

Introduction

Purpose

This manual provides Motor and Conduit installation instructions on Encore® dispensers.

IMPORTANT INFORMATION

Proper field wiring is imperative. These motor connections are different from previous models. Check the wiring diagram as shown in [Figure 64](#) on [page 32](#), [Figure 65](#) on [page 33](#), [Figure 66](#) on [page 34](#), and [Figure 67](#) on [page 35](#) thoroughly to avoid motor and Encore electronics damage.

Intended Users

This manual is intended for Gilbarco®-trained and certified Authorized Service Contractors (ASCs).

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Required Tools and Materials

Machine Lubricant is required to install the Motor and Conduit Kit.

Parts List

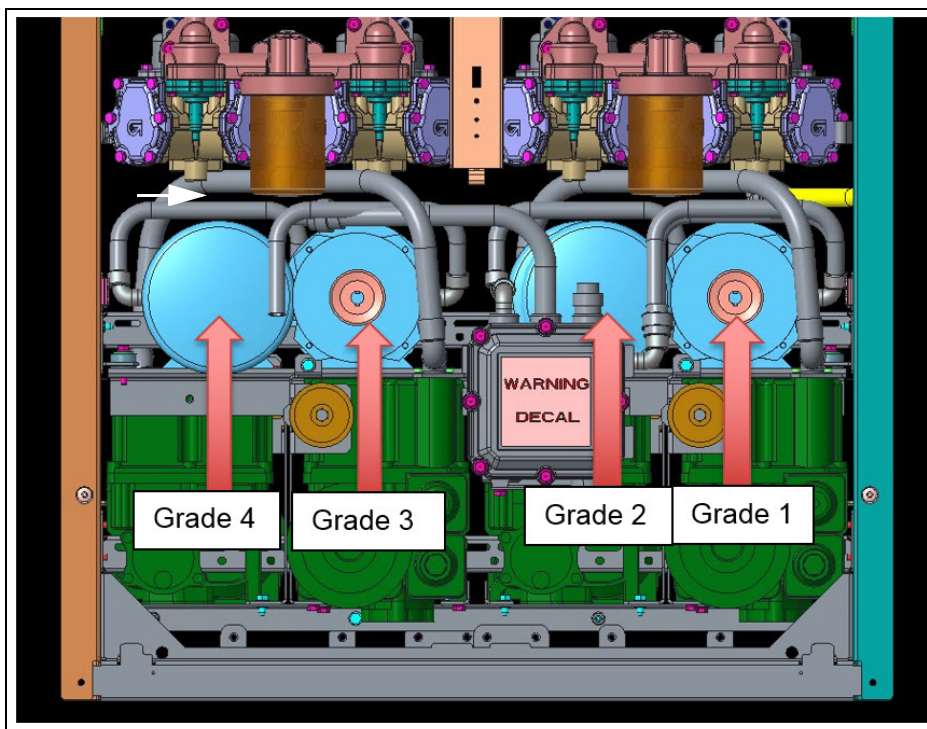
The following table lists the parts included in the Motor and Conduit Kit (M16308K001):

Item #	Part Name	Part Number	Quantity
1	Grade 1 Conduit	M16122B001	1
2	Grade 2 Conduit	M16123B001	1
3	Grade 3 Conduit	M16124B001	1
4	Grade 3 Conduit	M16124B002	1
5	Grade 4 Conduit	M16125B001	1
6	Grade 4 Conduit	M06426B001	1
7	Bushing, Reducing, 3/4x1/2	K49827	2
8	Elbow, Conduit	K42428	1
9	Elbow, Conduit 3/4 90	K80453-01	2
10	Union, Conduit	Q10017-01	1
11	Union, 1/2-inch Conduit	Q10016-04	1
12	1Hp Single Phase 110/230 VAC Motor Type E	M13377B103	1
13	Motor and Conduit Kit (M16308K001 and M16308K002) Installation Instructions	MDE-5401	1

The following table lists the parts included in the Motor and Conduit Kit (M16308K002):

Item #	Part Name	Part Number	Quantity
1	Grade 1 Conduit	M16122B001	1
2	Grade 2 Conduit	M16123B001	1
3	Grade 3 Conduit	M16124B001	1
4	Grade 3 Conduit	M16124B002	1
5	Grade 4 Conduit	M16125B001	1
7	Bushing, Reducing, 3/4x1/2	K49827	2
8	Elbow, Conduit	K42428	1
9	Elbow, Conduit 3/4 90	K80453-01	2
10	Union, Conduit	Q10017-01	1
11	Union, 1/2-inch Conduit	Q10016-04	1
12	1Hp 3 Three Phase 220/380 VAC Motor Type E	M13377B302	1
13	Motor and Conduit Kit (M16308K001 and M16308K002) Installation Instructions	MDE-5401	1

Figure 1: View from Side A of the Unit



Related Documents

Document Number	Title	GOLD SM Library
FE-363	Field Wiring Diagram Encore 500/700 (M07555 Power Supply Only)	<ul style="list-style-type: none"> • Encore and Eclipse® • Encore and Eclipse Installers • Field Wiring Diagrams
MDE-3804	Encore and Eclipse Start-up/Service Manual	<ul style="list-style-type: none"> • Encore and Eclipse • Service Manual
PT-1936	Encore Series Pumps and Dispensers Illustrated Parts Manual	<ul style="list-style-type: none"> • Encore and Eclipse • Parts Manual
PT-1937	Encore 300, Encore 500/500 S, Encore 700 S, Eclipse Recommended Spare Parts Manual	<ul style="list-style-type: none"> • Encore and Eclipse • Parts Manual

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
DEF	Diesel Exhaust Fluid
ESD	Electrostatic Discharge
FCC	Federal Communications Commission
GOLD	Gilbarco Online Documentation
NEC®	National Electrical Code
NFPA®	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
TAC	Technical Assistance Center

Important Safety Information

Notes: 1) Save this Important Safety Information section in a readily accessible location.

