

ASA LANDING GEAR PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://asalandinggear.examzify.com>



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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

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- 1. If an airplane equipped with master cylinders and single-disk brakes has excessive brake pedal travel, but the brakes are hard and effective, what is the probable cause?**
 - A. Mismatched brake components.
 - B. Worn brake linings.
 - C. Improper fluid type in the system.
 - D. Faulty master cylinder seal.
- 2. What is the primary purpose of the landing gear fairing?**
 - A. To protect the gear from damage
 - B. To provide aerodynamic efficiency
 - C. To serve as a structural support
 - D. To assist with shock absorption
- 3. What is considered preventive maintenance regarding landing gear tires?**
 - A. Replacement of worn tires
 - B. Removal and installation
 - C. Balancing and alignment
 - D. Inflating tires to proper pressure
- 4. If air in the brake system is not the cause of spongy brake action, what is the next likely cause?**
 - A. Deteriorated brake linings
 - B. Low fluid level in the reservoir
 - C. Deteriorated flexible hoses
 - D. Faulty master cylinder
- 5. What does the term "cycle count" refer to in landing gear systems?**
 - A. The number of times the landing gear has been extended and retracted
 - B. The total weight the landing gear can support
 - C. The speed at which the landing gear operates
 - D. The maintenance frequency of the landing gear

- 6. What safety feature prevents the landing gear from being retracted while on the ground?**
- A. Landing gear locks
 - B. Weight on wheels switch
 - C. Brake sensor
 - D. Gear position indicator
- 7. How do retractable landing gear affect an aircraft's performance?**
- A. They increase weight significantly
 - B. They improve fuel efficiency by reducing drag
 - C. They limit the aircraft's speed
 - D. They decrease landing stability
- 8. What could cause parking brakes to bleed off pressure apart from an external leak?**
- A. A faulty brake pedal
 - B. An internal leak in the master cylinder
 - C. A broken cable
 - D. An empty reservoir
- 9. Which repair method is suitable for fixing a toe-in condition without component replacement?**
- A. Adjusting the wheel bearing
 - B. Re-torquing the wheels
 - C. Changing brake fluid
 - D. Using spacers at the scissor torque links
- 10. Which component is known to affect the stroke limitation in oleo shock struts?**
- A. The hydraulic fluid type
 - B. The sleeve, spacer, or bumper ring
 - C. The landing gear doors
 - D. The brake control system

Answers

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

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Explanations

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1. If an airplane equipped with master cylinders and single-disk brakes has excessive brake pedal travel, but the brakes are hard and effective, what is the probable cause?

- A. Mismatched brake components.
- B. Worn brake linings.**
- C. Improper fluid type in the system.
- D. Faulty master cylinder seal.

Excessive brake pedal travel, in the context of a system equipped with master cylinders and single-disk brakes where the brakes are still hard and effective, is typically indicative of worn brake linings. When brake linings wear down, they create a greater distance between the brake pedal and the brake components when the pedal is pressed. This increased distance leads to more travel in the pedal before the brakes engage, thus resulting in the excessive travel observed. The condition of the brake system allows the brakes to still function effectively because, although there is more pedal travel, the mechanical advantage provided by the design of the braking system ensures that sufficient force is transmitted to the braking surfaces for effective stopping capability. In contrast, issues like mismatched brake components or improper fluid type in the system generally lead to poor braking performance or responsiveness, not simply increased pedal travel with a still effective brake. A faulty master cylinder seal would typically result in a soft pedal feel or potential loss of braking effectiveness due to fluid leakage rather than just excessive travel. Therefore, worn brake linings are indeed the most likely cause for the condition described.

2. What is the primary purpose of the landing gear fairing?

- A. To protect the gear from damage
- B. To provide aerodynamic efficiency**
- C. To serve as a structural support
- D. To assist with shock absorption

The primary purpose of the landing gear fairing is to provide aerodynamic efficiency. Landing gear fairings are designed to streamline the aircraft's shape during flight, which helps reduce drag and improve overall performance. By smoothing out the irregular shape and surface of the landing gear, fairings minimize air resistance as the aircraft moves through the air. This aerodynamic efficiency is crucial for enhancing fuel efficiency and optimizing the flight characteristics of the aircraft. While the other functions, such as protecting the landing gear from damage or contributing to structural support, are important considerations in the overall design, their primary function is not as focused on aerodynamics. Fairings do not serve to absorb shock; that role is typically fulfilled by the shock struts and other components within the landing gear system. Therefore, the aerodynamic benefits gained from fairings are central to their purpose.

