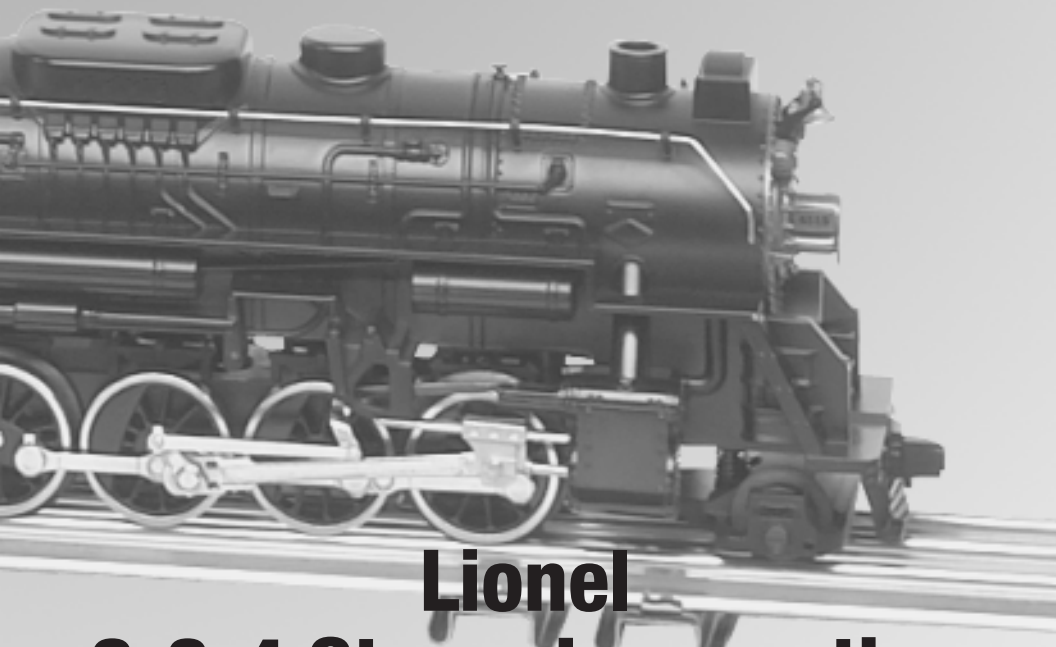
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Lionel
2-8-4 Steam Locomotive
Owner's Manual

Featuring TrainSounds™

Congratulations!

Congratulations on your purchase of the Lionel 2-8-4 steam locomotive and tender. This powerful locomotive features puffing smoke, a bright headlight, and the TrainSounds sound system.

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Operating your locomotive

Running your locomotive

1 With track power off, place your locomotive on the track.

2 Connect the drawbar between the locomotive and tender.

See Figure 1.

Caution! If the smoke unit switch is in the ON position, add smoke fluid to your locomotive's stack to prevent damage to the smoke unit. Refer to page 7 for additional information.

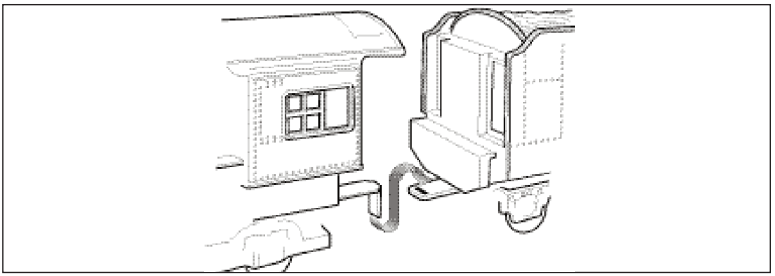


Figure 1. Drawbar connection

3 Power up your locomotive with your transformer.

Your locomotive is designed to operate on 7-15 volts alternating current. Virtually all Lionel and Lionel-compatible alternating-current transformers are suitable.

Note! Do not power your locomotive with direct current (DC) transformers. The locomotive was designed for use with alternating current (AC) transformers only.

