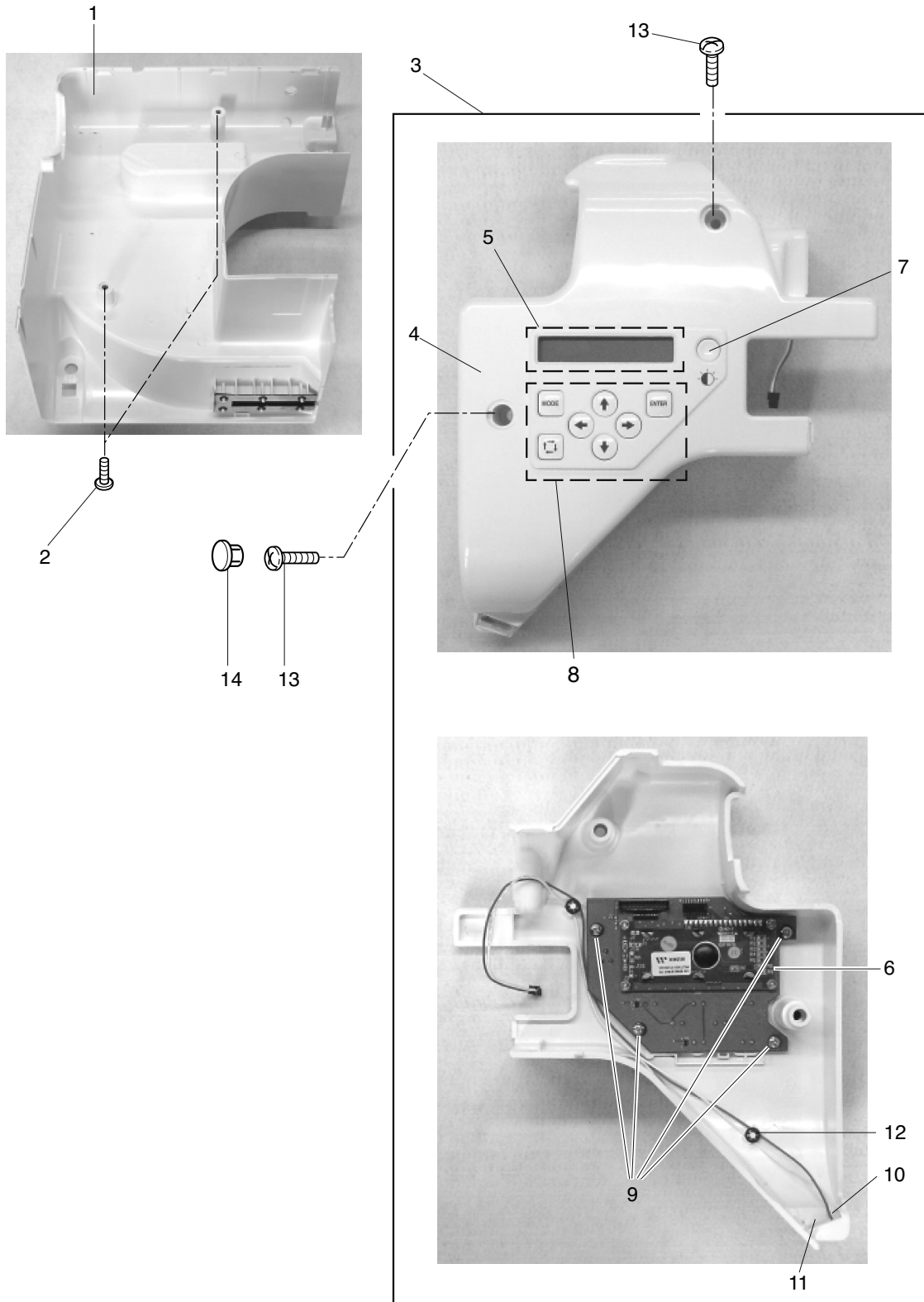


**SERVICE MANUAL
&
PARTS LIST

MODEL: MB-4Se (V2)**

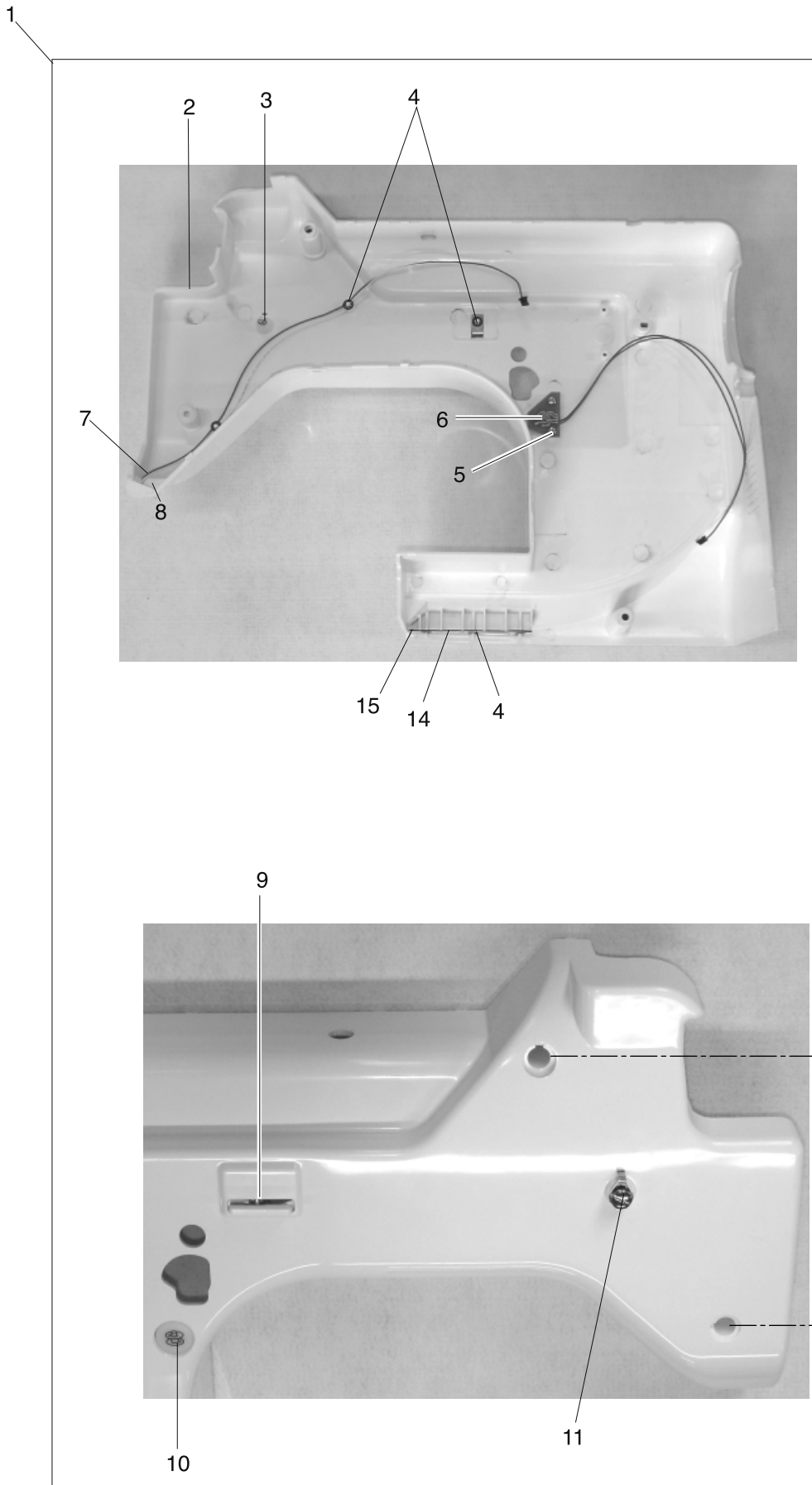
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770611A01	Right cover (unit)
2	000081005	Setscrew 4x8
3	770608208	Head set right cover (unit)
4	770007108	Head set right cover
5	770418003	LCD window
6	770526016	Printed circuit board K (unit)
7	770397016	Brightness adjusting dial
8	770328108	Button panel
9	000120203	Setscrew 3x8 (B)
10	770335005	LED lamp cover
11	859525161	Printed circuit board L2 (unit)
12	000014306	Snap ring CS-3
13	000104108	Setscrew 4x20
14	653006101	Cap

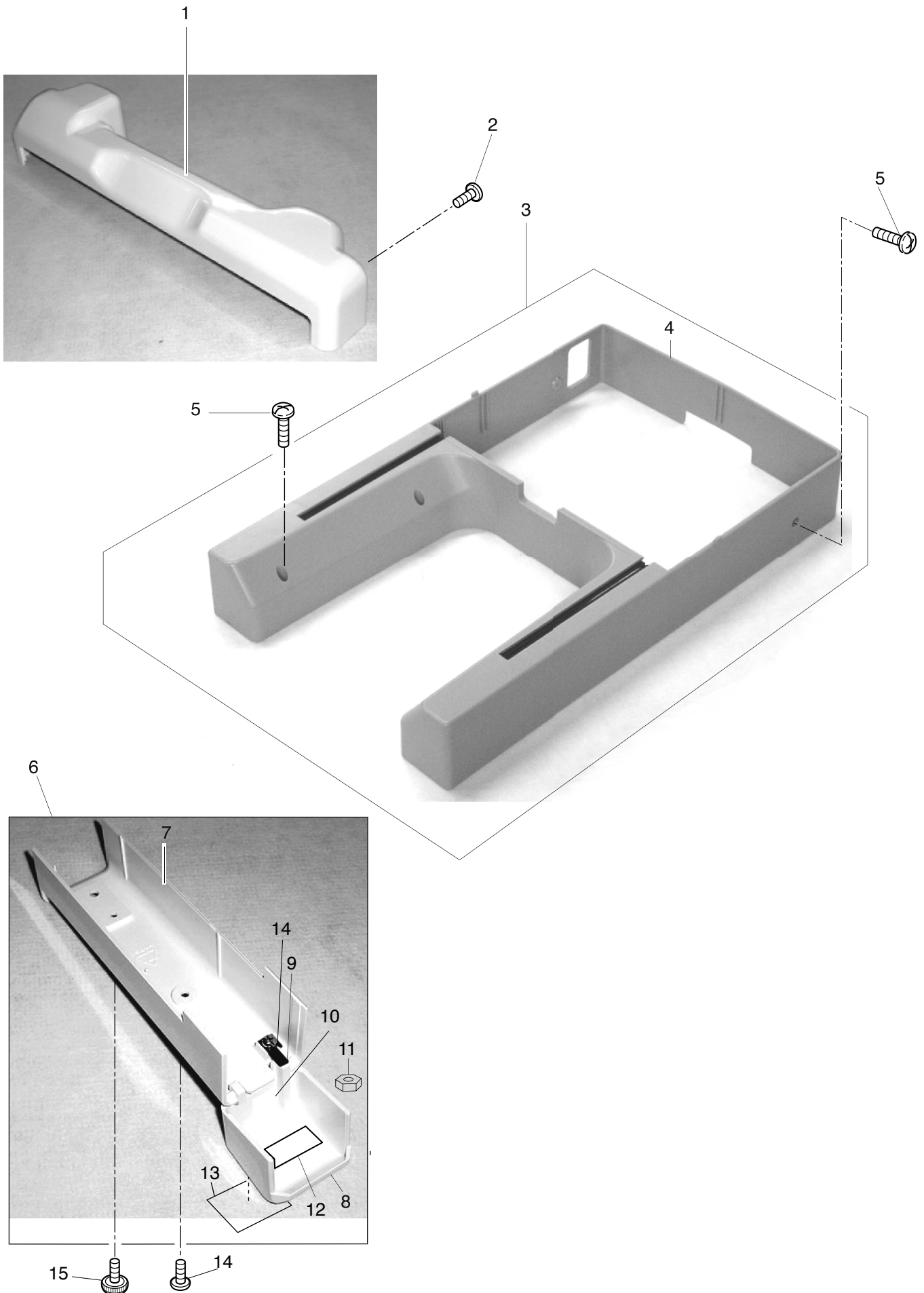
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770606206	Left cover (unit)
2	770005014	Left cover
3	000160102	Adjustable lock nut 4
4	000014306	Snap ring CS-3
5	000261001	Setscrew 3x8 (B)
6	770536008	Printed circuit board T (unit)
7	859525161	Printed circuit board L2 (unit)
8	770335005	LED lamp cover
9	832508006	Thread cutter (unit)
10	770343202	Start/Stop button
11	767639002	Thread guide (unit)
12	000101703	Setscrew 4x12
13	653006101	Cap
14	770332002	Carriage window sheet
15	770331001	Sheet set plate

