

"200" SERIES ALCO DIESEL LOCOMOTIVES

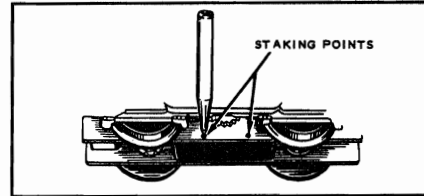
The "200" series diesel locomotives, modeled on the Alco FA-2, 1,600 HP diesels, was initiated in 1957. Although somewhat similar in outline to the earlier models of this locomotive, produced between 1950-1954 and described in Section LOC-2023, the locomotives in the "200" series were completely redesigned in every respect and their components are not interchangeable with those of the earlier models.

In 1957 and 1958 several versions of this locomotive were produced, most of them with both P (power) and T (trailer) "A" units; some with just "P" units. Two of the locomotives, Nos. 202 and 212 were made without front couplers and were equipped with a double-wound field and a two position reverse.

In all 1958 models of these locomotives a change was made in the design and method of mounting the lamp socket to the locomotive frame. This change was made to provide space for mounting of the horn relay and battery in Nos. 208 and 209 but was incorporated as well in all locomotives of this type.

A characteristic service problem in these locomotives was uneven operation in the forward and reverse directions. The cause of this frequently was a loose bottom bearing plate which allowed the bottom end of the armature shaft to get out of proper alignment with the worm wheel. If continued, such misalignment causes rapid wear of the brass worm wheel and, in extreme cases, jamming of the motor.

In most cases, if the worm wheel is in good condition, repair can be made by eliminating the excessive "play" of the bottom bearing plate by denting the motor side plates with a sharp pin punch.



In 1959, power trucks used in "200" series motors were redesigned to eliminate the bottom thrust bearing and to replace it with a sleeve bearing mounted in the top plate of the truck. Older trucks may be converted to this new design by the installation of Motor Frame and Field Assembly No. 1055-110 (with a single-wound field) or a No. 219-113 (with a double-wound field). If the old armatures are retained a Nylon Sleeve No. 1055-126 should be placed on the armature shaft as a spacer to provide clearance between the armature winding and the top plate of the truck.

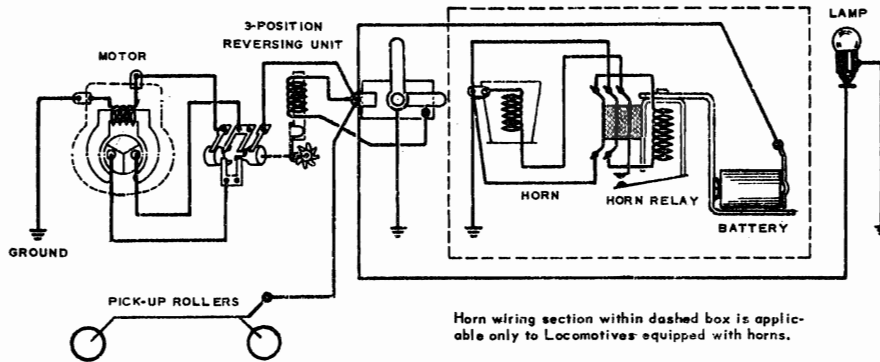
In the same year collector trucks were also redesigned to provide a one-piece molded construction but the old unit and the new trucks are interchangeable as a complete unit.

Locomotives in this series have been made in several varieties: with and without horns; with two-position or three-position reversing units and with no reverse at all; with two, one or no magne-traction axles; and with various combinations of "A" and "B" units. The locomotives and their principal features are listed in the table below.

