

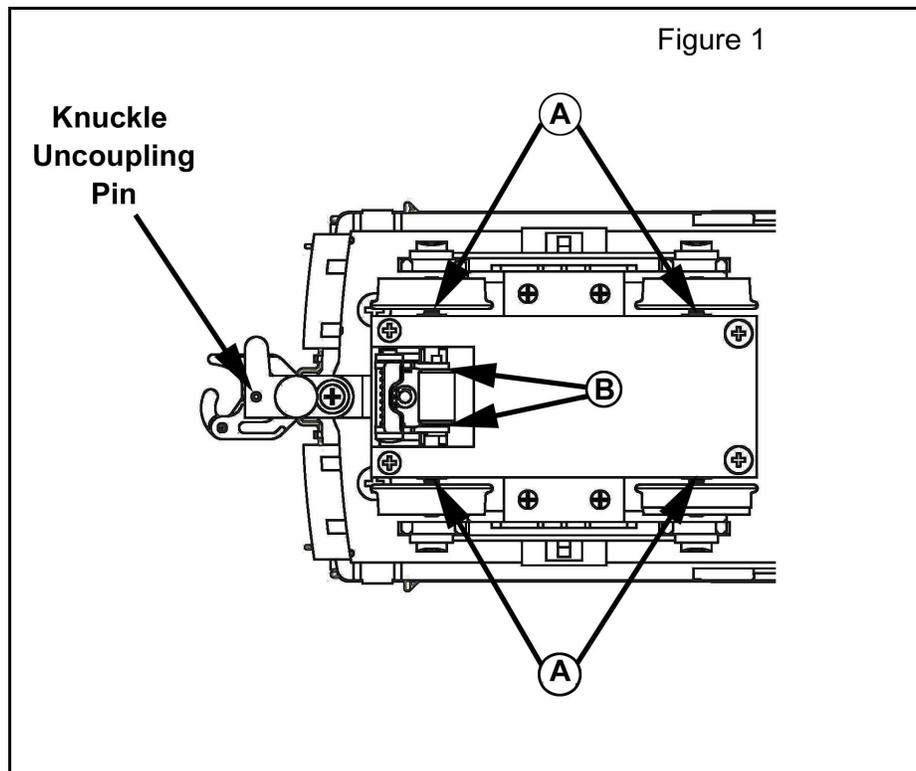


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SCALE 44 TON POWERED DIESEL LOCOMOTIVE INSTRUCTIONS

Thank you for purchasing a Williams by Bachmann® locomotive. This locomotive has been manufactured to provide years of use and enjoyment. Please follow the simple instructions below.

This locomotive has been greased and tested before leaving the factory. Before operating, please lightly lubricate the points shown in the diagram below. Do not over-lubricate and take extra care to avoid getting lubricants on the wheel surfaces or traction tires.



1. For the axles and coupler pivot points **Marked A**, we recommend that you lubricate with a small amount of light oil such as Bachmann E-Z Lube® #99984 Light Gear Oil. **Do not over-lubricate.**
2. For areas that require electrical flow, such as roller pick-ups **Marked B**, please use Bachmann E-Z Lube® #99981 Conductive Contact Lube. **Never use any Teflon® based oil on these areas because this type oil has insulating properties.**

OPERATION

After unpacking the locomotive, make sure that the uncoupling plunger is in the correct position with the pin inserted in the knuckle (see figure 1). Failure to do so will allow the uncoupling plunger to contact the center rail and a direct short will occur when power is applied to the track. We recommend using an AC hobby transformer with maximum voltage output of 18 VAC and a wattage rating of **at least 80 watts**.

Throttle Control

The throttle control will allow you to operate your train at a wide range of speeds. Slowly turn the control knob until you are familiar with the response of the locomotive that you are operating. Please note that our True Blast Plus® sound systems require about 3 volts or greater to operate correctly.

Horn Operation

To operate the horn of your locomotive, simply depress the horn/whistle button on your transformer. Our True Blast Plus® horn will play as long as you depress the horn/whistle button.

Bell Operation

To operate the bell on your locomotive, press and hold the bell button for one second. To stop the bell, press and hold the button for one second.

