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 equiped 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 ½ 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.

ILLON PRECISION PRODUCTS, INC.
755 East Gelding Drive, Suite 106
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NVENTORY CONTROL SHEET
ARIABLE PARTS DILLON RL 300

ustomer: _____

ate: _____

		.45 ACP	.38 Spl./.357	.44 Mag./.44 Spl.	.41 Mag.	.45 Long Colt	9mm Parabellum	.380 ACP	.223(5.56mm NATO)	.308 WIN(7.62 NATO)	.30-06	.30-10	.270	.243
300-2-1	Shellplate .45 ACP/300-60 Locators* 35.50	x												
300-2-2	" .38/.357 35.50		x							x	x		x	x
300-2-3	" .223 35.50							x	x					
300-2-4	" .44 Mag./.303 British 35.50			x										
300-2-5	" 9mm Parabellum 35.50						x							
300-2-6	" .41 Mag 35.50				x									
300-2-7	" .30-30 35.50											x		
300-2-8	" .30 M1 35.50													
300-2-C	" .45 Long Colt 35.50					x								
300-43-E	Pistol Powder Funnel/Expander .45ACP 8.00	x				x								
300-43-D	" " " " .38/.357 8.00		x											
300-43-G	" " " " .44 Mag 8.00			x										
300-43-H	" " " " .41 Mag 8.00				x									
300-43-F	" " " " 9mm/.380 8.00						x	x						
300-43-C	" " " " .30 M1 10.00								x					
300-44-A	Powder Measure Funnel .223 8.00									x	x	x		
300-44-B	" " " 30-06/308/30-30 8.00												x	
300-44-J	" " " .270 8.00													x
300-44-I	" " " 6mm/.243 8.00													
300-44-K	" " " .25-06 8.00													
300-45	Powder Bar Large 35.00								x	x	x	x	x	x
300-46	Powder Bar Small 30.00	x	x	x	x	x	x	x						
300-47	Powder Bar Spacer 9.00	x	x	x	x	x	x	x						

300-7 Toolhead 33.50
300-42-B Powder Measure Adapter 7.00

Dillon RL 300 Parts List

0-1 Frame
0-2 Shell Plate, Specify Caliber
0-3 Link Arm
0-4 Main Shaft
0-4A Platform Bolts (2)
0-5 Support Column
0-6 Shell Platform
0-7 Tool Head
0-8 Crank
0-9 Crank Pivot Pin
0-9A Spring Washer
0-10 Pivot Pin Snap Rings (2)
0-11 Operating Handle
0-12 Operating Handle Knob
0-13 Operating Handle Washer
0-14 Operating Handle Bolt
0-15A Upper Link Arm Pin, Right
0-15B Upper Link Arm Pin, Left
0-16 Powder Die Clamp
0-17 Shell Plate Bolt
0-18 Tool Head Bolt, Left
0-19 Tool Head Bolt, Right
0-20 Support Column Bolts (2), Left and Right
0-21 Primer Seating Depth Adjustment Bolt
0-22 Index Ball
0-23 Index Ball Spring
0-24L Primer Seating Punch, Large
0-24S Primer Seating Punch, Small
0-25L Primer Seating Cup, Large
0-25S Primer Seating Cup, Small
0-26 Primer Seating Cup Spring
0-27 Primer Feed Base
0-28 Primer Feed Top
0-29L Primer Slide Body, Large
0-29S Primer Slide Body, Small
0-29A Primer Slide Plunger
0-29B Primer Plunger Spring
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)

