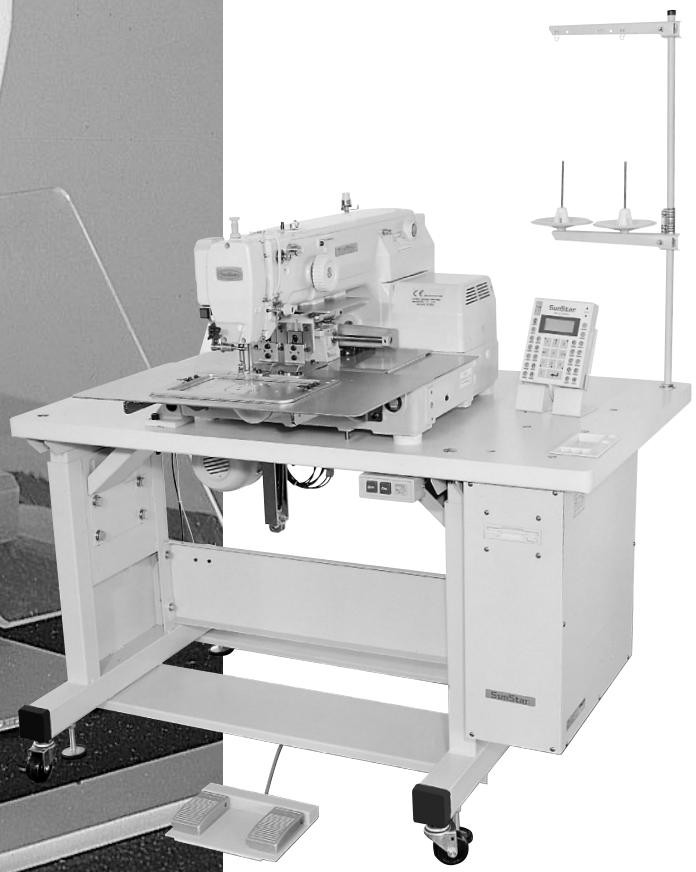
SunStar®

MANUAL

INVERTING CLAMP DEVICES

Electronically Controlled
Pattern Sewing Machine

SPS/A-1811 Series
SPS/A-1306 Series



1) FOR AT MOST USE WITH EASINESS, PLEASE READ THIS MANUAL BEFORE USING THE MACHINE.
2) KEEP THIS MANUAL IN SAFE PLACE FOR REFERENCE WHEN THE MACHINE BREAKS DOWN.

SUNSTAR MACHINERY CO., LTD.

MME-051128

1. Thank you for purchasing our product. Based on the rich expertise and experience accumulated in industrial sewing machine production, SUNSTAR will manufacture industrial sewing machines, which deliver more diverse functions, high performance, powerful operation, enhanced durability, and more sophisticated design to meet a number of user's needs.
2. Please read this user's manual thoroughly before using the machine. Make sure to properly use the machine to enjoy its full performance.
3. The specifications of the machine are subject to change, aimed to enhance product performance, without prior notice.
4. This product is designed, manufactured, and sold as an industrial sewing machine. It should not be used for other than industrial purpose.

SUNSTAR MACHINERY CO., LTD.

CONTENTS

1

Notice Before Using

1) Before inputting air pressure by air pressure control devices, check if a needle is not attached.

⚠ Caution	**If the up-feed plate and reversal feeding frame ascend simultaneously with air pressure input so that a needle is put over the reversal feeding frame, the needle can be broken**

2) Before reading patterns, check the pattern number once more.

⚠ Caution	**If you use read patterns, incorretly a needle can be broken when the reversal feeding frame ascend during sewing or after finishing sewing.**

3) Using presser foot is not available for normal inverting working. In case of using the presser foot, you should be careful since the sewing range around reversal crank differs from the normal sewing range.

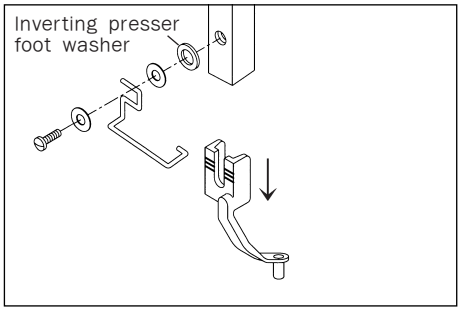
2

Inverting Clamp Devices of SPS/A-1306 Series

1. Installing the Inverting Clamp Devices

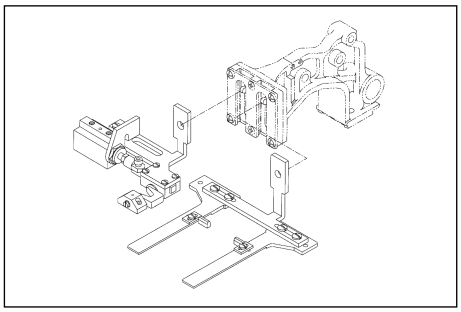
1) Remove the up-feed plate and feed plate cramp attached to feed bracket.

2) Remove the presser foot and insert the Inverting presser foot washer on that spot, then fasten a fixing screw.



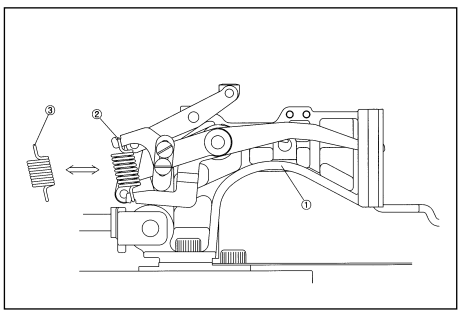
[Fig. 1]

3) Install the Inverting clamp devices as seen in the figure 2.



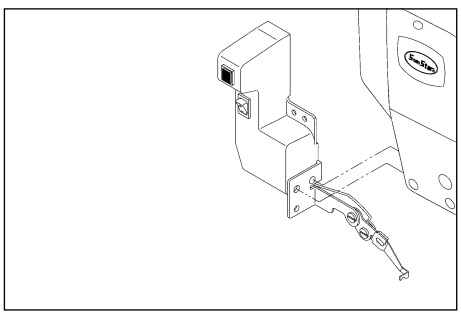
[Fig. 2]

4) If the machine is an electronic type, replace the lift lever extension spring② located on the left side of the feed bracket① with the lift lever extension spring for turnover device③.



[Fig. 3]

5) Attach the wiper for the inverting clamp devices.



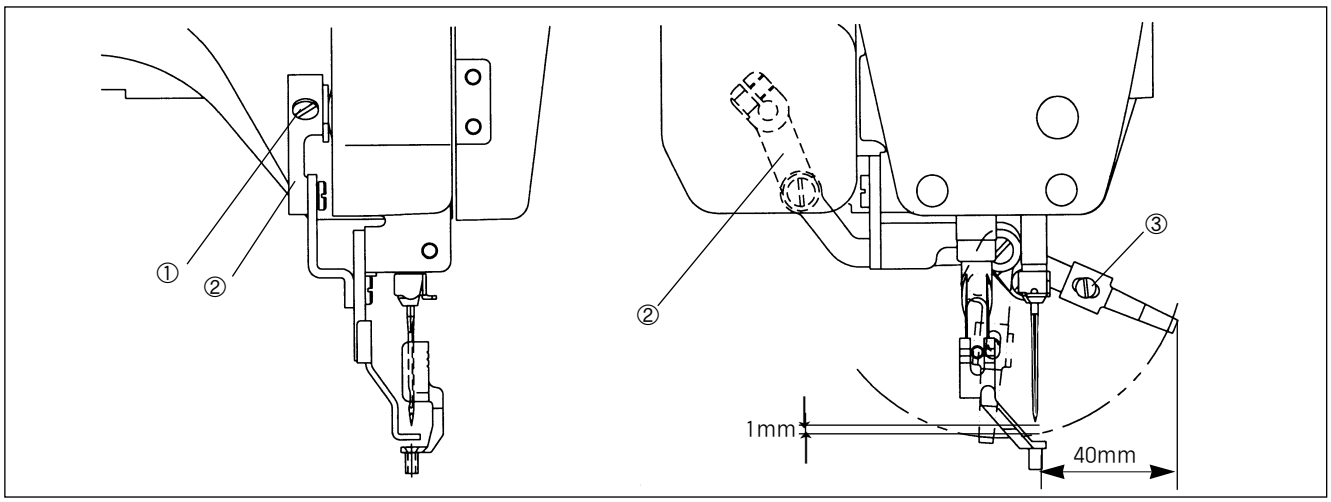
[Fig. 4]

2. Adjusting the Wiper Parts

1) Unfasten the crank fixing screw① when a needle is stopped upward.
2) Adjust the wiper crank ② for wiper and needle to be apart from about 40mm.
3) Fasten the wiper crank fixing screw ①.
4) Unfasten the wiper fixing screw ③ and adjust it for wiper tail and needle tip to be apart from about 1mm, then fasten the wiper fixing screw ③.

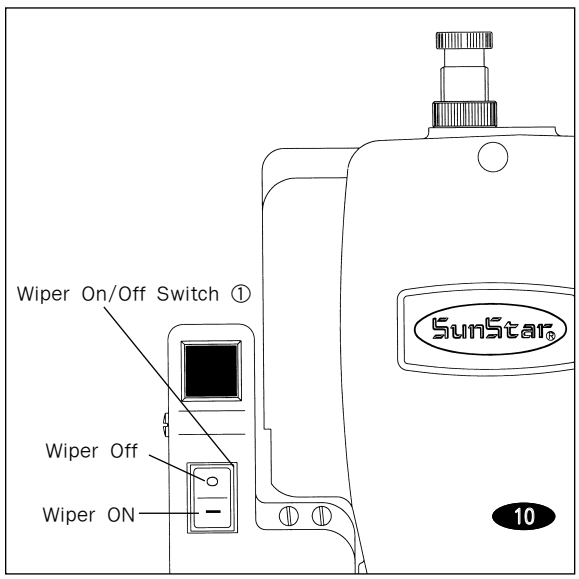
Caution

If a position of wiper is not proper, the wiper can be interfered with needle or inverting clamp devices during operating, therefore, precise operation can not be a chieved.



[Fig. 5]

5) For using the wiper, press the wiper operation switch — ① and for not using it, press the wiper operation switch ○①.



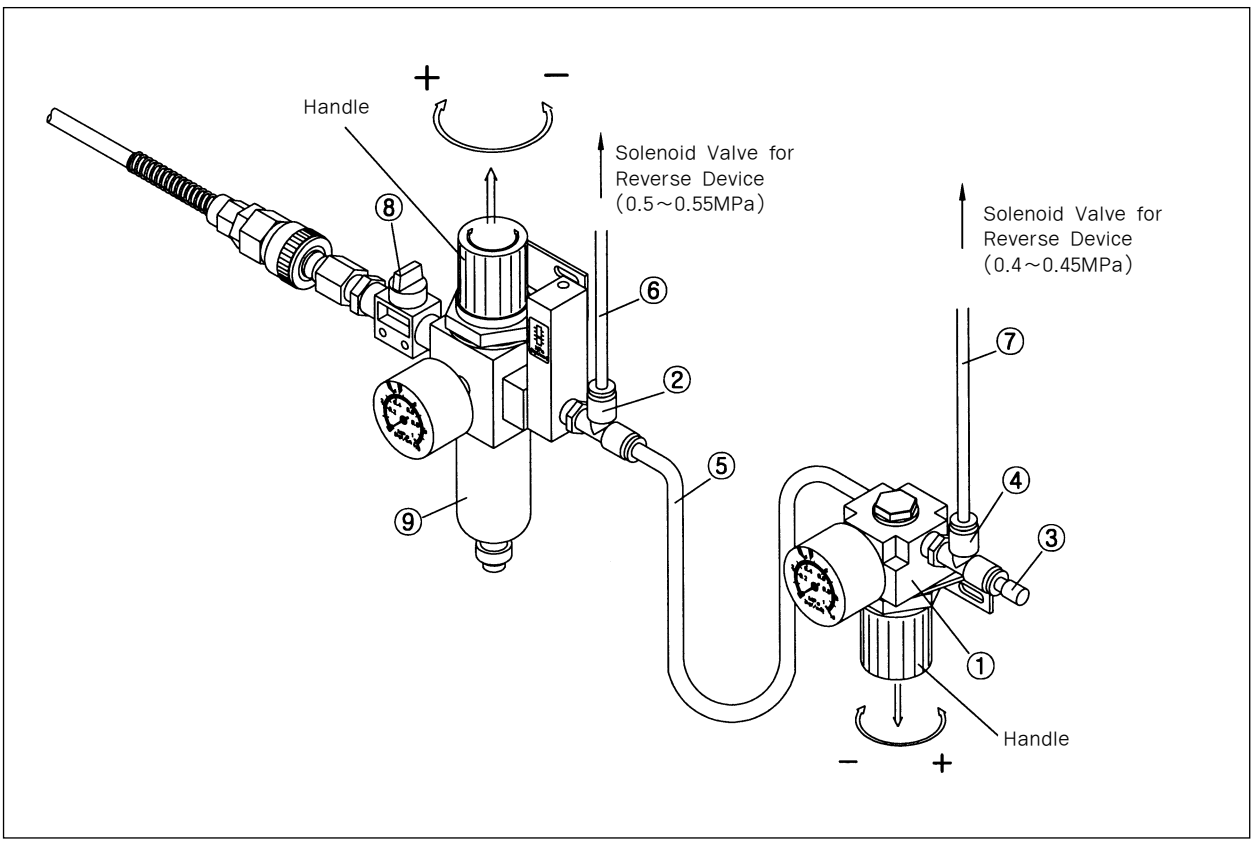
[Fig. 6]

3. Installation and Adjustment of Pneumatic Control Parts

Caution	**Make sure that the power is turned off during parts installation and adjustment in order to prevent safety accidents.**