Prime Mover Sounds

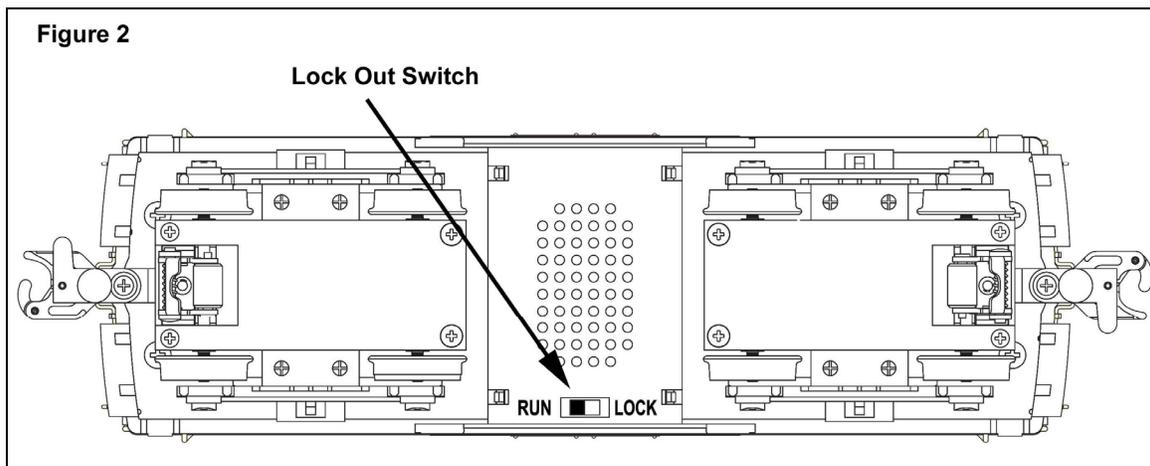
Prime mover sounds play automatically when you apply power to the locomotive. The sound revs up when you increase the track voltage and revs down when you decrease track voltage.

Direction Control

Williams reverse units sequence FORWARD, NEUTRAL, REVERSE, NEUTRAL, and again FORWARD. To sequence the reverse board, simply depress and hold the direction button, release the button 1 second after the train has come to a complete stop. **PLEASE NOTE:** If you do not wait for your train to come to a complete stop, the reverse unit may not always sequence properly. After approximately 7 seconds without power, the reverse board will reset to FORWARD.

Direction Lockout

This locomotive is equipped with a direction lockout switch to prevent the reverse unit from cycling through the normal sequencing. The switch is located on the bottom of the locomotive frame just behind the fuel tank (see Figure 2).



Uncoupling

This locomotive is equipped with operating knuckle couplers at both ends. To uncouple, position the uncoupling plunger over the center of electro-magnetic track uncoupling section and activate the magnet.

PERIODIC MAINTENANCE

Lubrication

We recommend that you lubricate as directed on page 1 every 10 hours of operation. In addition, you also should check the motor gearbox every 25 hours. For this periodic maintenance, you will have to remove the bottom cover of each truck to gain access to the parts that require servicing. The truck covers are attached with four screws on the bottom corner of each truck. After gaining access to the gearbox, you can inspect the gears and apply any necessary lubrication. We recommend Bachmann E-Z Lube® #99982 Grease, or equivalent.

Traction Tire Replacement

Our traction tires are very durable and should not need replacing very frequently. They should last hundreds of hours under normal conditions. If they wear out prematurely, check to make sure your track joints are tight. Gaps in your track can cause damage to the tires. To replace the traction tires you must remove the body shell so that you can disconnect the trucks from the frame. The body shell is attached with four screws on the bottom of the locomotive frame. The screws are located in each corner of the frame. Once the screws are removed, grasp the bottom of the shell at the center and pull away from the frame. After removing the body shell, unscrew the truck mounting screw. This will allow you to disengage the truck from the frame. Then remove the 2 screws holding each sideframe to the truck. Remove old tire(s) if present, clean wheel groove with any degreasing agent **making sure to follow the safety and handling instructions on the degreasing agent's bottle**. Wipe dry with paper towel or clean rag. Stretch the new traction tire over the wheel making sure that it does not twist and seats smoothly in the wheel groove. Re-attach the sideframes , then the trucks, and finally the body shell.