

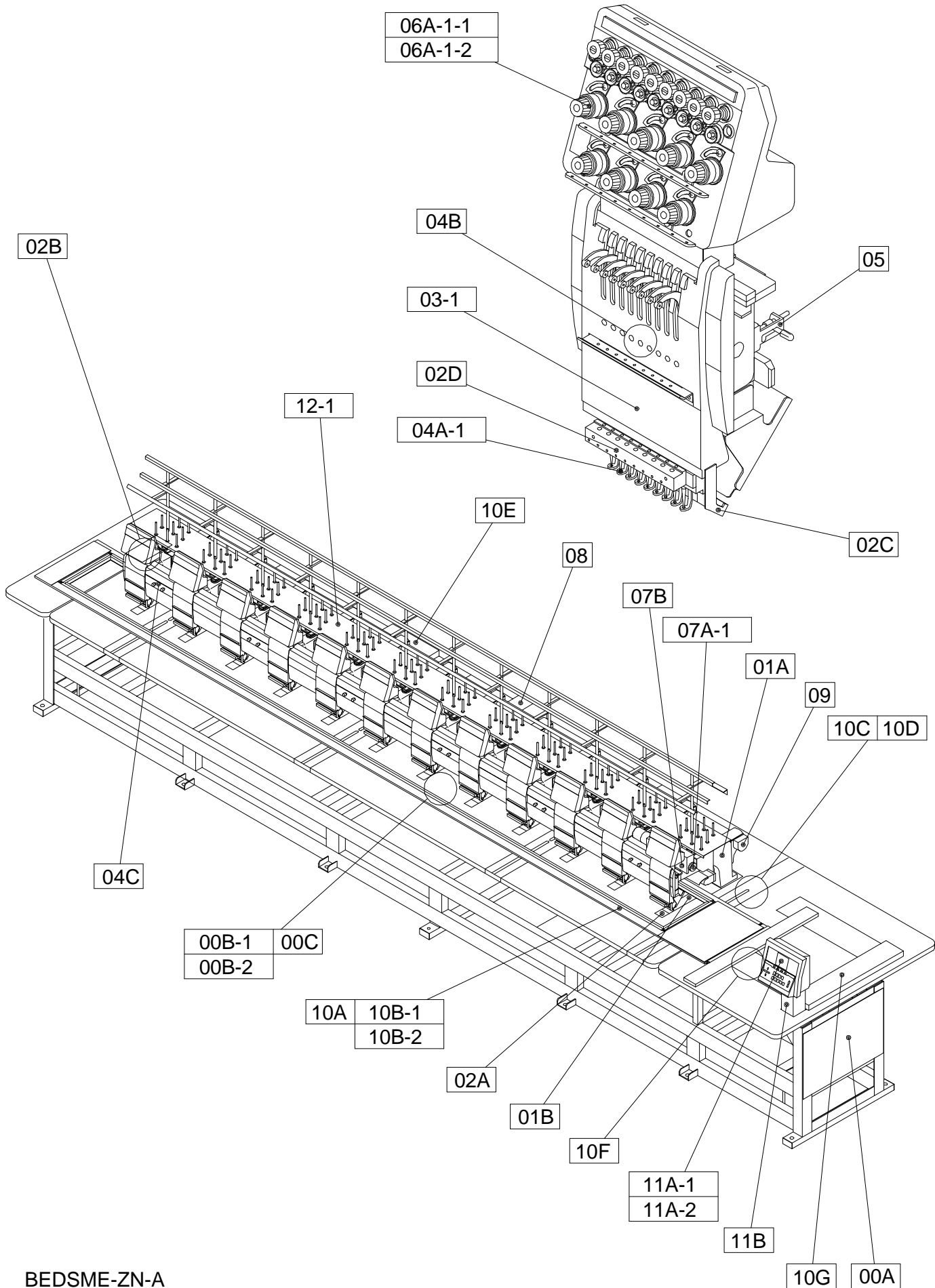
*Barudan*

HIGH SPEED AUTOMATIC EMBROIDERY MACHINE

**BEDSME-ZN/ZQ-A**

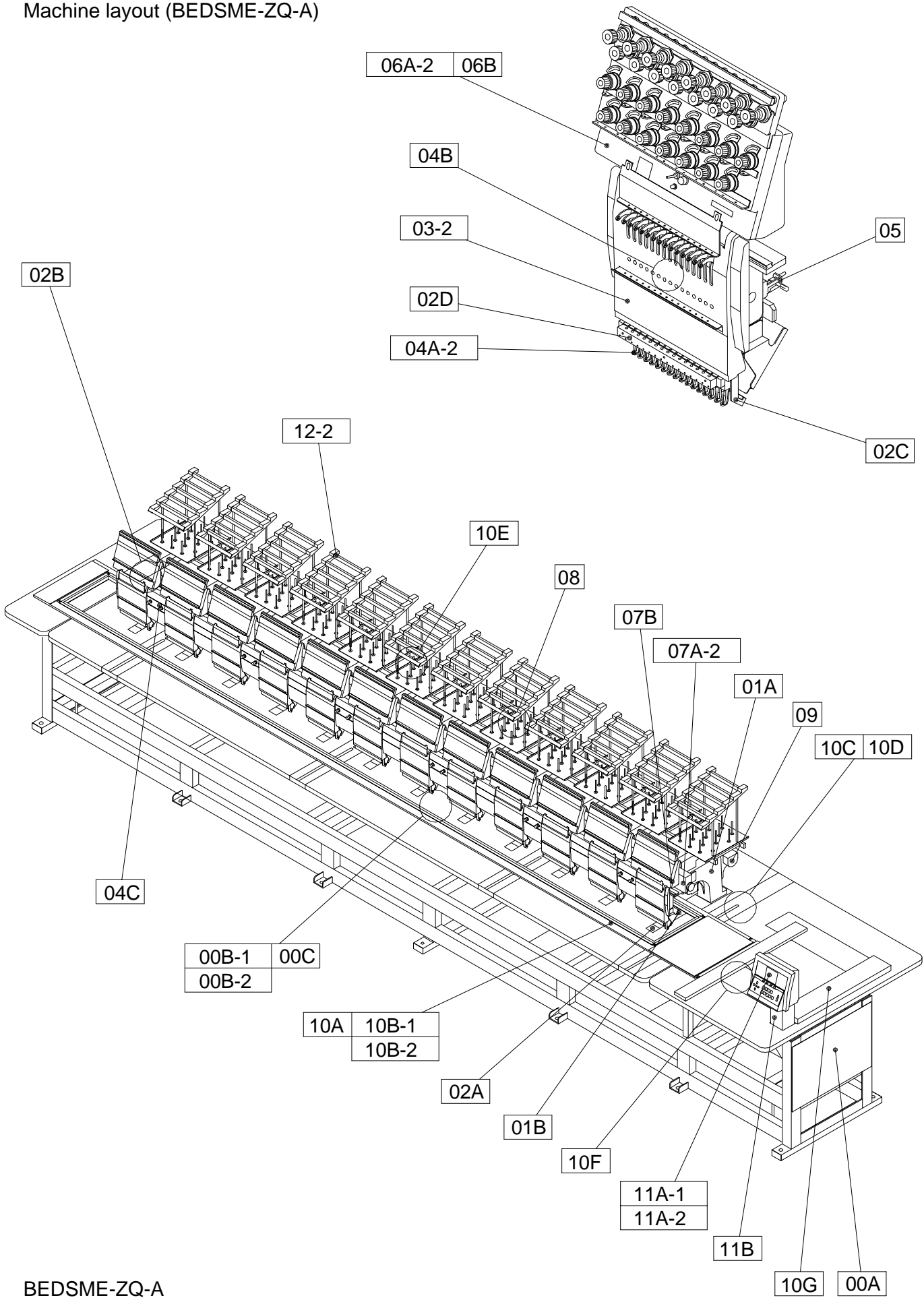
**PARTS LIST**

Machine layout (BEDSME-ZN-A)



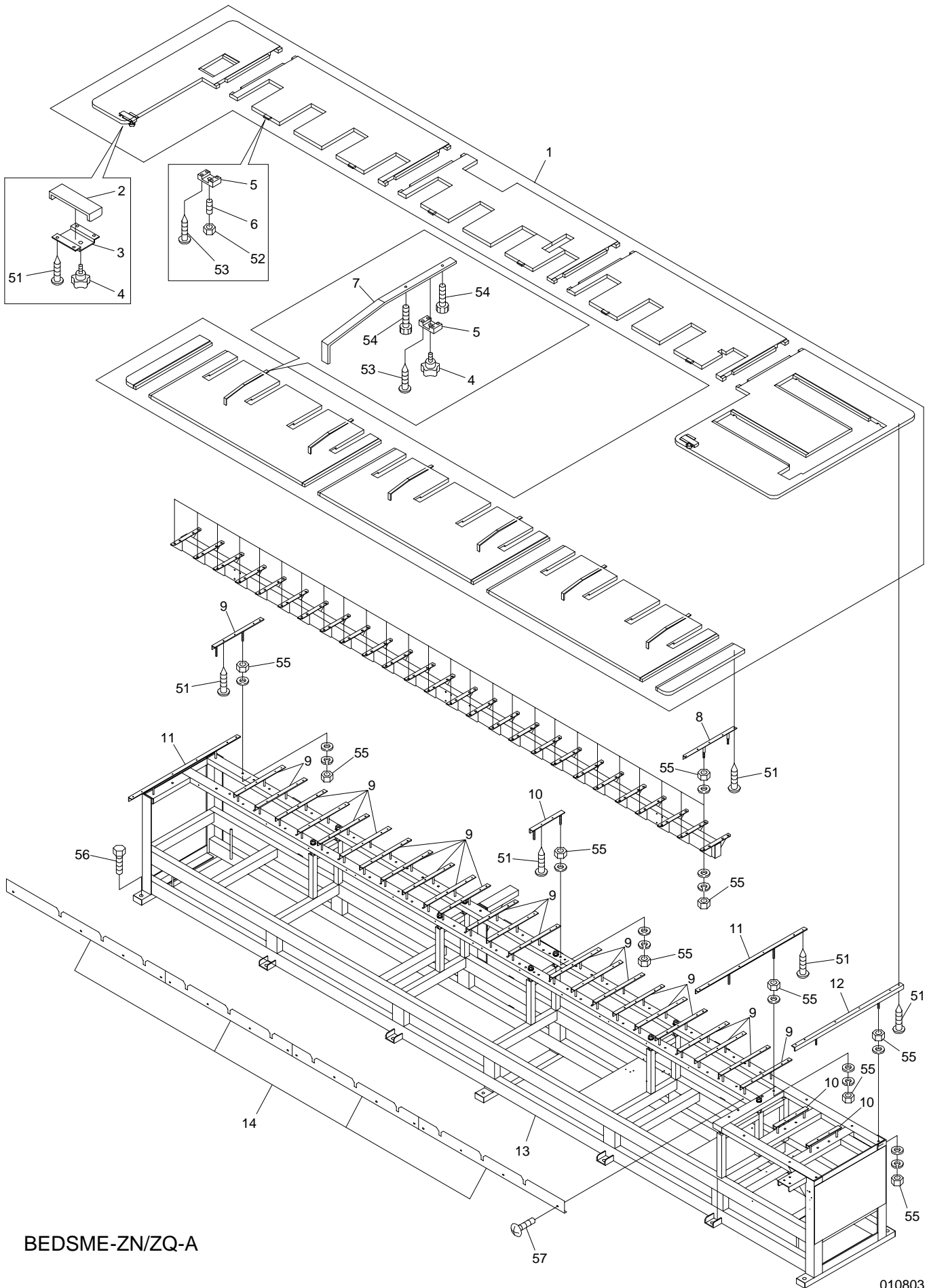
BEDSME-ZN-A

Machine layout (BEDSME-ZQ-A)



BEDSME-ZQ-A

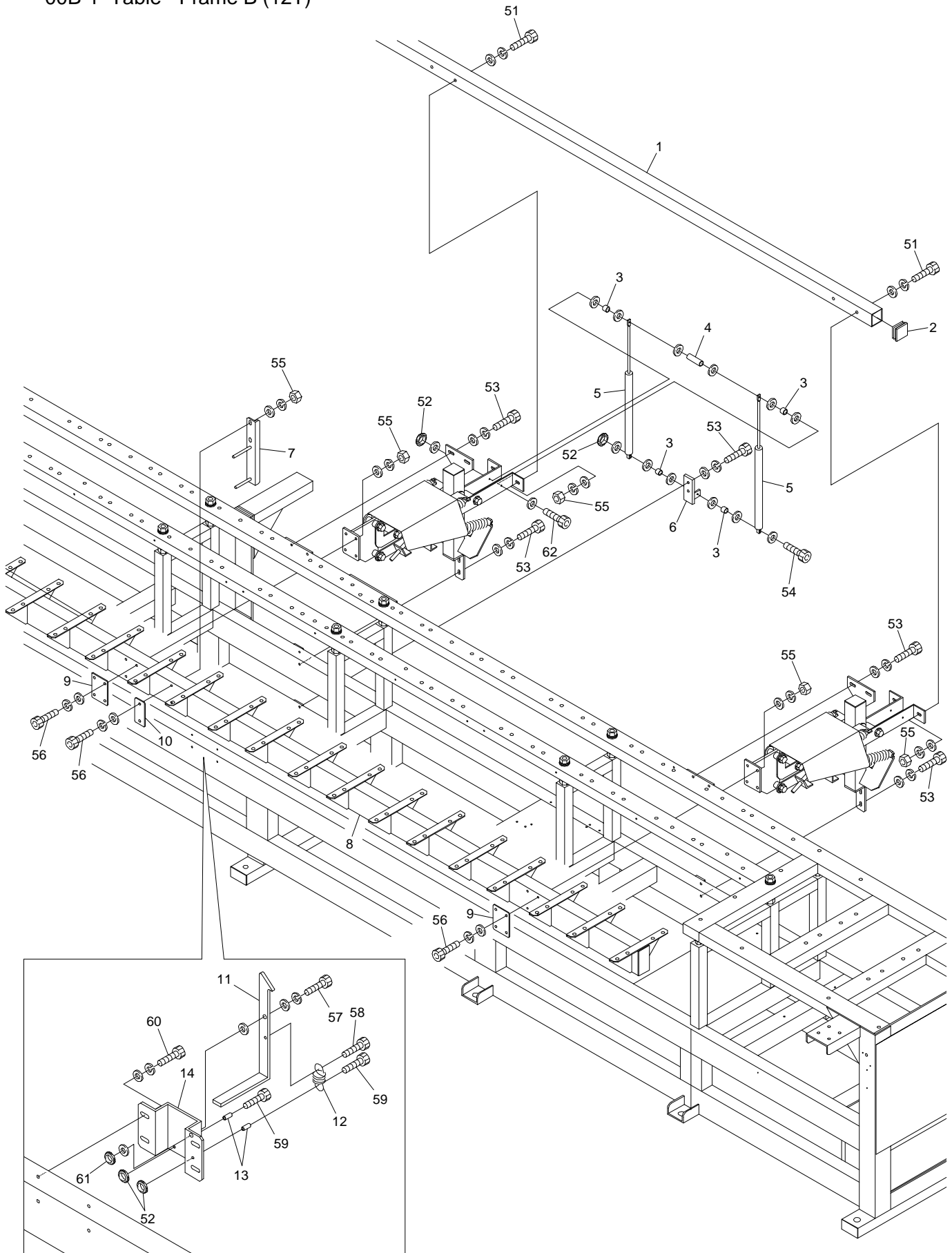
00A Table - Frame A



BEDSME-ZN/ZQ-A



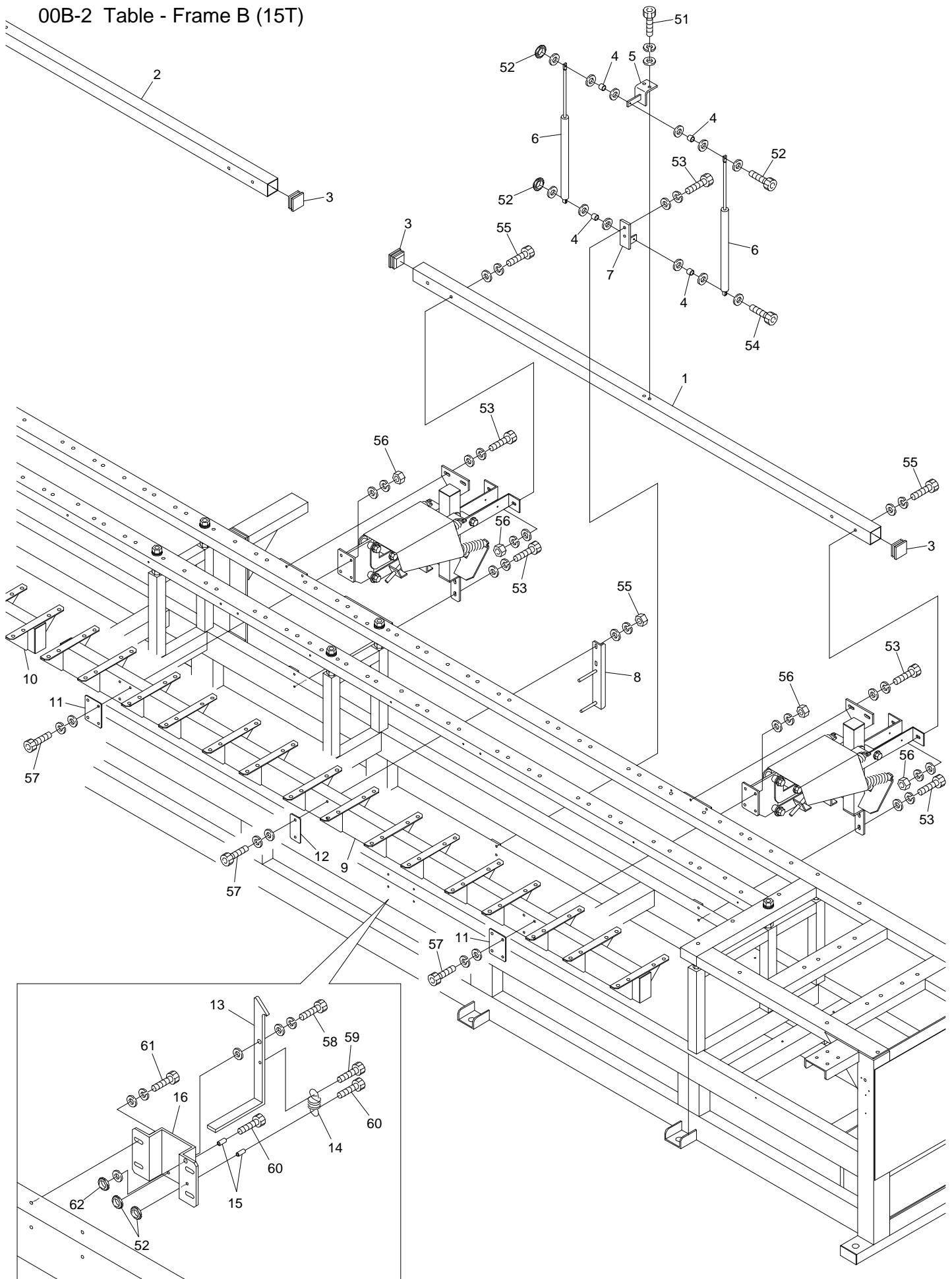
00B-1 Table - Frame B (12T)



BEDSME-ZN/ZQ-A



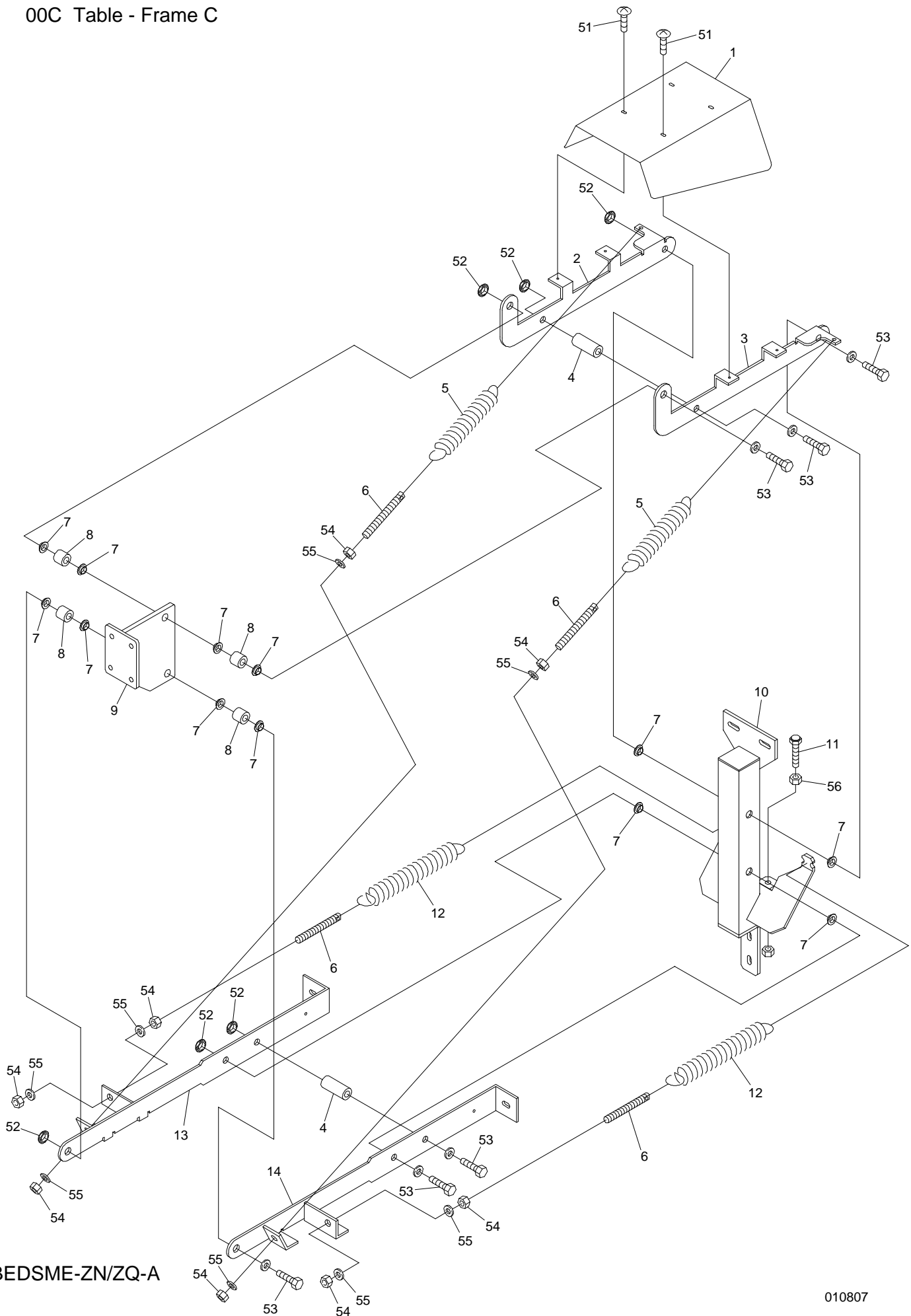
00B-2 Table - Frame B (15T)







