

COMPLETE INSTRUCTIONS FOR LEE 4-DIE SET

LEE ULTIMATE RIFLE DIE SET

1 INSPECT, PREPARE YOUR CASES

Inspect your cases to be sure they are safe for reloading. Discard all cases with split necks, indications of head separation or other defects. The **ULTIMATE 4-DIE SET** is equipped with both the **FULL LENGTH SIZER** and **COLLET NECK SIZER** for semi-auto rifles or reloading mixed range brass. Use the collet sizer for bolt action rifles or cases that have been fired in your gun only. If you are using the **COLLET NECK SIZING DIE**, try the empties in your gun chamber before you start to reload. If they do not fit freely, you must use the **FULL LENGTH SIZER**.



After a few loadings, cases tend to get longer. This could be dangerous if the case were so long that it would pinch the bullet in the end of the chamber. Pressure high enough to damage the gun could result. A convenient way to trim to the correct safe length is with the **LEE QUICK TRIM CASE TRIMMER**. Install the appropriate Quick Trim Die — and 5 quick turns of the crank will yield a perfectly trimmed and chamfered case.

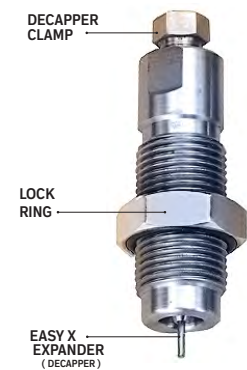
90347 DELUXE QUICK TRIM

2 FULL LENGTH SIZER SEMI-AUTO / MIXED RANGE BRASS

Wipe on a thin film of **LEE CASE LUBRICANT** with your fingers. Fingers are the best way of lubing as any grit that could damage the die is felt and can be wiped away. Be sure to lube the inside of the case neck with a cotton swab. The case may be immediately sized or let the lube dry. Lee lube may also be thinned with up to four parts water for easier application and greater economy. If thinned, let case dry before sizing.

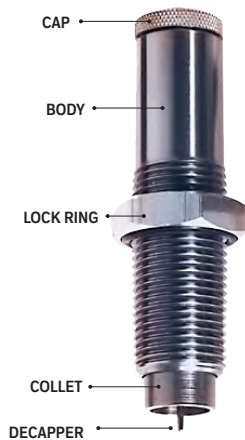


OR 2 COLLET NECK SIZER BOLT ACTION / BRASS FOR YOUR GUN ONLY



Screw the full length sizer in until it touches the shell holder. Then lower the ram and screw the die in $\frac{1}{4}$ to $\frac{1}{2}$ turn more. Raise the ram and tighten the lock ring finger tight.

The decapper is retained by a collet. Should it be overstressed by an obstruction; it simply slides up without damage. To reset, loosen the decapper clamp and position the decapper flush with clamp end and retighten. Considerable torque may be necessary. A $\frac{1}{2}$ " and $\frac{3}{4}$ " wrench are necessary.



ADJUSTMENT FOR LEE PRESSES

Screw the sizing die in until it contacts the shell holder, plus one turn more ($1\frac{1}{2}$ turns for Classic series press owners). Run a case into the die. You will feel the primer being extracted, then the lever will come to an abrupt stop. At this point, the lever must be pushed firmly (min. 25 lbs.) to close the collet and size the neck. Extra bullet grip can be obtained by screwing the die in an additional quarter-turn.

Other brands of presses that toggle or snap over center at the end of the stroke provide no feel and can damage the collet neck sizing die if adjusted as above. We suggest the die be screwed in until the die contacts the shell holder, plus **2 FULL TURNS** This will prevent the press from toggling over center and give the operator feel of the collet closing.

OPTION Even greater accuracy can be obtained by rotating the case one-half turn and sizing the case a second time.

TIGHTER BULLET FIT

As delivered from the factory, the collet die will grip the bullet with a light press fit with cases of average hardness. For a tighter fit, you can anneal the case neck or polish the decapper mandrel .001 smaller. Do not go beyond .001 smaller as there will be no increase in bullet pull, and a decrease in accuracy as the bullet will then be sizing the neck as it is inserted.

OPTION The collet die provides the optimum bullet fit for maximum accuracy and case life. Should you desire a tighter fit, and are not able or willing to polish the mandrel or anneal the case neck, you can order a custom mandrel from the factory. Be sure to specify the caliber and bullet diameter.

