

## Introduction

### Purpose

This manual provides instructions for installing the following Encore® 300 and Encore 500 Conversion Retrofit Kits:

Kit Number	Type Conversion	Procedure Location
<b>Multi-Hose Multi Product Dispenser (MPD) to a Single Hose MPD (Dispenser)</b>		
M04532K001	3G6H MPD to 3GSH MPD Pre 02/2002 Outlet Conversion and from lever-activated to nozzle-activated boot	<a href="#">page 9</a>
M04532K002	3G6H MPD to 3GSH MPD Aft 02/2002 Outlet Conversion	<a href="#">page 13</a>
<b>Multi-Hose MPD to a Single Hose Blender (Dispenser)</b>		
M04532K003	3G6H MPD to 3+0 SH Blender Pre 02/2002 Outlet Conversion	<a href="#">page 16</a>
M04532K004	3G6H MPD to 3+0 SH Blender Aft 02/2002 Outlet Conversion	<a href="#">page 19</a>
<b>Single Hose MPD to Single Hose Blender (Dispenser)</b>		
M04532K005	3GSH MPD to 3+0 SH Blender Outlet Conversion	<a href="#">page 20</a>
<b>Multi-Hose MPD to a Single Hose MPD (Pump)</b>		
M04532K006	3G6H MPD to 3GSH MPD Pre 02/2002 Outlet Conversion and from lever-activated to nozzle-activated boot	Refer to "Installing M04532K001 Conversion Kit" on <a href="#">page 9</a>
M04532K007	3G6H MPD to 3GSH MPD Aft 02/2002 Outlet Conversion	Refer to "Installing M04532K002 Conversion Kit" on <a href="#">page 13</a>
<b>Multi-Hose MPD to a Single Hose Blender (Pump)</b>		
M04532K008	3G6H MPD to 3+0 SH Blender Pre 02/2002 Outlet Conversion	Refer to "Installing M04532K003 Conversion Kit" on <a href="#">page 16</a>
M04532K009	3G6H MPD to 3+0 SH Blender Aft 02/2002 Outlet Conversion	Refer to "Installing M04532K004 Conversion Kit" on <a href="#">page 19</a>
<b>Single Hose MPD to Single Hose Blender (Pump)</b>		
M04532K010	3GSH MPD to 3+0 SH Blender Outlet Conversion	Refer to "Installing M04532K005 Conversion Kit" on <a href="#">page 20</a>

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## Required Reading

Before installing the equipment, the installer must read, understand, and follow:

- This manual
- National Fire Protection Association (NFPA) 30A, The Automotive and Marine Service Station Code
- NFPA 70®, The National Electric Code (NEC®)
- Applicable federal, state, and local codes and regulations

Failure to do so may adversely affect the safe use and operation of the equipment.

*Note: This kit must be installed by a Gilbarco®-trained Authorized Service Contractor (ASC) to insure valid warranty.*

## Required Tools and Material

The following equipment is needed to install the Hose Conversion Retrofit Kit:

- Standard Open End Wrench Set
- 7/32-inch or #22 Drill Bit with Manual Drill
- 7-mm Nut Driver or Socket
- 3/8-inch Nut Driver or Socket
- Screwdrivers, Standard and Phillips® Head
- Step Ladder (minimum 8 feet)
- Approved Container (for catching fuel)
- Soft Cloth
- Approved Absorbent Material
- Eye Protection

## Parts List

## M04532K00X Encore Conversion Retrofit Kits

Part Number	Description	K001	K002	K003	K004	K005	K006	K007	K008	K009	K010
M00789B001	Gasket, Angle Casting	2	-	2	-	-	2	-	2	-	-
M02087B010	Manifold, Angle Casting Open	-	2	-	2	-	-	-	-	-	-
Q12974-118	Gasket O-ring .862 ID X 1.068 OD Parco Cmpd 9131-75	4	4	4	4	4	4	4	4	4	4
M00377A001	Tube, Upper Discharge	2	2	-	-	-	2	2	-	-	-
M01047A005	Assembly, Nozzle Boot	2	2	2	2	-	2	2	2	2	-
M00329A009	Boot Cavity Blank Assy, Offset CIM™ Left Boot	2	2	2	2	-	2	2	2	2	-
M00329A006	Assembly, Blank, Cavity, CIM	2	2	2	2	-	2	2	2	2	-
EN11005G001*	Enc Ofst CIM Nzl Stand (Left Panel Graphic)	0*	0*	0*	0*	-	0*	0*	0*	0*	-
EN11004G002*	Enc Ofst CIM Nzl Bln (Right Panel Graphic)	0*	0*	0*	0*	-	0*	0*	0*	0*	-
M00911A001	Assembly, Base and Shunt	-	-	6	6	-	-	-	6	6	-
M00910A001	Assembly, Button and Magnet	-	-	6	6	-	-	-	6	6	-
M03533A001	Assembly, Grade Select Button	6	6	-	-	-	6	6	-	-	-
Q11677-24	Screw, Hex washer HD Thread Forming 6-20X	12	12	12	12	-	12	12	12	12	-
EU02004G001	ENC/ECL Oct Kit P-T-S	1	1	1	1	-	1	1	1	1	-
Q12514-10	Switch, Proximity and Actuator (Magnetic Reed Switch)	6	6	6	6	-	6	6	6	6	-
Q10651-40	Circuit Board Support	12	12	12	12	-	12	12	12	12	-
M00571B001	Plug, Angle Casting	2	2	-	-	-	2	2	-	-	-
M00613B001	Gasket, Angle Casting Plug	2	2	-	-	-	2	2	-	-	-
M01257B010	Screw, Metric Socket Button Head M8 x 20	4	4	-	-	-	4	4	-	-	-
M00414B003	Nut, Metric Hex Serrated Flange	4	4	-	-	-	4	4	-	-	-
R19442-G1**B0	Assy, Hose Outlet Plug	4	4	4	4	-	4	4	4	4	-
M11310B001	Plug, Angle Casting	-	-	4	4	4	-	-	4	4	4
M15742B001	Decal, Model no, Retrofit Kit	1	1	-	-	-	-	-	-	-	-
M15742B002	Decal, Model no, Retrofit Kit	-	-	-	-	-	1	1	-	-	-
M15742B003	Decal, Model no, Retrofit Kit	-	-	1	1	1	-	-	-	-	-
M15742B004	Decal, Model no, Retrofit Kit	-	-	-	-	-	-	-	1	1	1

\*EN11005G001 and EN11004G002 are order entry items to match color.