A. For pneumatic type

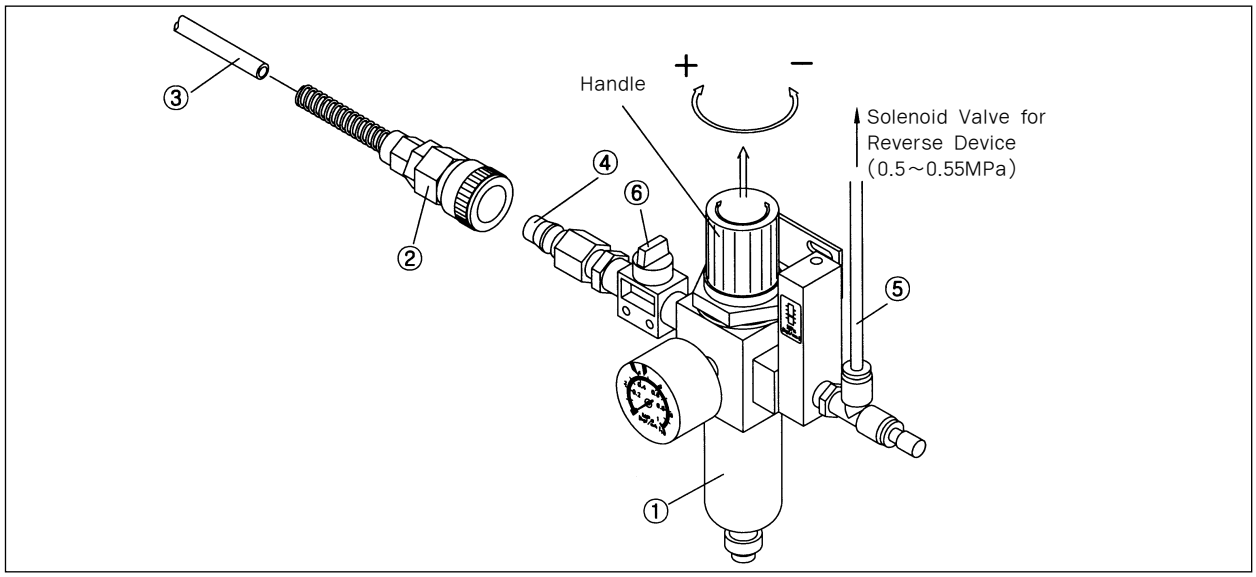
1) Attach the pressure adjuster① to the rear side of the table leg using the screw.
2) Remove the plug③ attached to T②, and insert it into T④. Connect the air hose⑤ as in the figure below.
3) Connect the air hoses⑥,⑦ to the corresponding solenoid entrances.
4) Open the finger valve⑧ and pass the air to move in.
5) Pull the pressure adjuster⑨ handle for the reverse device in the arrow direction. When it is turned in the (+) direction, the pressure increases. When it is turned in the (-) direction, the pressure decreases. Set the air pressure at the appropriate level of 0.5~0.55MPa (5~5.5Kgf/㎠).
6) Pull the pressure adjuster① handle for upper feed in the arrow direction. When it is turned in the (+) direction, the pressure increases. When it is turned in the (-) direction, the pressure decreases. Set the air pressure at the appropriate level of 0.4~0.45MPa (4~4.5Kfg/㎠).



[Fig. 7]

B. For electronic type

1) Attach the pressure adjuster② to the rear side of the table leg using the screw.
2) Connect the air hose③ to the quick joint socket②.
3) Assemble the quick joint socket② and the quick joint plug④.
4) Connect the air hose⑤ as in the figure and connect it to the reverse device solenoid entrance.
5) Open the finger valve⑥ and pass the air to move in.
6) Pull the pressure adjuster① handle for the reverse device in the arrow direction. When it is turned in the (+) direction, the pressure increases. When it is turned in the (-) direction, the pressure decreases. Adjust the air pressure at the appropriate level of 0.5~0.55MPa (5~5.5Kgf/㎠).



[Fig. 8]

Caution

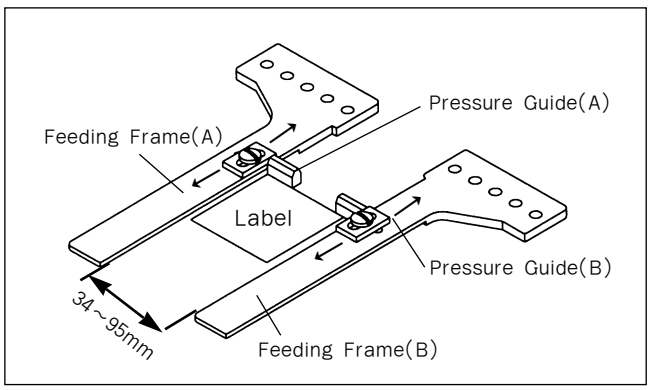
If the air pressure of the pressure adjuster for the reverse device decreases in the middle of use (3Kgf/㎠ or below), error message will be displayed and the machine will stop its operation.

Note

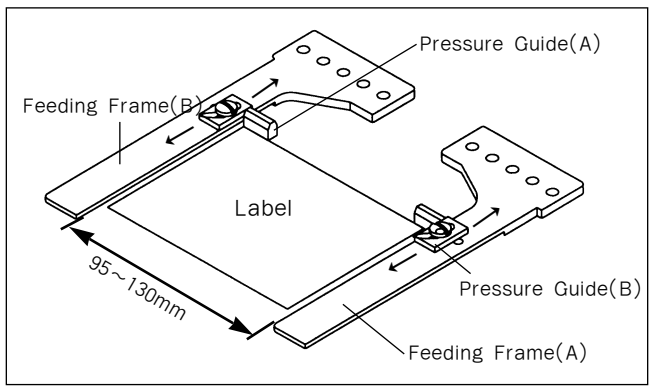
When closing the finger valve after use, the remaining air inside the valve will be released. Therefore, the air pressure is displayed 0 MPa (0 Kfg/㎠).

4. Adjusting the Reversal Feeding Frame

1) Attach the feeding frame guide (A) and (B) to the feeding frame (A) and (B).
2) If the width of label is 34~95mm, attach them as seen in the fig. 9, and if 95~130mm, attach them as seen in the fig. 10.



[Fig. 9]

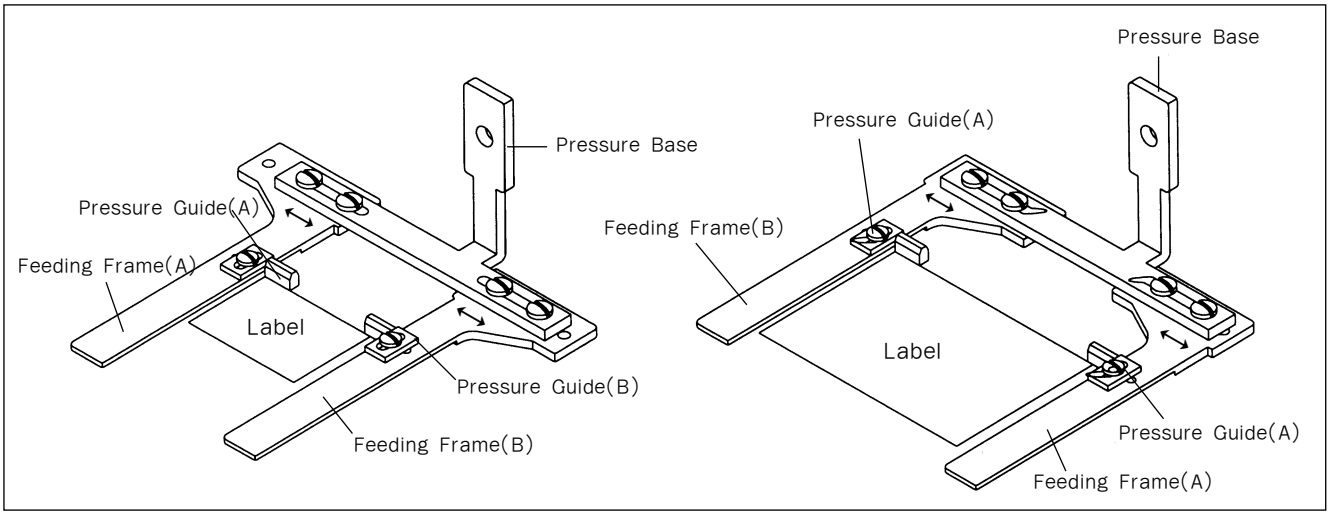


[Fig. 10]

3) Adjust the precise position by moving the pressure guide (A) and (B) to the arrow direction according to the available sewing range for label.

Caution	**As seen in the fig. 9, if the pressure guide (A) and (B) is interfered with the reversal crank since the width of label is too small, remove the pressure guide (A) and (B).**

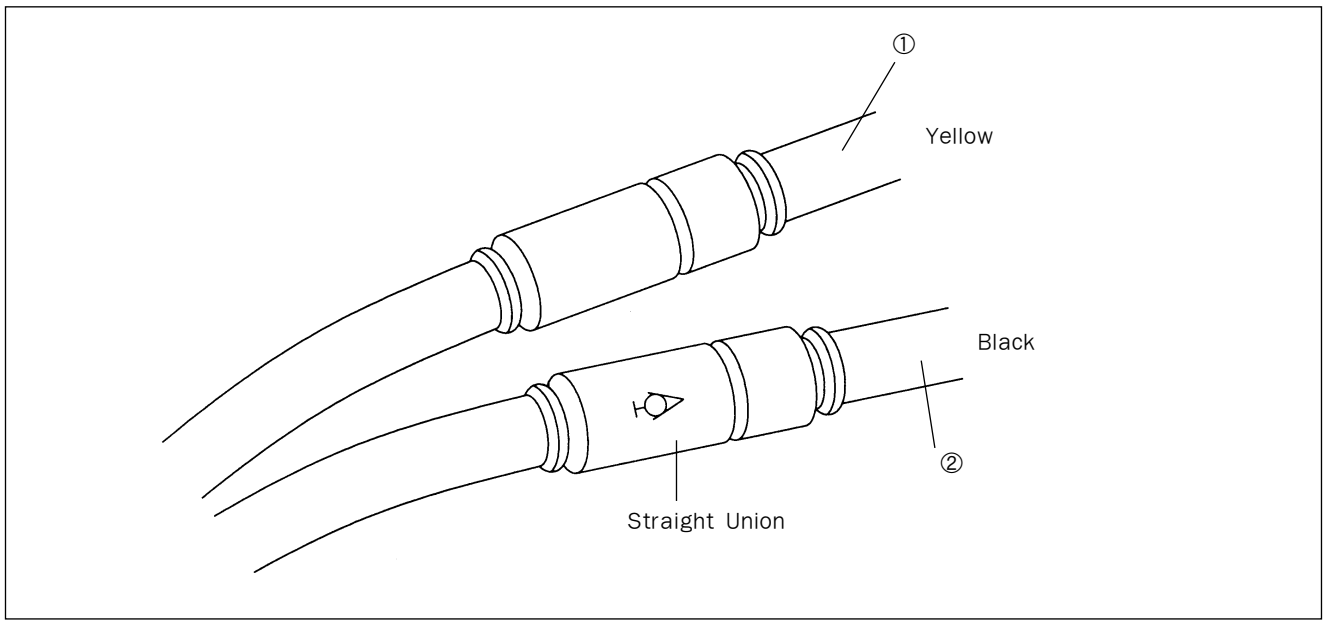
4) Attach the feeding frame (A) and (B) to the feeding frame base.
Adjust the precise position by moving the width of label to the arrow direction.



[Fig. 11]

5. Removing the Inverting Clamp Devices

1) Remove the inverting clamp devices when the machine is worked with standard specification.
2) Remove the inverting air tube ① and ② from one-touch juncture and straight union.
3) Unfasten the fixing screws and take off the parts for the inverting clamp devices.



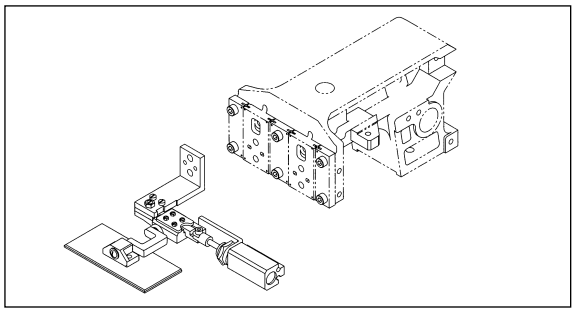
[Fig. 12]

3

Inverting Clamp Device of SPS/A-1811 Series

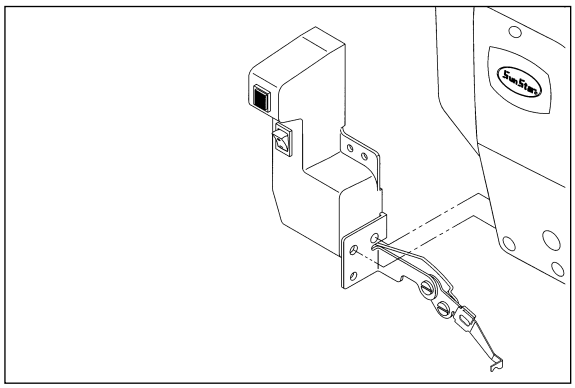
1. Installing the Inverting Clamp Devices

1) Exchange the up-feed plate and low-feed plate into up-feed plate for reversal and low-feed plate for reversal.
2) Attach the inverting clamp devices to the feed bracket as seen in the fig. 12.



[Fig. 13]

3) Attach the wiper for the inverting clamp devices.