2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.


Preliminary Precautions


You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

⚠ WARNING

 The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

 You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the Gilbarco Technical Assistance Center (TAC) at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 70; National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

No Open Fire



Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

No Sparks - No Smoking



Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.



Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

WARNING



Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

WARNING

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Before You Begin

Before you begin, read and understand all safety information.

CAUTION



A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

- 1 Inform the manager.
- 2 Barricade the unit to be worked on.
- 3 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.



WARNING

Failure to turn off the unit during kit installation may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door to the unit and during installation of the kit.

- 4 Match the parts received in the kit with “[Parts List](#)” on [page 2](#).

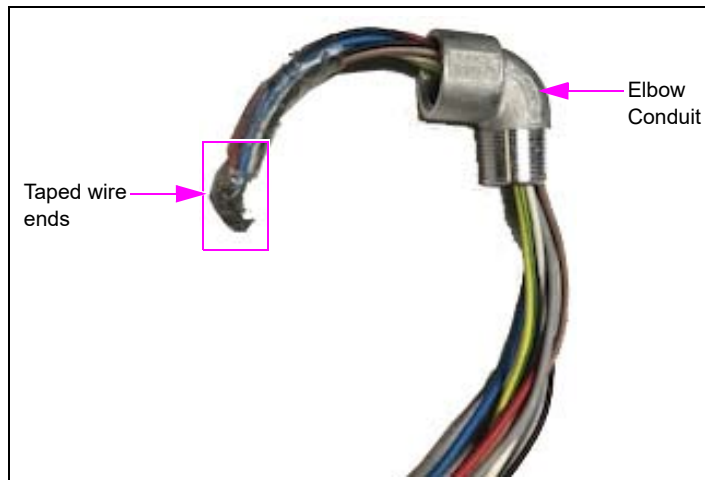
Note: The instruction that follows are for both Conduit Kits (M16308K001 and M16308K002). Ensure that you use the correct motor with the respective Conduit kits. For M16308K001, use M13377B103 motor; for M16308K002, use M13377B302 motor.

Installing Grade 1

To install Grade 1, proceed as follows:

- 1 Tape the wire ends together to allow easier installation.
- 2 Route wires through the Elbow Conduit (K80453-01).
Note: Insert wires through the external threaded end first.

Figure 2: Routing Wires through the Elbow Conduit



- 3 Slide the elbow conduit through the cables until it contacts the motor, and then screw the elbow into the motor while letting the wires rotate freely as you tighten.
- 4 Move the elbow to 9 o'clock position pointing toward the shaft of the motor when sufficiently tight.

Figure 3: Moving Elbow toward the Motor Shaft



- 5 Route the wire through the Bushing (K49827) with the unthreaded lip facing the elbow joint (see [Figure 4](#)). Screw it until it fits firmly inside the elbow joint (see [Figure 5](#)).

Figure 4: Routing Wires through Bushing

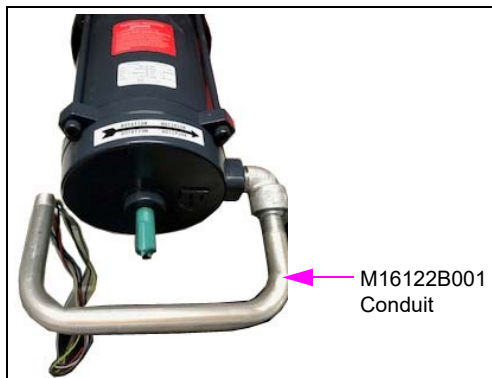


Figure 5: Bushing inside the Elbow Joint



- 6 Slide wires starting from the shorter end to the longer end through the Conduit (M16122B001).
- 7 Screw the shorter end into the bushing, letting the wires rotate freely within the conduit.
- 8 After the conduit is firmly attached, move it such that the main pipe is parallel to the ground (see [Figure 6](#)).

Figure 6: Moving the Conduit



- 9 Turn the elbow conduit, along with the conduit and bushing attached, to the 12 o'clock position (see [Figure 7](#)).

Figure 7: Turning the Elbow Joint



- 10 Route the female end of the Union (Q10016-04) down the wire as shown in [Figure 8](#). After the union reaches the conduit, screw it firmly until it covers the conduit (see [Figure 8](#) and [Figure 9](#)).

Figure 8: Routing Female End of Union



Figure 9: Fixing Union to Conduit

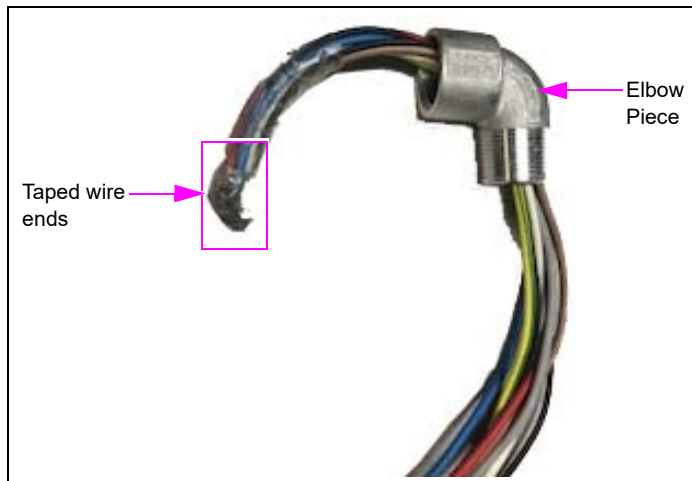


Installing Grade 2

To install Grade 2, proceed as follows:

- 1 Tape the wire ends together to allow easier installation.
- 2 Route wires through the Elbow Conduit (K80453-01).
Note: Insert wires through the external threaded end first.

