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| **Project 8.1b Model a Miniature Train Change Orders** |

Introduction

Engineering Change Orders (ECO) are used to modify components, assemblies, or documents such as processes and work instructions. They may also be used for changes in specifications.

ECOs are also called an Engineering Change Note, Engineering Change Notice (ECN) or just Engineering Change (EC).

In a typical system development cycle, the specification or the implementation is likely to change during engineering development or during integration of the system elements. These last-minute design changes are commonly referred to as engineering change orders (ECOs) and affect the functionality of a design after it has been wholly or partially completed. ECOs can compensate for design errors found during debug or changes that are made to the design specification to compensate for design problems in other areas of the system design.

Procedure

1. Use the flowing Engineering Change Orders to modify the Miniature Train.
   1. Part #1 Train body
      1. Axle holes should be moved to .6 from the bottom
      2. All blind holes should be flat bottom holes (fbh)
   2. Part #2 Stack
      1. Hole diameter 0.25, 1.25 deep (fbh)
      2. Counter bore diameter 0.75, 0.25 deep
   3. Part #6 Axle Peg
      1. Peg length should be dimensioned 0.875 in. long
      2. ¼ - 20 UNC threads should be applied only 0.5 of shaft length
   4. Part #8 Linkage Peg
      1. Length of peg should be 0.1875 in.
   5. Part #9 Cow Catcher
      1. Change the offset of the two trapezoid recesses from 0.10 to 0.125 in.
   6. Part #10 Straight Track
      1. Widen each groove from 0.35 in. to 0.375 while maintaining the same distance between the groove center lines.