

# LANCER®

## COUNTER ELECTRIC DISPENSER LANCER SERIES 2500

### Operation Manual

**PN: 28-0089/04**



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Manual PN: 28-0089/04

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**FOR QUALIFIED INSTALLER ONLY**

### ABOUT THIS MANUAL

This booklet is an integral and essential part of the product and should be handed over to the operator after the installation and preserved for any further consultation that may be necessary. Please read carefully the guidelines and warnings contained herein as they are intended to provide the user with essential information for the continued safe use and maintenance of the product. In addition, it provides GUIDANCE ONLY to the user on the correct services and site location of the unit.

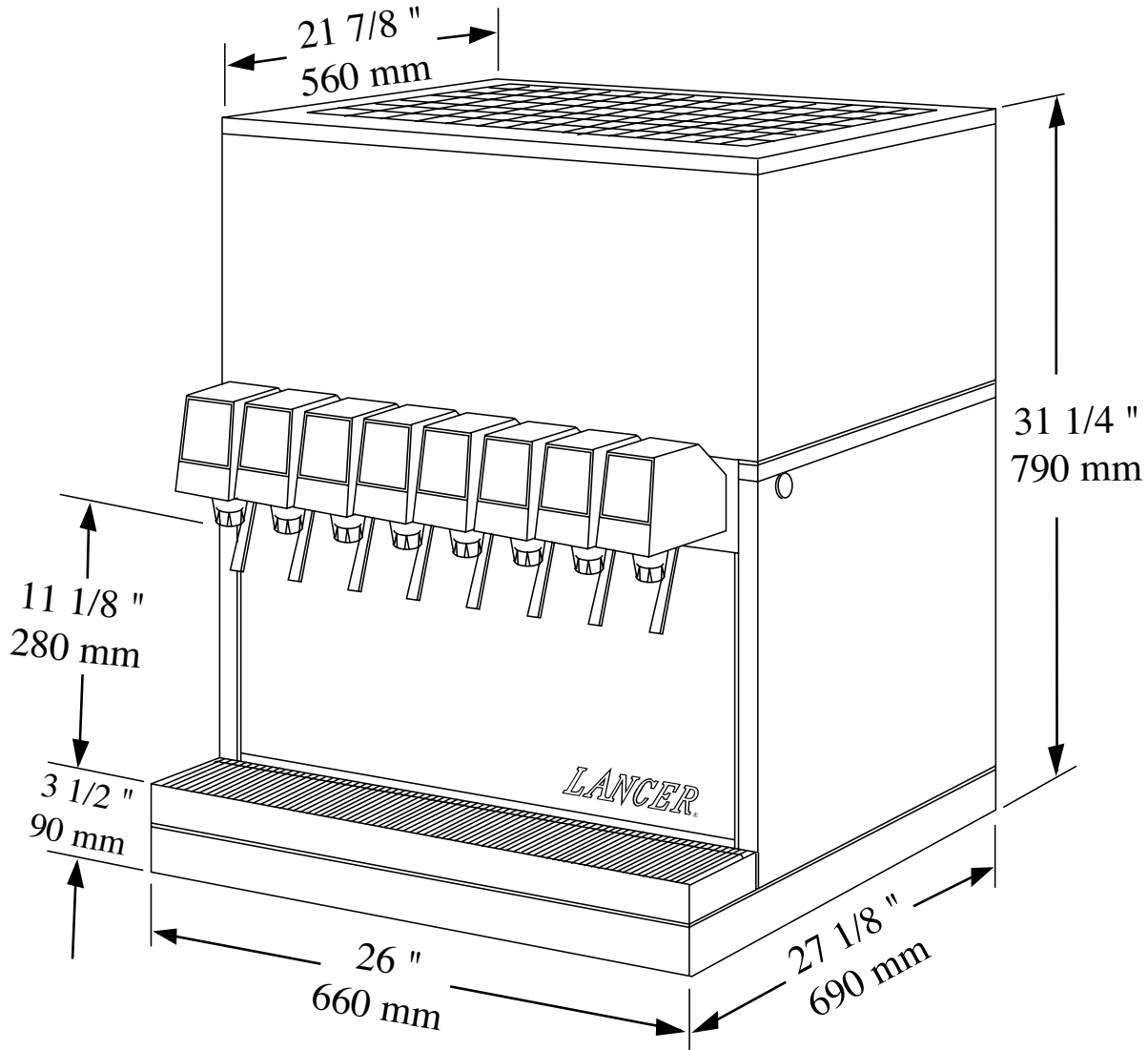
The installation and relocation, if necessary, of this product must be carried out by qualified personnel with up-to-date safety and hygiene knowledge and practical experience, in accordance with current regulations.