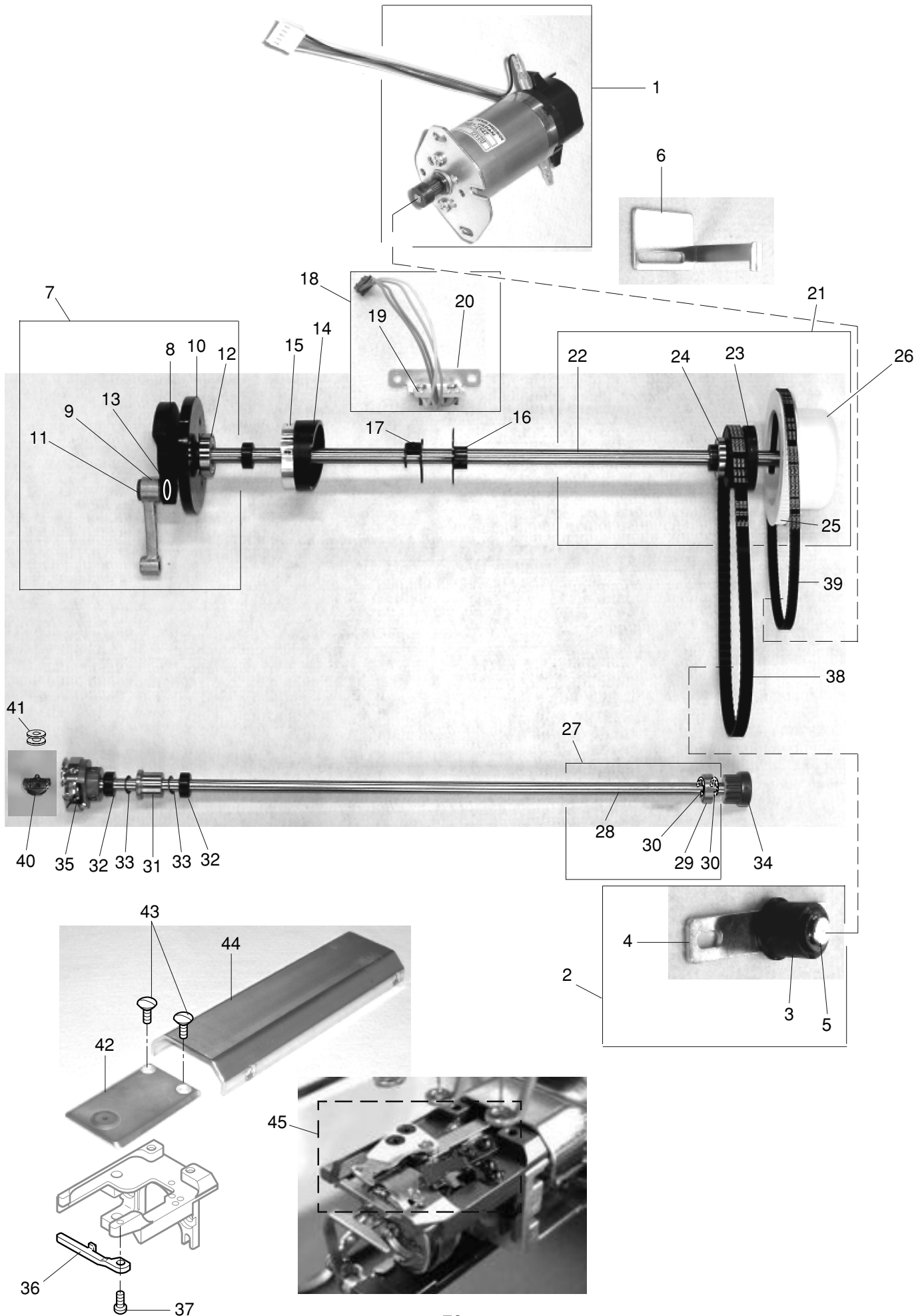
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770008006	X carriage cover
2	000101437	Setscrew 4x6
3	770612205	Base cover (unit)
4	770012209	Base cover
5	000081038	Setscrew 4x8
6	770605401	Bed cover (unit) (U.S.A.) (Canada)
	770605102	Bed cover (unit) (Australia) (UK) (Chile)
	770605205	Bed cover (unit) (Continental Europe)
7	770014005	Bed cover
8	770015006	Hook race cover
9	770016007	Bed cover spring
10	100045000	Caution sticker (U.S.A.) (Canada)
	831025001	Caution sticker (Continental Europe)
11	000061102	Nut 4-1-7
12	770425003	Oil hole seal
13	770434005	Sticker
14	000081005	Setscrew 4x8
15	770977005	Setscrew

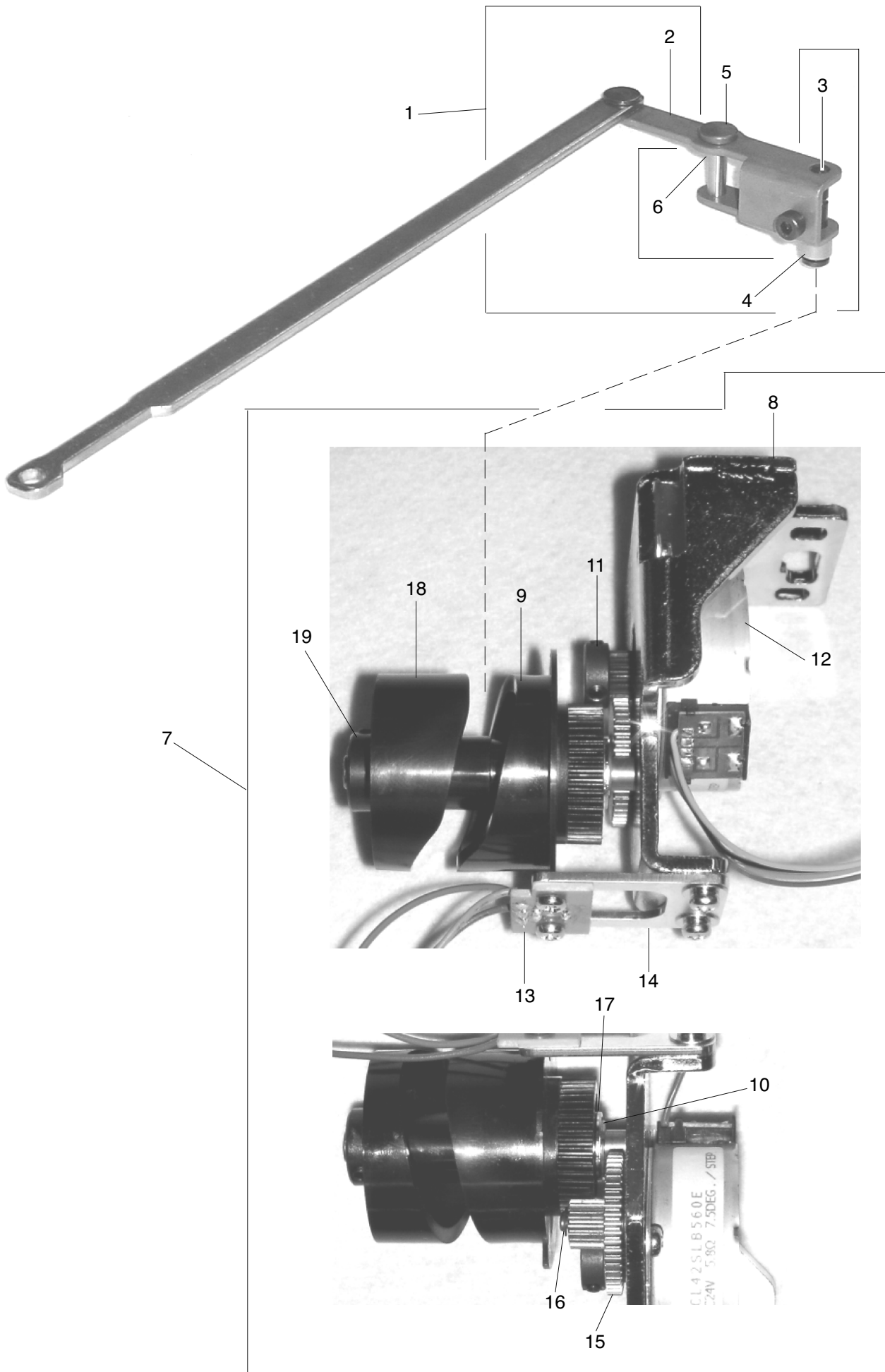
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770610007	DC motor (unit) (U.S.A.) (Canada) (Chile)
	770610100	DC motor (unit) (Australia) (UK) (Continental Europe)
2	770625005	Idler (unit)
3	625217100	Idler
4	770023007	Tension
5	000002806	Snap ring E-6
6	770025009	Pointer
7	770628008	Crank (unit)
8	770067003	Crank
9	770502005	Crank rod (unit)
10	770376008	Presser foot cam
11	770068004	Rod shaft (upper)
12	770029003	Bearing
13	000131403	Rulon washer
14	770093008	Thread take-up lever cam
15	770094009	Cam clamp
16	770149000	Point Slit C
17	653052009	Shielding plate (A)
18	770675000	Sensor (unit)
19	843505708	Printed circuit board P (unit)
20	770148009	Sensor set plate
21	770627007	Upper shaft (unit)
22	770019000	Upper shaft
23	770021005	Upper shaft pulley
24	770027001	Bearing
25	770422000	Belt wheel
26	770423001	Handwheel
27	770632005	Hook race shaft (unit)
28	770030007	Hook race shaft
29	767182005	Spherical bushing
30	000032403	Crescent ring
31	770368007	Hook race shaft front bushing
32	820672005	Lower shaft ring (unit)
33	000036902	Thrust washer FT80
34	770022006	Hook race pulley
35	770589006	Hook race (unit)
36	770033000	Hook holder
37	770498007	Setscrew
38	770028002	Timing belt
39	846188102	Timing belt
40	770590000	Bobbin case (unit)
41	770591001	Bobbin
42	770034012	Needle plate (flat seam)
43	770370002	Needle plate setscrew
44	770035002	Bed face plate
45	770501004	Thread cutter (unit)

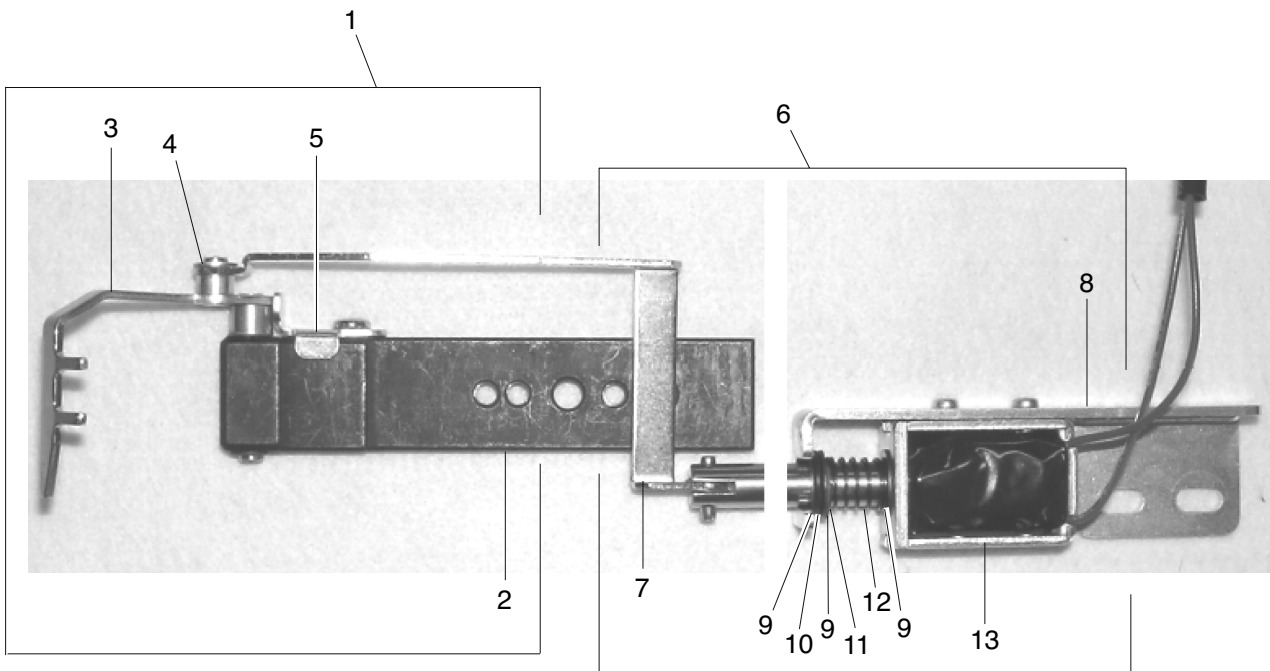
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770635008	Lever (unit)
2	770056009	Lever
3	770053006	Roller shaft
4	770054007	Roller
5	770055008	Support pin
6	000036603	Thrust washer
7	770634007	Thread cutter drive (unit)
8	770048008	Thread cutter driving base
9	770374006	Thread cutter cam (right)
10	000001609	Snap ring E-5
11	770137005	Driving gear
12	770539207	Pulse motor
13	843503119	Printed circuit board E2 (unit)
14	770051004	Sensor set plate
15	770057000	Y gear
16	000002301	Snap ring E-2
17	770058001	Cam base
18	770375007	Thread cutter cam (left)
19	770049009	Cam holder collar

