ASE Suspension and Steering (A4) Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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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. **If the vehicle's ride height is correct on the front but lower than specification on the rear, which front alignment angle would be most affected?**

   A. Toe

   B. Caster

   C. Camber

   D. SAI

2. **Which component directly affects how vertical tires are relative to the road surface?**

   A. Camber angle

   B. Toe angle

   C. SAI angle

   D. Caster angle

3. **Which of the following could cause a noise from the rear of the vehicle?**

   A. Worn rear wheel bearings

   B. Rear tires out of balance

   C. Missing spring separators

   D. Worn spring eye bushings

4. **A vehicle has hard steering at low speeds, and occasionally the engine will stall. Which of the following is the most likely cause?**

   A. Faulty power steering pressure switch

   B. Weak power steering pump

   C. Worn steering gear

   D. Worn ball joints

5. **Which alignment angle is adjusted last during a four-wheel alignment?**

   A. Front toe

   B. Rear toe

   C. Front camber

   D. Rear camber

6. A vibration is felt in the steering wheel at speeds above 30 mph. What could be the cause?

A. Front wheels out of balance

B. Rear wheels out of balance

C. Caster

D. Camber

7. Which component is essential for proper handling during cornering?

A. Suspension geometry

B. Tire tread depth

C. Brake rotor condition

D. Engine performance

8. When performing a four-wheel alignment, which adjustment is made to correct the thrust angle?

A. Rear camber

B. Rear toe

C. Front camber

D. Front toe

9. A vehicle becomes unpredictable when cornering due to what likely cause?

A. Worn track bushings

B. Worn shock bushings

C. Weak front springs

D. Weak rear springs

10. In a steering system with excessive play, which component is most likely worn?

A. Worn strut mounts

B. Worn sway bar bushings

C. Worn shock mounts

D. Worn rack mounts

Answers

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

Explanations

1. If the vehicle's ride height is correct on the front but lower than specification on the rear, which front alignment angle would be most affected?

A. Toe

B. Caster

C. Camber

D. SAI

When the ride height of a vehicle is correct in the front but lower than specifications in the rear, the front caster angle is most impacted. Caster refers to the angle created by the steering pivot point in relation to the vertical axis when viewed from the side. If the rear is lower, it can influence the weight distribution and suspension geometry of the front suspension. As the rear suspension compresses, it can affect the handling characteristics and stability, altering how the front wheels contact the road during steering. Specifically, a significant change in ride height can lead to a change in the caster angle, impacting steering feel and the vehicle's return to center after turning. In contrast, toe, which measures the direction the tires are pointing relative to each other, and camber, which refers to the tilt of the tires inward or outward from a vertical perspective, are less directly influenced by rear height changes. The Steering Axis Inclination (SAI) is also less likely to be affected in this scenario. Therefore, caster becomes the alignment angle most susceptible to changes due to variances in ride height in the rear of the vehicle.

2. Which component directly affects how vertical tires are relative to the road surface?

A. Camber angle

B. Toe angle

C. SAI angle

D. Caster angle

The camber angle is the component that directly affects how vertical the tires are in relation to the road surface. Camber refers to the angle formed between the vertical axis of the wheel and the vertical axis of the vehicle when viewed from the front or rear. The camber angle can be either positive or negative; positive camber tilts the top of the tire away from the vehicle, while negative camber tilts the top of the tire toward the vehicle. Correct camber settings are crucial for maximizing tire contact with the road during cornering, improving handling, and promoting even tire wear. If the camber angle is not within the specified range, it can lead to uneven tire wear and reduced traction, especially when turning. This makes camber a vital adjustment in suspension alignment to ensure that tires maintain optimal contact with the road surface through various driving conditions. The other angles, such as toe, SAI (Steering Axis Inclination), and caster, while important for different aspects of vehicle dynamics and handling, primarily influence steering responsiveness and stability rather than the vertical alignment of the tire relative to the road surface.

