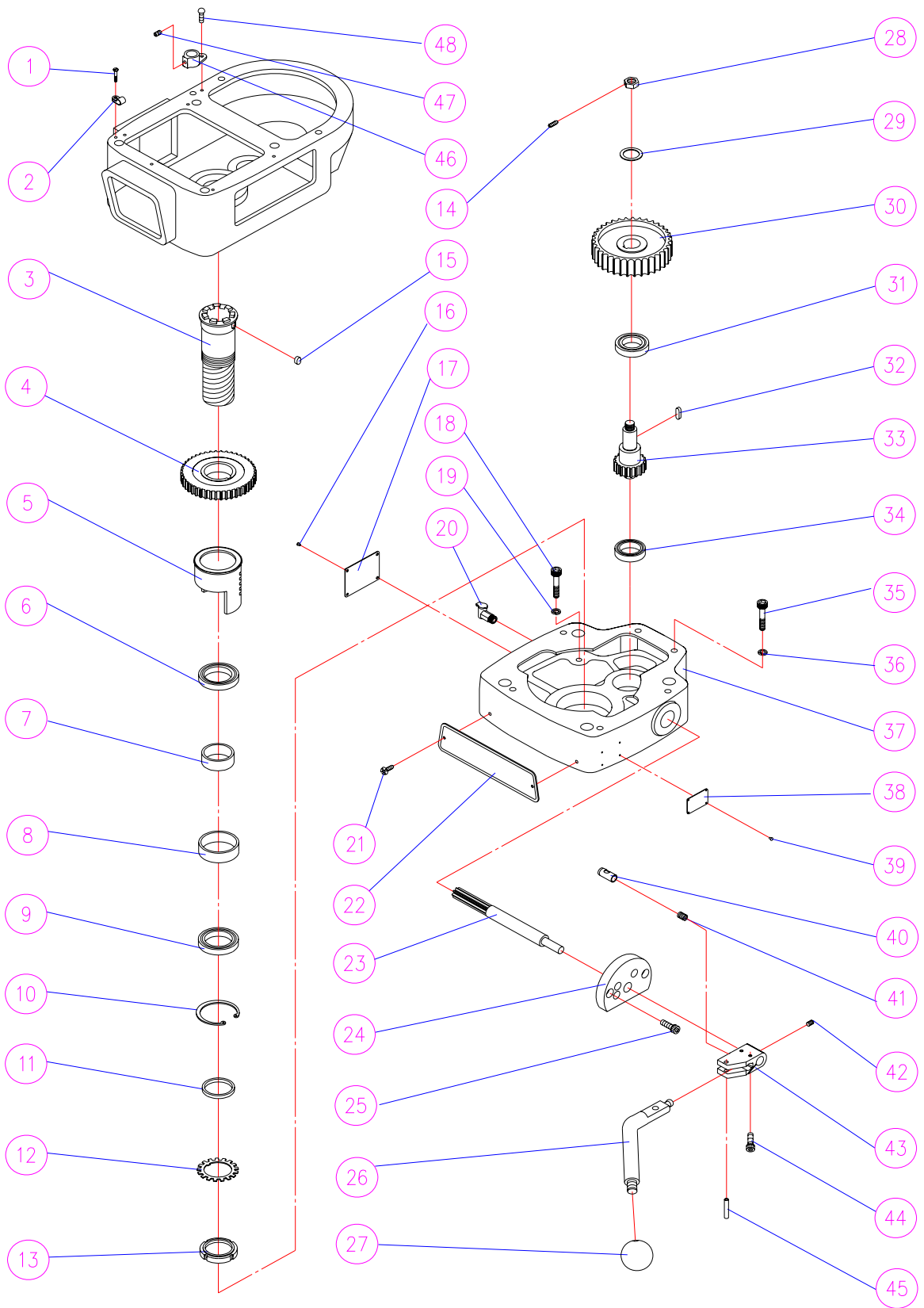


HEAD STOCK UPSIDE (1) PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	SC-M6x20L	SOCKET CAP SCREW	4
2.	K6-K042-00	TOP BEARING CAP	1
3.	6009LLB	BALL BEARING	1
4.	K6-K043-00	SPACER	1
5.	SC-M6x30L	SOCKET CAP SCREW	5
6.	WF-ø6	FLAT WASHER	5
7.	F4-K005-00	CHANGE HOUSING	1
8.	8M-25-720	HTD BELT	1
9.	K6-K054-00	GEAR 47T	1
10.	K6-K052-00	GEAR 62T	1
11.	K6-K045-00	SPINDLE GEAR HUB	1
12.	8M-25-480	HTD BELT	1
13.	K6-K047-00	SPACER	1
14.	6010LLB	BALL BEARING	1
15.	SS-M6x6L	SOCKET SET SCREW	1
16.	SP-ø3x20L	SPRING PIN	1
17.	K6-K125-00	HANDLE	1
18.	K6-K128-00	SHIFT CRANK	1
19.	K6-K132-00	PINION BLOCK	1
20.	SP-ø5x30L	SPRING PIN	1
21.	SC-M8x20L	SOCKET CAP SCREW	2
22.	SG-ø13b2-25L	SPRING	1
23.	K6-K129-00	PLUNGER	1
24.	PM-GE15	SPINDLE SPEED PLATE	1
25.	SR-M4x8L	ROUND HEAD SCREW	4
26.	HN-M4	NUT	2
27.	KY-8x8x70L	KEY	1
28.	SR-M4x35L	HEAD ROUND SCREW	4
29.	F4-K008-00	AIR BLOWER NET	1
30.	SF23092A	AIR BLOWER	1
31.	SR-M6x10L	HEAD ROUND SCREW	2
32.	F4-K009-00	MOTOR AIR BLOWER COVER	1
33.	SR-M5x10L	ROUND HEAD SCREW	4
34.	GF172	AIR BLOWER	1
35.	K6-K026-00	LOCK BOLT	2
36.	K6-K027-00	WASHER	2
37.	BB-ø1/4"	BRACELET BALL HANDLE	1
38.	K2-S006-00	MOTOR LOCK NUT HANDLE	1
39.	F4-K007-00	SPINDLE MOTOR	1
40.	KY-8x7x50L	KEY	1
41.	K6-K033-00	GEAR 40T	1
42.	K6-K036-00	GEAR 21T	1
43.	K6-K037-00	WASHER	1
44.	SC-M8x20L	SOCKET CAP SCREW	1
45.	F4-K001-00	BELT HOUSING ASSEMBLY	1
46.	K6-K164-00	VENTILATOR	1
47.	SR-M5x6L	ROUND HD SCREW	4
48.	K4-K147-00	DRAWBAR	1
49.	K4-K149-00	DRAWBAR WASHER	1

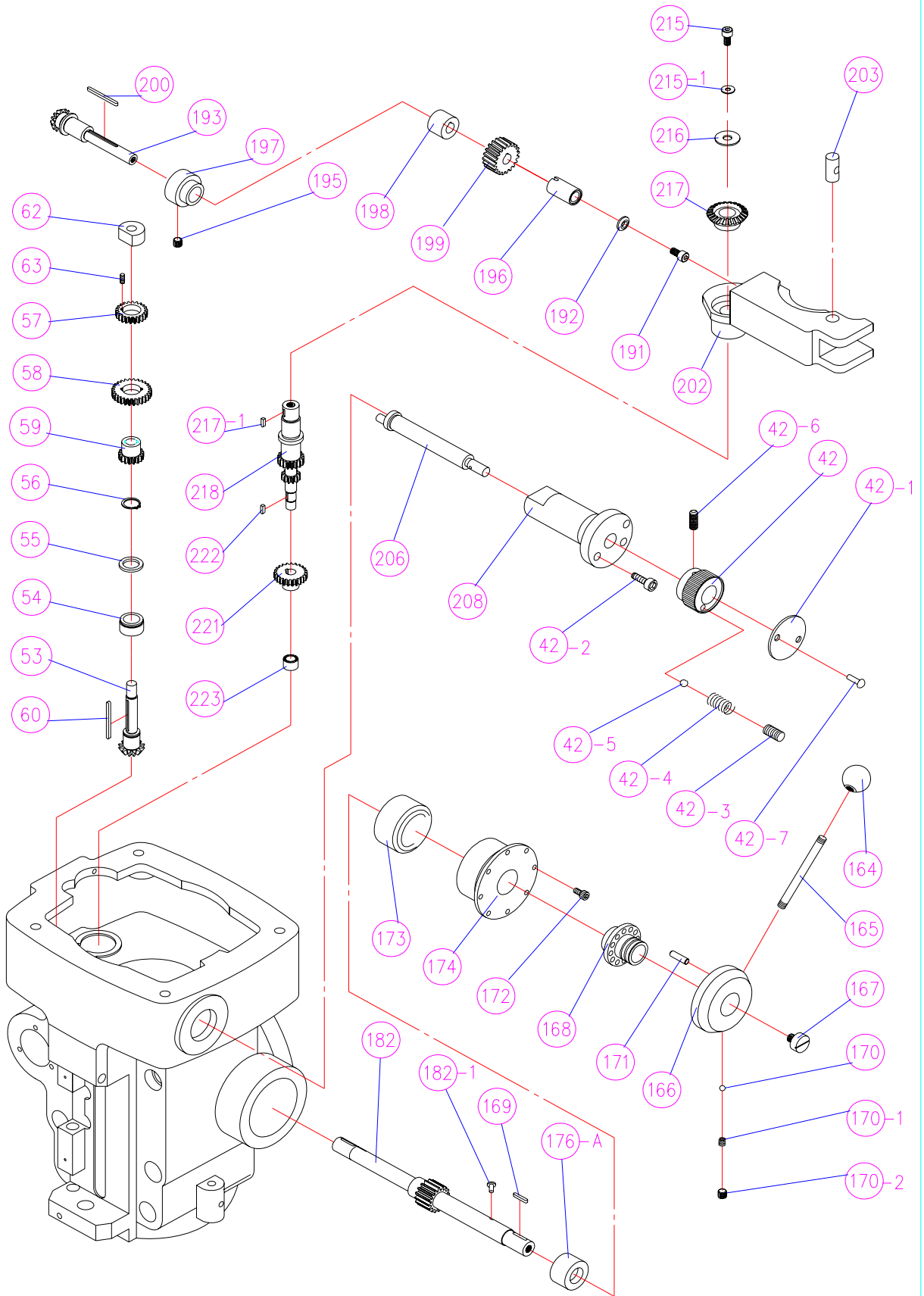
11.2 HEAD STOCK UPSIDE (2)



