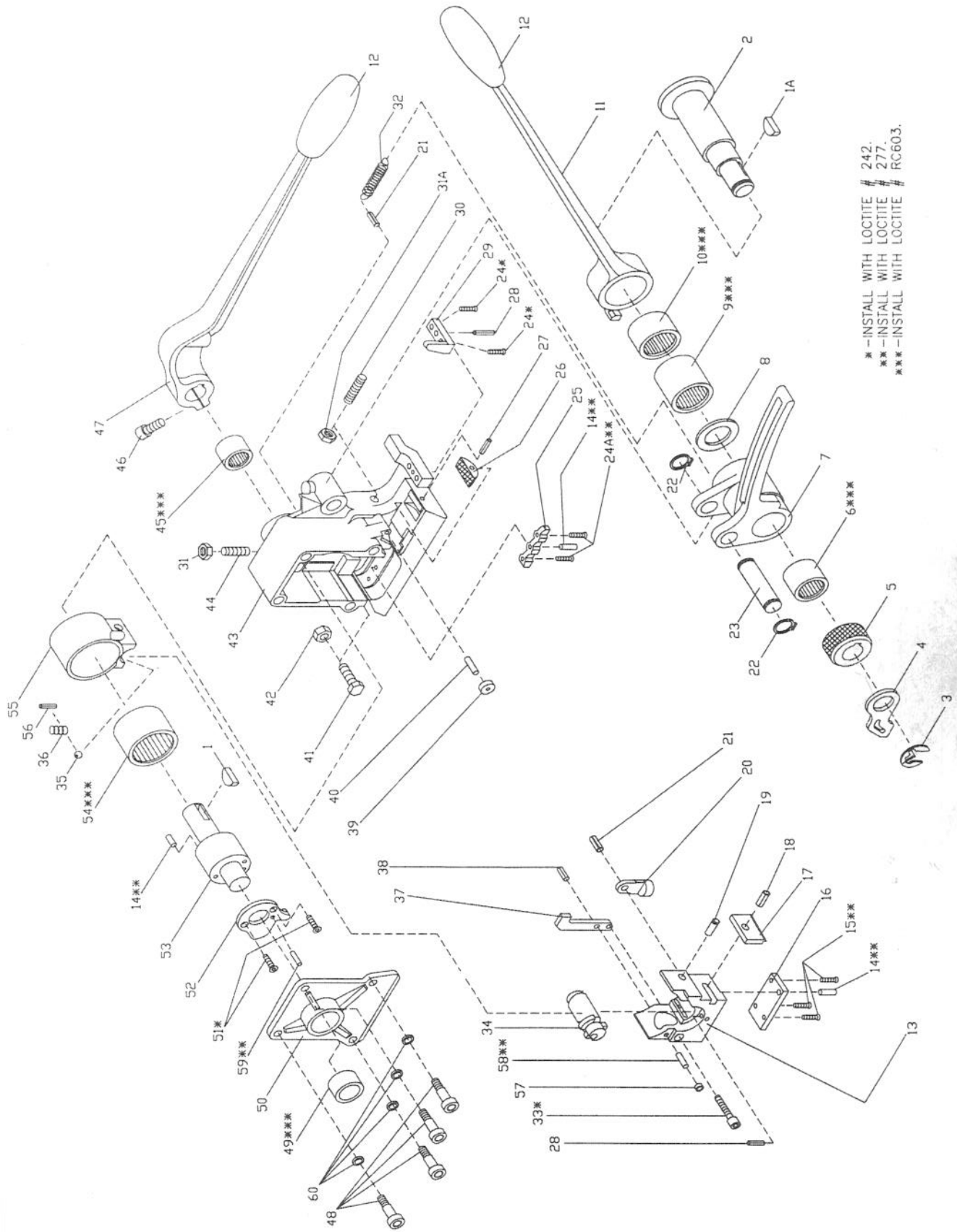


These products are patented and/or have patents pending.

