Subject: N to HOn30 2-8-0 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 14:02:09 GMT
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I'm developing a set of parts to convert a Bachmann N gauge 2-8-0 steam loco into a narrow gauge version for HOn30.The idea is (or at least was) to make the conversion fairly simple, and to leave the choice to the builder as to how much work is involved.Most parts will all be available separately to give a choice for the builder.
The parts being developed are:
Tender body - done
Cab - done (2 versions, the mk.1 is in the photos)
Pilot - done
Air-pump - done
Chimney - done
Domes - done (new hollow version - done)
Headlight - done
Bell - done
Turbo Generator - done

Some of these parts are available from other sources, I'm developing them because they are not easy to buy where I live.

This kit was originally developed for the DC version. I have now adapted some of the parts to fit the DCC version. Scroll down to the bottom for instructions specific for the DCC version.

Now for some pictures.First, a before and after comparison.Then some of a nearly finished model.

Next,I'll be showing how I did the conversion with the parts available so far.

File Attachments
1) conv.1.jpg, downloaded 3020 times
2) conv.2.jpg, downloaded 2853 times
3) conv.3.jpg, downloaded 2856 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 15:47:20 GMT
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The parts used for the conversion:

Some are still being developed (see first post).
I'll start with the locomotive.
Part 1.
Remove the body from the chassis, you need to remove the handrails from the rear of the cab and unclip the front steps from the smokebox.Pull the body up from the cab end and then push forward.The cab pulls off from the body.To remove the pilot,loosen the front screw on the keeper plate.This allows you to remove the pony truck,giving you access to the screw holding the pilot in place.The new pilot is a direct replacement for this.
You should have a pile of bits like this:

On the body,remove the chimney and domes (the rear one is held on by a screw).Remove the airpump and the foot board that went over it.

To allow the new cab to fit,a small part of the front of the footplate has to be removed.See below.

The pipes under the right side of the cab are cut back,as the new cab will be in the way.See above.

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3) conv.6.jpg, downloaded 2748 times
4) conv.7.jpg, downloaded 2755 times
5) conv.8.jpg, downloaded 2742 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 16:02:17 GMT
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Part 2.
Test fit the parts.The new cab fits the same way as the original.

Now things can a bit complicated.If you refit the body onto the chassis, you'll find something sticking out where one of the new domes is to go.

[A new hollow dome is now available in a new detail set. The mod shown below is not needed if you are using the new detail set.]

This problem can be solved with a bit of bodging.Remove the body and the weight at the front of the chassis.Unless you plan the use it somehow,remove the lightboard from the front of the chassis,cutting the wires close to the joints.

The tabs projecting up can be broken off at the hole in them.This still leaves enough exposed metal for the wires to make contact.

Place the wires over the remains of the tabs and wedge something non-conducting in between them to hold them in place.I used a small piece of wood.

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2) conv.10.jpg, downloaded 2699 times
3) conv.11.jpg, downloaded 2703 times
4) conv.12.jpg, downloaded 2712 times
5) conv.13.jpg, downloaded 2698 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 17:02:21 GMT
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Part.3
The completed chassis:

Refit the body and test fit the domes.

If you are happy with the fit of parts, it's on to the airbrake.
I used a piece of 0.5mm dia. brass rod to mount the airbrake onto the small block that the original one was mounted on.I drilled a small hole into the back side of the pump and glued the rod into it.

New footboards were made from 5mm wide strips of thin plastic card and glued onto the existing footboards.Some of the boiler side plumbing will need adjusting to make room for these.The arrow points to where the airpump will be mounted.

The domes and chimney can now be glued in place, filling any gaps around their bases.Now is the time to paint the separate parts before final assembly and glueing the airbrake in place.The parts here are unpainted so you can see them!

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1) conv.14.jpg, downloaded 2689 times
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3) conv.16.jpg, downloaded 2683 times
4) conv.17.jpg, downloaded 2661 times
5) conv.18.jpg, downloaded 2698 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 18:32:26 GMT
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The tender.
There are two options here:
1.The simpler option is use one of my tenders complete with trucks.Just add some weight and make a drawbar to connect it to the loco.
2.The more complicated one, which I shall detail here, is to use the donor tender chassis plus a new body.This has the advantage of retaining the all wheel pick-up of the original chassis.

Part.1
Some pics of the tenders alongside.

Remove the trucks and N gauge coupler.Remove the insert in the top of the body by pushing a screwdriver up through the rear truck pivot hole.Remove the weight.

Remove the footsteps from around the bottom of the chassis.