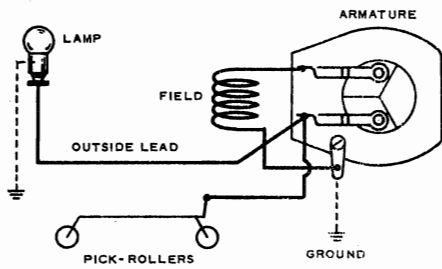
CAT. NO.	NAME	YEAR	UNITS	MAGNETIC AXLES	TYPE OF REVERSE	HORN
202 *	Union Pacific	1957	A	One	2-position	No
204	Santa Fe (Blue & Gold)	1957	A-A	Two	3-position	No
205	Missouri Pacific	1957	A-A	Two	3-position	No
208	Santa Fe (Blue & Gold)	1958	A-A	Two	3-position	Yes
209	New Haven	1958	A-A	Two	3-position	Yes
210	Texas Special	1958	A-A	Two	3-position	No
212 *	U.S. Marine	1958	A	One	2-position	No
216	Burlington	1958	A	Two	3-position	No
217	Boston & Maine	1959	A-B	Two	3-position	No
218	Santa Fe (Red & Silver)	1959	A-A	Two	3-position	Yes
219	Missouri-Pacific	1959	A-A	Two	2-position	No
220	Santa Fe	1959	A-B	Two	3-position	No
224	U.S. Navy	1960	A-B	Two	3-position	No
225	Chesapeake & Ohio	1960	A	Two	2-position	No
226	Boston & Maine	1960	A-B	Two	3-position	Yes
227 *	Canadian National	1960	A	None	None	No
228	Canadian National	1960	A	Two	2-position	No
229	Minneapolis & St. Louis	1961	A	One	2-position	Yes
230 *	Chesapeake & Ohio	1961	A	Two	2-position	No
231	Rock Island	1961	A	Two	2-position	No
1055 *	Texas Special	1959	A	None	None	No
1065 *	Union Pacific	1961	A	None	None	No

* No front couplers

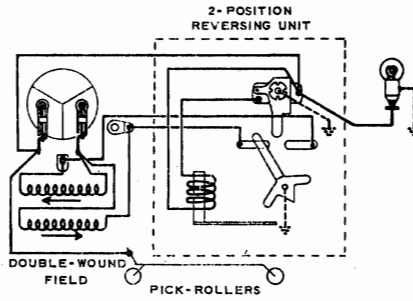
Wiring Diagram of Locomotives equipped with 3-Position Reverse



Wiring Diagram of Locomotives with no Reversing Mechanism



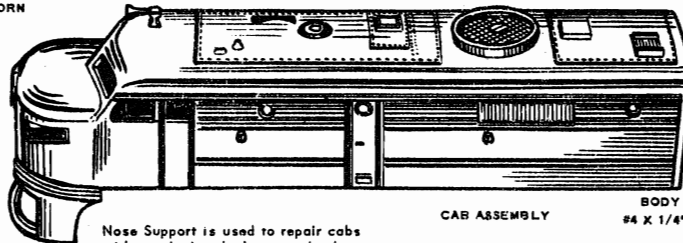
Wiring Diagram of Locomotives with 2-position Reverse



