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Rev. 1



***Lionel
Rotary Coal Tibble
Owner's Manual***

Congratulations

Congratulations on your purchase of the Lionel Coal Tipple, the ultimate in prototypical function and railroading fun! Use your diesel locomotive to position a rotating coupler-equipped bathtub gondola in the Tipple, and, at the press of a button, the

Tipple will turn it upside down, emptying its coal into the chute below. Complete with your first bathtub gondola, a bag of special Coal Tipple coal, a receiving bin, and a graduated trestle set, this accessory will be the star of your O-27 or O gauge three-rail layout.

Note! Just like prototypical coal tipples, this accessory is for use with diesel locomotives only. Steam locomotives are too heavy. Also, use only the larger, approved Rotary Coal Tipple Coal. Smaller particles will cause the gears to bind.

Caution! Your Coal Tipple has been secured for shipping. Remove the four braces and screw before you operate this accessory. Refer to page 3.

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Removing the shipping supports

Four braces and a screw have been installed to secure the Coal Tipple during shipping. Be sure to remove these components before operation. Figure 1 illustrates the location of these parts.

1. Slide the orange braces out of the gears at each end of the rotating drum.
2. Remove the flat orange braces and the rubber bands in the rack and pinion mechanism at the bottom of the Tipple.
3. Finally, remove the screw that secures the large cam gear at the bottom of the Tipple.

Caution! Do not operate this accessory without removing the parts discussed above and illustrated in Figure 1.

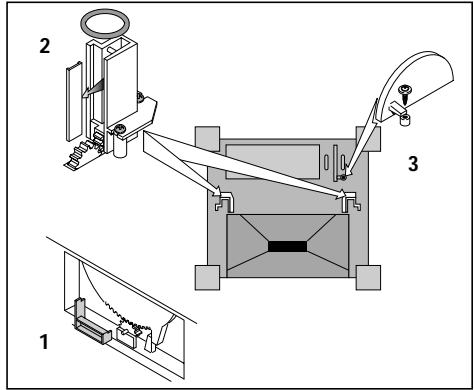


Figure 1. Brace and screw removal

Wiring your Lionel Rotary Coal Tipple

The Lionel Coal Tipple operates best at 12-16 volts (AC). When wiring this accessory, keep in mind that you are powering the section of track that passes through the Tipple as well as the motors that clamp and rotate the bathtub gondolas. It is extremely important that the voltage of this section of track matches the voltage of the track that approaches and departs from the accessory. If the voltage of this section is higher than the rest of the track, your locomotive will accelerate rapidly when it passes through the Tipple. This could result in derailments on the trestle.

The easiest way to prevent differences in track voltage is to use a Lionel Lock-On (available separately, part no. 6-62900). Powering the Tipple track section with the power from another section of track automatically provides the same voltage. You may choose to wire this accessory with a separate power supply, but you must be careful to keep the voltage of the Tipple track section equal to the rest of the track. Figure 2 illustrates the complete wiring diagram for the Coal Tipple.

Caution! You need the ends of the wires to be stripped back 1/4" to 3/8". To strip the wires, use a pair of wire strippers or a sharp knife. Only an adult should perform this task! Always use care when stripping wires.

Wiring your Lionel Rotary Coal Tipple (continued)

1. **Attach a Lionel Lock-On (available separately, part no. 6-62900) to the track.**

Slide the bottom edge of the outside rail into the metal lip on the Lock-On. Press the clip at the end of the Lock-On over the bottom edge of the inside rail.

2. **Attach one wire to the #1 spring clip terminal on the Lionel Lock-On and connect the wire to the left/inside TRANSFORMER POST on the Coal Tipple.**

Lock-On connections:

Press down on the top of the terminal clip so that a metal loop is formed. Slide the bare end of the wire into the exposed loop. Release pressure on the terminal clip, allowing the crimped metal to pinch the end of the wire in the metal loop. Give a little tug on the wire to be sure that the hold is secure.