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1) tc.1.jpg, downloaded 2644 times
2) tc.2.jpg, downloaded 2642 times
3) tc.3.jpg, downloaded 2646 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 18:41:43 GMT
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Part.2
Cut off the front of the body, using the first vertical row of rivets as a guide.The cut doesn't have to

be neat,see next stage.

Cut off remaining three sides of the body, above the chassis.Take care not to damage the conductor strips inside.

Remove the small pillars at the corners.

Cut down the truck mounts so that they are flush with the small bits of plastic either side of them.Make a cut out at the rear for the Micro-Trains coupler.

Test fit into the body, make adjustments if needed.

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1) tc.4.jpg, downloaded 2634 times
2) tc.5.jpg, downloaded 2633 times
3) tc.6.jpg, downloaded 2625 times
4) tc.7.jpg, downloaded 2607 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 28 Jul 2012 18:53:09 GMT
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Part 3.
Remove the rear pillar from inside the upper insert.About 5mm will do.
Glue this onto the rear truck mount, top side of chassis.Use the mounting screw to hold it in place (centered).(I used plastic weld for this).

Glue some 1mm plastic card to top of chassis, between the conductive strips, to support the weight.I used part of the upper insert for this.

Glue the weight to this support.Refit the trucks and drawbar.

Mount a Micro-Trains 1015 coupler to the rear of the new body and place onto chassis.Make a lid for the rear toolbox from some thin plastic card.

That's it for now.Any Questions?

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1) tc.8.jpg, downloaded 2603 times

2) tc.9.jpg, downloaded 2624 times
3) tc.10.jpg, downloaded 2587 times
4) tc.11.jpg, downloaded 2600 times
5) tc.12.jpg, downloaded 2592 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sun, 29 Jul 2012 10:08:59 GMT
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A word about finishing.I left any detail off the cab roof because the finish of a curved surface can vary with the printing process.A roof hatch can be made out of some plastic card if you want.
To get a smooth finish on the roof, the method I use is to paint (acrylic), and sand when dry.Repeat until a smooth finish is achieved.This photo was taken mid-process.

File Attachments

1) cab-2.jpg, downloaded 2571 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Wed, 15 Aug 2012 22:06:00 GMT
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Extra detail parts are now available, including an improved dome design.
I'll post photos when I get around to fitting them.

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Fri, 17 Aug 2012 22:41:41 GMT
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The two domes are the same size, but one has a larger base making it sit slightly higher.I've replaced the front dome with the larger based one.The bell is mounted where the original one was, the hole drilled to 1mm (#61). The light also needs a 1mm hole for mounting.

The light is painted silver on the inside.It has some micro krystal klear in the opening for the lens.There is room inside for a very small LED if you want to make it work.

File Attachments

1) bell-1.jpg, downloaded 2530 times
2) bell-2.jpg, downloaded 2533 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Sat, 21 Sep 2013 06:04:16 GMT
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Update.
A new set of detail parts is available (in FUD only). This includes all the parts needed for one loco.
The domes are now hollow, the tabs that stick on the chassis can be left in place now.
A new addition is the turbo generator. This needs a small hole drilled into it (0.5mm) and some brass rod (or similar) glued into the hole to form the exhaust pipe.

The part you are drilling into is 1mm wide.
Remove the old N scale part from the model, fill the hole left behind, and glue the new one in place.

Or it could be place behind the stack.

File Attachments

1) gen_1.jpg, downloaded 1514 times
2) gen_small_1.jpg, downloaded 1512 times

Subject: Re: N to HOn30 Steam loco conversion project
Posted by pinddle on Tue, 10 Dec 2013 23:09:53 GMT
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Instructions for the DCC conversion.
For the loco it should be the same as per DC. The wiring will look a bit different, but if you are using the new hollow domes you shouldn't need to touch that.
The tender needs less work than before. Remove the body by unclipping it. Also removed the coupler lifting bar at the rear. Unplug the lead from the loco. Cut off the footsteps.
Now for the only major work, two lumps of metal at the front of the chassis need to be removed (marked in red).

You are aiming for this.

The new body should now fit onto the chassis. The lead from the loco passes through the hole at the front of the body.
You can retain the original coupler, or remove it and fit a Microtrains 1015 as before.
The gap between loco and tender is less than before, but it should go round most curves.

Note - I have designed two tenders for this conversion.
The Low one is the same height as the DC version. This has a hole in the coal space to allow room for the plug. This can be hidden with a coal load.
The High one is 2mm taller than the DC one. The plug is completely hidden, but the tender top is smooth with no coal space. This can also be hidden with a coal load.

File Attachments

1) dccc_1.jpg, downloaded 1244 times
2) dccc_2.jpg, downloaded 1256 times
3) dccc_3.jpg, downloaded 1246 times