Example: "Send undersize collet die mandrel for 30/06 using a 308 bullet." [There is a \$11.00 charge; \$5.00 for the undersize mandrel + \$6.00 for shipping]

Stuck Case If a case is not lubricated, the rim will be pulled off and the case remains stuck in the die. If this happens — **loosen, but do not remove the decapper clamp with a $\frac{3}{4}$ " and $\frac{1}{2}$ " wrench.** Use a $\frac{3}{16}$ " drift punch and large hammer (1-lb. or larger) to tap on the decapper rod and drive the stuck case free. Lee Precision will remove a stuck case for \$6.00.



3 PRIME

Prime the case according to instructions supplied with your press. For maximum accuracy, speed and convenience, we suggest use of the **LEE ERGO-PRIME**. With this tool, you never touch the primers from box to shell. Built-in primer flipper turns them right side up. Primers are automatically fed and installed just as fast as you can place the shell in the holder.

The Lee Ergo-Prime Hand held, requires special, but inexpensive shell holders. 90250



4 CHARGE THE CASE

Select a load from the chart on the reverse side. This is the most critical decision you must make. An overcharge can



blow up the gun and injure the shooter or persons nearby. It is dangerous to use a bullet of a greater weight with a charge for a lighter bullet. Never select a load intended for a bullet lighter than you are using. Loads for a slightly heavier bullet are safe. The Lee Dipper is the safest and easiest powder measure to use. Adjustable powder measures should be double checked with a scale. Use the starting loads. You may work up to the **NEVER EXCEED LOADS** gradually, provided you know how to watch for pressure signs.

CAUTION: After charging the case, the only operation that should be done is to seat the bullet. Never try to seat a primer after powder has been added.

5 EASY ADJUST DEAD LENGTH BULLET SEATING DIE THIS DIE DOES NOT CRIMP

Simply screw the die in until it touches the shell holder, plus an additional $\frac{1}{4}$ turn and finger tighten the lock ring. Bullet seating depth is controlled by the adjusting screw. Rotate the adjusting screw clockwise to seat the bullet deeper and counterclockwise for a longer overall length. Bullet seating depth plays an important role in accuracy. Many shooters prefer to seat the bullet .020 to .030 inches away from the rifling. Others prefer that it just touch the rifling. Only you can determine which produces the best accuracy.

Caution: Never seat bullets deeper than the minimum overall length listed by reliable load data sources.

The Bullet Seating die is equipped with a floating bullet seating punch for maximum accuracy. It is designed to seat all shapes of bullets with minimum deformation. If you attempt to compress the charge, it may deform the bullet an objectionable amount. It will be necessary to modify the bullet seating punch to fit the bullet. If unable to do it yourself or have it done locally, we can do it for you. Send \$14.00 along with a sample bullet, and order "Custom Seating Plug for Sample Bullet" (\$8.00 for the bullet + \$6.00 for shipping)



FACTORY CRIMP IS A TRADEMARK OF LEE PRECISION, INC.

6 FACTORY CRIMP™ DIE

Screw the Lee Factory Crimp Die in to touch the shell holder, plus $\frac{1}{2}$ turn more. Adjust in for a heavier crimp. It is usually best to start with too little crimp, as you can readjust and crimp again to suit your needs. When the four splits in the collet are closed, maximum crimp has been achieved. Do not try for more as the die will be damaged and the crimp excessive.

Bullets do not need a crimp groove as the Lee Factory Crimp Die will form one while crimping. However, it requires a harder push on the press lever to form the crimp.

FOR A COMPLETE CATALOG, SEND YOUR NAME AND ADDRESS

LEE

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CAUTION

Ammunition reloading can be dangerous if done improperly and should not be attempted by persons not willing and able to read and follow instructions exactly. Children should not be permitted to reload ammunition without strict parental supervision. Always wear safety glasses when reloading and shooting. Ammunition loaded with these tools and data should only be used in modern guns in good condition. We do not accept responsibility for ammunition loaded with these tools or data as we have no control over the manufacture and storage of components or the loading procedure and techniques. Primers and gun powders, like gasoline and matches, can be dangerous if improperly handled or misused.

LEE BREECH LOCK CHALLENGER PRESS

The "O" frame press by design is the strongest and the most popular style press by far. Large opening and long stroke handles the largest belted magnums with ease. The primer catcher is positive and routes the spent primers directly to the trash can. Priming is a dream with the Lee Lever Prime System. Best of all, it includes the Breech Lock Quick Change Die System.

Change dies instantly with a twist of the wrist; you'll never have to re-adjust your die.

Other features include all steel linkage with adjustable length lever. This same press will cost you more than twice as much from other manufacturers, and that's without all of the Challenger's features. If cost is more important than convenience, you can leave the Breech Lock bushing locked in the press and screw dies in and out like any conventional press. 90588



YOU CAN change dies instantly with a twist of the wrist; you'll never have to re-adjust your die.