

PARTS CATALOG

AND
INSTRUCTION
MANUAL

ARTOS ENGINEERING CO.
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ALBANY N.Y.

NO. 618 SURFACE GRINDER

Landis Tool Co.

ABRASIVE MACHINE TOOL COMPANY

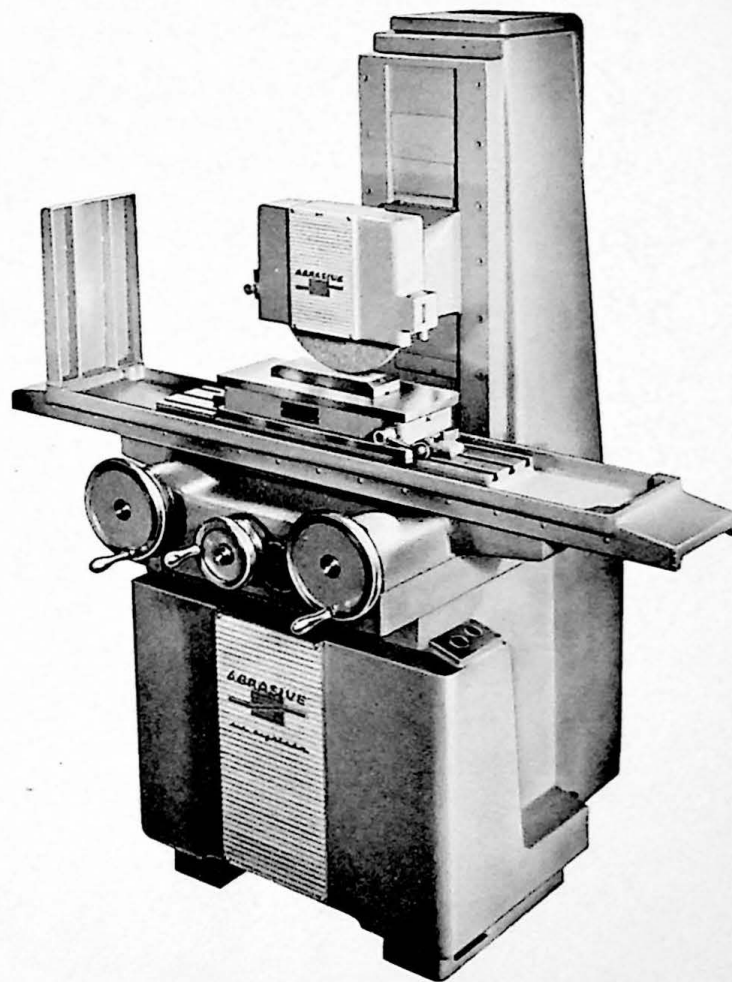
EAST PROVIDENCE 14, RHODE ISLAND

Waynesboro, Penna.

Property of Atlas
Eng Co.

ABRASIVE

ABRASIVE SURFACE GRINDER



No. 618

ABRASIVE MACHINE TOOL COMPANY
EAST PROVIDENCE 14, RHODE ISLAND

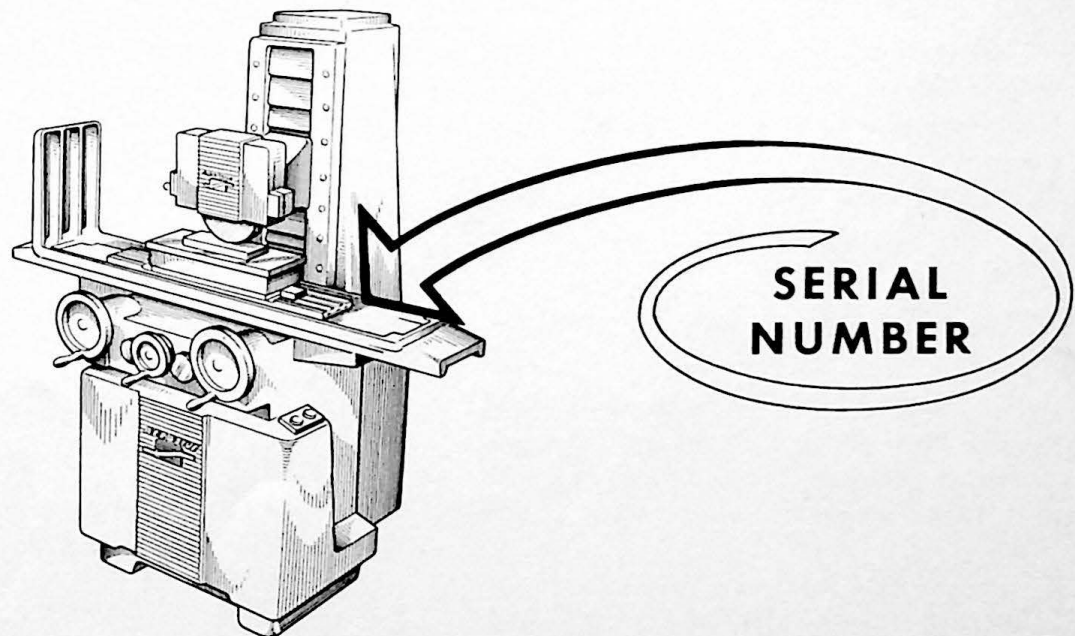
ORDERING INSTRUCTIONS

While it has been our experience that comparatively few repair parts are required for Abrasive Surface Grinding Machines, at the same time it is our policy to carry a complete stock for the convenience of our customers in case of emergency and we can usually ship immediately on receipt of order.

To expedite shipment and save uncertainty upon our part, we earnestly request our customers to order by the PART NUMBERS found on the parts lists opposite the illustrations. The "Key Numbers" on the illustrations are merely to aid you in working between the illustrations and the parts lists.

Also, do not fail to mention the SERIAL NUMBER of MACHINE for which the part is desired. This will be found stamped on the right hand side of the Table, as shown in illustration below.

As this is not an instruction book in the art of surface grinding, we invite the correspondence of our customers if they have a grinding problem or desire advice concerning the most suitable wheel to use for any specific work. Our experience in this connection will be of value to our customers, and it will be our pleasure to render all possible assistance.



618 PRECISION SURFACE GRINDER – OPERATING INSTRUCTIONS

As soon as machine is received, check the crate and then the machine for damage in transit. If this is not done the carrier will refuse any claims.

Remove crate and loose parts, but leave steel strapping which holds table and saddle until machine is finally placed. This protects the sensitive antifriction ways.

Before using, make sure that all preservative is off vertical ways and that all packing material is removed. Oil column ways with clean light machine oil. Level the machine, using two leveling screws on side and one in rear.

Rotation of spindle is clockwise.

A small reservoir for oil is located on the left side of the machine just below the end of the saddle. This is the only lubrication point on this machine. Be sure to fill this before starting the machine with light machine oil (approx. 300 sec. Saybolt at 100° F.). On hand operated lubricators the plunger should be pulled several times before starting machine. After the initial start, one or two pulls a day should be sufficient. Do not push plunger in. On automatic machines the oil is pumped each time the start button is pushed.

OPERATING FEATURES: –

Table Lock – This is either a large knurled nut which engages back of table handwheel, or small knurled knob in center of table handwheel. Be sure it is released before operating table.

Table Friction – Nut with two holes in center of table handwheel when tightened or loosened varies drag on table.

Crossfeed Friction – Four allen head screws in face of crossfeed nut can be tightened or loosened to vary drag on crossfeed screw.

Spindle – On machines equipped to take 7" diameter wheels there is a long pin supplied to fit holes in large diameter of wheel chuck. This should be used whenever wheels are changed or chuck is to be removed. On machines equipped with 12" diameter wheels, a face pin spanner is supplied to fit pin holes in face of wheel chuck. Do not hammer wrenches used on wheel chuck or spindle as this dents the precision ball bearing races.

SPINDLE GUARANTEE:–

The spindle assembly for this machine is guaranteed to function properly and satisfactorily for six months from date of shipment, provided it has had reasonable care and attention. If for any reason it fails to give this satisfaction, we will replace it without charge immediately upon written or telegraphic notice from the customer, giving the serial number of the machine. Attempts upon the part of the customer or any other person not an authorized agent or representative of this company to adjust the spindle or any other evident proofs of carelessness, will be sufficient basis for us to charge the customer for the cost of putting the returned assembly back into saleable condition.

MAINTENANCE: –

Lubrication – Spindle is prelubricated and needs no attention. Only oiling point is reservoir on bed just below left end of saddle. Keep this filled with machine oil 300 sec. Saybolt at 100° F.