Figure 10: Routing Wires through Elbow Piece



- 3 Slide the elbow conduit through the cables until it contacts the motor.
- 4 Screw the elbow into the motor while letting the wires rotate freely as you tighten.
- 5 Route the wire through the Bushing (K49827) with the unthreaded lip facing the elbow joint (see [Figure 11](#)).

Figure 11: Routing Wires through Bushing



- Screw it until it is firmly inside the elbow joint (see [Figure 12](#)).

Figure 12: Bushing inside the Elbow Joint



- Move the elbow in the 3 o'clock position toward the opposite end of the shaft when sufficiently tight.

Figure 13: Moving the Conduit



- Route the wires through the Grade 2 Conduit (M16123B001) and tighten the conduit into the elbow, irrespective of the starting end of the wire.

Figure 14: Routing the Wires



- 9 Route the female end of the Union (Q10016-04) through the wire with the conduit matching side first as shown in [Figure 15](#). After the union reaches the conduit, screw it firmly until it covers the conduit (see [Figure 16](#)).

Note: The nut-shaped piece of the union should be able to move freely up and down the conduit.

Figure 15: Routing the Female End of the Union



Figure 16: Fixing the Union to the Conduit

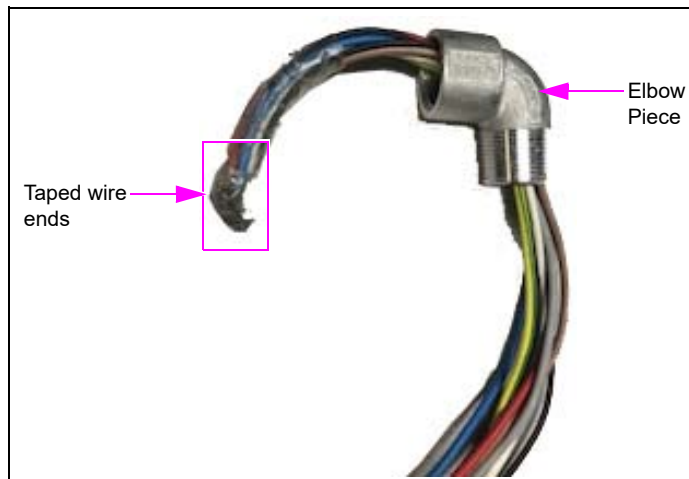


Installing Grade 3

To install Grade 3, proceed as follows:

- 1 Tape the wire ends together to allow easier installation.
- 2 Route wires through the Elbow Conduit (K80453-01).
Note: Insert wires through the external threaded end first.

Figure 17: Routing Wires through the Elbow Piece



- 3 Slide the elbow conduit through the cables until it contacts the motor, and then screw the elbow into the motor while letting the wires rotate freely as you tighten.
- 4 Move the elbow to the 12 o'clock position when sufficiently tight.
- 5 Route the wire through the Bushing (K49827) with the unthreaded lip facing the elbow joint (see [Figure 18](#)). Screw it until it is firmly inside the elbow joint (see [Figure 19](#) on [page 14](#)).

Figure 18: Routing Wires through Bushing



Figure 19: Fixing the Elbow Joint



- 6 Slide wires starting from the shorter end to the longer end through the Conduit (M16124B001).
- 7 Screw the shorter end into the bushing, letting the wires rotate freely within the conduit.
- 8 Move the conduit perpendicular to the motor and facing away from the motor.

Figure 20: Moving the Conduit



- 9 Route wires through the Elbow Connector (K42428), irrespective of direction; unlike the first elbow, connector K42428 has the same end on both sides.
- 10 Slide the elbow conduit through the cables until it contacts the motor, and then screw the elbow into the motor while letting the wires rotate freely as you tighten.

- 11 When the elbow connector is tight, rotate it such that the end is facing toward the ground.

Figure 21: Rotating the Elbow Connector



- 12 Route the wires through the Conduit (M16124B002); the wires may start at either end of the conduit.

- 13 Tighten the conduit into the elbow so that the pipe is facing the ground (see [Figure 22](#)).

Figure 22: Tightening the Conduit



- 14 Route the female end of the Union (Q10016-04) through the wire with the skinnier end first (see [Figure 23](#)). When the union reaches the conduit, screw it firmly until it covers the conduit (see [Figure 24](#)).

Figure 23: Routing the Female End of the Union



Figure 24: Fixing the Union to the Conduit

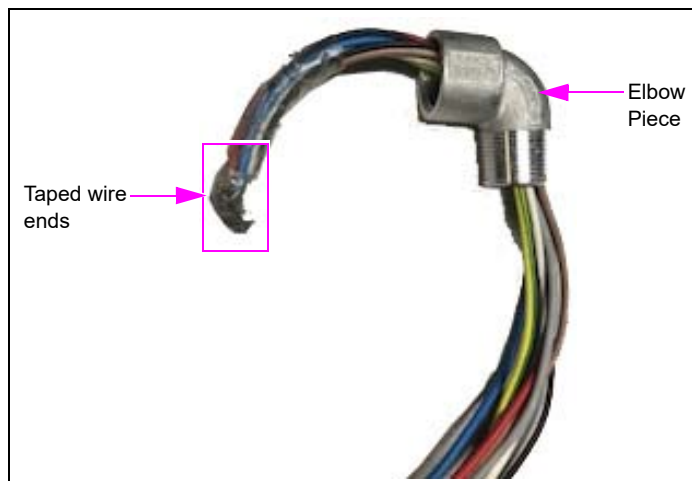


Installing Grade 4

To install Grade 4, proceed as follows:

- 1 Tape the wire ends together to allow easier installation.
- 2 Route wires through the Elbow Conduit (K80453-01).
Note: Insert wires through the external threaded end first.

