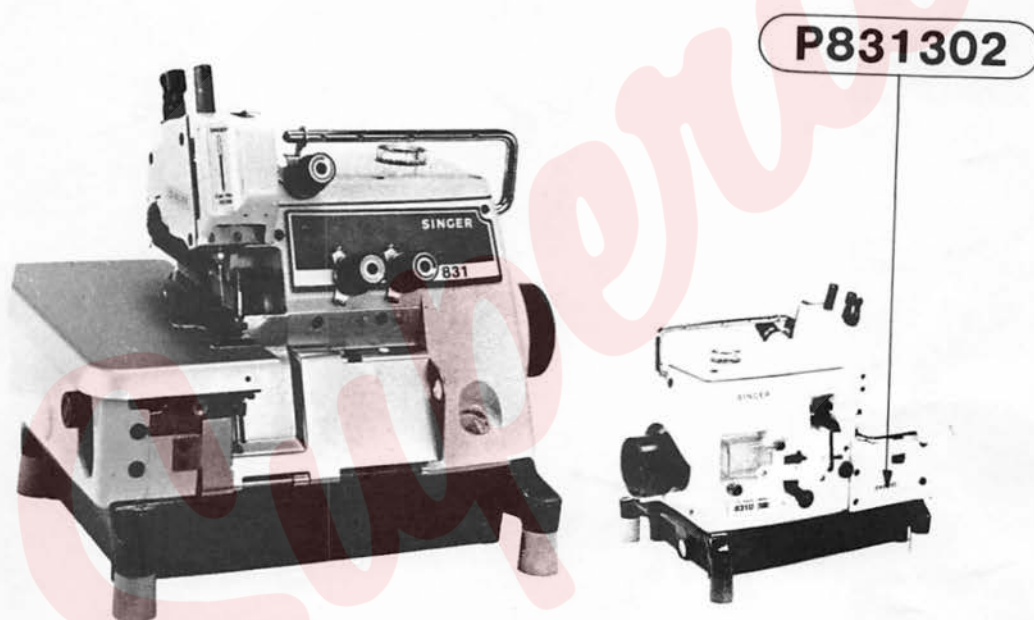


# **PARTS BOOK**

**FOR**

## **SINGER 831U·832U**



High Speed Single Needle  
Two Needle Overedge Machine

**THE SINGER COMPANY**

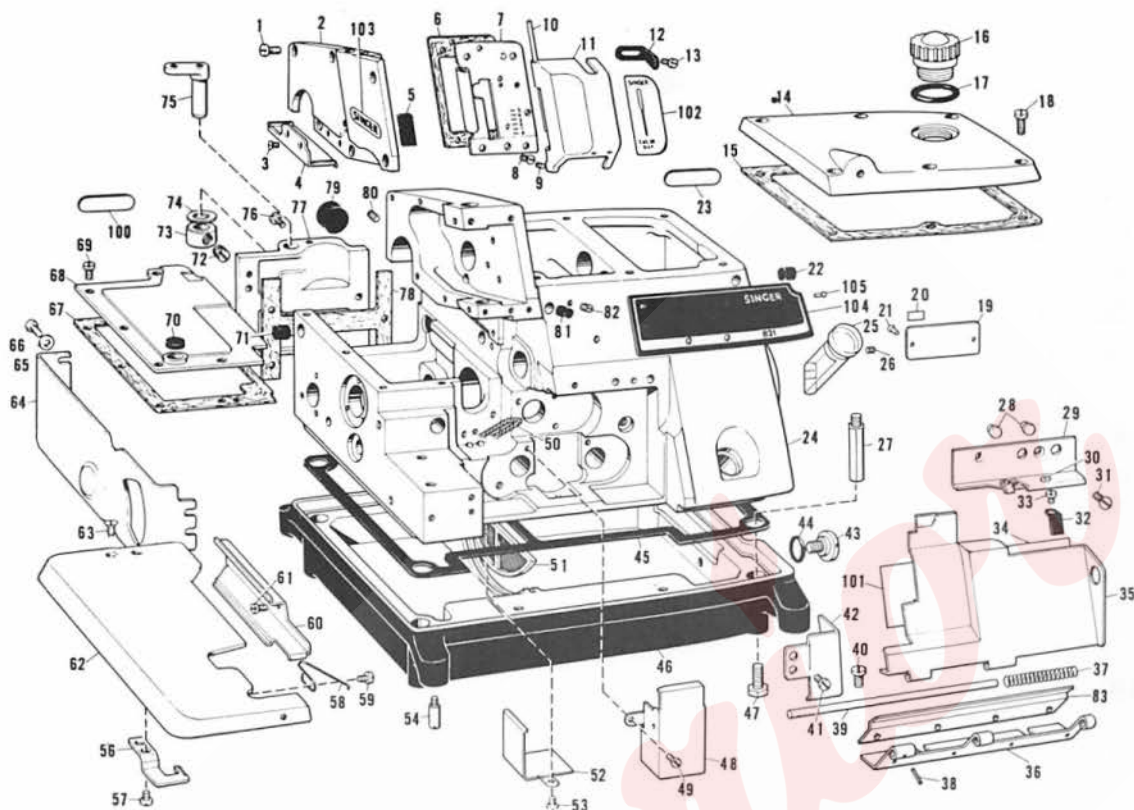
## How to use the parts book

1. This parts book can be used for ordering of the parts of the machine which plate number is same as shown on the upper cover of the book (or correction sheet).
2. These pages from A-H, Z, Y on this parts catalogue show all the parts for 831U-001-○.
3. When the column for the parts number or parts assembly number is  , 000000-0-00 please refer to the different parts list on the page 37.
4. When the column for the parts number is  , the parts cannot be supplied. But when the parts assembly number is shown in the column, please order the parts by the parts assembly number so that the parts can be arranged in the form of assembled parts.
5. The parts which number is marked with ※ is not lapped together with except the parts to be fitted. Therefore, please order the parts together with the fitting parts as a unit.
6. After page 9, please refer to the different parts list on the page 37.

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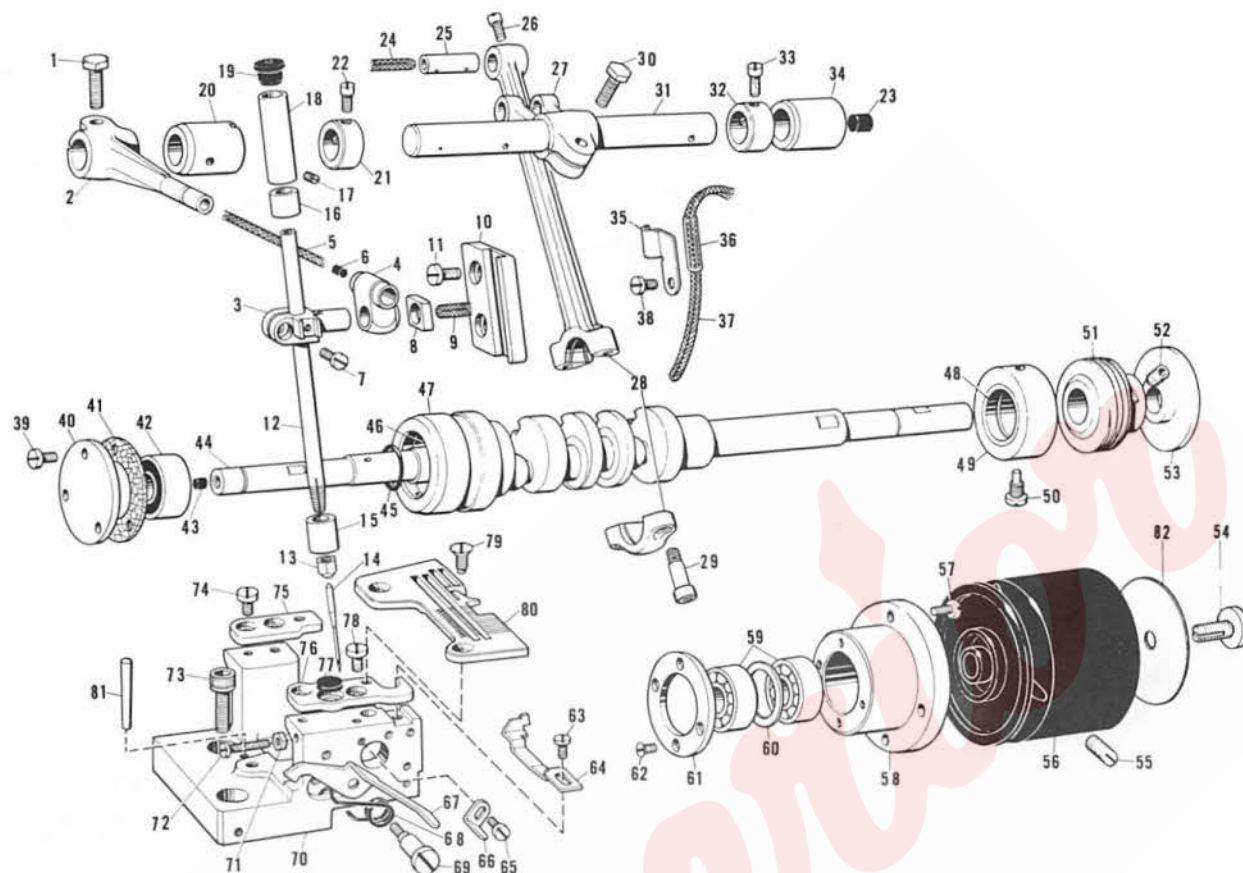
# A. 831U001- Machine Body



| Ref. No.                                                       | Name of Parts                      | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                | Q'ty | Parts No.   | Assembly No. |
|----------------------------------------------------------------|------------------------------------|------|-------------|--------------|----------|------------------------------|------|-------------|--------------|
| A-1                                                            | Screw                              | 6    | 009680-7-12 |              | A-43     | Screw                        | 1    | 110641-0-01 |              |
| A-2                                                            | Cover for Needle Driving Mechanism | 1    | 146422-0-01 |              | A-44     | "O" Ring                     | 1    | 109203-0-01 |              |
| A-3                                                            | Screw                              | 2    | 108960-0-02 |              | A-45     | Gasket                       | 1    | 151060-0-00 |              |
| A-4                                                            | Cloth Guide (S)                    | 1    | 146461-0-01 |              | A-46     | Oil Reservoir                | 1    | 146458-0-02 |              |
| A-5                                                            | Rubber Cap                         | 1    | 143992-0-01 |              | A-47     | Screw                        | 4    | 017771-6-12 |              |
| A-6                                                            | Face Plate Gasket                  | 1    | 146433-0-00 |              | A-48     | Inside Cover                 | 1    | 146436-0-01 |              |
| A-7                                                            | Face Plate                         | 1    | 146428-0-01 |              | A-49     | Screw                        | 2    | 009670-6-12 |              |
| A-8                                                            | Screw                              | 3    | 102843-0-04 |              | A-50     | Wick                         | 1    | 147361-0-00 |              |
| A-9                                                            | Screw                              | 1    | 146427-0-01 |              | A-51     | Oil Filter                   | 1    | 145664-0-00 |              |
| A-10                                                           | Pin for Face Plate                 | 1    | 146426-0-00 |              | A-52     | Oil Stopper Plate            | 1    | 146457-0-01 |              |
| A-11                                                           | Face Plate Cover                   | 1    | 146425-0-01 |              | A-53     | Screw                        | 2    | 009670-6-12 |              |
| A-12                                                           | Stopper Spring                     | 1    | 146432-0-01 |              | A-54     | Set Pin for Cushion          | 4    | 140077-0-01 |              |
| A-13                                                           | Screw                              | 2    | 009670-6-12 |              | A-56     | Stopper for Cloth Plate      | 1    | 146449-0-01 |              |
| A-14                                                           | Top Cover                          | 1    | 146419-0-01 |              | A-57     | Screw                        | 2    | 001670-5-12 |              |
| A-15                                                           | Gasket                             | 1    | 146420-0-00 |              | A-58     | Spring                       | 1    | 146450-0-01 |              |
| A-16                                                           | Oil Filler Cap and Flow Indicator  | 1    | 146421-0-00 |              | A-59     | Screw                        | 1    | 001670-5-12 |              |
| A-17                                                           | Gasket                             | 1    | 113589-0-01 |              | A-60     | Cloth Guide (L)              | 1    | 146460-0-01 |              |
| A-18                                                           | Screw                              | 6    | 009681-2-12 |              | A-61     | Screw                        | 2    | 009670-6-12 |              |
| A-19                                                           | Model Plate 831U                   | 1    |             |              | A-62     | Cloth Plate                  | 1    | 146448-0-01 |              |
| A-20                                                           | Label                              | 1    |             |              | A-63     | Screw                        | 2    | 100032-0-03 |              |
| A-21                                                           | Model Plate Pin                    | 2    |             |              | A-64     | Cloth Plate Lower            | 1    | 146717-1-01 |              |
| A-22                                                           | Oil Cap                            | 1    | 146315-0-00 |              | A-65     | Washer                       | 4    | 113431-0-02 |              |
| A-23                                                           | Name Plate                         | 1    |             |              | A-66     | Screw                        | 4    | 009680-7-12 |              |
| A-24                                                           | Machine Body                       | 1    |             |              | A-67     | Gasket                       | 1    | 146709-0-00 |              |
| A-25                                                           | Oil Gauge                          | 1    | 148084-0-01 |              | A-68     | Cover for Feed Mechanism     | 1    | 146708-0-00 |              |
| A-26                                                           | Screw                              | 1    | 014680-4-22 |              | A-69     | Screw                        | 5    | 009680-7-12 |              |
| A-27                                                           | Machine Body Leg                   | 4    | 151059-0-01 |              | A-70     | Cloth Plate Cushion (B)      | 1    | 111486-0-01 |              |
| A-28                                                           | Oil Cap                            | 2    | 111865-0-01 |              | A-71     | Oil Cap                      | 1    | 146315-0-00 |              |
| A-29                                                           | Supporter for Front Cover          | 1    |             |              | A-72     | Screw                        | 2    | 101706-0-01 |              |
| A-30                                                           | Thread Bushing                     | 2    | 146924-0-00 | 146713-0-01  | A-73     | Set Collar                   | 1    |             | 181969-0-03  |
| A-31                                                           | Screw                              | 2    | 117160-0-01 |              | A-74     | Washer                       | 1    | 141183-0-00 |              |
| A-32                                                           | Stopper Spring for Front Cover     | 1    | 146446-0-01 |              | A-75     | Cloth Plate Supporter        | 1    | 143374-0-01 |              |
| A-33                                                           | Screw                              | 1    | 123185-0-01 |              | A-76     | Screw                        | 4    | 009681-0-12 |              |
| A-34                                                           | Threading Diagram                  | 1    | 146718-0-01 |              | A-77     | Cover for Feed Mechanism (B) | 1    | 146704-0-01 |              |
| A-35                                                           | Front Cover                        | 1    |             |              | A-78     | Gasket                       | 1    | 146705-0-00 |              |
| A-36                                                           | Front Cover Hinge                  | 1    | 146440-0-01 |              | A-79     | Oil Cap                      | 1    | 140066-0-01 |              |
| A-37                                                           | Spring                             | 1    | 146442-0-01 |              | A-80     | Screw                        | 2    | 013760-6-12 |              |
| A-38                                                           | Pin                                | 1    | 047140-8-42 | 148991-0-01  | A-81     | Oil Cap                      | 1    | 140421-0-01 |              |
| A-39                                                           | Front Cover Hinge Pin              | 1    | 146441-0-00 |              | A-82     | Screw                        | 1    | 013689-4-12 |              |
| A-83                                                           | Hinge Cover                        | 1    | 148984-0-01 |              | A-100    | Label                        | 1    |             |              |
| A-40                                                           | Screw                              | 2    | 107407-0-03 |              | A-101    | Label                        | 1    | 147943-0-01 |              |
| A-41                                                           | Screw                              | 2    | 009670-6-12 |              | A-102    | Label                        | 1    |             |              |
| A-42                                                           | Front Cover Guide                  | 1    | 146712-0-01 |              | A-103    | Label                        | 1    |             |              |
| [NOTE! PREFIX ALL NUMBERS BY 'BR'.]<br>[EXAMPLE BR146222-0-01] |                                    |      |             |              | A-104    | Name Plate F                 | 1    |             |              |
|                                                                |                                    |      |             |              | A-105    | Name Plate F Pin             | 2    |             |              |
|                                                                |                                    |      |             |              |          |                              |      |             |              |



## B. 831U001- Crank Shaft and Needle Bar Mechanism

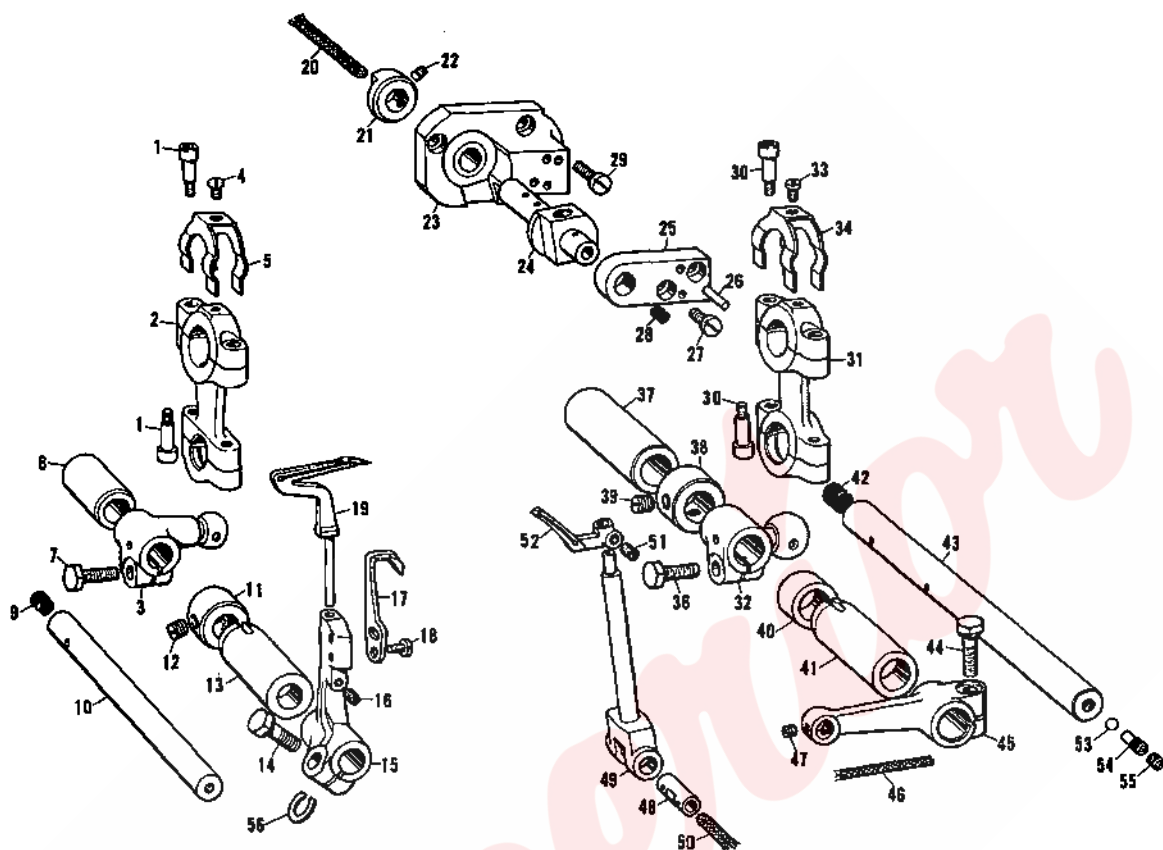


| Ref. No. | Name of Parts                | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                 | Q'ty | Parts No.    | Assembly No. |
|----------|------------------------------|------|-------------|--------------|----------|-------------------------------|------|--------------|--------------|
| B-1      | Screw                        | 1    | 017771-6-12 | 146480-0-01  | B-42     | Bearing 6000                  | 1    | 072600-0-00  |              |
| B-2      | Needle Arm                   | 1    | 146481-0-01 |              | B-43     | Cap                           | 1    | 142274-0-01  |              |
| B-3      | Needle Bar Clamp             | 1    | 146482-0-01 |              | B-44     | Crank Shaft                   | 1    | *146724-0-01 |              |
| B-4      | Needle Bar Connector         | 1    | 140096-0-01 |              | B-45     | "O" Ring                      | 1    | 114294-0-01  |              |
| B-5      | Wick                         | 1    | 140418-0-00 |              | B-46     | Crank Shaft Inner Bushing (L) | 1    |              | 146473-0-01  |
| B-6      | Oil Cap                      | 1    | 140326-0-01 |              | B-47     | Crank Shaft Outer Bushing (L) | 1    |              |              |
| B-7      | Screw                        | 1    | 009670-8-12 |              | B-48     | Crank Shaft Inner Bushing (M) | 1    |              | 143179-0-00  |
| B-8      | Needle Bar Guide Slide Block | 1    | 105078-0-01 |              | B-49     | Crank Shaft Outer Bushing (M) | 1    |              |              |
| B-9      | Wick                         | 2    | 140415-0-00 |              | B-50     | Screw                         | 1    | 110668-0-01  |              |
| B-10     | Needle Bar Guide             | 1    | 105079-0-01 |              | B-51     | Worm                          | 1    | 146647-0-01  |              |
| B-11     | Screw                        | 2    | 009680-7-12 | 147629-0-01  | B-52     | Screw                         | 2    | 014770-6-22  |              |
| B-12     | Needle Bar                   | 1    |             |              | B-53     | Oil Rejector                  | 1    | 140084-0-00  |              |
| B-13     | Needle Clamp Nut             | 1    | 147631-0-01 |              | B-54     | Cap Screw                     | 1    | 140180-0-01  |              |
| B-14     | Needle Cat. No. 6120 #11     | 1    | 151200-0-11 |              | B-55     | Screw                         | 2    | 013761-4-10  |              |
| B-15     | Needle Bar Bushing (D)       | 1    | 146486-0-00 |              | B-56     | Pulley                        | 1    | 147848-0-02  |              |
| B-16     | Needle Bar Bushing (U)       | 1    | 146485-0-00 |              | B-57     | Screw                         | 4    | 009681-0-12  |              |
| B-17     | Screw                        | 1    | 013679-4-12 |              | B-58     | Bearing Case                  | 1    | 110670-0-00  |              |
| B-18     | Needle Bar Cap               | 1    | 146484-0-01 |              | B-59     | Bearing 6000                  | 2    | 072600-1-00  |              |
| B-19     | Cap                          | 1    | 114255-0-02 |              | B-60     | Thrust Washer                 | 1    | 110672-0-00  |              |
| B-20     | Needle Shaft Bushing (Left)  | 1    | 140093-0-00 |              | B-61     | Bearing Cover                 | 1    | 110673-0-00  |              |
| B-21     | Set Collar                   | 1    | 140092-0-01 | *146476-1-01 | B-62     | Screw                         | 4    | 107244-0-01  |              |
| B-22     | Screw                        | 2    | 100366-0-01 |              | B-63     | Screw                         | 1    | 009670-6-12  |              |
| B-23     | Oil Cap                      | 1    | 140327-0-01 |              | B-64     | Needle Guard (F)              | 1    | 146726-0-01  |              |
| B-24     | Wick                         | 1    | 140320-0-00 |              | B-65     | Screw                         | 1    | 009670-6-12  |              |
| B-25     | Pin                          | 1    | 140088-0-01 |              | B-66     | Cloth Plate Lever Stopper     | 1    | 146454-0-01  |              |
| B-26     | Screw                        | 1    | 100366-0-01 |              | B-67     | Cloth Plate Lever             | 1    | 146451-0-01  |              |
| B-27     | Needle Arm Driving Lever     | 1    | 146478-0-01 |              | B-68     | Spring                        | 1    | 146452-0-01  |              |
| B-28     | Needle Arm Driving Crank Rod | 1    |             |              | B-69     | Stud Screw                    | 1    | 146453-0-01  |              |
| B-29     | Screw                        | 2    | 148425-0-01 |              | B-70     | Throat Plate Support Bracket  | 1    | 146725-0-01  |              |
| B-30     | Screw                        | 1    | 017771-6-12 |              | B-71     | Nut                           | 1    | 021670-2-02  |              |
| B-31     | Needle Bar Crank Shaft       | 1    | 146479-0-01 |              | B-72     | Screw                         | 1    | 009671-4-12  |              |
| B-32     | Set Collar                   | 1    | 140092-0-01 |              | B-73     | Screw                         | 2    | 018061-6-22  |              |
| B-33     | Screw                        | 2    | 100366-0-01 |              | B-74     | Screw                         | 2    | 001680-5-12  |              |
| B-34     | Needle Shaft Bushing (Right) | 1    | 148120-0-00 |              | B-75     | Throat Plate Supporter (B)    | 1    | 146495-0-01  |              |
| B-35     | Tube Holder                  | 1    | 146645-0-01 |              | B-76     | Throat Plate Supporter (F)    | 1    | 146494-0-01  |              |
| B-36     | Vinyl Tube                   | 1    | 146644-0-00 |              | B-77     | Cloth Plate Cushion (B)       | 1    | 111486-0-01  |              |
| B-37     | Wick                         | 1    | 150307-0-00 |              | B-78     | Screw                         | 2    | 001680-5-12  |              |
| B-38     | Screw                        | 1    | 009680-7-12 |              | B-79     | Screw                         | 2    | 100032-0-03  |              |
| B-39     | Screw                        | 3    | 009670-8-12 |              | B-80     | Throat Plate                  | 1    |              |              |
| B-40     | Bearing Cap                  | 1    | 143311-0-01 |              | B-81     | Pin                           | 1    | 107351-0-01  |              |
| B-41     | Gasket                       | 1    | 143312-0-00 |              | B-82     | Pulley Cover                  | 1    | 147415-0-02  |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]



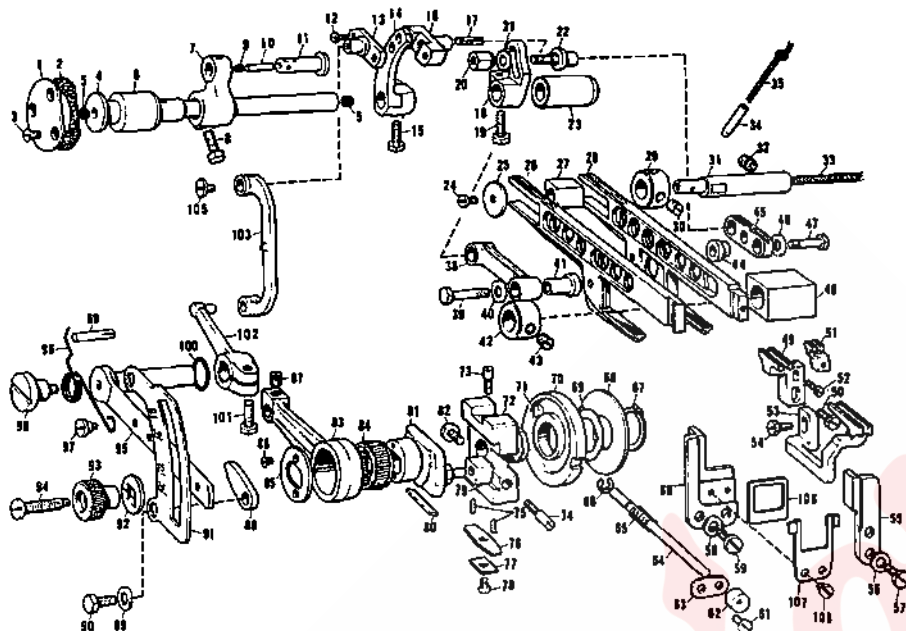
# C. 831U001-○ Looper Mechanism



| Ref. No. | Name of Parts                               | Q'ty | Parts No.   | Assembly No.  | Ref. No. | Name of Parts                        | Q'ty | Parts No.   | Assembly No.  |
|----------|---------------------------------------------|------|-------------|---------------|----------|--------------------------------------|------|-------------|---------------|
| C-1      | Screw                                       | 4    | 148425-0-01 | * 144044-0-01 | C-44     | Screw                                | 1    | 149170-0-01 | 146603-1-01   |
| C-2      | Looper Connecting Rod                       | 1    |             |               | C-45     | Looper (Right Hand) Driving Lever    | 1    |             |               |
| C-3      | Looper (Left Hand) Connecting Lever         | 1    |             |               | C-46     | Wick                                 | 1    | 140416-0-00 |               |
| C-4      | Screw                                       | 1    | 105034-0-03 |               | C-47     | Screw                                | 1    | 148294-0-01 |               |
| C-5      | Looper Connecting Rod Stopper               | 1    | 110704-0-01 | 180323-0-01   | C-48     | Looper (Right Hand) Holding Shaft    | 1    |             | 144025-0-01   |
| C-7      | Screw                                       | 1    | 017771-6-12 |               | C-49     | Looper (Right Hand) Holder           | 1    |             |               |
| C-8      | Looper (Left Hand) Shaft Bushing (B)        | 1    | 146615-0-00 |               | C-28     | Oil Cap                              | 1    | 140326-0-01 |               |
| C-9      | Oil Cap                                     | 1    | 140327-0-01 |               | C-29     | Screw                                | 3    | 009680-7-12 |               |
| C-10     | Looper (Left Hand) Shaft                    | 1    | 146614-0-01 | 146603-1-01   | C-30     | Screw                                | 4    | 148425-0-01 | * 144025-0-01 |
| C-11     | Set Collar                                  | 1    |             |               | C-31     | Looper (Right Hand) Connecting Rod   | 1    |             |               |
| C-12     | Screw                                       | 2    | 013760-6-12 |               | C-32     | Looper (Right Hand) Connecting Lever | 1    |             |               |
| C-13     | Looper (Left Hand) Shaft Bushing (F)        | 1    | 146616-0-00 |               | C-33     | Screw                                | 1    | 105034-0-03 |               |
| C-14     | Screw                                       | 1    | 149171-0-01 | 146603-1-01   | C-34     | Looper Connecting Rod Stopper        | 1    | 110704-0-01 | 147934-0-01   |
| C-15     | Looper (Left Hand) Holder                   | 1    | 146617-0-01 |               | C-36     | Screw                                | 1    | 017771-4-12 |               |
| C-56     | Spacer                                      | 1    | 148782-0-01 |               | C-37     | Bushing                              | 1    | 144029-0-00 |               |
| C-16     | Screw                                       | 1    | 014680-4-22 |               | C-38     | Set Collar                           | 1    | 146581-0-01 |               |
| C-17     | Movable Needle Guard                        | 1    | 144127-0-01 | 146603-1-01   | C-39     | Screw                                | 2    | 100260-0-01 | 147934-0-01   |
| C-18     | Screw                                       | 2    | 009670-8-12 |               | C-40     | Thrust Collar                        | 1    | 146602-0-01 |               |
| C-19     | Looper (Left Hand)                          | 1    | 144049-0-01 |               | C-41     | Bushing                              | 1    | 144031-0-00 |               |
| C-20     | Wick                                        | 1    | 140317-0-00 |               | C-42     | Oil Cap                              | 1    | 140327-0-01 |               |
| C-21     | Set Collar                                  | 1    |             | 146603-1-01   | C-43     | Looper (Right Hand) Shaft            | 1    | 148033-0-01 | 147934-0-01   |
| C-22     | Screw                                       | 2    | 014680-4-22 |               | C-50     | Wick                                 | 1    | 140417-0-00 |               |
| C-23     | Looper (Right Hand) Holder Guide Base       | 1    |             |               | C-51     | Screw                                | 1    | 014680-4-22 |               |
| C-24     | Looper (Right Hand) Holder Guide Block      | 1    |             |               | C-52     | Looper (Right Hand)                  | 1    |             |               |
| C-25     | Looper (Right Hand) Holder Supporting Plate | 1    |             | 146603-1-01   | C-53     | Steel Ball                           | 1    | 071023-8-50 | 147934-0-01   |
| C-26     | Taper Pin                                   | 2    |             |               | C-54     | Screw                                | 1    | 148034-0-01 |               |
| C-27     | Screw                                       | 2    | 009681-0-12 |               | C-55     | Screw                                | 1    | 148294-0-01 |               |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
EXAMPLE BR146222-0-01

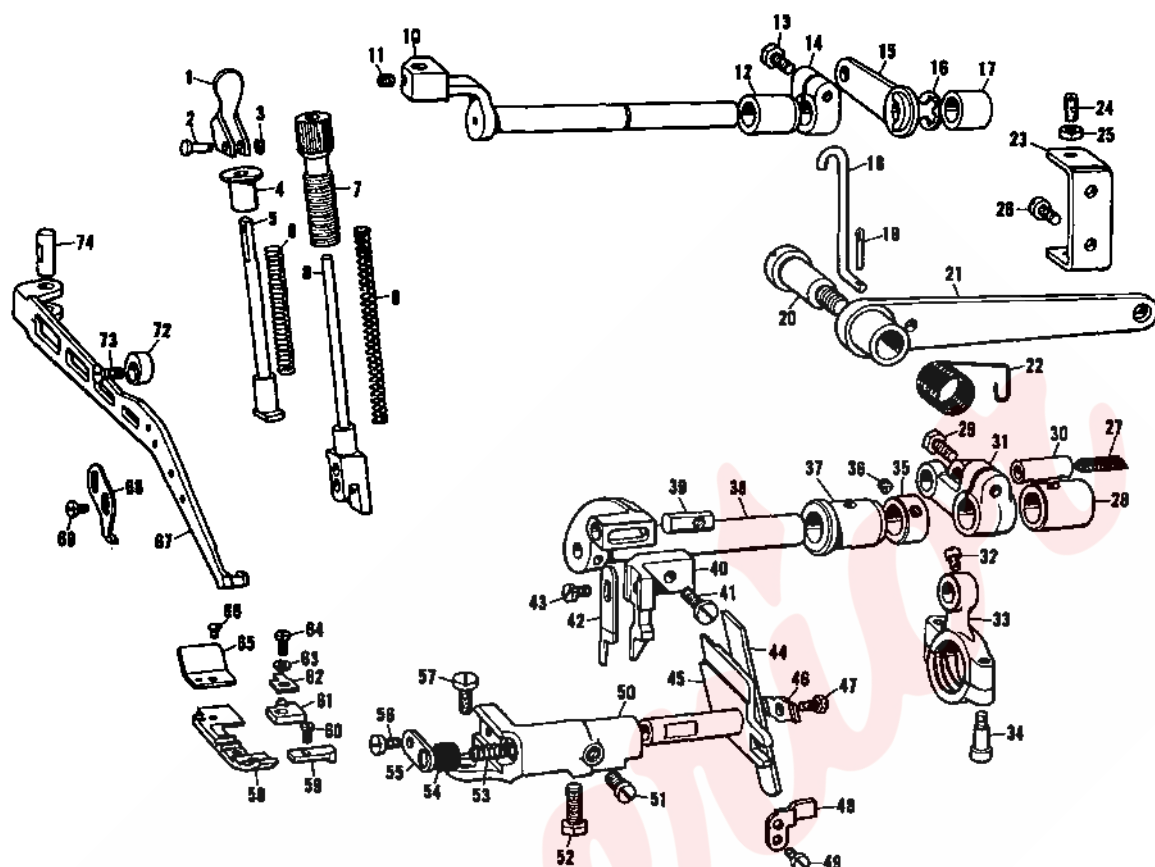
# D. 831U001- Feed Mechanism



| Ref. No. | Name of Parts                    | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                           | Q'ty | Parts No.   | Assembly No. |
|----------|----------------------------------|------|-------------|--------------|----------|-----------------------------------------|------|-------------|--------------|
| D-1      | Cover for Feed Shaft Bushing (L) | 1    | 140188-0-04 |              | D-56     | Washer                                  | 2    | 113431-0-02 |              |
| D-2      | Gasket                           | 1    | 140187-0-00 |              | D-57     | Screw                                   | 2    | 107407-0-03 |              |
| D-3      | Screw                            | 3    | 102538-0-02 |              | D-58     | Washer                                  | 2    | 113431-0-02 |              |
| D-4      | Feed Shaft                       | 1    | 146538-0-01 |              | D-59     | Screw                                   | 2    | 107407-0-03 |              |
| D-5      | Oil Cap                          | 2    | 140327-0-01 |              | D-60     | Feed Bar Guide (L)                      | 1    | 149888-0-00 |              |
| D-6      | Feed Shaft Bushing (L)           | 1    | 146539-0-00 |              | D-61     | Screw                                   | 1    | 009670-6-12 |              |
| D-7      | Feed Arm                         | 1    | 146533-0-01 |              | D-62     | Cap                                     | 1    | 146537-0-00 |              |
| D-8      | Screw                            | 1    | 017771-6-12 |              | D-63     | Supporter for Feed Adjusting Shaft      | 1    | 146536-0-01 |              |
| D-9      | Oil Cap                          | 1    | 140326-0-01 |              | D-64     | Feed Adjusting Shaft                    | 1    | 146534-0-01 |              |
| D-10     | Pin                              | 1    | 147318-0-00 |              | D-65     | Spring                                  | 1    | 146535-0-01 |              |
| D-11     | Feed Arm Pin                     | 1    | 146532-0-01 |              | D-66     | Stop Ring                               | 1    | 048040-3-42 |              |
| D-12     | Screw                            | 2    | 009660-7-12 |              | D-67     | Stop Ring                               | 1    | 048150-1-43 |              |
| D-13     | Differential Feed Adjuster Cap   | 1    |             |              | D-68     | Washer                                  | 1    | 146529-0-01 |              |
| D-14     | Differential Feed Arm            | 1    |             | 146550-0-01  | D-69     | Spring                                  | 1    | 144055-0-01 |              |
| D-15     | Screw                            | 1    | 017771-4-12 |              | D-70     | Eccentric Wheel Adjusting Cam           | 1    |             |              |
| D-16     | Differential Feed Adjuster       | 1    |             |              | D-71     | Eccentric Wheel Adjusting Cam Stopper   | 1    |             | 144053-0-01  |
| D-17     | Felt                             | 1    | 147383-0-00 |              | D-72     | Eccentric Wheel Holder                  | 1    | 146405-0-01 |              |
| D-18     | Main Feed Arm                    | 1    | 140205-0-01 |              | D-73     | Screw                                   | 2    | 100025-0-02 |              |
| D-19     | Screw                            | 1    | 017771-4-12 |              | D-74     | Screw                                   | 1    | 145663-0-01 |              |
| D-20     | Nut                              | 1    | 143565-0-01 |              | D-75     | Gib Holder Pin                          | 2    | 146402-0-01 |              |
| D-21     | Washer                           | 1    | 113431-0-02 |              | D-76     | Gib Holder Plate (L)                    | 1    | 146404-0-01 |              |
| D-22     | Main Feed Link Shaft             | 1    | 143564-0-01 |              | D-77     | Gib Holder Plate (S)                    | 1    | 146403-0-01 |              |
| D-23     | Feed Shaft Bushing (R)           | 1    | 146540-0-00 |              | D-78     | Screw                                   | 1    | 009660-5-02 |              |
| D-24     | Screw                            | 1    | 009680-7-12 |              | D-79     | Slide Block                             | 1    | 140165-0-01 | 146528-0-01  |
| D-25     | Slide Plate                      | 1    | 146549-0-01 |              | D-80     | Gib                                     | 1    | 146401-0-01 |              |
| D-26     | Differential Feed (Front) Bar    | 1    | 146543-0-01 | 147773-0-01  | D-81     | Eccentric Wheel                         | 1    |             |              |
| D-28     | Main Feed (Back) Bar             | 1    | 146542-0-01 |              | D-82     | Screw                                   | 1    | 107093-0-02 |              |
| D-48     | Feed Lifting Slide Block         | 1    | 146544-0-00 | 146541-0-01  | D-83     | Feed Rod                                | 1    | 146530-0-01 |              |
| D-27     | Feed Bar Guide Block             | 1    | 146547-0-00 |              | D-84     | Needle Roller Bearing 20                | 1    | 146531-0-01 |              |
| D-29     | Set Collar                       | 1    |             | 181969-0-03  | D-85     | Feed Rod Presser Plate                  | 1    | 140176-0-01 |              |
| D-30     | Screw                            | 2    | 101706-0-01 |              | D-86     | Screw                                   | 2    | 117517-0-03 |              |
| D-31     | Feed Bar Guide Block Shaft       | 1    | 146548-0-01 |              | D-87     | Screw                                   | 1    | 013770-7-10 |              |
| D-32     | Screw                            | 1    | 014770-6-22 |              | D-88     | Stopper for Differential Stitch Control | 2    | 146563-0-01 |              |
| D-33     | Wick                             | 1    | 147362-0-00 |              | D-89     | Washer                                  | 2    | 025770-2-32 |              |
| D-34     | Oil Pipe                         | 1    | 147217-0-00 |              | D-90     | Screw                                   | 2    | 017771-4-12 |              |
| D-35     | Wick                             | 1    | 112735-0-00 |              | D-91     | Differential Feed Indicator             | 1    | 146561-0-01 |              |
| D-36     | Differential Feed Link           | 1    | 146554-0-01 |              | D-92     | Washer                                  | 1    | 146566-0-01 |              |
| D-39     | Feed Link Shaft (Large)          | 1    | 140217-0-01 |              | D-93     | Knob                                    | 1    | 146564-0-01 |              |
| D-40     | Washer                           | 1    | 140208-0-01 |              | D-94     | Screw                                   | 1    | 146565-0-01 |              |
| D-41     | Differential Feed Link Bushing   | 1    | 146555-0-01 |              | D-95     | Differential Feed Adjusting Lever       | 1    | 146558-0-01 |              |
| D-42     | Set Collar                       | 1    | 146741-0-00 |              | D-96     | Spring                                  | 1    | 146560-0-01 |              |
| D-43     | Screw                            | 1    | 101706-0-01 |              | D-97     | Stud Screw                              | 1    | 100294-0-02 |              |
| D-44     | Main Feed Link Bushing           | 1    | 140207-0-01 |              | D-98     | Stud Screw                              | 1    | 146559-0-01 |              |
| D-45     | Main Feed Link                   | 1    | 140209-0-01 |              | D-99     | Dowel Pin                               | 1    | 140063-0-01 |              |
| D-46     | Washer                           | 1    | 140208-0-01 |              | D-100    | Gasket                                  | 1    | 109203-0-01 |              |
| D-47     | Main Feed Link Shaft (Small)     | 1    | 140210-0-01 |              | D-101    | Screw                                   | 1    | 017771-4-12 | 146914-0-01  |
| D-49     | Main Feed (Back) Dog             | 1    | 146744-0-01 |              | D-102    | Differential Feed Link Lever            | 1    |             |              |
| D-50     | Screw                            | 1    | 117516-0-01 |              | D-103    | Differential Feed Adjusting Link        | 1    | 146556-0-01 |              |
| D-51     | Chain Feed Dog                   | 1    | 146577-0-01 |              | D-105    | Screw                                   | 1    | 148834-0-01 |              |
| D-52     | Screw                            | 1    | 009630-8-12 |              | D-106    | Fragment Protector                      | 1    | 149886-0-00 |              |
| D-53     | Differential Feed (Front) Dog    | 1    | 146748-0-01 |              | D-107    | Fragment Protector Supporter            | 1    | 149887-0-01 |              |
| D-54     | Screw                            | 1    | 117516-0-01 |              | D-108    | Screw                                   | 2    | 106568-0-03 |              |
| D-55     | Feed Bar Guide (R)               | 1    | 148174-0-00 |              |          |                                         |      |             |              |

