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# ***726 Berkshire 2-8-4 steam locomotive Owner's Manual***

featuring **TRAINmaster** and *Railroads*  
C-O-M-M-A-N-D

# Congratulations!

You own one of the most sophisticated model trains ever built—the Lionel TrainMaster® Command-equipped Century Club 726 Berkshire steam locomotive. From its stylized boil-

er and tender to the rugged mechanicals underneath, the Century Club 726 Berkshire is ready for duty on your model railroad. Experience the superiority of today's Lionel.

- Powerful Pullmor® motor
- Lionel Command™ LCRU2 reverse unit for use with the Lionel TrainMaster® Command™ model railroad control system
- Railsounds™ steam sound system—digital samples from a real Berkshire steam locomotive
- Smoke generator that produces clean, safe, and realistic smoke
- Stainless steel rims on drive wheels
- Tender-mounted Electrocoupler™
- Brilliant headlight

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# Transformer operations

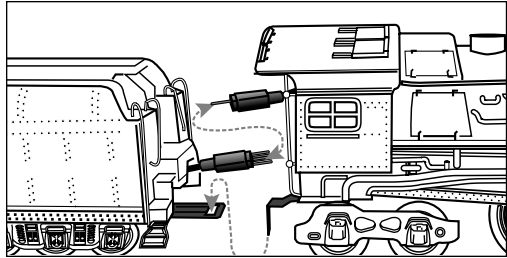
## Running your Lionel 726 Berkshire with a Lionel transformer

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**1**

### **Place your 726 Berkshire on Lionel or Lionel-compatible 0 gauge track.**

- With track power OFF, connect the locomotive tether between the engine and tender. The six-pin tender plug connects with the six-pin receptacle on the locomotive. Feed any excess tether into the tender. Connect the drawbar between locomotive and tender.



**2**

### **Power up your 726 Berkshire with your transformer.**

- Your 726 is designed to operate on 5-15 volts alternating current. Virtually all Lionel and Lionel-compatible alternating-current transformers are suitable; we recommend the TrainMaster Command model railroad control system.

**Note!**

- DO NOT POWER YOUR 726 WITH DIRECT CURRENT (DC). Damage to sensitive electronic components may occur.
- When you first power up your track, the 726 will wait between 3 and 8 seconds as it “listens” for digital language from the TrainMaster Command Base (available separately). When it’s determined that it’s on a transformer-controlled railroad, the 726’s headlight will illuminate and Railsounds will fire up. At this point, the 726 is in neutral. (This occurs when placing the 726 on your railroad for the first time. Thereafter, it starts in forward after every three-second power interrupt.)

**3**

### **Move ‘em out!**

- Get your 726 moving. Press the DIR button on your CAB-1 remote or Lionel transformer. This sequences the Liontech Command reverse unit (LCRU2) to the next operating state.
- Adjust track voltage until your 726 moves at your desired speed.

# Transformer operations

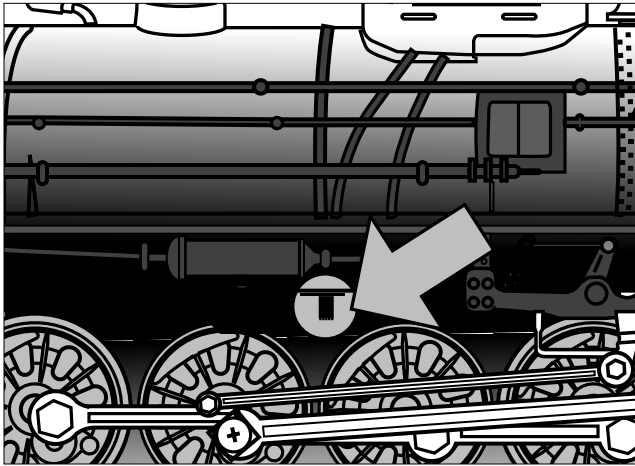
## Locking your 726 Berkshire into a single operational state

To select a single operational state for your Lionel 726 Berkshire (example: forward only), you can deactivate the LCRU2's sequencing function with the reverse unit control switch, located underneath the cab of the 726.

