

**Table (4-4) observations of assembly machine  
Result of machines after modifications**

<b>S/N</b>	<b>Assembly machine</b>	<b>Selected quantity</b>	<b>Duration (minute)</b>	<b>Quantity of waste</b>	<b>Percentage of waste</b>	<b>Waste states</b>	<b>Reasons of waste</b>
1	A	1000	12	13	1.3	1- (11) empty case 2- (2) long case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
2	A	1000	11	12	1.2	1- (11) empty case 2- (1) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
3	A	1000	10	14	1.4	1- (9) empty case 2- (3) long case 3- (2) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
4	A	1000	11	13	1.3	1- (10) empty case 2- (3) long case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
5	A	3000	28	16	0.53	1- (13) empty case 2- (2) long case 3- (1) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness

							2-1 Defect from previous stage
7	A	3000	27	15	0.5	1- (10) empty case 2- (3) long case 3- (2) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
8	A	3000	29	17	0.56	1- (14) empty case 2- (3) long case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
9	B	1000	13	6	0.6	1- (5) empty case 2- (1) long case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
10	B	1000	12	5	0.5	1- (3) empty case 2- (2) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
11	B	1000	14	10	1.0	1- (8) empty case 2- (2) long case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
12	B	1000	14	4	0.4	1- (3) empty case 2- (1) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage

13	B	3000	27	12	0.4	1- (10) empty case 2- (2) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
14	B	3000	29	13	0.43	1- (8) empty case 2- (3) long case 3- (2) short case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage
15	B	3000	26	11	0.36	1- (9) empty case 2- (2) long case	1-1 Shortest of the lead core 1-2 Delay in handling time 1-3 Low spring stiffness 2-1 Defect from previous stage