Removing Spindle –

1. Remove wheel guard cover.
2. Remove wheel sleeve then large nut and spring from front of the cartridge.
3. Turn off master electrical switch on control panel.

4. Remove cover in rear of column.
5. Disconnect the twist lock electrical connection from the motor.
6. Pull motor assembly out from the back of machine. Be careful not to drop end of spindle when it comes through back of head, as it is possible to damage threads on front of spindle.

NOTE: On 12" machines only, two 3/4" rods are furnished. These rods have threaded ends which fit holes below the motor in the wheel head. Screw these rods into wheel head and rest back ends on grooves in column opening. Then slide Spindle assembly out of machine on these rods.

Do not attempt to repair this spindle. If repairs are necessary return complete spindle assembly to the factory.

Wire, call or write factory; a replacement will be sent you. Install loaner spindle, then return faulty spindle to the factory for repair. No charge is made for the use of this loaner spindle except the customer pays freight charges to and from the Abrasive Machine Tool Company.

When installing spindle be sure to line up pin in cartridge with hole in back of head. This is just below large hole for cartridge.

To Remove Table: — Remove the two nuts from lower left end of table to disconnect cable, also remove slotted washer at right end of table, then lift table up and off. Remove rolls and cage to prevent loss of rolls and damage to the cage. Lay cage on flat surface to prevent any bending.

To Install Table: — Make sure surface is clean (this is important). Remove all traces of old

grease and dirt. Lay cage in track and insert the rolls. Using clean applicator apply U. S. Colderplate P (Our SP-2015) grease in small amounts to the top of each roll. Wrap cable around spool three times with wraps starting at the top of spool.

NOTE: The rear end of cable connects to the right hand end of table. The forward end of the cable on the spool connects to left hand end of table. Hang end of cable over each side of saddle with a small weight attached. The weight at each end prevents cable from coming off spool. Install table on top of rolls, be careful not to drop table on the side rails, as this may dent table ways causing a tight table. After table is in place remove weight from the right hand end of cable. Insert this end in hole in table. Bring table to the right to take up slack in cable. Do not make this too tight as you will pull left end of cable inside saddle. To connect left end, remove weight, insert threaded end of cable in the hole in table. Insert spring and cap, then tighten nut. Hold cable to prevent turning. Tighten nut until all back lash or slip is removed from the table handwheel.

Remove Saddle: —

1. Remove crossfeed handwheel Part #B-618-C1.
2. Remove crossfeed vernier Part #A-618-C-10.

NOTE: Spring Part #SP301 - 7/32 x 17/32 x .028 and Ball Part #SP60 - 1/4" Diameter will be exposed and can be removed.

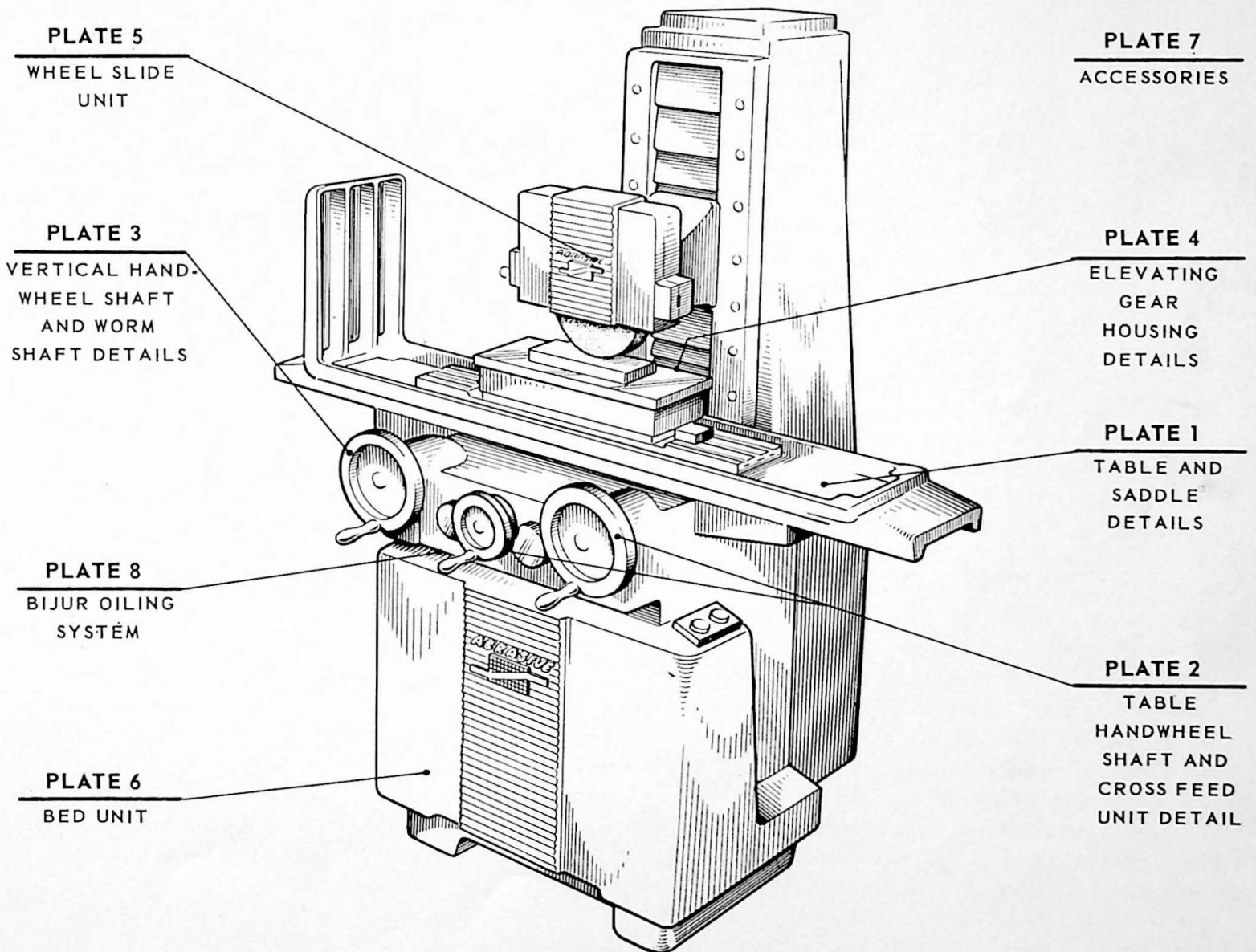
3. Remove three screws part #SP16-1/4 - 20 x 1/2 Lg. which are located under crossfeed vernier.
4. Replace crossfeed handwheel and turn counterclockwise. This will remove crossfeed screw and cartridge.

5. Remove three screws and cap #A618-F-3 on end of telescoping shaft B618-F-12 which goes into elevating housing under head.
6. Remove gilmer belt on elevating mechanism.
7. Pull shaft B618-F-12 straight out through front of saddle.
8. Remove tube B618-F-20 which protects this shaft as it goes into elevating housing.
9. Lift saddle straight up.
10. Follow instructions above on table ways for cleaning and greasing ways.

SUGGESTED CHECK LIST IN CASE OF OPERATING DIFFICULTY.

1. Poor finish – This can be due to the use of a wheel not suited to the work, a dull diamond, or dirty coolant. Also, it is very important to realize that there is a big difference between 7 and 12 inch wheels on a grinder. Because some operators are not familiar with this difference, poor results can be expected. Here are some of the differences and recommendations as applied to the Abrasive 618. The working area of a 12" wheel 3/4" wide is 28.3 square inches. The 7" by 1/2" has an area of 11 square inches. Both of these are standard sizes for the two models of our 618. Obviously the 12" wheel of the same specifications should be dressed at a slower rate than the 7". By the same token, the 12" will stand up longer since there are many more cutting edges in its circumference. One other important difference is that the surface feet per minute on a new 12" wheel is approximately 5500 (because it has 1800 R.P.M. Motor) whereas on the 7" it is approximately 6500 (because it has 3600 R.P.M. Motor). This is true on all motorized spindle grinders. It means that a wheel with the same specifications which work well on the 7" may not stand up on a 12" wheel machine.
2. Spindle trouble – Do not attempt any repairs-wire or call factory for replacement - then follow instructions in first part of book for removal.
3. Table action stiff – First make sure brake is all the way off. Second, loosen nut in center of table handwheel. If it is still stiff try oiling ways with light oil by using squirt type oil can aimed between guides and sides of table ways. If none of these suggestions work, table must be removed and checked for pick-up or dirt.
4. Table too free – Tighten nut in center of table handwheel until "feel" is right.
5. Table or saddle loose – Guide rails must be moved up 15° angle. Remove dowels from one side only. Never disturb both sides. Loosen screws and with table or saddle in place move guide rail against it as far as it will go, then retighten screws. Then ream dowel holes for over-size dowels or drill and ream in new location for old dowels. If unit feels too tight, do not try to readjust rails, but lap or scrape off high spots.
6. Saddle movement stiff – First check telescoping shaft on elevating as this may pick up in worm causing saddle to "freeze". If it is not worm and shaft, then loosen 4 screws on face of crossfeed nut, until "feel" is right. If it is still stiff try oiling ways with light oil by using squirt type oil can aimed between guides and sides of saddle ways. If none of these suggestions work, saddle must be removed and checked for pick-up or dirt.
7. Cable slipping or fraying – Tighten cable with nuts on left lower side of table, be sure not to allow cable to twist as this will cause cable to climb over side of drive spool. If there is no further adjustment left on threaded end of cable, a replacement is necessary.

