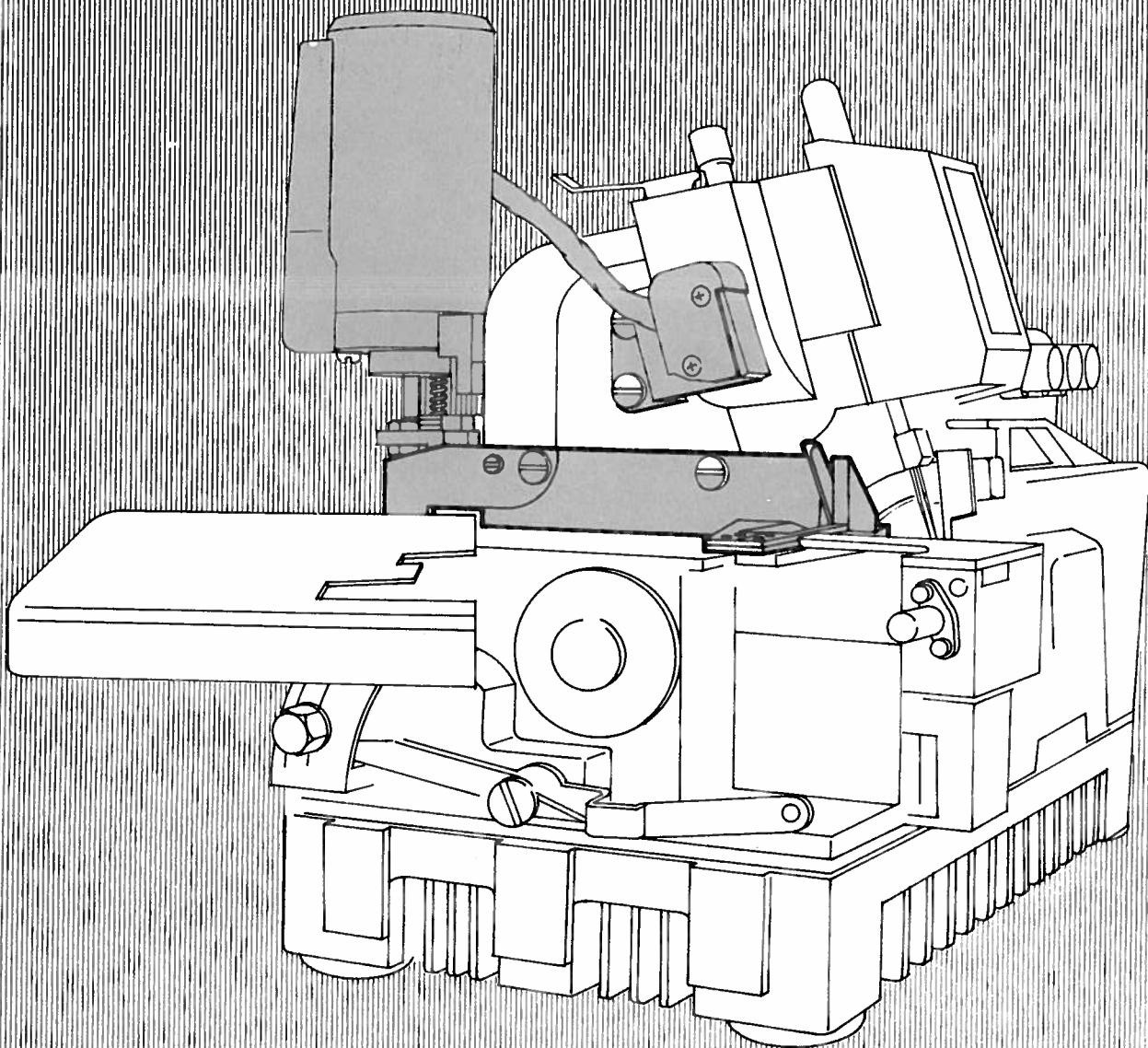


TAPE CUTTER

TK SERIES

FOR THE NEW WILLCOX & GIBBS 500 SERIES



WILLCOX & GIBBS, INC.



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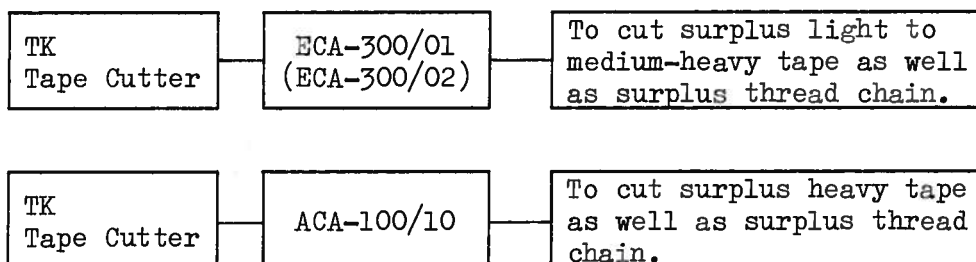
CLASSIFICATION OF TK TAPE CUTTERS

Tape cutter model	Machine model
TKU-320	515/IV. 516/IV
TKU-520	503/IV. 504/IV. 514/IV
TKR-530	All 500/V

* TK Tape Cutter cuts surplus tape as well as surplus thread chain left on fabrics sewn, perfect cut with slight touch on switch.

* used with its own driving unit model ECA-300/01 (ECA-300/02) or ACA-100/10. •
 ECA-300/01 (ECA-300/02) = Electric Solenoid Type
 ACA-100/10 = Pneumatic Type

* Your operation may choose:



REPLACEMENT OF MACHINE PARTS

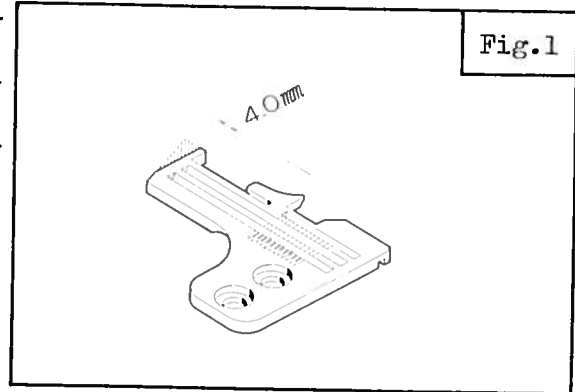
Replace parts in the machine with those listed in the column of 'New part number'.