\*\*Part numbers shown are for black.

## Related Documents

<b>Document Number</b>	<b>Document Title</b>	<b>GOLD<sup>SM</sup> Library</b>
MDE-3804	Encore and Eclipse® Start-up/Service Manual	Encore and Eclipse
MDE-3893	Encore/Eclipse Series Owner's Manual	Encore and Eclipse
MDE-3985	Encore Installation Manual	Encore and Eclipse
MDE-4625	Graphic Panel Application for The Advantage® Series, Encore, Eclipse, and Encore S	Encore and Eclipse
MDE-5339	Encore and Eclipse with Sandpiper™ Electronics Troubleshooting Guide	<ul style="list-style-type: none"><li>• Encore and Eclipse</li><li>• Service Manual</li></ul>
PT-1936	Encore Series Pumps and Dispensers Illustrated Parts Manual	Encore and Eclipse

## Abbreviations and Acronyms

<b>Terms</b>	<b>Description</b>
ASC	Authorized Service Contractor
CIM	Customer Interface Module
DEF	Diesel Exhaust Fluid
ESD	Electrostatic Discharge
GOLD	Gilbarco Online Documentation
MPD	Multi Product Dispenser
OSHA	Occupational Safety and Health Administration
PPU	Price per Unit
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).

 <b>WARNING</b>	
	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.

## Important Safety Information

### 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 cancer.

#### **WARNING**

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

## 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 found in *MDE-3804 Encore and Eclipse Start-up/Service Manual*.

### 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.

To prepare the site and dispenser for the installation, proceed as follows:

- 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.
- 4 Match the parts received in the kits with “[Parts List](#)” on [page 3](#).

### 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 kit installation.

### IMPORTANT INFORMATION

Following minor hydraulic service that introduces air into the Diesel Exhaust Fluid (DEF) hydraulics, such as removing the nozzle or inlet pipe, a minimum of 10 gallons must be purged from the DEF hose. Failure to do so may cause error codes such as 20, 5050, 5047 or 5049 to occur. For more information on error codes, refer to *MDE-5339 Encore and Eclipse with Sandpiper Electronics Troubleshooting Guide*.

# Installing Encore Hose Conversion Retrofit Kits

## Preparing for Installation

### **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 only these cashier station "stops."

### **WARNING**

If any gasoline has been inhaled, seek emergency help immediately. Inhaled gasoline may cause unconsciousness and burns to lips, mouth and lungs.

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



Spraying fuel from residual pressure in lines can cause serious eye injuries. Always wear eye protection.



Collect, transport and dispose of fuel only in approved containers specifically designed for this purpose.

To prepare the Encore unit for installing the hose conversion retrofit kits, proceed as follows:

- 1 Close the shear valve in the Encore unit and check to ensure the valve is sealed by activating the nozzle on one of the hoses and checking for any flow.
- 2 At the Encore unit, relieve the pressure in the hanging hardware assembly by holding the nozzle into an approved fuel container and squeezing the handle.
- 3 Remove the four lifting brackets from the top of the unit. Save brackets and mounting hardware for re-installation.
- 4 Remove the upper housing cover.
- 5 Place all of the sheet metal that has been removed in a place where it will not be damaged during the installation of the conversion kit.



## Installing M04532K001 Conversion Kit

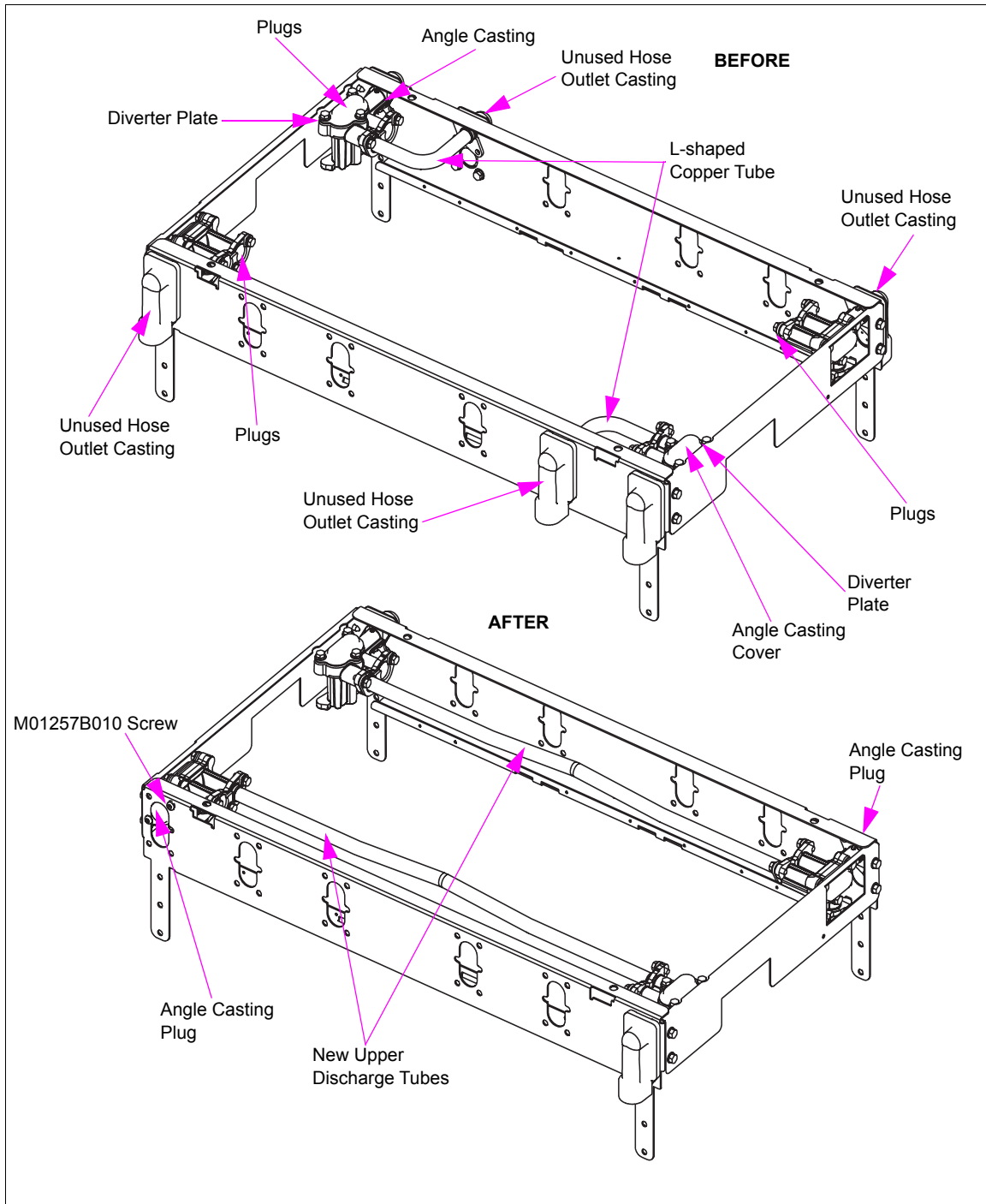
The M04532K001 conversion kit converts an Encore 3-grade, 6-hose MPD to a 3-grade, single-hose unit [3G6H MPD to 3GSH MPD (for units built before February 2002)].

