GLOBAL

MEMBER OF THE IMCA-GROUP

WF 9955

HIGH SPEED SINGLE NEEDLE COMPOUND WALKING-FOOT NEEDLE FEED MACHINE

PARTSLIST
&
INSTRUCTION MANUAL

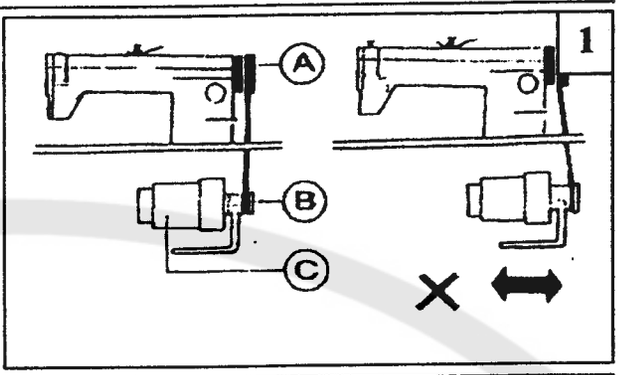
INSTRUCTION MANUAL

1. MAIN SPECIFICATION

Sewing speed	2000s.p.m.	Needle	DP×17 22#
Stitch length	0 – 9mm	Lubrication	Automatic
Needle bar stroke	33.2mm	Reverse feeding mechanism	Have
Presser foot lift	8mm (Manual)		
	15mm (Knee)		

2. INSTALL THE MOTOR (Fig.1)

Align Motor Pulley Groove (B) and Balance Wheel Groove (A) by moving the Motor(C) leftward or rightward.



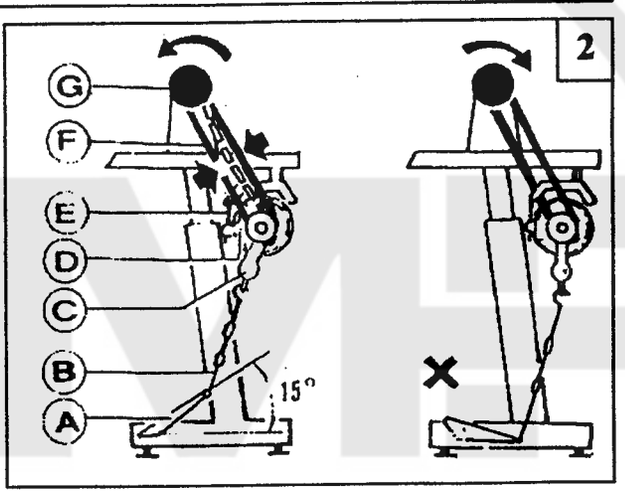
3. CONNECT THE CLUTCHLEVER WITH THE PEDAL (Fig.2)

1. The optimum tilt angle of Pedal (A) is approximately 15 degree.

2. Adjust Clutch Cover (D) so that Clutch Lever (C) and Draw Bar (B) run the line.

3.The balance wheel should rotate counter-clockwise when viewed from the outside of Balance Wheel (G). The direction of the motor pulley rotation can be reversed by reversing (turning over 180 degree) the power plug of the motor.

4. Adjust the tension of V-belt (F) by turning Motor Vertical Position Screw (E). The proper tension of the V-belt is a slack of 10-20mm when the belt is depressed at the center of the belt by finger.



4. PREPARATION AND LUBRICATION (Fig.3)

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

Although each machine is confirmed strictly 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) Oiling

(1) Required amount of oil

Line (A) on the oil reservoir: Max. oil level

Line (B) on the oil reservoir: Min. oil level

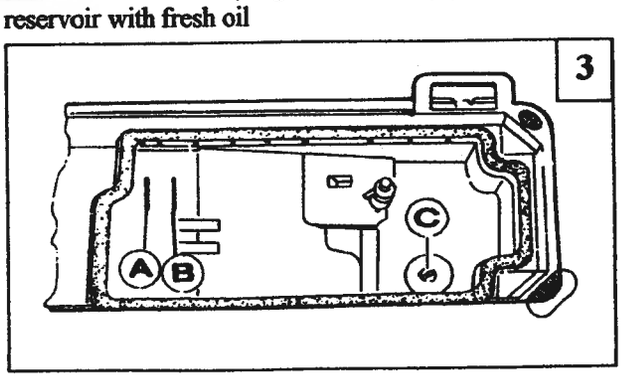
If oil level goes down under Line (B), oil cannot be distributed to each part of the machine, thus causing the parts a seizure.

(2) Replenishing

Always use only No.18 special machine oil for high speed sewing. Be sure to replenish oil to Line (A) before starting operation.

(3) Replacing oil

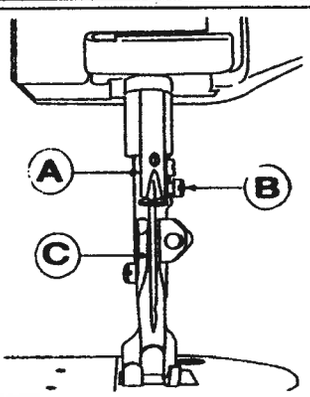
To replace oil, remove Screw (C) to drain oil. After completely draining off oil, clean the oil reservoir and securely tighten Screw (C), then fill the reservoir with fresh oil



5. REPLACE NEEDLE (Fig.4)

Turn the balance wheel to lift needle bar (A) to the upper end of its stroke. Loosen Needle Clamp Screw (B) while keeping the long groove of the needle(C) leftward, fully insert the needle shank up to the bottom of the needle socket. Then tighten Needle Clamp Screw (B).

4



6.RUN IN OPERATION (Fig.5)

Run-in operation is required for a new sewing machine, or a sewing machine left out of operation for a considerable length of time.

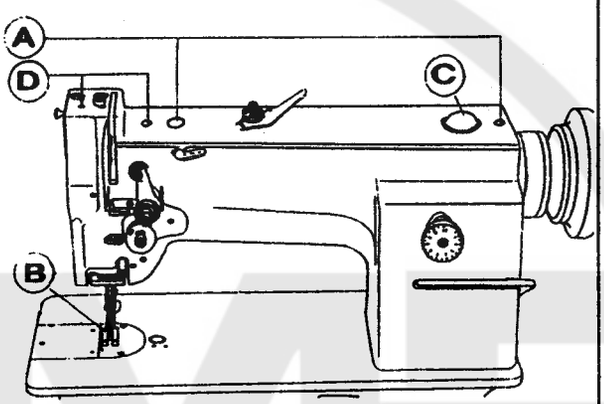
1) Remove Rubber Plugs (A) on the top of the arm and replenish sufficient amount of oil, and also to the red oil hole (D).

2) Lift Presser Foot (B).

3) Run the machine at a low speed (1000-1500spm) to check oil distributing condition through Oil Check Window (C).

4) Perform run-in operation at 1000-1500spm for 30 minutes. After a lapse of one month of service during which the working speed is increased gradually and the machine runs sufficiently well, the high speed 2000spm can be adopted according to the nature of the work..

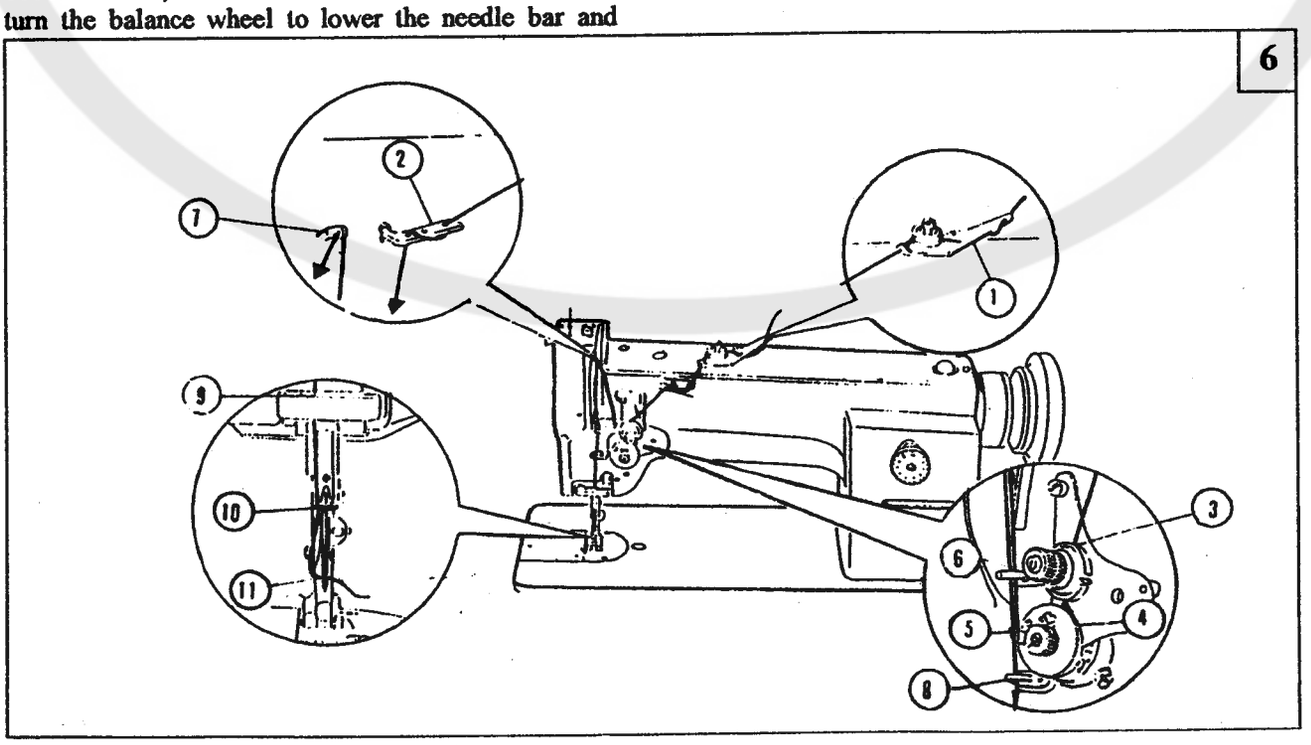
5



7. THREADING (Fig.6)

To thread the needle thread, raise needle bar to the upper end of its stroke, lead the thread from spool and perform threading as shown in Fig.6. To draw the bobbin thread, hold the end of the needle thread and turn the balance wheel to lower the needle bar and then to lift it to its highest position. Pull the needle thread and the bobbin thread is drawn up. Put the ends of needle thread and bobbin thread frontward under presser foot.

6



8. WINDING ADJUSTMENT (Fig.7)

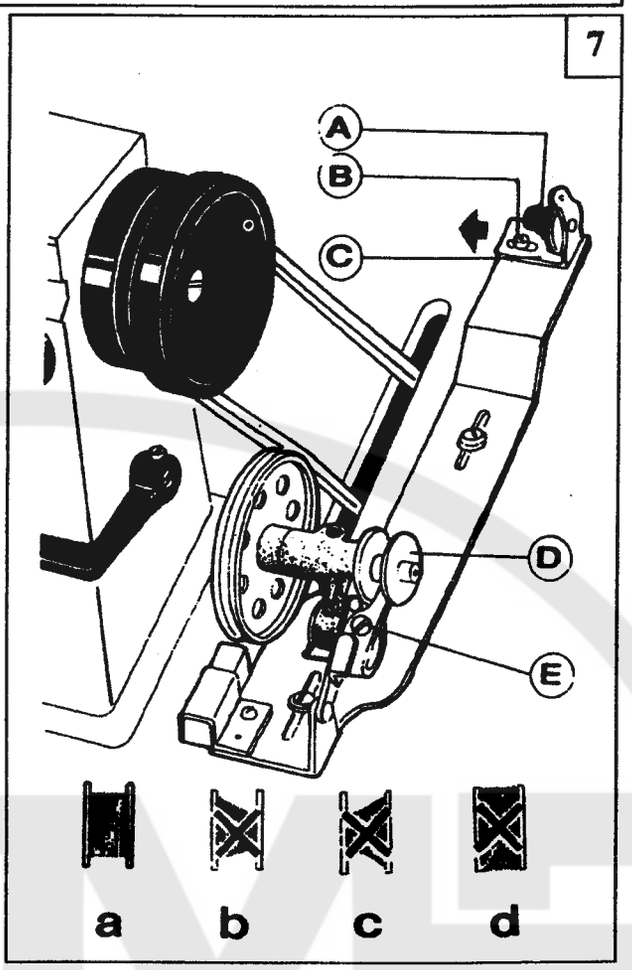
1) The wound bobbin thread should be neat and tight, if not, adjust the winding tension by turning Tension Stud Nut (A) of bobbin winder tension bracket.

