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United States Department of the Interior

NATIONAL PARK SERVICE
Golden Spike National Historic Site
P.O. Box 897
Brigham City, Utah 84302

June 4, 2008

Wilson Martin
Utah State Historic Preservation Officer
Utah State Historical Society
300 S. Rio Grande
Salt Lake City, UT 84101

Re: Consensus Determination of Eligibility for the Addition of Two Features, replicas of Central Pacific Railroad Jupiter and Union Pacific Railroad No. 119, to Golden Spike National Historic Site.

Dear Mr. Wilson,

The National Park Service (NPS) is requesting concurrence from the Utah State Historic Preservation Office (UTSHPO) on a consensus determination of eligibility (DOE) for the two reconstructed train locomotives at Golden Spike National Historic Site (GOSP). The replicas of Central Pacific Railroad No. 60, known as "Jupiter," and Union Pacific No. 119, known as 119, are kept within the boundaries of GOSP. They are open year round for public viewing and operate on a seasonal basis. We believe the two locomotives are contributing resources to Golden Spike National Historic Site (NRIS #66000080), and therefore eligible for the National Register of Historic Places. The site was administratively listed in the National Register on 10/15/1966. Confirmation nomination documentation was approved by the Keeper on 05/23/1988.

The site was originally nominated under Criterion A, C, and D, for its association with an event marking an important moment in American history; its preserved resources which "embody the distinctive characteristics of a type, period . . . [and] method of construction . . . that represent a significant and distinguishable entity whose components may lack individual distinction;" and for its potential to yield information important "to the history of American social development and ethnic pluralism." The categories related to the site's significance are commerce, communications, transportation, politics, and military conquest on the western frontier of the continental United States. The site includes approximately fifteen and a half miles of parallel railroad grades and associated features. The boundaries of the park unit and the boundaries of the site as listed on the National Register are the same. The period of significance for the site is from 1868 to 1914, and the level of significance is National.

It was at this location at Promontory Summit that railroad officials joined the rails of the Central Pacific and Union Pacific Railroads with ceremonial spikes on May 10, 1869, thus commemorating the completion of the nation's first transcontinental railroad. The Secretary of the Interior designated Golden Spike as a National Historic Site on April 2, 1957. On July 30, 1965, Congress by Public Law 89-102 (79 Stat, 426) established Golden Spike as a National Park Service unit "for the purpose of commemorating the completion of the first transcontinental railroad across the United States." In 1976 the United States Congress, through H.R. 13713, Section 301(5) and Senate Report No. 94-1158, authorized funding for and directed the National Park Service to design, build and operate replicas of the two famous locomotives as part of a plan to recreate the scene of the historic event.

Golden Spike National Historic Site, Utah

This Development increase of 4,254,000 will be used to recreate the scene at Promontory Point when the transcontinental railroad was completed. Two replica locomotives will be the center of this development, which will also include a restored grade, sheltering facility and other improvements (H.R. 13713).

DESCRIPTIONS

Jupiter and 119 were both originally 4-4-0 locomotives—meaning there were four leading wheels, four drive wheels, and no trailing wheels. Designed specifically for use on American railroads, the 4-4-0 was the most common locomotive in use during the Civil War and the transcontinental railroad construction era, and therefore became known as the American Standard. Both the wood-fired Jupiter and the coal-fired 119 steam engines had tenders. Jupiter had a conical-shaped smokestack. No. 119 had crowned-straight smokestack.

In September 1868, Schenectady Locomotive Works in New York built the original Jupiter for the Central Pacific Railroad (CP). After the ceremony Jupiter continued to operate as a passenger locomotive for the CP. The locomotive remained in service through various railroad reorganizations, had her name changed, and underwent various modifications. She was eventually sold to the Globe Railroad who scrapped her in 1906.

In November 1868, Rogers Locomotive and Machine Works of Paterson, New Jersey, built 119 for the Union Pacific Railroad (UP). Following the event, 119 remained a freight locomotive for the UP—though later renumbered by the railroad—until she was scrapped in 1903.

No original plans or blueprints were, or have been found, for either steam engine in the railroads' or manufacturers' archives. Chadwell O'Connor and his team at O'Connor Engineering Laboratories spent over ten years researching the locomotives and designing the replicas as they appeared in photographs in 1869. Several key figures in the railroad research field were involved in the process of creating the over 800 drawings produced for reconstructing the two locomotives. For example, John White, of the Smithsonian

Institution, conducted extensive research on the original locomotives; and Gerald Best, a renewed locomotive writer, reviewed the specifications and drawings.

Using information known at that time, O'Connor Engineering Service constructed the two engines in Costa Mesa, California, between 1976 and 1979. The major known differences between the 1979 replicas and the originals were the additions of several rail safety features such as welded boilers, Westinghouse engine air brakes, and redundant steam injectors; the choice of paint colors; the use of oil as the fuel in both engines; and the addition of a hydrostatic lubricator to Jupiter.

There have been some changes made to the replica locomotives since their construction in 1979, most were carried out to make them more accurate. Major changes since 1979 include converting the locomotives to their historically accurate fuel sources in 1991; repainting No. 119 from vermilion red to wine in 1994; repainting the paintings on the rear corners of the tender of No. 119 as they were deemed by some to be too cartoon-like; repainting Jupiter from vermilion red to ultramarine blue and crimson red in 1994; and adding modern rolling stock air brake systems to both locomotives in anticipation of safely towing cars.

SIGNIFICANCE STATEMENT, LEVEL AND PERIOD OF SIGNIFICANCE:
The replicas of Jupiter and No. 119 are eligible for the National Register of Historic Places as contributing resources to the Golden Spike National Historic Site under Criterion A, for the role the original steam engines played in a widely recognized moment in American history. The building of the transcontinental railroad was determinative in the direction of commerce, communications, transportation, politics, and military conquest on the western frontier of the continental United States. The race to complete the transcontinental culminated in a symbolic event on May 10, 1869, when the locomotives representing the West's Central Pacific and the East's Union Pacific faced each other on the railroad tracks at Promontory, Utah, as ceremonial spikes were driven into ties at the famous "Golden Spike Ceremony."

Jupiter and 119 meet the requirements of Criteria Consideration E: Reconstructed Properties. The two locomotives are accurately executed in a suitable environment, presented in a dignified manner as part of a restoration master plan, and neither the original Jupiter nor No. 119 has survived.

