

*Barudan*

**BENYHE-ZQ-B04/06**

**PARTS BOOK**



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Barudan America, Inc.  
29500 Fountain Parkway  
Solon, Ohio 44139 USA

Part Numbers are subject to change due to continuing improvements.



**BENYHE-ZQ-B  
BENBHE-ZQ-B  
HIGH SPEED AUTOMATIC EMBROIDERY  
MACHINE**

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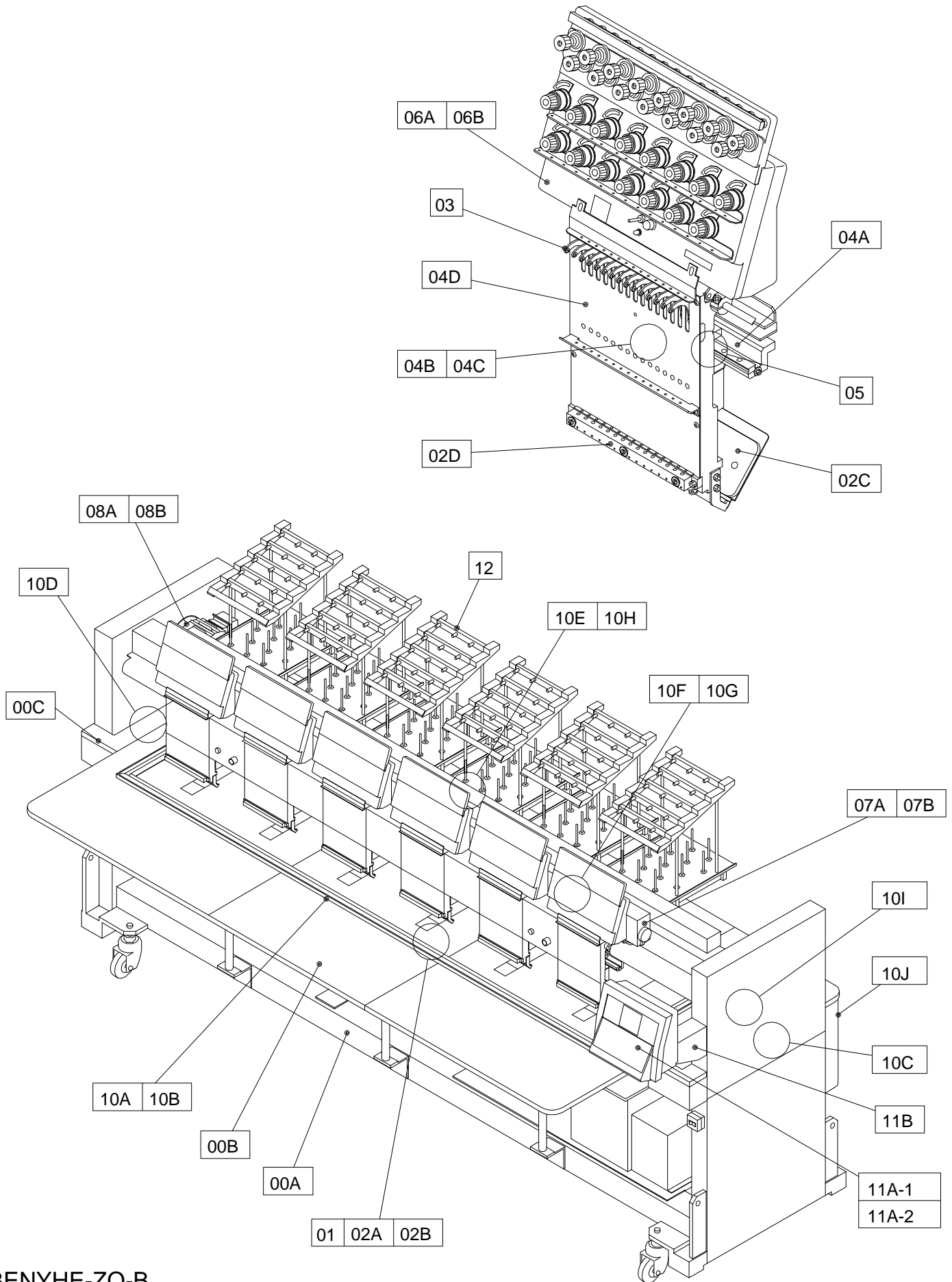
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# MACHINE LAYOUT (BENYHE-ZQ-B)

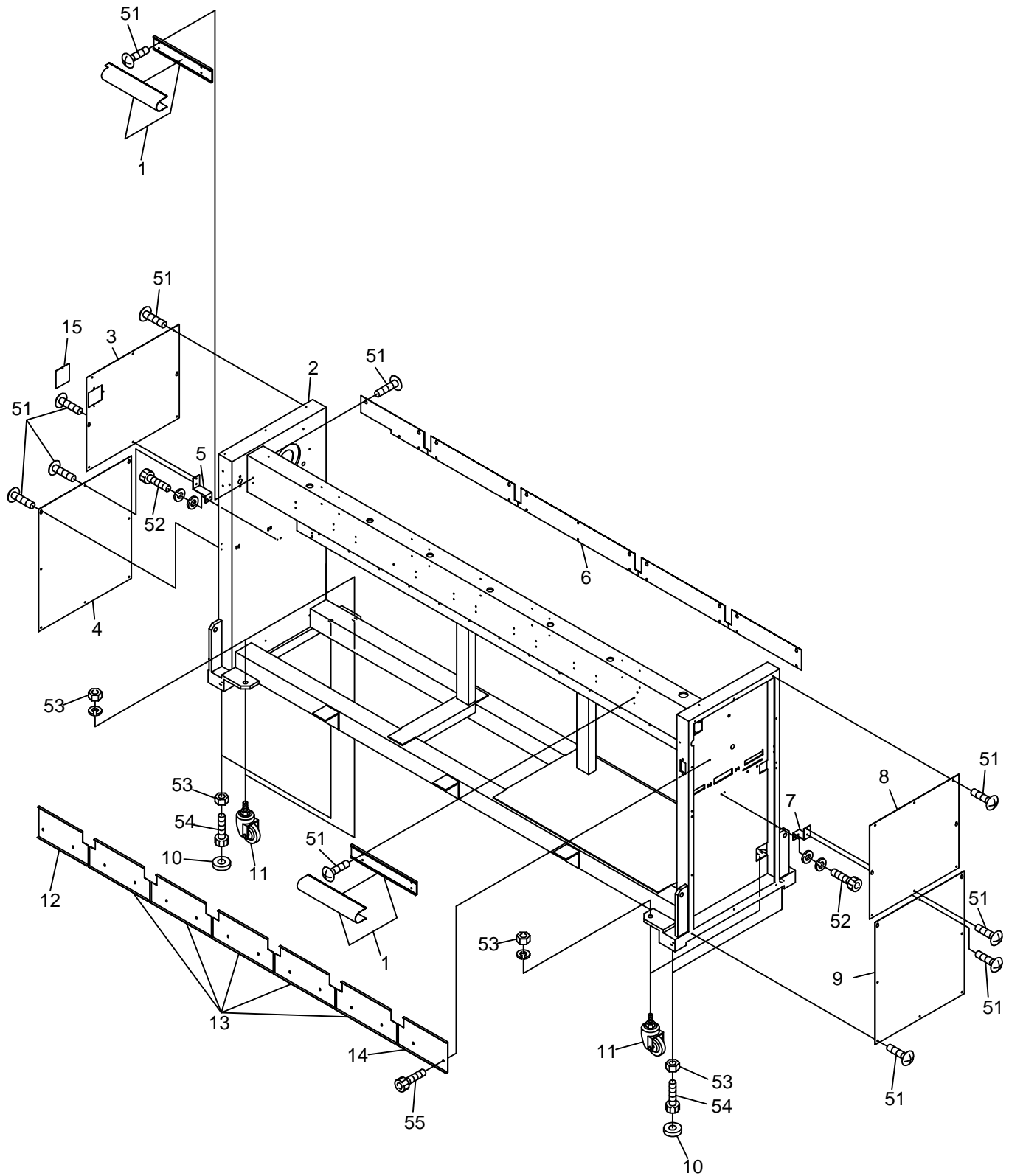


BENYHE-ZQ-B  
BENBHE-ZQ-B





# 00A TABLE FRAME A

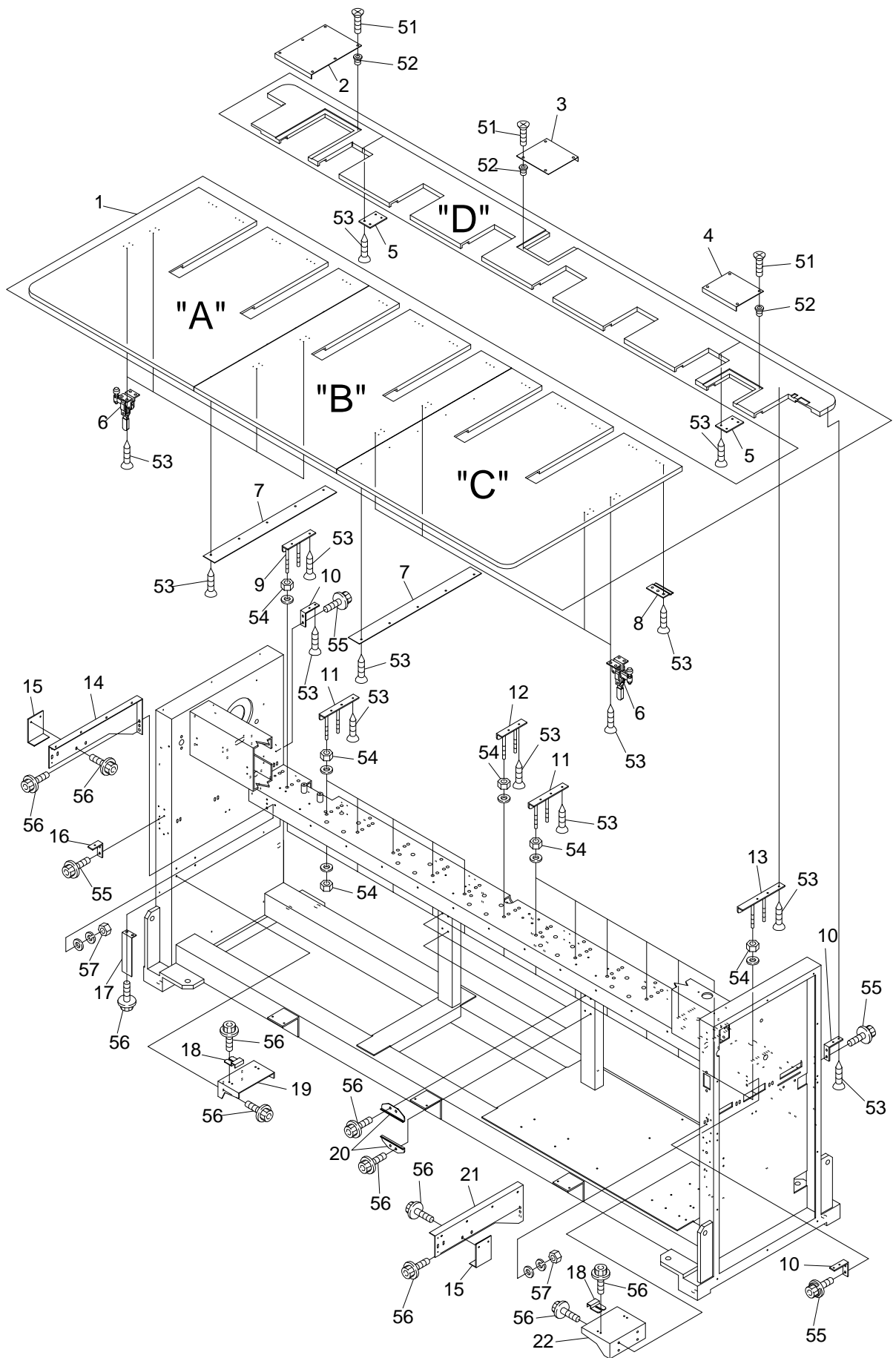


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# 00B TABLE FRAME B

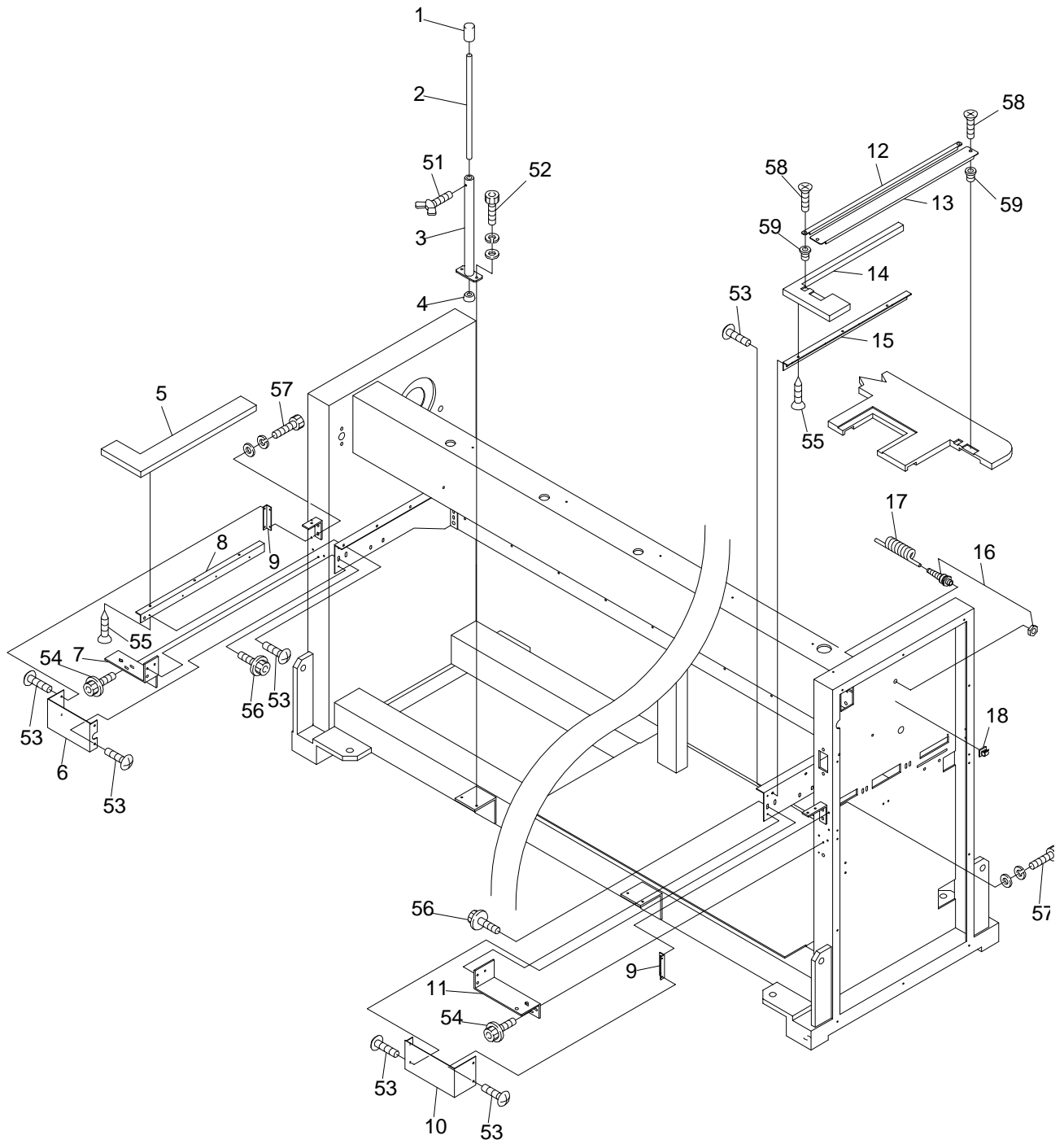


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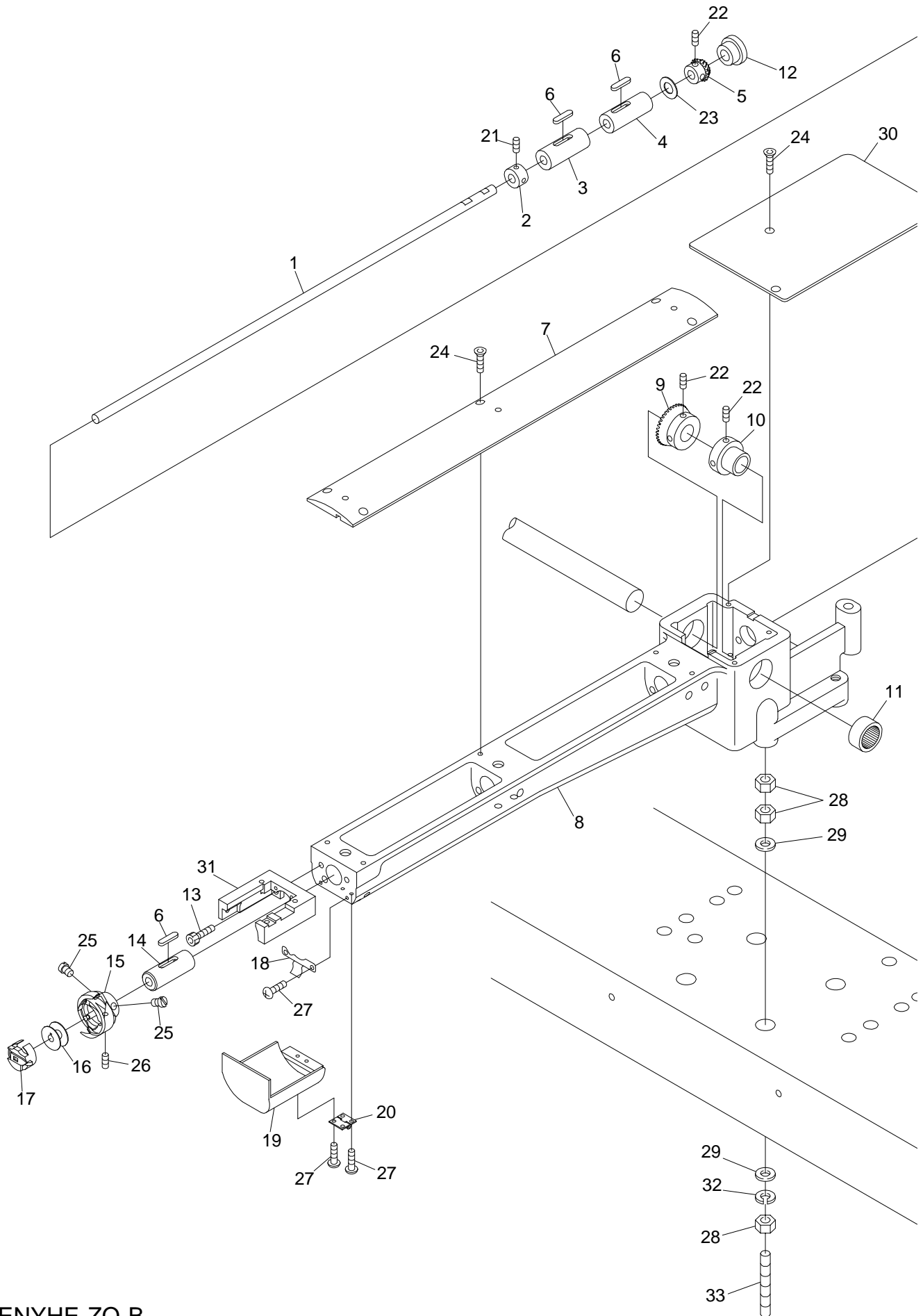
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# 01 HEAD BED