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## CED 2500 SPECIFICATIONS



<p><b>DIMENSIONS</b>  <b>Width:</b> 26 in (660 mm)  <b>Depth:</b> 27 1/8 in (690 mm)  <b>Height (w/out legs):</b> 31 1/4 in (790 mm)</p>	<p><b>WEIGHT</b>  <b>Empty:</b> 209 lbs (95 kg)  <b>Operating:</b> 376 lbs (171 kg)  <b>Shipping:</b> 257 lbs (117 kg)</p>	<p><b>CARBONATOR WATER SUPPLY</b>  <b>Min flowing pressure:</b> 35 PSIG (0.241 BAR)  <b>Max static pressure:</b> 60 PSIG (0.414 BAR)</p>
<p><b>SPACE REQUIRED</b>  <b>Left Side:</b> 4 in (101.6 mm)  <b>Right side:</b> 4 in (101.6 mm)  <b>Back:</b> 4 in (101.6 mm)  <b>Top:</b> 8 in (203.2 mm)</p>	<p><b>ICE</b>  <b>Capacity:</b> 50 lbs (23 kg)</p> <p><b>FITTINGS</b>  <b>Water for carbonator inlet:</b> 3/8" barb  <b>Plain water inlet:</b> 3/8" barb  <b>Brand syrup inlets:</b> 3/8" barb  <b>Injection flavor inlets:</b> 1/4" barb  <b>CO2 inlet:</b> 3/8" barb</p>	<p><b>CARBON DIOXIDE (CO2)</b>  <b>Min pressure:</b> 70 PSIG (0.483 BAR)  <b>Max pressure:</b> 80 PSIG (0.552 BAR)</p>
<p><b>ELECTRICAL</b>  115VAC/60Hz/4.3AMPs  230-240VAC/50-60Hz/2.6AMPs</p>		

# PRE-INSTALLATION CHECKLIST

## BEFORE GETTING STARTED

Each unit is tested under operating conditions and is thoroughly inspected before shipment. At the time of shipment, the carrier accepts responsibility for the unit. Upon receiving the unit, carefully inspect the carton for visible damage. If damage exists, have the carrier note the damage on the freight bill and file a claim with carrier. Responsibility for damage to the dispenser lies with the carrier.

TOOLS REQUIRED	
<input type="checkbox"/> Oetiker Pliers	<input type="checkbox"/> Slotted Screwdriver
<input type="checkbox"/> Tubing Cutters	<input type="checkbox"/> Phillips Screwdriver
<input type="checkbox"/> Wrench	<input type="checkbox"/> Cordless Drill

POST MIX ACCESSORIES	
<input type="checkbox"/> CO2 Regulator Set	<input type="checkbox"/> CO2 Supply
<input type="checkbox"/> Beverage Tubing	<input type="checkbox"/> Oetiker Clamps/Fittings
<input type="checkbox"/> Water Booster	<input type="checkbox"/> Water Regulator
<input type="checkbox"/> Precision Cutters (if removing/replacing carbonator tank)	

BIB SYSTEM	
<input type="checkbox"/> BIB Rack	<input type="checkbox"/> BIB Regulator Set
<input type="checkbox"/> BIB Syrup Boxes	
<input type="checkbox"/> BIB Connectors - ensure you have the correct connectors for syrup lineup.	

CONSIDER LOCATION OF THE FOLLOWING PRIOR TO INSTALL	
<input type="checkbox"/> Water supply lines	<input type="checkbox"/> Drain
<input type="checkbox"/> Is the countertop level?	<input type="checkbox"/> Heating and air conditioning ducts
<input type="checkbox"/> Grounded electrical outlet.	
<input type="checkbox"/> Enough space to install the dispenser. Include space for a top-mounted ice machine, if necessary.	
<input type="checkbox"/> Does the top-mounted ice machine have a minimum clearance on all sides?	
<input type="checkbox"/> Located away from direct sunlight or overhead lighting.	
<input type="checkbox"/> Can the countertop support the weight of the dispenser? Be sure to include the weight of an ice machine (if necessary) plus the weight of the ice.	
<input type="checkbox"/> This unit is not suitable for use in an area where a water jet could be used.	



## WARNING/ADVERTENCIA/AVERTISSEMENT



⚠ The dispenser is for indoor use only. This appliance is intended for use in commercial applications such as restaurants, stores or similar. This unit is not a toy. It should not be used by children or infirm persons without supervision. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Cleaning and user maintenance shall not be performed by children without supervision. This unit is not designed to dispense dairy products. The minimum/maximum ambient operating temperature for the dispenser is 40°F to 90°F (4°C to 32°C). Do not operate unit below minimum ambient operation conditions. Should freezing occur, cease operation of the unit and contact authorized service technician. Service, cleaning and sanitizing should be accomplished only by trained personnel. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

⚠ El dispensador sólo debe usarse en interiores. Esta unidad está diseñada para su uso en aplicaciones comerciales tales como restaurantes, tienda o similares. Esta unidad no es un juguete. No la deben usar niños ni personas discapacitadas sin supervisión. Esta unidad no está destinada al uso por parte de personas (incluso niños) con capacidad física, sensorial o mental reducida, o sin experiencia y conocimientos suficientes, a menos que una persona responsable de su seguridad les haya dado supervisión o capacitación en el uso de la unidad. Limpieza y mantenimiento de usuario no deberá ser realizada por los niños sin supervisión. Esta unidad no ha sido diseñada para suministrar productos lácteos. La temperatura ambiente operativa mínima / máxima para el dispensador es de 40°F a 90°F (4°C a 32°C). No opere la unidad por debajo de las condiciones mínimas de funcionamiento ambiente. En caso de ocurrir congelación, cesar la operación de la unidad y póngase en contacto con el servicio técnico autorizado. Servicio de limpieza y desinfección debe llevarse a cabo solamente por personal especializado. Precauciones de seguridad aplicables deben ser observadas. Advertencias de instrucciones en el producto que se use debe ser seguido.

