

310T Truck and Coach Technician Certification Practice Exam (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

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- 1. What would be indicated when an ohmmeter connected across the J1939 backbone reads higher than normal resistance?**
 - A. One terminating resistor is open.**
 - B. High resistance in the CAN stubs.**
 - C. One terminating resistor is shorted.**
 - D. A short in the backbone wiring harness.**

- 2. Using an ohmmeter, what test results would indicate an inoperable block heater?**
 - A. Continuity between both heater terminals.**
 - B. Infinite resistance between both heater terminals.**
 - C. No continuity between either heater terminal and ground.**
 - D. Infinite resistance between either heater terminal and ground.**

- 3. What is the procedure for checking charging system regulated voltage?**
 - A. Use a carbon pile to control alternator output.**
 - B. Measure system voltage with engine at 1000 rpm.**
 - C. Turn on all electrical loads and run engine at 1000 rpm.**
 - D. Measure system voltage while alternator output is below 1/3.**

- 4. What should be done after replacing a tie rod end?**
 - A. Adjust toe.**
 - B. Adjust caster.**
 - C. Adjust camber.**
 - D. Adjust toe-out on turns.**

- 5. What is indicated by excessive air reservoir build up time?**
 - A. A plugged air drier.**
 - B. Air governor set too low.**
 - C. A leaking service relay valve.**
 - D. A restricted compressor air inlet.**

- 6. When attaching accessories or components, what part of a frame rail should not be drilled?**
- A. The face.**
 - B. The flange.**
 - C. The gusset.**
 - D. The cross-member.**
- 7. What should be inspected on a chain sling before the technician uses it?**
- A. Length and size.**
 - B. Bends and color.**
 - C. Elongation and twist.**
 - D. Date of manufacture and expiry date.**
- 8. What will cause excessive air pressure drop during a brake application?**
- A. Brakes adjusted too tight.**
 - B. Excessive pushrod travel.**
 - C. Air governor cut out set too low.**
 - D. Service tank relief valve leaking.**
- 9. What is the procedure for checking king pin wear?**
- A. Pry up on loaded tire and measure deflection.**
 - B. Measure spindle deflection through the turning radius.**
 - C. Remove wheel end assembly and measure vertical travel.**
 - D. Remove weight from spindle, pry up under tire and measure deflection.**
- 10. What is the purpose of performing an oil sample analysis?**
- A. To determine fuel contamination.**
 - B. To analyze wear metals and contaminants.**
 - C. To assess oil viscosity.**
 - D. To check for coolant leaks.**

Answers

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

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Explanations

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1. What would be indicated when an ohmmeter connected across the J1939 backbone reads higher than normal resistance?

- A. One terminating resistor is open.**
- B. High resistance in the CAN stubs.**
- C. One terminating resistor is shorted.**
- D. A short in the backbone wiring harness.**

When an ohmmeter connected across the J1939 backbone reads higher than normal resistance, it indicates that one terminating resistor is open. The J1939 network operates with a pair of terminating resistors at each end of the backbone to ensure proper signal integrity and reduce reflections. If one of these resistors is open, the overall resistance across the backbone will be higher than expected, reflecting the absence of that resistor. This results in improper communication on the CAN network. In a properly functioning J1939 network, you should observe a consistent resistance that is indicative of both terminating resistors being intact. An open resistor means that the circuit is incomplete, leading to signal issues that can affect data transmission between electronic control units (ECUs). Thus, identifying an open terminating resistor through a high resistance reading is critical for diagnosing and resolving communication problems on the network.

2. Using an ohmmeter, what test results would indicate an inoperable block heater?

- A. Continuity between both heater terminals.**
- B. Infinite resistance between both heater terminals.**
- C. No continuity between either heater terminal and ground.**
- D. Infinite resistance between either heater terminal and ground.**

An inoperable block heater will typically show infinite resistance between both heater terminals when tested with an ohmmeter. This result indicates that there is an open circuit within the heater element, meaning that electrical current cannot flow through it. When the block heater is functioning properly, you would expect to see a low resistance value reflecting the continuity of the heating element, which allows current to pass through. Infinite resistance signifies that there is a break in the element or a complete malfunction, preventing it from heating the engine block. The other options represent different scenarios: continuity between both heater terminals would suggest the heater is operational; no continuity between either terminal and ground implies the heater is isolated from the chassis, typically a good condition; and infinite resistance between either terminal and ground suggests a good insulation but does not provide information on the operational state of the heater element itself. Therefore, infinite resistance directly between the heater terminals is indeed the indicator of failure.

