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# *Lionel Rotary Snowplow Owner's Manual*

# ***Congratulations!***

**Y**ou purchased a tough, durable locomotive—the Rotary Snowplow built by Lionel. From the crisp detail and expert decoration on the outside to the brute power

under the hood, the Lionel Rotary Snowplow is ready for duty on your model railroad. Experience the superiority of today's Lionel.

## **Features of the Rotary Snowplow**

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- **Powerful Pullmor motor**
- **Magnetic coupler (on rear of locomotive)**
- **Brilliant headlight**
- **Rotating snow impeller**

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# *Transformer operations*

## Running your Rotary Snowplow with a Lionel transformer

**1**

*Place your Rotary Snowplow on Lionel or Lionel-compatible 0 gauge track.*

**2**

*Power up your Rotary Snowplow with your transformer.*

- **Your Rotary Snowplow is designed to operate on 11-18 volts alternating current.** Virtually all Lionel and Lionel-compatible alternating-current transformers are suitable.

**Caution!**

- **Do not power your Rotary Snowplow with direct current (DC).** Damage to sensitive electronic components may occur.

**3**

*Move 'em out!*

- **Get your Rotary Snowplow moving.** Press the DIR button on your CAB-1 remote or Lionel transformer. This sequences the Lionel reverse unit to the next operating state.
- **Adjust track voltage** until your Rotary Snowplow moves at your desired speed. To increase speed, increase track voltage. To decrease speed, reduce voltage. To stop the locomotive, turn-off track power.
- **See page 4 for information on locking your Rotary Snowplow in a single operational state.**

# Transformer operations

## Locking your Rotary Snowplow into a single operational state

To select a single operational state for your Lionel Rotary Snowplow (example: forward only), you can deactivate the reverse unit's sequencing function with the reverse unit control switch.

Get your locomotive moving in the desired direction, then *slow it down without stopping*. Set the reverse unit control switch to OFF. Refer to Figure 1 for the location of the switch. The Rotary Snowplow is

now "locked" into your chosen direction.

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

**Note!** Your locomotive's reverse unit will "reset" to forward after any five second or longer power interruption, regardless of the original locked-out direction.

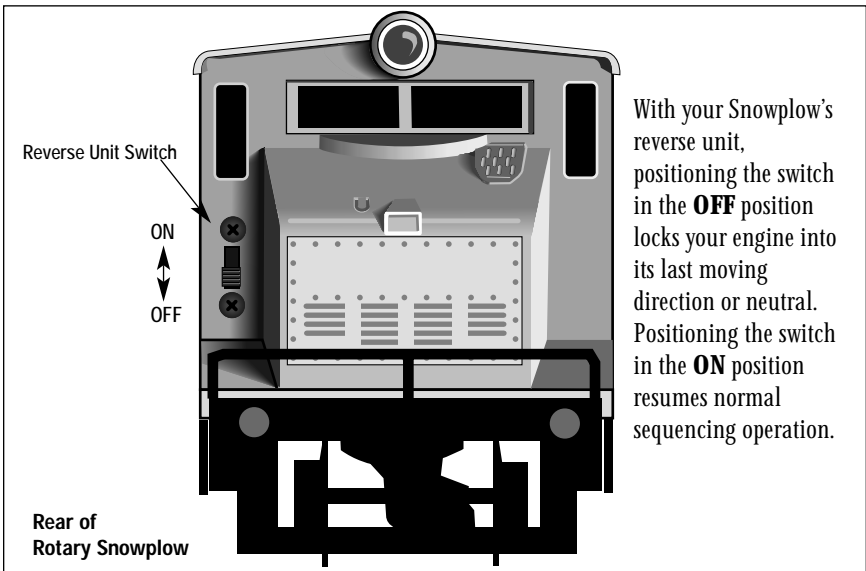


Figure 1. Reverse unit switch location

# Transformer operations

## Locking your Rotary Snowplow into a single operational state (continued)

**T**able 1 lists the sequence of directions that your Snowplow will go through, depending on the setting of the E unit

switch. Refer to Figure 1 on page 4 for the location of that switch.