Modified parts can be ordered by number or reworked as specified in the illustration.

Cut the slashed portion for modification

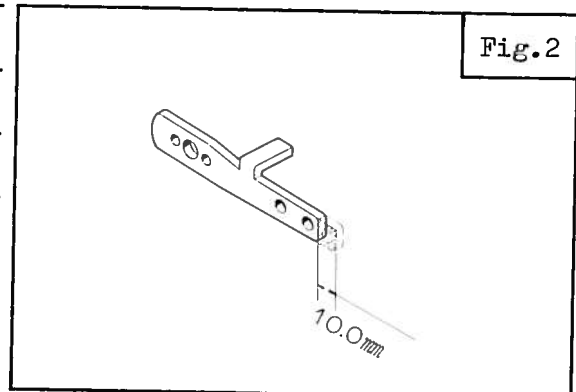
515/IV, 516/IV with TKU-320

New part number	Existing part number	Description	Fig. no.
303019	204215	Cloth plate	x
323-802-007	323-802-210		
303130	204177B	Foot lift lever	2
323-530-025	323-530-016		
303014	204850	Machine arm (left)	3
323-500-014	323-500-004		



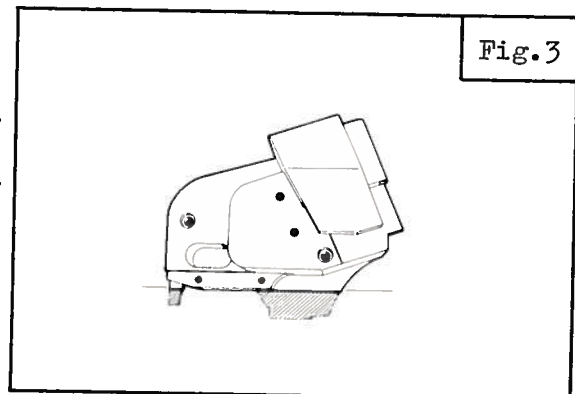
503/IV, 504/IV, 514/IV with TKU-520

New part number	Existing part number	Description	Fig. no.
303066	204798	Cloth plate (wide)	x
323-802-008	323-802-003		
303127	204740	Cloth plate (narrow)	x
323-802-009	323-802-002		
303014	204850	Machine arm (left)	3
323-500-014	323-500-004		
303130	204177B	Foot lift lever	2
323-530-025	323-530-016		
See chart below		Needle plate	1



500/V with TKR-530

New part number	Existing part number	Description	Fig. no.
300066	201181C	Cloth plate	x
323-802-010	323-802-001		
300014	202602B	Machine arm (left)	x
323-500-015	323-500-009		
300017	202934	Feed mechanism cover	x
323-510-072	323-510-017		
See chart below		Needle Plate	1



New part number	Existing part number	New part number	Existing part number	New part number	Existing part number
300070	202499E	300073	202554E	300076	202616
323-801-092	323-801-031	323-801-095	323-801-030	323-801-098	323-801-038
300071	202542E	300074	202596E	300077	202617
323-801-093	323-801-026	323-801-096	323-801-028	323-801-099	323-801-039
300072	202546E	300075	202597E	300078	202618
323-801-094	323-801-027	323-801-097	323-801-029	323-801-100	323-801-222

more.....continued to page 3.

PREPARATION OF MACHINE AND PARTS

Remove parts from machine in the following sequence.

503/IV, 504/IV, 514/IV with TKU-520

1. Presser arm
2. Cloth plate*
3. Needle plate*
4. Cloth plate fabric guard (no longer used)
5. Machine arm (left)*
6. Foot lift lever*

* replace with modified parts shown in page 2.

515/IV, 516/IV with TKU-320

1. Presser arm
2. Cloth plate*
3. Needle plate
4. Machine arm (left)*
5. Foot lift lever*

* replace with modified parts in shown in page 2.

500/V with TKR-530

1. Presser arm
2. Cloth plate*
3. Cloth plate fabric guard (no longer used)
4. Needle plate*
5. Machine arm (left)*
6. Feed mechanism cover*
7. Foot lift lever

* replace with modified parts shown in page 2.

Polish portion A on the Machine Arm (Right) to a flat smooth surface for attaching Solenoid Bracket.

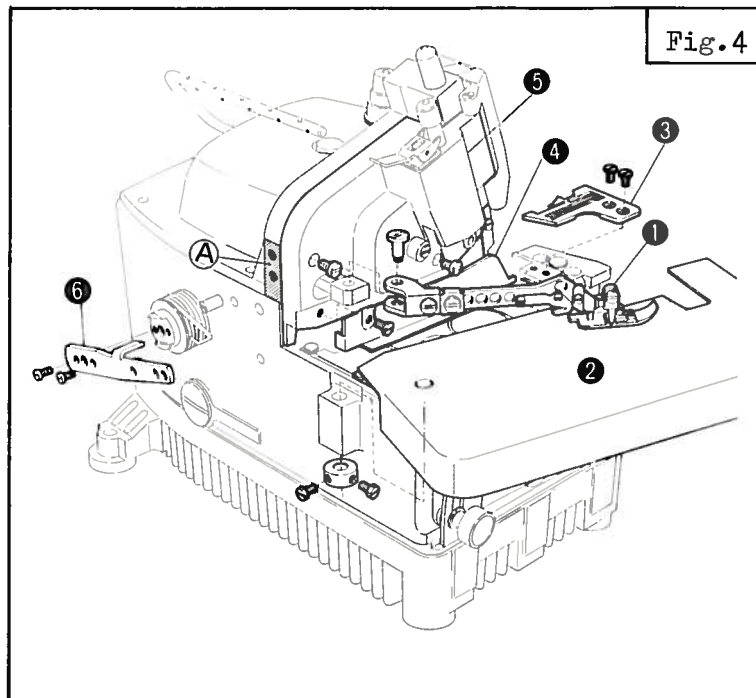


Fig.4

(continued from page 2)