3. What is considered preventive maintenance regarding landing gear tires?

- A. Replacement of worn tires
- B. Removal and installation**
- C. Balancing and alignment
- D. Inflating tires to proper pressure

Preventive maintenance related to landing gear tires involves activities that aim to maintain the tires in good condition and extend their service life. Inflating tires to the proper pressure is crucial for ensuring optimal tire performance, safety, and wear characteristics. Proper inflation helps to maximize tire life, improve fuel efficiency, and contribute to better handling and braking. Regular checks and adjustments of tire pressure are essential to prevent issues such as blowouts or uneven wear, demonstrating the importance of this maintenance activity in the overall upkeep of landing gear tires. While replacing worn tires, removing and installing tires, and balancing and aligning them are important maintenance tasks, they tend to be reactive rather than preventive. They may occur after a problem has been identified or because the tires have reached the end of their serviceable life, rather than as a routine practice to avoid issues before they arise.

4. If air in the brake system is not the cause of spongy brake action, what is the next likely cause?

- A. Deteriorated brake linings
- B. Low fluid level in the reservoir
- C. Deteriorated flexible hoses**
- D. Faulty master cylinder

A spongy brake action typically indicates a problem within the brake system that affects the hydraulic pressure or the efficiency of braking components. If air in the brake lines has been ruled out, the next most probable cause is deteriorated flexible hoses. Flexible hoses can wear out over time due to exposure to heat, humidity, and the harsh chemicals that can be present in brake fluid. As hoses age, they can internally collapse or develop cracks, leading to a decrease in pressure, which can cause a spongy feel when the brake pedal is depressed. When the brake pedal is pressed, instead of transferring fluid pressure effectively to the brake calipers or drums, the compromised hose may allow the fluid to expand within the hose itself, resulting in a loss of effective braking force. While other components like deteriorated brake linings, low fluid levels in the reservoir, or a faulty master cylinder could contribute to brake performance issues, they are less likely to specifically produce a spongy feel compared to the action of a failing flexible hose. Deteriorated linings would typically cause reduced stopping power or increased stopping distances, low fluid levels would trigger an illuminated warning light, and a faulty master cylinder would more likely lead to a complete brake failure rather than just a

5. What does the term "cycle count" refer to in landing gear systems?

- A. The number of times the landing gear has been extended and retracted**
- B. The total weight the landing gear can support
- C. The speed at which the landing gear operates
- D. The maintenance frequency of the landing gear

The term "cycle count" in the context of landing gear systems specifically refers to the number of times the landing gear has been extended and retracted during its operational lifetime. This measure is crucial because each cycle places stress on the landing gear components, impacting their longevity and the need for maintenance or inspection. Aircraft manufacturers and maintenance organizations often track the cycle count as part of their maintenance programs to ensure the safety and reliability of the landing gear, as wear and fatigue can accumulate over time with more cycles. Thus, understanding the cycle count is essential for determining when components may need inspection, repair, or replacement to maintain optimal aircraft performance and safety.

6. What safety feature prevents the landing gear from being retracted while on the ground?

- A. Landing gear locks
- B. Weight on wheels switch**
- C. Brake sensor
- D. Gear position indicator

The weight on wheels switch is a crucial safety feature designed to prevent the landing gear from being retracted when the aircraft is on the ground. This switch detects whether the weight of the aircraft is resting on the landing gear. When the aircraft is on the ground, the switch is activated, sending a signal to the landing gear control system that prohibits retraction. This is essential for safety because retracting the landing gear while on the ground can lead to severe damage to the airplane and potentially endanger the safety of the occupants. The other features mentioned, while important in their own right, do not serve the specific function of preventing landing gear retraction during ground operations. Landing gear locks are more about ensuring that the gear remains in a specific position (down or up) once it is in place. A brake sensor typically monitors the status of the brakes rather than the landing gear position. A gear position indicator simply shows whether the gear is up or down, without actively preventing retraction based on the aircraft's weight status.

