XL750 Reloading System Assembly and User Instructions

Dillon Precision, Inc.

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DILLON PRECISION DISCLAIMER, EXPLANATION OF SAFETY WARNINGS, DILLON CONTACT INFORMATION

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 that if not avoided, will result in death or serious injury.

WARNING!

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

CAUTION!

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

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Document Revisions

Date	Version Number	Document Changes
7-30-19	0	Initial Release
8-6-19	1	Corrections
8-26-19	2	Corrections
10-19-19	3	Corrections--Primer Slide Height Change
12-18-19	4	Added PN For Primer Slide, PEWS, Primer Assembly
3-2-2020	5	Primer Slides Updated
8-4-2020	6	Added note—STOP-- install Caliber Conversion and Shellplate and index parts and related items
9-28-2020	7	Added PN for Large and Small Tube Pack PN75109(L) and 75110(S)
3-9-2021	8	Corrected wording of Primer Drop Position Set Screw pages 44 and 50
3-15-2021	9	Add SW Powder Funnel 13171 for Conversion 21122—32 S&W
8-6-2021	10	Corrected PN Page 54 for Crank to 13674
10-5-2021	11	Corrected Large Primer Size Page 71
8-29-2022	12	Spelling Grammar
3-28-2023	13	Clarifyingthat empty Conversion box no longer included on pages 6 and 7
4-1-2024	14	System comes set up for Large Primer--Page 20

MANDATORY SAFETY PRECAUTIONS—MUST BE READ

1. ***The Basic Risk of Reloading, and Overall XL750 Design Usage Safety:***
    1. ***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 novice and experienced reloaders***
    2. ***Dillon Precision Inc. has designed the XL750 with user safety in mind, doing everything Dillon Precision Inc. knows to make the use of the XL750 as safe as possible.***
2. ***Mandatory XL750 User Safety Minimum Requirements:***
    1. ***Dillon Precision Inc. cannot guarantee the complete safety of the reloader/user of the XL750. To minimize the user's risk, use common sense when reloading and follow these basic safety rules at a minimum.***
    2. ***KNOWLEDGE: Study and learn the basics, processes and specifications used in the reloading of ammunition from reputable sources and publications by a 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.***
    3. ***EYE AND EAR PROTECTION: Never operate the XL750 without eye and ear protection.***
    4. ***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.***
    5. ***INTERRUPTIONS: If you are interrupted in any manner, always inspect the cases at every station and know exactly what has been done to ensure that proper process steps have or have not been completed.***
    6. ***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.***
    7. ***SAFETY: Do not remove any safety device(s) from the reloader or modify the reloader in any way. Keep components and ammunition out of the reach of children.***
    8. ***LEAD--CAUTION! Almost all bullets have a lead component, which may or may not be exposed. Be sure to have proper ventilation while handling the lead component (bullet) or when shooting. Lead causes birth defects, reproductive harm and cancer. Wash your hands thoroughly after handling lead components or shooting.***
    9. ***POWDERS--DANGER! There are many kinds of powders (propellants) used in the reloading process and are in general specified as rifle, pistol or shotgun powders. Powder selection is specific to the bullet caliber, weight and type of bullet being reloaded. There is no way to overstate the care and selection of a powder to be used in the reloading process. Again, refer to established bullet and powder manufacturers. Using the wrong powder or amount of powder or mixing powders can result in serious injury or death. Never mix powders. Always store the powder in its original container. Never have more than one type of powder in the reloading area at one time—preferably store powders in a separate room. Observe all maximum load warnings.***
    10. ***PRIMERS—DANGER! Primers contain a small amount of a shock-sensitive chemical that explodes when struck by a firing pin or hammer or accidentally crushed. Never force primers. If they get stuck in the operation of the loader, carefully disassemble the reloader and gently remove the obstruction. Never attempt to clear primers that are stuck in either the primer pickup tube or the primer magazine tube. Never, under any circumstance, insert any type of rod into these tubes to attempt to push out stuck primers—PRIMERS CAN "CHAIN DETONATE." If a primer(s) gets stuck in the magazine or pickup tubes flood the tube with penetrating oil/WD-40, throw it away and call Dillon for a free replacement. Never attempt to deprime a cartridge case with a live primer. Depriming a live primer is one of the most dangerous things you can do in reloading and can cause serious injury or death. Never attempt to further seat primers on a loaded cartridge. Use only the primer for the specific application for which you are loading.***
    11. ***BLACK POWDER--DANGER! Do not use black powder or black powder substitutes in any Dillon Powder Measure. Doing so can result in severe injury or death.***
    12. ***LOAD AND LOADED LENGTH—WARNING! Use only recommended load specifications from manuals and information supplied by established, known component manufacturers. Avoid maximum loads listed in loading manuals. Be extremely careful to avoid a double charge. Dillon has no control over the components and specifications used when reloading with the Dillon equipment. No responsibility is implied or assumed for results obtained through the use of or inability to use any such components or reloading specifications.***
    13. ***QUALITY CHECKS--At a minimum, perform periodic quality checks every 50-100 reloads-ESPECIALLY the powder charge.***
    14. ***PROPERLY LABEL RELOADED AMMUNITION: Overall Length, bullet manufacturer, type and weight-- primer manufacturer and type--powder manufacturer, type and powder charge and date loaded.***
    15. ***RELOADING AREA-- The reloading area should be well lit, dry and comfortable without breezes.***
    16. ***BE PATIENT and OBSERVANT— Users should have no trouble achieving conservative Dillon published loading rates. Be smooth and steady. The reloading process is not a process to hurry--- If something does not LOOK RIGHT, SOUND RIGHT, OR FEEL RIGHT —STOP, LOOK and THINK! If the problem is not obvious—CALL Dillon Technical Support (800) 223-4570 or visit the troubleshooting section at www.dillonprecision.com.***

3. XL750 LIMITED LIFETIME WARRANTY

Dillon Precision Inc. warrants the XL750 for the life of the system against defects in material and workmanship except for the following that Dillon Precision Inc. warrants against defects in material and workmanship for one year from the date of shipment:

- Casefeed Motor
- Casefeed Controls

Dillon Precision Inc. will repair or replace any part(s) that prove defective parts. Dillon Precision Inc. will provide repaired or replacement 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, insufficient or excessive electrical supply, 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 or (iii) a motor is used to cycle the XL750, or (iv) the addition of any non-authorized equipment. A part(s) replaced under warranty does not restart the warranty period.

STOP!

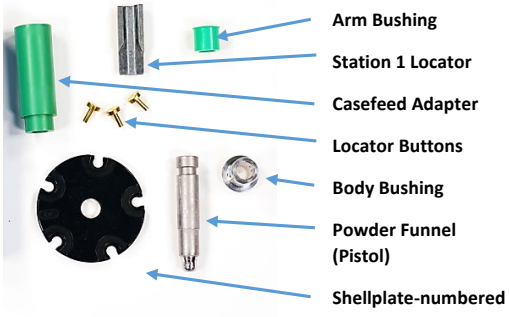
BEFORE ASSEMBLING and INSTALLING YOUR DILLON XL750 RELOADING SYSTEM

- **GO TO:** https://dillonprecision.com/xl750setup.html
- **OR TO THIS MANUAL:**
- ***Section 9 Pages 33-40---CALIBER CONVERSION LIST AND PROCEDURES***
- ***TO INSTALL YOUR CALIBER CONVERSION AND SHELLPLATE-INDEX PARTS SHIPPED SEPERATELY (SEE BELOW)***

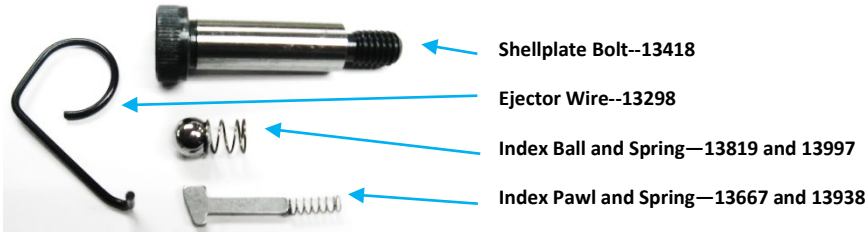
The followings items for your specific caliber are now shipped separately and need to be installed:

1. **Items contained in the Caliber Conversion Box.**

750 Conversion Box



2. **The Shellplate Bolt, Index Ball and Spring, Index Pawl and Spring and the Ejector Wire are shipped in the XL750 Accessory Box—See 4.3 and 4.4 on Pages 6 and 7**

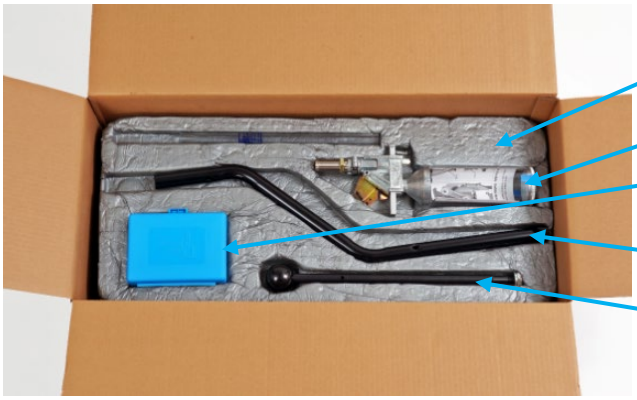


4. XL750 SHIPPING CONTENTS

4.1. Remove the following items from the top protective foam layer of the XL750 shipping box:

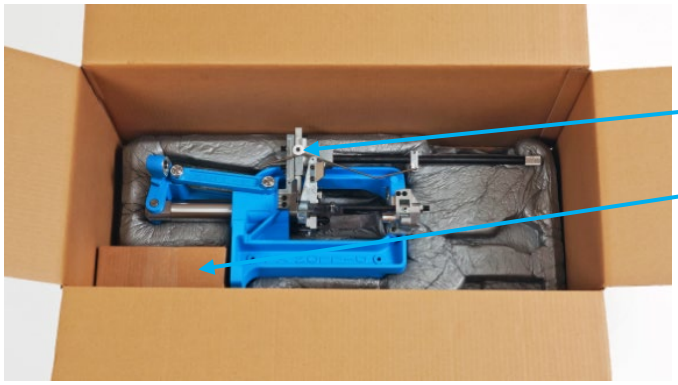
- Primer Early Warning System, Follower Rod and Battery
- XL750 System Manual
- XL750 Tube Pack—Large or Small

4.2. Remove the following items from the second layer of protective foam



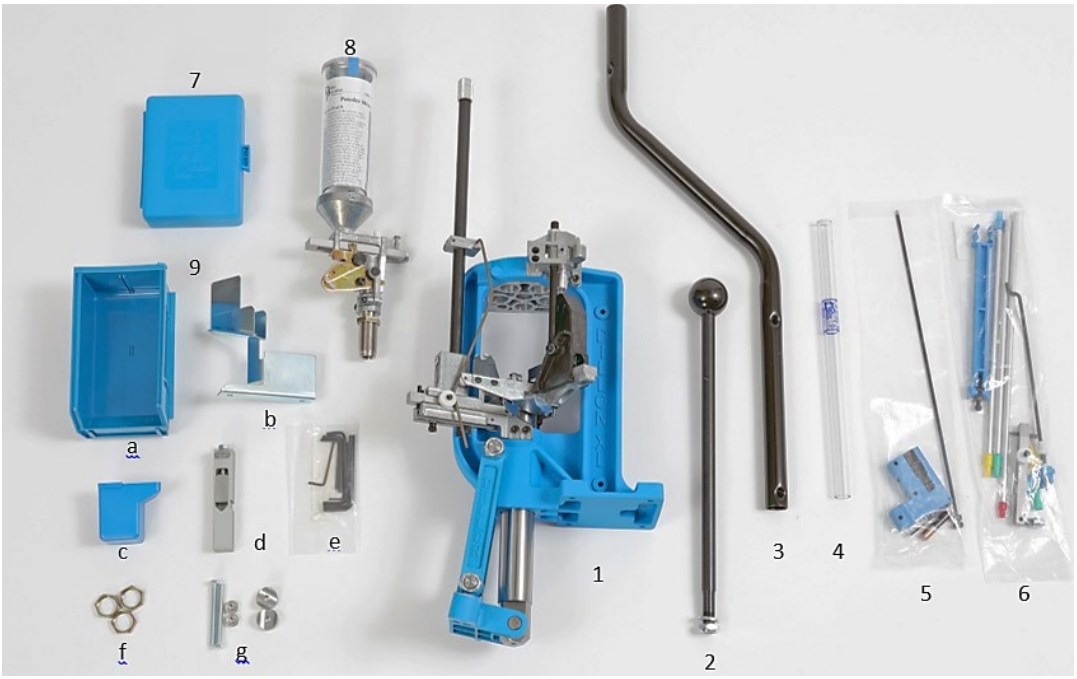
- Casefeed Tube
- Dillon Powder Measure
- OPTIONAL ITEM NO LONGER INCLUDED
- Casefeed Mounting Post
- Operating Handle

4.3. Remove XL750 Accessory Box and the XL750



- XL750
- XL750 Accessory Box—now includes a bag containing: The Shellplate Bolt, Index Ball and Spring, Index Pawl and Spring and the Ejector Wire-- to be installed by customer

4.4. Overall contents of XL750 Shipment



1. XL750 machine with Toolhead and Toolhead Retaining Pins and Caliber Conversion Kit installed

2. Standard Operating Handle assembly with washer and lock nut

3. Casefeed Mounting Post

4. Casefeed Tube

5. Bag containing Primer Early Warning System, Battery and Primer Follower Rod.

6. Tube Pack accessory parts bag—PN75109(L) and PN75110(S)

7. OPTIONAL ITEM NO LONGER INCLUDED

8. Powder Measure with Powder Die

9. Accessory box contents (PN22025)

   a. Cartridge Bin (PN13839)

   b. Cartridge Chute/Bin Bracket (PN13470)

   c. Spent Primer Cup (PN16211)

   d. Large Powder Bar Assembly (PN20063)

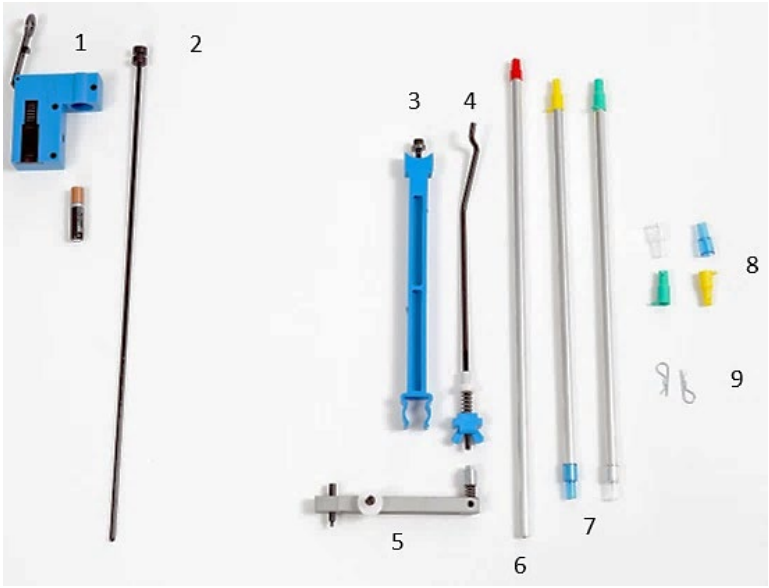
   e. Set of seven standard Allen wrenches (1/4, 3/16, 5/32, 9/64, 1/8, 3/32, 5/64)—(PN16607)

   f. Spare Die Lock Rings-3

   g. Casefeed Post Hardware - ¼-20 hex head bolts with nuts and two Tube Clamps

10. Shellplate Bolt, Index Ball and Spring, Index Pawl and Spring and the Ejector Wire to be installed by customer— is shipped in a bag attached to XL750

4.5. Contents of Primer Early Warning Bag and Tube Pack Accessory Bag, Item 5 and 6 above PN75109(L)/PN75110(S):



1. Primer Early Warning System with battery

2. Primer Follower Rod

3. Casefeed Tube Locator Arm

4. Powder Measure Failsafe Rod Assembly

5. Primer Slide Assembly of the primer size not installed

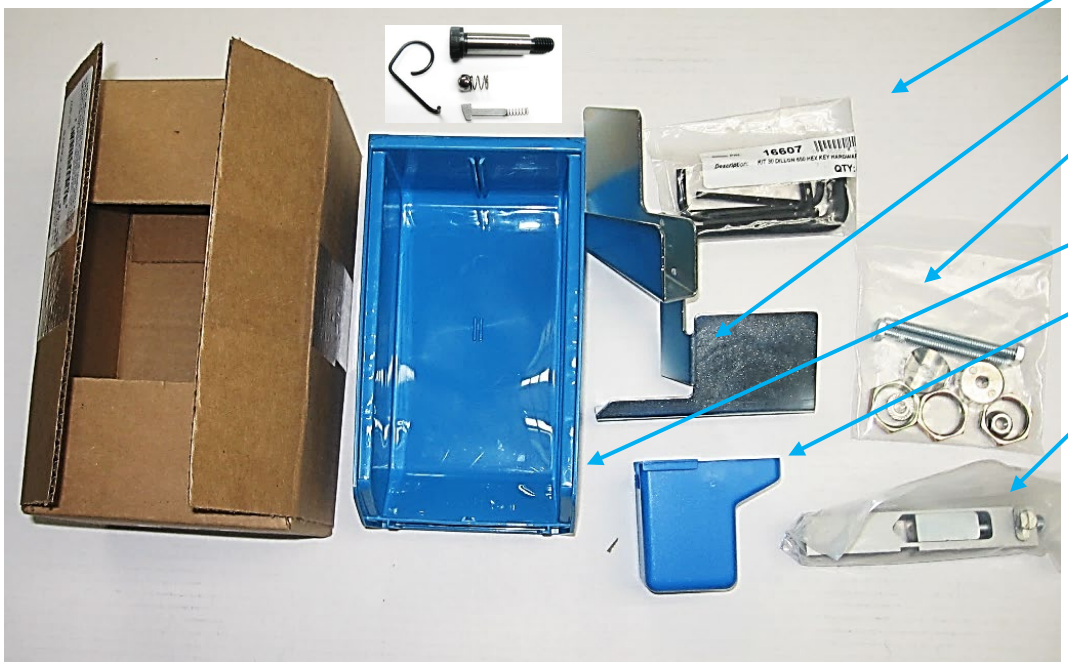
6. Primer Magazine Tube Assembly of the size not installed—small or large

7. Small and Large Primer Pickup Tubes

8. Spare Primer Pickup Tube Tips

9. Primer Pickup Tube Hairpin Cotter Pins.

4.6. XL750 Accessory Box Contents



5. XL750 ASSEMBLY GUIDE

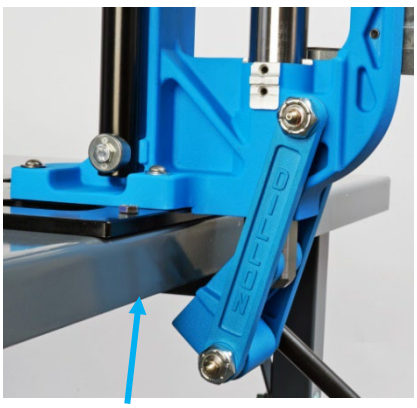
5.1. Mounting the XL750--Select a clear area on your reloading bench. Be certain your bench is strong enough to support the weight and the force required to operate the XL750. If possible, attach your bench to the wall. Remove the XL750 Main Frame from the packaging and place it on your selected area. You will need 7/16" wrenches, a drill motor and a 9/32" drill bit.

5.2. Mounting the XL750 directly to a bench (not using the Strong Mount)

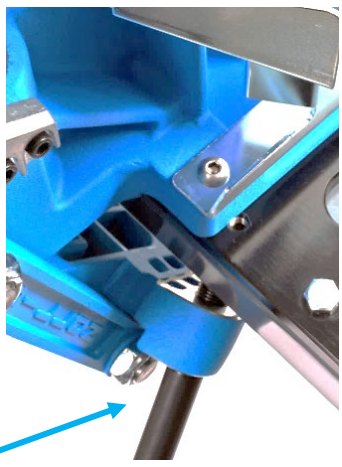
5.3.1 Bring the machine to the forward edge of your bench as shown below, if the XL750 is mounted directly to a bench. The XL750 requires ¾" clearance under the front edge of the bench for the Operating Handle and Crank in the down position.

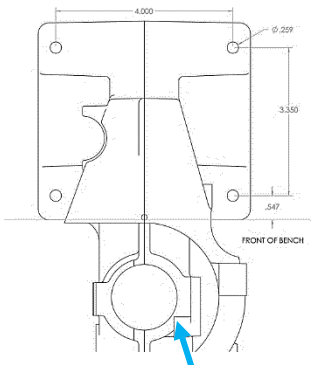
5.3.2 Mark the four mounting holes using the machine as a template or use the Template on page 75 at the back of this manual. Remove the machine and drill four 9/32" holes through the bench. Replace the Machine and bolt it securely to your bench with ¼" Grade 5 hardware or available Dillon Mounting Hardware Kit P/N 14355.

5.3.3 Bolt down the left side of the XL750 finger tight using Small Diameter washers on the top and Large Diameter Washers on the bottom, especially if using a wooden bench.



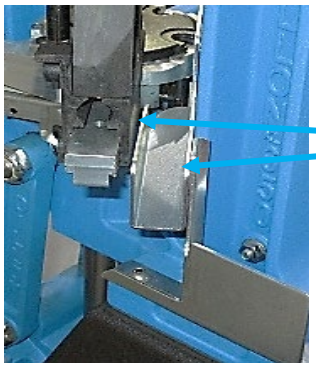
Note ¾" clearance required for the Crank and Operating Handle if mounting XL750 base directly to the bench





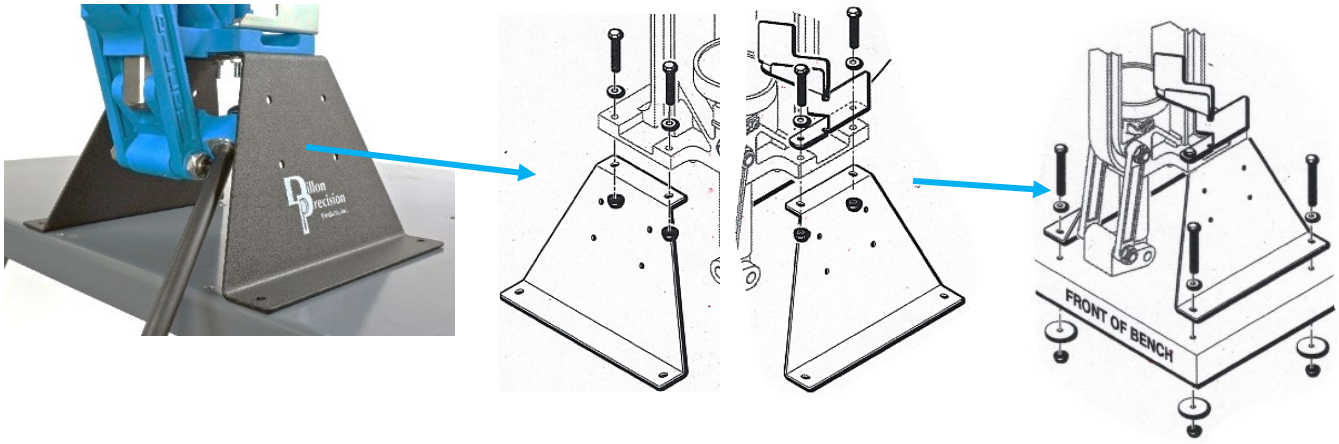
Mounting Hole Drill Template Page 75

5.3.4 **Place the Chute/Bin Bracket on top of the Frame on the right side, as shown below. Put the small washers on top of the bracket, and the large washers under a wooden bench. The Chute/Bin Bracket can contact the XL750 frame but must not touch the Casefeed Slide.**



Chute/Bin Bracket not touching the Casefeed Slide when installed

5.3.5 **A recommended option is to install the XL750 using the Dillon Strong Mount P/N 22052. Installation instructions are included with the Strong Mount. Standing up operating the XL750 is the preferred operating method. This provides for the force needed to seat primers properly. A 2⅛" taller Strong Mount is also available that is used on the RL550 P/N 22051. It also fits the XL750 and helps if your bench is short. The Dillon Strong Mount improves the stability of the system during the reloading process by distributing the loading forces over a larger area of the bench.**



5.4 Install the Operating Handle to the right as shown below.

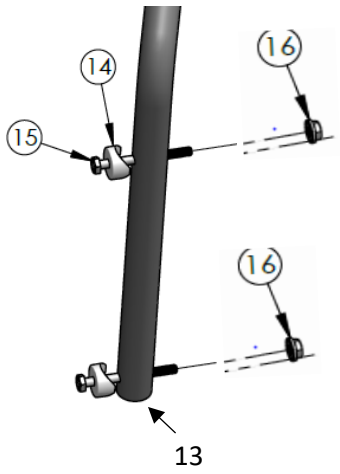
5.4.1 **Hold the washer over the hole on the right side of the Crank, insert the Handle, and thread on the Nut.**

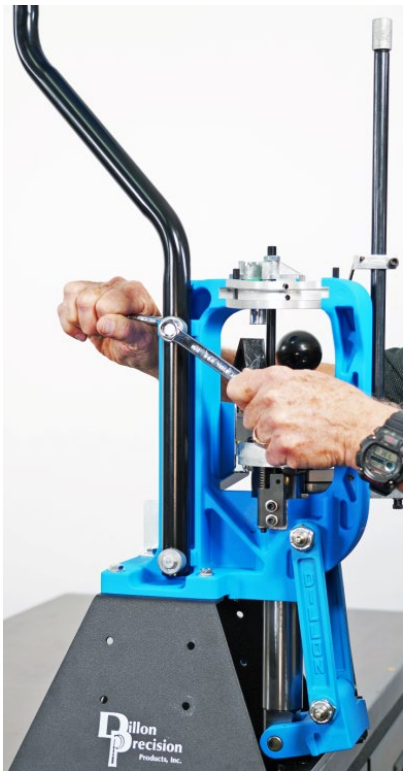
5.4.2 **Put a 5/32" Allen wrench or screwdriver through the hole in the Handle and tighten the Nut securely using a 7/8" wrench.**

5.4.3 Cycle the Operating Handle down and up slowly. Verify the Handle and Crank completely clear the bench and that there is no contact with the Case Insert Slide or the Chute/Bin Bracket.

5.4.4 The Standard Operating Handle has a ball grip. A Roller Handle P/N 17950 is an available option.

5.5 Mount the Casefeed Post (13) to the XL750 Frame with the included Hardware shown--(14)-13613 CF Post Clamp and (15)-- ¼-20 Hex Screws and Nuts and (16).

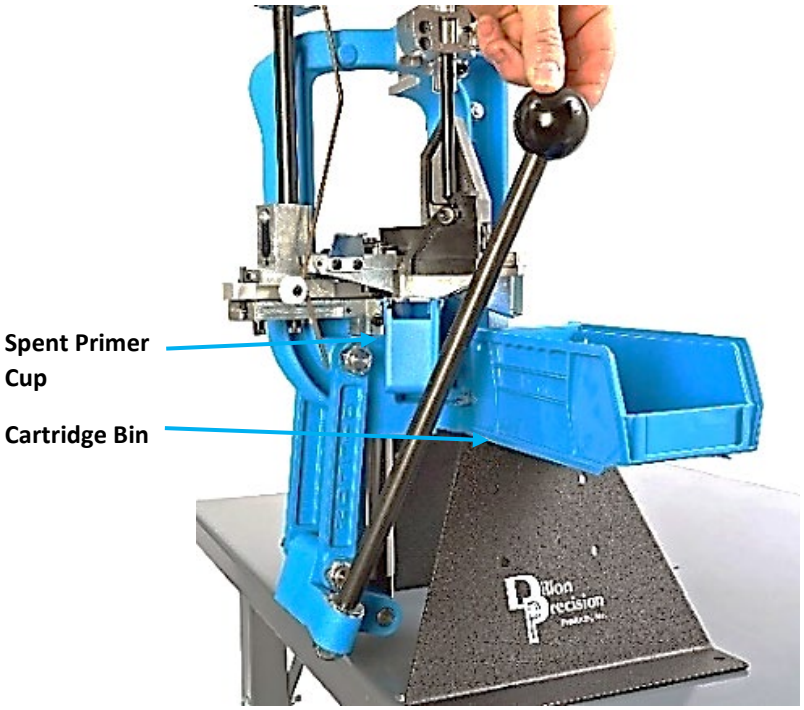




5.6 Install the Spent Primer Cup and Cartridge Bin

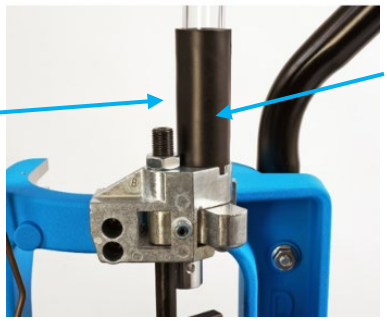
5.6.1 Place the Cartridge Bin on the Chute/Bin Bracket with the Operating Handle pushed to its full aft priming position. There should be clearance between the Handle and Bin.

5.6.2 Slide the Spent Primer Cup onto the Bracket as shown.



5.7 Install Casefeed Adapter

5.7.1 **Remove the Casefeed Adapter from the Caliber Conversion Kit Box.** **It also contains the Locator Buttons and the Powder Funnel. Install the supplied Casefeed Adapter in the Casefeed Body. The key on the Adapter fits into the notch on the Casefeed Body. Casefeed Adapters are caliber/color specific.**



Note: Casefeed Adapter are different colors for different calibers

5.7.2 **If you are <u>not</u> using the Dillon Automatic Casefeeder and manually feeding cases, install the standard Casefeed Tube, fit the Casefeed Tube into the Casefeed Adapter with the beveled end of the tube up and secured with the plastic Tube Bracket as shown.**

Casefeed Tube Bracket

Casefeed Tube (Snaps into Bracket)

Casefeed Mounting Post

Casefeed Adapter

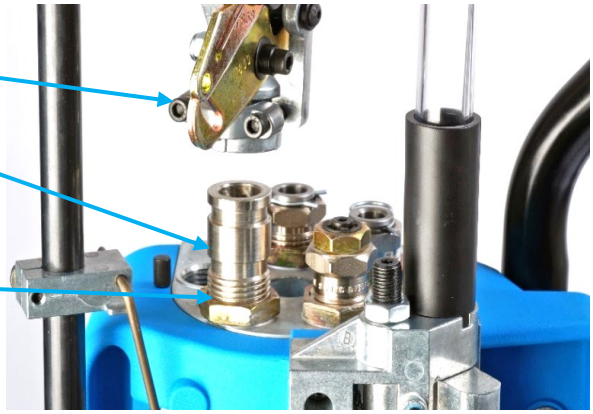
5.8 Install the Powder Measure

5.8.1 **Remove the Powder Die from the Powder Measure Body by loosening the two clamping socket head screws. Screw the Powder Die into Station 2. Stop when the Die is flush with the bottom of the Toolhead and tighten the Lock Ring finger tight for now.**

Powder Measure Clamp Screws

Powder Die with Lock Ring

Install Powder Die in Toolhead Hole Labeled "2" in the Toolhead

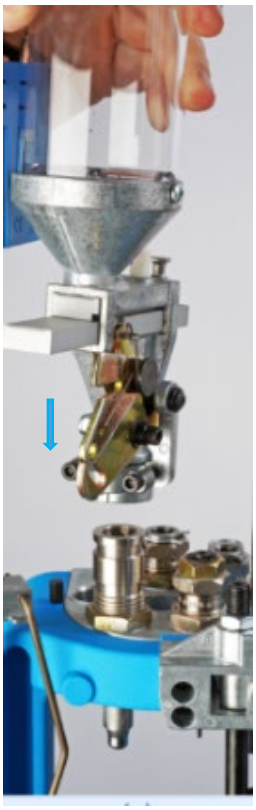


5.8.2 **Remove the caliber-specific Powder Funnel from the Caliber Conversion Box and place the Powder Funnel into the Powder Die as shown below. The Powder Funnel should move freely in the Die. Note the difference between Rifle and Pistol Powder Funnels.**

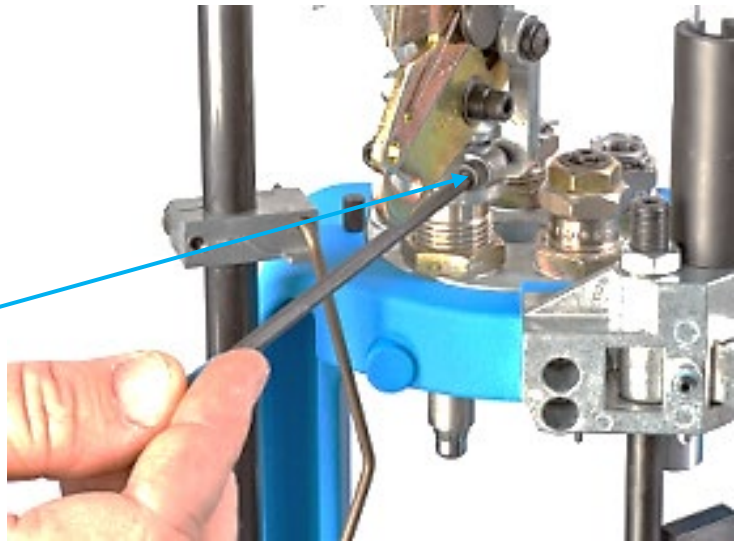
Pistol Powder Funnel

Rifle Powder Funnel

5.8.3 **Place the Powder Measure onto the Powder Die and lightly tighten the two clamp screws.**

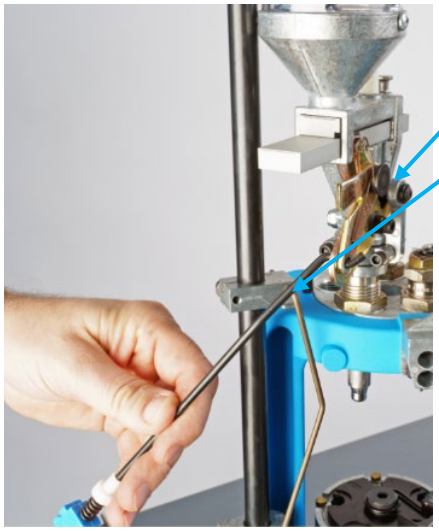


Powder Measure Clamp Screws-- lightly tightened



5.8.4 Install the Powder Measure Failsafe Rod

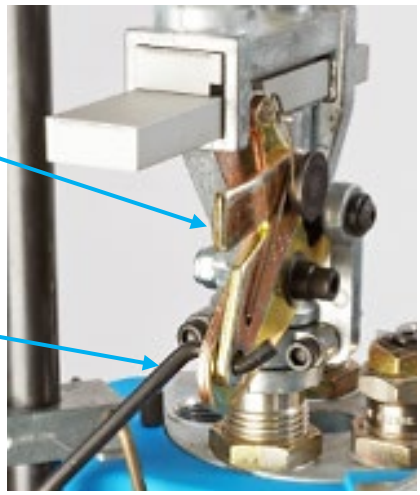
- Install the bent end of the Powder Measure Failsafe Rod through the slot and hole in the Lock-Link Mechanism oriented as shown below.
- Gently snap the white Failsafe Rod Bushing from the bottom up, into the Failsafe Rod Bracket.
- Rotate the Powder Measure aligning the Failsafe Rod vertically with the Failsafe Rod Bracket.
- Cycle the Operating Handle all the way up and back compressing the Failsafe Rod Spring. Adjust the blue Wing Nut up leaving .030" of clearance (credit card thickness) between coils. Readjustment may be necessary after setting the case mouth bell for pistol cases and the Powder Funnel to case contact on rifle cases.