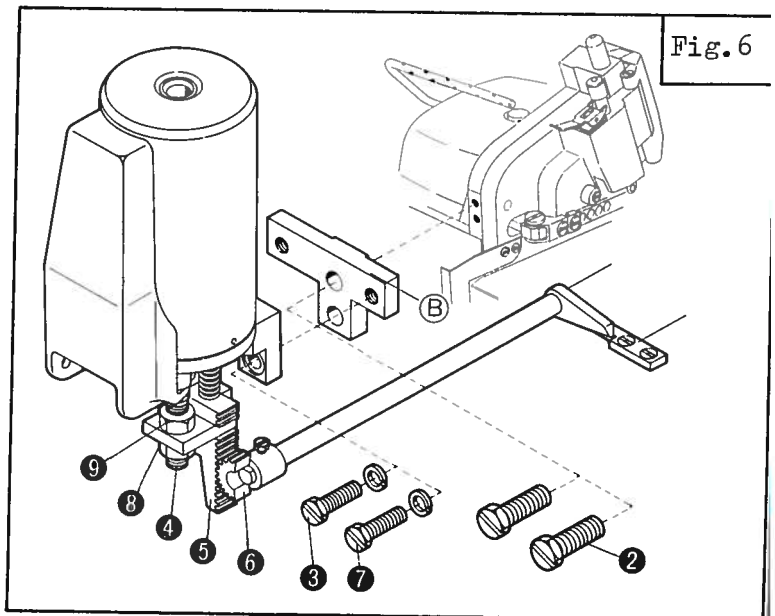
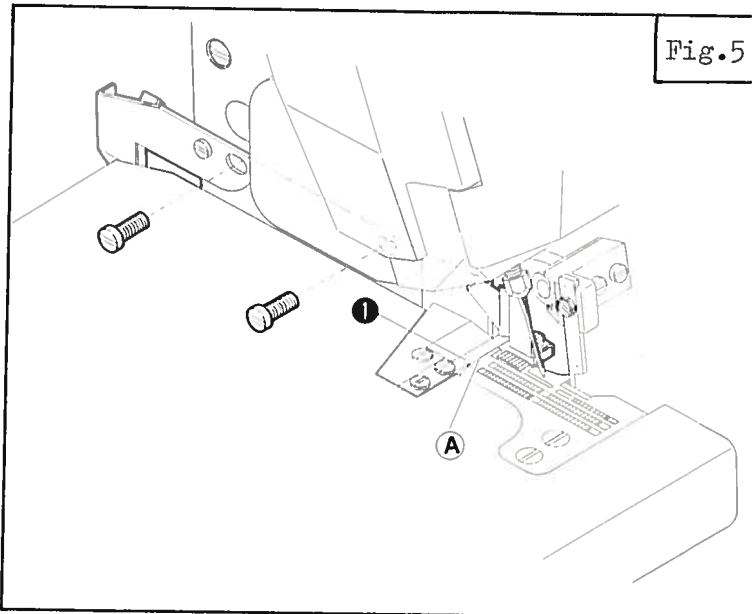
New part number	Existing part number	New part number	Existing part number	New part number	Existing part number
300079	202674	300088	205233	300097	205242
323-801-101	323-801-040	323-801-110	323-801-346	323-801-113	323-801-353
300080	202675	300089	205234	300098	205243
323-801-102	323-801-315	323-801-111	323-801-347	323-801-120	323-801-364
300081	202702	300090	205235	300099	205244
323-801-103	323-801-070	323-801-112	323-801-340	323-801-121	323-801-365
300082	202981	300091	205236	300100	205245
323-801-104	323-801-354	323-801-113	323-801-341	323-801-122	323-801-357
300083	202983	300092	205237	300101	205255
323-801-105	323-801-355	323-801-114	323-801-342	323-801-123	323-801-047
300084	202983	300093	205238	300102	205256
323-801-106	323-801-356	323-801-115	323-801-343	323-801-124	323-801-048
300085	204731	300094	205239	300103	205257
323-801-107	323-801-041	323-801-116	323-801-360	323-801-125	323-801-049
300086	205231	300095	205240		
323-801-108	323-801-344	323-801-117	323-801-361		
300087	205232	300096	205241		
323-801-109	323-801-345	323-801-118	323-801-362		

INSTALLATION OF TAPE CUTTER

Assemble machine parts and TK Tape Cutter on machine in the following sequence.

515/IV, 516/IV with TKU-320

1. Machine arm (left)
2. Needle plate
3. Cutter frame
 - . remove Gear Guard from Cutter Frame.
 - . insure clearance A is as small as possible.
 - . place Stationary Blade ① level with Needle Plate.
 - . replace Gear Guard on Cutter Frame.
4. Solenoid Bracket
 - . top edge B should be level.
 - . tighten screws ② securely.
Torque: 110-150kg/cm
5. Solenoid assembly
 - . preset overlap of Movable and Stationary Blades at 1.0mm (0.039").
 - . attach Solenoid Assembly to Solenoid Bracket with left Screw ③ only. Turn Screw ③ approximately 3 threads only.
 - . hold Plunger ④ up by hand, and engage Rack ⑤ with Pinion ⑥ .
 - . confirm Rack ⑤ and Pinion ⑥ smoothly by moving Plunger ④ by hand.
 - . tighten Screws ③ and ⑦ securely.
 - . Overlap of Movable and Stationary Blades should be within 0.5-1.5mm (0.020-0.059") when Movable Blade is in its lowest position. Adjust the overlap by loosening Nuts ⑧ and ⑨ and moving Rack ⑤ up and down by hand.
 - . confirm that Tape Cutter actuates properly by moving Rack ⑤ up and down by hand. Cut thread chain or the similar.
6. Foot lift lever
7. Cloth plate
8. Presser arm



