

Reciprocating Engine Overhaul 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

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- 1. What inspections are performed on valve springs during overhaul?**
 - A. Visual cracks, only; replace if crack found.**
 - B. Measure installed height only; no other checks.**
 - C. Visual cracks, tension consistency, installed height; replace if out of spec.**
 - D. Color of springs checked for condition.**

- 2. Crankshaft runout checks are usually performed under which conditions?**
 - A. During engine overhaul and after a prop strike**
 - B. During annual inspection**
 - C. After a prop strike or sudden engine stoppage**
 - D. During 100-hour inspection**

- 3. Which bearing type must be continuously lubricated by pressure oil?**
 - A. Plain**
 - B. Ball**
 - C. Roller**
 - D. Journal**

- 4. Why is valve timing verification critical and what tools are used?**
 - A. To ensure correct intake/exhaust timing; use timing marks, dial indicators, and a cam timing method per manual.**
 - B. To measure piston ring gap; use feeler gauges.**
 - C. To determine oil viscosity; use oil testing kit.**
 - D. To evaluate crankshaft balance; use balancer weights.**

- 5. Which engine servicing operation generally requires engine pre-oiling prior to starting the engine?**
 - A. Engine overhaul**
 - B. Routine maintenance**
 - C. Engine installation**
 - D. Calibration**

- 6. How is crankshaft straightness checked and what readings indicate replacement?**
- A. Visual inspection for straightness.**
 - B. Use a straight edge only to check straightness.**
 - C. Use a dial indicator to measure bend/runout; out-of-spec indicates replacement.**
 - D. Inspect for color wear on the journals.**
- 7. If an engine overhaul is mandatory for flight operations conducted by a company, who can extend the overhaul time?**
- A. FAA**
 - B. Manufacturer**
 - C. FAA-approved repair station**
 - D. Certificated inspector**
- 8. Which cleaning solvent is preferred for disassembled engine parts during overhaul?**
- A. Water-based degreaser**
 - B. Soap and water**
 - C. Mineral spirits solvent**
 - D. Alcohol-based cleaner**
- 9. What is the decimal equivalent of the fraction 64/16?**
- A. 2.0**
 - B. 6.4**
 - C. 4.0**
 - D. 3.0**
- 10. If the oil pressure of a cold engine is higher than at normal operating temperatures, the engine's lubrication system is probably operating normally.**
- A. False**
 - B. True**
 - C. Not enough data**
 - D. Cannot determine**

Answers

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

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Explanations

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1. What inspections are performed on valve springs during overhaul?

- A. Visual cracks, only; replace if crack found.**
- B. Measure installed height only; no other checks.**
- C. Visual cracks, tension consistency, installed height; replace if out of spec.**
- D. Color of springs checked for condition.**

Valve spring inspections focus on three things to ensure proper valve control: cracks, tension, and installed height. Visual inspection catches cracks or flaws in the spring body that could lead to sudden failure. But fatigue can wear a spring even without obvious cracks, so checking tension consistency is essential—this means verifying the spring develops the correct force as it compresses, matching the engine’s specifications across the operating range. Installed height matters because the spring’s preload sets the valve seat pressure; if the installed height is out of spec, the valve may not seal properly or could float at high RPM. If any of these checks fail, the spring should be replaced to protect valve timing and sealing. Color or appearance alone isn’t a reliable measure of condition, so it isn’t sufficient by itself.

2. Crankshaft runout checks are usually performed under which conditions?

- A. During engine overhaul and after a prop strike**
- B. During annual inspection**
- C. After a prop strike or sudden engine stoppage**
- D. During 100-hour inspection**

Crankshaft runout checks measure how far the crankshaft deviates from true rotation, which reveals any bending or misalignment that could affect engine operation. This measurement requires access to the crankshaft and precise setup with dial indicators, so it’s done when the engine is opened up during overhaul to verify overall condition and determine if the crank is within tolerance. A prop strike is a common cause of crankshaft damage because the sudden impact can bend or twist the shaft, making a runout check essential before reuse. Routine annual or 100-hour inspections don’t typically involve disassembly for this precise measurement, and a sudden engine stoppage is an abnormal event that may lead to damage but isn’t a standard trigger for runout checks unless damage is suspected.

3. Which bearing type must be continuously lubricated by pressure oil?

- A. Plain**
- B. Ball**
- C. Roller**
- D. Journal**

Plain bearings rely on a continuous film of lubricant between sliding surfaces to prevent metal-to-metal contact. Because the surfaces slide against each other, this film must be maintained at all times, which is achieved by delivering oil under pressure. The pressurized oil not only forms and sustains the lubricating film but also helps carry away heat generated by sliding motion, protecting the bearing from overheating and wear. In contrast, rolling-element bearings like ball or roller types use discrete rolling surfaces, and while they can be lubricated by oil or grease, they do not depend on a continuously pressurized oil film in the same way. Journal bearings are essentially a type of plain bearing, so they share the same lubrication requirement.

4. Why is valve timing verification critical and what tools are used?

- A. To ensure correct intake/exhaust timing; use timing marks, dial indicators, and a cam timing method per manual.**
- B. To measure piston ring gap; use feeler gauges.**
- C. To determine oil viscosity; use oil testing kit.**
- D. To evaluate crankshaft balance; use balancer weights.**

Valve timing verification ensures the camshaft and crankshaft stay synchronized so the intake and exhaust valves open and close at the correct times in the combustion cycle. When timing is correct, the engine breathes properly, builds compression when it should, and avoids valve-piston interference in engines where parts can collide if timing is off. This is essential for power, efficiency, and reliability across operating conditions. To verify timing, you use the timing marks on the timing gear or pulley and align them per the service manual to the correct reference position. A dial indicator is often used to measure valve events such as lift and duration, confirming that the camshaft timing matches the specified values. Following the cam timing procedure exactly as outlined in the manual is key, because the procedure can vary between engines and may require a timing tool, precise positioning, and verified measurements. Other tasks mentioned here don't fit timing verification. Piston ring gap measurement with feeler gauges is about ring seating, not valve events. Oil viscosity testing checks lubrication properties, not valve timing. Crankshaft balance with balancer weights relates to rotating mass balance, not the timing of valve events.