Get your locomotive moving in the desired direction, then *slow it down*

*without stopping*. Set the reverse unit control switch to PROGRAM/LOCK. The 726 is now "locked" into your chosen direction.

When you no longer want single-direction operation, just slide the reverse unit control switch back to FORWARD/ RUN.



PROGRAM/LOCK



FORWARD/RUN

Use this setting to choose a single operational state like "forward."

Use this setting for normal operations.

## Your 726 Berkshire's Railsounds system—the basics

**L**ionel Railsounds is the most realistic model railroad sound system in the world. Your 726 features digital samples from a real-life Berkshire for the *ultimate* in realism.

Begin by installing a 9-volt *alkaline* battery in the tender. This ensures full feature operation of Railsounds. The battery compartment is located

beneath the tender's removable coal load. Connect the 9-volt alkaline battery to the lead and replace the coal load.

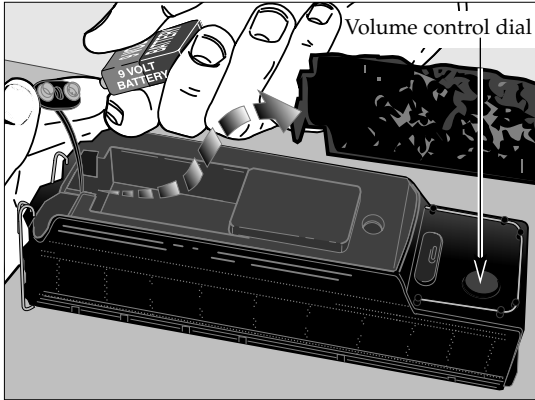
When you first apply track power, the

726's Railsounds system produces sounds of the locomotive at rest. As the 726 moves, chuffing begins, increasing with the locomotive's speed.

To silence the steam chuffing (whistle/bell are unaffected), slide the Rail-sounds switch, located under the tender, to the OFF position *before powering up the locomotive*.

The whistle is activated by using the

lever or button on your transformer or CAB-1. The circular hatch on the tender serves as the volume control dial to raise or lower the level of sound.



*Installing a 9-volt alkaline battery in your 726 Berkshire's tender.*

### Note!

Although Railsounds is powered by track voltage, *the battery is required* for uninterrupted operation. Use only alkaline batteries.

### Note!

Discontinue locomotive power *for 10 seconds* before changing the Railsounds ON/OFF switch position.

### Note!

If Railsounds "drops out" during track power interrupts (direction change), replace the battery.

# Transformer operations

## Experiencing the range of your 726 Berkshire's Railsounds system

**W**ith Railsounds, you experience the sounds of real railroading like never before. Simply put, it's the most sophisticated, authentic model railroad sound system in the world. And remember—inside your Lionel 726 Berkshire are the sounds of a real-life Berkshire. No other electric train can offer you authentic Berkshire sounds. *That's* the power of Lionel.

- **Variable chuff rate.** Your 726's speed determines the steam chuff rate.
- **MultiWhistle™.** Different whistles every time—a Railsounds exclusive.
- **Authentic bell.** Press BELL on your CAB-1 or transformer to begin the effect, again to discontinue. Even the

final "hit" is muted like the real thing.

- **Reverse unit reset sound.** Power down your track, wait for 3-5 seconds, and listen for the air-release sound—that's the 726 telling you its Lionel Command reverse unit has just *reset to forward operation*.
- **Shutdown sequence.** No other model railroad sound system shuts down like Railsounds. Turn off track power, and after the air-release reset sound, you have two seconds to restart your 726. If you're done with operations, Railsounds will commence with an authentic Berkshire shutdown sequence about two seconds after the air-release reset occurs. Note: The 9-volt battery must be installed for the shutdown sequence to occur (see page 5).

