

# Rimoldi®

SPARE PARTS CATALOGUE

CATALOGO PEZZI DI RICAMBIO

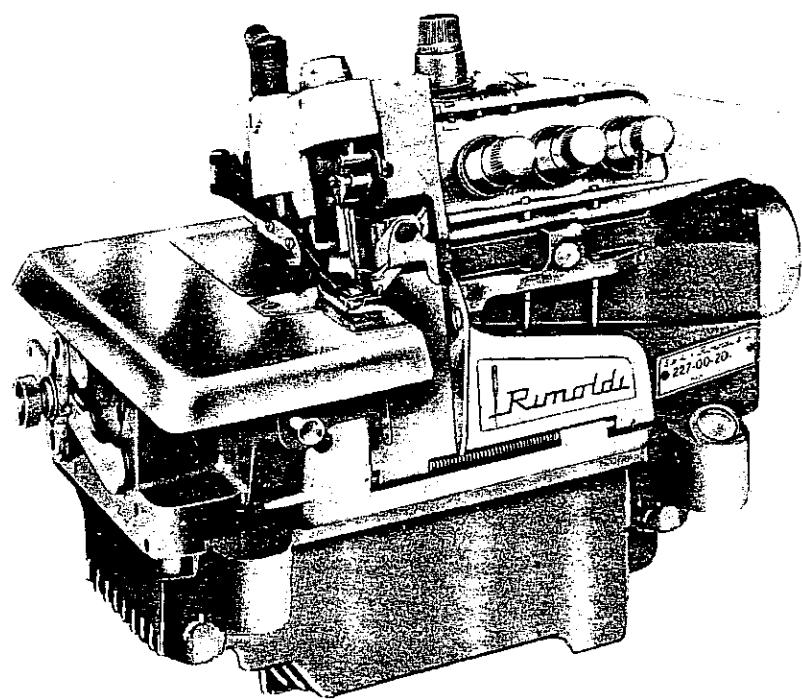
CATALOGUE RECHANGES

ERSATZTEILELISTE

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



# Rimoldi



## SPARE PARTS CATALOGUE

class **227-00-20**

and subclasses

**227-00-32**



# **INTRODUCTION**



## CONTENS

### INTRODUCTION

|   |        |
|---|--------|
| I - MACHINE HEAD IDENTIFICATION           | Page 5 |
| II - TECHNICAL DATA BY MACHINE HEAD CLASS | " 5    |
| III - TECHNICAL DATA BY SUB-CLASS         | " 6    |

### INTRODUCTIONS

#### I - INSTALLATION AND TIMING

|   |        |
|---|--------|
|   | Page 9 |
| a - Positioning of head                           | " 9    |
| b - Assembly of trasmission                       | " 9    |
| c - Filling tube oil sump                         | " 9    |
| d - Assembly and adjustment of sewing parts       | " 14   |
| e - Positioning and adjustment of presserfoot arm | " 14   |
| f - Adjustment of front cover plate               | " 14   |
| g - Adjustment of needle thread take-up           | " 14   |
| h - Electric lubrication control device           | " 15   |
| - Timing table                                    | " 16   |

#### II - USE

|  |         |
|--|---------|
|  | Page 17 |
| a - Threading                                    | " 17    |
| b - Needle change                                | " 19    |
| c - Positioning and adjustment of presserfoot    | " 19    |
| d - Tensioning discs adjustment                  | " 19    |
| e - Stitch length adjustment                     | " 19    |
| f - Seam width adjustment                        | " 19    |
| g - Trouble due to incorrect handling of machine | " 20    |

#### III - MAINTENANCE

|   |         |
|---|---------|
|   | Page 21 |
| a - Daily   | " 21    |
| b - Weekly  | " 21    |
| c - Quarterly   | " 21    |
| d - Sharpening knives                                 | " 21    |
| e - Instructions for changing Cam Shaft (if required) | " 21    |

### SPARE PARTS CATALOGUE

#### I - INSTRUCTIONS FOR USE

|                  |         |
|------------------|---------|
|                  | Page 25 |
| a - Introduction | " 25    |

#### II - ORDER PLACING PROCEDURE

|                     |      |
|---------------------|------|
|                     | " 25 |
| a - All spare parts | " 25 |
| b - Needles         | " 25 |

#### III - ILLUSTRATIONS

|  |         |
|--|---------|
|  | Page 27 |
|--|---------|



## 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 without 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.

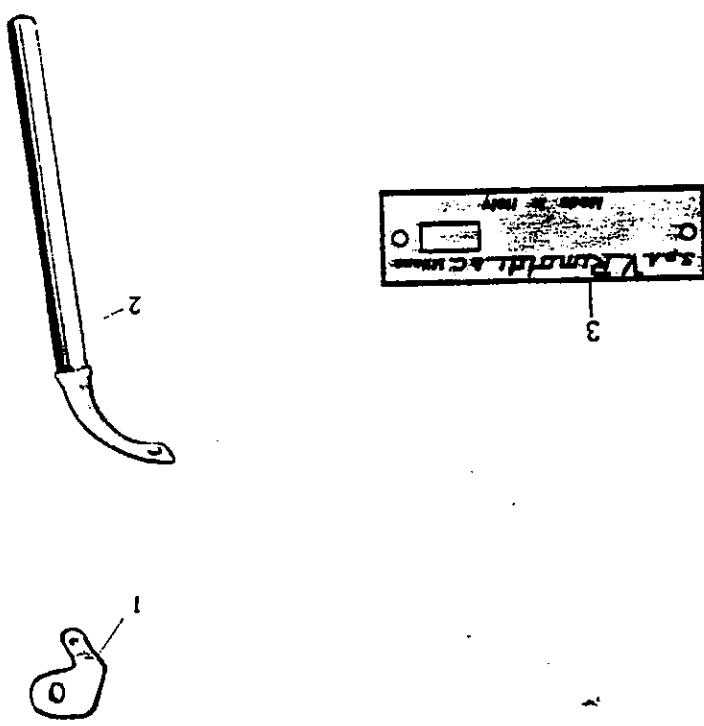
### b) Needles

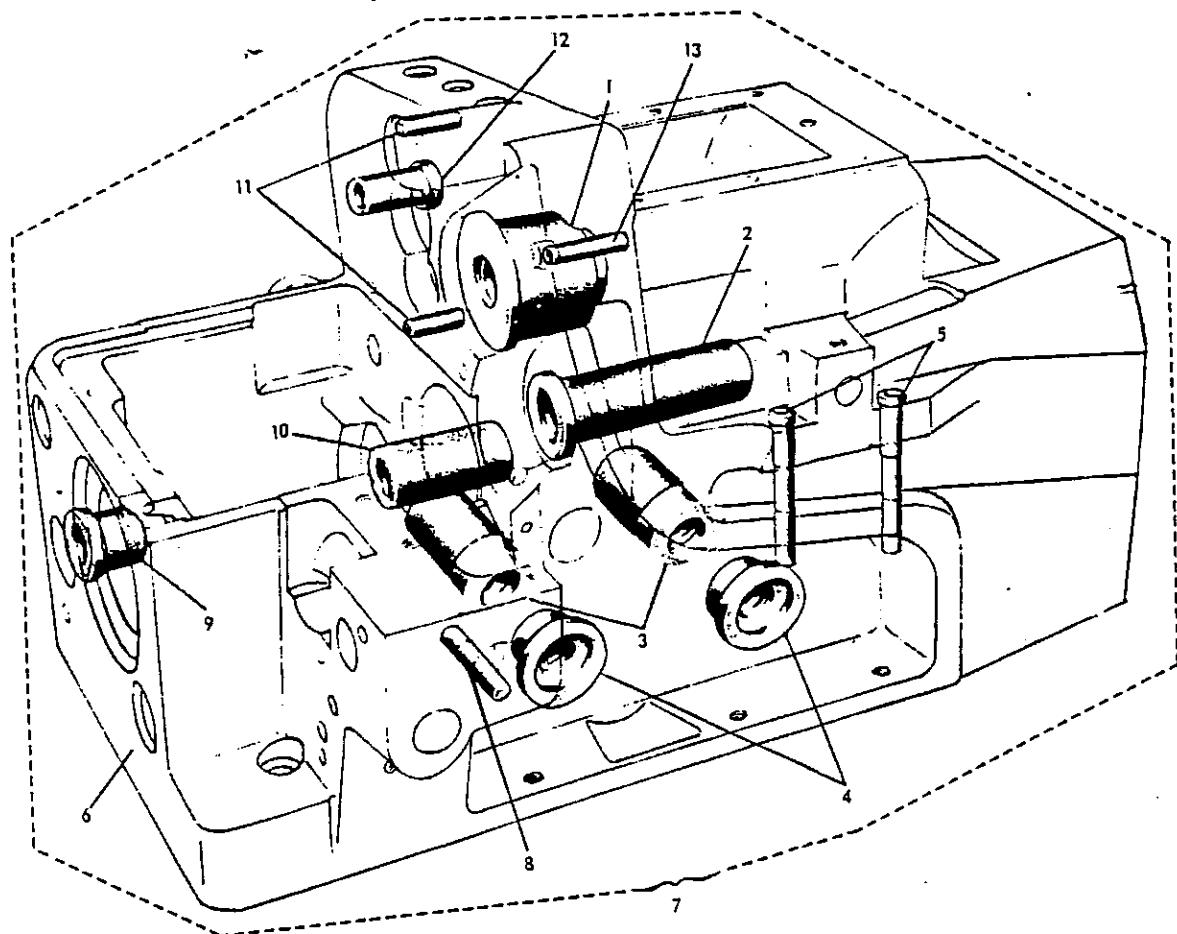
1. Only straight RIM 27 needles should be used on the machine heads illustrated in this catalogue.
2. The needle system and size are marked on the needle shank.
3. The gauge indicates the average diameter in hundredths of a millimetre taken on the blade of the needle.
4. The system and size are also 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**

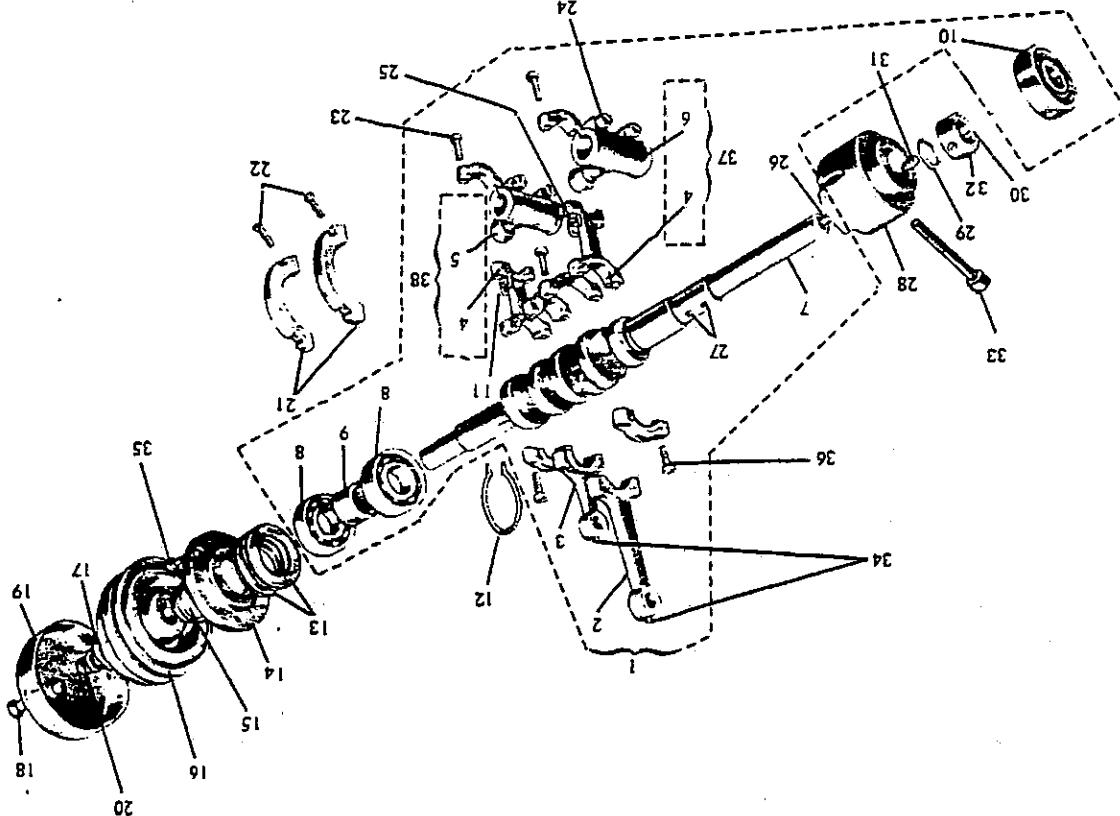
| REF. | PART N.  | DESCRIPTION                                   | QTY. | REF. | PART N.  | DESCRIPTION                           | QTY. | REF. | PART N.  | DESCRIPTION                           | QTY. |
|------|----------|---|------|------|----------|---------------------------------------|------|------|----------|---------------------------------------|------|
| 1    | 210077-1 | drive, guide secondary; scope second bay type | 1    | 2    | 210077-1 | drive, guide primary type, same plate | 1    | 3    | 210077-1 | drive, guide primary type, same plate | 1    |
| 4    | 210077-1 | drive, guide secondary; scope second bay type | 1    | 5    | 210077-1 | drive, guide primary type, same plate | 1    | 6    | 210077-1 | drive, guide primary type, same plate | 1    |
| 7    | 210077-1 | drive, guide primary type, same plate         | 1    | 8    | 210077-1 | drive, guide primary type, same plate | 1    | 9    | 210077-1 | drive, guide primary type, same plate | 1    |