503/IV, 504/IV, 514/IV with TKU-520

1. Machine arm (left)
2. Needle plate
3. Cutter frame
 - . insure clearance A is as small as possible.
 - . place Stationary Blade ① level with Needle Plate.
4. Solenoid Bracket
 - . top edge B should be level.
 - . tighten Screws ② securely.
Torque: 110-150kg/cm
5. Solenoid assembly
 - . preset overlap of Movable and Stationary Blades at 1.0mm (0.039").
 - . attach Solenoid Assembly to Solenoid Bracket with left Screw ③ only. Turn Screw ③ approximately 3 threads only.
 - . hold Plunger ④ up by hand, and engage Rack ⑤ with Pinion ⑥ .
 - . confirm Rack ⑤ and Pinion ⑥ smoothly by moving Plunger ④ by hand.
 - . tighten Screws ③ and ⑦ securely.
 - . Overlap of Movable and Stationary Blades should be within 0.5-1.5mm (0.020-0.059") when Movable Blade is in its lowest position.
Adjust the overlap by loosening Nuts ⑧ and ⑨ and moving Rack ⑤ up and down by hand.
 - . confirm Tape Cutter actuates properly by moving Rack ⑤ up and down by hand.
Cut thread chain or the similar.
6. Foot lift lever
7. Cloth plate
8. Presser arm

500/V with TKR-530

1. Cutter frame bracket base
 - . mount Cutter Frame Bracket Base on Feed Bar Guide (Right).
Use screws for the Guide for mounting.
 - . insure no play in Feed Bars.
2. Machine arm (left)
3. Needle plate
4. Cutter frame
 - . insure clearance A is as small as possible.
 - . place Stationary Blade ① level with Needle Plate.
5. Solenoid bracket
 - . top edge B should be level.
 - . tighten Screws ② securely.
Torque: 110-150kg/cm
6. Solenoid assembly
 - . preset overlap of Movable and Stationary Blades at 1.0mm (0.039").
 - . attach Solenoid Assembly to Solenoid Bracket with left Screw ③ only. Turn Screw ③ approximately 3 threads only.
 - . hold Plunger ④ up by hand, and engage Rack ⑤ with Pinion ⑥ .
 - . confirm Rack ⑤ and Pinion ⑥ smoothly by moving Plunger ④ by hand.
 - . tighten Screws ③ and ⑦ securely.
 - . Overlap of Movable and Stationary Blades should be within 0.5-1.5mm (0.020-0.059") when Movable Blade is in its lowest position.
Adjust the overlap by loosening Nuts ⑧ and ⑨ and moving Rack ⑤ up and down by hand.
 - . confirm Tape Cutter actuates properly by moving Rack ⑤ up and down by hand.
Cut thread chain or the similar.
7. Foot lift lever
8. Cloth plate
9. Presser arm

INSTALLATION OF DRIVING UNIT
(ECA-300/01. ECA-300/02)

Assemble parts in the following sequence.

1. Controller Box
 - . fix Bracket ① with Screws ② under work table as specified in Fig.11 in page 14.
 - . hang Controller Box ③ on Bracket .
2. Plug ④ and Receptacle ⑤
 - . each wire with Plug ④ has its own mark 'R', 'W' or 'B'.
 - . Each wire with Receptacle ⑤ also has its own mark.
 - . connect the wires of the same mark.
3. Connector ⑥
 - . fit Connector ⑥ with the one in Solenoid Assembly.
4. Fit Connectors ⑦ and ⑧ .
5. Connect Plugs ⑨ and Receptacles ⑩ .
6. Connect Cord ⑪ with switch of machine motor.
 - . wiring is as per shown in Fig.10 in page 14.

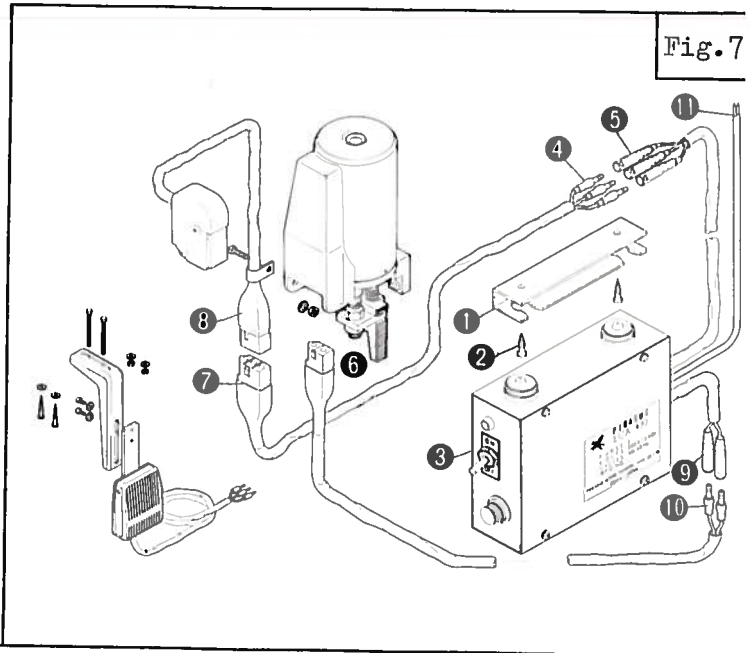


Fig.7

OPERATION

1. Put motor switch on.
2. Put Controller Switch ⑫ on.
 - . with Switch ⑫ on, Neon-lamp ⑬ is lighted.
 - . If Neon-lamp ⑬ is off, check Fuse ⑭ .
3. Push Grip-switch or Knee-switch on, and Tape Cutter will act one time.

