

SINGER
6233/6234/6235

LIST OF PARTS

Sewing Machine Models

6233

6234

6235

by **SINGER***



A Publication of Product Support
International Group Engineering

Part No. 119675-001

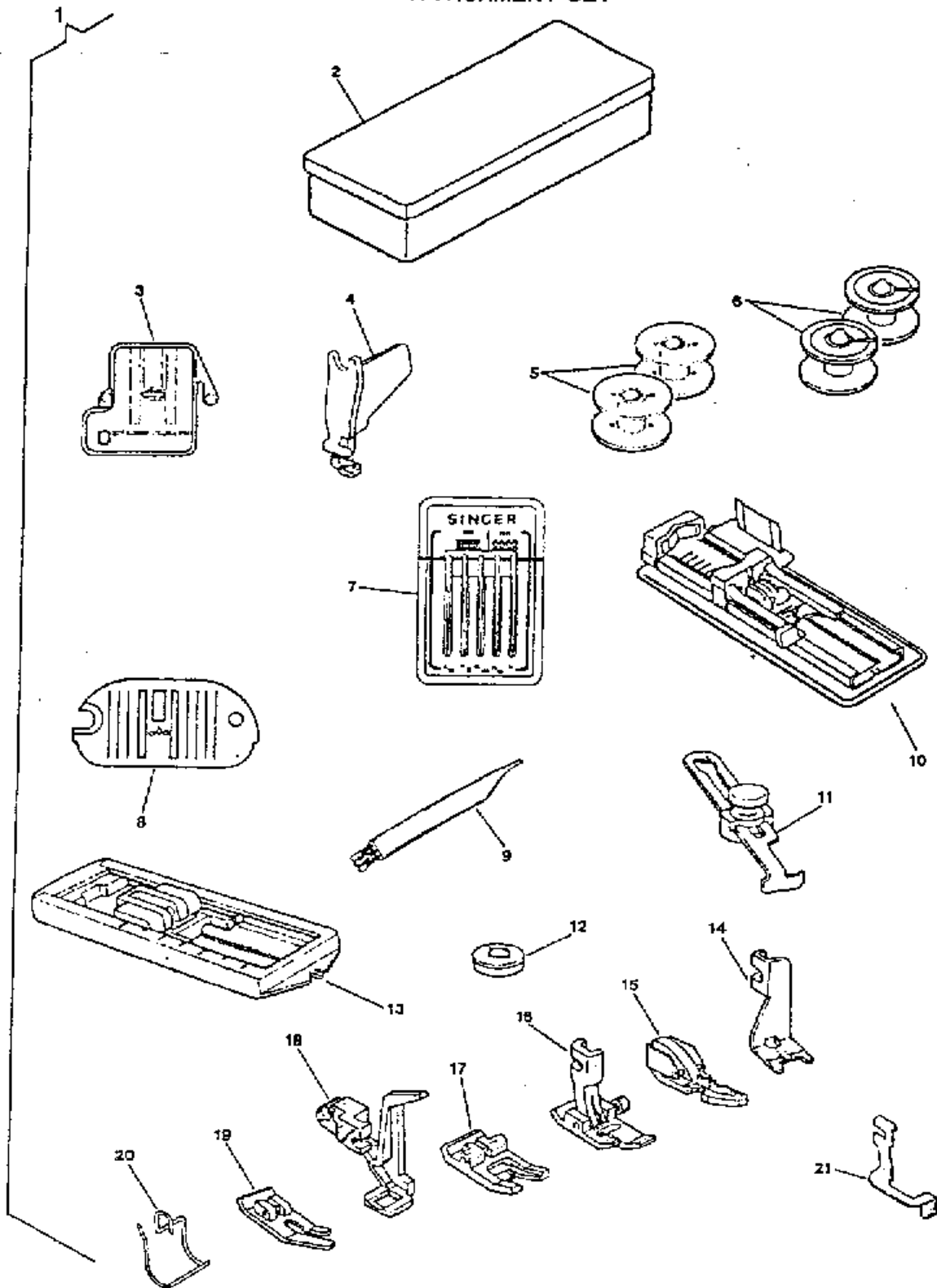
Printed in Taiwan

INDEX

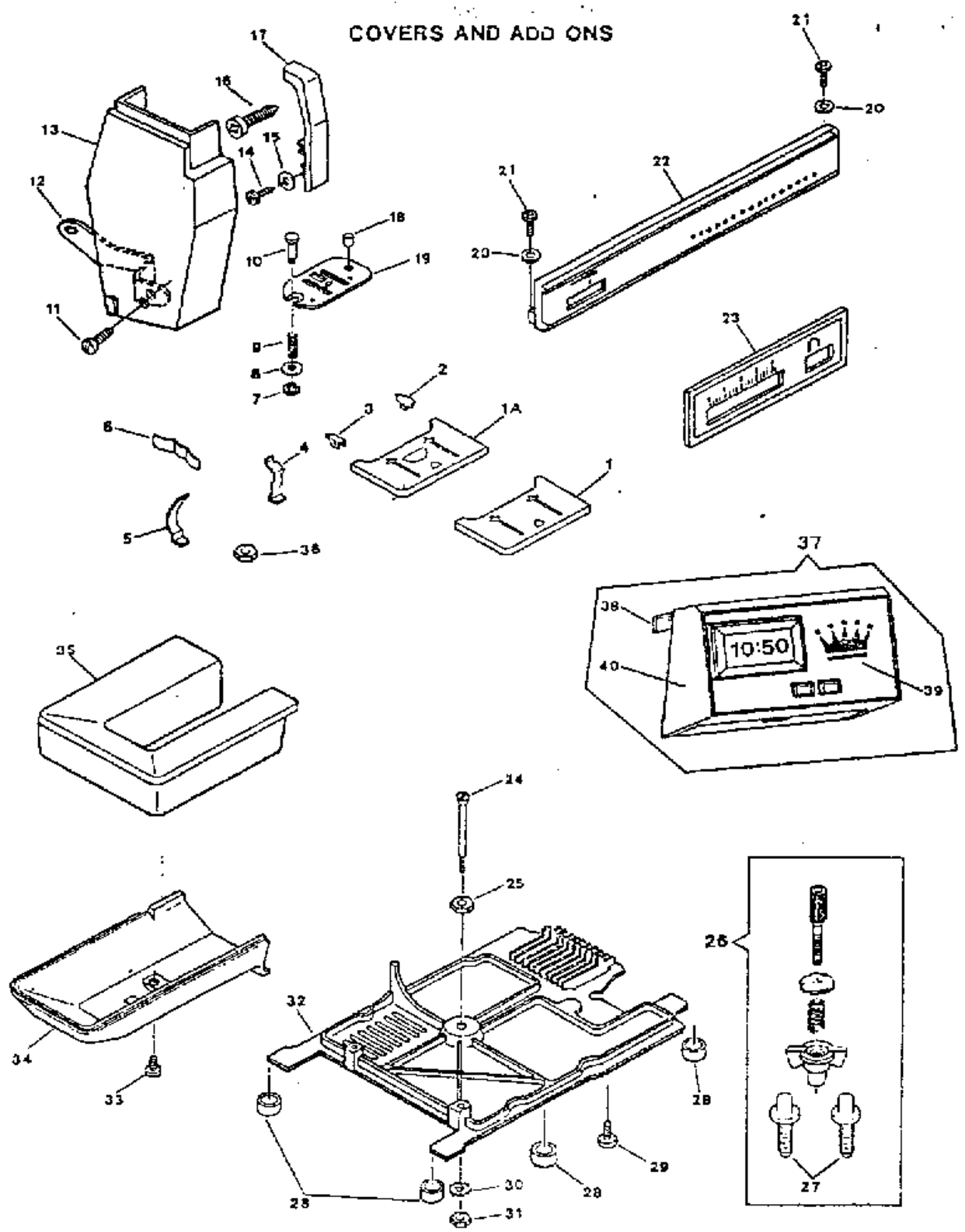
PAGE NO.	SUBASSEMBLY
1, 2	ATTACHMENT SET
3, 4	COVERS AND ADD ONS
5, 8	ARM TOP COVER
9, 10	ARM SHAFT DRIVE SYSTEM
11, 12	HAND WHEEL
13, 14	COAXIAL PRESSER BAR SYSTEM
15, 16	NEEDLE BAR & THREAD TAKE-UP
17, 22	ALPHA FEED
23, 24	HOOK SYSTEM (APOLLO)
25, 26	HOOK AND BOBBIN WINDING SYSTEM (CENTAUR)
27, 32	PATTERN, STITCH LENGTH CONTROL & CAM CONTROLLED FEED
33, 34	DEMAND RESPONSIVE NEEDLE TENSION SYSTEM
35, 38	ELECTRICAL EQUIPMENT

REF. NO.	PART NO.	DESCRIPTION	6	6	6
		ATTACHMENT SET	2	2	2
			3	3	3
			3	4	5
			X		
1	313030	Attachment complete		X	
1	313031	Attachment complete			X
1	313032	Attachment complete	X	X	
2	402673-455	Accessory box complete (ALT: 402673-454)		X	X
3	313117	Feed cover plate			X
4	503277	Needle threader complete	X		
5	172336	Bobbin		X	X
6	312956	Bobbin	X	X	X
7	353364	Needle pack (ALT: 384064)			X
8	313066	Throat plate for straight sewing	X	X	X
9	546358	Lint Brush			X
10	313093-451	Buttonhole (one-step) complete (ALT: NT-1321)		X	X
11	161172	Seam & blindstitch hem guide complete			X
12	507664-459	Arm spool pin thread lead-off (small, plastic)			X
13	313992-451	Presser foot plate (snap-on) for sewing buttonholes	X	X	
14	381056	Presser foot plate for button sewing			X
15	171480	Presser foot plate (snap-on) for cording & slide fasteners compl.	X	X	X
16	381491	Blind hem presser foot assembly			X
17	171463	Special purpose presser foot plate (snap-on)	X	X	X
18	384037	Darning & embroidery foot complete (plastic)			X
19	384045	Presser foot plate (snap-on) for straight sewing			X
19	161919	Presser foot plate (snap-on) for straight sewing (alternate)			X
20	421508	Finger guard attached to presser bar for Italy and U.S. school machines. In accessory box for France	X	X	X
		Blindstitch guide			X
21	171120		X	X	

ATTACHMENT SET



COVERS AND ADD ONS



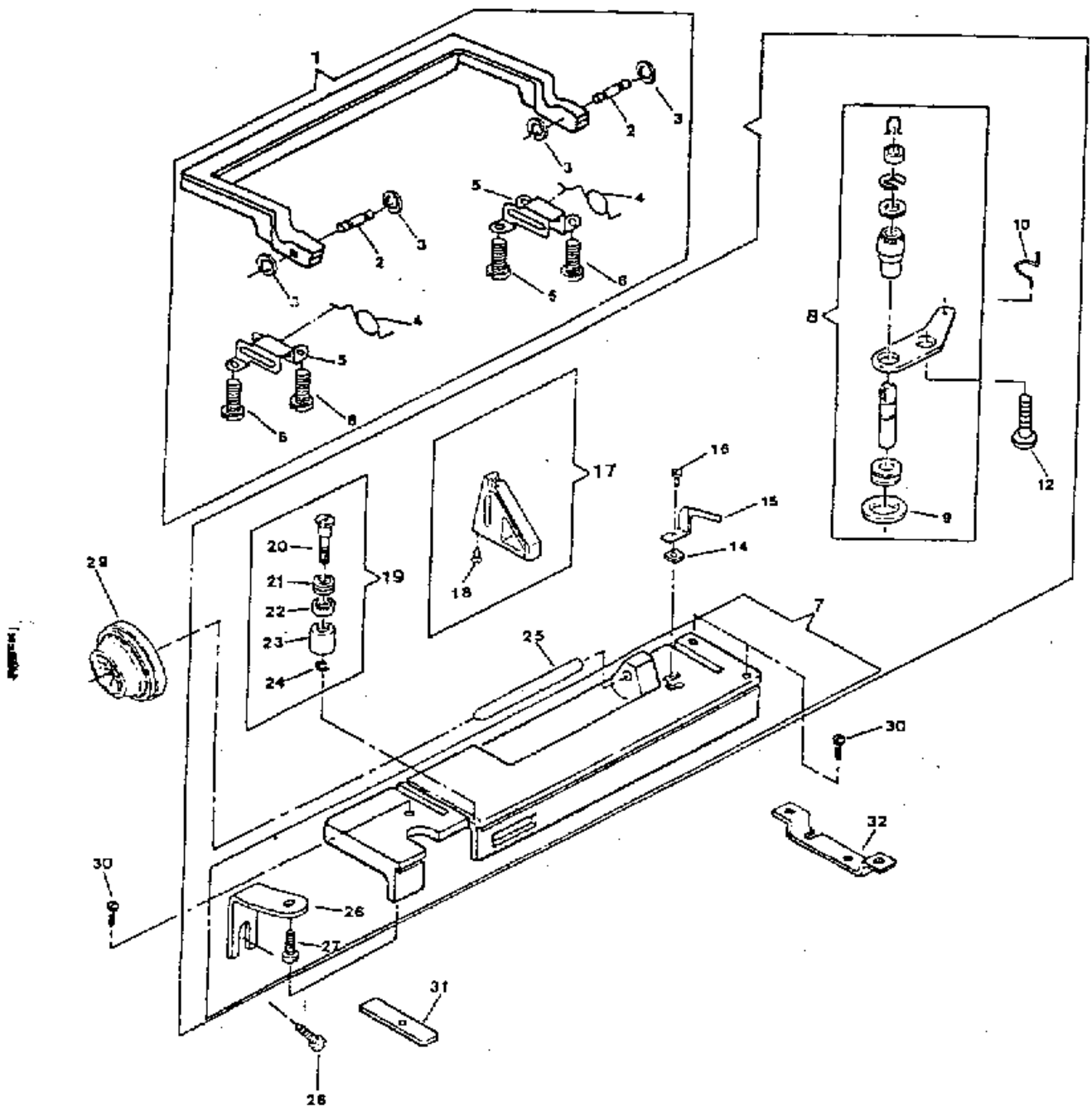
COVERS AND ADD ONS			6	6	6
REF.	PART	DESCRIPTION	2	2	2
NO.	NO.		3	3	3
			3	4	5
1	314666	Bed slide assembly compl. (Apollo)	X		
1A	314109	Bed slide assembly compl. ALT:313166		X	X
2	312779	Bed slide spring (right)		X	X
2	114669	Bed slide spring (right)	X		
3	313108	Bed slide spring (left)		X	X
3	314670	Bed slide spring (left)	X		
4	313178	Bed slide stop	X		
5	313179	Bed slide stop spring	X		
6	313118	Cloth plate spring	X	X	X
7	313098	Throat plate plunger retaining ring	X	X	X
8	549426-451	Throat plate plunger washer	X	X	X
9	312805	Throat plate plunger spring	X	X	X
10	312804	Throat plate plunger	X	X	X
11	113521-451	Face plate mounting screw	X	X	X
12	314263	Face plate mounting bracket	X	X	X
13	314259-451	Face plate complete	X	X	X
14	113470-003	Thread take-up cover mounting screw	X	X	X
15	314455	Thread take-up cover mounting screw washer	X	X	X
16	113455-004	Thread take-up cover mounting screw	X	X	X
17	314718-451	Thread take-up cover	X	X	X
18	353624	Throat plate locating pin	X	X	X
19	312777	Throat plate for zig zag sewing	X	X	X
20	502495-451	Control panel screw washer		X	
21	113455-001	Control panel screw		X	
22	314647	Control panel with graphics assembly (U.S./Canada)		X	
22	314649	Control panel with graphics assembly (Europe)		X	
23	312803-001	Stitch length control panel (U.S./Canada)	X	X	
23	313152-001	Stitch length control panel assembly (U.S./Canada)		X	
23	312803-002	Stitch length control panel (Europe)	X	X	
23	313152-002	Stitch length control panel (Europe)		X	
24	313052-451	Bottom cover mounting bolt	X	X	X
25	313173-451	Bottom cover mounting bolt mounting nut	X	X	X
26	313180	Machine hold down mounting kit	X	X	X
27	148069	Machine locator pin	X	X	X
28	313909-451	Bed leg cushion	X	X	X
29	113455-002	Bed cover plate (bottom) screw	X	X	X
30	313172-451	Bottom cover mounting bolt washer	X	X	X
31	313177-452	Bottom cover mounting bolt mounting nut	X	X	X
32	312774-001	Bed cover plate (bottom)	X	X	X
33	354633-452	Bed cover (tubular) screw	X	X	X
34	312773-451	Bed cover tubular (assembly)	X	X	X
35	313882-451	Cloth plate assembly	X	X	X
36	313049	Bed insert nut	X	X	X

