LANDING GEAR AND BRAKES PRACTICE TEST (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

1. What is the maximum gear extension speed (VLO)?

A. 250 KIAS

B. 260 KIAS

C. 240 KIAS

D. 230 KIAS

2. If you use the Electrical Override, how does the sequence compare to normal operation?

A. In the same sequence as normal

B. In reversed order

C. In a random sequence

D. It does not follow any sequence

3. Setting the autobrake selector knob to OFF will do what?

A. Disarm the autobrake modes

B. Engage maximum braking automatically

C. Increase brake pressure to the wheels

D. Disable the parking brake

4. What is shimmy, and how is it mitigated in the nose wheel?

A. Shimmy is rapid, oscillating steering of the nose wheel due to instability; mitigated by damper systems, proper tire pressures, and steering linkages.

B. Shimmy is a type of brake fade under heavy load.

C. Shimmy is wheel wobble during gear retraction; mitigated by lowering speed.

D. Shimmy is gear door flutter; mitigated by lubrication.

5. Why is it important to verify that doors are not fouled during preflight checks?

A. To ensure smooth operation and proper sealing of the retracted gear.

B. To ensure the doors are easily accessible for maintenance.

C. To prevent interference with other aircraft systems.

D. To indicate the color of the aircraft exterior.

6. What is the significance of hydraulic reservoir levels and air venting in landing gear systems?

A. They only matter during maintenance testing.

B. Proper reservoir levels and venting prevent cavitation and maintain smooth actuation; air in the system can cause spongy or slow gear operation.

C. They determine cabin pressurization.

D. They primarily affect fuel efficiency.

7. In a hydraulically actuated landing gear extension, what is the correct standard sequence?

A. Hydraulic pressure is applied to gear actuators, gears rotate down from stowed position, doors open to clear the gear path, gear fully extends and locks, doors close to streamline the gear, and down-lock indicators confirm full extension.

B. Gears rotate down from stowed position, hydraulic pressure is applied to actuators, doors close to streamline, gear fully extends and locks, doors open to clear the gear path, and down-lock indicators confirm full extension.

C. Doors open to clear the gear path, hydraulic pressure is applied to actuators, gears rotate down from stowed position, gear fully extends and locks, doors close to streamline, and down-lock indicators confirm full extension.

D. Hydraulic pressure is applied to actuators, doors open to clear the gear path, doors close to streamline, gear rotates down, gear fully extends and locks, and down-lock indicators confirm extension.

8. Which of the following is NOT a typical inspection item for wheel and tire assemblies?

A. Tire tread depth.

B. Ply wear.

C. Wheel cracks.

D. Antenna alignment.

9. Describe the typical sequence of events during a standard landing gear retraction in a tricycle-gear airplane.

A. After selecting retract, doors open, then gear retracts, and doors latch.

B. After selecting retract, gear extends, then doors close.

C. After selecting retract, hydraulic actuators extend the gear; doors begin to close.

D. After selecting retract, hydraulic actuators withdraw the gear, doors begin to close, the gear moves to the down-locked position, and doors fully latch closed; gear position indicators confirm stowage.

10. Which item is not typically checked during a landing gear tire preflight inspection?

A. Tread wear.

B. Cuts.

C. Brake fluid level.

D. Bulges.

Answers

1. A
2. A
3. A
4. A
5. A
6. B
7. A
8. D
9. D
10. C

Explanations

1. What is the maximum gear extension speed (VLO)?

A. 250 KIAS

B. 260 KIAS

C. 240 KIAS

D. 230 KIAS

VLO is the maximum speed at which the landing gear can be extended or retracted safely. Going above this speed means the gear and doors are subjected to higher aerodynamic and inertial loads, which can prevent proper extension/locking or even cause mechanical damage. So you extend or retract the gear only at or below this limit and complete the operation within that envelope. For many airliners, the published value of VLO is 250 KIAS, which is why 250 KIAS is the correct choice. The other speeds either exceed the limit or do not align with the standard gear-operating speed used in typical aircraft procedures.

