Lionel M-497 Jet-Powered Rail Car Owner’s Manual
Congratulations!

Congratulations on the purchase of your M-497 Jet-Powered Rail Car. With the streamlined cowl on the front end and the eye-catching jet engine pod on the roof, this new jet-powered car is a strikingly unique car to add to your layout.

LOCOMOTIVE FEATURES:

- Transformer controlled forward, neutral and reverse operation
- Electronic e-unit with direction lock
- Realistic jet engine sounds
- Simulated jet engine mounted on roof with illumination
- Pullmor motor
- Operating headlight
- Operating coupler on rear
- Marker lights
- Interior light
- Magne-Traction
- Traction tires
- Metal frame
- On/Off sound switch
- Volume control
- Minimum Curve: 0-36

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Transformer operations

Running your locomotive with a Lionel transformer

**Caution!** Do not power your locomotive with direct current (DC). Damage to sensitive electronic components may occur.

1. **PLACE YOUR LOCOMOTIVE ON LIONEL OR LIONEL-COMPATIBLE O GAUGE TRACK.**

2. **THROTTLE UP YOUR LOCOMOTIVE WITH YOUR TRANSFORMER.**

Your locomotive is designed to operate on 8-18 volts alternating current. Virtually all Lionel and Lionel-compatible alternating current transformers are suitable.

Throttle up your locomotive and it will begin to move in the forward direction. Adjust track voltage until your locomotive moves at your desired speed. To increase speed, increase track voltage. To decrease speed, decrease voltage.

Pressing the DIRECTION button on your transformer will sequence the Electronic E-unit to the next operating state in the repeating sequence of: forward, neutral, reverse, neutral, and so on.

To stop the locomotive, cycle the Electronic E-unit to neutral or turn-off track power.
**Transformer operations**

**Locking your locomotive into forward direction only operation**

When the Electronic E-unit Direction Lock switch is in the RUN position, your locomotive sequences through a repeating pattern of operations: forward, neutral, reverse, neutral, and so on.

To lock your locomotive into forward direction only operation, you can deactivate the Electronic E-unit’s sequencing function. Follow the steps below and refer to figure 1 for the location of the Electronic E-unit Direction Lock switch.

**Note!** Always turn off track power before removing the locomotive from the track.

1. Turn off track power, wait three seconds, and remove the locomotive from the track. Now slide the Electronic E-unit Direction Lock switch to the LOCK position. Your locomotive is now locked into forward direction only operation.

2. Place your locomotive back on the track. Power up the track and press the direction button on your transformer to confirm that the locomotive is now locked into forward direction only operation.

To restore the forward-neutral-reverse sequence, turn off power and remove your locomotive from the track. Slide the Electronic E-unit Direction Lock switch back to the RUN position. Place the locomotive back on the track and restore track power.

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**Figure 1. Switch locations**

![Diagram of switch locations](image)
Transformer operations

Using your locomotive’s magnetic coupler

Your Lionel locomotive 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 Track section (available separately; 6-65149 or 6-12746 for 0-27 gauge; 6-65530 for O gauge; or 6-12020 and 6-12054 for FasTrack layouts).

Place your locomotive’s coupler trigger disc over the central coil of a Remote-Control Track section and press UNCOUPLE on the controller. The magnetic field pulls the disc downward, and the knuckle opens.

One operating technique favored by Lionel railroaders is the “moving uncouple.” Press the UNCOUPLE button as the locomotive passes over a Remote-Control Track section. The magnetic field will open the coupler; the consist remains behind as the locomotive moves on. But be careful—the speed of a newly uncoupled and moving locomotive can increase dramatically.

Figure 2. Magnetic coupler operation
Place the sound switch in the SND position. Refer to Figure 1 on page 5 for the location of the switch. As the Jet-Powered Rail Car moves around the track, the sound level will increase.

To adjust the Jet sounds, use the volume control knob located on the underside of the locomotive. See Figure 1 on page 5 for the location of the Volume Control Knob.

To deactivate the sounds, slide the sound switch to the NO SND position.
Operating and servicing your locomotive

Lubricating your locomotive

The life and performance of your locomotive depends to a considerable extent upon proper care and lubrication of the motor and other moving parts. Since your locomotive might have been stored on the dealer's shelves for some time, be sure to lubricate it according to the lubrication chart in Figure 3 on page 8 before running the locomotive for the first time. Put a small dab of Lionel Lubricant at all points marked “L”. Using the point of a pin or a thin wire, put a drop of Lionel Oil at points marked “O”. Lubricate carefully but never to excess. A small amount of oil or lubricant, properly applied, goes a long way. Be careful not to get any oil or lubricant on the running surfaces of the wheels or on the rails, or your locomotive will lose traction and do not lubricate locomotive rollers.

The motor requires occasional lubrication with a few drops of light machine oil. See Figure 4 on page 9. To get at the motor the locomotive body must first be removed by removing the screws from the underside of the frame at both ends of the powered locomotive.

A complete Lubrication and Maintenance Kit No. 927 (6-62927) which contains all the material and equipment necessary to keep your locomotive in top notch condition may be obtained from your authorized Lionel dealer or service station.

The locomotive is illuminated by 14 volt, bayonet-base lamps (No. 600-0363-300), available at your authorized Lionel dealer or service station. To replace your lamps, see the instructions on page 10.

When you find that the lubrication points illustrated in Figure 3 appear dry, lubricate your locomotive after you have removed any accumulated dirt and dust. There are two basic rules to keep in mind when you are lubricating your locomotive: use only a small amount of lubrication and avoid getting grease or oil on your locomotive’s wheels, roller pick-ups, or the track.

