

curved needle

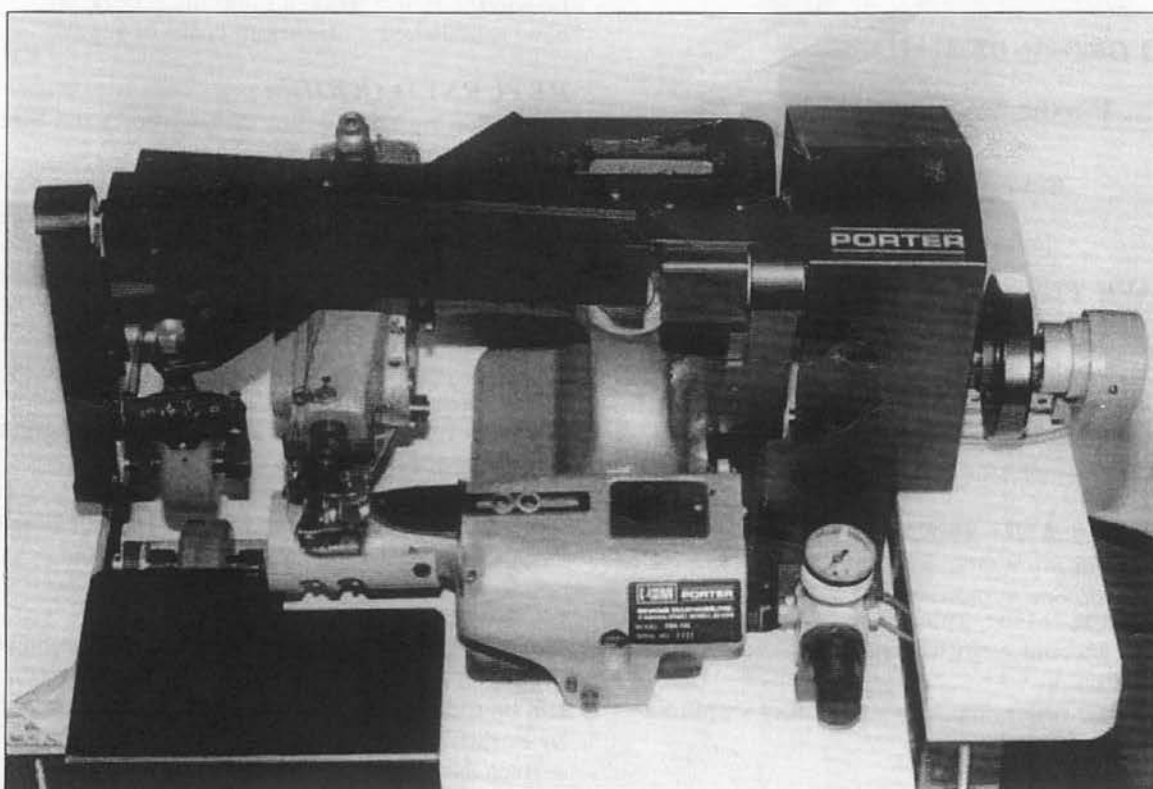
PORTER®

DESIGNERS AND MANUFACTURERS OF SPECIALIZED MATTRESS SEWING EQUIPMENT

CATALOG #9700 12/94

PBS 700

Blind Stitch Machine



INSTRUCTIONS, PARTS CATALOG
& SERVICE MANUAL

PSM PORTER®
SEWING MACHINES, INC.
97 Rantoul Street, Beverly, MA 01915
(508)922-2611 • (800)343-8138 • FAX (617)599-7081

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4. Person placing order
5. Machine Model Number
6. Part Number or complete part description

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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 receipt.
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PBS 700 Blind Stitch Machine

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OPERATING INSTRUCTIONS

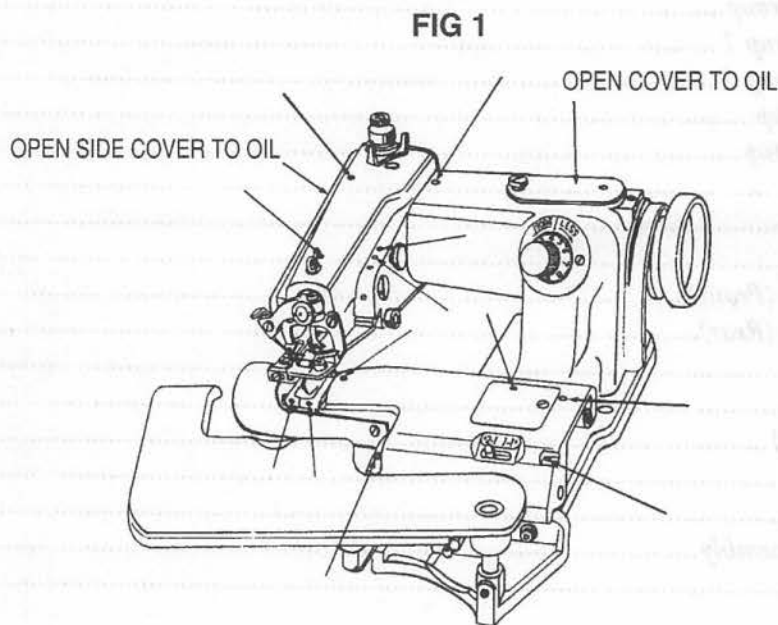
Handwheel Rotation and Speed

Turn handwheel only in direction away from operator for clockwise rotation. Be sure motor drive is wired up to obtain the same clockwise rotation. The recommended operating speed of a brand new machine is 1,800 to 2,000 stitches per minute. After a breaking-in period of several weeks and after the operator has become skilled in the operation of the machine, the speed can be increased up to 2200 stitches per minute.

Oiling and Maintenance (Fig. 1)

It is important not to operate the machine before oil of good quality has been dropped at all points shown in Fig. 1. When breaking in a new machine, oiling should be done sparingly several times a day. Thereafter, one oiling daily will be sufficient. After oiling, wipe machine carefully to avoid soiling of the material.

Do not operate machine without material under the presser foot. This will prevent damage to the needle and the feed dog as well as the feed plattens.



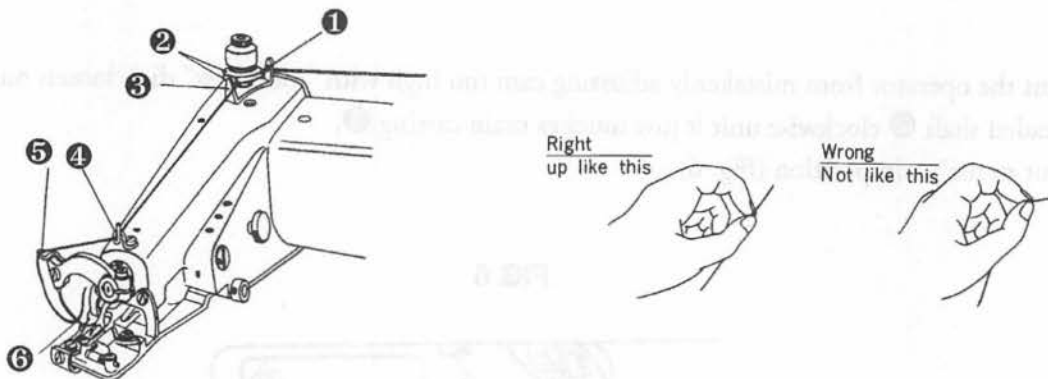
Threading Machine (Fig. 2)

Turn handwheel of machine in clockwise direction away from operator until needle lever reaches its furthest left hand position.

Draw thread from spool on thread stand and pass it through eyelet of rear thread guide ①, then slide it between two tension discs ②, and pass it over rear thread guide ③, through eyelet of front thread guide ④, then down through needle clamp hole ⑤ and pass it from the underside of needle hole ⑥. Leave thread about 5 cm (2 inches) past needle hole.

To thread needle at point ⑥, swing front plate out of way and depress cylinder out of way with knee lifter, then hold thread between index finger and thumb. End of thread must be stub not feather edge.

FIG 2



Adjusting Cam to Needle (Figs. 3, 4, 5, & 6.)

POWER OFF

Heel foot treadle to depress feed frame and turn handwheel away from operator (clockwise) until point of needle is at the left edge of cam slot (Fig.3). Release treadle.

If the cam is pressing up against needle (Fig. 4), turn dial "less" until a $1/32$ " clearance gap is between needle and cam (Fig. 5).

FIG 3

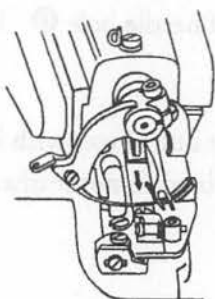


FIG 4

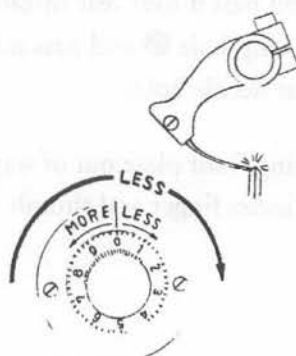
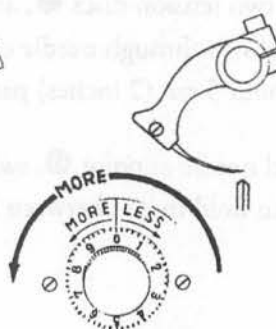
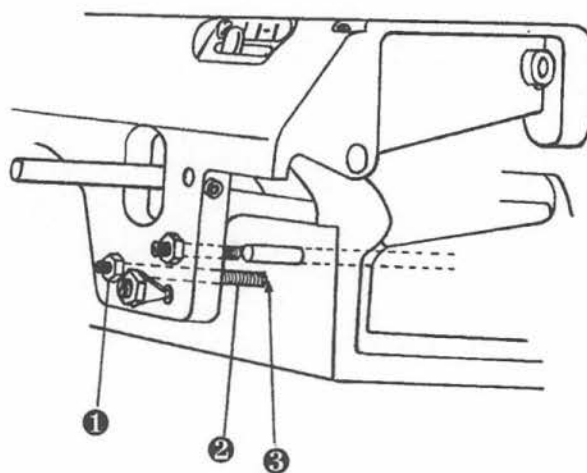


FIG 5



To prevent the operator from mistakenly adjusting cam too high with "more/less" dial, loosen nut at ❶ and turn threaded shaft ❷ clockwise until it just touches main casting ❸. Secure nut to maintain position (Fig. 6).

FIG 6



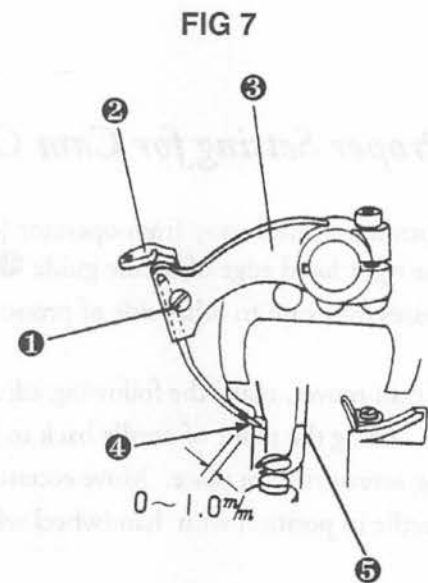
Replacing Needle (Fig.7)

Turn handwheel away from operator (clockwise) until needle reaches the end of its return stroke (extreme left hand position).

Remove old or defective needle by loosening needle clamp screw ①. Insert new needle into seat in needle clamp ② and needle lever ③ as far as it will go. Make sure hole of needle is 0-1.0 mm (0.04") on the left end of presser foot ④ and tighten needle clamp screw ①.

Turn handwheel slowly away from operator and observe movement of needle. The curved portion of the needle should bear slightly on the needle guide groove ⑤ in the left hand part of presser foot.

Always replace bent or blunt needles. They affect the satisfactory operation of machine.



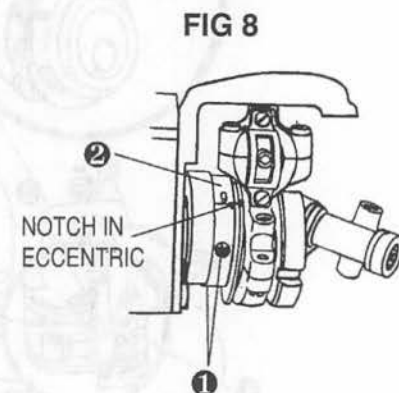
Needle Recommendation

Size #5-1/2

Regulating Stitch Length (Fig. 8)

Loosen screws ① in stitch regulating collar ② and turn collar ② until desired number is reached by indicator notch of eccentric. The larger the number by the notch, the longer the stitch. The smaller the number by the notch, the shorter the stitch. Tighten screws ① securely.

Number on Collar	5	6	7	9
Stitch Length (SPI)	5	4.2	3.6	3



NOTE: Due to the changing thicknesses of material passing between the cam and shoe area, an end result of 6-8 SPI will be satisfactory.

ADJUSTMENTS

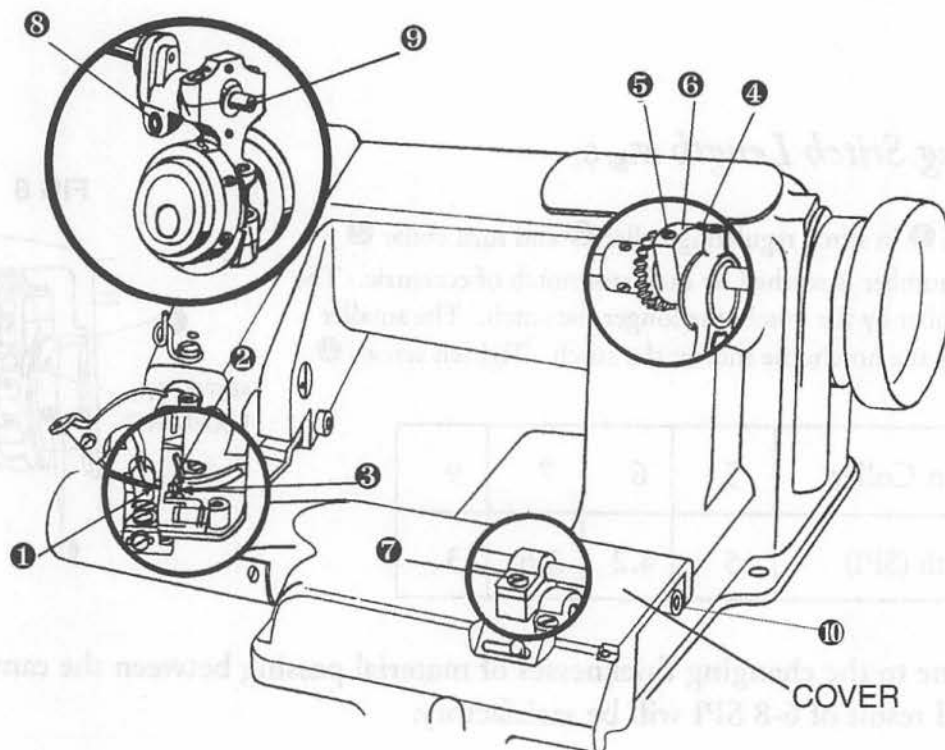
Proper Setting for Cam Connection (Fig. 9)

Turn handwheel away from operator (clockwise) until needle is on the down stroke. When needle reaches the right hand edge of needle guide ①, Cam ② should stop and should not move until the point of needle passes over cam to other side of presser foot opening ③.

If cam moves, make the following adjustments: first open top cover plate and loosen screw ④ on eccentric ⑥. Bring the point of needle back to the right hand edge of needle guide ①. Then loosen screw ⑤, keeping screwdriver in place. Move eccentric ⑥ forward to backward until cam is at the stop position, holding needle in position with handwheel while performing this operation. Tighten screw ⑤.

If still not correct, readjust by loosening screw ⑤ again, change angle of eccentric ⑥ slightly forward or backward as needed and retighten screw ⑤. When adjusted satisfactorily, be sure to tighten both screws ④ & ⑤ before putting machine into operation.