Coal Tipple connections:

Loosen the thumbscrew to expose a hole in the terminal post. Insert the bare end of the wire through the hole and tighten the nut to secure the wire. Be sure that the exposed wire is in contact with the terminal post.

3. **Attach another wire to the #2 Lock-On terminal and connect it to the right/outside TRANSFORMER POST.**
4. **Attach one wire to each of the OPERATION POSTS on the Coal Tipple and connect one wire to each of the terminals on the small switch that is included with this accessory.**

Hint! The Coal Tipple “interrupts” the flow of electricity around your layout. If power is not equal on both sides of this accessory, simply attach an additional Lock-On to the track on the other side of the Tipple and wire it to your power supply.

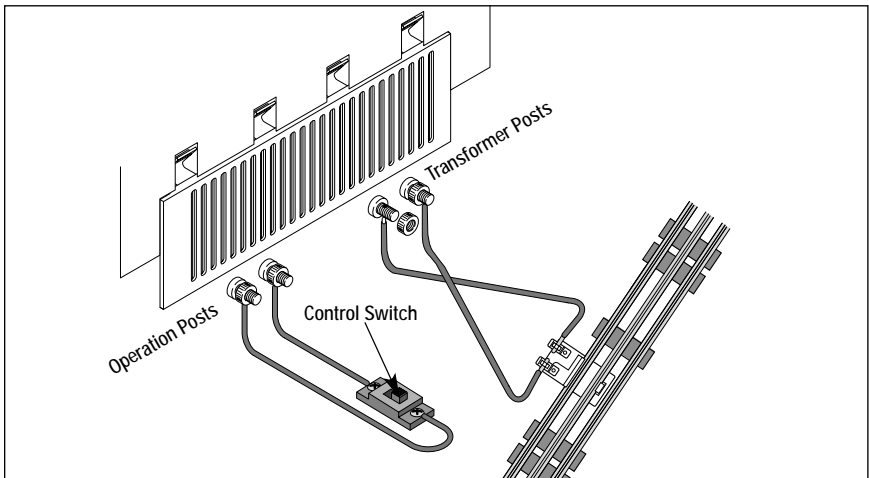


Figure 2. Wiring your Coal Tipple

Wiring the Coal Tipple to operate in the Command environment

Connect your Rotary Coal Tipple to an SC-2 Switch and Accessory Controller (available separately, 6-22980) or the Accessory Switch Controller (available separately, 6-14182). Refer to these manuals for additional information. Two wires are needed to connect your Coal Tipple to the SC-2 or ASC.

SC-2 wiring and operation

- 1. Attach a wire to one of the OPERATION POSTS on the Tipple and connect it to the COMM (common) position on the SC-2.**
- 2. Attach another wire to the other OPERATION POSTS and connect it to the accessory momentary position on the SC-2.**

Press and hold the AUX1 button on your CAB-1 Remote Controller to operate the Tipple.

ASC wiring and operation

- 1. Attach a wire to one of the OPERATION POSTS on the Tipple and connect it to the COMM (common) position on the ASC.**
- 2. Attach another wire to the other OPERATION POSTS and connect it to a numbered accessory terminal on the ASC.**

Press and hold the AUX1 button on your CAB-1 Remote Controller to operate the Tipple.

Choosing a location for the Lionel Coal Tipple on your layout

Your layout will never be the same with the addition of the Lionel Coal Tipple! You have many options when installing this accessory, limited only by the available space on your layout. Follow these guidelines to help you set up your Coal Tipple.

- You must include at least two sections of straight track on the right and left sides of the accessory. This will allow the Rotating Couplers to rotate freely.
- Locate the Coal Tipple on a siding, a special loop of track, or even your mainline.
- Use the complete trestle set (included with the Tipple) to bring your trains up to the proper level.
- Be sure to place the Coal Tipple within reach on your layout.
- Slide the coal bin (included) below the chute. Be sure to remove the coal from this tray after each gondola is emptied.
- Dumping lots of coal? We recommend that you create an opening in your layout for the coal to pass through, and then position the Tipple above it. It is most convenient to collect the coal in a large container below your layout; that way, you can easily scoop the coal out of the container to refill your bathtub gondolas — plus the coal doesn't back up into the gears.