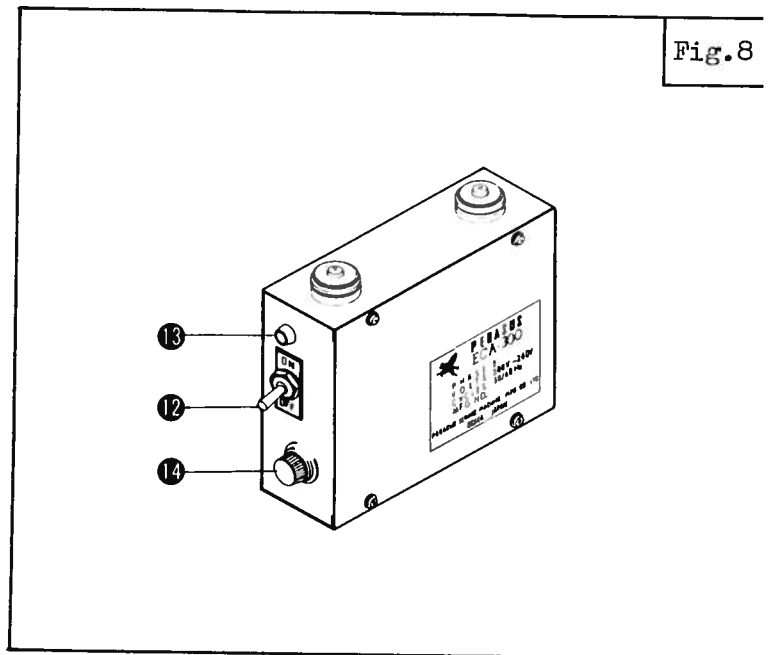


Fig.8

CAUTION !

Do not check around the blades of Tape Cutter or wiring of Driving Unit unless you have taken the following steps.

1. Put off Motor Switch.
2. Push Grip-switch (Knee-switch) and make Tape Cutter act one time.

There still remains electric power in the controller to actuate Tape Cutter one time even if you have put off motor switch or controller switch. Tape Cutter can one time guillotine by pushing Grip-switch (Knee-switch) even after switches being off, because an electric condenser in the controller box still has electric power to actuate Tape Cutter one time. Thus it is essential to eliminate the electric power left in the condenser by pushing Grip-switch (Knee-switch) before you check the blades or wiring.

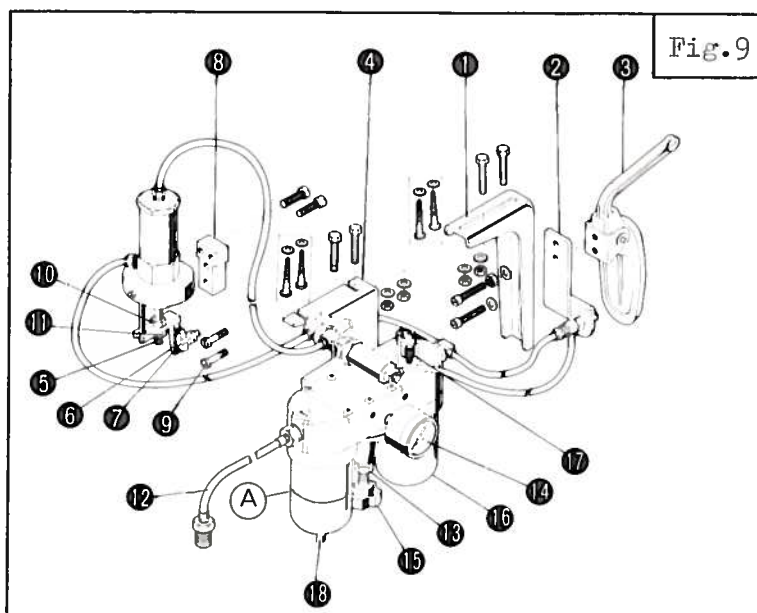
INSTALLATION OF DRIVING UNIT (ACA-100/10)

Please proceed the installation of Tape Cutter up to item 'Cutter Frame' shown in page 4-5.

Assemble parts in the following sequence.

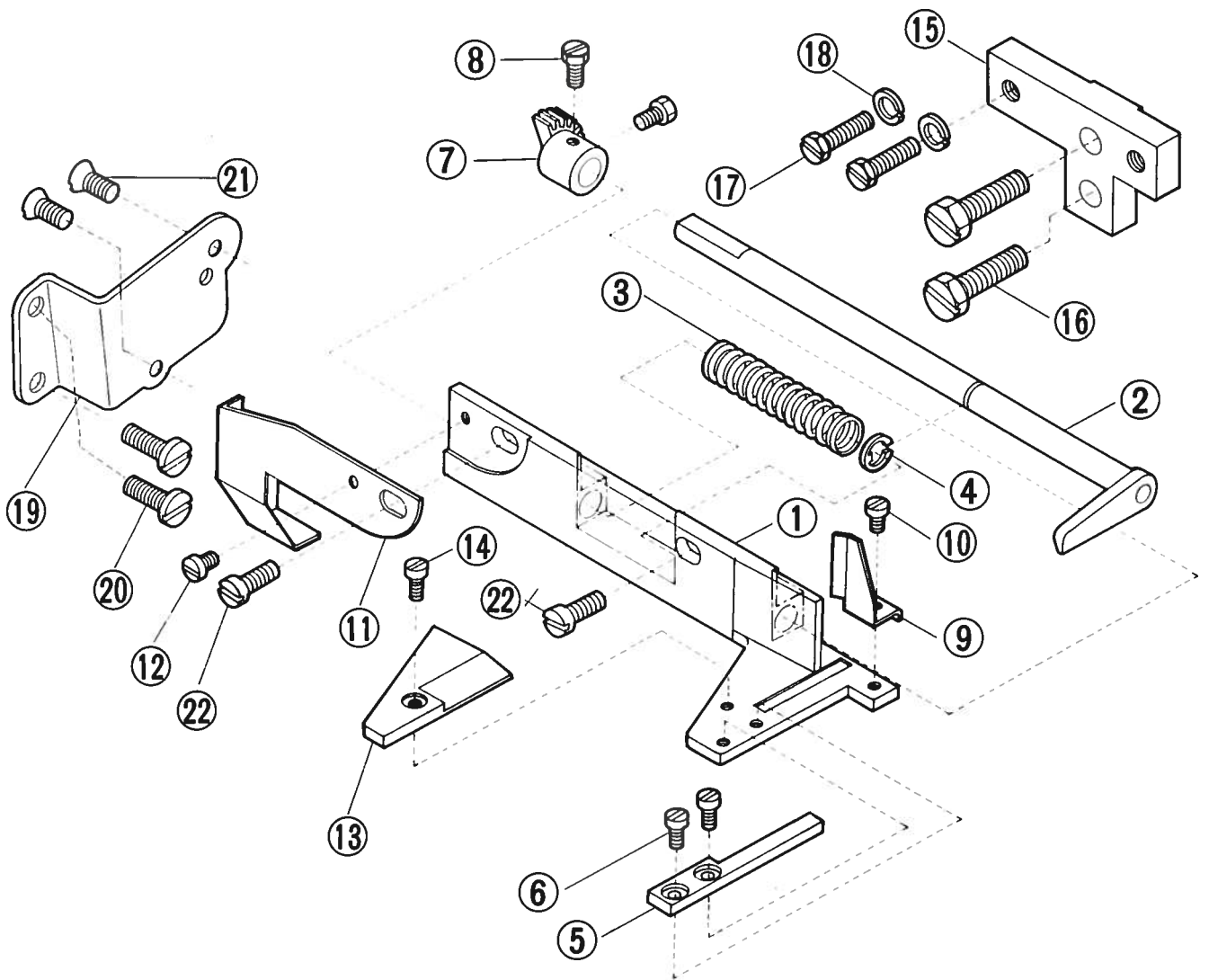
For assembling, use Screws, Nuts and Washers provided, as per shown in Fig.9.

