

# INSTRUCTION MANUAL

591V 200A/300A Machine

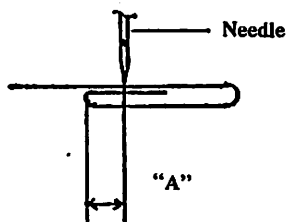
Oil Reservoir, Hemmer Opening Device  
and Feed Roller Lift-Up Device Assembly

## A. Oil Reservoir Assembly

1. Remove 2 sets of Bolts ② , Nuts ③ , Washers ④ and Spring Washers ⑤ from Support ① .
2. First insert 2 Bolts ② thru the table bolt holes, next insert Washers ④ into Bolts ② and tighten with Nuts ③ .
3. Remove 4 sets of Screws ⑥ and Washers ⑦ on Support ① and remove Bracket ⑧ together with Shaft ⑨ , etc.
4. Provisionally hang Support ① with 2 Bolts ② , when hanging Support ① , insert Nut ③ and Washer ④ on upper side of Support ① and insert Washer ④ , Spring Washer ⑤ and Nut ③ on underside.
5. Next, place right end of Reservoir ⑩ on the 2 Cushions assembled to the corners of the Table and left end on the 2 Cushions ⑪ assembled to Support ① . In this case, do not let Clamp ⑫ and 2 Brackets ⑬ assembled to upper surface of Support ① touch Reservoir ⑩ .
6. Next, adjust upper edge of Reservoir ⑩ parallel with upper surface of Table by 2 lower Nuts ③ . After confirming, fix Support ① by tightening Nuts ③ .
7. Clamp Reservoir ⑩ by 2 Brackets ⑬ so it will not move forward or backward and firmly secure with Washer ⑮ and Screw ⑭ . In this case, care should be taken to place Reservoir ⑩ so that space in front and back of table cut-out are even.
8. Next, press Pad ⑯ attached to the surface of Clamp ⑫ against left surface of Reservoir ⑩ and push to the right. This prevents longitudinal movement of Reservoir ⑩ . Finally secure Clamp ⑫ with Washer ⑮ and Screw ⑭ .

## B. Hemmer Opening Device Assembly

1. Assembly Bracket ⑧ previously removed (with Shaft ⑨ , Hub ⑱ , Lever ⑳ and Bracket ㉑ attached) to bottom surface of Support ① with 4 Washers ⑦ and Screws ⑥ .  
In assembling, pull Bracket ⑧ as far to the front as possible and secure (Bracket ⑧ has 4 oblong holes). Further, adjust position of Ring ㉒ on Shaft ⑨ so that there is no axial play of Shaft ⑨ within Bracket ⑧ .
2. Next, remove Ring ㉓ on front end of Shaft ⑨ , and pull out Hub ⑱ from Shaft ⑨ together with Lever ㉔ .
3. Next, firmly assemble Hemmer Assembly to Bed taking care of assembly height.
4. Then, set distance "A" from left folded edge of double folded under material to needle drop line. This distance can be adjusted by the position of Leg part on the right end of Slide ㉖ secured to Screw ㉗ .  
Further, Plunger ㉘ is fixed to the right end of Screw ㉗ and when Hemmer is closed, right end of Plunger ㉘ should positively stop at the right end of Sleeve ㉙ where Plunger ㉘ fits in.



5. Trial sewing must be performed until desired distance "A" is obtained and when this has been confirmed, finally set Slide ㉖ with 2 Washers ③① and Nuts ③② .
6. Next, confirm that Bracket ③② is firmly fastened on Screw ㉗ clamped from both sides with 2 Washers ③① and Nuts ③② .  
Also, it is desirable to position Bracket ③② as far as possible to the right on Screw ㉗ .
7. Next, assemble Arm ③④ with Plate ③③ to Hub ⑱ and provisionally tighten Screw ③⑤ . See illustration.
8. Then, insert Hub ⑱ into Shaft ⑨ and at the same time, fit Pin ③⑥ on upper end of Lever ㉔ into slot on Bracket ③② .

9. Assemble Ring ②③ previously removed onto Shaft ⑨ . Hub ①⑨ should rotate freely on Shaft ⑨ and held in position by 2 Rings ②③ from both slides.
10. Also, it may be necessary to adjust Bracket ③② horizontally so that Pin ③⑥ on Lever ②④ fits sufficiently into the slot.
11. Next, fix Lever ②④ to Hub ①⑨ with 2 Washers ③⑧ and Screws ③⑦ so that when Hemmer is in extreme right position, there is a clearance of about 1 mm between Pin ③⑥ and top end of slot on Bracket ③② .
12. Now, set position of Plate ③③ to a position most adequate to the knee and firmly tighten Screw ③⑤ .
13. Next, hook Spring ④① to Screw Stud ③⑨ on Support ① and Screw Stud ④① on Lever ②④ . This Spring ④① pulls Lever ②④ to the right and thru Pin ③⑥ , acts to close the Hemmer.
14. At start and finish of hemming tubular material, Plate ③③ is pushed by the knee to the right to open the Hemmer.
15. Adjust the tension of Spring ④① so that Lever ②④ quickly returns to original position when knee is released from Plate ③③ . For this, screw in or out Hook on the left end of Spring ④① hooked to the groove on Screw Stud ④① .
16. Next, adjust height of Screw ④② so that when Plate ③③ is pressed by the knee to the right, Pin ③⑥ does not disengage from slot on Bracket ③② .  
By extruding Screw ④② downwards, rotating range of Hub ①⑨ becomes smaller.  
Finally, set Screw ④② with Washer ④④ and Nut ④③ .