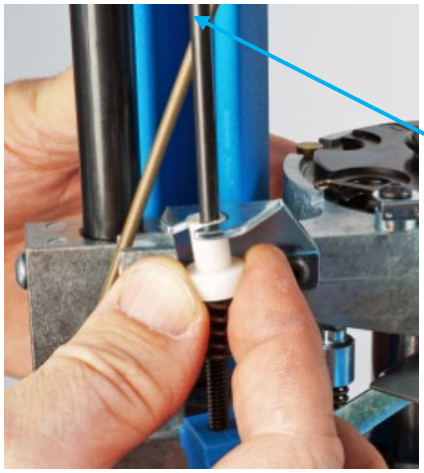


Lock-link Assembly

Failsafe Rod

Note how upper end of the Rod is installed in the Lock Link Assembly

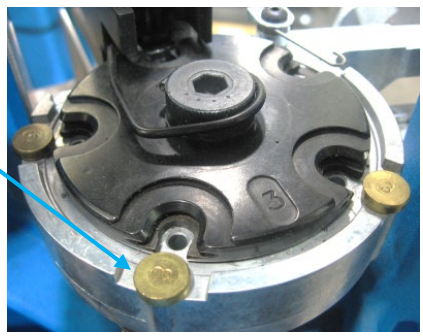




Gently Snap Failsafe Rod Bushing up into Failsafe Rod Bracket. Tighten the Blue Wingnut with the Operating Handle down and the spring compressed—<u>leave a .030" gap between coils</u>

5.9 Install the three Buttons in the Platform Holes.

Install Locator Buttons from Caliber Conversion Kit Box in Stations 3, 4 and 5

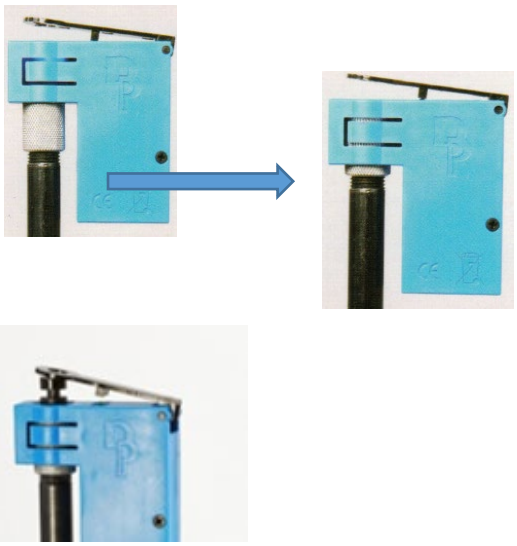


5.10 Install the Primer Early Warning System

5.10.1 The Primer Early Warning system emits a "beeping" sound to warn you when the Primer Magazine is down to the last three or four primers.

5.10.2 Simply push the Primer Early Warning System onto the Primer Magazine Shield knurled Cap. You can store the plastic Primer Follower Rod in the Magazine Tube when there are no primers in the tube by putting it under the Operating Lever.

Push Primer Early Warning System onto the knurled Cap—Store Rod as shown--disables audio alert



5.11 Your assembly is complete. Gently pull the Operating Handle towards you. Make a full stroke down and up again and push to the full aft priming position. The Shellplate should index clockwise. The Primer Slide should move forward and back. The Casefeed Slide should travel forward to the Shellplate, and the Primer Punch will be projecting up through the hole in the Platform into the Shellplate.

6 OPTIONAL EQUIPMENT FOR THE XL750

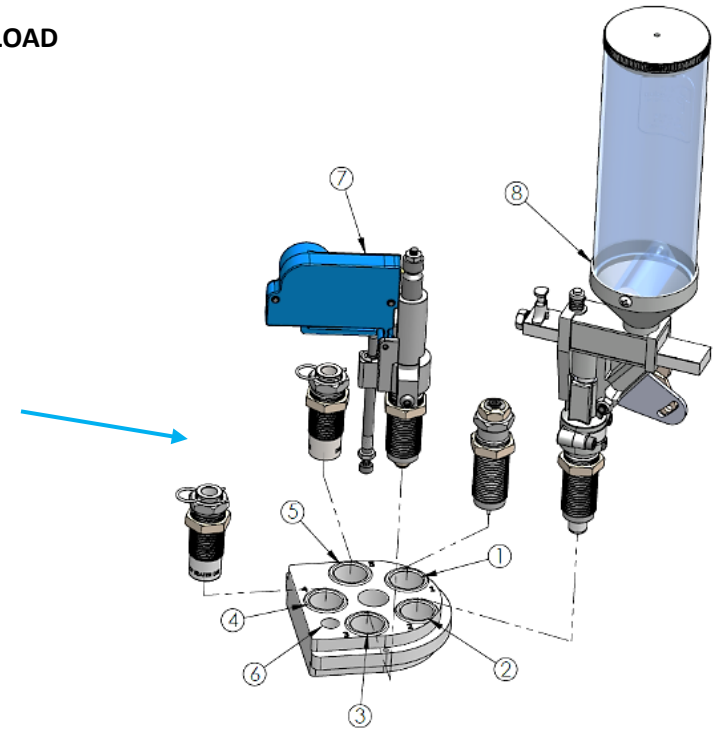
- The XL750 can be ordered with the optional Dillon Precision Inc. Variable Speed Casefeeder. The XL750 Automatic Casefeeder enhances the throughput in conjunction with the Auto Indexing of the XL750. Installation and operating instructions are included with the Automatic Casefeeder for the XL750.

Description	Part Number
Large Pistol Casefeed Assembly	21080
Large Rifle Casefeed Assembly	21080
Small Pistol Casefeed Assembly	21079
Small Rifle Casefeed Assembly	21082

- Dillon Strong Mount Brackets: P/N 22051 (650/750) P/N 22052 (Tall Mount 550/750)
- Dillon Powder Check System: P/N 21044
- Low Powder Warning Sensor: P/N 16306
- Roller Handle: P/N 17950
- Bullet Tray: P/N 22214
- Tool holder with Wrenches: P/N 11555
- XL750/650 Upgrade Kit P/N 35007: Strong Mount, Bullet Tray and Roller Handle ("Package Deal")
- Dillon Rapid Trim 1500 Case Trimmer: P/N 62164 and Associated Size Trim Dies
- Dillon Super Swage 600: P/N 20095

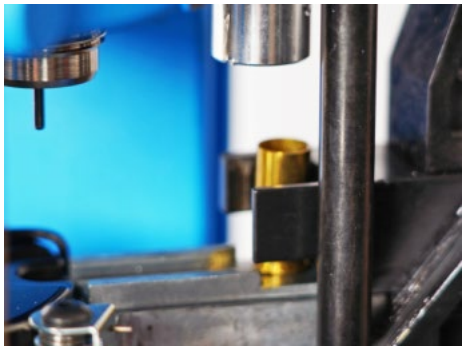
7 THE DILLON XL750 FIVE RELOADING STATIONS AND CONFIGURATION

STATION 1--INSERT CASE INTO SHELLPLATE, DEPRIME AND SIZE CASE
STATION 2--FEED AND SEAT PRIMER--BELL CASE MOUTH (PISTOL CASE) DISPENSE POWDER
STATION 3--OPEN—OPTIONAL POWDER CHECK OR BULLET FEEDER
STATION 4--PLACE AND SEAT BULLET
STATION 5--CRIMP BULLET/EJECT COMPLETED RELOAD



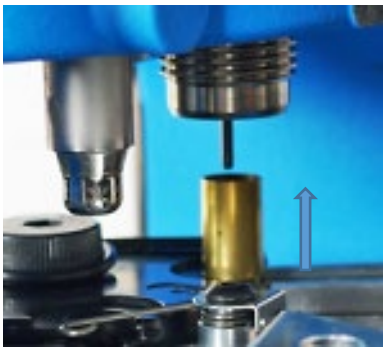
7.1 Station 1—De-prime and Size

- **On the "full aft stroke" of the Operating Handle, cases are automatically inserted into the Shellplate.**
- **On the downstroke of the Operating Handle Cases are De-primed and Sized.**



Station 1-Case dropped onto Station 1 Locator

Station 1-Case Inserted into Shellplate—full aft stroke

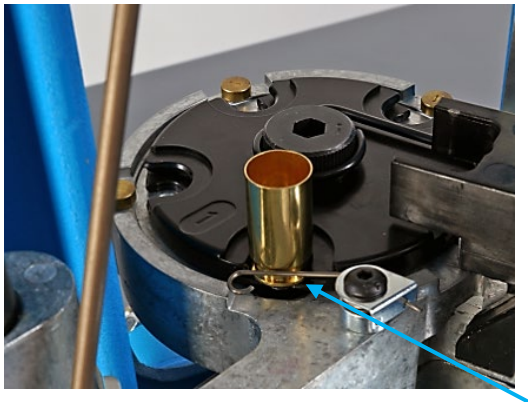


Station 1-Case Inserted into Size De-prime Die—down stroke

Station 1

7.2 Station 2— Primer, Flare (bell) Cases, Dispense Powder

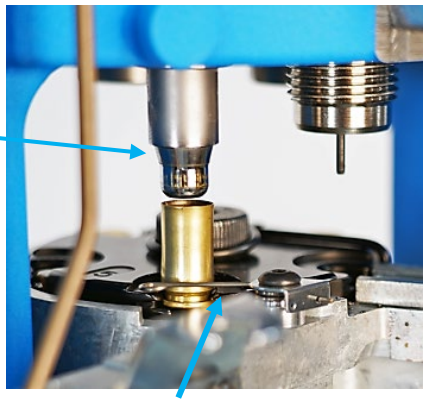
- **Cases are primed during the full aft/push stroke from the neutral (rest) position of the Operating Handle.**
- **On the downstroke, the pistol case (not rifle) mouth is belled (flared) and powder is dispensed into the case.**
- **This station incorporates a unique Spring Wire Case Retainer instead of a Button. This enhances the case to Primer and Powder Die alignment and provides easy case removal and replacement for primer inspection.**



Station 2

Prime Case on full aft stroke of Handle

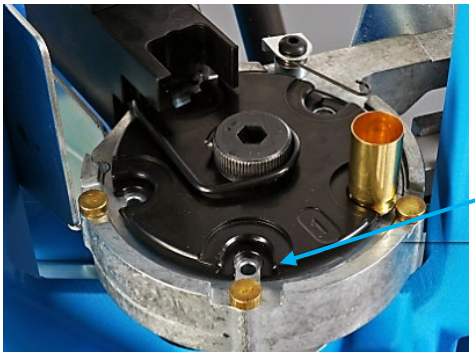
Case entering Powder Die at Station 2 on down stroke



Note-- Spring Case Retainer-- Station 2 only

7.3 Station 3—Open

- **Station 3 is open on the standard XL750 for the optional usage of either the Dillon Precision Powder Check or a Bullet Feeder.**



Station 3--Open

Station 3

7.4 Station 4--Seats the bullet

- **Station 4 is for bullet placement and seating.**

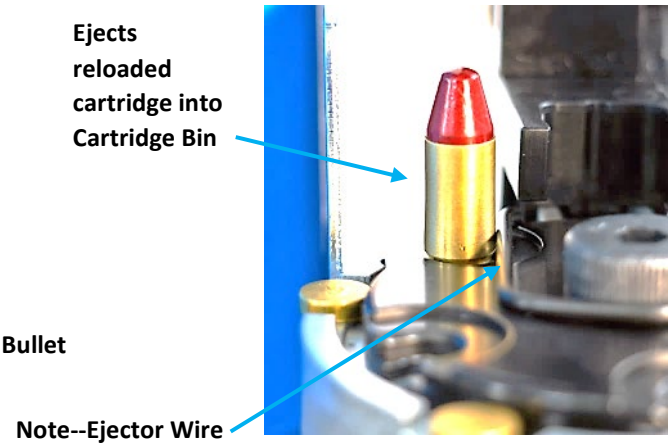
Station 4--Bullet Placement and Seating

Station 4

7.5 Station 5--Crimps the bullet and ejects the cartridge

- **Station 5 is for bullet crimping and ejection.**

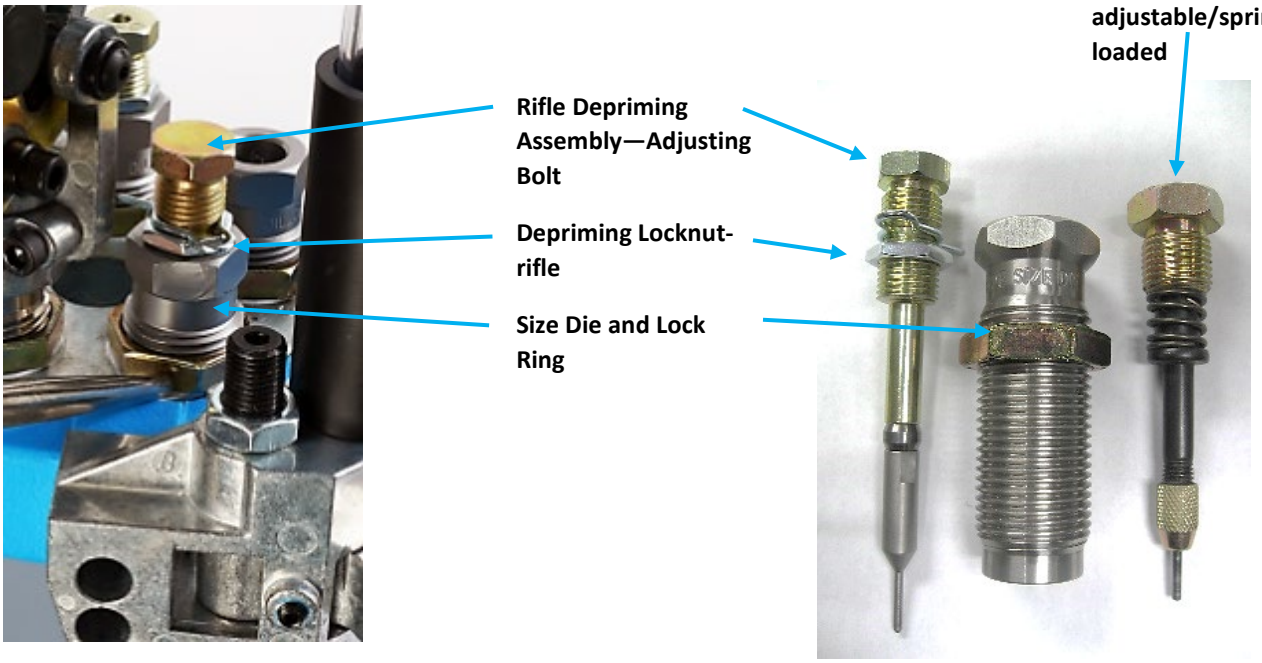
Station 5



Station 5 (Eject)

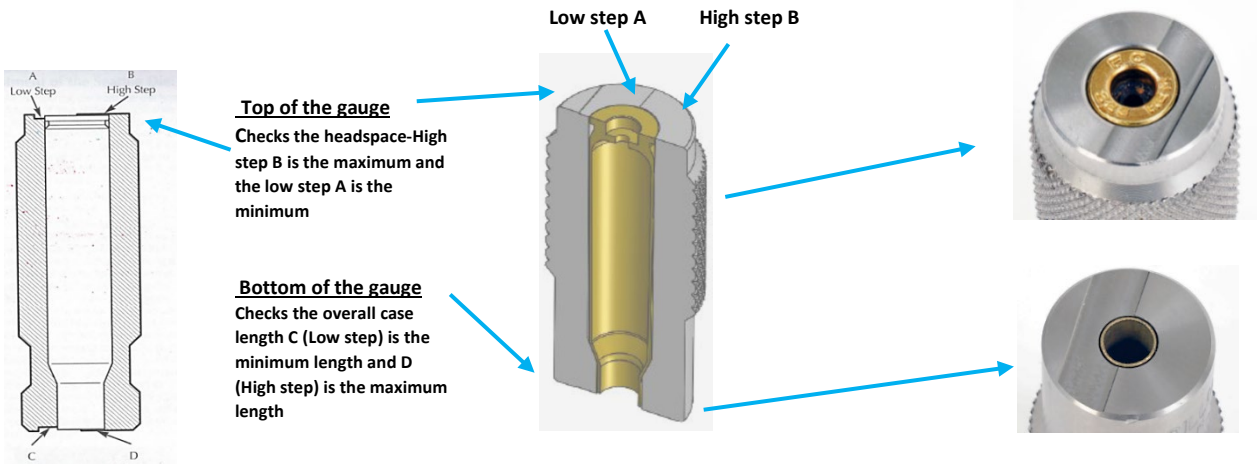
8 SETUP PROCEDURES FOR XL750—WARNING! DUE TO VARIATIONS IN COMPONENTS, CHECK ALL STATIONS FOR PROPER ADJUSTMENTS FOR THE CARTRIDGE BEING LOADED. YOU MUST READ THE FOLLOWING INSTRUCTIONS. IF THERE IS SOMETHING YOU DO NOT UNDERSTAND, CALL (800) 223-4570 FOR TECHNICAL ASSISTANCE.

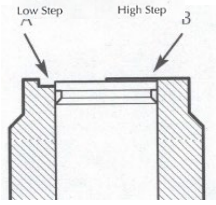
8.1 Station 1--Size De-prime Components Are Shown Below:



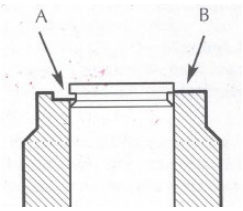
8.1.1 Size Die Adjustment--<u>Bottleneck (Rifle) Cartridges</u>--*Refer to Section 14.3 page 69 on Headspace definition.*

- **Lower the Operating Handle all the way down.**
- **Screw the Sizing Die into Station 1 until it just touches the Shellplate and back it up two turns. Tighten the Die Lock Ring finger tight.**
- **Loosen the Rifle Depriming Assembly Locknut and raise the Depriming Assembly 3 turns.**
- **Raise the Handle and insert a lubricated case into Station 1.**
- **Cycle the Handle all the way down.**
- **Raise the Handle and remove the case. The case is now initially sized. Verify the case is correctly sized and the headspace is correct using a Dillon Head Space Gauge. (<u>Using a Headspace Gauge for bottleneck cartridges is an absolute must.)</u> Insert the sized case into the Gauge. The top of the Gauge verifies that the headspace is correct, and the bottom of the Gauge verifies the case length is correct. (See below.) If the headspace is above the maximum, 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. (See below.) If the case head is below the lower step, back the Die up and check another case. Use a 7/8" wrench to hold the Die body and tighten the Die lock ring with a 1" Dillon Bench Wrench.**
- **Note--Some Dies may require "full contact/slight cam-over" with the Shellplate.**
- ***Note: Die Locking/Adjustment Procedure--Always "final tighten" any Die-Body i.e., Size, Seat and Crimp Die Body Lock Rings with the appropriately processed case fully inside the Die with Handle down. This always promotes better alignment of the Die and Shellplate.***

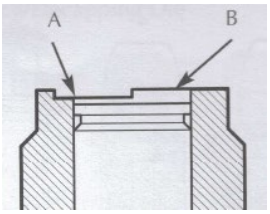




Proper Headspace—Case head is at or just below the high step (B) and above the low step (A)



Improper Headspace—Case head is above the top step (B)--adjust size die down CW--Cycle this case through the Size Die Station again

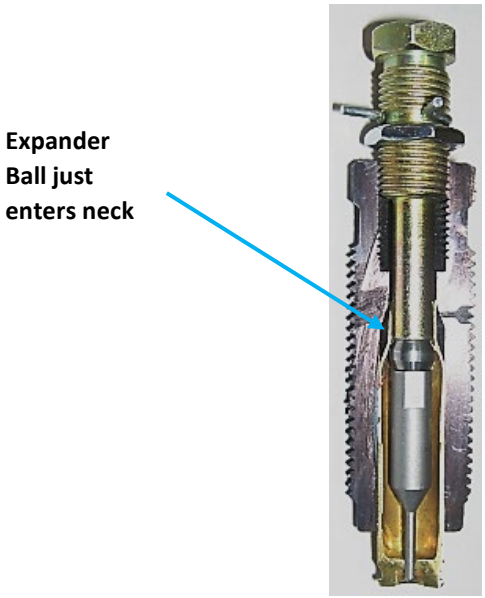


Improper Headspace—Case head is below the low step (A)--adjust size die up CCW--run another case through the Size Die Station

8.1.2 De-prime Assembly Adjustment--Bottleneck Cartridges

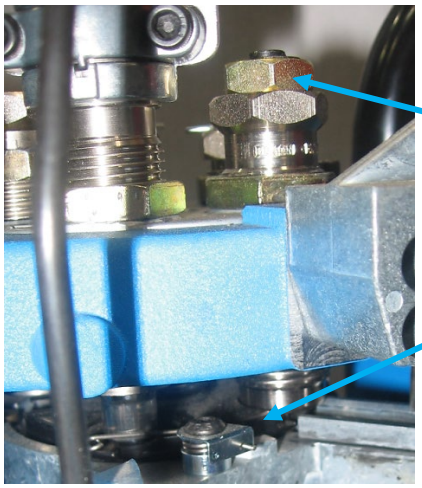
- **Screw the De-prime Assembly down while partially cycling the Handle up and down until the shoulder of the Depriming Pin just contacts the flash hole inside the case. (See below.) Thread the De-prime Bolt up 1½ turns from contact. Note--If the Size Die is adjusted more than ½ a turn, re-adjust the height of the Depriming Pin.**

- **Centering the Dillon Rifle/Bottle Neck Depriming Stem and Carbide Expander Ball is a recommended step. Insert the set-up case in Station 1. Cycle the Operating Handle all the way down. Back-off the 5/8" Depriming Bolt Lock Nut a minimum of 2 turns. Raise the Handle slowly, stopping when you feel the resistance of the Expander Ball entering the inside of the Neck. Tighten the 5/8" lock nut while holding a slight amount of upward pressure on the Handle.**



8.1.3 Size Die Adjustment--Pistol Cartridges

- **Cycle the Handle all the way down. Screw the Pistol Size Die (Clockwise) down until it just touches the Shellplate, and back the Die up 1/16 of a turn or less. Note--Some Dies may require "full contact/slight cam-over" with the Shellplate.**
- **Tighten the Die Lock Ring with a 1" Dillon Bench Wrench using a 7/8" wrench to hold the Die Body with the sized case in the Die.**
- **Note--the Pistol Depriming Assembly is not adjustable. It is spring-loaded to assist in removing used primers from the tip of the Depriming Pin during the Depriming step.**
- **It is a good idea to check the sized pistol case in a Dillon Pistol Case Gauge. —(See below.) The sized case should drop freely in and out of the Pistol Case Gauge. This Case Gauge can be used to gauge the completed reload as a final quality check.**



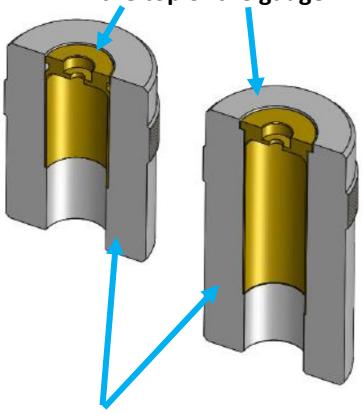
Pistol Depriming Assembly—non-adjustable

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

Pistol Sizing Depriming Assembly

Pistol Sizing/Depriming Assembly

Proper Headspace—Casehead is flush with the top of the gauge

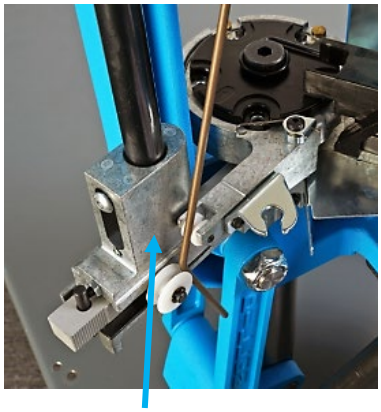


Rimless and Rimmed Dillon Pistol Case Gauges

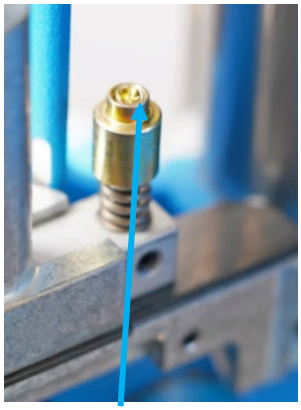
- **DANGER! Never attempt to de-prime live primers or re-seat primers in loaded cartridges, an explosion may result.**

8.2 Station 2--Primer Seating, Case Mouth Expanding and Powder Dispensing

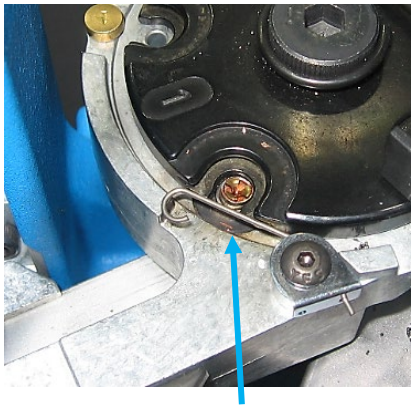
8.2.1 Primers are automatically fed and seated in this station. Note--Primers are seated with the full aft push stroke of the Operating Handle. Refer to and read Section 14.4 on Primer Basics on page 71.



Priming System



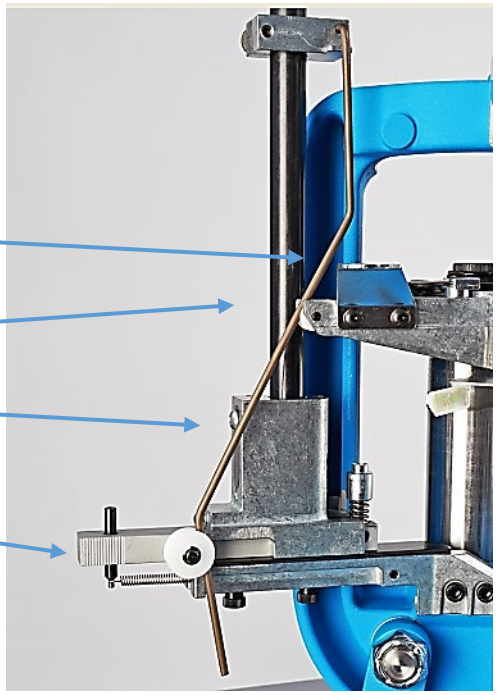
Primer in Primer Cup

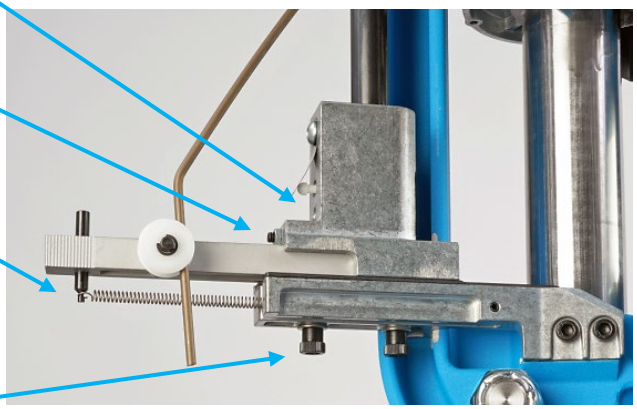


Primer ready to be installed

8.2.2 Primer Magazine, Feeding and Seating Components

- **The XL750 incorporates an Automatic Linear Primer Feed System utilizing standard Dillon Primer Magazines with Primer Feed Orifices and a Primer Shield along with a size-specific spring-loaded Primer Punch and Cup.**
- **The Primer Follower Rod is The Primer Early Warning/Low Primer Alarm Actuator.**
- **The XL750 comes from Dillon, set up with a large primer system. The alternate size components are in the "Tube Pack"--See shipping contents.**





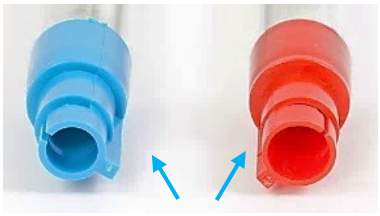
8.2.3 Verifying The Operation of The Automatic Primer System

- **The XL750 comes set up for the primers that are specific to the caliber that is ordered—Small or Large Rifle, Small or Large Pistol. It comes with one size installed and the other size shipped in the "tube pack".**
- **Primers are seated by pushing the Operating Handle to the rear—full aft, from the Handles "neutral position" at the top of the XL750's stroke.**
- ***CAUTION! The "feel method" in the primer seating method is a critical part of the reloading process.***

- ***Not pushing the Handle fully to the full aft priming position will not seat the primer deep enough.***
- ***If the primer takes too much force to be seated and the Handle cannot be cycled completely to the rear—STOP and inspect the case. The primer pocket may be damaged, or it could have a crimped primer pocket.***
- ***Low resistance to seating a primer can indicate an enlarged primer pocket that may not retain the primer. Discard this cartridge case.***

- **Verify that the system feeds primers as follows:**
  - **Remove the plastic Follower Rod.**
  - **Verify the Magazine Tube is correct--The Magazine Tube with a blue tip for small primers and the Magazine Tube with a red tip for large primers.**

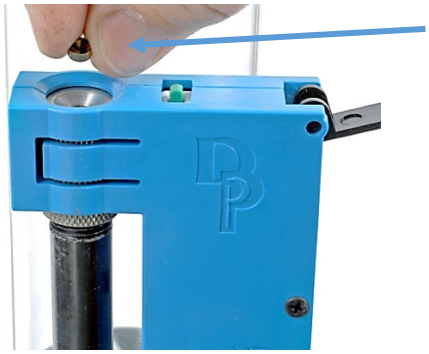
  - **Install the Magazine Tube in the Magazine Shield. The tab on the plastic Magazine Tip, red or blue, must be gently aligned with the slot down in the Primer Feed Body Housing and then slid down about a 1/4" more. Now tighten the knurled Cap just snug.**



Magazine Tip Alignment Tab

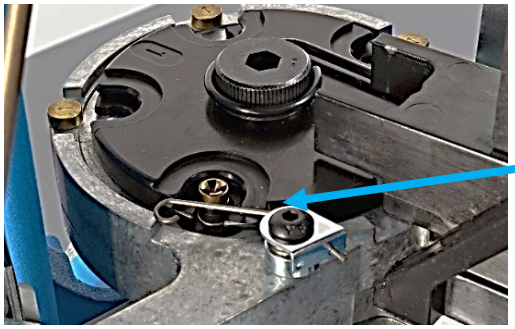
Tighten knurled Magazine Cap

  - **With the Operating Handle up, manually take one primer that you will be using and drop it anvil side up in the hole in the Magazine Cap as below:**