Note: nylon or polyester thread should be wound with little tension, otherwise, Bobbin (D) might break or deform.

2) When the wound thread layer does not present a cylindrical shape as shown in Fig.7 (a), loosen Set Screw (B) of bobbin winder tension bracket and slide Bracket (C) leftward or rightward. If thread is wound as shown in Fig.7 (b), move the bracket rightward, but if thread is wound as shown in Fig.7 (c), move the bracket leftward.

After adequately positioning the bracket, tighten Set Screw (B).

3) Do not overfill the bobbin. The optimum length of thread will fill about 80% of bobbin capacity. This can be adjusted by adjusting Screw (E) of bobbin winder stop latch.

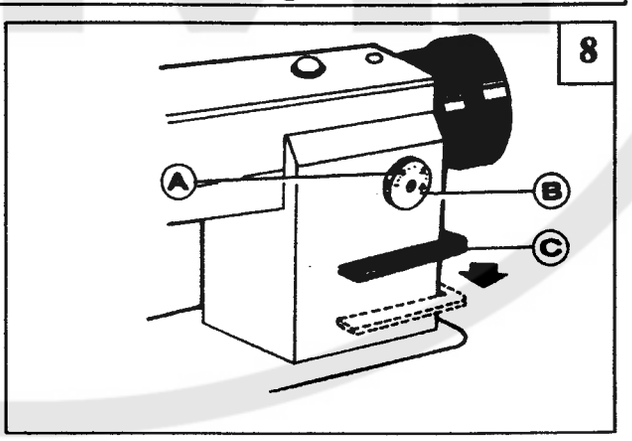


9. SET STITCH LENGTH AND REVERSE FEEDING (Fig.8)

1) Stitch length can be set by turning Dial (A).

2) The figures on face (B) of dial show stitch length in mm.

3) Reverse feeding starts when Reverse Feed Lever (C) is depressed, and the machine will feed forward again if Reverse Feed Lever (C) is released.



10. ADJUST THREAD TENSION (Fig.9,10,11)

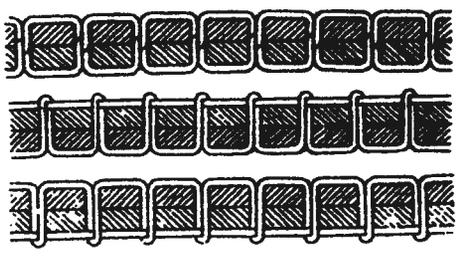
Generally, the thread tension is to be adjusted according to the sewing materials and sewing conditions.

Fig.9 shows different stitch forms. Normal stitch form should be as shown in Fig.9 (a). When abnormal stitches cause puckering and thread break-age, the tension of needle thread and bobbin thread must be adjusted accordingly.

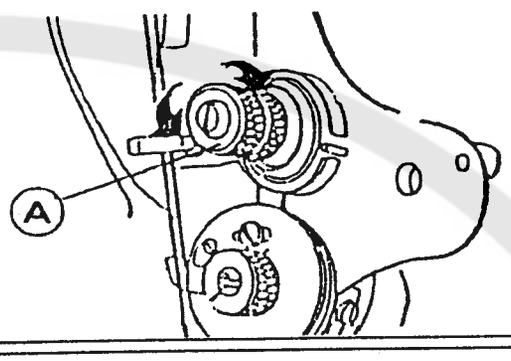
In case needle thread tension is too strong or bobbin thread tension is too weak, as shown in Fig.9 (b), turn the thumb nut counterclockwise to decrease the needle thread tension, or tighten the tension spring regulating screw of bobbin case to increase the bobbin thread tension (See Fig. 10,11)

In case needle thread tension is too weak or bobbin thread tension is too strong, as shown in Fig.9 (c), turn the thumb nut clockwise to increase the needle thread tension, or loosen the tension spring regulating screw of bobbin case to decrease the bobbin thread tension.

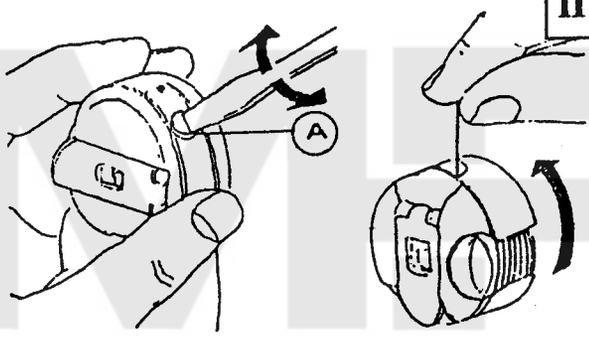
9



10



11



11. ADJUST THREAD TAKE-UP SPRING (Fig.12)

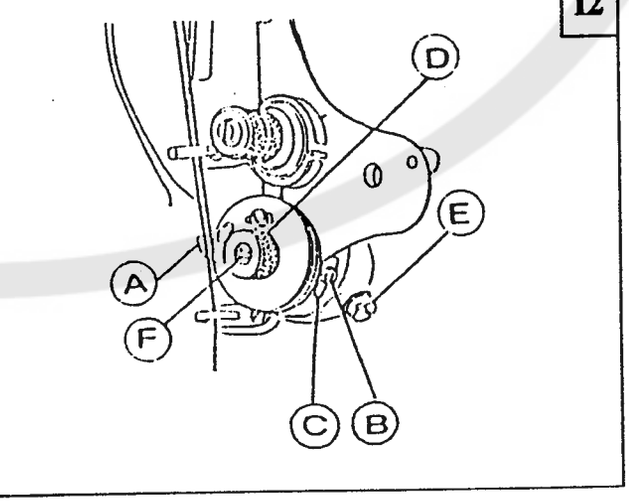
1.Adjustment of the thread take-up spring stroke

Loosen the stopper screw (B) and move the regulating ring (C) leftwards to decrease the stroke of the thread take-up spring, or move the regulating ring (C) rightwards to increase the stroke. After the adjustment, tighten the screw (B).

2.Adjustment of the thread take-up spring tension

Loosen the nut (D) and screw (E) and turn the regulating screw (F) clockwise to decrease the tension of the thread take-up spring, or turn the regulating screw (F) counterclockwise to increase the tension. Then tighten the nut (D) and the screw (E).

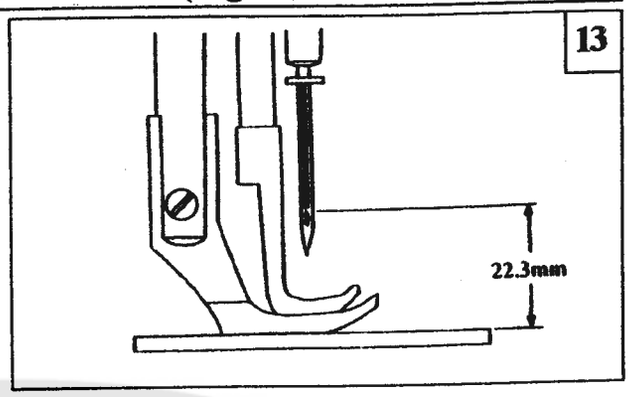
12



12.TIME NEEDLE MOTION TO HOOK MOTION (Fig.13,14)

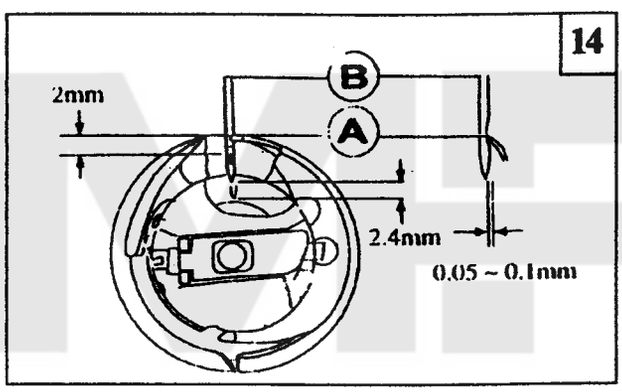
1. Adjusting the height of the needle bar (Fig. 13)

When the needle bar is at its highest point, normally the measurement between the surface of the needle plate and the upper end of the needle eye is 22.3mm.



2. Time needle motion to hook motion

Before adjustment, set stitch length to minimum, then turn the balance wheel toward you until the needle bar reaches its lowest point. Continue turning and allow the needle bar to raise about 2.4mm while on its upward stroke. With needle bar in this position, the hook point (A) should be at the center of the needle(B), and normally the measurement between the hook point and the upper end of the needle eye (C) should be 2mm, further the clearance between the hook point and the needle hollow should be about 0.05 to 0.1mm.



13. REPLACE ROTATING HOOK (Fig.15)

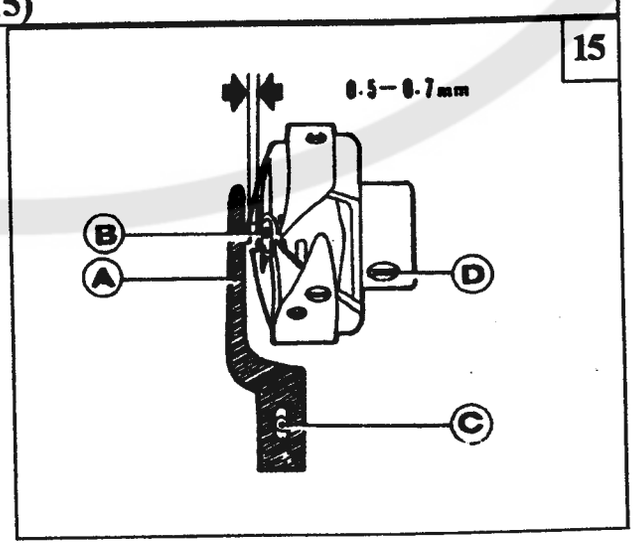
1) Lift needle bar to the highest position of its stroke.

2) Remove the throat plate and feed dog, take down needle and bobbin case

3) Loosen Screw (C) of hook positioner and take down Hook Positioner (A).

4) Loosen Screw (D) of rotating hook, then take down the rotating hook

5) Installing the hook can be done in reverse sequence. Note that Needle (B) and the convex surface of Hook Positioner (A) should align with a clearance of 0.5-0.7mm between them.



13. REPLACE ROTATING HOOK (Fig.15)

1) Lift needle bar to the highest position of its stroke.

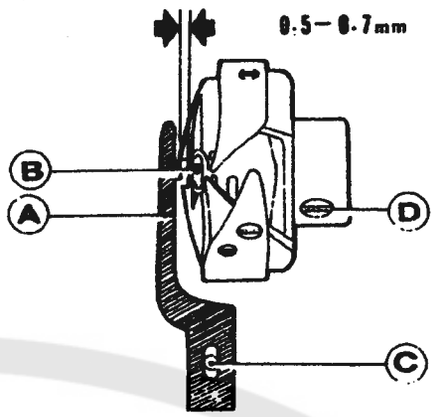
2) Remove the throat plate and feed dog, take down needle and bobbin case

3) Loosen Screw (C) of hook positioner and take down Hook Positioner (A).

4) Loosen Screw (D) of rotating hook, then take down the rotating hook

5) Installing the hook can be done in reverse sequence. Note that Needle (B) and the convex surface of Hook Positioner (A) should align with a clearance of 0.5-0.7mm between them.

15



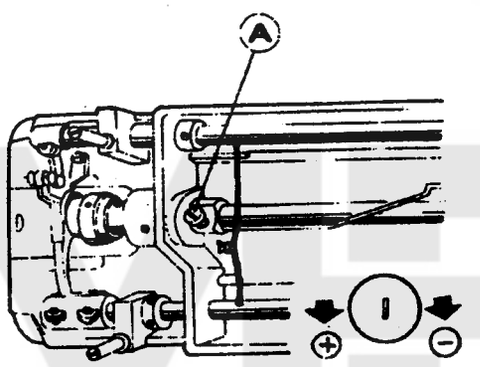
14.LUBRICATION ADJUSTMENT (Fig.16)

The lubrication of the rotating hook can be adjusted by Oil Adjusting Screw (A) as follows:

1) Turn Oil Adjusting Screw (A) clockwise to increase oil and turn Oil Adjusting Screw (A) counterclockwise to decrease oil

2) To adjust the amount of oil by turning the Screw (A) within 5 turns. When the Screw (A) is fully tightened, the oil amount is Maximum. When the Screw (A) is fully loosened, the oil amount is Minimum.