### Upper Hydraulics

To install M04532K001 Conversion Kit, proceed as follows:

- 1 Ensure that the procedures in [“Preparing for Installation”](#) on [page 8](#) have been performed.
- 2 Remove the two angle casting covers, which have L-shaped copper tubes attached to the angle casting.
- 3 Remove the two diverter plates under the angle casting covers and discard. Replace the Angle Casting Gasket (M00789B001). Remount the angle casting covers.
- 4 Remove and discard the two L-shaped copper tubes.
- 5 Remove the plugs in the opposite angle castings and discard. They are silver or gold discs, approximately 1-3/16-inch diameter by approximately 3/16-inch thick and may have the words “This side up” stamped in them. Replace the Q12974-118 O-rings used underneath them.
- 6 Remove and discard the four unused hose outlet castings (with hoses attached).
- 7 Assemble new Upper Discharge Tubes (M00377A001). Check to see that all remaining plugs (discs similar to those in step 5) are in position before tightening retaining brackets.
- 8 Plug the opening in angle casting with Angle Casting Plug (M00571B001) and Gasket (M00613B001). Sandwich the plug and gasket between the angle casting and the upper frame.
- 9 Secure the angle casting plug assembly with button head M01257B010 Screws and M00414B003 Nuts.
- 10 Perform the procedures in [“Bezel”](#) on [page 11](#).

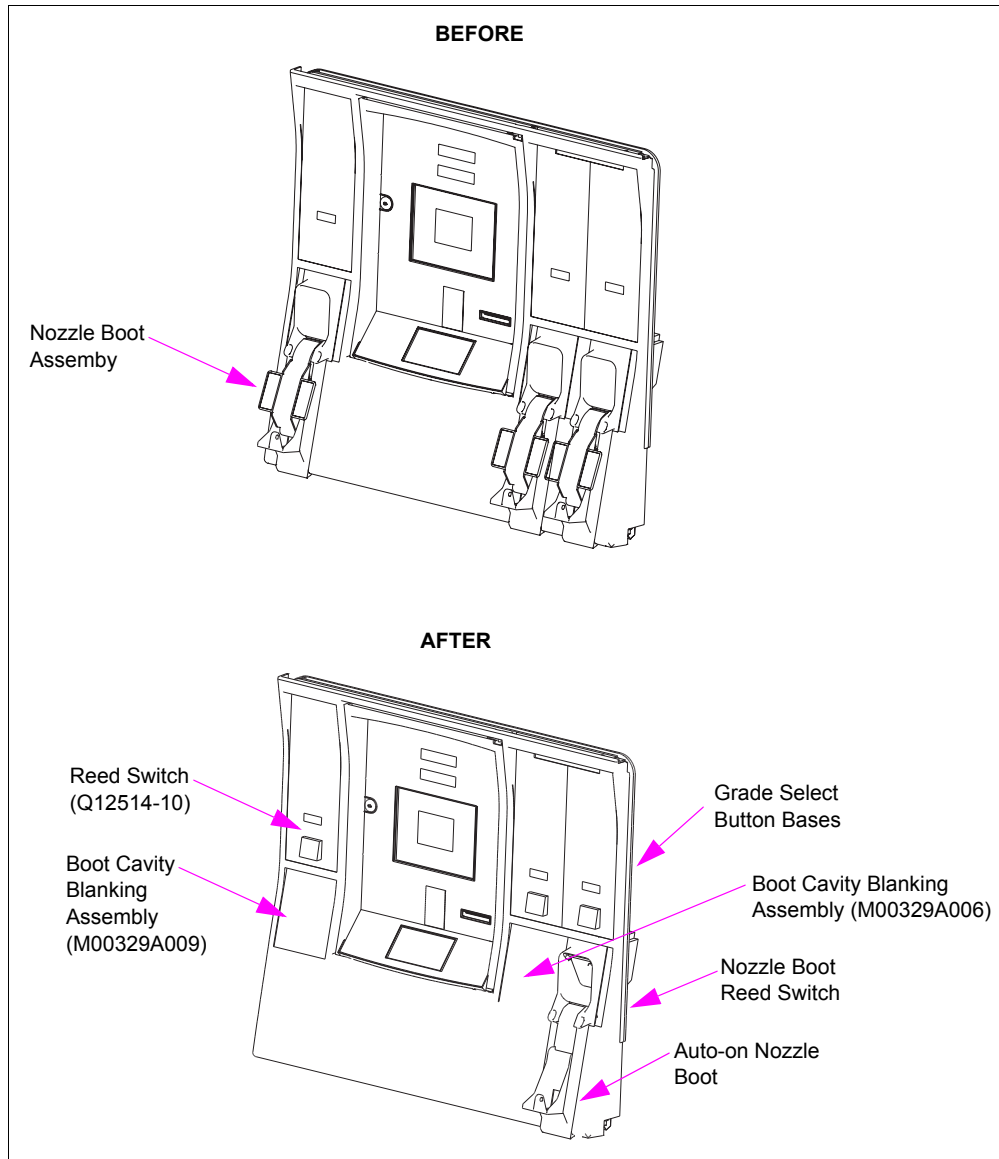
Figure 1: Conversion for Three-Grade, Six-Hose Unit to Three-Grade, Single-Hose Unit



