

# Dillon Reloading Die User Instructions

## Dillon Precision, Inc.

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**DISCLAIMER**

The material in this manual is for informational purposes only. The products it describes are subject to change without prior notice. Dillon Precision Inc. makes no representations or warranties with respect to this manual. Dillon Precision Inc. shall not be liable for any damages, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the use of, or the inability to use the products described herein. Read this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Keep this manual in a safe location for future reference.

**EXPLANATION OF SAFETY WARNINGS**

**DANGER!**

Danger! Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury

**WARNING!**

Warning! Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

**CAUTION!**

Caution! Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

**Dillon Contact Information**

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Date	Version Number	Document Changes
4-29-2021	0	First Release

***MANDATORY SAFETY PRECAUTIONS—MUST BE READ***

**1. The Basic Risk of Reloading, and Overall Dillon Die Design Usage Safety:**

- DANGER!** The reloading of ammunition and the handling of reloading components used in the reloading process is inherently dangerous. Accidents and mistakes in re-loading can and do occur, sometimes with disastrous results resulting in, but not limited to loss of hearing, vision, limbs or life. These accidents can occur with the novice and experienced reloader.

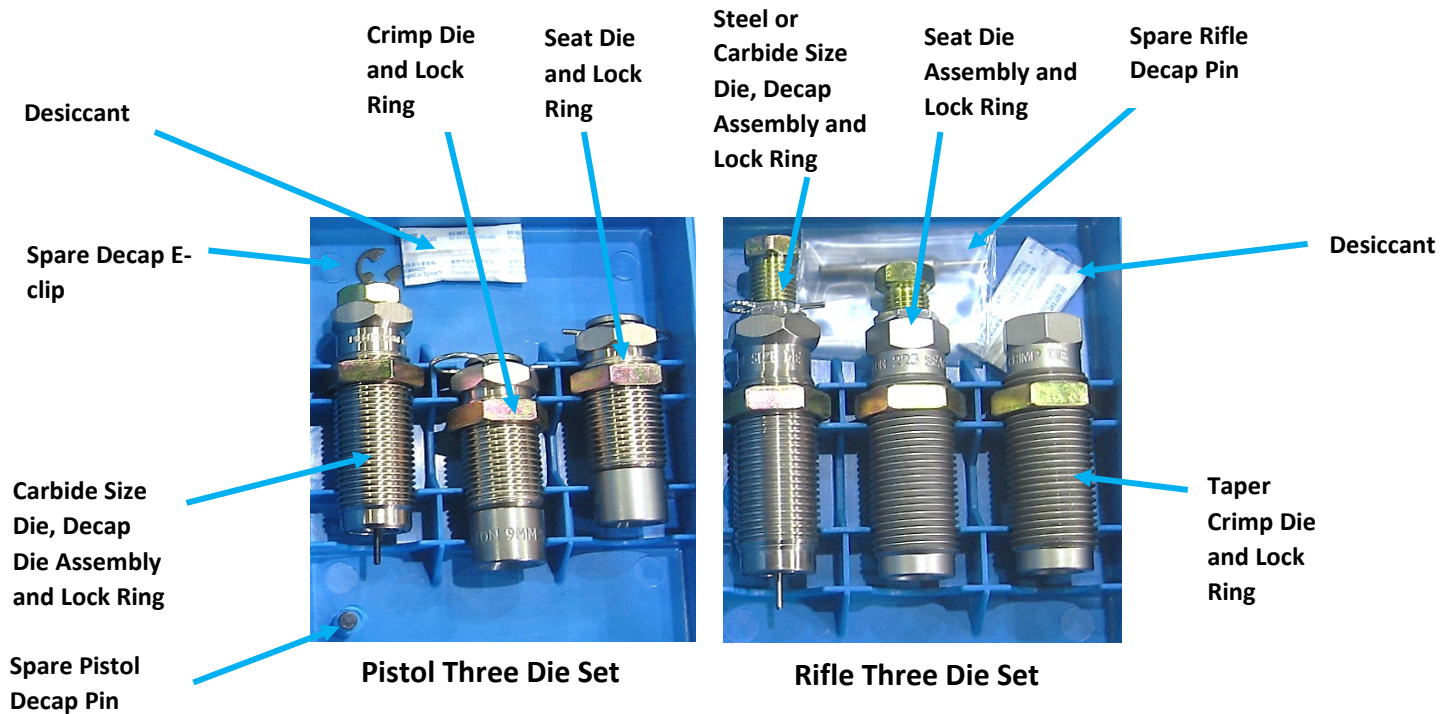
**2. Mandatory User Safety Minimum Requirements:**

- KNOWLEDGE:** Study and learn the basics, processes and specifications used in the reloading of ammunition from reputable sources and publications by the prominent bullet and powder manufacturers such as Sierra, Hornady, Speer, Western Powders and Alliant Powders; including reloading manuals such as the Lyman Reloading Manual and the Western Powder Reloading Guide.
- EYE AND EAR PROTECTION:** Never reload without eye and ear protection.
- PAY ATTENTION:** Give your full attention to the reloading process. Do not watch television, the internet, or converse with anyone while loading. It is a full-time operation.
- SMOKING/IMPAIRMENT:** Do not smoke or allow anyone to smoke in the reloading area. Do not allow open flames. Do not load if you have been drinking alcohol or are impaired in any way.
- SAFETY:** Keep components and ammunition out of the reach of children.
- BE PATIENT and OBSERVANT--**If a problem is not obvious—CALL Dillon Technical Support (800) 223-4570 or visit the troubleshooting section at [www.dillonprecision.com](http://www.dillonprecision.com).

### 3. DILLON RELOADING DIES LIMITED WARRANTY

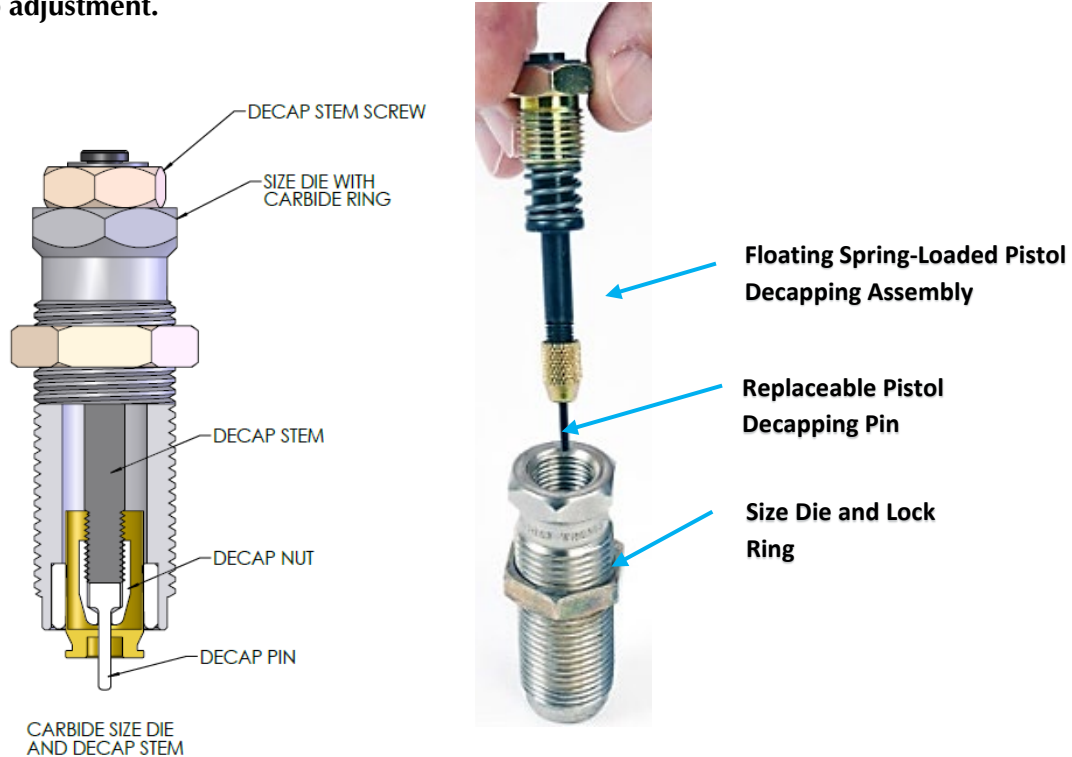
Dillon Precision Inc. warrants the Dillon Reloading Dies for life against defects in material and workmanship. Dillon Precision Inc. will either repair or replace any part(s) that prove defective. *Decapping/Decapping Rifle and Pistol Pins are consumable items and not warrantied.* Dillon will provide repaired or replacement products/parts at Dillon's choice on an exchange basis. This limited warranty does not cover any damage to the product that results from improper installation, accident, abuse, misuse, natural disaster, abnormal mechanical or environmental conditions, or any unauthorized disassembly, repair or modification. This limited warranty shall not apply if: (i) the product was not used in accordance with any accompanying instructions, (ii) the product was not used for its intended function, (iii) the addition of any non-authorized equipment (iv), or if the product is used in commercial ammo manufacturing.

### 4. DILLON PISTOL AND RIFLE THREE DIE SET CONTENTS—All Dillon Die sets include a Size/Decap Die, Seat Die and Crimp Die as shown below. All Dillon seat and crimp dies incorporate a generous lead-in radius for enhanced progressive loading.



## 5. DILLON PISTOL DECAP (DEPRIME) ASSEMBLY AND SIZE DIE DESCRIPTION

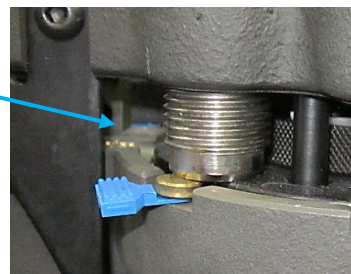
5.1. The Pistol Decapping Assembly incorporates a floating/spring-loaded stem with an easily replaceable hardened Decapping Pin. This floating spring-loaded assembly helps with the alignment of the Decapping pin with the flash hole in the brass case and provides a “snap” action of the primer stem to minimize primer “draw-back” i.e. primers sticking on the end of the Decapping Pin and being pulled back into the primer pocket. This Pistol Decapping Assembly is common to all Dillon Pistol Dies and requires no adjustment.