Figure 3. Underside details and lubrication points
Operating and servicing your locomotive

Lubricating your locomotive’s Pullmor motor armature

Your locomotive will require occasional lubrication of its Pullmor motor armature. If you hear excess noise during operation, or if the locomotive slows down intermittently, you may need to oil the top armature bearing.

1. Remove the locomotive’s body screws. See Figure 3 on page 8 for the screw locations. Carefully lift the shell away from the frame.

2. Apply a small amount of Lionel oil (two drops) in the hole at the top of the motor. See Figure 4.

3. Replace the body, securing it with the two body screws.

**Note!** To prevent damage to the locomotive body, do not overtighten the body screws.

Figure 4. Pullmor motor lubrication
Replacing your locomotive’s lamps and LEDs

Your locomotive is illuminated by three 14-volt lamps. During the course of normal operations, they may require replacement.

1. Remove the locomotive’s body screws. See Figure 3 on page 8 for the screw locations. Carefully lift the shell away from the frame.

2. To remove the lamp, gently push the lamp down and turn counter clockwise to disengage the lamp from the socket.

3. Replace it with Lionel part no. 600-0363-300, available from your authorized Lionel dealer or service station, or from Lionel Customer Service in Chesterfield, MI. See Instructions for Obtaining Service on page 12 for more information.

4. Replace the body, securing it with the two body screws.

**Note!** To prevent damage to the locomotive body, do not overtighten the body screws.

The LEDs in the jet engine are expected to last for the life of the jet-powered rail car and are not user serviceable.
Operating and servicing your locomotive

Replacing the traction tires

Your locomotive is equipped with traction tires to increase the tractive effort and allow it to pull more cars at one time.

During the course of normal operations, the traction tires may become worn out. Replacement traction tires are included with the locomotive. We recommend that you have the traction tires (610-6001-065) replaced by an authorized Lionel dealer or service station because the truck and side frames must be removed to access the wheels. See Instructions for Obtaining Service on page 12 for more information.
Lionel Limited Warranty Policy & Service

This Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, with the exception of LIGHT BULBS, LED's & TRACTION TIRES are warranted to the original owner-purchaser for a period of one year from the original date of purchase against original defects in materials or workmanship when purchased through a Lionel Authorized Retailer®.

This warranty does NOT cover the following:

- Normal wear and tear
- Light bulbs or LED's
- Defects appearing in the course of commercial use
- Damage resulting from abuse/misuse of the product

Transfer of this product by the original owner-purchaser to another person voids this warranty in its entirety. Modification of this product in any way; visually, mechanically or electronically, voids the warranty in its entirety.

Any warranted product which is defective in original materials or workmanship and is delivered by the original owner-purchaser (this warranty is non-transferable) to Lionel LLC or any Lionel Authorized Service Station MUST be accompanied by the original receipt for purchase (or copy) from an Authorized Lionel Retailer®, will at the discretion of Lionel LLC, be repaired or replaced, without charge for parts or labor. In the event the defective product cannot be repaired, and a suitable replacement is not available, Lionel will offer to replace the product with a comparable model (determined by Lionel LLC), if available. In the event a comparable model is not available the customer will be refunded the original purchase price (requires proof of purchase from the Authorized Lionel Retailer®). Any products on which warranty service is sought must be sent freight or postage prepaid (Lionel will refuse any package when postage is due). Transportation and shipping charges are not covered as part of this warranty.

NOTE: Products that require service that do not have a receipt from an LIONEL AUTHORIZED RETAILER® will be required to pay for all parts required to repair the product (labor will not incur a charge) providing the product is not older than 3 years from date of manufacture and is within 1 year from date of purchase. A copy of the original sales receipt is required.

In no event shall Lionel LLC be held 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 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 LLC product is required, bring the item, along with your DATED sales receipt and completed warranty information (at the bottom of this page) to the nearest Lionel Authorized Service Station. Your nearest Lionel Service Station can be found by calling 1-800-4-LIONEL or by accessing the website at www.lionel.com.

If you prefer to send your Lionel product directly to Lionel, for repair you must FIRST call 586-949-4100 extension 9105 or FAX Lionel at 586-949-5429 or write to Customer Service, 26750 Twenty Three Mile Road, Chesterfield, MI 48051-2493. Please have the 6-digit Lionel product number, the date of original purchase, the dealer where the item was purchased and what seems to be the problem. You will receive a return authorization (RA) number to ensure your merchandise will be properly tracked and handled upon receipt at Lionel LLC.

Once you have your Return Authorization (RA) number, make sure the item is packed in its original Styrofoam inner container which is placed inside the original outer display box (this will help prevent damage during shipping and handling). This shipment MUST be prepaid and we recommend that it be insured with the carrier of your choice.

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 Lionel LLC’s Authorized Service Stations after its warranty has expired. A reasonable service fee should be expected once the product warranty has expired.

Warranty Information

Please complete the information below and keep it, along with your DATED ORIGINAL SALES RECEIPT. You MUST present this form AND your DATED SALES RECEIPT when requesting warranty service.

* A complete listing of Lionel Authorized retailers can be found by calling 1-800-4-LIONEL or by visiting our website at www.lionel.com.

Products that are more than 3 years old, from date of manufacture, are not applicable for warranty coverage, even if they have never been sold prior to this date. (Under no circumstance shall any components or labor be provided free of charge.)

Name

Address

Place of Purchase

Date of Purchase

Product Number

Product Description

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