

QUICK PIC BOOK
DENVER AND
RIO GRANDE WESTERN /
RIO GRANDE SOUTHERN
 (NARROW GAUGE)

C-19 / CLASS 70 / B-4-70
2-8-0 LOCOMOTIVES
 (DRGW 340 & 346, RGS 41)



A MODELER'S REFERENCE
 BY JEFF TAYLOR, MIKE CONDER,
 MAURIE WALKER, AND TIM MULINA

DENVER & RIO GRANDE,
DENVER & RIO GRANDE WESTERN,
RIO GRANDE SOUTHERN
 CLASS 70/70N, RECLASSIFIED C-19 CA. 1924

TABLE OF CONTENTS

A BRIEF HISTORY 5
FRONT 7
FIREMAN'S SIDE20
CAB 42
CAB INTERIOR - DRGW 346 52
CAB INTERIOR - DRGW 340 58
CAB INTERIOR - RGS 41..... 61
ENGINEER'S SIDE - DRGW 34664
ENGINEER'S SIDE - DRGW 34076
ENGINEER'S SIDE - RGS 41..... 77
TOP - DRGW 346 79
TOP - DRGW 340 87
TOP - RGS 41..... 89
TENDER - DRGW 346 (CA. 2004-2011) 91
TENDER - DRGW 346 (CA. 1959-2002) 104
TENDER - DRGW 340 (EX-DRGW 318 CA. 1952)105
TENDER - RGS 41..... 108
TENDER COMPARISONS AND THE OFFICIAL
DRGW FOLIOS 111
OTHER TITLES BY BHI PUBLICATIONS 113

Photos in this book may appear washed out, poorly exposed or somewhat grainy. This is intentional to be able to show all of the details possible.

A Brief History

Originally built by the Baldwin Locomotive Works - Burnham, Parry, Williams & Co. of Philadelphia PA in 1881. These locomotives which originally wore numbers 400-411 were the largest Consolidation type locomotives built for the Rio Grande narrow gauge lines.

With their 16"x22" cylinders and 37" diameter drivers these were huge when compared to the others already in service. As such they were intended for helper service on the grades of Veta, Marshall, & Cumbres Passes which were the steepest on the narrow gauge at 4%.

Five of them were converted to standard gauge for a time from 1889 until 1900 when more large standard gauge locomotives could be built once the main line of the Grande was standard gauged. They then came back as Class 74 instead of as Class 70 like the ones which had not been regauged. These stayed those classes until 1924 when the D&RG was reorganized as the D&RGW and the classes were changed to the final C-19 designation for both groups.

In 1916, two of the locomotives, #402 & #409 were traded to the Rio Grande Southern for three former Crystal River locomotives which became DRGW 360, 361, & 375. The two DRGW locos became the RGS 40 & 41. The DRGW also offered the RGS locomotive #400 which by chance later became DRGW 340 but the RGS declined to take it.

In November 1951, Walter Knott bought RGS 41 for his new Ghost Town & Calico Railroad to go around his Wild West Town that kept customers occupied while they were in line waiting to eat. A few months later he added DRGW 340. In 1952 the movie DENVER & RIO GRANDE was released

Continued in the book.

Front



RGS 41 wears the original headlight it wore in the final years on the RGS. It had been stored for years during which time the fake box headlight replaced it.



RGS 41 has a 20" dia. Pyle-National model probably dating to the early 1920's. This light came off of RGS 4-6-0 #25 and was placed on 41 in August of 1940. The reflector is made of tin and was originally plated with Silver but was re-plated at Knott's with Nickel. The light shade was made at Knott's and is way too long.