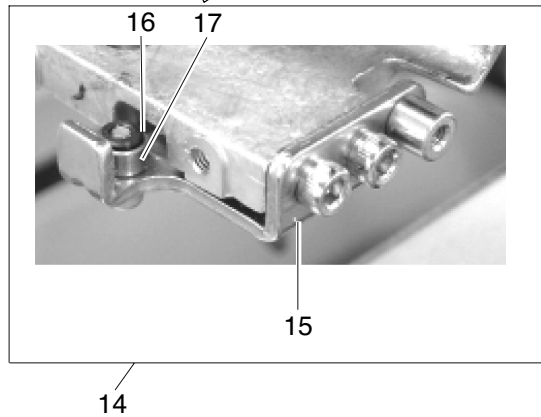
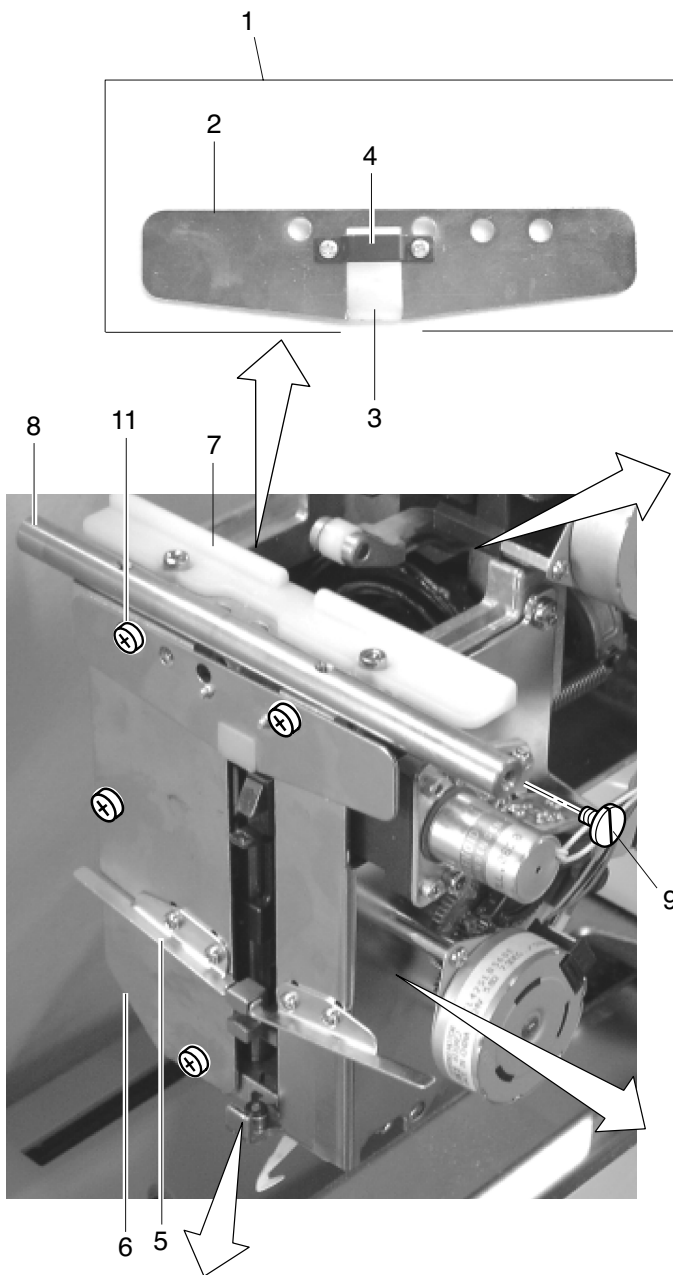
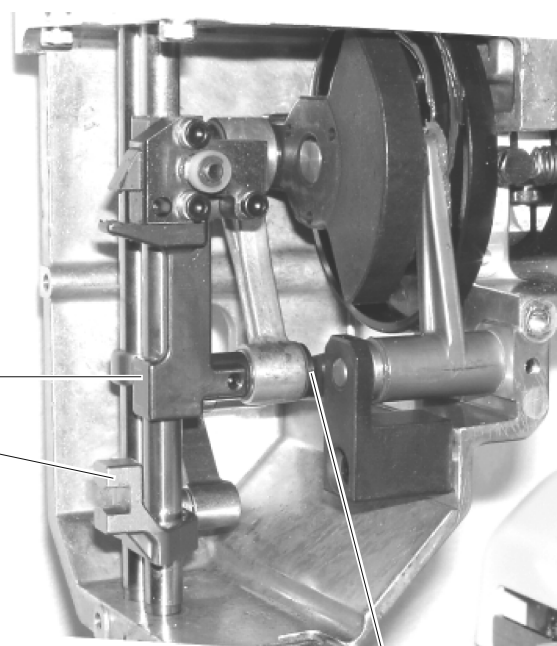
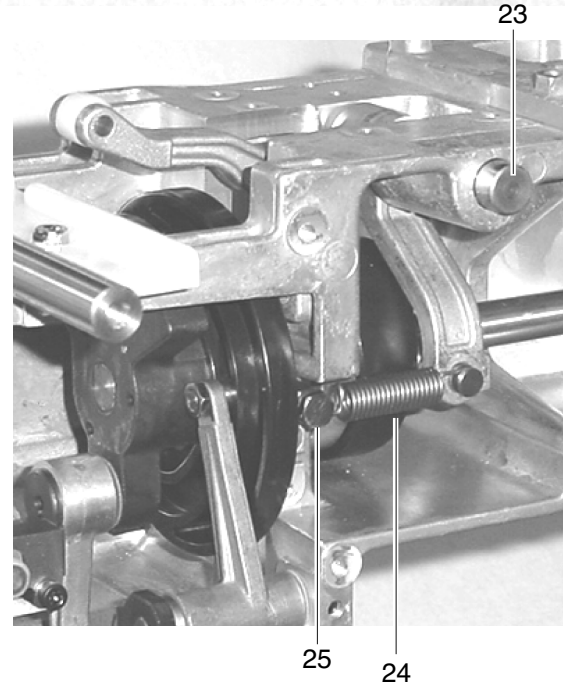
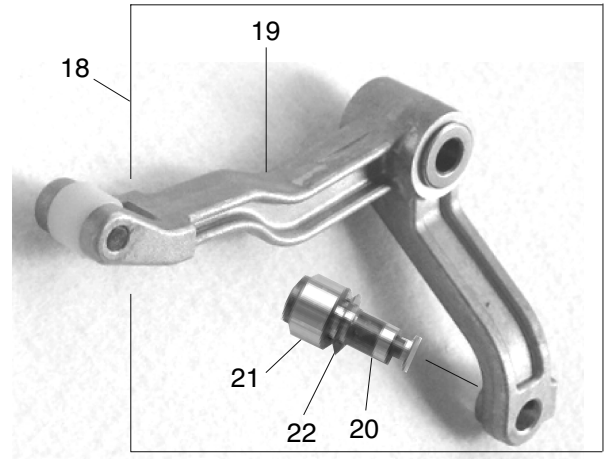
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770636009	Keeper assembly (unit)
2	770062008	Keeper base
3	770061007	Keeper
4	000002105	Snap ring E-3
5	770063009	Stopper
6	770637000	Keeper solenoid (unit)
7	770060006	Keeper rod
8	770059002	Solenoid base
9	000036108	Thrust washer FT70
10	770450007	Ring O
11	000001609	Snap ring E-5
12	770065001	Solenoid spring
13	770066002	Keeper solenoid (unit)

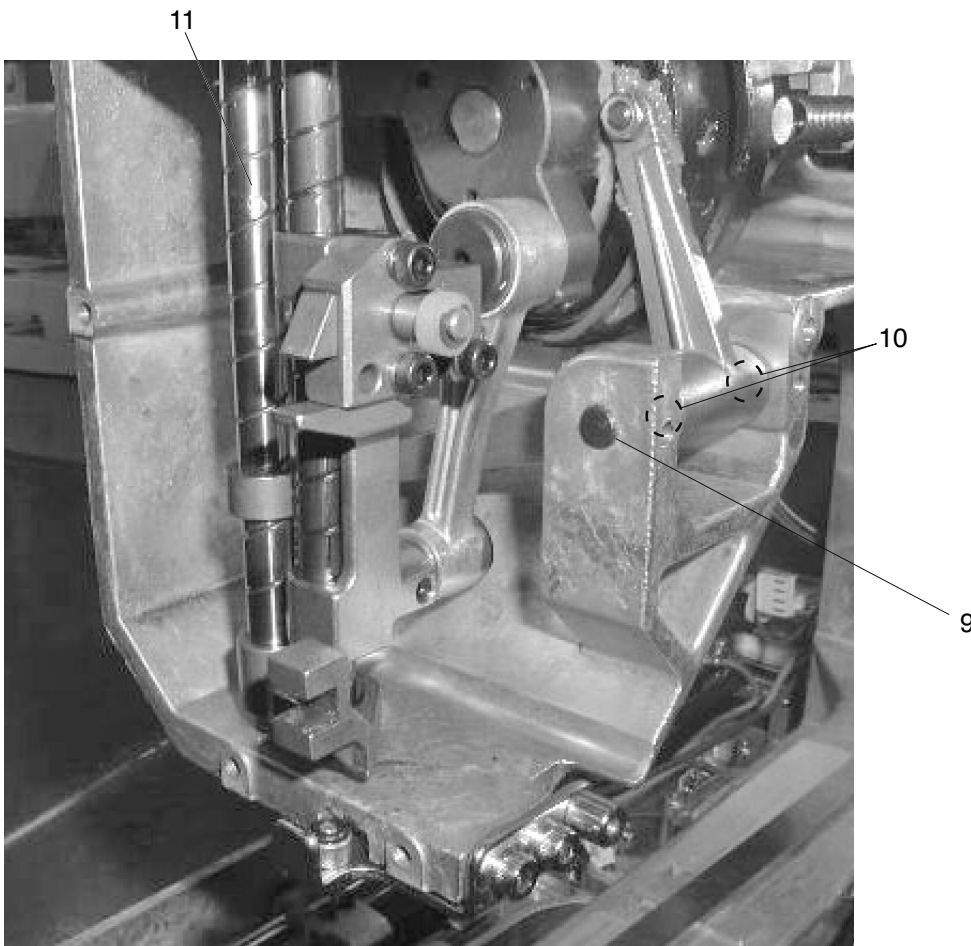
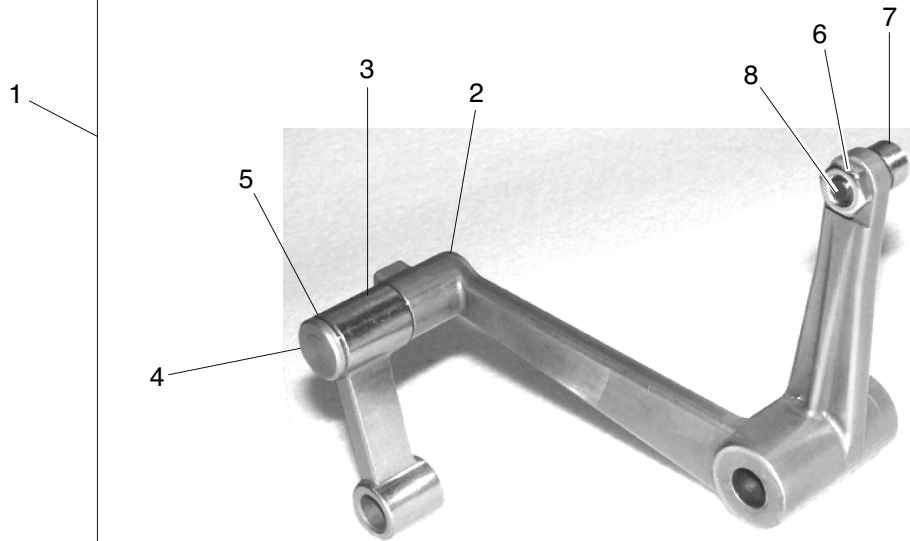
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770642008	Upper face plate (unit)
2	770113005	Upper face plate
3	770116008	Cushion B
4	770117009	Supporting metal
5	770132000	Left guide plate
6	770107006	Left face plate
7	770081003	Thread take-up lever guide
8	770082004	Rail shaft
9	770115007	Stopper screw
10	770073002	Lower rod shaft
11	000081005	Setscrew 4x8
12	770638001	Needle bar rest (unit)
13	770639002	Presser foot block (unit)
14	770641007	Needle drop position adjustment assembly (unit)
15	770095000	Needle drop adjusting plate (unit)
16	770096001	Adjusting shaft
17	770097002	Adjusting roller
18	770629009	Thread take-up lever (unit)
19	770504007	Thread take-up lever
20	770089001	Cam roller shaft
21	770090005	Cam roller
22	000036005	Thrust washer FT60
23	770086008	Thread take-up lever supporting shaft
24	770091006	Thread take-up lever spring
25	770092007	Thread take-up lever spring holding shaft

