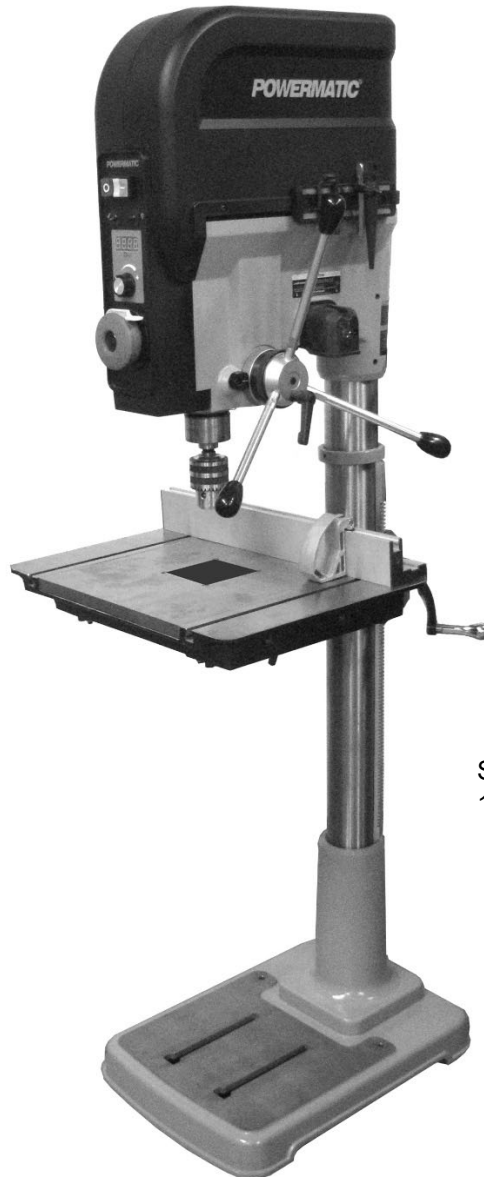


POWERMATIC®

Operating Instructions and Parts Manual 20-inch Variable Speed Drill Press Model PM2820EVS



Shown with optional
1792822 Tool Holder

Powermatic
427 New Sanford Road
LaVergne, Tennessee 37086
Ph.: 800-274-6848
www.powermatic.com

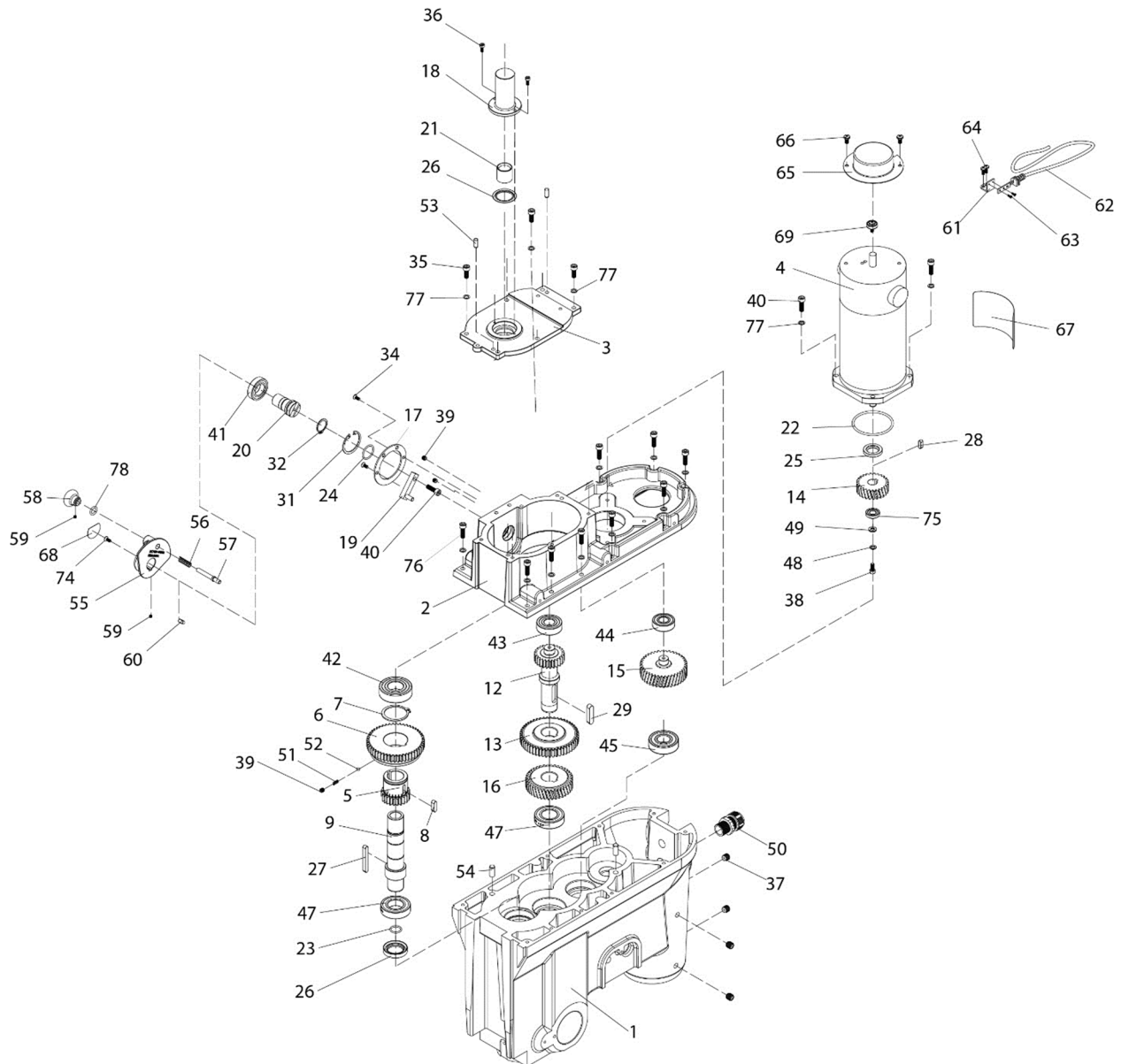
Part No. M-1792820
Edition 1 05/2020
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13.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from Powermatic. Some parts are shown for reference only, and may not be available individually.

