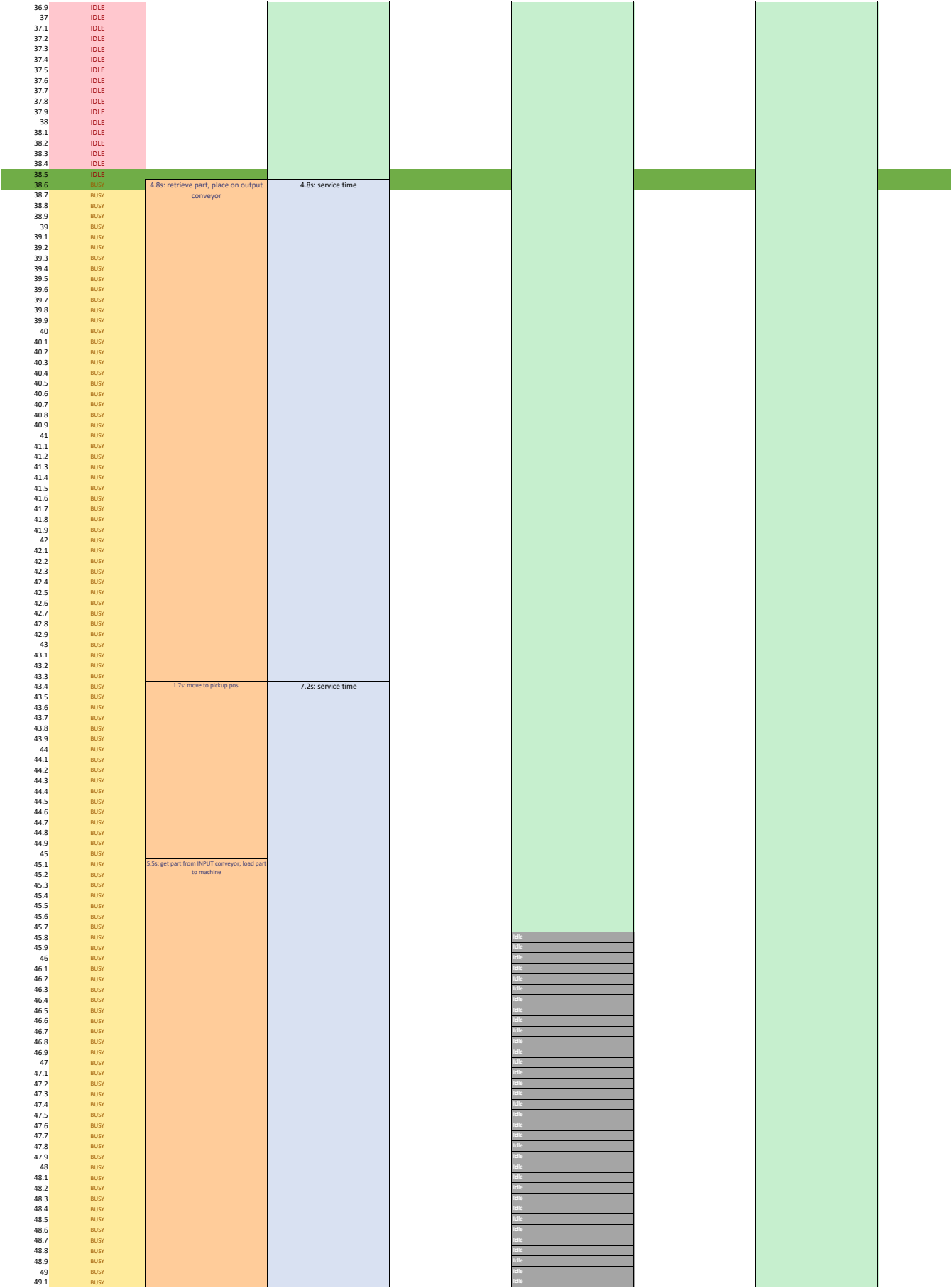


Time (s)	Robot	robot	machine 1	robot	machine 2	robot	machine 3
0.1	BUSY	5.5s: get part from INPUT conveyor; load part to machine	5.5s: service time		idle		idle
0.2	BUSY				idle		idle
0.3	BUSY				idle		idle
0.4	BUSY				idle		idle
0.5	BUSY				idle		idle
0.6	BUSY				idle		idle
0.7	BUSY				idle		idle
0.8	BUSY				idle		idle
0.9	BUSY				idle		idle
1	BUSY				idle		idle
1.1	BUSY				idle		idle
1.2	BUSY				idle		idle
1.3	BUSY				idle		idle
1.4	BUSY				idle		idle
1.5	BUSY				idle		idle
1.6	BUSY				idle		idle
1.7	BUSY				idle		idle
1.8	BUSY				idle		idle
1.9	BUSY				idle		idle
2	BUSY				idle		idle
2.1	BUSY				idle		idle
2.2	BUSY				idle		idle
2.3	BUSY				idle		idle
2.4	BUSY				idle		idle
2.5	BUSY				idle		idle
2.6	BUSY				idle		idle
2.7	BUSY				idle		idle
2.8	BUSY				idle		idle
2.9	BUSY				idle		idle
3	BUSY				idle		idle
3.1	BUSY				idle		idle
3.2	BUSY				idle		idle
3.3	BUSY				idle		idle
3.4	BUSY				idle		idle
3.5	BUSY				idle		idle
3.6	BUSY				idle		idle
3.7	BUSY				idle		idle
3.8	BUSY				idle		idle
3.9	BUSY				idle		idle
4	BUSY				idle		idle
4.1	BUSY				idle		idle
4.2	BUSY				idle		idle
4.3	BUSY				idle		idle
4.4	BUSY				idle		idle
4.5	BUSY				idle		idle
4.6	BUSY				idle		idle
4.7	BUSY				idle		idle
4.8	BUSY				idle		idle
4.9	BUSY				idle		idle
5	BUSY				idle		idle
5.1	BUSY				idle		idle
5.2	BUSY				idle		idle
5.3	BUSY				idle		idle
5.4	BUSY				idle		idle
5.5	BUSY				idle		idle
5.6	BUSY	33s: machine cycle	33s: machine cycle	1.7s: move to pickup pos.	7.2s: service time		idle
5.7	BUSY						idle
5.8	BUSY						idle
5.9	BUSY						idle
6	BUSY						idle
6.1	BUSY						idle
6.2	BUSY						idle
6.3	BUSY						idle
6.4	BUSY						idle
6.5	BUSY						idle
6.6	BUSY						idle
6.7	BUSY						idle
6.8	BUSY						idle
6.9	BUSY						idle
7	BUSY						idle
7.1	BUSY						idle
7.2	BUSY						idle
7.3	BUSY						idle
7.4	BUSY			5.5s: get part from INPUT conveyor; load part to machine			idle
7.5	BUSY						idle
7.6	BUSY						idle
7.7	BUSY						idle
7.8	BUSY						idle
7.9	BUSY						idle
8	BUSY						idle
8.1	BUSY						idle
8.2	BUSY						idle
8.3	BUSY						idle
8.4	BUSY						idle
8.5	BUSY						idle
8.6	BUSY						idle
8.7	BUSY						idle
8.8	BUSY						idle
8.9	BUSY						idle
9	BUSY						idle
9.1	BUSY						idle
9.2	BUSY						idle
9.3	BUSY						idle
9.4	BUSY						idle
9.5	BUSY						idle
9.6	BUSY						idle
9.7	BUSY						idle
9.8	BUSY						idle
9.9	BUSY						idle
10	BUSY						idle
10.1	BUSY						idle
10.2	BUSY						idle
10.3	BUSY						idle
10.4	BUSY						idle
10.5	BUSY						idle
10.6	BUSY						idle
10.7	BUSY						idle
10.8	BUSY						idle
10.9	BUSY						idle
11	BUSY						idle
11.1	BUSY						idle
11.2	BUSY						idle
11.3	BUSY						idle
11.4	BUSY						idle
11.5	BUSY						idle
11.6	BUSY						idle
11.7	BUSY						idle
11.8	BUSY						idle
11.9	BUSY						idle
12	BUSY						idle
12.1	BUSY						idle
12.2	BUSY						idle