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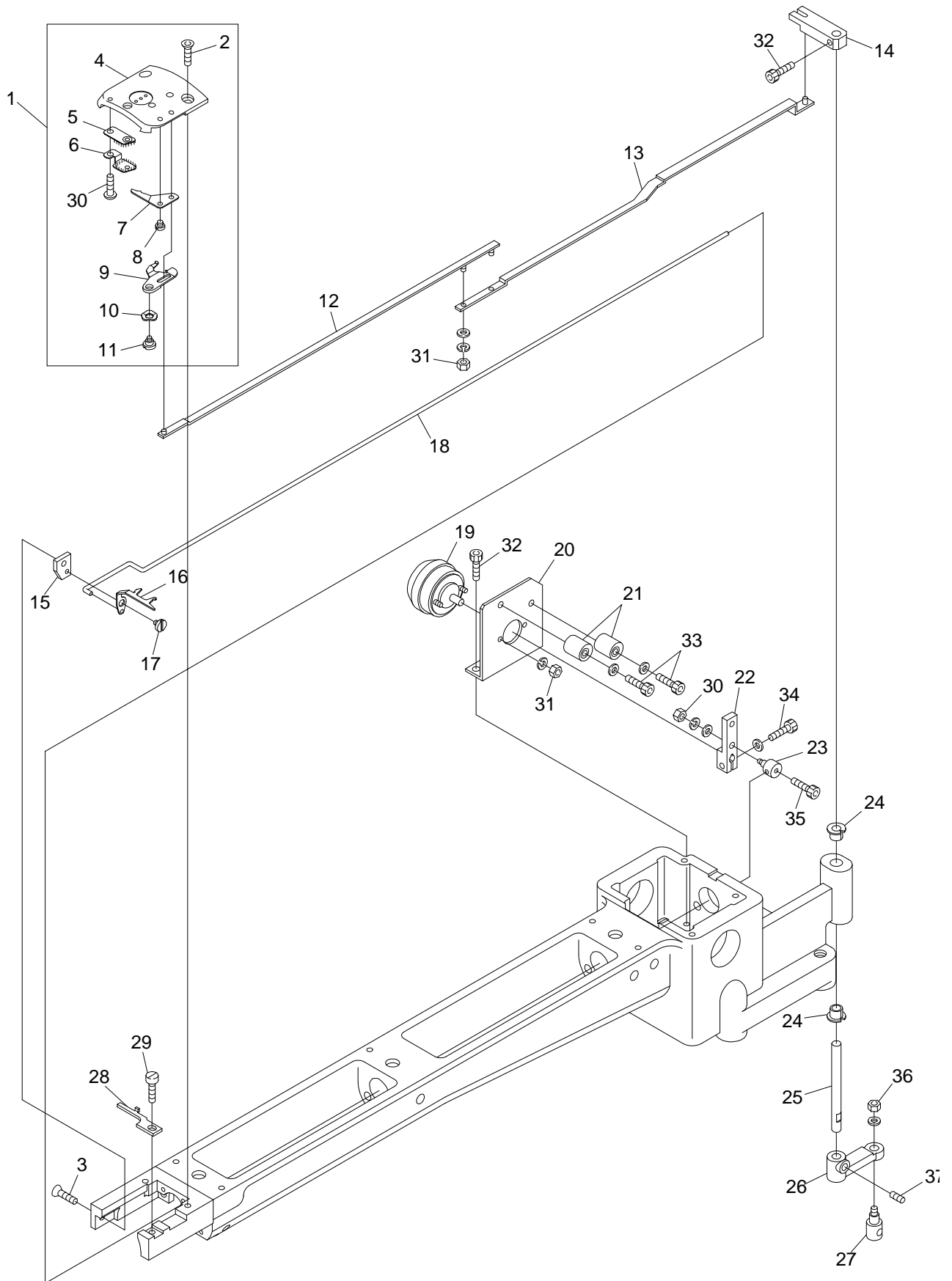
**01 Head-Bed**

(H=Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	HS210021	Lower Shaft	Hx1	Small Hook
	HS210020	Lower Shaft	Hx1	Medium Hook
2.	KF220290	Lower Shaft Collar	Hx1	
3.	KF220230	Lower Shaft Metal (Front)	Hx1	
4.	KL220270	Lower Shaft Metal (Rear)	Hx1	
5.	HP220712	Lower Shaft Gear (Small )	Hx1	
6.	KL220140	Oil Felt "C" (5 x 25 x 20)	Hx3	
7.	HS210190	Cylinder Bed Cover	Hx1	
8.	HS210013	Cylinder Bed, R-Type	Hx1	Small Hook
	HS210230	Cylinder Bed, R-Type	Hx1	Medium Hook
9.	HP321082	Lower Shaft Connecting Gear (Large)	Hx1	
10.	HP321090	Lower Shaft Connecting Collar	Hx1	
11.	A9011111	Needle Bearing (TLA-2012Z)	Hx1	
12.	A9014059	Grommet (MG-1)	Hx1	
13.		Hex Socket Bolt M5x15		
14.	KF220240	Arm Shaft Bushing (Upper)	Hx1	
15.	KF220700	Sewing Hook (HSL-ATR M1QTS)	Hx1	Small Hook
	HB220010	Sewing Hook (HMS-A M2QTS)	Hx1	Medium Hook
16.	KF220530	Bobbin	Hx1	Small Hook
	KF220421	Bobbin (HMS DBM)	Hx1	Medium Hook
17.	KF220981	Bobbin Case (SC35-BNS-3)	Hx1	Small Hook
	KF220302	Bobbin Case (BC-DB MZ2 NBL5)	Hx1	Medium Hook
18.	KC250482	Cylinder Bed Hook Cover Holding Spring	Hx1	
19.	HS210030	Cylinder Bed Hook Cover	Hx1	
20.	A9012027	Hinge (TH-TM-72)	Hx1	
21.		Hex Socket Set Screw SM ¼-40 x 4		
22.		Hex Socket Set Screw M5 x 6		
23.	A9012154	Thrust Washer (TRA-512)	Hx1	
24.	KX250080	Throat Plate Screw (Hex Socket)	Hx7	
25.		Screw SM 11/64-40 x 5		
26.		Set Screw SM 11/64-40 x 5		
27.		Phillips Pan Head Screw M3 x 6		
28.		Hex Nut M8		
29.		Flat Washer M8		
30.	HS210042	Bed Cover	Hx1	
31.	LA210080	Throat Plate Base	Hx1	Small Hook
	HS210200	Throat Plate Base	Hx1	Medium Hook
32.		Spring Washer M8		
33.		Hex Socket Set Screw M8 x 70		

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# 02A THREAD CUT A



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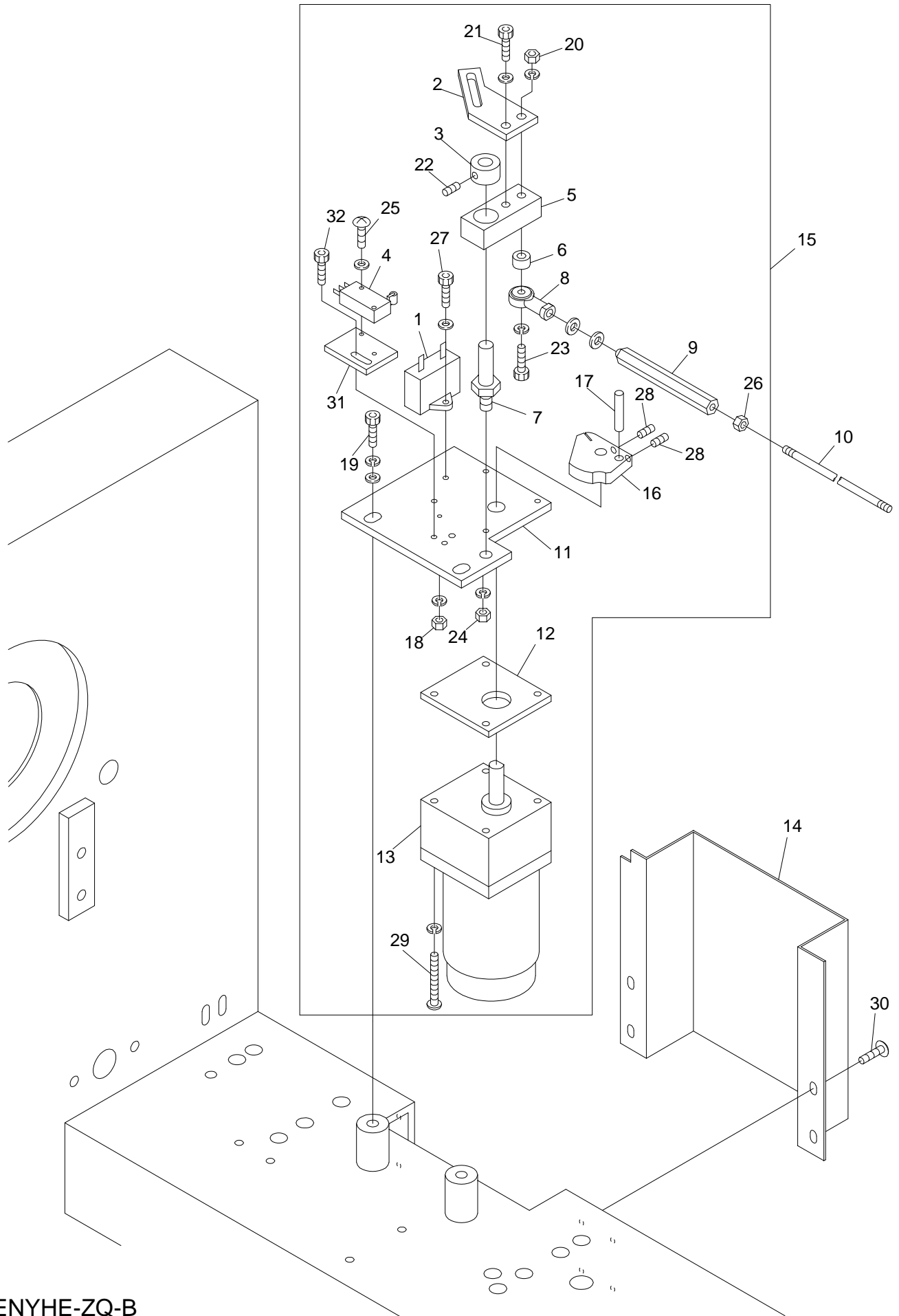
**02A Thread Cut A**

(H=Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	KX270281	Throat Plate Assembly (MK-5)	Hx1	With Washer
	ZKX270282	Throat Plate Assembly, ZN/ZQA (MK-5)		Without Washer
2.	KX250080	Throat Plate Screw	Hx2	
3.		Hex Socket Flush Screw M4x 6	Hx1	
4.	KX270022	Throat Plate, ZN/ZQA (MK-5)	Hx1	
5.	HT270160	Lower Thread Support Stay (Upper)	Hx1	
6.	HT270180	Lower Thread Support Stay (Lower)	Hx1	
7.	KN270961	Fixed Knife	Hx1	
8.	KX270010	Fixed Knife Set Screw	Hx1	
9.	KN270952	Driving Knife	Hx1	
10.	A9013066	Wave Washer (WW-5 SK)	Hx1	
11.	KC270970	Knife Turning Shaft	Hx1	
12.	HS210111	Knife Drive Rod A	Hx1	
13.	HS210121	Knife Drive Rod B	Hx1	
14.	HS210100	Knife Lever (Upper)	Hx1	
15.	HS210050	Fork Attaching Stay	Hx1	
16.	HS210143	Trimmer Fork	Hx1	Small Hook
	HS210142	Trimmer Fork	Hx1	Medium Hook
17.	KC271001	Upper Thread Knife Turning Shaft	Hx1	
18.	HS210070	Fork Driving Rod	Hx1	
19.	A9056030	Rotary Solenoid, Trimmer Fork (M960371R)(ETL)	Hx1	
20.	HS210061	Solenoid Stay	Hx1	Small Hook
	HS210060	Solenoid Stay	Hx1	Medium Hook
21.	KN272401	Eccentric Stopper	Hx2	
22.	KC271940	Solenoid Lever A	Hx1	
23.	HS210080	Connecting Clamp	Hx1	
24.	A9011173	DU Bushing With Flange (MB060-12FDU)	Hx2	
25.	HS210090	Knife Lever Driving Shaft	Hx1	
26.	KN271560	Knife Lever (Lower)	Hx1	
27.	HM270000	Connecting Bar Clamp	Hx1	
28.	KX270000	Hook Position Bracket	Hx1	
29.	A9012007	Hook Position Bracket Screw (SM11/64-40 x 7)	Hx1	
30.		Pan Head Screw M3 x 3		
31.		Hex Nut M3		
32.		Hex Socket Bolt M4 x 8		
33.		Hex Socket Bolt M4 x 18		
34.		Hex Socket Bolt M4 x 10		
35.		Hex Socket Bolt M3 x 5		
36.		Hex Nut M4		
37.		Hex Socket Set Screw M5 x 6		

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# 02B THREAD CUT B

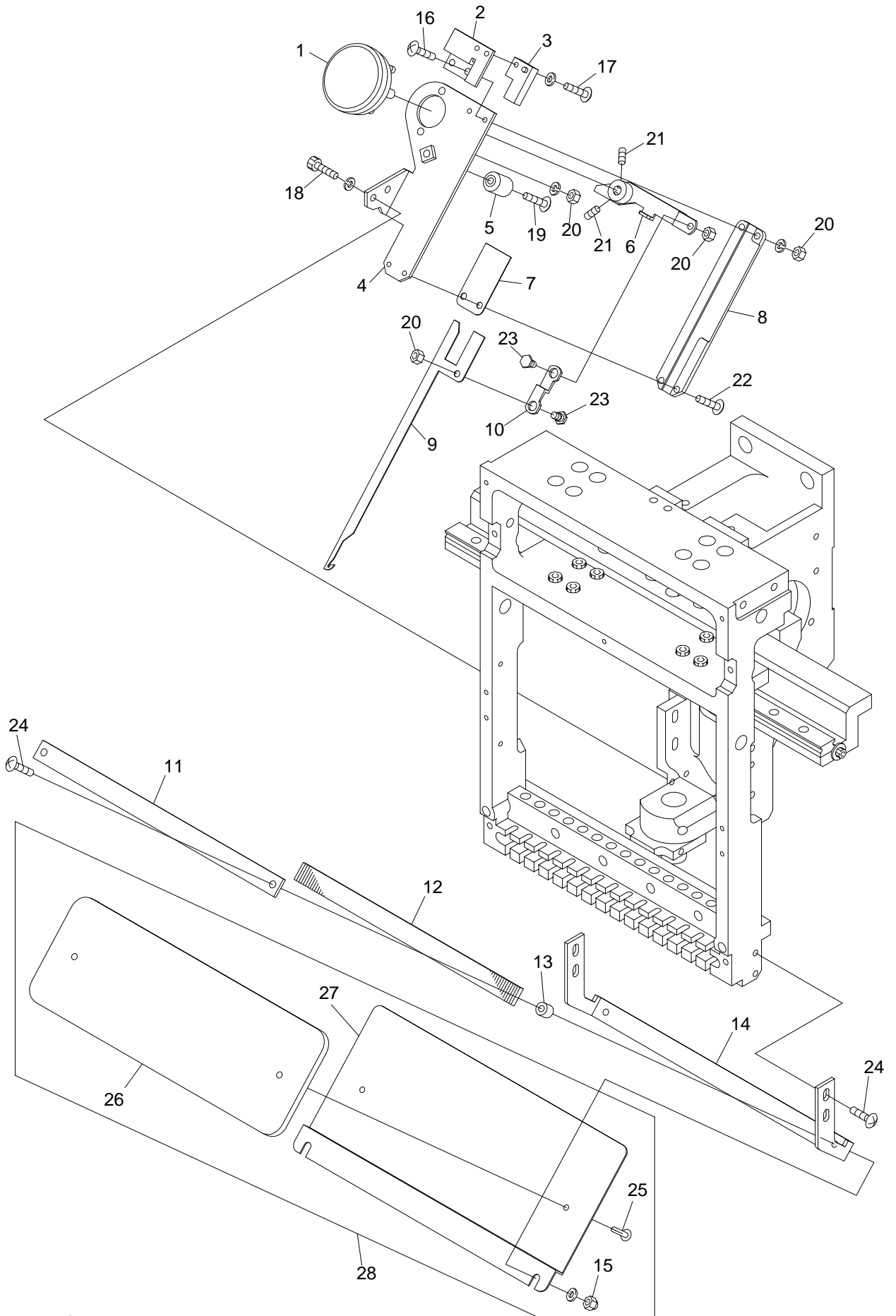


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BENBHE-ZQ-B



# 02C THREAD CUT C



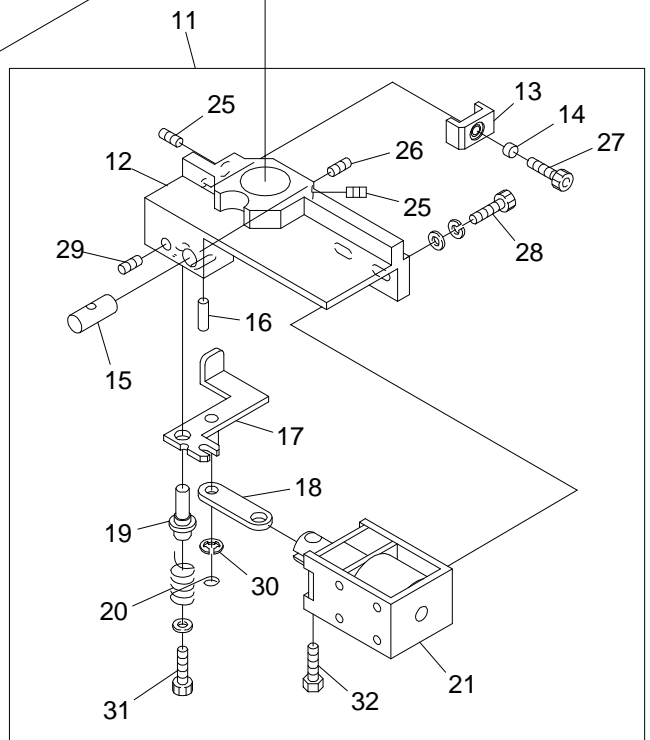
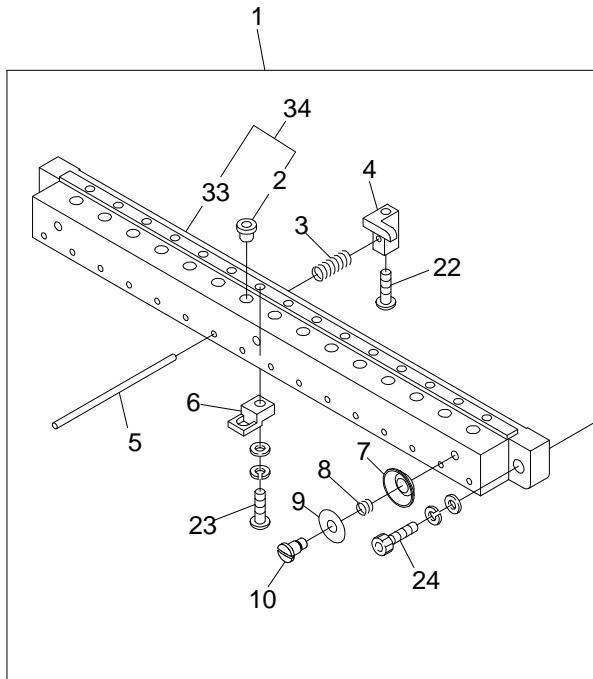
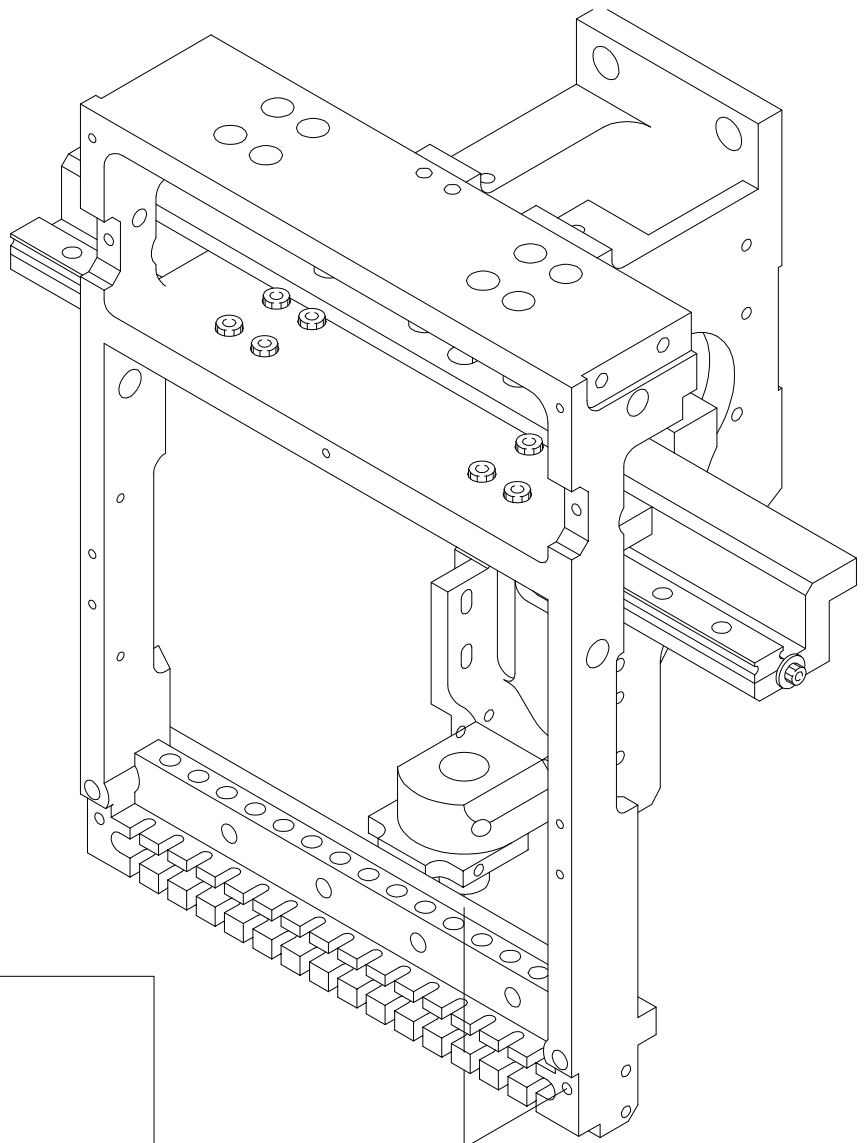
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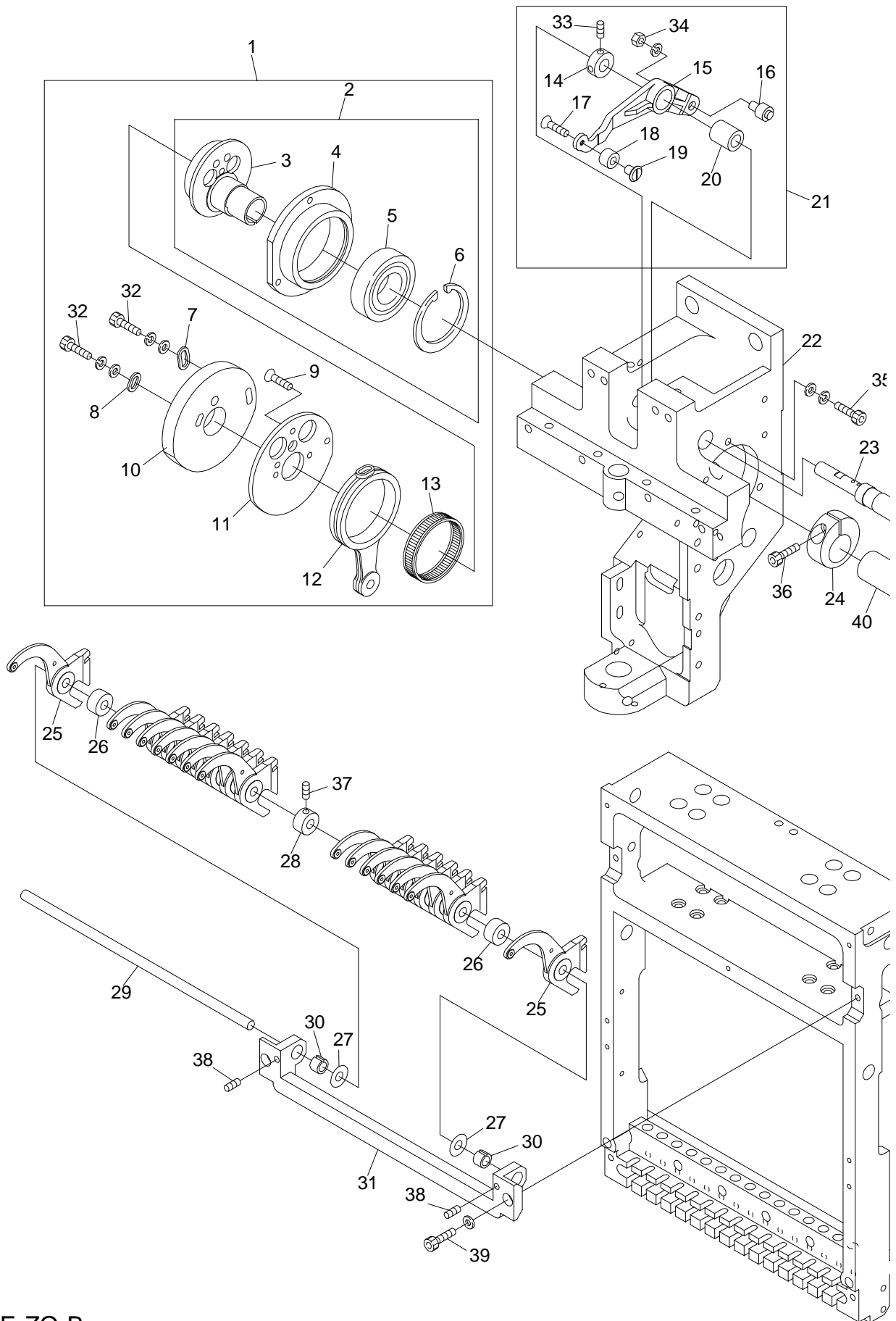
# 02D THREAD CUT D



