

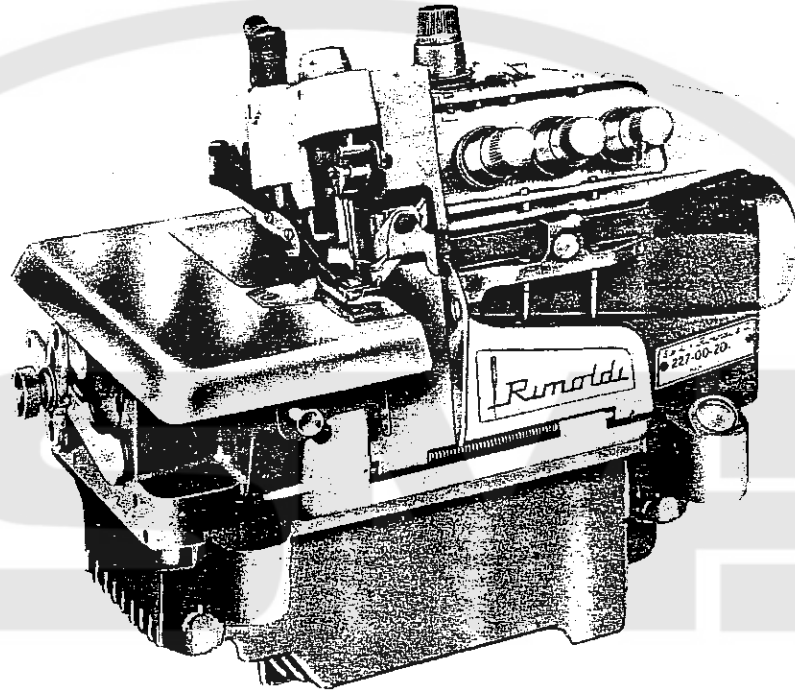
# Rimoldi®

SPARE PARTS CATALOGUE  
CATALOGO PEZZI DI RICAMBIO  
CATALOGUE RECHANGES  
ERSATZTEILELISTE

**class 227-00-20  
and subclasses  
227-00-32**



# Remolde



## **SPARE PARTS CATALOGUE**

**class 227-00-20**

**and subclasses**

**227-00-32**





**INTRODUCTION**



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## INTRODUCTION

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## INSTRUCTIONS FOR USE

### a) Introduction

1. The Spare Parts Catalogue consists of a set of illustrations of the different mechanisms or assemblies making up the basic machine head and its subclasses.
2. For easy look-up, the illustration index shows the position of each assembly on the machine.
3. The conversion groups of the basic head and its subclasses are illustrated in individual drawings.
4. The illustrations show the number identifying subclasses printed in bold type at top right.
5. On each illustration the single parts of the assembly shown are identified by a number. Assemblies of which parts cannot be supplied separately, are identified by capital letters. Parts and devices which are not standard equipment with the machine but which can be supplied on request are listed at the bottom of each illustration page and illustrated complete with all components at the end of the catalogue.
6. The catalogue carries a general list of parts in numerical order by drawing number, covering all the parts in our machines, with the number of the illustration where the part can be found.

## II. ORDER PLACING PROCEDURE

### a) All spare parts

The following instructions should be carefully followed to make sure that required spare parts are shipped thout delay:

1. State machine head serial number
2. State drawing number of spare parts ordered.
3. Write name of spare part required in full.
4. State quantity required.

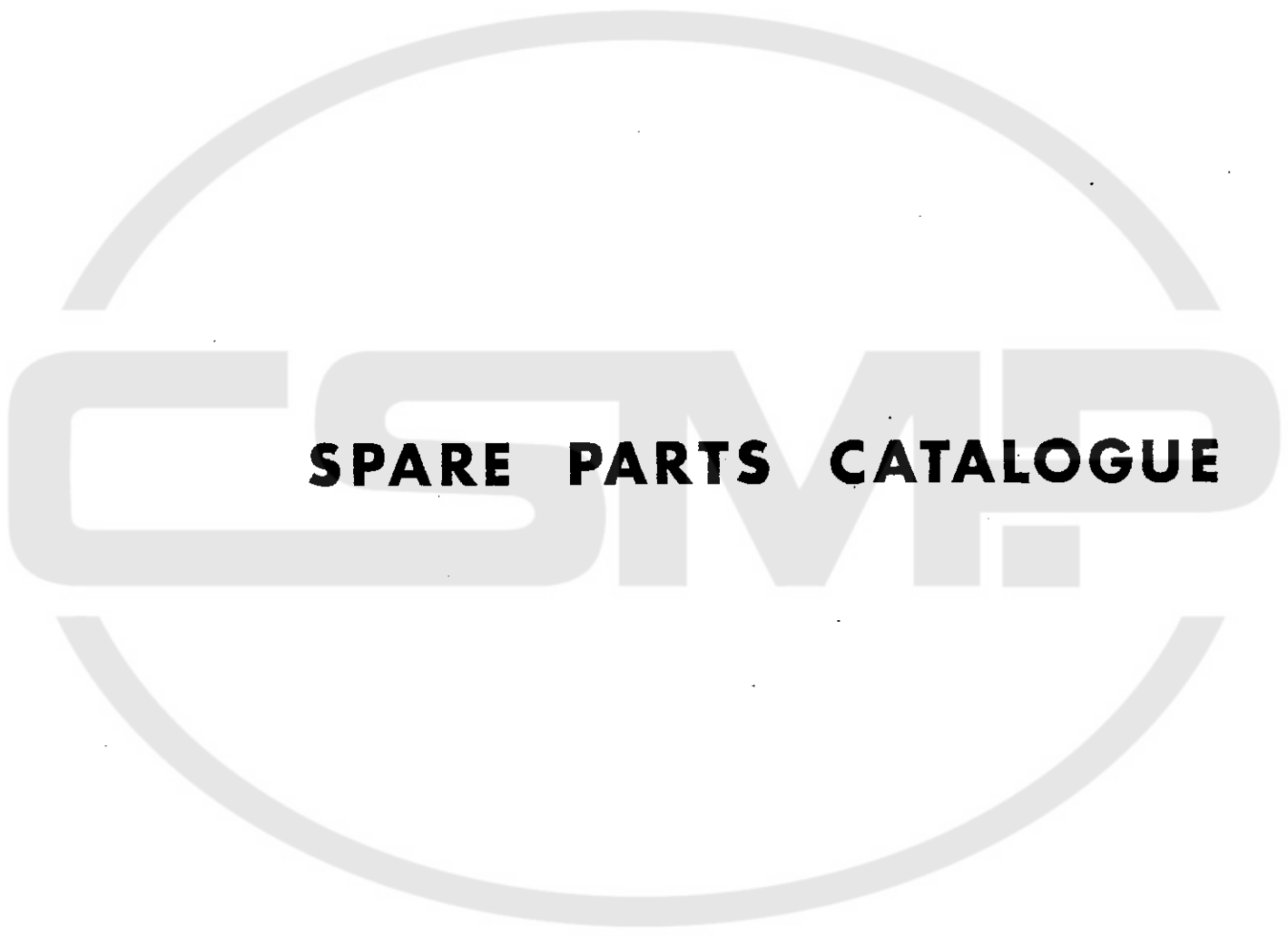
## I M P O R T A N T

RIMOLDI are desirous of thoroughly studying all cases of breakage, wear or unsatisfactory performance encountered with parts they have manufactured. For this reason, such parts should be dispatched together with the spare part order.

### b) Needles

1. Only straight RIM 27 needles should be used on the machine heads illustrated in this catalogue.
2. The needle system and size are marked on the needle shank.
3. The gauge indicates the average diameter in hundredths of a millimetre taken on the blade of the needle.
4. The system and size are also stamped on the RIMOLDI needle envelope.
5. When ordering, always state clearly the required needle system and size. (Example: 100 needles, size 90, system RIM 27).
6. In case of doubt, attach a sample needle or an empty envelope of the needle required.
7. For sewing elastic or elasticised materials special ball-point needles classed as SKU are available.



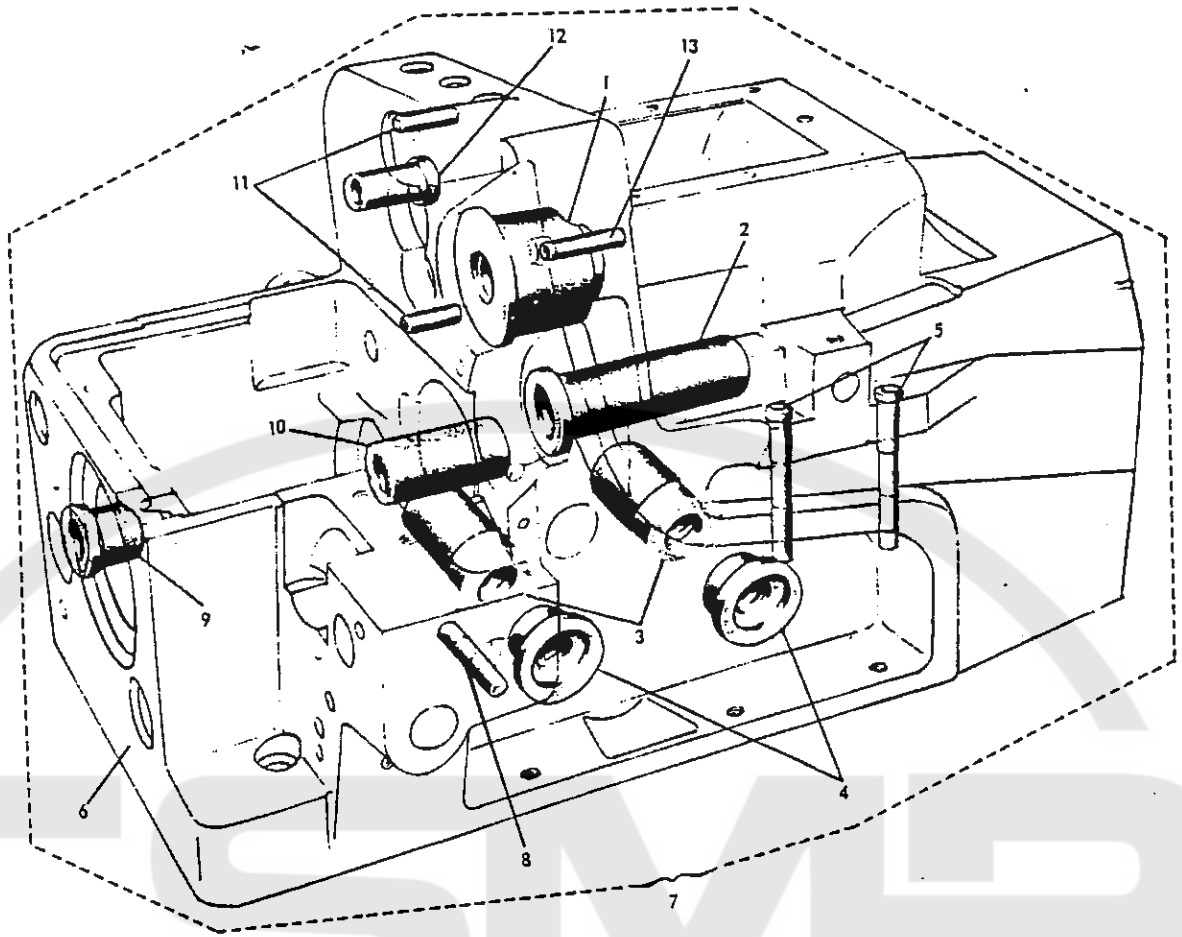


**SPARE PARTS CATALOGUE**

REF. N°	PART N°	DESCRIPTION	QUANT.	REF. N°	PART N°	DESCRIPTION	QUANT.
1	2402/6	thead, guide accessory : scope	1				
2	21272-10	second key (scope)	1				
3	2882-1 (40)	medium type, same plate	1				

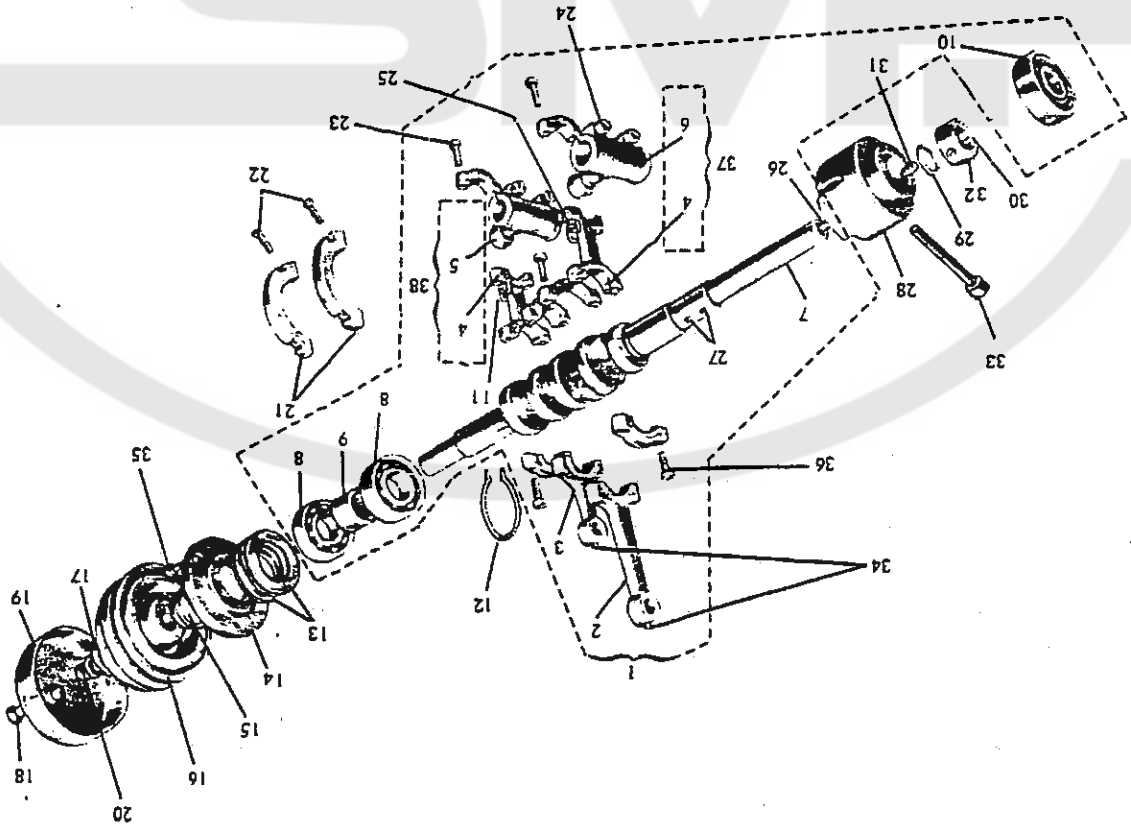
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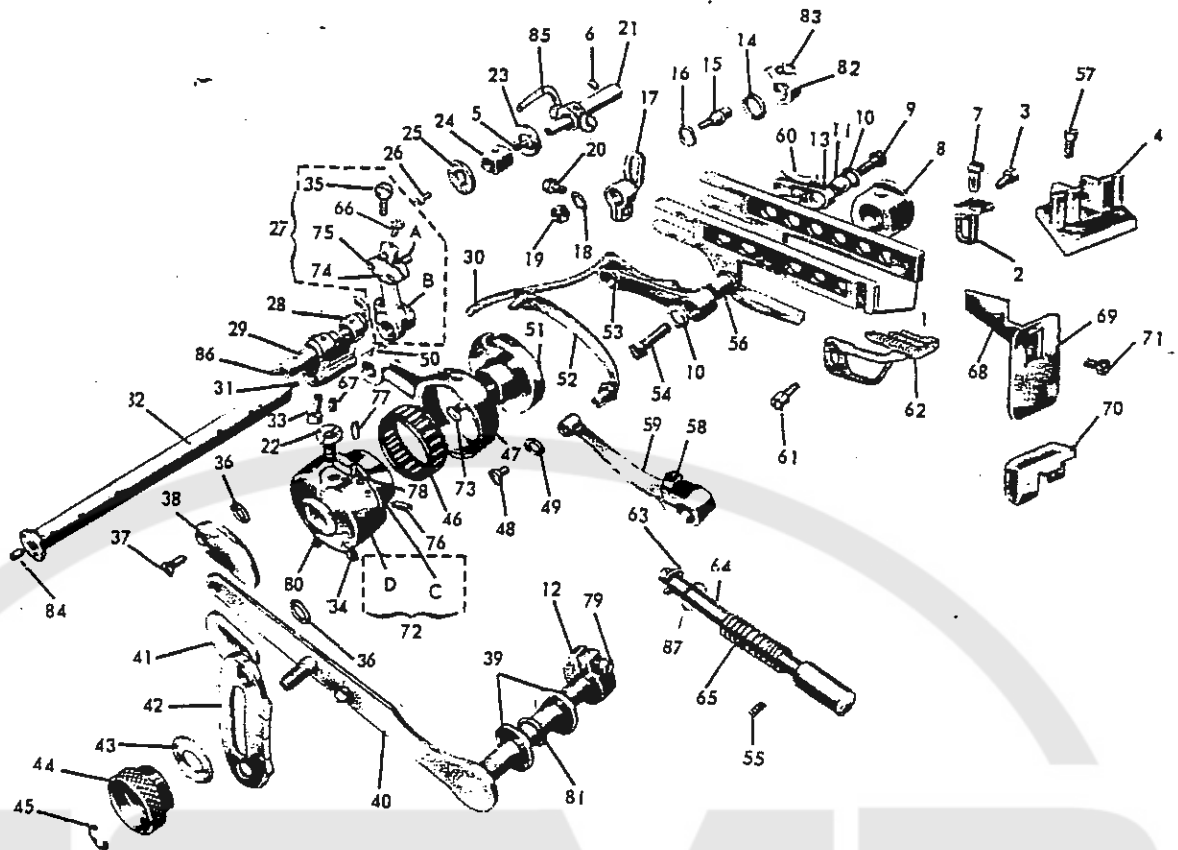




REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	270-016	bushing, needle bar shaft	1	8	270-912	latch pin, workplate	1
2	270-097/1	bushing, upper knife holder	1	9	202045-0-11	bushing, differential shaft	1
3	270-058/2	rear bushing, looper shaft	2	10	270-042/3	bushing (left), differential shaft	2
4	270-057/1	front bushing, looper shaft	2	11	270-642	pin, coverplate centering	1
5	270-268	guide tube, looper thread	2	12	270-082/1	bushing, presserfoot lifter lever	1
6	202004-0-11	base, machine	1	13	270-264	thread guide, needle	1
7	202005-3-11	base with bushings and thread guides	1				

REF. No.	PART. No.	DESCRIPTION	QUANT.	REF. No.	PART. No.	DESCRIPTION	QUANT.
1	PM.27-009/3	main shaft, with connecting rods	1	20	27-0510	pivot, handwheel	1
2	280-012/3	control rod, needle bar	1	21	27-017/2	rockers	1
3	270-116/2	control rod, knife	1	22	270-999	screws, rocker	2
4	270-061/2	control rod, secondary looper	2	23	010-H-13,7	screws for control rods 280-012/3 and 270-116/2	4
5	270-060/1	sleeve, secondary looper control rod	1	24	270-975	screw, sleeve	4
6	270-059/1	sleeve, primary looper control rod	1	25	290-944	lock-screw, connecting rod guide	4
7	270-009/4	main shaft	2	26	092-D-14	lock-screw, connecting rod guide	2
8	270-707	ball bearing, right	2	27	092-C-2	wick	2
9	270-613	spacer, bearing	1	28	270-010/2	bush, intermediate	1
10	270-709	ball bearing, left	2	29	074-A-12	washer, differential	1
11	270-062	guide, connecting rod	1	30	270-722	ring, adjustment	1
12	270-704	snap-ring, right ball bearing	1	31	270-750	cap, main shaft	1
13	270-705	spring, cup	1	32	016-D-5	screw, adjustment	1
14	260-620	flange, right	1	33	270-938	lock-screw, intermediate bush	1
15	270-614	spacer, main shaft right	1	34	023-N-5,5	gnub-screw, pin	2
16	270-008/1	handwheel	1	35	001-E-10	screw, right flange	2
17	270-612/1	washer with guide	1	36	010-D-11,5	screw, looper control rod	3
18	270-981	set-screw, handwheel	1	37	PM.270-059/1	sleeve assembly	1
19	270-608/5	cover with handwheel	1	38	PM.270-060/1	sleeve assembly	1
1	PM.276 B-009/6	main shaft, with connecting rods	1				
6	270-060/1	sleeve, primary looper control rod	1				
7	270-009/3	main shaft	1				
37	PM.270-060/1	sleeve assembly	1				
		for 227-00-32					
		N. B. Bearings reference number 8 can be supplied as separate spares, however it is indispensable to specify on the order sheet the Roman numeral appearing on the outer race of the re-moved bearing.					

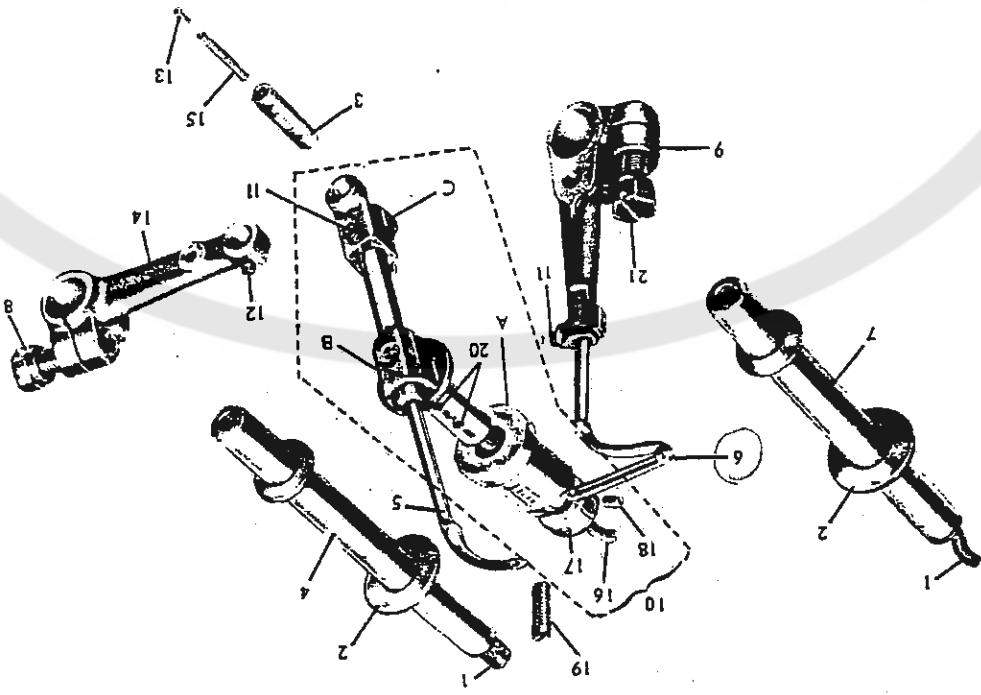




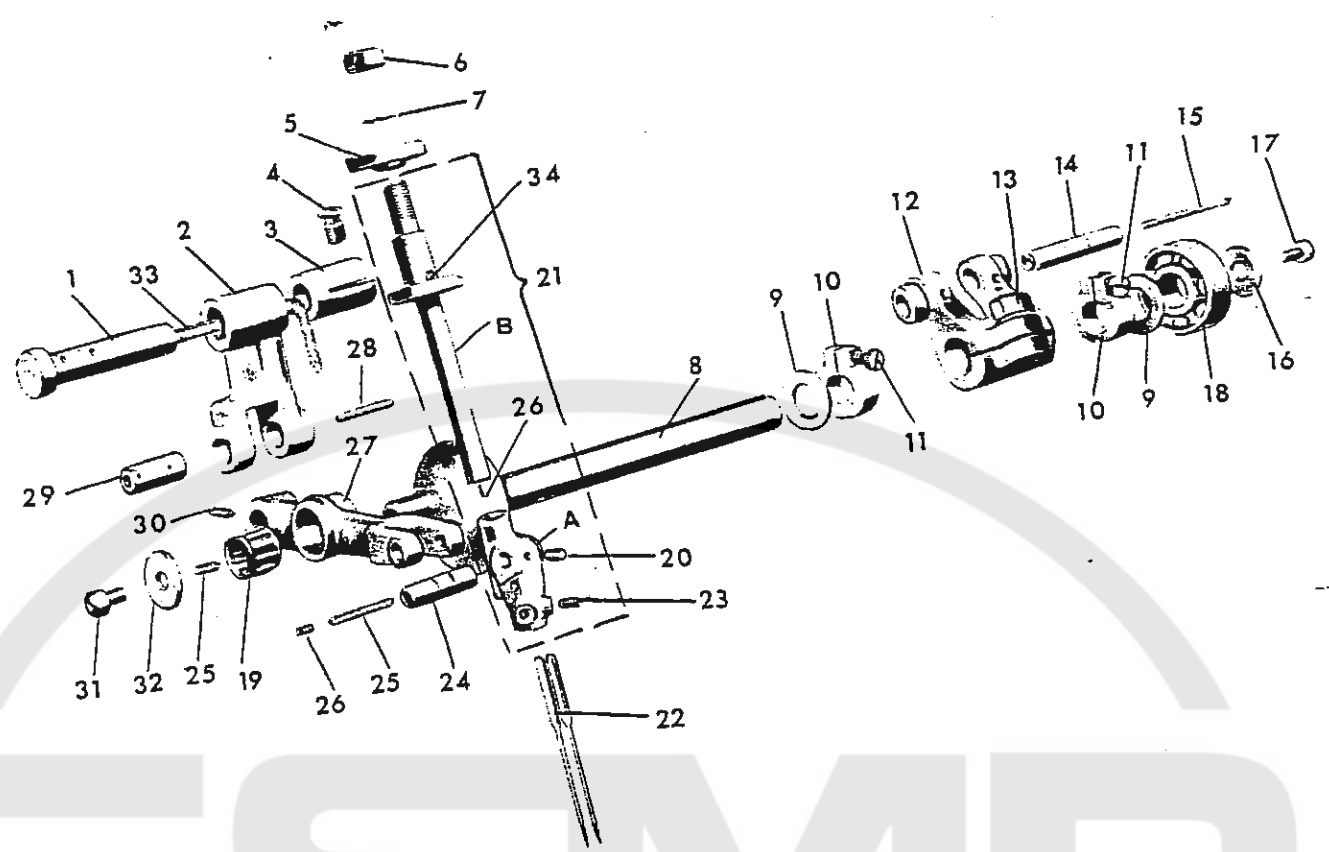
REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	PM.270-049/1	assembly, differential slide	1	47	270-037/3	rod, differential control	1
2	27-27-051	feed dog, rear	1	48	270-984	screw, feed lever	1
3	270-977	screw, attach rear feed dog	1	49	070-B-3	washer, feed lever	1
4	270-640/3	guide block, right differential	1	50	023-N-5,5	securing screw, pin	1
5	092-B-1	oil wick	4	51	270-735	eccentric regulation	1
6	270-937/1	securing screw, differential eccentric shaft	1	52	PM.270-045/2	attachment, differential segment	1
7	27-27-052	feed dog, chaining	1	53	270-033/1	link, differential slide	1
8	270-611/1	eccentric, feed dog lifter	1	54	270-980	securing screw, differential link	1
9	270-979	securing screw, link	1	55	270-943	grub-screw, securing pushbutton	1
10	070-M-4,5	washer, differential links	2	56	270-034	bush for differential slide	1
11	270-035	bush, differential feed slide	1	57	005-L-11	securing screw for guide	2
12	4030-06	collar	1	58	270-997	screw, differential control lever	2
13	270-048	link, differential feed slide	1	59	270-566/1	control lever, differential segment	1
14	073-C-8	washer, pin	1	60	092-D-4	oil wick, differential link	1
15	270-054	pin, differential segment	1	61	270-978	securing screw, front feed dog	1
16	071-M-5,5	washer, diff. ratio increase segment	1	62	27-27-050	front feed dog	1
17	279-047/2	guide segment, diff. ratio increase	1	63	290-700	snap-ring for pushbutton	1
18	070-F-4	washer, diff. ratio pin	1	64	270-736/3	shank, pushbutton	1
19	057-F-4	nut for pin 270-054	1	65	270-738	spring, pushbutton	1
20	270-975	screw, segment	1	66	001A-2,5	screw	1
21	270-039	shaft, differential eccentric	1	67	270-729	set-screw	1
22	270-7391	securing pin	1	68	279-249/1	shield	1
23	071-H-5	washer, differential eccentric shaft	1	69	270-250/2	rubber guard for feed dogs	1
24	270-036/1	sliding block, for differential	1	70	270-253	gasket, slide guide	1
25	270-935	counter-washer	1	71	004-L-7	securing screw, guard	2
26	026-C-7	screw, counter-washer	1	72	PM.270-732/3	housing and cam stitch length eccentric	1
27	PM.270-038/3	complete adjustable differential assembly	1	73	270-734	flat spring	1
28	270-040	yoke, connecting rod	1	74	270-032/3	plate, differential mechanism cursor	1
29	270-031/1	pin, fork yoke	1	75	004-P-6	securing screw, cursor plate	2
30	092-D-6	oil wick, dowel	1	76	270-928	grub-screw, for eccentric slide	2
31	092-D-12	oil wick, rear pivot	1	77	270-929	lock-screw, for grub-screw	2
32	270-041/1	rear pivot, differential	1	78	270-747	gib, eccentric slide	1
33	250-471	screw, yoke	1	79	007-C-11	screw, collar	2
34	017-E-11,5	securing screw, adjustable eccentric	1	80	023-E-12	set-screw, eccentric	1
35	039-H-9	screw, differential segment	1	81	270-595	gasket, differential control lever	1
36	064-F-5	washer, segment	2	82	270-717	collar, differential collar	1
37	270-992	screw, differential segment	2	83	270-927	screw, collar	1
38	270-287/1	upper sector	1	84	270-915	plug, differential pinion bore	1
39	073-A-8	washer, differential drive shaft	2	85	082-D-11	oil wick	1
40	PM.270-562/2	lever, complete differential control	1	86	092-D-23	oil wick	1
41	270-288/1	stop	1	87	270-594	gasket	1
42	270-567	sector with setting marks	1	A	270-046/3	slide for differential adjustment	1
43	065-D-6	washer, knurled knob	1	B	270-038/3	segment for differential adjustment	1
44	270-568	knurled knob, lever lock	1	C	279-733/1	slide, stitch length eccentric cam	1
45	270-702	snap ring	1	D	270-732/3	stitch length eccentric cam	1
46	270-703	needle roller bearing cage	1				

for 227-00-32

REF. N°	PART N°	DESCRIPTION	QUANT.	REF. N°	PART N°	DESCRIPTION	QUANT.
1	092-D-16	oil wick, for pintons	2	13	016-B-2.5	grub-screw, for pin	1
2	073-N-10	washers, loop control lever	2	14	27-77-067	control lever, secondary looper	1
3	270-070	pin, secondary looper control	1	15	092-B-1	oil-wick, for pin	1
4	270-064	shaft, secondary looper control	1	16	092-D-7	oil-wick	1
5	27.277-074/2	secondary looper with large eye	1	17	270-053	shm, adjustment	1
6	270-069	primary looper with large eye	1	18	016-B-3	set-screw	1
7	270-069	shaft, primary looper control	1	19	017-F-11	set-screw	1
8	250-471	screw, looper lever	2	20	092-C-2	felt tube	4
9	270-068/3	loop-holder, primary	1	A	27-77-056/1	adjustable bush	1
10	G.27-77-065/3	oscillating guide, with screw-type bush	1	B	27-77-065/3	oscillating guide	1
11	270-974/1	set-screw, looper	2	C	270-063/2	loop-holder, secondary	1
12	016-B-4	set-screw, primary looper travel	1	21	002-F-14	screw looper lever	1
1	092-D-16	oil wick, for pintons	2	13	016-B-2.5	grub-screw, for pin	1
2	073-N-10	washers, loop control lever	2	14	27-77-067	control lever, secondary looper	1
3	270-070	pin, secondary looper control	1	15	092-B-1	oil-wick, for pin	1
4	270-064	shaft, secondary looper control	1	16	092-D-7	oil-wick	1
5	27.277-074/2	secondary looper with large eye	1	17	270-053	shm, adjustment	1
6	270-069	primary looper with large eye	1	18	016-B-3	set-screw	1
7	270-069	shaft, primary looper control	1	19	017-F-11	set-screw	1
8	250-471	screw, looper lever	2	20	092-C-2	felt tube	4
9	270-068/3	loop-holder, primary	1	A	27-77-056/1	adjustable bush	1
10	G.27-77-065/3	oscillating guide, with screw-type bush	1	B	27-77-065/3	oscillating guide	1
11	270-974/1	set-screw, looper	2	C	270-063/2	loop-holder, secondary	1
12	016-B-4	set-screw, primary looper travel	1	21	002-F-14	screw looper lever	1
						control lever, secondary looper	1
						oil-wick	1
						shm, adjustment	1
						set-screw	1
						set-screw	1
						felt tube	4
						adjustable bush	1
						oscillating guide	1
						loop-holder, secondary	1
						screw looper lever	1
						On request:	
						27-277-074S/2	
						270-075	
						for 227-00-32	
						secondary looper	1
						primary looper	1