00C Table - Frame C

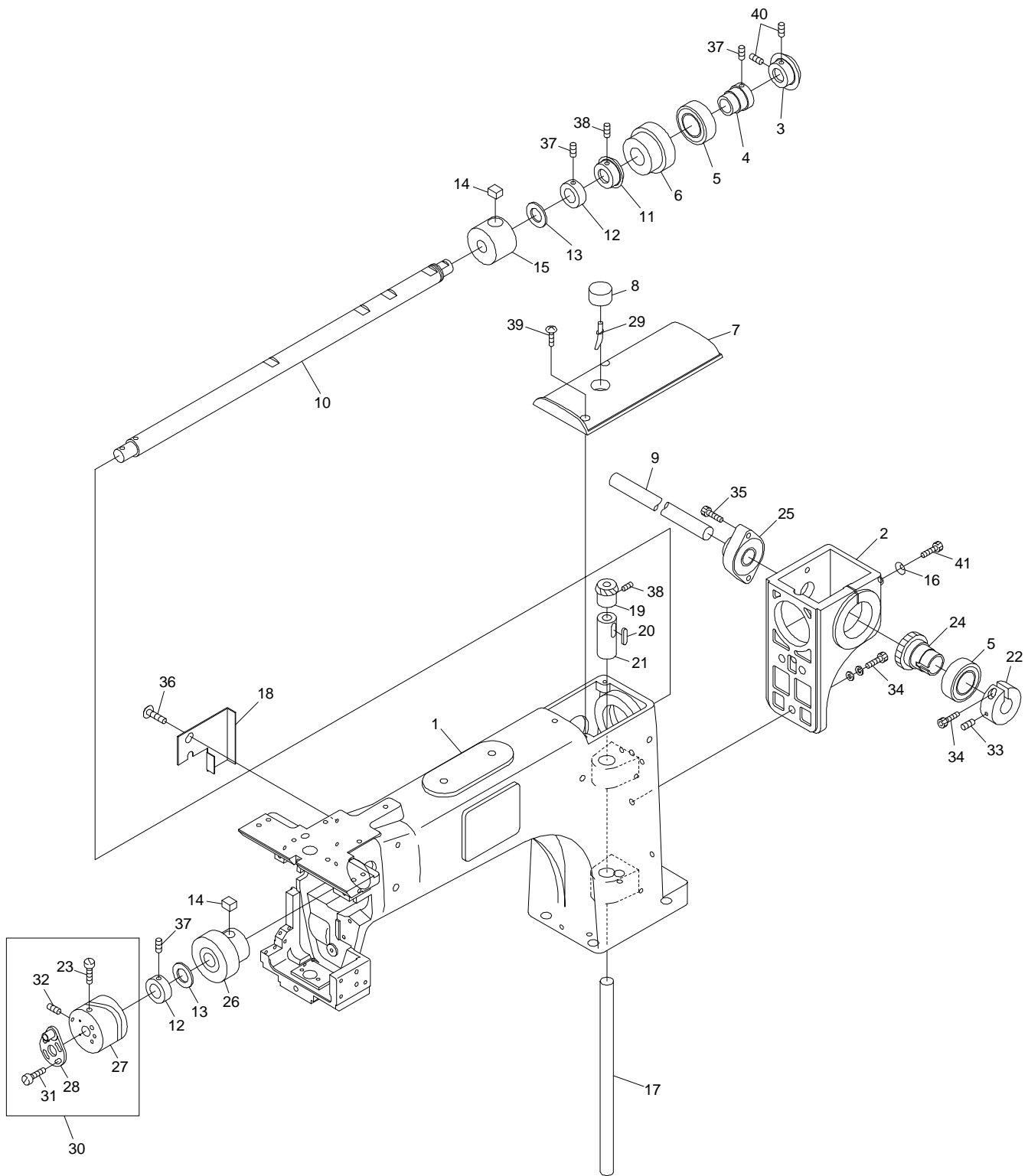


BEDSME-ZN/ZQ-A

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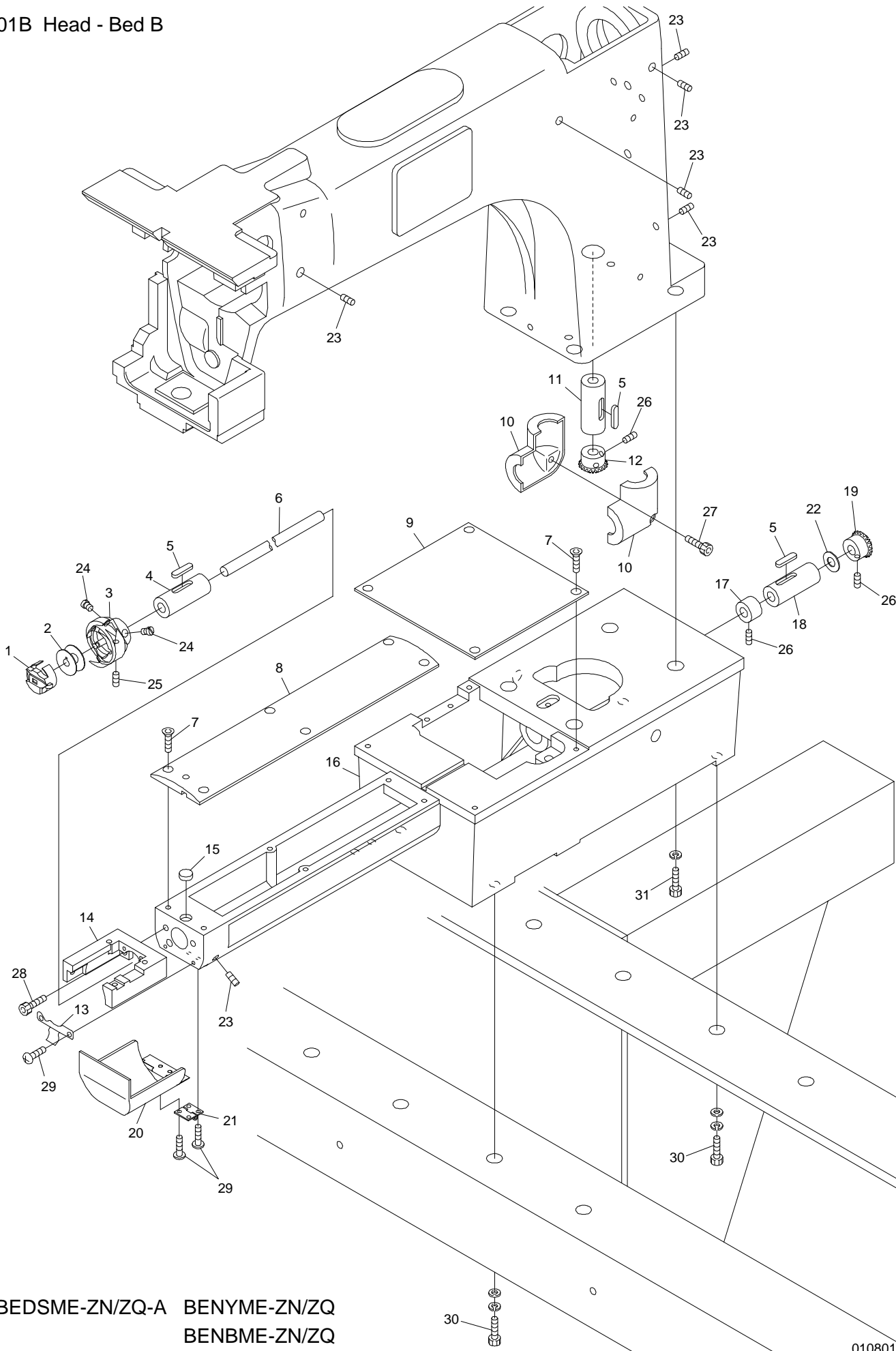
01A Head - Bed A



BEDSME-ZN/ZQ-A BENYME-ZN/ZQ  
BENBME-ZN/ZQ

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	SF210010	Arm(DSME)	Hx1	
2	SF210030	Arm gear case(DSME)	Hx1	
3	KL220100	Upper shaft gear(Spiral bevel M1.5-25R)	Hx1	
4	KL220090	Upper shaft rear bearing collar	Hx1	
5	A9010017	Bearing(6004ZZ)	Hx2	
6	KL220040	Upper shaft rear bearing case	Hx1	
7	KL250040	Arm top cover	Hx1	
8	KL220150	Oil felt D	Hx1	
9	HB320070	Connecting shaft f15x3300		
10	KL220000	Upper shaft	Hx1	
11	KF220130	Bevel gear(Upper shaft)	Hx1	
12	KL220080	Upper shaft collar	Hx2	
13	HP231390	Thrust washer(Upper shaft gear)	Hx2	
14	KL220130	Oil felt B	Hx2	
15	KL220030	Upper shaft middle metal	Hx1	
16		Disk spring M6		
17	KL220010	Vertical shaft	Hx1	
18	SF250000	Arm side cable cover	Hx1	
19	KF220460	Bevel gear(Vertical shaft upper)	Hx1	
20	KL220140	Oil felt C	Hx1	
21	KL220050	Vertical shaft metal(Upper)	Hx1	
22	KL320020	Connecting gear clamp f19	Hx1	
23	KF230420	Take up lever cam set screw	Hx1	
24	KL320000	connecting gear(Spiral bevel M1.5-25L)	Hx1	
25	HP321140	Upper shaft connecting unit	Hx1	
26	KL220020	Upper shaft front metal	Hx1	
27	KB230030	Take up lever cam K6	Hx1	
28	KB230050	90°crank(Phase adjust type)	Hx1	
29	KC251330	Oil core L=75	Hx1	
30	KB230010	Take up cam K6 90°with crank	Hx1	
31	A9012007	Screw for bobbin(SM11/64 ?40x10)	Hx1	
32		Set screw (SM15/64 28x10) (With adhesive)		
33		Hex.socket set screw M6x10		
34		Hex.socket bolt M6x25		
35		Hex.socket bolt M6x8(With spring washer)		
36		Truss screw M4x8		
37		Hex.socket set screw M6x6		
38		Set screw(SM1/4 40x4)		
39		Truss screw M4x10		
40		Hex.socket set screw M6x6(With adhesive)		
41		Hex.socket bolt M6x60		