Assembling the graduated trestle set

The Lionel Coal Tiptle includes a full graduated trestle set, designed to bring your train up to the proper level. In order from tallest to shortest, the thirty trestle piers are labeled "P," "S," "A," "B," "C," etc. Follow these steps and refer to Figure 3 to build your trestle.

1. Slip the tie channel into the grooves on top of each pier and push in evenly until it snaps into place.
2. Join the track sections loosely together, then slide them onto the tie channel until the track is centered. Press the track sections firmly together to complete this step.
3. Use two No. 4 x 1/2 sheet metal screws (not included) to secure the track to the top of the trestle. Pass these screws through the holes in the ties. Two holes in the track ties will line up with two holes in the tie channels.
4. Mount the piers to your layout by passing No. 5 or 6 wood screws (not included) into the base of each pier.
5. Use two screws to install the track adapters to the frame of the Tiptle as illustrated in Figure 4. For 0 gauge track, use the adapter labeled 0 GAUGE. For 0-27 gauge track, use the adapter labeled 0-27 GAUGE.

Note! You may need to bend down the ends of the brown track ties for the 0-27 track to fit in the adapter.

6. Secure the end of the track to the adapter(s) with two screws as illustrated in Figure 4.

Note! At the Coal Tiptle, you will find a small gap between the rotating section of track attached to the accessory and the track section that meets it. This allows room for the track to rotate.

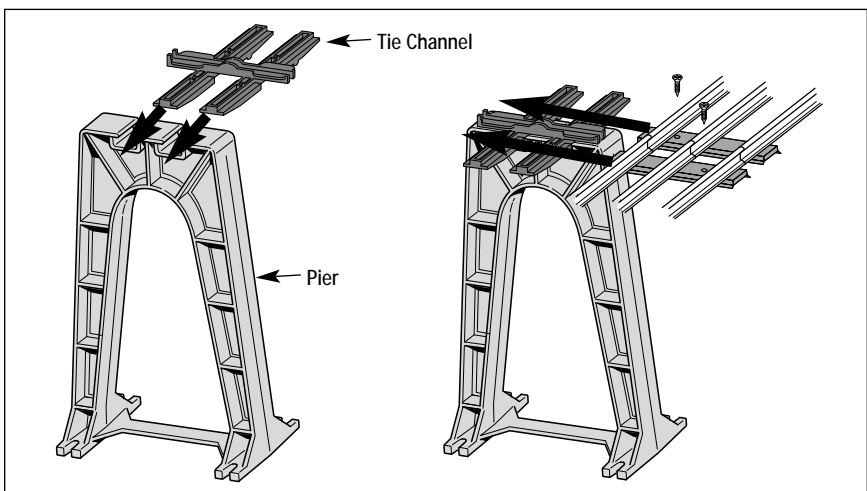


Figure 3. Assembling the trestle

Assembling the graduated trestle set (continued)