16



15.ADJUST PRESSER FOOT (Fig.17,18)

1. Lift adjustment of presser foot (Fig.17)

The normal height of the presser foot (A) should be 8mm, yet it can be adjusted, if necessary, according to actual requirement. Loosen the pressure regulating screw(C) and lift the presser bar lifter to raise the presser foot, loosen the screw (D) and move presser bar upwards and downwards to change the lift of the presser foot.

NOTE: The changeable lift of the presser foot (A) will result in the alternate movement height of the presser foot(A) and the walking foot(B), therefore, adjustment must be made to it accordingly. See procedure 3 stated below for proper way.

2. Pressure adjustment of the presser foot (A)(Fig.17)

Turn pressure regulating screw(C) clockwise to increase the pressure of the presser foot (A) and counterclockwise to decrease it if you desire.

3. Adjustment of the alternate vibrating height of the presser foot (A) and the walking foot (B) (Fig.17)

The presser foot (A) and the walking foot (B) vibrate alternately with equal height when machine is in operation, but it can be adjusted according to actual requirements. To increase vibrating height of the walking foot (B) and decrease vibrating height of the presser foot (A), adjust as follows: Down the presser bar lifter and turn balance wheel until the presser foot (A) is slightly separate from the needle plate, loosen screw (E) and depress the presser foot (A) to reach needle plate and then tighten the screw (E). To decrease vibrating height of the walking foot (B) and increase vibrating height of the presser foot (A): Turn balance wheel until the walking foot (B) is slightly separate from the needle plate, loosen screw (E) and depress the walking foot (B) to reach needle plate and then tighten the screw (E).

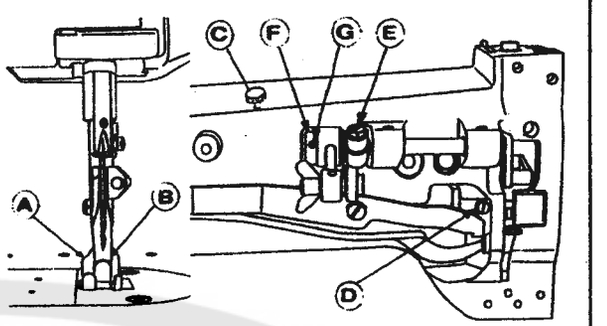
4. Movement height adjustment of presser foot and walking foot (Fig18)

The thickness of the material sewn should control the height of the lift of the presser foot and walking foot. The lift should be just enough for clearance of the material. To adjust, loosen the net (H) move the crank rod upwards to increase the up and down movement, and downwards to decrease it, then tighten nut (H).

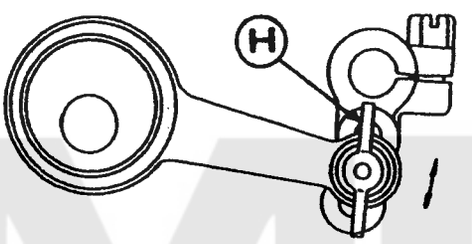
5. Time walking foot (B) to needle (Fig17)

This is the normal timing when turn the balance wheel toward you, after lowering the presser bar lifter, the walking foot (B) should reach the feeder earlier than the needle eye comes to, and when the needle raises, the walking foot (B) should leave the feeder after the needle eye has left the feeder. This is due the reason that the walking foot (B) must tightly hold the goods while the needle is passing the goods for avoiding irregular stitches. To adjust this loosen the two screws (G) and adjust the rotating position of the cam (F) faster or slower as may be desired, and tighten the screws (G).

17



18



16.ADJUST FEED DOG (Fig.19,20,21,22,23,24)

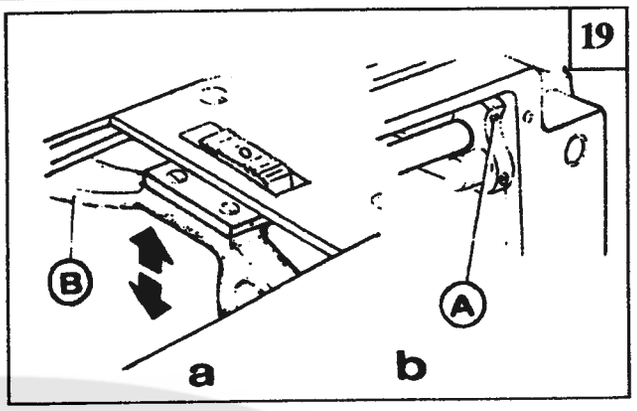
1. Adjustment of the height of feed dog (Fig.19,20)

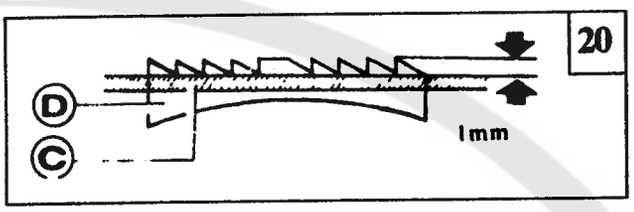
1) Turn balance wheel until feed dog is lifted to its highest position.

2) Loosen the screw (A) of the feed lifting rock shaft crank (right).

3) Move the feed bar (B) in the direction shown by the arrow in Fig.19a to fix the height of the feed dog(C). the standard height of the feed dog(C) is that top of the feed dog is 1mm above the needle plate surface(D).

4) After the adjustment, be sure to tighten the screw (A).





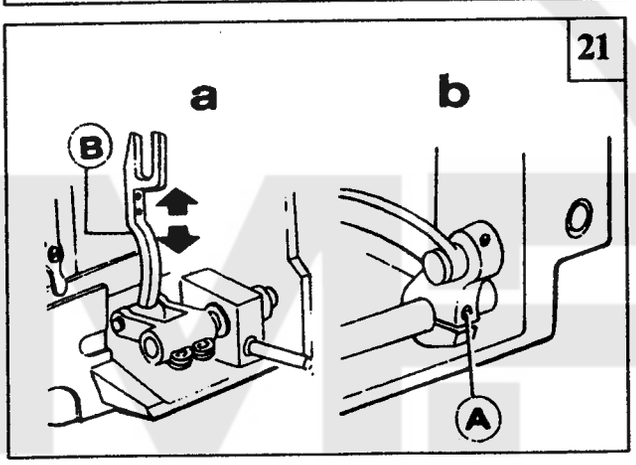
2. Adjustment of the position of feed dog (Fig.21,22)

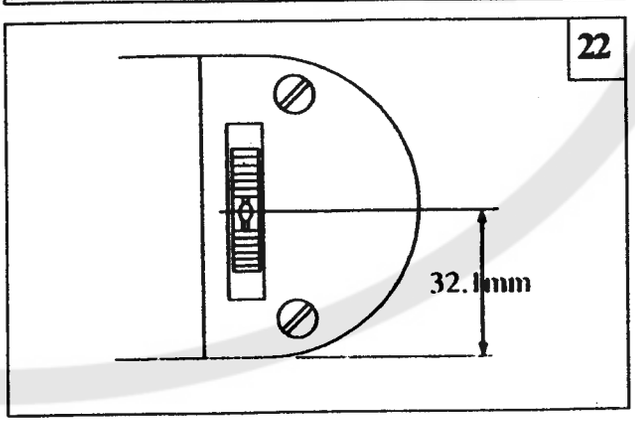
1) Minimize stitch length

2) Turn balance wheel to lift feed dog to its highest position.

3) Loosen the screw (A) of feed rock shaft crank and move the feed bar (B) in the direction shown in Fig.21a to fix the position of the feed dog. The standard position of the feed dog (C) is that the distance between the center of the needle hole on the feed dog(C) and the edge of the needle plate is 32.1mm.

4) After the adjustment, be sure to tighten the screw (A).



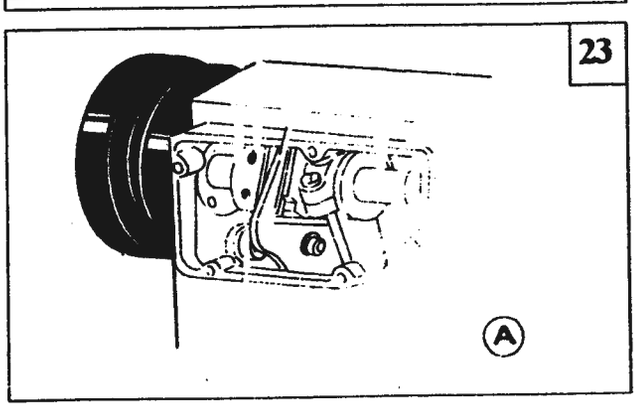


3. Relative position adjustment between needle and the needle hole in the feed dog.(Fig.23)

Make sure that needle can be descended to the center of the needle hole, if not, adjust it as follows:

1) Remove the arm side cover and loosen the screw(A).

2) Holding the needle bar and move it to the center of the needle hole in the feed dog, the tighten screw(A) and replace the arm side cover



4. Time feed motion to needle motion (Fig.24)

The standard timing of feed motion to needle motion is that the feed dog starts moving forward when the needlepoint reaches the needle plate surface.

If feed motion is not timed to needle motion, adjust as follows:

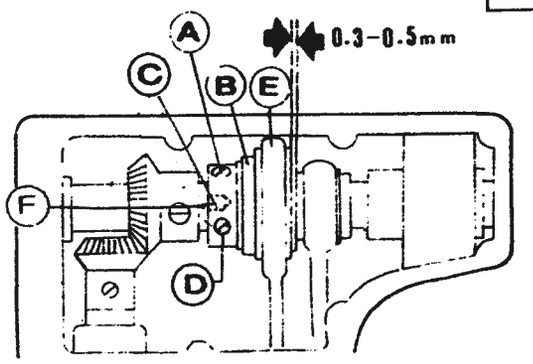
1) Remove the arm side cover and loosen the screw (A), (D) of the feed and feed lifting eccentric.

2) Holding feed and feed lifting eccentric (B) and turn balance wheel slowly until the reference hole(C) on the feed and feed lifting eccentric aligns with mark (F).

When adjusting, the clearance between feed and feed lifting eccentric (B) and eccentric sleeve(E) should be 0.3-0.5mm.

After the adjustment, be sure to tighten the screw (A), (D).

24



17. REGULAR CLEANING (Fig.25,26,27)

1.Cleaning feed dog

Remove the throat plate and clear off the dust and lint between the feed and teeth slots.

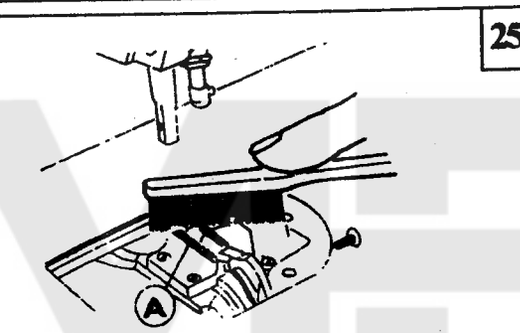
2.Cleaning rotating hook

Swing out the machine head and clean the hook. Wipe the bobbin case with soft cloth.

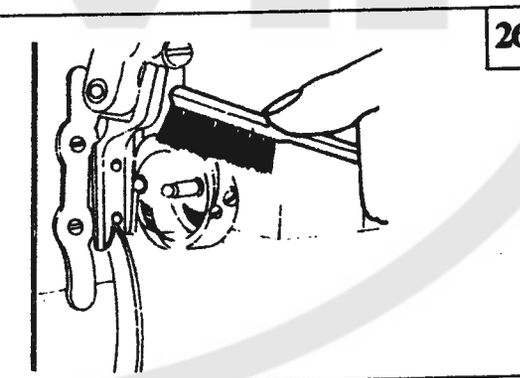
3.Cleaning oil pump screen

Swing out the machine head and clean the dirt on the oil pump screen.

