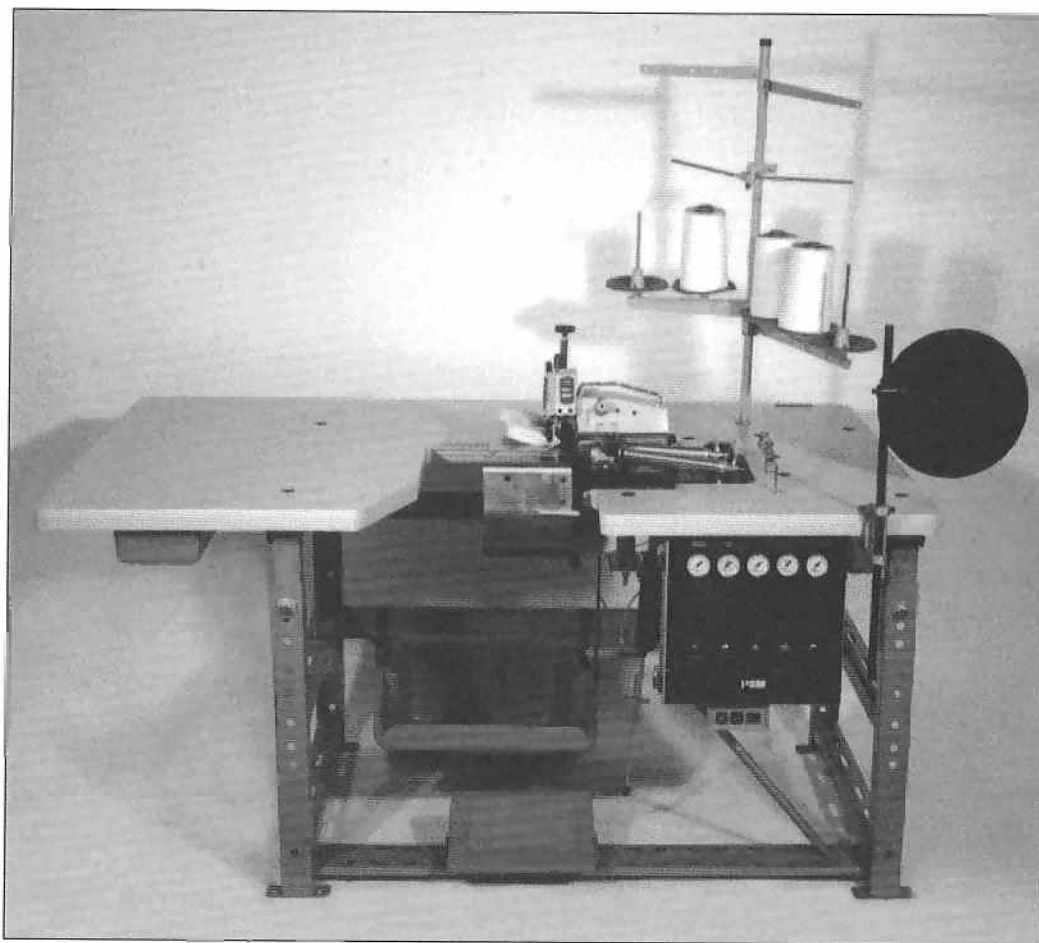




Catalog #BS 401 9/96

#9520

BS 401 Mattress & Box Spring Machines



INSTRUCTIONS & PARTS MANUAL

For BS 401-100, BS 401-300, BS 401-500, BS 401-600 & CB 100

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INSTRUCTIONS

RECOMMENDED SPEEDS

BS 401-100, 300 & CB-100 NOT TO EXCEED 4200 SPM.

BS 401-500 NOT TO EXCEED 3400 SPM.

BS 401-600 NOT TO EXCEED 2100 SPM.

NEEDLES

The **BS 401-100, 300 & CB-100** are designed to use needle type PSM 130.

The **BS 401-500** is designed to use needle type PSM 160.

The **BS 401-600** is designed to use needle type PSM 1160(23).

Generally, the size of the needle should be determined by the size of thread or weight of material to be sewn.

DAILY MAINTENANCE

Before morning start

- Make sure oil level is correctly maintained in oil sight gauge.
- Make sure needle is correctly set and not damaged.
- Make sure threading is correct.
- Make sure chaining thread approximately 10 mm long remains behind presser foot.

Chaining Thread

It is necessary to have a chaining thread approximately 10 mm long behind the presser foot when starting to sew. This will avoid "skip-stitches."

After replacing needles or thread, check that a continuous, smooth neat chaining thread comes out from under the presser foot.

At close of work

- Remove dust and lint deposited in the machine around needle plate and looper.
- If any trouble or irregularity is found, report it to the plant mechanic for adjustment or repair.
- Keep record of needle and thread breakage.
- Dust cover, furnished with machine, should be placed on the machine.

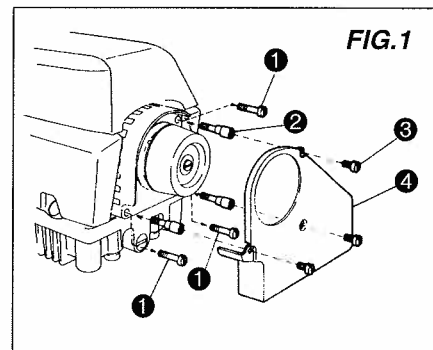
Cleaning the Machine

Cleaning the machine is a simple but important operation. It is not necessary to remove any parts. Merely release the foot and swing it out to the left. Swing out the covers and remove all the collected lint from around the loopers, feed slots, and under the needle plate. Blow out any loose lint or use a lint brush. Replace covers and return foot to the sewing position.

BELT GUARD ASSEMBLY

Assemble belt guard on machine in sequence as follows:

1. Put machine on table.
2. Replace screws ① for oil cooler cover with fixing screws ② provided.
3. Put V-belt in machine pulley.
4. Fix belt guard ④ on fixing screws ② with screws ③.
5. Rest machine in position in work table.
6. Engage V-belt in machine motor pulley.



LUBRICATION

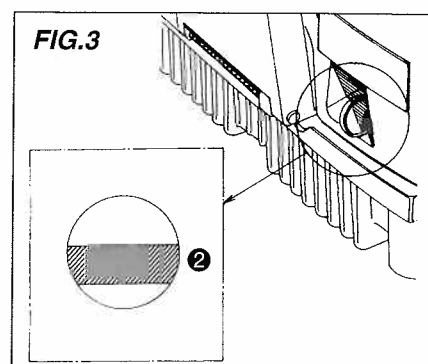
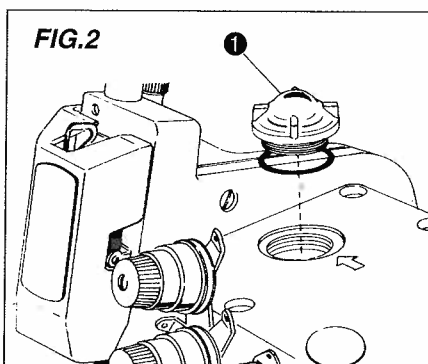
Lubrication is important in operating precision machines like the **BS 401**. The life of the machine depends on the use of quality oil. Use only oil recommended for these machines as shown at right.

1. At the end of 4 weeks, the original oil should be drained and replaced.
2. Oil level should always be kept between two lines on the oil sight gauge (as shown in **Fig.3** below).

		Brand "A"	Brand "B"
Kinematic Viscosity (centistokes)	100°F	19.01	14.57
	210°F	4.04	3.57
Viscosity Index	VI (A)	130.0	147.5
	VI (B)	123.5	142.5
Pour Point (°F)		-59.0	-63.5
Load Carrying Capacity (kg/cm ²)		more than 12 (170 psi.)	more than 12 (170 psi.)

To Fill Oil:

1. Remove oil sight window ① and pour fresh oil into reservoir (700 c.c. capacity) until oil reaches upper line of oil sight gauge ②.
2. Replace window ①.

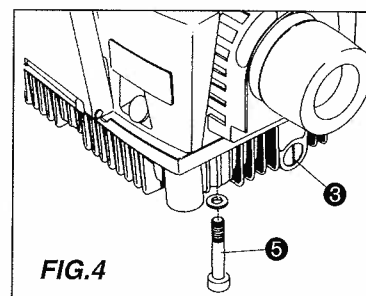


Caution: Keep oil level between the two lines on gauge ②.

To Drain Oil:

1. Remove the machine from its stand and set it on a table.
2. Screw out drain plug ③ and drain oil.
3. Replace drain plug ③.

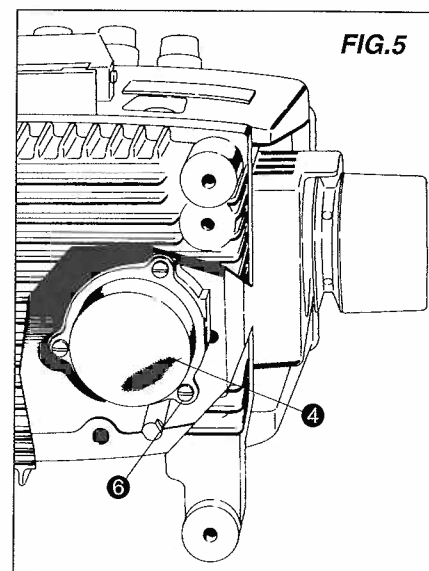
Change oil entirely every 6 months.



Oil Filter

Filter ④ should be kept clean. Lubrication oil is filtered and delivered to all frictional surfaces. Clogging of this filter may cause lack of lubrication and accidental seizure of parts. Check and clean filter every three months, or if necessary, replace with new filter when: Oil jet in oil sight window ① is restricted or weak, or oil contains foam or debris.

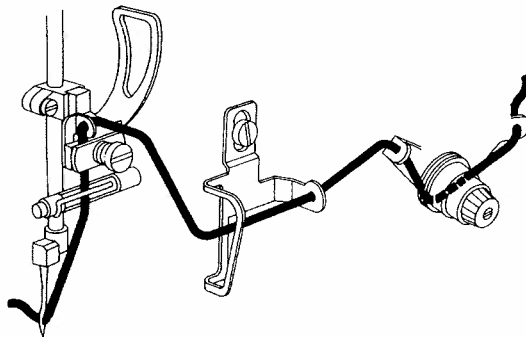
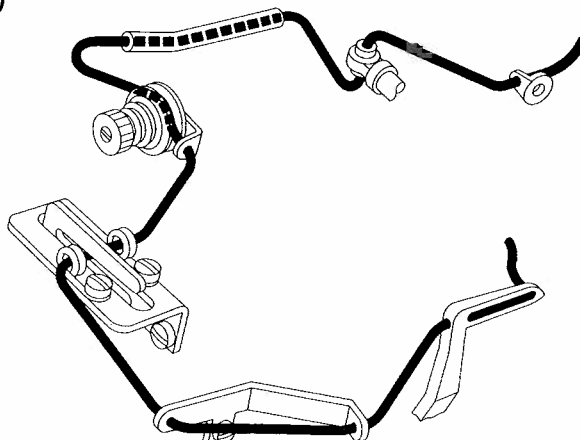
1. Drain oil from machine.
2. Remove bolts ⑤ and oil pan from machine.
3. Remove screws ⑥ and take out filter ④.
4. Clean filter ④ with new petrol and blow with low pressure air.
5. Replace filter ④ and tighten screws ⑥.
6. Replace oil pan and tighten bolts ⑤.
7. Fill reservoir level with upper line of oil sight gauge ②.



THREADING

When a machine is received, note that it has been threaded correctly. The simplest way to rethread it is to tie the new threads to those already in the machine and pull the new threads through, making sure that the knots will go through the looper eyes. In case the machine requires a complete rethreading, refer to threading diagrams **Fig.9 & Fig.10**.

The amount of thread tension required varies with type of material, size, and type of thread, etc. To increase thread tension, turn each thread tension nut clockwise, and to decrease, counter clockwise.

FIG.9**FIG.10****STITCH LENGTH REGULATION**

1. Swing out cloth plate to the left.
2. Press in rod ①.
3. While pressing in on rod ①, turn handwheel in the sewing direction until rod 1 drops into the hole in eccentric. Read the number shown on handwheel, opposite to the mark on indication plate. This number indicates the length of one stitch of your machine in millimeters.
4. While keeping rod ① dropped in eccentric, turn handwheel toward the desired stitch length for a longer or a shorter stitch.

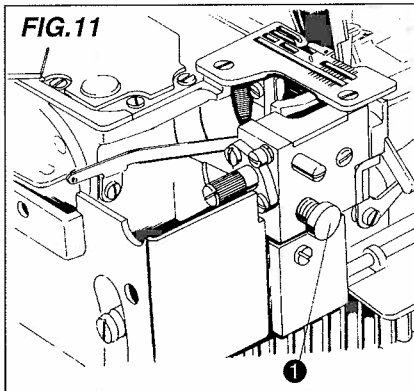
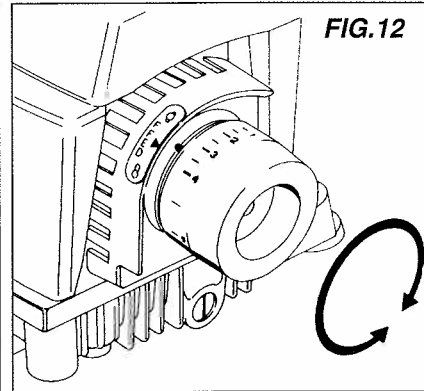
Longer stitch - Turn handwheel clockwise.

Shorter stitch - Turn handwheel counter clockwise.

5. When desired stitch length is set, release rod ①.

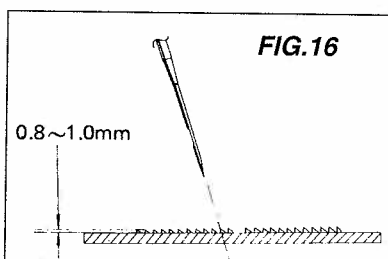
6. Return cloth plate to the sewing position.

The stitch length made may vary more or less depending on the material.

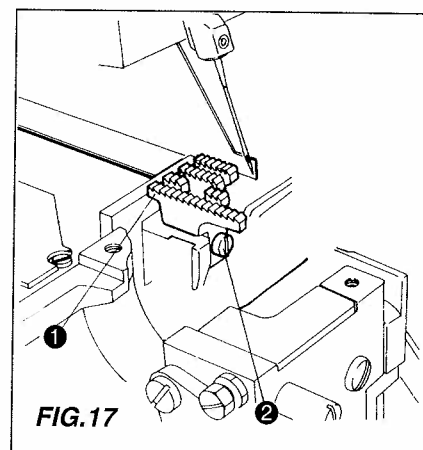
FIG.11**FIG.12**

FEED HEIGHT ADJUSTMENT

Standard height of main feed is 0.8 - 1.0 mm above the surface of needle plate at its back tooth when feeds are at their highest position. A straight edge can be placed across the top of main feeds.



1. Loosen screw ②.
2. Adjust feed ① by raising or lowering until proper height is obtained.
3. Tighten screw ②.

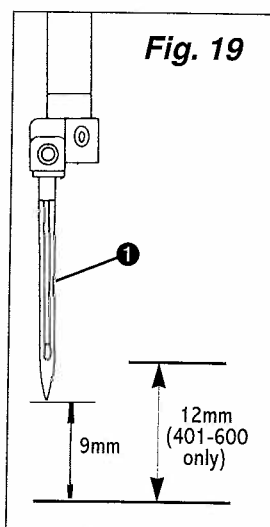
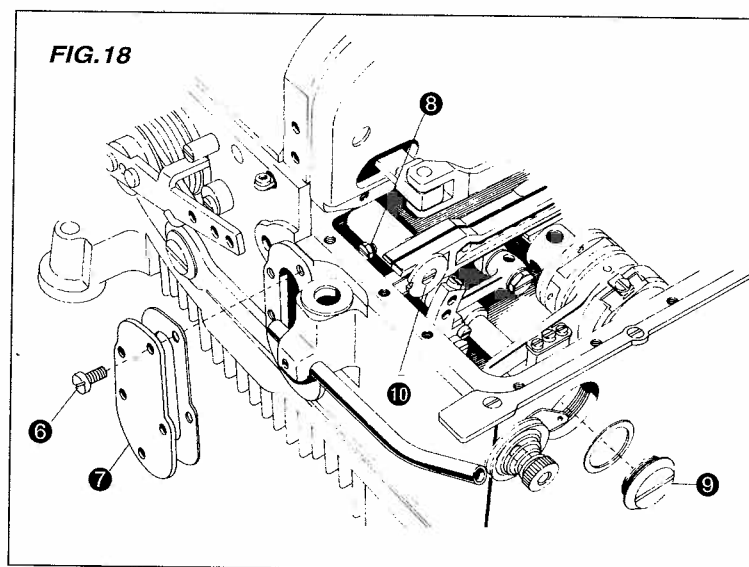


FEED TILT ADJUSTMENT

Feed dogs have generally been preset at the factory.

In general, set feeds level as follows:

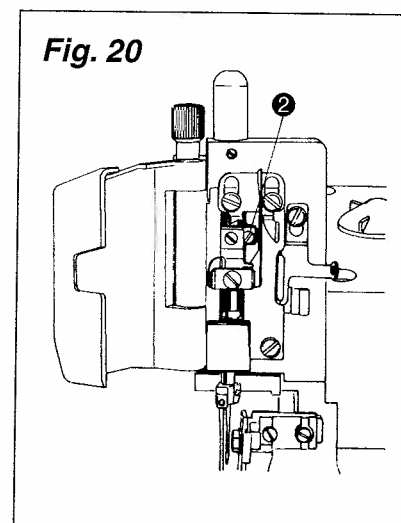
1. Turn handwheel until feeds are at their highest position.
2. Remove screws ⑥ and cover plate ⑦.
3. Loosen screw ⑧.
4. Remove screw ⑨ and turn screw ⑩ with a screwdriver until proper tilt is obtained.
5. Tighten screw ⑧ while pressing screw ⑩ to eliminate play in feed bars. Replace cover plate ⑦ and screws ⑥.
7. Replace screw ⑨.



NEEDLE BAR HEIGHT ADJUSTMENT

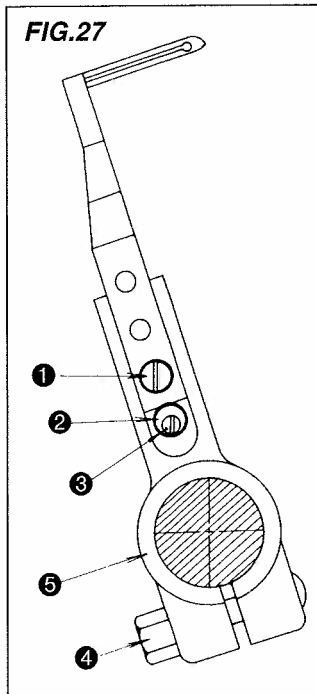
Turn handwheel until needle is at its highest position. Check that the clearance between the point of needle ① and the top of needle plate is correct as listed below. If this setting is incorrect, reset as follows.

1. Slightly loosen screw ②.
2. Reset needle bar to correct clearance at its highest position.
3. Turn handwheel and observe that needle descends in the center of the needle hole in needle plate.
4. Tighten screw ② securely.



LOOPER ADJUSTMENT

FIG.27



When looper is at its extreme left position, the distance 2.1 mm should be obtained from the center line of the needle to the point of looper. The clearance 0 - 0.1 mm should also be obtained when the looper point is in the scarf of the needle.

1. Slide looper into lever ⑤, making sure it reaches regulator ②.
2. If necessary, adjust this by turning regulator ②.
3. Turn handwheel by hand until needle bar ascends 3.0 mm from the lowest position.
5. Move lever ⑤ so that looper point comes to the scarf of needle and just touches needle (the clearance 0 - 0.1 mm).
6. Turn handwheel until looper is at its extreme left position.
7. Adjust the distance from the centerline of needle to point of looper to 1.5 to 2 mm.
8. Tighten screw ④ securely.

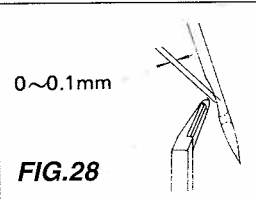


FIG.29

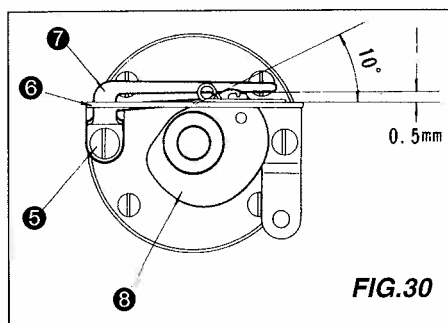
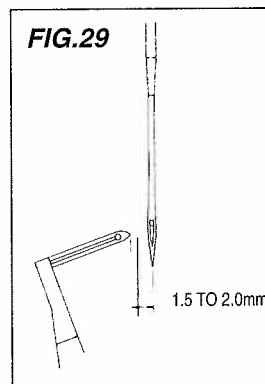
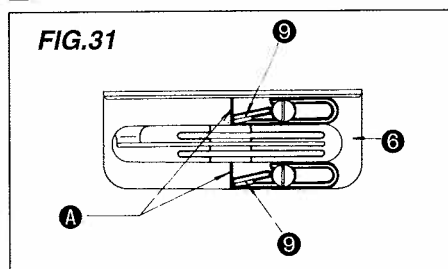


FIG.30

LOOPER THREAD CONTROL ADJUSTMENT

1. Lightly loosen screw ⑤.
2. Set bracket ⑥ horizontal and set guide ⑦ as 0.5 mm above from the top of bracket ⑥.
3. Tighten screw ⑤.
4. Loosen two screws for takeup ⑧ and turn handwheel until looper is at extreme right position.
5. Set takeup ⑧ so that its flat portion is at a 10 degrees angle to guide ⑦.
6. Tighten the two screws loosened.
7. Loosen screws holding eyelets ⑨ and move eyelets ⑨ until the coiled ends line up with engraved line A on bracket, then tighten screws.

FIG.31

**NEEDLE GUARDS.**

1. Turn handwheel until needles are at their lowest position.
2. Loosen screws ①. Adjust guard ② back and forth until it just touches needle. Tighten screws ①.
3. Loosen screw ③. Turn handwheel until needles are at their lowest position.
4. Adjust guard ④ so there is a space of 0.1 - 0.2 mm between needle and guard ④. Tighten screw ③.

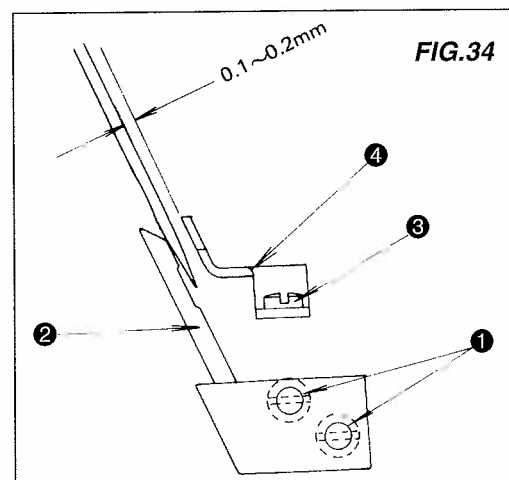
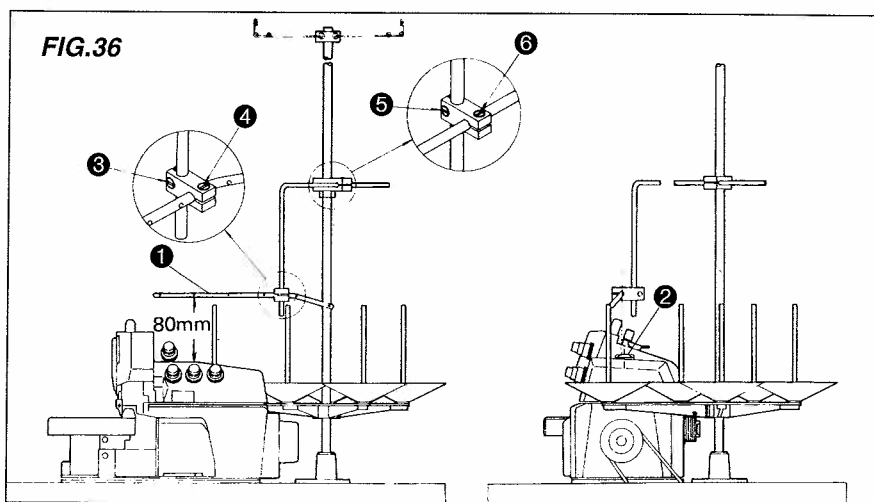


FIG.34

THREAD STAND SETUP

1. Set thread stand as shown in Fig.36. Loosening screws ③, ④, ⑤, and ⑥, set thread guide bar ① as follows.
2. Obtain the distance of approximately 80 mm between bar ① and machine top cover.
3. Bar ① should be above and a little front of oil sight window ②.
4. Tighten screws ③, ④, ⑤, and ⑥.