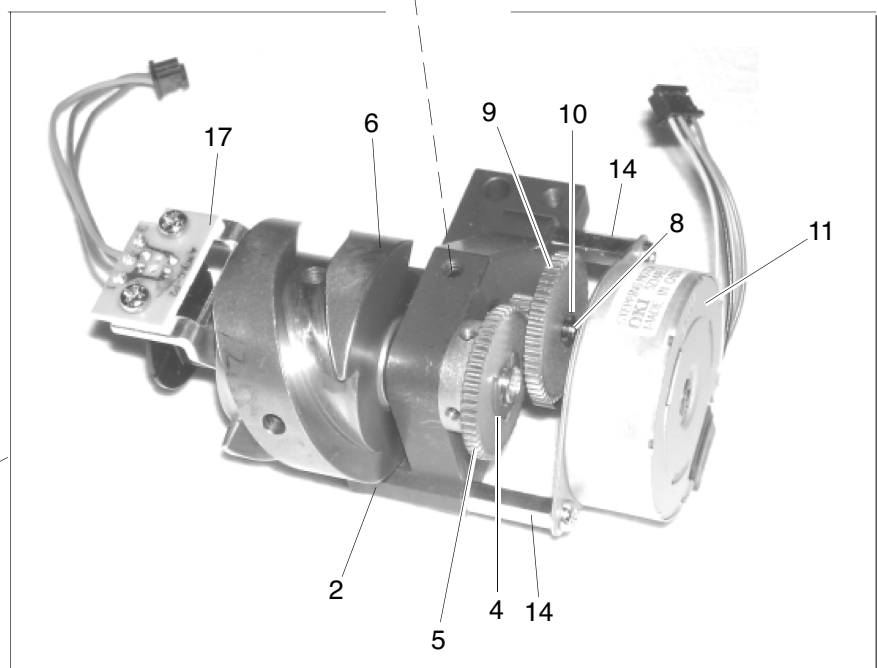
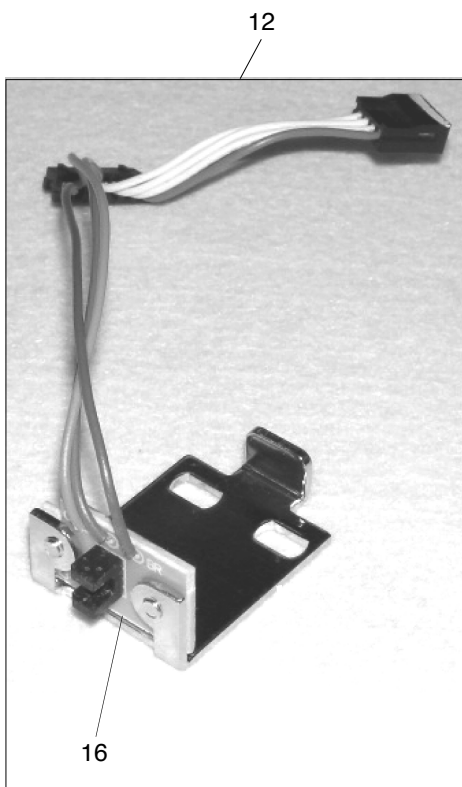
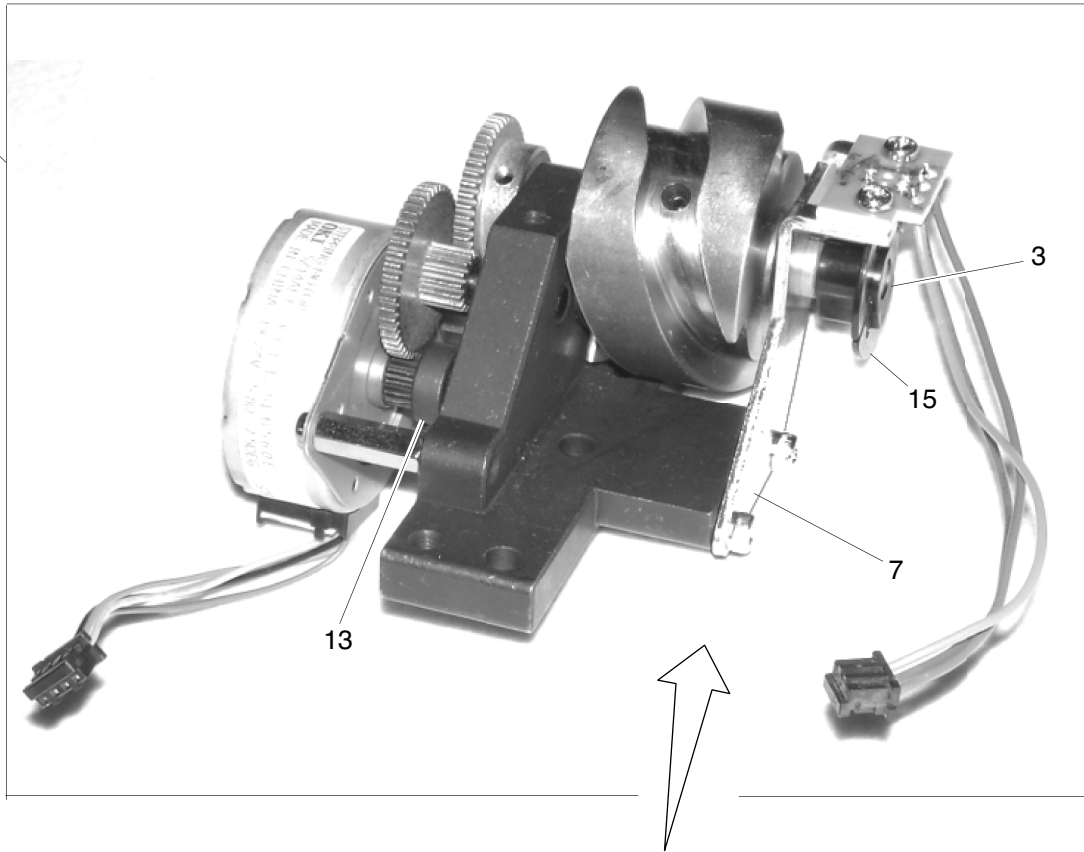
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770630003	Presser foot lever (unit)
2	770120005	Presser foot lever
3	770125000	Presser foot rod
4	770126001	Rod shaft
5	000036005	Thrust washer FT60
6	000061205	Nut 4-3-7
7	770121006	Cam roller
8	770122007	Roller pin
9	770340003	Supporting shaft
10	000131506	Rulon washer
11	770640006	Main shaft (unit)

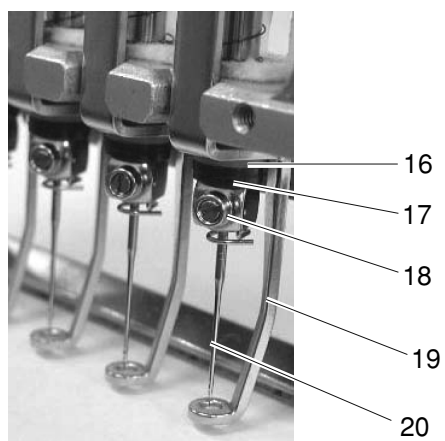
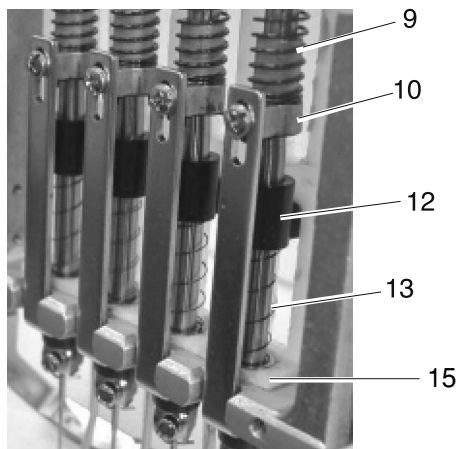
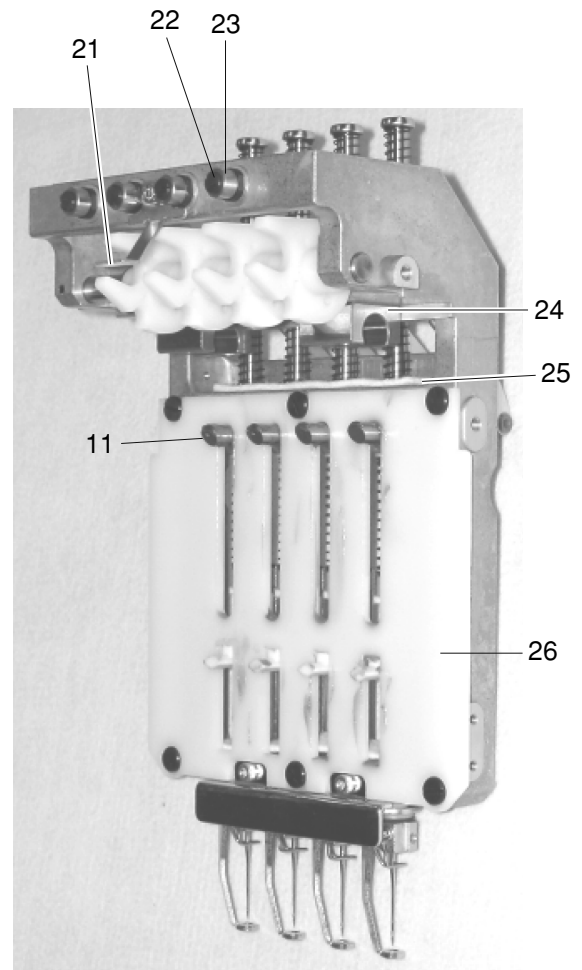
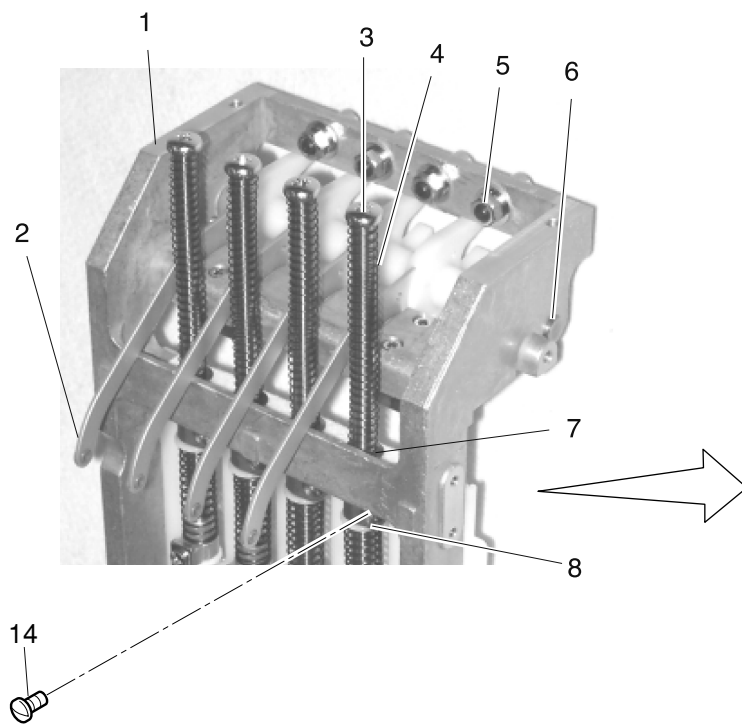
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770645001	Horizontal motor drive shaft (unit)
2	770133001	Horizontal motor base
3	770134002	Horizontal move drive shaft
4	000001609	Snap ring E-5
5	770135003	Horizontal drive gear B
6	770139007	Horizontal drive cam
7	770140001	Shaft guide plate
8	770146007	Center shaft
9	770136004	Idler gear
10	000002301	Snap ring E-2
11	770539207	Pulse motor
12	770676001	Needle position sensor
13	770137005	Horizontal motor gear
14	770138006	Motor stud
15	770142003	Needle position sensor slit
16	770564005	Horizontal motor harness (unit)
17	843502303	Printed circuit board E1 (unit)
18	770147008	Driving motor cover

