

## Safety Procedures

**WARNING**

Dangerous environment.  
Highly flammable/explosive fuels and high voltage are present.  
Failure to observe all safety precautions could result in serious injury or death.  
Observe all safety precautions as outlined in Gilbarco® manuals.

## Installation Procedures

1. Install a single EMERGENCY POWER CUTOFF control to remove AC power from the site dispensing equipment. The EMERGENCY POWER CUTOFF control is an additional safety feature, not a substitute for the National Electrical Code (NEC®)/National Fire Protection Association (NFPA) 30 circuit breaker requirements. Label the EMERGENCY POWER CUTOFF switch and instruct the owner and operator to keep the area clear of obstructions.
2. Connect an insulated grounding conductor from the dispenser power panel to the site grounding electrode (size per NEC).
3. Install power breakers to each circuit leading to the dispenser unit and Submersible Turbine Pump (STP). The power breakers must be capable of simultaneously disconnecting hot and neutral conductors.  
Note: In Canada switching neutral is contrary to the Canadian Electrical Code (CEC), reference part 1, rule 14-014.
4. Only field wiring connections are shown in the Junction Boxes (J-boxes). Cap all unused wires. Local and NECs apply.
5. Potting is required for any conduit passing through any portion of a hazardous vapor area. Install conduits per NEC for hazardous locations.

6. Wire circuits are NEC Class 1. Wires are 14 American Wire Gauge (AWG) copper stranded. Power load and distance run may require a larger wire gauge.

Wiring to the speaker (intercom) and call button must be Class 2.  
Two-wire communication wiring for installation with new wiring uses Unshielded Twisted Pair (UTP) data wires.

Wiring specifications:  
10-12 twists per foot, 18 AWG up to 1000 feet runs, 2000 feet total or 14 AWG up to 2600 feet runs 5200 feet total, unshielded, 300 V minimum, stranded annealed copper thin wire Polyvinyl Chloride (PVC) insulation of type Thermoplastic Flexible Fixture Wire Nylon Jacketed (TFFN), Thermoplastic High Heat resistant Nylon Jacketed (THHN), or Machine Tool Wire (MTW) Underwriters Laboratories (UL®) approved gasoline and oil resistant. Reference C&M Corporation part #27525 (18 AWG) or equivalent.

7. Consult manufacturer specifications for wire nuts to determine maximum number of wires that may be used per nut.

8. STP isolation boxes are required by NEC 514-16 to:
  - a. Allow the removal of service of one unit safely without removing the power from all dispensing equipment.
  - b. Prevent damage to equipment from cross-phasing. Damage caused by cross phasing is not covered by warranty.
  - c. Gilbarco STP Isolation Box PA0287 is not available for 220/230/240 VAC units (use local suppliers for isolation relay boxes).

9. For 10.4-inch color screen, install additional unshielded "twisted pair" wires for each dispenser inside power conduit. Twisted pair video - wire is 18 AWG (600 VAC stranded annealed copper) twisted to 10 - 12 twists per foot, gas and oil resistant; UL/CSA rated; must meet qualifications of CSA-TR-64 with nylon jackets (any source that meets this video specification can be used).

10. For VaporVac®, VV+ and VV- are used only with field retrofit kits. See kit MDEs for proper connections.

11. For Automatic Temperature Compensation (ATC) option, ATC+ and ATC- connect to T-meter module assembly.

12. For U.S. 240 VAC installations, wires labeled 'HOT' are to be connected to L1 and wires labeled 'NEUTRAL' are to be connected to L2.

*Note: Wire all circuits NEC Class 1, except wiring to speaker (intercom) and call button which are NEC Class 2. Gilbarco two-wire is NEC Class 1 and may share the main power conduit.*

## Electrical Rating

Includes Enclosure Heater.  
12.0 AMP @ 120 VAC 60 Hz.  
6.0 AMP @ 240 VAC 50 Hz.

Enclosure Heater  
(Heater will cycle in extremely cold conditions.  
Heater will only come on when cold and pump is in use)  
3.1 AMP @ 120 VAC 60 Hz.  
1.5 AMP @ 240 VAC 50 Hz.  
Gilbarco recommends one 15 AMP breaker per dispenser.

