

# ARTISAN® SEWING MACHINES

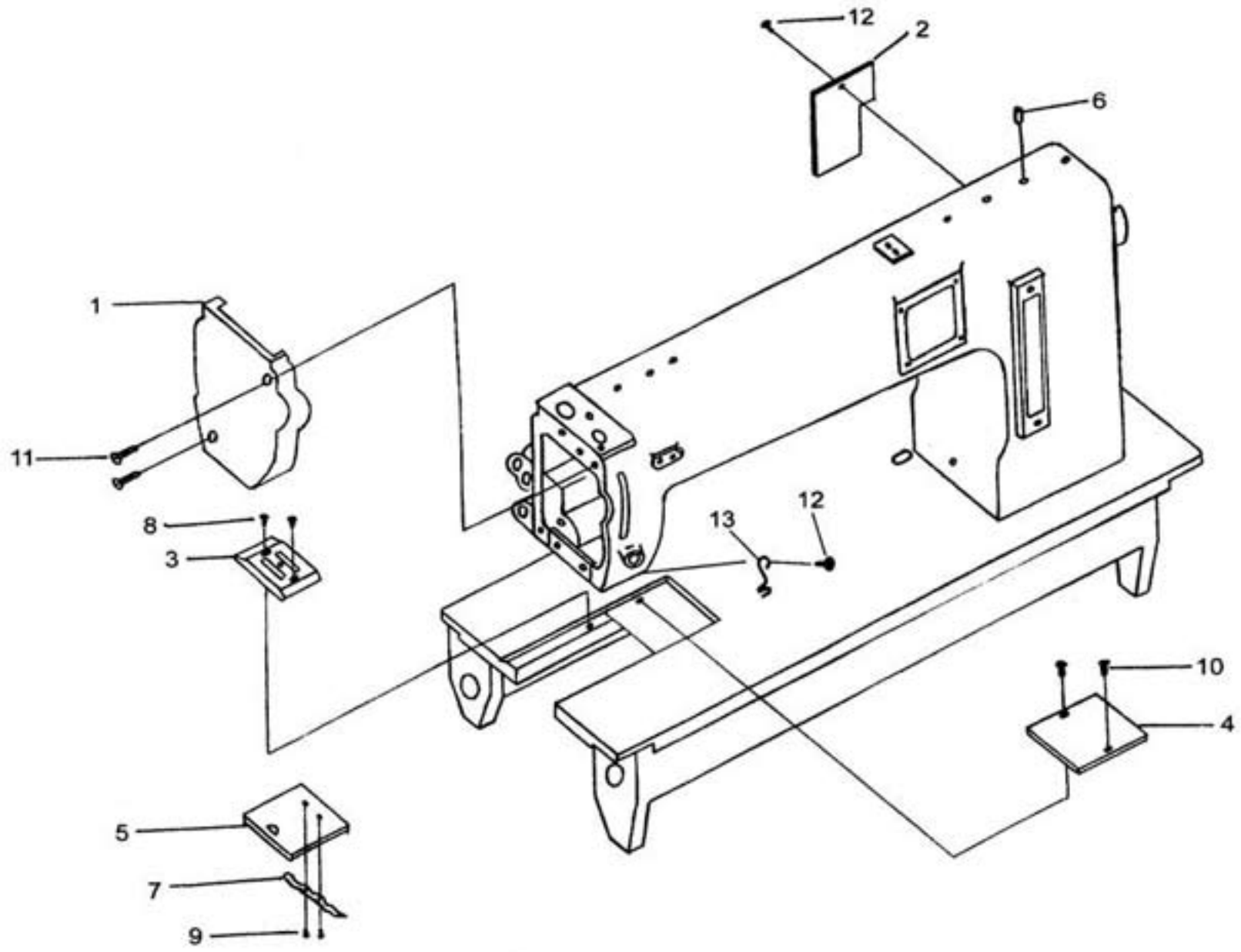


**ARTISAN®**

**TORO-4600 and TORO-4700  
Operators and Spare Parts Manual**

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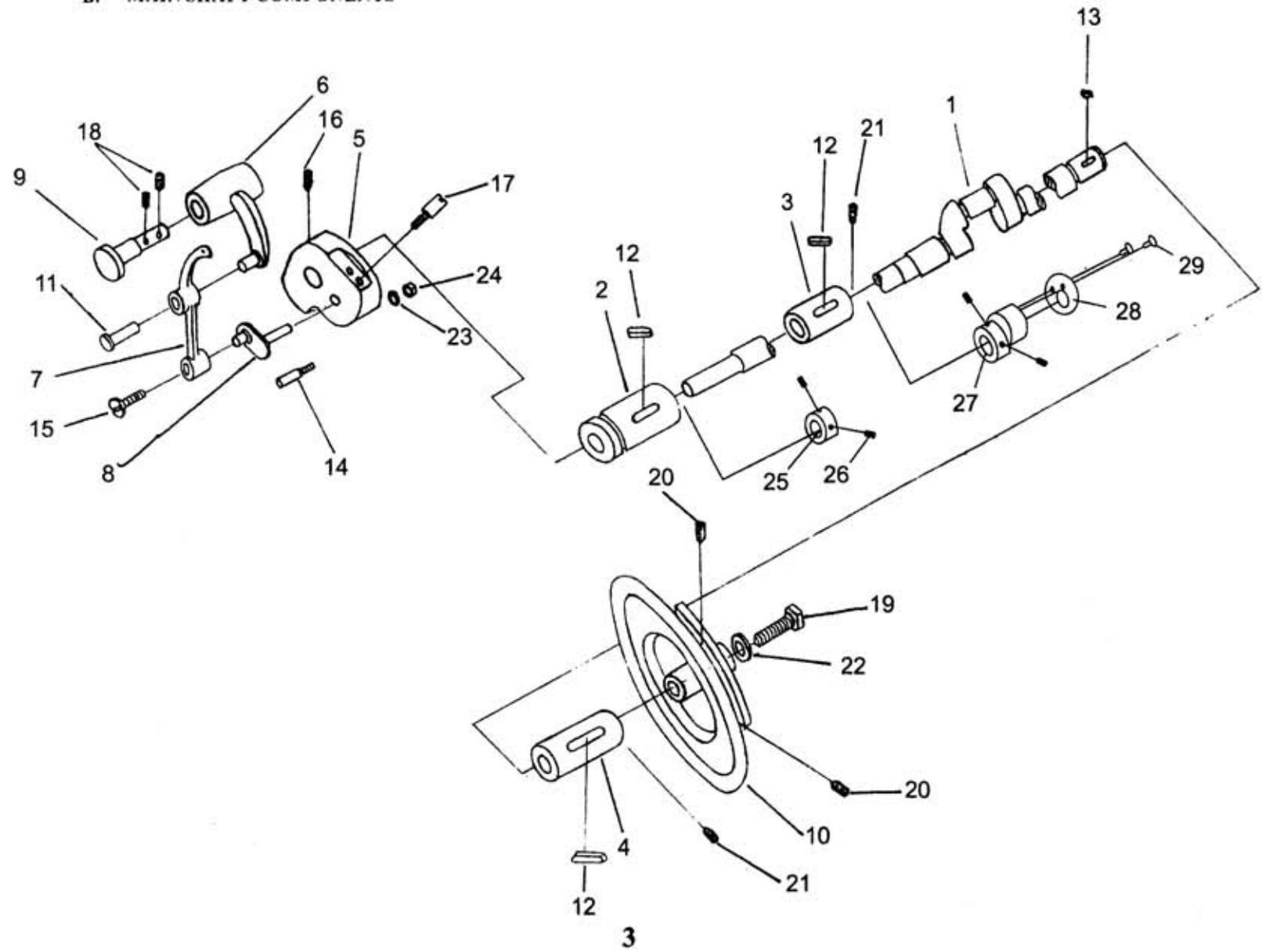
A. FRAME & MISCELLANEOUS COVER COMPONENTS



A. FRAME & MISCELLANEOUS COVER COMPONENTS

REF.No	NOTE	Part No	Name of Part	Q'TY
1		460201	Face Plate Asm.	1
2		460202	Side Cover	1
3		460203	Throat Plate	1
4		460204	Slide Plate(Right)	1
5		460205	Slide Plate(Left)	1
6		460206	Oil Pipe	1
7		460207	Slide Plate Spring	1
8		460208	Screw	2
9		460209	Screw 3/32-56 L=2.5	2
10		460210	Screw 11/64-40 L=6.5	2
11		460211	Screw 15/64-28 L=18	2
12		460212	Screw 9/64-40 L=7	2
13		460213	Frame threadguide	1