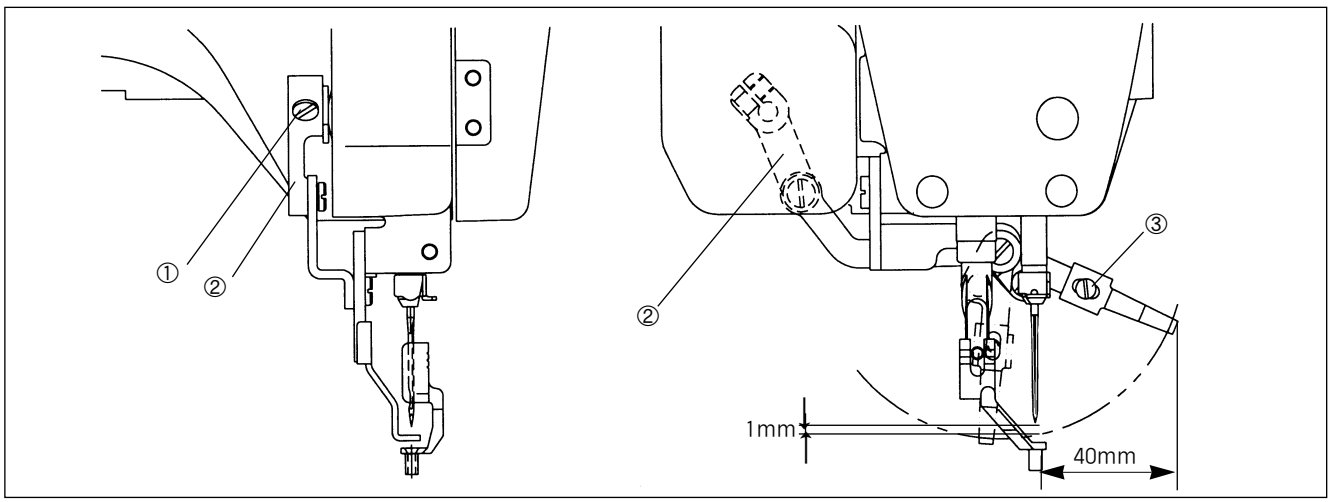


[Fig. 14]

2. Adjusting the Wiper Parts

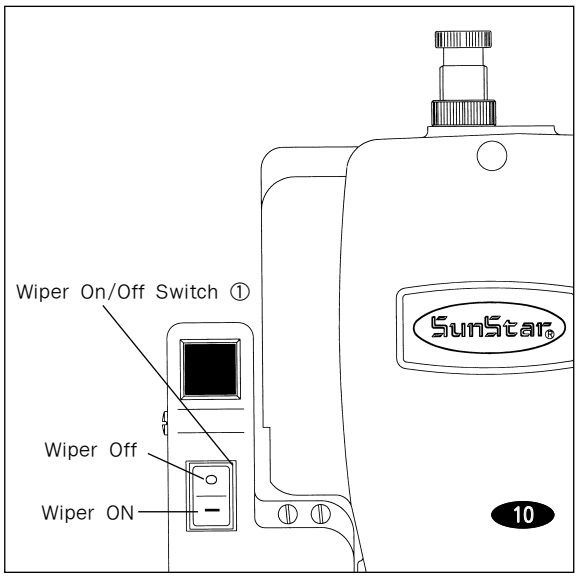
1) Unfasten the crank fixing screw① when a needle is stopped upward.
2) Adjust the wiper crank ② for wiper and needle to be apart from about 40mm.
3) Fasten the wiper crank fixing screw ①.
4) Unfasten the wiper fixing screw ③ and adjust it for wiper tail and needle tip to be apart from about 1mm, then fasten the wiper fixing screw ③.

Caution	**If a position of wiper is not proper, the wiper can be interfered with needle or inverting clamp devices during operating, therefore, precise operation can not be a chieved.**



[Fig. 15]

5) For using the wiper, press the wiper operation switch — ① and for not using it, press the wiper operation switch ○①.

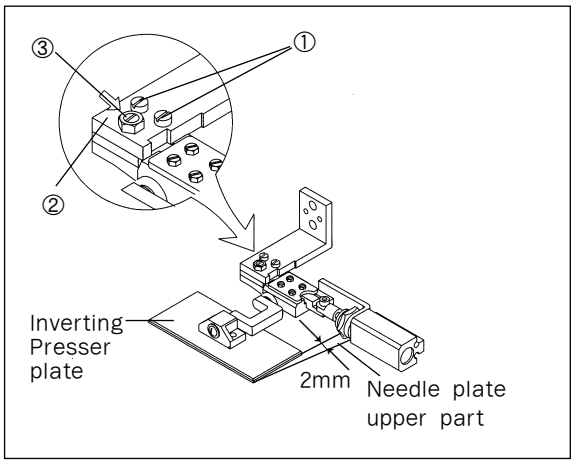


[Fig. 16]

3. Adjusting the Inverting Presser Plate Feeding Frame

To prevent from lack of pressure at front area of reversal feeding frame during reversal working, adjust the front part of reversal feeding frame to be lower than back part.

1) Unfasten the fixing screw ① and nut ②, then turn the adjusting screw ③ clockwise until the front side of reversal feeding frame goes down.
2) After adjusting, fasten the fixing screw ① and nut ②.
   At this time, when the front tail of reversal feeding frame is in accord with the surface of needle plate, adjust the front tail to be 2mm higher than the surface of needle plate.



[Fig. 17]

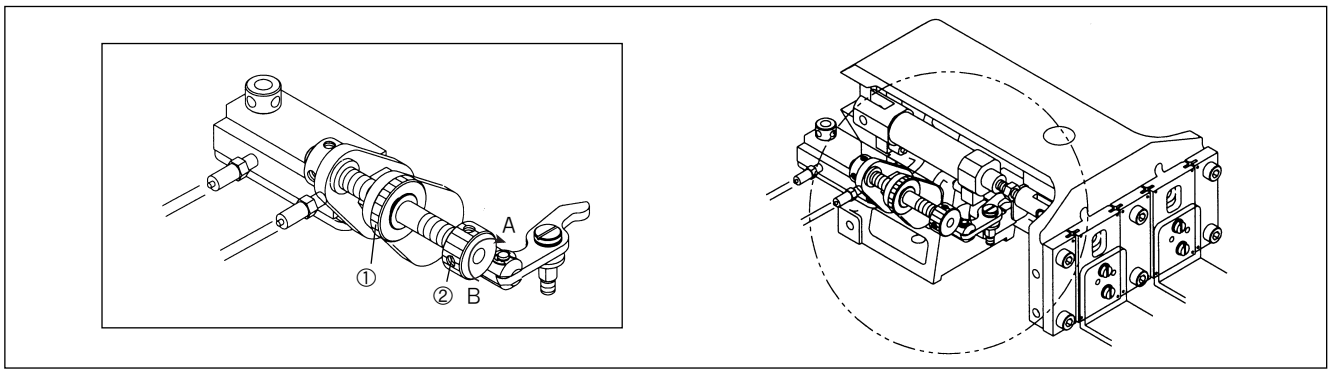
Caution

If the ascending quantity of back side end of reversal feeding frame is small, lack of pressure on the front side can be happened, and if the ascending quantity is large, the reversal crank does not turn and the reversal feeding frame does not ascend.

4. Adjusting the Middle Stop Position of Reversal Feeding Frame

Adjust the middle for easy working stop position of reversal feeding frame to fit with the position of sewing materials. Adjust the gap between reversal feeding frame and sewing materials to be 1mm.

1) Unfasten the cylinder stroke adjusting nut ①.
2) Turn the cylinder bracket fixing nut ② for the middle stop position to be placed a little higher than sewing materials. If the cylinder bracket fixing nut ② is turned to the A direction, the middle stop position will be lower.
3) Fasten the cylinder stroke adjusting nut ① tightly.



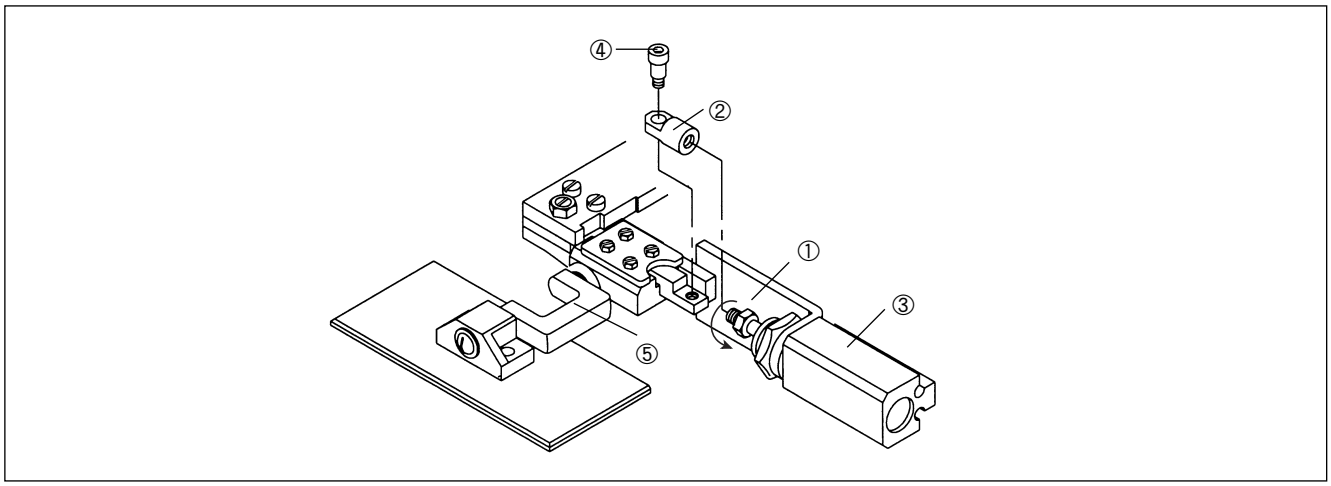
[Fig. 18]

5. Adjusting the Position of the Inverting Clamp Devices Crank

1) Turn the nut ① to the end of arrow direction.
2) Attach the reversal cylinder knuckle ② to the reversal cylinder ③.
3) After unfastening the reversal rack hinge screw ④, reverse the reversal crank ⑤.
4) If you turn the nut ① to the spanner direction, the several cylinder shaft will turn and the position of reversal crank ⑤ will to change.
5) Turn the nut ① to the opposite direction of arrow to let the reversal crank ⑤ reverse with balance for right and left, then fix the reversal cylinder knuckle ②.

Caution

If the position of reversal crank is not adjusted, the reversal crank can be interfered with reversal feeding frame when reversing.



[Fig. 19]

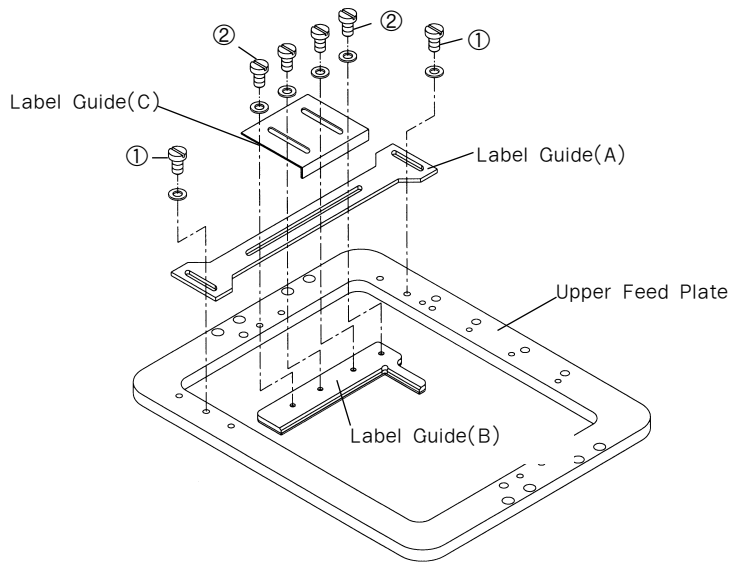
6. Adjusting the Label Guide

1) Attach the label guide as seen in the fig. 19.

Caution	**In case of using label guide, attach the accessory sponge to the lower part of up-feed plate.**

2) After unfastening the fixing screw ①, adjust the position of label guide (A) to fit with the left end of label, then fasten the fixing screw ①.
3) After unfastening the fixing screw ②, adjust the position of label guide (B) to fit with the upper end of label, then fasten the fixing screw ②.

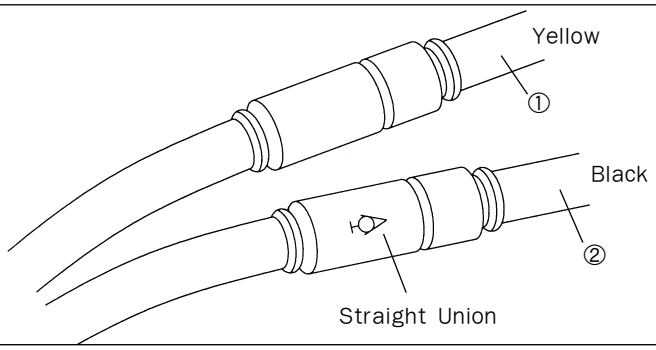
Caution	**In case of using small sized label, use the label guide (C) since the label guide (A) can be interfered with the reversal devices.**



[Fig. 20]

7. Removing the Inverting Clamp Devices

1) Remove the inverting clamp devices when using the standard specification or adjusting X-Y preciously.
2) Remove the inverting air tubes ① and ②, and one-tough juncture from the straight union.
3) After unfastening the fixing screw, take off the inverting clamp devices (unit).

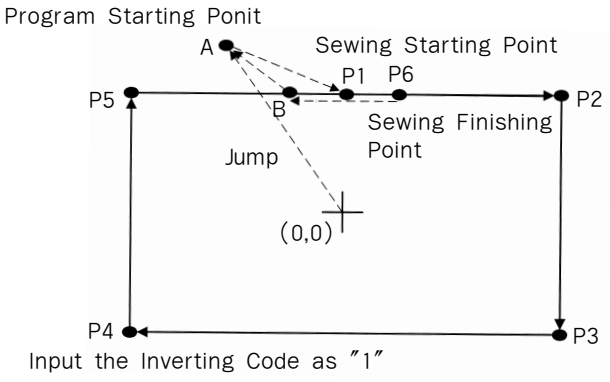


[Fig. 21]

4

The Use of Inverting Functions

They are used when inverting clamp devices are available. During programming the patterns, pay attention to that inverting clamp is interfered with needle bar, or inverting cylinder drive part is interfered with needle bar. There are two ways for inputting inverting codes (the orders to drive inverting devices), one is to call the already programmed pattern to add the inverting codes and the other is to program newly.



1. Pattern Programming by Using the Inverting Code

① Insert a floppy diskette into a floppy disk drive.
② Press a MODE key.
③ By using Arrow Keys ▲▼ , move to "2. Program" menu, then press ENTER ↵ key. At this time, the upper feed plate descends and move to the origin.

```
<<  Main Menu>>
2. Program
3. Bobbin Wind
4. Machine Test
```

```
ORIGIN
X:00000A N:00000
Y:00000A
Function Code?
```

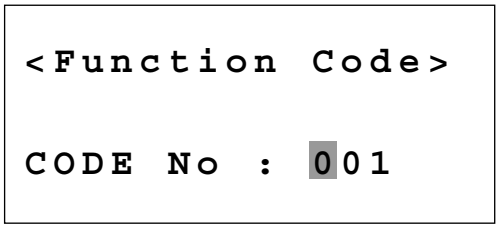
④ After pressing JUMP key, move to the A point by pressing Arrow Keys. Then press PNT SET key.

```
004:JUMP
X:?????
Y:?????
N:001
```

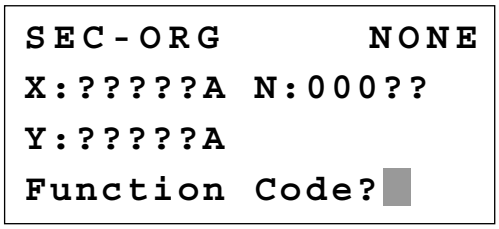
⑤ If you press EXE key, the machine operates pattern date, then upper feed plate moves according the operated data.

```
JUMP          NONE
X:?????A N:000??
Y:?????A
Function Code?
```

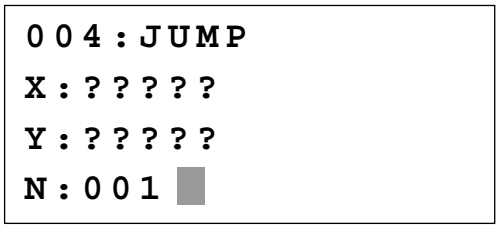
⑥ After pressing CODE key, set up the 2nd origin by pressing digit keys, [0][0][1].



