References

14 CFR parts 39, 43, 91; FAA-H-8083-2, FAA-H-8083-25

Objectives

To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with airworthiness requirements, including airplane certificates.

Knowledge

PA.I.B.K1 General airworthiness requirements and compliance for airplanes, including:

PA.I.B.K1a — Certificate Location and Expiration Dates

(Student Guide – Final Draft)

Airworthiness Certificate – Location

14 CFR § 91.203(a)(1) states that an aircraft may not be operated unless:

"The airworthiness certificate is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew."

Key point:
The FAA requires the certificate to be **visible at the aircraft entrance**, not merely carried onboard.

Airworthiness Certificate – Expiration and Validity

4 CFR § 21.181 — Duration and Continued Validity

For a **Standard Airworthiness Certificate**:

It **does not have an expiration date**

- It remains effective **only as long as** the aircraft:
    1. Meets its **approved type design**
    2. Is in a **condition for safe operation**
    3. Is **maintained and operated** in accordance with applicable regulations

PA.I.B.K1b b. Required inspections and airplane logbook documentation

The FAA's word in §91.7:

The pilot in command shall determine…

- **§ 91.409** — Inspections (annual, 100-hour; progressive if applicable)

When the 100-Hour limit is due for rental or "for hire" planes, the airplane Is grounded

- The aircraft is **no longer airworthy**
- It **may not be operated**
- It **cannot legally leave the ground**

At that moment, the airplane is effectively **grounded by regulation**,

This comes directly from **14 CFR § 91.409(b)**.

The FAA provides **one narrow escape hatch** in **14 CFR § 91.409(c)**:

A 100-hour inspection may be exceeded by **not more than 10 hours** *while en route to a place where the inspection can be done*.

This does **not** restore general airworthiness.
It creates a **single-purpose allowance**:

You may fly the airplane only to reach maintenance.

That's it.

No lessons.
No rentals.
No passengers for hire.
No "since we're up anyway."

Opps! And you just lost hours on the next 100 hour inspection.

Any time used beyond the 100 hours must be included in computing the next 100 hours.

- Aircraft is due for 100-hour at **1,500.0**
  - It flies to maintenance and arries at **1,504.8**
  - ✓ Legal — because the flight was **only to reach maintenance**

The next 100-hour inspection is due at **1,600.0** ❌ **Not** 1,604.8

Student Mastery — Annual vs 100-Hour Inspection

(Why You Don't Get to "Forget" the Annual)

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1. What the Annual Inspection Really Is

14 CFR § 91.409(a) requires that **every civil aircraft** operated in the United States must have had an **annual inspection within the preceding 12 calendar months**.

Key words students must hear:

- **Every aircraft**
- **Every year**
- **No exceptions** for rentals, flight training, or recent 100-hour inspections

👉 **If the annual expires, the airplane is grounded. Period.**

There is **no ferry allowance** and **no extra time** for an expired annual inspection.

---

2. What the 100-Hour Inspection Is

A **100-hour inspection** is required by **§ 91.409(b)** when the aircraft is:

- Used to **carry passengers for hire**, or
- Used for **flight instruction for hire**

Important distinction:

- The **100-hour inspection is operational**
- The **annual inspection is universal**

The 100-hour inspection exists **in addition to**, not instead of, the annual.

---

3. What Happens When Each One Expires

- **Expired annual**
  ❌ Aircraft may not be flown at all
  ❌ No 10-hour allowance
  ❌ No repositioning flight
- **Expired 100-hour**
  ❌ Aircraft may not be used for hire
  ✓ May be flown **only** to maintenance (up to 10 hours)

These rules are **not interchangeable**.

---

4. One Important Overlap (Students Love This Part)

The FAA allows **one-way credit only**:

- ✓ **An annual inspection CAN be logged as a 100-hour inspection**
- ❌ **A 100-hour inspection CANNOT be logged as an annual**

Why?

- Annual inspections must be signed off by a mechanic with **Inspection Authorization (IA)**
- 100-hour inspections do not require an IA

---

5. Mastery Sentence (Say This and You Own It)

"A 100-hour inspection never replaces the annual, but an annual inspection can satisfy the 100-hour requirement."