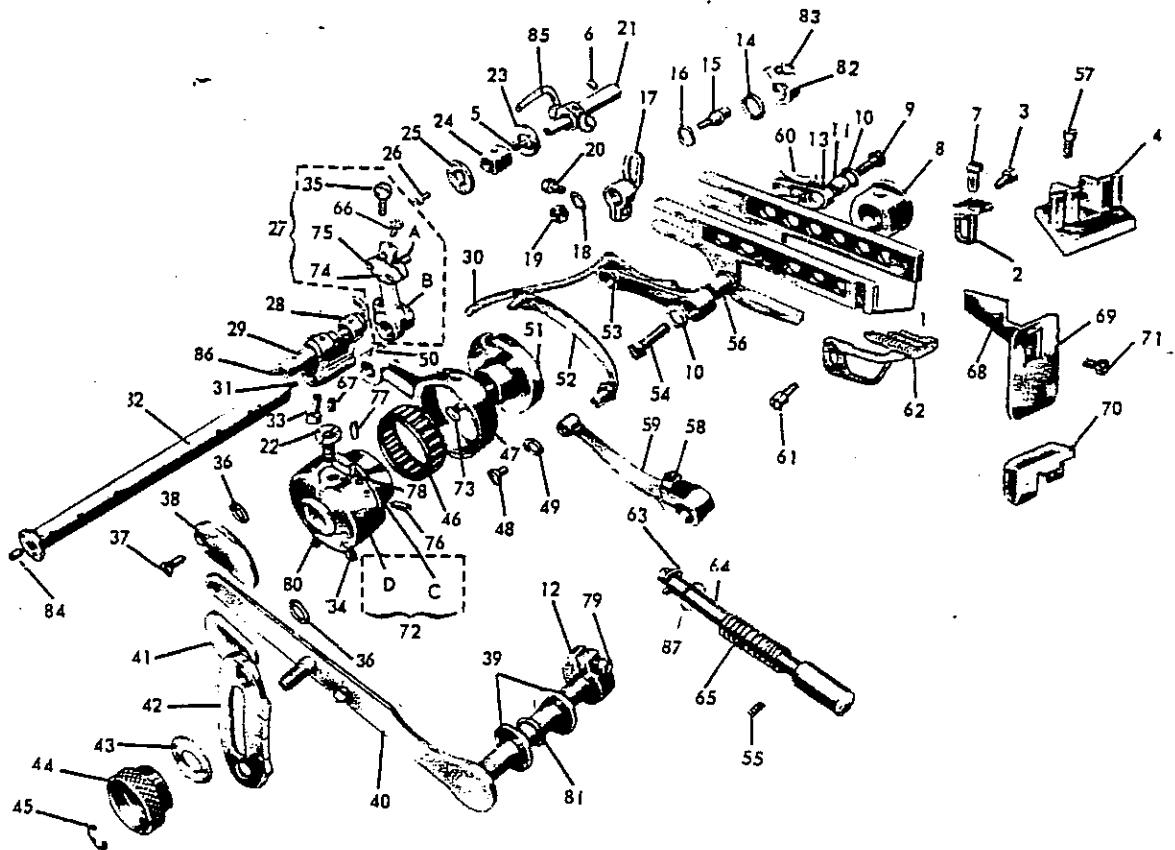




| REF.<br>N° | PART.<br>N° | DESCRIPTION                          | QUANT. | REF.<br>N° | PART.<br>N° | DESCRIPTION                        | QUANT. |
|------------|-------------|--------------------------------------|--------|------------|-------------|------------------------------------|--------|
| 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 | 1      |
| 4          | 270-057/1   | front bushing, looper shaft          | 2      | 11         | 270-642     | pin, coverplate centering          | 2      |
| 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 |        |            |             |                                    |        |

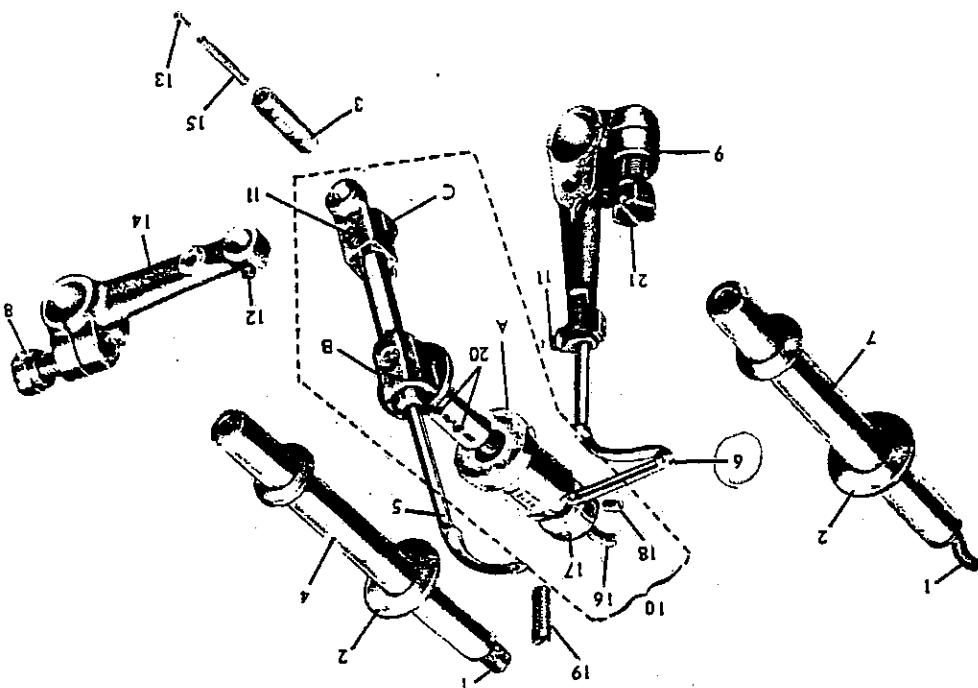
| REF. | PART.        | DESCRIPTION                      | ITEM |      | REF.         | PART.                                  | DESCRIPTION | ITEM | REF. | PART. | DESCRIPTION |
|------|--------------|----------------------------------|------|------|--------------|--|-------------|------|------|-------|-------------|
|      |              |                                  | REF. | ITEM |              |  |             |      |      |       |             |
| 1    | PM 277-009/3 | main shaft, with connecting rods | 1    | 20   | 270-510      | pivot, handwheel                       |             |      |      |       |             |
| 2    | 280-012/3    | control rod, needle bar          | 1    | 21   | 270-617/2    | rockers                                |             |      |      |       |             |
| 3    | 270-061/2    | control rod, knife               | 1    | 22   | 270-999      | screws, rocker                         |             |      |      |       |             |
| 4    | 270-061/2    | control rod, secondary lifter    | 1    | 23   | 010-H-13,7   | screws, for control rods 280-012/3     |             |      |      |       |             |
| 5    | 270-059/1    | control rod, primary lifter      | 1    | 24   | 270-975      | screws, for control rods and 270-116/2 |             |      |      |       |             |
| 6    | 270-059/1    | sleeve, secondary lifter         | 1    | 25   | 290-944      | lock-screw, connecting rod             |             |      |      |       |             |
| 7    | 270-009/4    | main shaft                       | 1    | 26   | 092-D-14     | oil-wick, main shaft                   |             |      |      |       |             |
| 8    | 270-707      | ball bearing, right              | 1    | 27   | 092-C-2      | wick                                   |             |      |      |       |             |
| 9    | 270-613      | spacer, bearing                  | 1    | 28   | 270-010/2    | bush, intermediate                     |             |      |      |       |             |
| 10   | 270-709      | flange, left                     | 1    | 29   | 074-A-12     | washer, differential                   |             |      |      |       |             |
| 11   | 270-062      | guide, connecting rod            | 1    | 30   | 270-722      | ring, adjustment                       |             |      |      |       |             |
| 12   | 270-704      | guide, right ball bearing        | 1    | 31   | 270-750      | cap, adjustment                        |             |      |      |       |             |
| 13   | 270-705      | spacer, main shaft               | 1    | 32   | 010-D-5      | lock-screw, pin                        |             |      |      |       |             |
| 14   | 260-620      | flange, cup                      | 1    | 33   | 270-938      | lock-screw, right flange               |             |      |      |       |             |
| 15   | 270-614      | flange, right                    | 1    | 34   | 023-N-6,5    | lock-screw, intermediate bush          |             |      |      |       |             |
| 16   | 270-612/1    | handwheel                        | 1    | 35   | 001-E-10     | lock-screw, pin                        |             |      |      |       |             |
| 17   | 270-008/1    | handwheel                        | 1    | 36   | 010-D-11,5   | lock-screw, right flange               |             |      |      |       |             |
| 18   | 270-981      | washer, main shaft               | 1    | 37   | PM 270-059/1 | cover with handwheel                   |             |      |      |       |             |
| 19   | 270-608/5    | sleeve assembly                  | 1    | 38   | PM 270-060/1 | sleeve assembly                        |             |      |      |       |             |
| 20   | 276-B-009/6  | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 21   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 22   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 23   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 24   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 25   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 26   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 27   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 28   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 29   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 30   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 31   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 32   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 33   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 34   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 35   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 36   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 37   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |
| 38   | PM 270-009/3 | main shaft, with connecting rods |      |      |              |  |             |      |      |       |             |

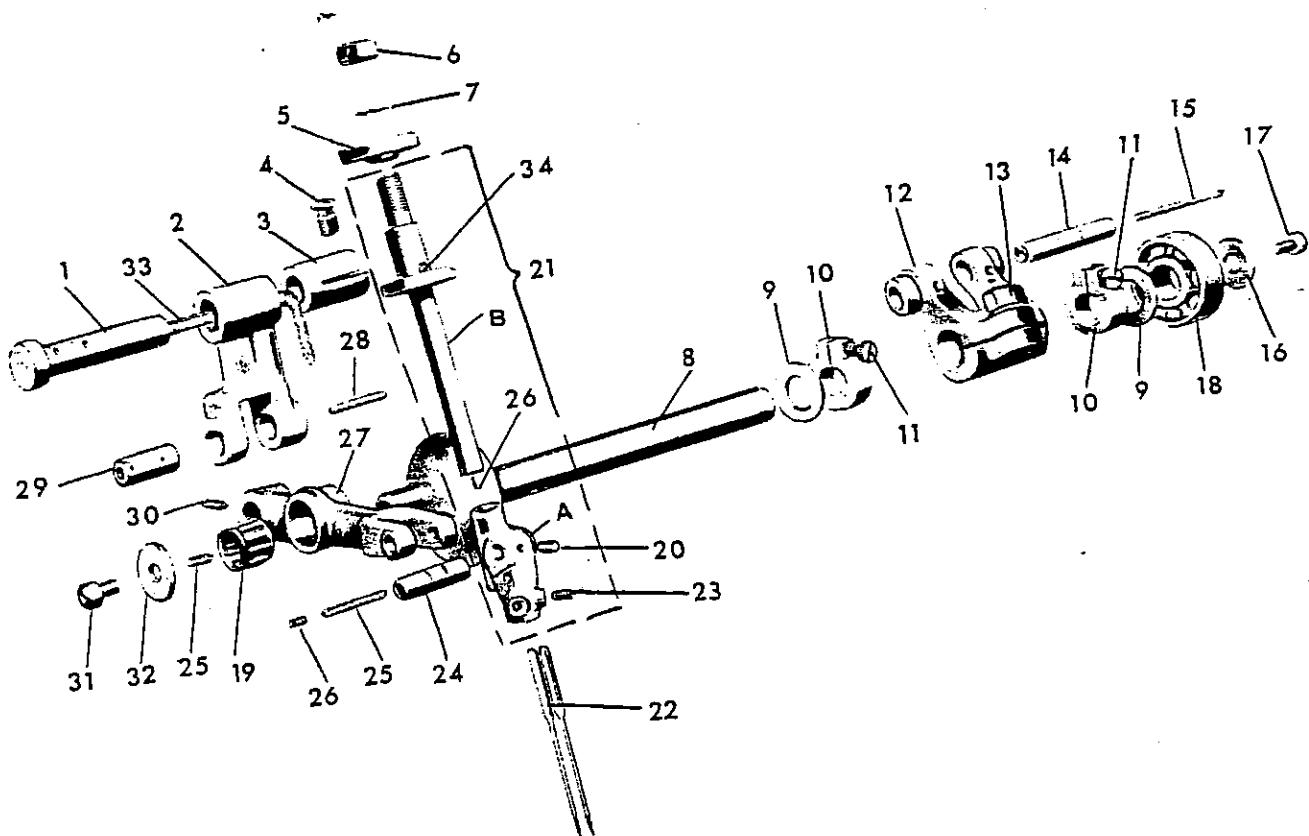




| REF.<br>N° | PART.<br>N°  | DESCRIPTION                                  | QUANT. | REF.<br>N° | PART.<br>N°  | DESCRIPTION                             | QUANT. |
|------------|--------------|--|--------|------------|--------------|---|--------|
| 1          | PM.270-049/1 | assembly, differential 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         | 092-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                           |        |