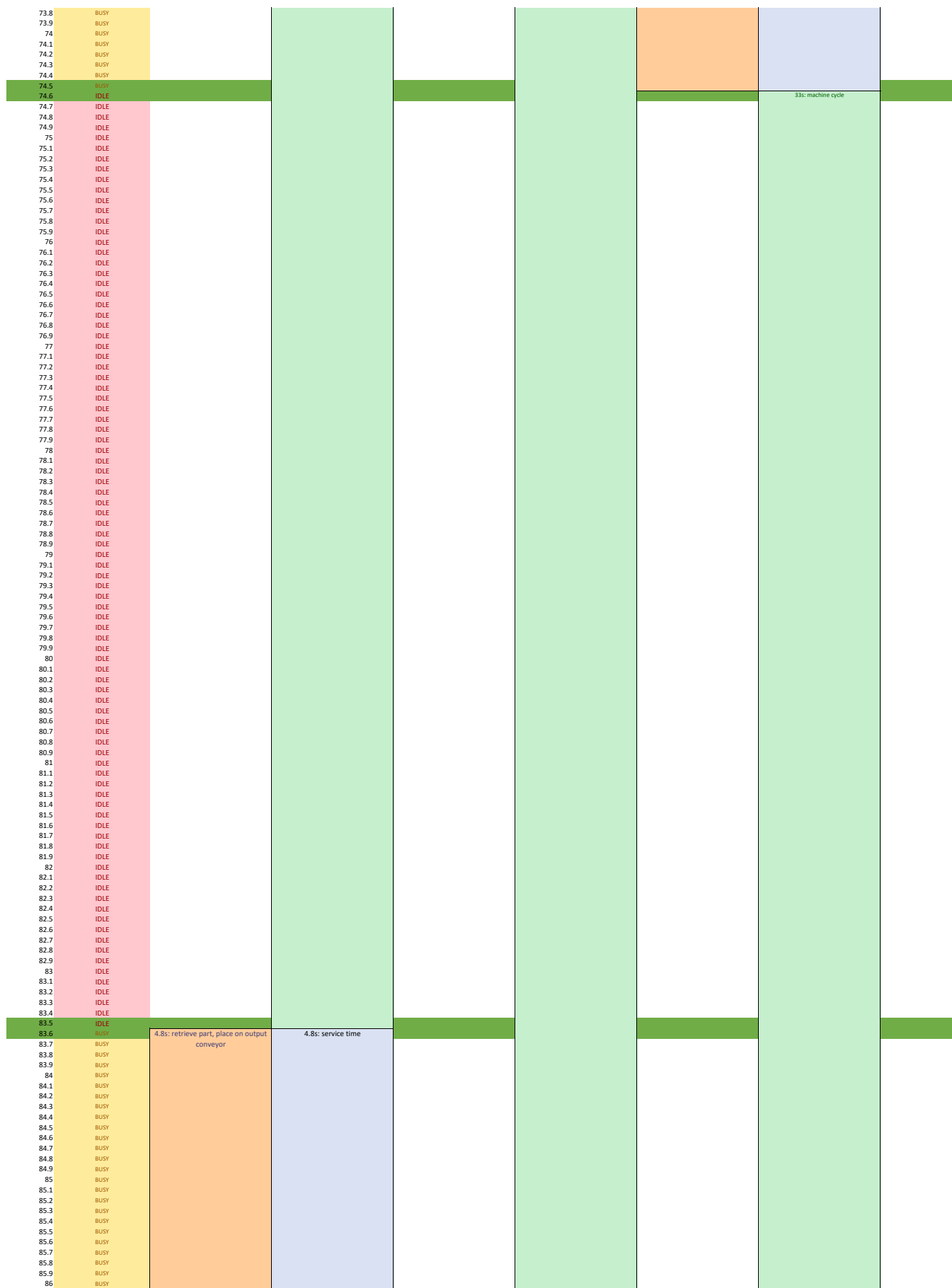
12.3	BUSY					idle
12.4	BUSY					idle
12.5	BUSY					idle
12.6	BUSY					idle
12.7	BUSY					idle
12.8	BUSY				33s: machine cycle	1.7s: move to pickup pos.
12.9	BUSY					7.2s: service time
13	BUSY					
13.1	BUSY					
13.2	BUSY					
13.3	BUSY					
13.4	BUSY					
13.5	BUSY					
13.6	BUSY					
13.7	BUSY					
13.8	BUSY					
13.9	BUSY					
14	BUSY					
14.1	BUSY					
14.2	BUSY					
14.3	BUSY					
14.4	BUSY					
14.5	BUSY					
14.6	BUSY					
14.7	BUSY					
14.8	BUSY					
14.9	BUSY					
15	BUSY					
15.1	BUSY					
15.2	BUSY					
15.3	BUSY					
15.4	BUSY					
15.5	BUSY					
15.6	BUSY					
15.7	BUSY					
15.8	BUSY					
15.9	BUSY					
16	BUSY					
16.1	BUSY					
16.2	BUSY					
16.3	BUSY					
16.4	BUSY					
16.5	BUSY					
16.6	BUSY					
16.7	BUSY					
16.8	BUSY					
16.9	BUSY					
17	BUSY					
17.1	BUSY					
17.2	BUSY					
17.3	BUSY					
17.4	BUSY					
17.5	BUSY					
17.6	BUSY					
17.7	BUSY					
17.8	BUSY					
17.9	BUSY					
18	BUSY					
18.1	BUSY					
18.2	BUSY					
18.3	BUSY					
18.4	BUSY					
18.5	BUSY					
18.6	BUSY					
18.7	BUSY					
18.8	BUSY					
18.9	BUSY					
19	BUSY					
19.1	BUSY					
19.2	BUSY					
19.3	BUSY					
19.4	BUSY					
19.5	BUSY					
19.6	BUSY					
19.7	BUSY					
19.8	BUSY					
19.9	BUSY					
20	IDLE					33s: machine cycle
20.1	IDLE					
20.2	IDLE					
20.3	IDLE					
20.4	IDLE					
20.5	IDLE					
20.6	IDLE					
20.7	IDLE					
20.8	IDLE					
20.9	IDLE					
21	IDLE					
21.1	IDLE					
21.2	IDLE					
21.3	IDLE					
21.4	IDLE					
21.5	IDLE					
21.6	IDLE					
21.7	IDLE					
21.8	IDLE					
21.9	IDLE					
22	IDLE					
22.1	IDLE					
22.2	IDLE					
22.3	IDLE					
22.4	IDLE					
22.5	IDLE					
22.6	IDLE					
22.7	IDLE					
22.8	IDLE					
22.9	IDLE					
23	IDLE					
23.1	IDLE					
23.2	IDLE					
23.3	IDLE					
23.4	IDLE					
23.5	IDLE					
23.6	IDLE					
23.7	IDLE					
23.8	IDLE					
23.9	IDLE					
24	IDLE					
24.1	IDLE					
24.2	IDLE					
24.3	IDLE					
24.4	IDLE					
24.5	IDLE					