HEAD STOCK UPSIDE (2) PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	SR-M5x6L	ROUND HEAD SCREW	1
2.	UC-1	CABLE CLAMPS	1
3.	K6-K101-00	SPINDLE GEAR HUB	1
4.	K6-K100-00	SPINDLE BULL GEAR ASSEMBLY	1
5.	K4-K105-00	BEARING SLEEVE	1
6.	6910LLB	BALL BEARING	1
7.	K4-K111-00	BEARING SPACER	1
8.	K4-K110-00	BEARING SPACER	1
9.	6910LLB	BALL BEARING	1
10.	R-72	SNAP RING	1
11.	K4-K103-01	WASHER	1
12.	AW-10	TOOTH WASHER	1
13.	K4-K104-00	LOCK NUT	1
14.	SS-M6x6L	SOCKET SET SCREW	1
15.	KY-8x8x18L	KEY	1
16.	RT-ø2x5L	RIVET	4
17.	PM-GE13	PLATE	1
18.	SC-M10x55	SOCKET CAP SCREW	4
19.	WS-ø10	SPRING WASHER	4
20.	OC-1/8" PT	OIL CAP	1
21.	SR-M4x6L	ROUND HEAD SCREW	2
22.	PM-BT12	NAME PLATE	1
23.	K5-K136-00	BULL GEAR SHIFT PINION	1
24.	K6-K137-00	HI-LOW DETENT PLATE	1
25.	M5x12L	SOCKET CAP SCREW	2
26.	K2-K145-00	HI-LOW SHIFT CRANK	1
27.	BB-ø1/4"	BRACELET BALL HANDLE	1
28.	HN-5/8"	NUT	1
29.	WS-ø5/8"	SPRING WASHER	1
30.	K6-K119-00	PULLEY	1
31.	6205ZZ	BALL BEARING	1
32.	KY-8x8x25L	KEY	1
33.	K6-K114-00	BULL GEAR PINION COUNTER SHAFT	1
34.	6204ZZ	BALL BEARING	1
35.	SC-M8x25L	SOCKET CAP SCREW	6
36.	WS-ø8	SPRING WASHER	6
37.	F4-K003-00	GEAR HOUSING	1
38.	PM-GE22	QUILL FEED WARNING PLATET	1
39.	RT-ø2x5L	RIVET	4
40.	K2-K144-00	HI-LOW DETENT PLUNGER	1
41.	K2-K143-00	SPRING	1
42.	SS-M5x6L	SOCKET SET SCREW	1
43.	K2-K141-00	HI-LOW PINION BLOCK	1
44.	SC-M4x16L	SOCKET CAP SCREW	2
45.	SP-ø4x16L	SPRING PIN	1
46.	K5-5054-00	CABLE CLAMPS	1
47.	SS-M6x8L	SOCKET SET SCREW	1
48.	SR-M5x10L	ROUND HEAD SCREW	1

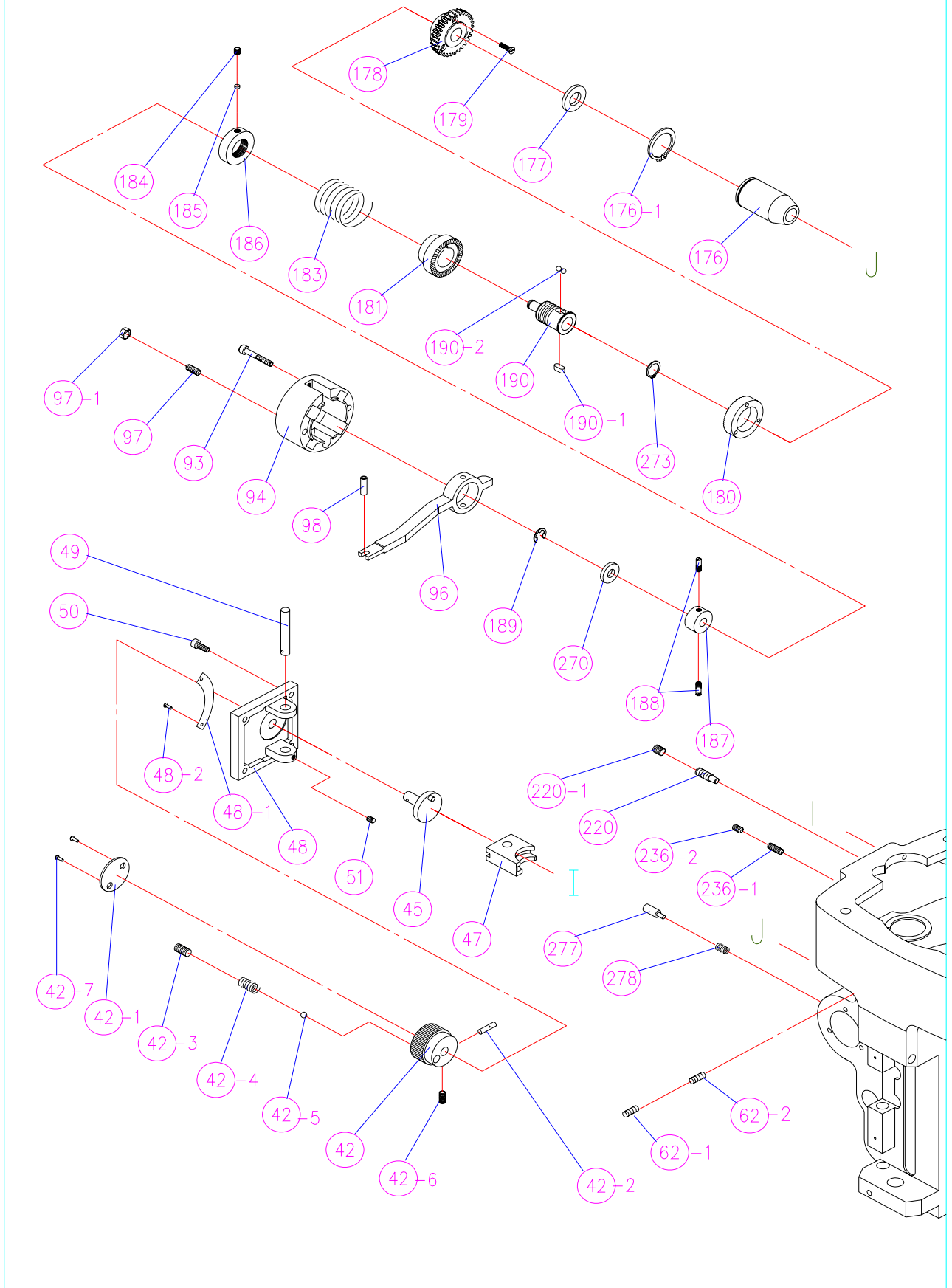
11.3 HEAD STOCK INFRASTRUCTURE (1)



HEAD STOCK INFRASTRUCTURE (1) PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
42.	K5-A042-00	SHIFTER CRANK	1
42-1.	K5-A042-10	PLATE	1
42-2.	SC-M5x12L	SOCKET CAP SCREW	1
42-3.	SS-M6x6L	SOCKET SET SCREW	1
42-4.	K5-A040-00	COMPRESSION SPRING	1
42-5.	BS-ø6	STEEL BALL	1
42-6.	SS-M6x10L	SOCKET SET SCREW	1
42-7.	RT-ø2x5L	RIVET	2
53.	K2-A053-00	FEED REVERSE BEVEL PINION	1
54.	K2-A054-00	BEVEL GEAR BEARING	1
55.	K2-A055-00	BEVEL GEAR THRUST WASHER	1
56.	S-16	SNAP RING	1
57.	K2-A057-00	FEED DRIVE CLUSTER GEAR (UPPER)	1
58.	K2-A058-00	FEED DRIVE CLUSTER GEAR (ENTER)	1
59.	K2-A059-00	FEED DRIVE CLUSTER GEAR	1
60.	KY-3x3x45	KEY	1
62.	K2-A062-00	TRIP SHAFT BUSHING	1
63.	SS-M4x10	SOCKET SET SCREW	1
164.	BB-3/8"	BLACK PLASTIC BALL HANDLE	1
165.	K2-A165-00	PINION SHAFT HUB HANDLE	1
166.	K2-A166-00	PINION SHAFT HUB	1
167.	K2-A167-00	PINION SHAFT HUB SCREW	1
168.	K2-A168-00	PINION SHAFT HUB SLEEVE	1
169.	KY-3x3x18L	KEY	1
170.	BS-ø5	STEEL BALL	1
170-1.	K2-A170-A0	SPRING	1
170-2.	SS-5/16"x5/16"	SOCKET SET SCREW	1
171.	K2-A171-00	ROLL PIN	1
172.	K2-A172-00	SOCKET SET SCREW M5x12	2
173.	K4-A173-00	CLOCK SPRING	1
174.	K4-A174-00	SPRING COVER	1
176-A.	K4-A176-10	SHAFT BUSHING	1
182.	K4-A182-00	QUILL PINION SHAFT	1
182-1.	K2-A182-A0	PIN	1
191.	SR-M6x12	ROUND HEAD SCREW	1
192.	K2-A192-00	BEVEL PINION WASHER	1
193.	K4-A193-00	FEED BEVEL PINION	1
195.	SS-M6x6L	SOCKET SET SCREW	1
196.	K4-A196-00	FEED WORM GEAR SHAFT SLEEVE	1
197.	K2-A197-00	WORM CRADLE BUSHING	1
198.	K4-A198-00	WORM GEAR SPACER	1
199.	K2-A199-00	FEED DRIVE WORM GEAR	1
200.	KY-3x3x25L	KEY	1
202.	K4-A202-00	WORM GEAR CRADLE	1
203.	K2-A203-00	FEED ENGAGE PIN	1
206.	K5-A206-00	WORM GEAR CRADLE THROW-OUT	1
208.	K5-A208-00	SHIFT SLEEVE	1
215.	SC-M8x16L	SOCKET CAP SCREW	1
215-1.	WS-ø8	SPRING WASHER	1
216.	WF-ø5/6"	FLAT WASHER	1
217.	K2-A217-00	FEED REVERSE BEVEL GEAR	1
217-1.	KY-3x3x10L	KEY	1
218.	K2-A218-00	FEED DRIVING GEAR	1
221.	K2-A221-00	FEED DRIVE GEAR	1
222.	KY-3x3x8L	KEY	1
223.	BA-66	TORRINGTON NEEDLE BEARING	1