The period of significance for the engines is 1869, the date of the ceremony, which falls within the period of significance of the site. As contributing resources to a site of National significance, the level of significance of the locomotives is National.

SUMMARY OF THE DETERMINATION OF ELIGIBILTY (DOE):
The National Park Service has determined that the replicas of train locomotives Central Pacific Railroad No. 60, known as "Jupiter," and Union Pacific No. 119, known as "119," are contributing resources to the Golden Spike National Historic Site. The structures are eligible for inclusion in the National Register of Historic Places under Criterion A and qualify under Criteria Consideration E. The level of significance is National, and the Period of Significance is 1869. If you concur with this determination of eligibility please sign and date in the space provided below.

Utah State Historic Preservation Officer Concurrence

6/27/08
Date

Should you have any questions, please feel free to contact Sayre Hutchison at (303) 969-2157. Thank you for your time and consideration regarding this matter. Please forward the signed consensus determination of eligibility back to my attention.

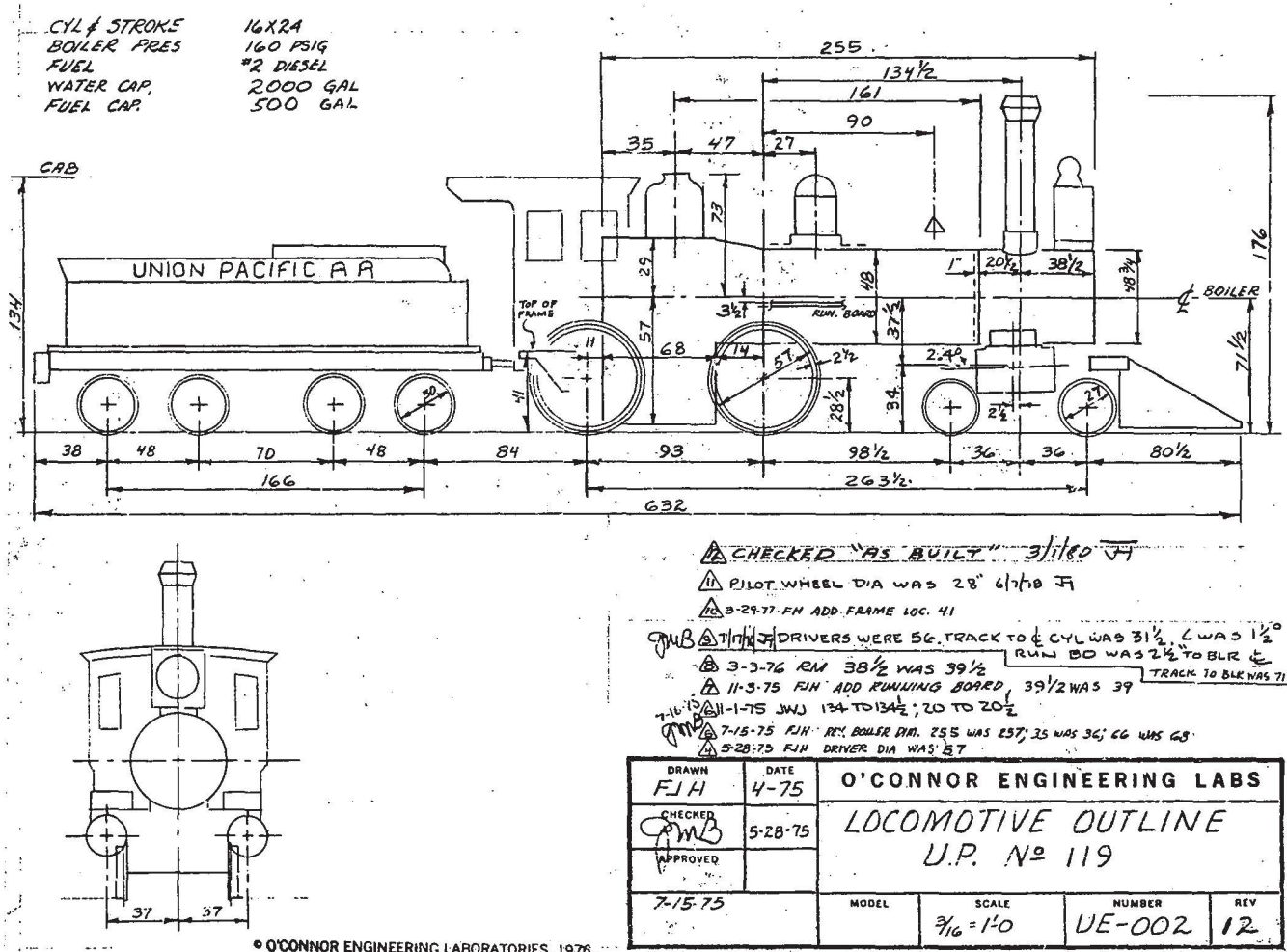
Sincerely,

Doug Crossen
Superintendent Golden Spike National Historic Site

Attachment:

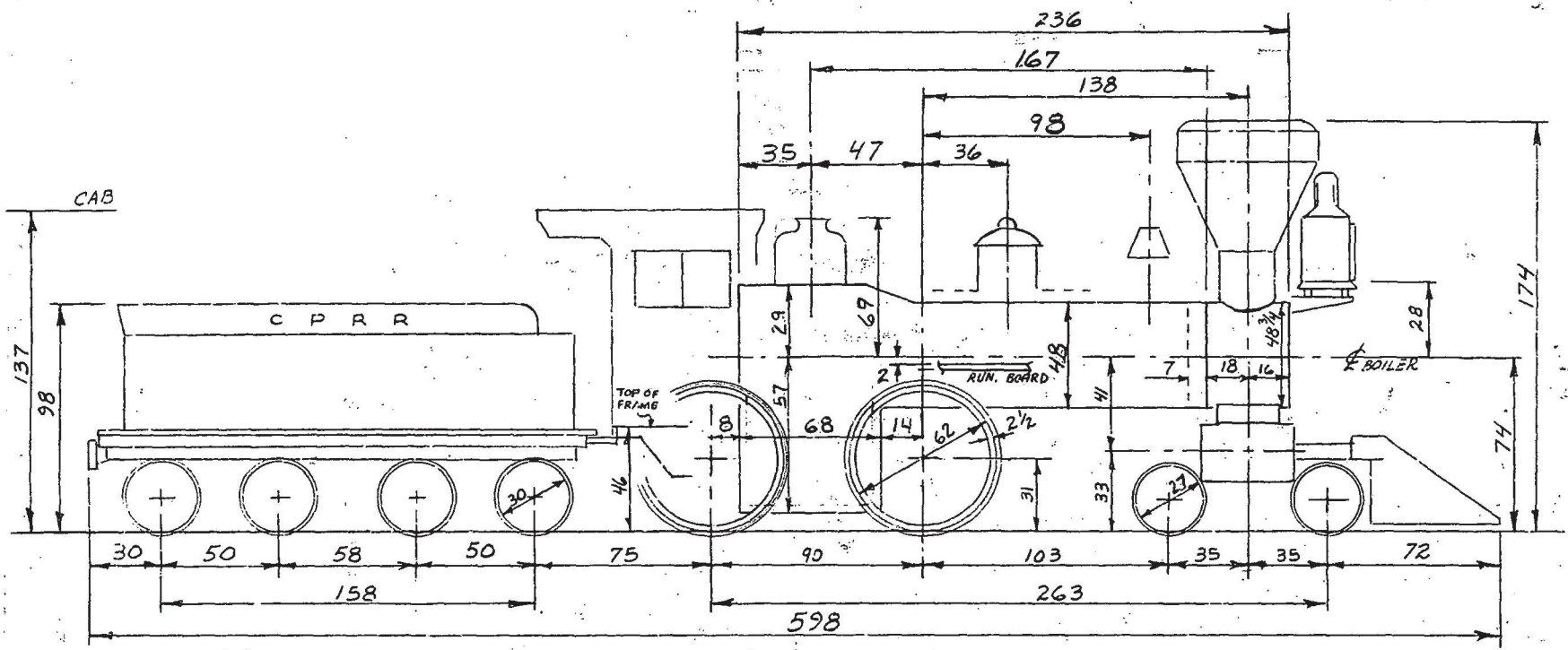
A. O'Connor Engineering Lab Plan for No. 119
B. O'Connor Engineering Lab Plan for Jupiter
C. Photographs of Replica Locomotives

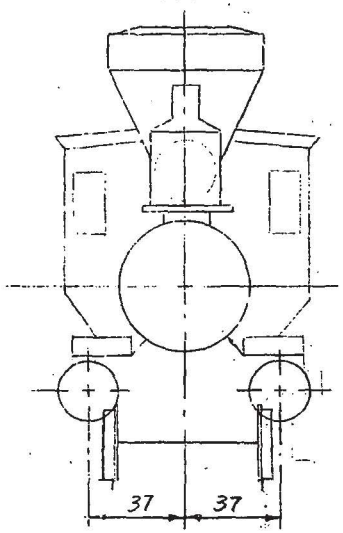
Cc:
Sayre Hutchison, IMR Cultural Resource Program (Denver)
Doug Crossen, GOSP Acting Superintendent
Bret Guisto, GOSP Archeologist
Leslie Crossland, GOSP Superintendent



Attachment A
O'Connor Engineering Labs
"Locomotive Outline No. 119"
April 1975

Source: Western National Parks Association, *Promontory Locomotive Project: Plans for the Jupiter and No. 11*, n.d. (Two –CD set).





CYL & STROKE	16X24
BOILER PRESS	160 PSIG
FIREBOX	
TUBES	2"
WEIGHT ON DRIVERS	
TOTAL ENGINE WT.	
WATER TANK	
FUEL	OIL
FUEL TANK CAPACITY	

12 CHECKED "AS BUILT" 3/1/80 JH

11 PILOT WHEEL DIA WAS 28" 6/7/78 JH

10 3-29-77 FJH ADD TOP OF FRAME 46 TO TRACK

9 4-22-76 FJH BELL - 98 WAS 97

8 11-13-75 FJH LAG RING 167 WAS 169, 18 WAS 16, 7 WAS 9

7 11-3-75 FJH ADD RUNNING BOARD

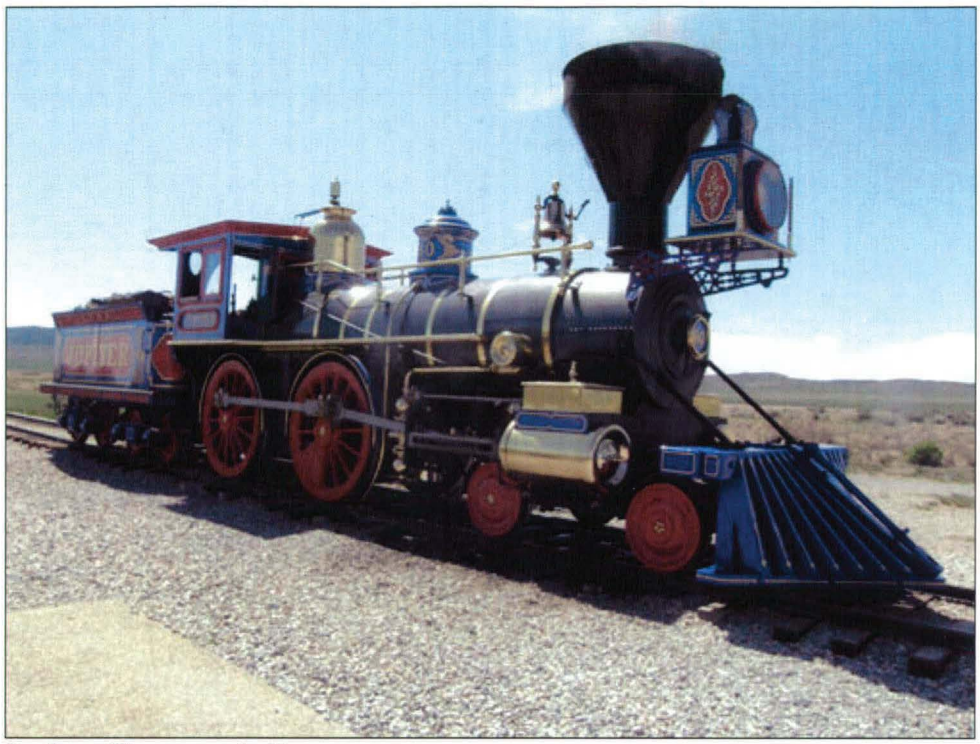
7-16-75 6 7-26-75 FJH REV. STEAM DOME HGT, 69 WAS 67