⚠ Le distributeur est destiné à un usage à l'intérieur seulement. Cet appareil est conçu pour une utilisation dans des applications commerciales telles que les restaurants, les dépanneurs ou similaires. Cet appareil n'est pas un jouet. Il ne devrait pas être utilisé par des enfants ou des personnes infirmes sans surveillance. Cet appareil n'est pas destiné à un usage par des personnes (y compris les enfants) ayant des capacités physiques, sensorielles ou mentales réduites, ou manquant d'expérience et de connaissances, à moins qu'elles obtiennent de la surveillance ou des instructions au sujet de l'utilisation de l'appareil de la part d'une personne chargée de leur sécurité. Nettoyage et entretien de l'utilisateur ne doivent pas être effectués par des enfants sans surveillance. Cet appareil n'est pas conçu pour distribuer des produits laitiers. La température de service ambiante minimum/maximum pour le distributeur est de 40°F à 90°F (4°C à 32°C). Ne pas faire fonctionner l'appareil ci-dessous les conditions minimales de fonctionnement ambiantes. Faut-gel se produisent, cesser l'exploitation de l'appareil et contactez technicien agréé. Service de nettoyage et de désinfection doivent être effectuées uniquement par du personnel qualifié. Les mesures de sécurité applicables doivent être respectées. Avertissements Instruction sur le produit utilisé doit être suivie.



## DISPENSER INSTALLATION HIGHLIGHTS



### ***This unit has been factory sanitized per Lancer specifications.***

Listed below are six critical elements which will aid in a successful installation.

1. Fill water bath until water overflows from tank overflow tube.
2. The carbonator pump motor must be disconnected from the power supply (see Section 1.7) prior to connection to water .. supply for initial build up of ice bank. Failure to do so will result in automatic shut off of carbonator (see item 6 below) or damage to the pump.
3. If this dispenser is installed in an area that is susceptible to  $\pm 10\%$  variation of the nominal line voltage, consider installing a surge protector or similar protection device.
4. There is a five (5) minute delay which prevents the compressor and condenser fan from starting until the delay has lapsed. If electrical current is interrupted, there is always a five (5) minute delay before the compressor starts.
5. Supply Water Pressure: Minimum - 25 PSI (0.172 MPA); Maximum - 50 PSI (0.345 MPA); If pressure is over 50 PSIG (0.345 MPA), a water pressure regulator must be used.
6. On units with the built in water regulator, the regulator must be removed if inlet water pressure is less than 25 PSIG. (0.172 MPA)



## PUNTOS IMPORTANTES EN LA UNIDAD DISPENSADORA



### ***Esta tin/dad ha sido saneada en fabrica por las especificaciones de Lancer.***

A continuacion se relacionan 6 puntos importantes para una conecta instalacion.

1. Llene el bano-Maria hasta que el agua se desborde sobre el tubo que controla la derrama del tanque.
2. El motor de la bomba del carbonatador debe desconectarse electricamente (Ver Manual - Seccion 1.7) antes de conectar el suministro de agua para la formacion inicial del banco de hielo. De no hacerse esto resultaria en un bloqueo automatico del carbonatador (ver abajo el punto 6) o en danos a la bomba.
3. Si la unidad va a ser instalada en un area en la que puedan darse variaciones de voltage de + 6 - 10% de su valor nominal, se debe considerar la conveniencia de instalar un estabilizador de corriente o sistema de proteccion similar.
4. Hay una demora de 5 minutos que evita que el compresor y el abanico del condensador arranquen hasta pasado ese tiempo. Si hay algun corte en la corriente electrica siempre se producira esa demora de 5 minutos antes de arrancar el compresor.
5. Presión de suministro del agua de red: Minimo 25 PSI (0.172 MPA); Maximo 50 PSI (0.345 MPA). En unidades sin regulador de presión incorporado, si la presión del agua es superior a 50 PSIG (0.345 MPA) se debe usar un regulador de presión.
6. En unidades con regulador de presión incorporado, el regulador debe der eliminado cuando la presión de entrada de agua sea inferior a 25 PSIG (0.172 MPA).



## REGLES DE SECURITE POUR L'NSTALLATION DU DISTRIBUTEUR DE SODAS



### ***La proprètè da cet ensamble est assurè à l'usine sylvant les spècifications èmis par Lancer .***

Il est essentiel de respecter les 6 points suivants pour l'installation de l'appareil:

1. Remplir le bain-Maire jusqu'à ce que l'eau déborde par le tuyau de trop-plein du réservoir.
2. Le moteur de la pompe du carbonateur doit être débranché de l'alimentation électrique (Voir le manuel, Section 1.7) avant l'arrivée de l'eau pour la formation initiale de la glace. Oublier ou négliger cette opération provoquera l'arrêt automatique du carbonateur (voir le point 6 cidessous) ou causera des dommages à la pompe.
3. Si le distributeur es installé dans une zone ou la tension électrique nominale est susceptible de variations de (+) 10%, il est conseillé d'installe un appaeil de protection contre les sautes de courant.
4. Un d'lai de 5 minutes empeche le compresseur et la ventilation du condesateur de se mettre en marche avant que ce lees de temps ne se soit écoulè. Lorsque le courant électrique es interrompu, il y a toujours un délai de 5 minutes avant que le presseur ne se mette en.
5. Pression de l'eau: Minimum 25 PSI (0.172 MPA); Maximo 50 PSI (0.345 MPA). Sur les unités qui n'ont pas de régulateur de pression d'eau incorprè, si la pression d'H2O est supérieure à 50 PSIG (0.345 MPA), un régulateur de pression d'eau doit être utilisè.
6. Sur les unités avec régulateur d'eau incorporè, le régulateur doit être enlevè si la pression d'arrivve est inferieure à 25 PSIG (0.172 MPA)