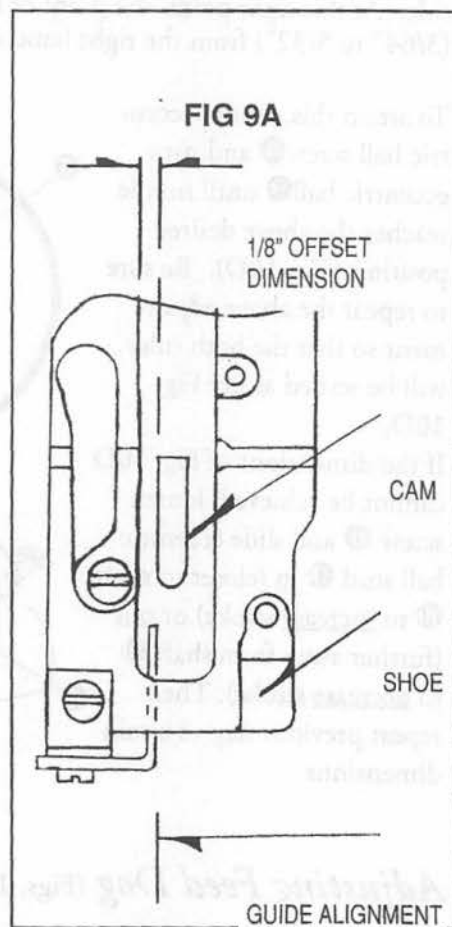
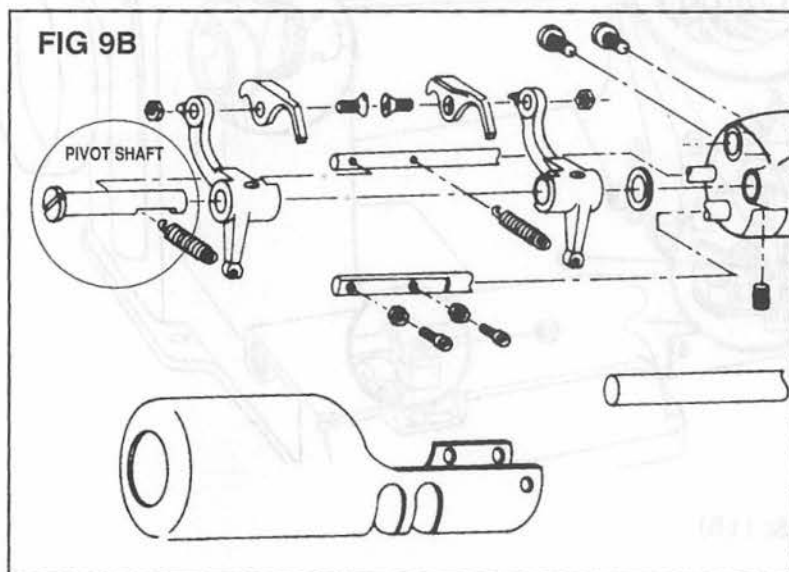
FIG 9



Setting Cam Shaft Offset (Figs. 9, 9A, & 9B)

Remove cover (Fig. 9) and loosen screw ⑦ on cam shaft drive collar and L.H. positioning collar (not shown). Loosen R.H. position collar ⑩ and slide cam shaft to dimension shown in (Fig. 9A). Then secure both L.H. and R.H. collars.

Fig. 9B shows the pivot shaft for the feed plattens. The shaft has a clearance slot for the travel stroke of the cam. Be sure there is no interference contact after performing the off-set adjustment.



Setting Cam Shaft Stroke (Fig. 9 & 9C)

When the point of needle is at the cam, open window plate, loosen screw ⑦ and adjust cam to be 5 m/m (13/64") between the center of needle and the end position of rib's forward movement as shown in Fig. 9C.

FIG 9C

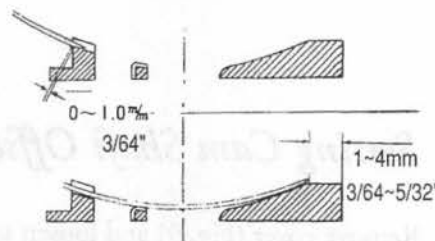


Adjusting Needle Stroke to Presser Foot

(Figs. 10 & 10D)

Turn handwheel away from operator (clockwise), bringing needle to the highest position at the left side. At this left point, the hole of needle should be 0 to 1.0 m/m (0.04") from the left hand edge of presser foot (Fig. 10D). And bring needle to the end of stroke at the right side. At this right point, the point of needle should be 1 to 4 m/m (3/64" to 5/32") from the right hand edge of presser foot (Fig. 10D).

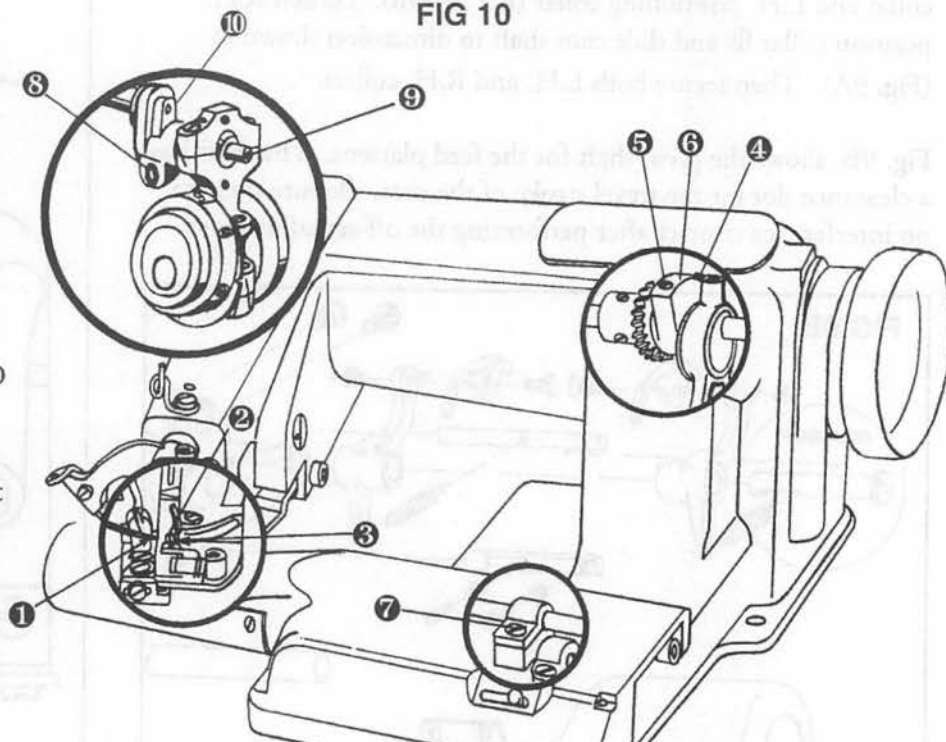
FIG 10D



To attain this, loosen eccentric ball screw **8** and turn eccentric ball **9** until needle reaches the above desired position (Fig. 10D). Be sure to repeat the above adjustment so that the both sides will be settled as per Fig. 10D.

If the dimensions of Fig. 10D cannot be achieved, loosen screw **8** and slide eccentric ball stud **9** in (closer to shaft **10** to increase stroke) or out (further away from shaft **10** to decrease stroke). Then repeat previous step to attain dimensions.

FIG 10



Adjusting Feed Dog (Figs. 11A & 11B)

Feed Dog should be 0.8 m/m (1/32") below presser foot and move in parallel with presser foot when the number of stitch length is at 5 (Fig. 11A).

Be sure the feed dog **1** clears the parts around feed dog **1** when the number of stitch length is 9, and secure feed dog set screws **2** firmly (Fig. 11B).

FIG 11A

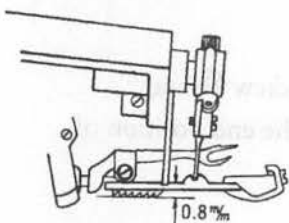
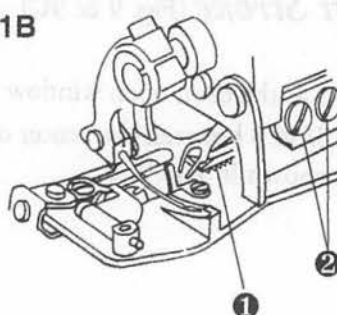


FIG 11B



Adjusting Looper (Fig. 12A)

Replacement part #2200B. [Generic Polished]
Replacing Looper (Fig. 12A)

Loosen screw ① to take out looper ②. When putting new looper in, the shoulder of looper should touch the shoulder of looper rod ③ at point ①.

Adjusting Looper to Needle and Presser Foot (Figs. 12A, 12B & 12C)

Looper must clear the chaining finger ⑤ and clear needle, being just above the needle about the thickness of a sheet of paper at point ⑥.

Make sure the distance between right hand side of looper rod folk pin ⑦ and rear face of looper rod ball ⑧ is normally 104 m/m (4-3/32") (Fig. 12A).

The long prong of the looper should be 3 m/m (1/8") from the left hand edge of needle hole when the long prong of the looper is on the center of the needle (Fig. 12B).

If looper touches needle or presser foot at point ⑥, loosen screws ⑨ and turn the screwdriver slot in eccentric stud ⑩ by screwdriver. If looper is hitting needle, turn eccentric stud ⑩ clockwise. If looper touches presser foot at point ⑪ and needle touches short prong of looper at point ⑫, loosen nut ⑬ by wrench. Then turn looper rod at point ③ downward, which will clear short prong of looper at point ⑫ and raise looper at point ⑪ (Figs. 12A & 12C). Be certain to tighten all screws after adjustments are made. By turning eccentric stud ⑩ clockwise or counterclockwise, it will raise or lower looper at points ⑪ and ⑫. NOTE: With eccentric stud ⑩, raise or lower looper on both sides ⑪ and ⑫. Turning looper rod ③, raise one side and lower the other side.

Looper should clear chaining finger ⑮ and presser foot at point ⑮. Move eccentric stud ⑩ from left to right by loosening screws ⑨. This will get the desired clearance.

In case of the above adjustment, be sure that looper rod eccentric stud ⑮ is flush against looper and rod carrier ⑮ and does not have any play left or right. Secure by retightening screw ⑨ (Figs. 12B & 12C).

FIG 12A

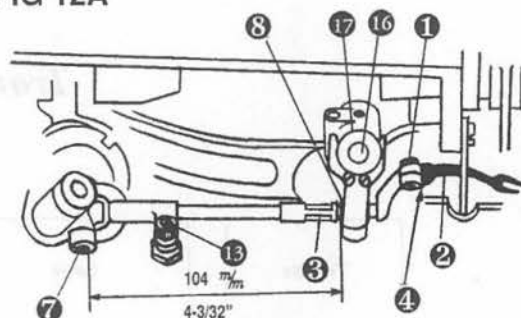


FIG 12B

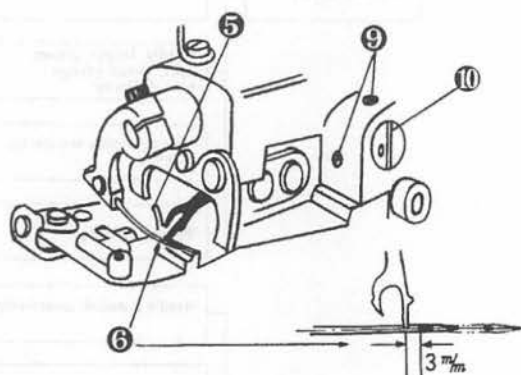
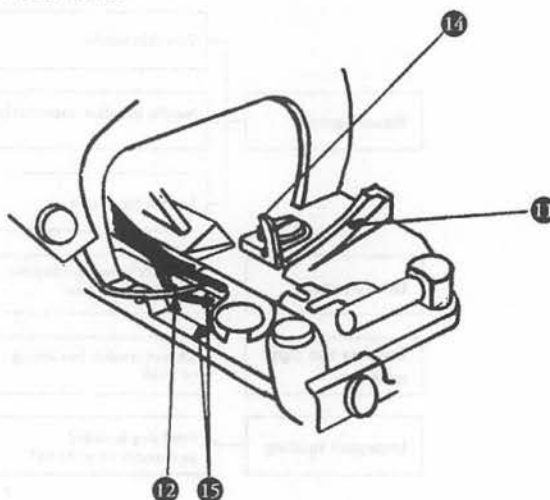


FIG 12C

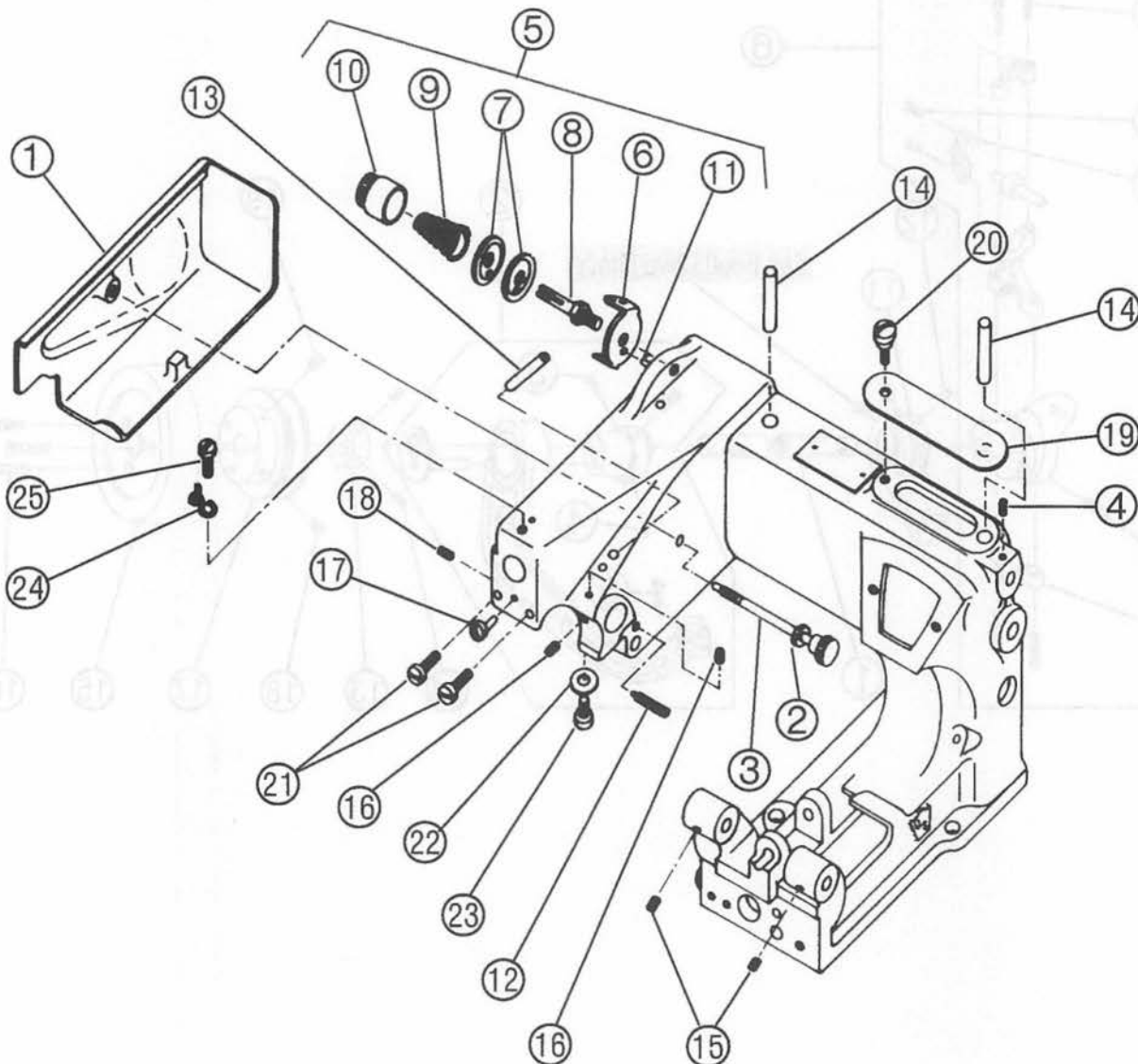


Troubleshooting

Trouble	Cause	Inspection	Remedy	Page
Thread break	Poor-quality thread	Thread quality	Use thread of good quality	/
	Too thin needle	Needle size	Replace with a thicker needle	5
	Needle installed incorrectly	Direction and position of needle		5
	Needle, looper, presser foot, thread passage have defective	Flaw of Needle, looper, presser foot, thread passage	Smooth with sandpaper and polish with buff, or replace	/
	Thread tension too strong or weak	Thread tension control	Adjust to correct thread tension	/
Stitches skip	Wrong threading	Threading		3
	Needle installed incorrectly	Direction and position of needle		5
	Needle point defective	Needle point blunt or bent	Replace with a good needle	5
	Looper defective	Looper blunt or broken	Smooth with sandpaper and polish with buff, or replace looper	/
	Relative of needle and looper or clearance between needle and looper are wrong	Timing or clearance between needle and looper		9-10
Needle break	Too thin needle	Needle size	Replace with a thicker needle	5
	Needle installed incorrectly	Direction and position of needle		5
	Looper hit needle	Clearance between needle and looper		9-10
Uneven stitch	Clearance between needle point and cam top too great	Height of cam		4
Stitches too tight or loose	Thread tension too strong or weak	Thread tension control	Adjust to correct thread tension	/
Improper feeding	Feed dog installed incorrectly or worn out	Feed dog position or worn out		11