2. If you use the Electrical Override, how does the sequence compare to normal operation?

A. In the same sequence as normal

B. In reversed order

C. In a random sequence

D. It does not follow any sequence

Electrical Override does not change the order of operations. When this mode is used, the system is still governed by the same sequence that's used during normal operation. The override mainly affects how signals are delivered—often speeding up or bypassing some automatic controls—without reordering the events themselves. That keeps gear and brake actuation predictable and safe, aligning with the established interlocks and timing. Reversing the sequence, randomizing it, or not following any sequence would create conflicts between actuators and safety interlocks, which is why those options don't fit.

3. Setting the autobrake selector knob to OFF will do what?

A. Disarm the autobrake modes

B. Engage maximum braking automatically

C. Increase brake pressure to the wheels

D. Disable the parking brake

The autobrake system is designed to apply a preselected, automatic braking force on landing or during a rejected takeoff. Setting the selector to OFF disables that automatic function, disarming all autobrake modes so no automatic brake application will occur. You then rely on manual braking input from the pilots. This does not cause automatic maximum braking to occur, and it does not by itself increase brake pressure—the system simply stops executing the preset automatic deceleration. The parking brake is a separate system and remains unaffected by turning autobrake off.

4. What is shimmy, and how is it mitigated in the nose wheel?

A. Shimmy is rapid, oscillating steering of the nose wheel due to instability; mitigated by damper systems, proper tire pressures, and steering linkages.

B. Shimmy is a type of brake fade under heavy load.

C. Shimmy is wheel wobble during gear retraction; mitigated by lowering speed.

D. Shimmy is gear door flutter; mitigated by lubrication.

Shimmy is rapid, self-excited side-to-side oscillation of the nose wheel steering that can occur when the nose gear, tire, and steering linkage enter a vibrating condition. This instability can be triggered by factors like braking, steering input, or runway irregularities, and it can damage components if not controlled. The best way to mitigate it is through a combination of damping and proper geometry: a nose-wheel shimmy damper absorbs energy from the oscillations and quickly slows them down, preventing the vibration from growing. Keeping tire pressures within specification ensures the tire's dynamic stiffness and response don't promote resonance, and correctly adjusted steering linkages (with proper lubrication and minimal play) prevent loose or binding motion that can sustain shimmy. Some designs also include anti-shimmy devices or centering mechanisms to help return the wheel to straight travel. Other options describe different issues that aren't about nose-wheel oscillation, such as brake fade, wobble during gear retraction, or gear-door flutter.

5. Why is it important to verify that doors are not fouled during preflight checks?

A. To ensure smooth operation and proper sealing of the retracted gear.

B. To ensure the doors are easily accessible for maintenance.

C. To prevent interference with other aircraft systems.

D. To indicate the color of the aircraft exterior.

Not fouled gear doors are essential because they must close smoothly and seal properly when the gear is retracted. If the doors are obstructed or misaligned, they may not fully close or seal, which can let dirt, water, or debris into the gear bay and create unwanted drag. This can affect aerodynamic efficiency and may lead to gear retraction or deployment issues in flight. Verifying door cleanliness during preflight directly protects the gear system's operation and the airplane's performance. The other options don't address this functional impact—maintenance access, interference with other systems, or exterior color aren't the immediate safety and performance factors involved in gear door sealing.

6. What is the significance of hydraulic reservoir levels and air venting in landing gear systems?

A. They only matter during maintenance testing.

B. Proper reservoir levels and venting prevent cavitation and maintain smooth actuation; air in the system can cause spongy or slow gear operation.

C. They determine cabin pressurization.

D. They primarily affect fuel efficiency.

Understanding how hydraulic reservoir levels and air venting affect landing gear helps you see why these factors matter for reliable gear operation. The pump draws fluid from the reservoir to pressurize and move the actuators that extend and retract the gear. If the reservoir level is too low, the pump can draw air or run dry, leading to cavitation or a loss of available fluid, which means reduced force, slower actuation, or incomplete gear extension/retraction. Keeping the proper reservoir level ensures the pump always has enough fluid to supply during peak demand and maintains steady pressure in the lines. Venting lets air escape from the system so air pockets don't linger as the fluid levels change during operation. Air is compressible, so trapped air creates a spongy feel, delayed response, or sluggish gear movement, and it can cause pressure fluctuations that degrade actuation quality. Proper venting prevents these issues, ensuring smooth, predictable gear operation and helping to avoid cavitation-related damage. These factors don't govern cabin pressurization or fuel efficiency; they're specific to the reliability and performance of the hydraulic landing gear system.

