



D.S.P. & P. 63

**DENVER, SOUTH PARK AND
PACIFIC NUMBER 63
Metamorphosis of an
HOn3 consolidation
By Paul Scoles**

Perhaps it was that Congdon stack, or maybe the small "white-walled" drivers, or that certain "something" that some locomotives seem to have that gives them a lady-like quality, but whatever the reason, as soon as the photo and drawing appeared in the May, 1975 issue of *The Gazette* I knew it was one loco I had to try to build. Of course, the fact that the Pelican Bay

Rwy and Navigation Company badly needed another 2-8-0 for freight and helper service required that something be built, but those unfortunate souls among us who model our railroads in the 1880's and 1890's have precious little to chose from on the commercial market. Therefore, when I first saw this little beauty my search was over.

That is not to say, though, that one simply launches into a building project like this with only one photo and a drawing. In the first place, the drawing only depicted the engineer's side

of the loco (although there probably wasn't much difference in those days), and secondly (and most important in my case), the photo and drawing show the engine as it appeared in 1883, some ten years before the period I model in. Thus the loco lacked what I would call transitional detail (i.e. additional tool boxes, larger air pumps, piping, etc.). So it was decided that a search for some slightly more recent photos was in order, and fortunately at about this time the *Colorado Rail Annual #12* came to the rescue.

A number of photos were uncovered in Rail Annual #12 that would prove to be useful. Page 63 for instance, shows D.L.&G. #217 (fireman's side), another of the 1883 Cooke order, and a tool box is located just ahead of the cab above the running board, and the boiler check is located further forward than on the loco in the drawing. The photo also showed coal retaining boards added to the tender. Page 79 revealed another 2-8-0 (engineer's side) showing the air pump mounted lower on the boiler, splitting the running board. From the myriad of data we've had on the Rio Grande from this period I gather this was a standard modification. I chose to ignore the fact that those magnificent Congdon stacks had apparently disappeared by this time on most locomotives. Other photos from the 1890 period were studied carefully to try to detect other "standard" modifications by the D.L.&G.

I would have liked to have had more information on the tenders for these locos, but it seems the photographers of the period weren't too inclined to photograph them. Because of this, it was decided to "extrapolate" a tender of 1895 vintage from the known practices of the day, and numerous Rio Grande photos, not to mention what was available from Kemtron. An exact South Park tender it ain't, but it seems to "fit" with the loco.

Armed with what little information I was able to come up with on the loco, and my trusty Kemtron catalog, I began to search for parts. A great many Kemtron parts (as well as some Cal-Scale and Cary parts) can be used on locos of this period with little or no modification, but for some reason the South Park decided to be just different enough to make life difficult for the period modeler. However, if you are willing to settle for a close approximation (as I was) then most parts can be used as is. In addition, since this loco was to be used on the PBR&N, and not the South Park, it was decided to have spoked lead trucks instead of the more usual solid ones, and for operating considerations, automatic couplers (Kadees) instead of the link-and-pins still in use on most roads during my modeling period. Finally, since working classification lights were in order, and I couldn't think of any easy way to light those South Park style markers, a type more closely resembling those used on the Rio Grande were chosen (actually Utah Pacific's filed to a different shape, because they easily accept a 1.5 volt bulb.). For a complete list of commercial parts used refer to the parts list below.

At the heart of any locomotive construction project is the frame and

driver assembly, and here is where the Pelican Bay Rwy and Navigation Co. shop crew really lucked out. A few months before this project got under way a friend traded me a slightly damaged Balboa C-19 frame, with drivers, rods and cylinders, and as it turned out I've never made a better trade as the C-19 frame was a perfect foundation upon which to build this loco. Since the frame was somewhat too long to fit the Kemtron boiler and cab and still match the South Park dimensions it required shortening by about 2". This amount was removed from the rear end, necessitating moving the drawbar screw forward, as well as the rear cab support. Moving the cab forward on the frame required repositioning the "L-shaped" motor mount supplied with the C-19 frame. I wanted to keep this motor mounting bracket because I use Micro-mo precision motors and slip-on gear heads in all my locos, and the 6.3:1 center-shaft gear head attaches right to this bracket with a couple of 2-56 screws (see Feb. and Mar., 1976 Model Railroader). The motor and gear head, when attached to this bracket, line right up with the stock Balboa worm, giving a smooth running unit. The 050 Micro-mo and 6.3:1 gear head, coupled to the Balboa 26:1 worm, yields a loco that has a speed of 10 scale miles-per-hour at 12 volts, and is very smooth throughout its speed range. See photo #2.