Drop one primer in Magazine Shield/Cap

- **Cycle the handle smoothly down and back up to the full aft priming position.**
- **The primer should present itself in the Priming Station on top of the Primer Punch—repeat this step 3 times--if successful proceed to the next step, if not proceed to Primer Drop Alignment Section 10.3.**



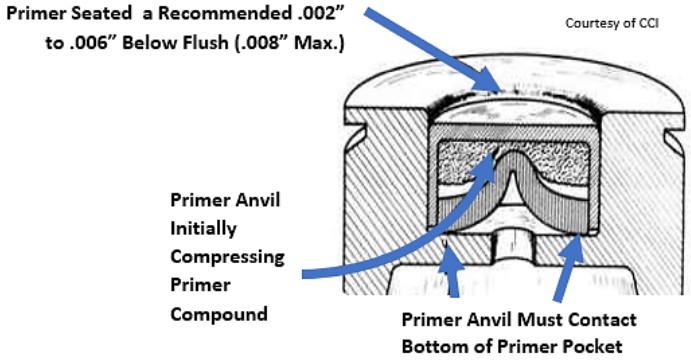
Correct presentation of primer—Single primer drop test

8.2.4 Verify Primer Seating Depth

- **Put a de-primed case in Station 2 with the Spring Wire Retainer. Push the Operating Handle full aft seating the primer. Remove the case and verify the primer is seated flush or slightly below flush. Primer seating depth is an important parameter to control when reloading and can be a safety issue. The ideal seating depth is .002" to .006" (.008" Max) below the case head. WARNING! "High" or protruding primers can lead to slam fires in semi-autos or firing out of battery and can stop the cylinder from rotating in revolvers. Seating the primer too deep can cause damage to the primer causing misfires and or inconsistent ignition. Refer to Section 14.4 on Primer Basics.**

Primer on right is seated properly—the one on the left is high

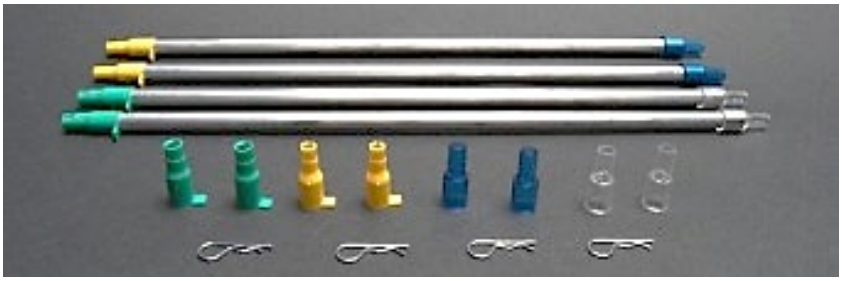
Courtesy of Western Powders



8.2.5 Filling The Primer Magazine-- Dillon offers two choices for filling the primer magazine:

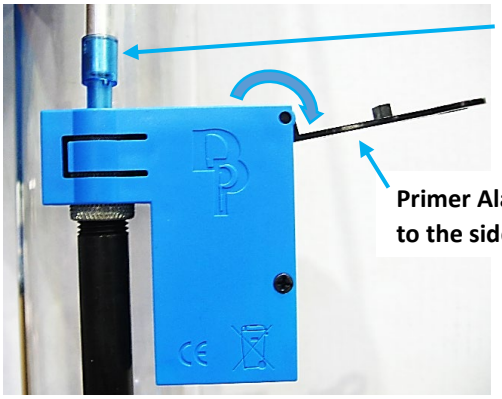
- **Manually as below with the optional Dillon Primer Flip Tray and Dillon Primer Pickup Tubes. Pickup Tubes are included with the XL750.**
- **The Primer Pick-Up Tubes have different colored tips. They have been color-coded to identify size easily. The color code is as follows:**

Primer Pickup Size	Pickup Tip Color	Dispense Tip Color
Small	Yellow	Blue
Large	Green	Clear



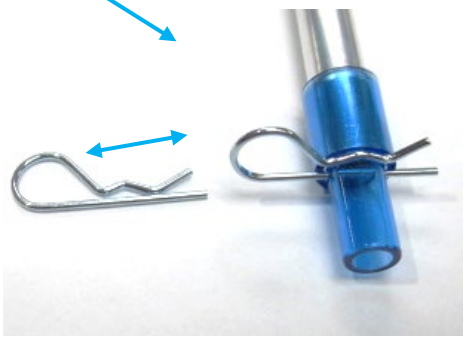
- **Place primers on the half of the Flip Tray with the ribs. Oscillate the tray and primers around until all the primers are flat. Pick up all the primers that are shiny side up by placing the Plastic Pickup Tip over the shiny side up primers in the Primer Flip Tray and gently pressing down. Put the other half of the Flip Tray on the ribbed half with the primers that are anvil side up. Hold the two halves together and turn them over. Remove the top half of the tray and pick up the remaining primers.**

- **Pivot the Primer Alarm Lever away from the Early Warning System Housing and invert the Pickup Tube over the Primer Shield Cap. Pull the Retaining Clip and allow the primers to drop into the Magazine—verify no primers remain in the Pickup Tube. Pivot the Switch Lever back. Gently slide the Follower Rod down through the Switch Lever and into the Primer Magazine Tube.**

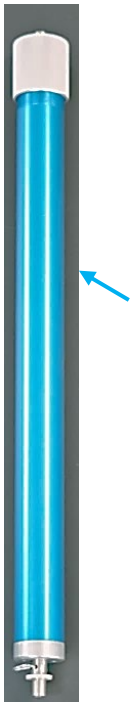


Invert Pickup Tube over Primer Shield Cap opening—remove Retaining Clip dispensing primers

Primer Alarm Lever rotated to the side



- **The Black Plastic Follower Rod will activate the Primer Early Warning Alarm when there are approximately three to four remaining primers.**
- **The second method of filling the Primer Magazine is to use the Dillon RF100 Automatic Primer Filler that automatically loads primers in a Primer Filler/Tube Housing—see below:**



Protective Housing and Dispensing Assembly—Holds 100 primers

Dillon RF 100 Automatic Primer Filler

Dillon's RF 100 Automatic Primer Filler™ eliminates the task of manually filling primer pick up tubes. Pour your primers from their box into the top of the RF100. Press the blue button. In about two minutes the primers are inside the primer tube that is inside a protective metal housing. The RF100 comes in either a small or large primer version. Size conversion kits are also available.

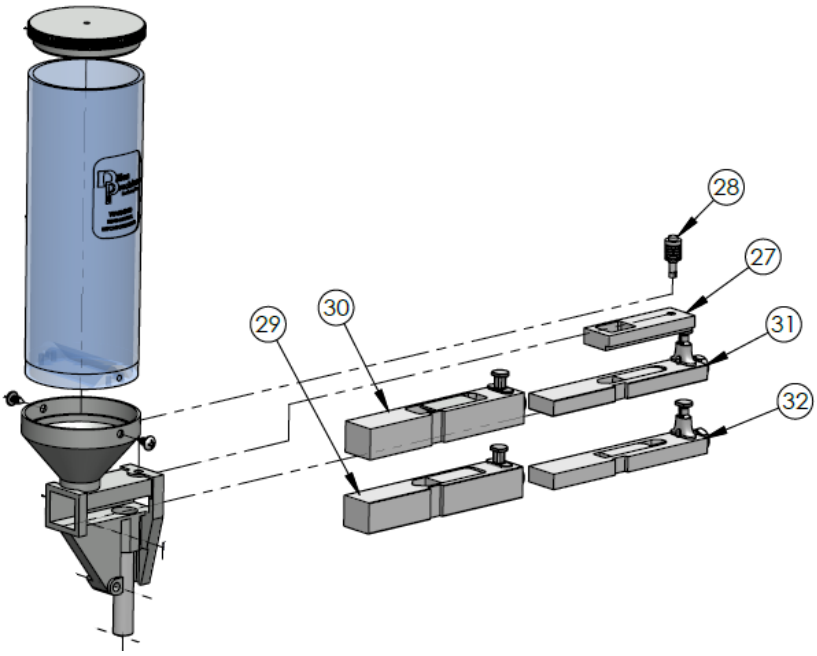
RF100 Voltages	Small Primer Part No.	Large Primer Part No.
120 VAC	97111	97077
220 VAC	97113	97112

8.3 Station #2--Powder Measure Setup (Case Mouth Expanding and Powder Dispensing)

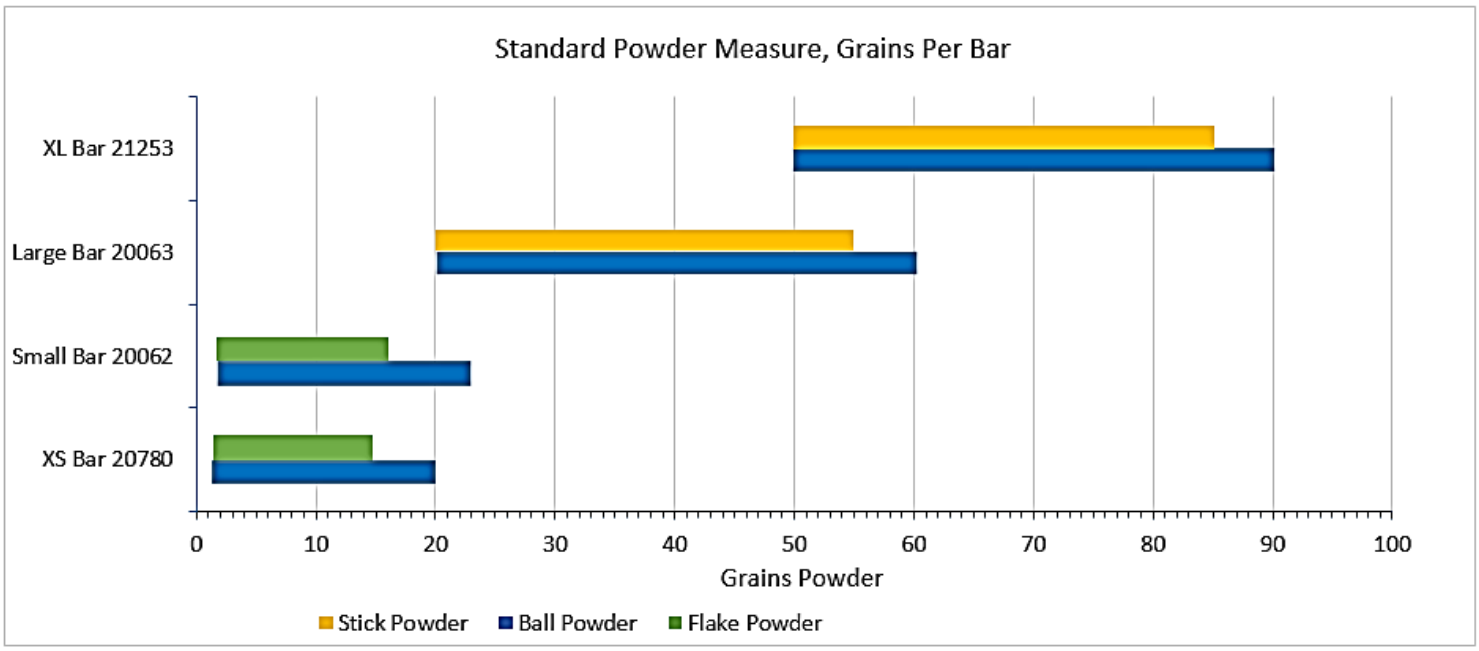
Station 2

8.3.1 The Dillon Powder Measure System included with the XL750 is a Volumetric Powder System that is activated by the cartridge case. There are different Powder Bars. (See below.) Each Powder Bar has a screw adjustable volume to control the amount of powder dispensed.

8.3.2 The XL750 is shipped with a Small and a Large Powder Charge Bar. The Small Bar is installed in the Powder Measure. The Dillon Powder Measure uses Charge Bars that are specific to the range of powder dispensed as shown below.



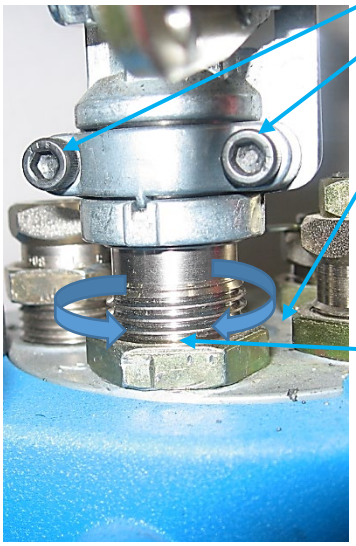
27	13644_POWDER BAR SPACER
28	13921_POWDER BAR SPACER PLUG
29	20063-LARGE POWDER BAR ASSEM
30	21353_EXTRA LARGE POWDER BAR ASSEM
31	20062_SMALL POWDER BAR ASSEM
32	20780_EXTRA SMALL POWDER BAR ASSEM



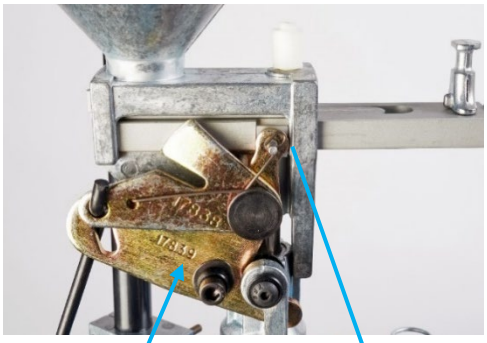
8.3.3 There are 3 adjustments required for the Automatic Powder Measure system for pistol cartridges and 2 for rifle cartridges:

- **1--Full horizontal travel of the Powder Bar--The Powder Charge Bar must be adjusted to achieve full horizontal travel. Failure to do so will result in inconsistent powder charges.**
- **2--Case mouth belling for pistol cartridges.**
- **3--Powder charge weight for rifle and pistol.**

8.3.4 Place an empty, sized and expanded case in Station #2 with no powder in the Powder Measure. Loosen the 7/8-14 Powder Die locknut and the two-socket head Powder Measure clamping screws (see below). Cycle the Operating Handle fully down. Proper adjustment is achieved with the Powder Bar reaching the end of its travel at the same time the Operating Handle reaches the bottom of its stroke, as indicated by the Charge Bar Arm just touching the Powder Body as shown below. If the Charge Bar Arm has not traveled its full distance or tries to over travel, raise the Operating Handle slightly while threading the 7/8-14 Powder Die up/down with your fingers while holding the Powder Measure from rotating. Lightly tighten the Die Lock Ring and the two Powder Die clamping screws—further adjustment is required for case belling and powder funnel height discussed below.



Adjusting the Powder Measure travel requires loosening the two Powder Die Clamping Screws and the Powder Die Lock Nut



Rotate Powder Die Up or down with your fingers to achieve full travel of "Charge Bar Arm" while cycling the Operating Handle up and down with a sized case in this station

"Charge Bar Arm" must touch the Powder Body here without over travel as the Operating Handle reaches the bottom of its stroke

8.3.5 Pistol Cases--belling (flaring) the case mouth--Take the empty case from the previous step and place it in Station 2. Cycle the Operating Handle down and back up. Remove and inspect the case that is now in Station 3 for the belling achieved. Adjust-thread the Powder Die up/down a small amount (~⅛ turn) at a time with your fingers while keeping the Powder Measure from rotating. Place the case back in Station 2 and repeat the test until the proper amount of belling is attained as shown below. Note: If using a bullet feeder—use the bullet feeder powder funnel.

8.3.6 The desired amount of bell/flare is just enough to allow the bullet to sit on the case's mouth without falling off/over and to keep the case from shaving off bullet material, especially with lead bullets. On handgun cartridges, a sized belled (flared) case mouth diameter should measure approximately .010" larger than a sized unflared case mouth. <u>This is different from adjusting the Powder Die for a bottlenecked case which is discussed below</u>.

Bell case mouth just enough to allow the bullet to sit on the case mouth without falling over

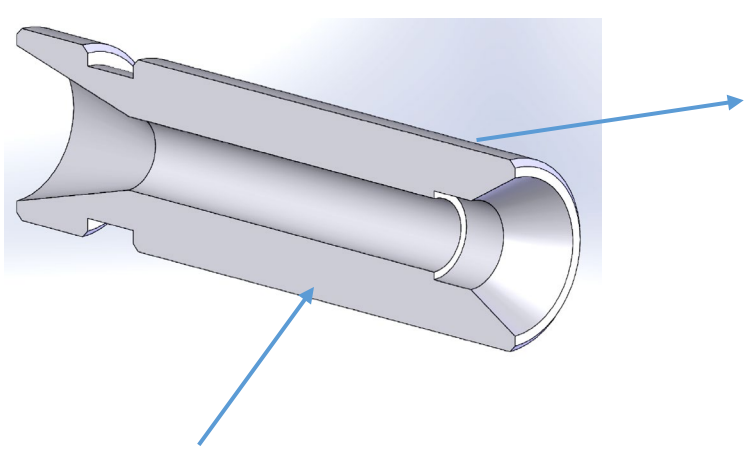
Measuring Belling

No Belling **Adequate Belling** **Excessive Belling**

Typical Dillon Pistol Powder Funnel

Flaring Feature of Funnel

8.3.7 Rifle Cases--again, full Powder Bar Travel is required. Place an empty, sized, properly trimmed and expanded case in Station 2, with no powder in the Powder Measure. (It is highly recommended to always chamfer and deburr a rifle case neck to assist seating of the bullet and dropping powder.) Note--the caliber-specific Powder Funnel fits over the outside of the case neck. Loosen the 7/8-14 Powder Die Locknut and the two socket head clamping screws. Cycle the Operating Handle down and raise the Operating Handle just enough to disengage the case from the Powder Funnel while you are threading the 7/8-14 powder Die up/down with your fingers; while holding the Powder Measure from rotating, to achieve full travel of the Charge Bar Arm. <u>The proper adjustment is for the Powder Bar to reach the end of its travel at the same time the Operating Handle reaches the bottom of its travel.</u> Tighten the locknut and the two Powder Die clamping screws. Excessive contact between the Rifle Powder Funnel and the neck of the cartridge case can buckle the case and/or damage the Powder Measure.



Cross section of Dillon Rifle Powder Funnel

Rifle case neck fits up inside Caliber Specific Powder Funnel to Activate Powder Measure

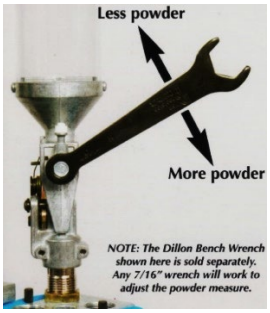
8.3.8 Powder Charge Weight Adjustment

- A scale that weighs in grains is required for this step. There are two types of scales available from Dillon--a Balance Beam Scale--(Dillon Part No. 13480) and a Digital Electronic Scale--(Dillon Part No. 10483).

- <u>Select a powder that is specific to the bullet caliber, weight and type of bullet being reloaded.</u> Refer to established bullet and powder manufacturers for reloading data such as Sierra, Hornady, Western Powders

or Alliant Powders and reloading manuals such as the Hodgdon, Lyman or Western Powders Reloading Manual.

- Verify that the proper Powder Bar is installed in the Powder Measure.
- Select the powder charge weight in grains from the appropriate established reloading document and write it down.
- Put on safety glasses.
- Remove the Powder Measure Hopper Lid and fill the Hopper with the prescribed powder and replace the Hopper Lid. Label the Hopper with tape or a sticky note as to what powder is in the Hopper.
- Place a primed case in station 2 and cycle the Handle fully down. Remove the case and dump the powder in the pan on the scale. Adjust the powder bar adjusting bolt as required--Clockwise to increase the amount and CCW to decrease the amount using a 7/16" wrench. Measure the powder dispensed 3-4 times or until the dispensed amount is stable.

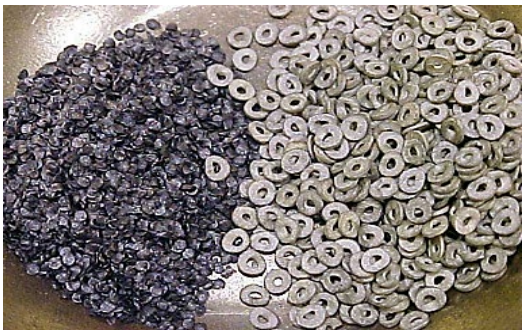


- Note: Stick powders are more difficult to dispense and require more care and time to drop into the case than ball powders.

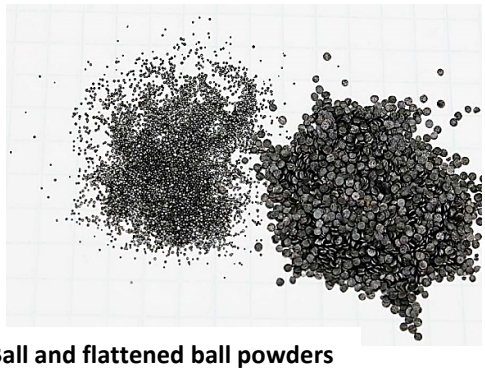
DANGER! WARNING!

- POWDER BURN RATES ARE SIGNIFICANTLY DIFFERENT BETWEEN POWDERS FOR RIFLES AND PISTOLS.
- USING THE WRONG POWDER (PISTOL POWDER IN A RIFLE FOR EXAMPLE) OR AMOUNT OF POWDER OR MIXING POWDERS CAN RESULT IN SERIOUS INJURY OR DEATH.
- ALWAYS STORE POWDER IN ITS ORIGINAL CONTAINER.
- NEVER MIX POWDERS.
- NEVER HAVE MORE THAN ONE TYPE OF POWDER IN THE RELOADING AREA AT ONE TIME.
- OBSERVE ALL MAXIMUM LOAD WARNINGS. (MAXIMUM LOADS MAY NOT BE SAFE IN YOUR FIREARM.)
- NEVER LEAVE POWDER IN THE POWDER MEASURE

- Typical Powder Shapes:



Flake and perforated disk



Ball and flattened ball powders

Extruded Powders—Tubes/ Rods

8.3.9 Optional Dillon Powder Check-Station 3—See instructions provided with the Dillon Powder Check Assembly PN21044 for setup and installation.

8.4 Station 4--Bullet Seating Setup Cartridge Overall Length (COAL/OAL)

8.4.1 The seating Die pushes the bullet into the case. How far the bullet is pushed into the case will determine the cartridge overall length--COAL/OAL. The maximum cartridge overall length (OAL) depends on the following factors:

- **The bullet must be seated deep enough into the case to provide sufficient "hold/grip" on the bullet.**
- **The bullet should not contact the rifling/lands in the barrel when the cartridge is chambered in general reloading practice. *WARNING!--seating bullets into the lands can cause an overpressure condition! Note: There are competitive precision shooters/reloaders that load bullets touching the lands under carefully controlled conditions.***
- **The cartridge must fit the firearm's magazine (if it has one).**
- **The bullet may have a cannelure(s) or a crimping groove that may be used to determine the proper OAL.**

Pistol and Rifle Cannelures

- **Most loading manuals provide the OAL based on SAAMI (Sporting ARMS and Ammunition Manufacturers' Institute) standards. The cartridge overall length specified in the reloading manuals for a cartridge is usually the minimum length for that bullet/powder charge combination. WARNING! Avoid loading shorter than the minimum length. This will seat the bullet deeper into the case. This decreases the case volume and increases the pressure, which could lead to an overpressure condition, especially in pistol cartridges.**

8.4.2 Installation and Adjustment of the Pistol Seating Die--Determine the overall length required in your reloading manual--write it down.

- **The Dillon Pistol Seating Die has a removable double-ended Seating Stem. One end is for flat nose bullets and the other is for round nose bullets. There is another for "wadcutter" bullets for 38/357 only.**
- **Select the Seating Stem that matches the nose of the bullet being seated. Assemble the Seating Die as shown below. This design allows for quick cleaning of these items without losing the adjustment.**

Dillon Pistol Seating Die

Dillon Pistol Seating Die interchangeable stems

- **Screw the Seating Die down in Station 4 until the bottom of the Die is flush with the bottom of the Toolhead. At this point, the Die will not be down far enough to begin seating the bullet. Place a belled case into Station**

4. Place a bullet on the belled case mouth and lower the Handle. Then, raise the Handle just enough to inspect cartridge OAL without indexing the Shellplate. Remove the Cartridge and use a dial caliper to measure the overall length of the cartridge. If the bullet is not seated deep enough, screw the Seating Die down 1/2 turn at a time. Note, one full turn moves the Die about .070", about the thickness of a nickel. Replace the cartridge in Station 4 and repeat these steps until the correct 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.) Tighten the Die Lock ring with a 1" Dillon Bench Wrench while holding the Die with a 7/8" end wrench with the Platform up (Handle Down) and a cartridge in the Die.

Pistol OAL

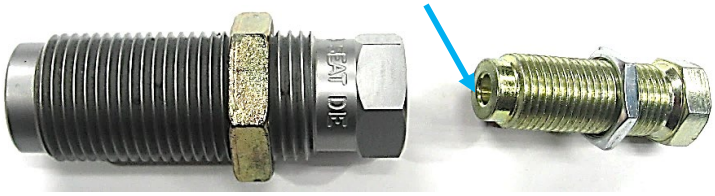
8.4.3 Installation and Adjustment of the Bottleneck (Rifle) Seating Die with Adjustable Seating Stem—

- Check the overall length required in your reloading manual—write it down. It is a good idea to chamfer the inside of the neck on a bottleneck/rifle cartridge before the bullet seating step. This helps the bullet get started into the case and minimizes damage/scratching of expensive precision bullets. Chamfering is easily accomplished with a chamfer tool such as the Wilson Deburring Tool available from Dillon—Part No. 16038. This tool can deburr the inside as well as the outside neck of the case.

Wilson ID/OD Deburring Tool PN16038

- The Dillon Rifle Seating Die has an adjustable seating stem.

Bullet Contacts Edge of Seating Stem



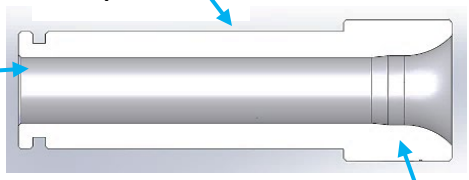
- **Setting up the Rifle Seat Die:** Place a sized case in Station 4 (the case can be primed and charged). Lower the Operating Handle all the way down. Screw the Rifle Seat Die down until it touches the case and back the 7/8-14 Threaded Die Body up two turns. Lock the Die Lock ring in place with a 1" Dillon Bench Wrench while holding the die with a 7/8" end wrench. Loosen the 5/8" Seating Stem Lock Nut and back the center 9/16" Adjustable Seating Stem up 3 turns. Place a bullet in the case's mouth and lower the Handle. Carefully screw the 9/16" Seating Stem down until it contacts the bullet. Then, raise the Handle just enough to remove and inspect the OAL of the cartridge without indexing the Shellplate. Use a dial caliper to measure the OAL of the cartridge. If the bullet is not seated deep enough, screw the 9/16" Seating Stem down 1/8 of a turn at a time. Note, one full turn moves the Seating Stem .050". A ¼ of a turn is about .012". Again, cycle the cartridge in Station 4 and inspect the OAL. Repeat these steps until the correct COAL is correct. Tighten the Seating Stem 5/8" lock nut while holding the 9/16" stem from rotating with end wrenches with a cartridge in the Die with the Platform all the way up (Handle down). (A quick method for pre-setting the Die

is to place a previously loaded "good" cartridge in Station 4 and adjust the Die down until just touches the case and adjust the Seating Stem down until it just touches the bullet.) Again, check the COAL and adjust as necessary.

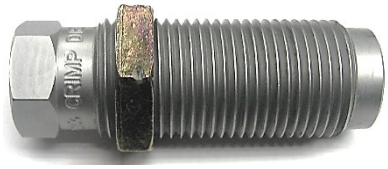
Rifle OAL

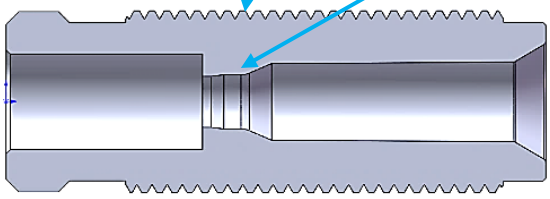
8.5 Station 5--Bullet Crimping is the final operation in the reloading process in Station 5. Crimping removes the belling of the case mouth from the previous neck expanding or belling step. Crimping provides added friction for "holding" the bullet by the case. Dillon recommends the crimp operation be separate from the seating operation and provides independent crimp dies in the Dillon 3 Die sets.

8.5.1 Dillon Pistol Crimp Die with removable Crimp Insert:

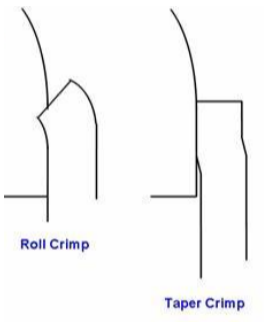


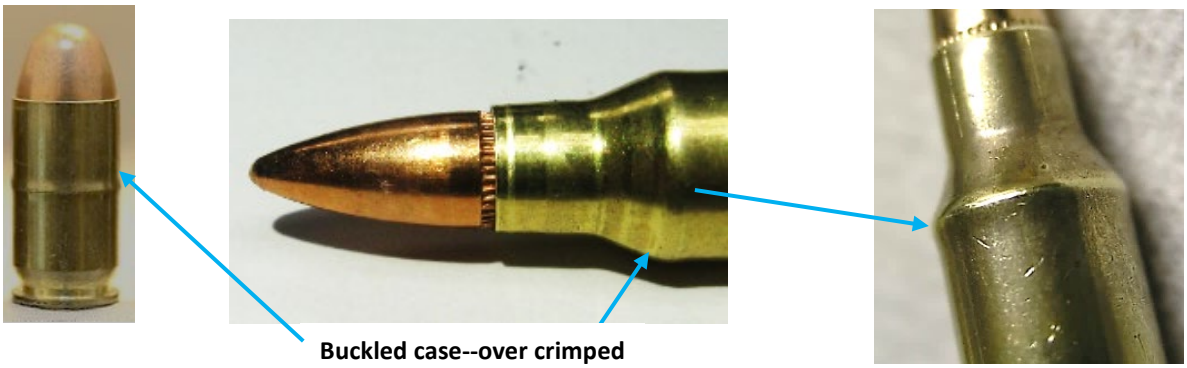
8.5.2 Dillon Rifle Crimp Die:





8.5.3 There are two types of crimping--the roll crimp and the taper crimp. In general, taper crimping is used for semi-autos with rimless cartridges and roll crimping for revolvers with rimmed cartridges. Excessive crimping can "buckle" the cartridge case as shown below.