300-34L Primer Magazine, Large
300-34S Primer Magazine, Small
300-35 Primer Magazine Follower
300-36 Primer Magazine Shield
300-37 Powder Measure Base
300-38 Powder Measure Top
300-39 Powder Measure Baffle
300-40 Powder Measure Tube
300-41 Powder Measure Lid
300-42 Powder Die
300-42A Powder Die Set Screw
300-43 Powder Funnel/Pistol Expander, Specify Caliber
300-44 Rifle Powder Funnel, Specify Caliber
300-45L Powder Bar, Large
300-45S Powder Bar, Small
300-46 Powder Bar Stop
300-47 Powder Bar Spacer
300-48 Powder Bar Spring
300-49 10-24-3/4 Cap Screw
300-50 10-24-3/8 Set Screw
300-51 Support Column Washers (4)
300-52 Nylon Balls (3)
300-53 Powder Clamp/Powder Base Bolts (2)
300-54 Primer Slide Return Adjustment Screw
300-55 Spent Primer Cup Screw
300-56 Spent Primer Catcher Bracket
300-57 Spent Primer Catcher Chute
300-58 Spent Primer Catcher Pin
300-59 Spent Primer Catcher Screws
300-60 Locator Buttons (3) Specify Caliber
300-61 10-24-5/8 Cap Screw
300-62 ¼ Washer
300-63 Main Shaft Pivot Pin
300-64 Main Shaft Pivot Pin Snap Ring
300-65 Primer Base Clamp
300-66L Primer Pick-Up Tube, Large
300-66S Primer Pick-Up Tube, Small

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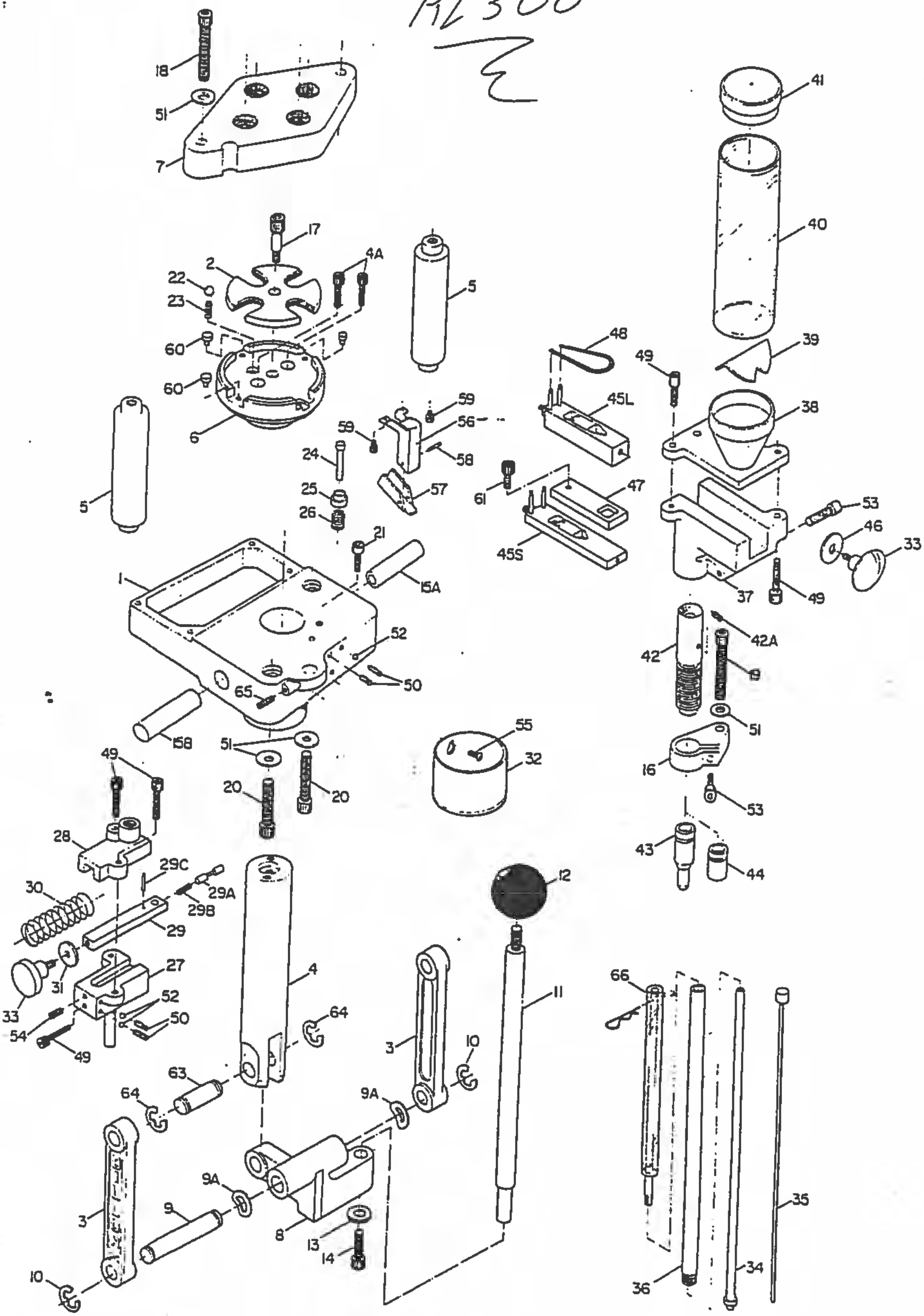