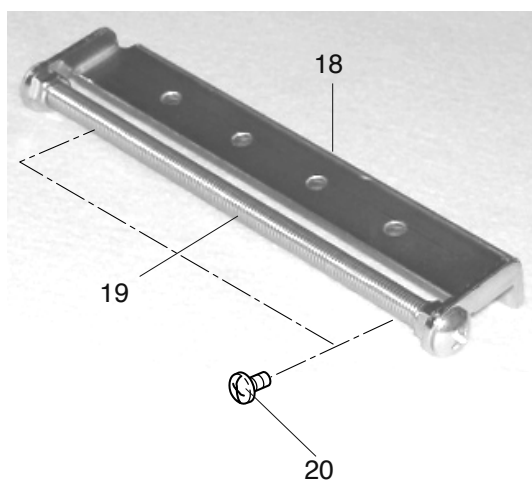
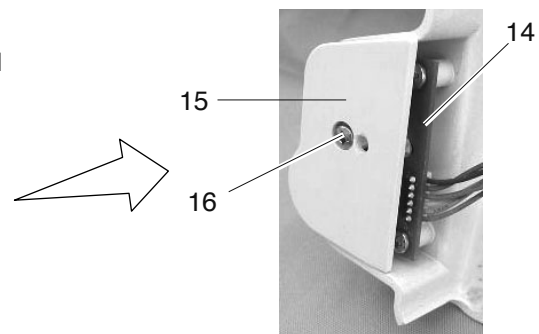
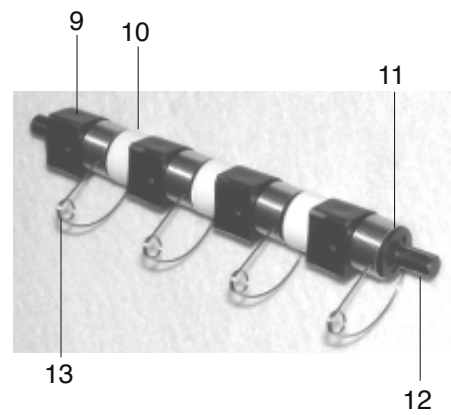
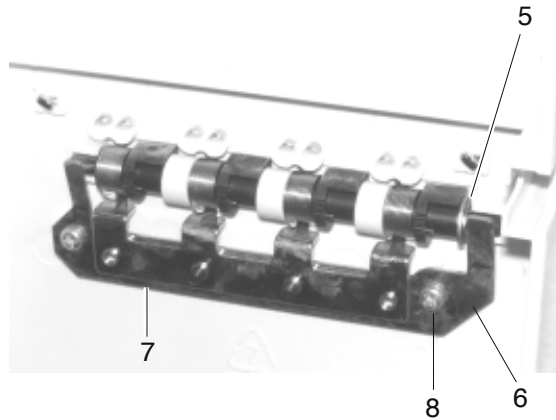
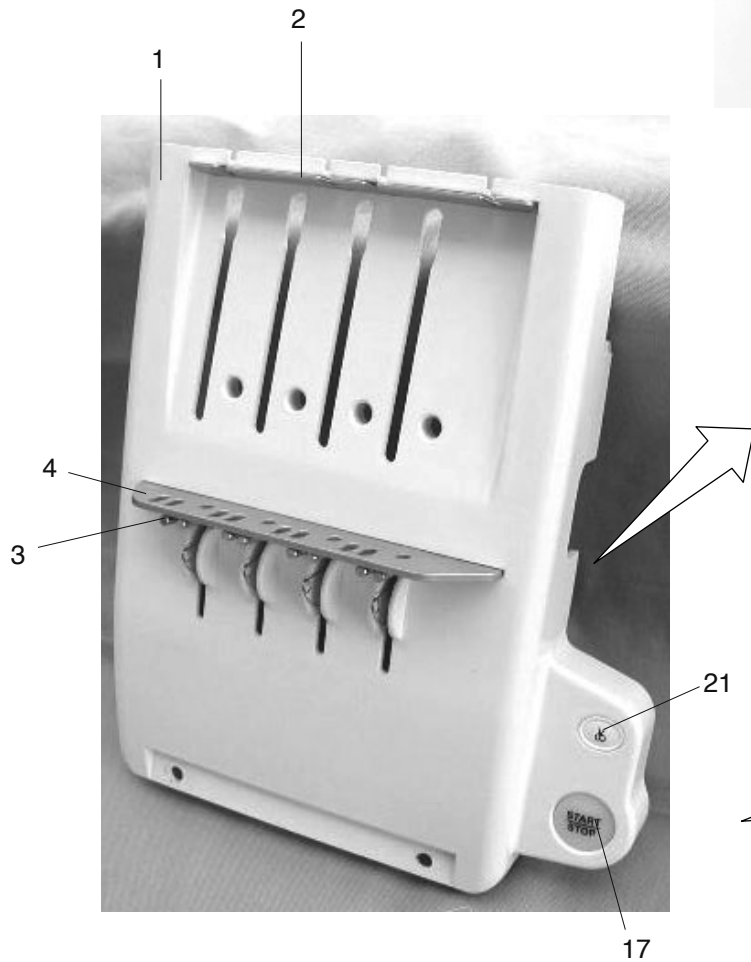
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770152006	Dynamic head case
2	770659008	Thread take-up lever (unit)
3	770163000	Needle bar
4	770162009	Needle bar supporting upper spring
5	770153007	Head drive pin
6	770157001	Thread take-up lever shaft
7	000071404	Washer 6
8	770168005	Spring cushion
9	770169006	Needle bar supporting lower spring
10	770179009	Presser foot release button
11	770166003	Needle bar supporter
12	770170000	Presser bar supporter
13	770181004	Presser bar supporter spring
14	770167004	Setscrew
15	770295002	Oil felt (lower)
16	770172002	Presser foot bushing
17	770173003	Needle clamp cushion
18	770509002	Needle clamp (unit)
19	770171001	Presser foot
20	770419004	Needle
21	770156000	Home position dog
22	770155009	Setscrew
23	770154008	Head drive roller
24	770161008	Head drive guide
25	770164001	Oil felt
26	770176006	Stopper

PARTS LIST



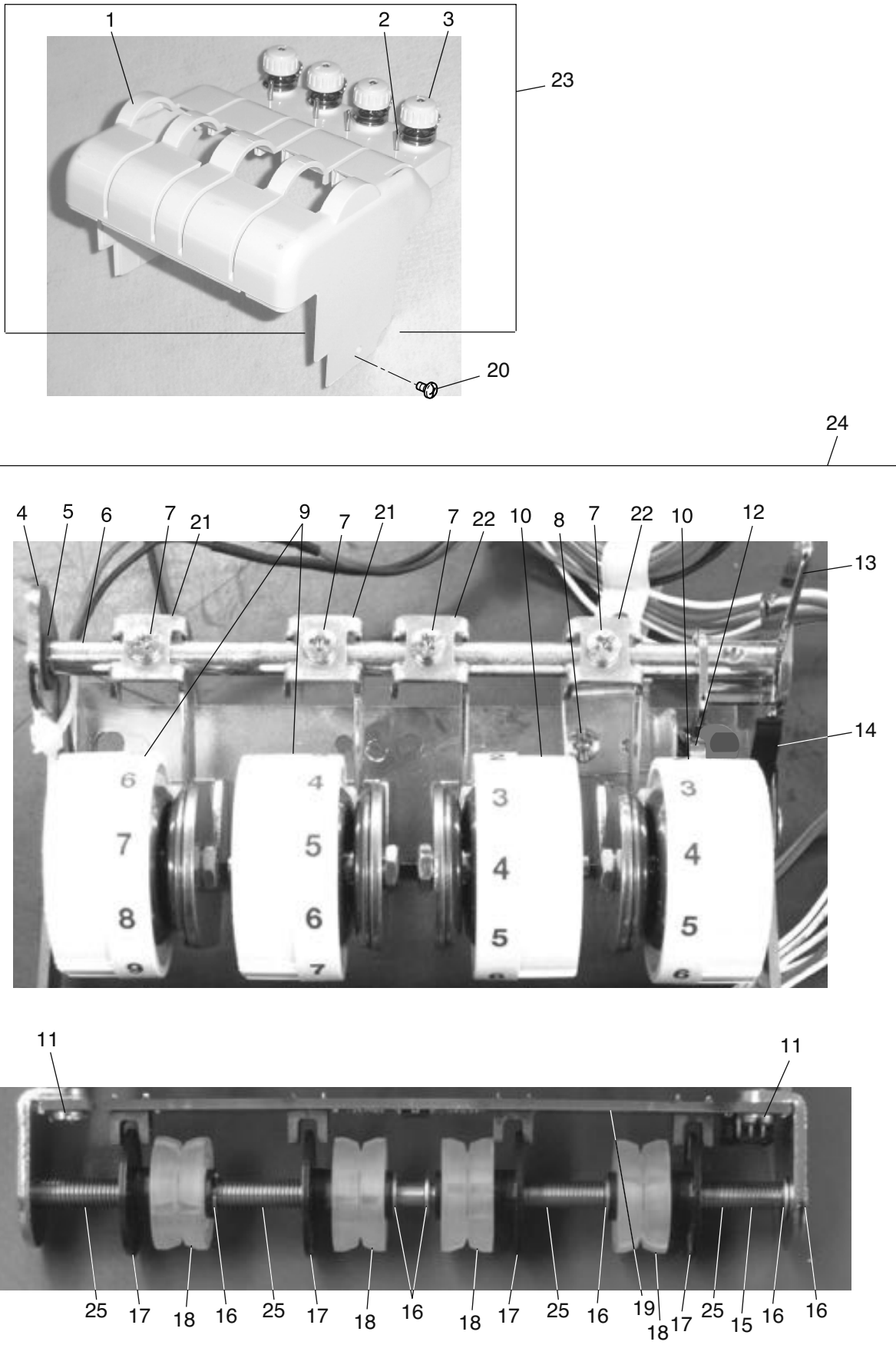
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770185A01	Thread catcher panel
2	770424002	Thread catcher upper guide plate
3	770187000	Needle thread support spring
4	770186009	Thread catcher guide plate
5	000002105	Snap ring E-3
6	770192008	Thread catcher set plate
7	770193009	Adjuster
8	000161103	Setscrew 3x6 (B)
9	770189002	Block
10	770190006	Block spacer
11	770447001	Snap ring SE-4
12	770191007	Thread catcher supporting shaft
13	770188001	Check spring
14	770535007	Printed circuit board S (unit)
15	770184007	Rear lid
16	000261001	Setscrew 3x8 (P)
17	770343109	Start/Stop button
18	770195001	Lower thread guide plate
19	770194000	Thread guide spring
20	000165901	Setscrew 4x12
21	770404109	Button 1

PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770506009	Jump solenoid (unit)
2	770507000	Right face plate (unit)
3	770565006	Motor harness (unit)
4	770212005	Printed circuit board set plate
5	771040003	Spacer
6	770210003	Thread catcher hook
7	770539207	Pulse motor (unit)
8	770204004	Horizontal motor gear A
9	770057000	Horizontal gear
10	000002301	Snap ring E-2
11	770209009	Thread catcher hook spring
12	770207007	Thread catcher connecting link
13	770206006	Thread catcher rod
14	770208008	Rod shaft
15	000002507	Snap ring E-4
16	770211004	Thread catcher guide
17	770213109	Thread catcher upper holder
18	770214007	Thread catcher lower holder
19	770216102	Thread guide brush
20	770631004	Needle bar rest release device (unit)
21	770643009	Thread catcher (unit)
22	770953005	LED cover (right)
23	770954006	LED cover (left)
24	770595005	LED (unit)
25	000101138	Setscrew 3x4

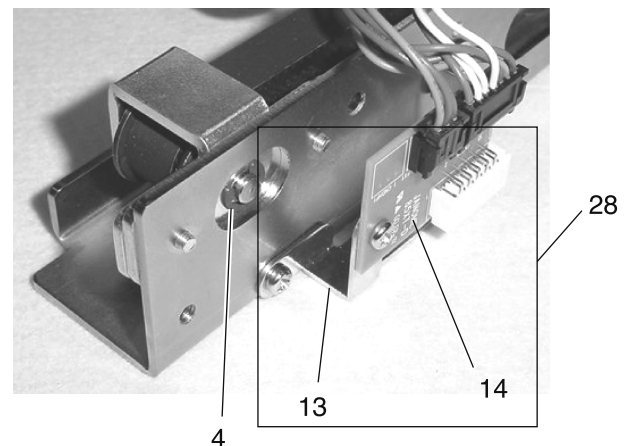
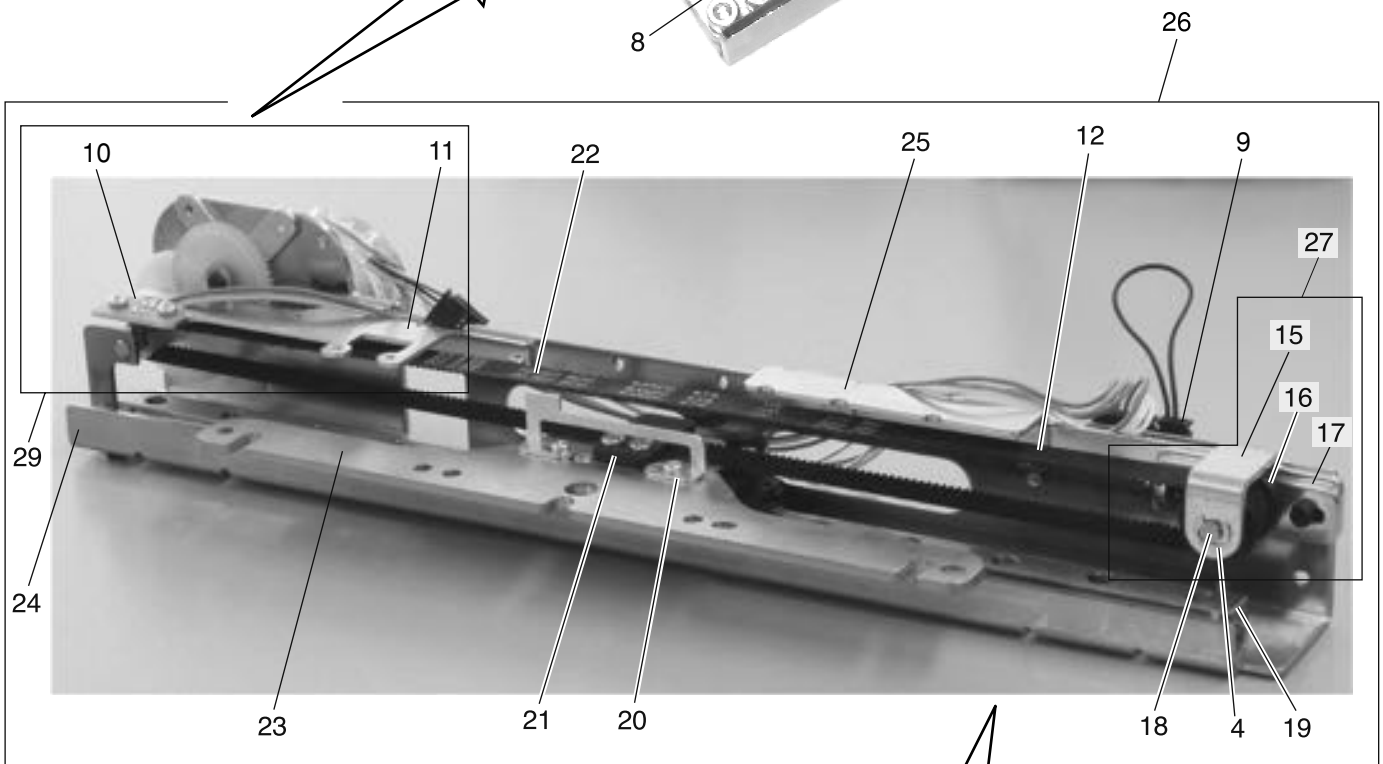
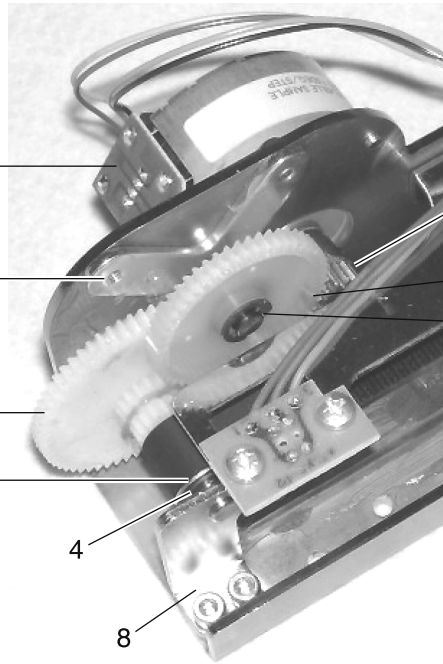
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770253008	Thread tension panel
2	770252007	Guide pin
3	770515001	Pre-tension (unit)
4	770236005	Thread tension bracket
5	000001609	Snap ring E-5
6	770250005	Release shaft
7	000066705	Setscrew 3x8
8	000103808	Setscrew 3x5
9	770512008	Thread tension A (unit)
10	770513009	Thread tension B (unit)
11	000101116	Setscrew 3x4
12	846513801	Micro switch (unit)
13	770245007	Thread tension release lever
14	770249001	Stopper spring
15	770978006	Sensor roller shaft
16	000002105	Snap ring E-3
17	771020007	Sensor slit
18	770242004	Sensor roller
19	770592002	Printed circuit board G (unit)
20	000166005	Setscrew 4x8
21	770243005	Thread release arm A
22	770244006	Thread release arm B
23	770613000	Thread tension panel (unit)
24	770683001	Thread tension (unit)
25	770979007	Sensor spring

