

Mark 4

POST-MIX BEVERAGE DISPENSER

For 1 to 14 Button
Post-Mix
and
Juice Dispensers
Standard and Flow Regulator Manifold



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SERVICE AND FACTORY ASSISTANCE:

Please record your Installer/Service Agent's name and phone number here for future reference:

SERVICE AGENT NAME: _____ DATE OF INSTALLATION: _____

SERVICE AGENT PHONE: _____ SERIAL NUMBER: _____

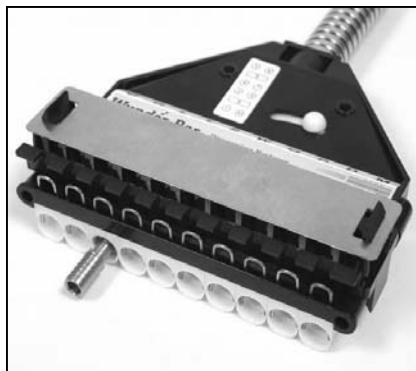
Or, call the Wunder-Bar Service Hotline 1-866-WUNDERBAR (1-866-986-3372) anytime or
(707) 448-5151 Monday through Friday, 7:00 AM to 5:00 PM Pacific Time.

MARK 4 MANUAL

REV041410

When you begin to install your *Wunder-Bar*® Mechanical Flex Hose bar dispenser, you will notice that all necessary mounting hardware, a hose hanger, a drip cup, a drain tube, and the appropriate number of stainless steel input fittings are included with each dispenser (**Fig.1**).

The input fittings are installed in the product manifold of the dispenser. These input fittings are held in place by kwik klips. To remove input fittings, pull up on kwik klip just far enough to allow removal of the fittings (**Fig.2**). (It is not necessary to remove the kwik klip entirely).



1/4" straight Input Fittings are included with all new *Wunder-Bar*® Post-Mix Beverage and Juice Dispensers unless custom "Fitting Sets" are ordered. Input fittings are available in straight, 90 degree, and 45 degree configurations with either 1/4", 5/16", 3/8", or 1/2" barbed ends. 3/8" and 1/2" Input Fittings are available in two lengths: "short" and "long" (**Fig.3**) to allow the two lengths to be installed "staggered" to accommodate braided tubing.

To make a tubing connection; remove the input fitting, secure the tubing to the fitting with a ferrule or Oetiker clamp, re-install fitting into correct position on the manifold, push the kwik klip down fully to lock the input fitting into position. The letters and numbers on the manifold label correspond to the button positions on the dispensing handle.

Use the two, 2" stainless steel wood screws, provided as part of the mounting hardware package, to secure the tube collector/manifold assembly to the underside of the bar. (A Kwik Mount kit is also available as an optional item). It is recommended that a screw be placed in both the tube collector and the brix manifold to prevent unwanted flexing.

SANITARY DRIP CUP (Fig.4) INSTALLATION INSTRUCTIONS:

1. Position the PH10-121 (Drip Cup Holder) into the recess located under the PM10-40 (Hose Hanger) and align the three matching mounting screw holes.
2. Position the combined PH10-121 and PM10-40 under the countertop, in the desired mounting location, with the alignment line lined-up with the front edge of the countertop.
3. Install three PM10-65 (#10 x 3/4" Phillips, Pan Head Screws) through the three mounting holes and into the countertop, completely, until no screw threads are visible or exposed below the screw hole mounting bosses.
4. Install one end of the PH10-106 (6' Drain Tube) onto the PH10-121's (Drip Cup Holder) drain nipple, fully.
5. Extend the other end of the PH10-106 (6' Drain Tube) to the floor sink or drain. Do not install Drain Tube end into the ice bin or sink drain.
6. Install the PM10-76 (Grommet) into the PM10-40 (Hose Hanger).
7. Install the PH10-122 (Drip Cup Insert) into the PH10-121 (Drip Cup Holder)

After all connection are made, turn on water supply, carbonator, C02, and BIB pumps. CHECK ALL DISPENSER AND SYSTEM FITTINGS CONNECTIONS FOR LEAKS IMMEDIATELY!

ATTENTION!

The POST-MIX DISPENSER'S water supply line must be connected to the potable water supply with adequate backflow prevention to comply with federal, state, and local codes.



Fig.1

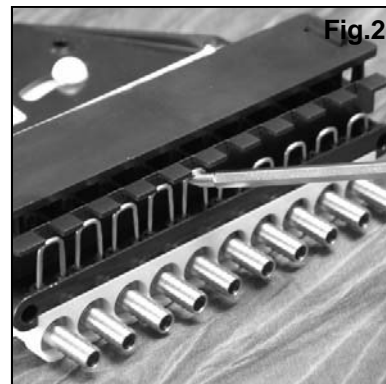


Fig.2

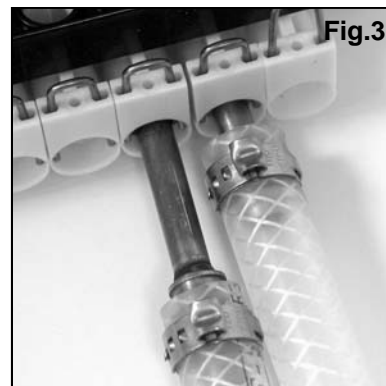


Fig.3

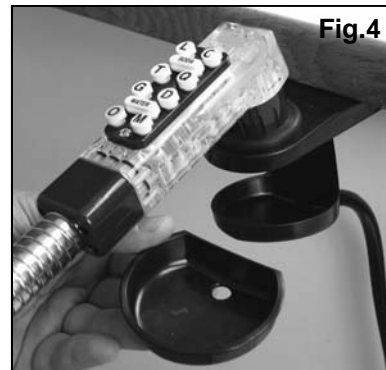


Fig.4

It will be necessary to brix your *Wunder-Bar*® Mechanical Flex Hose bar dispenser before use. Either a *Wunder-Bar*® Syrup separator and Brix Cup (**Fig.5**) or a refractometer may be used. Diet products do not contain sugar and therefore diet products' ratio may only be measured using a Brix Cup.

Brix ratio is the ratio of syrup concentrate to soda or water. A syrup separator (p/n PH10-83) is designed to separate the syrup/concentrate from the soda or plain water, allowing for proper measurement of products. A Brix Cup (p/n PH10-35) allows the user to visually compare and confirm the ratios of soda-to-syrup and water-to-syrup. A refractometer (Not available from Wunder-Bar) is a hand-held optical device used to measure the amount of sugar in solution in beverages containing sugar.

In order for accurate Brix measurements or readings to be made, it will be necessary to "ice down" the cold plate, by covering the cold plate located in the bottom of the ice bin with a minimum of 4" to 6" of ice. If a mechanically refrigerated beverage chilling system is to be used, instead of a cold plate, turn ON the refrigerated, re-circulating beverage unit and allow it to "chill down" to normal operating temperature before attempting to take Brix readings or measurements. Once the cold plate or refrigerated unit have reached temperature, dispense approximately 10 to 12 ounces of each beverage just before attempting to "read" each products' brix.

SETTING THE SODA AND WATER FLOW RATES

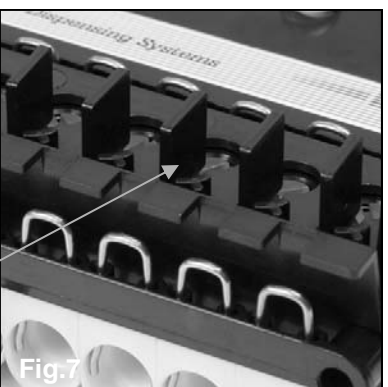
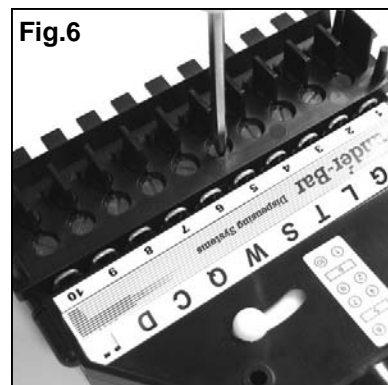
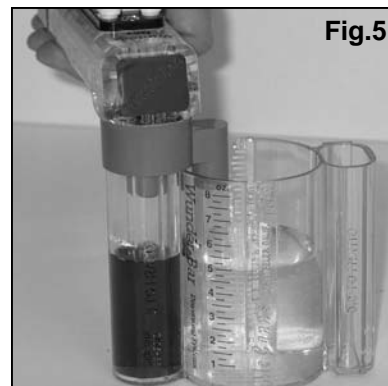
Set the flow rate to your specifications or to the nominal flow rate of 5 oz of soda in 3 seconds. Dispense soda, through nozzle, into the large chamber of the Brix Cup or a measuring cup. Squeeze the two tabs together and remove the manifold cover. Adjust the brix screw at the "S" position on the product manifold by turning the screw **counter-clockwise or "out" to increase** flow rates and **clockwise or "in" to decrease** flow rates (**Fig.6**). The brix screws are the exposed screws on the product manifold. Do not turn the "Shut-Offs" to adjust the brix ratio. The shut-offs are closest to the input fitting side of the manifold and are open when the Shut-Off tabs or screw slots are in line with the flow of product through the manifold (see **Fig.7**). Repeat the adjustment process to set the water flow rate to 5 oz. of water in 3 seconds.

ADJUSTING THE BRIX RATIOS

Now that the soda and water flow rates are set, product brixing may begin. The "L" button corresponds to the "L" position on the product label at the manifold. The "C" button corresponds with the "C" position on the manifold, "T" for "T", etc. The syrup brix screws are adjusted in the same manner as Soda and Water Brix Screws; **counter-clockwise or "out" increases** flow rates, **clockwise or "in" decreases** flow rates. The most common ratio for Post-mix beverages is 5:1 (5 parts soda or water to 1 part syrup). However, some specialty beverages have 5.5:1 or higher ratios. Some juices and mixers have ratios as low as 1:1 to 2:1. Always read the BIB (Bag-In-Box) syrup container label for ratio specifications before starting. The small chamber (syrup side) of brix cup should fill to 1 oz. in the same amount of time it takes to fill the large chamber 5 oz. of soda or water—confirming a 5:1 brix ratio (**Fig.5**). If the product was 4:1 ratio, the small chamber would fill to the same 1 oz. mark, but the soda or water would fill to 4 oz. Repeat until all products are properly brix ratio'd.

