



# ES44DC BNSF Heritage 2 Locomotive

<b>1 BACKGROUND .....</b>	<b>2</b>
1.1 BNSF .....	2
1.2 EMD ES44DC .....	2
<b>2 ROLLING STOCK.....</b>	<b>3</b>
2.2 EMD ES44DC BNSF Heritage 2 .....	3
2.3 Coal Hopper.....	3
2.4 Pipe Flat Car .....	4
2.5 Tank Car .....	4
<b>3 CAB CONTROLS.....</b>	<b>5</b>
<b>4 SCENARIOS.....</b>	<b>7</b>
4.1 Training: BNSF ES44 Engineer .....	7
4.2 [ES44DC] Hobart Dayshift .....	7
4.3 [ES44DC] Leaving San Diego .....	7

## 1 Background

### 1.1 BNSF

BNSF's history dates back to 1849, when the Aurora Branch Railroad in Illinois and the Pacific Railroad of Missouri were formed. The Aurora Branch eventually grew into the Chicago, Burlington and Quincy Railroad, (CB&Q), a major component of predecessor Burlington Northern. A portion of the Pacific Railroad became the St. Louis-San Francisco Railway (Frisco).

The Atchison, Topeka and Santa Fe Railway (ATSF) was chartered in 1859. It built one of the first transcontinental railroads in North America, linking Chicago and Southern California; major branches led to Texas, Denver, and San Francisco. The Interstate Commerce Commission denied a proposed merger with the Southern Pacific Transportation Company in the 1980s.

The Burlington Northern Railroad (BN) was created in 1970 through the consolidation of the Chicago, Burlington and Quincy Railroad, the Great Northern Railway, the Northern Pacific Railway and the Spokane, Portland and Seattle Railway. It absorbed the St. Louis-San Francisco Railway (Frisco) in 1980. Its main lines included Chicago-Seattle with branches to Texas (ex-Burlington) and Montgomery, Alabama (ex-Frisco), and access to the low-sulfur coal of Wyoming's Powder River Basin.

### 1.2 EMD ES44DC

Built by General Electric's Transportation Systems division in response to the introduction of tighter emission policies that came into effect in 2005, the ES44AC and DC locomotives replace the AC4400CW series. The upgrades result in more power and less emissions from the smaller GEVO 12-cylinder engine than its 16-cylinder predecessor.

Consisting of a twin six axle or Co-Co wheel arrangement, more than 2000 of these locomotives have been ordered by nearly all the major US and Canadian railroad companies, 506 of which are allocated to Union Pacific Railroads alone.

The Evolution Series locomotives are very similar in appearance to the Dash 9, with both AC and DC versions featuring the large cabinet behind the crew compartment on the left side, housing the Traction Inverters for the AC models. The radiators on these locomotives are longer than previous models, extending forwards towards the exhaust vents. Also present is a raised hump housing heat exchangers related to the reduced emissions.

These newer improved models have further enhanced the reputation of GE Transportation Systems to produce powerful heavy haulage machines for many freight carrier applications.

## 2 Rolling Stock

### 2.2 EMD ES44DC BNSF Heritage 2

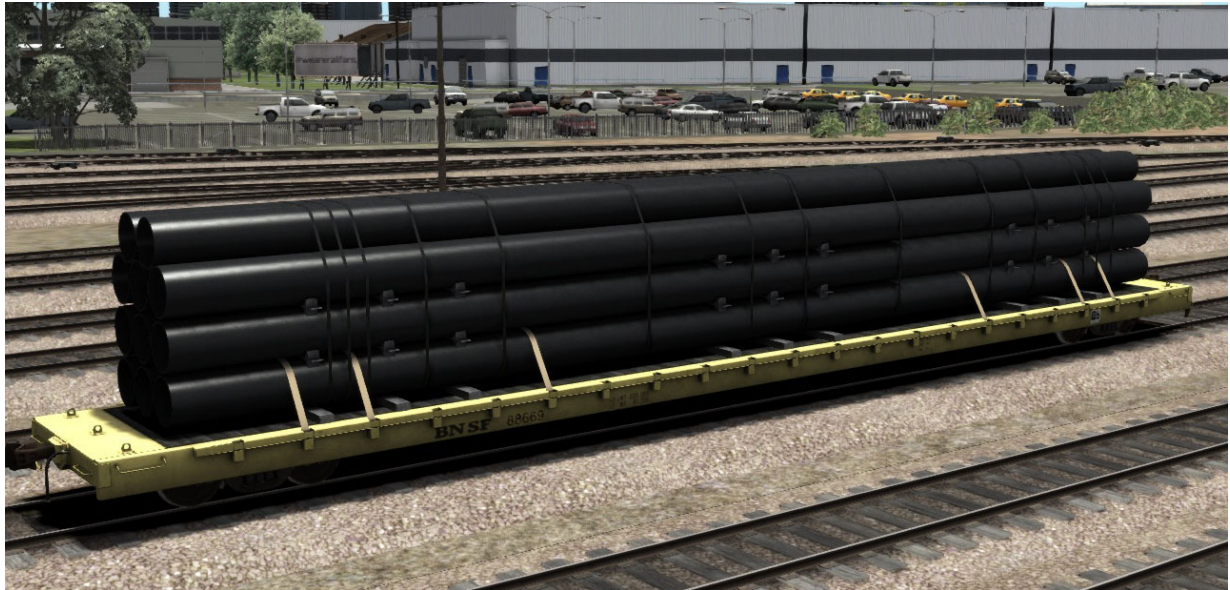
This locomotive appears as “ES44DC BNSF Heritage 2” in the editor browser list.



