

GLOBAL

FU 903-95 P

**Long arm cylinder bed feed-up the arm
lockstitch sewing machine with puller**

**INSTRUCTION MANUAL
PARTS MANUAL**

--- CONTENT ---

Instruction Manual

| | |
|---|------|
| 1、 PRECAUTIONS BEFORE STARTING OPERATION | 2 |
| (1) Safety Precautions | 2 |
| (2) Precautions before Starting Operation | 2 |
| (3) Precautions for Operating Conditions | 2 |
| 2、 MAIN SPECIFICATION | 2 |
| 3、 PREPARATION FOR OPERATION | 3 |
| (1) Cleaning the machine | 3 |
| (2) Examination | 3 |
| (3) Lubrication | 3 |
| (4) Testing | 3 |
| 4、 REPLACE NEEDLES | 4 |
| 5、 WINDING OF BOBBIN THREAD | 4 |
| 6、 ADJUSTMENT OF THE BOBBIN WINDER | 4 |
| (1) In case of uneven winding | 4 |
| (2) Winding amount of thread | 4 |
| (3) Winding strength | 4 |
| 7、 THREADING | 5 |
| 8、 REMOVING AND INSERTING THE BOBBIN | 5 |
| (1) Removing | 5 |
| (2) Installation | 5 |
| 9、 ADJUSTING THE THREAD TENSION | 5 |
| (1) Tension of the Upper thread | 5 |
| (2) Tension of the Lower thread | 5 |
| 10、 ADJUSTMENT OF PRESSER FOOT PRESSURE | 5 |
| 11、 ADJUSTMENT OF STITCH LENGTH AND FORWARD/BACKWARD SEWING | 6 |
| 12、 FEED DOG HEIGHT | 6 |
| 13、 ADJUSTING THE HEIGHT OF THE NEEDLE BAR | 6 |
| 14、 USING OF THE HAND WHEEL | 6 |
| Parts Catalog | 7-37 |

1. PRECAUTIONS BEFORE STARTING OPERATION

1) Safety Precautions:

- (1) When turning the power on, keep your hands and fingers away from the area around/under the needle and the area around the balance wheel.
- (2) Power must be turned off when the machine is not in use, or when the operator leaves the seat.
- (3) Power must be turned off when tilting the machine head, installing or removing the "V" belt, adjusting the machine, or when replacing.
- (4) Avoid placing fingers, hairs, bars etc., near the balance wheel, "V" belt, bobbin winder balance wheel, or motor when the machine is in operation.
- (5) Do not insert fingers into the thread take-up cover, under/around the needle, or balance wheel when the machine is in operation.
- (6) If a belt cover, finger guard, eye guard are installed, do not operate the machine without these safety devices.

2) Precautions before Starting Operation:

- (1) If the machine's oil pan has an oil sump, never operate the machine before filling it.
- (2) If the machine is lubricated by a drop oiler, never operate the machine before lubricating.
- (3) When a new sewing machine is first turned on, verify the rotational direction of the balance wheel with the power on. (The balance wheel should rotate counter-clockwise when viewed from the balance wheel.)
- (4) Verify the voltage and (single or three) phase with those given on the machine nameplate.

3) Precautions for Operating Conditions:

- (1) Avoid using the machine at abnormally high temperature (35°C or higher) or low temperature (5°C or lower) .
- (2) Avoid using the machine in dusty conditions.

2. MAIN SPECIFICATIONS

| | | |
|---------------------------------|----------|----|
| Max. Speed(rpm) | 680 | |
| Needle | DY×3 26# | |
| Needle Bar Stroke(mm) | 56 | |
| Thread Take-up Lever Stroke(mm) | 96 | |
| Stitch Length(mm) | 12 | |
| Presser-Foot Stroke | By Hand | 13 |
| | By Knee | 20 |

3. PREPARATION FOR OPERATION

1) Cleaning the machine

Before leaving the factory, the machine parts are coated with rust-preventive grease, which may be hardened and contaminated by dust during storage and shipment. This grease must be removed with gasoline.

2) Examination

Though every machine is confirmed by strict inspection and test before leaving the factory, the machine parts may be loose or deformed after long distance transportation with jolt. A thorough examination must be performed after cleaning the machine. Turn the balance wheel to see if there is running obstruction, parts collision, uneven resistance or abnormal noise. If these exist, adjustment must be made accordingly before run-in operation.

3) Lubrication (Fig.1.1、 Fig.1.2)

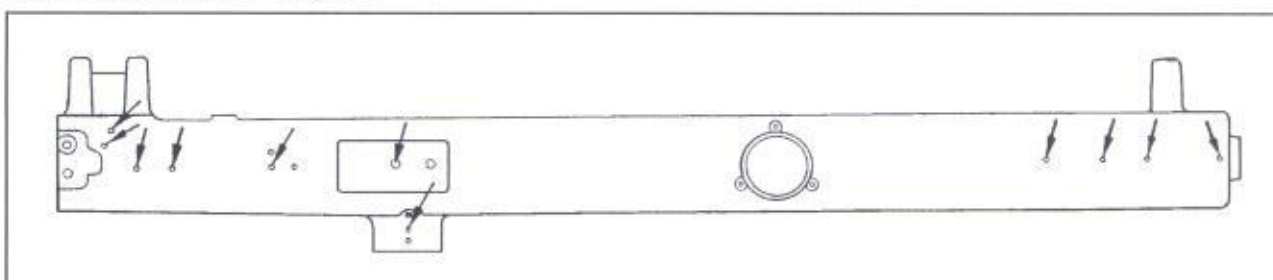


Fig.1.1

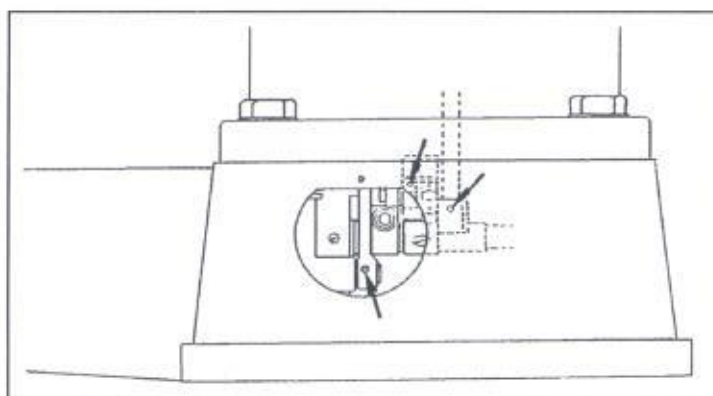


Fig.1.2

When a new sewing machine is used for the first time, or sewing machine left out of use for considerably long time is used again, replenish a suitable amount of oil to the portions indicated by arrow in below figure.

CAUTION: Please use white spindle oil.

Always keep the presser foot lifted before attempting a dry run.

4) Testing

In order to get the best working situation, run the sewing machine in a low speed for about 1 month after lubricated fully. Then increase the speed to the need one.

CAUTION: Before using the following procedures, be sure to turn the power switch off.

The needle used by this sewing machine is DY×3 26#. During operation, proper needle can be chosen according to the sewing thread. (the sewing thread should be able to pass the pinhole.)

4. REPLACE NEEDLES (Fig.2)

CAUTION: Before using the following procedures, be sure to turn the power switch off.

The needle used by this sewing machine is DY×3 26#. Turn the balance wheel to lift needle bar to the upper end of its stroke. Loosen needle clamp screw (A). While keeping the long groove of the needle leftward fully insert the needle shank up to the bottom of the needle socket. Then tighten needle clamp screw (A).

Note: Fig. (b): insufficient insertion.

Fig. (c): wrong direction of long groove.

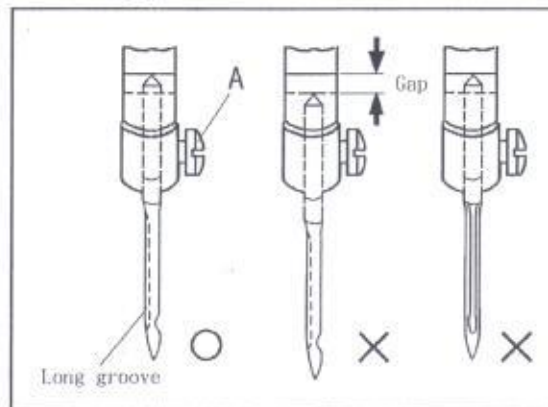


Fig.2

5. WINDING OF BOBBIN THREAD (Fig.3)

- (1) Push the bobbin 3 on the bobbin winder shaft as far as it will go.
- (2) Bring the thread forward toward the bobbin and wind from below in clockwise direction several times around the bobbin.
- (3) Push the lever 5 toward other side so that the driving wheel and driven wheel will engage and then start the machine.
- (4) The driven wheel will automatically be free from the driving wheel and stop after the bobbin is filled with thread.

6. ADJUSTMENT OF THE BOBBIN WINDER (Fig.3)

1) In case of uneven winding

If the thread does not wind evenly on the bobbin, loosen the nut 1 and move the bracket 2 to the right or to the left as may be required, then tighten the nut.

2) Winding amount of thread

Loose the screw 6. move adjusting plate 5 towards the axis can decrease the amount of thread winding on the bobbin, and move backwards can increase it.

3) Winding strength

Strength of the winding can be adjusted with the nut 1.

7. THREADING (Fig.4)

Raise the needle bar to its highest position and route the upper thread in the order illustrated beside.

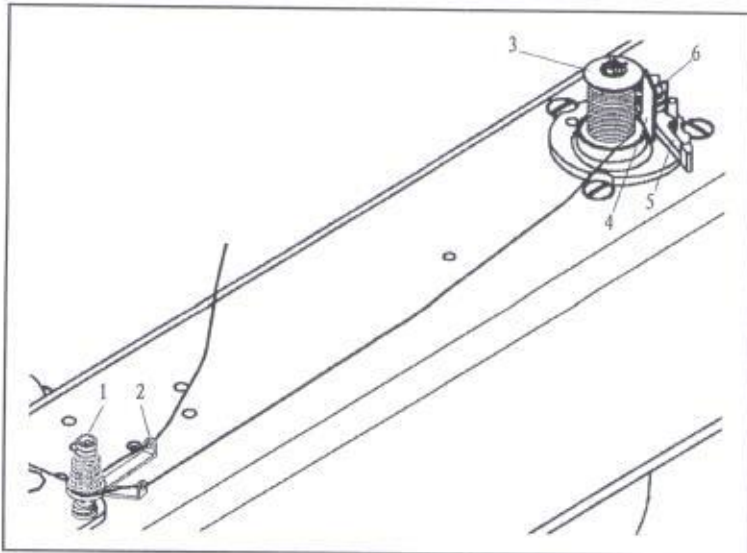


Fig.3

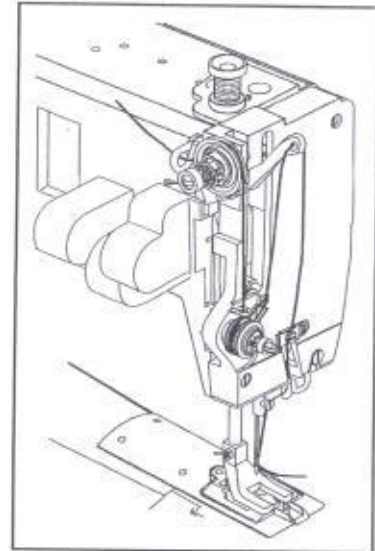


Fig.4

8. REMOVING AND INSERTING THE BOBBIN

- (1) Removing: Open the shuttle race cap and the bobbin holder, then take out the bobbin.
- (2) Installation: Put the bobbin in the rotary hook case, Permit about 5 cm of bobbin thread to hang down freely. Install the bobbin in the bobbin case so that the thread wound direction is clockwise. Then close the rotary hook and the shuttle race cap.

9. ADJUSTING THE THREAD TENSION (Fig.5)

For ordinary stitching, the tension of the upper and the lower threads should be equal.

1) Tension of the upper thread

Before adjusting the tension of the upper thread, be sure that presser foot is let down. To adjust tension, turn serrated nut on tension device to the right (clockwise) to increase tension and to the left (counter-clockwise) if you desire to decrease the tension.