SECONDARY WATER BRIX SCREW (Fig.8)

All *Wunder-Bar*® Post-Mix and Juice dispensers have a "Secondary Water Adjustment Screw" to enable juices and beverages with 2:1 and 1:1 ratios to be dispensed through buttons located under the lower right Butterfly Plate. The Secondary Water Brix Screw is factory set to the "open" position. Use a small bladed screwdriver to turn the screw Clockwise or "in" to decrease water flow to achieve 2.1 to 1:1 ratios for products like tomato juice and Bloody Mary Mix.



FLOW REGULATOR OVERVIEW

The purpose of the flow regulator is to provide a more precise brix ratio between soda and syrup during pressure fluctuations. The regulators compensate for pressure variances by automatically reducing the amount of product that passes through when pressure rises, and increasing amounts when pressure falls. Liquid flow regulators manufactured for post-mix beverage dispensers use a "piston" moving up or down within a "cylinder". Typically, a small opening at one end of the piston is where the liquid enters. Located within the hollow piston is an adjustable tension spring which provides resistance against the path of liquid flow.

HOW IT WORKS

Incoming liquid, under pressure, forces the piston upward against the adjusted tension spring. As the piston moves, the regulating process begins. It partially or fully closes the outlet holes located in the top of the cylinder wall. As pressure varies, the piston will move in a direction to open or close the outlet holes to maintain the preset flow rate.

FACTORY GUIDELINES

The flow control regulator is not a "fix-all" for varying pressures over a wide range. There are limitations, a minimum operating pressure and a maximum operating pressure. This range is determined by the "Finished Product" (FP) flow rate. When you lower the FP flow rate, you increase the operating range. Therefore, a slower FP rate is generally better because lower pressures can be applied to the syrups and this increases the regulator's accuracy and consistency. To maintain a proper flow and desired "Finished Product (FP)", flow rate must first be established. The following instructions will assist you in adjusting for a flow rate of 1.5 ounces per second of finished product.

CAUTION: Before you begin to set rates, make certain that all air has been removed from the soda, water and syrup lines. Air will cause varying flow. Also, be sure to chill all liquid to its normal operating temperature to assure proper settings.

GENERAL OPERATING INSTRUCTIONS FOR FLOW REGULATORS

Your Flow Regulator Manifold was factory pre-set and tested to the following pressures and flow rates:

Achieving Finished Product Flow Rate of 1.5 Ounces Per Second

1. Set High CO2 pressure to 90 PSI (flow) from the Carbonator
2. Set Low CO2 pressure to 60 PSI (flow) for BIB pumps for Sugar-based syrups.
3. Set Diet CO2 pressure to 20 PSI (flow) for BIB pumps for Diet syrups.
4. Set the Soda flow rate to 6.5 ounces in 5 seconds (See adjustment procedures below)
5. Set Syrup to Soda/Water ratio to 5:1 for most carbonated products. Other ratios will be noted on the BIB label. However, some specialty beverages have 5.5:1 or higher ratios. Some juices and mixers have ratios as low as 1:1 to 2:1. Always read the BIB (Bag-In-Box) syrup container label for ratio specifications before starting. The small chamber (syrup side) of brix cup should fill to 1 oz. in the same amount of time it takes to fill the large chamber 5 oz. of soda or water—confirming a 5:1 brix ratio (**Fig.5**). If the product was 4:1 ratio, the small chamber would fill to the same 1 oz. mark, but the soda or water would fill to 4 oz. Repeat until all products are properly brix ratio'd.

At 1.5 ounces per second finished product flow rate, controllable pressure "throw" ranges are:

SODA: 40 to 110 PSI

SUGAR BASED SYRUPS: 20 TO 80 PSI

DIET SYRUPS: 10 TO 40 PSI

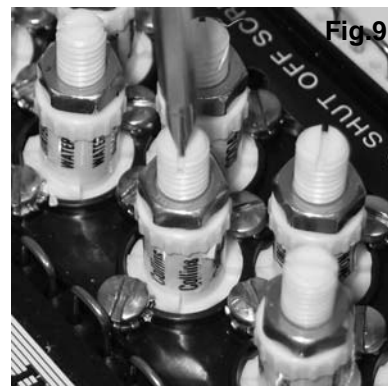
FLOW REGULATOR ADJUSTMENT

Once the Soda and Water flow rates have been set, only adjust the syrup flow regulator adjustment screws if the ratio is not correct (**Fig.9**). Loosen the desired syrup's lock nut first, before attempting adjustments

To decrease the amount of syrup: Turn the adjustment screw counter-clockwise (**Fig.9**).

To increase the amount of syrup: Turn the adjustment screw clockwise.

Always make adjustments in 1/4 to 1/2 turn increments.



Wunder-Bar® Mechanical Post-Mix Dispensers can be configured for any combination of carbonated or non-carbonated beverages or non-carbonated premix beverages—up to a total of 14 products total (requires 14 Button Dispenser), including soda and plain water. All these combinations are field convertible without shutting off the dispenser. Wunder-Bar® Post-Mix Juice Dispensers are permanently factory-configured to dispense non-carbonated juices, mixes, and beverages, only.

BUTTONS AND BUTTERFLY PLATES

The Buttons and Button Plate can be removed while dispenser is under pressure (**Fig.10**). After the button plate has been removed, buttons and the configuration of the dispenser can be changed so that any combination of carbonated and non-carbonated buttons can be achieved. Simply remove the butterfly retainer screws (**Fig.11**) and lift out the butterfly plates (stainless steel plates with small ball bearings attached) to create various standard configurations and endless special configurations. The butterfly plate balls fit into the handle recess. The half moon cutout area of the butterfly plates are where the retainer and retainer screws are located when attaching the plates to the handle. When replacing the butterfly plates, be careful not to over-tighten the retainer screws. This may cause the plates to bind. See Butterfly Maps on pages 8 and 9.

SHUT-OFFS

If it becomes necessary to work on the internal components of the dispenser, you must turn off all syrups, water, and carbonated water. The manifold is equipped with shut-offs (or shut-off screws) for each of the syrups, the soda, and the water (**Fig.12**).

The shut-offs work like a gate valve. There is a hole through the shut-off that is aligned in the same direction as the shut-off's tab handle. This allows each beverage dispenser on the system to be shut off, individually, at each dispenser's brix manifold, without affecting the other dispensers on the system.

Turn the shut-offs 90 degrees clockwise to shut off the flow of all products at the dispenser's manifold (**Fig.13**).

DISCONNECTING DISPENSER FROM BRIX MANIFOLD

After all shut-offs are turned 90° to the OFF position (**Fig.13**), depress all buttons on the dispensing handle to release pressure between the manifold and handle. Pull up on kwik klips between the tube collector and manifold (**Fig.14**). These are called the Interconnect kwik klips. (It is not necessary to remove the kwik klips). Push the cam knob sideways while pulling the manifold away from the tube collector to separate the manifold from the tube collector (**Fig.15**). A replacement flex-hose assembly can now be placed onto the brix manifold, the interconnect kwik klips pushed back into place, shut off screws opened 90 degrees counter clockwise, and the new dispenser doesn't even have to be re-brixed! **OR**, repairs can be made in a properly equipped, adequately lighted area, and out of the way of the bartender. Reinstall the dispenser back onto the brix manifold when repairs are completed. Re-brixing should not be required.

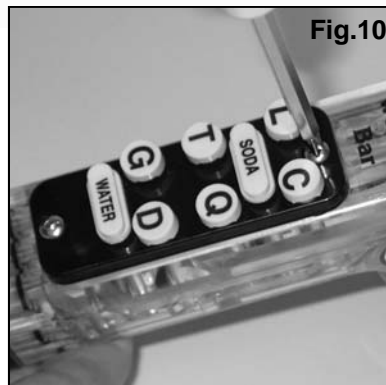


Fig.10

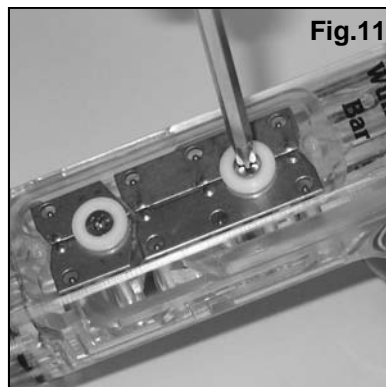


Fig.11



Fig.12

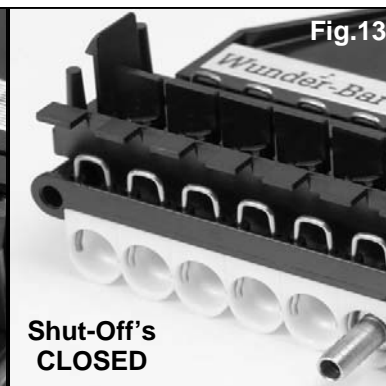


Fig.13

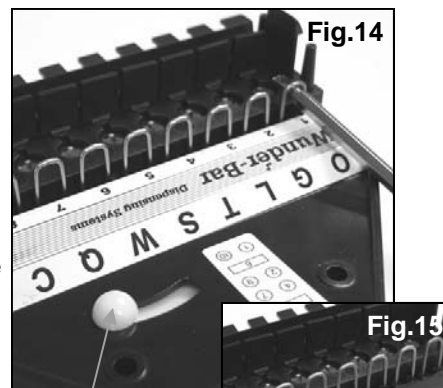


Fig.14

CAM KNOB



Fig.15

REPLACING O-RINGS IN THE HANDLE.

Any one or all of the valve positions on the handle may be serviced individually, by first turning the shut-off's for the products to be serviced, 90 degrees to the **OFF** position (**Fig.16**). The flex-hose assembly does not have to be disconnected from the manifold, as long as the Shut-Off's are in the OFF position before servicing any valve on the handle. See **SHUT-OFFS** section on page 5.