<b>Engine Direction Sequences</b>	
<b>N = Neutral</b> <b>F = Forward</b> <b>R = Reverse</b>	
Condition	Direction Change Cycle
Case #1: First power up or without power longer than 5 seconds	
Reverse unit off (switch in <b>OFF</b> position)	N, E, N, F, etc.
Reverse unit on (switch in <b>ON</b> position)	N, E, N, R, etc.
Case #2: Engine without power for less than 2.5 seconds	
Reverse unit off (switch in <b>OFF</b> position)	N, Last-Dir, N, Last-Dir, etc.
Reverse unit on (switch in <b>ON</b> position)	N, E, N, R, etc.

Table 1. Engine direction sequences

# Transformer operations

## Using your Rotary Snowplow's magnetic coupler

The rear of your Lionel Rotary Snowplow is equipped with an operating magnetic knuckle coupler, a revolutionary design first introduced by Lionel in 1945.

Lionel magnetic couplers react to the magnetic field generated by a Lionel Remote-Control Uncouple Track section (available separately).

Place your locomotive's coupler trigger plate (see Figure 2 below) over the central coil of a remote-control track section and

press UNCOUPLE on the controller. The magnetic field pulls the plate downward, and the knuckle opens.

One operating technique favored by Lionel railroaders is the "moving uncouple." Press the UNCOUPLE button as the trigger plate passes over a remote-control section. The magnetic field will open the coupler; the consist remains behind as the Snowplow moves on.

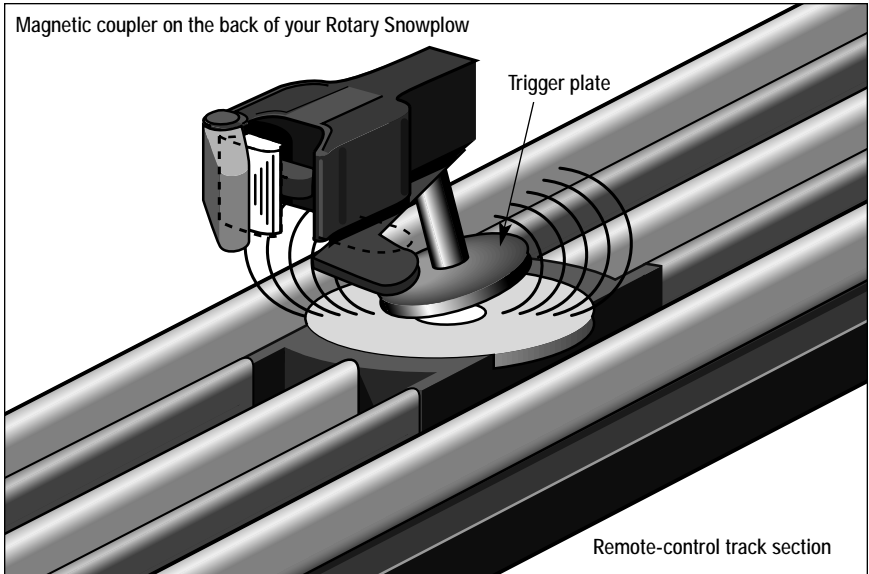


Figure 2. Trigger plate operation

# Maintaining and servicing your Rotary Snowplow

## Lubricating your Rotary Snowplow

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

We recommend that 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 Rotary Snowplow's wheels *or* your track. You'll know your Rotary Snowplow 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.

