



The New Part 147

Best Practices for Addressing New Training Requirements



Upcoming Weekly Webinars

Sept. 8: Two-Week Countdown: Are you Ready for the New Part 147?

Previous Recordings:

[The New Part 147: An Overview](#)

[The Next 120 Days: A Checklist](#)

[Aligning Curriculum to the ACS: New 147.17 Training Requirements](#)

[Opportunity Awaits: New 147.15 Training Provided at Another Location](#)

[Accreditor Deference: New 147.23 Quality Control Systems](#)

[A Quality Check: New 147.25 Minimum Passage Rate](#)

[Mechanic Testing Under the New ACS](#)



Required Reading

[Interim Final Rule \(effective 09.21.22\)](#)

[Advisory Circular 147-3C](#) (submit comments/feedback to ATEC)

[Mechanic Airman Certification Standards](#)

[Mechanic Airman Certification Standards Companion Guide](#)

[Notice N8900.616 \(Inspector Guidance\)](#)

[DME Minimum Tool and Equipment List \(8900.2C, Figure 6-17\)](#)



Resources

- www.atec-amt.org/the-new-part-147
- [Gap Analysis \(Rev. 3\)](#) ([record of revisions](#)) ([samples](#))
- [Operations specifications request letter template](#) (free for members, use the member password as the coupon code)
- [FASSTeam Briefing](#)
- Quality System Manual for non-accredited programs (email Crystal)
- [Member Q&A](#)



Upcoming Events

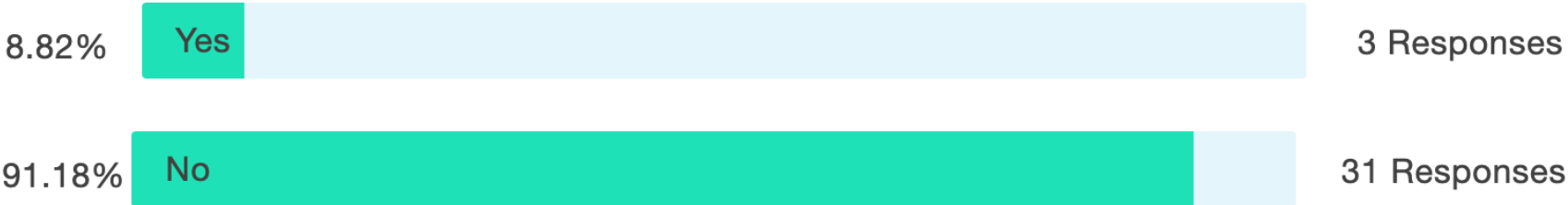
- Washington Fly-in, Sept. 20-23, 2022, register at www.atec-amt.org/fly-in
- Annual Conference in Chicago, March 26-29, 2023



June 24 Poll Results

1 of 3. Have you submitted information to your local office to support issuance of new operations specifications?

Multiple choice with single answer



2 of 3. Have you received any new operations specifications from your local office?

Multiple choice with single answer



Question

The ACS includes new knowledge, risk mitigation, and skill elements that are not addressed in the current part 147 or practical test standard. To meet the new rule, we must incorporate those elements into our curriculum.

The program is unable to procure the necessary equipment (either because its expensive or there are long lead times) to address these elements in time to meet the Sept. 21 requirement.

How are we expected to comply with the new rule if we can't obtain the equipment in time to align our curriculum to the new mechanic airman certification standard?



Answer

- For new elements, part 147 will require that the school “align” curriculum with the standard, but the rule does not dictate *how* a program imparts the knowledge.
- The “how” is totally up to the school, including what equipment it decides to use.
- If the ideal equipment is not available, schools must get creative...



§ 147.17 Training requirements

- (a) Each certificated aviation maintenance technician school must:
- (1) Establish, maintain, and utilize a curriculum that is **designed to continually align with the mechanic airman certification standards** referenced in paragraph (b) of this section, as appropriate for the ratings held;
 - (2) Provide training of a quality that meets the requirements of § 147.25 [minimum passage rate]; and
 - (3) Ensure **students have the knowledge and skills necessary to be prepared to test** for a mechanic certificate and associated ratings under subpart D of part 65 of this chapter.



§ 147.13 Facilities, equipment, and material requirements

- (a) Each certificated aviation maintenance technician school must provide and maintain the facilities, equipment, and materials that are **appropriate to the rating or ratings held** by the school and the number of students taught.

* * *



Back to the Question...

How do we comply with the new part 147 when there are challenges procuring equipment to teach new ACS elements?



First ask: Is this item really new?

- The vast majority of ACS elements are not new (on average, programs are identifying gaps for around 9% of ACS elements).
- Triple check that the element is not already addressed in the current part 147 curriculum requirements or in the practical test standard.
- If the element is incorporated in one of those documents, ask yourself how or whether the program is addressing the element now? What equipment is the local DME using to test that element?
- So long as your curriculum addresses the element, the program is in compliance with the new rule.



How else might we teach it?