24.6	IDLE			
24.7	IDLE			
24.8	IDLE			
24.9	IDLE			
25	IDLE			
25.1	IDLE			
25.2	IDLE			
25.3	IDLE			
25.4	IDLE			
25.5	IDLE			
25.6	IDLE			
25.7	IDLE			
25.8	IDLE			
25.9	IDLE			
26	IDLE			
26.1	IDLE			
26.2	IDLE			
26.3	IDLE			
26.4	IDLE			
26.5	IDLE			
26.6	IDLE			
26.7	IDLE			
26.8	IDLE			
26.9	IDLE			
27	IDLE			
27.1	IDLE			
27.2	IDLE			
27.3	IDLE			
27.4	IDLE			
27.5	IDLE			
27.6	IDLE			
27.7	IDLE			
27.8	IDLE			
27.9	IDLE			
28	IDLE			
28.1	IDLE			
28.2	IDLE			
28.3	IDLE			
28.4	IDLE			
28.5	IDLE			
28.6	IDLE			
28.7	IDLE			
28.8	IDLE			
28.9	IDLE			
29	IDLE			
29.1	IDLE			
29.2	IDLE			
29.3	IDLE			
29.4	IDLE			
29.5	IDLE			
29.6	IDLE			
29.7	IDLE			
29.8	IDLE			
29.9	IDLE			
30	IDLE			
30.1	IDLE			
30.2	IDLE			
30.3	IDLE			
30.4	IDLE			
30.5	IDLE			
30.6	IDLE			
30.7	IDLE			
30.8	IDLE			
30.9	IDLE			
31	IDLE			
31.1	IDLE			
31.2	IDLE			
31.3	IDLE			
31.4	IDLE			
31.5	IDLE			
31.6	IDLE			
31.7	IDLE			
31.8	IDLE			
31.9	IDLE			
32	IDLE			
32.1	IDLE			
32.2	IDLE			
32.3	IDLE			
32.4	IDLE			
32.5	IDLE			
32.6	IDLE			
32.7	IDLE			
32.8	IDLE			
32.9	IDLE			
33	IDLE			
33.1	IDLE			
33.2	IDLE			
33.3	IDLE			
33.4	IDLE			
33.5	IDLE			
33.6	IDLE			
33.7	IDLE			
33.8	IDLE			
33.9	IDLE			
34	IDLE			
34.1	IDLE			
34.2	IDLE			
34.3	IDLE			
34.4	IDLE			
34.5	IDLE			
34.6	IDLE			
34.7	IDLE			
34.8	IDLE			
34.9	IDLE			
35	IDLE			
35.1	IDLE			
35.2	IDLE			
35.3	IDLE			
35.4	IDLE			
35.5	IDLE			
35.6	IDLE			
35.7	IDLE			
35.8	IDLE			
35.9	IDLE			
36	IDLE			
36.1	IDLE			
36.2	IDLE			
36.3	IDLE			
36.4	IDLE			
36.5	IDLE			
36.6	IDLE			
36.7	IDLE			
36.8	IDLE			





61.5	BUSY					idle
61.6	BUSY					idle
61.7	BUSY					idle
61.8	BUSY					idle
61.9	BUSY					idle
62	BUSY					idle
62.1	BUSY					idle
62.2	BUSY					idle
62.3	BUSY					idle
62.4	BUSY					idle
62.5	BUSY					idle
62.6	BUSY			33s: machine cycle	4.8s: retrieve part, place on output conveyor	4.8s: service time
62.7	BUSY					
62.8	BUSY					
62.9	BUSY					
63	BUSY					
63.1	BUSY					
63.2	BUSY					
63.3	BUSY					
63.4	BUSY					
63.5	BUSY					
63.6	BUSY					
63.7	BUSY					
63.8	BUSY					
63.9	BUSY					
64	BUSY					
64.1	BUSY					
64.2	BUSY					
64.3	BUSY					
64.4	BUSY					
64.5	BUSY					
64.6	BUSY					
64.7	BUSY					
64.8	BUSY					
64.9	BUSY					
65	BUSY					
65.1	BUSY					
65.2	BUSY					
65.3	BUSY					
65.4	BUSY					
65.5	BUSY					
65.6	BUSY					
65.7	BUSY					
65.8	BUSY					
65.9	BUSY					
66	BUSY					
66.1	BUSY					
66.2	BUSY					
66.3	BUSY					
66.4	BUSY					
66.5	BUSY					
66.6	BUSY					
66.7	BUSY					
66.8	BUSY					
66.9	BUSY					
67	BUSY					
67.1	BUSY					
67.2	BUSY					
67.3	BUSY					
67.4	BUSY					
67.5	BUSY					
67.6	BUSY					
67.7	BUSY					
67.8	BUSY					
67.9	BUSY					
68	BUSY					
68.1	BUSY					
68.2	BUSY					
68.3	BUSY					
68.4	BUSY					
68.5	BUSY					
68.6	BUSY					
68.7	BUSY					
68.8	BUSY					
68.9	BUSY					
69	BUSY					
69.1	BUSY					
69.2	BUSY					
69.3	BUSY					
69.4	BUSY					
69.5	BUSY					
69.6	BUSY					
69.7	BUSY					
69.8	BUSY					
69.9	BUSY					
70	BUSY					
70.1	BUSY					
70.2	BUSY					
70.3	BUSY					
70.4	BUSY					
70.5	BUSY					
70.6	BUSY					
70.7	BUSY					
70.8	BUSY					
70.9	BUSY					
71	BUSY					
71.1	BUSY					
71.2	BUSY					
71.3	BUSY					
71.4	BUSY					
71.5	BUSY					
71.6	BUSY					
71.7	BUSY					
71.8	BUSY					
71.9	BUSY					
72	BUSY					
72.1	BUSY					
72.2	BUSY					
72.3	BUSY					
72.4	BUSY					
72.5	BUSY					
72.6	BUSY					
72.7	BUSY					
72.8	BUSY					
72.9	BUSY					
73	BUSY					
73.1	BUSY					
73.2	BUSY					
73.3	BUSY					
73.4	BUSY					
73.5	BUSY					
73.6	BUSY					
73.7	BUSY					