NOTE! PREFIX ALL NUMBERS BY 'BR'.  
EXAMPLE BR146222-0-01

# **E. 831U001-○ Knives and Presser Foot Mechanism**

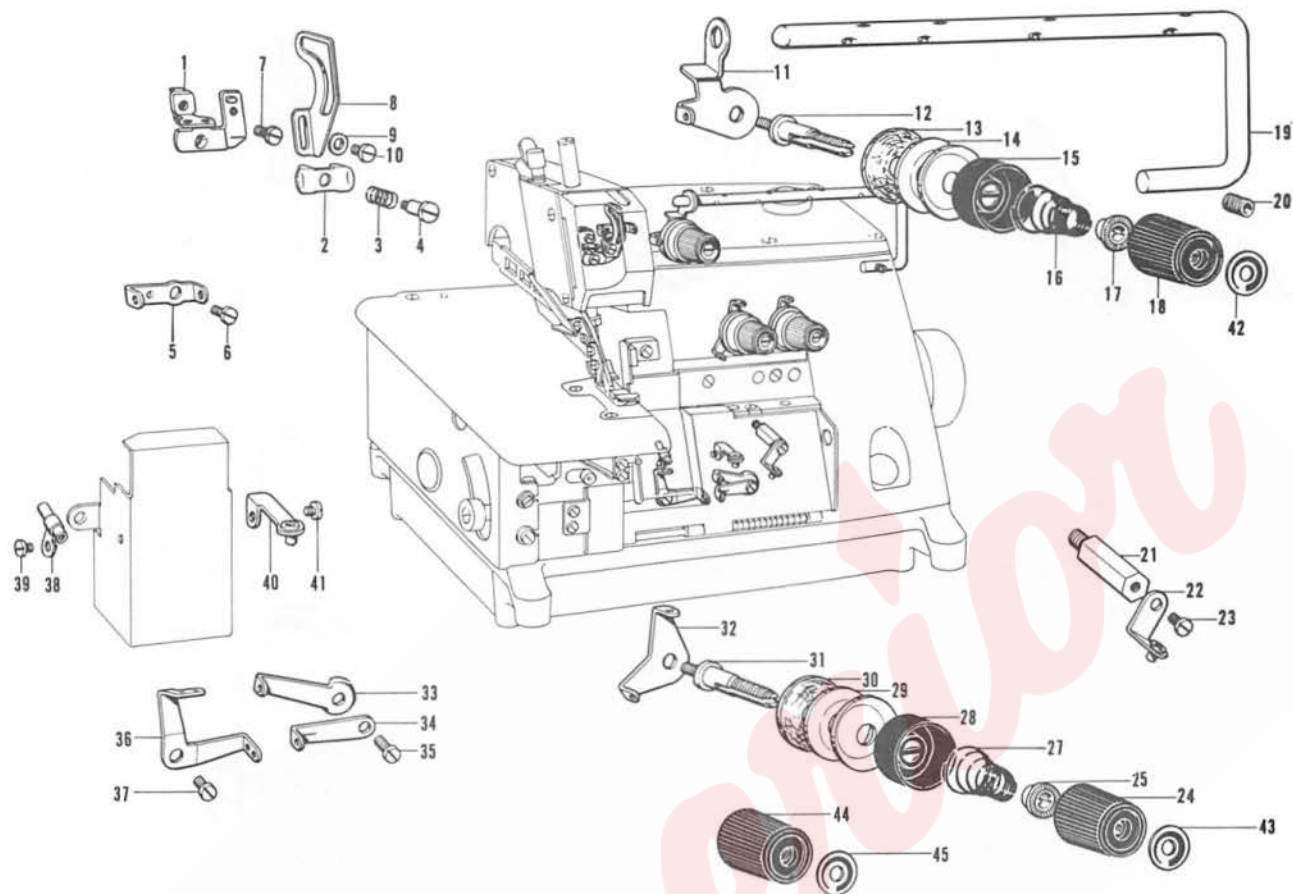


| Ref. No. | Name of Parts                    | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                     | Q'ty | Parts No.   | Assembly No. |
|----------|----------------------------------|------|-------------|--------------|----------|-----------------------------------|------|-------------|--------------|
| E-1      | Presser Bar Lifter               | 1    | 147759-0-01 |              | E-38     | Upper Knife Driving Arm           | 1    | 146580-0-01 |              |
| E-2      | Presser Bar Lifter Pin           | 1    | 144084-0-01 |              | E-39     | Nut                               | 1    | 148281-0-01 |              |
| E-3      | Stop Ring                        | 1    | 048020-3-42 |              | E-40     | Upper Knife Holder                | 1    | 144073-0-01 |              |
| E-4      | Washer                           | 1    | 144083-0-01 |              | E-41     | Screw                             | 1    | 107407-0-03 |              |
| E-5      | Presser Bar Lifter Shaft         | 1    | 144085-0-01 |              | E-42     | Upper Knife (Movable)             | 1    | 144074-0-00 |              |
| E-6      | Spring                           | 1    | 144086-0-01 |              | E-43     | Screw                             | 1    | 144075-0-01 |              |
| E-7      | Screw                            | 1    | 144079-0-01 |              | E-44     | Lower Knife (Stationary)          | 1    | 112436-0-01 |              |
| E-8      | Presser Bar                      | 1    | 146521-0-01 |              | E-45     | Lower Knife Holder                | 1    | 146754-0-01 |              |
| E-9      | Spring                           | 1    | 144081-0-01 |              | E-46     | Lower Knife Holding Plate         | 1    | 117515-0-01 |              |
| E-10     | Presser Arm Shaft                | 1    | 146525-0-01 |              | E-47     | Screw                             | 1    | 117516-0-01 |              |
| E-11     | Screw                            | 1    | 014680-4-22 |              | E-48     | Lower Knife Holder Guide          | 1    | 146585-0-01 |              |
| E-12     | Bushing                          | 1    | 140263-0-00 |              | E-49     | Screw                             | 2    | 009670-6-12 |              |
| E-13     | Screw                            | 1    | 017771-6-12 |              | E-50     | Lower Knife Holder Supporter      | 1    | 146582-0-01 |              |
| E-14     | Collar                           | 1    | 140261-0-01 |              | E-51     | Screw                             | 1    | 102627-0-01 |              |
| E-15     | Presser Foot Lifter Inside Lever | 1    | 146524-0-01 |              | E-52     | Screw                             | 1    | 017771-4-12 |              |
| E-16     | Stop Ring                        | 1    | 048080-3-42 |              | E-53     | Spring                            | 1    | 146584-0-01 |              |
| E-17     | Bushing (Right)                  | 1    | 140262-0-00 |              | E-54     | Cap                               | 1    | 146586-0-00 |              |
| E-18     | Presser Foot Lifter Link         | 1    | 146523-0-01 |              | E-55     | Lower Knife Holder Spring Stopper | 1    | 140248-0-01 |              |
| E-19     | Cutter Pin                       | 1    | 110793-0-01 |              | E-56     | Screw                             | 1    | 009680-7-12 |              |
| E-20     | Screw                            | 1    | 148372-0-01 |              | E-57     | Screw                             | 1    | 107407-0-03 |              |
| E-21     | Presser Foot Lifter Lever        | 1    | 143323-1-03 |              | E-58     | Presser Foot                      | 1    |             |              |
| E-22     | Spring                           | 1    | 143325-0-01 |              | E-59     | Presser Foot (Front)              | 1    | 146888-0-01 |              |
| E-23     | Adjuster Plate                   | 1    | 146522-0-01 |              | E-60     | Screw                             | 1    | 009639-3-12 |              |
| E-24     | Screw                            | 2    | 011711-4-12 |              | E-61     | Chaining-off Finger               | 1    | 146886-0-01 |              |
| E-25     | Nut                              | 2    | 110161-0-06 |              | E-62     | Presser Foot Hinge Spring         | 1    | 146887-0-01 |              |
| E-26     | Screw                            | 2    | 009680-7-12 |              | E-63     | Washer                            | 1    | 025030-1-32 |              |
| E-27     | Wick                             | 1    | 140317-0-00 |              | E-64     | Screw                             | 1    | 100080-0-04 |              |
| E-28     | Bushing Right                    | 1    | 144117-0-00 |              | E-65     | Presser Foot (Rear)               | 1    | 146889-0-01 |              |
| E-29     | Screw                            | 1    | 017771-6-12 |              | E-66     | Screw                             | 1    | 100105-0-05 |              |
| E-30     | Pin                              | 1    | 140232-0-01 |              | E-67     | Main Presser Arm                  | 1    | 146789-0-01 |              |
| E-31     | Upper Knife Driving Lever        | 1    | 140233-0-01 |              | E-68     | Presser Foot Stopper              | 1    | 140504-0-01 |              |
| E-32     | Screw                            | 1    | 100366-0-01 |              | E-69     | Screw                             | 2    | 001660-5-12 |              |
| E-33     | Upper Knife Driving Rod          | 1    | 148428-0-00 |              | E-72     | Presser Arm Stopper               | 1    | 144088-0-01 |              |
| E-34     | Screw                            | 2    | 148425-0-01 |              | E-73     | Screw                             | 1    | 107231-0-02 |              |
| E-35     | Set Collar                       | 1    | 146581-0-01 |              | E-74     | Pin for Presser Arm Shaft         | 1    | 146527-0-01 |              |
| E-36     | Screw                            | 2    | 100260-0-01 |              |          |                                   |      |             |              |
| E-37     | Bushing                          | 1    | 140235-0-00 |              |          |                                   |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]



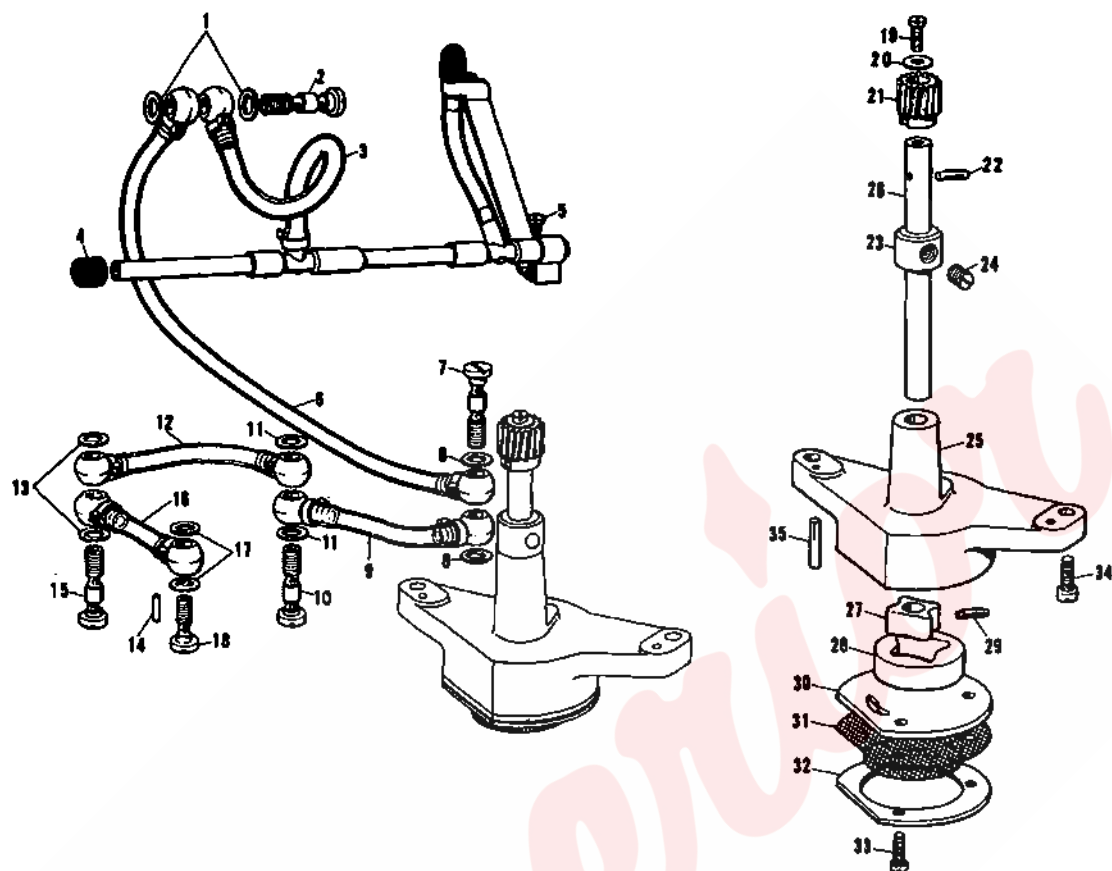
## F. 831U001- Threading



| Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                          | Q'ty | Parts No.   | Assembly No. |
|----------|------------------------------------|------|-------------|--------------|----------|----------------------------------------|------|-------------|--------------|
| F. 1     | Needle Thread Guide                | 1    | 147344-0-01 |              | F. 21    | Thread Guide Holder                    | 1    | 144111-0-01 |              |
| F. 2     | Needle Thread Guard                | 1    | 112300-0-01 |              | F. 22    | Looper (Left Hand) Thread Guide        | 1    | 146926-0-01 |              |
| F. 3     | Needle Thread Guard Spring         | 1    | 112299-0-01 |              | F. 23    | Screw                                  | 1    | 009670-6-12 |              |
| F. 4     | Screw                              | 1    | 112301-0-01 |              | F. 25    | Washer                                 | 2    | 144105-0-00 |              |
| F. 5     | Needle Thread Guide (A)            | 1    | 143757-0-01 |              | F. 27    | Spring                                 | 2    | 144110-0-01 |              |
| F. 6     | Screw                              | 1    | 009660-4-12 |              | F. 28    | Tension Disc Washer                    | 2    | 144103-0-02 |              |
| F. 7     | Screw                              | 1    | 009670-6-12 |              | F. 29    | Tension Disc                           | 4    | 145446-0-01 |              |
| F. 8     | Needle Thread Take-up              | 1    | 144108-0-01 |              | F. 30    | Felt                                   | 2    | 110832-0-01 |              |
| F. 9     | Washer                             | 1    | 105248-0-01 |              | F. 31    | Looper Thread Tension Control Stud     | 2    | 110820-0-01 |              |
| F. 10    | Screw                              | 1    | 009669-3-12 |              | F. 32    | Needle Thread Guide Plate              | 2    | 110813-0-01 |              |
| F. 11    | Thread Guide Supporter             | 1    | 146649-0-01 |              | F. 33    | Looper (Right Hand) Thread Take-up (R) | 1    | 146652-0-01 |              |
| F. 12    | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              | F. 34    | Looper (Left Hand) Thread Take-up (R)  | 1    | 146653-0-01 |              |
| F. 13    | Felt                               | 1    | 110832-0-01 |              | F. 35    | Screw                                  | 1    | 009670-8-12 |              |
| F. 14    | Tension Disc                       | 2    | 145446-0-01 |              | F. 36    | Looper Thread Take-up (L)              | 1    | 146654-0-01 |              |
| F. 15    | Tension Disc Washer                | 1    | 144103-0-02 |              | F. 37    | Screw                                  | 1    | 009670-6-12 |              |
| F. 16    | Spring                             | 1    | 144104-0-01 |              | F. 38    | Looper (Right Hand) Thread Guide       | 1    | 142669-0-01 |              |
| F. 17    | Washer                             | 1    | 144105-0-00 |              | F. 39    | Screw                                  | 1    | 122771-0-02 |              |
| F. 19    | Main Thread Guide                  | 1    | 146648-0-01 |              | F. 40    | Looper (Right Hand) Thread Guide       | 1    | 146929-0-01 |              |
| F. 20    | Screw                              | 1    | 014770-6-22 |              | F. 41    | Screw                                  | 1    | 009670-6-12 |              |
| F. 18    | Thread Tension Adjusting Nut       | 1    |             | 151201-0-03  | F. 44    | Thread Tension Adjusting Nut           | 1    |             | 151201-0-04  |
| F. 42    | Color Plate                        | 1    | 147049-0-03 |              | F. 45    | Color Plate                            | 1    | 147049-0-04 |              |
| F. 24    | Thread Tension Adjusting Nut       | 1    |             | 151201-0-02  |          |                                        |      |             |              |
| F. 43    | Color Plate                        | 1    | 147049-0-02 |              |          |                                        |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
EXAMPLE BR146222-0-01]

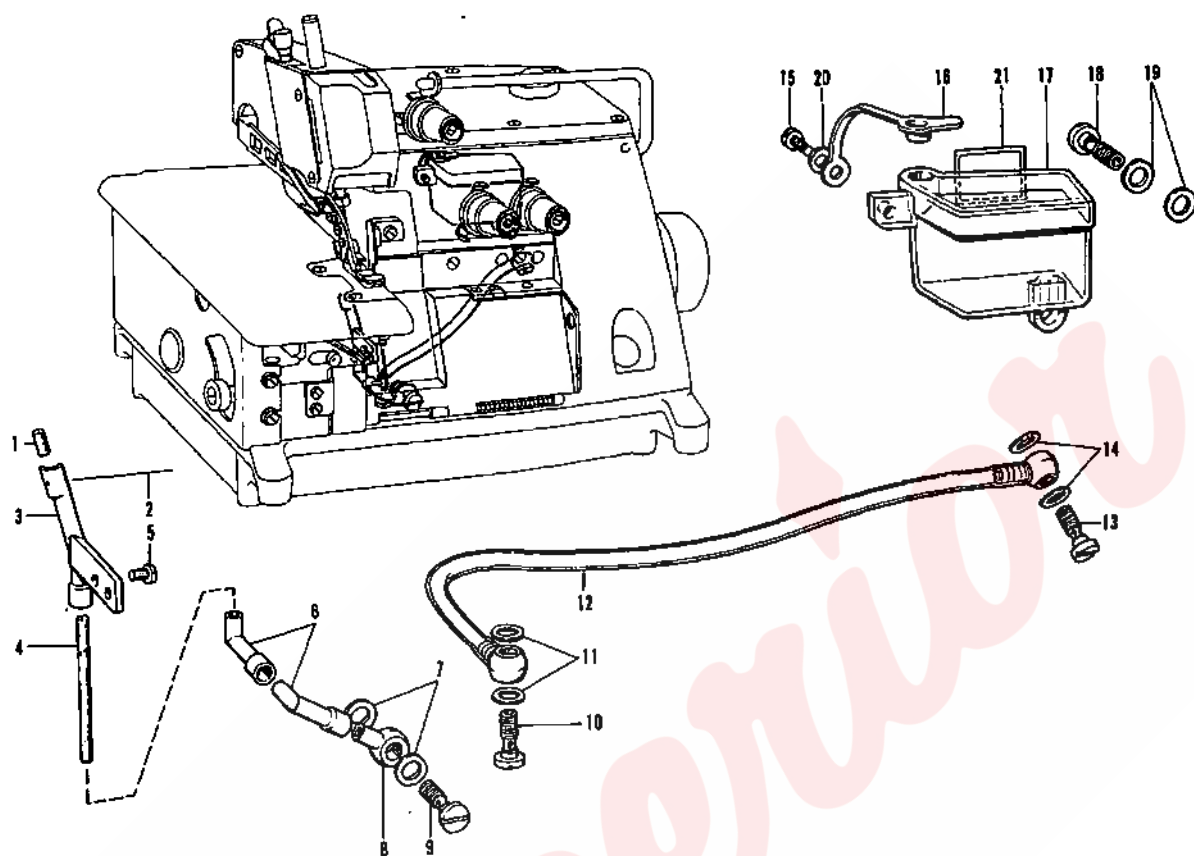
# G. 831U001- Lubrication



| Ref. No. | Name of Parts        | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts         | Q'ty | Parts No.   | Assembly No. |
|----------|----------------------|------|-------------|--------------|----------|-----------------------|------|-------------|--------------|
| G-1      | Gasket               | 2    | 112348-0-01 |              | G-19     | Screw                 | 1    | 009670-8-12 |              |
| G-2      | Oil Feeding Pipe (B) | 1    | 112364-0-01 |              | G-20     | Washer                | 1    | 025350-3-32 |              |
| G-3      | Main Oil Pipe        | 1    | 146636-0-01 |              | G-21     | Worm Wheel            | 1    |             | 147521-0-01  |
| G-4      | Oil Cap              | 1    | 140325-0-01 |              | G-22     | Pin                   | 1    | 144622-0-01 |              |
| G-5      | Screw                | 1    | 009670-6-12 |              | G-23     | Set Collar            | 1    |             |              |
| G-6      | Vinyl Tube           | 1    | 140780-0-01 |              | G-24     | Screw                 | 2    | 101706-0-01 | 181995-0-01  |
| G-7      | Oil Feeding Pipe (B) | 1    | 112364-0-01 |              | G-25     | Pump Case             | 1    | 147522-0-00 |              |
| G-8      | Gasket               | 2    | 112348-0-01 |              | G-26     | Main Pump Gear Shaft  | 1    |             |              |
| G-9      | Vinyl Tube           | 1    | 140779-0-01 |              | G-27     | Pump Inner Roter      | 1    |             | 147523-0-01  |
| G-10     | Oil Feeding Pipe (B) | 1    | 112364-0-01 |              | G-28     | Pump Outer Roter      | 1    |             |              |
| G-11     | Gasket               | 2    | 112348-0-01 |              | G-29     | Pin                   | 1    |             |              |
| G-12     | Vinyl Tube           | 1    | 140778-0-01 |              | G-30     | Pump Cover            | 1    | 147527-0-01 |              |
| G-13     | Gasket               | 2    | 112348-0-01 |              | G-31     | Oil Pump Screen       | 1    | 147528-0-00 |              |
| G-14     | Pin                  | 1    | 147318-0-00 |              | G-32     | Oil Pump Screen Frame | 1    | 147529-0-00 |              |
| G-15     | Oil Feeding Pipe (B) | 1    | 112364-0-01 |              | G-33     | Screw                 | 3    | 009671-0-12 |              |
| G-16     | Vinyl Tube           | 1    | 147211-0-01 |              | G-34     | Screw                 | 2    | 009711-2-12 |              |
| G-17     | Gasket               | 2    | 112348-0-01 |              | G-35     | Pin                   | 2    | 508693-0-01 |              |
| G-18     | Screw                | 1    | 112359-0-01 |              |          |                       |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

# H. 831U001- Needle Cooler



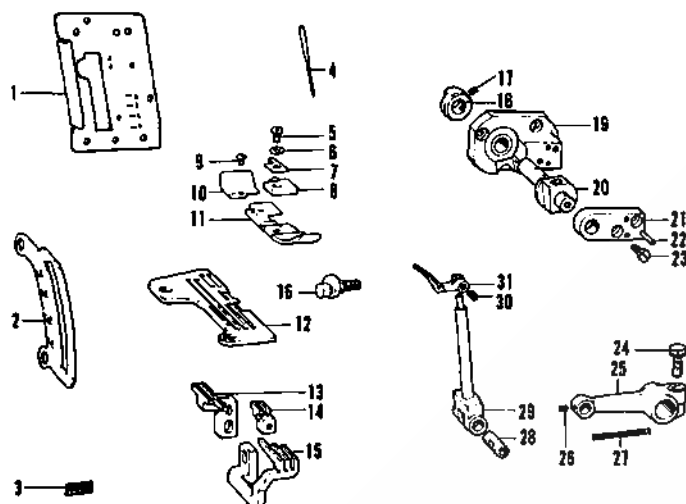
| Ref. No. | Name of Parts         | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts | Q'ty | Parts No.   | Assembly No. |
|----------|-----------------------|------|-------------|--------------|----------|---------------|------|-------------|--------------|
| H-1      | Felt (S)              | 1    | 146740-0-00 | 146738-0-00  | H-12     | Vinyl Tube    | 1    | 146512-0-00 |              |
| H-2      | Steel Wire            | 1    | 147738-0-00 |              | H-13     | Screw         | 1    | 112359-0-01 |              |
| H-3      | Felt Holder           | 1    | 146739-0-00 |              | H-14     | Gasket        | 2    | 112348-0-01 |              |
| H-4      | Felt                  | 1    | 144116-0-00 |              | H-15     | Screw         | 1    | 009681-0-12 |              |
| H-5      | Screw                 | 2    | 100257-0-10 |              | H-16     | Cap           | 1    |             | 146511-0-00  |
| H-6      | Pipe Joint            | 2    | 146516-0-00 |              | H-17     | Oil Tank      | 1    |             |              |
| H-7      | Gasket                | 2    | 112348-0-01 |              | H-18     | Screw         | 1    | 112359-0-01 |              |
| H-8      | Oil Feeding Connector | 1    | 146515-0-00 |              | H-19     | Gasket        | 2    | 112348-0-01 |              |
| H-9      | Screw                 | 1    | 112359-0-01 |              | H-20     | Washer        | 1    | 113431-0-02 |              |
| H-10     | Screw                 | 1    | 112359-0-01 |              | H-21     | Label         | 1    |             |              |
| H-11     | Gasket                | 2    | 112348-0-01 |              |          |               |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]



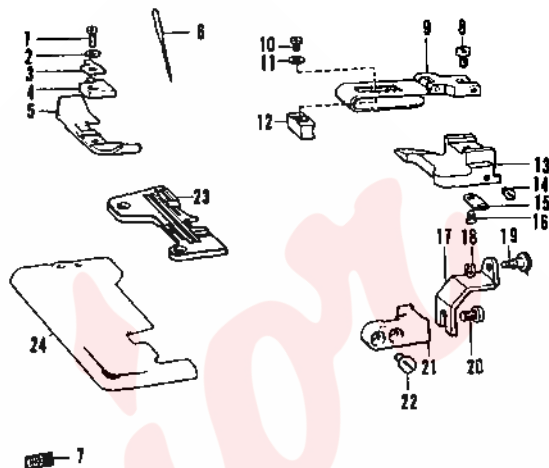
## I. 831U002- (Bulky Knit Work)

This machine is the same as the 831U001- machine, with the following exceptions:



## J. 831U003- (Blind Stitch Hemming)

This machine is the same as the 831U001- machine, with the following exceptions:



| Ref. No. | Name of Parts                               | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------------------------|------|-------------|--------------|
| I-1      | Face Plate                                  | 1    | 146706-0-01 |              |
| I-2      | Differential Feed Indicator                 | 1    | 146742-0-01 |              |
| I-3      | Label                                       | 1    |             |              |
| I-4      | Needle Cat. No. 6120 #14                    | 1    | 151200-0-14 |              |
| I-5      | Screw                                       | 1    | 100080-0-04 |              |
| I-6      | Washer                                      | 1    | 025030-1-32 |              |
| I-7      | Presser Foot Hinge Spring                   | 1    | 146887-0-01 |              |
| I-8      | Chaining-off Finger                         | 1    | 146900-0-01 | 146898-0-01  |
| I-9      | Screw                                       | 1    | 100105-0-05 |              |
| I-10     | Presser Foot (Rear)                         | 1    | 145774-0-01 |              |
| I-11     | Presser Foot                                | 1    |             |              |
| I-12     | Throat Plate                                | 1    |             |              |
| I-13     | Main Feed (Back) Dog                        | 1    | 146745-0-01 |              |
| I-14     | Chain Feed Dog                              | 1    | 146578-0-01 |              |
| I-15     | Differential Feed (Front) Dog               | 1    | 146750-0-01 |              |
| I-16     | Main Feed Shaft                             | 1    | 144068-0-01 |              |
| I-17     | Screw                                       | 2    | 014680-4-22 |              |
| I-18     | Set Collar                                  | 1    |             |              |
| I-19     | Looper (Right Hand) Holder Guide Base       | 1    |             |              |
| I-20     | Looper (Right Hand) Holder Guide Block      | 1    |             |              |
| I-21     | Looper (Right Hand) Holder Supporting Plate | 1    |             |              |
| I-22     | Taper Pin                                   | 2    |             |              |
| I-23     | Screw                                       | 2    | 009681-0-12 |              |
| I-24     | Screw                                       | 1    | 149170-0-01 |              |
| I-25     | Looper (Right Hand) Driving Lever           | 1    |             |              |
| I-26     | Screw                                       | 1    | 148294-0-01 |              |
| I-27     | Wick                                        | 1    | 140416-0-00 |              |
| I-28     | Looper (Right Hand) Holding Shaft           | 1    |             |              |
| I-29     | Looper (Right Hand) Holder                  | 1    |             |              |
| I-30     | Screw                                       | 1    | 014680-4-22 |              |
| I-31     | Looper (Right Hand)                         | 1    |             | 147937-0-01  |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
EXAMPLE BR146222-0-01

| Ref. No. | Name of Parts                                    | Q'ty | Parts No.   | Assembly No. |
|----------|--------------------------------------------------|------|-------------|--------------|
| J-1      | Screw                                            | 1    | 100080-0-04 |              |
| J-2      | Washer                                           | 1    | 025030-1-32 |              |
| J-3      | Presser Foot Hinge Spring                        | 1    | 146887-0-01 | 146890-0-01  |
| J-4      | Chaining-off Finger                              | 1    | 146892-0-01 |              |
| J-5      | Presser Foot                                     | 1    |             |              |
| J-6      | Needle Cat. No. 6120 #9                          | 1    | 151200-0-09 |              |
| J-7      | Label                                            | 1    |             |              |
| J-8      | Screw                                            | 1    | 001670-6-14 |              |
| J-9      | Blind Stitch Hemming Guide A Assembly            | 1    |             |              |
| J-10     | Screw                                            | 1    | 009660-4-12 | 151173-0-01  |
| J-11     | Washer                                           | 1    | 025030-2-32 |              |
| J-12     | Blind Stitch Hemming Guide Adjuster              | 1    | 150339-0-01 |              |
| J-13     | Blind Stitch Hemming Guide                       | 1    |             |              |
| J-14     | Screw                                            | 1    | 111443-0-01 |              |
| J-15     | Flat Spring                                      | 1    | 147713-0-01 |              |
| J-16     | Screw                                            | 1    | 009679-3-12 | 147710-0-01  |
| J-17     | Blind Stitch Hemming Guide Fitting Holder        | 1    | 147712-0-01 |              |
| J-18     | Stop Ring                                        | 1    | 048030-3-42 |              |
| J-19     | Adjusting Screw                                  | 1    | 146759-0-01 |              |
| J-20     | Screw                                            | 1    | 009680-7-12 |              |
| J-21     | Supporter for Blind Stitch Hemming Guide Fitting | 1    | 146760-0-01 |              |
| J-22     | Screw                                            | 2    | 009670-6-12 |              |
| J-23     | Throat Plate                                     | 1    |             |              |
| J-24     | Cloth Plate                                      | 1    | 146716-0-01 |              |

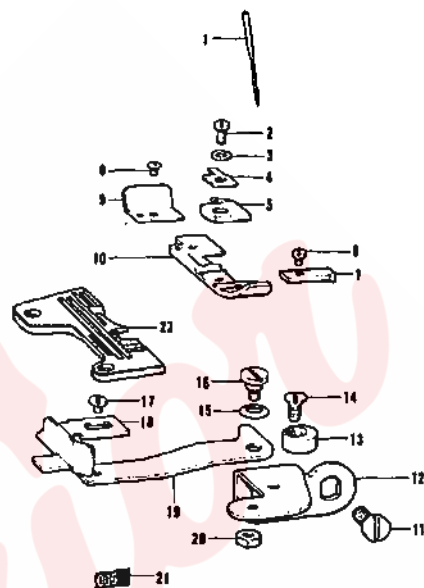
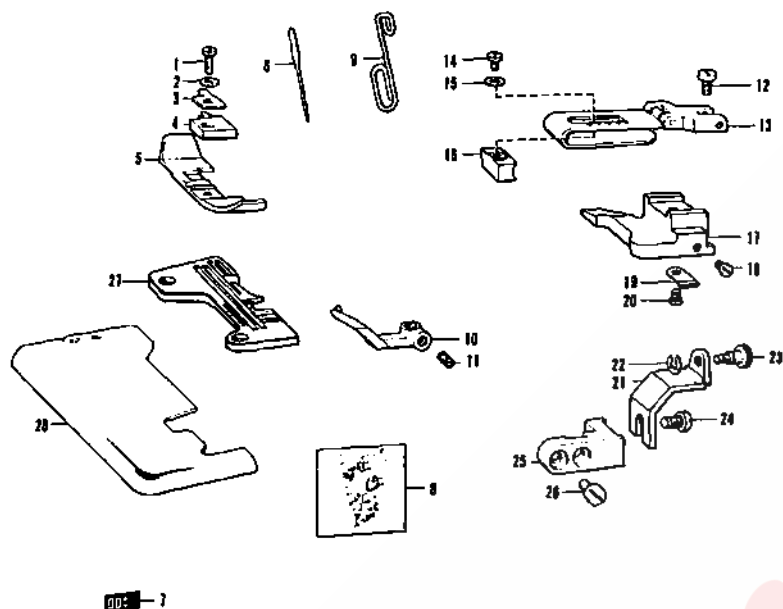
[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
EXAMPLE BR146222-0-01

# I'. 831U004- (Blind Stitch Hemming)

This machine is the same as the 831U001 machine, with the following exceptions:

# J'. 831U006- (Serging)

This machine is the same as the 831U001 machine, with the following exceptions:



| Ref. No. | Name of Parts                                    | Q'ty | Parts No.   | Assembly No. |
|----------|--------------------------------------------------|------|-------------|--------------|
| I'-1     | Screw                                            | 1    | 100080-0-04 | 146890-0-01  |
| I'-2     | Washer                                           | 1    | 025030-1-32 |              |
| I'-3     | Presser Foot Hinge Spring                        | 1    | 146887-0-01 |              |
| I'-4     | Chaining-off Finger                              | 1    | 146892-0-01 |              |
| I'-5     | Presser Foot                                     | 1    |             |              |
| I'-6     | Needle Cat. No. 6120 #9                          | 1    | 151200-0-09 |              |
| I'-7     | Label                                            | 1    |             | 147935-0-01  |
| I'-8     | Threading Diagram                                | 1    | 146719-0-01 |              |
| I'-9     | Needle Thread Take-up                            | 1    | 142201-0-01 | 147710-0-01  |
| I'-10    | Spreader                                         | 1    |             |              |
| I'-11    | Screw                                            | 1    | 014680-4-22 | 151173-0-01  |
| I'-12    | Screw                                            | 1    | 001670-6-14 |              |
| I'-13    | Blind Stitch Hemming Guide A Assembly            | 1    |             | 147710-0-01  |
| I'-14    | Screw                                            | 1    | 009660-4-12 |              |
| I'-15    | Washer                                           | 1    | 025030-2-32 | 147710-0-01  |
| I'-16    | Blind Stitch Hemming Guide Adjuster              | 1    | 150339-0-01 |              |
| I'-17    | Blind Stitch Hemming Guide                       | 1    |             | 147710-0-01  |
| I'-18    | Screw                                            | 1    | 009679-3-12 |              |
| I'-19    | Flat Spring                                      | 1    | 147713-0-01 | 147710-0-01  |
| I'-20    | Screw                                            | 1    | 111443-0-01 |              |
| I'-21    | Blind Stitch Hemming Guide Fitting Holder        | 1    | 147712-0-01 | 147710-0-01  |
| I'-22    | Stop Ring                                        | 1    | 048030-3-42 |              |
| I'-23    | Adjusting Screw                                  | 1    | 146759-0-01 | 147710-0-01  |
| I'-24    | Screw                                            | 1    | 009680-7-12 |              |
| I'-25    | Supporter for Blind Stitch Hemming Guide Fitting | 1    | 146760-0-01 | 147710-0-01  |
| I'-26    | Screw                                            | 2    | 009670-5-12 |              |
| I'-27    | Throat Plate                                     | 1    |             | 147710-0-01  |
| I'-28    | Cloth Plate                                      | 1    | 146716-0-01 |              |

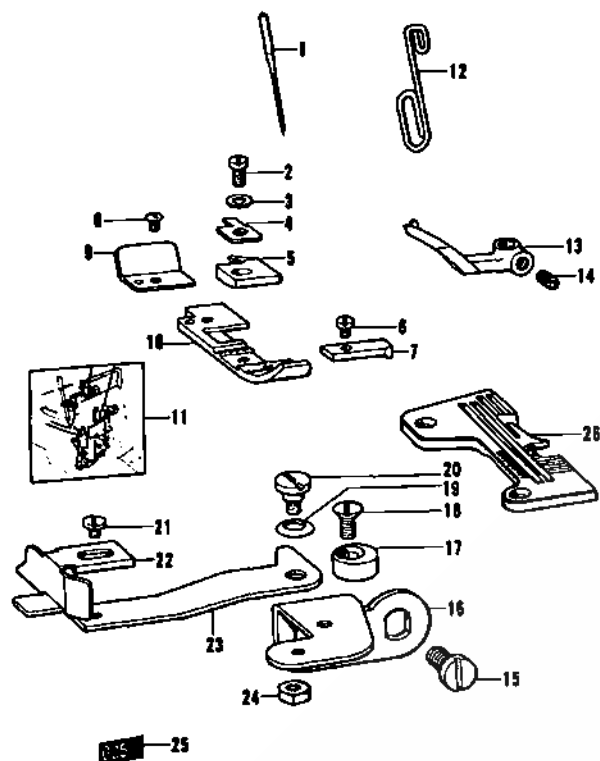
[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|
| J'-1     | Needle Cat. No. 6120 #14  | 1    | 151200-0-14 | 146893-0-01  |
| J'-2     | Screw                     | 1    | 100080-0-04 |              |
| J'-3     | Washer                    | 1    | 025030-1-32 |              |
| J'-4     | Presser Foot Hinge Spring | 1    | 146887-0-01 |              |
| J'-5     | Chaining-off Finger       | 1    | 146894-0-01 |              |
| J'-6     | Screw                     | 1    | 009639-3-12 |              |
| J'-7     | Presser Foot (Front)      | 1    | 146888-0-01 | 146893-0-01  |
| J'-8     | Screw                     | 1    | 100105-0-05 |              |
| J'-9     | Presser Foot (Rear)       | 1    |             | 146893-0-01  |
| J'-10    | Presser Foot              | 1    |             |              |
| J'-11    | Screw                     | 2    | 110201-0-01 | 146761-0-01  |
| J'-12    | Guide Supporter           | 1    | 146599-0-01 |              |
| J'-13    | Presser Arm Stopper       | 1    | 144088-0-01 | 146761-0-01  |
| J'-14    | Screw                     | 1    | 005710-8-12 |              |
| J'-15    | Spring Washer             | 1    | 146598-0-01 | 146761-0-01  |
| J'-16    | Stud Screw                | 1    | 146597-0-01 |              |
| J'-17    | Screw                     | 1    | 009679-3-12 | 146761-0-01  |
| J'-18    | Guide                     | 1    | 146762-0-01 |              |
| J'-19    | Guide Set Plate           | 1    | 146596-0-01 | 146761-0-01  |
| J'-20    | Nut                       | 1    | 021680-2-02 |              |
| J'-21    | Label                     | 1    |             | 146761-0-01  |
| J'-22    | Throat Plate              | 1    |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

**M. 831U005- (Serging)**

This machine is the same as the 831U001 machine, with the following exceptions:

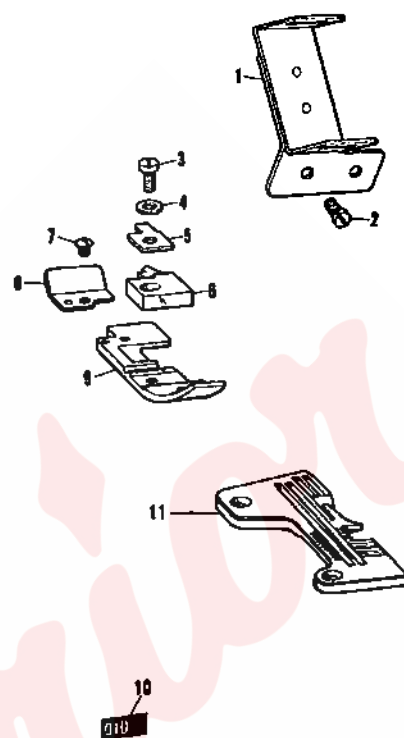


| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|
| M-1      | Needle Cat. No. 6120 ±14  | 1    | 151200-0-14 |              |
| M-2      | Screw                     | 1    | 100080-0-04 |              |
| M-3      | Washer                    | 1    | 025030-1-32 |              |
| M-4      | Presser Foot Hinge Spring | 1    | 146887-0-01 |              |
| M-5      | Chainring-off Finger      | 1    | 146894-0-01 |              |
| M-6      | Screw                     | 1    | 009639-3-12 | 146893-0-01  |
| M-7      | Presser Foot (Front)      | 1    | 146888-0-01 |              |
| M-8      | Screw                     | 1    | 100105-0-05 |              |
| M-9      | Presser Foot (Rear)       | 1    | 146889-0-01 |              |
| M-10     | Presser Foot              | 1    |             |              |
| M-11     | Threading Diagram         | 1    | 146719-0-01 |              |
| M-12     | Needle Thread Take-up     | 1    | 142201-0-01 |              |
| M-13     | Spreader                  | 1    |             | 147935-0-01  |
| M-14     | Screw                     | 1    | 014680-4-22 |              |
| M-15     | Screw                     | 2    | 110201-0-01 |              |
| M-16     | Guide Supporter           | 1    | 146599-0-01 |              |
| M-17     | Presser Arm Stopper       | 1    | 144088-0-01 |              |
| M-18     | Screw                     | 1    | 005710-8-12 |              |
| M-19     | Spring Washer             | 1    | 146598-0-01 |              |
| M-20     | Stud Screw                | 1    | 146597-0-01 | 146761-0-01  |
| M-21     | Screw                     | 1    | 009679-3-12 |              |
| M-22     | Guide                     | 1    | 146762-0-01 |              |
| M-23     | Guide Set Plate           | 1    | 146596-0-01 |              |
| M-24     | Nut                       | 1    | 021680-2-02 |              |
| M-25     | Label                     | 1    |             |              |
| M-26     | Throat Plate              | 1    |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

**M'. 831U010- (Taping on Light, Medium Work)**

This machine is the same as the 831U001 machine, with the following exceptions:

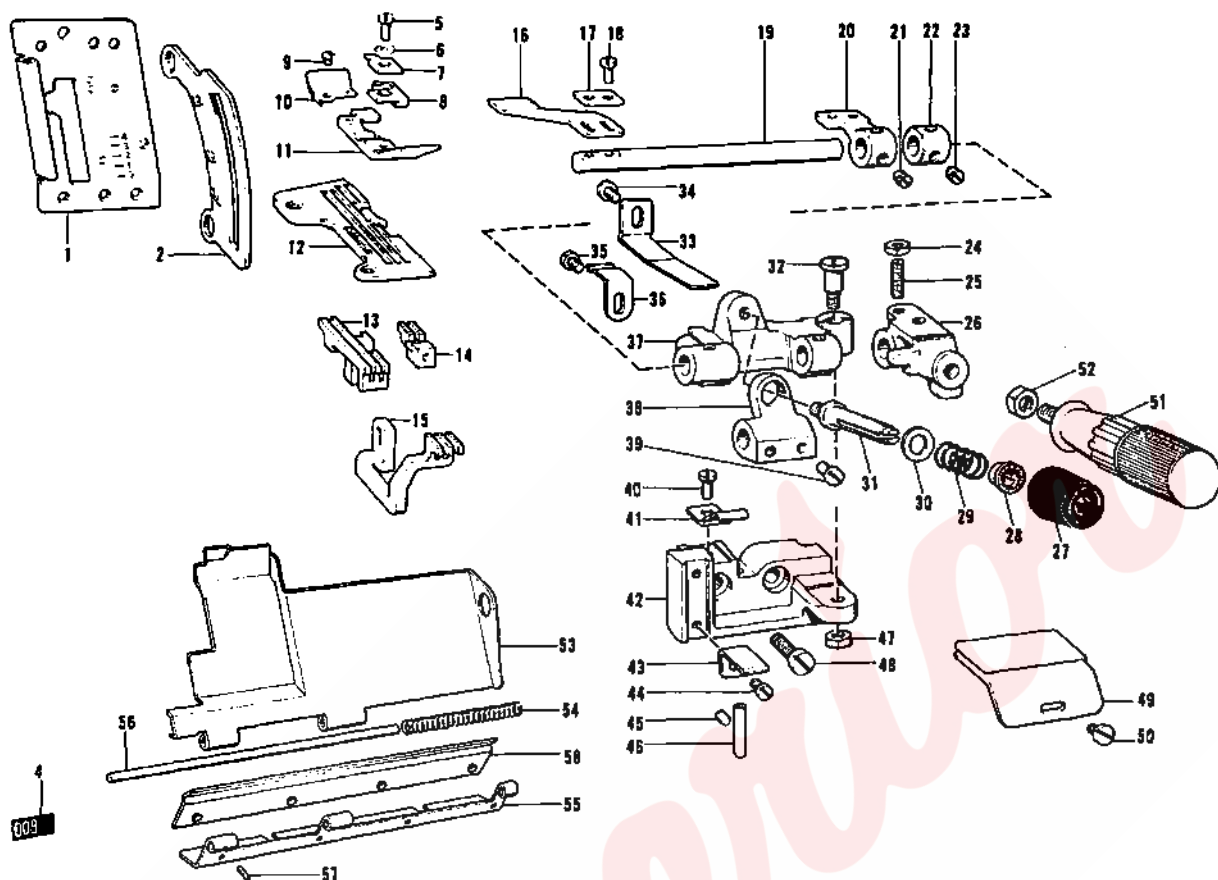


| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|
| M'-1     | Tape Guide                | 1    | 146883-0-01 |              |
| M'-2     | Screw                     | 2    | 009669-4-12 |              |
| M'-3     | Screw                     | 1    | 100080-0-04 |              |
| M'-4     | Washer                    | 1    | 025030-1-32 |              |
| M'-5     | Presser Foot Hinge Spring | 1    | 146887-0-01 |              |
| M'-6     | Chainring-off Finger      | 1    | 146897-0-01 | 146895-0-01  |
| M'-7     | Screw                     | 1    | 100105-0-05 |              |
| M'-8     | Presser Foot (Rear)       | 1    | 145774-0-01 |              |
| M'-9     | Presser Foot              | 1    |             |              |
| M'-10    | Label                     | 1    |             |              |
| M'-11    | Throat Plate              | 1    |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

# K. 831U008- (Ruffling)

This machine is the same as the 831U001 machine, with the following exceptions:



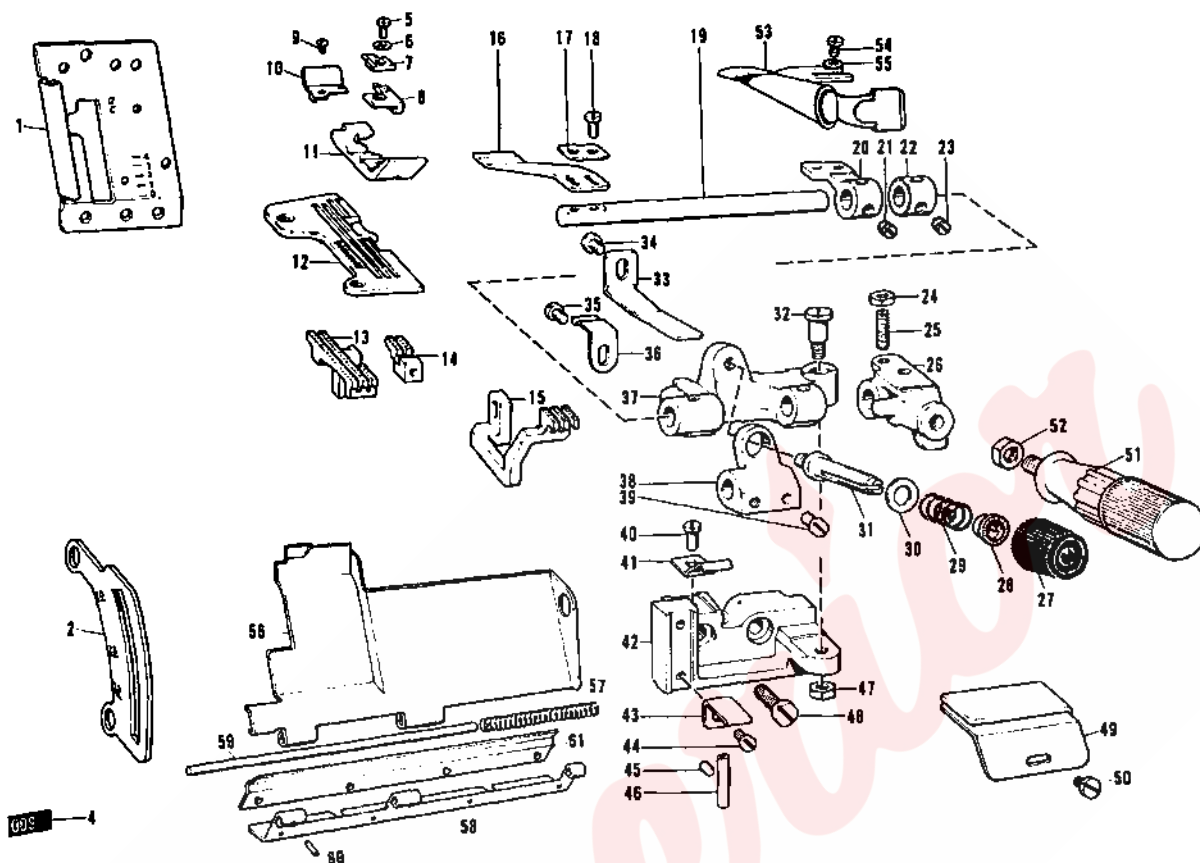
| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|------------------------------------|------|-------------|--------------|
| K-1      | Face Plate                    | 1    | 146430-0-01 |              | K-28     | Washer                             | 1    | 144105-0-00 |              |
| K-2      | Differential Feed Indicator   | 1    | 146562-0-01 |              | K-29     | Spring                             | 1    | 144788-0-01 |              |
| K-4      |                               | 1    |             |              | K-30     | Washer                             | 1    | 025770-2-32 |              |
| K-5      | Screw                         | 1    | 100080-0-04 |              | K-31     | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              |
| K-6      | Washer                        | 1    | 025030-1-32 |              | K-32     | Screw                              | 1    | 147933-0-01 |              |
| K-7      | Presser Foot Plate            | 1    | 144091-0-01 |              | K-33     | Spring                             | 1    | 145811-0-01 |              |
| K-8      | Chaining-off Finger           | 1    | 144813-0-01 | 144811-0-01  | K-34     | Screw                              | 1    | 009680-6-12 |              |
| K-9      | Screw                         | 1    | 100105-0-05 |              | K-35     | Screw                              | 1    | 001670-5-12 |              |
| K-10     | Presser Foot Chain Shield     | 1    | 144100-0-01 |              | K-36     | Spring                             | 1    | 144764-0-01 |              |
| K-11     | Presser Foot (U)              | 1    |             |              | K-37     | Bracket for Ruffling Blade         | 1    |             | 146587-0-02  |
| K-12     | Throat Plate                  | 1    |             |              | K-38     | Spring Base                        | 1    |             |              |
| K-13     | Main Feed (Back) Dog          | 1    | 146746-0-01 |              | K-39     | Screw                              | 2    | 105163-0-01 |              |
| K-14     | Chain Feed Dog                | 1    | 146578-0-01 |              | K-40     | Screw                              | 1    | 009680-6-12 |              |
| K-15     | Differential Feed (Front) Dog | 1    | 146751-0-01 |              | K-41     | Spring                             | 1    | 145808-0-01 |              |
| K-16     | Ruffling Blade                | 1    | 144783-0-01 |              | K-42     | Ruffier Base                       | 1    |             |              |
| K-17     | Washer                        | 1    | 144784-0-01 |              | K-43     | Ruffling Blade Guide               | 2    | 145807-0-01 |              |
| K-18     | Screw                         | 2    | 009660-7-12 |              | K-44     | Screw                              | 2    | 009680-8-12 |              |
| K-19     | Ruffling Blade Base Shaft     | 1    | 145803-0-01 | 146587-0-02  | K-45     | Screw                              | 1    | 013679-4-12 |              |
| K-20     | Binder Base                   | 1    |             |              | K-46     | Thread Guide Pipe                  | 1    | 146592-0-01 |              |
| K-21     | Screw                         | 2    | 101706-0-01 |              | K-47     | Nut                                | 1    | 150553-0-02 |              |
| K-22     | Set Collar                    | 1    |             | 181995-0-02  | K-48     | Screw                              | 2    | 009781-8-12 |              |
| K-23     | Screw                         | 2    | 101706-0-01 |              | K-49     | Ruffier Guide                      | 1    | 144793-0-00 |              |
| K-24     | Nut                           | 1    | 105234-0-03 |              | K-50     | Screw                              | 1    | 112751-0-02 |              |
| K-25     | Screw                         | 1    | 110230-0-01 |              | K-51     | Handle                             | 1    | 145809-0-01 |              |
| K-26     | Handle Fixing Plate           | 1    |             |              | K-52     | Nut                                | 1    | 150556-0-02 |              |
| K-27     | Thread Tension Adjusting Nut  | 1    | 149566-0-02 |              | K-53     | Front Cover                        | 1    |             |              |
|          |                               |      |             |              | K-54     | Spring                             | 1    | 146442-0-01 |              |
|          |                               |      |             |              | K-55     | Front Cover Hinge                  | 1    | 146440-0-01 | 146710-0-01  |
|          |                               |      |             |              | K-56     | Front Cover Hinge Pin              | 1    | 146441-0-00 |              |
|          |                               |      |             |              | K-57     | Pin                                | 1    | 047140-8-42 |              |
|          |                               |      |             |              | K-58     | Hinge Cover                        | 1    | 148984-0-01 |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01



# L. 831U009- (Ruffing (W/Piping))

This machine is the same as the 831U001 machine, with the following exceptions:

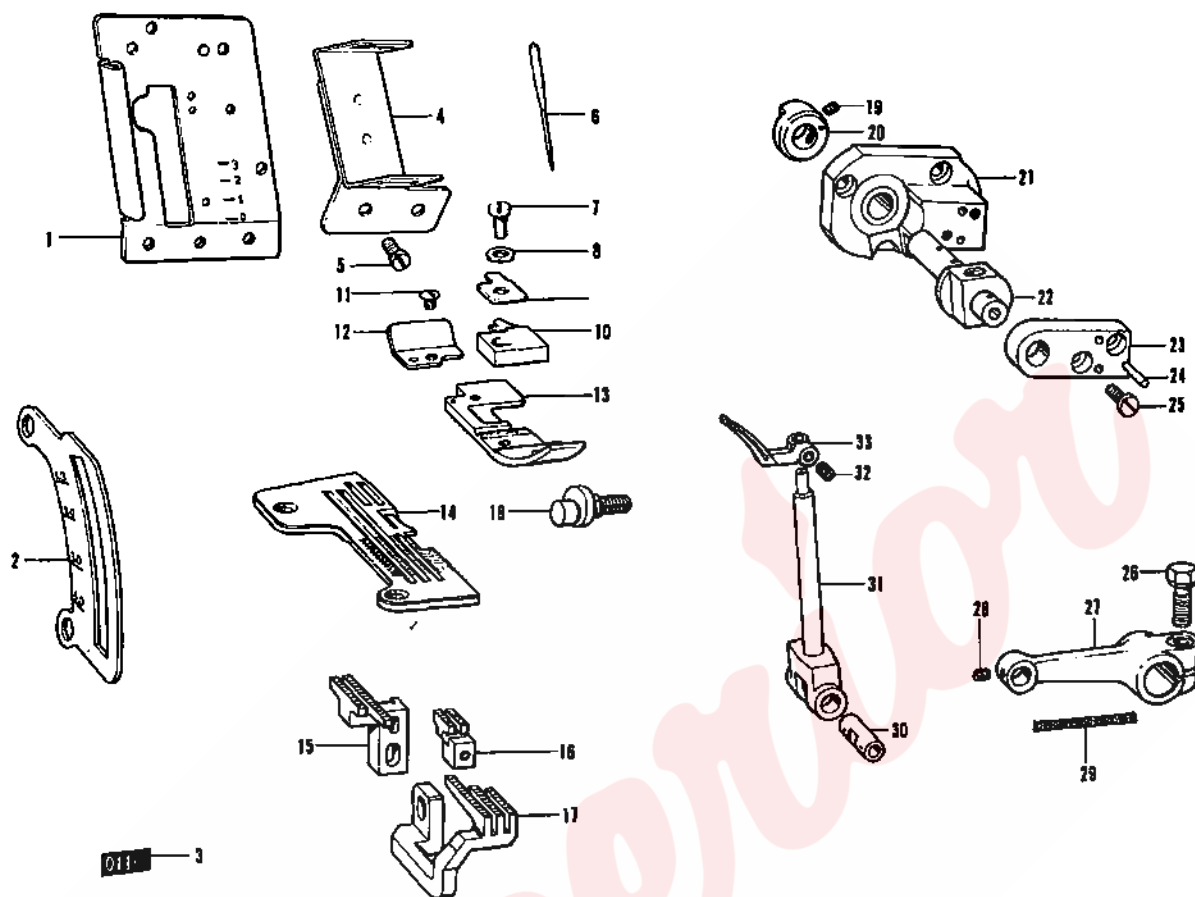


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|------------------------------------|------|-------------|--------------|
| L-1      | Face Plate                    | 1    | 146430-0-01 | 147433-0-01  | L-29     | Spring                             | 1    | 144788-0-01 | 146587-0-02  |
| L-2      | Differential Feed Indicator   | 1    | 146562-0-01 |              | L-30     | Washer                             | 1    | 025770-2-32 |              |
| L-4      | Label                         | 1    |             |              | L-31     | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              |
| L-5      | Screw                         | 1    | 100080-0-04 |              | L-32     | Screw                              | 1    | 147933-0-01 |              |
| L-6      | Washer                        | 1    | 025030-1-32 |              | L-33     | Spring                             | 1    | 145811-0-01 |              |
| L-7      | Presser Foot Plate            | 1    | 144091-0-01 |              | L-34     | Screw                              | 1    | 009680-6-12 |              |
| L-8      | Chaining-off Finger           | 1    | 144813-0-01 |              | L-35     | Screw                              | 1    | 001670-5-12 |              |
| L-9      | Screw                         | 1    | 100105-0-05 |              | L-36     | Spring                             | 1    | 144764-0-01 |              |
| L-10     | Presser Foot Chain Shield     | 1    | 144100-0-01 |              | L-37     | Bracket for Ruffing Blade          | 1    |             |              |
| L-11     | Presser Foot                  | 1    |             |              | L-38     | Spring Base                        | 1    |             |              |
| L-12     | Throat Plate                  | 1    |             | 146587-0-02  | L-39     | Screw                              | 2    | 105163-0-01 | 146710-0-01  |
| L-13     | Main Feed (Back) Dog          | 1    | 147828-0-01 |              | L-40     | Screw                              | 1    | 009680-6-12 |              |
| L-14     | Chain Feed Dog                | 1    | 147832-0-01 |              | L-41     | Spring                             | 1    | 145808-0-01 |              |
| L-15     | Differential Feed (Front) Dog | 1    | 146751-0-01 |              | L-42     | Ruffler Base                       | 1    |             |              |
| L-16     | Ruffing Blade                 | 1    | 144783-0-01 |              | L-43     | Ruffing Blade Guide                | 2    | 145807-0-01 |              |
| L-17     | Washer                        | 1    | 144784-0-01 |              | L-44     | Screw                              | 2    | 009680-8-12 |              |
| L-18     | Screw                         | 2    | 009660-7-12 |              | L-45     | Screw                              | 1    | 013679-4-12 |              |
| L-19     | Ruffing Blade Base Shaft      | 1    | 145803-0-01 |              | L-46     | Thread Guide Pipe                  | 1    | 146592-0-01 |              |
| L-20     | Binder Base                   | 1    |             |              | L-47     | Nut                                | 1    | 150563-0-02 |              |
| L-21     | Screw                         | 2    | 101706-0-01 | 181995-0-02  | L-48     | Screw                              | 2    | 009781-8-12 |              |
| L-22     | Set Collar                    | 1    |             |              | L-49     | Ruffler Guide                      | 1    | 144793-0-00 |              |
| L-23     | Screw                         | 2    | 101706-0-01 |              | L-50     | Screw                              | 1    | 112751-0-02 |              |
| L-24     | Nut                           | 1    | 105234-0-03 |              | L-51     | Handle                             | 1    | 145809-0-01 |              |
| L-25     | Screw                         | 1    | 110230-0-01 |              | L-52     | Nut                                | 1    | 150556-0-02 |              |
| L-26     | Handle Fixing Plate           | 1    |             |              | L-53     | Binder                             | 1    | 147440-0-00 |              |
| L-27     | Thread Tension Adjusting Nut  | 1    | 149566-0-02 |              | L-54     | Screw                              | 2    | 009680-6-12 |              |
| L-28     | Washer                        | 1    | 144105-0-00 |              | L-55     | Washer                             | 2    | 110735-0-02 |              |
|          |                               |      |             |              | L-56     | Front Cover                        | 1    |             |              |
|          |                               |      |             |              | L-57     | Spring                             | 1    | 146442-0-01 | 146710-0-01  |
|          |                               |      |             |              | L-58     | Front Cover Hinge                  | 1    | 146440-0-01 |              |
|          |                               |      |             |              | L-59     | Front Cover Hinge Pin              | 1    | 146441-0-00 |              |
|          |                               |      |             |              | L-60     | Pin                                | 1    | 047140-8-42 |              |
|          |                               |      |             |              | L-61     | Hinge Cover                        | 1    | 148984-0-01 |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01

## N. 831U011-○ (Taping on Bulky Knit Work)

This machine is the same as the 831U001-○ machine, with the following exceptions :

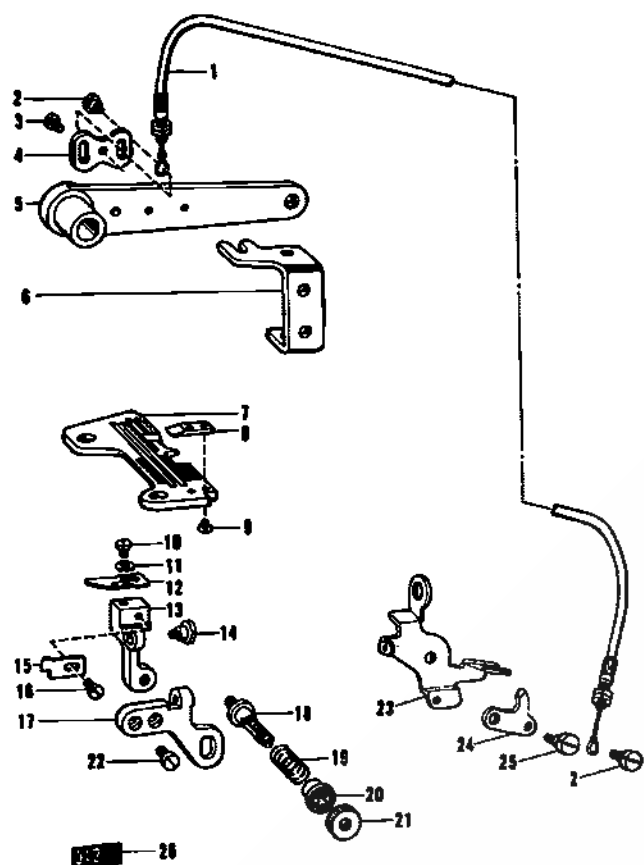


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                               | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|---------------------------------------------|------|-------------|--------------|
| N- 1     | Face Plate                    | 1    | 146706-0-01 |              | N-18     | Main Feed Shaft                             | 1    | 144068-0-01 |              |
| N- 2     | Differential Feed Indicator   | 1    | 146742-0-01 |              | N-19     | Screw                                       | 2    | 014680-4-22 |              |
| N- 3     | Label                         | 1    |             |              | N-20     | Set Collar                                  | 1    |             |              |
| N- 4     | Tape Guide                    | 1    | 146883-0-01 |              | N-21     | Looper (Right Hand) Holder Guide Base       | 1    |             |              |
| N- 5     | Screw                         | 2    | 009669-4-12 |              | N-22     | Looper (Right Hand) Holder Guide Block      | 1    |             |              |
| N- 6     | Needle Cat. No. 6120 #14      | 1    | 151200-0-14 |              | N-23     | Looper (Right Hand) Holder Supporting Plate | 1    |             |              |
| N- 7     | Screw                         | 1    | 100080-0-04 |              | N-24     | Taper Pin                                   | 2    |             |              |
| N- 8     | Washer                        | 1    | 025030-1-32 |              | N-25     | Screw                                       | 2    | 009681-0-12 | 146611-1-01  |
| N- 9     | Presser Foot Hinge Spring     | 1    | 146887-0-01 |              | N-26     | Screw                                       | 1    | 149170-0-01 |              |
| N-10     | Chaining-off Finger           | 1    | 146897-0-01 | 146895-0-01  | N-27     | Looper (Right Hand) Driving Lever           | 1    |             |              |
| N-11     | Screw                         | 1    | 100105-0-05 |              | N-28     | Screw                                       | 1    | 148294-0-01 |              |
| N-12     | Presser Foot (Rear)           | 1    | 145774-0-01 |              | N-29     | Wick                                        | 1    | 140416-0-00 |              |
| N-13     | Presser Foot                  | 1    |             |              | N-30     | Looper (Right Hand) Holding Shaft           | 1    |             |              |
| N-14     | Throat Plate                  | 1    |             |              | N-31     | Looper (Right Hand) Holder                  | 1    |             |              |
| N-15     | Main Feed (Back) Dog          | 1    | 146745-0-01 |              | N-32     | Screw                                       | 1    | 014680-4-22 | 147937-0-01  |
| N-16     | Chain Feed Dog                | 1    | 146578-0-01 |              | N-33     | Looper (Right Hand)                         | 1    |             |              |
| N-17     | Differential Feed (Front) Dog | 1    | 146750-0-01 |              |          |                                             |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

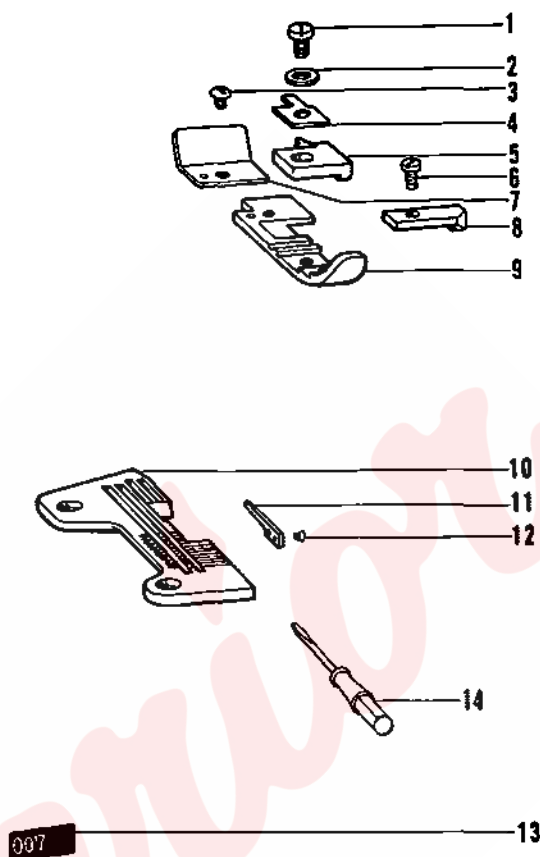
## N'. 831U012- (Chain-back)

This machine is the same as the 831U001- machine, with the following exceptions:



## K'. 831U007- (Turn-down Hemming)

This machine is the same as the 831U001- machine, with the following exceptions:



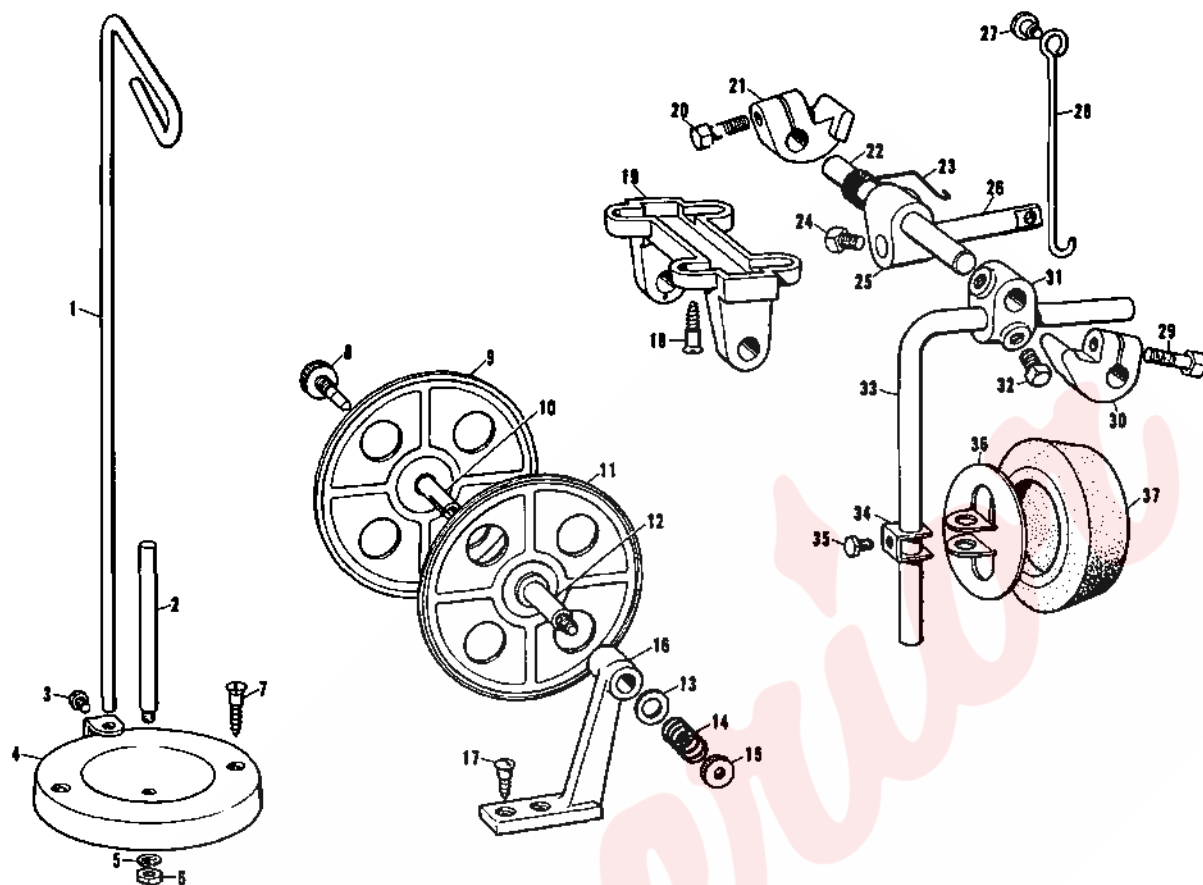
| Ref. No. | Name of Parts                        | Q'ty | Parts No.   | Assembly No. |
|----------|--------------------------------------|------|-------------|--------------|
| N'-1     | Flexible Wire Assembly               | 1    | 147480-0-01 |              |
| N'-2     | Screw                                | 2    | 141514-0-01 |              |
| N'-3     | Screw                                | 2    | 009670-6-12 |              |
| N'-4     | Wire Plate                           | 1    | 147672-0-01 |              |
| N'-5     | Presser Foot Lifter Lever            | 1    | 148359-0-01 |              |
| N'-6     | Lever Adjuster Plate                 | 1    | 147454-0-01 |              |
| N'-7     | Throat Plate                         | 1    |             |              |
| N'-8     | Chain-Back Guide                     | 1    | 147484-0-01 |              |
| N'-9     | Screw                                | 2    | 141544-0-01 |              |
| N'-10    | Screw                                | 1    | 009660-4-12 |              |
| N'-11    | Washer                               | 1    | 025030-1-32 |              |
| N'-12    | Chain-Back Blade Presser Plate       | 1    | 147477-0-01 |              |
| N'-13    | Chain-Back Blade Holder              | 1    |             |              |
| N'-14    | Screw                                | 1    | 147476-0-01 |              |
| N'-15    | Chain-Back Knife                     | 1    | 147478-0-01 |              |
| N'-16    | Screw                                | 1    | 009660-4-12 | 147473-0-01  |
| N'-17    | Chain-Back Blade Holder Supporter    | 1    |             |              |
| N'-18    | Thread Tension Control Stud          | 1    | 147148-0-01 |              |
| N'-19    | Spring                               | 1    | 147479-0-01 |              |
| N'-20    | Washer                               | 1    | 144105-0-00 |              |
| N'-21    | Upper Thread Tension Adjusting Screw | 1    | 105230-0-01 |              |
| N'-22    | Screw                                | 2    | 009670-6-12 |              |
| N'-23    | Thread Guide Support                 | 1    | 147485-0-01 |              |
| N'-24    | Tension Release Lever                | 1    | 147483-0-01 |              |
| N'-25    | Screw                                | 1    | 141514-0-01 |              |
| N'-26    | Label                                | 1    |             |              |

| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|
| K'-1     | Screw                     | 1    | 100080-0-04 |              |
| K'-2     | Washer                    | 1    | 025030-1-32 |              |
| K'-3     | Screw                     | 1    | 100105-0-05 |              |
| K'-4     | Presser Foot Hinge Spring | 1    | 146887-0-01 |              |
| K'-5     | Chaining-off Finger       | 1    | 148313-0-01 | 148311-1-01  |
| K'-6     | Screw                     | 1    | 009639-3-12 |              |
| K'-7     | Presser Foot (Rear)       | 1    | 146889-0-01 |              |
| K'-8     | Presser Foot (Front)      | 1    | 146888-0-01 |              |
| K'-9     | Presser Foot              | 1    |             |              |
| K'-10    | Throat Plate              | 1    |             |              |
| K'-11    | Finger Plate              | 1    | 148354-0-01 |              |
| K'-12    | Screw                     | 1    | 148355-0-01 |              |
| K'-13    | Label                     | 1    |             |              |
| K'-14    | Screw Driver              | 1    | 148925-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

# P. Cord Guide



| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|----------|---------------------------|------|-------------|--------------|
| P. 1     | Thread Guide              | 1    | 109853-0-01 | 181031-0-01  | P. 20    | Screw                     | 1    | 017762-2-03 | 151224-0-01  |
| P. 2     | Spool Pin                 | 1    | 100444-0-02 |              | P. 21    | Collar                    | 1    | 104890-0-02 |              |
| P. 3     | Screw                     | 1    | 100080-0-02 |              | P. 22    | Knee Lifter Shaft         | 1    | 144804-0-01 |              |
| P. 4     | Disc for Spool            | 1    | 109852-0-01 |              | P. 23    | Spring                    | 1    | 144806-0-01 |              |
| P. 5     | Washer                    | 1    | 028050-2-42 |              | P. 24    | Screw                     | 2    | 100463-0-01 |              |
| P. 6     | Nut                       | 1    | 110161-0-03 |              | P. 25    | Knee Lifter Bracket       | 1    | 143989-0-01 |              |
| P. 7     | Screw                     | 2    | 100447-0-01 |              | P. 26    | Knee Lifter Lever         | 1    | 144805-0-01 |              |
| P. 8     | Screw                     | 1    | 143980-0-01 |              | P. 29    | Screw                     | 1    | 017762-2-03 |              |
| P. 9     | Tape Winder Wheel (L)     | 1    |             | 143978-0-01  | P. 30    | Collar                    | 1    | 104890-0-02 | 180814-0-01  |
| P. 10    | Tape Winder Shaft (L)     | 1    |             |              | P. 31    | Knee Lifter Bracket       | 1    | 143989-0-01 |              |
| P. 11    | Tape Winder Wheel (R)     | 1    |             | 143976-0-01  | P. 32    | Screw                     | 2    | 100463-0-01 |              |
| P. 12    | Tape Winder Shaft (R)     | 1    |             |              | P. 33    | Knee Lifter Bar           | 1    | 104619-0-02 |              |
| P. 13    | Washer                    | 1    | 108494-0-01 | 143767-0-02  | P. 34    | Knee Lifter Plate Stopper | 1    | 114967-0-01 |              |
| P. 14    | Spring                    | 1    | 108495-0-01 |              | P. 35    | Screw                     | 1    | 110087-0-01 |              |
| P. 15    | Nut                       | 1    | 100136-0-01 |              | P. 36    | Knee Lifter Plate         | 1    | 114966-0-01 |              |
| P. 16    | Tape Winder Bracket       | 1    | 143750-0-02 | 151224-0-01  | P. 37    | Knee Lifter Cover         | 1    | 140503-0-01 |              |
| P. 17    | Screw                     | 2    | 101118-0-01 |              | P. 27    | Stud Screw                | 1    | 146594-0-01 |              |
| P. 18    | Screw                     | 4    | 033452-5-02 |              | P. 28    | Connecting Bar            | 1    | 146593-0-01 |              |
| P. 19    | Knee Lifter Shaft Bracket | 1    | 144803-0-01 |              |          |                           |      |             |              |

★Above-mentioned parts are accessories for 831U-009—●832U-037—●038—●Piping Ruffler.

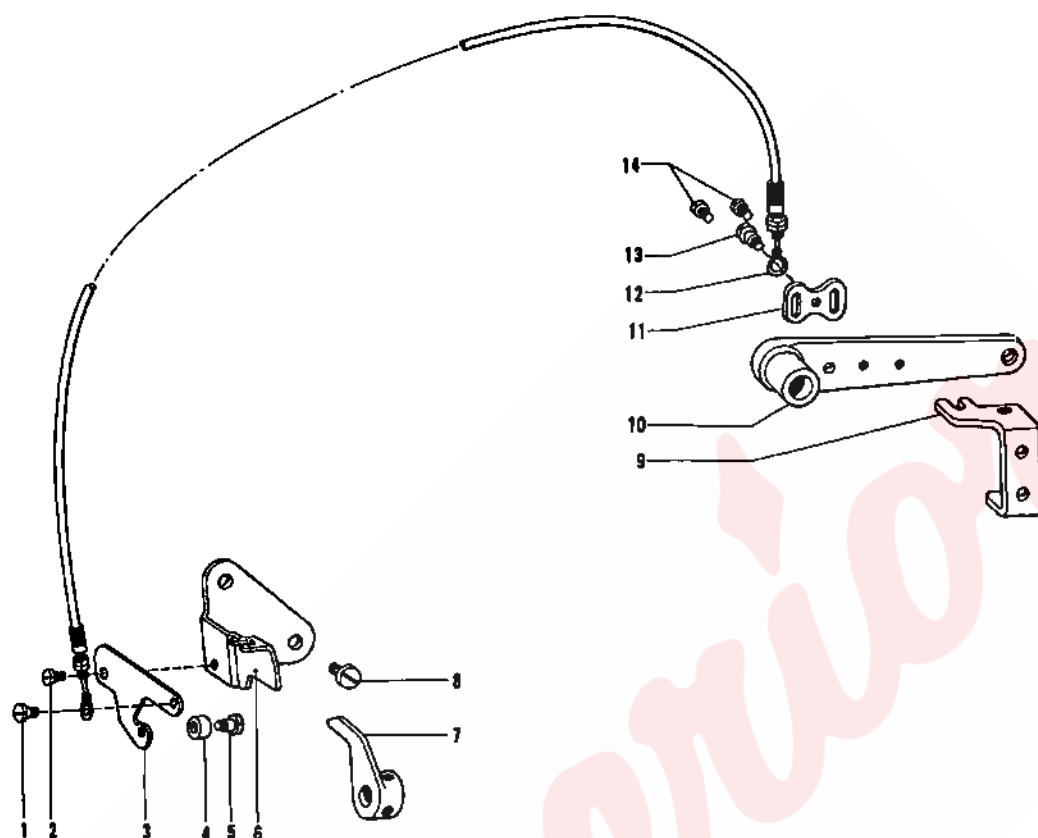
★The parts of P-18~37 are for Ruffler 831U-008—●832U-033—●034—●

★Then the parts of P-1~17 are for Piping 832U-050—●

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]



## Q. Ruffler Interlocking Parts Assembly

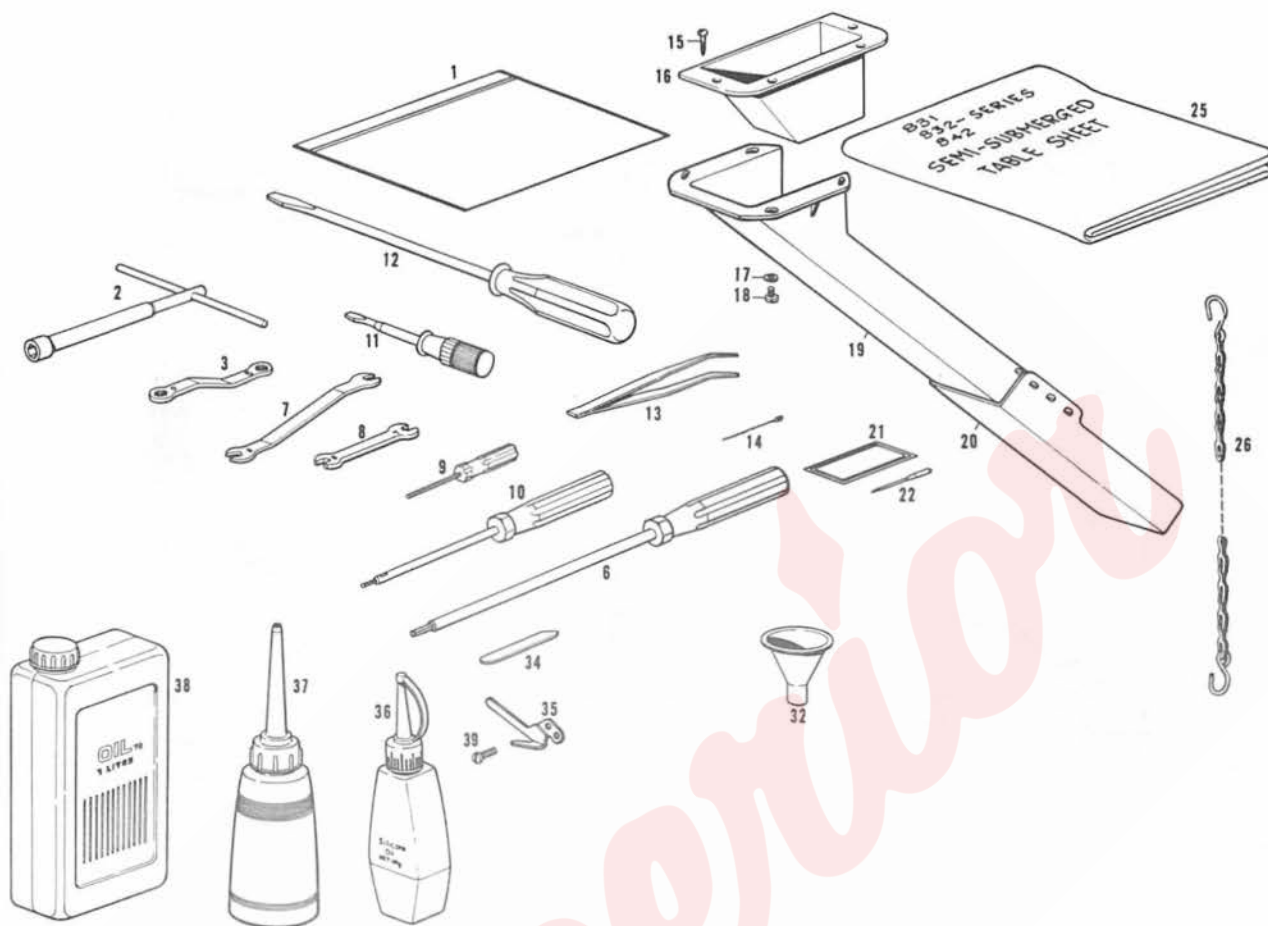


| Ref. No. | Name of Parts                     | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|-----------------------------------|------|-------------|--------------|----------|---------------------------|------|-------------|--------------|
| Q- 1     | Screw                             | 1    | 141514-0-01 | 148395-0-01  | Q- 8     | Screw                     | 1    | 009680-8-12 | 151227-0-02  |
| Q- 2     | Screw                             | 1    | 141514-0-01 |              | Q- 9     | Lever Adjuster Plate      | 1    | 147454-0-01 |              |
| Q- 3     | Ruffling Plate Lifter Lever       | 1    | 148388-0-01 |              | Q-10     | Presser Foot Lifter Lever | 1    | 148369-0-01 |              |
| Q- 4     | Roller                            | 1    | 148390-0-01 |              | Q-11     | Wire Plate                | 1    | 147672-0-01 |              |
| Q- 5     | Screw                             | 1    | 112301-0-01 |              | Q-12     | Flexible Wire Assembly    | 1    | 148391-0-01 |              |
| Q- 6     | Presser Foot Lifter Lever Support | 1    | 148389-0-01 |              | Q-13     | Screw                     | 1    | 141514-0-01 |              |
| Q- 7     | Presser Foot Lifter               | 1    | 148387-0-01 |              | Q-14     | Screw                     | 2    | 009670-6-12 |              |

★ Above-mentioned parts are accessories for 831U-008-○ Ruffler, 831U-009-○ Piping Ruffler, 832U-033-○  
034-○ Ruffler and 832U-037-○-038-○ Piping Ruffler.

