Powerbuilt 641429

Powerbuilt Strut Tool and Strut Coil Compressor Kit User Manual

Model: 641429

1. Introduction

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your Powerbuilt Strut Tool and Strut Coil Compressor Kit. This tool is designed to facilitate the removal and installation of vehicle strut suspension systems by safely compressing coil springs.
Please read this manual thoroughly before using the tool to ensure proper handling and to prevent injury or damage to the equipment.

2. Safety Information

WARNING: Always wear appropriate personal protective equipment, including safety glasses, gloves, and sturdy footwear, when operating this tool. Coil springs are under extreme tension and can cause severe injury if not handled properly.

- Ensure the tool is securely mounted in a heavy-duty bench vise before use.
- Always use the integrated safety cables. Loop them through the spring as instructed to prevent shifting or ejection.
- Inspect the tool for any damage, wear, or cracks before each use. Do not use if damaged.
- Do not exceed the maximum working wire diameter of 5/8 inch for the spring.
- Do not exceed the maximum capacity of 4000 lbs (1814 kg).
- Keep hands and fingers clear of moving parts and the spring during compression and decompression.
- Use a 1/2-inch drive impact wrench or ratchet for compression. Avoid excessive force.
- Ensure the strut and spring are clean and free of debris before mounting.
- Perform work in a well-lit and stable environment.

3. Product Overview and Components

The Powerbuilt Strut Tool and Strut Coil Compressor Kit is designed for safe and efficient strut service. The kit includes the main compressor unit and safety wires.

Figure 3.1: Kit Contents. The image displays the main strut coil compressor tool and two safety wires, neatly organized within its durable carrying case.

- **Main Compressor Unit:** Heavy-duty steel construction, designed to securely hold and compress coil springs.
- **Safety Wires:** Two reinforced cables that loop through the spring to prevent accidental ejection during compression.
- **Carrying Case:** Durable case for storage and transport of the kit.