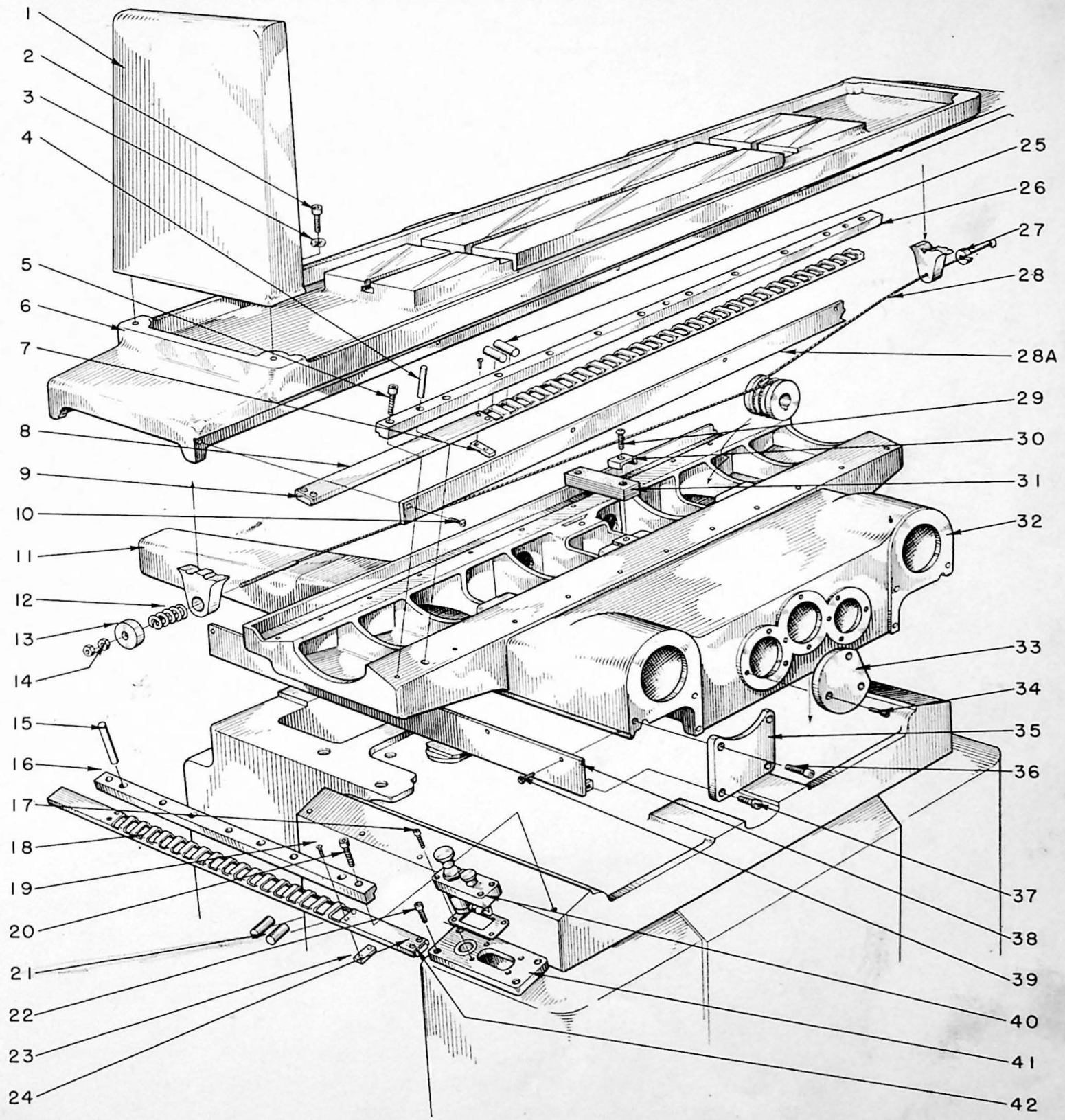
INDEX TO PLATES



PARTS LIST PLATE 1

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	D618-T-6	Table Dust Guard	
2	SP-16	Socket Cap Screw	$\frac{5}{16}$ " - 18 NC x $\frac{3}{4}$ " Long
3	SP-350HC	High Collar Lockwasher	$\frac{5}{16}$ " Nominal Size
4	SP-190	Hardened and Ground Dowel	$\frac{5}{16}$ " Dia. x $1\frac{1}{4}$ " Long
5	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $\frac{7}{8}$ " Long
6	D618-T-1B	Table	
7	A618-S-17	Saddle Cage Scraper	
8	C-618-S-15+	Table and Saddle Roller Cage	
9	A618-S-16	Saddle Cage Stop	
10	SP-35	Button Head Screw	#10 - 24 NC x $\frac{3}{8}$ " Long
11	B618-S-2B	Saddle End Cap	
12	SP-301	Compression Spring	$\frac{3}{4}$ " O.D. x 2" Long x .125 Wide
13	A618-T-3C	Cable Spring Retainer	$\frac{1}{4}$ " - 20 NC
14	SP-101	Hex. Nut	#6 - 32 NC
15	SP-190	Hardened and Ground Dowel	$\frac{3}{8}$ " Dia. x $1\frac{1}{4}$ " Long
16	B618-B-3	Saddle Way Guide	
17	SP-16	Socket Cap Screw	#8 - 32 NC x $\frac{3}{4}$ " Long
18	C-618-B-4+	Saddle and Bed Roller Cage	
19	SP-130R	Self Tapping Screw	#4 Dia. x $\frac{1}{4}$ " Long
20	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $\frac{7}{8}$ " Long
21	SP-61	Steel Roll	$\frac{1}{2}$ " Dia. x 1" Long
22	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $\frac{5}{8}$ " Long
23	A618-B-6	Bed Cage Scraper	
24	SP-97	Round Head Brass Rivet	$\frac{1}{8}$ " Dia. x $\frac{1}{2}$ " Long
25	SP-61	Steel Roll	$\frac{3}{8}$ " Dia. x $\frac{3}{4}$ " Long
26	B618-S-4	Table Way Guide	
27	A618-T-4B	Cable Anchor	
28	A618-T-7C	Cable	
28A	B618-T-2B	Table Ways Cover	
29	SP-35 Soc.	Button Head Socket Cap Screw	$\frac{5}{16}$ " - 18 NC x 1" Long
30	A618-S-13	Bumper Clip	
31	A618-S-14	Longitudinal Table Bumper	
32	D618-S-1B	Saddle	
33	A618-S-12	Saddle Opening Cover	
34	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $\frac{1}{2}$ " Long
35	A618-S-7	Saddle Way End Shield - L.H.	
	A618-S-8	Saddle Way End Shield - R.H.	
36	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $\frac{1}{2}$ " Long
37	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $\frac{3}{8}$ " Long
38	B618-S-11B	Saddle Side Shield - L.H.	
	B618-S-10B	Saddle Side Shield - R.H.	
39	SP-35	Button Head Screw	#10 - 24 NC x $\frac{3}{8}$ " Long
40	C-2030	Lubricator Unit Type L	LMH - C - 2030 SP-900
41	C618-B-33	Oil Reservoir (For Manual Oper. Pump)	
42	A618-B-5	Bed Cage Stop	

