

# RL300

WARNING: DO NOT ATTEMPT TO OPERATE YOUR RL 300 UNTIL YOU READ AND COMPLETELY UNDERSTAND THE OPERATING INSTRUCTIONS. IF YOU HAVE ANY QUESTIONS, PLEASE CALL THE FACTORY AT 602-948-8009.

## INITIAL SET-UP:

Your RL 300 Progressive Reloader has been set up and adjusted for the caliber in which it was ordered, except for the following: The powder measure must be clamped in place on the powder die (42) and the powder bar (45 or 46/47) must be adjusted for the desired powder charge. This is a trial and error operation using a powder scale.

If it is to be utilized, the primer feed assembly should be installed on the lug on the left front face of the frame (1).

## PRELIMINARY ADJUSTMENTS:

Several adjustments are necessary. If the optional semi-automatic primer feed is to be used, it should be installed, and then adjusted in the following manner. Push the primer slide (29) forward, so as to center it over the primer seating cup (25). The primer slide should be centered over the primer seating cup (25), and seated as low as possible without drag. Lock the primer feed base (27) in place by tightening the screw (49). Now cycle the primer slide (29) in and out several times to assure that it moves freely. Re-adjust, if necessary. Install the primer magazine (34), and secure in place with the shield (36). Load one primer into the magazine. The primer should fall freely into the primer slide (29). If adjustment is necessary, the

primer slide return adjustment screw (54), located on the left side of the base (27), may be utilized. This screw regulates the rearward travel of the primer slide and is used to assure alignment of the primer slide under the primer magazine. Screw No. 49, located immediately below, is used to regulate the forward travel of the primer slide and should be adjusted so as to assure proper alignment of the primer slide over the primer cup. If the primer should fail to fall freely from the primer slide into the primer cup, use this adjustment. These two adjustments are locked in place by set screws on the front of the primer feed base.

SEQUENCE OF OPERATION:

STATION 1 - Cartridges of all calibers are sized, decapped, and primed at station 1. Although some pistol sizing dies do not come equipped with a decap assembly, these assemblies are stock items and are available from the manufacturer of the die. Bottle neck rifle cartridges may be neck expanded at station 1 by using a standard ball type expander as supplied by most die manufacturers.

STATION 2 - The powder is metered into the cartridge case at Station 2. Inside neck expansion is also usually accomplished at station 2. These two operations are accomplished simultaneously through the use of a hollow expander, which serves also as the powder funnel.

STATION 3 - Bullet seating takes place at station 3. If a roll crimp is desired, it can also be accomplished at Station 3.

STATION 4 - This station is utilized for taper crimping.

A typical loading cycle would be as follows: A fired, empty cartridge case should be introduced at station 1. Simultaneously, a bullet should be seated on the primed and powder charged case at Station 3. The tool handle is now moved to the downward position. This sizes and decaps the case at Station 1, bells the case mouth at Station 2, seats the bullet at Station 3, and taper crimps the cartridge at Station 4. While the tool handle is in the down position, the operator, using his right hand, pushes the powder bar to the full rearward position. Hold it there for a moment and then release it, allowing the bar to return to its normal position. Now, with his left hand, the operator pushes the primer slide inward, depositing a primer into the primer cup. Next, raise the operating handle and press forward against the stop to seat the primer. Release the operating handle. Using the thumb and fore finger of both hands, rotate the shell plate one click to the right. Finally, remove the loaded round from Station 1 and commence the cycle again.

NOTE: Every effort should be made to move the powder bar in a consistent manner. The importance of this cannot be stressed too much. For example, in throwing 40 grains of ball powder, 1/10 of a grain accuracy can be maintained if the powder bar is handled in a smooth, consistent manner. However, variations in excess of 1/2 a grain can be expected if the powder bar is not stroked in a reasonably even manner. This is especially true when using extruded (pencil lead type) powders. In metering extruded powders, invariably,

a few grains will be sheared by the powder bar.

The powder bar should be handled in the following manner when using extruded powders. Push the powder bar forward. It will move forward smoothly and then come to an abrupt stop. This is the point at which the extruded grains must be sheared. The operator should now deliberately increase pressure on the bar, shearing the grains, and then, in one continuous motion, completing the stroke. It is tempting to slam the bar forward so as to more easily shear the grains and complete the stroke in one swift motion. This however, will produce excessive variations.