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BENBHE-ZQ-B



# 03 TAKE UP LEVER



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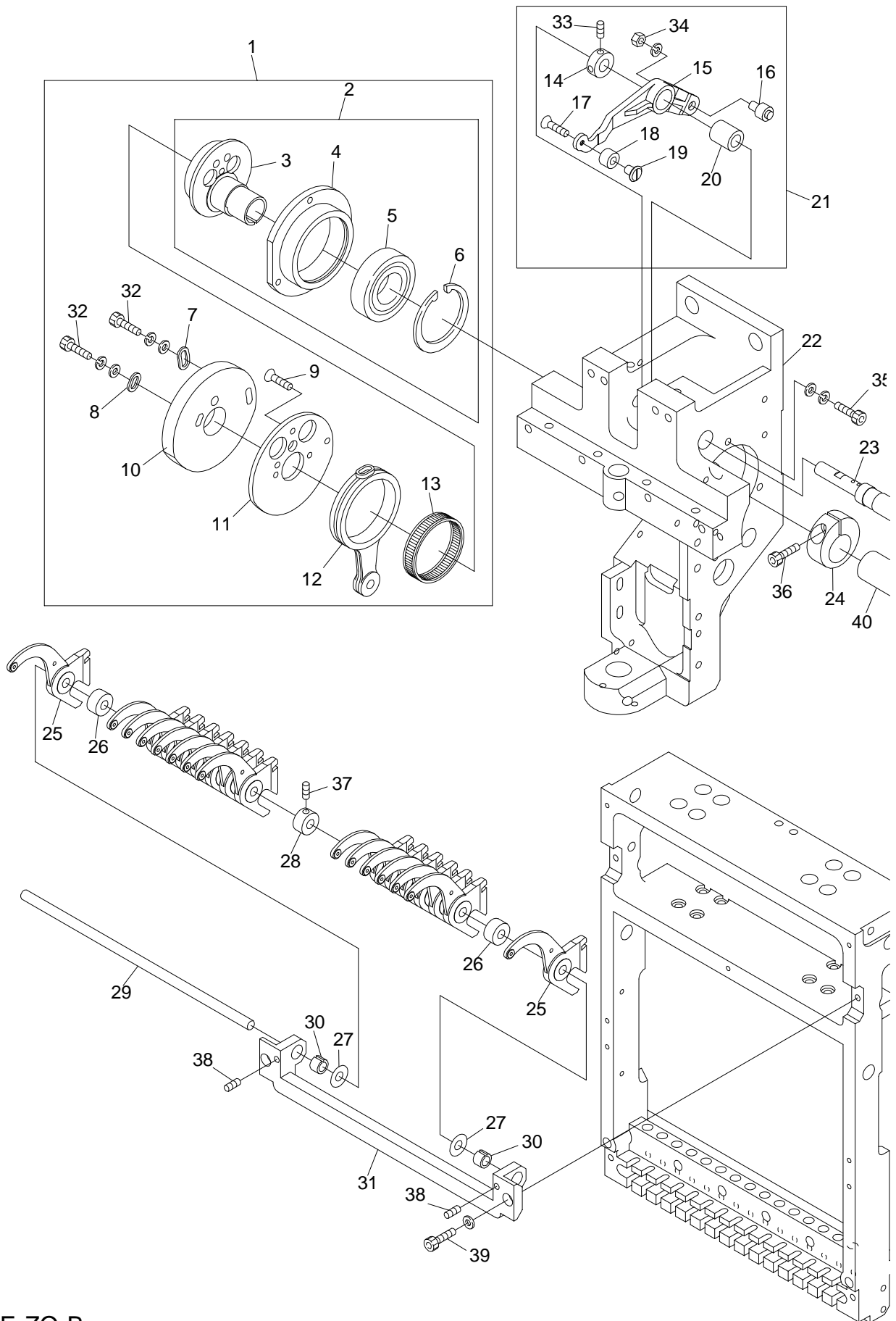
**03 Take Up Lever**

(H=Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	HB230681	Take Up Lever Needle Bar Driver Assembly	Hx1	Small Hook
	HB230691	Take Up Lever Needle Bar Driver Assembly	Hx1	Medium Hook
	RN230000	Take Up Lever Needle Bar Driver Assy. (ZQ5)	Hx1	Small Hook
	RN230060	Take Up Lever Needle Bar Driver Assy. (ZQ5)	Hx1	Medium Hook
2.	HB230710	Needle Bar Driving Cam Assembly	Hx1	
3.	HB230011	Needle Bar Driving Cam (Eccentric 9.2)	Hx1	
	RN230020	Needle Bar Driving Cam (ZQ5)		
4.	HB230030	Bearing Case	Hx1	
5.	A9010017	Bearing (6004ZZ)	Hx1	
6.	A9012163	C-Ring (42.0 Dia.)	Hx1	
7.	HB230080	Cam Washer (2)	Hx1	
8.	HB230070	Cam Washer (1)	Hx1	
9.	HB230620	Flush Pan Screw	Hx3	
10.	HB230062	Take Up Lever Cam (H6)	Hx1	Small Hook
	RH230290	Take Up Lever Cam (H6) (ZQ5)	Hx1	
11.	HB230051	Take Up Lever Cam Base	Hx1	
	RH230300	Take Up Lever Cam Base (ZQ5)	Hx1	
12.	HB230020	Needle Bar Crank Rod	Hx1	
	RH230280	Needle Bar Crank Rod (ZQ5)	Hx1	
13.	HB230341	Needle Roller Bearing	Hx1	
	RH230270	Needle Roller Bearing (ZQ5)	Hx1	
14.	HB230800	Driving Shaft Set Collar	Hx1	
15.	HT230012	Take Up Lever Driving Lever (YN Bridge)	Hx1	
	RH230311	Take Up Lever Driving Lever (ZQ5)	Hx1	
16.	KF230680	Cam Follower	Hx1	
17.	HB230650	Flush Screw (Roller Shaft)	Hx1	
18.	RD230120	Take Up Lever Driving Roller (BEMAX)	Hx1	
	RV230060	Take Up Lever Driving Roller (ZQ5)	Hx1	
19.	RD230130	Take Up Lever Driving Roller Shaft (BEMAX)	Hx1	
20.	HT230890	Take Up Lever Metal	Hx1	
21.	RD230290	Take Up Lever Driving Assembly	Hx1	
	RV230070	Take Up Lever Driving Assembly (ZQ5)		
22.	RD230010	Arm (ZQ-B)	Hx1	
23.	HT230660	Take Up Lever Driving Lever Fixing Pin	Hx1	
	RH230320	Take Up Lever Driving Lever Fixing Pin (ZQ5)		
24.	HB230040	Needle Bar Driving Cam Set Collar	Hx1	
	RH230330	Needle Bar Driving Cam Set Collar (ZQ5)		
25.	KX230152	Take Up Lever (ZN/ZQ)	Hx15	
26.	KX230141	Take Up Lever Spacer	Hx13	
27.	KX231310	Take Up Lever Shim (T= 0.3mm)	Hx2	
28.	RD230201	Take Up Lever Space Collar	Hx1	
29.	RD230080	Take Up Lever Shaft	Hx1	

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# 03 TAKE UP LEVER CONT'D

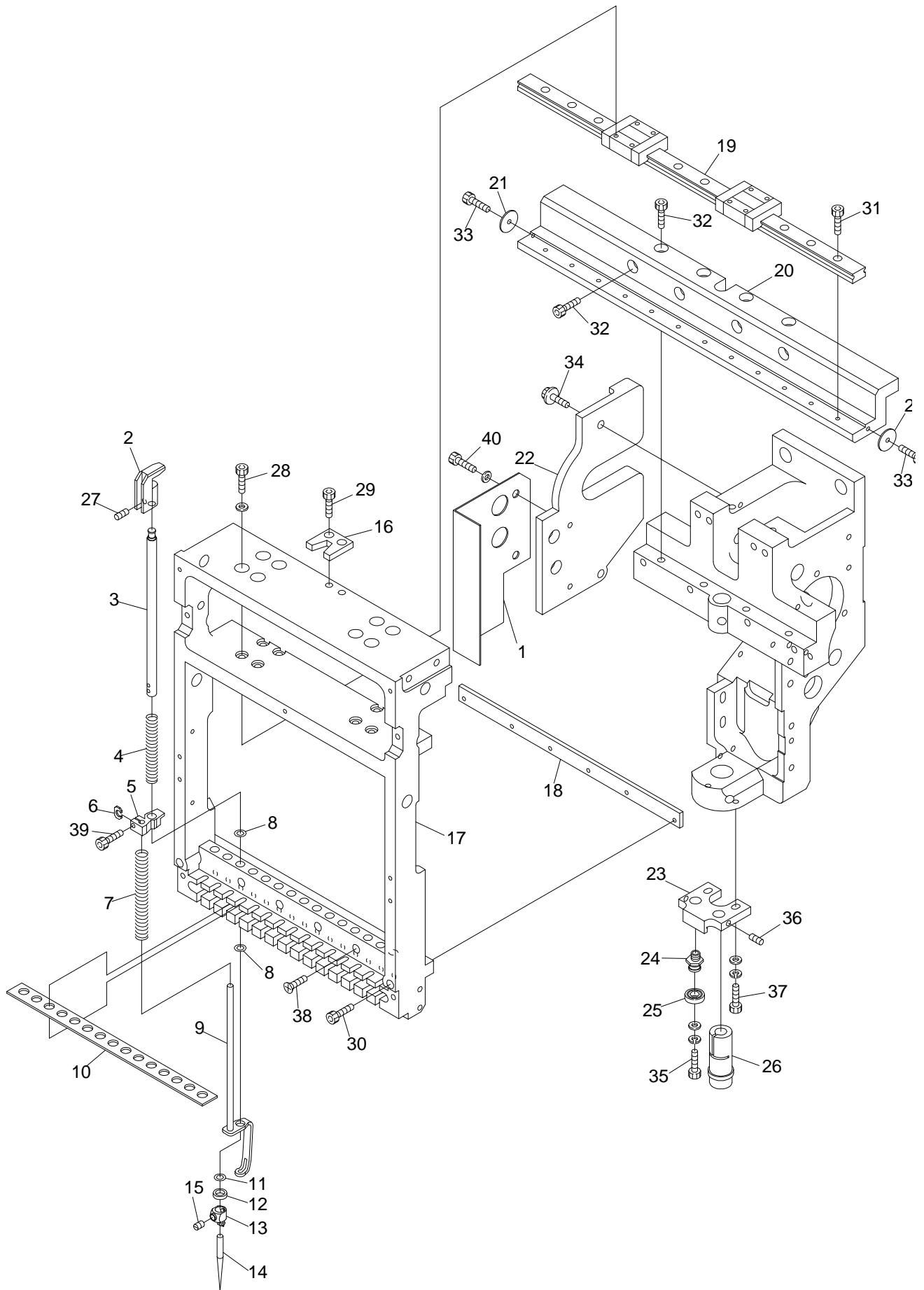


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# 04A NEEDLE BAR A



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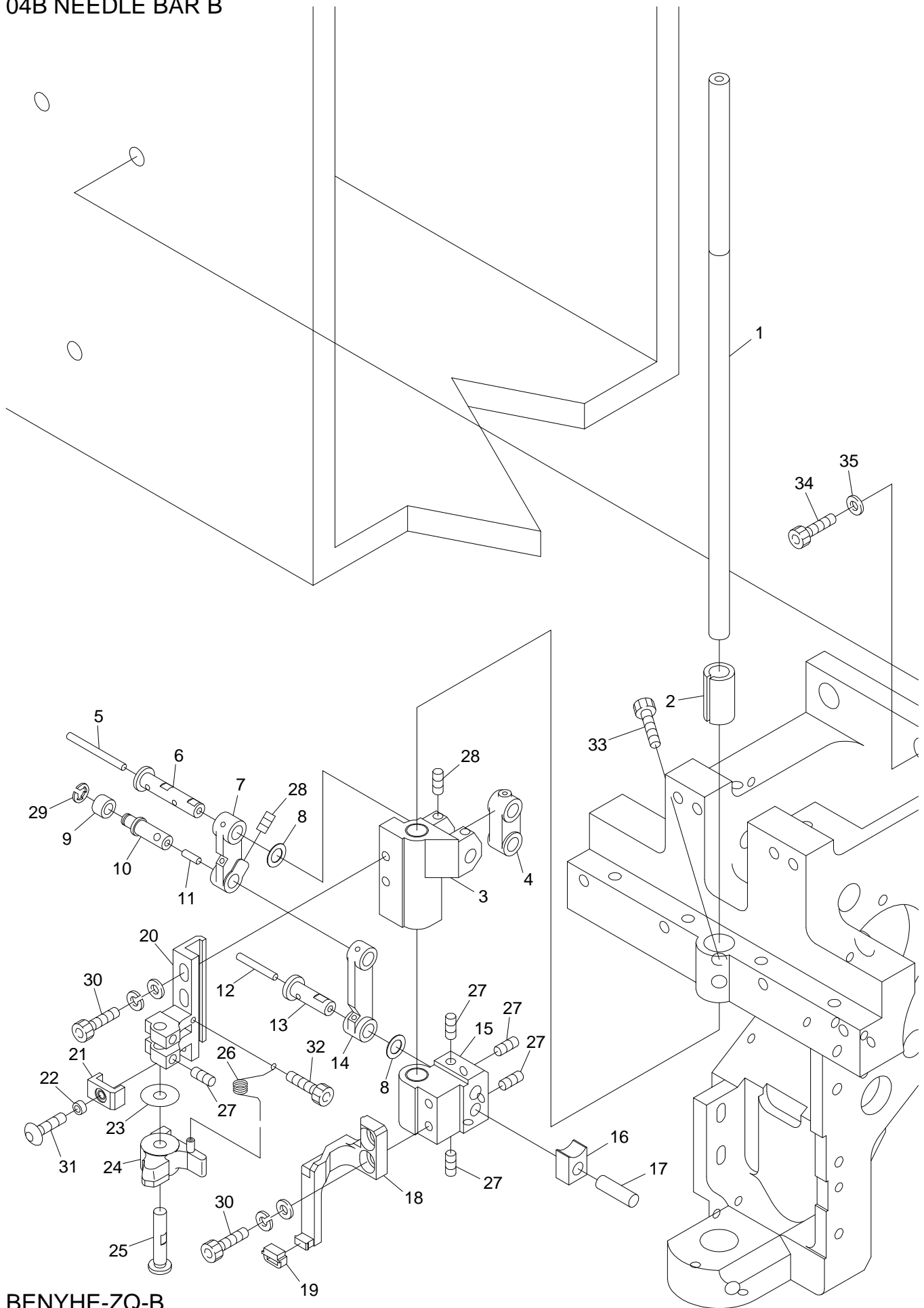
**04A Needle Bar A**

(H=Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	RD250080	Needle Bar Cover	1	Last Head
2.	RD230490	Needle Bar Guide	Hx15	
3.	RH230410	Needle Bar (YN5/ZQ4/ZQ5)	Hx15	Assembly (RD230480)
4.	KV230040	Needle Bar Spring, Upper (Thick)	Hx15	
5.	HT230330	Presser Foot Set Clamp	Hx15	
6.	HT230263	Set Clamp Washer	Hx15	
7.	KX230251	Needle Bar Spring, Lower (ZN)	Hx15	
8.	KF230920	O-Ring (Large)	Hx30	
9.	RD230370	Presser Foot	Hx15	
10.	RD230070	Needle Bar Felt	Hx1	
11.	KF230910	O-Ring (Small)	Hx15	
12.	HT230120	Washer (2.4)	Hx15	
13.	RH230450	Needle Clamp (with Hook)	Hx15	Assembly (RH230440)
14.	FN070011SNY	Needle (DBXK5-NY11S)	Hx15	
15.	RH230460	Needle Clamp Screw	Hx15	
16.	RD230170	Slide Block Fixing Plate	Hx1	
17.	RD230042	Slide Block	Hx1	Except For First Head
	RA230000	Slide Block	Hx1	First Head
18.	RD230060	Bearing Plate	Hx1	
19.	RD230020	LM-Guide	Hx1	
20.	RD230031	Base Plate	Hx1	
21.	KX230192	LM Stopper	Hx2	
22.	RD230180	Arm Support Fixing Bracket	Hx1	
23.	RD230050	Bearing Guide	Hx1	
24.	KX230080	Bearing Pin	Hx1	
25.	A9010065	Ball Bearing (686ZZ)	Hx1	
26.	KX230080	Drive Shaft Bushing (Lower)	Hx1	
27.		Hex Socket Set Screw M4 x 4		
28.		Hex Socket Bolt M3 x 8		
29.		Hex Socket Flat Head Screw M5 x 20		
30.		Hex Socket Bolt M3 x 25		
31.		Hex Socket Bolt M3 x 8		
32.		Hex Socket Bolt M5 x 15		
33.		Hex Socket Button Head Screw M4 x 15		
34.		Hex Socket Flange Bolt M4 x 12		
35.		Hex Socket Bolt M4 x 6 (with Washer)		
36.		Hex Socket Dog Point Set Screw M4 x 12		
37.		Hex Socket Bolt M4 x 15 (with Washer)		
38.		Hex Socket Flat Head Screw M3 x 25		
39.		Hex Socket Bolt M3 x 8		
40.		Hex Socket Bolt M4 x 10 (with Washer)		Last Head