ORNAMENTAL HORN 50-100



NOSE SUPPORT 204-78



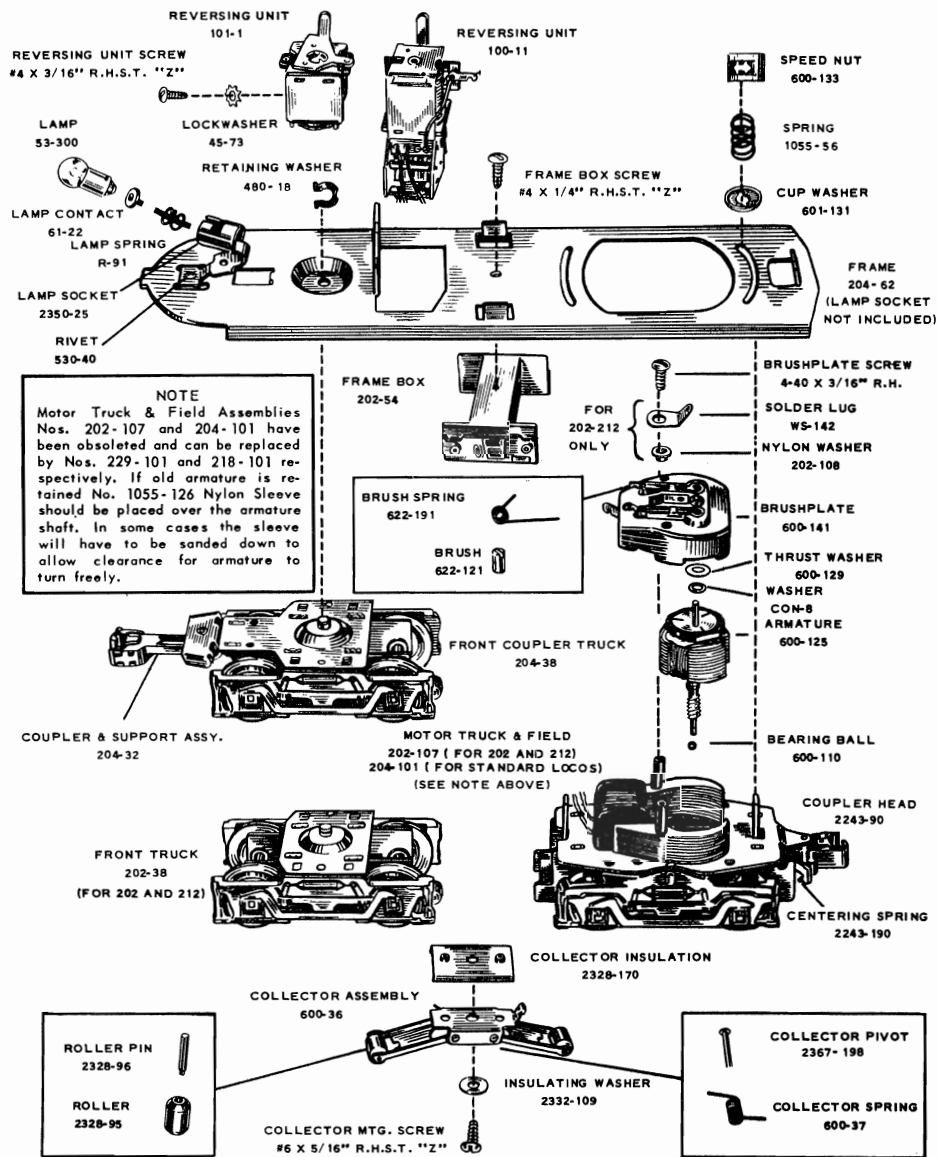
CAB ASSEMBLY

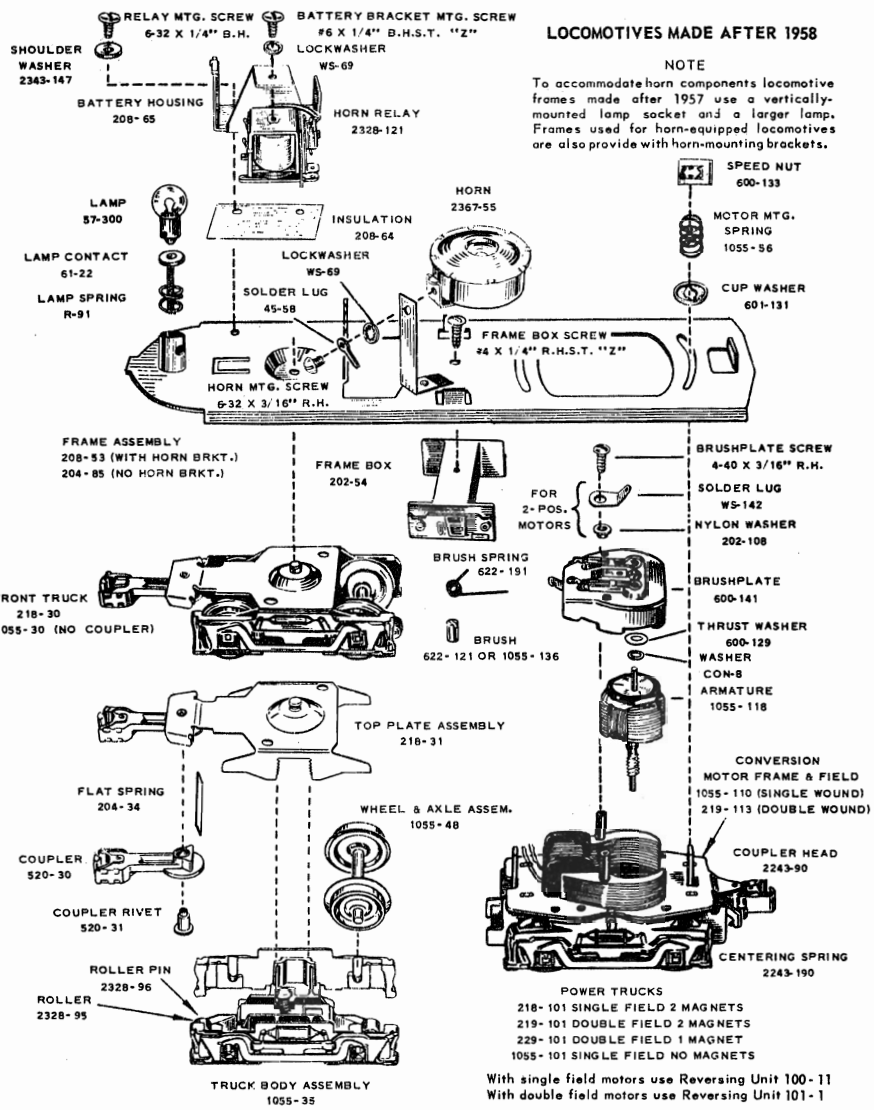
**BODY MTG. SCREW
#4 X 1/4" R.H.S.T. "Z"**

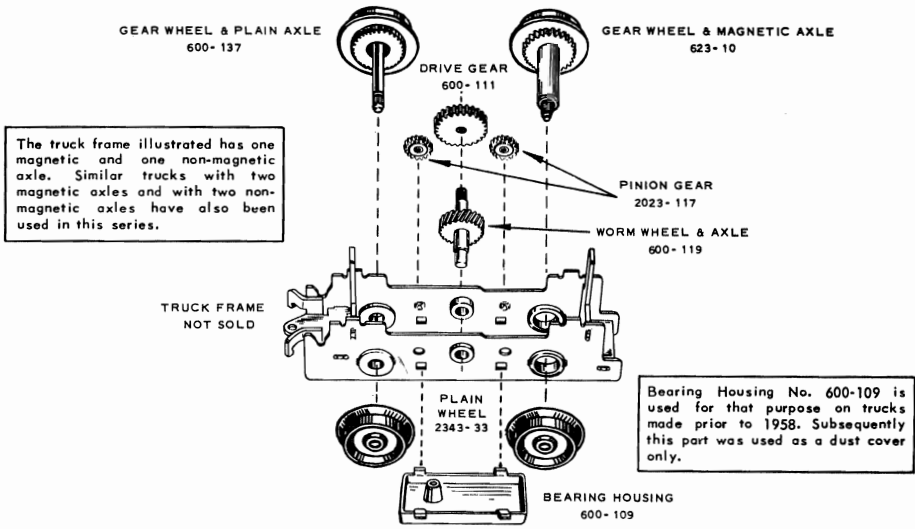
Nose Support is used to repair cabs with cracked or broken coupler bar. Cut off the broken ends at dotted line, file smoothly and install Nose Support.

For complete listing of cab numbers see first page of the price list.