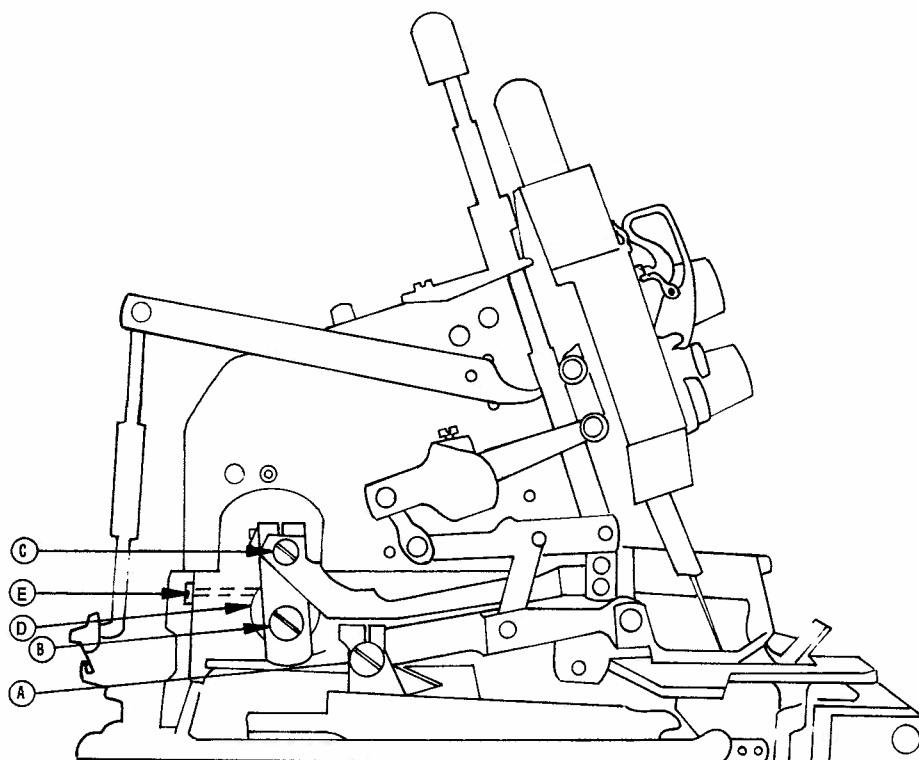
WALKING FOOT ADJUSTMENTS

- Ⓐ This eccentric pin adjusts the position of the Walking Foot front to rear. This enables you to align the Walking Foot teeth with the lower feed dog teeth.
- Ⓑ This screw adjusts the Walking Foot movement in relation to the presser foot. The higher the bracket, the faster the presser foot will meet the needle plate, causing the Walking Foot to raise off the work faster. Lowering the bracket will cause the Walking Foot to raise off the work more slowly.
- Ⓒ This eccentric pin primarily adjusts the position of the presser foot front to rear.

Ⓓ This shaft adjusts the position of the presser foot front to rear. It is used to adjust the clearance between the presser foot and the Walking Foot.

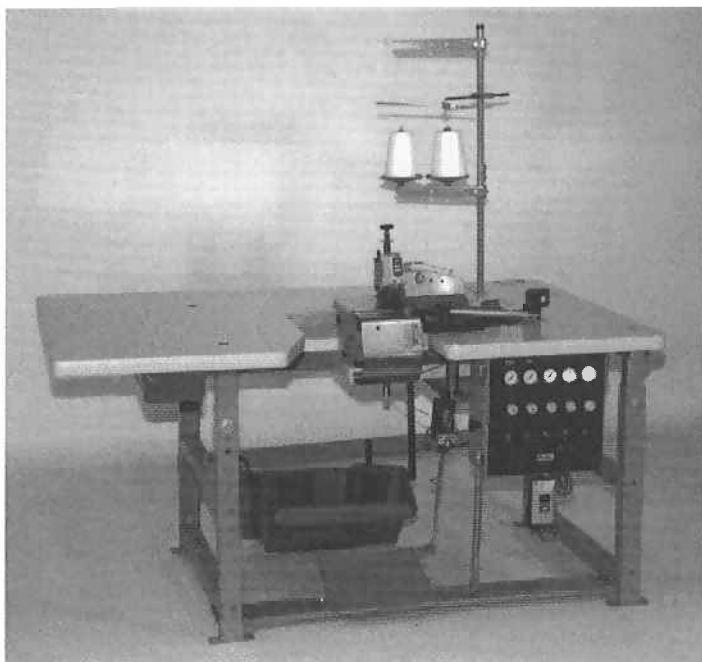
Ⓔ This screw holds shaft 'D'. Loosen it to free the shaft.

Any one of the above adjustments will slightly change one or more of the other adjustments. Take this into consideration when making any one adjustment. Before running the machine, turn it over by hand to check all clearances.



OPERATION**General Description**

Porter's binding machines allow an operator to hem a panel to a border while taping in one operation. Pneumatic feed and control systems and high speed sewing head provide semi-automatic performance.

**Features**

Pneumatic hemming and border control system.
Synchronized top feeding unit.
Needle positioner.
Edge control warning system.
Pneumatic foot lift.
Totally enclosed oiling system.
High speed sewing head.

Benefits

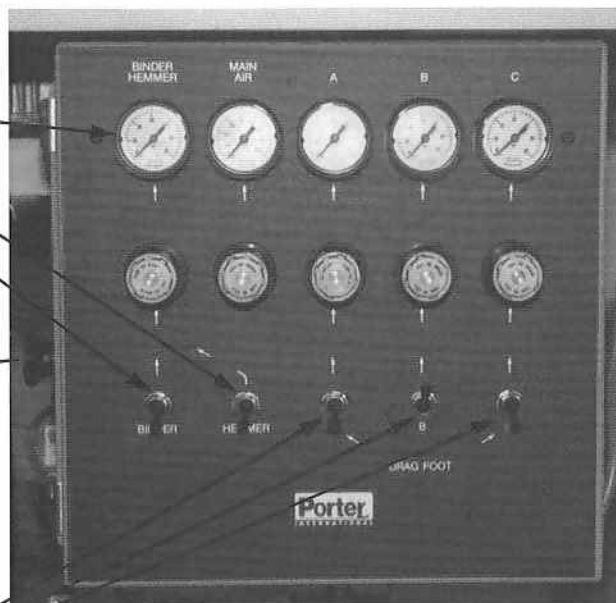
Eliminates pre-hemming panels.
Increases box spring production as much as 60%.
Panel and closed border are sewn evenly by pneumatic control system and synchronized top feed unit.
Increase of 25% in sewing machine speed.
Eliminates need for skilled operator
Thread savings of 33%.

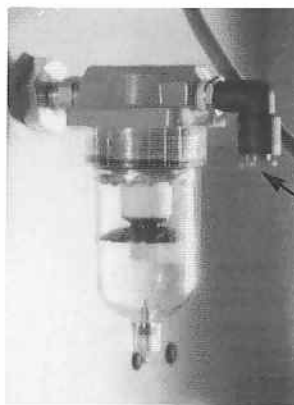
1. Flip down toggle switches on control box

Binder hemmer gauge
Hemmer
Binder

Button to raise drag foot

Drag foot



2. Connect main air

Attach
air hose

3. Insert binding tape

Make sure it is inserted under presser foot.
*Note: Push treadle back to lift foot.

**4. Adjust air pressure settings (see photo at left)****A. Main air gauge.**

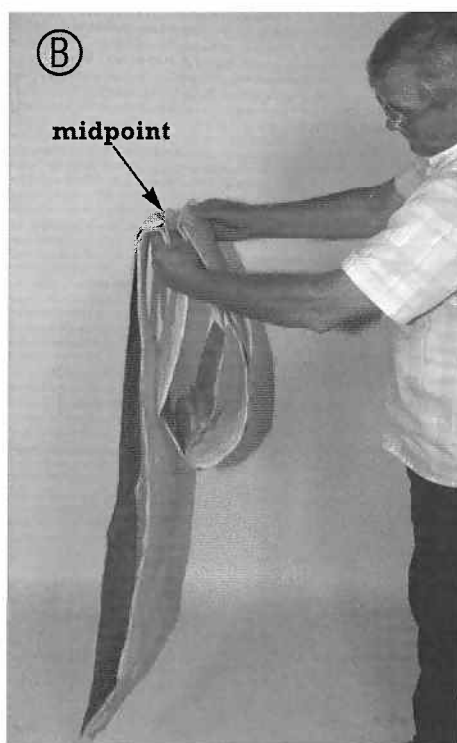
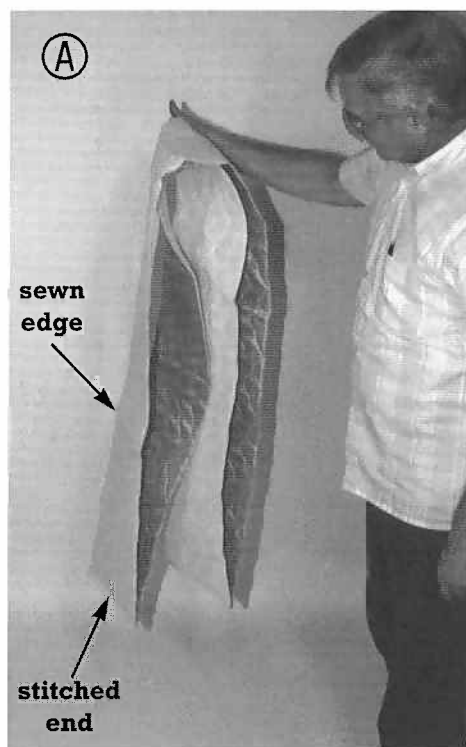
1. Flip up "hemmer" toggle switch.
2. Adjust main air knob to obtain 80-100 PSI of air pressure.
3. Tighten center screw on knob to lock the knob at this position.

B. Binder hemmer gauge

1. Flip up "binder" toggle switch.
2. Adjust knob and tighten screw to obtain 30 PSI of air pressure as described below.

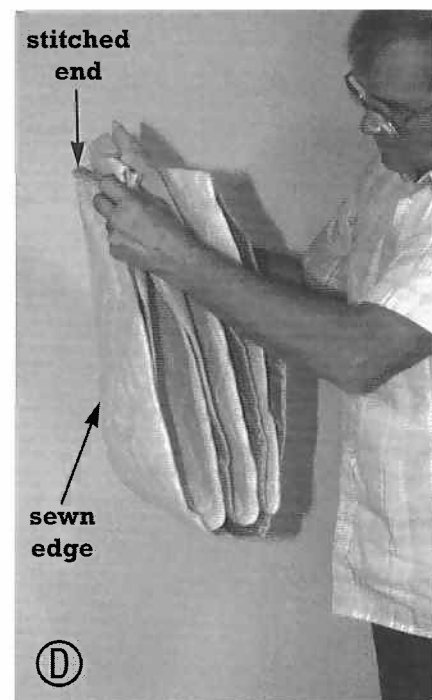
C. "A, B, C" gauges (These gauges control the air pressure on the drag foot. The three switches toggle three different types of material.)

1. Flip up respective toggle switches.
2. Adjust knob and tighten screw as described above. Actual settings are determined by the border material used. (See 7 below.)



5. Prepare border material

- Ⓐ Hold border at midpoint with stitched end at one end and sewn edge on right.
- Ⓑ Fold ends to front and back of midpoint.
- Ⓒ Drop middle fold and refold to outside away from stitched seam.
- Ⓓ Hold with stitched edge on top and sewn edge on right and place in bucket.



6. Load machine

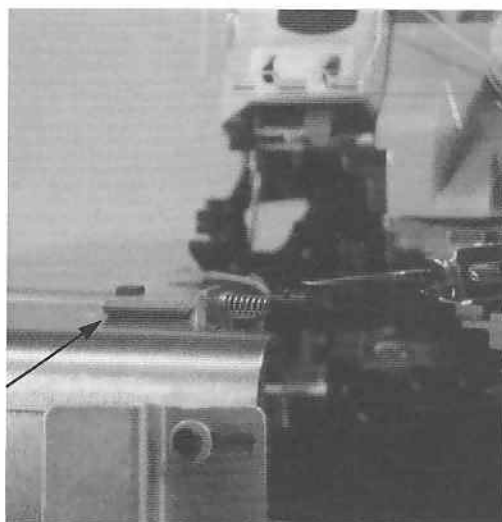
- A. Slide stitched end of border under drag foot and presser foot up to the edge of the cloth plate.
- B. Press the button on the side of the control box with knee to raise drag foot.
- C. Flip up hemmer toggle. This will lower drag foot and will engage the hemmer.

7. Setting drag foot pressure

- A. The three air pressure systems (A, B, and C) on the control box allow the machine to be set up for three different types of border material. (See page 10 for illustration.)
- B. To determine the correct pressure for a specific material:
 - 1. Initially set the pressure for 20 PSI.
 - 2. Sew an entire border to a panel.
 - 3. If the border ends up shorter than the panel, the drag foot is exerting too little pressure. Increase the pressure.
 - 4. If the border ends up too long, then decrease the air pressure on the drag foot.
 - 5. Once the pressure is adjusted so that the panel and border come out even, record the pressure settings for that particular material.

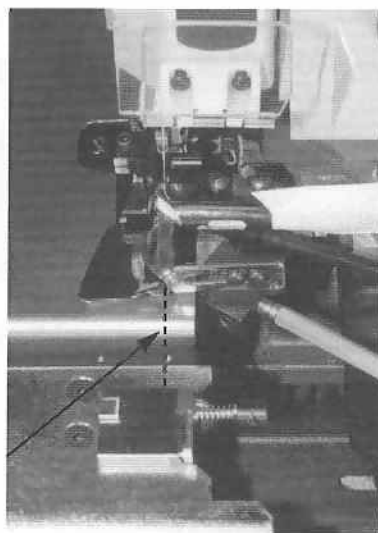


8. Aligning drag foot



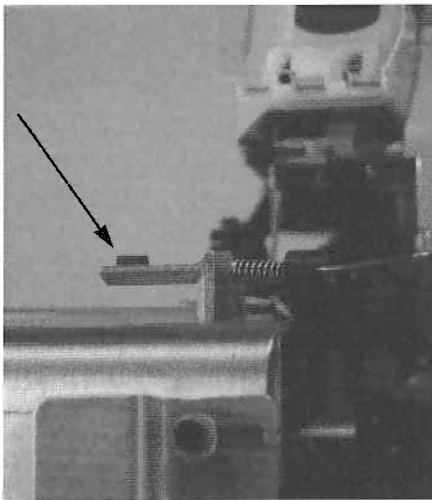
A. Vertical positioning

- 1. Make sure that the drag foot sits tightly (flush) against the top plate of the tracking device.
- 2. If a space exists between the bottom of the drag foot and the top plate of the tracking device, check the air cylinder. It may be screwed in too far preventing the full movement of the drag foot. Loosen the air cylinder.

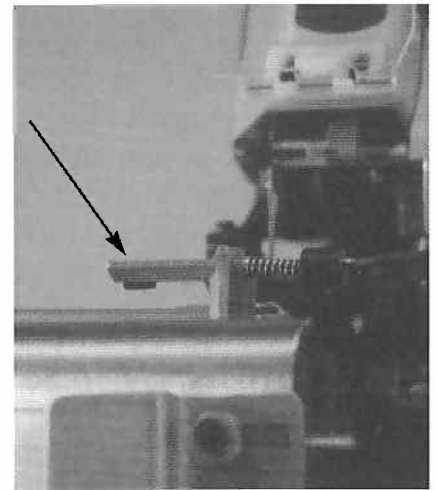


B. Horizontal positioning

- 1. Inside edge of drag foot must be in line with the inside edge of the mouth of the binder.
- 2. This is adjusted by loosening the screws which hold on the bracket of the tracking device.

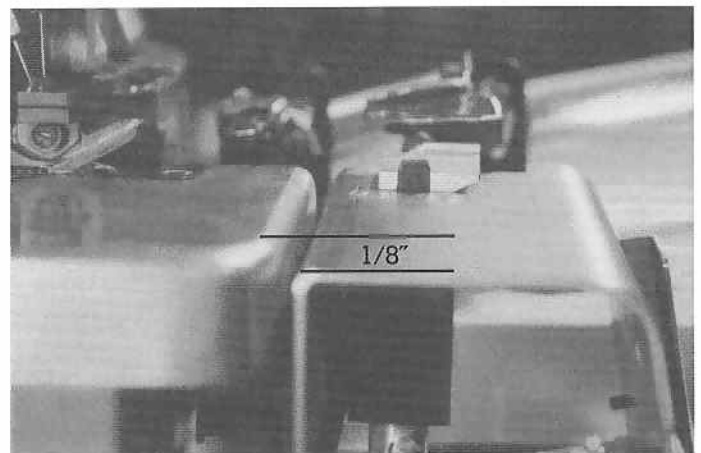
**C. Quilt adjustment**

1. For non-quilted borders, the drag foot cam must be positioned as shown at left.
2. For quilted borders, the drag foot cam must be positioned as shown at right.

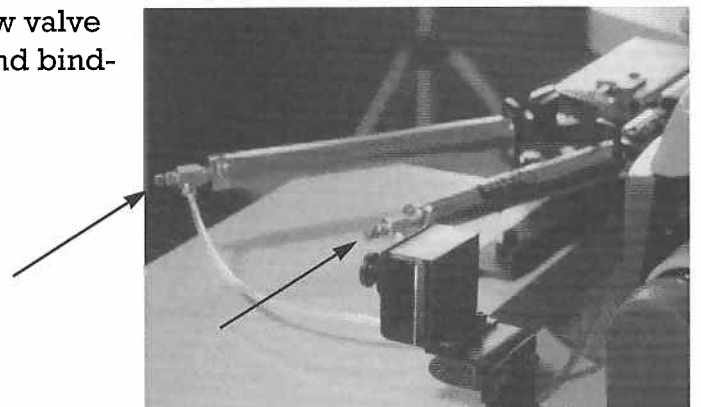
**9. Aligning the tracking device**

A. The top surface of the tracking device should be 1/8," lower than the top surface of the cloth plate.

1. Find the holes in the front side of the tracking device. The border edge guide must be removed to allow access to the right hand hole.
2. Loosen the screws behind these holes.
3. Adjust the height of the tracking device.
4. Re-tighten the internal screws and replace the edge guide.

**10. Adjusting the speed of insertion of the hemming and binding device**

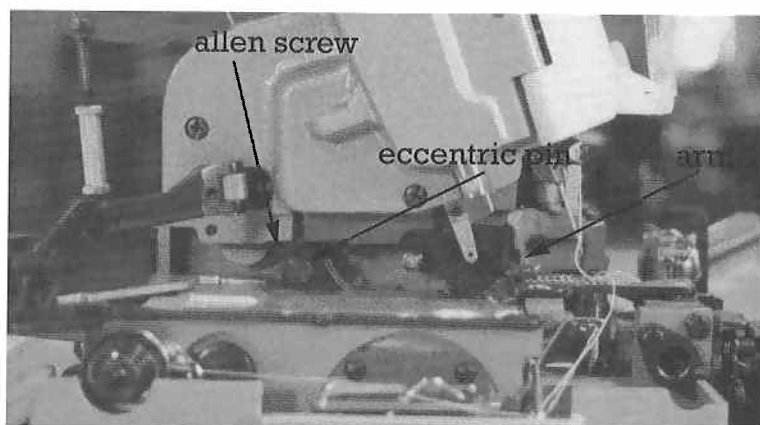
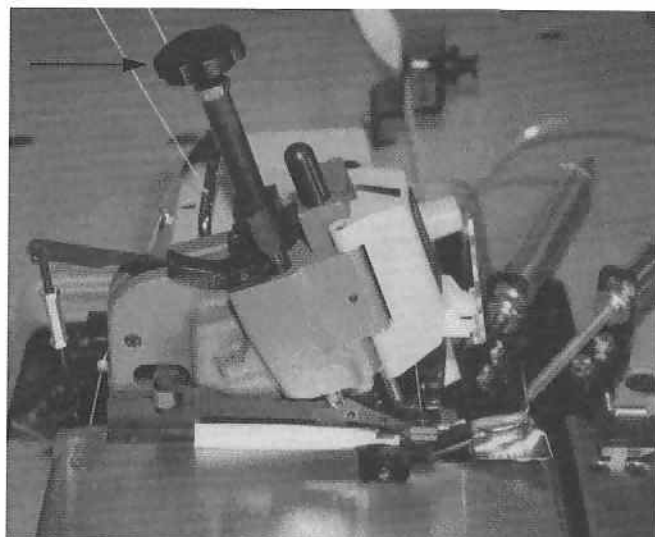
A. The speed of insertion is regulated by the flow valve (small brass knob) at the end of the hemming and binding air cylinders as shown in illustrations.



11. Adjusting the top feed mechanism

A. Pressure

1. Tighten the thumb screw at the top of the pressure rod nearly as tightly as possible.
2. The top feed should be exerting maximum or nearly maximum pressure.



B. Teeth Alignment

The top feed teeth must be aligned to mesh exactly with the teeth of the bottom feed dog. To align the teeth:

1. Loosen the allen screw at the rear of the top feed holder.
2. Turn the eccentric pin with a screw driver to adjust the position of the top feed arm so that the top feed and bottom feed dog teeth mesh.

C. Synchronization:

The lift must be adjusted so that the movement of the top feed is synchronized with the movement of the bottom feed dog. To adjust lift:

- A. Loosen the two Allen screws on the front of the lifter. Rotate the lifter to either advance or retard the top feed movement. Make sure that you do not shift the lifter sideways.