## ELECTRICAL WARNING/ADVERTENCIA ELÉCTRICA/ AVERTISSEMENT ÉLECTRIQUE



⚠ Check the dispenser serial number plate for correct electrical requirements of unit. Do not plug into a wall electrical outlet unless the current shown on the serial number plate agrees with local current available. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords with this unit. Do not 'gang' together with other electrical devices on the same outlet. The keyswitch does not disable the line voltage to the transformer primary. Always disconnect electrical power to the unit to prevent personal injury before attempting any internal maintenance. The resettable breaker switch should not be used as a substitute for unplugging the dispenser from the power source to service the unit. Only qualified personnel should service internal components of electrical control housing. Make sure that all water lines are tight and units are dry before making any electrical connections!

⚠ Verifique la placa con el número de serie del dispensador, donde encontrará los requisitos eléctricos correctos de la unidad. No enchufe la unidad en un tomacorriente de pared a menos que la corriente indicada en la placa con el número de serie concuerde con la corriente local disponible. Al hacer las conexiones, respete todos los códigos eléctricos locales. Cada dispensador debe tener un circuito eléctrico independiente. No use extensiones con esta unidad. No la conecte junto con otros dispositivos eléctricos al mismo tomacorriente. El interruptor de llave no corta el voltaje de línea al transformador primario desconecte siempre la alimentación eléctrica a la unidad para evitar lesiones personales antes de tratar de realizar tareas de mantenimiento. El disyuntor de sobrecarga resettable no se debe usar como sustituto para desenchufar el dispensador de la fuente de alimentación para realizar tareas de servicio de la unidad. El servicio de los componentes internos de la caja de control eléctrico debe confiarse exclusivamente a personal calificado. Asegúrese de que todas las líneas de agua estén ajustadas y las unidades estén secas antes de hacer conexiones eléctricas.

⚠ Examinez la plaque de numéro de série du distributeur pour connaître les bonnes exigences en matière d'électricité pour l'appareil. Ne le branchez pas à une prise électrique murale à moins que le courant indiqué sur la plaque de numéro de série corresponde au courant local disponible. Respectez tous les codes électriques locaux lorsque vous faites des connexions. Chaque distributrice doit avoir un circuit électrique séparé. N'utilisez pas de cordons prolongateurs avec cet appareil. Ne pas le brancher avec d'autres appareils électriques sur la même prise. L'interrupteur à clé ne coupe pas la tension secteur au transformateur primaire. Débranchez toujours le courant électrique à l'appareil, afin de prévenir des blessures, avant de faire un entretien interne quelconque. Le disjoncteur réarmable ne devrait pas être utilisé au lieu de débrancher le distributeur de la source d'alimentation en électricité pour faire de l'entretien/une réparation de l'appareil. Seul le personnel qualifié devrait faire l'entretien/la réparation des composants internes dans le logement des commandes électriques. Assurez-vous que toutes les conduites d'eau sont étanches et que les appareils sont secs avant de faire des connexions électriques!



## CO<sub>2</sub>/CARBON DIOXIDE /EI ANHÍDRIDO CARBÓNICO/ DIOXYDE DE CARBONE



⚠ Carbon Dioxide (CO<sub>2</sub>) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO<sub>2</sub> may displace oxygen in the blood. Prolonged exposure to CO<sub>2</sub> can be harmful. Personnel exposed to high concentrations of CO<sub>2</sub> gas will experience tremors which are followed by a loss of consciousness and suffocation. If a CO<sub>2</sub> gas leak is suspected, immediately ventilate the contaminated area before attempting to repair the leak. Strict attention must be observed in the prevention of CO<sub>2</sub> gas leaks in the entire CO<sub>2</sub> and soft drink system.

⚠ El anhídrido carbónico (CO<sub>2</sub>) es un gas incoloro, no combustible, con un olor pungente ligero. Altos porcentajes de CO<sub>2</sub> en la sangre pueden desplazar el oxígeno en la sangre. La exposición prolongada al CO<sub>2</sub> puede ser nociva. El personal expuesto a concentraciones altas de CO<sub>2</sub> sufre temblores seguidos de la pérdida de la consciencia y sofocación. Si se sospecha que existe una pérdida de CO<sub>2</sub>, ventile el área contaminada antes de tratar de reparar la pérdida. Hay que prestar suma atención para evitar pérdidas de CO<sub>2</sub> en todo el sistema de CO<sub>2</sub> y de bebidas gaseosas.