If a student can say that cleanly, they understand the rule.

Bottom Line (Instructor-Grade Truth)

- A **current 100-hour** does **not** keep an aircraft legal if the **annual is expired**
- A **current annual** always satisfies the 100-hour requirement
- **Panama City waits** until § 91.409 is happy

Student Mastery — "Other Things That Can Ground the Airplane"

(Inspections, Equipment Checks, and Logbooks That Matter to the Pilot)

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1. Some Inspections Only Matter for Certain Operations

Not every inspection grounds the airplane for *every* flight—but **some do**, depending on how you plan to fly.

Altimeter & Static System

14 CFR § 91.411

- Required **for IFR operations**
- Must be inspected **within the preceding 24 calendar months**
- Applies to:
  - Altimeter system
  - Static pressure system
  - Altitude reporting equipment

Student takeaway:

No current §91.411 inspection = no IFR flight.

The airplane may still be legal for **VFR**, but IFR is off the table.

Transponder Inspection

14 CFR § 91.413

- Required **within the preceding 24 calendar months**
- Applies when operating:
  - In transponder-required airspace

    A transponder (with altitude reporting, Mode C) is required in U.S. airspace for all aircraft in Class A, B, and C, within 30 nautical miles of major airports (the "Mode C veil"), and generally above 10,000 feet MSL (except below 2,500 feet AGL)

  - Under IFR

Student takeaway:

If the transponder inspection is expired, you may be limited or grounded ***depending on the airspace or operation.***

---

2. ELT — The Quiet One That Still Bites

14 CFR § 91.207

The Emergency Locator Transmitter must be:

- Installed and operable
- Inspected every **12 calendar months**
- Battery replaced:
  - When used for more than 1 cumulative hour, or
  - When 50% of battery life has expired

Student takeaway:

Expired ELT inspection or dead battery = unairworthy airplane.

This one grounds aircraft more often than people expect.

14 CFR § 91.207(d) — *ELT Not Required for Certain Operations*

This paragraph says an ELT is **not required** when the aircraft is operated:

- **For training**, and
- **Within 50 nautical miles of the airport from which the flight began**

Key assumptions the FAA is making:

- You're staying local
- You're in familiar terrain
- You have ATC / radio coverage
- Someone expects you back

That's not casual—it's **structured risk acceptance**.

"An ELT is normally required, but the FAA allows training flights within 50 nautical miles of the departure airport to be conducted without an ELT. **This is a limited exception that applies only to local training operations."**

If a student can say that, they won't get trapped by the rule.

---

3. Logbooks Matter More Than the Wrench

An airplane is not airworthy unless the paperwork proves it.

Maintenance Records

14 CFR § 91.417

Requires records of:

- Required inspections
- Maintenance and alterations
- AD compliance
- Retention and transfer of records

If required records are **missing or incomplete**:
👉 The aircraft is **not airworthy**, even if mechanically fine.

Owner/Operator Responsibility

14 CFR § 91.405

The owner or operator must:

- Ensure required maintenance is performed
- Ensure discrepancies are corrected
- Ensure proper entries are made

Student takeaway:

"I thought maintenance handled that" is not a defense.

You don't fly the airplane you *think* is legal.
You fly the airplane the logbooks can *prove* is legal.

4. Flying After Maintenance Is Not Automatic

14 CFR § 91.407

After maintenance, preventive maintenance, rebuilding, or alteration:

- The aircraft must be **approved for return to service**
- A **maintenance release** is required
- An **operational check or test flight** may be required before carrying passengers

Student takeaway:

No proper signoff = no flight.