OPERATION MANUAL AND PARTS LIST **MS31** SERIES TOOLS

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7. MS31 DIAGRAM



8. MS31 PARTS LIST



POSITION	PART NO.	PART NAME	PARTS PER TOOL
1, 1A	ZR-0001	WOODRUFF KEY	2
2	ZR-0002	FEEDWHEEL SHAFT	1
3	ZR-0003	EXTERNAL RETAINING RING	1
4	ZR-0006	STRAP GUIDE 3/4" (19mm)	1
5	ZR-0074	FEEDWHEEL 31	1
6	ZR-0008	ROLLER BEARING	1
7	ZR-0009	FEEDWHEEL LEVER	1
8	ZR-0010	WASHER	1
9	ZR-0011	ROLLER CLUTCH AND BEARING ASSEMBLY	1
10	ZR-0012	ROLLER CLUTCH	1
11	ZR-0013	TENSION LEVER	1
12	ZR-0014	HANDLE	2
13	ZR-0067	DIE AND KNIFE BLOCK 31 (INCLUDES ZR-0034, ZR-0077)	1
14	ZR-0016	DOWEL PIN	3
15	ZR-0017	CHEESE HEAD MACHINE SCREW	3
16	ZR-0068	DIE 31	1
17	ZR-0069	KNIFE 31 (INCLUDES ZR-0021)	1
18	ZR-0021	SPRING TENSION PIN	1
19	ZR-0022	CONNECTION PIN	1
20	ZR-0023	BACK UP HOOK	1
21	ZR-0024	SPRING TENSION PIN	2
22	ZR-0025	EXTERNAL RETAINING RING	2
23	ZR-0026	SHAFT	1
24, 24A	ZR-0033	CHEESE HEAD MACHINE SCREW	4
25	ZR-0071	PUNCH 31	1
26	ZR-0031	GRIPPER	1
27	ZR-0032	SPRING TENSION PIN	1
28	ZR-0034	SPRING TENSION PIN	2
29	ZR-0037	STRAP STOP FRONT 3/4" (19mm)	1
30	ZR-0038	HEXAGON SOCKET SET SCREW	1
31, 31A	ZR-0039	NUT	2
32	ZR-0040	EXTENSION SPRING	1
33	ZR-0041	HEXAGON SOCKET CAP SCREW	1

8. MS31 PARTS LIST



POSITION	PART NO.	PART NAME	PARTS PER TOOL
34	ZR-0042	CAM	1
35	ZR-0043	BALL	1
36	ZR-0044	COMPRESSION SPRING	1
37	ZR-0045	DIE BLOCK BACK UP	1
38	ZR-0046	SPRING TENSION PIN	1
39	ZR-0047	SPACER	1
40	ZR-0048	PIN	1
41	ZR-0051	STRAP STOP REAR 3/4" (19mm)	1
42	ZR-0052	NUT	1
43	ZR-0072	HOUSING MS31	1
44	ZR-0054	HEXAGON SOCKET SET SCREW	1
45	ZR-0055	ROLLER BEARING	1
46	ZR-0056	HEXAGON SOCKET CAP SCREW	1
47	ZR-0057	SEALING LEVER	1
48	ZR-0338	COVER SCREW <i>New #</i>	4
49	ZR-0059	ROLLER BEARING	1
50	ZR-0060	HOUSING COVER	1
51	ZR-0061	CHEESE HEAD MACHINE SCREW	2
52	ZR-0078	CAM LEVER (INCLUDES ZR-0028)	1
53	ZR-0063A	ECCENTRIC SHAFT 31 (INCLUDES ZR-0016)	1
54	ZR-0064	ROLLER BEARING	1
55	ZR-0065	ECCENTRIC SHAFT PLUNGER (INCLUDES ZR-0043, ZR-0044, ZR-0064, ZR-0075)	1
56	ZR-0075	SPRING TENSION PIN	1
57	ZR-0076	ROLLER	1
58	ZR-0077	ROLLER PIN	1
59	ZR-0028	DOWEL PIN	1
60	ZR-0339	WASHER	4
—	ZR-0073	OPERATION MANUAL AND PARTS LIST FOR MS31 SERIES TOOLS.	1