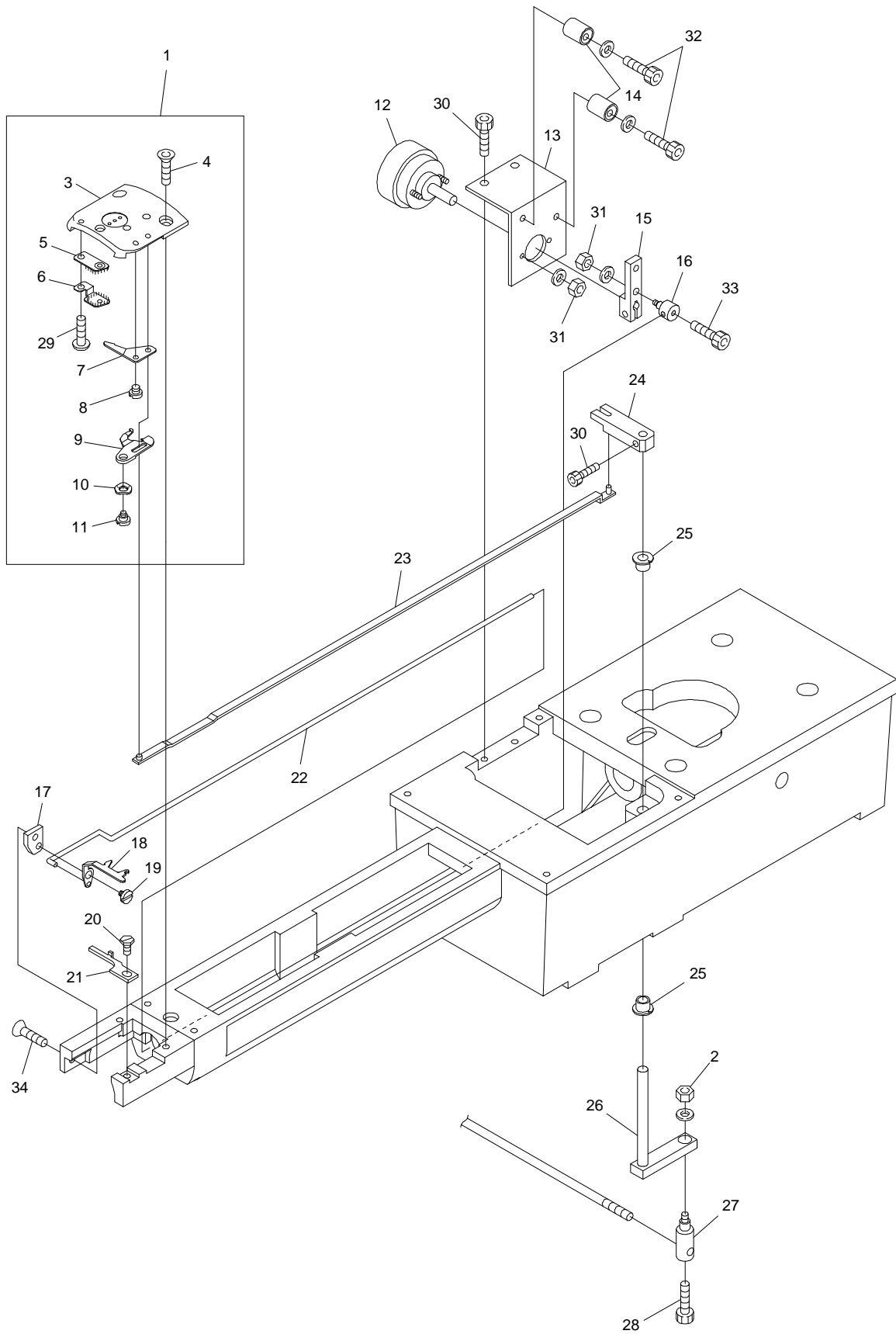
01B Head - Bed B



BEDSME-ZN/ZQ-A BENYME-ZN/ZQ  
BENBME-ZN/ZQ



02A Thread cut A

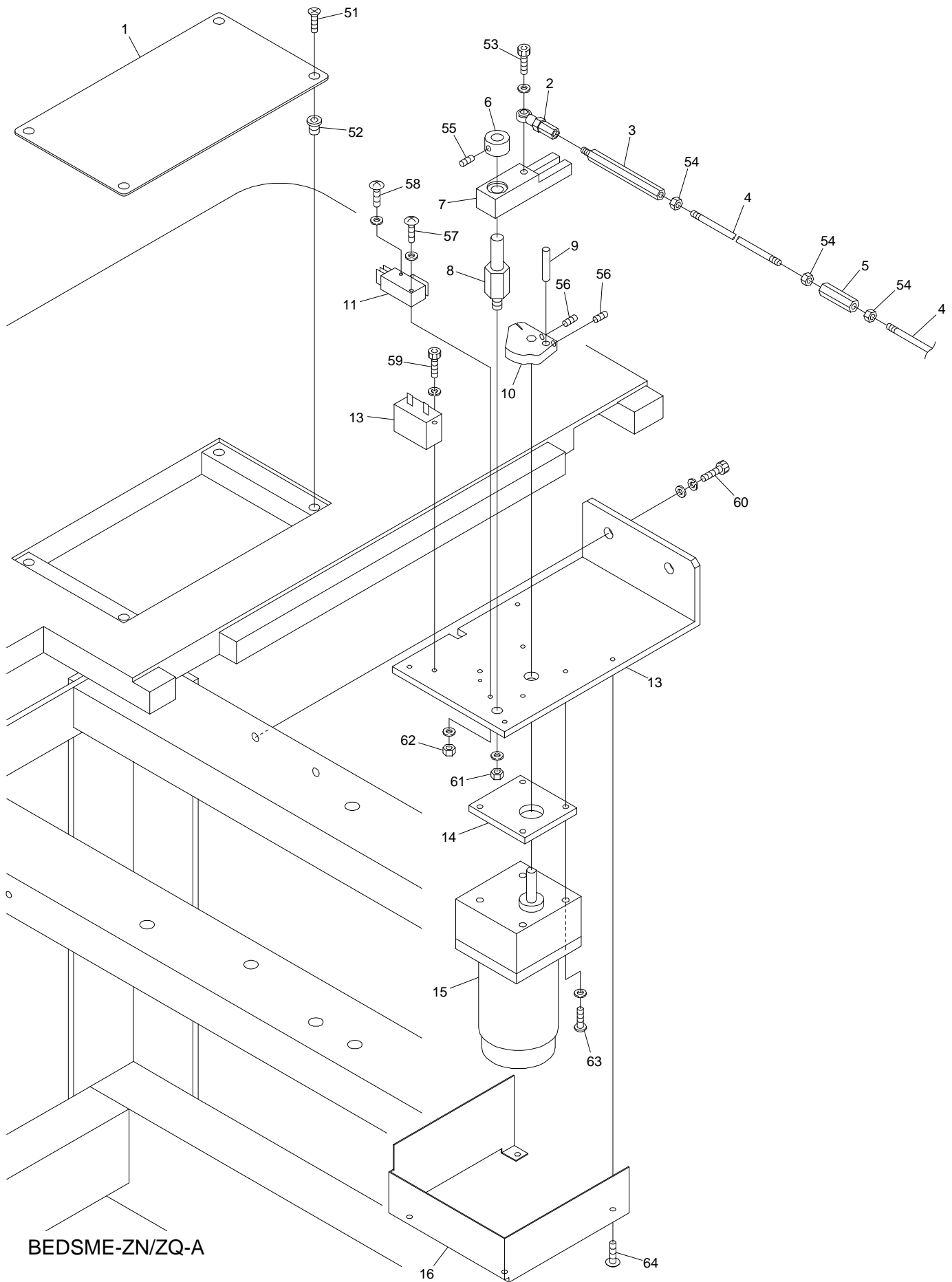


BEDSME-ZN/ZQ-A BENYME-ZN/ZQ BENT-ZN/ZQ  
BENBME-ZN/ZQ





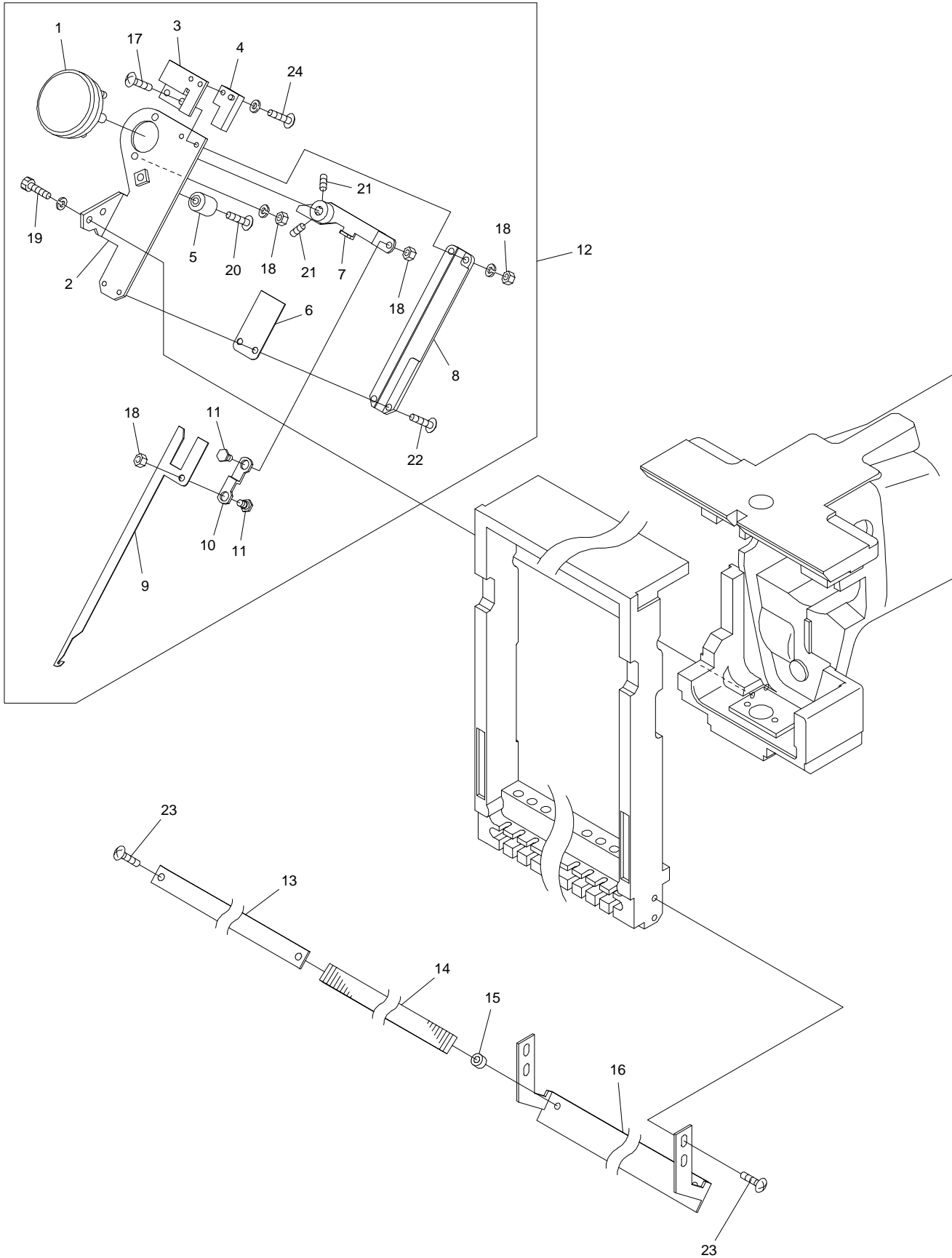
# 02B Thread cut B



BEDSME-ZN/ZQ-A



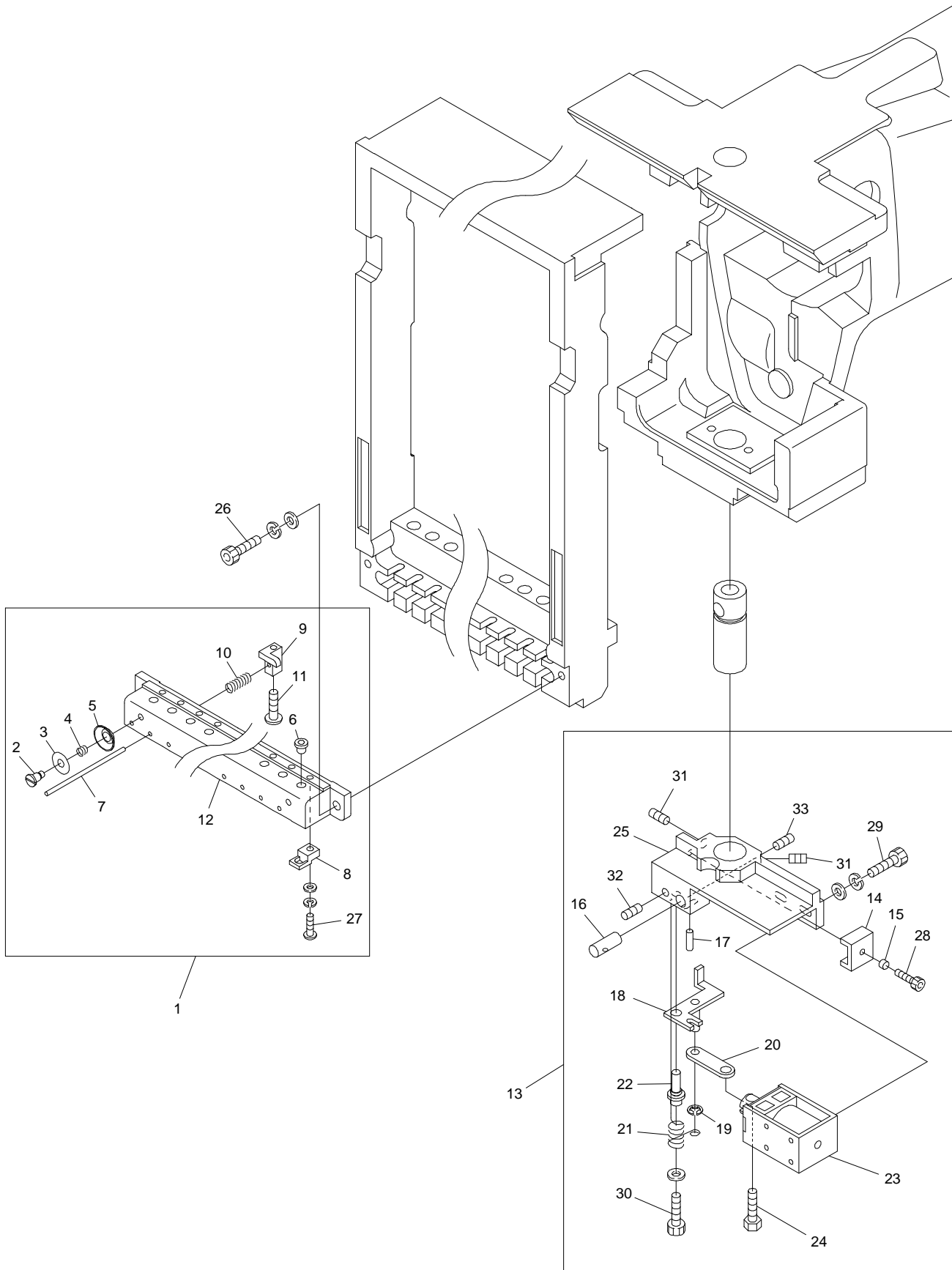
02C Thread cut C



BEDSME-ZN/ZQ-A BENYME-ZN/ZQ BENT-ZN/ZQ  
BENBME-ZN/ZQ



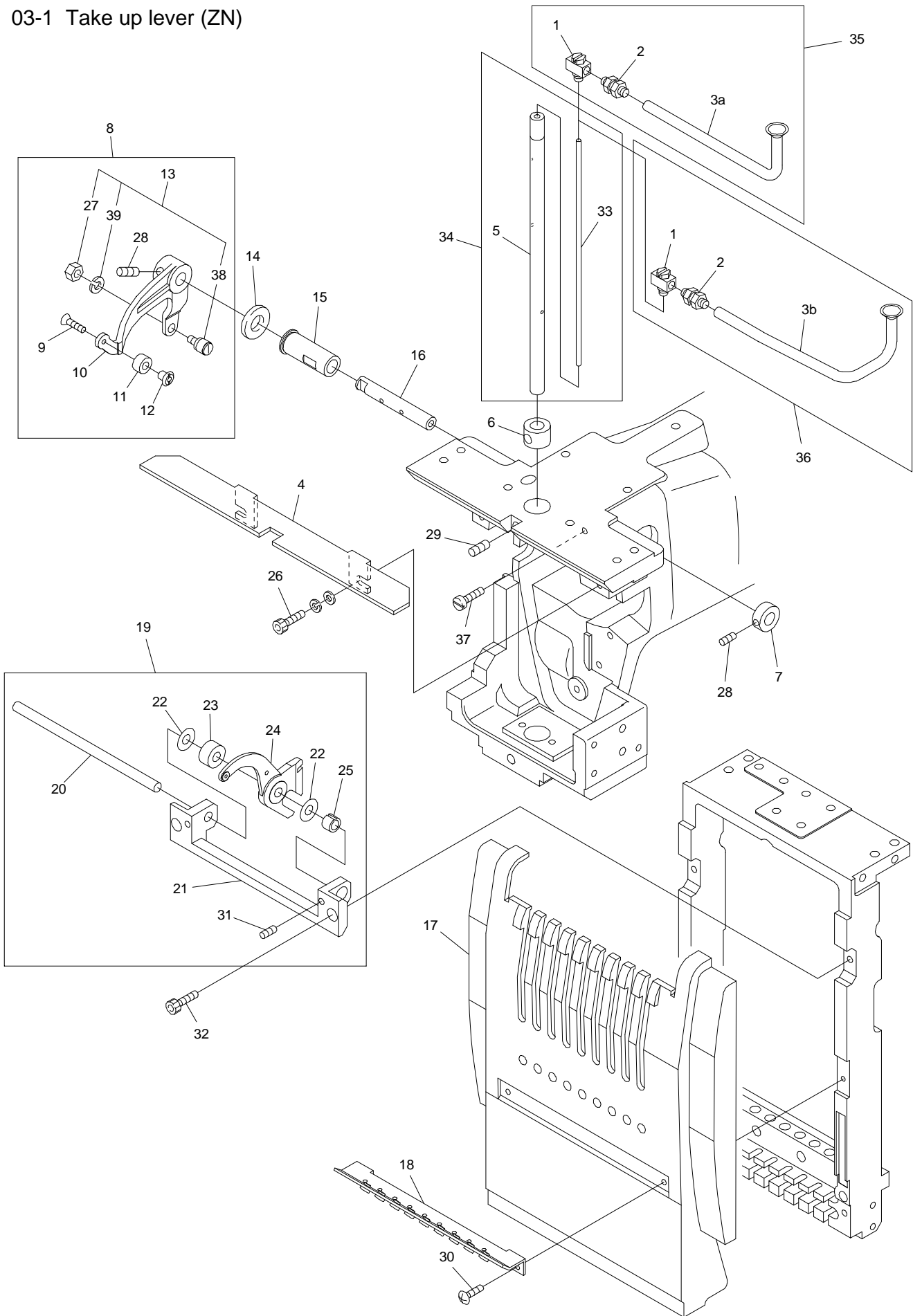
02D Thread cut D



BEDSME-ZN/ZQ-A BENYME-ZN/ZQ BENT-ZN/ZQ  
BENBME-ZN/ZQ



03-1 Take up lever (ZN)



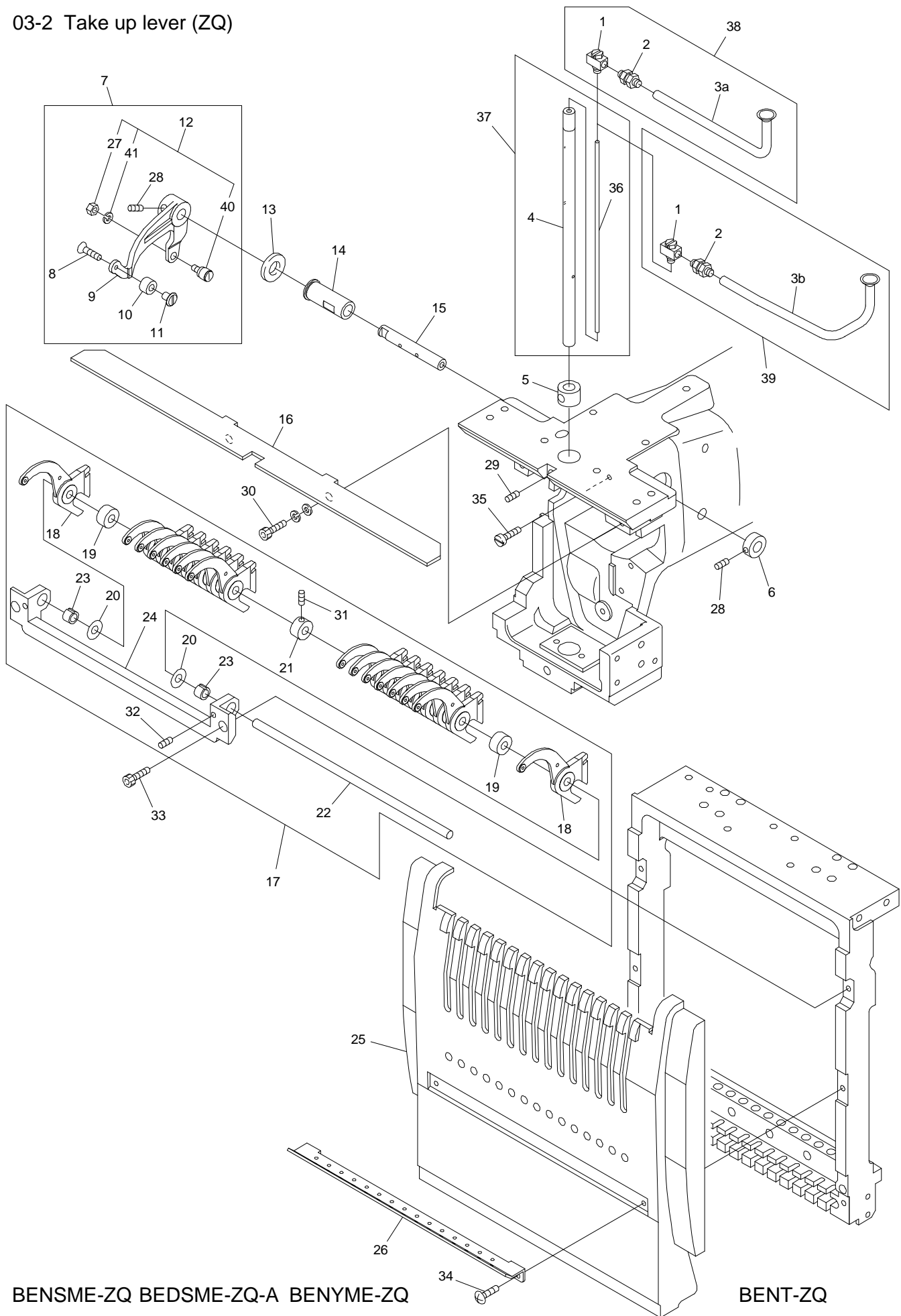
BENSME-ZN BEDSME-ZN-A BENYME-ZN BENT-ZN  
 BERNME-ZN BENBME-ZN



## 03-1 Take up lever (ZN)

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	A9075122	Universal elbow M-5UL	Hx1	
2	A9075123	Universal nipple M-5UN	Hx1	
3a	LA230260	Lubrication pipe	Hx1	Except for NT
3b	MG230000	Drive shaft lubrication pipe	Hx1	NT
4	KX230163	Stocker	Hx1	
5	LA230171	Slide shaft	Hx1	
6	KX230071	Slide shaft bush(Upper)	Hx1	
7	HB230270	Needle bar drive lever fixing pin set collar	Hx1	
8	KT230052	Take up lever drive lever a'ssy	Hx1	
9	HB230650	Flush screw(With adhesion)	Hx1	
10	KT230032	Take up lever driving lever	Hx1	
11	HT230090	Take up lever drive roller	Hx1	
12	HT230100	Take up lever drive roller shaft	Hx1	
13	KF230501	Take up lever roller a'ssy	Hx1	
14	A9012164	Washer(R-TW0815)	Hx1	
15	KB230100	Take up lever drive shaft metal	Hx1	
16	KB230110	Take up lever drive shaft	Hx1	
17	SF250020	Head cover ZN-A(DSME)	Hx1	
18	KX240161	Thread guard(With ceramic)	Hx1	
19	KX230200	Take up lever a'ssy	Hx1	
20	KX230130	Take up lever shaft	Hx1	
21	KX230110	Take up lever bracket	Hx1	
22	KX230310	Take up lever shim(t0.3)	Hx1	
23	KX230141	Take up lever spacer	Hx8	
24	KX230152	Take up lever(ZN multi)	Hx9	
25	KX230120	Take up lever collar	Hx1	
26		Hex.socket bolt M4x10(With washers)		
27		Hex.nut M4		
28		Hex.socket set screw M5x6(With adhesion)		
29		Hex.socket set screw M5x8		
30		Truss screw M3x10		
31		Hex.socket set screw M4x8		
32		Hex.socket bolt M4x8		
33	LA230340	Oil core	Hx1	
34	LA230420	Slide shaft a'ssy	Hx1	
35	LA230360	Lubrication pipe a'ssy for multi head type	Hx1	Except for NT
36	MG230010	Drive shaft lubrication pipe a'ssy	Hx1	NT
37		screw(SM11/64x11)		
38	KF230680	Cam followers(KRx4x7.9x15-1Px1)	Hx1	
39		Spring washer M4		

03-2 Take up lever (ZQ)



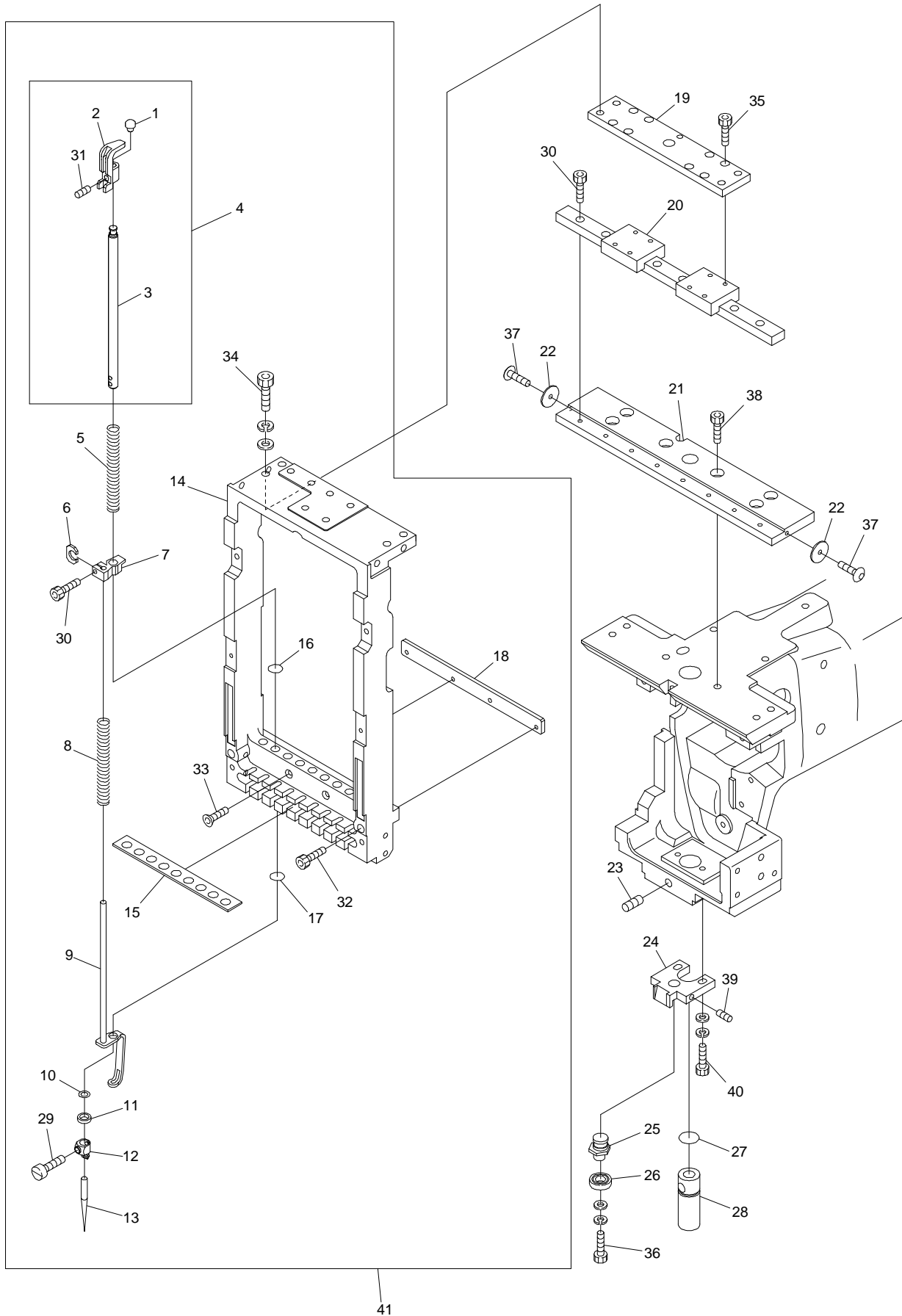
BENSME-ZQ BEDSME-ZQ-A BENYME-ZQ  
 BENRME-ZQ BENBME-ZQ

BENT-ZQ

## 03-2 Take up lever (ZQ)

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	A9075122	Universal elbow M-5UL	Hx1	
2	A9075123	Universal nipple M-5UN	Hx1	
3a	LA230260	Lubrication pipe	Hx1	Except for NT
3b	MG230000	Drive shaft lubrication pipe	Hx1	NT
4	LA230171	Slide shaft	Hx1	
5	KX230071	Slide shaft bush(Upper)	Hx1	
6	HB230270	Needle bar drive lever fixing collar	Hx1	
7	KT230052	Take up lever drive lever a'ssy	Hx1	
8	HB230650	Flush screw(With adhesion)	Hx1	
9	KT230032	Take up lever drive lever	Hx1	
10	RD230120	Take up lever drive roller	Hx1	
11	RD230130	Take up lever drive roller shaft	Hx1	
12	KF230501	Take up lever rollar a'ssy	Hx1	
13	A9012164	Washer(R-TW0815)	Hx1	
14	KB230100	Take up lever drive shaft metal	Hx1	
15	KB230110	Take up lever drive shaft	Hx1	
16	LA230251	Stocker	Hx1	
17	LA230410	Take up lever a'ssy(ZQ-A)	Hx1	
18	KX230152	Take up lever(ZN multi)	Hx15	
19	KX230141	Take up lever spacer	Hx13	
20	KX230310	Take up lever shim(t0.3)	Hx2	
21	RD230201	Take up lever spacer collar	Hx1	
22	RD230080	Take up lever shaft	Hx1	
23	KX230120	Take up lever collar	Hx1	
24	LA230281	Take up lever bracket	Hx1	
25	SF250050	Head cover ZQ-A(DSME)	Hx1	
26	RD240271	Thread guard(With guide)	Hx1	
27		Hex.nut M4		
28		Hex.socket set screw M5x6(With adhesion)		
29		Hex.socket set screw M5x8		
30		Hex.socket bolt M4x10(With washers)		
31		Hex.socket set screw M4x4		
32		Hex.socket set screw M4x8		
33		Hex.socket bolt M4x8		
34		Truss screw M3x10		
35		screw(SM11/64x11)		
36	LA230340	Oil core	Hx1	
37	LA230420	Slide shaft a'ssy	Hx1	
38	LA230360	Lubrication pipe a'ssy for multi head type	Hx1	Except for NT
39	MG230010	Drive shaft lubrication pipe a'ssy	Hx1	NT
40	KF230680	Cam followers(KRx4x7.9x15-1Px1)	Hx1	
41		Spring washer M4		