## Notes on Railsounds

- Use the tender-top "water hatch" volume control to adjust sound output.
- Listen for incidental engine sounds during Railsounds operation. They're automatic and, of course, authentic.
- The 9-volt alkaline battery you installed ensures *continuous* Berkshire sounds, even during short track-power interrupts.
- Longer track-power interruptions (including locomotive derailments) cause Railsounds to shut down after about 7 seconds.
- For even *more* authentic Railsounds effects, operate your 726 in the TrainMaster Command environment. See page 8 for details.

# TrainMaster Command operations

## Your 726 Berkshire in the TrainMaster Command environment

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**L**ionel TrainMaster Command is the fun and sophisticated model railroad control system from Lionel. Your 726 Berkshire features the Lionel Command reverse unit, which acts as both a conventional reverse unit as well as the key to unlocking many extra features when you operate in Command mode.

TrainMaster Command gives you the power to operate multiple Command-

equipped locomotives *on the same track, at the same time*. It's the most fun you can have with electric trains, and it's incredibly easy too! Just follow the directions below and you'll be on your way.

**TO OPERATE IN COMMAND, YOU NEED A COMMAND BASE AND A CAB-1 REMOTE.** Find them both at your authorized Lionel retailer.

**1**

### ***Place your 726 on Lionel or Lionel-compatible 0 gauge track.***

- **Make sure track power is OFF before placing it on track.**
- **Make sure your Lionel Command Base is ON** and its communications wire is connected to the COMMON post on your Lionel transformer *or* the U on any of your installed PowerMasters.
- Once positioned on the track, **increase track voltage to FULL** (on PowerMaster, slide the CMD/CONV switch to CMD). This automatically delivers full voltage to the track.

**2**

### ***Address your 726 with CAB-1.***

- **Press ENG and 1** on the numeric keypad of your CAB-1 remote. This command is sent by CAB-1 to the Command Base, which then translates your command into digital code. That code is sent around your railroad's outside rails in the form of a digital "halo." All Command-equipped Lionels listen to this digital communication, but they *do not respond* until they hear their own ID number.
- The digital language of TrainMaster Command—and not track power—controls the actions of Command-equipped Lionels. Track power is simply like gasoline in the tank of your car—it gives you the power to go places, but it doesn't tell you where to go or how fast to get there.
- **All Command-equipped Lionels come factory-programmed with an ID# of "1."** To change your 726's ID#, see page 11.

**3**

### ***Move 'em out!***

- Throttle up or press any command button on CAB-1. Your 726 will respond to your *every* command. Read on. The fun is just beginning!

# TrainMaster Command operations

## CAB-1 commands for your 726 Berkshire

### BERKSHIRE RAILSOUNDS EFFECTS IN BOLD ITALIC



**COUPLER RELEASE SOUNDS.**



Tender's rear coupler releases. **COUPLER RELEASE SOUNDS.**



Press AUX2 to turn your Berkshire's headlight on and off.



Turn the THROTTLE to the right to accelerate, left to decelerate. **SPEED-DEPENDENT VARIABLE STEAM CHUFFING. DYNACHUFF DYNAMIC CHUFFING EFFECT.**



Press HALT to shut down all PowerMaster electrical output on your railroad. Stops all Command-equipped Lionels in operation.



Press WSTL/HRN to activate the 726's whistle, release to discontinue. **MULTI-WHISTLE STEAM WHISTLE SOUND.**



Press BELL once to activate the bell, again to discontinue. **TRADITIONAL BELL SOUND.**



Press DIR—the locomotive decelerates to a complete stop; turn the throttle up, and the locomotive moves in the opposite direction. **THERE IS NO NEUTRAL. STEAM AIR-RELEASE SOUND.**



Press and hold BOOST for extra power. Release BOOST and return to the locomotive's previous speed. **LABORED CHUFF.**



Press and hold BRAKE to slow down or stop. Release BRAKE and return to the previous speed. **SQUEALING BRAKE SOUNDS.**

## Railsounds in the Command environment

Your 726's Railsounds system gives you even *more* in the TrainMaster Command environment.