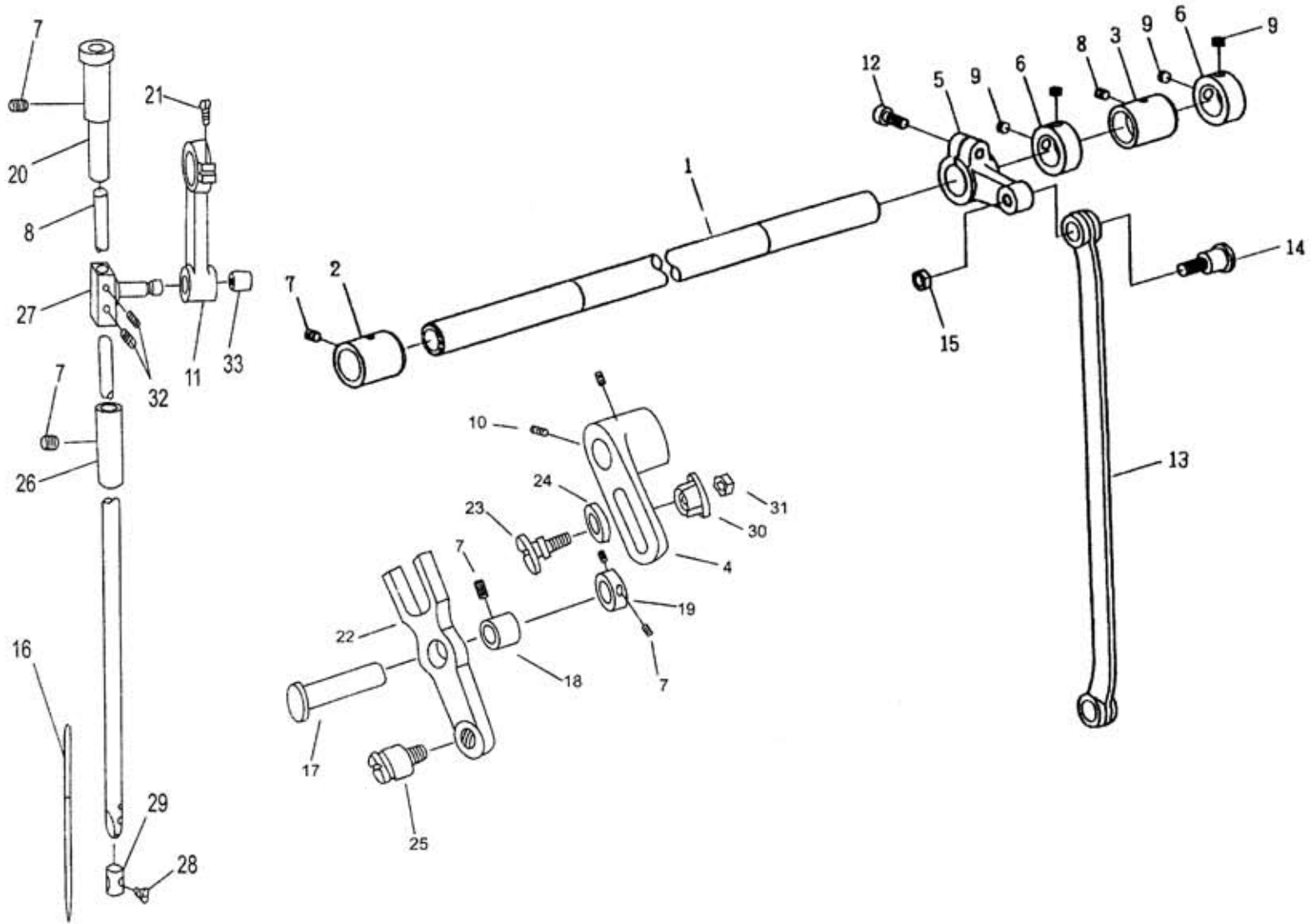
**B. MAIN SHAFT COMPONENTS**



**B. MAIN SHAFT COMPONENTS**

REF.No	NOTE	Part No	Name of Part	Q'TY
1		460801	Main Shaft	1
2		460402	Main Shaft Bushing,Front	1
3		460403	Main Shaft Bushing,Center	1
4		460404	Main Shaft Bushing,Rear	1
5		460405	Needle Bar Crank	1
6		460406	Threading Connection Rod	1
7		460407	Threading Rod Body	1
8		460408	Threading Crank	1
9		460409	Pin of threading connecting	1
10		460410	Upper wheel	1
11		460411	Rivet of therading rod	1
12		460412	Felt of rear sleeve	1
13		460413	Key of upper shaft	1
14		460414	Pin of needle bar crank	1
15		460415	Screw of threading crank	1
16		460416	Screw of needle bar crank	1
17		460417	Pin screw of needle bar crank	1
18		460418	Screw for pin of threading connection rod	2
19		460419	Safet screw of upper wheel	1
20		460420	Screws of upper wheel	1
21		460421	Screw of middle sleeve	2
22		460422	Washer of upper wheel	1
23		460423	Pin serew of needle bar crank	1
24		460424	Nut	1
25		460425	Thrust Coller	1
26		460426	Screw 1/4-40 L=6	2
27		460427	Feed Cam	1
28		460428	Side Plate	1
29		460429	Screw 11/64-40	2

C. NEEDLE BAR UPPER FEED MECHANISM COMPONENTS (1/3)

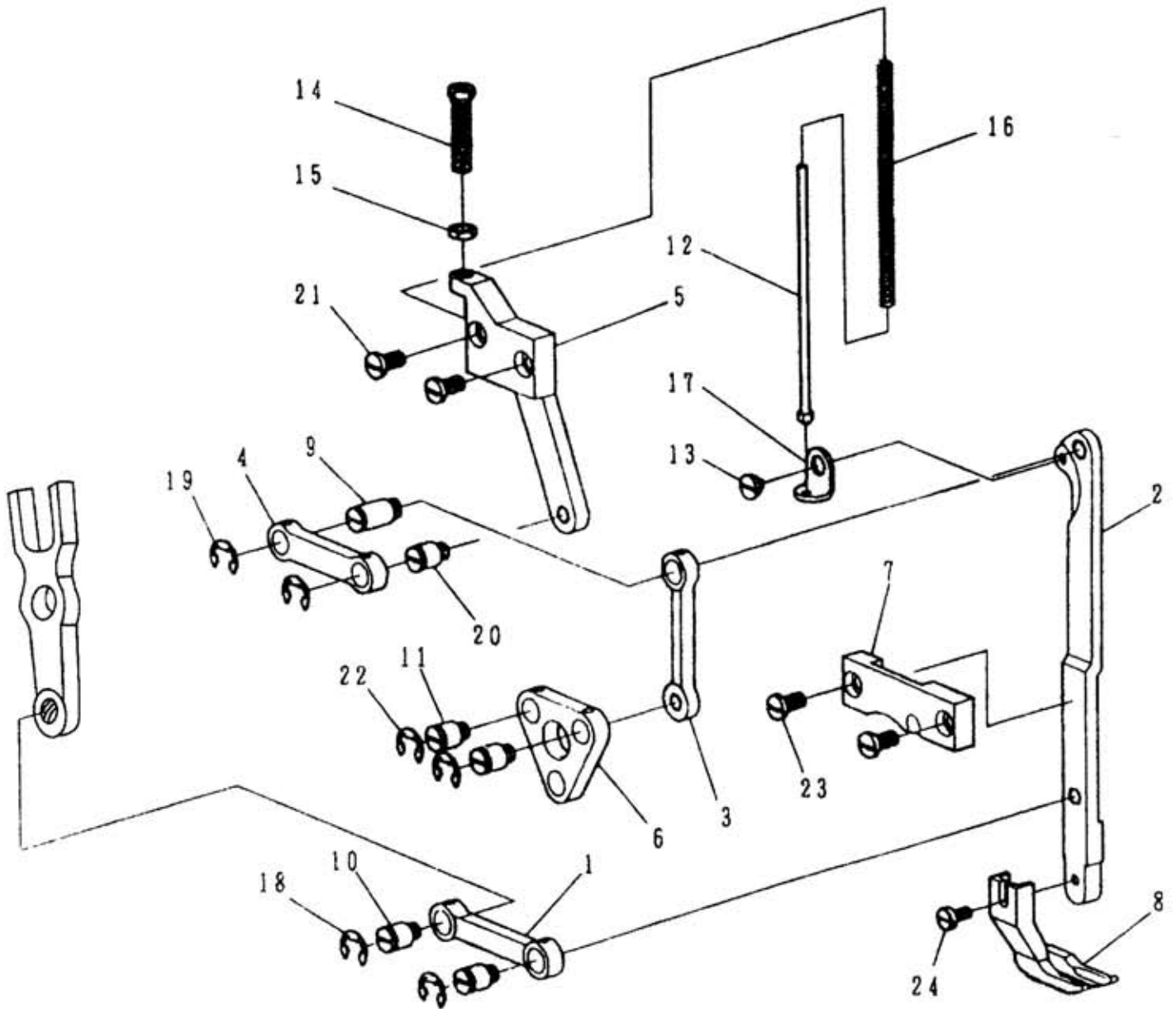


C. NEEDLE BAR UPPER FEED MECHANISM COMPONENTS(1/3)

REF.No	NOTE	Part No	Name of Part	Q`TY
1		460601	Driving shaft	1
2		460602	Driving shaft front metal	1
3		460603	Driving shaft Rear metal	1
4		460604	Differential regulating rod	1
5		460605	Driving shaft rod,rear	1
6		460606	Thrust collar D=18W=12	2
7		460607	Screw 15/64-28 L=7	2
8		460608	Needle bar	1
9		460609	Screw 1/4-40 L=4.5	6
10		460610	Screw 15/64-28 L=14.5	1
11		460611	Small connecting rod	1
12		460612	Screw M 6x1 L=15	1
13		460613	Lenghtwise feed rod	1
14		460614	Hinge screw 9/32-28 K=12	1
15		460615	Nut 9/32-28	1
16		460616	Needle794#230	1
17		460617	Frame driving base shaft	1
18		460618	Bushing	1
19		460619	Thrust collar D=9.53 W=10	1
20		460620	Needle bar bushing	1
21		460621	Screw of small connecting rod	1
22		460622	Uper feed control bracket	1
23		460623	Position screw	1
24		460624	Washer of position screw	1
25		460625	Hinge screw9/32-28	1
26		460626	Lower bushing of needle bar	1
27		460627	Needle bar connecting shaft	1
28		460628	Screw 11/64-40 ;=6.5	1
29		460629	Needle bar thread guide	1
30		460630	Regulating nut	1
31		460631	Lock nut	1
32		460632	Screw of needie bar connecting shaft	2
33		460633	Roller of needie bar connecting shaft	1