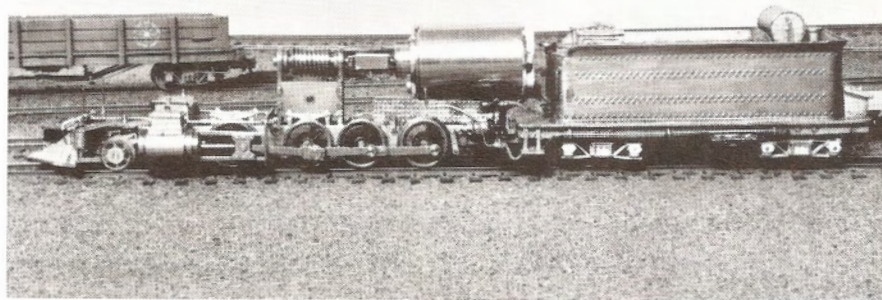
In order to provide power for the working headlight and the classification lights, a PFM constant lighting unit was installed in the tender, and connected to the loco with sub-miniature connectors. I've given up on trying to install sound in these small tenders (such as the C-16 original wrapper used here) for the time being. My cohort in crime Lonnie Shay mounts the small PFM speaker on edge in these tenders, but the resultant fuel load (wood) required to cover them resembles something more akin to the Sumpter Valley than the South Park of 1890 (or the PBR&N for that matter!). Anybody have any ideas?

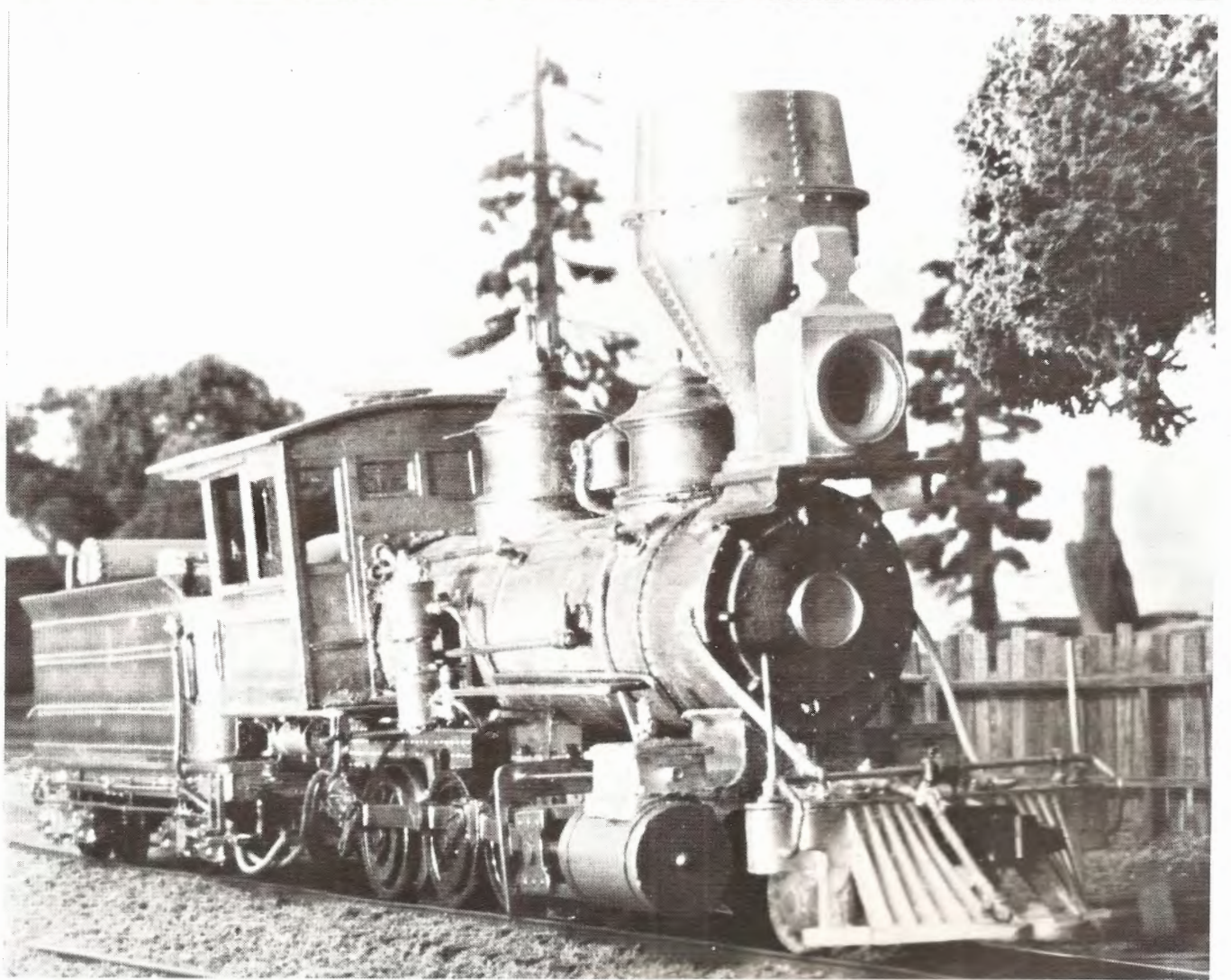
Beyond the above remarks it is pretty much just a matter of soldering the various (and many) parts to-

gether in some orderly fashion. I did chuck the Kemtron domes up in my lathe and turn them down a little to more closely resemble South Park domes. Also the Kemtron front number plate was turned down to not much more than a very small flat disc over which I later glued the Lynchgate "Cook" number plate. Soldering was accomplished with an alcohol torch and a pair of soldering tweezers, using one or the other depending on what was being soldered. Kemtron solder paint was used, except along the bottom of the tender wrapper, where a small diameter resin-core solder was used to achieve a "filler." If you don't have either an alcohol torch (or some other type of torch), or the soldering tweezers, I would strongly recommend acquiring one or both of them . . . especially if you build or modify locos as they are indispensable.