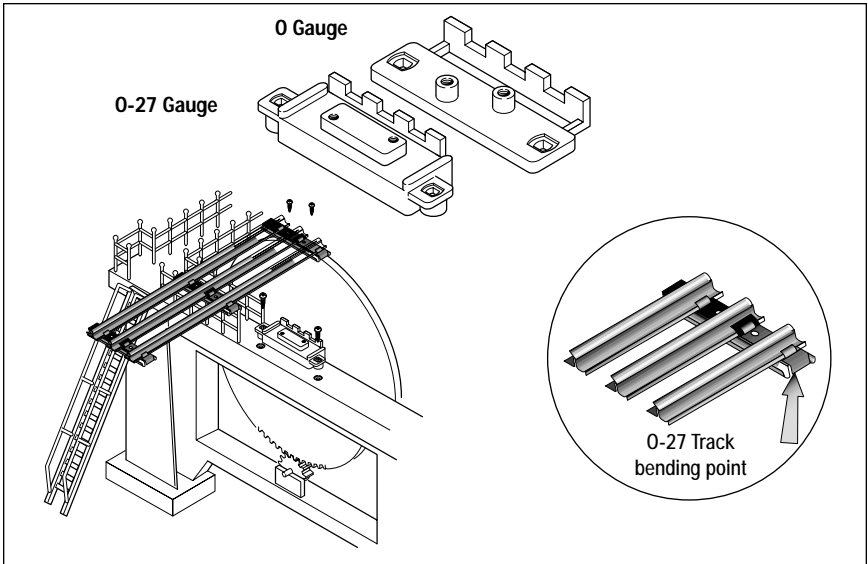


Figure 4. Track adapter and track installation

Installing the ladders

Figure 5 illustrates the placement of the ladders. Snap the ladders into the slots on the sides of the Tipple.

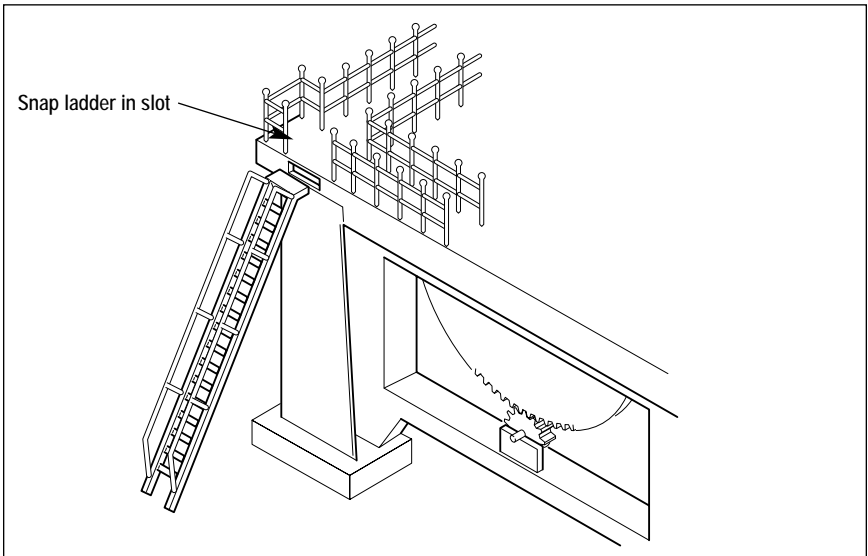


Figure 5. Installing the ladders

Operating the Lionel Coal Tipple

After you have completed the wiring, built the trestle, and placed the Coal Tipple on your layout, you are ready to operate this accessory. Couple your dual rotary coupler bathtub gondola with any diesel-headed consist, and make the quick trip up the trestle. Position the bathtub gondola in the Tipple, and start the action at the press of a button! For prototypical operation, don't forget to add a string of rotary coupler-equipped Bathtub Gondolas (available separately).

Caution! Be sure to follow the following guidelines when operating the Coal Tipple.

- **Do not attempt to operate steam locomotives through this accessory!** Steam locomotives exceed weight and size limits, and the locomotives or the accessory could be damaged. Head up your consists with diesel locomotives only.
- **Be sure that each diesel locomotive and rolling stock clear all of the structures through the Tipple — especially the clamps.** Roll each unit through the Tipple by hand to check for clearance. Note that the distance from the top of the rails to the bottom of the clamps is 3-11/16". The distance between the clamps is 2-5/16".
- **Do not operate the first version of the Lionel Dash-9 locomotives (introduced in 1996) through this accessory.** They exceed the size limits of the Tipple. Use caution when operating the later version of the Dash-9 locomotives (introduced in 2000) through the Tipple. The cabs of these locomotives may strike the clamps.
- **Only operate this accessory with rotary coupler-equipped Bathtub Gondolas.** To avoid damaging this accessory, do NOT attempt to use any other rolling stock with this accessory. The Bathtub Gondolas were designed to meet precise length and height specifications.
- **Use only Coal Tipple coal.** Small particles will cause the gears to bind. Extra coal is available separately.
- **If you will be emptying many cars at once, do not fill the cars to capacity.** Using less coal will allow the coal to pass through without backing up into the gears.
- **Dump only one car load at a time.** Wait for the coal to flow through the Tipple. Because coal particles may become lodged in the gears, it is important to prevent coal back-ups.