5 7-15-75 FJH REV. BOILER DIM.; 236 WAS 237; 35 WAS 36; 66 WAS 68

DRAWN	DATE	O'CONNOR ENGINEERING LABS			
FJH	4-75				
CHECKED	5-28-75	LOCOMOTIVE OUTLINE JUPITER			
APPROVED					
		MODEL	SCALE	NUMBER	REV
			3/16 = 1'-0	CE-001	12

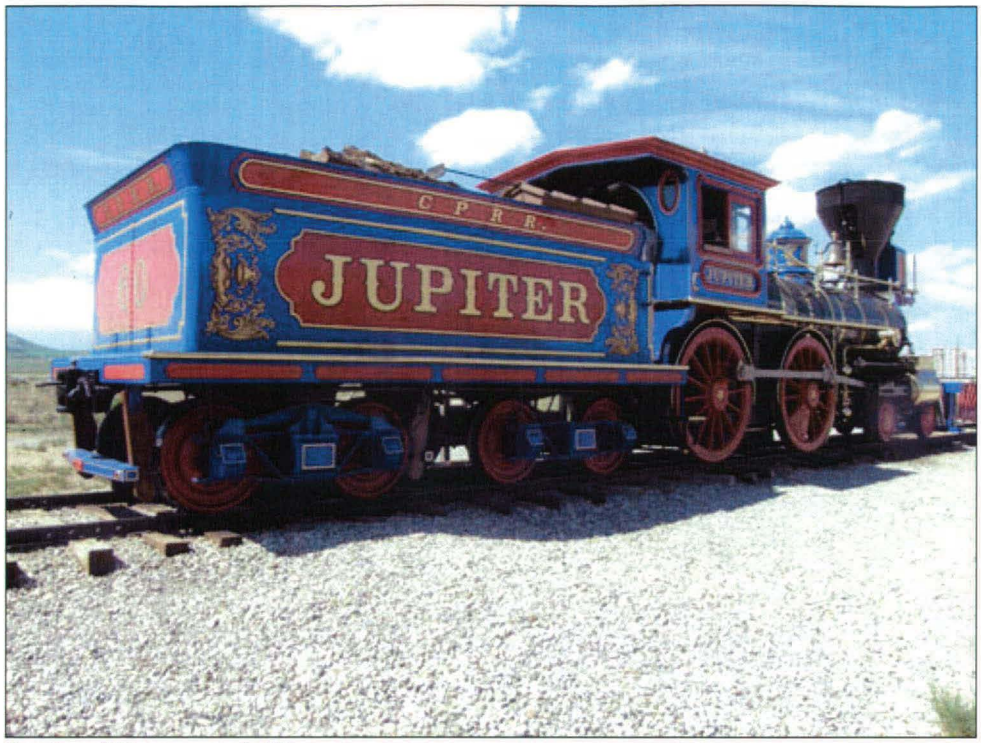
Attachment B

Attachment C
Photographs of Replica Engines at Golden Spike National Historic Site
June 2, 2008



Jupiter (Photograph 1)

Jupiter (Photograph 2)

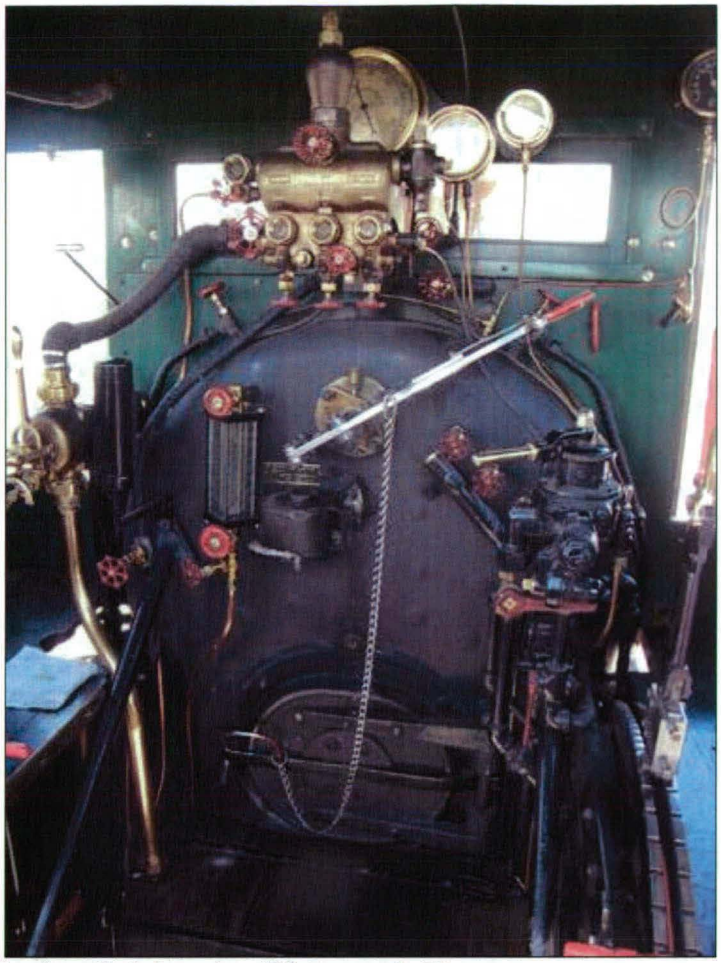


Jupiter (Photograph 3)

Jupiter (Photograph 4)