4 Move 'em out!

Get your locomotive moving. Your locomotive goes through a repeating pattern of operations: forward, neutral, reverse, neutral, and so on. To sequence the reverse unit, press the DIRECTION button on your transformer, or briefly bring the throttle all the way back to the OFF position and then forward. Each press of the DIRECTION button or interruption in track power causes the locomotive to advance to the next operational state.

Adjust track voltage until your locomotive moves at your desired speed.

Operating your locomotive

Reverse unit procedure

The electronic reverse unit inside your Lionel locomotive acts like the transmission in a car. When you apply power to the track, the locomotive moves in the direction specified by the reverse unit—or it sits in neutral, awaiting another power interruption. Power interruptions are the signal that tells the reverse unit to sequence to the next operational state.

To interrupt power and sequence the locomotive's reverse unit, press the direction control button or briefly bring the throttle lever all the way back to the OFF position. The reverse unit alternates between three states: forward, neutral, and reverse.

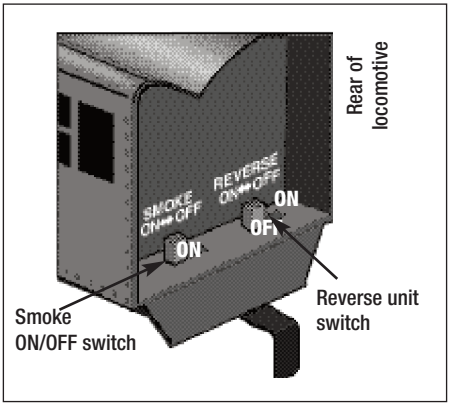


Figure 2. Switch locations

Also, the locomotive can be "locked" into a certain mode of operation by throwing the reverse unit switch located on the underside of the frame (see Figure 2 above). To lock your locomotive into a specific operational state, sequence the locomotive into the desired state and reduce track power without completely powering down the locomotive, then throw the switch to the OFF position. The DIRECTION button will then have no affect on the direction of the locomotive. Slide the switch to the ON position to resume forward-neutral-reverse operation.

Additionally, this reverse unit has a "power-up reset" feature. If the locomotive sits without power for a short period of time, the reverse unit will automatically reset and start in the forward direction when the transformer is turned on or "powered up," regardless of the reverse unit switch position. If the switch is in the OFF position, the locomotive will start in the forward direction and be "locked" there.

Operating your locomotive

Operating the TrainSounds sound system

Your TrainSounds Tender was designed to operate at approximately 6 to 18 volts (AC). When you power up the locomotive on the track, you will hear the sounds of the idling steam locomotive. The chuffing intensity will increase proportionally with the locomotive's speed.

Note! Always operate the TrainSounds Tender with a lighted locomotive, an illuminated car, or lighted track bumpers. This power draw will prevent the whistle from sounding erratically.

Whistle

Press the **WHISTLE** button on your transformer to sound the whistle. The sound will play for as long as you hold the button.

Brake squeal

To activate the sound of squealing brakes, operate your locomotive at a rapid rate of speed for at least ten seconds, and then throttle down to a lower speed. The brake sounds will discontinue automatically after a few moments.

Note! If you are unable to activate the brake sounds, your locomotive's speed may be too low. Increase the speed of the locomotive, operate for at least ten seconds, and then reduce the throttle by half.

Crew dialogue

When the car is not in motion, you may activate random crew dialogue using the WHISTLE button on your controller.

Note! The car must be powered up on the track and not in motion (in neutral) for the dialogue to play. Do not turn off track power.

Press the WHISTLE button	*Dialogue*
Stop/Power-up to about 35 seconds	"Stand by" dialogue
After 35 seconds	"Clear for departure" dialogue
After 60 seconds	Random, automatic crew dialogue

Note! If you activate multiple "stand by" dialogues during the first 35 seconds, the length of time before the "clear for departure" dialogue becomes 35 seconds, plus the length of the dialogue.

Maintaining and servicing locomotive

Lubricating your locomotive

Help your steam locomotive lead a long and productive life on your railroad by maintaining it properly.

We recommend that you purchase a Lionel Lubrication and Maintenance Kit (6-62927), available from your Lionel dealer. Two basic rules to keep in mind: never over-lubricate (a small amount will do) and avoid getting grease or oil on the locomotive's wheels, contact rollers, or your track.