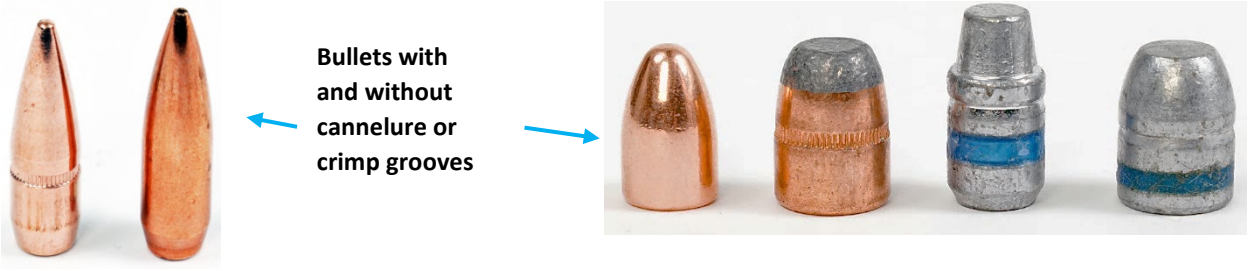




Buckled case--over crimped

8.5.4 Roll Crimping

- **In roll crimping (or Accu-crimp for the Dillon Revolver Crimp Die), the edge of the case mouth is rolled inward into 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. If there is no groove or cannelure, take care not to 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-.003" maximum. A reduction of case mouth diameter greater than .003" may cause bullet deformation and a loose bullet. It is not necessary to use the cannelure if your COAL is not compatible with the location of the cannelure.**



Bullets with and without cannelure or crimp grooves

- **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. This can cause the revolver's cylinder to lock up after a few shots if a bullet is "pulled" far enough out of the case to contact the frame.**

8.5.5 Taper Crimping—(straight wall pistol cases)

- **A taper crimp simply flattens out the belling. The gradual taper in the top of the taper Crimp Die slightly reduces the diameter of the top portion of the case (case mouth). A Dillon Taper Crimp Die is used for rimless straight-walled or tapered cases such as the 9mm, .40 S&W and .45 ACP. This style of cartridge headspaces 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 .001-003".**

8.5.6 Verifying Proper Crimp with a Dillon Case Gauge

- **Pistol cartridge caliber-specific case gauges are available from Dillon and replicates the SAAMI chamber specification. They provide a quick check of the cartridge's crimp, diameter and case length. If the reload fits in the case gauge, it most likely fits in the gun's chamber.**

Dillon Pistol Case Gauge

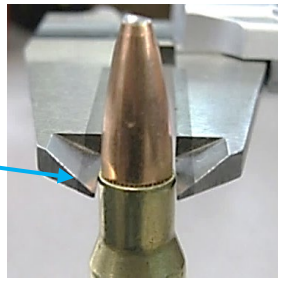
- **Rifle Crimping--Rifle bottleneck cases, in general, are not crimped unless the bullet has a cannelure and the OAL corresponds with that position as below. Taper crimp only enough to straighten out any belling from the previous steps. An autoloaded rifle cartridge might require a crimp (no more than .001”-.002”) if the neck tension on the bullet is inadequate to hold the bullet in place during the auto-loading cycle of the firearm.**

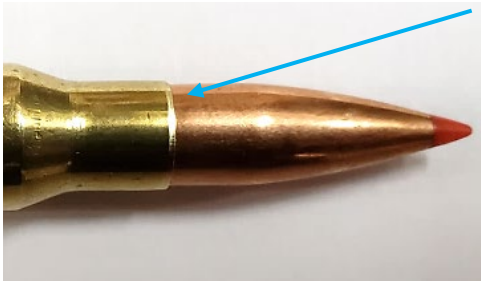
Taper Crimp of Rifle Cartridge with Cannelure

8.5.7 Adjustment of the bottleneck Crimp Die

- **Screw the Crimp Die into Station 5. Screw it down until it is flush with the bottom of the Toolhead as a starting point.**
- **Place a cartridge with a properly seated bullet into Station 5 (Crimp Station).**
- **Lower the Handle and continue to screw the Die Down until it touches the cartridge.**
- **Raise the Handle slightly, screw the Die down 1/8 of a turn or less and lower the Handle.**
- **Raise the Handle halfway and inspect the cartridge. If the belling of the case mouth is still present, or more crimp is needed, give the Die a 1/8 turn down or less and try again. Continue making small adjustments until the desired amount of crimp is achieved--the crimp should reduce the case mouth diameter to no more than .001-.002”.**

Crimp –reduce diameter no more than .001-.002”





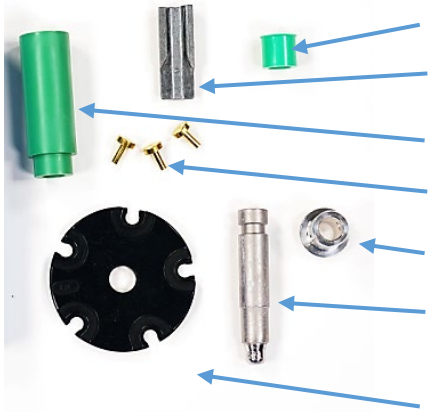
Excessive crimp may show up as a “bright ring” at the top edge of the case neck

- **Once the adjustment is complete, place the case back into Station 5 and lower the Handle. Tighten the Crimp Die lock ring using a 1" Dillon Bench Wrench and a 7/8" end wrench to hold the Die body with a cartridge in the Die with the Platform all the way up (Handle down).**
- **Once all the reloading stations are in use, recheck all the process parameters from each station to verify nothing has changed due to the “full operating load” on the system!**

9 CALIBER CONVERSION LIST AND PROCEDURES

9.1 Dillon has conversion kits for various calibers as noted in Table 9.1.2 below:

9.1.1 The following is a typical Caliber conversion box and contents:



Arm Bushing

Station 1 Locator

Casefeed Adapter

Locator Buttons

Body Bushing

Powder Funnel (Pistol)

Shellplate-numbered

9.1.2 XL750 Conversion List

Caliber, Pistol	Conversion	Casefeed Adapter	Arm Bushing	Body Bushing	Sta 1	Shellplate	Powder Funnel	Buttons	Notes
22 Remington Jet	21096	Orange, 13386	Red, 13403	38/357, 13384	2, 13563	2, 13430	A, 13426	2, 14062	
256 Winchester Mag	21097	Orange, 13386	Red, 13403	38/357, 13384	2, 13563	2, 13430	R, 13243	2, 14062	
25-20 Winchester	21619	Blue, 13075	Green, 13412	Small, 13513	W, 13267	O, 10294	R, 13243	3, 14060	7
30 Luger, 7.62x25mm Tokarev	21107	Green, 13450/Red, 13143	Green, 13412	Small, 13513	5, 13546	5, 13509	C, 13564	3, 14060	
32 ACP,7.65MM, 32 Short Colt	21114	Green, 13450	Green, 13412	Small, 13513	8, 11936	8, 12779	S, 12845	8, 14048	7
32 S&W Long, 32 H&R, 327 Fed	21122	Green 13450, Blue 13075	Green, 13412	Small, 13513	D, 11619	D, 12879	S, 12845 SW,13171	3, 14060	7
32-20 Winchester	21620	Blue, 13075	Green, 13412	Small, 13513	W, 13267	O, 10294	S, 12845	3, 14060	7
7mm TCU	21103	White 223, 13575	Green, 13412	Small, 13513	3, 13614	3, 13345	N, 13014	3, 14060	
9mm / 38 Super / 9x21	21109	Green, 13450	Green, 13412	Small, 13513	5, 13546	5, 13509	F, 13806	3, 14060	
9x18 Makarov	21657	Green, 13450	Green, 13412	Small, 13513	3, 13614	5, 13509	9, 14980	3, 14060	
9x25 Dillon, 357 Sig	21527	Red, 13143	Red, 13403	Medium, 13604	W, 13267	W, 13310	F, 13806	2, 14062	
380 ACP	21104	White 380, 11573	Green, 13412	Small, 13513	3, 13614	3, 13345	F, 13806	3, 14060	
38 Super Comp	16902	Green, 13450	Green, 13412	Small, 13513	3, 13614	3, 13345	F, 13806	3, 14060	
38 Special, 357 Mag	21098	Orange 13386	Red, 13403	38/357, 13384	2, 13563	2, 13430	D, 13599	2, 14062	2
38-40 Winchester	21492	Yellow, 13442	Yellow, 13619	Large, 13639	N, 14237	N, 10296	W, 13600	4, 14047	
40 S&W / 10mm	21120	Purple, 18076	Red, 13403	Medium, 13604	W, 13267	W, 13310	W, 13600	2, 14062	
41 Magnum	21111	Yellow, 13442	Red, 13403	Medium, 13604	6, 13118	6, 13121	H, 13240	1, 13930	2
44-40 Winchester	21493	Yellow, 13442	Yellow, 13619	Large, 13639	N, 14237	N, 10296	4, 13474	4, 14047	
44 Special. 44 Magnum	21105	Yellow, 13442	Yellow, 13619	Large, 13639	4, 13340	4, 13185	G, 13427	4, 14047	2
45 ACP, .45 GAP	21071	Red, 13143	Red, 13403	Medium, 13604	1, 13595	1, 13204	E, 13782	1, 13930	5
45 Auto Rim	21445	Yellow, 13442	Yellow, 13619	Large, 13639	45AR, 16263	H, 10297	E, 13782	4, 14047	
45 Colt, 454 Casull	21118	Yellow, 13442	Yellow, 13619	Large, 13639	C, 12817	C, 12986	E, 13782	4, 14047	2
45 Winchester Magnum	21423	Yellow, 13442	Yellow, 13619	Large, 13639	1, 13595	L, 10295	E, 13782	1, 13930	
460 S&W	20889	460 S&W 11505	Yellow, 13619	Large, 13639	C, 12817	C, 12986	460, 18949	4, 14047	
475 Linebaugh, 480 Ruger	20835	Yellow 475/480, 18494	See Notes>	See Notes>	G, 14331	G, 10298	475/480, 10723	6, 15755	3, 4
500 S&W	20836	Yellow 475/480, 18494	See Notes>	See Notes>	B, 13156	B, 12903	50 Pistol, 14465	7, 13436	3, 4
50 AE	21092	Yellow 475/480, 18494	Yellow, 13619	Large, 13639	N, 14237	50AE, 16400	50 Pistol, 14465	4, 14047	
Caliber, Rifle	**Conversion**	**Casefeed Adapter**	**Arm Bushing**	**Body Bushing**	**Sta 1**	**Shellplate**	**Powder Funnel**	**Buttons**	**Notes**
17 Remington	21099	White 223, 13575	Green, 13412	Small, 13513	3, 13614	3, 13345	O, 12921	3, 14060	
204 Ruger	11231	White 223, 13575	Green, 13412	Small, 13513	3, 13614	3, 13345	204, 20322	3, 14060	
.218 Bee	21618	Blue, 30M1/32H&R/32-20, 13075	Green, 13412	Small, 13513	W, 13267	O, 10294	A, 13426	3, 14060	
.22 Hornet	21697	Blue, modified, 15186	Green, 13412	Small, 13513	E, 14859	E, 10300	A, 13426	8, 14048	
.22 Remington Jet	21096	Orange 13386	Red, 13403	38/357, 13384	2, 13563	2, 13430	A, 13426	2, 14062	
.221 Rem Fireball	21102	White 223, 13575	Green, 13412	Small, 13513	3, 13614	3, 13345	A, 13426	3, 14060	
222 Rem, 222 Rem Mag	21101	White 223, 13575	Green, 13412	Small, 13513	3, 13614	3, 13345	A, 13426	3, 14060	
224 Valkyrie	62413	Orange, 22-250, 14313	Red, 13403	Medium, 13604	5, 62431	W, 13310	A, 13426	2, 14062	
223 Rem/5.56, 22 Nosler	21101	White 223, 13575	Green, 13412	Small, 13513	3, 13614	3, 13345	A, 13426	3, 14060	
22-250 Remingon	21088	Orange, 22-250, 14313	White 13661	Medium, 13604	1, 13595	1, 13204	A, 13426	1, 13930	
.220 Swift	21429	Orange, 220 Swift 14851	White 13661	Medium, 13604	6, 13118	L, 10295	L, 10831	1, 13930	
223 WSSM	18419	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	223 SM, 18417	6, 15755	3, 4
224 Weatherby	21116	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	A, 12339	A, 12529	A, 13426	2, 14062	
6mm PPC	22043	Orange, 22-250, 14313	Red, 13403	Medium, 13604	A, 12339	A, 12529	6PPC, 13085	2, 14062	
6.0 Creedmore	62407	Orange, 22-250, 14313	White 13661	Medium, 13604	1, 13595	6.5, 16545	6PPC, 13085	1, 13930	
243 Win, 6mm Rem	21089	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	1, 13595	1, 13204	I, 13305	1, 13930	
243 WSSM	16248	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	243 SM, 11156	6, 15755	3, 4
.25-20 Winchester	21619	Blue, 30M1/32H&R/32-20, 13075	Green, 13412	Small, 13513	W, 13267	O, 10294	R, 13243	3, 14060	
25-06, 257 Roberts, 257 AI	21090	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	1, 13595	1, 13204	K, 13216	1, 13930	
25 WSSM	20356	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	25 SM, 11157	6, 15755	3, 4
256 Win Mag	21097	Orange 13386	Red, 13403	38/357, 13384	2, 13563	2, 13430	R, 13243	2, 14062	

Caliber, Rifle	Conversion	Casefeed Adapter	Arm Bushing	Body Bushing	Sta 1	Shellplate	Powder Funnel	Buttons	Notes
6.5 Creedmore	62245	Orange, 22-250, 14313	White 13661	Medium, 13604	1, 13595	6.5, 16545	K, 13216	1, 13930	
6.5 Grendel	20895	Orange, 22-250, 14313	Red, 13403	Medium, 13604	A, 12339	A, 12529	6.5 Grendel, 18947	2, 14062	
6.5x55 Mauser, 260 Remington	21476	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	1, 13595	6.5, 16545	Y, 12870	1, 13930	
264 Win Mag, 6.5 Rem Mag	21437	Black, Short Mag/45-70, 14395	Yellow, 13619	Large, 13639	B, 13156	B, 12903	Y, 12870	4, 14047	1
26 Nosler	62298	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	7mm SM, 18416	4, 14047	1, 3, 4
6.8 SPC	20324	Orange, 22-250, 14313	Red, 13403	Medium, 13604	2, 13563	W, 13310	N, 13014	2, 14062	5
270 Win, 280 Rem/7mm Expr	21093	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	1, 13595	1, 13204	J, 13456	1, 13930	
270/7mm Wby, 7mm Rem Mag	21438	Black, Short Mag/45-70, 14395	Yellow, 13619	Large, 13639	B, 13156	B, 12903	J, 13456	4, 14047	1
7mm RUM	18426	Black, Tall Mag, 14394	See Notes>	See Notes>	B, 13156	B, 12903	7mm TM, 15019	6, 15755	1, 3, 4, 6
.270/7mm WSM, 7mm RSAUM	18420	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	7mm SM, 18416	6, 15755	1, 3, 4
28 Nosler	62298	Black, Tall Mag, 14394	See Notes>	See Notes>	B, 13156	B, 12903	7mm SM, 18416	6, 15755	1, 3, 4
7.62x39mm	21117	Orange, 22-250, 14313	Red, 13403	Medium, 13604	A, 12339	A, 12529	AK, 13015	2, 14062	5
7.62x54r	21699	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	G, 14331	G, 10298	B, 13587	7, 13436	3
30AR	62253	Orange, 22-250, 14313	Yellow, 13619	Medium, 13604	7, 13176	L, 10295	AK, 13015	1, 13930	
30 M1 Carbine	21113	Blue, 30M1/32H&R/32-20, 13075	Green, 13412	Ex Small, 22270	8, 11936	8, 12779	C, 13564	8, 14048	2
300 Blackout	20897	Blue, modified, 15186	Green, 13412	Small, 13513	3, 13614	3, 13345	AK, 13015	3, 14060	
30-30 Winchester	21112	Orange mod, 220 Swift 14851	White 13661	Medium, 13604	7, 13176	7, 13300	B, 13587	4, 14047	
308 Marlin Express	62249	Orange, 22-250, 14313	Red, 13403	Medium, 13604	1, 13595	1, 13204	AK, 13015	1, 13930	
308/30-06/.30TC	21094	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	1, 13595	1, 13204	B, 13587	1, 13930	
300Wby/Win/H&H/308 Norm	21439	Black, Tall Mag, 14394	Yellow, 13619	Large, 13639	B, 13156	B, 12903	B, 13587	4, 14047	1
300 WSM, 300 RSAUM	18421	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	30 SM, 18415	6, 15755	1, 3, 4
30 Nosler	62297	Black, Tall Mag, 14394	See Notes>	See Notes>	B, 13156	B, 12903	30 TM, 15013	6, 15755	1, 3, 4
300 Rem Ultra Mag	18422	Black, Tall Mag, 14394	See Notes>	See Notes>	B, 13156	B, 12903	30 TM, 15013	6, 15755	1, 3, 4, 6
303 British	21106	Black Std, 308/30-06, 13541	Yellow, 13619	Large, 13639	4, 13340	N, 10296	B, 13587	4, 14047	
8x57mm Mauser	20071	Black Std, 308/30-06, 13541	White 13661	Medium, 13604	1, 13595	1, 13204	M, 12963	1, 13930	
32-20 Winchester	21620	Blue, 30M1/32H&R/32-20, 13075	Green, 13412	Small, 13513	W, 13267	O, 10294	S, 12845	3, 14060	7
325 WSM	20892	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	B, 13156	B, 12903	325 SM, 18948	6, 15755	1, 3, 4
33 Nosler	62296	Black, Tall Mag 14394	See Notes>	See Notes>	B, 13156	B, 12903	338 TM, 15012	6, 15755	1, 3, 4
338 Win Mag, 340 Weatherby	21441	Black, Short Mag/45-70, 14395	Yellow, 13619	Large, 13639	B, 13156	B, 12903	Q, 13406	4, 14047	1, 6
338 Remington Ultra Mag	18423	Black, Tall Mag, 14394	See Notes>	See Notes>	B, 13156	B, 12903	338 TM, 15012	6, 15755	1, 3, 4, 6
38-40 Winchester	21492	Yellow, 13442	Yellow, 13619	Large, 13639	N, 14237	N, 10296	W, 13600	4, 14047	
350 Remington Magnum	21442	Black, Short Mag/45-70, 14395	White 13661	Large, 13639	B, 13156	B, 12903	P, 13187	4, 14047	
375 H&H Mag.	21443	Black, Tall Mag, 14394	Yellow, 13619	Large, 13639	B, 13156	B, 12903	R, 13531	4, 14047	1
375 Remington Ultra Mag	18424	Black, Tall Mag, 14394	See Notes>	See Notes>	B, 13156	B, 12903	378 TM, 15010	4, 14047	1, 3, 4, 6
44-40 Winchester	21493	Yellow, 13442	Yellow, 13619	Large, 13639	N, 14237	N, 10296	4, 13474	4, 14047	
444 Marlin	21491	Black Std, 308/30-06, 13541	Yellow, 13619	Large, 13639	N, 14237	N, 10296	X, 12920	4, 14047	
450 Bushmaster	62247	Orange, 22-250, 14313	Yellow, 13619	Large, 13639	1, 13595	1, 13204	460 S&W, 18949	1, 13930	
458 SOCOM	21119	Yellow 475/480, 18494	See Notes>	See Notes>	1, 13595	1, 13204	458 SCM, 21440	1, 13930	3, 4
458 Win Mag	21444	Black, Short Mag/45-70, 14395	Yellow, 13619	Large, 13639	B, 13156	B, 12903	T, 13407	4, 14047	1
45-70 Government	21422	Black, Short Mag/45-70, 14395	See Notes>	See Notes>	G, 14331	G, 10298	T, 13407	7, 13436	3

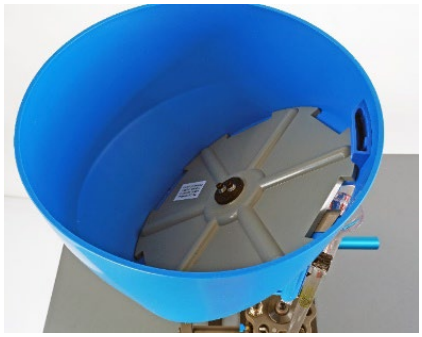
Notes:

1. Requires Extra Large powder bar for the Standard powder measure for charges up to 85 grains, 21353.
2. Requires Casefeed Plate spacer washer, 13703
3. Requires Magnum rifle casefeed conversion kit, 11069.
4. Requires Extra Large powder die, 21253.
5. Cases can be Large or Small primer.
6. Requires Magnum Powder Measure system for charges over 85 grains, 97126.
7. Requires Extra Small powder bar for the standard powder measure for charges under 4 grains, 20780

9.2 Caliber Conversion Procedure

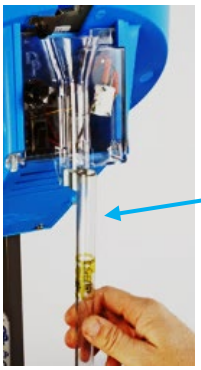
9.2.1 Casefeed Conversion (If Optional Casefeeder Installed).

- **Remove and replace the Casefeed Plate inside the Casefeed Bowl if required.**
- **Adjust the Casefeeder as specified in the Casefeed Setup Section of the Casefeed Instructions.**



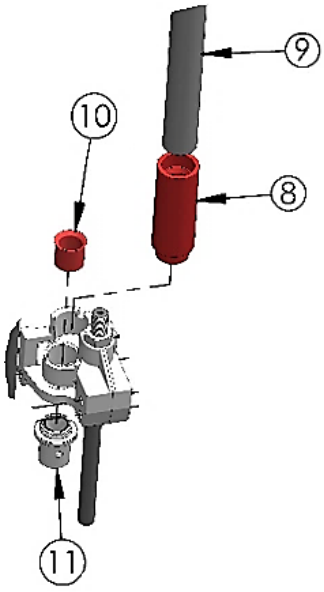
9.2.2 Remove/Replace Casefeed Tube

- **Remove Casefeed Tube from upper Spring Clamp and Casefeed Adapter**

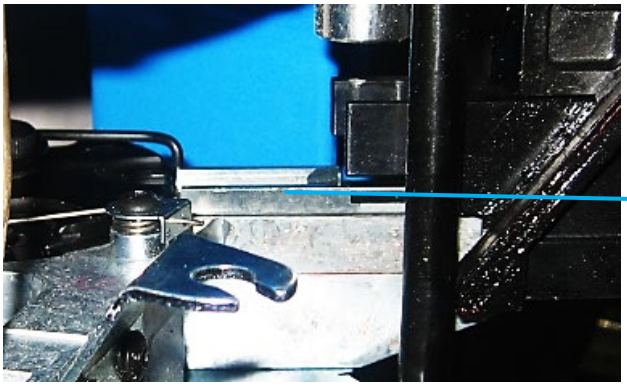


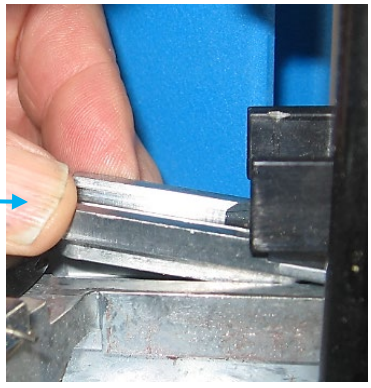
Remove from Spring Clamp

9.2.3 Obtain the Caliber Conversion and change out the parts shown:

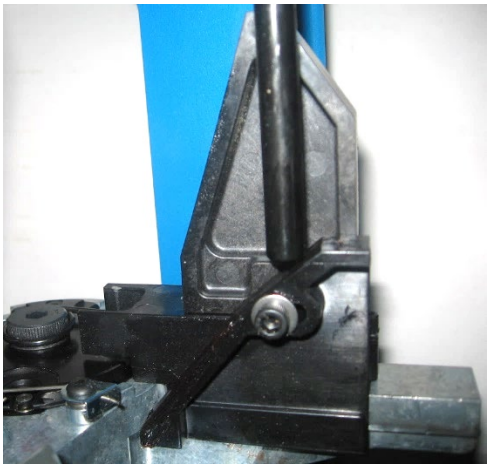


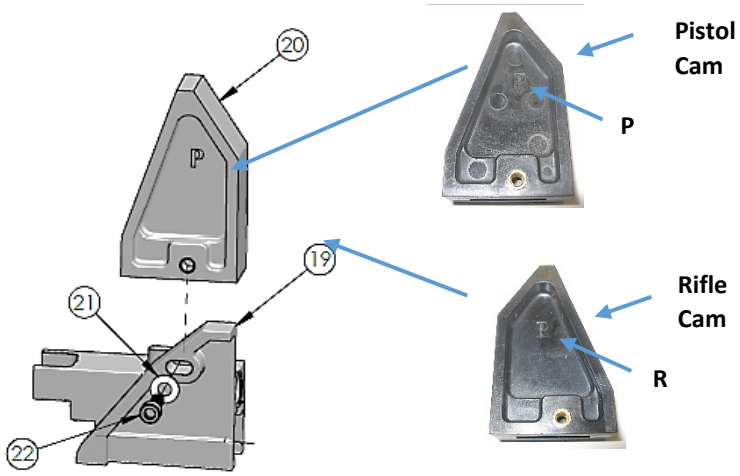
- **Replace the Station 1 Locator**





- **The Case Insert Slide Cam has two cam edge profiles, one edge for Pistol (P) and the other for Rifle (R). They can be flipped back and forth, depending on what is being loaded. The profile to be used is identified by a "P" and an "R" embossed on the side facing out. Remove the Screw (22) attaching the Case Insert Cam (20) to the Case Insert Slide (19) and orient the proper configuration Pistol (P) or Rifle (R) facing out and refasten to the Case Insert Slide with Screw (22).**

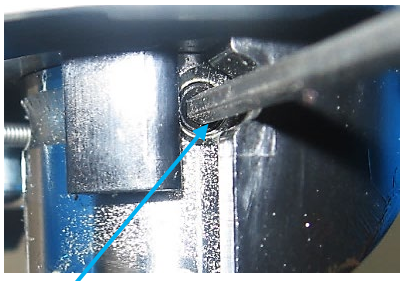




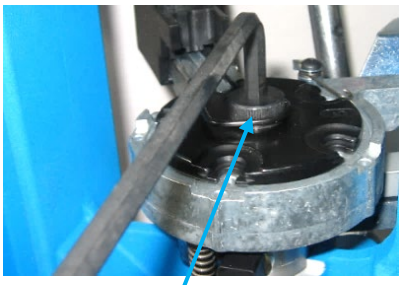
9.3 Shellplate Conversion

- **Replace the Shellplate by first, pulling up and removing the Ejector Wire. Next, loosen the Shellplate Bolt Locking Brass Tipped Set Screw. Remove Shellplate Bolt. Check Index Ball and Spring for debris and clean. Replace the Shellplate. Tighten the Shellplate Bolt down snugly and back it up ⅛ of a turn to allow Shellplate to rotate without dragging with "no" up and down clearance. Retighten Shellpate Bolt Locking Brass Tipped Set Screw. Reinstall the Ejector Wire. The "loop" goes around the Shellplate Bolt, not underneath it. <u>Not tightening the Brass Tipped Locking Set screw will allow the Shellplate to rotate the Shellplate Bolt and stop the Shellplate from indexing.</u>**

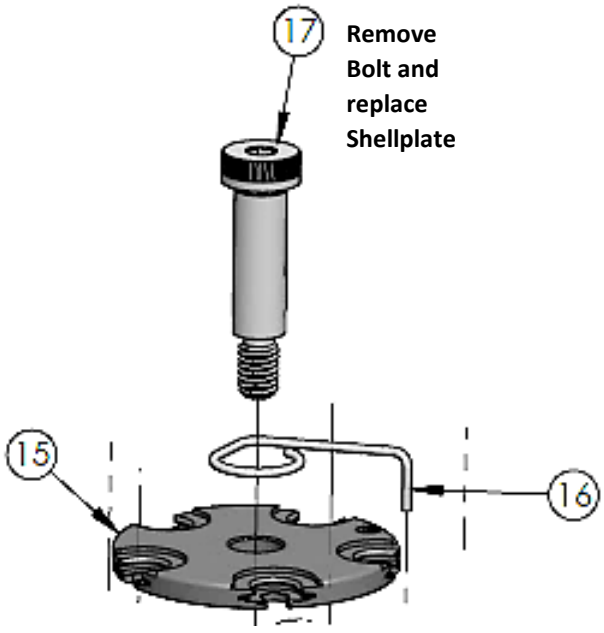
Remove Ejector Wire



Loosen Brass Tipped Locking Set Screw with an Allen wrench

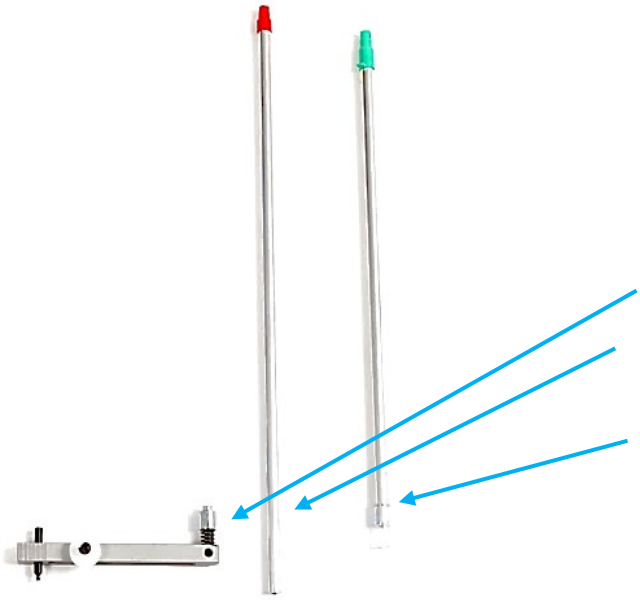


Remove Bolt and replace Shellplate



9.4 Primer Size Conversion

- **The XL750 comes with both Small and Large Primer capability.**
- **The XL750 ships set up in the Primer size specific to the cartridge ordered. The Magazine Tube Assembly uses color-coded plastic Primer Magazine Feed Tips. The Large Prime Magazine Tip is red and Small Primer Magazine Tip is blue. The aluminum magazine tubes also have a different inside diameter. A conversion Kit for the alternate size (small or large) primer system not installed is included in the initial shipment--in the "Tube Pack."**



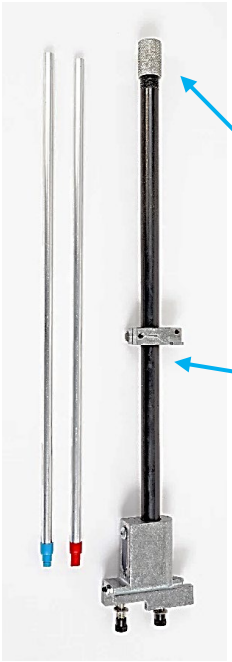
Typical Primer Size Conversion Kit included with the XL750--

Primer Slide

Primer Magazine Tube/Orifice Tip

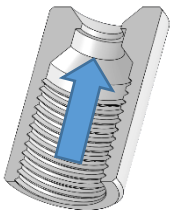
Primer Pickup Tube

- **To change Primer Magazine Size:**
  - **Remove the Primer Shield Cap, and lift the Magazine Tube assembly straight up out of the Magazine Shield. WARNING!--any primers in the Magazine Tube will fall out inside the Magazine Shield. Note: the Primer Housing must be detached to "pour out" any primers left in the Magazine Tube or Magazine Shield.**
  - **Insert the new Magazine Tube Assembly. Rotate the Magazine Tube gently until you feel the tab on the Plastic Tip engage the slot in the Feed Body allowing the Magazine Tube Assembly to drop into place.**
  - **Replace the Primer Shield Cap, making sure the Magazine Tube goes into the bore inside the Cap. Tighten the Cap just snug.**



Knurled Magazine Cap

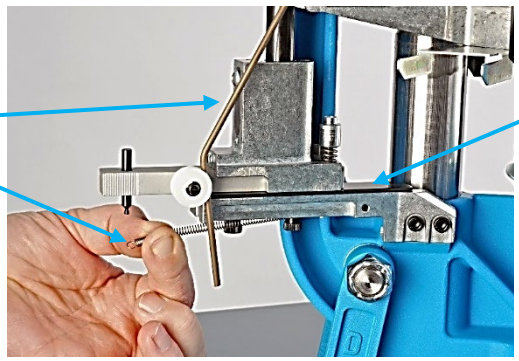
Magazine Shield and Feed Body



Magazine Cap fits over Magazine Tube

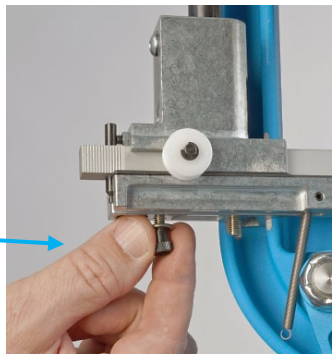
- **Disconnect Primer Slide Return Spring and remove the 2 Primer Shield Feed Body Thumb Screws and Washers from the Primer Slide Support Bracket.**

Disconnect Spring from Post and Disconnect Rod

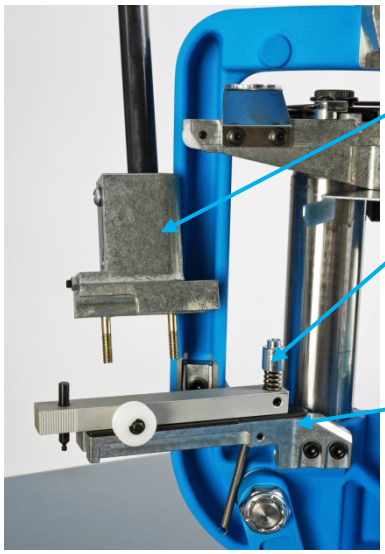


Track Bearing

Remove both Thumb Screws and Washers

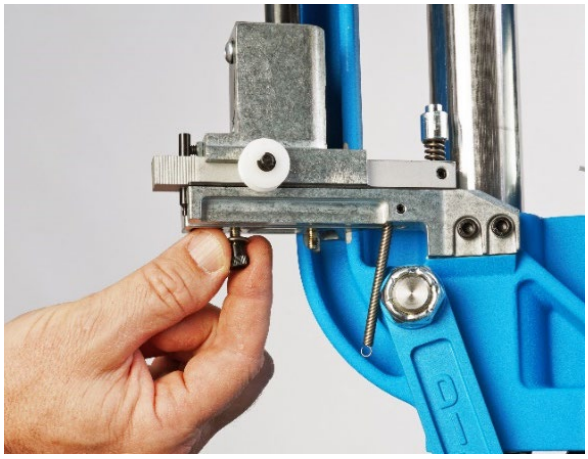


- **Remove the Operating Rod.**
- **Remove Primer Feedbody Assembly including Magazine Shield with Cap, Primer Slide Index Assembly and Primer Early Warning Alarm.**
- **Place the replacement Primer Slide Assembly in position on the Track Bearing. Lower the Feedbody Assembly into place and screw the Washers and Thumb Nuts onto the Studs—loosely.**
- **Move the Primer Slide forward into the priming position. Gently cycle the Operating Handle to the priming position while centering the Priming Cup in the Platform and hold it there, fully compressing the Primer Punch Spring.**
- **Wiggle the Primer Slide and Feedbody around within the clearance in the stud holes to make sure there is no binding of the Priming Cup (Gold or Silver) in the Shellplate. Tighten the thumbscrews firmly finger-tight. If needed tighten no more than 1/8 of a turn past finger tight with a 7/32" Allen Wrench. <u>Overtightening may bind the Primer Slide.</u>**

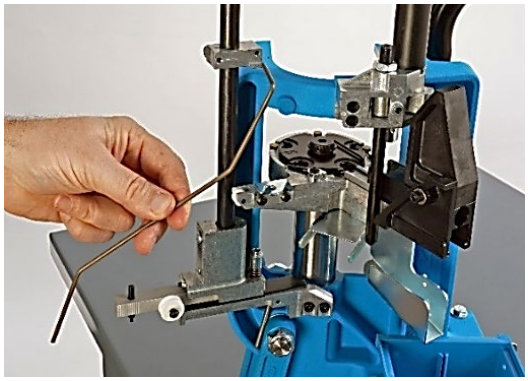


Remove all together--Primer Mag Shield, Cap, and Early Warning Alarm Assembly.