Figure 25: Routing Wires through the Elbow Piece



- 3 Slide the Elbow Conduit (K80453-01) through the cables until it contacts the motor, and then screw the elbow into the motor while letting the wires rotate freely as you tighten.
- 4 Move the elbow to the 3 o'clock position when sufficiently tight.

Figure 26: Moving the Elbow Conduit



- 5 Route wires through the Bushing (K49827) with the unthreaded lip facing the elbow joint (see [Figure 27](#)). Screw it until it is firmly inside the elbow joint.

Figure 27: Routing Wires through Bushing



- 6 Route wires through the Conduit (M16125B001) starting at the long end of the conduit. The wires will come out the end with two bends.
- 7 Screw the conduit into the elbow joint until tight and then turn it such that the end of the conduit is facing upwards.

Figure 28: Fixing the Conduit to the Elbow Joint



- 8 Route the female end of the Union (Q10016-04) through the wire with the skinnier side first (see [Figure 29](#)). When the union reaches the conduit, screw it firmly until it covers the conduit.

Figure 29: Routing the Female End of the Union



Assembling the Conduit

The following sections include steps to assemble the parts for each grade that is attached to the Conduit.

- Notes:*
- 1) For any step in which one part is threading to another, apply a slight coat of lubricant to the threads being inserted.
 - 2) Ensure that all threaded pieces are tightened fully; figures may not show the appearance when fully tightened.

Assembling Grade 1

To assemble Grade 1, proceed as follows:

Note: At any time during this installation, if any parts are already in the ports that are specified by the instructions, remove them.

- 1 Screw the Elbow Unit (K42448) into the right-most hole on the side of the Conduit with two large holes and one smaller hole in between them (see [Figure 30](#)). Point the elbow slightly toward the rear of the Conduit.

Figure 30: Fixing the Elbow Unit to the Conduit



- 2 Insert a Bushing (K49827) into the end of the elbow with the unthreaded lip going in first.

Figure 31: Inserting the Bushing



Figure 32: Inserting the Bushing - 1



- 3 Attach a complete ½-inch Union (Q10016-04) to the bushing.

Figure 33: Attaching the Union to Bushing



Figure 34: Attached Union to Bushing



Assembling Grade 2

To assemble Grade 2, proceed as follows:

Note: At any time during this installation, if any parts are already in the ports that are specified by the instructions, remove them.

- 1 Screw the Elbow Unit (K42448) into the right-most hole on the side of the Conduit with two large holes and one smaller hole in between them (see [Figure 35](#)). Point the elbow slightly toward the rear of the Conduit.

Figure 35: Fixing the Elbow Unit to the Conduit



- 2 Insert a Bushing (K49827) into the end of the elbow with the unthreaded lip going in first.

Figure 36: Inserting the Bushing



Figure 37: Inserting the Bushing - 1



- 3 Attach a complete 1/2-inch Union (Q10016-04) to the bushing.

Figure 38: Attaching the Union to Bushing



Figure 39: Attached the Union to Bushing



- 4 Connect an Elbow (K42448) to the Conduit at the hole next to where the main conduit was attached, with the end pointing toward the rear of the Conduit.

Figure 40: Connecting the Elbow to the Conduit



- 5 Thread a bushing into the end of the elbow with the unthreaded lip facing towards the elbow.

Figure 41: Threading the Bushing

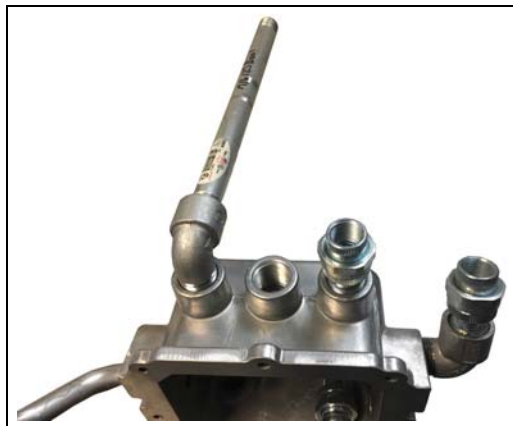


- 6 Insert the Grade 2 Conduit (M06814B001) into the bushing at the end of the elbow.

Figure 42: Inserting Grade 2 Conduit



Figure 43: Inserting Grade 2 Conduit - 1



Assembling Grade 3

To assemble Grade 3, proceed as follows:

Note: At any time during this installation, if any parts are already in the ports that are specified by the instructions, remove them.

- 1 Screw the Elbow Unit (K42448) into the right-most hole on the side of the Conduit with two large holes and one smaller hole in between them (see [Figure 44](#)). Point the elbow slightly toward the rear of the Conduit.

Figure 44: Fixing the Elbow Unit to the Conduit



- 2 Insert a Bushing (K49827) into the end of the elbow with the unthreaded lip going in first.

Figure 45: Inserting the Bushing



Figure 46: Inserting the Bushing - 1



- 3 Attach a complete ½-inch Union (Q10016-04) to the bushing.