1. Assemble Bracket ①, Bracket ② and Knee Switch ③ in one unit.
2. Mount Bracket ① under work table in position as specified in Fig.11 in page 14.
3. Mount Bracket ④ under work table in position as also specified in Fig.11.
4. Solenoid assembly
 - preset the overlap of Movable and Stationary Blades at 1.0mm (0.039").
 - push up Plunger ⑤ by hand, and then engage Rack ⑥ with Pinion ⑦.
 - lightly attach Bracket ⑧ on Machine Arm (Right) with Screws ⑨.
 - confirm Rack ⑥ and Pinion ⑦ smoothly by moving Plunger ⑤ by hand.
 - tighten Screws ⑨ securely. Torque: 110-150kg/cm
 - overlap of Movable and Stationary Blades should be within 0.5-1.5mm (0.020-0.059") when Movable Blade is in its lowest position. Adjust the overlap by loosening Nuts ⑩ and ⑪ and moving Rack ⑥ up and down by hand.
 - confirm Tape Cutter actuates properly by moving Plunger ⑤ by hand.
5. Cut thread chain or the similar.
6. Connect Tube ⑫ with Air Compressor.
7. Fix Foot Lift Lever, Cloth Plate and Presser Arm on machine in position.



DAILY MAINTENANCE

1. Drain water by pushing Pin ⑱ by finger when water is accumulated. Drain water before it reaches the line A.
2. Keep oil (same oil to be used for the machine) in Container ⑲ in its half level.
7. Open the Valve of Air Compressor.
 - Air pressure from Air Compressor should be 10kg/cm² or below.
8. Loosen Lock Nut ⑲ and set Gauge ⑳ at 3.5-5.0kg/cm² by turning Facet ㉑ by hand.
9. Push Knee Switch and Tape Cutter will actuate one time.
10. If necessary, adjust the drop of oil in Container ⑲ as one drop per 5 times of cutting of Tape Cutter.
 - Turn Nut ㉒ and adjust this.

