

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.

DELUXE
QUICK-TRIM
CASE TRIMMER



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. 90437 Deluxe Quick Trim

CHOOSE ONE STYLE SIZER TO INSTALL

FULL LENGTH SIZER

RESIZING LUBRICANT REQUIRED
FOR 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.



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 $\frac{3}{8}$ 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.



OR

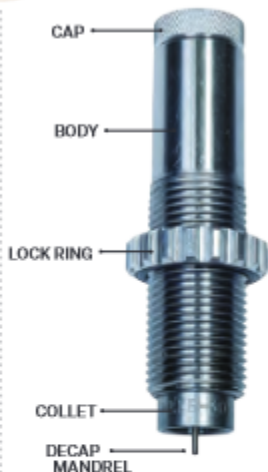
OPTIONAL

Clean cases are easier to inspect. Cases can be decapped, cleaned, trimmed, chamfered, neck reamed or turned and primer pockets cleaned. For best accuracy, keep your cases sorted by brand and lot. Some shooters even sort by weight to insure uniform wall thickness and case capacity. Check for off center or mis-shaped flash holes. Maximum accuracy is obtained with cases that have dead center flash holes of a uniform size.

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COLLET NECK SIZER

FOR BOLT ACTION / BRASS FROM YOUR GUN ONLY



ADJUSTMENT FOR LEE PRESSES Screw sizing die in until it contacts the shell holder, plus one more turn (1 1/4 turns for Classic Series press owners).

ADJUSTMENT FOR OTHER BRANDS Screw collet neck-sizing die in until it makes firm contact with shell holder, plus 2 MORE TURNS. This will prevent the press from toggling over center and give the operator feel of the collet closing. Presses that toggle or snap over center at the end of the stroke provide no feel and can damage the collet necksizing die if not adjusted properly.

Insert a case into 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 1/4 turn. **OPTION** Even greater accuracy can be obtained by rotating the case one-half turn and then 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 undersize mandrel + \$6.00 shipping]



Stuck Case If 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 3/4" and 1/2" wrench. Use a 3/16" drift punch and large hammer (1-lb. or larger) to tap on the decapper rod and drive the stuck case free. Replacement sizing dies may be purchased on our website at a 50% product discount by applying the coupon code — LEE LUBEWORKS — to your shopping cart.



same inexpensive shell holders as Auto Prime. 90700

3 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, like the **Lee Auto-Drum Powder Measure**, 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 case, the only operation that should be done is to seat bullet. Never try to seat primer after powder has been added.



Using Case Activated Powder Measure?

SHORT Charging Die # 90668 REQUIRED



ADJUSTING
SCREW



4

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 plug 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.

5

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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