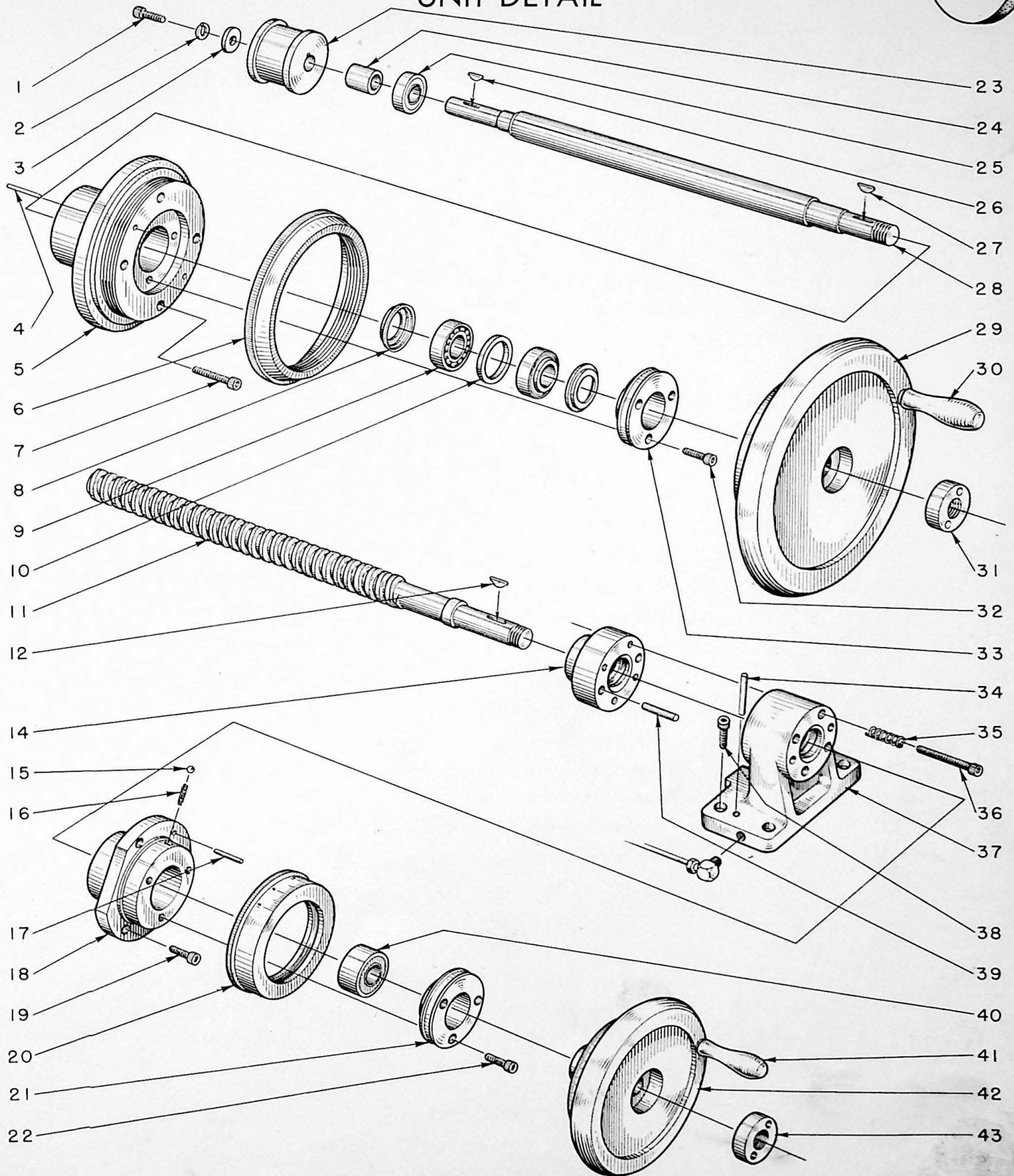
TABLE AND SADDLE DETAILS



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PARTS LIST PLATE 2

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	SP-16	Socket Cap Screw	1/4" - 20 NC x 1" Long
2	SP-350	A.S.A. Lockwasher	1/4" Nominal Size
3	SP-208	Beveled Steel Washer	7/32" I.D. x 3/4" O.D. x 1/16" Thick
4	SP-190	Hardened and Ground Dowel	3/16" Dia. x 1 1/2" Long
5	B618-5-6	Table Feed Cartridge	
6	B618-S-23	Table Feed Locknut	
7	SP-16	Socket Cap Screw	1/4" - 20 NC x 1 1/4" Long
8	A618-S-24	Bearing Shield	
9	SP-216	Roller Bearing, Timken Type TS	Cone A6067 - Cup A6157
10	A618-S-25	Spacing Collar	
11	C618-C-6	Cross Feed Screw	
12	SP-85	Woodruff Key	Size #9
14	A618-C-4	Crossfeed Backlash Nut	
15	SP-60	Steel Ball	1/4" Dia.
16	SP-301	Compression Spring	7/32" O.D. x 1 7/32" x .028 x 5C.P.I.
17	SP-190	Hardened and Ground Dowel	3/16" Dia. x 3/4" Long
18	B618-C-2	Crossfeed Cartridge	
19	SP-16	Socket Cap Screw	1/4" - 20 NC x 1/2" Long
20	A618-C-10	Crossfeed Handwheel Dial Vernier	
21	A618-C-7	Crossfeed Bearing Retainer	
22	SP-16	Socket Cap Screw	1/4" - 20 NC x 1/2" Long
23	A618-S-18	Cable Spool	
24	A618-S-19	Spool Spacer	
25	SP-217	Radial Ball Bearing	MRC #102 KSFF
26	SP-85	Dyett Key	Size #7
27	SP-85	Dyett Key	Size #9
28	B618-S-9	Table Feed Shaft	
29	C618-S-5	Table Feed Handwheel	
30	SP-237	Quick Action Machine Handle	Model #834
31	A618-F-4	Shaft Nut	
32	SP-16	Socket Cap Screw	1/4" - 20 NC x 5/8" Long
33	A618-F-7	Cartridge Bearing Retainer	
34	SP-190	Hardened and Ground Dowel	1/4" Dia. x 1 1/4" Long
35	SP-301	Compression Spring	3/8" O.D. x 3/4" Long x .047 Wide
36	SP-16	Socket Cap Screw	1/4" - 20 NC x 1 3/4" Long
37	B618-C-3B	Crossfeed Nut	
38	SP-16	Socket Cap Screw	1/4" - 20 NC x 7/8" Long
39	SP-190	Hardened and Ground Dowel	5/16" Dia. x 1" Long
40	SP-217	Ball Bearing	MRC #5203 SBKFF
41	SP-237	Quick Action Machine Handle	Model #833
42	B618-C-1	Crossfeed Handwheel	
43	A618-F-4	Shaft Nut	