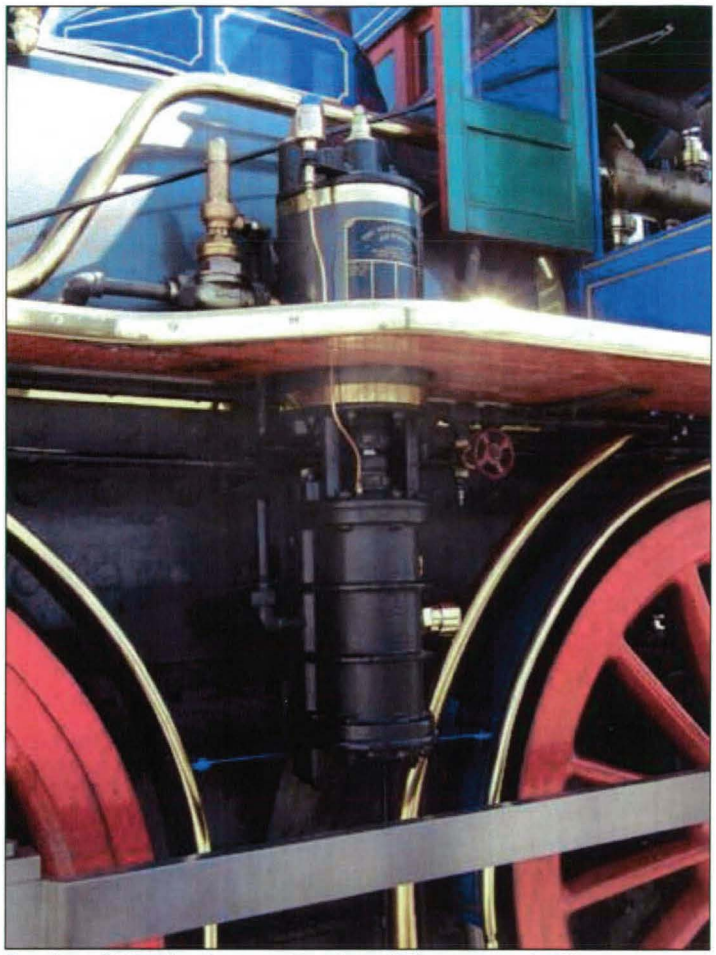
Jupiter (Photograph 5)

Jupiter (Photograph 6)

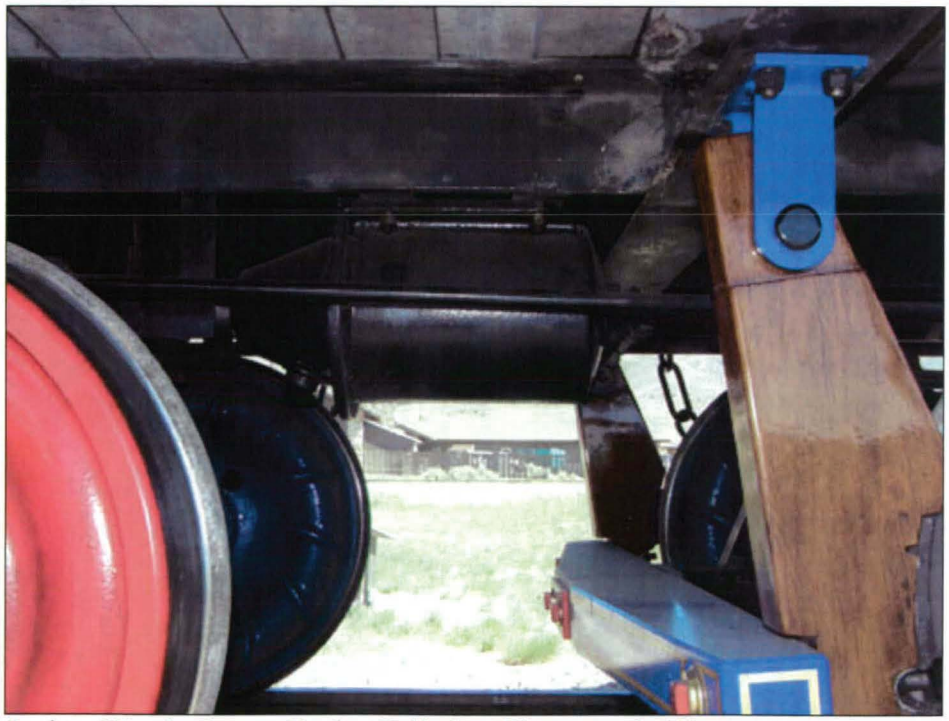


Jupiter-Cab Interior (Photograph 7)

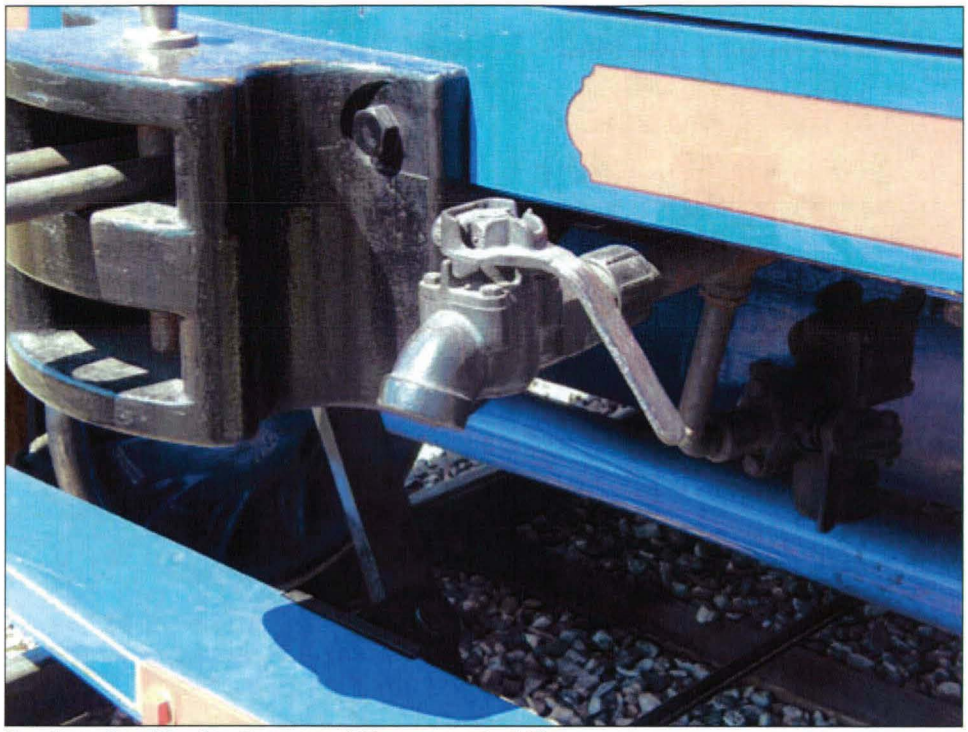
Jupiter (Photograph 8)



