



**UNION PACIFIC "BIG BOY"
4-8-8-4 STEAM LOCOMOTIVE**

OWNERS MANUAL



1:29 Scale

**USA TRAINS
P.O. BOX 100
MALDEN, MA 02148
USA
www.usatrains.com**



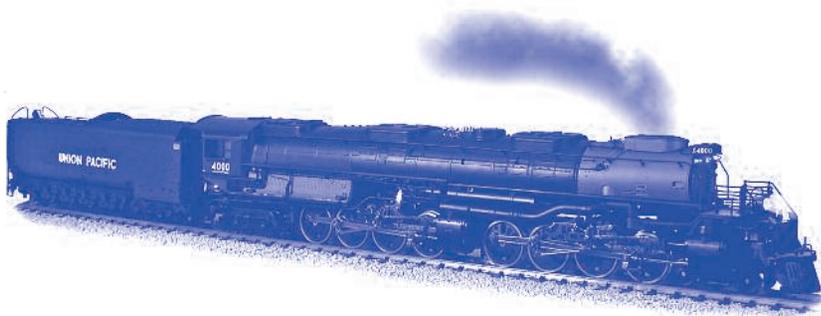
Dear Customer,

Congratulations on your purchase of the world's largest die-cast Big Boy steam locomotive.

The Engineering and Design staff at USA Trains has spent many hours reviewing blueprints and developing a steam locomotive that looks authentic and will provide you with many hours of operating enjoyment. We believe that our customers deserve the high level of detail of this die-cast model and strive every day to provide you with the latest technologies that give more "realism" at a reasonable price. This locomotive will enhance the appearance of any modeler's railroad.

Please read the following instructions which will help you understand and operate the numerous features of this locomotive.

Happy Railroading
USA TRAINS



HISTORY OF THE UNION PACIFIC "BIG BOY" 4-8-8-4 LOCOMOTIVE

A total of 25 of these behemoths were built by the Alco shops between 1941 and 1944. All were built exclusively for the Union Pacific Railroad Engineering Department. These engines were designed to eliminate helpers and to pull heavy tonnage over the 1.55% continuous grade up Shermom Hill in the Wasatch mountain region east of Ogden, Utah. With the end of the Steam Era came an end to "the Largest and most magnificent steam locomotives ever built." Many survive today in Railroad Museums across the country.

The accurate reproduction of this locomotive in its original body style by USA Trains will allow the modeler to have an authentic Big Boy operating on their model railroad.

SERVICING

This locomotive is built with pride by USA Trains and is covered by a limited warranty. (See limited warranty terms). Please follow these instructions carefully before sending your locomotive for service:

1. Return locomotive in its original wooden box with the proper foam inserts and then pack the original box in a proper shipping carton so it is well protected in shipment. The package must be fully insured and pre-paid. USA Trains is not responsible for damage or loss during shipment.
2. Include a note explaining the problem and servicing you need performed. Be sure to include your name, street address, (NO P.O. BOXES PLEASE) City, State, Country (if outside U.S.A) and zip code along with a daytime phone number including area code. If the locomotive service is not covered by warranty, a reasonable service fee will be charged. For any locomotives to be returned outside the continental U.S.A., please include \$300.00 U.S. currency to cover return postage.

3. Ship your item to:

USA TRAINS
662 CROSS STREET
MALDEN, MA. 02148

LIMITED ONE YEAR WARRANTY

This USA Trains locomotive is warranted for one year from the date of purchase against defects in material or workmanship. We will repair or replace (at our option) the defective part without charge for parts or labor within one year of the original date of purchase provided the warranty registration card has been received by USA Trains. This warranty does not cover items that have been abused or damaged by careless handling or improper operation such as a train derailment, modification or repair by non-factory technicians. Parts that "wear out" due to excessive use are also not covered under warranty. USA Trains reserves the right to determine "excessive use". Transportation costs incurred by the customer are not covered under this warranty.