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — *Maintenance & Inspections / Logbooks / Required Inspections*
- **FAA-H-8083-2 (Risk Management Handbook)** — maintenance status as a risk control (preflight risk evaluation)

PA.I.B.K1c c. Airworthiness Directives and Special Airworthiness Information Bulletins

14 CFR Part 39 (primary):

- **§ 39.3** — Applicability: **who must comply**
- **§ 39.7** — Legal effect: operating an aircraft not in compliance violates regs

14 CFR Part 91 (primary):

- **§ 91.403** — Owner/operator responsibility for maintaining airworthiness, **including AD compliance**
- **§ 91.405** — Ensure maintenance is properly performed / discrepancies addressed

SAIB note (important):

- **SAIBs are not regulatory like ADs**—they're FAA safety information. They matter operationally and for ADM, even when not mandatory.

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — *Airworthiness / ADs (mandatory) vs SAIBs (advisory)*
- **FAA-H-8083-2 (Risk Management Handbook)** — assessing risk when "advisory" information indicates elevated hazard

1. What an Airworthiness Directive (AD) Is

Airworthiness Directives (ADs) are **legally enforceable FAA rules** issued under **14 CFR Part 39** to correct unsafe conditions in aircraft, engines, propellers, or appliances.

14 CFR § 39.3 — Applicability

- ADs apply to **any person** operating a product to which the AD applies

14 CFR § 39.7 — Legal Effect

- Operating an aircraft **not in compliance with an applicable AD is a violation of federal regulations**

Student takeaway:

If an applicable AD is not complied with, the aircraft is unairworthy.

No discretion. No judgment call. No "we'll do it later."

2. Who Is Responsible for AD Compliance

14 CFR § 91.403(a) places responsibility on the **owner or operator** to:

- Maintain the aircraft in an airworthy condition
- Ensure compliance with **all applicable Airworthiness Directives**

14 CFR § 91.405

- Requires discrepancies (including AD issues) to be corrected

Important distinction for students:

- Maintenance may *perform* the work
- The **owner/operator** is still responsible
- The **PIC** must verify compliance before flight

3. What Happens If an AD Is Overdue

If an applicable AD is:

- Overdue

- Not properly documented
- Not complied with as required

👉 **The aircraft may not be legally operated**

There is:

- ❌ No grace period
- ❌ No ferry allowance unless explicitly authorized
- ❌ No "it flies fine" exception

This is a hard stop for airworthiness.

4. What a SAIB Is (And Is Not)

Special Airworthiness Information Bulletins (SAIBs) are:

- **Advisory**, not regulatory
- Issued to alert owners and operators of **potential safety concerns**

Key difference:

- **ADs are mandatory**
- **SAIBs are informational**

Student takeaway:

You cannot violate a SAIB—but you can ignore a warning at your own risk.

---

5. Why SAIBs Still Matter to Pilots (ADM Tie-In)

Even though SAIBs are not mandatory:

- They may identify **known failure trends**
- They may highlight **emerging safety issues**
- They often precede future ADs

A professional pilot uses SAIBs to:

- Reassess risk
- Adjust operations
- Decide whether a flight is still prudent

This is **Aeronautical Decision-Making**, not regulation compliance.

---

6. Mastery Comparison (This Clears It Up Instantly)

Item	Mandatory?	Affects Airworthiness?	Can You Fly If Not Complied With?
AD	Yes	Yes	✗ No
SAIB	No	Not directly	✓ Yes (with risk awareness)

---

7. Mastery Sentence (If They Can Say This, They Own It)

"Airworthiness Directives are mandatory and must be complied with for an aircraft to be airworthy, while SAIBs are advisory but provide important safety information for pilot decision-making."

- **FAA-H-8083-25 (PHAK)** — special flight permit overview and practical use cases
- **FAA-H-8083-2 (Risk Management Handbook)** — risk control: limitations/conditions, route, weather, performance margins

PA.I.B.K1d d. Purpose and procedure for obtaining a special flight permit

The FAA defines a **Special Flight Permit** in **14 CFR §21.197**.

In plain FAA language, a special flight permit may be issued for an aircraft that **does not currently meet applicable airworthiness requirements**, **but is capable of safe flight**, for a **specific purpose**.