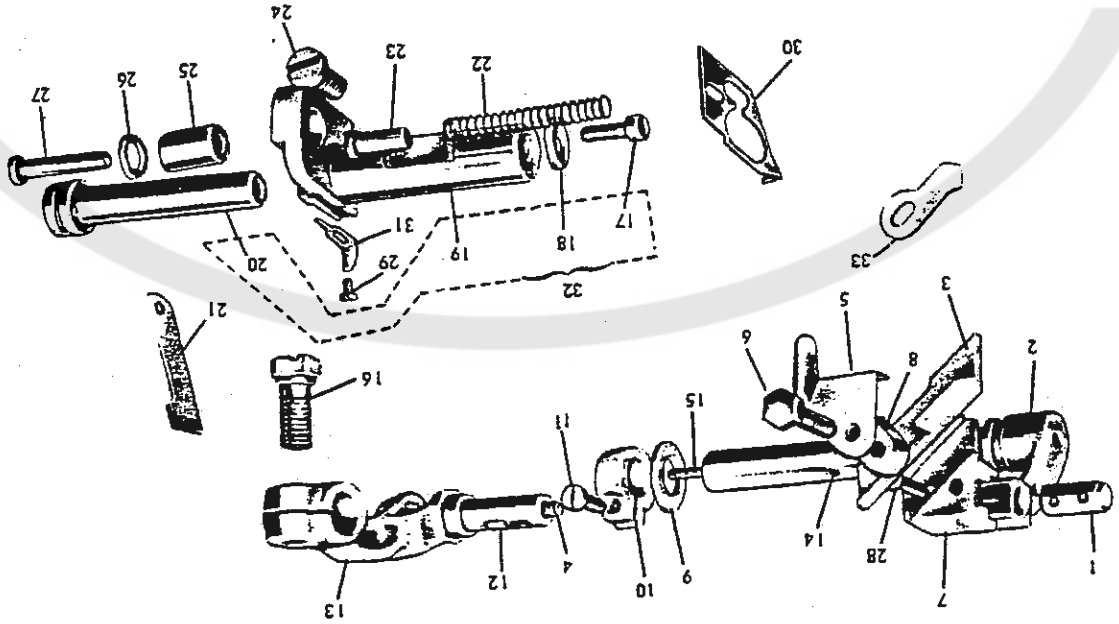




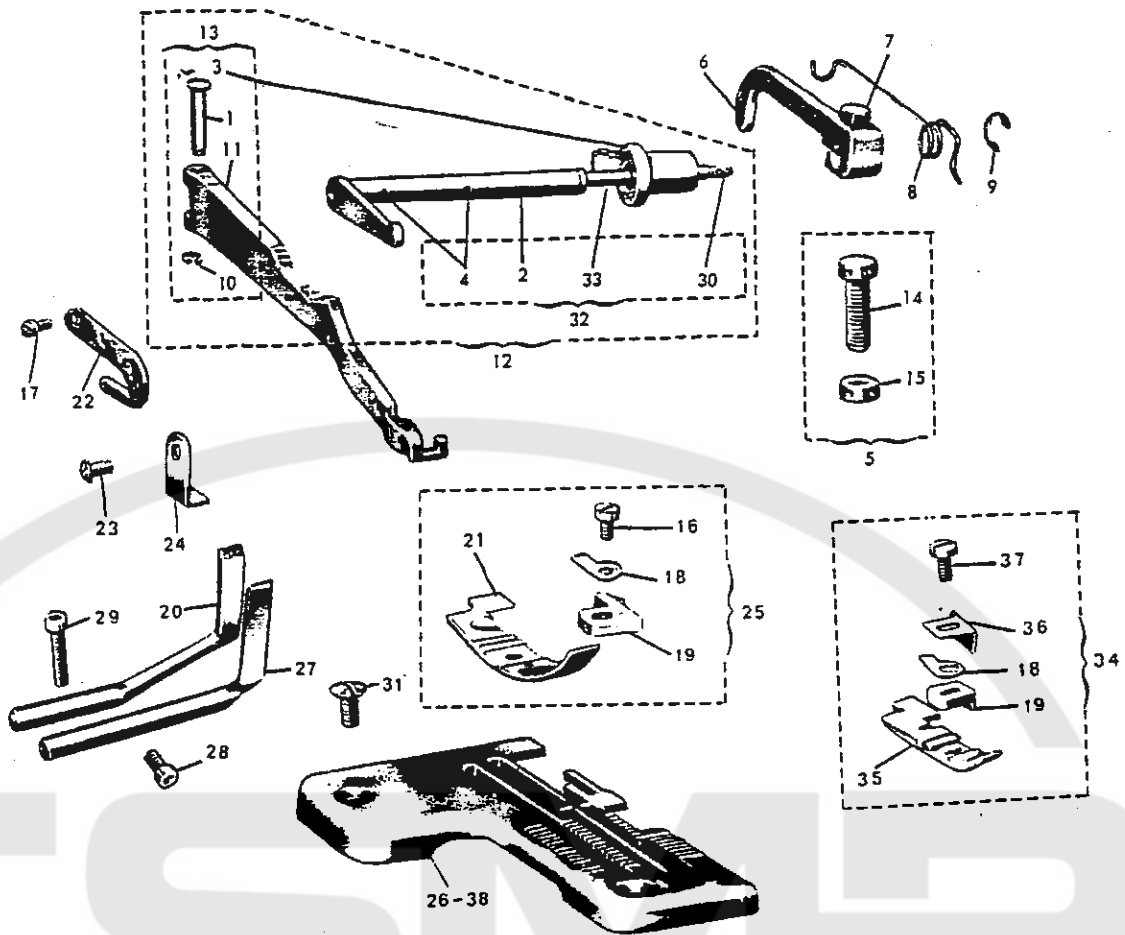


REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	PM.270-138/1	pin, needle lever rocker	1	19	250-708/1	needle bearing cage, needle control lever	1
2	PM.270-137/1	lever, fork	1	20	016-B-2.5	screw, pin securing	1
3	270-132/1	bush, fork lever	1	21	G.27-27-025/4	needle bar assembly with clamp, complete	1
4	270-728/1	securing screw, bush	1	22	RIM.27	needle	2
5	290-027/1	washer, needle rocker pin	1	23	290-944	screw, needle clamp	1
6	270-933	lock-nut, guide pin	1	24	270-130	pin, needle clamp	2
7	270-713	flexible washer	1	25	092-B-1	oil-wick for needle clamp pin	1
8	270-006/1	drive shaft, needle bar	1	26	016-A-2.5	grub-screw, needle bar clamp pin	1
9	073-F-9	washer, upper shaft	2	27	270-135	lever, needle holder slide control	1
10	270-719	collar, upper shaft	2	28	092-D-5	oil-wick for pin	1
11	007-C-11	screw, for collar	2	29	270-133/1	pin, fork lever	1
12	270-007/1	attachment, drive shaft	1	30	023-N-5,5	set-screw, needle bar control lever	1
13	270-975/1	screw, attachment drive shaft	1	31	001-E-7	screw, upper shaft	1
14	270-031/1	pin, attachment drive shaft	1	32	270-131	shim, adjustment	1
15	092-D-6	oil-wick, for pin	1	33	092-D-11	oil-wick, for pin	1
16	071-E-5	washer, upper shaft	1	34	092-A-10	oil-wick, for needle bar	1
17	001-G-10	screw, washer	1	A	27-27-020/3	needle clamp	1
18	270-708	bearing, upper shaft	1	B	290-025/1	needle bar	1

REF. No.	PART. No.	DESCRIPTION	QUANT.
1	270-102	pin, upper knife holder	1
2	270-096/1	upper knife holder	1
3	27-77-112	upper knife, serrated	1
4	092-D-5	oil-wick	1
5	128-111	trimming guard, upper knife	1
6	270-987	securing screw, upper knife	1
7	270-099	block, upper knife holder	1
8	270-103	lock-pawl, upper knife	1
9	073-F-9	washer, upper knife holder	1
10	270-719	collar, upper knife holder	1
11	007-C-11	screw, upper knife holder collar	1
12	270-108/1	pin, yoke attachment	1
13	270-098	yoke attachment	1
14	092-C-2	oil-wick for yoke attachment pin	2
15	092-D-9	oil-wick for knife holder	1
16	250-471	screw, upper knife lever	1
17	007-P-10	set-screw, lower knife	1
18	064-L-5	washer, for pin	1
19	270-104	lower knife holder	1
20	270-105	pin, lower knife holder	1
21	277-113	lower knife	1
22	270-100	spring, lower knife	1
23	270-106	pressure pin, lower knife	1
24	003-L-12	securing screw, lower knife holder	1
25	270-101	bushing, lower knife guide	1
26	070-F-4	washer, for bushing	1
27	270-877	screw, bushing	1
28	028-B-5	screw, upper knife holder	1
29	004-A-5	securing screw, angle stop	1
30	27-77-227	brace-plate, rear needle guard	1
31	27-77-228	angle stop, front needle guard	1
32	PM.270-104/1	knife holder, lower	1
33	128-110	trimming guard upper knife	1
3	276-B-112	upper knife for 227-00-32	3
			1
QUANT.	PART. No.	DESCRIPTION	QUANT.

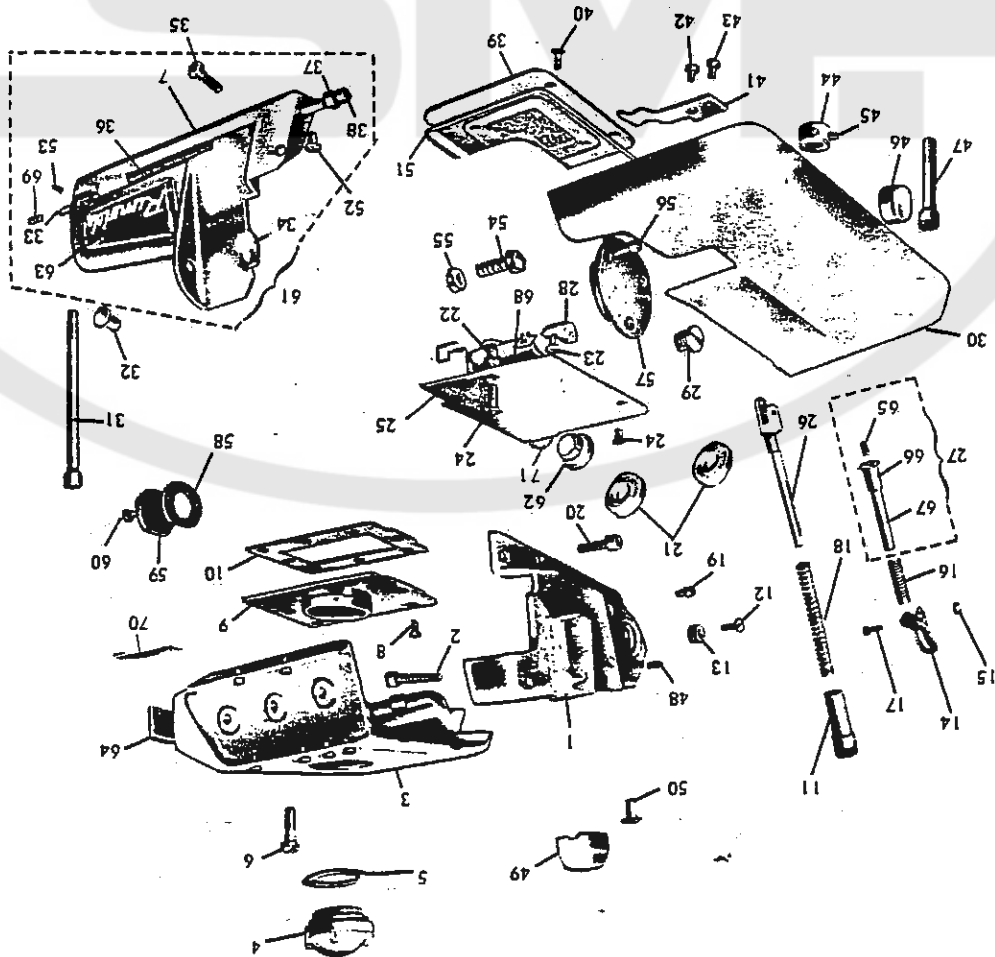


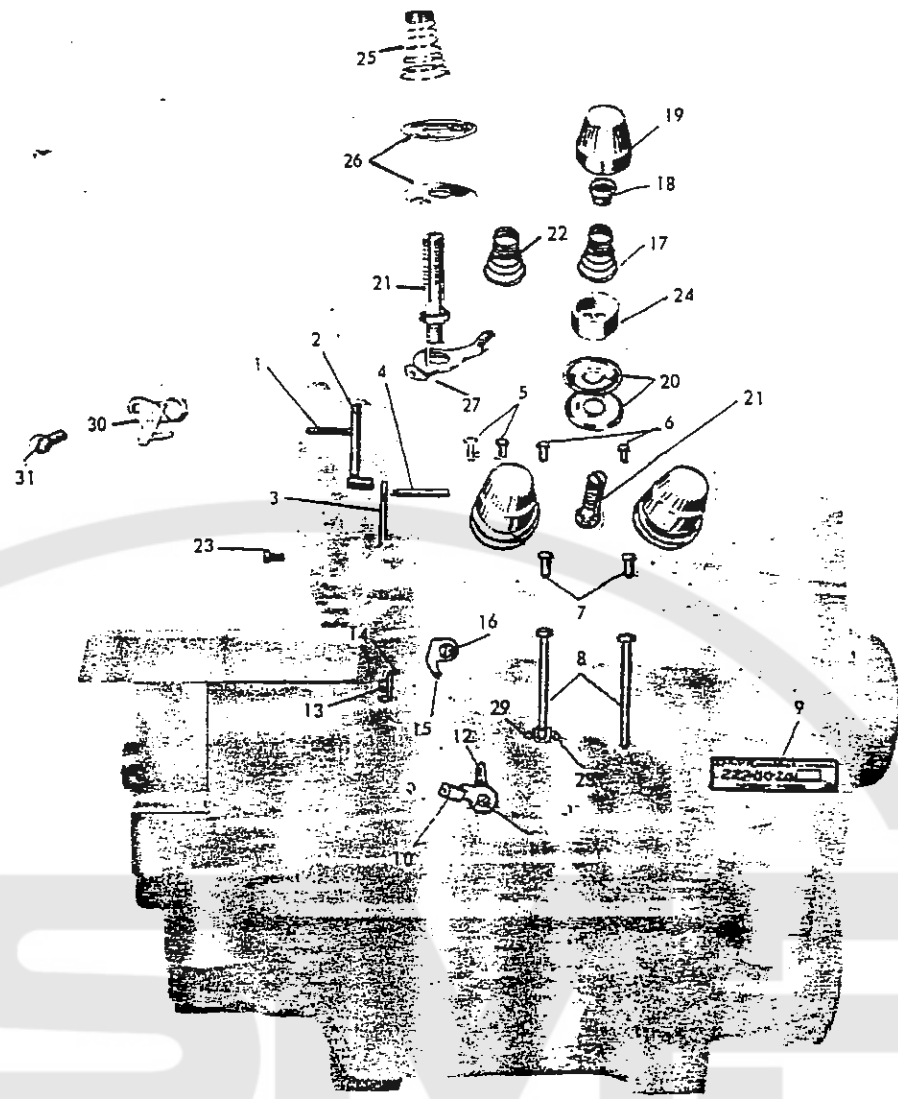
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REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	270-077	pin, presserfoot arm	1	18	27.77-196	bracket, presserfoot	1
2	270-081/1	shaft, presserfoot lifter lever	1	19	272 68-191	chaining finger, presserfoot	1
3	270-083	bushing, presserfoot lifter lever shaft	1	20	27-277-109/1	needle guard, rear	1
4	092-C-2	oil-wick	4	21	27.26-184	shoe, presserfoot	1
5	PM270-085/1	stop-pin, lever stroke adjustment	1	22	270-188	chain cutter	1
6	270-087/1	lever, presserfoot lifter	1	23	27.01 P-403/1	screw, angle mounting	1
7	270-985	screw, presserfoot lifter lever	1	24	27.26-186	angle stop presserfoot	1
8	270-089/1	spring, presserfoot lifter lever	1	25	G 27.277-181	presserfoot assembly	1
9	270-714	snap-ring, presserfoot lifter lever shaft	1	26	27.277-114	needle plate for narrow bight	1
10	270-701	snap-ring	1	27	27.277-107/1	needle guard, front	1
11	27-778-076/1	presserfoot arm	1	28	270-936/2	screw, front needle guard	1
12	G 27-778-076/1	presserfoot arm assembly	1	29	270-934/2	screw, rear needle guard	1
13	PM27.778-076/1	coupling, presserfoot lifter lever	1	30	092-D-11	oil-wick	1
14	270-085/1	stop-pin, presserfoot lifter lever travel	1	31	032-L-10,5	screw, needle plate securing	2
15	270-091	lock-ring, for item 14	1	32	PM 270-081/1	shaft, presserfoot arm, complete	1
16	004-L-8	screw, presserfoot chaining finger	1	33	270-073	tube, protection	1
17	001-A-4,3	screw	1				
		for 227-00-32					
34	G27.26-181/1	presserfoot assembly	1				
35	27.26-184/1	shoe presserfoot	1				
36	27.77-183	chaining plate	1				
37	004-L-9	screw, presserfoot chaining finger	1				
38	27.26-114/1	needle plate	1				