MAIN FRAME GROUP

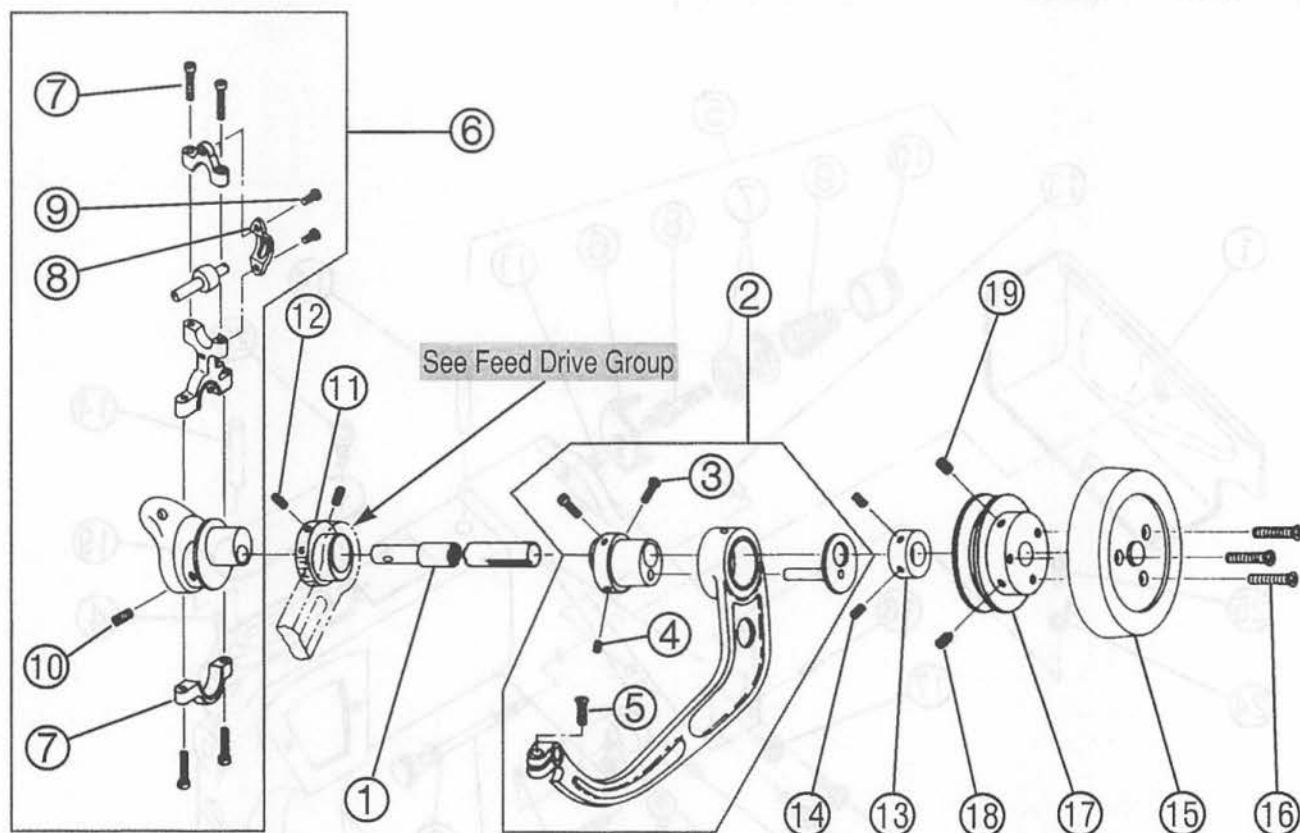
Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700000	Side Cover Assembly	1	14	700120	Wick, Oil	1
2	700010	Washer, Clamp Screw	1	15	700130	Screw, Set	2
3	700020	Screw, Side Cover	1	16	700140	Screw, Set	1
4	700030	Screw, Guard	1	17	700150	Pin, Presser Foot	1
5	700040	Thread Tension Regulating Assy	1	18	700160	Screw, Set	1
6	700050	Thread Guide	1	19	700170	Plate, Top Cover	1
7	700060	Disc, Thread Tension	2	20	700180	Screw, Top Cover	1
8	700070	Post, Thread Tension	1	21	700190	Screw, Bridge Mtg.	2
9	700080	Spring, Tension	1	22	700200	Washer, Clamp Screw	1
10	700090	Nut, Tension	1	23	700210	Screw, Clamp	1
11	700095	Pin, Spring	1	24	700220	Thread Guide	1
12	700100	Screw, Feed Lever Plate	1	25	700230	Screw, Thread Guide	1
13	700110	Tube, Oil	1				



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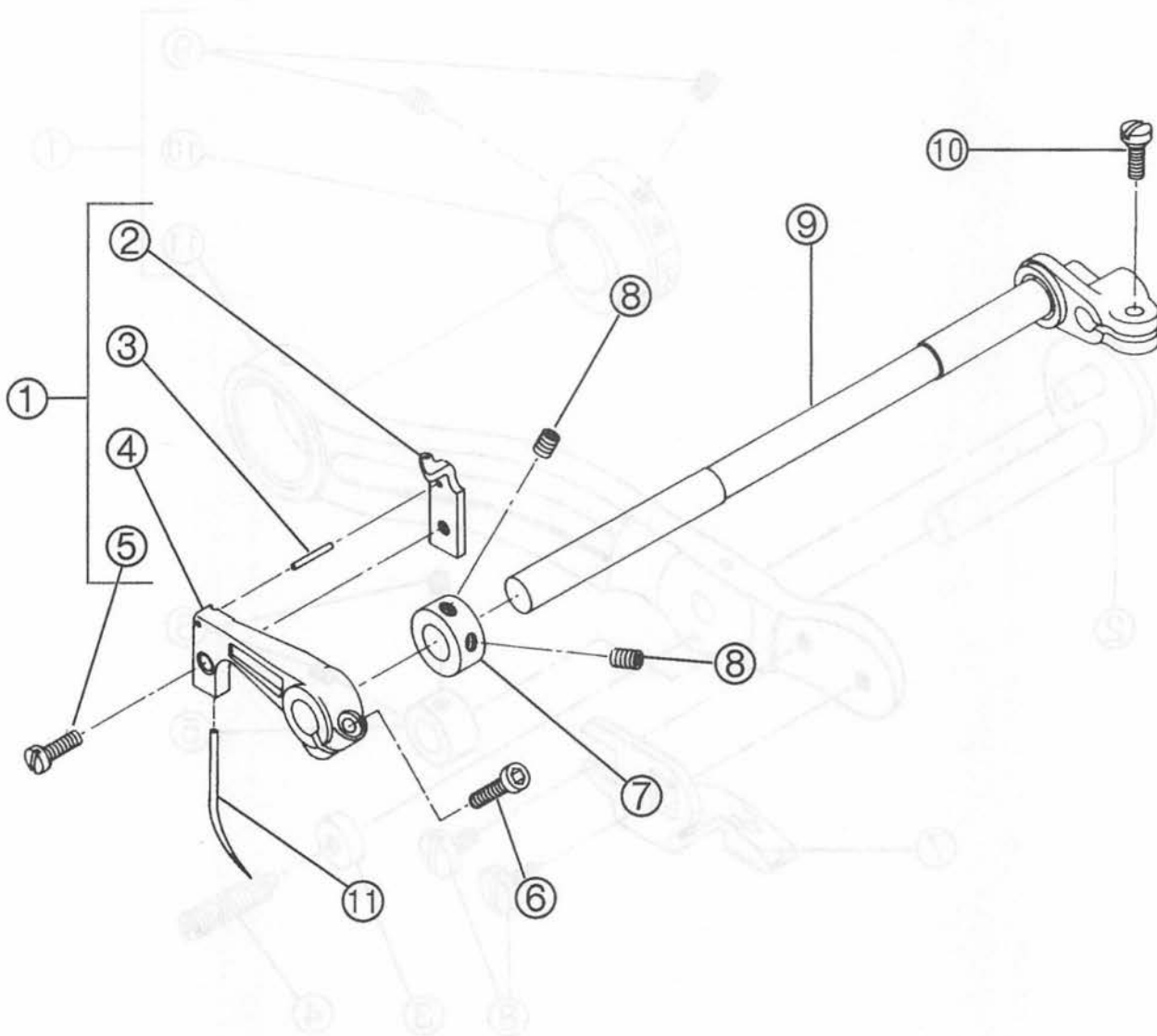
MAIN SHAFT GROUP

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700240	Main Shaft	1	11	700620	Stitch Collar	1
2	700250	Rib Connection Lever & Eccentric Ass'y	1	12	700610	Set Screw	2
3	700260	Screw Eccentric	2	13	700360	Collar Ass'y	1
4	700270	Screw For Stud	1	14	700370	Screw	1
5	700280	Screw, Clamp	1	15	700380	Handwheel	1
6	700290	Needle Connection Ass'y	1	16	700390	Screw	3
7	700300	Screw	2	17	700400	Pulley Ass'y	1
8	700310	Guard	1	18	700410	Screw	1
9	700320	Screw	2	19	700030	Screw	1
10	700330	Screw	1				



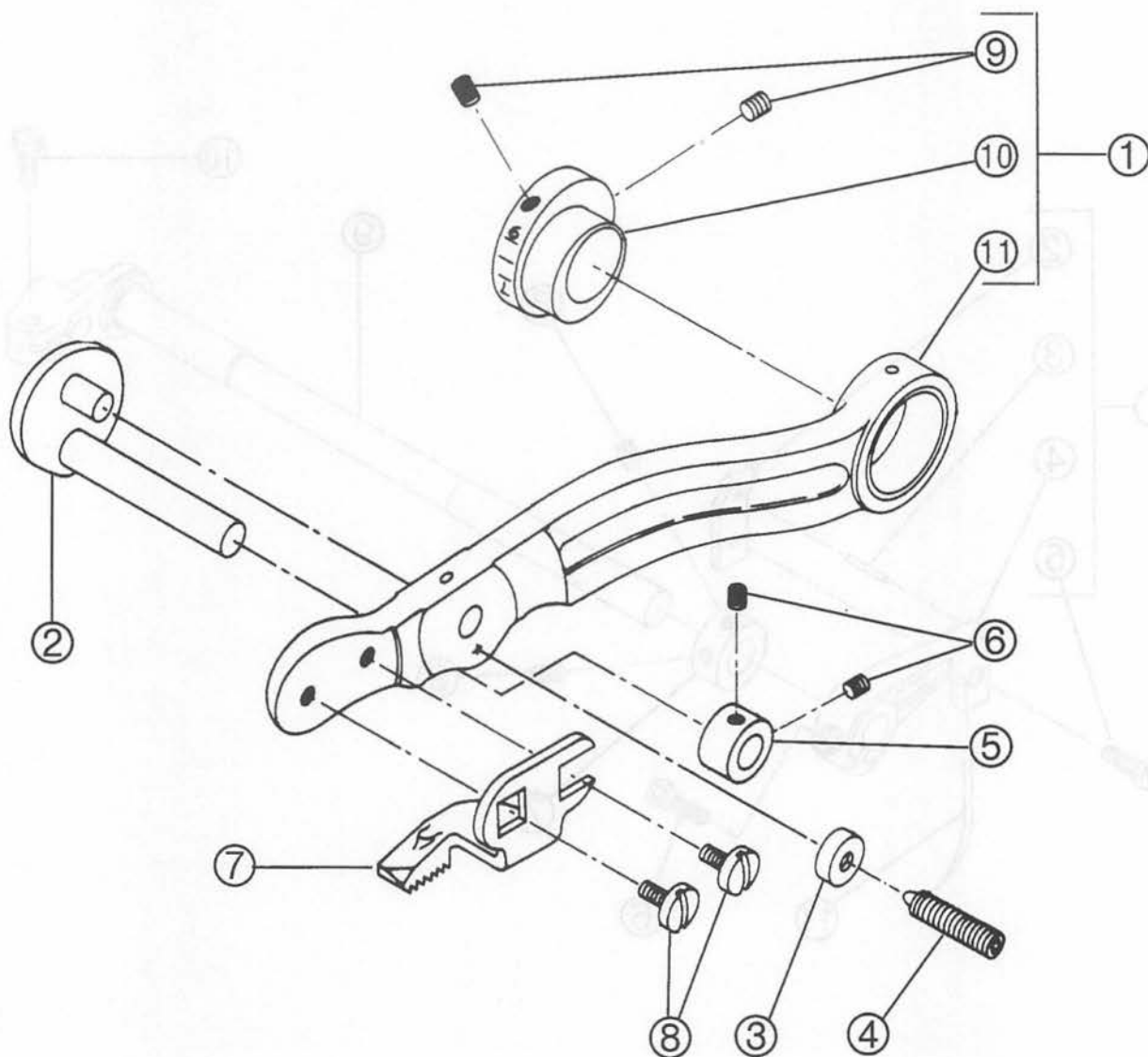
NEEDLE DRIVE GROUP

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700430	Needle Lever Ass'y	1	7	700490	Collar Ass'y	1
2	700440	Clamp	1	8	700160	Screw	2
3	700450	Pin	1	9	700510	Shaft	1
4	700460	Lever	1	10	700520	Screw	1
5	700470	Screw	1	11	700530	PSM550	1
6	700480	Screw	1				



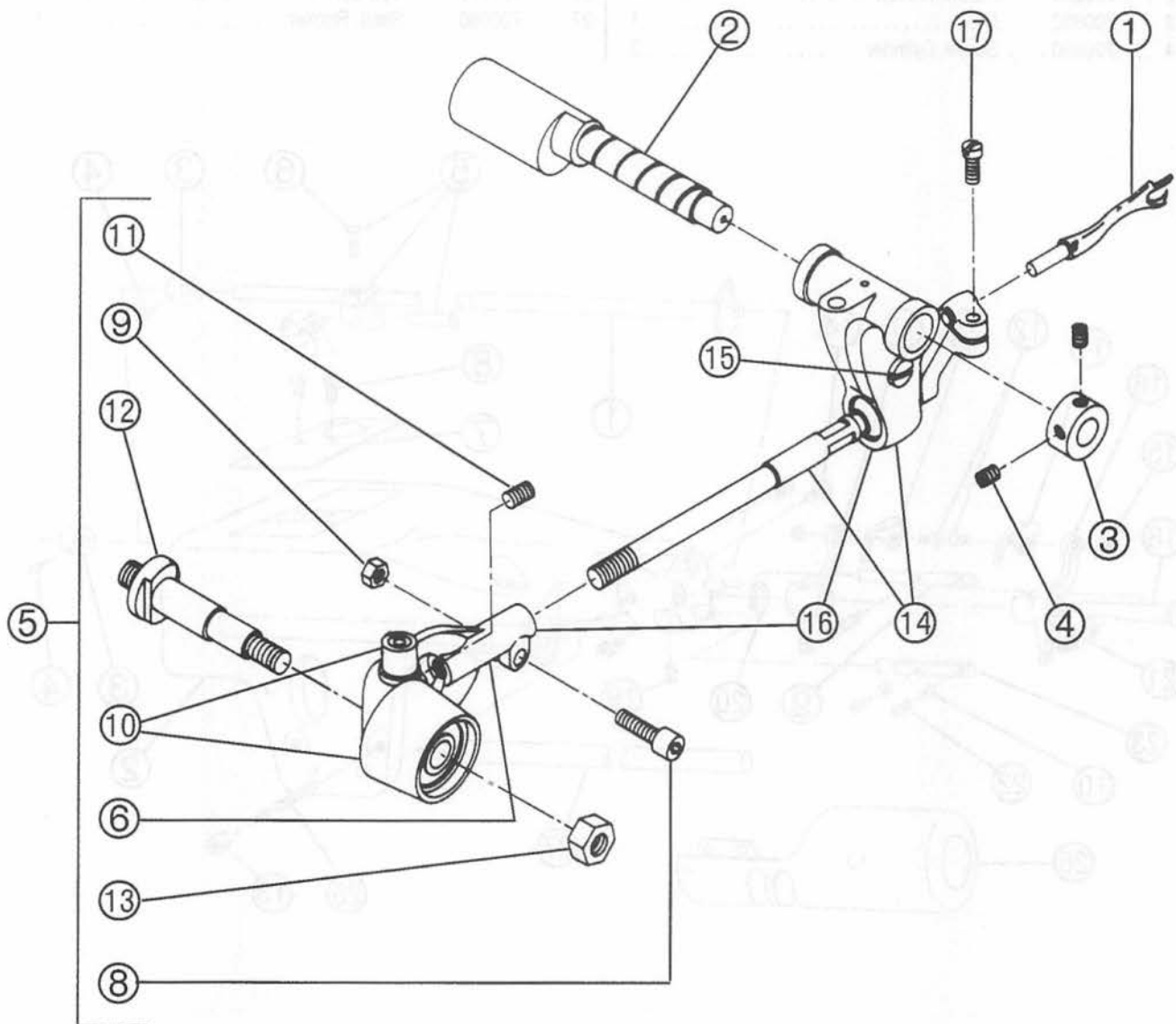
FEED DRIVE GROUP

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700540	Feed Lever & Stitch Collar Ass'y	1	7	700590	Feeder	1
2	700550	Feed Rocker Ass'y	1	8	700600	Feeder Screw	2
3	700560	Feed Lever Plate	1	9	700610	Set Screws	2
4	700100	Screw - Lever Plate	1	10	700620	Stitch Collar	1
5	700570	Thrust Collar Ass'y	1	11	700630	Feed Lever	1
6	700580	Set Screw	2				