⚠ Le dioxyde de carbone (CO<sub>2</sub>) est plus lourd que l'air et déplace l'oxygène. Le CO<sub>2</sub> est un gaz incolore et incombustible, ayant une odeur un peu âcre. Des concentrations fortes de CO<sub>2</sub> peuvent déplacer l'oxygène dans le sang. Une exposition prolongée au CO<sub>2</sub> peut être nocive. Le personnel exposé à de fortes concentrations de CO<sub>2</sub> gazeux éprouvera des tremblements, suivis rapidement d'une perte de conscience et de suffocation. On doit faire très attention de prévenir les fuites de CO<sub>2</sub> gazeux dans le système entier de CO<sub>2</sub> et de boisson gazeuse. Si on suspecte qu'il y a une fuite de CO<sub>2</sub> gazeux, aérez le secteur contaminé immédiatement avant d'essayer de réparer la fuite.





## AUTOMATIC AGITATION/AGITACIÓN AUTOMÁTICA/



⚠ Units are equipped with an automatic agitation system and will activate unexpectedly. Do not place hands or foreign objects in the water bath tank. Unplug the dispenser during servicing, cleaning, and sanitizing. To avoid personal injury, do not attempt to lift the dispenser without assistance. For heavier dispensers, use a mechanical lift.

⚠ Las unidades están equipadas con un sistema automático de agitación, por lo que se pueden activar repentinamente. No ponga las manos ni objetos extraños en el compartimiento donde se guarda el hielo. Durante el servicio, la limpieza y la esterilización, desenchufe el dispensador. Para evitar lesiones personales, no trate de levantar el dispensador sin ayuda. Para los dispensadores más pesados, use un elevador mecánico.

⚠ Les appareils sont équipés d'un système d'agitation automatique qui s'activera de manière inattendue. Ne mettez pas les mains ou des corps étrangers dans le compartiment d'entreposage de glace. Débranchez le distributeur pendant l'entretien/la réparation, le nettoyage et l'aseptisation. Pour éviter des blessures, n'essayez pas de soulever le distributeur sans aide. Pour les distributeurs plus lourds, utilisez un chariot élévateur.



## WATER NOTICE/AGUA AVISO/ PRÉAVIS DE L'EAU



⚠ Provide an adequate potable water supply. Water pipe connections and fixtures directly connected to a potable water supply must be sized, installed, and maintained according to federal, state, and local laws. The water supply line must be at least a 3/8 inches (9.525 mm) pipe with a minimum of 25 PSI (0.172 MPA) line pressure, but not exceeding a maximum of 50 PSI (0.345 MPA). Water pressure exceeding 50 PSI (0.345 MPA) must be reduced to 50 PSI (0.345 MPA) with the provided pressure regulator. Use a filter in the water line to avoid equipment damage and beverage off-taste. Check the water filter periodically, as required by local conditions. The water supply must be protected by means of an air gap, a backflow prevention device (located upstream of the CO2 injection system) or another approved method to comply with NSF standards. A leaking inlet water check valve will allow carbonated water to flow back through the pump when it is shut off and contaminate the water supply. Ensure the backflow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

⚠ Proporcione un suministro adecuado de agua potable. La línea de suministro de agua debe ser de una tubería de por lo menos 3/8 pulgadas (9.525 mm) con una presión de línea mínima de 25 PSI (0.172 MPA), pero sin superar el máximo de 50 PSI (0.345 MPA). La presión de agua que supere los 50 PSI se debe reducir a 50 PSI (0.345 MPA) con un regulador de presión. Use un filtro en la línea de agua para evitar daños al equipo y cierto sabor raro en las bebidas. Verifique periódicamente el filtro de agua de acuerdo con las condiciones imperantes. El suministro de agua debe estar protegido por una separación de aire, un dispositivo de prevención del contraflujo (situado antes del sistema de inyección de CO2) u otro método aprobado para cumplir las normas NSF. Si la válvula de retención de entrada de agua tuviera pérdidas, permitiría el contraflujo del agua carbonatada a través de la bomba cuando se la detiene y contaminaría el suministro de agua. Asegúrese de que el dispositivo de prevención del contraflujo cumpla con las normas locales y de ASSE. Es responsabilidad del instalador cumplir con estos requisitos.

⚠ Fournissez une alimentation en eau potable adéquate. Les connexions et les dispositifs de conduite d'eau connectés directement à une alimentation en eau potable doivent être calibrés, installés et maintenus selon les lois fédérales, provinciales et locales. La conduite d'alimentation en eau doit être un tuyau d'au moins 3/8 pouces (9.525 millimètres) avec une pression de ligne minimum de 25 LPC (0.172 MPA), mais ne doit pas dépasser un maximum de 50 LPC (0.345 MPA). Une pression d'eau de plus de 50 LPC (0.345 MPA) doit être réduite à 50 LPC (0.345 MPA) avec le régulateur de pression fourni. Utilisez un filtre dans la conduite d'eau pour éviter des dommages à l'équipement et un goût des boissons qui n'est pas juste. Vérifiez le filtre à eau périodiquement, selon les exigences des conditions locales. L'alimentation en eau doit être protégée au moyen d'un intervalle d'air, un disjoncteur hydraulique (situé en amont du système d'injection de CO2) ou une autre méthode approuvée pour se conformer aux normes de la NSF. Un clapet antiretour pour l'eau entrante qui fuie permettra à l'eau gazeuse de repasser par la pompe quand elle est fermée et de contaminer l'alimentation en eau. Assurez-vous que le disjoncteur hydraulique soit conforme aux normes de l'ASSE et locales. L'installateur est responsable d'assurer la conformité.