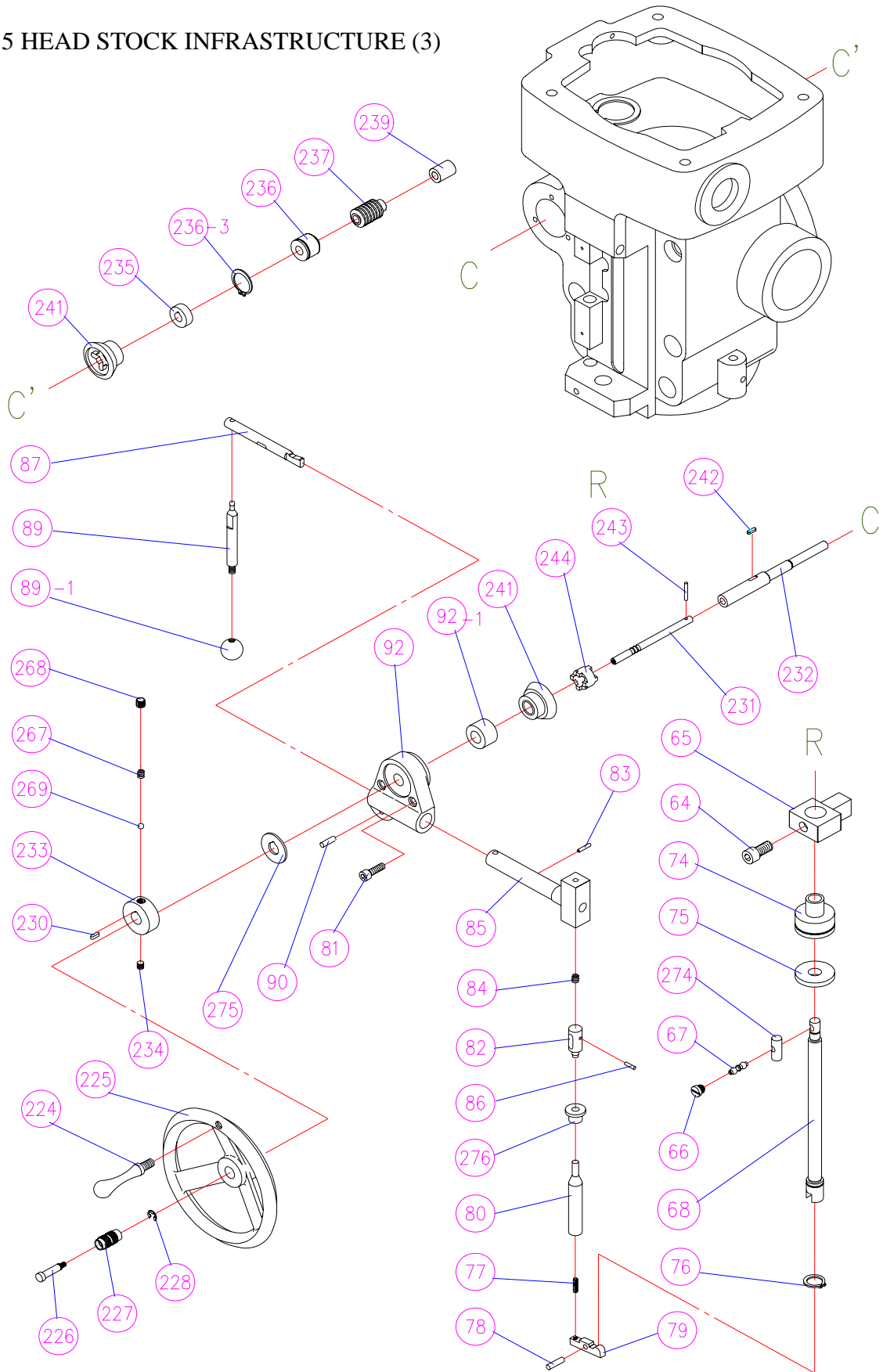
11.4 HEAD STOCK INFRASTRUCTURE (2)



HEAD STOCK INFRASTRUCTURE (2) PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
42.	K5-A042-00	SHIFT CRANK	1
42-1.	K5-A042-10	PLATE	1
42-2.	SP-ø3x30L	SPRING PIN	1
42-3.	SS-M6x6L	SOCKET SET SCREW	1
42-4.	K5-A042-40	COMPRESSION SPRING	1
42-5.	BS-ø6	STEEL BALL	1
42-6.	SS-M6x6L	SOCKET SET SCREW	1
42-7.	RT-ø2x5L	RIVET	2
45.	K5-A045-00	CLUSTER GEAR SHIFT CRANK	1
47.	K2-A047-00	FEED GEAR SHIFT FORK	1
48.	K4-A048-00	CLUSTER GEAR COVER	1
48-1.	PM-G26	QUILL FEED SPEED PLATE	1
48-2.	RT-ø2x5L	RIVET	2
49.	K2-A049-00	FEED SHIFT ROD	1
50.	SC-M5x15L	SOCKET CAP SCREW	4
51.	SS-M5x5L	SOCKET SET SCREW	1
62-1.	SS-M6x6L	SOCKET SET SCREW	1
62-2.	SS-M6x8L	SOCKET SET SCREW	1
93.	SC-M5x35L	SOCKET CAP SCREW	2
94.	K2-A094-00	CLUTCH ARM COVER	1
96.	K5-A096-00	OVERLOAD CLUTCH TRIP	1
97.	SS-1/4"x3/4"	SOCKET SET SCREW	1
97-1.	1/4"	NUT	1
98.	SP-ø5x16L	SPRING PIN	1
176.	K2-A176-00	QUILL PINION SHAFT BUSHING	1
176-1.	SE-32	SNAP RING	1
177.	K2-A177-00	PINION SHAFT WORM GEAR SPACER	1
178.	K2-A178-00	OVERLOAD CLUTCH WORM GEAR	1
179.	SR-M4x12L	ROUND HEAD SCREW	3
180.	K2-A180-00	OVERLOAD CLUTCH RING	1
181.	K2-A181-00	OVERLOAD CLUTCH	1
183.	K2-A183-00	SAFETY CLUTCH SPRING	1
184.	SS-M6x6L	SOCKET SET SCREW	1
185.	K2-A185-00	SPACER	1
186.	K2-A186-00	OVERLOAD CLUTCH ADJUSTABLE NUT	1
187.	K2-A187-00	OVERLOAD CLUTCH RING	1
188.	K2-A188-00	OVERLOAD CLUTCH RING PIN	2
189.	E-8	SNAP RING	1
190.	K2-A190-00	OVERLOAD CLUTCH SLEEVE	1
190-1.	KY-5x5x12L	KEY	1
190-2.	SB-ø6	STEEL BALL	2
220.	K2-A220-00	SOCKET SET SCREW	1
220-1.	K2-A220-A0	SOCKET SET SCREW A202	1
236-1.	SS-M6x10L	SOCKET SET SCREW	1
236-2.	K2-A236-B0	A236 SOCKET SET SCREW	1
270.	K2-A270-00	WASHER	1
273.	S-15	SNAP RING	1
277.	K2-A277-00	PIN	1
278.	K2-A278-00	COMPRESSION SPRING	1

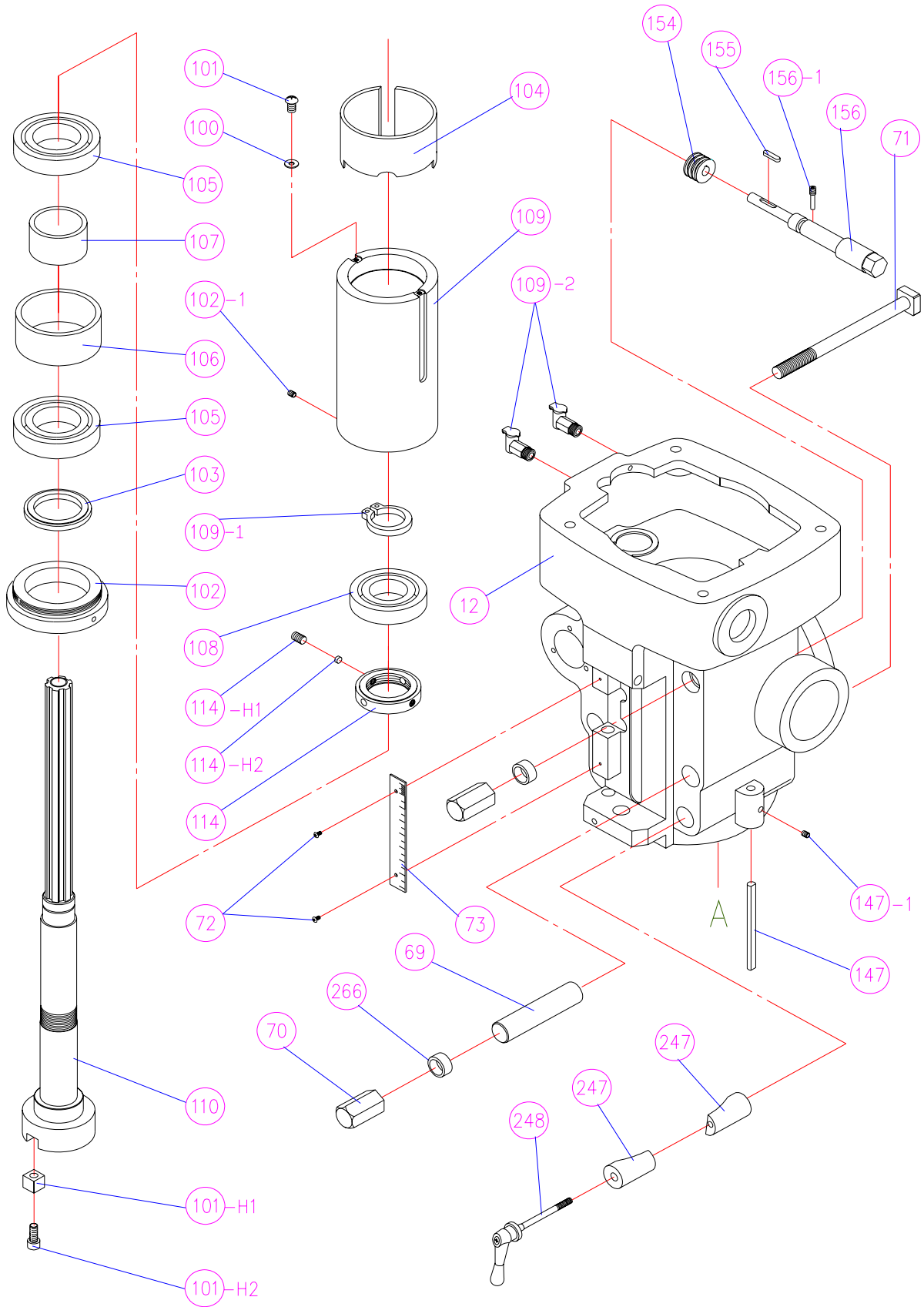
11.5 HEAD STOCK INFRASTRUCTURE (3)



HEAD STOCK INFRASTRUCTURE (3) PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
64.	SC-3/8" x 3/4"	SOCKET CAP SCREW	1
65.	K6-A065-00	QUILL STOP KNOB	1
66.	K2-A066-00	REVERSE TRIP BALL LEVER SCREW	1
67.	K2-A067-00	REVERSE TRIP BALL LEVER	1
68.	K2-A068-10	QUILL STOP MICRO SCREW (IMPERIAL)	1
	K2-A068-M0	QUILL STOP MICRO SCREW (METRIC)	1
74.	K2-A074-10	DIAL WITH 50 GRADUATIONS (IMPERIAL)	1
	K2-A074-M0	DIAL WITH 50 GRADUATIONS (METRIC)	1
75.	K2-A075-10	QUILL DIAL STOP NUT (IMPERIAL)	1
	K2-A075-M0	QUILL DIAL STOP NUT (METRIC)	1
76.	SE-16	SNAP RING	1
77.	SS-M4x16L	SOCKET SET SCREW	1
78.	K2-A078-00	TRIP LEVER PIN	1
79.	K2-A079-00	FEED TRIP LEVER	1
80.	K2-A080-00	FEED TRIP PLUNGER	1
81.	SC-M6x20L	SOCKET CAP SCREW	2
82.	K2-A082-00	GEARSHIFT PLUNGER	1
83.	SP-ø3x15L	SPRING PIN	1
84.	K2-A084-00	COMPRESSION SPRING	1
85.	K4-A085-00	FEED TRIP PLUNGER BUSHING	1
86.	SP-ø3x12	SPRING PIN	1
87.	K4-A087-00	CAM ROD	1
89.	K2-A089-00	TRIP HANDLE	1
89-1.	BB-ø1/4"	BLACK PLASTIC BALL HANDLE	1
90.	K2-A090-00	TRIP HANDLE PIN	1
92.	K2-A092-00	FEED TRIP BRACKET	1
92-1.	K4-A092-10	WASHER	1
224.	K2-A224-00	HANDWHEEL HANDLE	1
225.	K2-A225-00	HANDWHEEL	1
226.	K2-A226-00	FEED REVERSE KNOB STUD	1
227.	K2-A227-00	REVERSE KNOB	1
228.	SE-5	SNAP RING	1
230.	KY-3x3x10L	KEY	1
231.	K6-A231-01	REVERSE CLUTCH ROD	1
232.	K6-A232-01	FEED WORM SHAFT	1
233.	K2-A233-00	HANDWHEEL CLUTCH	1
234.	SS-M6x6L	SOCKET SET SCREW	1
235.	K5-A235-00	FEED WORM SHAFT THRUST WASHER	1
236.	K2-A236-00	WORM SHAFT BUSHING	1
236-3.	S-22	SNAP RING	1
237.	K2-A237-00	WORM	1
239.	K2-A239-00	BUSHING	1
241.	K2-A241-00	FEED REVERSE BEVEL GEAR	2
242.	KY-3x3x15L	KEY	1
243.	SP-ø3x20L	SPRING PIN	1
244.	K2-A244-00	FEED REVERSE CLUTCH	1
267.	K2-A267-00	COMPRESSION SPRING	1
268.	SS-M8x6L	SOCKET SET SCREW	1
269.	BS-ø3/16"	STEEL BALL	1
274.	K2-A274-00	PIN	1
275.	K2-A275-00	WASHER	1
276.	K2-A276-00	TRIP PLUNGER BUSHING	1