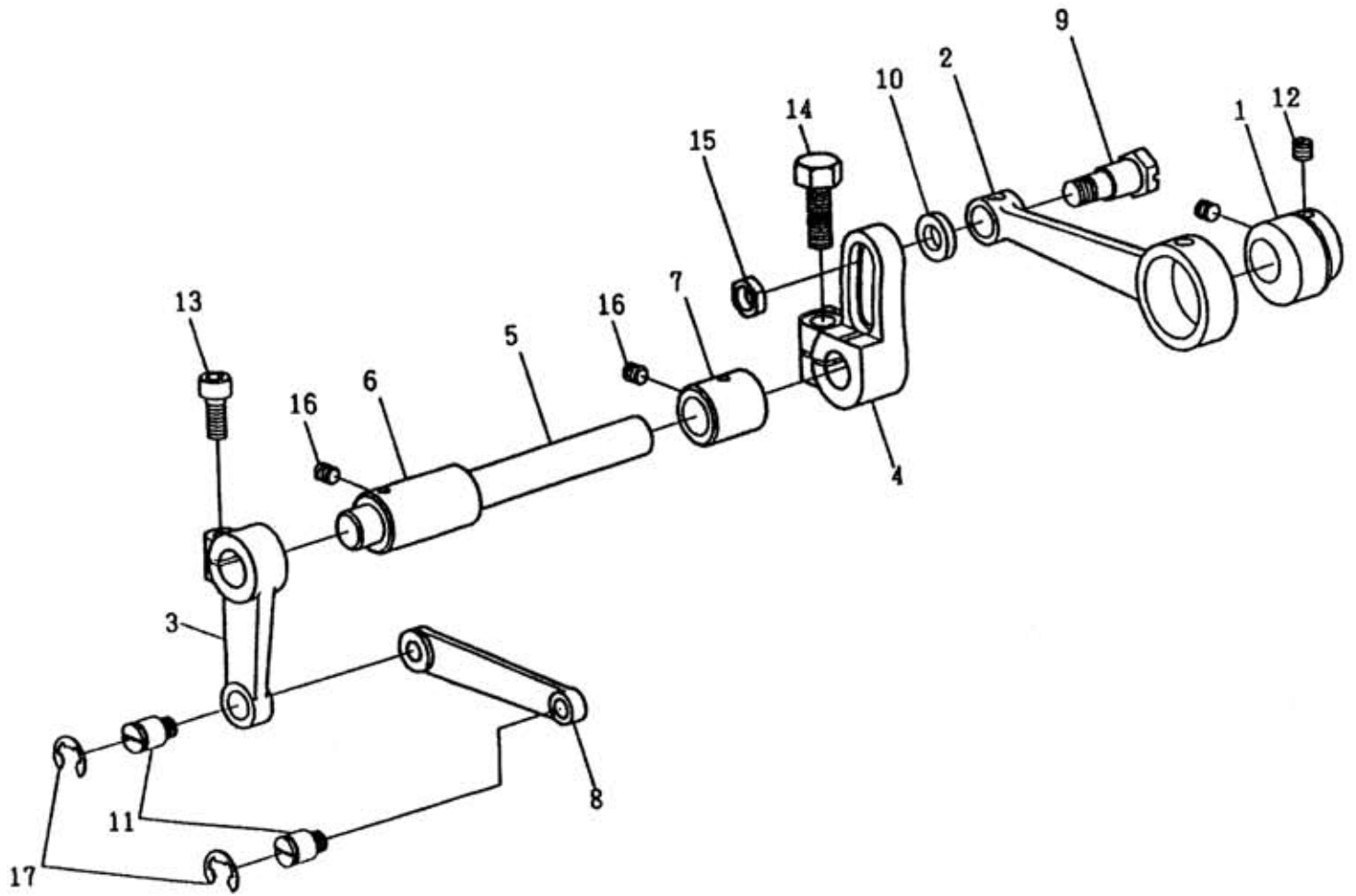
C. NEEDLE BAR • UPPER FEED MECHANISM COMPONENTS (2/3)



### C. NEEDLE BAR - UPPER FEED MECHANISM COMPONENTS

<u>REF.No</u>	<u>NOTE</u>	<u>Part No</u>	<u>Name of Part</u>	<u>Q'TY</u>
1		460801	Rod	1
2		460802	Upper feed rod	1
3		460803	Upper feed link A	1
4		460804	Upper feed link B	1
5		460805	Upper feed link bracket	1
6		460806	Bracket	1
7		460807	Support plate	1
8		460808	Walking foot (standard)	1
9		460809	Hinge screw	1
10		460810	Hinge screw	1
11		460811	Hinge screw	1
12		460812	Spring guide bar	1
13		460813	Hinge screw	1
14		460814	Adjusting thumb screw	1
15		460815	Nut 9/32-28	1
16		460816	Spring	1
17		460817	Retaining	1
18		460818	E-Shaped snap ring (8mm)	2
19		460819	E-Shaped snap ring (8mm)	2
20		460820	Hinge screw	1
21		460821	Screw 15/64-28 L=12	2
22		460822	E-Shaped snap ring (8mm)	2
23		460823	Screw 15/64-28 L=12	2
24		460824	Screw 11/64-40 L=9.5	1

C. NEEDLE BAR • UPPER FEED MECHAISM COMPONENTS (3/3)

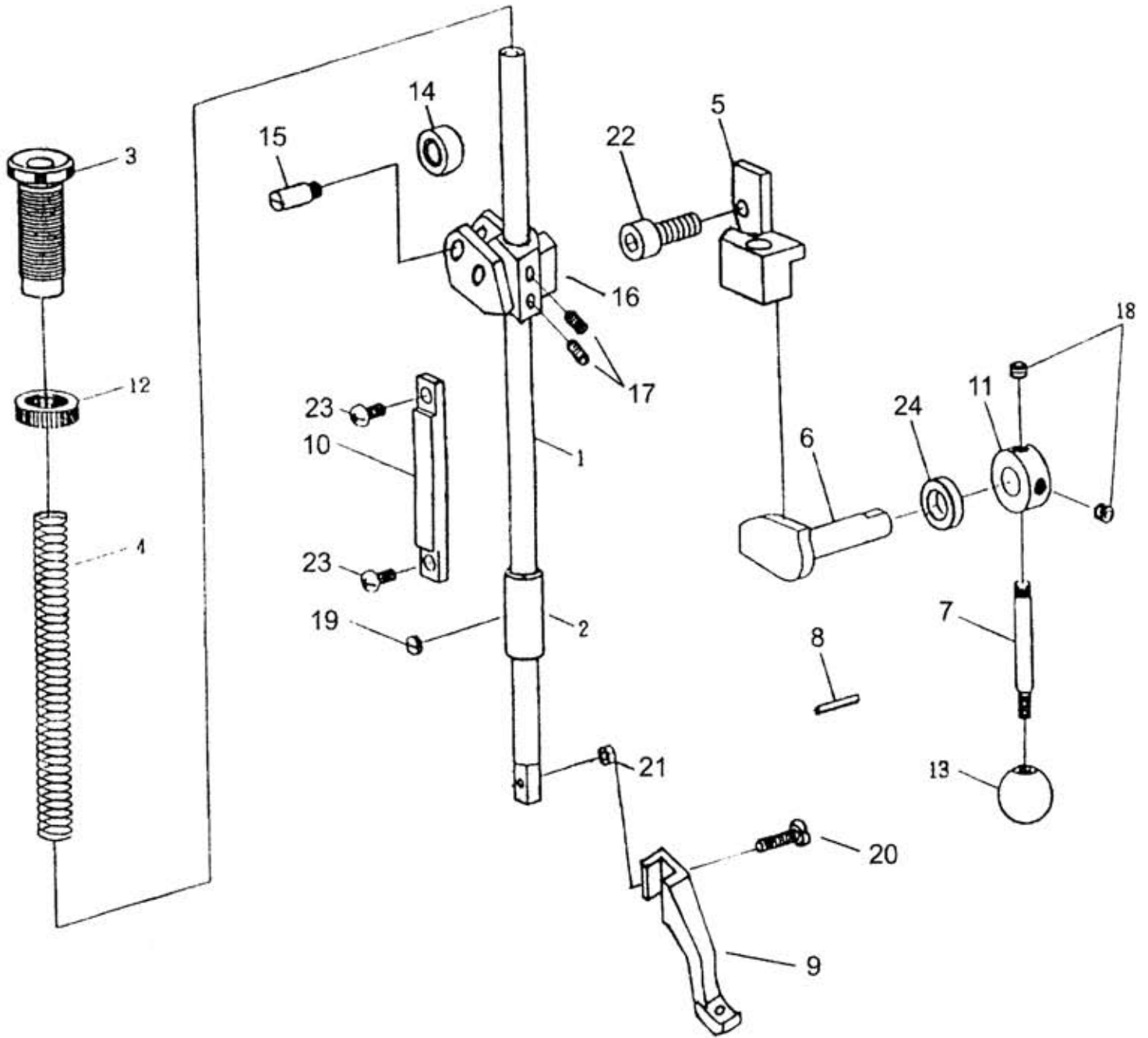


**C. NEEDLE BAR UPPER FEED MECHANISM COMPONENTS (3/3)**

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REF.No	NOTE	Part No	Name of Part	Q'TY
1		461001	Driving cam	1
2		461002	Connecting rod	1
3		461003	Driving shaft arm,Front	1
4		461004	Driving shaft arm,Rear	1
5		461005	Fdde rocker shaft	1
6		461006	Bushing,Front	1
7		461007	Bushing,Rear	1
8		461008	Rod	1
9		461009	Hinge screw	1
10		461010	Washer	1
11		461011	Hinge screw	1
12		461012	Screw 1/4-40 L=6	1
13		461013	Screw M6 L=21	1
14		461014	Screw 5/16-18	1
15		461015	Nut 11/32-28	1
16		461016	Screw 15/64-28 L=7	1
17		461017	E-Shaped snap ring(8mm)	1

