Competition Engineering C8015

Competition Engineering C8015 Torque Box Lower Reinforcement Plate User Manual

Model: C8015 | Brand: Competition Engineering

Introduction

This manual provides essential information for the proper installation and use of the Competition Engineering C8015 Torque Box Lower Reinforcement Plate. This product is designed to enhance the structural integrity of your vehicle's lower torque boxes. The C8015 kit includes two stamped steel lower torque box reinforcement plates. Please note that welding is required for the installation of this product.

Product Overview

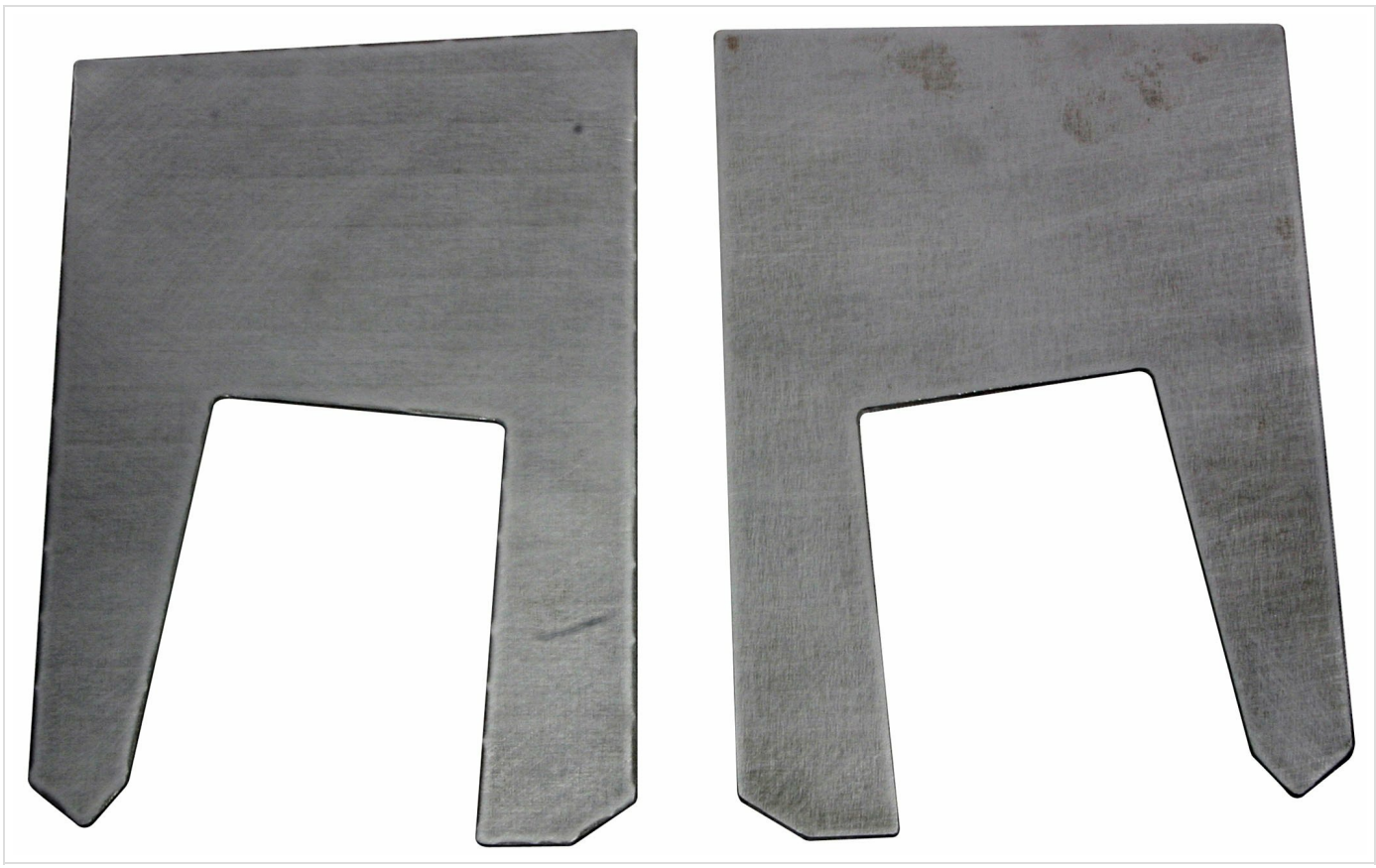

Image: Two Competition Engineering C8015 Torque Box Lower Reinforcement Plates. These are flat, grey metal plates, each with a distinct cut-out shape resembling an inverted 'U' or a 'staple' with angled ends, designed for structural reinforcement.

The Competition Engineering C8015 Torque Box Lower Reinforcement Plate is an automotive accessory specifically engineered to reinforce the lower torque boxes of a vehicle. This reinforcement helps to prevent flex and damage in high-stress applications, contributing to increased strength and durability of the chassis.

Setup and Installation

Installation of the C8015 Torque Box Lower Reinforcement Plates requires specialized tools and skills, including welding. It is recommended that installation be performed by a qualified professional or an individual with extensive experience in automotive fabrication and welding.