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# 04B NEEDLE BAR B



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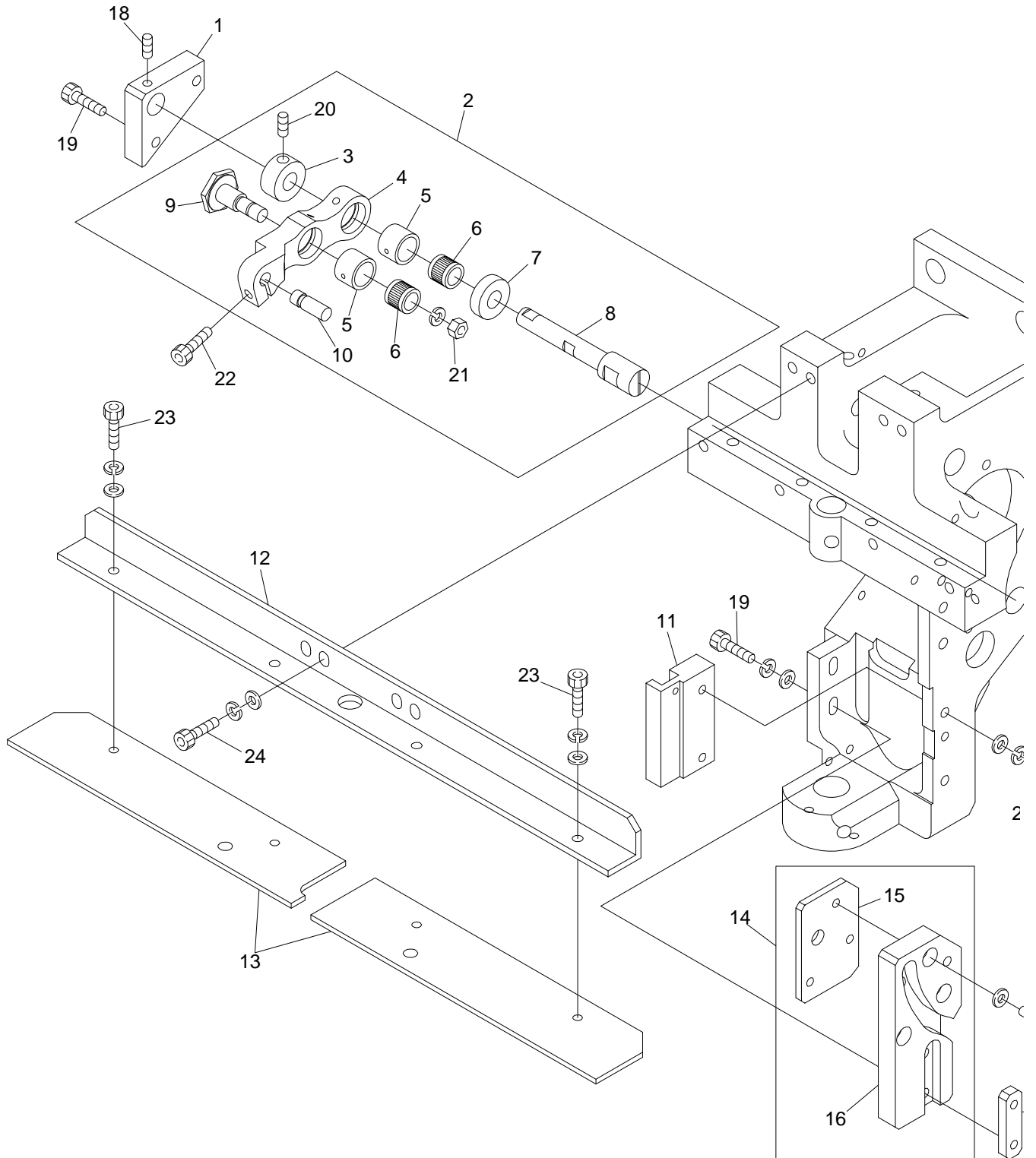
**04B Needle Bar B**

(H=Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	RD230140	Driving Shaft	Hx1	
	RV230020	Driving Shaft (ZQ5)	Hx1	
2.	RD230150	Driving Shaft Bushing (Upper)	Hx1	
3.	HT230510	Needle Bar Driving Slide Block	Hx1	
4.	HB230200	Needle Bar Drive Link	Hx1	
5.	HT230750	Oil Core (30mm)	Hx1	
6.	HT230470	Link Pin (Small)	Hx1	
7.	HT230490	Link (Small)	Hx1	
8.	HT230730	Shim Ring (10.0 Dia. T=0.3)	Hx2	
9.	KF230530	Roller (Take Up Lever)	Hx1	
10.	HT230450	Link Roller Joint Pin	Hx1	
11.	HT230760	Oil Core (8mm)	Hx1	
12.	HT230770	Oil Core (20mm)	Hx1	
13.	HT230460	Link Pin (Large)	Hx1	
14.	HT230480	Link (Large)	Hx1	
15.	HT230500	Set Slide Block	Hx1	
16.	HP231370	Square Ball	Hx1	
17.	HT230320	Square Ball Pin	Hx1	
18.	RD230390	Presser Foot Support (ZQ4)	Hx1	NYHE/NBHE-ZQ-B
	RR230030	Presser Foot Support (ZQ5)		
19.	HT230340	Presser Foot Support Rubber	Hx2	
20.	HT230290	Needle Bar Driver Fixing Base (YN2/ZQ-B)	Hx1	
21.	HT230520	Needle Bar Driver Stopper	Hx1	
22.	A9012368	Spacer (3 x 4 x 2.5 Long )	Hx1	
23.	RH230550	Shim Ring	Hx1	
24.	RH230540	Needle Bar Driver	Hx1	NYHE/NBHE-ZQ-B
25.	HT230280	Needle Bar Driver Pin	Hx1	
26.	HT230560	Needle Bar Driver Return Spring	Hx1	
27.		Hex Socket Set Screw M4 x 4 (with Nylon)		
28.		Hex Socket Set Screw M4 x 6 (with Nylon)		
29.		E-Ring (3.0 Dia.)		
30.		Hex Socket Bolt M4 x 12 (with Washers)		
31.		Hex Socket Button Head Bolt M3 x 6		
32.		Hex Socket Bolt M4 x 6 (with Washer)		
33.		Hex Socket Bolt M5 x 20		
34.		Hex Socket Bolt M5 x 20		
35.		Disk Spring M8		

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# 04C NEEDLE BAR C

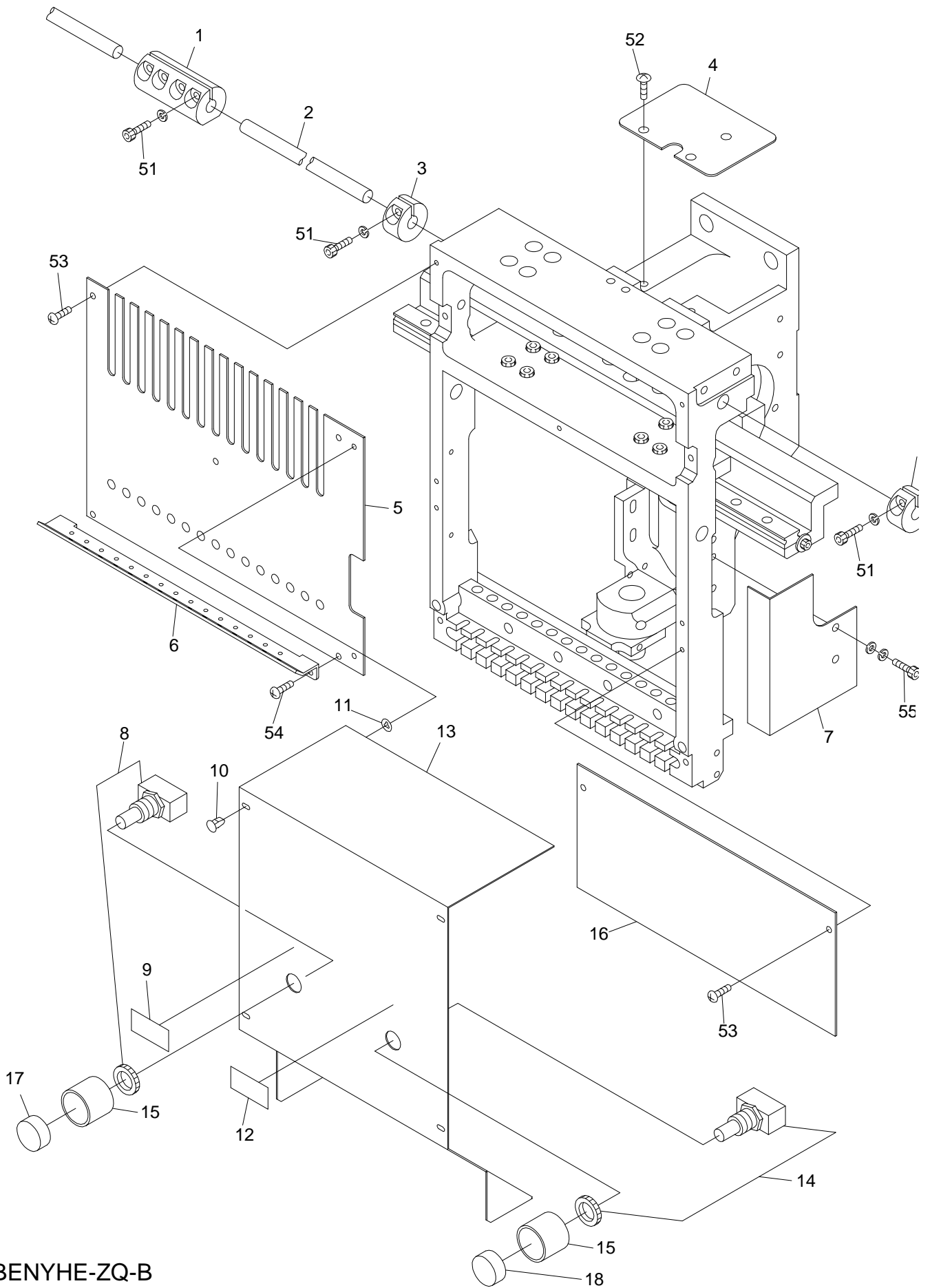


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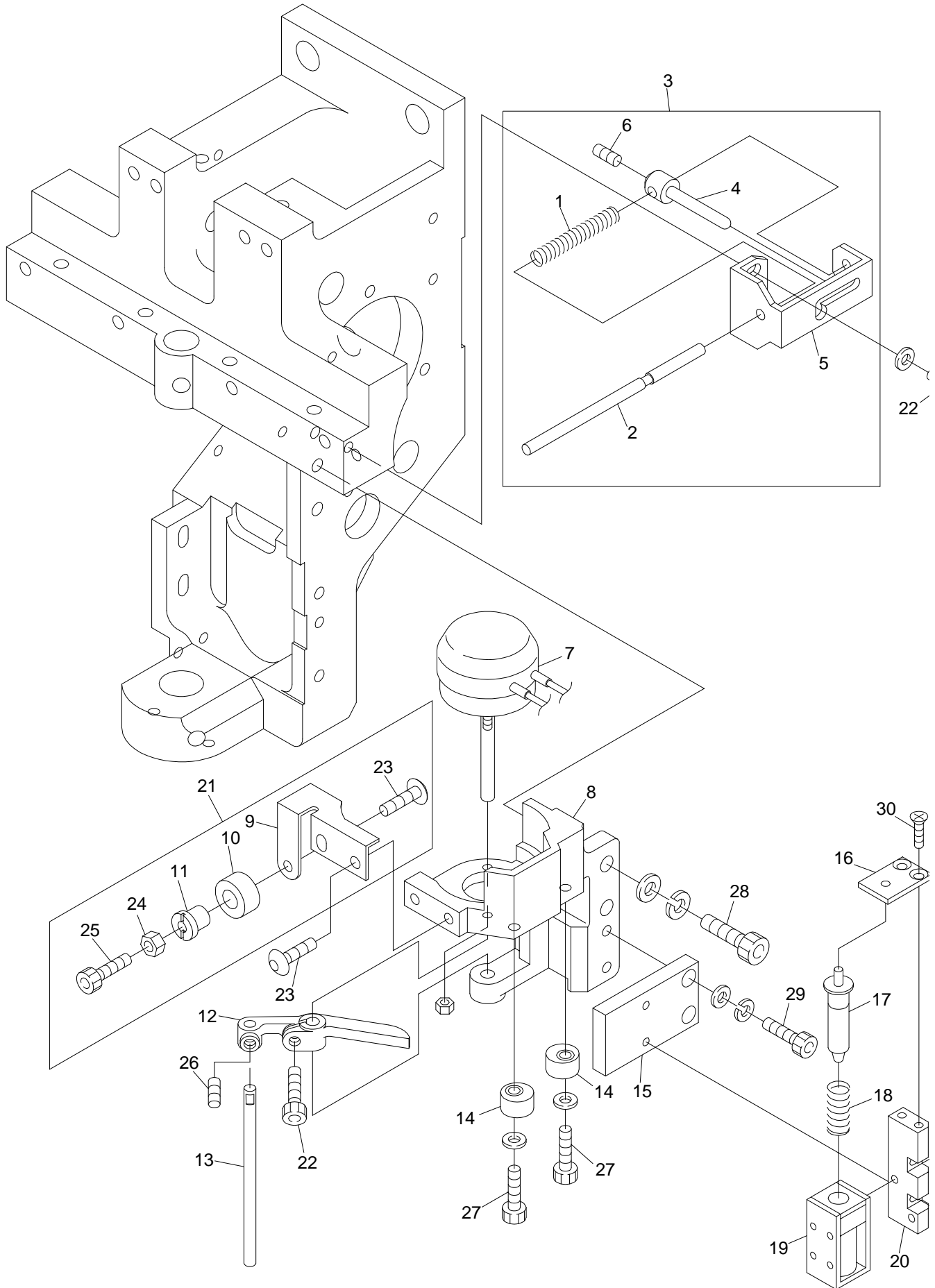
# 04D NEEDLE BAR D



BENYHE-ZQ-B  
BENBHE-ZQ-B



# 05 JUMP



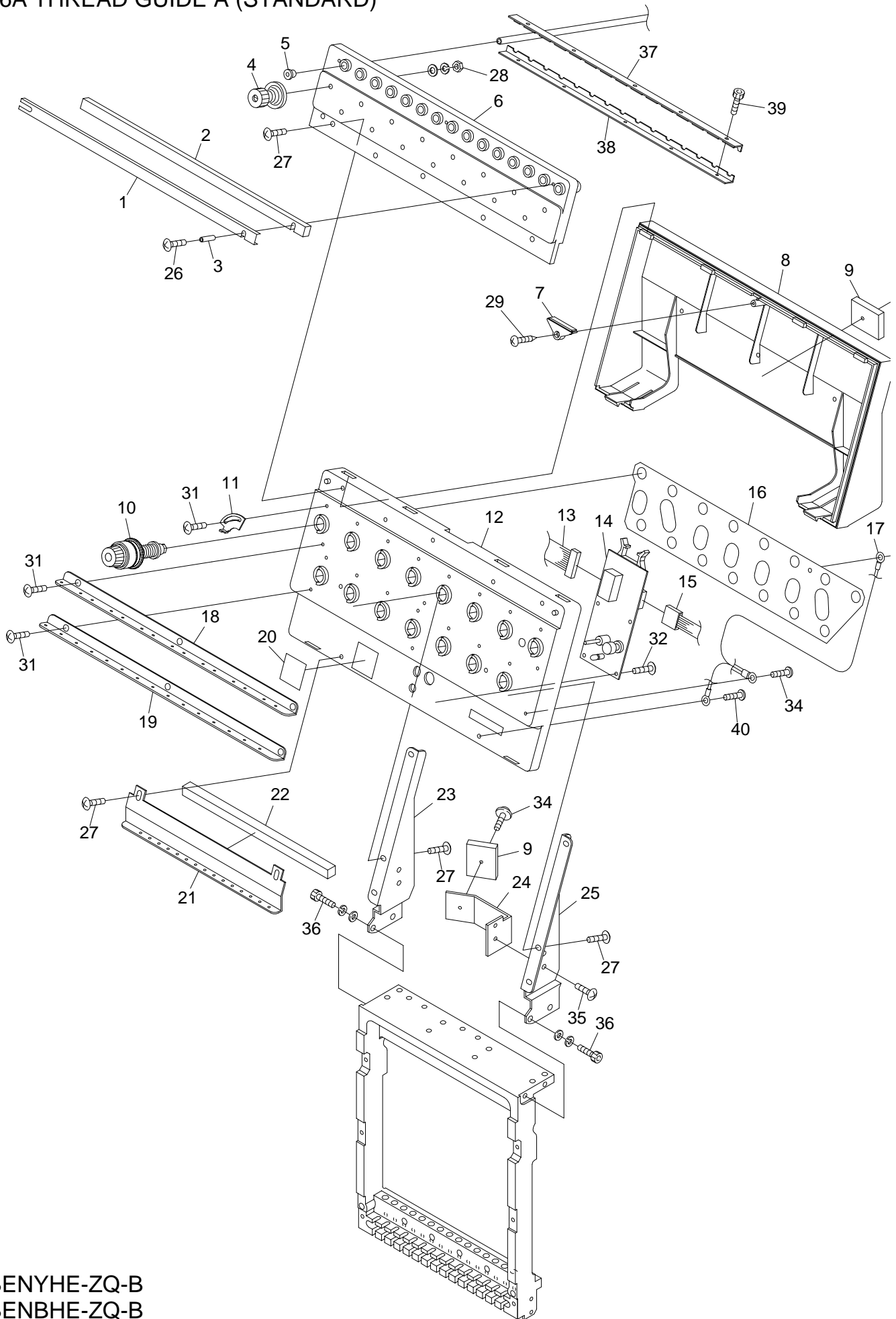
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# 06A THREAD GUIDE A (STANDARD)



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BENBHE-ZQ-B

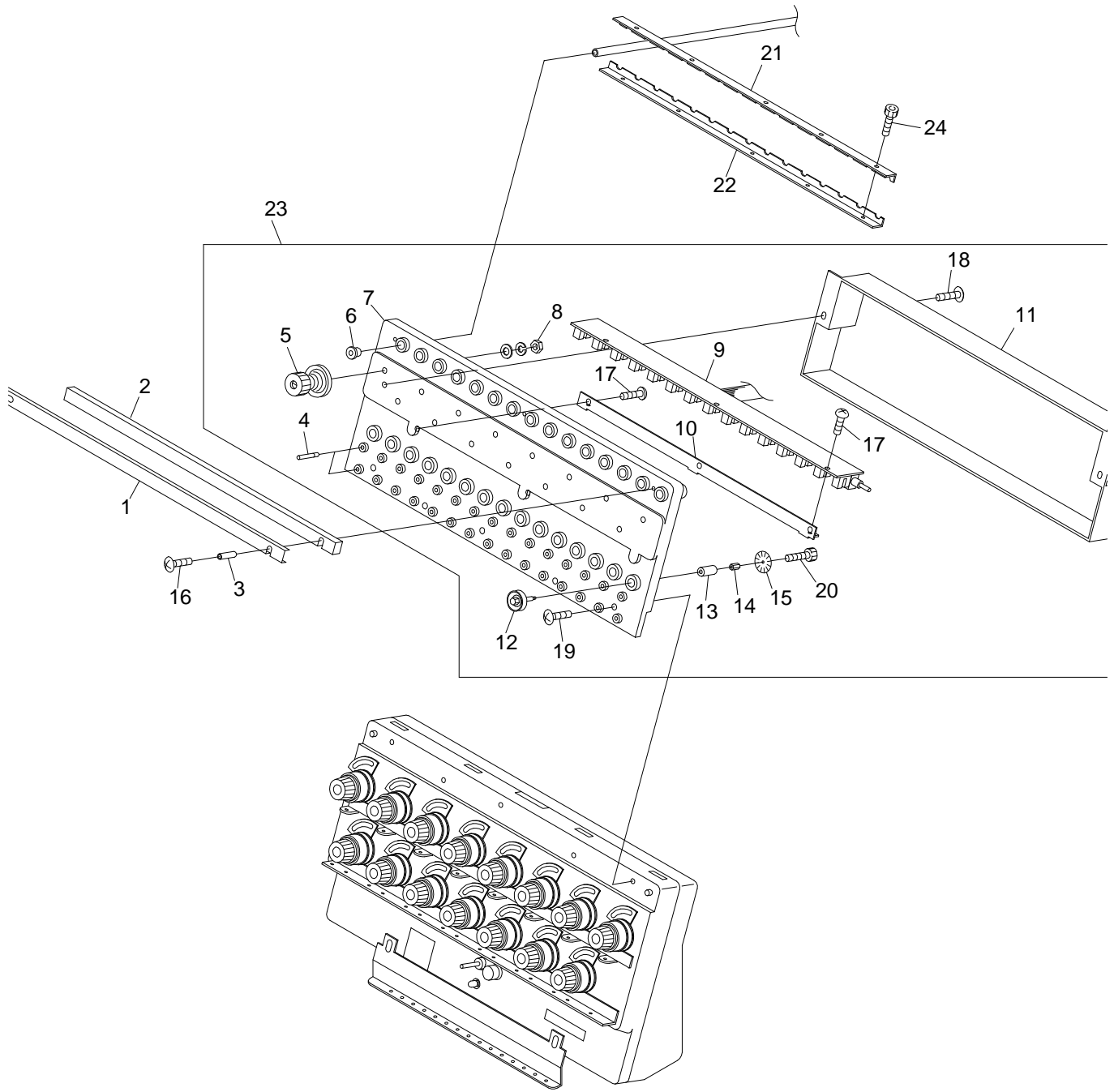
**06A Thread Guide A (Standard)**

(H=Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	RD240291	Felt Frame	Hx1	
2.	RD240301	Felt	Hx1	
3.	A9012412	Spacer (3.0 Dia. x 17.0)	Hx2	
4.	RD240320	First Thread Tension Assembly (ZQ-A)	Hx15	
5.	HT240480	Thread Guide Eyelet (White)	Hx15	
6.	RD240280	Thread Tension Base	Hx1	
7.	HT240240	Blind Cap	Hx1	
8.	RD240030	Tension Base Cover	Hx1	
9.	A9068032	Clamp (FCW-26)	Hx2	
10.	RD240153	Dial Thread Tension Unit Complete (BEMAX)	Hx15	
11.	RD240111	Thread Spring Adjusting Plate	Hx15	
12.	RD240022	Tension Base Case Assembly	Hx1	
13.	EBY01690	H1899 Cable	Hx1	
14.	EBY01940	4640 Head Switch Board with Cable (BEMAX)	Hx1	
15.	EBY01700	H1900 Additional Cable	Hx1	
16.	RD240121	Tension Ground Plate	Hx1	
17.	A9053077	Tension Base Ground 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	
21.	RD240051	Second Thread Guide	Hx1	
22.	RD240130	Sponge Rubber	Hx1	
23.	RD240171	Tension Base Mounting Bracket (L)	Hx1	
24.	RD240090	Cable Holder	Hx1	
25.	RD240181	Tension Base Mounting Bracket (R)	Hx1	
26.		Phillips Truss Head Screw M3 x 25		
27.		Phillips Truss Head Screw M4 x 10		
28.		Hex Nut (SM11/64-40)		
29.		Tapping Screw M3 x 12		
30.		Tapping Pan Head Screw M3 x 25		
31.		Phillips Truss Head Screw M3 x 5		
32.		Phillips Truss Head Screw M3 x 6		
33.		Phillips Pan Head Screw M3 x 6		
34.		Phillips Pan Head Screw (w/ Washer) M3 x 6		
35.		Phillips Truss Head Screw M4 x 6		
36.		Hex Socket Bolt M5 x 16		
37.	RD240430	Tube Holder (Upper)	Hx1	
38.	RD240440	Tube Holder (Lower)	Hx1	
39.		Hex Socket Bolt M3 x 15		
40.		Phillips Pan Head Screw M4 x 6		

