NOCTI Diesel Technology 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. Which of the following foundation brake parts should be lubricated with chassis grease?

A. Wheel Cylinders

B. Brake Drums

C. S-Cam Bushings

D. Push Rods

2. When performing the flywheel runout check, the dial indicator base is secured to the flywheel housing and the pointer rests on which surface?

A. Flywheel face

B. Crankshaft journals

C. Clutch pressure plate

D. Flywheel rim

3. Excessive preloads in a steering gear box would result in

A. Hard steering

B. Loose steering

C. Wandering

D. No effect

4. A breaker bar, with its additional length, generates more _____ than using a standard wrench with the same amount applied force.

A. Torque

B. Speed

C. Force

D. Mass

5. Vehicle alignment will not correct Pinion angle.

A. Pinion angle

B. Camber

C. Toe

D. Caster

6. For the Spicer double plate clutch with a non-synchronized transmission, the correct pedal height where the throw-out bearing contacts the clutch brake is

A. 2 inches

B. 3 inches

C. 4 inches

D. 5 inches

7. The primary cause of low coolant temperature in a diesel engine is

A. A faulty thermostat

B. Low radiator flow

C. Coolant leak

D. Water pump failure

8. What device may be used to repair a bolt hole that has been stripped out and is unable to be re-tapped?

A. Epoxy putty

B. Dowel pin

C. Tap

D. Heli-coil

9. MSDS stands for

A. Manual Safety Data Sheet

B. Material Safety Data Summary

C. Material Safety Data Sheet Index

D. Material Safety Data Sheet

10. During welding, popping sounds and pitting indicate flux impurity. Which issue is most closely associated with this condition?

A. Insufficient shielding gas

B. Too low amperage

C. Impurities in the flux

D. Dull electrode

Answers

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

Explanations

1. Which of the following foundation brake parts should be lubricated with chassis grease?

A. Wheel Cylinders

B. Brake Drums

C. S-Cam Bushings

D. Push Rods

In drum-type foundation brakes, lubrication is used only on moving metal-to-metal contact points that could wear or seize. The S-Cam mechanism relies on bushings that allow the cam shaft to rotate smoothly as the brake shoes are spread. These S-Cam bushings should be lubricated with chassis grease to reduce wear, prevent rust, and ensure the cam turns freely so the shoes apply evenly. The other components aren't lubricated with grease for safety and performance reasons. Wheel cylinders are hydraulic devices; introducing grease would contaminate the brake fluid and compromise hydraulic braking. Brake drums are the friction surfaces that interact with the shoes, so any grease on them would reduce friction and cause braking problems. Push rods aren't targeted for chassis grease in typical brake maintenance, as their function is mechanical linkage rather than a bearing surface that needs lubrication. So, the S-Cam bushings are the parts that should be lubricated with chassis grease.

2. When performing the flywheel runout check, the dial indicator base is secured to the flywheel housing and the pointer rests on which surface?

A. Flywheel face

B. Crankshaft journals

C. Clutch pressure plate

D. Flywheel rim

The main idea is to check how true the flywheel is relative to the crankshaft by measuring the surface that actually mates with the clutch. The dial indicator is fixed to the flywheel housing and the probe rests on the flywheel face. As the flywheel rotates, any wobble or out-of-flatness on that face shows up as movement on the dial, indicating runout. The flywheel face is the reference surface that must stay true because it directly affects clutch engagement and transmission alignment. resting on the crankshaft journals, the clutch pressure plate, or the rim wouldn't reflect the surface that the clutch relies on for proper operation, so they aren't used here. If the dial indicates excessive runout, resurfacing or replacement of the flywheel may be necessary to meet spec and ensure smooth clutch engagement.

3. Excessive preloads in a steering gear box would result in

A. Hard steering

B. Loose steering

C. Wandering

D. No effect

Excessive preload in a steering gear box increases friction inside the gear train. Preload is meant to remove play between gear teeth and bearings, but when it is set too high, the parts push against each other too tightly, making the steering harder to turn. You'll feel a stiff, heavy steering effort rather than a smooth, easy turn. Loose steering would come from too little preload or worn components, wandering from issues like misalignment or tire problems, and there would still be an effect with wrong preload—so this choice isn't correct.

4. A breaker bar, with its additional length, generates more _____ than using a standard wrench with the same amount applied force.

A. Torque

B. Speed

C. Force

D. Mass

Torque is the turning effect a force produces, and it depends on how far from the pivot you apply that force. A breaker bar lengthens the distance from the bolt to where you push, so for the same amount of force you generate a larger torque. In other words, longer leverage multiplies the turning effect without changing the force you apply, making it easier to loosen tight fasteners. The speed or mass aren't directly increased by the longer handle; the key change is the increased torque from the longer lever arm.