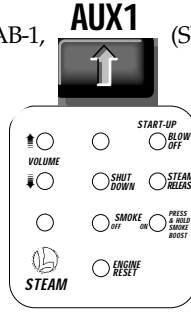
- **DynaChuff™** Real steam locomotive chuffing depends on the locomotive's load. DynaChuff simulates both labored and relaxed chuffing sounds. Highball down the mainline and hear the labored chuffing of a locomotive battling inertia. Reduce your throttle setting, and chuff-

ing relaxes to a more sedate sound, as though the load placed on the 726 has decreased. Experience DynaChuff on steep grades, at yard crawls, and at speed. *Another* Railsounds exclusive.

- **Bonus sounds** like squealing brakes with the CAB-1 BRAKE command.
- **Incidental sounds** you control with CAB-1 numeric keypad commands, like steam letoff and steam release effects.

## CAB-1 numeric keypad commands for your 726 Berkshire

When you press AUX1 on CAB-1, you turn the numeric keypad into 10 command buttons. The keypad “stays open” and gives you access to extra command features until you press any top-row button



(SW, ACC, RTE, TR, or ENG). The CAB-1 keypad overlay included with your 726 is designed to help you learn the auxiliary features specific to this classic locomotive.

***BERKSHIRE RAILSOUNDS EFFECTS IN BOLD ITALIC.***

**0** Stops and resets the 726 to FORWARD. ***WHISTLE BLOWS. HEADLIGHT FLICKERS.***

**1** Raises the volume of Railsounds. ***SOUND VOLUME INCREASES.***

**2** Reserved for future use.

**3** Starts up Railsounds. ***STARTUP SEQUENCE COMMENCES. STEAM BLOWOFF SOUND.***

**4** Lowers the volume of Railsounds. ***SOUND VOLUME DECREASES.***

**5** Activates the Railsounds steam shutdown sequence. Just like the real thing, *your 726 must be idle for shutdown to occur.* ***STEAM SHUTDOWN COMMENCES.*** Remember, the whistle and bell will not sound until you *restart* Railsounds.

**6** ***STEAM RELEASE SOUND.***

**7** Reserved for future use.

**8** Turns off the smoke generator.

**9** Turns on the smoke generator. Press and hold 9 (10 seconds maximum) to initiate Smoke Boost™ —it superheats the smoke generator and enhances smoke output when you start running your 726.

### Note!

Always keep smoke fluid in your 726’s smoke generator. Using Smoke Boost with depleted fluid can damage the generator’s element.

# *TrainMaster Command operations*

## *Tuning your 726 Berkshire's performance*

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### **MOMENTUM**

Simulate the labored performance of a locomotive pulling a heavy load with momentum. Press L, M, or H (located under CAB-1's removable panel) for light, medium, or heavy momentum. The LCRU2 remembers the setting until you change it. For delayed response, use H. For quick response, choose L.

### **BOOSTING AND BRAKING**

Use the BOOST and BRAKE command buttons for incremental control of speed *and* a superior method for handling grades, stops-and-starts, and more. Plus, using BRAKE in the Command environment gives you a bonus Railsounds effect—the ultrarealistic sound of squealing brakes.

### **STALL**

Make your 726 feel more responsive by setting a “stall” voltage. Get your locomotive moving, then press SET; the 726 will stop. The headlight will flash, indicating it's in the SET mode. Turn the throttle clockwise to get the engine moving, then decrease speed until the locomotive just stops.

Then press SET again; the LCRU2 remembers the stall setting until you change it. To clear stall, press SET twice, holding it for one second each time.

### **HIGH VOLTAGE SETTING**

Press SET, headlight will flash. Get your locomotive moving to the maximum speed you want it to run, press BOOST. Use this to keep your locomotive from accidentally being derailed. To clear the setting, press SET, then BOOST without moving the throttle.