## 1. INSTALLATION

### 1.1 RECEIVING THE UNIT

Each unit is completely tested under operating conditions and thoroughly inspected before shipment. At time of shipment, the carrier accepts the unit and any claim for damage(s) must be made with carrier. Upon receiving units from the delivering carrier, carefully inspect carton for visible indication(s) of damage. If damage exists, have carrier note same on bill of lading and file a claim with the carrier.

### 1.2 UNPACKING



**WARNING** TO AVOID PERSONAL INJURY OR DAMAGE, DO NOT ATTEMPT TO LIFT A UNIT WITHOUT HELP. FOR HEAVIER UNITS, USE OF A MECHANICAL LIFT MAY BE APPROPRIATE. UNITS ARE EQUIPPED WITH AUTOMATIC AGITATION. THE UNIT MAY ACTIVATE UNEXPECTEDLY. DO NOT PLACE HANDS, OR FOREIGN OBJECTS INTO THE ICE STORAGE COMPARTMENT. UNPLUG DISPENSER FROM THE POWER SOURCE, WHEN UNIT IS BEING SERVICED, CLEANED, OR SANITIZED.

**ADVERTENCIA** EVITE LAS LESIONES PERSONALES, NO TRATE DE LEVANTAR EL DISPENSADOR SIN AYUDA. PARA LOS DISPENSADORES MÁS PESADOS USE UN ELEVADOR MECÁNICO. LAS UNIDADES EQUIPADAS CON AGITACIÓN AUTOMÁTICA SE ACTIVAN REPENTINAMENTE. NO PONGA LAS MANOS NI OBJETOS EXTRANOS EN EL COMPARTIMIENTO DE ALMACENAMIENTO DE HIELO. DESENCHUFE EL DISPENSADOR DURANTE TAREAS DE SERVICIO, LIMPIEZA Y ESTERILIZACIÓN.

**AVERTISSEMENT** POUR ÉVITER DES BLESSURES OU DES DOMMAGES, N'ESSAYEZ PAS DE SOULEVER UNE UNITÉ SANS AIDE. POUR LES UNITÉS PLUS LOURDES, L'UTILISATION D'UN ASCENSEUR MÉCANIQUE PEUT ÊTRE APPROPRIÉE. LES UNITÉS SONT ÉQUIPÉES D'UNE AGITATION AUTOMATIQUE. L'UNITÉ PEUT S'ACTIVER DEMAINÈRE INATTENDUE. NE PLACEZ PAS LES MAINS, OU DES CORPS ÉTRANGERS DANS LE COMPARTIMENT DE STOCKAGE DE GLACE. DÉBRANCHEZ LE DISTRIBUTEUR DE LA SOURCE D'ALIMENTATION EN ÉLECTRICITÉ QUAND L'UNITÉ EST ENTRETENUE, NETTOYÉE OU ASEPTISÉE.

- A. Cut band and remove.
- B. Remove top portion of carton by lifting up.
- C. Remove top inner carton pad and corners.
- D. Lift Unit up by plywood shipping base and remove lower portion of carton.
- E. Inspect unit for concealed damage and if evident, notify delivering carrier and file a claim against same.
- F. Remove plywood shipping base from unit by moving unit so that one side is off the counter top or table, allowing access to screws on the bottom of the plywood shipping base.

**NOTE:** If unit is to be transported, it is advisable to leave unit secured to plywood shipping base.

G. If Unit is to be installed with optional legs, assemble legs to unit by tilting unit. **DO NOT LAY UNIT ON ITS SIDE OR BACK.**

H. Remove accessory kit of loose parts from drip tray.

### 1.3 SELECTING A COUNER LOCATION

The dispenser is designed to sit on a flat, supported surface capable of supporting a minimum weight of 200 pounds (90.7 kg). It may be either counter or leg mounted. When the dispenser is to be permanently bolted to the counter top, seal dispenser base to counter top with a silicone sealant which provides a smooth and easily cleanable bond to the counter.

**NOTE:** NSF listed units must be sealed to the counter or have four (4) inch legs installed.



**WARNING** FAILURE TO MAINTAIN PROPER AIR CLEARANCE WILL CAUSE THE COMPRESSOR TO OVERHEAT AND WILL RESULT IN PREMATURE COMPONENT FAILURE

**WARNING** FALTA DE MANTENIMIENTO DE LIQUIDACIÓN DE AIRE ADECUADO HACEN QUE EL COMPRESOR SE SOBRECALIENTE Y PODRÁ FALLAR COMPONENTE PREMATURO

**WARNING** NON-RESPECT DE LIQUIDATION DE L'AIR BONNE QUE LE COMPRESSEUR À SURCHAUFFER ET À ENTRAÎNER DE DURER COMPOSANT

Locate dispenser to allow approximately 15 inches (380 mm) of unobstructed space above and six (6) inches (152 mm) of unobstructed space in back of the unit for proper air circulation and removal of bonnet. Air is drawn in through the back grill and is exhausted out the top grill.