2) Tension of the lower thread

The lower thread tension is controlled by the larger screw near the end of the spring at the outside of the bobbin case. Turning this screw to the right (clockwise) will increase the thread tension, while turning it to the left (counter-clockwise) will decrease the tension.

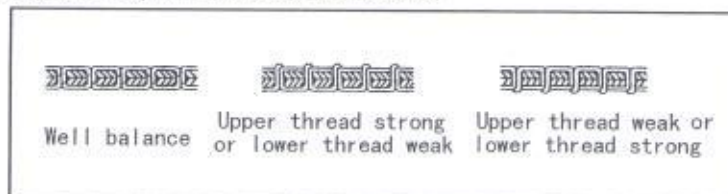


Fig.5

10. ADJUSTMENT OF PRESSER FOOT PRESSURE (Fig.6)

- (1) Pressure should be adjusted according to the material to be sewn.
- (2) Pressure on both the walking foot and the presser foot can be adjusted. (The adjusting screw has been set before shipment.)
- (3) Sewing pressure should be adjusted to the minimum required strength.

11. ADJUSTMENT OF STITCH LENGTH AND FORWARD/BACKWARD SEWING

(Fig.7)

- (1) Stitch length can be changed by the stitch length adjusting bolt.
- (2) Stitch length can be adjusted between 0-8mm.
- (3) Setting the stitch length adjusting bolt upside can sewing ahead, and setting it downside can go backstitch.

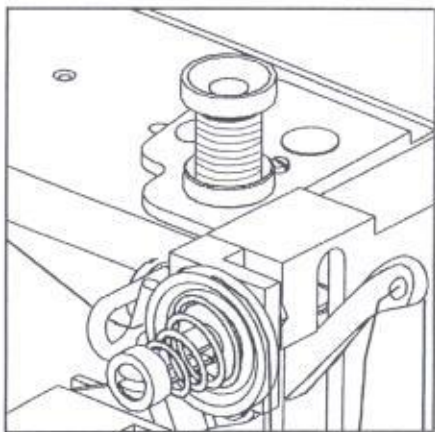


Fig.6

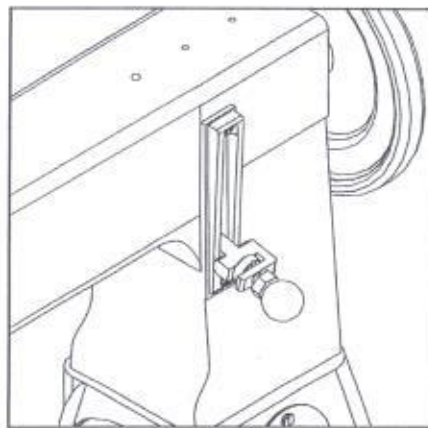


Fig.7

12. FEED DOG HEIGHT (Fig.8)

The feed dog should be 1.5mm higher than the vertex of the needle plate. Adjustment of the feed dog height can be done as follows:

- (1) Turn the stitch length to the minimum position.
- (2) Turn the machine balance wheel so as to raise the feed dog to its highest point.
- (3) Loosen the screw of the feed dog 1 and adjust the height of part 2 by raising or lowering it. Then tighten the screw1.

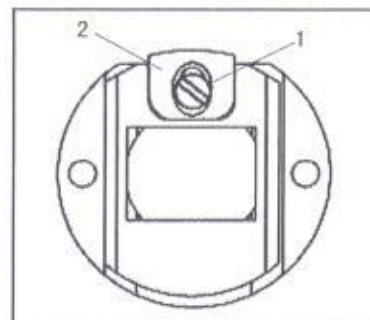


Fig.8

13. ADJUSTING THE HEIGHT OF THE NEEDLE BAR

When the needle bar is at its highest point, normally the measurement between the highest point of the needle plate and the needlepoint is 28 mm. When this distance need to be adjusted, the steps is as follows:

- (1) Take down the face plate, adjust the needle bar to its highest position.
- (2) Loosen the screw of needle bar connecting stud screw.
- (3) Adjust the needle bar to the right position.
- (4) Tighten the screw.

14. USING OF THE HAND WHEEL (Fig.9)

If you want to change the position of the needle when the machine is not running, you can use the hand wheel. Just push the hand wheel in and make the clutch connected then rotate it.

Caution: forbid to push the hand wheel when the machine is running.

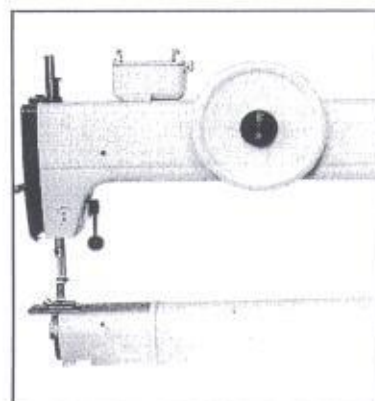
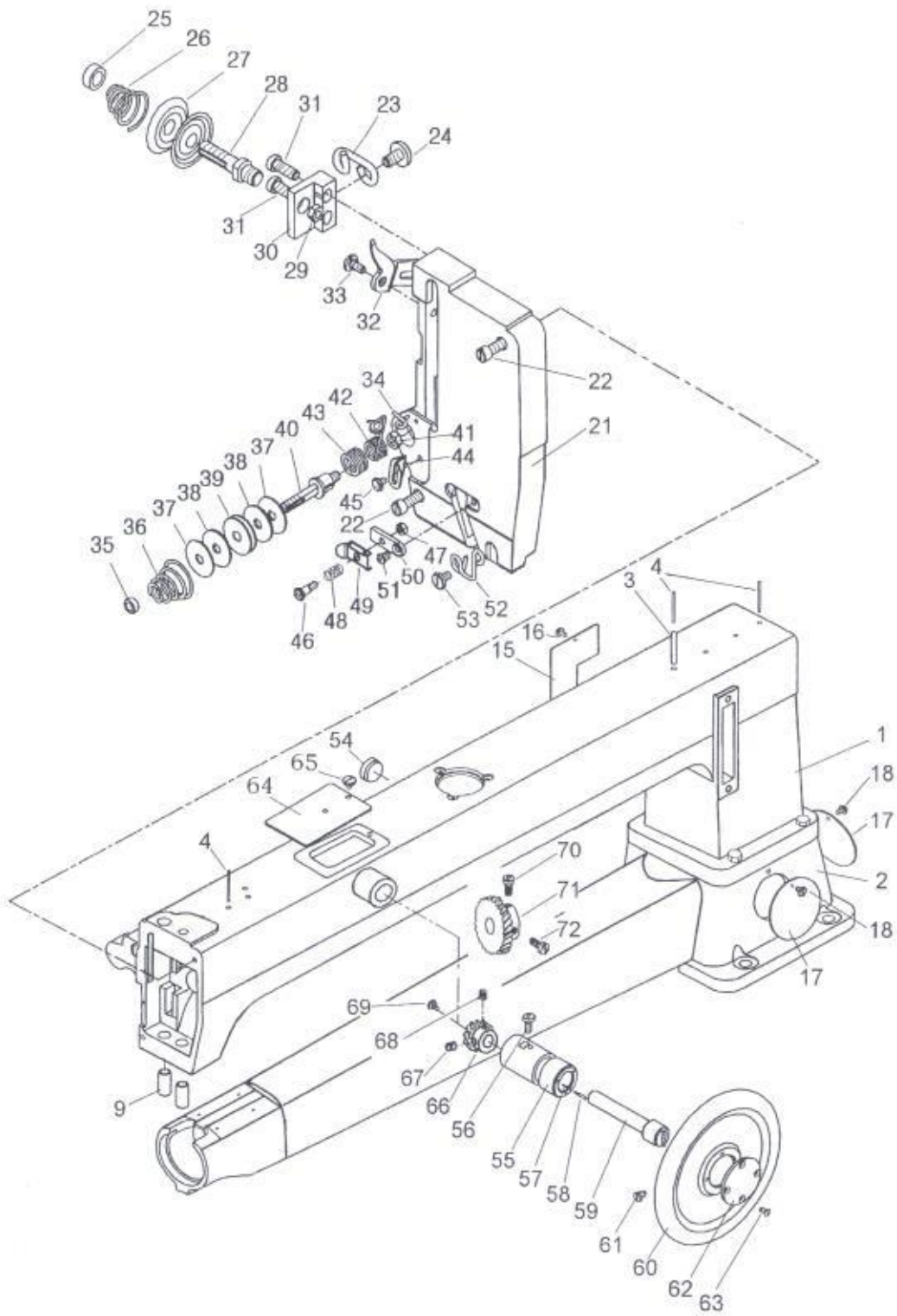