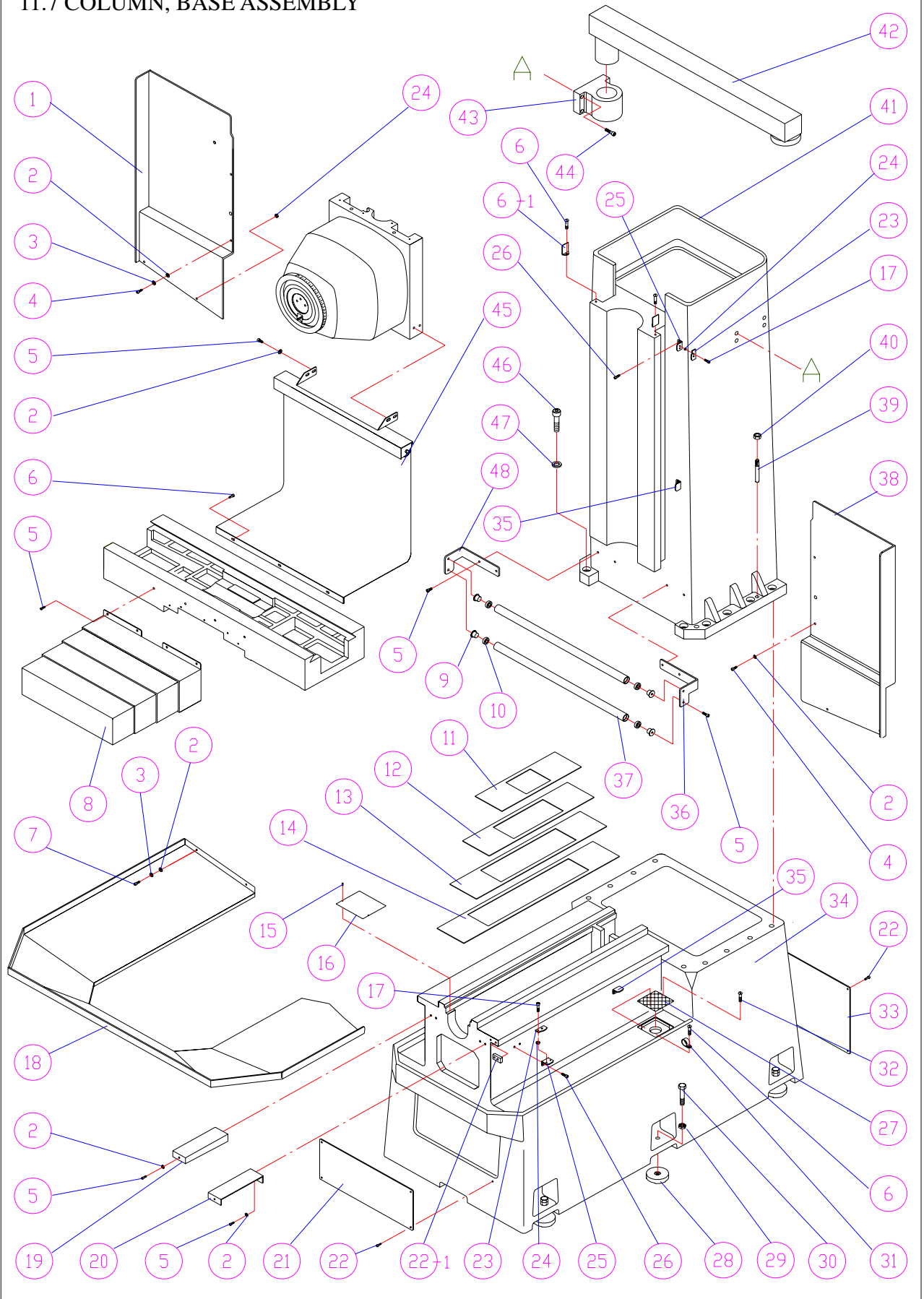
11.6 HEAD STOCK INFRASTRUCTURE (4)



HEAD STOCK INFRASTRUCTURE (4) PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
12.	F4-A012-01	QUILL HOUSING	1
69.	K4-A069-00	BUSHING	2
70.	K4-A070-00	HEX. NUT	4
71.	K2-A071-00	1-2" T-BOLT	1
72.	SR-M3x4L	ROUND HEAD SCREW	2
73.	K2-A073-I0	MICROMETER SCALE (IMPERIAL)	1
	K2-A073-M0	MICROMETER SCALE (METRIC)	1
100.	K2-A100-00	WASHER	2
101.	SR-M5x8L	ROUND HEAD SCREW	2
101-H1.	K2-A110-A0	LOCK BLOCK	2
101-H2.	SC-5/16"x3/4"	SOCKET CAP SCREW	2
102.	K4-A102-00	#7207 NOSE-PIECE #40,R8	1
102-1.	SS-M5x6L	SOCKET SET SCREW	1
103.	K4-A103-00	LOCK WASHER #7207	1
104.	K4-A104-00	OIL BAFFLE	1
105.	7010B	BEARING	2
106.	K4-A106-00	BUSHING	1
107.	K4-A107-00	BUSHING	1
108.	6008ZZ	BEARING	1
109.	C4-A109-00	SLEEVE	1
109-1.	SE-40	SNAP RING	1
109-2.	OC-1/8" PT	OIL CAP	1
110.	C4-A110-00	SPINDLE 40#	1
114.	K4-A114-00	LOCK NUT	1
114-H1.	SS-M8x8L	SOCKET SET SCREW	2
114-H2.	K2-A114-H2	PRESSURE WASHER	2
147.	K2-B147-00	STOP PIN	1
147-1.	SS-M6x8L	SOCKET SET SCREW	1
154.	K2-A154-00	WORM GEAR	1
155.	KY-3x3x15L	KEY	1
156.	K4-A156-00	WORM GEAR SHAFT	1
156-1.	K2-A156-A0	WORM GEAR SHAFT SCREW	1
247.	K4-A247-00	QUILL LOCK SLEEVE	1
248.	K4-A248-00	QUILL LOCK BOLT	1
266.	K4-A266-00	WASHER	4