ARM TOP COVER

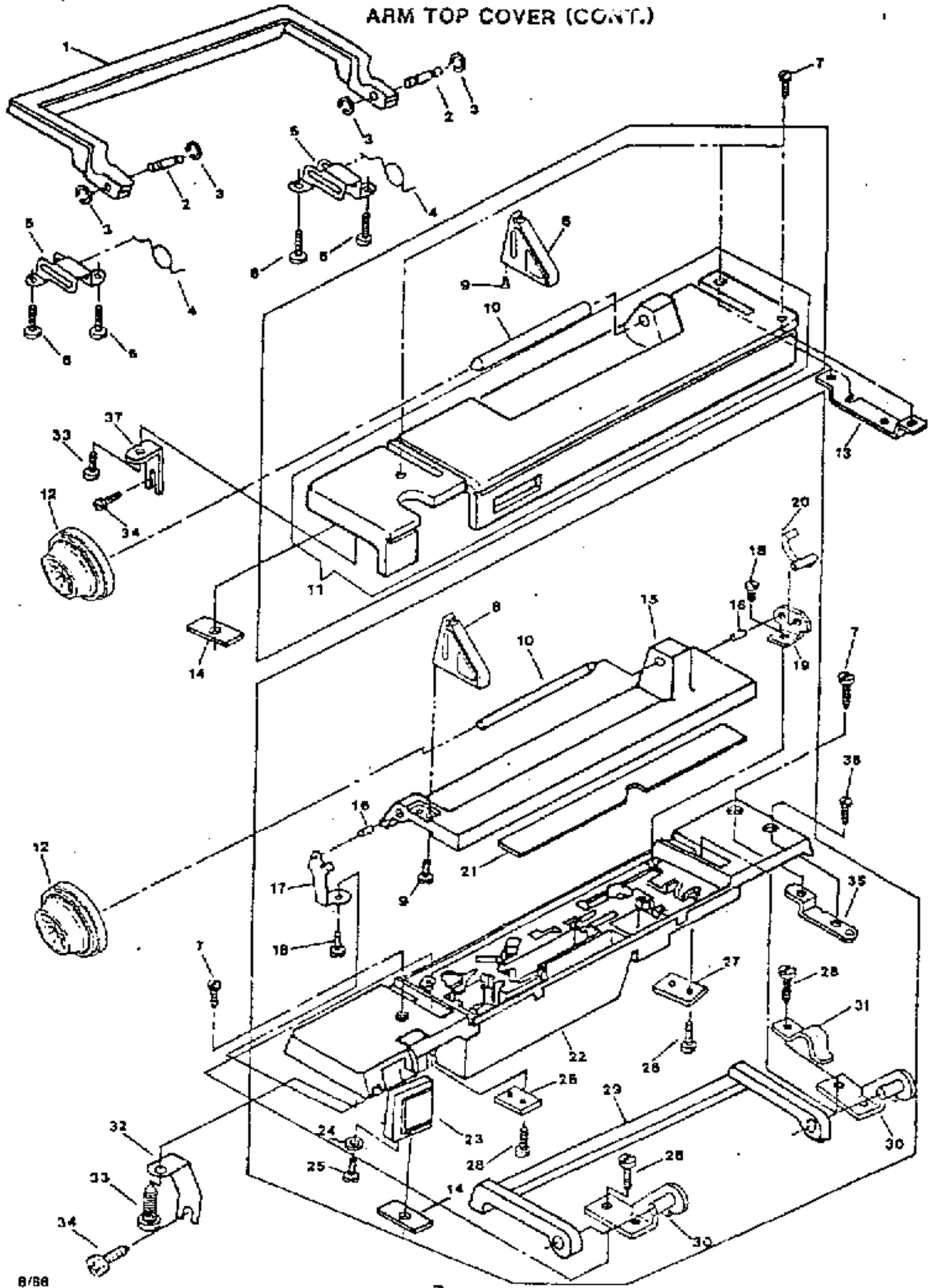
6 6 6
2 2 2
3 3 3
3 4 5

REF. NO.	PART NO.	DESCRIPTION	
		Arm top cover machine handle	X
1	314270-451	Arm top cover machine handle hinge pin	X
2	314274	Arm top cover machine handle hinge pin retaining ring	X
3	312686	Arm top cover machine handle mounting bracket spring	X
4	314501	Arm top cover machine handle mounting bracket	X
5	314271	Arm top cover machine handle mounting bracket screw	X
6	113455-003	Arm top cover assembly (USA & Canada)	X
7	314641-001	Arm top cover assembly (Europe)	X
7	314641-002	Arm top cover assembly (International)	X
7	314641-003	Arm top cover assembly (Japan)	X
7	313641-004	Bobbin winder assembly	X
8	314675	Bobbin winder friction ring	X
9	314045-451	Bobbin winder lever spring	X
10	312897	Bobbin winder lever hinge stud	X
12	314672	Bobbin winder stop screw nut	X
14	314711-451	Bobbin winder stop	X
15	312894	Bobbin winder stop screw	X
16	141808-453	Arm top cover thread guide assembly	X
17	313563	Arm top cover thread guide screw	X
18	354810-451	Bobbin winder tension assembly	X
19	313536	Bobbin winder tension stud	X
20	179812	Bobbin winder tension disc spring	X
21	45847	Bobbin winder tension disc	X
22	45915	Bobbin winder tension stud collar	X
23	319606	Bobbin winder tension stud retaining ring	X
24	31966J-452	Spool pin (Horizontal)	X
25	312940-451	Arm top cover support bracket	X
26	314337	Arm top cover support bracket screw (left)	X
27	113442-002	Arm top cover support bracket screw (right)	X
28	113516-451	Spool pin thread lead-off (medium & large)	X
29	179967-451	Arm top cover mounting screw (3)	X
30	354927-001	Arm top cover mounting plate (left)	X
31	312892	Arm top cover mounting plate (right)	X
32	314275		

ARM TOP COVER



ARM TOP COVER (CONT.)



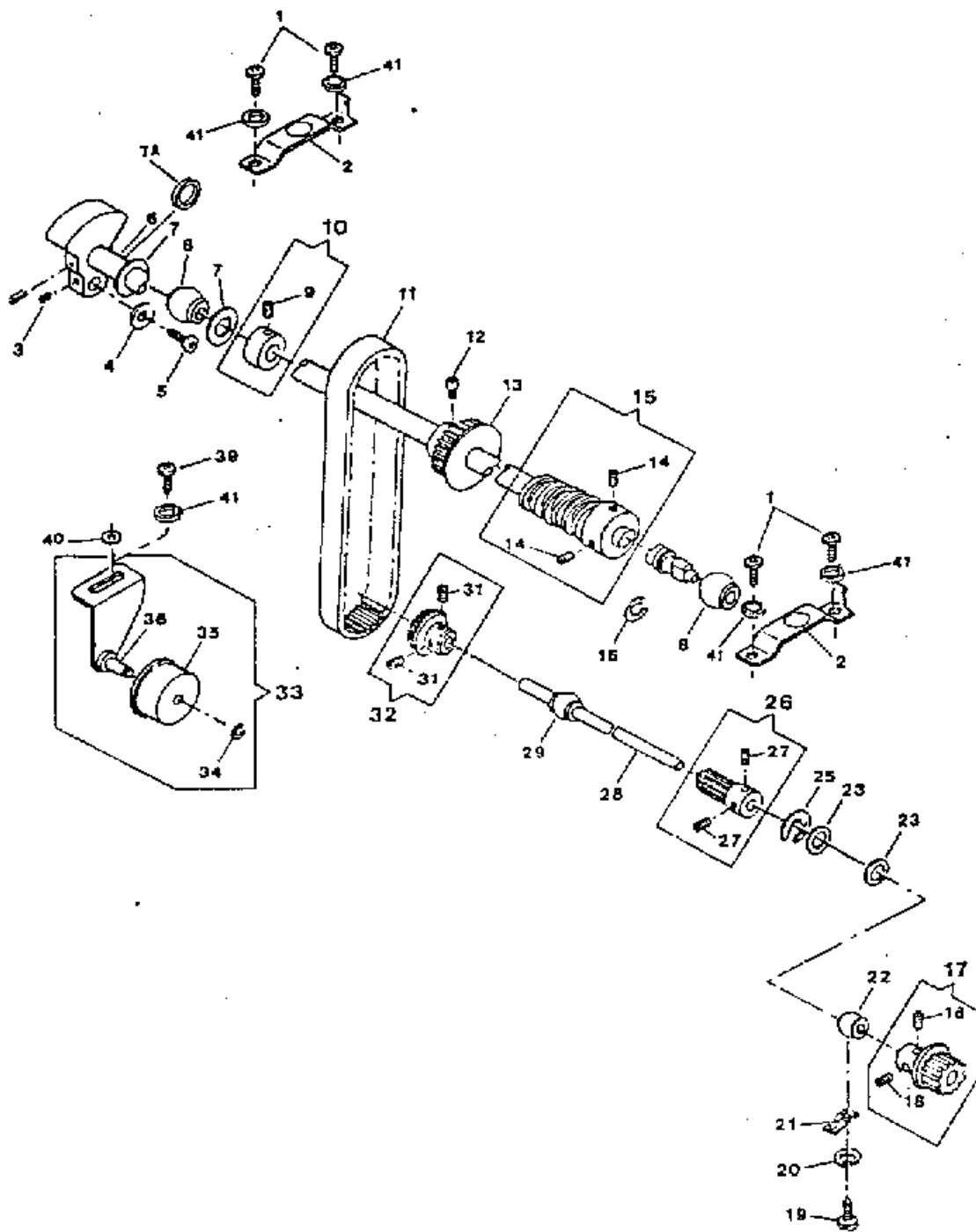
8/88

REF. NO.	PART NO.	DESCRIPTION	ARM TOP COVER (CONT.)		
			5	6	6
1	314270-451	Arm top cover machine handle			
2	314274	Arm top cover machine handle hinge pin (2)			
3	312686	Arm top cover machine handle hinge pin retaining (4)			
4	314501	Arm top cover machine handle spring (2)			
5	314271	Arm top cover machine handle mounting bracket (2)			
6	113455-008	Arm top cover machine handle mounting bracket screw (4)			
7	354927-001	Arm top cover mounting screw			
8	313563-451	Arm top cover thread guide assembly			
9	354810-451	Arm top cover thread guide screw			
9	113501-451	Arm top cover thread guide screw			
10	312940-451	Spool pin (Horizontal)			
11	314642-001	Arm top cover assembly (USA & Canada)			
11	314642-002	Arm top cover assembly (Europe)			
11	314642-001	Arm top cover assembly (International)			
12	179967-451	Spool pin thread lead-off (medium & large)			
13	314275	Arm top cover mounting plate (right)			
14	312892	Arm top cover mounting plate (left)			
15	314380-900	Arm top cover lid (molded)			
16	314478	Arm top cover lid hinge pin			
17	314518	Arm top cover lid hinge (left)			
18	113445-006	Arm top cover lid hinge screw (2)			
19	313213	Arm top cover lid hinge (right)			
20	313435	Arm top cover lid spring			
21	314381-900	Arm top cover lid accessory label			
22	314379-900	Arm top cover molded			
23	314390-001	Control panel extension assembly (USA/Canada/International)			
23	314390-002	Control panel extension assembly (Europe)			
24	502495-451	Control panel extension washer			
25	113455-003	Control panel extension screw			
26	314561	Arm top cover machine handle hinge bracket nut plate (left)			
27	314560	Arm top cover machine handle hinge bracket nut plate (right)			
28	113520-451	Arm top cover machine handle hinge bracket screw (right & left)			
29	314384-451	Arm top cover machine handle			
30	314385	Arm top cover machine handle hinge bracket complete (2)			
31	314485	Arm top cover machine handle retaining spring			
32	314391	Arm top cover support bracket			
33	113442-002	Arm top cover support bracket (left) mounting screw			
34	113516-451	Arm top cover support bracket (right) screw			
35	314387	Arm top cover support bracket			
36	354954-451	Arm top cover mounting screw (right front)			

