

Lee Precision 900502

Lee Precision Anniversary Challenger Kit II Instruction Manual

Model: 900502

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of your Lee Precision Anniversary Challenger Kit II. This kit is designed to facilitate the reloading of ammunition, offering a comprehensive set of tools for various stages of the reloading process. Please read this manual thoroughly before attempting to use any components of the kit.

The core of this kit is the Challenger Press, an O-frame press engineered for strength and user comfort, featuring a 30-degree angled opening for enhanced hand clearance. It utilizes compound leverage to manage full-length sizing, even for large magnum cases, and includes an integrated primer catcher. The kit also provides a complete powder-handling system, including the precise Perfect Powder Measure, and essential case preparation tools such as a cutter, lock stud for trimming, an inside/outside case mouth chamfer tool, a primer pocket cleaner, and premium sizing lube. A Breech Lock Quick Change Bushing is included to simplify die changes, ensuring consistent reloading without repeated adjustments.

2. SAFETY INFORMATION

Reloading ammunition is an activity that requires strict adherence to safety protocols. Failure to follow these guidelines can result in serious injury or death.

- Always wear appropriate personal protective equipment, including **safety glasses**, during all reloading operations.
- Ensure your reloading area has **adequate ventilation** to prevent the accumulation of airborne lead or powder residue.
- Never smoke or have open flames near gunpowder or primers.
- Store primers and gunpowder in their original containers, in a cool, dry, and secure location, away from heat sources and out of reach of children and unauthorized persons.
- Always consult and strictly adhere to published reloading data from reputable sources (e.g., reloading manuals). **Do not exceed maximum recommended loads.**
- Inspect all components (cases, primers, powder, bullets) for defects before use.
- Keep your reloading area clean and organized to prevent errors.

- Never mix different types of gunpowder.
- **Proposition 65 Warning:** This product may expose you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, please visit www.P65Warnings.ca.gov.

3. PRODUCT OVERVIEW AND COMPONENTS

The Lee Precision Anniversary Challenger Kit II includes the following key components:

- **Challenger Press:** A robust O-frame press with a 30-degree angled opening for maximum hand clearance and compound leverage for sizing. Features a built-in primer catcher.
- **Perfect Powder Measure:** A precise device for accurately dispensing gunpowder.
- **Lee Safety Scale:** A sensitive beam scale for measuring powder charges.
- **Breech Lock Quick Change Bushing:** Allows for rapid die changes without re-adjustment.
- **Case Preparation Tools:** Includes a cutter and lock stud for trimming cases, an inside/outside case mouth chamfer tool, and a primer pocket cleaner.
- **Sizing Lube:** A tube of premium lubricant for case sizing.
- **Power Funnel:** Used to easily fill cases with powder.



Figure 3.1: The complete Lee Precision Anniversary Challenger Kit II, including the Challenger Press, Perfect Powder Measure, Safety Scale, case preparation tools, and various accessories, ready for assembly and use.



Figure 3.2: A detailed view of the Lee Perfect Powder Measure, showing its hopper, measuring mechanism, and mounting bracket. This device is used for accurately dispensing gunpowder.

4. SETUP

Proper setup is crucial for the safe and efficient operation of your reloading kit.

1. **Mounting the Challenger Press:** Securely attach the Challenger Press to a sturdy workbench using appropriate bolts (not included). Ensure the press is stable and does not wobble during operation.
2. **Assembling the Perfect Powder Measure:** Follow the instructions provided with the Perfect Powder Measure to assemble it. Mount it to your workbench or directly to the press if using a compatible die.
3. **Setting up the Lee Safety Scale:** Place the Safety Scale on a level, stable surface, away from drafts. Calibrate it according to its specific instructions before use.
4. **Installing the Breech Lock Bushing:** Insert the Breech Lock Quick Change Bushing into the press. Your reloading dies can then be threaded into this bushing.
5. **Case Preparation Tools:** Familiarize yourself with the case cutter, lock stud, chamfer tool, and primer pocket cleaner. Note that a specific shell holder and case length gauge are required for each caliber to be trimmed, which are sold separately.