Fig.9

A. ARM BED AND ITS ACCESSORIES



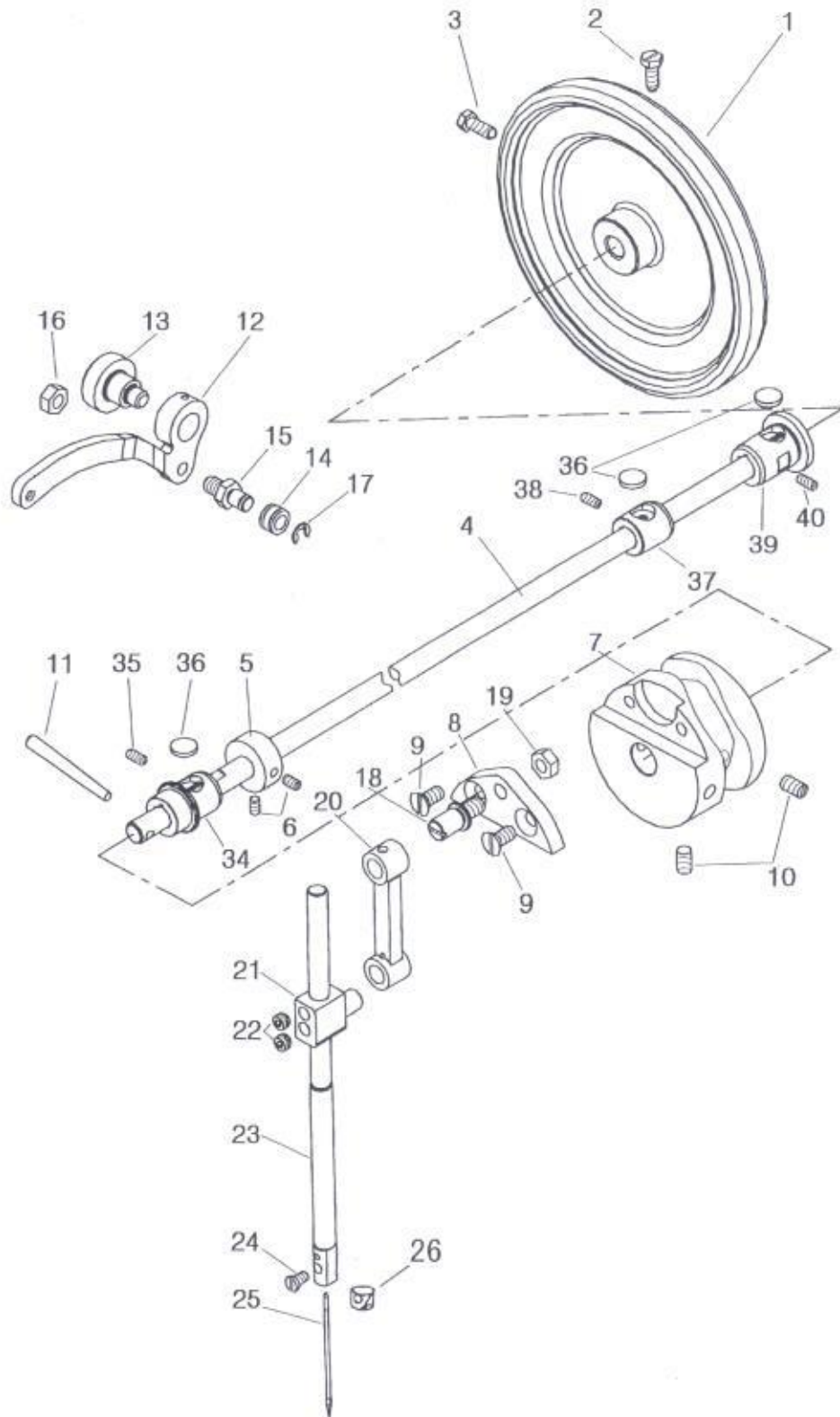
A. ARM BED AND ITS ACCESSORIES

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|--|------|-------------------|
| A01 | HD607B8001 | Arm | 1 | |
| A02 | HD609B8001 | Bed | 1 | |
| A03 | H7215B8001 | Oil pipe | 1 | |
| A04 | H7216B8001 | Oil wick | 3 | |
| A09 | H7218B8001 | Presser bar bushing | 1 | |
| A15 | H7225B8001 | Arm side cover | 1 | |
| A16 | HA100B2060 | Screw | 1 | SM11/64 (40) × 9 |
| A17 | H7228B8001 | Round cover | 2 | |
| A18 | HA100B2060 | Screw | 2 | SM11/64 (40) × 9 |
| A21 | H7236B8001 | Face plate | 1 | |
| A22 | H7238B8001 | Screw | 2 | SM15/64 (28) × 22 |
| A23 | H7240B8001 | Thread guide | 1 | |
| A24 | H3410C301K | Screw | 1 | SM9/64 (40) × 6.5 |
| A25 | HA115B0702 | Nut | 1 | |
| A26 | H7241B8001 | Tension spring | 1 | |
| A27 | HA310B0705 | Tension disc | 2 | |
| A28 | H7242B8001 | Tension screw stud | 1 | SM9/32 (28) |
| A29 | H2010J0066 | Tension nut | 1 | SM9/32 (28) |
| A30 | H7243B8001 | Thread tension regulator complete base | 1 | |
| A31 | HA111G0683 | Screw | 2 | SM11/64 (40) × 12 |
| A32 | H7244B8001 | Tension releasing disc | 1 | |
| A33 | H7245B8001 | Screw | 1 | SM3/16 (28) |
| A34 | H7246B8001 | Thread guide | 1 | |
| A35 | HA115B0702 | Tension nut | 1 | |
| A36 | H7241B8001 | Tension spring | 1 | |
| A37 | H7248B8001 | Washer | 2 | |
| A38 | H7249B8001 | Felt | 2 | |
| A39 | H7250B8001 | Damping plate | 1 | |
| A40 | H7251B8001 | Tension screw stud | 1 | SM15/64 (28) |
| A41 | HA710N0683 | Nut | 1 | SM15/64 (28) |
| A42 | H7253B8001 | Thread take-up spring | 1 | |
| A43 | H7254B8001 | Spring | 1 | |
| A44 | H7255B8001 | Thread take-up spring guide plate | 1 | |
| A45 | H3410C301K | Screw | 1 | SM9/64 (40) × 6.5 |
| A46 | H7257B8001 | Screw | 1 | SM1/8 (44) |
| A47 | H7258B8001 | Nut | 1 | SM1/8 (44) |
| A48 | H7259B8001 | Tension spring | 1 | |
| A49 | H7260B8001 | Tension disc | 1 | |
| A50 | H7261B8001 | Thread tension regulator complete base | 1 | |
| A51 | HA7311CC06 | Screw | 1 | SM9/64 (40) × 6 |
| A52 | H7262B8001 | Thread guide | 1 | |
| A53 | H3410C301K | Screw | 1 | SM9/64 (40) × 6.5 |
| A54 | HA300B2100 | Rubber plug | 1 | |

A. ARM BED AND ITS ACCESSORIES

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|------------------|------|---------------------|
| A55 | HE957B8001 | Bushing | 1 | |
| A56 | HE040D8001 | Screw | 1 | SM17/64 (24) × 17.5 |
| A57 | HE962B8001 | Spring | 3 | |
| A58 | HE961B8001 | Pin | 3 | |
| A59 | HE965B8001 | Hand wheel shaft | 1 | |
| A60 | HE963B8001 | Hand wheel | 1 | |
| A61 | HE966B8001 | Screw | 2 | SM1/4 (32) × 6 |
| A62 | HE965B8001 | Cover | 1 | |
| A63 | HA700F2100 | Screw | 4 | SM11/64 (40) |
| A64 | HE951B8001 | Top cover | 1 | |
| A65 | H201510065 | Screw | 1 | SM3/16 (28) |
| A66 | HE958B8001 | Gear | 1 | |
| A67 | HE017G8001 | Screw | 1 | SM1/4 (32) × 5.5 |
| A68 | HE023C8001 | Screw | 1 | SM1/4 (32) × 5.5 |
| A69 | HE007C8001 | Screw | 1 | SM17/64 (24) × 11 |
| A70 | HE960B8001 | Screw | 1 | SM1/4 (32) × 11 |
| A71 | H8921B8001 | Gear | 1 | |
| A72 | HE022G8001 | Screw | 1 | SM1/4 (32) × 10.5 |

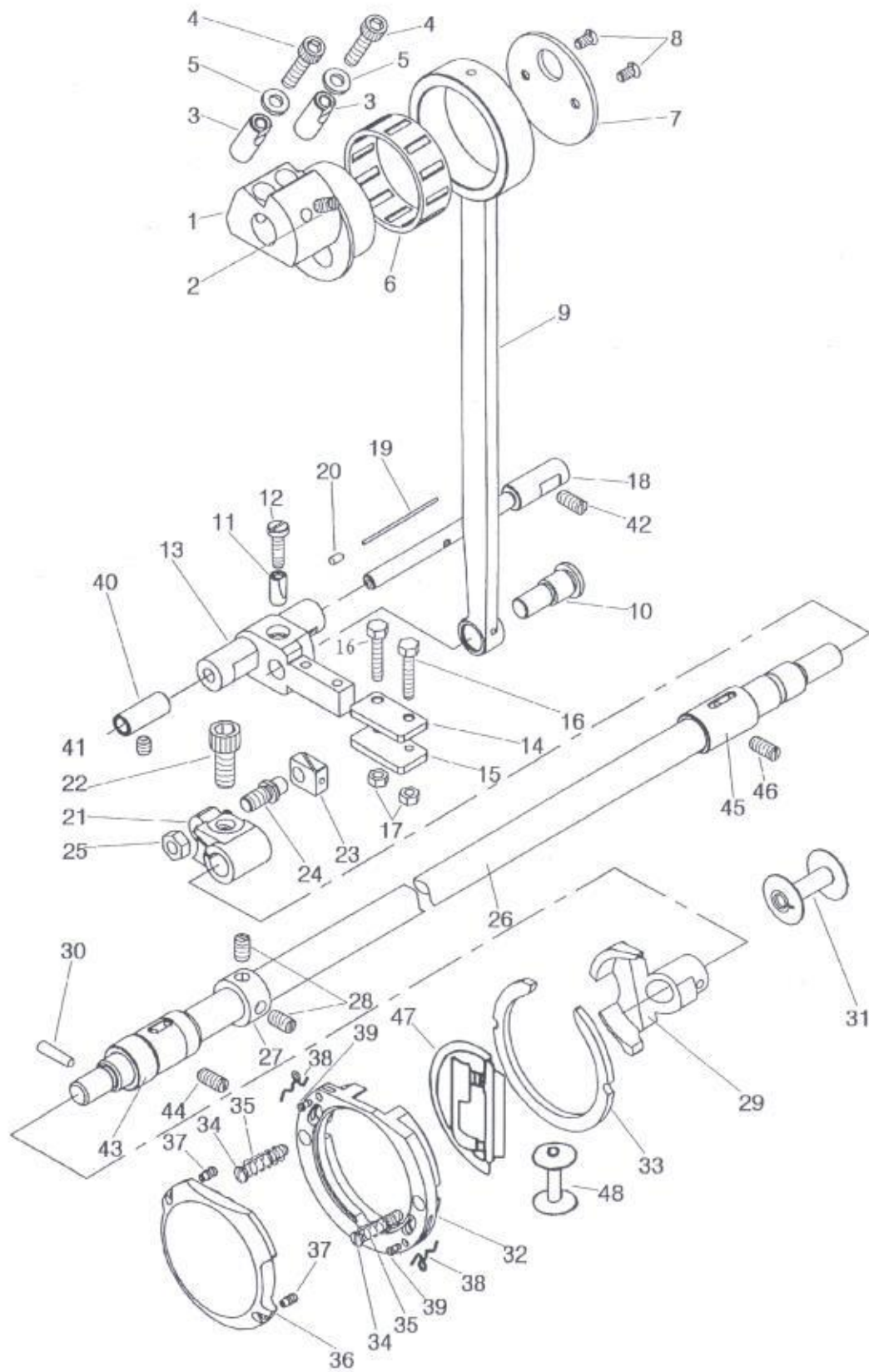
B. NEEDLE BAR AND THREAD TAKE-UP MECHANISM



B. NEEDLE BAR AND THREAD TAKE-UP MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|---------------------------------------|------|--------------------|
| B01 | H7204C8001 | Pulley | 1 | |
| B02 | H7205C8001 | Screw | 1 | SM5/16 (24) × 19 |
| B03 | H7206C8001 | Screw | 1 | SM5/16 (24) × 19 |
| B04 | H8905C8001 | Arm shaft | 1 | |
| B05 | HA108G0661 | Collar | 1 | |
| B06 | HA105D0662 | Set Screw | 2 | SM1/4 (40) × 6 |
| B07 | H7209C8001 | Thread take-up cam | 1 | |
| B08 | H7210C8001 | Needle bar connecting base link screw | 1 | |
| B09 | H403060120 | Screw | 2 | M6 × 12 |
| B10 | H4933K8001 | Set Screw | 2 | SM1/4 (40) × 10 |
| B11 | H602040450 | Pin | 1 | |
| B12 | H7211C8001 | Thread take-up lever | 1 | |
| B13 | H7212C8001 | Screw | 1 | SM5/16 (24) × 7.5 |
| B14 | H7213C8001 | Roller | 1 | |
| B15 | H7214C8001 | Roller pin | 1 | |
| B16 | H2010J0066 | Nut | 1 | SM9/32 (28) |
| B17 | H007013050 | Retaining ring-E type | 1 | |
| B18 | H7215C8001 | Needle bar connecting link screw | 1 | SM9/32 (28) × 11.5 |
| B19 | H2010J0066 | Nut | 1 | SM9/32 (28) |
| B20 | H7216C8001 | Needle bar connecting link | 1 | |
| B21 | H9006C8001 | Needle bar connecting stud | 1 | |
| B22 | HA800F2020 | Set Screw | 2 | SM1/4 (40) × 4.5 |
| B23 | H9007C8001 | Needle bar | 1 | |
| B24 | HA700F2100 | Screw | 1 | SM11/64 (40) × 7 |
| B25 | H7220C8001 | Needle | 1 | DY*3 26# |
| B26 | H9010C8001 | Thread pass bushing | 1 | |
| B34 | H7213B8001 | Bushing | 1 | |
| B35 | H2405D0664 | Set Screw | 1 | SM15/64 (28) × 14 |
| B36 | H7214B8001 | Felt | 3 | |
| B37 | H7212B8001 | Bushing | 1 | |
| B38 | H2405D0664 | Set Screw | 1 | SM15/64 (28) × 14 |
| B39 | H7211B8001 | Bushing | 1 | |
| B40 | H2405D0664 | Set Screw | 1 | SM15/64 (28) × 14 |