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
(EXAMPLE BR146222-0-01)

## Y. Accessories

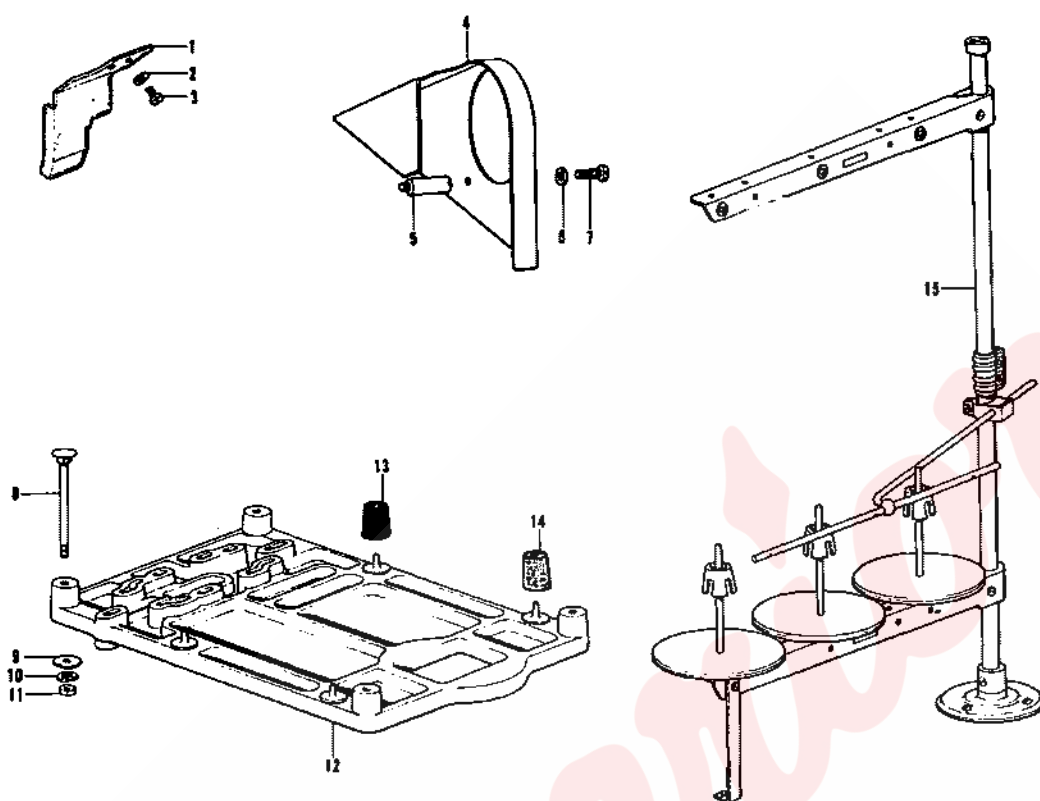


| Ref. No. | Name of Parts                | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                  | Q'ty | Parts No.   | Assembly No. |
|----------|------------------------------|------|-------------|--------------|----------|--------------------------------|------|-------------|--------------|
| Y-1      | Vinyl Bag                    | 1    | 122991-0-02 |              | Y-20     | Chip Chute (S)                 | 1    | 148432-0-01 |              |
| Y-2      | Wrench                       | 1    | 140342-0-01 |              | Y-21     | Needle Envelope                |      |             |              |
| Y-3      | Wrench                       | 1    | 105343-0-01 |              | Y-22     | Needle (Cat. No. 6120 or 6122) |      | 151200-     |              |
| Y-6      | Screw Driver for Socket Hand | 1    | 149173-0-01 |              | Y-25     | Table Sheet                    | 1    | 147698-0-02 |              |
| Y-7      | Wrench 8                     | 1    | 143566-0-01 |              | Y-26     | Chain Assembly                 | 1    | 142262-0-01 |              |
| Y-8      | Wrench 6x7                   | 1    | 107779-0-01 |              | Y-32     | Funnel                         | 1    | 140759-0-00 |              |
| Y-9      | Screw Driver for Socket Hand | 1    | 144124-0-01 |              | Y-34     | Stationary Knife               | 1    | 112436-0-01 |              |
| Y-10     | Screw Driver for Socket Hand | 1    | 146700-0-01 |              | Y-35     | Chain Cutter                   | 1    | 140888-0-01 |              |
| Y-11     | Screw Driver                 | 1    | 118837-0-01 |              | Y-36     | Silicone Oil                   | 1    | 142343-0-01 |              |
| Y-12     | Screw Driver                 | 1    | 101572-1-01 |              | Y-37     | Oiler                          | 1    | 114483-0-02 |              |
| Y-13     | Tweezers                     | 1    | 117466-0-00 |              | Y-38     | Oil Vessel                     | 1    | 145277-1-04 |              |
| Y-14     | Threader                     | 3    | 142125-0-00 |              | Y-39     | Screw                          | 2    | 009669-4-12 |              |
| Y-15     | Screw                        | 4    | 031311-3-02 |              |          |                                |      |             |              |
| Y-16     | Chip Chute Bracket           | 1    | 148430-0-01 |              |          |                                |      |             |              |
| Y-17     | Washer                       | 4    | 025680-2-32 |              |          |                                |      |             |              |
| Y-18     | Screw                        | 4    | 009681-0-12 |              |          |                                |      |             |              |
| Y-19     | Chip Chute (L)               | 1    | 148431-0-01 |              |          |                                |      |             |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01.

| Ref. No. | Name of Parts                  | 831U | 832U |
|----------|--------------------------------|------|------|
| Y-21     | Needle Envelope                | 1    | 2    |
| Y-22     | Needle (Cat. No. 6120 or 6122) | 5    | 10   |

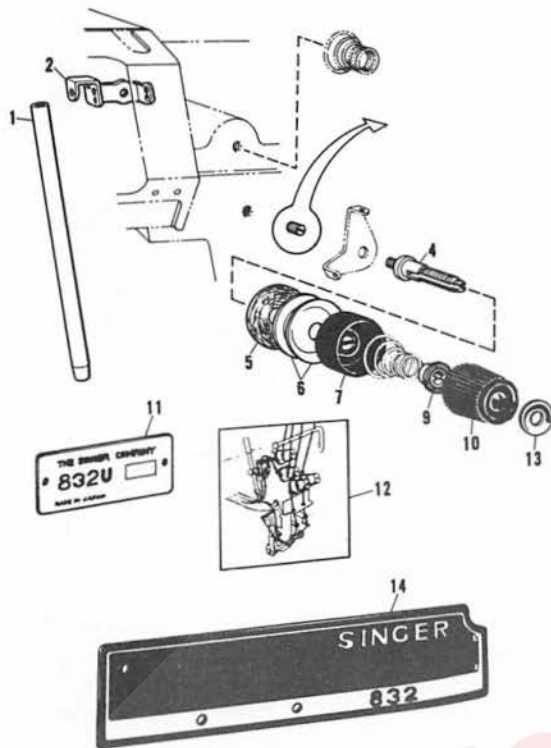
## Z. Machine Base Plate and Thread Unwinder 3 THF



| Ref. No. | Name of Parts   | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts         | Q'ty | Parts No.   | Assembly No. |
|----------|-----------------|------|-------------|--------------|----------|-----------------------|------|-------------|--------------|
| Z-1      | Eye Guard       | 1    |             | 151017-0-01  | Z-9      | Washer                | 4    | 025080-2-36 |              |
| Z-2      | Washer          | 2    | 025030-2-32 |              | Z-10     | Washer                | 4    | 028080-2-42 |              |
| Z-3      | Screw           | 3    | 009660-5-12 |              | Z-11     | Nut                   | 4    | 021080-1-06 |              |
| Z-4      | Belt Cover      | 1    |             |              | Z-12     | Machine Base Plate    | 1    | 148447-0-00 |              |
| Z-5      | Belt Cover Stud | 2    | 148042-0-01 | 148348-0-01  | Z-13     | Rubber Cushion        | 1    | 147919-0-01 |              |
| Z-6      | Washer          | 2    | 113431-0-02 |              | Z-14     | Rubber Cushion        | 3    | 147919-0-02 |              |
| Z-7      | Screw           | 2    | 009681-0-12 |              | Z-15     | Thread Unwinder 3 THF | 1    | 150160-0-02 |              |
| Z-8      | Screw           | 4    | 210973-0-01 |              |          |                       |      |             |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
(EXAMPLE BR146222-0-01)

## a. Common Parts for All 832U Varieties

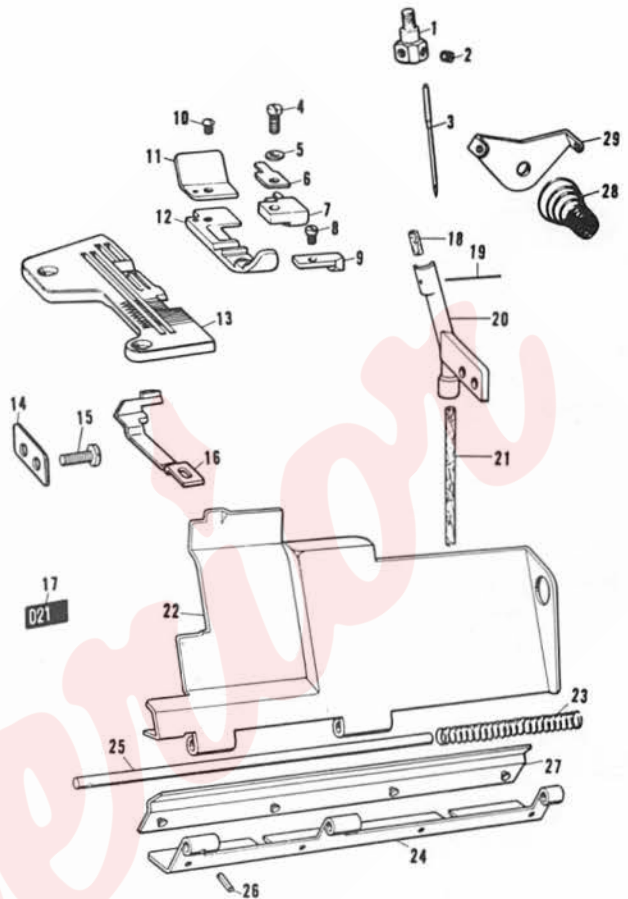


| Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. |
|----------|------------------------------------|------|-------------|--------------|
| a-1      | Needle Bar                         | 1    | 146483-0-01 |              |
| a-2      | Needle Thread Guide                | 1    | 146793-0-01 |              |
| a-4      | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              |
| a-5      | Felt                               | 1    | 110832-0-01 |              |
| a-6      | Tension Disc                       | 2    | 145446-0-01 |              |
| a-7      | Tension Disc Washer                | 1    | 144103-0-02 |              |
| a-9      | Washer                             | 1    | 144105-0-00 |              |
| a-11     | Model Plate 832U                   | 1    |             |              |
| a-12     | Threading Diagram                  | 1    | 146765-0-01 |              |
| a-10     | Thread Tension Adjusting Nut       | 1    |             | 151201-0-01  |
| a-13     | Color Plate                        | 1    | 147049-0-01 |              |
| a-14     | Name Plate F                       | 1    |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

## b. 832U021- Needle Gauge 1.8 mm (Light Work)

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



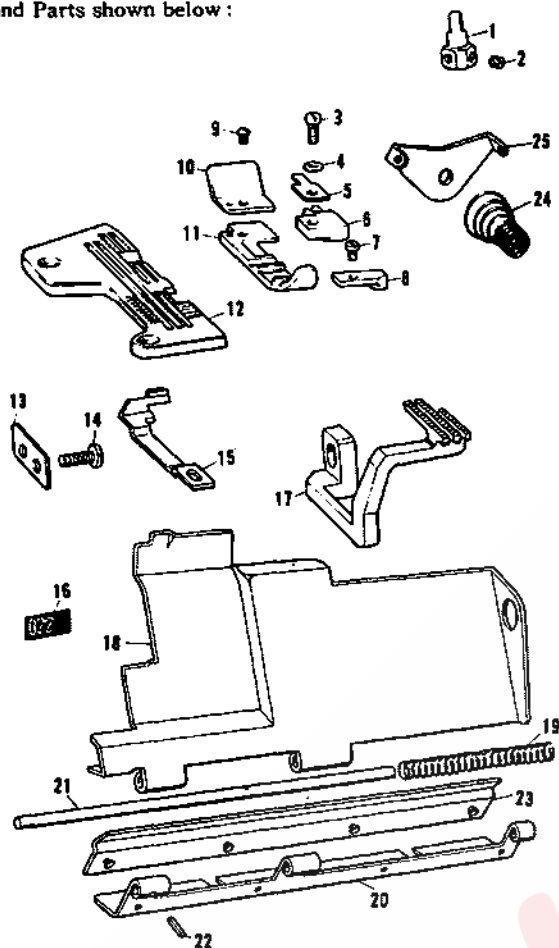
| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|
| b-1      | Needle Clamp 1.8          | 1    |             | 146771-0-01  |
| b-2      | Screw                     | 2    | 146427-0-01 |              |
| b-3      | Needle Cat. No. 8538 #11  | 2    | 151206-0-11 |              |
| b-4      | Screw                     | 1    | 100080-0-04 |              |
| b-5      | Washer                    | 1    | 025030-1-32 |              |
| b-6      | Presser Foot Hinge Spring | 1    | 146887-0-01 |              |
| b-7      | Chaining-off Finger       | 1    | 146964-0-01 | 146963-0-01  |
| b-8      | Screw                     | 1    | 009639-3-12 |              |
| b-9      | Presser Foot (Front)      | 1    | 146888-0-01 |              |
| b-10     | Screw                     | 1    | 100105-0-05 |              |
| b-11     | Presser Foot (Rear)       | 1    | 146889-0-01 |              |
| b-12     | Presser Foot              | 1    |             |              |
| b-13     | Throat Plate              | 1    |             |              |
| b-14     | Spacer                    | 1    | 146787-0-01 |              |
| b-15     | Screw                     | 2    | 105216-0-01 |              |
| b-16     | Needle Guard F            | 1    | 146777-0-01 |              |
| b-17     | Label                     | 1    |             |              |
| b-18     | Felt (S)                  | 1    | 146740-0-00 |              |
| b-19     | Steel Wire                | 1    | 147738-0-00 | 148008-0-00  |
| b-20     | Felt Holder               | 1    | 148009-0-00 |              |
| b-21     | Felt                      | 1    | 144116-0-00 |              |
| b-22     | Front Cover               | 1    |             |              |
| b-23     | Spring                    | 1    | 146442-0-01 |              |
| b-24     | Front Cover Hinge         | 1    | 146440-0-01 | 148993-0-01  |
| b-25     | Front Cover Hinge Pin     | 1    | 146441-0-00 |              |
| b-26     | Pin                       | 1    | 047140-8-42 |              |
| b-27     | Hinge Cover               | 1    | 148984-0-01 |              |
| b-28     | Spring                    | 2    | 144104-0-01 |              |
| b-29     | Needle Thread Guide Plate | 1    | 110813-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]



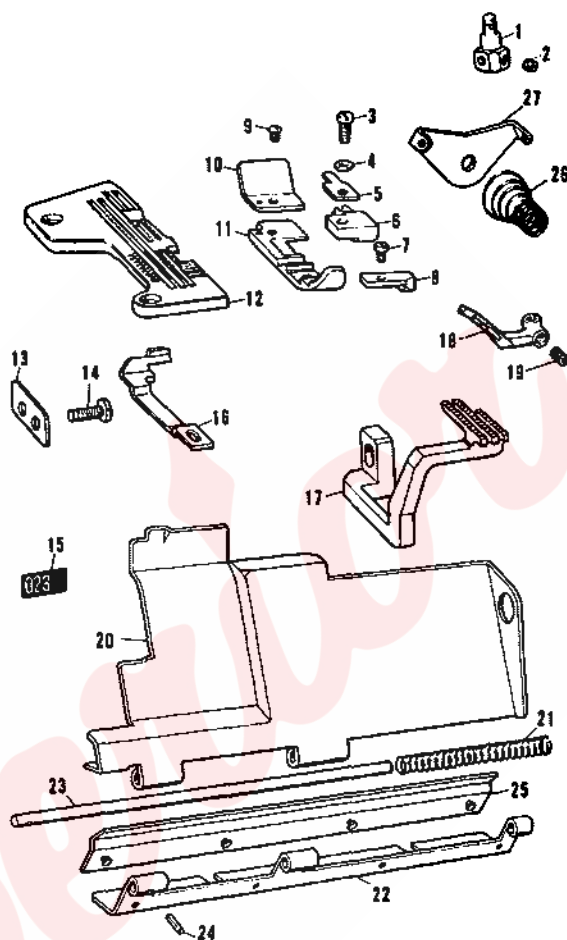
**c. 832U022- Needle Gauge 2.2 mm  
(Light and Medium Work)**

This machine is the same as the 831U001- (A-H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



**d. 832U023- Needle Gauge 2.2 mm  
(Light and Medium Work)**

This machine is the same as the 831U001- (A-H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|
| c-1      | Needle Clamp 2.2              | 1    |             | 146773-0-01  |
| c-2      | Screw                         | 2    | 146427-0-01 |              |
| c-3      | Screw                         | 1    | 100080-0-04 |              |
| c-4      | Washer                        | 1    | 025030-1-32 |              |
| c-5      | Presser Foot Hinge Spring     | 1    | 146887-0-01 | 146902-0-01  |
| c-6      | Chaining-off Finger           | 1    | 146903-0-01 |              |
| c-7      | Screw                         | 1    | 009639-3-12 |              |
| c-8      | Presser Foot (Front)          | 1    | 146888-0-01 |              |
| c-9      | Screw                         | 1    | 100105-0-05 | 146889-0-01  |
| c-10     | Presser Foot (Rear)           | 1    | 146889-0-01 |              |
| c-11     | Presser Foot                  | 1    |             |              |
| c-12     | Throat Plate                  | 1    |             |              |
| c-13     | Spacer                        | 1    | 146787-0-01 | 146777-0-01  |
| c-14     | Screw                         | 2    | 105216-0-01 |              |
| c-15     | Needle Guard F                | 1    | 146777-0-01 |              |
| c-16     | Label                         | 1    |             |              |
| c-17     | Differential Feed (Front) Dog | 1    | 146749-0-01 | 148993-0-01  |
| c-18     | Front Cover                   | 1    |             |              |
| c-19     | Spring                        | 1    | 146442-0-01 |              |
| c-20     | Front Cover Hinge             | 1    | 146440-0-01 |              |
| c-21     | Front Cover Hinge Pin         | 1    | 146441-0-00 | 148984-0-01  |
| c-22     | Pin                           | 1    | 047140-8-42 |              |
| c-23     | Hinge Cover                   | 1    | 148984-0-01 |              |
| c-24     | Spring                        | 2    | 144104-0-01 |              |
| c-25     | Needle Thread Guide Plate     | 1    | 110813-0-01 |              |

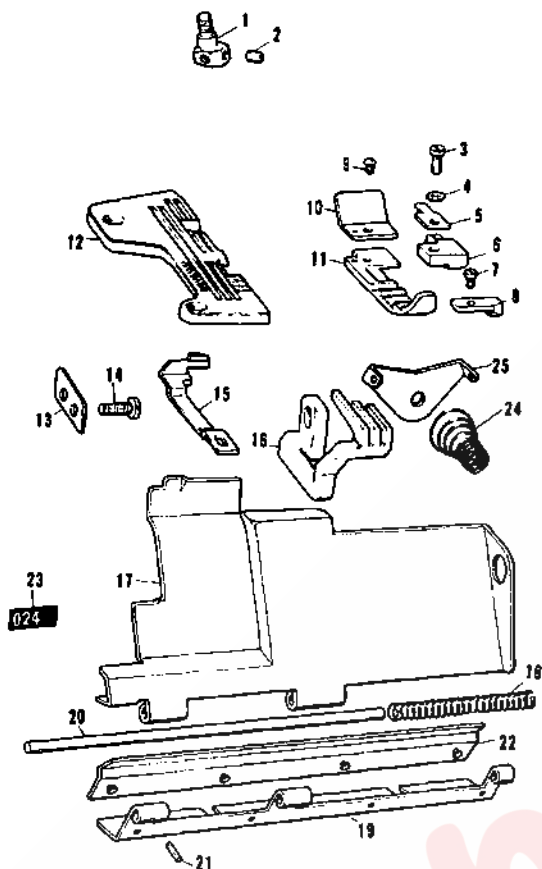
[NOTE! PREFIX ALL NUMBERS BY 'BR']  
EXAMPLE BR146222-0-01

| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|
| d-1      | Needle Clamp 2.2              | 1    |             | 146773-0-01  |
| d-2      | Screw                         | 2    | 146427-0-01 |              |
| d-3      | Screw                         | 1    | 100080-0-04 |              |
| d-4      | Washer                        | 1    | 025030-1-32 |              |
| d-5      | Presser Foot Hinge Spring     | 1    | 146887-0-01 | 146902-0-01  |
| d-6      | Chaining-off Finger           | 1    | 146903-0-01 |              |
| d-7      | Screw                         | 1    | 009639-3-12 |              |
| d-8      | Presser Foot (Front)          | 1    | 146888-0-01 |              |
| d-9      | Screw                         | 1    | 100105-0-05 | 146889-0-01  |
| d-10     | Presser Foot (Rear)           | 1    | 146889-0-01 |              |
| d-11     | Presser Foot                  | 1    |             |              |
| d-12     | Throat Plate                  | 1    |             |              |
| d-13     | Spacer                        | 1    | 146787-0-01 | 146777-0-01  |
| d-14     | Screw                         | 2    | 105216-0-01 |              |
| d-15     | Label                         | 1    |             |              |
| d-16     | Needle Guard F                | 1    | 146777-0-01 |              |
| d-17     | Differential Feed (Front) Dog | 1    | 146749-0-01 | 147936-0-01  |
| d-18     | Looper (Right Hand)           | 1    |             |              |
| d-19     | Screw                         | 1    | 014680-4-22 |              |
| d-20     | Front Cover                   | 1    |             |              |
| d-21     | Spring                        | 1    | 146442-0-01 | 148993-0-01  |
| d-22     | Front Cover Hinge             | 1    | 146440-0-01 |              |
| d-23     | Front Cover Hinge Pin         | 1    | 146441-0-00 |              |
| d-24     | Pin                           | 1    | 047140-8-42 |              |
| d-25     | Hinge Cover                   | 1    | 148984-0-01 | 148984-0-01  |
| d-26     | Spring                        | 2    | 144104-0-01 |              |
| d-27     | Needle Thread Guide Plate     | 1    | 110813-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
EXAMPLE BR146222-0-01

**b'. 832U024- Needle Gauge 3 mm**  
(Light and Medium Work)

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

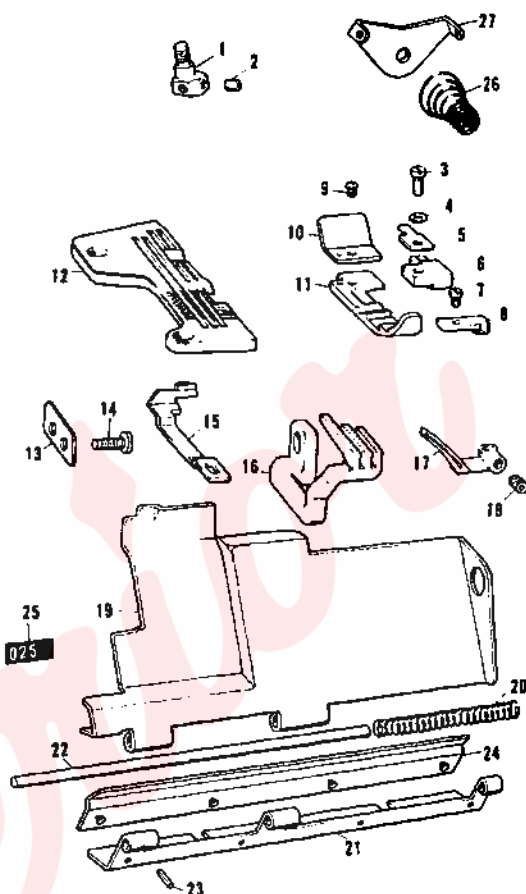


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|
| b'-1     | Needle Clamp 3                | 1    |             | 146775-0-01  |
| b'-2     | Screw                         | 2    | 146427-0-01 |              |
| b'-3     | Screw                         | 1    | 100080-0-04 |              |
| b'-4     | Washer                        | 1    | 025030-1-32 |              |
| b'-5     | Presser Foot Hinge Spring     | 1    | 146887-0-01 |              |
| b'-6     | Chaining-off Finger           | 1    | 146966-0-01 |              |
| b'-7     | Screw                         | 1    | 009639-3-12 | 146965-0-01  |
| b'-8     | Presser Foot (Front)          | 1    | 146888-0-01 |              |
| b'-9     | Screw                         | 1    | 100105-0-05 |              |
| b'-10    | Presser Foot (Rear)           | 1    | 146889-0-01 |              |
| b'-11    | Presser Foot                  | 1    |             |              |
| b'-12    | Throat Plate                  | 1    |             |              |
| b'-13    | Spacer                        | 1    | 146788-0-01 |              |
| b'-14    | Screw                         | 2    | 105216-0-01 |              |
| b'-15    | Needle Guard F                | 1    | 146778-0-01 |              |
| b'-16    | Differential Feed (Front) Dog | 1    | 146749-0-01 |              |
| b'-17    | Front Cover                   | 1    |             |              |
| b'-18    | Spring                        | 1    | 146442-0-01 |              |
| b'-19    | Front Cover Hinge             | 1    | 146440-0-01 |              |
| b'-20    | Front Cover Hinge Pin         | 1    | 146441-0-00 | 148995-0-01  |
| b'-21    | Pin                           | 1    | 047140-8-42 |              |
| b'-22    | Hinge Cover                   | 1    | 148984-0-01 |              |
| b'-23    | Label                         | 1    |             |              |
| b'-24    | Spring                        | 2    | 144104-0-01 |              |
| b'-25    | Needle Thread Guide Plate     | 1    | 110813-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

**c'. 832U025- Needle Gauge 3 mm**  
(Light and Medium Work)

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

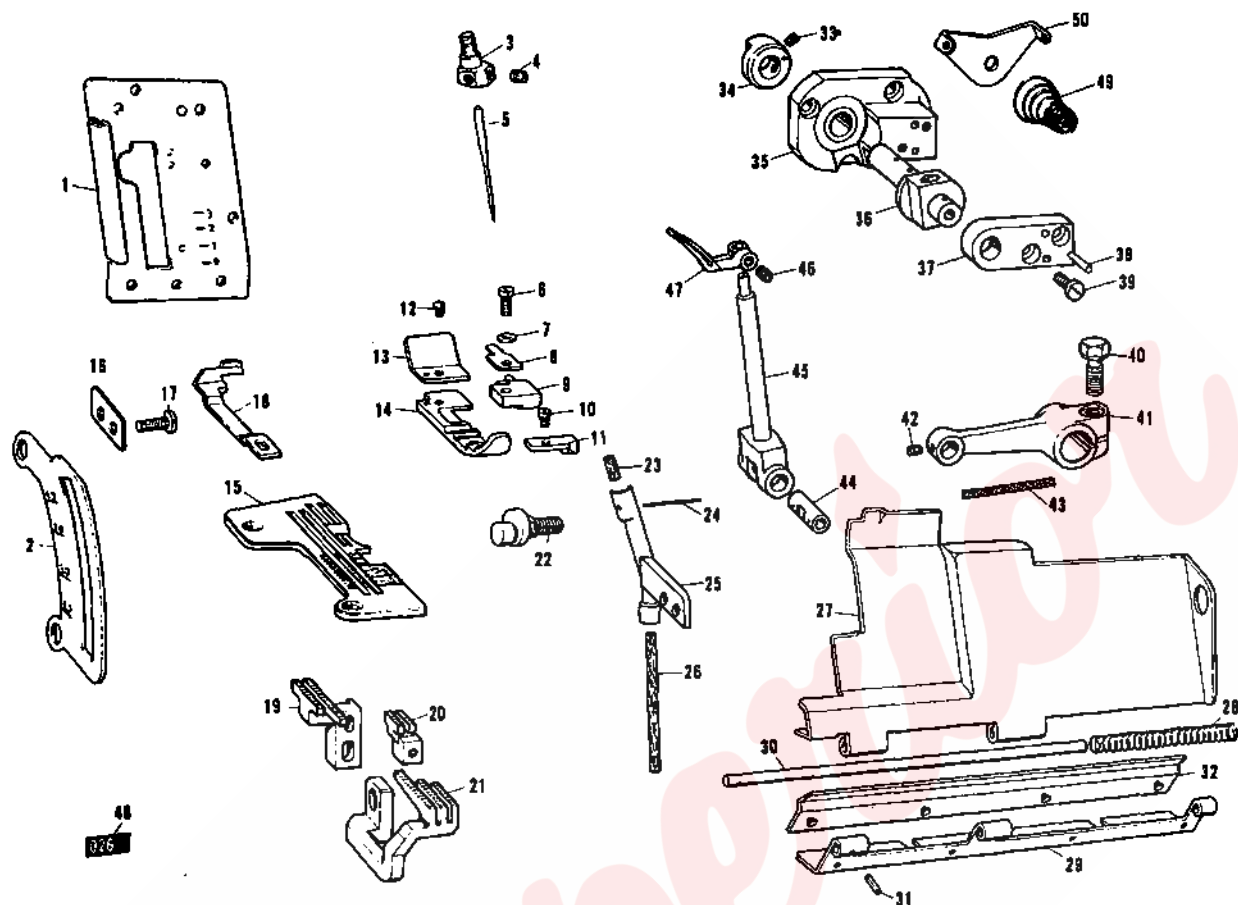


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|
| c'-1     | Needle Clamp 3                | 1    |             | 146775-0-01  |
| c'-2     | Screw                         | 2    | 146427-0-01 |              |
| c'-3     | Screw                         | 1    | 100080-0-04 |              |
| c'-4     | Washer                        | 1    | 025030-1-32 |              |
| c'-5     | Presser Foot Hinge Spring     | 1    | 146887-0-01 |              |
| c'-6     | Chaining-off Finger           | 1    | 146966-0-01 |              |
| c'-7     | Screw                         | 1    | 009639-3-12 | 146965-0-01  |
| c'-8     | Presser Foot (Front)          | 1    | 146888-0-01 |              |
| c'-9     | Screw                         | 1    | 100105-0-05 |              |
| c'-10    | Presser Foot (Rear)           | 1    | 146889-0-01 |              |
| c'-11    | Presser Foot                  | 1    |             |              |
| c'-12    | Throat Plate                  | 1    |             |              |
| c'-13    | Spacer                        | 1    | 146788-0-01 |              |
| c'-14    | Screw                         | 2    | 105216-0-01 |              |
| c'-15    | Needle Guard F                | 1    | 146778-0-01 |              |
| c'-16    | Differential Feed (Front) Dog | 1    | 146749-0-01 |              |
| c'-17    | Looper (Right Hand)           | 1    |             | 147936-0-01  |
| c'-18    | Screw                         | 1    | 014680-4-22 |              |
| c'-19    | Front Cover                   | 1    |             |              |
| c'-20    | Spring                        | 1    | 146442-0-01 |              |
| c'-21    | Front Cover Hinge             | 1    | 146440-0-01 |              |
| c'-22    | Front Cover Hinge Pin         | 1    | 146441-0-00 | 148995-0-01  |
| c'-23    | Pin                           | 1    | 047140-8-42 |              |
| c'-24    | Hinge Cover                   | 1    | 148984-0-01 |              |
| c'-25    | Label                         | 1    |             |              |
| c'-26    | Spring                        | 2    | 144104-0-01 |              |
| c'-27    | Needle Thread Guide Plate     | 1    | 110813-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

**d'. 832U026- Needle Gauge 1.8 mm  
(Bulky Knit Work)**

This machine is the same as the 831U001- (A-H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

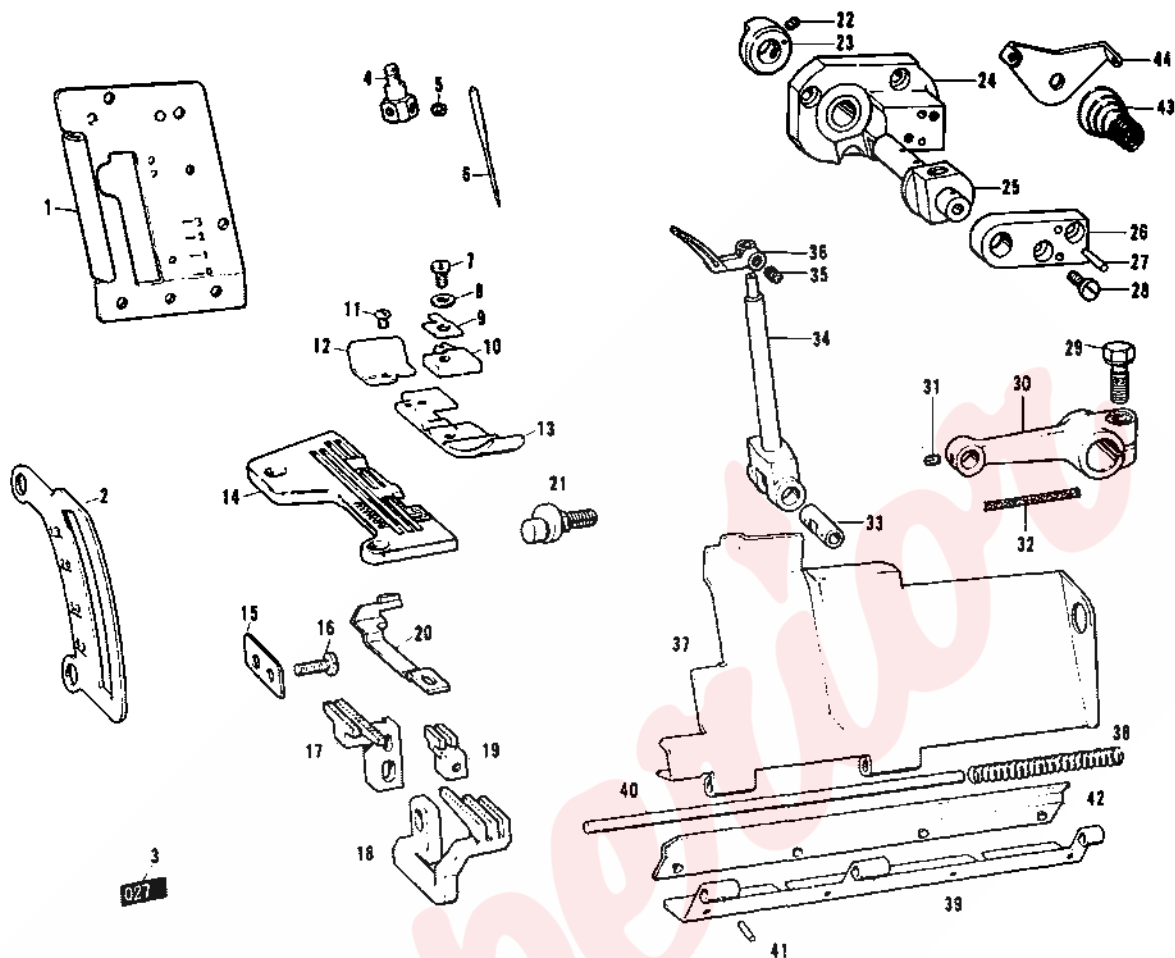


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                               | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|---------------------------------------------|------|-------------|--------------|
| d'-1     | Face Plate                    | 1    | 146706-0-01 |              | d'-26    | Felt                                        | 1    | 144116-0-00 | 148008-0-00  |
| d'-2     | Differential Feed Indicator   | 1    | 146742-0-01 |              | d'-27    | Front Cover                                 | 1    |             |              |
| d'-3     | Needle Clamp 1.8              | 1    |             | 146771-0-01  | d'-28    | Spring                                      | 1    | 146442-0-01 |              |
| d'-4     | Screw                         | 2    | 146427-0-01 |              | d'-29    | Front Cover Hinge                           | 1    | 146440-0-01 |              |
| d'-5     | Needle Cat. No. 8538 #11      | 2    | 151206-0-11 |              | d'-30    | Front Cover Hinge Pin                       | 1    | 146441-0-00 | 148993-0-01  |
| d'-6     | Screw                         | 1    | 100080-0-04 |              | d'-31    | Pin                                         | 1    | 047140-8-42 |              |
| d'-7     | Washer                        | 1    | 025030-1-32 |              | d'-32    | Hinge Cover                                 | 1    | 148984-0-01 |              |
| d'-8     | Presser Foot Hinge Spring     | 1    | 146887-0-01 |              | d'-33    | Screw                                       | 2    | 014680-4-22 |              |
| d'-9     | Chaining-off Finger           | 1    | 146964-0-01 |              | d'-34    | Set Collar                                  | 1    |             |              |
| d'-10    | Screw                         | 1    | 009639-3-12 | 146963-0-01  | d'-35    | Looper (Right Hand) Holder Guide Base       | 1    |             |              |
| d'-11    | Presser Foot (Front)          | 1    | 146888-0-01 |              | d'-36    | Looper (Right Hand) Holder Guide Block      | 1    |             |              |
| d'-12    | Screw                         | 1    | 100105-0-05 |              | d'-37    | Looper (Right Hand) Holder Supporting Plate | 1    |             |              |
| d'-13    | Presser Foot (Rear)           | 1    | 146889-0-01 |              | d'-38    | Taper Pin                                   | 2    |             | 146611-1-01  |
| d'-14    | Presser Foot                  | 1    |             |              | d'-39    | Screw                                       | 2    | 009681-0-12 |              |
| d'-15    | Throat Plate                  | 1    |             |              | d'-40    | Screw                                       | 1    | 149170-0-01 |              |
| d'-16    | Spacer                        | 1    | 146787-0-01 |              | d'-41    | Looper (Right Hand) Driving Lever           | 1    |             |              |
| d'-17    | Screw                         | 2    | 105216-0-01 |              | d'-42    | Screw                                       | 1    | 148294-0-01 |              |
| d'-18    | Needle Guard F                | 1    | 146777-0-01 |              | d'-43    | Wick                                        | 1    | 140416-0-00 |              |
| d'-19    | Main Feed (Back) Dog          | 1    | 148401-0-01 |              | d'-44    | Looper (Right Hand) Holding Shaft           | 1    |             |              |
| d'-20    | Chain Feed Dog                | 1    | 146578-0-01 |              | d'-45    | Looper (Right Hand) Holder                  | 1    |             |              |
| d'-21    | Differential Feed (Front) Dog | 1    | 148402-0-01 |              | d'-46    | Screw                                       | 1    | 014680-4-22 | 147937-0-01  |
| d'-22    | Main Feed Shaft               | 1    | 144068-0-01 |              | d'-47    | Looper (Right Hand)                         | 1    |             |              |
| d'-23    | Felt (S)                      | 1    | 146740-0-00 |              | d'-48    | Label                                       | 1    |             |              |
| d'-24    | Steel Wire                    | 1    | 147738-0-00 | 148008-0-00  | d'-49    | Spring                                      | 2    | 144104-0-01 |              |
| d'-25    | Felt Holder                   | 1    | 148009-0-00 |              | d'-50    | Needle Thread Guide Plate                   | 1    | 110813-0-01 |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01