13.1.1 PM2820EVS Gear Box Assembly – Exploded View

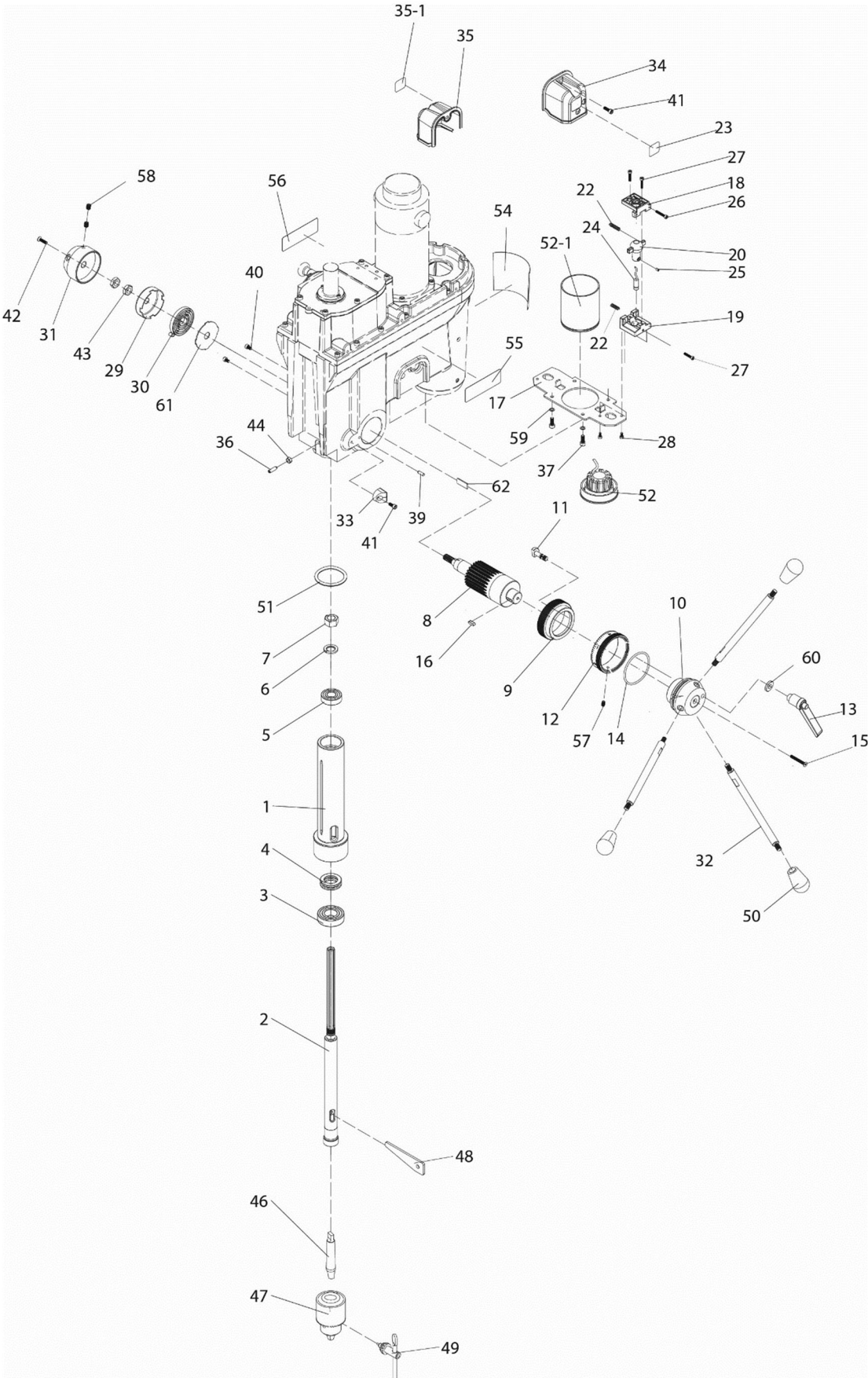


13.1.2 PM2820EVS Gear Box Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
1	PM2820EVS-101	Headstock		1
2	PM2820EVS-102	Gear Box		1
3	PM2820EVS-103	Gear Box Cover		1
	PM2820EVS-MA	Motor Assembly (item #4,14,25,28,38,46,48,49,61-67,75)		1
4	PM2820EVS-104	DC Motor (item #25 & 67)		1
	PM2820EVS-MCB	Motor Carbon Brush (not shown)		
	PM2820EVS-MCBC	Motor Carbon Brush Cap (not shown)		
5	PM2820EVS-105	Gear, 24T	24T	1
6	PM2820EVS-106	Gear, 50T	50T	1
7	PM2820EVS-107	C-Ring		1
8	PM2820EVS-108	Key, hardened	6x6x20 mm	1
9	PM2820EVS-109	Shaft		1
12	PM2820EVS-112	Gear, 25T with shaft	25T	1
13	PM2820EVS-113	Gear, 51T	51T	1
14	PM2820EVS-114	Gear, 26T	26T	1
15	PM2820EVS-115	Gear, 39T with shaft	39T	1
16	PM2820EVS-116	Gear, 39T	39T	1
17	PM2820EVS-117	Speed Seat Cover		1
18	PM2820EVS-118	Spindle Cover		1
19	PM2820EVS-119	Crank Lever		1
20	PM2820EVS-120	Speed Shaft		1
21	PM2820EVS-121	Bushing		1
22	PM2820EVS-122	O-Ring	59.4x3.1mm	1
23	PM2820EVS-123	O-Ring	15x2mm	1
24	PM2820EVS-124	O-Ring	21x2mm	1
25	PM2820EVS-125	Oil Seal	17x30x05V	1
26	PM2820EVS-126	Oil Seal	25x38x07V	2
27	PM2820EVS-127	Key, hardened	6x6x50mm	1
28	PM2820EVS-128	Key, hardened	5x5x15mm	1
29	PM2820EVS-129	Key, hardened	8x7x36mm	1
31	PM2820EVS-131	C-Ring	RTW-37	1
32	PM2820EVS-132	C-Ring	STW-20	1
34	TS-1512011	Socket Head Flat Screw	M4x10	2
35	TS-1503041	Socket Head Cap Screw	M6x16	6
36	TS-1501031	Socket Head Cap Screw	M4x10	2