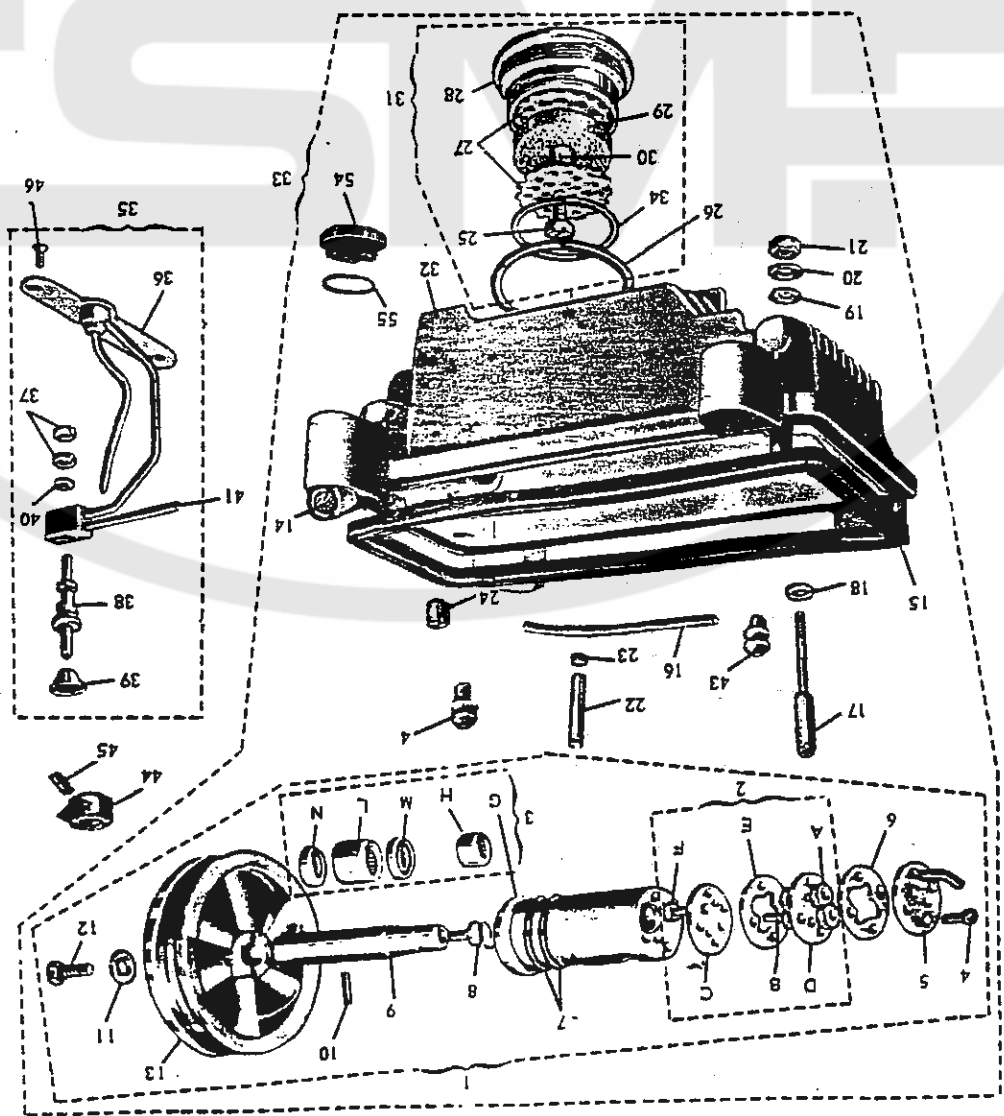
REF. No.	PART. No.	DESCRIPTION	QUANT.	REF. No.	PART. No.	DESCRIPTION	QUANT.
1	PM.270-208/3	side cover, with bushing	1	35	007-F-14	screw, cover	1
2	007-H-25	screw, top cover	1	36	270-221	spring, front cover	1
3	PM.27-27-20/5/3	oil-cap, with thread take-up bushing	1	37	054-D-4	nut, retaining	1
4	270-241/2	oil-cap, with window	1	38	270-226	screw, front cover securing	1
5	270-965/2	packing ring, oil-cap	1	39	G.270-242/3	plate, complete with filters, tubes	1
6	270-983	screw, cover securing	1	40	028-E-10	screw, bottom plate securing	1
7	PM.270-218/2	hinge assembly with guide tubes	1	41	270-212	spring, workplate latch	1
8	007-R-7.5	screw, securing oil-cap plate	1	42	001-D-6	screw, spring securing	1
9	G.270-245/4	oil-cap plate	1	43	001-D-4.5	screw, spring securing	1
10	270-246	oil-cap plate gasket	1	44	270-718	collar, workplate pin	1
11	270-093/1	cap, spring adjustment	1	45	017-E-4.5	screw, collar	1
12	032-F-9.5	set-screw, stop cam	1	46	270-030	plug, differential shaft seal	1
13	605-412	stop cam	1	47	270-973	screw-bolt, machine assembly, short	1
14	270-094	lever, presserfoot locking	1	48	270-715	set-screw for adjustment cap 270-093/1	1
15	270-701	snap-ring	1	49	270-129/1	cap, guide pin	1
16	270-086	spring, presserfoot release rod	1	50	270-731/1	plug, attachment Wisal	1
17	270-078	pin, presserfoot release lever	1	51	270-231	gasket	1
18	2701-P-092	spring, presserfoot pressure	1	52	01205/A	screw, front cover plate securing	1
19	270-993	set-screw	1	53	270-913	pin, front cover plate	1
20	270-995	screw, top cover securing	2	54	270-214	set-screw, side cover plate	2
21	270-066/2	plug, looper bushing	2	55	057-E-4	nut, set-screw	2
22	270-303	nut, cover	1	56	005-M-10	screw, side flange, left	1
23	026-E-10	screw, seal plug securing	1	57	270-619	flange, left side	1
24	026-C-7	screw, splash guard securing	2	58	270-624	gasket, sealing disc	2
25	270-247/1	splash guard	1	59	270-623/1	sealing disc	1
26	PM.270-095/3	shaft, presserfoot pressure	1	60	001-D-10	screw, sealing disc	1
27	G.270090/1	release rod, presserfoot	1	61	G.270-216/2	cover plate assembly, front	1
28	270-248/1	pin, seal	1	62	270-030/2	screw, plug	1
29	270-940	plug, screw	1	63	270-175	nameplate, front cover plate	1
30	PM.270-210/3	work-plate assembly	1	64	270-174	nameplate, tensioning disc housing cover	1
31	270-972	screw-bolt, machine assembly	1	65	290-923	set-screw, tie-rod	1
32	270-730/2	screw, plug	1	66	270-090/1	block, tie-rod	1
33	270-220/1	pin, front cover plate	1	67	270-110	tie-rod	1
34	PM.270-217/2	cover, looper and take-up	1	68	PM.270-301	splashguard assembly	1
				69	016-E-5.5	screw bracket	1
				70	270-653	screw	1
				71	270-926	screw	1

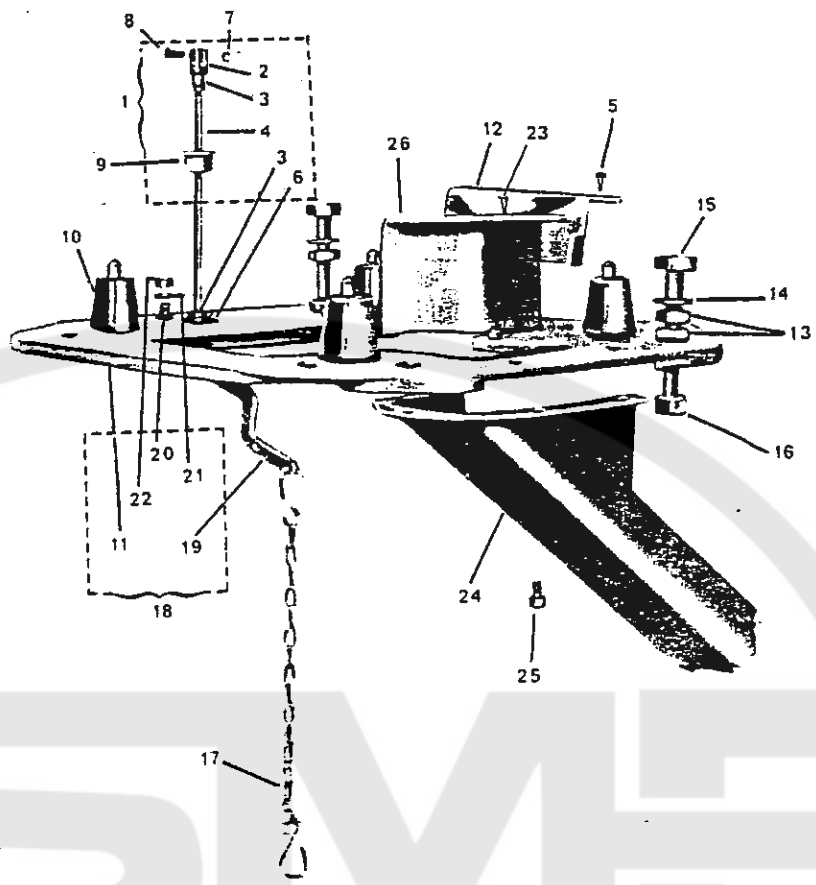




REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	270-941	screw, thread guide tube securing	1	17	272-232.1	spring, primary looper	2
2	PM270-263/1	tube, needle thread guide	1	18	270-233	bushing, upper tension	4
3	270-274/3	take-up, needle thread	1	19	202558-2-00	nut, tension adjusting	4
4	270-264	needle thread guide	1	20	603-031	disc, tension	6
5	270-265	bush, upper thread guide	2	21	270-230	pin, tension screw	4
6	270-265/1	bush, upper thread guide	2	22	270-232/2	spring, needle	1
7	270-266	bush, lower thread guide	2	23	004 N-5.5	screw, needle take-up securing	2
8	270-268	tube, lower thread guide	2	24	202556-0-00	cup, tension disc	4
9	780220-0-00	machine type nameplate	1	25	270-232.1	spring needle	1
10	270-269/2	take-up, primary looper	1	26	250-031	disc tension	2
11	004 L-8	screw, take-up securing	1	27	27 27-253	thread guide	1
12	270-270/2	take-up, secondary looper	1	28	016 B-2.5	screw	1
13	004 A-3.2	screw, bracket securing	1	29	27 00-2714	thread guide	1
14	270-276/1	bracket, looper	1	30	3 27.27-262.2	needle thread take-up assembly	1
15	27.277-2751	thread guide, secondary looper	1	31	004 P-4.5	screw	1
16	032-A-6	screw, thread guide securing	1				
		for 227-00-32					
9	780232-0-00	machine type nameplate	1				
29	270-271	thread guide	1				