04A-1 Needle bar A (ZN)

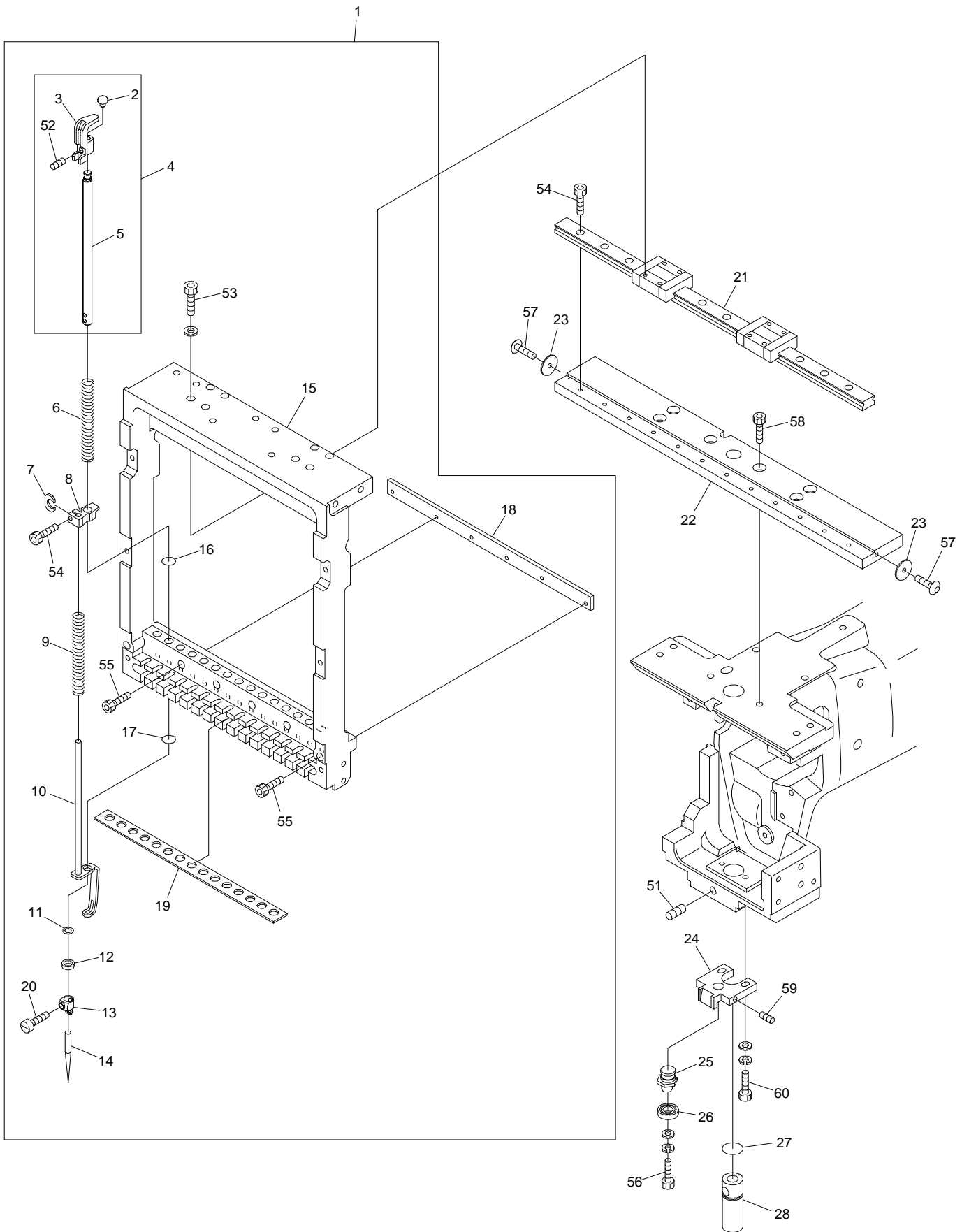


BENSME-ZN BEDSME-ZN-A BENYME-ZN BENT-ZN  
 BENRME-ZN BENBME-ZN

## 04A-1 Needle bar A (ZN)

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	HT230130	Needle bar cap	Hx9	
2	HT230151	Needle bar guide	Hx9	
3	HT230041	Needle bar	Hx9	
4	HT230810	Needle bar a'ssy	Hx9	
5	HT230251	Needle bar spring(Upper)	Hx9	
6	HT230263	Washer for set clamp	Hx9	
7	HT230330	Cloth winder stop latch set clamp	Hx9	
8	KX230251	Needle bar spring(Lower)	Hx9	
9	HT230143	Pressure foot	Hx9	
10	KF230910	O-ring(AN6227-5)	Hx9	
11	HT230120	Washer 2.4(YN)	Hx9	
12	HT230670	Needle clamp(With hook)	Hx9	
13	KF230250	Needle(DBK5-11)	Hx9	
14	KX230283	Slide block	Hx1	
15	KX230180	Needle bar felt	Hx1	
16	A9014055	O-ring(1-AS-7)	Hx9	
17	KF230920	O-ring(P7)	Hx9	
18	KX230040	Bearing plate	Hx1	
19	KX230010	LM base	Hx1	
20	KX230060	LM guide	Hx1	
21	KX230023	Base plate	Hx1	
22	KX230192	LM stopper	Hx2	
23		Hex.socket set screw M5x8	Hx2	
24	LA230140	Bearing guide	Hx1	
25	KX230050	Bearing pin	Hx1	
26	A9010065	Ball bearing 686zz	Hx1	
27	A9019037	O-ring(Bush lower S12.5 NOK)	Hx1	
28	LA230080	Slide shaft bush(Lower)	Hx1	
29	KF230240	Needle clamp screw(SM9/64 40)	Hx9	
30		Hex.socket bolt M3x8		
31		Hex.socket set screw M4x4		
32		Hex.socket bolt M3x25		
33		Hex.socket flush screw M3x25		
34		Hex.socket bolt M5x16(With washers)		
35		Hex.socket bolt M3x6		
36		Hex.socket bolt M4x6(With washers)		
37		Hex.socket button bolt M3x6		
38		Hex.socket bolt M5x12		
39		Hex.socket set screw(Dog point) M4x12		
40		Hex.socket bolt M4x15(With washers)		
41	LA230321	Slide block a'ssy	Hx1	

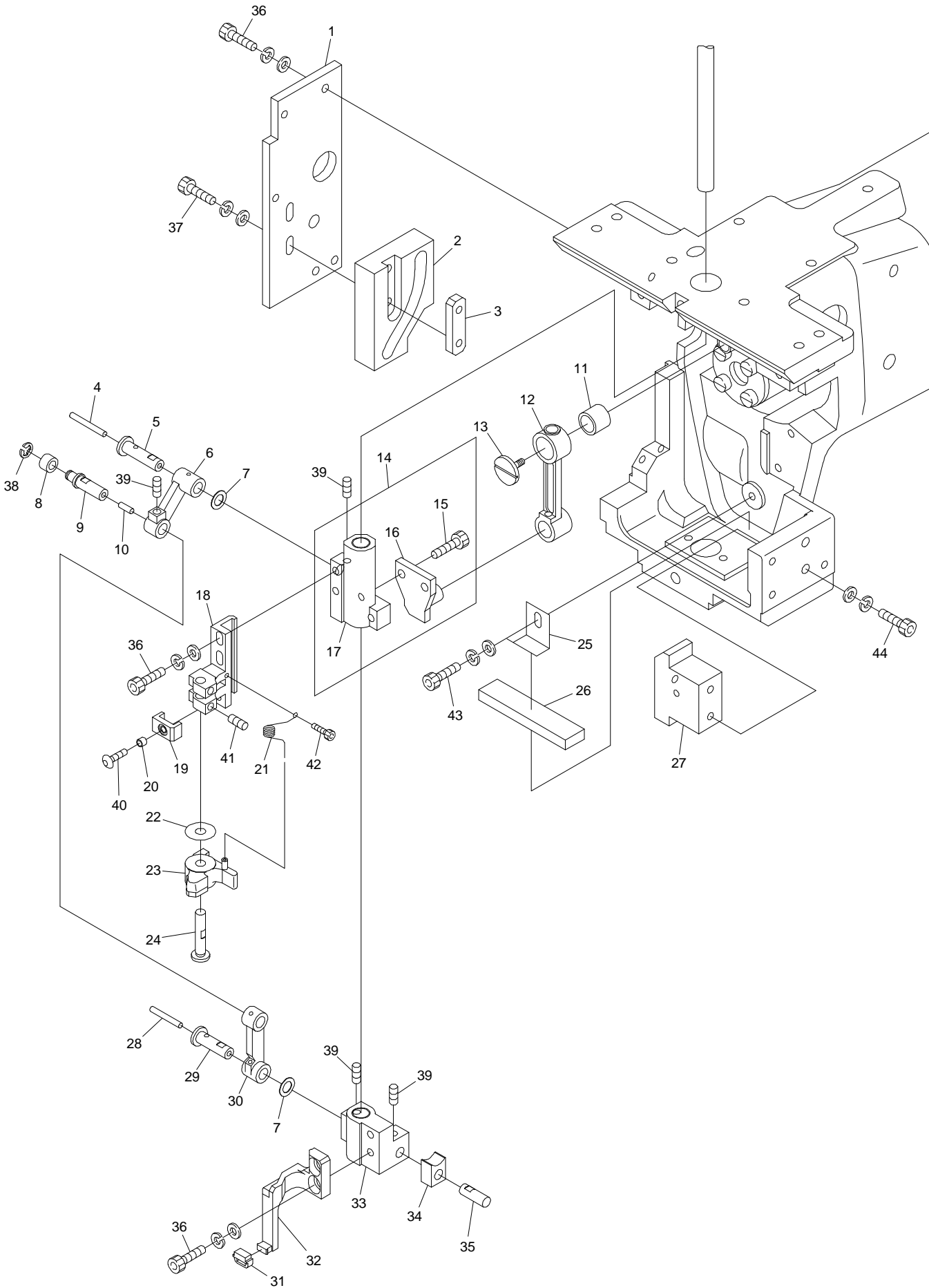
04A-2 Needle bar A (ZQ)



BENSME-ZQ BEDSME-ZQ-A BENYME-ZQ BENT-ZQ  
 BENRME-ZQ BENBME-ZQ



04B Needle bar B



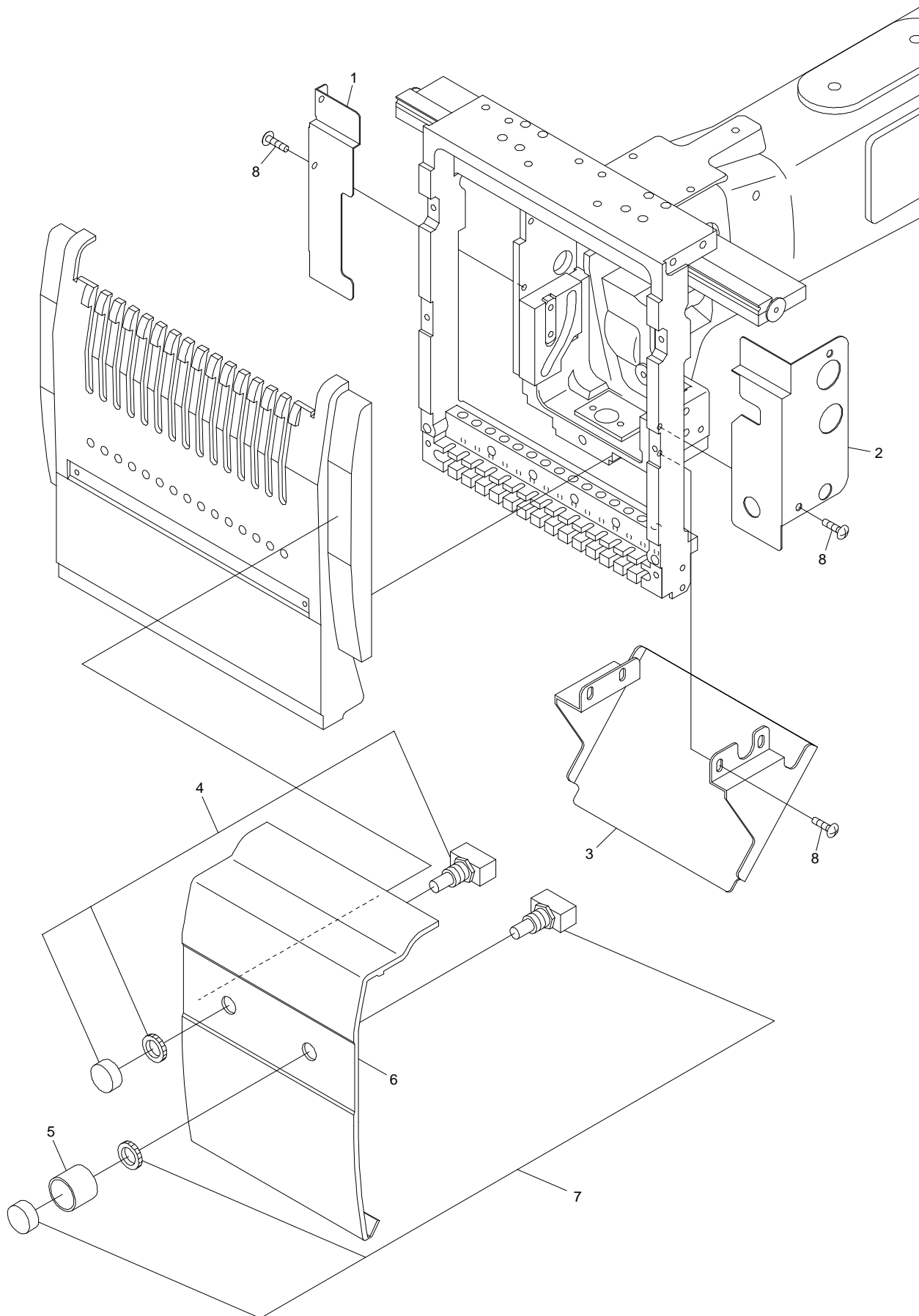
BENSME-ZN/ZQ BEDSME-ZN/ZQ-A BENYME-ZN/ZQ BENT-ZN/ZQ  
BENRME-ZN/ZQ BENBME-ZN/ZQ



## 04B Needle bar B

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	LA230100	Presser foot cam plate	Hx1	
2	LA230150	Presser foot cam	Hx1	
3	HT230380	Cam tap plate	Hx1	
4	LA230290	Oil core(23mm)	Hx1	
5	LA230110	Link pin(Upper)	Hx1	
6	LA230040	Link(Upper)	Hx1	
7	HT230730	Shim ring(10 t=0.3)	Hx2	
8	KF230530	Roller(For take up lever)	Hx1	
9	LA230130	Link roller joint pin	Hx1	
10	HT230760	Oil core(8mm)	Hx1	
11	A9011115	Needle bearing(K9x12x10T2)	Hx1	
12	LA230060	Crank rod	Hx1	
13	KB230070	90°crank counter clockwise screw	Hx1	
14	LA230030	Driver slide a'ssy	Hx1	
15	A9019036	Hex.socket bolt M4x10(With mech)	Hx2	
16	LA230020	Driver slide pin	Hx1	
17	LA230010	Driver slide	Hx1	
18	LB230070	Needle bar driver fixing base	Hx1	
19	HT230520	Needle bar driver stopper	Hx1	
20	A9012368	Spacer(Roll bush)	Hx1	
21	HT230560	Needle bar driver return spring	Hx1	
22	A9012367	Shim ring(15 t=0.15)	Hx1	
23	HT230531	Needle bar driver	Hx1	
24	HT230280	Needle bar driver pin	Hx1	
25	LA230200	Felt plate	Hx1	
26	LA230210	Felt(Oil cleaner)	Hx1	
27	LA230160	Guide box	Hx1	
28	HT230770	Oil core(20mm)	Hx1	
29	LA230120	Link pin(Lower)	Hx1	
30	LA230050	Link(Lower)	Hx1	
31	HT230340	Presser foot support rubber	Hx1	
32	HT230370	Presser foot support	Hx1	
33	LA230070	Presser foot slide	Hx1	
34	HP231370	Square ball	Hx1	
35	LA230090	Square ball pin	Hx1	
36		Hex.socket bolt M4x12		
37		Hex.socket bolt M4x20		
38		E-ring(3 dia.)		
39		Hex.socket set screw M4x6(With nylon)		
40		Hex.socket button bolt M3x6		
41		Hex.socket set screw M4x4(With nylon)		
42		Hex.socket bolt M2.5x6		
43		Hex.socket bolt M4x8		
44		Hex.socket bolt M4x16		