## Bezel

- 1 Remove all existing lever-on nozzle boot assemblies. Discard nozzle boots but keep screws for reuse.
- 2 Assemble the Auto-on Nozzle boot (M01047A005) using two reclaimed screws from step 1. Ensure that the bottom of nozzle boot is “hooked” at bottom of bezel before tightening screws.
- 3 Assemble the nozzle Boot Cavity Blanking Assembly (M00329A009) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11005G001 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.
- 4 Assemble the nozzle Boot Cavity Blanking Assembly (M00329A006) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11004G002 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.
- 5 Assemble Reed Switches (Q12514-10) to Price per Unit (PPU) assemblies ([Figure 3 on page 15](#)) using two Snap Lock Supports (Q10651-40). Plug connector into PPU assembly as shown in [Figure 3 on page 15](#).
- 6 Assemble Grade Select Button Bases using two Q11677-24 Screws per base.  
*Note: Mounting holes are molded into bezel but may be covered over by branding graphics.*  
  
“Poking” or selectively cutting at the graphics with a pocket knife (or similar tool), where it will be covered over by the selection button, may be required to locate the mounting holes. Multiple mounting holes may be found. Position the grade select button base such that it is centered under the PPU. When base is mounted, snap the button cover (from M03533A001) over the base. Apply the correct octane decal onto buttons from kit (EU02004G001).
- 7 Reposition the Nozzle Boot Reed Switch at back of bezel at auto-on nozzle boot by flipping it over 180 degrees ([Figure 4 on page 15](#)). Remove and discard reed switches at unused nozzle boot locations.
- 8 Perform the procedures in “[Completing Installation](#)” on [page 22](#) to complete the installation.

Figure 2: Encore Bezel



## Installing M04532K002 Conversion Kit

The M04532K002 conversion kit converts an Encore 3-grade, 6-hose MPD to a 3-grade single-hose MPD unit [3G6H MPD to 3GSH MPD (for units built after February 2002)].

### Upper Hydraulics

*Note: Single numbers in parentheses refer to numbers on [Figure 1](#) on [page 10](#).*

To install M04532K002 Conversion Kit, proceed as follows:

- 1 Ensure that the procedures in “[Preparing for Installation](#)” on [page 8](#) have been performed.
- 2 Remove and discard the two angle castings, which have L-shaped copper tubes attached. Replace with new Angle Castings (M02087B010).  
  
*Note: Diverter plates are not used on units built after February 2002.*
- 3 Remove and discard the two L-shaped copper tubes.
- 4 Remove the plugs in the opposite angle castings and discard. They are silver or gold discs, approximately 1-3/16-inch in diameter by approximately 3/16-inch thick and may have the words “This side up” stamped in them. Replace the Q12974-118 O-rings used underneath them.
- 5 Remove and discard the four unused hose outlet castings (with hoses attached).
- 6 Assemble new Upper Discharge Tubes (M00377A001). Check to see that all remaining plugs (discs similar to those in [step 4](#)) are in position before tightening retaining brackets.
- 7 Plug the opening in angle casting with Angle Casting Plug (M00571B001) and Gasket (M00613B001). Sandwich the plug and gasket between the angle casting and the upper frame.
- 8 Secure the angle casting plug assembly with button head M01257B010 Screws and M00414B003 Nuts.
- 9 Continue with the procedures in “[Bezel](#)” on [page 14](#).

### Bezel

*Note: Single numbers in parentheses refer to numbers on [Figure 2](#) on [page 12](#).*

- 1 Remove all existing lever-on nozzle boot assemblies. Discard nozzle boots but keep screws for reuse.
- 2 Assemble the Auto-on Nozzle Boot (M01047A005) using two reclaimed screws from step 1. Ensure that the bottom of nozzle boot is “hooked” at bottom of bezel before tightening screws.
- 3 Assemble the Nozzle Boot Cavity Blanking Plate (M00329A009) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11005G001 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.
- 4 Assemble the Nozzle Boot Cavity Blanking Plate (M00329A006) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11004G002 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.
- 5 Assemble reed switches to PPU assemblies using two Snap lock supports (Q10651-40). Plug connector into PPU assembly as shown in [Figure 3](#) on [page 15](#).
- 6 Assemble grade select button bases (from M03533A001) using two Q11677-24 Screws per base.

*Note: Mounting holes are molded into bezel but may be covered over by branding graphics.*

“Poking” or selectively cutting at the graphics with a pocket knife (or similar tool), where it will be covered over by the selection button, may be required to locate the mounting holes. Multiple mounting holes may be found. Position the button base such that it is centered under the PPU. When base is mounted, snap the button cover (from M03533A001) over the base. Apply the correct octane decal onto buttons from kit (EU02004G001).
- 7 Reposition nozzle boot reed switch at back of bezel at auto-on nozzle boot by flipping it over 180 degrees ([Figure 4](#) on [page 15](#)). Remove and discard reed switches at unused nozzle boot locations.
- 8 Perform the procedures in “[Completing Installation](#)” on [page 22](#) to complete the installation.