D. PRESSURE BAR COMPONENTS

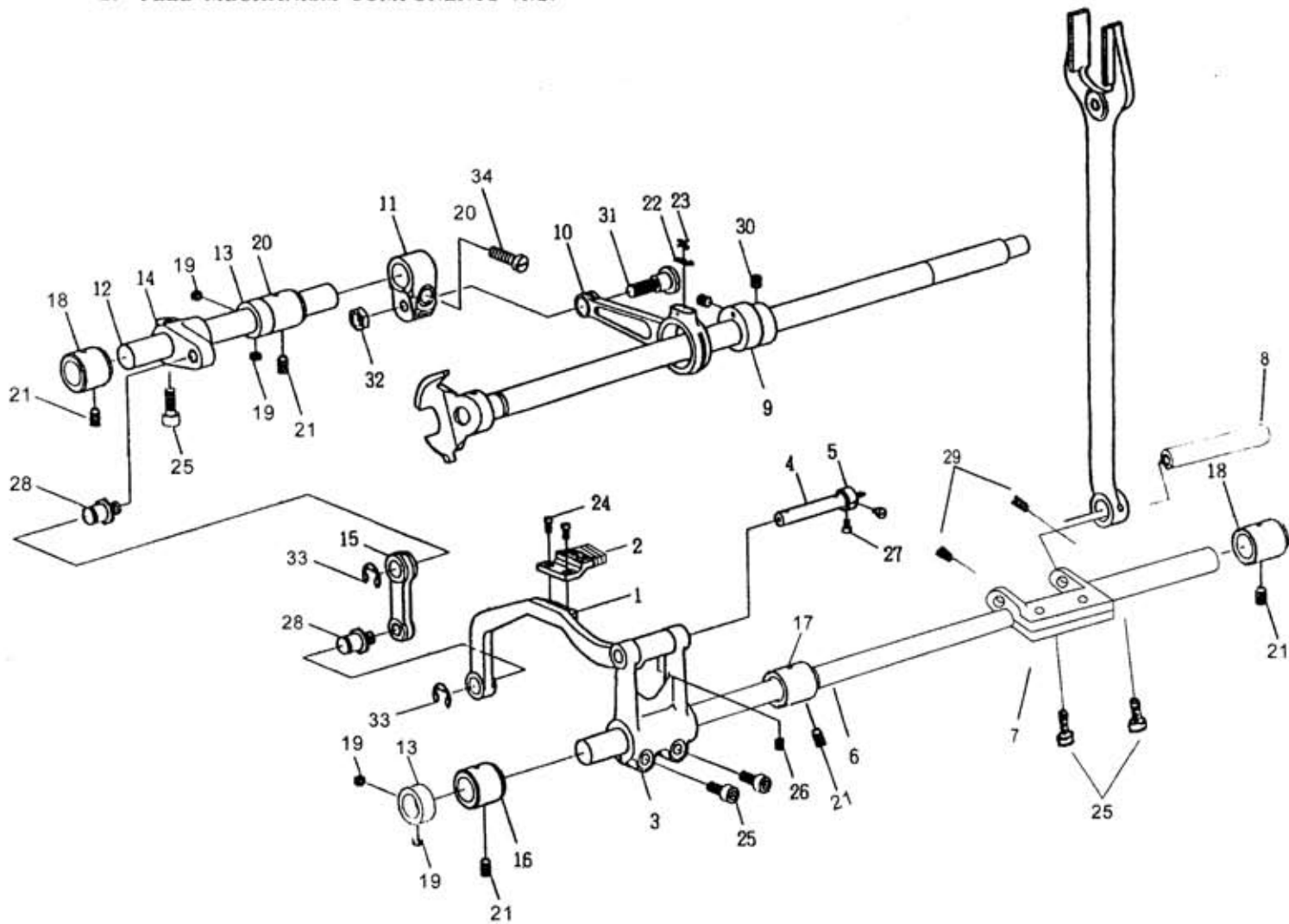


D. PRESSURE BAR COMPONENTS

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REF.No	NOTE	Part No	Name of Part	Q'TY
1		461201	Presser bar	1
2		461202	Presser bar bushing	1
3		461203	Screw	1
4		461204	Spring	1
5		461205	Hand lifter link	1
6		461206	Hand lifter cam	1
7		461207	Hand lifter lever	1
8		461208	Spring pin 3.0x20	1
9		461209	Pressure foot (standard)	1
10		461210	Guide plate	1
11		461211	Thrust collar	1
12		461212	Nut	1
13		461213	Grip	1
14		461214	Roller follower	1
15		461215	Guide pin	1
16		461216	Presser bar guide bracket	1
17		461217	Screw 1/4-40 L=6	2
18		461218	Screw 1/4-40 L=4.5	2
19		461219	Screw 1/4-40 L=2.5	1
20		461220	Screw 9/64-40 L=13.5	1
21		461221	Nut 9/64-40	1
22		461222	Screw 1/4-40 L=6.5	1
23		461223	Screw 3/16-32 L=10	2
24		461224	Collar	1

E. FEED MECHANISM COMPONENTS (1/2)

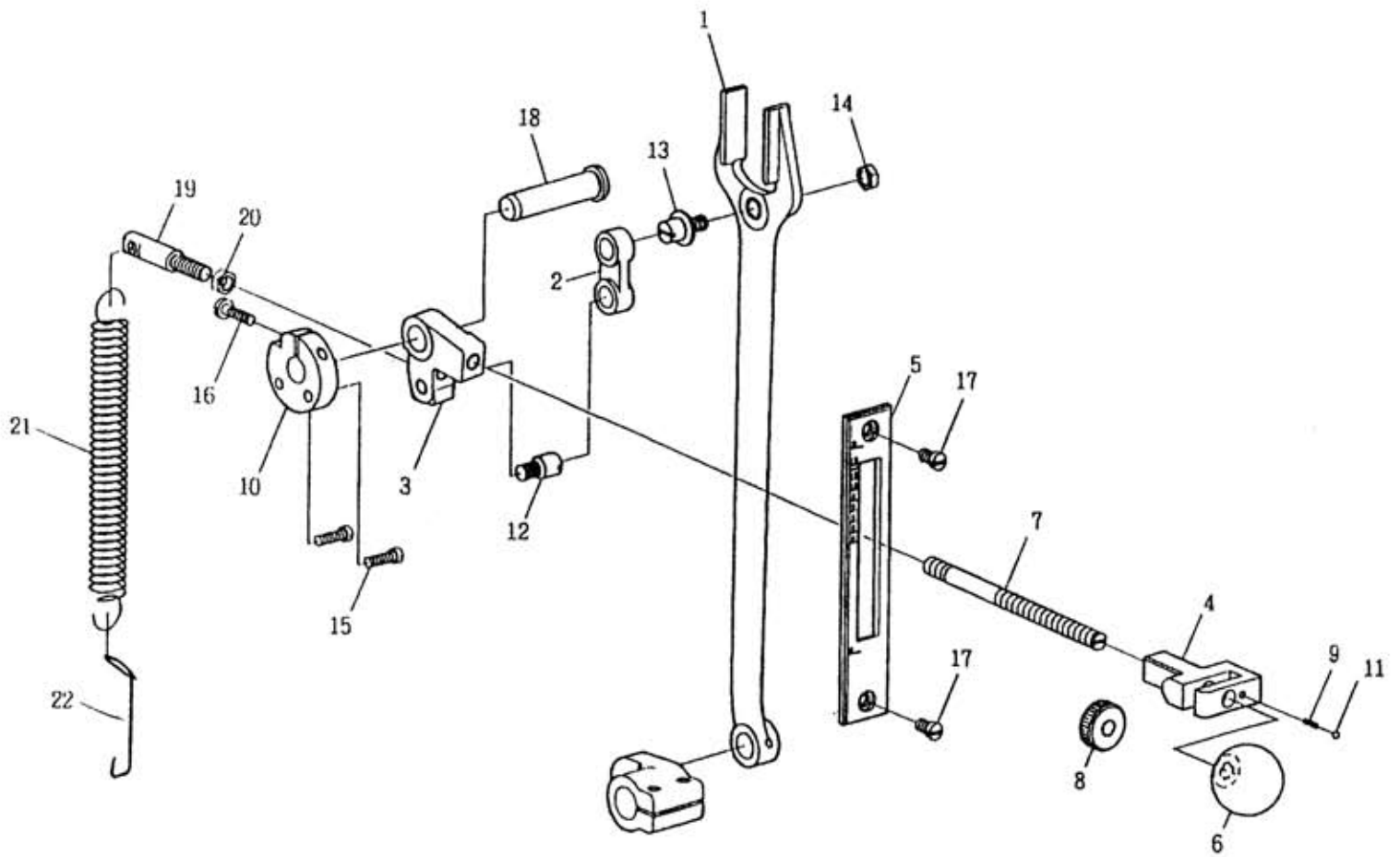


E. FEED MECHANISM COMPONENTS(1/2)

REF.No	NOTE	Part No	Name of Part	Q'TY
1		461401	Feed bar	1
2		461402	Fdde dog	1
3		461403	Feed bar rod	1
4		461404	Feed bar shaft	1
5		461405	Thrust collar	1
6		461406	Feed rocker shaft	1
7		461407	Feed rocker shaft	1
8		461408	Feed bar shaft	1
9		461409	Fdde lifting rock cam	1
10		461410	Feed rod	1
11		461411	Feed lifting rock link	1
12		461412	Feed lifting rock shaft	1
13		461413	Thrust collar D=14.72 W=10	2
14		461414	Feed lifting rock link(front)	1
15		461415	Feed lifting link	1
16		461416	Bushing front	1
17		461417	Driving shaft metal	2
18		461418	Driving shaft metal	2
19		461419	Screw 1/4-40 L=3.5	4
20		461420	Screw 15/64-28 L=18	1
21		461421	Screw 15/64-28 L=10.5	5
22		461422	Felt	1
23		461423	Spring	1
24		461424	Screw 9/64-40 L=6.5	2
25		461425	Screw M 6x1 L=15	5
26		461426	Screw 3/16-32 L=7	1
27		461427	Screw 9/64-40 L=4.5	2
28		461428	Hinge screw 5/16-24	2
29		461429	Screw 15/64-28 L=10.5	2
30		461430	Screw 1/4-40 L=7	2
31		461431	Hinge screw 9/32-28 D=10 L=9.5	1
32		461432	Nut 9/32-28	1
33		461433	E-shaped snaprint (8mm)	2
34		461434	Screw 15/64-28 L=18	1