### **SOUND QUALITY**

To achieve your preferred Railsounds master volume level, use the tender-top water-hatch volume control dial. Turn the dial left or right to adjust the volume to your liking.

For quick remote-control of volume *below* the master setting—like muting—use the CAB-1 numeric keypad's volume control. Pressing AUX1 and then 4 on the numeric keypad lowers overall Railsounds output.

## Assigning your 726 Berkshire a new ID#

**Example** *Assign a new ID# to your 726 Berkshire*

Command Base ON

Place the 726 on track

PowerMasters set to CMD or traditional power supplies ON FULL

Slide the 726's reverse unit control switch to PROGRAM/LOCK

Turn track power on (PowerMasters):



Press BOOST

Program the 726 as Engine #72:



Press ENG



Press 72 (the ID#)



Press SET

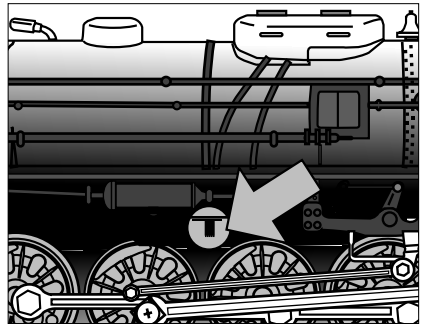
Hear the whistle sound (or see the headlight flash if Railsounds is OFF)

Slide the reverse unit control switch to FORWARD/RUN

Your engine remembers its ID# forever; you can change it any time by repeating these steps

As your Lionel Command-equipped fleet grows, you'll want to give your 726 a more individualized ID#. Choose from any between 1 and 99. To make things easy, use a portion of your 726's cab number, for example 72.

Turn the Command Base ON and place the 726 on track. Slide the 726's reverse unit control switch to PROGRAM (see the illustration), then power up. Using CAB-1, press ENG, the engine ID# (example: 72), then press the SET button located under CAB-1's removable panel. Hear the whistle blow (or see the headlight flash if Railsounds is off); that's the LCRU2 confirming the new ID#. Slide the LCRU2 switch to FORWARD/RUN. Your 726 is ready to run with its all-new ID#.



PROGRAM/LOCK ←→ FORWARD/RUN

Slide the 726's reverse unit control switch to PROGRAM/ LOCK. When you've finished ID# programming, slide the switch to FORWARD/RUN.

## *TrainMaster Command operations*

### *Your 726 Berkshire's digital communication antenna*

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**Y**our 726 locomotive's wire handrails are more than just model grabirons—they're the LCRU2's receiving antenna for Command Base digital communications. Please handle the 726 carefully to avoid handrail damage.

To ensure optimum reception, both handrails are insulated from the 726's die-cast shell. If your 726 is experiencing difficulty in receiving Base communications, check the handrail ends in the cab and pilot for the presence of insulating material. Ensure each stanchion is present and enjoys a proper fit.

Finally, prevent the handrails from touching the steamchest/boiler front between the last stanchion and the pilot. The tubing on the handrail, near the hinges at the boiler front, is factory-installed to assure that the handrail (antenna) remains insulated from the metal. This gives the best reception for the digital communications.

If the tubing is not desired, remove it by lifting the handrail out of the cow-catcher and sliding the tubing off. Reinsert the handrail, making sure the insulating bushing is in place.

## Using your Electrocoupler in the TrainMaster Command environment

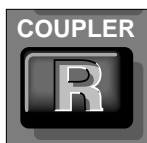
Your Lionel 726 Berkshire is equipped with a tender-mounted Electrocoupler that responds to the COUPLER R button on your CAB-1 remote when operated in the TrainMaster Command environment.

Simply press the COUPLER R button on

your CAB-1 remote, and the tender coupler opens, accompanied by the Rail-sounds coupler release sound.

### **Note!**

Your 726 tender's Electrocoupler is NOT designed to be opened manually.