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DILLON PRECISION PRODUCTS, INC.  
 755 East Gelding Drive, Suite 106  
 Coatsdale, Arizona 85260

INVENTORY CONTROL SHEET  
 VARIABLE PARTS DILLON RL 300

Customer: \_\_\_\_\_

Date: \_\_\_\_\_

00-2-1	Shellplate	.45 ACP/300-60	Locators*	.35.50
00-2-2	"	.38/.357	"	.35.50
00-2-3	"	.223	"	.35.50
00-2-4	"	.44 Mag./	.303 British	.35.50
00-2-5	"	9mm	Parabellum	.35.50
00-2-6	"	.41 Mag.	"	.35.50
00-2-7	"	.30-30	"	.35.50
00-2-8	"	.30 ML	"	.35.50
00-2-C	"	.45 Long Colt	"	.35.50
00-43-E	Pistol	Powder	Funnel/Expander	.45ACP
00-43-D	"	"	"	.38/.357
00-43-G	"	"	"	.44 Mag
00-43-H	"	"	"	.41 Mag
00-43-F	"	"	"	9mm/.380
00-43-C	"	"	"	.30 ML
00-44-A	Powder	Measure	Funnel	.223
00-44-B	"	"	"	30-06/308/30-30
00-44-J	"	"	"	.270
00-44-I	"	"	"	6mm/.243
00-44-X	"	"	"	.25-06
00-45	Powder	Bar	Large	
00-46	Powder	Bar	Small	
00-47	Powder	Bar	Spacer	
00-7	Toolhead			
00-42-B	Powder	Measure	Adapter	

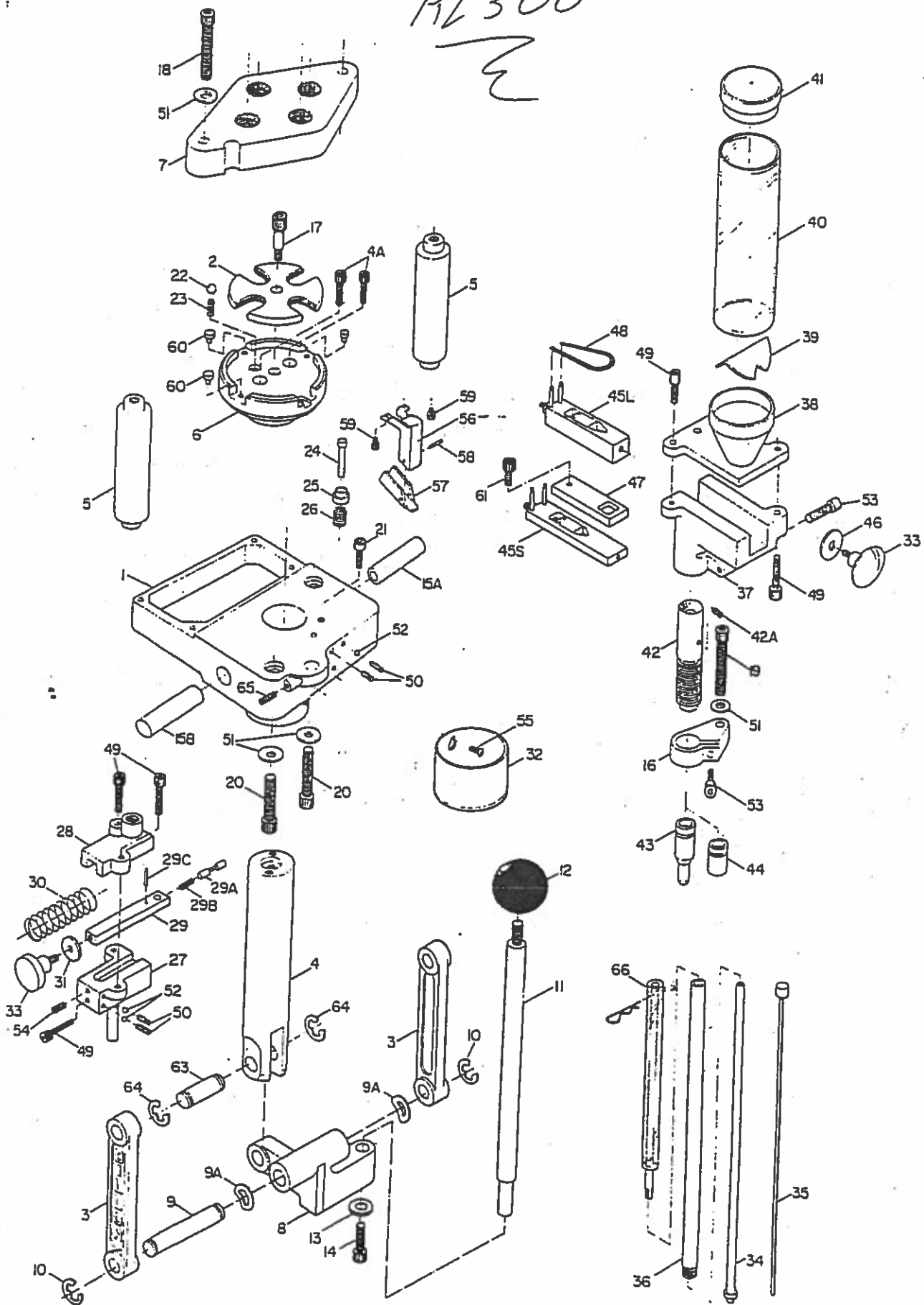
X	.45 ACP
X	.38 Spl./
X	.357
X	.44 Mag./
X	.44 Spl.
X	.41 Mag.
X	.45 Long Colt
X	9mm Parabellum
X	.380 ACP
X	.223(5.56mm NATO)
X	.308 WIN(7.62. NATO)
X	.30-06
X	.30-30
X	.270
X	.243