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# 06B THREAD GUIDE B (UTSM)

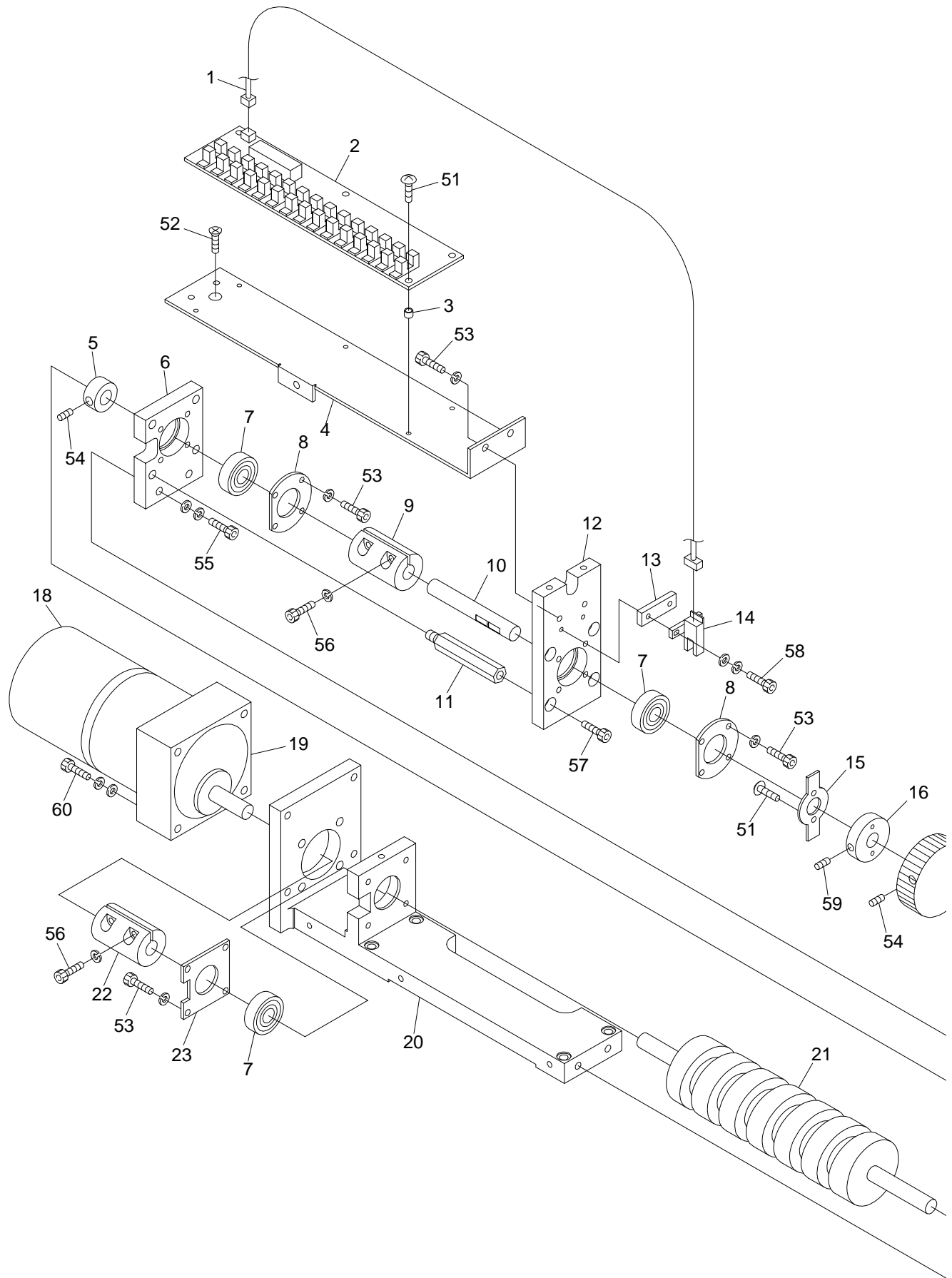


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# 07A COLOR CHANGE A

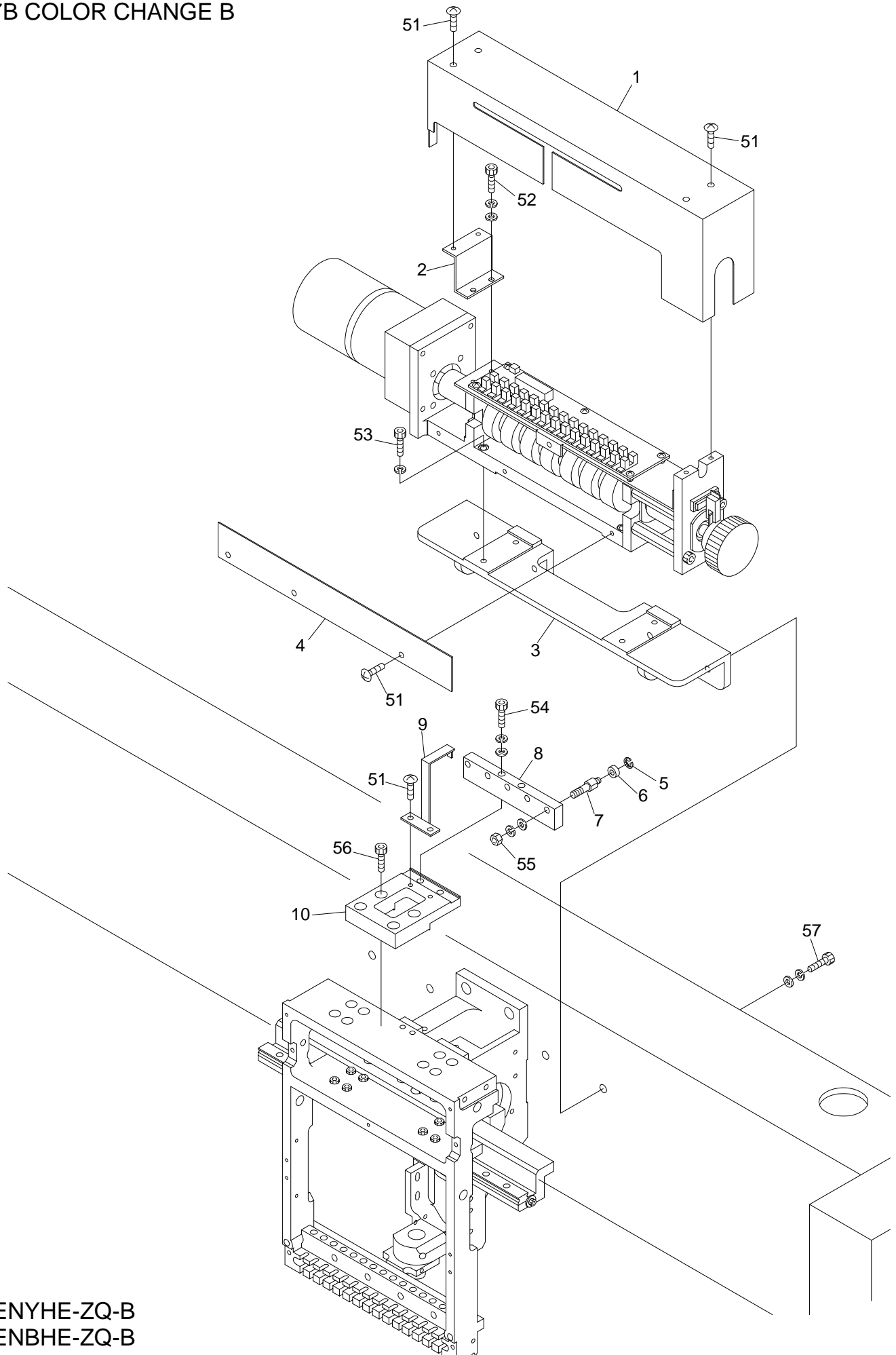


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BENBHE-ZQ-B



07B COLOR CHANGE B



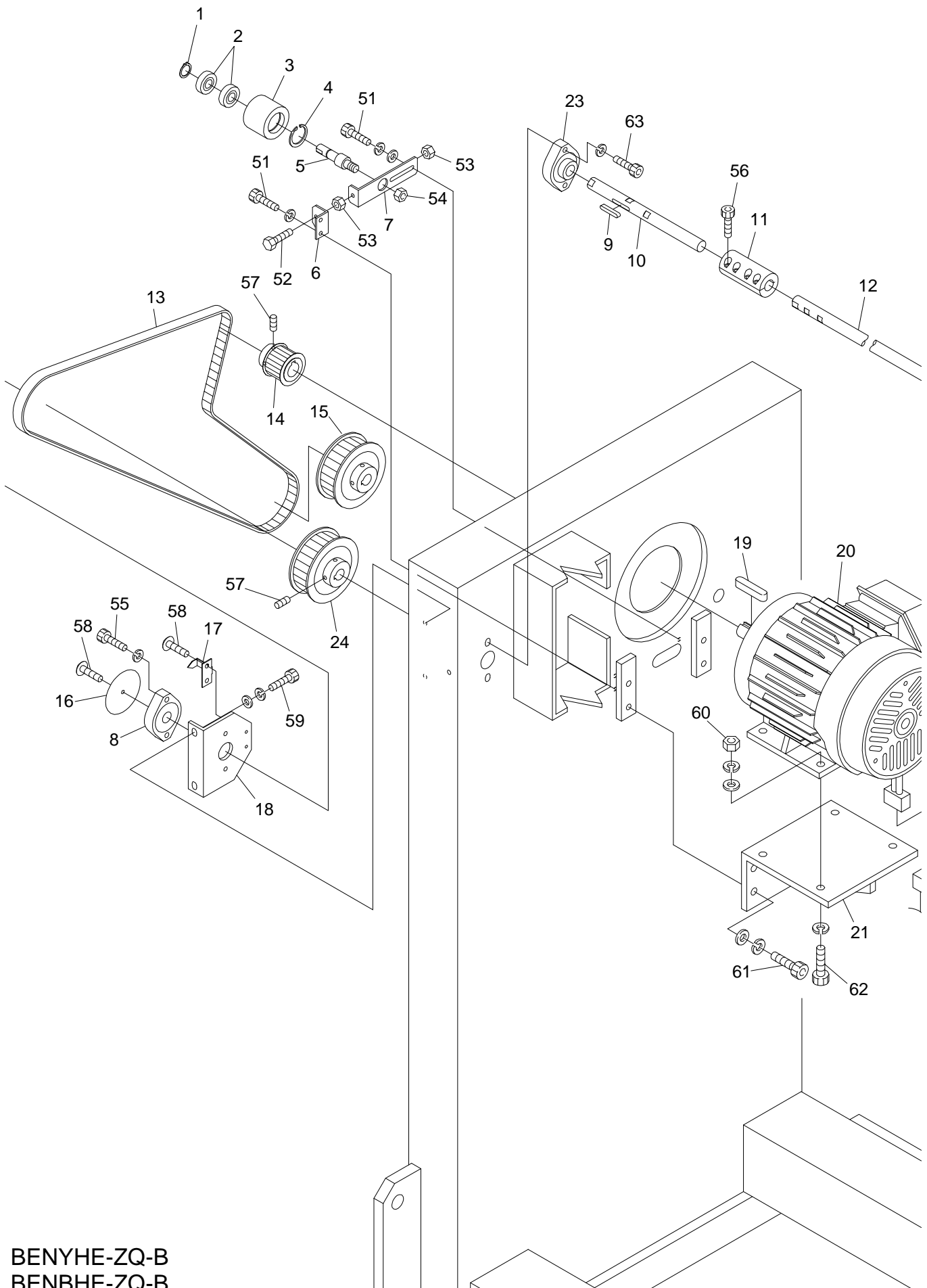
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# 08A DRIVE A



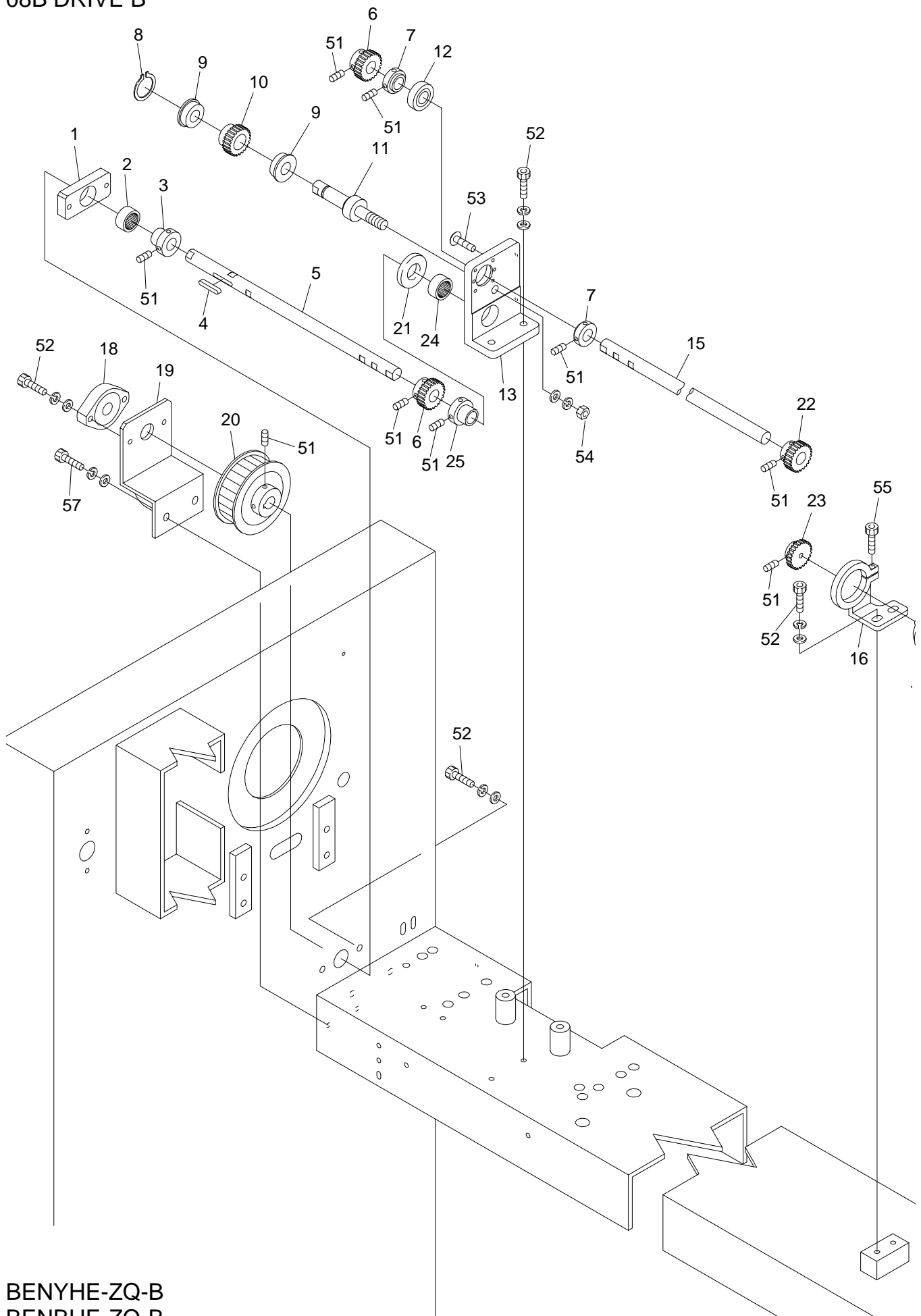
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**08A Drive A**

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	A9012066	C-Ring (12.0 Dia.)	1	
2.	A9010003	Bearing (6001ZZ)	2	
3.	RQ310000	Idler	1	
4.	A9012063	C-Ring (28.0 Dia.)	1	
5.	RQ310010	Idler Pulley Shaft	1	
6.	RQ310020	Tension Adjuster Bracket	1	
7.	HM310070	Tension Adjuster	1	
8.	HP321140	Upper Connecting Collar Bearing	1	
9.	HX310110	Upper Shaft Key (5x5x30)	1	
10.	RQ310070	Upper Shaft (NYHE-B)	1	
	RY310000	Keyed Shaft, Upper (20 Dia. x 190 L) (ZQ5)	1	
11.	HH320550	Arm Shaft Connecting Coupling	1	
	A9013069	Arm Shaft Coupling (N-20-20) (ZQ5)	1	
12.	RQ310110	Lower Connecting Shaft (520)	1	4 Head
	RQ310120	Lower Connecting Shaft (380)	1	6 Head
	RY310010	Main Shaft (20 Dia. x 2130 L) (ZQ5)	1	
13.	A9020180	Timing Belt (B250S5M1420)	1	
14.	HX310040	Timing Pulley B	1	
15.	HX310030	Timing Pulley A	1	
16.	HM310251	Angle Display Plate	1	
17.	HX310090	Angle Indicator (ZQ-B)	1	
18.	RQ310030	Bearing Bracket A	1	
19.	HU315290	Main Motor Shaft Key	1	
20.	HV310220	Main Motor (1K FBK8-4P-0.55kw VF3 200V) (ETL)	1	
21.	RA310100	Motor Bracket	1	
22.	A9053081	Motor Cable (1.25x4x5m)	1	
23.	HP321140	Upper Connecting Collar Bearing	1	
	A9011240	Upper Shaft Support Bearing (UCFL 204) (ZQ5)	1	
24.	HX310030	Timing Pulley A	1	
	RX310000	Timing Pulley A (ZQ5)	1	
51.		Hex Socket Bolt M5x10 (Black)		
52.		Hex Socket Bolt M5x30 (Black)		
53.		Hex Nut M5		
54.		Hex Nut M10		
55.		Hex Socket Bolt M6x20 (Black)		
56.		Hex Socket Bolt M5x20		
57.		Hex Socket Set Screw M5x6		
58.		Phillips Truss Head Screw M4x6		
59.		Hex Socket Bolt M6x16 (Black)		
60.		Hex Nut M8		
61.		Hex Socket Bolt M8x25		
62.		Hex Socket Bolt M8x35		
63.		Hex Socket Bolt M6x30		
		Hex Socket Bolt M8x25 (ZQ5)		