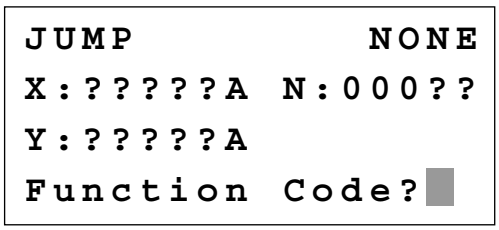
⑦ Press ENTER key.



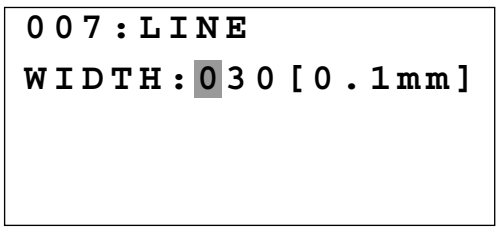
⑧ After pressing JUMP key, move to the sewing start point P1, by pressing Arrow key. Then press PNT SET key.



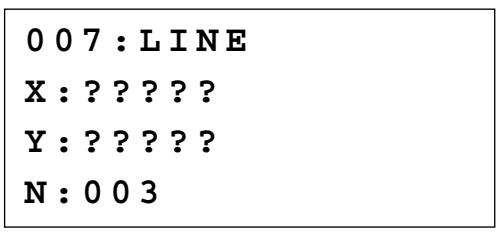
⑨ If you press EXE key, the machine operates pattern data, then upper feed plate moves according the operated data.



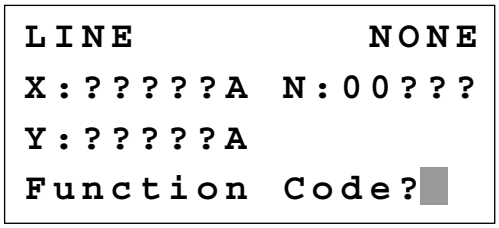
⑩ After pressing LINE key, input the stitch width by using digit keys, then press ENTER ↵ key.
(For example, if you want to set up 3mm as stitch width, input [0][3][0].)



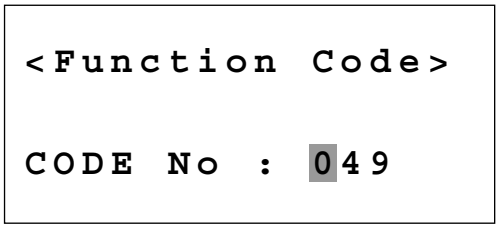
⑪ Move to the P2, P3, and P4 by using Arrow keys, then press PNT SET key each time to input the coordinates of each corner.



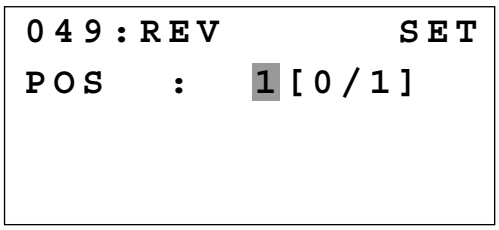
⑫ If you press EXE key, the machine operates pattern data, then upper feed plate moves according the operated data.



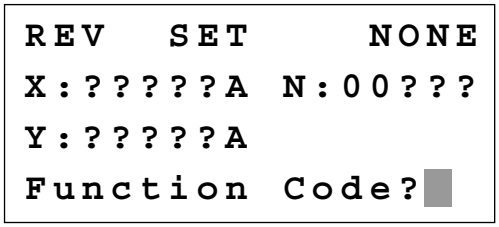
⑬ After pressing CODE key, input the inverting code by pressing digit keys [0][4]and [9].



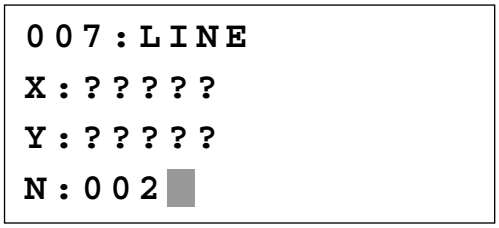
⑭ Press ENTER key. Operate the inverting cylinder by pressing digit key, 1.



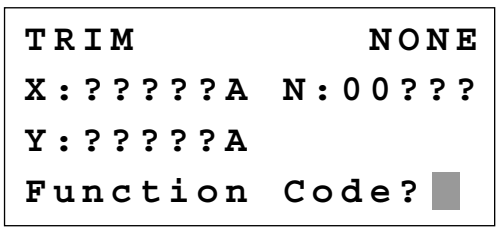
⑮ After confirming, input the inverting code by pressing ENTER key.



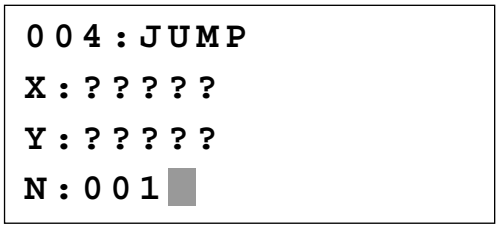
⑯ Program P5 and P6 by using LINE.



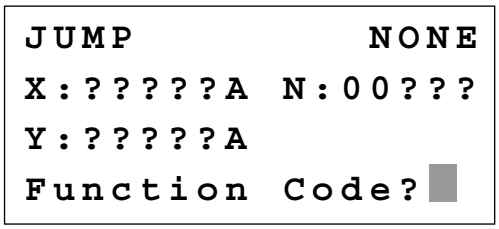
⑰ Press Trim key to input trimming code.
"000 : TRIM" appears on the screen, then the screen on the right appears again.



⑱ After pressing JUMP key, move to the B point by using digit keys. Then, press PNT SET key.



⑲ If you press EXE key, the machine operates pattern data, then upper feed plate moves according the operated data.



⑳ Perform test sewing.
㉑ After pressing WRITE key, input the number you want to save by using digit keys, and press ENTER ↵ key. Save the generated pattern data into a floppy diskette as the relevant number.
(For example, to save the pattern number as 551, input [5][5]and [1].)
㉒ For completing pattern data generation, press MODE key. The upper feed plate moves to the origin, then ascends. To back to the initial screen, press ESC key.

```
015:PTRN WRITE
NO: 551
```

```
 <<Main Menu>>
2.Program
3.Bobbin Wind
4.Machine Test
```

2. Adding the Codes for Reversal to the Patterns Already Programmed

1) Reading the pattern that does not have inverting codes.

① Insert a floppy diskette that has a pattern to be added the inverting code.
② Press MODE key.
③ After moving to "2. Program" menu by using Arrow key, ▲▼, press ENTER ↵ key. At this time, the upper feed plate descends and moves to the origin.

```
 <<<Main Menu>>
2.Program
3.Bobbin Wind
4.Machine Test
```

```
ORIGIN
X:00000A N:00000
Y:00000A
Function Code?
```

④ After pressing READ key, input the pattern number that contains a sewing speed you want to change by using digit keys, then press ENTER key to read the pattern.
(For example, to read pattern number 500, input [5][0][0].)

```
014:PTRN     READ
NO     :500
```

2) Inserting the inverting code

⑤ Add the inverting code by using FORW, BACK keys, and move to the P4 that you want to add the inverting code.

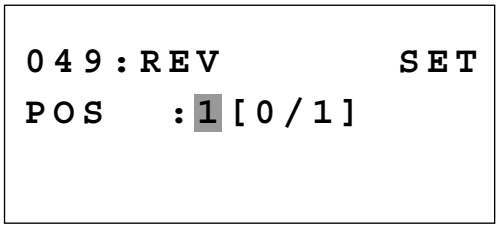
```
LINE
X:?????A N:000??
Y:?????A
Function Code?
```

⑥ After pressing CODE key, input the inverting code by pressing digit keys, [0][4] and [9].

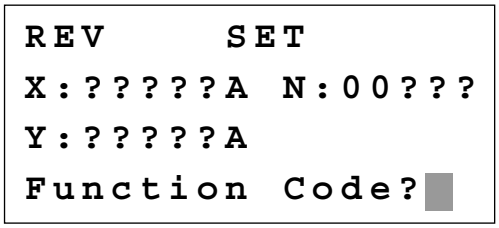
```
<Function Code>

CODE No : 049
```

⑦ Press ENTER key.
Operate the inverting cylinder by pressing digit key 1.

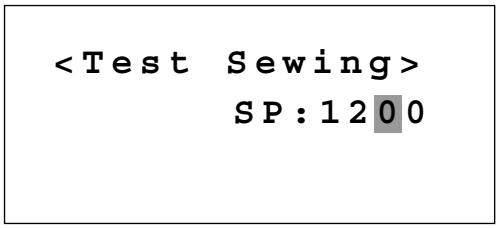


⑧ After confirming, press ENTER key to input the inverting code.

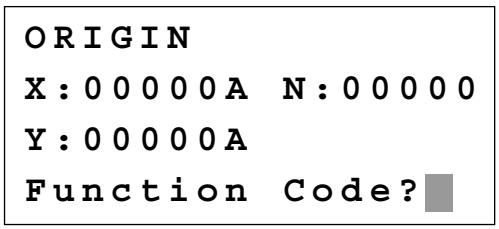


3) Test sewing

⑨ Press TEST key. After moving to the origin, the upper feed plate moves to the sewing start point and ascends to turn on the READY LED. After adjusting proper speed for test sewing by pressing SPEED key, if you press down right pedal switch once, the upper feed plate descends, and if you press down left pedal switch once more, the test sewing comes to start. After completing the test sewing, the up-feed plate moves to the sewing start point then ascends.

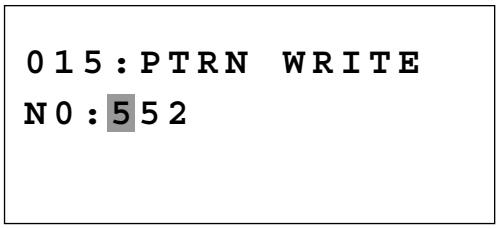


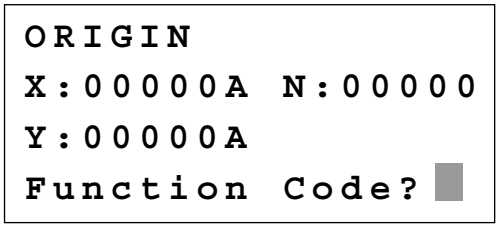
⑩ By repressing TEST key, complete the test sewing. After the upper feed plate descends and moves to the origin, the READY LED turns off.



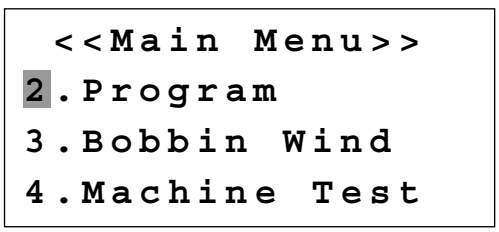
4) Saving as new pattern number

⑪ After pressing WRITE key, input the pattern number you want to save by using digit key, and press ENTER ↵ key. Save the generated pattern data into a floppy diskette as a relevant number. (For example, to save the pattern number as 552, input [5],[5]and [2].) During saving the pattern, READY LED flickers. After completing the saving, the READY LED turns off, and the upper feed plate moves to the origin.