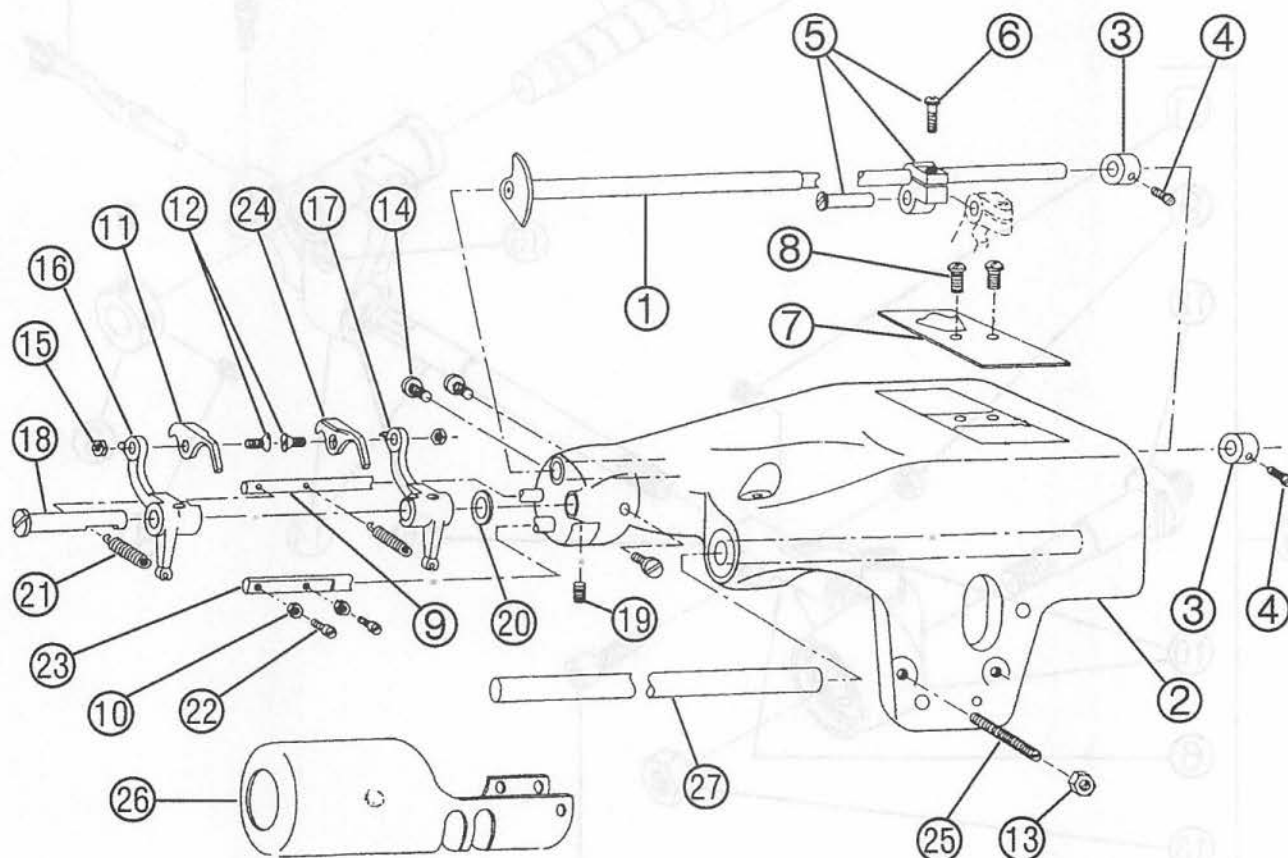
LOOPER DRIVE GROUP

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700640	Looper	1	10	700720	Looper Rod Sleeve Ass'y	1
2	700650	Stud, Looper Adjustment	1	11	700730	Screw	1
3	700660	Collar Ass'y	1	12	700770	Stud	1
4	700580	Set Screw	1	13	700780	Nut	1
5	700670	Looper Rod Fork, Sleeve & Stud Ass'y	1	14	700740	Looper Rod & Carrier Ass'y	1
6	700680	Fork	1	15	700750	Screw	1
7	700690	Pin	1	16	700760	Looper Rod, Fork & Carrier Ass'y	1
8	700700	Screw	1	17	700765	Screw	1
9	700710	Nut	1				



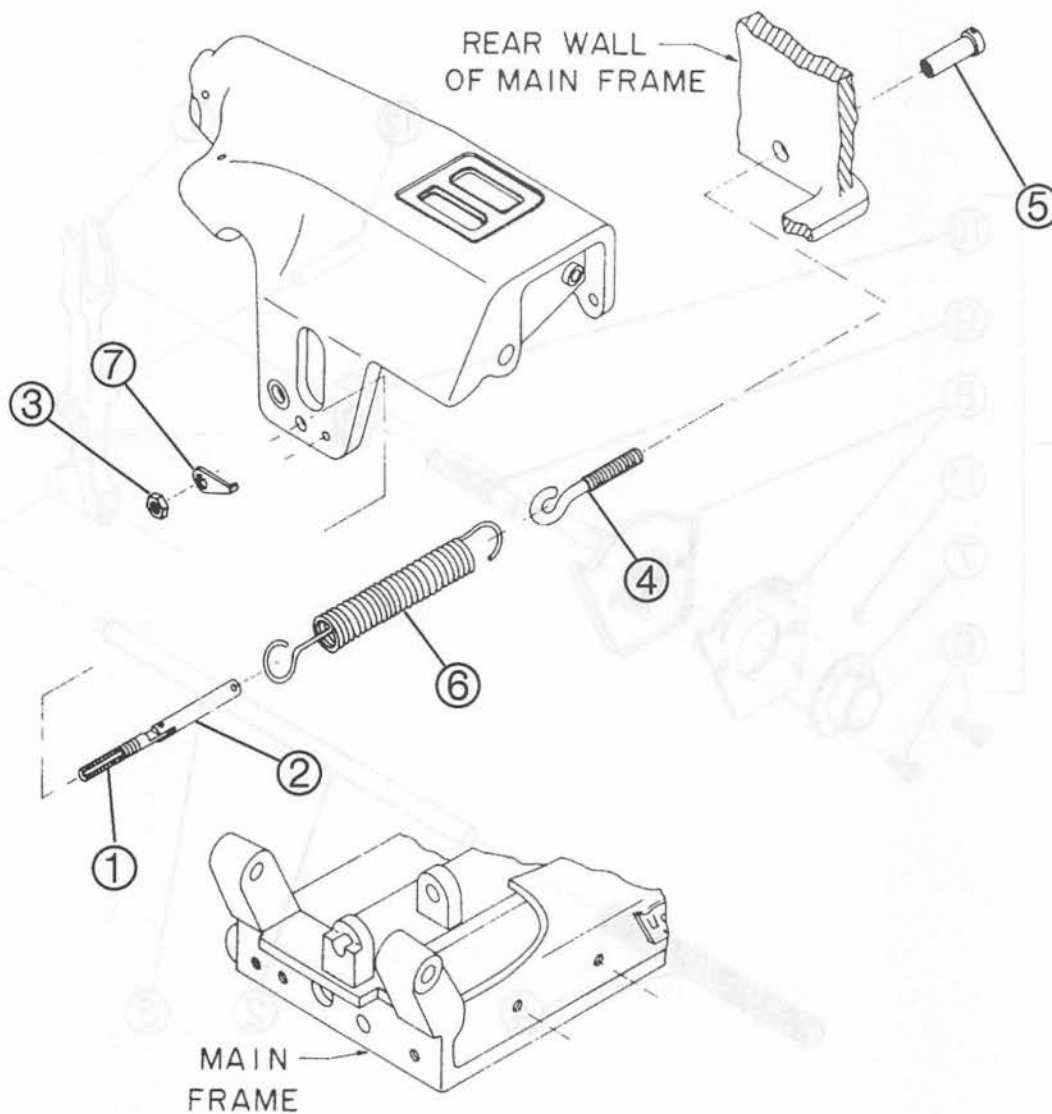
FEED FRAME GROUP 1

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700740	.Rib Shaft Assy	1	15	700890	.Nut, Platten Lock	2
2	700750	.Feed Frame Ass'y	1	16	700890	.Bkt, L.H. Platten	1
3	700760	.Collar Ass'y	1	17	700900	.Bkt, R.H. Platten	1
4	700770	.Set Screw	1	18	700910	.Stud	1
5	700780	.Rib Shaft Crank Ass'y	1	19	700030	.Set Screw	1
6	700790	.Screw	1	20	700920	.Spacer	1
7	700800	.Plate, Window	1	21	700930	.Spring	4
8	700810	.Screw, Plate	2	22	700940	.Screw, Limit	2
9	700820	.Post, Spring	1	23	700950	.Post	1
10	700830	.Nut	2	24	700960	.Platten, R.H.	1
11	700840	.Platten, L.H.	1	25	900970	.Screw, Frame	1
12	700850	.Screw, Platten	1	26	700970	.Cylinder	1
13	700860	.Nut	1	27	700980	.Shaft, Rocker	1
14	700880	.Screw, Cylinder	3				



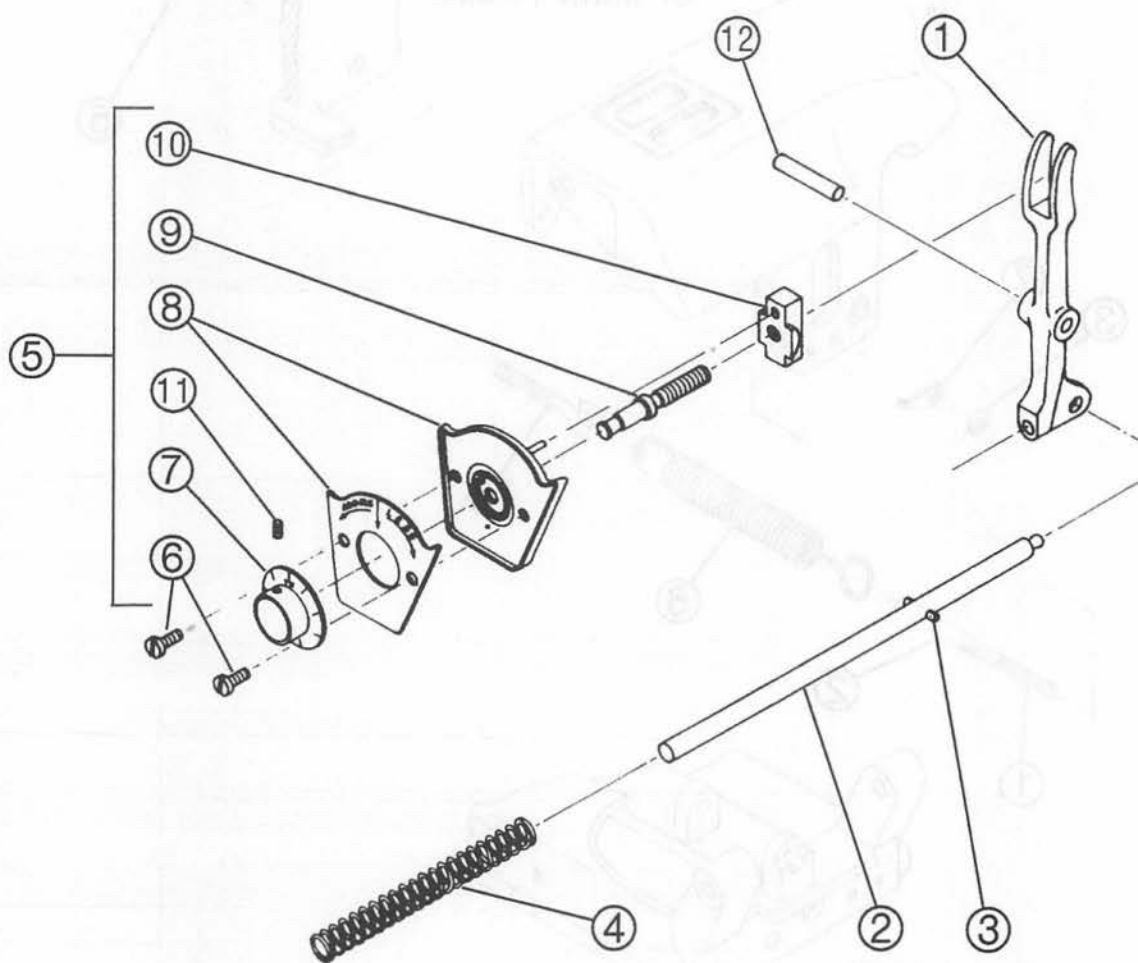
FEED FRAME GROUP 2

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700990	Spring Link Ass'y	1	5	701020	Nut, Spring	1
2	701000	Pin	1	6	701030	Main Spring	1
3	700860	Nut, Ret'ng	1	7	701040	Key	1
4	701010	Screw, Link	1				