Figure 3: PPU Assembly

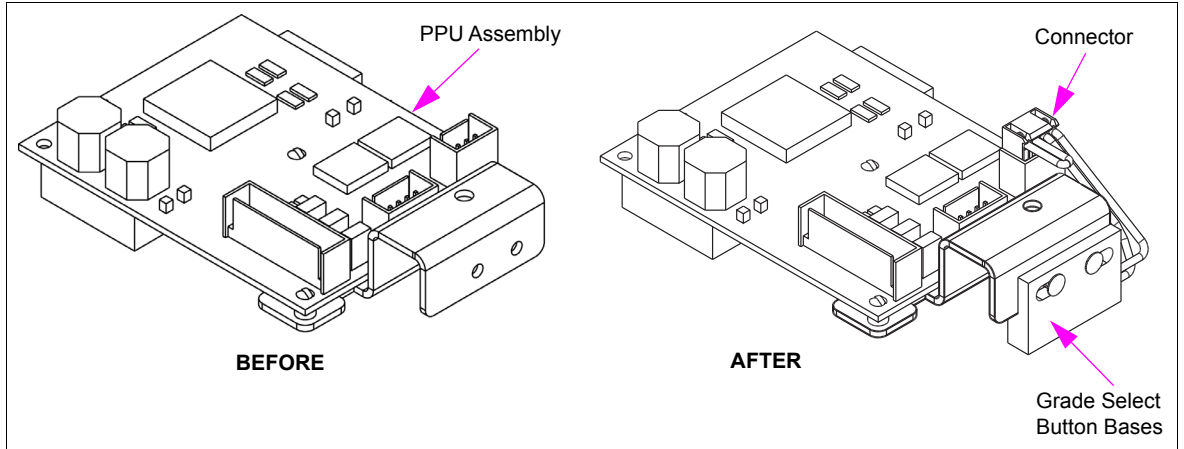
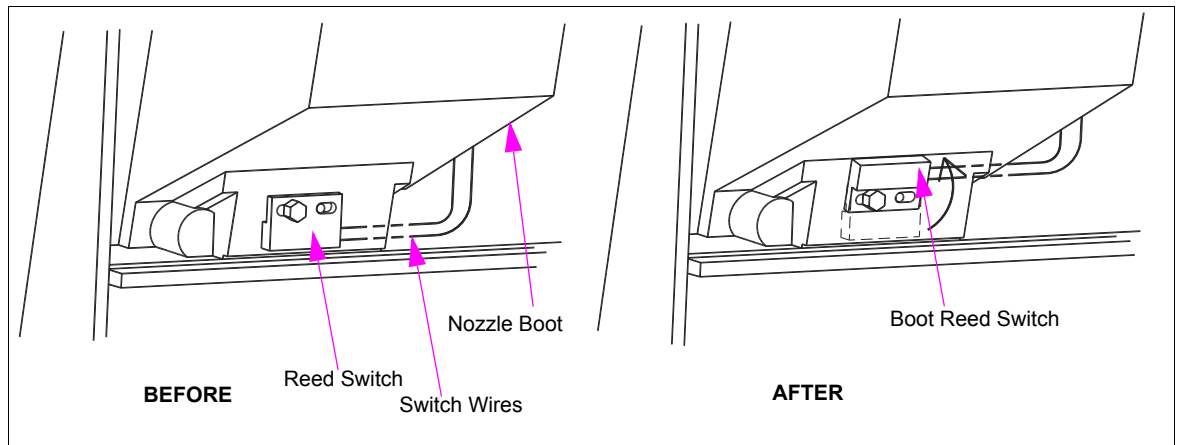


Figure 4: Reed Switch



## Installing M04532K003 Conversion Kit

The M04532K003 conversion kit converts an Encore 3 grade 6 hose MPD to a 3+0 selectable blender [3G6H MPD to 3+0 SH Blender (for units built before February 2002)].

### Upper Hydraulics

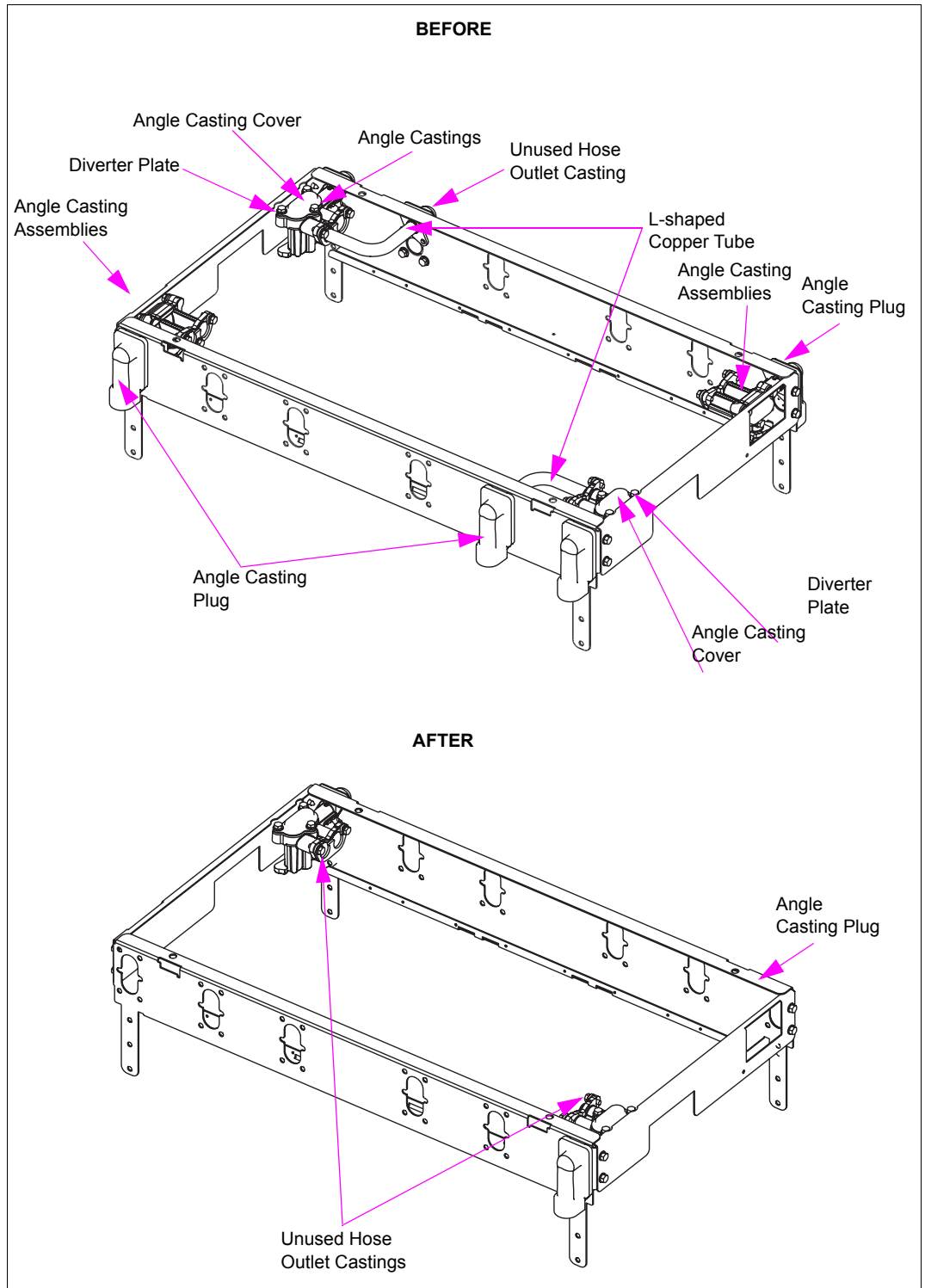
*Note: Single numbers in parentheses refer to numbers on [Figure 5](#) on [page 17](#).*