37	PM2820EVS-137	Set Screw	M10x10	4
38	TS-1502031	Socket Head Cap Screw	M5x12	1
39	PM2820EVS-139	Set Screw	M6x6	3
40	TS-1503051	Socket Head Cap Screw	M6x20	15
41	BB-6904VV	Ball Bearing	6904LLB	1
42	BB-6205VV	Ball Bearing	6205LLB	1
43	BB-6203VV	Ball Bearing	6203LLB	1
44	BB-6202VV	Ball Bearing	6202LLB	1
45	BB-6204VV	Ball Bearing	6204LLB	1
47	BB-6005VV	Ball Bearing	6005LLB	2
48	TS-1550031	Flat Washer	M5	1
49	TS-1550041	Flat Washer	M6	1
50	PM2820EVS-150	Strain Relief	M20	1
51	PM2820EVS-151	Spring		1
52	PM2820EVS-152	Steel Ball	5mm	1
53	PM2820EVS-153	Pin	6x16mm	2
54	PM2820EVS-154	Pin	8x20mm	2
	PM2820EVS-CHA	Clutch Handle Assembly (item# 55-59, 78)		
55	PM2820EVS-155	Clutch Handle		1
56	PM2820EVS-156	Spring		1
57	PM2820EVS-157	Shaft		1
58	PM2820EVS-158	Knob		1
59	TS-1521011	Set Screw	M4x4	2
60	PM2820EVS-160	Key	5x5x10mm	1
61	PM2820EVS-161	Bracket		1
62	PM2820EVS-162	Motor Sensor kit		1
63	PM2820EVS-163	Pan Head Screw	M2x6	2
64	TS-1532032	Pan Head Screw	M4x10	2

Index No.	Part No.	Description	Size	Qty.
65	PM2820EVS-165	Cover		1
66	TS-1534041	Pan Head Screw	M5x10	2
67	PM2820EVS-167	Motor Label		1
68	PM2820EVS-168	Clutch Warning Label		1
69	PM2820EVS-169	Magnet Collar set		1
71	TS-152704	Hex Wrench, not shown	3mm	1
72	TS-152706	Hex Wrench, not shown	5mm	1
73	5628801	Hex Wrench, not shown	10mm	1
74	TS-1513031	Socket Head Flat Screw	M5X14	1
75	PM2820EVS-175	Flange		1
76	TS-1503061	Socket Head Cap Screw	M6x25	1
77	TS-0732041	Tooth Washer	1/4 in.	1
78	PM2820EVS-178	O-Ring	10x2.5mm	1