**e. 832U027- Needle Gauge 2.2 mm  
(Bulky Knit Work)**

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



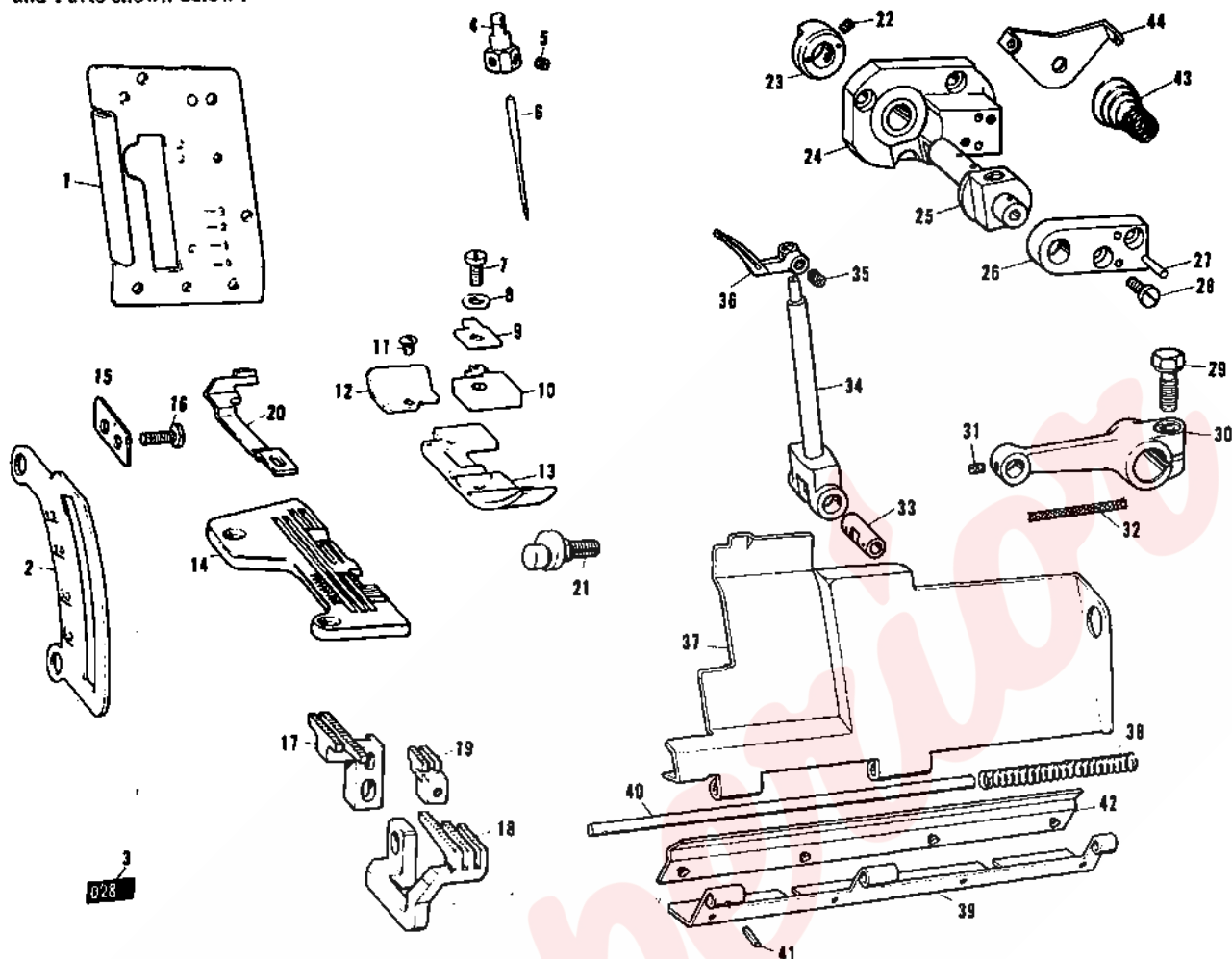
| Ref. No. | Name of Parts                 | Qty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                          | Qty | Parts No.   | Assembly No. |
|----------|-------------------------------|-----|-------------|--------------|----------|----------------------------------------|-----|-------------|--------------|
| e-1      | Face Plate                    | 1   | 146706-0-01 |              | e-23     | Set Collar                             | 1   |             |              |
| e-2      | Differential Feed Indicator   | 1   | 146742-0-01 |              | e-24     | Looper (Right Hand) Holder Guide Base  | 1   |             |              |
| e-3      | Label                         | 1   |             |              | e-25     | Looper (Right Hand) Holder Guide Block | 1   |             |              |
| e-4      | Needle Clamp 2.2              | 1   |             | 146773-0-01  | e-26     | Looper (Right Hand) Holder             | 1   |             |              |
| e-5      | Screw                         | 2   | 146427-0-01 |              |          | Supporting Plate                       | 1   |             |              |
| e-6      | Needle Cat. No. 6120 #14      | 2   | 151200-0-14 |              | e-27     | Taper Pin                              | 2   |             |              |
| e-7      | Screw                         | 1   | 100080-0-01 |              | e-28     | Screw                                  | 2   | 000680-0-12 | 146611-1-01  |
| e-8      | Washer                        | 1   | 025030-1-32 |              | e-29     | Screw                                  | 1   | 149170-0-01 |              |
| e-9      | Presser Foot Hinge Spring     | 1   | 146887-0-01 |              | e-30     | Looper (Right Hand) Driving Lever      | 1   |             |              |
| e-10     | Churning-off Finger           | 1   |             |              | e-31     | Screw                                  | 1   | 148250-0-01 |              |
| e-11     | Screw                         | 1   | 100105-0-05 |              | e-32     | Wick                                   | 1   | 110416-0-00 |              |
| e-12     | Presser Foot (Rear)           | 1   | 145774-0-01 |              | e-33     | Looper (Right Hand) Holding Shaft      | 1   |             |              |
| e-13     | Presser Foot                  | 1   |             |              | e-34     | Looper (Right Hand) Holder             | 1   |             |              |
| e-14     | Throat Plate                  | 1   |             |              | e-35     | Screw                                  | 1   | 014680-4-22 | 147937-0-01  |
| e-15     | Spacer                        | 1   | 146787-0-01 |              | e-36     | Looper (Right Hand)                    | 1   |             |              |
| e-16     | Screw                         | 2   | 105216-0-01 |              | e-37     | Front Cover                            | 1   |             |              |
| e-17     | Main Feed (Back) Dog          | 1   | 146745-0-01 |              | e-38     | Spring                                 | 1   | 146442-0-01 |              |
| e-18     | Differential Feed (Front) Dog | 1   | 146750-0-01 |              | e-39     | Front Cover Hinge                      | 1   | 146140-0-01 | 148993-0-01  |
| e-19     | Chain Feed Dog                | 1   | 146578-0-01 |              | e-40     | Front Cover Hinge Pin                  | 1   | 146141-0-00 |              |
| e-20     | Needle Guard F                | 1   | 146777-0-01 |              | e-41     | Pin                                    | 1   | 047140-8-42 |              |
| e-21     | Main Feed Shaft               | 1   | 144068-0-01 |              | e-42     | Hinge Cover                            | 1   | 148984-0-01 |              |
| e-22     | Screw                         | 2   | 014680-4-22 | 146611-1-01  | e-43     | Spring                                 | 2   | 144104-0-01 |              |
|          |                               |     |             |              | e-44     | Needle Thread Guide Plate              | 1   | 110813-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]



**e' 832U028- Needle Gauge 2.2 mm  
(Bulky Knit Work)**

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

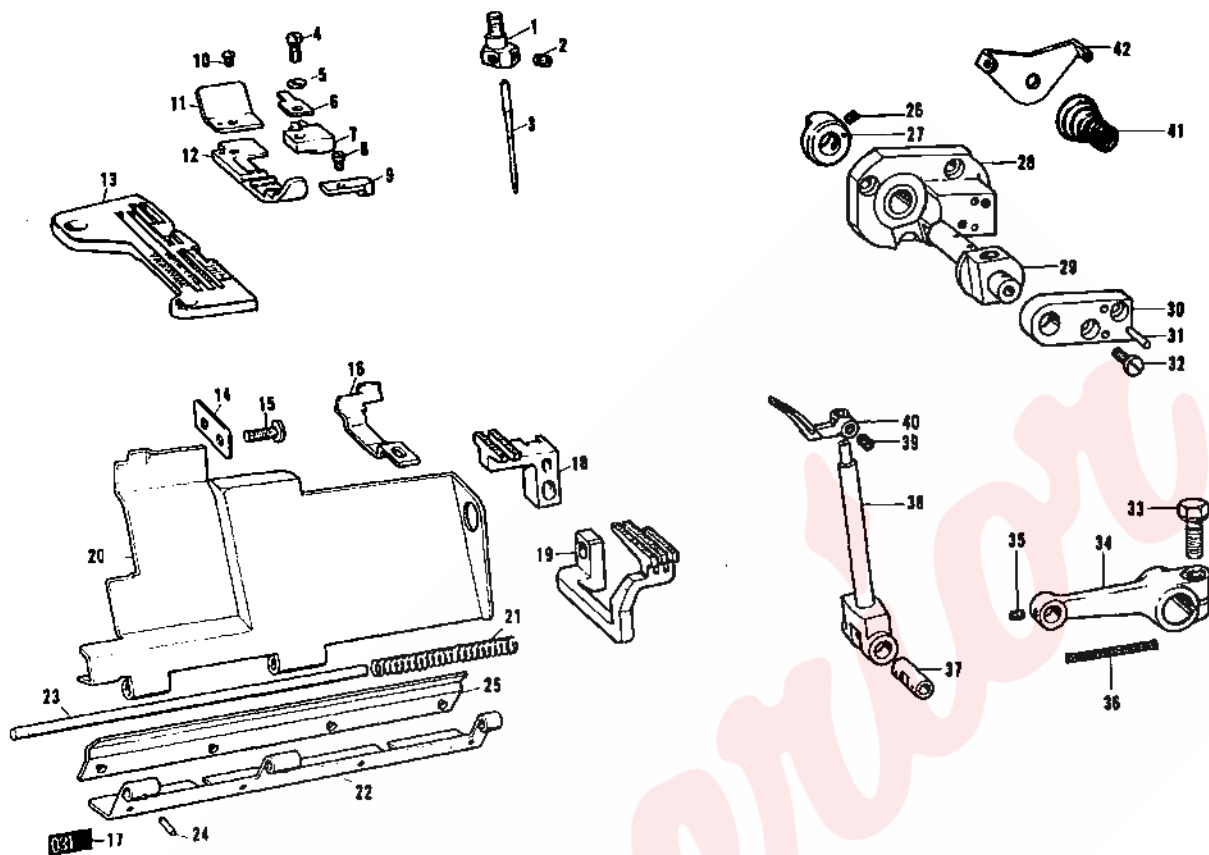


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                               | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|---------------------------------------------|------|-------------|--------------|
| e' 1     | Face Plate                    | 1    | 146706-0-01 |              | e' 23    | Set Collar                                  | 1    |             |              |
| e' 2     | Differential Feed Indicator   | 1    | 146742-0-01 |              | e' 24    | Looper (Right Hand) Holder Guide Base       | 1    |             |              |
| e' 3     | Label                         | 1    |             |              | e' 25    | Looper (Right Hand) Holder Guide Block      | 1    |             |              |
| e' 4     | Needle Clamp 2.2              | 1    |             | 146773-0-01  | e' 26    | Looper (Right Hand) Holder Supporting Plate | 1    |             |              |
| e' 5     | Screw                         | 2    | 146427-0-01 |              | e' 27    | Taper Pin                                   | 2    |             |              |
| e' 6     | Needle Cat. No. 6120 #14      | 2    | 151200-0-14 |              | e' 28    | Screw                                       | 2    | 009681-0-12 | 146611-1-01  |
| e' 7     | Screw                         | 1    | 100080-0-04 |              | e' 29    | Screw                                       | 1    | 149170-0-01 |              |
| e' 8     | Washer                        | 1    | 025030-1-32 |              | e' 30    | Looper (Right Hand) Driving Lever           | 1    |             |              |
| e' 9     | Presser Foot Hinge Spring     | 1    | 146887-0-01 |              | e' 31    | Screw                                       | 1    | 148294-0-01 |              |
| e' 10    | Chaining-off Finger           | 1    |             |              | e' 32    | Wick                                        | 1    | 140416-0-00 |              |
| e' 11    | Screw                         | 1    | 100105-0-05 |              | e' 33    | Looper (Right Hand) Holding Shaft           | 1    |             |              |
| e' 12    | Presser Foot (Rear)           | 1    | 145774-0-01 |              | e' 34    | Looper (Right Hand) Holder                  | 1    |             |              |
| e' 13    | Presser Foot                  | 1    |             |              | e' 35    | Screw                                       | 1    | 014680-4-22 | 147936-0-01  |
| e' 14    | Throat Plate                  | 1    |             |              | e' 36    | Looper (Right Hand)                         | 1    |             |              |
| e' 15    | Spacer                        | 1    | 146787-0-01 |              | e' 37    | Front Cover                                 | 1    |             |              |
| e' 16    | Screw                         | 2    | 105216-0-01 |              | e' 38    | Spring                                      | 1    | 146442-0-01 |              |
| e' 17    | Main Feed (Back) Dog          | 1    | 146745-0-01 |              | e' 39    | Front Cover Hinge                           | 1    | 146440-0-01 | 148993-0-01  |
| e' 18    | Differential Feed (Front) Dog | 1    | 146750-0-01 |              | e' 40    | Front Cover Hinge Pin                       | 1    | 146441-0-00 |              |
| e' 19    | Chain Feed Dog                | 1    | 146578-0-01 |              | e' 41    | Pin                                         | 1    | 047140-8-42 |              |
| e' 20    | Needle Guard F                | 1    | 146777-0-01 |              | e' 42    | Hinge Cover                                 | 1    | 148984-0-01 |              |
| e' 21    | Main Feed Shaft               | 1    | 144068-0-01 |              | e' 43    | Spring                                      | 2    | 144104-0-01 |              |
| e' 22    | Screw                         | 2    | 014680-4-22 | 146611-1-01  | e' 44    | Needle Thread Guide Plate                   | 1    | 110813-0-01 |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01

**f. 832U031- Needle Gauge 3 mm  
(Extra Heavy Work)**

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

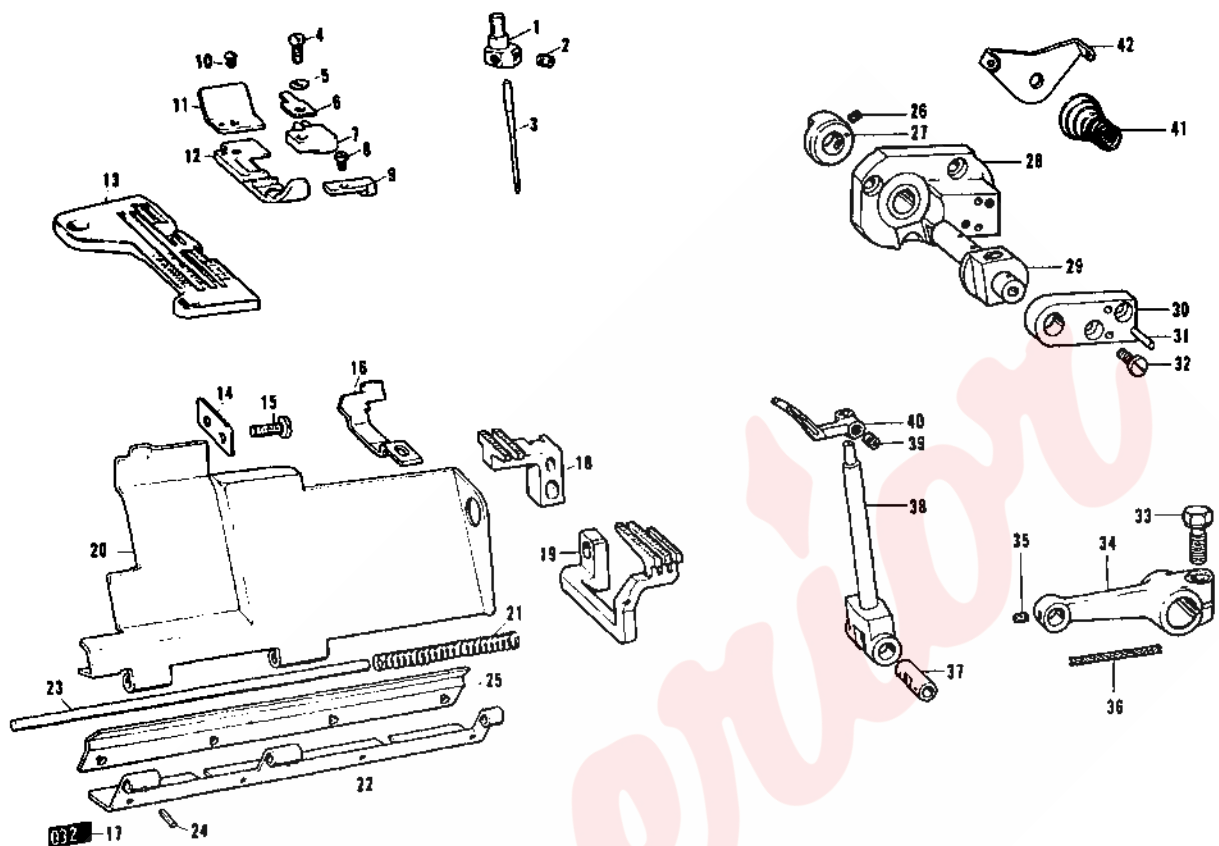


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                               | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|---------------------------------------------|------|-------------|--------------|
| f-1      | Needle Clamp 3                | 1    |             | 146775-0-01  | f-22     | Front Cover Hinge                           | 1    | 146440-0-01 | 148995-0-01  |
| f-2      | Screw                         | 2    | 146427-0-01 |              | f-23     | Front Cover Hinge Pin                       | 1    | 146441-0-00 |              |
| f-3      | Needle Cat. No. 5122 #21      | 2    | 152186-0-21 |              | f-24     | Pin                                         | 1    | 047140-8-42 |              |
| f-4      | Screw                         | 1    | 100080-0-04 |              | f-25     | Hinge Cover                                 | 1    | 148984-0-01 |              |
| f-5      | Washer                        | 1    | 025036-1-32 | 146965-0-01  | f-26     | Screw                                       | 2    | 014680-4-22 | 146611-1-01  |
| f-6      | Presser Foot Hinge Spring     | 1    | 146887-0-01 |              | f-27     | Set Collar                                  | 1    |             |              |
| f-7      | Chaining-off Finger           | 1    | 146966-0-01 |              | f-28     | Looper (Right Hand) Holder Guide Base       | 1    |             |              |
| f-8      | Screw                         | 1    | 009639-3-12 |              | f-29     | Looper (Right Hand) Holder Guide Block      | 1    |             |              |
| f-9      | Presser Foot (Front)          | 1    | 146888-0-01 |              | f-30     | Looper (Right Hand) Holder Supporting Plate | 1    |             |              |
| f-10     | Screw                         | 1    | 100105-0-05 |              | f-31     | Taper Pin                                   | 2    |             |              |
| f-11     | Presser Foot (Rear)           | 1    | 146889-0-01 |              | f-32     | Screw                                       | 2    | 008681-0-12 |              |
| f-12     | Presser Foot                  | 1    |             |              | f-33     | Screw                                       | 1    | 149170-0-01 |              |
| f-13     | Throat Plate                  | 1    |             |              | f-34     | Looper (Right Hand) Driving Lever           | 1    |             |              |
| f-14     | Spacer                        | 1    | 146788-0-01 |              | f-35     | Screw                                       | 1    | 148294-0-01 |              |
| f-15     | Screw                         | 2    | 105216-0-01 |              | f-36     | Wick                                        | 1    | 140416-0-00 |              |
| f-16     | Needle Guard F                | 1    | 146778-0-01 |              | f-37     | Looper (Right Hand) Holding Shaft           | 1    |             |              |
| f-17     | Label                         | 1    |             | 148995-0-01  | f-38     | Looper (Right Hand) Holder                  | 1    |             | 147937-0-01  |
| f-18     | Main Feed (Back) Dog          | 1    | 146790-0-01 |              | f-39     | Screw                                       | 1    | 014680-4-22 |              |
| f-19     | Differential Feed (Front) Dog | 1    | 146791-0-01 |              | f-40     | Looper (Right Hand)                         | 1    |             |              |
| f-20     | Front Cover                   | 1    |             |              | f-41     | Spring                                      | 2    | 144104-0-01 |              |
| f-21     | Spring                        | 1    | 146442-0-01 |              | f-42     | Needle Thread Guide Plate                   | 1    | 110813-0-01 |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01

**f. 832U032- Needle Gauge 3 mm  
(Extra Heavy Work)**

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

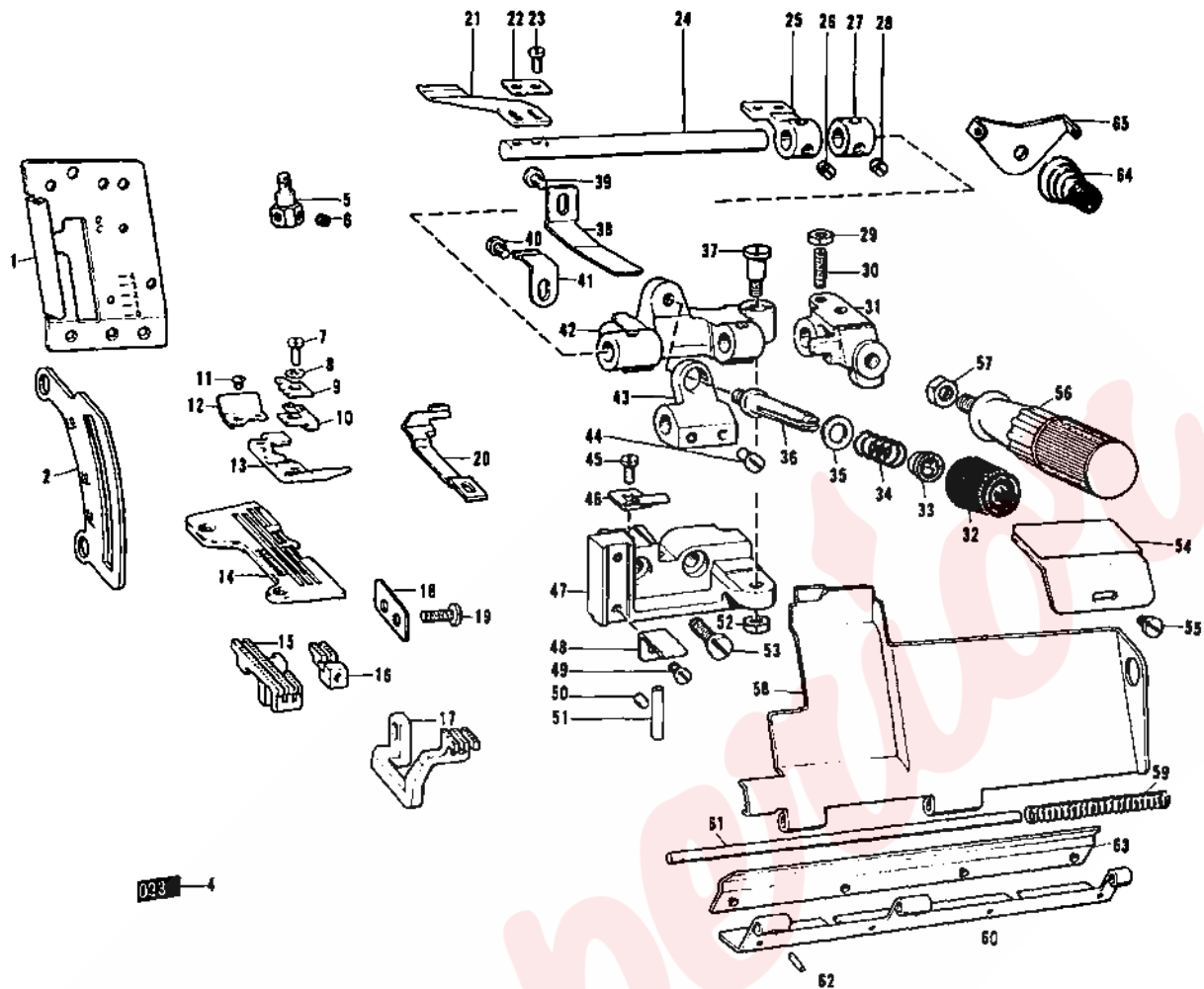


| Ref. No. | Name of Parts                 | Qty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                               | Qty | Parts No.   | Assembly No. |
|----------|-------------------------------|-----|-------------|--------------|----------|---------------------------------------------|-----|-------------|--------------|
| f. 1     | Needle Clamp 3                | 1   |             | 146775-0-01  | f. 22    | Front Cover Hinge                           | 1   | 146440-0-01 | 148995-0-01  |
| f. 2     | Screw                         | 2   | 146427-0-01 |              | f. 23    | Front Cover Hinge Pin                       | 1   | 146441-0-00 |              |
| f. 3     | Needle Cat. No. 6122 #21      | 2   | 152186-0-21 | 146965-0-01  | f. 24    | Pin                                         | 1   | 047140-8-42 | 146611-1-01  |
| f. 4     | Screw                         | 1   | 100080-0-04 |              | f. 25    | Hinge Cover                                 | 1   | 148984-0-01 |              |
| f. 5     | Washer                        | 1   | 025030-1-32 |              | f. 26    | Screw                                       | 2   | 014680-4-22 |              |
| f. 6     | Presser Foot Hinge Spring     | 1   | 146887-0-01 |              | f. 27    | Set Collar                                  | 1   |             |              |
| f. 7     | Chaining-off Finger           | 1   | 146966-0-01 |              | f. 28    | Looper (Right Hand) Holder Guide Base       | 1   |             |              |
| f. 8     | Screw                         | 1   | 009639-3-12 |              | f. 29    | Looper (Right Hand) Holder Guide Block      | 1   |             |              |
| f. 9     | Presser Foot (Front)          | 1   | 146888-0-01 |              | f. 30    | Looper (Right Hand) Holder Supporting Plate | 1   |             |              |
| f. 10    | Screw                         | 1   | 100105-0-05 |              | f. 31    | Taper Pin                                   | 2   |             |              |
| f. 11    | Presser Foot (Rear)           | 1   | 146889-0-01 |              | f. 32    | Screw                                       | 2   | 009681-0-12 |              |
| f. 12    | Presser Foot                  | 1   |             |              | f. 33    | Screw                                       | 1   | 149170-0-01 |              |
| f. 13    | Throat Plate                  | 1   |             | 148995-0-01  | f. 34    | Looper (Right Hand) Driving Lever           | 1   |             | 147936-0-01  |
| f. 14    | Spacer                        | 1   | 146788-0-01 |              | f. 35    | Screw                                       | 1   | 148294-0-01 |              |
| f. 15    | Screw                         | 2   | 105216-0-01 |              | f. 36    | Wick                                        | 1   | 140416-0-00 |              |
| f. 16    | Needle Guard F                | 1   | 146778-0-01 |              | f. 37    | Looper (Right Hand) Holding Shaft           | 1   |             |              |
| f. 17    | Label                         | 1   |             |              | f. 38    | Looper (Right Hand) Holder                  | 1   |             |              |
| f. 18    | Main Feed (Back) Dog          | 1   | 146790-0-01 |              | f. 39    | Screw                                       | 1   | 014680-4-22 |              |
| f. 19    | Differential Feed (Front) Dog | 1   | 146791-0-01 |              | f. 40    | Looper (Right Hand)                         | 1   |             |              |
| f. 20    | Front Cover                   | 1   |             |              | f. 41    | Spring                                      | 2   | 144104-0-01 |              |
| f. 21    | Spring                        | 1   | 146442-0-01 |              | f. 42    | Needle Thread Guide Plate                   | 1   | 110813-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
EXAMPLE BR146222-0-01]

# **g. 832U033- Needle Gauge 2.2 mm (Ruffling)**

This machine is the same as the 831U001 (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

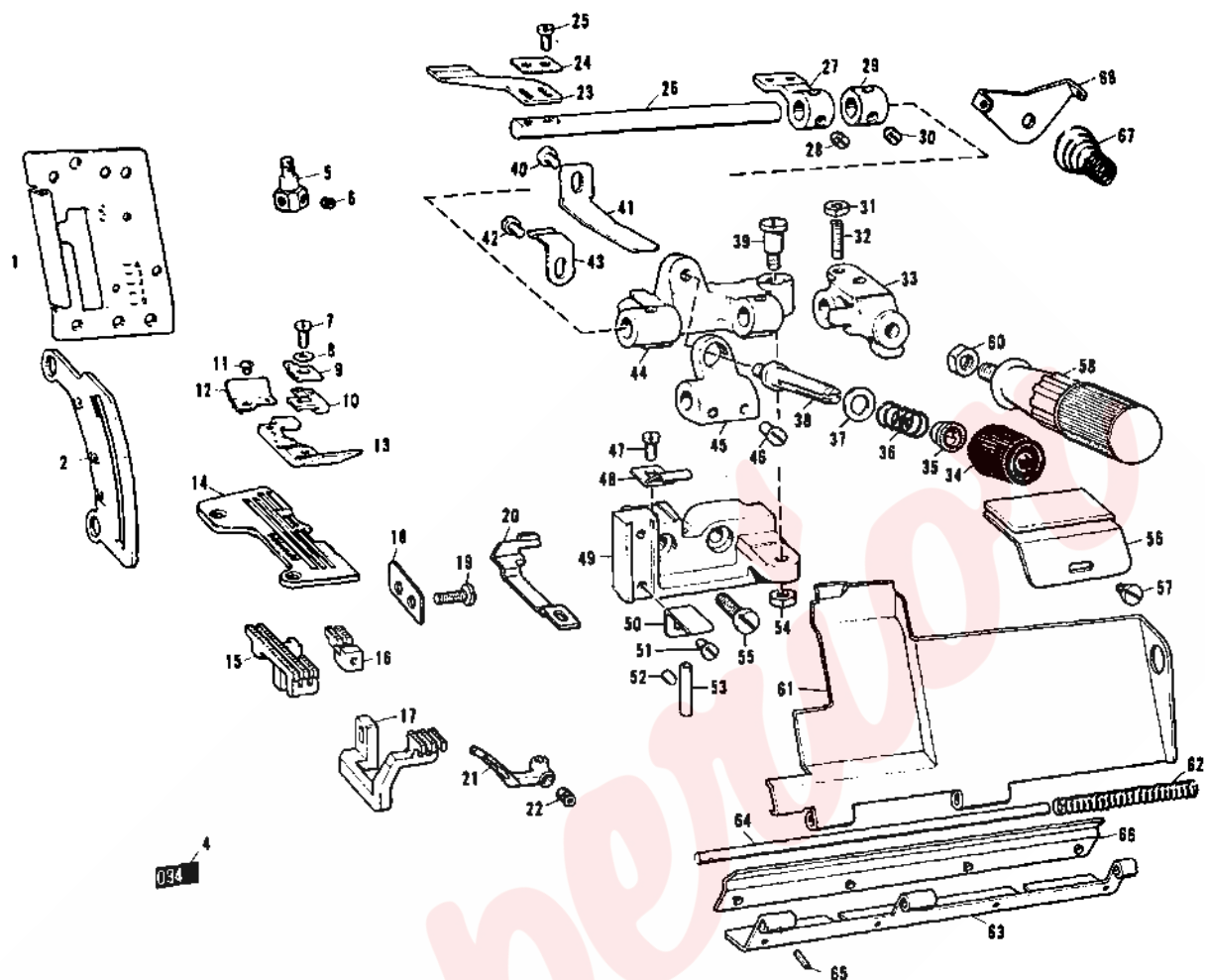


| Ref. No. | Name of Parts                 | Qty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                      | Qty | Parts No.   | Assembly No. |
|----------|-------------------------------|-----|-------------|--------------|----------|------------------------------------|-----|-------------|--------------|
| g-1      | Face Plate                    | 1   | 146430-0-01 |              | g-34     | Spring                             | 1   | 144788-0-01 |              |
| g-2      | Differential Feed Indicator   | 1   | 146562-0-01 |              | g-35     | Washer                             | 1   | 025770-2-32 |              |
| g-4      | Label                         | 1   |             |              | g-36     | Looper Thread Tension Control Stud | 1   | 110820-0-01 |              |
| g-5      | Needle Clamp 2.2              | 1   |             | 146773-0-01  | g-37     | Screw                              | 1   | 147933-0-01 |              |
| g-6      | Screw                         | 1   | 146427-0-01 |              | g-38     | Spring                             | 1   | 145811-0-01 |              |
| g-7      | Screw                         | 1   | 100080-0-04 |              | g-39     | Screw                              | 1   | 009580-6-12 |              |
| g-8      | Washer                        | 1   | 025030-1-32 |              | g-40     | Screw                              | 1   | 001670-5-12 |              |
| g-9      | Presser Foot Plate            | 1   | 144091-0-01 |              | g-41     | Spring                             | 1   | 144764-0-01 |              |
| g-10     | Chaining off Finger           | 1   | 144816-0-01 | 144815-0-01  | g-42     | Bracket for Ruffling Blade         | 1   |             | 146587-0-02  |
| g-11     | Screw                         | 1   | 100105-0-05 |              | g-43     | Spring Base                        | 1   |             |              |
| g-12     | Presser Foot Chain Shield     | 1   | 144100-0-01 |              | g-44     | Screw                              | 2   | 105163-0-01 |              |
| g-13     | Presser Foot U                | 1   |             |              | g-45     | Screw                              | 1   | 009580-6-12 |              |
| g-14     | Throat Plate                  | 1   |             |              | g-46     | Spring                             | 1   | 145818-0-01 |              |
| g-15     | Main Feed (Back) Dog          | 1   | 146746-0-01 |              | g-47     | Ruffler Base                       | 1   |             |              |
| g-16     | Chain Feed Dog                | 1   | 146578-0-01 |              | g-48     | Ruffling Blade Guide               | 2   | 145807-0-01 |              |
| g-17     | Differential Feed (Front) Dog | 1   | 146751-0-01 |              | g-49     | Screw                              | 2   | 009580-8-12 |              |
| g-18     | Spacer                        | 1   | 146787-0-01 |              | g-50     | Screw                              | 1   | 013679-4-12 |              |
| g-19     | Screw                         | 2   | 105216-0-01 |              | g-51     | Thread Guide Pipe                  | 1   | 146592-0-01 |              |
| g-20     | Needle Guard F                | 1   | 146777-0-01 |              | g-52     | Nut                                | 1   | 150553-0-02 |              |
| g-21     | Ruffling Blade                | 1   | 144783-0-01 |              | g-53     | Screw                              | 2   | 009781-8-12 |              |
| g-22     | Washer                        | 1   | 144784-0-01 |              | g-54     | Ruffler Guide                      | 1   | 144793-0-00 |              |
| g-23     | Screw                         | 2   | 009660-7-12 |              | g-55     | Screw                              | 1   | 112751-0-02 |              |
| g-24     | Ruffling Blade Base Shaft     | 1   | 145803-0-01 | 146587-0-02  | g-56     | Handle                             | 1   | 145809-0-01 |              |
| g-25     | Binder Base                   | 1   |             |              | g-57     | Nut                                | 1   | 150556-0-02 |              |
| g-26     | Screw                         | 2   | 101706-0-01 |              | g-58     | Front Cover                        | 1   |             |              |
| g-27     | Set Collar                    | 1   |             | 181995-0-02  | g-59     | Spring                             | 1   | 146442-0-01 |              |
| g-28     | Screw                         | 2   | 101706-0-01 |              | g-60     | Front Cover Hinge                  | 1   | 146440-0-01 | 146763-0-01  |
| g-29     | Nut                           | 1   | 105234-0-03 |              | g-61     | Front Cover Hinge Pin              | 1   | 146441-0-00 |              |
| g-30     | Screw                         | 1   | 110230-0-01 |              | g-62     | Pin                                | 1   | 047140-8-42 |              |
| g-31     | Handle Fixing Plate           | 1   |             |              | g-63     | Hinge Cover                        | 1   | 148984-0-01 |              |
| g-32     | Thread Tension Adjusting Nut  | 1   | 149566-0-02 |              | g-64     | Spring                             | 2   | 144104-0-01 |              |
| g-33     | Washer                        | 1   | 144105-0-00 |              | g-65     | Needle Thread Guide Plate          | 1   | 110813-0-01 |              |

NOTE! PREFIX ALL NUMBERS BY 'BR'.  
EXAMPLE BR146222-0-01

**g. 832U034 Needle Gauge 2.2 mm (Ruffling)**

This machine is the same as the 831U001 (A-H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



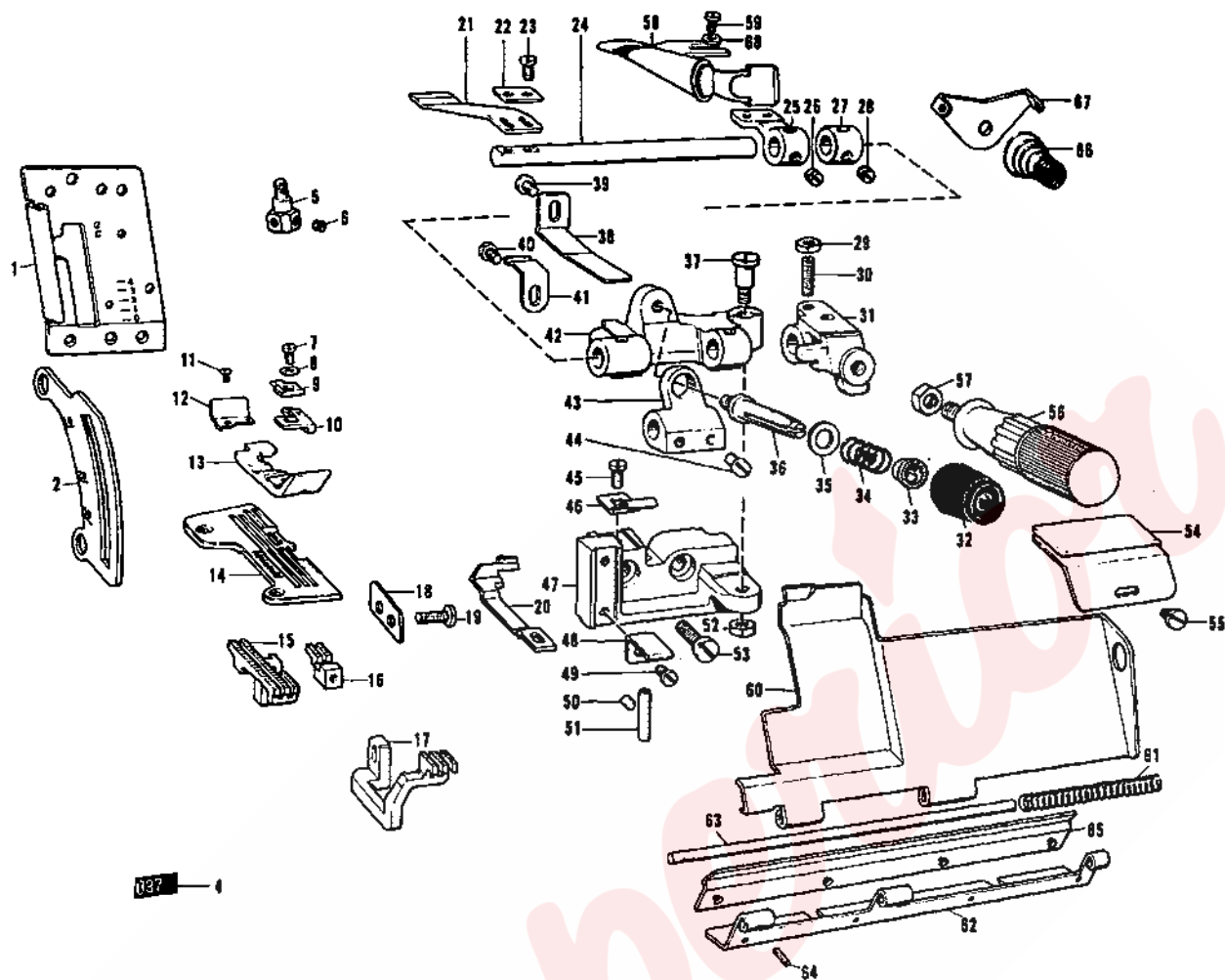
| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|------------------------------------|------|-------------|--------------|
| g-1      | Face Plate                    | 1    | 146430-0-01 |              | g'-35    | Washer                             | 1    | 144105-0-00 |              |
| g-2      | Differential Feed Indicator   | 1    | 146562-0-01 |              | g'-36    | Spring                             | 1    | 144788-0-01 |              |
| g-3      | Label                         | 1    |             |              | g'-37    | Washer                             | 1    | 025770-2-32 |              |
| g-4      | Needle Clamp 2.2              | 1    |             | 146773-0-01  | g'-38    | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              |
| g-5      | Screw                         | 1    | 146427-0-01 |              | g'-39    | Screw                              | 1    | 147933-0-01 |              |
| g-6      | Screw                         | 1    | 100080-0-04 |              | g'-41    | Spring                             | 1    | 145811-0-01 |              |
| g-7      | Washer                        | 1    | 025030-1-32 |              | g'-40    | Screw                              | 1    | 009680-6-12 |              |
| g-8      | Presser Foot Hinge Spring     | 1    | 144091-0-01 | 144815-0-01  | g'-42    | Screw                              | 1    | 001670-5-12 |              |
| g-9      | Chaining-off Finger           | 1    | 144816-0-01 |              | g'-43    | Spring                             | 1    | 144764-0-01 |              |
| g-10     | Screw                         | 1    | 100105-0-05 |              | g'-44    | Bracket for Ruffling Blade         | 1    |             | 146587-0-02  |
| g-11     | Presser Foot Chain Shield     | 1    | 144100-0-01 |              | g'-45    | Spring Base                        | 1    |             |              |
| g-12     | Presser Foot U                | 1    |             |              | g'-46    | Screw                              | 2    | 105163-0-01 |              |
| g-13     | Throat Plate                  | 1    |             |              | g'-47    | Screw                              | 1    | 009680-6-12 |              |
| g-14     | Main Feed (Back) Dog          | 1    | 146746-0-01 |              | g'-48    | Spring                             | 1    | 145808-0-01 |              |
| g-15     | Chain Feed Dog                | 1    | 146578-0-01 |              | g'-49    | Ruffler Base                       | 1    |             |              |
| g-16     | Differential Feed (Front) Dog | 1    | 146751-0-01 |              | g'-50    | Ruffling Blade Guide               | 2    | 145807-0-01 |              |
| g-17     | Spacer                        | 1    | 146787-0-01 |              | g'-51    | Screw                              | 2    | 009680-8-12 |              |
| g-18     | Screw                         | 2    | 105216-0-01 |              | g'-52    | Screw                              | 1    | 013679-4-12 |              |
| g-19     | Needle Guard F                | 1    | 146777-0-01 |              | g'-53    | Thread Guide Pipe                  | 1    | 146592-0-01 |              |
| g-20     | Looper (Right Hand)           | 1    |             | 147936-0-01  | g'-54    | Nut                                | 1    | 150553-0-01 |              |
| g-21     | Screw                         | 1    | 014680-4-22 |              | g'-55    | Screw                              | 2    | 009781-8-12 |              |
| g-22     | Ruffling Blade                | 1    | 144783-0-01 |              | g'-56    | Ruffler Guide                      | 1    | 144793-0-00 |              |
| g-23     | Washer                        | 1    | 144784-0-01 |              | g'-57    | Screw                              | 1    | 112751-0-02 |              |
| g-24     | Screw                         | 2    | 009660-7-12 |              | g'-58    | Handle                             | 1    | 145809-0-01 |              |
| g-25     | Ruffling Blade Base Shaft     | 1    | 145803-0-01 | 146587-0-02  | g'-60    | Nut                                | 1    | 150556-0-02 |              |
| g-26     | Binder Base                   | 1    |             |              | g'-61    | Front Cover                        | 1    |             |              |
| g-27     | Screw                         | 2    | 101706-0-01 |              | g'-62    | Spring                             | 1    | 146442-0-01 |              |
| g-28     | Set Collar                    | 1    |             |              | g'-63    | Front Cover Hinge                  | 1    | 146440-0-01 |              |
| g-29     | Screw                         | 2    | 101706-0-01 | 181995-0-02  | g'-64    | Front Cover Hinge Pin              | 1    | 146441-0-00 | 146763-0-01  |
| g-30     | Nut                           | 1    | 105234-0-03 |              | g'-65    | Pin                                | 1    | 047140-8-42 |              |
| g-31     | Screw                         | 1    | 110230-0-01 |              | g'-66    | Hinge Cover                        | 1    | 148984-0-01 |              |
| g-32     | Handle Fixing Plate           | 1    |             |              | g'-67    | Spring                             | 2    | 144104-0-01 |              |
| g-33     | Thread Tension Adjusting Nut  | 1    | 149566-0-02 |              | g'-68    | Needle Thread Guide Plate          | 1    | 110813-0-01 |              |