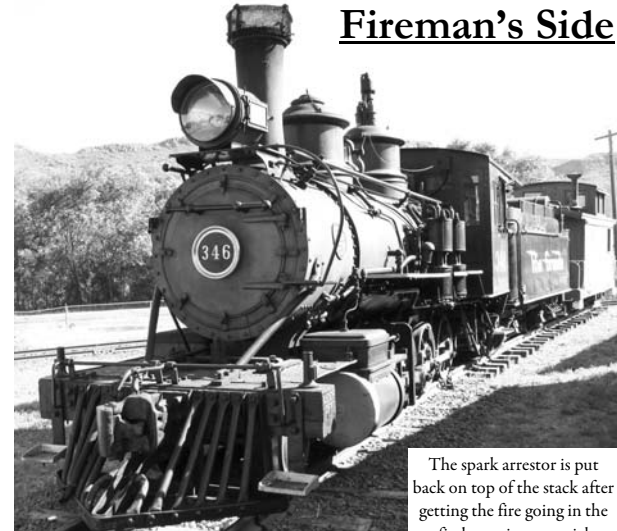
The headlight on 340 is the former back up light off of it's tender. The numberboard wings were fabricated by the shop crew at Knott's Berry Farm. This replaced the fake box headlight that had been used for years. The 16" Pyle-National Golden Glow with Winged Numberboard that it wore was used on K-27 #464 and was left on it when that loco went to the Huckleberry Railroad.



The electrical conduit comes into the middle, of the back of the headlight.



Fireman's Side

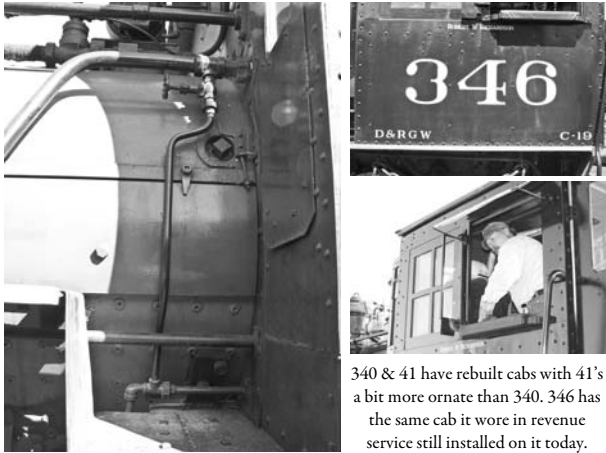


The spark arrester is put back on top of the stack after getting the fire going in the firebox using a special electric fan to create a draft. The fan is seen in place on the bottom of the next page and on the top of page 80.



The smokebox front is different between the three. 340 & 346 retain the older style face, while the one on 41 is made of flat steel done around 1941 and while it is proposed elsewhere that it was cut from RGS 22 or 25, we believe that it is more likely that the RGS fabricated it intentionally for locomotive 41.

Cab



340 & 41 have rebuilt cabs with 41's a bit more ornate than 340. 346 has the same cab it wore in revenue service still installed on it today.



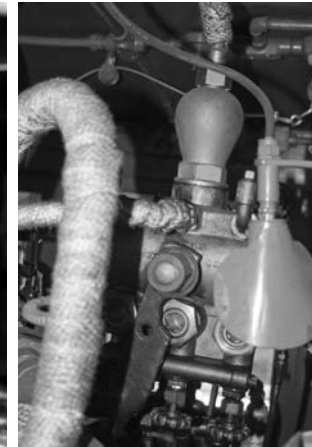
There is a metal apron that spans the joint between the loco and tender. Like other smaller locomotives, the fireman had to fire the loco standing outside the cab. The following pages show the firebox doors and the ways that they are opened differently between the two locations that operate them. The 346 is still coal fired and the fireman steps on the foot pedal shown on the left of the middle row of the next page. The other locos while still appearing to have coal tenders, in fact are oil fired so the fireman does not need to open the door often.



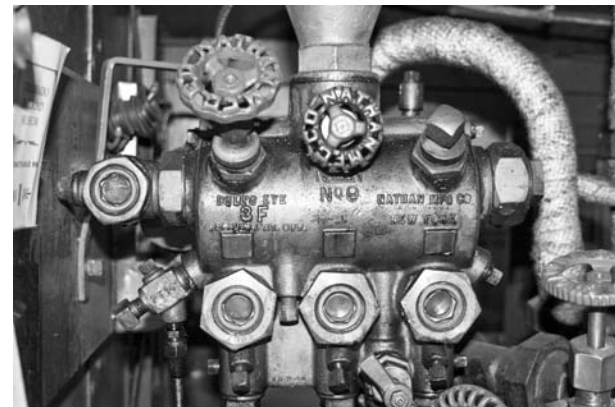
The electrical generators run by having steam passed through a turbine fan blades to create electricity by spinning it just like a commercial electrical powerplant. The generator sits astride the boiler just in front of the cab. The exhaust stack for the steam used in it points up on the engineer's side of the housing and goes up above the cab roof.