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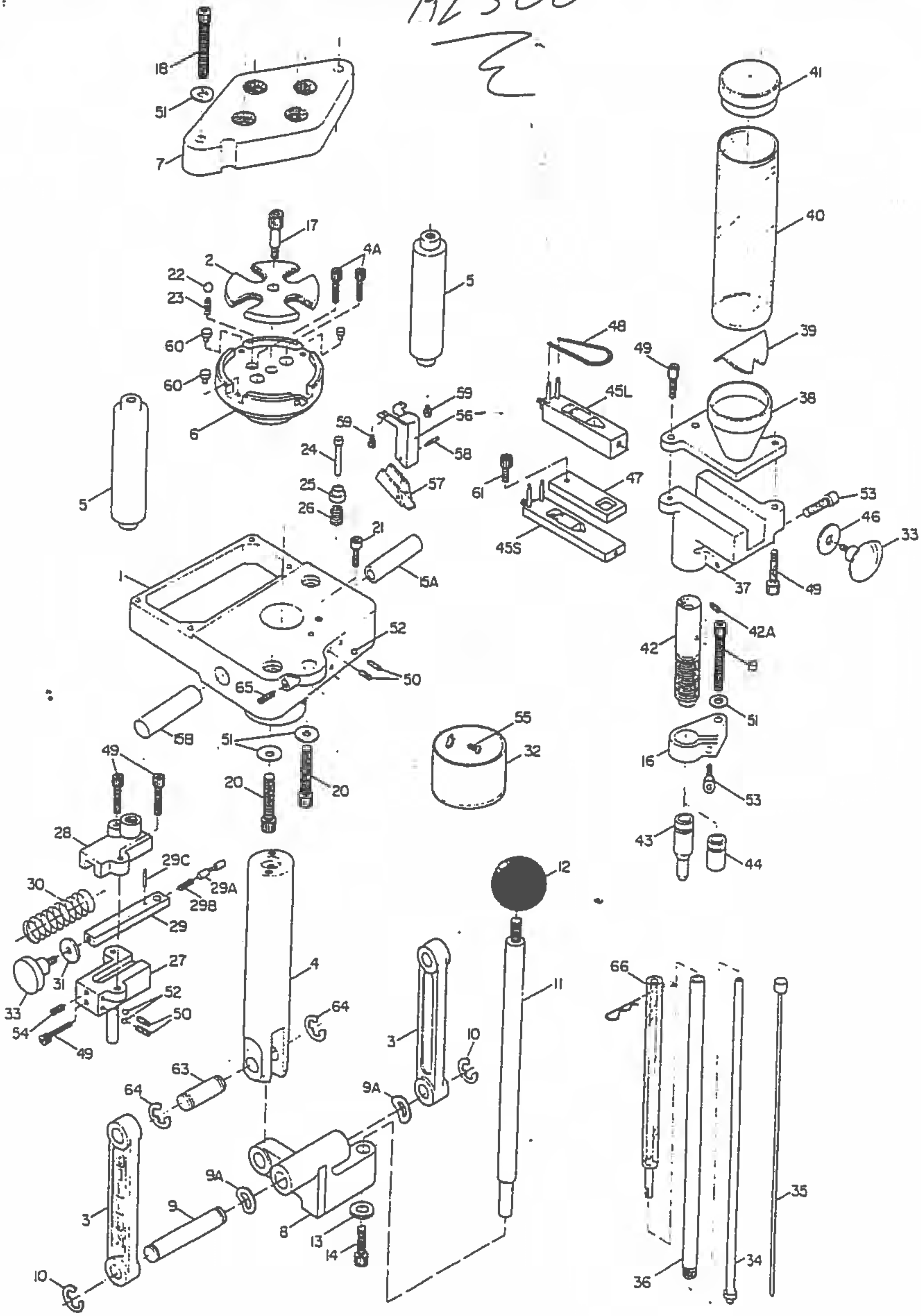