Jupiter-Westinghouse Brakes (Photograph 9)



Jupiter-Westinghouse Brake Cylinder (Photograph 10)



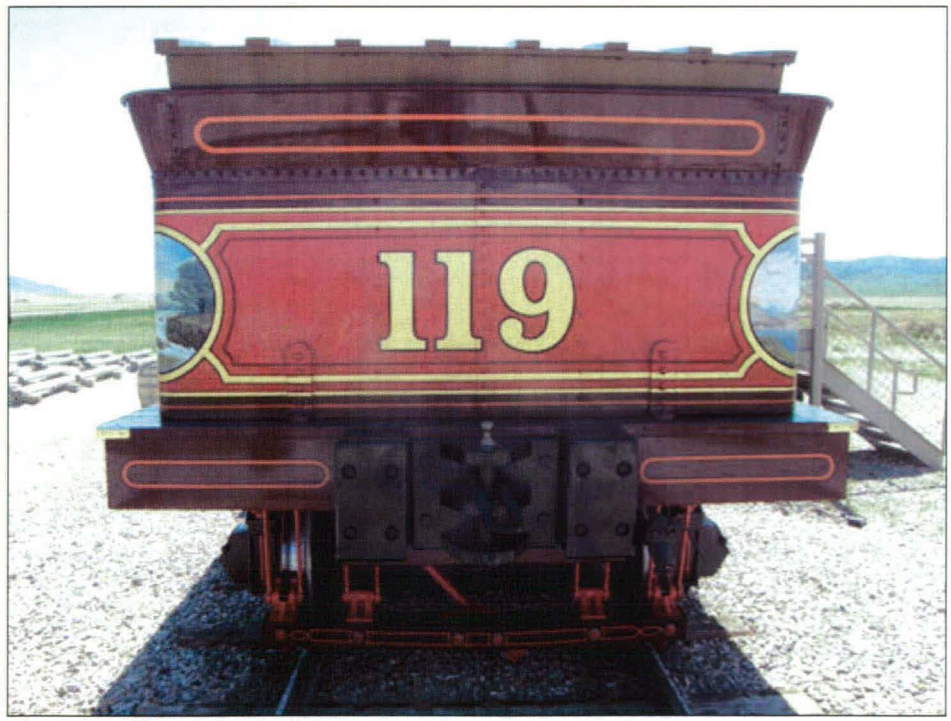
Jupiter-Car Brake System (Photograph 11)

Jupiter-Hydrostatic Lubricator (Photograph 12)

No. 119 (Photograph 1)

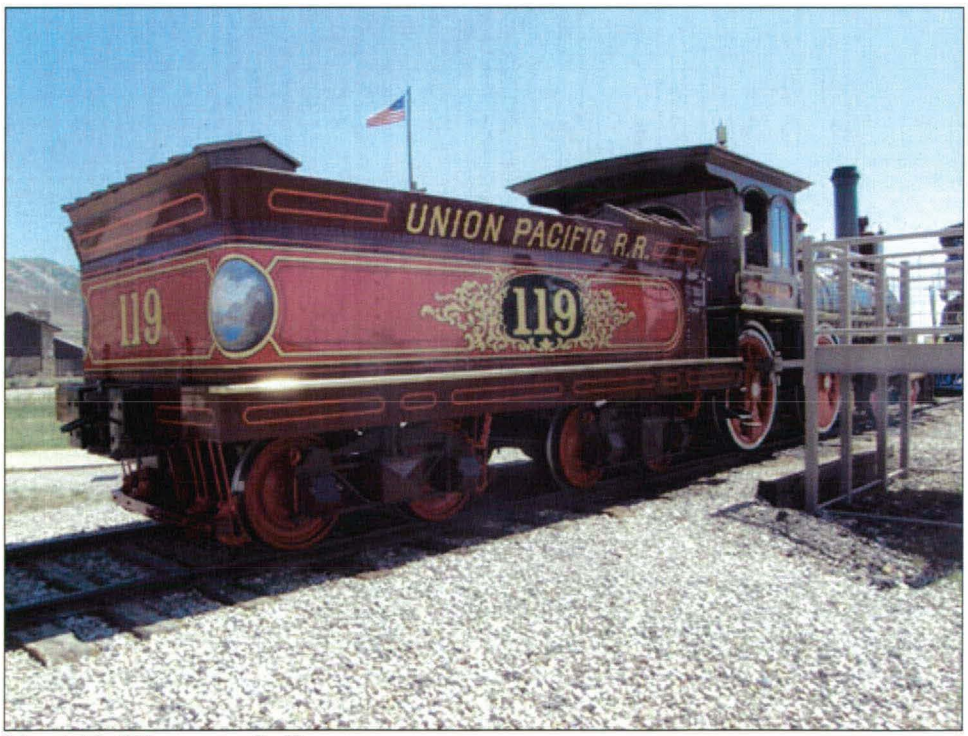
No. 119 (Photograph 2)

No. 119 (Photograph 3)