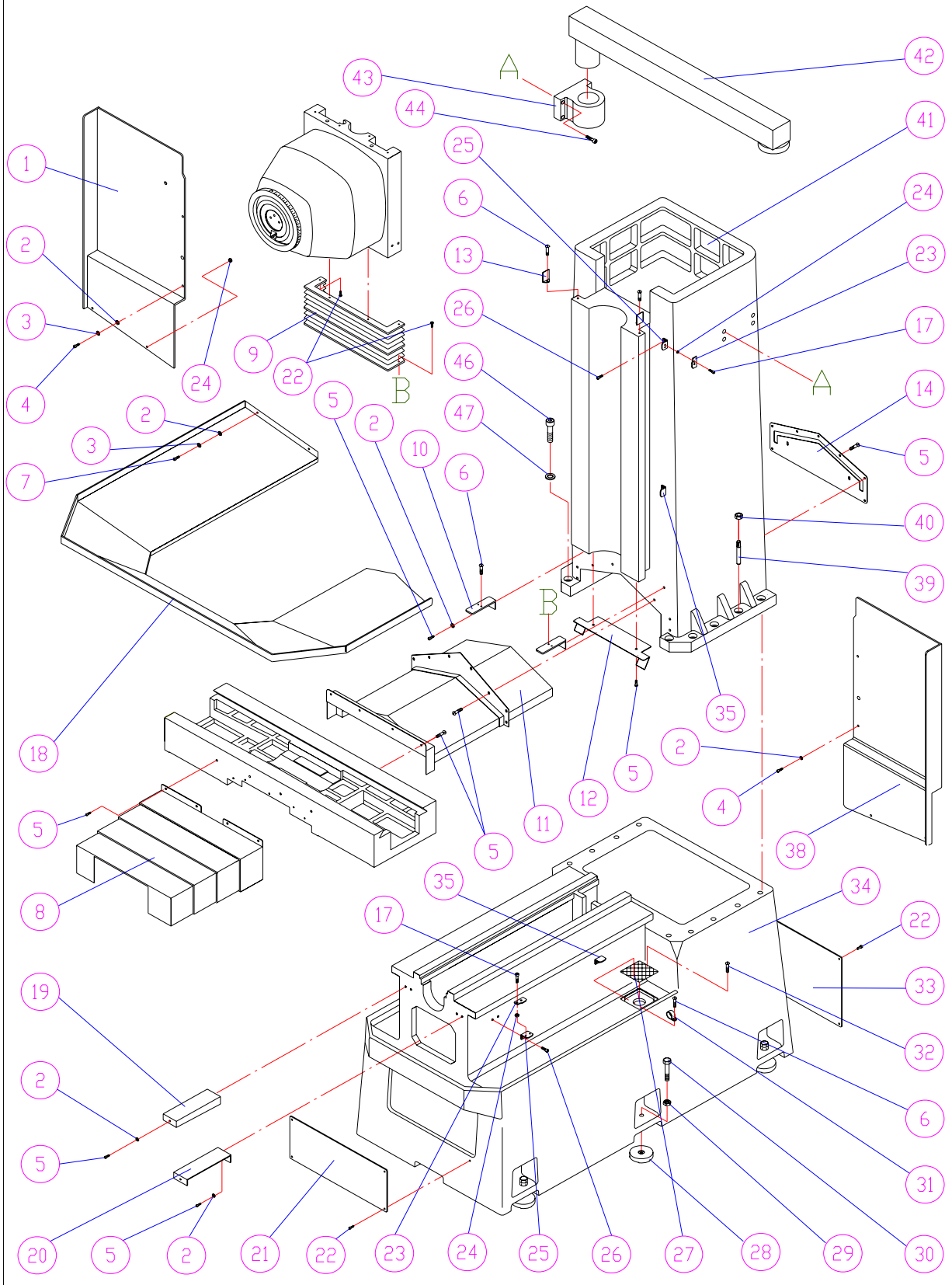
11.7 COLUMN, BASE ASSEMBLY



COLUMN, BASE ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	B4-A115-L0	CHIP GUARD	1
2.	WF-ø6	FLAT WASHER	14
3.	WS-ø6	SPRING WASHER	8
4.	SB-M6x8L	HEX. SOCKET BUTTON HEAD SCREW	4
5.	SC-M6x12L	SOCKET CAP SCREW	22
6.	SR-M5x10L	ROUND HEAD SCREW	6
6-1.	B4-Z016-01	FIXED PLTE	2
7.	SB-M6x12L	HEX. SOCKET BUTTON HEAD SCREW	4
8.	B4-Y045-A0	CHIP GARD	1
9.	B6-Z041-00	PLUNGER	4
10.	609ZZ	BALL BEARING	4
11.	B4-Y025-02	CHIP GARD	1
12.	B4-Y026-02	CHIP GARD	1
13.	B4-Y027-02	CHIP GARD	1
14.	B4-Y028-02	CHIP GARD	1
15.	SP-ø3x6L	SPRING PIN	4
16.	B4-Y029-01	COVER	2
17.	SC-M5x12L	SOCKET CAP SCREW	4
18.	B4-A120-01	CHIP TRAY	1
19.	B4-Y046-L0	BRACKET (LEFT)	1
20.	B4-Y046-R0	BRACKET (RIGHT)	1
21.	B6-A007-00	COVER	1
22.	SR-M6x6L	ROUND HEAD SCREW	8
22-1.	B6-Y018-00	STOP DOG	1
23.	B6-X019-01	DOG	2
24.	HN-M6	NUT	8
25.	B6-X016-A1	DOG	2
26.	SC-M5x8L	SOCKET CAP SCREW	8
27.	K2-C130-00	STRAINER	2
28.	K5-C099-00	CHOCK	6
29.	HN-3/4"	NUT	6
30.	SH-3/4"x3"	SOCKET CAP SCREW	6
31.	ACC-6	CABLE CLAMPS	2
32.	SR-M5x12L	ROUND HEAD SCREW	2
33.	B6-A008-00	COVER	1
34.	B4-A000-00	BASE	1
35.	B6-X016-01	DOG	2
36.	B4-Z042-R0	BRACKET	1
37.	B6-Z040-00	BEAM	2
38.	B4-A115-R0	CHIP GUARD	1
39.	DF-6004-00	TAPER PIN	2
40.	HN-M8	NUT	2
41.	B4-A001-00	COLUMN	1
42.	B6-C144-00	BOOM	1
43.	B6-C141-00	BRACKET	1
44.	SC-M8x30L	SOCKET CAP SCREW	4
45.	B4-Z009-01	BOWL GUARD	1
46.	SC-M16x75L	SOCKET CAP SCREW	10
47.	WS-ø16	SPRING WASHER	10
48.	B4-Z042-L0	BRACKET	1

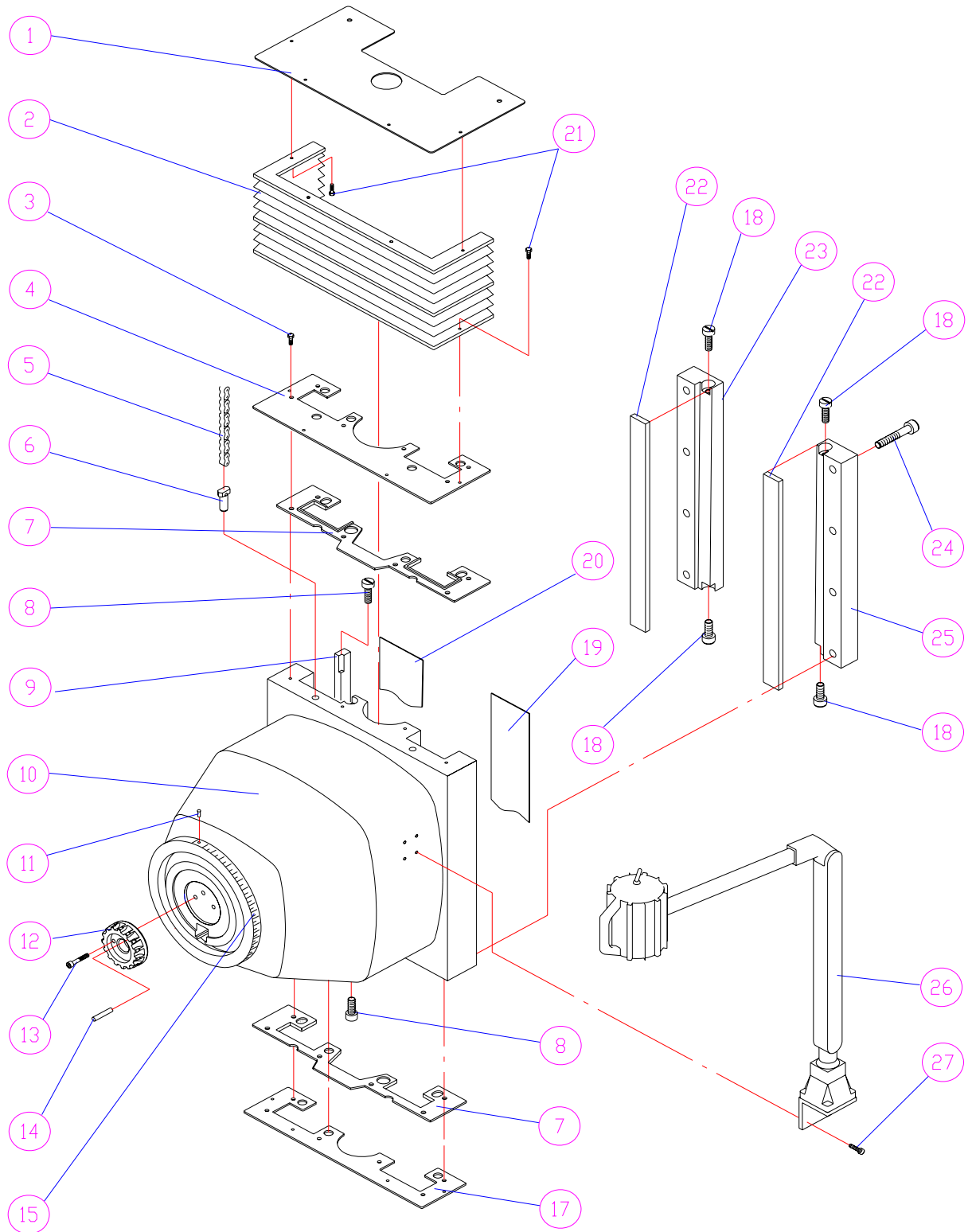
11.8 COLUMN, BASE ASSEMBLY



COLUMN, BASE ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	B4-A115-L0	CHIP GUARD	1
2.	WF-ø6	FLAT WASHER	8
3.	WS-ø6	SPRING WASHER	8
4.	SB-M6x8L	HEX. SOCKET BUTTON HEAD SCREW	4
5.	SC-M6x12L	SOCKET CAP SCREW	31
6.	SR-M5x10L	ROUND HEAD SCREW	8
7.	SB-M6x12L	HEX. SOCKET BUTTON HEAD SCREW	4
8.	B4-Y045-00	CHIP GARD	1
9.	B4-Z006-00	RETRACTILITY COVER	1
10.	B6-Z018-00	RETRACTICITY COVR BRACKET	2
11.	B4-Y047-00	CHIP GUARD	1
12.	B4-Z019-00	FIXED PLATE	1
13.	B4-Z016-01	FIXED PIECE	2
14.	B6-A013-A1	COVER	1
17.	SC-M5x12L	SOCKET CAP SCREW	4
18.	B4-A120-01	CHIP TRAY	1
19.	B4-Y046-L0	BRACKET (LEFT)	1
20.	B4-Y046-R0	BRACKET (RIGHT)	1
21.	B6-A007-00	COVER	1
22.	SR-M6x6L	ROUND HEAD SCREW	8
23.	B6-X019-01	DOG	2
24.	HN-M6	NUT	8
25.	B6-X016-A1	DOG	2
26.	SC-M5x8L	SOCKET CAP SCREW	8
27.	K2-C130-00	STRAINER	2
28.	K5-C099-00	CHOCK	6
29.	HN-3/4"	NUT	6
30.	SH-3/4"x3"	SOCKET CAP SCREW	6
31.	ACC-6	CABLE CLAMPS	2
32.	SR-M5x12L	ROUND HEAD SCREW	2
33.	B6-A008-00	COVER	1
34.	B4-A000-00	BASE	1
35.	B6-X016-01	DOG	2
38.	B4-A115-R0	CHIP GUARD	1
39.	DF-6004-00	TAPER PIN	2
40.	HN-M8	NUT	2
41.	B4-A001-A0	COLUMN	1
42.	B6-C144-00	BOOM	1
43.	B6-C141-00	BRACKET	1
44.	SC-M8x30L	SOCKET CAP SCREW	4
46.	SC-M16x75L	SOCKET CAP SCREW	10
47.	WS-ø16	SPRING WASHER	10