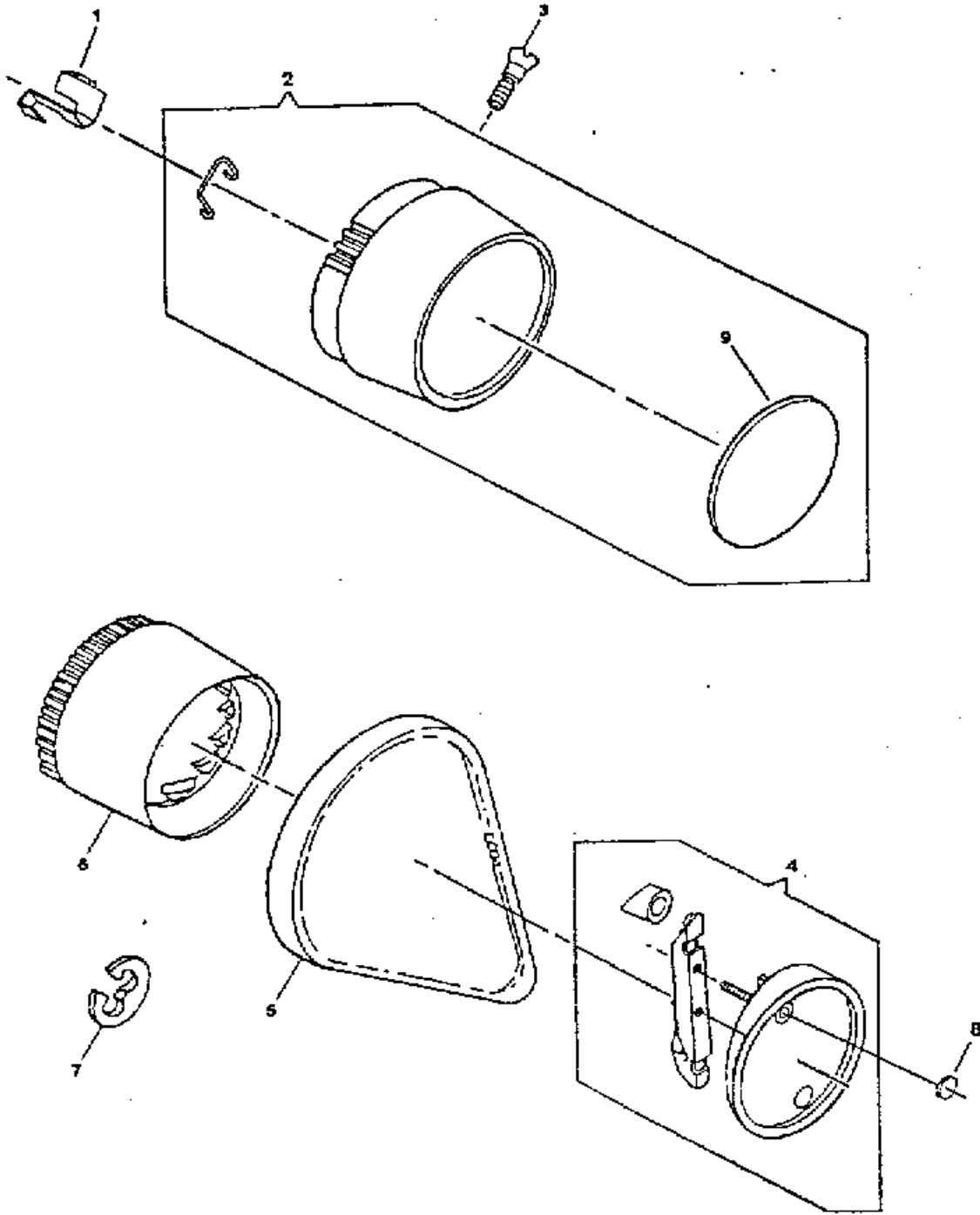
ARM SHAFT DRIVE SYSTEM

REF. NO.	PART NO.	DESCRIPTION	
			6 6 6
			2 2 2
			3 3 3
			1 4 5
			X X X
1	113455-001	Arm shaft (horizontal) bushing (left & right) clamp screw	X X X
2	312796	Arm shaft (horizontal) bushing (left & right) clamp assembly	X X X
3	113488-431	Thread take-up stud set screw	X X X
4	931929-004	Thread take-up axial screw washer	X X X
5	113408-001	Thread take-up axial screw	X
6	313982	Arm shaft horizontal assembly	X
6	313989	Arm shaft horizontal assembly (alternate to 313982)	X X
6	313998	Arm shaft (horizontal) assembly	X X
6	313999	Arm shaft horizontal assembly (alternate to 313998)	X X X
7	312620-001	Arm shaft (horizontal) retaining collar thrust washer (plastic)	X X X
7A	312620-002	Arm shaft thrust washer	X X X
8	312795	Arm shaft (horizontal) bushing (left & right)	X X X
9	514556-451	Arm shaft (horizontal) retaining collar set screw	X X X
10	312619	Arm shaft (horizontal) retaining collar assembly	X X X
11	603975-011	Belt (rotating hook drive) ALT: 603975-012	X X X
12	544212-003	Arm shaft (horizontal) belt drive pulley screw	X X X
13	314074-901	Arm shaft (horizontal) belt drive pulley (plastic)	X X X
14	354591-451	Disc stack driving worm gear set screw	X X X
15	312623	Disc Stack driving worm gear assembly	X
16	313153	Hand wheel retaining ring	X X X
17	314131	Rotating hook drive shaft belt pulley assembly	X X X
18	544098	Rotating hook drive shaft belt pulley set screw	X X X
19	113445-001	Rotating hook drive shaft bushing (self-aligning) clamp screw	X X X
20	314013-451	Rotating hook drive shaft bushing (self-aligning) clamp screw lock washer	X X X
21	313816	Rotating hook drive shaft bushing (self-aligning) clamp	X X X
22	312700-001	Rotating hook drive shaft bushing (right) (self-aligning)	X X X
23	444900-452	Rotating hook drive shaft spring washer	X X X
25	312685	Rotating hook drive shaft bearing retaining ring	X X X
26	313920	Feed drive shaft driving gear assembly	X X X
27	113466-451	Feed drive shaft gear set screw	X X X
28	313936	Rotating hook drive shaft	X X X
29	312700-002	Rotating hook drive shaft bushing (left) (self-aligning)	X X X
31	544208-005	Rotating hook drive shaft bevel gear set screw	X X X
32	314011	Rotating hook drive shaft bevel gear assembly ALT: 314054-900	X X X
33	313195	Idler bracket assembly	X X X
34	313157	Belt idler pulley retaining ring	X X X
35	382255	Belt idler pulley	X X X
36	313001	Idler bracket assembly	X X X
39	113455-002	Rotating hook driving belt tension adjuster screw	X X X
40	314014-451	Rotating hook driving belt tension adjuster screw washer	X X X
41	314013-451	Arm shaft bushing (clamp screw washer)	X X X