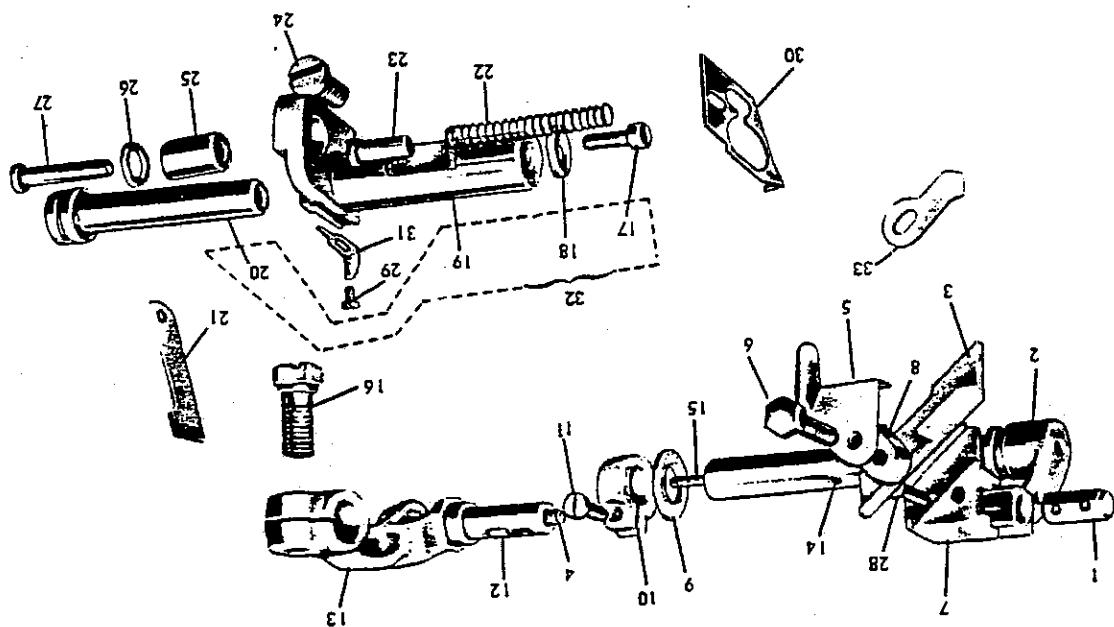
| REF. | PART.     | DESCRIPTION                             | ITEM | REF. | PART.     | DESCRIPTION                           | ITEM | REF.      | PART.                                   | DESCRIPTION                          | ITEM |
|------|-----------|---|------|------|-----------|---------------------------------------|------|-----------|---|--------------------------------------|------|
| 1    | 092-D-16  | Oil wick, for pinions                   | 2    | 13   | 046-B-2.5 | Ground-screw, for DIN control lever   | 2    | 14        | 277-77-067                              | Washers, looper control lever        | 1    |
| 2    | 073-N-10  | Pin, secondary looper control lever     | 3    | 15   | 092-B-1   | Shaft, secondary looper control lever | 4    | 16        | 092-D-7                                 | Oil-wick                             | 2    |
| 3    | 270-070   | Shaft, secondary looper control lever   | 5    | 17   | 270-053   | Shaft, primary looper with large eye  | 6    | 18        | 016-B-3                                 | Shaft, primary looper with large eye | 1    |
| 4    | 270-064   | Shaft, secondary looper control lever   | 7    | 19   | 017-F-11  | Screw, primary looper control lever   | 8    | 250-471   | Screw, primary looper control lever     | 2                                    |      |
| 5    | 277-074/2 | Shaft, secondary looper control lever   | 9    | 20   | 092-C-2   | Screw, set-screw                      | 10   | 277-065/3 | Screw, set-screw, looper                | 3                                    |      |
| 6    | 270-075/2 | Shaft, primary looper with large eye    | 11   | 19   | 277-056/1 | Screw, set-screw, oscillating guide   | 12   | 016-B-4   | Screw, set-screw, primary looper travel | 4                                    |      |
| 7    | 270-069   | Shaft, primary looper control lever     | 12   | 21   | 002-F-14  | Screw, set-screw, oscillating guide   | 13   | 270-074/1 | Screw, set-screw, primary looper travel | 5                                    |      |
| 8    | 250-471   | Screw, primary looper control lever     | 13   | 21   | 270-063/2 | Screw, set-screw, oscillating guide   | 14   | 277-075   | Secondary looper                        | 6                                    |      |
| 9    | 270-068/3 | Screw, primary looper control lever     | 14   | 21   | 277-057   | Screw, set-screw, oscillating guide   | 15   | 277-074/2 | Secondary looper                        | 7                                    |      |
| 10   | 277-065/3 | Screw, set-screw, oscillating guide     | 16   | 21   | 277-057   | Screw, set-screw, oscillating guide   | 17   | 277-074/2 | Secondary looper                        | 8                                    |      |
| 11   | 270-074/1 | Screw, set-screw, primary looper travel | 18   | 21   | 277-057   | Screw, set-screw, oscillating guide   | 19   | 277-074/2 | Secondary looper                        | 9                                    |      |
| 12   | 016-B-4   | Screw, set-screw, primary looper travel | 20   | 21   | 277-057   | Screw, set-screw, oscillating guide   | 21   | 277-074/2 | Secondary looper                        | 10                                   |      |

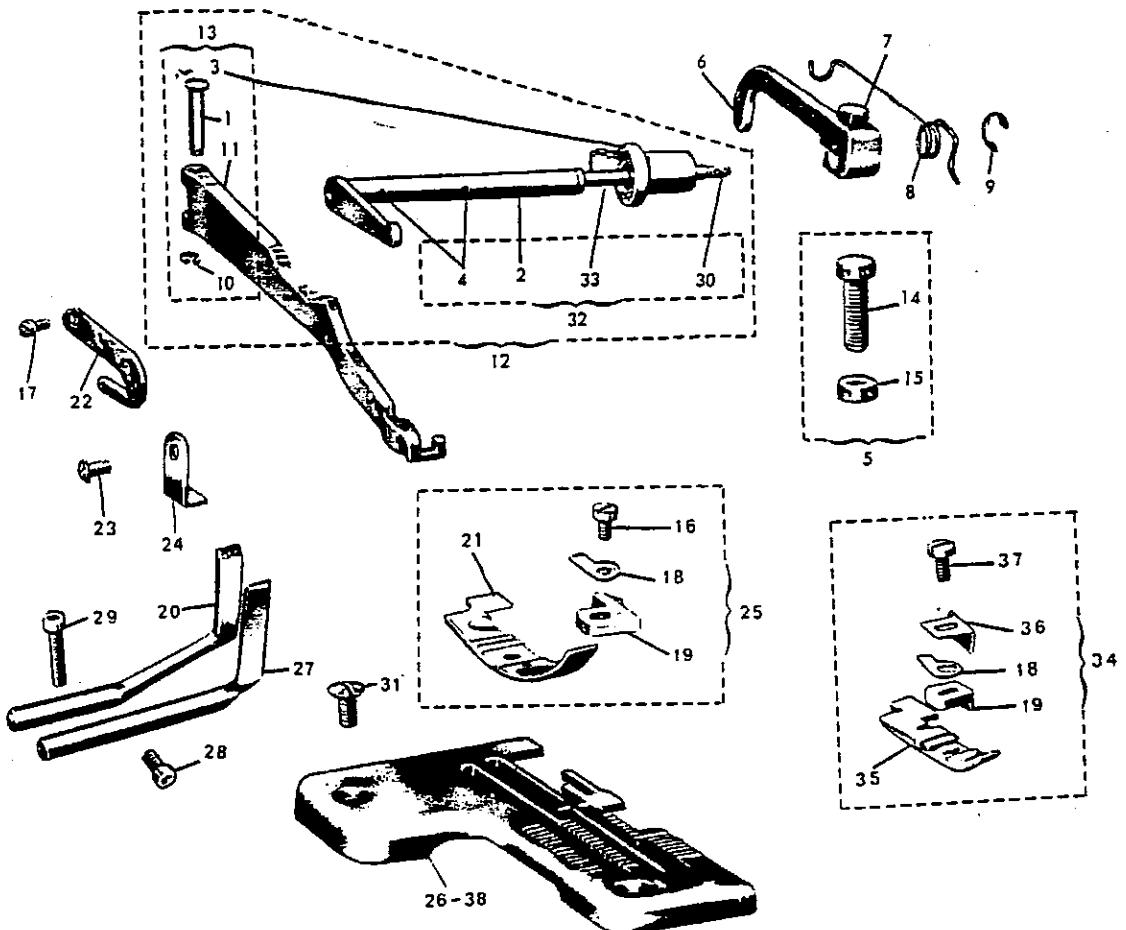




| REF.<br>N° | PART.<br>N°  | DESCRIPTION                   | QUANT. | REF.<br>N° | PART.<br>N°   | DESCRIPTION                               | QUANT. |
|------------|--------------|-------------------------------|--------|------------|---------------|---|--------|
| 1          | PM.270-138/1 | pin, 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                                    | 1      |
| 5          | 290-027/1    | washer, needle rocker pin     | 1      | 23         | 290-944       | screw, needle clamp                       | 2      |
| 6          | 270-933      | lock-nut, guide pin           | 1      | 24         | 270-130       | pin, needle clamp                         | 1      |
| 7          | 270-713      | flexible washer               | 1      | 25         | 092-B-1       | oil-wick for needle clamp pin             | 2      |
| 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      |

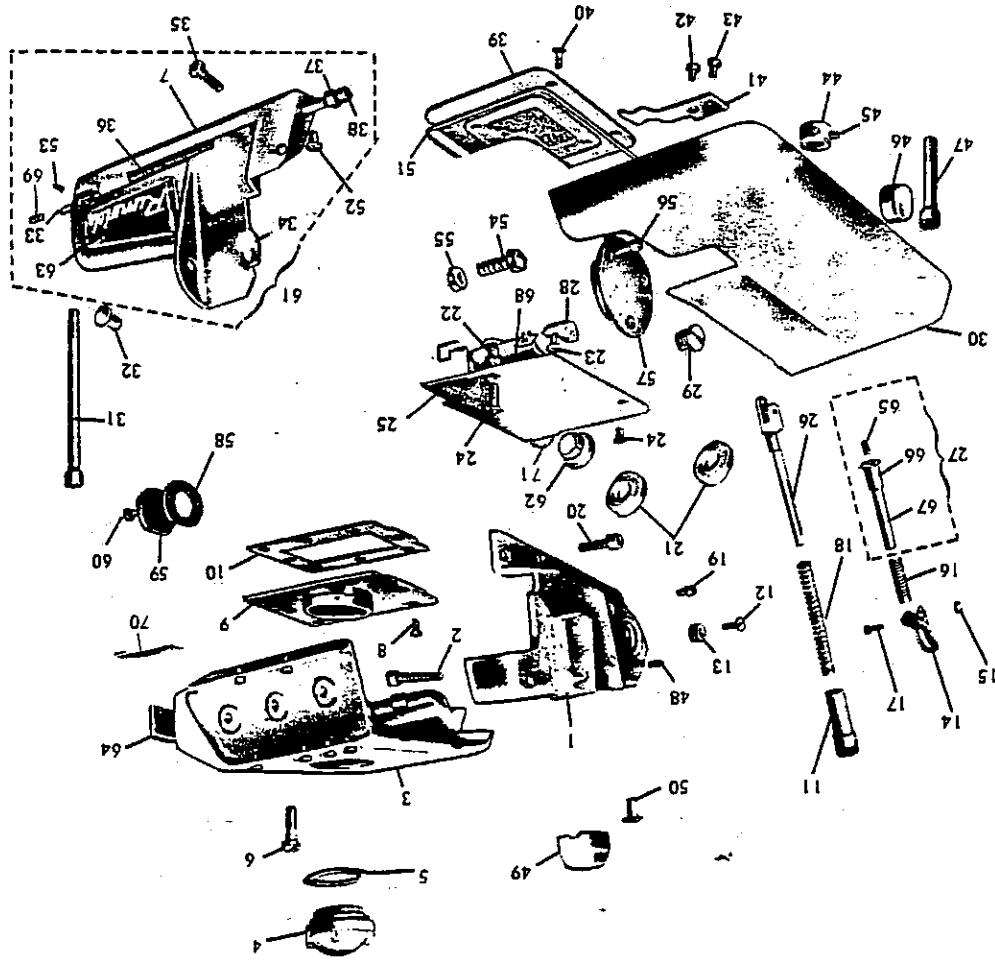
| REF. | PART.      | DESCRIPTION                   | REF. | PART.    | DESCRIPTION                    | REF. | PART.        | DESCRIPTION                     |
|------|------------|-------------------------------|------|----------|--------------------------------|------|--------------|---------------------------------|
| 1    | 270-102    | pin, upper knife holder       | 17   | 007-P-10 | set-screw, lower knife         | 18   | 064-L-5      | washer, for pin                 |
| 2    | 270-096/1  | upper knife holder            | 19   | 270-104  | lower knife holder             | 20   | 270-105      | pin, lower knife holder         |
| 3    | 270-77-112 | upper knife holder            | 21   | 277-113  | lower knife                    | 22   | 270-100      | spring, lower knife             |
| 4    | 092-D-5    | oil-wick                      | 23   | 270-106  | securing screw, upper knife    | 24   | 270-100      | trimming guard, upper knife     |
| 5    | 128-111    | lock-pawl                     | 25   | 277-113  | lower knife holder             | 26   | 270-105      | securing screw, lower knife     |
| 6    | 270-987    | securing screw, upper knife   | 27   | 277-113  | lower knife                    | 28   | 270-105      | trimming guard, lower knife     |
| 7    | 270-099    | lock-pawl, upper knife holder | 29   | 270-106  | lower knife holder             | 29   | 270-106      | securing screw, lower knife     |
| 8    | 073-F-9    | washer, upper knife holder    | 30   | 270-101  | pressing pin, lower knife      | 31   | 270-101      | pressing pin, lower knife       |
| 9    | 270-103    | collar, upper knife holder    | 32   | 003-L-12 | bushing, lower knife holder    | 32   | 003-L-12     | bushing, lower knife holder     |
| 10   | 270-719    | washef, upper knife holder    | 33   | 070-F-4  | washer, for bushing            | 34   | 270-877      | screw, bushing                  |
| 11   | 007-C-11   | pin, yoke attachment          | 35   | 270-877  | screw, bushing                 | 36   | 028-B-5      | screw, upper knife holder       |
| 12   | 270-098/1  | yoke attachment               | 37   | 270-877  | screw, bushing                 | 38   | 004-A-5      | screw, angle stop               |
| 13   | 270-098    | oil-wick for yoke attachment  | 39   | 277-227  | brace-plate, rear needle guard | 40   | 277-227      | brace-plate, front needle guard |
| 14   | 092-C-2    | oil-wick for yoke holder      | 41   | 277-228  | angle stop, rear needle guard  | 42   | PM 270-104/1 | angle stop, front needle guard  |
| 15   | 270-098    | oil-wick for yoke holder      | 43   | 128-110  | trimming guard, upper knife    | 44   | 128-110      | trimming guard, lower knife     |
| 16   | 250-471    | screw, upper knife lever      |      |          |                                |      |              |                                 |