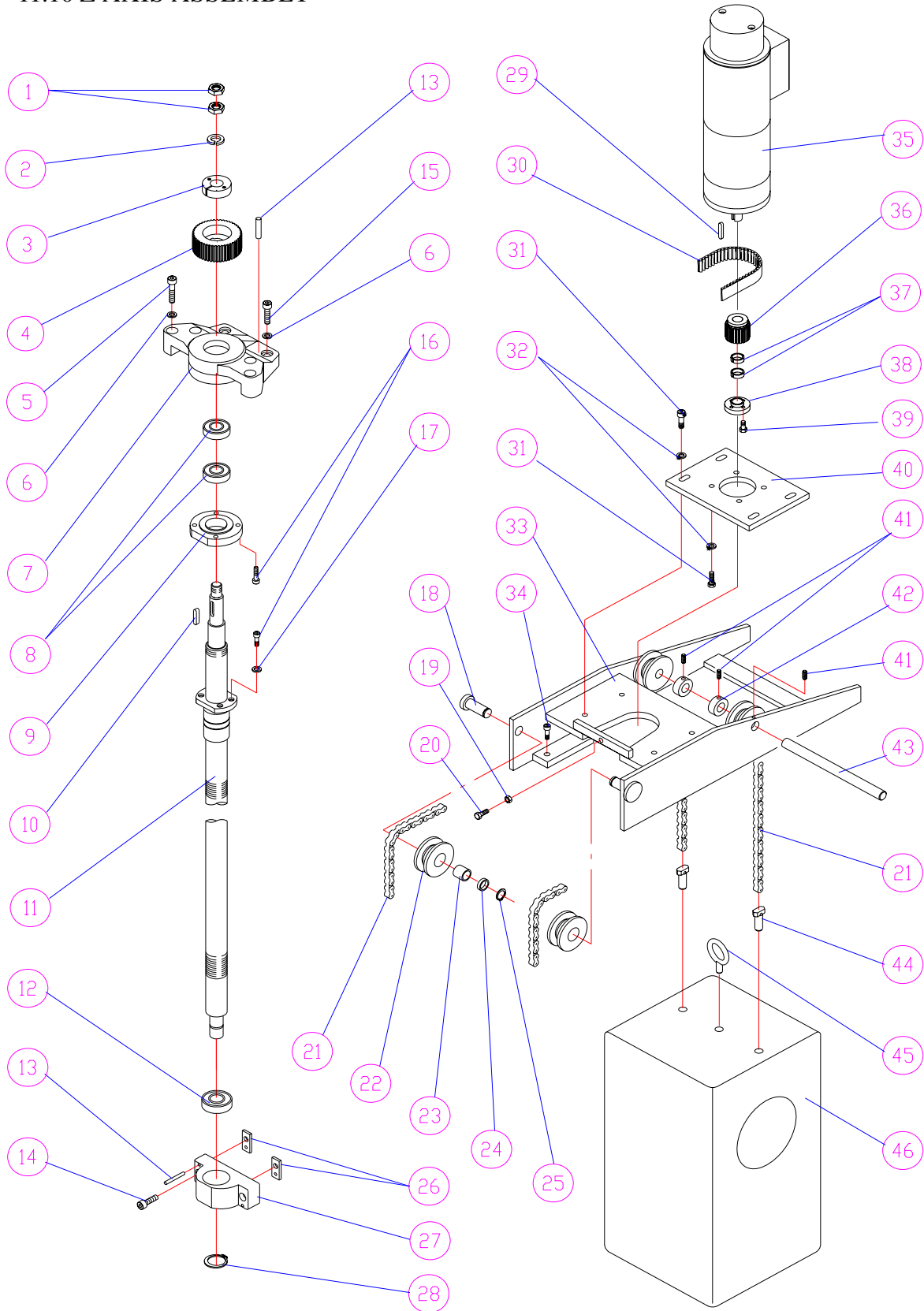
11.9 ELEVATING ASSEMBLY



ELEVANTING ASSEMBLY PARTS LIST

NO	PART NO	DESCRIPTION	QTY
1.	B4-Z005-00	FIXED PLATE	1
2.	B4-Z006-00	RETRACTILITY COVER	1
3.	SR-M5x10L	ROUND HEAD SCREW	12
4.	B4-Z007-01	WIPER HOLDER	1
5.	RL-420-104L	CHAIN	2
6.	B6-Z008-00	BALANCING SCREW	2
7.	B4-Z014-00	WIPER	2
8.	K2-C041-A0	GIB ADJ-SCREW	2
9.	B6-Z022-00	GIB	1
10.	B4-A002-01	ELEVANTING CASTING	1
11.	RT- \emptyset 2x5L	RIVET	3
12.	K2-C001-00	QUILL HOUSING ADJ-GEAR	1
13.	SC-M8x16L	SOCKET CAP SCREW	2
14.	SP- \emptyset 6x24L	SPRING PIN	1
15.	PM-GE26	ADAPTOR SCALE	1
17.	B4-Z013-01	WIPER HOLDER	1
18.	K2-C041-00	GIB ADJ-SCREW	4
19.	B6-Z021-00	TURCITE	1
20.	B6-Z020-00	TURCITE	1
21.	SR-M6x6L	ROUND HEAD SCREW	4
22.	B6-Z024-00	GIB	2
23.	B6-Z011-00	SLIDING RAIL	1
24.	SC-M10x40L	SOCKET CAP SCREW	8
25.	B6-Z010-00	SLIDING RAIL	1
26.	WL-12V55W	WORK LAMP	1
27.	SC-M6x12L	SOCKET CAP SCREW	4

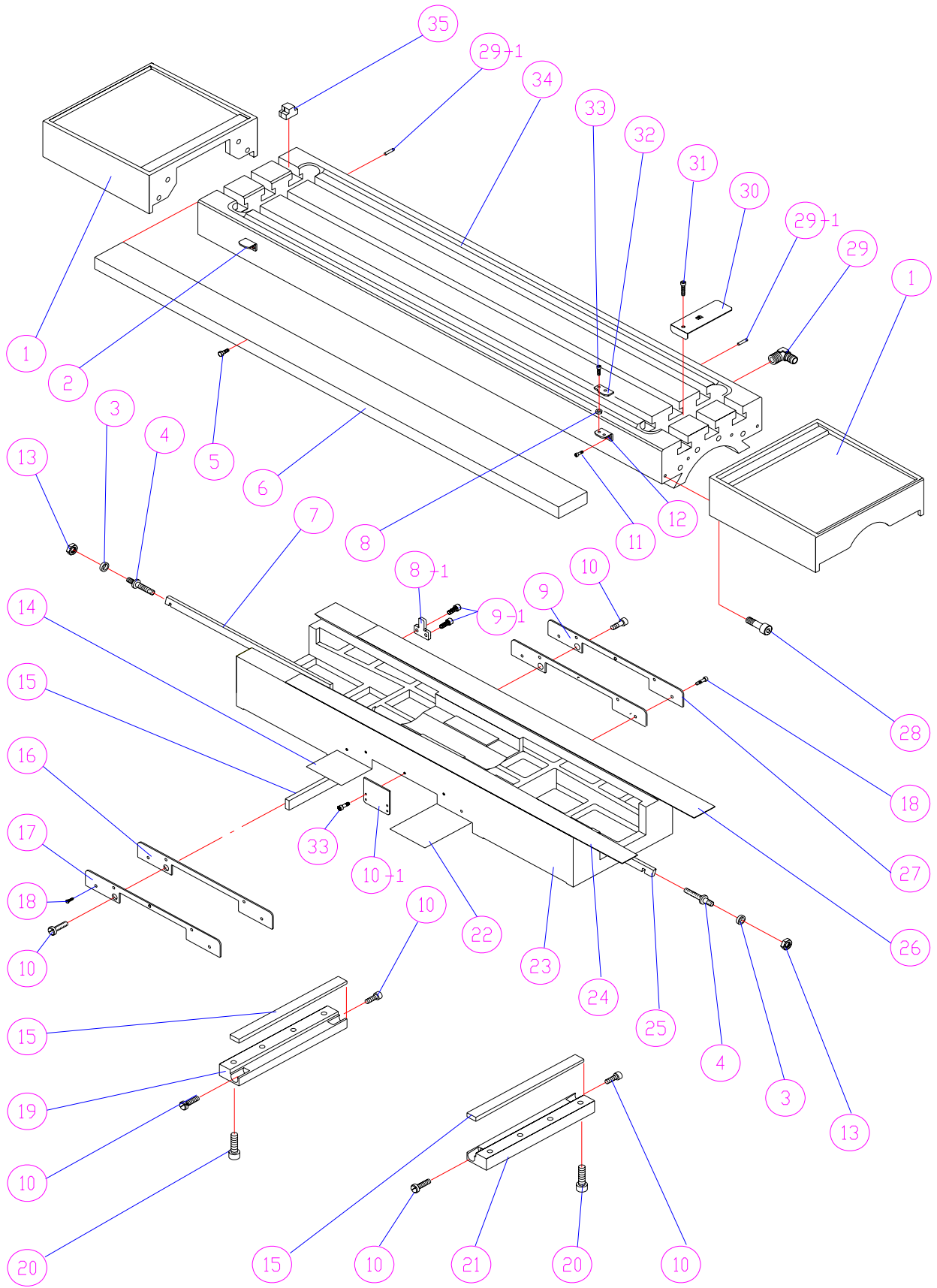
11.10 Z AXIS ASSEMBLY



Z AXIS ASSEMBLY PARTS LIST

NO	PART NO	DESCRIPTION	QTY
1.	HN-5/8"-18UNC	NUT	2
2.	WS- ϕ 5/8"	SPRING WASHER	1
3.	B3-X031-A1	LOCK BLOCK	1
4.	B3-X030-01	48T HTD GEAR	1
5.	SC-M10x50L	SOCKET CAP SCREW	4
6.	WS- ϕ 10	SPRING WASHER	6
7.	B4-Z001-01	Z AXIS BALL BEARING BRACKET	1
8.	BSD2047CGA	BALL BEARING	2
9.	B4-Z002-00	BEARING CAP	1
10.	KY-6x6x20L	KEY	1
11.	B4-Z000-M0	Z AXIS BALL SCREW (METRIC)	1
12.	6004ZZ	BALL BEARING	1
13.	TP-#4x38L	TAPE PIN	4
14.	SC-M8x30L	SOCKET CAP SCREW	2
15.	SC-M10x40L	SOCKET CAP SCREW	2
16.	SC-M6x20L	SOCKET CAP SCREW	8
17.	WS- ϕ 6	SPRING WASHER	4
18.	B6-Z036-00	SHAFT	2
19.	HN-M6	NUT	1
20.	SC-M6x25L	SOCKET CAP SCREW	1
21.	RL-420-104L	CHAIN	2
22.	B6-Z037-00	BALANCING PULLEY	4
23.	BA-1012Z	BEARING	4
24.	B6-Z039-00	SPACER	4
25.	SE-16	SNAP RING	2
26.	B6-Z004-00	CLAMPING PLATE	2
27.	B4-Z003-01	BRACKET	1
28.	SE-20	SNAP RING	1
29.	KY-3/16"x25L	KEY	1
30.	450-5Mx22	HTD BELT	1
31.	SC-M8x20L	SOCKET CAP SCREW	8
32.	WS- ϕ 5/16"	SPRING WASHER	8
33.	B4-Z029-01	BALANCING BASE	1
34.	SC-M8x25L	SOCKET CAP SCREW	4
35.	MTS30U4-36	SERVER MOTOR	1
36.	B4-Z027-00	24T HTD BELT GEAR	1
37.	SEC300	LOCK RING (ϕ 16x ϕ 20)	2
38.	B6-Z028-00	LOCK BLOCK	1
39.	SC-M4x16L	SOCKET CAP SCREW	4
40.	B6-Z034-00	MOTOR BASE	1
41.	SS-M6x8L	SOCKET SET SCREW	3
42.	CF-6107-00	SPACER	2
43.	B4-Z038-00	BALANCING PULLEY SHAFT	1
44.	B6-Z008-00	BALANCING SCREW	2
45.	HB-M8	HOOK BOLT	1
46.	B6-A005-00	BALANCING BLOCK	1