3. Which of the following could cause a noise from the rear of the vehicle?

A. Worn rear wheel bearings

B. Rear tires out of balance

C. Missing spring separators

D. Worn spring eye bushings

A noise from the rear of the vehicle can be attributed to various mechanical issues, and incorrectly attributing the cause could lead to ineffective repairs. When it comes to rear tires being out of balance, this can certainly lead to vibrations and noises, particularly at higher speeds. Unbalanced tires can result in uneven tire wear, and this wear may create a loud thumping or humming sound that originates from the rear of the vehicle as you drive. While rear wheel bearings, spring separators, and spring eye bushings can also lead to noises, they typically manifest in different ways or under specific conditions. Worn wheel bearings often create a grinding or whining sound, while issues with bushings and missing separators usually produce different types of noises, like clunks or rattles. Therefore, focusing on tire balance is crucial for diagnosing noise issues effectively, especially since tire balance is a common maintenance concern that directly impacts ride quality and can lead to other suspension-related issues as well.

4. A vehicle has hard steering at low speeds, and occasionally the engine will stall. Which of the following is the most likely cause?

A. Faulty power steering pressure switch

B. Weak power steering pump

C. Worn steering gear

D. Worn ball joints

The most likely cause of hard steering at low speeds combined with engine stalling is related to a faulty power steering pressure switch. The power steering pressure switch is responsible for detecting the hydraulic pressure in the power steering system and sending the appropriate signals to the engine control module (ECM). If this switch is faulty, it may not provide the correct feedback regarding steering effort, leading to hard steering because the power assist may not engage properly at low speeds. Additionally, a malfunctioning switch can impact the engine's performance, potentially causing it to stall, as it might incorrectly trigger changes in the engine's operation. Understanding the dynamics of the steering and power system is key. A weak power steering pump could also lead to hard steering due to an inability to provide adequate hydraulic pressure, but it would typically not be directly related to engine stalling. Similarly, worn steering gear or worn ball joints could affect vehicle handling and steering feel, but they don't have a direct link to the engine's stalling issue. Thus, the combination of hard steering and engine stalling points towards the power steering pressure switch as the most likely source of the problem.

5. Which alignment angle is adjusted last during a four-wheel alignment?

A. Front toe

B. Rear toe

C. Front camber

D. Rear camber

In a four-wheel alignment process, adjusting the front toe is performed last because it is critical for ensuring the vehicle's steering response and overall handling characteristics are optimized. The front toe setting influences how the tires align with the centerline of the vehicle, directly affecting tire wear and vehicle tracking. Prior to adjusting the front toe, other alignment angles such as camber and rear toe are set first to create a stable baseline of the vehicle's geometry. Maintaining this sequence is vital; once the foundational angles are determined, the final adjustments to the front toe can be made to fine-tune steering performance. Proper toe alignment ensures that both front tires point in the right direction, allowing for precise steering control and ultimately extending tire life. By adjusting the front toe last, technicians can confirm that the suspension components are in the correct positions before finalizing this crucial aspect of the alignment, leading to a more accurate setup overall.

6. A vibration is felt in the steering wheel at speeds above 30 mph. What could be the cause?

A. Front wheels out of balance

B. Rear wheels out of balance

C. Caster

D. Camber

When a vibration is felt in the steering wheel at speeds above 30 mph, the most likely cause is that the front wheels are out of balance. This is because the steering wheel is directly influenced by the front tires, which are responsible for steering the vehicle. An imbalance in the front wheels can result from uneven tire wear, improper tire inflation, or if weights used to balance the tires have come loose or fallen off. As the vehicle accelerates, the vibration from the imbalanced wheels becomes more pronounced, making it noticeable in the steering wheel. The other factors do not directly contribute to the specific symptom of a steering wheel vibration. While unbalanced rear wheels can cause vibrations, they typically manifest as vibrations felt in the seat rather than the steering wheel, since the rear wheels do not influence steering directly. Similarly, issues with caster and camber affect wheel alignment and handling characteristics rather than causing vibrations, particularly in the steering wheel. Caster impacts steering stability and feel, while camber affects tire wear and traction but would not specifically cause a vibration in the steering at higher speeds.