PARTS LIST



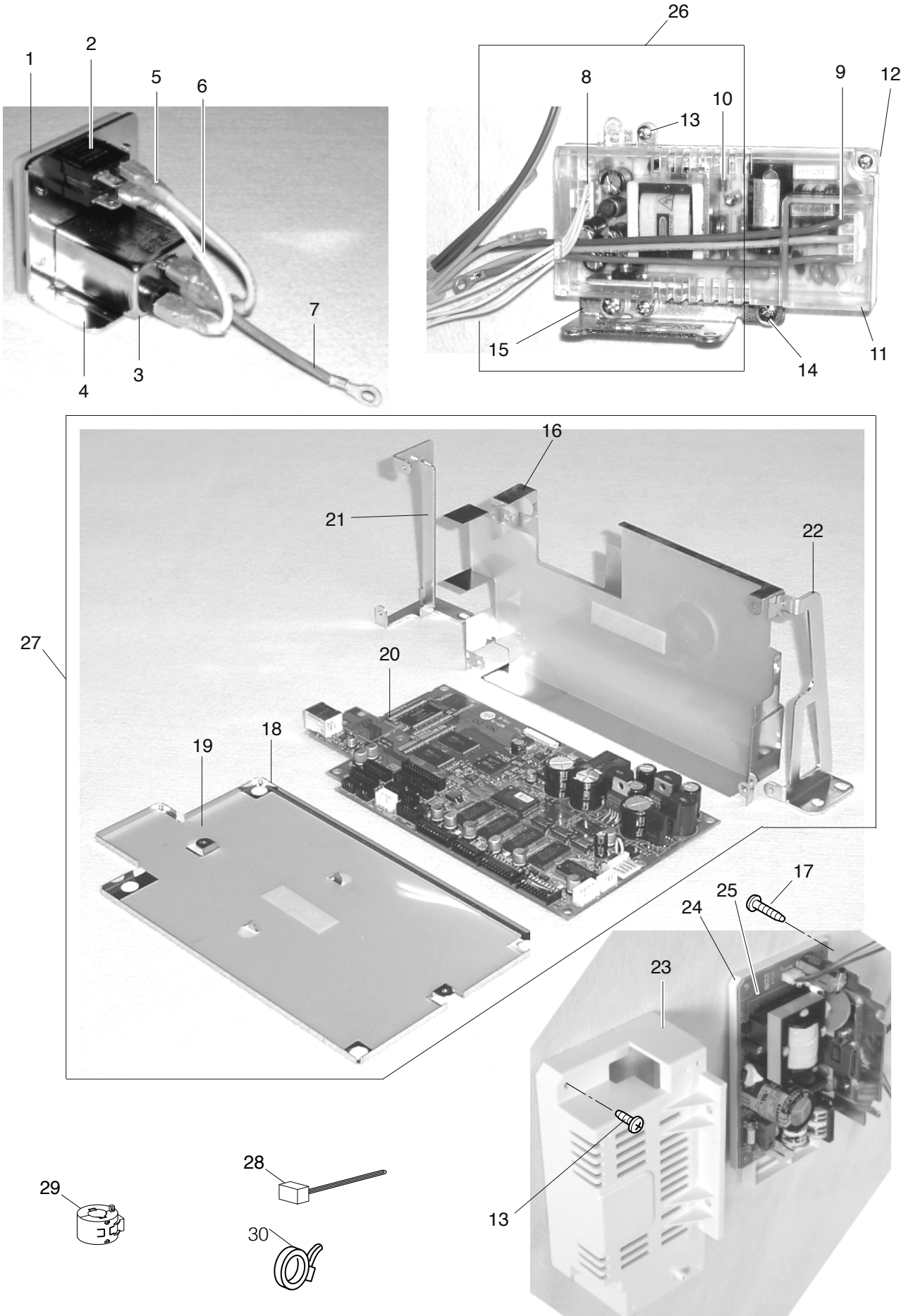
PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770532004	Stepping motor
2	770379001	Motor gear
3	770380005	X gear
4	000002507	Snap ring E-4
5	850110106	X gear set plate
6	770262000	X drive pulley
7	000070311	Washer 5
8	770271002	X drive pulley shaft supporter
9	770585002	Short connector (unit)
10	770566007	Motor harness (unit)
11	770276007	X sensor set plate
12	770280004	X timing belt
13	770270001	Printed circuit board bracket 1
14	770533005	Printed circuit board D (unit)
15	770277008	X tension pulley plate
16	770528007	Tension pulley (unit)
17	770438009	Pulley spacer
18	770278009	X tension pulley shaft
19	770269007	X rail guide
20	770268006	Connecting block
21	770264002	X belt holder
22	770265003	X carriage sensor plate
23	770267005	Connecting plate
24	770518004	X carriage base (unit)
25	770442006	Bracket
26	770646002	X carriage base assembly (unit)
27	770649005	X tension pulley (unit)
28	770648004	Printed circuit board assembly 1 (unit)
29	770647003	X sensor set plate (unit)

PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770300001	Printed circuit board bracket 2
2	770384009	Cable guide 2
3	843503706	Printed circuit board E2 (unit)
4	770403005	Belt guide plate
5	770542007	Flexible cable (unit)
6	770301002	Flexible set plate
7	770183006	Cable guide 1
8	770291008	Y carriage shaft
9	770288002	Y belt holder
10	770302003	Cording foot
11	770274005	X carriage connecting block L
12	770290007	Y timing belt
13	770256001	Y tension pulley right plate
14	000002507	Snap ring E-4
15	770296003	Y tension pulley shaft
16	770528007	Tension pulley (unit)
17	770383008	Belt roller
18	770468008	Belt roller plate
19	770532004	Stepping motor
20	000101404	Setscrew 4x6
21	770286000	Y pulse motor bracket
22	770379001	Motor gear
23	770380005	X gear
24	850110106	X gear set plate
25	770284008	Y drive pulley
26	770281005	Y carriage gear shaft
27	770529008	Spherical bushing (unit)
28	770287001	Bushing supporter
29	770530002	Timing belt pulley (unit)
30	770292009	Y carriage sensor plate
31	770303004	Y rail stopper
32	770272003	X carriage connecting block R
33	770282006	Collar
34	770567019	Motor harness Y (unit)
35	770298005	Sensor set plate
36	770257002	Y tension pulley left plate
37	770652001	Y tension pulley right plate (unit)
38	770651011	X carriage connecting block L (unit)
39	770650009	X carriage connecting block R (unit)
40	770653002	Y tension pulley left plate (unit)
41	770654003	Y carriage gear shaft (unit)
42	770682000	Belt roller (unit)

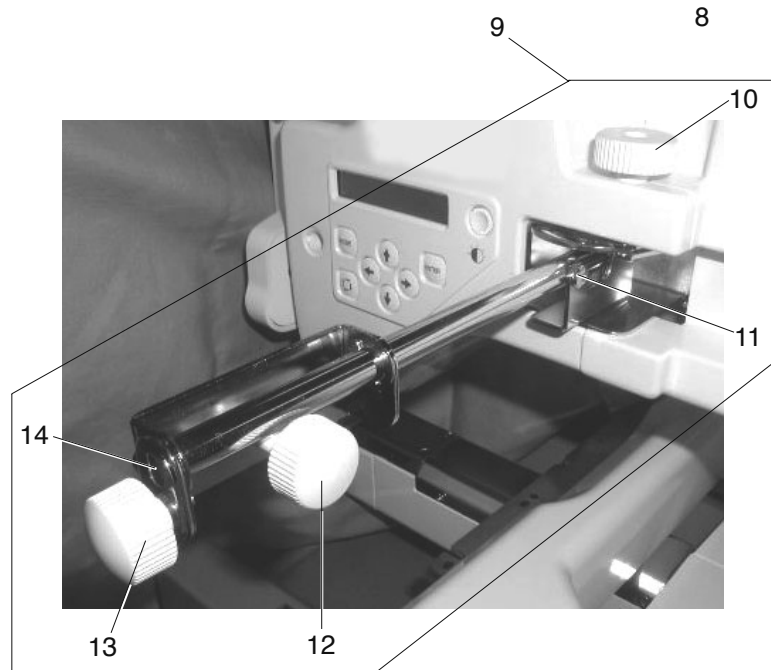
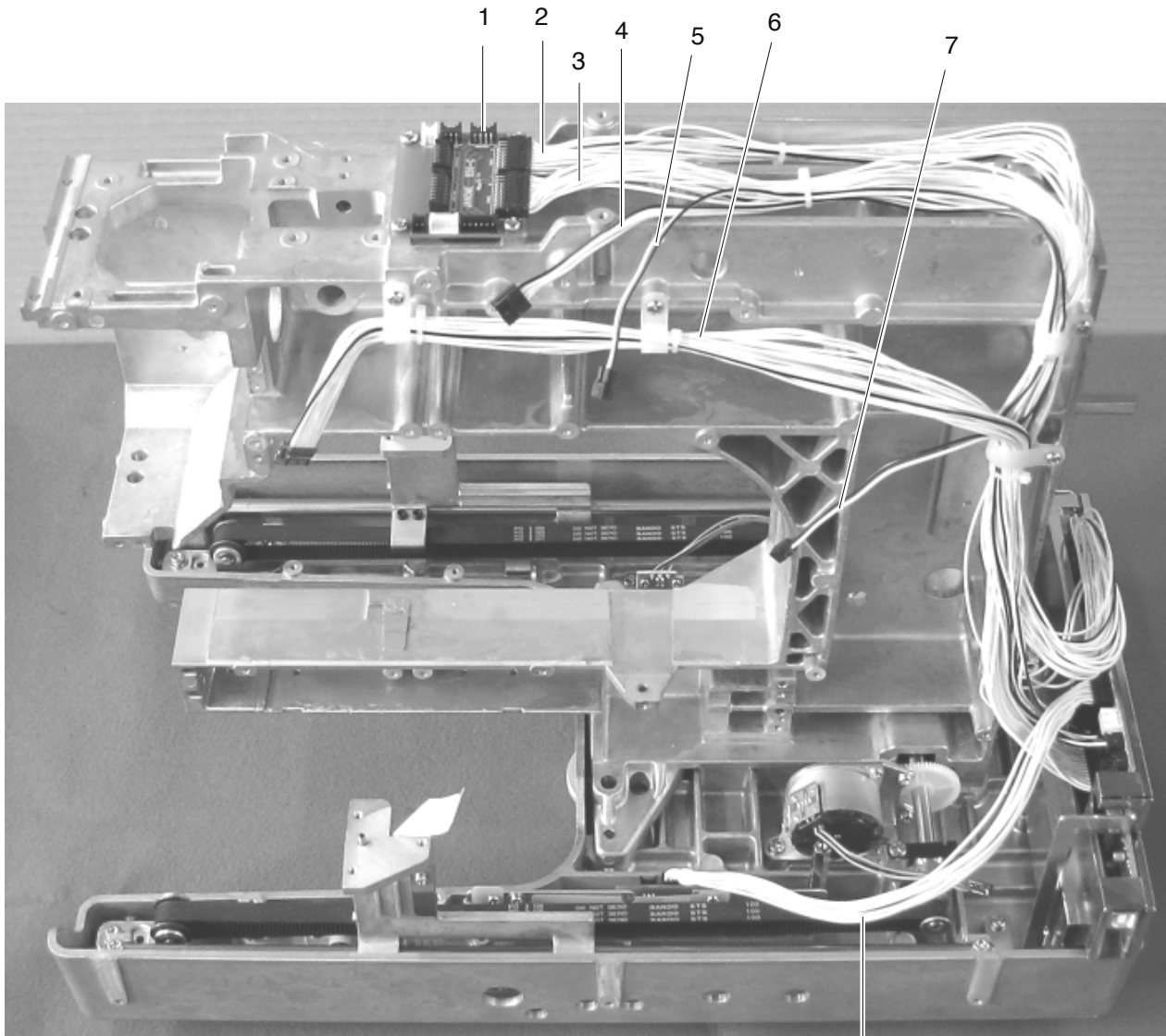
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	771045101	Inlet lid
2	863518005	Main switch
3	770562014	Noise filter inlet
4	771044007	Inlet set plate
5	770544009	Inlet cord (unit) (blue)
6	770544102	Inlet cord (unit) (brown)
7	770555003	Grounding cord (unit)
8	770549004	Secondary power supply harness (unit)
9	770545000	Primary power supply harness (unit)
10	770588005	Switching power supply 30W (unit)
11	860062011	Switching power supply case
12	860063104	Switching power supply plate
13	000261001	Setscrew 3x8 (B)
14	000081005	Setscrew 4x8
15	770388003	Set plate A (30W)
16	770391009	Shielding case B (2)
17	000161206	Setscrew 3x10 (B)
18	770390008	Shielding case B (1)
19	770392011	Insulation sheet B (1)
20	770689708	Printed circuit board B (unit)
21	770337007	Printed circuit board left set plate
22	770336006	Printed circuit board right set plate
23	770386012	Auxiliary power supply case
24	770387013	Case lid
25	860519029	Switching power supply (unit)
26	770607300	Auxiliary power supply (unit)
27	770604709	Shielding case B (unit) (U.S.A.) (Canada) (Chile)
	770604754	Shielding case B (unit) (Australia) (UK) (Continental Europe)
28	770585002	Short connector (unit)
29	000595203	Ferrite core (Australia) (UK) (Continental Europe) (Chile)
30	000053307	Cord tie band (Australia) (UK) (Continental Europe) (Chile)

