

LIONEL SERVICE MANUAL

NO. 345 CULVERT PIPE UNLOADER

No. 345 Culvert Pipe Unloader, first made in 1957, is powered by a vibrator motor, which is similar to the motor used in the Lumber Mill and described in detail on page 1, Section ACC-464.

The moving belt is connected to the magnetic lift through a series of pulleys, as illustrated below. As the traveling crane reaches proper position over the track, the magnetic lift drops to pick up a culvert section. After the traveling crane, carrying the culvert, reaches the unloading platform, the culvert is 'brushed off' the magnet by the edge of the platform.

The proper operating range should be between 9 and 14 volts. Excessively high voltage will cause and mechanism to clatter and may also throw the drive line off its pulley.

**Adjusting Crane Travel**

If the traveling crane does not reach the end of its travel at either the platform end or the track end, first check the base at the points where it is bent to provide track channel. Correcting the bend over the edge of a work bench will adjust the position and alignment of the vertical supports of the traveling

crane structure. An additional adjustment for locating the position of the crane over the track is provided by bending the finger or tab on the beam.

**Installing Drive Line**

The drive line used in this mechanism is a special de-waxed 12-pound test braided nylon spinning line and is available from the Lionel Service Department in 4-foot lengths No. 345-80. The required lengths of line are given in the illustration below. To install drive line, tie the proper length of line to the drive pulley, wind it  $1\frac{1}{2}$  times around the drive pulley and thread it through the eyelet attached to the armature. Stretch until the spring measure  $\frac{7}{8}$  of an inch and crimp the eyelet to hold the line securely in place. To reduce or increase spring tension, adjust the bend of the tab, to which the spring is attached, with a pair of pliers.

**Adjusting the Magnetic Lift**

The magnetic lift must be strong enough to pick the culvert sections and yet to allow them to be brushed off by the edge of the platform. The strength of the magnetic field is adjusted by adding or removing pieces of tape to the face of the magnet.

