

APPENDIX 4

Hazard Control Section

APPENDIX 4

Case Study Problem-Solving Matrices for Maintenance and Inspection Work Areas.

This Appendix includes:

- a sample completed Corrective Actions List; and
- 50 case studies.

**CORRECTIVE ACTION LIST
(MAINTENANCE AND INSPECTION WORK AREAS)**

Corrective Action List (Maintenance and Inspection Work Areas)

Select the corrective action from the **case studies** pages paying particular attention to the body regions that are primary and secondary concerns. Place a ✓ in the appropriate boxes below as you select from each case study.

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
1. Alternate between sitting and standing tasks			A.5.2.4
2. Avoid high force tasks while seated			A.5.2.4
3. Change a pinch grip to a power grip			
4. Change lifting/carrying task into a rolling or sliding task			A.5.2.7
5. Change posture frequently			A.5.2.4
6. Call for assistance if necessary			
7. Direct cold air away from the hands			A.5.1.2
8. Distribute intensive activities throughout the process			
9. Eliminate exposure to hard edges	X		
10. Eliminate need to constantly hold trigger			A.5.1.2
11. Eliminate unnecessary tasks			
12. Encourage appropriate seasonal clothing			
13. Encourage ergonomic work techniques	X		
14. Encourage person to have visual disorders corrected			
15. Heat metal/material to make more pliable			
16. Improve cleat design			
17. Improve floor condition		X	
18. Improve visual access to work			
19. Improve wheel			

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
condition			
20. Incorporate rest pauses			
21. Increase handle length to improve leverage			A.5.1.2
22. Increase light levels			
23. Increase room temperature			
24. Increase size of work surface			
25. Increase task variety			A.5.2.4
26. Increase weight of work piece			
27. Lower light levels			
28. Lower the chair			A.5.2.5
29. Lower the handle			
30. Lower the monitor/screen			
31. Lower the person			A.5.2.5
32. Lower the work piece/work surface			A.5.2.5
33. Maintain bolts and screws			
34. Maintain hand tool/power tools			A.5.2.2
35. Maintain tracks, rollers, and movement mechanisms			
36. Minimize material which must be removed manually			
37. Modify facilities to decrease handling			
38. Move closer to the work location			A.5.2.3
39. Move monitor/screen closer to body			
40. Move monitor/screen further away from body			

Corrective Action List (Maintenance and Inspection Work Areas) Cont'd

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
41. Move work piece closer to body			
42. Obtain patient's assistance			
43. Place the trigger/switch to allow a comfortable hand/arm position			
44. Position mouse/input device next to the keyboard			
45. Position the monitor/screen in front of the body			
46. Provide a ball-bearing rotation table			
47. Provide a carrying container for tools/supplies			A.5.2.7
48. Provide a cart			A.5.2.7
49. Provide a flat/level keyboard			
50. Provide a foot pedal which requires the correct amount of force to use			
51. Provide a foot pump			
52. Provide a footrail or footrest			A.5.2.6
53. Provide a full-sized input device			
54. Provide a high friction gripping surface			A.5.2.2
55. Provide a hook-type tool to pull items			
56. Provide a keyboard which does not require excessive keying forces			
57. Provide a larger worksurface			
58. Provide a lighter weight door			
59. Provide a lighter weight tool			A.5.1.2
60. Provide a magnifying glass			
61. Provide a mechanical lift device		X	A.5.1.1

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
62. Provide a multi-finger trigger			A.5.1.2
63. Provide a padded, compressible surface to lay on			
64. Provide a padded, compressible surface to sit on			
65. Provide a palm rest			
66. Provide a power tool			A.5.1.2
67. Provide a powered cart			
68. Provide a shorter handle to reduce arm movement			
69. Provide a smaller container			A.5.2.7
70. Provide a spring release mechanism on plier-type tools			A.5.1.2
71. Provide a storage bag which is easy to pack/unpack		X	
72. Provide a swivel connection for air hose			A.5.2.2
73. Provide a telephone head set			
74. Provide a tool that minimizes exposure to vibration/impact/torque			A.5.1.2
75. Provide a tool which can be used with both hands			A.5.1.2
76. Provide a tool which requires minimal force to use			A.5.1.2
77. Provide a tool with an appropriate handle angle			A.5.1.2
78. Provide a wheel barrow			
79. Provide a work surface which is adjustable in height		X	
80. Provide adequate leg clearance			
81. Provide adequate toe clearance			
82. Provide adequate work space			

Corrective Action List (Maintenance and Inspection Work Areas) Cont'd

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
83. Provide an adjustable height lift table			
84. Provide an adjustable mirror			
85. Provide an alternative keyboard			
86. Provide an appropriate anti-fatigue mat		X	
87. Provide an appropriate chair/stool			
88. Provide an appropriate handle diameter			A.5.1.2
89. Provide an appropriate handle grip span on plier-type tools			A.5.1.2
90. Provide an auxiliary table			
91. Provide anti-vibration materials			A.5.2.2
92. Provide appropriate abrasive material			
93. Provide appropriate gloves			
94. Provide appropriate handles			A.5.1.2
95. Provide appropriate knee protection	X		
96. Provide appropriate shoe inserts	X		
97. Provide appropriate solvent solution			
98. Provide automatic or semi-automatic feed for fasteners			
99. Provide bolt and screw head designs which are durable			
100. Provide computer glasses			
101. Provide controls which do not require excessive forces			
102. Provide displays which are readable and easy to			

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
understand			
103. Provide extensions for tools			A.5.2.2
104. Provide handles with insulating material			A.5.1.2
105. Provide portable heaters			
106. Provide powered assistance for a manual activity			
107. Provide powered or mechanical assistance for door			
108. Provide protection from glare from natural light			
109. Provide protection from glare from overhead lights/task lights			
110. Provide shields or barriers from the wind			
111. Provide support for reference documents			
112. Provide support for the arms			
113. Provide support for the cable or hose			A.5.2.2
114. Provide support for the head			
115. Provide support for the lower back			
116. Provide support for the tool			A.5.1.2
117. Provide support for the upper body			
118. Provide support for the work piece			
119. Provide wheels			
120. Raise the chair			A.5.2.5
121. Raise the handle			
122. Raise the monitor/screen			
123. Raise the person			A.5.2.5
124. Raise the work piece/work surface	X		A.5.2.5
125. Recess container into work surface			
126. Reduce carry distance			

Corrective Action List (Maintenance and Inspection Work Areas) Cont'd

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
127. Reduce depth of storage container			A.5.2.7
128. Reduce force required to install or remove the component		X	
129. Reduce number of fasteners used			
130. Reduce the angle a person has to turn to transfer an item			A.5.2.7
131. Reduce weight of work piece			
132. Remove obstructions			A.5.2.3
133. Replace abrasive or cutting material frequently			
134. Replace standing foot pedals with alternative controls			
135. Reposition foot pedal			A.5.2.6
136. Rotate the work piece			
137. Sharpen blades frequently			

Job Factors

Corrective Action	Action Selected		Implementation Reference (Appendix 5)
	Minor	Major	
138. Stand to perform task			A.5.2.4
139. Store materials in the same orientation in which they are used			
140. Use alternative fasteners			
141. Use heavy excavation equipment (e.g., back hoes)			
142. Use two or more persons to perform the transfer	X		A.5.2.7
143. Wear appropriate shoes			
144. Provide a machine/automate			
145. Modify foot pedal			A.5.2.6