Figure 47: Attaching the Union to Bushing

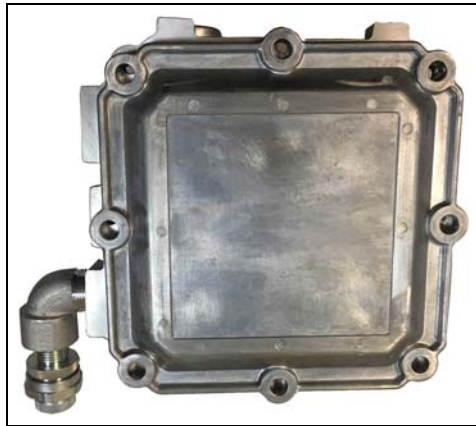


Figure 48: Attached Union to Bushing



- 4 Connect an Elbow (K42448) to the Conduit at the hole next to where the main conduit was attached, with the end pointing toward the rear of the Conduit.

Figure 49: Connecting the Elbow to the Conduit



- 5 Thread a bushing (K49827) into the end of the elbow with the unthreaded lip toward the elbow.

Figure 50: Threading the Bushing



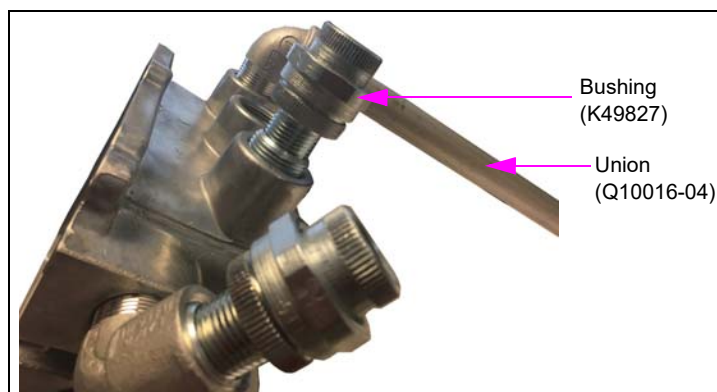
- 6 Insert the Grade 2 Conduit (M06814B001) into the bushing at the end of the elbow.

Figure 51: Inserting the Grade 2 Conduit



- 7 Insert a Bushing (K49827) into the hole on the other end of that same side of the Conduit followed by a 1/2-inch Union (Q10016-04) as shown in [Figure 52](#).

Figure 52: Inserting Bushing into the Conduit



Assembling Grade 4

To assemble Grade 4, proceed as follows:

Note: At any time during this installation, if any parts are already in the ports that are specified by the instructions, remove them.

- 1 Screw the Elbow Unit (K42448) into the right-most hole on the side of the Conduit with two large holes and one smaller hole in between them (see [Figure 53](#)). Point the elbow slightly toward the rear of the Conduit.

Figure 53: Fixing the Elbow Unit to the Conduit



- 2 Insert a Bushing (K49827) into the end of the elbow with the unthreaded lip going in first.

Figure 54: Inserting the Bushing



Figure 55: Inserting the Bushing - 1



- 3 Attach a complete ½-inch Union (Q10016-04) to the bushing.

Figure 56: Attaching the Union to Bushing



Figure 57: Attached Union to Bushing



- 4 Connect an Elbow (K42448) to the Conduit at the hole next to where the main conduit was attached, with the end pointing toward the rear of the Conduit.

Figure 58: Connecting the Elbow to the Conduit



- 5 Thread a bushing (K49827) into the end of the elbow with the unthreaded lip toward the elbow.

Figure 59: Threading the Bushing



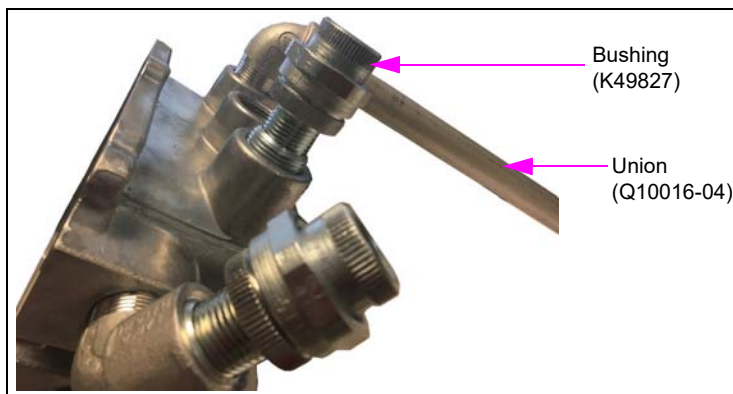
- 6 Insert the Grade 2 Conduit (M06814B001) into the bushing at the end of the elbow.

Figure 60: Inserting Grade 2 Conduit



- 7 Insert a Bushing (K49827) into the hole on the other end of that same side of the Conduit followed by a 1/2-inch Union (Q10016-04) as shown in [Figure 61](#).

Figure 61: Inserting Bushing into the Conduit



- 8 On the side closest to the Grade 2 conduit, insert the shorter end of the Grade 4 conduit into the hole closest to the center of that side. Face the conduit so that it points diagonally as shown in [Figure 62](#).

Figure 62: Inserting Grade 4 Conduit into Side Closest to Grade 2



- 9 Insert a complete 1/2-inch union onto the end of the Grade 4 conduit.