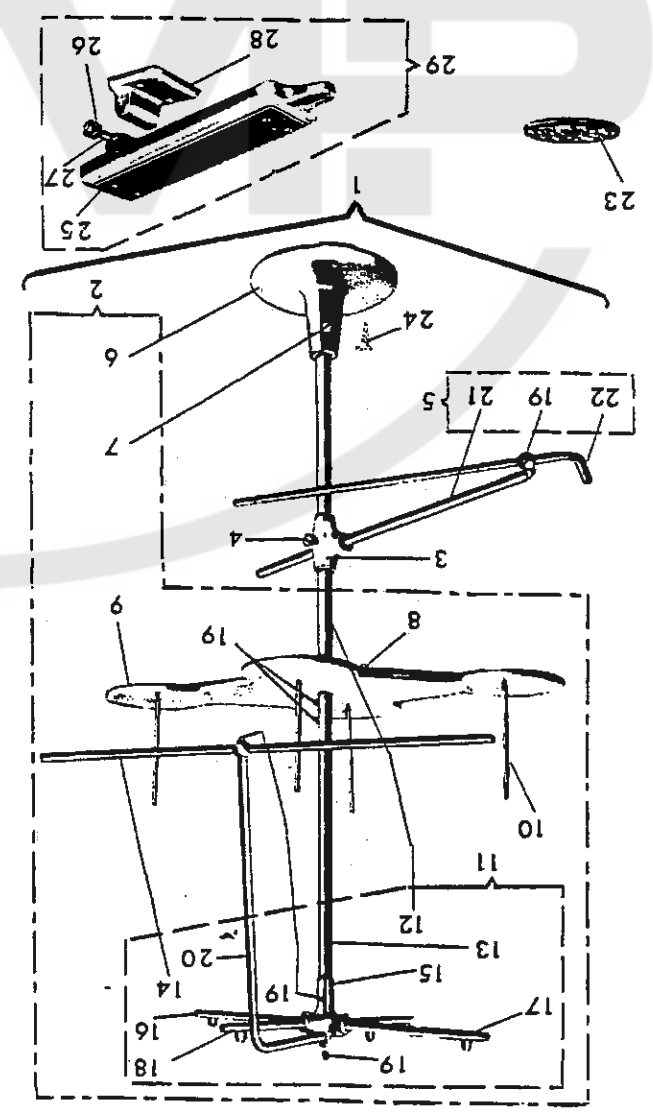
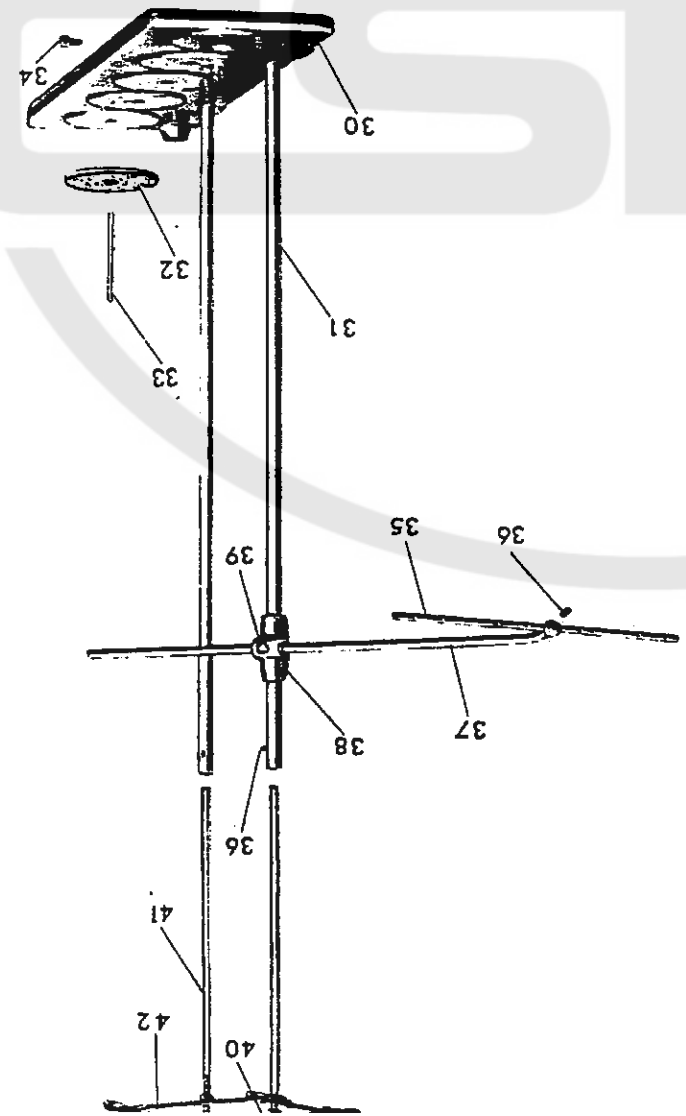
REF. No.	PART. No.	DESCRIPTION	QUANT.	REF. No.	PART. No.	DESCRIPTION	QUANT.
1	G.270-816/1	oil pump assembly	1	34	270-966/1	gasket	1
2	G.633-833/1	gear assembly	1	35	G.270-646	oil distributor assembly	1
3	PM.270-816/1	pump unit	1	36	PM.270-645/1	oil distributor	1
4	633-812	screw	4	37	057-A-3	nut	1
5	PM.633-817/1	cover	1	38	270-650	valve	2
6	633-818/1	washer	1	39	270-651	gasket	1
7	633-711/1	gasket	2	40	270-734/1	flexible washer	1
8	270-824/1	worm	1	41	270-652	junction tube	1
9	270-823/1	shaft	1	43	633-826/1	coupling tube, oil pump	2
10	633-708	flexible pin	1	44	270-645	pointer, oil distributor	1
11	633-707	cup spring	1	45	016-B-2,5	grub-screw, pointer	1
12	039-G-10	screw, pulley securing	1	46	028-E-10	screw	2
13	270-810/2	pulley, oil pump	1				
14	633-959/1	oil level window	1				
15	270-808/1	gasket	1				
16	633-842	tube	1				
17	270-811/1	pin	2				
18	270-946	gasket	2				
19	270-947	gasket	2				
20	065-L-5	washer	2				
21	059-G-6	nut	2				
22	270-831/1	tube	1				
23	270-836	felt pad	1				
24	017-H-12	grub-screw	1				
25	007-L-20	screw	1				
26	633-966	gasket	1				
27	270-828/1	disc	1				
28	270-996/2	plug	1				
29	270-827/1	felt disc	1				
30	633-925	spacer	1				
31	G.270-996/2	plug, oil sump	1				
32	270-001/2	oil sump	1				
33	205520-5-00	oil pump and sump assembly complete	1				
1	G.270-816/1	current plug	1	54	270-432/1	current plug	1
1		rubber gasket	1	55	270-430	rubber gasket	1
1		gear wheel	1	A	633-821/2	gear wheel	1
1		gear wheel pin	1	B	633-822/2	gear wheel pin	1
1		gear plate, side	1	C	633-819	gear plate, side	1
1		gear plate, inner	1	D	633-833	gear plate, inner	1
1		washer, inner	1	E	633-818/1	washer, inner	1
1		drive shaft	1	F	633-834/1	drive shaft	1
1		housing, pump	1	G	270-816/1	housing, pump	1
1		roller housing	1	H	633-814	roller housing	1
1		roller housing	1	L	633-813	roller housing	1
1		seal ring	2	M	670-702	seal ring	2



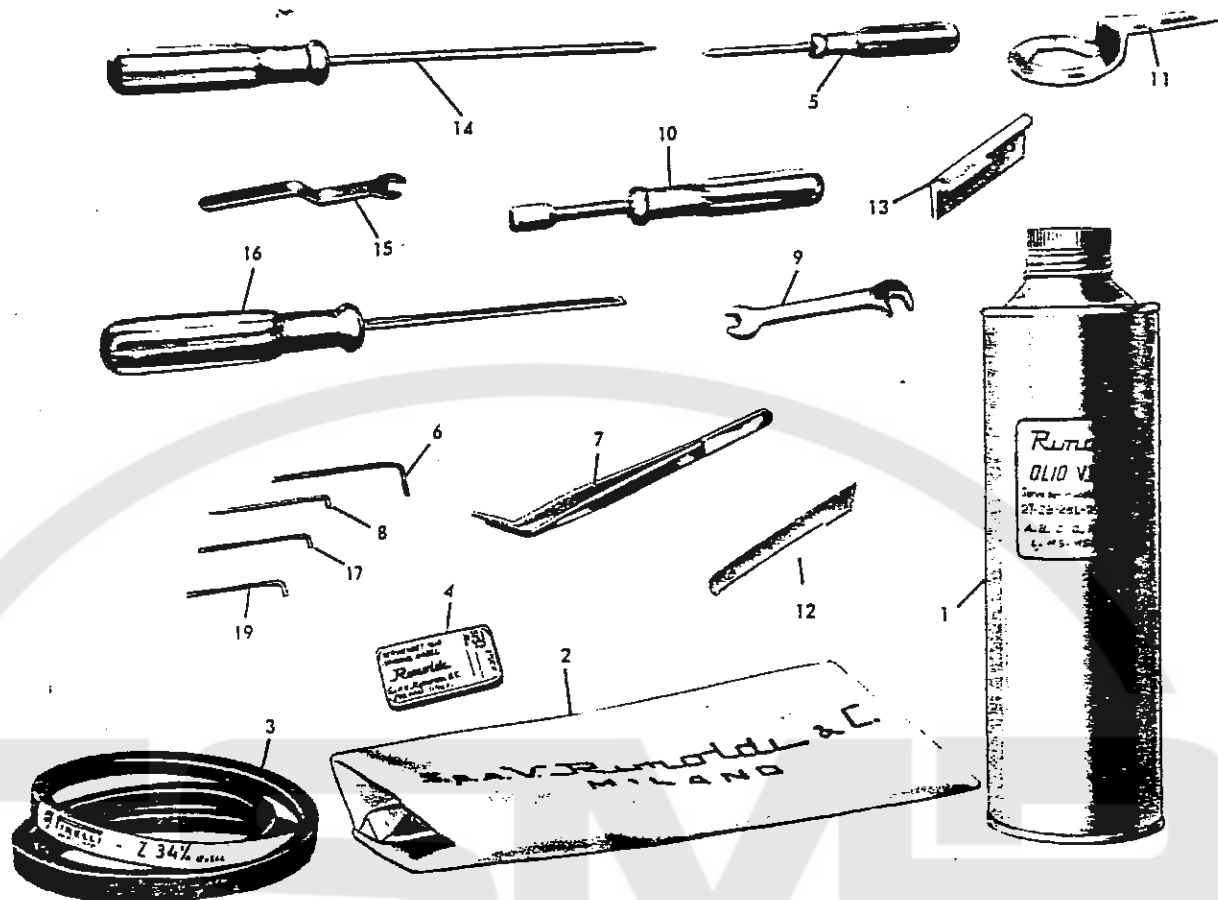


REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	G.270-583	tie-rod assembly, presserfoot lifter lever	1			ON REQUEST	
2	270-585	coupling, presserfoot lifter lever upper	1				
3	059-A-5	lock-nut, lifter lever tie-rod	2	23	270-558	pin	1
4	270-583	rod, presserfoot lifter lever	1	24	270-590/1	waste chute (long - right)	1
5	270-459	lock-screw, flywheel guard	7		270-590/2	waste chute (left)	3
6	270-557	coupling, presserfoot lifter lever	1	25	001-G-10	screw, waste chute securing	1
7	270-701	snap-rings	3	26	270-589/1	waste chute -short	
8	270-558	pin, for coupling	2				
9	270-552	bushing, upper plate	1				
10	270-004	rubber mounts, machine	4				
11	PM.270-005/3	bearing plate, with pins	1				
12	270-588	guard, flywheel	1				
13	058-M-10	nut, machine bearing screw	8				
14	067-H-10	washer, machine bearing plate	4				
15	270-971	screw, machine bearing plate	4				
16	051-L-10	nut, machine plate mounting bolt	4				
17	PM.1159	chain with hook	1				
18	G.270-005/3	machine bearing plate	1				
19	270-586/1	lever, presserfoot lifter	1				
20	270-584	pivot, presserfoot lifter lever	1				
21	065-L-6	washer	3				
22	059-H-6	nut, presserfoot lifter lever pivot	1				

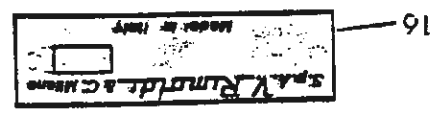
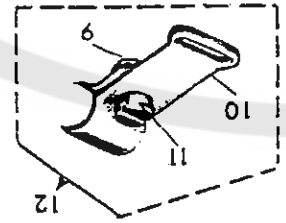
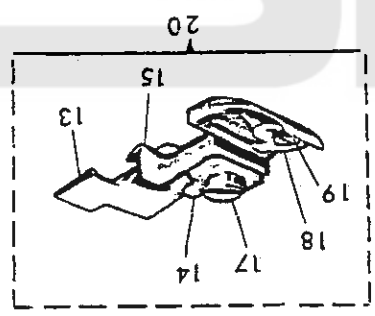
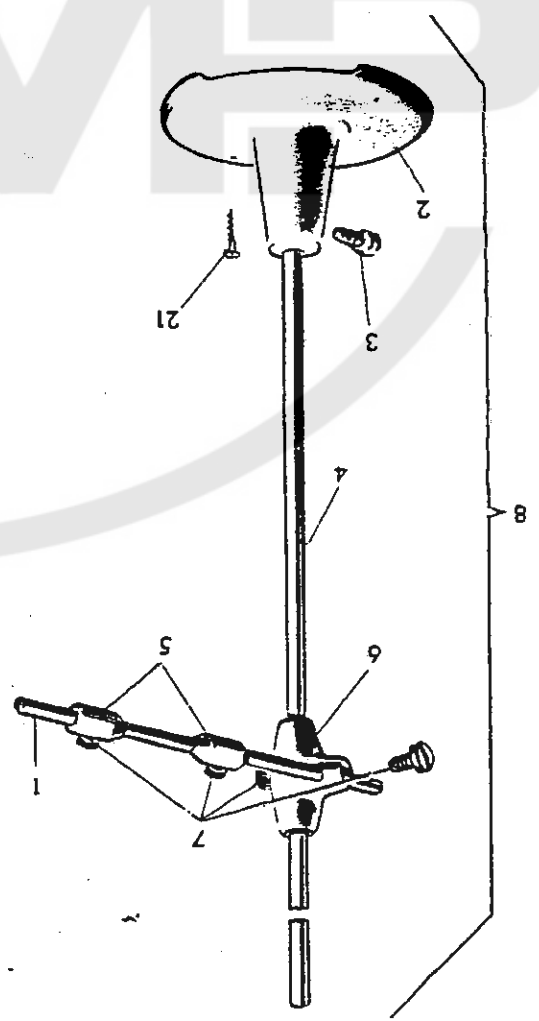
REF. N°	DISSEGNO N°	DENOMINAZIONE	QUANT.	REF. N°	DISSEGNO N°	DENOMINAZIONE	QUANT.
1	AS.2727-140	thread stand assembly complete	1	30	490/2	thread spool	1
2	AS.260-140	thread stand assembly complete	1	31	910-143	upright, main	1
3	605-937	bracket	1	32	569	pad, thread spool	2
4	605-980	lock-screw	2	33	1146	pin, thread spool	2
5	32727-157	bar sustaining with thread guide rod	1	34	001-G-10	cap-screw	1
6	01141	base, thread stand	1	35	270-157	rod, thread guide	1
7	001-G-12	screw, rod securing	1	36	016-F-5	grub-screw	1
8	001-G-10	screw, plate securing	1	37	270-158/1	rod, thread guide	1
9	260-142	plate, thread spool	1	38	605-937	bracket, thread guide rod sustaining bar	1
10	1146	pin, thread spool	4	39	605-980	lock-screw	4
11	3260-137	frame, thread guide assembly	1	40	1145	lock-nut, thread guide sustaining	1
12	250-143	upright, main lower	1	41	910-144	upright, top section	1
13	250-130	upright, main upper	1	42	G 497	thread guide assembly	1
14	250-137	rod, thread guide	1				
15	260-140	connector-piece, rod	1				
16	PM 260-134/1	rod, thread guide	1				
17	PM 260-133/1	rod, thread guide	1				
18	PM 260-135/1	rod, thread guide	1				
19	016-F-5	grub-screw	10				
20	PM 250-148/1	sustaining rod, thread guide rod upper	1				
21	270-158/1	bar, thread guide sustaining lower	1				
22	2727-137	rod, thread guide	1				
23	569	pad, thread spool	4				
24	TS 20 x 30	screw, thread stand securing	2				
25	PM 910-914	pedal	2				
26	053-H-8	mt, pedal	2				
27	910-964	screw, sharp	2				
28	910-934/1	base, pedal	2				
29	3 910-914/1	pedal assembly complete	1				







REF. N°	PART. N°	DESCRIPTION	QUANT.	REF. N°	PART. N°	DESCRIPTION	QUANT.
1	VR.604	oil, 1 quart can	1	10	270-741	pipe-wrench, 9/32"	1
2	1175	machine cover	1	11	639-M-745	wrench for oil sump plug	1
3	280-155	vee-belt	1	12	277-113	knife, lower	1
4	RIM.27	needle, RIM.27	6	13	2777-112	knife, upper	1
5	1151/2	screwdriver	1	14	01160/2	screwdriver	1
6	633-742	hex. wrench, 1/8" for 270-715	1	15	270-745	hex. wrench, 9/32"	1
7	1158	pincers, threading	1	16	01161/2	screwdriver	1
8	641-LY-743	hex. wrench 3/32"	1	17	270-743	hex. wrench, 5/64"	1
9	1156/1	wrench, double-ended	1	18	270-431	power cable and plug	1
				19	290-746	hex. wrench 1/16" for needles	1
						On request: 270-675/1	
						Tab. 75	