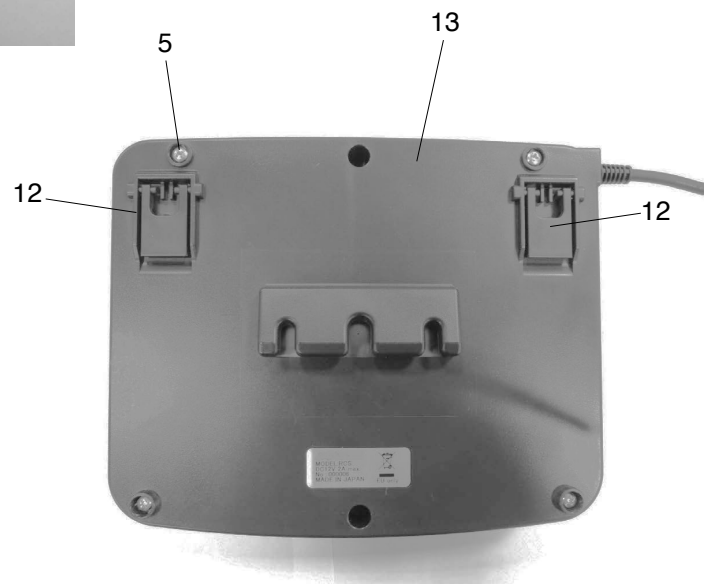
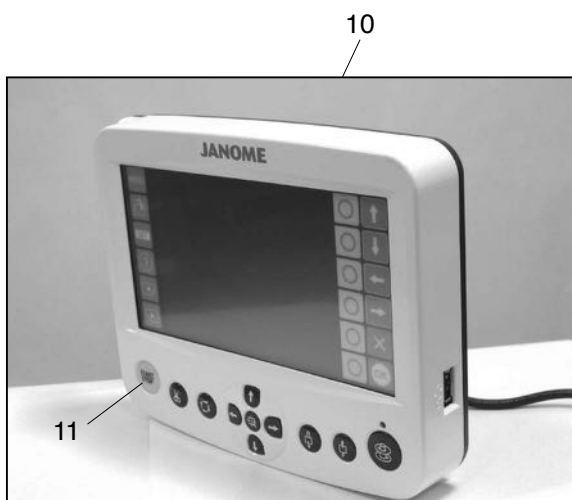
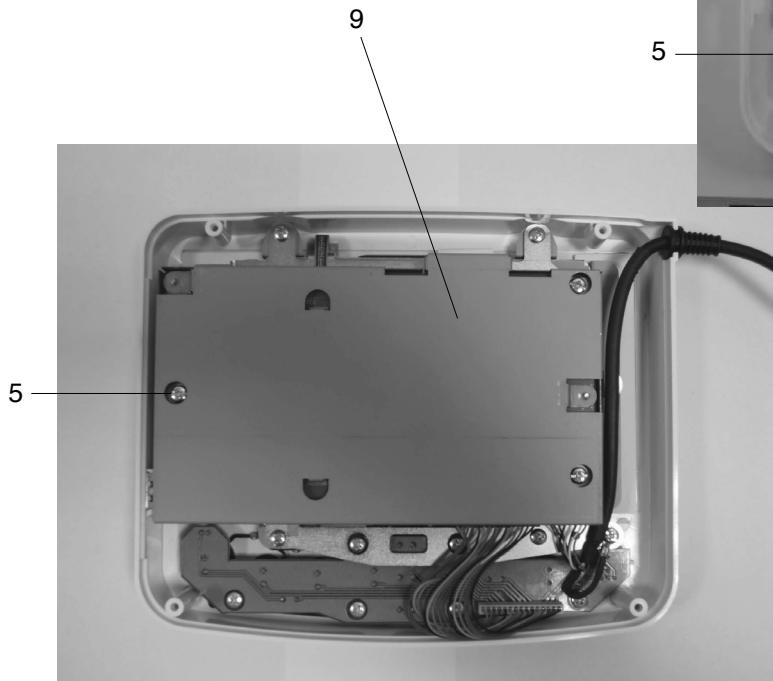
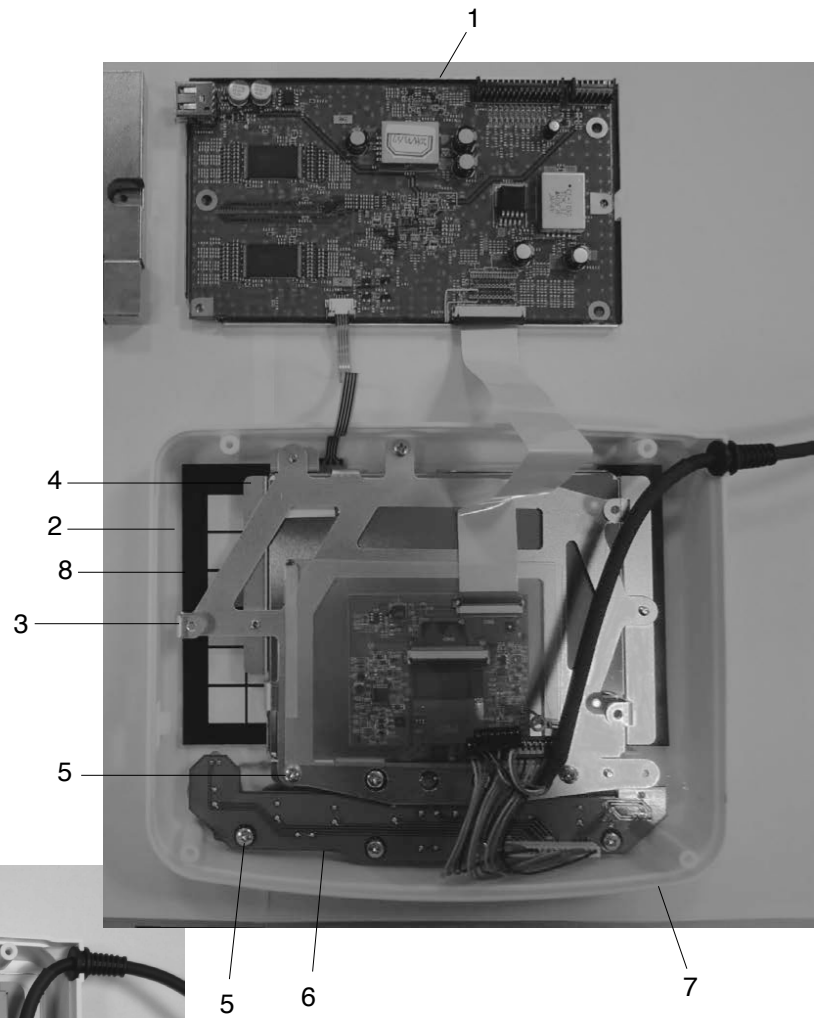
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770531003	Printed circuit board C (unit)
2	860530107	Harness (unit) (18P)
3	770540005	Harness (unit) (20P)
4	770552000	Harness (unit) (6P)
5	770546001	Harness (unit) (3P)
6	770554002	Harness (unit) (24P)
7	770553001	Harness (unit) (2P)
8	860565008	Harness (unit) (12P)
9	770621001	RCS arm (unit)
10	770308009	RCS knob
11	000103509	Setscrew 4x10
12	770413008	RCS knob (3)
13	770412007	RCS knob (2)
14	000115227	Setscrew TP 4x6

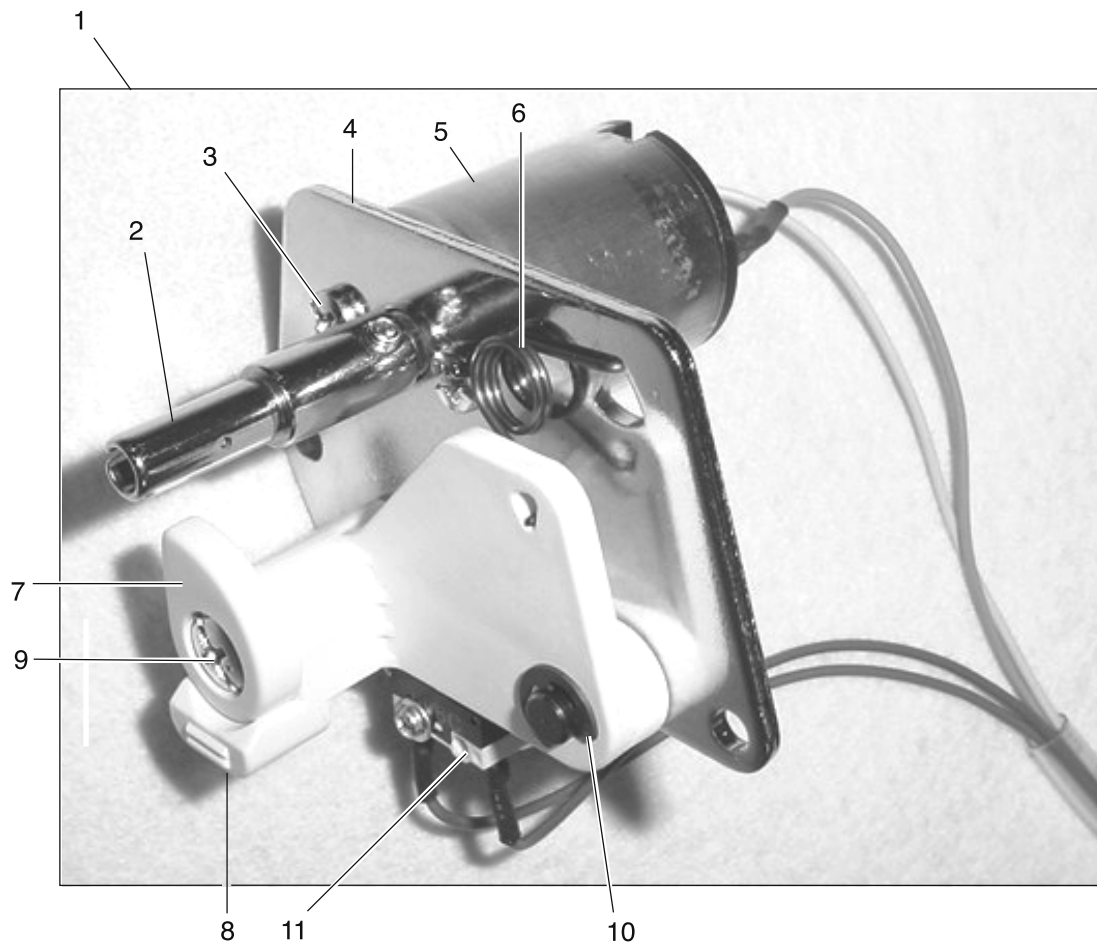
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770690609	Printed circuit board A (unit)
2	770664006	LCD (unit)
3	770970008	LCD set plate 1
4	770971009	LCD set plate 2
5	000161206	Setscrew 3x10 (B)
6	770520009	Printed circuit board F (unit)
7	770965A01	RCS cover
8	770584001	LCD (unit)
9	770665502	Shield case (unit)
10	770666710	RCS (unit)
11	770343109	Start/Stop button
12	770353205	RCS leg
13	770342212	RCS rear lid