12. Timing

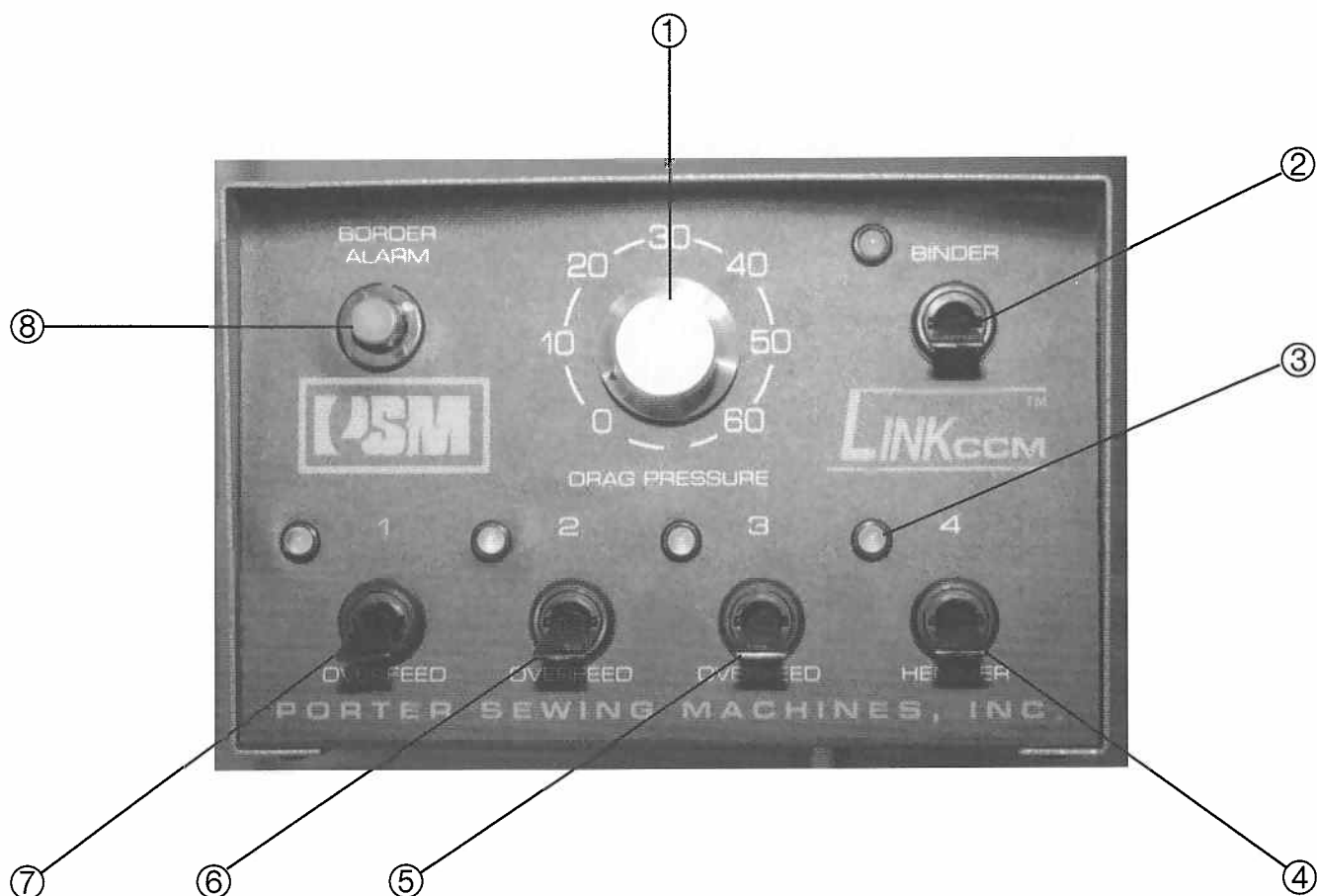
When the chainstitch looper (#620270) is at its extreme left position, the centerline of the chainstitch needle should be 1/16 of an inch from the point of the looper. When the looper point is in the scarf of the needle, the needle should clear the looper 0 to .1 millimeters.

13. Needle height

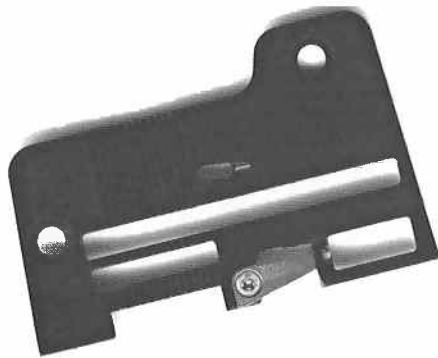
When the needle is at its highest position, the distance between the top of the needle plate and the point of the needle should be 1 1/32 of an inch, or 8.5 millimeters.

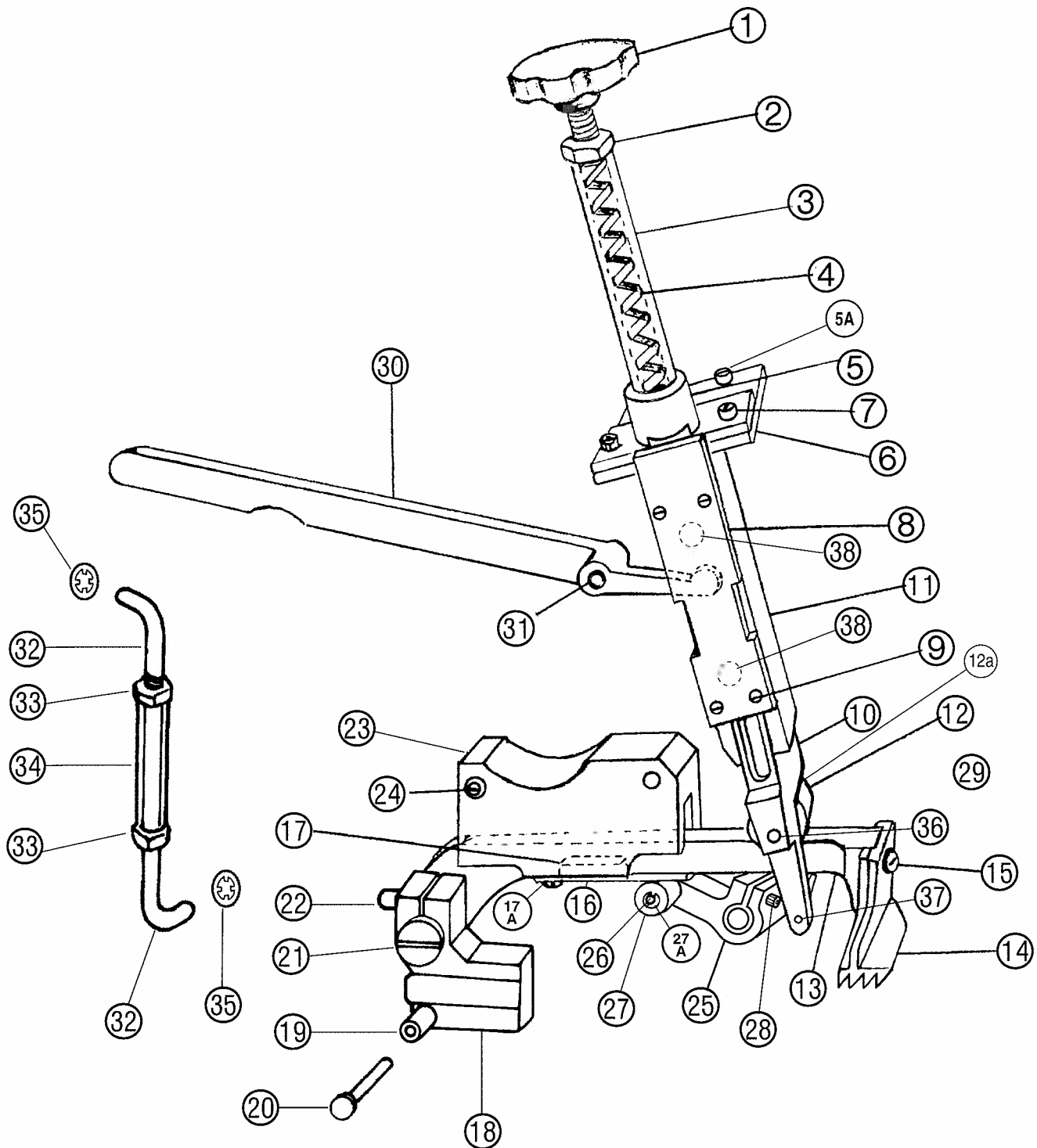
14. Overfeed Control Box (CB-100 & 401-600)

- ① Drag foot pressure control.
- ② Toggle for moving binder in or out.
- ③ Lights to indicate when components are in use..
- ④ Toggle for moving hemmer or guide in or out.
- ⑤⑥⑦ Toggles for overfeed: As each toggle is engaged, the differential feed is increased by one-third. Amount of overfeed required varies according to border material.
- ⑧ Warning light to show when drag foot is *not* engaged.



PARTS DIAGRAMS



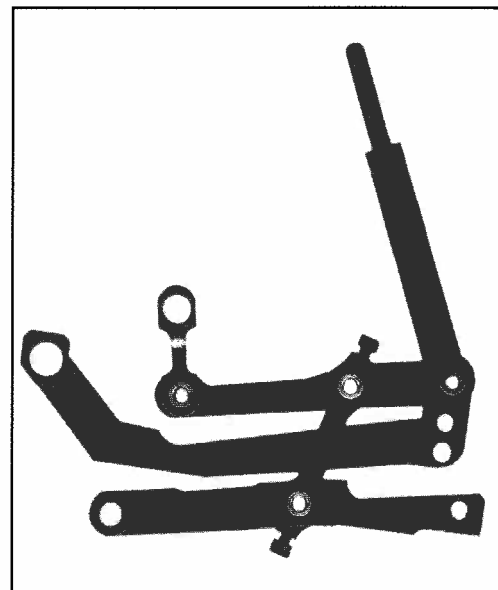
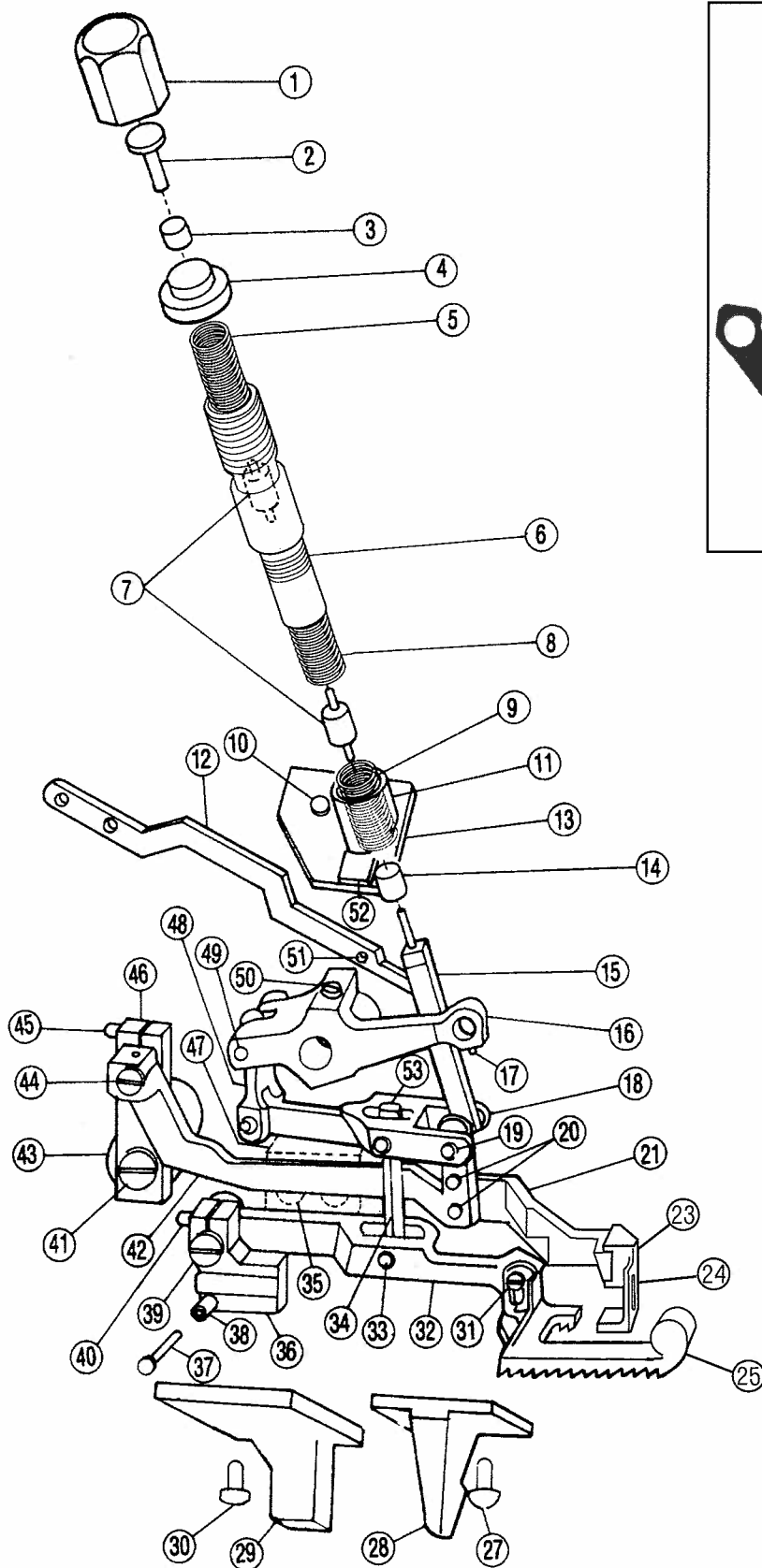
BS 401 TOP FEED MECHANISM (BS 401-100, 300, & CB-100)

BS 401 TOP FEED MECHANISM (BS 401-100, 300, & CB-100)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty	
1	650000	THUMBSCREW	1	18	630117	TOP FEED HOLDER	1	
2	650001	NUT	1	19	630147	TOP FEED HOLDER BUSHING	1	
3	650003	SPRING GUIDE SLEEVE	1	20	SHCS 8-32x3/4	SCREW	1	
4	650002	PRESSURE SPRING	1	21	630155	ECCENTRIC STUD	1	
5	650004	FLANGE	1	22	SHCS 4-40x3/8	SCREW	1	
5A	SHCS 8-32x1/2	SCREW	2	23	650016	GUIDE BLOCK	1	
6	650005	FLANGE BASE	1	24	SHCS 8-32x5/8	SCREW	1	
7	SHCS 8-32x1/4	SCREW	2	25	650048	LIFTER ASSY	1	
8	650006	PRESSURE BAR COVER	1	26	650018	LIFTER PIN	1	
9	610940	SCREW	4	27	650019	LIFTER ROLLER	1	
10	650007	PRESSURE BAR ASSY	1	27A	5560-18	RETAINER	1	
11	650008	PRESSURE BAR GUIDE BLOCK	1	28	SHCS 6-32X3/8	SCREW	2	
12	650009	PRESSURE ROLLER	1	30	650020	AUX-LIFTER ARM	1	
12A	5133-12	RETAINER (not shown)	1	31	DP 3/16x7/8	AUX-LIFTER ARM PIN	1	
13A	650054	TOP FEED MAIN SECTION ASSY COMP	1	32	620144	CONNECTOR	2	
	13	650010	TOP FEED MAIN SECTION	1	33	HN8-32	NUT	2
	14	650011	TOP FEED FOOT	1	34	620102	KEYSTONE CONNECTOR	1
	15	618420	SCREW	1	35	5115-15	RETAINER	2
	16	650012	WEAR STRIP	1	36	650047	PRESSURE ROLLER PIN	1
	17	650013	WEAR STRIP CUSHION	1	37	EXP.PN 1/16x3/16	EXPANSION PIN	1
	17A	610100	SCREW	1	38	FHMS 10-32x1/2	SCREW	2

WALKING FOOT MECHANISM (BS 401-500)

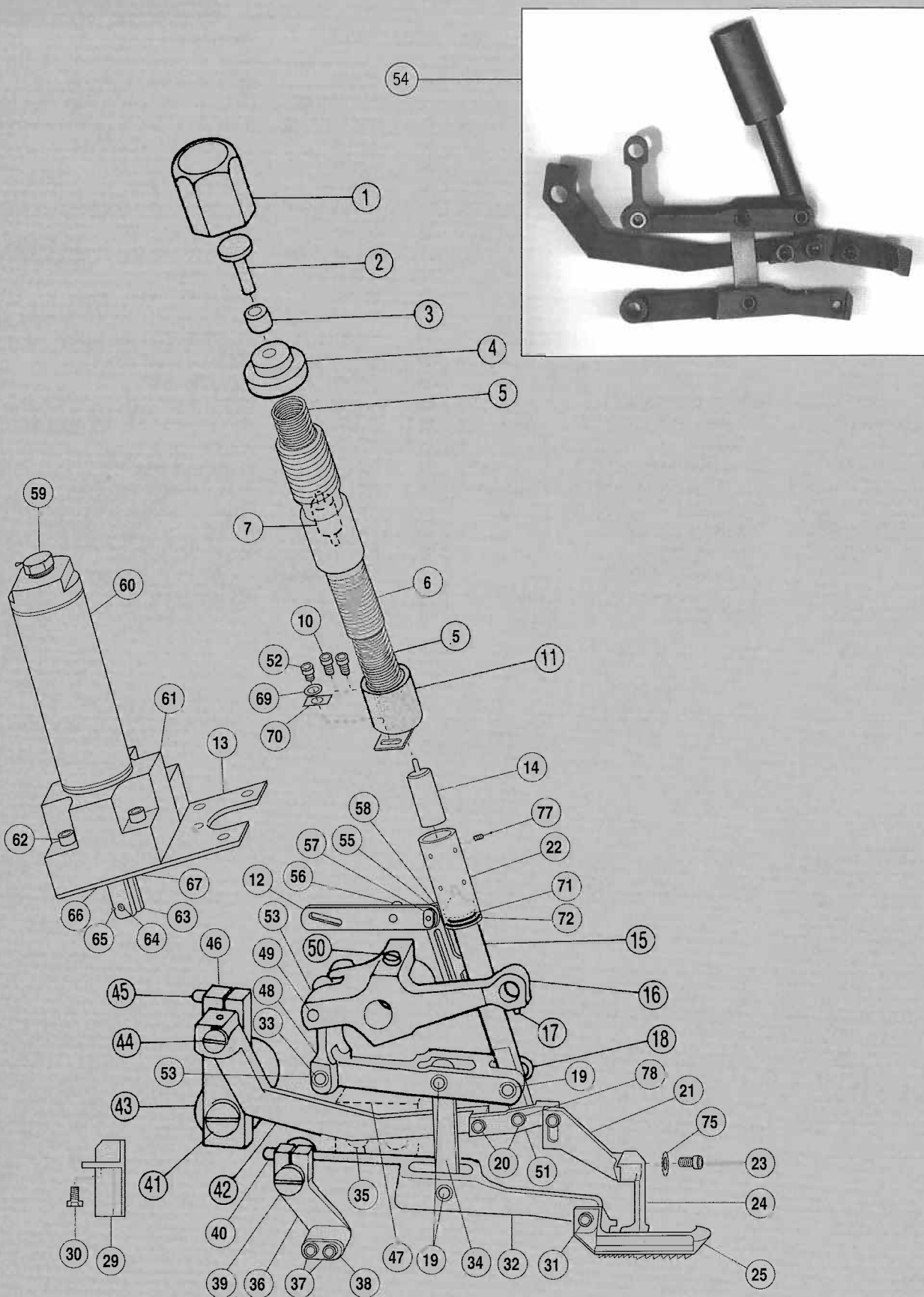
(BS 401-600 on page 22)



WALKING FOOT MECHANISM (BS 401-500)

(BS 401-600 on page 22)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	630300	ACORN NUT	1	29	630142	RETAINING BLOCK (GEAR)	1
2	630301	ADAPTER	1	30	BHCS10-32X3/8	BUTTON HEAD CAP SCREW 10-32X3/8	1
3	630302	PRELOAD SPACER	1	31	SHCS8-32X3/8	SOCKET HEAD CAP SCREW 8-32X3/8	1
4	630303	CHECK NUT	1	32	630145	TOP FEED MAIN SECTION	1
5	630304	WHITE SPRING	1	33	620175	PIVOT PIN	1
6	630305	HOUSING PRESSURE SPRING	1	34	620177	TOP FEED CONNECTOR LINK	1
7	630306	SPACER	2	35	SHCS8-32X1/2	SOCKET HEAD CAP SCREW 8-32X1/2	1
8	630304	WHITE SPRING	1	36	640028	TOP FEED HOLDER	1
9	630304	WHITE SPRING	1	37	SHCS8-32X3/4	SOCKET HEAD CAP SCREW 8-32X3/4	1
10	SHCS8-32X1/2	SOCKET HEAD CAP SCREW 8-32X1/4	1	38	630147	LONG BUSHING	1
11	630307	PRESSURE SPRING BASE	1	39	650055	ECCENTRIC PIN	1
12	630152	AUXILIARY LIFTER ARM	1	40	SHCS4-40X3/8	SOCKET HEAD CAP SCREW 4-40X3/8	1
13	630308	PRESSURE SPRING MOUNTING BLOCK	1	41	PHMS1/4-28X3/4	PAN HEAD MACHINE SCREW 1/4-28X3/4	2
14	630310	BOTTOM SPACER	1	42	630144	PRESSER FOOT ARM	1
15	630134	PRESSER BAR	1	43	620163	LOCATING STUD	1
16	630136	NEEDLE DRIVE ARM	1	44	620134	ECCENTRIC STUD	1
17	619400	SCREW	2	45	SHCS6-32X1	SOCKET HEAD CAP SCREW 6-32X1	1
18	630140	W.F. BEAM	1	46	620165	LOCATING BAR	1
19	620150	LONG PIVOT PIN	2	47	620168	RUBBING BLOCK	1
20	SHCS5-40X3/8	SOCKET HEAD CAP SCREW 5-40X3/8	2	48	620135	BEAM CONNECTOR LINK	1
21	650057	PRESSER FOOT EXTENSION	1	49	630138	CONNECTOR LINK PIVOT PIN	1
23	SHCS5-40X3/8	SCREW (NOT SHOWN)	1	50	611620	SCREW	1
24	650056	PRESSER FOOT	1	51	DP3/16X3/4	DOWEL PIN 3/16X3/4	1
25	650058	T.F. WALKING FOOT	1	52	SHCS8-32X1/8	SOCKET HEAD CAP SCREW 8-32X1/8	1
27	BHS10-32X3/8	BUTTON HEAD CAP SCREW 10-32X3/8	1	53	HLSS4-40X5/64	HOLLOW LOCK SET SCREW 4-40X5/64	7
28	620126	FRONT GUIDE BLOCK-TF ARM	1	54	630153	LINKAGE ASSEMBLY	1

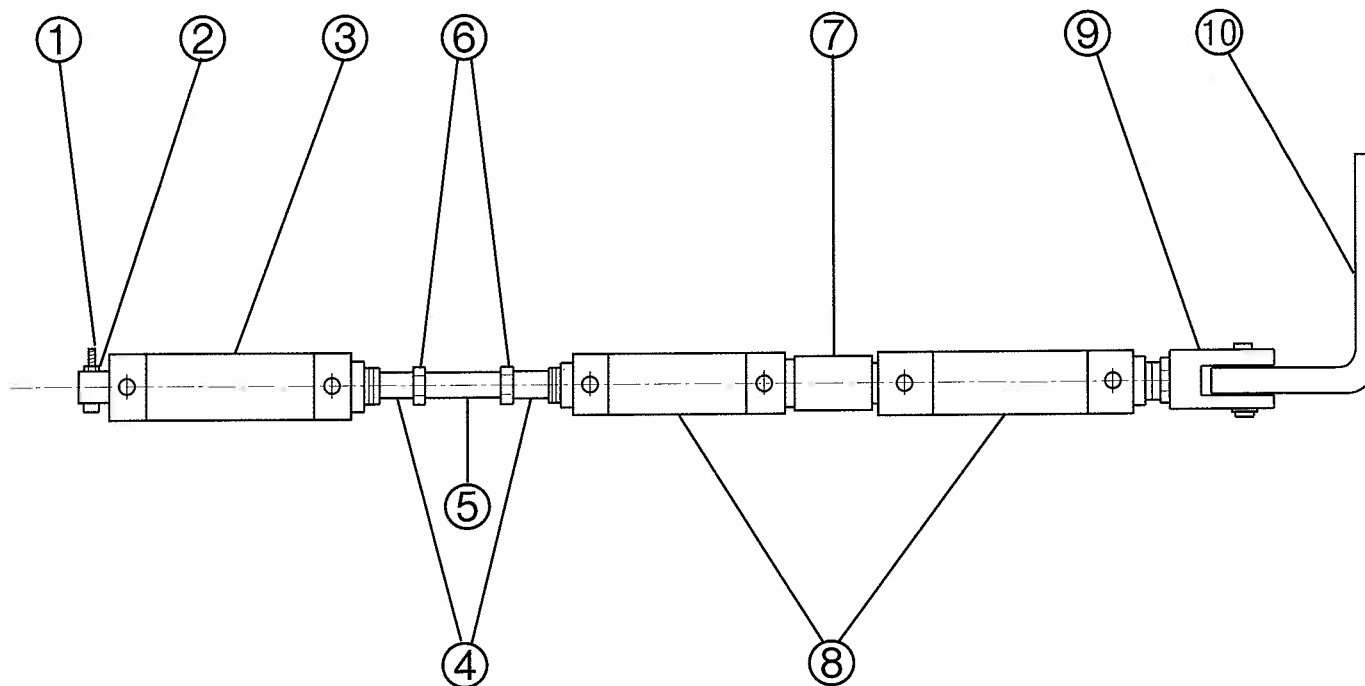
WALKING FOOT MECHANISM (BS 401-600)