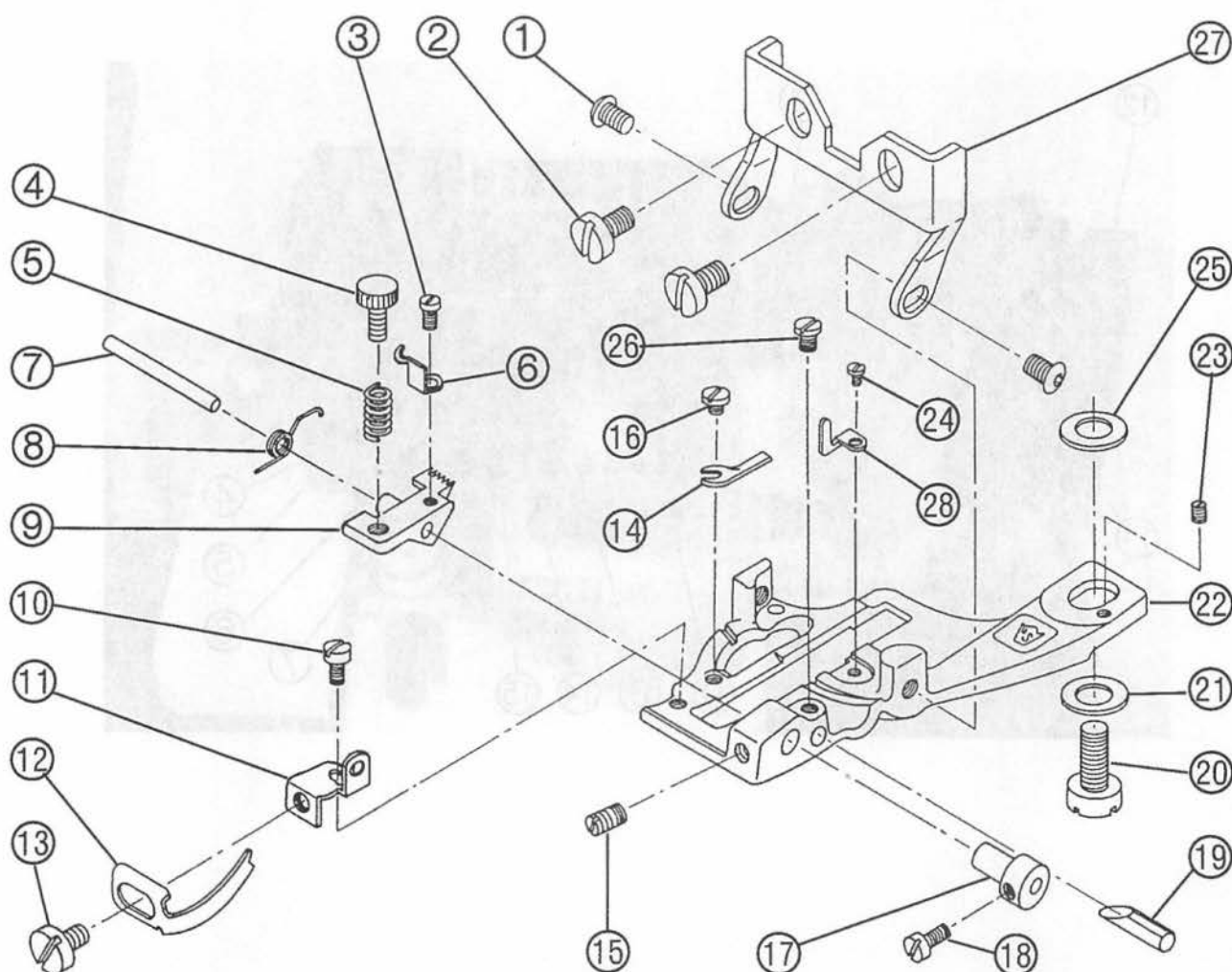
REGULATING GROUP

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	701050	Regulating Fork	1	7	701110	Dial & Ratchet Ass'y	1
2	701060	Push Rod Ass'y	1	8	701120	Dial Plate Ass'y	1
3	701070	Pin	1	9	701130	Screw	1
4	701080	Spring	1	10	701140	Shoe	1
5	701090	Regulator Ass'y	1	11	701150	Screw	1
6	701100	Screw, Regulator	2	12	701160	Pin	1



PRESSER FOOT GROUP

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	700190	Screw	2	15	701280	Screw	1
2	700810	Screw	2	16	701290	Screw	1
3	701170	Screw	1	17	701300	Bushing	1
4	701180	Screw	1	18	701310	Screw	1
5	701190	Spring	1	19	701320	Wedge	1
6	701200	Spring	1	20	700210	Screw	1
7	701210	Shoe Pin	1	21	700200	Washer	1
8	701220	Spring	1	22	701330	Presser Foot	1
9	701230	Shoe	1	23	701340	Screw	1
10	701240	Screw	1	24	701350	Screw	1
11	701250	Anchor	1	25	701360	Washer	1
12	701260	Guide	1	26	701370	Screw	1
13	700770	Screw	1	27	701380	Bridge	1
14	701270	Needle Guide	1	28	701390	Chain Off Pin	1

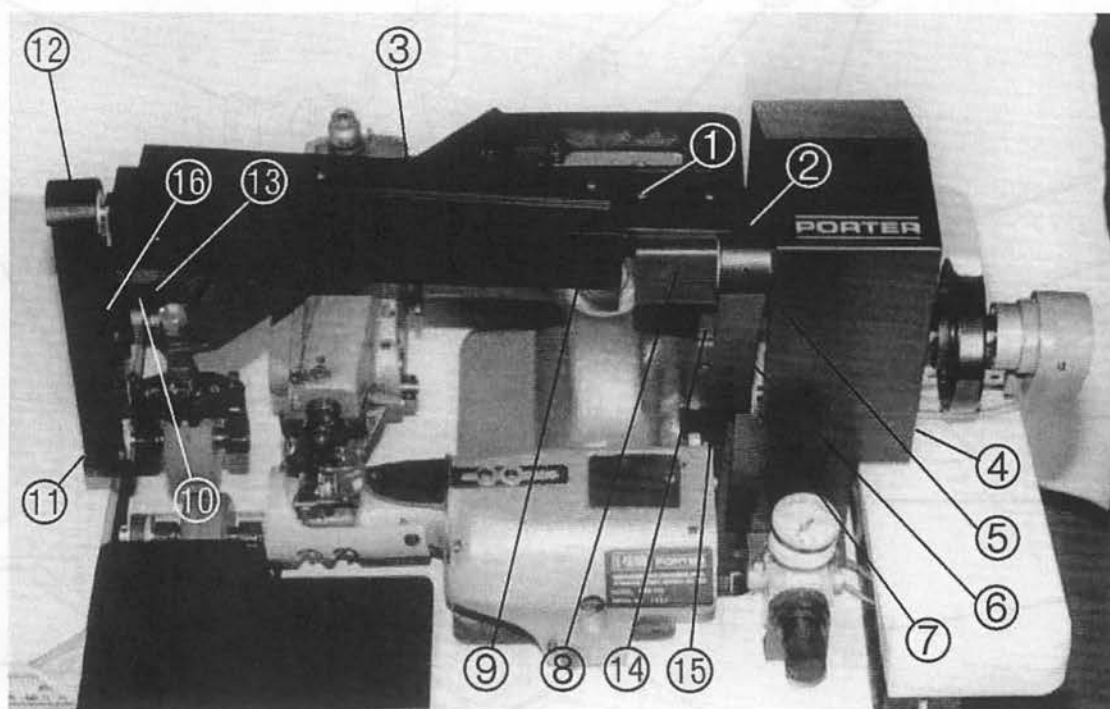


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COVERS

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	.BHCS440X1/4	Screw	4	9	.BSC-3	Guard-Main Shaft	1
2	.BSC-10	Bracket Right	1	10	.BSC-2	Bracket Pulley Cover	1
3	.BSC-11	Cover, Shaft-Rear	1	11	.BSC-8	Left Shield Belt	1
4	.BSC-1	Hand Wheel Cover	1	12	.BHCS6-32X1/4	Screw	4
5	.BSC-7	Large Shield Pulley	1	13	.BHCS6-32X3/8	Screw	5
6	.BSC-9	Top Right Belt Guard	1	14	.BSC-6	Bottom Right Belt Guard	1
7	.BSC-4	Small Shield Pulley	3	15	.BSC-5	Left Belt Bracket	1
8	.BSP-20	Gear Box Cover	1	16	.SHCS6-32X1/4	Screw	2

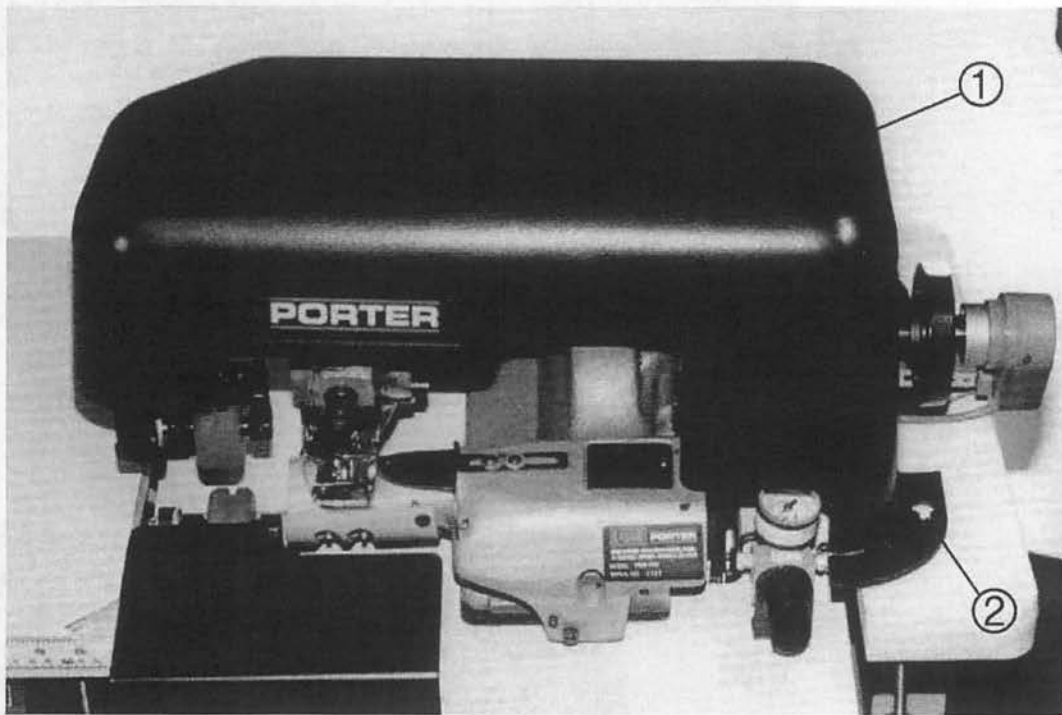


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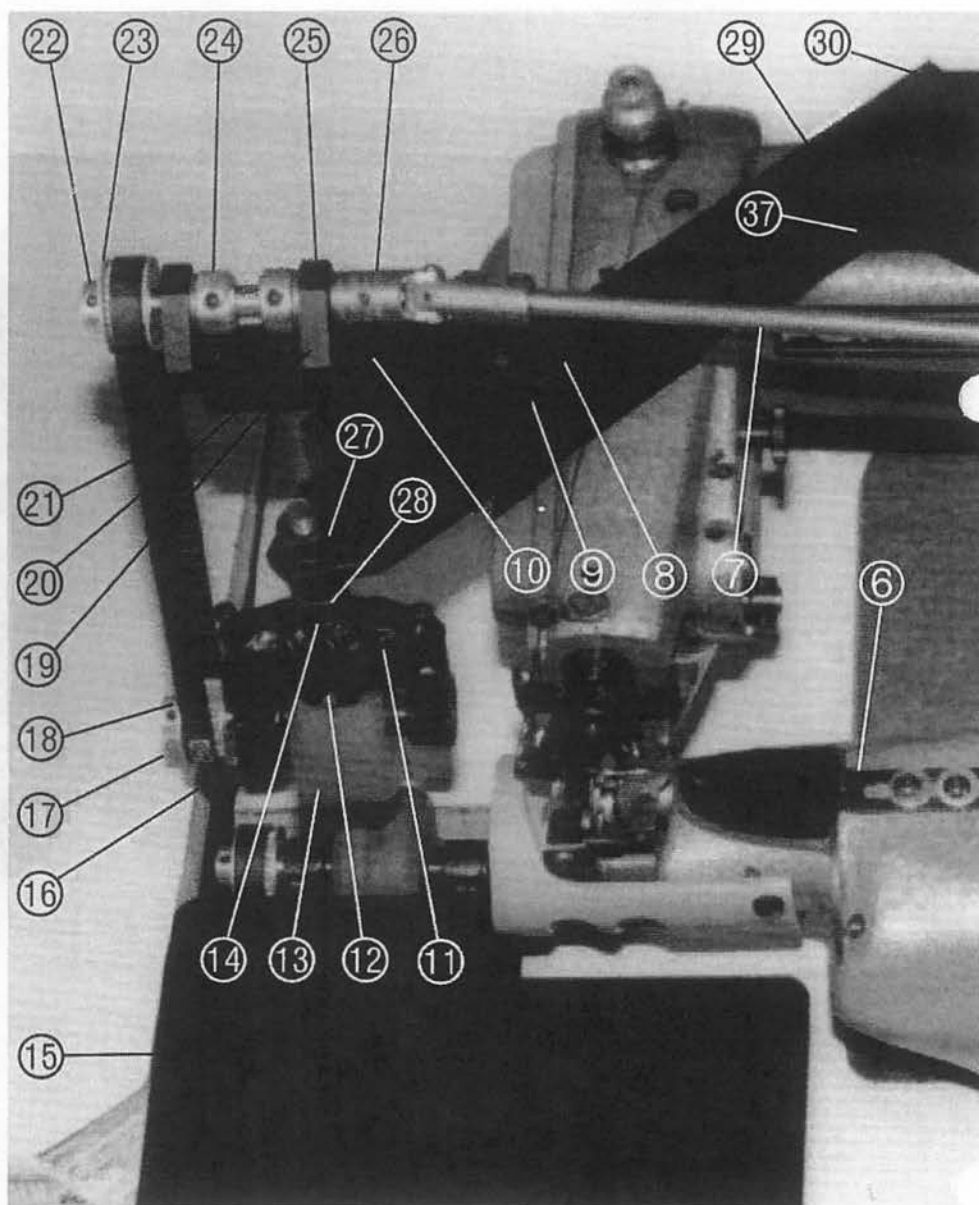
ALTERNATE COVER

Ref #	Part #	Description	Qty
1	BSC-30	Blindstitch Cover	1
2	TS-1"	Taping Screws	2

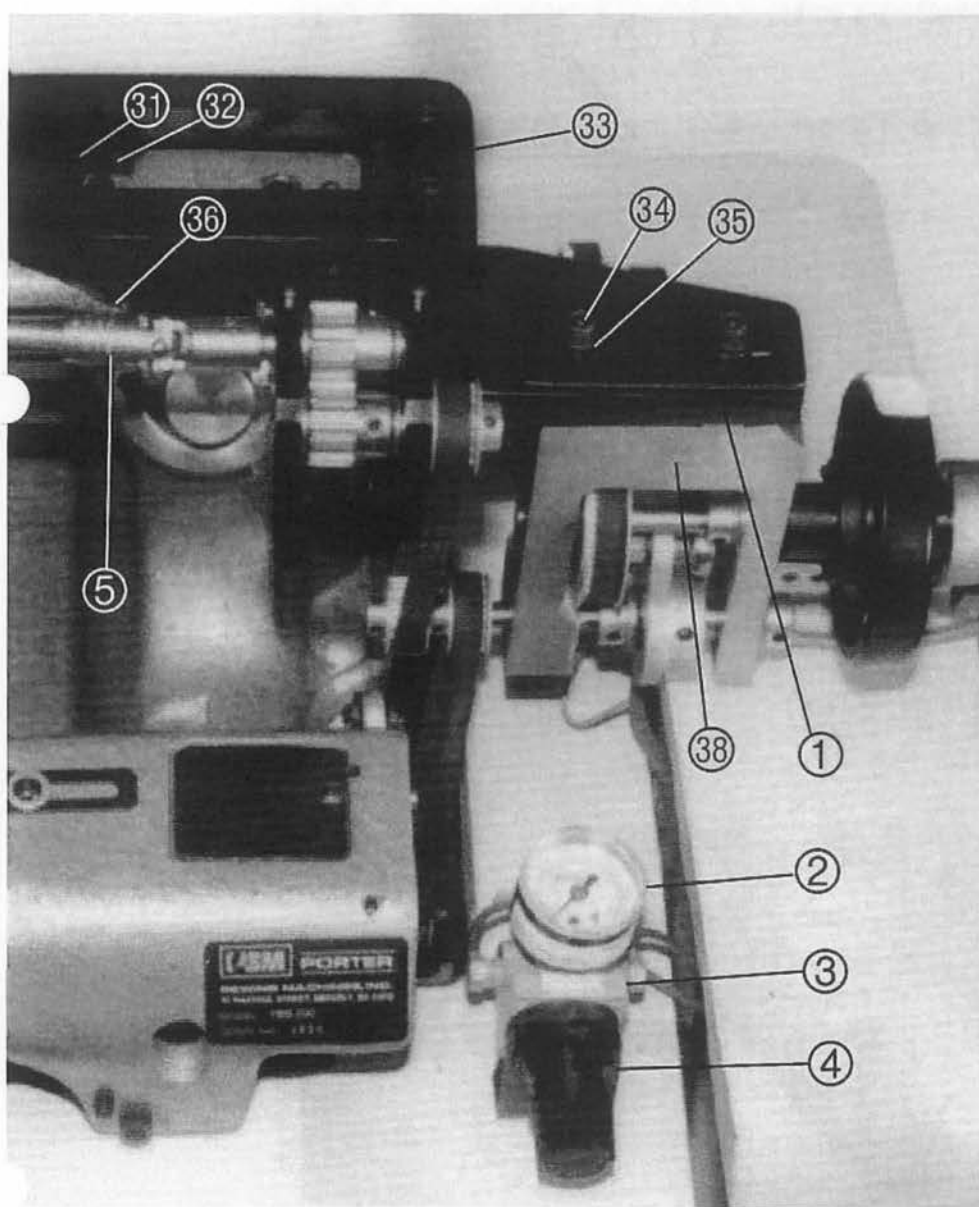


PULLER ASSEMBLY

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	.BS-209	Spacer	1	11	.3011	Yoke	1
2	.1611A	0-30 PSI Gauge	1	12	.BS-233	Yoke Bracket Shaft	1
3	.CO-401-DOO	Air Regulator	1	13	.5283	Top Roller	1
4	.93191	Bracket	2	14	.BS-204	Yoke Support	1
5	.BSP-17	Adj. Universal Joint	1	15	.BS-317	Cloth Plate	1
6	.PBS700-EGH	Cloth Guide	1	16	.3/8-16X2-1/2	Stud	1
7	.BSP-22	Shaft	1	17	.BSP-21	Shaft	1
8	.BSP-03	Support	1	18	.BSP-25	Pulley	1
9	.BSP-04	Block	2	19	.SHCS8-32X3/4	Screw	2
10	.SHCS8-32X1/2	Screw	2	20	.BSP-02	Housing	1



Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
21	.375RPP5	.Belt	1	31	.BS-216	.Adapter Mtg Bracket	1
22	.BSP-06	.Shaft	1	32	.SHCS10-32X1/2	.Screw	4
23	.BSP-24	.Pulley	4	33	.BSP-10	.Mounting Bracket	1
24	.SC37	.Collar	2	34	.SHCS1/4-20X1-3/4	Screw	2
25	.FB68-3-1/4	.Bearing	6	35	.FU1/4-Black	.Washer	4
26	.BSP-05	.Universal Joint	1	36	.Exp 1/8X5/8	.Pin	2
27	.HN3/8-16	.Nut	3	37	.BSP-01	.Support	1
28	.SS1/4-28X3/8	.Screw	2	38	.BS207	.Support	1
29	.BS-206	.Stiffener	1				
30	.SHCS10-32X1-1/4	Screw	2				

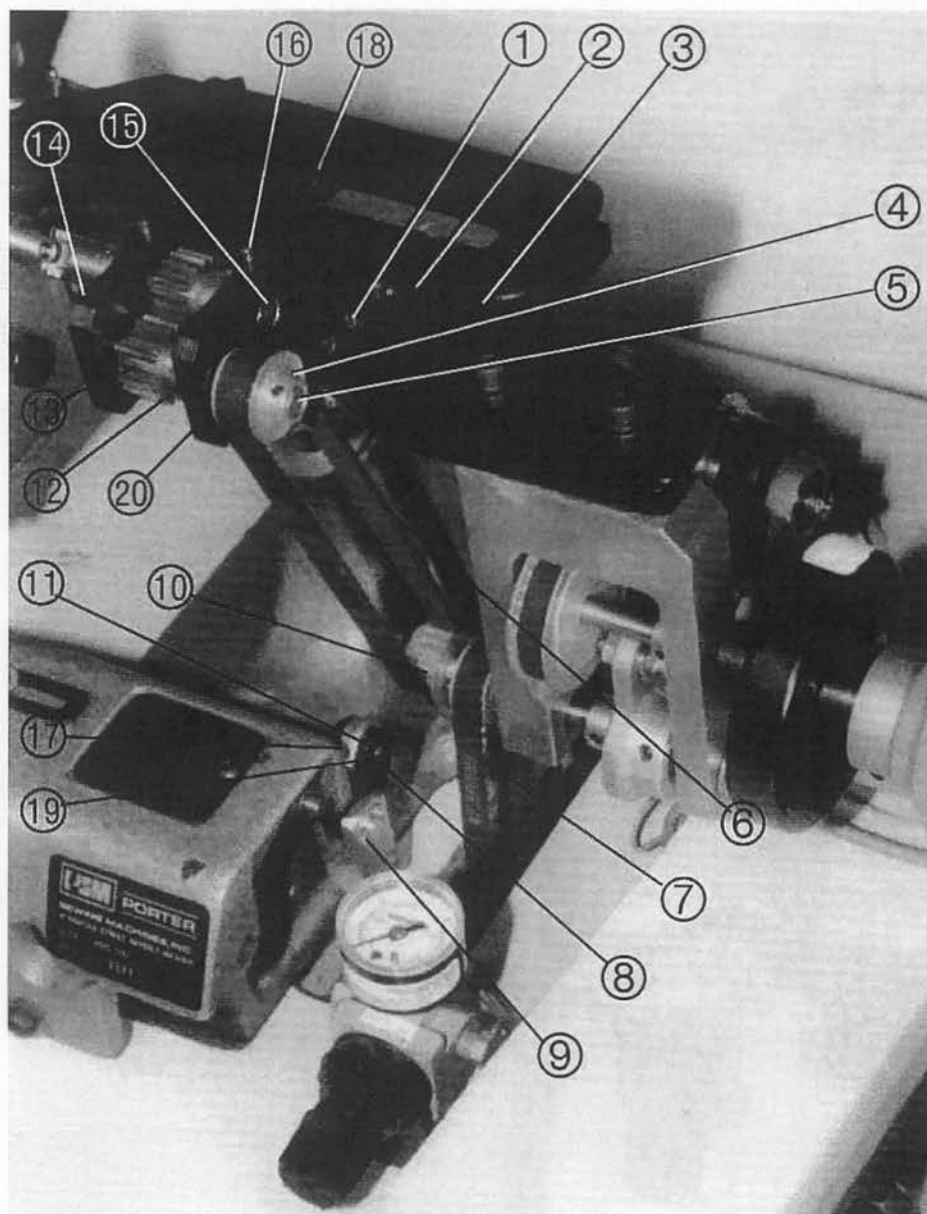


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DRIVE ASSEMBLY (FRONT)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	SHCS8-32X3/8	Screws	4	11	BHCS8-32X3/8	Screws	2
2	BSP-14	Base	1	12	BSP-18	Shaft U-Joint	1
3	BSP-15	Adjustment Plate	1	13	YA-18-3/8	Spur Gear	2
4	BSP-21	Pulley	4	14	BSP-13	Side Plate Assy	2
5	BSP-19	Shaft	1	15	FBG8-3-1/4	Bearing	4
6	450RPP5	Belt	1	16	SHCS8-32X1-1/2	Screw	2
7	425RPP5	Belt	1	17	.6072K21	1/4 28 Male Ball Joint	1
8	BS-500	Yoke	1	18	FW1/4-Black	Washer	2
9	D231-1	Rod Clevis	1	19	BS-501	Pin Yoke	1
10	BSP-24	Pulley	4	20	BSP-16	Nut Plate	1

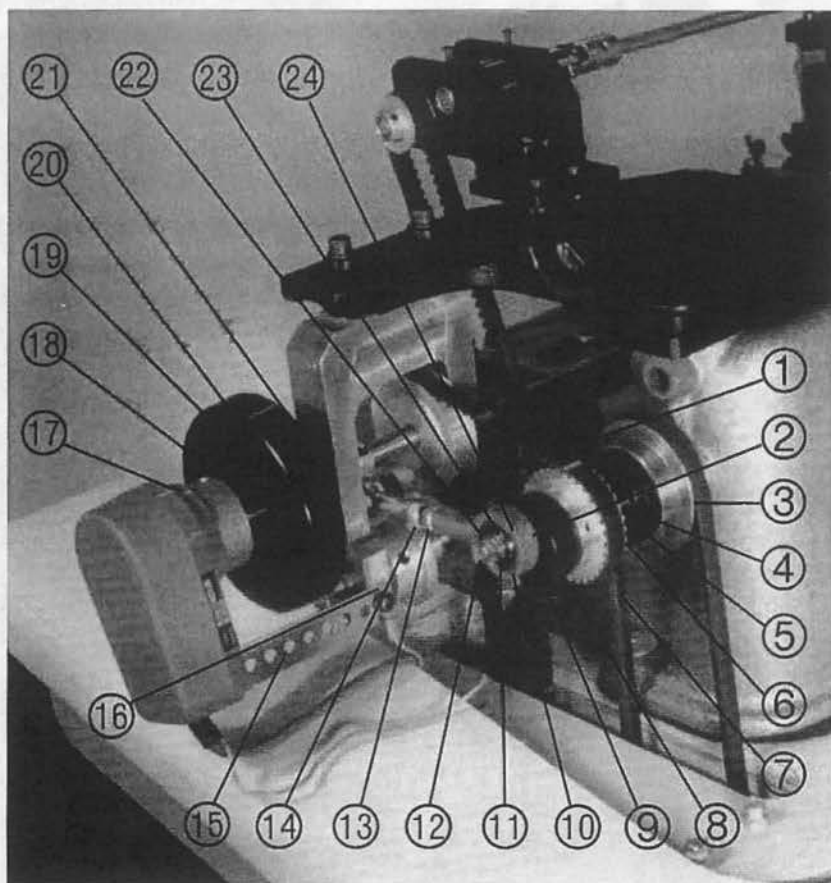


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DRIVE ASSEMBLY (REAR)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	GR3070037	Belt	1	13	HN1/4-28	Nut	2
2	3007	Rod End	1	14	2993	Push Rod	1
3	30320	Pulley	1	15	K11M40740080	Positioner Holder	1
4	BS-244	Drive Flange	1	16	BHCS10-32X1/4	Screw	1
5	SHCS8-32X3/4	Screw	3	17	XCK-22	Synchronizer Positioner	1
6	BS-213	Pulley	1	18	1412	Positioner Adapter	1
7	41-V	Belt	1	19	FHCS8-32X1-1/4	Screw	3
8	BS-304	Ecc. Drive Hub	1	20	BS-256	Handwheel	1
9	BS-306	Ecc. Drive Retainer	1	21	BS-258	Handwheel Adapter	1
10	SHCS8-32X3/8	Screw	4	22	38KLL	Bearing	1
11	PC5-4	Washer	1	23	BS-306	Bushing	1
12	HN10-32	Nut	1	24	HHCS10-32X1	Screw	1

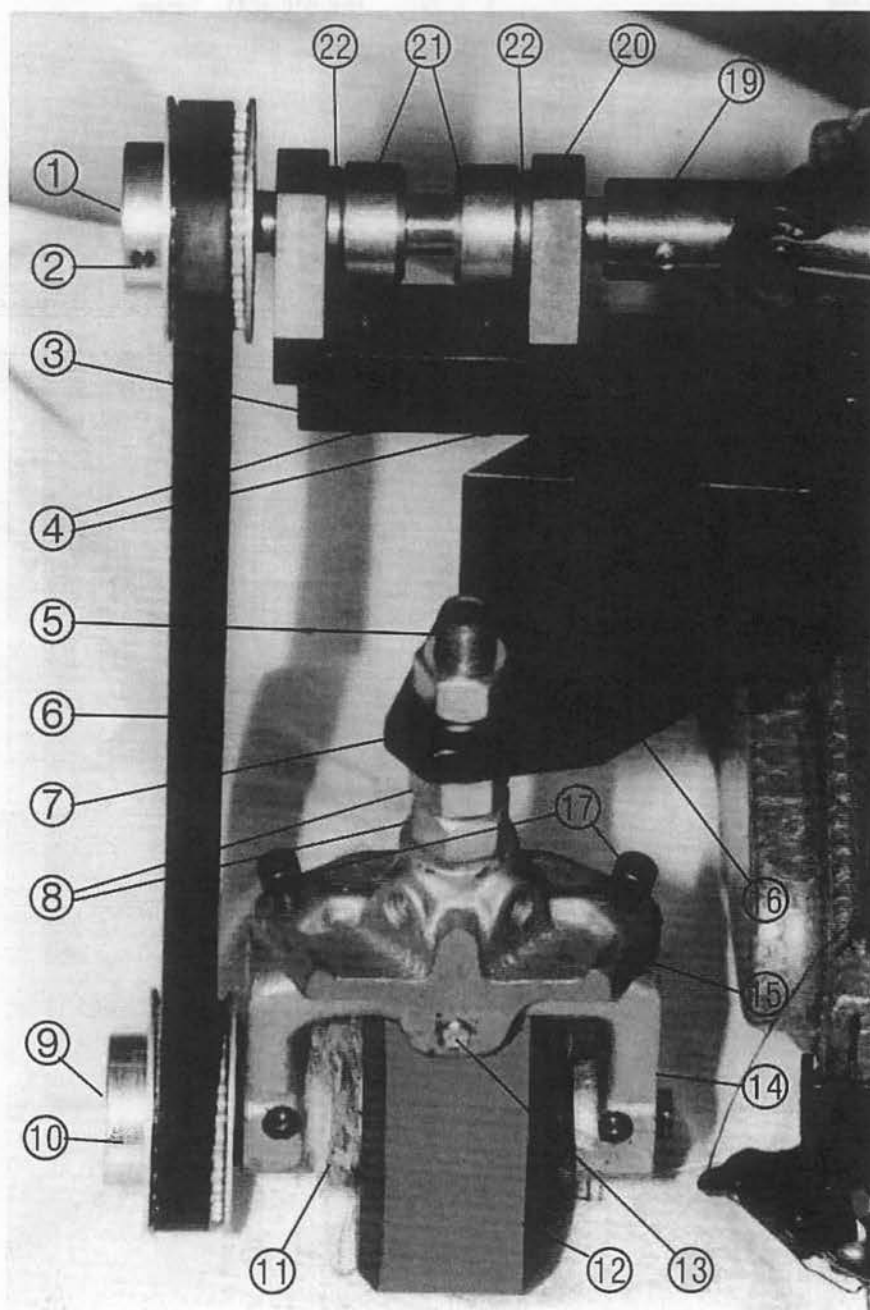


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UPPER PULLER

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	BSP-06	Shaft	1	12	BS-5283	Roller	1
2	BSP-24	Pulley	4	13	BS-233	Pin	1
3	BSP-03	Support	1	14	3011	Yoke	1
4	SHCS8-32X5/8	Screw	2	15	BS-204	Yoke Support	1
5	3/8-16X2-1/2	Stud	1	16	BSP-04	Block	2
6	375RPP5-9	Belt	1	17	SHCS8-32X1/2	Screw	2
7	BSP-10	Mounting Bracket	1	18	SHCS8-32X1-1/2	Screw	2
8	HN3/8-16	Nut	3	19	BSP-05	Universal Joint	1
9	BSP-21	Pulley Shaft	1	20	BSP-02	Housing	1
10	BSP-25	Pulley	4	21	SC37	Collar	2
11	BS-405	Spacer	2	22	FB683X1/4	Bearing	2