LOCOMOTIVES MADE PRIOR TO 1958





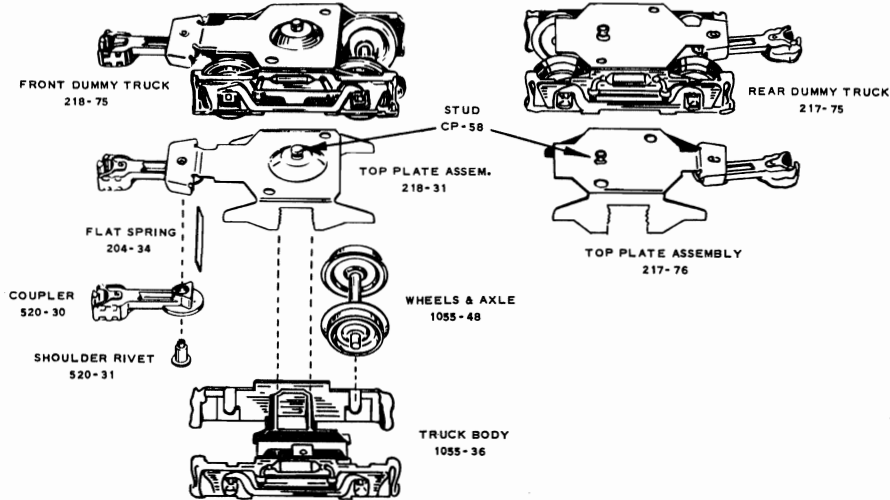
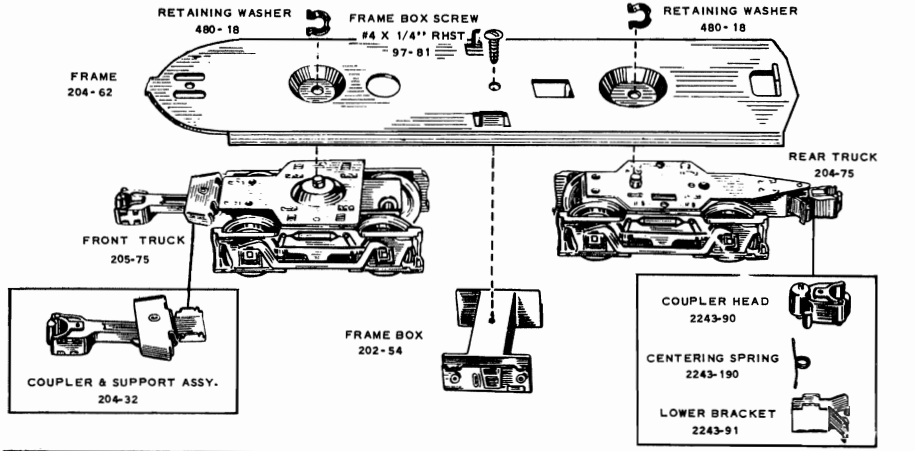


"200" SERIES DUMMY "A" AND "B" UNITS

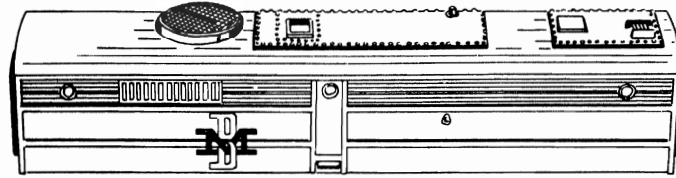
The dummy "A" units in the "200" series are catalogued by letter T (for "Trailer"). The bodies are identical with those used for the powered "A" units (catalogued as P) but the frames are designed for mounting of two non-powered trucks. Two sets of trucks have been used matching locomotives made

before and since 1958. The trucks, however, are interchangeable as complete units.

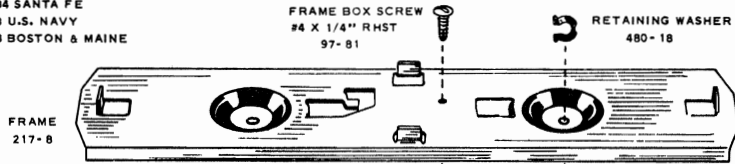
The "B" units, catalogued by letter C, have also been made for several of the "200" series locomotives, as listed on the first page of this section.