WALKING FOOT MECHANISM (BS 401-600)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	630300	ACORN NUT	1	42	670018	PRESSER FOOT ARM	1
2	630301	ADAPTER	1	43	620163	LOCATING STUD	1
3	660040	PRELOAD SPACER	1	44	620134	ECCENTRIC STUD	1
4	630303	CHECK NUT	1	45	SHCS 6-32X1	SOCKET HEAD CAP SCREW	1
5	630312	WHITE SPRING	2	46	620165	LOCATING BAR	1
6	670063	HOUSING PRESSURE SPRING	1	47	620168	RUBBING BLOCK	1
7	630306	SPACER	1	48	670011	BEAM CONNECTOR LINK	1
10	SHCS 8-32X1/4	SOCKET HEAD CAP SCREW	1	49	630138	CONNECTOR LINK PIVOT PIN	1
11	660027	PRESSURE SPRING BASE	1	50	611620	SCREW	1
12	670029	BEAM, LIFTER	1	51	670611	CONNECTOR	1
13	660028	PRESSURE SPRING MOUNTING BLOCK	1	52	SHCS 8-32X1/8	SOCKET HEAD CAP SCREW	1
14	670062	SPRING GUIDE	1	53	HLSS 4-40X5/64	HOLLOW LOCK SET SCREW	2
15	670061	PRESSER BAR	1	54	670070	LINKAGE ASSY	1
16	670041	NEEDLE DRIVE ARM	1	55	FHCS 8-32X3/8	SCREW	1
17	619400	SCREW	2	56	660032	SPACER	1
18	670028	W.F. BEAM	1	57	660035	RETAINER	1
19	670038	PIVOT PIN	3	58	670030	SLIDE, LIFTER	1
20	SHCS 8-32X3/8	SOCKET HEAD CAP SCREW	3	59	MPAL-8016	FITTING	1
21	670607	PRESSER FOOT EXTENSION	1	60	091	AIR CYLINDER	1
22	670060	BARRELL	1	61	660029	SPACER, AIR CYL.	1
23	SHCS 8-32X3/8	SCREW	2	62	SHCS 8-32X5/8	SCREWS	4
24	650056	PRESSER FOOT	1	63	660030	YOKE	1
25	670601	TOP FEED	1	64	660031	PIN	1
29	670056	COVER GUIDE	1	65	SC7-5	SET SCREW	1
30	HHB 1/4-20X1/2	HEX HEAD BOLT	1	66	HN 5/16-24	NUT, (NOT SHOWN)	1
31	SHCS 8-32X3/8	SOCKET HEAD CAP SCREW	1	67	660033	CYL. MTG. NUT, (NOT SHOWN)	1
32	670032	TOP FEED MAIN SECTION	1	69	SLW#8	WASHER	1
33	620175	PIVOT PIN	1	70	660034	SPACER	2
34	670017	TOP FEED CONNECTOR LINK	1	71	2-012	O-RING	1
35	SHCS 8-32X	SOCKET HEAD CAP SCREW	1	72	2-013	O-RING	1
36	670602	TOP FEED HOLDER	1	73	670039	BUSHING, PRESSER BAR	1
37	SHCS 8-32X3/4	SOCKET HEAD CAP SCREW	1	75	SW#8	STAR WASHER	2
38	630147	RETAINER	1	76	SLW#8	WASHER	2
39	670068	ECCENTRIC PIN	1	77	HLSS 4-40X5/64	SET SCREW	1
40	SHCS 4-40X3/8	SOCKET HEAD CAP SCREW	1	78	670039	FERRULE (NOT SHOWN)	1
41	PHMS 1/4-28X3/4	PAN HEAD MACHINE SCREW	2				

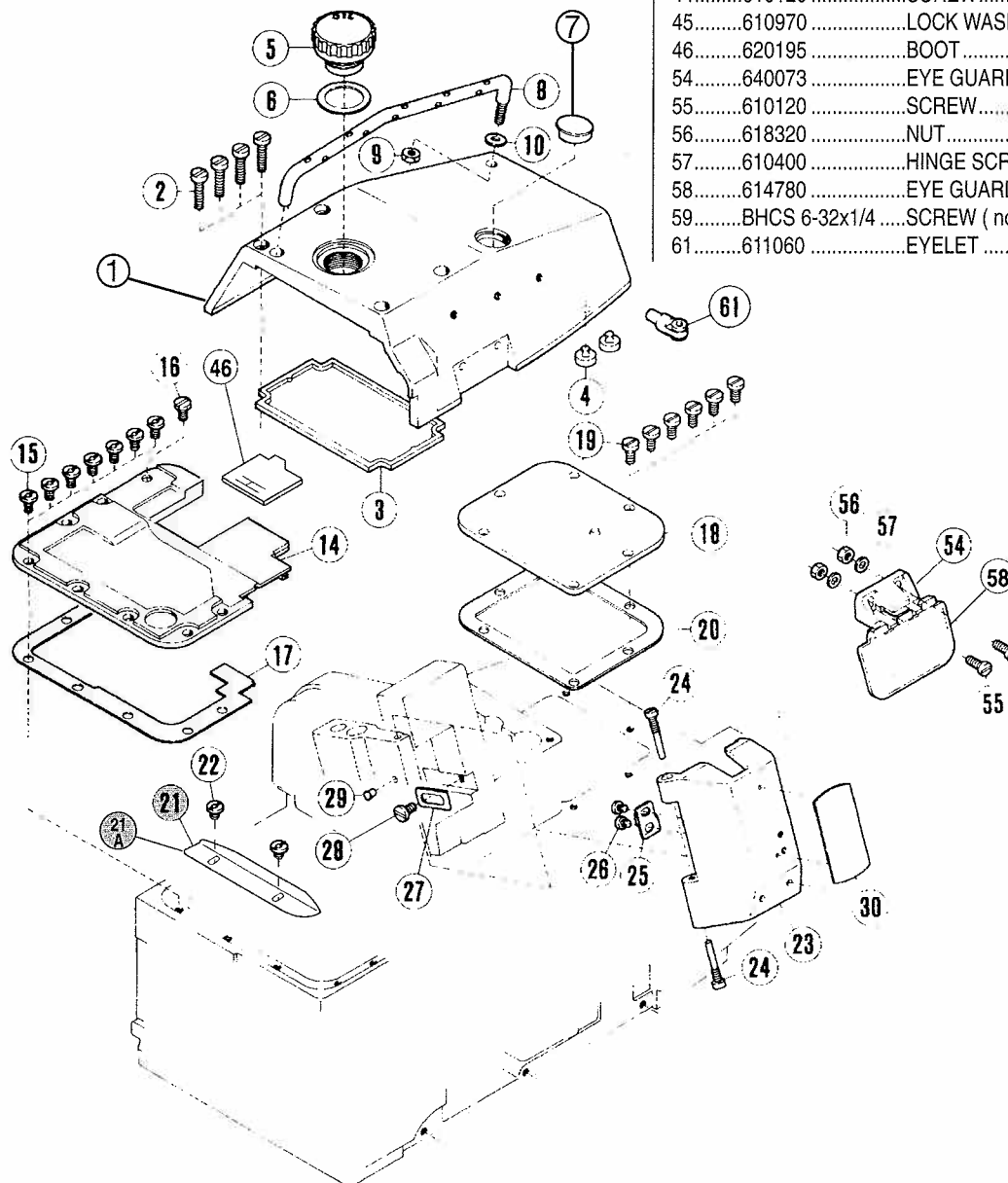
OVERFEED MECHANISM (CB-100 & BS 401-600)

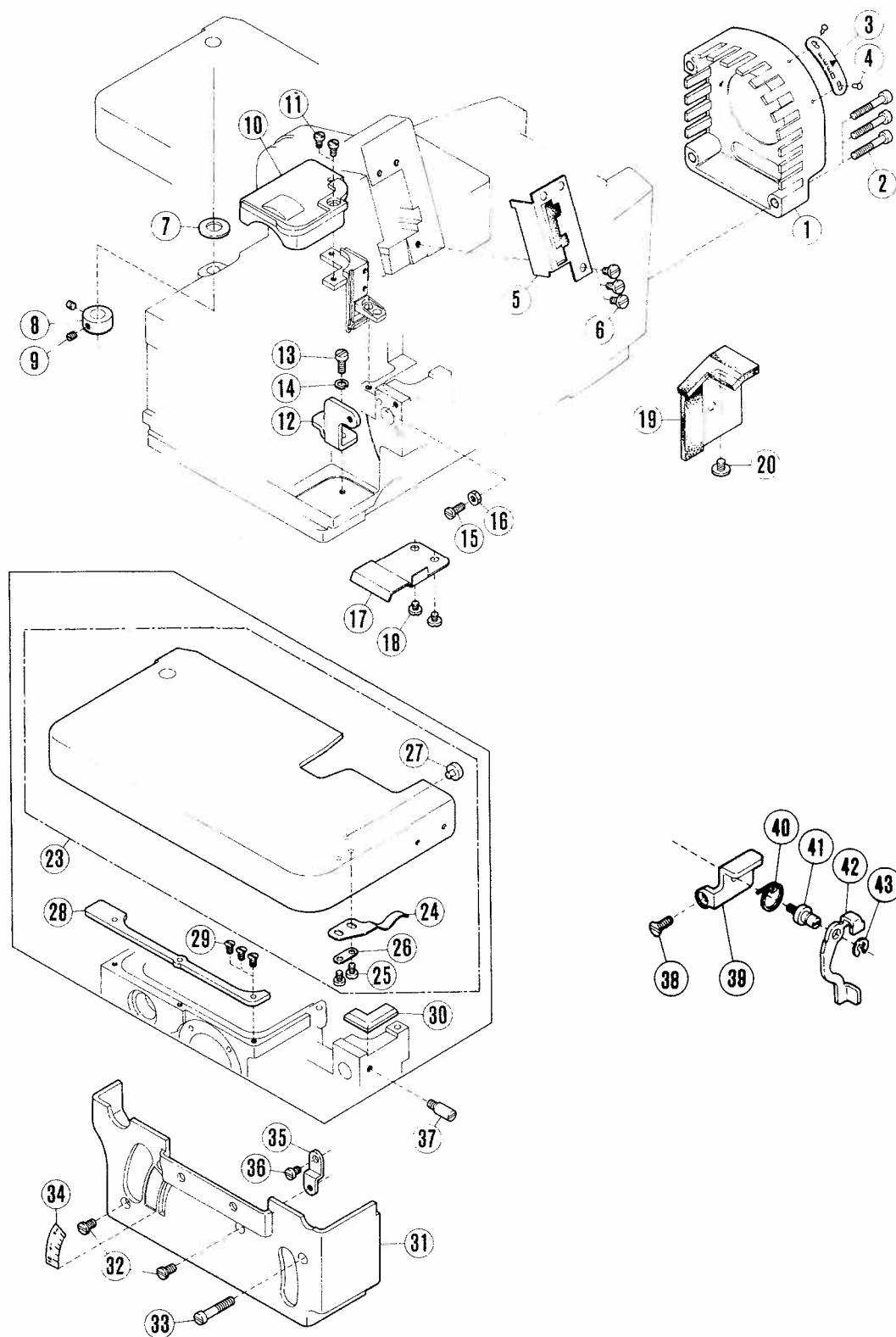
Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	SHCS8-32X3/4.....	SOCKET HEAD CAP SCREW.....	1	6.....	HN10-32.....	HEX NUT.....	3
2.....	HN8-32.....	HEX NUT.....	1	7.....	SMA-4.....	HEX SPACER.....	1
3.....	SMA-2.....	AIR CYLINDER.....	1	8.....	020.5-DXP.....	AIR CYLINDER.....	2
4.....	SMA-12.....	SPACER.....	2	9.....	D-850.....	CLEVIS.....	1
5.....	HS10-32X1 (IT).....	HEX SPACER (INTERNAL THREAD).....	1	10.....	SMA-5.....	BRACKET.....	1



1) MISCELLANEOUS COVERS

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	615860	TOP COVER.....	1	19.....	618740	SCREW.....	6
2.....	618980	SCREW.....	4	20.....	616120	GASKET.....	1
3.....	616800	GASKET.....	1	21.....	650035	FABRIC GUARD (401-100 & 300).....	1
4.....	616820	CUSHION.....	2	21A.....	620202	FABRIC GUARD (401-500, 600 & CB 100)....	1
5.....	614820	OIL SPLASH SIGHT WINDOW.....	1	22.....	PHMS 6-32x1/8	SCREW.....	2
6.....	614840	O-RING.....	1	23.....	614940	NEEDLE BAR COVER.....	1
7.....	616060	PLUG.....	1	24.....	611820	HINGE PIN.....	2
8.....	640001	THREAD GUIDE BAR.....	1	25.....	611860	LOCK SPRING.....	1
9.....	618280	NUT.....	1	26.....	610220	LOCK SPRING SCREW.....	2
10.....	610780	WASHER.....	1	27.....	613530	LOCK SPRING LATCH.....	1
14.....	640003	BEDPLATE.....	1	28.....	618340	SCREW.....	1
15.....	618340	SCREW.....	7	29.....	610680	CUSHION RUBBER.....	1
16.....	640002	SCREW.....	1	30.....	617270	NAME PLATE.....	1
17.....	616540	GASKET.....	1	32.....	610120	SCREW.....	2
18.....	616100	BED COVER PLATE RIGHT.....	1	33.....	640005	LOCK WASHER.....	2
				44.....	610120	SCREW.....	2
				45.....	610970	LOCK WASHER.....	2
				46.....	620195	BOOT.....	1
				54.....	640073	EYE GUARD BRACKET W/PIN.....	1
				55.....	610120	SCREW.....	2
				56.....	618320	NUT.....	2
				57.....	610400	HINGE SCREW WASHER.....	2
				58.....	614780	EYE GUARD.....	1
				59.....	BHCS 6-32x1/4	SCREW (not shown).....	1
				61.....	611060	EYELET.....	3



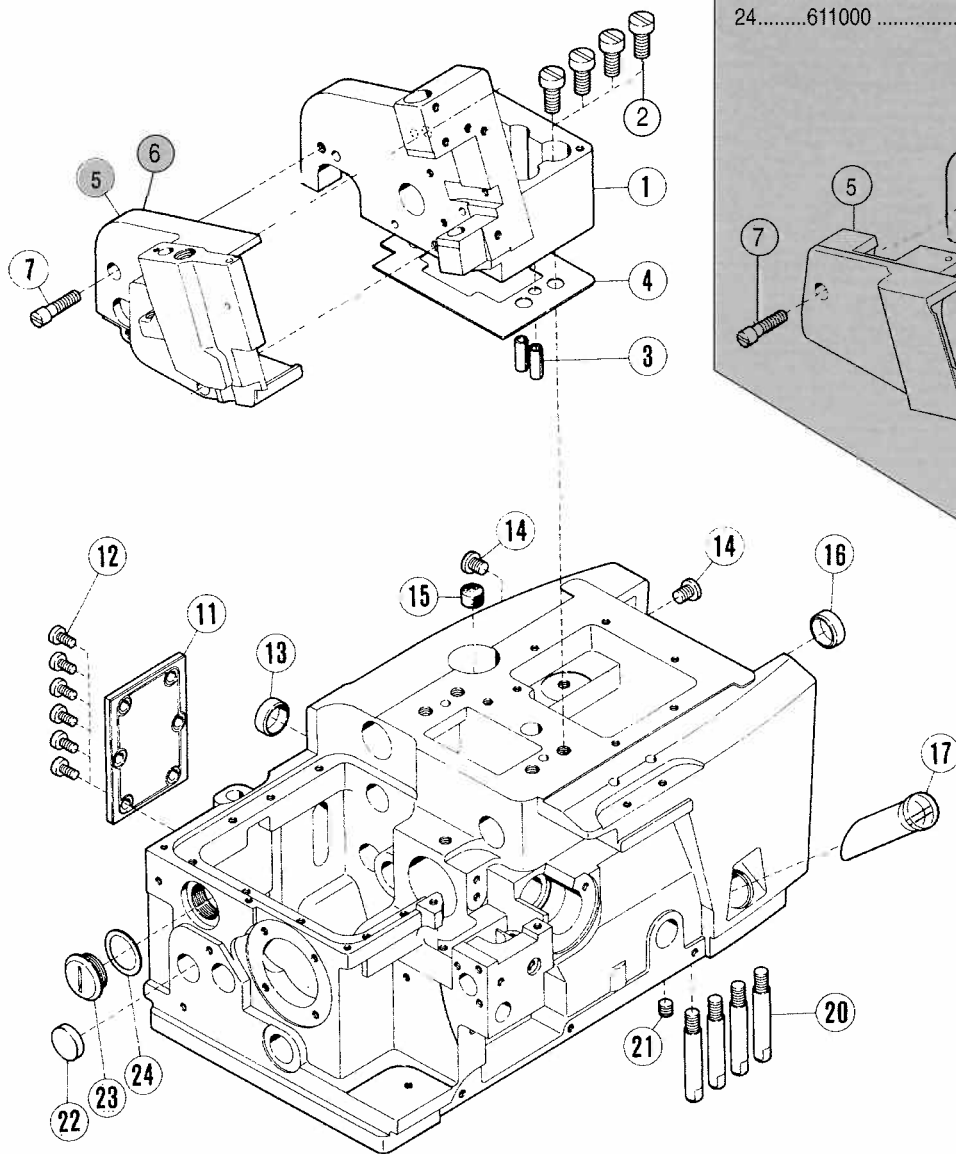
2) MISCELLANEOUS COVERS

2) MISCELLANEOUS COVERS

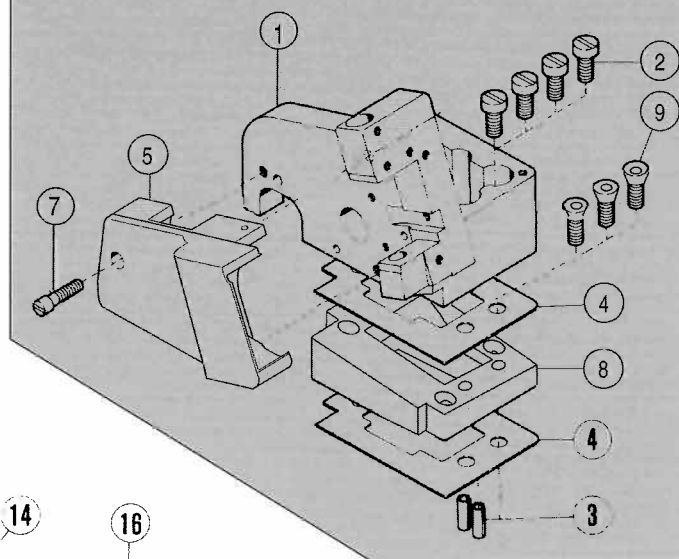
Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	613960	OIL COOLER COVER	1	24	613520	LOCK SPRING	1
2	618660	SCREW	1	25	610200	LOCK SPRING SCREW	2
3	613940	STITCH INDICATOR	1	26	610900	LOCK SPRING SCREW WASHER	1
4	614500	RIVET	2	27	616820	CUSHION	1
5	616640	FACE PLATE	1	28	613540	CUSHION RUBBER LEFT	1
6	618340	SCREW	3	29	618400	SCREW	3
7	611760	WASHER	1	30	613560	CUSHION RUBBER FRONT	1
8	611260	THRUST COLLAR	1	31	614420	MACHINE COVER LEFT	1
9	610420	SET SCREW	2	32	618640	SCREW	2
10	640007	FEED ECC. COVER	1	33	619060	LONG SCREW	1
11	619520	SCREW	2	34	616080	INDICATION PLATE	1
12	614440	SPACER	1	35	614430	SPACER	1
13	618120	SPACER SCREW	1	36	618720	SCREW	1
14	611640	SPACER SCREW WASHER	1	37	619180	STOP SCREW	1
15	619800	STOP SCREW	1	38	610560	SCREW	1
16	618280	STOP SCREW WASHER	1	39	650049	STOPPER	1
17	640008	FEED BAR COVER	1	40	650050	SPRING	1
18	618140	SCREW	2	41	650051	PIN	1
19	617145	R. LOOPER LVR. OIL SHIELD	1	42	650052	LEVER	1
20	618940	SCREW	1	43	650053	RING	1
23	656059	CLOTH COVER COMPLETE	1				

MACHINE BED FRAME

Ref #	Part #	Description	Qty
1	617140	MACHINE ARM (RIGHT)	1
2	618500	SCREW	4
3	610980	PIN	2
4	613580	GASKET	1
5	650060	SIDE COVER-LEFT (401-100, 300, & CB 100)	1
6	650061	SIDE COVER-LEFT (401-500)	1
7	619000	SCREW	1
11	617380	COVER PLATE	1
12	619840	SCREW	6
13	614360	PLUG	1
14	619540	SCREW	2
15	614280	OIL FILTER	1
16	614360	PLUG	1
17	612000	OIL SIGHT GAUGE	1
20	612020	BED PIN	4
21	611680	SCREW	1
22	617360	PLUG	1
23	619040	SCREW	1
24	611000	WASHER	11