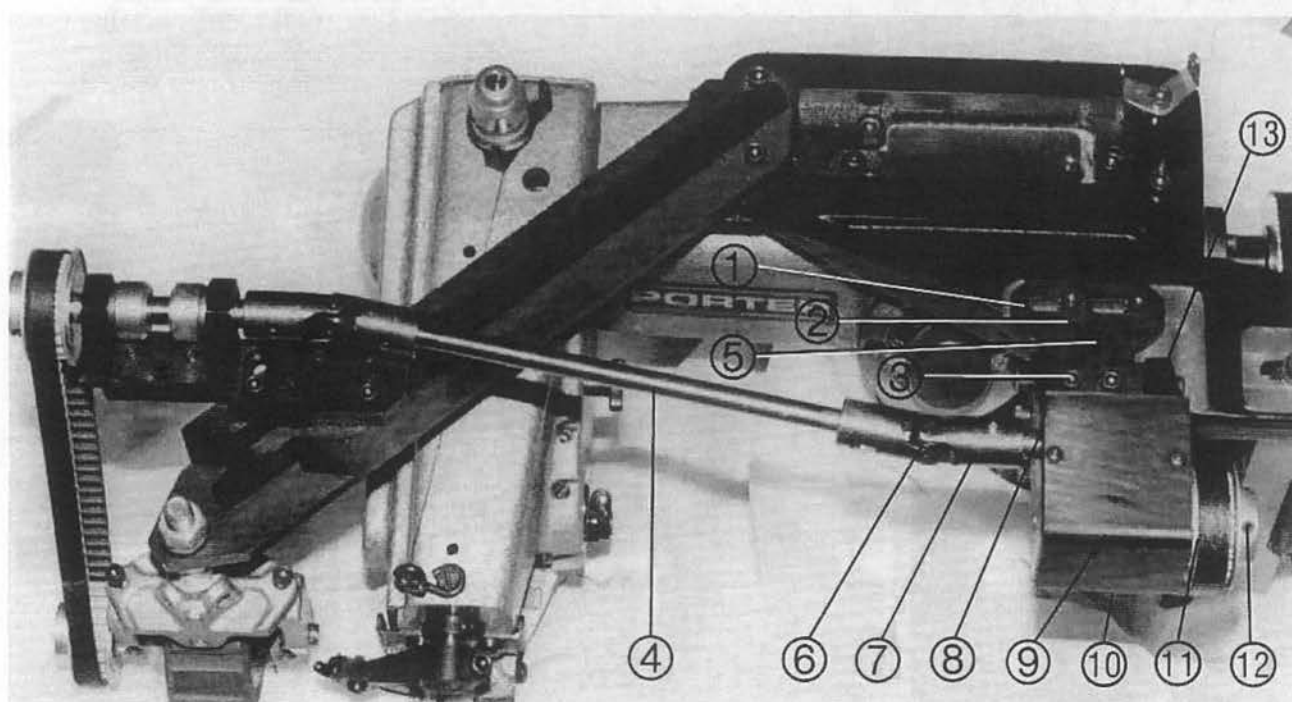


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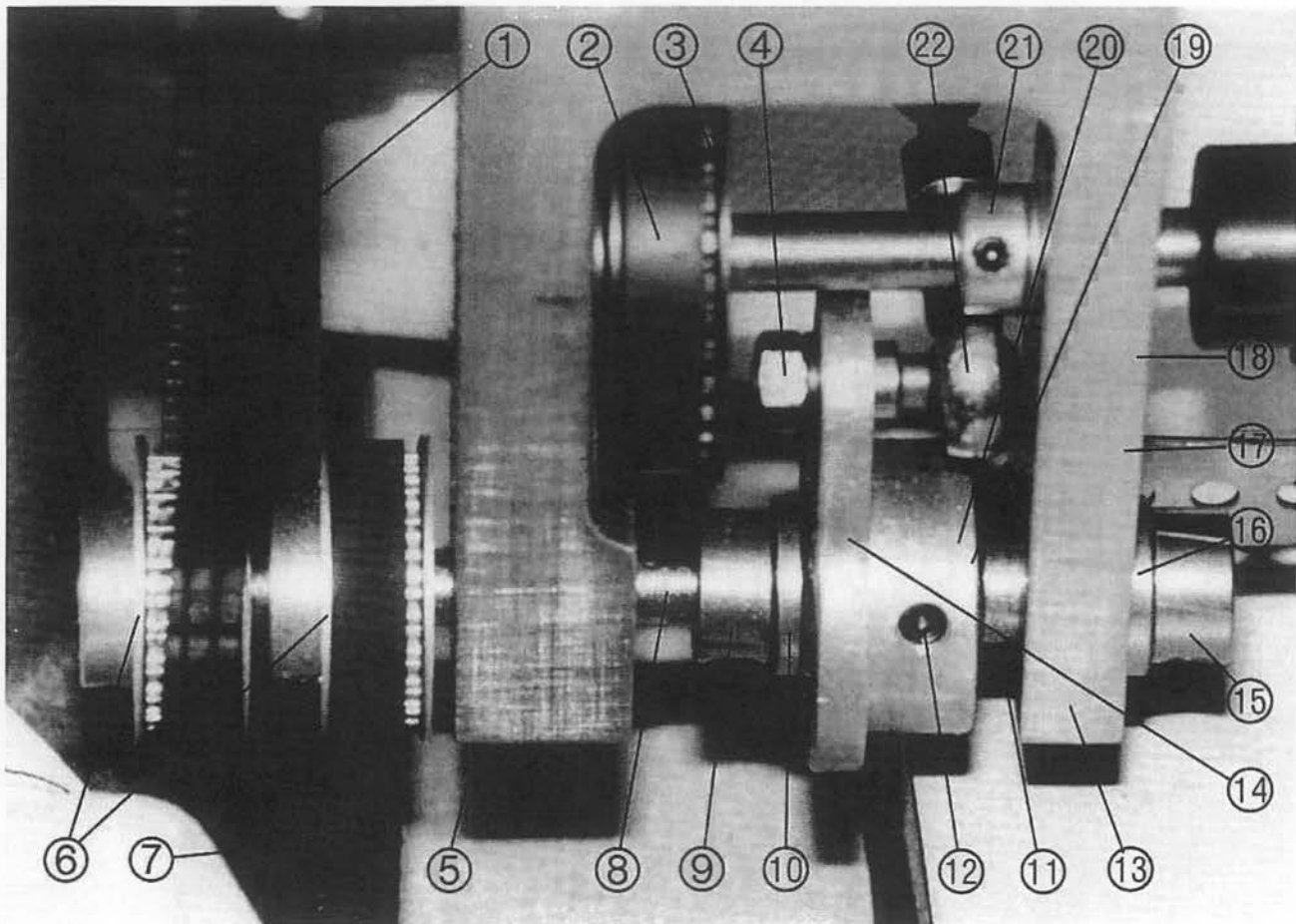
PULLER SHAFT

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	BSP-16	Nut Plate	1	8	BSP-12	Side Plate Left	1
2	FW1/4	Block Spacer	1	9	BSP-20	Cover	1
3	BSP-14	Base	1	10	YA-18-3/8	Spur Gear	2
4	BSP-22	Shaft	1	11	BSP-19	Shaft	1
5	BSP-15	Adj. Plate	1	12	BSP-24	Pulley	4
6	BSP-17	U-Joint	1	13	BSP-11	Side Plate Right	1
7	BSP-18	Shaft	1				



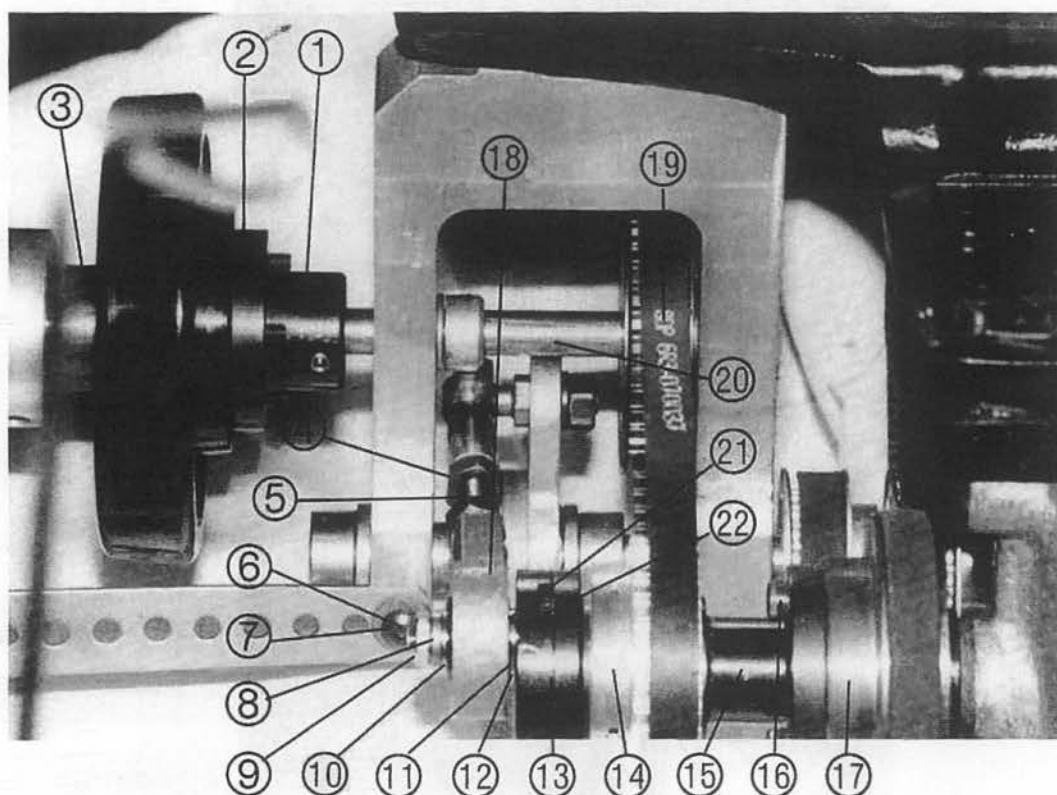
GEARBOX (FRONT)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	450RPP5-9	Belt	1	12	SS1/4-28X1/4	Screw	2
2	GR3070037	Belt	1	13	BH68	Bearing	1
3	6C32H3712	Pulley	1	14	3006	Clutch Arm	1
4	HN1/4X28	Nut	1	15	CS5-4	Collar	2
5	RCB061014FS	Clutch Bearing	2	16	CD3-5	Washer	2
6	BSP-24	Pulley	2	17	BS-207	Support	1
7	425RPP5-9	Belt	1	18	B7-43	Bearing	2
8	BSP-23	Shaft	1	19	BS-303	Bushing	1
9	CS5-4	Collar	2	20	RCB061014FS	Clutch Bearing	2
10	CD3-5	Washer	2	21	BS-228	Collar	1
11	SS-2-74	Spacer	1	22	6072K31	Female Ball Joint	1



GEARBOX (REAR)

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	BS-258	Handwheel Adaptor	1	12	BS-305	Ecc. Drive Retainer	1
2	FHCS8-32X1-1/4	Screw	3	13	BS-304	Ecc. Drive Hub	1
3	1412	Positioner Adaptor	1	14	BS-213	Pulley	1
4	HN1/4-28	Nut	2	15	BS-244	Dirve Flange	1
5	2993	Push Rod	1	16	SHCS8-32X3/4	Screw	4
6	BHCS10-32X1/4	Screw	1	17	3032U	Pulley	1
7	HHCS10-32X1	Screw	1	18	3007	Rod End	1
8	38KLL	Bearing	1	19	GR3070037	Belt	1
9	HN10-32	Nut	1	20	BS-281	Hand Wheel Shaft	1
10	PC5-4	Washer	1	21	HHCS10-32X1	Screw	1
11	BS-306	Bushing	1	22	SHCS8-32X7/8	Screw	4

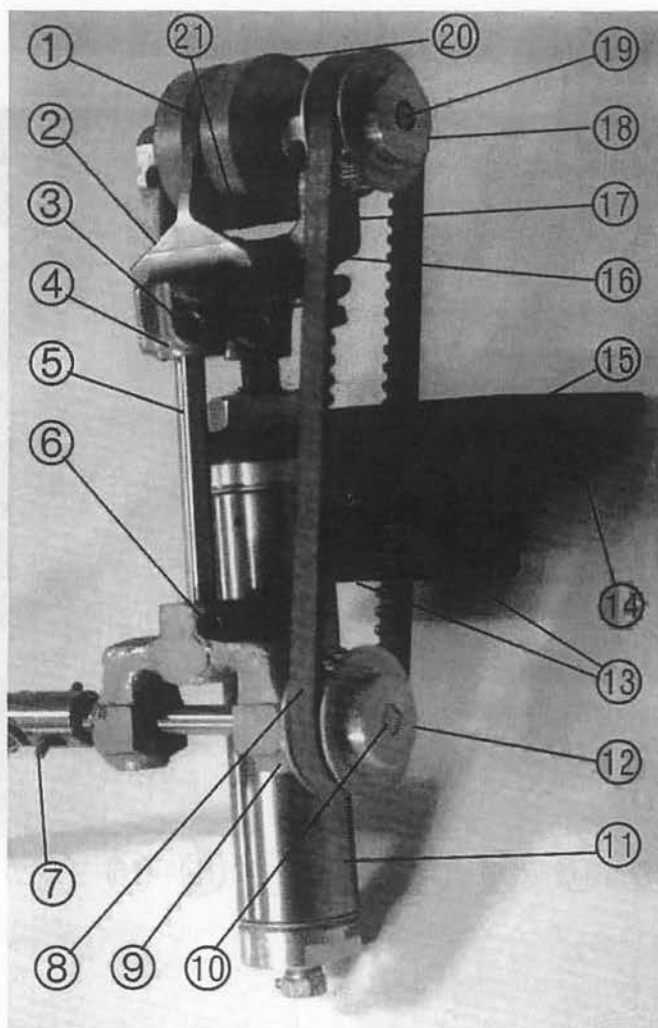


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LOWER PULLER

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	.5284	Grooved Roller	1	12	.BSp 25	Pulley	2
2	.BS 316	Lower Roller Stripper	1	13	.SHCS 1/4x1	Screws	2
3	.SS1/4 28x3/8	Screws	6	14	.BS 201	Mounting Bracket	1
4	.BS 203	Yoke Bracket	1	15	.BS 202	Cylinder Support	1
5	.BS 234	Yoke Pivot Shaft	1	16	.BS 233	Yoke Bracket Shaft	1
6	.SS1/4 28x3/8	Screws	6	17	.3011	Yoke	1
7	.exp1/8x5/8	Pin	1	18	.BSp 25	Pulley	4
8	.400 Rpp 5-9	Timing Belt	1	19	.BS 239	Shaft	1
9	.BS 232	Yoke	1	20	.BS 405	Spacer	2
10	.BS 238	Shaft	1	21	.SHCS 8-32x3/8	Screws	2
11	.122NR	Air Cylinder	1				

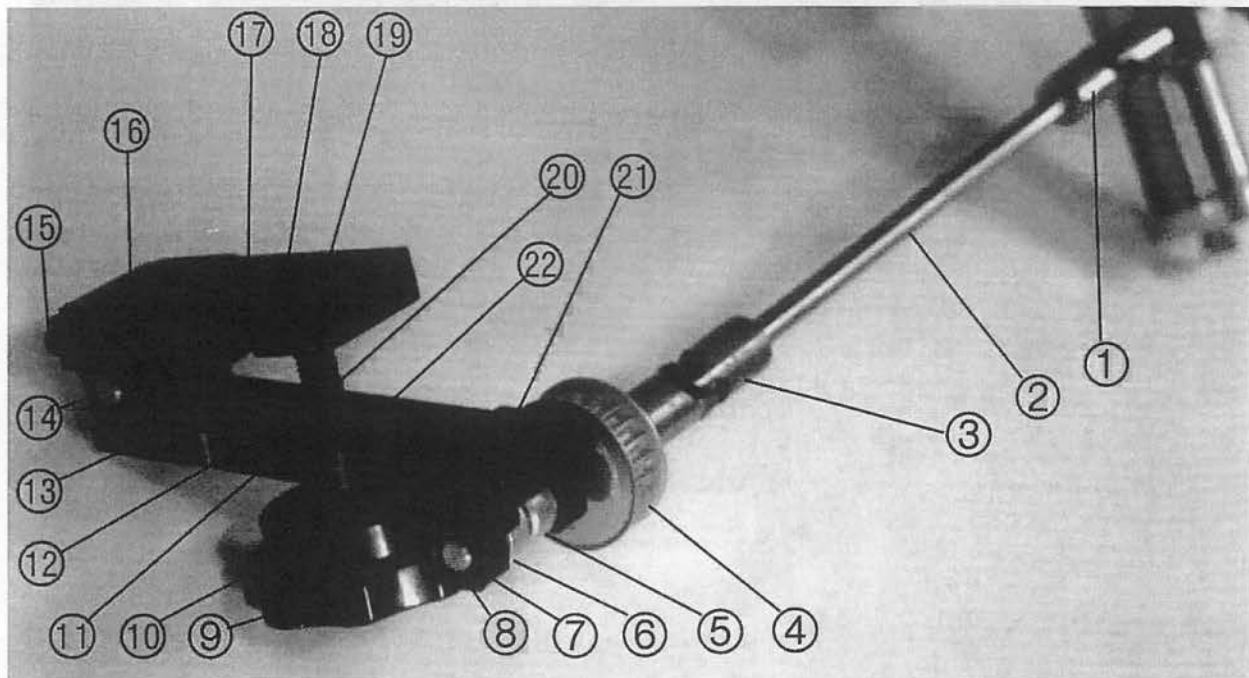


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LOWER DRIVE ASSEMBLY

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	BS-236	Universal Joint	1	12	BS-246	Alignment Nut	1
2	BS-237	Shaft	1	13	SHCS8-32X5/8	Screw	2
3	BS-235	Universal Joint	1	14	BS-252	Shaft	1
4	BSP-25	Pulley	4	15	BS-251	Hinge	1
5	CS53	Collar	2	16	BS-248	Base	1
6	BS-247	Shaft Support	4	17	BS-245	Block	1
7	B7-38	Bearing	4	18	CD1-3	Washer	2
8	BS-254	Shaft	1	19	Q1-25	Snap Ring	1
9	6044K31	Knob	1	20	BS-255	Adj. Screw	1
10	HN3/8X16	Nut	1	21	SHCS8-32X3/8	Screw	8
11	BS-249	Pulley Plate	1	22	EDSS10-32X3/8	Screw	4