To install M04532K003 Conversion Kit, proceed as follows:

- 1 Ensure that the procedures in “[Preparing for Installation](#)” on [page 8](#) have been performed.
- 2 Remove the two angle casting covers, which have L-shaped copper tubes attached to the angle casting.
- 3 Remove and discard the two diverter plates under the angle casting covers. Check to see if the angle casting gasket is OK. If needed, replace M00789B001 Angle Casting Gasket. Remount the angle casting covers.
- 4 Remove and discard the two L-shaped copper tubes.
- 5 Plug opening in angle casting with Angle Casting Plug (M11310B001).
- 6 Remove and discard the opposite angle casting assemblies.
- 7 Remove and discard the four unused hose outlet castings (with hoses attached).
- 8 Remove and discard the two unused lower discharge lines (not shown). Plug the opening in the bottom of the meter with Angle Casting Plug (M11310B001).
- 9 Continue with the procedures in “[Bezel](#)” on [page 18](#).



Figure 5: Conversion for Three-Grade, Six-Hose Unit to a 3+0 Selectable Blender



### Bezel

*Note: Single numbers in parentheses refer to numbers on [Figure 2 on page 12](#).*

- 1 Remove the existing lever-on nozzle boot assemblies. Discard nozzle boots but keep screws for reuse.
- 2 Assemble the Auto-on Nozzle Boot (M01047A005) using two reclaimed screws from step 1. Ensure that the bottom of nozzle boot is “hooked” at bottom of bezel before tightening screws.
- 3 Assemble Nozzle Boot Cavity Blanking Plate (M00329A009) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11005G001 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.
- 4 Assemble the Nozzle Boot Cavity Blanking Plate (M00329A006) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11004G002).
- 5 Assemble Grade Select Button Bases (M00911A001) using two Q11677-24 Screws per base.  
*Note: Mounting holes are molded into bezel but may be covered over by branding graphics.*  
  
“Poking” or selectively cutting at the graphics with a pocket knife (or similar tool), where it will be covered over by the selection button, may be required to locate the mounting holes. Multiple mounting holes may be found. Position the button base such that it is centered under the PPU. When base is mounted, snap the button cover (M00910A001) over the base. Apply the correct octane decal onto buttons from kit (EU02004G001).
- 6 Assemble Reed Switches (Q12514-10) to PPU assemblies ([Figure 3 on page 15](#)) using 2 Snap Lock Supports (Q10651-40). Plug connector into PPU assembly as shown.
- 7 Reposition the nozzle boot reed switch at back of bezel at auto-on nozzle boot by flipping it over 180 degrees ([Figure 4 on page 15](#)). Remove and discard reed switches at unused nozzle boot locations.
- 8 Perform the procedures in “[Completing Installation](#)” on [page 22](#) to complete the installation.

## Installing M04532K004 Conversion Kit

The M04532K004 conversion kit converts an Encore 3-grade, 6-hose MPD to a 3+0 selectable blender [3G6H MPD to 3+0 SH Blender (for units built after February 2002)].

### Upper Hydraulics

*Note: Single numbers in parentheses refer to numbers on [Figure 5](#) on [page 17](#).*

To install M04532K004 Conversion Kit, proceed as follows:

- 1 Ensure that the procedures in “[Preparing for Installation](#)” on [page 8](#) have been performed.
- 2 Remove the two angle castings, which have L-shaped copper tubes attached, and discard. Replace with new M02087B010 Angle Castings.

*Note: Diverter plates are not used on units built after February 2002.*

- 3 Remove and discard the two L-shaped copper tubes.
- 4 Plug the opening in angle casting with an Angle Casting Plug (M11310B001).
- 5 Remove and discard the opposite angle casting assemblies.
- 6 Remove and discard the four unused hose outlet castings.
- 7 Remove and discard the two unused lower discharge lines (not shown). Plug the opening in the bottom of the meter with Angle Casting Plug (M11310B001).
- 8 Perform the following procedures in “[Bezel](#)”.

### Bezel

*Note: Single numbers in parentheses refer to numbers on [Figure 2](#) on [page 12](#).*

- 1 Remove existing lever-on nozzle boot assemblies. Discard nozzle boots but keep screws for reuse.
- 2 Assemble the Auto-on Nozzle Boot (M01047A005) using two reclaimed screws from step 1. Ensure that the bottom of nozzle boot is “hooked” at the bottom of bezel before tightening screws.
- 3 Assemble the Nozzle Boot Cavity Blanking Plate (M00329A009) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11005G001 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.
- 4 Assemble the Nozzle Boot Cavity Blanking Plate (M00329A006) using two reclaimed screws from step 1. Cover with cosmetic decal (EN11004G002 or proper color decal). For more information, refer to *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse, and Encore S*.

- 5 Assemble Grade Select Button Bases (M00911A001) using two screws (Q11677-24) per base.  
*Note: Mounting holes are molded into bezel but may be covered over by branding graphics.*

“Poking” or selectively cutting at the graphics with a pocket knife (or similar tool), where it will be covered over by the selection button, may be required to locate the mounting holes. Multiple mounting holes may be found. Position the button base such that it is centered under the PPU. When base is mounted, snap the button cover (M00910A001) over the base. Apply the correct octane decal onto buttons from kit (EU02004G001).