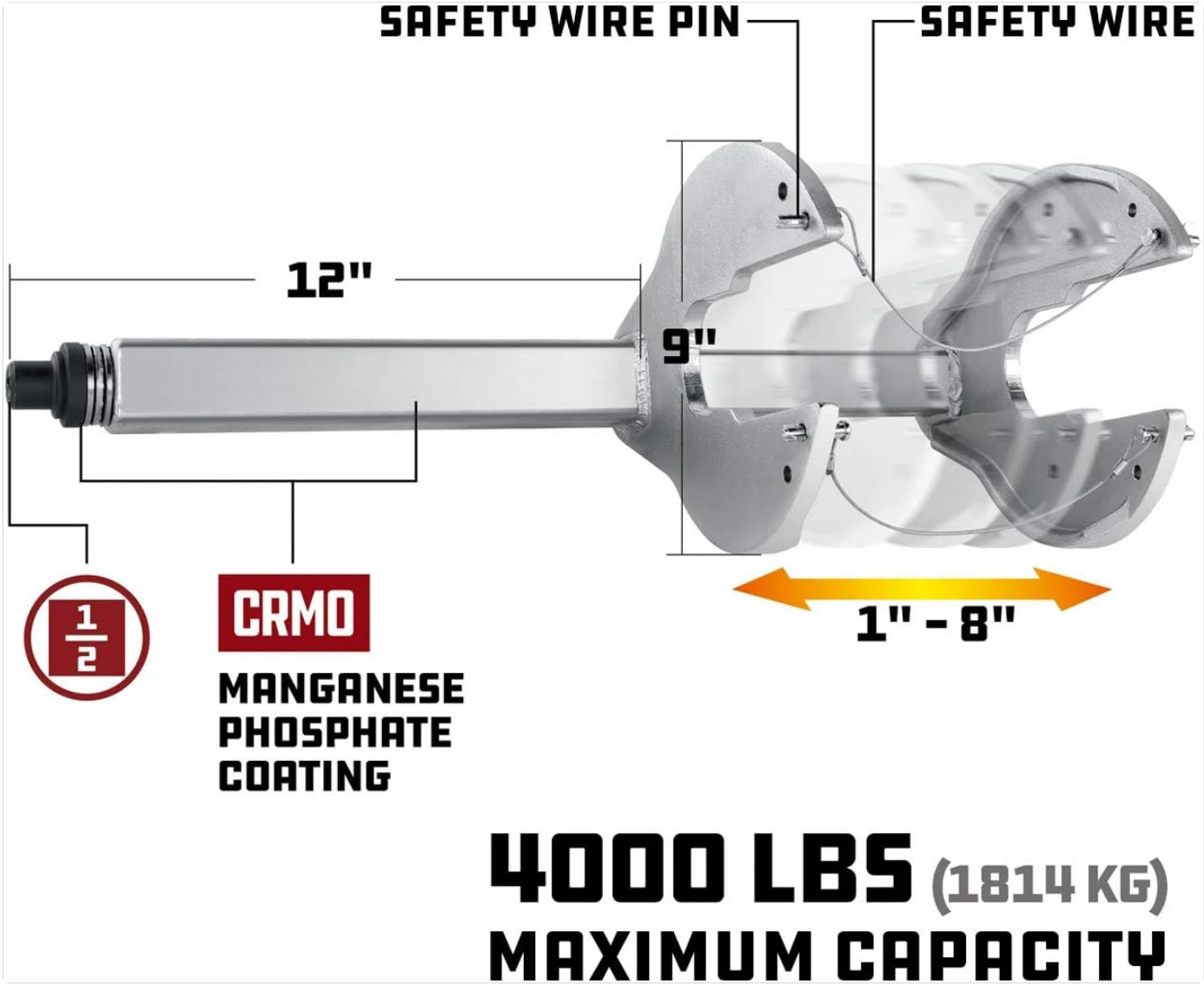

Figure 3.2: Tool Specifications and Dimensions. This diagram illustrates key measurements such as the 12-inch shaft length, 9-inch jaw depth, and a compression range of 1 to 8 inches. It also highlights the 4000 lbs (1814 kg) maximum capacity and the 5/8 inch maximum working wire diameter.

4. Setup

1. **Secure Mounting:** Place the compressor tool's clamp plate into a heavy-duty bench vise. Tighten the vise securely to ensure the compressor is stable and will not move during operation.
2. **Prepare Strut Assembly:** Remove the strut assembly from the vehicle according to the vehicle manufacturer's service manual. Clean any dirt or debris from the coil spring and strut.
3. **Position the Strut:** Carefully position the strut assembly within the jaws of the compressor. Ensure the spring coils are seated properly and evenly within the compressor's arms.

