DIE-CAST 4-4-2 ENGINE AND TENDER WITH SOUND OF STEAM

1 SOUND OF STEAM CONNECTION

The tender houses an electronic circuit and speaker which produce a realistic steam sound when the engine is running. The circuit receives power directly from the rails so that no batteries are required.

In order for the Sound of Steam to operate, the wire coming from the cab of the locomotive must be connected to the wire coming from the tender. The connection is made by a push-in plug attachment at the end of each wire.

The steam sound is synchronized to the smoke coming out of the smokestack and to the speed of the train. Starting the locomotive slowly will cause a low-volume hissing to be produced, which is rhythmically changed to a louder chugging sound as the speed is increased.

2 REVERSING THE LOCOMOTIVE

The locomotive is equipped with a reversing “E-Unit” which is operated by the “direction” control on your transformer, or by moving the transformer voltage control to the OFF position and then back on again. If you want to operate the train in one direction only, which is necessary if you have automatic stations or insulated blocks in your layout, you must disconnect the E-Unit. This is done by moving the E-Unit lever to its OFF position. The E-Unit lever is located on the top of the locomotive. Make sure the locomotive is moving in the desired direction, stop it without operating the “direction” control (either turn off the power or hold the locomotive with hand), then move the E-Unit lever to OFF. Because the E-Unit works partly by gravity, it will not operate properly if the locomotive is held on its side or upside down.

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3 SMOKE GENERATOR

The locomotives are equipped with the latest type smoke generators and are designed for use with the new Lionel No. 2909 smoke-producing fluid furnished in squeeze bottles. Place four to eight drops of smoke fluid in the smoke generator through the smokestack. Smoke will be produced after track power is applied for several seconds. The locomotive will puff only when the wheels are turning. More than eight drops of fluid may cause the generator to overflow and the fluid to spill from the locomotive. If the smoke generator should become flooded, lift the locomotive slightly off the track and increase the voltage so that the drive wheels turn rapidly. After a few minutes, the locomotive will begin to puff smoke properly.

The new No. 2909 "Smoke Liquid" contains a light liquid petrolatum. Any stains can be removed with standard cleaning fluids.

4 LUBRICATION, MAINTENANCE AND HEADLAMP REPLACEMENT

The moving parts of your locomotive such as gears, axles, side rods, and motor armature shaft require periodic lubrication.

When operating the train regularly, inspect these parts frequently to make sure they are not dry. Remove accumulations of dust and dirt. Also, clean and lubricate the locomotive after storage. Use only small quantities of lubricant with each application. DO NOT OVER LUBRICATE. Keep lubricant off motor brushes, wheel rims, track rails, and contact points.

To replace the headlamp, remove the two front truck screws. Carefully slide the front truck assembly off the linkage rods. Lift the smoke unit out of the cab just far enough to pull out the lamp. Pull the lamp straight out and replace it with a new Lionel No. 161-300 lamp. Do not twist the lamp or it may break. Install the smoke unit. The smoke stack must line up with the opening in the top of the cab. Replace the front truck, making sure the linkage rods go into the holes in the front truck. Install the two front truck screws. The lug wired from the smoke unit must fit through the slot in the front truck and be secured under one of the front truck screws. Replacement lamps can be obtained from your local Lionel dealer or the factory service department.