# 08B DRIVE B



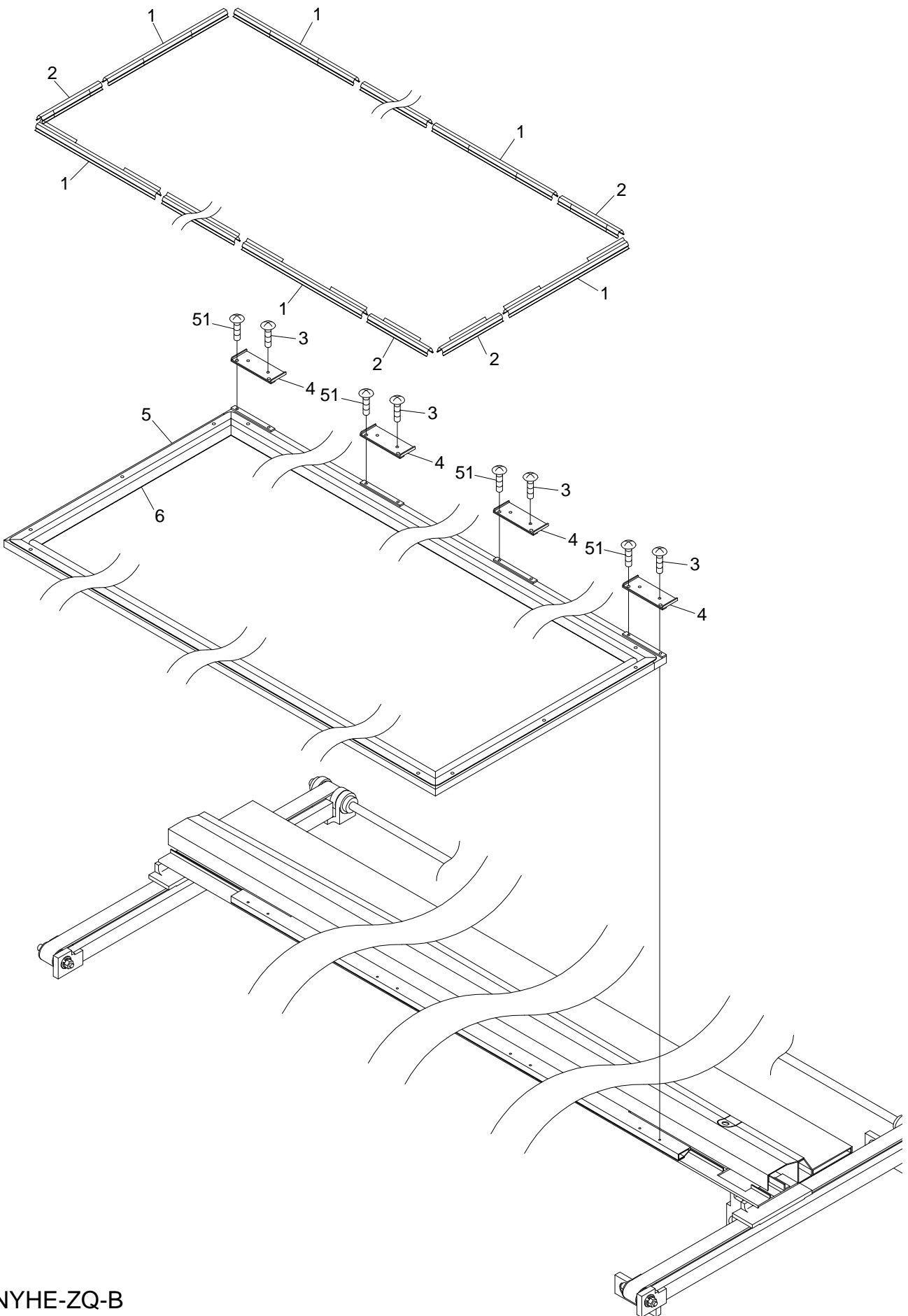
BENYHE-ZQ-B  
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**08B Drive B**

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	RQ310050	Shaft Support Plate (Lower Shaft)	1	
2.	A9011111	Needle Bearing (TLA-2012Z)	1	
3.	HP321090	Lower Connecting Shaft Collar	1	
4.	HX310110	Upper Shaft Key (5x5x30)	1	
5.	RQ310100	Lower Shaft (Pulley A)	1	
6.	RA310310	Spur Gear	2	
7.	RQ310150	Bearing Fixing Collar	2	
8.	A9012061	C-Ring (10.0 Dia.)	1	
9.	A9010066	Bearing (LF-1910ZZ)	2	
10.	RA310321	Idler Spur Gear (Metal)	1	
11.	RA310330	Idler Shaft	1	
12.	A9010007	Bearing (6002ZZ)	1	
13.	RQ310130	Bearing Bracket	1	Small Hook
	RQ310131	Bearing Bracket (ZQ5)	1	
	RQ310160	Bearing Bracket (ZQ5)	1	Medium Hook
14.				
15.	RQ310110	Lower Connecting Shaft (520)	1	4 Head
	RQ310120	Lower Connecting Shaft (380)	1	6 Head
16.	HP331923	Encoder Support	1	
17.	KN511020	Position Encoder (051)	1	
18.	HP321140	Upper Connecting Bearing Collar	1	
19.	RQ310040	Bearing Bracket B (Lower Shaft)	1	
20.	HX310030	Timing Pulley A	1	
21.	A9012156	Thrust Washer (70W-2015) (ZQ5)	1	
22.	HP321710	Encoder Driving Gear No.1	1	
23.	HP321720	Encoder Driving Gear No.2	1	
24.	A9011111	Needle Bearing (TLA-2012Z)	1	
	A9010007	Bearing (6002ZZ) (ZQ5)	1	
25.	HP321090	Lower Connecting Shaft Collar	1	
	RQ310150	Bearing Fixing Collar (ZQ5)	1	
51.		Hex Socket Set Screw M5x6		
52.		Hex Socket Bolt (Black) M6x20		
53.		Phillips Truss Screw M4x6		
54.		Hex Nut M8		
55.		Hex Socket Bolt M4x18		

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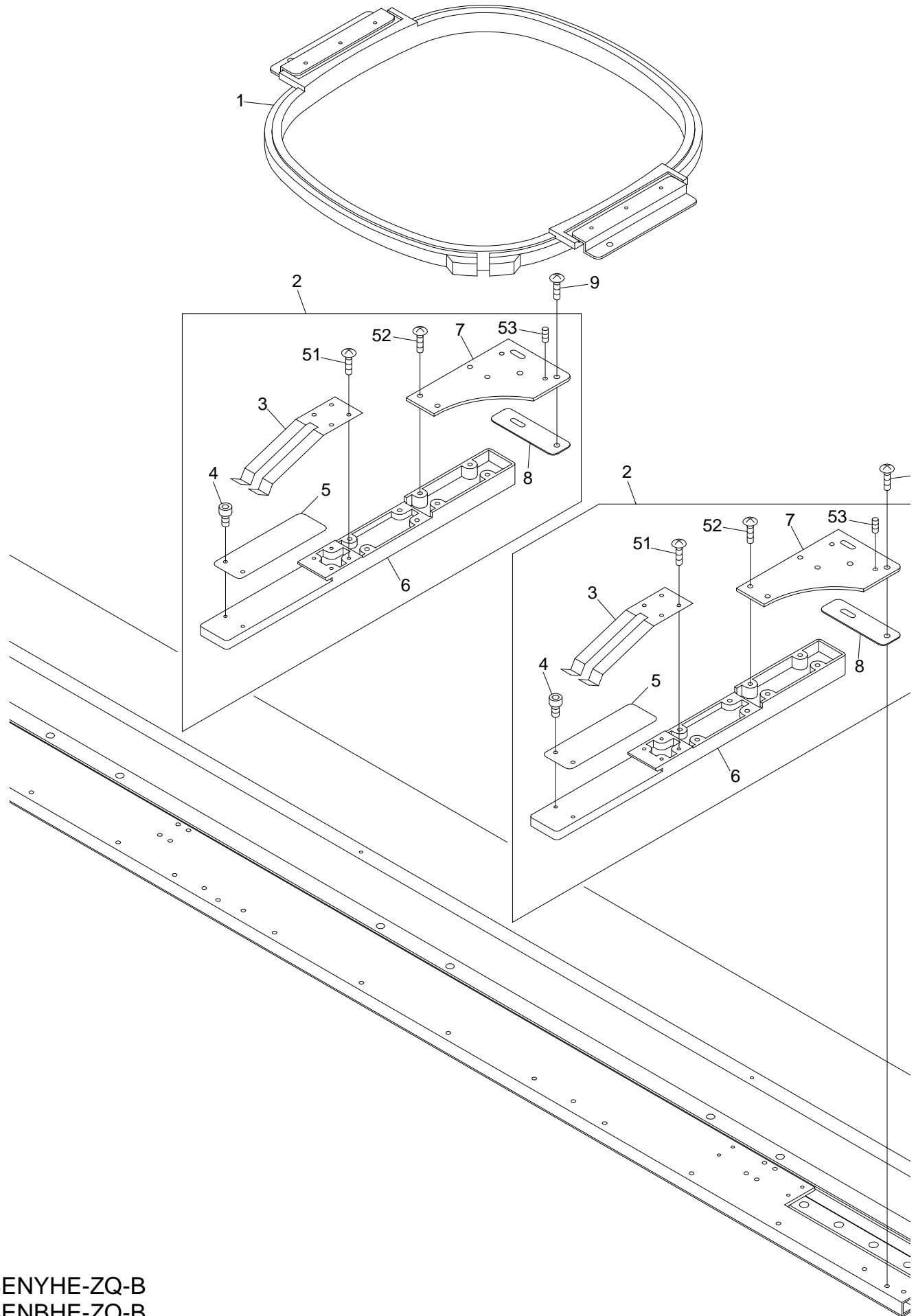
# 10A PANTOGRAPH DRIVE A



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# 10B-1 PANTOGRAPH DRIVE B-1



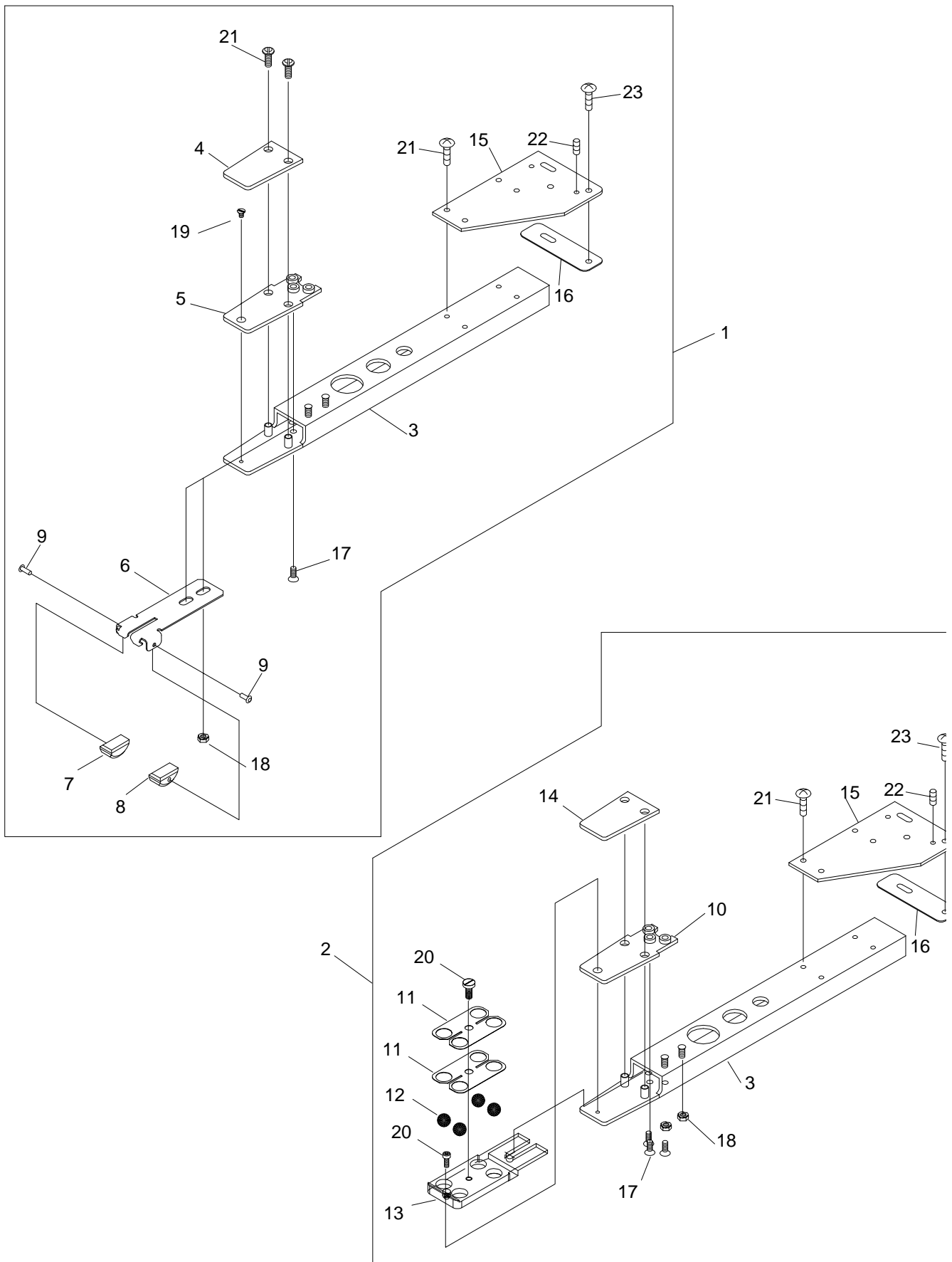
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BENBHE-ZQ-B





# 10B-2 PANTOGRAPH DRIVE B-2

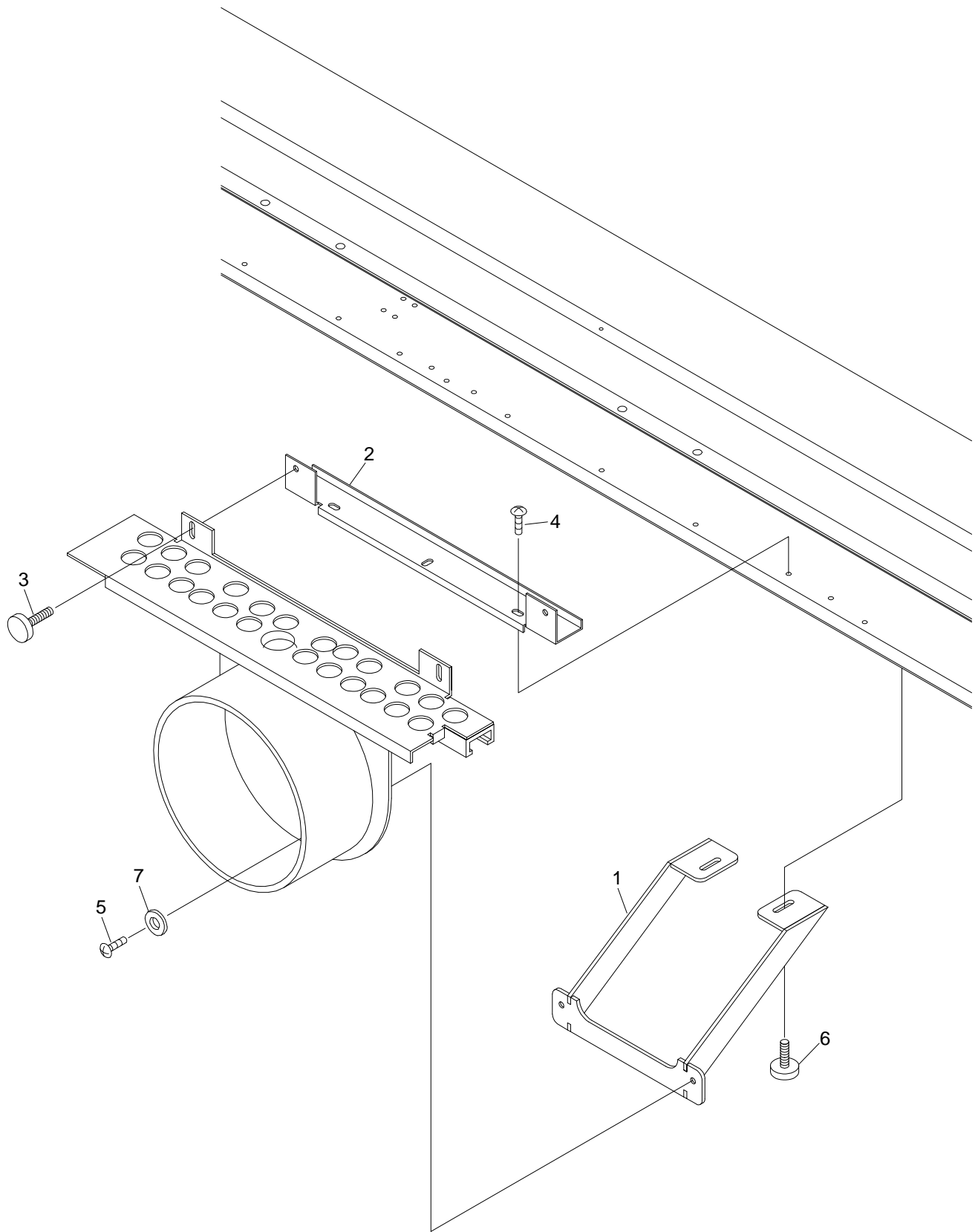


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# 10B-3 PANTOGRAPH DRIVE B-3

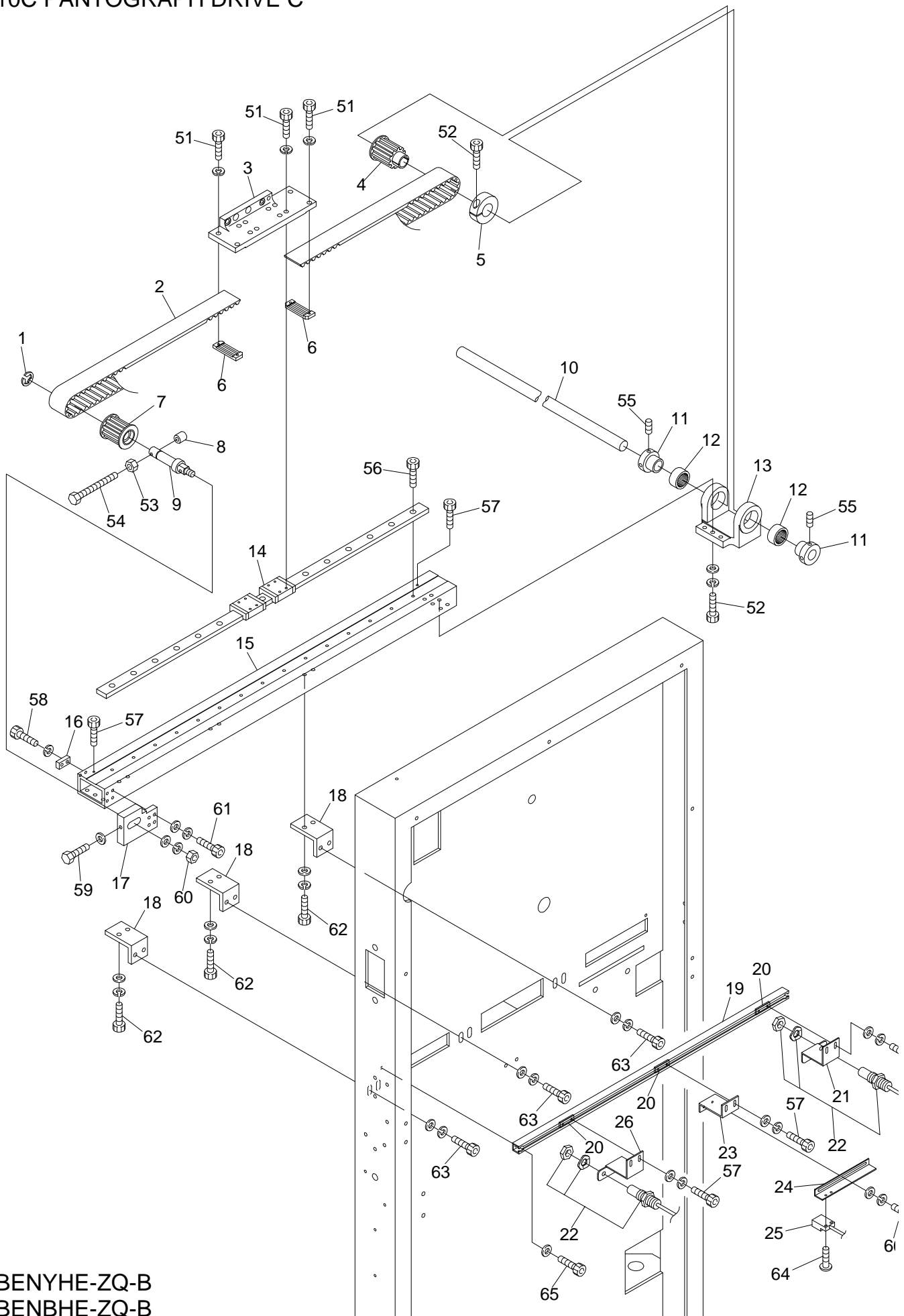


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# 10C PANTOGRAPH DRIVE C



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BENBHE-ZQ-B

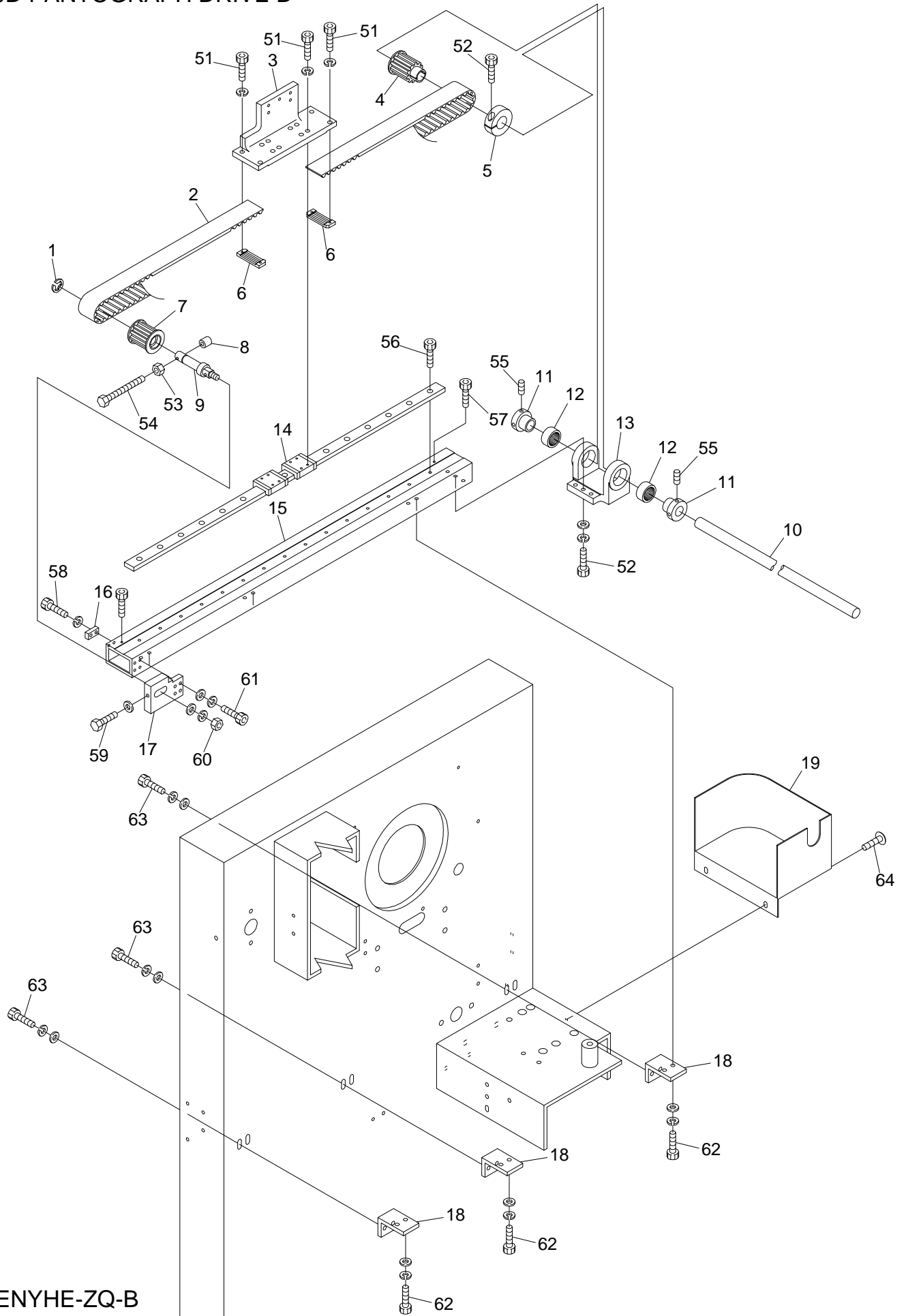
**10C Pantograph Drive C**

(H = Head Qty.)