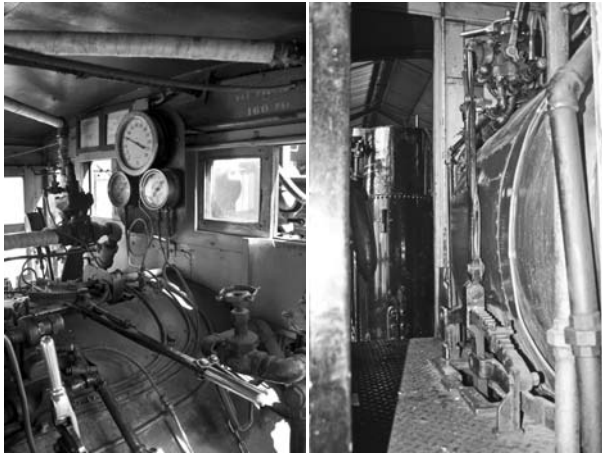


The higher capacity generators are obviously different on the exterior from the normal Pyle-National generator commonly used on the D&RGW / RGS narrow gauge lines. The one on 346 is shown on the bottom of page 85 & top of page 86.

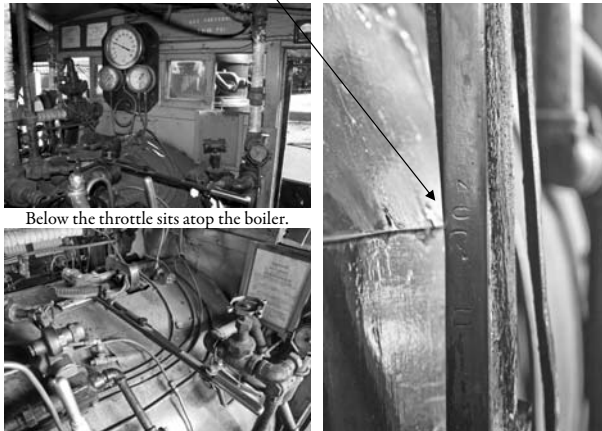


Below is the hydrostatic lubricator, mounted atop the backhead of the boiler. The two locomotives at Knott's have this style versus the Nathan DV-3 on 346.





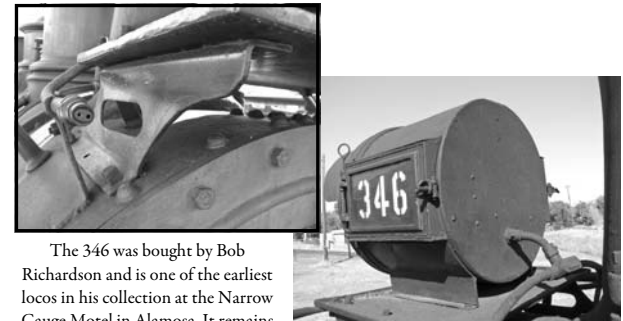
Note the different gauge mount made by Knott's as the pressure rises on the gauge DRGW 340's original number (#400) is still visible stamped into the Johnson Bar.



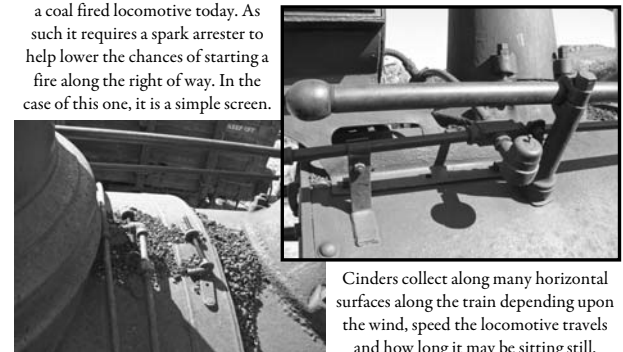
Below the throttle sits atop the boiler.



Above is an electric fan used to create a draft to help start a cold engine's fire.