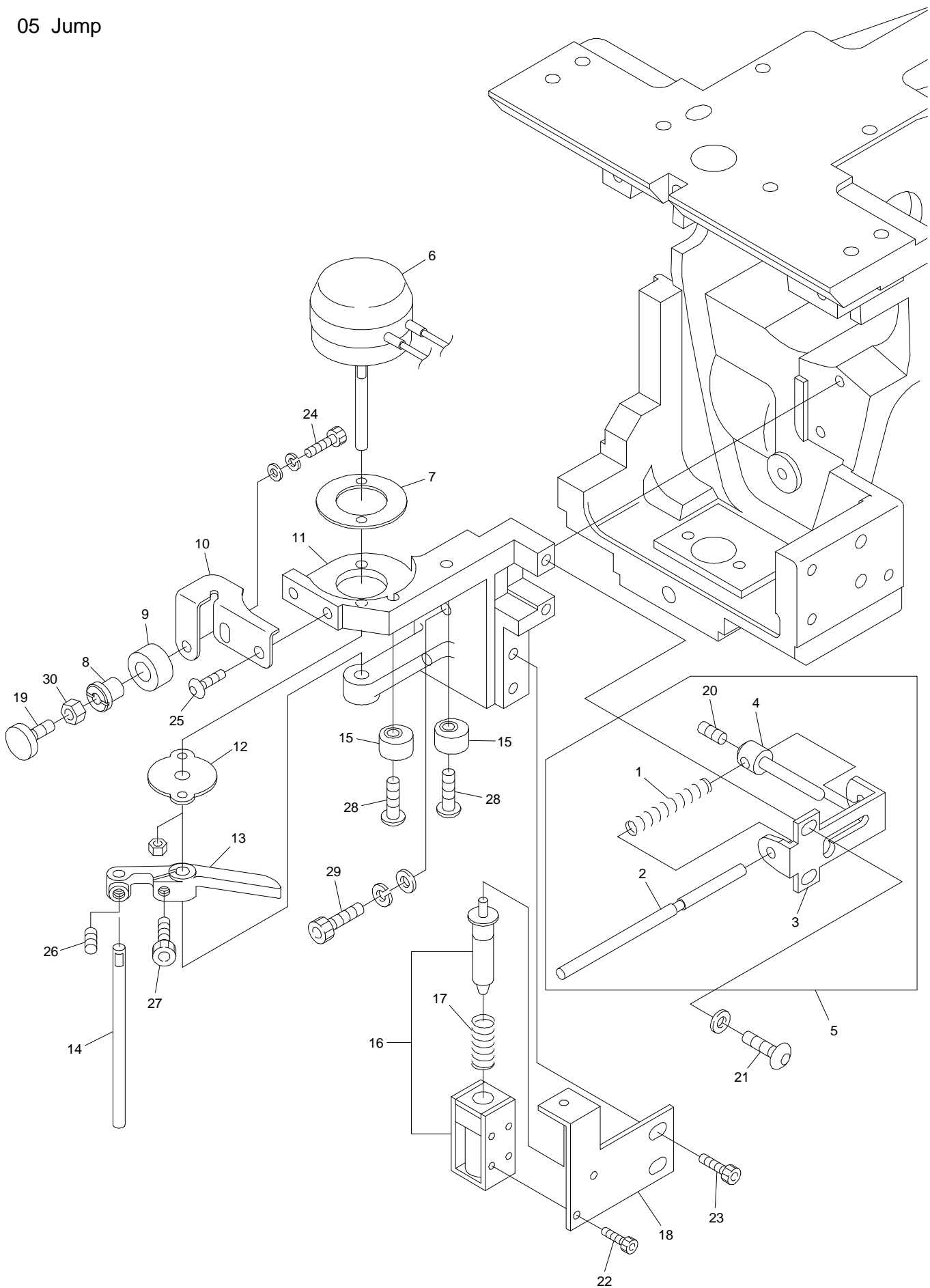
04C Needle bar C



BENSME-ZN/ZQ BEDSME-ZN/ZQ-A BENYME-ZN/ZQ BENT-ZN/ZQ  
BENRME-ZN/ZQ BENBME-ZN/ZQ



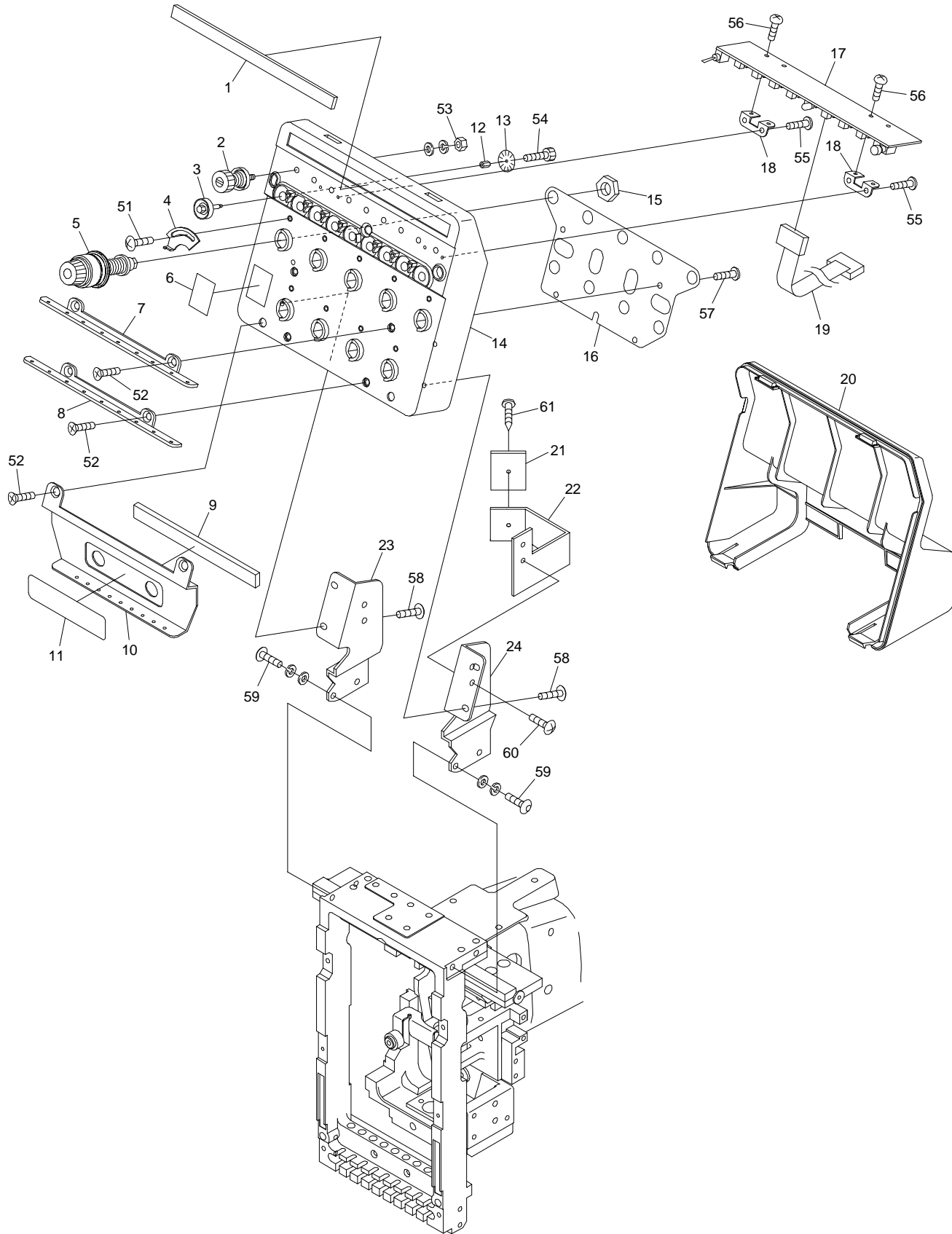
05 Jump



BENSME-ZN/ZQ BEDSME-ZN/ZQ-A BENYME-ZN/ZQ BENT-ZN/ZQ  
BENRME-ZN/ZQ BENBME-ZN/ZQ

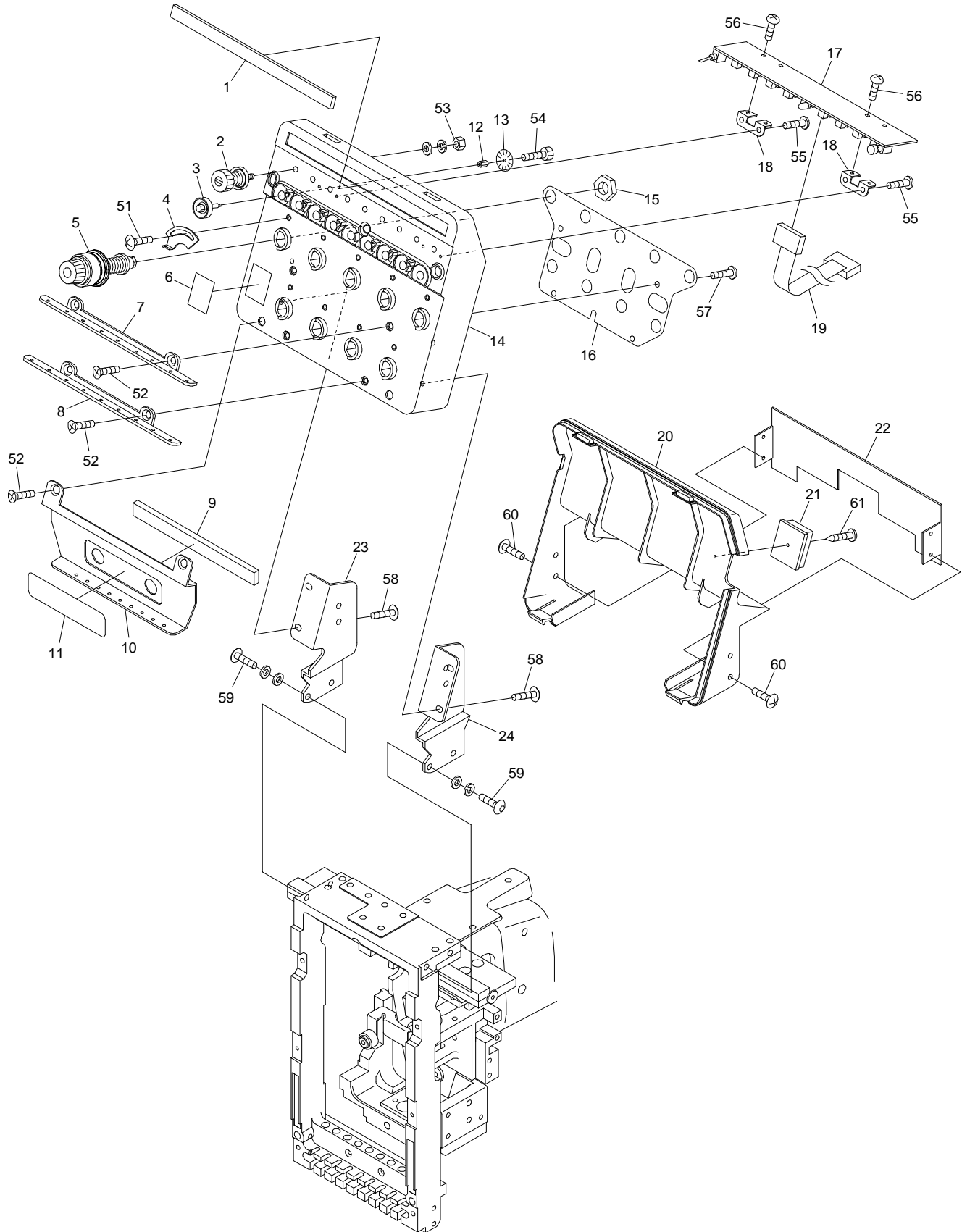


06A-1-1 Thread guide A (Standard)(ZN)(General head)





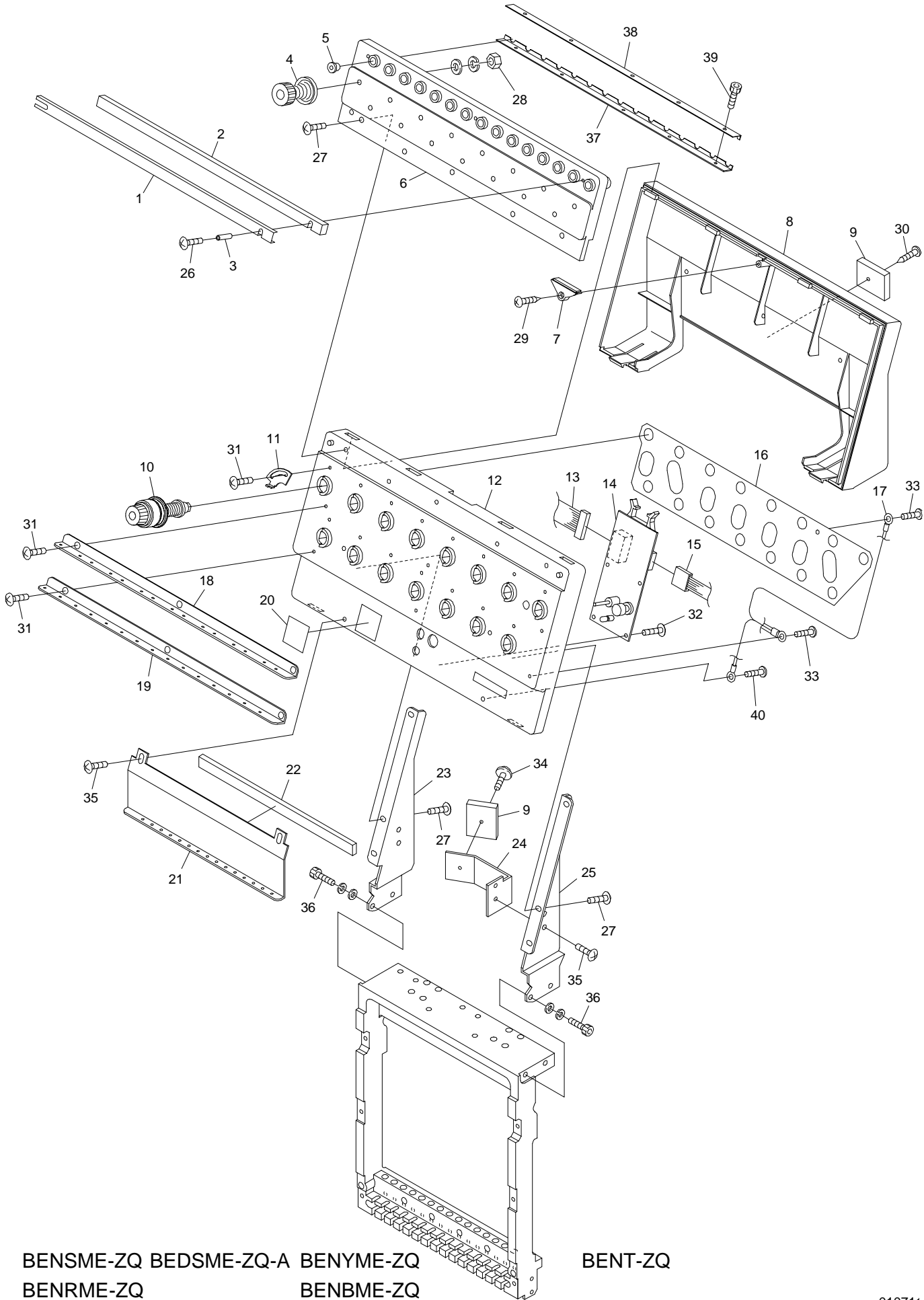
06A-1-2 Thread guide A (Standard)(ZN)(Head with color change mechanism)







06A-2 Thread guide A (Standard)(ZQ)



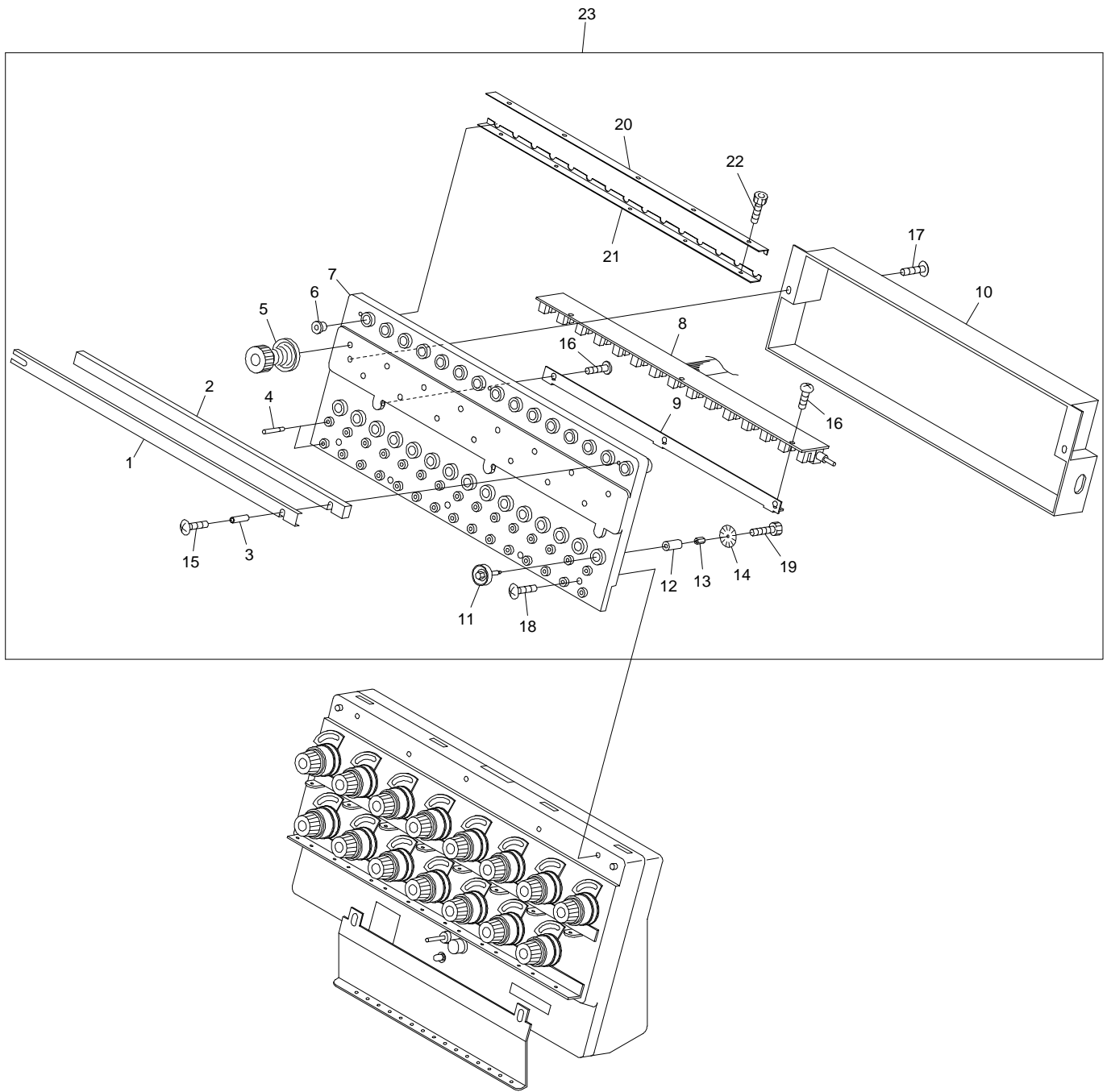
BENSME-ZQ BEDSME-ZQ-A BENYME-ZQ  
 BENRME-ZQ BENBME-ZQ

BENT-ZQ

## 06A-2 Thread guide A (Standard)(ZQ)

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	RD240291	Felt shaft	Hx1	
2	RD240301	Felt	Hx1	
3	A9012412	Spacer(f3x17L)	Hx2	
4	RD240321	Thread tension a'ssy(ZQ)	Hx15	
5	HT240480	Thread collar(For thread stand,white)	Hx15	
6	RD240280	Thread tension base	Hx1	
7	HT240240	Blind cap	Hx1	
8	RD240030	Tension cover(For 15 needle)	Hx1	
9	A9068032	FCW clamp(FCW-26)	Hx1 Hx2	NT Except for NT
10	RD240153	Dial thread tension unit complete(BEMAX)	Hx15	
11	RD240111	Thread spring adjusting plate	Hx15	
12	RD240022	Tension base case a'ssy	Hx1	
13	EBY01690	H1899 pin pin cable	Hx1	
14	EBY01641	4640 head switch board(With BEMAX cable)	Hx1	
15	EBY01700	H1900 additional pin pin cable	Hx1	
16	RD240121	Tension earth plate	Hx1	
17	A9053077	Tension base earth cable ZQ	Hx1	
18	RD240330	First thread guide plate(ZQ-A)	Hx1	
19	RD240340	Second thread guide plate(ZQ-A)	Hx1	
20		Number label	Hx1	Except for NT
21	LA240030	Second thread guide	Hx1	
22	LA240040	Sponge rubber	Hx1	
23	MG240010	Tension base(L)	Hx1	
24	RD240090	Cord holder	Hx1	Except for NT
25	MG240000	Tension base(R)	Hx1	
26		Truss screw M3x25		
27		Truss screw M4x10		
28		Hex.nut SM11/64		
29		Tapping screw f3x12		
30		Tapping pan screw f3x25		
31		Truss screw M3x5		
32		Truss screw M3x6		
33		Pan screw M3x6		
34		Pan screw for flange M3x8		Except for NT
35		Truss screw M4x6		
36		Hex.socket bolt M5x10(With washers)		
37	RD240440	Tube holder(Lower)	Hx1	
38	RD240430	Tube holder(Upper)	Hx1	
39		Hex.socket bolt M3x15		
40		Pan screw M4x6		

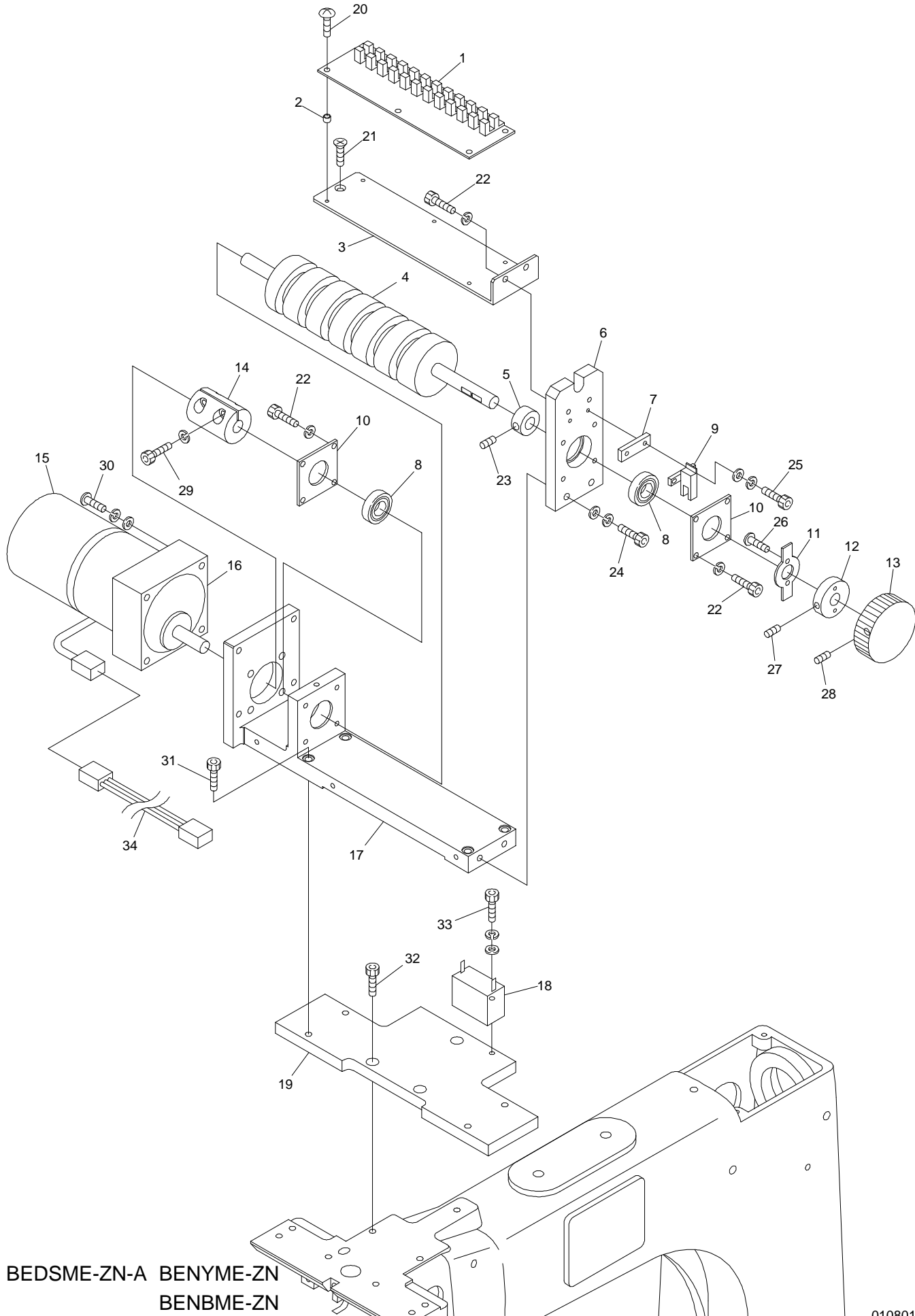
06B Thread guide B (Lower thread sensorium)(ZQ)



BENSME-ZQ BEDSME-ZQ-A BENYME-ZQ BENT-ZQ  
BENRME-ZQ BENBME-ZQ



07A-1 Color change A(ZN)