## 6. PISTOL SIZE DIE INSTALLATION GUIDE AND DECAP PIN REPLACEMENT

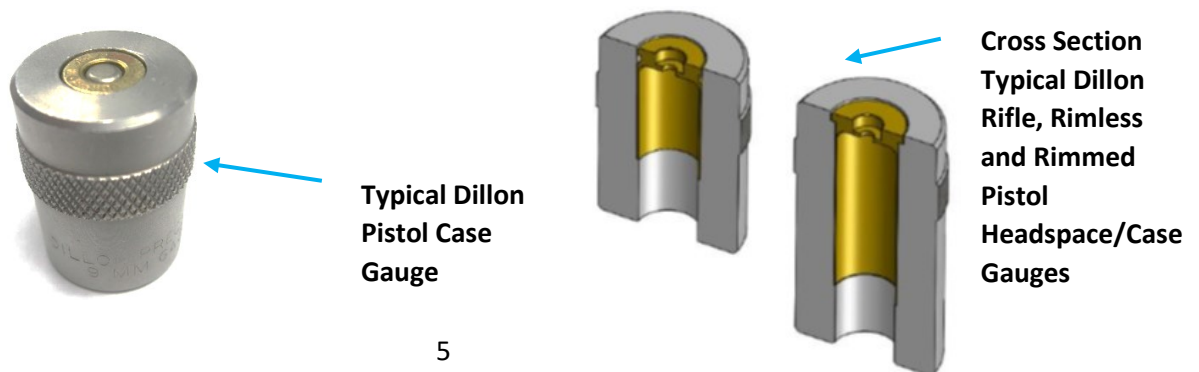
6.1. Cycle the reloading press so that the Toolhead and Shellplate are in their sizing position. Screw the Pistol Size Die (Clockwise) down until it just touches the Shellplate, back the Die no more than 1/16 of a turn.

Example of the Size Die just touching to a 1/16 of a turn up from the Shellplate

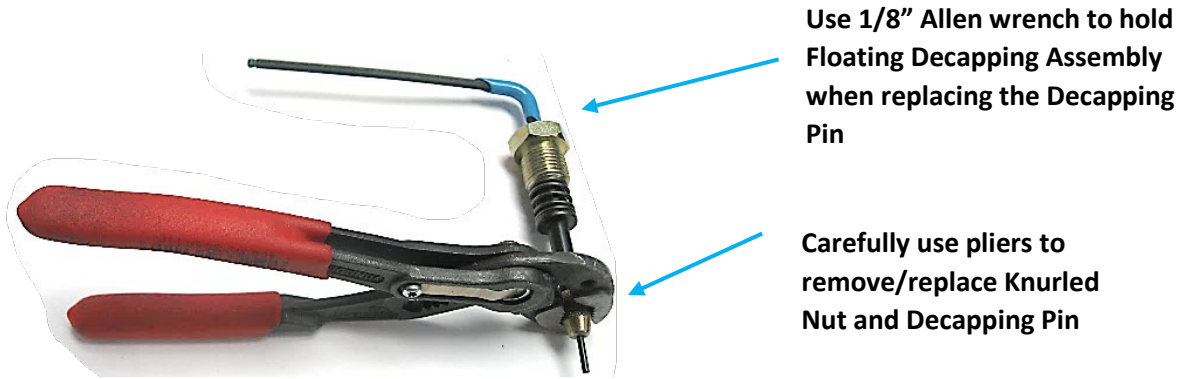


6.2. Tighten the Die Lock Ring with a 1" Dillon Bench Wrench using a 7/8" wrench to hold the Die Body with a sized case fully up in the Size Die to promote better alignment of the Shellplate, Die and Toolhead.

6.3. It is a good idea to check the sized pistol case in a Dillon Pistol Case Gauge. The sized case should drop freely in and out of the Pistol Case Gauge. This Case Gauge can also be used to gauge the completed cartridge.



6.4. Pistol Decapping Pins can be bent or broken in the Decapping process due to foreign objects in the case or a Berdan case. All Dillon Pistol Dies use the same Decapping Pin. A package of 10 Decapping Pins is available from Dillon (PN 21528). To replace the Pin, remove the Decapping Assembly from the Size Die with an 11/16" end wrench. Use a 1/8" Allen wrench in the end of the Decapping Assembly and a set of pliers to remove the Knurled Nut that retains the Decapping Pin as shown below. Use a drop of blue Loctite on the threads when re-assembling the Knurled Nut/Pin Assembly and tighten.



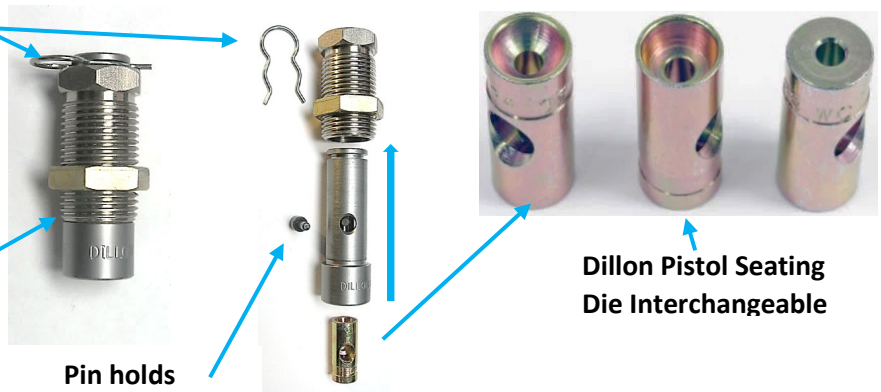
Use 1/8" Allen wrench to hold Floating Decapping Assembly when replacing the Decapping Pin

Carefully use pliers to remove/replace Knurled Nut and Decapping Pin

7. PISTOL SEAT DIE ADJUSTMENT--The Dillon Pistol Seating Die has a removable double-ended Seating Stem. One end is for flat nose bullets and the other for round nose bullets. There is another one available for "wadcutter" (.38) bullets in the .38/.357 Die Set. Select the Seating Stem that matches the nose of the bullet. Assemble the Seating Die as shown below making sure that the small black Seater Stem Pin holds the Seater Stem in the Seat Die Insert and that the Seater Assembly slides inside the Die Body and is held in place with the Spring Clip.

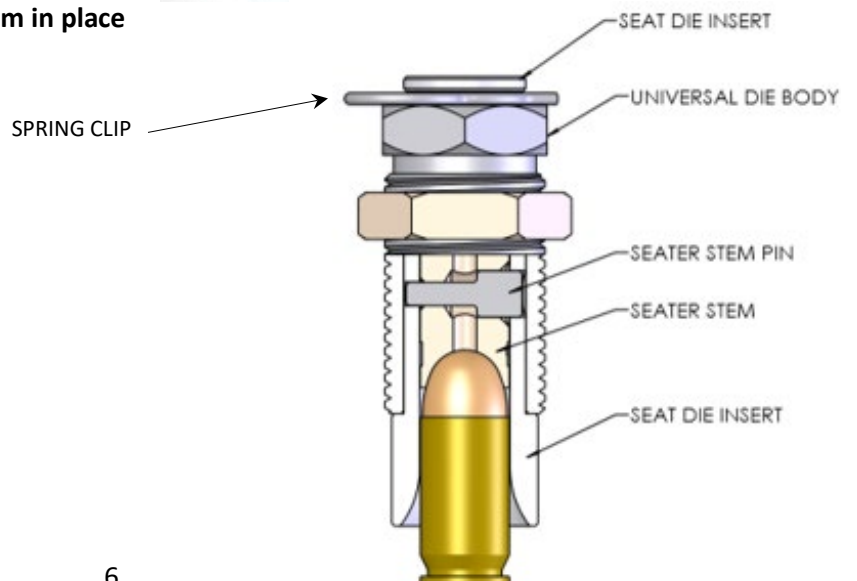
Spring Clip holds the assembly together for ease of cleaning disassembly and assembly without loss of adjustment

