#397
Operating Coal Loader
Owner’s Manual
Congratulations

Congratulations on your purchase of the Lionel #397 Coal Loader. This tough accessory features die-cast, durable plastic, and stamped metal construction with a powerful motor. Place the Operating Coal Loader on any O27 or O gauge three-rail layout with 12-18 volts (AC) available.

Inventory of parts

- 397 Coal Loader
- Control switch
- Three wires
- Bag of coal
- Owner's manual
- Warranty card
- Service Center list

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Installing your Operating Coal Loader

Place the Operating Coal Loader anywhere on your layout! There is no need to build special sidings or spur lines because loading and unloading are done at the same place, right in front of the Coal Loader! However, a section of remote control track (available separately, part no. 6-12746 for O27 gauge, or 6-65530 for O gauge) must be placed in front of the Coal Loader so that coal cars can be unloaded into the bin. We recommend that you have at least one section of straight track on both sides of the Uncoupling Track section because it is difficult to couple cars on a curve.

When placing the Coal Loader on your layout, be sure that the accessory is far enough away from the track to avoid a collision, but close enough for the coal cars to unload into the bin.

To prevent the Coal Loader from moving, drive screws through the four holes in the base to secure the Coal Loader to your layout. The rubber gaskets will reduce noise caused by the vibration of the accessory.
Using the Coal Loader in conjunction with other accessories

For even more fun, use the Operating Coal Loader in conjunction with another exciting accessory.

- Place the Operating Coal Loader next to the #456R Operating Coal Ramp (available separately, part no. 6-14005). Simply mount the bin onto two posts that are inserted into the rubber grommets on the base of the Coal Loader. Refer to Figure 1 for the set up of these accessories and the track layout. Empty the hopper into the Operating Coal Ramp, and the coal will pour into the Coal Loader below!
- Place the Coal Load under the incredible Lionel Rotary Coal Tipple (available separately, part no. 6-32910)! Position the Coal Loader under the Tipple so that the Tipple chute empties into the bin as shown in Figure 2.

Figure 1. Set up of the Coal Loader and the #456R Operating Coal Ramp

Figure 2. Set up of the Coal Loader and the Rotary Coal Tipple
Wiring your Operating Coal Loader in a conventional environment

Your Operating Coal Loader will operate best at 12-18 volts (AC). Power this accessory with a separate accessory power supply or through track power with a Lionel LockOn. To adjust the speed at which the accessory loads the coal, variable voltage control is recommended. Follow these steps and refer to Figure 3 as you wire the Coal Loader.

**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.

1. Attach a wire to the POWER/A terminal on your power supply or to the #1 spring clip terminal on the LockOn and connect it to the small switch that was included with this accessory.  
   *Spring clip terminal 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 check if the hold is secure.

2. Attach another wire to the opposite terminal on the small switch and connect it to one of the thumbscrew terminals on the accessory.  
   *Thumbscrew connections* : Loosen the nut to expose the hole in the shaft. Insert the bare end of the wire into the hole, then tighten the thumbscrew to secure the wire.

3. Attach the final wire to the COMMON/GROUND/U terminal on your power supply or to the #2 spring clip terminal on the LockOn and connect it to the other thumbscrew terminal on the Coal Loader.  
   Your Coal Loader is now wired for operation in the conventional environment (without Command Control).

![Figure 3. Conventional wiring diagram](image)
Operating your Coal Loader in a conventional environment

Fill the bin with Lionel Coal (additional coal available separately, part no. 6-12732), throw the switch, and watch the action! When you throw the switch (wired between the power terminal and the accessory), the motor will turn on, activating the conveyor belt and vibrating the coal to the top of the bin.

Use only Lionel Artificial Coal with this accessory. Other materials will clog the conveyor.
Wiring your Coal Loader with an SC-1 Switch and Accessory Controller

Wire your Coal Loader to an SC-1 Switch and Accessory Controller to operate this accessory in the TrainMaster Command Control environment. Follow these steps and refer to Figure 4 as you make these connections.

1. Attach a wire to one of the thumbscrew terminals on your Coal Loader and connect it to an AUX1, momentary position on the SC-1 as illustrated in Figure 4.

2. Attach another wire to the remaining thumbscrew terminal on the Coal Loader and connect it to the POWER/A terminal on your power supply.

3. Attach another wire to the COMMON/GROUND/U terminal of the power supply and connect it to a COMM terminal on the SC-1.

Figure 4. SC-1 wiring diagram
Wiring your Coal Loader with an SC-2 Switch and Accessory Controller

Wire your Coal Loader to an SC-2 Switch and Accessory Controller to operate this accessory in the TrainMaster Command Control environment. Follow these steps and refer to Figure 5 as you make these connections.

1. Attach a wire to one of the thumbscrew terminals on your Coal Loader and connect it to an Accessory 1, momentary position on the SC-2 as illustrated in Figure 5.

2. Attach another wire to the remaining thumbscrew terminal on the Coal Loader and connect it to the POWER/A terminal on your power supply.

3. Attach another wire to the COMMON/GROUND/U terminal of the power supply and connect it to a COMMON terminal on the SC-2.

Figure 5. SC-2 wiring diagram
Assigning an accessory ID# to the Coal Loader

Follow these steps to assign an accessory ID# to the Coal Loader. The ID# is assigned the same way, regardless of whether you are using an SC-1 or SC-2. Refer to the SC-1 or SC-2 instruction manual for additional information.

1. Turn on the Command Base.
2. Be sure that the SC-1 or SC-2 unit has power.
3. Slide the RUN/PGM switch to PGM on the SC-1 or SC-2.
4. Press ACC on the CAB-1 Remote Controller.
5. Choose an ID# and enter it in with the numeric keypad on the CAB-1.
   (Choose a number between 1 and 99.)
6. Press SET on the CAB-1 remote.
7. Slide the RUN/PGM switch to the RUN position.

The accessory ID# has been set.
Operating your Coal Loader in a Command environment

To operate the Coal Loader with your CAB-1 remote and your SC-1 or SC-2 unit, address the Coal Loader by pressing ACC and entering the ID# on the CAB-1 remote. Press and hold the AUX1 button to operate the conveyor belt. When you release AUX1, the conveyor belt will stop.

Maintaining your Coal Loader

If the conveyor belt sticks or hesitates, dust the inside surface of the conveyor belt with cornstarch or talcum powder. To prevent coal particles from building up, do not lubricate the conveyor belt with oil or grease.
**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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