Key FAA intent:

- ❗ The aircraft is **not airworthy**
- ✅ The aircraft is **safe for the intended flight**
- 📍 The authorization is **limited in purpose, route, time, and conditions**

This permit **does not fix the airplane**.
It only allows a *very specific flight* under *very specific limitations*.

2️⃣ When Is a Special Flight Permit Needed?

A special flight permit is needed **when an aircraft is unairworthy**, but must be moved or operated for one of these FAA-recognized reasons:

Common examples students must know:

- Flying the aircraft **to a maintenance facility**
- Flying it **back to base** for repairs
- Delivering or exporting an aircraft
- Conducting production or customer acceptance flights

Typical real-world trigger:

- An **inspection is expired** (annual, 100-hour, altimeter/transponder)
- Required equipment is **inoperative and not deferrable**
- The aircraft **cannot be legally flown under normal rules**

⚠️ Important distinction for students:

If the aircraft can be legally flown under §91.213 (inoperative equipment),
you do NOT need a special flight permit.

A permit is only needed when **no other legal option exists**.

3️⃣ What Is the Procedure to Obtain One?

Step 1: Determine the Need

The **owner or operator** determines the aircraft is **unairworthy** but **safe for a specific flight**.

This is a **PIC-level ADM decision**, not a guess.

Step 2: Maintenance Evaluation

A certificated mechanic may be required to:

- Inspect the aircraft
- Confirm it is **safe for the intended flight**
- List **operational limitations** (airspeed, altitude, day VFR only, etc.)

The FAA may require this statement before issuing the permit.

Step 3: Apply to the FAA

The permit is issued by:

- The local **FSDO**, or
- An FAA-authorized designee (DAR)

The application specifies:

- Aircraft identification
- Reason for the permit
- Proposed route
- Conditions and limitations

Step 4: Fly Exactly as Authorized

This part matters a lot on checkrides:

- The aircraft may **only** be operated:
  - For the **approved purpose**
  - Along the **approved route**
  - Under the **approved conditions**

Deviating from the permit = operating an **unairworthy aircraft illegally**.

4️⃣ What a Special Flight Permit Does *NOT* Do

- ❌ It does **not** return the aircraft to airworthy status
- ❌ It does **not** remove the need for maintenance
- ❌ It does **not** allow normal operations
- ❌ It does **not** transfer liability from the PIC

The PIC is **still responsible** under **§91.7** for determining the aircraft is safe for flight.

5️⃣ Student Takeaway (This Is the Money Line)

A special flight permit allows a **specific, limited flight** of an **unairworthy aircraft** when the FAA determines it can be flown **safely for that purpose only**.

If you remember only one thing, it should be this:

"Unairworthy doesn't always mean unflyable—but it always means restricted."

✅ Primary FAA Training Manual Reference

FAA-H-8083-25 — Pilot's Handbook of Aeronautical Knowledge (PHAK)

Special Flight Permits 9-12

PA.I.B.K2 Pilot-performed preventive maintenance.

(Student Mastery — "Just Because You Can Doesn't Mean You Should")

. What Preventive Maintenance Is

Preventive maintenance consists of **simple, non-complex tasks** that the FAA allows pilots/owners to perform on their own aircraft.

This authority comes from **14 CFR Part 43**, not Part 91.

---

2. Who May Perform Preventive Maintenance

14 CFR § 43.3(g) allows:

- The **owner or operator** of an aircraft
- Who holds at least a **private pilot certificate**

to perform **preventive maintenance only**, as defined by the FAA.

Student takeaway:

Pilots may perform preventive maintenance—but only what the FAA specifically allows.

---

3. What Counts as Preventive Maintenance

The **only authoritative list** is found in:

14 CFR Part 43, Appendix A(c)

Examples include:

- Replacing spark plugs
- Changing engine oil and oil filters
- Replacing safety belts
- Servicing landing gear shock struts
- Replacing prefabricated fuel or oil lines
- Simple interior and cosmetic tasks

If the task is **not listed** in Appendix A(c):
👉 **It is not preventive maintenance for a pilot.**

---

4. How the Work Must Be Done

Even when a pilot is allowed to do the work, the FAA still requires:

14 CFR § 43.13

- Acceptable methods, techniques, and practices
- Proper tools
- Work performed in a safe and correct manner

Student takeaway:

Being allowed to do the work does not excuse doing it poorly.