NOTE: PREFIX ALL NUMBERS BY 'BR'.  
EXAMPLE BR146222-0-01



## h. 832U037- Needle Gauge 2.2 mm (Ruffling (W/Piping))

This machine is the same as the 831U001- (A-H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

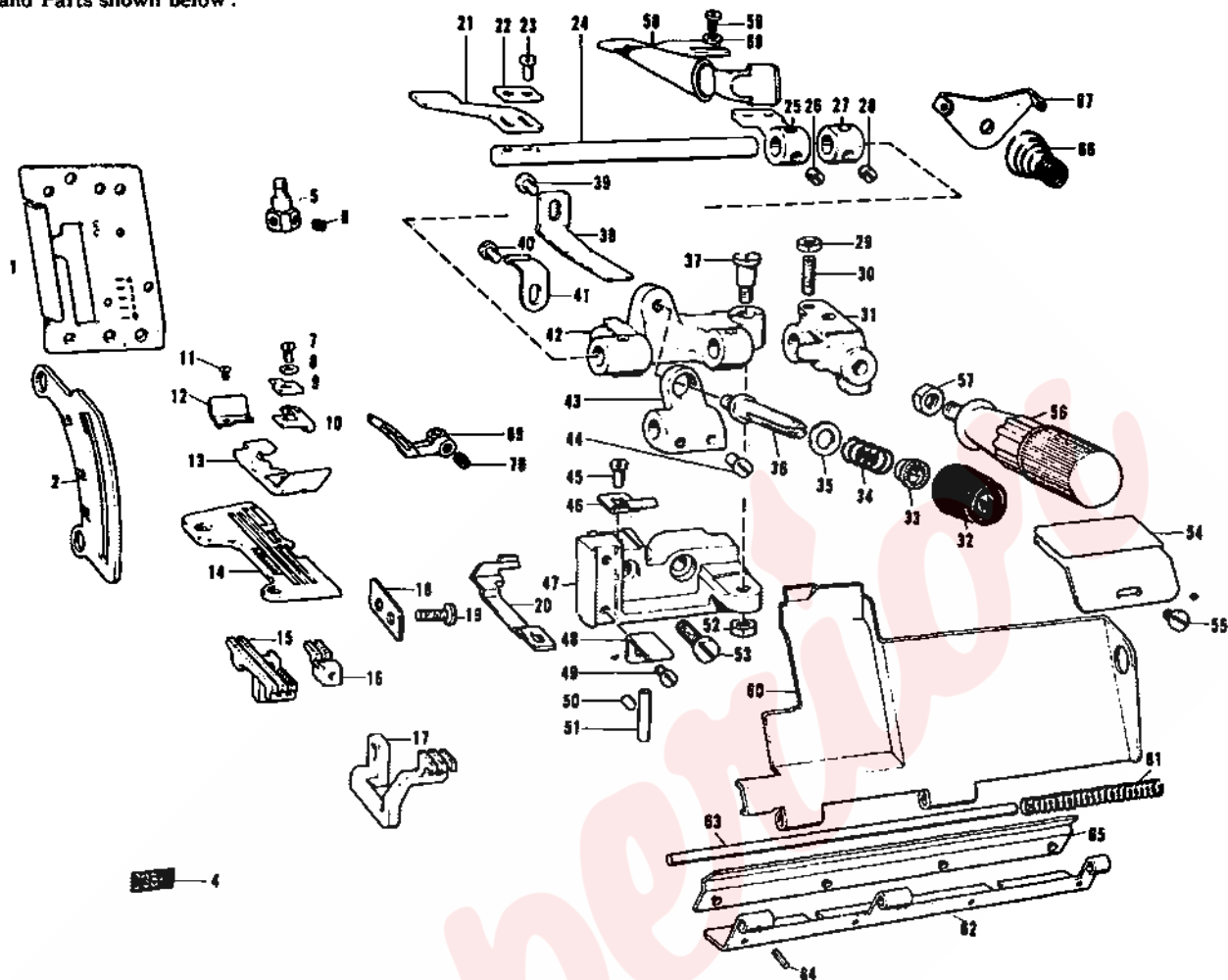


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|------------------------------------|------|-------------|--------------|
| h-1      | Face Plate                    | 1    | 146430-0-01 |              | h-35     | Washer                             | 1    | 025770-0-01 |              |
| h-2      | Differential Feed Indicator   | 1    | 146562-0-01 |              | h-36     | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              |
| h-4      | Label                         | 1    |             |              | h-37     | Screw                              | 1    | 147933-0-01 |              |
| h-5      | Needle Clamp 2.2              | 1    |             | 146773-0-01  | h-38     | Spring                             | 1    | 145811-0-01 |              |
| h-6      | Screw                         | 2    | 146427-0-01 |              | h-39     | Screw                              | 1    | 009680-6-12 |              |
| h-7      | Screw                         | 1    | 100080-0-04 |              | h-40     | Screw                              | 1    | 001670-5-12 |              |
| h-8      | Washer                        | 1    | 025030-1-32 |              | h-41     | Spring                             | 1    | 144764-0-01 |              |
| h-9      | Presser Foot Plate            | 1    | 144091-0-01 |              | h-42     | Bracket for Ruffling Blade         | 1    |             |              |
| h-10     | Chaining-off Finger           | 1    | 144816-0-01 | 147439-0-01  | h-43     | Spring Base                        | 1    |             |              |
| h-11     | Screw                         | 1    | 100105-0-05 |              | h-44     | Screw                              | 2    | 105163-0-01 | 146587-0-02  |
| h-12     | Presser Foot Chain Shield     | 1    | 144100-0-01 |              | h-45     | Screw                              | 1    | 009680-6-12 |              |
| h-13     | Presser Foot                  | 1    |             |              | h-46     | Spring                             | 1    | 145808-0-01 |              |
| h-14     | Throat Plate                  | 1    |             |              | h-47     | Ruffler Base                       | 1    |             |              |
| h-15     | Main Feed (Back) Dog          | 1    | 147828-0-01 |              | h-48     | Ruffling Blade Guide               | 2    | 145807-0-01 |              |
| h-16     | Chain Feed Dog                | 1    | 147832-0-01 |              | h-49     | Screw                              | 2    | 009680-8-12 |              |
| h-17     | Differential Feed (Front) Dog | 1    | 146751-0-01 |              | h-50     | Screw                              | 1    | 013679-4-12 |              |
| h-18     | Spacer                        | 1    | 146787-0-01 |              | h-51     | Thread Guide Pipe                  | 1    | 146582-0-01 |              |
| h-19     | Screw                         | 2    | 105216-0-01 |              | h-52     | Nut                                | 1    | 150553-0-02 |              |
| h-20     | Needle Guard F                | 1    | 146777-0-01 |              | h-53     | Screw                              | 2    | 009781-8-12 |              |
| h-21     | Ruffling Blade                | 1    | 144783-0-01 |              | h-54     | Ruffler Guide                      | 1    | 144793-0-00 |              |
| h-22     | Washer                        | 1    | 144784-0-01 |              | h-55     | Screw                              | 1    | 112751-0-02 |              |
| h-23     | Screw                         | 2    | 009660-7-12 |              | h-56     | Handle                             | 1    | 145809-0-01 |              |
| h-24     | Ruffling Blade Base Shaft     | 1    | 145803-0-01 | 146587-0-02  | h-57     | Nut                                | 1    | 150556-0-02 |              |
| h-25     | Binder Base                   | 1    |             |              | h-58     | Binder                             | 1    | 147440-0-00 |              |
| h-26     | Screw                         | 2    | 101706-0-01 |              | h-59     | Screw                              | 2    | 009680-6-12 |              |
| h-27     | Set Collar                    | 1    |             | 181995-0-02  | h-60     | Front Cover                        | 1    |             |              |
| h-28     | Screw                         | 2    | 101706-0-01 |              | h-61     | Spring                             | 1    | 146442-0-01 |              |
| h-29     | Nut                           | 1    | 105234-0-03 |              | h-62     | Front Cover Hinge                  | 1    | 146440-0-01 | 146763-0-01  |
| h-30     | Screw                         | 1    | 110230-0-01 |              | h-63     | Front Cover Hinge Pin              | 1    | 146441-0-00 |              |
| h-31     | Handle Fixing Plate           | 1    |             |              | h-64     | Pin                                | 1    | 047140-8-42 |              |
| h-32     | Thread Tension Adjusting Nut  | 1    | 149566-0-02 |              | h-65     | Hinge Cover                        | 1    | 148984-0-01 |              |
| h-33     | Washer                        | 1    | 144105-0-00 |              | h-66     | Spring                             | 2    | 144104-0-01 |              |
| h-34     | Spring                        | 1    | 144788-0-01 |              | h-67     | Needle Thread Guide Plate          | 1    | 110813-0-01 |              |
|          |                               |      |             |              | h-68     | Washer                             | 2    | 110735-0-02 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

# h'. 832U038- Needle Gauge 2.2 mm (Ruffling (W/Piping))

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

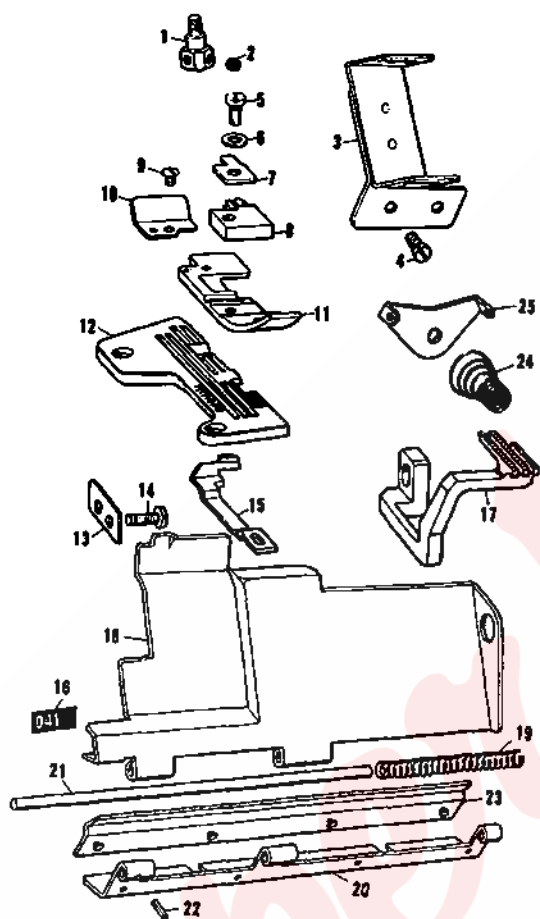


| Ref. No. | Name of Parts                 | Qty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                      | Qty | Parts No.   | Assembly No. |
|----------|-------------------------------|-----|-------------|--------------|----------|------------------------------------|-----|-------------|--------------|
| h'- 1    | Face Plate                    | 1   | 146430-0-01 |              | h'-36    | Looper Thread Tension Control Stud | 1   | 110820-0-01 |              |
| h'- 2    | Differential Feed Indicator   | 1   | 146562-0-01 |              | h'-37    | Screw                              | 1   | 147933-0-01 |              |
| h'- 4    | Label                         | 1   |             |              | h'-38    | Spring                             | 1   | 145811-0-01 |              |
| h'- 5    | Needle Clamp 2.2              | 1   |             |              | h'-39    | Screw                              | 1   | 009680-6-12 |              |
| h'- 6    | Screw                         | 2   | 146427-0-01 | 146773-0-01  | h'-40    | Screw                              | 1   | 001670-5-12 |              |
| h'- 7    | Screw                         | 1   | 100080-0-04 |              | h'-41    | Spring                             | 1   | 144764-0-01 |              |
| h'- 8    | Washer                        | 1   | 025030-1-32 |              | h'-42    | Bracket for Ruffling Blade         | 1   |             |              |
| h'- 9    | Presser Foot Plate            | 1   | 144091-0-01 | 147439-0-01  | h'-43    | Spring Base                        | 1   |             |              |
| h'-10    | Chaining-off Finger           | 1   | 144816-0-01 |              | h'-44    | Screw                              | 2   | 105163-0-01 | 146587-0-02  |
| h'-11    | Screw                         | 1   | 100105-0-05 |              | h'-45    | Screw                              | 1   | 009680-5-12 |              |
| h'-12    | Presser Foot Chain Shield     | 1   | 144100-0-01 |              | h'-46    | Spring                             | 1   | 145808-0-01 |              |
| h'-13    | Presser Foot                  | 1   |             |              | h'-47    | Ruffler Base                       | 1   |             |              |
| h'-14    | Throat Plate                  | 1   |             |              | h'-48    | Ruffling Blade Guide               | 2   | 145807-0-01 |              |
| h'-15    | Main Feed (Back) Dog          | 1   | 147828-0-01 |              | h'-49    | Screw                              | 2   | 009680-8-12 |              |
| h'-16    | Chain Feed Dog                | 1   | 147832-0-01 |              | h'-50    | Screw                              | 1   | 013679-4-12 |              |
| h'-17    | Differential Feed (Front) Dog | 1   | 146751-0-01 |              | h'-51    | Thread Guide Pipe                  | 1   | 146592-0-01 |              |
| h'-18    | Spacer                        | 1   | 146787-0-01 |              | h'-52    | Nut                                | 1   | 150553-0-02 |              |
| h'-19    | Screw                         | 2   | 105216-0-01 |              | h'-53    | Screw                              | 2   | 009781-8-12 |              |
| h'-20    | Needle Guard F                | 1   | 146777-0-01 |              | h'-54    | Ruffler Guide                      | 1   | 144793-0-00 |              |
| h'-21    | Ruffling Blade                | 1   | 144783-0-01 |              | h'-55    | Screw                              | 1   | 112751-0-02 |              |
| h'-22    | Washer                        | 1   | 144784-0-01 |              | h'-56    | Handle                             | 1   | 145809-0-01 |              |
| h'-23    | Screw                         | 2   | 009660-7-12 |              | h'-57    | Nut                                | 1   | 150556-0-02 |              |
| h'-24    | Ruffling Blade Base Shaft     | 1   | 145803-0-01 | 146587-0-02  | h'-58    | Binder                             | 1   | 147440-0-00 |              |
| h'-25    | Binder Base                   | 1   |             |              | h'-59    | Screw                              | 2   | 009680-6-12 |              |
| h'-26    | Screw                         | 2   | 101706-0-01 |              | h'-60    | Front Cover                        | 1   |             |              |
| h'-27    | Set Collar                    | 1   |             | 181995-0-02  | h'-61    | Spring                             | 1   | 146442-0-01 |              |
| h'-28    | Screw                         | 2   | 101706-0-01 |              | h'-62    | Front Cover Hinge                  | 1   | 146440-0-01 |              |
| h'-29    | Nut                           | 1   | 105234-0-03 |              | h'-63    | Front Cover Hinge Pin              | 1   | 146441-0-00 | 146763-0-01  |
| h'-30    | Screw                         | 1   | 110230-0-01 |              | h'-64    | Pin                                | 1   | 047140-8-42 |              |
| h'-31    | Handle Fixing Plate           | 1   |             |              | h'-65    | Hinge Cover                        | 1   | 148984-0-01 |              |
| h'-32    | Thread Tension Adjusting Nut  | 1   | 149566-0-02 |              | h'-66    | Spring                             | 2   | 144104-0-01 |              |
| h'-33    | Washer                        | 1   | 144105-0-00 |              | h'-67    | Needle Thread Guide Plate          | 1   | 110813-0-01 |              |
| h'-34    | Spring                        | 1   | 144788-0-01 |              | h'-68    | Washer                             | 2   | 110735-0-02 |              |
| h'-35    | Washer                        | 1   | 025770-2-32 |              | h'-69    | Looper (Right Hand)                | 1   |             | 147936-0-01  |
|          |                               |     |             |              | h'-70    | Screw                              | 2   | 014680-4-22 |              |

NOTE! PREFIX ALL NUMBERS BY 'BR'.  
EXAMPLE BR146222-0-01

**j. 832U041- Needle Gauge 2.2 mm**  
(Taping on Light, Medium Work)

This machine is the same as the 831U001 (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

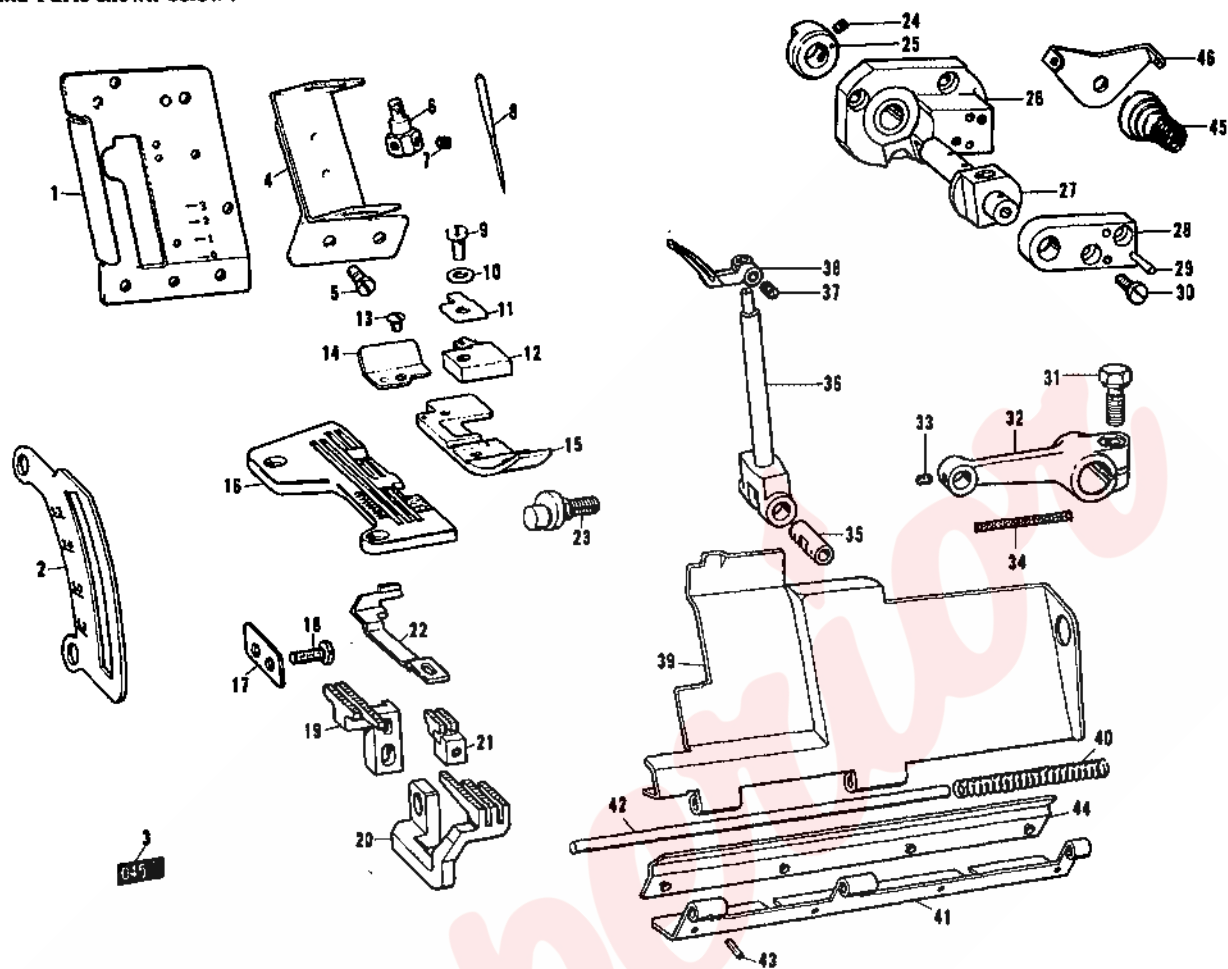


| Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. |
|----------|---------------------------|------|-------------|--------------|----------|-------------------------------|------|-------------|--------------|
| j-1      | Needle Clamp 2.2          | 1    |             | 146773-0-01  | j-14     | Screw                         | 2    | 105216-0-01 |              |
| j-2      | Screw                     | 2    | 146427-0-01 |              | j-15     | Needle Guard F                | 1    | 146777-0-01 |              |
| j-3      | Tape Guide                | 1    | 146883-0-01 |              | j-16     | Label                         | 1    |             |              |
| j-4      | Screw                     | 2    | 009669-4-12 | 146906-0-01  | j-17     | Differential Feed (Front) Dog | 1    | 146749-0-01 |              |
| j-5      | Screw                     | 1    | 100080-0-04 |              | j-18     | Front Cover                   | 1    |             | 148993-0-01  |
| j-6      | Washer                    | 1    | 025030-1-32 |              | j-19     | Spring                        | 1    | 146442-0-01 |              |
| j-7      | Presser Foot Hinge Spring | 1    | 146887-0-01 |              | j-20     | Front Cover Hinge             | 1    | 146440-0-01 |              |
| j-8      | Chaining-off Finger       | 1    | 146907-0-01 |              | j-21     | Front Cover Hinge Pin         | 1    | 146441-0-00 |              |
| j-9      | Screw                     | 1    | 100105-0-05 |              | j-22     | Pin                           | 1    | 047140-8-42 |              |
| j-10     | Presser Foot (Rear)       | 1    | 145774-0-01 |              | j-23     | Hinge Cover                   | 1    | 148984-0-01 |              |
| j-11     | Presser Foot              | 1    |             |              | j-24     | Spring                        | 2    | 144104-0-01 |              |
| j-12     | Throat Plate              | 1    |             |              | j-25     | Needle Thread Guide Plate     | 1    | 110813-0-01 |              |
| j-13     | Spacer                    | 1    | 146787-0-01 |              |          |                               |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR']  
[EXAMPLE BR146222-0-01]

**k. 832U045- Needle Gauge 2.2 mm**  
(Taping on Bulky Knit Work)

This machine is the same as the 831U001- (A~H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :

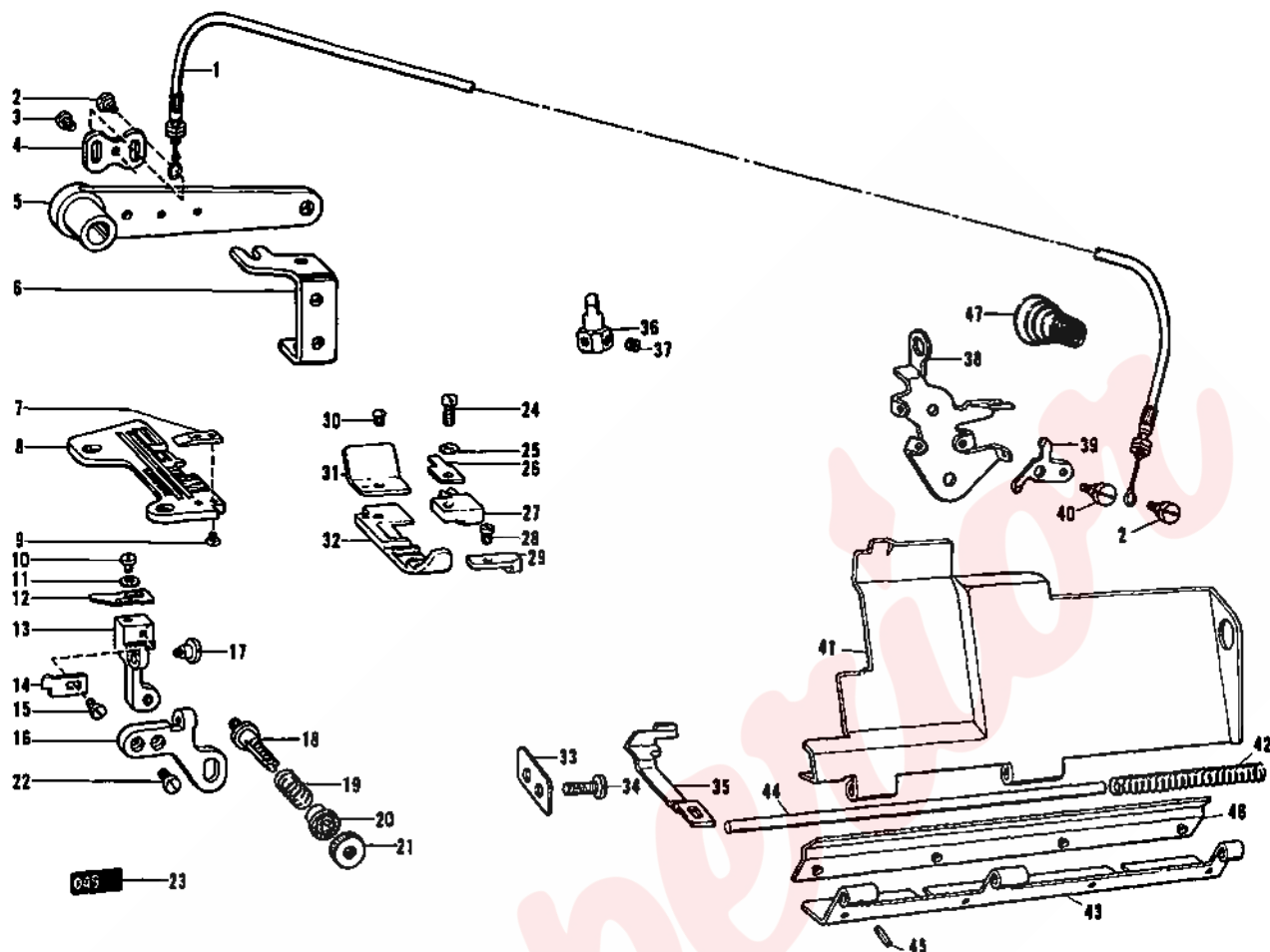


| Ref. No. | Name of Parts                 | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts                     | Q'ty | Parts No.   | Assembly No. |
|----------|-------------------------------|------|-------------|--------------|----------|-----------------------------------|------|-------------|--------------|
| k-1      | Face Plate                    | 1    | 146706-0-01 |              | k-26     | Looper (Right Hand) Holder        | 1    |             |              |
| k-2      | Differential Feed Indicator   | 1    | 146742-0-01 |              |          | Guide Base                        |      |             |              |
| k-3      | Label                         | 1    |             |              | k-27     | Looper (Right Hand) Holder        | 1    |             |              |
| k-4      | Tape Guide                    | 1    | 146883-0-01 |              |          | Guide Block                       |      |             |              |
| k-5      | Screw                         | 2    | 009669-4-12 |              | k-28     | Looper (Right Hand) Holder        | 1    |             |              |
| k-6      | Needle Clamp 2.2              | 1    |             | 146773-0-01  |          | Supporting Plate                  |      |             |              |
| k-7      | Screw                         | 2    | 146427-0-01 |              | k-29     | Taper Pin                         | 2    |             |              |
| k-8      | Needle Cat. No. 6120 #14      | 2    | 151200-0-14 |              | k-30     | Screw                             | 2    | 009681-0-12 |              |
| k-9      | Screw                         | 1    | 100080-0-04 |              | k-31     | Screw                             | 1    | 149170-0-01 |              |
| k-10     | Washer                        | 1    | 025030-1-32 |              | k-32     | Looper (Right Hand) Driving Lever | 1    |             |              |
| k-11     | Presser Foot Hinge Spring     | 1    | 146887-0-01 | 146906-0-01  | k-33     | Screw                             | 1    | 148294-0-01 |              |
| k-12     | Chaining-off Finger           | 1    | 146907-0-01 |              | k-34     | Wick                              | 1    | 140416-0-00 |              |
| k-13     | Screw                         | 1    | 100105-0-05 |              | k-35     | Looper (Right Hand) Holding Shaft | 1    |             |              |
| k-14     | Presser Foot (Rear)           | 1    | 145774-0-01 |              | k-36     | Looper (Right Hand) Holder        | 1    |             |              |
| k-15     | Presser Foot                  | 1    |             |              | k-37     | Screw                             | 1    | 014680-4-22 |              |
| k-16     | Throat Plate                  | 1    |             |              | k-38     | Looper (Right Hand)               | 1    |             | 147937-0-01  |
| k-17     | Spacer                        | 1    | 146787-0-01 |              | k-39     | Front Cover                       | 1    |             |              |
| k-18     | Screw                         | 2    | 105216-0-01 |              | k-40     | Spring                            | 1    | 146442-0-01 |              |
| k-19     | Main Feed (Back) Dog          | 1    | 146745-0-01 |              | k-41     | Front Cover Hinge                 | 1    | 146440-0-01 |              |
| k-20     | Differential Feed (Front) Dog | 1    | 146750-0-01 |              | k-42     | Front Cover Hinge Pin             | 1    | 146441-0-00 |              |
| k-21     | Chain Feed Dog                | 1    | 146578-0-01 |              | k-43     | Pin                               | 1    | 047140-8-42 |              |
| k-22     | Needle Guard F                | 1    | 146777-0-01 |              | k-44     | Hinge Cover                       | 1    | 148984-0-01 |              |
| k-23     | Main Feed Shaft               | 1    | 144068-0-01 |              | k-45     | Spring                            | 2    | 144104-0-01 |              |
| k-24     | Screw                         | 2    | 014680-4-22 | 146611-1-01  | k-46     | Needle Thread Guide Plate         | 1    | 110813-0-01 |              |
| k-25     | Set Collar                    | 1    |             |              |          |                                   |      |             |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

**m. 832U049- Needle Gauge 2.2 mm**  
(Chain-back)

This machine is the same as the 831U001- (A-H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



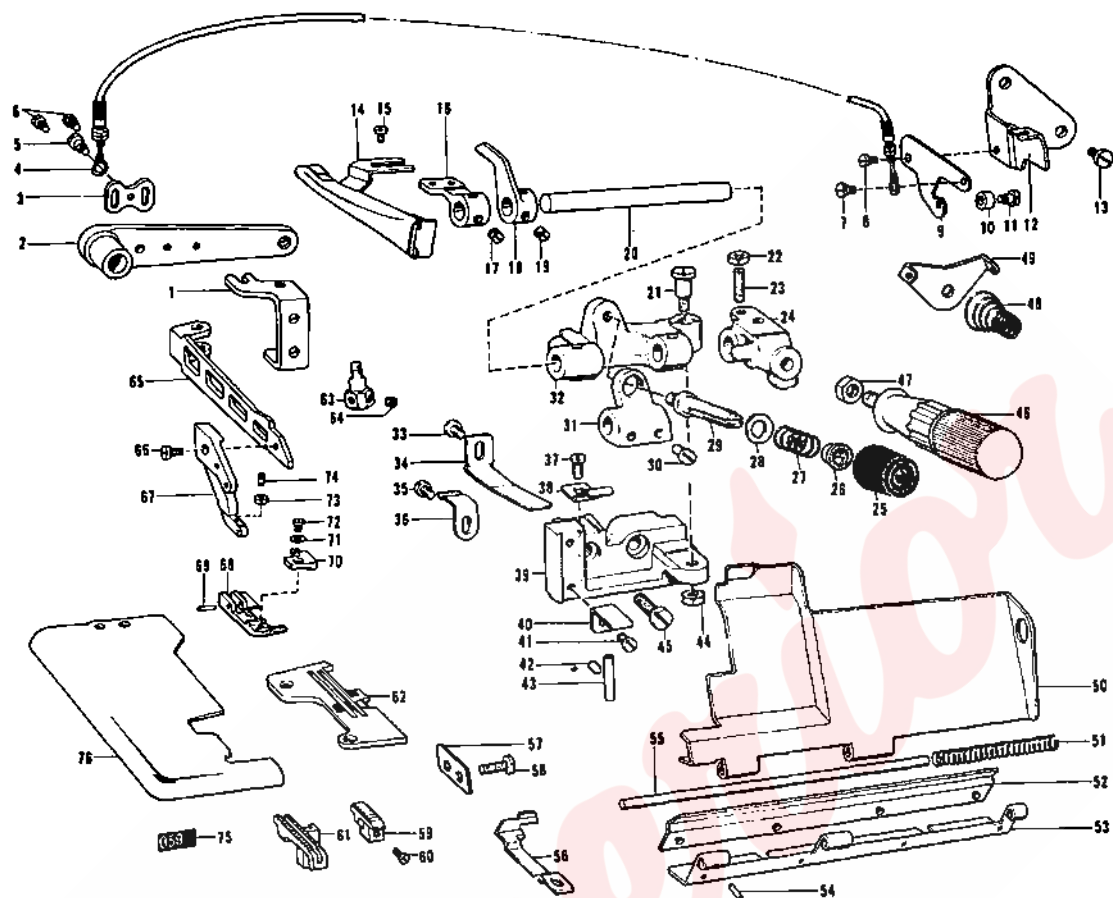
| Ref. No. | Name of Parts                        | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|--------------------------------------|------|-------------|--------------|----------|---------------------------|------|-------------|--------------|
| m-1      | Flexible Wire Assembly               | 1    | 147480-0-01 |              | m-23     | Label                     | 1    |             |              |
| m-2      | Needle Gauge                         | 2    | 141514-0-01 |              | m-24     | Screw                     | 1    | 100080-0-04 |              |
| m-3      | Screw                                | 2    | 009670-6-12 |              | m-25     | Washer                    | 1    | 025030-1-32 |              |
| m-4      | Wire Plate                           | 1    | 147672-0-01 |              | m-26     | Presser Foot Hinge Spring | 1    | 146887-0-01 |              |
| m-5      | Presser Foot Lifter Lever            | 1    | 148369-0-01 |              | m-27     | Chaining-off Finger       | 1    | 146903-0-01 |              |
| m-6      | Lever Adjuster Plate                 | 1    | 147454-0-01 |              | m-28     | Screw                     | 1    | 009639-3-12 | 146902-0-01  |
| m-7      | Chain-Back Guide                     | 1    | 147484-0-01 |              | m-29     | Presser Foot (Front)      | 1    | 146888-0-01 |              |
| m-8      | Throat Plate                         | 1    |             |              | m-30     | Screw                     | 1    | 100105-0-05 |              |
| m-9      | Screw                                | 2    | 141544-0-01 |              | m-31     | Presser Foot (Rear)       | 1    | 146889-0-01 |              |
| m-10     | Screw                                | 1    | 009660-4-12 |              | m-32     | Presser Foot              | 1    |             |              |
| m-11     | Washer                               | 1    | 025030-1-32 |              | m-33     | Spacer                    | 1    | 146787-0-01 |              |
| m-12     | Chain-Back Blade Presser Plate       | 1    | 147477-0-01 |              | m-34     | Screw                     | 2    | 105216-0-01 |              |
| m-13     | Chain-Back Blade Holder              | 1    |             |              | m-35     | Needle Guard F            | 1    | 146777-0-01 |              |
| m-14     | Chain-Back Knife                     | 1    | 147478-0-01 |              | m-36     | Needle Clamp 2.2          | 1    |             | 146773-0-01  |
| m-15     | Screw                                | 1    | 009660-4-12 |              | m-37     | Screw                     | 2    | 146427-0-01 |              |
| m-16     | Chain-Back Blade Holder Supporter    | 1    |             | 147473-0-01  | m-38     | Thread Guide Support      | 1    | 148370-0-01 |              |
| m-17     | Screw                                | 1    | 147476-0-01 |              | m-39     | Tension Release Lever     | 1    | 148371-0-01 |              |
| m-18     | Thread Tension Control Stud          | 1    | 147148-0-01 |              | m-40     | Screw                     | 1    | 141514-0-01 |              |
| m-19     | Spring                               | 1    | 147479-0-01 |              | m-41     | Front Cover               | 1    |             |              |
| m-20     | Washer                               | 1    | 144105-0-00 |              | m-42     | Spring                    | 1    | 146442-0-01 |              |
| m-21     | Upper Thread Tension Adjusting Screw | 1    | 105230-0-01 |              | m-43     | Front Cover Hinge         | 1    | 146440-0-01 |              |
| m-22     | Screw                                | 2    | 009670-6-12 |              | m-44     | Front Cover Hinge Pin     | 1    | 146441-0-00 |              |
|          |                                      |      |             |              | m-45     | Pin                       | 1    | 047140-8-42 | 148993-0-01  |
|          |                                      |      |             |              | m-46     | Hinge Cover               | 1    | 148984-0-01 |              |
|          |                                      |      |             |              | m-47     | Spring                    | 2    | 144104-0-01 |              |