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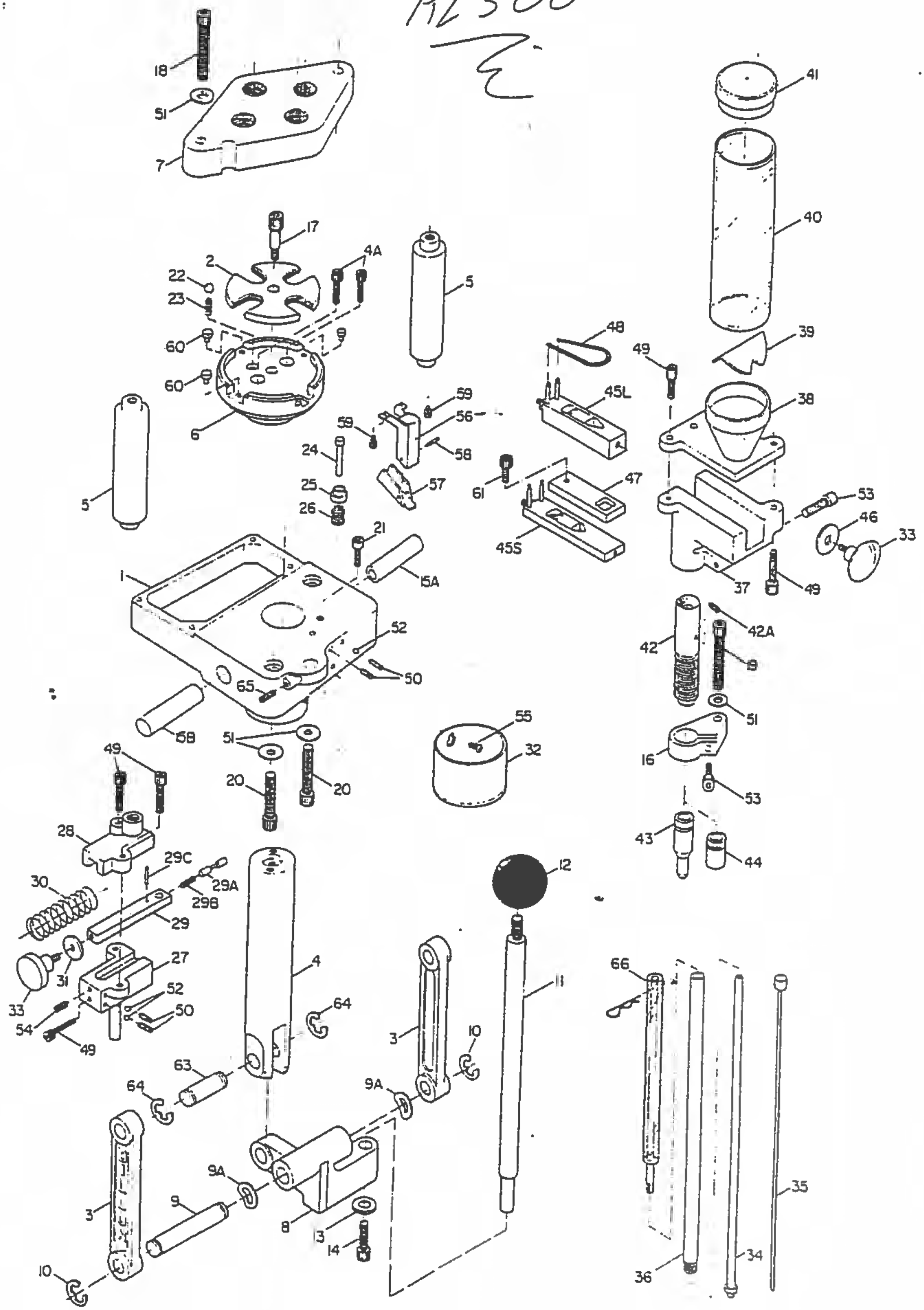
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