

GMA Welding for Collision Repair Welding 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. Which welding technique decreases penetration by pointing at the weld bead and pushing away from it?**
 - A. Pull**
 - B. Push**
 - C. Drag**
 - D. Sweep**

- 2. For plug welds when no vehicle maker recommendation exists, what hole size should be drilled or punched in the location of the spot welds being replaced?**
 - A. 8 mm**
 - B. 5/16 inch**
 - C. 3/16 inch**
 - D. 1/4 inch**

- 3. What is the term for a groove cut into the base metal at one or both sides of the weld bead, which may be caused by unbalanced voltage and amperage settings or improper welding gun angles?**
 - A. Porosity**
 - B. Crater**
 - C. Undercut**
 - D. Overlap**

- 4. Which welding position is typically described as the overhead position?**
 - A. Overhead position**
 - B. Flat position**
 - C. Vertical position**
 - D. Horizontal position**

- 5. Melt through that creates a ripple is a sign of _____ weld penetration.**
 - A. Poor**
 - B. Burn through**
 - C. Inadequate**
 - D. Good**

- 6. Which coating should be applied to bare metal before plug welding, if applicable?**
- A. Weld-through primer**
 - B. Anti-spatter**
 - C. Zinc coating**
 - D. Rust inhibitor**
- 7. What is the travel angle for the open butt joint weld described?**
- A. 70°**
 - B. 60°**
 - C. 80°**
 - D. 50°**
- 8. For plug welds, what must be true about the hole after welding?**
- A. It should be left partially open**
 - B. It should be widened after welding**
 - C. It must be completely filled**
 - D. It should be filled partially and then ground**
- 9. Which sequence correctly lists the three steps described for the destructive test?**
- A. Band the pieces along the weld axes with the root on the face of the bend; hammer the sample flat; inspect for cracks**
 - B. Hammer the sample flat; band the pieces; inspect for cracks**
 - C. Band the pieces with the root on the face of the bend; hammer the sample flat; inspect for cracks**
 - D. Inspect for cracks; band the pieces; hammer the sample flat**
- 10. GMA (MIG) plug welds join two or more lap pieces together and are used to replace factory spot welds. What type of weld is this?**
- A. Lap weld**
 - B. Seam weld**
 - C. Butt weld**
 - D. Plug weld**

Answers

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

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Explanations

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1. Which welding technique decreases penetration by pointing at the weld bead and pushing away from it?

- A. Pull
- B. Push**
- C. Drag
- D. Sweep

Pushing the MIG gun while aiming the electrode toward the weld bead and moving away from it reduces heat input into the joint. This causes the arc to spread heat more along the surface, producing a wider, flatter bead with shallower penetration. That lower penetration helps prevent burn-through on thin sheets, which is often desirable in collision repair work. In contrast, pulling the gun toward you concentrates heat into the weld pool, leading to deeper penetration and a taller bead. The terms drag or sweep describe different motion styles, but the push technique specifically lowers penetration by directing the heat away from the joint as you travel.

2. For plug welds when no vehicle maker recommendation exists, what hole size should be drilled or punched in the location of the spot welds being replaced?

- A. 8 mm
- B. 5/16 inch**
- C. 3/16 inch
- D. 1/4 inch

When you replace a spot weld with a plug weld, you drill or punch a hole at the weld location so the plug weld can fuse the patch to the base metal. If there's no maker's spec to follow, you use a standard default size that provides enough weld area without risking damage from heat. The commonly taught default is five-sixteenths of an inch, which is about eight millimeters. This diameter gives sufficient cross-sectional area for a strong plug weld across typical panel thicknesses, while keeping heat input under control to minimize burn-through. Smaller holes reduce the weld area and strength, and larger holes increase heat input and the risk of damaging the panels or causing distortion. The 8 mm size is essentially the same diameter, but the standard reference used in practice is five-sixteenths of an inch.

3. What is the term for a groove cut into the base metal at one or both sides of the weld bead, which may be caused by unbalanced voltage and amperage settings or improper welding gun angles?

A. Porosity

B. Crater

C. Undercut

D. Overlap

Undercut is a groove that forms along the weld toe in the base metal on one or both sides of the bead. It happens when heat input is too high or the arc and filler metal don't fuse the edge properly, often due to unbalanced voltage and amperage or an improper gun angle. The molten base metal at the toe melts away faster than the filler metal can fill it, leaving a recessed notch that weakens the joint by reducing the weld's throat thickness. Visually, you'll see a clean, diagonal groove running beside the weld bead rather than a smooth, continuous fusion with the base metal. To fix it, reduce heat input and adjust the gun angle so filler metal properly deposits into the joint and fills the toe, ensuring the weld rebuilds the thickness of the base metal. This is different from porosity (gas pockets in the weld metal), crater (depression at the end of the weld), or overlap (overhang beyond the edge).

4. Which welding position is typically described as the overhead position?

A. Overhead position

B. Flat position

C. Vertical position

D. Horizontal position

Welding positions are about how the joint sits in relation to gravity. The overhead position is when you are welding with the workpiece above you, so the weld bead is formed on the underside of the joint and gravity tends to pull the molten metal downward. This orientation makes controlling the weld pool and maintaining shielding gas more challenging, which is why overhead is treated as its own distinct position. The other common positions describe the joint being flat (horizontal plane with gravity helping the pool), vertical (on a vertical surface), or horizontal (joint aligned with a horizontal plane), each with its own handling characteristics.

