Number One Air Conditioning Maker

Interoffice Letter

Carrier

17 & 19 SERIES SERVICE ENGINEERS (A)

TECHNICAL SERVICE MANAGERS (A)

ZONE SERVICE MANAGERS (A)

Date: MARCH 2, 1976

From: MERRILL A. LEWIS

Office: MSD SERVICE ENGINEERING - SYRACUSE

Subject: POWER FACTOR CAPACITORS

FIELD EXPERIENCE REPORT 76-2

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Our Starter Application Data (Form 19-3XA, dated 4/73, Catalog No. 511-942) describes the selection and application of power factor correcting capacitors for new 19 Series equipment, and in general, is applicable on a retrofit basis; this information can be used when a customer wants to apply capacitors to existing equipment. We feel that this practice will tend to increase as time goes on because of the energy situation.

When involved in customer requests for capacitor application information for existing installations, the following should be considered (please refer to 19-3XA, Figure 17, "Capacitor Locations").

Actual motor current (as measured with an ammeter at the motor terminals) will always be higher than the current measured upstream of the capacitor.

If the motor current sensing resistor is in the same locations as the overload (with respect to locations A, B, and C in Figure 17), the discussion which applies to the motor overload trip setting (olta) also applies to the motor overload calibration in the machine control module. If the sensing resistor is located as in location "C", the motor overload calibration, in addition to the olta setting, must be changed accordingly.

In this case (location "C"), the motor overloads should be recalibrated by the starter vendor. Recalibration of the module should be accomplished using standard procedures, with the caution that actual motor current be used, whether measured (downstream of capacitors) or calculated (upstream of capacitors times power factor ratio).

If there is an ammeter on the starter door, make sure the customer is aware of whether it is reading actual motor current or a value decreased by the power factor ratio.

Regards,

MAL/kas

FILE INSTRUCTIONS: CONTROLS & WIRING

Action Necessary B – Contents Essential C – Information Only

C-34 (3-74)