MAINTAINING AND SERVICING

LUBRICATION

Your locomotive was lubricated at the factory and under normal operating conditions will not need to be lubricated during the first 50 hours of operation. The locomotive has three lubrication points. (See diagram below)

1. Siderod/valve gear lubrication.

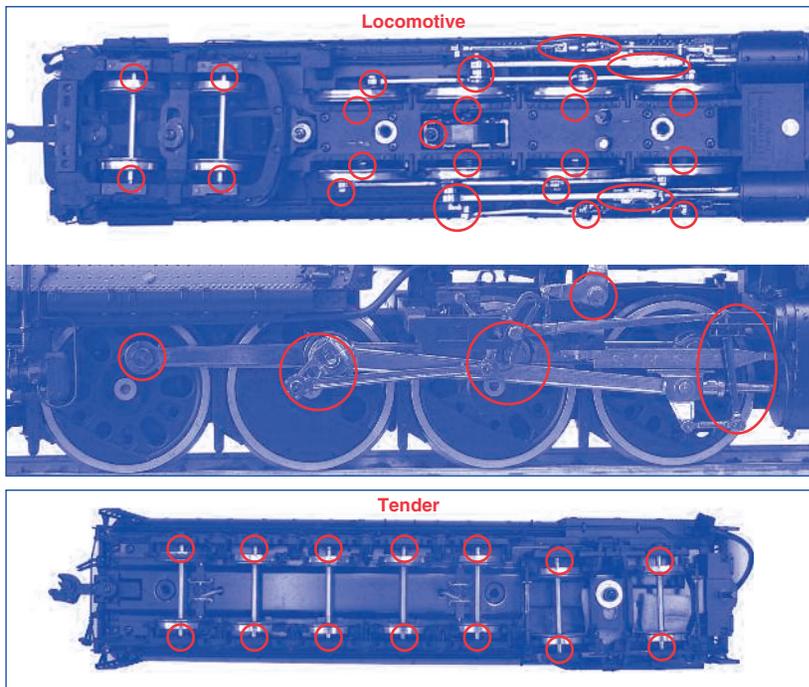
Periodically apply a few drops of light oil such as Hob-e-lube (#HL653) to each of the pivot points of each siderods. (See diagram below) Also, apply a light coat of oil to the valve gear so it slides back and forth freely. This should be applied to both sets of drivers.

2. Axle lubrication.

Two drops of oil should be placed on all eight contact points where drive wheel axles enter each gearbox. The same should be done for the locomotive pilot truck and trailing truck axles, as well as the tender truck axles.

3. Gearbox lubrication.

Under normal operating conditions, the gearbox should be lubricated after each 100 hours of operation by first removing the screw in the bottom of the gearbox (see diagram below for location of screw) and then applying moly grease by Hob-e-lube into the hole. As you apply grease into the hole, rotate the wheels to spread the grease onto all the gears. This should be applied to both gear boxes.



FEATURES

Big Boy Locomotive Features:

- Highly detailed die-cast metal construction
- Factory installed Phoenix Sound system
- "DCC Ready" for easy DCC installation
- Operating dual smoke stacks
- Delay start feature to allow sound system and smoke units to operate before movement of locomotive
- Operating headlight & cab light
- Illuminated marker lights
- Illuminated work lights under running boards
- Lighted firebox and ash pan glow
- Hidden front scale coupler that rotates open
- Die-cast drivers with stainless steel rims
- Roller bearing drive axles
- Metal drive rods
- Drawbar coupling between locomotive and tender
- Highly detailed metal piping
- "Real" operating smoke deflectors on stack area
- Separately cast metal detail parts
- Metal hand rails
- Brass bell
- Brass whistle
- Detailed builders plate
- Wooden box

Big Boy Tender Features:

- Highly detailed die-cast metal construction
- "Real" coal load
- Operating back-up light on tender
- Illuminated marker lights
- Separately cast metal parts
- Detailed coal bin with stoker
- Operating coupler lift bar
- Opening water hatches

Overall length of Locomotive & Tender is 57 inches



OPERATION

POWER REQUIREMENTS

The locomotive is designed to operate on direct current (DC) with outputs of 0-24 volts. **DO NOT EXCEED 24 VOLTS DC.**

CONTROL SWITCHES

The locomotive contains switches to operate the ON/OFF motors, ON/OFF lights, and ON/OFF smoke generators. The control switches are located under the roof hatches on side directly forward of the cab. (See photo 1)