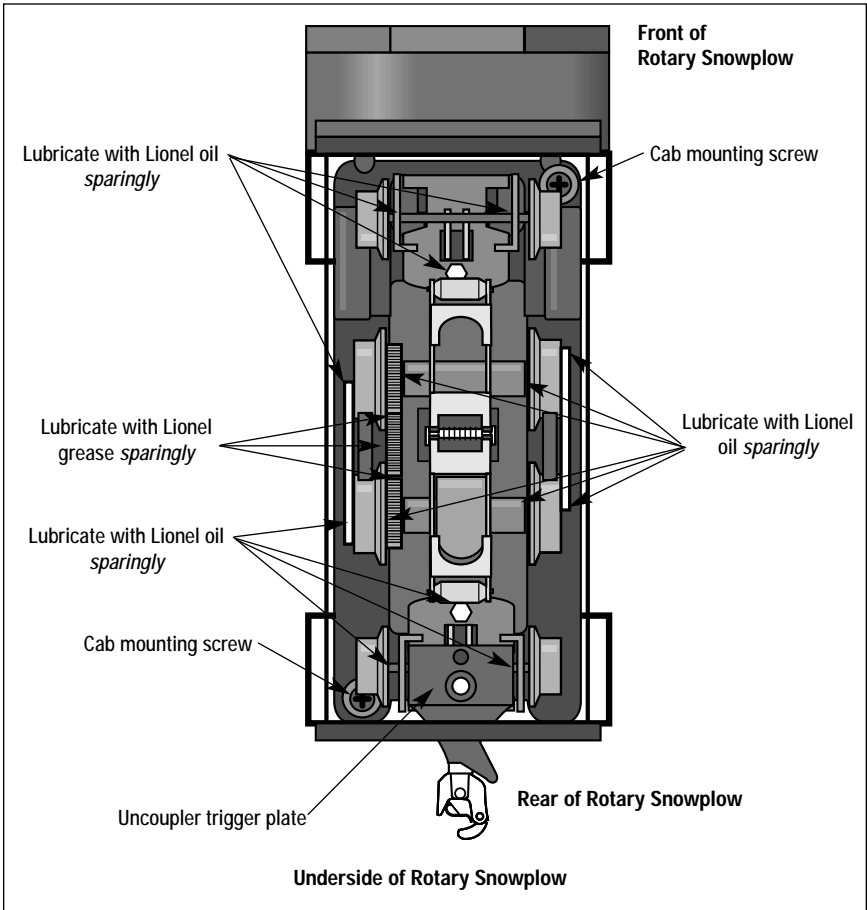


Figure 3. Screw location and lubrication points

# ***Maintaining and servicing your Rotary Snowplow***

## **Lubricating the Pullmor motor armature**

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**Y**our Rotary Snowplow will require the occasional lubrication of its powerful Pullmor motor. Add two or three drops of Lionel Oil (available in the Lionel Lubrication and Maintenance Kit, no. 6-62927) to the top armature bearing.

1. Remove the two screws that secure the Snowplow's body shell to the frame and carefully lift the shell away from the frame.

As illustrated in Figure 3, these screws are located on opposite ends of the body. One is at the left front corner behind the impeller housing; the other is at the rear right corner.

2. Locate the Snowplow drive pulley on top of the motor at the rear of the locomotive. Refer to Figure 4.
3. Place two or three drops of Lionel oil at the base of the pulley to lubricate the motor shaft.
4. Replace the body shell, tightening the two cab mounting screws.

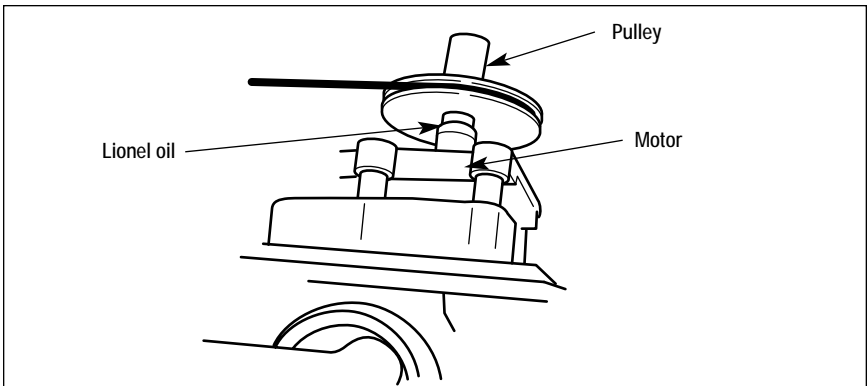


Figure 4. Pullmor motor armature lubrication



# Maintaining and servicing your Rotary Snowplow

## Lubricating the front pulley

To keep your Rotary Snowplow operating properly, be sure to lubricate the front pulley axle after every six to eight hours of operation. Refer to Figure 5 for the location of this lubrication point.