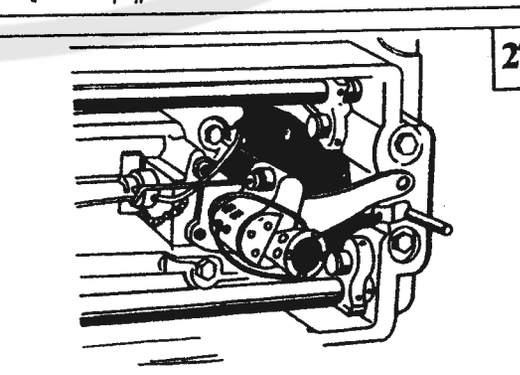
25



26

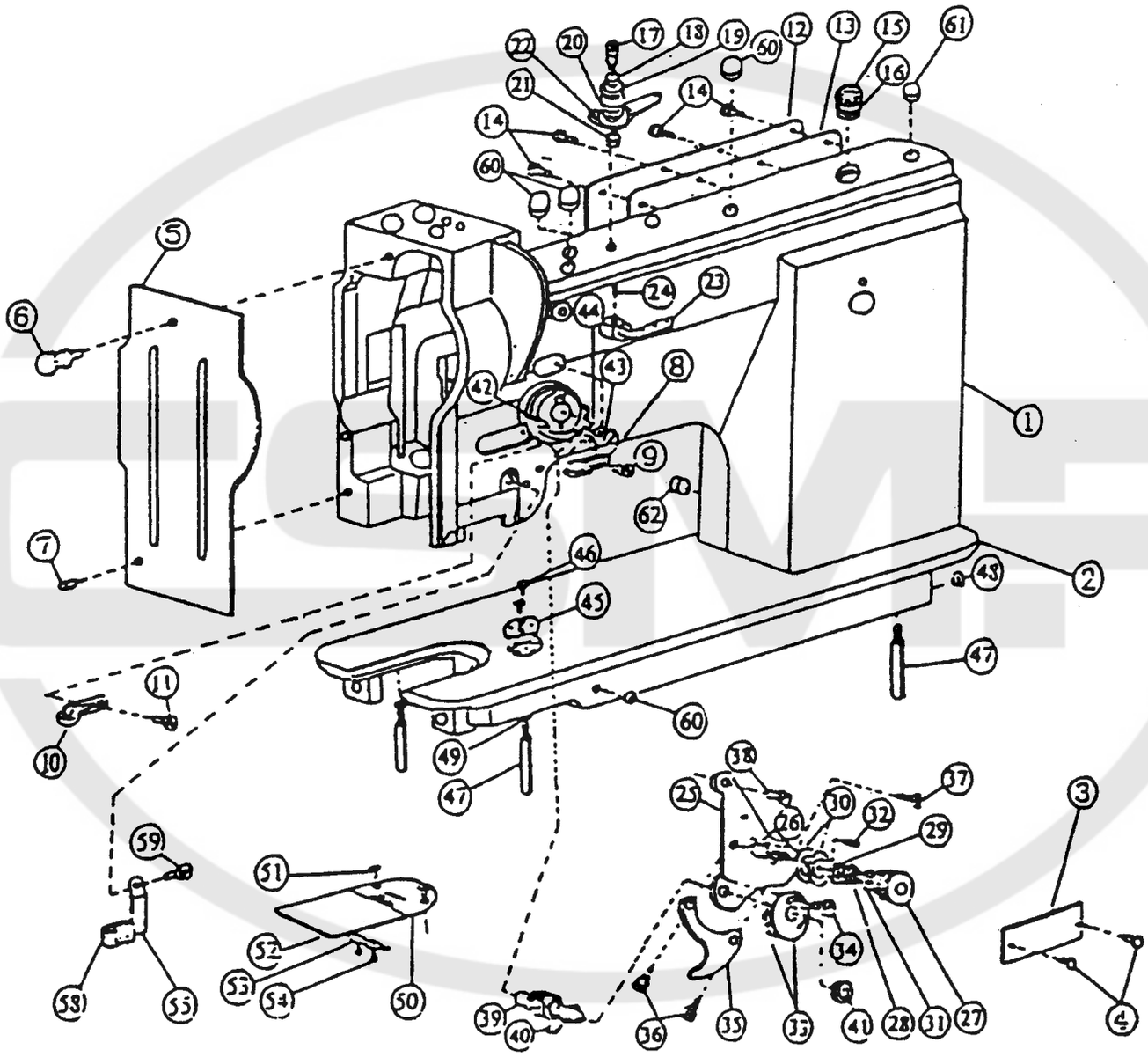


27



Partslist

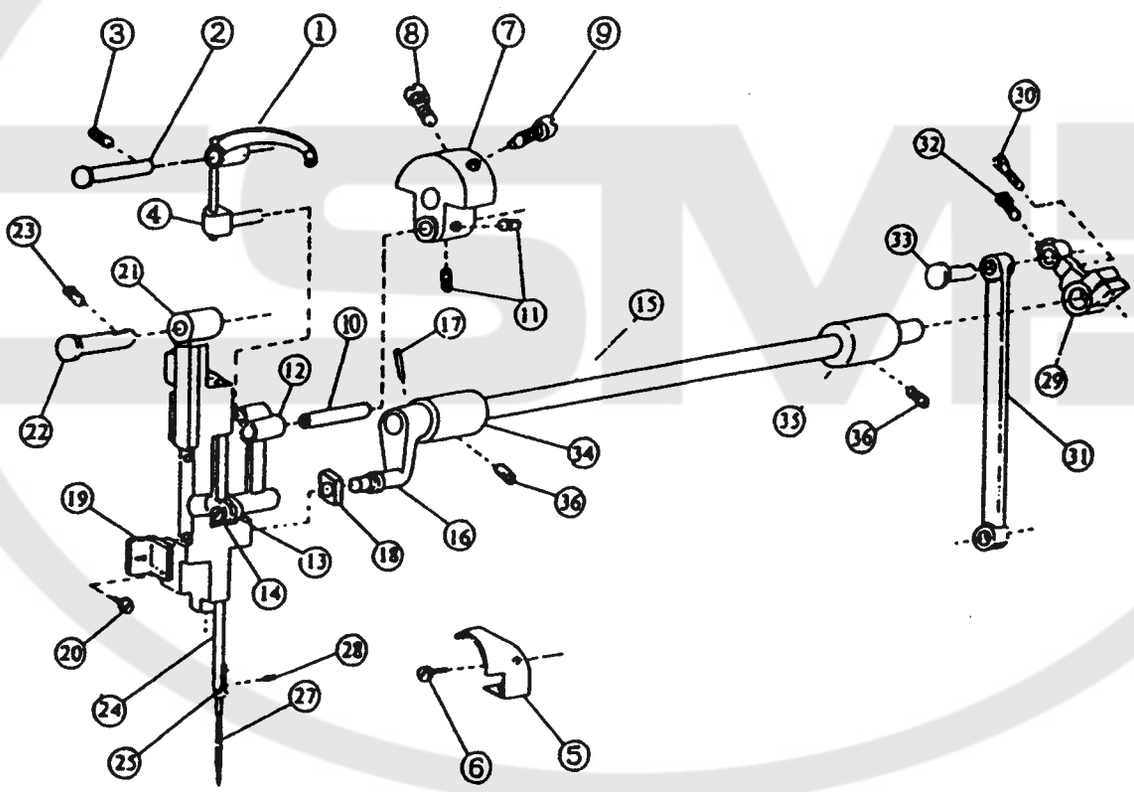
1


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
58
59
60
61
62

1. ARM BED AND ITS ACCESSORIES

No.	Ref. No	Description	Pieces	Remark
1	BM05-01-001A2	Arm	1	
2	BM07-01-001B2	Arm bed	1	
3	BM07-01-002	Trade mark plate	1	
4	GB827-86	Trade mark plate rivet	2	ϕ 2.5 × 5
5	BM05-01-003	Face plate	1	
6	BM05-01-004	Set screw	1	
7	BM05-01-005	Knock pin	1	
8	BM05-01-006	Thread guide (up)	1	
9	22T1-003C6	Set screw	1	SM9/64" (3.57)× 40/6
10	22T1-003C5	Thread guide (middle)	1	
11	22T1-003C6	Set screw	1	SM9/64" (3.57)× 40/6
12	BM05-01-014	Arm side cover	1	
13	BM05-01-015	Gasket for arm side cover	1	
14	72T1-017	Set screw	8	SM11/64" (4.37)× 40/9
15	12H1-007C1	Oil check window	1	
16	12H1-007C2	O-ring	1	
17	22T1-009E1	Screw type tension stud	1	
18	22T1-009E2	Spring for pretension	1	
19	22T1-009E3	Disc for pretension	2	
20	22T1-009E4	Space for pretension	1	
21	GB896	Stop ring	1	Ring 3
22	22T1-009E5	Pretension thread guide	1	
23	22T1-010	Three-hole thread guide	1	
24	22T1-011	Set screw	1	SM11/64" (4.37)× 40/5
25	BM05-01-007C1	Thread tension bracket	1	
26	BM05-01-007C2	Thread tension stud	1	
27	BM05-01-007C3	Tension regulating nut	1	
28	73T1-002C1	Thread tension spring	1	
29	BM05-01-007C4	Thread tension releasing disc	1	
30	BM05-01-007C5	Thread tension disc	2	
31	BM05-01-007C6	Stop disc	1	
32	BM05-01-007C7	Pin	1	
33	BM05-01-007C8-1	Thread controller disc	1	
	BM05-01-007C8-2	Thread controller disc	1	
34	BM05-01-007C9	Screw	1	SM3/32" (2.38)× 56
35	BM05-01-007C10	Thread tension release plate	1	
36	BM05-01-007C11	Screw	2	
37	BM05-01-007C12	Thread tension release pin	1	
38	72T1-013	Screw	1	SM11/64" (4.37)× 40/5.5
39	BM05-01-008	Thread controller stud	1	
40	BM05-01-009	Thread take-up spring	1	
41	BM05-01-010	Tension thumb nut	1	
42	BM05-01-011	Thread take-up spring stop	1	
43	BM05-01-016	Screw	1	SM9/64" (3.57)× 40/6
44	22T1-011	screw	1	SM11/64" (4.37)× 40/5
45	72T1-014	Cloth guide plate	1	
46	72T1-013	Screw	2	
47	22T1-022	Bed supportor	3	
48	72T1-010	Rubber Plug	1	
49	GB93	Retaining washer	3	Washer 6
50	BM07-01-003	Needle plate	1	
51	72T1-019	Screw	2	SM11/64" (4.37)× 40/8
52	22T1-021G1	Slide board	1	
53	22T1-021G2	Slide board spring	1	
54	22T1-021G3	Screw	2	SM3/32" (2.38)× 56/2.2
55	BM05-01-013	Thread guide (lower)	1	
58	BM03-02-001A3	Felt for thread guide (lower)	1	
59	22T1-003C6	Set Screw	1	SM9/64" (3.57)× 40/6
60	72T1-004C4	Rubber plug	4	ϕ 11.8
61	72T1-011	Rubber plug	1	ϕ 5.7
62	72T1-009	Rubber plug	1	ϕ 8.8

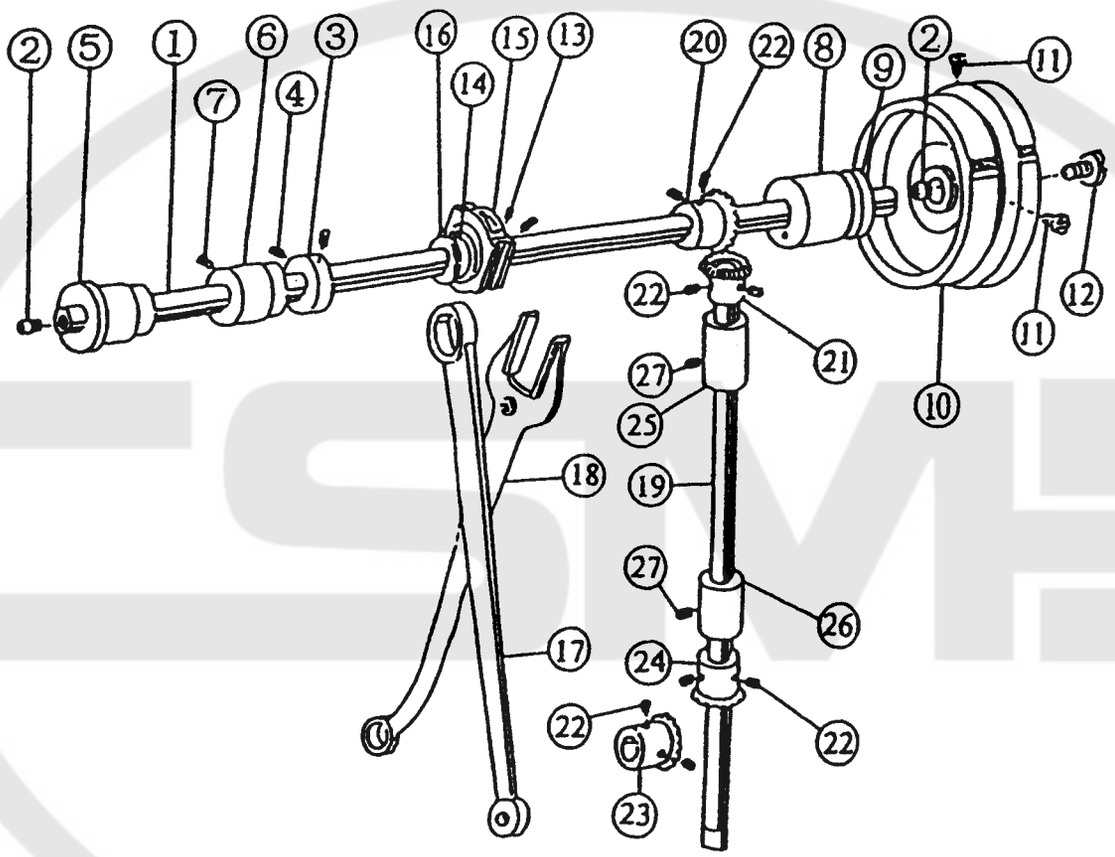
2


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
27
28
29
30
31
32
33
34
35
36