---

5. Documentation Is Not Optional

After performing preventive maintenance, the pilot **must** make a logbook entry.

14 CFR § 43.9 requires:

- Description of the work performed
- Date of completion
- Aircraft total time
- Name, signature, certificate number, and type of certificate held

No logbook entry =
👉 **Aircraft not returned to service**

---

6. Who Is Still Responsible for Airworthiness

14 CFR § 91.403(a) makes this crystal clear:

- The **owner/operator** remains responsible for airworthiness
- Even if the pilot performed the maintenance
- Even if it was done "correctly"

Student takeaway:

Doing your own maintenance does not shift responsibility away from you.

---

7. Flying After Preventive Maintenance

14 CFR § 91.407 applies after **any** maintenance, including preventive maintenance:

- The aircraft must be **approved for return to service**
- An **operational check or test flight** may be required
- Passengers may be restricted until the aircraft is verified safe

Student takeaway:

Turning a wrench does not automatically make the airplane flyable.

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8. The Real-World Caution (This Is the Lesson)

Just because:

- You are allowed
- The task is listed
- You've done it before

…does not mean it's always the right choice.

Good ADM asks:

- Do I have the **tools**?
- Do I have the **knowledge**?
- Do I have the **documentation discipline**?
- Am I willing to **own the result**?

Mastery Sentence (If They Can Say This, They Get It)

"A pilot may perform only the preventive maintenance listed in Part 43 Appendix A, must perform it correctly, must document it properly, and remains responsible for the aircraft's airworthiness."

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — preventive maintenance overview; what pilots may do; documentation emphasis
- **FAA-H-8083-2 (Risk Management Handbook)** — risk considerations: competence, tools, documentation, test flight thinking

PA.I.B.K3 Equipment requirements for day and night VFR Flight, to include:

Required Equipment for Day and Night VFR

14 CFR § 91.205 establishes the **baseline** for required instruments and equipment for:

- **Day VFR**
- **Night VFR**

These requirements apply to **powered civil aircraft with standard category airworthiness certificates**.

Student takeaway:

If required by §91.205 for the type of flight, the equipment must be operative.

This section is the **starting point** for every inoperative-equipment decision.

PA.I.B.K3a a. Flying with inoperative equipment

The Moment Something Breaks

When an instrument or piece of equipment becomes inoperative, the pilot must decide:

Can this airplane still be legally and safely operated for this flight?

That decision is governed by **14 CFR § 91.213**.

Flying With Inoperative Equipment (No Minimum Equipment List (MEL) Aircraft)

Most training and rental aircraft do not have an approved MEL, so the controlling rule is:

14 CFR § 91.213(d) — Operations Without an Approved MEL

This is the **decision tree** pilots must follow.

The aircraft **may not be operated** with inoperative equipment unless **all** of the following are true:

1. The inoperative item is **not required** by:
   - **§ 91.205** (day/night VFR)
   - The aircraft's **AFM/POH**
   - **A MEL**
   - A **Kinds Of Operation Equipment List (KOEL)**
   - An **Airworthiness Directive**
2. The item is **not required for safe operation**
3. The item is:
   - Removed from the aircraft **or**
   - Deactivated, and
   - **Placarded "INOPERATIVE"**
4. The aircraft is otherwise in a condition for safe flight

Student takeaway:

If any one of these fails, the airplane does not fly.

---

4. The PIC's Responsibility Never Goes Away

14 CFR § 91.7(a) states:

- The **PIC may not operate an unairworthy aircraft**

Even if §91.213 allows flight:

- The PIC must still decide whether the aircraft is **safe for this flight**

Important reality:

Legal does not always mean smart.

---

5. Maintenance and Discrepancy Responsibility

14 CFR § 91.403 / § 91.405

- The owner/operator is responsible for correcting discrepancies
- Known inoperative equipment must be addressed properly

This prevents "temporary" problems from becoming **permanent hazards**.