Dillon Pistol Seating Die Assembly



Pin holds Stem in place

Dillon Pistol Seating Die Interchangeable



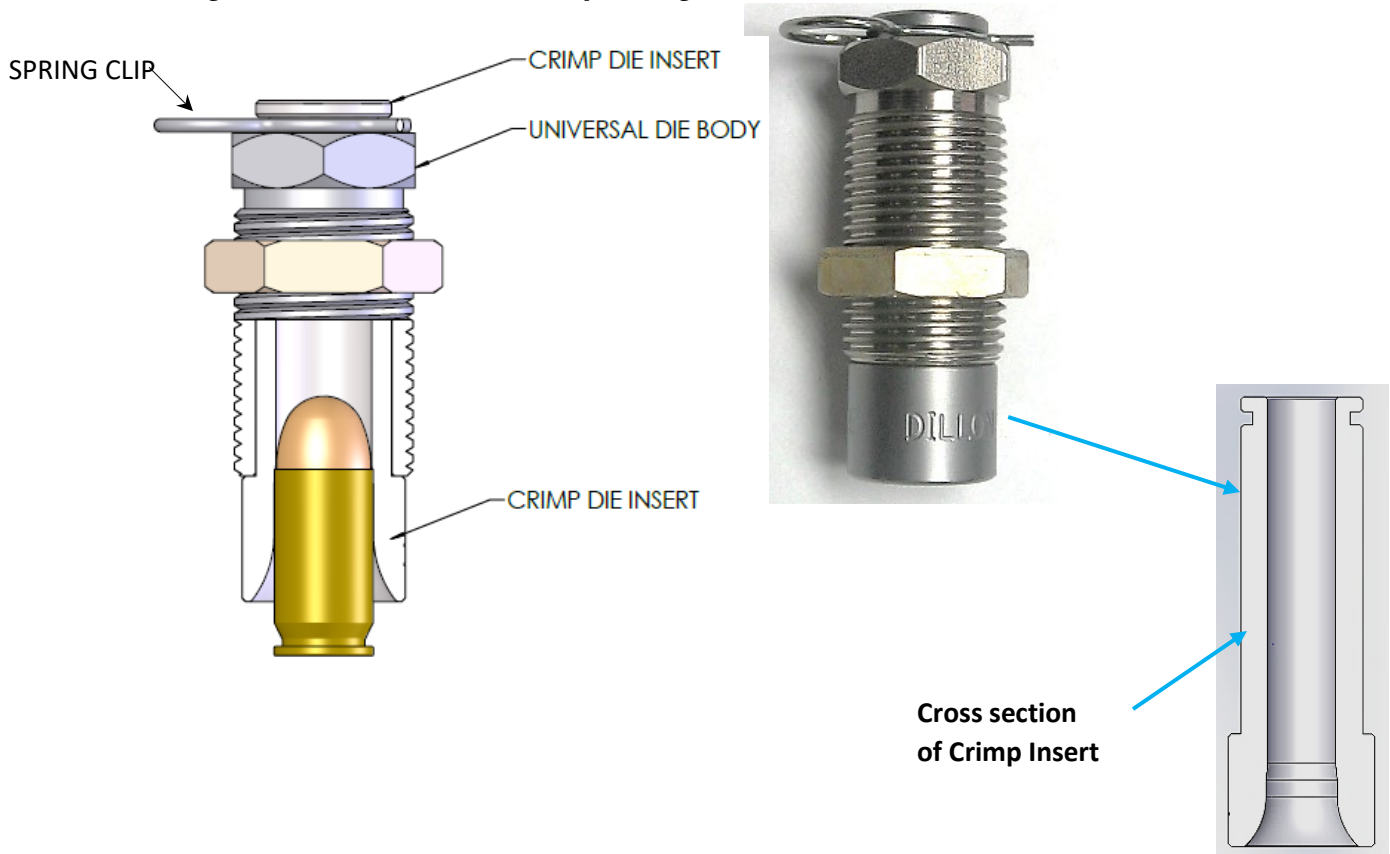
- 7.1. Screw the Pistol Seating Die into the Toolhead until the bottom of the Die is flush with the bottom of the Toolhead. This is a starting position for the Seat Die. Place a belled/flared case into the Shellplate/Seating Station. Place a bullet in the belled case mouth and insert the case with the bullet into the Seating Die with the reloading press. Remove the cartridge and check the overall length of the cartridge with a dial caliper. If the bullet is not seated deep enough, screw the Seating Die down half a turn at a time. As a guide, one full turn moves the Die about .070", about the thickness of a nickel coin. Replace the cartridge and repeat these steps until the correct COAL (Cartridge Overall Length) is achieved. (A quick method for pre-setting the Die is to place a previously loaded "good" cartridge in the Seating Station and adjust the Die down until just touches the bullet.) Verify the COAL and tighten the Die Lock Ring with a 1" Dillon Bench Wrench while holding the Die with a 7/8" End Wrench.



Pistol COAL

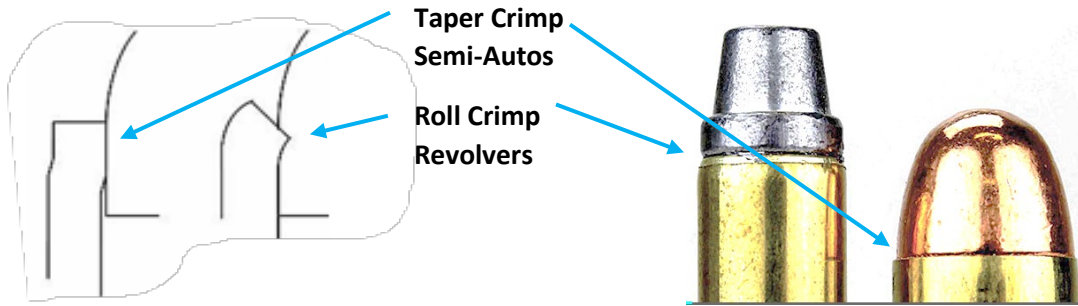
**8. PISTOL CRIMP DIE ADJUSTMENT—Crimping is the final operation in the reloading process. Crimping removes the bellying of the case mouth from the neck expanding or belling step and provides added friction or "holding" of the bullet by the brass case.**

- 8.1. Dillon recommends the crimp operation be separate from the seating operation and provides independent crimp dies in the Dillon 3 Die sets.  
 8.2. The Dillon Pistol Crimp Die uses an easily removable Crimp Insert. This feature allows for quick cleaning without the loss of the crimp setting.



Cross section of Crimp Insert

- 8.3. There are two types of crimping--roll crimp and taper crimp. Taper crimping is generally used for rimless semi-auto cartridges and roll crimping is used for revolvers with rimmed cartridges.



- 8.4. Roll crimping rolls the top edge of the case mouth inward capturing the bullet, leaving a slight radius at the top of the case mouth. Cast lead bullets or jacketed bullets may or may not have a crimp groove or a cannelure that accepts the roll crimp.



- 8.5. If there is no groove or cannelure, do not over crimp the bullet. Over crimping can damage the bullet and reduce the "hold" on the bullet due to the bullet being deformed and the brass case springing back away from the deformed bullet. Crimping a bullet without a crimp groove should only reduce the diameter of the brass case mouth/outer diameter .001-.002". A reduction of case mouth diameter greater than .002" may cause bullet deformation and a loose bullet. Note-- it is not necessary to use the cannelure if your COAL is not compatible with the location of the cannelure.
- 8.6. Roll crimping a revolver bullet provides the extra hold between the bullet and the case to prevent the bullet from being "pulled" out of the case during recoil. A bullet that is "pulled" far enough out of the case by recoil may contact the frame causing the revolver's cylinder to lock-up.
- 8.7. Pistol cartridge caliber-specific case gauges are available from Dillon and replicate the SAAMI chamber specification. These gauges provide a quick check of the cartridge's crimp, diameter and case length. If it fits in the case gauge, it will most likely fit in the gun's chamber.
- 8.8. Taper Crimping of straight wall pistol cases simply flattens out the belling. The gradual taper at the top of the taper Crimp Die slightly reduces the diameter of the top portion of the case mouth. A Dillon Taper Crimp Die is used for rimless straight-walled or tapered cases such as the 9mm, .40 S&W, .45 ACP. These styles of cartridges headspace on the case mouth. Roll crimping here would shorten the cartridge case causing improper head spacing in the chamber. Taper crimping can be used on bullets with or without a cannelure or a crimp groove. Again, crimping should only reduce the diameter of the case mouth .001"-002".
- 8.9. Excessive crimping can "buckle" the cartridge case as shown below and may prevent chambering of the cartridge.

Case buckled by  
over crimping

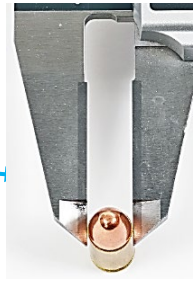


- 8.10. Adjustment of the Crimp Die



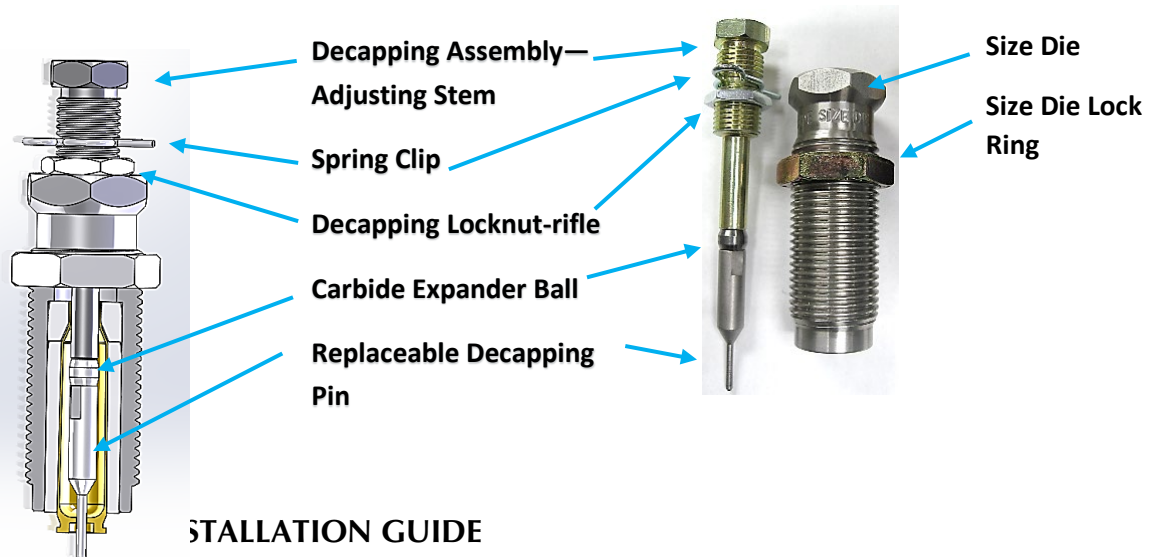
- 8.10.1 Screw the Crimp Die into the Crimp Station. Screw it down until it is flush with the bottom of the Toolhead as a starting point.
- 8.10.2 Place a cartridge with a properly seated bullet into the Crimp Station.
- 8.10.3 Lower the Operating Handle and continue to screw the Crimp Die Down until it just touches the cartridge.
- 8.10.4 Raise the Operating Handle slightly and screw the Die down 1/8 of a turn or less, lower the Operating Handle.
- 8.10.5 Raise the Operating Handle halfway and inspect the cartridge. If the beelling of the case mouth is still present, or the desired amount of crimp is not enough, give the Die no more than a 1/8 of a turn and try again. Continue making small adjustments until the desired amount of crimp is achieved that is .001-.002" less than the case mouth outside diameter. Once the adjustment is complete, place the case back into the Crimp Station and lower the Operating Handle. Tighten the Crimp Die lock ring with the cartridge in place.