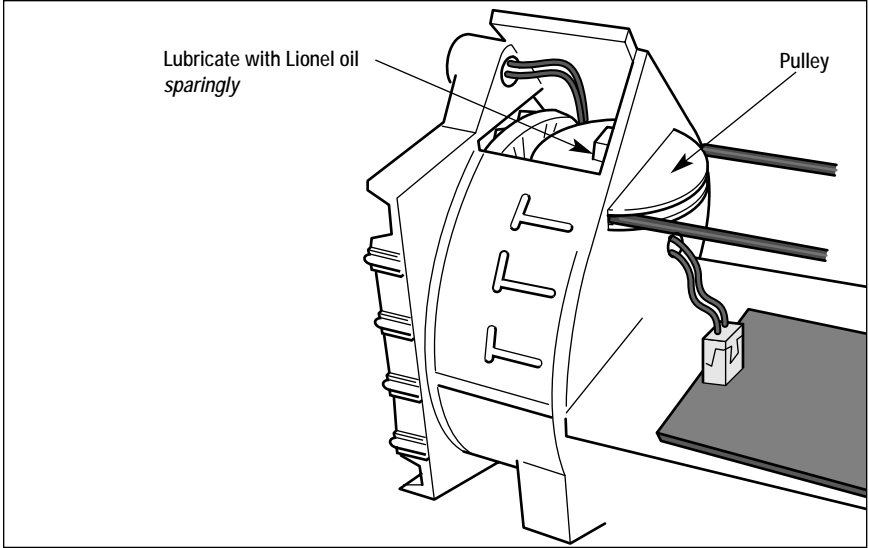


Figure 5. Front pulley lubrication

# ***Maintaining and servicing your Rotary Snowplow***

## **Replacing the headlamp**

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**Y**our Rotary Snowplow features an operating headlight. During the course of normal operation, this lamp may require replacement. The lamp is Lionel part no. 610-8446-100, available from your authorized Lionel Dealer. Follow these steps and refer to Figure 6 on page 11 as you replace this lamp.

1. Remove the two screws that secure the Snowplow's body shell to the frame and carefully lift the shell away from the frame.  
As illustrated in Figure 3, these screws are located on opposite ends of the body. One is at the left front corner behind the impeller housing; the other is at the rear right corner.
2. Follow the two wires that emerge from the impeller housing to the two-pin connector on the circuit board.
3. Pull out the top portion of the two-pin connector.
4. Use a pointed tool to pry open the white tabs and pull out the two wires as illustrated in Figure 6.
5. Remove the wires by pulling them through the snowblower housing and the lens opening.
6. Feed the replacement lamp wires back through the lens opening and snowblower housing.
7. Insert the wires into the top portion of the connector; then plug the connector back into the circuit board.
8. Press the lens assembly securely into place.
9. Replace the body shell, tightening the two cab mounting screws.

# Maintaining and servicing your Rotary Snowplow

## Replacing the headlamp (continued)

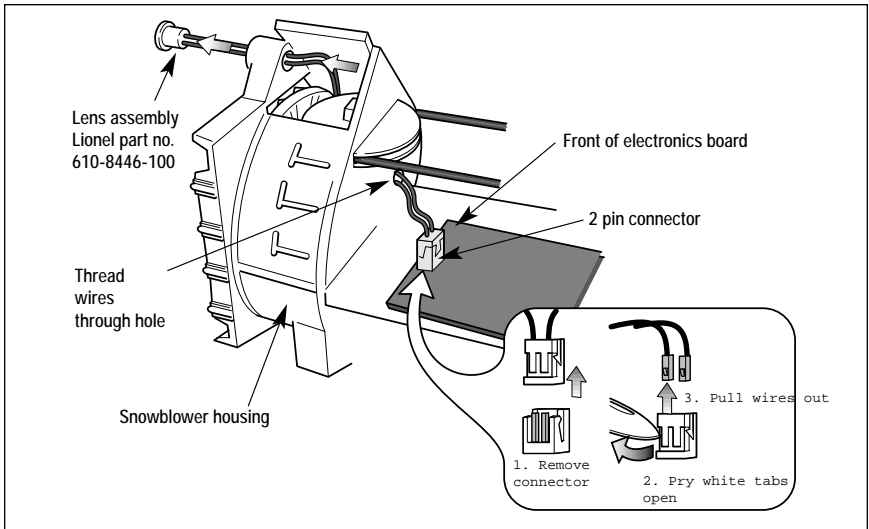


Figure 6. Lamp replacement

## Limited Warranty/Lionel Service

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**T**his 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](http://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 \_\_\_\_\_