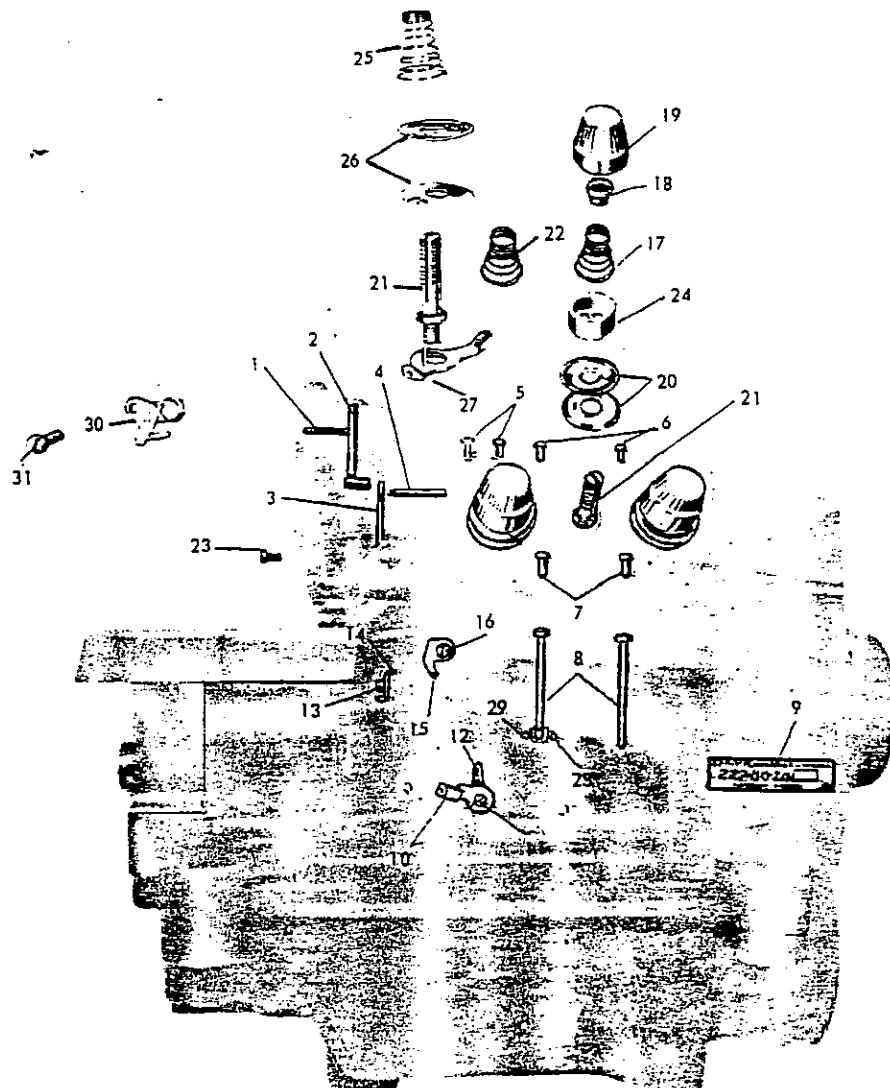




| REF.<br>N° | PART.<br>N°    | DESCRIPTION                               | QUANT. | REF.<br>N° | PART.<br>N°   | DESCRIPTION                      | QUANT. |
|------------|----------------|---|--------|------------|---------------|----------------------------------|--------|
| 1          | 270-077        | pin, presserfoot arm                      | 1      | 18         | 27.77-196     | bracket, presserfoot             | 1      |
| 2          | 270-081/1      | shaft, presserfoot lifter lever           | 1      | 19         | 272 6B-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          | 2/0-089/1      | 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      |            |               |                                  |        |
| 34         | G27.26-181/1   | for 227-00-32                             | 1      |            |               |                                  |        |
| 35         | 27.26-184/1    | presserfoot assembly                      | 1      |            |               |                                  |        |
| 36         | 27.77-183      | shoe presserfoot                          | 1      |            |               |                                  |        |
| 37         | Q04-L-9        | chaining plate                            | 1      |            |               |                                  |        |
| 38         | 27.26-114/1    | screw, presserfoot chaining finger        | 1      |            |               |                                  |        |
|            |                | needle plate                              | 1      |            |               |                                  |        |

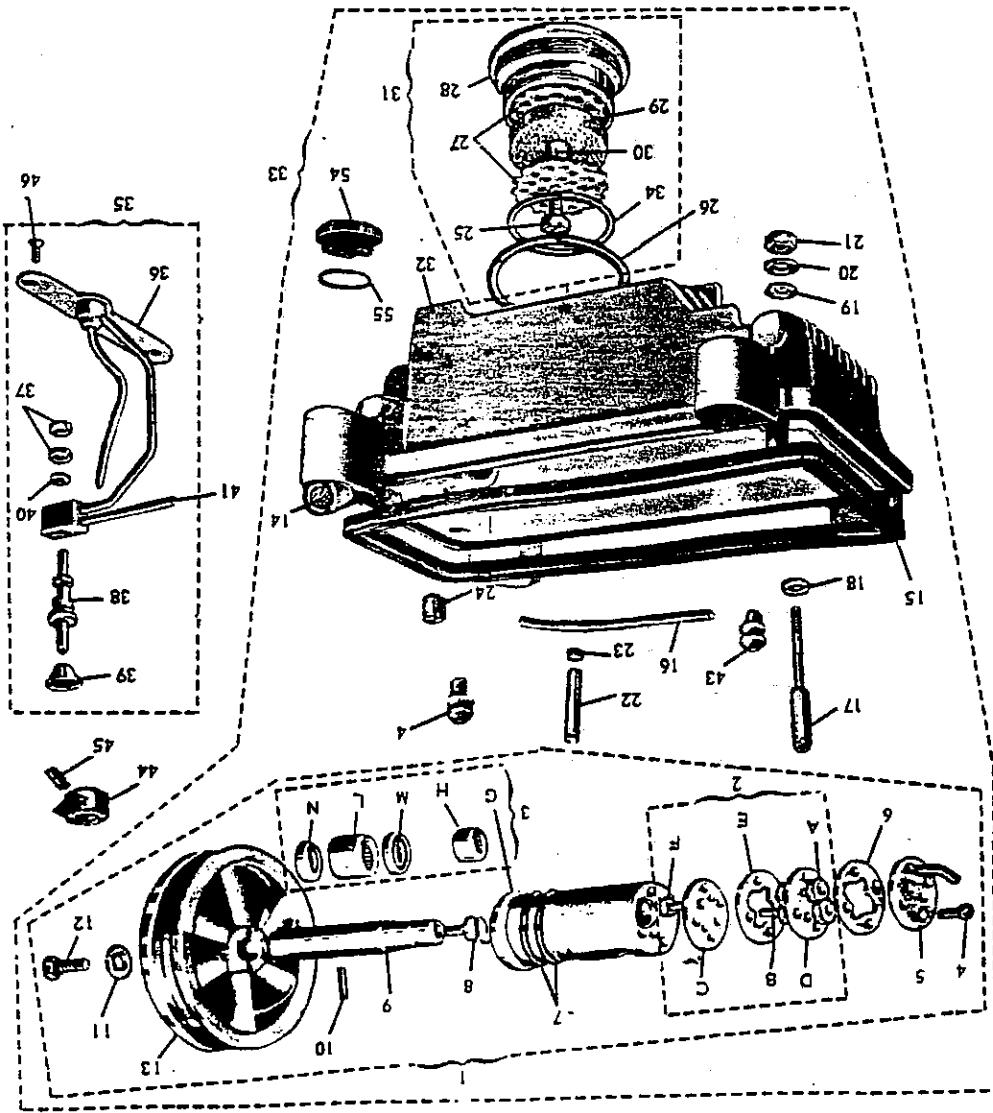
| REF. | PART.        | DESCRIPTION                          | REF. | N° | PART.       | REF. | N° | DESCRIPTION                              |
|------|--------------|--------------------------------------|------|----|-------------|------|----|--|
| 1    | PM.270-208/3 | side cover, with bushing             | 1    | 35 | 007-E-14    |      |    | screw, cover                             |
| 2    | 007-H-25     | cover, top bushing                   | 1    | 36 | 070-E-221   |      |    | screw, front cover                       |
| 3    | PM.270-205/3 | cover, with threaded take-up bushing | 1    | 37 | 054-D-4     |      |    | spring, front cover                      |
| 4    | 270-241/2    | oil-cap, with window                 | 1    | 38 | 270-0-226   |      |    | nut, retaining                           |
| 5    | 270-955/2    | packing ring, oil-cap                | 1    | 39 | G.270-242/3 |      |    | plate, complete with filters, tubes      |
| 6    | 270-983      | hinge assembly with guide tubes      | 1    | 40 | 028-E-10    |      |    | plate, bottom plate securing             |
| 7    | 007-R-75     | hinge, cover securing                | 1    | 41 | 270-212     |      |    | screw, working                           |
| 8    | 007-218/2    | hinge assembly with cap plate        | 1    | 42 | 001-D-6     |      |    | screw, security                          |
| 9    | G.270-245/4  | oil-cap plate                        | 1    | 43 | 001-D-4,5   |      |    | screw, spring securing                   |
| 10   | 270-246      | oil-cap plate gasket                 | 1    | 44 | 270-178     |      |    | collar, workplate pin                    |
| 11   | 270-093/1    | oil-cap plate adjustment             | 1    | 45 | 017-E-4,5   |      |    | collar, stop cam                         |
| 12   | 032-E-9,5    | stop cam                             | 1    | 46 | 270-0-303   |      |    | plung, differential shaft seal           |
| 13   | 605-412      | set-screw, stop cam                  | 1    | 47 | 270-973     |      |    | plung, diff gear                         |
| 14   | 270-094      | lever, presserfoot locking           | 1    | 48 | 270-173     |      |    | set-screw, short screw                   |
| 15   | 270-701      | lever, presserfoot release           | 1    | 49 | 270-0-193/1 |      |    | cap, adjustment cap                      |
| 16   | 270-086      | spring, presserfoot release rod      | 1    | 50 | 270-0-231   |      |    | plug, attachment W/seat                  |
| 17   | 270-078      | spring, presserfoot release lever    | 1    | 51 | 270-231     |      |    | nut, set-screw                           |
| 18   | 2701-P-092   | spring, presserfoot release lever    | 1    | 52 | 01205/A     |      |    | scREW, front cover plate securing        |
| 19   | 270-993      | pin, presserfoot pressure rod        | 1    | 53 | 01205/B     |      |    | scREW, front cover plate                 |
| 20   | 270-095      | pin, top cover securing              | 1    | 54 | 270-214     |      |    | pin, front cover plate                   |
| 21   | 270-066/2    | plung, top cover                     | 1    | 55 | 057-E-4     |      |    | set-screw, side cover                    |
| 22   | 270-303      | plung, outer bushing                 | 2    | 56 | 005-M-10    |      |    | nut, set-screw                           |
| 23   | 026-E-10     | nipple, cover                        | 2    | 57 | 270-619     |      |    | frange, side fringe, left                |
| 24   | 026-C-7      | pin, splash guard securing           | 2    | 58 | 270-624     |      |    | frange, side fringe, right               |
| 25   | 270-247/1    | screw, splash guard securing         | 2    | 59 | 270-623/1   |      |    | gaskey, seal ring disc                   |
| 26   | PM.270-095/3 | shaft, presserfoot pressure rod      | 1    | 60 | 001-D-10    |      |    | sealing disc                             |
| 27   | 270-220/1    | pin, front cover plate               | 1    | 61 | G.270-216/2 |      |    | cover plate assembly, front              |
| 28   | 270-248/1    | plung, screw                         | 1    | 62 | 270-030/2   |      |    | cover plate assembly, rear               |
| 29   | 270-940      | work-plate assembly                  | 1    | 63 | 270-175     |      |    | nameplate, tensioning disc housing cover |
| 30   | PM.270-120/3 | cover, splash bolt, machine assembly | 1    | 64 | 270-174     |      |    | nameplate, front cover plate             |
| 31   | 270-972      | pin, front cover plate               | 1    | 65 | 270-923     |      |    | scREW, seal ring disc                    |
| 32   | 270-220/2    | scREW, plug                          | 1    | 66 | 270-0-110   |      |    | block, tie-rod                           |
| 33   | 270-220/1    | scREW, plug                          | 1    | 67 | 270-0-110   |      |    | tie-rod                                  |
| 34   | PM.270-217/2 | cover, looper and take-up            | 1    | 68 | PM.270-301  |      |    | splashguard assembly                     |

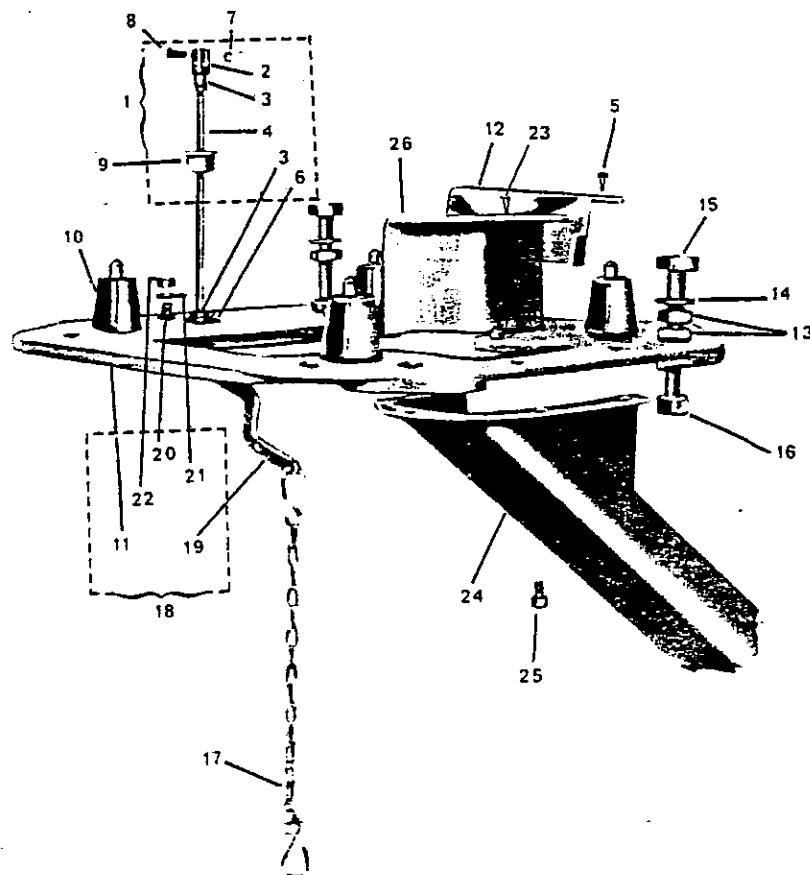




| REF.<br>N° | PART.<br>N° | DESCRIPTION                       | QUANT. | REF.<br>N° | PART.<br>N° | DESCRIPTION                    | QUANT. |
|------------|-------------|-----------------------------------|--------|------------|-------------|--------------------------------|--------|
| 1          | 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 V-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         | 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      |            |             |                                |        |

