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## Narrow gauge Forney locomotive

This document was written by Chris Devenish and was originally published by Worthing and District SME in their newsletter in the Summer of 2011.

Taurus is a 3½" gauge 1 ¾" scale (or just under 1/7 full size) model of a narrow gauge (2 foot gauge) prototype built by the Baldwin Locomotive Works in America in 1913. It is a Forney Locomotive with a 2-4-4 wheel arrangement, the full size engines being designed to go round sharp curves on lightly laid narrow gauge track. Most of the 2 foot gauge Forneys were built for the many and varied "short lines" in the state of Maine, and I have lettered mine as a loco from the Kennebec Central Railroad, a short 5 mile long line between the town of Randolph, Maine and an American Civil War Veterans home at Togus. In fact the KCRR only had 0-4-4 Forneys, but who's counting, and anyway KCRR could also stand for Kentucky Chicken Railroad !!



The model is built to Don Young's Lucky 7 design which was described in the American Live Steam Magazine between January 1977 and March 1980. I purchased the model from the dealer Steamdays in Liverpool in September last year as I wanted to have an engine suitable for Public Running duties, unfortunately I have no prior history of the model except that Roy Gregson, the dealer, thought that it might have been made by someone in the Derby area, he purchased it from a gentleman in Wales who had bought it to put on his mantelpiece – all I can say is it must have been a flipping large mantelpiece !! The model weighs in at 300lb, has 2" diameter cylinders and a 6" diameter copper boiler. The engine could be built as a 3½" gauge model, as mine, with the wheels inside the frames and outside flycranks, or as a 7¼" gauge model with wheels outside the frame. My model has a number of modifications to Don's original design, the main one being the substitution of standard coil springs for the complicated equalised suspension system. Michael Wheelwright (who has built a 2/3rd size Lucky 7 himself) warned me that the original design with the equalised springing was not as powerful as might be thought, because as the weight of the loco is equalised over the 5 axles, only 40% of the weight is carried by the two driving axles, however, as mine does not have this, it has more weight on the drivers, and seems to be a pretty powerful beast – hence the Taurus nameplate!



I've had to do very little to it since purchasing it, the main problem being a leaky water tank, which has now been successfully sealed with Aquarium silicon sealant (it was not possible to take it all apart to solder it

properly), I have also had to make a new whistle valve for the dome mounted whistle (it also has a very effective chime whistle mounted under the running board). Curiously, it was also missing a rear pilot beam (buffer beam to you and me) and thanks to Michael for lending me his drawings, I was able to make a new one complete with wooden steps, and I had to fabricate a new rear (non-working) buckeye coupling. As spark arrestors are now a requirement for Public Running, I thought that if I have to have one it's going to be a good one, and I have made a copy of the Ridgeway or Beartrap spark arrestors used on the Colorado & Southern Railroad – the sparks and ash hit the mesh at the front, are deflected to the back of the arrestor, fall down the hopper and are discharged onto the track through the pipe which terminates just in front of the left hand cylinder – it seems to work pretty well and certainly provides a talking point.