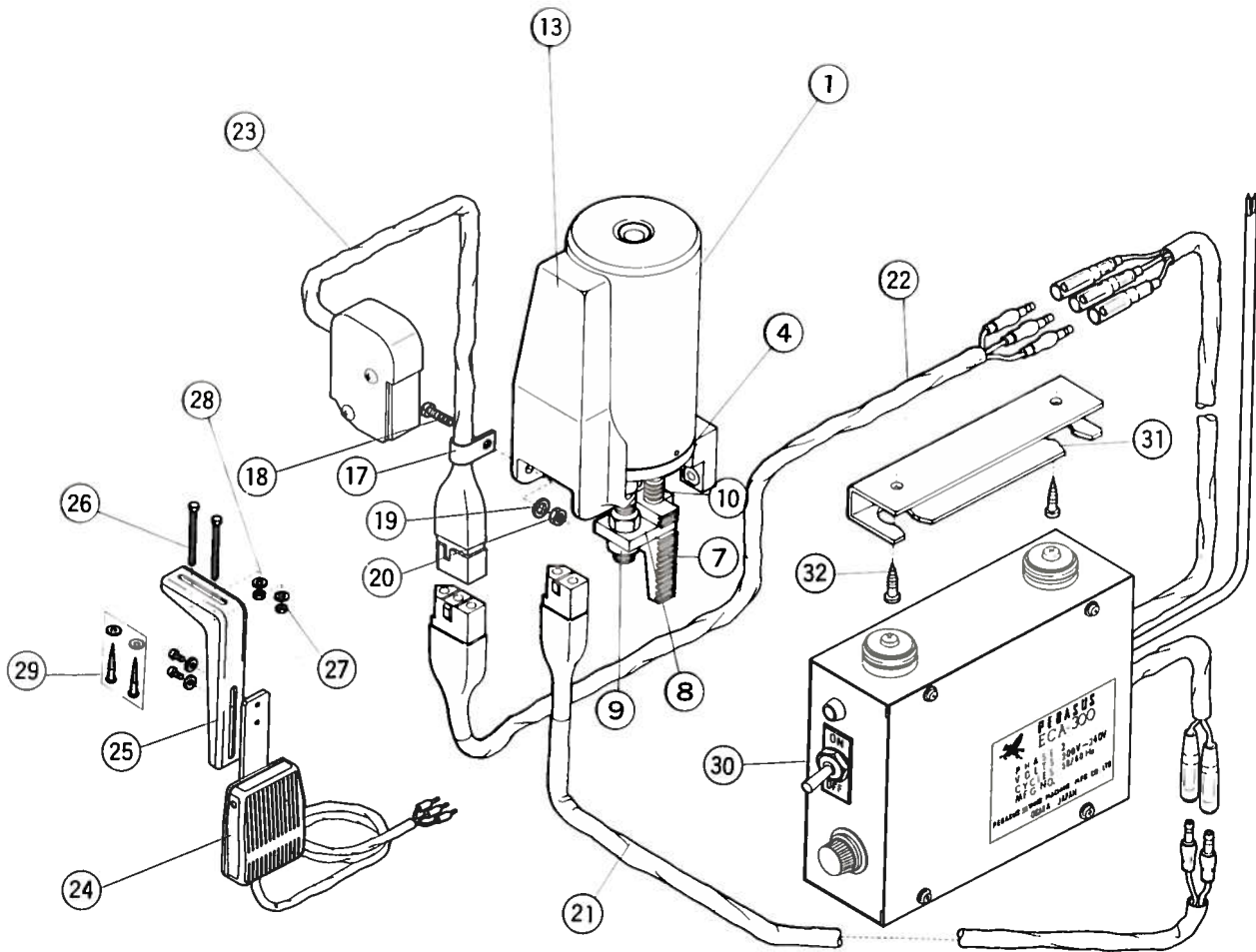


PARTS LIST FOR TKU-520, TKU-320 AND TKR-530

Ref. No.	TKU-520	TKU-320	TKR-530	Description
	303169	303133	300141	Tape cutter head complete
	323-900-038	323-900-039	323-900-040	
1	303007	303020	300001A	" " frame
	323-508-012	323-508-013	323-508-014	
	-----	-----	300002	" " " bracket
			323-740-049	
2	303002	303131	300003	Movable blade
	323-873-015	323-873-016	323-873-017	
3	303096	303096	303096	" " spring
	323-640-020	323-640-020	323-640-020	
4	303097	303097	303097	" " " stop ring
	323-633-005	323-633-005	323-633-005	
5	300006	303021	300006	Stationary blade
	323-873-018	323-873-019	323-873-018	
6	1186	1186	1186	" " screw (2)
	323-600-246	323-600-246	323-600-246	
7	300007	300007	300007	Pinion
	323-763-001	323-763-001	323-763-001	
8	5220	5220	5220	" screw (2)
	323-600-291	323-600-291	323-600-291	
9	303005	303022	300008	Fabric guard
	323-560-037	323-560-038	323-560-039	
10	1186	1186	1186	" " screw (2)
	323-600-246	323-600-246	323-600-246	
11	303063	303063	303063	Gear guard
	323-560-040	323-560-040	323-560-040	
12	1186	1186	2921 (2)	" " screw
	323-600-246	323-600-246	323-600-026	
13	303011	303011	300011	Tape guide plate
	323-800-046	323-800-046	323-800-047	
14	1186	1186	1186 (2)	" " " screw
	323-600-246	323-600-246	323-600-246	
15	303013	303013	300130	Solenoid bracket
	323-740-050	323-740-050	323-740-051	
16	5266	5266	5266	" " screw (2)
	323-600-265	323-600-265	323-600-265	
17	5276	5276	5276	" screw (2)
	323-600-088	323-600-088	323-600-088	
18	303067	303067	303067	" " washer (2)
	323-616-002	323-616-002	323-616-002	
19	303128	303128	300140	Grip-switch bracket *
	323-740-052	323-740-052	323-740-053	
20	5113	5113	5113	" " screw *
	323-600-039	323-600-039	323-600-039	
21	3001	3001	3001	" screw (2) *
	323-600-059	323-600-059	323-600-059	
22	5345	5345	2902	Tape cutter frame screw (2)
	323-600-096	323-600-096	323-600-259	