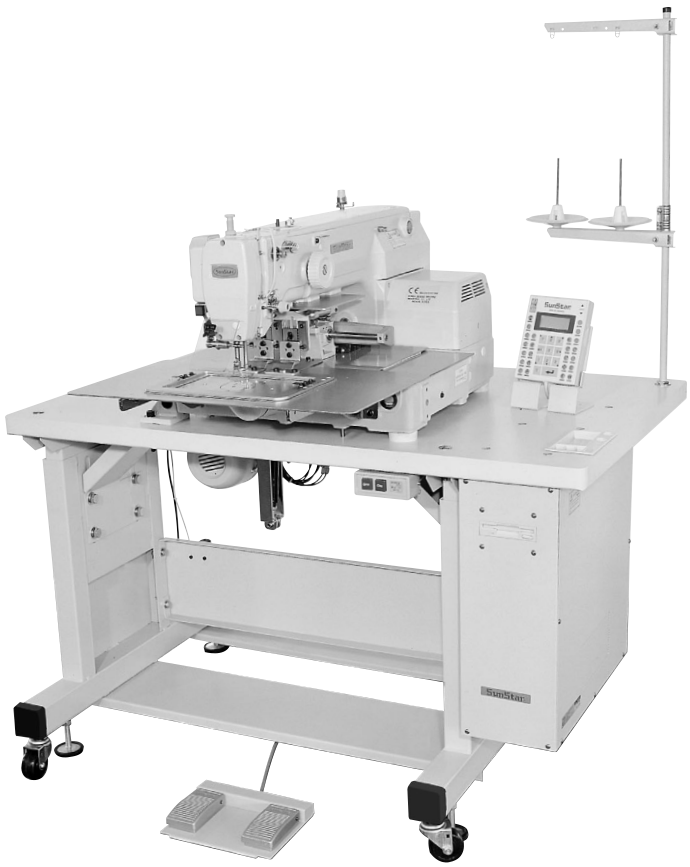




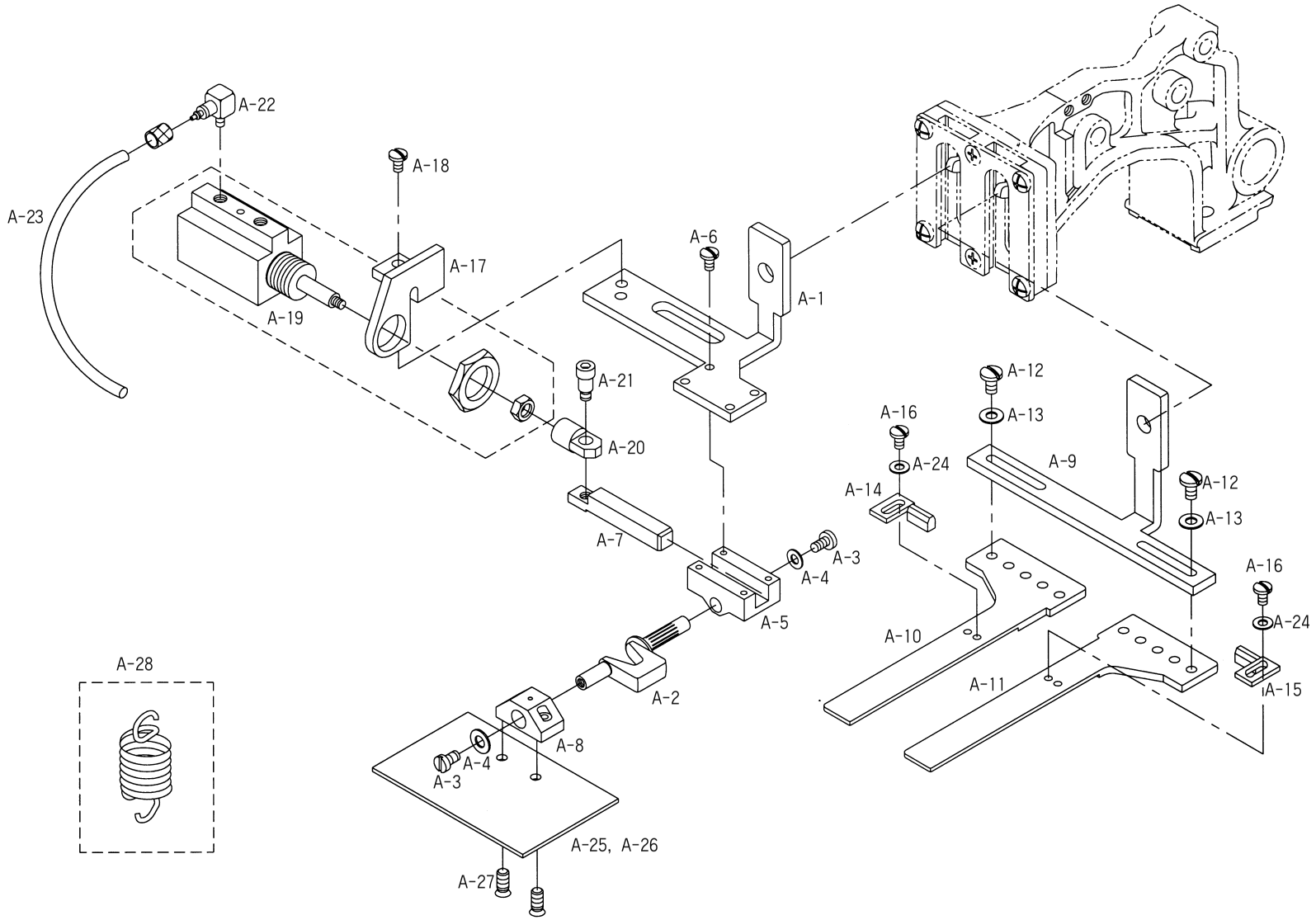
⑫ To complete the pattern data generation, press MODE key. After moving to the origin, the upper feed plate ascends. To back to he initial screen, press ESC key.



Parts book



Inverting Clamp Devices Mechanism (SPS/A-1306 Series)

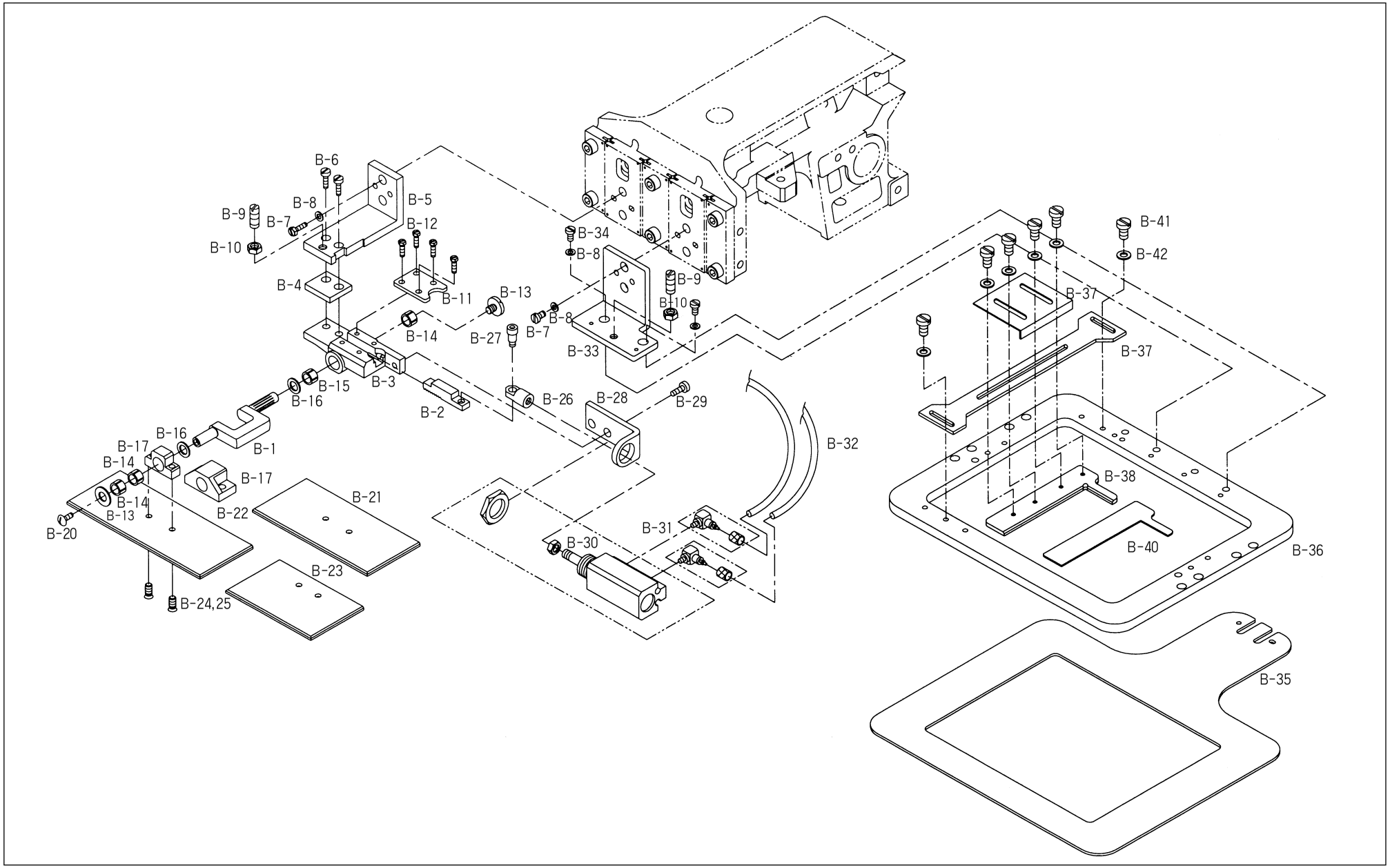


Ref. No.	Parts No.	Parts Names	Q'ty
A-1	52A001S-306H	Inverting Base	1
A-2	52A002S-306H	Inverting Crank	1
A-3	52A003S-306H	Screw (1/8" n=40)	2
A-4	SW-0103-9011	Washer	2
A-5	52A005S-306H	Inverting Crank Base	1
A-6	SC-0524-4122	Screw (1/8" n=44)	4
A-7	52A007S-306H	Inverting Rack	1
A-8	52A008S-306H	Inverting Support Base	1
A-9	52A009S-306H	Presser Plate Base	1
A-10	52A010S-306H	Feeding Frame (A)	1
A-11	52A011S-306H	Feeding Frame (B)	1
A-12	SC-0543-4525	Screw (11/64 n=40)	4
A-13	22S021S-306H	Washer	4
A-14	52A014S-306H	Guide Presser (A)	1
A-15	52A015S-306H	Guide Presser (B)	1
A-16	SC-0502-4125	Screw (9/64" n=40)	1
A-17	52A017S-306H	Inverting Cylinder Bracket	1
A-18	SC-0548-4122	Screw (3/16 n=28)	2
A-19	09A019S-306H	Inverting Cylinder Ass'y	1set
A-20	09A029S-811H	Inverting Cylinder Knuckle	1
A-21	09A030S-811H	Inverting Rack Hinge Screw	2
A-22	49A029S-811H	Air Elbow	2
A-23	05A039S-811H	Air Hose (ϕ4)	1
A-24	01-017W-1600	Washer	2
A-25		Inverting Presser Plate(A)	1
A-26		Inverting Presser Plate(B)	1
A-27	09A023S-811H	Screw	2
★ A-28		Lifting Lever Tension Spring (Invert Clamp)	1

Ref. No.	부품번호	품 명	수량

Note)★Registered A-28 parts are electronic kinds of machine.

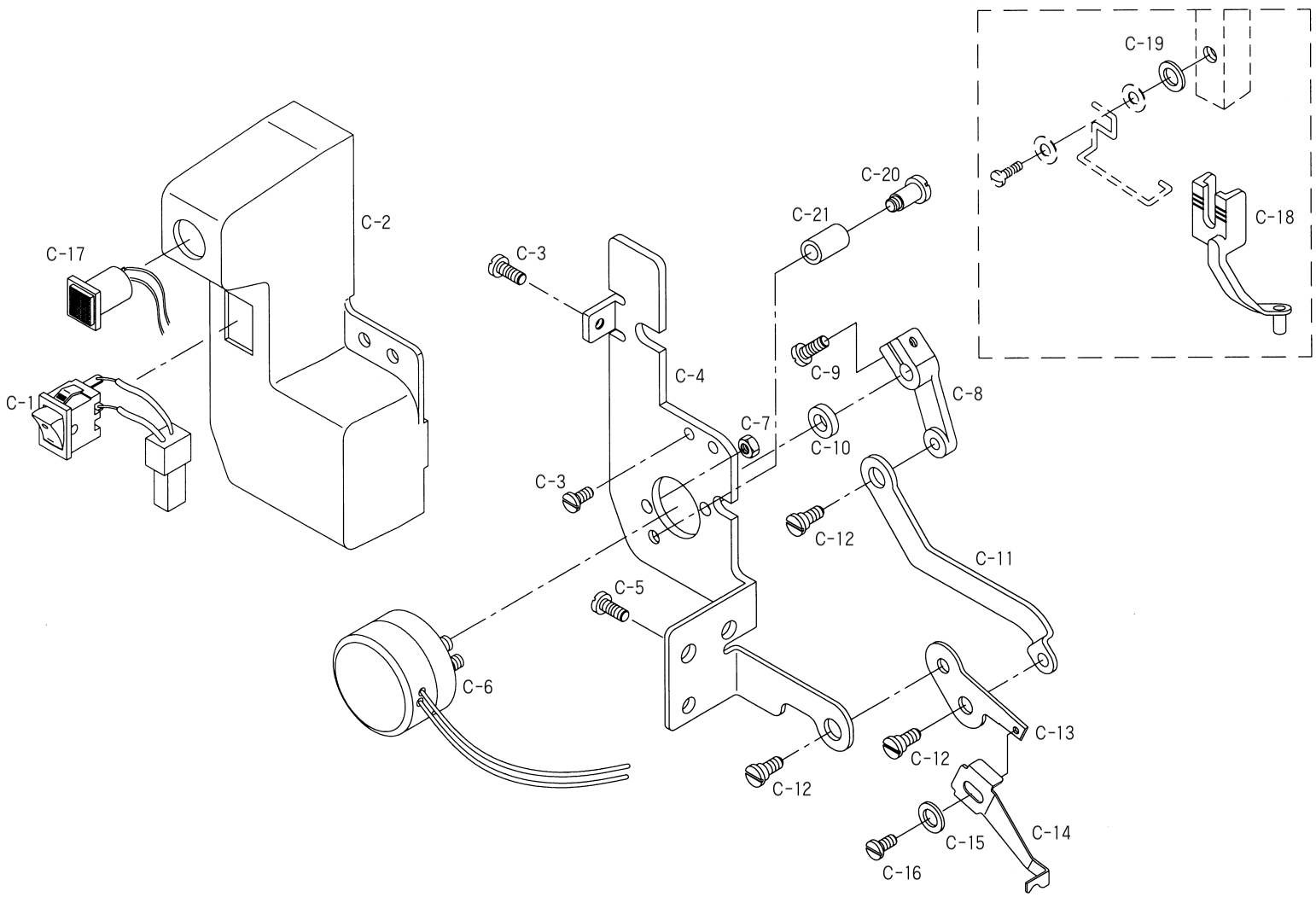
Inverting Clamp Devices Mechanism (SPS/A-1811 Series)



Ref. No.	Parts No.	Parts Names	Q'ty
B-1	09-A017S-811H	Inverting Crank	1
B-2	09A026S-811H	Inverting Rack	1
B-3	09A021S-811H	Inverting Clamp Shaft Base	1
B-4	09A011S-811H	Inverting Clamp Spacer	1
B-5	09A010S-811H	Inverting Clamp	1
B-6	SC-0183-4122	Screw (15/64" n=28)	2
B-7	22A043S-811H	Screw For Feed Plate Clamp B	4
B-8	06-022W-2350	Washer	4
B-9	SC-0508-4515	Screw (15/64" n=28)	1
B-10	SN-0120-4000	Nut	1
B-11	09A025S-811H	Inverting Rack Cover	1
B-12	SC-0156-4118	Screw (9/64" n=40)	4
B-13	SC-000458-00	Screw(B) For Inverting Clamp	1
B-14	09A013S-811H	Needle Bearing(A)	3
B-15	09A015S-811H	Needle Bearing(B)	1
B-16	09A016S-811H	Washer	2
B-17	09A018S-811H	Invering Support Base "A"	1
B-18	09A019S-811H	Invering Support Base "B"	1
B-19	SW-0120-1011	Washer	1
B-20	SC-0200-4123	Screw (11/64" n=40)	1
B-21	09A020S-811H	Inverting Presser Plate "A"	1
B-22	09A021S-811H	Inverting Presser Plate "B"	1
B-23	09A022S-811H	Inverting Presser Plate "D"	1
B-24	SC-0120-4120	Screw For Inverting Presser Plate "A,B"	2
B-25	09A023S-811H	Screw For Inverting Presser Plate "D"	2
B-26	09A029S-811H	Inverting Cylinder Knuckle	1
B-27	09A030S-811H	Inverting Rack Hlinge Screw	1
B-28	09A027S-811H	Inverting Cylinder Bracket	1
B-29	SC-0151-3118	Screw (15/64" n=28)	2
B-30	09A028S-811H	Air Cylinder Ass'y	1Set
B-31	49A003S-811H	Air Elbow	2
B-32	05A039S-811H	Air Hose (ϕ4)	2
B-33	09A-031S-811H	Feed Plate Clamp (R)	1
B-34	22A0435-811H	Screw	1
B-35	GP-013524-00	Lower Feed Plate	1
B-36	09A037S-811H	Upper Feed Plate	1
B-37	09A032S-811H	Label Guide (A)	1
B-38	09A033S-811H	Label Guide (B)	1
B-39	09A034S-811H	Label Guide (C)	1
B-40	09A035S-811H	Seet for Label Guide (B)	1
B-41	SC-0543-4525	Screw (11/64" n=40)	6
B-42	01-017W-1600	Washer	6