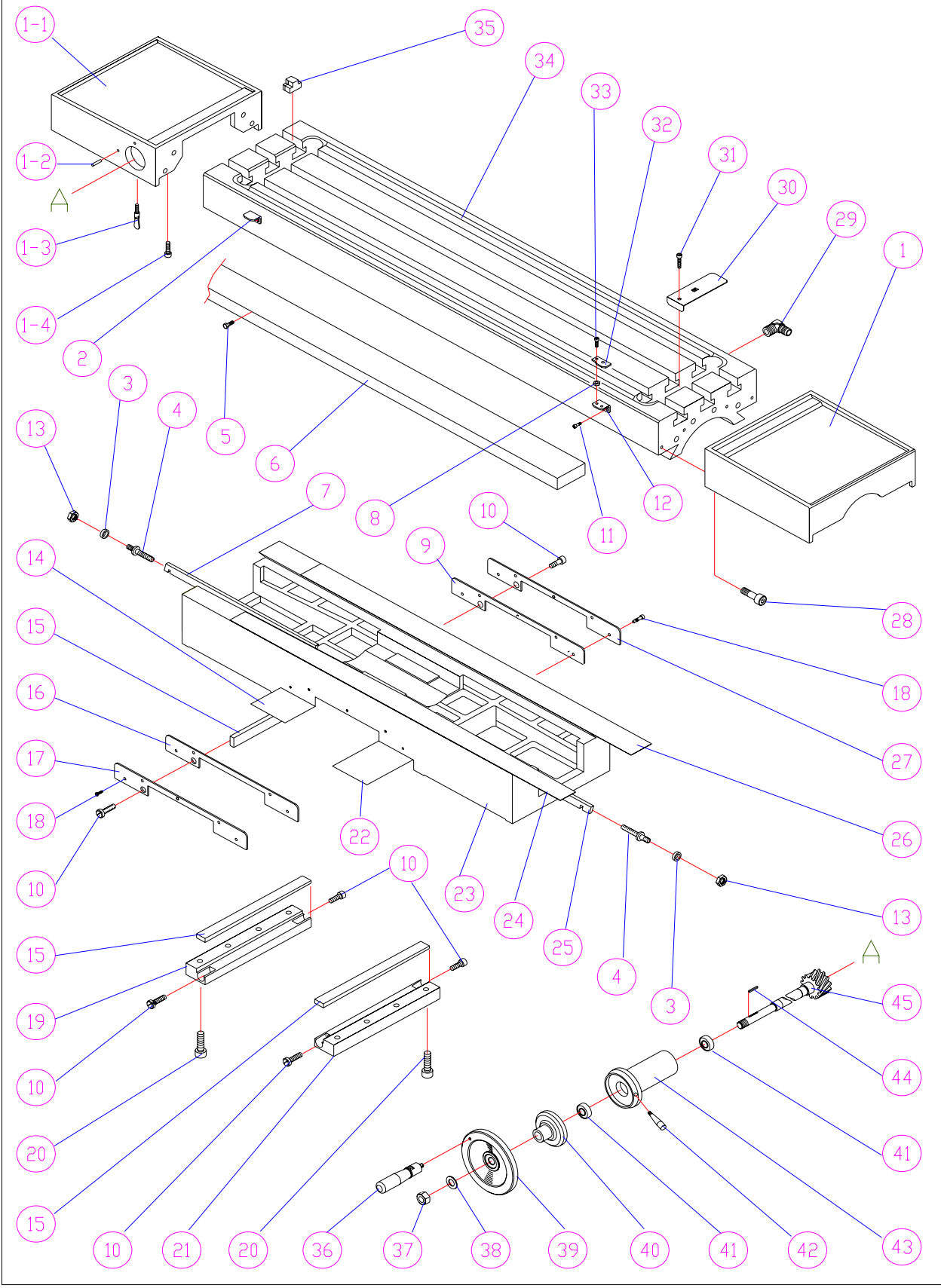
11.11 TABLE, SADDLE ASSEMBLY



TABLE, SADDLE ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	B4-X013-00	BRACKET	2
2.	B6-X016-01	DOG	1
3.	2V-X047-00	WASHER	2
4.	2V-X046-00	ADJUST SCREW	2
5.	SC-M6x10L	SOCKET CAP SCREW	6
6.	B4-X020-01	LIMIT SWITCH COVER	1
7.	K2-C043-00	TABLE/SADDLE BIB	1
8.	HN-M6	NUT	2
8-1.	B6-X028-00	STOP DOG	1
9.	K5-C044-10	WIPER	1
9-1.	SC-M6x16L	SOCKET CAP SCREW	2
10.	K2-C041-00	GIB ADJ-SCREW	6
10-1.	2V-X015-00	X AXIS LIMIT SWITCH BASE	1
11.	SC-M5x8L	SOCKET CAP SCREW	4
12.	B6-X018-01	DOG	1
13.	HN-M10	NUT	2
14.	K5-C138-00	TURCITE	1
15.	B6-Z024-00	GIB	3
16.	K5-C044-00	WIPER	1
17.	K5-C050-00	WIPER HOLDER	1
18.	SR-M5x10L	ROUND HEAD SCREW	10
19.	K5-C115-00	SLIDING RAIL	1
20.	SC-M10x35L	SOCKET CAP SCREW	8
21.	K5-C116-00	SLIDING RAIL	1
22.	K5-C139-00	TURCITE	1
23.	B4-X002-00	SADDLE	1
24.	B4-C136-00	TURCITE	1
25.	B4-C043-00	GIB	1
26.	B4-C137-00	TURCITE	1
27.	K5-C050-10	WIPER HOLDER	1
28.	SC-M10x30L	SOCKET CAP SCREW	8
29.	EC-1/2"x5/8"	90° ELBOW MALE STUD HOSE CONNECTOR	2
29-1.	SP-ø5x24L	SPRING PIN	2
30.	B4-X040-00	STRAINER	2
31.	SC-M6-30L	SOCKET CAP SCREW	2
32.	B6-X019-01	DOG	1
33.	SC-M5-12L	SOCKET CAP SCREW	6
34.	K5-C023-20	TABLE	1
35.	K2-D029-00	CHOCK PLUG	6

11.12 TABLE, SADDLE (X AXIS WITH HANDLEWHEEL) ASSEMBLY



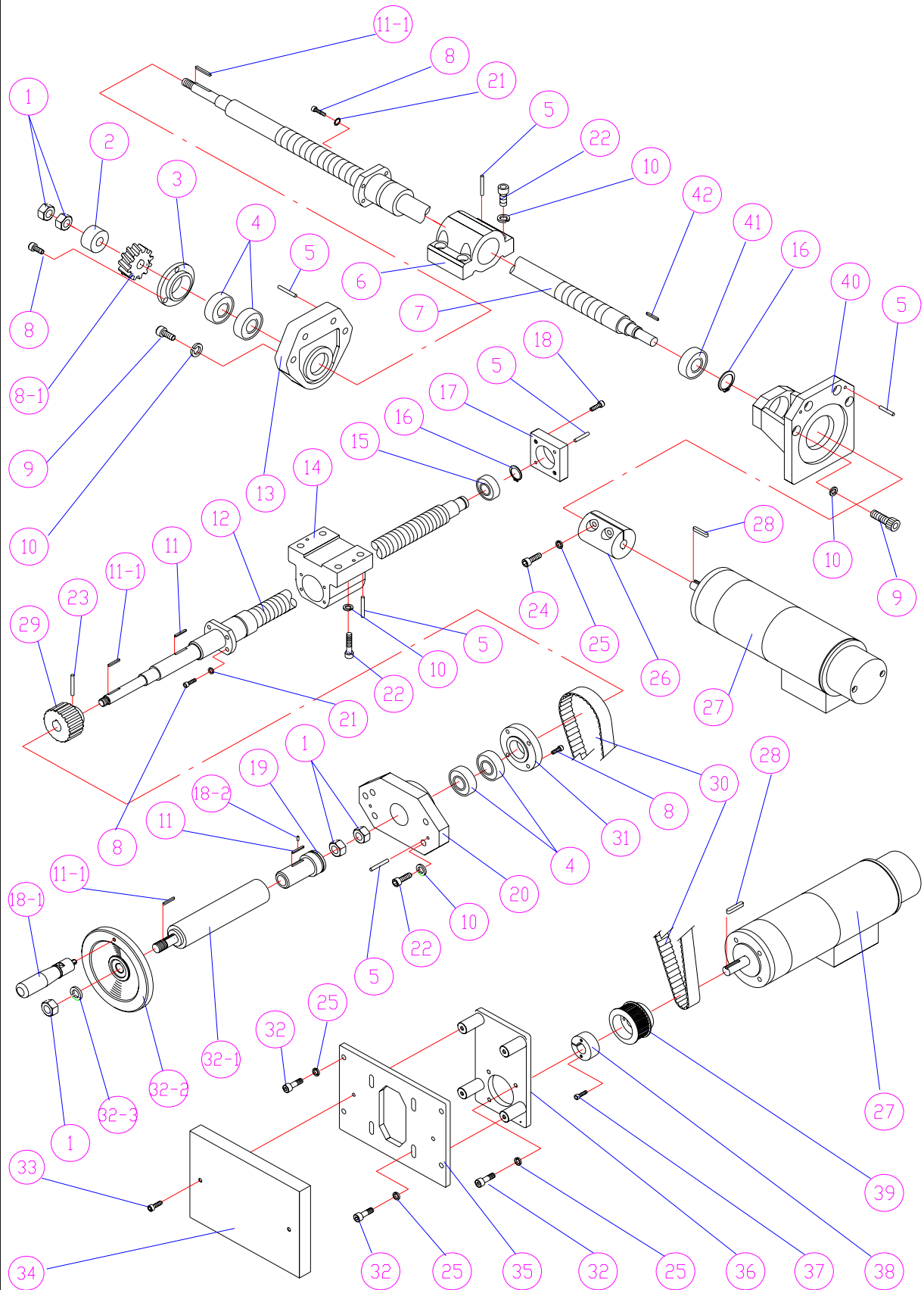
TABLE, SADDLE (X AXIS WITH HANDLEWHEEL) ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	B4-X013-00	BRACKET	1
1-1.	B4-X013-L0	BRACKET	1
1-2.	SP-ø5x24L	SPRING PIN	2
1-3.	CF-3058-00	LOCKING	1
1-4.	SC-M6x16L	SOCKET CAP SCREW	1
2.	B6-X016-01	DOG	1
3.	2V-X047-00	WASHER	2
4.	2V-X046-00	ADJUST SCREW	2
5.	SC-M6x10L	SOCKET CAP SCREW	6
6.	B4-X020-01	LIMIT SWITCH COVER	1
7.	K2-C043-00	TABLE/SADDLE BIB	1
8.	HN-M6	NUT	2
9.	K5-C044-10	WIPER	1
10.	K2-C041-00	GIB ADJ-SCREW	6
11.	SC-M5x8L	SOCKET CAP SCREW	4
12.	B6-X016-A1	DOG	1
13.	HN-M10	NUT	2
14.	K5-C138-00	TURCITE	1
15.	B6-Z024-00	GIB	3
16.	K5-C044-00	WIPER	1
17.	K5-C050-00	WIPER HOLDER	1
18.	SR-M5x10L	ROND HEAD SCREW	10
19.	K5-C115-00	SLIDING RAIL	1
20.	SC-M10x35L	SOCKET CAP SCREW	8
21.	K5-C116-00	SLIDING RAIL	1
22.	K5-C139-00	TURCITE	1
23.	B4-X002-00	SADDLE	1
24.	B4-C136-00	TURCITE	1
25.	B4-C043-00	GIB	1
26.	B4-C137-00	TURCITE	1
27.	K5-C050-10	WIPER HOLDER	1
28.	SC-M10x30L	SOCKET CAP SCREW	8
29.	EC-1/2"x5/8"	90° ELBOW MALE STUD HOSE CONNECTOR	2
30.	B4-X040-00	STRAINER	2
31.	SC-M6x30L	SOCKET CAP SCREW	2
32.	B6-X019-01	DOG	1
33.	SC-M5x12L	SOCKET CAP SCREW	2
34.	K5-C023-20	TABLE	1
35.	K2-D029-00	CHOCK PLUG	6
36.	B6-X043-00	HANDLE	1
37.	HN-5/8"-18UNF	NUT	1
38.	WS-ø5/8"	SPRING WASHER	1
39.	B6-X042-00	HANDLE WHEEL	1
40.	B6-X041-00	BUSHING	1
41.	6004Z	BALL BEARING	2
42.	DF-3053-00	HANDLE	1
43.	B6-X053-00	BRACET	1
44.	KY-3x3x25L	KEY	1
45.	B4-X051-01	13T GEAR SHAFT	1