"200" SERIES DUMMY "B" UNIT (C)



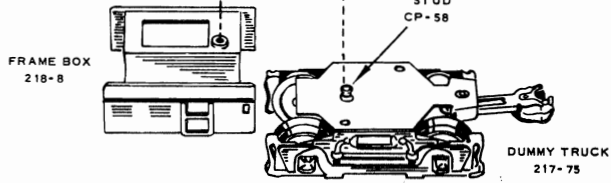
CAB
 217-3 BOSTON & MAINE
 218-34 SANTA FE
 224-3 U.S. NAVY
 226-3 BOSTON & MAINE



FRAME
 217-8

FRAME BOX SCREW
 #4 X 1/4" RHST
 97-81

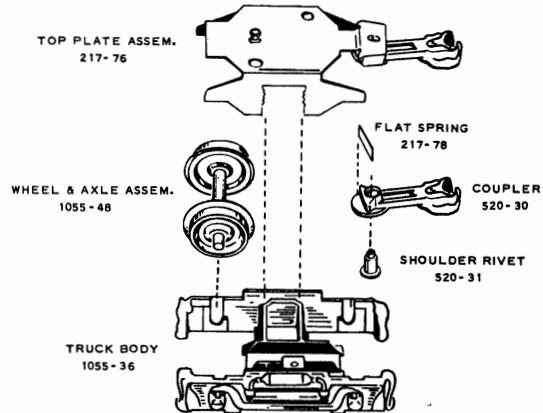
RETAINING WASHER
 480-18



FRAME BOX
 218-8

STUD
 CP-58

DUMMY TRUCK
 217-75



TOP PLATE ASSEM.
 217-76

WHEEL & AXLE ASSEM.
 1055-48

TRUCK BODY
 1055-36

FLAT SPRING
 217-78

COUPLER
 520-30

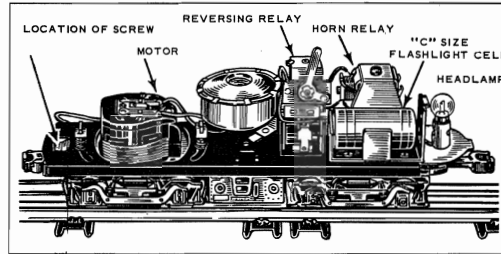
SHOULDER RIVET
 520-31

LIONEL ALCO DIESEL LOCOMOTIVE

INTRODUCTION

Lionel Alco Diesel locomotives are modeled on the 1,500 horsepower general-purpose freight and passenger locomotives built by the American Locomotive Company and used by many American railroads.

These locomotives are designed to operate on the sharp-curved Lionel "027" track, but will run as well on "0" or "Super-0" track. The operating voltage of this locomotive ranges from 9 to 14 volts, depending on the load.



MAGNE-TRACTION

Like most modern Lionel locomotives, the power sections of Alco diesels are equipped with Magne-Traction which means that their driving wheels are magnetized to grip the track more securely, to enable the locomotive to pull heavier loads and to negotiate steeper grades without slipping on the track. Alco diesels are generally able to pull the trains with which they are sold up the grade provided by Lionel No. 110 Trestle Set. With heavier loads, however, the grade may have to be decreased.

Be careful not to let pins, paper clips, carpet tacks or other small iron objects to come in contact with the steel parts of the locomotive or they will be attracted to the magnetized wheels, gears, or axles and may interfere with action of the locomotive.

NOTE: *Magne-traction is not effective on aluminum, brass or other non-ferrous rails.*

COUPLING and UNCOUPLING

Lionel Alco diesels are equipped with self-centering fixed knuckle couplers which will mate automatically with any operating knuckle coupler. To couple the locomotive to the train simply push or run it against the mating car. This can be done anywhere along a straight stretch of track, provided that the car coupler is open.