TABLE HANDWHEEL SHAFT AND CROSS FEED
UNIT DETAIL*abrasive*

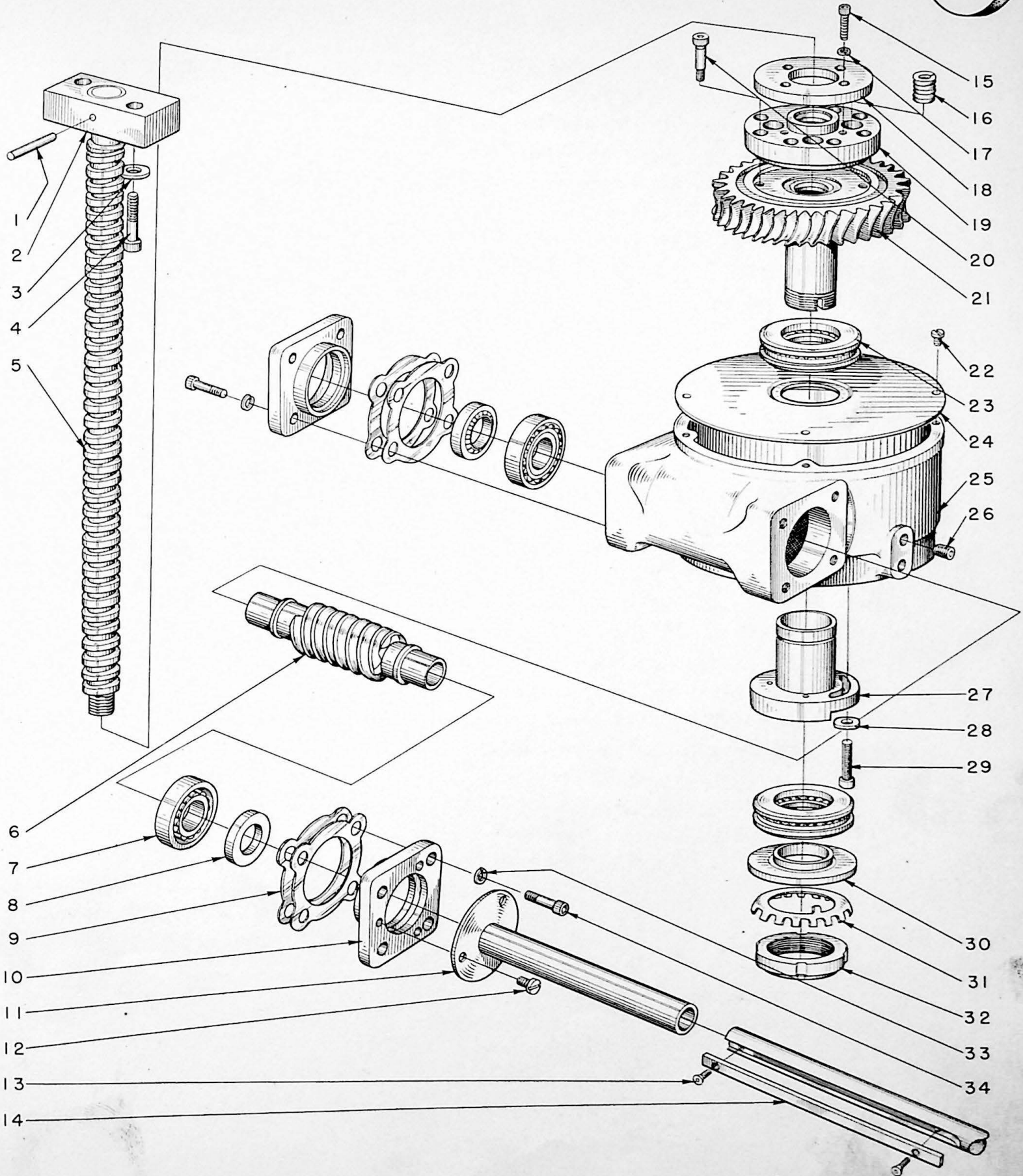
PARTS LIST PLATE 3

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	B618-F-12	Worm Shaft	
2	B618-F-27	Timing Belt Pulley	20 T.
		Socket Set Screw (Furnished with B618-F-27)	$\frac{1}{4}$ " - 20 NC x $\frac{5}{16}$ " Long
3	SP-346	Gilmer Belt	#210L - 050
4	B618-F-26	Timing Belt Pulley	18 T.
		Socket Set Screw (Furnished with B618-F-26)	$\frac{1}{4}$ " - 20 NC x $\frac{5}{16}$ " Long
5	SP-85	Dyett Key	#9 Size
6	A618-F-5	Vertical Feed Handwheel Shaft	
7	SP-60	Steel Ball Grade 1	$\frac{1}{4}$ " Dia.
8	SP-301	Compression Spring	$\frac{7}{32}$ " O.D. x $1\frac{1}{16}$ " Long x .035 Wire 8 C.P.I.
9	B618-F-10	Elevating Feed Cartridge	
10	A618-F-9	Spacing Collar (Outer)	
11	A618-F-8	Spacing Collar (Inner)	
12	A618-F-7	Cartridge Bearing Retainer	
13	SP-85	Dyett Key	#9 Size
14	A618-F-6	Worm Shaft Bearing Housing	
15	SP-217	Radial Ball Bearing	New Departure #55502
16	SP-113	Ball Bearing Locknut	Cat. #N-02
17	SP-190	Hardened and Ground Dowel	$\frac{3}{16}$ " Dia. x $\frac{3}{4}$ " Long
18	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 x $\frac{1}{2}$ " Long
19	A618-F-3	Elevating Worm Shaft Cartridge	
20	SP-352	Ball Bearing Lockwasher	Cat. #W-02
21	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $1\frac{1}{4}$ " Long
22	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 NC x $1\frac{1}{4}$ " Long
23	SP-190	Hardened and Ground Dowel	$\frac{3}{16}$ " Dia. x $1\frac{1}{2}$ " Long
24	SP-217	Radial Ball Bearing	MRC 203 SF
25	SP-16	Socket Cap Screw	$\frac{1}{4}$ " - 20 x $\frac{5}{8}$ " Long
26	A618-F-30	Elevating Handwheel Dial	
	A618-F-2B	Elevating Handwheel Memory Dial - R.H.	Special Equip.
	A618-F-33	Elevating Handwheel Memory Dial - L.H.	Special Equip.
27	C-618-F-31	Elevating Handwheel L.H.	L.H. Machine Only
	C-618-F-11	Elevating Handwheel R.H.	R.H. Machine Only
28	SP-237	Quick Action Machine Handle	Model 834
29	A618-F-4	Shaft Nut	

PARTS LIST PLATE 4

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	SP-190	Hardened and Ground Dowel	1/4" Dia. x 1 3/4" Long
2	A618-F-25B	Elevating Screw Block	
3	SP-208	Beveled Steel Washer	7/8" O.D. x 1 13/32" I.D. x 1/16"
4	SP-7	Hex Head Cap Screw	3/8" - 16 NC x 1 3/4" Long
5	B618-F-24+	Elevating Screw	
6	B618-F-17	Elevating Worm	
7	SP-216	Timken Type TS Roller Bearing	Cone 15590 - Cup 15520
8	SP-372	Oil Seal	Garlock #51 x 351 1 1/8" x 1 5/8" x 5/16"
9	SP-194	Metal Shim	.005 Thick - Timken K20905
	SP-194	Metal Shim	.007 Thick - Timken K20907
	SP-194	Metal Shim	.020 Thick - Timken K20920
10	B618-F-19	Bearing Retainer	
11	B618-F-20	Worm Shaft Shield	
12	SP-35	Button Head Screw	#10 - 24 NF x 3/8" Long
13	SP-37 Soc.	Socket Flat Head Screw	#6 - 32 NC x 3/8" Long
14	B618-F-23	Key	
15	SP-16	Socket Cap Screw	1/4" - 20 NC x 5/8" Long
16	SP-301	Compression Spring	3/4" O.D. x 1" Long x 1/8" Wide
17	SP-350HC	High Collar Lockwasher	1/4" Nominal Size
18	B618-F-15	Backlash Nut Cap	
19	B618-F-14	Backlash Nut	
20	SP-34	Stripper Bolt	5/16" Dia. x 5/8" Long
21	C618-F-13	Elevating Worm Wheel	
22	SP-35	Button Head Screw	#10 - 24 NC x 1/4" Long
23	SP-218	Ball Thrust Bearing	SKF #2909
24	B618-F-22	Cover	
25	D618-F-1	Elevating Gear Housing	
26	SP-560	Socket Pipe Plug	1/8" N.P.T.
27	B618-F-16B	Eccentric Bushing	
28	SP-208	Beveled Steel Washer	1/2" O.D. x 1 13/64" I.D. x 1/16"
29	SP-16	Socket Cap Screw	#10 - 24 x NC x 5/8" Long
30	B618-F-18	Thrust Bearing Retainer	
31	SP-352	Ball Bearing Lockwasher	#W-08
32	SP-113P	Ball Bearing Locknut	#N-08
33	SP-350-HC	High Collar Lockwasher	1/4" Nominal Size
34	SP-16	Socket Cap Screw	1/4" - 20 NC x 5/8" Long