5. OPERATING INSTRUCTIONS

The reloading process typically involves several stages. Always refer to a reputable reloading manual for specific load data and detailed procedures for your caliber.

1. **Case Cleaning and Inspection:** Clean spent cases and inspect them for damage, cracks, or deformities.
2. **Depriming and Sizing:** Install the appropriate sizing die with the Breech Lock Bushing. Lubricate cases with the provided sizing lube. Use the Challenger Press to deprime the spent primer and resize the case to its correct dimensions. The built-in primer catcher will collect spent primers.
3. **Case Trimming and Chamfering:** If cases are too long, use the case cutter and lock stud with the correct shell holder and length gauge to trim them. Use the inside/outside case mouth chamfer tool to deburr and

chamfer the case mouth. Clean the primer pocket with the primer pocket cleaner.

4. **Priming:** Install the priming arm on the Challenger Press. Place a new primer into the priming tool and seat it firmly into the primer pocket using the press.
5. **Powder Charging:** Use the Perfect Powder Measure to dispense the precise amount of gunpowder into each case, as specified by your reloading manual. Verify charges periodically with the Lee Safety Scale. Use the power funnel to aid in filling cases.
6. **Bullet Seating:** Install the bullet seating die. Place a bullet on the charged case and use the Challenger Press to seat the bullet to the correct overall length.
7. **Crimping (Optional):** If required, install a crimping die and apply the appropriate crimp to the case mouth.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable performance of your reloading equipment.

- **Challenger Press:** Keep the press clean and free of powder residue and debris. Periodically apply a light coat of oil to moving parts to ensure smooth operation.
- **Perfect Powder Measure:** After each use, empty any remaining powder from the measure. Clean the powder measure thoroughly to prevent powder buildup, which can affect accuracy.
- **Lee Safety Scale:** Keep the scale clean and protected from dust. Avoid dropping or jarring the scale, as this can affect its calibration.
- **Dies and Tools:** Clean all dies and case preparation tools after use. Store them in a dry place to prevent rust.

7. TROUBLESHOOTING

This section addresses common issues encountered during reloading.

- **Inconsistent Powder Charges:** Ensure the Perfect Powder Measure is clean and free of static cling. Verify the scale is calibrated and on a stable surface. Some powders may meter less consistently than others.
- **Stuck Cases in Sizing Die:** This usually indicates insufficient case lubrication. Ensure cases are properly lubricated before sizing. Do not force the press handle if a case is stuck.
- **Priming Issues (e.g., primers not seating, falling out):** Check that the correct size primer (small or large) is being used for the case. Ensure the primer pocket is clean. Apply consistent, firm pressure when seating primers.
- **Cases Not Trimming Evenly:** Verify that the case cutter and lock stud are correctly assembled and that the specific shell holder and length gauge are appropriate for the caliber being trimmed. Ensure consistent pressure during trimming.

For issues not covered here, consult a comprehensive reloading manual or contact Lee Precision customer support.

8. SPECIFICATIONS

Brand Name	Lee Precision
Model Name	Lee Precision 90050: 50 Ann Breech Lock Challenger Kit
Part Number	900502
Item Weight	0.7 Kilograms

Item Dimensions (LxWxH)	3.58 x 3.58 x 3.58 inches
Package Weight	4.35 Kilograms
Package Dimensions (LxWxH)	14.41 x 14.13 x 6.81 inches
Color	Red
Material	Other
Suggested Users	Unisex-adult
Sport Type	Hunting
Manufacturer	Sportsman Supply Inc.
Model Year	2011
Date First Available	June 8, 2005

9. WARRANTY INFORMATION

For detailed warranty information regarding your Lee Precision Anniversary Challenger Kit II, please refer to the official documentation included with your product or visit the Lee Precision website. Warranty terms and conditions may vary.

10. SUPPORT

If you require technical assistance, have questions about product operation, or need replacement parts, please contact Lee Precision customer support directly. Contact information can typically be found on the manufacturer's website or in the packaging materials.