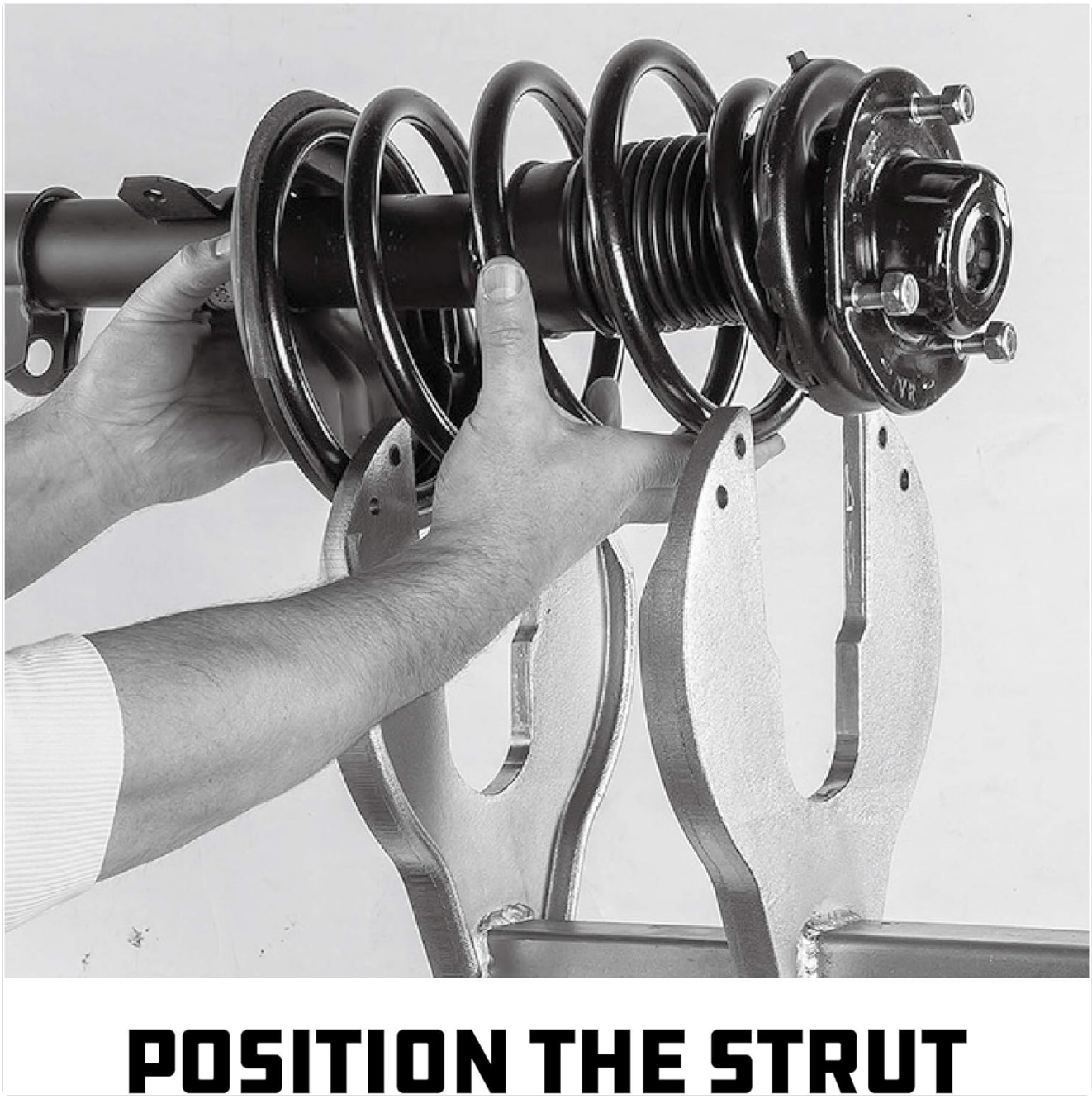

Figure 4.1: Positioning the Strut. This image shows the correct method for placing the strut assembly into the compressor jaws, ensuring the spring is aligned for safe compression.

4. **Install Safety Wires:** Thread the provided safety wires through the spring coils and attach them to the designated safety wire pins on the compressor arms. This is a critical safety step to contain the spring in case of slippage.