3. What is the procedure for checking charging system regulated voltage?

- A. Use a carbon pile to control alternator output.
- B. Measure system voltage with engine at 1000 rpm.
- C. Turn on all electrical loads and run engine at 1000 rpm.
- D. Measure system voltage while alternator output is below 1/3.**

The procedure for checking the charging system regulated voltage involves measuring system voltage under specific conditions to ensure the alternator is functioning correctly. The correct choice highlights that measuring system voltage while the alternator output is below 1/3 provides a controlled environment where fluctuations in output can be effectively monitored. Measuring the voltage when the alternator is not operating at its maximum capacity allows you to see how well the system operates under less demanding conditions. This is crucial for diagnosing potential issues with regulation and ensuring that the alternator can maintain proper voltage levels when the electrical load increases. In contrast, using a carbon pile to control alternator output might not accurately reflect actual system conditions as it doesn't simulate the operational load of a vehicle. Measuring system voltage with the engine at 1000 rpm is part of the procedure, but it does not specify the alternator's output condition, which is essential for an accurate assessment. Turning on all electrical loads and running the engine at 1000 rpm could provide insights into system performance, but it may not effectively demonstrate regulated voltage under lower operational conditions. Understanding the context of each step in the procedure helps in diagnosing charging system performance accurately.

4. What should be done after replacing a tie rod end?

- A. Adjust toe.**
- B. Adjust caster.
- C. Adjust camber.
- D. Adjust toe-out on turns.

After replacing a tie rod end, it is necessary to adjust the toe for several important reasons. The tie rod end is a crucial component of the steering mechanism that connects the steering gear to the steering knuckle. When it is replaced, the alignment of the wheels can be altered, potentially leading to uneven tire wear, steering problems, or compromised vehicle handling. The toe alignment specifically refers to the angle of the wheels in relation to the centerline of the vehicle. Proper toe adjustment ensures that the wheels are parallel or angled correctly to optimize their relationship during steering and driving. This adjustment is key to maintaining vehicle stability, safety, and tire health. In contrast, caster and camber adjustments relate to other aspects of wheel alignment that are not directly influenced by the addition or replacement of a tie rod end. Caster affects the steering axis angle, while camber deals with the tilt of the wheels. Adjusting toe-out on turns is also a specific adjustment related to handling but is adjusted based on other criteria rather than after simply changing a tie rod end. Thus, adjusting the toe is the immediate and essential step to ensure optimal alignment after the replacement.

5. What is indicated by excessive air reservoir build up time?

- A. A plugged air drier.**
- B. Air governor set too low.**
- C. A leaking service relay valve.**
- D. A restricted compressor air inlet.**

Excessive air reservoir build-up time typically indicates that there is a restriction preventing adequate airflow into the air system. This aligns with the idea of a restricted compressor air inlet, as such a restriction would impede the efficient operation of the compressor, causing it to take longer to build up the necessary air pressure in the reservoirs. When the air inlet to the compressor is restricted, the volume of air that the compressor can draw in is reduced, which directly impacts its ability to generate the required pressure quickly. This results in a longer than normal build-up time for the air reservoirs. Identifying and rectifying a restricted air inlet is crucial for restoring the proper functioning of the air brake system, ensuring that systems relying on compressed air operate efficiently and safely. The other answer choices point to different issues within the air system that would not specifically result in excessive build-up time: a plugged air dryer might affect air quality but not build-up speed directly; an air governor set too low would lead to premature cut-out, not longer build times; and a leaking service relay valve could cause loss of pressure but would not create a prolonged build-up scenario.

6. When attaching accessories or components, what part of a frame rail should not be drilled?

- A. The face.**
- B. The flange.**
- C. The gusset.**
- D. The cross-member.**

The flange of a frame rail should not be drilled when attaching accessories or components because it plays a critical structural role. The flange is designed to distribute loads and provide torsional strength to the frame. Drilling into the flange can compromise this strength, leading to potential failure in high-stress applications, such as during driving or in collision situations. Maintaining the integrity of the flange is crucial for the overall performance and safety of the vehicle. Other parts of the frame rail may be more suited for modification, but the flange is specifically designed to remain intact to ensure proper load handling and structural integrity.