ITEM	LIST NO.	DESCRIPTION	QTY	NOTE
1.	A9012052	E-Ring (10.0 Dia.)	1	
2.	HV480110	Timing Belt (B300S5M)	1	
3.	RQ480020	H-Guide Slide Bracket (R)	1	
4.	HV480040	Pantograph Drive Pulley (Rear)	1	
5.	HH481980	Clamping Collar (19.0 Dia.)	1	
6.	HP480940	Belt Set Rack	2	
7.	HV480050	Pantograph Drive Pulley (Front)	1	
8.	HH482110	Pulley Shaft Bolt Cap	1	
9.	HM480020	Timing Pulley Shaft (H)	1	
10.	KC320113	H-Motor Shaft (R) (15mm)	1	Cut Product
11.	HP321090	Lower Connecting Shaft Collar	2	
12.	A9011111	Needle Bearing (TLA-2012Z)	2	
13.	RQ480010	H-Guide Rear Pulley Bracket	1	
14.	RA480120	LM-Guide (HRW12LR200M+600LM) (H)	2	
15.	RQ480040	H-Guide Rail Base (R)	1	
16.	RQ480070	Support Plate	1	
17.	RQ480000	H-Guide Front Pulley Bracket	1	
18.	RQ480060	H-Rail Base Fixed Bracket	3	
19.	RQ480120	H-Rail	1	
20.	KU460270	Plate Nut (M3)	3	
21.	RQ480100	Switch Bracket R (H-Side)	1	
22.	A9052079	Limit Switch (RS-001)	2	
23.	RQ480081	Origin Sensor Bracket (H)	1	
24.	RQ480091	Origin Sensor Fixed Stay (H)	1	
25.	A9052084	Origin Sensor (SW-3795)	1	
26.	RQ480110	Switch Bracket L (H-Side)	1	
51.		Hex Socket Bolt M3x10		
52.		Hex Socket Bolt M5x18 (Black)		
53.		Hex Nut M4		
54.		Hex Bolt M4x40		
55.		Hex Socket Set Screw M5x8		
56.		Hex Socket Bolt M4x8 (Black)		
57.		Hex Socket Bolt M3x6 (Black)		
58.		Hex Socket Bolt M4x12 (Black)		
59.		Hex Bolt M4x25		
60.		Hex Nut M8		
61.		Hex Socket Bolt M4x16		
62.		Hex Socket Bolt M5x16		
63.		Hex Socket Bolt M6x16		
64.		Truss Screw M3x10 (Stainless Steel)		
65.		Hex Socket Bolt M4x6		
66.		Hex Socket Bolt M3x6		

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# 10D PANTOGRAPH DRIVE D

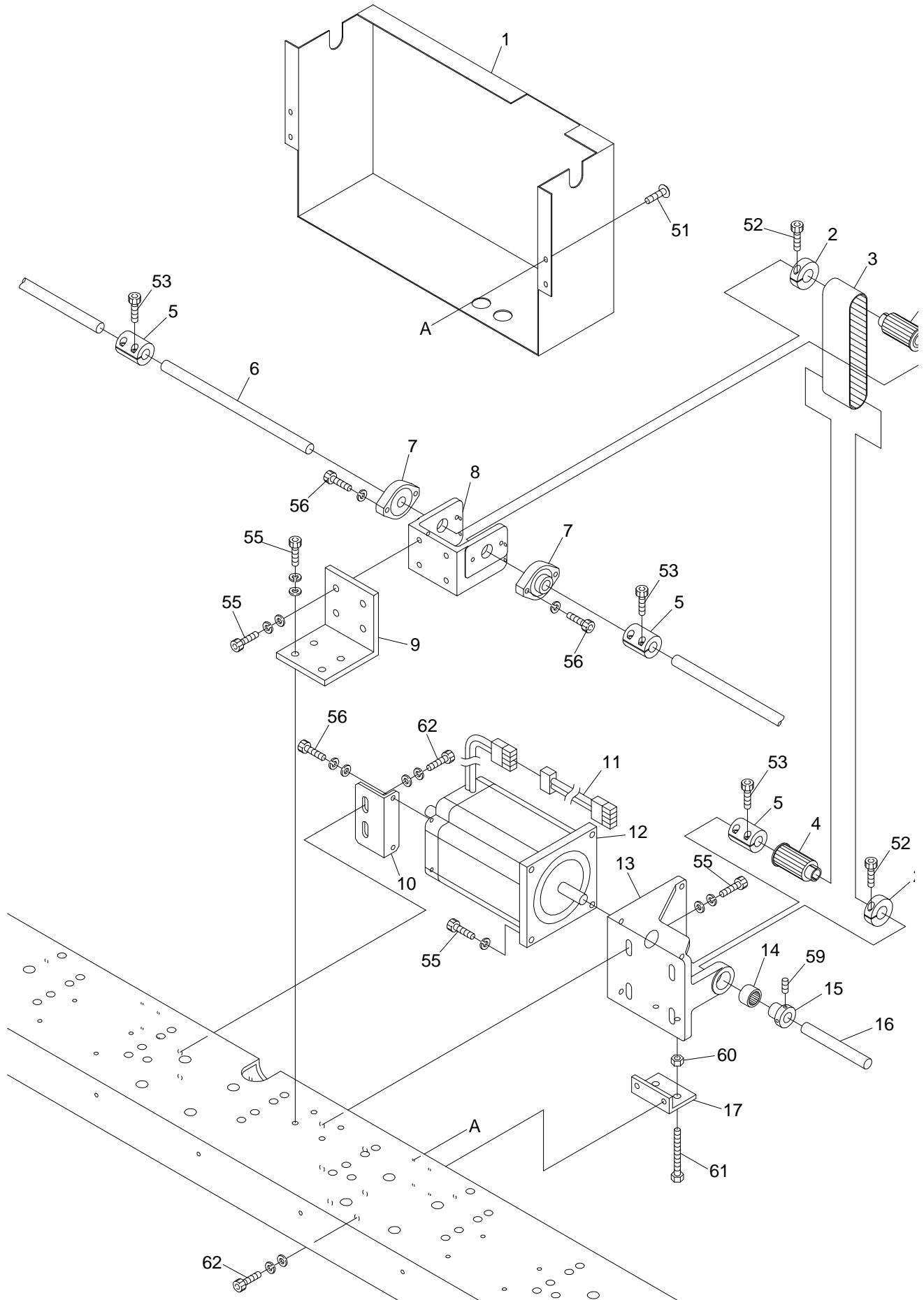


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# 10E PANTOGRAPH DRIVE E

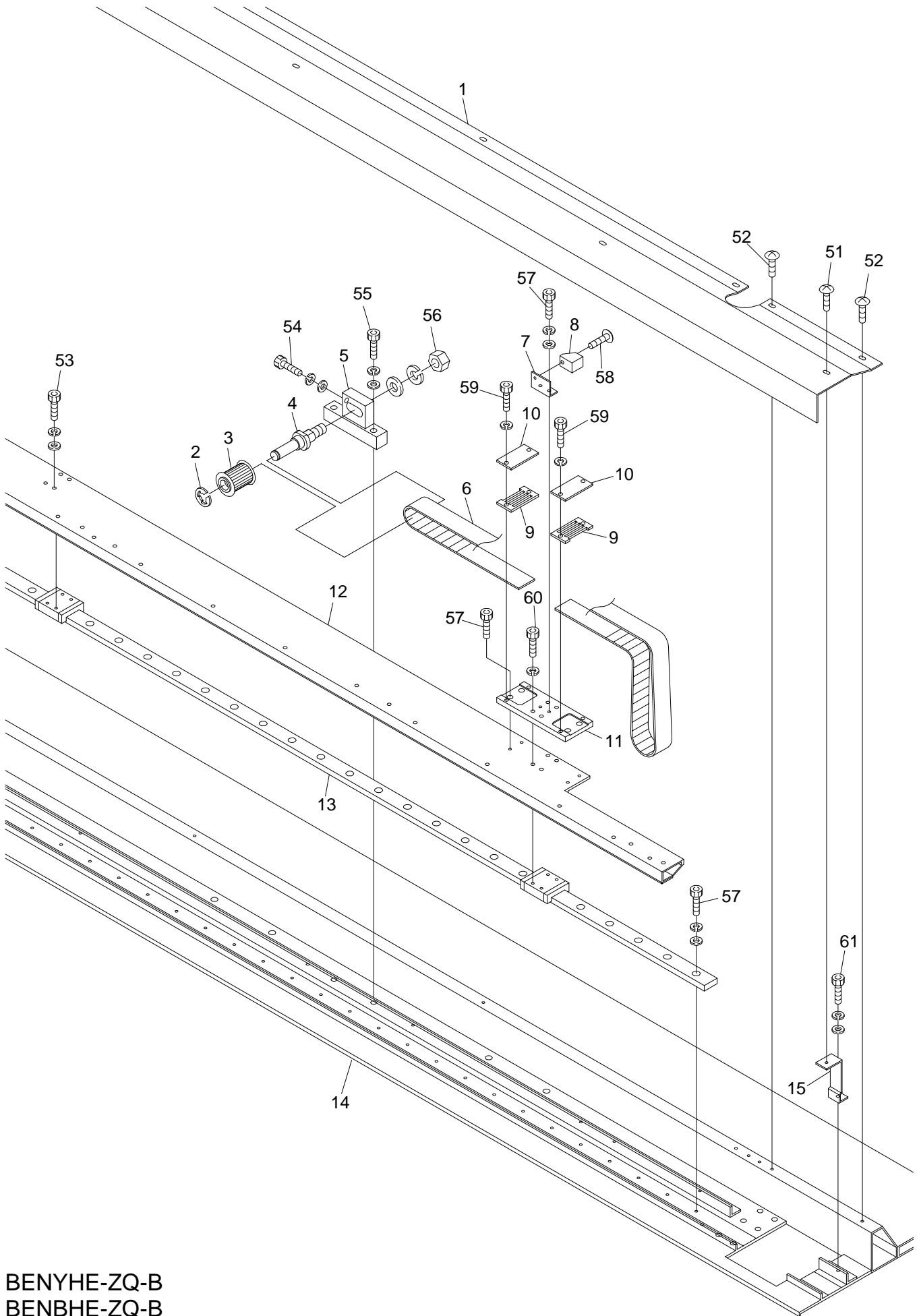


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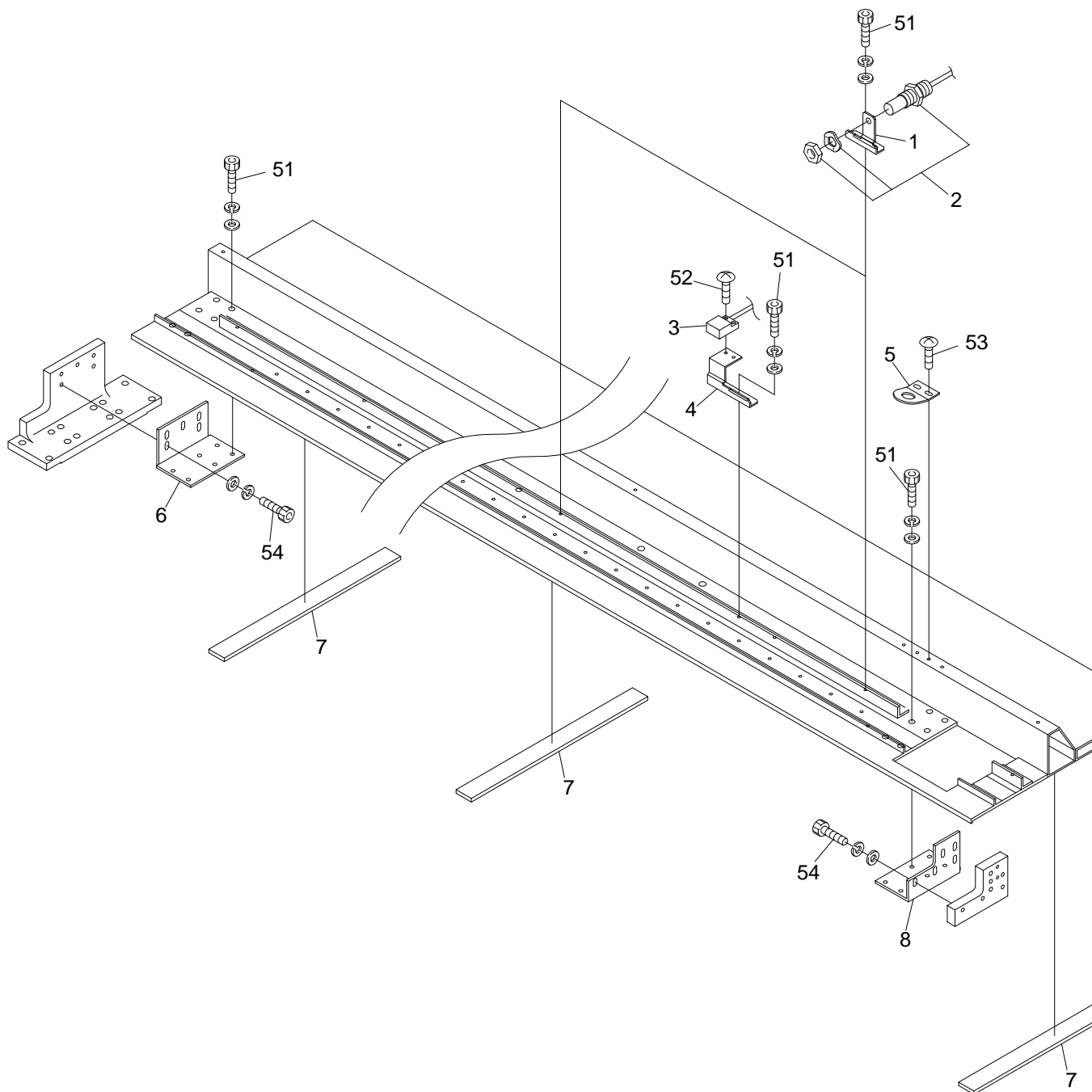
# 10F PANTOGRAPH DRIVE F