2. NEEDLE BAR AND TAKE-UP MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	31H-001	Thread take-up lever	1	
2	BM05-02-002	Hinge pin	1	
3	22T2-002	Set screw	1	SM15/64" (5.95)× 28/10
4	31H-004	Thread take-up lever driving stud	1	
5	BM05-02-004	Oil-guard	1	
6	22T8-011C4	Set screw	1	SM9/64" (3.57)× 40/4.5
7	BM05-02-005A1	Needle bar crank	1	
8	22T2-006	Set screw	1	SM9/32" (7.14)× 28/13
9	22T2-007	Set screw	1	SM9/32" (7.14)× 28/14
10	BM05-02-006	hinge pin	1	
11	72T2-004B2	Set screw	2	SM1/4" (6.35)× 40/6
12	BM05-02-007	Needle bar link	1	
13	BM05-02-008	Needle bar adaptor	1	
14	22T7-015	Set screw	1	SM9/64" (3.57)× 40/11
15	BM05-02-009B1	Needle bar rock frame rock shaft	1	
16	BM05-02-009B2	Crank (left)	1	
17	GB117	Pin for crank	1	Taper pin A3 × 16
18	BM05-02-009B3	Slide block for needle bar rock frame	1	
19	BM05-02-009B4	Position bracket	1	
20	72T2-003	Screw	1	SM11/64" (4.37)× 40/8
21	BM05-02-010	Needle bar rock frame	1	
22	BM05-02-011	Hinge pin	1	
23	22T2-002	Screw	1	SM15/64" (5.95)× 28/10
24	BM05-02-012	Needle bar	1	
25	BM05-02-017	Thread guide for needle bar	1	
27		Needle	1	DP × 17 22 #
28	22T2-017	Needle clamp screw	1	SM1/8" (3.18)× 44/4.5
29	BM07-02-001C1	Crank (right)	1	
30	BM02-08-007	Screw	1	SM1/4" (6.15)× 24/16
31	BM07-02-001C2	Crank lever link	1	
32	72T3-005D1a3	Screw (right)	1	SM15/64" (5.95)× 28/6
33	BM05-05-003	Hinge pin (upper)	1	
34	BM05-02-015	Bushing for rock shaft (left)	1	
35	BM05-02-016	Bushing for rock shaft (right)	1	
36	22T2-002	Screw	2	SM15/64" (5.95)× 28/10

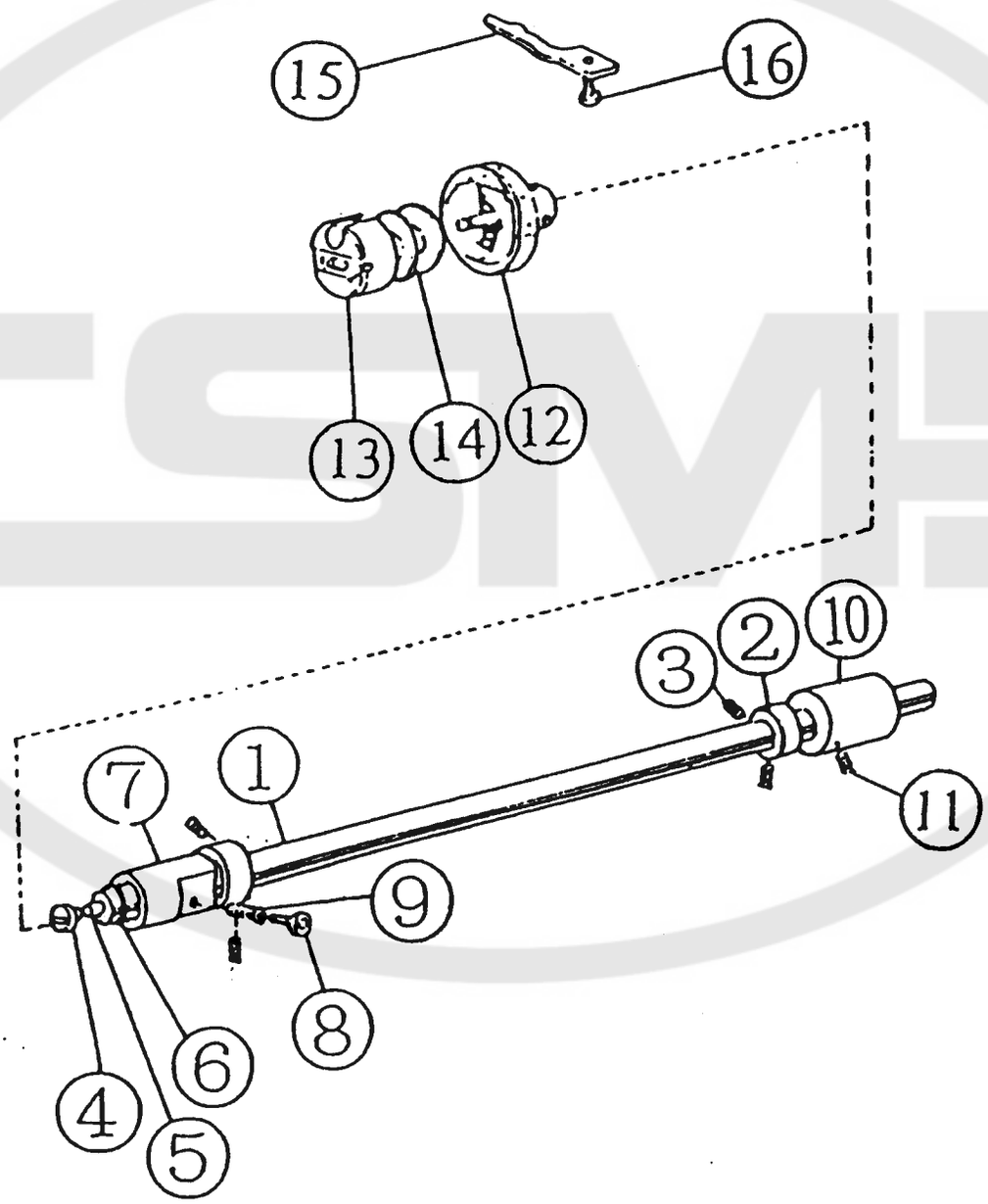
3


2
5
1
6
3
16
15
13
20
22
8
9
2
11
7
4
14
12
11
22
21
27
10
25
18
19
27
26
17
24
22
22
23

3. ARM SHAFT AND VERTICAL SHAFT MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	BM05-03-001A1	Arm shaft	1	
2	22T3-001A2	Rubber plug	2	
3	22T6-005B1	Collar for arm shaft	1	
4	22T3-002B2	Set screw	2	SM1/4" (6.35)× 40/4
5	22T3-003	Arm shaft bushing (left)	1	
6	BM05-03-007	Arm shaft bushing (middle)	1	
7	22T2-002	Set screw	1	SM15/64" (5.95)× 28/10
8	BM05-03-006	Arm shaft bushing (right)	1	
9	22T3-006F	Oil seal	1	
	22T3-006F2	Spring for oil seal	1	
10	BM02-03-001	Balance wheel	1	
11	22T3-007C2	Set screw	2	SM15/64" (5.95)× 28/12
12	22T3-008	Set screw	1	SM11/32" (8.73)× 28/10
13	72T3-005D1a3	Set screw	2	SM15/64" (5.95)× 28/7
14	11H3-002B1a1	Feed lifting eccentric	1	
15	72T3-005D1a2	Eccentric sleeve	1	
16	22T3-009D1b	Retaining ring	1	
17	BM04-03-002A2	Crank rod for feed lifting rock	1	
18	BM07-03-001B2	Feed forked connection	1	
19	BM05-03-003	Vertical shaft	1	
20	22T3-010E2a1-2	Bevel gear for arm shaft	1	
21	22T3-010E2a2-2	Bevel gear for vertical shaft (upper)	1	
22	22T2-005B3	Set screw	8	SM1/4" (6.35)× 40/7
23	22T3-010E2b1-2	Bevel gear for hook shaft	1	
24	22T3-010E2b2-2	Bevel gear for vertical shaft (lower)	1	
25	BM05-03-004	Vertical shaft bushing (upper)	1	
26	BM05-03-005	Vertical shaft bushing (lower)	1	
27	22T2-002	Set screw	2	SM15/64" (5.95)× 28/10

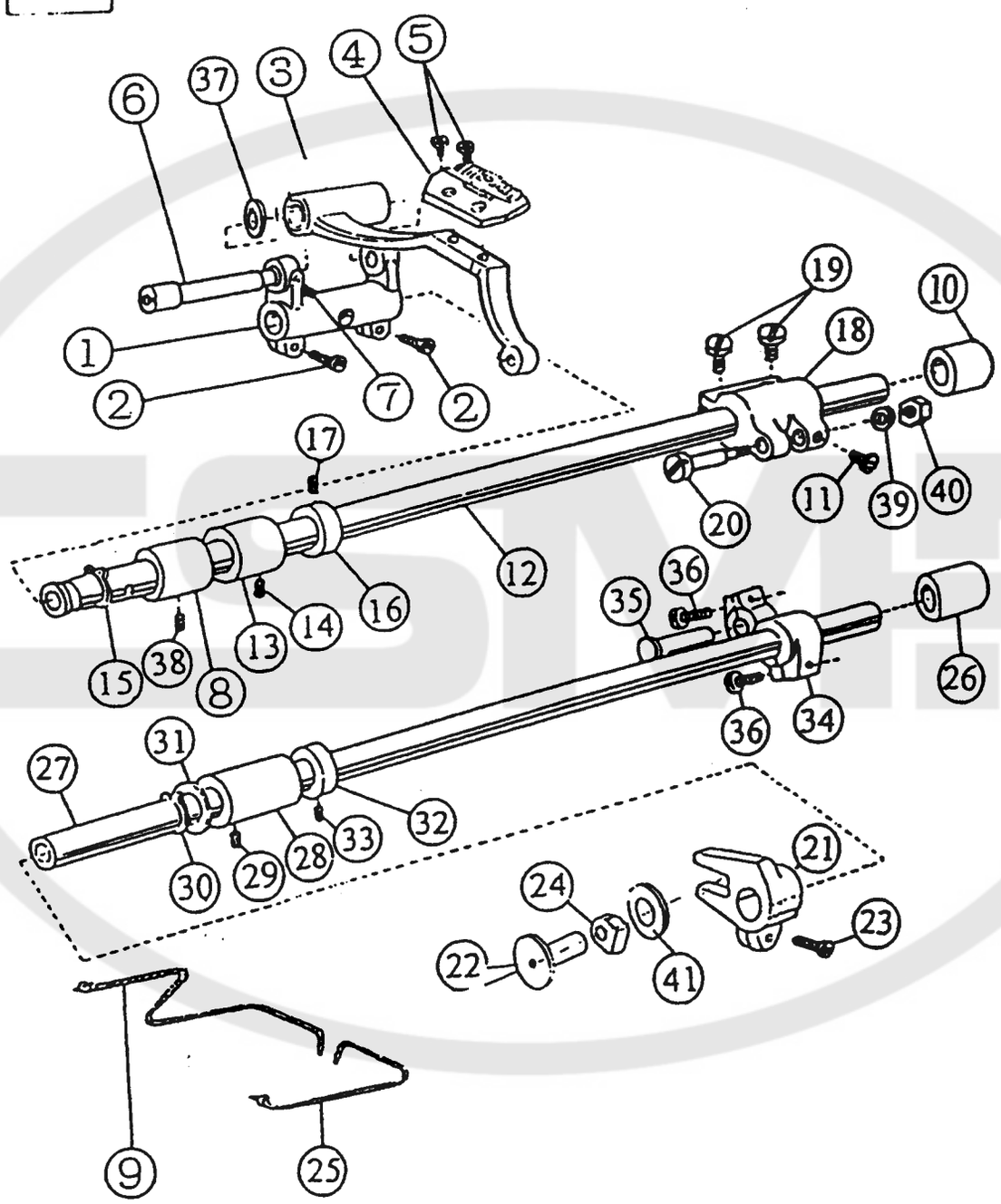
4



4. HOOK SHAFT MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	BM05-04-001	Rotating hook shaft	1	
2	72T4-002B1	Collar for hook shaft	2	
3	72T4-002B2	set screw	4	SM15/64" (5.95)× 28/4.5
4	22T4-001A1a1	Filter screw	1	SM3/16" (4.76)× 32
5	22T4-001A1a2	Filter	1	
6	22T4-003G	Oil seal for rotating hook shaft	1	
7	22T4-004	Hook shaft bushing (left)	1	
8	72T4-003	oil adjusting screw	1	
9	22T4-006	Spring for oil adjuster	1	
10	BM07-04-001	Hook shaft bushing (right)	1	
11	22T2-002	Set screw	1	SM15/64" (5.95)× 28/10
12	HSM-A(5)	Rotating hook complete	1	
13	BC-STH	Bobbin case	1	
14	11H4-001	Bobbin	1	
15	74T4-004	Rotating hook positioner	1	
16	22T4-015	Set screw	1	SM11/64" (4.37)× 40/10