Notice in the photos the loco to tender hose connections. These were made by using the insulation from some very flexible wire that had been pirated from a few aerospace printed circuit boards. If you can find some of this small, super-flexible wire, it can serve as the above-mentioned loco to tender hoses, as well as sound or lighting wires or whatever wires you have running from your loco to tender, and it is so flexible there are no problems with derailments.

A few words about painting . . . Many of the photos I've seen of locos during this period reveal what appears to be either a gray boiler or Russian iron or something on this order. For this loco I chose to paint the boiler a light metallic gray in an attempt to achieve this effect. The paint was mixed by adding about ¼ black to a bottle of scalecoat aluminum, with a few drops of jade green (careful with the green!). The cab, domes, stack, and all piping and handrails were done in black, as well as the running boards and fittings. The smoke box was painted with Floquil's graphite, and the boiler bands, bell, and cylinder heads were done with Floquil's brass. The cab roof was painted an oxide red, as was the inset cab panel, and following a common practice of the day the drivers and wheels were outlined in white.





Weathering was what I term "moderate" (others call it heavy), but for my tastes it gives the look of a loco that has been used quite a bit, but is still not ready for the shop. Weathering was accomplished with both an air-brush and Grumbacher's Raw Umber chalk.

One final note: This loco (as are all PBR&N locos) is equipped with small brass pick-up shoes, or sliders, to insure good positive electrical pick-up at all times. Lonnie and I mentioned this in our micro motor article in Model Railroader, and for good reason ... they work very well, and are not at all noticeable. Notice in photo #1, behind the first driver on the engineer's side. It seems that virtually all small locos (like anything in HOn3) and most larger ones suffer from poor pick-up at times, especially when you don't operate often. If such is the case with some of your locos, give the sliders a try... you'll be pleasantly surprised.

At any rate, building the South Park loco was very satisfying, with the result that I now have a neat little consolidation that is just different enough to stand out amidst the more common Rio Grande-type locos on my roster. Whether I use her in mainline freight

or passenger service, or as a helper pushing on the rear of a long drag, she seems to stand out and state in royal fashion: "I'm special . . . I'm the South Park."

**Commercial
PARTS LIST
FOR**

D.S.P.&P. #63

- Utah Pacific CM-64 marker lights
- Modeltronics 1340, 2-pin connector
- PFM constant intensity lighting kit
- MV lens #L-218 (for headlight)
- Tomalco T-1002-6 tender brake gear
- Ace Castings Congdon stack
- Cary HL-142 headlight
- Cal-Scale AP-256 9/2" airpump
- Cal-Scale GV-314 globe valves
- Cal-Scale AH-277 air hoses
- Kemtron-loco 6045 pilot deck
- Kemtron-loco 6013 deck braces
- Kemtron-loco 4 cab hatch
- Kemtron-loco 6045 cab support
- Kemtron-loco 6010 bell
- Kemtron-loco 6067 lubricators
- Kemtron-loco 6047 cab steps
- Kemtron-loco 514 wash-out steps
- Kemtron-loco 6145 running boards
- Kemtron-loco 6055 loco tool box
- Kemtron-loco 6443 wood-beam pilot

- Kemtron-loco 230 whistle
- Kemtron-loco 6039 kingpin and flag holders
- Kemtron-loco 6058 valve gear
- Kemtron-loco 6059 cab grab irons
- Kemtron-loco 6137 boiler
- Kemtron-loco 6038 cab
- Kemtron-loco 6012 lead truck frame
- Kemtron-loco 6140 steam dome
- Kemtron-loco 6141 sand dome
- Kemtron-loco 361 air pipe
- Kemtron-tender 6026 air tank
- Kemtron-tender 6027 tool box
- Kemtron-tender 6051 tool box
- Kemtron-tender 6053 tool box
- Kemtron-tender 160 re-rail frog
- Kemtron-tender 6050 brake wheel ' staff
- Kemtron-tender 1415 pipe brackets
- Kemtron-tender 1417 pipe brackets
- Kemtron-tender 6129 tender sill
- Kemtron-tender 6024 tender top
- Kemtron-tender 6056 water hatch
- Kemtron-tender 6364 tender steps
- Kemtron-tender 6025 tender shell
- PFM mini-connectors
- Micro-mo Electronics 050/004 motor
- Micro-mo Electronics 6.3:1 05/3, center shaft gearhead
- Lynchgate Cooke front number plate