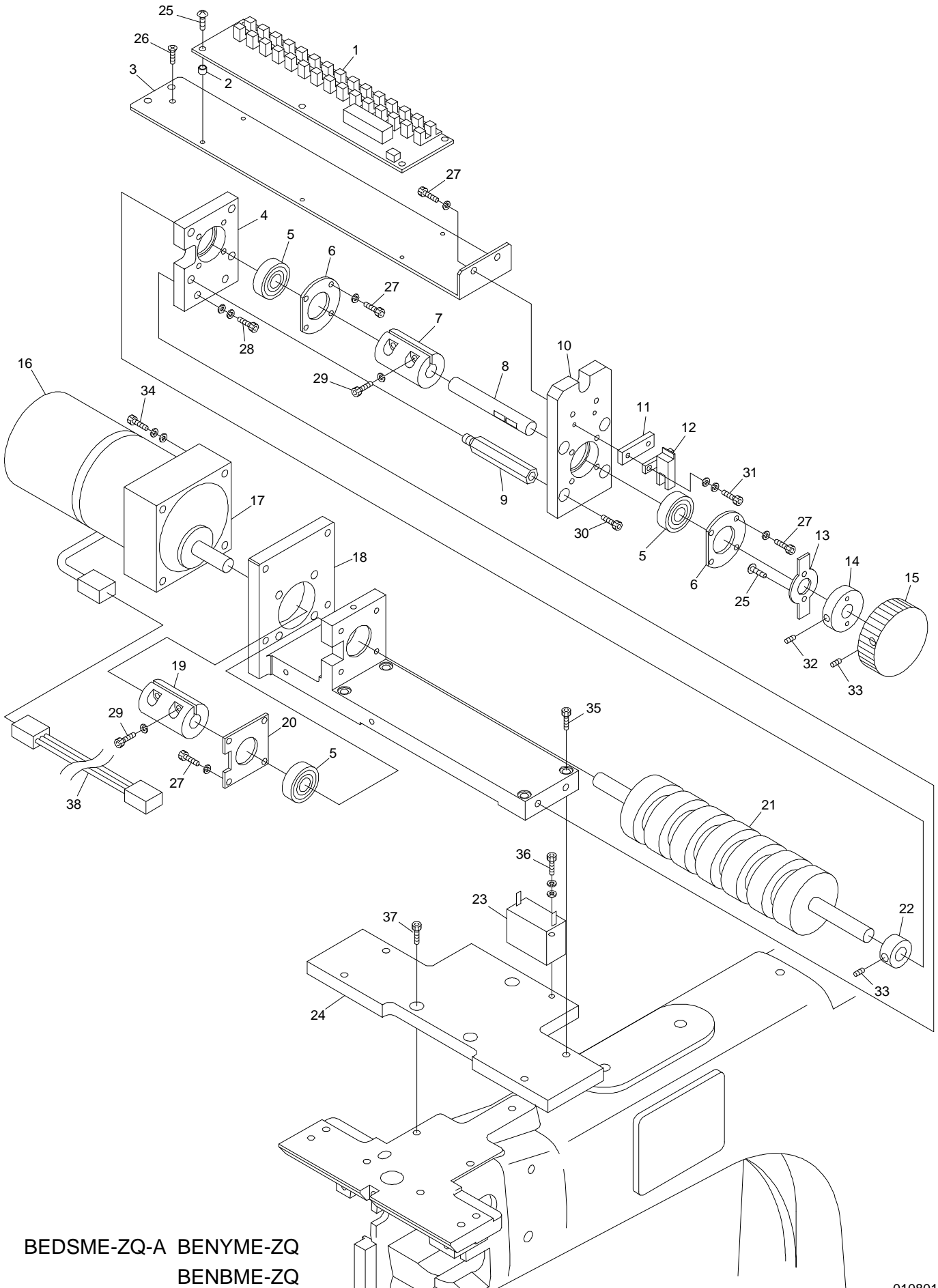


BEDSME-ZN-A BENYME-ZN  
BENBME-ZN

## 07A-1 Color change A (ZN)

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	EBY01623	3370 Needle positioner board (ZN)	1	
2	A9012208	Spacer(Roll bush) 5x4L	5	
3	KX330300	Color change board base plate	1	
4	KX330060	Color change cam	1	
5	KX330120	Bearing hold collar	1	
6	LA330170	Color change side plate(ZN-A)	1	
7	KX330250	Sensor spacer	1	
8	A9010062	Bearing 6000ZZ	2	
9	A9060063	Photo micro sensor EE-SX672A(OMRON)	1	
10	KX330110	Bearing hold	2	
11	KX330271	Rotation sensor dock	1	
12	KC330170	Detection plate collar	1	
13	KX330130	Manual knob	1	
14	RD330020	Motor coupling	1	6T max.
	RD330030	Coupling	1	8T min.
15	A9065092	Reversible motor 3RJ10GB-AUL-E4	1	6T max.
	A9065078	Reversible motor 3RK15GN-AUL-E13	1	8T min.
16	A9065093	Gear head 3GB18K	1	6T max.
	A9065079	Gear head 3GN18K	1	8T min.
17	LA330151	Color change base(ZN-A)	1	
18	A9054022	Condenser CH45UL	1	6T max.
	A9054023	Condenser CH60UL	1	8T min.
19	LA330120	Color change base plate	1	
20		Truss screw M3x10		
21		Flush screw M4x6		
22		Hex.socket bolt M4x10(With spring washer)		
23		Hex.socket set screw M6x5		
24		Hex.socket bolt M5x25(With washers)		
25		Hex.socket bolt M3x16(With washers)		
26		Truss screw M4x8		
27		Hex.socket set screw M5x10		
28		Hex.socket set screw M6x6		
29		Hex.socket bolt M4x15(With spring washer)		
30		Pan screw M4x60(With spring washer)		
31		Hex.socket bolt M5x25		
32		Hex.socket bolt M5x18		
33		Hex.socket bolt M4x10(With washers)		
34	LA510030	Between cable with color change motor	1	

07A-2 Color change A(ZQ)



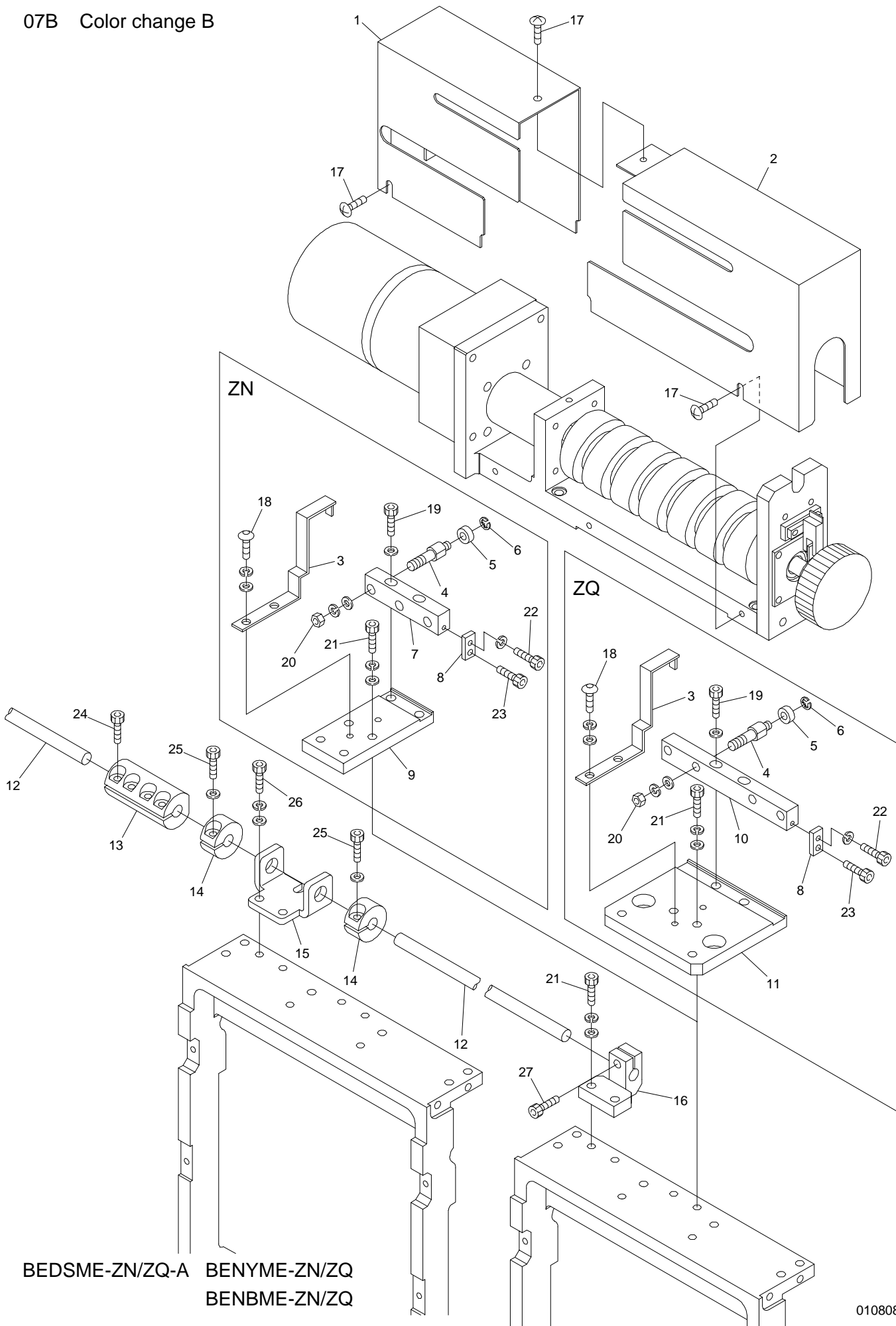
BEDSME-ZQ-A BENYME-ZQ  
BENBME-ZQ



## 07A-2 Color change A (ZQ)

ITEM	LIST NO.	DESCRIPTION	Q'TY	NOTE
1	EBY01650	Color change board	1	
2	A9012208	Spacer(Roll bush) f5x4L	5	
3	RD330081	Color change board base plate	1	
4	LA330060	Color change side plate(ZQ-A)	1	
5	A9010063	Bearing 6000ZZ	3	
6	RD330070	Bearing hold plate(2)	1	
7	RD330030	Coupling	1	
8	RD330040	Connecting shaft	1	
9	RD330050	Stud bolt	4	
10	LA330040	Color change top plate(ZQ-A)	1	
11	KX330250	Sensor spacer	1	
12	A9060063	Photo micro sensor EE-SX672A(OMRON)	1	
13	KX330271	Rotation sensor dock	1	
14	KC330170	Detection plate collar	1	
15	KX330130	Manual knob	1	
16	A9065092	Reversible motor 3RJ10GB-AUL-E4	1	6T max.
	A9065078	Reversible motor 3RK15GN-AUL-E13	1	8T min.
17	A9065093	Gear head 3GB18K	1	6T max.
	A9065079	Gear head 3GN18K	1	8T min.
18	LA330091	Color change base(ZQ-A)	1	
19	RD330020	Motor coupling	1	6T max.
	RD330030	Coupling	1	8T min.
20	RD330060	Bearing hold plate(1)	1	
21	RD330150	Color change cam	1	
22	KX330120	Bearing hold collar	1	
23	A9054022	Condenser CH45UL	1	6T max.
	A9054023	Condenser CH60UL	1	8T min.
24	LA330120	Color change base plate	1	
25		Truss screw M3x8		
26		Flush screw M4x6		
27		Hex.socket bolt M4x10(With spring washer)		
28		Hex.socket bolt M5x25(With washers)		
29		Hex.socket bolt M4x15(With spring washer)		
30		Hex.socket bolt M5x15		
31		Hex.socket bolt M3x16(With washers)		
32		Hex.socket set screw M5x10		
33		Hex.socket set screw M6x6		
34		Hex.socket bolt M4x60(With washers)		
35		Hex.socket bolt M5x25		
36		Hex.socket bolt M4x10(With washers)		
37		Hex.socket bolt M5x18		
38	LA510030	Between cable with color change motor	1	

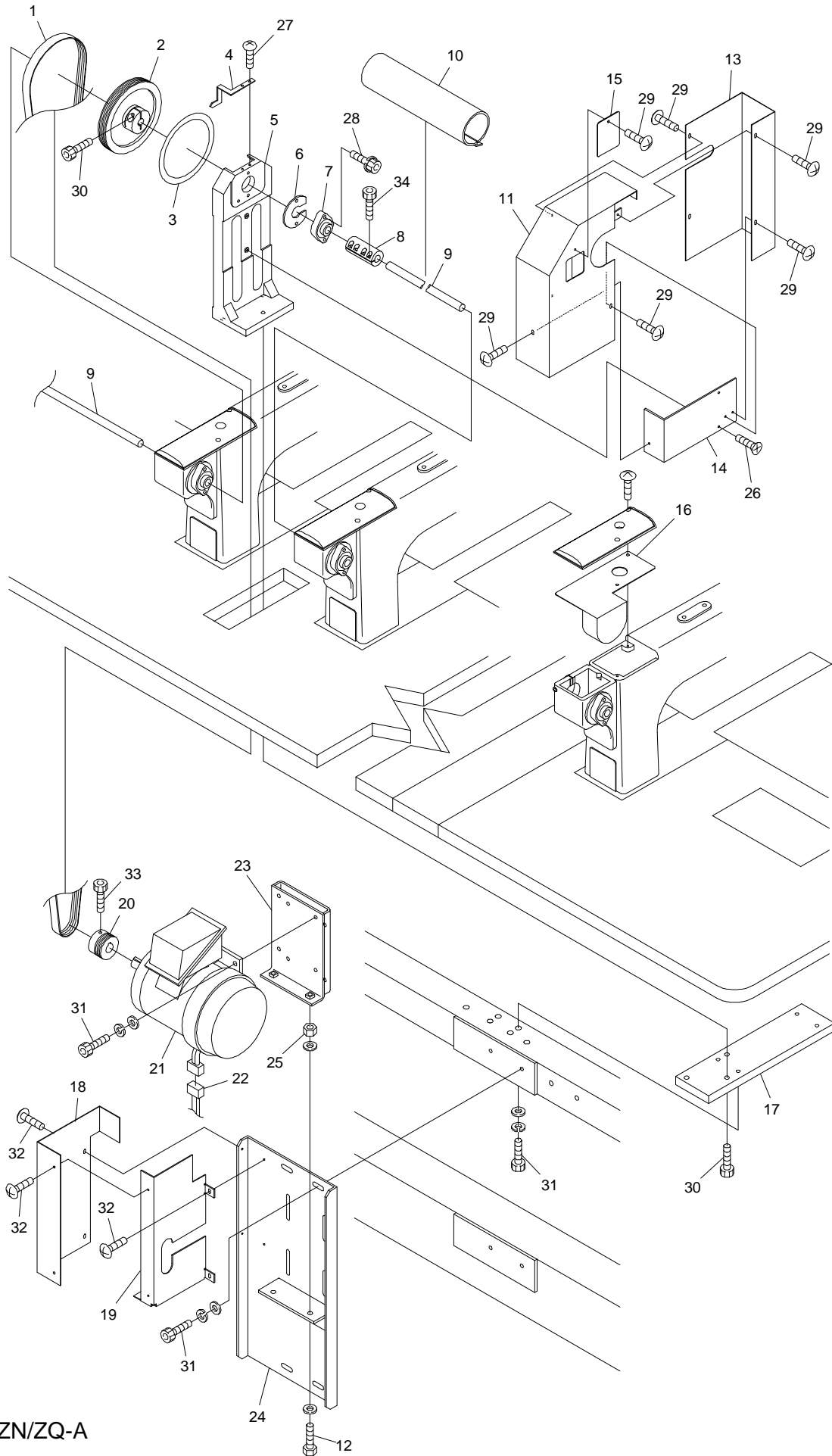
07B Color change B



BEDSME-ZN/ZQ-A BENYME-ZN/ZQ  
BENBME-ZN/ZQ



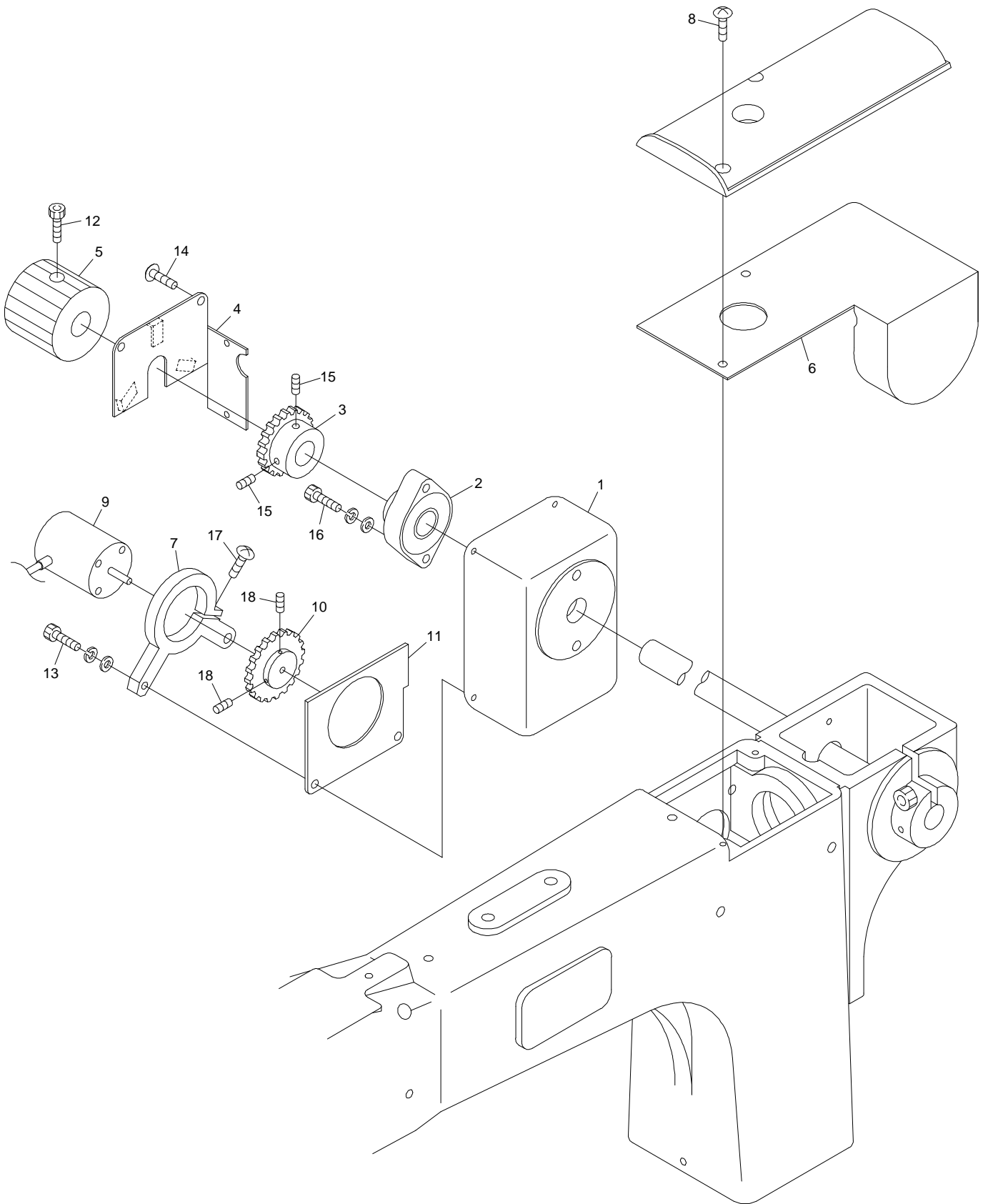
08 Drive



BEDSME-ZN/ZQ-A



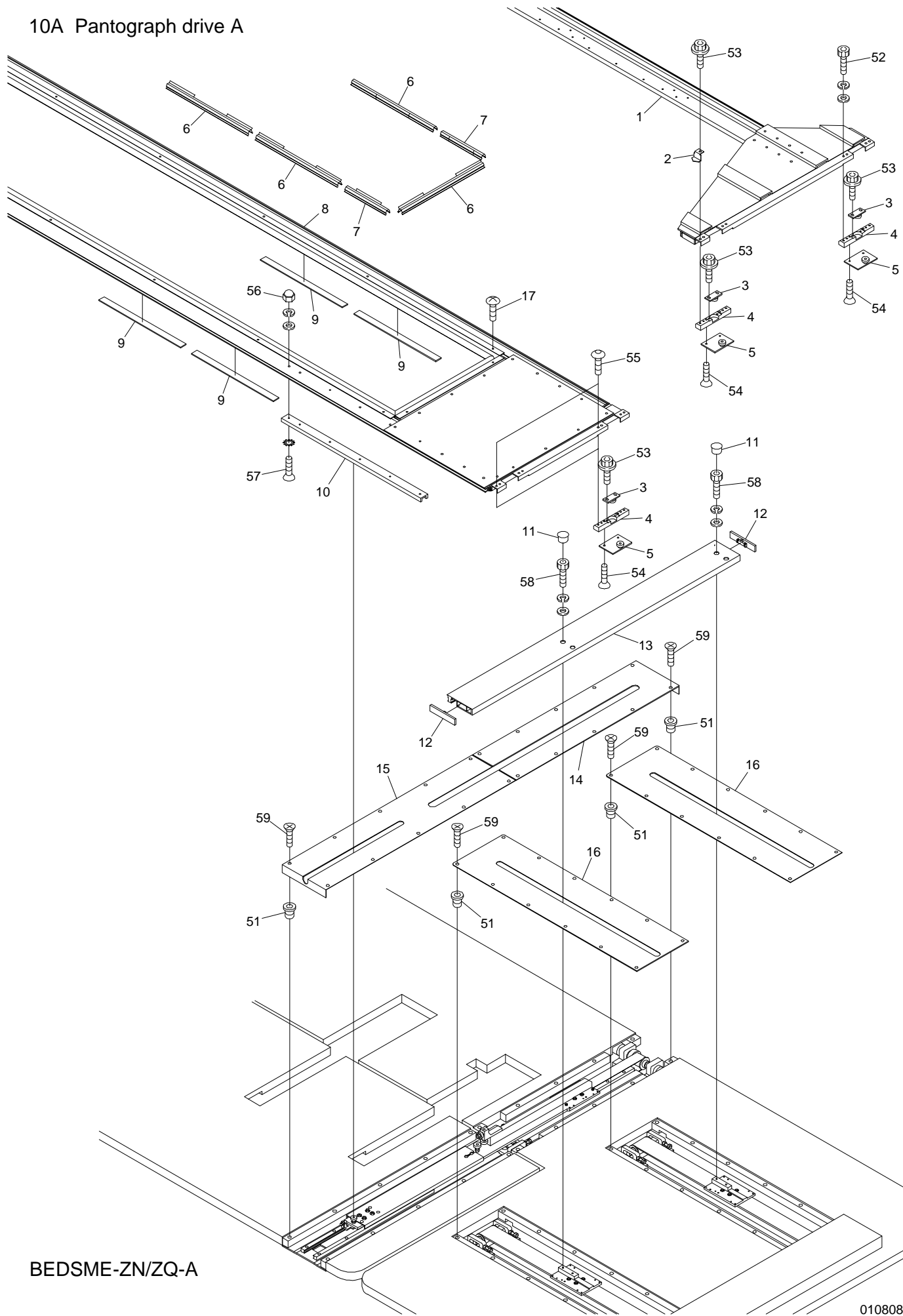
# 09 Connecting shaft



BENS-YN/YS    BENS-YN/YS-L    BENY-YN/YS    BEDSME-ZN/ZQ-A    BENYME-ZN/ZQ  
 BENR-YN/YS    BENR-YN/YS-L    BENB-YN/YS                         BENBME-ZN/ZQ