Remove Primer Slide and replace with desired size--Note: Gold Primer Cup is for small primers and the Silver one is for Large Primers--No Lube!



Clean Track Bearing and re-install--No Lube!

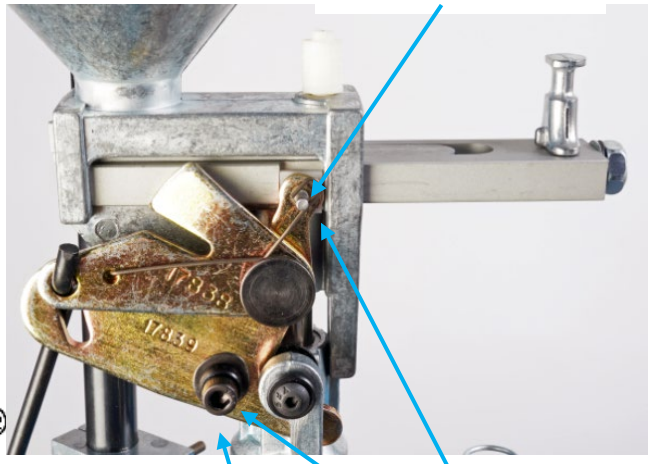


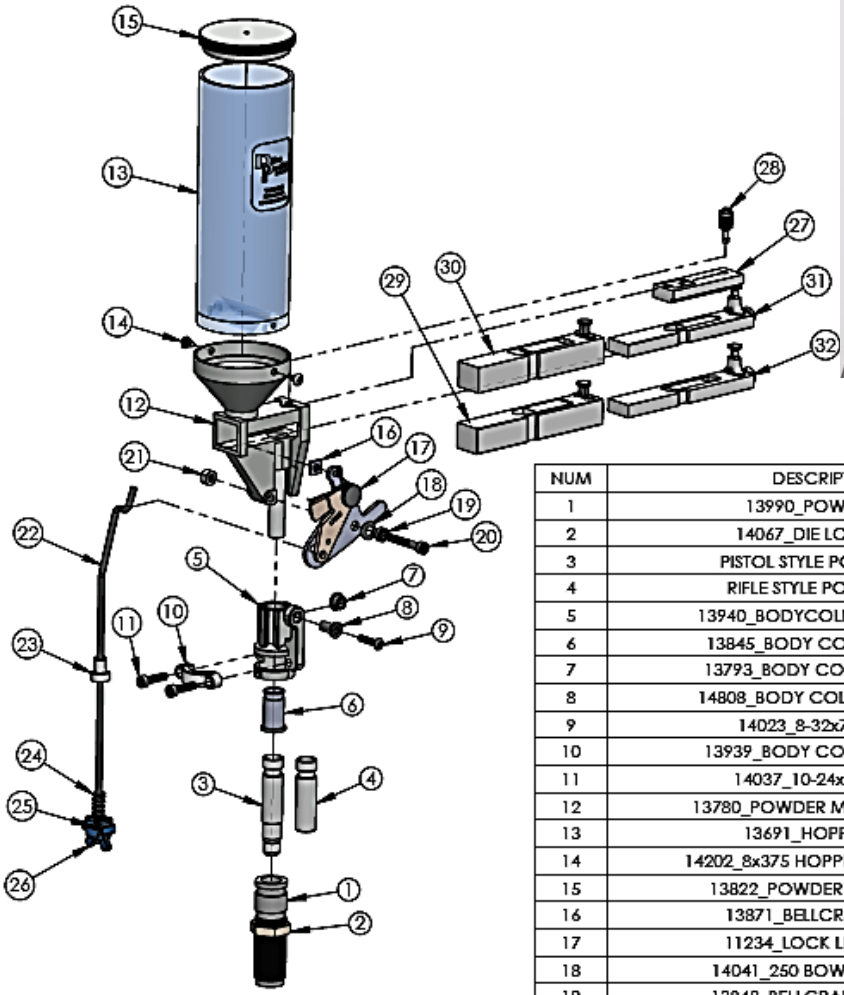
- **Replace the Operating Rod and re-attach the Slide Return Spring.**
- **Perform a single primer feed test as previously described to verify the correct operation of the Primer Feed Assembly.**

9.5 Powder Measure Conversion—

- **First, remove the Powder Measure and dump all powder out of the measure, cycling the Powder measure right side up and down.**
- **Loosen pivot screw and locknut (20) and (21) just enough to disengage drive pin tab on (17) and from White Plastic Bell Crank "Cube" (16) from Powder Bar slot.**
- **Slide out Powder Bar and Spacer (27) and Spacer Plug (28) if used) and replace it with the desired Powder Bar item (29, 30, 31 or 32).**
- **Reengaged White "Cube" (16) with Powder Bar Slot and Toggle Drive Pin item (17) and retighten (20) Pivot Screw and (21) Lock Nut—do not over-tighten! Make sure Powder Bar slides freely.**

Drive Pin, Bell Crank Cube and Powder Bar Drive Slot





NUM	DESCRIPTION
1	13990_POWDER DIE
2	14067_DIE LOCK RING
3	PISTOL STYLE POWDER DIE
4	RIFLE STYLE POWDER DIE
5	13940_BODYCOLLAR HOUSING
6	13845_BODY COLLAR SLEEVE
7	13793_BODY COLLAR ROLLER
8	14808_BODY COLLAR BUSHING
9	14023_8-32x750 BHCS
10	13939_BODY COLLAR CLAMP
11	14037_10-24x750 SHCS
12	13780_POWDER MEASURE BODY
13	13691_HOPPER TUBE
14	14202_8x375 HOPPER TUBE SCREW
15	13822_POWDER HOPPER LID
16	13871_BELLCRANK CUBE
17	11234_LOCK LINK ASSEM
18	14041_250 BOWED WASHER
19	13848_BELLCRANK BUSHING
20	13904_10-32x1250 SHCS
21	16340_10-32 LOCKNUT ZINC
22	13629_FAILSAFE RETURN ROD
23	18086_FAILSAFE ROD BUSHING
24	14033_PRIMER CUP SPRING
25	13801_TINNERMAN NUT
26	13799_FAILSAFE WINGNUT
27	13644_POWDER BAR SPACER
28	13921_POWDER BAR SPACER PLUG
29	20063-LARGE POWDER BAR ASSEM
30	21353_EXTRA LARGE POWDER BAR ASSEM
31	20062_SMALL POWDER BAR ASSEM
32	20780_EXTRA SMALL POWDER BAR ASSEM

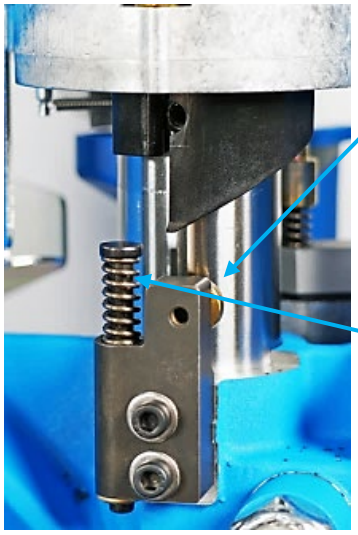
Loosen Pivot Screw and Self-Locking Nut Just enough to disengage the Drive Pin from the Bell Crank Cube

Re-engage Drive Pin and Retighten Pivot Screw just enough to remove "play" and still provide free movement

10 ADJUSTMENTS AND REPLACEMENT PROCEDURES

10.1 Shellplate Indexing Adjustment--Shellplate indexing is controlled by the following parts:

- The Index Block of the XL750 has a Rolling Wheel that contacts the Ring Indexer for reduced friction. It also has a spring-loaded Platform Support Post to take the load off the Primer Punch Spring when the Platform is in its rest position. The Index Block has a flat "hard stop" pad on top, to limit the downward travel of the Platform. This protects the primer punch spring from over-compression but does not limit primer seating.
- The Index Block has slotted mounting holes for adjustment for Shellplate indexing. Moving the block to the back of the XL750 advances the Shellplate (Clockwise) during indexing. Verify that the Shellplate and Platform are clean before adjusting the Index Block.
- If the Primer Cup is not centered in the Shellplate Priming Hole, verify that the cartridge case in the Shellplate is well aligned with the dies in the Toolhead—that is, the case doesn't move when it enters the die from the bottom. Loosen the two Index Block mounting Screws and slide the Block a very small amount toward the front of the XL750. Operate the Handle down while lightly holding your finger on the Shellplate as it indexes. Continue making small adjustments until the Primer Cup is centered in the Shellplate



Index Roller

Index Ring (4)

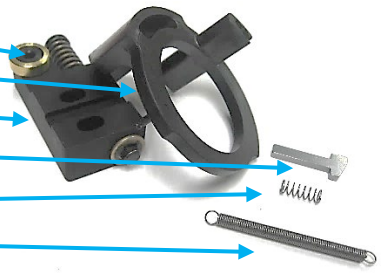
Adjustable Index Block

Index Pawl ("Tomahawk") (6)

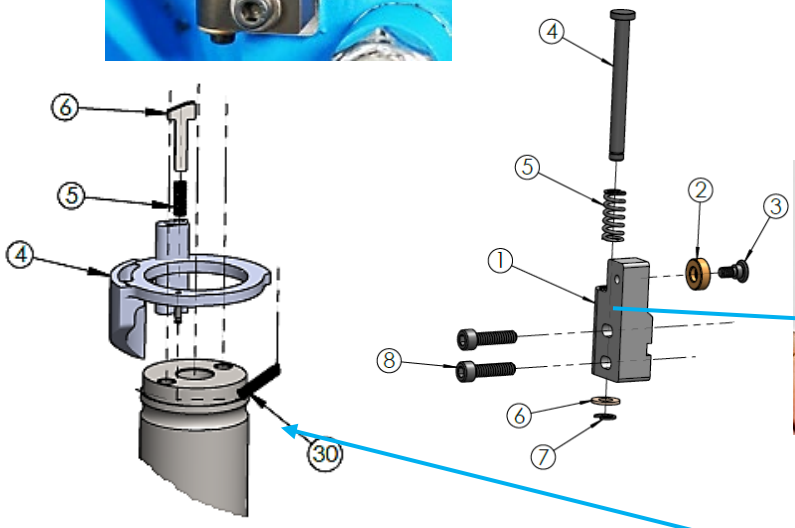
Index Spring (5)

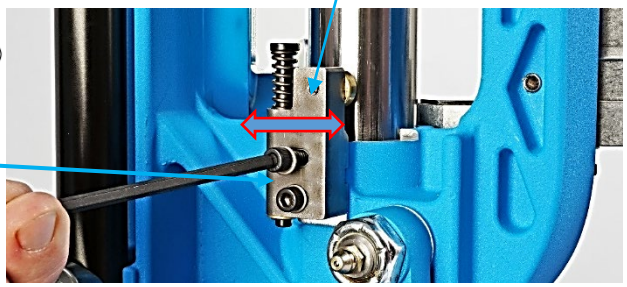
Index Return Spring (30)

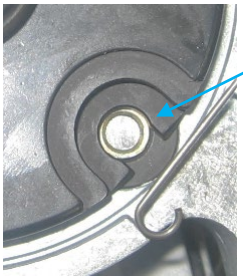
Spring Loaded Platform Support Post



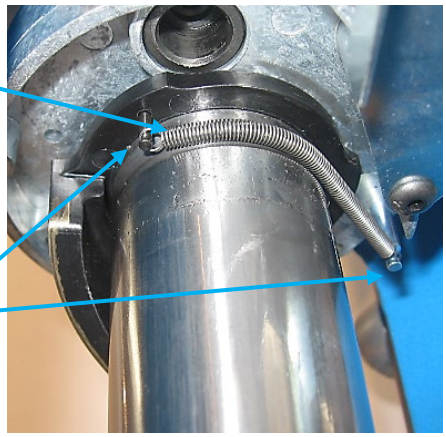
Loosening the two screws and moving the Block towards the back of the XL750 "advances" the Shellplate (Clockwise) during indexing. Moving the Block toward the front of the System "retards" the Indexing.







Primer Punch and Cup Centered in Shellplate

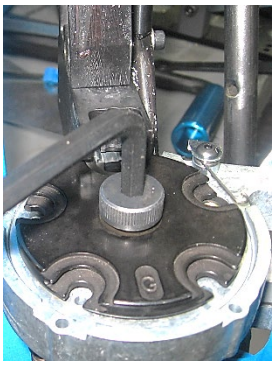


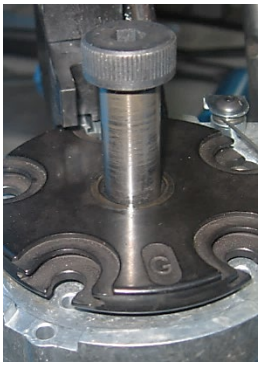
Note Installation of Indexing Spring on Index Ring Pin and Platform

10.2 Indexer Ring Replacement

- **The Index Ring on the XL750 is designed to "break" to protect the rest of the system if the index system is "overloaded" or jammed.**
- **Replacing the Ring requires the usage of a Dillon Alignment Fixture (PN13713) with a Toolhead and Powder Die.**

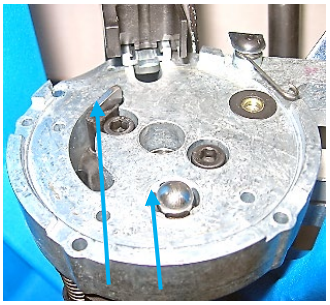
- **Loosen the Shellplate Bolt Locking Brass Tipped Set Screw in the left side of the Main Shaft. Remove Ejector Spring. Remove the Shellplate Bolt and Shellplate.**



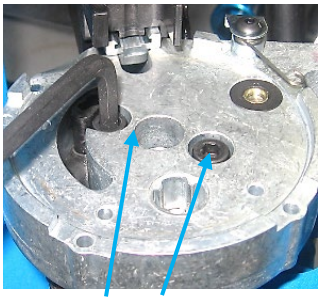


- **Remove the Indexer Return Spring, Index Ball and Spring and the Index Pawl ("Tomahawk") and its Spring. Note the direction the Pawl faces. Remove the two Platform Mounting Screws**

Carefully remove Indexer Return Spring from the two pins



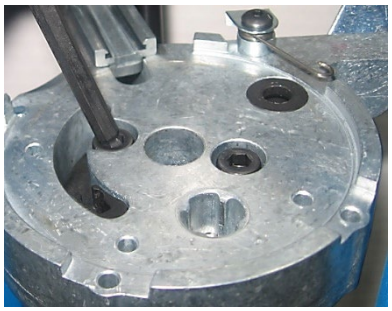
Index Pawl and Spring and Index Ball and Spring



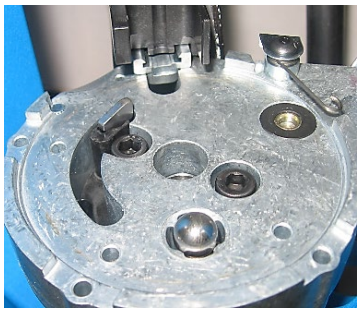
Remove Platform Mounting Screws and the Platform

- **Carefully remove the Platform from the Main Shaft. Remove the broken or damaged Index Ring. Clean the Shaft top, lightly oil and replace the Plastic Index Ring.**
- **Reinstall the Platform and loosely tighten the two Mounting Screws.**
- **Reinstall the Indexer Return Spring.**
- **Reinstall the Index Ball and Spring and the Index Pawl ("Tomahawk") with its Spring. Make sure the Pawl is oriented correctly.**

Broken Index Ring



Loosely tighten Mounting Screws

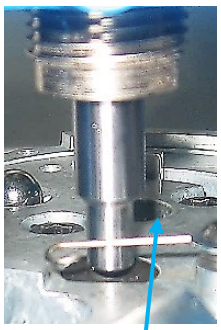


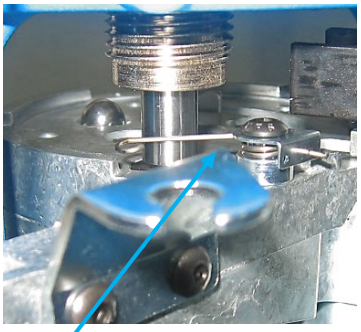
Reinstall Index Pawl and Spring and Index Ball and Spring

Reinstall Index Ring Spring

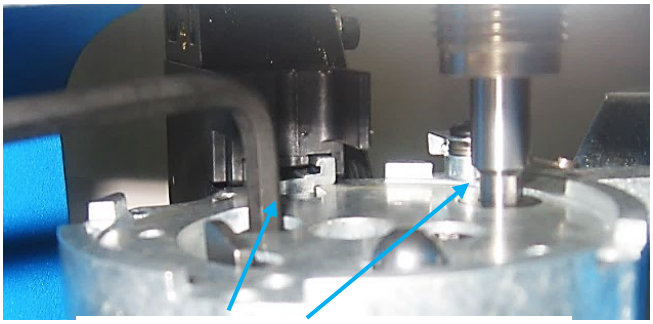
- **Install an XL750 Toolhead with a Powder Die threaded down to just above the Shellplate. Gently place the Alignment fixture in the Powder Die and raise the Platform moving the Platform side-to-side so that the end of the Alignment Fixture fits easily into the Priming Hole in the Platform.**

- **Lower the Platform as little as possible, keeping the Alignment Pin engaged while tightening the two Platform Mounting Screws. Lower the Platform down and tighten both Mounting screws snugly—8-10 ft-lbs. while not allowing the Platform to shift while tightening.**



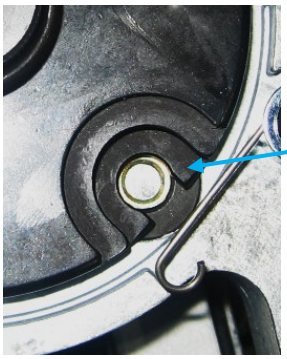


Alignment Fixture entering the Primer Hole



Tighten both Platform Mounting screws while keeping the Alignment Fixture pin engaged in the Primer Hole

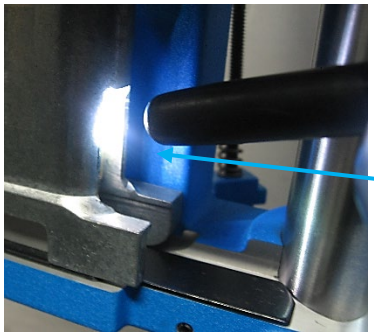
- **Cycle the handle and make sure that Priming Cup goes up in the Platform hole and that the Primer hole is concentric with the hole in the Shellplate as shown below:**
  - **If the Primer Cup is "off"--Realign the Primer Slide**
  - **If the Shellplate is "off" --Readjust the Index Block**



Primer Cup must fit Hole in Platform without dragging and be concentric with the "U" shaped Shellplate

10.3 Adjusting The Primer Drop Alignment

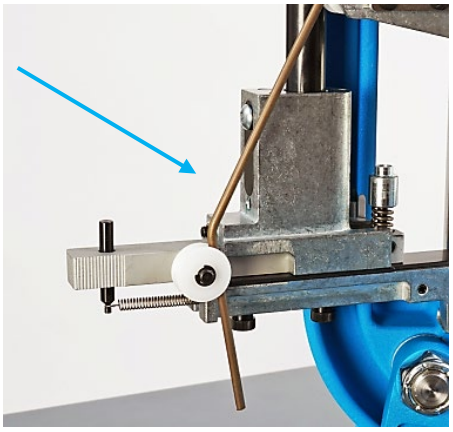
- **Make sure there are no primers in the Magazine Tube and the Operating Handle is up. Remove the Magazine tube. Shine a small flashlight in the opening as shown below and look down the Shield Tube and verify the Primer Hole in the Primer Slide is centered directly under the opening in the Primer Feedbody as shown below. If not, adjust the Primer Slide Drop Cup Position Set Screw on the back of the XL750 in or out no more than 1/8 of a turn at a time, to fine-tune the position of the Primer Slide. See the graphical depiction below. Reinstall the Primer Magazine.**
- **Drop one primer in the Primer Magazine. Cycle the Operating Handle down, up and to the Full Aft Priming Position. Verify the primer is now sitting on top of the Primer Punch as shown below. A small amount of over-travel to the rear for primer pickup is acceptable.**



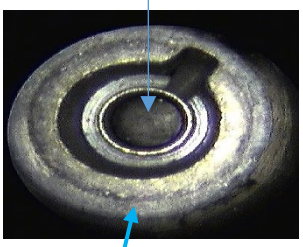
WARNING! -Wear Safety Glasses

Shine Flashlight Here and look down Primer Shield Tube

Primer Drop Cup Position Set Screw –adjust in/out to align Cup to Magazine



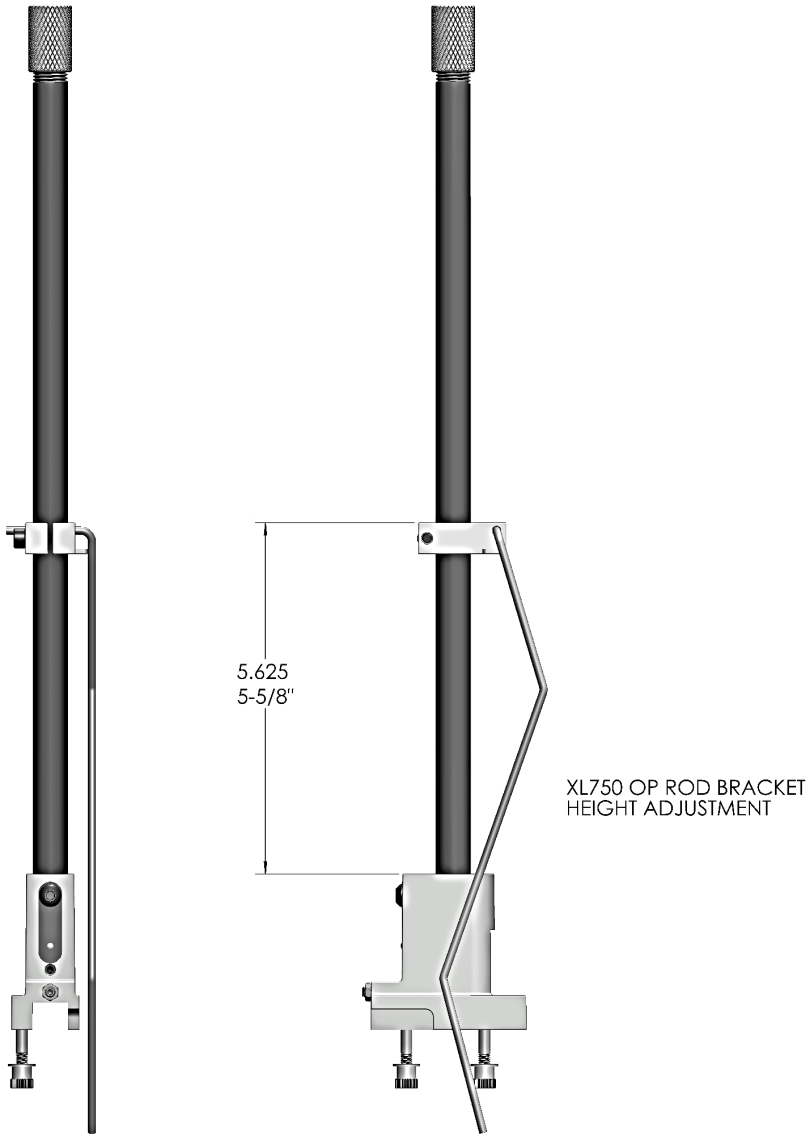
Proper primer presentation



View down inside Primer Shield Tube

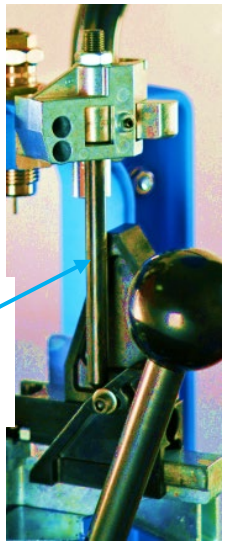
10.4 Operating Rod Bracket Adjustment

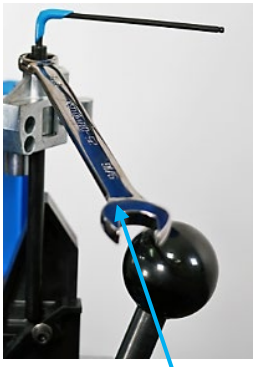
- **The Operating Rod Bracket for the XL750 is designed to be installed at the height as shown below. The Bracket must also be aligned rotationally as shown. Deviation from this dimension may cause primer feeding issues. The height is set at Dillon and should not require adjustment.**

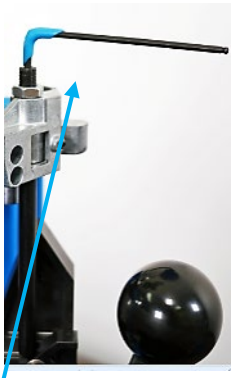


10.5 Adjusting The Camming Pin—

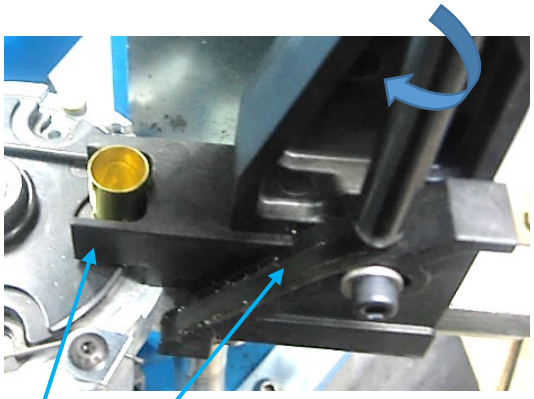
- **The Case Insert Camming Pin requires adjustment when switching calibers or cases with a different diameter:**
- **Loosen the Lock Nut with a 9/16" wrench and turn the Camming Pin down (clockwise) 4 or 5 turns.**
- **Place a case in Station 1 and cycle the Operating Handle to its full rearward/primer seating position.**
- **Turn the Camming Pin up (counterclockwise) or until the Case Insert Slide contacts the case.**
- **Turn the Camming Pin ~1/8 of a turn down—providing a little clearance between the Insert Slide and the Case—properly adjusted, the case will be fully inserted into the Shellplate but not "jammed" or tilted.**
- **Retighten the Lock Nut.**







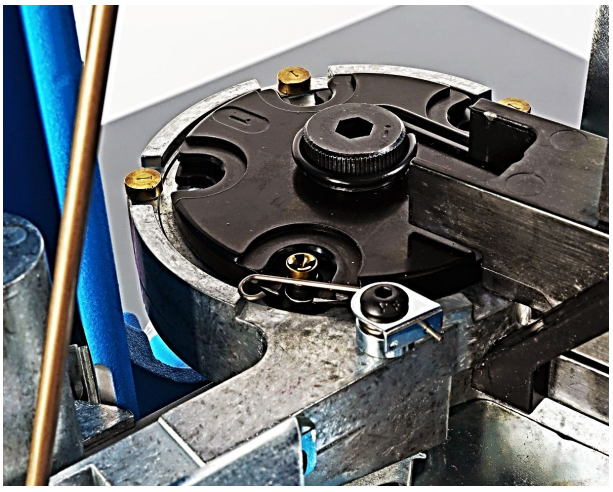
Loosen Lock Nut and rotate Cam Pin with Allen Wrench



Adjust Camming Pin contact with Slide to get a slight amount of clearance here between case and Cam Slide with the <u>case fully inserted and the Handle pushed all the way to the rear</u>

10.6 Adjusting The Spring Retainer for Station 2

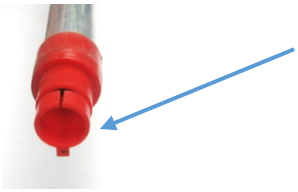
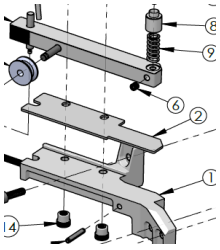
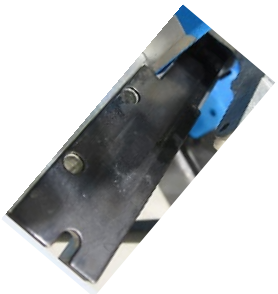
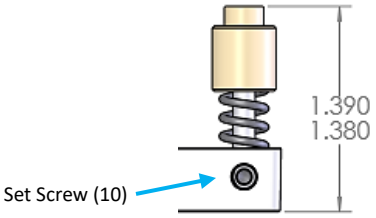
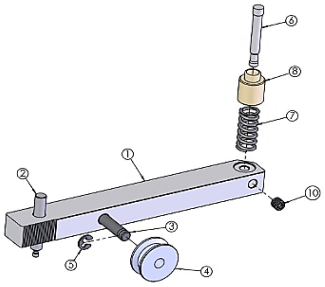
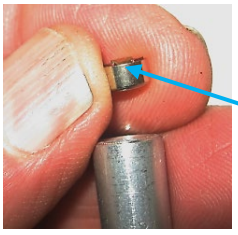
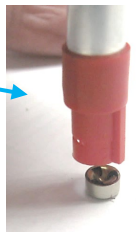
- **The XL750 incorporates a new feature, a Spring Retainer in Station 2--The Priming, Powder and Belling Station. This feature improves the centering of the case in this station. It provides easy adjustment for different size calibers and easy removal and reinstallation of cases.**
- **The locator spring should just lightly touch the case to keep it centered in the Shellplate; it should not force the case to the back of the Shellplate pocket.**

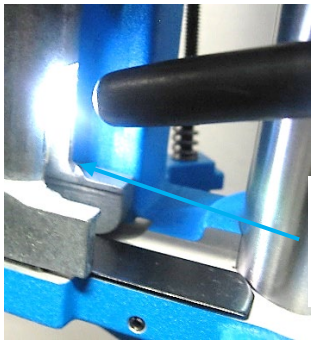
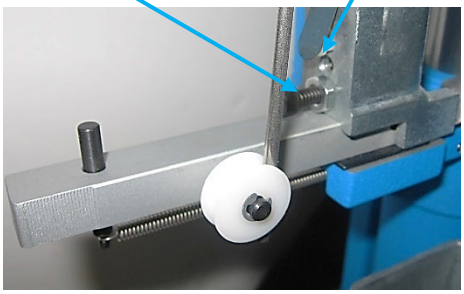
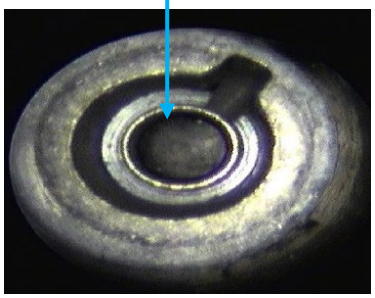


11 TROUBLESHOOTING GUIDE

No.	Category	Issue	Corrective Action
1	Cleanliness	The reloading process is inherently "dirty" because of residue from used primers, leftover corn cob from tumbling, spilled powder and metal shavings from trimming on the system. The general reloading process of sizing and seating bullets and primers also generates metal particles. Live primer residue along with leftover Case Lube are other contaminants that need to be cleaned up.	1.Compressed air or a “can of air" and a 1” paintbrush are the reloader's “best friends.” At the end of a reloading session, blow out the Primer Slide and Shellplate areas. A small paintbrush can be used for cleaning spilled powder. 2.Periodically clean out the Size, Seat and Crimp Die with alcohol and swabs. They will get "gooey" over time.
		Brass residue can also build up on the end of Pistol Powder Funnels in the flaring process.	1.Polishing the end of the Powder Funnel may also be necessary if the Funnel starts sticking inside pistol cases.
2	Indexing	Erratic /Incomplete Indexing	1.Shellplate Bolt adjusted too tight.—Loosen up no more than 1/8 of a turn. 2.Shellplate Bolt tightens when Shellplate turns.—Shellplate Bolt Locking Brass Tipped Set Screw missing or loose 3.Wrong size Locator Buttons. 4.Index Pawl bent, worn, backward, missing or Pawl Spring missing or broken 5.Index Ball and or Index Spring missing or broken. 6.Sticky gunk or debris under the Shellplate.--Remove the Shellplate, and clean with alcohol or acetone. 7.Damaged Shellplate.
		Shellplate over-traveling or “jumping backward” after indexing	1.Index Ball and spring stuck down with gunk or debris.--Remove Shellplate and clean top of Platform and Index Ball, Spring and Index Pocket. 2.Not taking a full stroke on the Handle. 3.The ring Indexer is worn or Index Block needs adjusting. 4.Indexer Return Spring damaged or missing. 5.Index Block out of adjustment.
		Handle movement difficult	1.Powder or other debris causing jamming of moving parts. 2.Link Arm and Pins worn or galled.—Clean and Re-lube. 3.Main Shaft is sticky or dirty.--Clean and lubricate with 30 wt. oil. Do not use spray lubes like WD-40. 4.Casefeed Slide is sticky or dry. --Clean Casefeed Slide parts and Platform, re-lube with multi-purpose grease.
		Shellplate over/under indexes	1.Adjust the Index Block backward or forward. The Index Block has been factory adjusted and should not require adjustment. This adjustment also controls the indexing of the Shell Plate. Refer to Section 10.1 of this manual.
3	Casefeeding	Casefeeder Plate will not rotate.	1.Brass caught under the Casefeed Plate. 2.The Casefeed bowl is too full. 3.Bad Micro switch or Microswitch Lever caught on the inside of the Tube. 4.Clutch is slipping.--Adjust clutch per Casefeeder Instructions.
		Cases are falling upside down.	1.Using the wrong Casefeed Plate for that caliber. 2.The window Port Cuff is open too wide. See Casefeeder instructions. 3.Casefeed is too full. 4.XL750 is not secured properly, or the bench is not stable.
		Cases are hanging up on the Microswitch Lever	1.Check the angle of the switch lever and adjust it as needed by gently bending it.
		The case doesn’t drop onto Platform	1.Wrong Casefeed Arm Bushing or Body Bushing. 2.Cases jammed in Casefeed Tube/Funnel. 3.Tumbling media in Casefeed Tube. 4.Case upside down, wrong caliber case mixed in. 5.Casefeed Assembly is not adjusted properly. 6.Case Insert Slide Cam is not adjusted properly. (Part with “P” and “R”)