86.1	BUSY					
86.2	BUSY					
86.3	BUSY					
86.4	BUSY					
86.5	BUSY					
86.6	BUSY					
86.7	BUSY					
86.8	BUSY					
86.9	BUSY					
87	BUSY					
87.1	BUSY					
87.2	BUSY					
87.3	BUSY					
87.4	BUSY					
87.5	BUSY					
87.6	BUSY					
87.7	BUSY					
87.8	BUSY					
87.9	BUSY					
88	BUSY					
88.1	BUSY					
88.2	BUSY					
88.3	BUSY					
88.4	BUSY					
88.5	BUSY					
88.6	BUSY					
88.7	BUSY					
88.8	BUSY					
88.9	BUSY					
89	BUSY					
89.1	BUSY					
89.2	BUSY					
89.3	BUSY					
89.4	BUSY					
89.5	BUSY					
89.6	BUSY					
89.7	BUSY					
89.8	BUSY					
89.9	BUSY					
90	BUSY					
90.1	BUSY					
90.2	BUSY					
90.3	BUSY					
90.4	BUSY					
90.5	BUSY					
90.6	BUSY					
90.7	BUSY					
90.8	BUSY					
90.9	BUSY					
91	BUSY					
91.1	BUSY					
91.2	BUSY					
91.3	BUSY					
91.4	BUSY					
91.5	BUSY					
91.6	BUSY					
91.7	BUSY					
91.8	BUSY					
91.9	BUSY					
92	BUSY					
92.1	BUSY					
92.2	BUSY					
92.3	BUSY					
92.4	BUSY					
92.5	BUSY					
92.6	BUSY					
92.7	BUSY					
92.8	BUSY					
92.9	BUSY					
93	BUSY					
93.1	BUSY					
93.2	BUSY					
93.3	BUSY					
93.4	BUSY					
93.5	BUSY					
93.6	BUSY					
93.7	BUSY					
93.8	BUSY					
93.9	BUSY					
94	BUSY					
94.1	BUSY					
94.2	BUSY					
94.3	BUSY					
94.4	BUSY					
94.5	BUSY					
94.6	BUSY					
94.7	BUSY					
94.8	BUSY					
94.9	BUSY					
95	BUSY					
95.1	BUSY					
95.2	BUSY					
95.3	BUSY					
95.4	BUSY					
95.5	BUSY					
95.6	BUSY					
95.7	BUSY					
95.8	BUSY					
95.9	BUSY					
96	BUSY					
96.1	BUSY					
96.2	BUSY					
96.3	BUSY					
96.4	BUSY					
96.5	BUSY					
96.6	BUSY					
96.7	BUSY					
96.8	BUSY					
96.9	BUSY					
97	BUSY					
97.1	BUSY					
97.2	BUSY					
97.3	BUSY					
97.4	BUSY					
97.5	BUSY					
97.6	BUSY					
97.7	BUSY					
97.8	BUSY					
97.9	BUSY					
98	BUSY					
98.1	BUSY					
98.2	BUSY					
98.3	BUSY					



98.4	BUSY
98.5	BUSY
98.6	BUSY
98.7	BUSY
98.8	BUSY
98.9	BUSY
99	BUSY
99.1	BUSY
99.2	BUSY
99.3	BUSY
99.4	BUSY
99.5	BUSY
99.6	BUSY
99.7	BUSY
99.8	BUSY
99.9	BUSY
100	BUSY
100.1	BUSY
100.2	BUSY
100.3	BUSY
100.4	BUSY
100.5	BUSY
100.6	BUSY
100.7	BUSY
100.8	BUSY
100.9	BUSY
101	BUSY
101.1	BUSY
101.2	BUSY
101.3	BUSY
101.4	BUSY
101.5	BUSY
101.6	BUSY
101.7	BUSY
101.8	BUSY
101.9	BUSY
102	BUSY
102.1	BUSY
102.2	BUSY
102.3	BUSY
102.4	BUSY
102.5	BUSY
102.6	BUSY
102.7	BUSY
102.8	BUSY
102.9	BUSY
103	BUSY
103.1	BUSY
103.2	BUSY
103.3	BUSY
103.4	BUSY
103.5	BUSY
103.6	BUSY
103.7	BUSY
103.8	BUSY
103.9	BUSY
104	BUSY
104.1	BUSY
104.2	BUSY
104.3	BUSY
104.4	BUSY
104.5	BUSY
104.6	BUSY
104.7	BUSY
104.8	BUSY
104.9	BUSY
105	BUSY
105.1	BUSY
105.2	BUSY
105.3	BUSY
105.4	BUSY
105.5	BUSY
105.6	BUSY
105.7	BUSY
105.8	BUSY
105.9	BUSY
106	BUSY
106.1	BUSY
106.2	BUSY
106.3	BUSY
106.4	BUSY
106.5	BUSY
106.6	BUSY
106.7	BUSY
106.8	BUSY
106.9	BUSY
107	BUSY
107.1	BUSY
107.2	BUSY
107.3	BUSY
107.4	BUSY
107.5	BUSY
107.6	BUSY
107.7	BUSY
107.8	BUSY
107.9	BUSY
108	BUSY
108.1	BUSY
108.2	BUSY
108.3	BUSY
108.4	BUSY
108.5	BUSY
108.6	BUSY
108.7	BUSY
108.8	BUSY
108.9	BUSY
109	BUSY
109.1	BUSY
109.2	BUSY
109.3	BUSY
109.4	BUSY
109.5	BUSY
109.6	BUSY
109.7	BUSY
109.8	BUSY
109.9	BUSY
110	BUSY
110.1	BUSY
110.2	BUSY
110.3	BUSY
110.4	BUSY
110.5	BUSY
110.6	BUSY

	1.7s: move to pickup pos.	7.2s: service time		
	5.5s: get part from INPUT conveyor; load part to machine			
		33s: machine cycle	4.8s: retrieve part, place on output conveyor	4.8s: service time

110.7	BUSY				
110.8	BUSY				
110.9	BUSY				
111	BUSY				
111.1	BUSY				
111.2	BUSY				
111.3	BUSY				
111.4	BUSY				
111.5	BUSY				
111.6	BUSY				
111.7	BUSY				
111.8	BUSY				
111.9	BUSY				
112	BUSY				
112.1	BUSY				
112.2	BUSY				
112.3	BUSY				
112.4	BUSY				
112.5	BUSY				
112.6	BUSY				
112.7	BUSY				
112.8	BUSY				
112.9	BUSY				
113	BUSY				
113.1	BUSY				
113.2	BUSY				
113.3	BUSY				
113.4	BUSY				
113.5	BUSY				
113.6	BUSY				
113.7	BUSY				
113.8	BUSY				
113.9	BUSY				
114	BUSY				
114.1	BUSY				
114.2	BUSY				
114.3	BUSY				
114.4	BUSY				
114.5	BUSY				
114.6	BUSY				
114.7	BUSY				
114.8	BUSY				
114.9	BUSY				
115	BUSY				
115.1	BUSY				
115.2	BUSY				
115.3	BUSY				
115.4	BUSY				
115.5	BUSY				
115.6	BUSY				
115.7	BUSY				
115.8	BUSY				
115.9	BUSY				
116	BUSY				
116.1	BUSY				
116.2	BUSY				
116.3	BUSY				
116.4	BUSY				
116.5	BUSY				
116.6	BUSY				
116.7	BUSY				
116.8	BUSY				
116.9	BUSY				
117	BUSY				
117.1	BUSY				
117.2	BUSY				
117.3	BUSY				
117.4	BUSY				
117.5	BUSY				
117.6	BUSY				
117.7	BUSY				
117.8	BUSY				
117.9	BUSY				
118	BUSY				
118.1	BUSY				
118.2	BUSY				
118.3	BUSY				
118.4	BUSY				
118.5	BUSY				
118.6	BUSY				
118.7	BUSY				
118.8	BUSY				
118.9	BUSY				
119	BUSY				
119.1	BUSY				
119.2	BUSY				
119.3	BUSY				
119.4	BUSY				
119.5	BUSY				
119.6	IDLE				
119.7	IDLE				
119.8	IDLE				
119.9	IDLE				
120	IDLE				
120.1	IDLE				
120.2	IDLE				
120.3	IDLE				
120.4	IDLE				
120.5	IDLE				
120.6	IDLE				
120.7	IDLE				
120.8	IDLE				
120.9	IDLE				
121	IDLE				
121.1	IDLE				
121.2	IDLE				
121.3	IDLE				
121.4	IDLE				
121.5	IDLE				
121.6	IDLE				
121.7	IDLE				
121.8	IDLE				
121.9	IDLE				
122	IDLE				
122.1	IDLE				
122.2	IDLE				
122.3	IDLE				
122.4	IDLE				
122.5	IDLE				
122.6	IDLE				
122.7	IDLE				
122.8	IDLE				
122.9	IDLE				