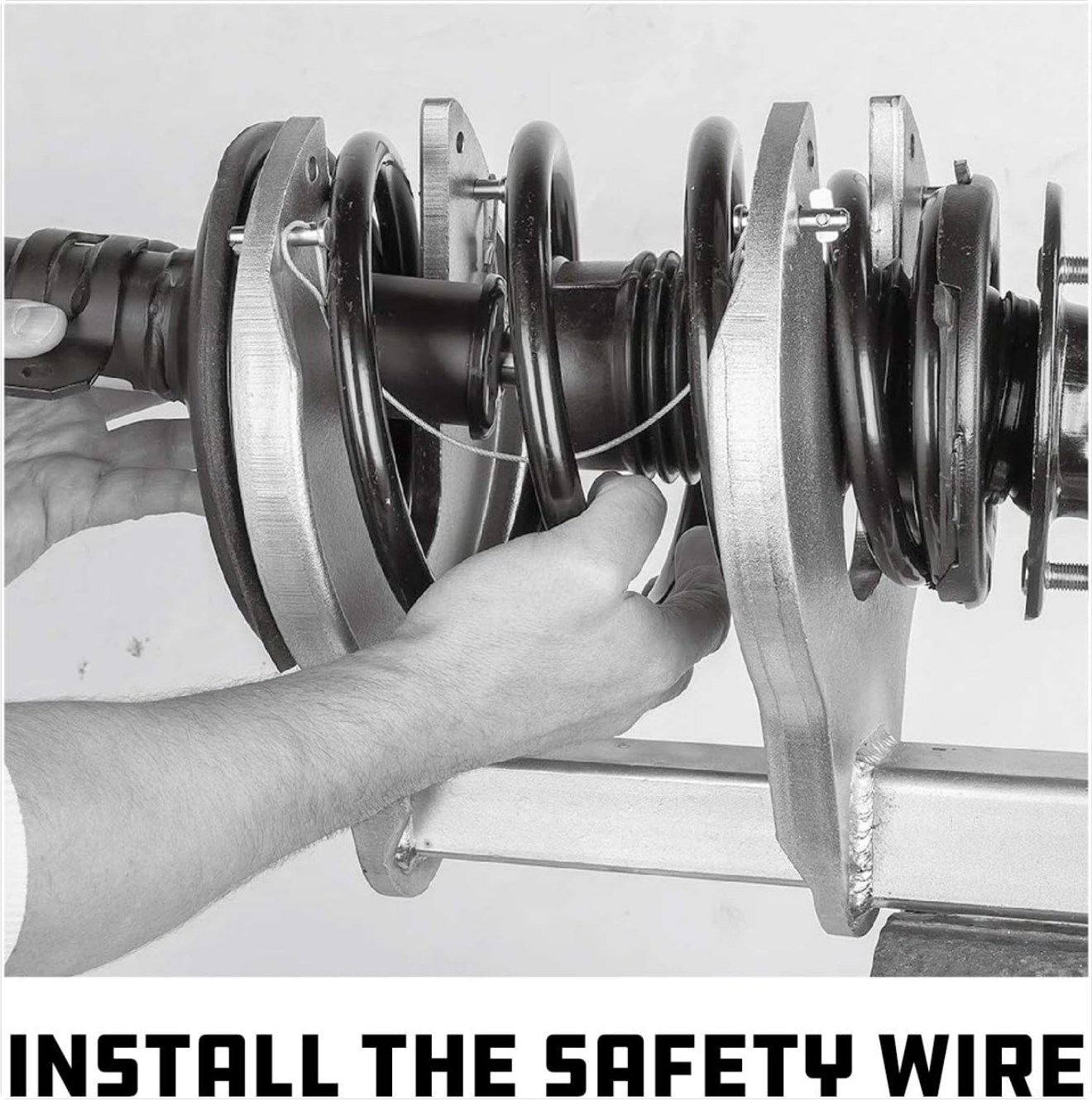

Figure 4.2: Installing the Safety Wire. This image demonstrates how to properly thread the safety wire through the spring and secure it to the compressor, enhancing safety during operation.

5. Operating Instructions

1. **Compress the Spring:** Attach a 1/2-inch drive impact wrench or ratchet to the drive end of the compressor tool. Slowly and steadily turn the wrench to compress the spring. Ensure the spring compresses evenly and remains seated within the jaws.