13.2.1 PM2820EVS Quill and Laser Assembly – Exploded View

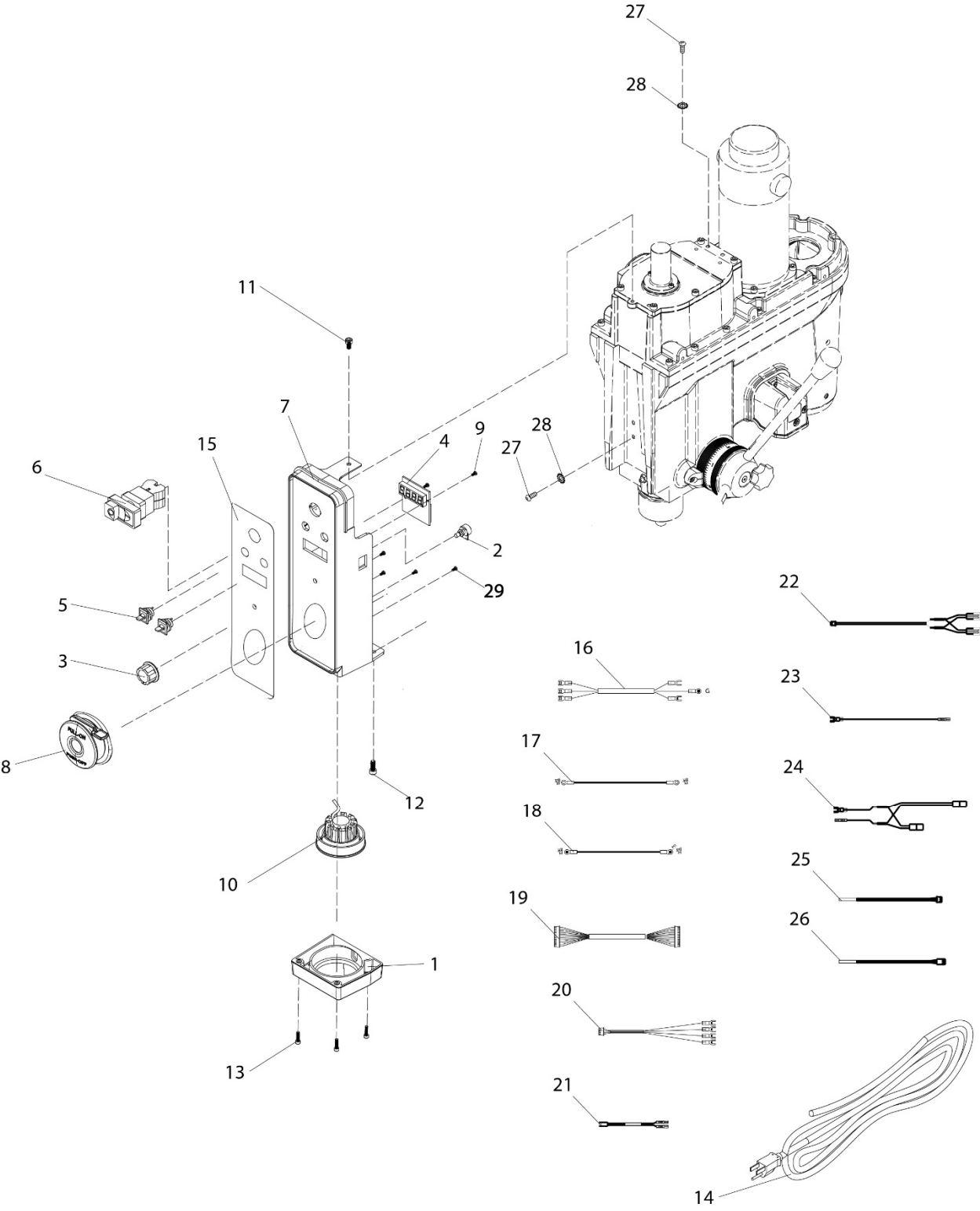


13.2.2 PM2820EVS Quill and Laser Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
	PM2820EVS-SA	Spindle Assembly (index #1-7)		
1	PM2820EVS-201	Quill		1
2	PM2820EVS-202	Spindle		1
3	BB-6205VV	Ball Bearing	6205LLB	1
4	BB-51105	Thrust Bearing	51105	1
5	BB-6203VV	Ball Bearing	6203LLB	1
6	TS-2361161	Lock Washer	M16	1
7	PM2820EVS-207	Hex Nut	M16xP1.0	1
8	PM2820EVS-208	Feed Shaft		1
9	PM2820EVS-209	Ring		1
10	PM2820EVS-210	Hub, Right		1
11	PM2820EVS-211	Lock Bolt		1
12	PM2820EVS-212	Depth Limited Scale		1
13	PM2820EVS-213	Locking Lever		1
14	PM2820EVS-214	O-Ring	64.4x3.1mm	1
15	PM2820EVS-215	Socket Head Flat Screw	M5x40mm	1
16	PM2820EVS-128	Key	5x5x15mm	1
17	PM2820EVS-217	Seat		1
	PM2820EVS-RLK	Right Laser Kit (item #18-22, 24-27)		1
	PM2820EVS-LLK	Left Laser Kit (item #18-22, 24-27)		1
18	PM2820EVS-218	Laser Upper bracket		2
19	PM2820EVS-219	Laser Lower bracket		2
20	PM2820EVS-220	Laser Adjustment Seat		2
22	PM2820EVS-222	Spring		4
23	PM2820EVS-223	Laser Label, Right		2
24	PM2820EVS-224	Laser Light		2
25	PM2820EVS-225	Plastic Set Screw	M4x6	2
26	TS-1501071	Socket Head Cap Screw	M4x25	2
27	TS-1501061	Socket Head Cap Screw	M4x20	6
28	TS-1532042	Machine Screw	M4x12	4
	PM2820EVS-CSA	Coil Spring Assembly (item #29-30,61)		1
29	PM2820EVS-229	Spring Cap		1
30	PM2820EVS-230	Coil Spring		1
31	PM2820EVS-231	Hub, Left		1
32	PM2820EVS-232	Feed Handle		3
33	PM2820EVS-233	Depth Pointer		1
34	PM2820EVS-234	Laser Seat Cover, Right (Includes #23)		1
35	PM2820EVS-235	Laser Seat Cover, Left (Includes #35-1)		1
35-1	PM2820EVS-2351	Laser Label, Left		1
36	PM2820EVS-236	Guide Pin		1
37	TS-1503041	Socket Head Cap Screw	M6x16	4
39	PM2820EVS-239	Pin		1
40	TS-1502011	Socket Head Cap Screw	M5x8	2
41	TS-1502041	Socket Head Cap Screw	M5x16	3
42	TS-1513041	Socket Head Flat Screw	M5x20	1
43	PM2820EVS-243	Nut	M12-1.25P	2
44	TS-1540041	Hex Nut	M6	1
46	PM2800-140	Arbor	MT2, JT3	1
47	PM2820EVS-247	Keyed Chuck		1
48	PM2800-136	Drift Key		1
49	PM2820EVS-249	Chuck Key		1
50	PM2820EVS-250	Knob		3
51	PM2820EVS-251	O-ring	51.6x 5.7mm	1
52	PM2820EVS-252	LED Light Kit		1
52-1	PM2820EVS-2521	LED Light Holder		1
53	PM2820EVS-253	I.D label (not shown)		1
54	PM2820EVS-254	Warning Label		1
55	PM2820EVS-255	Laser Warning Label, English version		1
56	PM2820EVS-256	Laser Warning Label, French version		1
57	TS-1523031	Set Screw	M6x10	1
58	TS-1524041	Set Screw	M8x15	2
59	TS-0732041	Tooth Washer	1/4 in	4