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BENBHE-ZQ-B



# 10G PANTOGRAPH DRIVE G

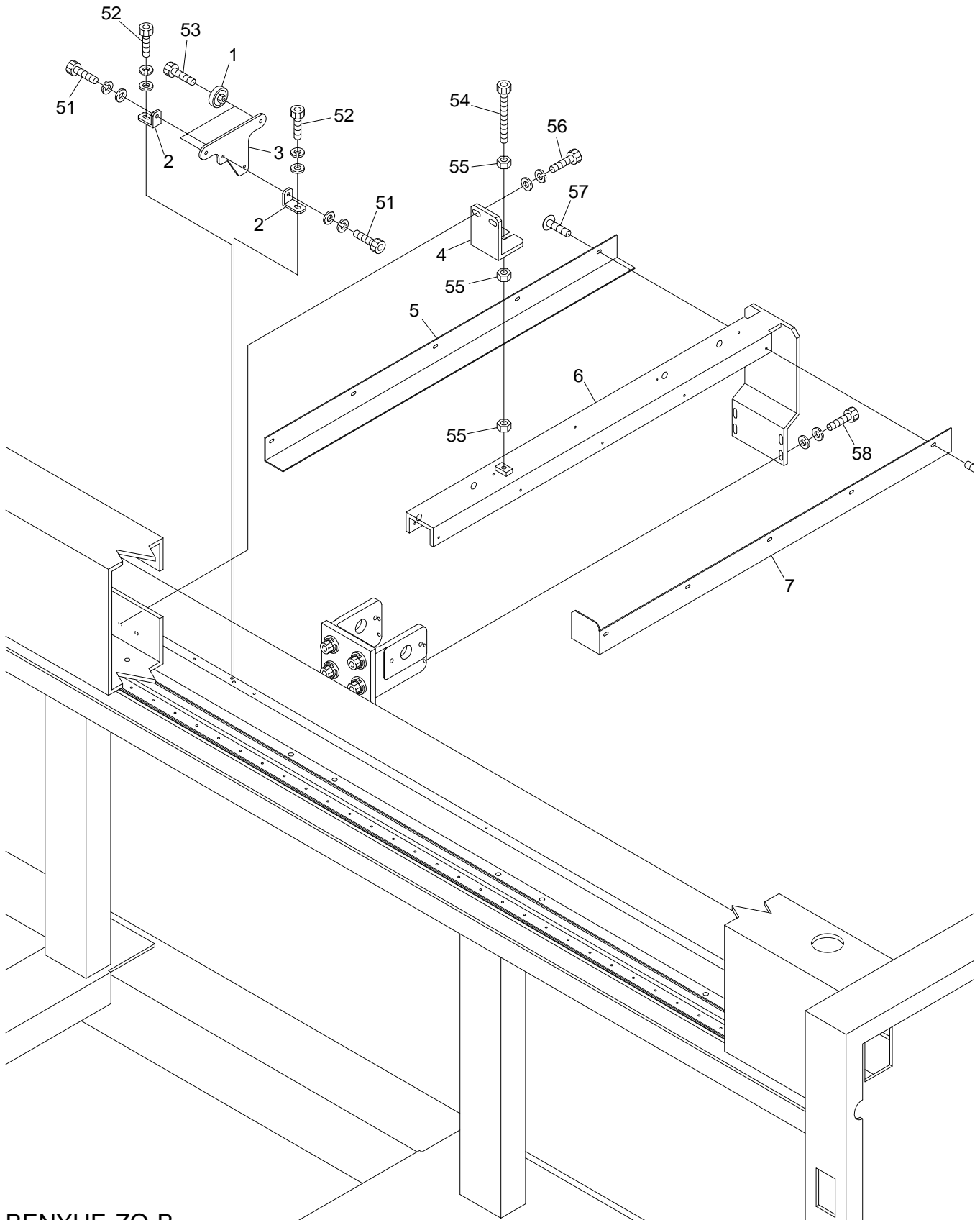


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BENBHE-ZQ-B



# 10H PANTOGRAPH DRIVE H



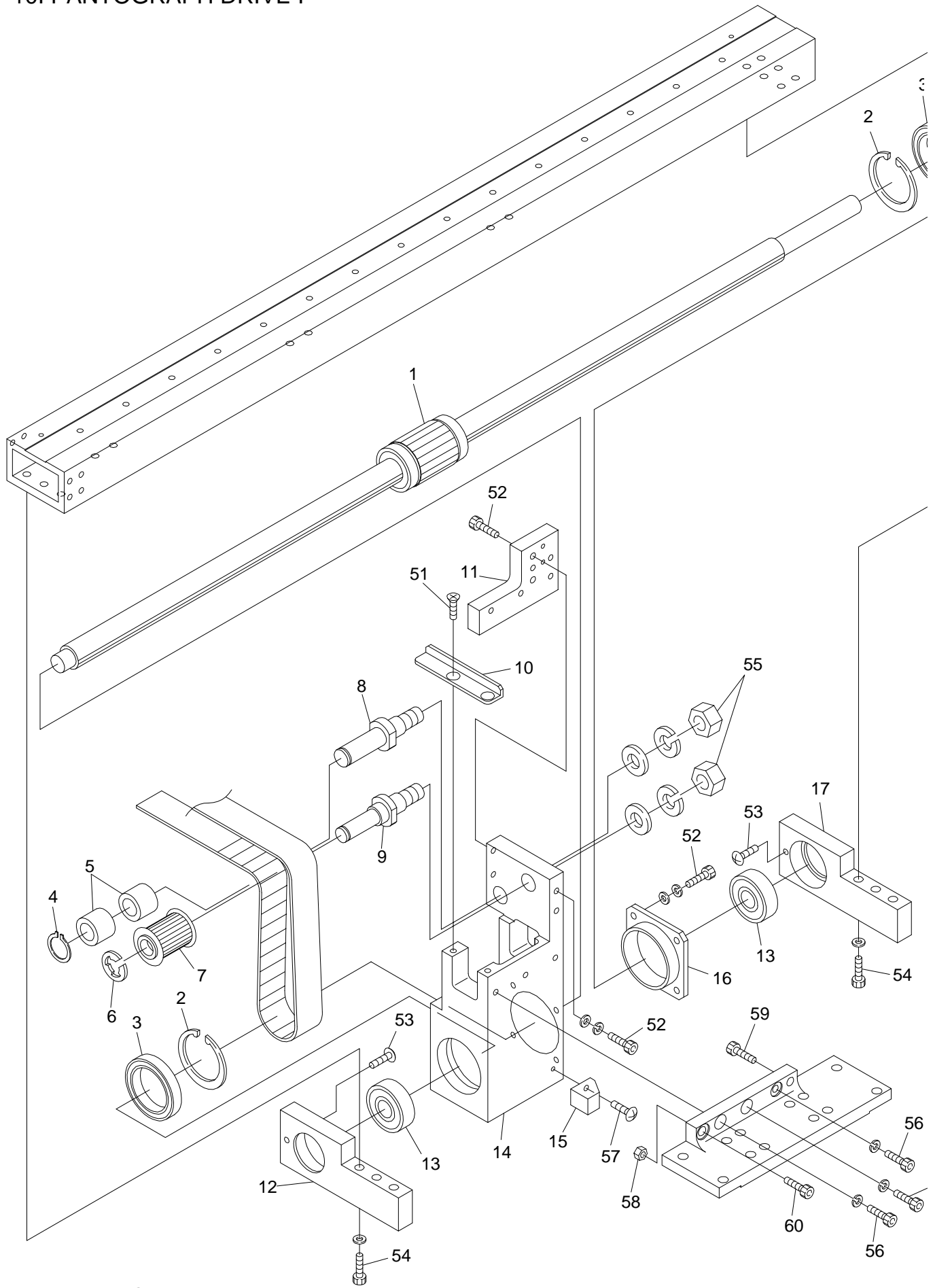
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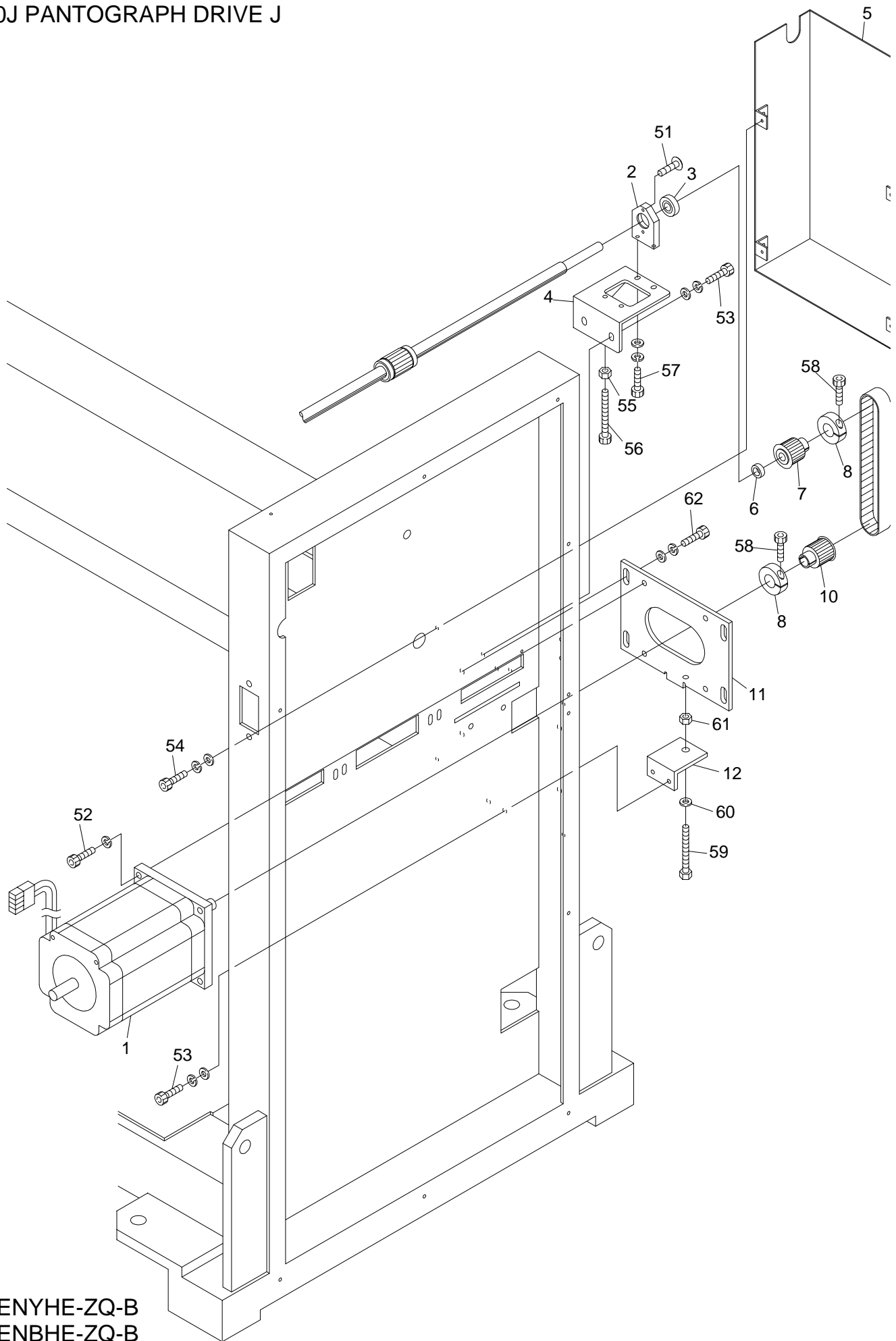
# 10I PANTOGRAPH DRIVE I



BENYHE-ZQ-B  
BENBHE-ZQ-B



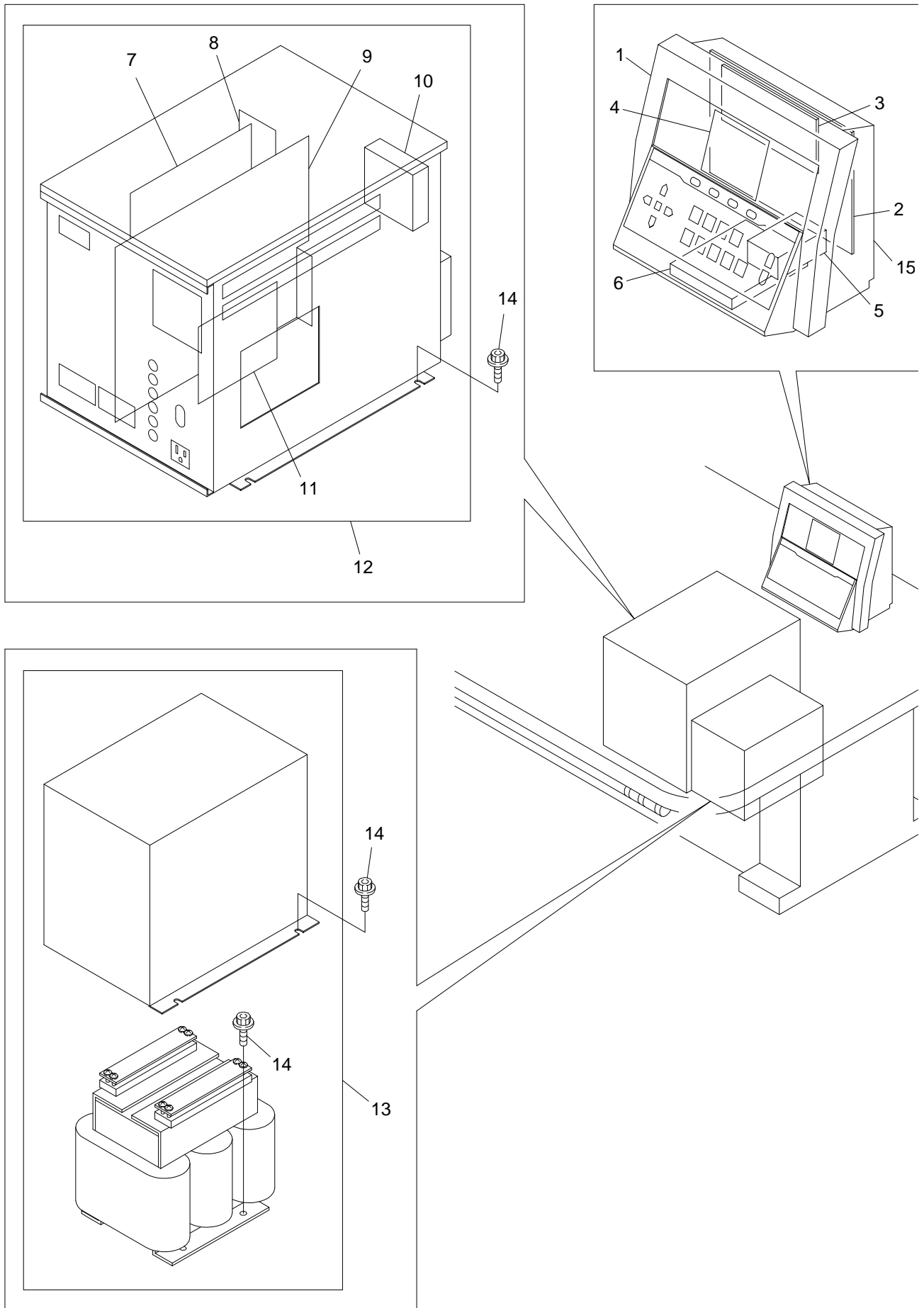
# 10J PANTOGRAPH DRIVE J



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BENBHE-ZQ-B



11A-1 CONTROL A (NY-2)

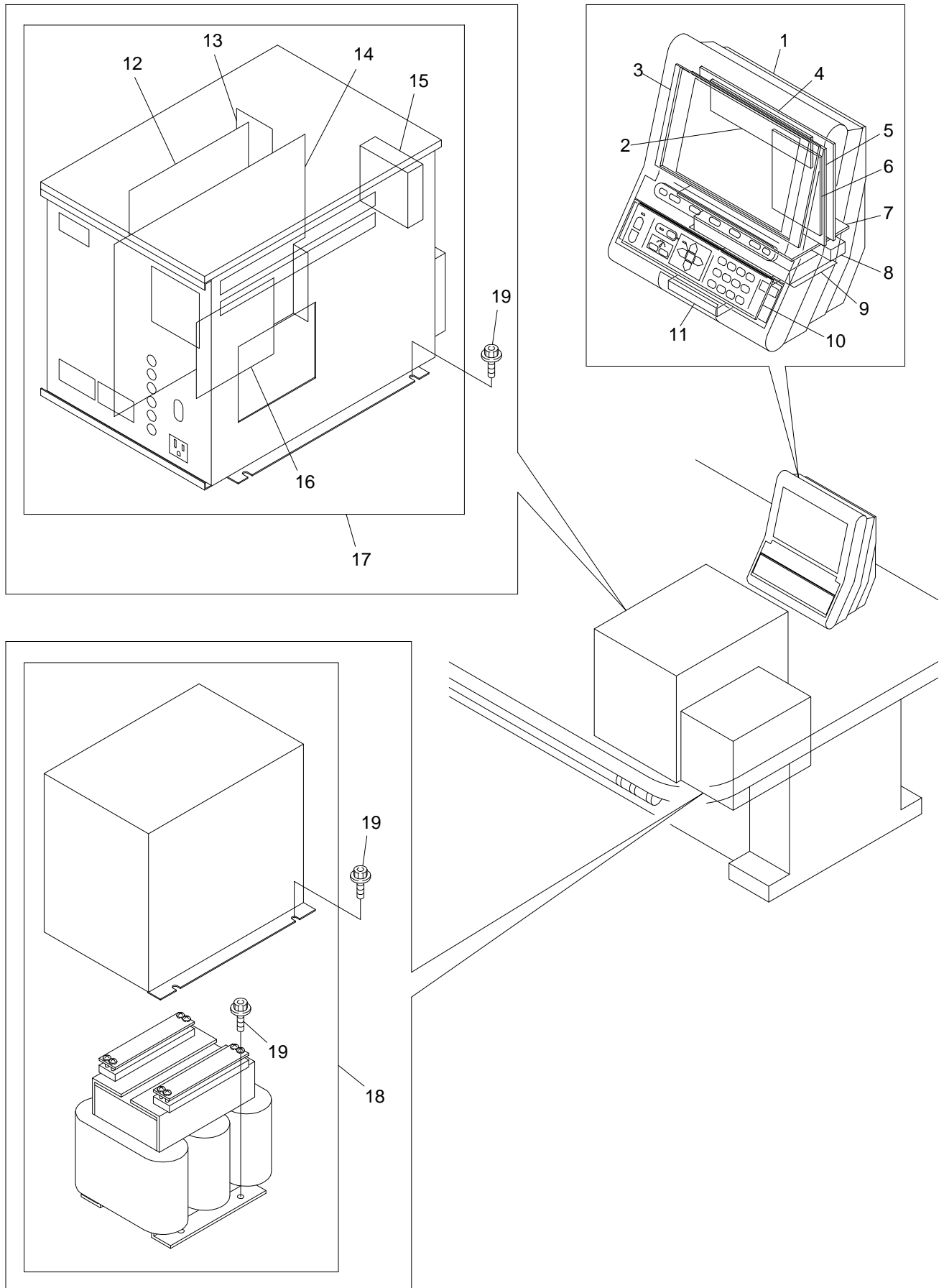


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# 11A-2 CONTROL A (NB)



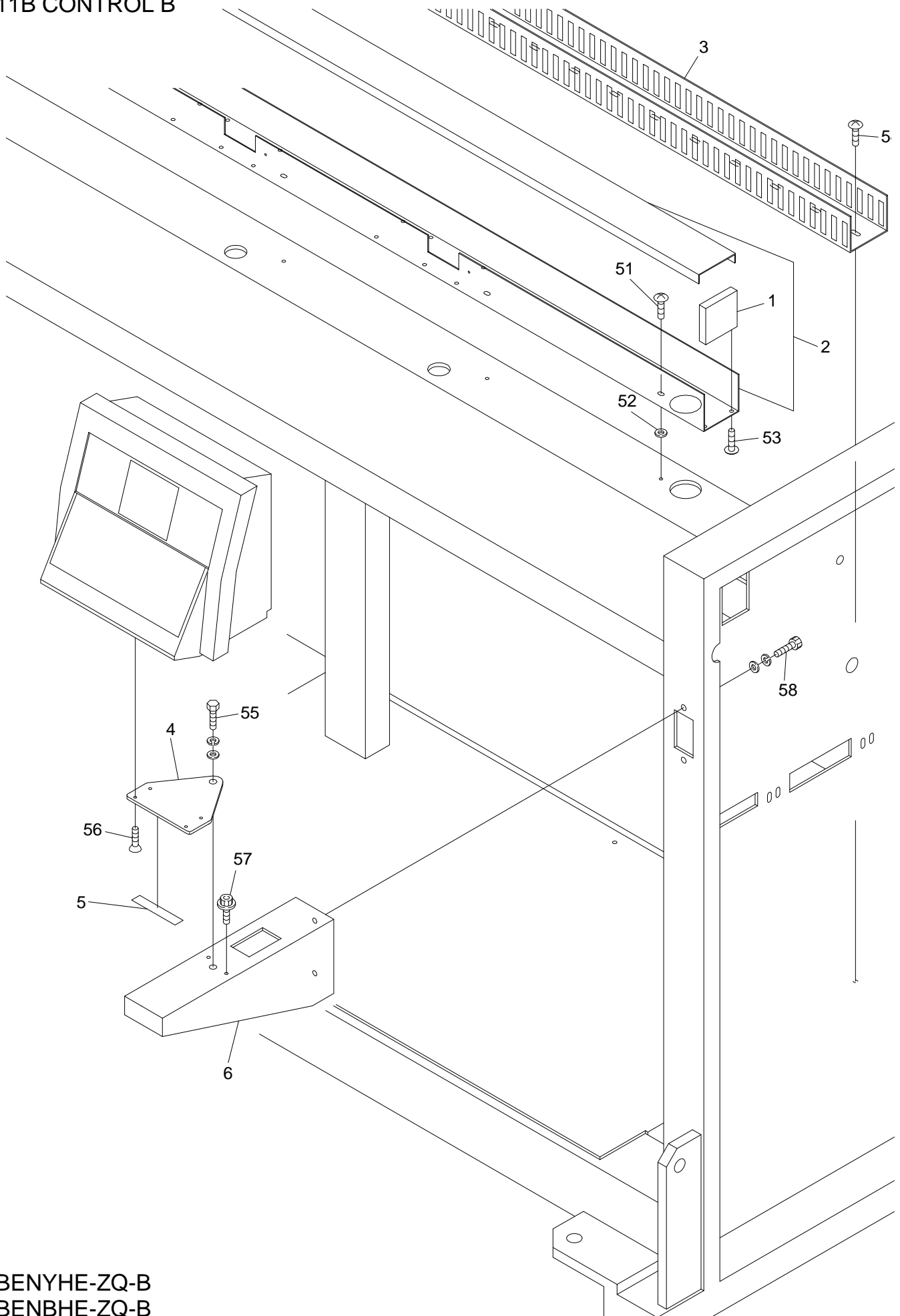
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# 11B CONTROL B

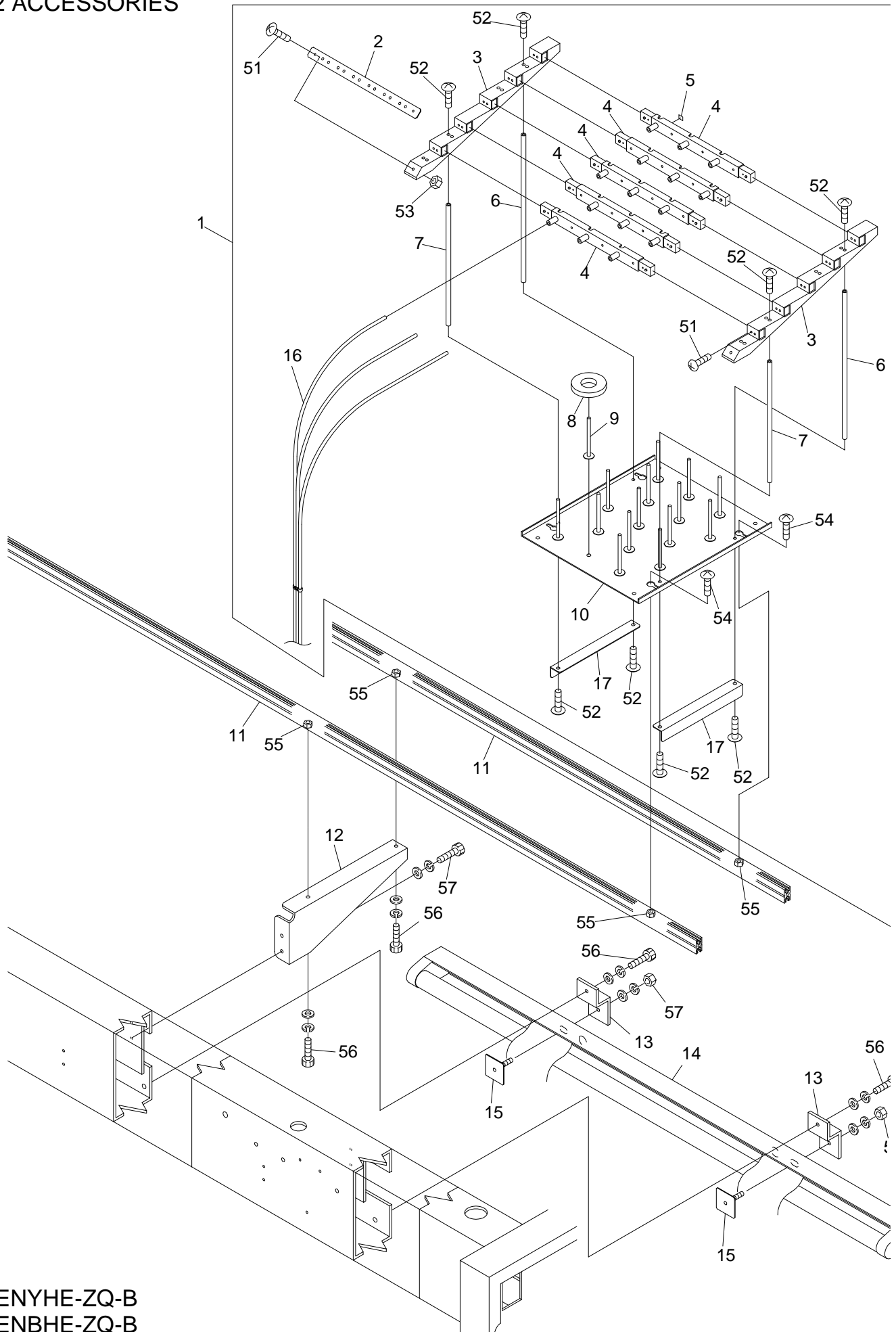


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# 12 ACCESSORIES



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