Figure 63: Inserting the Union into the Grade 4 Conduit

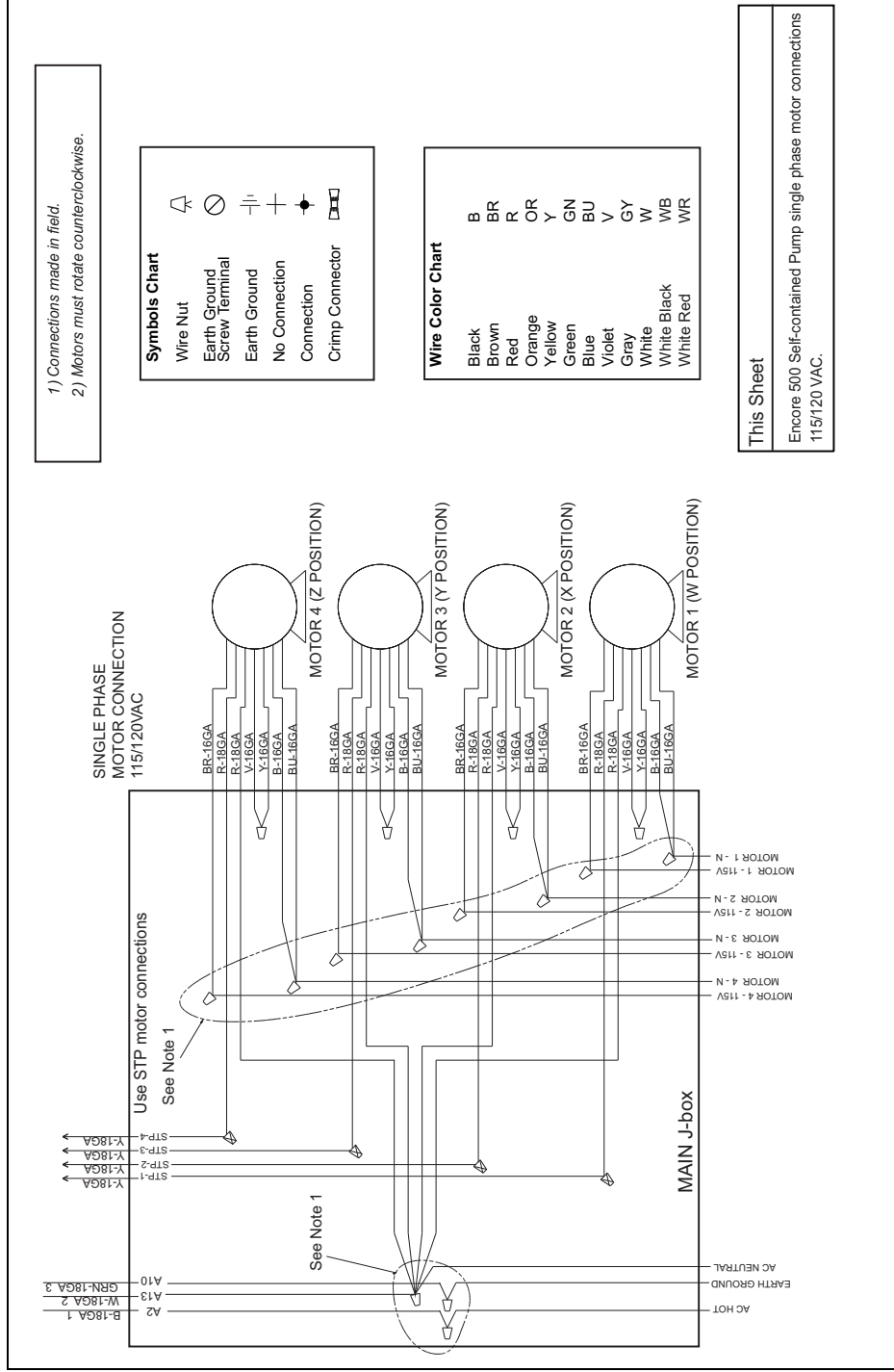


Wiring

IMPORTANT INFORMATION

Proper field wiring is imperative. These motor connections are different from previous models. Ensure that you check the corresponding wiring diagram (see [Figure 64](#), [Figure 65](#) on [page 33](#), [Figure 66](#) on [page 34](#), and [Figure 67](#) on [page 35](#)) thoroughly to avoid motor and Encore electronics damage.

Figure 64: Wiring Diagram for Conduit Kit (M16308K001) containing M13377B103



This Sheet
 Encore 500 Self-contained Pump single phase motor connections
 115/120 VAC.