You'll know your locomotive requires lubrication when visual inspection reveals dryness on the parts indicated in Figure 3. Remove accumulated dirt and dust before lubricating, and always lubricate any locomotive emerging from prolonged storage.

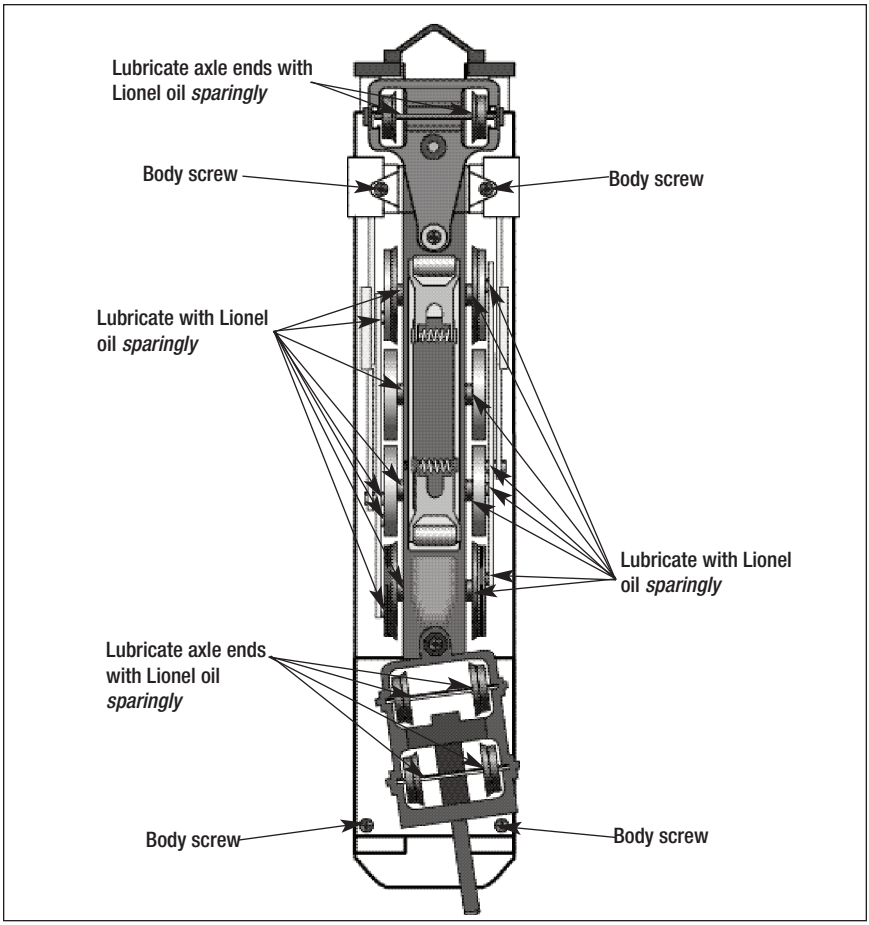


Figure 3. Lubrication points

Maintaining and servicing locomotive

Adding fluid to your locomotive's smoke stack

Your locomotive is equipped with a smoke generator that produces safe, clean, white smoke during operation.

The smoke generator requires the periodic addition of Lionel smoke fluid in order to function. Pierce the tube end with a pin, then add four to eight drops of fluid directly into the locomotive's stack. Smoke production will commence momentarily, faster if you run your locomotive at speed. When smoke production decreases, add more fluid (four to eight drops).

If you prefer *smoke-free* locomotive operation, move the SMOKE switch located inside the cab to the OFF position, and your locomotive will stop smoking. Refer to Figure 2 on page 4 for the location of the switch.

When the smoke unit is on, **always** keep a small amount of smoke fluid in the locomotive's smoke generator; the generator's element can become damaged if operated without fluid. Smoke production is greater at higher voltages and when the locomotive is pulling a heavy load or long consist.

Caution! Always keep a small amount of smoke fluid in the smoke unit when the smoke unit is on.