C. LOWER SHAFT MACHANISM



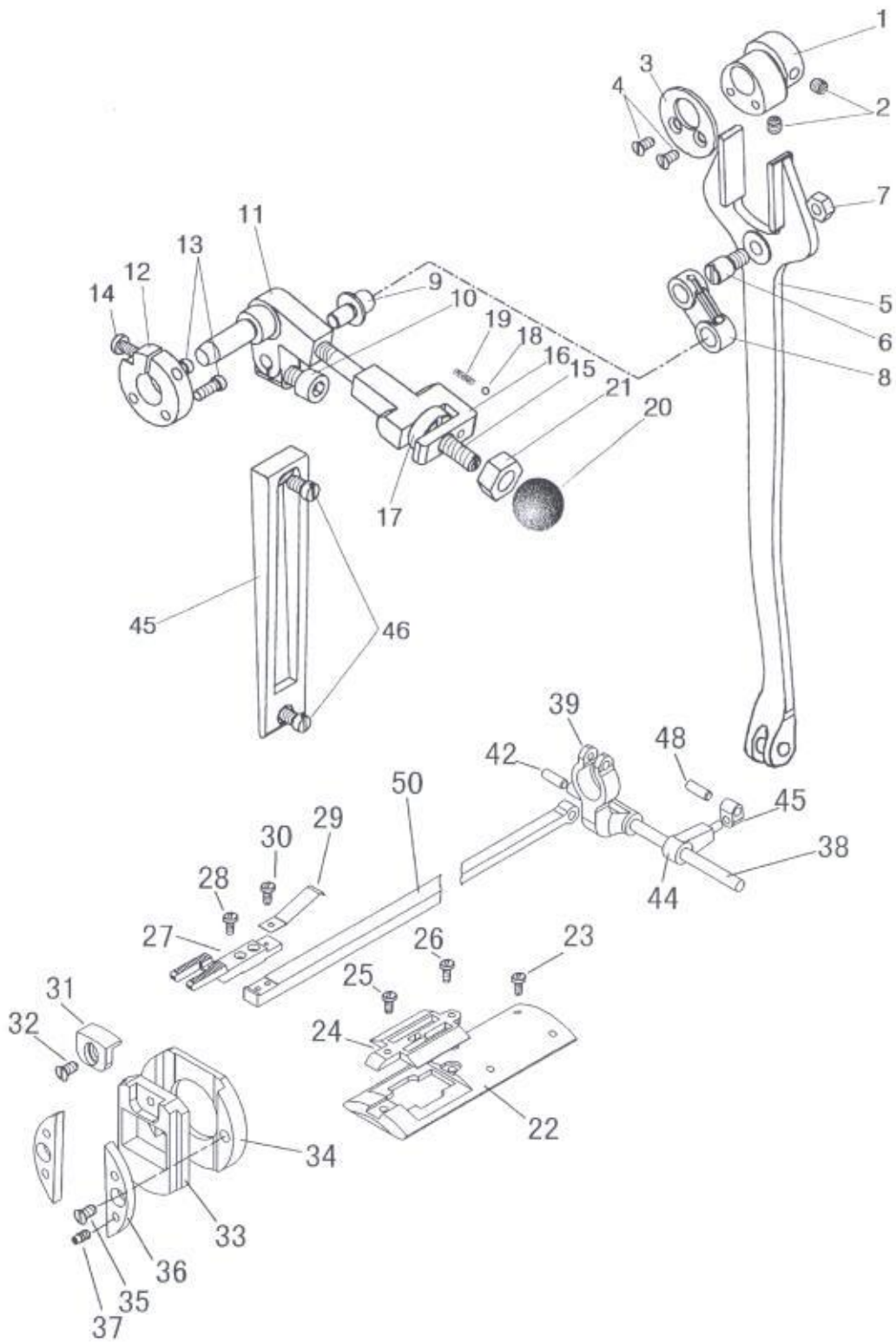
C. LOWER SHAFT MACHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|---------------------------|------|---------------------|
| C01 | H7204D8001 | Eccentric | 1 | |
| C02 | H7205D8001 | Set Srew | 1 | SM15/64 (28) × 12 |
| C03 | H7206D8001 | pin | 2 | |
| C04 | H415060250 | Screw | 2 | M6 × 25 |
| C05 | H4728H8001 | Washer | 2 | |
| C06 | H7237D8001 | Bearing | 1 | K43 × 48 × 17 (NTN) |
| C07 | H7207D8001 | Eccentric cover | 1 | |
| C08 | H2000B2050 | Screw | 2 | SM11/64 (40) × 9 |
| C09 | H7208D8001 | Crank connecting rod | 1 | |
| C10 | H7209D8001 | Crank connecting rod pin | 1 | |
| C11 | H7210D8001 | Pin | 1 | |
| C12 | H7211D8001 | Screw | 1 | SM3/16 (32) × 18 |
| C13 | H7213D8001 | Shuttle shaft | 1 | |
| C14 | H7214D8001 | Plate | 1 | |
| C15 | H7215D8001 | Plate | 1 | |
| C16 | H7216D8001 | Screw | 2 | SM11/64 (40) |
| C17 | H2000M0120 | Nut | 2 | SM11/64 (40) |
| C18 | H7218D8001 | Inside Shaft | 1 | |
| C19 | H7219D8001 | Oil wick | 1 | |
| C20 | H7220D8001 | Rivet | 1 | |
| C21 | H7222D8001 | Lower shaft crank | 1 | |
| C22 | H415080200 | Screw | 1 | M8 × 20 |
| C23 | H7223D8001 | Shuttle shaft slide block | 1 | |
| C24 | H7224D8001 | Screw | 1 | |
| C25 | H2010J0066 | Nut | 1 | SM9/32 (28) |
| C26 | H8905D8001 | Lower shaft | 1 | |
| C27 | HA108G0661 | Collar | 1 | |
| C28 | H7239D8001 | Set Screw | 2 | SM1/4 (40) × 3.5 |
| C29 | H9005D8001 | Shuttle driver | 1 | |
| C30 | H602040180 | Pin | 1 | |
| C31 | H7228D8001 | Bobbin | 1 | |
| C32 | H7229D8001 | Shuttle race body | 1 | |
| C33 | H7230D8001 | Shuttle race back ring | 1 | |
| C34 | H7231D8001 | Screw | 2 | SM3/16 (32) |
| C35 | H7232D8001 | Spring | 2 | |
| C36 | H7233D8001 | Shuttle race cap | 1 | |
| C37 | H7234D8001 | Screw | 2 | SM1/8 (44) |
| C38 | H7235D8001 | Spring | 2 | |
| C39 | H7236D8001 | Screw | 2 | SM3/32 (56) |
| C40 | H7234B8001 | Bushing | 1 | |
| C41 | HA3411D308 | Set Screw | 1 | SM15/64 (28) × 7 |
| C42 | HA100C2020 | Set Screw | 1 | SM15/64 (28) × 10 |
| C43 | H7230B8001 | Bushing | 1 | |

C. LOWER SHAFT MACHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|-----------------------|------|-------------------|
| C44 | H2405D0664 | Set Screw | 1 | SM15/64 (28) × 14 |
| C45 | H7229B8001 | Bushing | 1 | |
| C46 | H2405D0664 | Set Screw | 1 | SM15/64 (28) × 14 |
| C47 | H7240D8001 | Shuttle hook complete | 1 | |
| C48 | H7228D8001 | Bobbin | 1 | |

D. FEEDING MECHANISM



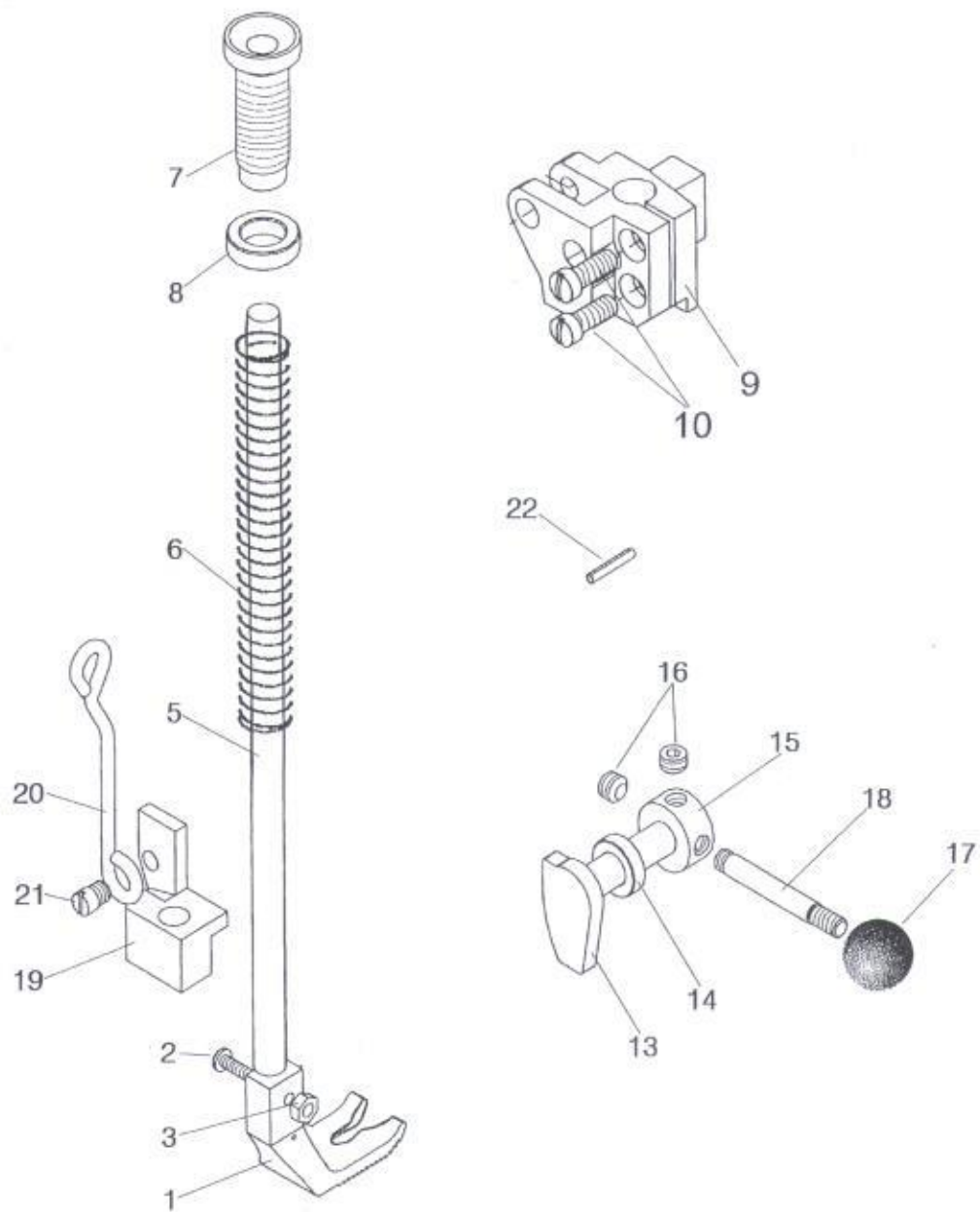
D. FEEDING MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|---|------|------------------|
| D01 | H7205E8001 | Feed cam | 1 | |
| D02 | H7206E8001 | Set Screw | 2 | SM15/64 (28) × 6 |
| D03 | H7207E8001 | Feed cam cover | 1 | |
| D04 | H2000B2050 | Screw | 2 | SM11/64 (40) × 9 |
| D05 | HD619E8001 | Feed forked connection | 1 | |
| D06 | H7209E8001 | Feed forked connection crank pin | 1 | |
| D07 | H2010J0066 | Nut | 1 | SM9/32 (28) |
| D08 | H7210E8001 | Stitch length connecting link | 1 | |
| D09 | H7211E8001 | Stitch length connecting link crank pin | 1 | |
| D10 | H415050140 | Screw | 1 | M5 × 14 |
| D11 | H7212E8001 | Stitch length adjusting pin | 1 | |
| D12 | H7213E8001 | Damping plate | 1 | |
| D13 | HA104G0012 | Screw | 2 | SM3/16 (28) × 12 |
| D14 | H7211D8001 | Screw | 1 | SM3/16 (32) × 18 |
| D15 | H7214E8001 | Stitch length adjusting bolt | 1 | |
| D16 | H7215E8001 | Stitch length limited plate | 1 | |
| D17 | H7216E8001 | Nut | 1 | |
| D18 | HE00001032 | Metal ball | 1 | |
| D19 | H7217E8001 | Spring | 1 | |
| D20 | | Plastic ball | 1 | M8 × 32 (black) |
| D21 | H003008080 | Nut | 1 | M8 |
| D22 | HD605E8001 | Needle plate splint | 1 | |
| D23 | HA104G0012 | Screw | 4 | |
| D24 | HD606E8001 | Needle plate | 1 | |
| D25 | H2204C0651 | Screw (long) | 1 | |
| D26 | HD623E8001 | Screw (short) | 1 | |
| D27 | HD607E8002 | Feed dog | 1 | |
| D28 | H4006I0673 | Screw | 2 | |
| D29 | HD608E8001 | Feed dog spring | 1 | |
| D30 | HA104C0659 | Screw | 1 | |
| D31 | HD609E8001 | Adjusting board | 1 | |
| D32 | H5711G8001 | Screw | 1 | |
| D33 | HD610E8001 | Slide block | 1 | |
| D34 | HD612E8001 | Slide block base | 1 | |
| D35 | HA104G0012 | Screw | 2 | |
| D36 | HD613E8001 | Pressure plate | 2 | |
| D37 | HA104G0654 | Screw | 4 | |
| D38 | HD614E8001 | Feed driving shaft | 1 | |
| D39 | HD615E8001 | Feed driving arm | 1 | |
| D42 | HD616E8001 | Hinge | 1 | |
| D44 | HD617E8002 | Feed shaft arm | 1 | |
| D45 | HD618E8001 | Feed shaft arm connection | 1 | |
| D48 | HD616E8001 | Hinge | 1 | |