Measuring Crimp



## 9. DILLON RIFLE DECAP (DEPRIME) ASSEMBLY AND SIZE DIE DESCRIPTION

- 9.1. Dillon steel size dies are shipped with an anti-corrosion oil coating that must be removed before use. Clean the new die interior with alcohol by “winding a piece of paper towel wet with alcohol up through the die. Next, dampen a piece of paper towel with Dillon Size Lube and wind it up through the die. The Die is now ready to be used.
- 9.2. Dillon full-length size Dies are available in specialty case hardened steel or in full-length carbide. Dillon Precision Dies provide a lifetime of precise sizing of brass when properly used and cared for. Carbide Dies provides customers with increased durability, long-term sizing precision and higher scratch resistance. Fired brass must be properly cleaned to not damage the interior finish of the size dies.
- 9.3. Bottleneck cases MUST be lubricated with Dillon Case lube when using either Steel or Carbide Size Dies.
- 9.4. Dillon Steel Size Dies are shipped with an anti-corrosion protective coating. This coating must be removed before use to prevent a stuck case in the Size Die. Remove the Decapping Assembly. Wet a paper towel with alcohol and “wind it” into the bottom of the Size Die up through the neck. Follow this with a paper towel dampened with Dillon Case Lube. The die is now ready to be used.
- 9.5. The Dillon Rifle Decapping Assembly is adjustable and incorporates a replaceable Decapping Pin and a Carbide Expander Ball for expanding the neck of the case.



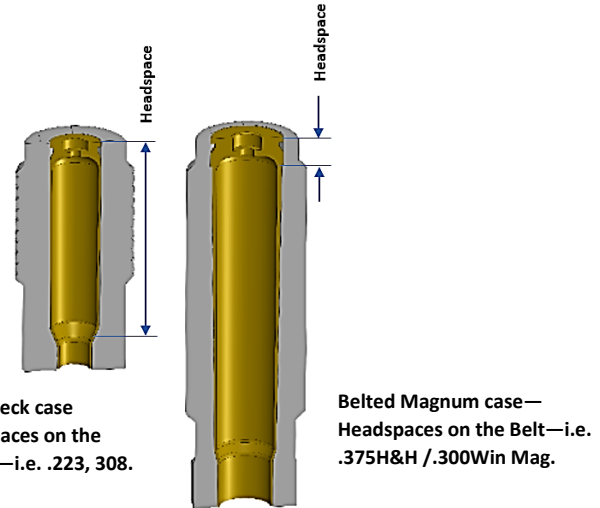
10. DILLON RIFL

STALLATION GUIDE

- 10.1. Cycle the reloading press so that the Toolhead and Shellplate are in their sizing position. Screw the Sizing Die down until it just touches the Shellplate and back it up two turns. Tighten the Die Lock Ring finger tight.
- 10.2. Loosen the Rifle Decapping Assembly Locknut and raise the Decapping Assembly 3 turns.
- 10.3. insert a lubricated case into the sizing station.
- 10.4. Cycle the press to size the case and remove the case.
- 10.5. Verify the case is properly sized and the headspace is correct by using a Dillon Head Space Gauge. Always use a Headspace Gauge to set the Size Die for bottleneck cartridges!
- 10.6. Cartridge types head space differently. Bottleneck rimless cases headspace on a mid-point on the shoulder. Belted magnum cases headspace on the belt (some will also headspace on the shoulder). Note—the Dillon gauge is a headspace gauge, not a chamber gauge! EGW Chamber Checkers are available from Dillon—see below.



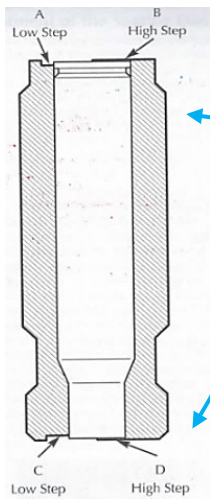
Typical EGW "Multi-Round" Chamber Checker— .223 & .308 examples



Bottleneck case  
Headspace on the  
Should—i.e. .223, 308.

Belted Magnum case—  
Headspace on the Belt—i.e. .375H&H / .300Win Mag.

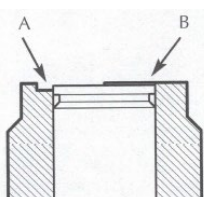
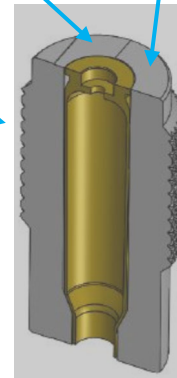
- 10.7. Insert the sized case into the Gauge.
- 10.8. The top of the Gauge verifies that the headspace is correct and the bottom of the Gauge verifies the length--see below. If the headspace is above the maximum (High Step B--see below), screw the Die down 1/8 of a turn (about .009") and resize the case again. Repeat until the case head is below the upper step (High Step B). If the case head is below the Low Step A--(see below), back the Die up, discard this case and check another case.



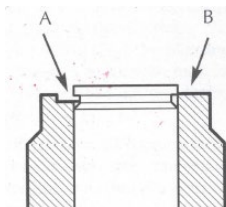
Top of the gauge checks the headspace—High step B is the maximum and the low step A is the minimum

Bottom of the gauge checks the overall case length C (Low step) is the minimum length and D (High step) is the maximum length

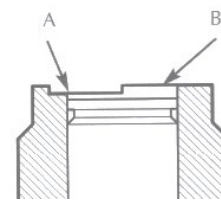
Low step A High step B



Proper Headspace—Case head is at or just below the high step (B) and above the low step (A)



Improper Headspace—Case head is above the top step (B) — adjust size die down (clockwise) —Cycle this case through the size station



Improper Headspace—Case head is below the low step (A) — adjust size die up (counter clockwise) and run another case through the size station

10.9 Press.)

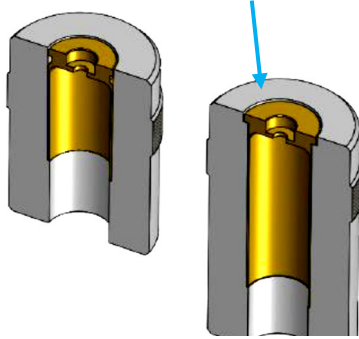
from

available from Wilson in Dillon's Blue



Typical Dillon Pistol Case Gauge

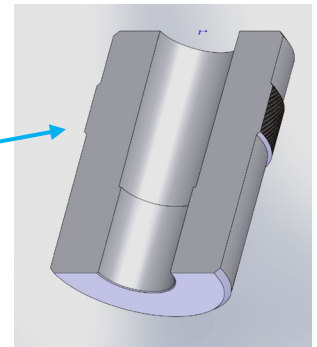
Proper Headspace—Case head is flush with the top of the gauge



Rimless and Rimmed Dillon Pistol Case Gauges

Caliber	P/N
.233 Remington	13254
.308 Winchester	12867
.30-06 Springfield	12679
.380 ACP	15160
9mm Parabellum	15161
.38 Super	15158
.38 Special	15159
.357 Magnum	15163
.40 S&W	15164
10mm	15162
.44 Magnum	15165
.45 ACP	15166
.45 Colt	15167
.45 GAP	12672

Typical Dillon Pistol Case Gauge cross section



- 10.10. Repeat the case sizing until the case is properly sized. Note--Some Dies may require "light contact/slight cam-over" of the Dies when they contact the Shellplate.
- 10.11. Use a 7/8" wrench to hold the Die Body and tighten the Die Lock Ring with a 1" Dillon Bench Wrench with the sized case fully inside the Die.

### 11. RIFLE DECAP ADJUSTMENT AND DECAPPING PIN REPLACEMENT

- 11.1. Put a decapped case in the size station, screw the Decapping Assembly down while partially cycling the Handle up and down until the shoulder of the Decapping Pin just contacts the flash hole inside the case with the Handle down. See below. Raise the Decapping Stem 1½ turns from contact with the inside of the case.

Screw Decapping pin down until the shoulder just touches the top of flash hole then backup 1 ½ turns

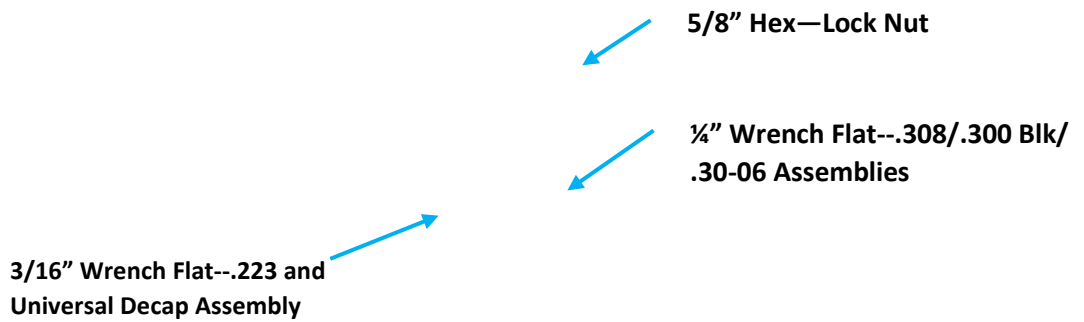


- Spring Clip
- Decapping Stem Locknut
- Carbide Expander Ball
- Replaceable Decapping Pin

- 11.2. The Rifle Decapping Pin is replaceable and is a consumable item. To replace the Pin, use a 9/16" end wrench and a 3/16" end wrench for the wrench flats on the Universal Decap and .223 Decap Assembly as shown below. Use ¼" end wrench for the .308 and .30-06 Decap Assemblies. Use a drop of Blue Loctite on the Decapping Pin threads when reassembling.

