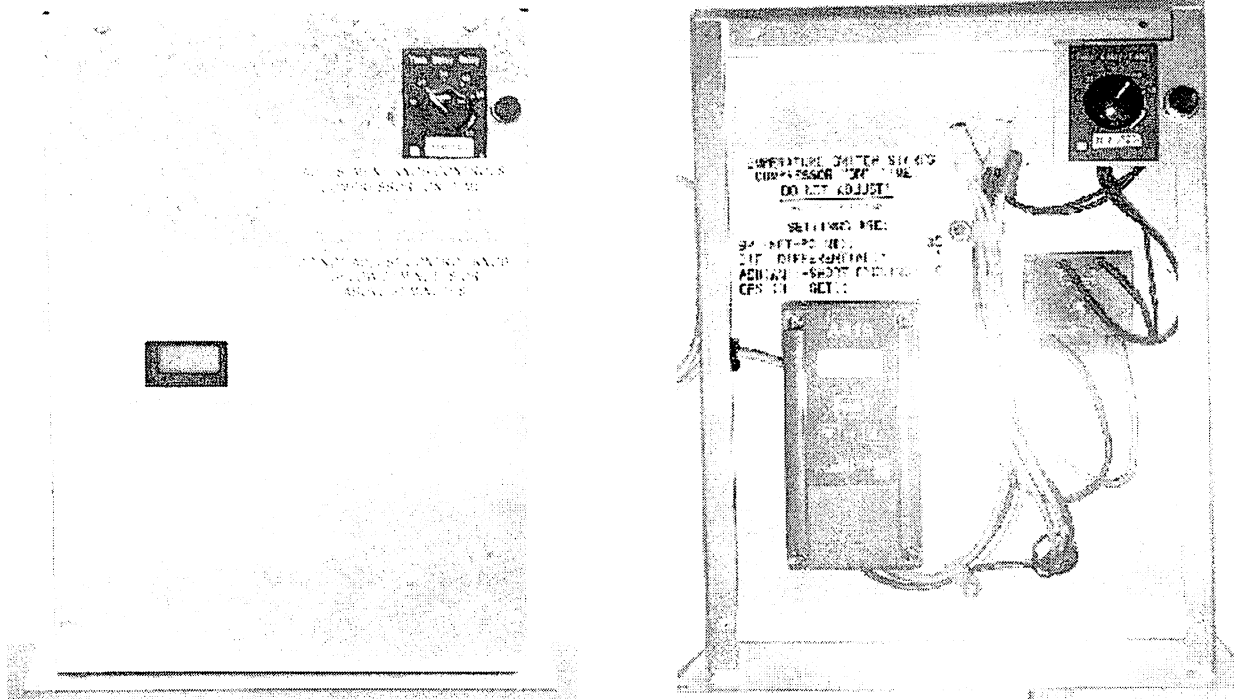


OPERATING INSTRUCTIONS FOR "TIME-CONTROLS KIT"



THIS INSTALLATION MANUAL IS FOR THE FOLLOWING FEDERAL INDUSTRIES MODELS ONLY: **RSSM478R**

1. Superheat/Expansion Valve Information

The recommended superheat setting (measured at the TEV bulb) is 8-12°.
The correct expansion valve is a "Sporlan" EBFV-AA-C or equivalent.

2. Setting and Testing of Controls

The controls are designed to use both temperature and time to regulate case temperature.
TEMPERATURE: The electronic temperature switch begins an "on" cycle by energizing the solenoid valve starting the compressor. When this switch closes at 36-37° on the digital readout, the "on" cycle begins. When the switch opens at 35° (opens on fall), the timing device begins timing.

TIME: The timing device will continue the "on" cycle for the pre-determined time set by the control knob. At the end of a time period (i.e. 20 minute setting on knob), the solenoid valve de-energizes and the compressor pumps down on low pressure. The unit will remain "off" until the coil temperature again rises to 36-37°, closing the temperature switch, and another "on" cycle is repeated.