D. FEEDING MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|--------------------------------|------|---------------|
| D50 | HD620E8001 | Feed driving connecting link | 1 | |
| D51 | HD621E8001 | Stitch length indicating plate | 1 | |
| D52 | HA104F0654 | Screw | 2 | SM15/64(28)×9 |

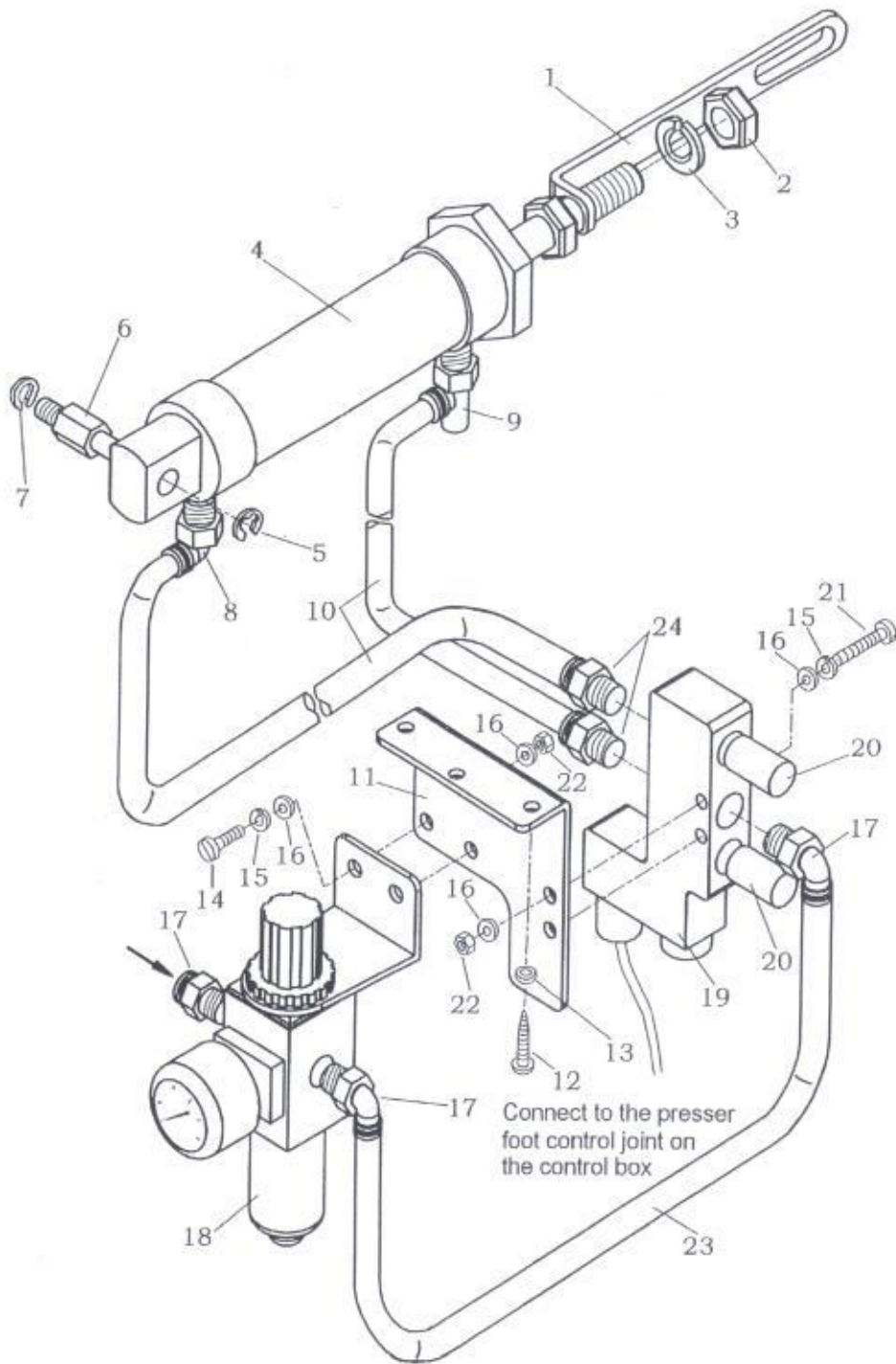
E. UPPER SHAFT & PRESSER FOOT MECHANISM



E. UPPER SHAFT & PRESSER FOOT MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|---------------------------|------|------------------------|
| E01 | HD604F8001 | Presser foot | 1 | |
| E02 | H7205F8001 | Screw | 1 | SM9/64 (40) × 14 |
| E03 | HA710P0673 | Nut | 1 | SM9/64 (40) |
| E05 | H7207F8001 | Presser bar | 1 | |
| E06 | H7208F8001 | Presser bar spring | 1 | |
| E07 | H7209F8001 | Thumb screw | 1 | SM5/8 (28) |
| E08 | H7210F8001 | Nut | 1 | SM5/8 (28) |
| E09 | H7216G8001 | Presser bar guide bracket | 1 | |
| E10 | HA104G0012 | Screw | 2 | SM3/16" (4.76) × 28/12 |
| E13 | H7214F8001 | Presser bar lifting shaft | 1 | |
| E14 | H7215F8001 | Washer | 1 | |
| E15 | H7217F8001 | Collar | 1 | |
| E16 | H7218C8001 | Set Screw | 2 | SM1/4 (40) × 4.5 |
| E17 | | Plastic ball | 1 | M6 × 20 |
| E18 | H7219F8001 | Bolt | 1 | |
| E19 | H7220F8001 | Presser bar guide bracket | 1 | |
| E20 | H7221F8001 | Connecting rod | 1 | |
| E21 | H7222F8001 | Screw | 1 | SM1/4 (40) |
| E22 | H609030180 | Pin | 1 | |

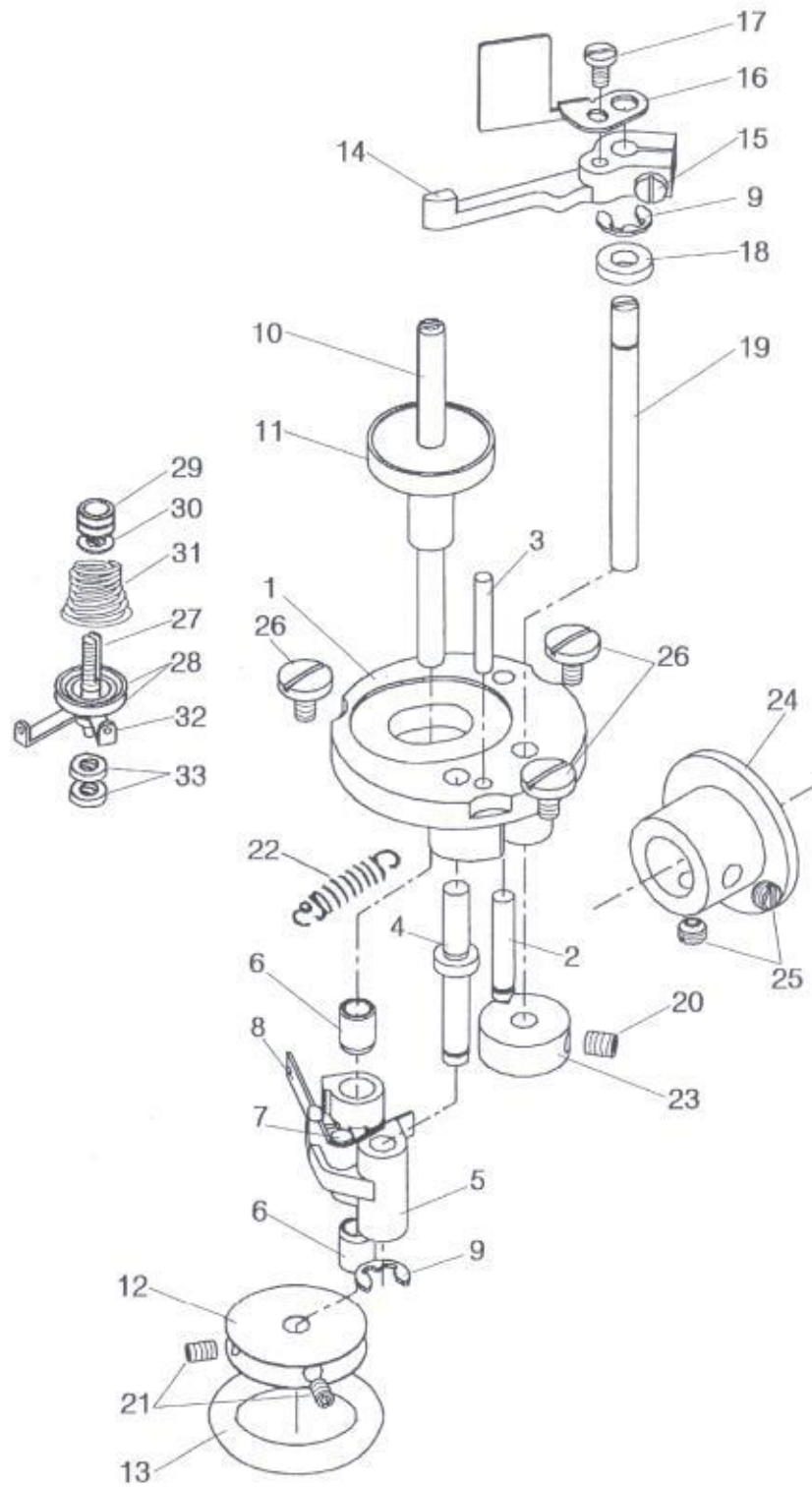
F. KNEE LOFTER MECHANISM



F. KNEE LOFTER MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|--|------|----------|
| F01 | H8906I8001 | Cylinder bar | 1 | |
| F02 | | Nut | 1 | M10×1.25 |
| F03 | H005008100 | Spring Washer | 1 | |
| F04 | H4910N8001 | Cylinder | 1 | MAL25×50 |
| F05 | H007013060 | E type ring | 1 | |
| F06 | H8907I8001 | Swing Pin | 1 | |
| F07 | H005008080 | Spring Washer | 1 | |
| F08 | H4921N8001 | Tube Fitting | 1 | φ6-1/8" |
| F09 | H4922N8001 | Timing valve | 1 | φ6-1/8" |
| F10 | H8908I8001 | PU Tube | 2 | φ6(1.6m) |
| F11 | H4923N8001 | Bracket for filtration and decompression | 1 | |
| F12 | H801045200 | Screw | 2 | M4.5×20 |
| F13 | HA300J2230 | Washer | 2 | |
| F14 | H402040120 | Screw | 2 | M4×12 |
| F15 | H005008040 | Spring washer | 4 | |
| F16 | H005005040 | Washer | 8 | |
| F17 | H8909I8001 | Tube Fitting | 3 | φ8-1/4" |
| F18 | H4915N8001 | Valve for filtration and decompression | 1 | |
| F19 | H4918N8001 | Solenoid Valve | 1 | |
| F20 | H4924N8001 | Silencer | 2 | |
| F21 | H402040300 | Screw | 2 | M4×30 |
| F22 | H003002040 | Nut | 4 | M4 |
| F23 | H8910I8001 | PU Tube | 1 | φ8(0.2m) |
| F24 | H4917N8001 | Tube Fitting | 2 | φ6-1/4" |