- 6 Assemble Reed Switches (Q12514-10) to PPU assemblies (Figure 3 on page 15) using two Snap Lock Supports (Q10651-40). Plug connector into PPU assembly as shown.
- 7 Reposition nozzle boot reed switch at back of bezel at auto-on nozzle boot by flipping it over 180 degrees (Figure 4 on page 15). Remove and discard reed switches at unused nozzle boot locations.
- 8 Perform the procedures in “Completing Installation” on page 22 to complete the installation.

## Installing M04532K005 Conversion Kit

The M04532K005 conversion kit converts an Encore 3-grade, single-hose MPD to 3+0 single hose selectable blender (3GSH MPD to 3+0 SH Blender).

*Note: These instructions are not affected by the February 2002 angle casting change.*

### Upper Hydraulics

*Note: Single numbers in parentheses refer to numbers on Figure 6 on page 21.*

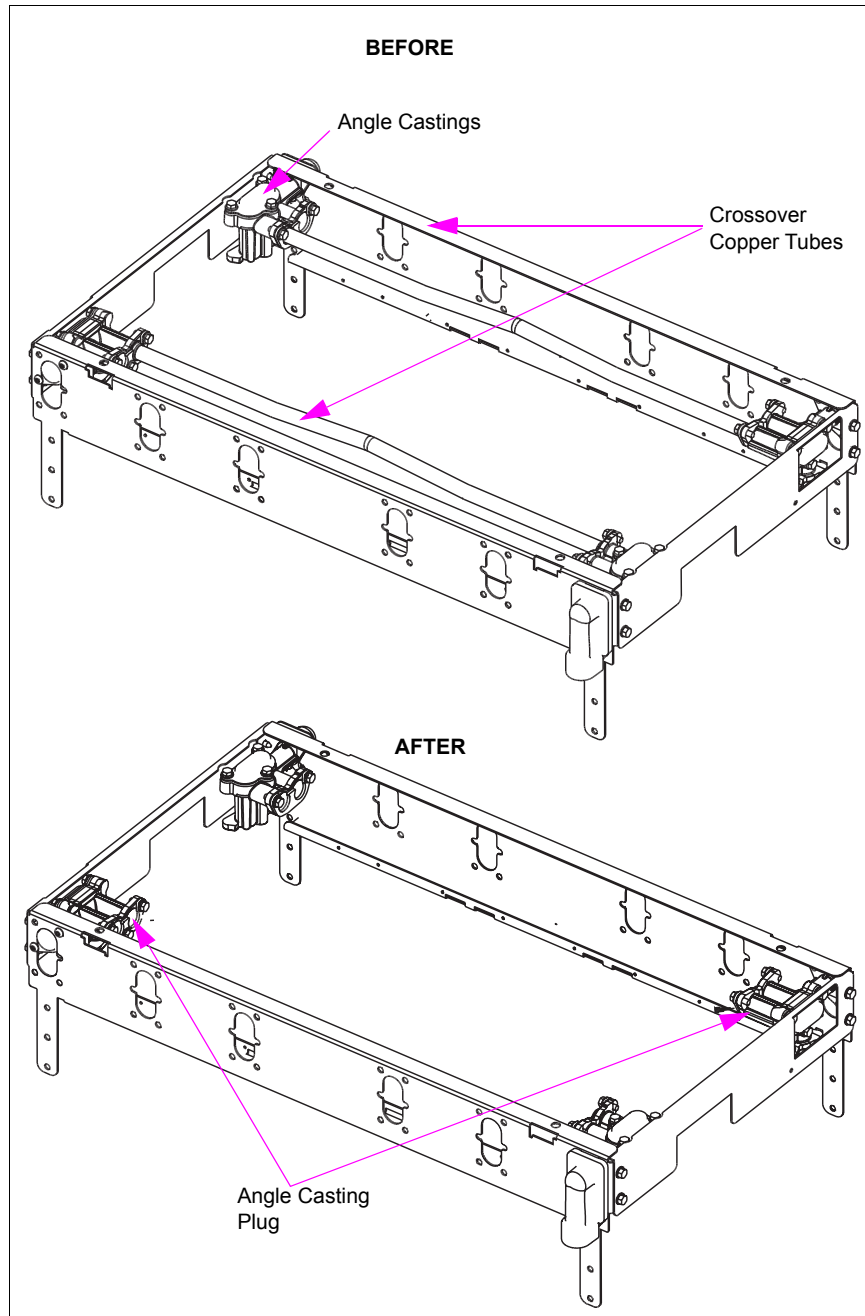
To install M04532K005 Conversion Kit, proceed as follows:

- 1 Ensure that the procedures in “Preparing for Installation” on page 8 have been performed.
- 2 Remove the crossover copper tubes, between the angle castings, and discard.
- 3 Plug the resulting openings in the Angle Castings with Plugs (M11310B001). Assemble the plugs with the words “This side up” to the outside. Replace the Q12974-118 O-rings used underneath them.

*Note: There are no bezel changes on this conversion.*

- 4 Perform the procedures in “Completing Installation” on page 22 to complete the installation.

Figure 6: Conversion for 3-Grade, Single-Hose Unit to 3+0 Selectable Blender



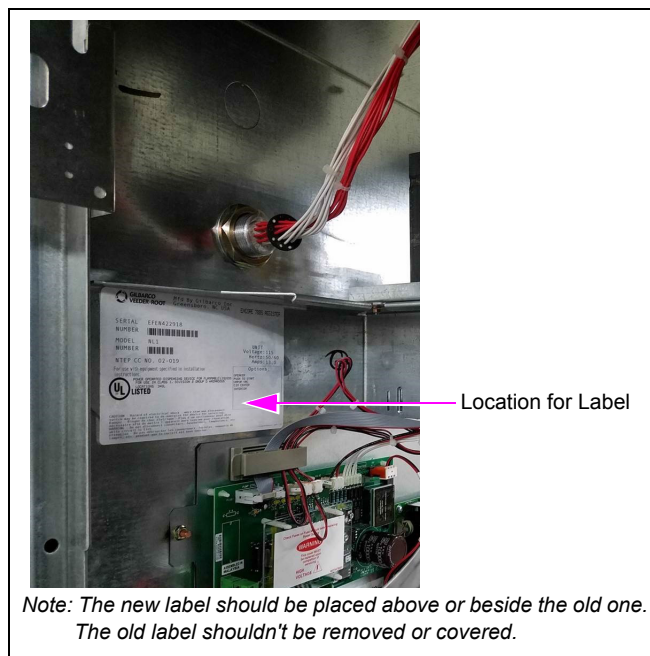
## Completing Installation

Before unit is returned to service, complete the installation by performing the following:

*Note: Steps 1 and 3 do not apply when installing the M04532K005 Retrofit Kit because no hoses or hose castings were removed and nozzle hooks were not replaced.*

- 1 Using the Hose Outlet Plug Assembly (R19442-G1\*\*B0), plug unused openings in upper housing cover (not shown in figures).
- 2 Remount the upper housing cover and lifting brackets.
- 3 Adjust the nozzle hook to accommodate the nozzle used (refer to “[Nozzle Hook Adjustment](#)” on [page 23](#)).
- 4 Remove precautions taken for lockout/tagout procedures.
- 5 Open the shear valve to allow fuel flow to the Encore unit.
- 6 Purge the unit (refer to “[Testing](#)” on [page 25](#)).
- 7 Test for leaks (refer to “[Testing](#)” on [page 25](#)).
- 8 Reprogram the unit (refer to “[Software Update](#)” on [page 24](#)).
- 9 Perform a cold start procedure (For more information, refer to *MDE-3804 Encore and Eclipse Start-Up and Service Manual*).
- 10 Affix the outlet conversion label to the unit to reflect the new model number.  
*Notes: 1) Refer to the “[Parts List](#)” on [page 3](#) to determine the correct label corresponding to the kit number.  
2) The new label should be placed above or beside the old one.*

**Figure 7: Conversion Label**

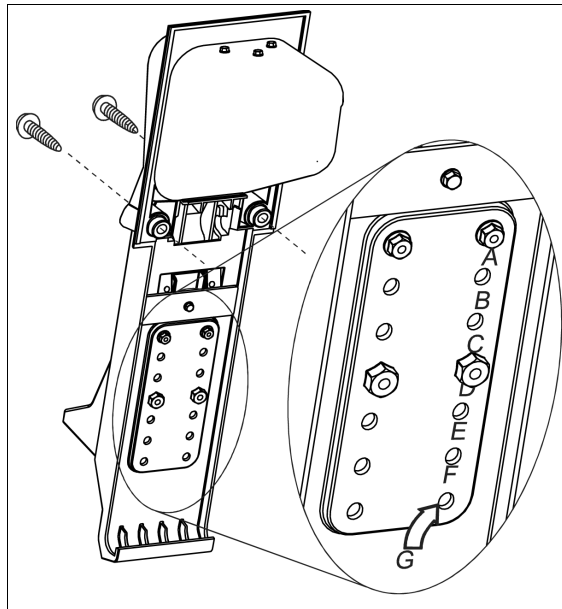


## Nozzle Hook Adjustment

To adjust nozzle hook, proceed as follows:

- 1 Remove the nozzle from the nozzle boot and place on the ground.
- 2 Using screwdriver, remove the two nozzle boot mounting screws (see [Figure 8](#)). Retain nozzle boot mounting screws for reassembly.
- 3 Remove nozzle boot from door by pulling outwards.

**Figure 8: Nozzle Hook Adjustment**



- 4 Place nozzle boot face down on work surface covered with soft cloth to protect nozzle boot face.
- 5 Identify location marks located under the right-side row of indented hole locations (see [Figure 8](#)). Standard nozzle hook locations are A and D.
- 6 Using 7-mm nut driver or socket, remove the two upper hex head screws.
- 7 Using 3/8-inch nut driver or socket, remove the two nuts from lower carriage bolts.
- 8 Remove the nozzle hook and carriage bolts from nozzle boot. Save hex head screws, carriage bolts, and nuts for reassembly.

- 9 Determine the new nozzle hook position using the following table and [Figure 8](#) on [page 23](#).

Nozzle Type	Upper Hex Head Screw Location	Lower Carriage Bolt and Nut Location
Standard factory location all non-vapor A D	A	D
VaporVac - OPW, Husky, Emco-Wheaton	A	D
VaporVac - Catlow, Richards	B	E
Healy System	C	F
Balance - Husky Short	A	D
Balance - Husky Long, Emco Wheaton Long	E	Unmarked. Use nozzle hook carriage bolt holes as drill guide
Balance - OPW Long	Bottom hole set (G on <a href="#">Figure 7</a> on <a href="#">page 22</a> )	Unmarked. Use nozzle hook carriage bolt holes as drill guide

- 10 If new holes are needed, drill using the 7/32-inch or #22 drill bit and hand powered drill.  
*Note: When locations “E” or “G” are used by the upper hex head screws, the lower carriage bolt and nut hole set are unmarked. Temporarily mount the nozzle hook with the upper hex head screws in location “E” or “G” (as determined by chart), and then use the nozzle hook carriage bolt holes as a drilling guide for the unmarked hole set. After holes are drilled, remove nozzle hook and clean up debris around hole set.*
- 11 Place nozzle hook in new position and secure to nozzle boot using the screws, bolts, and nuts saved in [step 8](#) on [page 23](#).
- 12 Test nozzle hook adjustment by holding the nozzle boot upright and inserting nozzle over nozzle hook and into boot. Wiggle boot to verify that the nozzle does not slip out of position.
- 13 Remove the nozzle from the nozzle boot and position the nozzle boot into the door. Secure in place with the two mounting screws saved in [step 2](#) on [page 23](#).
- 14 Re-insert nozzle into the boot.

### Software Update

Follow the procedures provided in *MDE-3804 Encore and Eclipse Start-Up and Service Manual* to update the following:

For the Encore 300:

- New firmware
- Cold start
- Reprogramming (blending and configuration)
- Recalibration

For the Encore 500:

- Cold start
- Identity change
- Recalibration
- Reprogramming
- Blend setting



## Testing



Purge air from the unit and check for leaks and proper operation. Ensure to check each hose, nozzle, and each grade selection switch. For more information on purging and test procedures, refer to *MDE-3804 Encore and Eclipse Start-Up and Service Manual*.

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