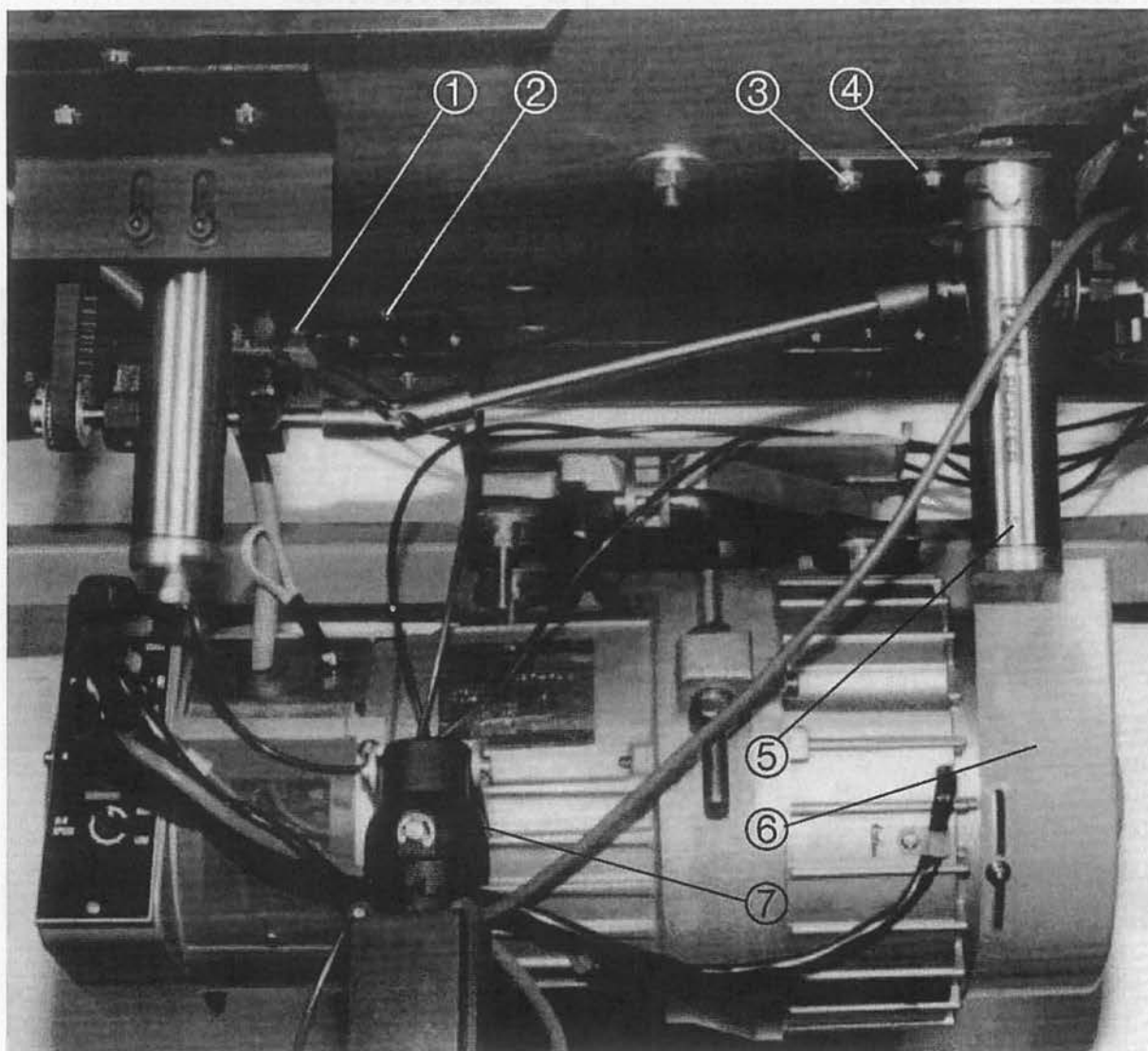


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UNDER TABLE

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	LTV-110	Air Manifold	1	5	122R	Cylinder	1
2	T-1	Air Tub Fitting 1/8	1	6	.614720	Belt Guard	1
3	TS1-1/4	Taping Screw	4	7	LKCL2	Air Accuator	1
4	BS-263	Cylinder Bracket	1				



INDEX

Part #	Page	Ref #	Part #	Page	Ref #	Part #	Page	Ref #	Part #	Page	Ref #
122NR	32	11	700100	16	4	700560	16	3	700910	18	18
122R	34	5	700100	13	12	700570	16	5	700920	18	20
1412	31	3	700110	13	13	700580	17	4	700930	18	21
1412	27	18	700120	13	14	700580	16	6	700940	18	22
1611A	24	2	700130	13	15	700590	16	7	700950	18	23
2993	31	5	700140	13	16	700600	16	8	700960	18	24
2993	27	14	700150	13	17	700610	14	12	700970	18	26
3/8-16X2-1/2	28	5	700160	15	8	700610	16	9	700980	18	27
3/8-16X2-1/2	24	16	700160	13	18	700620	14	11	700990	19	1
3006	30	14	700170	13	19	700620	16	10	701000	19	2
3007	27	2	700180	13	20	700630	16	11	701010	19	4
3007	31	18	700190	21	1	700640	17	1	701020	19	5
3011	32	17	700190	13	21	700650	17	2	701030	19	6
3011	24	11	700200	13	22	700660	17	3	701040	19	7
3011	28	14	700200	21	21	700670	17	5	701050	20	1
30320	27	3	700210	21	20	700680	17	6	701060	20	2
3032U	31	17	700210	13	23	700690	17	7	701070	20	3
375RPP5	25	21	700220	13	24	700700	17	8	701080	20	4
375RPP5-9	28	6	700230	13	25	700710	17	9	701090	20	5
38KLL	27	22	700240	14	1	700720	17	10	701100	20	6
38KLL	31	8	700250	14	2	700730	17	11	701110	20	7
400 Rpp 5-9	32	8	700260	14	3	700740	17	14	701120	20	8
41-V	27	7	700270	14	4	700740	18	1	701130	20	9
425RPP5	26	7	700280	14	5	700750	18	2	701140	20	10
425RPP5-9	30	7	700290	14	6	700750	17	15	701150	20	11
450RPP5	26	6	700300	14	7	700760	18	3	701160	20	12
450RPP5-9	30	1	700310	14	8	700760	17	16	701170	21	3
5283	24	13	700320	14	9	700765	17	17	701180	21	4
5284	32	1	700330	14	10	700770	18	4	701190	21	5
6044K31	33	9	700360	14	13	700770	17	12	701200	21	6
6072K21	26	17	700370	14	14	700770	21	13	701210	21	7
6072K31	30	22	700380	14	15	700780	17	13	701220	21	8
614720	34	6	700390	14	16	700780	18	5	701230	21	9
6C32H3712	30	3	700400	14	17	700790	18	6	701240	21	10
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700010	13	2	700430	15	1	700810	18	8	701260	21	12
700020	13	3	700440	15	2	700810	21	2	701270	21	14
700030	14	19	700450	15	3	700820	18	9	701280	21	15
700030	18	19	700460	15	4	700830	18	10	701290	21	16
700030	13	4	700470	15	5	700840	18	11	701300	21	17
700040	13	5	700480	15	6	700850	18	12	701310	21	18
700050	13	6	700490	15	7	700860	18	13	701320	21	19
700060	13	7	700510	15	9	700860	19	3	701330	21	22
700070	13	8	700520	15	10	700880	18	14	701340	21	23
700080	13	9	700530	15	11	700890	18	15	701350	21	24
700090	13	10	700540	16	1	700890	18	16	701360	21	25
700095	13	11	700550	16	2	700900	18	17	701370	21	26

Part #	Page	Ref #	Part #	Page	Ref #	Part #	Page	Ref #	Part #	Page	Ref #
701380	.21	.27	BS-263	.34	.4	BSP-17	.24	.5	HN1/4X28	.30	.4
701390	.21	.28	BS-281	.31	.20	BSP-17	.29	.6	HN1/4-28	.27	.13
93191	.24	.4	BS-303	.30	.19	BSP-18	.29	.7	HN10-32	.27	.12
900970	.18	.25	BS-304	.31	.13	BSP-18	.26	.12	HN10-32	.31	.9
B7-38	.33	.7	BS-304	.27	.8	BSP-19	.26	.5	HN3/8-16	.28	.8
B7-43	.30	.18	BS-305	.31	.12	BSP-19	.29	.11	HN3/8X16	.33	.10
BH68	.30	.13	BS-306	.31	.11	BSP-20	.22	.8	HN3/8-16	.25	.27
BHCS4-40X1/4	.22	.1	BS-306	.27	.23	BSP-20	.29	.9	K11M40740080	.27	.15
BHCS6-32X1/4	.22	.12	BS-306	.27	.9	BSP-21	.26	.4	LKCL2	.34	.7
BHCS6-32X3/8	.22	.13	BS-316	.32	.2	BSP-21	.24	.17	LTV-110	.34	.1
BHCS8-32X3/8	.26	.11	BS-317	.24	.15	BSP-21	.28	.9	PBS700-EGH	.24	.6
BHCS10-32X1/4	.31	.6	BS-405	.32	.20	BSP-22	.24	.7	PC5-4	.31	.10
BHCS10-32X1/4	.27	.16	BS-405	.28	.11	BSP-22	.29	.4	PC5-4	.27	.11
BS-201	.32	.14	BS-500	.26	.8	BSP-23	.30	.8	Q1-25	.33	.19
BS-202	.32	.15	BS-501	.26	.19	BSP-24	.29	.12	RCB061014FS	.30	.5
BS-203	.32	.4	BS-5283	.28	.12	BSP-24	.28	.2	RCB061014FS	.30	.20
BS-204	.28	.15	BSC-1	.22	.4	BSP-24	.25	.23	SC37	.28	.21
BS-204	.24	.14	BSC-10	.22	.2	BSP-24	.30	.6	SC37	.25	.24
BS-206	.25	.29	BSC-11	.22	.3	BSP-24	.26	.10	SHCS1/4-20X1-3/4	.25	.34
BS-207	.25	.38	BSC-2	.22	.10	BSP-25	.24	.18	SHCS1/4X1	.32	.13
BS-207	.30	.17	BSC-3	.22	.9	BSP-25	.28	.10	SHCS10-32X1/2	.25	.31
BS-209	.24	.1	BSC-30	.23	.1	BSP-25	.33	.4	SHCS10-32X1-1/4	.25	.30
BS-213	.27	.6	BSC-4	.22	.7	BSP-25	.32	.18	SHCS6-32X1/4	.22	.16
BS-213	.31	.14	BSC-5	.22	.15	BSP-25	.32	.12	SHCS8-32X1/2	.28	.17
BS-216	.25	.31	BSC-6	.22	.14	CD1-3	.33	.18	SHCS8-32X1/2	.24	.10
BS-228	.30	.21	BSC-7	.22	.5	CD3-5	.30	.10	SHCS8-32X1-1/2	.26	.16
BS-232	.32	.9	BSC-8	.22	.11	CD3-5	.30	.16	SHCS8-32X1-1/2	.28	.18
BS-233	.32	.16	BSC-9	.22	.6	CO-401-DOO	.24	.3	SHCS8-32X3/8	.27	.10
BS-233	.28	.13	BSP-01	.25	.37	CS5-4	.30	.9	SHCS8-32X3/8	.33	.21
BS-233	.24	.12	BSP-02	.24	.20	CS5-4	.30	.15	SHCS8-32X3/8	.32	.21
BS-234	.32	.5	BSP-02	.28	.20	CS53	.33	.5	SHCS8-32X3/8	.26	.1
BS-235	.33	.3	BSP-03	.24	.8	D231-1	.26	.9	SHCS8-32X3/4	.27	.5
BS-236	.33	.1	BSP-03	.28	.3	EDSS10-32X3/8	.33	.22	SHCS8-32X3/4	.31	.16
BS-237	.33	.2	BSP-04	.28	.16	EXP1/8X5/8	.25	.36	SHCS8-32X3/4	.24	.19
BS-238	.32	.10	BSP-04	.24	.9	EXP1/8X5/8	.32	.7	SHCS8-32X5/8	.28	.4
BS-239	.32	.19	BSP-05	.28	.19	FB68-3-1/4	.25	.25	SHCS8-32X5/8	.33	.13
BS-244	.31	.15	BSP-05	.25	.26	FB683X1/4	.28	.22	SHCS8-32X7/8	.31	.22
BS-244	.27	.4	BSP-06	.25	.22	FBG8-3-1/4	.26	.15	SS-2-74	.30	.11
BS-245	.33	.17	BSP-06	.28	.1	FHCS8-32X1-1/4	.31	.2	SS1/4-28X1/4	.30	.12
BS-246	.33	.12	BSP-10	.28	.7	FHCS8-32X1-1/4	.27	.19	SS1/4-28X3/8	.32	.3
BS-247	.33	.6	BSP-10	.25	.33	FU1/4-Black	.25	.35	SS1/4-28X3/8	.32	.6
BS-248	.33	.16	BSP-11	.29	.13	FW1/4	.29	.2	SS1/4-28X3/8	.25	.28
BS-249	.33	.11	BSP-12	.29	.8	FW1/4-Black	.26	.18	T-1	.34	.2
BS-251	.33	.15	BSP-13	.26	.14	GR3070037	.30	.2	TS-1"	.23	.2
BS-252	.33	.14	BSP-14	.26	.2	GR3070037	.31	.19	TS1-1/4	.34	.3
BS-254	.33	.8	BSP-14	.29	.3	GR3070037	.27	.1	XCK-22	.27	.17
BS-255	.33	.20	BSP-15	.26	.3	HHCS10-32X1	.27	.24	YA-18-3/8	.26	.13
BS-256	.27	.20	BSP-15	.29	.5	HHCS10-32X1	.31	.7	YA-18-3/8	.29	.10
BS-258	.27	.21	BSP-16	.29	.1	HHCS10-32X1	.31	.21			
BS-258	.31	.1	BSP-16	.26	.20	HN1/4-28	.31	.4			

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Measurement Conversion Chart

MM	APPROXIMATE INCH		MM	APPROXIMATE INCH		MM	APPROXIMATE INCH	
	FRACTION	DECIMAL		FRACTION	DECIMAL		FRACTION	DECIMAL
0.1		.004	3.4		.134	6.7	17/64	.264
0.2		.008	3.5		.138	6.8		.268
0.3	1/64	.012	3.6	9/64	.142	6.9		.272
0.4	1/64	.016	3.7		.146	7.0		.276
0.5		.020	3.8		.150	7.1	9/32	.280
0.6		.024	3.9		.154	7.2		.283
0.7		.028	4.0	5/32	.157	7.3		.287
0.8	1/32	.032	4.1		.161	7.4		.291
0.9		.035	4.2		.165	7.5	19/64	.295
1.0		.039	4.3		.169	7.6		.299
1.1		.043	4.4	11/64	.173	7.7		.303
1.2	3/64	.047	4.5		.177	7.8		.307
1.3	3/64	.051	4.6		.181	7.9	5/16	.311
1.4		.055	4.7		.185	8.0		.315
1.5		.059	4.8	3/16	.189	8.1		.319
1.6	1/16	.063	4.9		.193	8.2		.323
1.7		.067	5.0		.197	8.3	21/64	.327
1.8		.071	5.1		.201	8.4		.330
1.9		.075	5.2	13/64	.205	8.5		.335
2.0	5/64	.079	5.3		.209	8.6		.339
2.1		.083	5.4		.213	8.7	11/32	.343
2.2		.087	5.5		.217	8.8		.346
2.3		.091	5.6	7/32	.220	8.9		.350
2.4	3/32	.094	5.7		.224	9.0		.354
2.5		.098	5.8		.228	9.1	23/64	.358
2.6		.102	5.9		.232	9.2		.362
2.7		.106	6.0	15/64	.236	9.3		.366
2.8	7/64	.110	6.1		.240	9.4		.370
2.9		.114	6.2		.244	9.5	3/8	.374
3.0		.118	6.3		.248	9.6		.378
3.1		.122	6.4	1/4	.252	9.7		.382
3.2	1/8	.125	6.5		.256	9.8		.386
3.3		.130	6.6		.260	9.9	25/64	.390
20.0	25/32	.787	50.0	1-31/32	1.968	10.0		.394
30.0	1-3/16	1.181	60.0	2-23/64	2.362	80.0	3-5/32	3.150
40.0	1-37/64	1.575	70.0	2-3/4	2.756	90.0	3-35/64	3.543
						100.0	3-15/16	3.937