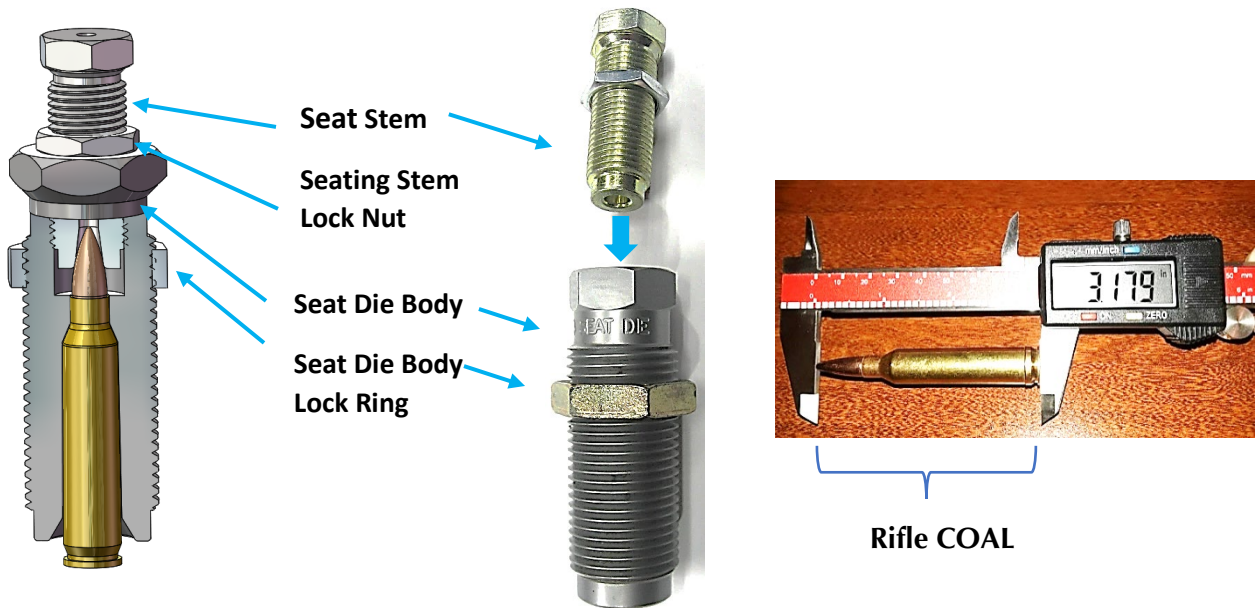


9/16" Hex—Rifle Decap Stem



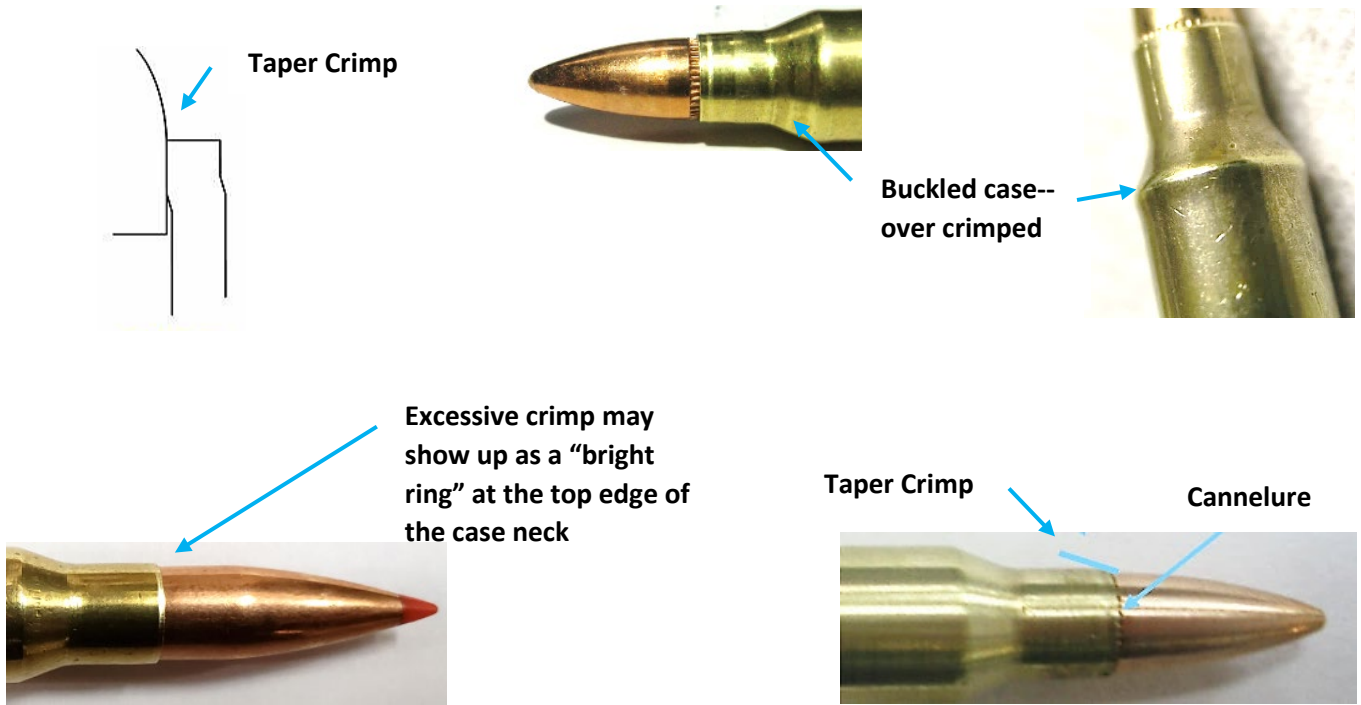
**12. RIFLE CARTRIDGE SEAT DIE ADJUSTMENT—Determine the cartridge overall length (COAL) required in your reloading manual.**

12.1. Set up the Rifle Seat Die by placing a sized and neck expanded case in the seating station. Screw the Rifle Seat Die down until it touches the case and back the 7/8-14 threaded Die Body up two turns. Lock the Die Lock ring in place with a 1" Dillon Bench Wrench while holding the Die with a 7/8" End Wrench. Loosen the 5/8" hex Seating Stem Lock Nut and back the center 9/16" hex Seating Stem Bolt up 3 turns. Place a bullet in the case mouth and seat the bullet. Carefully screw the 9/16" hex Seating Stem down until it contacts the bullet. Remove the cartridge and use a dial caliper to measure the COAL of the cartridge. If the bullet is not seated deep enough, screw the Seating Stem down 1/8 turn. As a guide, one full turn moves the Stem .050". A 1/4 of a turn is about .012". Repeat these steps until the correct COAL is achieved. Now tighten the Seating Stem hex 5/8" lock nut while holding the 9/16" stem from rotating with end wrenches with the cartridge in the Seat Die. (A quick method for pre-setting the Seat Die is to place a previously loaded "good" cartridge in the Seat Station. Verify that the COAL is correct.

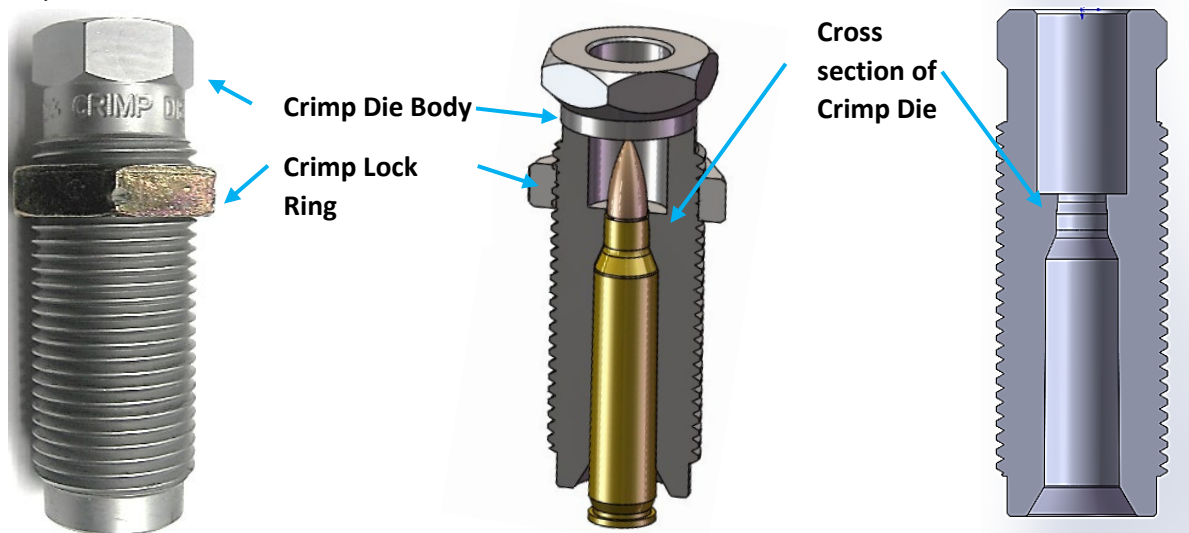


**13. RIFLE CRIMP DIE DESCRIPTION AND ADJUSTMENT—Crimping is the final operation in the reloading process. Crimping removes the belling of the case mouth from the previous neck expanding or belling step and provides added friction or "holding" of the bullet by the brass case. Rifle bottleneck cases, in general, are not crimped unless the bullet has a cannelure and the COAL corresponds with that position as below. Taper crimp enough to straighten out any belling from the previous steps. An autoloading rifle cartridge might require more crimping if the neck tension on the bullet is inadequate to hold the bullet in place during the auto-loading cycle. Excessive crimping can "buckle" the cartridge case as shown below and may prevent chambering of the cartridge. Crimping a bullet without a crimp groove should only reduce the diameter of the brass case**

mouth/outer diameter .001-.002" maximum. A reduction of case mouth diameter greater than .002" may cause bullet deformation and a loose bullet. Note--it is not necessary to use the cannelure if your COAL is not compatible with the location of the cannelure.