PARTS LIST

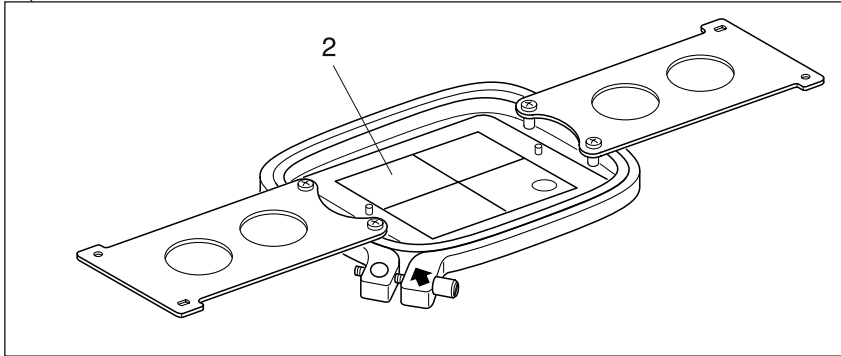


PARTS LIST

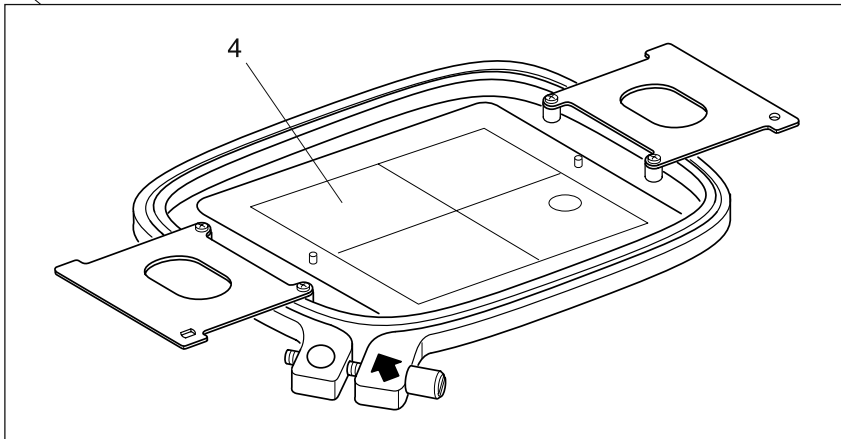
KEY NO.	PARTS NO.	DESCRIPTION
1	770603100	Bobbin winder (unit)
2	767508001	Bobbin winder shaft (unit)
3	000101105	Setscrew 3x4
4	770330011	Bobbin winder set plate
5	846510107	Bobbin winder motor (unit)
6	846178109	Bobbin winder spring
7	846177108	Bobbin winder stopper
8	846176107	Bobbin winder lever
9	000104120	Setscrew 4x20
10	000002507	Snap ring E-4
11	846514101	Micro switch (unit)

PARTS LIST

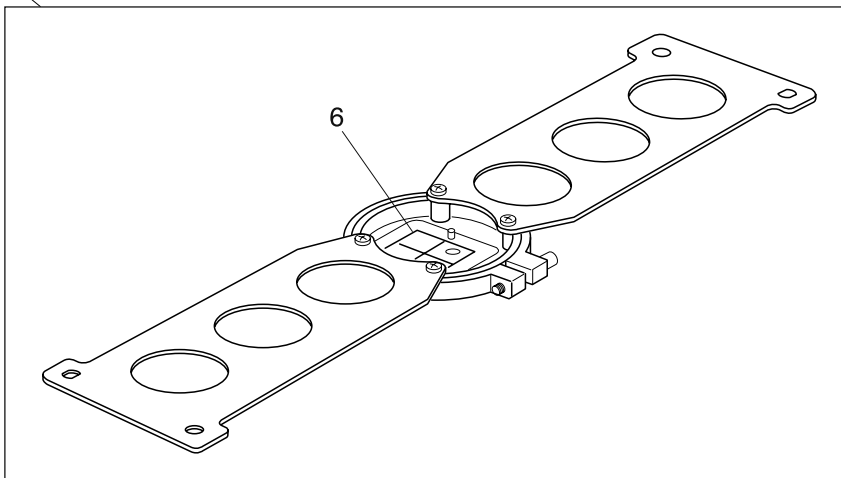
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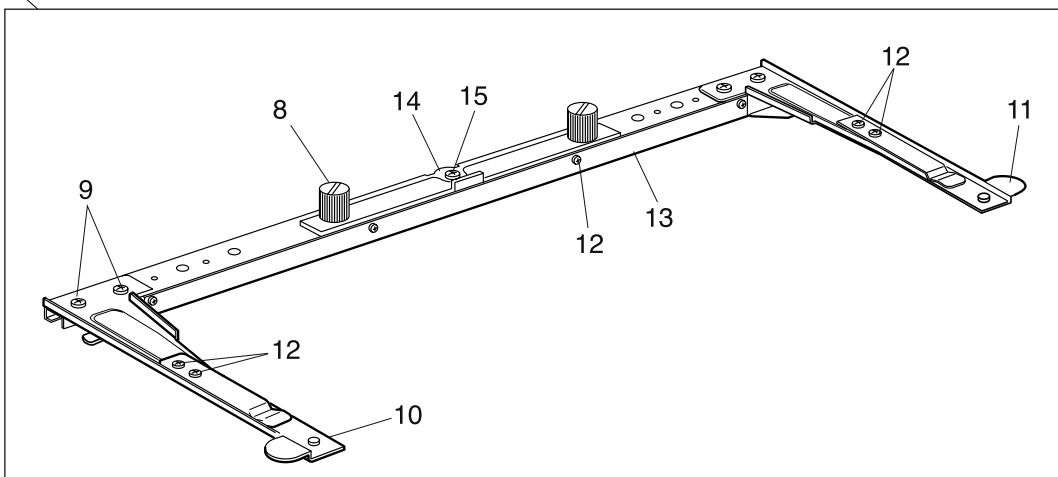
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5



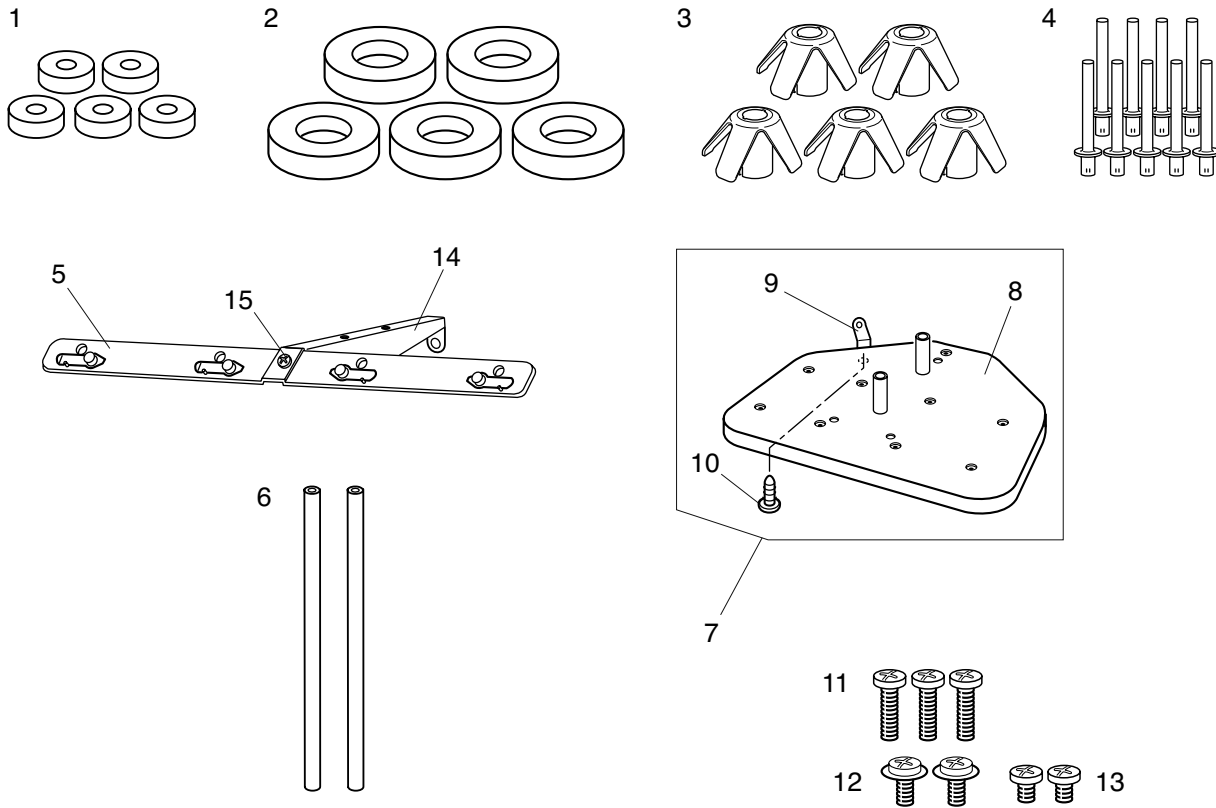
7



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770808004	Standard hoop M2 (unit)
2	770808200	Template sheet (standard)
3	770807003	Large hoop M1 (unit)
4	770807209	Template sheet (large)
5	770809005	Small hoop M3 (unit)
6	770809201	Template sheet (small)
7	770523002	Connecting arm fixing arm (unit)
8	770319003	Hoop knob (2)
9	000145710	Setscrew 4x8
10	770315009	Hoop supporting arm (L) (unit)
11	770314008	Hoop supporting arm (R) (unit)
12	000103819	Setscrew 3x5
13	770440004	Support plate
14	770385000	Support roller
15	000101437	Setscrew 4x6

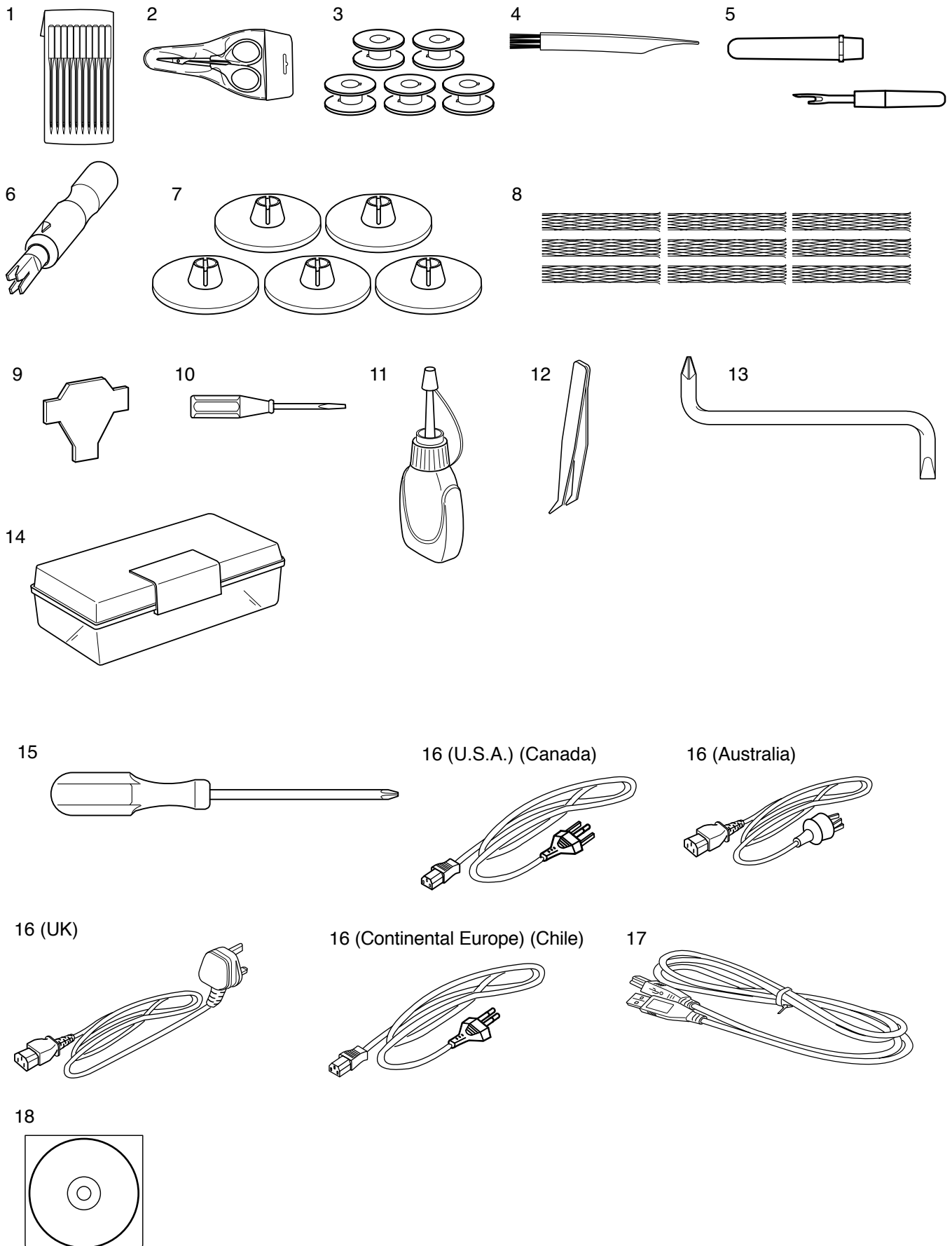
PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770406019	Felt
2	770364014	Felt ring (large)
3	770850001	Spool supporter
4	770421009	Spool pin
5	770623003	Thread guide (unit)
6	770259004	Support rod
7	770622013	Spool stand (unit)
8	770420019	Spool stand (2)
9	770360009	Bobbin thread guide
10	000261001	Setscrew 3x8 (B)
11	000106823	Setscrew 4x35
12	000115711	Setscrew TP 4x10
13	000081038	Setscrew 4x8
14	770359016	Thread guide arm
15	000230506	Setscrew 3x6

PARTS LIST



PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1	770811000	Needle
2	803813203	Scissors
3	770591001	Bobbin
4	802424004	Lint brush
5	647808009	Seam ripper
6	200254007	Needle threader
7	822020503	Spool holder (large)
8	624806202	Net
9	653802002	Screwdriver
10	792030005	Screwdriver (small)
11	770816108	Oil
12	888804008	Tweezers
13	770810009	Offset screwdriver
14	366401400	Standard accessory case
15	718410003	Screwdriver
16	980559200	Power supply cord (U.S.A.) (Canada)
	770920003	Power supply cord (Australia)
	770920209	Power supply cord (UK)
	770920106	Power supply cord (Continental Europe) (Chile)
17	850403006	USB cable
18	770861005	Instruction CD