## Active STP Connections

Eclipse®	STP1	STP2	STP3	STP4
MPD Two-grade	X		X	
MPD Three-grade	X	X	X	
MPD Single-hose	X	X	X	
MPD Single-hose +1	X	X	X	X
Dual One-grade	X	X		
Quad Two-grade	X	X		
Blender Single-hose	X	X		
Blender X+1	X	X	X	
Blender X+0	X	X		
Super-Hi™	X	X		

### Reference Manuals

MDE-2755 STP Control and Dispenser Isolation Relay Box (PA0287)  
MDE-3116 Distribution Box PA0306 Installation Instructions  
MDE-3802 Encore® and Eclipse Site Preparation Manual  
MDE-3986 Eclipse Installation Manual

## Contents

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1	Cover Sheet, Safety Notes, and References
2	Field Wiring Diagram Eclipse Series Dispensers 120/240

Used On

The Eclipse Series Dispensers  
120/240 VAC

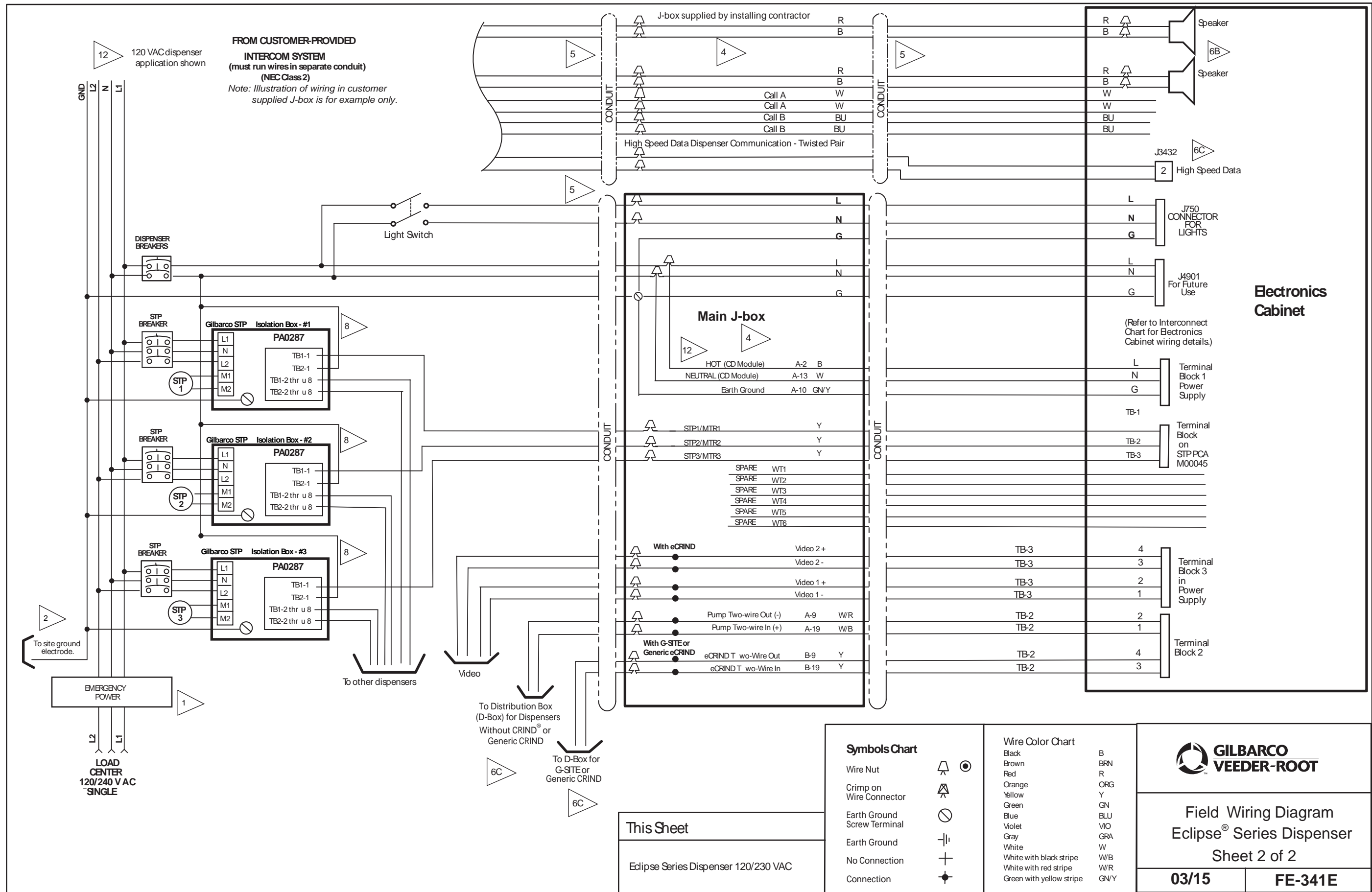


Field Wiring Diagram  
Eclipse® Series Dispensers

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FE-341E



This Sheet  
Eclipse Series Dispenser 120/230 VAC

**Symbols Chart**

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

**Wire Color Chart**

Black	B
Brown	BRN
Red	R
Orange	ORG
Yellow	Y
Green	GN
Blue	BLU
Violet	VO
Gray	GRA
White	W
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	GN/Y

**GILBARCO VEEDER-ROOT**

Field Wiring Diagram  
Eclipse® Series Dispenser  
Sheet 2 of 2

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