(NOTE! PREFIX ALL NUMBERS BY 'BR'.)  
EXAMPLE BR146222-0-01



**n. 832U050- Needle Gauge 2.2 mm  
(Piping)**

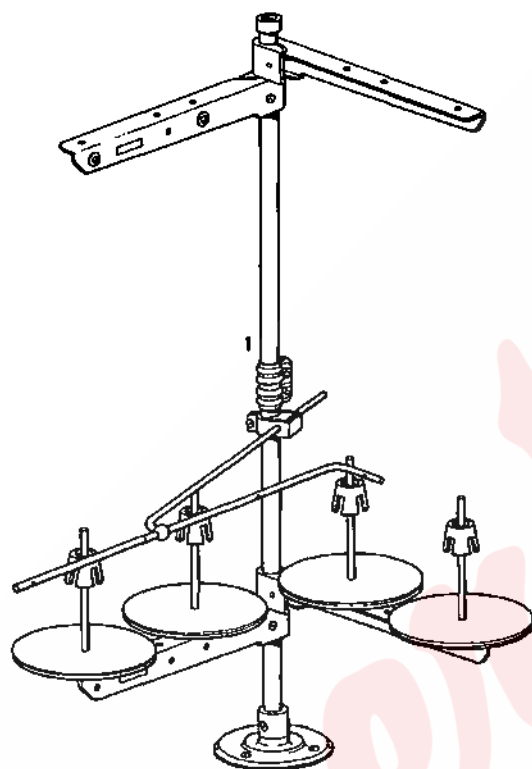
This machine is the same as the 831U001- (A ~ H) with exceptions of 832U Common Parts (Page 20, a) and Parts shown below :



| Ref. No. | Name of Parts                      | Q'ty | Parts No.   | Assembly No. | Ref. No. | Name of Parts             | Q'ty | Parts No.   | Assembly No. |
|----------|------------------------------------|------|-------------|--------------|----------|---------------------------|------|-------------|--------------|
| n-1      | Lever Adjuster Plate               | 1    | 147454-0-01 | 148395-0-01  | n-39     | Ruffler Base              | 1    |             | 149202-0-01  |
| n-2      | Presser Foot Lifter Lever          | 1    | 148369-0-01 |              | n-40     | Ruffling Blade Guide      | 2    |             |              |
| n-3      | Wire Plate                         | 1    | 147672-0-01 |              | n-41     | Screw                     | 2    | 009680-8-12 |              |
| n-4      | Flexible Wire Assembly             | 1    | 148391-0-01 |              | n-42     | Screw                     | 1    | 013679-4-12 |              |
| n-5      | Screw                              | 1    | 141514-0-01 |              | n-43     | Thread Guide Pipe         | 1    |             |              |
| n-6      | Screw                              | 2    | 009670-6-12 |              | n-44     | Nut                       | 1    | 150553-0-02 |              |
| n-7      | Screw                              | 1    | 141514-0-01 |              | n-45     | Screw                     | 2    | 009781-8-12 |              |
| n-8      | Screw                              | 1    | 141514-0-01 |              | n-46     | Handle                    | 1    | 145809-0-01 |              |
| n-9      | Ruffling Plate Lifter Lever        | 1    | 148388-0-01 |              | n-47     | Nut                       | 1    | 150556-0-02 |              |
| n-10     | Roller                             | 1    | 148390-0-01 |              | n-48     | Spring                    | 2    | 144104-0-01 |              |
| n-11     | Screw                              | 1    | 112301-0-01 |              | n-49     | Needle Thread Guide Plate | 1    | 110813-0-01 |              |
| n-12     | Presser Foot Lifter Lever Support  | 1    | 148389-0-01 |              | n-50     | Front Cover               | 1    |             |              |
| n-13     | Screw                              | 2    | 110735-0-02 |              | n-51     | Spring                    | 1    | 146442-0-01 |              |
| n-14     | Binder                             | 1    | 149197-0-00 |              | n-52     | Hinge Cover               | 1    | 148984-0-01 | 146763-0-01  |
| n-15     | Screw                              | 2    | 009680-6-12 |              | n-53     | Front Cover Hinge         | 1    | 146440-0-01 |              |
| n-16     | Binder Base                        | 1    |             | 149202-0-01  | n-54     | Pin                       | 1    | 047140-8-42 |              |
| n-17     | Screw                              | 2    | 101706-0-01 |              | n-55     | Front Cover Hinge Pin     | 1    | 146441-0-00 |              |
| n-18     | Presser Foot Lifter                | 1    | 148387-0-01 |              | n-56     | Needle Guard F            | 1    | 146777-0-01 |              |
| n-19     | Screw                              | 2    | 101706-0-01 |              | n-57     | Spacer                    | 1    | 146787-0-01 |              |
| n-20     | Ruffling Blade Base Shaft          | 1    | 149203-0-01 |              | n-58     | Screw                     | 1    | 105216-0-01 |              |
| n-21     | Screw                              | 1    |             |              | n-59     | Chain Feed Dog            | 1    | 149194-0-01 |              |
| n-22     | Nut                                | 1    | 105234-0-03 |              | n-60     | Screw                     | 1    | 009660-7-12 |              |
| n-23     | Screw                              | 1    | 110230-0-01 |              | n-61     | Main Feed (Back) Dog      | 1    | 149193-0-01 |              |
| n-24     | Handle Fixing Plate                | 1    |             |              | n-62     | Throat Plate              | 1    |             |              |
| n-25     | Thread Tension Adjusting Nut       | 1    | 149566-0-02 |              | n-63     | Needle Clamp 2.2          | 1    |             | 146773-0-01  |
| n-26     | Washer                             | 1    | 144105-0-00 |              | n-64     | Screw                     | 1    | 146427-0-01 |              |
| n-27     | Spring                             | 1    | 144788-0-01 |              | n-65     | Main Presser Arm          | 1    | 146526-0-01 |              |
| n-28     | Washer                             | 1    | 025770-2-32 |              | n-66     | Screw                     | 1    | 009680-7-12 |              |
| n-29     | Looper Thread Tension Control Stud | 1    | 110820-0-01 |              | n-67     | Sub Presser Arm           | 1    |             |              |
| n-30     | Screw                              | 2    | 105163-0-01 |              | n-68     | Presser Foot              | 1    |             |              |
| n-31     | Spring Base                        | 1    |             |              | n-69     | Pin                       | 1    | 149183-0-01 |              |
| n-32     | Bracket for Ruffling Blade         | 1    |             |              | n-70     | Chaining-off Finger       | 1    | 150739-0-01 | 149195-1-01  |
| n-33     | Screw                              | 1    | 009680-6-12 |              | n-71     | Washer                    | 1    | 025030-1-32 |              |
| n-34     | Spring                             | 1    |             |              | n-72     | Screw                     | 1    | 009660-4-12 |              |
| n-35     | Screw                              | 1    | 001670-5-12 |              | n-73     | Nut                       | 1    | 021660-1-02 |              |
| n-36     | Spring                             | 1    | 144764-0-01 |              | n-74     | Screw                     | 1    | 103978-0-02 |              |
| n-37     | Screw                              | 1    | 009680-6-12 |              | n-75     | Label                     | 1    |             |              |
| n-38     | Spring                             | 1    | 145808-0-01 |              | n-76     | Cloth Plate               | 1    | 146716-0-01 |              |

[NOTE! PREFIX ALL NUMBERS BY 'BR'.]  
[EXAMPLE BR146222-0-01]

## 2. Thread Unwinder 4 THF



| Ref. No. | Name of Parts         | Q'ty | Parts No.   | Assembly No. |
|----------|-----------------------|------|-------------|--------------|
| z- 1     | Thread Unwinder 4 THF | 1    | 150161-0-02 |              |

{NOTE! PREFIX ALL NUMBERS BY 'BR'.}  
EXAMPLE BR146222-0-01}

# DIFFERENT PARTS LIST

| Class | Variety                 | No. of Needles | No. of Threads | Needle Gauge | Blunt            | Max. Stitch | Differential Ratio | Presser Foot Lift | Feed Dog |      | Needle Size | Sewing Speed | Face Plate Assembly |           | Front Cover Assembly |           | Needle Bar Assembly |           | Needle Bar |           |
|-------|-------------------------|----------------|----------------|--------------|------------------|-------------|--------------------|-------------------|----------|------|-------------|--------------|---------------------|-----------|----------------------|-----------|---------------------|-----------|------------|-----------|
|       |                         |                |                |              |                  |             |                    |                   | Pitch    | Type |             |              |                     |           |                      |           |                     |           |            |           |
| 831U  | 001-3<br>-4<br>-5       | 1              | 3              | —            | 3<br>4<br>5      | 3.6         | 0.6~1.8            | 6                 | 1.6      | A    | #11         | 6500         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 002-5<br>-6<br>-7       | 1              | 3              | —            | 5<br>6<br>7      | 2.5         | 1.3~4              | 7                 | 2        | B    | #14         | 6000         | I-1                 | 145706001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 003-3<br>-4<br>-5       | 1              | 3              | —            | 3<br>4<br>5      | 3.6         | 0.6~1.8            | 5                 | 1.6      | A    | #9          | 6500         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 004-3<br>-4             | 1              | 2              | —            | 3<br>4           | 3.6         | 0.6~1.8            | 6                 | 1.6      | A    | #8          | 6500         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 005-4<br>-5<br>-6       | 1              | 2              | —            | 4<br>5<br>6      | 3.6         | 0.6~1.8            | 4                 | 1.6      | A    | #14         | 6000         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 006-4<br>-5             | 1              | 3              | —            | 4<br>5           | 3.6         | 0.6~1.8            | 4                 | 1.6      | A    | #14         | 6000         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 007-2<br>-4             | 1              | 3              | —            | 2<br>4           | 3.6         | 1.6~1.8            | 6                 | 1.6      | A    | #11         | 6500         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 008-5                   | 1              | 3              | —            | 5                | 3.3         | 1~3                | 5                 | 1.6      | C    | #11         | 6000         | K-1                 | 146430001 | K 53~58              | 146710001 | B 12~13             | 147629001 |            |           |
|       | 009-5                   | 1              | 3              | —            | 5                | 3.3         | 1~3                | 5                 | 1.6      | D    | #11         | 6000         | L-1                 | 146430001 | L 56~64              | 146710001 | B 12~13             | 147629001 |            |           |
|       | 010-5                   | 1              | 3              | —            | 5                | 3.6         | 0.6~1.8            | 6                 | 1.6      | A    | #11         | 6500         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 011-6<br>-7             | 1              | 3              | —            | 6<br>7           | 2.5         | 1.3~4              | 7                 | 2        | B    | #14         | 6000         | H-1                 | 145706001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
|       | 012-3<br>-4<br>-5<br>-6 | 1              | 3              | —            | 3<br>4<br>5<br>6 | 3.6         | 0.6~1.8            | 6                 | 1.6      | A    | #11         | 6500         | A-7                 | 146428001 | A 35~39<br>-83       | 148991001 | B 12~13             | 147629001 |            |           |
| 832U  | 021-4                   | 2              | 4              | 1.8          | 4                | 3.6         | 0.6~1.8            | 6                 | 1.6      | A    | #11         | 6500         | A-7                 | 146428001 | b 22~27              | 148993001 |                     |           | a-1        | 146483001 |
|       | 022-5<br>-6             | 2              | 4              | 2.2          | 5<br>6           | 3.6         | 0.6~1.8            | 6                 | 1.6      | E    | #11         | 6500         | A-7                 | 146428001 | c 18~23              | 148993001 |                     |           | a-1        | 146483001 |
|       | 023-5<br>-6             | 2              | 4              | 2.2          | 5<br>6           | 3.6         | 0.6~1.8            | 6                 | 1.6      | E    | #11         | 6500         | A-7                 | 146428001 | d 20~25              | 148993001 |                     |           | a-1        | 146483001 |
|       | 024-5                   | 2              | 4              | 3            | 5                | 3.6         | 0.6~1.8            | 6                 | 1.6      | E    | #11         | 6500         | A-7                 | 146428001 | b' 17~22             | 148995001 |                     |           | a-1        | 146483001 |
|       | 025-6                   | 2              | 4              | 3            | 6                | 3.6         | 0.6~1.8            | 6                 | 1.6      | E    | #11         | 6500         | A-7                 | 146428001 | c' 19~24             | 148995001 |                     |           | a-1        | 146483001 |
|       | 026-4<br>-5<br>-6       | 2              | 4              | 1.8          | 4<br>5<br>6      | 2.5         | 1.3~4              | 7                 | 1.6      | G    | #11         | 6000         | d'-1                | 145706001 | d' 27~32             | 148993001 |                     |           | a-1        | 146483001 |
|       | 027-5<br>-6<br>-7       | 2              | 4              | 2.2          | 5<br>6<br>7      | 2.5         | 1.3~4              | 7                 | 2        | B    | #14         | 6000         | e-1                 | 145706001 | e 37~42              | 148993001 |                     |           | a-1        | 146483001 |
|       | 028-5<br>-6<br>-7       | 2              | 4              | 2.2          | 5<br>6<br>7      | 2.5         | 1.3~4              | 7                 | 2        | B    | #14         | 6000         | e'-1                | 145706001 | e' 37~42             | 148993001 |                     |           | a-1        | 146483001 |
|       | 031-7                   | 2              | 4              | 3            | 7                | 3.6         | 0.6~1.8            | 7                 | 2.5      | F    | #21         | 6000         | A-7                 | 146428001 | f 20~25              | 148995001 |                     |           | a-1        | 146483001 |
|       | 032-7                   | 2              | 4              | 3            | 7                | 3.6         | 0.6~1.8            | 7                 | 2.5      | F    | #21         | 6000         | A-7                 | 146428001 | f' 20~25             | 148995001 |                     |           | a-1        | 146483001 |
|       | 033-5                   | 2              | 4              | 2.2          | 5                | 3.3         | 1~3                | 5                 | 1.6      | C    | #11         | 6000         | g-1                 | 146430001 | g 58~63              | 146763001 |                     |           | a-1        | 146483001 |
|       | 034-5                   | 2              | 4              | 2.2          | 5                | 3.3         | 1~3                | 5                 | 1.6      | C    | #11         | 6000         | g'-1                | 146430001 | g' 61~66             | 146763001 |                     |           | a-1        | 146483001 |
|       | 037-5                   | 2              | 4              | 2.2          | 5                | 3.3         | 1~3                | 5                 | 1.6      | D    | #11         | 6000         | h-1                 | 146430001 | h 60~65              | 146763001 |                     |           | a-1        | 146483001 |
|       | 038-5                   | 2              | 4              | 2.2          | 5                | 3.3         | 1~3                | 5                 | 1.6      | D    | #11         | 6000         | h'-1                | 146430001 | h' 60~65             | 146763001 |                     |           | a-1        | 146483001 |
|       | 041-5                   | 2              | 4              | 2.2          | 5                | 3.6         | 0.6~1.8            | 6                 | 1.6      | E    | #11         | 6500         | A-7                 | 146428001 | j 18~23              | 148993001 |                     |           | a-1        | 146483001 |
|       | 045-5<br>-6<br>-7       | 2              | 4              | 2.2          | 5<br>6<br>7      | 2.5         | 1.3~4              | 7                 | 2        | B    | #14         | 6000         | K-1                 | 145706001 | k 39~44              | 148993001 |                     |           | a-1        | 146483001 |
|       | 049-5<br>-6             | 2              | 4              | 2.2          | 5<br>6           | 3.6         | 0.6~1.8            | 6                 | 1.6      | A    | #11         | 6500         | A-7                 | 146428001 | m 41~46              | 148993001 |                     |           | a-1        | 146483001 |
|       | 050-5                   | 2              | 4              | 2.2          | 5                | 3.6         | —                  | 5                 | 1.6      | H    | #11         | 6500         | A-7                 | 146428001 | n 50~55              | 146763001 |                     |           | a-1        | 146483001 |



| Needle Clamp Assembly |           | Needle Cat. No. 8120-8538 6122 |           | Needle Guard F |           | Throat Plate |                                                  | Spacer |           | Screw |           | Presser Foot Assembly |                                     | Main Feed Link Shaft |           | Differential Feed Indicator |           |
|-----------------------|-----------|--------------------------------|-----------|----------------|-----------|--------------|--------------------------------------------------|--------|-----------|-------|-----------|-----------------------|-------------------------------------|----------------------|-----------|-----------------------------|-----------|
|                       |           | B-14                           | 15120001  | B-64           | 146726001 | B-80         | 146730001<br>146731001<br>146732001<br>146733001 |        |           | H-5   | 100257010 | E 58-56               | 146884001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | I-4                            | 151200014 | B-64           | 146726001 | I-12         | 146734001<br>146735001<br>146736001              |        |           | H-5   | 100257010 | I 5-11                | 146898001                           | I-16                 | 144068001 | I-2                         | 146742001 |
|                       |           | J-6                            | 151200009 | B-64           | 146726001 | J-23         | 146730001<br>146731001<br>146732001              |        |           | H-5   | 100257010 | J 1-5                 | 146890001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | I'-5                           | 151200009 | B-64           | 146726001 | I'-27        | 146730001<br>146731001                           |        |           | H-5   | 100257010 | I' 1-5                | 146890001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | M-1                            | 151200014 | B-64           | 146726001 | M-26         | 146731001<br>146732001<br>146733001              |        |           | H-5   | 100257010 | M 2-10                | 146893001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | J'-1                           | 151200014 | B-64           | 146726001 | J'-22        | 146731001<br>146732001                           |        |           | H-5   | 100257010 | J' 2-10               | 146893001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | B-14                           | 15120001  | B-64           | 146726001 | K'10-12      | 148352001<br>148314801                           |        |           | H-5   | 100257010 | K' 1-9                | 148311001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | B-14                           | 15120001  | B-64           | 146726001 | K-12         | 146737001                                        |        |           | H-5   | 100257010 | K 5-11                | 144811001                           | D-22                 | 143564001 | K-2                         | 146562001 |
|                       |           | B-14                           | 15120001  | B-64           | 146726001 | L-12         | 146737001                                        |        |           | H-5   | 100257010 | L 5-11                | 147433001                           | D-22                 | 143564001 | L-2                         | 146562001 |
|                       |           | B-14                           | 15120001  | B-64           | 146726001 | M'-11        | 146732001                                        |        |           | H-5   | 100257010 | M' 3-9                | 146895001                           | D-22                 | 143564001 | D-91                        | 146561001 |
|                       |           | N-6                            | 151200014 | B-64           | 146726001 | N-14         | 146735001<br>146736001                           |        |           | H-5   | 100257010 | N 7-13                | 146895001                           | N-18                 | 144068001 | N-2                         | 146742001 |
|                       |           | B-14                           | 15120001  | B-64           | 146726001 | N'-T         | 147449001<br>147450001<br>147451001<br>147452001 |        |           | H-5   | 100257010 | E 58-66               | 146884001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| b 1-2                 | 146771001 | b-3                            | 151206011 | b-16           | 146777001 | b-13         | 146779001                                        | b-14   | 146787001 | b-15  | 105216001 | b 4-12                | 146963001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| c 1-2                 | 146773001 | B-14                           | 15120001  | c-15           | 146777001 | c-12         | 146781001<br>146782001                           | c-13   | 146787001 | c-14  | 105216001 | c 3-11                | 146902001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| d 1-2                 | 146773001 | B-14                           | 15120001  | d-15           | 146777001 | d-12         | 146781001<br>146782001                           | d-13   | 146787001 | d-14  | 105216001 | d 3-11                | 146902001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| b' 1-2                | 146775001 | B-14                           | 15120001  | b'-15          | 146778001 | b'-12        | 148030001                                        | b'-13  | 146788001 | b'-14 | 105216001 | b' 3-11               | 146965001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| c' 1-2                | 146775001 | B-14                           | 15120001  | c'-15          | 146778001 | c'-12        | 148031001                                        | c'-13  | 146788001 | c'-14 | 105216001 | c' 3-11               | 146965001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| d' 3-4                | 146771001 | d'-5                           | 151206011 | d'-18          | 146777001 | d'-15        | 146779001<br>146780001<br>146782001              | d'-16  | 146787001 | d'-17 | 105216001 | d' 6-14               | 146963001                           | d'-22                | 144068001 | d'-2                        | 146742001 |
| e 4-5                 | 146773001 | e-6                            | 151200014 | e-20           | 146777001 | e-14         | 146781001<br>146782001<br>146783001              | e-15   | 146787001 | e-16  | 105216001 | e 7-13                | 147952001<br>146904001<br>146904001 | e-21                 | 144068001 | e-2                         | 146742001 |
| e' 4-5                | 146773001 | e'-6                           | 151200014 | e'-20          | 146777001 | e'-14        | 146781001<br>146782001<br>146783001              | e'-15  | 146787001 | e'-16 | 105216001 | e' 7-13               | 147952001<br>146904001<br>146904001 | e'-21                | 144068001 | e'-2                        | 146742001 |
| f 1-2                 | 146775001 | f-3                            | 152186021 | f-16           | 146778001 | f-13         | 146785001                                        | f-14   | 146788001 | f-15  | 105216001 | f 4-12                | 146965001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| f' 1-2                | 146775001 | f'-3                           | 152186021 | f'-16          | 146778001 | f'-13        | 146785001                                        | f'-14  | 146788001 | f'-15 | 105216001 | f' 4-12               | 146965001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| g 5-6                 | 146773001 | B-14                           | 15120001  | g-20           | 146777001 | g-14         | 146786001                                        | g-18   | 146787001 | g-19  | 105216001 | g 7-13                | 144815001                           | D-22                 | 143564001 | g-2                         | 146562001 |
| g' 5-6                | 146773001 | B-14                           | 15120001  | g'-20          | 146777001 | g'-14        | 146786001                                        | g'-18  | 146787001 | g'-19 | 105216001 | g' 7-13               | 144815001                           | D-22                 | 143564001 | g'-2                        | 146562001 |
| h 5-6                 | 146773001 | B-14                           | 15120001  | h-20           | 146777001 | h-14         | 146786001                                        | h-18   | 146787001 | h-19  | 105216001 | h 7-13                | 147439001                           | D-22                 | 143564001 | h-2                         | 146562001 |
| h' 5-6                | 146773001 | B-14                           | 15120001  | h'-20          | 146777001 | h'-14        | 146786001                                        | h'-18  | 146787001 | h'-19 | 105216001 | h' 7-13               | 147439001                           | D-22                 | 143564001 | h'-2                        | 146562001 |
| j 1-2                 | 146773001 | B-14                           | 15120001  | j-15           | 146777001 | j-12         | 146781001                                        | j-13   | 146787001 | j-14  | 105216001 | j 5-11                | 146906001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| k 6-7                 | 146773001 | K-8                            | 151200014 | k-22           | 146777001 | k-15         | 146781001<br>146782001<br>146783001              | k-17   | 146787001 | k-18  | 105216001 | k 9-15                | 146906001                           | K-23                 | 144068001 | K-2                         | 146742001 |
| m 35-37               | 146773001 | B-14                           | 15120001  | m-35           | 146777001 | m-8          | 148366001<br>148367001                           | m-33   | 146787001 | m-34  | 105216001 | m 24-32               | 146902001                           | D-22                 | 143564001 | D-91                        | 146561001 |
| n 63-64               | 146773001 | B-14                           | 15120001  | n-56           | 146777001 | n-62         | 149192001                                        | n-57   | 146787001 | n-58  | 105216001 | n 67-74               | 149195001                           | D-22                 | 143564001 | D-91                        | 146561001 |

|       |      |                                  |   |             |
|-------|------|----------------------------------|---|-------------|
| 027-5 | e-10 | Presser Foot Chaining-off Finger | 1 | 146907-0-01 |
| 027-6 | e-10 | Presser Foot Chaining-off Finger | 1 | 146905-0-01 |

|       |       |                                  |   |             |
|-------|-------|----------------------------------|---|-------------|
| 028-5 | e'-10 | Presser Foot Chaining-off Finger | 1 | 146907-0-01 |
| 028-6 | e'-10 | Presser Foot Chaining-off Finger | 1 | 146905-0-01 |

| Class | Variety                       | Main Feed (Back) Dog |           | Differential Feed (Front) Dog |           | Chain Feed Dog |           | Looper (Right Hand) Holder Assembly |           | Looper (Right Hand) Assembly |           | Needle Thread Take-up |           | Washer |           | Oil Cap |           |
|-------|-------------------------------|----------------------|-----------|-------------------------------|-----------|----------------|-----------|-------------------------------------|-----------|------------------------------|-----------|-----------------------|-----------|--------|-----------|---------|-----------|
| 831U  | 001-3<br>-4<br>-5<br>-6<br>-7 | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 002-5<br>-6<br>-7             | I-13                 | 146745001 | I-15                          | 146750001 | I-14           | 146578001 | I 17-29                             | 146611101 | I 30-31                      | 147937001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 003-3<br>-4<br>-5             | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 004-3<br>-4                   | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | I 10-11                      | 147935001 | I-9                   | 142201001 |        |           | A-28    | 111865001 |
|       | 005-4<br>-5<br>-6             | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | M 13-14                      | 147935001 | M-12                  | 142201001 |        |           |         |           |
|       | 006-4<br>-5                   | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 007-2<br>-4                   | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 008-5                         | K-13                 | 146745001 | K-15                          | 146751001 | K-14           | 146578001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 009-5                         | L-13                 | 147828001 | L-15                          | 146751001 | L-14           | 147832001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 010-5                         | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 011-6<br>-7                   | N-15                 | 146745001 | N-17                          | 146750001 | N-16           | 146578001 | N 19-31                             | 146611101 | N 32-33                      | 147937001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 012-3<br>-4<br>-5<br>-6       | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
| 832U  | 021-4                         | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 022-5<br>-6                   | D-49                 | 146744001 | c-17                          | 146749001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 023-5<br>-6                   | D-49                 | 146744001 | d-17                          | 146749001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | d 18-19                      | 147936001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 024-5                         | D-49                 | 146744001 | b'-16                         | 146749001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 025-6                         | D-49                 | 146744001 | c'-16                         | 146749001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | c'17-18                      | 147936001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 026-4<br>-5<br>-6             | d'-19                | 148401001 | d'-21                         | 148402001 | d'-20          | 146578001 | d'33-45                             | 146611101 | d'46-47                      | 147937001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 027-5<br>-6<br>-7             | e-17                 | 146745001 | e-18                          | 146750001 | e-19           | 146578001 | e 22-34                             | 146611101 | e 35-36                      | 147937001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 028-5<br>-6<br>-7             | e'-17                | 146745001 | e'-18                         | 146750001 | e'-19          | 146578001 | e'22-34                             | 146611101 | e'35-36                      | 147936001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 031-7                         | f-18                 | 147890001 | f-19                          | 146751001 | D-51           | 146577001 | f 26-38                             | 146611101 | f 39-40                      | 147937001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 032-7                         | f'-18                | 146790001 | f'-19                         | 146751001 | D-51           | 146577001 | f'26-38                             | 146611101 | f'39-40                      | 147936001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 033-5                         | g-15                 | 146746001 | g-17                          | 146751001 | g-16           | 146578001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 034-5                         | g'-15                | 146746001 | g'-17                         | 146751001 | g'-16          | 146578001 | C 21-27<br>C 44-49                  | 146603101 | g'21-22                      | 147936001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 037-5                         | h-15                 | 147828001 | h-17                          | 146751001 | h-16           | 147832001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 038-5                         | h'-15                | 147828001 | h'-17                         | 146751001 | h'-16          | 147832001 | C 21-27<br>C 44-49                  | 146603101 | h'69-70                      | 147936001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |
|       | 041-5                         | D-49                 | 146744001 | J-17                          | 146749001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 045-5<br>-6<br>-7             | K-19                 | 146745001 | K-20                          | 146750001 | K-21           | 146578001 | K 24-36                             | 146611101 | K 37-38                      | 147937001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 049-5<br>-6                   | D-49                 | 146744001 | D-53                          | 146748001 | D-51           | 146577001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 | A-28    | 111865001 |
|       | 050-5                         | n-61                 | 149193001 |                               |           | n-59           | 149194001 | C 21-27<br>C 44-49                  | 146603101 | C 51-52                      | 147934001 | F-8                   | 144108001 | F-9    | 105248003 |         |           |



| Threading Diagram |           | Label | Cloth Plate                                      | Label | Thread Guide Supporter | Presser Foot Lifter Lever | Adjuster Plate | Felt Holder Assembly | Blind Stitch Hemming Guide Assembly |      |           |      |           |         |           |         |           |
|-------------------|-----------|-------|--------------------------------------------------|-------|------------------------|---------------------------|----------------|----------------------|-------------------------------------|------|-----------|------|-----------|---------|-----------|---------|-----------|
| A-34              | 146718001 | A-20  | 146974001<br>146974002<br>146974003<br>146974054 | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | I-3   | 146974004<br>146974005<br>146974006              | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | J-7   | 146974007<br>146974008<br>146974009              | J-24  | 146716001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 | J 8-21  | 147710001 |
| I'-8              | 146719001 | I'-7  | 146974010<br>146974011                           | I'-26 | 146716001              |                           |                | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 | I'12-25 | 147710001 |
| M-11              | 146719001 | M-25  | 146974014<br>146974015                           | A-62  | 146448001              |                           |                | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | J'-21 | 146974017                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | K'-13 | 146974057<br>146974058                           | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | K-4   | 146974019                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | L-4   | 146974020                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | M'-10 | 146974021                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | N-3   | 146974025                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| A-34              | 146718001 | N'-25 | 146974042<br>146974043<br>146974044<br>146974058 | A-62  | 146448001              | A-111                     | 147943001      | N'-23                | 147485001                           | N'-5 | 148369001 | N'-6 | 147454001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | b-17  | 146975039                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | b 18-21 | 148008000 |         |           |
| a-12              | 146765001 | c-16  | 146975004<br>146975005                           | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | d-15  | 146975065<br>146975010                           | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | b'-23 | 146975064                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | c'-25 | 146975010                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | d'-48 | 146975068<br>146975012<br>146975013              | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | d'23-26 | 148008000 |         |           |
| a-12              | 146765001 | e-3   | 146975062<br>146975041<br>146975015              | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | e'-3  | 146975063<br>146975069<br>146975016              | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | f-17  | 146975017                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | f'-17 | 146975018                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | g-4   | 146975019                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | g'-4  | 146975020                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | h-4   | 146975021                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | h'-4  | 146975022                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | j-16  | 146975023                                        | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | k-3   | 146975031<br>146975032<br>146975033              | A-62  | 146448001              | A-111                     | 147943001      | F-11                 | 146649001                           | E-21 | 143323103 | E-23 | 146522001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | m-23  | 146975066<br>146975067                           | A-62  | 146448001              | A-111                     | 147943001      | m-38                 | 148370001                           | m-5  | 148369001 | m-6  | 147454001 | H 1-4   | 146738000 |         |           |
| a-12              | 146765001 | n-75  | 146975072                                        | n-75  | 146716001              | A-111                     | 147943001      | F-11                 | 146649001                           | n-2  | 148369001 | n-1  | 147454001 | H 1-4   | 146738000 |         |           |

| Class | Variety                 | Screw           | Guide             | Screw           | Ruffler Device Assembly | Screw           | Ruffler Guide   | Screw           | Knee Adjuster Parts Set |
|-------|-------------------------|-----------------|-------------------|-----------------|-------------------------|-----------------|-----------------|-----------------|-------------------------|
| 031U  | 001-3<br>-4<br>-5       |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 002-5<br>-6<br>-7       |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 003-3<br>-4<br>-5       | J-22 009670612  |                   |                 |                         |                 |                 |                 |                         |
|       | 004-3<br>-4             | I'-26 009670612 |                   |                 |                         |                 |                 |                 |                         |
|       | 005-4<br>-5<br>-6       |                 | M 15-24 146761001 | M-15 110201001  |                         |                 |                 |                 |                         |
|       | 006-4<br>-5             |                 | J'12-20 146761001 | J'-11 110201001 |                         |                 |                 |                 |                         |
|       | 007-2<br>-4             |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 008-5                   |                 |                   |                 | K 16-47 146587002       | K-48 009781812  | K-49 144793001  | K-50 112751002  | P 18-37 151224001       |
|       | 009-5                   |                 |                   |                 | L 16-47 146587002       | L-48 009781812  | L-49 144793001  | L-50 112751002  | P 18-37 151224001       |
|       | 010-5                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 011-6<br>-7             |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 012-3<br>-4<br>-5<br>-6 |                 |                   |                 |                         |                 |                 |                 |                         |
| 032U  | 021-4                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 022-5<br>-6             |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 023-5<br>-6             |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 024-5                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 025-6                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 026-4<br>-5<br>-6       |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 027-5<br>-6<br>-7       |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 028-5<br>-6<br>-7       |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 031-7                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 032-7                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 033-5                   |                 |                   |                 | g 21-52 146587002       | g-53 009781812  | g-54 144793000  | g-55 112751002  | P 18-37 151224001       |
|       | 034-5                   |                 |                   |                 | g' 21-54 146587002      | g'-55 009781812 | g'-56 144793000 | g'-57 112751002 | P 18-37 151224001       |
|       | 037-5                   |                 |                   |                 | h 21-52 146587002       | h-53 009781812  | h-54 144793000  | h-55 112751002  | P 18-37 151224001       |
|       | 038-5                   |                 |                   |                 | h' 21-52 146587002      | h'-53 009781812 | h'-54 144793000 | h'-55 112751002 | P 18-37 151224001       |
|       | 041-5                   |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 049-5<br>-6<br>-7       |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 049-5<br>-6             |                 |                   |                 |                         |                 |                 |                 |                         |
|       | 050-5                   |                 |                   |                 | n 16-44 149202001       | n-45 009781812  |                 |                 |                         |



| Class | Variety                 | Screw         | Screw Driver   | Handle          | Nut             | Presser Foot<br>Assembly For<br>Chain-back | Screw           | Chain-back<br>Guide | Screw          |
|-------|-------------------------|---------------|----------------|-----------------|-----------------|--------------------------------------------|-----------------|---------------------|----------------|
| 831U  | 001-3<br>-4<br>-5       |               |                |                 |                 |                                            |                 |                     |                |
|       | 002-5<br>-6<br>-7       |               |                |                 |                 |                                            |                 |                     |                |
|       | 003-3<br>-4<br>-5       |               |                |                 |                 |                                            |                 |                     |                |
|       | 004-3<br>-4             |               |                |                 |                 |                                            |                 |                     |                |
|       | 005-4<br>-5<br>-6       |               |                |                 |                 |                                            |                 |                     |                |
|       | 006-4<br>-5             |               |                |                 |                 |                                            |                 |                     |                |
|       | 007-2<br>-4             |               | K-14 148925001 |                 |                 |                                            |                 |                     |                |
|       | 008-5                   |               |                | K-51 145809001  | K-52 150556002  |                                            |                 |                     |                |
|       | 009-5                   |               |                | L-51 145809001  | L-52 150556002  |                                            |                 |                     |                |
|       | 010-5                   | M-2 009669412 |                |                 |                 |                                            |                 |                     |                |
|       | 011-6<br>-7             | N-5 009669412 |                |                 |                 |                                            |                 |                     |                |
|       | 012-3<br>-4<br>-5<br>-6 |               |                |                 |                 | N'10-21 147473001                          | N'-22 009670612 | N'-8 147484001      | N'-9 141544001 |
| 832U  | 021-4                   |               |                |                 |                 |                                            |                 |                     |                |
|       | 022-5<br>-6             |               |                |                 |                 |                                            |                 |                     |                |
|       | 023-5<br>-6             |               |                |                 |                 |                                            |                 |                     |                |
|       | 024-5                   |               |                |                 |                 |                                            |                 |                     |                |
|       | 025-6                   |               |                |                 |                 |                                            |                 |                     |                |
|       | 026-4<br>-5<br>-6       |               |                |                 |                 |                                            |                 |                     |                |
|       | 027-5<br>-6<br>-7       |               |                |                 |                 |                                            |                 |                     |                |
|       | 028-5<br>-6<br>-7       |               |                |                 |                 |                                            |                 |                     |                |
|       | 031-7                   |               |                |                 |                 |                                            |                 |                     |                |
|       | 032-7                   |               |                |                 |                 |                                            |                 |                     |                |
|       | 033-5                   |               |                | g-56 145809001  | g-57 150556002  |                                            |                 |                     |                |
|       | 034-5                   |               |                | g'-58 145809001 | g'-60 150556002 |                                            |                 |                     |                |
|       | 037-5                   |               |                | h-56 145809001  | h-57 150556002  |                                            |                 |                     |                |
|       | 038-5                   |               |                | h'-56 145809001 | h'-57 150556002 |                                            |                 |                     |                |
|       | 041-5                   | j-4 009669412 |                |                 |                 |                                            |                 |                     |                |
|       | 045-5<br>-6<br>-7       | k-5 009669412 |                |                 |                 |                                            |                 |                     |                |
|       | 049-5<br>-6             |               |                |                 |                 | m10-21 147473001                           | m-22 009670612  | m-7 147484001       | m-9 141544001  |
|       | 050-5                   |               |                | n-46 145809001  | n-47 150556002  |                                            |                 |                     |                |





# I N D E X

| Class | Variety                       | Ruffler Interlocking Parts Assembly |
|-------|-------------------------------|-------------------------------------|
| 831U  | 001-3<br>-4<br>-5<br>-6<br>-7 |                                     |
|       | 002-5<br>-6<br>-7             |                                     |
|       | 003-3<br>-4                   |                                     |
|       | 004-3<br>-4                   |                                     |
|       | 005-4<br>-5<br>-6             |                                     |
|       | 006-4<br>-5                   |                                     |
|       | 007-2<br>-4                   |                                     |
|       | 008-5 Q 1-14                  | 151227002                           |
|       | 009-5 Q 1-14                  | 151227002                           |
|       | 010-5                         |                                     |
|       | 011-6<br>-7                   |                                     |
|       | 012-3<br>-4<br>-5<br>-6       |                                     |
| 832U  | 021-4                         |                                     |
|       | 022-5<br>-6                   |                                     |
|       | 023-5<br>-6                   |                                     |
|       | 024-5                         |                                     |
|       | 025-6                         |                                     |
|       | 026-4<br>-5<br>-6             |                                     |
|       | 027-5<br>-6<br>-7             |                                     |
|       | 028-5<br>-6<br>-7             |                                     |
|       | 031-7                         |                                     |
|       | 032-7                         |                                     |
|       | 033-5 Q 1-14                  | 151227002                           |
|       | 034-5 Q 1-14                  | 151227002                           |
|       | 037-5 Q 1-14                  | 151227002                           |
|       | 038-5 Q 1-14                  | 151227002                           |
|       | 041-5                         |                                     |
|       | 045-5<br>-6<br>-7             |                                     |
|       | 049-5<br>-6                   |                                     |
|       | 050-5                         |                                     |

| Parts No.   | Ref. No. | Parts No.   | Ref. No. | Parts No.   | Ref. No. |
|-------------|----------|-------------|----------|-------------|----------|
| 001660-5-12 | E-69     | 009670-6-12 | n-6      | 013679-4-12 | h-50     |
| 001670-5-12 | A-57     | 009670-8-12 | B-7      |             | n-42     |
|             | A-59     |             | B-39     | 013689-4-12 | A-82     |
|             | K-35     |             | C-18     | 013760-6-12 | A-80     |
|             | L-35     |             | F-35     |             | C-12     |
|             | g-40     |             | G-19     | 013761-4-10 | B-55     |
|             | g'-42    | 009671-0-12 | G-33     | 013770-7-10 | D-87     |
|             | h-40     | 009671-4-12 | B-72     | 014680-4-22 | A-26     |
|             | n-35     | 009679-3-12 | J-16     |             | C-16     |
|             | I'-12    |             | J'-17    |             | C-22     |
|             | J-8      |             | I'-18    |             | C-51     |
| 001670-6-14 | B-74     |             | M-21     |             | E-11     |
| 001680-5-12 | B-78     | 009680-6-12 | K-34     |             | I-17     |
|             | M-18     |             | K-40     |             | I-30     |
| 005710-8-12 | J'-14    |             | L-34     |             | I'-11    |
|             | D-52     |             | L-40-54  |             | M-14     |
| 009630-8-12 | E-60     |             | g-39     |             | N-19     |
|             | J'-6     |             | g-45     |             | N-32     |
|             | M-6      |             | g'-40    |             | c'-18    |
|             | K'-6     |             | g'-47    |             | d-19     |
|             | b-8      |             | h-39     |             | d'-33    |
|             | c-7      |             | h-45     |             | d'-46    |
|             | d-7      |             | h-59     |             | e-22     |
|             | b'-7     |             | n-15     |             | e-35     |
|             | c'-7     |             | n-33     |             | e'-22    |
|             | d'-10    |             | n-37     |             | e'-35    |
| 009639-3-12 | f-8      | 009680-7-12 | A-1      |             | f-26     |
|             | f-8      |             | A-66     |             | f-39     |
|             | m-28     |             | A-69     |             | f'-26    |
|             | F-6      |             | B-11     |             | f'-39    |
|             | J-10     |             | B-38     |             | g'-22    |
|             | I'-14    |             | C-29     |             | k-24     |
|             | N'-10    |             | D-24     |             | k-37     |
|             | N'-16    |             | E-26     |             |          |
|             | m-10     |             | E-56     |             |          |
|             | m-15     |             | J-20     | 014770-6-22 | B-52     |
| 009660-4-12 | n-72     |             | I'-24    |             | D-32     |
|             | D-78     | 009680-8-12 | n-66     |             | F-20     |
|             | Z-3      |             | K-44     | 017762-2-03 | P-20     |
|             | D-12     |             | L-44     |             | P-29     |
|             | K-18     |             | Q-8      | 017771-4-12 | C-36     |
|             | L-18     |             | g-49     |             | D-15     |
|             | g-23     |             | g'-51    |             | D-19     |
|             | g'-25    |             | h-49     |             | D-90     |
|             | h-23     |             | n-41     |             | D-101    |
|             | n-60     |             | A-76     |             | E-52     |
|             | F-10     | 009681-0-12 | B-57     | 017771-6-12 | A-47     |
| 009669-3-12 | Y-39     |             | C-27     |             | B-1      |
|             | M-2      |             | H-15     |             | B-30     |
| 009669-4-12 | N-5      |             | I-23     |             | C-7      |
|             | j-4      |             | N-25     |             | D-8      |
| 009670-6-12 | k-5      |             | Y-18     |             | E-13     |
|             | A-13     |             | Z-7      |             | E-29     |
|             | A-41     |             | d'-39    | 018061-6-22 | B-73     |
|             | A-49     |             | e-28     | 021080-1-06 | Z-11     |
|             | A-53     |             | e'-28    | 021660-1-02 | n-73     |
|             | A-61     |             | f-32     | 021670-2-02 | B-71     |
|             | B-63     |             | f'-32    | 021680-2-02 | M-24     |
|             | B-65     |             | k-30     |             | J'-20    |
|             | D-61     |             |          | 025030-1-32 | E-63     |
|             | E-49     | 009681-2-12 | A-18     |             | I-6      |
| 009670-6-12 | F-7      | 009711-2-12 | G-34     |             | I'-2     |
|             | F-23     | 009781-8-12 | K-48     |             | J-2      |
|             | F-37     |             | L-48     |             | J'-3     |
|             | F-41     |             | g-53     |             | K-6      |
|             | G-5      |             | g'-55    |             | K'-2     |
|             | J-22     |             | h-53     |             | L-6      |
|             | I'-26    |             | n-45     |             | M-3      |
|             | N-3      | 011711-4-12 | E-24     |             | M-4      |
|             | N-22     | 013679-4-12 | B-17     |             | N-8      |
|             | m-3      |             | K-45     |             | N-11     |
|             | m-22     |             | L-45     |             | b-5      |
|             | Q-14     |             | g-50     |             | c-4      |
|             |          |             | g'-52    |             | d-4      |