Replacing your locomotive's lamp

Your locomotive's headlight and marker lights are illuminated by one lamp. During the course of normal operations, the lamp may require replacement.

Carefully remove the four body screws (see Figure 3 on page 7 for their locations), then lift the body off of the frame. Locate and unscrew the expired lamp shown in Figure 4. Replace the lamp with Lionel part no. 600-2314-300, available from your authorized Lionel Service Center. (See the Lionel Service section on page 8 for more information.) Reinstall the cab and the four screws, taking care to not pinch any wires during reassembly.

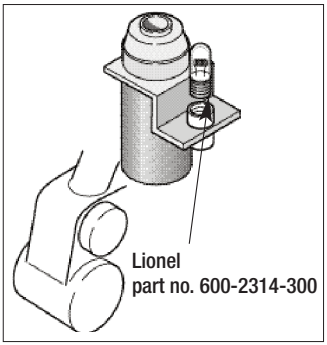


Figure 4. Lamp replacement

Replacing your locomotive's traction tires

Two of the drive wheels are fitted with rubber traction tires to enhance tractive effort, allowing your locomotive to pull many cars at once.

To replace the traction tires, simply use a 3/16" nut driver to remove the side rod nut from the wheel and slip off the old traction tire. Refer to Figure 5. Install the replacement, Lionel part no. 620-8616-206. Retighten the side rod nut, and you're ready to pull that long freight back to the yard.

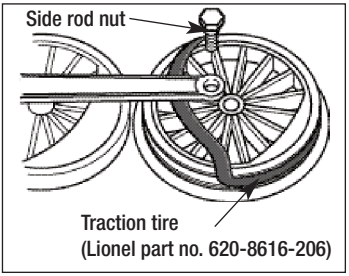


Figure 5. Traction tire replacement

Limited Warranty/Lionel Service

This Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, except for light bulbs, is warranted to the original consumer-purchaser, for **one year** against original defects in materials or workmanship when purchased through an authorized Lionel merchant.

This warranty does NOT cover normal wear and tear, light bulbs, defects appearing in the course of commercial use, or damage resulting from abuse or misuse of the product by the purchaser. Transfer of this product by the original consumer-purchaser to another person voids this warranty. Modification of this product voids this warranty.

Any warranted product which is defective in original materials or workmanship and is delivered by the original consumer-purchaser to Lionel L.L.C. or an authorized Lionel L.L.C. Service Center, together with proof of original purchase will, at the option of Lionel L.L.C., be repaired or replaced, without charge for parts or labor. In the event the defective product cannot be repaired, and a replacement is not available, a refund of the original purchase price will be granted. Any products on which warranty service is sought must be sent freight or postage prepaid, as transportation and shipping charges are not covered by the warranty.

In no event shall Lionel L.L.C. be liable for incidental or consequential damages.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

This limited warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Instructions for Obtaining Service

If service for this Lionel L.L.C. product is required, bring the item, along with your dated sales receipt and completed warranty information to the nearest Authorized Lionel Service Center. Your nearest Lionel Service Center can be found by calling 1-800-4-Lionel, or by accessing our Website at www.lionel.com.

If you prefer to send your product back to Lionel L.L.C. for repair in Michigan, you must first call 586-949-4100 or FAX 586-949-5429, or write to Customer Service, P.O. Box 748, New Baltimore, MI 48047-0748, stating what the item is, when it was purchased and what seems to be the problem. You will be sent a return authorization letter and label to ensure your merchandise will be properly handled upon receipt.

Once you have received your return authorization and label, make sure that the item is packed to prevent damage during shipping and handling. We suggest that you use the product's original packaging. This shipment must be prepaid and we recommend that it be insured.

Please make sure you have followed all of the above instructions carefully before returning any merchandise for service. You may choose to have your product repaired by one of our Authorized Lionel Service Centers after its warranty has expired. A reasonable service fee will be charged.

Warranty Information

Please complete the information below and keep it, along with your dated sales receipt. You must present this and your dated sales receipt when requesting warranty service.

Name _____

Address _____

Place of Purchase _____

Date of Purchase _____

Product Number _____

Product Description _____

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