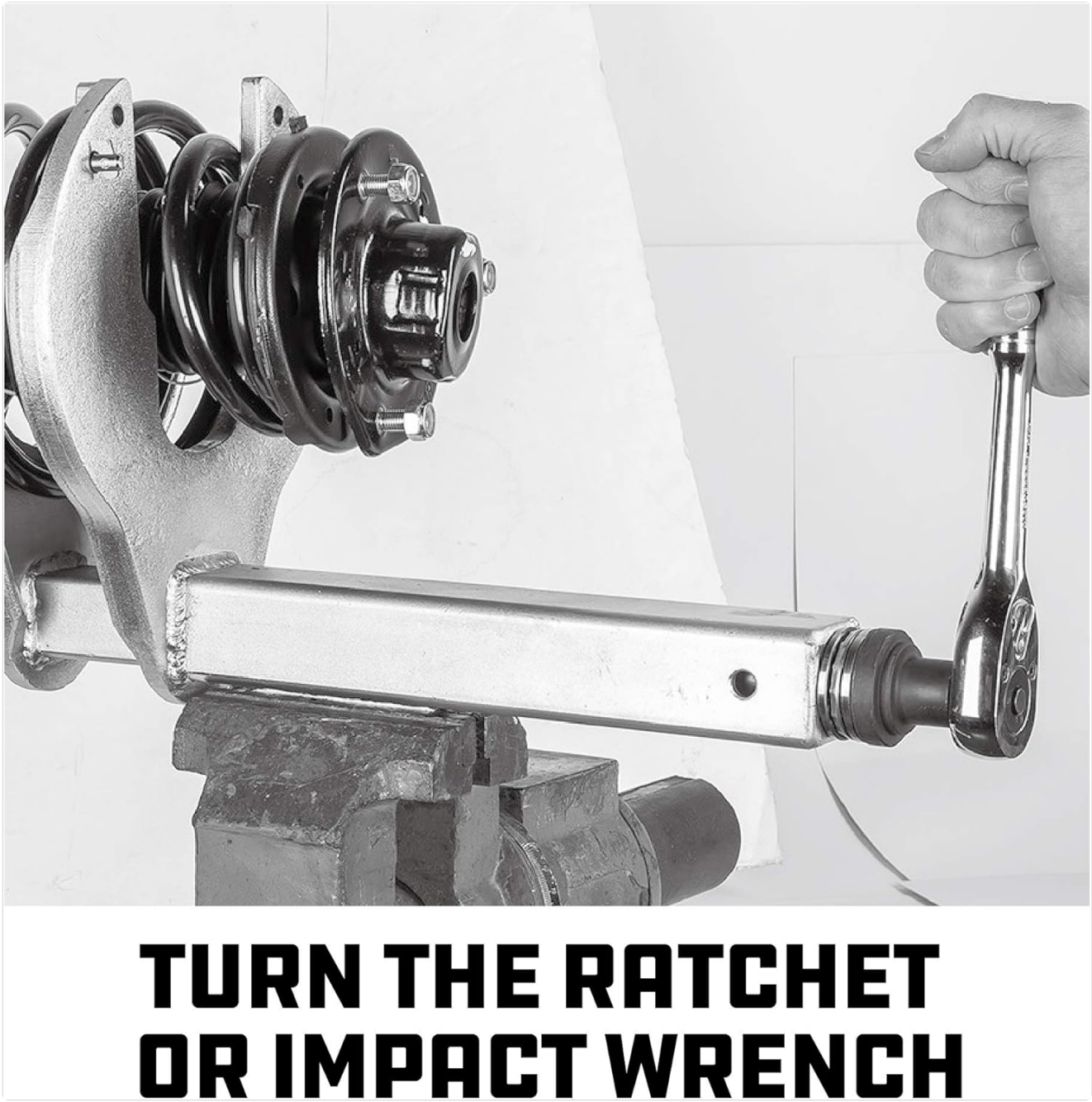

Figure 5.1: Turning the Ratchet or Impact Wrench. This image shows the application of a ratchet to the compressor's drive, illustrating the process of compressing the strut spring while the tool is mounted in a vise.