### 2.3 Coal Hopper



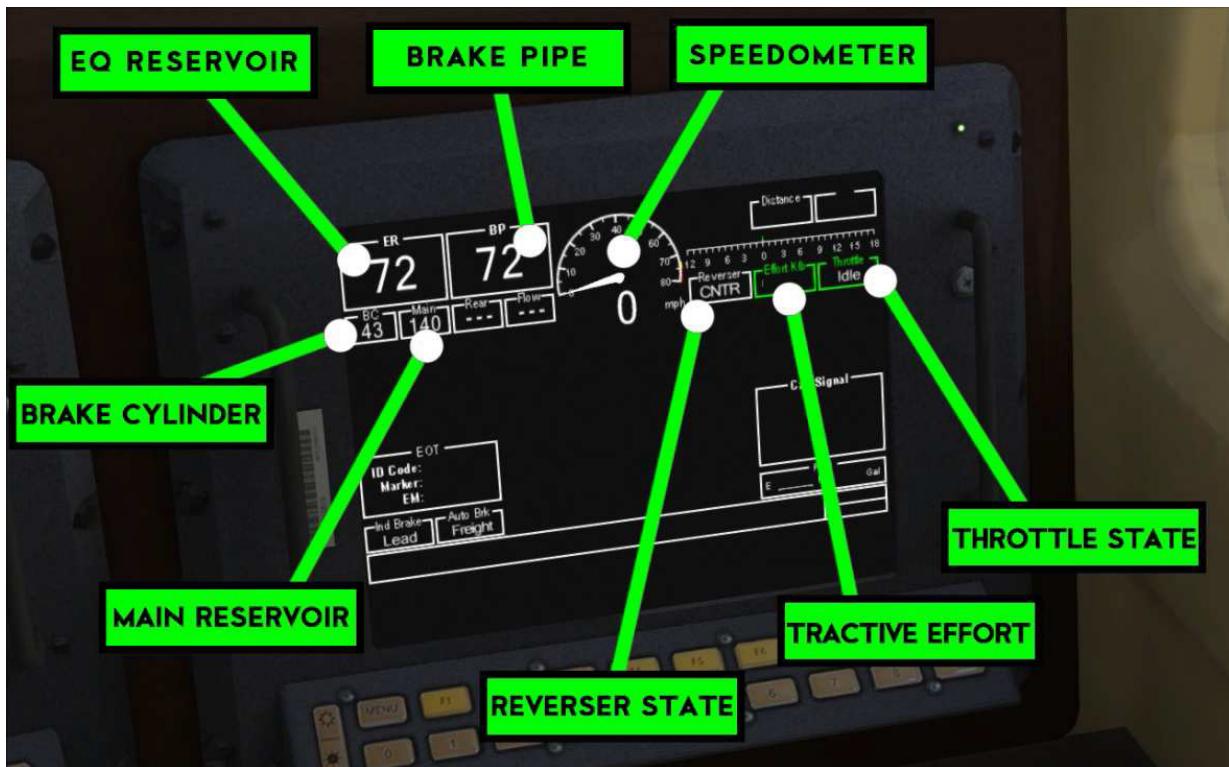
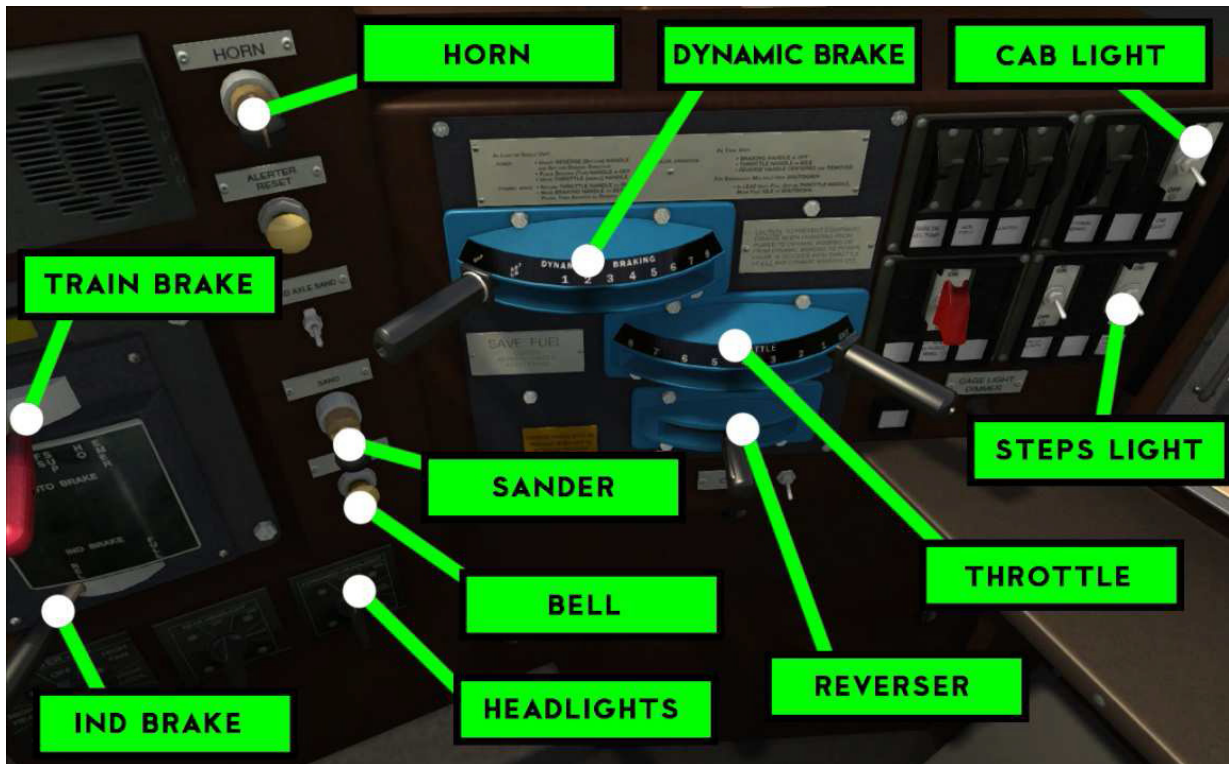
## 2.4 Pipe Flat Car



## 2.5 Tank Car



### 3 Cab Controls



## Train Simulator 2014 – ES44DC BNSF Heritage 2

1	Independent / Locomotive Brake	Apply [    Release ]
2	Auto Brake	Apply `    Release ;
3	Bell	B
4	Horn	Space Bar
5	Alerter	Q
6	Dynamic Brake	Apply .    Release ,
7	Throttle	A / D
8	Reverser	W / S
9	Sander	X
10	Headlights	Toggle H
11	Cab Light	L
12	Wipers	V
13	Step Lights	K
14	Engine Start	Z
15	Engine Stop	Z

## 4 Scenarios

### 4.1 Training: BNSF ES44 Engineer

- Route Pacific Surfliner
- Rating Easy
- Type Tutorial

A simple tutorial on operating the BNSF ES44.

### 4.2 [ES44DC] Hobart Dayshift

- Route Pacific Surfliner
- Rating Medium
- Type Career

You are performing some freight duties between Hobart and Commerce yards.

### 4.3 [ES44DC] Leaving San Diego

- Route Pacific Surfliner
- Rating Hard
- Type Career

You are driving BNSF train M-SDGBAR, which is the regular northbound freight out of San Diego. Passenger train activity is quiet as dusk falls. Head North to Sorrento Valley.