Ref. No.	Parts No.	Parts Names	Q'ty

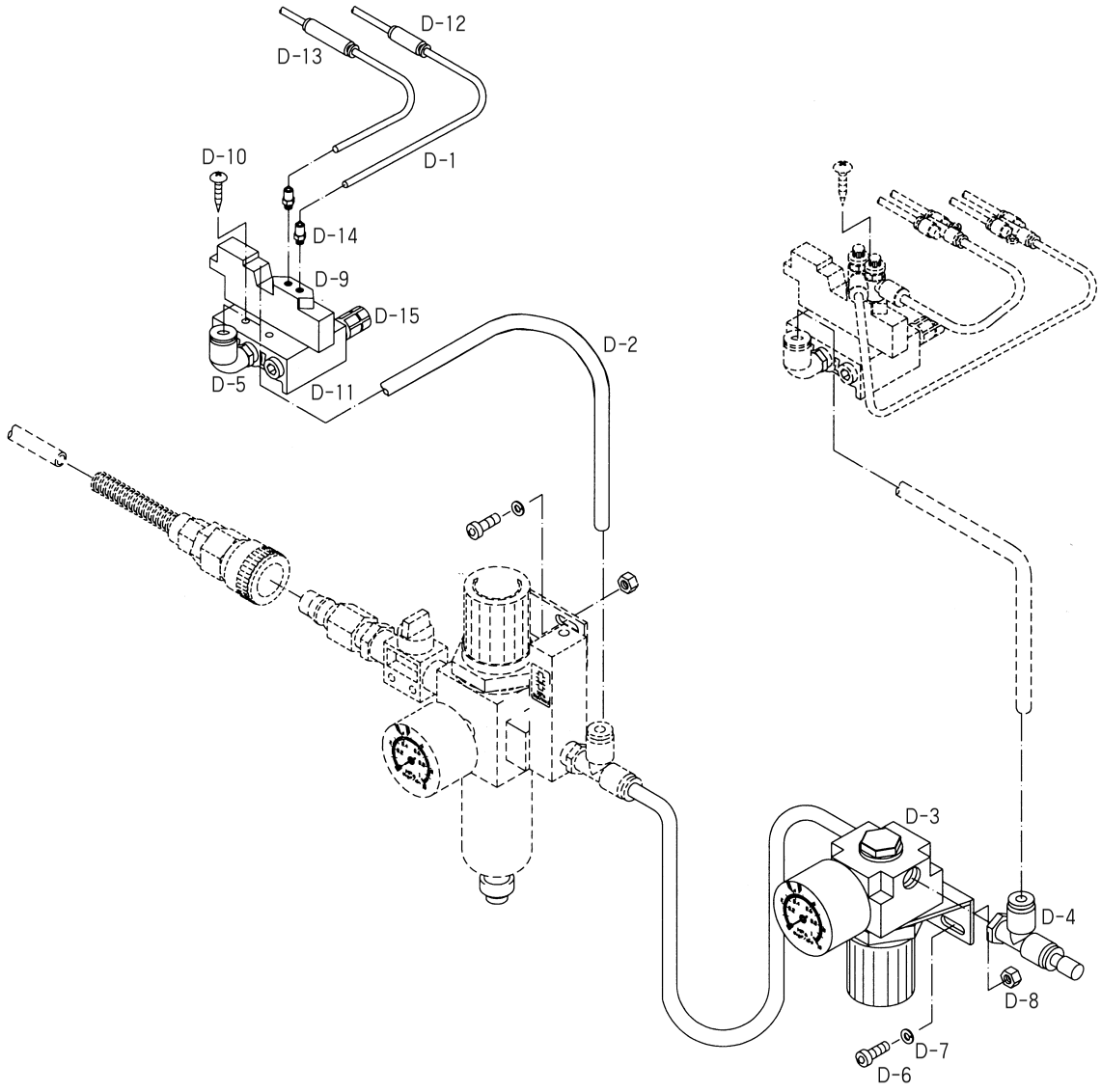
Wiper & Presser Foot Mechanism



Ref. No.	Parts No.	Parts Names	Q'ty
C-1	11S036S-306H	Wiper On/Off Switch Ass'y	1Set
C-2	09A004S-811H	Wiper Cover	1
C-3	SC-0543-4525	Screw (11/64" n=40)	3
C-4	GP-023016-00	Wiper Base	1
C-5	SC-0525-4122	Screw (11/64" n=40)	2
C-6	09A001S-811H	Wiper Solenoid Ass'y	1
C-7		Nut (M4×P0.7)	1
C-8	09A006S-811H	Wiper Crank	1
C-9	SC-0330-4422	Screw (15/64" n=28)	1
C-10	06-034W-7400	Washer	1
C-11	09A007S-811H	Wiper Connecting Rod	1
C-12	05A045S-811H	Hinge Screw For B-11	3
C-13	09A008S-811H	Wiper Installing Plate	1
C-14	09A009S-811H	Wiper	1
C-15	01-071W-1600	Washer	1
C-16	SC-0502-4125	Screw (9/64" n=28)	1
C-17	01S057S-306H	Emergency Switch	1
C-18	09A003S-811H	Presser Foot	1
C-19	09A002S-811H	Washer	1
C-20	09A036S-811H	Stud for Wiper Stopper	1
C-21	06-040R-106L	Rubber for Wiper Stopper	1

Ref. No.	Parts No.	Parts Names	Q'ty

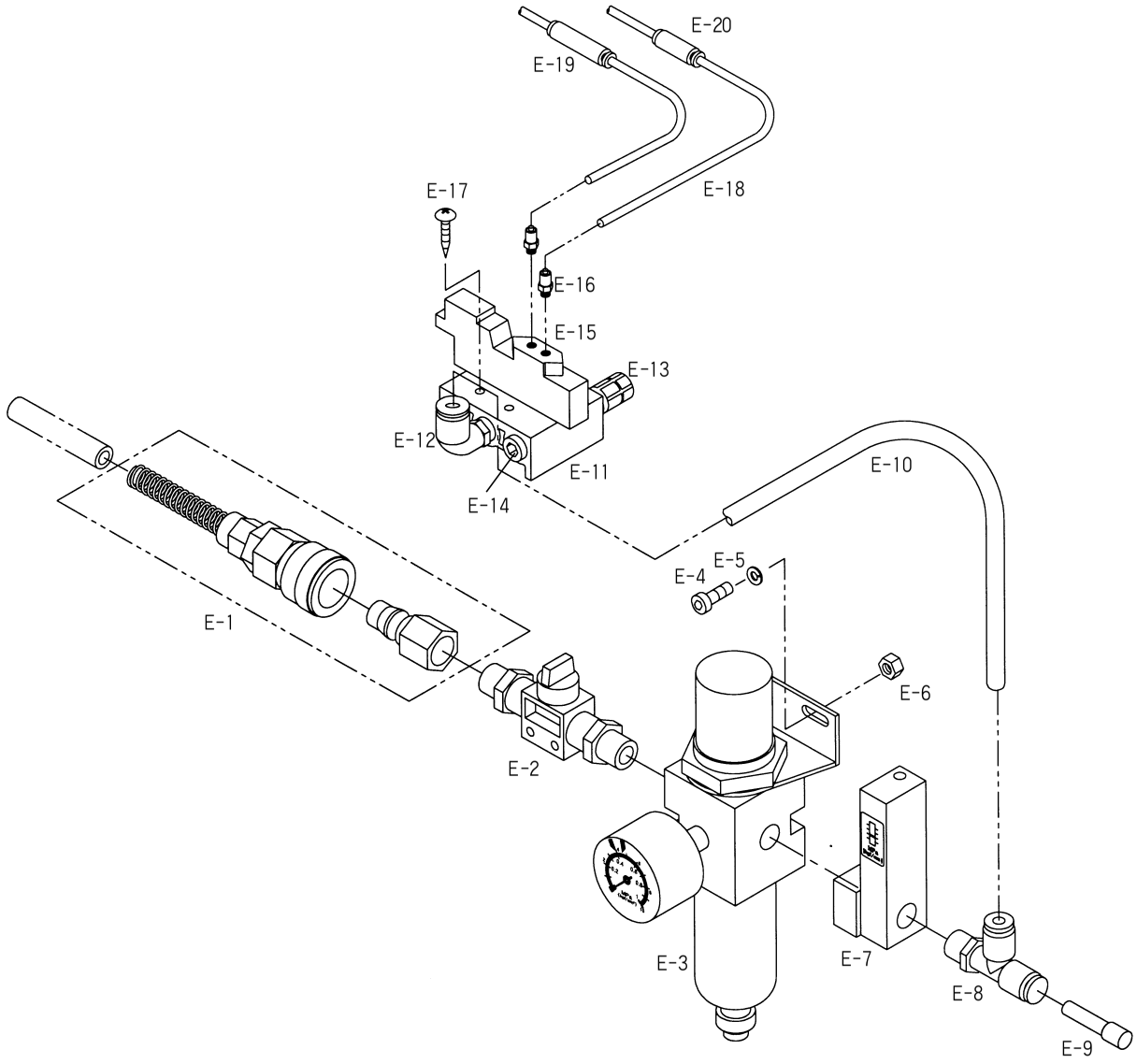
Pneumatic Control Mechanism (SPS/A-1306 Pneumatic Machine Seires)



Ref. No.	Parts No.	Parts Names	Q'ty
D-1	49A001S-811H	Urethane Hose (ϕ4)	
D-2	05A052S-811H	Urethane Hose (ϕ6)	
D-3	49A006S-811H	Regulator	1
D-4	49A009S-811H	Tee	1
D-5	49A014S-811H	Elbow Union	1
D-6	02031SC-2113	Screw (M5×P0.8)	2
D-7	10-010W-7507	Washer	2
D-8	SN-0115-2000	Nut (M5×P0.8)	2
D-9	49A017S-811H	Solenoid Valve	1
D-10	49A018S-811H	Tapping Screw	2
D-11		Solenoid Valve Bracket	1
D-12	49A013S-811H	Straight Union	1
D-13	49A100S-811H	Check Valve	1
D-14	49A015S-811H	Hose Nipple	2
D-15	49A020S-811H	Silencer	2

Ref. No.	Parts No.	Parts Names	Q'ty

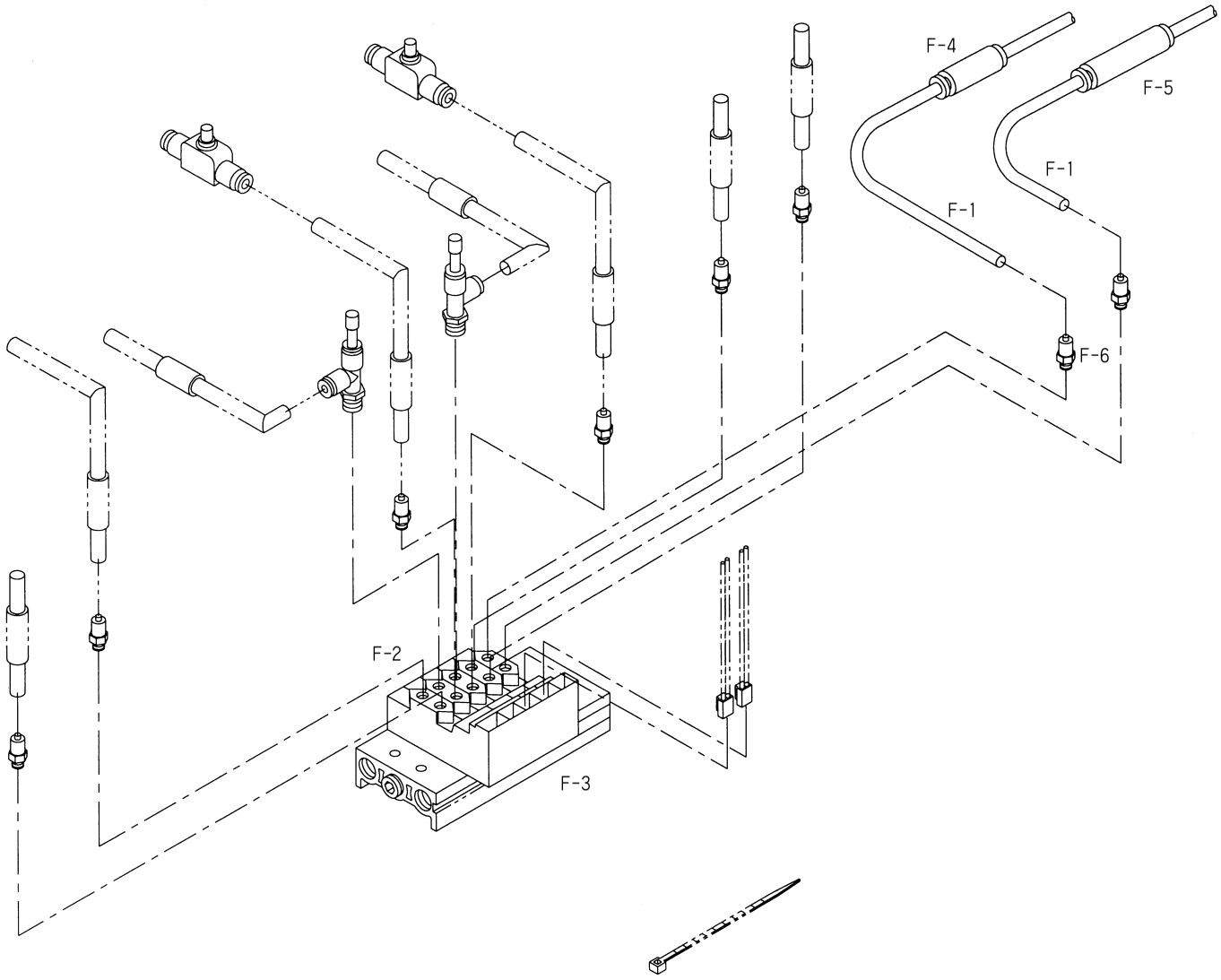
Pneumatic Control Mechanism (SPS/A-1306 Electronic Machine Series)



