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Model: 67605 | Brand: 3mirrors

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of the 3mirrors 67605 Valve Spring Compressor Tool. This tool is designed to facilitate the removal and installation of valve springs on various LS engines and compatible GM vehicles without requiring the removal of the rocker stand or other rockers. Proper use ensures efficient and safe maintenance of your engine's valve train components.



Figure 1: 3mirrors 67605 Valve Spring Compressor Tool.

2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment, including safety glasses and gloves, when using this tool.
- Ensure the engine is cool and disconnected from the battery before beginning any work.
- Verify that the tool is correctly assembled and securely fastened to the cylinder head before applying pressure.
- Do not over-tighten bolts or apply excessive force, as this may damage the tool or engine components.
- Keep hands and fingers clear of moving parts during operation.
- If using compressed air to hold valves in place, ensure the air supply is stable and sufficient.

3. PACKAGE CONTENTS

The 3mirrors 67605 Valve Spring Compressor Tool package typically includes the following components:

- Main Compressor Body (T-shaped part with 'TOP' marking)
- Lower Support Plate

- Compression Screw (long threaded bolt)
- Compression Nut
- Mounting Bolts (2x)
- Washers (various sizes)
- Optional: Air Hose Adapter (for holding valves with compressed air)



Figure 2: Included components of the valve spring compressor tool.

4. SETUP AND ASSEMBLY

Proper assembly is crucial for the tool's functionality and safety. Follow these steps:

1. Identify the main compressor body (T-shaped piece) and the lower support plate.
2. Attach the lower support plate to the cylinder head using the provided mounting bolts. Ensure it is seated correctly over the valve springs you intend to work on.
3. Thread the compression screw through the main compressor body. The side marked "TOP" on the T-shaped part should face upwards.
4. Place a washer and the compression nut onto the compression screw.
5. Position the assembled main compressor body over the lower support plate, aligning the compression screw with the valve spring retainer.

Video 1: Assembly demonstration of the LS valve spring compressor tool.



Figure 3: Assembled tool ready for use.



When assembling, as shown in the figure, note that the long bolt has an inclined angle inward. If the installation is wrong, it will be inclined outwards. The result is that you cannot use the tool correctly.

Figure 4: Ensure the T-shaped part is oriented correctly with the 'TOP' marking facing upwards for proper function.

5. OPERATING INSTRUCTIONS

This tool is compatible with LS engines (4.8L, 5.3L, 5.7L, 6.0L, 6.2L) found in vehicles such as Firebird, Silverado, Camaro, GTO, Trans am, Corvette, CTSV, Sierra, Tahoe, Suburban, and Pontiac G8 GT. It can also be used on Dodge Ram 318 360 5.2 5.9 engines if you use your original bolts.

1. **Prepare the Engine:** If working with the cylinder head on the engine, ensure the piston for the cylinder you are working on is at Top Dead Center (TDC) to prevent the valve from dropping into the cylinder. Alternatively, use an air hose adapter to pressurize the cylinder and hold the valves in place.
2. **Lubricate:** Apply a small amount of lubricant to the threads of the compression screw and nut to ensure smooth operation and prevent wear.
3. **Position the Tool:** Place the assembled valve spring compressor tool onto the cylinder head, ensuring the lower support plate is securely bolted down and the compression screw is centered over the valve spring retainer.
4. **Compress the Spring:** Use a wrench or ratchet to slowly turn the compression nut, which will press down on the valve spring. Continue compressing until the valve keepers are exposed and can be easily removed.
5. **Remove/Install Keepers:** Carefully remove the old valve keepers. If installing new springs, place the new keepers into position.
6. **Release the Spring:** Slowly loosen the compression nut to release the tension on the valve spring. Ensure the keepers remain seated correctly.
7. **Remove the Tool:** Once the spring is fully seated and the keepers are in place, unbolt and remove the compressor tool.

Video 2: Overview of the 67605 Valve Spring Compressor Tool in use.

Video 3: Demonstration of the valve spring compressor tool in action on a GM LS engine.



Figure 5: The tool installed on an LS engine cylinder head, compressing valve springs.

6. MAINTENANCE

To ensure the longevity and continued performance of your 3mirrors 67605 Valve Spring Compressor Tool:

- Clean the tool thoroughly after each use to remove any oil, grease, or debris.
- Inspect all threaded components for wear or damage. Replace any worn parts immediately.
- Store the tool in a dry place to prevent rust and corrosion.
- Periodically apply a light coat of oil to the threaded parts to maintain smooth operation.

7. TROUBLESHOOTING

If you encounter issues while using the tool, consider the following:

- **Difficulty in Compression:** Ensure the compression screw threads are well-lubricated. Verify that the tool is correctly aligned and that the mounting bolts are tightened sufficiently to prevent movement.
- **Stripped Bolts/Nuts:** This can occur from over-tightening or lack of lubrication. The kit includes an extra compression bolt. Always use appropriate torque and lubrication.
- **Valve Dropping:** Confirm that the piston is at TDC for the cylinder being worked on, or that sufficient air pressure is applied to hold the valves in place.
- **Keepers Not Seating:** Ensure the valve spring is fully compressed and the valve stem is clean. Use a small magnet or pick tool to carefully position the keepers.

8. SPECIFICATIONS

Brand	3mirrors
Model	67605
Item Weight	11.8 ounces
Package Dimensions	6.5 x 4.37 x 0.71 inches
Material	3/8" Steel (Bolts: 10.9, 12.9 performance levels)
Compatibility	LS Engines (4.8, 5.3, 5.7, 6.0, 6.2L), various GM vehicles (Firebird, Silverado, Camaro, GTO, Trans am, Corvette, CTSV, Sierra, Tahoe, Suburban, Pontiac G8 GT), Dodge Ram 318 360 5.2 5.9 (with original bolts).

9. WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please contact 3mirrors customer service through the retailer where the product was purchased. Keep your purchase receipt as proof of purchase.