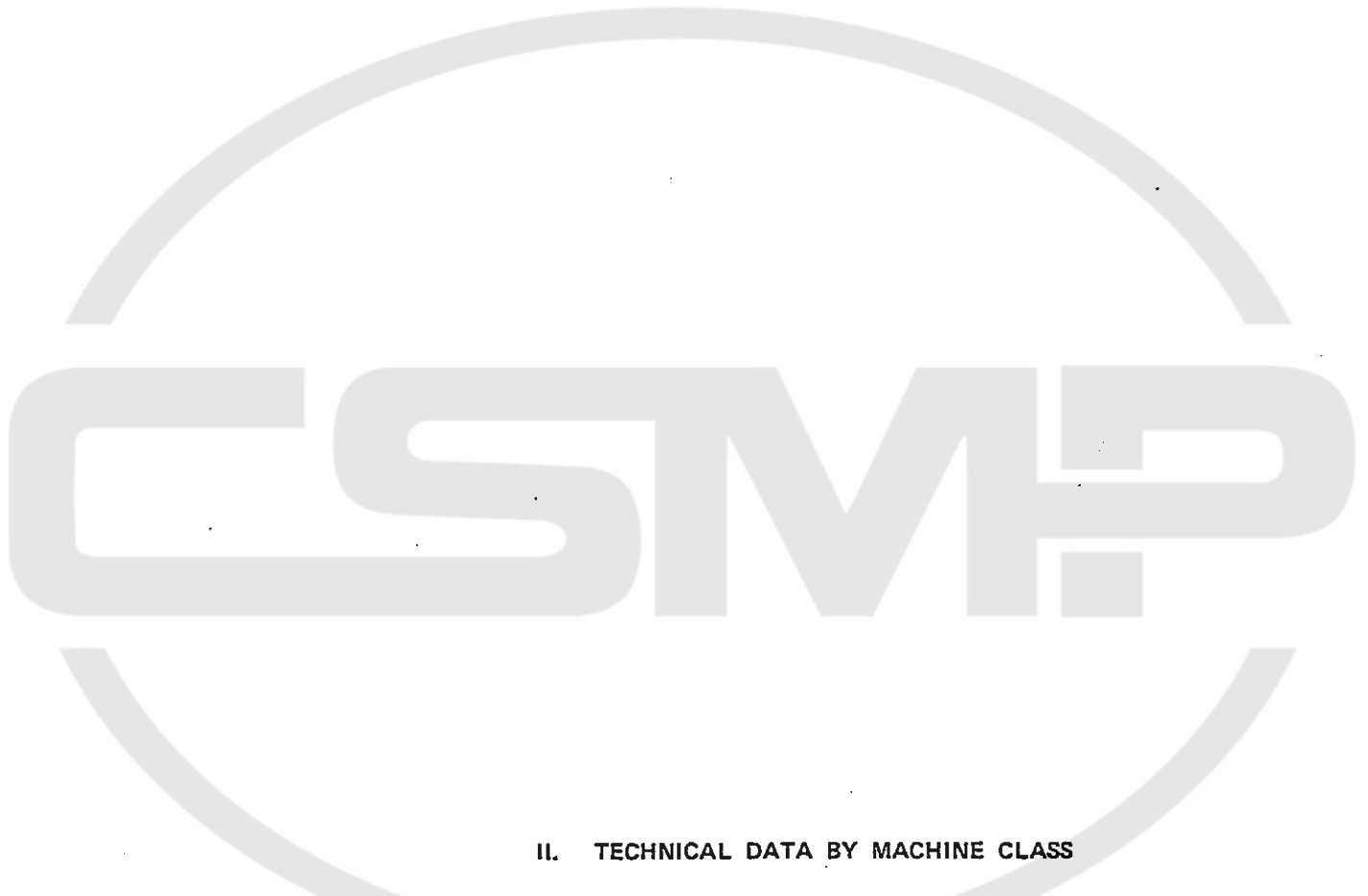


REF. No.	PART No.	DESCRIPTION	QUANT.	REF. No.	PART No.	DESCRIPTION	QUANT.
1	605-144	bar, top	1	12	PM27.77 R-267	guide, reinforcing tape, complete	1
2	01141	base	1	13	27.277 R-184	shoe	1
3	001 G-12	screw	1	14	27.277-136	lug, chaming plate	1
4	605-143	uppright	1	15	27.268-131	finger, chaming	1
5	605-723	tapered sleeve	2	16	780256-0-03	machine, type nameplate	2
6	605-937	bracket	1	17	004 L-8	screw	1
7	605-980	knurled head screw	4	18	27.277 R-071	plate	4
8	G250 R-9373	elastic reel stand	1	19	004 G-3	screw	1
9	057 A-3	nut	1	20	G27.277 R-181	presserfoot, complete	1
10	27.77 R-267	guide, reinforcing tape	1	21	TS 20X30	screw, frame securing	1
11	001 C-5,5	screw	1				1

## I. HEAD IDENTIFICATION

### a) Identification numbers

1. Every head is identified by:
  - class or sub-class number
  - serial number
2. The class and sub-class number are engraved on the name-plate, on the base of the machine.
3. The head serial number is engraved on a boss on the bottom of the base.



## II. TECHNICAL DATA BY MACHINE CLASS

The machines depicted in this catalogue are overedging machines with 2 needles, needle gauge 3/32", with the following general characteristics:

1. Straight needle, system RIM 27/Fmb - Thickness 80 - 100.
2. Differential can be regulated while machine is running.
3. Push-button stitch length adjustment.
4. Stitch length variable from 6 to 30 stitches per inch.
5. Differential feed ratio: up to 3,5:1 and also up to 4:1.
6. Width of bight: from 3/16" to 5/16".
7. Speed: from 6000 to 6500 RPM, depending on the type of application and manufacture.
8. Lubrication: by pump.
9. Motor: 1/3 HP or 1/2 HP, according to subclasses.
10. Outer dimensions of machine head: 12" x 9.3/4".
11. Weight: approx. 45 lbs.



## I. INSTALLATION AND TIMING

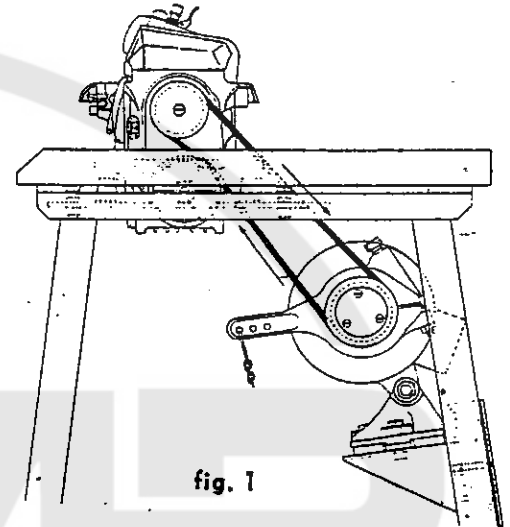
### a) Positioning of head

After motor is mounted on stand, proceed as follows:

1. Force-fit the four rubber shock absorber pads on to the pins provided on the machine head bearing plate
2. Place machine head on table centering the lower holes in the head on the shock absorber pad pins.

### b) Assembly of transmission

1. Install driving belt as shown in diagram 1.
2. Check that reverse of driving belt rides firmly and squarely on pump pulley, without slipping.
3. Adjust belt tension by loosening motor clamp
4. Level machine head by adjusting machine cradle bolts.
5. Tighten up machine cradle bolt lock-nuts.



### c) Filling lube oil sump (fig. 2)

1. Unscrew threaded cap 'A'.
2. Pour in 1 and 3/4 pts Esso Standard Teresso 43 oil.
3. Check through oil-window that oil level is between the two red lines.
4. Replace and tighten cap 'A'.
5. Before starting up the machine, the following points should be lubricated:
  - needle clamp guide rod
  - upper looper bar
6. Start machine slowly, letting it idle for about 5 minutes and gradually rev up from 1500 r.p.m. to rated operating speed.

### d) Assembly and adjustment of sewing parts

**Note:** The operations described below are for machine timing

1. Timing gauges required:
  - S.1686.00 for all operations except operation 4 (fig. 4).
  - S.1555.00 for operation N. 4
2. Preliminary disassembly of:
  - Front cover plate
  - Both thread take-ups of lower looper holder
  - Side Cover Plate (casing) of needle movement
  - Upper plate with oil indicator cap
  - Side plate protecting needle movement
  - Main feed dog

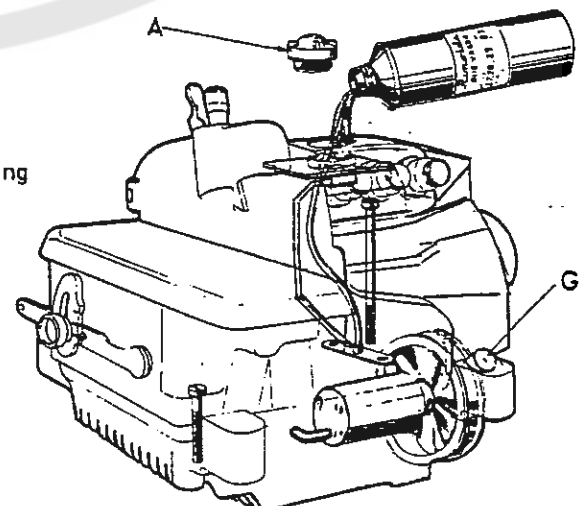


fig. 2

3. Setting of needle (fig. 3).

- if the needle plate is in proper position, the needles must be centred for passage through the respective needle holes of the needle plate.
- the distance between the needle points and the top surface of the needle plate is 11/32 inch when the needle is at its highest point.

- if adjustment is necessary, loosen screw A (fig. 3) and move needle bar clamp up or down, using needle gauge S.1686.00 as indicated in fig. 3 to obtain the correct setting. Retighten screw A.

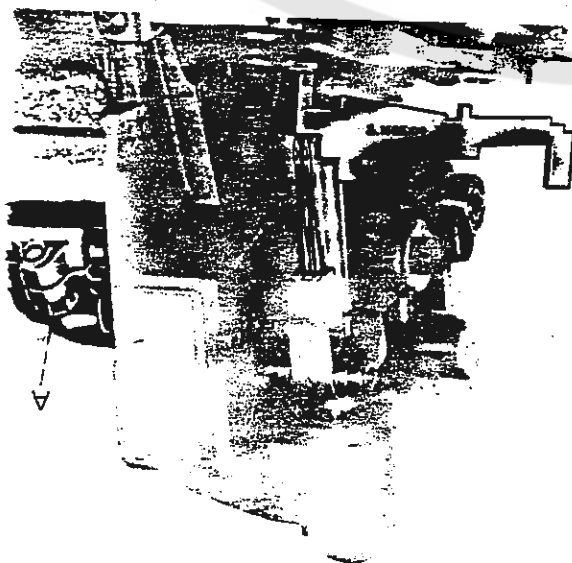


fig. 3

4. Setting primary looper (fig. 4)

SETTING OF HEIGHT

- loosen screw E.
- mount looper height gauge S.1555.00 on the primary looper shaft with special screw supplied with gauge as shown in fig. 4.
- raise or lower looper so that its point contacts the upper line on timing gauge S.1555.00.
- slightly tighten screw E (fig. 4).
- set thread guide bracket A by raising thread guide bracket to the top of the primary looper shank.
- retighten screws B and E.
- remove looper height gauge S.1555.00.

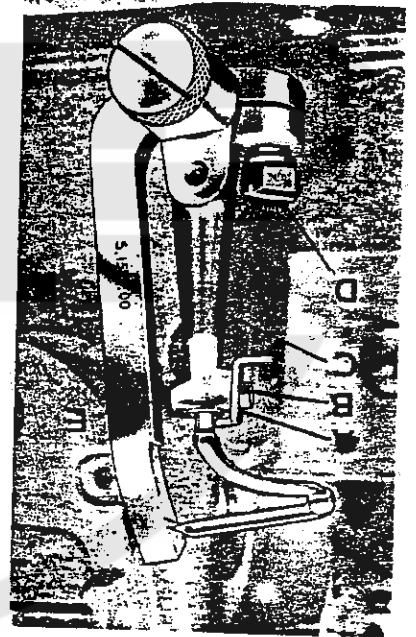


fig. 4

Setting angle

- Slightly loosen screw 'D'.
- Place timing gauge S.1686.00 on milled surface of base as shown in fig. 5; shift lever C and turn looper (which has been set in place but not locked) until correct angle is obtained.
- Correct position can be checked by reference to the timing table.
- Firmly tighten up screw E (fig. 4).

Setting the primary looper in relation to the needle:

- When the primary looper has completed its stroke to the left and with the needle in its lowest position, the distance between the looper point and the needle should be as indicated in fig. 6.
- If adjustment is necessary move lever C along its rotation axis. In its stroke from left to right the looper point should pass 1/64" from the bottom of the needle scarf.
- Retighten screw D

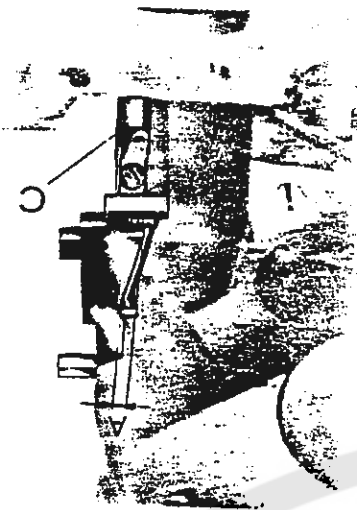


fig. 5

## 5. Timing Secondary Looper

Note: To set the dimension  $11/32''$  in Fig. 8, rotate lever E upwards or downwards: remember that by doing this the dimensions in Fig. 7 will be increased or decreased.

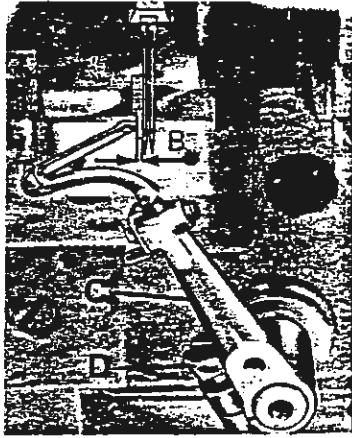


fig. 6

- Slightly loosen screw B.
- Slightly loosen screw A.
- Adjust crossing of secondary and primary looper rotating the secondary so that its tip passes behind the primary looper barely skimming it.
- Check distances given in figures 7-8 (see timing table).
- During its left to right motion the secondary looper should barely skim the needle.

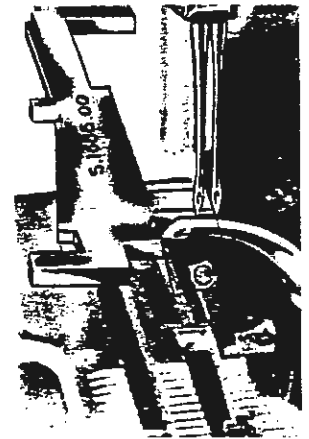


fig. 7

- If adjustment is required, slightly loosen Screw D and push the complete looper assembly inwards or outwards, avoiding any change in the distance already fixed. Make sure all parts move smoothly.
- Lock screw D.
- Recheck to make sure the two loopers are crossing smoothly and verify all the other settings.
- Tighten up screws A and B.
- Finally, make sure all the assembly are moving smoothly.

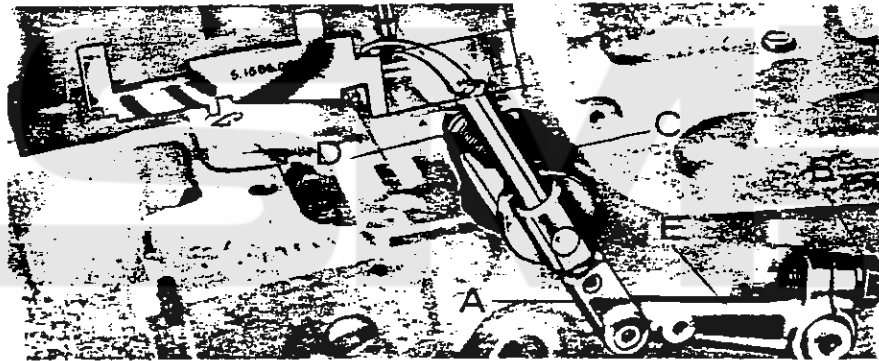


fig. 8

## 6. Setting the needle guards (fig. 9)

- To set front needle guard A, loosen screw C.
- With needles at their lowest position, set front needle guard so that it touches the needles.
- Retighten screw C.
- To set rear needle guard B, loosen screw D.
- With needles in their lowest position, set rear needle guard so that it touches needles without deflection.
- Retighten screw D.
- It must be checked that when working, any eventual slight bending of the needles does not cause them to break through impact with the primary looper. To do this, bend the needles slightly towards the inner part of the machine and check that the primary looper, during its stroke from left to right, passes without breaking them. If this is not the case, the needle guards need to be positioned correctly by bending them slightly just above the shanks, where the part is not so hard. Check that each needle operates in the corresponding plane of the front and rear needle guards.
- Thread the needles, bringing them to their lowest position and pushing them slightly against rear needle guard B.
- The thread must run freely. If this is not the case it means that the needle is too low and the thread is trapped between needle and needle guard.

### NOTE:

- The point of the looper, in its stroke from left to right, must enter the needle scarf in its upper portion and in its stroke to the left, in the lower portion.
- For very hard synthetic fabrics the needle must flex considerably on the front needle guard.