### C. Feed Roller Lift-Up Device Assembly

1. Mount machine head on Gasket (45) above Reservoir (10) . Next, reduce pressure of Top Feed Roller on machine head.
2. Next, insert Bell Crank Plunger thru Reservoir (10) and place bottom end in hollow on the right end of Crank (46) which has been assembled under Reservoir (10) . In this case, there should be a slight clearance between the bottom end of Bell Crank Plunger and hollow on Crank (46) . This clearance adjustment is done by Screw (47) and Nut (48) .
3. Next, insert Connection (52) from the backside into the holes of Lever (20) on Shaft (9) and lower end of Lever (50) on Shaft (49) , and insert 2 Rings (53) on both ends of Connection (52) .
4. Then, with lower part of Lever (50) on Shaft (49) slanted approximately 15° to the left, provisionally tighten Screw (51) on Crank (46) .
5. Next, with Hook (54) on Bracket (21) which is assembled to the rear of Shaft (9) pointing to the left and upwards, provisionally tighten Bracket (21) with Screw (55) .
6. Connect Hook (54) and Pedal (56) with Chain (57) as shown in illustration. Length of Hook (54) is adjusted by Screw (58) on Bracket (21) .
7. Next, press Pedal (56) and lift Top Feed Roller thru the actions of Chain (57) - Hook (54) (Bracket (21) ) - Shaft (9) - Lever (20) - Connection (52) - Lever (50) - Shaft (49) - Crank (46) and finally lifting Bell Crank Plunger up thru Reservoir (10) .
8. Lift-up amount of Top Feed Roller is adjusted by Dog (59) assembled at the rear end of Shaft (49) . Dog (59) is fixed by Screw (60) . In this case, care must be taken so that Shaft (49) does not move horizontally.
9. Next, press Pedal (56) , confirm that the above motions are positively transmitted to Bell Crank Plunger and securely tighten Screw (55) on Bracket (21) , Screw (51) on Crank (46) and Screw (60) on Dog (59) . Be especially careful that head of Screw (55) does not interfere with bottom surface of Support (1) .
10. Finally, adjust Top Feed Roller to desired pressure.

## PARTS LIST

ITEM	PARTS NUMBER	NOMENCLATURE	ITEM	PARTS NUMBER	NOMENCLATURE
1	415652	Support	43	541165-002	Nut
2	415653	Bolt	44	543803-003	Washer
3	541168-002	Nut	45	415662	Gasket
4	543803-006	Washer	46	545915-901	Crank
5	543805-006	Spring Washer	47	545061	Screw
6	414750-001	Screw	48	545405	Nut
7	543803-004	Washer	49	545913	Shaft
8	415678	Bracket	50	415675	Lever
9	415674	Shaft	51	545062	Screw
10	415661	Reservoir	52	415682	Connection
11	45780	Cushion	53	508302	Ring
12	415655	Clamp	54	6338	Hook
13	415658	Bracket	55	415686	Screw
14	414604-001	Screw	56	547778	Pedal
15	543803-003	Washer	57	547781	Chain
16	415656	Pad	58	504105	Screw
17	414750-001	Screw	59	545922-901	Dog
18	543803-004	Washer	60	545062	Screw
19	415698	Hub	70	139980	Screw
20	415675	Lever	71	544208-001	Screw
21	505404-901	Bracket	72	543810-003	Pin
22	503000	Ring	73	543803-002	Washer
23	543801-012	Ring	74	414744-002	Screw
24	415696	Lever	75	414118-900	Holder
25	415640	Hemmer Assembly	76	414666	Screw
26	415645	Slide	77	414116	Cushion
27	414759-001	Screw	78	544208-001	Screw
28	415703	Plunger	79	543810-003	Pin
29	415704	Sleeve	80	545921	Spring
30	541165-002	Nut	81	543823-001	Washer
31	543803-003	Washer	82	545036	Screw
32	415702	Bracket	83	545754	Gasket
33	414117-900	Plate			
34	544895	Arm			
35	504105	Screw			
36	415697	Pin			
37	414604-001	Screw			
38	543803-003	Washer			
39	545255	Screw Stud			
40	549234	Screw Stud			
41	415699	Spring			
42	414760-001	Screw			