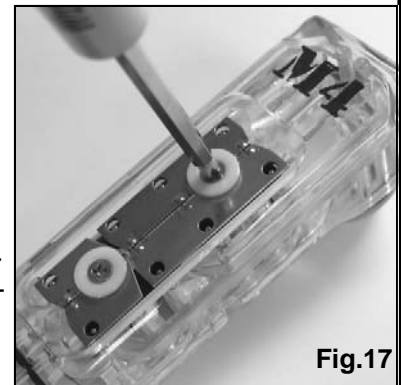
REPLACING A STEM O-RING (leak under the button plate)

If any syrup, soda, or water leak from under the button plate, when dispensing, the Stem O-ring for that flavor, the soda or the water must be removed and replace. The Mark 4 dispenser allows for replacement of the stem o-ring from the top of the handle without depressurizing the dispenser.

NOTE: Although the stem O-rings may be replaced with the dispenser fully pressurized, it is wise to close the shut-off, for the position to be serviced, to avoid product leakage if the valve stem is accidentally depressed.

REMOVAL OF STEM O-RING

Remove the button plate. Remove only the butterfly plates located directly above the stem O-ring to be replaced (**Fig.17**). Lift up and remove the O-ring retainer plate from above the stem O-ring that is to be replaced (**Fig.18**). Use the "spring" end of the Stem O-ring Removal Tool (p/n: PH10-112) to stab and then remove the defective Stem O-ring from the O-ring cavity (**Fig.19**). Turn the spring end counterclockwise while pushing down to pierce the defective O-ring. Remove and discard the defective O-ring. Do not re-use leaking or defective O-rings.

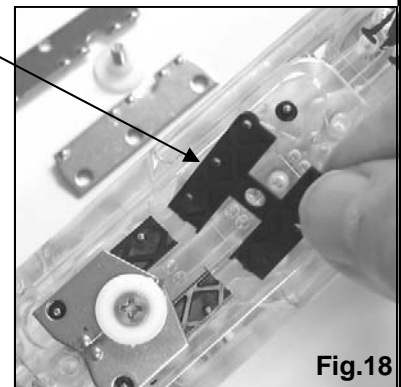


O-ring Retainer Plate

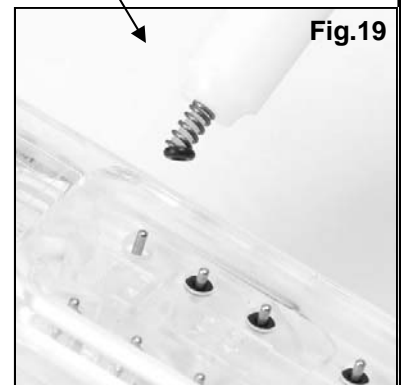
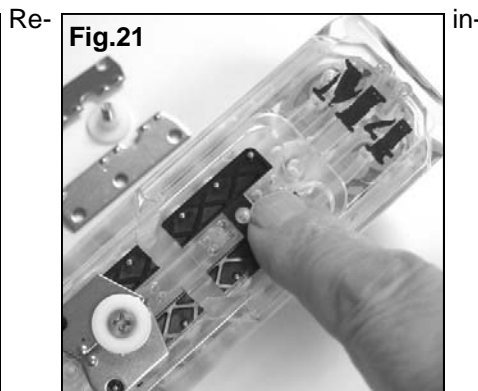
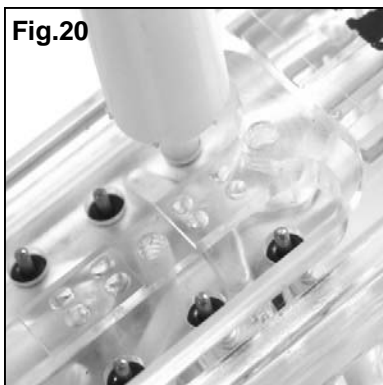
REPLACING THE STEM O-RING

Position the replacement stem o-ring onto the valve stem. Use the opposite end of the stem o-ring removal tool, (the end with no spring), to push the stem o-ring into the o-ring recess, fully (**Fig.20**).

Position the stem o-ring retainer plate so that the six or eight valve stems protrude through the retainer plate as shown in **Fig.21**. Push all four corners of the plate down, fully, to completely seat the retainer plate. Re-install the Butterfly plates, butterfly retainer, and screw (**Fig.17**). DO NOT OVERTIGHTEN THE RETAINER SCREWS!



O-ring Removal Tool



REPLACING VALVE PLUNGER ASSEMBLY (product leaks thru nozzle)

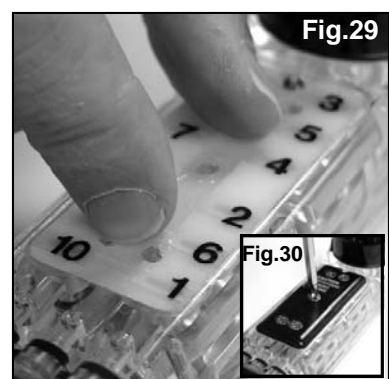
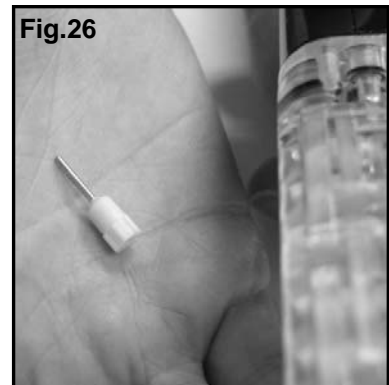
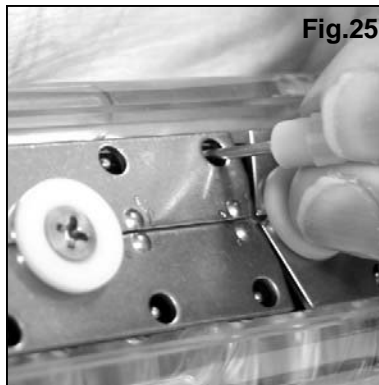
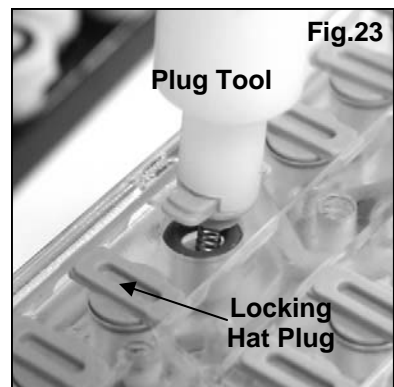
IMPORTANT: Confirm that all shut-offs are in the OFF (closed) position before replacing a valve stem (**Fig.16, page 6**). Press the buttons for all positions to be serviced, to relieve pressure between the manifold and handle.

Remove both button plate screws and the button plate and set them aside. Remove all of the bottom plate screws and the bottom plate. **NOTE:** Refer to the numbers printed on the locking hat plate to locate the valve plunger(s) to be replaced. Remove the locking hat plate (**Fig.22**) and set it aside. Use the locking hat plug tool (p/n PH10-126), or a small blade screwdriver, to turn the desired locking hat plug 90 degrees (**Fig.23**). Remove the locking hat plug (with spring) and O-ring for every valve plunger to be replaced (**Fig.24**). Hold the dispenser in the palm of your hand with the nozzle pointing down. Push the desired plunger stem, from the top of the dispenser, downward into the palm of your hand, using the tip of the metal stem on a spare valve plunger stem (**Figs.25,26**).

Install a replacement (cream colored) Santoprene® rubber valve plunger stem back into the valve cavity, all the way, up through the stem O-ring. Position the locking hat plug, with spring and O-ring, onto the slotted end of the locking hat plug tool (**Fig.24**). Position the hat plug, with spring and O-ring, into the valve cavity (**Fig.27**). The spring should be positioned into the hole in the bottom of the rubber valve stem.

TIP: The o-ring can be seated easier by rotating the hat plug back and forth, 1/8th turn, as the hat plug is being inserted into the valve cavity (**Fig.27**). Lightly push the hat plug, with o-ring, into the valve cavity and then turn the locking hat plug 90° to the locked position (**Fig.28**).

Repeat this process for all valve stems to be replaced. Replace the locking hat plug plate so that the numbers are readable while holding the handle with the nozzle away from you (**Fig.29**). Install the bottom plate and screws (**Fig.30**). **DO NOT OVERTIGHTEN THE BOTTOM PLATE SCREWS.**



TUBE COLLECTOR

When the tube collector is separated from the brix manifold, the tube collector cover plate can be removed to expose the product tubing (**Fig.31**). On a 8 to 10 button dispenser, the syrup tubes in positions 1, 3, 8, and 10 (**see Fig.31**) are standard syrup tubes. The yellow tubes in positions 2, 4, 7, and 9 (**see Fig.31**) are syrup barrier tubes which should be used for energy drinks and pungent syrups such as root beer and punch. The blue tubes in positions 5 and 6 are Soda and Water. **NOTE: All positions with barrier tubes are indicated by yellow highlighted numbers on the manifold label located on top of the tube collector.**

All syrup positions have "B" interconnect fittings and red "B" lock rings. The Soda and Water positions have "A" interconnect fittings and red "B" lock rings. The letter B is molded into the side of the "B" interconnect fittings. (**Fig.32**). The letter A is molded into the "A" interconnect fittings(**Fig.33**).

12 button dispensers have barrier tubes in syrup positions 4, 5, 10 and 11. 14 button dispensers have barrier tubes in syrup positions 4, 5, 10, and 11.

HANDLE REMOVAL

After the dispenser has been depressurized: Remove the four slot screws in the rear of handle heel. Slide the heel back and away from the handle (**Fig.34**). The split heel may be separated (**Fig.34**) and removed from the sheathing for replacement. Loosen and remove the two retainer posts from the rear of the handle, using a 5/16" hex driver, a 5/16" or small adjustable wrench. The top center of the retainer plate is marked with a stamped number "10". Pull the retainer plate and tubing (with ferrules and caps) away from the handle. This allows for removal and replacement of the tube seal o-rings and ferrule caps and ferrules.

REPLACING A PRODUCT TUBE

Disconnect the handle and sheathing assembly from the manifold. Remove the Tube Collector Cover screws to gain access to the tube-ends and interconnect fittings. Lift up on the desired tube's interconnect fitting and unsnap it to separate it from the tube collector. The Individual tube can now be replaced in the field. Remove the four screws from the handle heel and slide the heel and sheathing away from the handle. Loosen and remove the two retainer posts, using a hex driver, wrench, or pliers, from the rear of the handle. **NOTE: The number "10" is stamped into the retainer plate at the top to aid proper tubing to handle orientation during re-assembly.** Pull the retainer plate and tubing (with ferrules and caps) away from the handle.