E. FEED MECHANISM COMPONENTS (2/2)

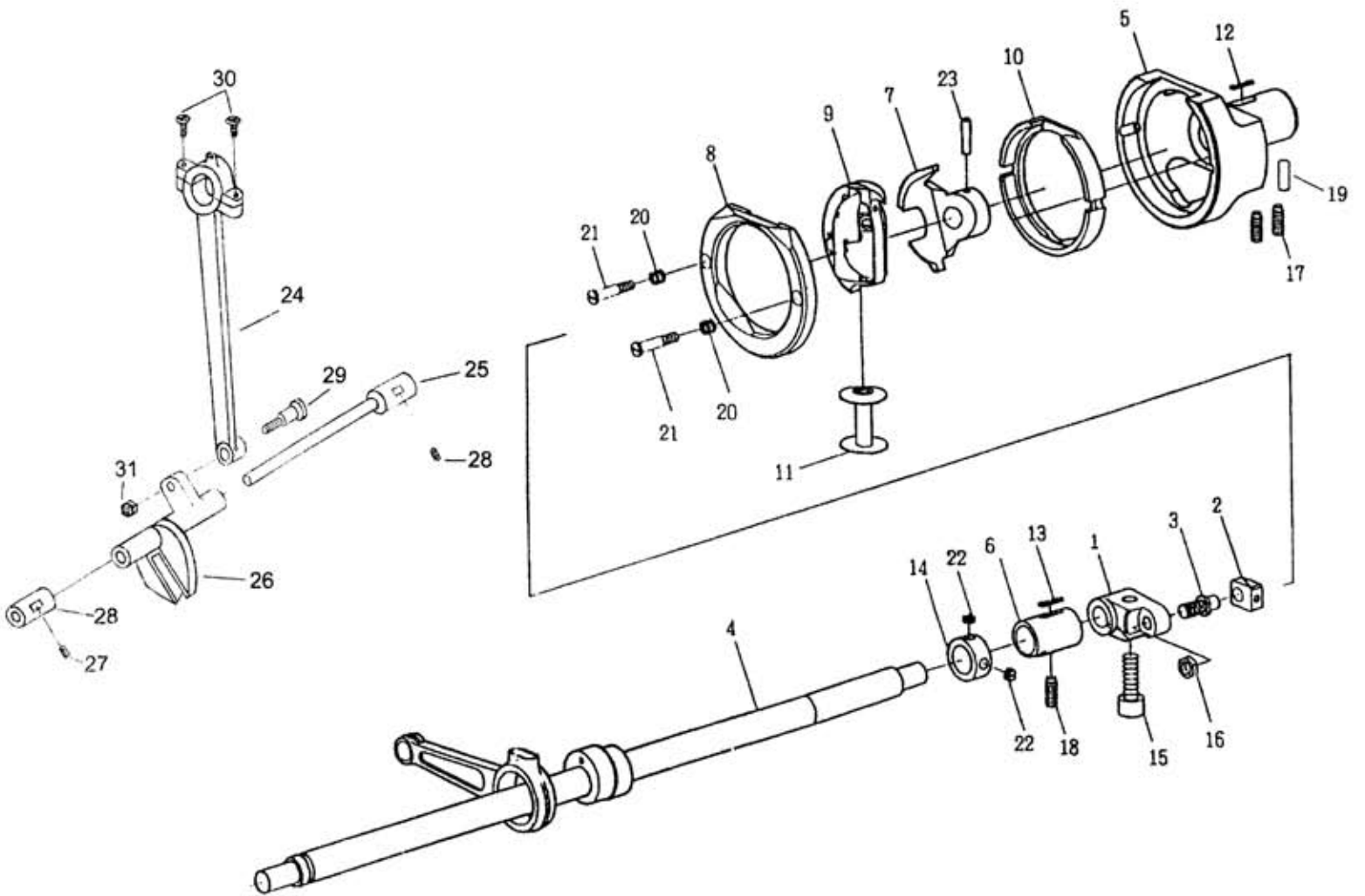


E. FEED MECHANISM COMPONENTS (2/2)

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REE.No	NOTE	Purt No	Name of Part	Q'TY
1		461601	Rod	1
2		461602	Feed Connecting Link	1
3		461603	Feed Regulator	1
4		461604	Lever	1
5		461605	Side Cover	1
6		461606	Lever Grip	1
7		461607	Lever Shaft	1
8		461608	Nut	1
9		461609	Sprint	1
10		461610	Support Plat	1
11		461611	Ball	1
12		461612	Hinge Screw 9/32-28	1
13		461613	Hinge Screw 9/32-28	1
14		461614	Nut 9/32-28	1
15		461615	Screw 3/16-28 L=12	2
16		461616	Screw 3/16-32 L=18	1
17		461617	Screw 15/64-28 L=9	2
18		461618	Feed Regurator Shaft	1
19		461619	Spring Hook Screw	1
20		461620	Nut 9/32-28	1
21		461621	Spring	1
22		461622	Spring Hook	1

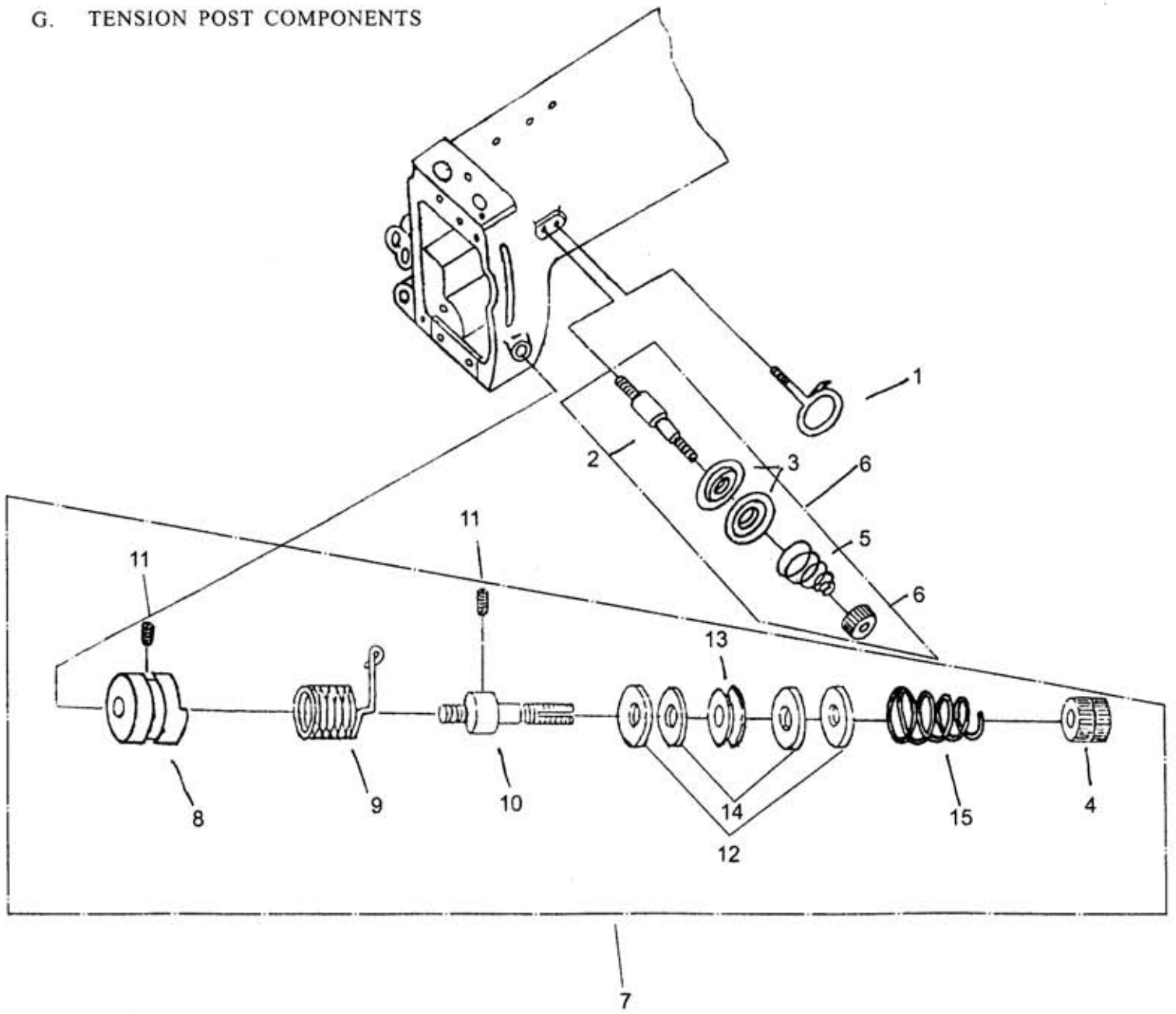
F. HOOK DRIVING SHAFT COMPONENTS



F. HOOK DRIVING SHAFT COMPONENTS

REF.No	NOTE	Part No.	Name of Part	Q'TY
1		461801	Hook Driving Shaft Crank	1
2		461802	Crand Slide Block	1
3		461803	Slide Block Stud	1
4		461804	Hook Driving Shaft	1
5		461805	Bushing,Front	1
6		461806	Bushing,Rear	1
7		461807	Shuttle Driver	1
8		461808	Hook Cover	1
9		461809	Hook Asm.	1
10		461810	Shuttle Race Body	1
11		461811	Bobbin	1
12		461812	Felt	1
13		461813	OilFelt	1
14		461814	Thrust Collar D=14.72 W=10	1
15		461815	Screw M8x1.25 L=22	1
16		461816	Nut 9/32-28	1
17		461817	Screw 15/64-28 L=15	2
18		461818	Screw 15/64-28 L=15	1
19		461819	Tapered Pin	1
20		461820	Hook Counter Spring	2
21		461821	Hinge Screw 3/16-28 D=5 L=15.6	2
22		461822	Screw 1/4-40 L=3.5	2
23		461823	Tapered Pin 4.0x16	1
24		461824	Connecting rod	1
25		461825	Hinge pin	1
26		461826	Oscilating rock shaft	1
27		461827	Rock shaft bushing	1
28		461828	Screw 15/64-28L=7	2
29		461829	Screw	1
30		461830	Screw M5 L=15	2
31		461831	Nut M10x1	1