33.50  
 7.00

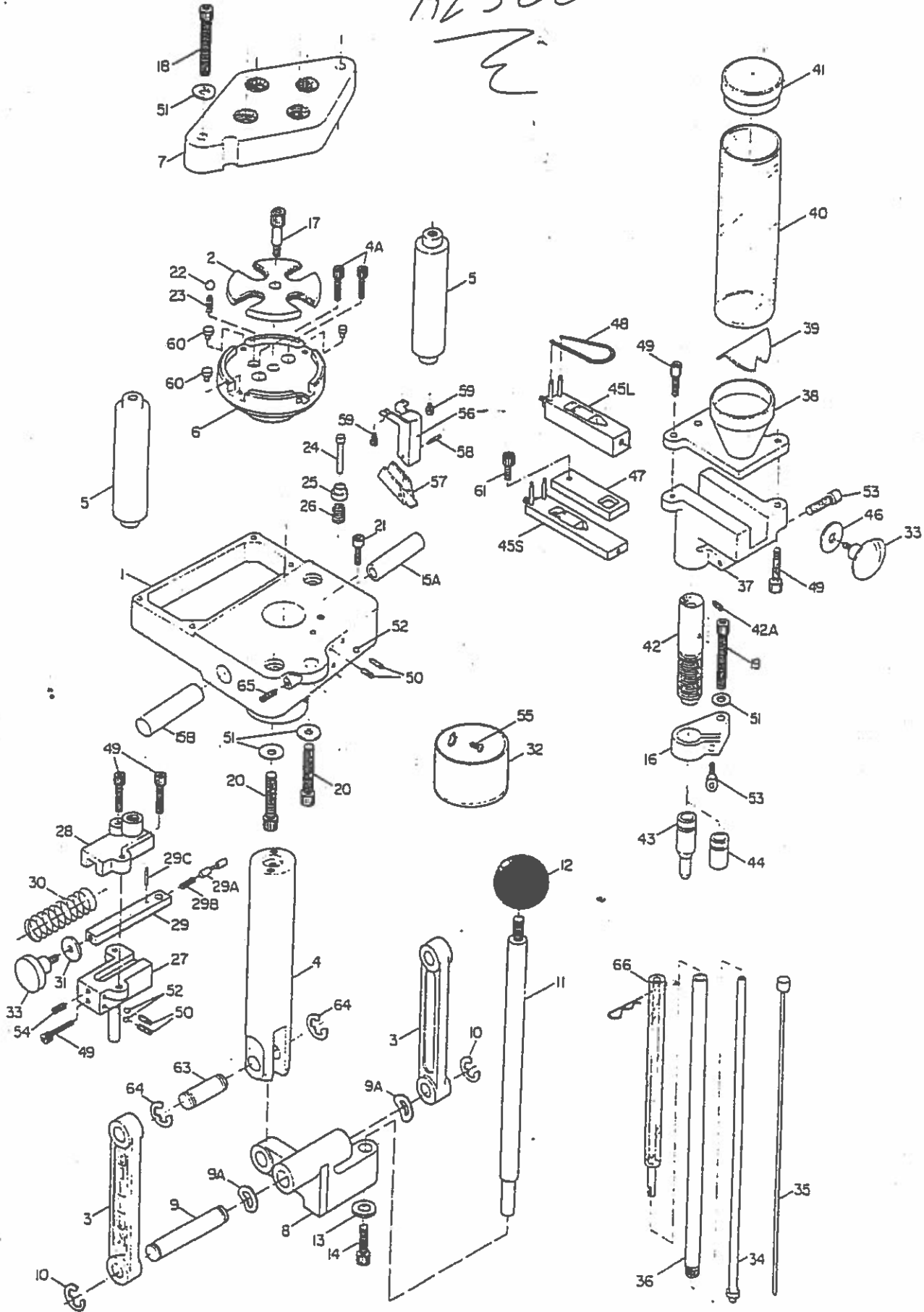
Dillon RL 300 Parts List

0-1	Frame	300-34L	Primer Magazine, Large
0-2	Shell Plate, Specify Caliber	300-34S	Primer Magazine, Small
0-3	Link Arm	300-35	Primer Magazine Follower
0-4	Main Shaft	300-36	Primer Magazine Shield
0-4A	Platform Bolts (2)	300-37	Powder Measure Base
0-5	Support Column	300-38	Powder Measure Top
0-6	Shell Platform	300-39	Powder Measure Baffle
0-7	Tool Head	300-40	Powder Measure Tube
0-8	Crank	300-41	Powder Measure Lid
0-9	Crank Pivot Pin	300-42	Powder Die
0-9A	Spring Washer	300-42A	Powder Die Set Screw
0-10	Pivot Pin Snap Rings (2)	300-43	Powder Funnel/Pistol Expander, Specify Caliber
0-11	Operating Handle	300-44	Rifle Powder Funnel, Specify Caliber
0-12	Operating Handle Knob	300-45L	Powder Bar, Large
0-13	Operating Handle Washer	300-45S	Powder Bar, Small
0-14	Operating Handle Bolt	300-46	Powder Bar Stop
0-15A	Upper Link Arm Pin, Right	300-47	Powder Bar Spacer
0-15B	Upper Link Arm Pin, Left	300-48	Powder Bar Spring
0-16	Powder Die Clamp	300-49	10-24-3/4 Cap Screw
0-17	Shell Plate Bolt	300-50	10-24-3/8 Set Screw
0-18	Tool Head Bolt, Left	300-51	Support Column Washers (4)