ARM SHAFT DRIVE SYSTEM



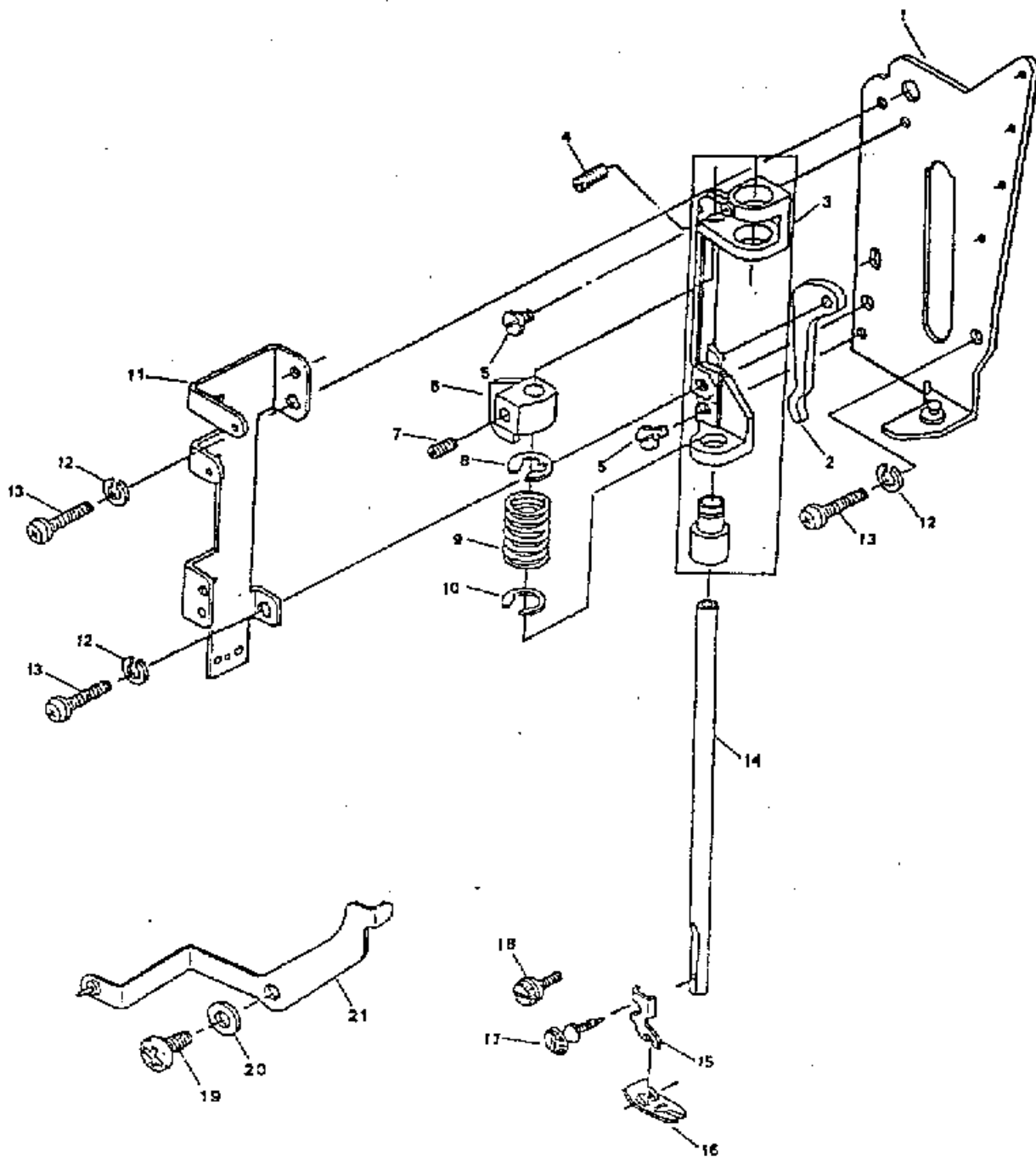
HAND WHEEL



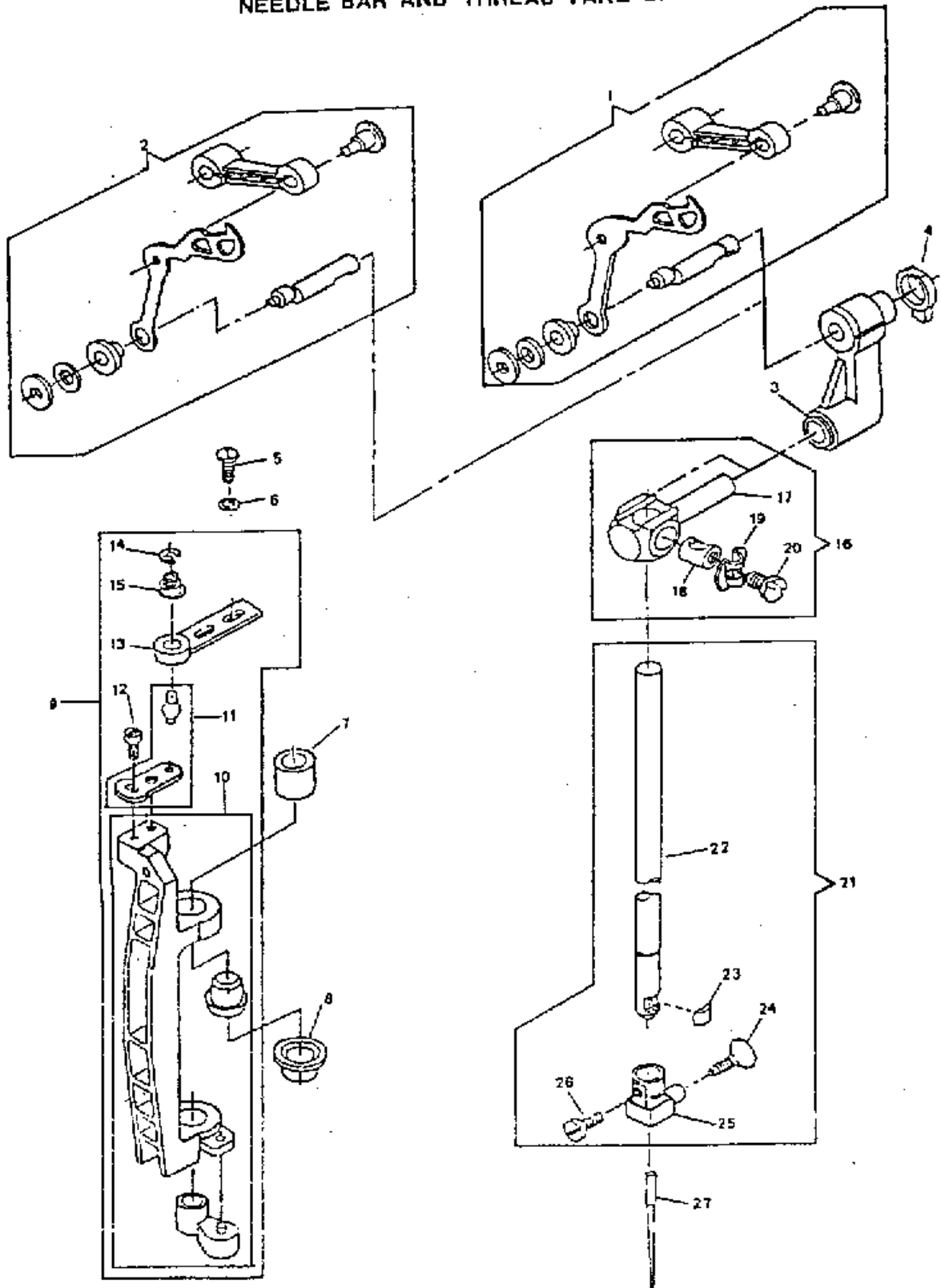
REF. NO.	PART NO.	DESCRIPTION	HAND WHEEL		
			3	4	5
			5	6	6
			2	2	2
			3	3	3
			3	4	5
1	314044	Hand wheel drive screw support clip		X	X
2	312991-451	Hand wheel assembly		X	X
3	313454-451	Hand wheel drive screw		X	X
4	313185-451	Hand wheel clutch plate assembly		X	
5	312628-001	Belt (motor drive) ALT: 979285-001		X	X
6	312625-451	Hand wheel (plastic)		X	
7	313153	Hand wheel retaining ring		X	
8	314733-900	Hand wheel access plate (apollo)		X	
9	312986-900	Hand wheel name plate (centaur)		X	X

REF. NO.	PART NO.	COAXIAL PRESSER BAR SYSTEM FOR NEW HEAD END	6 6 6
		DESCRIPTION	2 2 2
			3 3 3
			3 4 5
1	314696	Head end mounting plate assembly comp.	X X X
2	314582	Presser bar lifter	X X X
3	314580	Needle bar & presser bar adjusting bracket (sub-assembly)	X X X
* 4	544208-001	Needle bar vibrating bracket ball bushing (upper)adjuster set screw	X X X
5	113485-S/C	Needle bar presser bar adjusting bracket mounting screw	X X X
6	314583-901	Presser bar guide bracket	X X X
7	141936-833	Presser bar guide bracket screw	X X X
8	314584	Presser bar spring retaining ring (upper)	X X X
9	353214	Presser bar spring	X X X
10	314585	Presser bar spring retaining ring (lower)	X X X
11	314591	Face plate mounting bracket	X X X
12	313955-451	Head end mounting plate lock washer	X X X
13	113455-012	Head end mounting plate screw	X X X
14	314581	Presser bar	X X X
15	163706-451	Presser foot shank (snap-on)	X X X
16	313150	Presser foot plate (snap-on) for zig-zag sewing	X X X
17	113531-451	Presser foot thumb screw	X
18	314627-451	Presser foot thumb screw & bobbin winder thread holder	X X
19	113455-001	Needle thread tension release lever hinge screw	X X X
20	314041-451	Needle thread tension release lever retaining washer	X X X
21	314589	Needle thread tension release lever assembly	X X X
			X

COAXIAL PRESSER BAR SYSTEM



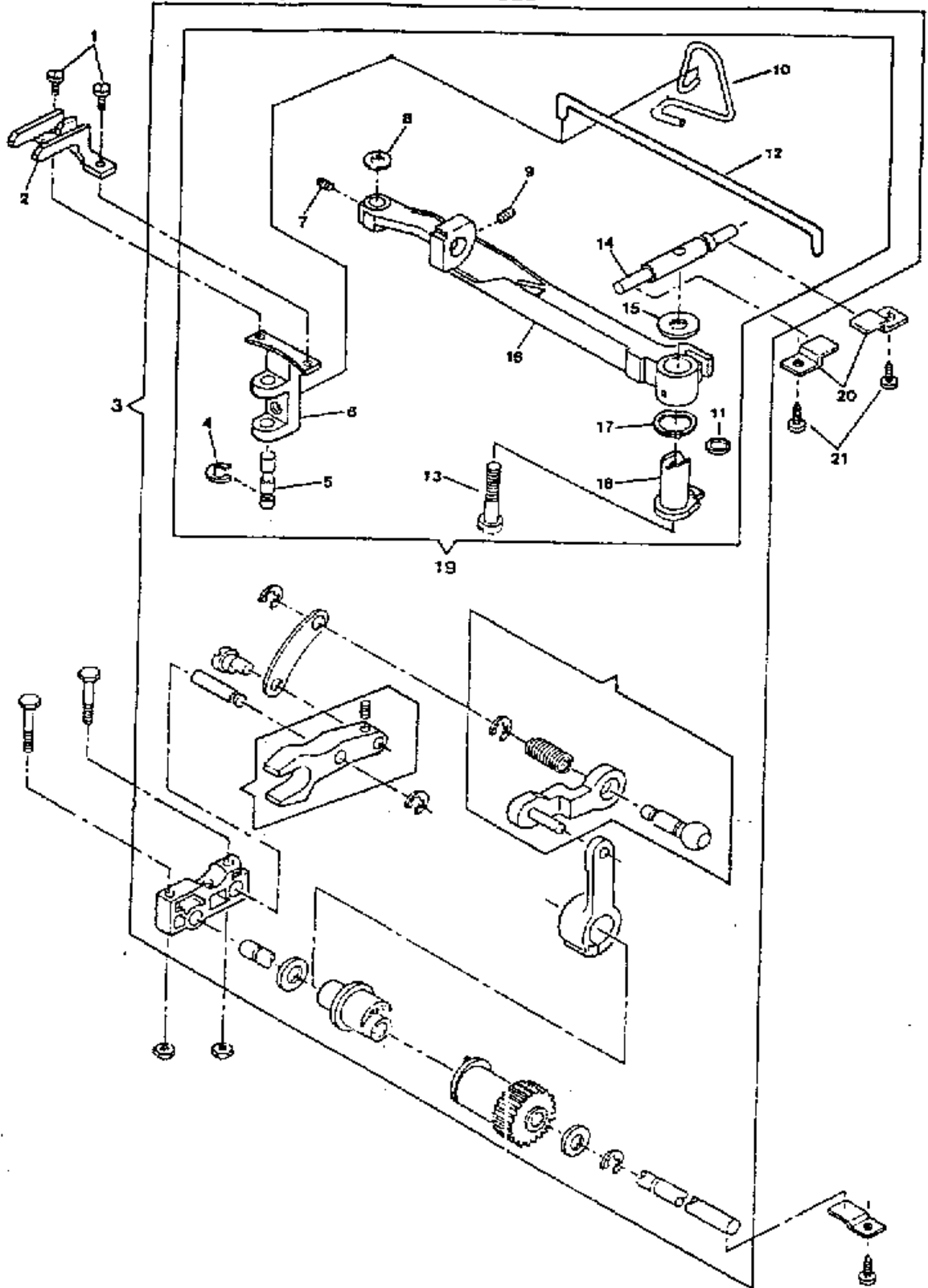
NEEDLE BAR AND THREAD TAKE-UP



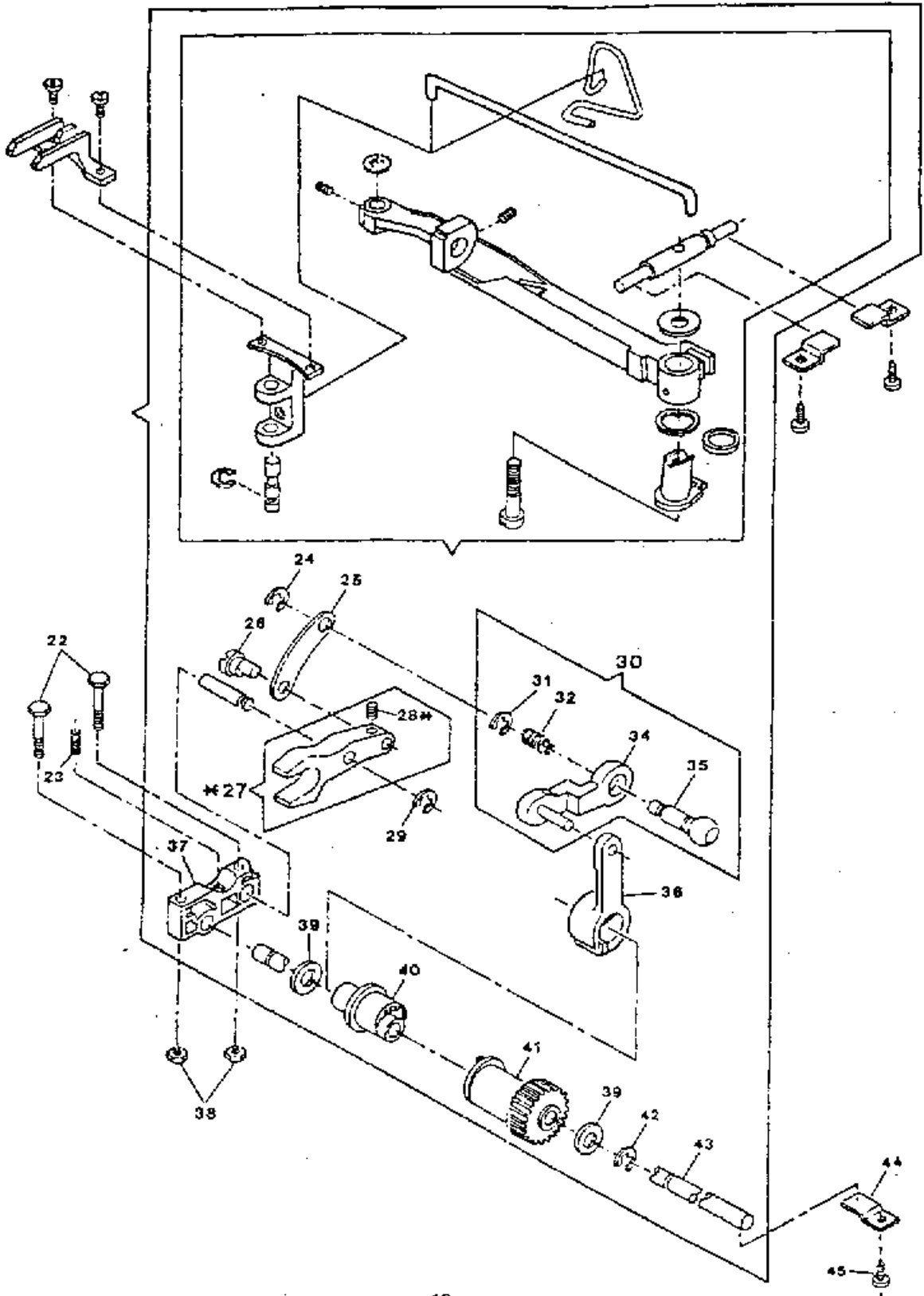
NEEDLE BAR & THREAD TAKE-UP FOR NEW HEAD END			6	6	6
REF.	PART		2	2	2
NO.	NO.	DESCRIPTION	3	3	3
			4	4	5
* 1	314694	Thread take-up complete (apollo)		X	
* 2	314699	Thread take-up complete (centaur)		X	X
3	313533	Needle bar connecting link assembly	X	X	X
4	314146	Needle bar connecting link spacer	X	X	X
5	113408-001	Needle bar driving arm ball joint screw	X	X	X
6	931929-004	Needle bar driving arm ball joint screw washer	X	X	X
7	314574	Needle bar vibrating bracket bushing (upper)	X	X	X
8	314573	Needle bar ball bushing socket (lower)	X	X	X
9	314569	Needle bar vibrating bracket assembly	X	X	X
10	314614	Needle bar vibrating bracket sub-assembly	X	X	X
11	314570	Needle bar vibrating bracket stud plate assembly	X	X	X
12	141920-451	Needle bar vibrating bracket stud plate assembly mounting screw	X	X	X
13	312839	Needle bar driving arm ball joint	X	X	X
14	312702	Needle bar driving arm ball joint retaining ring	X	X	X
15	382602	Needle bar driving arm ball joint spring	X	X	X
16	313191	Needle bar connecting stud sub-assembly	X	X	X
17	312751	Needle bar connecting stud	X	X	X
18	312769	Needle bar connecting stud hinge pin	X	X	X
19	384000	Needle bar connecting stud hinge pin friction washer	X	X	X
20	354972-451	Needle bar clamping & guide screw	X	X	X
21	313192	Needle bar sub-assembly	X	X	X
22	313553	Needle bar	X	X	X
23	313552	Needle bar gib	X	X	X
24	354898-451	Needle thumb screw	X	X	X
25	313798	Needle clamp body	X	X	X
26	141920-454	Needle clamp body Needle clamp thread guide & Needle stop screw	X	X	X
27	N2045	Needle size No. 14 (in machine)	X	X	X

REF. NO.	PART NO.	DESCRIPTION	6 6 6
		ALPHA FEED	Z 2 2
			J 3 3
			J 4 5
			X X X
1	141920-452	Feed dog screw	X
2	312679	Feed dog (Apollo)	X X
2	313021	Feed dog (zinc) (Centaur)	X
2	313171	Feed dog (Apollo) (alternate Pyramid)	X
3	314140-002	Alpha feed module	X X
3	314140-001	Alpha feed module	X X X
4	511713	Feed dog holder stud retaining ring	X X X
5	511052	Feed dog holder stud	X X X
6	422334-902	Feed dog holder (machined)	X X X
7	544100	Feed dog holder stud screw	X X X
8	511210	Feed dog holder washer	X X X
9	354983-451	Feed bar connecting and feed lifting fork connecting hinge stud (eccentric) set screw (ALT: 354420-451)	X X X
10	422561	Feed dog holder compensating link retaining spring (front)	X X X
11	422337	Feed dog holder compensating link retaining spring (back)	X X X
12	422335-001	Feed dog holder compensating link	X X X
13	514744-451	Feed bar pivot hinge stud lock screw	X X X
14	314142	Feed bar pivot hinge stud pin	X X X
15	422338	Feed bar hinge pin washer	X X X
16	422333-902	Feed bar	X X X
17	511211	Feed bar guide hinge pin spring washer	X X X
18	422340-001	Feed bar pivot hinge stud	X X X
19	314141	Feed bar assembly	X X X
20	312851	Feed bar pivot hinge stud clamp	X X X
21	113455-003	Feed bar pivot hinge stud clamp screw	X X X

ALPHA FEED



ALPHA FEED (CONT.)



