

EMPI 00-4450-0

EMPI Trigger Shifter 00-4450-0 Instruction Manual

Model: 00-4450-0

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your EMPI Trigger Shifter, Model 00-4450-0. This tall trigger shifter is designed for classic air-cooled Volkswagens, including Type 1 VW Bug Sedans, Karmann Ghia, Type 3 Squareback, Fastback, Notchback, VW Thing, Sandrails, Dune Buggies, and Manx Buggies. It features a chrome round shaft with a reverse lock-out trigger loop, reduced throw movement for quick and smooth shifts, and a black plastic trim base with a rubber shift boot.

Please read this manual thoroughly before installation and use to ensure proper function and safety.

2. SAFETY INFORMATION

- Always ensure the vehicle is parked on a level surface with the parking brake engaged before beginning any installation or maintenance.
- Disconnect the vehicle's battery before performing electrical work, if any is required (though not typically for a mechanical shifter).
- Wear appropriate personal protective equipment (PPE), such as gloves and eye protection, during installation.
- If you are unsure about any step of the installation process, consult a qualified mechanic.
- After installation, test all gear selections and the reverse lock-out mechanism thoroughly in a safe environment before driving.
- This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 warning). Handle with care and wash hands after use.

3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- EMPI Trigger Shifter Assembly (Chrome shaft, black knob, trigger loop, black plastic trim base, rubber shift boot)
- Knob (pre-installed)

- Mounting hardware (if applicable, not explicitly listed but implied for installation)



Image 1: EMPI Trigger Shifter with included rubber boot and mounting plate.

4. SPECIFICATIONS

Feature	Detail
Brand	EMPI
Model Number	00-4450-0
Material	Chrome, Plastic, Alloy Steel
Color	Black (Knob), Chrome (Shaft)

Feature	Detail
Overall Height	13.5 inches
Item Weight	2.67 pounds
Lock Type	Trigger Lock (for Reverse)
Special Features	Easy to Install, Short Shift Pattern
Compatibility	Classic Air-cooled Volkswagens (Type 1 VW Bug Sedans, Karmann Ghia, Type 3 Squareback, Fastback, Notchback, VW Thing, Sandrails, Dune Buggies, Manx Buggies)

5. SETUP AND INSTALLATION

Installation of the EMPI Trigger Shifter is generally straightforward. However, specific steps may vary slightly depending on your vehicle model. Always refer to your vehicle's service manual for precise instructions regarding shifter removal and installation.

5.1 Tools Required (Typical)

- Wrench set (metric/SAE as required)
- Screwdriver set
- Pliers
- Grease (for pivot points)

5.2 Installation Steps (General Guide)

1. **Prepare Vehicle:** Park the vehicle on a level surface, engage the parking brake, and place the transmission in neutral.
2. **Remove Old Shifter:** Carefully remove any console trim or boot covering the existing shifter. Disconnect the shifter linkage from the transmission. Unbolt and remove the old shifter assembly from the vehicle floor.
3. **Inspect Area:** Clean the mounting area and inspect the shifter coupler and bushings for wear. Replace any worn components as necessary.
4. **Install New Shifter:** Position the EMPI Trigger Shifter assembly into the mounting location. Secure it with the appropriate bolts and hardware. Ensure the rubber shift boot is properly seated to prevent debris from entering the mechanism.
5. **Connect Linkage:** Reconnect the shifter linkage to the new shifter. Ensure all connections are secure and free of excessive play.
6. **Adjust Shifter (if necessary):** Some shifters may require minor adjustments to ensure proper engagement of all gears. Follow your vehicle's service manual for linkage adjustment procedures.
7. **Test Functionality:** With the engine off, cycle through all gears (1st through 4th, and Reverse) to ensure smooth engagement and proper operation of the reverse lock-out.
8. **Final Assembly:** Reinstall any removed console trim or shift boot.



Image 2: Front view of the EMPI Trigger Shifter, highlighting the chrome shaft and black knob.

Your browser does not support the video tag.

Video 1: This video demonstrates the physical components and general appearance of an EMPI shifter, similar to the 00-4450-0 model. It provides a visual overview of the product's design and construction.

6. OPERATING INSTRUCTIONS

The EMPI Trigger Shifter is designed for precise and quick gear changes with an integrated reverse lock-out mechanism.

- **Standard Gear Selection:** To engage forward gears (1st, 2nd, 3rd, 4th), simply move the shifter lever through the standard H-pattern. The reduced throw design allows for shorter, more direct shifts.
- **Engaging Reverse:** To engage reverse, pull the trigger loop located on the shifter shaft towards you. While holding the trigger, move the shifter into the reverse gear position. Release the trigger once reverse is engaged. The trigger mechanism prevents accidental engagement of reverse during forward driving.
- **Disengaging Reverse:** To disengage reverse, move the shifter out of the reverse position. The trigger will automatically reset.

7. MAINTENANCE

Regular maintenance ensures the longevity and smooth operation of your EMPI Trigger Shifter.

- **Lubrication:** Periodically (e.g., every 6-12 months), inspect the shifter's pivot points and linkage connections. Apply a small amount of high-quality grease to these areas to ensure smooth movement and prevent wear.
- **Inspection:** Regularly check the shifter assembly, mounting bolts, and linkage for any signs of looseness, wear, or damage. Tighten any loose fasteners.
- **Cleaning:** Keep the shifter and surrounding area clean. Wipe down the chrome shaft and plastic components with a soft, damp cloth. Avoid harsh chemicals that could damage the finish.
- **Boot Condition:** Inspect the rubber shift boot for cracks or tears. A damaged boot can allow dirt and moisture to enter the shifter mechanism, leading to premature wear. Replace if necessary.

8. TROUBLESHOOTING

If you encounter issues with your EMPI Trigger Shifter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Difficulty engaging gears	Loose or misadjusted linkage; Worn shifter coupler/bushings; Lack of lubrication.	Check and adjust shifter linkage; Inspect and replace worn coupler/bushings; Lubricate pivot points.
Shifter feels "sloppy" or has excessive play	Loose mounting bolts; Worn shifter base components; Worn linkage bushings.	Tighten mounting bolts; Inspect and replace worn shifter base components or linkage bushings.
Reverse difficult to engage or disengage	Trigger mechanism obstruction; Linkage issue; Lack of lubrication.	Ensure trigger moves freely; Check reverse linkage adjustment; Lubricate trigger pivot.
Grinding noise during shifts	Improper clutch adjustment; Transmission issue; Severely misadjusted shifter linkage.	Check clutch adjustment; Consult a mechanic for transmission inspection; Verify shifter linkage adjustment.

If problems persist after attempting these solutions, it is recommended to consult a professional automotive technician.

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your EMPI Trigger Shifter, please refer to the documentation included with your purchase or contact EMPI directly through their official website or customer service channels. Keep your proof of purchase for warranty claims.