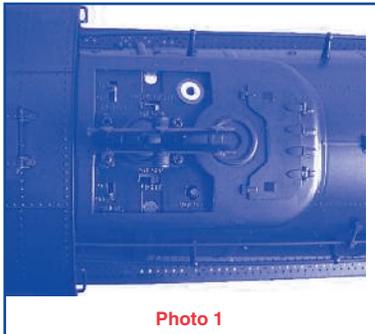
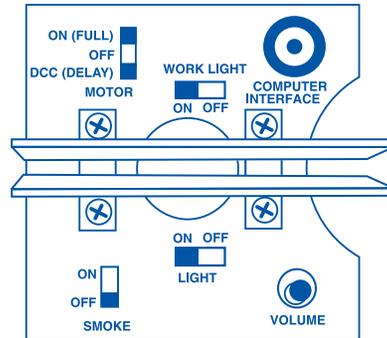


Photo 1



MOTOR SWITCH

The fireman's side hatch contains a 3 position switch to control the motors (center OFF, one side for ON (FULL) and the opposite side for DCC (DELAY) mode).

DCC (DELAY) MODE FOR SLOW SPEED OPERATION ONLY-DO NOT EXCEED 24 VOLTS DC.

The locomotive is equipped with a "delay feature". In the DCC mode position the delay feature is activated. This allows the sound and smoke units to start up before the locomotive begins to move. The loco begins to move slowly at approximately 8 volts. At this point the sound and smoke units are fully activated. The locomotive begins to move progressively faster as the voltage is turned up higher. The locomotive is DCC ready. In order to install a decoder you must remove the delay feature circuit. There are four terminal screws that need to be released in order to remove the four wires connecting the delay feature (see wiring diagram in Phoenix sound instructions manual). You are now ready to install a decoder of your choice to the locomotive. The circuit will allow the decoder to operate the motors and lights only. The sound and smoke units are connected to track power directly.

ON (FULL) MODE FOR NORMAL SPEED OPERATION ONLY-DO NOT EXCEED 24 VOLTS DC.

The motor ON (FULL) position allows direct track voltage to the motors. The locomotive will begin to move on the low voltage range of the power supply. The sound and smoke units will begin to function after the locomotive is moving. This mode also allows the motors to operate at the higher voltage range which in turn will allow the locomotive to run at higher speeds.

OPERATION

SMOKE GENERATOR SWITCH

The locomotive is equipped with two Sync-Ro-nized fan driven smoke generators that produce steam exhaust synchronized to the axle rotation of the driving wheels. The smoke generator requires periodic addition of smoke fluid in order to operate properly. To add smoke fluid, add approximately 20 drops of USA Trains smoke fluid (part number R50001) into each of the smoke stacks. Remember less is better - do not overfill the smoke unit and promptly wipe up any excess smoke fluid that may have spilled onto any painted surfaces. You can now begin operation. Smoke production will begin when the fluid becomes heated. It may take longer to generate the smoke if the unit is full. When the smoke chamber is empty, the smoke unit will shut down automatically until more fluid is added.

CAUTION! To prevent smoke generator burnout and to extend its life, never run the locomotive without smoke fluid in the smoke generator. If no smoke fluid is in the smoke generator, switch the smoke switch to the "OFF" position.

PHOENIX SOUND SYSTEM

CONTROL SWITCHES

Your locomotive is equipped with a Phoenix sound system from the factory. The locomotive contains a momentary toggle switch (see diagram on page 4) to increase/decrease the volume. To turn off the sound simply toggle the volume off. There is also a computer interface which allows you to customize your train sounds. Please refer to the Phoenix Sound owners manual for more information.

WHISTLE AND BELL OPERATION

The whistle and bell are activated by magnetic reed switches which are triggered by magnets placed along your track. These reed switches are located on the bottom of the locomotive near the rear driver. Magnets must be positioned inside the two rails of your track to line up with these reed switches to activate the bell or whistle. The whistle can also be activated by fluctuating the track voltage which will cause the whistle to blow.

STEAM SOUNDS

The sound of steam is automatically turned on upon movement of the locomotive and is synchronized to the axle rotation of the drive wheels.

For complete operating instructions and additional features, please refer to the Phoenix Sound handbook provided with your locomotive.