Figure 65: Wiring Diagram for Conduit Kit (M16308K001) containing M13377B103

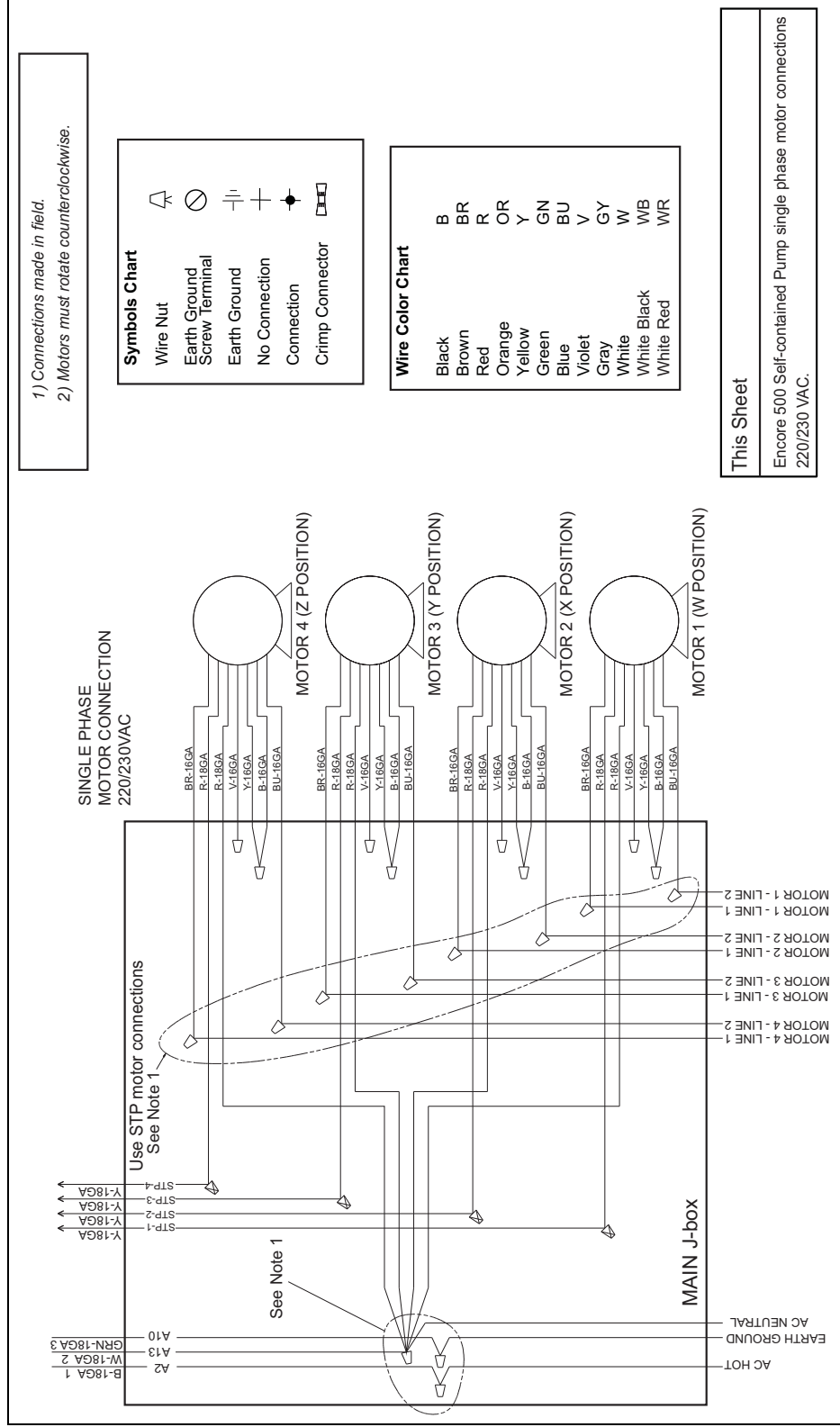
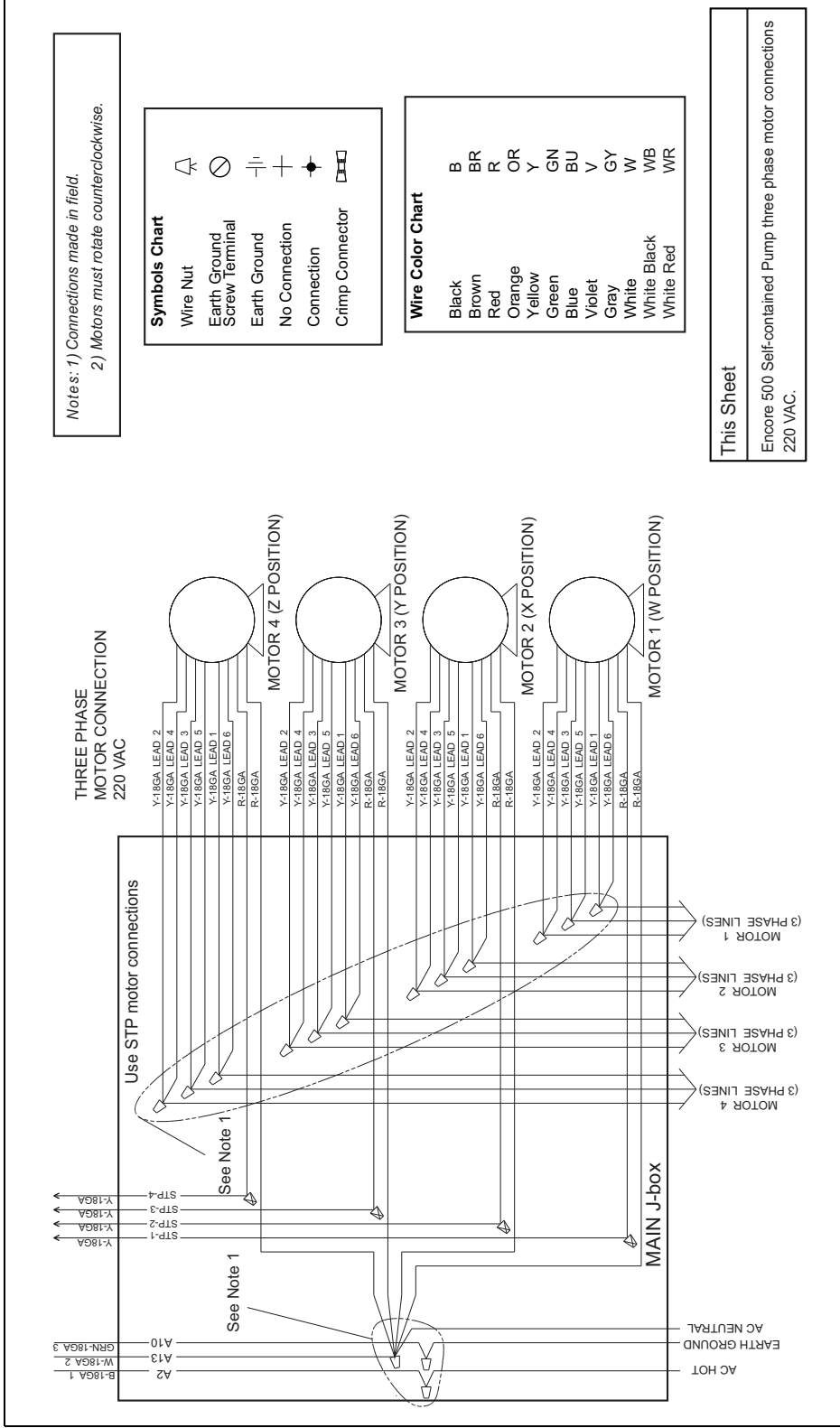


Figure 66: Wiring Diagram for Conduit Kit (M16308K002) containing M13377B302



Notes: 1) Connections made in field.
 2) Motors must rotate counterclockwise.