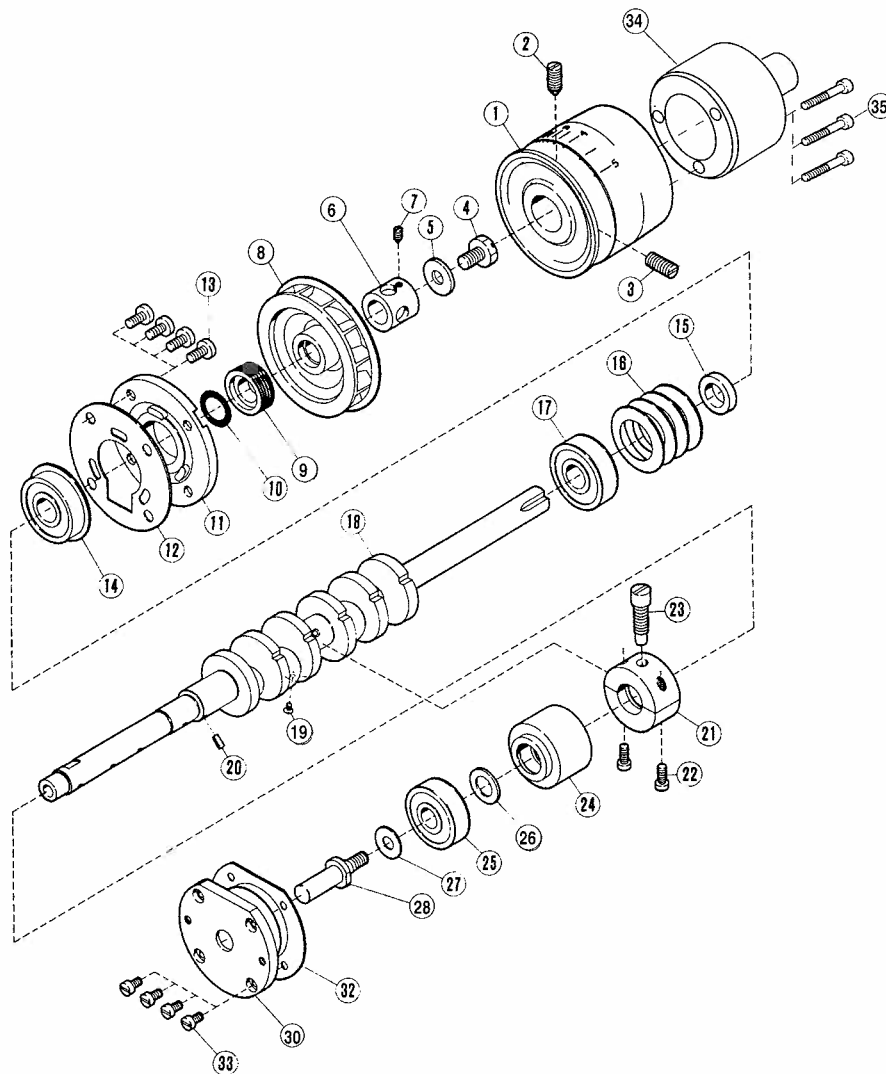
**BS 401-600 ONLY**

Ref #	Part #	Description	Qty
1	670059	UPPER CASTING	1
2	SHCS 1/4-28X1/2	SCREW	4
3	610980	PIN	2
4	613580	GASKET	2
5	660049	SIDE COVER (LEFT)	1
6	670050	LOWER CASTING	1
7	619000	SCREW	1
8	670009	WEDGE	1
9	FHSCS 1/4-28X1/2	SCREWS	3
11	617380	COVER PLATE	1
12	619840	SCREW	6
13	614360	PLUG	1
14	619540	SCREW	2
15	614280	OIL FILTER	1
16	614360	PLUG	1
17	612000	OIL SIGHT GAUGE	1
20	612020	BED PIN	4
21	611680	SCREW	1
22	617360	PLUG	1
23	619040	SCREW	1
24	611000	WASHER	1



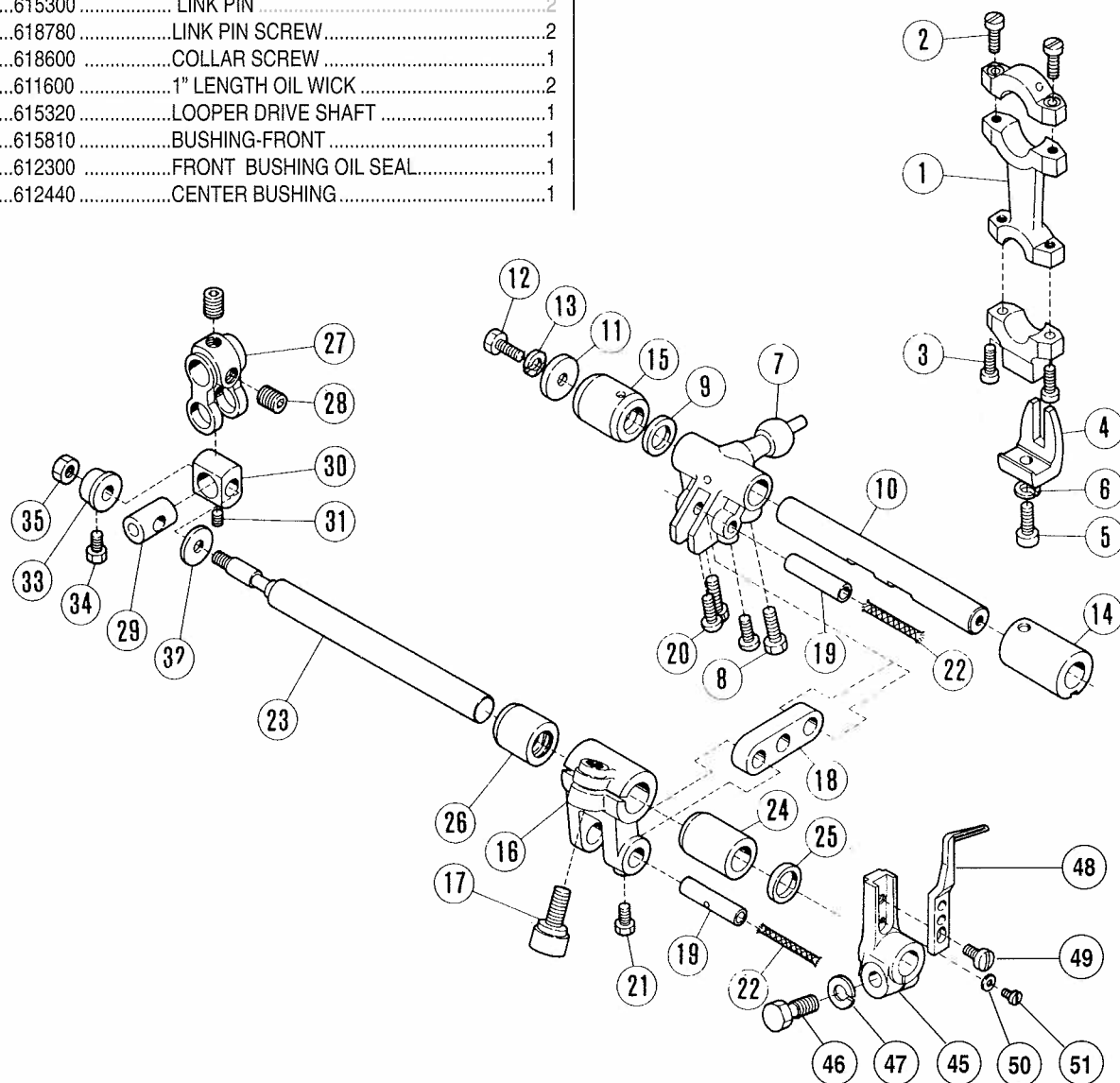
CRANKSHAFT MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	612220	PULLEY	1	18.....	616140	CRANKSHAFT	1
2.....	618520	SCREW	1	19.....	620013	SCREW	1
3.....	618540	SCREW	1	20.....	611580	OIL FELT	1
4.....	620012	SCREW	1	21.....	612080	BUSHING (CENTER).....	1
5.....	612200	WASHER	1	22.....	610040	SCREW	2
6.....	612240	COLLAR	1	23.....	619300	SCREW	1
7.....	619340	SCREW	1	24.....	612060	BUSHING (LARGE)	1
8.....	613500	COOLING FAN.....	1	25.....	612040	BALL BEARING	1
9.....	616770	OIL SEAL COLLAR	1	26.....	640006	THRUST WASHER	1
10.....	615540	"O" RING	1	27.....	613840	WASHER	1
11.....	616775	PLATE	1	28.....	614520	CRANKSHAFT EXTENSION	1
12.....	612180	GASKET.....	1	30.....	614580	HOUSING	1
13.....	618740	SCREW.....	4	32.....	613680	GASKET.....	1
14.....	612140	BALL BEARING	1	33.....	610100	SCREW	4
15.....	612120	SPACER.....	1	34.....	630102	SYNCHRONIZER ADAPTOR	1
16.....	612100	WASHER	4	35.....	SHCS 8-32x1-1/2 ..	SCREW	3
17.....	611480	BEARING	1				



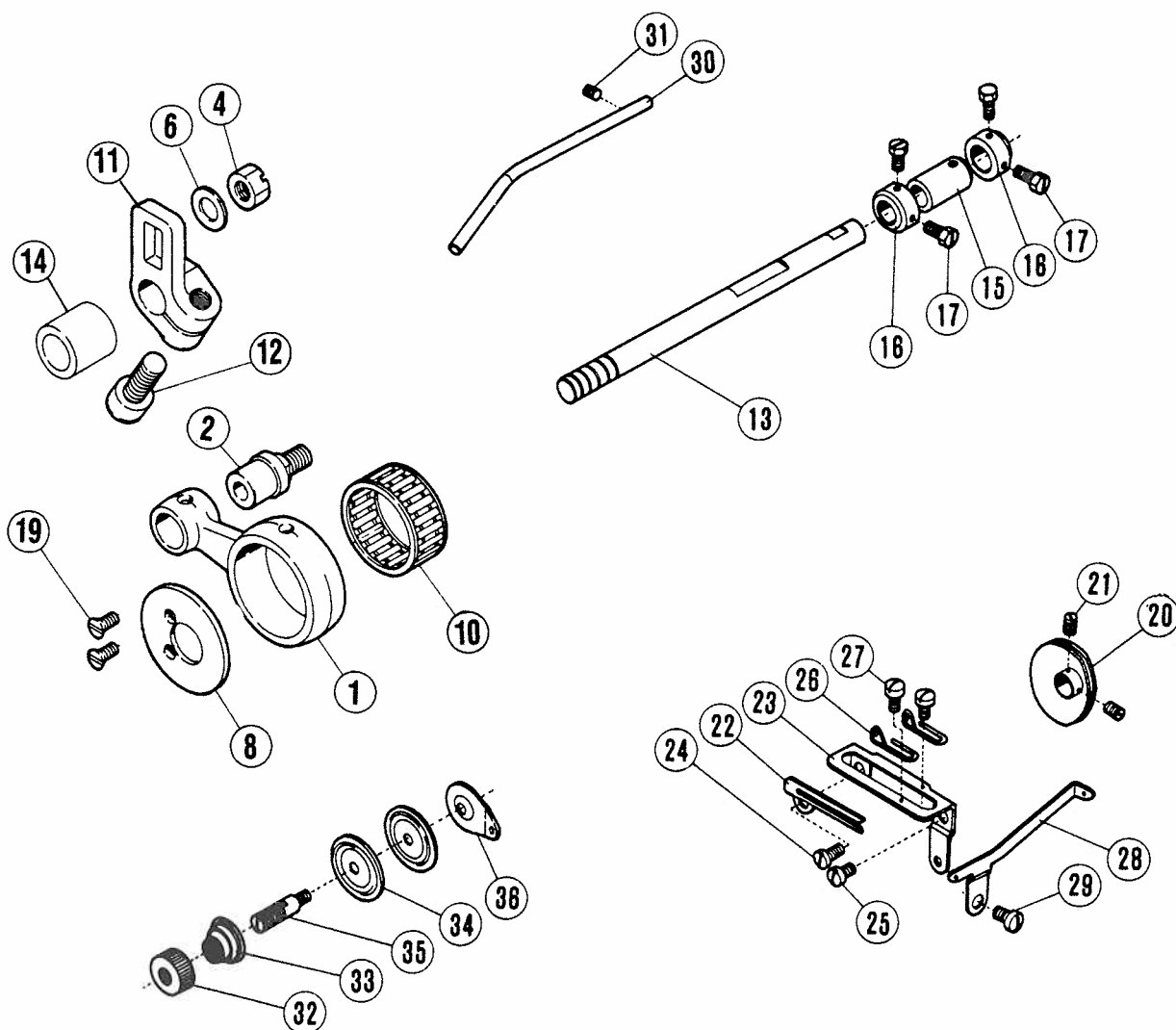
1) LOOPER MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	616160	LOOPER DRIVE CONN.....	1	27	614960	LOOPER AVOIDING LINK.....	1
2	617600	LARGE CAP SCREW.....	2	28	619720	SCREW.....	2
3	610040	SMALL CAP SCREW.....	2	29	614980	PIN.....	1
4	611160	GUIDE.....	1	30	615000	BLOCK.....	1
5	610020	GUIDE SCREW.....	1	31	619400	SCREW.....	1
6	611640	SPACER SCREW WASHER.....	1	32	615020	THRUST WASHER.....	1
7	615240	LOOPER DRIVE CRANK.....	1	33	615040	COLLAR.....	1
8	611620	SCREW.....	2	34	618600	COLLAR SCREW.....	1
9	614260	RETAINING RING.....	1	35	619620	NUT.....	1
10	617055	LOOPER LEVER SHAFT.....	1	45	612520	LOOPER LEVER.....	1
11	612646	THRUST WASHER.....	1	46	619360	CLAMP SCREW.....	1
12	617540	THRUST WASHER SCREW.....	1	47	613640	CLAMP SCREW WASHER.....	1
13	611640	SPACER SCREW WASHER.....	1	48	620270	LOOPER.....	1
14	615780	FRONT BUSHING.....	1	49	610140	SCREW.....	1
15	612320	REAR BUSHING.....	1	50	613200	REGULATOR.....	1
16	615260	LOOPER DRIVE SHANK.....	1	51	618220	REGULATOR SCREW.....	1
17	619700	CLAMP SCREW.....	1				
18	615280	LINK.....	1				
19	615300	LINK PIN.....	2				
20	618780	LINK PIN SCREW.....	2				
21	618600	COLLAR SCREW.....	1				
22	611600	1" LENGTH OIL WICK.....	2				
23	615320	LOOPER DRIVE SHAFT.....	1				
24	615810	BUSHING-FRONT.....	1				
25	612300	FRONT BUSHING OIL SEAL.....	1				
26	612440	CENTER BUSHING.....	1				



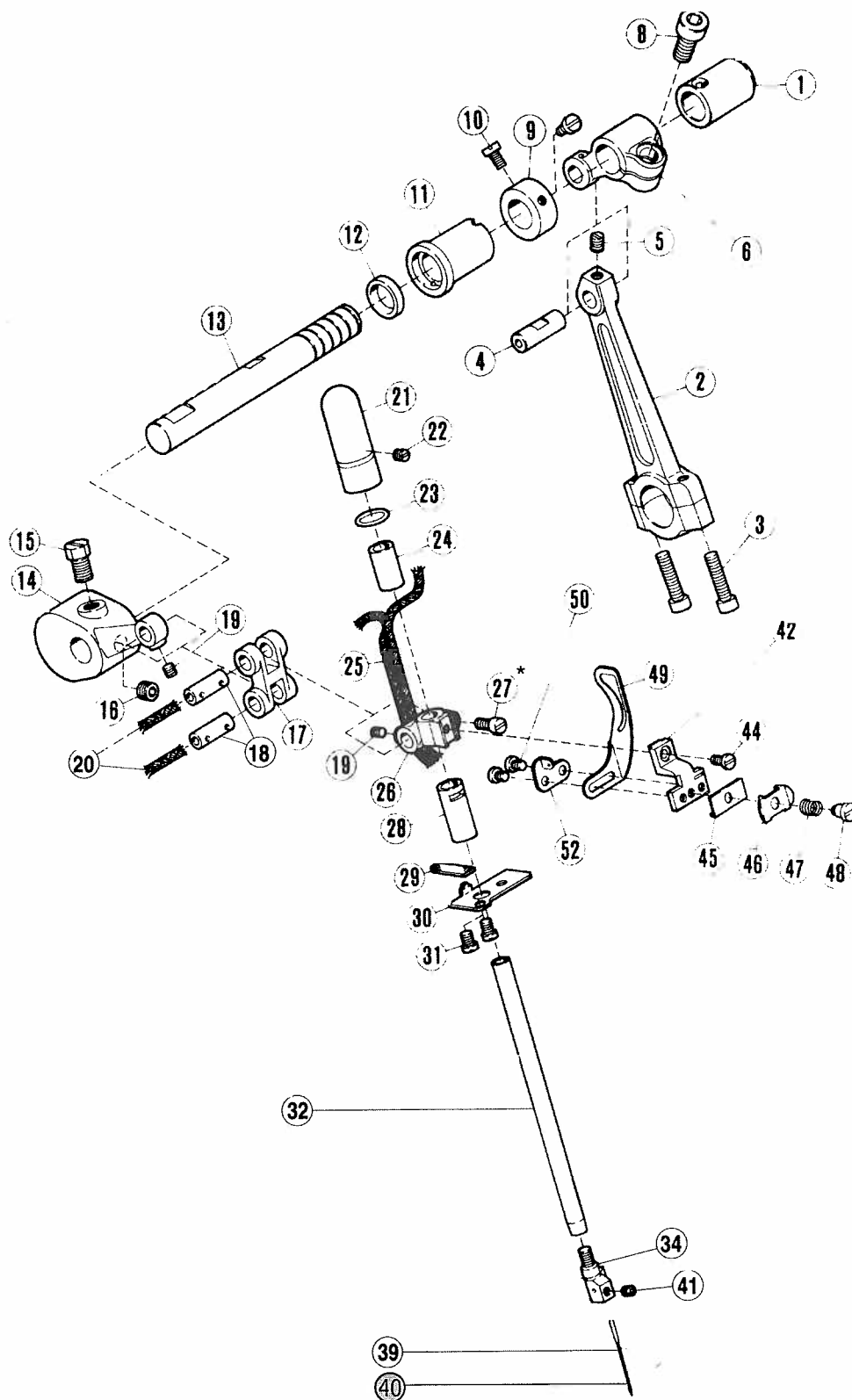
2) LOOPER MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	620030	LOOPER AVOIDING CONNECTION	1	22	612560	GUIDE	1
2	620031	PIN	1	23	612580	LOOPER THREAD GUIDE BRACKET	1
4	619740	PIN NUT	1	24	618340	SCREW	1
6	615740	PIN NUT WASHER	1	25	618720	SCREW	1
8	620029	COLLAR	1	26	613700	TAKEUP EYELET	2
10	620028	NEEDLE BEARING	1	27	618480	SCREW	2
11	620032	LOOPER AVOIDING CRANK	1	28	616220	LOOPER THREAD GUIDE	1
12	620026	CLAMP SCREW	1	29	618720	SCREW	1
13	614540	LOOPER AVOIDING SHAFT	1	30	612600	LOOPER THREAD TUBE	1
14	640027	LEFT BUSHING	1	31	610420	SCREW	1
15	612500	RIGHT BUSHING	1	32	618300	LOOPER THREAD TENSION NUT	1
16	611100	THRUST COLLAR	2	33	610520	SPRING	1
17	618600	COLLAR SCREW	4	34	611460	DISC	2
19	640028	SCREW	2	35	610500	POST	1
20	612540	LOOPER THREAD TAKEUP	1	36	611920	GUIDE	1
21	619400	GENUINE SCREW	2				



NEEDLE BAR MECHANISM (BS 401-100, 300, 500, & CB-100)

(BS 401-600 on pages 34-35)



NEEDLE BAR MECHANISM

(BS 401-600 on pages 34-35)

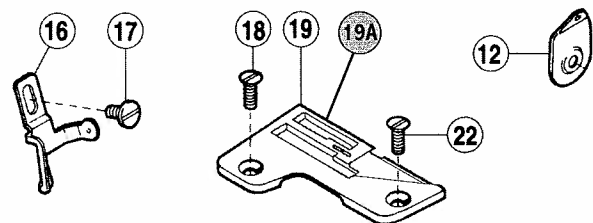
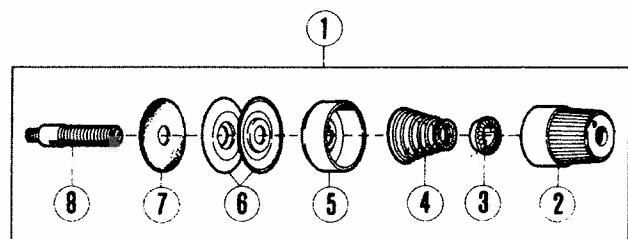
Ref #	Part #	Description	Qty
1.....	615440	BUSHING (RIGHT)	1
2.....	612260	CONNECTION	1
3.....	619200	SCREW	2
4.....	614760	PIN	1
5.....	619220	SCREW	1
6.....	611440	CRANK (REAR)	1
8.....	619700	SCREW	1
9.....	611220	THRUST WASHER	1
10.....	619520	SCREW	2
11.....	615420	BUSHING (LEFT)	1
12.....	615460	OIL SEAL	1
13.....	615400	SHAFT	1
14.....	630136	CRANK (FRONT)	1
15.....	611620	SCREW	1
16.....	619420	SCREW	1
17.....	630118	LINK	1
18.....	610960	PIN	2
19.....	619400	SCREW	2
20.....	611600	OIL WICK	2
21.....	617240	CAP	1
22.....	610420	SCREW	1
23.....	610740	"O" RING	1
24.....	613900	BUSHING UPPER	1
25.....	617420	OIL WICK	1
26.....	640012	NEEDLE BAR CLAMP	1
27*	610060	SCREW	1
28.....	613920	BUSHING (LOWER)	1
29.....	617220	OIL FELT	1
30.....	617200	DUST SHIELD	1
31.....	618440	SCREW	2
32.....	617280	NEEDLE BAR	1
34.....	630113	NEEDLE HOLDER	1
39.....	PSM-130	NEEDLE (401-100, 300, & CB 100)	1
40.....	PSM-160	NEEDLE (401-500)	1
41.....	619400	SCREW	1
42.....	614040	RETAINER BRACKET	1
44.....	619640	SCREW	1
45.....	611720	GUIDE	1
46.....	610760	GUIDE	1
47.....	617340	SPRING	1
48.....	629860	SCREW	1
49.....	611880	TAKEUP	1
50.....	610135	SCREW	2
52.....	614060	THREAD GUIDE	1

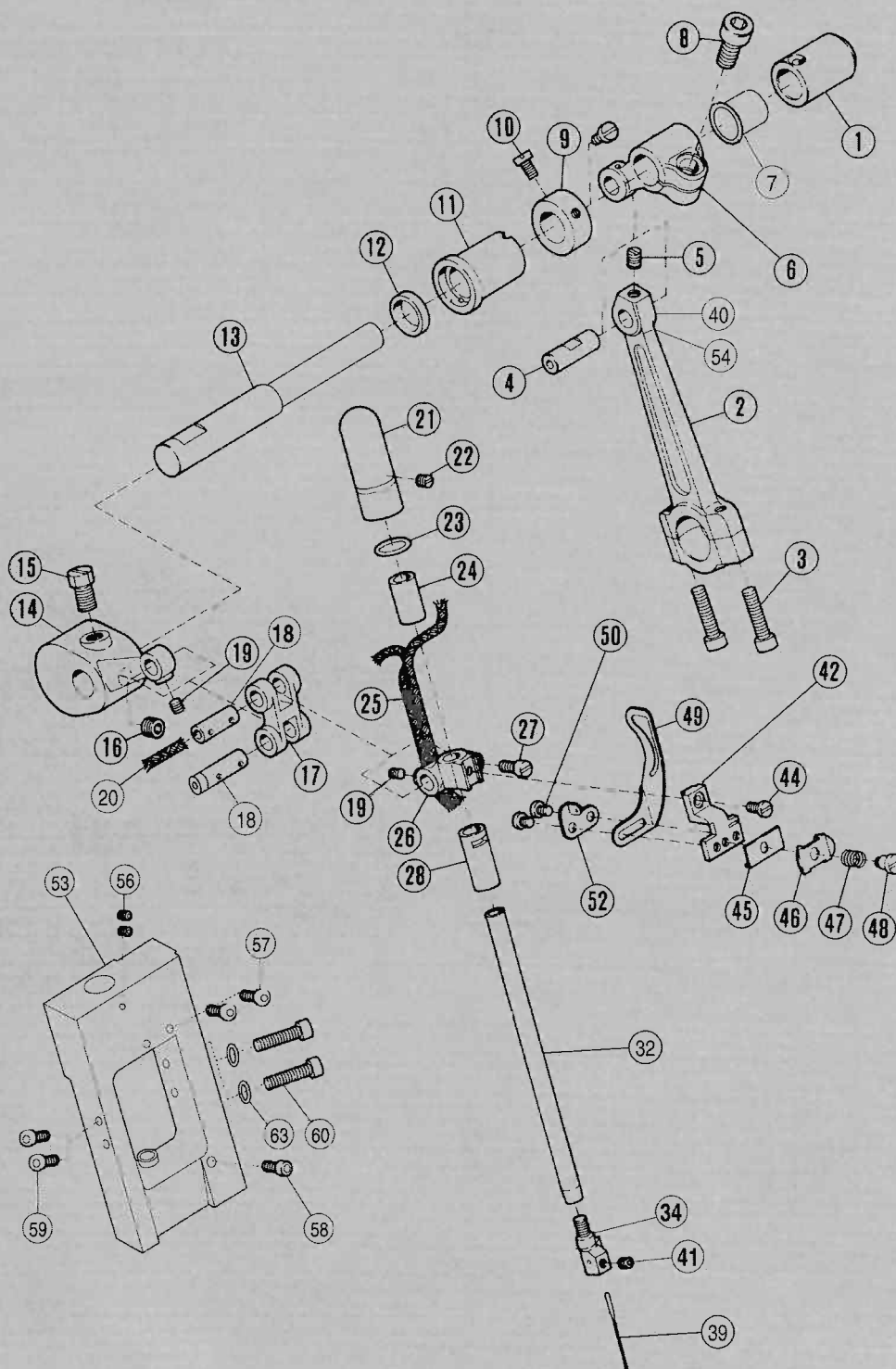
* For socket head cap screw order:

SHCS 6-32x3/8SCREW.....2

NEEDLE PLATE & TENSION

Ref #	Part #	Description	Qty
1.....	616840	NEEDLE THREAD TENSION COMPLETE	1
2.....	616680	NUT	1
3.....	616700	SPRING BUSHING	1
4.....	611040	SPRING (HEAVY)	1
5.....	616740	SPRING CUP	1
6.....	611460	DISC	2
7.....	616720	CUSHION FELT	1
8.....	618560	POST, SHORT ENDED	1
12.....	611920	GUIDE DISC	1
16.....	640010	THREAD GUIDE	1
17.....	618340	SCREW	1
18.....	610560	SCREW	1
19.....	650075	THROAT PLATE	10
19A.....	670623	THROAT PLATE (CB-100 ONLY)	1
22.....	610560	SCREW	1

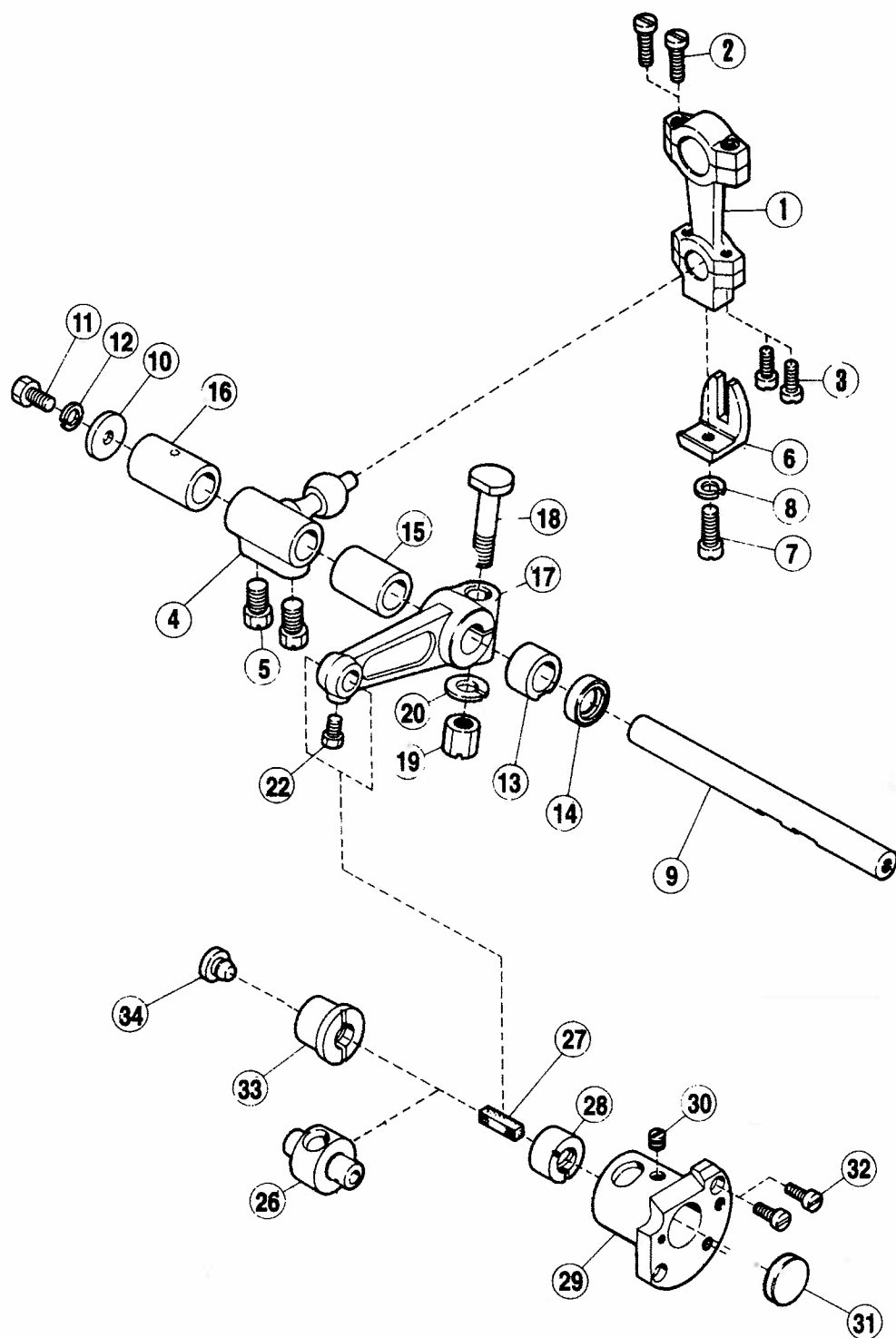


NEEDLE BAR MECHANISM (BS 401-600)

NEEDLE BAR MECHANISM (BS 401-600)

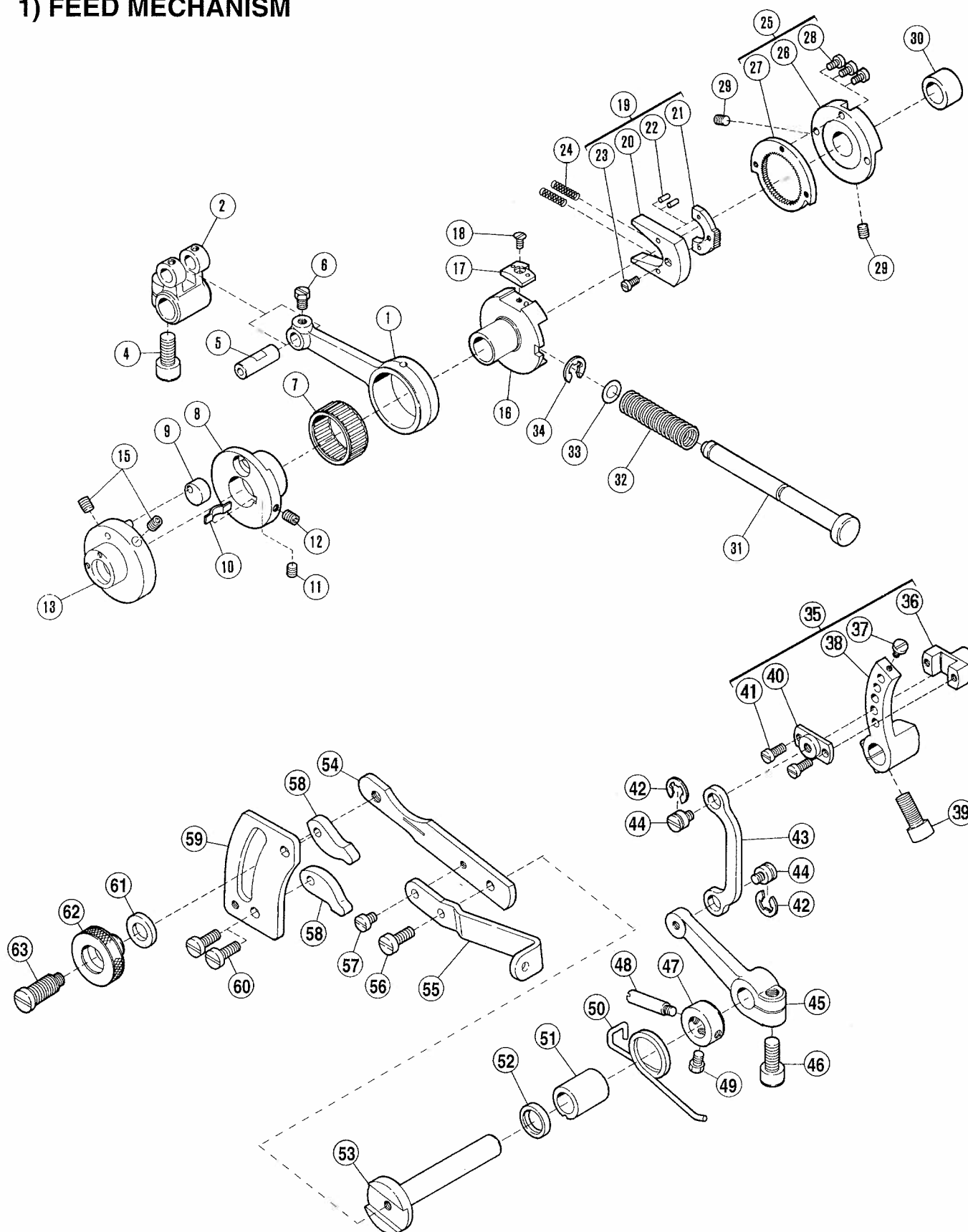
Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	615440	BUSHING (RIGHT)	1	27	610060	SCREW	1
2	670008	CONNECTION	1	28	670004	BUSHING (LOWER)	1
3	619200	SCREW	2	32	617280	NEEDLE BAR	1
4	614760	PIN	1	33	617300	NEEDLE HOLDER	1
5	SS 1/4-20X3/16	SCREW	1	39	PSM-1160	NEEDLE	1
6	670054	CRANK (REAR)	1	40	6700013	EXTENSION	1
7	670058	NYLON BUSHING	1	41	619400	SCREW	1
8	619700	SCREW	1	42	614040	RETAINER BRACKET	1
9	670002	COLLAR	1	44	619640	SCREW	1
10	619520	SCREW	2	45	611720	GUIDE	1
11	615420	BUSHING (LEFT)	1	46	610760	GUIDE	1
12	615460	OIL SEAL	1	47	617340	SPRING	1
13	670057	SHAFT	1	48	629860	SCREW	1
14	670041	CRANK (FRONT)	1	49	611880	TAKEUP	1
15	611620	SCREW	1	50	610135	SCREW	2
16	619420	SCREW	1	52	614060	THREAD GUIDE	1
17	630118	LINK	1	53	670606	NEEDLE BAR SUPPORT ASSEMBLY	1
18	610960	PIN	2	54	670014	SCREW (NOT SHOWN)	1
19	619400	SCREW	1	56	SS 8-32X1/8	SET SCREW	1
20	611600	OIL WICK	2	57	BHCS 8-32X1/4	SCREW	2
21	660038	CAP	1	58	SHCS 8-32X1/4	SCREW	1
22	610420	SCREW	1	59	BHCS 6-32X1/4	SCREW	2
23	610740	"O" RING	1	60	SHCS 10-32X7/8	SCREW	2
24	613900	BUSHING UPPER	1	61		SUPPORT ASSY(REF# 56-60,24,28)	1
25	617420	OIL WICK	1	62	5103-23	E-RING	2
26	640012	NEEDLE BAR CLAMP	1	63	FW 1/4-BLACK	WASHER	2

DRIVE MECHANISM



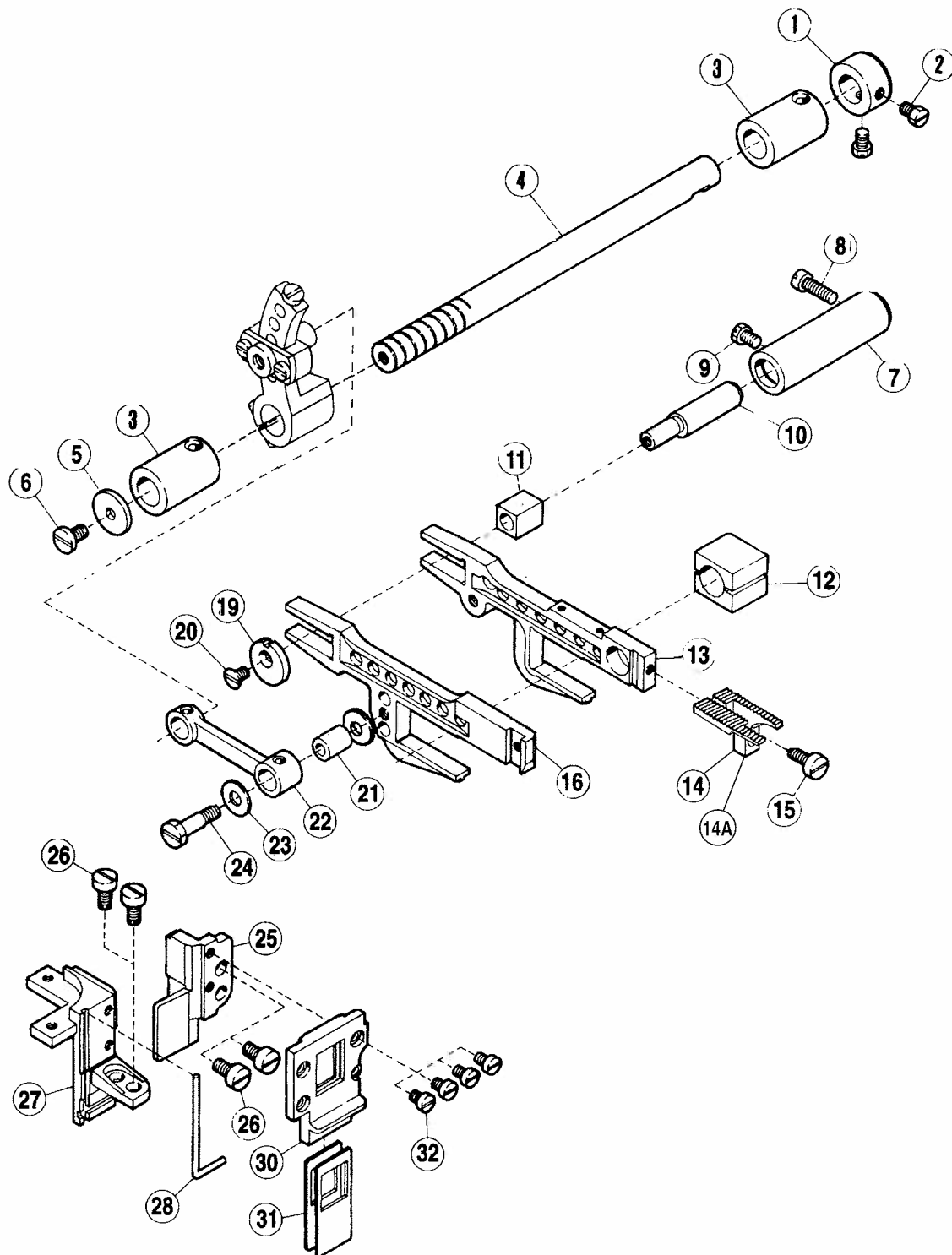
DRIVE MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	616160	LOOPER DRIVE CONN.....	1	16.....	616620	BUSHING (REAR)	1
2.....	640013	CAP SCREW (LARGE).....	2	17.....	612340	LOOPER LEVER CRANK.....	1
3.....	640013	CAP SCREW (LARGE).....	2	18.....	619280	CLAMP SCREW	1
4.....	612280	CRANK.....	1	19.....	619380	CLAMP SCREW NUT	1
5.....	611620	CRANK SCREW	2	20.....	611560	CLAMP SCREW NUT WASHER	1
6.....	611160	GUIDE.....	1	22.....	618600	PIN SCREW.....	1
7.....	619600	GUIDE SCREW	1	26.....	615100	GUIDE.....	1
8.....	611640	GUIDE SCREW WASHER.....	1	27.....	613600	OIL FELT	2
9.....	640015	RIGHT LOOPER DRIVE SHAFT	1	28.....	612380	BUSHING (FRONT)	1
10.....	612640	THRUST WASHER	1	29.....	640017	HOUSING	1
11.....	617540	THRUST WASHER SCREW.....	1	30.....	640018	BUSHING FRONT SCREW	1
12.....	611640	WASHER	1	31.....	615220	HOUSING CAP	1
13.....	615760	BUSHING (FRONT)	1	32.....	610100	HOUSING CAP SCREW.....	2
14.....	612300	BUSHING (FRONT) OIL SEAL	1	33.....	640016	BUSHING (REAR)	1
15.....	640014	BUSHING (CENTER).....	1	34.....	617060	CAP	1

1) FEED MECHANISM

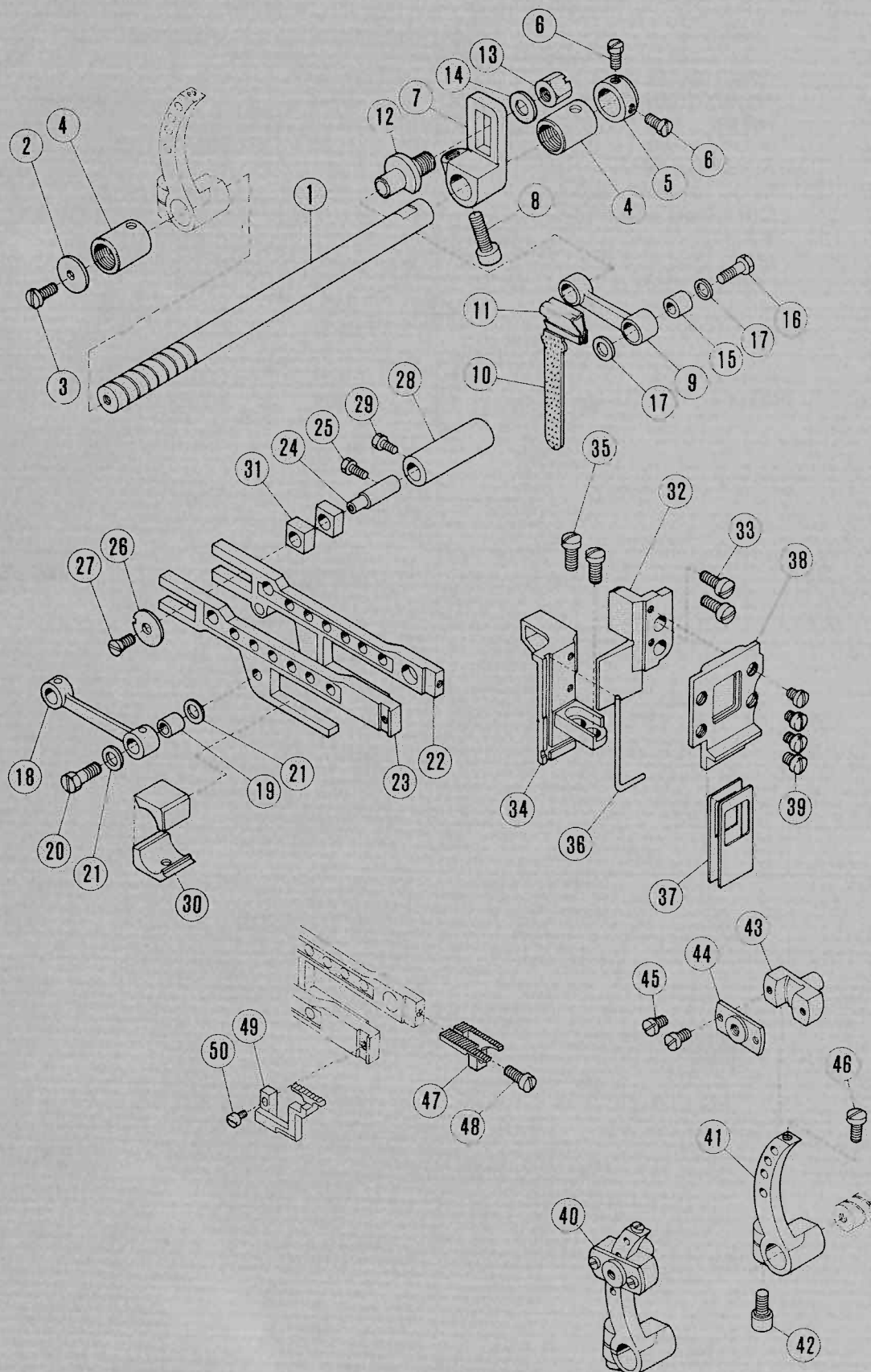
1) FEED MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	612620	FEED DRIVE CONNECTION	1	34	611740	RETAINING RING	2
2	620217	FEED DRIVE CRANK	1	35	615560	FEED REG. ASSY. (REF.#36-41)	1
4	619700	CLAMP SCREW	1	36	615600	BLOCK	1
5	614760	PIN	1	37	618660	STOP SCREW	1
6	618600	PIN SCREW	1	38	615580	SEGMENT (CRANK)	1
7	612480	NEEDLE BEARING	1	39	619700	SCREW	1
8	620034	FEED DRIVE ECCENTRIC	1	40	615620	BLOCK COVER	1
9	620037	FEED ECCENTRIC GUIDE	1	41	618420	SCREW	2
10	620038	FLAT SPRING	1	42	611740	RETAINING RING	2
11	619400	SET SCREW	1	43	612820	FEED REG. LINK	1
12	620039	SET SCREW	1	44	619460	SCREW	2
13	620040	LOOPER AVOIDING ECCENTRIC	1	45	612800	FEED REG. LEVER	1
15	620033	SET SCREW	2	46	619700	SCREW	1
16	620042	FEED REGULATING ECCENTRIC	1	47	614120	COLLAR	1
17	620052	STOPPER	1	48	614180	SCREW PIN	1
18	619780	SCREW	1	49	618600	SCREW	1
19	616340	FD. REG. RACHET ASSY. (REF.#20-24)	1	50	614160	REGULATING SPRING	1
20	616365	POSITION GEAR BRACKET	1	51	640031	BUSHING	1
21	616360	POSITION GEAR	1	52	612300	OIL SEAL	1
22	640029	PIN	2	53	614100	FEED SHAFT	1
23	619580	SCREW	1	54	614140	FEED REG. LEVER	1
24	616400	SPRING	2	55	614600	LEVER (FRONT)	1
25	620035	RACHET WHEEL ASSY. (REF.#26-29)	1	56	618760	SCREW	1
26	620043	BRACKET	1	57	610200	SCREW	1
27	620044	WHEEL	1	58	612860	STOPPER	2
28	620045	SCREW	3	59	612840	REGULATING PLATE	1
29	620033	SET SCREW	2	60	618760	SCREW	2
30	620053	SPACER	1	61	611940	WASHER	1
31	620055	PUSH BUTTON	1	62	614480	THUMB NUT	1
32	616520	SPRING	1	63	619500	SCREW	1
33	620054	O-RING	1				

2) FEED MECHANISM (BS 401-100, 300, & 500)