A new tube assembly, with an interconnect fitting and lock ring installed, should be ordered from the factory. Cut the old interconnect fitting off of the old tube. Tape the new tube's end to the end of the old tube. Slowly pull the tube through the sheathing all the way to the back of the retainer plate. Un-tape the tubes and discard the old tube. Insert the new tube's end through the open hole in the retainer plate about 1 to 1-1/2". Dip the tube end in hot water for 3 seconds and then install the ferrule into the tube end. Install the ferrule cap onto the tube end with ferrule installed. Push all of the tubes' back to the retainer plate surface. Align the mark to the top of the handle while inserting all ten tube ends with ferrules and caps back into their o-rings in the back of the handle. Once all ten are properly inserted, re-install the two retainer posts while visually confirming that all ten ferrule caps are centered in their respective tube seal o-rings. Do not over-tighten the retainer posts. Reinstall the heel and all four heel screws. Do not over-tighten the screws.

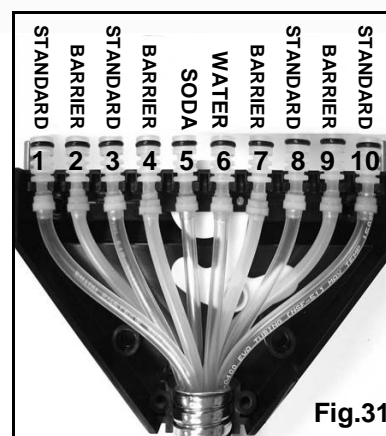


Fig.31

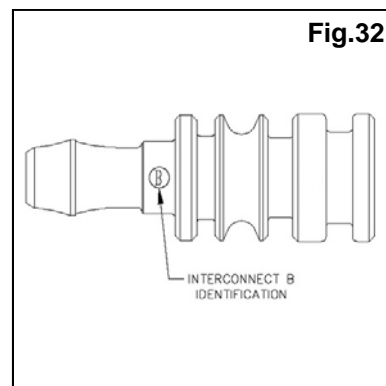


Fig.32

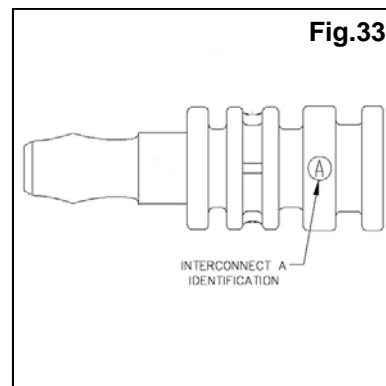


Fig.33

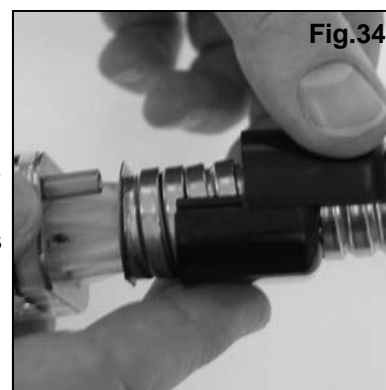


Fig.34

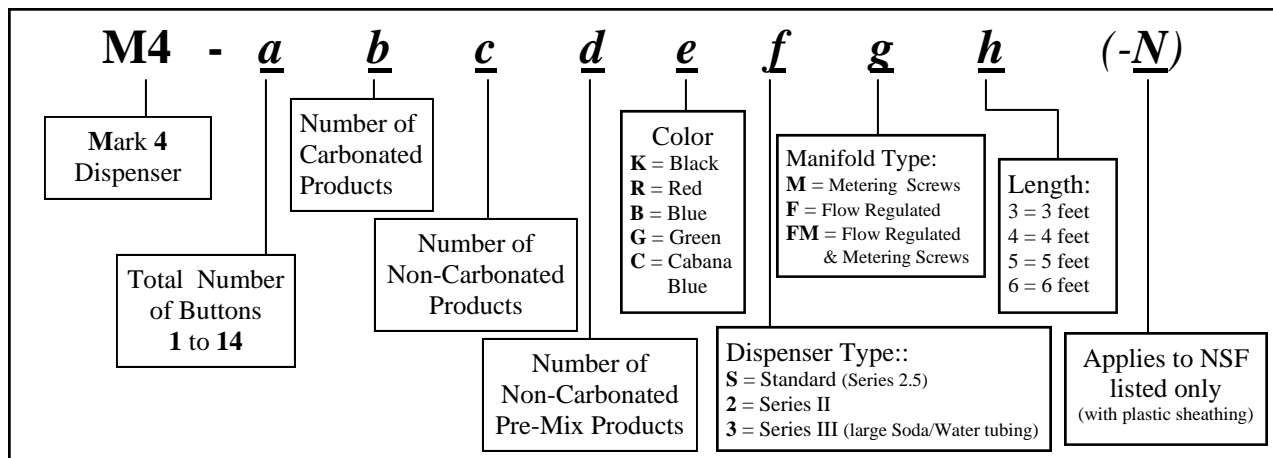
The Wunder Bar Mechanical Flex Hose bar dispenser is available in 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, and 14 button models. All models can be configured for many combinations of carbonated, non-carbonated, non-carbonated premix and energy drink products at any time. All of these combinations are field-convertible and can be modified without shutting off the dispenser. All seven, eight, and nine button dispensers have all the necessary valves and product tubes already installed into the dispenser, making the upgrade to up to ten buttons as easy as adding buttons on the handle and input modules and input fittings at the manifold.

BUTTONS AND BUTTERFLY PLATES

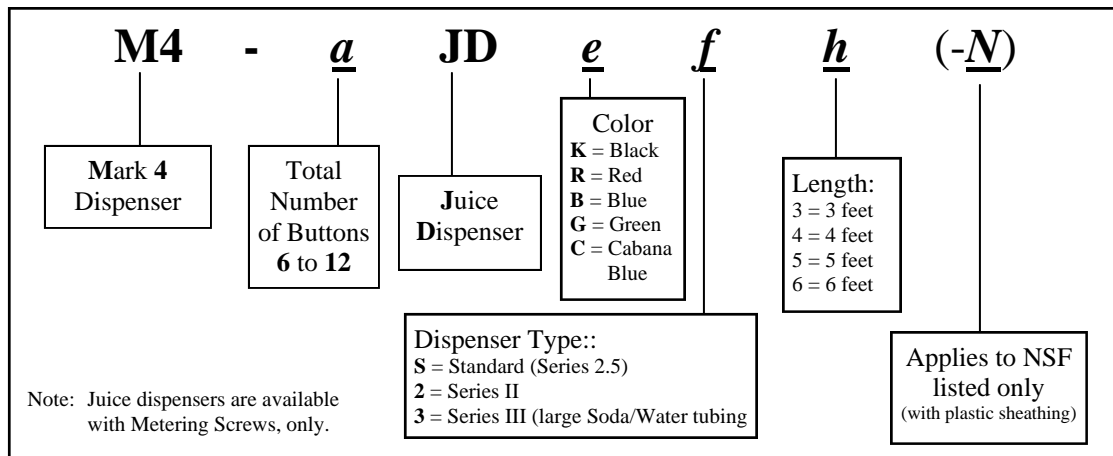
The buttons and button plate can be removed while dispenser is under pressure. After the button plate has been removed, buttons can be changed as can the configuration of the dispenser. By removing the butterfly retainer and screws, and lifting out the butterfly plates, various standard configurations and endless special configurations can be created. The butterfly plates' balls fit into indentations in the o-ring retainers located in the handle recess. The half moon cut out area of the butterfly plates are where the retainer and retainer screws are located when attaching the plates to the handle. When replacing butterfly plates, be careful not to over-tighten the retainer screws. Over-tightening the retainer screws can cause the butterfly plates to bind. See the *Butterfly Plate Maps* on pages 10 and 11 of this manual.

EXPLANATION OF MODEL NUMBERS

POST-MIX AND ENERGY DRINK DISPENSERS



POST-MIX JUICE DISPENSERS



BUTTERFLY MAP

<p>M4-10800</p>	<p>M4-10700</p>	<p>M4-10620 (M4-8600)</p>	<p>M4-10530 (M4-8510)</p>
<p>M4-10440</p>	<p>M4-10350</p>	<p>M4-10260</p>	<p>M4-10170</p>
<p>M4-10080</p>	<p>M4-12640</p>	<p>M4-12550</p>	<p>M4-12460</p>

● = Carbonated positions

○ = Non-Carbonated positions

* = Secondary water metering screw effects these positions

® = Requires Soda/Water Button foot extensions into bottom of button on the side that this symbol appears.



<p>M4-12820</p>	<p>M4-12730</p>	<p>M4-12640</p>	<p>M4-12550</p>
<p>M4-12460</p>	<p>M4-12370</p>	<p>M4-12280</p>	<p>M4-14840</p>
<p>M4-14750</p>	<p>M4-14660</p>	<p>M4-14570</p>	<p>M4-14480</p>

● = Carbonated positions

* = Secondary water metering screw effects these positions

○ = Non-Carbonated positions ® = Requires Soda/Water Button foot extensions into bottom of button on the side that this symbol appears.

EQUIPMENT AND SUPPLIES NECESSARY

- Clean 5 gallon bucket (1)
- Clean cloth towel (1)
- Safety goggles and rubber gloves
- **CLEANING SOLUTION**

Kay-5® Sanitizer/Cleaner, chlorinated alkaline product is approved for use as a manual type cleaner or for use as a chlorinating sanitizer. Kay-5® is available in 1 oz. packets. Two, 1 oz. packets of Kay 5® mixed with 5 gallons of water, will deliver the appropriate cleaner concentration.

PREPARATION:

Prepare sanitizing solution by adding two, 1 oz. packets of Kay-5® to 5 gallons of potable water (not greater than 100°F) in a clean 5 gallon bucket. This produces a 100 PPM chlorine solution. Stir to ensure Kay-5® crystals are completely dissolved.

CAUTION: Chlorinated detergents are corrosive. Wear rubber gloves and safety goggles while performing all cleaning and sanitation procedures.