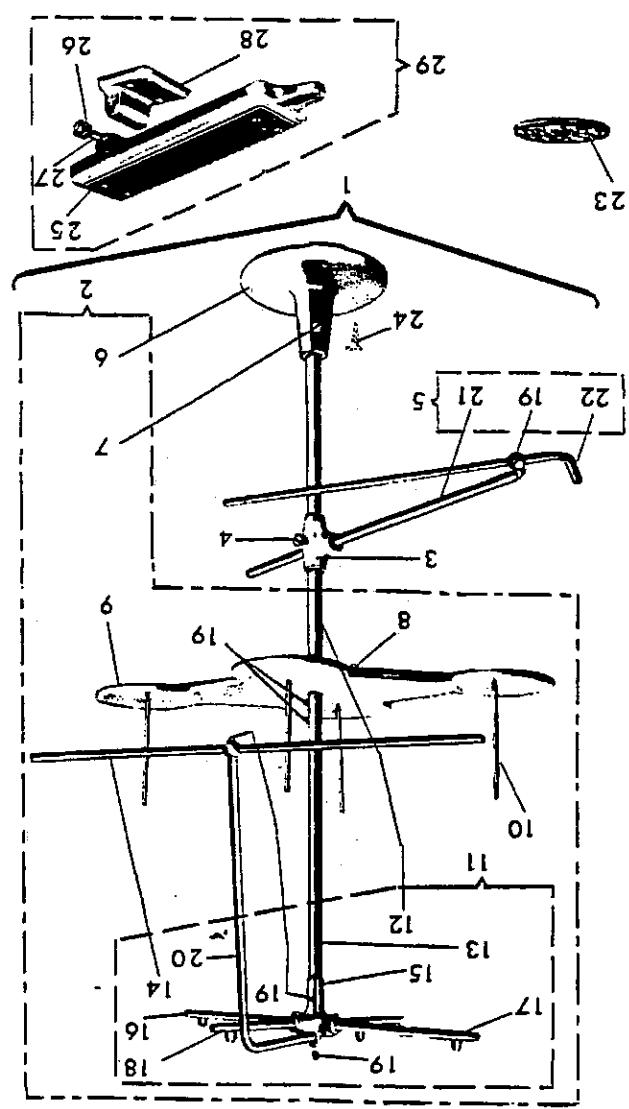
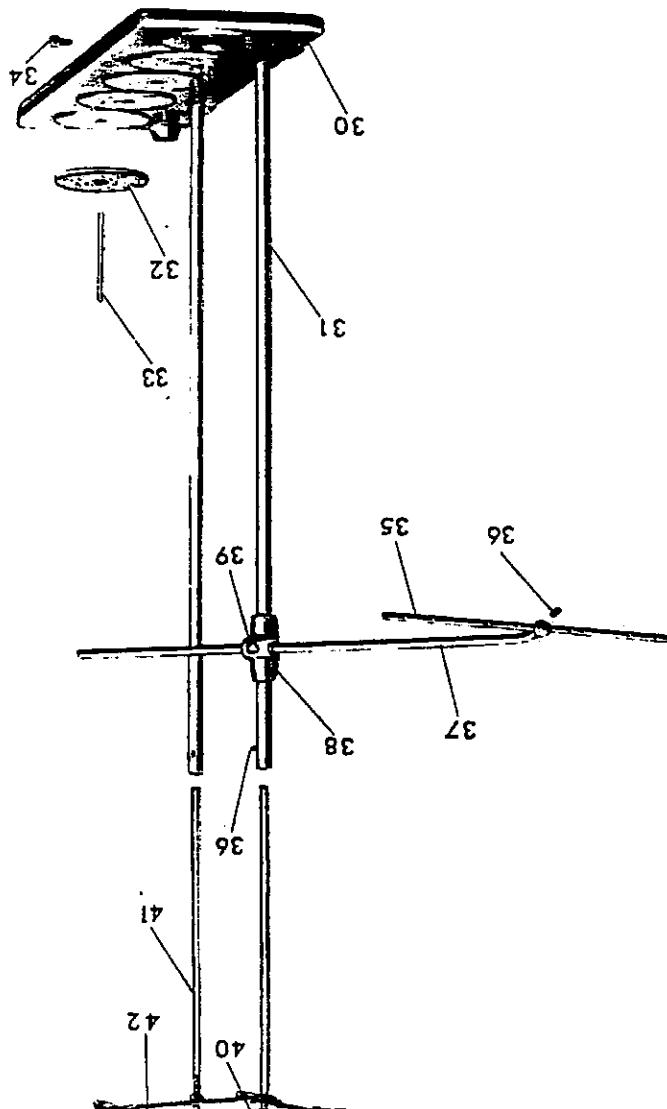
| REF. | PART.        | DESCRIPTION                         | AMOUNT |
|------|--------------|-------------------------------------|--------|
| 1    | G.270-816/1  | oil pump assembly                   | 1      |
| 2    | G.633-833/1  | gear assembly                       | 1      |
| 3    | PM.270-816/1 | pump unit                           | 1      |
| 4    | G.633-818/1  | screws                              | 1      |
| 5    | PM.633-817/1 | oil distributor assembly            | 1      |
| 6    | 633-711/1    | washer                              | 1      |
| 7    | 633-711/1    | gasket                              | 1      |
| 8    | 270-824/1    | worm                                | 1      |
| 9    | 270-708      | shaft                               | 1      |
| 10   | 633-823/1    | flexible pin                        | 1      |
| 11   | 633-707      | cup spring                          | 1      |
| 12   | 033-959/1    | crew, pulley securing               | 1      |
| 13   | 270-810/2    | crew, pump                          | 1      |
| 14   | 633-959/1    | oil lever window                    | 1      |
| 15   | 270-808/1    | gasket                              | 1      |
| 16   | 633-842      | tube                                | 1      |
| 17   | 270-811/1    | pin                                 | 1      |
| 18   | 270-947      | gasket                              | 1      |
| 19   | 065-L-5      | nut                                 | 1      |
| 20   | 270-946      | washer                              | 1      |
| 21   | 059-G-6      | tube                                | 1      |
| 22   | 270-836      | feet pad                            | 1      |
| 23   | 017-H-12     | grub-screw                          | 1      |
| 24   | 270-827/1    | feet disc                           | 1      |
| 25   | 633-966      | screw                               | 1      |
| 26   | 633-966      | disc                                | 1      |
| 27   | 270-828/1    | plugs                               | 1      |
| 28   | 270-996/2    | oil sump                            | 1      |
| 29   | 633-927/1    | oil pump and sump assembly complete | 1      |
| 30   | 633-925      | oil pump                            | 1      |
| 31   | G.270-001/2  | oil sump                            | 1      |
| 32   | 270-001/2    | oil pump                            | 1      |
| 33   | 205520-5-00  | oil pump and sump assembly complete | 1      |

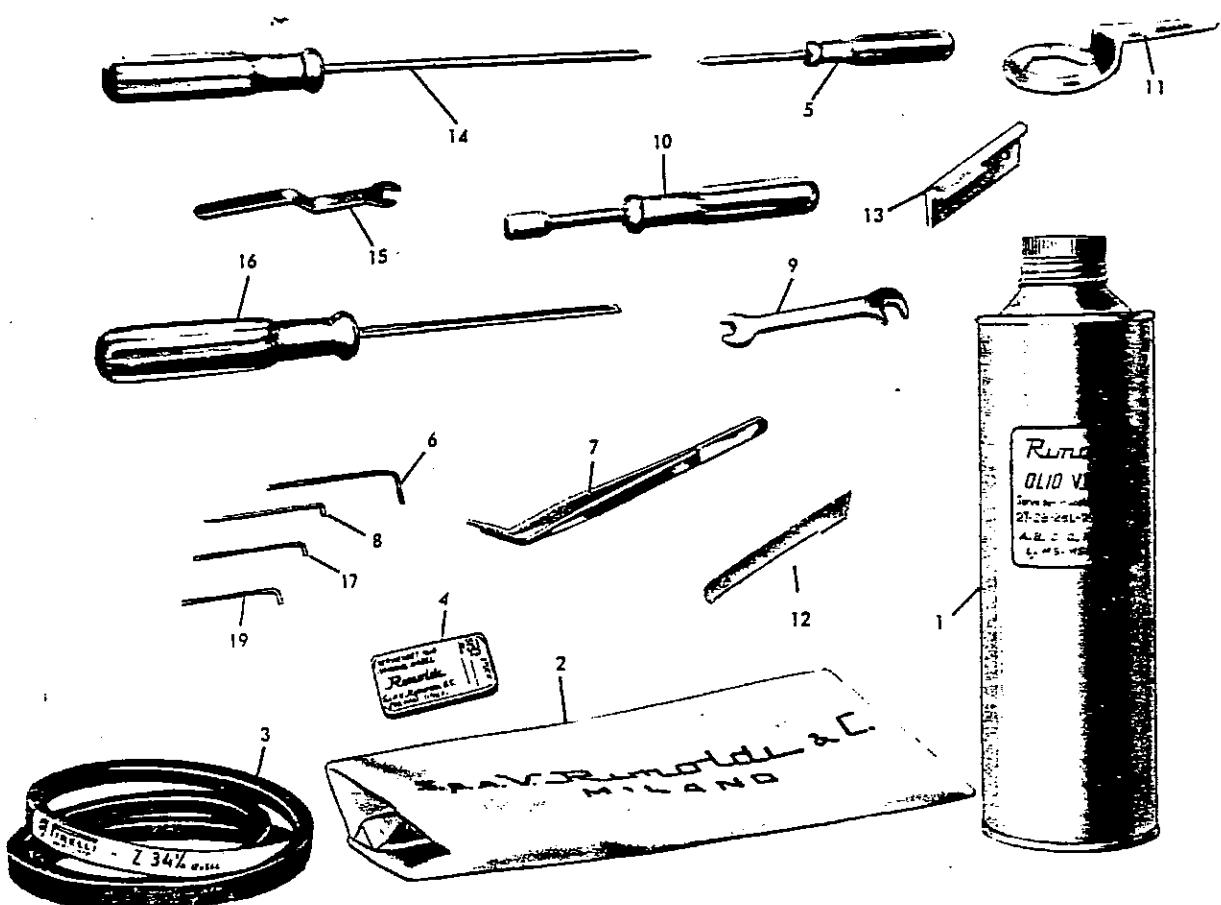




| REF.<br>N° | PART.<br>N°  | DESCRIPTION                                | QUANT. | REF.<br>N° | PART.<br>N° | DESCRIPTION                 | QUANT. |
|------------|--------------|--|--------|------------|-------------|-----------------------------|--------|
| 1          | G.270-583    | tie-rod assembly, presserfoot lifter lever | 1      | 23         | 270-558     | ON REQUEST                  |        |
| 2          | 270-585      | coupling, presserfoot lifter lever upper   | 1      | 24         | 270-590/1   | pin                         | 1      |
| 3          | 059-A-5      | lock-nut, lifter lever tie-rod             | 2      | 25         | 270-590/2   | waste chute (long - right)  | 1      |
| 4          | 270-583      | rod, presserfoot lifter lever              | 1      | 26         | 001-G-10    | waste chute (left)          | 1      |
| 5          | 270-459      | lock-screw, flywheel guard                 | 7      |            | 270-589/1   | screw, waste chute securing | 3      |
| 6          | 270-557      | coupling, presserfoot lifter lever         | 1      |            |             | waste chute -short          | 1      |
| 7          | 270-701      | snap-rings                                 | 3      |            |             |                             |        |
| 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      |            |             |                             |        |