2) FEED MECHANISM (BS 401-100, 300, & 500)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	611100	THRUST COLLAR	1	15.....	610100	SCREW	1
2.....	618600	THRUST COLLAR SCREW	2	16.....	612740	DIFFERENTIAL FEED BAR	1
3.....	640032	BUSHING	2	19.....	613780	WASHER	1
4.....	614080	FEED BAR SHAFT	1	20.....	619480	WASHER SCREW	1
5.....	612640	THRUST WASHER	1	21.....	612680	BUSHING	1
6.....	618340	THRUST WASHER SCREW	1	22.....	612720	CONNECTING LINK	1
7.....	612780	FEED BAR GUIDE BUSHING	1	23.....	612700	BUSHING SCREW WASHER	2
8.....	617440	SCREW	1	24.....	619140	BUSHING SCREW	1
9.....	618600	SCREW	1	25.....	615140	FEED BAR GUIDE (RIGHT)	1
10.....	612760	FEED BAR HINGE PIN	1	26.....	619080	SCREW	4
11.....	640033	FEED BAR GUIDE BLOCK	1	27.....	640034	FEED BAR GUIDE	1
12.....	614320	LIFT BLOCK	1	28.....	615200	GASKET	1
13.....	620231	FEED BAR	1	30.....	615180	INSERT PLATE	1
14.....	650076	MAIN FEED DOG	1	31.....	615160	FEED BAR OIL SPLASH GUARD	2
14A.....	650078	MAIN FEED DOG (401-500)	1	32.....	619600	SCREW	4

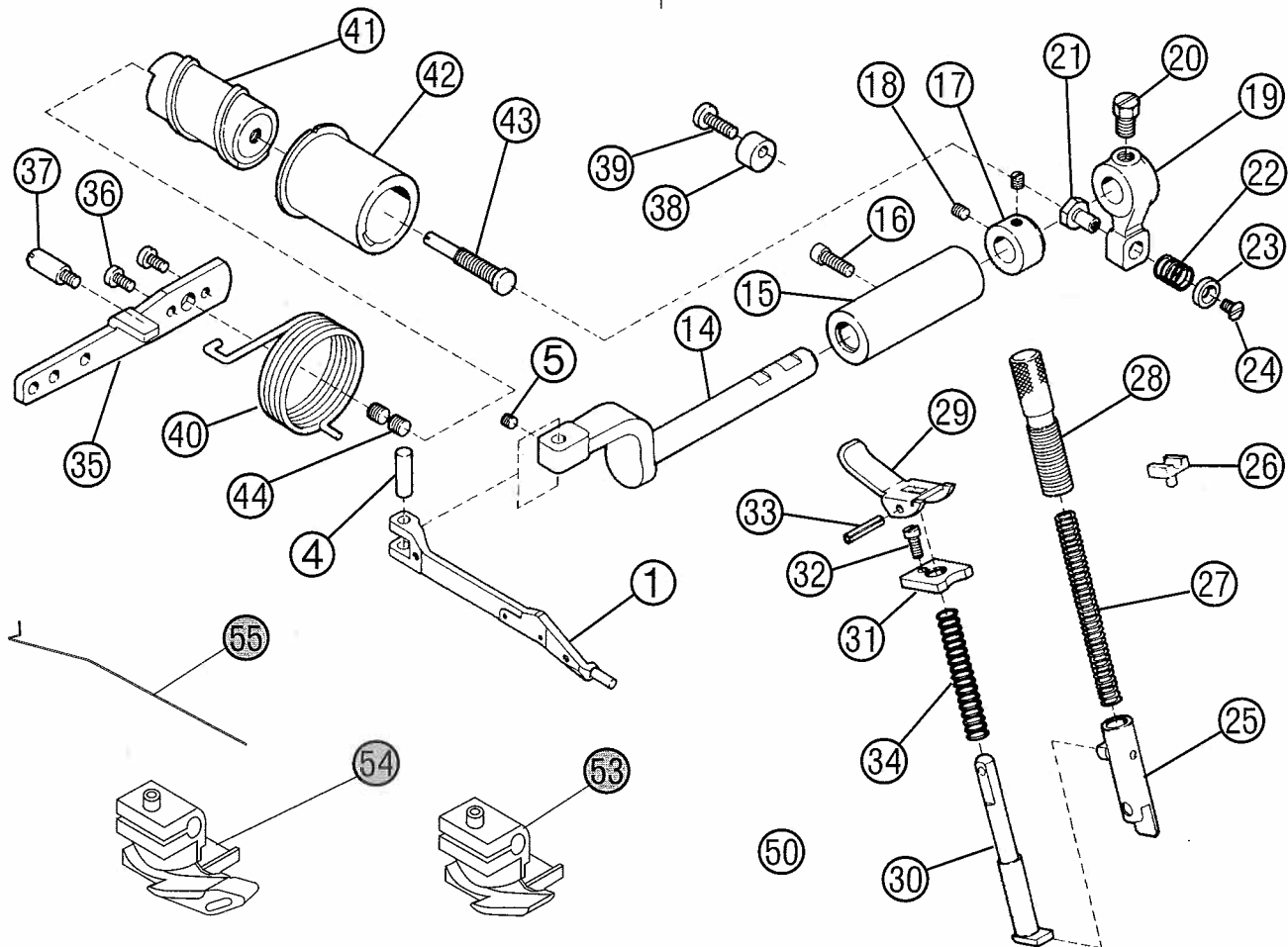
MAIN & DIFFERENTIAL FEED MECHANISM (CB-100 & BS 401-600)

MAIN & DIFFERENTIAL FEED MECHANISM (CB-100 & BS 401-600)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	614080	Feed Bar Shaft.....	1	27.....	619480	Washer Screw.....	1
2.....	613660	Looper.....	1	28.....	612780	Feed Bar Bushing Guide.....	1
3.....	618340	Screw.....	1	29.....	617440	Bushing Screw.....	1
4.....	612320	Rear Bushing.....	2	30.....	614320	Lift Block.....	1
5.....	611100	Thrust Collar.....	1	31.....	611200	Feed Bar Guide Block.....	2
6.....	618600	Collar Screw.....	2	32.....	615140	Right Feed Bar Guide.....	1
7.....	615700	Regulating Crank.....	1	33.....	619080	Screw.....	2
8.....	619700	Clamp Screw.....	1	34.....	615120	Feed Bar Guide.....	1
9.....	612660	Main Feed Connecting Link.....	1	35.....	619080	Screw.....	2
10.....	613180	Oil Felt.....	1	36.....	615200	Gasket.....	1
11.....	613860	Retainer.....	1	37.....	615160	Feed Bar Oil Splash Guard.....	2
12.....	615720	Pin.....	1	38.....	615180	Insert Plate.....	1
13.....	619740	Pin Nut.....	1	39.....	619600	Screw.....	4
14.....	615740	Pin Nut Washer.....	1	40.....	615560	Differential Feed Regulator.....	1
15.....	612680	Bushing.....	1	41.....	615580	Segment.....	1
16.....	619140	Screw.....	1	42.....	619700	Clamp Screw.....	1
17.....	612700	Washer.....	2	43.....	615600	Block.....	1
18.....	612720	Connecting Link.....	1	44.....	615610	Block Cover.....	1
19.....	612680	Bushing.....	1	45.....	618420	Screw.....	2
20.....	619140	Bushing Screw.....	1	46.....	618860	Block Stop Screw.....	1
21.....	612700	Bushing Screw Washer.....	2	47.....	650077	Feed Dog (CB-100).....	1
22.....	612730	Main Feed Bar (CB-100).....	1	47A.....	650079	Feed Dog (401-600).....	1
22A.....	670604	Main Feed Bar (401-600).....	1	48.....	610100	Screw.....	1
23.....	612740	Differential Feed Bar (CB-100).....	1	49.....	670622	Differential Feed Dog (CB-100).....	1
23A.....	670605	Differential Feed Bar (401-600).....	1	50.....	610120	Genuine Screw.....	1
24.....	612760	Feed Bar Hinge Pin.....	1	51.....	620015	Front Feed Dog.....	1
25.....	618600	Collar Screw.....	1	52.....	610140	Screw.....	1
26.....	613780	Washer.....	1				

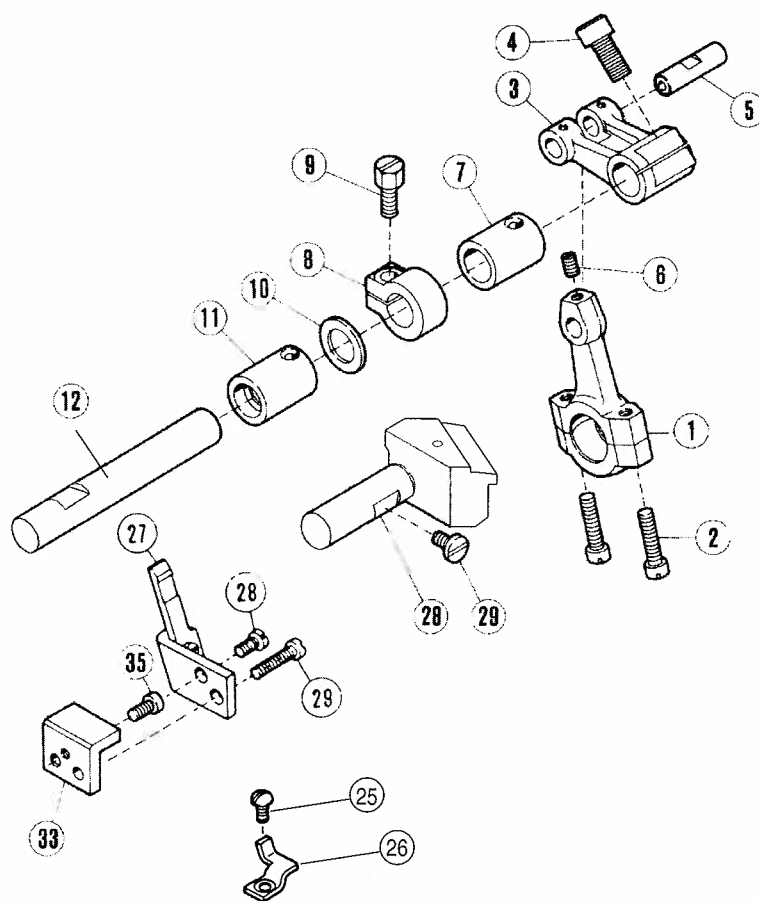
PRESSER FOOT & LIFT MECHANISM**(BS 401-500 ON PAGE 20; BS 401-600 ON PAGE 22)**

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	650038	PRESSER FOOT ARM	1	34	611420	SPRING	1
4	617040	HINGE PIN	1	35	613220	FOOT LIFT LEVER	1
5	619020	HINGE PIN SCREW	1	36	610180	SCREW	2
14	616960	FOOT LIFT LEVER SHAFT	1	37	619180	STOP SCREW	1
15	616980	BUSHING, COMPLETE	1	38	611840	REGULATOR	1
16	617440	BUSHING SCREW	1	39	618760	REGULATOR SCREW	1
17	611100	COLLAR	1	40	613240	SPRING	1
18	610420	COLLAR SCREW	2	41	614680	FOOT LIFT CAM	1
19	615900	LEVER	1	42	614700	BUSHING	1
20	611620	SCREW	1	43	615960	REGULATING SCREW STUD	1
21	615920	PIN	1	44	618160	STOP SCREW	2
22	615940	PIN SPRING	1	45	650039	PRESSER FOOT	1
23	611900	PIN WASHER	1	46	616920	PRESSER FOOT SHANK	1
24	619480	PIN SCREW	1	47	619100	PRESSER FOOT PIN SCREW	1
25	617000	PRESSER BAR, COMPLETE	1	48	618780	PRESSER FOOT PIN SCREW	1
26	616780	GUIDE	1	49	616940	PRESSER FOOT PIN	1
27	617020	PRESSER BAR GUIDE	1	50	650040	PRESSER FOOT ROLLER	1
28	617180	THUMB SCREW	1	51	650041	PRESSER FOOT ROLLER BRKT.	1
29	617100	HAND LIFT LEVER	1	52	619120	SCREW	1
30	611780	SPRING PLUNGER	1	53	650042	PRESSER FOOT ASSEMBLY (401-100 & 300)	1
31	617120	SPRING PLUNGER BUSHING	1	54	670620	PRESSER FOOT ASSY. (CB 100 ONLY)	1
32	618420	BUSHING SCREW	1	55	670621	PRESSER FOOT SPRING (CB 100 ONLY)	1
33	611800	HINGE PIN	1				



TOP FEED LIFT ASSEMBLY & NEEDLE GUARDS

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	612880	DRIVE CONN.....	1	11.....	613020	BUSHING (RIGHT).....	1
2.....	619200	CAP SCREW.....	2	12.....	650070	SHAFT.....	1
3.....	613000	DRIVE CRANK.....	1	25.....	5227	SCREW.....	1
4.....	619700	CLAMP SCREW.....	1	26.....	620047	FRONT NEEDLE GUARD.....	1
5.....	612900	PIN.....	1	27.....	613580	REAR NEEDLE GUARD.....	1
6.....	610440	PIN SCREW.....	1	28.....	650071	HAMMER STOP.....	1
7.....	640035	BUSHING (LEFT).....	1	29.....	618340	SCREW.....	1
8.....	614815	THRUST COLLAR.....	1	33.....	613120	GUIDE.....	1
9.....	618350	THRUST COLLAR SCREW.....	2	35.....	610100	GUIDE SCREW.....	1
10.....	615390	WASHER.....	1				

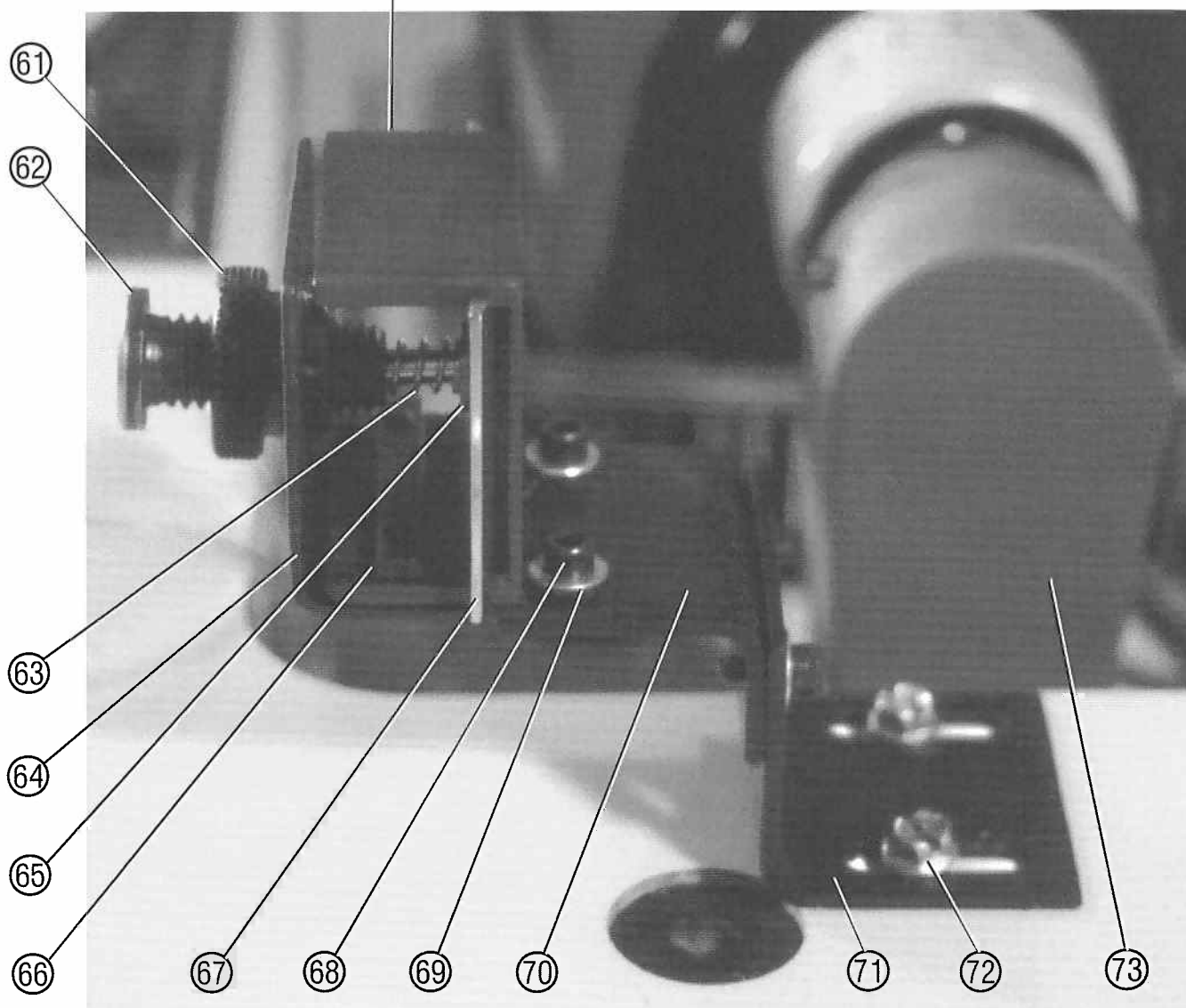


TAPE TENSION ASSEMBLY

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
60.....	PNR-2049	Shroud.....	1	67.....	PNR-2053	Pressure Plate.....	1
61.....	CL-1213-TSJN	Check Nut	1	68.....	SHCS8-32x3/8	Screw	4
62.....	6219	Adjusting Screw	1	69.....	FW#8.....	Washer.....	4
63.....	LC-032D-4-M	Spring.....	1	70.....	NP-102	Bracket	1
64.....	PNR-2054	Support.....	1	71.....	NP-101	Bracket.....	1
65.....		Washer.....	1	72.....		Wood Screw	2
66.....	PNR-2048	Nut Plate	1	73.....	TCK-22.....	Synchronizer	1

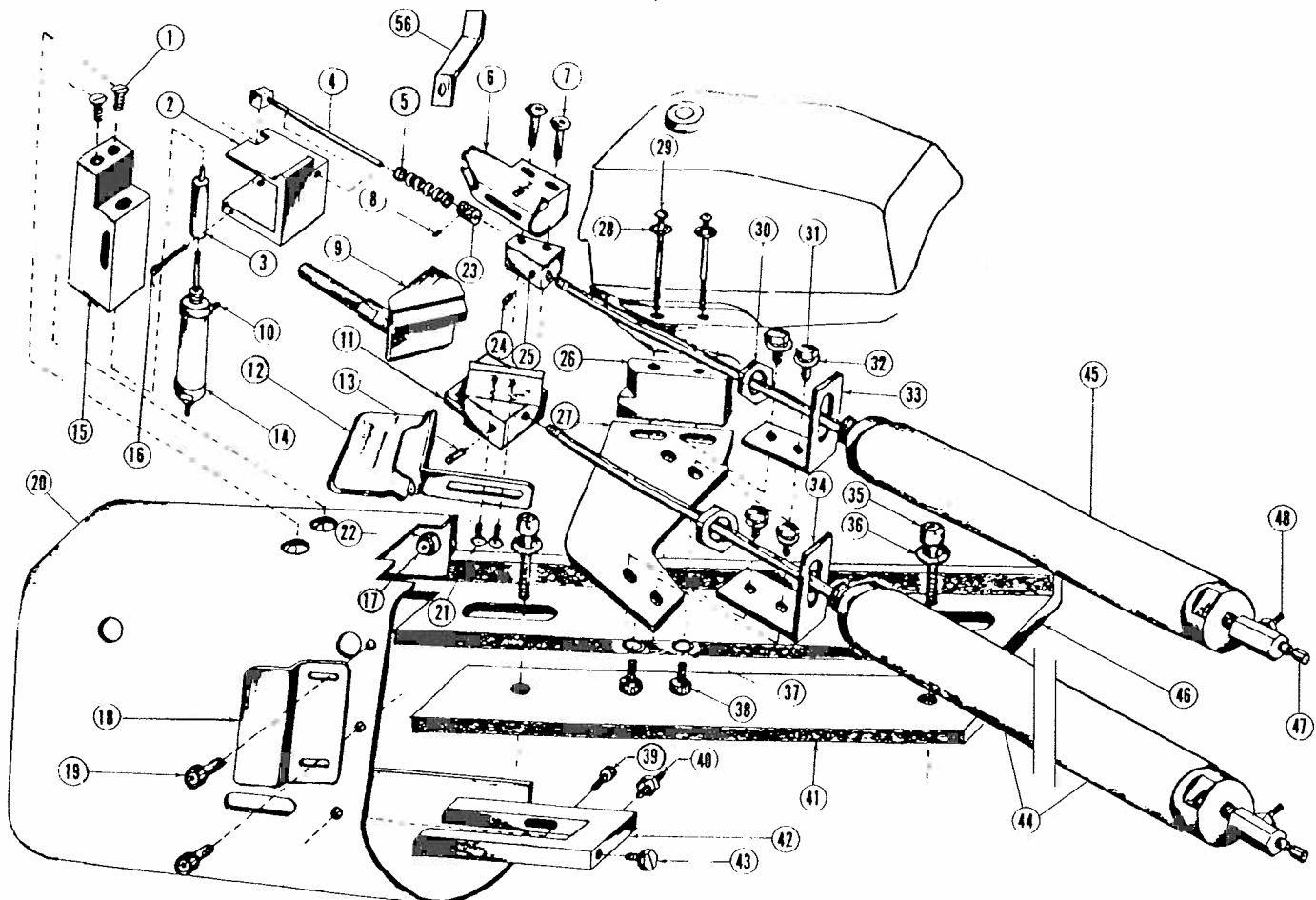
For Synchronizer Adaptor Screws see page 29, Ref# 35

