

MACHINE EVALUATION CHECKLIST

Machine Efficiency and Safety		Yes	No
1. Are multiple or simultaneous cuts possible?		"	"
2. Are handles, wheels, and levers readily accessible?		"	"
3. Are handles, wheels, and levers designed for best mechanical advantage?		"	"
a. Are knobs at least 0.5-2 inches in diameter, with larger sizes for greater torque?		"	"
b. Are cranks and handwheels a minimum of 3-5 inches in diameter for low loads?		"	"
c. Are cranks and handwheels more than 8 inches in diameter for heavy loads?		"	"
4. Are fixtures used to, avoid holding with the hand?		"	"
5. Are guards or interlocks used, to prevent unintended entry?		"	"
Design of General Controls		Yes	No
1. Are different colors used for different controls?		"	"
2. Are controls clearly labeled?		"	"
3. Are shape and texture coding used for tactual identification?		"	"
a. Are no more than seven unique codes being utilized?		"	"
4. Is size coding used for tactual identification?		"	"
a. Are no more than three unique codes being utilized?		"	"
b. Are size differences greater than 0.5 inch?		"	"
Design of Emergency Controls		Yes	No
1. Are power-on controls designed to prevent accidental activation?		"	"
2. Do activation controls require a unique or dual action motion?		"	"
3. Are power-on buttons recessed?		"	"
4. Are activation controls colored green?		"	"
5. Are deadman controls utilized for continually activated controls?		"	"
6. Are emergency controls designed for quick activation?		"	"
7. Are stop buttons protruding?		"	"
8. Are emergency controls large and easy to activate?		"	"
9. Are emergency controls easily reachable?		"	"
10. Are emergency controls visible and colored red?		"	"
11. Are emergency controls placed away from other normally used controls?		"	"
Control Placement		Yes	No
1. Are primary controls placed in front of the operator at elbow height?		"	"
a. Are frequency-of-use and importance principles used to identify primary controls?		"	"
2. Are secondary controls placed next to primary controls, but still within reach?		"	"
3. Is twisting avoided in reaching for controls?		"	"
4. Are controls located in the proper sequence of operation?		"	"
5. Are mutually related controls grouped together?		"	"
6. Are hand operated controls separated by at least 2 inches?		"	"
7. Are three or less foot pedals utilized?		"	"
8. Are foot pedals located at floor level, to avoid raising the leg?		"	"
9. Is a sit/stand stool provided for extended foot pedal operation?		"	"

Display Design		Yes	No
1.	Are displays located on the visual cone of sight (horizontal to 30E down)?	"	"
2.	Are indicator lights used to attract the operator's attention?	"	"
3.	Are acoustic signals used for critical warnings?	"	"
4.	Are movable pointers used to indicate trends?	"	"
5.	Are counters provided for accurate readings?	"	"
6.	Are displays grouped so as to accentuate an abnormal display?	"	"
7.	Are mutually related displays grouped together?	"	"
Control-Display Compatibility		Yes	No
1.	Is affordance (perceived property results in desired action) used?	"	"
2.	Is feedback utilized to indicate completion of action?	"	"
3.	Does the control and display have a direct-drive relationship?	"	"
4.	Does the display reading increase from left to right?	"	"
5.	Do clockwise motions increase settings?	"	"
6.	Do clockwise motions close valves?	"	"
7.	For stick controls, does upward or backward motion produce upward motion?	"	"
8.	For controls out of plane, does the right-hand rule apply?	"	"
Label Design		Yes	No
1.	Is clear and concise wording used?	"	"
2.	Do the letters subtend at least 12 arcminutes of visual angle?	"	"
3.	Are dark letters used on a white background?	"	"
4.	Are uppercase letters used for only a few words?	"	"
5.	Are symbols (preferably simple) used only if clearly understood?	"	"