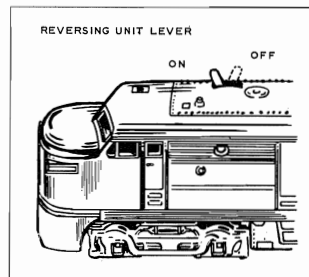
The locomotive is uncoupled from the train by opening the coupler of the car joined to it. To open the car coupler wait until the car truck is over the central electromagnet of a Remote Control Track; then push the "Uncouple" button.

Uncoupling operation can be performed either while the train is standing still, or while it is in motion. If the train is moving, keep one hand on the voltage control and be ready to cut down the track voltage because the locomotive will speed up immediately when its train load is released.

REMOTE CONTROL REVERSING

The reversing unit is a relay which operates whenever electrical current to the locomotive is momentarily interrupted by operating the "Direction" control of the transformer or by moving the transformer voltage control to OFF position. The sequence of its operation is Forward, Reverse, Forward, etc. In other words, each time the "Direction" Control is operated, the locomotive will change direction.

If one constant direction of travel is desired, the reversing relay can be turned off and the locomotive will travel continually in the direction it was when the Reversing Unit Lever was turned to "OFF".
NOTE: *Momentary interruptions of current, caused by "shorts" or dirt and grease on the track rails - locomotive's wheels and center rail rollers, may make the locomotive change direction.*

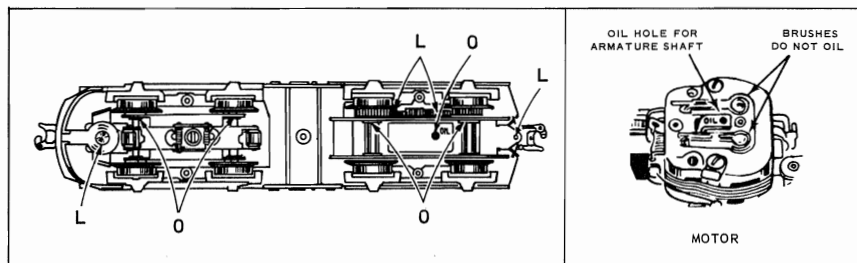


CARE OF THE LOCOMOTIVE

The life and performance of the locomotive depend 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, it's a good idea to lubricate it before running it for the first time. Follow the lubricating chart. Put a small dab of Lionel Lubricant at all points marked "L" and a drop or two of light machine oil at points "O". 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.

Also do not lubricate the contact roller, because a sticky roller axle may build up a layer of dirt which will interfere with electrical contact.

The locomotive motor is lubricated by means of an oil wick which should be replenished occasionally with a few drops of oil applied with a medicine dropper or a wire applicator. A complete lubricating and maintenance kit No. 928, which contains all the materials and equipment to keep your outfit in top notch condition is available from your Lionel dealer or from the Lionel Service Department for \$2.50.



WARNING HORN and HEADLIGHT

This locomotive is equipped with an electric warning horn which is powered by a size "C" flashlight battery and remotely controlled by a built-in relay and the "Whistle" control on your Multi-Control transformer.

The battery is supplied with the locomotive and must be inserted into position before the horn can be sounded. To insert the battery take off the locomotive body by removing the screw on the back end of the locomotive.

The horn will sound whenever the locomotive is tilted to the side or placed upside down. In these positions the relay will close through its own weight.

The battery should be removed before the locomotive is stored away to protect the locomotive against possible battery leaks, particularly if the storage place is damp or unheated.

The battery will last a long time but will eventually wear out even if it is not used. Replace with any good quality size "C" battery.

The headlight is illuminated by a miniature bayonet base lamp. To reach the lamp for replacement take off locomotive body by removing the screw in the back of the locomotive. To remove lamp press it into the socket and turn it slightly to the left. Replace with Lionel lamp No. L57.