13.1. Dillon recommends the crimp operation be separate from the seating operation and provides independent crimp dies in the Dillon 3 Die sets. The Crimp Die is a single piece of case-hardened specialty steel.

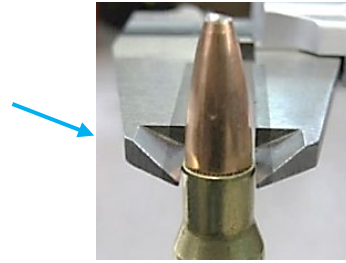


13.2. Adjustment of the Crimp Die—

- 13.2.1 Screw the Crimp Die into the Crimp Station. Screw the Die down until it is flush with the bottom of the Toolhead as a starting point.
- 13.2.2 Place a cartridge with a properly seated bullet into the Crimp Station.
- 13.2.3 Lower the Operating Handle and continue to screw the Crimp Die Down until just it touches the cartridge.
- 13.2.4 Raise the Operating Handle slightly and screw the Die down no more than 1/8 of a turn, lower the Operating Handle.
- 13.2.5 Raise the Operating Handle halfway and inspect the cartridge. If the belting of the case mouth is still present, or the desired amount of crimp is not enough, give the Die a 1/8 turn down and try again. Continue making small adjustments until the desired amount of crimp is achieved—The crimped

diameter should be no more than .001-.002" less than the case mouth outside diameter. Once the adjustment is complete, place the case back into the Crimp Station and lower the Operating Handle. Tighten the Crimp Die lock ring with the cartridge in place.

Measuring Crimp



## 14. REMOVING A STUCK CASE

14.1. Everyone reloading is going to "stick" or seize a case in the reloading size die at some point. Trying to remove the case with the reloading press will usually damage the case rim and possibly the Shellplate itself. Examples of damaged rims are shown below. (Refer to Section 14.5-14.7 below on how to remove a stuck case.)

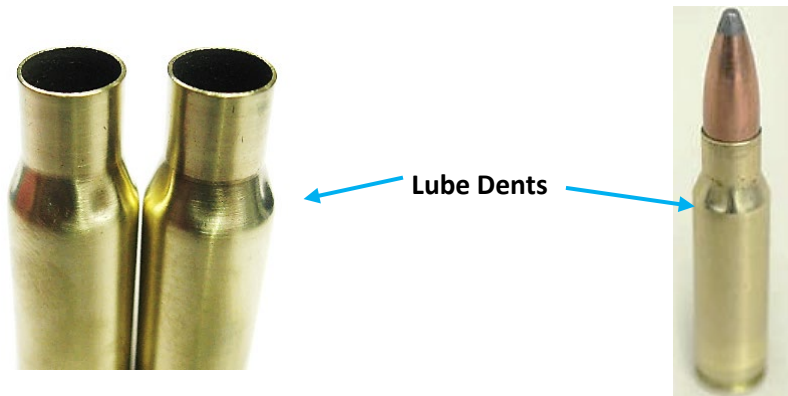


Rims damaged when trying to remove case stuck in size die in reloading press



14.2. Stuck cases can be caused by "blown-out" cases that were fired in an over-sized chamber or excessive pressures, dirty cases, insufficient size lubricant or the wrong lubricant. The Dillon Case Lube formulation of Isopropyl alcohol and lanolin is the most effective, easy to apply and remove resizing lubricant. Engine oils and greases, household oils or specialty fluids like WD40, CLP lubricants and water-based case lubricants should not be used. Resizing dies must be disassembled and cleaned periodically. Grit and debris on cases and in the die can cause a seized or stuck case.

14.3. Over lubricating brass cases can cause hydraulically formed "lube dents" in the case during the resizing process. (These "lube dents" will straighten out during the firing process.) Dents can also be caused by not waiting for the alcohol in the Dillon Case Lube to dry before sizing. If this occurs, clean out the Size Die. Use enough lube to ensure the case will easily enter the size die. If the case is resistant to going in, stop and re-lube.



14.4. The Dillon Rifle Size Die Decapping Assembly can be used to push a stuck case out of the Size Die. With the Die in the Toolhead and Press, remove the Stem Clip. Loosen and thread the 5/8" Jam Nut to the top of the Decapping Stem. Use a 9/16" wrench to turn the Decapping Stem down, pushing the stuck case out the bottom of the Die. (If the case does not readily move-STOP and proceed to 14.5 below).



Remove Stem Clip

Loosen and thread Lock Nut to the top of the Decapping Stem



Tighten the Depriming Stem assembly down against the inside web of



14.5. If the stuck case was not removed as described above in 14.4, remove the Decapping Stem Assembly by threading the 5/8" Lock Nut down against the top of the die and using a 5/8" end wrench to hold the Lock Nut and thread the Stem Assembly out of the die using a 9/16" end wrench as shown below and remove the stem assembly. Use a hammer and a pin punch that fits through the case neck and contacts the inside base of the stuck case and carefully drive the case out of the die. If the Decapping Stem assembly can't be removed proceed to 14.6 below.

1--Thread Lock Nut down against the top of Die and hold it with a 5/8" wrench

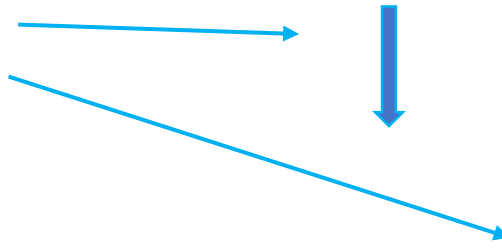
2--Thread Decapping Stem out of the die with a 9/16" wrench—the Stem should come out--- if not go to Section 14.7 below

3--If the Stem came out, use a punch that fits through the neck of the case contacting the inside web of the case base and carefully drive the stuck case down and out of the die

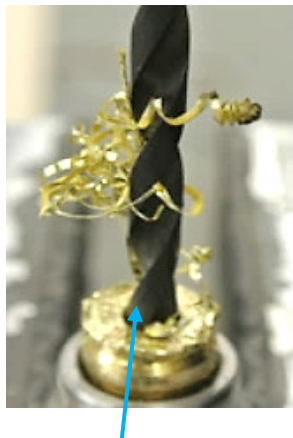
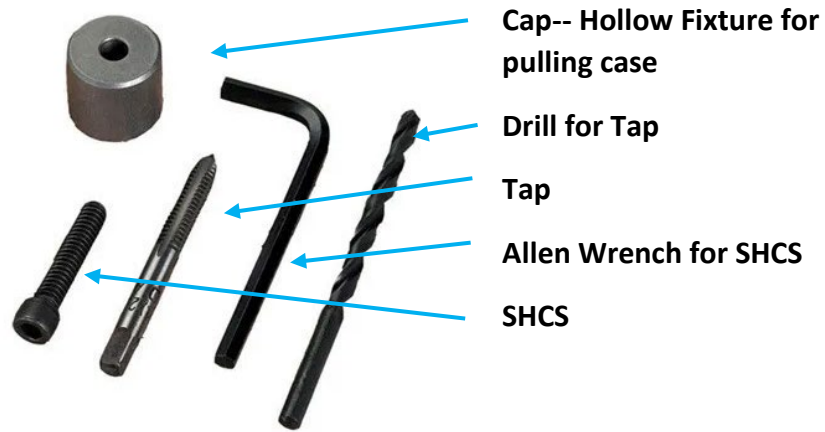
14.6. If the case is still stuck and the decapping assembly is stuck on the Expander Ball in the Die and/or the Decapping Assembly can't be removed, use a pair of vice grips to firmly grab the bottom of the exposed case. Carefully hit down on the vise-grips with a hammer. This should free the case from the Expander Ball and the Die. Clean and inspect the Die and Decapping Assembly for damage and reinstall them.



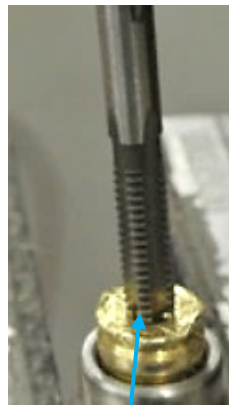
Firmly grasp exposed case with vice-grips and carefully strike the vice-grips with a hammer removing the stuck case



14.7. As a last resort, use the Redding Stuck Case Removal kit from Dillon PN12186. This is a fixture to make a case puller by drilling the exposed bottom of the case, then tapping it and assembling the cap by threading the SHCS through it and then tighten with the provided Allen wrench to “pull” the case out of the die. If this doesn’t work, send the die to Dillon.