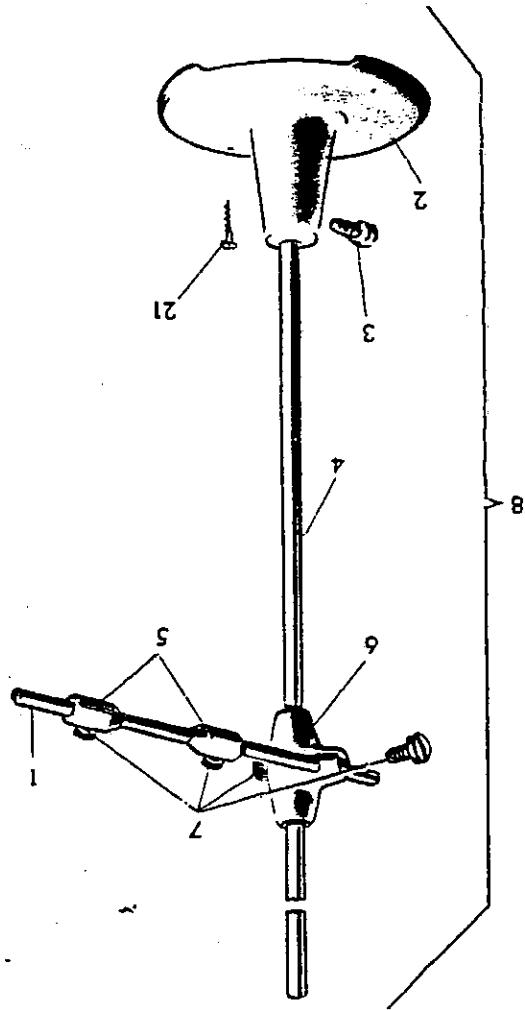
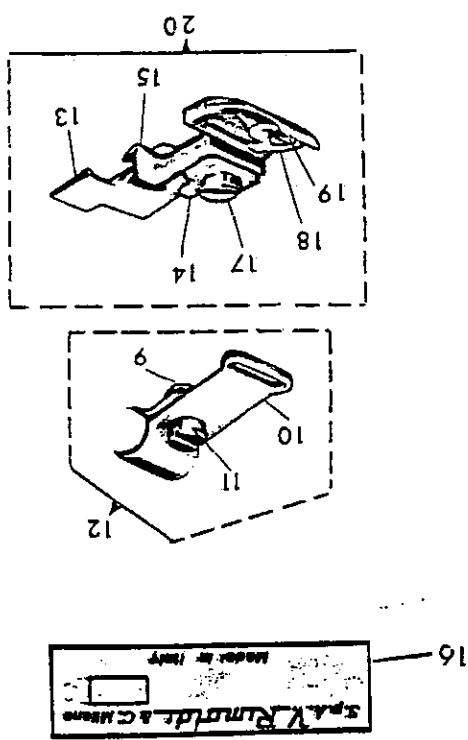
| N° | DESIGNO      | DESIGNAZIONE                         | N° | DESIGNO | DESIGNAZIONE                    | N° | DESIGNO | DESIGNAZIONE                    |
|----|--------------|--------------------------------------|----|---------|---------------------------------|----|---------|---------------------------------|
| 1  | AS.277-140   | SUPPLIED WITH HEAD ONLY              | 1  | 30      | 490/2.                          | 1  | 30      | 490/2.                          |
| 2  | AS.260-140   | thread strand assembly complete      | 1  | 31      | 910-143                         | 1  | 31      | 910-143                         |
| 3  | 605-937      | bracket                              | 1  | 32      | 569                             | 2  | 33      | 1146                            |
| 4  | 605-980      | lock-screw                           | 1  | 34      | 001-3-10                        | 2  | 34      | 001-3-10                        |
| 5  | 3277-157     | bar sustaining with thread guide rod | 1  | 35      | 016-F-5                         | 1  | 35      | 016-F-5                         |
| 6  | 01141        | base, thread strand                  | 1  | 36      | 016-F-5                         | 1  | 36      | 016-F-5                         |
| 7  | 001-G-12     | screws, rod securing                 | 1  | 37      | 220-157                         | 1  | 37      | 220-157                         |
| 8  | 260-142      | lock-screw                           | 1  | 38      | 605-937                         | 1  | 38      | 605-937                         |
| 9  | 260-143      | plate, plate securing                | 1  | 39      | 005-980                         | 1  | 39      | 005-980                         |
| 10 | 11146        | pin, thread spool                    | 1  | 40      | 11145                           | 1  | 40      | 11145                           |
| 11 | 3260-137     | frame, thread spool                  | 1  | 41      | 910-144                         | 1  | 41      | 910-144                         |
| 12 | 250-143      | upright, main lower                  | 1  | 42      | G 497                           | 1  | 42      | G 497                           |
| 13 | 250-120      | upright, main upper                  | 1  | 43      | 11145                           | 1  | 43      | 11145                           |
| 14 | 250-137      | upright, main upper                  | 1  | 44      | lock-nut, thread guide assembly | 1  | 44      | lock-nut, thread guide assembly |
| 15 | 260-140      | rod, thread guide                    | 1  | 45      | upright, main upper             | 1  | 45      | upright, main upper             |
| 16 | PM 260-134/1 | connection piece, rod                | 1  | 46      | lock-nut, thread guide          | 1  | 46      | lock-nut, thread guide          |
| 17 | PM 260-133/1 | rod, thread guide                    | 1  | 47      | upright, main upper             | 1  | 47      | upright, main upper             |
| 18 | PM 260-135/1 | rod, thread guide                    | 1  | 48      | lock-nut, top section           | 1  | 48      | lock-nut, top section           |
| 19 | 01145        | grub-screw                           | 1  | 49      | upright, main upper             | 1  | 49      | upright, main upper             |
| 20 | PM 250-148/1 | grub-screw                           | 1  | 50      | lock-nut, top section           | 1  | 50      | lock-nut, top section           |
| 21 | 277-158/1    | bar, thread guide sustaining; power  | 1  | 51      | upright, main upper             | 1  | 51      | upright, main upper             |
| 22 | 277-137      | rod, thread guide sustaining         | 1  | 52      | upright, main upper             | 1  | 52      | upright, main upper             |
| 23 | 569          | pad, thread spool                    | 1  | 53      | upright, main upper             | 1  | 53      | upright, main upper             |
| 24 | 5 20 X 30    | pedal, thread strand securing        | 1  | 54      | upright, main upper             | 1  | 54      | upright, main upper             |
| 25 | PM 910-914   | pedal, thread strand                 | 1  | 55      | upright, main upper             | 1  | 55      | upright, main upper             |
| 26 | 053-H-8      | pedal                                | 1  | 56      | upright, main upper             | 1  | 56      | upright, main upper             |
| 27 | 910-964      | scREW, sharp                         | 1  | 57      | upright, main upper             | 1  | 57      | upright, main upper             |
| 28 | 910-934/1    | base, pedal                          | 1  | 58      | upright, main upper             | 1  | 58      | upright, main upper             |
| 29 | 3 910-914/1  | pedal assembly complete              | 1  | 59      | upright, main upper             | 1  | 59      | upright, main upper             |





| REF.<br>Nº  | PART.<br>Nº | DESCRIPTION                    | QUANT. | REF.<br>Nº | PART.<br>Nº | DESCRIPTION                   | QUANT. |
|-------------|-------------|--------------------------------|--------|------------|-------------|-------------------------------|--------|
| 1           | VR.504      | 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                 | 5      | 13         | 277-112     | knife, upper                  | 1      |
| 5           | 1161/2      | screwdriver                    | 1      | 14         | 01160/2     | screwdriver                   | 1      |
| 6           | 533-742     | 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: |             |                                |        | 270-575/1  |             | Tab. 75                       |        |

| REF. | PA.<br>Nº   | DESCRIPTION            | REF.<br>Nº | PART.         | REF.<br>Nº | DESCRIPTION                       |
|------|-------------|------------------------|------------|---------------|------------|-----------------------------------|
| 1    | 605-144     | base, rcd.             | 12         | PMCT 77 R-267 | 1          | guide, reinforcing type, complete |
| 2    | 01141       | base                   | 13         | 21277 F-184   | 1          | shoe                              |
| 3    | 001 G-12    | screw                  | 14         | 2777-196      | 1          | tung, chainring plate             |
| 4    | 605-143     | upright                | 15         | 27768-191     | 1          | hinge, chainring                  |
| 5    | 605-723     | tapered sleeve         | 16         | W80256-0-03   | 1          | machined, type nameplate          |
| 6    | 605-927     | bracket                | 17         | 034 L-8       | 1          | screw                             |
| 7    | 605-380     | knurled head screw     | 18         | 21177 R-071   | 1          | plate                             |
| 8    | G250 R-9373 | elastice reel stand    | 19         | 004 G-3       | 1          | screw                             |
| 9    | 057 A-3     | guide, reel            | 20         | 6271277 F-181 | 1          | presserfoot, complete             |
| 10   | 2777 R-267  | guide, reinforced tape | 21         | TS 2DX30      | 1          | screw, frame securing             |
| 11   | 001 C-5.5   |                        |            |               |            |                                   |



## 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.

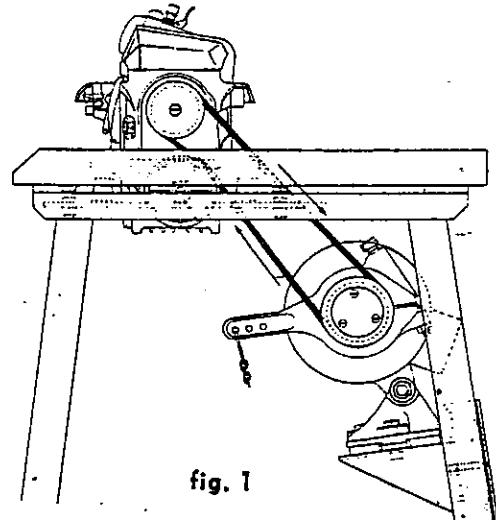
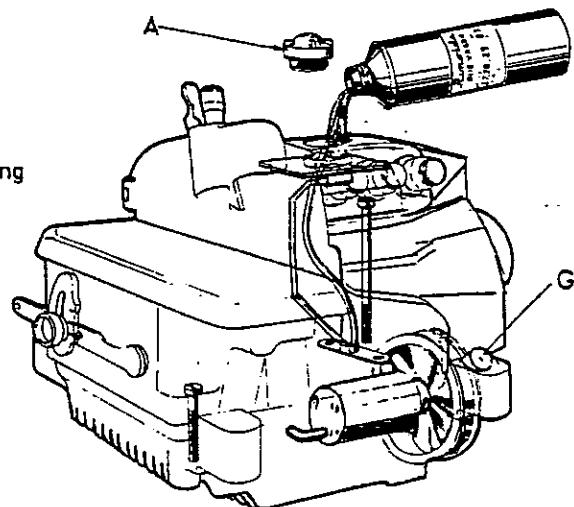


fig. 1

### 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.



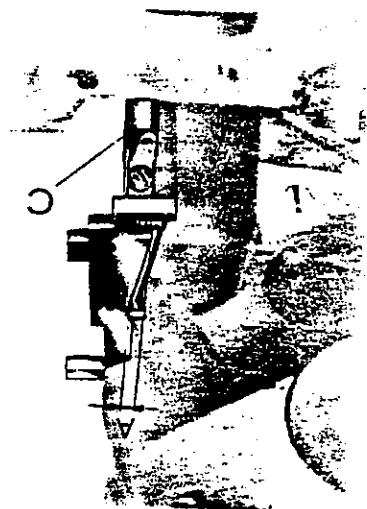
### d) Assembly and adjustment of sewing parts

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

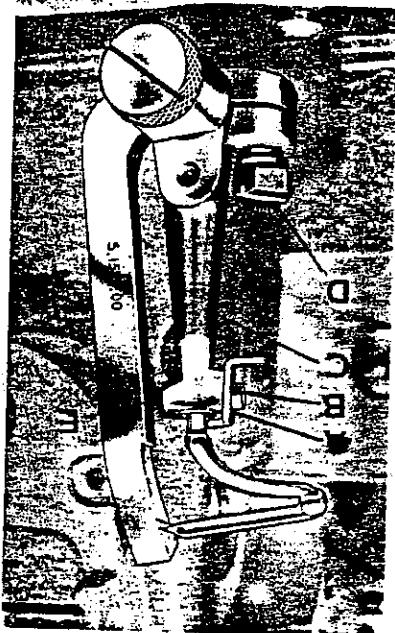
Fig. 5



- When the primary looper has completed its stroke to the left and with the needle in its lowest position, the distance between the needle 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 looped point should pass 1/64" from the bottom of the needle.
- Set the primary looper in relation to the needle.
- Firmly tighten up screw E (fig. 4).
- Correct position can be checked by reference to the timing table.
- Place timing gauge S.1686.00 on milled surface of base has been set in place but not locked) until correct angle is obtained.
- 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.
- Set the needle in its lowest position.
- Loosen screw D.
- Set the primary looper height gauge S.1555.00.
- Raise or lower looper so that its point contacts the upper line on timing gauge S.1555.00.
- Mount looper height gauge S.1555.00 on the primary looper shaft with special screw supplied with gauge as shown in fig. 4.
- Loosen screw E.
- Slightly tighten screw E (fig. 4).
- Set the 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.

Setting angle

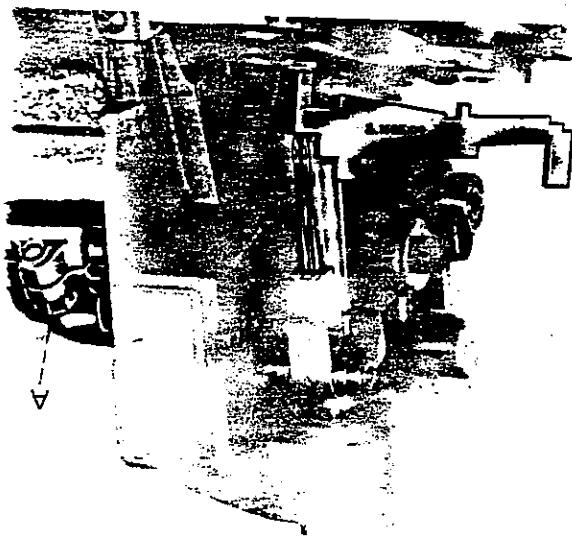
Fig. 4



#### SETTING OF HEIGHT

4. Setting Primary looper (fig. 4)

Fig. 3



- 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.

- If the needle plate is in proper position, the needles must be centered 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 1 1/32 inch when the needle is at its highest point.
- If the needle plate is in proper position, the needles must be centered for passage through the respective needle holes of the needle plate.
- If the needle plate is in proper position, the needles must be centered for passage through the respective needle holes of the needle plate.

3. Setting of needle (fig. 3).

## 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.

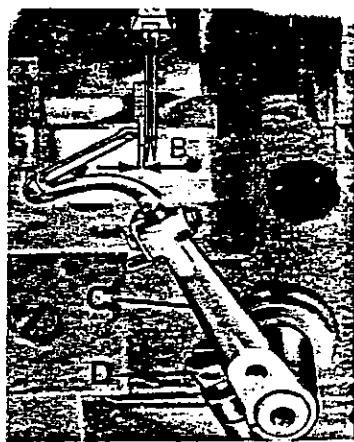


fig. 6

- 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.