5. Vehicle alignment will not correct Pinion angle.

A. Pinion angle

B. Camber

C. Toe

D. Caster

The key idea is that wheel alignment adjusts the orientation of the wheels themselves, not the driveline. During a typical alignment, you set camber, toe, and caster to ensure proper tire contact and steering dynamics. Pinion angle, on the other hand, is the angle between the driveshaft and the differential (the driveline geometry). That angle isn't changed by aligning the wheels, so alignment cannot fix a misaligned pinion angle. If the pinion angle is off, you correct it by adjusting the driveline setup—such as changing the differential mounting geometry, adding or removing shims, using adjustable control arms, or using a driveshaft with the proper angle—rather than through wheel alignment. Changes in ride height or suspension can affect pinion angle, which is why driveline corrections are needed rather than standard alignment adjustments.

6. For the Spicer double plate clutch with a non-synchronized transmission, the correct pedal height where the throw-out bearing contacts the clutch brake is

A. 2 inches

B. 3 inches

C. 4 inches

D. 5 inches

The point being tested is when the throw-out bearing is positioned to contact the clutch brake in a Spicer double-plate clutch with a non-synchronized transmission. That brake action is designed to slow the flywheel/input shaft to help you mesh gears smoothly during a shift. The pedal height at which this contact occurs is fixed by the linkage geometry and the brake's location on the flywheel. Four inches is the mid-travel position where the bearing meets the clutch brake at the correct moment: late enough that the clutch is not fully released yet, but early enough to impart the brake action as you begin to disengage. This timing helps prevent gear clash and reduces shock loads on the gears during shifts. If you only travel two or three inches, the brake contact would be premature or unlikely to occur in time for a smooth shift; if you go toward five inches, the brake would stay engaged longer, causing unnecessary engine drag and wear.

7. The primary cause of low coolant temperature in a diesel engine is

A. A faulty thermostat

B. Low radiator flow

C. Coolant leak

D. Water pump failure

The temperature of the engine coolant is controlled by the thermostat, which regulates when coolant can flow to the radiator. When the engine is cold, the thermostat should stay closed to let the engine warm up quickly; once the coolant reaches the operating temperature, it opens to allow heat to be shed through the radiator. If the thermostat is faulty and stuck open, coolant continuously flows to the radiator even while the engine is still cold, so the engine never reaches its normal operating temperature and the measured coolant temperature stays low. Why the other options don't fit: a low radiator flow would reduce cooling effectiveness when the engine is hot and can lead to overheating, not keep the engine cold. A coolant leak lowers the coolant level and can cause overheating or air pockets, not a persistent low temperature. A failed water pump stops proper circulation and typically causes overheating as well.

8. What device may be used to repair a bolt hole that has been stripped out and is unable to be re-tapped?

A. Epoxy putty

B. Dowel pin

C. Tap

D. Heli-coil

When threads in a bolt hole are damaged beyond saving, you need a way to restore the internal threads so a bolt can bite again. A Helicoil is a threaded insert that fills the damaged hole and provides a new, durable internal thread for the bolt. You drill to the specified size, insert the coil with its own internal threads, and remove the tang so the bolt can engage the new threads just like it did originally. This approach preserves the hole and offers a strong, reusable repair. Epoxy putty won't provide a reliable, load-bearing thread. A dowel pin is used for alignment or locating, not for repairing threads. A tap is used to cut threads, but if the hole can't be re-tapped, you need the insert to rebuild the threads rather than trying to cut new ones.

9. MSDS stands for

A. Manual Safety Data Sheet

B. Material Safety Data Summary

C. Material Safety Data Sheet Index

D. Material Safety Data Sheet

The main idea is to know the exact term used for the document that conveys chemical hazards and safety information. The correct answer is Material Safety Data Sheet. This is the standard name for the document that accompanies chemicals and includes details like hazard identification, composition, first aid, fire and spill procedures, handling and storage, and protective measures. The other options don't fit because they describe a manual, a summary, or an index, rather than the full safety data sheet. Note that in many places this document is now called a Safety Data Sheet (SDS) under the Globally Harmonized System, but the traditional acronym MSDS stands for Material Safety Data Sheet.

10. During welding, popping sounds and pitting indicate flux impurity. Which issue is most closely associated with this condition?

A. Insufficient shielding gas

B. Too low amperage

C. Impurities in the flux

D. Dull electrode

When flux has impurities, it can release gases as it heats, which disrupts the weld by causing the arc to pop and the molten metal to spatter, leading to pits in the weld. This popping and pitting are a direct sign that the flux itself is contaminated, so impurities in the flux is the best explanation. If shielding gas were insufficient, you'd typically see porosity and oxidation due to the weld being exposed to the atmosphere. If amperage were too low, the arc would be weak and penetration poor, but not specifically link to gas release from the flux. A dull electrode tends to cause a rough arc and inconsistent bead, again not the gas-release symptom tied to flux impurities.

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://noctidieseltechnology.examzify.com

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