7. How do retractable landing gear affect an aircraft's performance?

- A. They increase weight significantly
- B. They improve fuel efficiency by reducing drag**
- C. They limit the aircraft's speed
- D. They decrease landing stability

Retractable landing gear significantly enhance an aircraft's performance by improving fuel efficiency through drag reduction. When the landing gear is extended, it creates additional aerodynamic drag, which can hinder the aircraft's performance and increase fuel consumption. By retracting the landing gear during flight, the aircraft presents a smoother profile to the oncoming airflow, minimizing drag and allowing for more streamlined flight. This reduction in drag not only improves fuel efficiency but also can enhance overall speed and range capabilities. Pilots can achieve and maintain higher speeds more easily and efficiently when the landing gear is retracted, which is essential for optimal flight performance. The other options do not reflect the primary impact of retractable landing gear on performance, as they either mischaracterize its effects or point out drawbacks that are not relevant to its main purpose.

8. What could cause parking brakes to bleed off pressure apart from an external leak?

- A. A faulty brake pedal**
- B. An internal leak in the master cylinder
- C. A broken cable
- D. An empty reservoir

The phenomenon of parking brakes losing pressure can indeed be attributed to factors beyond just external leaks, and one significant cause is an internal leak in the master cylinder. When there is an internal leak, the fluid that should be retained within the master cylinder can bypass seals or other components, leading to a gradual loss of pressure necessary to hold the brake in place. This internal malfunction might not be immediately apparent, as there may not be any visible signs of leakage, unlike external leaks that often result in fluid pooling under the vehicle. In contrast, a faulty brake pedal generally refers to issues like mechanical failures or improper alignment, which do not typically lead to a loss of hydraulic pressure independently. A broken cable specifically pertains to mechanical systems rather than hydraulic systems, while an empty reservoir would likely cause the brakes to fail entirely rather than simply bleed off pressure over time. Thus, the internal leak in the master cylinder effectively explains how parking brakes could lose pressure without any external evidence of failure, showcasing the subtle complexities of brake system maintenance and functionality.

9. Which repair method is suitable for fixing a toe-in condition without component replacement?

- A. Adjusting the wheel bearing
- B. Re-torquing the wheels
- C. Changing brake fluid
- D. Using spacers at the scissor torque links**

Using spacers at the scissor torque links is an effective method for addressing a toe-in condition without needing to replace any components. The toe-in condition refers to the alignment of the wheels, specifically that the front edges of the wheels are closer together than the rear edges. This misalignment can lead to uneven tire wear and handling issues. By introducing spacers at the scissor torque links, you can effectively adjust the angle of the landing gear, allowing for a correction in the toe alignment. This method enables precise adjustment without the need to replace parts, making it a cost-effective and efficient solution. The other methods listed do not directly relate to correcting a toe-in condition. Adjusting the wheel bearing and re-torquing the wheels are general maintenance practices that may contribute to overall wheel stability but do not specifically address alignment issues. Changing brake fluid has no relevance to wheel alignment at all, as it pertains to the braking system rather than the geometry of the landing gear.

10. Which component is known to affect the stroke limitation in oleo shock struts?

- A. The hydraulic fluid type
- B. The sleeve, spacer, or bumper ring**
- C. The landing gear doors
- D. The brake control system

The stroke limitation in oleo shock struts is primarily affected by the sleeve, spacer, or bumper ring. These components are integral to the design and function of oleo struts, which are used in aircraft landing gear to absorb shock during landing and taxiing. The sleeve and spacer determine the volume and thus the amount of hydraulic fluid that can be displaced within the strut during operation. When the landing gear compresses upon impact, the fluid is forced through or around these components. The bumper ring serves as a cushion to limit the extent of the shock strut's compression and helps smooth out the landing effect by providing a controlled stop for the movement of the strut. This mechanism ensures that the stroke, or the extent to which the strut can compress, is maintained within safe and functional limits, protecting the aircraft structure and enhancing passenger comfort. In contrast, while hydraulic fluid type, landing gear doors, and the brake control system are important to the overall operation and safety of the landing gear, they do not directly influence the stroke limitation of oleo shock struts. The hydraulic fluid type could slightly affect the damping characteristics, but it does not limit the stroke itself. Landing gear doors are primarily concerned with the aerodynamic streamlining of the aircraft and

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:

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

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