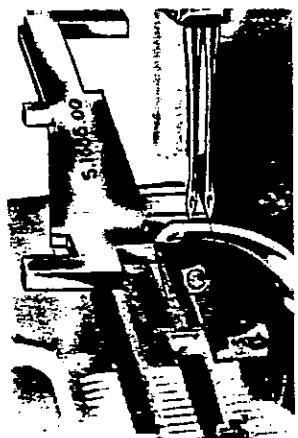
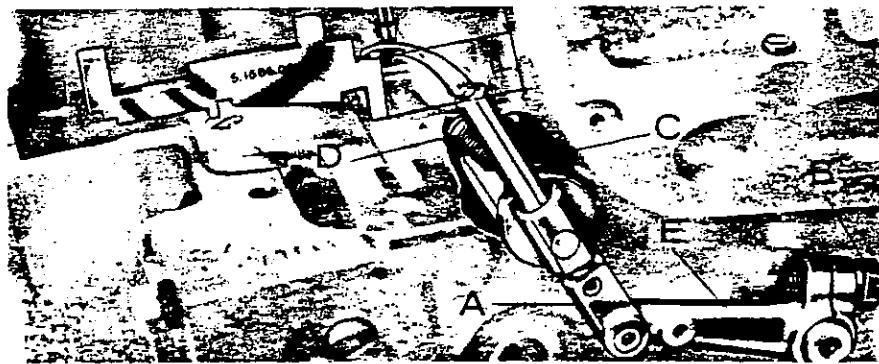


fig. 7

- 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.



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

fig. 8

- 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.

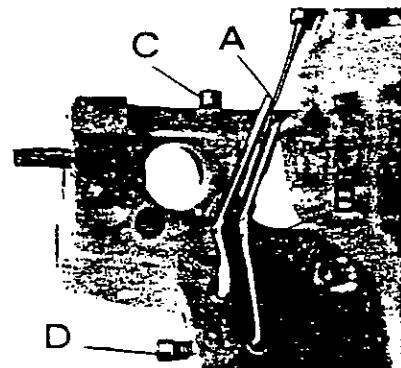


fig. 9

If feed mechanism adjustment is required, proceed as follows:

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.

#### 9. Feed mechanism (fig. 13).

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

fig. 12

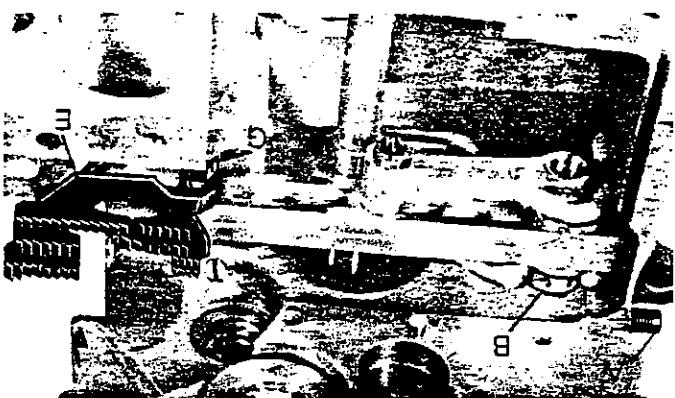
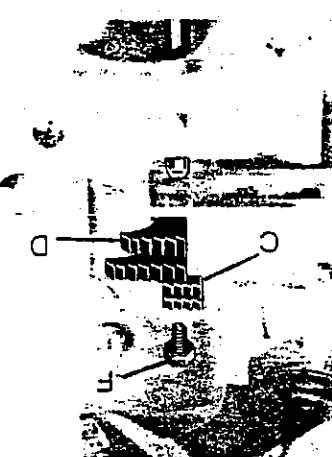


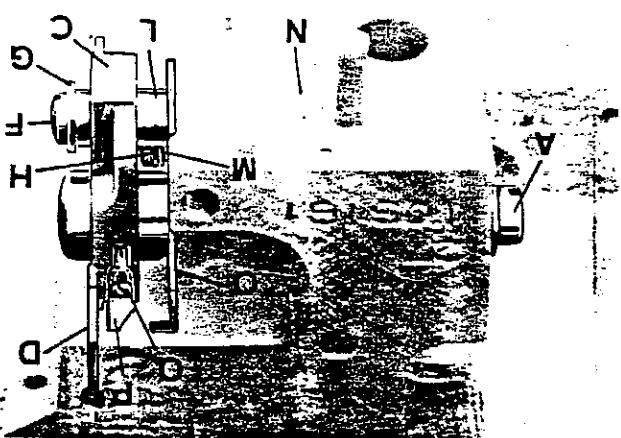
fig. 11



- Adjust feed dog angle by rotating eccentric B.
- Slacken screw A.
- Mount the front differential feed dog E with screw G but do not tighten it up fully (fig. 12).
- 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 rear feed dogs C and D (fig. 11) and match the feed dog slides.
- Remove Plexiglass plate beneath work plate.

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

fig. 10



- Mount lower trimmer knife (fig. 10).
- Slide knife guide block P on knife-holder with screw Q.
- 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 height.
- With needles in its lowest position, bring guide block P close up to front needle guard and lock it by tightening up screw Q.
- With needles in its lowest position, bring guide block P into place.
- Tighten up screw A.
- The cutting edge of the trimmer knife must be flush with the rear needle guard.
- The cutting edge of the trimmer knife must be flush with the rear needle guard.
- Check that trimmer knife holder C moves smoothly and adjust setting for required height.
- Screw N firmly.
- Pressure on trimmer knife should be lightly exerted to avoid generating friction between the two knives resulting in their hardening.
- Press one finger lightly against screw A and tighten up screw N firmly.
- Pressure applied between the knives by spring M and pin H is proper pressure.
- 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 applied between the two knives results in strong friction between the two knives resulting in their hardening.

#### 7. Mounting lower trimmer knife (fig. 10)

- 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.

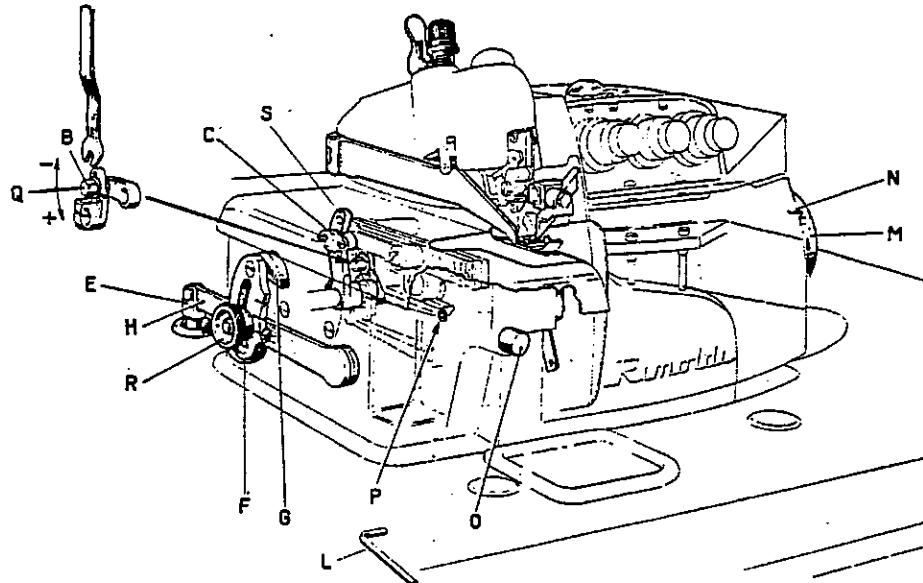


fig. 13

**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.

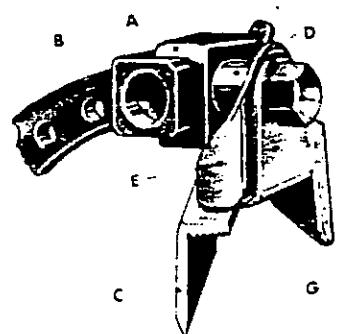
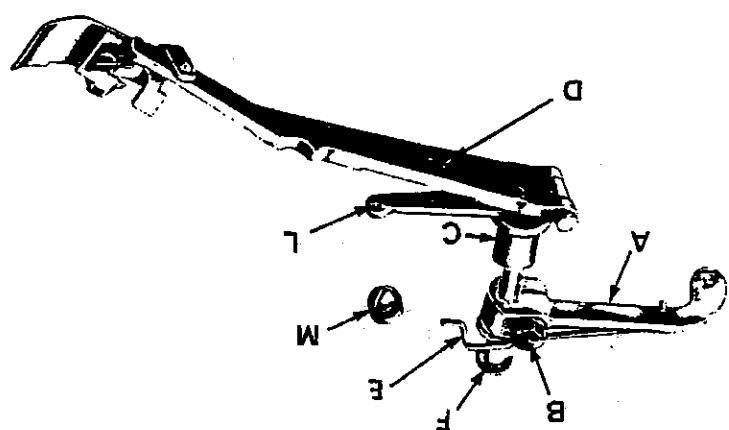
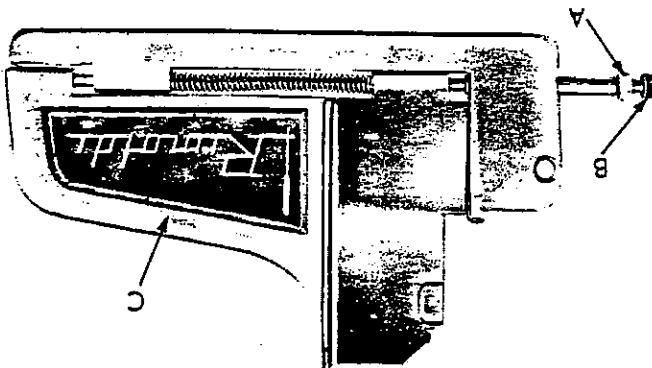


fig. 14



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 in bushing C on which bushing C into hole provided in baseplate.
  - Set slide lever A and spring E on to shaft L.
  - Slide snapring F on to shaft L.
  - With needle at highest position, insert presserfoot bearing.
  - Engage lifter lever A with presserfoot lifting foot pedal.
  - Engage lifter lever A with presserfoot bearing arm D.
  - When pedal is depressed it should have a slight idle stroke before actuating presserfoot bearing arm D.
  - Check movement of secondary looper; the latter should not impinge on presserfoot chainring finger when presserfoot is at its highest position. This undesirable condition can be prevented by adjusting eccentric washer M, below presserfoot bearing arm D, on slide cover.
  - Adjust lifter lever A, by regulating screw in base beneath the lever, so that it lifts presserfoot to required position.
- 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 ment.
- The cover plate can be shifted towards left or right by neede guard of the lower knife holder.
- For making up very tough fabrics, needle take-up 270-274/2 should be shifted forwards, towards open-

g) Adjustment of needle take-up

## ELECTRIC LUBRICATION CONTROL DEVICE (PRESSURE SWITCH)

### h) Disassembly and replacement of pressure switch

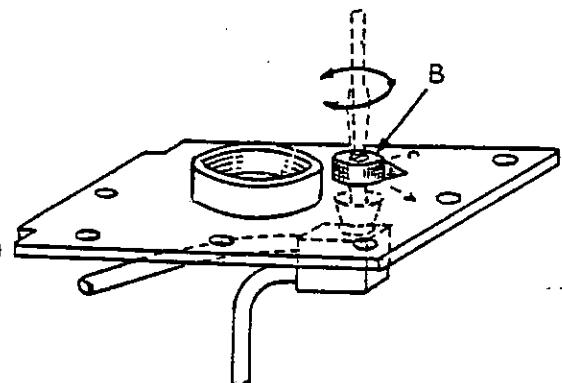
- Take down oil cup from baseplate and drain out oil.
- Remove screw by which pressure switch bracket is mounted on oil cup..
- Slacken the two screws on the electric wire terminal lugs.
- Slip plastic tube connecting pressure switch to rubber connection off the pressure switch.
- Remove bracket and 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.