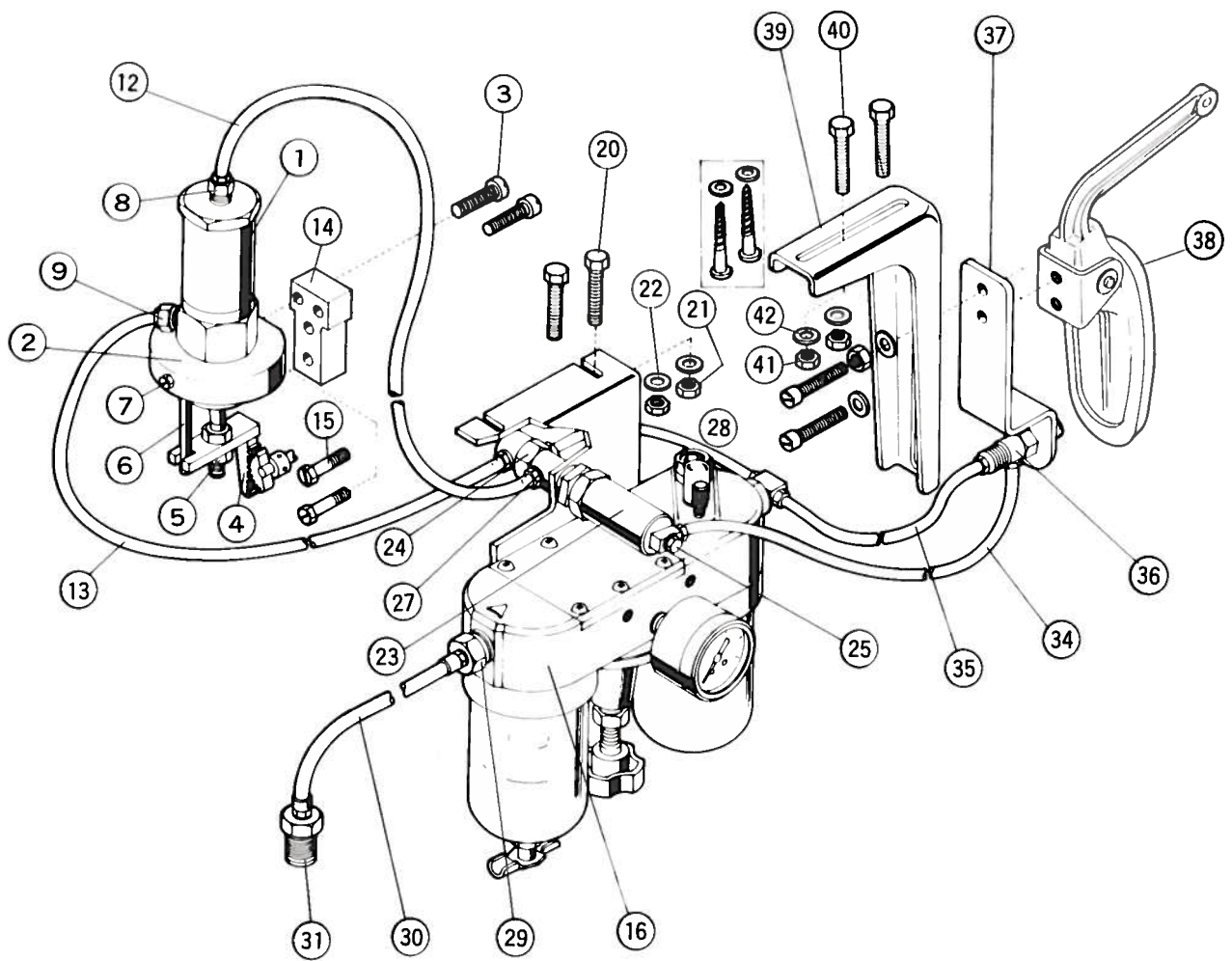
* for ECA-300/01 only

() = quantity



Ref. No.	New Product Code No.	Part No.	Description
	323-900-041	760006A	ECA-300/01
	323-900-042	760007A	ECA-300/02
	323-900-043	811004A	Solenoid assembly (includes parts of Ref.Nos.1-16)
1	323-795-002	811001A	Solenoid
2	323-632-200	202023	" plunger 'o' ring *
3	323-600-131	5355	" screw (4) *
4	323-685-020	303012	" holder
5	323-600-088	5276	" " screw (2) *
6	323-616-002	303067	" " " washer (2) *
7	323-762-002	303015	Rack
8	323-800-048	303016	" guide plate
9	323-630-030	5340	" " " nut (2)
10	323-640-020	303017	" post spring
11	323-607-002	303064	" post *
12	323-600-055	5097	" " screw *
13	323-510-073	303068	Solenoid cover
14	323-600-132	5349	" " screw *
15	323-615-216	202875	" " " washer *
16	323-615-012	201185	" " washer (2) *
17	323-683-017	748001	Cord clamp
18	323-600-133	5424	" " screw
19	323-615-012	201185	" " " nut washer
20	323-630-031	5350	" " " nut
21	323-537-001	742010	Solenoid extension cord
22	323-537-002	742006	Grip switch extension cord
23	323-954-001	303206	" switch (for ECA-300/01 only)
24	323-954-002	708002	Knee switch (for ECA-300/02 only)
25	323-505-100	197	" " bracket
26	323-605-003	5347	" " " bolt (2)
27	323-630-013	5348	" " " " nut (2)
28	323-615-021	204585	" " " " washer (2)
29	323-600-101	5341	" " " wooden screw (2)
30	323-900-044	760005A	Controller box unit
31	323-740-043	303009	" " bracket
32	323-600-365	5378	" " " screw (2)

* not shown



Ref. No.	New Product Code No.	Part No.	Description
1	323-651-002	513004	Air cylinder
2	323-685-019	204594	" " holder
3	323-600-296	5233	" " " screw (2)
4	323-762-001	204608	Rack
5	323-630-030	5340	" nut (2)
6	323-756-005	204610	" support
7	323-600-028	5048	" " screw
8	323-636-013	601017	Elbow
9	323-636-014	601005	Nipple
10	323-627-016	601006	Plug (2) *
11	323-635-004	601004	Sleeve (2) *
12	323-639-027	600013	Tube
13	323-639-028	600014	Tube
14	323-740-054	204613	Air cylinder bracket
15	323-600-265	5266	" " " screw (2)
16	323-716-010	595002	" regulator unit
17	323-600-130	5423	" " " screw (2) *
18	323-615-012	201185	" " " washer (2) *
19	323-740-055	300215	" " " bracket
20	323-605-003	5347	" " " bolt (2)
21	323-630-013	5348	" " " " nut (2)
22	323-615-021	204585	" " " " washer (2)
23	323-716-009	555001	" actuator
24	323-736-006	532001	" valve
25	323-636-015	601020	Elbow
26	323-636-016	601026	Joint
27	323-636-017	601002	Valve joint
28	323-639-029	600012	Tube
29	323-636-007	601011	Elbow
30	323-639-023	600005	Tube
31	323-636-008	601014	Nipple
32	323-635-003	601012	Sleeve (2) *
33	323-636-011	601013	Plug (2) *
34	323-639-030	600015	Tube
35	323-639-031	600016	Tube
36	323-736-005	531001	Air valve
37	323-740-056	300216	" " bracket
38	323-900-224	192	Knee pad (switch)
39	323-505-100	197	" " bracket
40	323-605-003	5347	" " " screw (2)
41	323-630-013	5348	" " " " nut (2)
42	323-615-021	204585	" " " " washer (2)

* not shown

Fig.10

Wiring in machine motor switch
for ECA-300/01 (ECA-300/02)

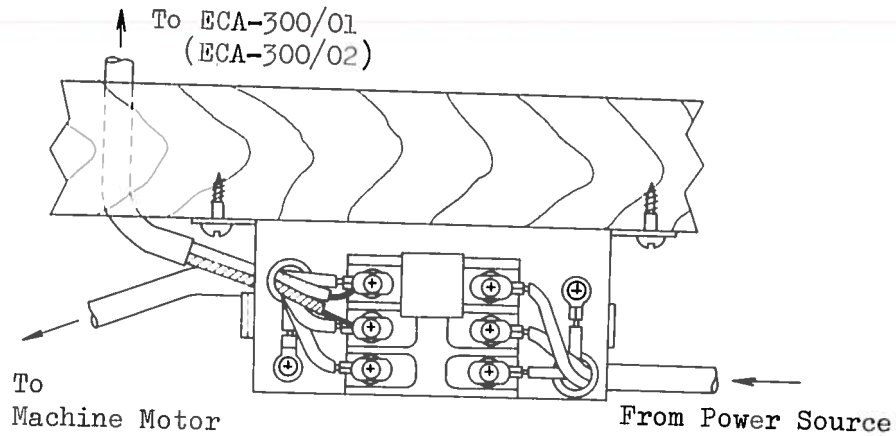


Fig.11

Mount portion in work table
for ECA-300/01(/02) and ACA-100/10