G. TENSION POST COMPONENTS

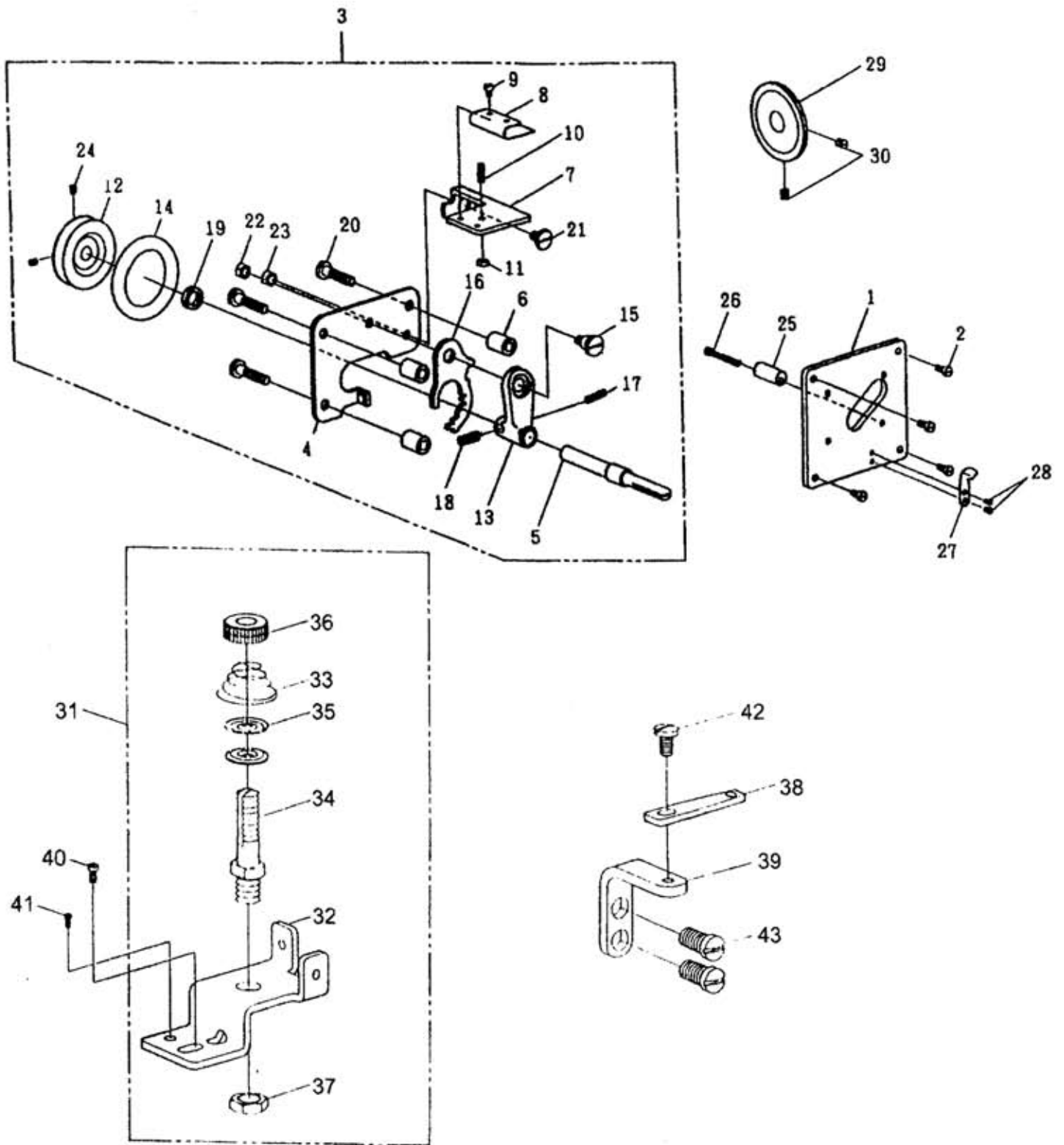


G. TENSION POST COMPONENTS

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REF.No	NOTE	Purt No	Name of Part	Q'TY
1		462001	Thread ring	1
2		462002	Screw of threading clamp	1
3		462003	Tension disk	2
4		462004	Nut of thread clamp	2
5		462005	Clamp spring	1
6		462006	Threading device	1
7		462007	Threading device	1
8		462008	Threading block	1
9		462009	Threading spring	1
10		462010	Threading screw	1
11		462011	Lock screw of threading screw	2
12		462012	Pressure plates	1
13		462013	Threading wheel	1
14		462014	Feld rings	1
15		462015	Threading spring	1

# H. THREAD WINDER — THREAD GUIDE COMPONENTS

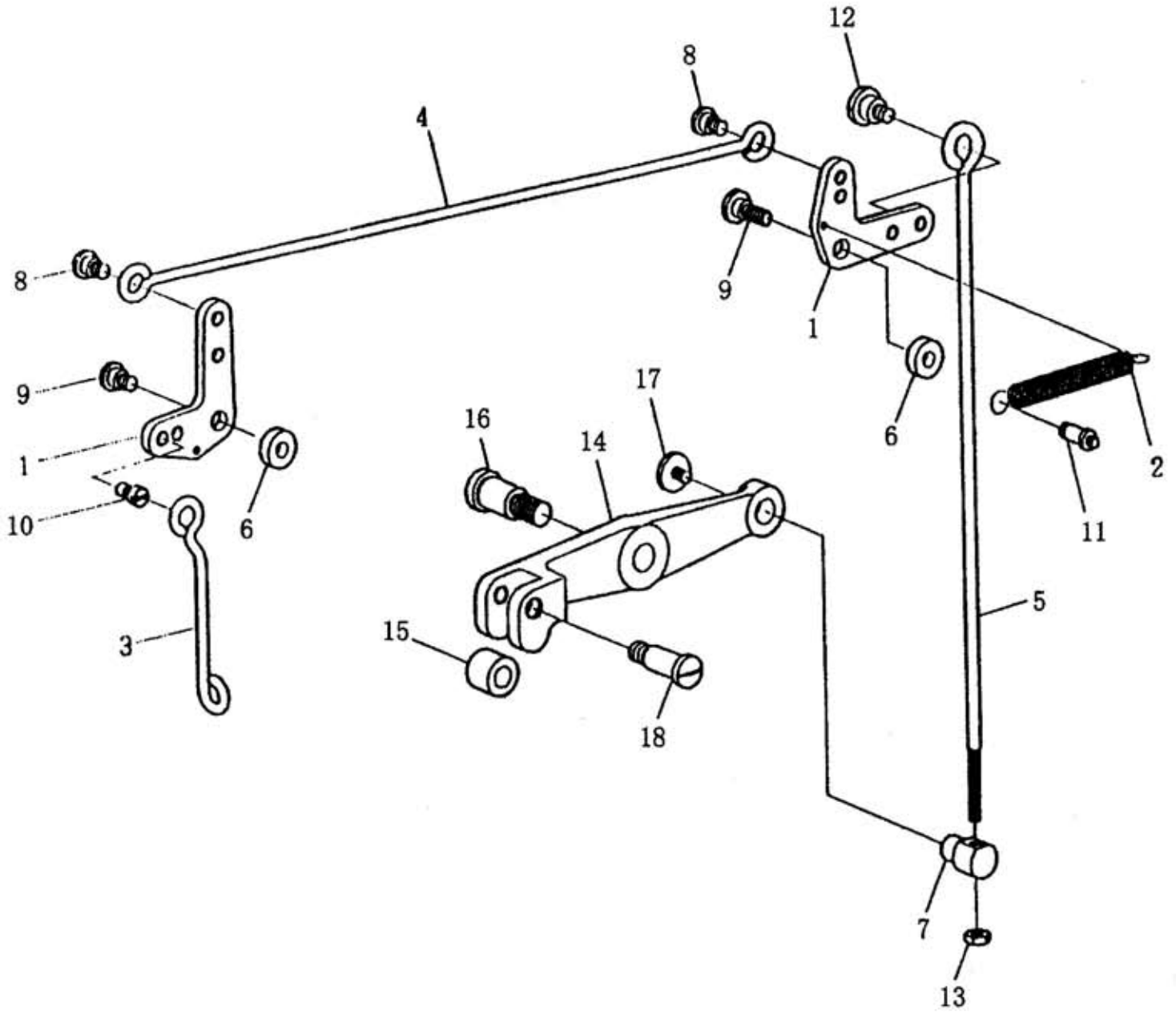


H. THREAD WINDER & THREAD GUIDE COMPONENTS(1/2)

REF.No	NOTE	Part No.	Name of Part	Q'TY
1		462201	Thread Winder Plate	1
2		462202	Screw 11/64-40 L=9	4
3		462203	Thread Winder Asm.	1
4		462204	Thread Winder Base	1
5		462205	Thread Winder Shaft	1
6		462206	Spacer	3
7		462207	Bobbin Presser	1
8		462208	Bobbin Presser Spring	1
9		462209	Screw 3/32-56 L=3.3	2
10		462210	Adjusting Screw	1
11		462211	Nut 1/8-44	1
12		462212	Bobbin Winder Wheel	1
13		462213	Bobbin Winder Frame	1
14		462214	Wheel Ring	1
15		462215	Hinge Screw	1
16		462216	Bobbin Winder Tension Bracket	1
17		462217	Spring	1
18		462218	Bobbin Winder Spring	1
19		462219	Thread Winding Shaft Collar	1
20		462220	Screw 11/64-40 L=18	3
21		462221	Hinge Screw D=7.24L=1.9	1
22		462222	Nut 11/64-40	1
23		462223	Nut 11/64-40	1
24		462224	Screw 11/64-40 L=5	2
25		462225	Stopper	1
26		462226	Screw 11/64-40 L=30	1
27		462227	Thread Cut & Clamp Plate	1
28		462228	Screw 1/8-44 L=4	2
29		462229	Friction Wheel	1
30		462230	Screw 15/64-28 L=7	2
31		462231	Thread Winder Guide Base Asm.	1
32		462232	Threa Winder Guide Base	1
33		462233	Tension Sping	1
34		462234	Threa Tension Post	1
35		462235	Tension Disk	2
36		462236	Thread Tension Stud Nut	1
37		462237	Nut 9/23-28	1
38		462238	Threa Guide	1
39		462239	Guide Bracket	1
40		462240	Screw 11/64-40 L=8.5	1
41		462241	Screw 1/8-44 L=6	1
42		462242	Screw 9/64-40 L=7	1
43		462243	Screw 15/64-28 L=10.5	2



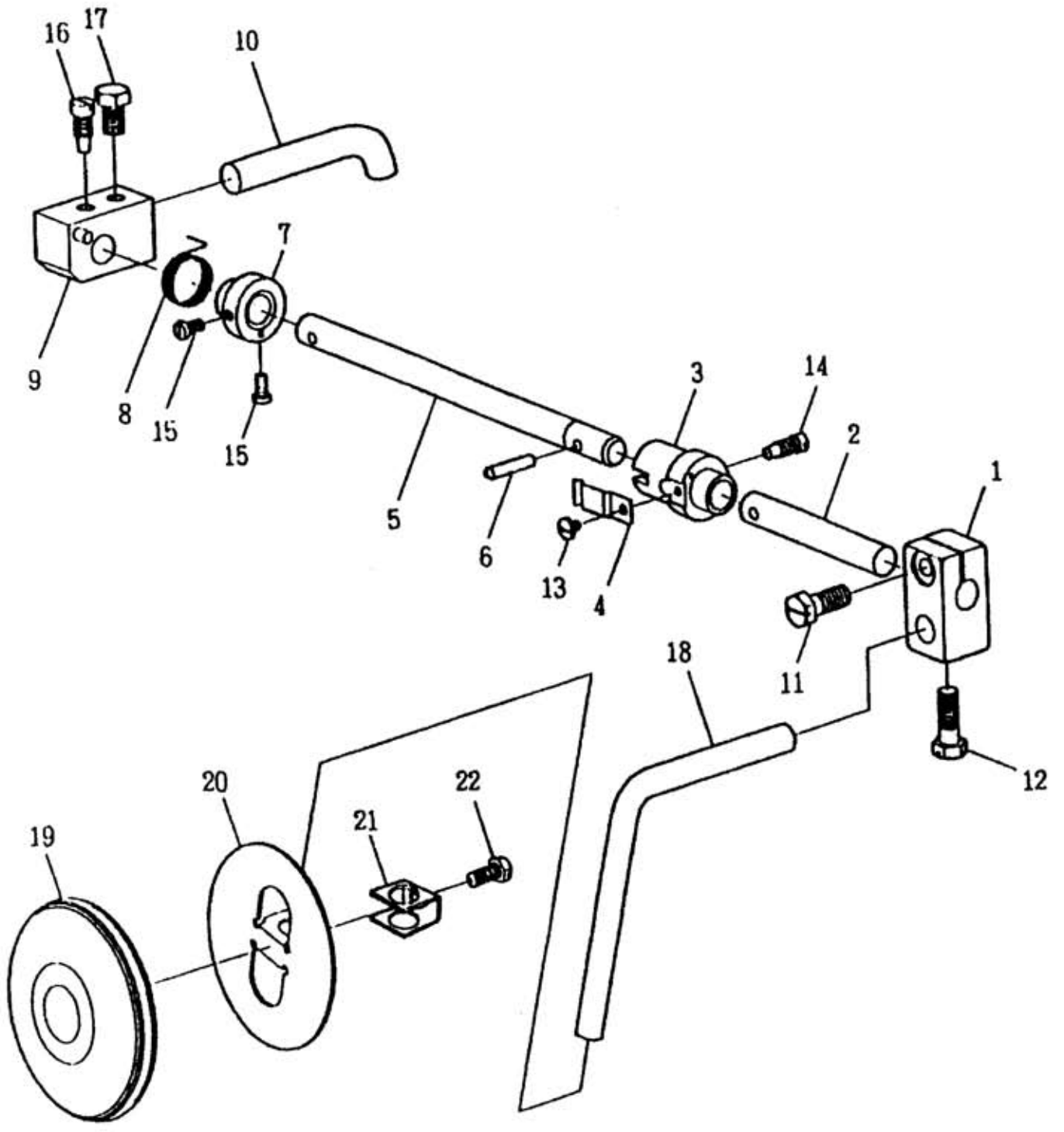
I. KNEE LIFTER COMPONENTS (1/2)



