 5.2, in that such glass parts come pre-marked from the factory, be mindful that all hand-cut flat glass laminated products receive a similar mark indicating what Automotive Safety Rating (AS rating) the glass meets. Technicians must state that they make sure that all such hand-crafted parts are etched with the proper AS rating prior to installation. Shops can apply such marks through silkscreen or acid/sand blast etching. Note that not all technicians will cut glass; identify those, if any, that do to assess this subject of compliance.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

<p>8.3 Those engaged in automotive mirror replacement shall install external and internal replacement mirrors that meet or exceed original equipment specifications and the requirements of Federal Motor Vehicle Safety Standard 111.</p>		
<p>A. The key here is that technicians replace all automotive mirrors with the same grade mirror specified by the OEM. There can be no variation in that all vehicles have specific mirrors installed in each model vehicle that allows for viewing compliance specified within FMVSS 111. Technicians should report that the mirrors used match the same shape, contour, and performance properties for the OE. (In most all cases, mirrors are purchased in a ready-cut package and no hand cuts are conducted. Passenger side view mirrors need to be convex)</p> <p>Special Notation: In general, it must have a convex passenger side rear view mirror, while the driver side cannot be convex. Exceptions include old cars, then one must put in whatever was put in by the factory.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>8.8 Those engaged in the repair, removal or replacement of motorized windows and/or panels in automobiles that are equipped with anti-pinch mechanisms shall reset, initialize and/or confirm their proper operation before the vehicle is released to its owner/operator. If the reset operation cannot be completed for any reason, the vehicle owner shall be informed verbally and in writing of the failure to reset. In addition, the owner/operator shall be <i>instructed to seek out a facility equipped to reset the system. The replacement glass installer is not responsible for the selection of any reset facility. Documentation of customer notification shall be kept as record pursuant to 8.7.</i></p>		
<p>A. The technician should say that they would refer to the OEM re-initialization procedure for that specific vehicle.</p> <p>If the reset operation cannot be completed, ask how they inform the vehicle owner of the failure to reset. They must do so both verbally and in writing.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

Support Processes

Material Storage

6.2 Products must be stored and controlled according to manufacturers' requirements as provided directly or through a private labeler.		
A. Through written retention system manufacturer instructions, determine proper storage requirements that most often pertain to temperature, and then compare such instruction to practices of glass shop location. The audit of this subject may require a combined assessment of both technician practices and glass shop management.	Yes <input type="checkbox"/> No <input type="checkbox"/>	

Records

6.7 All adhesive system component lot numbers must be traceable to each job.		
<p>A. Randomly select previous documents to observe consistency of the registered company to record and maintain such data. Be mindful that file selection should not predate the original AGSC registration approval date but otherwise they must retain records of each auto glass replacement for a period of at least three years from the date the work was completed.</p> <p>Special Notation: A trend of incomplete records filed by one or more technicians will be considered a noncompliance.</p> <p>Auditors may review records beginning at the location's AGSC registration date or back three years, whichever is more recent. If there is a trend toward incomplete records related to traceability within this period, it will be considered a noncompliance.</p> <p>Check a sampling of invoices and/or work orders covering the 3 years or from the date of registration if the Company has not been registered for a period of at least 3 years.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
6.8 All glass parts must be traceable to the installation by a DOT number and part number.		
<p>A. Randomly select previous documents to observe consistency by the registered company to record and maintain such data. Be mindful that file selection should not predate the original AGSC registration approval date but otherwise they must retain records of each auto glass replacement for a period of at least three years from the date the work was completed.</p> <p>Special Notation: A trend of incomplete records filed by one or more technicians or if a technician or glass shop DOES NOT have a process to record</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>	

<p>DOT and part numbers for each glass part for each job will be considered a noncompliance.</p> <p>Auditors may review records beginning at the location's AGSC registration date or back three years, whichever is more recent. If there is a trend toward incomplete records related to traceability within this period, it will be considered a noncompliance.</p> <p>Check a sampling of invoices and/or work orders covering the 3 years or from the date of registration if the Company has not been registered for a period of at least 3 years.</p>		
<p>8.7 Those engaged in automotive glass replacement shall create and retain records of each auto glass replacement (<i>and any ADAS recalibration/calibration conducted in conjunction with that glass replacement</i>) for a period of at least three years from the date the work was completed sufficient to demonstrate compliance with this standard. Records, either electronic or hard copy, shall be legible, easily identifiable and readily available. Such three-year period may be temporarily shortened for specific, clear and substantial reasons but must be adhered to when such reasons no longer exist.</p>		
<p>Check a sampling of invoice and/or work orders covering the past 3 years or from the date of registration if the Company has not been registered for a period of at least 3 years.</p> <p>A. There are a variety of documents that can be utilized to demonstrate compliance. Key is to make sure that records specifically required by the standard (adhesive system component lot numbers, windshield DOT numbers, windshield part numbers, technician training records, and any records required by the specific adhesive system manufacturer) are present.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	
<p>9.3 Training with respect to the content and requirements of the current version of this standard shall be required for all personnel directly involved in the automotive glass replacement process (examples: scheduling, purchasing, installing, customer service, quality control, management). Records of this training detailing content, date, participants and acknowledgement of the participant's successful completion of the training and receipt of a printed copy of the current standard shall be maintained.</p>		
<p>A. The auditor should verify that there are records for all applicable personnel that meet the requirements above. The auditor should not ask questions of people that fall outside the scope of their jobs.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	

Management

8.5 Notification of defective product:

- A failure or defect in any product used or intended for use in the automotive glass replacement process that could jeopardize customer safety shall be reported promptly to the manufacturer or supplier of the product.
- Any product installed by those engaged in automotive glass replacements that is discovered to be defective or which is determined could jeopardize customer safety must be immediately reported to the customer with an offer to remedy the situation

A. This includes glass cleaners, primers and adhesive products used in auto glass replacements. At times, one or more of these products may not perform properly. Often, this can be detected by technicians during the application process. It is important that when they detect such products not performing as specified, this must be reported immediately. This can result in a national recall of products. This too can occur with glass products if they do not follow required break patterns during an accident.

The question to ask technicians is, "Have you ever witnessed a product not seeming to perform as specified during a glass installation and, if so, what did you do about it?" Technicians must know to report this to management and management must contact the manufacturer or supplier of that product for investigation and must notify the customer and provide a proper remedy to the situation. Verbal or written evidence is okay. If notification in writing is provided to the customer, then a copy should be retained with the customer records.

Yes

No