Note: If a chlorinated sanitizer/cleaner other than Kay-5® is used, follow the manufacturer's instructions for proper dilution to produce 100 PPM Sanitizer/Cleaner solution.

DO NOT USE BLEACH. Bleach is abrasive and harsh on the numerous plastic components in our dispensing systems. We have confirmed that using a buffered chlorinated detergent and following the prescribed procedures ensures optimum sanitation and maintenance of dispensing equipment. This will limit sanitizer odor/off-taste carryover that could be perceived as a hazard

CLEANING THE SHEATHING

Materials Required:

Cleaning Solution (see CLEANING SOLUTION, above)
Flexible soft plastic bristle brush
Clean, dry Bar Towel

1. Immerse the Brush in Cleaning Solution as shown in **Fig.1**.
2. Wrap the brush around the sheathing at the Heel end (**Fig.2**). Move the brush up and down the entire length of the Sheathing, from Heel to Manifold (**Fig.3**), a minimum of 6 times.
3. Immerse the Brush in the Cleaning Solution. Rotate the Sheathing Brush 1/2 turn. Move the Brush up and down the entire length of the Sheathing 6 more times.
4. Immerse the Sheathing Brush in the Cleaning Solution. Rotate the Sheathing Brush an other 1/2 turn. Move the Sheathing Brush up and down the entire length of the Sheathing a minimum of 6 more times. Dry the entire length of the Sheathing with a clean bar towel.

CLEANING THE NOZZLE

Material Required:

Cup of Cleaning Solution (see *CLEANING SOLUTION* above)

- 1a. **SERIES II NOZZLE REMOVAL: (Compression Fit, two O-rings) (Fig.4)**
Grasp the nozzle and twist back and forth while pulling the nozzle away from the handle. If the nozzle is difficult to remove, immerse nozzle end of the handle in a cup of carbonated water for five minutes before attempting removal again.
 - 1b. **SERIES 2.5 and SERIES III: (Twist-Lock, one O-ring) (Fig.5)**
Grasp and twist the nozzle counterclockwise to unscrew the nozzle from the Handle. If the nozzle is difficult to remove, immerse nozzle end of the handle in a cup of carbonated water for five minutes before attempting removal again.
2. Remove nozzle and place in cup of cleaning solution (see CLEANING SOLUTION above) for 2 minutes. Immerse a clean brush in the sanitizer solution. Scrub nozzle and diffuser with a clean brush until any and all buildup is removed.
 3. Remove nozzle from sanitizer solution. Allow nozzle and diffuser to air dry.
 4. Reinstall nozzle onto diffuser.
 5. Dispense a beverage to confirm proper operation.

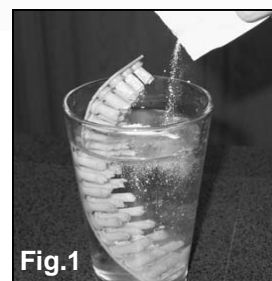


Fig.1



Fig.2



Fig.3



Fig.4



Fig.5

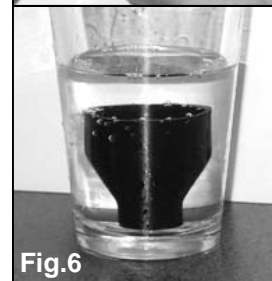


Fig.6

The Wunder Bar Mechanical Flex Hose bar dispenser is a NON -ELECTRIC dispenser. Rather than opening electrical solenoids by activating a switch in the handle, the button actually pushes down on tiny valves to allow water, soda and syrup to flow out. No electricity is generally an advantage in a wet bar environment. This means our dispenser can be soaked in lukewarm or cold water, which we recommend to be done when necessary, without being damaged. The dispenser is not intended to be used as an ice pick and should never be utilized to crack or chip ice. Under normal conditions this Wunder Bar dispenser should last for many years of trouble free service.

CLEANING A POST-MIX SYSTEM

WASH INSTRUCTIONS:

1. Fill the Sanitizer Tank (**Fig.7**) or Bucket (**Fig.8**) with Cleaning Solution (see *CLEANING SOLUTION* section on page 11). Label all BIB connectors to prevent mix-up. Disconnect all connectors from the Bag-In-Box Syrup Containers.
- 2a. **SANITIZING TANK:** Attach the BIB connector to the Sanitizing Tank outlet (**Fig.9**) to WASH one syrup circuit at a time, or to the tank manifold (if so equipped) to WASH multiple lines. Pressurize the tank to 30 to 40 PSI.
- 2b. **BUCKET:** Attach the BIB connector(s) to the appropriate cleaning adapter(s). Place the connector (s), with the adapter(s) installed, into the bucket of cleaning solution (**Fig.10**) so that they resting in the bottom, fully submerged.
3. Press and hold, one flavor button (exceptions are WATER and SODA) at a time, (**Fig.11**) until cleaning solution with no syrup present is dispensed from the nozzle. Repeat this process for all flavor buttons.
4. Allow the cleaning solution to remain in the system for a minimum of two minutes. Then proceed to step 5, RINSE INSTRUCTIONS.

RINSE INSTRUCTIONS:

5. Rinse and fill the Sanitizing Tank or Bucket with clean warm water (100° F / 38° C).
- 6a. **SANITIZING TANK:** Attach the BIB connector to the Sanitizing Tank outlet(s) (**Fig.2**). to RINSE one syrup circuit at a time, or to a tank manifold (if so equipped) to RINSE multiple lines Pressurize the tank to 30 to 40 PSI.
- 6b. **BUCKET:** Attach the BIB connector(s) to the cleaning adapter(s). Place the connector(s), with the adapter(s) installed, into the bucket of water (**Fig.10**) so that they resting in the bottom, fully submerged.
7. Press and hold, one flavor button (exceptions are WATER and SODA) at a time, (**Fig.11**) until pure water with no cleaning solution present is dispensed from the nozzle. Repeat this process for all flavor buttons
8. Proceed to step 9, SANITIZE INSTRUCTIONS.

SANITIZE INSTRUCTIONS

9. Fill the Sanitizer Tank (**Fig.7**) or Bucket (**Fig.8**) with Cleaning Solution (see *CLEANING SOLUTION* section on page 11). Disconnect all connectors from the Bag-In-Box Syrup Containers.
- 10a. **SANITIZING TANK:** Attach the BIB connector to the Sanitizing Tank outlet(s) (**Fig.2**) to RINSE one syrup circuit at a time, or to a tank manifold (if so equipped) to RINSE multiple lines Pressurize the tank to 30 to 40 PSI.
- 10b. **BUCKET:** Attach the BIB connector(s) to the appropriate cleaning adapter(s). Place the connector (s), with the adapter(s) installed, into the bucket of cleaning solution (**Fig.10**) so that they resting in the bottom, fully submerged.
11. Press and hold, one flavor button (exceptions are WATER and SODA) at a time, (**Fig.11**) until approximately 10 ounces of cleaning solution is observed being dispensed from the nozzle. Repeat this process for all flavor buttons.

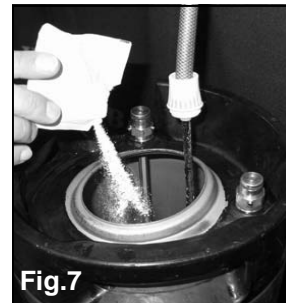


Fig.7



Fig.8

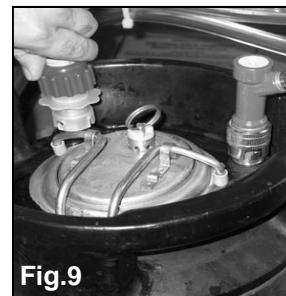


Fig.9



Fig.10



Fig.11

PROBLEM: Push product button and no syrup is dispensed.

POSSIBLE SOLUTION: *Check to make sure there is product in Syrup tank or BIB containers. *Check product connection at BIB container's outlet fitting and the pump. *Check CO2 supply to syrup tank or BIB pump. * Is product or pump inlet line kinked or crimped? *Is shut off screw in closed position? Open shut off screw. * Is brix screwed in too far? Open brix screw.

PROBLEM: Push soda button and no soda is dispensed.

POSSIBLE SOLUTION: * Is carbonator plugged in? Check power supply. * Is water supply to carbonator on? Check water supply. * Check CO2 supply to carbonator. * Is line kinked or crimped? *Is shut off screw in closed position? Open shut off screw (page 3). * Is brix screw screwed in too far? Open brix screw (page 3). * Is proper butterfly configuration being used? Check butterfly maps on pages 8 and 9.

PROBLEM: Push water button and no water is dispensed.

POSSIBLE SOLUTION: * Check water supply. *Is line kinked or crimped. *Is shut off screw in closed position? Open shut off screw. *Is brix screw screwed in too far? Open brix screw. *Is proper butterfly configuration being used? Check Butterfly map.

PROBLEM: Push product button, dispenses wrong product.

POSSIBLE SOLUTION: *Is correct BIB container connected to proper BIB pump? Check BIB product container and pump. * Is correct product tubing connected to proper position on manifold? Check connection at brix manifold.

PROBLEM: Product(s) taste "weak" or watered down.

POSSIBLE SOLUTION: Was dispenser brixed at proper operating temperature? Make sure cold plate is iced down correctly. * Is CO2 supply to containers or pumps set properly? Check CO2 supply and regulators, adjust to correct settings. Check CO2 supply to carbonator, set high pressure regulator between (95-105 PSI). Check brix screw on soda and/or water positions. Check brix screws on product. Check to be certain shut off screw slots are in proper position. (Flow runs in same direction as slot.) **Rebrix the dispenser.**

PROBLEM: Product(s) taste "strong" or syrupy.

POSSIBLE SOLUTION: Was dispenser brixed at proper operating temperature? Make sure cold plate is iced down correctly. * Is CO2 supply to containers or pumps set properly? Check CO2 supply and regulators, adjust to correct settings. Check CO2 supply to carbonator, set high pressure regulator between (95-105 psi). Check brix screw on soda and/or water positions. Check brix screws on product. Check to be certain shut off screw slots are in proper position. (Flow runs in same direction as slot.) **Re-brix dispenser.**

PROBLEM: Push button and release, product keeps dispensing.