ELEVATING GEAR HOUSING DETAILS

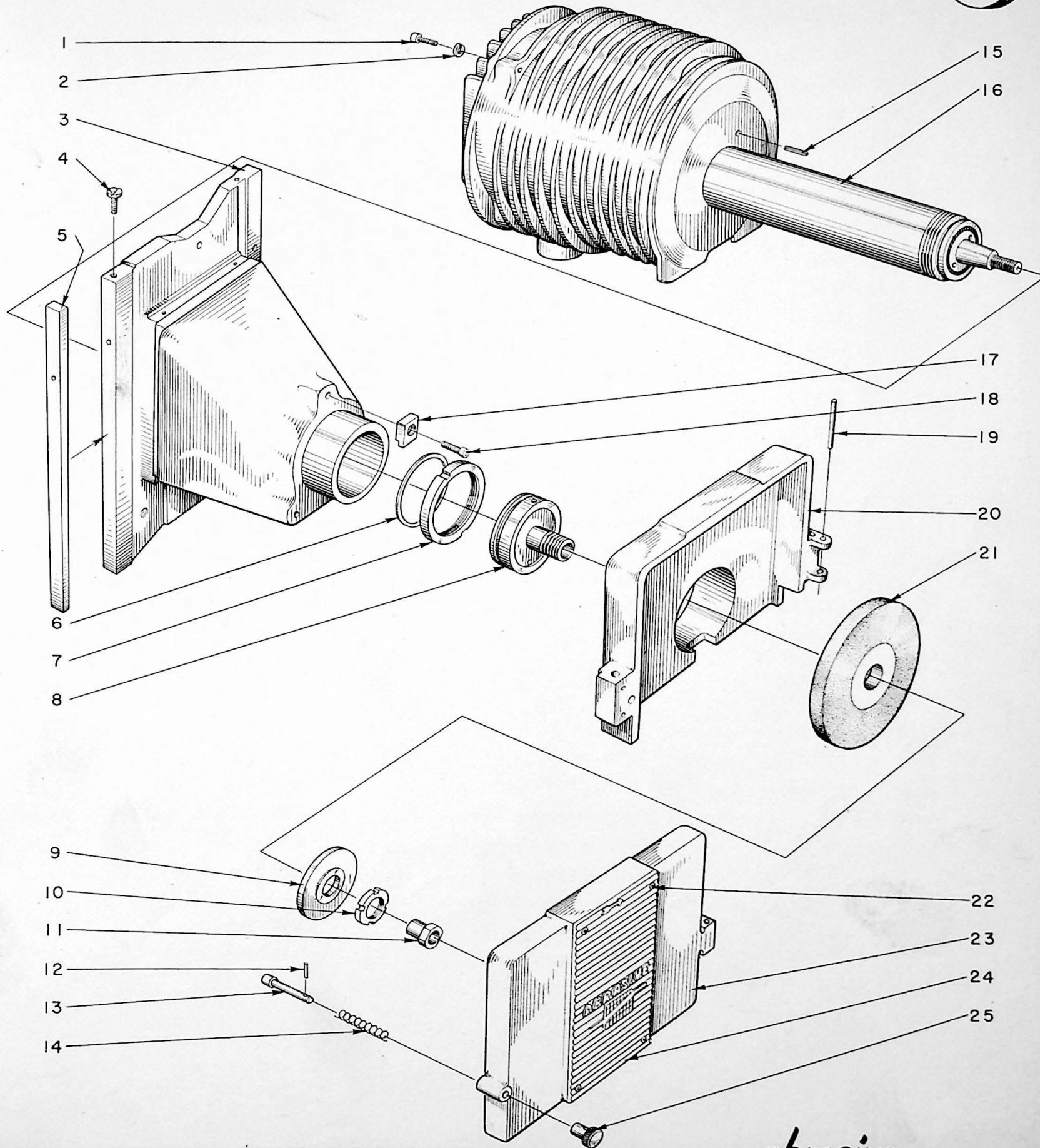


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PARTS LIST PLATE 5

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	SP-35	Socket Cap Screw	1/4" - 20 NC x 7/8" Long
2	SP-350	Lockwasher	1/4" Nominal Size
3	D618-W-1B	12" Wheel Slide	
	D618-W-21B	7" Wheel Slide	
4	3-W-36	Gib Screw	
5	B618-W-9	Wheel Slide Gib	
6	B618-W-114	12" Wave Washer	
	B618-W-214	7" Wave Washer	
7	B618-W-113	12" Cartridge Nut	
	B618-W-213	7" Cartridge Nut	
8	C618-W-104	12" Wheel Sleeve	
	B618-W-204	7" Wheel Sleeve	
9	B618-W-109	12" Wheel Sleeve Flange	
	1-1/2 - W-95	7" Wheel Sleeve Flange	
10	SP-104	12" Round Nut with Cuts	3" - 12 NS - L.H. x 3 3/4" x 3/8"
	SP-104	7" Round Nut with Cuts	1 1/4" - 16 NS - L.H. x 2 1/4" x 5/16"
11	B618-W-112	12" Spindle Nut	
	B618-W-222	7" Spindle Nut	
12	SP-189	Wheel Guard Stud Roll Pin	3/32" x 1/2" Long
13	A-618-W-5	Wheel Guard Stud	
14	SP-301	Compression Spring	3/8" Dia. x .031 Wire x 1" Long
15	SP-189	Roll Pin	3/16" Dia. x 1" Long
16	D618-W-121B	12" Spindle Cartridge Assembly	
	D618-W-221B	7" Spindle Cartridge Assembly	
17	3-W-310	Wheel Guard Clamp	
18	SP-16	Socket Cap Screw	3/8" - 16 NC x 3/4" Long
19	SP-90	Hinge Pin	5/16" Dia. x 2 1/2"
20	D618-W-2	12" Wheel Guard	
	C618-W-22	7" Wheel Guard	
21	SP-70	12" Grinding Wheel	12" x 3/4" x 3" DA 46 - H9 - V20
	SP-70	7" Grinding Wheel	7" x 1/2" x 1 1/4" DA 46 - H9 - V20
22	SP-35 Soc.	Socket Button Head Screw	#10 - 32 NF x 3/8" Long
23	D618-W-3B	12" Wheel Guard Cover	
	C618-W-23B	7" Wheel Guard Cover	
24	C618-W-4	12" Wheel Guard Panel	
	C618-W-24B	7" Wheel Guard Panel	
25	A-618-W-6	Wheel Guard Knob	

WHEEL SLIDE UNIT



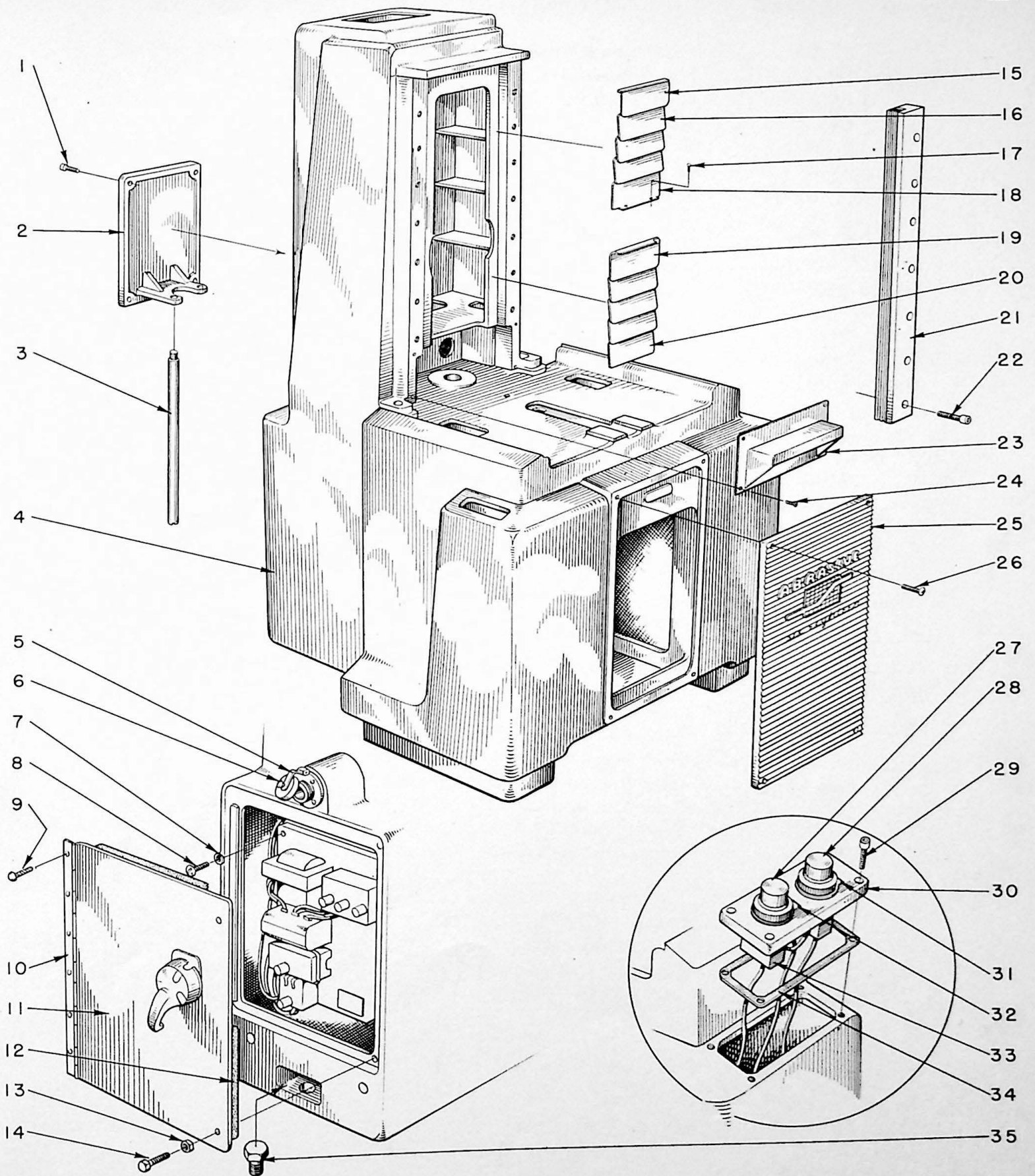
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PARTS LIST PLATE 6