Ref. No.	Parts No.	Parts Names	Q'ty
E-1	49A004S-811H	Quick Joint Plug Ass'y	1
E-2	49A005S-811H	Finger Valve	1
E-3	49A006S-811H	Filter Regulator	2
E-4	49A008S-811H	Screw(M5×P0.8)	2
E-5	10-010W-7507	Washer	2
E-6	49A009S-811H	Nut (M5×P0.8)	1
E-7	49A007S-811H	Air Pressure Switch	1
E-8	49A011S-811H	Tee	1
E-9	49A013S-811H	Plug(A)	-
E-10	05A052S-811H	Air Hose (ϕ6)	1
E-11		Manifold Block	1
E-12	49A014S-811H	Elbow Union	2
E-13	49A020S-811H	Silencer	3
E-14	52A014S-306H	Plug (B)	1
E-15	52A015S-306H	Solenoid Valve	2
E-16	49A015S-811H	Hose Nipple	2
E-17	49A018S-811H	Tapping Screw	-
E-18	49A001S-811GH	Air Hose (ϕ4)	1
E-19		Check Valve	1
E-20		Straight Union	

Ref. No.	Parts No.	Parts Names	Q'ty

Pneumatic Control Mechanism (SPS/A-1811 Series)



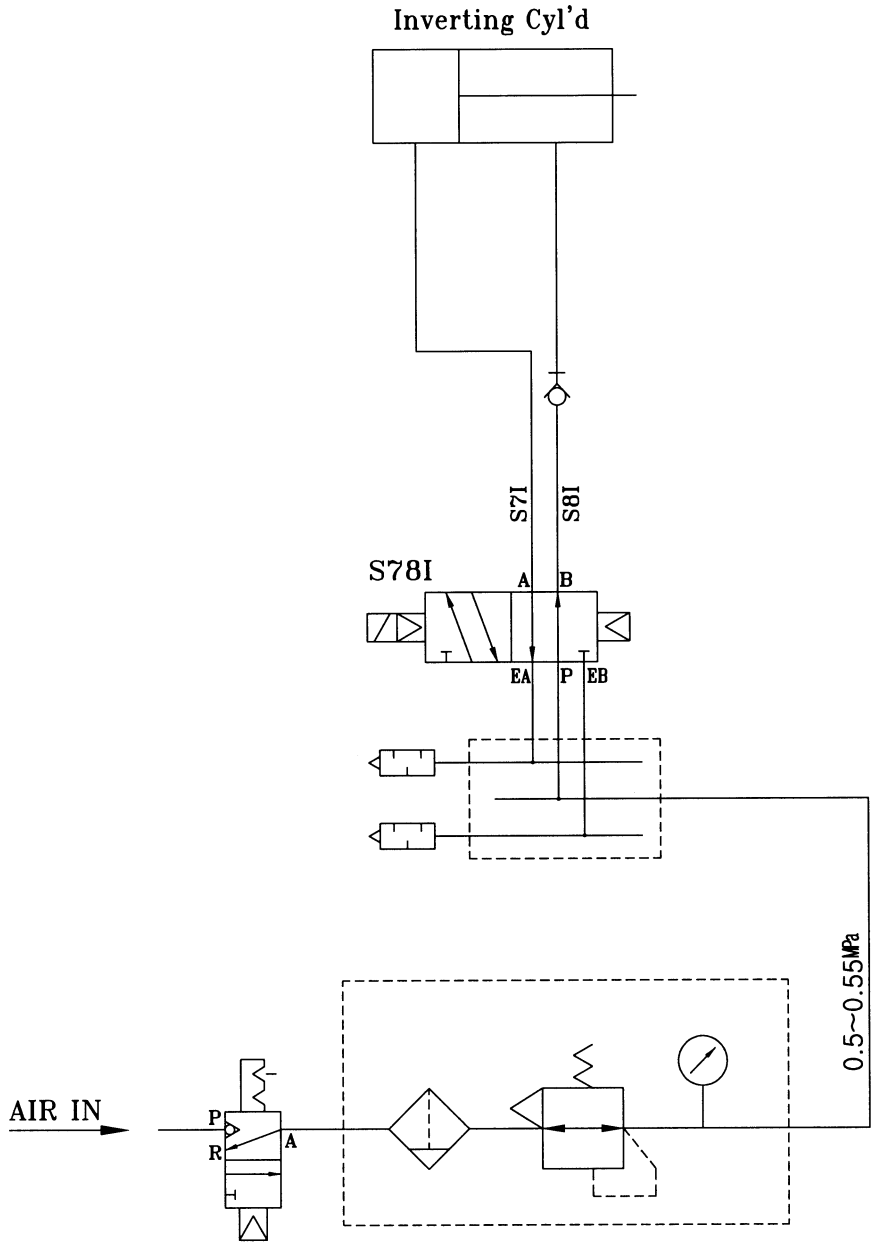
Ref. No.	Parts No.	Parts Names	Q'ty
F-1	49A001S-811H	Urethane Hose (ϕ4)	
F-2	49A017S-811H	Solenoid valve	1
F-3	51A048S-81H2	Manifold Block	1
F-4	49A013S-811H	Straight Union	1
F-5		Check Valve	1
F-6	49A015S-811H	Hose Nipple	2