## Using your Electrocoupler in the transformer-controlled environment

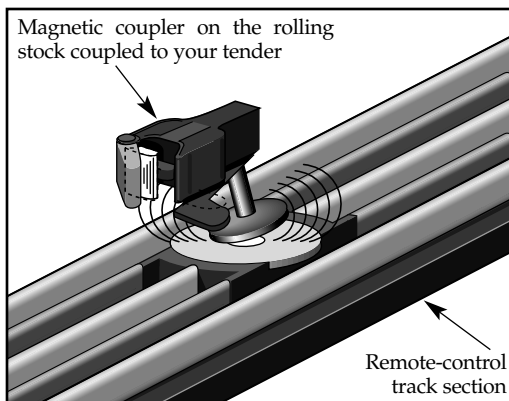
To use your tender's Electrocoupler in the transformer-controlled environment, you must first couple a piece of rolling stock equipped with Lionel magnetic couplers directly behind your tender. The magnetic coupler on the rolling stock will then react to the magnetic field generated by a Lionel remote-control track section (available separately).

Place the "trigger disc" on the rolling

stock's coupler over the remote-control track's coil and press UNCOUPLE on the track section's controller. The magnetic field pulls the disc downward, and the coupler opens.

### **Note!**

Your 726 tender's Electrocoupler will NOT open manually or by using a remote-control track section.



# Maintaining and servicing your 726 Berkshire

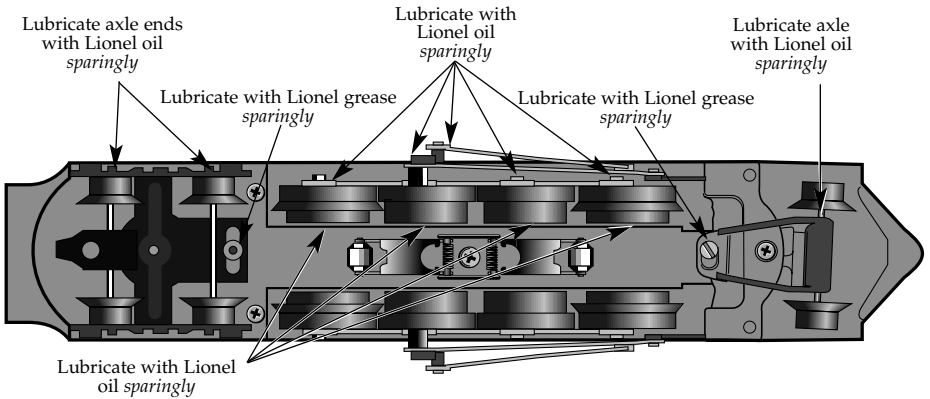
## Lubricating your 726 Berkshire

**H**elp your Lionel 726 Berkshire lead a long and productive life on your railroad by maintaining it properly.

We recommend you purchase a Lionel Lubrication and Maintenance Kit (no. 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 726's wheels, con-

tact rollers, *or* your track.

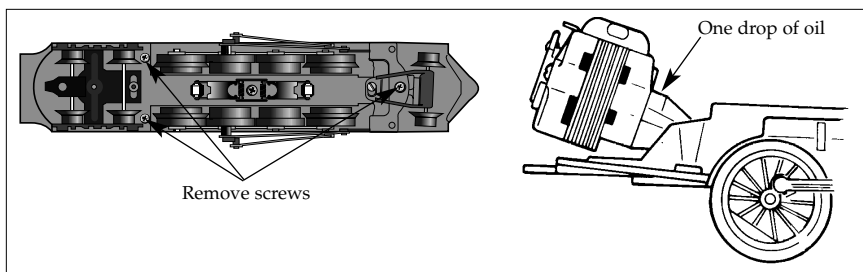
You'll know your 726 requires lubrication when visual inspection reveals dryness on the parts indicated in the illustration. Remove accumulated dirt and dust before lubricating, and always lubricate any locomotive emerging from prolonged storage. Also, *lightly* lubricate the 726's side rods after each 10 hours of operation.