5. Which engine servicing operation generally requires engine pre-oiling prior to starting the engine?

- A. Engine overhaul**
- B. Routine maintenance**
- C. Engine installation**
- D. Calibration**

Getting oil to every bearing and moving part before the first start is key to protecting the engine from wear during initial startup. When an engine has been removed and then reinstalled, the lubrication system can be dry or partially drained, and oil has not yet filled all passages. Pre-oiling forces oil through the galleries and bearings so that, when the crank is first turned, oil pressure is established immediately and metal-to-metal contact is avoided. This makes engine installation the operation where pre-oiling is most commonly required. Routine maintenance mainly involves checking and topping up oil and fluids, not priming the entire oil system before startup. An overhaul or calibration can involve priming as part of the reassembly or setup, but the situation that most clearly needs pre-oiling before starting is installing a rebuilt or new engine where the oil system has been drained or unprimed.

6. How is crankshaft straightness checked and what readings indicate replacement?

- A. Visual inspection for straightness.**
- B. Use a straight edge only to check straightness.**
- C. Use a dial indicator to measure bend/runout; out-of-spec indicates replacement.**
- D. Inspect for color wear on the journals.**

Crankshaft straightness is checked by measuring how much the shaft deviates from a true straight axis as it is rotated. The most reliable way to do this is with a dial indicator, because it quantitatively records small departures in alignment. In practice, the crank is supported so it can rotate in a fixture (often on suitable supports near the main journals), and a dial indicator is set against a fixed reference surface on the crank. As you rotate the crank through a full 360 degrees, you watch the indicator and capture the highest and lowest readings. The difference between those readings is the bend or runout. This measurement is then compared to the engine manufacturer's specified limit. If the deviation is out of spec, the crankshaft is considered faulty for straightness and should be replaced (some cases may allow reground/in-service correction only within tight limits, but generally if out-of-spec, replacement is required). Visual inspection or using a straight edge alone isn't sufficient because they can miss small, nonvisible bends or twists and won't quantify deviation accurately. Inspecting for journal color wear doesn't assess straightness at all.

7. If an engine overhaul is mandatory for flight operations conducted by a company, who can extend the overhaul time?

- A. **FAA**
- B. Manufacturer
- C. FAA-approved repair station
- D. Certificated inspector

Extending a mandatory overhaul time is a change to regulatory maintenance intervals, and that authority rests with the aviation regulator. The manufacturer may define recommended or required intervals, but any legal extension must be approved by the FAA to ensure continued airworthiness. The FAA can authorize an extension through approved data changes, field approvals, or amendments to the maintenance program. An FAA-approved repair station must follow approved data and cannot unilaterally extend the interval, and a certificated inspector certifies compliance with existing rules rather than granting extensions. So, the FAA is the entity that can authorize extending the overhaul time.

8. Which cleaning solvent is preferred for disassembled engine parts during overhaul?

- A. Water-based degreaser
- B. Soap and water
- C. **Mineral spirits solvent**
- D. Alcohol-based cleaner

When cleaning disassembled engine parts, you want a solvent that effectively dissolves oil and grease without introducing moisture or harming the metal surfaces or seals you'll rely on later. Mineral spirits solvent fits this need because it is a non-water-based hydrocarbon cleaner that lifts and dissolves oily deposits from metal parts. Its use minimizes rust risk since no water is introduced, and it dries relatively cleanly, leaving little residue that could interfere with mating surfaces. It also tends to be compatible with common engine metals and elastomers found in old components that will often be replaced during overhaul, reducing the chance of swelling or degradation. Water-based degreasers bring in moisture, which can promote corrosion on exposed metal during cleaning and drying. Soap and water also introduce water and may require thorough rinsing and drying to avoid rust or soap residue. Alcohol-based cleaners evaporate quickly and can affect paints, coatings, or certain elastomers, making them less versatile for general disassembly cleanup.

9. What is the decimal equivalent of the fraction 64/16?

- A. 2.0
- B. 6.4
- C. **4.0**
- D. 3.0

Dividing 64 by 16 tells you how many times 16 fits into 64. Since 16×4 equals 64, the quotient is 4. Writing that as a decimal gives 4.0, so the decimal equivalent is 4.0. The other options don't fit because they would imply multiplying 16 by those numbers to get 64 (for example, 2.0 gives 32, 3.0 gives 48, 6.4 gives 102.4), which isn't the case here.

10. If the oil pressure of a cold engine is higher than at normal operating temperatures, the engine's lubrication system is probably operating normally.

A. False

B. True

C. Not enough data

D. Cannot determine

Oil viscosity changes with temperature, so a cold engine has oil that's thicker and offers more resistance to flow. The pump must push this thicker oil through bearings and galleries, which tends to raise the pressure. Once the engine warms up, the oil thins, flows more easily, and the system pressure settles to the normal hot-range. So seeing higher oil pressure when cold compared with normal operating temperature is expected and usually indicates the lubrication system is functioning correctly, assuming the hot pressure is within specification. If hot pressure were abnormally high or low, that would point to a problem, but the described pattern itself is normal.

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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://recipengineoverhaul.examzify.com>

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

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