123	IDLE				
123.1	IDLE				
123.2	IDLE				
123.3	IDLE				
123.4	IDLE				
123.5	IDLE				
123.6	IDLE				
123.7	IDLE				
123.8	IDLE				
123.9	IDLE				
124	IDLE				
124.1	IDLE				
124.2	IDLE				
124.3	IDLE				
124.4	IDLE				
124.5	IDLE				
124.6	IDLE				
124.7	IDLE				
124.8	IDLE				
124.9	IDLE				
125	IDLE				
125.1	IDLE				
125.2	IDLE				
125.3	IDLE				
125.4	IDLE				
125.5	IDLE				
125.6	IDLE				
125.7	IDLE				
125.8	IDLE				
125.9	IDLE				
126	IDLE				
126.1	IDLE				
126.2	IDLE				
126.3	IDLE				
126.4	IDLE				
126.5	IDLE				
126.6	IDLE				
126.7	IDLE				
126.8	IDLE				
126.9	IDLE				
127	IDLE				
127.1	IDLE				
127.2	IDLE				
127.3	IDLE				
127.4	IDLE				
127.5	IDLE				
127.6	IDLE				
127.7	IDLE				
127.8	IDLE				
127.9	IDLE				
128	IDLE				
128.1	IDLE				
128.2	IDLE				
128.3	IDLE				
128.4	IDLE				
128.5	IDLE				
128.6		4.8s: retrieve part, place on output conveyor	4.8s: service time		
128.8	BUSY				
128.9	BUSY				
129	BUSY				
129.1	BUSY				
129.2	BUSY				
129.3	BUSY				
129.4	BUSY				
129.5	BUSY				
129.6	BUSY				
129.7	BUSY				
129.8	BUSY				
129.9	BUSY				
130	BUSY				
130.1	BUSY				
130.2	BUSY				
130.3	BUSY				
130.4	BUSY				
130.5	BUSY				
130.6	BUSY				
130.7	BUSY				
130.8	BUSY				
130.9	BUSY				
131	BUSY				
131.1	BUSY				
131.2	BUSY				
131.3	BUSY				
131.4	BUSY				
131.5	BUSY				
131.6	BUSY				
131.7	BUSY				
131.8	BUSY				
131.9	BUSY				
132	BUSY				
132.1	BUSY				
132.2	BUSY				
132.3	BUSY				
132.4	BUSY				
132.5	BUSY				
132.6	BUSY				
132.7	BUSY				
132.8	BUSY				
132.9	BUSY				
133	BUSY				
133.1	BUSY				
133.2	BUSY				
133.3	BUSY				
133.4	BUSY	1.7s: move to pickup pos.	7.2s: service time		
133.5	BUSY				
133.6	BUSY				
133.7	BUSY				
133.8	BUSY				
133.9	BUSY				
134	BUSY				
134.1	BUSY				
134.2	BUSY				
134.3	BUSY				
134.4	BUSY				
134.5	BUSY				
134.6	BUSY				
134.7	BUSY				
134.8	BUSY				
134.9	BUSY				
135	BUSY				
135.1	BUSY	5.5s: get part from INPUT conveyor; load part to machine			
135.2	BUSY				

135.3	BUSY					
135.4	BUSY					
135.5	BUSY					
135.6	BUSY					
135.7	BUSY					
135.8	BUSY					
135.9	BUSY					
136	BUSY					
136.1	BUSY					
136.2	BUSY					
136.3	BUSY					
136.4	BUSY					
136.5	BUSY					
136.6	BUSY					
136.7	BUSY					
136.8	BUSY					
136.9	BUSY					
137	BUSY					
137.1	BUSY					
137.2	BUSY					
137.3	BUSY					
137.4	BUSY					
137.5	BUSY					
137.6	BUSY					
137.7	BUSY					
137.8	BUSY					
137.9	BUSY					
138	BUSY					
138.1	BUSY					
138.2	BUSY					
138.3	BUSY					
138.4	BUSY					
138.5	BUSY					
138.6	BUSY					
138.7	BUSY					
138.8	BUSY					
138.9	BUSY					
139	BUSY					
139.1	BUSY					
139.2	BUSY					
139.3	BUSY					
139.4	BUSY					
139.5	BUSY					
139.6	BUSY					
139.7	BUSY					
139.8	BUSY					
139.9	BUSY					
140	BUSY					
140.1	BUSY					
140.2	BUSY					
140.3	BUSY					
140.4	BUSY					
140.5	BUSY					
140.6	BUSY					
140.7	BUSY					
140.8	BUSY					
140.9	BUSY					
141	BUSY					
141.1	BUSY					
141.2	BUSY					
141.3	BUSY					
141.4	BUSY					
141.5	BUSY					
141.6	BUSY					
141.7	BUSY					
141.8	BUSY					
141.9	BUSY					
142	BUSY					
142.1	BUSY					
142.2	BUSY					
142.3	BUSY					
142.4	BUSY					
142.5	BUSY					
142.6	BUSY					
142.7	BUSY					
142.8	BUSY					
142.9	BUSY					
143	BUSY					
143.1	BUSY					
143.2	BUSY					
143.3	BUSY					
143.4	BUSY					
143.5	BUSY					
143.6	BUSY					
143.7	BUSY					
143.8	BUSY					
143.9	BUSY					
144	BUSY					
144.1	BUSY					
144.2	BUSY					
144.3	BUSY					
144.4	BUSY					
144.5	BUSY					
144.6	BUSY					
144.7	BUSY					
144.8	BUSY					
144.9	BUSY					
145	BUSY					
145.1	BUSY					
145.2	BUSY					
145.3	BUSY					
145.4	BUSY					
145.5	BUSY					
145.6	BUSY					
145.7	BUSY					
145.8	BUSY					
145.9	BUSY					
146	BUSY					
146.1	BUSY					
146.2	BUSY					
146.3	BUSY					
146.4	BUSY					
146.5	BUSY					
146.6	BUSY					
146.7	BUSY					
146.8	BUSY					
146.9	BUSY					
147	BUSY					
147.1	BUSY					
147.2	BUSY					
147.3	BUSY					
147.4	BUSY					
147.5	BUSY					