5. Melt through that creates a ripple is a sign of _____ weld penetration.

- A. Poor
- B. Burn through
- C. Inadequate
- D. Good**

Penetration is about how deeply the weld metal fuses into the base metal. When the heat and travel speed are balanced in GMAW, the molten metal can flow through the joint and fuse the metal on both sides. Seeing a ripple pattern as the weld is laid down often means the metal has penetrated through to the far side, indicating the weld has achieved good penetration. This fusion-through-the-thickness shows the joint is fully fused rather than just melted superficially. If heat is too low, penetration is inadequate, with poor fusion and gaps. If heat is too high, you risk burn-through, which is undesirable. So a melt-through that creates a ripple aligns with good weld penetration.

6. Which coating should be applied to bare metal before plug welding, if applicable?

- A. Weld-through primer**
- B. Anti-spatter
- C. Zinc coating
- D. Rust inhibitor

Coatings around the weld area can change heat flow and the quality of the weld, so choosing a coating that is compatible with welding is key. Weld-through primer is designed specifically for this situation: it can stay on the bare metal in the weld area and still be welded through. It melts away and allows fusion, while providing corrosion protection on the hidden side once the joint is formed. This makes it appropriate to apply when a coated surface would otherwise be left bare, as long as the repair procedures permit it. Anti-spatter is intended to protect nearby surfaces from spatter, not to prepare the weld surface itself. Leaving it on the weld area can interfere with fusion or leave residues that complicate the weld, so it isn't used as the weld surface coating for plug welding. Zinc coating (galvanizing) creates a barrier that can cause porosity or other weld defects if left in the weld zone; it's typically removed or avoided at the weld site rather than used as the weld-through coating. Rust inhibitors aren't meant for the weld zone because they can burn off, contaminate the weld, and don't provide the needed corrosion protection for the joint after welding. So, using a weld-through primer is the best choice for coating bare metal before plug welding when applicable.

7. What is the travel angle for the open butt joint weld described?

- A. 70°**
- B. 60°**
- C. 80°**
- D. 50°**

Travel angle is how you tilt the welding gun as you move along the seam, shaping how heat and filler metal enter the joint. For an open butt joint, you need enough angle to direct the arc toward the root so the molten pool can fuse both pieces and fill the opening. About seventy degrees from the travel direction does this well: it faces the root, keeps the puddle centered in the joint, and promotes proper fusion without wandering too far to the edges. If you drop to shallower angles like sixty or fifty degrees, heat tends to push out toward the side walls, which can weaken the root fusion or create a flatter bead. If you go too steep, around eighty degrees, control becomes harder and the puddle can become too narrow or unstable, increasing the risk of defects. So the travel angle around seventy degrees best balances root access, bead shape, and fusion for this open butt joint.

8. For plug welds, what must be true about the hole after welding?

- A. It should be left partially open**
- B. It should be widened after welding**
- C. It must be completely filled**
- D. It should be filled partially and then ground**

Plug welds rely on filling the punched hole with weld metal so the two sheets are fused together with a solid, through-penetrating joint. The hole must be completely filled after welding because any remaining void weakens the connection, can trap moisture, and may lead to corrosion or failure under load. A fully filled plug weld provides the necessary strength and seal, and then you can grind flush if needed to blend the surface. Leaving it partially open, widening after welding, or only partially filling and grinding would all leave gaps or reduce strength, which is why complete fill is the correct approach.

9. Which sequence correctly lists the three steps described for the destructive test?

- A. Band the pieces along the weld axes with the root on the face of the bend; hammer the sample flat; inspect for cracks**
- B. Hammer the sample flat; band the pieces; inspect for cracks**
- C. Band the pieces with the root on the face of the bend; hammer the sample flat; inspect for cracks**
- D. Inspect for cracks; band the pieces; hammer the sample flat**

In a destructive bend test, you want to reveal any weaknesses in the weld by applying a controlled bending load after proper setup. The first step is to band the pieces along the weld axes with the root facing the bend surface. This orientation puts the most stress on the weld root during bending, which is where cracks are most likely to appear if the weld isn't sound. Securing the pieces this way also ensures the joint stays properly aligned during the test. Next, you hammer the sample flat. This step plastically deforms the specimen, intensifying the bending stress and making any hidden cracks in the weld or heat-affected zone more likely to show up on the surface. Finally, you inspect for cracks. After the deformation, you look for visible crack lines or other defects to judge the weld's integrity. If cracks are found, the weld would fail the test. Other sequences don't fit because they omit the specific orientation of the root relative to the bend, or they perform steps in an order that wouldn't reliably reveal cracks (for example, inspecting before applying the load).

10. GMA (MIG) plug welds join two or more lap pieces together and are used to replace factory spot welds. What type of weld is this?

- A. Lap weld**
- B. Seam weld**
- C. Butt weld**
- D. Plug weld**

Plug welding is the technique used to join overlapping lap pieces by welding through a pre-punched hole in one sheet so the weld fuses to the underlying sheet. In MIG (GMAW) welding for collision repair, this method re-creates factory spot welds, giving a series of discrete welds that hold the panels together without forming a long seam. The welds penetrate through the hole and bind both sheets, which is exactly what's needed when replacing spot welds. By contrast, a lap weld runs along the overlapped seam, a seam weld is continuous along a seam, and a butt weld joins edges end-to-end; none of those match the function of inserting welds through holes to connect the sheets.

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://gmaweldingforcollisionrepair.examzify.com>

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

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