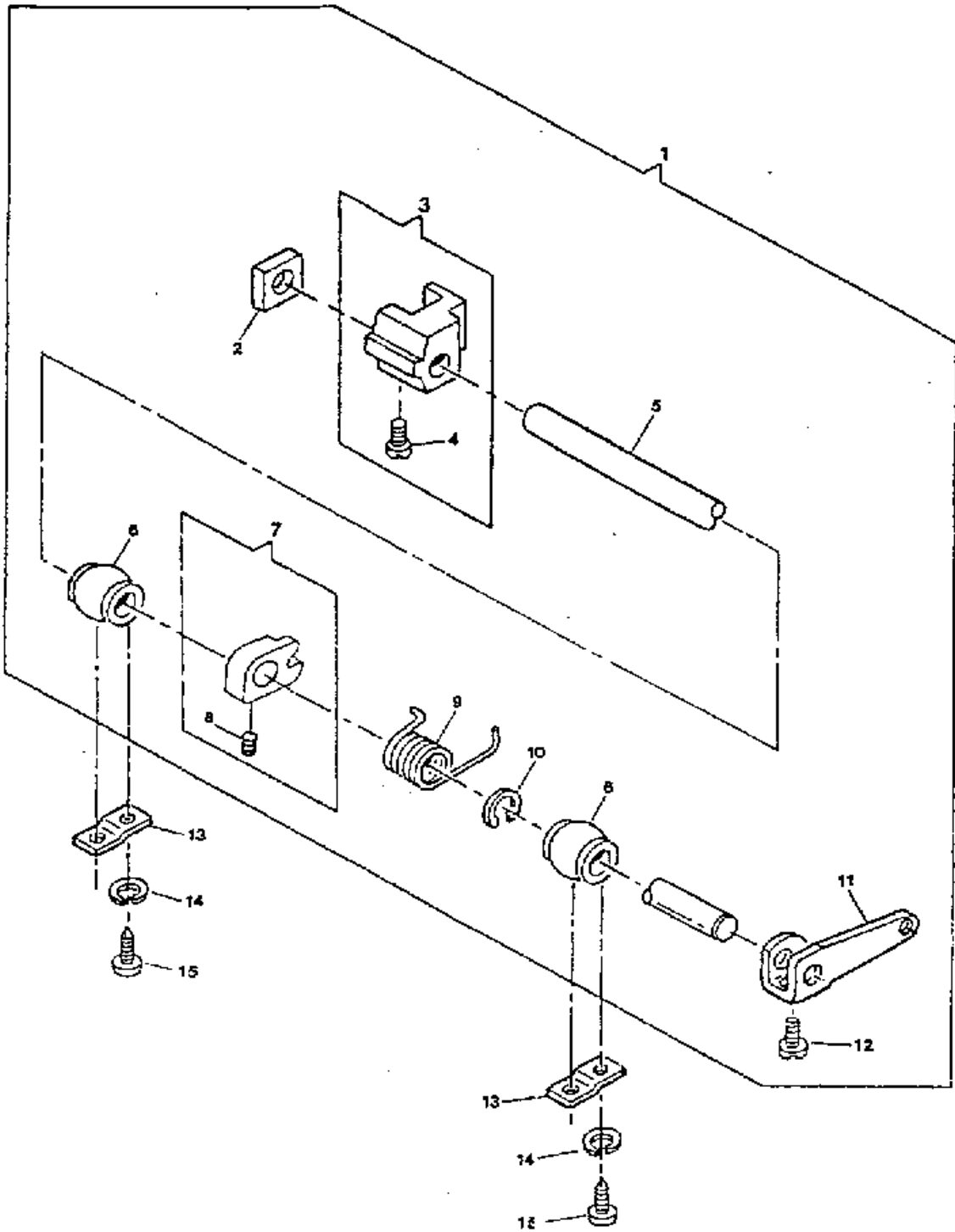
ALPHA FEED. (CONT.)

REF. NO.	PART NO.	DESCRIPTION	6 2 3 3	6 2 3 3	6 2 3 3
22	354921-451	Feed & rotating hook drive shaft bearing block mounting screw	X	X	X
23	314070	Rotating hook drive shaft bushing spring	X	X	X
24	312685	Feed lifting fork connecting retaining ring	X	X	X
25	511016	Feed lifting fork connection	X	X	X
26	511055	Feed lifting fork connecting hinge stud (eccentric)	X	X	X
* 27	503325-002	Feed lifting fork compl.	X	X	X
* 28	514585-451	Feed lifting fork connecting hinge stud (eccentric) set screw	X	X	X
29	312685	Feed & rotating hook drive shaft bearing block stud retaining ring	X	X	X
30	313910	Feed bar connection assembly complete	X	X	X
31	312685	Feed bar connection and feed lifting fork connection hinge stud (eccentric) retaining ring	X	X	X
32	314030	Feed bar connection spring	X	X	X
34	313130	Feed bar connection assembly	X	X	X
35	313455	Feed bar connection and feed lifting fork connection hinge stud (eccentric) ALT: 312852	X	X	X
36	312872-900	Feed regulator slide block drive connection	X	X	X
37	312864	Feed & rotating hook drive shaft bearing block assembly	X	X	X
38	514674-451	Feed & rotating hook drive shaft bearing block mounting screw nut	X	X	X
39	312879-451	Feed drive shaft gear washer	X	X	X
40	312869	Feed lifting cam & feed eccentric (Apollo)	X		
40	312870	Feed lifting cam & feed eccentric (Centaur)		X	X
41	312902	Feed drive shaft gear (plastic)	X	X	X
42	312585	Feed drive shaft gear retaining ring	X	X	X
43	312862-900	Feed drive shaft	X	X	X
44	312851	Feed drive shaft clamp	X	X	X
45	113455-003	Feed drive shaft clamp screw	X	X	X

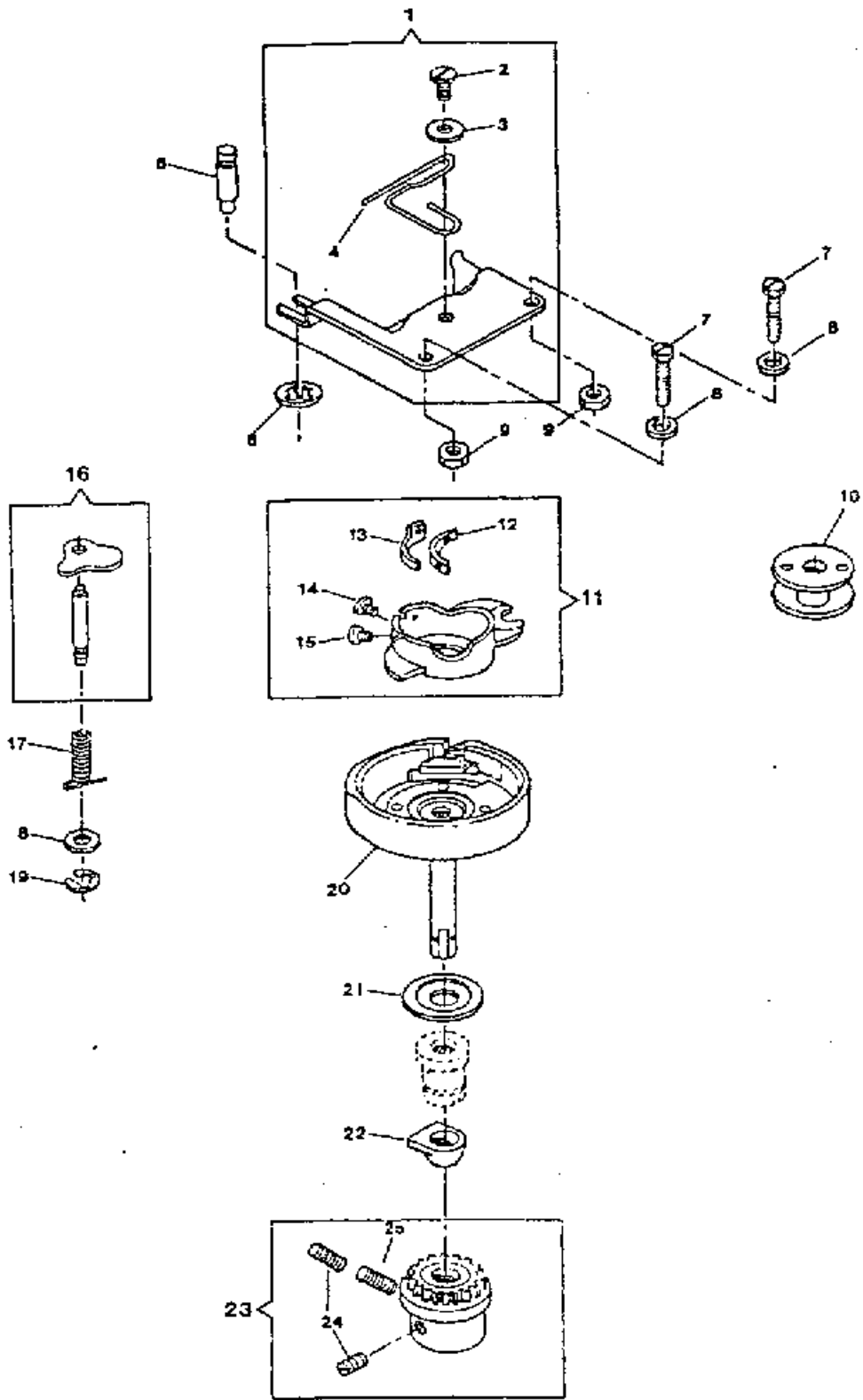
ALPHA FEED (CONT.)

REF. NO.	PART NO.	DESCRIPTION	6	5	6
			6	5	6
			2	2	2
			3	3	3
			3	4	5
			X	X	X
1	311133	Feed regulator shaft assembly	X	X	X
2	511030	Feed regulator slide block	X	X	X
3	312874	Feed regulator compl.	X	X	X
4	113523-451	Feed regulator screw	X	X	X
5	314173	Feed regulator shaft	X	X	X
6	312700-002	Feed regulator shaft bushing (self-aligning)	X	X	X
7	314175	Feed regulator shaft tension spring adjusting collar assembly	X	X	X
8	544207-001	Feed regulator shaft tension spring adjusting collar screw	X	X	X
9	314172	Feed regulator shaft tension spring	X	X	X
10	312875	Feed regulator shaft retaining ring	X	X	X
11	312801	Stitch length control crank	X	X	X
12	354922-451	Stitch length control crank screw	X	X	X
13	313816	Feed regulator shaft bushing (self-aligning) clamp	X	X	X
14	314013-451	Feed regulator shaft bushing (self-aligning) clamp screw lock washer	X	X	X
15	113455-001	Feed regulator shaft bushing (self-aligning) clamp screw	X	X	X

ALPHA FEED (CONT.)