**I. KNEE LIFTER COMPONENTS (1/2)**

REF.No	NOTE	Purt No	Name of Part	Q'TY
1		462401	Presser Bar Lifting Link	2
2		462402	Presser Bar Lifting Spring	1
3		462403	Presser Bar Lifting Bar	1
4		462404	Side Connecting Bar	1
5		462405	Lifting Lever Connecting Rod	1
6		462406	Link Collar	1
7		462407	Adjusting Rod	1
8		462408	Hinge Screw 15/64-28 K=1.97 L=4.3	2
9		462409	Hinge Screw 15/64-28 K=1.97 L=4.3	2
10		462410	Hinge Screw	2
11		462411	Screw 11/64-40	2
12		462412	Hinge Screw M6x1 D=10 L=6	1
13		462413	Nut 3/16-32	1
14		462414	Knee Lifter Crank(Rear)	1
15		462415	Roller	1
16		462416	Hinge Screw 3/8-28 D=12.5 L=17.2	1
17		462417	Screw 3/16-32 L=6.5	1
18		462418	Hinge Screw M8x1.25 D=9.8L=19	1

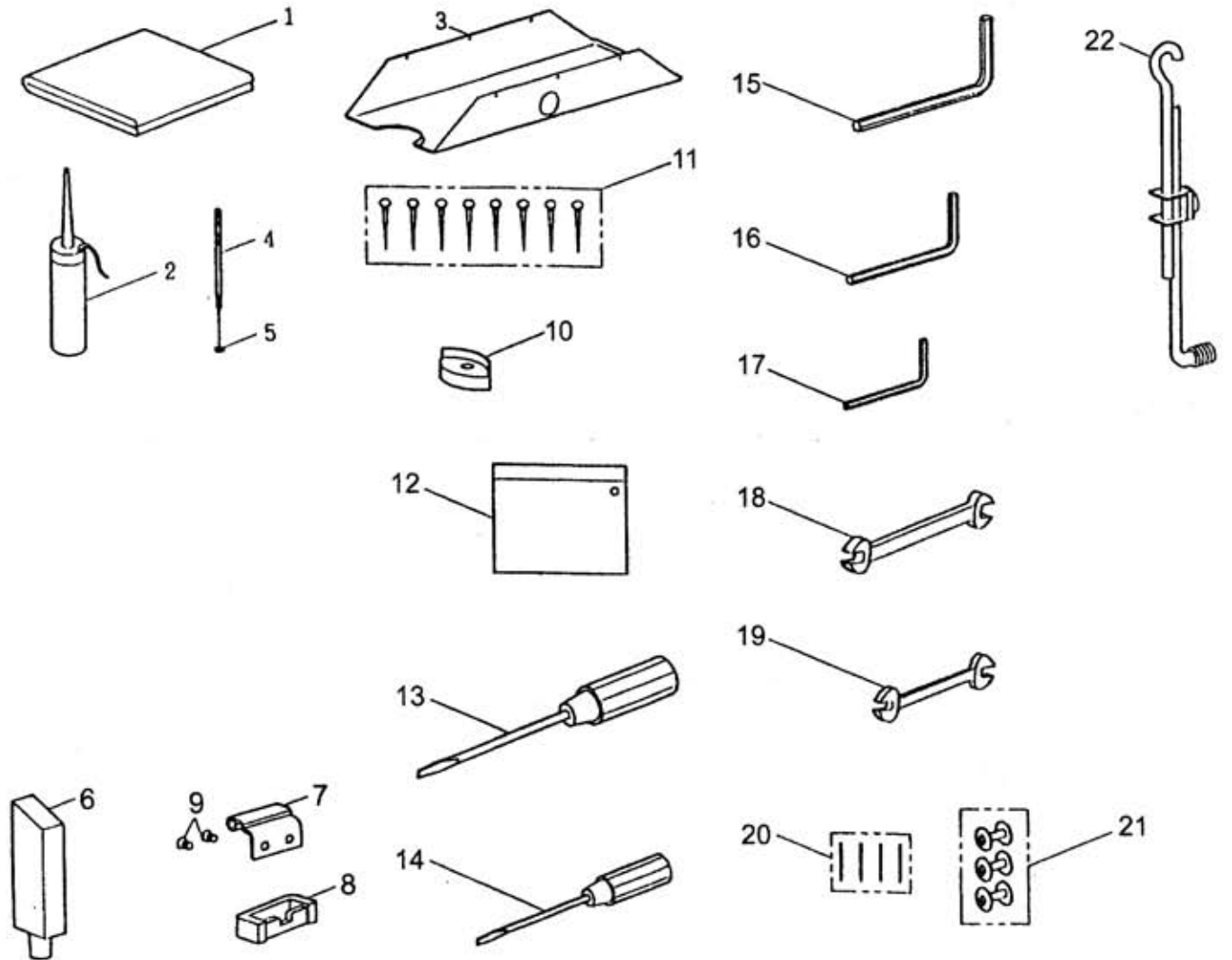
I. KNEE LIFTER COMPONENTS (2/2)



I. KNEE LIFTER COMPONENTS (2/2)

REF.No	NOTE	Purt No	Name of Part	Q'TY
1		462601	Kndd Lifter Crand (Front)	1
2		462602	Knee Lifter Coupling Shaft	1
3		462603	Knee Lifter Coupling	1
4		462604	Spring Plate	1
5		462605	Knee Lifter Shaft	1
6		462606	Pin	1
7		462607	Retaining Plate	1
8		462608	Spring	1
9		462609	Knee Lever Rod Asm.	1
10		462610	Knee Lever Rod	1
11		462611	Screw 5/16-24 L=21	1
12		462612	Screw 5/16-24 L=21	1
13		462613	Screw 9/64-40 L=5	1
14		462614	Screw 15/64-28 L=14.5	1
15		462615	Screw 11/64-40 L=8.5	2
16		462616	Screw 9/32-28 L=16	1
17		462617	Screw 5/16-24 L=13	1
18		462618	Knee Lever Rod	1
19		462619	Knee Guird	1
20		462620	Knee Plate	1
21		462621	Retainer	1
22		462622	Screw 15/64-28 L=14	1

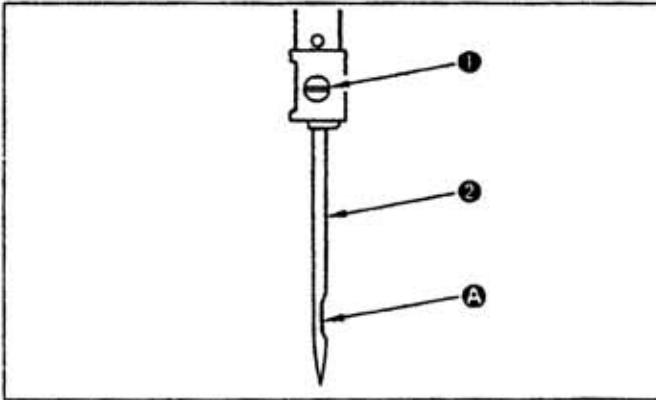
K. ACCESSORIES PARTS COMPONENTS



## K ACCESSORIES PARTS COMPONENTS

REF.No	NOTE	Part No	Name of part	Q'TY
1		463001	Cover	1
2		463002	Oiler	1
3		463003	Oil pan	1
4		463004	Needle thread guide pin	1
5		463005	Nut 3/16-32	1
6		463006	Arm support	1
7		463007	Head hinge	2
8		463008	Rubbler hinge	2
9		463009	Screw 9/32-28 L=9.7	4
10		463010	Vibration preventing rubber	4
11		463011	Nail	8
12		463012	Accessory box	1
13		463013	Screw driver(large)	1
14		463014	Screw driver(small)	1
15		463015	Hexagonal wrench kye(5mm)	1
16		463016	Hexagonal wrench kye(4mm)	1
17		463017	Hexagonal wrench kye(3mm)	1
18		463018	Wrench(11-14)	1
19		463019	Wrench(9-10)	1
20		463020	Needle(794 Nm=230-4)	10
21		463021	Bobbin	5
22		463022	Supporting arm	1