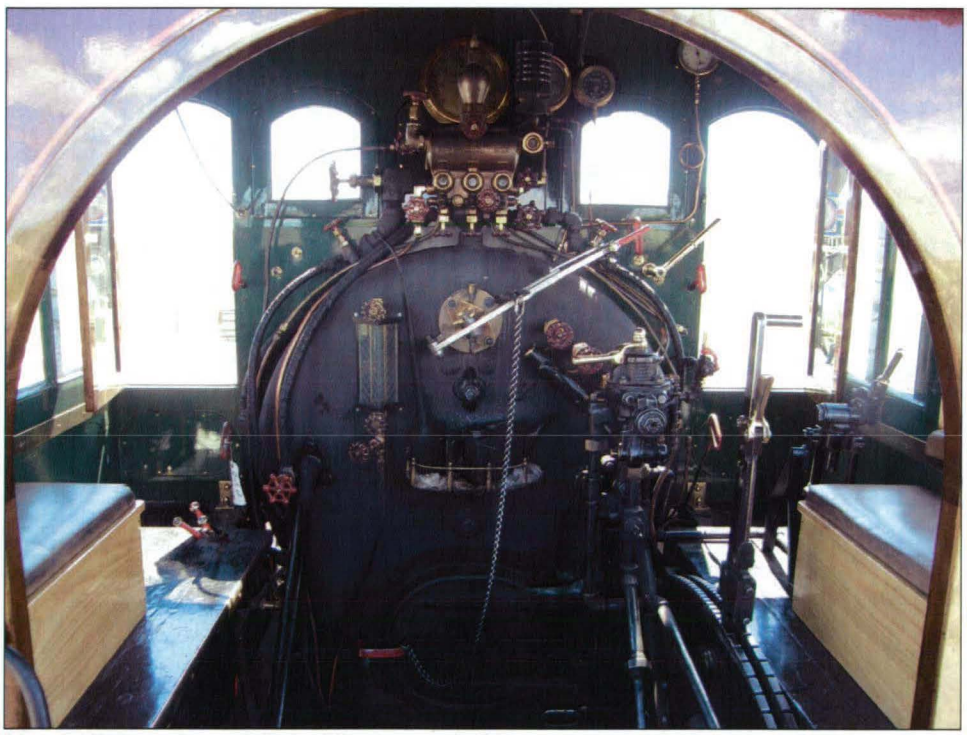
No. 119 (Photograph 4)

No. 119 (Photograph 5)



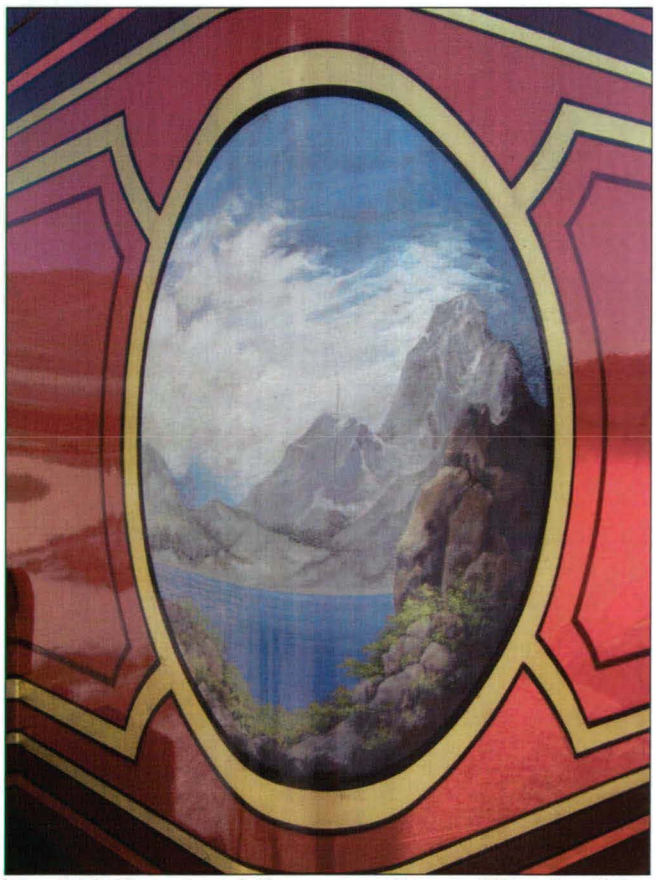
No. 119 (Photograph 6)

No. 119 (Photograph 7)

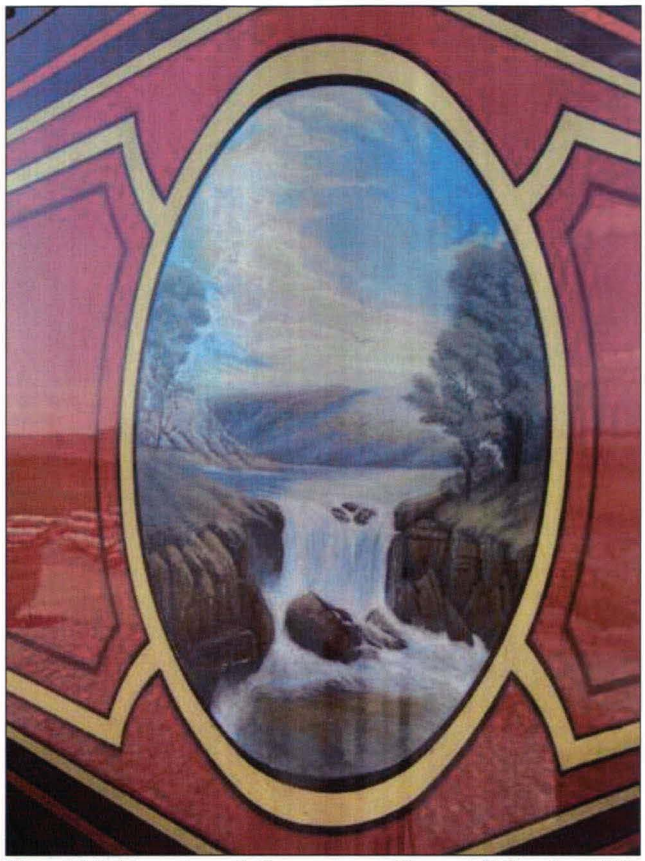


No. 119-Interior of Cab (Photograph 8)