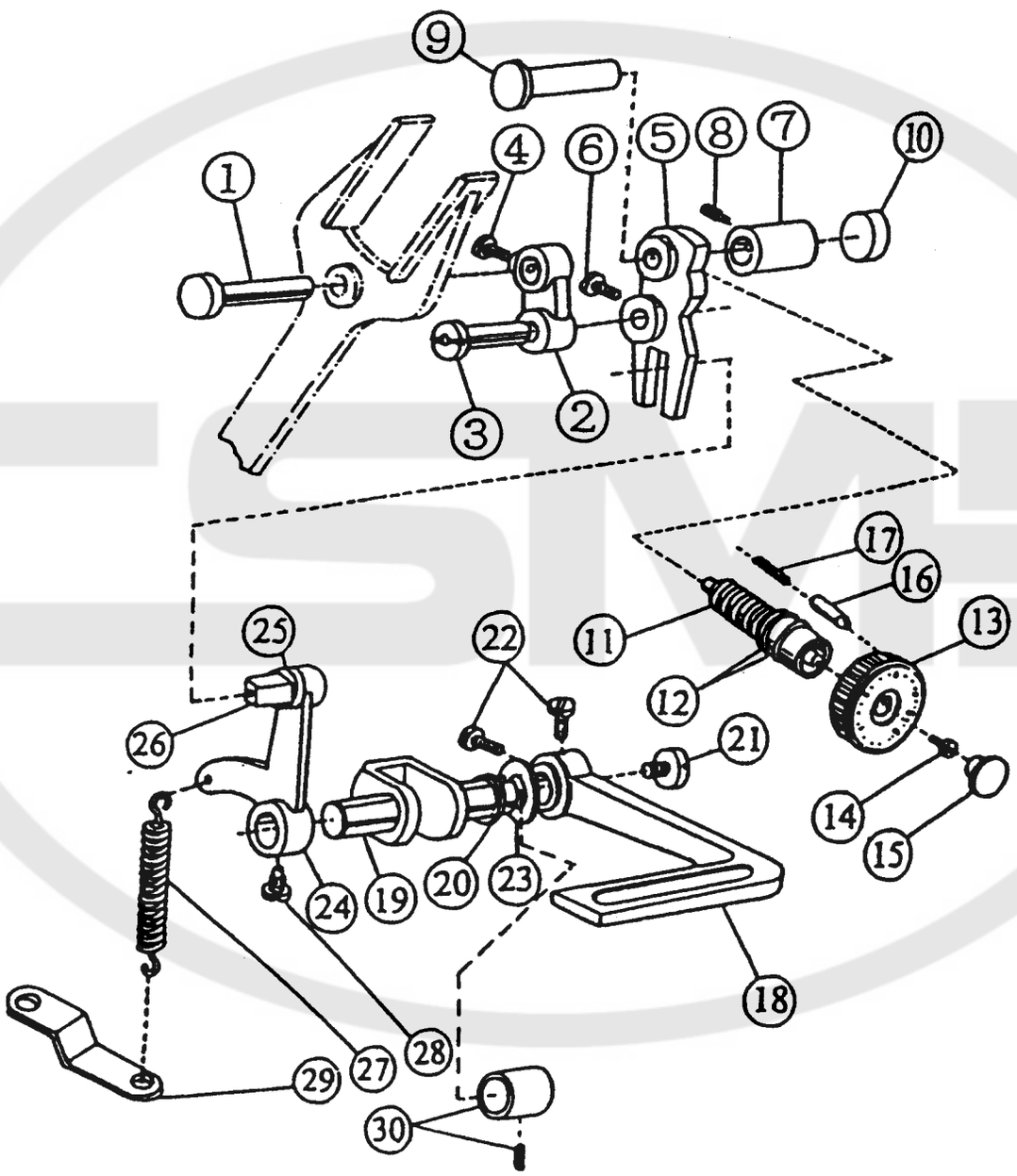
5


1
2
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
36
37
38
39
40
41

5. FEED LIFTING MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	22T6-001A1a	Feed bar crank	1	
2	72T6-001A6	Screw	2	SM3/16" (4.76)× 28/15
3	BM11-06-001A1	Feed bar	1	HG128-C
4	BM07-05-001	Feed dog	1	
5	22T6-001A4	Screw	2	SM1/8" (3.18)× 44/6
6	11H6-004	Shaft for feed bar	1	
7	22T2-019	Screw	1	SM11/64" (4.37)× 40/8
8	11H6-007	Bushing for feed rock shaft (left)	1	
9	72T6-001A5	Oil braid	1	2.5 × 315
10	11H6-006	Bushing for feed rock shaft (right)	1	
11	22T5-001A4	Screw	1	SM15/64" (5.95)× 28/10
12	11H6-001	Feed rock shaft	1	
13	11H6-008	Bushing for feed rock shaft	1	
14	72T4-002B2	Screw	1	SM15/64" (5.95)× 28/4.5
15	GB894	C-type stop ring	1	ring 15
16	22T6-005B1	Collar for feed rock shaft	1	
17	22T3-002B2	Screw	2	SM1/4" (6.35)× 40/4
18	BM07-05-003	Feed rock shaft crank	1	
19	22T6-001A1b	Screw	2	SM3/16" (4.76)× 28/12
20	BM07-05-002	Hige pin	1	
21	31H4-014	Feed lifting rock shaft crank (left)	1	
22	72T6-002B1b	Hinge pin	1	
23	GB70	Screw	1	M5 × 12
24	72T6-007D1a	Feed lifting connection sleeve	1	
25	72T6-002B4	Oil braid	1	ϕ 2.5 × 265
	72T6-002B2		1	
26	11H6-010	Bushing for feed lifting rock shaft (right)	1	
27	54T6-002	Feed lifting rock shaft	1	
28	22T6-012	Bushing for feed lifting rock shaft	1	
29	22T2-002	Screw	1	SM15/64" (5.95)× 28/10
30	GB894	C-cype stop ring	1	ring 15
31	22T6-013	Washer	1	
32	22T6-005B1	Collar for feed lifting rock shaft	1	
33	22T3-002B2	Screw	2	SM1/4" (6.35)× 40/4
34	72T6-003C1	Feed lifting rock shaft crank (right)	1	
35	22T6-007	Hinge pin	1	
36	22T6-001A1b	Screw	2	SM3/16" (4.76)× 28/12
37	22T6-001A6	Washer	1	
38	72T4-002B2	Screw	1	SM15/64" (5.95)× 28/4.5
39	BM02-08-012	Washer	1	
40	BM02-08-048	Screw nut	1	SM15/64" (5.95)× 28
41	72T6-007D1b	Washer	1	

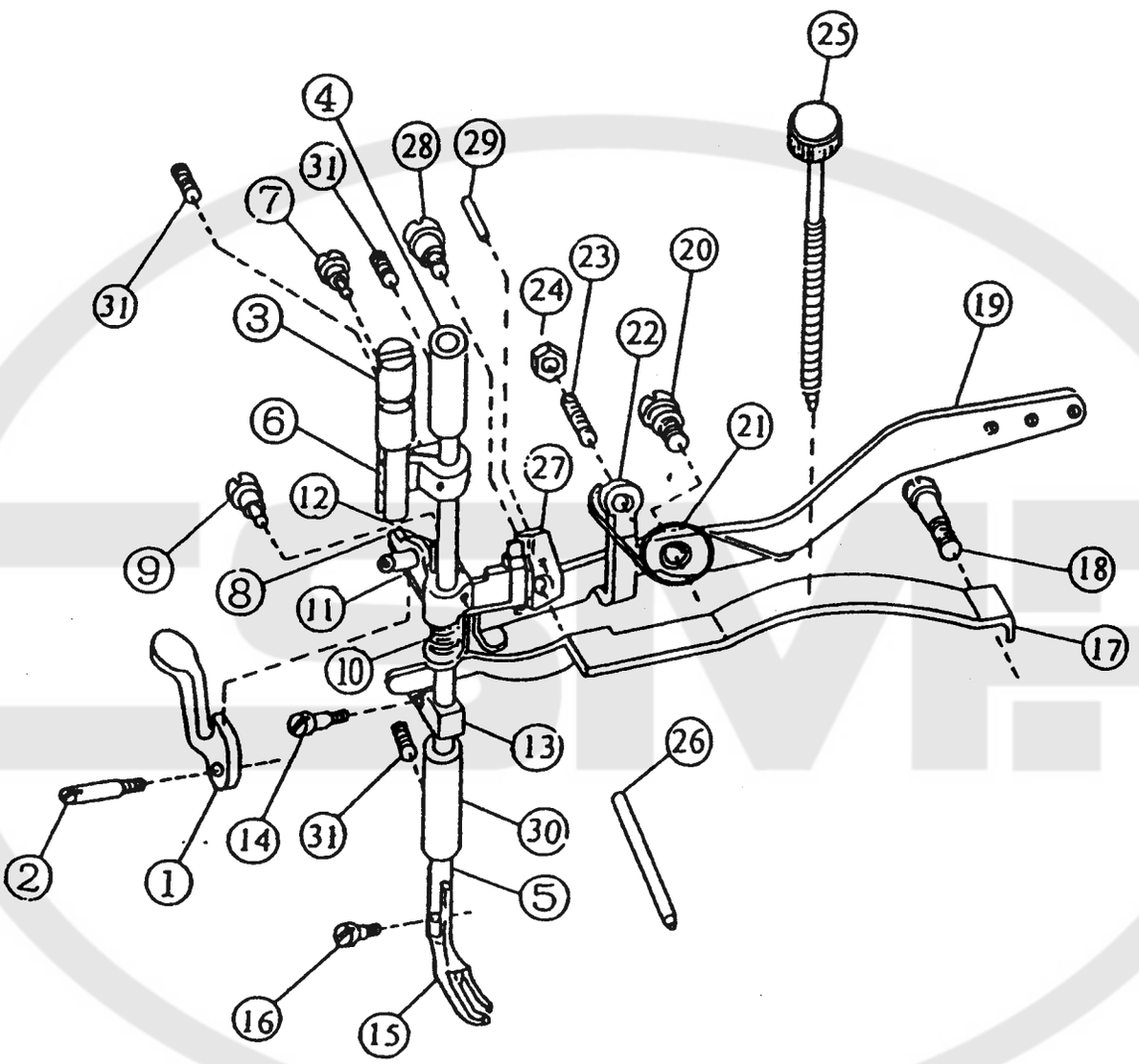
6


9
1
4
6
5
8
7
10
3
2
17
16
11
13
12
25
22
26
21
14
15
24
19
20
23
18
28
27
29
30

6. STITCH LENGTH REGULATING MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	BM01-06-001A1	Hinge pin	1	
2	BM01-06-001A2	Feed connecting link	1	
3	BM01-06-003	Hinge pin for feed connecting link	1	
4	22T5-001A4	Set screw	1	SM15/64" (5.95)× 28/10
5	73T5-002B1	Feed regulator	1	
6	22T5-001A4	Set screw	1	SM15/64" (5.95)× 28/10
7	BM05-06-001	Feed regulator bushing	1	
8	BM05-06-005	Set screw	1	SM15/64" (5.95)× 28/15
9	BM05-06-007	Hinge pin for feed regulator	1	
10	72T5-003	Rubber plug	1	ϕ 20 × 4
11	73T5-003C1	Feed regulator screw bar	1	
12	22T5-006C4	O-ring	2	14 × 2.4
13	BM03-05-001	Dial	1	
14	22T5-006C3	Screw	1	SM3/16" (4.76)× 28/8
15	72T5-005	Rubber plug	1	
16	22T5-008	Stopper pin	1	
17	22T5-009	Spring for stopper pin	1	
18	72T5-006C1	Reverse feed lever	1	
19	BM07-06-002D1	Reverse feed lever shaft	1	
20	22T5-010D2b	O-ring	1	9 × 1.9
21	22T5-010D3	Screw	1	SM3/16" (4.76)× 28/6.5
22	22T5-001A4	Screw	2	SM15/64" (5.95)× 28/10
23	22T5-011	Washer	1	
24	22T5-012E1	Reverse feed crank	1	
25	22T5-012E1a1	Slide block pin	1	
26	22T5-012E1a2	Slide block	1	
27	BM02-05-002	Spring for reverse feed crank	1	
28	22T5-013	Screw	1	SM15/64" (5.95)× 28/14
29	22T5-014	Bracket for spring	1	
30	BM05-06-003	Bushing for reverse feed lever shaft	1	
31	22T1-011	Screw	1	SM11/64" (4.37)× 40/5