Index No.	Part No.	Description	Size	Qty.
60	TS-1550061	Flat Washer	M8	1
61	PM2820EVS-261	Spring Retainer		1
62	PM2820EVS-262	Insert Plate		1

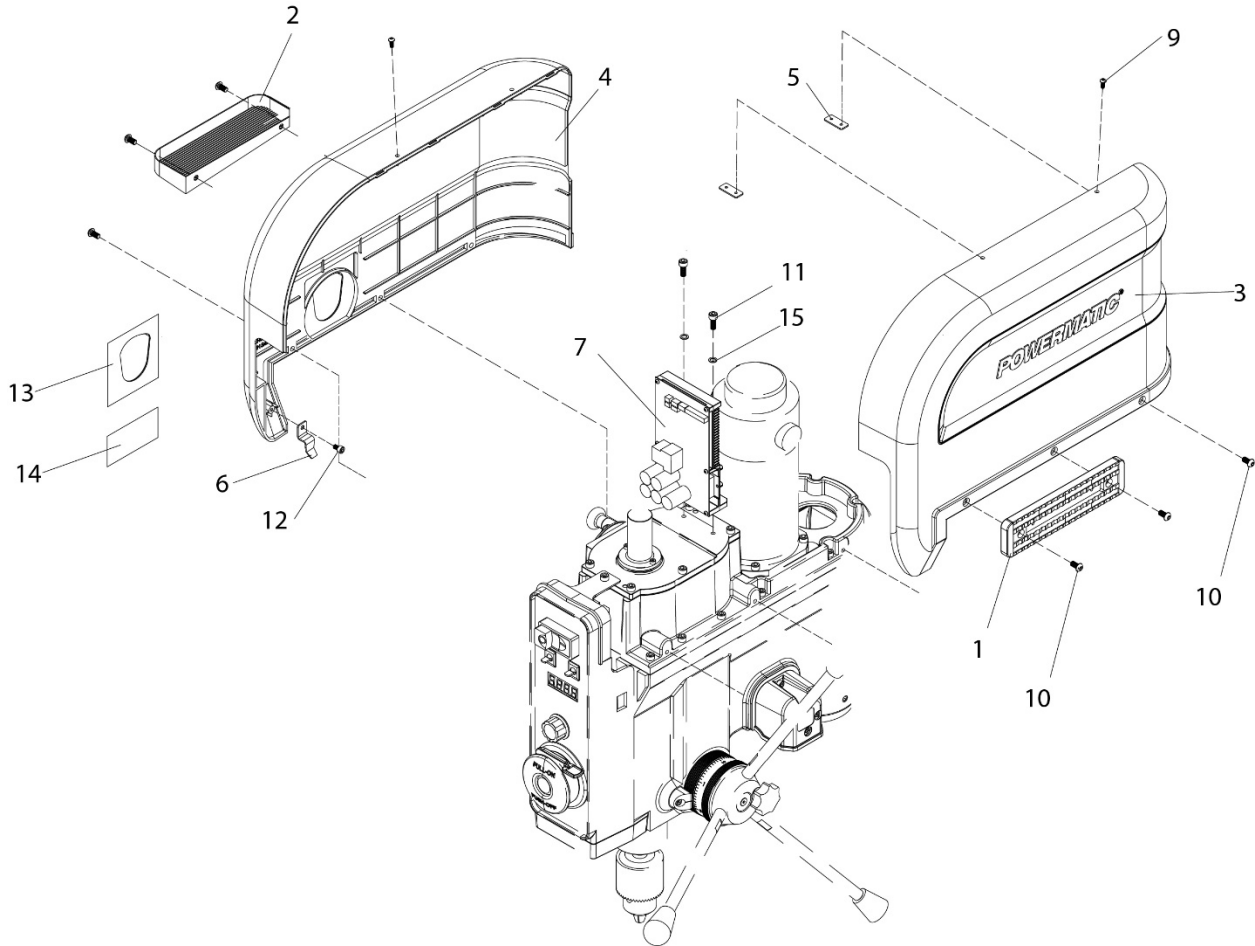
13.3.1 PM2820EVS Control Panel – Exploded View