		Cases are having trouble being inserted into Station 1--Shellplate	**1.Case Insert Slide jams on Station 1 Locator.** **2.Debris on Case Insert Slide and Platform.—Clean Slide and Platform.** **3.Debris under Station 1 Locator.** **4.Debris in or under Shellplate Pockets or Damaged Shellplate.** **5.Wrong, worn or damaged Station 1 Locator.—Replace Locator.** **6.Cycling Operating Handle too rapidly slow down.** **7.Check that the Shellplate is not over or under-indexing.** **8.Wrong Shellplate.** **9.Tighten/minimize the clearance between the Shellplate and the Platform. Test by pushing down on the edge of the Shellplate at station 4. If there is clearance ("feels springy"), tighten the Shellplate Bolt and secure with a Locking Brass Tipped Set Screw.**
4	**Sizing and Depriming**	**Crushing cases**	**1.Incomplete case insertion. Move the Operating Handle to full aft Priming Position on every stroke.** **2.Casefeed Camming Pin miss-adjusted or worn causing the case to be inserted "short" or jamming case into Shellplate. Re-lube and Readjust the Camming Pin.** **3.Not enough radius on Size Die entrance—Use Dillon Dies where available.** **4.Cycling Operating Handle too rapidly.**
		Bending or breaking Depriming Pins	**1.Berdan case.** **2.Smaller case inside the larger case.** **3.Debris in case.** **4.Cycling Handle too fast—Case is still wiggling hitting the De-prime Pin.**
		Scratched Cases	**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. You also can use Sweets 7.62 Solvent and rinse well.** **2.Dirty Brass.** **3.New Brass has burrs.**
		Dent in the shoulder of the case or neck	**1.Too much Case Lube—clean Size Die and cases and re-lube with less lube.**
		Case stuck or sticking in Size Die	**1.Insufficient Lube on the case.** **2.Overpressure-"blown-out" case—out of spec/oversize.** **3.Alcohol from Dillon Case Lube was not given time to evaporate.**
5	**Priming**	**Primers not feeding properly.**	**1.Stuck Primer in the tube. Discard Tube.** **2.Damaged magazine tip or tube. Replace tip or discard tube.** **3.Debris preventing Primer Slide from traveling far enough into the Primer Feedbody.--Remove and clean Slide and Feedbody, or clear with compressed air.** **4.Primer Cup on Slide not aligning properly with magazine tip.**
		Primers may stick on the end of the Depriming Pin and be "pulled back up" into the primer pocket	**1.In the case of issues with depriming rifle cases, place a de-primed case in Station one with the operating handle in its down position. Adjust the rifle Depriming Bolt down until it stops on the inside of the cartridge flash hole and then back the Depriming Bolt up 1 and ½ turns and lock it in place.** **2. Remove material from the tip of the Depriming Pin and polish the end, so the taper is gone. This gives a wider tip, and the primer is less likely to get jammed onto it. Also, you can polish the end of the tip of the Pin, so it is less likely to be stuck in the primer anvil.** **3.In the case of pistol Depriming issues—make sure there are no "burrs" on the end of the Depiming Pin. Polish if necessary and make sure that the spring-loaded Depriming Assembly is intact, especially the "E" clip on top of the Depriming Bolt.**

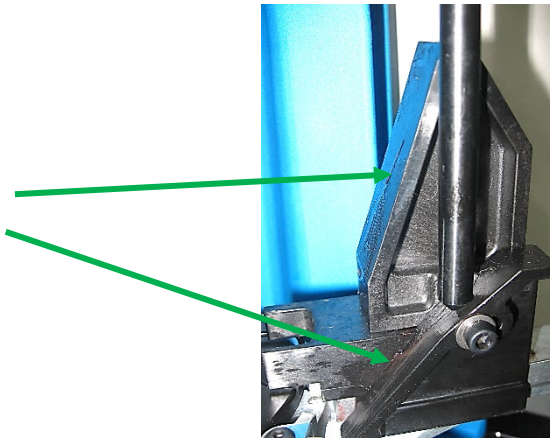
		The Priming Cup is not picking up primers reliably under the Primer Magazine in the Primer Feed Assembly. **Primers are being caught in Dispensing Tip**	**1. Remove the Primer Magazine from the Magazine Shield. Caution! Any primers left in the Primer Magazine will fall out. Push a small cloth patch, 3/8" x 3/8", wet with alcohol, through the Magazine Tube several times to clean the interior. Verify the Dispensing Tip (Red or Blue) is not damaged--Replace if visibly damaged.**  **"Fingers"** **2.To replace the tip, remove the old tip and gently place the new tip on the aluminum Magazine tube. Make sure it is the correct size/color for the primers used—Blue for small primers and Red for large primers. Put the Magazine Tube in the Magazine Shield Tube and orient the tip in the mating slot inside the primer feed body. Screw the magazine Cap on and use this to push the magazine tip on the rest of the way—do not over-tighten.**
			1.The Primer Track Bearing (2) is dirty or worn. Clean the Primer Slide with Alcohol and replace using no lube! If worn call Dillon for a new one.  
		Primer Slide Punch, Cup and or Spring are Dirty or have come apart	**1.Disassemble Punch (6), Cup (8), and spring (7) by loosening Set Screw (10), clean with alcohol, and dry.** **2.Re-assemble by fully compressing the Punch, Cup and Spring until they stop moving and firmly re-tightening the Set Screw (10). Do not damage the top of the cup when doing this. The installed height should be as shown below--1.380-1.390" for Small and Large Slides.**  
		Primer is not "Dropping" through Magazine	**1.Perform a single primer drop test with the Magazine Tube out of the system. Hold the Mag Tube vertically with the tip resting on a flat surface. Drop one primer into the top of the tube, shiny side down. Gently pick up the tube. The Primer should be sitting on the flat surface. If not, check the tip for damage and or burrs on the semicircular "fingers." If no damage and the primer is caught in the "fingers", gently and very lightly open the two "fingers." Try the test again. If still unsuccessful, replace the Tip and perform the test until successful.**  **Drop primer into top of Mag Tube Held vertically on a flat surface--Primer should fall freely through tip on to flat surface** 

		Crushed primers	**1. Dirt or debris in Shellplate pockets. Remove with a pick or similar tool.** **2. Crimped primer military brass. Military primer pockets must be chamfered or swaged before priming. –discard case.** **3. Ringed primer. A ring of the primer cup remains in the primer pocket after being de-primed.** **4.Primer Punch is not assembled properly in the Primer Slide.** **5.Wrong size/type primer for that caliber.** **6.Abrupt or jerky movement of the Operating Handle. Cycle the machine using a smooth motion. Slow down during the primer-seating step; be ready to stop if it is not seating smoothly or there is "high" primer seating resistance.**
		A stuck primer in the magazine or the pickup tube	**1.Throw away the tube—Call Dillon for a new one!**
		Primers not being picked up by the Primer Slide	**1.Perform the flashlight test and verify that the Primer Cup is directly under the Primer Feed Body opening when the Primer Slide is all the way back in the pickup position and the Operating Handle is all the way down. Shine a small flashlight in the opening of the Primer Feed Body and verify the Primer Cup is visually directly under/concentric with the Primer Feedbody opening as shown below. Adjust the Primer Cup Drop Position set screw as required. A little over travel is permissible.**  **Shine Flashlight here and look down Mag Tube**   **Primer Slide Seat Position Stop Screw** **Primer Cup-Drop Positon Set Screw** **View of Primer Cup from Top of Mag Shield**  
		High Primers—Primers are not being seated flush or below flush with the bottom of the case.	**1.Shellplate loose. To adjust, loosen the brass-tipped setscrew, turn the Shellplate Bolt down until it is snug, then back off 1/8 of a turn. Tighten the Locking Brass Tipped Set Screw.** **2.Insufficient force/rearward travel of the Operating Handle during the Primer seating cycle.** **3.Primer Punch is not assembled properly in the Primer Slide.**
		Unusual indentation in face of seated primer	**1.There are powder granules on the top of the Primer Punch Face or in the Primer Cup imprinting into the Primer—clean off/blow out spilled powder granules.**  **Crushed powder granule imprinted into primer**

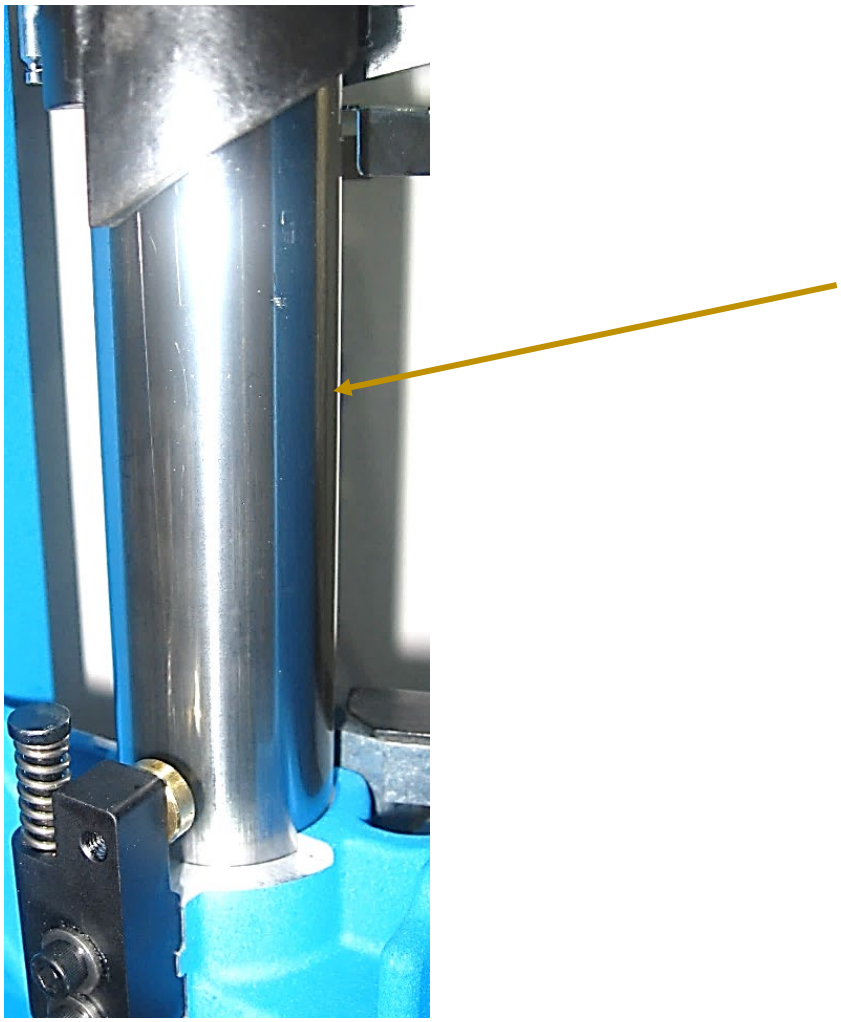
6	Case Flaring/Belling	Erratic flaring (too much or too little).	1.Variation in case length. Measure cases, trim or discard cases out of spec. 2.Handle not moving all the way down on each cycle. 3. Wrong Powder Funnel for that caliber. 4. Improper Powder Die adjustment. 5.Powder Measure loose on Powder Die.
		Brass residue can also build up on the end of Pistol Powder Funnels in the flaring process.	1.Polish the end removing any brass buildup and lightly lube with Case Lube.
7	Powder Measure	Inconsistent Powder Charges	1.Be sure that the Failsafe Return Rod Blue Wing Nut is tight enough to fully retract the Powder Bar. With the Operating Handle pushed full-aft, tighten the Blue Wing Nut until a business card just slips between the coils of the spring. Be sure the Powder Die height is adjusted for full Powder Bar travel. 2.Powder not settled in Hopper.--Cycle more powder charges until stable. 3. Wrong size Powder Bar for requirements. --replace Powder Bar. 4.Powder Measure loose on Powder Die.--Tighten Clamping Screws. 5.Slow down cycling, especially with "Stick Powders." 6.Small Powder Bar Spacer Plug missing.—Replace it.
		The powder bar not moving smoothly	1.Dirty or gummy--Clean with isopropyl alcohol or acetone. Do not lubricate. Do not use sandpaper, file or anything abrasive. 2.Powder bar, Small Bar Spacer or Measure Body galled from wear. Return to Dillon for repair or replacement. 3.Failsafe Rod Assembly missing or disconnected. 4. Very fine-grained spherical powder like Win 296, H110 and some Accurate Arms powder can get between the powder bar, spacer and/or the powder measure body and bind movement. 5.Powder Bar Adjustment Bolt adjusted fully open against the stop. This can bind the Powder Bar insert causing the Powder Bar to drag.
8	Powder Check	Powder Sticks to end of Powder Check Rod	1.Wipe off the end of the Powder Check Rod with a paper towel to remove any grease, or "crud" from the tip.
		The blue arm that the PCK drive Rod pushes on has gradually deformed upward, and no longer pushes the buzzer housing up.	1.The Powder Check Die is up too high, so the drive Rod is not pushing far enough on the arm. Lower the Die another thread to two and contact Dillon for a replacement housing.
9	Bullet Seating	The case neck is crumpling when the bullet is seated	1.On the 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.
		Bullet falling through case mouth or cartridge neck	1.The case was not sized. 2.The bullet diameter is incorrect.
10	Bullet Crimping	The case is bulging, or the case will not fit the Case Gauge	1.Raise the Crimp Die reducing the amount of crimp.

12 CLEANING AND LUBRICATING THE XL750-- Operating circumstances will dictate the frequency of required lubrication. Clean and lube after every 5,000 cycles of operation. Use a high-grade, conventional wheel bearing grease --do not use oil except as indicated below. The lubricants to be used are Chassis lube such as Schaeffer High-Performance Grease NLGI#229 High Moly Content (or equivalent) and Supreme 7000 Synthetic Plus 30W Motor Oil or equivalent.

12.1 Lightly Grease Casefeed Cam Surfaces



12.2 Lightly Oil Mainshaft every 5000 Cycles--Keep clean by blowing off with compressed air frequently



12.3 Grease Link Arm Zerk Fittings every 10,000 Cycles

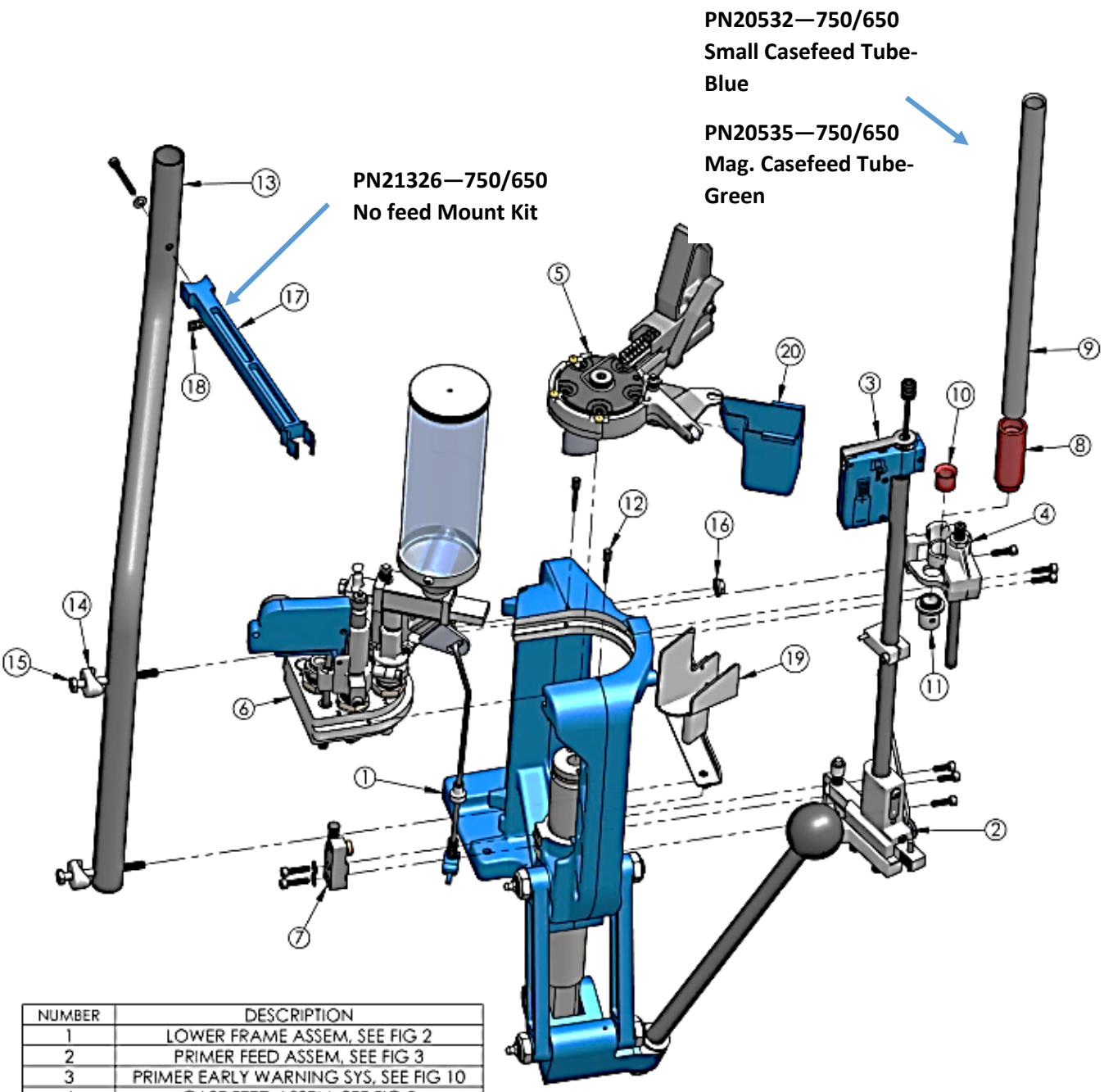
Zerk fitting-Grease 1-2 pumps and cycle Handle every 10,000 cycles —wipe off excess

12.4 General Cleanliness

- **The reloading process is inherently "dirty" because of residue from used primers, leftover corn cob from tumbling, spilled powder and metal shavings from trimming on the system. The reloading process of sizing, seating bullets and primers generates metal particles. Live primer residue along with leftover Case Lube are other contaminants that need to be cleaned up. Carefully blow the system out frequently and remove any debris.**

13 DILLON PRECISION XL750 EXPLODED VIEWS

13.1 Overview of System

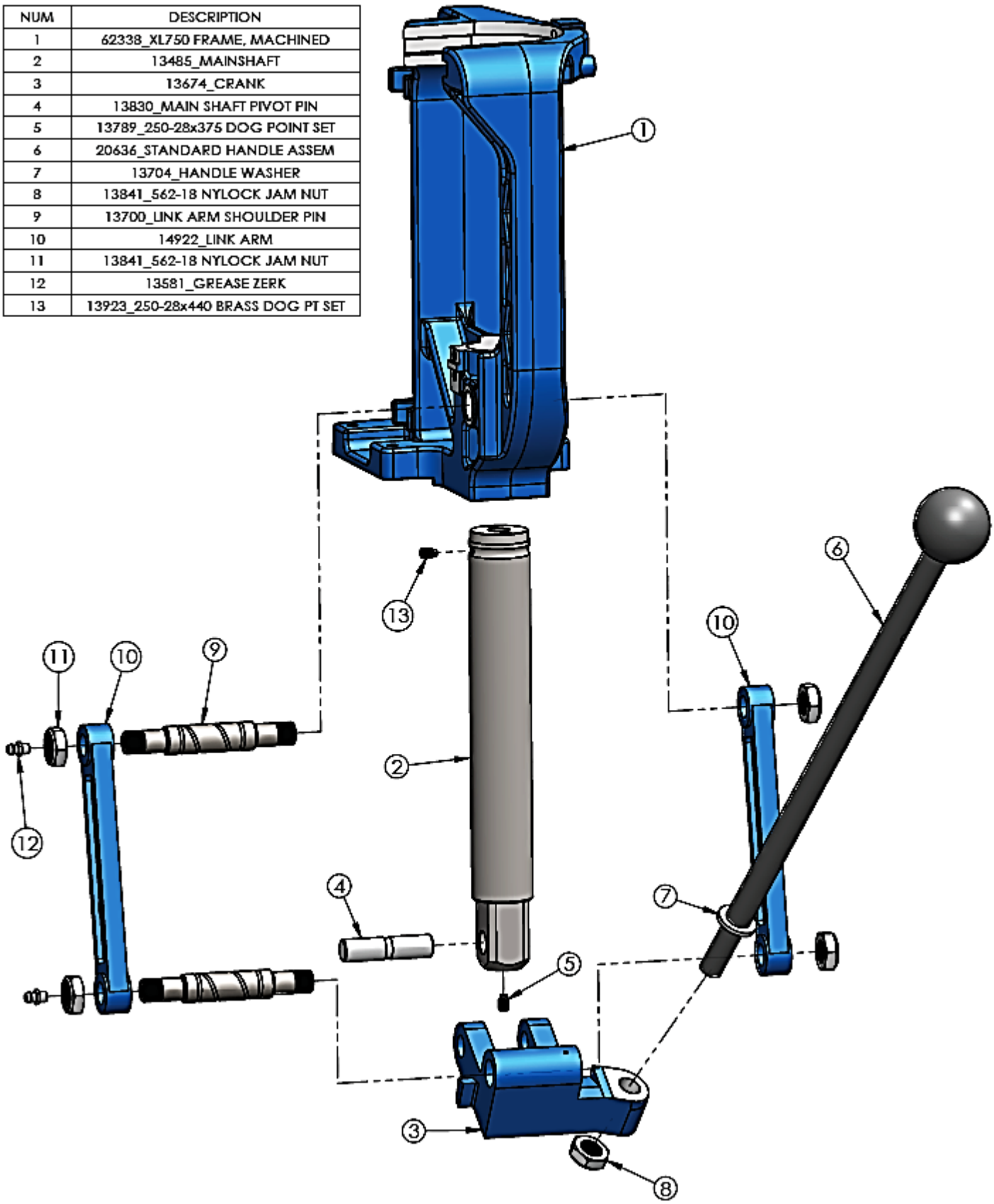


NUMBER	DESCRIPTION
1	LOWER FRAME ASSEM, SEE FIG 2
2	PRIMER FEED ASSEM, SEE FIG 3
3	PRIMER EARLY WARNING SYS, SEE FIG 10
4	CASE FEED ASSEM, SEE FIG 5
5	PLATFORM ASSEM, SEE FIG 6
6	TOOLHEAD ASSEM, SEE FIG 7
7	INDEX BLOCK ASSEM, SEE FIG 11
8	CASEFEED ADAPTER*
9	CASEFEED TUBE*
10	CASEFEED ARM BUSHING*
11	CASEFEED BODY BUSHING*
12	14008_TOOLHEAD PIN
13	17123_CF POST
14	13613_CF POST CLAMP
15	13911_250-20x2750 HHCS
16	13988_250-20 FLANGE NUT
17	13225_CF TUBE HOLDER
18	13801_TINNERMAN NUT
19	13470_CARTRIDGE CHUTE BRACKET
20	16211_SPENT PRIMER CUP
21	16065_650/750 STRONG MOUNT

* = CALIBER SPECIFIC

13.2 Frame And Lower Assembly

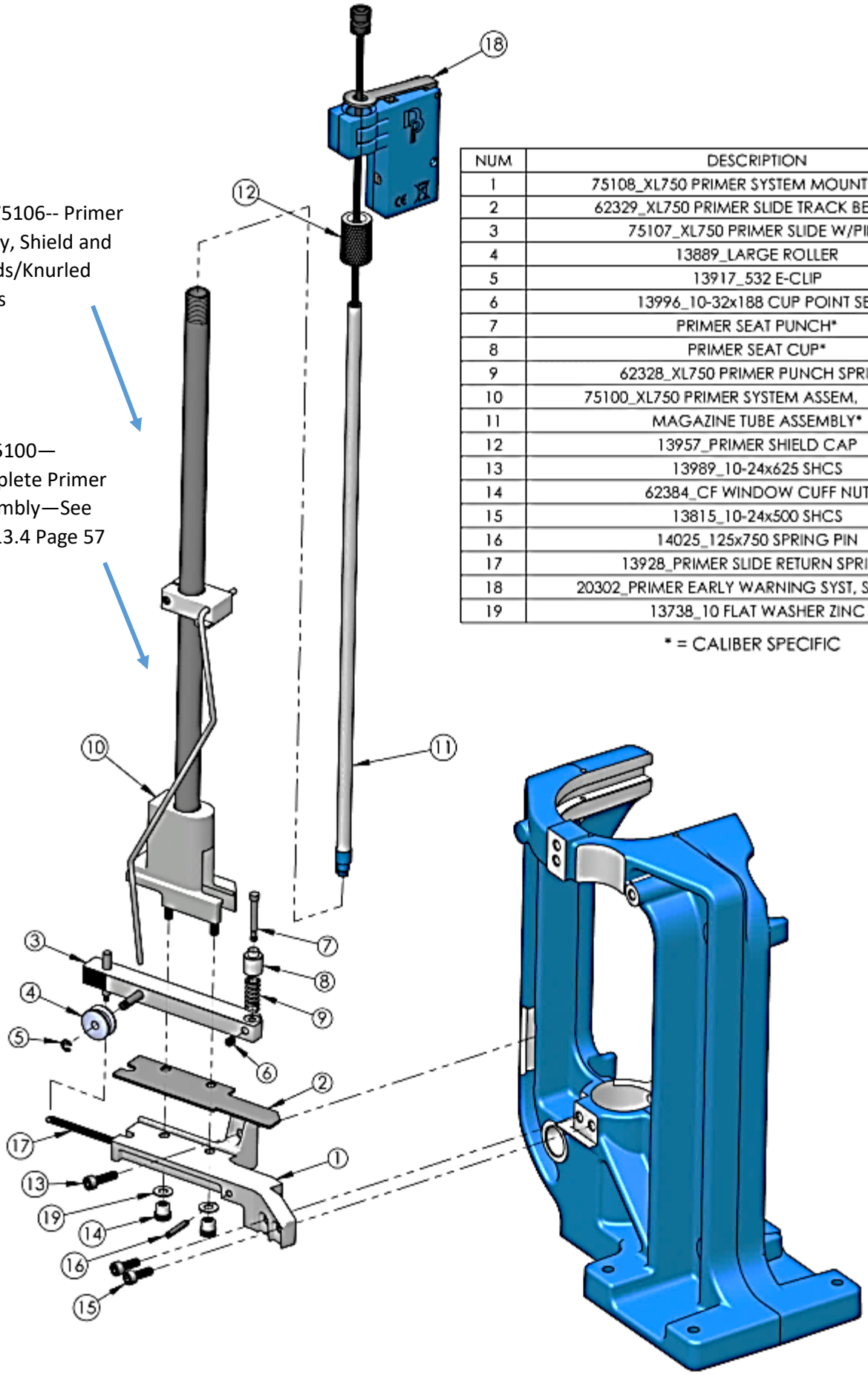
NUM	DESCRIPTION
1	62338_XL750 FRAME, MACHINED
2	13485_MAINSHAFT
3	13674_CRANK
4	13830_MAIN SHAFT PIVOT PIN
5	13789_250-28x375 DOG POINT SET
6	20636_STANDARD HANDLE ASSEM
7	13704_HANDLE WASHER
8	13841_562-18 NYLOCK JAM NUT
9	13700_LINK ARM SHOULDER PIN
10	14922_LINK ARM
11	13841_562-18 NYLOCK JAM NUT
12	13581_GREASE ZERK
13	13923_250-28x440 BRASS DOG PT SET



13.3 Primer System Overall Assembly

PN75106-- Primer Body, Shield and Studs/Knurled Nuts

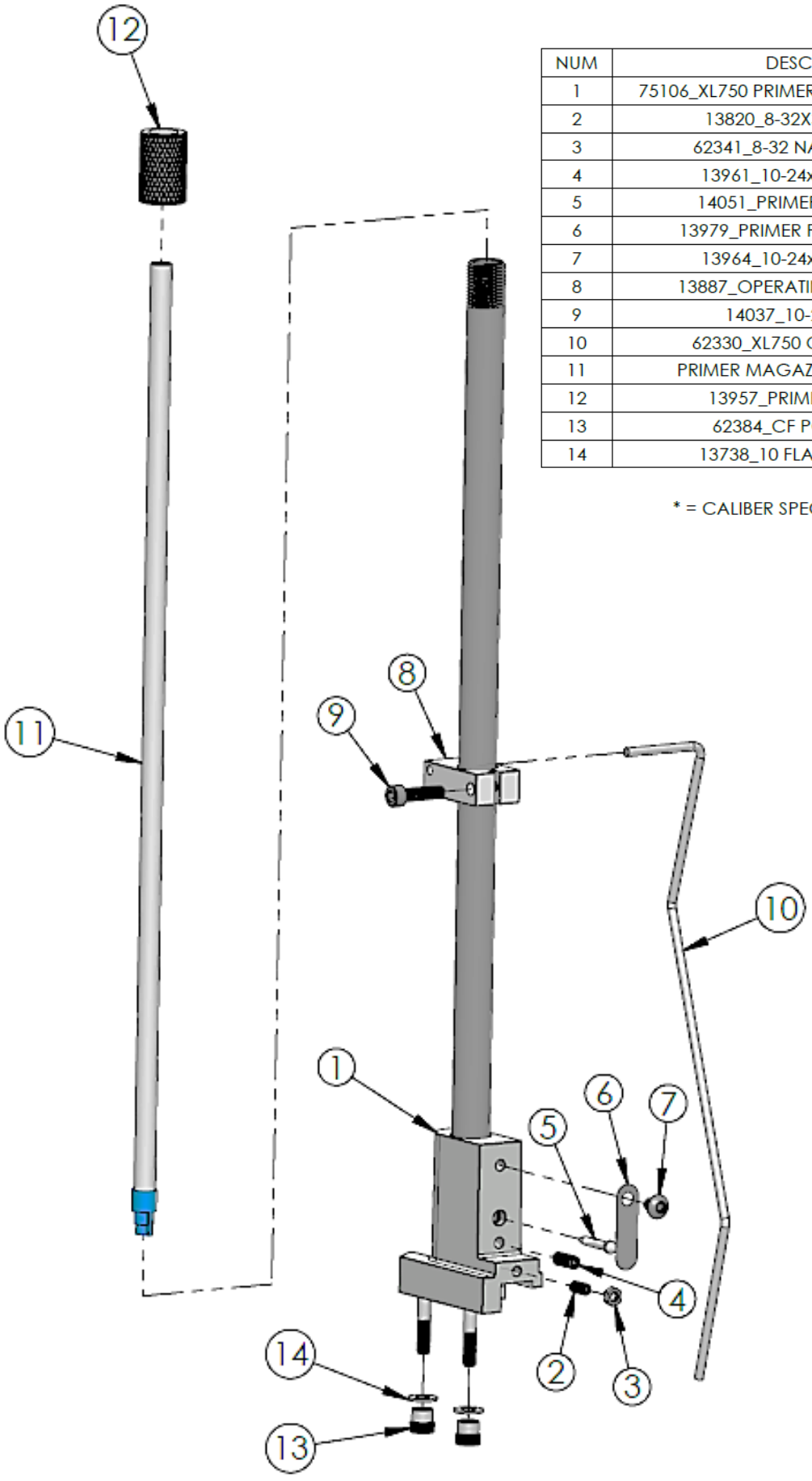
PN75100— Complete Primer Assembly—See Fig. 13.4 Page 57