---

6. Common Student Trap (This Is Where People Get It Wrong)

❌ "It's not listed in §91.205, so we're good."
❌ "It's just a convenience item."
❌ "It's always been broken."

Missing question:

*Is it required by the AFM, MEL, KOEL, or safe operation **for THIS flight**?*

That's where checkrides—and real flights—go sideways.

---

7. Mastery Sentence (Say This and You Own It)

"When equipment is inoperative, the pilot must use §91.213 to determine whether the item is required by regulation, the aircraft's limitations, or safe operation, **and must placard or deactivate it before flight."**

If a student can say that, they understand the process.

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — inoperative equipment process; required vs not required; placarding/deferral logic
- **FAA-H-8083-2 (Risk Management Handbook)** — risk-based go/no-go and mitigation when something is degraded

PA.I.B.K3b b. Using an approved Minimum Equipment List (MEL)

14 CFR Part 91 (primary):

- **§ 91.213(a)** — Operating under an **approved MEL**
- **§ 91.213(b)** — Additional requirements for MEL operations (as applicable)

Student Mastery — Inoperative Equipment With an MEL

When the Aircraft Has an Approved MEL

"If an aircraft has an approved Minimum Equipment List (MEL), the pilot must use the MEL to determine whether the aircraft may be operated with inoperative equipment."

What This Means

- The **MEL replaces §91.213(d)**
- The pilot **may NOT use the 'no-MEL decision tree'**
- The MEL is **FAA-approved and aircraft-specific**

Pilot Must Verify:

1. The inoperative item is **listed in the MEL**
2. The **conditions and limitations** in the MEL are complied with
3. Any required:
   - Procedures
   - Repairs
   - Placards
   - Time limits

   are followed exactly

Bottom Line for Students

- ✓ MEL says you may fly → **You may fly (within MEL limits)**
- ❌ MEL says no → **The airplane is grounded**
- ❌ MEL not followed exactly → **Illegal flight**

Mastery Sentence (MEL)

"When an aircraft has an approved MEL, the pilot must comply with the MEL to determine whether inoperative equipment is permitted, and may not use §91.213(d) instead."

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — MEL concept, purpose, and how it differs from "91.213(d) without MEL"
- **FAA-H-8083-2 (Risk Management Handbook)** — MEL as a formal risk control; human factors trap: "legal ≠ smart"

PA.I.B.K3c c. Kinds of Operation Equipment List (KOEL)

Regulatory anchor (where KOEL shows up operationally):

- **§ 91.213(d)(2)** — Without MEL, you must determine equipment is not required by:
  - the type certificate / aircraft instruments & equipment list (where KOEL typically lives),
  - AFM/POH limitations/required equipment for the operation, etc.

Student Mastery — Inoperative Equipment With a KOEL (No MEL)

When the Aircraft Does NOT Have an MEL

"If an aircraft does not have an approved MEL, the pilot must use §91.213(d), including the KOEL and aircraft limitations, to determine whether inoperative equipment is allowed."

What This Means (Student-Clear)

The pilot must determine the item is **NOT required** by:

1. **§91.205** (day/night VFR)
2. The **AFM/POH**
3. The **KOEL**
4. Any **Airworthiness Directive**
5. **Safe operation**

And then:

- Deactivate or remove the item
- Placard it **INOPERATIVE**

Bottom Line for Students

- KOEL is **part of the aircraft's limitations**
- If the KOEL says the item is required for that operation → ❌ No flight
- KOEL + §91.213(d) work **together**

Mastery Sentence (KOEL / No MEL)

"Without an approved MEL, the pilot must use §91.213(d), including the KOEL and aircraft limitations, to determine whether inoperative equipment is permitted."

One-Line Comparison (This Is the Memory Hook)

MEL airplane: Follow the MEL.
No-MEL airplane: Follow §91.213(d) and the KOEL.