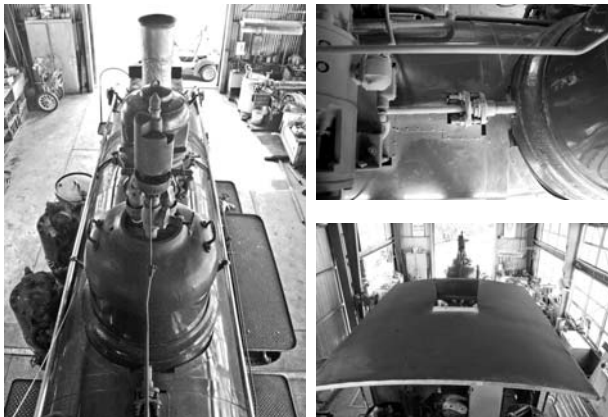
The 346 was bought by Bob Richardson and is one of the earliest locos in his collection at the Narrow Gauge Motel in Alamosa. It remains a coal fired locomotive today. As such it requires a spark arrester to help lower the chances of starting a fire along the right of way. In the case of this one, it is a simple screen.



Cinders collect along many horizontal surfaces along the train depending upon the wind, speed the locomotive travels and how long it may be sitting still.



The damage done to the stack on 340 is noticeable in the photos to the left below and the bottom photo on the prior page. On this page are views of the top of the steam dome and steam turret. The cab roof on 340 is below with the vent open.

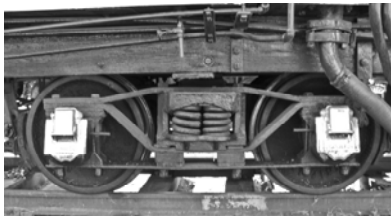
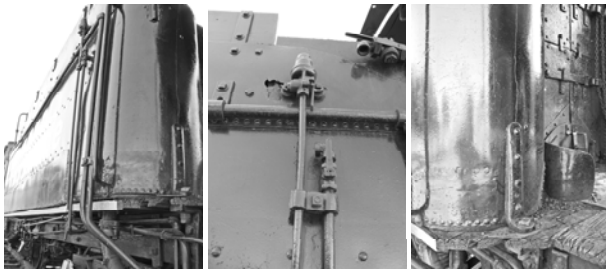
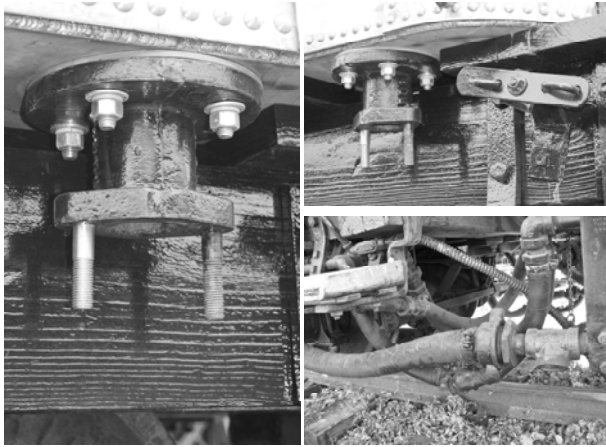


Top - RGS 41



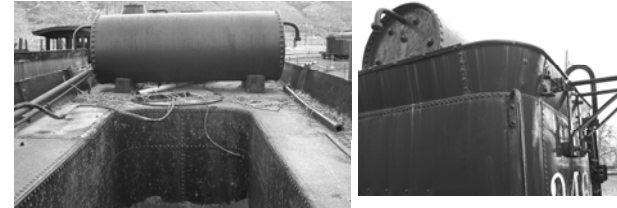
An interesting oddity that appears in photos of RGS 41 back pretty far is that it has the sand dome lid of a fluted dome but it has a rounded sand dome. The one end of the handle appears at one time to have been damaged so it is not attached to the lid.





The top three photos focus on the water outlet underneath the tender on this side. As mentioned earlier, US law requires boilers to have two separate water supplies. The tanks on these tenders is bolted to the wooden deck.

Tender - DRGW 346 (ca. 1959-2002)



This earlier version of the tender behind 346 shows it with fluted sides on the top and no steel plate at the rear of the coal bunker area, differing from that on page 101.



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