3. Pressure Control Settings

The Pressure Control Settings for the remote condensing unit are as follows:
Cut in pressure 25 to 35 PSI / Cut out pressure 5 to 10 PSI.

1. Set controls as follows:

A. Mechanical Defrost Timer

- i. Set for four (4) defrost cycles per day (i.e. 2AM, 8AM, 2PM, 8PM).
- ii. Set defrost failsafe cycle duration for 30 minutes.
- iii. Set defrost clock to correct time of day.

B. Timing Device Control Knob

The control knob setting establishes the length of the compressor “on” cycle. Refer to the silver label on the Time-Controls Box cover to the recommended length of cycle. The setting can be adjusted from 1 minute to 60 minutes. Control is pre-set at the factory to 20 minutes for ARCO. In most instances, this is an adequate setting.

C. Electronic Temperature Switch

The temperature switch is housed inside the Time-Controls box. DO NOT ADJUST this control. It has been properly set at the factory and needs no future adjustments. The keypad is locked on this control. The digital readout indicates coil temperature and can be viewed through the “window” in the box cover.

2. Time the length of the first “on” cycle.

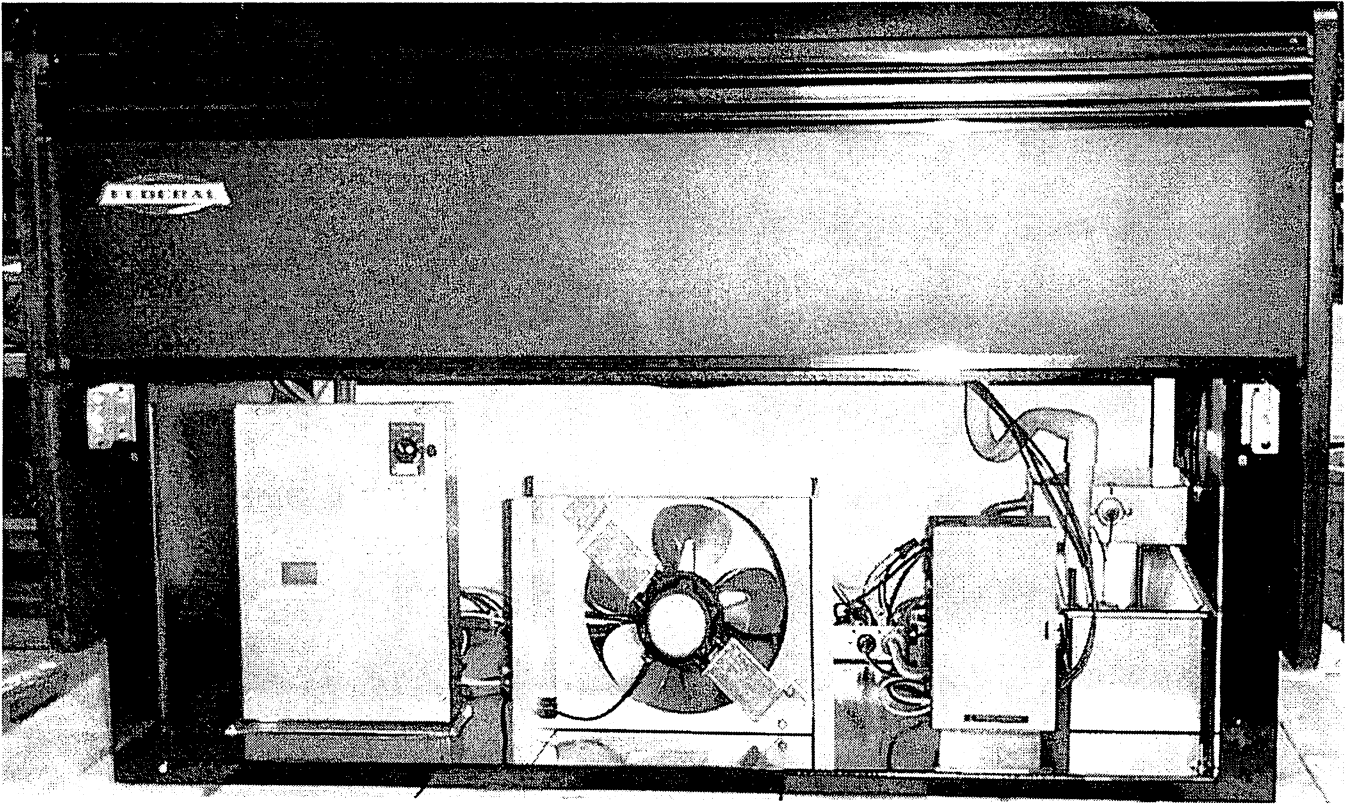
With power reapplied, observe that the red indicator light is lit and evaporator coil temperature through “window” of control box cover. When coil temperature reaches 35°, note the time. It is important to time the first cycle to confirm that the time set on control knob closely matches actual time. Make sure unit will not initiate a scheduled defrost cycle during the first “on” cycle. When the set time period has elapsed, the solenoid coil de-energizes and the red indicator light will go out.