## HOW TO INSTALL THE NEEDLE

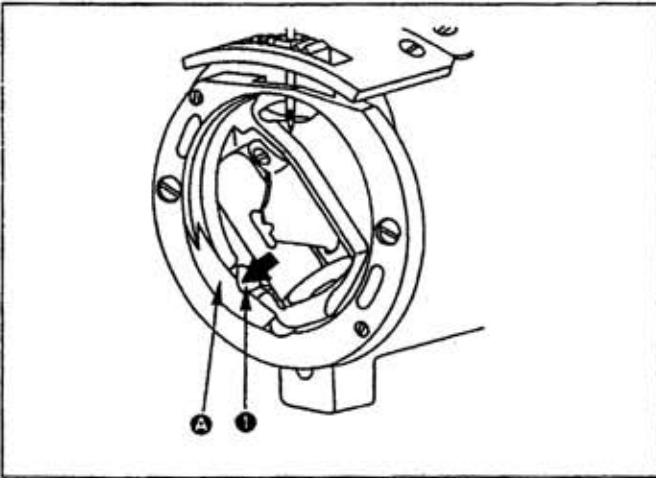


### SWITCH OFF THE MOTOR BEFORE REMOVING OR INSERTING A NEEDLE

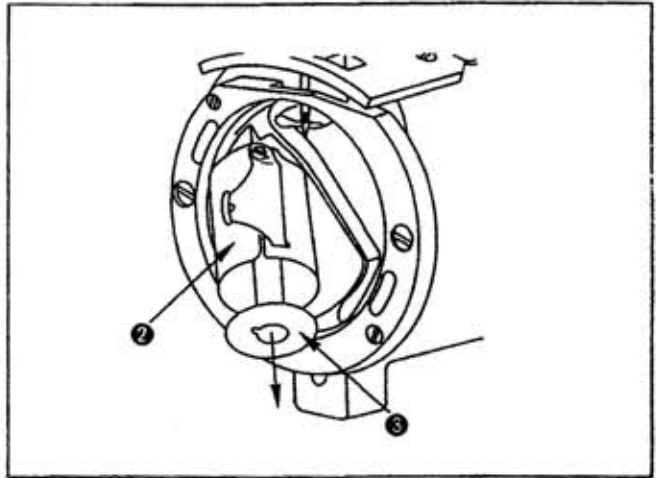
Artisan recommends that you use only "SCHMETZ" brand Needles. The standard needle is a Schmetz 1000

1. Turn the hand wheel counter-clockwise and raise the needle bar to its highest position.
2. Loosen the needle set screw (1) remove the old needle and insert a new needle (2) into the needle bar. Push it up into the hole as far as it will go.
3. Remember to locate the needle scarf (A) towards the hand wheel and the long groove of the needle to the left side.
4. Securely tighten the needle set screw (1).

## HOW TO TAKE OUT THE BOBBIN



1. Turn the handwheel counter-clockwise until the needle reaches it lowest position and depress the bobbin case retaining latch (1)



2. After depressing the latch, the bobbin case (2) will "pop out" and swing open. The bobbin (3) will then slide out of the bobbin case. Be careful not to dislodge the small push spring inside the bobbin case between the bobbin and the bobbin case.

## HOW TO WIND A BOBBIN THREAD

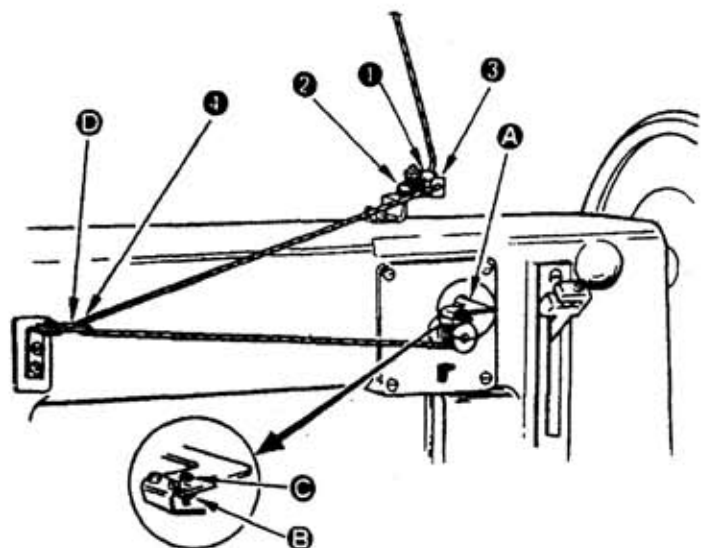
1. Raise the presser foot with the hand lifter lever.
2. Insert the bobbin onto the bobbin winder spindle.
3. Thread the winder in the order illustrated and wind the thread four or five turns onto the bobbin.
4. Push the bobbin winder trip latch (A) down. When the machine is operated the spindle will turn and start to wind the bobbin.
5. When the bobbin is fully wound, the trip latch will disengage and the spindle will stop.

To adjust the quantity of thread on the bobbin:

1. Loosen the adjusting screw and nut number (B) and (C.) and turn the screw counterclockwise to decrease the amount of thread on the bobbin and clockwise to increase the quantity of thread wound onto the bobbin.
2. Tighten the locking nut after adjusting for the correct amount of thread to be wound onto each bobbin.

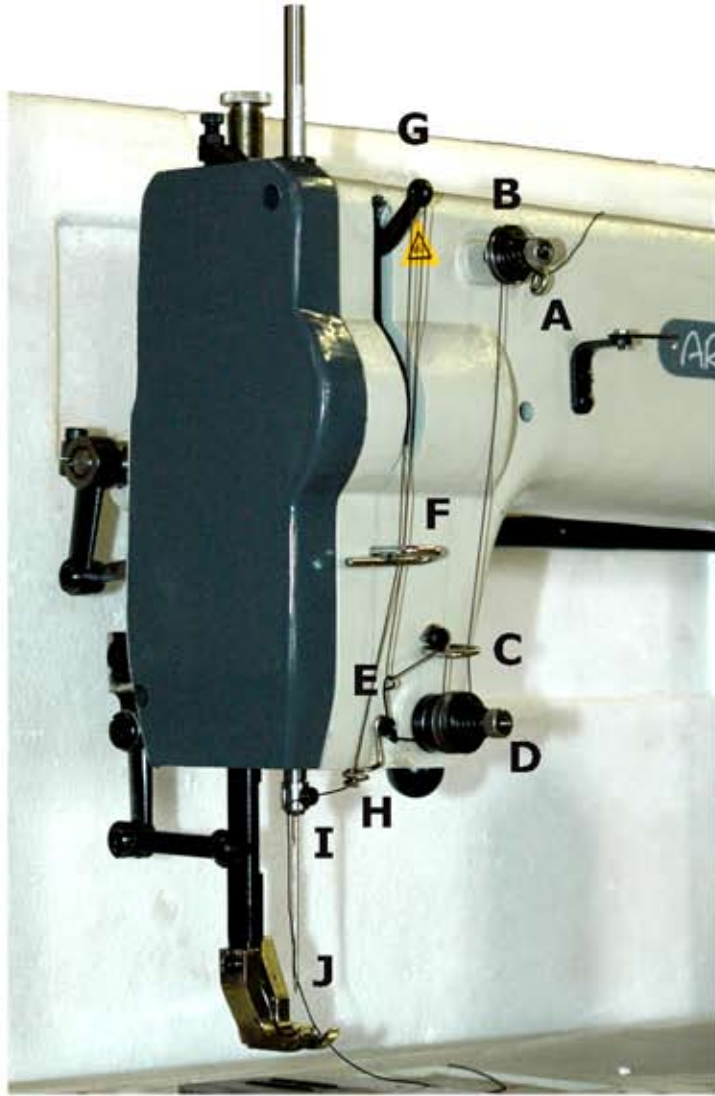
If the bobbin is not winding evenly, move the thread guide (D) either left or right to compensate.

Several Bobbins can be wound while the machine is stitching.



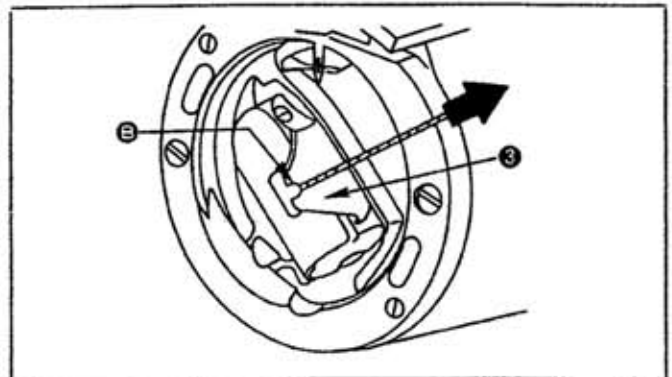
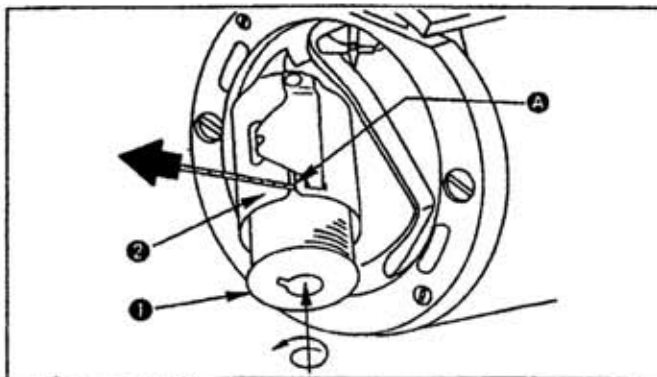


## HOW TO THREAD YOUR MACHINE



1. Place a spool of thread on the thread stand which is located at the right rear of the table top.
2. Pull some of the thread off the spool and thread it through the eyelet directly above the spool.
3. Pass the thread through the first thread guide (A). The thread guide just to the left of the label is for winding bobbins only.
4. Pull the thread over the top and between the discs of the upper tension assembly (B).
5. Pass the the thread through the second thread guide (C).
6. Wind the thread in clockwise direction around the roller tension assembly (D) *one-and-a-half* ( $1\frac{1}{2}$ ) turns and then up through the second thread guide (C) again.
7. Thread the check spring (E), which is located to the left of the roller tension.
8. Next, pass the thread up through the third thread guide (F) and through the take-up lever (G) from right to left.
9. Pull the thread downward and pass it through the third thread guide (F) again.
10. The thread then goes through the lower thread guide (H) and the needle bar thread guide (I).
11. Last of all, thread the needle (J) from left to right, leaving 5-6 in. of thread extending beyond the needle.

## HOW TO INSTALL THE BOBBIN



1. Pull approximately 3 to 4 inches of thread off the bobbin and insert the new bobbin into the bobbin case so that when turning the bobbin turns counter-clockwise.
2. Pass the thread through the slot (A) of the bobbin case and pull the thread until the thread passes under the bobbin thread tension adjusting spring and rests in the groove as pictured.
3. Leave at least 3 to 5 inches of thread remaining and hanging out beyond the bobbin case.
4. Turn the handwheel counter-clockwise, with the needle threaded one revolution, and the bobbin thread will be pulled up through the needle plate.