7. What should be inspected on a chain sling before the technician uses it?

- A. Length and size.**
- B. Bends and color.**
- C. Elongation and twist.**
- D. Date of manufacture and expiry date.**

When preparing to use a chain sling, inspecting for elongation and twist is crucial. Elongation refers to any lengthening of the links due to excessive load or fatigue. This can impair the sling's strength and reliability, making it unsafe for lifting operations. If the sling has elongated significantly, it may not be capable of supporting the intended load safely. Twist in the links can also impact how the load is distributed and can lead to uneven wear or potential failure during operation. A twisted chain sling is more likely to cause unpredictable movements during lifting, posing safety risks to operators and bystanders. While checking for length and size, bends, and even the manufacturing date are important maintenance practices, they don't specifically address immediate safety concerns related to the structural integrity and performance of the sling during its use. Hence, focusing on elongation and twist directly correlates with the operational safety of the chain sling.

8. What will cause excessive air pressure drop during a brake application?

- A. Brakes adjusted too tight.**
- B. Excessive pushrod travel.**
- C. Air governor cut out set too low.**
- D. Service tank relief valve leaking.**

Excessive pushrod travel is a key factor that can lead to an excessive air pressure drop during a brake application. When the pushrod travel is greater than the designed specifications, it means the brake shoes are moving further away from the drum than necessary. This increased travel requires more air to engage the brakes fully, which can lead to a significant drop in air pressure. Additionally, an excessive pushrod travel may indicate that the brakes are not properly adjusted or may have worn components that affect the overall effectiveness of the brake system. This misalignment can exacerbate air pressure drop because the air brake system not only relies on pressure to apply the brakes but also on the correct positioning and movement of the brake components. In contrast, other potential causes like brakes adjusted too tightly would generally lead to brake dragging rather than an excessive air pressure drop. The air governor cut-out set too low would cause the system to not reach optimal pressure, but it doesn't directly relate to air loss during braking. A leaking service tank relief valve would cause air loss but would not specifically affect the amount of air required during a brake application. Thus, excessive pushrod travel is the most direct contributor to an excessive drop in air pressure during braking.

9. What is the procedure for checking king pin wear?

- A. Pry up on loaded tire and measure deflection.
- B. Measure spindle deflection through the turning radius.
- C. Remove wheel end assembly and measure vertical travel.
- D. Remove weight from spindle, pry up under tire and measure deflection.**

The procedure for checking king pin wear involves making sure that the load is properly addressed when measuring the deflection of the king pin assembly. Removing the weight from the spindle ensures that the suspension system is not under compression, allowing for accurate measurement of any potential deflection caused by wear on the king pin. By prying up under the tire, any vertical movement can be observed and quantified. This measurement of deflection is critical because it translates directly to wear on the king pin. A significant amount of vertical movement may indicate that the king pin or bushings are worn, which could affect steering and handling of the vehicle. In contrast, the other options do not provide a reliable method for determining king pin wear. Some involve measuring deflection while the suspension is loaded, which can lead to inaccurate readings since the weight could mask any play in the king pin. Others might not directly measure the vertical travel related to king pin integrity, further underscoring the importance of checking while the weight is removed to obtain clean, accurate data. Therefore, the correct answer effectively addresses the procedure required for an accurate assessment of king pin wear.

10. What is the purpose of performing an oil sample analysis?

- A. To determine fuel contamination.
- B. To analyze wear metals and contaminants.**
- C. To assess oil viscosity.
- D. To check for coolant leaks.

Performing an oil sample analysis primarily serves the purpose of analyzing wear metals and contaminants present in the oil. This process is essential for determining the health and condition of the engine or component being analyzed. By identifying wear metals, such as iron or copper, technicians can assess the wear characteristics of various engine components, which allows them to catch potential failures before they occur. Additionally, contamination by particles or substances can indicate problems such as incomplete combustion, wear, or fluid degradation, giving valuable insight into maintenance needs and prolonging the life of the engine or machinery. In contrast, while determining fuel contamination is important, it is a separate diagnostic focus. Assessing oil viscosity is relevant to how the oil performs under operating conditions, but it does not provide insights into wear metals and contaminants, which are critical for understanding the overall health of the machinery. Checking for coolant leaks is also vital but falls outside the specific scope of oil sample analysis, which focuses mainly on the condition of the oil itself and the wear characteristics of the engine components it lubricates.

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://310truckcoachtechnician.examzify.com>

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

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