Ref. No.	Parts No.	Parts Names	Q'ty

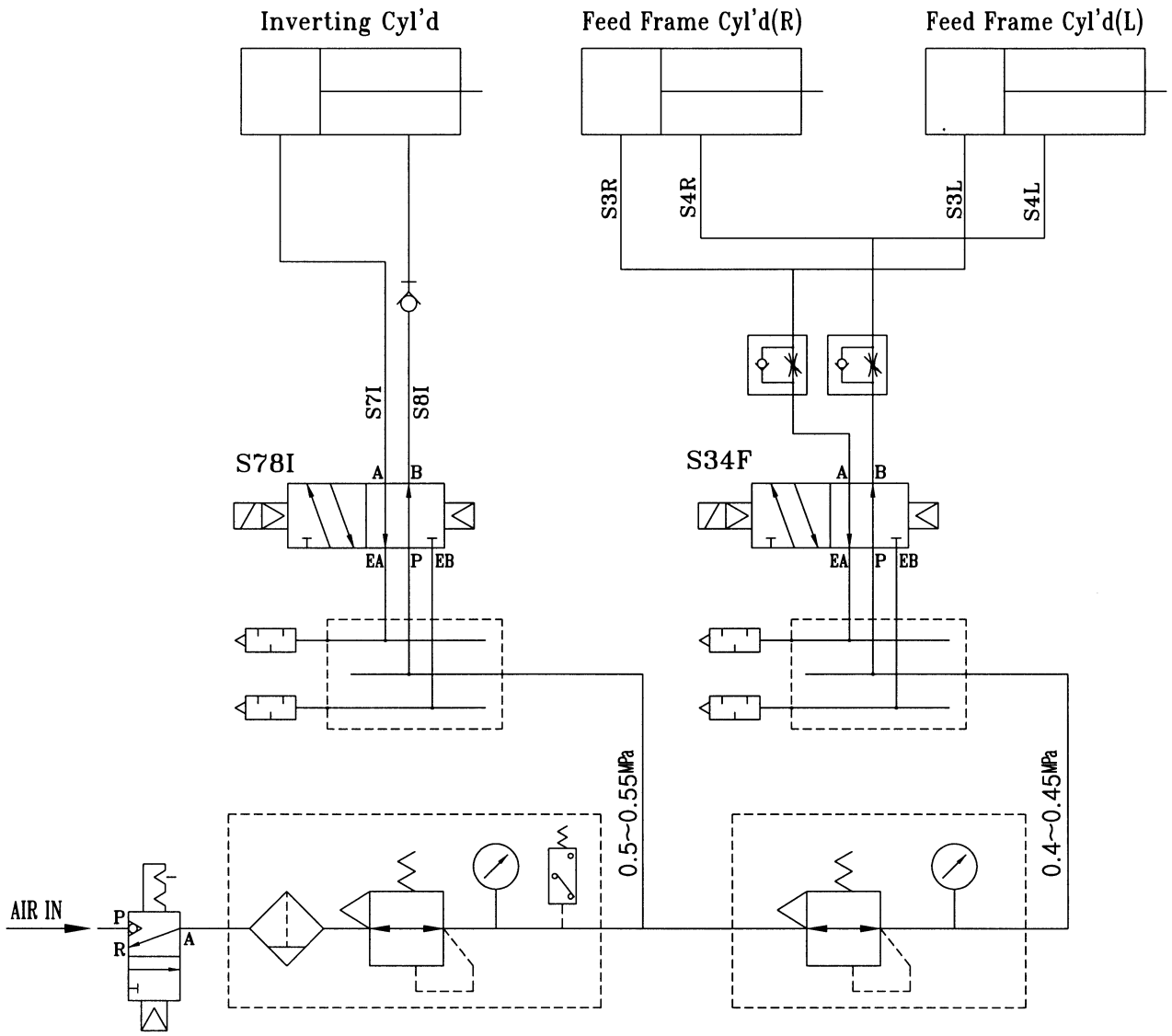
Attachments

1. Pneumatic circuit diagram for SPS/A-1306 series turnover device

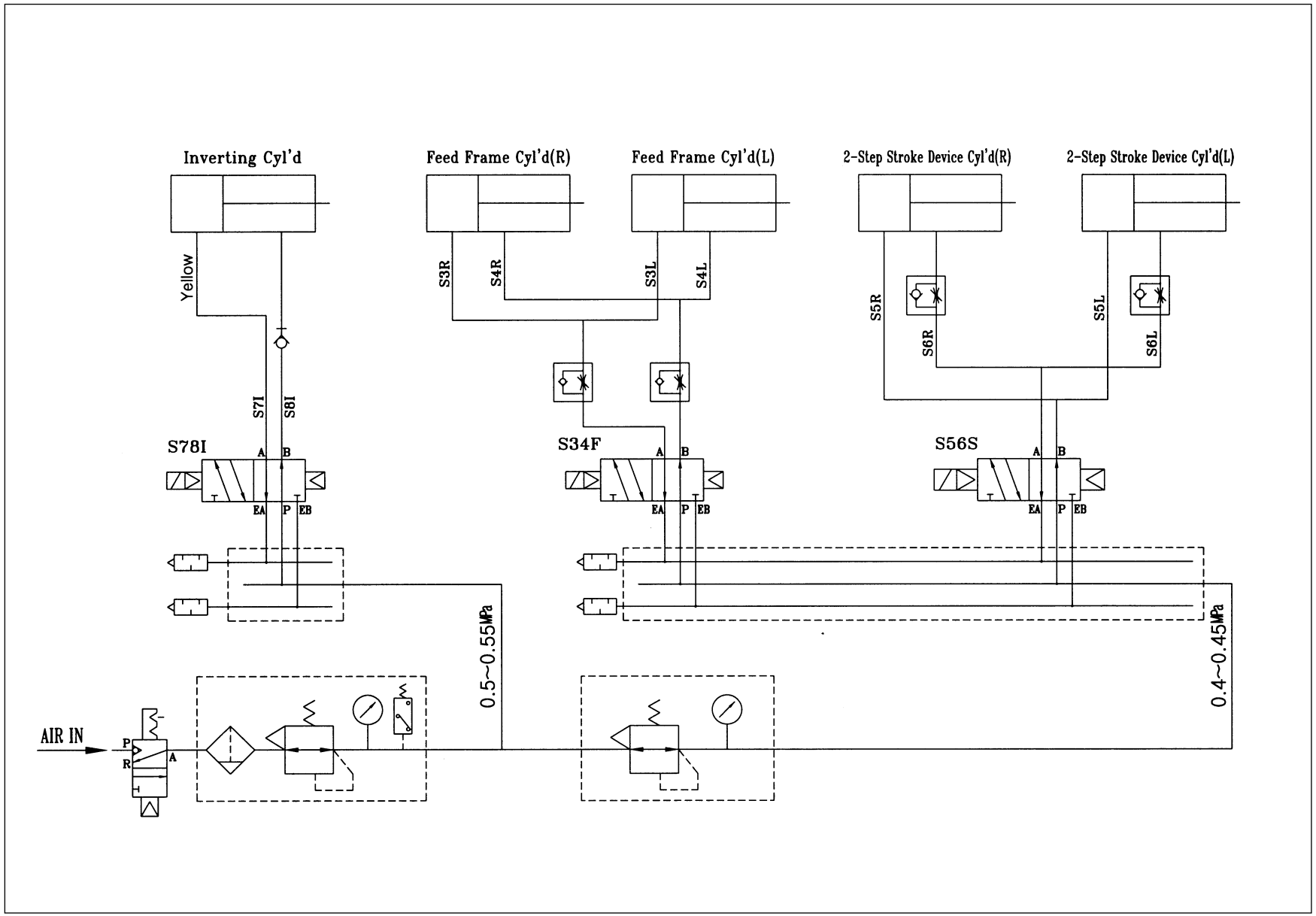
1) SPS/A-1306-HS-10



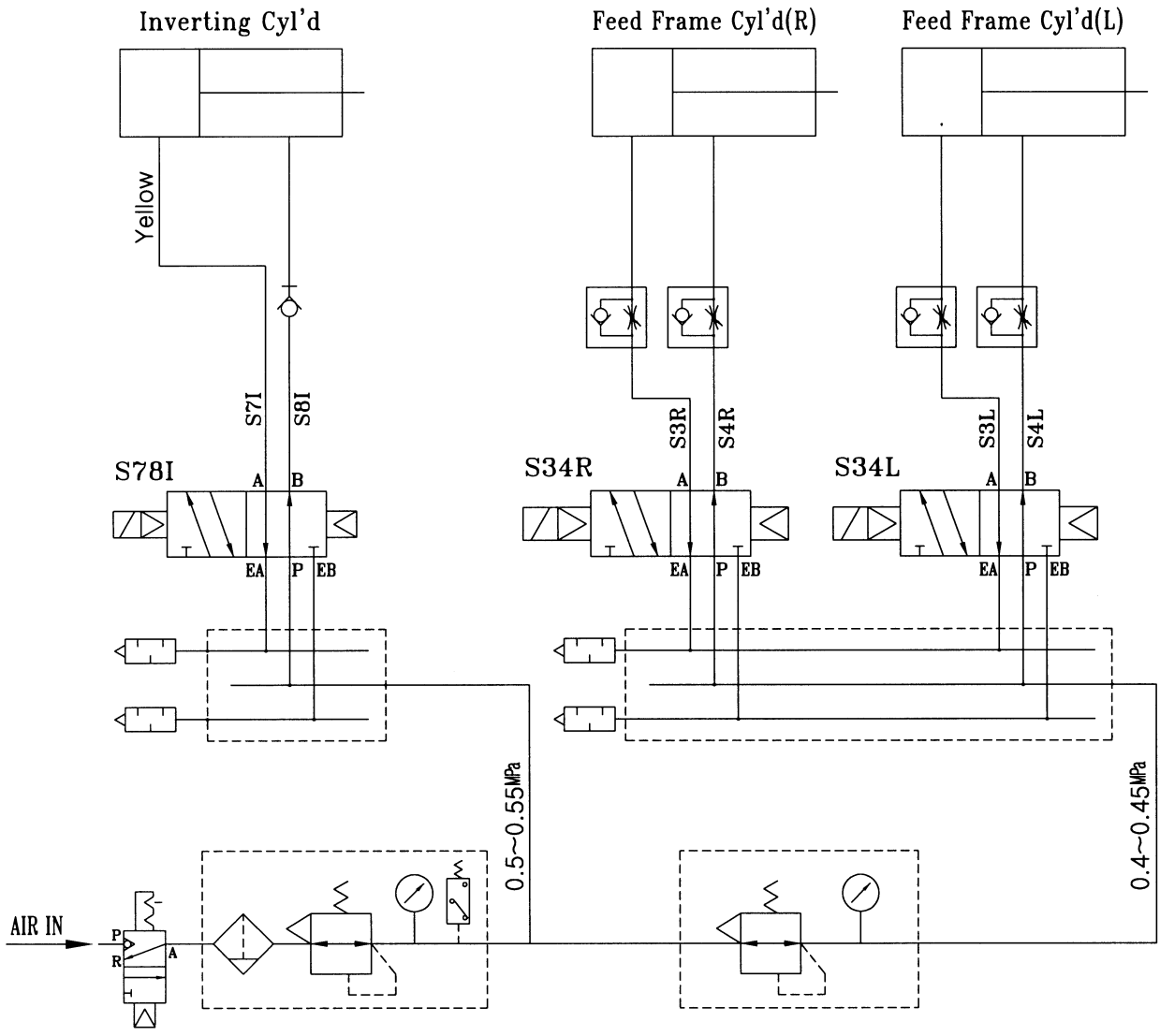
2) SPS/A-1306-HS-20



3) SPS/A-1306-HS-21

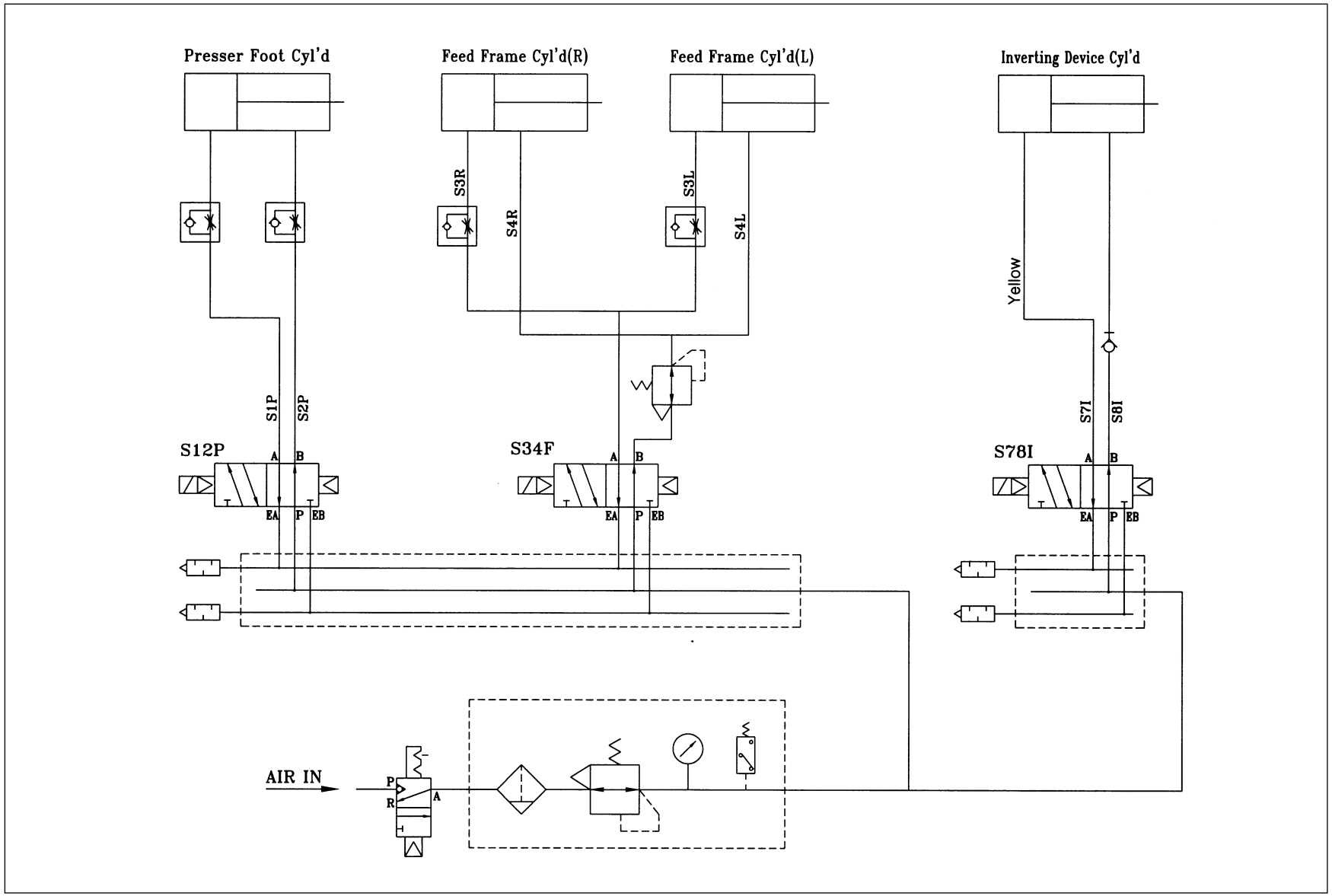


4) SPS/A-1306-HS-23(SPS/A-1306-HS-22)

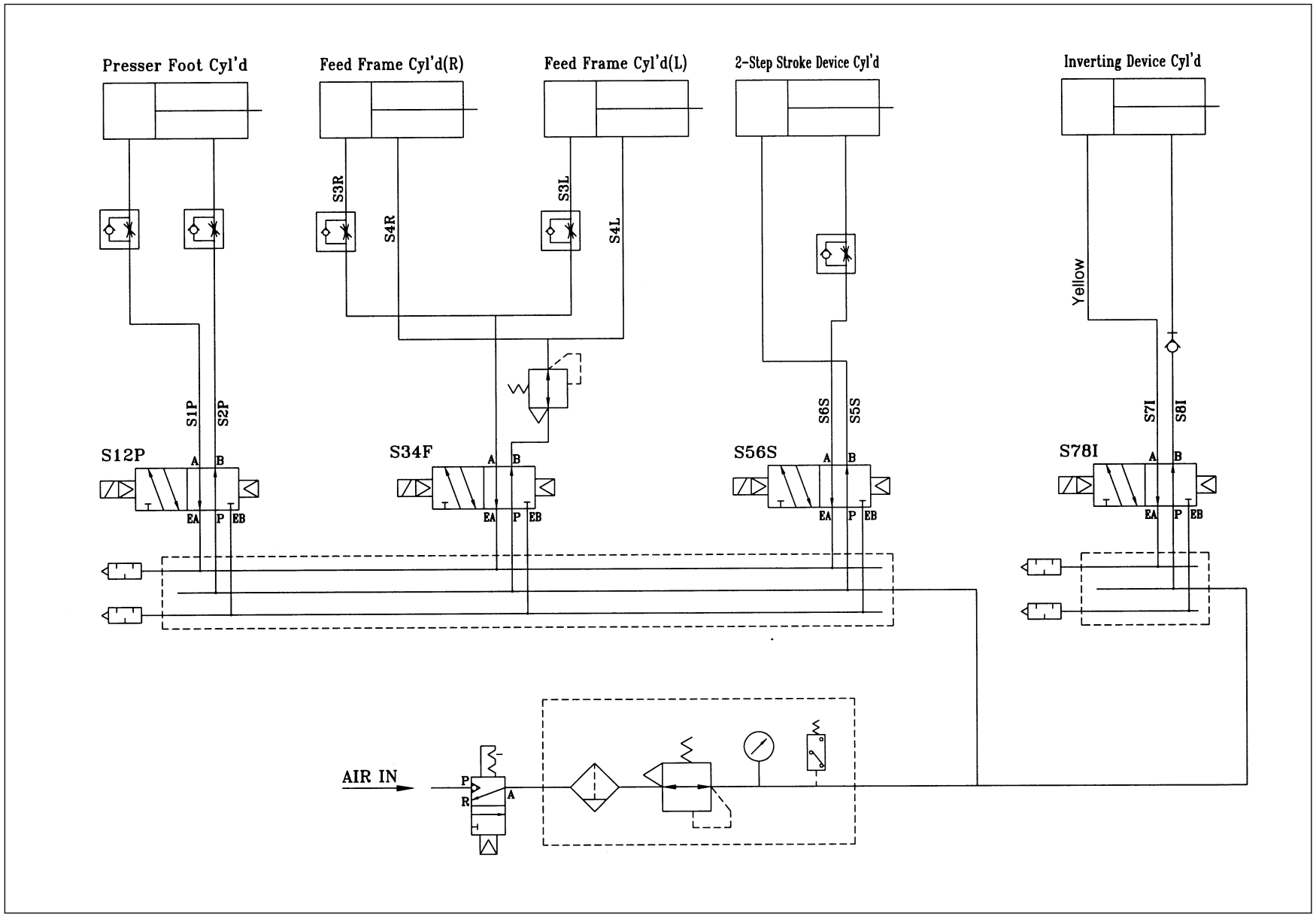


2. Pneumatic circuit diagram for SPS/A-1811 series turnover device

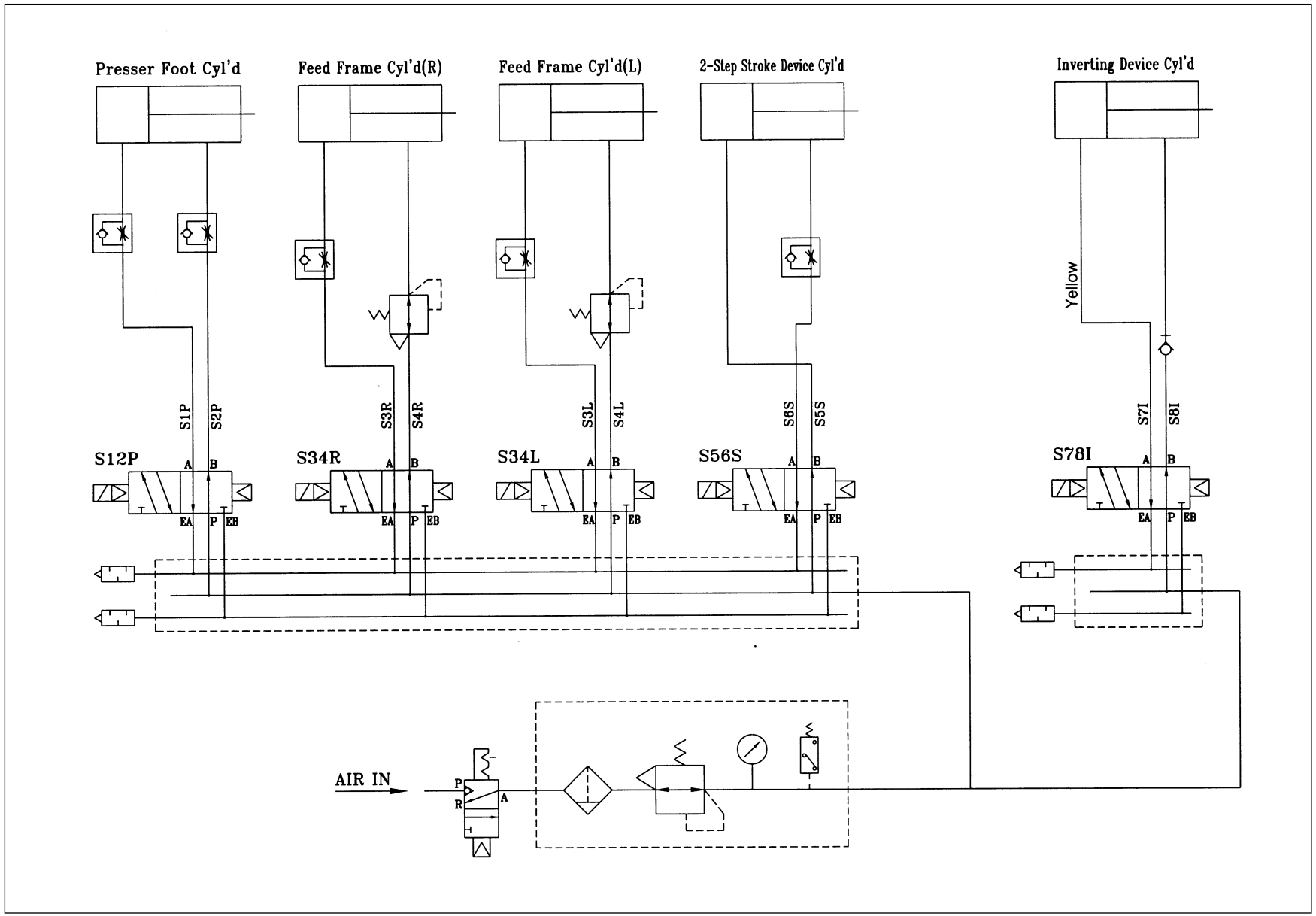
1) SPS/A-1811-HS-20



2) SPS/A-1811-HS-21



3) SPS/A-1811-HS-22



4) SPS/A-1811-HS-23