51 Listed on following page 47

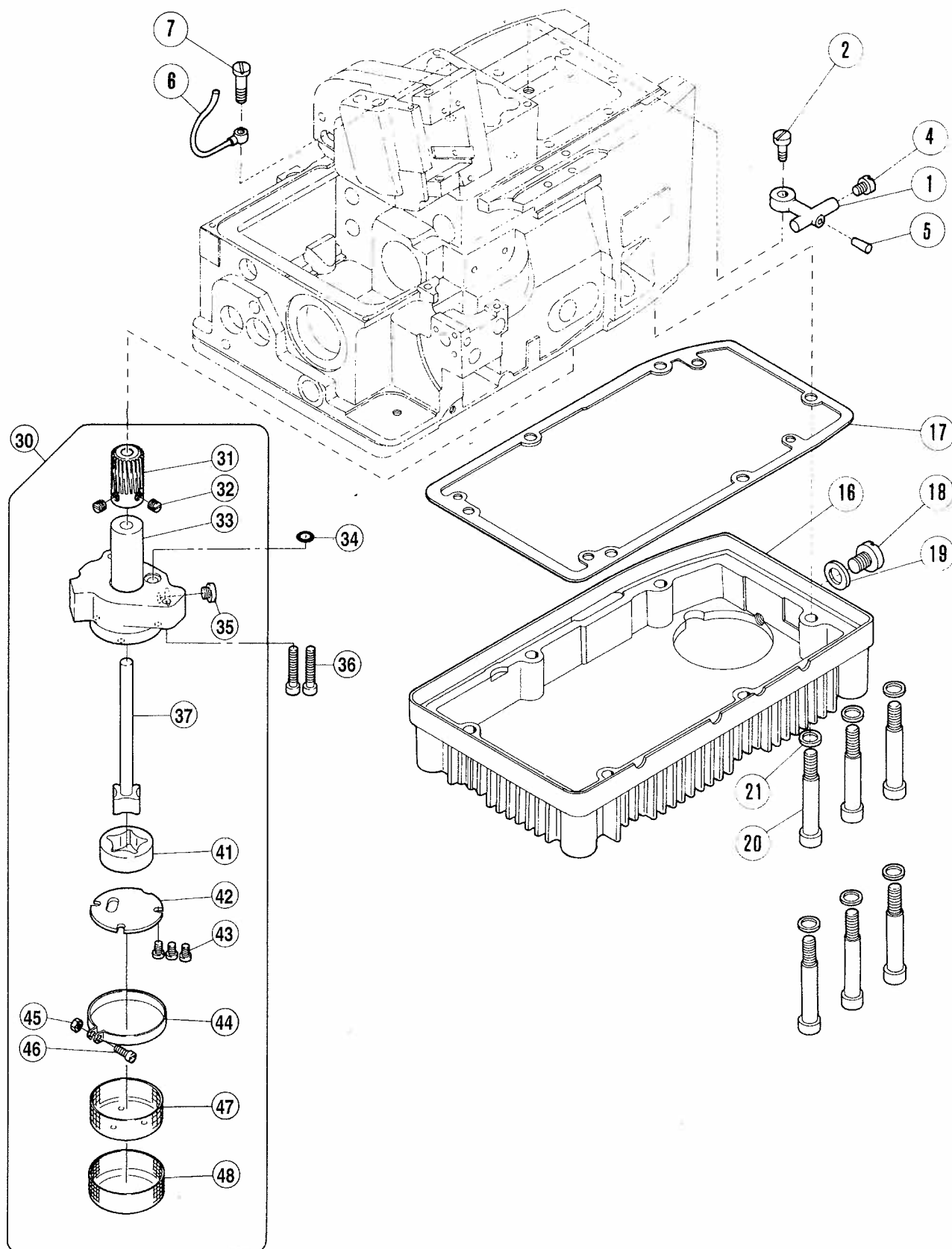


TAPE FEED MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	FHMS10-32x1/2	Screw	2	26.....	670716	Spacer Block	1
2.....	670708	Drag Foot	1	27.....	670714	Binder Hemmer Plate	1
3.....	670707	Drag Foot Ext Pin	1	28.....	FW#6	Washer	2
4.....	670713	Drag Foot Insert Cam	1	29.....	SHCS6-32x1-1/4	Screw	2
5.....	LC-022BC-6	Drag Foot Insert Cam Spring	1	30.....	D-9	Hex Nut	2
6.....	670700	Binder (State Size)	1	31.....	HHB 1/4-28x1/2	Bolt	4
7.....	BHCS8-32x3/4	Screw	2	32.....	FW1/2	Washer	4
8.....	SS6-32x1/4	Screw	1	33.....	670715	Cylinder Mounting Bracket	1
9.....	650071	Stop Block	1	34.....	670715	Cylinder Mounting Bracket	1
10.....	MH-1016	Air Fitting	2	35.....	SHCS1/4-20x2	Screw	2
11.....	670703	Hemmer Mounting Block	1	36.....	FW1/2	Washer	2
12.....	P205A	Hemmer (State Size)	1	37.....	FW#8	Washer	2
13.....	SS10-32x1/4	Screw	1	38.....	SHCS8-32x5/8	Screw	2
14.....	020.5-D	Drag Foot Cylinder	1	39.....	SHCS8-32x1/2	Screw	1
15.....	670706	Drag Foot Bracket	1	40.....	MH-1016	Air Fitting	1
16.....	SHCS8-32x5/8	Screw	1	41.....	670711	Bar Nut Border Guide Support Bkt.	1
17.....	SHCS1/4-20x1/2	Screw	2	42.....	670710	Border Edge Sensor	1
18.....	670709	Border Edge Guide	1	43.....	SS10-32X1/4	Screw	1
19.....	SHCS8-32x1/4	Screw	2	44.....	044-NR	Hemmer Cylinder	1
20.....	670705	Border Guide	1	45.....	043-NR	Binder Cylinder	1
21.....	BHCS6-32x1/4	Screw	2	46.....	670704	Bracket Border Guide Support	1
22.....	FW1/2	Washer	2	47.....	MNV-1KP	Air Flow Valve	2
23.....	670712	Drag Foot Handle	1	48.....	MH-1016	Air Fitting	2
24.....	SS8-32x1/8	Screw	1	51.....	S286A	Binder Tension Assy (See page 46)	1
25.....	670701	Binder Mounting Block	1	56.....	670717	Binder Stop Post	1

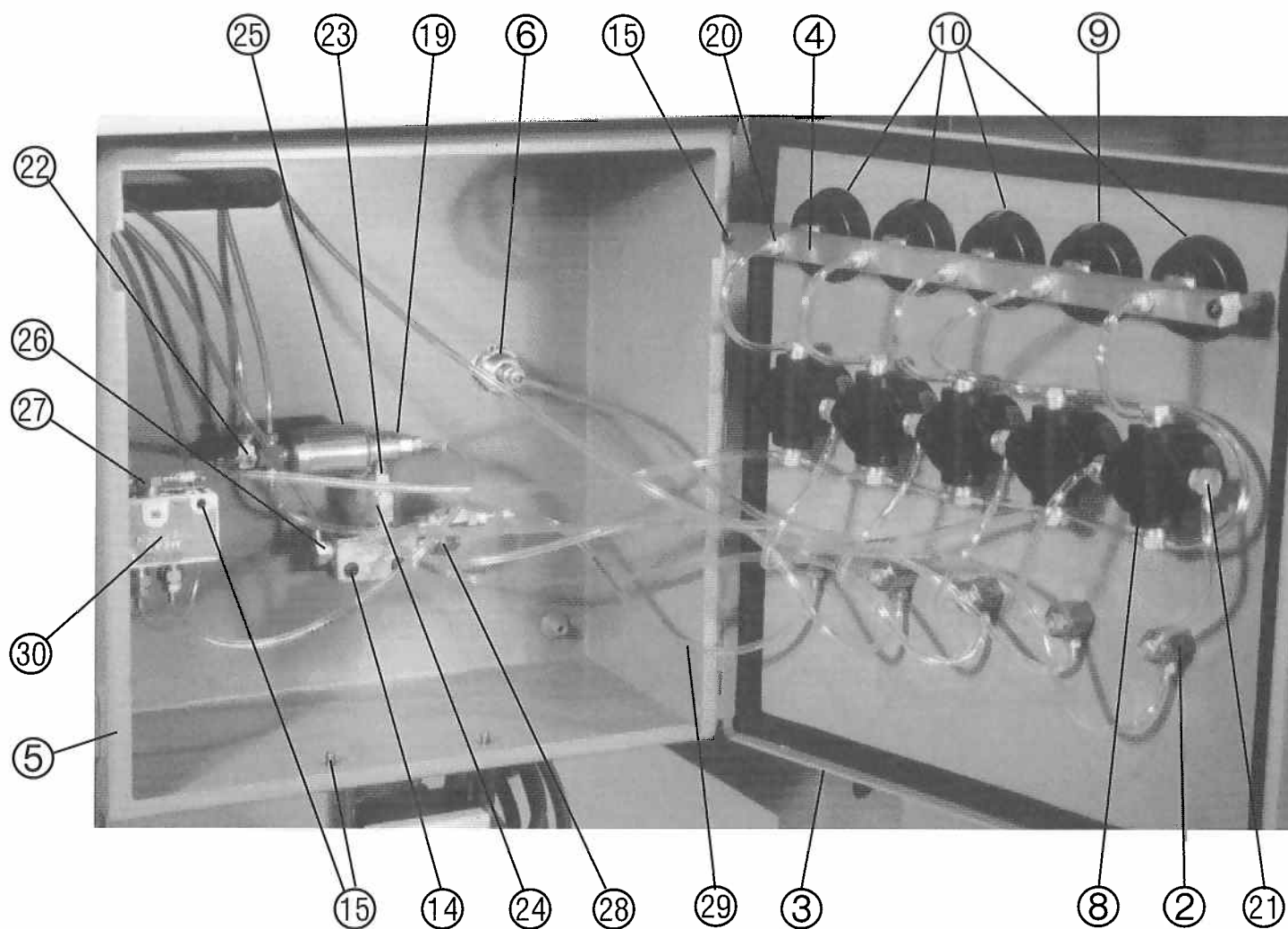
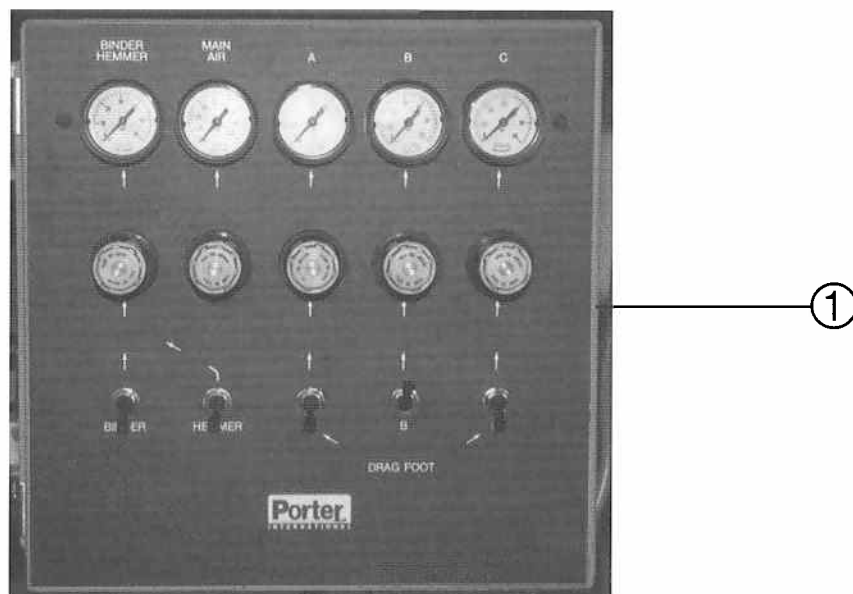


LUBRICATING MECHANISM



LUBRICATING MECHANISM

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	613440	OIL DISTRIBUTOR.....	1	33.....	620019	CASING COMPLETE.....	1
2.....	610860	OIL SPLASH SCREW.....	1	34.....	613320	"O" RING.....	1
4.....	613360	SCREW.....	1	35.....	618900	SCREW.....	1
6.....	613460	OIL SPLASH PIPE COMPLETE.....	1	36.....	618660	SCREW.....	2
7.....	611520	OIL SPLASH SCREW.....	1	37.....	620020	INSIDE ROTOR SHAFT.....	1
16.....	615500	OIL RESERVOIR.....	1	41.....	620024	OUTSIDE ROTOR.....	1
17.....	615980	GASKET.....	1	42.....	620025	ROTOR PLATE.....	1
18.....	618840	SCREW.....	1	43.....	619520	SCREW.....	3
19.....	611660	WASHER.....	1	44.....	640037	FILTER CLAMP.....	1
20.....	618960	BOLT.....	6	45.....	618320	NUT.....	1
21.....	614300	WASHER.....	6	46.....	610040	SCREW.....	1
30.....	613880	GEAR PUMP COMPLETE.....	1	47.....	640039	INSIDE FILTER.....	1
31.....	613360	WORM WHEEL.....	1	48.....	640038	OUTSIDE FILTER.....	1
32.....	618460	SCREW.....	2				

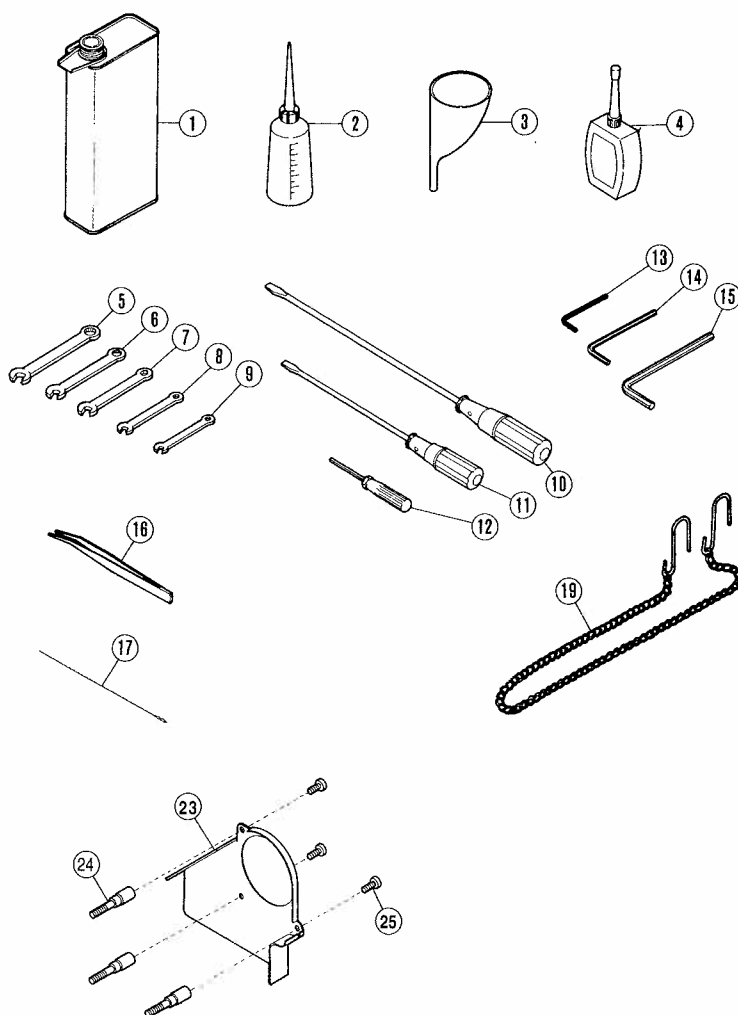
CONTROL BOX (BS 401-300 & 500)

CONTROL BOX (BS 401-300 & 500)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	10	ST-ASSEMBLY	1	16	F300-1	FILTER (NOT SHOWN)	5
2	03-01-01	TOGGLE SWITCH	5	17	HOC	MALE QUICK DISCONNECT (NOT SHOWN)	1
3	1347	401 CONTROL PANEL L	1	18	LTV-140	4-WAY VALVE (NOT SHOWN)	1
4	1360	MOUNTING BAR	1	19	MAV-3	3-WAY RELEASE VALVE	1
5	1361	PNEUMATIC ENCLOSURE	1	20	MH-1016	AIR FITTING	25
6	15029-1	BULKHEAD CONNECT	1	21	MLAS-1016	MINI PNEUMATIC	1
7	15090-3	T CROSS FITTING	1	22	MLS-MV-1010	NEEDLE VALVE	1
8	1611A	0-160 PSI REGULATOR	5	23	MN-1010	HEX NIPPLE	2
9	1681	1/8" NPT GUAGE	1	24	MPA-1810	AIR FITTING	5
10	1681-A	1/8" NPT GUAGE	4	25	MPA-7	AIR PILOT MUFFLER	1
11	216P-2	HEX NIPPLE (NOT SHOWN)	1	26	MPAL-8016	MINI PNEUMATIC	10
12	620102	SPACER (NOT SHOWN)	4	27	MPAT-8016	MINI PNEUMATIC	7
13	93195	LOCK RING FOR FILTER (NOT SHOWN)	5	28	MSV-1	SHUTTLE VALVE	2
14	BHCS8-32X1	BUTTON HEAD CAP SCREW	2	29	MUT-1016	AIR TUBING	25
15	BHCS8-32X3/4	BUTTON HEAD CAP SCREW	6	30	MV-60	3-WAY VALVE	1

ACCESSORIES

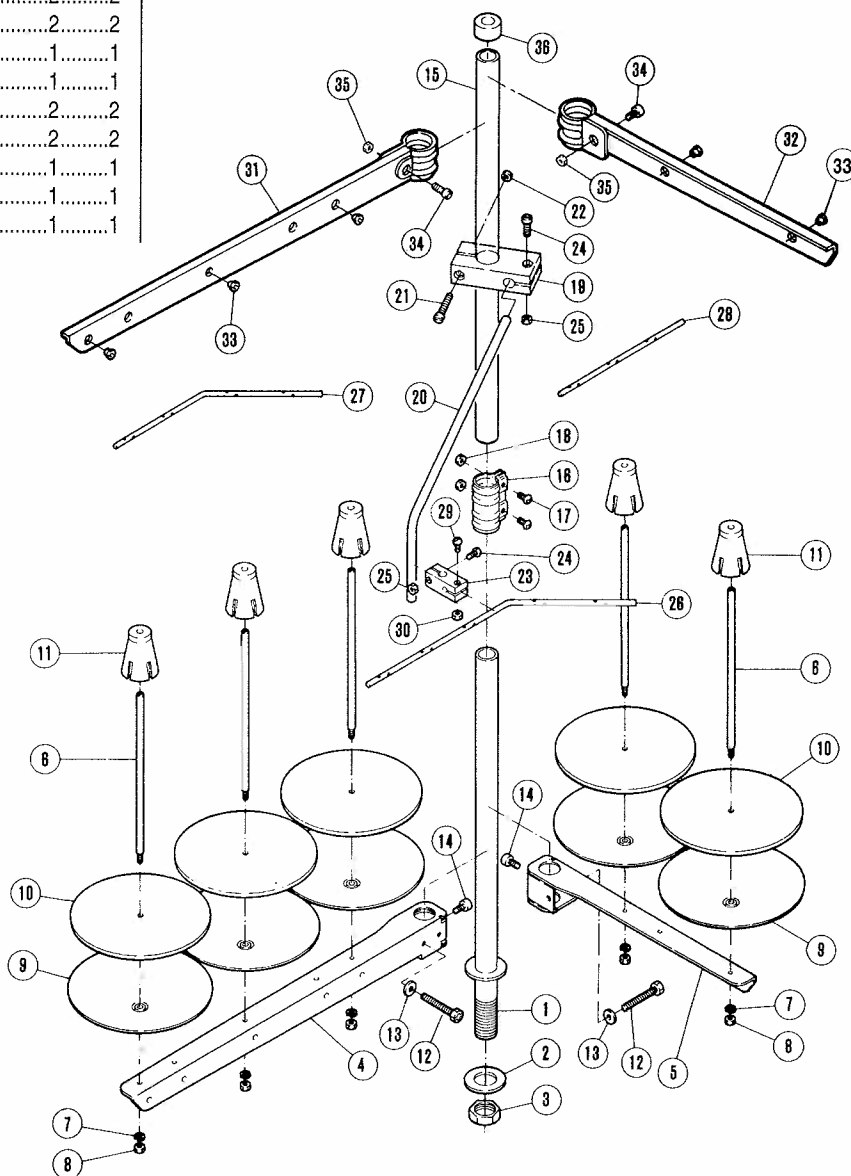
Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1.....	610340	OIL CONTAINER.....	1	12.....	610600	ALLEN WRENCH.....	1
2.....	610320	OILER.....	1	13.....	640071	ALLEN KEY (2.38 MM).....	1
3.....	610380	OIL FUNNEL.....	1	14.....	610640	ALLEN KEY (3.17 MM).....	1
4.....	610580	LUBRICANT CONTAINER.....	1	15.....	610720	ALLEN KEY (4.76 MM).....	1
5.....	618080	WRENCH (9.5 MM).....	1	16.....	610300	TWEEZERS.....	1
6.....	618060	WRENCH (8 MM).....	1	17.....	610460	THREADING WIRE.....	1
7.....	618040	WRENCH (7 MM).....	1	19.....	640072	THREADLE CHAIN.....	1
8.....	618020	WRENCH (6 MM).....	1	23.....	614720	BELT GUARD.....	1
9.....	618000	WRENCH (5 MM).....	1	24.....	614740	FIXING SCREW.....	3
10.....	610260	SCREWDRIVER (LARGE).....	1	25.....	618740	SCREW.....	3
11.....	610280	SCREWDRIVER (MEDIUM).....	1				



THREAD STAND

Ref #	Part#	Description	Spools: 3 Qty	4 Qty	5 Qty
*	640068	THREAD STAND ASS. (5-SPOOLS)	1		
*	640069	THREAD STAND ASS. (4-SPOOLS)	1		
*	640070	THREAD STAND ASS. (3-SPOOLS)	1		
1	640043	THREAD STAND ROD (LOWER)	1	1	1
2	640044	WASHER	1	1	1
3	640042	NUT	1	1	1
4	640058	BRACKET	1	1	1
5	640059	BRACKET		2	1
6	640060	SPOOL PIN	3	4	5
7	640061	SPRING WASHER	3	4	5
8	640053	NUT	3	4	5
9	640062	SPOOL TRAY	3	4	5
10	640063	CUSHION	3	4	5
11	640064	SPOOL RETAINING FIN	3	4	5
12	640065	SCREW	1	2	2
13	640066	WASHER	1	2	2
14	640067	SCREW	1	2	2
15	640040	THREAD STAND ROD (UPPER)	1	1	1
16	640056	JOINT	1	1	1
17	640057	SCREW	2	2	2
18	640049	NUT	2	2	2
19	640050	BRACKET	1	1	1
20	640051	THREAD GUIDE BAR ROD	1	1	1
21	640052	SCREW	1	1	1

Ref #	Part #	Description	Spools: 3 Qty	4 Qty	5 Qty
22	640053	NUT	1	1	1
23	640054	HOLDER	1	1	1
24	640055	SCREW	2	2	2
25	640053	NUT	2	2	2
26	618240	THREAD GUIDE BAR (5-SPOOLS)			1
27	618241	THREAD GUIDE BAR (4-SPOOLS)			1
28	618242	THREAD GUIDE BAR (3-SPOOLS)	1		
29	640055	SCREW	1	1	1
30	640053	NUT	1	1	1
31	640045	BRACKET	1		1
32	640046	BRACKET		2	1
33	640047	THREAD EYELET	3	4	5
34	640048	SCREW	1	2	2
35	640049	NUT	1	2	2
36	640041	ROD CAP	1	1	1



ORDERING INFORMATION

TO ORDER BY PHONE:

From Massachusetts 508-922-2611

From out of state 800-343-8138

TO ORDER BY FAX: 617-599-7081

(Fax & Message Service available 24 hours per day.)

TO ORDER BY MAIL:

**Porter International
97 Rantoul Street
Beverly, MA 01915 USA**

HAVE THIS INFORMATION READY:

1. Machine Model Number
2. Part Number or complete part description
3. Customer Number
4. Person placing order
5. Bill To and Ship To addresses
6. Fax/Phone

PRICES AND TERMS:

All prices are F.O.B. Beverly, MA, and are valid at the time of shipment.

All prices are list, unless otherwise noted.

Open account terms extended to firms with established credit.

Overseas orders must be paid before shipment unless otherwise noted.

SHIPPING:

When ordering parts please state how the shipment is to be made: (UPS Red, Blue, Orange or Ground; Federal Express; air mail).

Freight charges are included on invoice.

If a customer is on C.O.D. status, shipping costs are included in the C.O.D. amount.

TAXES:

Where the law requires, state sales and/or use taxes must be charged.

MINIMUM ORDERS:

Due to the rising costs of handling orders, we have established a minimum order of \$25.00.

RETURNED GOODS:

Porter International has a policy on returned parts which must be strictly adhered to.

1. All customers must call Porter to obtain a RMA (Returned Material Authorization) number. Parts returned without a RMA number will be returned to customer. We will not accept parts returned 60 days after authorization.
2. All parts to be returned must be shipped to Porter prepaid unless otherwise instructed by our Customer Service Department.
3. Credit for parts will be issued upon inspection by Porter and credited against your account.
4. A restocking charge of 15% will be issued on parts ordered incorrectly by the customer, unless otherwise noted.

CLAIMS:

If a parcel post shipment reaches you in damaged condition, advise us *immediately* so that a claim can be filed. All parcel post packages are insured by Porter. If a truck, UPS or express shipment arrives damaged, request the driver to make a notation on the freight bill. If the damage was concealed at the time of delivery, call the carrier for an inspection and obtain a **DAMAGE REPORT**. This is necessary in order to file a claim. In the case of truck lines, customer must file the claim. We will give any needed assistance, but the carrier is responsible for the safe arrival of goods.