13.3.2 PM2820EVS Control Panel – Parts List

Index No.	Part No.	Description	Size	Qty.
	PM2820EVS-CPA	Control Panel Assembly (item #2 - 9,15,29)		1
1	PM2820EVS-301	LED light Seat		1
2	PM2820EVS-302	Control Pot Assembly		1
3	PM2820EVS-303	Knob with Screw		1
4	PM2820EVS-304	Digital Readout		1
5	PM2820EVS-305	Momentary Switch		2
6	PM2820EVS-306	Control Switch		1
7	PM2820EVS-307	Front Panel Frame (Includes #15)		1
	PM2800-103-1	Switch Safety Key		
8	PM2820EVS-308	Main Switch (* includes Switch Safety Key)		1
9	TS-2283061	Machine Screw	M3x6	2
10	PM2820EVS-252	LED Light Kit		1
11	TS-1503021	Socket Head Cap Screw	M6x10	1
12	TS-1503031	Socket Head Cap Screw	M6x10	2
13	TS-2284201	Machine Screw	M4x20	4
14	PM2820EVS-314	Power Cable		1
15	PM2820EVS-315	Label, Control Panel		1
16	PM2820EVS-316	Power Cable, Terminal to PCB (not shown)		1
17	PM2820EVS-317	Grounding Wire, heat sink to headstock (not shown)		1
18	PM2820EVS-318	Grounding Wire, heat sink to headstock (not shown)		1
19	PM2820EVS-319	Signal wire, PCB to digital readout (not shown)		1
20	PM2820EVS-320	Connection Wire, digital to control switch (not shown)		1
21	PM2820EVS-321	Laser Wire, momentary switch to PCB (not shown)		1
22	PM2820EVS-322	Laser Wire, PCB to Laser (not shown)		1
23	PM2820EVS-323	LED Light Wire, momentary switch to Power (not shown)		1
24	PM2820EVS-324	LED Light wire, momentary switch & Power to LED light (not shown)		1
25	PM2820EVS-325	Sensor, High Speed Range (not shown)		1
26	PM2820EVS-326	Sensor, Low Speed Range (not shown)		1
27	TS-1501041	Socket Head Cap Screw	M4x12	4
28	TS-0733031	External Tooth Washer	#10	4
29	TS-2283102	Machine Screw	M3x10	4

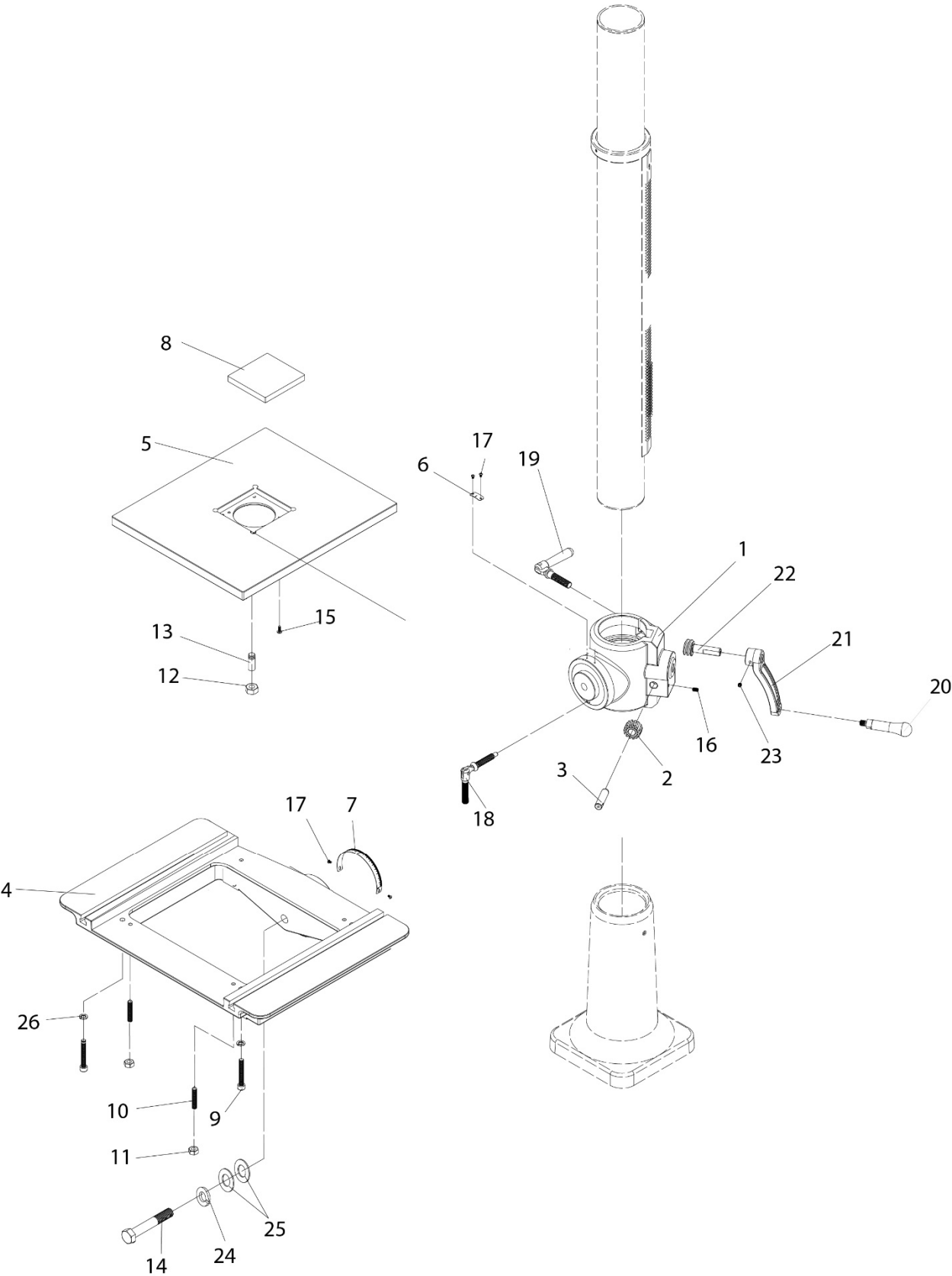
13.4.1 PM2820EVS Top Cover & PCB Assembly – Exploded View