147.6	BUSY
147.7	BUSY
147.8	BUSY
147.9	BUSY
148	BUSY
148.1	BUSY
148.2	BUSY
148.3	BUSY
148.4	BUSY
148.5	BUSY
148.6	BUSY
148.7	BUSY
148.8	BUSY
148.9	BUSY
149	BUSY
149.1	BUSY
149.2	BUSY
149.3	BUSY
149.4	BUSY
149.5	BUSY
149.6	BUSY
149.7	BUSY
149.8	BUSY
149.9	BUSY
150	BUSY
150.1	BUSY
150.2	BUSY
150.3	BUSY
150.4	BUSY
150.5	BUSY
150.6	BUSY
150.7	BUSY
150.8	BUSY
150.9	BUSY
151	BUSY
151.1	BUSY
151.2	BUSY
151.3	BUSY
151.4	BUSY
151.5	BUSY
151.6	BUSY
151.7	BUSY
151.8	BUSY
151.9	BUSY
152	BUSY
152.1	BUSY
152.2	BUSY
152.3	BUSY
152.4	BUSY
152.5	BUSY
152.6	BUSY
152.7	BUSY
152.8	BUSY
152.9	BUSY
153	BUSY
153.1	BUSY
153.2	BUSY
153.3	BUSY
153.4	BUSY
153.5	BUSY
153.6	BUSY
153.7	BUSY
153.8	BUSY
153.9	BUSY
154	BUSY
154.1	BUSY
154.2	BUSY
154.3	BUSY
154.4	BUSY
154.5	BUSY
154.6	BUSY
154.7	BUSY
154.8	BUSY
154.9	BUSY
155	BUSY
155.1	BUSY
155.2	BUSY
155.3	BUSY
155.4	BUSY
155.5	BUSY
155.6	BUSY
155.7	BUSY
155.8	BUSY
155.9	BUSY
156	BUSY
156.1	BUSY
156.2	BUSY
156.3	BUSY
156.4	BUSY
156.5	BUSY
156.6	BUSY
156.7	BUSY
156.8	BUSY
156.9	BUSY
157	BUSY
157.1	BUSY
157.2	BUSY
157.3	BUSY
157.4	BUSY
157.5	BUSY
157.6	BUSY
157.7	BUSY
157.8	BUSY
157.9	BUSY
158	BUSY
158.1	BUSY
158.2	BUSY
158.3	BUSY
158.4	BUSY
158.5	BUSY
158.6	BUSY
158.7	BUSY
158.8	BUSY
158.9	BUSY
159	BUSY
159.1	BUSY
159.2	BUSY
159.3	BUSY
159.4	BUSY
159.5	BUSY
159.6	BUSY
159.7	BUSY
159.8	BUSY

		33s: machine cycle	4.8s: retrieve part, place on output conveyor	4.8s: service time
			1.7s: move to pickup pos.	7.2s: service time
			3.5s: get part from INPUT conveyor; load part to machine	

159.9	BUSY				
160	BUSY				
160.1	BUSY				
160.2	BUSY				
160.3	BUSY				
160.4	BUSY				
160.5	BUSY				
160.6	BUSY				
160.7	BUSY				
160.8	BUSY				
160.9	BUSY				
161	BUSY				
161.1	BUSY				
161.2	BUSY				
161.3	BUSY				
161.4	BUSY				
161.5	BUSY				
161.6	BUSY				
161.7	BUSY				
161.8	BUSY				
161.9	BUSY				
162	BUSY				
162.1	BUSY				
162.2	BUSY				
162.3	BUSY				
162.4	BUSY				
162.5	BUSY				
162.6	BUSY				
162.7	BUSY				
162.8	BUSY				
162.9	BUSY				
163	BUSY				
163.1	BUSY				
163.2	BUSY				
163.3	BUSY				
163.4	BUSY				
163.5	BUSY				
163.6	BUSY				
163.7	BUSY				
163.8	BUSY				
163.9	BUSY				
164	BUSY				
164.1	BUSY				
164.2	BUSY				
164.3	BUSY				
164.4	BUSY				
164.5	BUSY				
164.6	IDLE				33% machine cycle
164.7	IDLE				
164.8	IDLE				
164.9	IDLE				
165	IDLE				
165.1	IDLE				
165.2	IDLE				
165.3	IDLE				
165.4	IDLE				
165.5	IDLE				
165.6	IDLE				
165.7	IDLE				
165.8	IDLE				
165.9	IDLE				
166	IDLE				
166.1	IDLE				
166.2	IDLE				
166.3	IDLE				
166.4	IDLE				
166.5	IDLE				
166.6	IDLE				
166.7	IDLE				
166.8	IDLE				
166.9	IDLE				
167	IDLE				
167.1	IDLE				
167.2	IDLE				
167.3	IDLE				
167.4	IDLE				
167.5	IDLE				
167.6	IDLE				
167.7	IDLE				
167.8	IDLE				
167.9	IDLE				
168	IDLE				
168.1	IDLE				
168.2	IDLE				
168.3	IDLE				
168.4	IDLE				
168.5	IDLE				
168.6	IDLE				
168.7	IDLE				
168.8	IDLE				
168.9	IDLE				
169	IDLE				
169.1	IDLE				
169.2	IDLE				
169.3	IDLE				
169.4	IDLE				
169.5	IDLE				
169.6	IDLE				
169.7	IDLE				
169.8	IDLE				
169.9	IDLE				
170	IDLE				
170.1	IDLE				
170.2	IDLE				
170.3	IDLE				
170.4	IDLE				
170.5	IDLE				
170.6	IDLE				
170.7	IDLE				
170.8	IDLE				
170.9	IDLE				
171	IDLE				
171.1	IDLE				
171.2	IDLE				
171.3	IDLE				
171.4	IDLE				
171.5	IDLE				
171.6	IDLE				
171.7	IDLE				
171.8	IDLE				
171.9	IDLE				
172	IDLE				
172.1	IDLE				