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — KOEL definition and how to use it with AFM/POH and ops type
- **FAA-H-8083-2 (Risk Management Handbook)** — operational risk when KOEL permits dispatch but conditions are marginal

PA.I.B.K3d d. Required discrepancy records or placards

(Student Mastery — "If It's Broken, It Must Be Marked and Tracked")

14 CFR Part 91 (primary):

- **§ 91.213(d)(2)(iii)** — Placard the inoperative item and record as required
- **§ 91.417(a)** — Maintenance records requirements (what must be recorded/retained)
- **§ 91.405(c)** — Have discrepancies repaired as required

14 CFR Part 43 (primary):

- **§ 43.9** — Maintenance record entries (ties to discrepancy correction/deferral documentation)

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1. Why This Knowledge Element Exists

Earlier knowledge elements taught the pilot:

- What equipment is required (§91.205)
- How to decide if an aircraft may fly with broken equipment (§91.213)
- How MELs and KOELs change the decision process

PA.I.B.K3d answers the final question:

Once something is determined to be inoperative, how does the FAA require it to be handled and documented?

---

2. Placards Are Mandatory, Not Optional

14 CFR § 91.213(d)(2)(iii) requires that inoperative equipment must be:

- **Deactivated or removed**, and
- **Placarded "INOPERATIVE"**, as appropriate

Student takeaway:

If it's broken and allowed to stay broken, it must be clearly marked.

Placards:

- Warn the pilot
- Warn other pilots
- Prevent accidental use
- Prove the PIC followed the decision process

No placard = no legal flight.

---

3. Discrepancies Must Be Recorded and Tracked

14 CFR § 91.417(a) requires maintenance records to include:

- Discrepancies
- Maintenance performed
- Inspection status
- Required retention of records

If an item is deferred, inoperative, or repaired:
👉 **There must be a record trail.**

Student takeaway:

Airworthiness is proven by logbooks, not memory.

---

4. Discrepancies Cannot Be Ignored Indefinitely

14 CFR § 91.405(c) places responsibility on the owner/operator to:

- Ensure discrepancies are **repaired as required**

This prevents:

- "Temporary" inoperative items becoming permanent
- Unsafe normalization of broken equipment

Student takeaway:

Placarding does not eliminate the responsibility to fix the problem.

5. How Maintenance Documentation Fits In (Part 43)

When discrepancies are corrected or deferred:

14 CFR § 43.9 requires maintenance record entries showing:

- What work was performed
- When it was completed
- Aircraft total time
- Who approved it for return to service

Without proper entries:
👉 **The aircraft is not legally returned to service**

---

6. How This Ties to Earlier Knowledge Elements

Here's the **big-picture connection** students must see:

- **K3** — What equipment is required
- **K3a** — How to decide if broken equipment is allowed
- **K3b / K3c** — MEL or KOEL changes the rules
- **K3d** — **How broken equipment is marked and tracked**

You don't just decide—you document the decision.

That's how the FAA knows the process was followed.

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7. Mastery Sentence (Say This and You Own It)

"When equipment is inoperative, it must be properly placarded and the discrepancy must be recorded and tracked until corrected, in accordance with §91.213, §91.417, and Part 43."

FAA Training Manuals:

- **FAA-H-8083-25 (PHAK)** — placards/records expectations and practical examples
- **FAA-H-8083-2 (Risk Management Handbook)** — risk control: documentation discipline prevents "normalization of deviance"

Risk Management

The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:

PA.I.B.R1 Inoperative equipment discovered prior to flight.

Regulatory basis for the risk scenario:

- **§ 91.7** — PIC must not operate an unairworthy aircraft
- **§ 91.205** — Required equipment baseline (day/night VFR)
- **§ 91.213** — Legal process for inoperative equipment (MEL vs no-MEL path)
- **§ 91.403 / § 91.405** — airworthiness & discrepancy responsibilities
- **§ 43.9 / § 43.13** — maintenance documentation and acceptable work standards (when corrective action is taken)

The FAA's Quiet Expectation (This Is the Real Standard)

The FAA does **not** require:

- A clean summary table
- A consolidated squawk list
- A "current inoperative equipment" page

But they **do require** that:

A reasonably knowledgeable pilot can determine airworthiness from the records provided.