Drill base of case



Tap drilled hole



Place cap over drilled and tapped case and thread screw into case with the Allen wrench—“pulling” the case out of the die





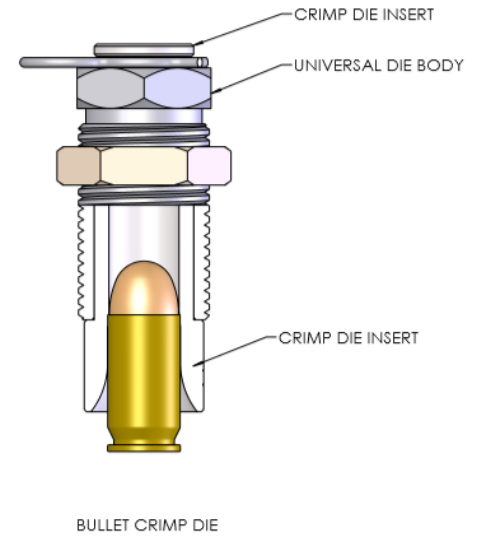
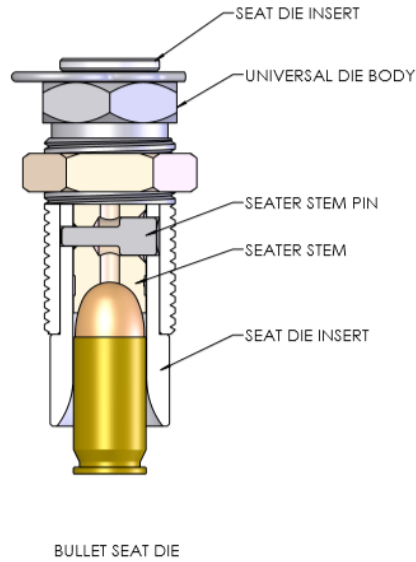
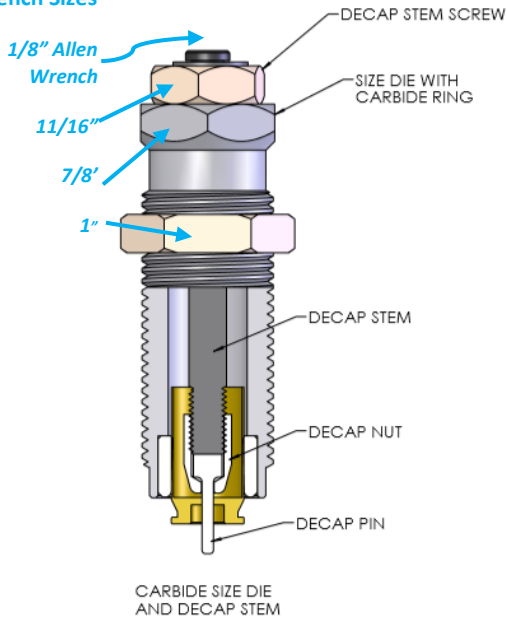
## 15. TROUBLESHOOTING GUIDE

	<b>Problem</b>	<b>Description</b>	<b>Remedy/Cause</b>
1.	<b>Decapping Failure” Primer Pull Back”</b>	Primers may stick on the end of the Decapping Pin and are pulled back up into the primer pocket. The Swage Rod then crushes the primer.	<ol style="list-style-type: none"> <li>1. With rifle cases, adjust the Rifle Decapping Stem down until it stops on the inside of the cartridge flash hole and then back the Decapping Stem up 1 and ½ turns and lock it in place.</li> <li>2. Decapping pin tip is damaged or bent—Replace.</li> <li>3. Polish the tip of the Decapping pin so the taper is gone. This gives a wider tip and the primer’s anvil is less likely to get jammed onto it.</li> <li>4. In the case of pistol Decapping issues, make sure there are no burrs on the end of the Decapping Pin. Polish if necessary and make sure that the spring-loaded Decapping Assembly is intact, especially the “E” clip on top of the Decapping Stem.</li> </ol>
		<b>Bending or breaking Decapping Pins</b>	<ol style="list-style-type: none"> <li>1. Berdan case.</li> <li>2. Smaller case inside the larger case.</li> <li>3. Debris in case—i.e. rocks.</li> <li>4. Cycling the press Handle too fast—Case is still wiggling and hitting the De-priming Pin.</li> </ol>
2.	<b>Sizing</b>	<b>Dents in the case during sizing</b>	<ol style="list-style-type: none"> <li>1. Excessive Case lubrication during the resizing process can hydraulically form dents in the case. Disassemble and clean out the Size Die with a swab. Use enough lube on the cases to ensure cases easily enter the Sizing Die. If the case is resistant to going into the Die, stop, and re-lube. Without adequate lubricant, the case will stick in the Die and Shellplate can rip the rim of the case.</li> <li>2. Dents can also be caused by debris inside the Die.</li> </ol>
		<b>Scratched Cases</b>	<ol style="list-style-type: none"> <li>1. Brass residue will build up in the Size Die (even carbide) over extended periods especially if the brass cases are not cleaned well. This very hard brass residue will leave vertical scratches on the case. Remove any hardened brass buildup in the Size Die with Red 3M Scotch Brite wrapped around a wood mandrel. Chuck the mandrel in a drill motor and run it gently back and forth inside the size Die to remove hardened brass buildup. Sweets 7.62 Solvent can also be used. Be sure to thoroughly rinse and dry the Die after using the Sweets.</li> <li>2. Dirty brass cases. --Re-clean cases.</li> <li>3. New Brass has burrs. --Tumble in corn Cobb.</li> </ol>
		<b>Case stuck in Size Die</b>	<ol style="list-style-type: none"> <li>1. Remove Die—remove the stuck case—Relube cases with Dillon Case Lube.</li> <li>2. Use the stuck case removal feature in the Dillon Rifle Size Die. Remove the Spring Clip from the Decapping Stem and thread the Decapping Stem Locknut up to the top of the hex. Thread the Decapping Stem down using the Decapping Pin to push the stuck case out of the Size Die. Do not use excessive force. Refer to Section 14 of this manual.</li> </ol>
3.	<b>Case Flaring/Belling</b>	<b>Erratic flaring (too much or too little).</b>	<ol style="list-style-type: none"> <li>1. Variation in case length. Measure cases, trim or discard out of spec. Cases</li> <li>2. Improper Powder Die adjustment.</li> <li>3. Powder Measure loose on Powder Die.</li> </ol>
		<b>Brass residue can also build-up on the end of Pistol Powder Funnels in the flaring process.</b>	<ol style="list-style-type: none"> <li>1. Polish the end removing any brass buildup and lightly lube with Case Lube.</li> </ol>
4.	<b>Bullet Seating</b>	<b>The case neck is crumpling when the bullet is seated</b>	<ol style="list-style-type: none"> <li>1. On straight wall and tapered cases, flare the case mouth to at least .010" larger, and up to .020" larger than a sized, unflared case. If loading flat-base bullets into bottleneck cases, use a case mouth-chamfering tool to bevel the inside of the case mouth easing bullet seating.</li> </ol>
		<b>Bullet falling through case mouth or cartridge neck</b>	<ol style="list-style-type: none"> <li>1. The case was not sized.</li> <li>2. The bullet diameter is incorrect. Check the bullet.</li> </ol>
5.	<b>Bullet Crimping</b>	<b>The case is bulging or the case will not fit the Case Gauge or firearm chamber</b>	<ol style="list-style-type: none"> <li>1. Raise the Crimp Die, reducing the amount of crimp.</li> </ol>

# 16. EXPLODED DRAWINGS AND PARTS IDENTIFIERS

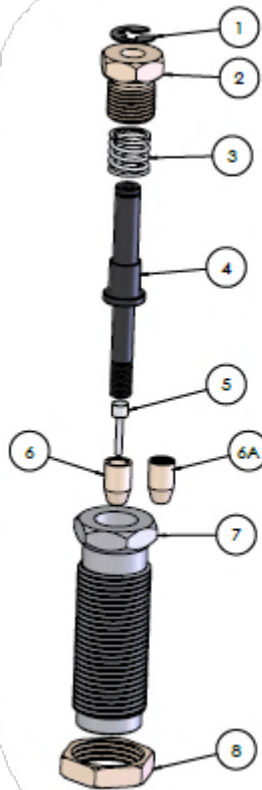
## 16.1. Typical Dillon Three-Die Pistol Set—Carbide Size Die

### Wrench Sizes



<b>Dillon Pistol Complete Three-Die Set</b>	<b>P/N</b>
.32 S&W/.32 H&R Mag	14426
.380 ACP	14401
9mm	14406
9x25 Dillon	14601
.357 Sig	22083
.38 Super	14399
.38 Special/.357 Mag	14400
.40 S&W/10mm Mag	14398
.41 Mag	14402
.44 Special/.44 Mag	14403
.45 ACP/.45GAP	14404
.45 Colt	14405

### 16.2. Dillon Pistol Size/Decap Die Assembly



ITEM	DESCRIPTION
1	13837_DECAP RETAINING CLIP
2	12866_DECAP STEM SCREW
3	13516_FLOATING DECAP SPRING
4	12800_FLOATING DECAP STEM
5	13753_PISTOL DECAP PIN
6	13429_DECAP NUT
6A	16665_32 ACP DECAP NUT
7	SIZE DIE BODY*
8	14067_DIE LOCK RING

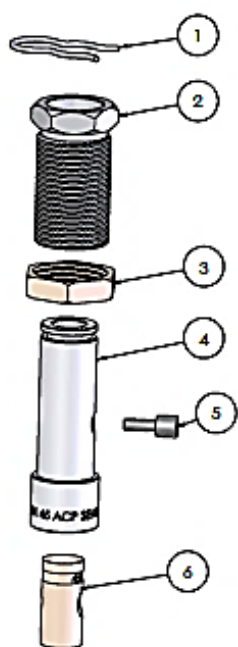
\* = CALIBER SPECIFIC

Note: 32ACP uses a reduced diameter Decap Nut (6A)

Caliber-Size/Decap Dies	P/N
.32 S&W/.32 H&R Mag	14119
.380 ACP	14410
9mm	14415
9x25 Dillon	14602
.357 Sig	16513
.38 Super	14408
.38 Special/.357 Mag	14409
.40 S&W/10mm Mag	14407
.41 Mag	14411
.44 Special/.44 Mag	14412
.45 ACP/.45GAP	14413
.45 Colt	14414
Spare Decapping Pins (10 Each)	21528
Spare Die Lock Rings (5-pack)	10669
Spare Pistol Decap Assembly (Items 1, 2, 3, 4, 5 & 6)	21530
Decap Assembly 32 S&W/H&R	11203



### 16.3. Dillon Pistol Seat Die Assembly

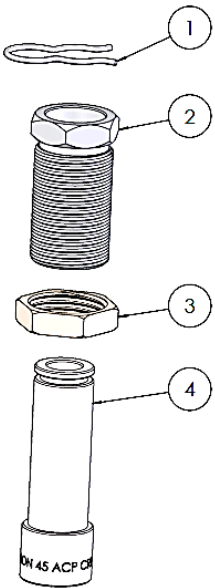


ITEM	DESCRIPTION
1	14445_UNIVERSAL BODY CLIP
2	14444_UNIVERSAL DIE BODY
3	14067_DIE LOCK RING
4	SEAT DIE INSERT*
5	14434_SEATER STEM PIN
6	SEATER STEM*