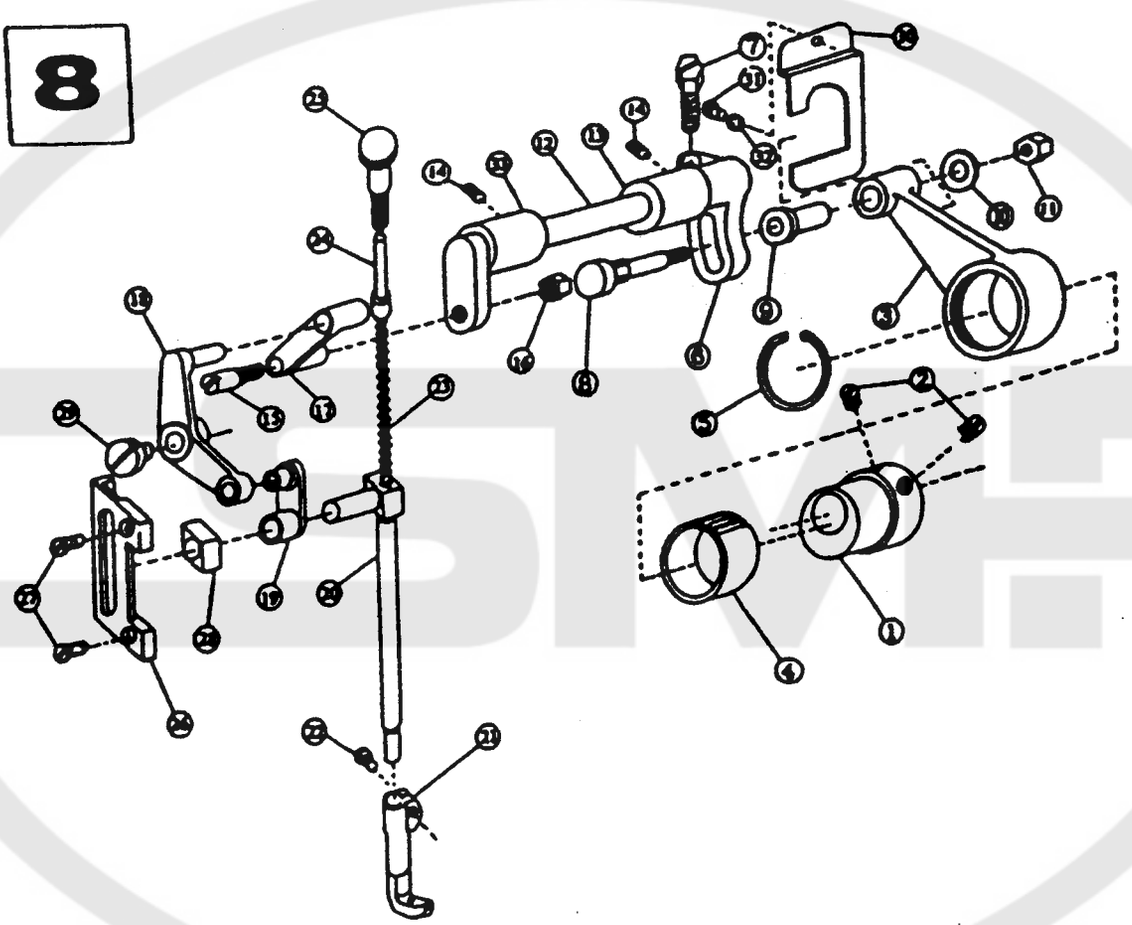
7


25
4
28
29
31
7
31
24
23
20
3
22
19
6
21
27
12
9
8
11
18
10
17
13
26
2
14
31
30
1
5
16
15

7. PRESSER FOOT MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	BM05-07-001	Presser foot lifter	1	
2	BM05-07-002	Set screw	1	
3	BM05-07-003	Presser bar position guide	1	
4	BM05-07-004	Presser bar bushing (upper)	1	
5	BM05-07-005	Presser bar	1	
6	BM05-07-006	Presser bar position guide bracket	1	
7	22T2-001A9	Screw	1	SM 9/64" (3.57)× 40/6
8	BM05-07-007	Presser bar lifting bracket	1	
9	22T6-008D3	Screw	1	SM11/64" (4.37)× 40/12
10	BM05-07-008	Presser bar spring	1	
11	BM05-07-009A1	Thread tension release slide	1	
12	BM05-07-009A2	Pin for thread tension release slide	1	
13	BM05-07-010	Bracket for presser bar spring	1	
14	BM05-07-021	Screw	1	SM9/64" (3.57)× 40/10
15	BM05-07-012	Out presser foot	1	
16	BM05-07-013	Screw	1	
17	BM05-07-014	Presser bar spring (flat)	1	
18	BM05-07-015	Screw	1	
19	BM05-07-016	Knee lifter lifting lever	1	
20	22T7-005-001	Screw	1	
21	BM05-07-017	Retracting spring for lever	1	
22	BM05-07-018	Retracting spring bracket	1	
23	22T9-001A9	Screw	1	SM15/64" (5.95)× 28/28
24	22T9-001A10	Nut	1	SM15/64" (5.95)× 28
25	BM05-07-019	Pressure regulating screw	1	
26	BM05-07-020	Thread tension release pin	1	
27	BM05-07-022	Presser bar lifting bracket guide	1	
28	BM02-08-007	Screw	1	SM1/4" (6.35)× 24/16
29	BM05-07-023	Pin	1	
30	BM05-07-011	Presser bar bushing (lower)	1	
31	22T2-002	Screw	3	SM15/64" (5.95)× 28/10

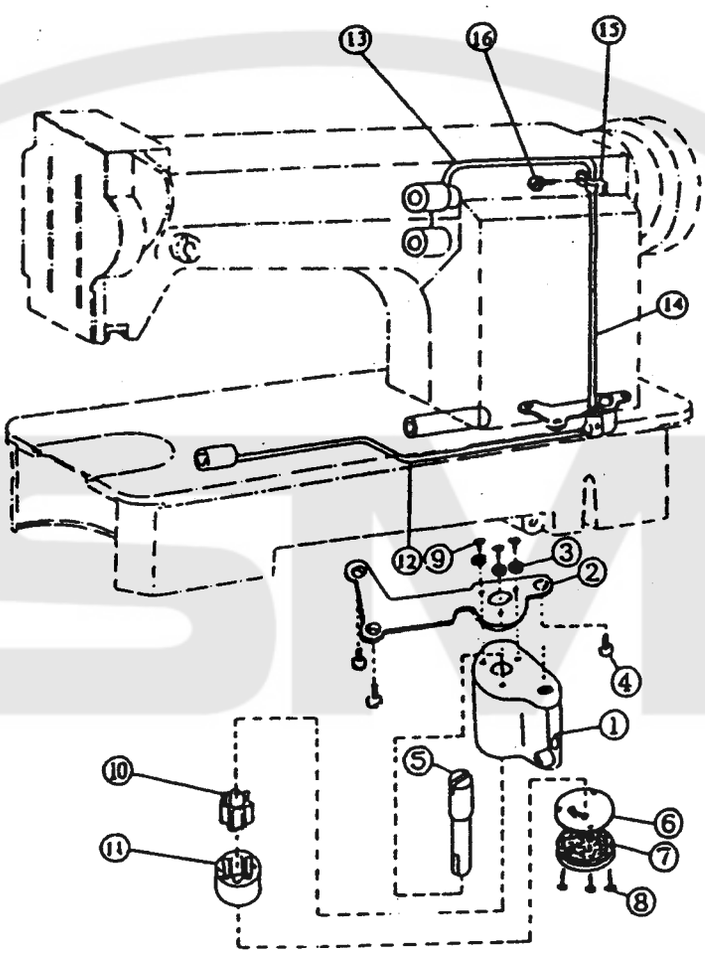
8



8. PRESSER LIFTING MECHANISM

No.	Ref. No	Description	Pieces	Remark
1	BM05-08-001A1	Lifting eccentric	1	
2	22T3-002B2	Screw	2	SM 1/4" (6.35)× 40/4
3	BM05-08-001A2	Lifting eccentric connection	1	
4	BM05-08-001A3	Needle bearing	1	
5	GB893	Retaining ring	1	Ring 30
6	BM05-08-002B1	Adjusting crank for eccentric connection	1	
7	BM05-08-002B2	Set screw	1	
8	BM05-08-003	Screw for lifting eccentric connecting collar	1	
9	BM05-08-004	Lifting eccentric connecting collar	1	
10	BM05-08-005	Washer	1	
11	BM05-08-006	Nut	1	SM 3/16" (4.76)× 28
12	BM05-08-007	Lifting rock shaft	1	
13	BM02-08-004	Lifting rock shaft bushing (right)	1	
14	22T1-011	Screw	2	SM 11/64" (4.37)× 40/5.5
15	BM05-08-008	Hinge pin	1	SM 1/4" (6.35)× 40
16	BM05-08-009	Hinge pin nut	1	
17	BM05-08-010	Lifting bell crank link	1	
18	BM05-08-011	Lifting bell crank	1	
19	BM05-08-012	Presser lifting link	1	
20	BM05-08-013	Vibrating presser bar	1	
21	BM05-08-014	Vibrating presser foot	1	
22	22T2-001A9	Screw	1	SM 9/64" (3.57)× 40/6
23	BM05-08-015	Vibrating presser bar spring	1	
24	BM05-08-016	Spring guide rod	1	
25	BM05-08-017	Adjusting bolt	1	
26	BM05-08-018	Guide for slide block	1	
27	22T2-001A9	Screw	2	SM 9/64" (3.57)× 40/6
28	BM05-08-019	Slide bolck for vibrating presser bar	1	
29	BM05-08-020	Screw	1	
30	BM05-08-021	Oil seal plate	1	
31	22T2-004	Screw	1	SM 11/64" (4.37)× 40/5.5
32	GB97	Washer		Washer 5
33	BM05-08-022	Lifting rock shaft bushing (left)		

