

Title: **AUXILIARY RELAYS FOR 32MP CONTROLS**

Number: **C9016**

Date: **11/13/90**

Supersedes:

Date:

Models Affected: **ALL 32MP CONTROLS**

**PURPOSE:** To inform the field of the proper selection of relays for use with the 32MP controller.

**FINDINGS:** When selecting relays for use with the 32MP, there are some important considerations to keep in mind:

1. **Size the relay coil correctly.** The Input/Output board on the microprocessor has 120 volt outputs that emit a constant leak-by voltage whether they are energized or not. When the output is de-energized, this leak-by, read on digital voltmeters, can read up to full voltage. The actual amperage, however, is very small. It is important to use a relay with a large enough impedance so that the coil is not energized constantly from the leak-by voltage. For example, usually the micro-sized relays will not work correctly with the 32MP, because it takes only a small current to energize the coil. Relays should have a minimum coil VA of 2.0.
  
2. **Size the relay contacts correctly.** The contact electrical rating must be higher than the requirements of the load being energized. On the 32MP Retrofit Kit, we recommend an auxiliary relay (P/N HN61KL616) to be used for pilot duty to pull in a pump starter relay, for the oil pump interlock, etc. The electrical rating for the contacts on this relay is only about three amps @ 250 volts. The contact ratings are always visible on the relay itself. This relay has contacts that are NOT rated for power duty. It should NOT be used for a purge relay (known as KI on wiring diagrams) or for use as a pump starter. If used for this purpose, the relay contacts could weld in the closed position, and problems can result. A suitable relay, in the case of the purge, is a P/N HN61KK912, which has two sets of contacts, both rated for 15 amps @ 227 volts. Chart 1 below lists Carrier relays with the coil and contact ratings:

CHART 1

PART #	COIL VOLTS	COIL SEALED VA	CONTACT AMPS	CONTACT VOLTS	HP
HN61KL616	120v	3.3	3 amps	@ 250v	1/10
HN61KK912	120v	9.5	15 amps	@ 277v	1/2

**FILE INSTRUCTIONS:** Controls, Wiring

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