\* = CALIBER SPECIFIC

Caliber—Individual Dies	P/N Seat Die	*P/N Seat Insert (4)	*P/N Seat Stem (6)
.32 S&W/.32 H&R Mag	14106	14493	14449
.380 ACP	14419	14487	14428
9mm	14424	14492	14433
9x25 Dillon	14603	14605	14427
.357 Sig	16515	16360	14433
.38 Super	14417	14485	14433
.38 Special/.357 Mag	14418	14486	14427
.38 Special/.357 Mag Wad Cutter	-----	-----	14599
.40 S&W/10mm Mag	14416	14484	14425
.41 Mag	14420	14488	14429
.44 Special/.44 Mag	14421	14489	14430
.45 ACP/.45GAP	14422	14490	14431
.45 Colt	14423	14491	14432

### 16.4. Dillon Pistol Crimp Die Assembly

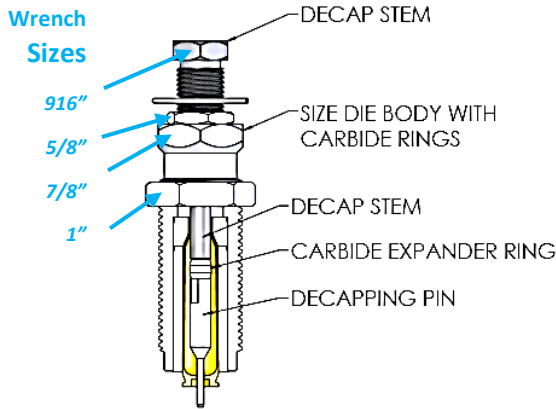


ITEM	DESCRIPTION
1	14445_UNIVERSAL BODY CLIP
2	14444_UNIVERSAL DIE BODY
3	14067_DIE LOCK RING
4	CRIMP DIE INSERT*

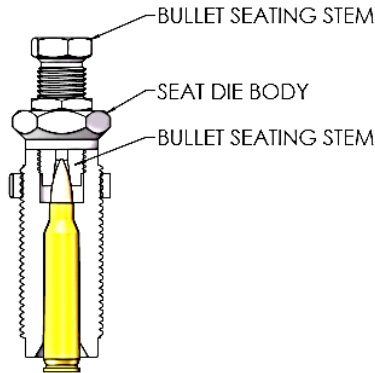
\* = CALIBER SPECIFIC

Caliber—Individual Dies	P/N Crimp Die	P/N Crimp Insert (item 4)
.32 S&W/.32 H&R Mag	14107	14503
.380 ACP	14438	14507
9mm	14443	14505
9x25 Dillon	14604	14512
.357 Sig	16514	14606
.38 Super	14436	16361
.38 Special/.357 Mag	14437	14506
.40 S&W/10mm Mag	14435	15404
.41 Mag	14439	14508
.44 Special/.44 Mag	14440	14509
.45 ACP/.45GAP	14441	14510
.45 Colt	14442	14511

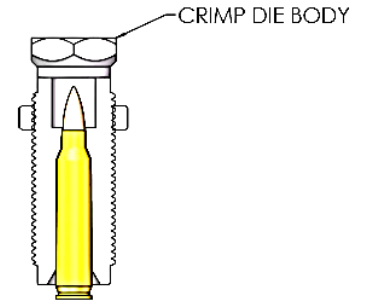
### 16.5. Typical Dillon Three-Die Rifle Set



CARBIDE SIZE DIE AND DECAP STEM



BULLET SEAT DIE



BULLET CRIMP DIE

**Note:**

**\*Steel Size Dies are available**

**\*Steel and Carbide Size Dies require case lubrication—Use Dillon Case Lube**

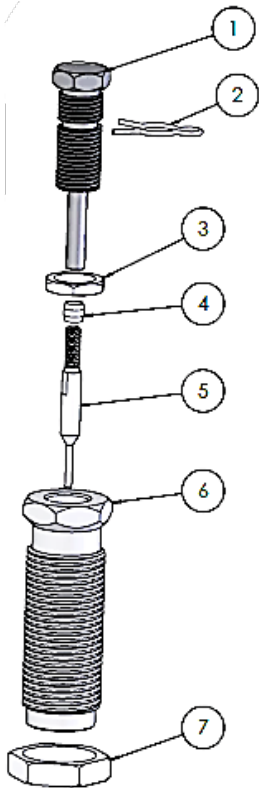


**Dillon Case Lube PN 13733**

Dillon Rifle Complete Three-Die Set	P/N
.223 Remington—with Steel Size Die	10839
.308 Winchester—with Steel Size Die	15574
.30-06 Springfield--with Steel Size Die	10840
.223 Remington—with Carbide Size Die	10096
.30 M1 Carbine—With Carbide Size Die	62128
.300 AAC Blackout—with Carbide Size Die	62114
.308 Winchester—With Carbide Size Die	10793
.30-06 Springfield—With Carbide Size Die	62151
Spare Rifle Decapping Pins	P/N
.223 Remington	13278
.308 Winchester	13132
.30-06 Springfield	13069
Universal Decapping Pin	15816



### 16.6. Dillon Rifle Size Die Assembly



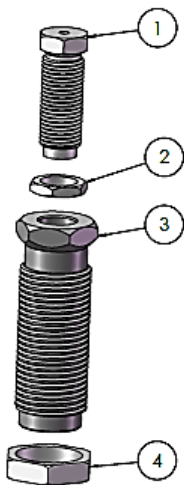
ITEM	DESCRIPTION
1	RIFLE DECAPPING STEM*
2	13906_RIFLE DECAP STEM CLIP
3	12577_SEAT DECAP NUT
4	CARBIDE EXPANDER RING*
5	DECAP PIN*
6	SIZE DIE BODY*
7	14067_DIE LOCK RING

\*CALIBER SPECIFIC

Dillon Rifle Size Die Assembly		P/N
.223 Remington		12778
.223 Remington--Carbide		10223
.30 M1 Carbine--Carbide		97039
.300 AAC Blackout--Carbide		62118
.308 Winchester		10242
.308 Winchester--Carbide		10234
.30-06 Springfield		12238
.30-06 Springfield--Carbide		62150
Universal Decap Die Body (Empty)		17583
Rifle Decapping Stems—Item 1		P/N
.223 Decapping Stem		13182
.308/.30-06 Decapping Stem		11430
Universal Decapping Stem		15187
Carbide Expander Balls—Item 4		P/N
.223 Carbide Expander Ball		13269
.308/.30-06 Expander Ball		13503
Steel Size Die Body—Item 6		P/N
.223 Steel Size Die Body		14914
.308 Steel Size Die Body		14924
.30-06 Steel Size Die Body		14923

Spare Decap Assemblies (Includes Items 1, 2, 3, 4 & 5)		P/N
.223 Remington		21707
.308 Winchester		21709
.30-06 Springfield		21708

### 16.7. Dillon Rifle Seat Die Assembly



ITEM	DESCRIPTION
1	SEAT STEM*
2	12577_SEAT STEM DECAP NUT
3	SEAT DIE BODY*
4	14067_DIE LOCK RING

\* = CALIBER SPECIFIC

Dillon Rifle Seat Dies (Individual)		P/N
.223 Remington		21672
.300 AAC Blackout		62141
.308 Winchester		21674
.30-06 Springfield		21673
Rifle Seating Stems--Item 1		P/N
.223 Seating Stem		12783
.308/.30-06 Seating Stem		12001
Rifle Seating Die Body--Item 3		P/N
.223 Seating Die Body		14916
.308 Seating Die Body		14932
.30-06 Springfield Die Body		14930

### 16.8. Dillon Rifle Crimp Die Assembly

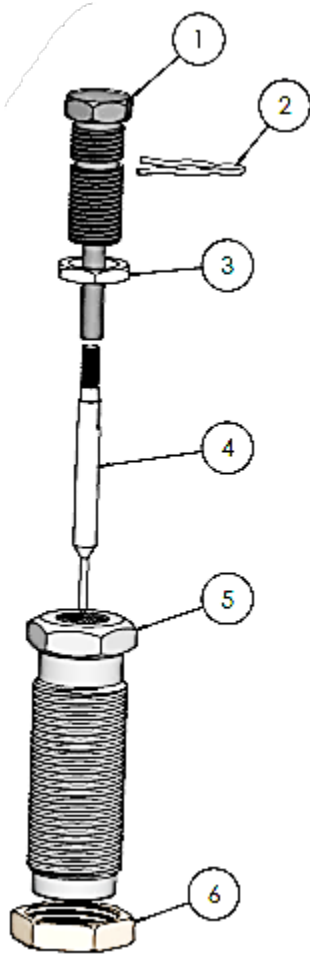


ITEM	DESCRIPTION
1	CRIMP DIE BODY*
2	14067_DIE LOCK RING

\* = CALIBER SPECIFIC

Dillon Rifle Crimp Dies (Individual)		P/N
.223 Remington		21676
.300 AAC Blackout		62142
.308 Winchester		21678
.30-06 Springfield		21677
Rifle Crimp Die Body--Item 3		P/N
.223 Crimp Die Body		14917
.308 Crimp Die Body		14934
.30-06 Crimp Die Body		14933

16.9. Dillon Universal (.223 and Up) Decapping Die Assembly--P/N 22127



ITEM	DESCRIPTION
1	15817_UNIVERSAL DECAPPING STEM
2	13906_RIFLE DECAP STEM CLIP
3	12577_SEAT DECAP NUT
4	15816_UNIVERSAL DECAP PIN
5	17583_UNIVERSAL DECAP BODY
6	14067_DIE LOCK RING

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