## ***Lubricating your 726 Berkshire's die-cast motor casing***

**A**fter 80 hours of operating time or after extended periods of storage, you'll need to lubricate the die-cast motor casing. Remove the three screws that hold the cab to the frame and lift off the cab. Apply one drop of oil to the small hole in

the die-cast motor casing, just below the field winding. Replace the cab and reinsert the screws. After extended running, the brushes may require replacement. Sluggish or intermittent operation are signs that brush replacement is due.



## ***Adding fluid to your 726 Berkshire's smoke generator***

**Y**our 726 is equipped with a smoke generator that produces safe, clean white smoke during operation.

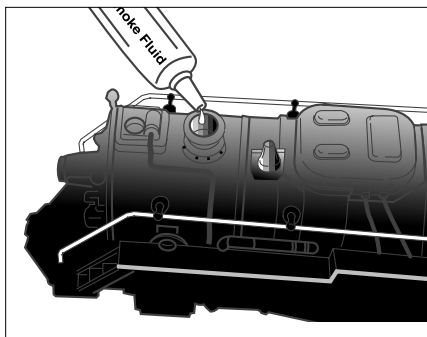
The smoke generator requires the periodic addition of Lionel smoke fluid in order to function. Pierce the tube end with a pin, then add four to eight drops of fluid directly into the 726's stack. Smoke production will commence

momentarily, faster if you run your 726 at speed. When smoke production wanes, add more fluid (four to eight drops).

An idle 726 will not smoke. In TrainMaster Command operations, press AUX1 and 9 (press for a maximum

of 10 seconds) to engage the smoke generator at idle/in neutral. *Always* keep a small amount of smoke fluid in the 726's smoke generator; the generator's element can become damaged if operated without fluid.

Smoke production is greater at higher voltages and when the 726 is pulling a heavy load or long consist.



# Maintaining and servicing your 726 Berkshire

## Replacing your 726 Berkshire's headlamp

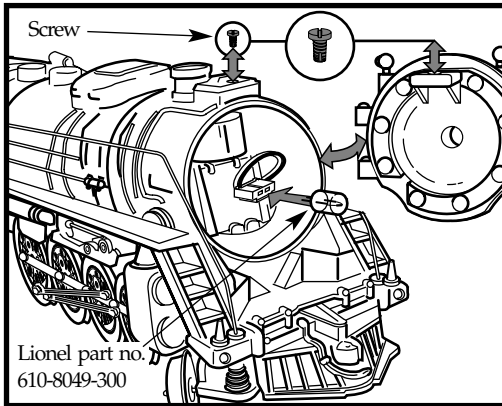
Your 726 is illuminated by a lamp located directly behind the boilerface. During the course of normal operation, the lamp may require replacement.

To replace the lamp, first remove the screw that holds the boilerface to the cab. Carefully remove the boilerface. Remove the connector from the light

in the boilerface. Remove the bulb from the boilerface and replace it with Lionel part no. 610-8049-300, available from

your authorized Lionel Service Center or Lionel Service.

Place the bulb assembly back into boilerface and relocate the boilerface and reinsert the screw.



## Lionel Service

This product is built with pride by Lionel and carries a 5-year warranty to support continued reliable operation. If service is required, bring it and its warranty card to your local authorized Lionel Service Center. To find the nearest dealer or Service Center, simply call 1-800-4-LIONEL or search on our website: [www.lionel.com](http://www.lionel.com).

If you prefer a Lionel factory repair, call 810-949-4100, fax 810-949-5429, or write Lionel Service, P.O. Box 748, New Baltimore, MI 48047-0748. State the problem and the product's purchase date. We'll send a return authorization

letter to assure proper handling while at Lionel. 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.

**CAUTION:** Make sure your product is properly packed to prevent shipping damage. The shipment must be prepaid, and we recommend it be insured. Please follow these instructions carefully. This warranty gives you specific legal rights. You may have other rights that vary from state to state.