35 TAPE READER BASES (FOR ASR SETS)

DESCRIPTION AND PRINCIPLES OF OPERATION

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1. GENERAL

1.01 This section is reissued to include information pertinent to new models and to rearrange text.

1.02 The primary concern of this section is the description and principles of operation of the bases used to mount 35 tape reader units in ASR sets. For information regarding adjustment and lubrication refer to other related 574-223-series sections.

1.03 The 35 tape reader bases include a base plate, gear assembly drive motor, and in some instances, an answer-back unit. In those instances where the answer-back unit is not included, the base provides mounting and drive facilities for a multiple-wire (parallel) distributor. The distributor itself is not part of the base. The primary function of the bases is, of course, to mount a tape reader unit in an ASR set. Some bases will mount two such tape readers.

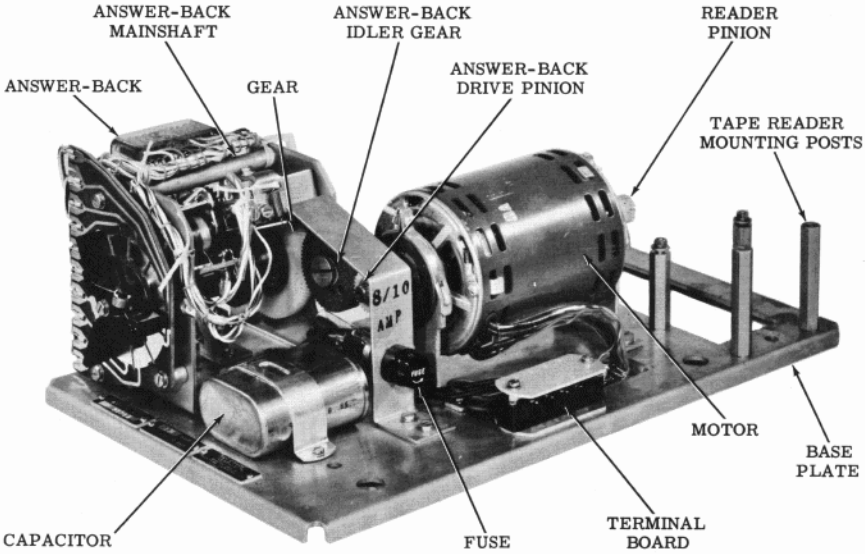

Figure 1 - 35 Tape Reader Base (Typical)

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1.04 The base plate itself is made of sheet metal, formed at the edges for greater rigidity. The dimensions of the plate may vary from one model base to another. Where the base is to mount two tape readers, an extension plate is used.

1.05 The bases also include whatever gears are necessary to drive the answer-back or distributor assemblies as well as the tape reader(s).

1.06 Two types of motors are employed, the type of motor depending upon the particular base. These motors are described briefly in the paragraphs following.

(a) One motor is a 4-pole, split phase (capacitor-run) synchronous unit which operates at 1800 rpm from a 115 volt ± 10%, 60 cps (only) source. It is fitted with sintered bronze bearings. A 3 uf oil dielectric type capacitor provides the phase shift for the capacitor winding. A time delay fuse protects the motor against overload.

(b) A second type motor is a 2-pole, capacitor-start synchronous unit which operates at 3600 rpm from a nominal 115 volt 60 cps source. It is fitted with sintered bronze bearings. An 88-108 uf capacitor provides the phase shift for the start winding. As the motor approaches operating speed the starting winding is opened by contacts of an associated starting relay. A time delay fuse protects the motor against overload.

1.07 For information concerning the answer-back or distributor unit, refer to the pertinent section.

1.08 Terminal boards, capacitors, connectors and various mechanical parts, which may vary from one base to the other, are provided as required.

2. PRINCIPLES OF OPERATION

2.01 The operation of the tape reader base is fairly straightforward (Figure 1). A pinion affixed to one end of the motor shaft drives the tape reader directly or through an intermediate gear arrangement. The answer-back or distributor units may be driven from a rear motor pinion or through the intermediate gear arrangement.

2.02 For information regarding the answer-back or distributor units refer to the appropriate section.