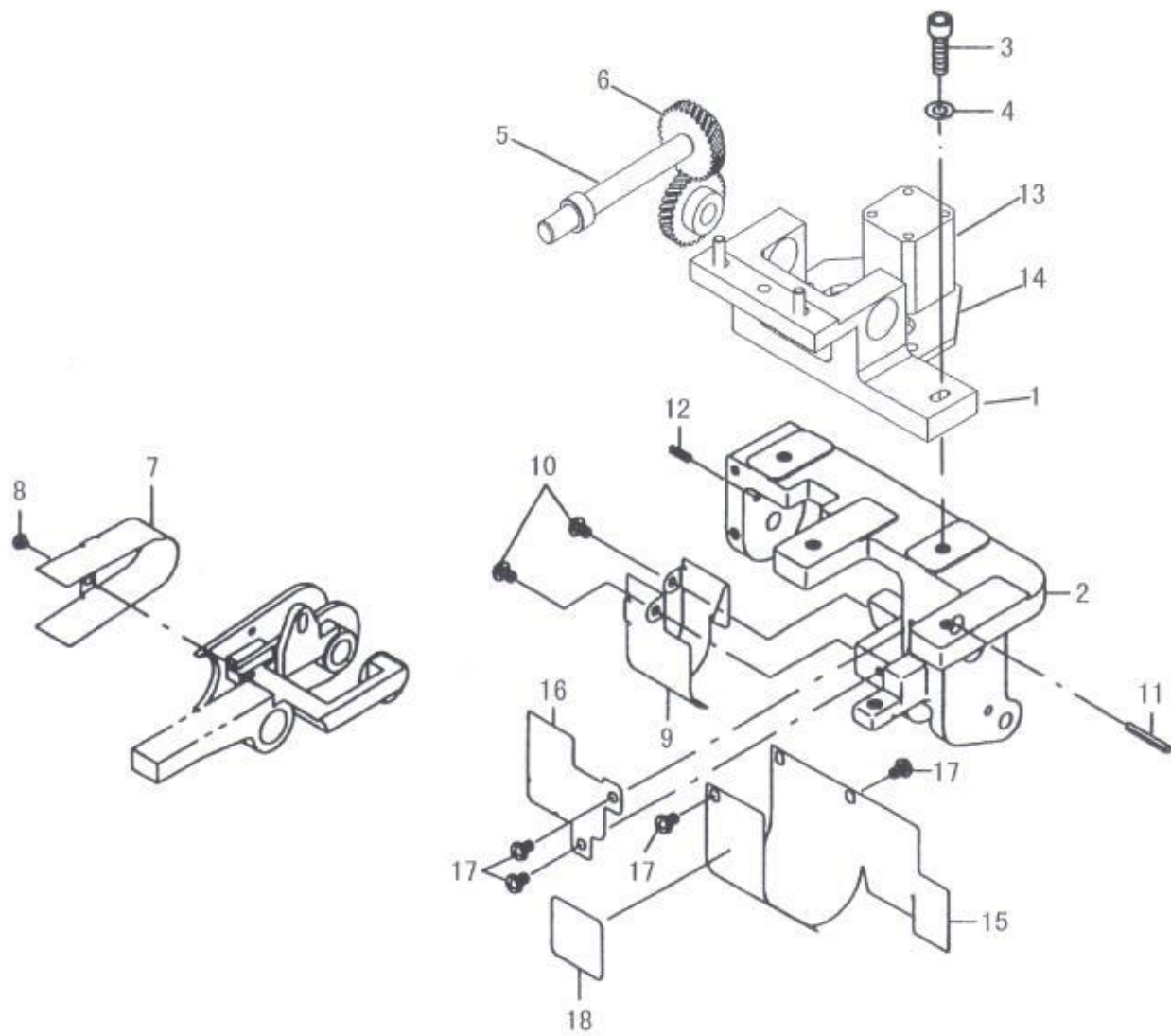
G. BOBBIN WINDER MECHANISM



G. BOBBIN WINDER MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|------------------------------|------|-----------------|
| G01 | H6706N8001 | Bobbin winder plate | 1 | |
| G02 | H6707N8001 | Pin | 1 | |
| G03 | H6708N8001 | Pin | 1 | |
| G04 | H7210J8001 | Bobbin winder crank shaft | 1 | |
| G05 | H7213J8001 | Bobbin winder crank | 1 | |
| G06 | H6713N8001 | Bushing | 2 | |
| G07 | H6714N8001 | Pin | 1 | |
| G08 | H6715N8001 | Bobbin winder spring | 1 | |
| G09 | H007013050 | Retaining ring-E type | 2 | |
| G10 | H7205J8001 | Bobbin winder shaft | 1 | |
| G11 | H6717N8001 | Bobbin base | 1 | |
| G12 | H6718N8001 | Driven wheel | 1 | |
| G13 | H6719N8001 | Friction rubber band | 1 | |
| G14 | H6720N8001 | Bobbin winder lever | 1 | |
| G15 | HA100H2150 | Screw | 1 | SM9/64(40) × 11 |
| G16 | H7206J8001 | Winding length limited plate | 1 | |
| G17 | H3200B2100 | Screw | 1 | |
| G18 | H6722N8001 | Washer | 1 | |
| G19 | H6723N8001 | Pin | 1 | |
| G20 | H6731N8001 | Set Screw | 1 | M5 × 6 |
| G21 | H6732N8001 | Set Screw | 2 | M3 × 4 |
| G22 | H6724N8001 | Spring | 1 | |
| G23 | H6725N8001 | Bobbin winder cam | 1 | |
| G24 | H7005D8001 | Driving wheel | 1 | |
| G25 | H4723D8001 | Set Screw | 2 | SM15/64(28) |
| G26 | H3107G0662 | Screw | 3 | SM11/64(40) |
| G27 | H7208J8001 | Screw | 1 | |
| G28 | HA310B0705 | Tension disc | 2 | |
| G29 | HA115B0702 | Nut | 1 | |
| G30 | HA115B7010 | Limited plate | 1 | |
| G31 | H3300B2040 | Spring | 1 | |
| G32 | H6662B8001 | Thread guide | 1 | |
| G33 | H003008040 | Nut | 2 | M4 |

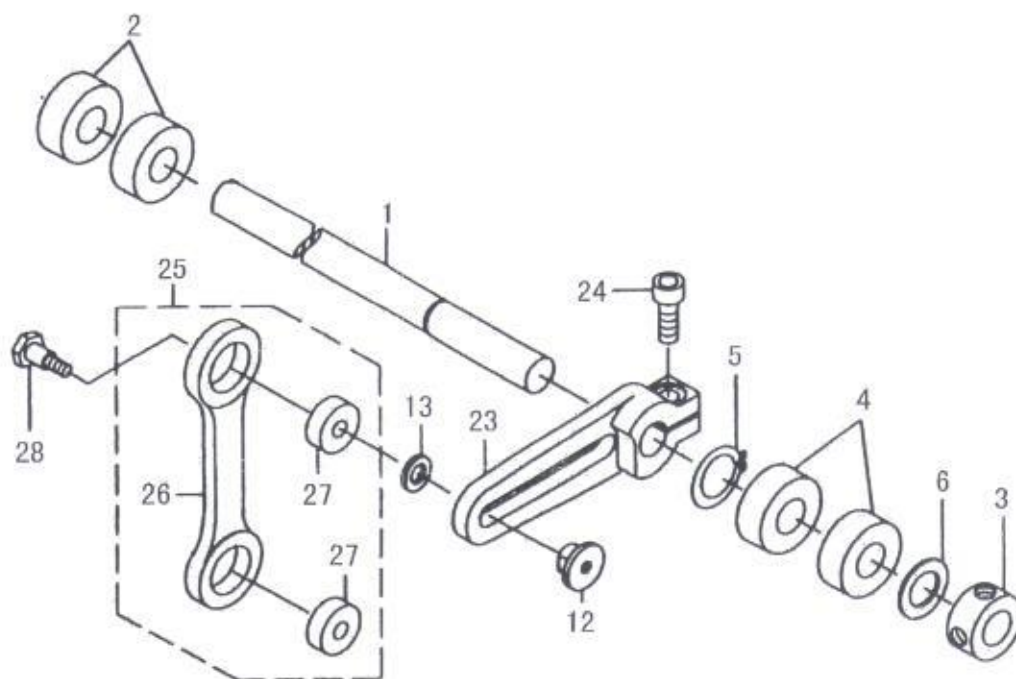
H. FRAME & COVER MECHANISM



H. FRAME & COVER MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|---------------------------|------|---------|
| H01 | HD605J8001 | Main base | 1 | |
| H02 | HK775H8001 | Clutch base | 1 | |
| H03 | H415060200 | Screw | 2 | |
| H04 | H005004060 | Washew | 2 | |
| H05 | HD607J8001 | Shaft | 1 | |
| H06 | H321421104 | Gear | 2 | |
| H07 | HK75JH8001 | Roller cover | 1 | |
| H08 | H402030050 | Screw | 1 | |
| H09 | HK76AH8001 | Intermediate puller cover | 1 | |
| H10 | H402030050 | Screw | 2 | |
| H11 | H609030100 | Pin | 1 | |
| H12 | H609030160 | Pin | 1 | |
| H13 | H415030160 | Cylinder | 1 | |
| H14 | H0607N8001 | Plate | 1 | |
| H15 | HD609J8001 | Clutch cover A | 1 | |
| H16 | HK76DH8001 | Clutch cover B | 1 | |
| H17 | HK77DH8001 | Screw | 5 | M4×5.5 |
| H18 | H7331G8001 | Model plate | 1 | |