10A Pantograph drive A

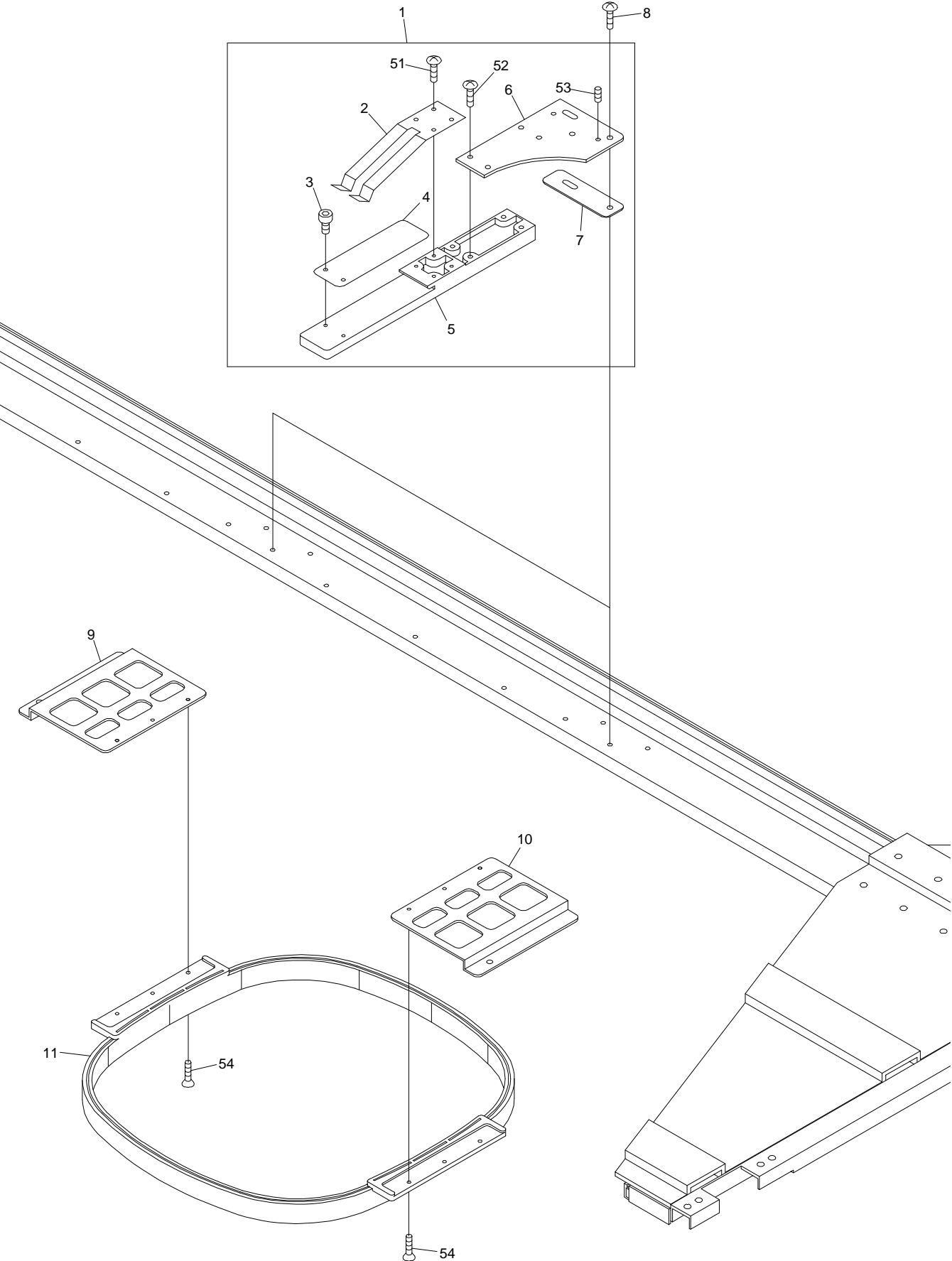


BEDSME-ZN/ZQ-A



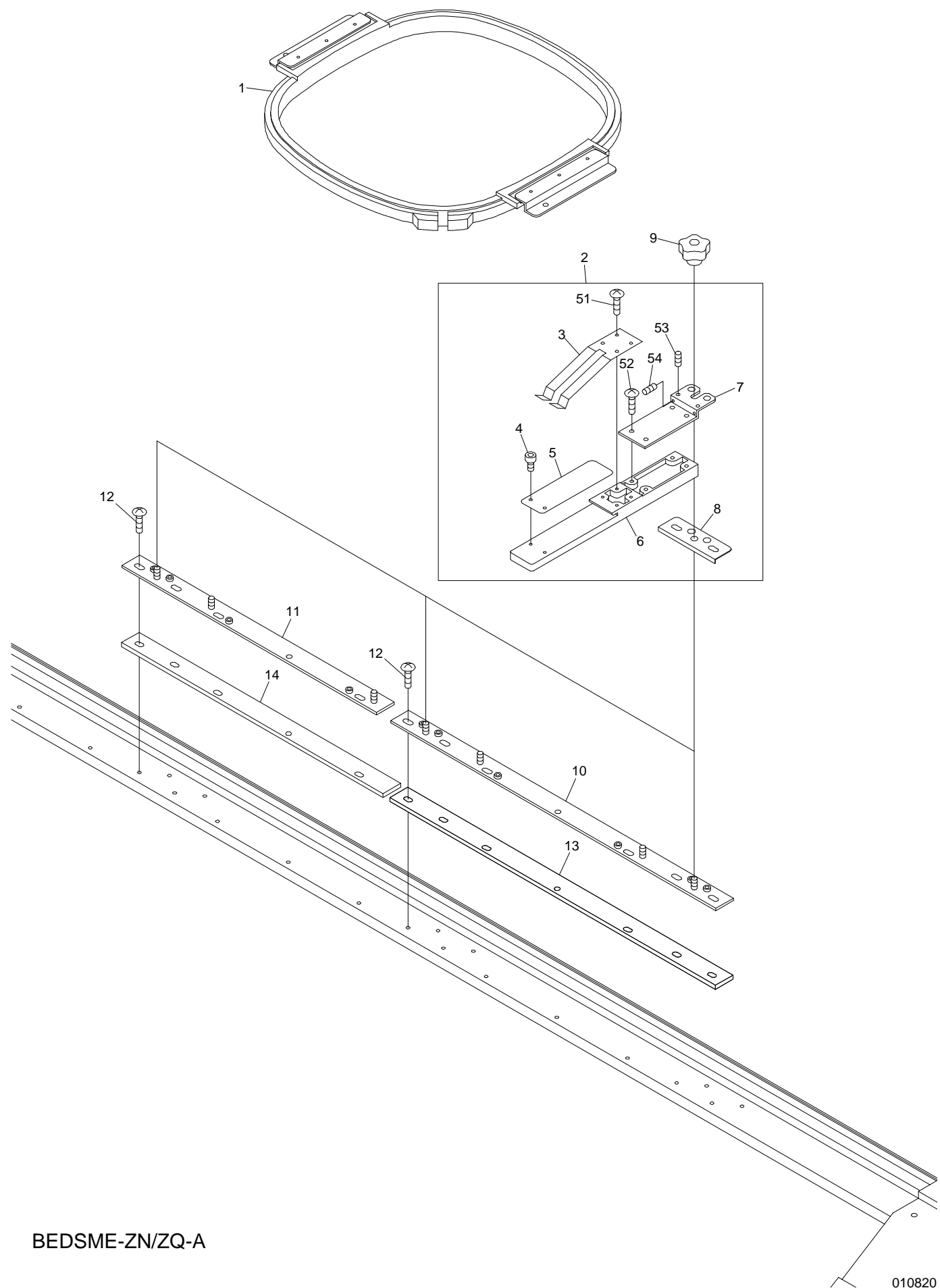


10B-1 Pantograph drive B



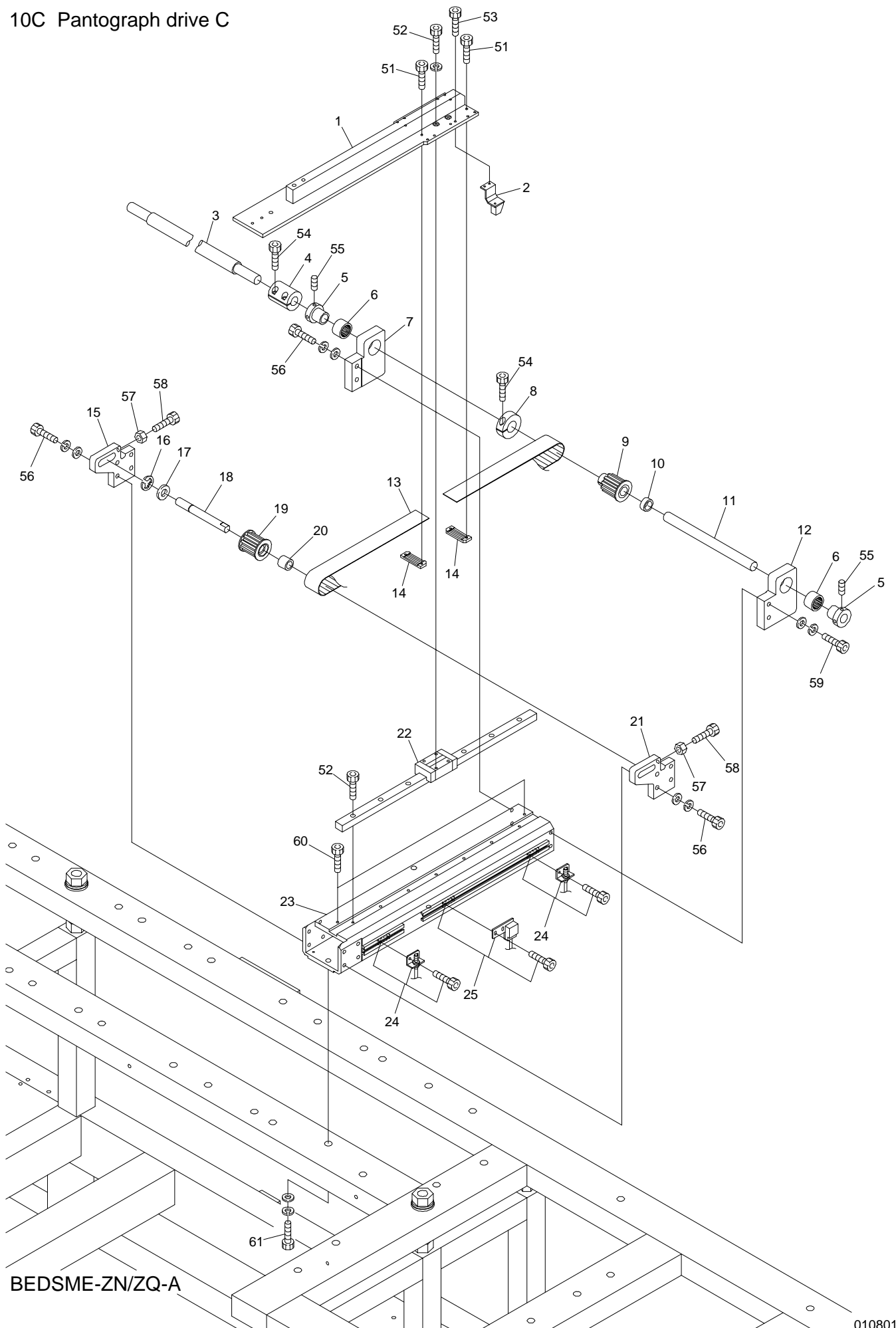


10B-2 Pantograph drive B (QS)