#### 1.4 CONNECTING THE DRAIN

- A. Remove cup rest. Lift splash plate up and pull out and down on the bottom to remove.
- B. Remove the drip tray from the unit and connect the drain tube to the drain fitting located on the bottom. Secure drain tube with clamp provided in accessory kit.
- C. Route the drain tube to a suitable drain and replace the unit's drip tray.

#### 1.5 FILLING UNIT WITH WATER

- A. Remove the bonnet from the unit.
- B. Remove the yellow plastic plug from the fill hole.
- C. Using a funnel or tube, fill the water bath compartment with water until it flows out of the overflow tube into the drip tray. Use bottled water where a water problem exists.
- D. Replace the yellow plug.

#### 1.6 CONNECTING TO ELECTRICAL POWER

**NOTE:** Adhere to the ELECTRICAL Warnings/Cautions, Page 8.



**GROUNDING WARNING** THE DISPENSER MUST BE PROPERLY ELECTRICALLY GROUNDED TO AVOID SERIOUS INJURY OR FATAL ELECTRICAL SHOCK. THE POWER CORD HAS A THREE-PRONG GROUNDED PLUG. IF A THREE-HOLE GROUNDED ELECTRICAL OUTLET IS NOT AVAILABLE, USE AN APPROVED METHOD TO GROUND THE UNIT. FOLLOW ALL LOCAL ELECTRICAL CODES WHEN MAKING CONNECTIONS. EACH DISPENSER MUST HAVE A SEPARATE ELECTRICAL CIRCUIT. DO NOT USE EXTENSION CORDS. DO NOT CONNECT MULTIPLE ELECTRICAL DEVICES ON THE SAME OUTLET.

**ADVERTENCIA, PUESTA A TIERRA** ES NECESARIO PONER A TIERRA ELÉCTRICAMENTE EL DISPENSADOR PARA EVITAR LESIONES GRAVES E INCLUSO ELECTROCHOQUES FATALES. EL CABLE DE ALIMENTACIÓN TIENE UN ENCHUFE PUESTO A TIERRA DE 3 CLAVIJAS. SI NO SE DISPONE DE UN TOMA ELÉCTRICO CONECTADO A TIERRA DE TRES AGUJEROS, USE UN MÉTODO APROBADO PARA PONER A TIERRA LA UNIDAD. AL HACER LAS CONEXIONES, RESPETE TODOS LOS CÓDIGOS ELÉCTRICOS LOCALES. CADA DISPENSADOR DEBE TENER UN CIRCUITO ELÉCTRICO INDEPENDIENTE. NO USE CABLES DE EXTENSIÓN. NO CONECTE VARIOS DISPOSITIVOS ELÉCTRICOS AL MISMO TOMACORRIENTE.

**EXIGENCES DE MISE À LA TERRE** LA DISTRIBUTRICE DOIT ÊTRE MISE À LA TERRE ÉLECTRIQUEMENT CORRECTEMENT POUR ÉVITER DES BLESSURES GRAVES OU UNE DÉCHARGE ÉLECTRIQUE MORTELLE. LE CORDON D'ALIMENTATION A UNE FICHE À TROIS BRANCHES MISE À LA TERRE. SI AUCUNE PRISE DE COURANT ÉLECTRIQUE À TROIS TROUS N'EST DISPONIBLE, UTILISEZ UNE MÉTHODE APPROUVÉE POUR METTRE L'UNITÉ À LA TERRE. RESPECTEZ TOUS LES CODES ÉLECTRIQUES LOCAUX LORSQUE VOUS FAITES DES CONNEXIONS. CHAQUE DISTRIBUTRICE DOIT AVOIR UN CIRCUIT ÉLECTRIQUE SÉPARÉ. N'UTILISEZ PAS DE CORDONS PROLONGATEURS. NE BRANCHEZ PAS PLUSIEURS APPAREILS ÉLECTRIQUES À LA MÊME PRISE DE COURANT.

#### 1.6 CONNECTING TO ELECTRICAL POWER, CONTINUED

- A. If the unit is equipped with a built-in carbonator, disconnect the power supply to the carbonator motor by disconnecting the designated connector located near the top of the electrical control box on the refrigeration deck.
- B. Check the dispenser serial number plate for correct electrical requirements of unit. Do not plug into wall electrical outlet unless the current shown on the serial number plate agrees with local current available.
- C. Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating, and plug in the unit. This will turn on the refrigeration system and allow it to start cooling while completing the rest of the installation. The agitator motor will start immediately, but the compressor and fan motor will not start until the five (5) minute delay has elapsed.



**CAUTION** FAILURE TO DISCONNECT THE MOTOR POWER SUPPLY WILL DAMAGE THE CARBONATOR MOTOR, THE PUMP AND VOID THE WARRANTY.

**PRECAUCIÓN** SI NO DESCONECTA LA ALIMENTACIÓN ELÉCTRICA DEL MOTOR PODRÍAN DAÑARSE LA BOMBA Y EL MOTOR DEL CARBONATADO Y ANULAR LA GARANTÍA.

**ATTENTION** LE FAIT DE NE PAS MAINTENIR LE DÉGAGEMENT SPÉCIFIÉ FERA SURCHAUFFER LE COMPRESSEUR ET AURA COMME CONSÉQUENCE UNE DÉFAILLANCE DU COMPRESSEUR.