POSSIBLE SOLUTION: * Butterfly plates are too tight. Remove button plate and loosen butterfly retainers, these only need to be snug. **Do not over tighten!** * Debris caught in cork o- ring. Hold hand over nozzle, depress all buttons at once, back flushing dispenser. This may dislodge particle enough to pass through dispenser. Change cork o-ring.

PROBLEM: When button is depressed, product oozes from under button plate.

POSSIBLE SOLUTION: * Stem o-ring defective. Replace stem o-ring (p/n PH10-20).

PROBLEM: Product leaks or drips out of nozzle.

POSSIBLE SOLUTION: * Cork o-ring (older models) or molded valve is defective. Replace cork o-ring or replace entire valve with new molded valve stem (p/n PH10-89).

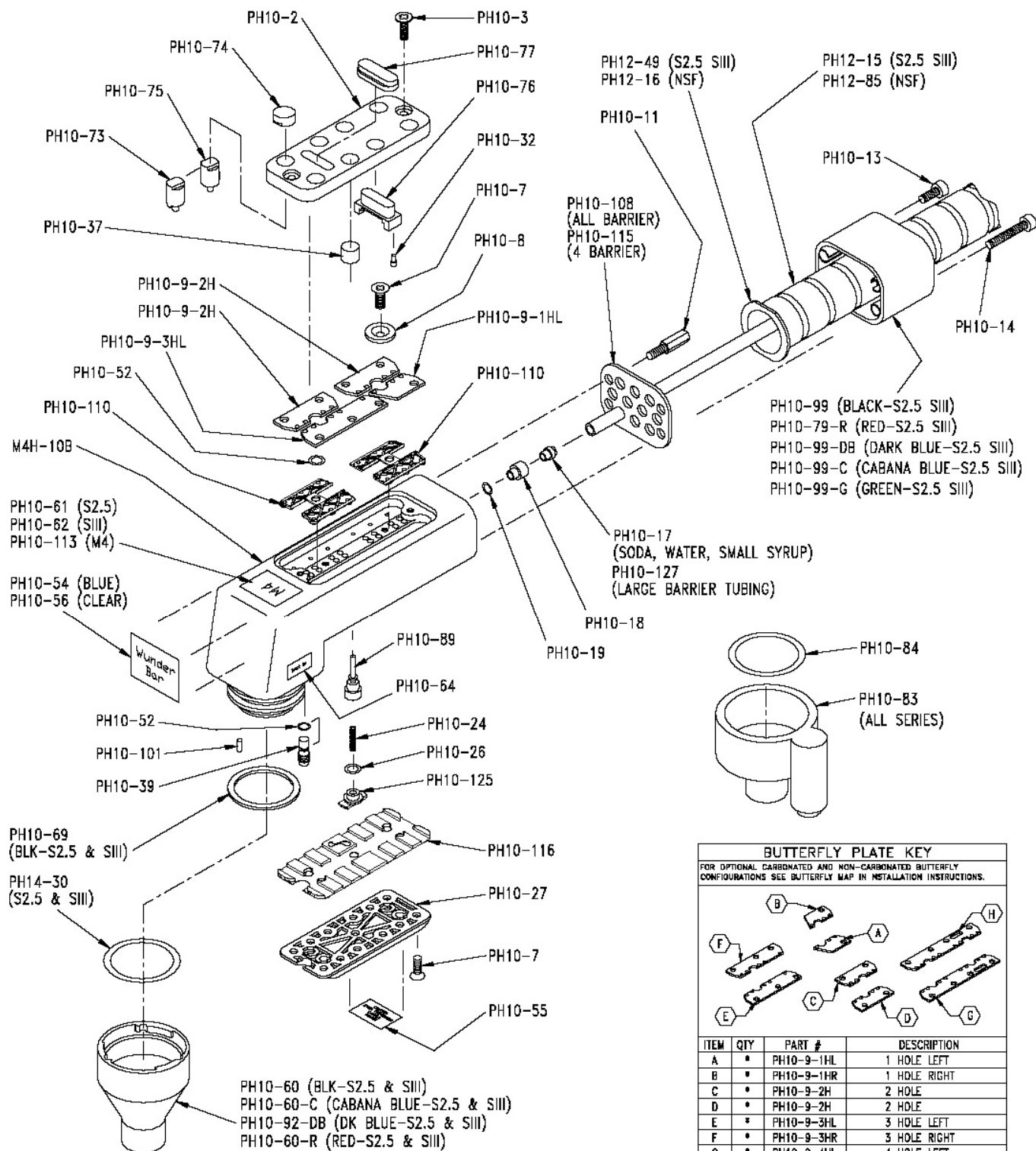
PROBLEM: Product leaking around bottom plate.

POSSIBLE SOLUTION: * Hat o-ring has failed. Replace hat o-ring (p/n PH10-26).

MARK 4 10-BUTTON POST MIX HANDLE

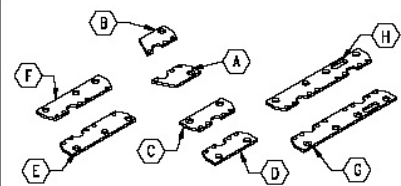
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BUTTERFLY PLATE KEY

FOR OPTIONAL CARBONATED AND NON-CARBONATED BUTTERFLY CONFIGURATIONS SEE BUTTERFLY MAP IN INSTALLATION INSTRUCTIONS.



ITEM	QTY	PART #	DESCRIPTION
A	*	PH10-9-1HL	1 HOLE LEFT
B	*	PH10-9-1HR	1 HOLE RIGHT
C	*	PH10-9-2H	2 HOLE
D	*	PH10-9-2H	2 HOLE
E	*	PH10-9-3HL	3 HOLE LEFT
F	*	PH10-9-3HR	3 HOLE RIGHT
G	*	PH10-9-4HL	4 HOLE LEFT
H	*	PH10-9-4HR	4 HOLE RIGHT

Wunder - Bar

Dispensing Systems

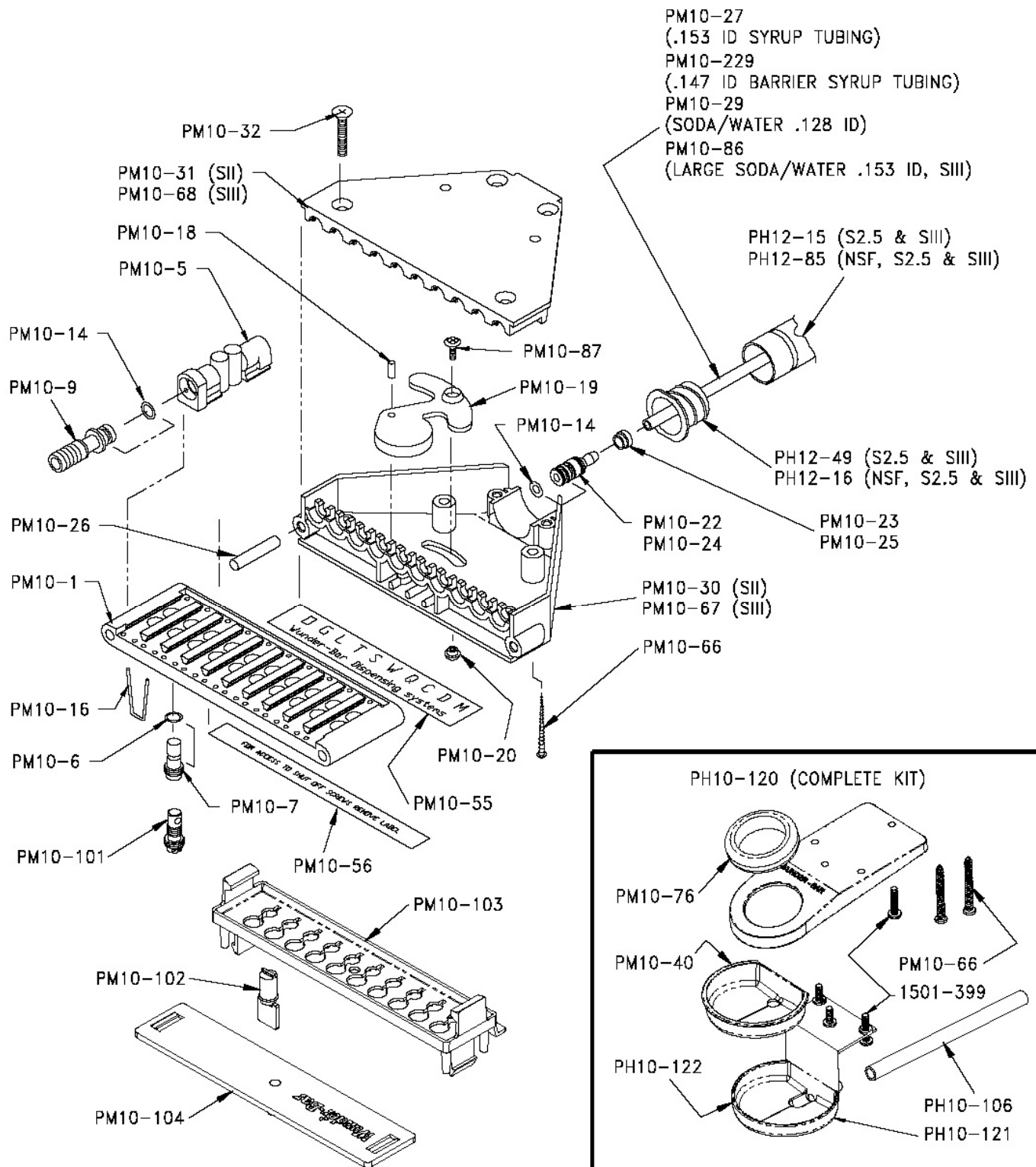
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MARK 4 10-BUTTON POST MIX MANIFOLD

