MOTION ECONOMY CHECKLIST

Suboperations	Yes	No
1. Can a suboperation be eliminated?	“	“
a. As unnecessary?	“	“
b. By a change in the order of the work?	“	“
c. By a change of tools or equipment?	“	“
d. By a change in layout of the workplace?	“	“
e. By combining tools?	“	“
f. By a slight change of material?	“	“
g. By a slight change in product?	“	“
h. By a quick-acting clamp on the jigs or fixtures?	“	“
2. Can a suboperation be made easier?	“	“
a. By better tools?	“	“
b. By changing leverages?	“	“
c. By changing positions of controls or tools?	“	“
d. By better material containers?	“	“
e. By using inertia where possible?	“	“
f. By lessening visual requirements?	“	“
g. By better workplace heights?	“	“

Movements	Yes	No
1. Can a movement be eliminated?	“	“
a. As unnecessary?	“	“
b. By a change in the order of work?	“	“
c. By combining tools?	“	“
d. By a change in tools or equipment?	“	“
e. By a drop disposal of finished material?	“	“
2. Can a movement be made easier?	“	“
a. By a change in layout, shortening distances?	“	“
b. By changing the direction of movements?	“	“
c. By using different muscles?	“	“
Use the first muscle group that is strong enough for the task:		
(1) Finger?	“	“
(2) Wrist?	“	“
(3) Forearm?	“	“
(4) Upper arm?	“	“
(5) Trunk?	“	“
d. By making movements continuous rather than jerky?	“	“

Holds	Yes	No
1. Can a hold be eliminated? (Holding is extremely fatiguing.)	“	“
a. As unnecessary?	“	“
b. By a simple holding device or fixture?	“	“
2. Can a hold be made easier?	“	“
a. By shortening its duration?	“	“
b. By using stronger muscle groups, such as the legs with foot-operated vises?	“	“

Delays	**Yes**	**No**
1. Can a delay be eliminated or shortened?	“	“
a. As unnecessary?	“	“
b. By a change in the work each body member does?	“	“
c. By balancing the work between the body members?	“	“
d. By working simultaneously on two items?	“	“
e. By alternating the work, each hand doing the same job, but out of phase?	“	“

Cycles	**Yes**	**No**
1. Can the cycle be rearranged so that more of the handwork is done during running time?	“	“
a. By automatic feed?	“	“
b. By automatic supply of material?	“	“
c. By change of man and machine phase relationship?	“	“
d. By automatic power cutoff at completion of cut or in case of tool or material failure?	“	“

Machine Time	**Yes**	**No**
1. Can the machine time be shortened?	“	“
a. By better tools?	“	“
b. By combined tools?	“	“
c. By higher feeds or speeds?	“	“