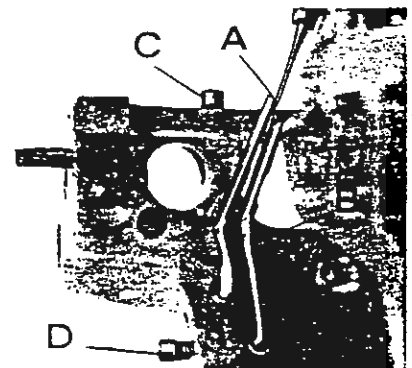


fig. 9

7. Mounting lower trimmer knife (fig. 10)

- Mount guide block P on knife-holder with screw Q.
- Slide knife D into place.
- The cutting edge of the trimmer knife must be flush with the rear needle guard.
- Tighten up screw A.
- With the needles in its lowest position, bring angle stop O close to the needle guard, lock bushing L and washer G by tightening up screw F.
- Check that knife holder C moves smoothly and adjust setting for required bite.
- Slightly tighten screw N.
- With needles in its lowest position, bring guide block P close up to front needle guard and lock it by tightening up screw Q.
- After setting upper trimmer knife touching lower trimmer knife, slacken screw N. The proper pressure is applied between the knives by spring M and pin H.
- Press one finger lightly against screw A and tighten up screw N firmly.
- Pressure should be lightly exerted to avoid generating strong friction between the two knives resulting in their hardening.

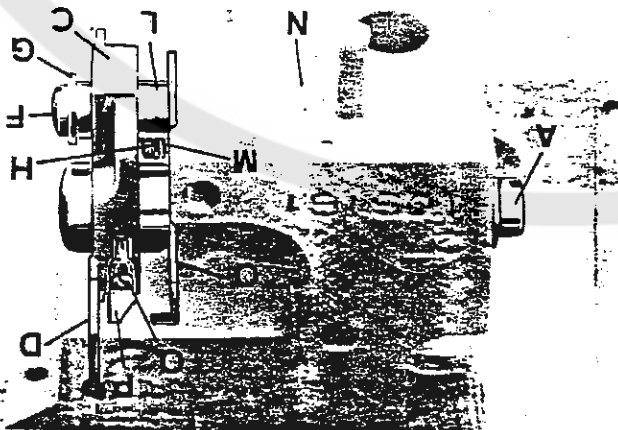


fig. 10

8. Mounting and setting Feed Dogs (figures 11 and 12)

- Remove Plexiglass plate beneath work plate.
- Mount rear feed dogs C and D (fig. 11) and match the feed dog slides.
- With a small screwdriver pushed through the threaded holes on the levers, tighten screw F slightly, inserting the screwdriver into the groove on the tip of the screw.
- Mount the front differential feed dog E with screw G but do not tighten it up fully (fig. 12).
- Slacken screw A.
- Adjust feed dog angle by rotating eccentric B.

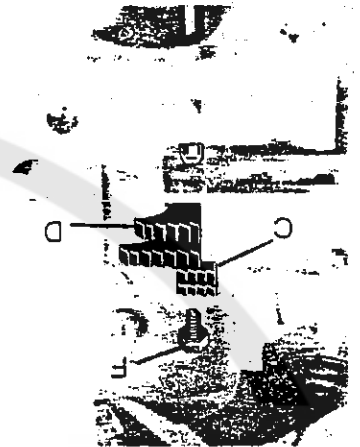


fig. 11

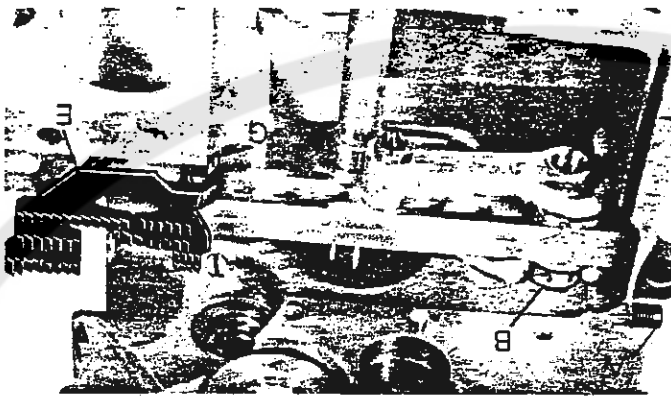


fig. 12

- The feed dog teeth visible through the needle plate should be absolutely flush with the latter.
- When the feed dogs are at their highest position, there should be a clearance of 1,3 mm. between the teeth and the needle plate at the front of the differential feed dog.
- Feed dog C should be lower than the other two.
- Lock screws F, G, and A.

9. Feed mechanism (fig. 13).

Note: The machine heads illustrated in this catalogue are supplied with the feed mechanism already set for the type of use to which they will be put.  
If feed mechanism adjustment is required, proceed as follows:



1. Inactivation of differential feed:
  - Slacken nut B using wrench A supplied with the machine head, and raise pin Q on rear feed dog lever as high as it will go.
  - Tighten up nut B; lower lever H against stop F and lock knurled knob R manually.
2. Setting differential feed for ratio 2 : 1
  - Slacken nut B.
  - Set pin Q at highest position.
  - Lock nut B.
  - Lower lever H against stop G.
3. Setting differential feed for ratio 3,5 : 1
  - Slacken nut B.
  - Set pin Q in lowest position.
  - Lock nut B.
  - Lower lever H against stop G.
4. Setting differential feed for ratio 4 : 1
  - Raise cursor C to its highest position on slide-bar S
  - Proceed as for item 3
  - The differential ratio can be changed while the machine is in operation by adjusting lever E.
5. Setting negative differential feed
  - Slacken nut B.
  - Set pin Q at highest position.
  - Shift cursor C in lowest position.

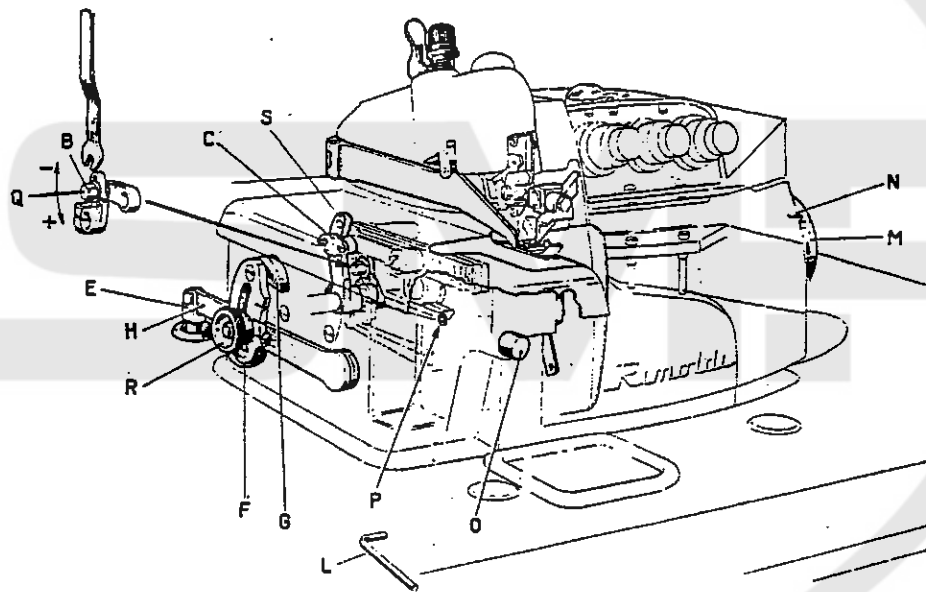


fig. 13

10. Mounting upper trimmer knife (fig. 14).

- Mount upper trimmer knife C on knife holder block
- Mount knife holder block D and trimming guards E and G with screw F.
- Trimming guard E should be very close to cutting edge of knife C.
- When trimmer knife C is at its lowest position, its cutting edge should overlap the cutting edge of lower trimmer knife by 1/32".
- For this adjustment, shift trimmer knife in its slanting seat and knife holder block A on the upper knife holder B.
- Tighten up screw F and check that the upper knife, when in lowest position, does not touch front needle guard.

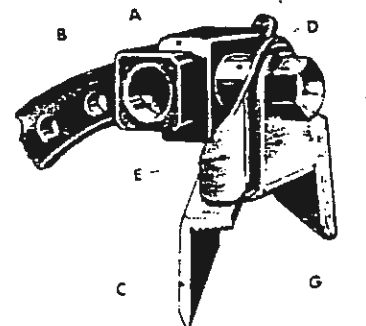
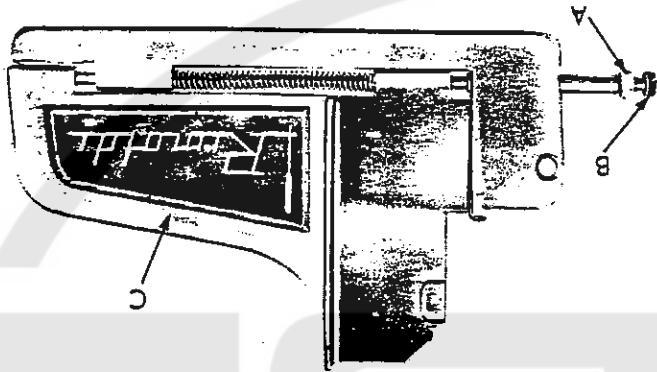


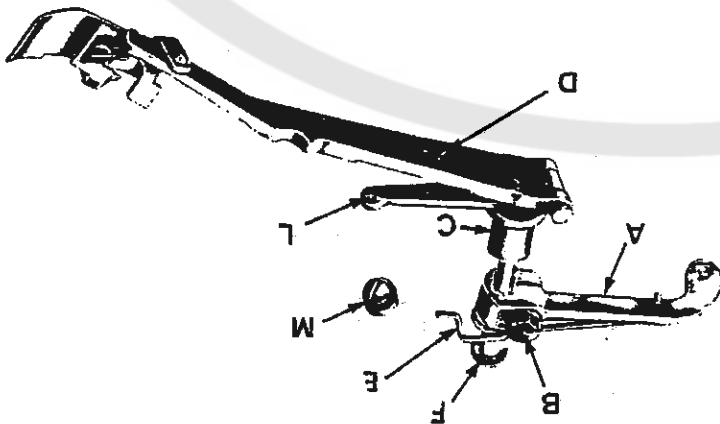
fig. 14

- 9) Adjustment of needle thread take-up
  - For making up very tough fabrics, needle thread take-up 270-274/2 should be shifted forwards, towards operator.



- f) Adjustment of front cover plate (fig. 16).
  - The front cover plate should be closed before adjustment.
  - The moving part C should not interfere with the front needle guard or the lower knife holder.
  - The cover plate can be shifted towards left or right by adjusting screw B.
  - Lock nut A.

- Adjust lifter lever A, by regulating screw in base beneath the lever, so that it lifts presserfoot to required position.
- Check movement of secondary looper; the latter should not impinge on presserfoot chaining finger when presserfoot is at its highest position. This undesirable condition can be prevented by adjusting eccentric washer M.
- Tighten up screw B.



- e) Positioning and adjustment of presserfoot arm (fig. 15).
  - Insert presserfoot arm shaft L in bushing C on which presserfoot bearing arm is hinged.
  - Insert presserfoot arm shaft L with bushing C into hole provided in baseplate.
  - Slide lever A and spring E on to shaft L.
  - Slide snapping F on to shaft L.
  - Set lifter lever A so that there is no end-play on presserfoot arm shaft L.
  - Slightly tighten screw B.
  - With needle at highest position, insert presserfoot bearing arm D in guide fork.
  - Engage lifter lever A with presserfoot lifting foot pedal.
  - When pedal is depressed it should have a slight idle stroke before actuating presserfoot bearing arm D.

## ELECTRIC LUBRICATION CONTROL DEVICE (PRESSURE SWITCH)

### h) Disassembly and replacement of pressure switch

- Take down oil cup from baseplate and drain out oil.
- Remove screw by which pressure switch bracket is mounted on oil cup.
- Slacken the two screws on the electric wire terminal lugs.
- Slip plastic tube connecting pressure switch to rubber connection off the pressure switch.
- Remove bracket and fix it to new pressure switch.
- Screw down electric wire lugs, slip plastic tube into pressure switch and mount switch on oil cup using the screws previously removed.
- Re-install oil cup and fill with oil as instructed on page 11, par c.

### Replacement of pressure switch lamp

- Proceed as described under items 1 and 2 for replacement of pressure switch.
- Remove rubber tube, remove lamp (bayonet cap) and replace with new lamp.
- Re-install rubber tube, replace pressure switch in position and fasten firmly to oil with screw
- Re-install oil cup and fill with oil as instructed on page 11, par c

### Electrical connection of pressure switch on Zefir motors

- Plug cable to current socket and insert plug at other end of cable in 12 V. light socket on motor.
- Note:** If no light socket is provided on the motor to be connected, but the voltage connection box is provided with 12 V. connections, proceed as follows:
- Mount a Mignon socket pitch 13 at one end of a cable 4 - 5 inches long and at the other connect it to the 12 V. light terminal lugs.
  - Plug cable to current socket at one end and to the above Mignon socket at the other.

### Adjustment of forced feed lubrication rate to main shaft (fig. 18)

- Remove cover.
- Using a screwdriver, turn indicator B in required direction (Turning towards the letter C punched on the plate, the rate of flow is decreased, turning the indicator towards the letter A, the rate of flow is increased).

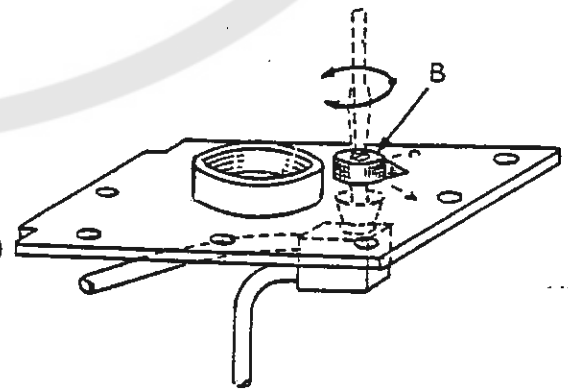
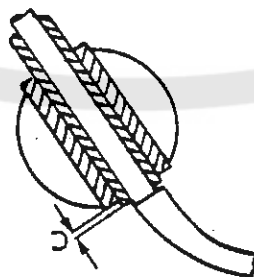


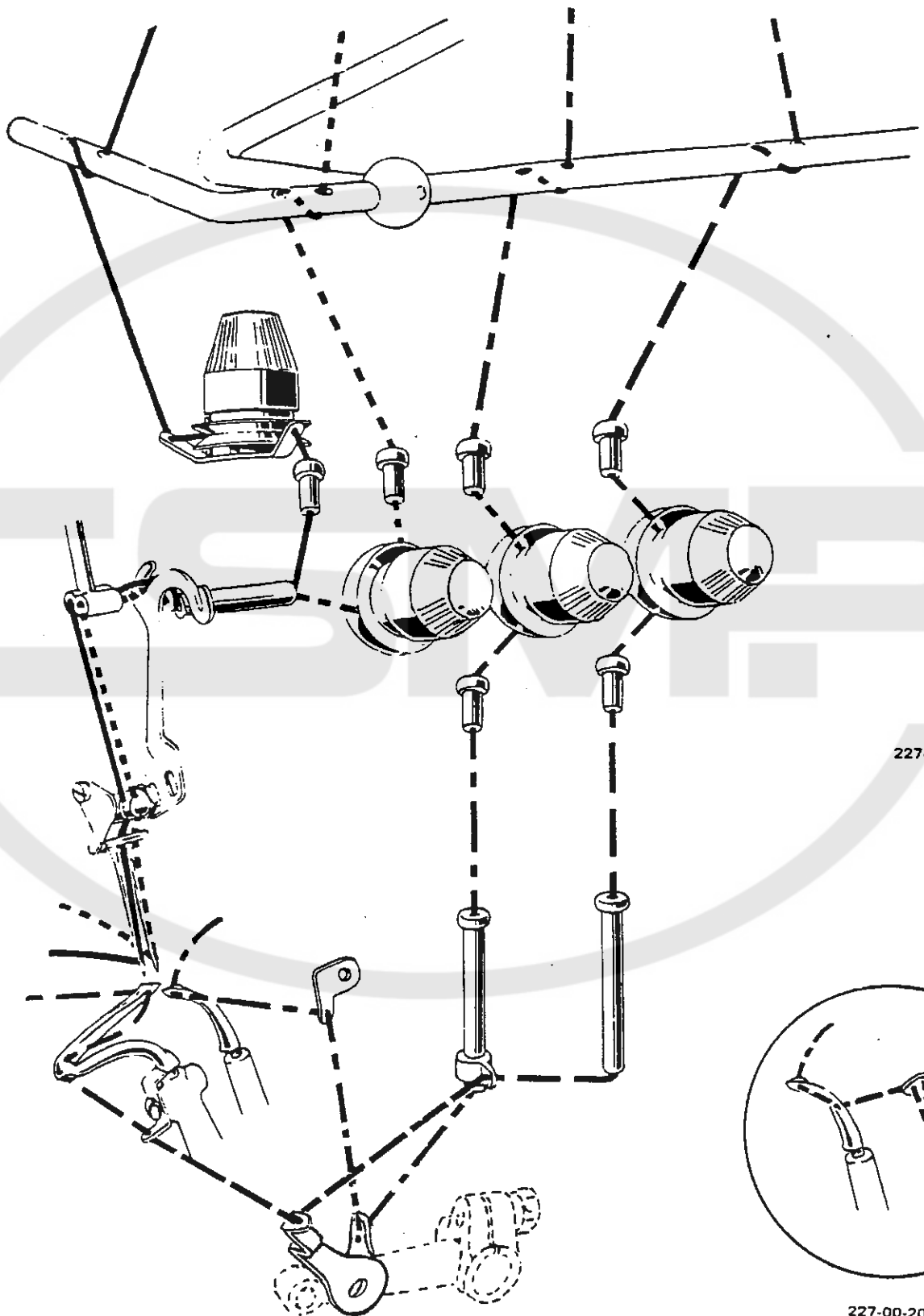
fig.18

MACHINE HEAD NUMBERS	A	B	C	D	F
227-00-32	2,5;2,8	1,5	3,3;3,5	0,5	—
227-00-20 227-01-07	2,5;3	1,5	8,5	0,3	8,8
227-00-21	2,5;3	1,5	3,5	0,3	8,8



TIMING TABLE

a - Threading



227-00-32

227-00-20



#### b) Needle change

1. Switch off motor.
2. Depress motor driving pedal to check that machine is absolutely motionless.
3. Set needle at top dead centre.
4. Lower lever B as far as it will go (fig. 19).
5. Swing out presserfoot from usual working position.
6. Slacken needle set-screw by one half-turn using screwdriver 290-746.
7. Remove needle.
8. Insert new needle.
9. The needle scarf should face the rear needle guard, i.e. towards the rear of the machine.
10. Using pincers supplied with machine kit, check that needle touches the bottom of the hole.
11. Retighten needle set-screw without displacing the needle, but do not apply excessive force.

