

586-Series
Auxiliary Equipment Kit

for

583-Series
Compact Control Center

Installation Instructions

with

Circuit Explanation

586-Series Auxiliary Equipment Kit

The auxiliary equipment kit is designed to fit inside the 583-series Compact Control Center control panel. This unit will control the first transfer auger from the drying bin. As such, this kit contains the transfer auger control switch, the contactor and overload relay (motor starter unit) for the transfer auger motor, a terminal strip, and a solid state delay timer with an adjustment pot. Required, but not included, are thermal units (overload heater strips) for the motor starter unit. These heater strips are available from Shivvers but must be sized per the motor horsepower. A single phase unit will require one heater strip, a three phase unit will require three heater strips.

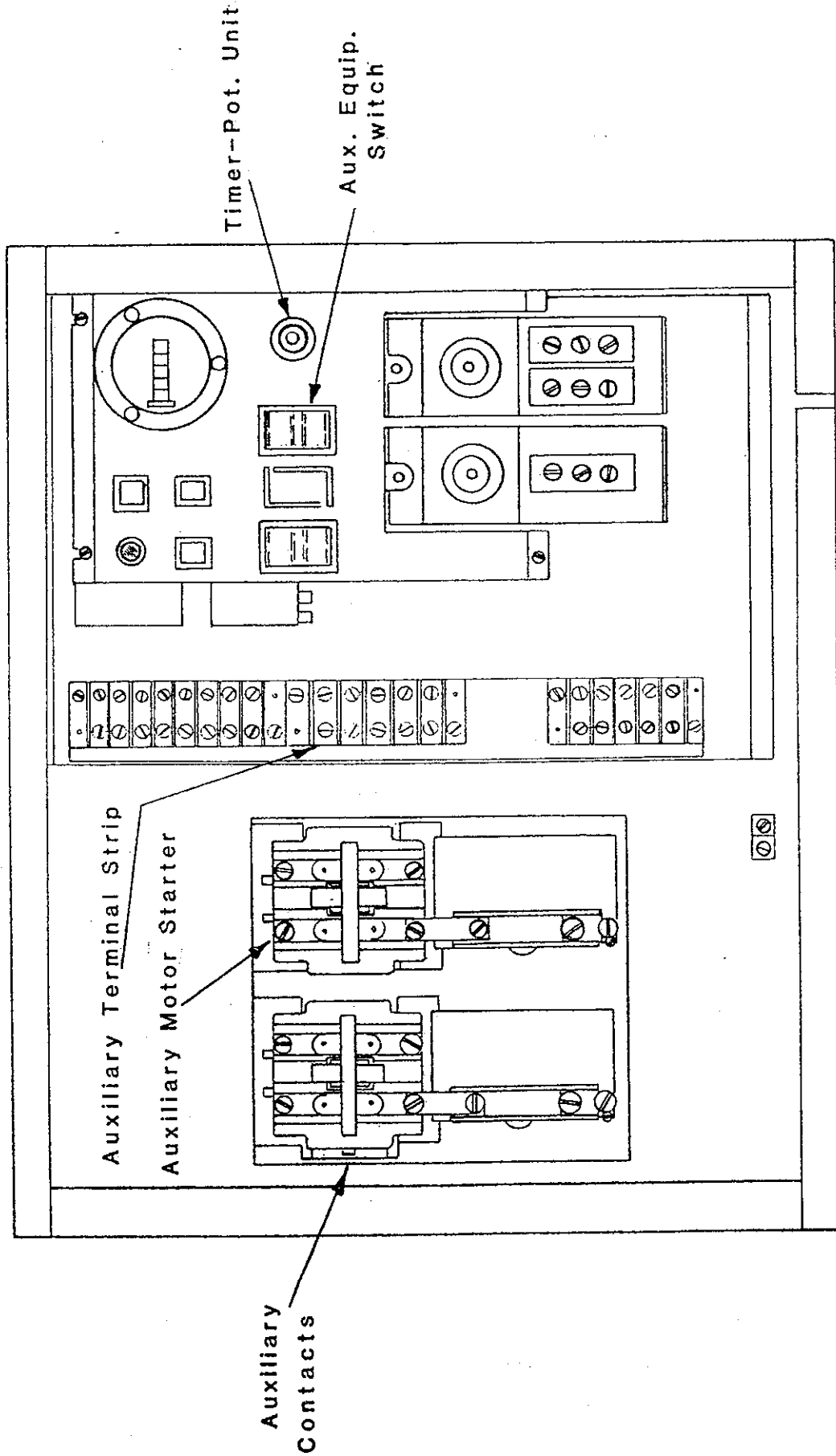
---BEFORE INSTALLATION---



DISCONNECT AND LOCK OUT ALL ELECTRICAL POWER TO THE COMPACT CONTROL CENTER AND TO THE FAN/HEATER UNIT. FAILURE TO DO SO CAN RESULT IN SERIOUS ELECTRICAL SHOCK OR DEATH!

Auxiliary Equipment Kit

Physical Layout and Terminology



AUXILIARY EQUIPMENT KIT INSTALLATION

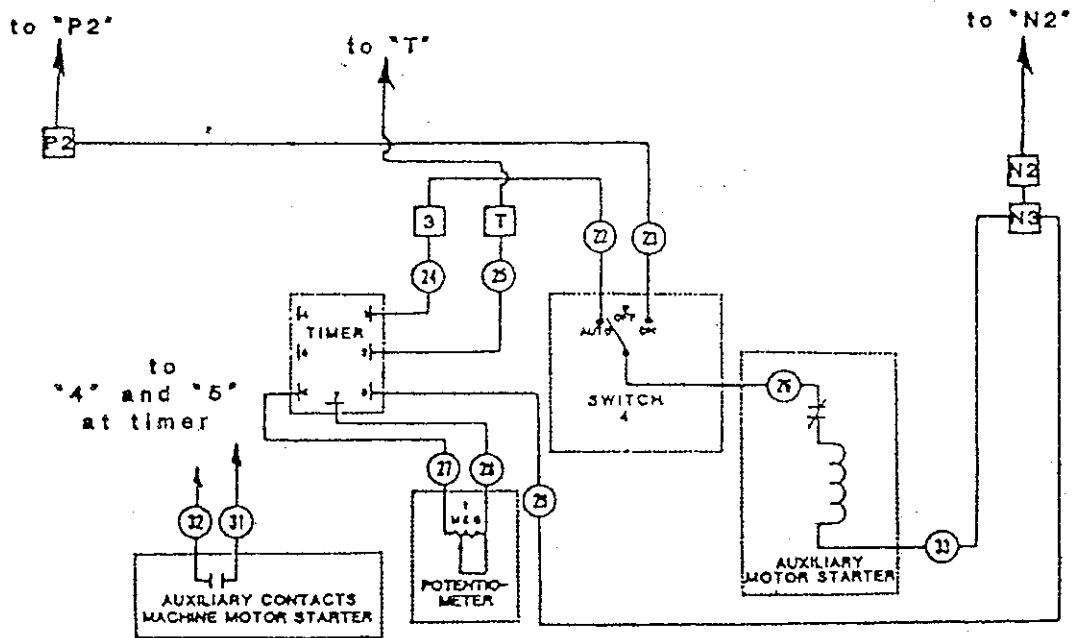
1. After the electrical power has been disconnected and locked out at the main disconnect switch, remove the front cover of the Compact Control Center.
2. Install the motor starter unit to the Compact Control Center. This unit should be fitted directly to the right of the machine motor starter unit and secured by the two short #10 screws in the hardware sack.
3. Install the terminal strip to the Compact Control Center. This unit installs directly below the main terminal strip and should be secured with the longer #10 screws in the hardware sack.
4. Unfasten the switch mounting plate from the thermostat mounting plate in the Compact Control Center. This mounting plate is held by three screws. Remove the bottom screw and loosen the two top screws, then set the plate to the side.
5. Remove the knob, locking nut, and toothed lockwasher from the timer/potentiometer unit. The knob is held in place by a small screw.
6. Connect wire 31 between the solid state timer (terminal 5) and one of the terminals of the auxiliary contact switch, mounted to the left side of the machine motor starter.
7. Connect wire 32 between terminal 4 of the solid state timer and the other terminal of the auxiliary contact.