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	SP-16	Socket Cap Screw	1/4" - 20 NC x 1/2" Long
2	D618-B-8	Column Back Plate	
3	B618-B-9	Cartridge Rail 12" Machine Only	
4	E618-B-1	Bed Unit	
5	SP-921	Russell and Stoll Receptacle	Cat. #F-11111
6	SP-35	Button Head Screw	#10 - 24 NC x 3/8" Long
7	SP-350	A.S.A. Lockwasher	5/16" Nominal Size
8	SP-35	Button Head Screw	5/16" - 18 NC x 1/2" Long
9	SP-40	Parker Kalon Drive Screw	#10 x 1/2" Long-Type U
10	B618-U-4	Door Hinge	
11	D618-U-3B+	Electrical Compartment Door	
12	B618-U-5	Door Gasket	
13	SP-103	Captive Nut	1/4" - 20 NC
14	SP-7	Hex. Head Cap Screw	1/4" - 20 NC x 1"
15	B618-B-14B	Column Way Guard - Top	
16	B618-B-11B	Column Way Guard - Intermediate	
17	SP-35	Button Head Screw	#10 - 24 NC x 1/4" Long
18	B618-B-13B	Column Way Guard - Wheel Slide Top	
19	B618-B-12B	Column Way Guard - Wheel Slide Bottom	
20	B618-B-45	Column Way Guard - Lower	
21	C618-B-17C	Wheel Slide Strap	
22	SP-16	Socket Cap Screw	1/2" - 13 NC x 1 1/4" Long
23	C618-B-10B	Column Way Guard - Bottom	
24	SP-35	Button Head Screw	#10 - 24 NC x 1/4" Long
25	D618-B-18	Front Bed Panel	
26	SP-35 Soc.	Socket Button Head Screw	1/4" - 20 NC x 5/8" Long
27	SP-793	Push Button Operator - Red	CR 2940 - UJ200C
28	SP-793	Push Button Operator - Black	CR 2940 - UJ200B
29	SP-16	Socket Cap Screw	1/4" - 20 NC x 1/2" Long
30	B618-B-28	Push Button Cover	
31	SP-795	Name Plate - Start	GE #118025C
32	SP-795	Name Plate - Stop	GE #118025D
33	SP-793	Control Unit Contact Block	CR 2940 - U - 202
34	A618-B-31	Push Button Cover Gasket	
35	A618-B-29	Jack Screw	

BED UNIT

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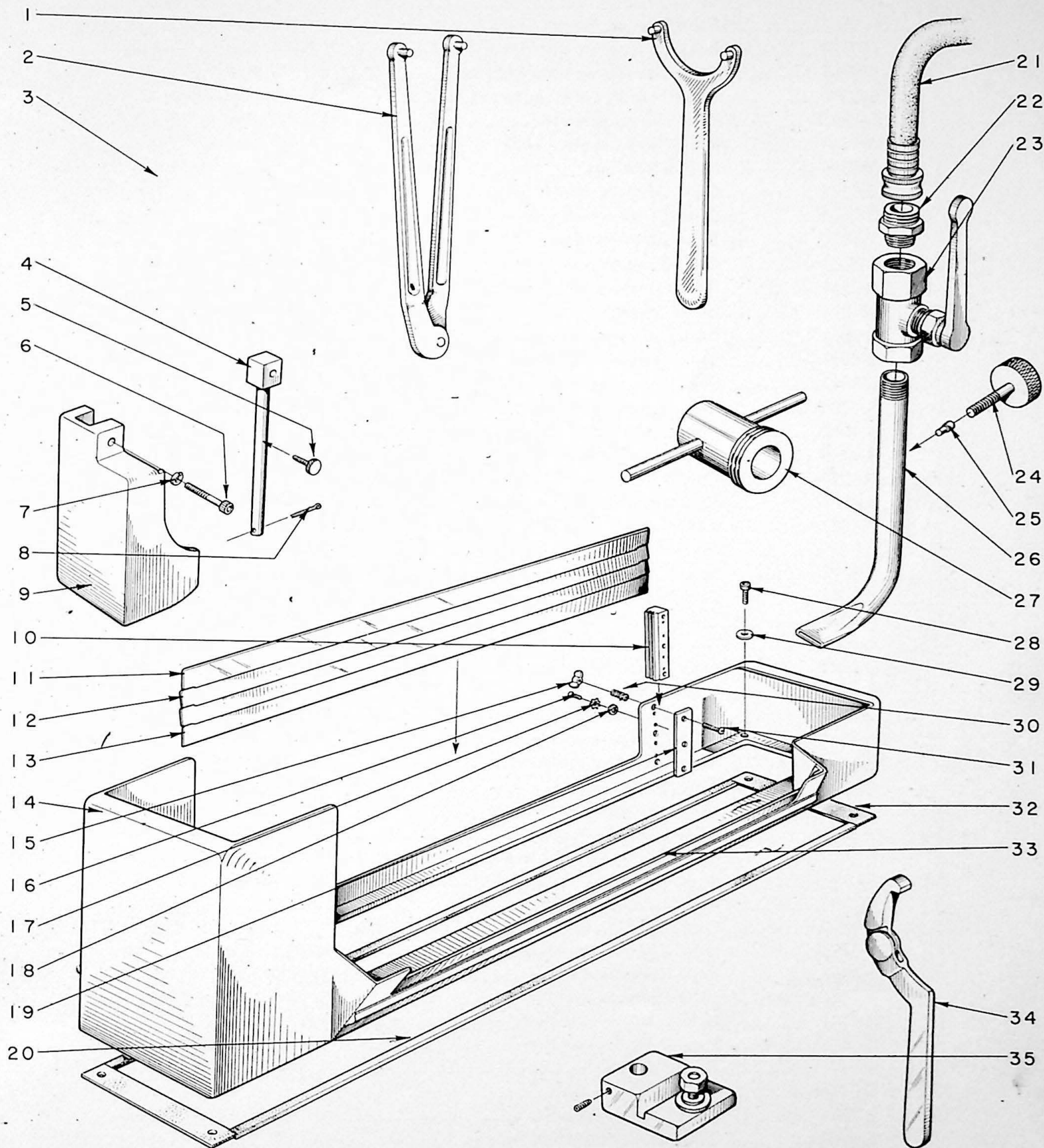


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PARTS LIST PLATE 7

KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	SP-233	Face Spanner Wrench 12" Machine	#428 - 2 1/4" C to C
2	SP-233	Face Spanner Wrench (Adjustable)	#482 2" Capacity
4	B618-P-5B	Spray Guard Stud 12" Machine	
	B618-P-7B	Spray Guard Stud 7" Machine	
5	SP-46	Knurled Set Screw	1/4" - 20 NC x 3/4" Lg. x 3/4" Dia. Head
6	SP-16	Socket Cap Screw	5/16" - 18 NC x 2" Lg.
7	SP-350 HC	High Collar Lockwasher	5/16" Size .047" x .078"
8	SP-95	Cotter Pin	3/32" x 1" Long
9	C618-P-3	Spray Guard for 12" Wheel	
	C618-P-4	Spray Guard for 7" Wheel	
10	B618-P-10B	Rear Adjustable Guard Guide	
11	B618-P-15B	Top Rear Adjustable Guard	
12	B618-P-16B	Intermediate Rear Adjustable Guard	
13	B618-P-17B	Bottom Rear Adjustable Guard	
14	E618-P-8B	Table Water Guard	
15	SP-108	Wing Nut	1/4" - 20 NC
16	SP-35 Soc.	Socket Button Head Screw	#10 - 24 NC x 1/2" Lg.
17	SP-353	"Shakeproof" Lockwasher	Size #10 - #1210
18	SP-208	Beveled Steel Washer Size #10	1/2" O.D. x 13/64" I.D. x 1/16" Thick
19	B618-P-11	Rear Adjustable Guard Clamp	
20	A618-P-19B	Front and Rear Gaskets	
21	SP-339	Light Green Plastic Hose with 3/4" Female Half Hose Coupling on Each End	1/2" I.D. x .093 Wall 8 Ft. Long
22	SP-557	Brass-Male Hose Nipple	1/2" I.P.T. x 3/4" Male Hose Thread
23	SP-537	Double Seal Ball Valve Jamesbury #D11-BB	1/2" Pipe Size Naval Bronze
24	SP-46	Nozzle Clamp Screw	5/16" - 18 NC x 1"
25	3-P-117	Clamping Shoe	
26	3-P-10C	Coolant Nozzle For 12" Machine	
	B618-P-20B	Coolant Nozzle For 7" Machine	
27	3-W-47C+	Wheel Sleeve Wrench For 12" Machine	
	B618-W-223	Wheel Sleeve Wrench For 7" Machine	
28	SP-16	Socket Cap Screw	5/16" - 18 NC x 5/8" Lg.
29	SP-208	Beveled Steel Washer	3/4" O.D. x 11/32" I.D. x 1/16" Thick
30	SP-301	Compression Spring	3/8" O.D. x 3/4" Lg. .047" Wide x .119" Pitch
31	SP-35B	Button Head Screw - Brass	1/4" - 20 NC x 1 1/4" Lg.
32	B618-P-18B	End Gaskets	
33	C618-P-12B	Front Adjustable Guard	
34	SP-232	Adjustable Hook Spanner Wrench	#472 1 1/4" to 3"
35	SP-65+	Diamond Holder Complete	For 3/8" Bolt