1. Place your string of rotary coupler-equipped bathtub gondolas anywhere in your consist, keeping these cars together.

Place the dual rotary coupler-equipped gondola at the head end of the train, then place the single rotary coupler-equipped gondolas in the following positions. Their non-rotating couplers should be toward the head end of the train. The ends and sides of the cars with the rotating couplers are decorated with colored panels or stencils to indicate this feature.

Note! Each non-rotating coupler is paired with a rotating coupler.

Caution! Be sure that the dual rotary coupler-equipped gondola is first, followed by the single rotary coupler-equipped gondolas. Also, be sure that the non-rotating couplers are at the head end of the consist.

Operating the Lionel Coal Tipple (continued)

2. Use your locomotive to pull your consist up the trestle and carefully position one of the bathtub gondolas on the rotating section of track.

Be sure that the bathtub gondola is centered in the Tipple and that the brakewheel will clear the structure when the Tipple is in operation. A red L.E.D. will turn on to indicate that the car is in the proper position.

Note! The Coal Tipple will not operate if the L.E.D. is off.

3. Press the button on the Tipple controller to start the action.

The Coal Tipple will begin to turn the gondola upside down, then the car will be clamped to the track. As the gondola rotates, the red L.E.D. will turn off, and the coal will pour into the chute below. The accessory will stop, leaving the car in the upside-down position.

Hint! From time to time, you will hear the clicking of the clutch mechanism. To correct this situation, rock the Coal Tipple back and forth by pressing the controller button. Use less coal to avoid coal back-ups.

4. Press the button one more time, and the accessory will reset itself, returning the car to the upright position and releasing the clamps.

Note! Routinely clear away any remaining coal from the Tipple, chute, and collection bin to prevent coal particles from backing up into the gears. For a further discussion on how to fix coal binding, see page 10.

Servicing the L.E.D. on the Lionel Coal Tiddle

The L.E.D. on your Coal Tiddle turns on only when a rotary coupler-equipped bathtub gondola is in the proper position. When the accessory is in the process of turning the gondola upside-down, the L.E.D. will

turn off. The L.E.D. is not user serviceable. For service, refer to the Lionel Service section of this manual and visit your Authorized Lionel Service Center.

Correcting bound gears

If coal causes the gears to bind, you will hear the clicking of the clutch mechanism. The clutch mechanism prevents the motor from seizing. To correct this situation, rock the coal tiddle back and forth by pressing the controller button. In the future, use less coal to avoid coal back-ups.

If you hear the clutch mechanism at the end of the cycle, and the Tiddle has not completed its rotation, you will need to

adjust the large cam gear located beneath the back panel. To access the cam gear, press down the four tabs and remove the panel. The cam gear is found to the right. Disengage the cam gear by lifting up the shaft that holds the small gear in place. Rotate the gear so that the mark on the large gear lines up with the alignment mark on the Tiddle. This alignment is illustrated in Figure 6.