- Just because the element is listed as a required skill in the certification standard, doesn't mean you HAVE to tie it to a hands-on project, the lab could be a paper project.
- While hands-on might certainly be the best way to impart the skill; for purposes of regulatory compliance, the program needs to ensure its addressed. (Noting that may change when outcomes are assessed... more on that later.)
- Make a short-term plan to address it for purposes of complying with the regulation, then pursue a long-term plan to get what you need.



An Example: AM.II.G.S12 Troubleshoot an air-cycle air conditioning system.

Issue posed by school: Equipment requirements are an ongoing concern. We have received a quote for an air cycle machine (ACM) training aid, but the lead time is six weeks minimum, and likely will not be received for four to six months. With the overwhelming influx of requests for training aids, **we are concerned we will not have the equipment in time to satisfy the new rule.**



An Example: AM.II.G.S12 Troubleshoot an air-cycle air conditioning system.

- While it would be great to have an air cycle machine or training aid to facilitate teaching of that skill, lead times are long and the school may not have the immediate funding to procure the equipment.
- The rule requires that the element be taught, but does not dictate *how* it is taught, that is up to the school. In the absence of the ideal equipment, schools must get creative.



An Example: AM.II.G.S12 Troubleshoot an air-cycle air conditioning system.

Potential ways to address the element in absence of the trainer

- Illustrate troubleshooting with an unserviceable component donated by an industry partner. Get your advisory committee involved...
- Use an online solution that allows the student to effectively troubleshoot in a virtual environment.
- Potential paper project: provide the student with a maintenance manual and discrepancy scenarios for the student to research, troubleshoot, and describe possible repair solutions.

NOTE: The recommendations are not meant to suggest that schools should not procure new equipment, but are a means of compliance for the short term while the program plans and prioritizes equipment purchases.



Other Considerations

- FAA is in the process of revising handbooks.
- FAA written, oral, and practical exams will not test any new ACS elements until Aug. 1, 2023.
- Officials have said DME minimum equipment lists will not change (at least in the short term).
- In other words, the new rule requires that you teach it, but it won't be tested by the FAA until Aug. 1. It won't impact your testing outcomes for another year so you have time to perfect the training.
- Once outcomes can be assessed through FAA assessment, the FAA may have more to say about equipment being used to teach the skill.



Takeaways

- New equipment purchases are not mandated by the new rule.
- Get creative to ensure that all ACS elements are addressed in your curriculum by Sept. 21. If the element is addressed, the school will comply with the new rule.
- Put together a plan and budget for future for equipment purchases to “perfect” training to ensure student outcomes meet expectations by Aug. 1, 2023 (by that time you will have revised FAA handbooks, sample test questions, and testing outcomes).



Addressing New ACS Elements Q&A

AM.II.M.S4 Inspect a smoke and toxic gas detection system.

AM.II.E.S2 Inspect, check, and service an anti-skid system.

AM.III.K.S7 Inspect a particle separator.

Q: How can we best address these new ACS elements in the short term?

NOTE: The first two elements are contained in the current PTS. For that reason, it is addressed in your current curriculum? If so, you comply with the new rule.



Airframe Environmental Systems (AM.II.G.S)

Inspect an oxygen system (in the PTS)

Purge an oxygen system prior to servicing

Service an oxygen system (in the PTS)

Clean and inspect a pilot emergency oxygen mask and supply hoses

Inspect an oxygen system pressure regulator

Inspect an oxygen system cylinder for serviceability

Inspect a chemical oxygen generator for serviceability and safe handling

Inspect a combustion heater fuel system for leaks

Troubleshoot an air-cycle air conditioning system

Inspect a cabin heater system equipped with an exhaust heat exchanger for cracks

Clean and inspect an outflow valve for a pressurization system



Rotorcraft Fundamentals (AM.II.N)

Risk elements:

Working around helicopter blades during ground operations.

Ground-handling procedures.

Ground operations and functional tests.

Maintenance and inspection of rotorcraft systems and components.

Skill elements:

Locate components of a helicopter rotor system.

Locate helicopter rotor blade track and balance procedures.

Locate and explain procedures needed to rig helicopter controls.

Locate and explain procedures to track and balance a rotor system.



Water and Waste Systems (AM.II.O.R1, S1-2)

Servicing lavatory waste systems, including use of safety equipment.

Locate and explain the procedures for servicing a lavatory waste system.

Locate and explain the procedures for servicing a potable water system.



Addressing New ACS Elements Q&A

AM.I.D.S8 Fabricate a flareless-fitting-tube connection.

Q: Besides being expensive to fabricate (approximately 30 dollars per student), parts (sleeves) are not available as they have been recalled. Can a homeowners plumbing compression fitting be substituted if it works in the same way?



Addressing New ACS Elements Q&A

AM.I.I.K22 Methods used to establish the serial number effectivity of an item

AM.I.G.R6 Disposal of chemicals and waste materials.

AM.I.L.R3 Non-invasive, condition-monitoring technologies

Q: We are trying to address some of the new ACS elements, but we either do not understand them or cannot locate a good reference to provide context on what is supposed to be taught. How should we address these?





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