8. Install the timer/pot unit in the hole of the switch plate and secure with the toothed lockwasher and nut. Turn the shaft of the pot to stop in one direction, then reinstall the knob to the shaft. Align the mark on the knob with 1 or 60 on the decal and tighten screw to attach the knob.
9. Note the position of the wires on the rocker switch and remove them to install the switch in the switch plate. Push the switch through the plate from the front and reinstall the wires.
10. Reinstall the switch plate to the thermostat mounting plate in the Compact Control Center and tighten the mounting screws.
11. Connect a black wire from terminal F2 of the AEK terminal strip to terminal F2 of the main terminal strip.
12. Connect a black wire from terminal T of the AEK terminal strip to terminal T of the main terminal strip.
13. Connect a white wire from terminal N2 of the AEK terminal strip to terminal N2 of the main terminal strip.

This completes the control wiring connections of the Auxiliary Equipment Kit. The power wires to operate the transfer auger motor should be connected directly to the top of the motor starter contactor. From the bottom terminals of the motor starter unit, wires will be connected to the motor.

Auxiliary Equipment Kit

Wiring Diagram



CIRCUIT DESCRIPTION

Manual Operation

In manual operation, the power to operate this circuit will enter at terminal P2 and be transferred to the control switch on wire 23 to the "on" terminal of the rocker switch. When this switch is put into the manual, or "on", position, connection will be made within the switch to the common, or center, terminal of the switch.

Wire 26 will transfer the power from the common terminal of the switch to one of the terminals of the interlock switch in the overload relay of the auxiliary motor starter unit. Provided this overload relay is not tripped, the power will pass through the interlock switch to the coil terminal of the contactor on this motor starter unit. Wire 33 is the neutral connection for this coil, connected to terminal N2. This should allow the contactor to close, starting the transfer auger motor.

Automatic Operation

For automatic operation, this circuit will receive power at terminal T of the auxiliary terminal strip. This power will be present only when the machine circuit is in the automatic mode at the machine control switch.

From terminal T of the Auxiliary terminal strip, wire 25 will carry the power to terminal 2 of the solid state timer unit. This timer will not have connection to the rest of the circuit until it is energized. This unit is energized by the operation of the auxiliary contacts of the machine motor starter unit. These contacts are connected to the timer by wires 31 and 32, connected to terminals 4 and 5 of the timer.

When this timer is energized, it will create a connection to terminal 1 of the timer, where wire 24 is connected to terminal 3 of the terminal strip. This timer will continue to make this connection as long as the auxiliary contacts are closed (the machine is running) and as long as the delay is in effect to run the transfer auger. The length of delay is controlled by the potentiometer unit, connected between terminals 6 and 7 of the timer unit. Terminal 3 of the timer unit is a neutral terminal, leading back to terminal N3 with wire 29, to complete the circuit to operate this timer.

After the power has gone through the timer unit and reached terminal 3 of the Auxiliary terminal strip, wire 22 will carry it to the automatic terminal of the transfer auger switch. When this switch is in the automatic position, connection will be made within the switch to the common terminal. This is where wire 26 is connected, and the power will follow the same path as in manual operation through the overload relay to operate the contactor of the motor starter.

COMPLETED CONTROL WIRING
 COMPACT CONTROL CENTER
 with

Auxiliary Equipment Kit