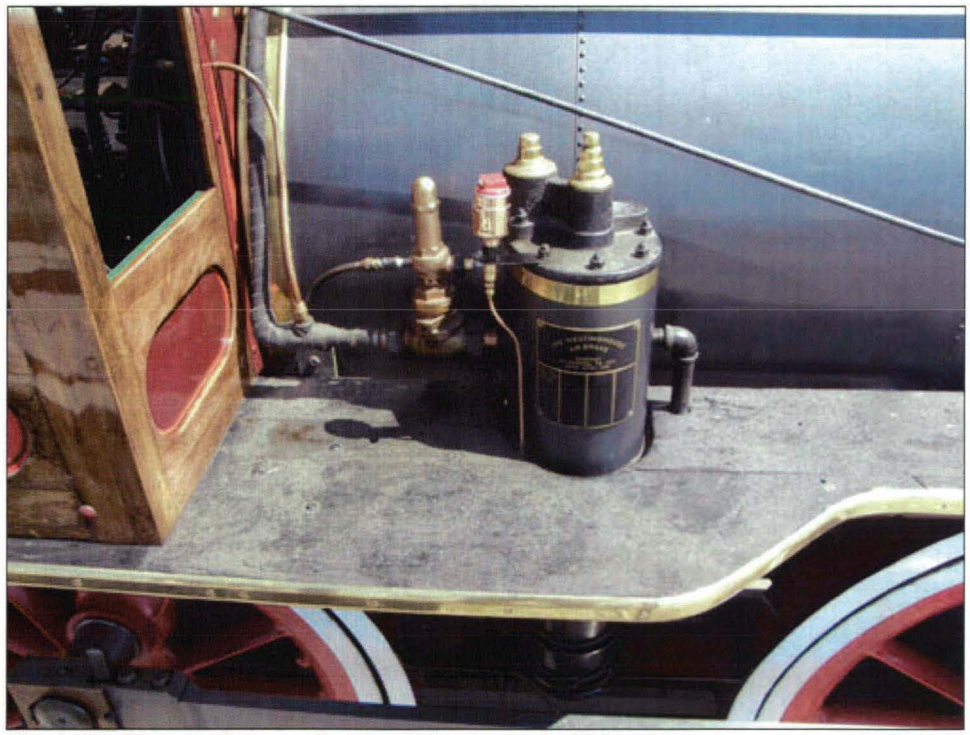
No. 119-Tender (Photograph 9)



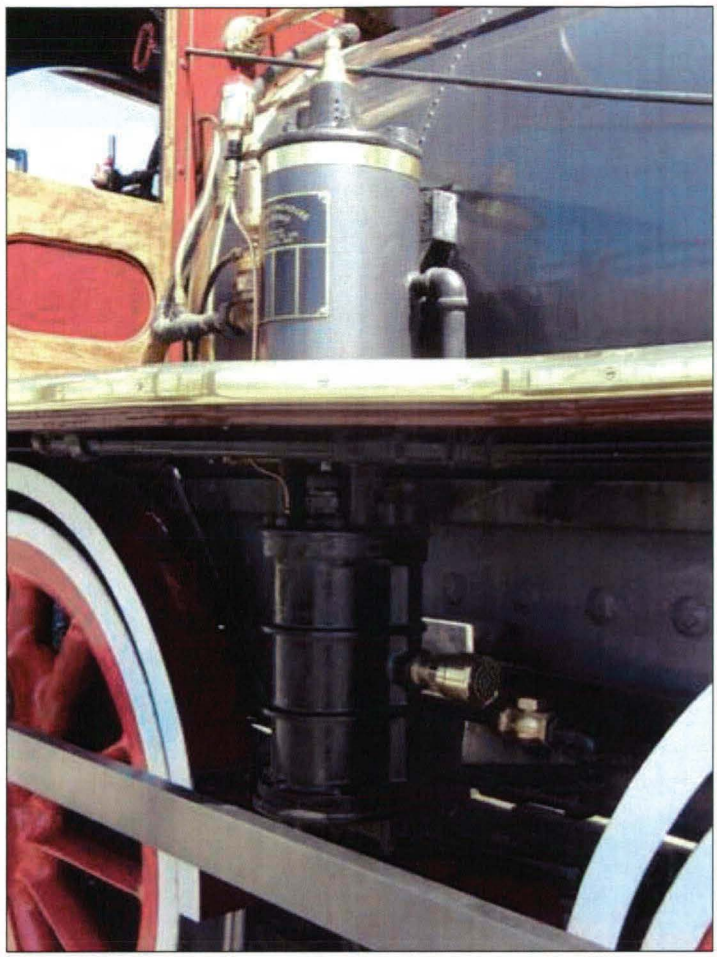
No. 119-Repainted Scenes on Rear of Tender (Photograph 10)



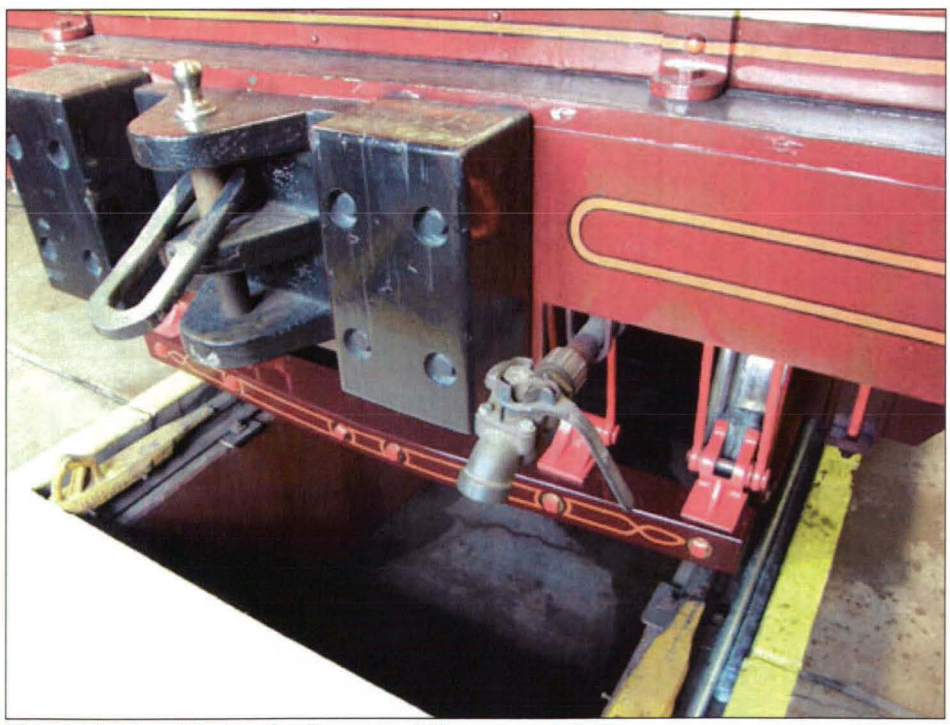
No. 119-Repainted Scenes on Rear of Tender (Photograph 11)



No. 119-Westinghouse Breaks (Photograph 12)



No. 119-Westinghouse Brakes (Photograph 13)



No. 119-Car Air Brake System (Photograph 14)