13.4.2 PM2820EVS Top Cover & PCB Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
1	1792822	Tool Holder (OPTIONAL ACCESSORY)		1
2	1792821	Storage Set (OPTIONAL ACCESSORY)		1
3	PM2820EVS-403	Cover, Right		1
4	PM2820EVS-404	Cover, Left		1
5	PM2820EVS-405	Steel Plate		2
6	PM2820EVS-406	Hook		2
7	PM2820EVS-407	PCB Assembly		1
9	TS-2244102	Socket Head Button Screw	M4x10	4
10	TS-2246202	Socket Head Button Screw	M6x20	6
11	TS-1503041	Socket Head Cap Screw	M6x16	2
12	TS-2285121	Machine Screw	M5x12	1
13	PM2820EVS-413	Clutch H & L Speed Label		1
14	PM2820EVS-414	Clutch Warning Label		1
15	TS-0732041	Tooth Washer	1/4 in	1
16	PM2820EVS-416	Fuse, PCB (not shown)	20A	1

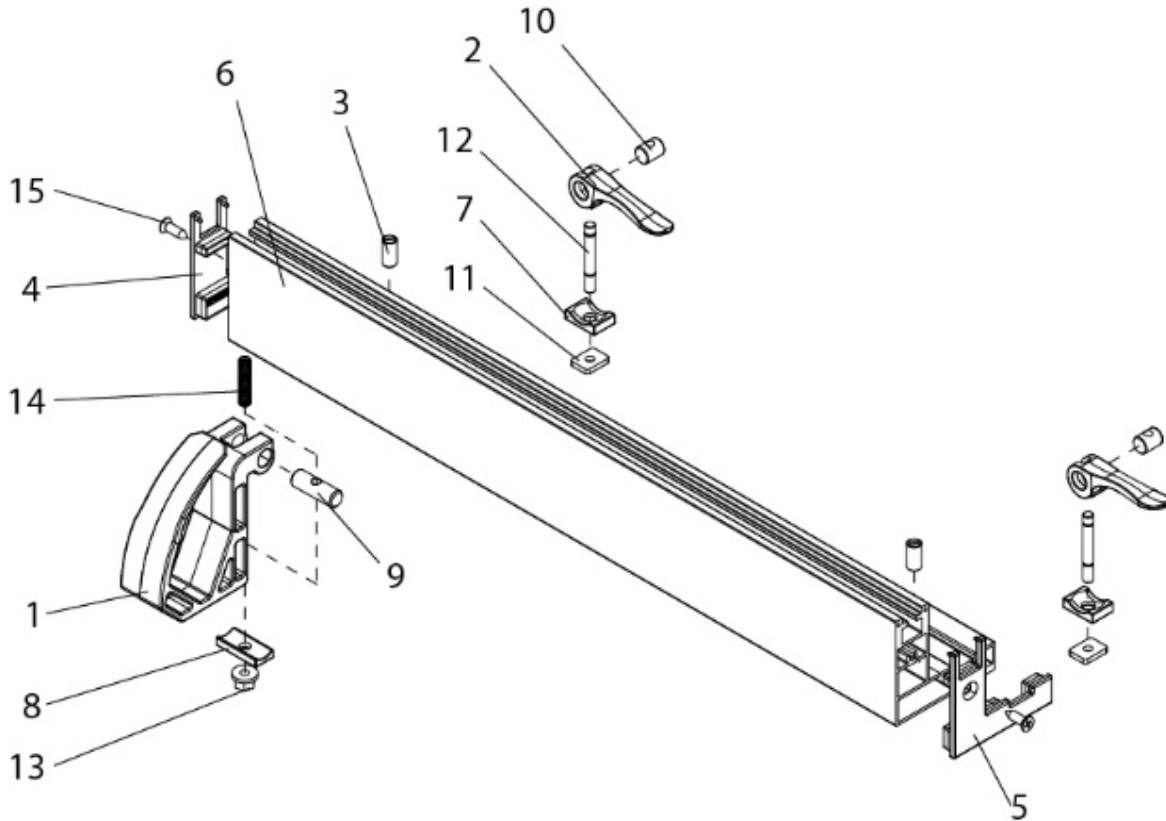
13.5.1 PM2820EVS Work Table Assembly – Exploded View