If the logbooks are so chaotic that:

- You can't tell whether an item is legally deferred
- You can't tell whether it's required for today's operation
- You can't trace compliance at all

Then under **§91.7**, **you cannot make the determination**.

And if you cannot determine airworthiness…

👉 **The aircraft is unairworthy for you.**

That's not punishment.
That's risk management baked into regulation.

Student Mastery Statement (This One Is Gold)

You might want this verbatim in the guide:

"Placards identify inoperative equipment, but logbooks establish whether that equipment is legally deferred. The pilot must be able to determine airworthiness from the records provided."

If a student understands that sentence, they won't get trapped by messy rental logs.

FAA Risk/ADM training:

- **FAA-H-8083-2 (Risk Management Handbook)** — primary for risk identification/assessment/mitigation
- **FAA-H-8083-25 (PHAK)** — ADM framework tie-in when determining dispatch vs delay/cancel

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BONUS:

Rental Aircraft Logbook Sanity Check

("Can I determine this airplane is airworthy for THIS flight?")

If you can't answer each section with confidence, the airplane is a no-go for you—regardless of placards.

STEP 1 — Start With the Mission

Before touching a logbook, decide:

- Day VFR or Night VFR?
- Local or XC?

- IFR or VFR only?
- Training or rental for hire?

👉 **Airworthiness is mission-dependent.**
Don't review logs in a vacuum.

STEP 2 — Required Inspections Snapshot

Verify **current status**, not history.

Check for **clear, current signoffs** for:

- ✅ **Annual inspection** (§91.409)
- ✅ **100-hour inspection**, if applicable (§91.409)
- ✅ **ELT inspection** (§91.207)
- ✅ **Altimeter/static** (IFR only) (§91.411)
- ✅ **Transponder** (IFR / transponder airspace) (§91.413)

Sanity rule:

If you have to *guess* whether something is current, it isn't current *for you*.

STEP 3 — AD Compliance Reality Check

You are not auditing the aircraft—you're checking **status**.

Look for:

- A **current AD compliance statement**
- Recurring ADs with:
  - Last compliance date
  - Next due time/date

🚩 **Red flag:**

- "Previously complied with" and nothing recent
- AD references without dates or times

👉 If you can't tell whether an AD is current, **stop**.

STEP 4 — Inoperative Equipment Cross-Check

Now match **plane → placards → logs**.

1. **Go to the airplane**
   - Note every **placard** marked *INOPERATIVE*
2. **Go to the logs**
   - Find **each item**
   - Verify it was:
     - Deferred legally (§91.213 or MEL)
     - Not required for your operation
     - Not affected by an AD

Sanity rule:

Placard with no log support = problem
Log entry with no placard = problem

They must agree.

STEP 5 — "Long-Term Broken Stuff" Test

This is the 152 special.

If something has been broken for **years**, ask:

- Is it allowed by **§91.205** for my flight?
- Is it allowed by **AFM/KOEL**?
- Is it still safe for *today's* conditions?

Red flag:

- "It's always been that way"
- "Nobody fixes that anymore"

Those are **not regulatory justifications**.

STEP 6 — Maintenance Signoff Check

Any corrective maintenance must have:

- A **§43.9** entry
- Proper description
- Approval for return to service
- Mechanic's certificate number

No proper signoff =
👉 **The airplane is not returned to service.**

STEP 7 — The PIC Determination (The Real Gate)

Ask yourself one honest question:

Can I clearly explain—using the logs—why this aircraft is airworthy for this flight?

If the answer is:

- "Yes, and here's how" → ✅ Go
- "I think so" → ❌ No-go
- "Probably" → ❌ No-go

Uncertainty defaults to no-go.
That's not fear—that's §91.7.

Mastery Statement

"The pilot must be able to determine from the aircraft records that required inspections are current, applicable ADs are complied with, and any inoperative equipment is legally deferred for the intended flight."

If a student can live by that sentence, they're protected for life.