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|-------------|----------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
| 025030-1-32 | b' - 4   | 100080-0-04 | L - 5    | 101706-0-01 | h - 26   | 110230-0-01 | L - 25   | 112436-0-01 | E - 44   |
|             | c' - 4   |             | M - 2    |             | h - 28   |             | g - 30   |             | Y - 34   |
|             | d' - 7   |             | M' - 3   |             | n - 17   |             | g' - 32  | 112735-0-00 | D - 35   |
|             | e - 8    |             | N - 7    |             | n - 19   |             | h - 30   | 112751-0-02 | K - 50   |
|             | e' - 8   |             | b - 4    | 102538-0-02 | D - 3    |             | n - 23   |             | L - 50   |
|             | f - 5    |             | c - 3    | 102627-0-01 | E - 51   | 110641-0-01 | A - 43   |             | g - 56   |
|             | f' - 5   |             | d - 3    | 102843-0-04 | A - 8    | 110668-0-01 | B - 50   |             | g' - 57  |
|             | g - 8    |             | b' - 3   | 103978-0-02 | n - 74   | 110670-0-00 | B - 58   |             | h - 55   |
|             | g' - 8   |             | c' - 3   |             |          | 110672-0-00 | B - 60   | 113431-0-02 | A - 66   |
|             | h - 8    |             | d' - 6   | 104619-0-02 | P - 33   | 110673-0-00 | B - 61   |             | D - 21   |
|             | j - 6    |             | e - 7    | 104890-0-02 | P - 21   | 110704-0-01 | C - 5    |             | D - 56   |
|             | k - 10   |             | e' - 7   |             | P - 30   |             | C - 34   |             | D - 58   |
|             | m - 11   |             | f - 4    | 105034-0-03 | C - 4    | 110735-0-02 | L - 55   |             | H - 20   |
|             | m - 25   |             | f' - 4   |             | C - 33   |             | h - 68   |             | Z - 6    |
|             | n - 71   |             | g - 7    | 105078-0-01 | B - 8    |             | n - 13   | 113589-0-01 | A - 17   |
|             |          |             | g' - 7   | 105079-0-01 | B - 10   | 110793-0-01 | E - 19   | 114255-0-02 | B - 19   |
| 025030-2-37 | J - 11   |             | h - 7    | 105163-0-01 | K - 39   | 110813-0-01 | F - 32   | 114294-0-01 | B - 45   |
|             | I' - 15  |             | j - 5    |             | L - 39   |             | b - 29   | 114483-0-02 | Y - 37   |
|             | Z - 2    |             | k - 9    |             | g - 44   |             | c - 25   | 114966-0-01 | P - 36   |
| 025080-2-36 | Z - 9    |             | m - 24   |             | g' - 46  |             | d - 27   | 114967-0-01 | P - 34   |
| 025350-3-32 | G - 20   |             |          |             | h - 44   |             | b' - 25  | 117160-0-01 | A - 31   |
| 025680-2-32 | Y - 17   | 100105-0-05 | E - 66   | 105216-0-01 | n - 30   |             | c' - 27  | 117466-0-00 | Y - 13   |
| 025770-2-32 | D - 89   |             | I - 9    |             | b - 15   |             | d' - 50  | 117515-0-01 | E - 46   |
|             | K - 30   |             | J' - 8   |             | c - 14   |             | e - 44   | 117516-0-01 | D - 50   |
|             | L - 30   |             | K - 9    |             | d - 14   |             | e' - 44  |             | D - 54   |
|             | g - 35   |             | L - 9    |             | b' - 14  |             | f - 42   |             | E - 47   |
|             | g' - 37  |             | M - 8    |             | c' - 14  |             | f' - 42  | 117517-0-03 | D - 86   |
|             | h - 35   |             | M' - 7   |             | d' - 17  |             | g - 65   | 118837-0-01 | Y - 11   |
|             | n - 28   |             | N - 11   |             | e - 16   |             | g' - 68  | 122771-0-02 | F - 39   |
| 028050-2-42 | P - 5    |             | K' - 3   |             | e' - 16  |             | h - 67   | 122991-0-02 | Y - 1    |
| 028080-2-42 | Z - 10   |             | b - 10   |             | f - 15   |             | j - 25   | 123185-0-01 | A - 33   |
| 031311-3-02 | Y - 15   |             | c - 9    |             | f' - 15  |             | k - 46   | 140063-0-01 | D - 99   |
| 033452-5-02 | P - 18   |             | d - 9    |             | g - 19   |             | n - 49   | 140066-0-01 | A - 79   |
| 047140-8-42 | A - 38   |             | b' - 9   |             | g' - 19  |             |          | 140077-0-01 | A - 54   |
|             | K - 57   |             | c' - 9   |             | h - 19   | 110820-0-01 | F - 12   | 140084-0-00 | B - 53   |
|             | L - 60   |             | d' - 12  |             | j - 14   |             | F - 31   | 140088-0-01 | B - 25   |
|             | b - 26   |             | e - 11   |             | k - 18   |             | K - 31   |             |          |
|             | c - 22   |             | e' - 11  |             | m - 34   |             | L - 31   | 140092-0-01 | B - 21   |
|             | d - 24   |             | f - 10   |             | n - 58   |             | a - 4    |             | B - 32   |
|             | b' - 21  |             | f' - 10  |             |          |             | g - 36   | 140093-0-00 | B - 20   |
|             | c' - 23  |             | g - 11   | 105230-0-01 | N' - 21  |             | g' - 38  | 140096-0-01 | B - 4    |
|             | d' - 31  |             | g' - 11  |             | m - 21   |             | h - 36   | 140165-0-01 | D - 79   |
|             | e - 41   |             | h - 11   | 105234-0-03 | K - 24   |             | n - 29   | 140176-0-01 | D - 85   |
|             | e' - 41  |             | j - 9    |             | L - 24   | 110832-0-01 | F - 13   | 140180-0-01 | B - 54   |
|             | f - 24   |             | k - 13   |             | g - 29   |             | F - 30   | 140187-0-00 | D - 2    |
|             | f' - 24  |             | m - 30   |             | g' - 31  |             | a - 5    | 140188-0-04 | D - 1    |
|             | g - 62   |             |          |             | h - 29   | 111443-0-01 | I' - 20  | 140205-0-01 | D - 18   |
|             | g' - 65  | 100136-0-01 | P - 15   |             | n - 22   |             | J - 14   | 140207-0-01 | D - 44   |
|             | h - 64   | 100257-0-10 | H - 5    | 105248-0-01 | F - 9    | 111486-0-01 | A - 70   | 140208-0-01 | D - 40   |
|             | j - 22   | 100260-0-01 | C - 39   | 105343-0-01 | Y - 3    |             | B - 77   |             | D - 46   |
|             | k - 43   |             | E - 36   | 106568-0-03 | D - 108  | 111865-0-01 | A - 28   | 140209-0-01 | D - 45   |
|             | m - 45   | 100294-0-02 | D - 97   | 107093-0-02 | D - 82   | 112299-0-01 | F - 3    | 140210-0-01 | D - 47   |
|             | n - 54   | 100366-0-01 | B - 22   | 107231-0-02 | E - 73   | 112300-0-01 | F - 2    | 140217-0-01 | D - 39   |
|             |          |             | B - 26   | 107244-0-01 | B - 62   | 112301-0-01 | F - 4    | 140232-0-01 | E - 30   |
|             |          |             | B - 33   | 107351-0-01 | B - 81   |             | Q - 5    | 140233-0-01 | E - 31   |
| 048020-3-42 | E - 3    |             | E - 32   | 107407-0-03 | A - 40   |             | n - 11   | 140235-0-00 | E - 37   |
| 048030-3-42 | J - 18   |             | P - 2    |             | D - 57   | 112348-0-01 | G - 1    | 140248-0-01 | E - 55   |
|             | I' - 22  | 100444-0-02 | P - 7    |             | D - 59   |             | G - 8    | 140261-0-01 | E - 14   |
| 048040-3-42 | D - 66   | 100447-0-01 | P - 24   |             | E - 41   |             | G - 11   | 140262-0-00 | E - 17   |
| 048080-3-42 | E - 16   | 100463-0-01 | P - 32   |             | E - 57   |             | G - 13   | 140263-0-00 | E - 12   |
| 048150-1-43 | D - 67   |             | P - 17   | 107779-0-01 | Y - 8    |             | G - 17   | 140317-0-00 | C - 20   |
| 071023-8-50 | C - 83   | 10118-0-01  | Y - 12   | 108494-0-01 | P - 13   |             | H - 7    |             | E - 27   |
| 072600-0-00 | B - 42   | 101572-1-01 | A - 72   | 108495-0-01 | P - 14   |             | H - 11   | 140320-0-00 | B - 24   |
| 072600-1-00 | B - 59   | 101706-0-01 | D - 30   | 108960-0-02 | A - 3    |             | H - 14   | 140325-0-01 | G - 4    |
| 100025-0-02 | D - 73   |             | D - 43   | 109203-0-01 | A - 44   |             | H - 19   | 140326-0-01 | B - 6    |
| 100032-0-03 | A - 63   |             | G - 24   |             | D - 100  | 112359-0-01 | G - 18   |             | C - 28   |
|             | E - 79   |             | K - 21   | 109852-0-01 | P - 4    |             | H - 9    |             | D - 9    |
| 100080-0-02 | P - 3    |             | K - 23   | 109853-0-01 | P - 1    |             | H - 10   | 140327-0-01 | B - 23   |
| 100080-0-04 | E - 64   |             | L - 21   | 110087-0-01 | P - 35   |             | H - 13   |             | C - 9    |
|             | I - 5    |             | L - 23   | 110161-0-03 | P - 6    |             | H - 18   |             | C - 42   |
|             | I' - 1   |             | g - 26   | 110161-0-06 | E - 25   | 112364-0-01 | G - 2    |             | D - 5    |
|             | J - 1    |             | g - 28   | 110201-0-01 | M - 15   |             | G - 7    | 140342-0-01 | Y - 2    |
|             | J' - 2   |             | g' - 28  |             | J' - 11  |             | G - 10   | 140415-0-00 | B - 9    |
|             | K - 5    |             | g' - 30  | 110230-0-01 | K - 25   |             | G - 15   | 140416-0-00 | C - 46   |
|             | K' - 1   |             |          |             |          |             |          |             |          |

| Parts No.   | Ref. No.  | Parts No.   | Ref. No. | Parts No.   | Ref. No.  | Parts No.   | Ref. No. | Parts No.   | Ref. No.  |
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| 140416-0-00 | I -27     | 144075-0-01 | E -43    | 144784-0-01 | K -17     | 146404-0-01 | D -76    | 146441-0-00 | k .42     |
|             | N -29     | 144079-0-01 | E - 7    |             | L -17     | 146405-0-01 | D -72    |             | m .44     |
|             | d' -43    | 144081-0-01 | E - 9    |             | g -22     | 146419-0-01 | A -14    |             | n .55     |
|             | e -32     | 144083-0-01 | E - 4    |             | g' -24    | 146420-0-00 | A -15    |             |           |
|             | e' -32    | 144084-0-01 | E - 2    |             | h -22     | 146421-0-00 | A -16    | 146442-0-01 | A -37     |
|             | f -36     | 144085-0-01 | E - 5    | 144788-0-01 | K -29     | 146422-0-01 | A - 2    |             | K .54     |
|             | f' -36    | 144086-0-01 | E - 6    |             | L -29     | 146425-0-01 | A -11    |             | L .57     |
|             | k -34     | 144088-0-01 | E -72    |             | g -34     | 146426-0-00 | A -10    |             | b .23     |
|             |           |             | J' -13   |             | g' -36    | 146427-0-01 | A - 9    |             | c .19     |
| 140417-0-00 | C -50     |             | M -17    |             | h -34     |             | b - 2    |             | d .21     |
| 140418-0-00 | B - 5     | 144091-0-01 | K - 7    |             | n -27     |             | c - 2    |             | b' .18    |
| 140421-0-01 | A -81     |             | L - 7    | 144793-0-00 | K -49     |             | d - 2    |             | c' .20    |
| 140503-0-01 | P -37     |             | g - 9    |             | L -49     |             | b' - 2   |             | d' .28    |
| 140504-0-01 | E -68     |             | g' - 9   |             | g -54     |             | c' - 2   |             | e .38     |
| 140759-0-00 | Y -32     |             | h - 9    |             | g' -56    |             | d' - 4   |             | e' .38    |
| 140778-0-01 | G -12     | 144100-0-01 | K -10    |             | h -54     |             | e - 5    |             | f .21     |
| 140779-0-01 | G - 9     |             | L -10    | 144803-0-01 | P -19     |             | e' - 5   |             | f' .21    |
| 140780-0-01 | G - 6     |             | g -12    | 144804-0-01 | P -22     |             | f - 2    |             | g .59     |
| 140888-0-01 | Y -35     |             | g' -12   | 144805-0-01 | P -26     |             | f' - 2   |             | g' .62    |
| 141183-0-00 | A -74     |             | h -12    | 144806-0-01 | P -23     |             | g - 6    |             | h .61     |
| 141514-0-01 | N - 2     | 144103-0-02 | F -15    | 144811-0-01 | K - 5-11  |             | g' - 6   |             | j .19     |
|             | N -25     |             | F -28    | 144813-0-01 | K - 8     |             | h - 6    |             | k .40     |
|             | Q - 1     |             | a - 7    |             | L - 8     |             | j - 2    |             | m .42     |
|             | Q - 2     | 144104-0-01 | F -16    | 144815-0-01 | g - 7-13  |             | k - 7    |             | n .51     |
|             | Q -13     |             | b -28    |             | g' - 7-13 |             | m -37    |             |           |
|             | m - 2     |             | c -24    | 144816-0-01 | g -10     |             | n -64    | 146446-0-01 | A .32     |
|             | m -40     |             | d -26    |             | g' -10    |             |          | 146448-0-01 | A .62     |
|             | n - 5     |             | b' -24   |             | h -10     | 146428-0-01 | A - 7    | 146449-0-01 | A .56     |
|             | n - 7     |             | c' -26   | 145277-1-04 | Y -38     | 146430-0-01 | K - 1    | 146450-0-01 | A .58     |
|             | n - 8     |             | d' -49   | 145446-0-01 | F -14     |             | L - 1    | 146451-0-01 | B .67     |
| 141544-0-01 | N - 9     |             | e -43    |             | F -29     |             | g - 1    | 146452-0-01 | B .68     |
|             | m - 9     |             | e' -43   |             | a - 6     |             | g' - 1   | 146453-0-01 | B .69     |
|             |           |             | f -41    | 145663-0-01 | D -74     |             | h - 1    | 146454-0-01 | B .66     |
| 142125-0-00 | Y -14     |             | f' -41   | 145664-0-00 | A -51     | 146432-0-01 | A -12    | 146457-0-01 | A .52     |
| 142201-0-01 | M -12     |             | g -64    | 145774-0-01 | I -10     | 146433-0-00 | A - 6    | 146458-0-02 | A .46     |
|             | I' - 9    |             | g' -67   |             | M - 8     | 146436-0-01 | A -48    | 146460-0-01 | A .60     |
| 142262-0-01 | Y -26     |             | h -66    |             | N -12     | 146440-0-01 | A -36    | 146461-0-01 | A . 4     |
| 142274-0-01 | B -43     |             | j -24    |             | e -12     |             | K -55    | 146473-0-01 | B .46, 47 |
| 142343-0-01 | Y -36     |             | k -45    |             | e' -12    |             | L -58    | 146476-1-01 | B .25-29  |
| 142669-0-01 | F -38     |             | m -47    |             | j -10     |             | b -24    | 146478-0-01 | B .27     |
| 143179-0-00 | B -48, 49 |             | n -48    |             | k -14     |             | c -20    | 146479-0-01 | B .31     |
| 143311-0-01 | B -40     |             |          |             |           |             | d -22    | 146480-0-01 | B . 1-4   |
| 143312-0-00 | B -41     | 144105-0-00 | F -17    | 145803-0-01 | K -19     |             | b' -19   | 146481-0-01 | B . 2     |
| 143323-1-03 | E -21     |             | F -25    |             | L -19     |             | c -21    | 146482-0-01 | B . 3     |
| 143325-0-01 | E -22     |             | K -28    |             | g -24     |             | d' -29   | 146483-0-01 | a . 1     |
| 143374-0-01 | A -75     |             | L -28    |             | g' -26    |             | e -39    | 146484-0-01 | B .18     |
| 143564-0-01 | D -22     |             | N -20    |             | h -24     |             | e' -39   | 146485-0-01 | B .16     |
| 143565-0-01 | D -20     |             | a - 9    | 145807-0-01 | K -43     |             | f -22    | 146486-0-00 | B .15     |
| 143566-0-01 | Y - 7     |             | g -33    |             | L -43     |             | f' -22   | 146494-0-01 | B .76     |
| 143750-0-02 | P -16     |             | g' -35   |             | g -48     |             | g -60    | 146495-0-01 | B .75     |
| 143757-0-01 | F - 5     |             | h -33    |             | g' -50    |             | g' -63   | 146511-0-00 | H .16, 17 |
| 143767-0-02 | P - 8-16  |             | m -20    |             | h -48     |             | h -62    | 146512-0-00 | H .12     |
| 143976-0-01 | P -11, 12 |             | n -26    | 145808-0-01 | K -41     |             | j -20    | 146515-0-00 | H . 8     |
| 143978-0-01 | P - 9, 10 | 144108-0-01 | F - 8    |             | L -41     |             | k -41    | 146516-0-00 | H . 6     |
| 143980-0-01 | P - 8     | 144110-0-01 | F -27    |             | g -46     |             | m -43    | 146521-0-01 | E . 8     |
| 143989-0-01 | P -25     | 144111-0-01 | F -21    |             | g' -48    |             | n -53    | 146522-0-01 | E .23     |
|             | P -31     | 144116-0-00 | H - 4    |             | h -46     |             |          | 146523-0-01 | E .18     |
| 143992-0-01 | A - 5     |             | b -21    |             | n -38     | 146441-0-00 | A -39    | 146524-0-01 | E .15     |
| 144025-0-01 | C -30-32  |             | d -26    | 145809-0-01 | K -51     |             | K -56    | 146525-0-01 | E .10     |
| 144029-0-00 | C -37     | 144117-0-00 | E -28    |             | L -51     |             | L -59    | 146526-0-01 | n .65     |
| 144031-0-00 | C -41     | 144124-0-01 | Y - 9    |             | g -56     |             | b -25    | 146527-0-01 | E .74     |
| 144044-0-01 | C - 1-3   | 144127-0-01 | C -17    |             | g' -58    |             | c -21    | 146528-0-01 | D .67-86  |
| 144049-0-01 | C -19     | 144622-0-01 | G -22    |             | h -56     |             | d -23    | 146529-0-01 | D .68     |
| 144053-0-01 | D -71, 71 | 144784-0-01 | K -36    |             | n -46     |             | b' -20   | 146530-0-01 | D .83     |
| 144055-0-01 | D -69     |             | L -36    | 145811-0-01 | K -33     |             | c' -22   | 146531-0-01 | D .84     |
| 144068-0-01 | I -16     |             | g -41    |             | L -33     |             | d' -30   | 146532-0-01 | D .11     |
|             | N -18     |             | g' -43   |             | g -38     |             | e -40    | 146533-0-01 | D . 7     |
|             | d' -22    |             | h -41    |             | g' -41    |             | e' -40   | 146534-0-01 | D .64     |
|             | e -21     |             | n -36    |             | h -38     |             | f -23    | 146535-0-01 | D .65     |
|             | e' -21    | 144783-0-01 | K -16    |             | A -22     |             | f' -23   | 146536-0-01 | D .63     |
|             | k -23     |             | L -16    | 146315-0-00 | A -71     |             | g -61    | 146537-0-00 | D .62     |
|             |           |             | g -21    | 146401-0-01 | D -80     |             | g' -64   | 146538-0-01 | D . 4     |
| 144073-0-01 | E -40     |             | g' -23   | 146402-0-01 | D -75     |             | h -63    | 146539-0-00 | D . 6     |
| 144074-0-00 | E -42     |             | h -21    | 146403-0-01 | D -77     |             | j -21    | 146540-0-00 | D .23     |

| Parts No.   | Ref. No.       | Parts No.   | Ref. No.  | Parts No.   | Ref. No.  | Parts No.   | Ref. No. | Parts No.   | Ref. No.    |
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| 146541-0-01 | D-26, 28, 48   | 146615-0-00 | C - 8     | 146745-0-01 | e -17     | 146779-0-01 | d' -15   | 146888-0-01 | E -59       |
| 146542-0-01 | D -28          | 146616-0-00 | C -13     |             | e' -17    | 146780-0-01 | d' -15   |             | J' - 7      |
| 146543-0-01 | D -26          | 146617-0-01 | C -15     |             | k -19     | 146781-0-01 | c -12    |             | M - 7       |
| 146544-0-00 | D -48          | 146636-0-01 | G - 3     |             |           |             | d -12    |             | K' - 8      |
| 146547-0-00 | D -27          |             |           | 146746-0-01 | K -13     |             | e -14    |             | b - 9       |
| 146548-0-01 | D -31          | 146644-0-00 | B -36     |             | g -15     |             | e' -14   |             | c - 8       |
| 146549-0-01 | D -25          | 146645-0-01 | B -35     |             | g' -15    |             | j -12    |             | d - 8       |
| 146550-0-01 | D -12~16       | 146647-0-01 | B -51     | 146748-0-01 | D -53     |             | k -16    |             | b' - 8      |
| 146554-0-01 | D -36          | 146648-0-01 | F -19     | 146749-0-01 | d -17     | 146782-0-01 | c -12    |             | c' - 8      |
| 146555-0-01 | D -41          | 146649-0-01 | F -11     |             | b' -16    |             | d -12    |             | d' -11      |
| 146556-0-01 | D -103         | 146652-0-01 | F -33     |             | c -17     |             | e -14    |             | f - 9       |
| 146558-0-01 | D -95          | 146653-0-01 | F -34     |             | c' -16    |             | e' -14   |             | f' - 9      |
| 146559-0-01 | D -98          | 146654-0-01 | F -36     |             | i -17     |             | k -16    |             | m -29       |
| 146560-0-01 | D -96          | 146700-0-01 | Y -10     | 146750-0-01 | I -15     | 146783-0-01 | e -14    | 146889-0-01 | E -65       |
| 146561-0-01 | D -91          | 146704-0-01 | A -77     |             | N -17     |             | e' -14   |             | M - 9       |
| 146562-0-01 | K - 2          | 146705-0-00 | A -78     |             | e -18     |             | k -16    |             | K' - 7      |
|             | L - 2          | 146706-0-01 | I - 1     |             | e' -18    | 146785-0-01 | f -13    |             | b -11       |
|             | g - 2          |             | N - 1     |             | k -20     |             | f' -13   |             | c -10       |
|             | g' - 2         |             | d' - 1    | 146751-0-01 | K -15     | 146786-0-01 | g -14    |             | d -10       |
|             | h - 2          |             | e - 1     |             | L -15     |             | g' -14   |             | b' -10      |
| 146563-0-01 | D -88          |             | e' - 1    |             | g -17     |             | h -14    |             | c' -10      |
| 146564-0-01 | D -93          |             | k - 1     |             | g' -17    | 146787-0-01 | b -14    |             | d' -13      |
| 146565-0-01 | D -94          |             |           |             | h -17     |             | c -13    |             | f -11       |
| 146566-0-01 | D -92          | 146708-0-00 | A -68     | 146754-0-01 | E -45     |             | d -13    |             | f' -11      |
| 146577-0-01 | D -51          | 146709-0-00 | A -67     | 146759-0-01 | J -16     |             | d' -16   |             | m -31       |
| 146578-0-01 | I -14          | 146710-0-01 | K -53~58  |             | I' -23    |             | e -15    | 146890-0-01 | J - 1~ 5    |
|             | K -14          |             | L -56~51  | 146760-0-01 | J -21     |             | e' -15   |             | I' - 1~ 5   |
|             | N -16          | 146712-0-01 | A -42     |             | I' -25    |             | g -18    | 146892-0-01 | J - 4       |
|             | d' -20         | 146713-0-01 | A -29, 30 | 146761-0-01 | J' -12~20 |             | g' -18   |             | I' - 4      |
|             | e -19          | 146716-0-01 | J -24     |             | M -16~24  |             | h -18    | 146893-0-01 | M - 2~10    |
|             | e' -19         |             | I' -28    | 146762-0-01 | J' -18    |             | j -13    |             | J' - 2~10   |
|             | g -16          |             | n -76     |             | M -22     |             | k -17    | 146894-0-01 | M - 5       |
|             | g' -16         | 146717-1-01 | A -64     | 146763-0-01 | g -58~63  |             | m -33    |             | J' - 5      |
|             | k -21          | 146718-0-01 | A -34     |             | g' -61~66 |             | n -57    | 146895-0-01 | M' - 3~ 9   |
|             |                | 146719-0-01 | I' - 8    |             | h -60~65  |             |          |             | N - 7~13    |
| 146580-0-01 | E -38          |             | M -11     |             | n -50~55  | 146788-0-01 | b' -13   | 146897-0-01 | M' - 6      |
| 146581-0-01 | E -35          | 146724-0-01 | B -44     | 146765-0-01 | a -12     |             | c' -13   |             | N -10       |
|             | C -38          | 146725-0-01 | B -70     | 146771-0-01 | b - 1, 2  |             | f -14    | 146898-0-01 | I - 5~11    |
| 146582-0-01 | E -50          | 146726-0-01 | B -64     |             | d' - 3, 4 |             | f' -14   | 148900-0-01 | I - 8       |
| 146584-0-01 | E -53          | 146730-0-01 | B -80     | 146773-0-01 | c - 1, 2  | 146789-0-01 | E -67    | 146902-0-01 | c - 3~11    |
| 146585-0-01 | E -48          |             | J -23     |             | d - 1, 2  | 146790-0-01 | f -18    |             | d - 3~11    |
| 146586-0-01 | E -54          |             | I' -27    |             | e - 4, 5  |             | f' -18   |             | m -24~32    |
| 146587-0-02 | K -16~47       | 146731-0-01 | B -80     |             | e' - 4, 5 | 146791-0-01 | f -19    | 146903-0-01 | c - 6       |
|             | L -16~47       |             | J -23     |             | g - 5, 6  |             | f' -19   |             | d - 6       |
|             | g -21~52       |             | I' -27    |             | g' - 5, 6 | 146793-0-01 | a - 2    |             | m -27       |
|             | g' -23~54      |             | M -27     |             | h - 5, 6  | 146883-0-01 | M - 1    | 146904-0-01 | e - 7~13    |
|             | h -21~52       |             | J' -22    |             | i - 1, 2  |             | N - 4    |             | e' - 7~13   |
| 146592-0-01 | K -46          | 146732-0-01 | B -80     |             | k - 6, 7  |             | j - 3    | 146905-0-01 | e -10       |
|             | L -46          |             | J -23     |             | m -36, 37 |             | k - 4    |             | e' -10      |
|             | g -51          |             | M -27     |             | n -63, 64 | 146884-0-01 | E -58~66 | 146906-0-01 | j - 5~11    |
|             | g' -53         |             | M -11     | 146775-0-01 | b' - 1, 2 | 146886-0-01 | E -61    |             | k - 9~15    |
|             | h -51          | 146733-0-01 | B -80     |             | c' - 1, 2 | 146887-0-01 | E -62    | 146907-0-01 | j - 8       |
| 146593-0-01 | P -28          | 146734-0-01 | I -12     |             | f - 1, 2  |             | I - 7    |             | k -12       |
| 146594-0-01 | P -27          | 146735-0-01 | I -12     |             | f' - 1, 2 |             | J - 3    | 146914-0-01 | D -101, 102 |
| 146596-0-01 | J' -19         |             | N -14     |             | f' - 1, 2 |             | I' - 3   | 146924-0-00 | A -30       |
|             | M -23          | 146736-0-01 | I -12     | 146777-0-01 | b -16     |             | J' - 4   | 146926-0-01 | F -22       |
| 146597-0-01 | J' -16         | 146737-0-01 | K -12     |             | c -15     |             | M - 4    | 146929-0-01 | F -40       |
|             | M -20          |             | L -12     |             | d -16     |             | M - 5    | 146963-0-01 | b - 4~12    |
| 146598-0-01 | J' -15         | 146738-0-00 | H - 1~ 4  |             | d' -18    |             | N - 9    |             | d' - 6~14   |
|             | M -19          | 146739-0-00 | H - 3     |             | e -20     |             | K' - 4   | 146964-0-01 | b - 7       |
| 146599-0-01 | J' -12         | 146740-0-00 | H - 1     |             | e' -20    |             | b - 6    |             | d' - 9      |
|             | M -16          |             | b -18     |             | g -20     |             | c - 5    | 146965-0-01 | b' - 3~11   |
| 146602-0-01 | C -40          |             | d' -23    |             | g' -20    |             | d - 5    |             | c' - 3~11   |
| 146603-1-01 | C-21~27, 44~49 | 146741-0-00 | D -42     |             | h -20     |             | b' - 5   |             | f - 4~12    |
| 146611-1-01 | I -17~29       | 146742-0-01 | I - 2     |             | j -15     |             | c' - 5   |             | f' - 4~12   |
|             | N -19~31       |             | N - 2     |             | k -22     |             | d' - 8   | 146966-0-01 | b' - 6      |
|             | d' -33~45      |             | d' - 2    |             | m -35     |             | e - 9    |             | c' - 6      |
|             | e -22~34       |             | e - 2     |             | n -56     |             | e' - 9   |             | f - 7       |
|             | e' -22~34      |             | e' - 2    |             |           |             | f - 6    |             | f' - 7      |
|             | f -26~38       |             | k - 2     | 146778-0-01 | b' -15    |             | f' - 6   | 146974-0-01 | A -20       |
|             | f' -26~38      |             |           |             | c' -15    |             | j - 7    | 146974-0-02 | A -30       |
|             | k -24~36       | 146744-0-01 | D -49     |             | f -16     |             | k -11    | 146974-0-03 | A -20       |
|             |                | 146745-0-01 | I -13     |             | f' -16    |             | m -26    | 146974-0-04 | I - 3       |
| 146614-0-01 | C -10          |             | N -15     | 146779-0-01 | b -13     |             |          | 146974-0-05 | I - 3       |



| Parts No.   | Ref. No. | Parts No.   | Ref. No.    | Parts No.   | Ref. No.   | Parts No.   | Ref. No.    | Parts No.   | Ref. No.    |
|-------------|----------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|
| 146974-0-06 | I - 3    | 147454-0-01 | n - 1       | 148030-0-01 | b' - 12    | 148984-0-01 | e - 42      | 150868-0-01 | p - 4       |
| 146974-0-07 | J - 7    | 147473-0-01 | N'10~21     | 148031-0-01 | c' - 12    |             | e' - 42     | 150869-0-01 | p - 15~23   |
| 146974-0-08 | J - 7    |             | m-10~21     | 148033-0-01 | C - 43     |             | f - 25      | 150871-0-01 | p - 18      |
| 146974-0-09 | J - 7    | 147476-0-01 | N'14        | 148034-0-01 | C - 54     |             | f' - 25     | 150872-0-01 | p - 23      |
| 146974-0-10 | I' - 7   |             | m-17        |             |            |             | g - 63      | 150873-0-01 | p - 10      |
| 146974-0-11 | I' - 7   | 147477-0-01 | N'12        | 148042-0-01 | Z - 5      |             | g' - 66     | 151017-0-01 | Z - 1~3     |
| 146974-0-14 | M-25     |             | m-12        | 148084-0-01 | A - 25     |             | h - 66      | 151059-0-01 | A - 27      |
| 146974-0-15 | M-25     | 147478-0-01 | N'15        | 148174-0-00 | D-55       |             | j - 23      | 151060-0-00 | A - 45      |
| 146974-0-17 | J' - 21  |             | m-14        | 148281-0-01 | E - 39     |             | k - 44      | 151173-0-01 | J - 9~12    |
| 146974-0-19 | K - 4    | 147479-0-01 | N'19        | 148294-0-01 | C - 47     |             | m-46        |             | I' - 13~16  |
| 146974-0-20 | L - 4    |             | m-19        |             | C - 55     |             | n - 52      | 151200-0-11 | B - 14      |
| 146974-0-21 | M-10     | 147480-0-01 | N' - 1      |             | I - 26     |             |             | 151200-0-14 | I - 4       |
| 146974-0-25 | N - 3    |             | m - 1       |             | N - 28     | 148991-0-01 | A-35~39, 83 | 151200-0-09 | J - 6       |
| 146974-0-42 | N'26     | 147483-0-01 | N'24        |             | d' - 42    | 148993-0-01 | b - 22~27   | 151200-0-09 | I' - 6      |
| 146974-0-43 | N'26     | 147484-0-01 | N' - 8      |             | e - 31     |             | c - 18~23   | 151200-0-14 | J' - 1      |
| 146974-0-44 | N'26     |             | m - 7       |             | e' - 31    |             | d - 20~25   | 151200-0-14 | M - 1       |
| 146974-0-54 | A - 20   | 147485-0-01 | N'23        |             | f - 35     |             | b' - 17~22  | 151200-0-14 | N - 6       |
| 146974-0-56 | K' - 13  | 147521-0-01 | G - 19~33   |             | f' - 35    |             | c' - 19~24  | 151200 -    | Y - 22      |
| 146974-0-58 | N'26     | 147522-0-00 | G - 25      |             | k - 33     |             | d' - 27~32  | 151200-0-14 | e - 6       |
| 146975-0-04 | c - 16   | 147523-0-01 | G - 26~29   |             |            |             | e - 37~42   | 151200-0-14 | e' - 6      |
| 146975-0-05 | c - 16   | 147527-0-01 | G - 30      | 148311-1-01 | K' - 1~9   |             | e' - 37~42  | 151200-0-19 | f - 3       |
| 146975-0-10 | c' - 25  | 147528-0-00 | G - 31      | 148313-0-01 | K' - 5     |             | j - 18~23   | 151200-0-19 | f' - 3      |
| 146975-0-12 | d' - 48  | 147529-0-00 | G - 32      | 148314-0-01 | K' - 10~12 |             | k - 39~44   | 151200-0-14 | k - 8       |
| 146975-0-13 | d' - 48  | 147629-0-01 | B - 12, 13  | 148348-0-01 | Z - 4~7    |             | m-41~46     |             |             |
| 146975-0-15 | e - 3    | 147631-0-01 | B - 13      | 148352-0-01 | K' - 10~12 |             |             | 151201-0-01 | a - 10, 13  |
| 146975-0-16 | e' - 3   | 147672-0-01 | N - 4       | 148354-0-01 | K' - 11    | 148995-0-01 | f - 20~25   | 151201-0-02 | F - 24, 43  |
| 146975-0-17 | f - 17   |             | Q - 11      | 148355-0-01 | K' - 12    |             | f' - 20~25  | 151201-0-03 | F - 18, 42  |
| 146975-0-18 | f' - 17  |             | m - 4       | 148366-0-01 | m - 8      | 149170-0-01 | C - 44      | 151201-0-04 | F - 44, 45  |
| 146975-0-19 | g - 4    |             | n - 3       | 148367-0-01 | m - 8      |             | I - 24      | 151206-0-11 | b - 3       |
| 146975-0-20 | g' - 4   | 147698-0-02 | Y - 25      | 148369-0-01 | N' - 5     |             | N - 26      |             | d' - 5      |
| 146975-0-21 | h - 4    | 147710-0-01 | J - 8~21    |             | Q - 10     |             | d' - 40     | 180323-0-01 | C - 11, 12  |
| 146975-0-23 | j - 16   |             | I' - 12~25  |             | m - 5      |             | e - 29      | 180814-0-01 | P - 31~37   |
| 146975-0-31 | k - 3    | 147712-0-01 | J - 17      |             | n - 2      |             | e' - 29     | 181031-0-01 | P - 1~7     |
| 146975-0-32 | k - 3    |             | I' - 21     | 148370-0-01 | m - 38     |             | f - 33      | 181969-0-03 | A - 72, 73  |
| 146975-0-33 | k - 3    | 147713-0-01 | J - 15      | 148371-0-01 | m - 39     |             | f' - 33     |             | D - 29, 30  |
| 146975-0-39 | b - 17   |             | I' - 19     | 148372-0-01 | E - 20     |             | k - 31      | 181995-0-02 | G - 23, 24  |
| 146975-0-41 | e - 3    | 147738-0-00 | H - 2       | 148387-0-01 | Q - 7      |             |             |             | K - 22, 23  |
| 146975-0-62 | e - 3    |             | b - 19      |             | n - 18     | 149171-0-01 | C - 14      |             | L - 22, 23  |
| 146975-0-63 | e' - 3   |             | d' - 24     | 148388-0-01 | Q - 3      | 149173-0-01 | Y - 6       |             | g - 27, 28  |
| 146975-0-64 | b' - 23  | 147759-0-01 | E - 1       |             | n - 9      | 149183-0-01 | n - 69      |             | g' - 29, 30 |
| 146975-0-65 | d - 15   | 147773-0-01 | D - 26, 28  | 148389-0-01 | Q - 6      | 149197-0-01 | n - 62      |             | h - 27, 28  |
| 146975-0-66 | m - 23   | 147828-0-01 | L - 13      |             | n - 12     | 149193-0-01 | n - 61      | 210973-0-01 | Z - 8       |
| 146975-0-67 | m - 23   |             | h - 15      | 148390-0-01 | Q - 4      | 149194-0-01 | n - 59      | 508893-0-01 | G - 35      |
| 146975-0-68 | d' - 48  | 147832-0-01 | L - 14      |             | n - 10     | 149195-1-01 | n - 67~74   | 147952-0-01 | e - 7~13    |
| 146975-0-69 | e' - 3   |             | h - 16      | 148391-0-01 | Q - 12     | 149197-0-00 | n - 14      |             | e' - 7~13   |
| 146975-0-72 | n - 75   | 147848-0-02 | B - 56      |             | n - 4      | 149202-0-01 | n - 16~44   | 148120-0-00 | B - 34      |
| 146975-0-81 | p - 3    | 147919-0-01 | Z - 13      | 148395-0-01 | Q - 2~6    | 149203-0-01 | n - 20      | 150307-0-00 | B - 37      |
| 146975-0-82 | p - 3    | 147919-0-02 | Z - 14      |             | n - 8~12   | 149566-0-02 | K - 27      | 151224-0-01 | P - 18~37   |
| 147049-0-01 | a - 13   | 147933-0-01 | K - 32      |             |            |             | L - 27      | 151227-0-02 | Q - 1~14    |
| 147049-0-02 | F - 43   |             | L - 32      | 148401-0-01 | d' - 19    |             | g - 32      | 146732-0-01 | J' - 22     |
| 147049-0-03 | F - 42   |             | g - 37      | 148402-0-01 | d' - 21    |             | g' - 34     | 146736-0-01 | N - 14      |
| 147049-0-04 | F - 45   |             | g' - 39     | 148425-0-01 | B - 29     |             | h - 32      | 152186-0-21 | f - 3       |
| 147148-0-01 | N'18     |             | h - 37      |             | C - 1      |             | n - 25      |             | f' - 3      |
|             | m-18     | 147934-0-01 | C - 51, 52  |             | C - 30     | 149886-0-00 | D - 106     |             |             |
| 147211-0-01 | G - 16   | 147935-0-01 | I' - 10, 11 |             | E - 34     | 149887-0-01 | D - 107     |             |             |
| 147217-0-00 | D - 34   |             | M - 13, 14  | 148427-0-01 | E - 30~34  | 149888-0-00 | D - 60      |             |             |
| 147318-0-00 | D - 10   | 147936-0-01 | c' - 17, 18 | 148428-0-00 | E - 33     | 150160-0-02 | Z - 15      |             |             |
|             | G - 14   |             | d - 18, 19  | 148430-0-01 | Y - 16     | 150161-0-02 | Z - 1       |             |             |
| 147344-0-01 | F - 1    |             | g' - 21, 22 | 148431-0-01 | Y - 19     | 150339-0-01 | J - 12      |             |             |
| 147361-0-00 | A - 50   |             | f' - 39~40  | 148432-0-01 | Y - 20     |             | I' - 16     |             |             |
| 147362-0-00 | D - 33   | 147937-0-01 | I - 30, 31  | 148447-0-00 | Z - 12     | 150553-0-02 | K - 47      |             |             |
| 147363-0-00 | D - 17   |             | N - 32, 33  | 148782-0-01 | C - 56     |             | L - 47      |             |             |
| 147415-0-02 | B' - 82  |             | d' - 46, 47 | 148832-0-01 | d' - 15    |             | g - 52      |             |             |
| 147433-0-01 | L - 5~11 |             | e - 35, 36  | 148834-0-01 | D - 106    |             | g' - 54     |             |             |
| 147439-0-01 | h - 7~13 |             | e' - 35, 36 | 148925-0-01 | K' - 14    |             | h - 52      |             |             |
| 147440-0-00 | L - 53   |             | f - 39, 40  | 148984-0-01 | A - 83     |             | n - 44      |             |             |
|             | h - 58   |             | k - 37, 38  |             | K - 58     | 150656-0-02 | K - 52      |             |             |
| 147449-0-01 | N' - 7   |             |             |             | L - 61     |             | L - 52      |             |             |
| 147450-0-01 | N' - 7   | 147943-0-01 | A - 101     |             | b - 27     |             | g - 57      |             |             |
| 147451-0-01 | N' - 7   |             |             |             | c - 23     |             | g' - 60     |             |             |
| 147452-0-01 | N' - 7   | 148008-0-00 | b - 18~21   |             | d - 25     |             | h - 57      |             |             |
| 147454-0-01 | N' - 6   |             | d' - 23~26  |             | h' - 22    |             | n - 47      |             |             |
|             | Q - 9    | 148009-0-00 | b - 20      |             | c' - 24    | 150739-0-01 | n - 70      |             |             |
|             | m - 6    |             | d' - 25     |             | d' - 32    | 150867-0-01 | p - 4       |             |             |





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