2. **Compress to Required Length:** Continue compressing the spring until enough tension is relieved from the strut's top nut to safely remove it. Do not over-compress the spring.
3. **Service the Strut:** With the spring compressed, you can now safely remove the top nut, disassemble the strut components, and replace the strut or other parts as needed.
4. **Reassemble and Decompress:** After servicing, reassemble the strut components. Ensure all parts are correctly aligned. Slowly decompress the spring by reversing the turning direction of the wrench. Ensure the spring expands evenly and seats correctly.
5. **Remove from Tool:** Once the spring is fully decompressed and the strut assembly is secure, remove the safety wires and then carefully remove the strut assembly from the compressor.

6. Maintenance

- **Cleaning:** After each use, clean the compressor tool to remove any dirt, grease, or debris. Use a clean cloth.
- **Lubrication:** Periodically apply a light coat of machine oil to the threaded shaft and moving parts to ensure smooth

operation and prevent rust.

- **Inspection:** Regularly inspect the tool for signs of wear, damage, or deformation, especially on the jaws, shaft, and safety wire attachment points. Check the safety wires for fraying or damage. Replace any worn or damaged components immediately.
- **Storage:** Store the tool in its original carrying case in a dry, clean environment to protect it from moisture and impact.

7. Troubleshooting

- **Spring Slipping:**
  - Ensure the spring is properly seated and centered in the compressor jaws.
  - Verify that the safety wires are correctly installed and taut.
  - Check if the spring wire diameter is within the tool's specified limits (max 5/8 inch).
- **Difficulty Compressing Spring:**
  - Ensure the threaded shaft is adequately lubricated.
  - Verify that the tool is securely mounted in a heavy-duty bench vise.
  - Confirm that the spring's capacity does not exceed the tool's 4000 lbs (1814 kg) limit.
- **Safety Wires Damaged/Broken:**
  - Immediately cease operation.
  - Do not use the tool without functional safety wires. Contact Powerbuilt for replacement parts.
- **Tool Appears Damaged (e.g., bent flange, cracked weld):**
  - Discontinue use immediately. Using a damaged tool is extremely dangerous.
  - Contact Powerbuilt customer support for assistance.

8. Specifications

Attribute	Value
Model Number	641429
Brand	Powerbuilt
Item Weight	32.8 pounds (14.88 kg)
Product Dimensions	21 x 10.75 x 15.25 inches (53.34 x 27.31 x 38.74 cm)
Maximum Capacity	4000 lbs (1814 kg)
Maximum Working Wire Diameter	5/8 inch (1.59 cm)
Drive Compatibility	1/2 inch impact wrench or ratchet
Material	Heavy-Duty Steel with Manganese Phosphate Coating

9. Warranty Information

Specific warranty details for the Powerbuilt Strut Tool and Strut Coil Compressor Kit are not provided in this manual. For

warranty claims or information, please refer to the product packaging or contact Powerbuilt customer support directly. Keep your proof of purchase for any warranty inquiries.

10. Customer Support

For technical assistance, replacement parts, or any questions regarding your Powerbuilt Strut Tool and Strut Coil Compressor Kit, please visit the official Powerbuilt website or contact their customer service department. Contact information can typically be found on the product packaging or their official website.
You can also visit the Powerbuilt Store on Amazon for more information and product listings.

Related Products and Brand Information

Powerbuilt offers a wide range of high-quality tools and equipment for automotive professionals and enthusiasts. Their commitment to excellence focuses on superior performance, innovation, and durability.

Figure 11.1: Powerbuilt Tools Collection. This image displays a variety of Powerbuilt hand tools, power tools, and storage solutions, reflecting the brand's extensive product line for automotive and general use.

Figure 11.2: Organized Tool Storage. This image showcases Powerbuilt screwdrivers within an organized tool chest drawer, emphasizing the brand's attention to detail and user convenience.