HOOK SYSTEM (APOLLO)

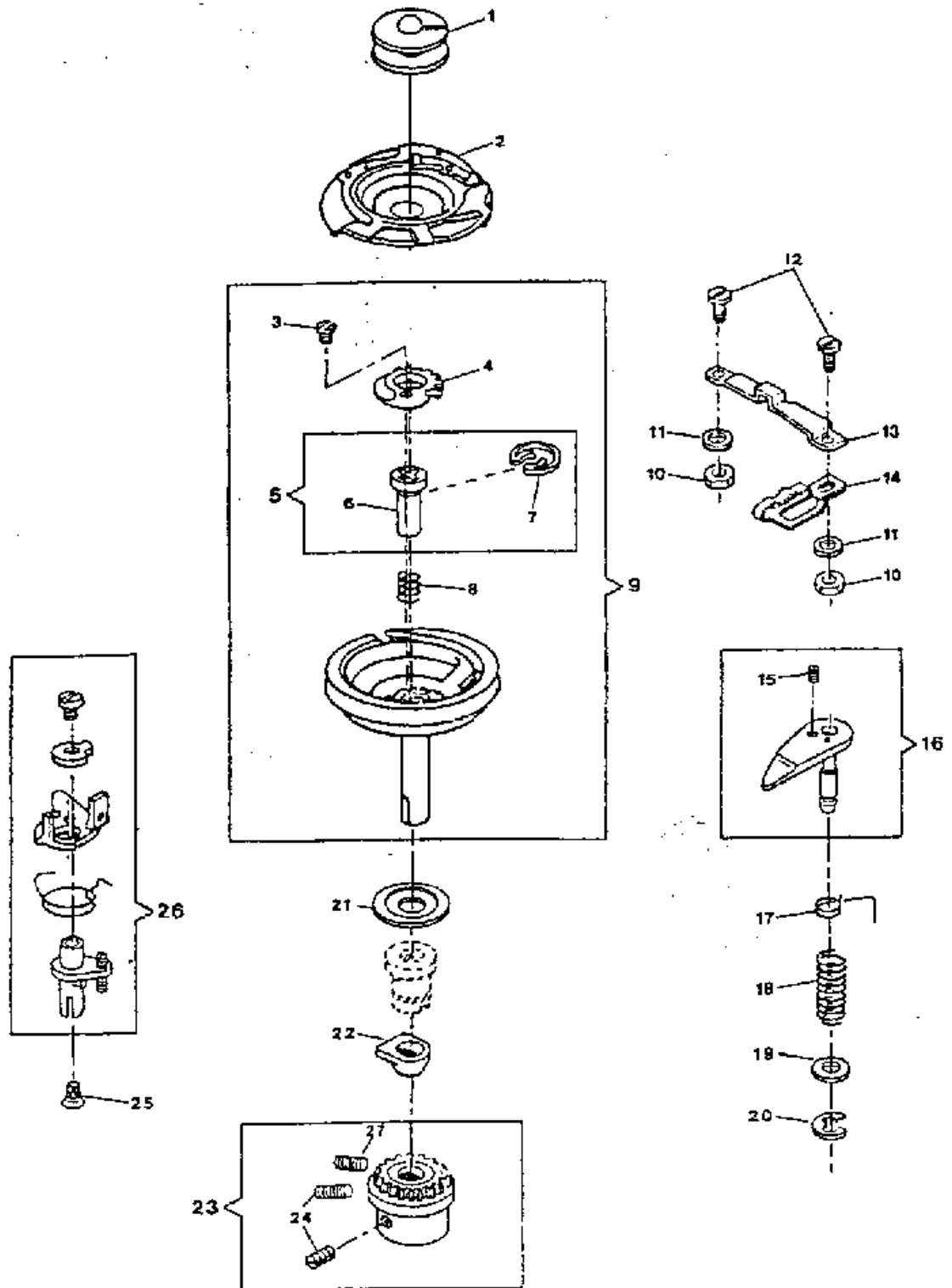


HOOK SYSTEM (APOLLO)			6 5 6
REF. NO.	PART NO.	DESCRIPTION	2 2 2
			3 3 3
			4 4 5
1	313089	Rotating hook bobbin case position plate assembly	X
1	314066	Rotating hook bobbin case position plate assembly (alternate to 313089)	X
2	354883-451	Rotating hook bobbin case cushion spring screw	X
3	313190-451	Rotating hook bobbin case cushion spring screw washer	X
4	313067-900	Rotating hook bobbin case cushion spring	X
5	312603	Rotating hook bobbin case position plate hold down stud	X
6	313151	Rotating hook bobbin case position plate hold down stud retaining ring	X
7	113439-451	Rotating hook bobbin case position plate screw	X
8	313190-451	Rotating hook bobbin case position plate screw washer	X
9	313945-451	Rotating hook bobbin case position plate screw nut	X
10	172336	Rotating hook bobbin (plastic)	X
11	421325	Rotating hook bobbin case complete	X
12	310884-452	Rotating hook bobbin case tension spring segment	X
13	310883	Rotating hook bobbin case tension spring	X
14	139975-452	Rotating hook bobbin case tension spring segment screw	X
15	354183-452	Rotating hook bobbin case tension regulating screw	X
16	312846	Rotating hook bobbin case retaining plate sub assembly	X
17	312607	Rotating hook bobbin case retaining plate stud spring	X
18	313190-451	Rotating hook bobbin case retaining plate stud washer	X
19	313783	Rotating hook bobbin case retaining plate stud retaining ring	X
20	314025	Rotating hook complete (alternate to 313034)	X
21	314049	Rotating hook flanged bushing thrust washer	X
22	312847	Rotating hook flanged bushing washer	X
23	314101-900	Rotating hook bevel gear complete (ALT: 314012)	X
24	544207-012	Rotating hook bevel gear (plastic) set screw	X
25	544207-011	Rotating hook bevel gear set screw	X

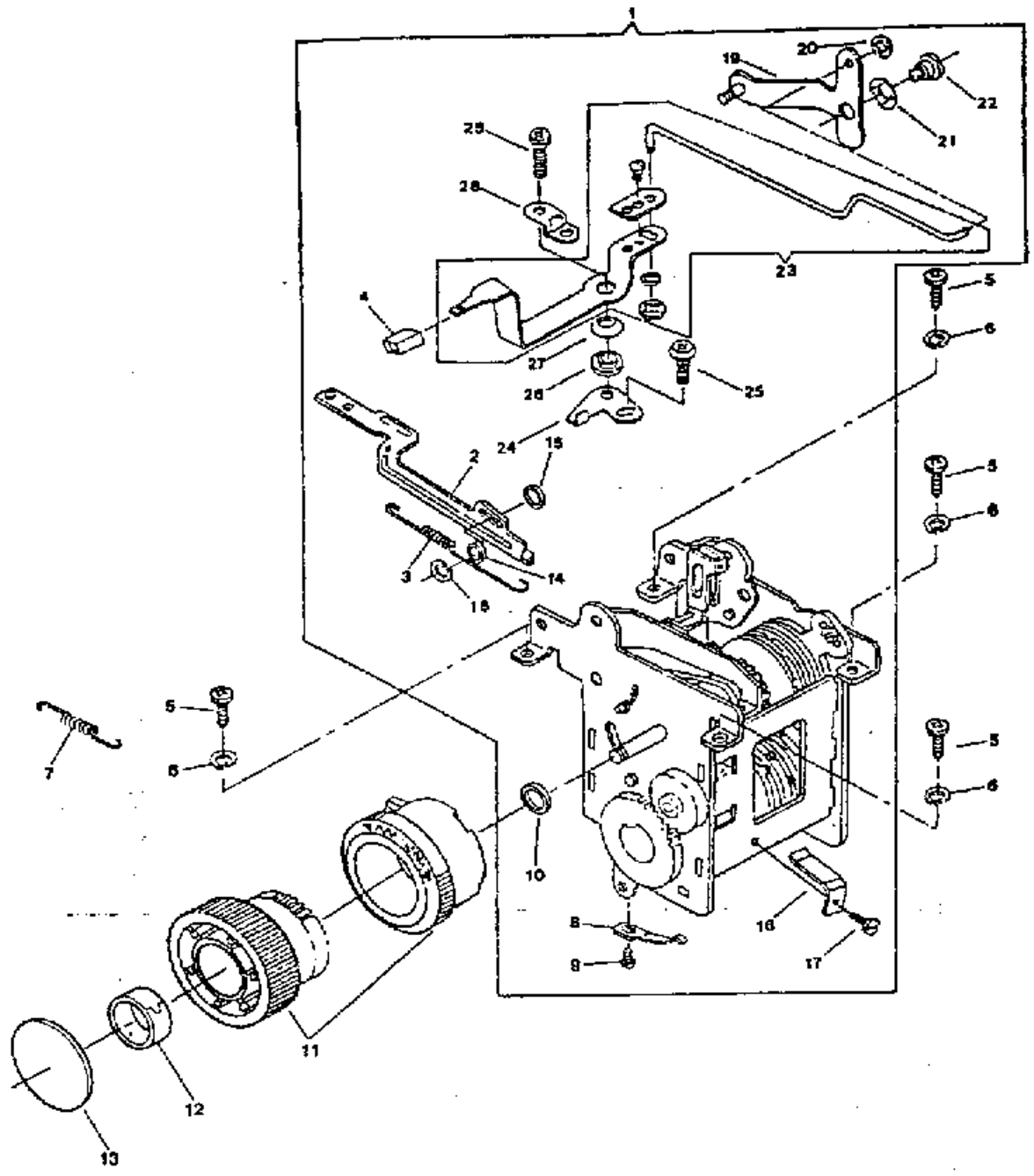
HOOK AND BOBBIN WINDING SYSTEM (CENTAUR)

REF. NO.	PART NO.	DESCRIPTION	6	6	6
			2	2	2
			3	3	3
			3	4	5
			X	X	
1	312956	Bobbin	X	X	
2	314662	Rotating hook bobbin case compl. (used with 314025)	X	X	
3	354973-451	Rotating hook thread pull-off insert screw	X	X	
4	312966	Rotating hook thread pull-off	X	X	
5	313155	Rotating hook bobbin driver clutch spring assembly	X	X	
6	312967	Rotating hook bobbin driver bushing	X	X	
7	313124	Rotating hook bobbin driver shaft clutch spring	X	X	
8	312968	Rotating hook bobbin driver bushing return spring	X	X	
9	313183-002	Rotating hook assembly	X	X	
10	313945-451	Rotating hook bobbin case position plate screw nut	X	X	
11	313190-451	Rotating hook bobbin case position plate screw washer	X	X	
12	113439-451	Rotating hook bobbin case position plate screw	X	X	
13	312738	Rotating hook bobbin case position plate	X	X	
14	313068	Bed slide positioner	X	X	
15	354891-451	Rotating hook bobbin case retaining plate adjusting screw	X	X	
16	313088	Rotating hook bobbin case retaining plate complete	X	X	
17	313930	Rotating hook bobbin case retaining plate return spring	X	X	
18	314072	Rotating hook bobbin case retaining plate spring	X	X	
19	313190-451	Rotating hook bobbin case position plate screw washer	X	X	
20	312702	Rotating hook bobbin case retaining plate spring retaining ring	X	X	
21	314049	Rotating hook flanged bushing thrust washer	X	X	
22	312847	Rotating hook flanged bushing washer	X	X	
23	314101-900	Rotating hook bevel gear complete (ALT: 314012)	X	X	
24	544207-012	Rotating hook bevel gear (plastic) set screw	X	X	
25	354929-451	Bed slide actuating lever stud screw	X	X	
26	313956	Bed slide actuating lever assembly	X	X	
27	544207-011	Rotating hook bevel gear set screw	X	X	

HOOK AND BOBBIN WINDING SYSTEM (CENTAUR)