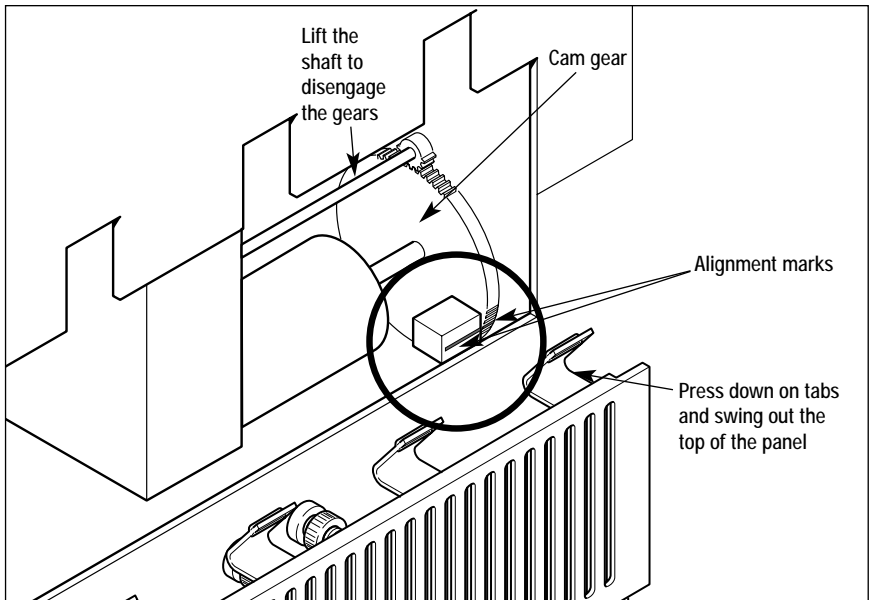


Figure 6. Aligning the gears

Maintaining and Servicing your Lionel Coal Tipple

Only a small amount of regular servicing is required. Simply keep the electrical contact strips clean and the gears lightly lubricated using the a Lionel Lubrica-

tion/Maintenance Kit (available separately, part no. 6-62927). Refer to Figure 7 for the locations of these parts.

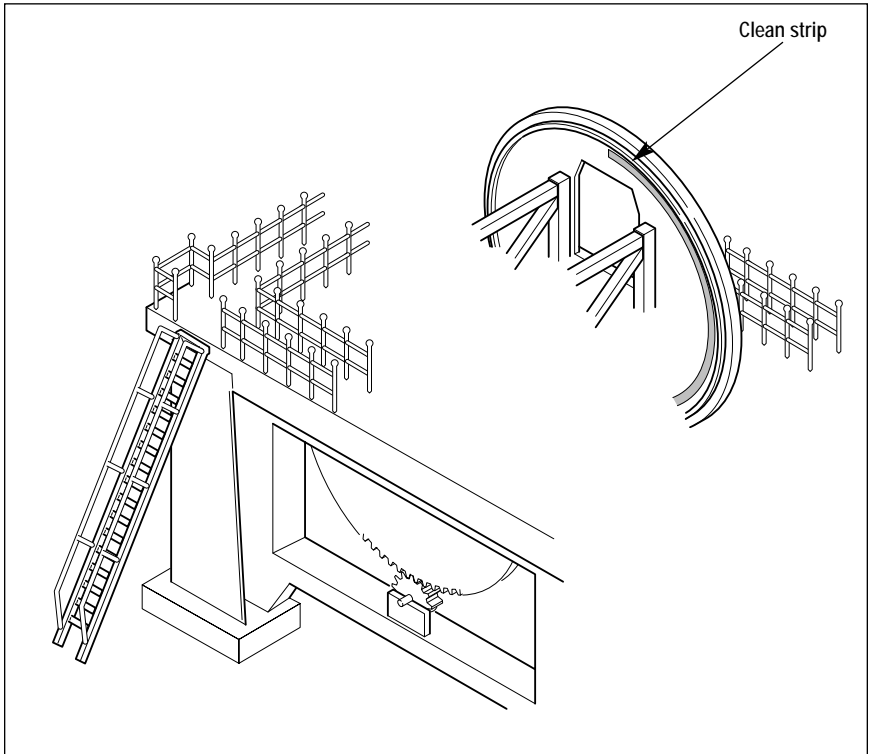


Figure 7. Maintaining your Coal Tipple

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 _____