7. Which component is essential for proper handling during cornering?

A. Suspension geometry

B. Tire tread depth

C. Brake rotor condition

D. Engine performance

Suspension geometry is crucial for proper handling during cornering as it influences how weight is distributed across the tires, how much body roll occurs, and how the vehicle responds to steering inputs. The design of the suspension system, including elements such as camber, caster, and toe angles, affects traction, stability, and control when a vehicle is turning. Proper suspension geometry ensures that the tires maintain optimal contact with the road surface, allowing for efficient transfer of forces between the vehicle and the road. This is especially important during cornering, where dynamic loads shift, and precise handling characteristics are needed to maintain stability and control. The other components listed, while important for the overall performance of a vehicle, do not have the same direct impact on handling during cornering. Tire tread depth is crucial for traction, but without the appropriate suspension geometry to manage weight transfer and body dynamics, the handling may still be compromised. Brake rotor condition affects stopping power but does not directly relate to cornering functionality. Engine performance primarily influences acceleration rather than how well a vehicle handles corners. Thus, suspension geometry stands out as the key factor in ensuring proper handling during cornering.

8. When performing a four-wheel alignment, which adjustment is made to correct the thrust angle?

A. Rear camber

B. Rear toe

C. Front camber

D. Front toe

When performing a four-wheel alignment, correcting the thrust angle primarily involves adjusting the rear toe. The thrust angle is the angle between the vehicle's centerline and the direction in which the rear wheels are pointed. If the rear wheels are not aligned in the same direction as the front wheels, it can lead to uneven tire wear and handling issues. Adjusting the rear toe directly influences the positioning of the rear wheels. This adjustment helps ensure that the rear wheels are parallel to each other and in line with the vehicle's intended travel direction. Proper adjustment of the rear toe can effectively realign the thrust angle so that the vehicle tracks straight down the road. In contrast, adjustments to rear camber, front camber, or front toe do not directly address the thrust angle. While these angles can impact overall vehicle handling and tire wear, they do not correct the relationship between the rear wheels and the vehicle’s centerline. Thus, focusing on rear toe adjustments provides the necessary correction for thrust angle misalignment.

9. A vehicle becomes unpredictable when cornering due to what likely cause?

A. Worn track bushings

B. Worn shock bushings

C. Weak front springs

D. Weak rear springs

When a vehicle becomes unpredictable while cornering, worn track bushings can significantly contribute to this issue. Track bushings are designed to maintain proper alignment and control of the suspension components. If these bushings are worn or damaged, they can allow for excessive play in the suspension, leading to a lack of stability when cornering. This instability can manifest as wandering or a feeling that the vehicle is not responding accurately to steering inputs, making the vehicle feel unpredictable. The other options may have effects on handling but do not directly address cornering behavior in the same way. For instance, worn shock bushings can lead to reduced damping performance but primarily affect ride quality rather than predictability in steering. Similarly, weak front or rear springs can impact suspension height and load distribution but won't create the same direct instability as worn track bushings do during cornering. Hence, the condition of the track bushings is critical for maintaining predictable handling dynamics.

10. In a steering system with excessive play, which component is most likely worn?

A. Worn strut mounts

B. Worn sway bar bushings

C. Worn shock mounts

D. Worn rack mounts

In a steering system exhibiting excessive play, the component that is most likely to be worn is the rack mounts. The rack and pinion steering mechanism relies on precise alignment and stability to provide effective steering response. Over time, rack mounts can degrade due to wear, exposure to road conditions, and the stresses of steering maneuvers. When the rack mounts are worn, they can result in a loose connection between the steering rack and the vehicle frame, leading to increased play in the steering wheel. This excessive play can manifest as a loose feeling when turning the steering wheel, which can compromise the driver's control over the vehicle. Consequently, addressing worn rack mounts is crucial for restoring proper steering response and ensuring safe vehicle operation. While other components like strut mounts, sway bar bushings, and shock mounts can also contribute to ride quality and handling, they do not specifically impact the steering mechanism in the same direct way that worn rack mounts do. Thus, it is the condition of the rack mounts that predominantly leads to the excessive play described in the steering system.

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://asesuspensionandsteering-a4.examzify.com

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