172.2	IDLE				
172.3	IDLE				
172.4	IDLE				
172.5	IDLE				
172.6	IDLE				
172.7	IDLE				
172.8	IDLE				
172.9	IDLE				
173	IDLE				
173.1	IDLE				
173.2	IDLE				
173.3	IDLE				
173.4	IDLE				
173.5	IDLE				
173.6	BUSY	4.8s: retrieve part, place on output conveyor	4.8s: service time		
173.7	BUSY				
173.8	BUSY				
173.9	BUSY				
174	BUSY				
174.1	BUSY				
174.2	BUSY				
174.3	BUSY				
174.4	BUSY				
174.5	BUSY				
174.6	BUSY				
174.7	BUSY				
174.8	BUSY				
174.9	BUSY				
175	BUSY				
175.1	BUSY				
175.2	BUSY				
175.3	BUSY				
175.4	BUSY				
175.5	BUSY				
175.6	BUSY				
175.7	BUSY				
175.8	BUSY				
175.9	BUSY				
176	BUSY				
176.1	BUSY				
176.2	BUSY				
176.3	BUSY				
176.4	BUSY				
176.5	BUSY				
176.6	BUSY				
176.7	BUSY				
176.8	BUSY				
176.9	BUSY				
177	BUSY				
177.1	BUSY				
177.2	BUSY				
177.3	BUSY				
177.4	BUSY				
177.5	BUSY				
177.6	BUSY				
177.7	BUSY				
177.8	BUSY				
177.9	BUSY				
178	BUSY				
178.1	BUSY				
178.2	BUSY				
178.3	BUSY				
178.4	BUSY	1.7s: move to pickup pos.	7.2s: service time		
178.5	BUSY				
178.6	BUSY				
178.7	BUSY				
178.8	BUSY				
178.9	BUSY				
179	BUSY				
179.1	BUSY				
179.2	BUSY				
179.3	BUSY				
179.4	BUSY				
179.5	BUSY				
179.6	BUSY				
179.7	BUSY				
179.8	BUSY				
179.9	BUSY				
180	BUSY				
180.1	BUSY	5.5s: get part from INPUT conveyor; load part to machine			
180.2	BUSY				
180.3	BUSY				
180.4	BUSY				
180.5	BUSY				
180.6	BUSY				
180.7	BUSY				
180.8	BUSY				
180.9	BUSY				
181	BUSY				
181.1	BUSY				
181.2	BUSY				
181.3	BUSY				
181.4	BUSY				
181.5	BUSY				
181.6	BUSY				
181.7	BUSY				
181.8	BUSY				
181.9	BUSY				
182	BUSY				
182.1	BUSY				
182.2	BUSY				
182.3	BUSY				
182.4	BUSY				
182.5	BUSY				
182.6	BUSY				
182.7	BUSY				
182.8	BUSY				
182.9	BUSY				
183	BUSY				
183.1	BUSY				
183.2	BUSY				
183.3	BUSY				
183.4	BUSY				
183.5	BUSY				
183.6	BUSY				
183.7	BUSY				
183.8	BUSY				
183.9	BUSY				
184	BUSY				
184.1	BUSY				
184.2	BUSY				
184.3	BUSY				
184.4	BUSY				

184.5	BUSY				
184.6	BUSY				
184.7	BUSY				
184.8	BUSY				
184.9	BUSY				
185	BUSY				
185.1	BUSY				
185.2	BUSY				
185.3	BUSY				
185.4	BUSY				
185.5	BUSY				
185.6	BUSY				
185.7	BUSY				
185.8	BUSY				
185.9	BUSY				
186	BUSY				
186.1	BUSY				
186.2	BUSY				
186.3	BUSY				
186.4	BUSY				
186.5	BUSY				
186.6	BUSY				
186.7	BUSY				
186.8	BUSY				
186.9	BUSY				
187	BUSY				
187.1	BUSY				
187.2	BUSY				
187.3	BUSY				
187.4	BUSY				
187.5	BUSY				
187.6	BUSY				
187.7	BUSY				
187.8	BUSY				
187.9	BUSY				
188	BUSY				
188.1	BUSY				
188.2	BUSY				
188.3	BUSY				
188.4	BUSY				
188.5	BUSY				
188.6	BUSY				
188.7	BUSY				
188.8	BUSY				
188.9	BUSY				
189	BUSY				
189.1	BUSY				
189.2	BUSY				
189.3	BUSY				
189.4	BUSY				
189.5	BUSY				
189.6	BUSY				
189.7	BUSY				
189.8	BUSY				
189.9	BUSY				
190	BUSY				
190.1	BUSY				
190.2	BUSY				
190.3	BUSY				
190.4	BUSY				
190.5	BUSY				
190.6	BUSY				
190.7	BUSY				
190.8	BUSY				
190.9	BUSY				
191	BUSY				
191.1	BUSY				
191.2	BUSY				
191.3	BUSY				
191.4	BUSY				
191.5	BUSY				
191.6	BUSY				
191.7	BUSY				
191.8	BUSY				
191.9	BUSY				
192	BUSY				
192.1	BUSY				
192.2	BUSY				
192.3	BUSY				
192.4	BUSY				
192.5	BUSY				
192.6	BUSY				
192.7	BUSY				
192.8	BUSY				
192.9	BUSY				
193	BUSY				
193.1	BUSY				
193.2	BUSY				
193.3	BUSY				
193.4	BUSY				
193.5	BUSY				
193.6	BUSY				
193.7	BUSY				
193.8	BUSY				
193.9	BUSY				
194	BUSY				
194.1	BUSY				
194.2	BUSY				
194.3	BUSY				
194.4	BUSY				
194.5	BUSY				
194.6	BUSY				
194.7	BUSY				
194.8	BUSY				
194.9	BUSY				
195	BUSY				
195.1	BUSY				
195.2	BUSY				
195.3	BUSY				
195.4	BUSY				
195.5	BUSY				
195.6	BUSY				
195.7	BUSY				
195.8	BUSY				
195.9	BUSY				
196	BUSY				
196.1	BUSY				
196.2	BUSY				
196.3	BUSY				
196.4	BUSY				
196.5	BUSY				
196.6	BUSY				
196.7	BUSY				

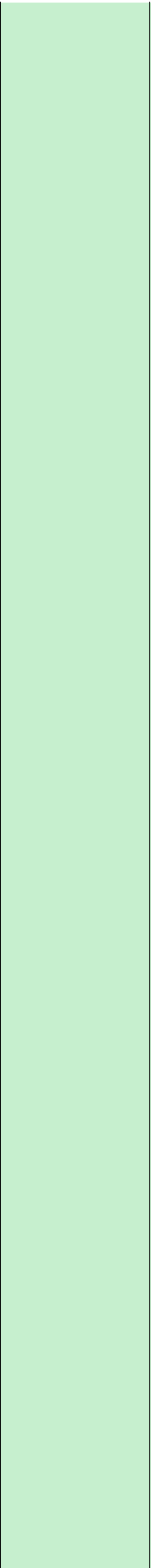
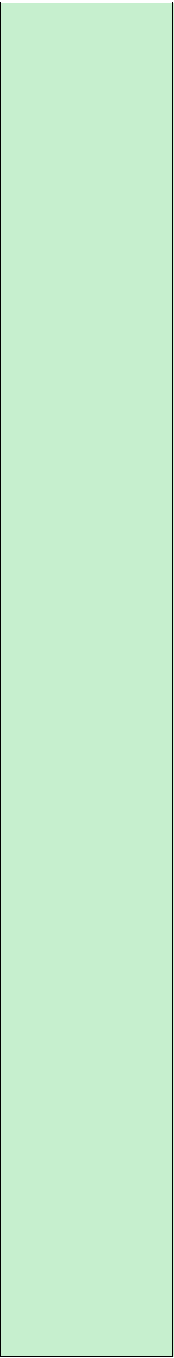