NUM	DESCRIPTION
1	75108_XL750 PRIMER SYSTEM MOUNT ASSEM
2	62329_XL750 PRIMER SLIDE TRACK BEARING
3	75107_XL750 PRIMER SLIDE W/PINS
4	13889_LARGE ROLLER
5	13917_532 E-CLIP
6	13996_10-32x188 CUP POINT SET
7	PRIMER SEAT PUNCH*
8	PRIMER SEAT CUP*
9	62328_XL750 PRIMER PUNCH SPRING
10	75100_XL750 PRIMER SYSTEM ASSEM,
11	MAGAZINE TUBE ASSEMBLY*
12	13957_PRIMER SHIELD CAP
13	13989_10-24x625 SHCS
14	62384_CF WINDOW CUFF NUT
15	13815_10-24x500 SHCS
16	14025_125x750 SPRING PIN
17	13928_PRIMER SLIDE RETURN SPRING
18	20302_PRIMER EARLY WARNING SYST, SEE FIG 10
19	13738_10 FLAT WASHER ZINC

* = CALIBER SPECIFIC

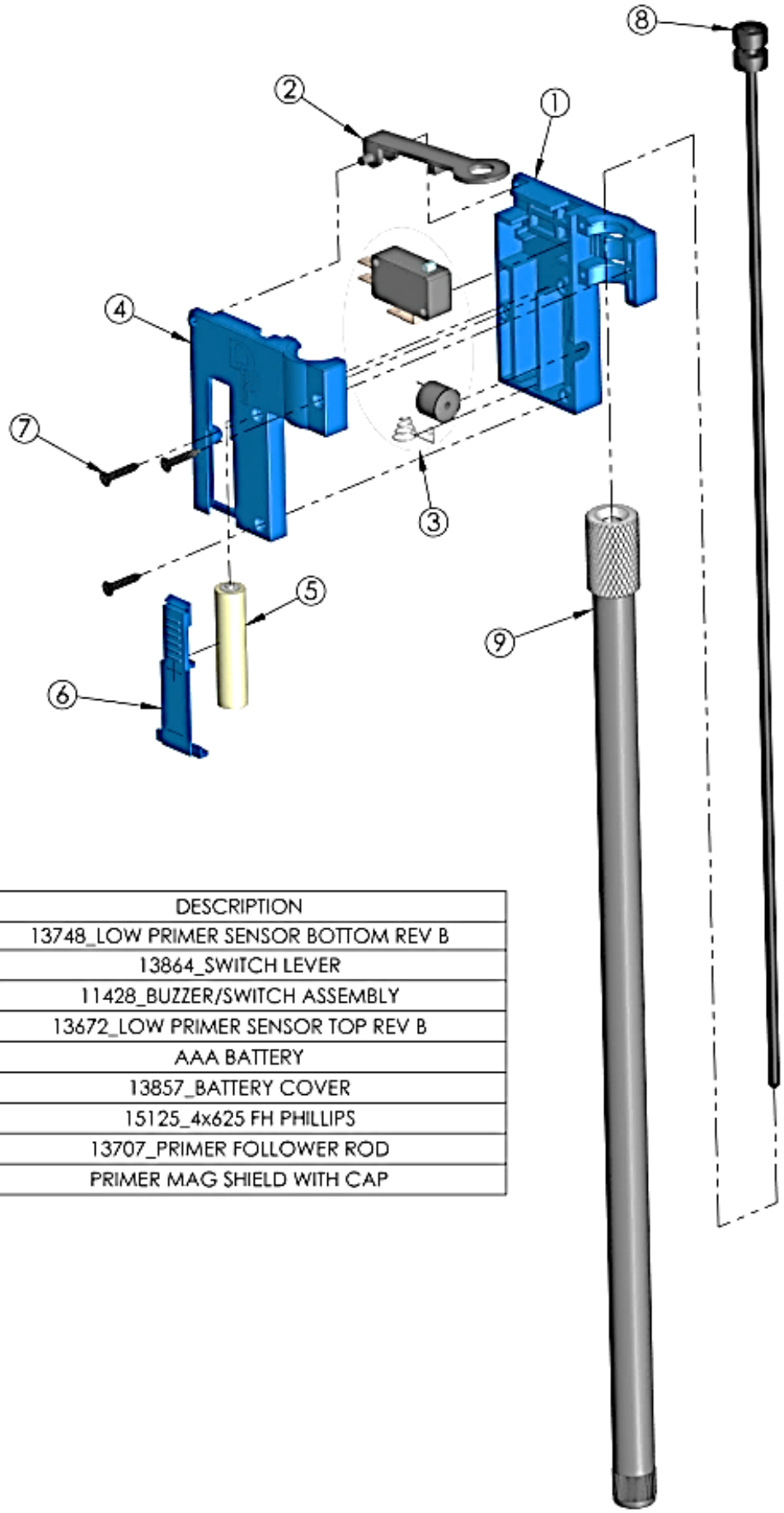
13.4 Primer Feedbody Assembly (PN 75100--No Mag Tube-item 11)



NUM	DESCRIPTION
1	75106_XL750 PRIMER FEED BODY W/SHIELD
2	13820_8-32X375 SET SCREW
3	62341_8-32 NARROW HEX NUT
4	13961_10-24x500 SET SCREW
5	14051_PRIMER FEED STOP PIN
6	13979_PRIMER FEED STOP SPRING
7	13964_10-24x250 BHCS ZINC
8	13887_OPERATING ROD BRACKET
9	14037_10-24x750 SHCS
10	62330_XL750 OPERATING ROD
11	PRIMER MAGAZINE TUBE WITH TIP*
12	13957_PRIMER SHIELD CAP
13	62384_CF PORT CUFF NUT
14	13738_10 FLAT WASHER ZINC

* = CALIBER SPECIFIC

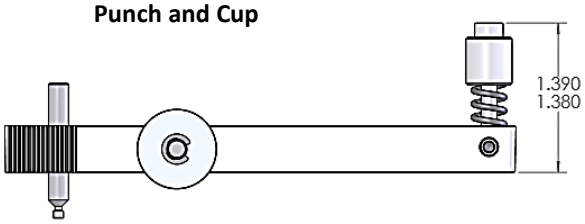
13.5 Primer Early Warning Assembly (PN 14797--PEWS Alone))

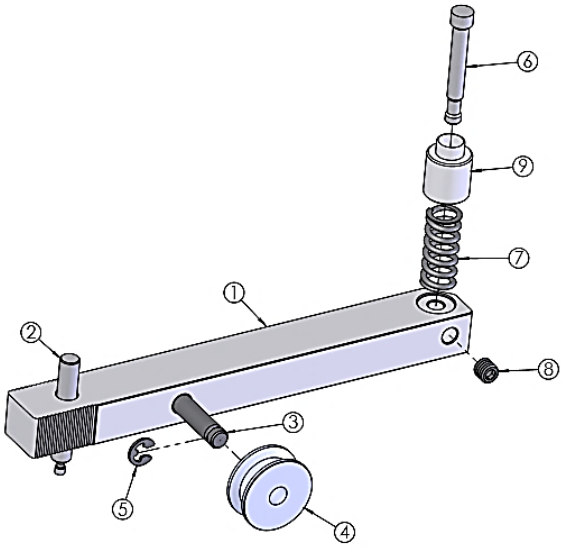


NUMBER	DESCRIPTION
1	13748_LOW PRIMER SENSOR BOTTOM REV B
2	13864_SWITCH LEVER
3	11428_BUZZER/SWITCH ASSEMBLY
4	13672_LOW PRIMER SENSOR TOP REV B
5	AAA BATTERY
6	13857_BATTERY COVER
7	15125_4x625 FH PHILLIPS
8	13707_PRIMER FOLLOWER ROD
9	PRIMER MAG SHIELD WITH CAP

13.6 Primer Slide Assembly—Large (PN 75101) And Small (PN 75102)

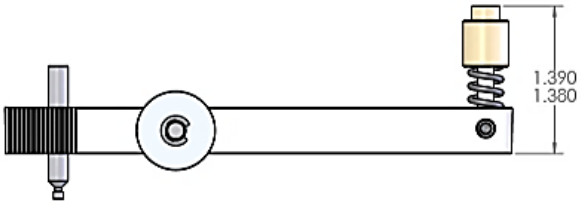
PN 75101 Large Primer Slide Assembly –Silver Punch and Cup

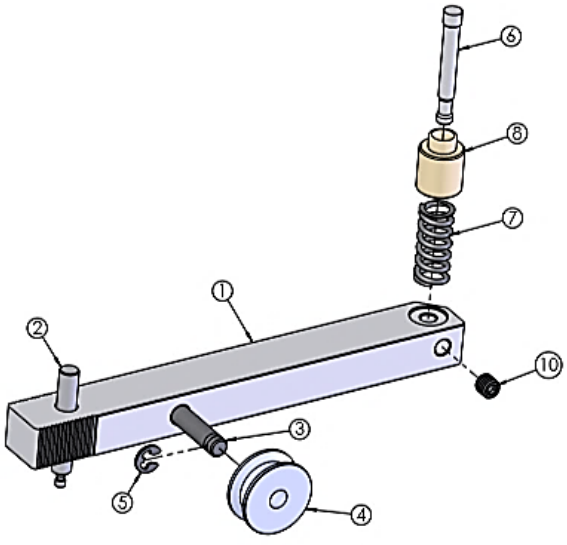




ITEM NO.	PART NUMBER	QTY.
1	75107_XL750 PRIMER SLIDE W/ PINS	1
2	13924_550 SLIDE RETURN SPRING POST	1
3	13919_550 SLIDE ROLLER POST	1
4	13889_LARGE ROLLER	1
5	13917_532 E CLIP	1
6	62318_XL750 PRIMER SEAT PUNCH LARGE	1
7	62328_XL750 PRIMER PUNCH SPRING	1
8	13996_10-32x188 CUP PT SET	1
9	62320-XL750 PRIMER SEAT CUP LARGE	1

PN 75102 Small Primer Slide Assembly –Gold Punch and Cup





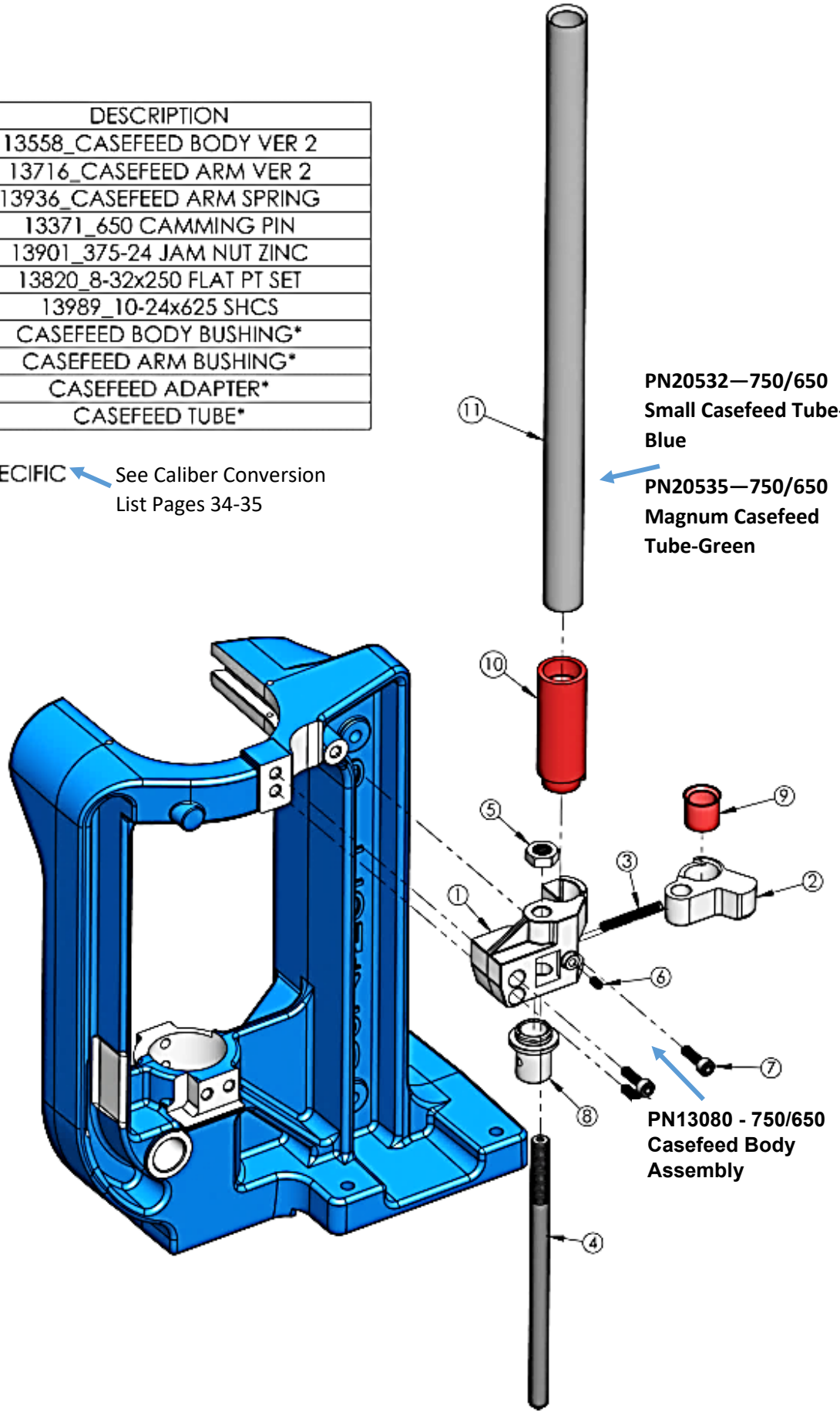
ITEM NO.	PART NUMBER	QTY.
1	75107_XL750 PRIMER SLIDE W/ PINS	1
2	13924_550 SLIDE RETURN SPRING POST	1
3	13919_550 SLIDE ROLLER POST	1
4	13889_LARGE ROLLER	1
5	13917_532 E CLIP	1
6	62319_XL750 PRIMER SEAT PUNCH SMALL	1
7	62328_XL750 PRIMER PUNCH SPRING	1
8	62321_XL750 PRIMER SEAT CUP SMALL	1
10	13996_10-32x188 CUP PT SET	1

13.7 Casefeed Assembly

NUMBER	DESCRIPTION
1	13558_CASEFEED BODY VER 2
2	13716_CASEFEED ARM VER 2
3	13936_CASEFEED ARM SPRING
4	13371_650 CAMMING PIN
5	13901_375-24 JAM NUT ZINC
6	13820_8-32x250 FLAT PT SET
7	13989_10-24x625 SHCS
8	CASEFEED BODY BUSHING*
9	CASEFEED ARM BUSHING*
10	CASEFEED ADAPTER*
11	CASEFEED TUBE*

* = CALIBER SPECIFIC

See Caliber Conversion List Pages 34-35

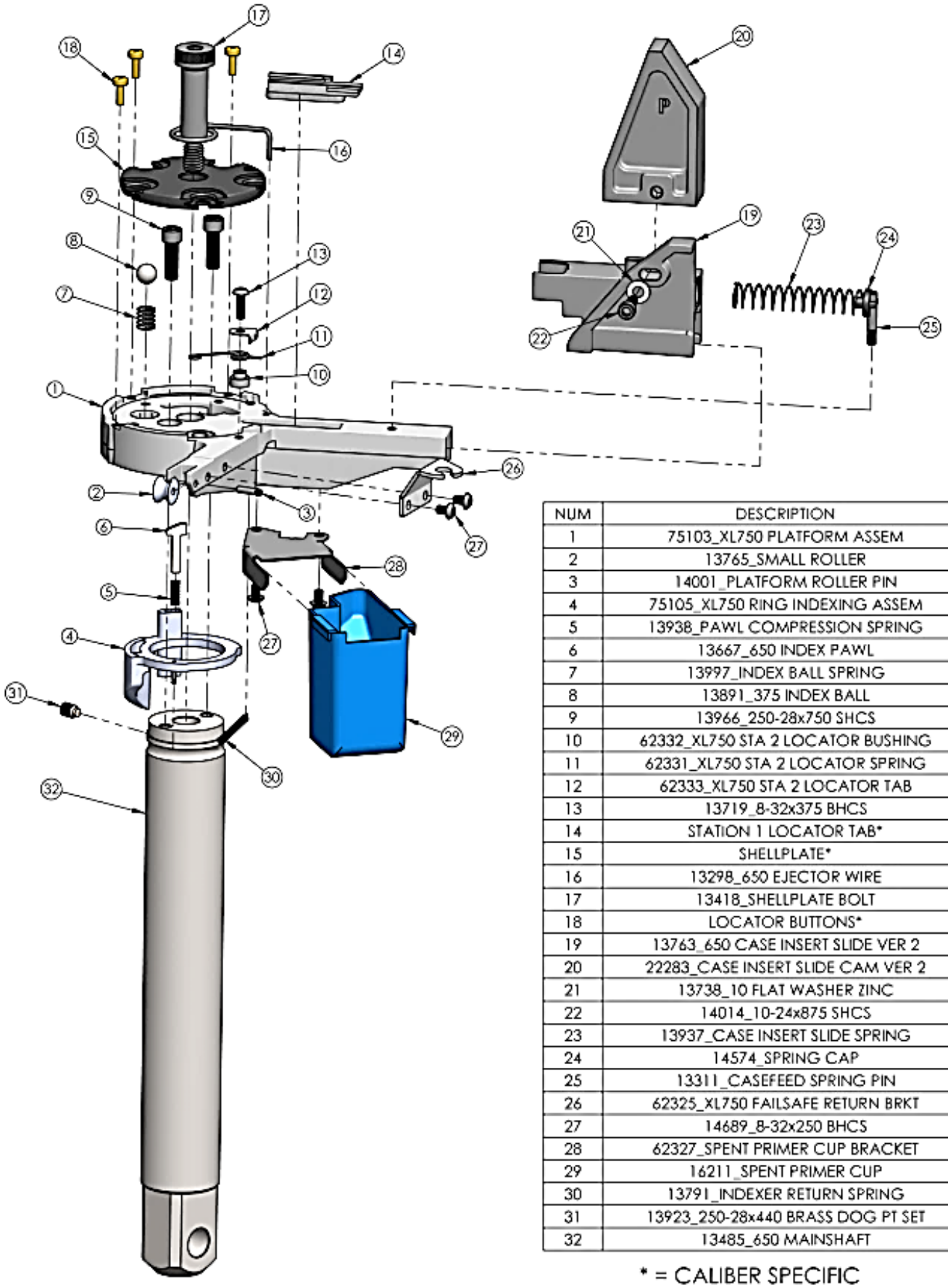


PN20532—750/650 Small Casefeed Tube-Blue

PN20535—750/650 Magnum Casefeed Tube-Green

PN13080 - 750/650 Casefeed Body Assembly

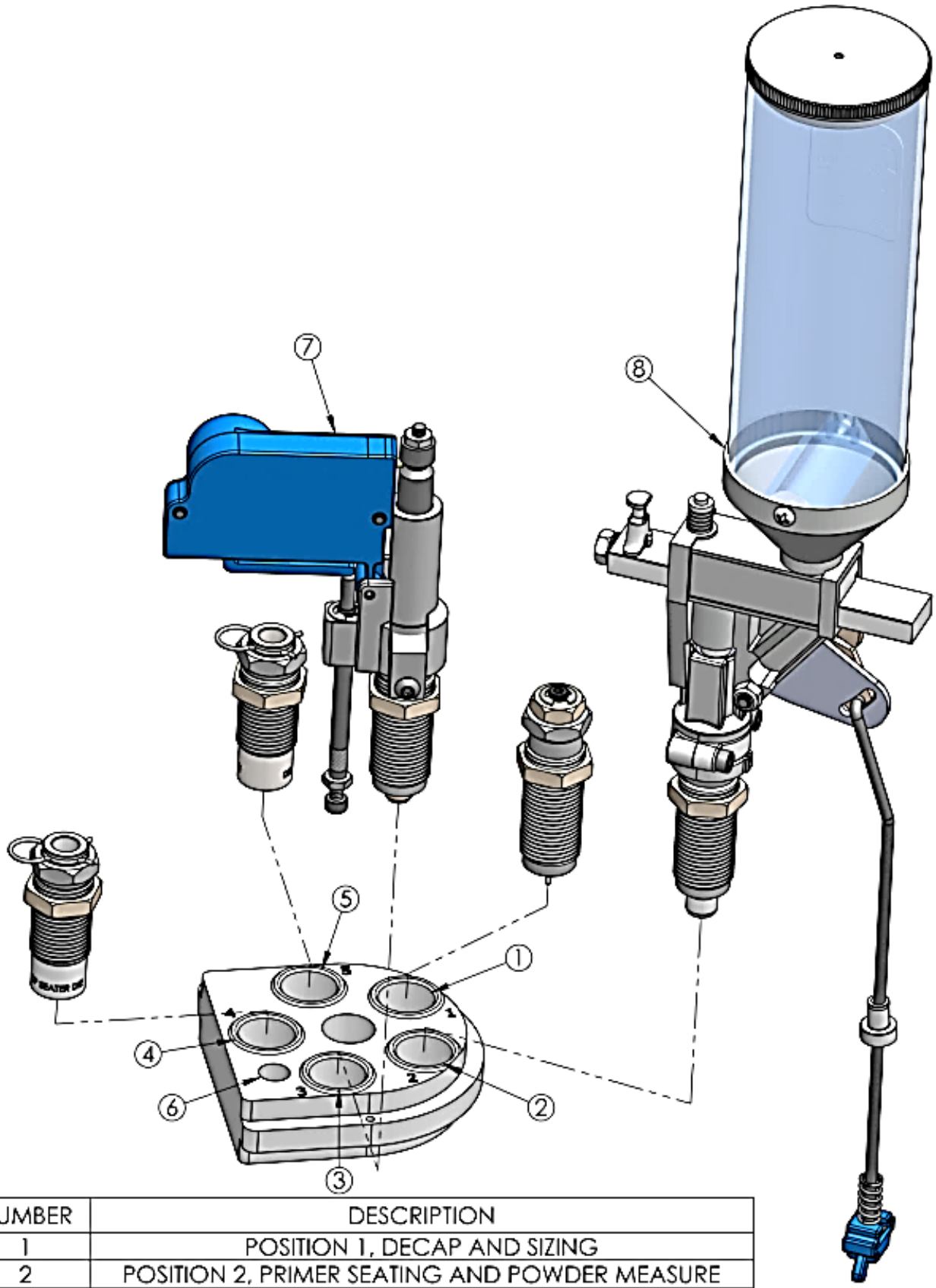
13.8 Platform Assembly



NUM	DESCRIPTION
1	75103_XL750 PLATFORM ASSEM
2	13765_SMALL ROLLER
3	14001_PLATFORM ROLLER PIN
4	75105_XL750 RING INDEXING ASSEM
5	13938_PAWL COMPRESSION SPRING
6	13667_650 INDEX PAWL
7	13997_INDEX BALL SPRING
8	13891_375 INDEX BALL
9	13966_250-28x750 SHCS
10	62332_XL750 STA 2 LOCATOR BUSHING
11	62331_XL750 STA 2 LOCATOR SPRING
12	62333_XL750 STA 2 LOCATOR TAB
13	13719_8-32x375 BHCS
14	STATION 1 LOCATOR TAB*
15	SHELLPLATE*
16	13298_650 EJECTOR WIRE
17	13418_SHELLPLATE BOLT
18	LOCATOR BUTTONS*
19	13763_650 CASE INSERT SLIDE VER 2
20	22283_CASE INSERT SLIDE CAM VER 2
21	13738_10 FLAT WASHER ZINC
22	14014_10-24x875 SHCS
23	13937_CASE INSERT SLIDE SPRING
24	14574_SPRING CAP
25	13311_CASEFEED SPRING PIN
26	62325_XL750 FAILSAFE RETURN BRKT
27	14689_8-32x250 BHCS
28	62327_SPENT PRIMER CUP BRACKET
29	16211_SPENT PRIMER CUP
30	13791_INDEXER RETURN SPRING
31	13923_250-28x440 BRASS DOG PT SET
32	13485_650 MAINSHAFT

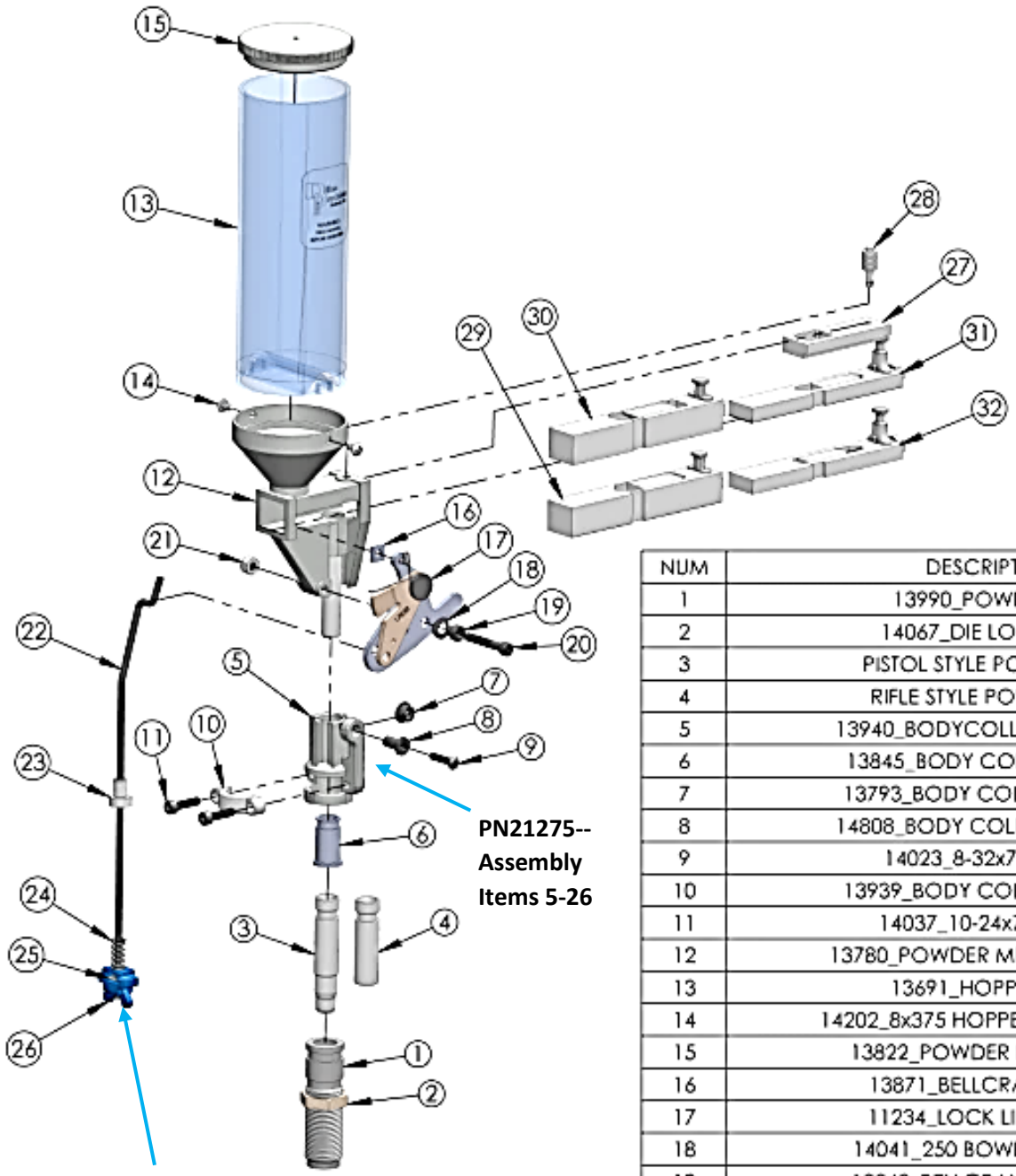
* = CALIBER SPECIFIC

13.9 Toolhead Assembly



NUMBER	DESCRIPTION
1	POSITION 1, DECAP AND SIZING
2	POSITION 2, PRIMER SEATING AND POWDER MEASURE
3	POSITION 3, POWDER CHECK
4	POSITION 4, BULLET SEATING
5	POSITION 5, BULLET CRIMPING
6	POWDER CHECK PUSH ROD HOLE
7	21044_POWDER CHECK SYSTEM, SEE FIG 8
8	22219_POWDER MEASURE SYSTEM, SEE FIG 9

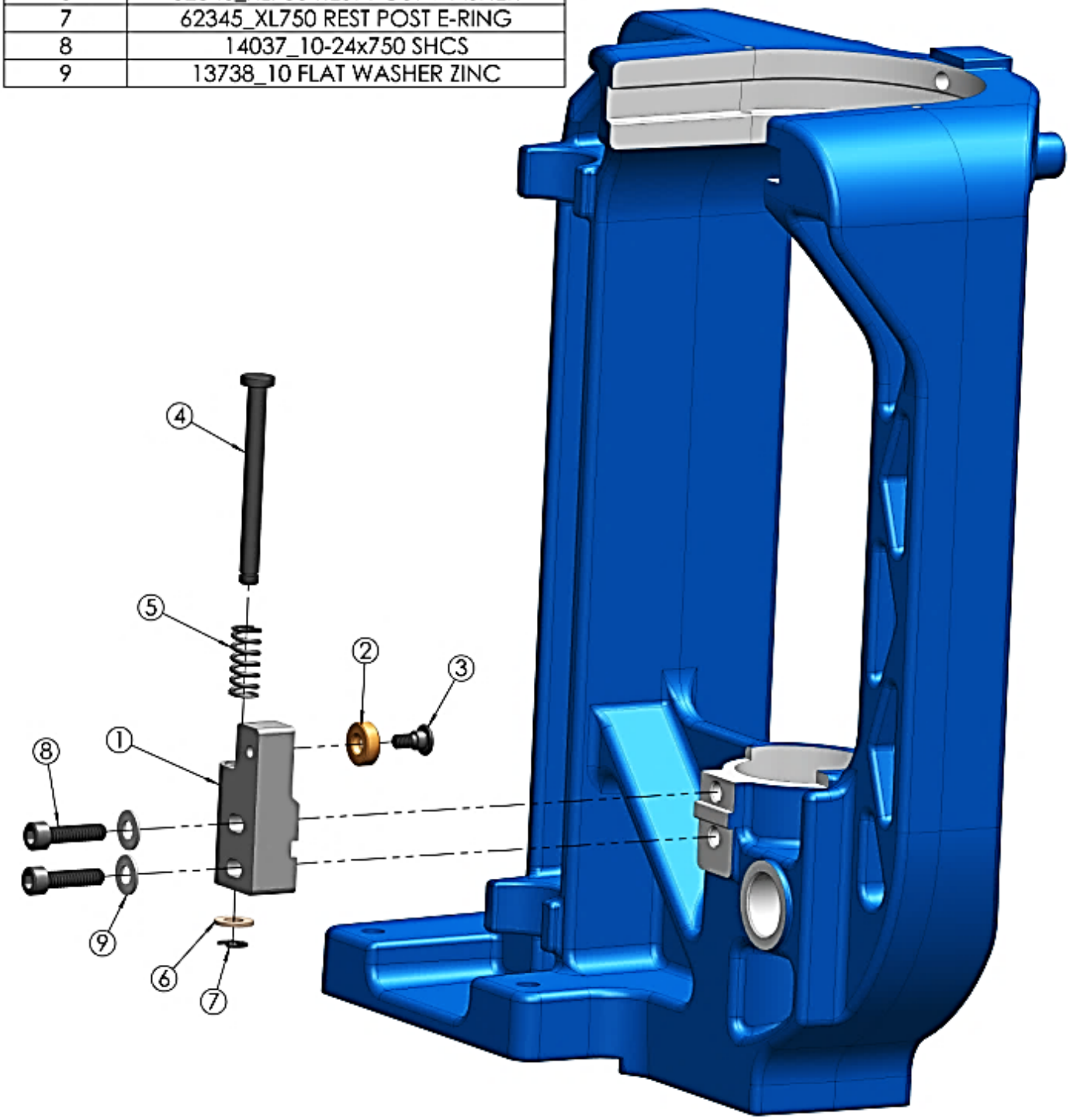
13.10 Powder Measure Assembly—Complete XL750 Powder Measure—(PN20782)