3. Time the length of the “off” cycle.

When the red indicator light goes out, note the time. The unit is now in its “off” cycle until the digital readout on the temperature control reaches 36-37°. The red indicator light will come on, and another cycle is started. This time frame is typically 8-10 minutes.

4. Check a defrost cycle.

After the 1st “on/off” cycle has been confirmed, initiate the mechanical defrost timer into a defrost cycle. This is to confirm that the “therm-o-disc” installed is properly functional. Again, observe the digital read-out on the temperature control. At the termination of defrost, the coil temperature typically reads between 40-45°. The solenoid will “click”, and refrigeration will resume.



Note location of Time-Controls Box, air circulation fan, defrost timer, and condensate evaporator pan.

PREVENTIVE MAINTENANCE PROCEDURE FOR FEDERAL INDUSTRIES MODELS: RSSM478R

This document is a reference of scheduled preventive maintenance for Federal Industries' open display merchandiser models.

Remote Models **RSSM478R**

1. Clean Remote Condenser: Refer to the remote condensing unit manufacturers. Recommendations for cleaning and maintenance of the remote condensing unit.

2. Clean Case Interior: **As needed.** Clean interior surfaces with a mild soap or detergent as needed.

3. Clean Honeycomb Material: **Annually.** Carefully remove the top, honeycomb material from the display case and blow out foreign material or wash in a sink (Thoroughly dry before reinstalling).

4. Clean Inner Rear/Duct Wall: **Annually or as needed.** If lint or other foreign material is present at the small rectangular slots in rear/duct wall, remove with damp rag so that all slots are clear.

FOR OPTIMUM PERFORMANCE OF THIS DISPLAY CASE, PLEASE:

- DO NOT LOAD WARM PRODUCT INTO CASE, USE PRE-CHILLED PRODUCT ONLY.
- DO NOT BLOCK FRONT, BOTTOM AIR GRILLE WITH PRODUCT OR OTHER DISPLAYS
- DO NOT STACK PRODUCT CLOSER THAN 2 INCHES FROM ANY INTERIOR LIGHTING
- DO NOT STACK PRODUCT TIGHT TO BACK WALL. LEAVE A MINIMUM OF 1 INCH CLEARANCE
- DO NOT HANG DISPLAYS/SIGNAGE FROM SHELF FRONTS OR BACK WALL
- DO NOT ADJUST CASE CONTROLS
- DO NOT ALLOW AIR DISTURBANCES AROUND CASE (i.e. FANS, OPEN DOORS, AIR DIFFUSERS)
- MAINTAIN STORE CONDITIONS AT MAXIMUM CONDITIONS OF 75° F. and 55% RH

Wiring Diagram