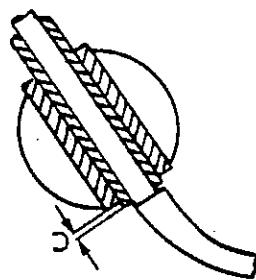


Adjustment of forced feed lubrication rate to main shaft (fig. 18)

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

fig.18

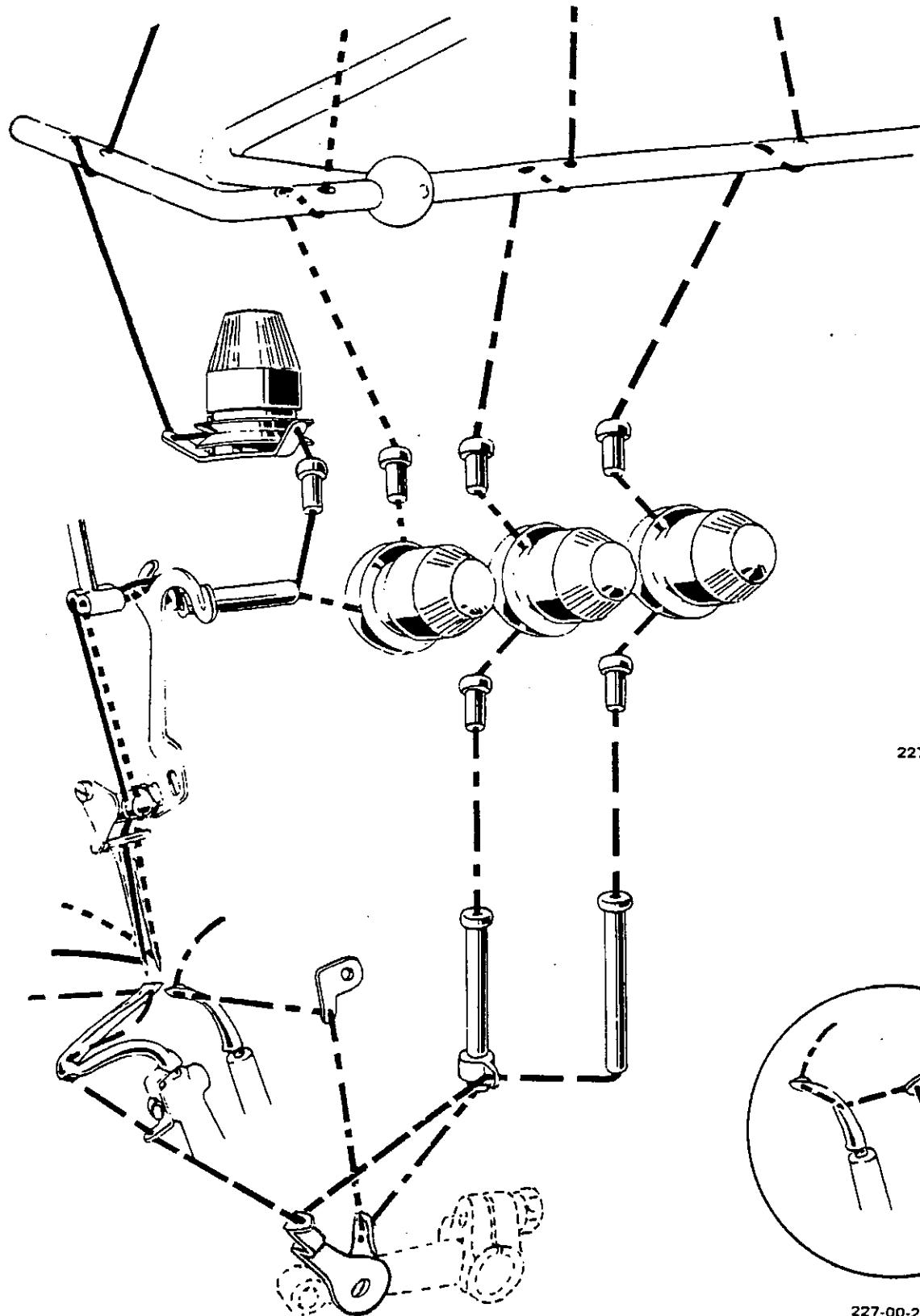
| MACHINE HEAD NUMBERS | A       | B   | C       | D   | E   |
|----------------------|---------|-----|---------|-----|-----|
| 227-00-32            | 2,5+2,8 | 1,5 | 3,3+3,5 | 0,5 | —   |
| 227-00-20            | 2,5+3   | 1,5 | 8,5     | 0,3 | —   |
| 227-01-07            | 2,5+3   | 1,5 | 8,5    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



T I M I N G   T A B L E

II - USE

a - Threading



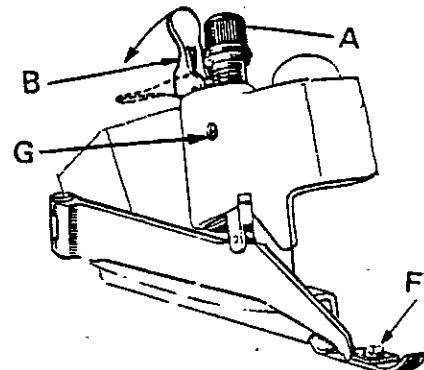
227-00-32

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. | TRROUBLE                          | PROBABLE CAUSE  |
|-----|-----------------------------------|---|
| 1   | Uneven stitching                  | - Thread take-ups incorrectly adjusted<br>- Wrong thread tension<br>- Yarns not gauged  |
| 2   | Feed and Fabric slipping sideways | - Presserfoot pressure too light<br>- Height and slant of feed dogs not properly adjusted<br>- Knives require sharpening<br>- Differential badly adjusted   |
| 3   | Machinie skipping                 | - Primary or Secondary looper badly adjusted in respect of needle so that loopers become blunt<br>- Looper becomes blunt<br>- Loopers too far apart at crossing<br>- Loopers too near at crossing, thus becoming blunt<br>- Front needle guard too far from needle<br>- Needle not set in proper position<br>- Yarn irregularly wound on reel<br>- Tensions too tight |
| 4   | Thread breaking                   | - Yarn irregularly wound on reel<br>- Tensions too tight  |
| 5   | Needle breaking                   | - Needle badly mounted  |
| 6   | Fabric being punctured            | - Blunt needle<br>- Needle size unsuitable for plate<br>- Needle point unsuitable   |
| 7   | Oil leaking                       | - Screws mounting oil cup on base not sufficiently tightened up<br>- Oil cup plug not screwed down tightly<br>- Oil cup gasket badly mounted  |
| 8   | Faulty lubrication                | - Oil level too low<br>- V - belt incorrectly mounted<br>- Upper tube clogged<br>- Lubrication pump filter clogged  |

### 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.

### IMPORTANT

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.

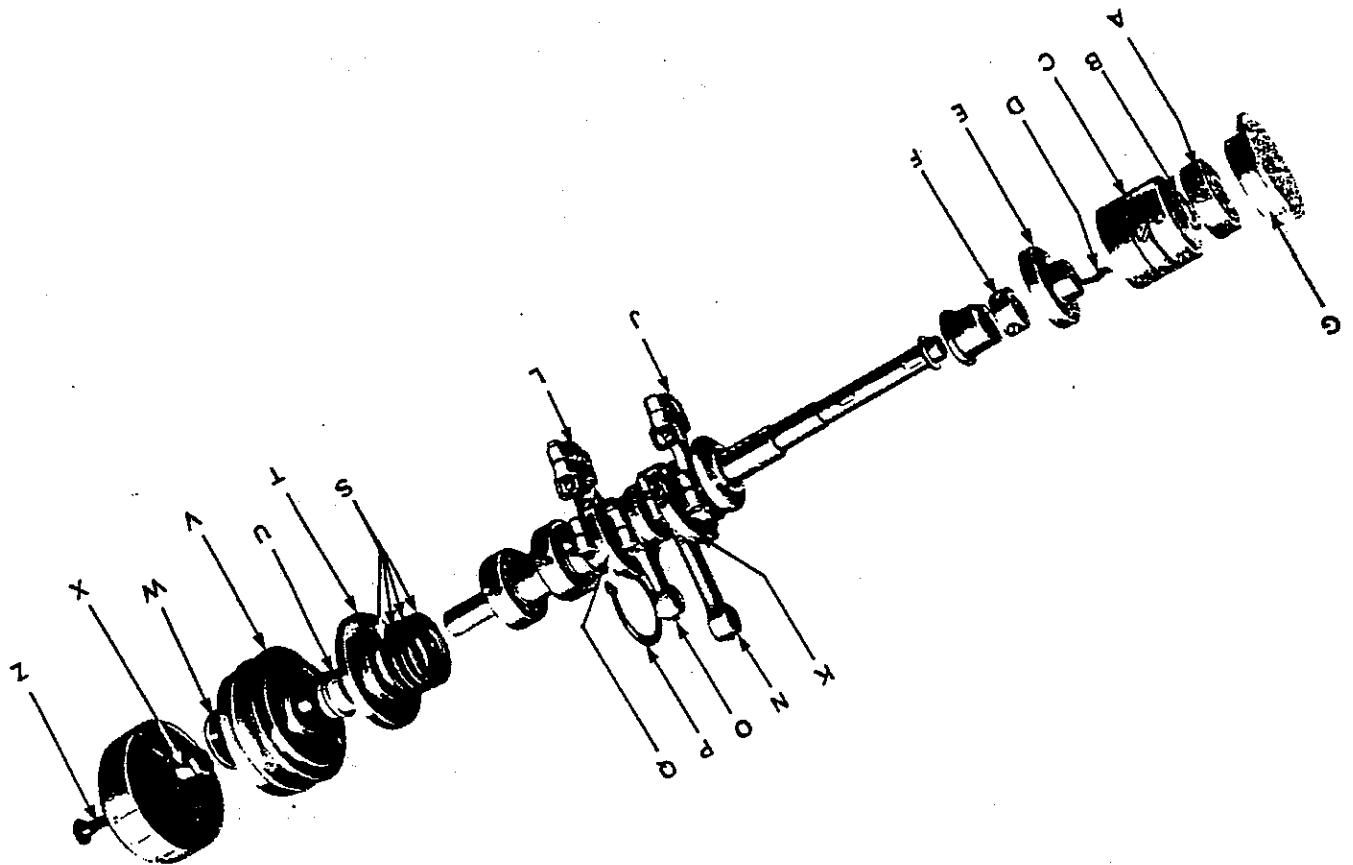
#### e) Instructions for taking down and removing cam shaft (if necessary).

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

### IMPORTANT

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:

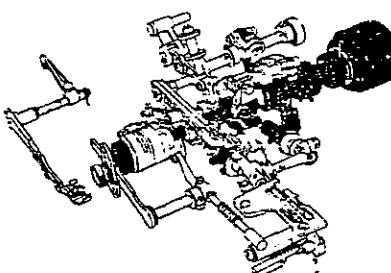
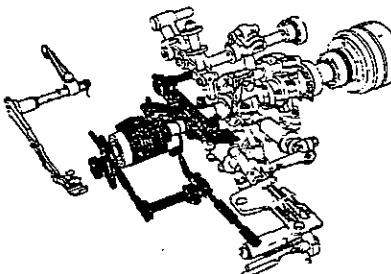
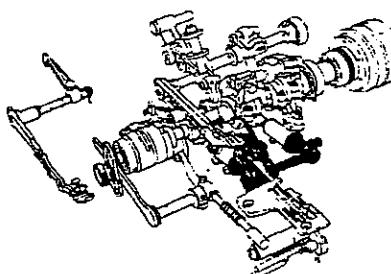
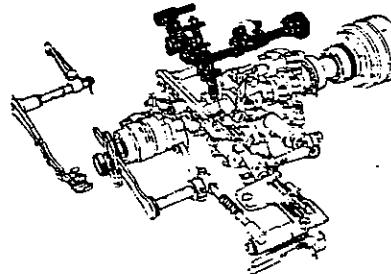
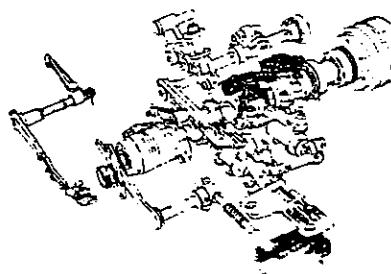
- Re-install flanges G and I with lubrication hole facing downwards.
- Leave all connecting rod lock-screws in their own holes.
- Connecting rods J and L are identified by a 2 punched on the L big-end and three lines on the J rod surface.
- For positioning the connecting rod cap a reference mark is provided 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.



1. Turn stitch length to reference 5 on handwheel.
2. Remove screw Z.
3. Turn stitch length to reference 0 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 pliers 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 pliers S. 0459/00, slightly shifting cam to the right.
18. Remove sectors K and Q.
19. Remove shaft.

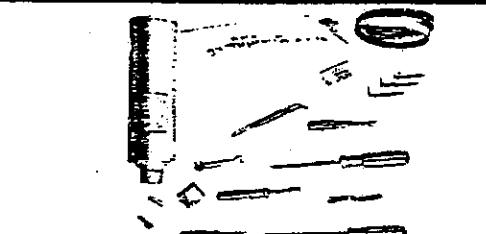
#### OPERATION SEQUENCE

# INDEX OF TABLES

|  |        |  |
|--|--------|--|
| HOUSING - BUSHING<br>AND GUIDE ASSEMBLY        | TAV. 1 |   |
| MAIN SHAFT WITH<br>CONNECTING RODS             | TAV. 2 |    |
| DIFFERENTIAL<br>MECHANISM                      | TAV. 3 |   |
| LOOPER DRIVE SHAFT<br>AND CONNECTING RODS      | TAV. 4 |  |
| NEEDLE DRIVE<br>MECHANISM                      | TAV. 5 |  |
| UPPER AND LOWER<br>TRIMMING KNIFE<br>MECHANISM | TAV. 6 |  |

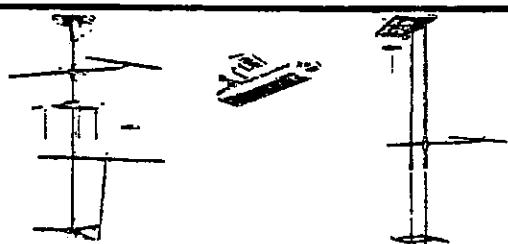
KIT  
STANDARD SERVICE

TAV. 13



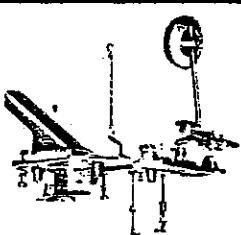
REEL STANDS  
AND FOOT PEDAL

TAV. 12



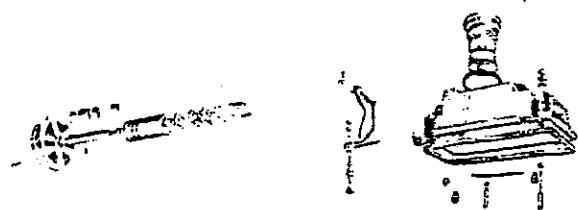
BRACKET AND  
KNEE CONTROL  
MACHINE MOUNTING

TAV. 11



OIL SUMP AND  
LUBRICATION PUMP

TAV. 10



THREAD TAKE-UP  
AND TENSION DISCS

TAV. 9



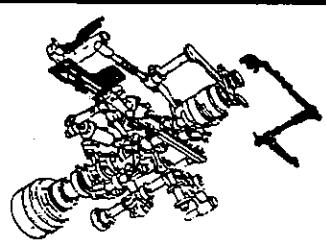
MACHINE COVER  
AND WORK PLATE

TAV. 8



PRESSERFOOT  
LINKAGE AND  
NEEDLE PLATE

TAV. 7



CLASS 227-01-07

TAV. 14

CLASS 227-00-21

TAV. 15