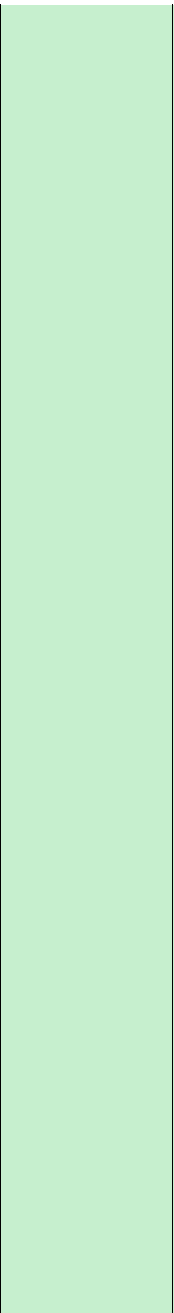
196.8	BUSY
196.9	BUSY
197	BUSY
197.1	BUSY
197.2	BUSY
197.3	BUSY
197.4	BUSY
197.5	BUSY
197.6	BUSY
197.7	BUSY
197.8	BUSY
197.9	BUSY
198	BUSY
198.1	BUSY
198.2	BUSY
198.3	BUSY
198.4	BUSY
198.5	BUSY
198.6	BUSY
198.7	BUSY
198.8	BUSY
198.9	BUSY
199	BUSY
199.1	BUSY
199.2	BUSY
199.3	BUSY
199.4	BUSY
199.5	BUSY
199.6	BUSY
199.7	BUSY
199.8	BUSY
199.9	BUSY
200	BUSY
200.1	BUSY
200.2	BUSY
200.3	BUSY
200.4	BUSY
200.5	BUSY
200.6	BUSY
200.7	BUSY
200.8	BUSY
200.9	BUSY
201	BUSY
201.1	BUSY
201.2	BUSY
201.3	BUSY
201.4	BUSY
201.5	BUSY
201.6	BUSY
201.7	BUSY
201.8	BUSY
201.9	BUSY
202	BUSY
202.1	BUSY
202.2	BUSY
202.3	BUSY
202.4	BUSY
202.5	BUSY
202.6	BUSY
202.7	BUSY
202.8	BUSY
202.9	BUSY
203	BUSY
203.1	BUSY
203.2	BUSY
203.3	BUSY
203.4	BUSY
203.5	BUSY
203.6	BUSY
203.7	BUSY
203.8	BUSY
203.9	BUSY
204	BUSY
204.1	BUSY
204.2	BUSY
204.3	BUSY
204.4	BUSY
204.5	BUSY
204.6	BUSY
204.7	BUSY
204.8	BUSY
204.9	BUSY
205	BUSY
205.1	BUSY
205.2	BUSY
205.3	BUSY
205.4	BUSY
205.5	BUSY
205.6	BUSY
205.7	BUSY
205.8	BUSY
205.9	BUSY
206	BUSY
206.1	BUSY
206.2	BUSY
206.3	BUSY
206.4	BUSY
206.5	BUSY
206.6	BUSY
206.7	BUSY
206.8	BUSY
206.9	BUSY
207	BUSY
207.1	BUSY
207.2	BUSY
207.3	BUSY
207.4	BUSY
207.5	BUSY
207.6	BUSY
207.7	BUSY
207.8	BUSY
207.9	BUSY
208	BUSY
208.1	BUSY
208.2	BUSY
208.3	BUSY
208.4	BUSY
208.5	BUSY
208.6	BUSY
208.7	BUSY
208.8	BUSY
208.9	BUSY
209	BUSY

		33s: machine cycle	4.8s: retrieve part, place on output conveyor	4.8s: service time
			1.7s: move to pickup pos.	7.2s: service time
			5.5s: get part from INPUT conveyor; load part to machine	

209.1	BUSY				
209.2	BUSY				
209.3	BUSY				
209.4	BUSY				
209.5	BUSY				
209.6	IDLE				33s: machine cycle
209.7	IDLE				
209.8	IDLE				
209.9	IDLE				
210	IDLE				
210.1	IDLE				
210.2	IDLE				
210.3	IDLE				
210.4	IDLE				
210.5	IDLE				
210.6	IDLE				
210.7	IDLE				
210.8	IDLE				
210.9	IDLE				
211	IDLE				
211.1	IDLE				
211.2	IDLE				
211.3	IDLE				
211.4	IDLE				
211.5	IDLE				
211.6	IDLE				
211.7	IDLE				
211.8	IDLE				
211.9	IDLE				
212	IDLE				
212.1	IDLE				
212.2	IDLE				
212.3	IDLE				
212.4	IDLE				
212.5	IDLE				
212.6	IDLE				
212.7	IDLE				
212.8	IDLE				
212.9	IDLE				
213	IDLE				
213.1	IDLE				
213.2	IDLE				
213.3	IDLE				
213.4	IDLE				
213.5	IDLE				
213.6	IDLE				
213.7	IDLE				
213.8	IDLE				
213.9	IDLE				
214	IDLE				
214.1	IDLE				
214.2	IDLE				
214.3	IDLE				
214.4	IDLE				
214.5	IDLE				
214.6	IDLE				
214.7	IDLE				
214.8	IDLE				
214.9	IDLE				
215	IDLE				
215.1	IDLE				
215.2	IDLE				
215.3	IDLE				
215.4	IDLE				
215.5	IDLE				
215.6	IDLE				
215.7	IDLE				
215.8	IDLE				
215.9	IDLE				
216	IDLE				
216.1	IDLE				
216.2	IDLE				
216.3	IDLE				
216.4	IDLE				
216.5	IDLE				
216.6	IDLE				
216.7	IDLE				
216.8	IDLE				
216.9	IDLE				
217	IDLE				
217.1	IDLE				
217.2	IDLE				
217.3	IDLE				
217.4	IDLE				
217.5	IDLE				
217.6	IDLE				
217.7	IDLE				
217.8	IDLE				
217.9	IDLE				
218	IDLE				
218.1	IDLE				
218.2	IDLE				
218.3	IDLE				
218.4	IDLE				
218.5	IDLE				
218.6					
218.7					
218.8					
218.9					
219					
219.1					
219.2					
219.3					
219.4					
219.5					
219.6					
219.7					
219.8					
219.9					
220					
220.1					
220.2					
220.3					
220.4					
220.5					
220.6					
220.7					
220.8					
220.9					
221					
221.1					
221.2					
221.3					

221.4  
221.5  
221.6  
221.7  
221.8  
221.9  
222  
222.1  
222.2  
222.3  
222.4  
222.5  
222.6  
222.7  
222.8  
222.9  
223  
223.1  
223.2  
223.3  
223.4  
223.5  
223.6  
223.7  
223.8  
223.9  
224  
224.1  
224.2  
224.3  
224.4  
224.5  
224.6  
224.7  
224.8  
224.9  
225  
225.1  
225.2  
225.3  
225.4  
225.5  
225.6  
225.7  
225.8  
225.9  
226  
226.1  
226.2  
226.3  
226.4  
226.5  
226.6  
226.7  
226.8  
226.9  
227







\_\_\_\_\_









REDUNDANT CYCLE BEGINS HERE

ROBOT IDLE TIME REPEATS AT 9 SECONDS

ROBOT IDLE TIME REPEATS AT 9 SECONDS





ROBOT IDLE TIME REPEATS AT 9 SECONDS

ROBOT IDLE TIME REPEATS AT 9 SECONDS







ROBOT IDLE TIME REPEATS AT 9 SECONDS

ROBOT IDLE TIME REPEATS AT 9 SECONDS





ROBOT IDLE TIME REPEATS AT 9 SECONDS