Required Tools and Materials:

- Welding equipment (MIG, TIG, or Stick welder)
- Appropriate welding safety gear (helmet, gloves, protective clothing)
- Grinder or wire brush for surface preparation
- Clamps to hold plates in position
- Measuring tape and marking tools
- Vehicle lift or jack stands
- Safety glasses

Installation Steps:

1. **Vehicle Preparation:** Safely lift and secure the vehicle on a lift or jack stands. Ensure the work area is well-ventilated and free from flammable materials.
2. **Locate Torque Boxes:** Identify the lower torque boxes on the vehicle's chassis. These are typically located near the rear suspension mounting points.
3. **Surface Preparation:** Thoroughly clean the surfaces of the lower torque boxes where the reinforcement plates will be attached. Remove any rust, paint, undercoating, or debris to ensure a strong weld.
4. **Positioning the Plates:** Carefully position each C8015 reinforcement plate against the lower torque box. The plates are designed to fit snugly and reinforce the critical stress points. Use clamps to hold the plates firmly in place.
5. **Welding:** With the plates securely clamped, begin welding the reinforcement plates to the torque boxes. Apply strong, continuous welds along all contact edges. Ensure full penetration for maximum strength. It is crucial to avoid overheating the surrounding metal.
6. **Inspection:** After welding, allow the welds to cool. Inspect all welds for proper penetration, consistency, and absence of cracks or porosity. Re-weld any areas that appear weak or incomplete.
7. **Finishing:** Once satisfied with the welds, you may choose to grind down any sharp edges and apply a protective coating (e.g., primer and paint) to prevent rust on the newly welded areas.
8. **Lower Vehicle:** Carefully lower the vehicle from the lift or jack stands.

Important Safety Note: Welding produces fumes and intense light. Always wear appropriate personal protective equipment (PPE) and ensure adequate ventilation. If unsure about any step, consult a professional.

Operation and Function

Once properly installed, the Competition Engineering C8015 Torque Box Lower Reinforcement Plates function passively by strengthening the vehicle's chassis. They are designed to distribute stress more effectively across the lower torque boxes, which are critical points for transferring power from the drivetrain to the wheels, especially in high-performance or drag racing applications.
The plates prevent the torque boxes from deforming or tearing under extreme loads, thereby improving the vehicle's launch

characteristics, reducing wheel hop, and extending the lifespan of the chassis components. There are no operational controls or user interactions required after installation.

Maintenance

The C8015 Torque Box Lower Reinforcement Plates require minimal maintenance after proper installation. Regular inspection is recommended, especially if the vehicle is used in demanding conditions (e.g., racing, off-road):

- **Visual Inspection:** Periodically inspect the welded areas for any signs of cracking, rust, or fatigue.
- **Corrosion Protection:** If the protective coating on the plates or welds becomes damaged, reapply paint or undercoating to prevent rust.
- **Impact Damage:** In case of severe impact to the undercarriage, inspect the reinforcement plates and surrounding chassis for damage.

Troubleshooting

As the C8015 is a passive reinforcement component, direct "troubleshooting" in the traditional sense is not applicable. Issues typically arise from improper installation rather than product malfunction.

Common Issues and Solutions:

Issue	Possible Cause	Solution
Cracks appearing near welds	Poor weld penetration, insufficient weld material, or excessive stress on an improperly reinforced area.	Consult a professional welder to inspect and repair the welds. Ensure proper surface preparation and welding techniques are used.
Rust forming on plates/welds	Lack of protective coating or damaged coating after installation.	Clean the rusted area thoroughly, apply rust converter if necessary, then prime and paint with a durable automotive coating.
Perceived lack of improvement in chassis rigidity	Other chassis components may be weak, or the torque boxes were not the primary source of flex.	Ensure the plates were installed correctly. Consider further chassis reinforcement if other areas are identified as weak points.

Specifications

Attribute	Detail
Product Name	Torque Box Lower Reinforcement Plate
Model Number	C8015
Brand	Competition Engineering
Manufacturer	Competition Engineering
Product Type	Auto Accessory
Material	Stamped Steel
Quantity per Package	2 plates
Installation Method	Welding Required

Attribute	Detail
Item Weight	0.01 ounces (Product weight as listed, likely shipping weight is higher)
Product Dimensions	12.38 x 9.63 x 0.5 inches
Package Dimensions	12.8" L x 8.61" W x 5.99" H
Package Weight	1.285 kilograms
Position	Rear (typically for rear torque boxes)
First Available Date	May 6, 2010

Warranty and Support

Specific warranty information for Competition Engineering products is typically provided with the product packaging or can be obtained directly from the manufacturer. For detailed warranty terms and conditions, please refer to the documentation included with your purchase or visit the official Competition Engineering website.
For technical support, installation inquiries, or questions regarding product compatibility, please contact Competition Engineering customer service. Contact details are usually available on their official website or product packaging.
Note: Improper installation, modification, or use of the product outside its intended purpose may void any applicable warranty.