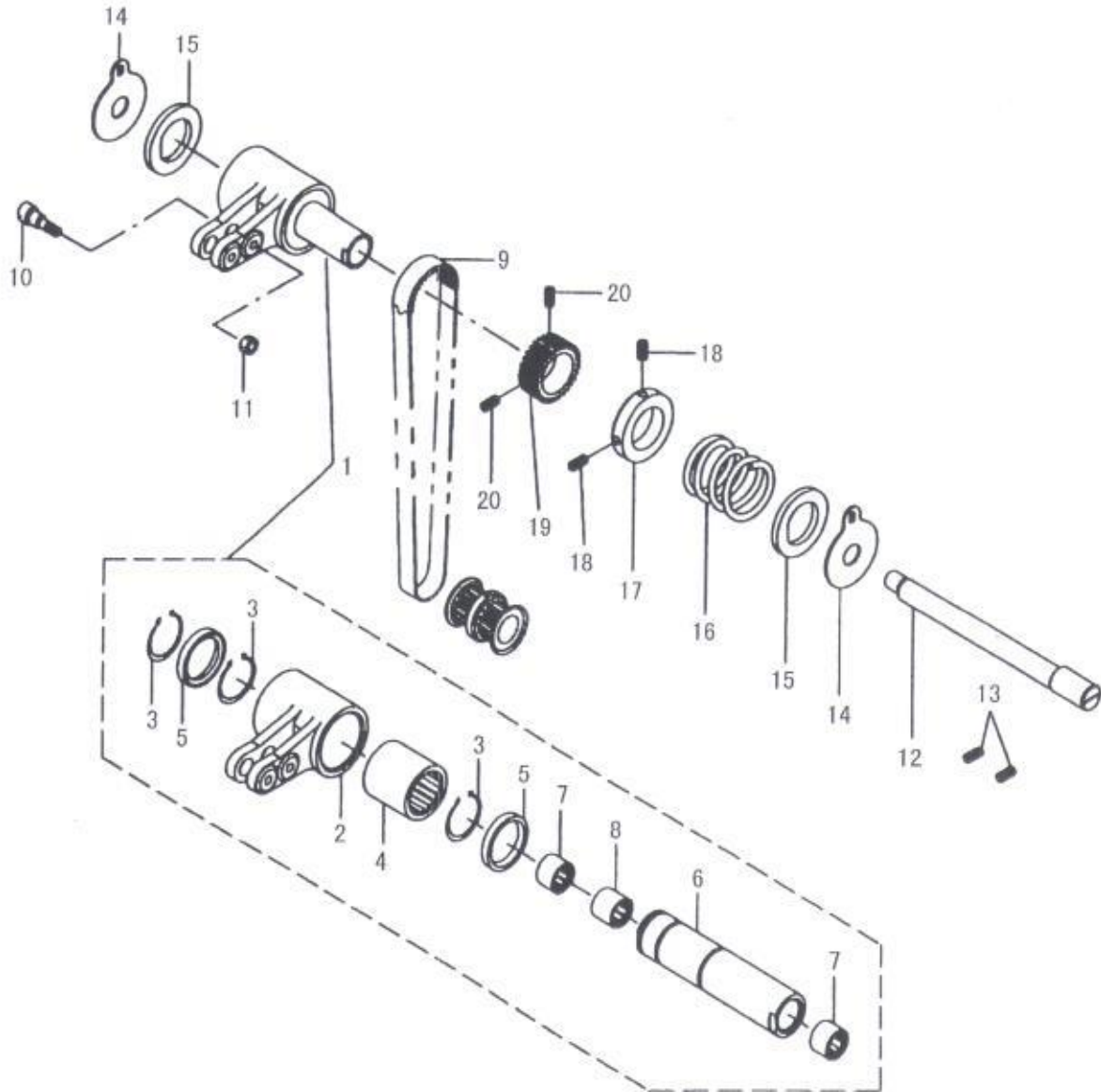
I. DRIVE MECHANISM



I. DRIVE MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|--------------------|------|---------|
| 101 | HK728H8001 | Rocking shaft | 1 | |
| 102 | H6707F8001 | Bearing | 2 | |
| 103 | HK730H8001 | Step-screw | 1 | |
| 104 | H6707F8001 | Bearing | 2 | |
| 105 | H007009120 | C-shaped snap ring | 1 | |
| 106 | HK732H8001 | Washer | 1 | |
| 112 | HK75DH8001 | Nut | 1 | M4 |
| 113 | HK75EH8001 | Washer | 1 | |
| 123 | HK734H8001 | Adjusting rod | 1 | |
| 124 | H415060160 | Screw | 1 | |
| 125 | HK786H7101 | Joint rod asm | 1 | |
| 126 | HK787H8001 | Joint rod | 1 | |
| 127 | HK788H8001 | Bearing | 2 | |
| 128 | HK75FH8001 | Screw | 1 | M4 |

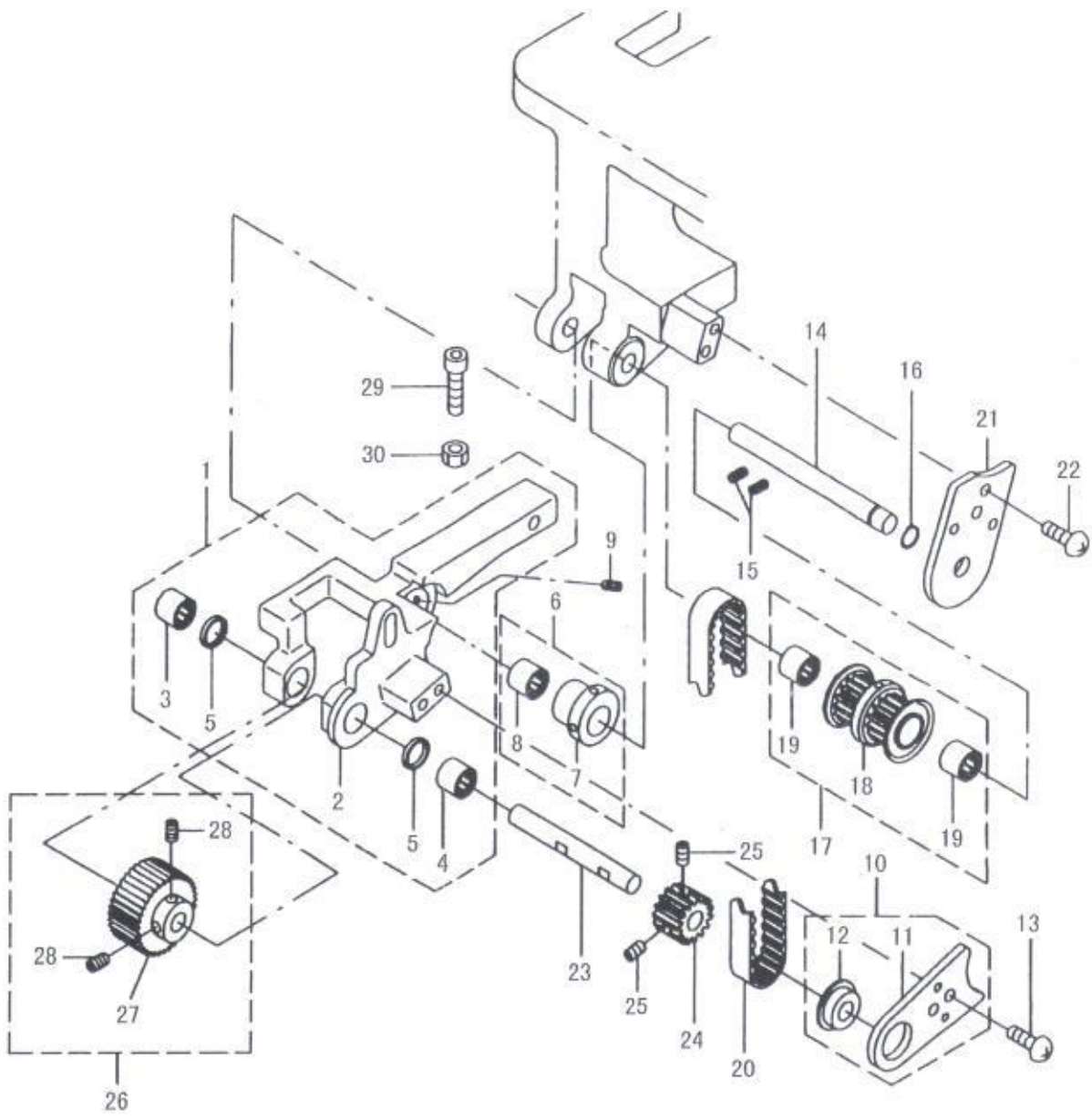
J. CLUTCH MECHANISM



J. CLUTCH MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|----------------------|------|---------|
| J01 | HK777H7101 | Clutch case asm | 1 | |
| J02 | HK778H8001 | Clutch case | 1 | |
| J03 | HK779H8001 | C-ring | 3 | |
| J04 | HK780H8001 | Roller clutch | 1 | |
| J05 | HK781H8001 | Clutch oil shield | 2 | |
| J06 | HK783H8001 | Clutch rocking shaft | 1 | |
| J07 | HK784H8001 | Ball bearing | 2 | |
| J08 | HK785H8001 | Ball bearing | 1 | |
| J09 | HK796H8001 | Clutch timing belt | 1 | |
| J10 | HK789H8001 | Step-screw | 1 | M4 |
| J11 | H3100E2180 | Nut | 1 | M4 |
| J12 | HK70CH8001 | Clutch shaft | 1 | |
| J13 | H431040060 | Screw | 2 | |
| J14 | HK70AH8001 | Brake plate | 2 | |
| J15 | HK799H8001 | Brake washer | 2 | |
| J16 | HK798H8001 | Brake spring | 1 | |
| J17 | HK791H8001 | Clutch brake collar | 1 | |
| J18 | H431040060 | Screw | 2 | |
| J19 | HK794H8001 | Clutch pulley | 1 | |
| J20 | H431040025 | Setscrew | 2 | |