0-19	Tool Head Bolt, Right	300-52	Nylon Balls (3)
0-20	Support Column Bolts (2), Left and Right	300-53	Powder Clamp/Powder Base Bolts (2)
0-21	Primer Seating Depth Adjustment Bolt	300-54	Primer Slide Return Adjustment Screw
0-22	Index Ball	300-55	Spent Primer Cup Screw
0-23	Index Ball Spring	300-56	Spent Primer Catcher Bracket
0-24L	Primer Seating Punch, Large	300-57	Spent Primer Catcher Chute
0-24S	Primer Seating Punch, Small	300-58	Spent Primer Catcher Pin
0-25L	Primer Seating Cup, Large	300-59	Spent Primer Catcher Screws
0-25S	Primer Seating Cup, Small	300-60	Locator Buttons (3) Specify Caliber
0-26	Primer Seating Cup Spring	300-61	10-24-5/8 Cap Screw
0-27	Primer Feed Base	300-62	1/4 Washer
0-28	Primer Feed Top	300-63	Main Shaft Pivot Pin
0-29L	Primer Slide Body, Large	300-64	Main Shaft Pivot Pin Snap Ring
0-29S	Primer Slide Body, Small	300-65	Primer Base Clamp
0-29A	Primer Slide Plunger	300-66L	Primer Pick-Up Tube, Large
0-29B	Primer Plunger Spring	300-66S	Primer Pick-Up Tube, Small
0-29C	Primer Plunger Pin		
0-30	Primer Slide Spring		
0-31	Primer Slide Stop		
0-32	Spent Primer Cup		
0-33	Primer Slide/Powder Measure Knobs (2)		

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