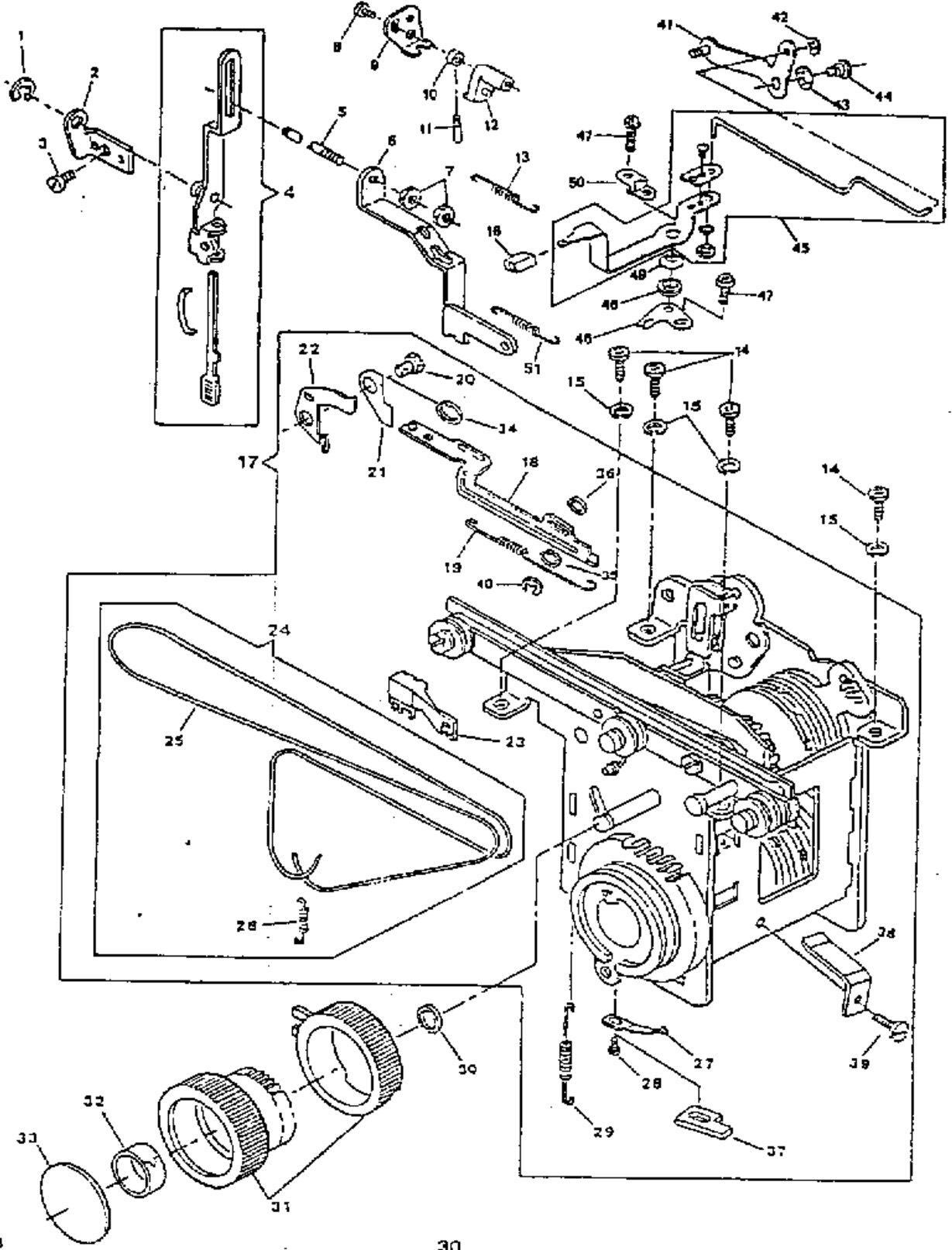
PATTERN STITCH LENGTH CONTROL AND CAM CONTROLLED FEED



REF. NO.	PART NO.	PATTERN, STITCH LENGTH CONTROL & CAM CONTROLLED FEED	DESCRIPTION	6 6 6	2 2 2	3 3 3	3 4 5
							X
1	314601-001		Pattern selector module				X
1	314601-002		Pattern selector module				X X
2	314492		Needle bar driving arm				X X
3	313053		Needle bar driving arm return spring				X X
4	314676-451		Bight amplitude control lever knob (plastic)				X X
5	113455-001		Disc selector mechanism mounting plate screw (left & right)				X X
6	314013-451		Disc selector mechanism mounting plate screw (left & right)				X X
			lock washer				
7	314497		Needle bar driving arm slide positioning spring				X X
8	313113		Pattern selector indicator detent spring				X X
9	354899-451		Pattern selector indicator detent screw				X X
10	314153		Pattern selector knob spacer				X X
11	314239-451		Pattern selector knob and stitch balance knob				X X
12	313535		Pattern selector knob compression ring				X X
13	313824-451		Pattern selector knob trim plate				X
13	313824-452		Pattern selector knob trim plate				X
14	314493		Stitch width control bracket washer (front)				X X
15	314494		Stitch width control bracket washer (back)				X X
16	314553		Pattern selector drum stabilizing spring				X X
17	113487-451		Pattern selector drum stabilizing spring screw				X X
18	314502		Bight amplitude control bracket retaining ring				X X
19	314603		Bight amplitude control bracket assembly				X X
20	314606		Bight amplitude control rod retaining (left)				X X
21	384000		Bight amplitude control lever friction washer				X X
22	113522-451		Bight amplitude control bracket pivot screw				X X
23	314607		Bight amplitude control lever assembly				X X
24	314610		Bight amplitude control lever stop				X X
25	113455-014		Bight amplitude control lever stop adjustment screw				X X
26	314611		Bight amplitude control lever shoulder washer				X X
27	353457		Bight amplitude control lever friction washer				X X
28	314683		Bight amplitude control lever retainer				X X

REF. NO.	PART NO.	PATTERN , STITCH LENGTH CONTROL & CAM CONTROLLED FEED (CONT)	6	6	6
			2	2	2
			3	3	3
			3	4	5
		DESCRIPTION			
1	312685	Buttonholer kick-out shaft tripping lever retaining ring			X
2	313392	Buttonholer lever pivot			X
3	354877-451	Buttonhole pivot lever screw			X
4	312994-002	Buttonhole kick-out tripping rod lever assembly			X
5	312982	Buttonhole tripping lever rod			X
6	313005	Buttonhole disc control catch release link			X
7	514674-451	Buttonhole tripping rod adjusting nut			X
7	514674-451	Buttonhole tripping rod locking nut			X
8	354935-451	Buttonhole actuator cam adjusting bracket screw			X
9	313071	Buttonhole actuator cam adjusting bracket			X
10	313022	Buttonhole follower hub release			X
11	313023	Buttonhole follower hub release pin			X
12	313025	Buttonhole actuator cam			X
13	314497	Needle bar driving arm slide positioning spring			X
14	113455-001	Disc selector mechanism mounting plate screw(left & right)			X
15	314013-451	Disc selector mechanism mounting plate screw(left & right) lock washer			X
16	314676-451	Bight amplitude control lever knob (plastic)			X
17	314613	Pattern selector module			X
18	314492	Needle bar driving arm assy			X
19	313053	Needle bar driving arm return spring			X
20	354984-451	Feed follower buttonhole adjusting actuator screw			X
21	314527	Feed follower actuator spacer			X
22	314526	Feed follower buttonhole adjusting actuator			X
23	312914	Pattern selector indicator			X
24	312916	Pattern selector cord assembly			X
25	313888	Pattern selector cord			X
26	312917	Pattern selector cord tension spring			X
27	313113	Pattern selector indicator detent spring			X
28	354899-451	Pattern selector indicator detent spring screw			X
29	313033	Buttonhole disc control catch spring			X
30	314153	Pattern selector knob spacer			X
31	314239-451	Pattern selector knob and stitch balance knob			X
32	313535	Pattern selector knob compression ring			X
33	313824-453	Pattern selector knob trim plate			X
34	502495-451	Feed follower buttonhole adjusting actuator screw washer			X
35	314493	Stitch width control bracket washer (front)			X
36	314494	Stitch width control bracket washer (back)			X
37	314557	Pattern selector indicator reinforcing detent spring			X
38	314553	Pattern selector drum stabilizing spring			X
39	113487-451	Pattern selector drum stabilizing spring screw			X
40	314502*	Bight amplitude control bracket retaining ring			X
41	314603	Bight amplitude control bracket assembly			X
42	314606	Bight amplitude control rod retaining (left)			X
43	384000	Bight amplitude control lever friction washer			X
44	113522	Bight amplitude control bracket pivot screw			X
45	314607	Bight amplitude control lever assembly			X
46	314610	Bight amplitude control lever stop			X
47	113455-014	Bight amplitude control lever stop adjustment screw			X
48	314611	Bight amplitude control lever shoulder washer			X
49	353457	Bight amplitude control lever friction washer			X
50	314683	Bight amplitude control lever retainer			X
51	313799	Buttonhole actuator adjusting rod spring			X

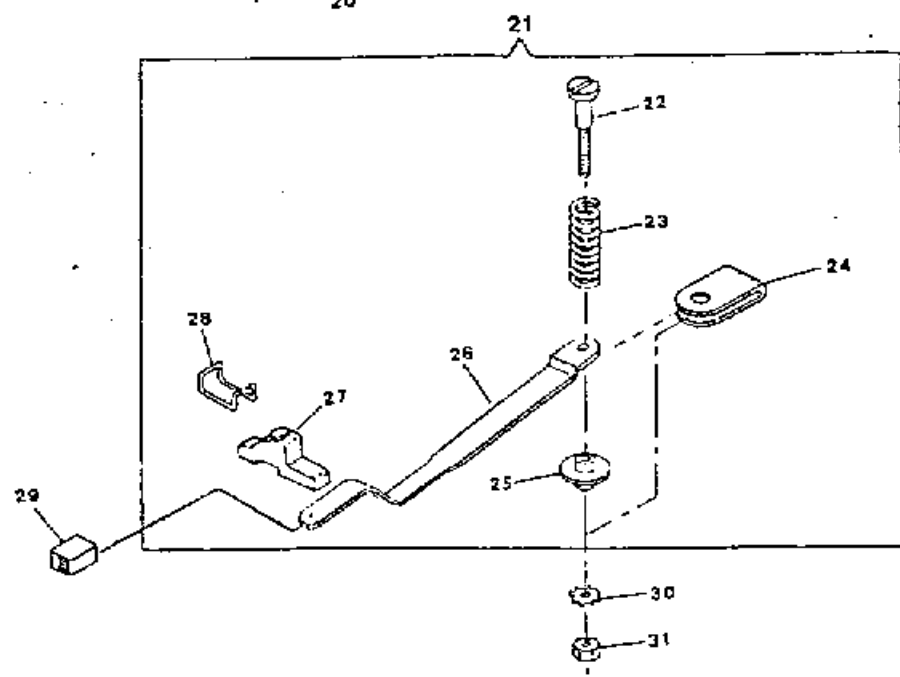
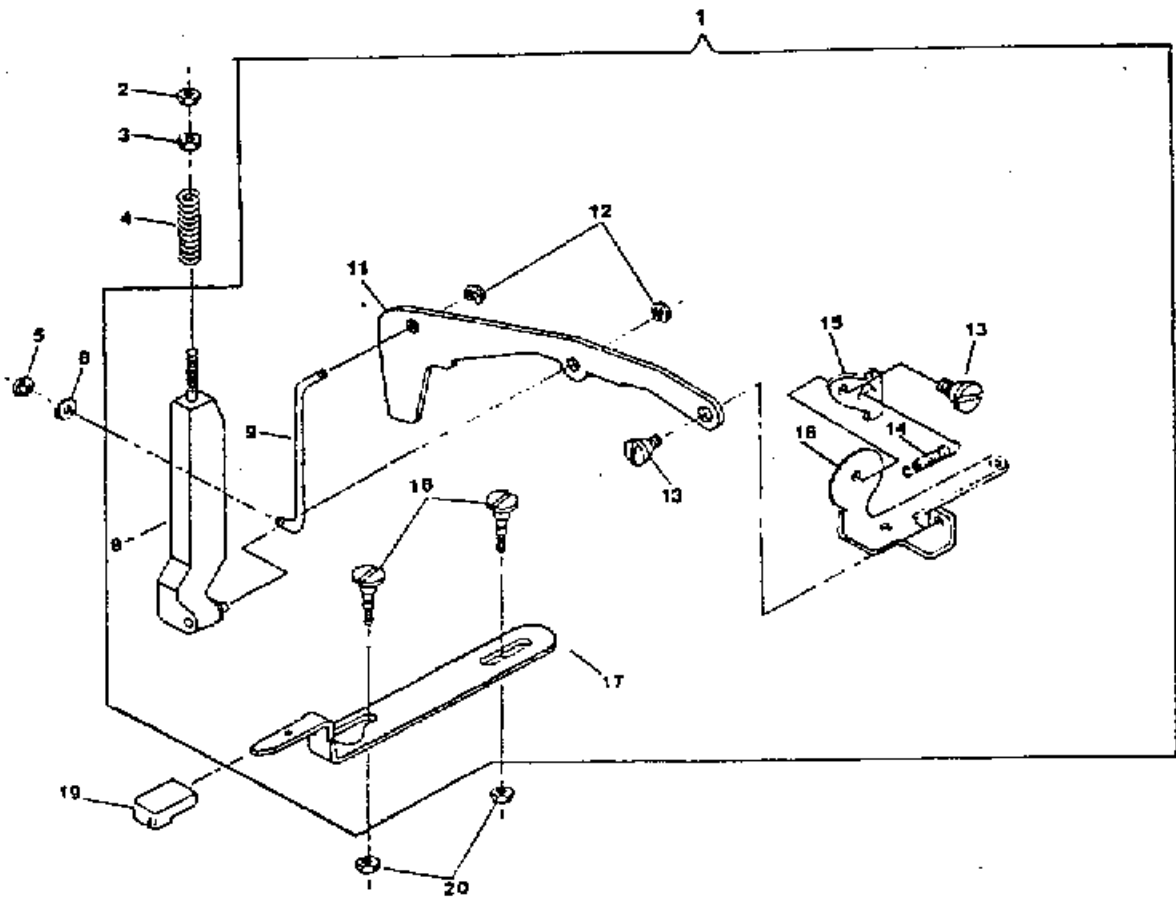
PATTERN STITCH LENGTH CONTROL AND CAM CONTROLLED FEED (CONT.)



8/88

30

PATTERN STITCH LENGTH CONTROL AND CAM CONTROLLED FEED (CONT.)

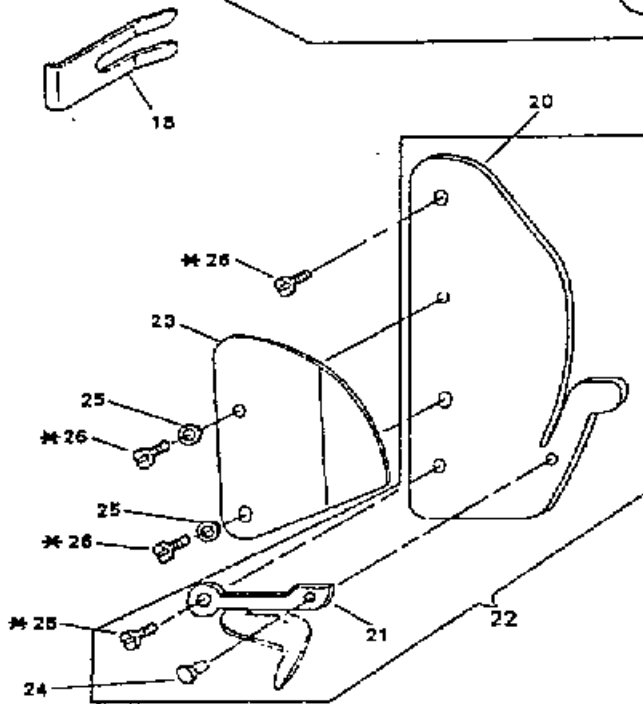
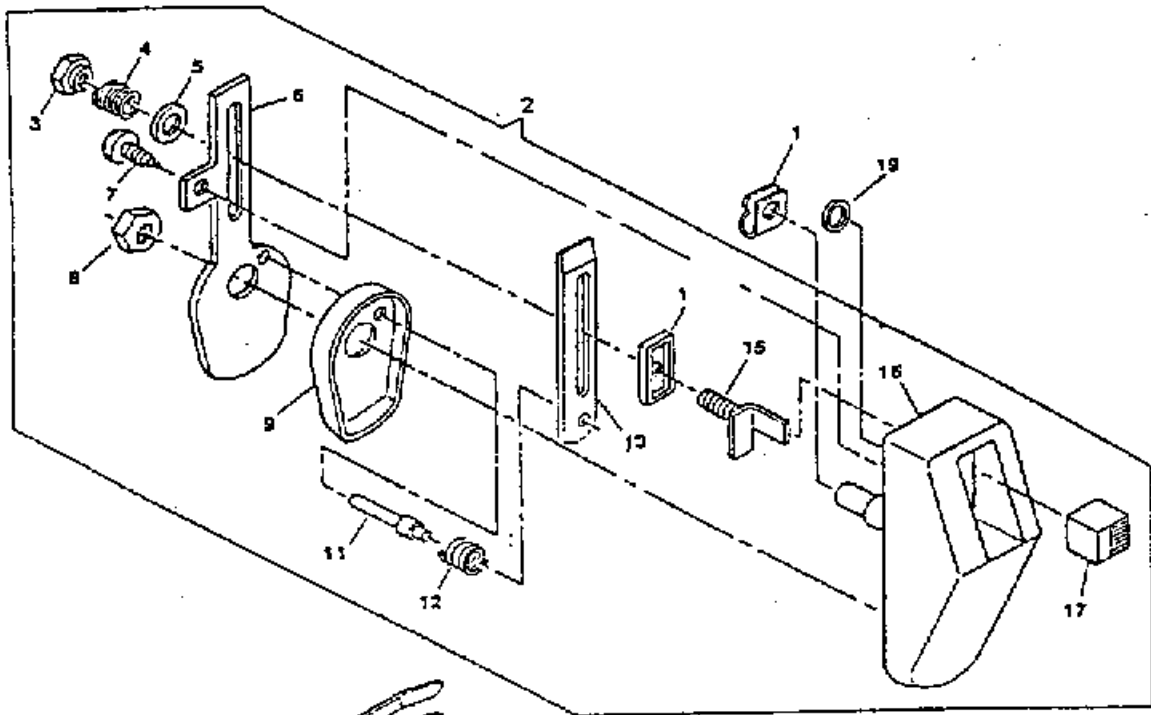