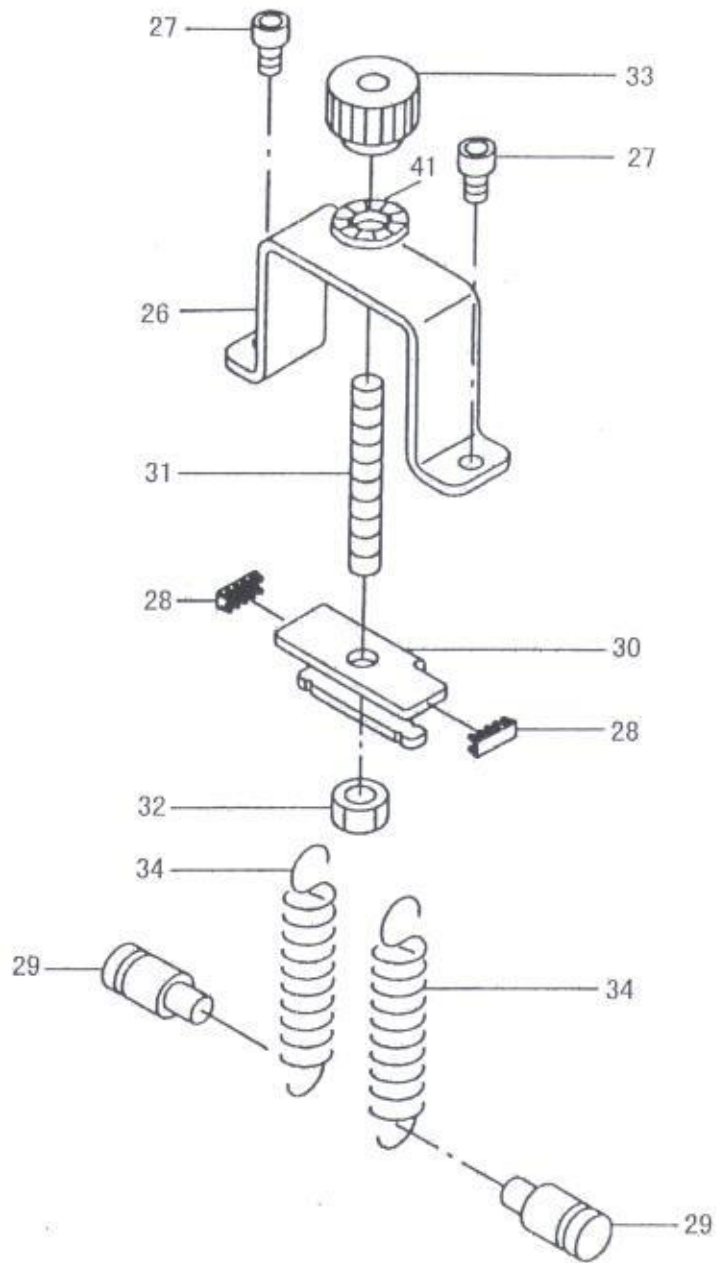
K. ROLLER DRIVE MECHANISM



K. ROLLER DRIVE MECHANISM

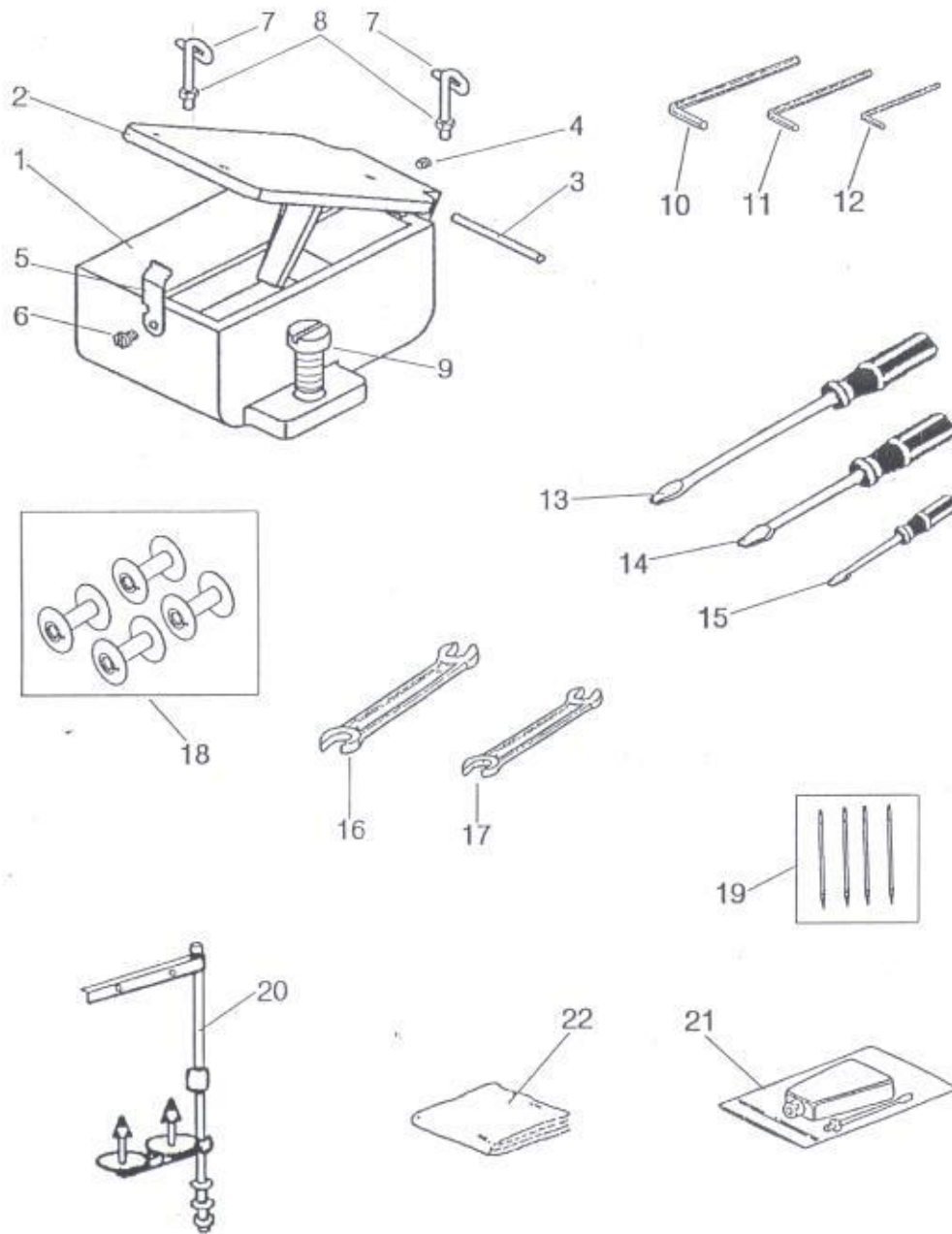
| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|------------------------------|------|---------|
| K01 | HK71GH7101 | Roller base asm | 1 | |
| K02 | HK71HH8001 | Roller base | 1 | |
| K03 | HK71IH8001 | Bearing | 1 | |
| K04 | HK71JH8001 | Bearing | 1 | |
| K05 | HK72AH8001 | Roller shaft oil shiel | 2 | |
| K06 | HK72CH7101 | Eccentric coller asm | 1 | |
| K07 | HK72DH8001 | Roller base eccentric coller | 1 | |
| K08 | HK71JH8001 | Bearing | 1 | |
| K09 | H431040060 | Screw | 1 | |
| K10 | HK73BH7101 | Roller shaft plate asm | 1 | |
| K11 | HK73EH8001 | Roller shaft plate | 1 | |
| K12 | HK73FH8001 | Bearing | 1 | |
| K13 | H415040080 | Screw | 2 | |
| K14 | HK74AH8001 | Puller shaft | 1 | |
| K15 | H431060060 | Screw | 2 | |
| K16 | H007009070 | Retaining ring | 1 | |
| K17 | HK74BH7101 | Intermediate puller asm | 1 | |
| K18 | HK74EH8001 | Intermediate puller asm | 1 | |
| K19 | HK71JH8001 | Bearing | 2 | |
| K20 | HK73HH8001 | Roller timing belt | 1 | |
| K21 | HK74JH8001 | Support plate | 1 | |
| K22 | H415040080 | Screw | 2 | |
| K23 | HK73CH8001 | Roller shaft | 1 | |
| K24 | HK73AH8001 | Roller pulley | 1 | |
| K25 | H431040030 | Screw | 2 | |
| K26 | HK72FH7101 | Urethane roller asm | 1 | |
| K27 | HK72GH8001 | Steel roller | 1 | |
| K28 | H431040060 | Screw | 2 | |
| K29 | H415060200 | Screw | 1 | |
| K30 | H003002060 | Nut | 1 | |

L. SPRING MECHANISM



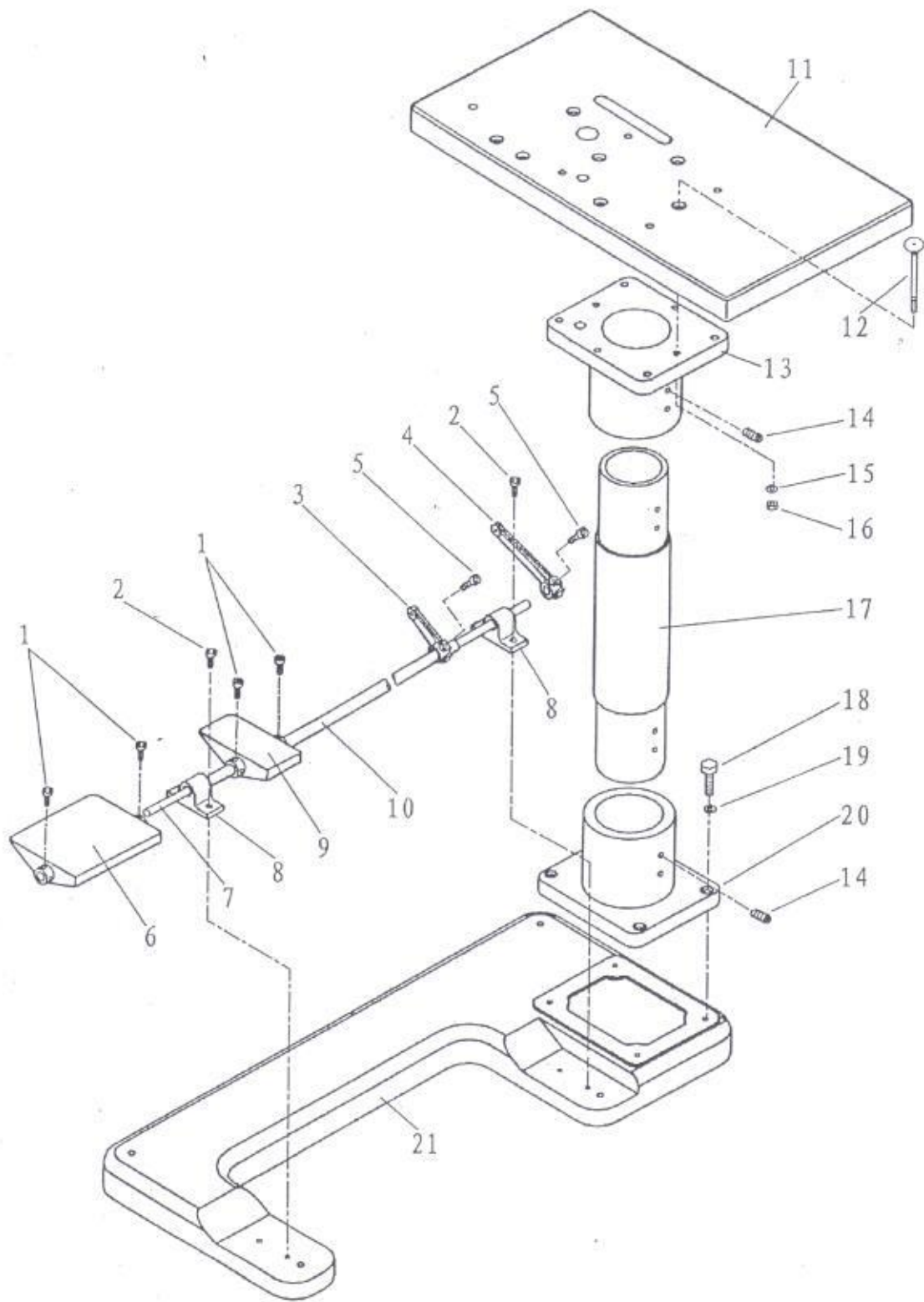
L. SPRING MECHANISM

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|-----------------------|------|---------|
| L26 | HK70GH8001 | Mounting bracket | 1 | |
| L27 | H415060120 | Screw | 2 | |
| L28 | HK70JH8001 | Spring plate cover | 2 | |
| L29 | HK72BH8001 | Tension spring rack B | 2 | |
| L30 | HK71AH8001 | Spring plate | 1 | |
| L31 | H210080600 | Adjusting screw | 1 | |
| L32 | H003002080 | Nut | 1 | |
| L33 | HK71DH8001 | Adjusting knob | 1 | |
| L34 | HK75AH8001 | Spring | 2 | |



M. ACCESSORIES-1

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|--------------------------|------|----------------|
| M01 | H7207K8001 | Silicon oil box | 1 | |
| M02 | H7208K8001 | Cover | 1 | |
| M03 | H605030400 | Pin | 1 | |
| M04 | H34411C410 | Screw | 1 | SM9/64(40) × 4 |
| M05 | H7209K8001 | Spring | 1 | |
| M06 | H3215K0693 | Screw | 1 | SM9/64(40) × 5 |
| M07 | H7210K8001 | Thread guide | 2 | |
| M08 | H7211K8001 | Nut | 2 | SM3/32(56) |
| M09 | HA800F2020 | Screw | 1 | SM15/64(28) |
| M10 | HB00001050 | Hexagon socket screw key | 1 | |
| M11 | HB00001040 | Hexagon socket screw key | 1 | |
| M12 | HB00001030 | Hexagon socket screw key | 1 | |
| M13 | HA300J2070 | Screw driver (size L) | 1 | |
| M14 | HA300J2200 | Screw driver (size M) | 1 | |
| M15 | HA300J2210 | Screw driver (size S) | 1 | |
| M16 | HJ02090110 | Spanner | 1 | |
| M17 | HJ02100130 | Spanner | 1 | |
| M18 | H7228D8001 | Bobbin | 4 | |
| M19 | H7220C8001 | Needle | 4 | |
| M20 | HA200J2030 | Thread stand assy | 1 | |
| M21 | H200400069 | Oiler | 1 | |
| M22 | H8904K8001 | Vinyl cover | 1 | |



N. ACCESSORIES-2

| Fig. No. | Part No. | Description | Pcs. | Remarks |
|----------|------------|-----------------------|------|---------|
| N01 | H415060140 | Screw | 8 | M6×14 |
| N02 | H103080250 | Screw | 4 | M8×25 |
| N03 | H8918K8001 | Short rod | 1 | |
| N04 | H8917K8001 | Long rod | 1 | |
| N05 | H415080160 | Screw | 4 | M8×16 |
| N06 | H8924K7101 | Large pedal | 1 | |
| N07 | H8920K8001 | Long steel tube | 1 | |
| N08 | H8913K8001 | Steel tube base | 2 | |
| N09 | H8924K7101 | Small pedal | 1 | |
| N10 | H8918K8001 | Short steel tube | 1 | |
| N11 | H8910K8001 | Bedplate | 1 | |
| N12 | H125100900 | Screw | 4 | M10×90 |
| N13 | H8915K8001 | Flange | 1 | |
| N14 | H429120250 | Set Screw | 4 | M12×25 |
| N15 | H005001100 | Washer | 4 | |
| N16 | H003002100 | Nut | 4 | M10 |
| N17 | H8912K8001 | Connecting steel tube | 1 | |
| N18 | H103120500 | Screw | 4 | M12×50 |
| N19 | H005008120 | Spring washer | 4 | |
| N20 | H8916K8001 | Flange | 1 | |
| N21 | H8911K8001 | Operation base | 1 | |