NO. 2333 LOCOMOTIVE

Lionel No. 2333 Twin Diesel Locomotive is a faithful scale model of the General Motors diesel locomotive. It consists of two 'A' Units coupled together and similar in outward appearance. The front unit, No. 2333P, is powered by two interconnected and simultaneously operating motors controlled by one reversing 'E-Unit' No. 2333-80. The operating voltage of the locomotive is 9-12 volts, depending on the load. The motors are mounted on the front and rear trucks and coupled to the driving axles by means of a worm and gear having a ratio of 8 to 1. The power unit also carries a rubber-mounted horn together with its controlling relay. Power for the horn is supplied by a size 'D' flashlight cell. The rear unit, No. 2333T, is not powered and contains no controlling mechanism. The 'front' trucks of both units are equipped with electro-magnetic couplers which operate on remote control track sections, picking up power from control rails by means of sliding contact shoes.

Lionel Twin Diesel Locomotives are available with either Santa Fe or New York Central markings. While both types are sold under the catalogue number 2333, service parts for the 'New York Central' locomotive bear 2334 designation.

When checking the performance of the twin diesel locomotive, make sure that both motors operate equally well. Raise the locomotive on blocks and apply voltage gradually. After the locomotive had been 'run in' for about 10 or 15 minutes the starting voltage of the two motors should not vary more than one volt. If the variation is greater than that, clean the commutator and check the brushes and the tension of the brush springs of the slow motor. Occasionally, poor operation of the motor may be due to mechanical interference between the field and the armature caused by loose riveting of the field laminations. The condition is easily repaired by tightening the riveting of the field studs at point 'A,' Figure 1, with a riveting punch or a ball peen hammer.

If one motor does not operate, the locomotive wheels will skid and lose traction. Failure of a motor may sometimes be caused by the field winding coming into contact with one of the brush leads at point 'B.' If the motor operates but fails to turn the wheels examine the driving gear on the armature shaft to see that it is tightly staked to the shaft. If it has become loose, remove the gear, score the end of the shaft with giant nippers, cold chisel, etc., and force the gear back onto the shaft.

WIRING DIAGRAM OF No. 2333 LOCOMOTIVE