X, Y AXIS ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	HN- \emptyset 1/2-20UNF	NUT	4
2.	K2-C090-00	BEARING CAP	1
3.	B4-X052-A0	SPACER	1
4.	BSD2047CGA	BALL BEARING	4
5.	TP-#4x38L	TAPER PIN	12
6.	2V-X003-A0	FEED NUT BRACKET	1
7.	B4-X017-M0	X AXIS BALL SCREW	1
8.	SC-M6x20L	SOCKET CAP SCREW	15
9.	SC-M10x35L	SOCKET CAP SCREW	8
10.	WS- \emptyset 10	SPRING WASHER	20
11.	KY-6x6x25L	KEY	1
12.	B4-Y000-M0	Y AXIS BALL SCREW	1
13.	B4-X005-00	BEARING BRACKET	1
14.	B6-Y080-00	Y AXIS FEED NUT BRACKET	1
15.	6004ZZ	BALL BEARING	1
16.	SE-20	SNAP RING	2
17.	B6-YA35-00	BEARING CAP	1
18.	SC-M8x20L	SOCKET CAP SCREW	2
19.	B6-YA08-B0	SPACER	1
20.	B4-YA07-00	Y AXIS BEARING BRACKET	1
21.	WS- \emptyset 6	SPRING WASHER	8
22.	SC-M10x40L	SOCKET CAP SCREW	12
23.	TP-#4x45L	TAPE PIN	1
24.	SC-M8x16L	SOCKET CAP SCREW	2
25.	WS- \emptyset 8	SPRING WASHER	14
26.	L9-3014-01	COUPLING	1
27.	MTS30U4-36	SERVO MOTOR	2
28.	KY-3/16"x18L	KEY	2
29.	B6-Y030-T0	38T HTD GEAR	1
30.	575-5Mx22	HTD BELT	1
31.	B4-YA11-00	BEARING CAP	1
32.	SC-M8x25L	SOCKET CAP SCREW	12
33.	SC-M6x20L	SOCKET CAP SCREW	2
34.	B4-Y022-00	COVER	1
35.	B4-Y020-00	MOTOT BASE	1
36.	B4-Y015-00	MOTOR PLATE	1
37.	SC-M6x30L	SOCKET CAP SCREW	2
38.	B3-X031-A1	LOCK BLOCK	1
39.	B6-X008-T1	38T HTD GEAR	1
40.	B4-X004-00	X AXIS MOTOR BASE	1
41.	6204ZZ	BALL BEARING	1
42.	KY-3/16"x3/16"x25L	KEY	1

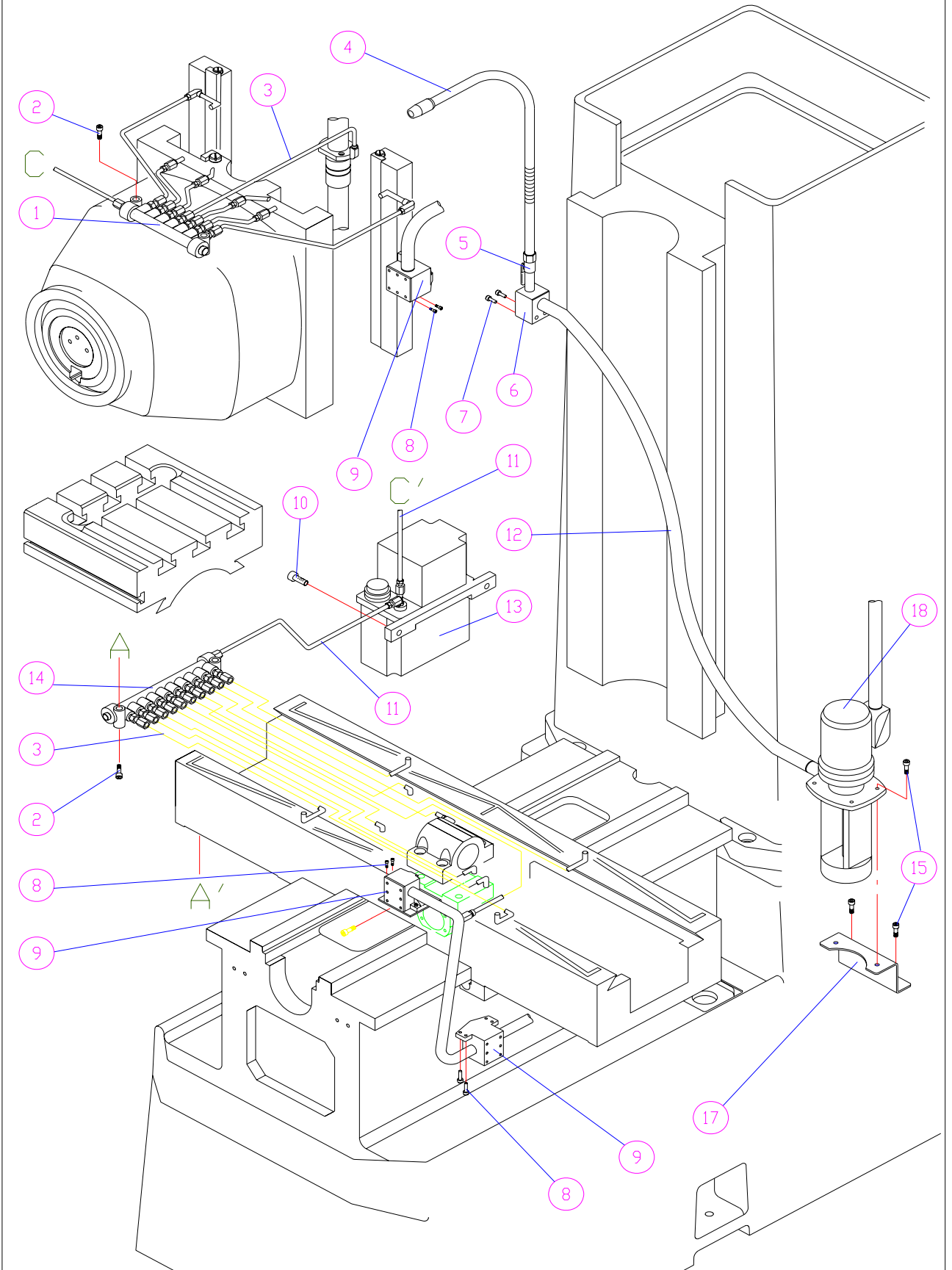
11.14 X, Y AXES (WITH HANDLE WHEEL) ASSEMBLY



X, Y AXES (WITH HANDLE WHEEL) ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	HN- ϕ 1/2-20UNF	NUT	4
2.	B4-X052-00	SPACER	1
2-1.	SS-M6x8L	SOCKET SET SCREW	1
3.	K2-C090-00	BEARING CAP	1
4.	BSD2047CGA	BALL BEARING	4
5.	TP-#4x38L	TAPER PIN	12
6.	2V-X003-A0	FEED NUT BRACKET	1
7.	B4-X017-M0	X AXIS BALL SCREW	1
8.	SC-M6x20L	SOCKET CAP SCREW	15
8-1.	B4-X050-01	GEAR 13T	1
9.	SC-M10x35L	SOCKET CAP SCREW	8
10.	WS- ϕ 10	SPRING WASHER	20
11.	KY-6x6x25L	KEY	2
11-1.	KY-3x3x25L	KEY	3
12.	B4-Y000-M0	Y AXIS BALL SCREW	1
13.	B4-X005-00	BEARING BRACKET	1
14.	B6-Y080-00	Y AXIS FEED NUT BRACKET	1
15.	6004ZZ	BALL BEARING	1
16.	SE-20	SNAP RING	2
17.	B6-YA35-00	BEARING CAP	1
18.	SC-M8x20L	SOCKET CAP SCREW	2
18-1.	B6-X043-00	HANDLE	1
18-2.	SP- ϕ 3x8	SPRING PIN	1
19.	B6-YA08-A0	SPACER	1
20.	B4-YA07-00	Y AXIS BEARING BRACKET	1
21.	WS- ϕ 6	SPRING WASHER	8
22.	SC-M10x40L	SOCKET CAP SCREW	12
23.	TP-#4x45L	TAPE PIN	1
24.	SC-M8x16L	SOCKET CAP SCREW	2
25.	WS- ϕ 8	SPRING WASHER	14
26.	L9-3014-01	COUPLING	1
27.		SERVO MOTOR	2
28.		KEY	2
29.	B6-Y030-T0	38T HTD GEAR	1
30.	575-5Mx22	HTD BELT	1
31.	B4-YA11-00	BEARING CAP	1
32.	SC-M8x25L	SOCKET CAP SCREW	12
32-1.	B6-YA15-00	HANDLE WHEEL CONNECT SHAFT	1
32-2.	B6-X042-00	HANDLE WHEEL	1
32-3.	WS- ϕ 5/8"	SPRING WASHER	1
33.	SB-M6x20L	HEX. BUTTON HEAD SCREW	2
34.	B4-Y022-00	COVER	1
35.	B4-Y020-00	MOTOT BASE	1
36.	B4-Y015-00	MOTOR PLATE	1
37.	SC-M6x30L	SOCKET CAP SCREW	2
38.	B3-X031-A1	LOCK BLOCK	1
39.	B6-X008-T1	38T HTD GEAR	1
40.	B4-X004-00	X AXIS MOTOR BASE	1
41.	6204ZZ	BALL BEARING	1
42.	KY-3/16"x3/16"x25L	KEY	1

11.15 LUBRICATION, COOLANT ASSEMBLY



LUBRICATION, COOLANT ASSEMBLY PARTS LIST

NO.	PART NO	DESCRIPTION	QTY
1.	OD-A9	OIL DISTRIBUTE	1
2.	SC-M6x25L	SOCKET CAP SCREW	4
3.	LT-ø4	LUBRICATING OIL TUBING	17
4.	CT-3/8" x 36"	COOLANT TUBES	1
5.	MFC-3/8"	MALE/FEMALE COCK	1
6.	B6-Z045-00	COOLANT TUBES BRACKET	1
7.	SC-M6x40L	SOCKET CAP SCREW	2
8.	SC-M5x16L	SOCKET CAP SCREW	12
9.	LR50067	LIMIT SWITCH	3
10.	SC-M6x20L	SOCKET CAP SCREW	2
11.	LS-ø4x1m	LUBRICATING STRING	2
12.	SCH-3/8" x 78"	STAINLESS STEEL CONVEYING HOSES	1
13.	CSED	ELECTRONIC LUBRICATION	1
14.	OD-A12	OIL DISTRIBUTE	1
15.	SC-M6x12L	SOCKET CAP SCREW	2
17.	2E-A010-00	COOLANT PUMP BASE	1
18.	130L-1/8HP	COOLANT PUMP (1ph 110/220V)	1