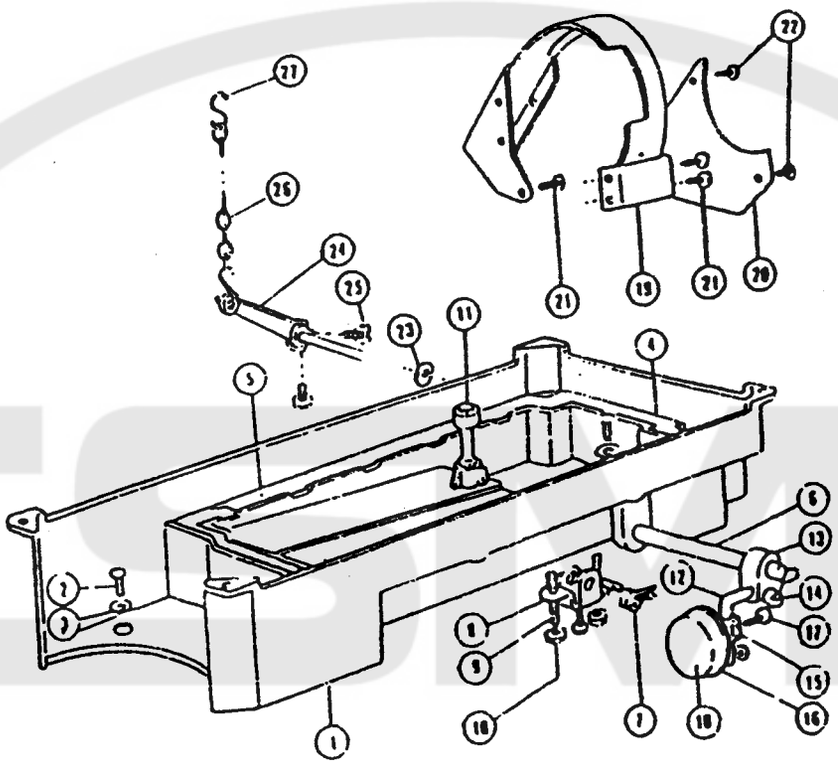
9



9. LUBRICATING MECHANISM

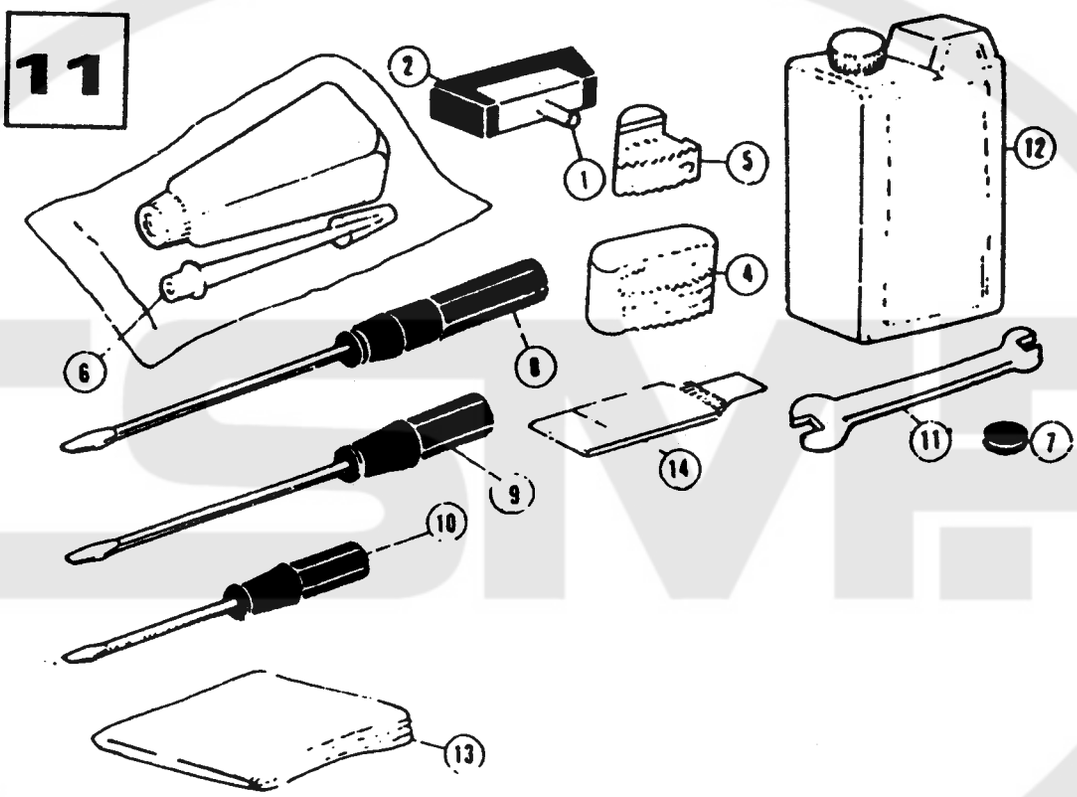
No.	Ref. No	Description	Pieces	Remark
1	BM03-09-001	Oil pump body	1	
2	BM07-09-002	Oil pump body plate	1	
3	22T1-007	Washer	3	
4	72T2-003	Screw	3	SM11/64" (4.37)× 40/8
5	BM03-09-002	Oil pump shaft	1	
6	BM03-09-003	Oil pump body guide plate	1	
7	11H8-008B1	Oil pump screen	1	
8	11H8-010	Set screw	3	SM1/8" (3.18)× 44/8
9	72T2-003	Set screw	3	SM11/64" (4.37)× 40/8
10		Gear (inner)	1	
11		Gear	1	
12	BM07-09-003A1	Oil pipe for hook shaft	1	
	22T8-010B1	Pipe connection for hook shaft	1	
13	BM05-09-001	Oil pipe for arm shaft (upper)	1	
14	BM07-09-004B1	Oil pipe for arm shaft (lower)	1	
	22T8-013D2	Pipe connection for arm shaft	1	
15	BM01-08-004	Pipe hold for arm shaft	1	
16	72T2-003	Set screw	1	SM11/64" (4.37)× 40/8

10



10. OIL RESERVOIR AND OTHER ACCESSORIES

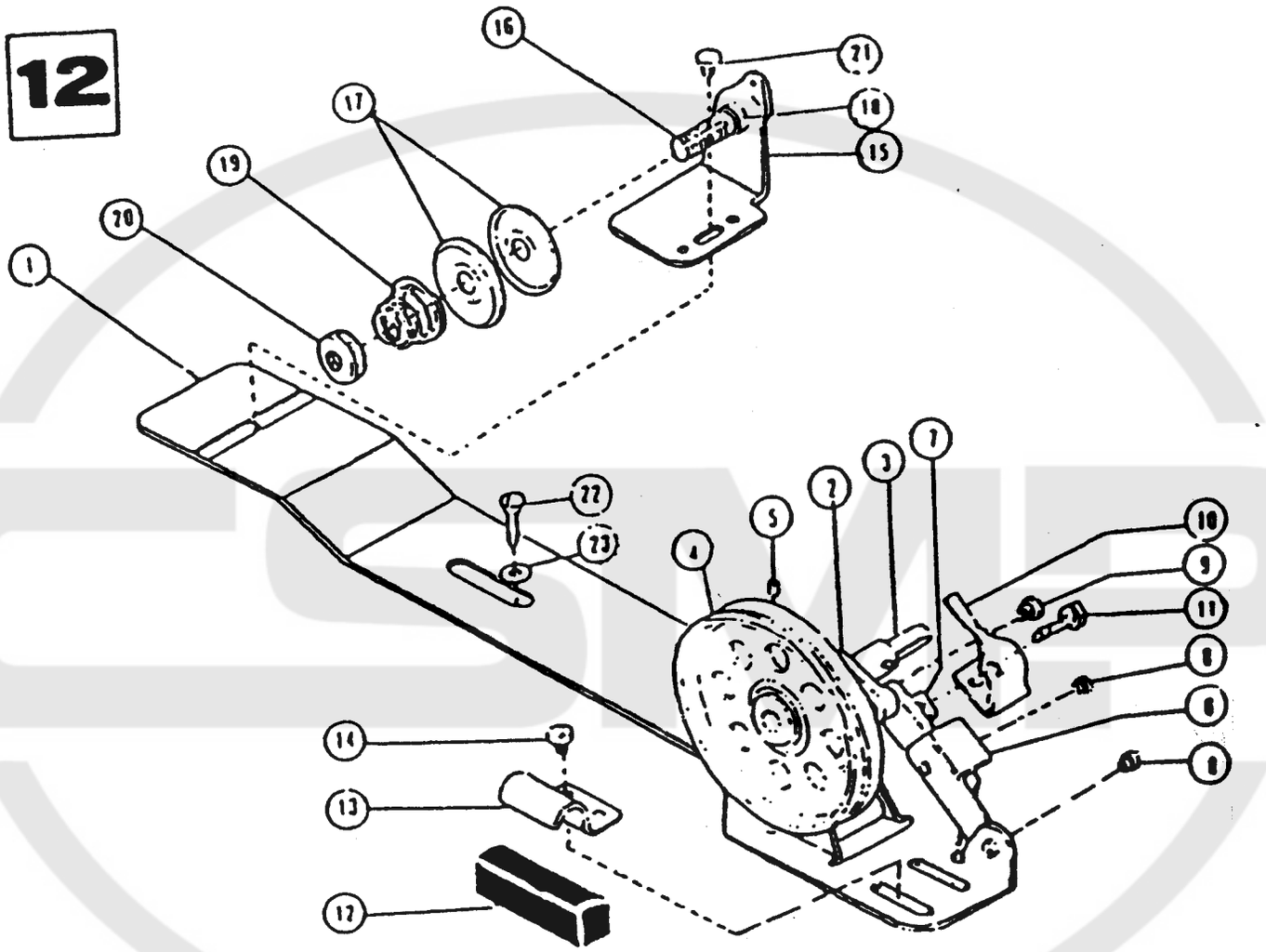
No.	Ref. No	Description	Pieces
1	74T9-001A1	Oil reservoir	1
2	22T9-001A2	Oil drain screw	1
3	22T9-001A3	Washer	1
4	22T9-001A4	Gasket for oil reservoir (big)	1
5	22T9-001A5	Gasket for oil reservoir(small)	1
6	BM05-10-001	Hinge pin for knee lifter	1
7	22T9-001A7	Retracting spring for knee lifter	1
8	22T9-001A8	Knee lifter stop bracket	1
9	22T9-001A9	Adjusting screw	2
10	22T9-001A10	Lock nut	2
11	22T9-003B1	Knee lifter lifting rod	1
12	22T9-003B2	Knee lifter bell crank	1
13	22T9-003B3	Joint for knee lifter bell crank	1
14	72T9-018	Set screw	2
15	22T9-003B6	Bracket for knee lifter plate	1
16	22T9-003B5	Knee lifter plate	1
17	22T9-003B7	Set screw	1
18	22T9-003B8	Pad for knee lifter plate	1
19	22T9-004C1	Belt cover bracket	1
20	22T9-004C2	Belt cover plate	1
21	72T1-017	Screw	3
22	72T9-028	Screw	3
23	GN896	Stop ring	1
24	BM05-10-002	Knee lifter rod crank	1
25	GB84	Set screw	2
26		Chain	1
27	GN1-1	Chain hook	2


11
2
1
5
12
4
6
8
9
14
11
7
10
13

11. ACCESSORIES

No.	Ref. No	Description	Pieces
1	22T9-007F1	Hinge of machine head	2
2	72T9-004C1	Rubber socket for hinge	2
4	72T9-005	Rubber cushion (big)	2
5	72T9-006	Rubber cushion (small)	2
6	22T9-011	Oiler	1
7	22T9-012	Magnet	1
8	72T9-007	Screw driver (long)	1
9	72T9-020	Screw driver (medium)	1
10	72T9-021	Screw driver (short)	1
11	72T9-022	Double-end wrench	1
12	22T9-017	Oil container	1
13	22T9-018	Vinyl cover	1
14	DP × 17 22#	Needle	4

12



12. BOBBIN WINDER MECHANISM

No.	Ref No	Description	Pieces
1	22T9-006D1	Bobbin winder base	1
2	22T9-006D2	Bobbin winder arm	1
	22T9-006D3	Shaft for bobbin winder arm	1
	22T9-006D4	Spring	1
3	22T9-006D5	Bobbin winder spindle	1
4	22T9-006D6	Bobbin winder pulley	1
5	22T9-006D7	Screw	1
6	22T9-006D8	Bobbin winder stop latch lever	1
7	22T9-006D9	Bobbin winder connecting bar	1
8	22T9-006D10	Rivet	2
9	22T9-006D11	Screw	1
10	22T9-006D12	Bobbin winder stop latch	1
11	22T9-006D13	Adjusting screw	1
12	22T9-006D14	Stopper block	1
13	22T9-005D15	Fixture for stopper block	1
14	22T9-006D16	Set screw	1
15	22T9-006D17	Bobbin winder tension bracket	1
16	22T9-006D18	Bobbin winder tension stud	1
17	22T9-006D19	Bobbin winder tension disc	2
18	22T9-006D20	Tension stud bushing	1
19	22T9-006D21	Bobbin winder tension spring	1
20	22T9-006D22	Tension stud nut	1
21	22T9-006D23	Tension bracket screw	1
22		Wood screw	2
23		Washer	2