Symbols Chart

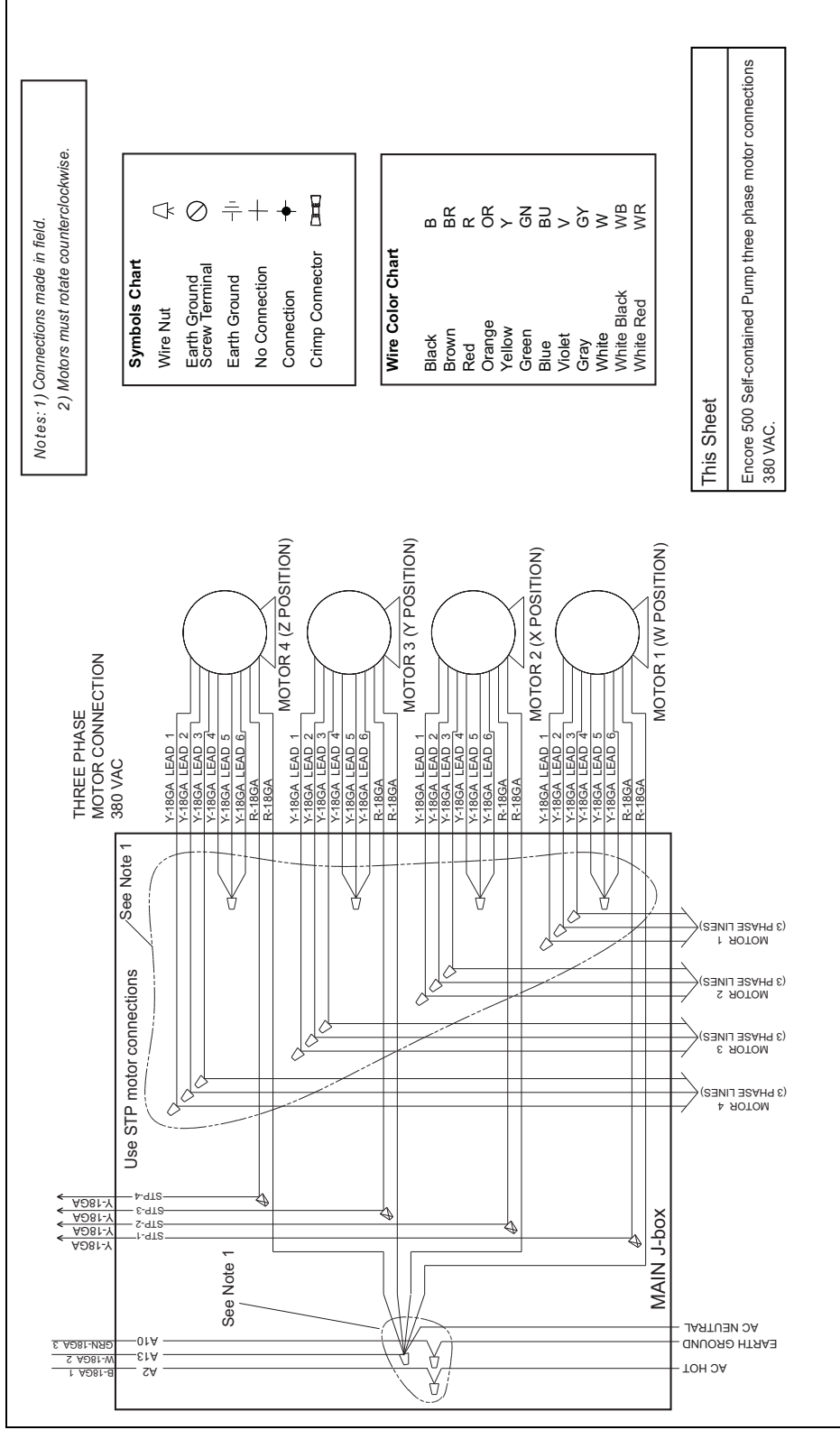
Wire Nut	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	
Crimp Connector	

Wire Color Chart

Black	B
Brown	BR
Red	R
Orange	OR
Yellow	Y
Green	GN
Blue	BU
Violet	V
Gray	GY
White	W
White Black	WB
White Red	WR

This Sheet
 Encore 500 Self-contained Pump three phase motor connections
 220 VAC.

Figure 67: Wiring Diagram for Conduit Kit (M16308K002) containing M13377B302



Before Reapplying Power to the Unit

Before reapplying the power to the unit, ensure the following:

- Verify that all the field wiring connections match the connections as shown in [Figure 64](#) on [page 32](#).
- Secure the Conduit cover.
- Ensure that the belt/pulley is aligned properly.
- Ensure that the belt tension is proper.

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7300 West Friendly Avenue · Post Office Box 22087

Greensboro, North Carolina 27420

Phone (336) 547-5000 · <http://www.gilbarco.com> · Printed in the U.S.A.

MDE-5401C Motor and Conduit Kit (M16308K001 and M16308K002) Installation Instructions · September 2020