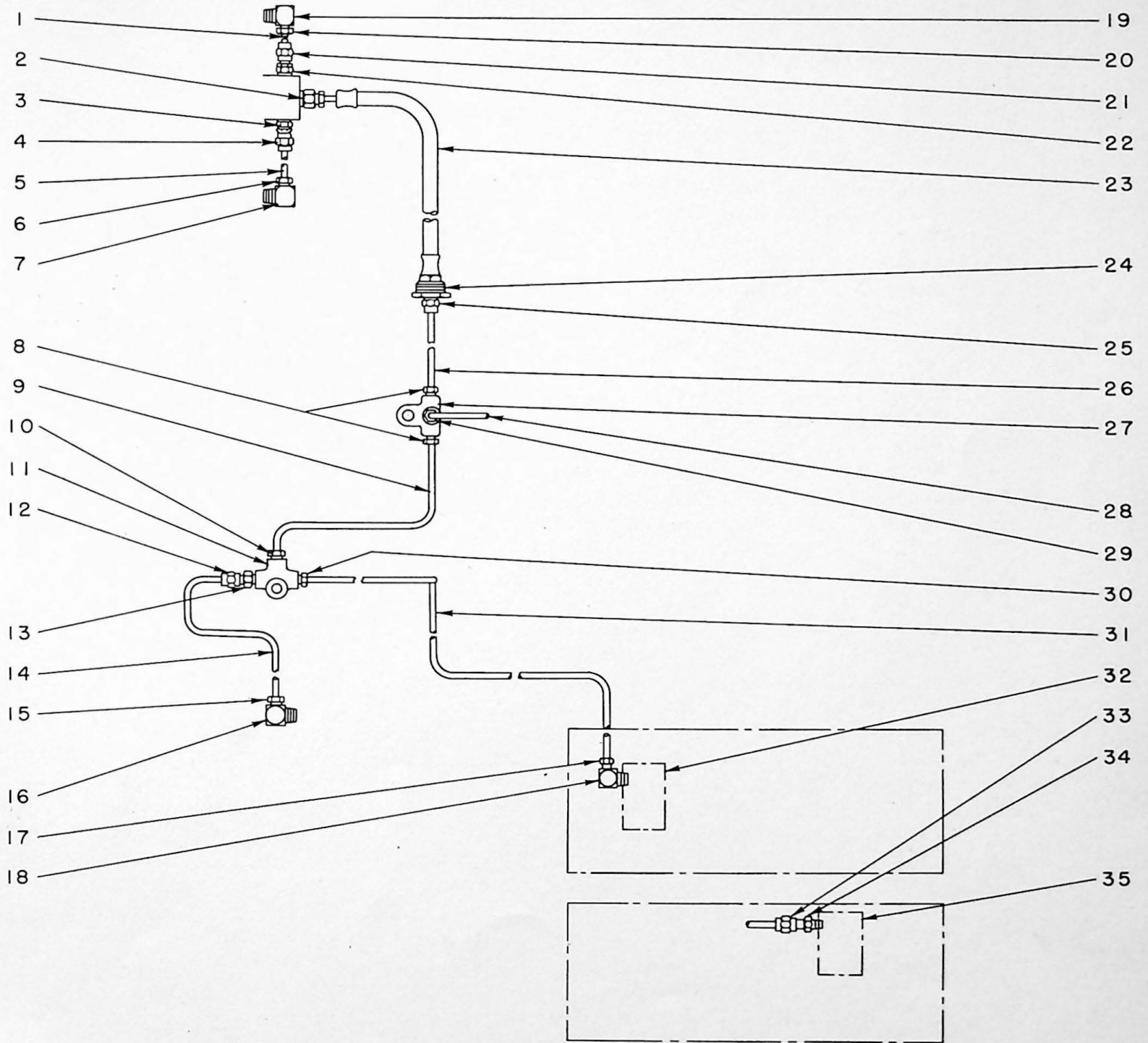
OUTFIT BOX AND TABLE WATER GUARD DETAILS



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KEY NO.	PART NO.	PART NAME	SPECIFICATIONS
1	SP-599	Copper Tubing	$\frac{5}{32}$ " O.D. x .055 Wide x 12" Long
2	A2835	Bijur Straight Adapter	SP-900 $\frac{1}{8}$ " I.P.T. x $\frac{5}{8}$ " Long
	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
3	B-3240	Bijur Type M Meter Unit	SP-900 MRA - Size O
4	B-1095	Bijur Compression Nut	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
5	SP-599	Copper Tubing	$\frac{5}{32}$ " O.D. x .055 Wide x 12" Long
6	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
7	A-3080	Bijur Elbow Adapter	SP-900 $\frac{1}{8}$ " I.P.T.
8	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
9	SP-94	Brass Tubing	$\frac{5}{32}$ " O.D. x .025 Wide x 7" Long
10	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
11	B-3065	Bijur Junction - 3 Way	SP-900
12	B-1095	Bijur Compression Nut	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
13	B-3191	Bijur Type M Meter Unit	SP-900 MJB - Size O
14	SP-599	Copper Tubing	$\frac{5}{32}$ " O.D. x .055 Wide x 18" Long
15	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
16	A-3080	Bijur Elbow Adapter	SP-900 $\frac{1}{8}$ " I.P.T.
17	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
18	A-3080	Bijur Elbow Adapter	SP-900 $\frac{1}{8}$ " I.P.T.
19	A-3080	Bijur Elbow Adapter	SP-900 $\frac{1}{8}$ " I.P.T.
20	B-1371	Bijur Compression Bushing	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
21	B-1095	Bijur Compression Nut	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
22	B-3240	Bijur Type M Meter Unit	SP-900 MRA - Size O
23	B-4872	Bijur Hose Assembly	SP-900 Type SC
24	A618-B-27	Oil Hole Connector	
25	B-1095	Bijur Compression Nut	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
26	SP-94	Brass Tubing	$\frac{5}{32}$ " O.D. x .025 Wide x 5 $\frac{1}{2}$ " Long
27	B-1092	Bijur Junction - 3 Way	SP-900
28	SP-599	Copper Tubing	$\frac{5}{32}$ " O.D. x .055 Wide x 10" Long
29	B-3191	Bijur Type M Meter Unit	MJB Size O
	B-1095	Bijur Compression Nut	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
30	B-1371	Bijur Compression Bushing	For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	For $\frac{5}{32}$ " Tubing
31	SP-94	Brass Tubing	$\frac{5}{32}$ " O.D. x .025 Wide x 26" Wide
32	D618-B-34	Manual Pump Assembly	
33	B-1095	Bijur Compression Nut	SP-900 For $\frac{5}{32}$ " Tubing
	B-1061	Bijur Compression Sleeve	SP-900 For $\frac{5}{32}$ " Tubing
34	B-3794	Bijur Adapter Nipple - Male	SP-900
35	D618-B-32B	Automatic Lubrication Pump Assembly	

BIJUR OILING SYSTEM



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A *TRUSPECTIVE* Publication by
The PURNELL COMPANY
Boston, Mass.