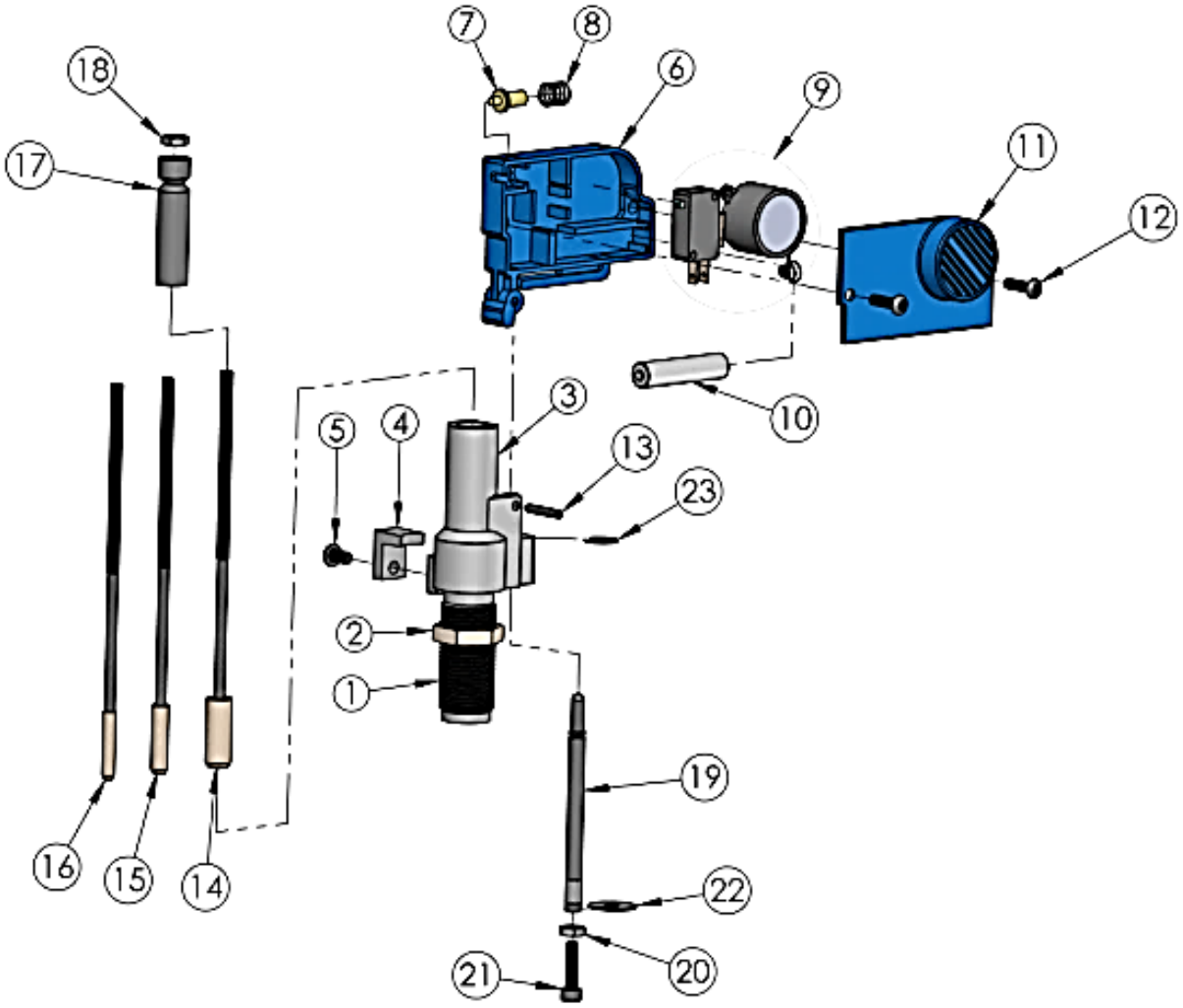
NUM	DESCRIPTION
1	13990_POWDER DIE
2	14067_DIE LOCK RING
3	PISTOL STYLE POWDER DIE
4	RIFLE STYLE POWDER DIE
5	13940_BODYCOLLAR HOUSING
6	13845_BODY COLLAR SLEEVE
7	13793_BODY COLLAR ROLLER
8	14808_BODY COLLAR BUSHING
9	14023_8-32x750 BHCS
10	13939_BODY COLLAR CLAMP
11	14037_10-24x750 SHCS
12	13780_POWDER MEASURE BODY
13	13691_HOPPER TUBE
14	14202_8x375 HOPPER TUBE SCREW
15	13822_POWDER HOPPER LID
16	13871_BELLCRANK CUBE
17	11234_LOCK LINK ASSEM
18	14041_250 BOWED WASHER
19	13848_BELLCRANK BUSHING
20	13904_10-32x1250 SHCS
21	16340_10-32 LOCKNUT ZINC
22	13629_FAILSAFE RETURN ROD
23	18086_FAILSAFE ROD BUSHING
24	14033_PRIMER CUP SPRING
25	13801_TINNERMAN NUT
26	13799_FAILSAFE WINGNUT
27	13644_POWDER BAR SPACER
28	13921_POWDER BAR SPACER PLUG
29	20063-LARGE POWDER BAR ASSEM
30	21353_EXTRA LARGE POWDER BAR ASSEM
31	20062_SMALL POWDER BAR ASSEM
32	20780_EXTRA SMALL POWDER BAR ASSEM

13.11 Index Block Assembly

NUMBER	DESCRIPTION
1	62324_XL750 INDEX BLOCK
2	13689_SD PRIMER SLIDE ROLLER
3	13809_SD ROLLER BOLT
4	62326_XL750 PLATFORM REST POST
5	62328_XL750 PRIMER PUNCH SPRING
6	62346_XL750 REST POST WASHER
7	62345_XL750 REST POST E-RING
8	14037_10-24x750 SHCS
9	13738_10 FLAT WASHER ZINC



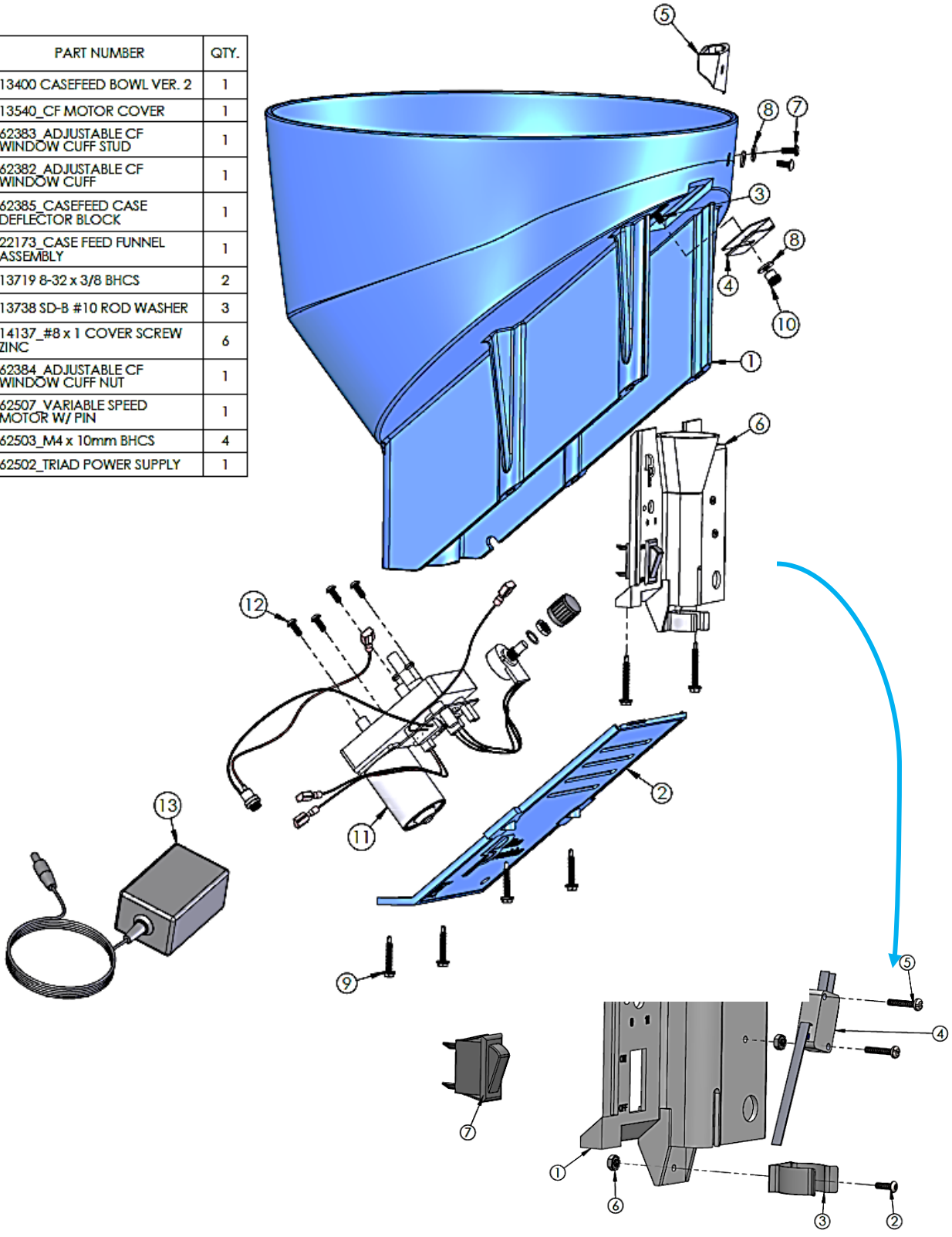
13.12 Powder Check Assembly (Optional—Complete Assembly PN21044))



NUMBER	DESCRIPTION
1	13990_POWDER DIE
2	14067_DIE LOCK RING
3	10552_PCK BODY COLLAR
4	13986_SD POWDER DIE CLAMP
5	13895_10-24x375 BHCS
6	13583_PCK BUZZER HOUSING MOD B
7	13602_PCK CONTACT PIN
8	13956_PCK CONTACT PIN SPRING
9	11426_BUZZER/SWITCH ASSEMBLY
10	AAA BATTERY
11	13537_PCK BUZZER COVER
12	13983_8-32x625 BHCS
13	14025_125x750 SPRING PIN
14	21374_PCK ROD ASSEM 44-45 CAL
15	21373_PCK ROD ASSEM 30-41 CAL
16	21372_PCK ROD ASSEM 22-29 CAL
17	12685_PCK ROD SLEEVE
18	13898_10-24 HEX NUT
19	13603_PCK PUSH ROD
20	13898_10-24 HEX NUT
21	14037_10-24x750 SHCS
22	14157_10 FENDER WASHER, FOR USE ON 1050
23	13837_DECAP RETAINING E-CLIP

13.13 Casefeed Bowl Assembly

ITEM NO.	PART NUMBER	QTY.
1	13400 CASEFEED BOWL VER. 2	1
2	13540_CF MOTOR COVER	1
3	62383_ADJUSTABLE CF WINDOW CUFF STUD	1
4	62382_ADJUSTABLE CF WINDOW CUFF	1
5	62385_CASEFEED CASE DEFLECTOR BLOCK	1
6	22173_CASE FEED FUNNEL ASSEMBLY	1
7	13719 8-32 x 3/8 BHCS	2
8	13738 SD-B #10 ROD WASHER	3
9	14137_#8 x 1 COVER SCREW ZINC	6
10	62384_ADJUSTABLE CF WINDOW CUFF NUT	1
11	62507_VARIABLE SPEED MOTOR W/ PIN	1
12	62503_M4 x 10mm BHCS	4
13	62502_TRIAD POWER SUPPLY	1

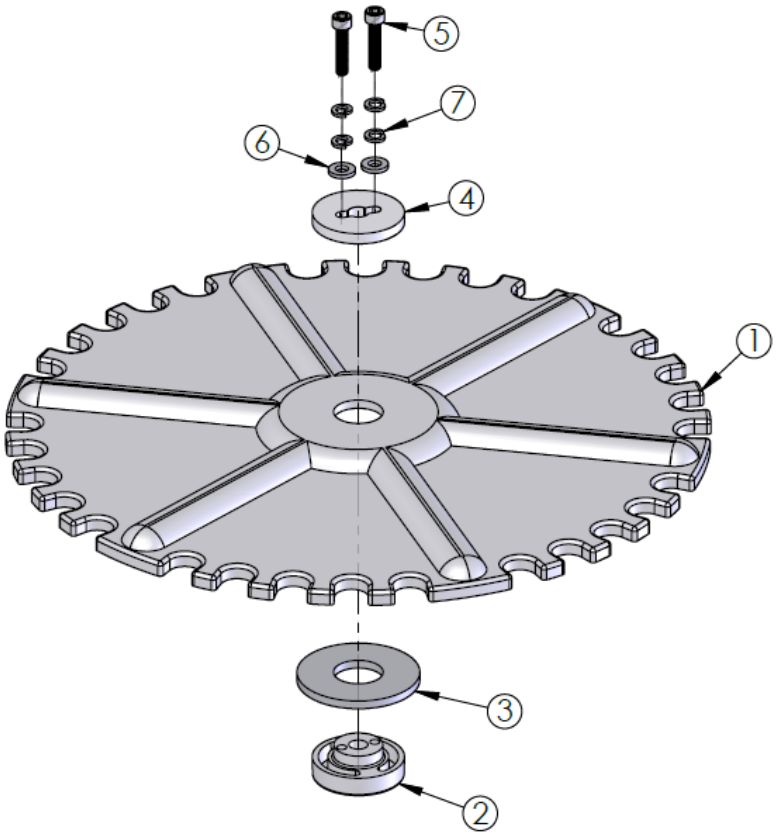


ITEM NO.	PART NUMBER	QTY.
1	11423 NEW CASE FEED FUNNEL V2	1
2	18918 550CF 4-40 x 3/8 BHCS	1
3	13859 CF TUBE CLIP	1
4	13779_MICRO SWITCH	1
5	13954 4-40 x 5/8 PAN HEAD SCREW	2
6	14038 4-40 KEPSNUT	3
7	62505_ON-OFF ROCKER SWITCH C1500ARBB	1

13.14 Casefeed Plates Assembly—Parts Identifier

ITEM NO.	PART NUMBER	QTY.
1	13402_LARGE PISTOL CASEFEED PLATE	1
1A	13465_SMALL PISTOL CASEFEED PLATE	
1B	13533_SMALL RIFLE CASEFEED PLATE	
1C	13290_LARGE RIFLE CASEFEED PLATE	
2	13736_CF LOWER CLUTCH	1
3	13703_CF SPACER	1
4	13632_CLUTCH DISC UPPER	1
5	18866_1032 x 875 SHCS CLUTCH SCREW	2
6	13738_SD-B #10 ROD WASHER	2
7	13813_CLUTCH SPRING WASHER	4

DESCRIPTION	
21072_LARGE PISTOL CASEFEED PLATE ASSEMBLY	SEE CONVERSION CHART FOR APPLICABLE SIZE
21073_SMALL PISTOL CASEFEED PLATE ASSEMBLY	
21074_SMALL RIFLE CASEFEED PLATE ASSEMBLY	
21075_LARGE RIFLE CASEFEED PLATE ASSEMBLY	



14 RELOADING BASICS

14.1 Clean Brass Is Required Before Reloading

- **There are many methods for cleaning fired brass, but the tried-and-true method is tumbling brass in a Dillon Vibratory Tumbler with ground corncob or walnut shell media with 2-3 “caps-full” of Dillon Case Polish. Putting a "clothes dryer sheet" in with the media helps control dust.**

Dillon PN13804

Dillon PN20439

14.2 Lubricating Brass

- **Pistol Brass—pistol brass should be lightly lubricated before sizing even if you are using a carbide size die. The most effective lubricant for cases is lanolin/isopropyl alcohol-based, as in the Dillon Case Lube.**
- **Rifle Brass—all bottleneck cases must be lubricated even when using carbide dies.**
- **Lubricate your clean cases by laying the brass flat on their sides in a shallow box or “cookie tray.” Pump three or four sprays on the cases and shake the box so the cases tumble and roll. Repeat this process one more time making sure that the lubricant is distributed over the cases. Let the cases dry for about 3-4 minutes before placing them in the Casefeeder Bowl.**

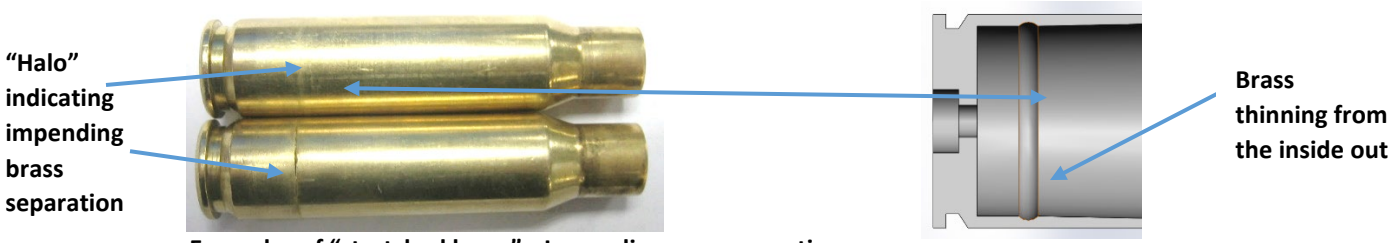
Dillon PN13733

- **Overlubricating the brass can cause hydraulically formed "lube dents" during the resizing process. This can also be caused by not waiting for the alcohol in the 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 resizing Die. If the case is resistant to going in, stop and re-lube. Without adequate lubricant, the case will stick in the Die and the Shellplate will "rip" the rim off the case when you try to remove it from the Die. The "lube dents" will straighten out during the firing process.**

14.3 Head Space—Case Sizing

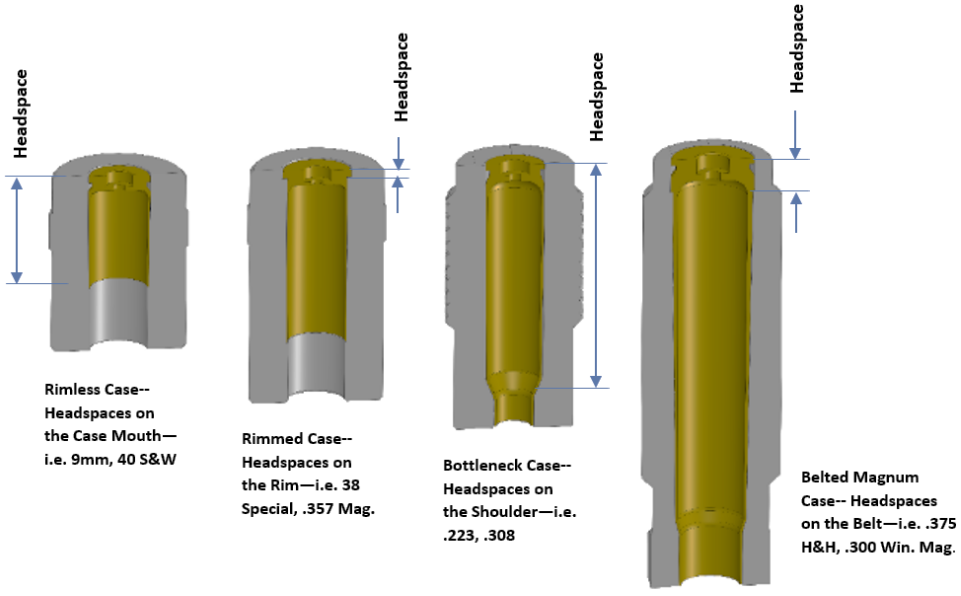
- **Headspace is an important reloading parameter. Cartridge headspace is the distance from the case head to the part of the case on which the cartridge stops moving forward in the chamber. Chamber headspace is the distance from the breech face to the part of the chamber that stops the case from moving forward. Headspace in its common usage (actually head clearance) is the difference between the chamber headspace length and the cartridge headspace length or the amount of clearance front to back the cartridge has in the chamber. If the cartridge headspace length is too long for the chamber, the bolt/slide will not close, and the firearm will not go into battery. If the cartridge headspace length is too short for the chamber (too much front-to-back clearance), the primer may not go off, you may get poor accuracy, stretched brass, short brass life, flattened primers or case head separation.**

- **An example of stretched/failing brass is shown below. The brass "flows" towards the neck during the firing process and causes the case wall to get thinner in a "groove" on the inside of the case as shown below:**

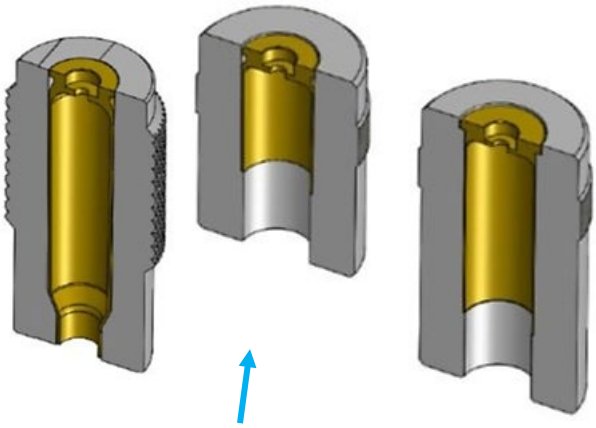


Examples of "stretched brass" --Impending case separation

- **Cartridge types head space differently. Rimless auto pistol cases headspace on the mouth of the case. Rimmed cases headspace on the rim. 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).**



- **When a straight wall cartridge is fired, the case expands in diameter to take up all of the available space in the chamber and seals in the propellant gases. When a bottleneck case is fired, the sides, neck and shoulder expand and the case stretches to take up all of the available space in the chamber, again acting as a gas seal. After fired the cartridge case "springs back" so the case can be extracted from the chamber, the case does not return all the way to its original unfired dimensions. This is why the case has to be sized. Sizing of the straight-walled rimmed or rimless case "squeezes" the case back to its original diameter so that it will fit in any firearm and hold a bullet. A bullet will fall through the mouth/neck of an un-sized case. In full-length sizing of the bottleneck cartridge, the case body is "squeezed" back to its original dimension, the case shoulder may also be pushed back, and the neck is reduced in diameter so that it will hold a bullet. Full-length sizing in general, allows the reloaded cartridge to be fired in any firearm of the appropriate caliber. Setting up the Sizing Die for a bottleneck case requires a higher level of precision than for straight-walled cases. Threading your Sizing Die down to the Shell Plate WILL NOT properly size bottleneck cartridges! It is imperative to have a Head Space Case Gauge for the cartridge you are reloading. A case gauge is roughly a "chamber" in a piece of steel with a high/low limit step at the base to check the headspace of your brass as well as a high/low limit step at the case mouth to determine the proper trim length—again, it is not a chamber gauge! Chamber gauges are available from EGWguns.com. See Below.**

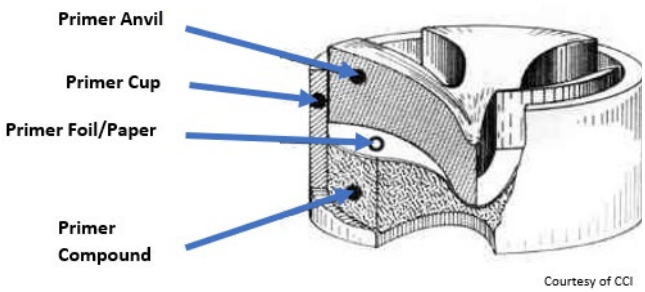


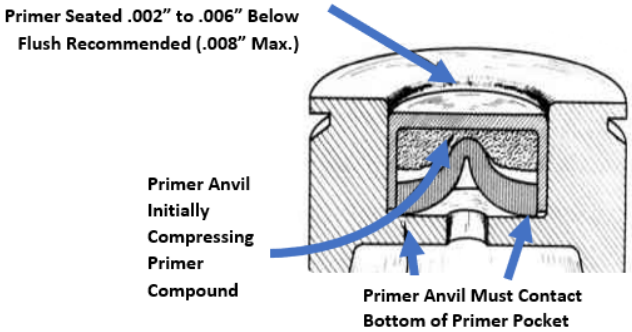
Cross Section Typical Dillon Rifle, Rimless and Rimmed Headspace/Case Gauges

Typical EGW Multi "Round" Chamber Checker

14.4 Primer Basics

- ***DANGER! Primers contain a small amount of a shock-sensitive chemical that explodes when struck by a firing pin or hammer which then sets off the powder/propellant and provides an initial pressure to assist the propellant to reach a self-sustaining burn. It is also part of the propellant gas sealing system. Primer elements are shown below. <u>Primers must be installed/seated to a recommended .002" to .006" (.008" Max.) below flush so that the Anvil contacts the bottom of the primer pocket to provide reliable ignition.</u>***

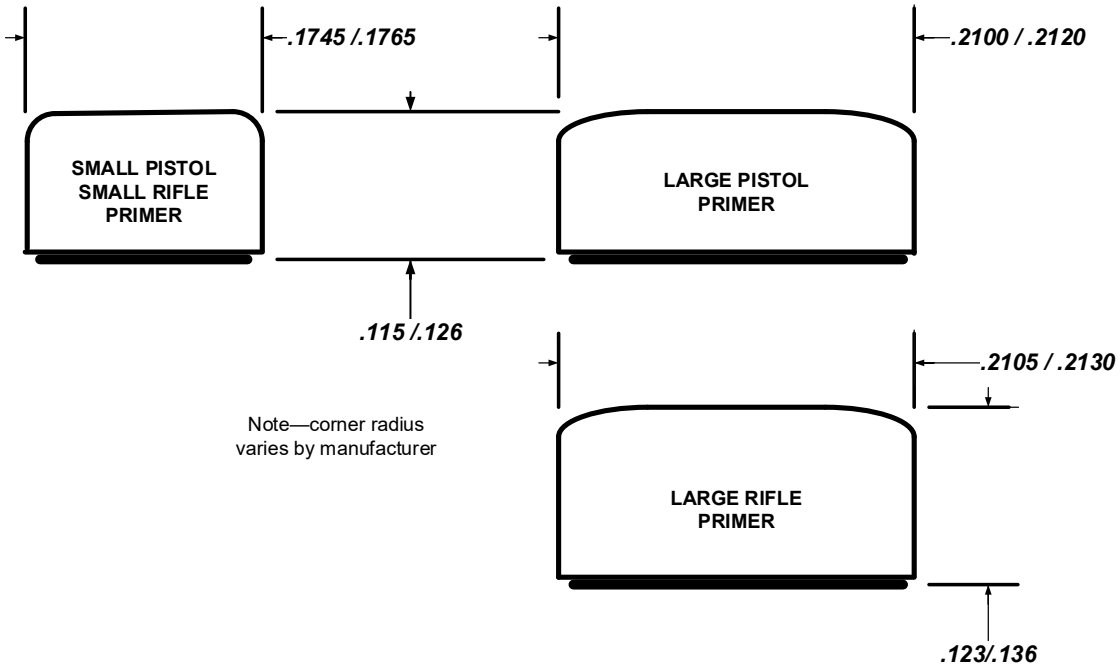




- ***DANGER! Primers can also detonate if accidentally crushed. Never force primers or subject them to excessive heat. If primers get stuck in the operation of the reloader, carefully disassemble the reloader and gently remove the obstruction. Never attempt to clear primers that are stuck in either the primer pickup tube or the primer magazine tube. Never, under any circumstance, insert any type of Rod into these tubes to push out stuck primers—PRIMERS CAN "CHAIN DETONATE." If a primer(s) is stuck in the magazine or pickup tubes flood the tube with penetrating oil/WD40, throw it away and call Dillon for a free replacement. Never attempt to deprime a cartridge case with a live primer. Depriming a live primer is one of the most dangerous things you can do in reloading and can cause serious injury or death.***
- ***CAUTION—Primers can leave a residue of primer "dust" behind especially if using a vibratory auto primer loader. An accumulation of dust is a fire and an explosion hazard. Keep the loading area and equipment free of any accumulated primer "dust." Use alcohol and paper towels to remove this residue.***
- ***WARNING! —Using the right primer is a very important issue in the reloading process. Use the primer recommended in your reloading manual for that specific load.***

- *There are two basic types of cartridge cases and associated primers-- Boxer and Berdan— the Boxer brass cartridge case and Boxer primer are what is reloadable and discussed here. WARNING! --Do not use Berdan cases. Berdan cases will destroy the depriming pin. Boxer primers will not seat properly in a Berdan primer pocket.*

- **There are four sizes of primers for Boxer Centerfire Cartridges:**
  - **Small Pistol**
  - **Large Pistol**
  - **Small Rifle**
  - **Large Rifle**
  - **There are also magnum, bench rest and military primer varieties**
  - **WARNING! Reloading manuals specifically define the primer used for the cartridge and the bullet being reloaded! Primers can dramatically affect the pressure, velocity and accuracy of the reloaded cartridge.**
  - **SAAMI Standard Dimensions for Primers:**

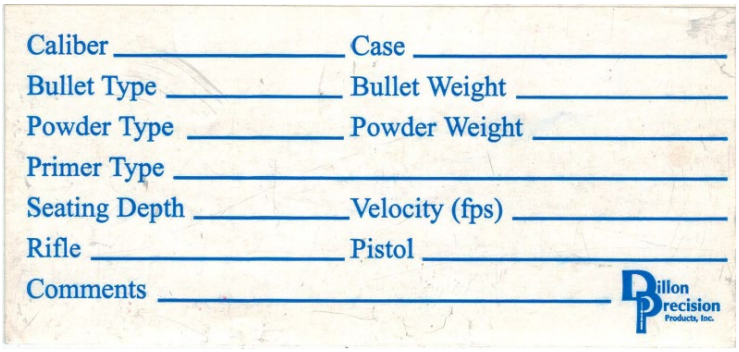


Examples of Primer Packaging:

- *CAUTION—Primers can leave a residue of primer "dust" behind especially if using a vibratory auto primer loader. An accumulation of dust is a fire and an explosion hazard. Keep the loading area and equipment free of any accumulated primer "dust." Use alcohol and paper towels to remove this residue.*

14.5 Documentation

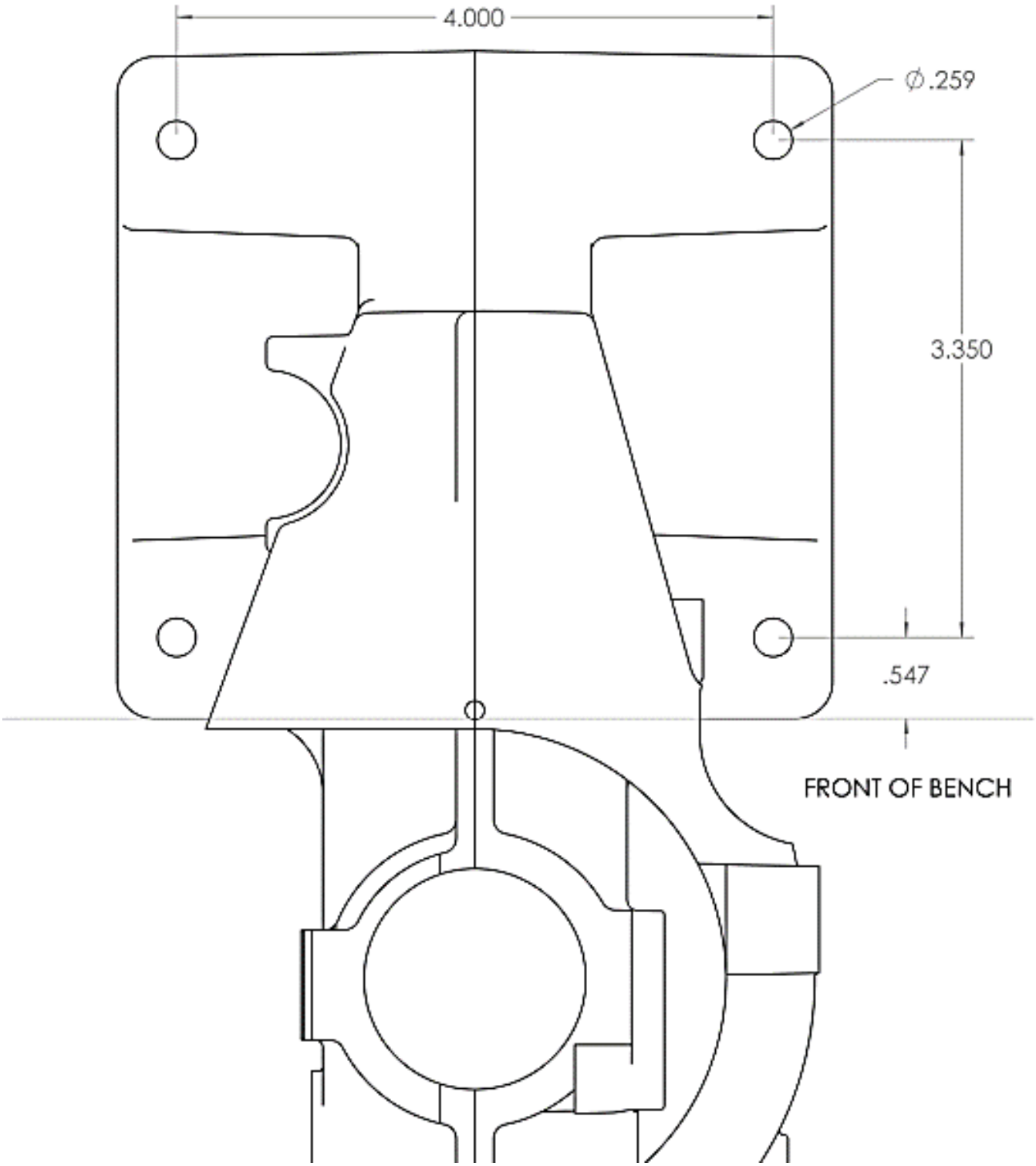
- **It is important to keep records of the important parameters that were used in reloading the cartridge in a record book and labeling the cartridge storage container. A quantity of 100" stick-on" labels with loading parameters is available from Dillion PN10446—see below. Recording additional data such as the Date and the Powder Lot number is also recommended.**



Reloading Stick on Label PN10446

15 NOTES:

16 TEMPLATE FOR DRILLING MOUNTING HOLES IN BENCH



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