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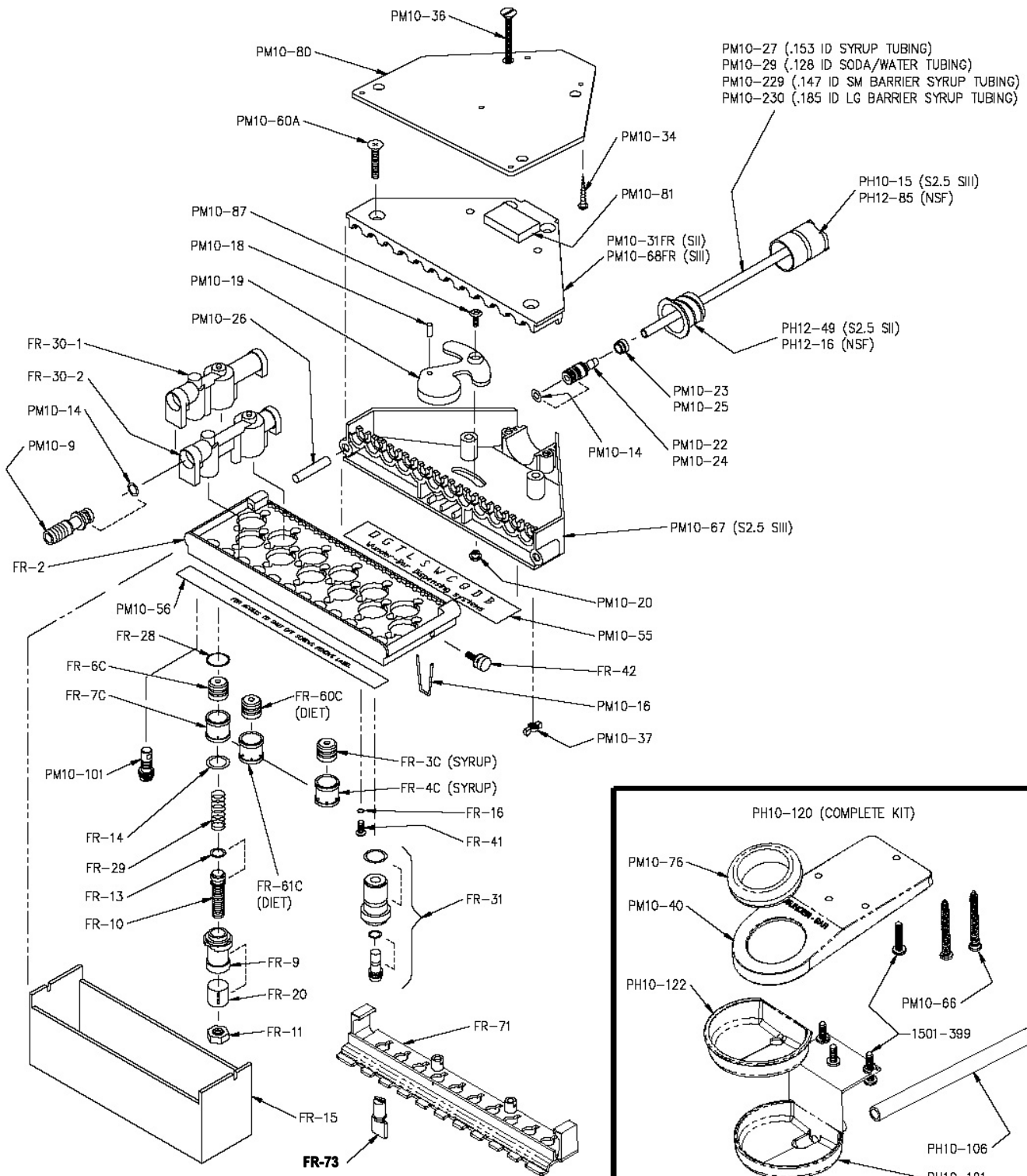
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MARK 4 10-BUTTON POST MIX MANIFOLD W/FLOW CONTROL

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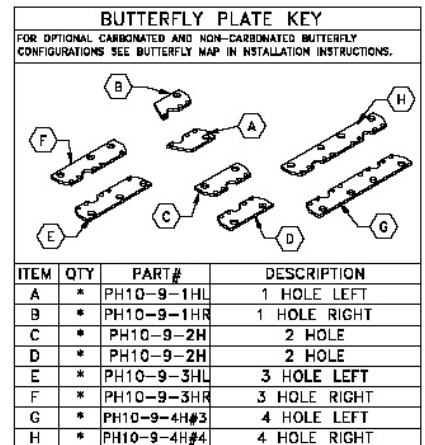
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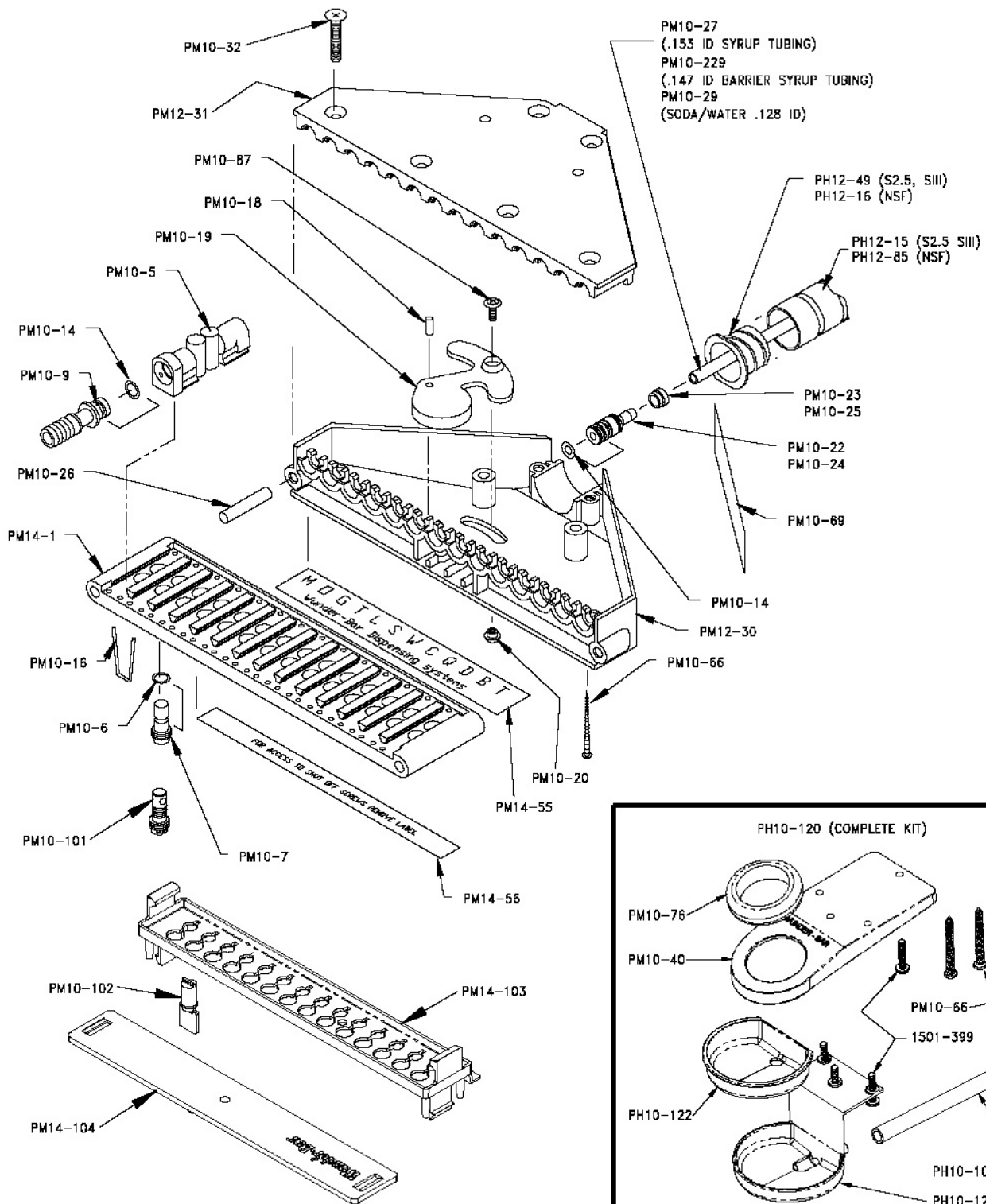
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MARK 4 12-BUTTON POST MIX MANIFOLD

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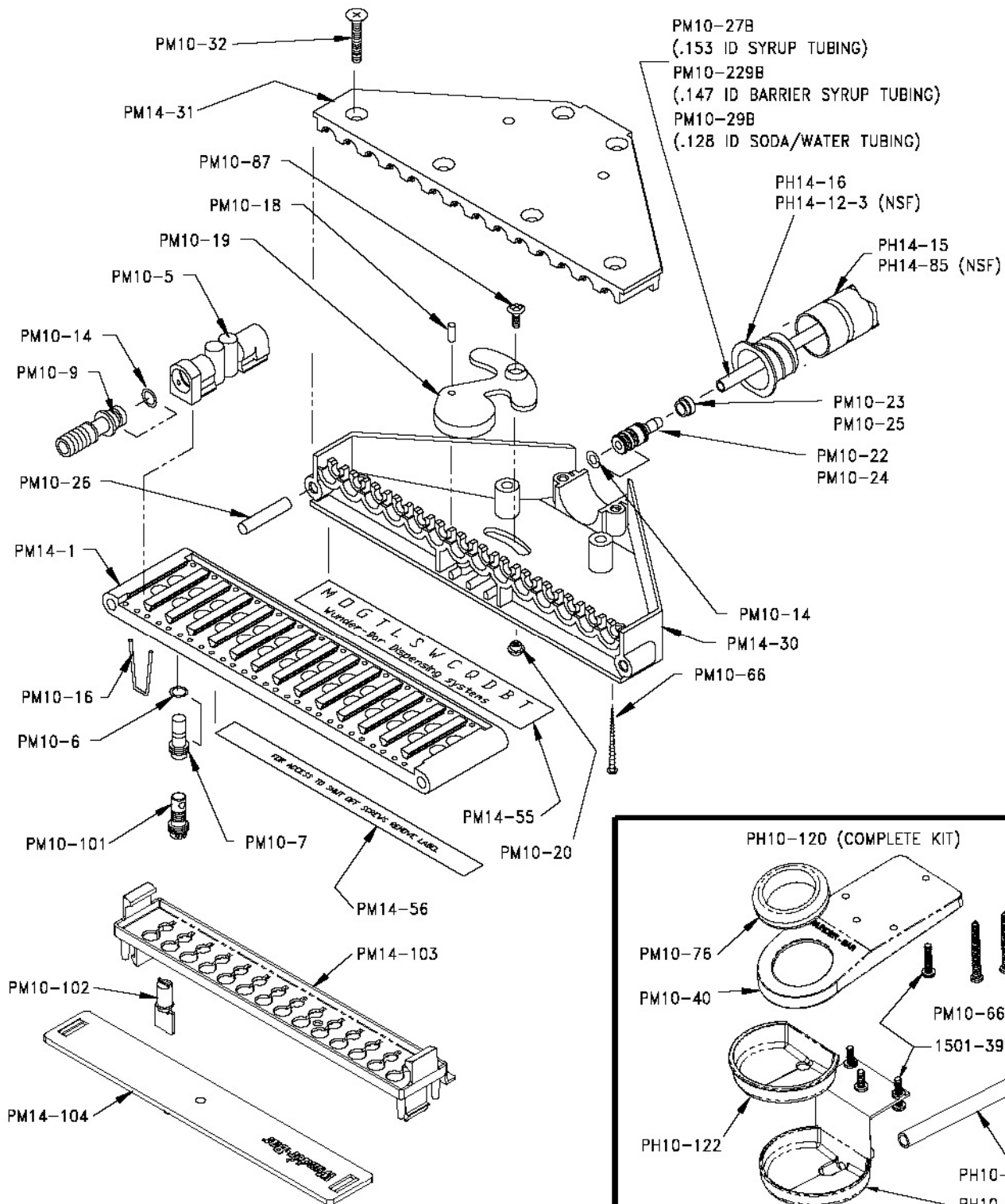
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MARK 4 14-BUTTON POST MIX MANIFOLD