PATTERN, STITCH LENGTH CONTROL & CAM CONTROLLED FEED (CONT.)			6 6 6
REF. NO.	PART NO.	DESCRIPTION	2 2 2
			3 3 3
			3 4 5
			X X
1	314300-001	Feed reverse mechanism	X
1	314300-002	Feed reverse mechanism	X X X
2	514674-451	Cam controlled feed connecting rod locking nut	X X X
3	312645-451	Cam controlled feed disc follower actuator connecting rod adjusting nut	X X X
4	313143	Cam controlled feed disc follower actuator connecting rod spring	X X X
5	312702	Feed lever connecting link retaining ring	X X X
6	313891	Cam controlled feed connecting rod stabilizing washer	X X X
8	314549	Cam controlled feed disc follower actuator connecting rod	X X X
9	313057	Feed lever connecting link	X X X
11	314283	Stitch length control arm	X X X
12	312702	Cam controlled feed disc follower actuator connecting rod retaining ring	X X X
13	354958-451	Reverse feed lever pivot screw	X X X
14	314282	Reverse feed crank spring	X X X
15	314281	Reverse feed crank	X X X
16	314279-900	Reverse feed lever mounting bracket	X X X
17	314280	Reverse feed control lever	X X X
18	113499-451	Reverse feed control lever & latch screw	X X X
19	312657-451	Reverse feed control lever knob (plastic)	X X X
20	514674-451	Reverse feed control lever guide screw nut	X X X
21	313569	Stitch length control lever assembly	X X X
22	113356-451	Stitch length control lever pivot screw	X X X
23	313567	Stitch length control lever spring	X X X
24	313566	Stitch length control friction washer	X X X
25	313565-451	Stitch length control lever nut	X X X
26	312663	Stitch length control lever	X X X
27	313960	Stitch length control lever cam assembly	X X X
28	313188	Stitch length control lever cam retaining clip	X X X
29	312664-451	Stitch length control lever knob (plastic)	X X X
30	313172-451	Stitch length control lever pivot lock washer	X X X
31	313177-451	Stitch length control lever nut	X X X

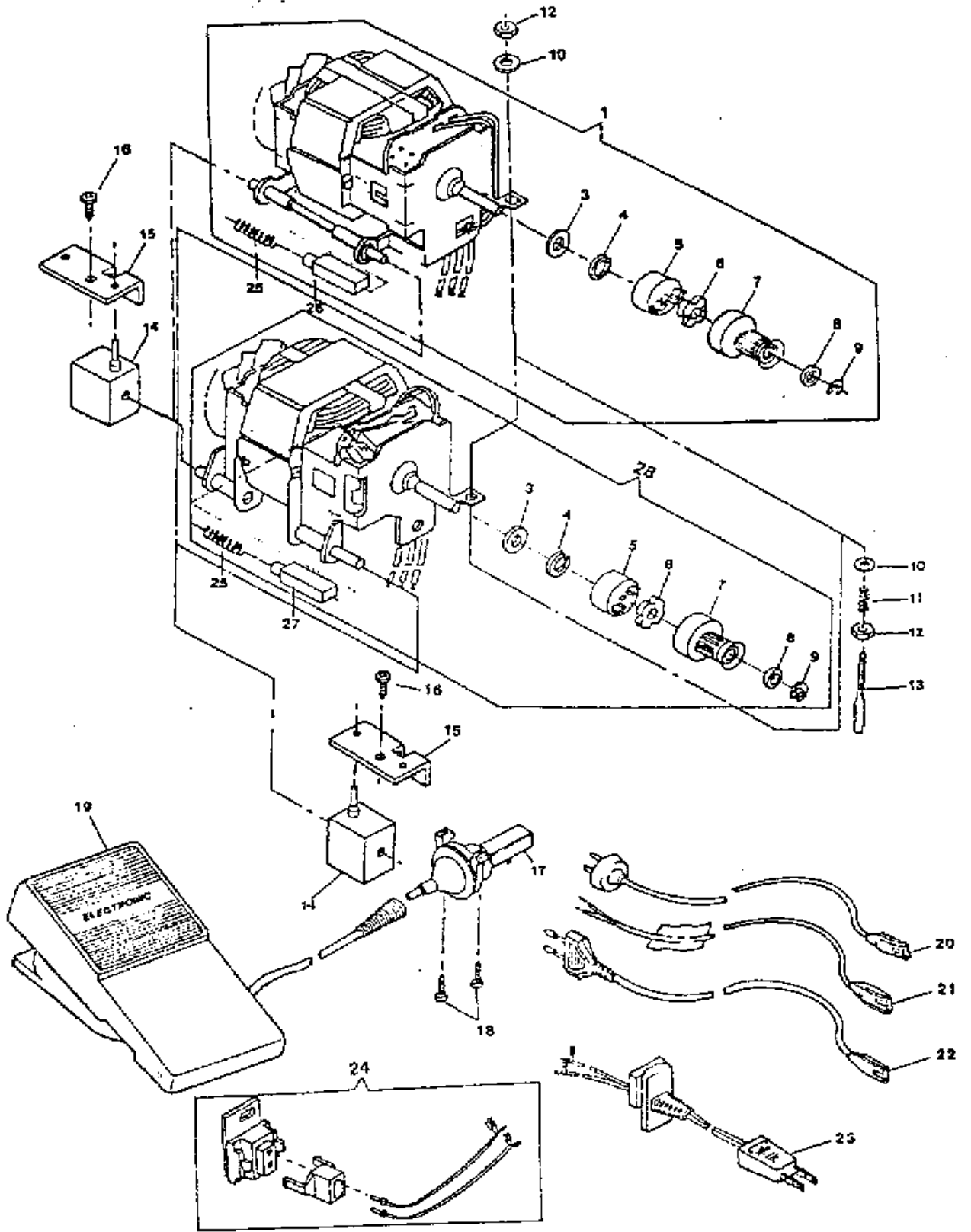
DEMAND RESPONSIVE NEEDLE TENSION SYSTEM

REF. NO.	PART NO.	DESCRIPTION	6 6 6	2 2 2	3 3 3	3 4 5
			X X X			
1	313199	Tension cover mounting retainer	X X X			
2	313077-001	Thread tension module (USA & Canada)	X X X			
2	313077-002	Thread tension module (Europe)	X X X			
3	314299-451	Tension regulator lever stud nut	X X X			
4	312708	Tension spring	X X X			
5	312710	Tension spring washer	X X X			
6	314002	Tension mounting plate sub-assembly take-off	X X X			
7	113442-003	Tension cover mounting screw	X X X			
8	53541	Tension cover retaining stud nut	X X X			
9	312703	Tension disc	X X X			
9	313403	Tension disc (alternate to 312703)	X X X			
11	312705	Tension release pin	X X			
12	314005	Pre-tension spring	X X X			
13	312707	Tension lever	X X X			
13	313904	Tension lever (alternate)	X X X			
14	313048	Tension regulating lever slide block	X X X			
15	312946	Tension regulating lever assembly	X X X			
16	313015-001	Tension cover assembly (USA & Canada)	X X X			
16	313015-002	Tension cover assembly (Europe)	X X X			
17	312664-451	Tension regulating knob	X X X			
18	313047	Tension cover retaining clip	X X X			
19	314309	Tension cover spacer (upper)	X			
20	314685-900	Thread wear plate (apollo)	X X			
20	314697-900	Thread wear plate (centaur)	X X X			
21	314687-900	Thread guide	X			
22	314688	Thread take-up wear plate ass'y (apollo)	X X			
22	314698	Thread take-up wear plate ass'y (centaur)	X X X			
23	314690	Thread pinch plate	X X X			
24	314686-900	Thread guide rivet	X X X			
25	317166	Pinch plate mounting screw washer	X X X			
* 26	113524-451	Mounting screw				

DEMAND RESPONSIVE NEEDLE TENSION SYSTEM



ELECTRICAL EQUIPMENT



REF. NO.	PART NO.	DESCRIPTION	ELECTRICAL EQUIPMENT		
			6	6	5
			2	2	2
			3	3	3
			3	4	5
1	988529-009	Motor comp. (Cat. NO. TA4-8) 120 volt (National motor)	X	X	X
1	988529-010	Motor comp. (Cat. NO. TA4-11) 220/240 volt (National motor)	X	X	X
3	931744-001	Spacer washer (as required)	X	X	X
3	931744-002	Spacer washer (as required)	X	X	X
3	931744-003	Spacer washer (as required)	X	X	X
3	931744-103	Spacer washer (as required)	X	X	X
4	603908-001	Retaining ring	X	X	X
5	988738-002	Motor pulley isolator hub	X	X	X
6	988795-001	Motor pulley torque cushion	X	X	X
7	979124-001	Pulley with belt retainer	X	X	X
8	988717-001	Washer	X	X	X
9	619279-902	Motor pulley isolator hub retaining ring	X	X	X
10	37969	Motor adjusting stud nut washer	X	X	X
11	314058	Motor belt tension spring	X	X	X
12	53646	Motor adjusting stud nut	X	X	X
13	988651-001	Motor adjusting stud	X	X	X
14	979329-001	Resilient mount	X	X	X
15	988651-001	Clip	X	X	X
16	113470-004	Motor mounting screw	X	X	X
17	988549-005	Pneumatic transducer	X	X	X
18	113444-003	Pneumatic transducer mounting screw	X	X	X
19	988667-001	Pneumatic controller assembly	X	X	X
20	988638-004	Appliance coupler for Australia	X	X	X
21	988638-003	Appliance coupler (240 volt) for U.K.	X	X	X
22	988638-001	Appliance coupler (220 volt) for Europe	X	X	X
23	988557-001	Cord w/strain relief and plug (120 volt) for U.S./Canada	X	X	X
24	988657-003	Cord with receptacle (Europe/U.K./Australia)	X	X	X
25	619436-001	Brush spring (2)	X	X	X
25	619435-013	Motor brush (2) (for national motor)	X	X	X
27	619435-015	Motor brush (2) (for ITU motor)	X	X	X
28	988529-009	Motor comp. (Cat. NO. TA4-8) 120 volt (ITU motor)	X	X	X
28	988529-010	Motor comp. (Cat. NO. TA4-11) 220/240 volt (ITU motor)	X	X	X

REF. NO.	PART NO.	DESCRIPTION	6 6 6
		ELECTRICAL EQUIPMENT (CONT.)	2 2 2
			3 3 3
			3 4 5
1	314596-001	Lint and heat shield assembly (220/240V)	X X X
2	979203-002	Light assembly (Europe) (220V)	X X X
2	979203-003	Light assembly (Australia) (240V)	X X X
3	540899	Ty-wrap self-locking (ALT: 605600-001)	X X X
4	979203-001	Lamp socket (120V) (US/Canada)	X
5	314596-002	Lint and heat shield assembly (100V)	X X X
5	314596-003	Lint and heat shield assembly (120V)	X X X
6	446138	Heat shield mounting screw washer	X X X
7	544211-002	Heat shield mounting screw	X X X
8	194120-021	Light bulb (240 Volt) (ALT: 542656-004)	X X X
8	194120-020	Light bulb (220 Volt) (ALT: 542656-003)	X X X
8	194120-019	Light bulb (120 Volt) (ALT: 542656-005)	X X X
9	113445-003	Thread take-up cover and lint/heat shield screw	X X X
10	988547-002	Washer	X X X
11	113444-001	Screw (P. C. Board mounting)	X X X
12	988548-001	Switch operator (120 Volt)	X X X
12	988548-002	Switch operator (220/240 Volts)	X X X
13	988547-001	Washer	X X X
14	979123-004	Speed control P. C. Board assembly 120 Volt (full wave)	X X X
14	979120-005	Speed control P. C. Board assembly 220/240 Volts (full wave)	X X X
14	979161-003	Speed control P. C. Board assembly 100 Volt (full wave)	X X X
14	979192-005	Speed control P. C. Board assembly 220/240 Volts (full wave)	X X X
15	113455-001	Screw (Light harness)	X X X
16	604690-001	Self-locking nylon cable tie (light harness)	X X X

ELECTRICAL EQUIPMENT (CONT.)