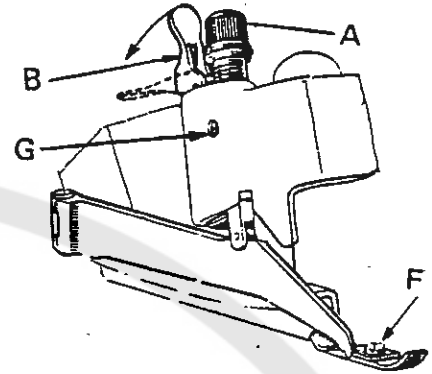


fig. 19

#### c) Positioning and adjustment of presserfoot (fig. 19)

1. Check that presserfoot is in proper position.
2. Needle should pass between pressurefoot shoe and chaining finger.
3. To adjust presserfoot slacken screw F.
4. Center presserfoot in proper position and tighten up screw F.
5. Presserfoot pressure is increased or slackened by loosening screw G with wrench 633-742 and adjusting knurled knob A.
6. Lock knob A by tightening up screw G with wrench 633-742.

#### d) Tensioning discs adjustment

1. Tighten tension discs just enough for even stitch formation.
2. Avoid over-tightening.

#### e) Stitch length adjustment (fig. 13)

1. Slacken screw P using appropriate wrench.
2. Depress pushbutton O and turn handwheel M until tip of pushbutton slips into the notch on the regulator.
3. Holding pushbutton O firm, turn handwheel M vigorously until indicator N shows the desired length on the handwheel.
4. Tighten up screw P firmly.

#### f) Seam width adjustment

Seam width can be adjusted within a very narrow range beyond which the needle plate must be changed. To vary seam width within the above narrow range, proceed as follows:

1. Slacken screw N of lower knife holder (fig. 10).
2. Slacken screw F (fig. 14).
3. Shift upper knife holder block A (fig. 14) to right or left until desired seam width is obtained.
4. Tighten up screw F (fig. 14)
5. Lower knife holder should be checked and set as described in paragraph d) 7.

No.	TROUBLE	PROBABLE CAUSE
1	Uneven stitches	<ul style="list-style-type: none"> <li>- Tension badly adjusted</li> <li>- Thread take-ups incorrectly adjusted</li> <li>- Wrong threading</li> <li>- Yarns not gauged</li> </ul>
2	Feed and Fabric slipping sideways	<ul style="list-style-type: none"> <li>- Presserfoot pressure too light</li> <li>- Height and slant of feed dogs not properly adjusted</li> <li>- Knives require sharpening</li> <li>- Differential badly adjusted</li> </ul>
3	Machine skipping stitches	<ul style="list-style-type: none"> <li>- Primary or Secondary Looper badly adjusted in respect of needle so that looper becomes blunted</li> <li>- Loopers too far apart at crossing</li> <li>- Loopers too near at crossing, thus becoming blunted</li> <li>- Front needle guard too far from needle</li> <li>- Needle not set in proper position</li> </ul>
4	Thread breaking	<ul style="list-style-type: none"> <li>- Tensions too taut</li> <li>- Yarn irregularly wound on reel</li> </ul>
5	Needle breaking	<ul style="list-style-type: none"> <li>- Needle bent</li> <li>- Needle badly mounted</li> </ul>
6	Fabric being punctured	<ul style="list-style-type: none"> <li>- Blunt needle</li> <li>- Needle size unsuitable for plate</li> <li>- Needle point unsuitable</li> </ul>
7	Oil leaking	<ul style="list-style-type: none"> <li>- Screws mounting oil cup on base not sufficiently tightened up</li> <li>- Oil cup plug not screwed down tightly</li> <li>- Oil cup gasket badly mounted</li> </ul>
8	Faulty lubrication	<ul style="list-style-type: none"> <li>- Oil level too low</li> <li>- V - belt incorrectly mounted</li> <li>- Upper tube clogged</li> <li>- Lubrication pump filter clogged</li> </ul>



### III. MAINTENANCE

#### a) Daily

Lightly clean feed and stitch formation mechanisms.

#### b) Weekly

1. Thoroughly clean, removing needle plate, feed dogs, front and rear needle guard and loopers.
2. Open front cover plate and carefully clean front cavity.
3. Clean inside the needle movement mechanism casing.

#### c) Quarterly

1. Using wrench provided with service kit, remove plug beneath oil sump and drain off oil completely.
2. Unscrew screw 007-M-15 by which filter is mounted on drain plug.
3. Remove filter and clean thoroughly by immersing in gasoline.
4. Blow filter and plug with jet of compressed air.
5. Soak felt gasket with clean oil.
6. Replace plug.
7. Fill oil cup with 1 and 3/4 pts fresh VR 604 oil.

#### I M P O R T A N T

When following instructions given in paragraph c, 1, do not unscrew drain plug completely immediately, but allow most of the oil to drain out from the side slots in the plug as shown in (fig. 20).

#### d) Sharpening knives

1. Sharpen knives using RIMOLDI knife sharpener and the special block provided, which assures the exact angle of sharpening. The sharpening block is supplied on request.

#### e) Instructions for taking down and removing cam shaft (if necessary).

- Tools required supplied on request only.
- Pincers type S. 0560/00
- Pincers type S. 0459/00
- Puller type S. 0416/00

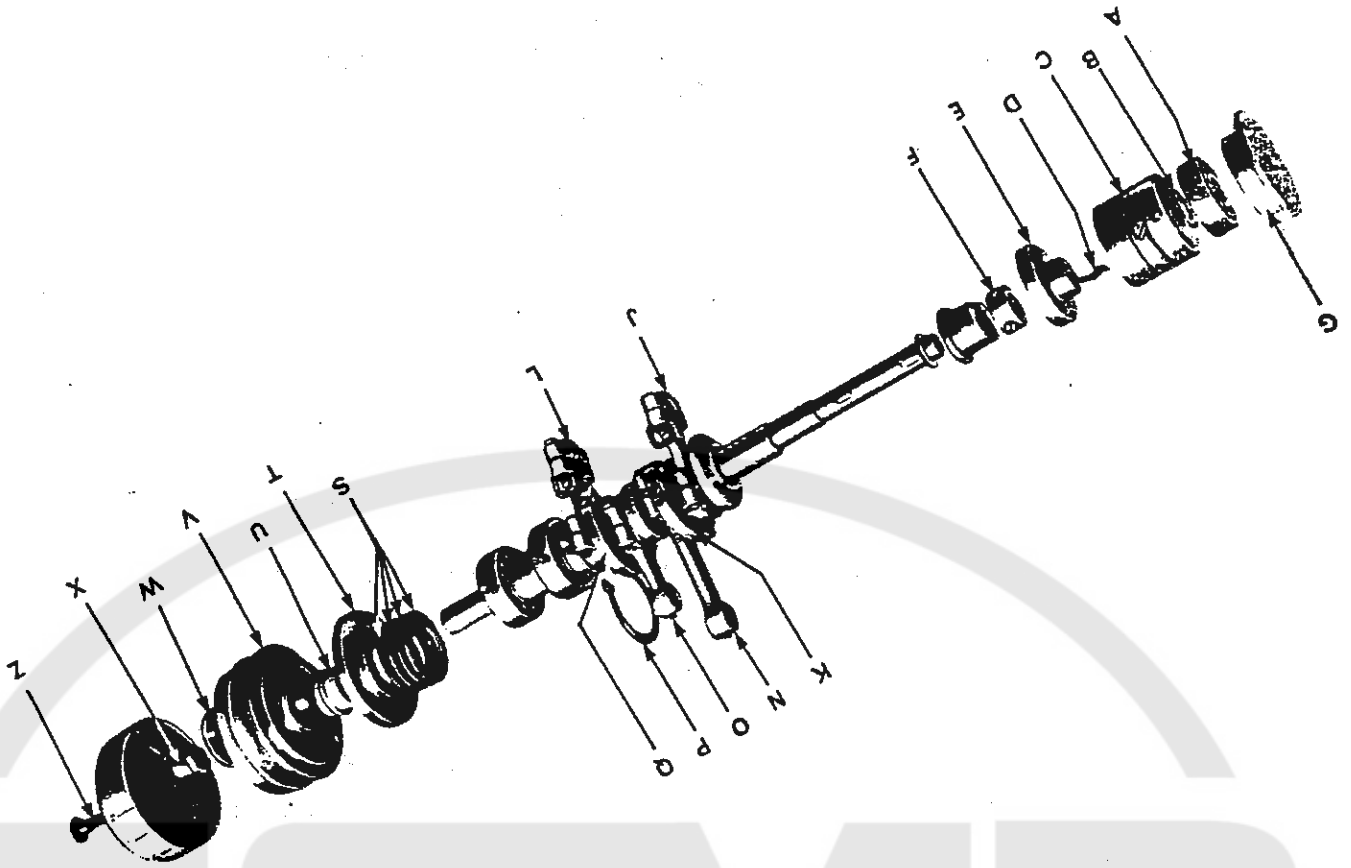
#### I M P O R T A N T

It is absolutely necessary for the main parts of the shaft-connecting rod assembly to be re-installed in their original position. Therefore proceed as follows:

- Re-install flanges G and I with lubrication hole facing downwards.
- Leave all connecting rod lock-screws in their own holes.
- Connecting rods J and L are identified by a 2 punched on the L big-end and three lines on the J rod surface.
- For positioning the connecting rod cap a reference mark is provided on both the cap and connecting rod. Both marks should be on the same side.
- For positioning connecting rod N reference is made to the drawing number on the handwheel side.
- Cup springs should be installed in the original order.

OPERATION SEQUENCE

1. Turn stitch length to reference 5 on handwheel.
2. Remove screw Z.
3. Turn stitch length to reference O on handwheel.
4. Remove flange G.
5. Slacken the two screws on eccentric C.
6. Remove ball bearing A and eccentric C, using puller S. 0416/99.
7. Remove spring D from regulator E, using pincers S. 0560/00.
8. Slacken screws on ring F.
9. Remove caps from connecting rods N, O, J, L.
10. Remove cover Y from handwheel.
11. Slacken hex screw X.
12. Remove washer W.
13. Remove handwheel V.
14. Remove flange T.
15. Slide off spacer U.
16. Remove cup spring S.
17. Pull off snap-ring P using pincers S.0459/00, slightly shifting cam to the right.
18. Remove sectors K and Q.
19. Remove shaft.



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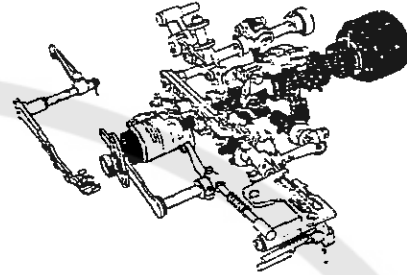
HOUSING – BUSHING  
AND GUIDE ASSEMBLY

TAV. 1



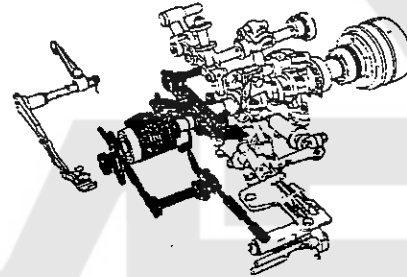
MAIN SHAFT WITH  
CONNECTING RODS

TAV. 2



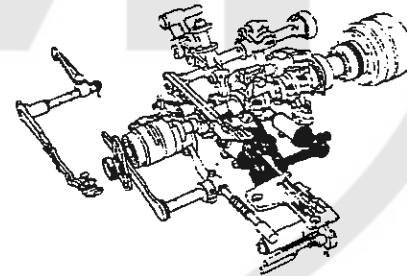
DIFFERENTIAL  
MECHANISM

TAV. 3



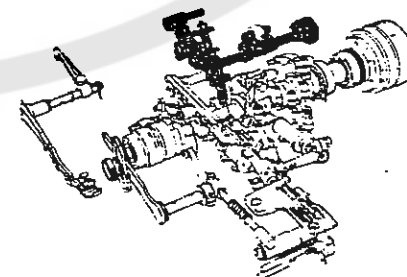
LOOPER DRIVE SHAFT  
AND CONNECTING RODS

TAV. 4



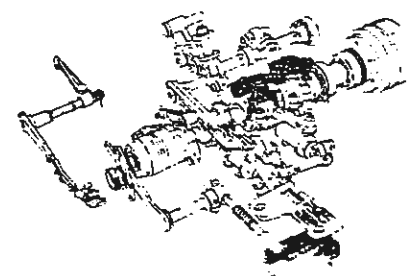
NEEDLE DRIVE  
MECHANISM

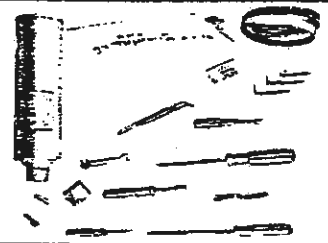

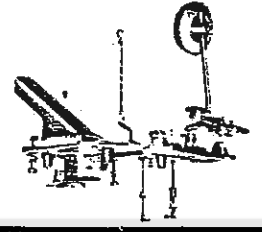
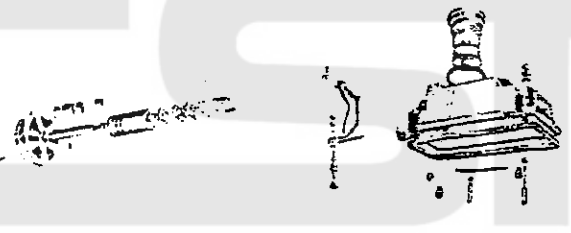
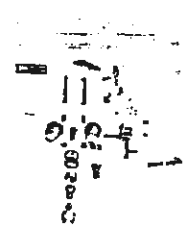

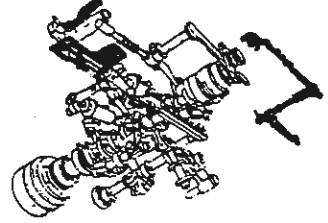
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UPPER AND LOWER  
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TAV. 6



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TAV. 15