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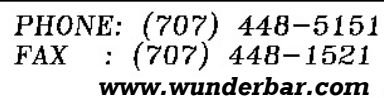
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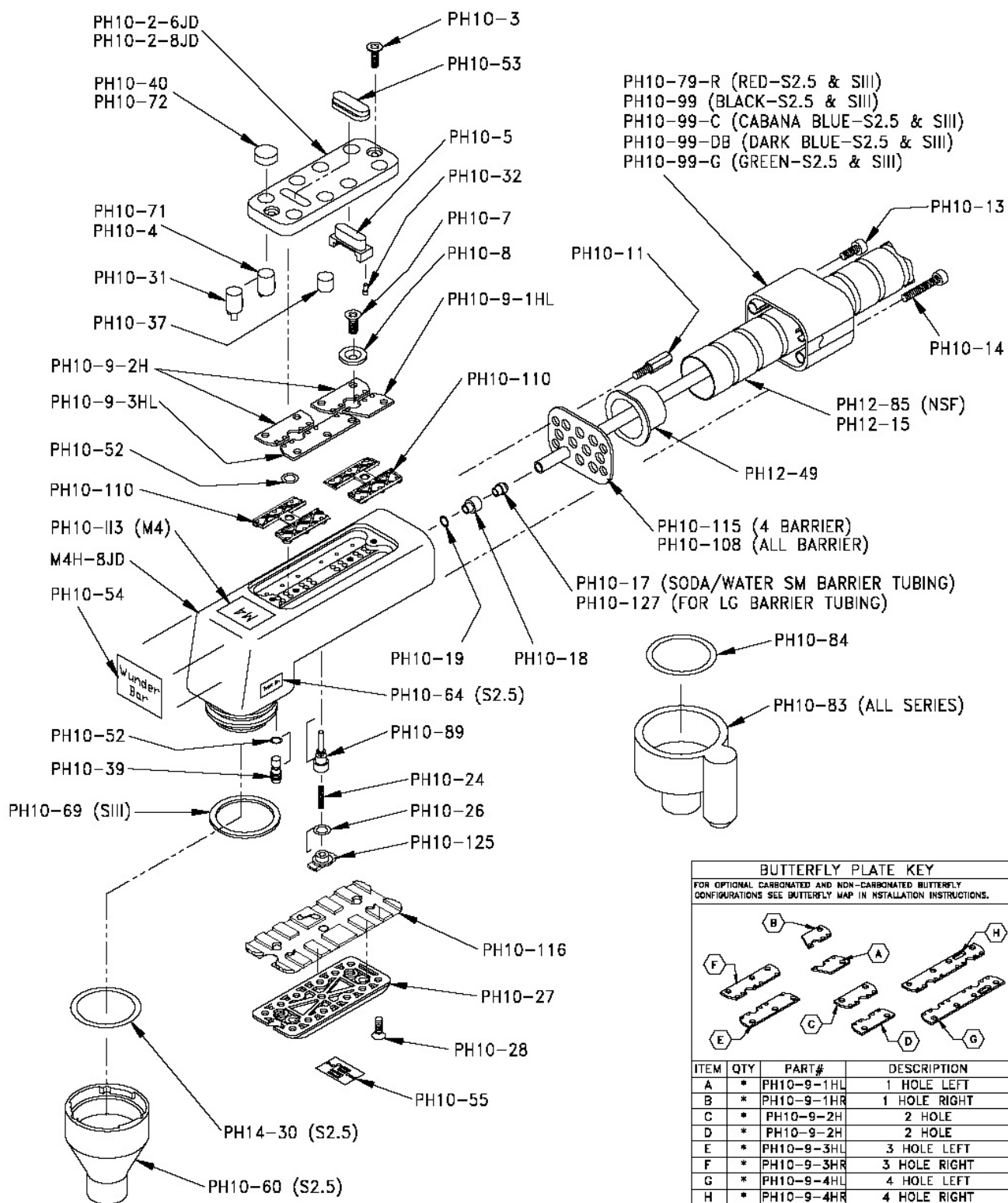
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MARK 4 6 & 8 BUTTON JUICE HANDLE

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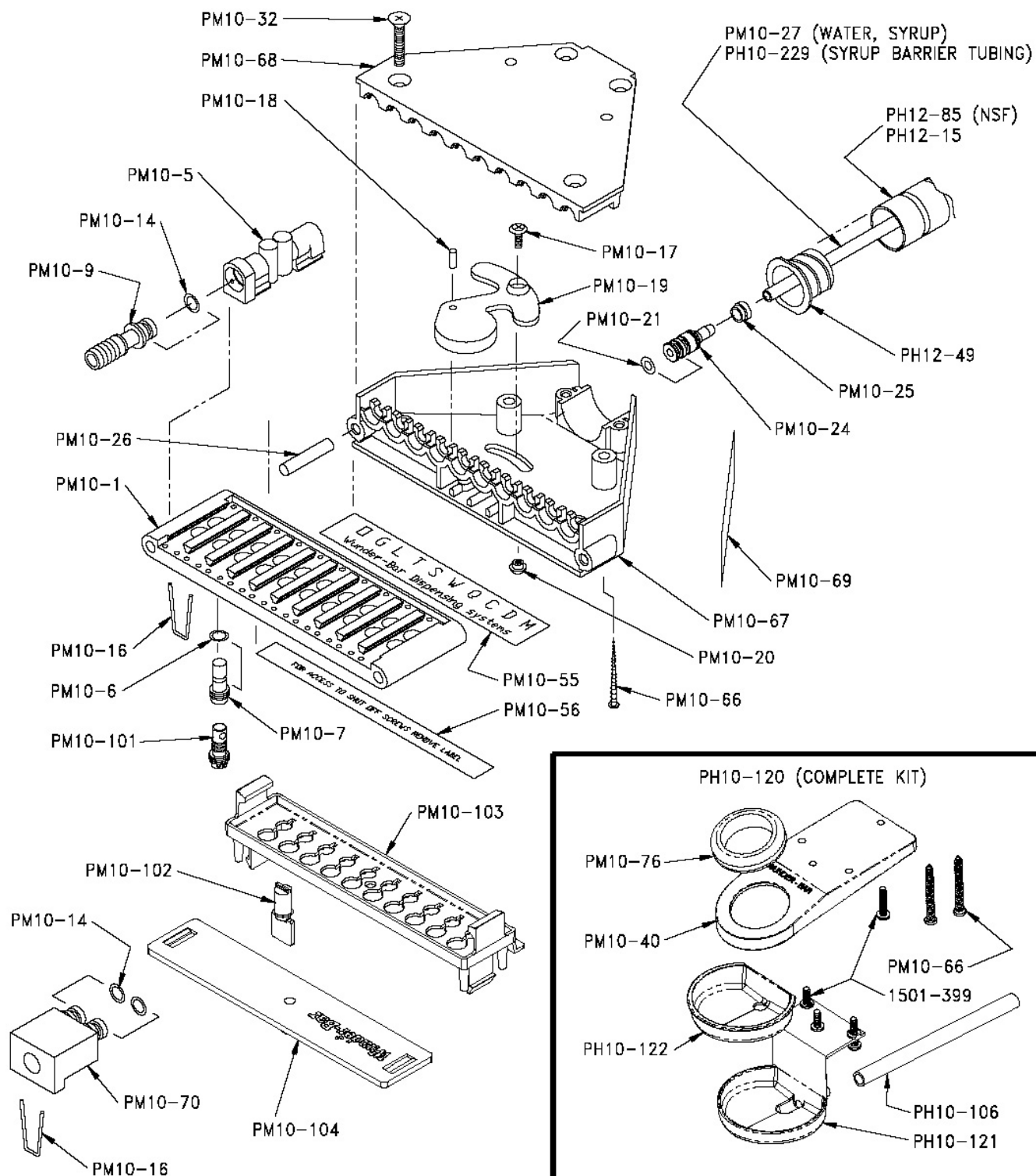
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MARK 4 6 & 8 BUTTON JUICE MANIFOLD

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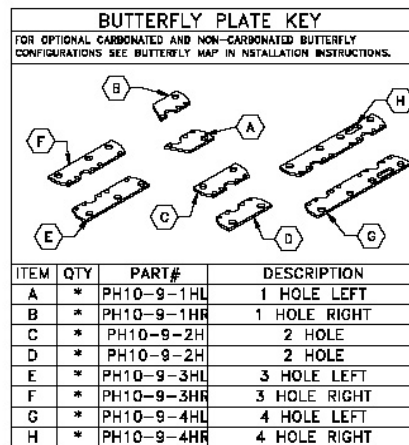
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