7. In a hydraulically actuated landing gear extension, what is the correct standard sequence?

A. Hydraulic pressure is applied to gear actuators, gears rotate down from stowed position, doors open to clear the gear path, gear fully extends and locks, doors close to streamline the gear, and down-lock indicators confirm full extension.

B. Gears rotate down from stowed position, hydraulic pressure is applied to actuators, doors close to streamline, gear fully extends and locks, doors open to clear the gear path, and down-lock indicators confirm full extension.

C. Doors open to clear the gear path, hydraulic pressure is applied to actuators, gears rotate down from stowed position, gear fully extends and locks, doors close to streamline, and down-lock indicators confirm full extension.

D. Hydraulic pressure is applied to actuators, doors open to clear the gear path, doors close to streamline, gear rotates down, gear fully extends and locks, and down-lock indicators confirm extension.

In hydraulically actuated landing gear extension, the system is designed so energy is applied first to start moving the gear, and then the surrounding doors and locks coordinate in a safe sequence. Applying hydraulic pressure to the gear actuators starts the motion, moving the gear down from its stowed position. As the gear begins to move, the doors open to clear the gear path so there is no interference with the gear as it extends. The gear then fully extends and locks into the down position, providing a secure configuration for landing. After locking, the doors close to streamline the gear and reduce drag, and down-lock indicators confirm that the gear is fully extended and locked in place. This sequence ensures there's always clearance for the gear to move without the doors obstructing it, and that a reliable lock is established before the doors are sealed, giving the crew a positive indication that the gear is safely deployed.

8. Which of the following is NOT a typical inspection item for wheel and tire assemblies?

A. Tire tread depth.

B. Ply wear.

C. Wheel cracks.

D. Antenna alignment.

The main idea here is recognizing what is actually inspected on a wheel and tire assembly versus items that belong to other aircraft systems. Tire tread depth is checked to ensure there is enough rubber for safe contact and that the tread hasn't worn below minimum limits. Ply wear is looked for because when the tire's internal plies or belts show wear or separation, the tire's integrity is compromised and it can fail under load. Wheel cracks are a critical hazard since a cracked wheel can propagate and fail when stressed during takeoff, landing, or taxiing. Antenna alignment, on the other hand, relates to the aircraft's communication/navigation systems rather than the wheel and tire assembly, so it isn't part of a typical wheel-and-tire inspection.

9. Describe the typical sequence of events during a standard landing gear retraction in a tricycle-gear airplane.

A. After selecting retract, doors open, then gear retracts, and doors latch.

B. After selecting retract, gear extends, then doors close.

C. After selecting retract, hydraulic actuators extend the gear; doors begin to close.

D. After selecting retract, hydraulic actuators withdraw the gear, doors begin to close, the gear moves to the down-locked position, and doors fully latch closed; gear position indicators confirm stowage.

The sequence tests how landing gear retracts in a coordinated way: when the retract command is given, the hydraulic system withdraws the gear into the bay, doors begin to close around the gear, the gear moves to the fully stowed and secured position, the doors fully latch, and the gear position indicators confirm that the gear is safely stowed. This option best matches that full sequence: withdrawal of the gear, doors starting to close, the gear moving into the stowed/secured state, doors completing their latch, and indicators showing stowage. The other choices skip or reverse essential steps—one suggests doors open and close in the wrong order or that the gear extends, which isn't consistent with retraction.

10. Which item is not typically checked during a landing gear tire preflight inspection?

A. Tread wear.

B. Cuts.

C. Brake fluid level.

D. Bulges.

The essential idea is that a landing gear tire preflight is about the tire's condition and integrity. You inspect for signs that the tire may fail in flight: tread wear to gauge remaining life and traction, cuts in the tread or sidewall that could propagate, and bulges which point to internal ply or bladder damage and can lead to sudden blowouts. These checks are all directly related to the tire itself and its ability to perform safely. Brake fluid level, on the other hand, belongs to the brake system's hydraulic inspection, not the tire condition. It's checked as part of ensuring the braking system has proper fluid for operation and isn't a function of the tire's condition. So, the item not typically checked during a landing gear tire preflight is brake fluid level.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://landinggearbrakes.examzify.com

We wish you the very best on your exam journey. You've got this!