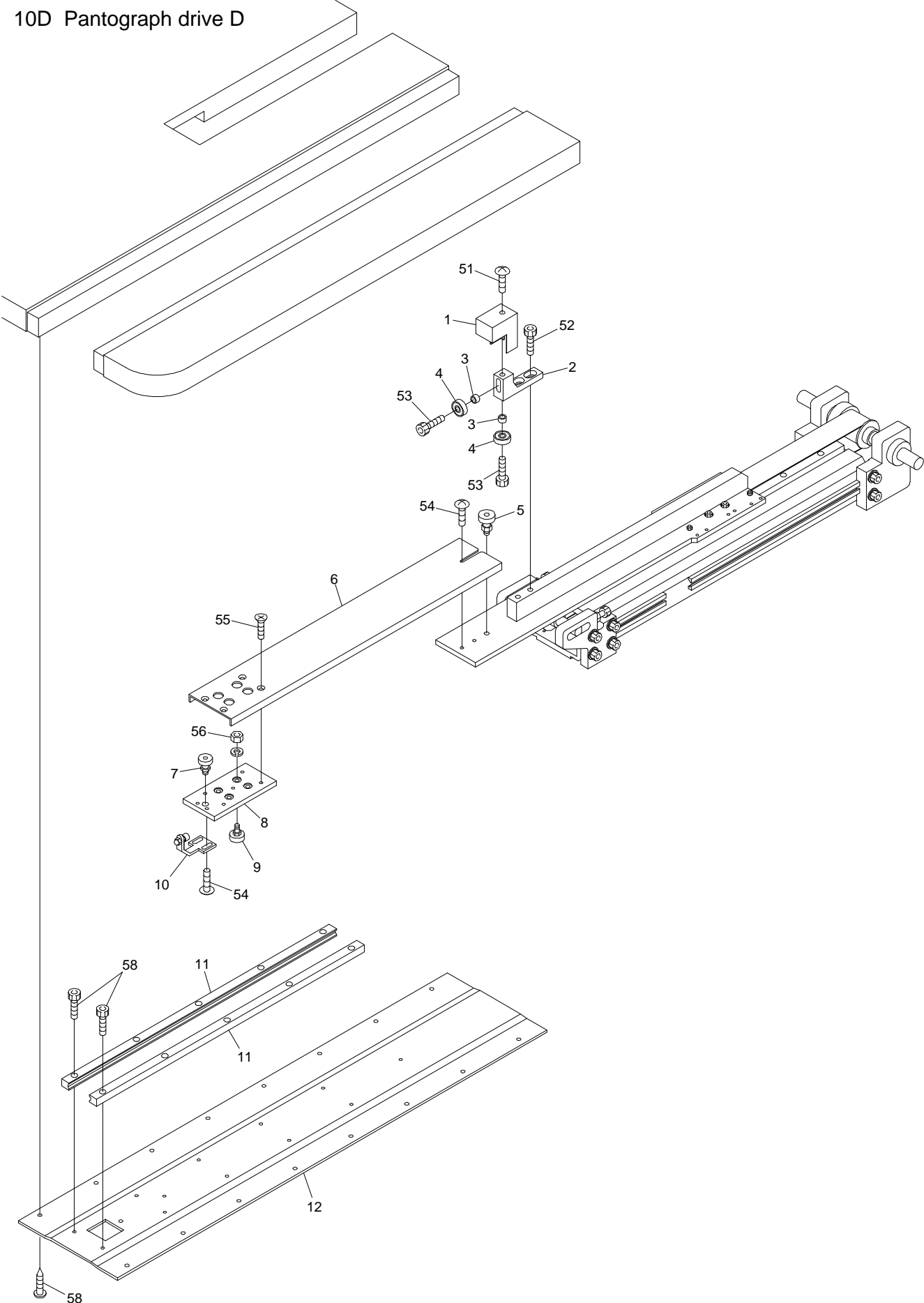


# 10C Pantograph drive C





10D Pantograph drive D

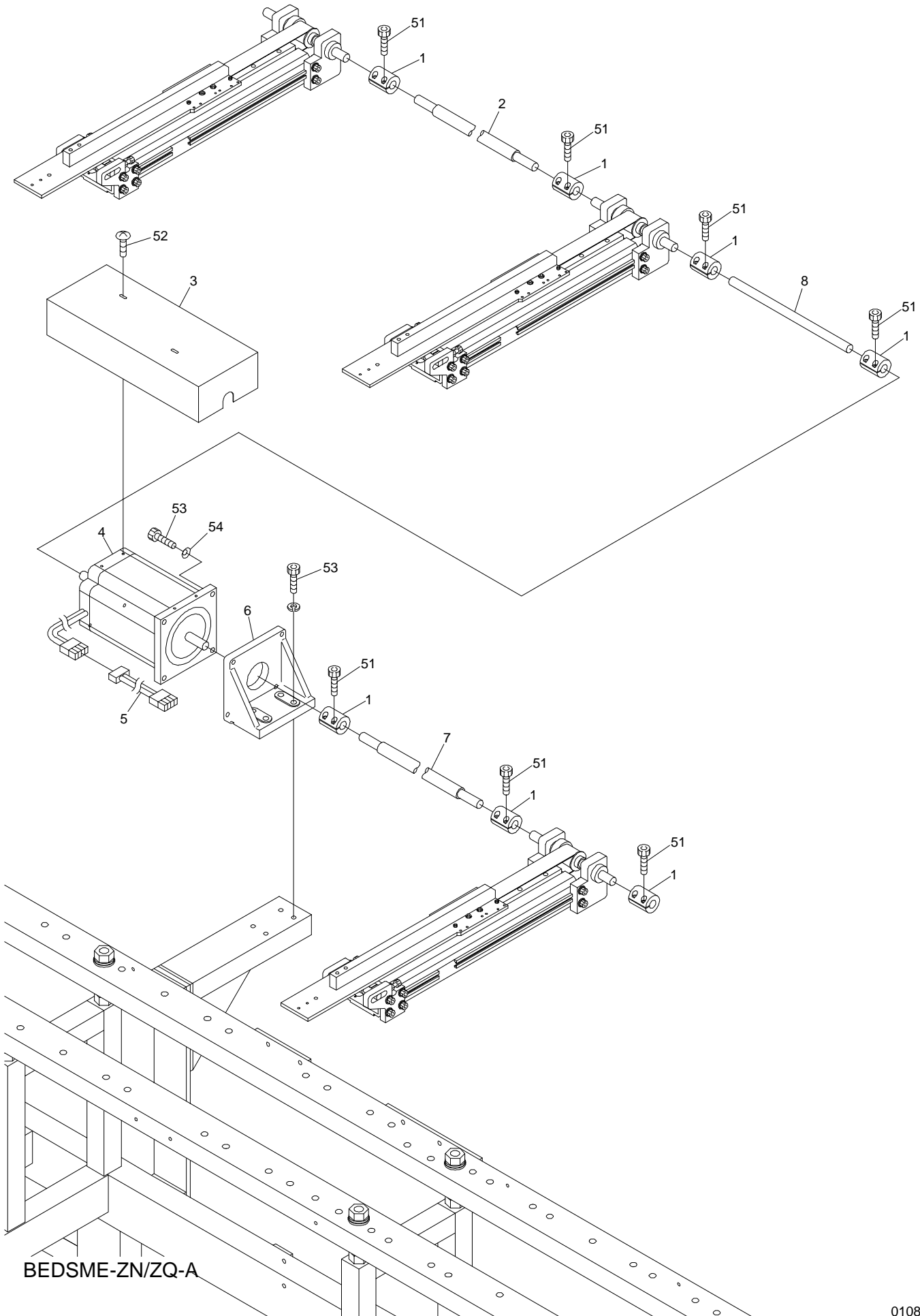


BEDSME-ZN/ZQ-A





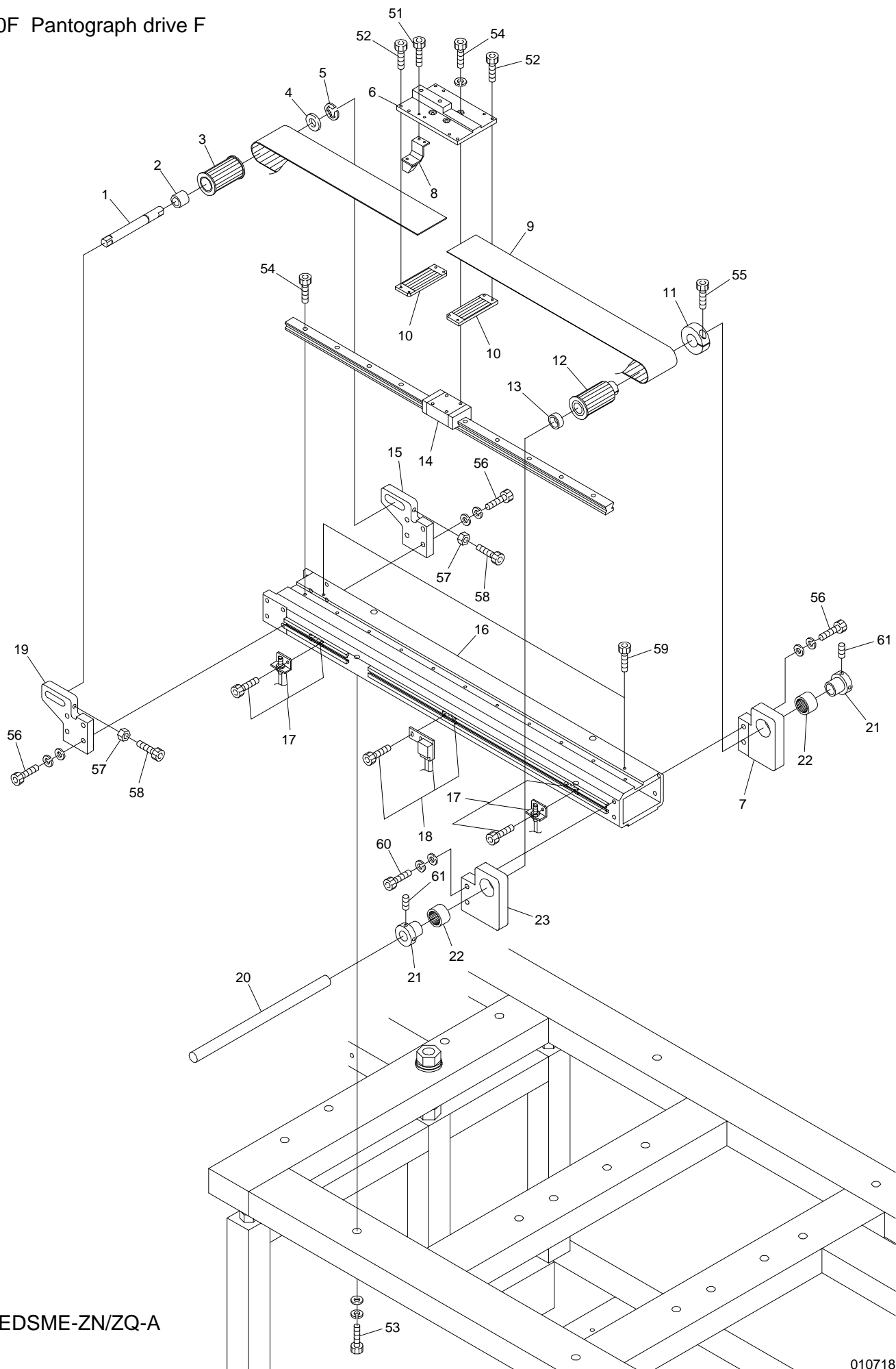
# 10E Pantograph drive E



BEDSME-ZN/ZQ-A



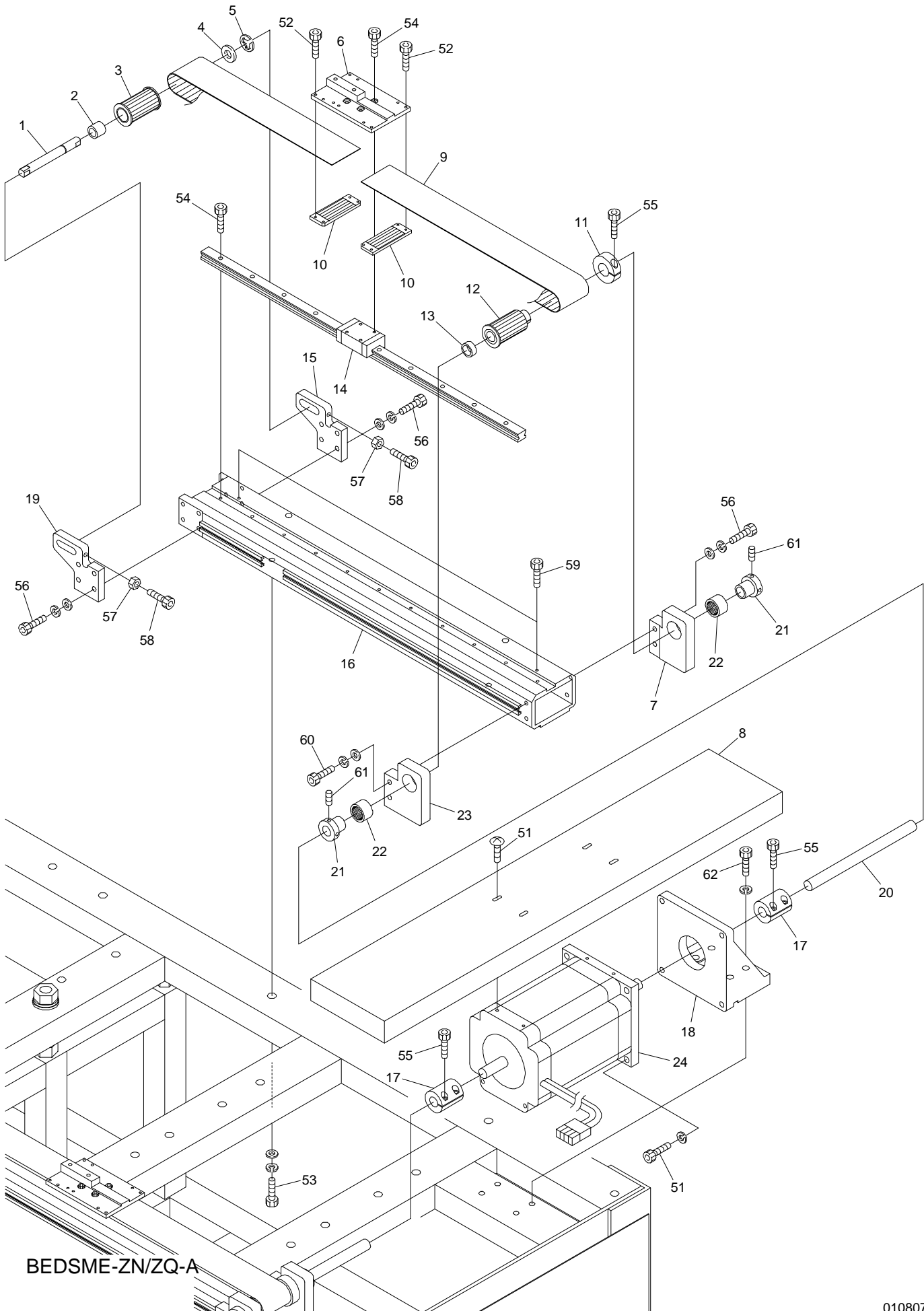
10F Pantograph drive F



BEDSME-ZN/ZQ-A



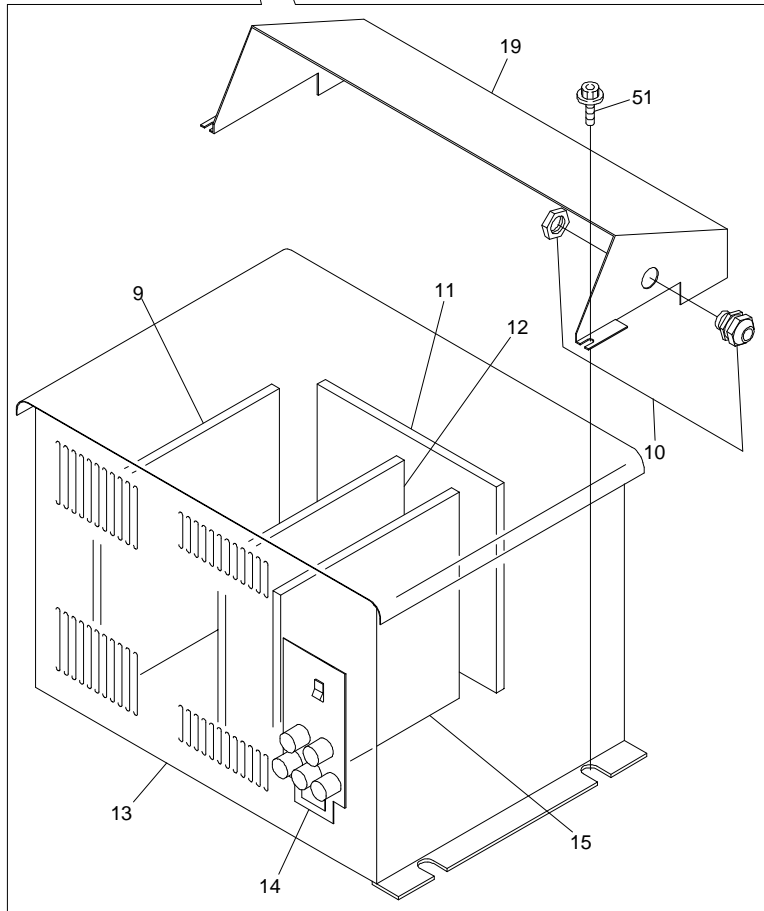
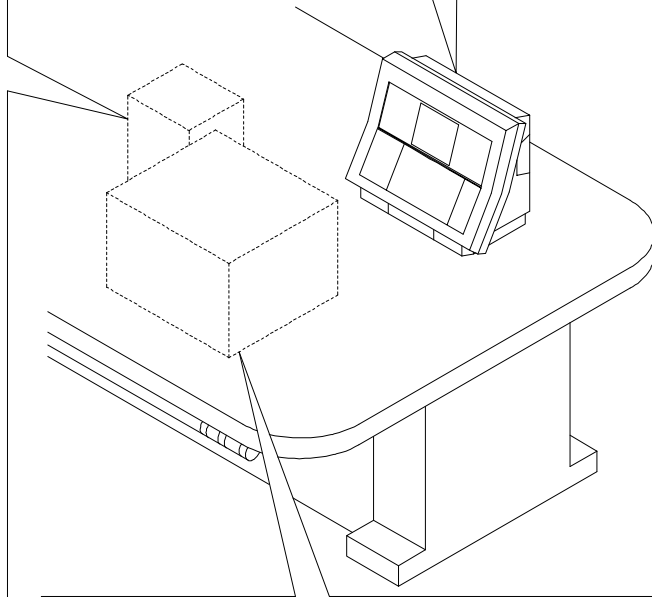
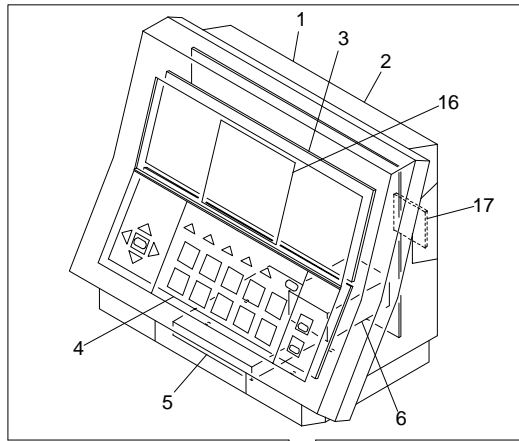
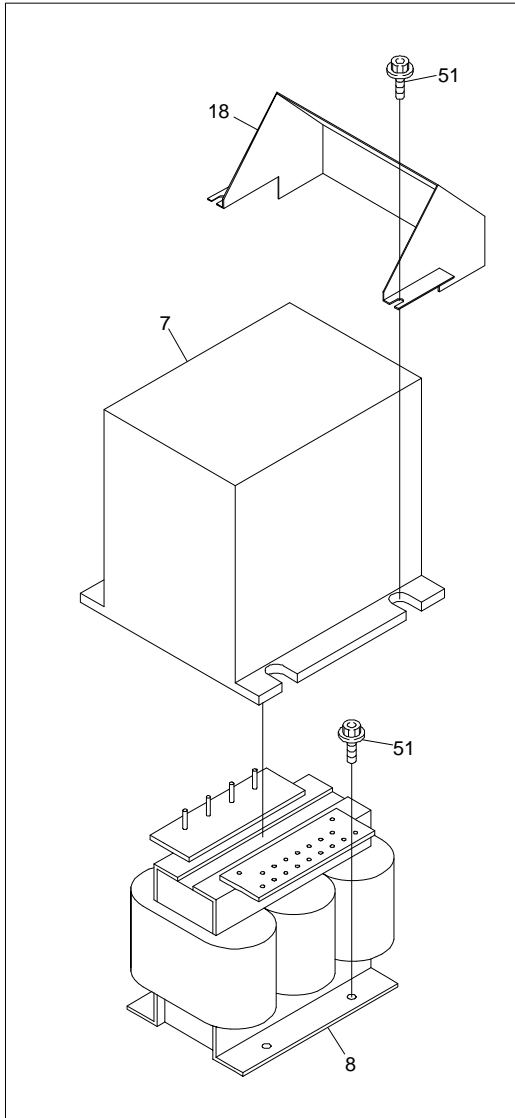
# 10G Pantograph drive G



BEDSME-ZN/ZQ-A



11A Control A



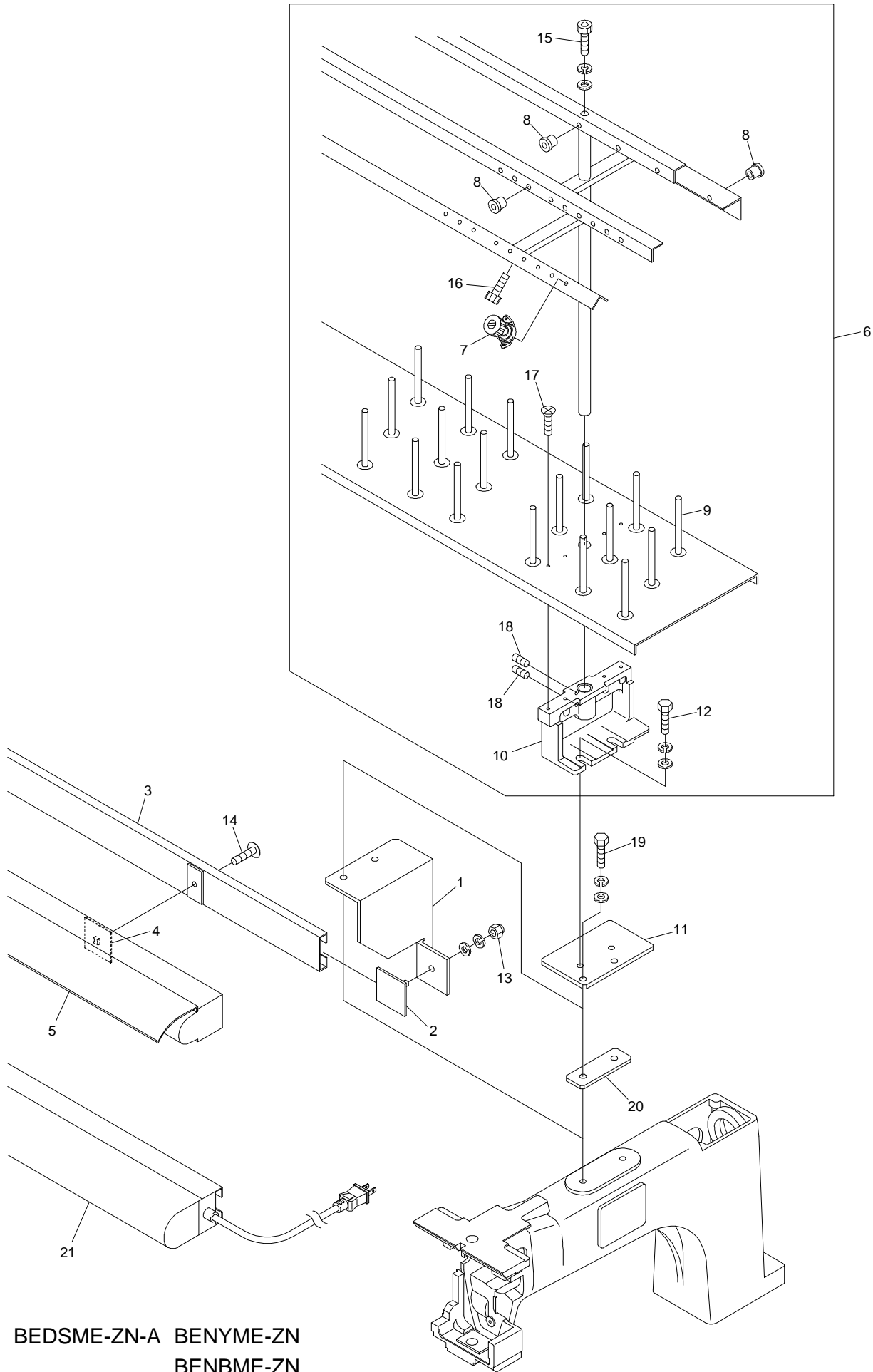








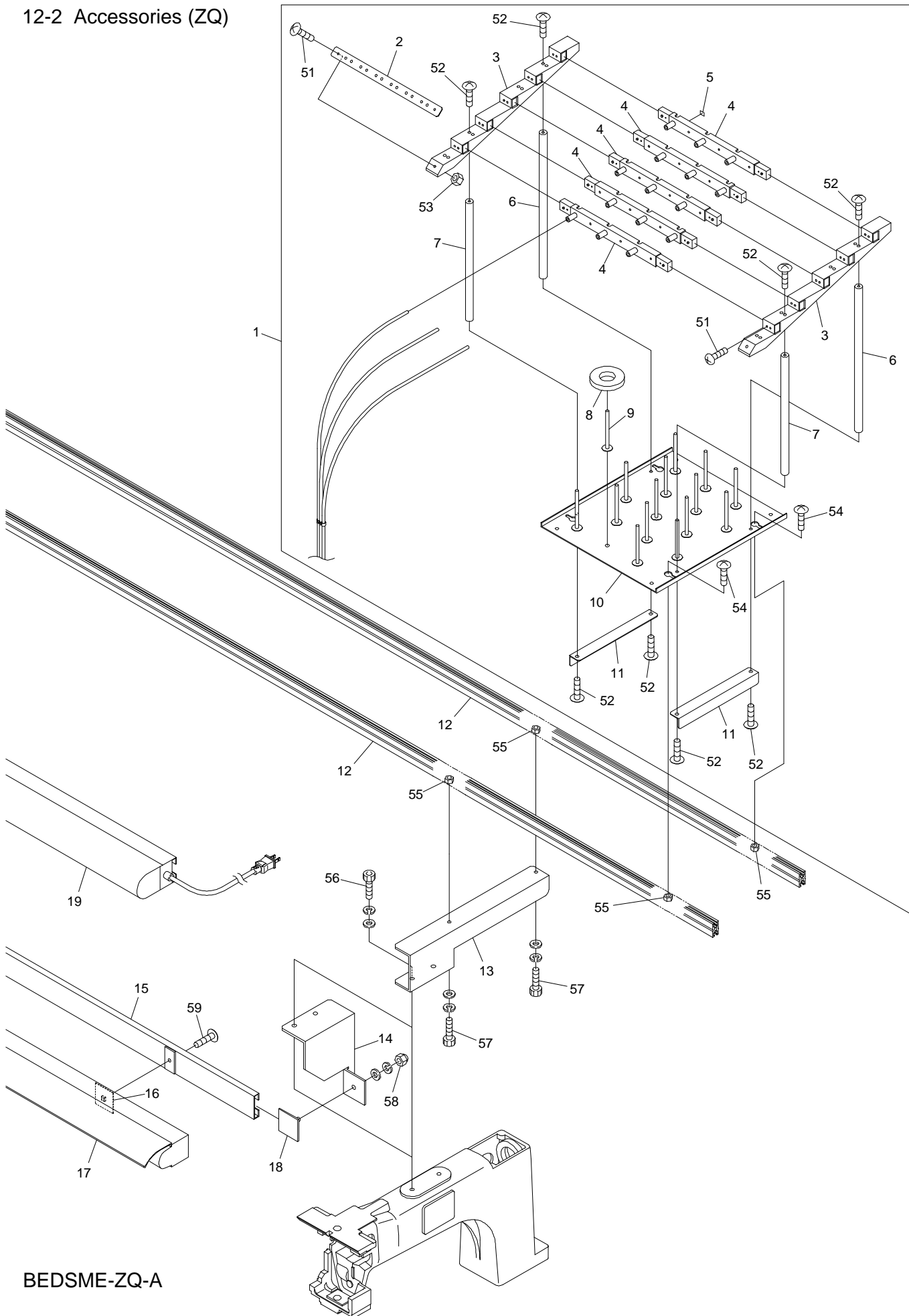
12-1 Accessories(ZN)



BEDSME-ZN-A BENYME-ZN  
BENBME-ZN



# 12-2 Accessories (ZQ)



BEDSME-ZQ-A