13.5.2 PM2820EVS Work Table Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
	PM2820EVS-TA	Table Assembly (item #1-26)		1
1	PM2820EVS-501	Table Bracket		1
2	PM2820EVS-502	Gear		1
3	PM2820EVS-503	Shaft		1
4	PM2820EVS-504	Main Table		1
5	PM2820EVS-505	Replacement Table		1
	1792823	Replacement Table with Insert (includes #5,8,12,13,15)		1
6	PM2820EVS-506	Pointer		1
7	PM2820EVS-507	Angle Scale		1
8	PM2820EVS-508	Table Insert		1
9	TS-1504121	Socket Head Cap Screw	M8x60	4
10	PM2820EVS-510	Set Screw	M8x60	4
11	TS-1540061	Hex Nut	M8	4
12	TS-1540041	Hex Nut	M6	4
13	PM2820EVS-513	Set Screw	M6x20	4
14	PM2820EVS-514	Hex Cap Screw	M16x110	1
15	TS-2284121	Machine Screw	M4x12	2
16	TS-1523031	Set Screw	M6x10	1
17	PM2820EVS-517	Socket Head Button Screw	M3x5	4
18	PM2820EVS-518	Lock Handle		1
19	PM2820EVS-519	Lock Handle		1
20	PM2820EVS-520	Handle		1
21	PM2820EVS-521	Crank Arm		1
22	PM2820EVS-522	Worm Shaft		1
23	TS-1523011	Set Screw	M6x6	1
24	TS-2361161	Lock Washer	M16	1
25	TS-155010	Flat Washer	M16	2
26	TS-2361081	Lock Washer	M8	4

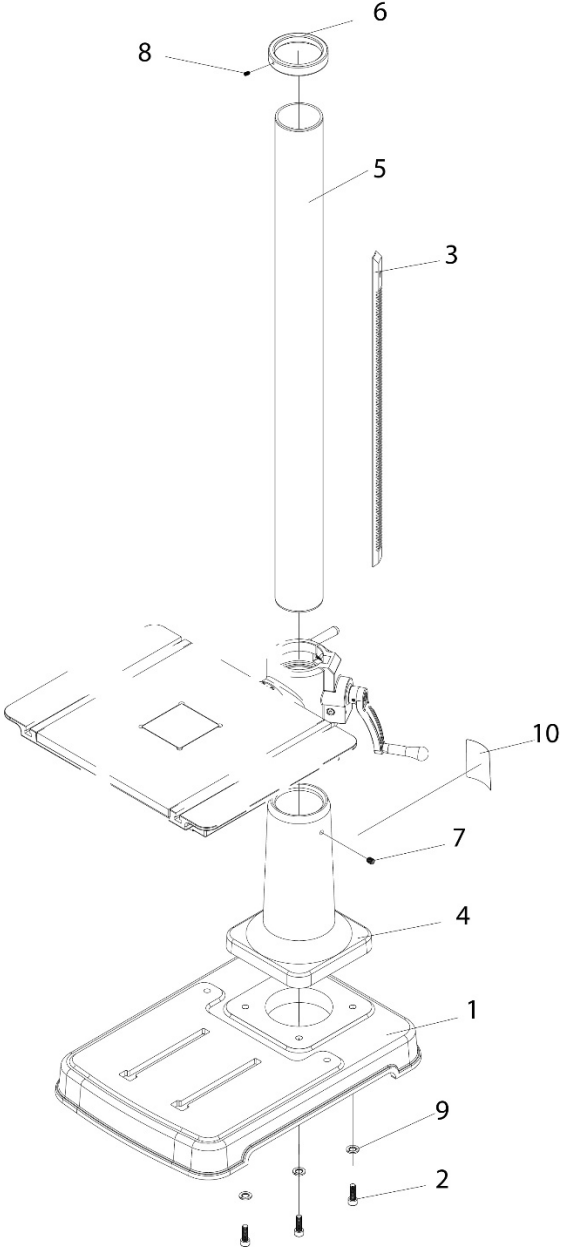
13.6.1 PM2820EVS Fence Assembly – Exploded View



13.6.2 PM2820EVS Fence Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
.....	PM2820EVS-FA.....	Fence Assembly (index #1-15)		
1.....	PM2800B-060.....	Work Stop		1
.....	PM2800B-WSA.....	Work Stop Assembly (index #1, 8, 9, 13, 14).....		1
2.....	PM2800B-040.....	Cam Lock Handle		2
3.....	PM2820EVS-603.....	Plastic Set Screw	M8x16	2
4.....	PM2800B-046.....	Left Fence Cap		1
5.....	PM2800B-061.....	Right Fence Cap		1
6.....	PM2820EVS-606.....	Fence		1
7.....	PM2800B-043.....	Cam Plate		2
8.....	PM2800B-057.....	Cam Plate, Work Stop		1
9.....	PM2800B-059.....	Center Shaft.....		1
10.....	PM2800B-041.....	Pivot.....		2
11.....	PM2800B-241.....	Rectangular Nut.....		2
12.....	PM2800B-042.....	Bolt.....		2
13.....	PM2800B-055A.....	Nut	M6	1
14.....	TS-1523081.....	Set Screw.....	M6x30	1
15.....	TS-1534041.....	Machine Screw	M5x10	2

13.7.1 PM2820EVS Column Assembly – Exploded View



13.7.2 PM2820EVS Column Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
1	PM2820EVS-701	Base		1
2	TS-1506041	Socket Head Cap Screw	M12x35	4
3	PM2820EVS-703	Rack		1
4	PM2820EVS-704	Column Holder Kit (Includes #5 & #7)		1
5		Column		1
6	PM2820EVS-706	Rack Ring		1
7	TS-1525021	Set Screw	M10x12	1
8	TS-1523031	Set Screw	M6x10	1
9	TS-2361121	Lock Washer	M12	4
10	LM-000417	I.D label, PM2820EVS		1