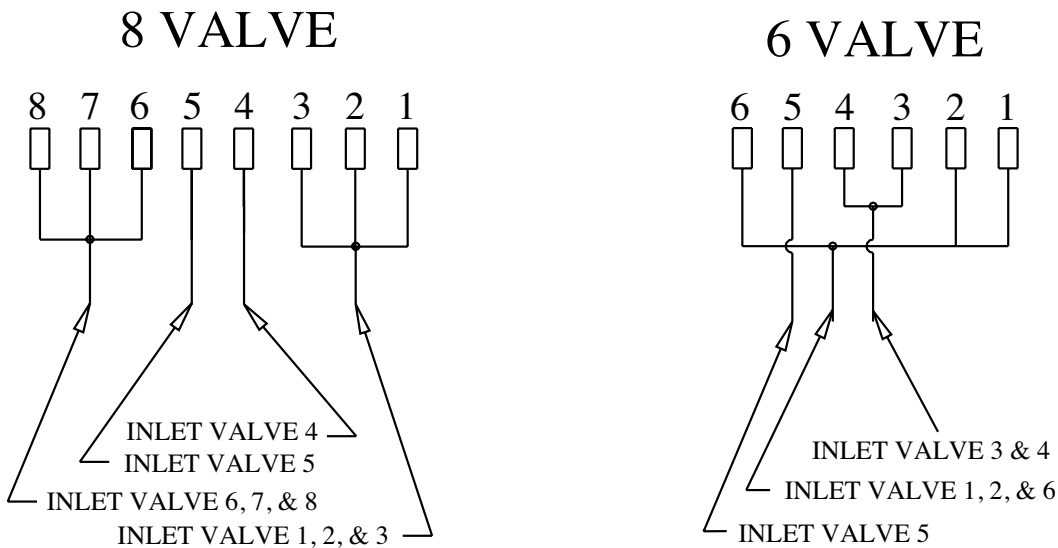
## 1.7 CONNECTING TO WATER SUPPLY

**NOTE:** Adhere to the WATER SUPPLY Warnings/Cautions, Page 6.

See Figure 1.

If unit has no plain water circuits, proceed to Section 1.8.

- Valves 4, 5, and 6 through 8 (on 8 valve units) and valves 3, 4, and 5 (on 6 valve units) have optional plain water or carbonated water capabilities. Using Figure 1, determine which valves are to be plumbed with plain water.
- Using proper beverage tubing and fittings, connect to water source [must be 35 PSI (2.4 bar) or more].
- Flush water supply line thoroughly.
- Route tubing through cutout in counter or through access hole in back of unit.
- Leave 12 inches (300 mm) of extra tubing length below the counter for servicing and moving the dispenser.
- Connect to desired plain water inlet behind splash plate and secure with Oetiker Clamp.
- Turn on water supply and check for leaks.
- Actuate each valve until all air is expelled.



**Plumbing Diagram, Carbonated/Plain Water**

**Figure 1**

## 1.8 CONNECTING TO CARBONATED WATER SUPPLY

See Figure 1.

- Install carbonator per manufacturer's instructions.
- Using proper beverage tubing and fittings, connect to carbonator tank outlets.
- Route tubing through cutout in counter or through access hole in back of unit.
- Leave 12 inches (300 mm) of extra tubing length below the counter for servicing and moving the dispenser.
- Connect to soda inlets behind splash plate and secure with Oetiker Clamps.
- Fill with water and pressurize carbonation system per manufacturer's instructions.
- Actuate each valve until a smooth flow of carbonated water is obtained.
- Check for leaks.



**WARNING** DO NOT TURN ON THE CO2 SUPPLY AT THIS TIME.

**ADVERTENCIA** NO CONECTE TODAVÍA LA ALIMENTACIÓN DE CO2.

**AVERTISSEMENT** N'OUVREZ PAS L'ALIMENTATION EN CO2 À CE MOMENT.

## 1.9 CONNECTING TO BAG-IN-BOX (BIB) SYRUP SUPPLY TO REMOTE SYRUP PUMPS

- A. To connect CO2 regulator assembly to the CO2 cylinder, see Section 1.9, Steps A - C.
- B. Place the remote BIB syrup supply and pumps in a convenient location.
- C. Attach the syrup supply tubes to the dispenser's syrup inlet fittings using an Oetiker clamp for each syrup flavor.
- D. Route the syrup supply tubes to the remote syrup pumps.
- E. Complete installation of the remote syrup pump system following the manufacturer's instructions.

## 1.10 PURGING THE CARBONATION SYSTEM

- A. Turn on water source. Lift the black lever on the top of the carbonator tank relief valve until water flows from the holes in the relief valve. Then release the relief valve.
- B. Reconnect the power supply to the carbonator pump.
- C. Back off on the CO2 regulator pressure adjusting screw all the way. Open the CO2 cylinder handle slowly. Turn the CO2 pressure regulator up slowly to 75 PSIG (5.1 bar).
- D. Press and hold each valve lever until water is flowing steadily from each valve.
- E. Check all of the unit's water, syrup, and CO2 connections for leaks and repair if necessary.

**NOTE:** Tank Method Only - to check for CO2 leaks, close the valve on the CO2 cylinder and observe if the pressure to the system drops with the cylinder valve closed for five (5) minutes. Open the cylinder valve after check.

- F. Assemble the unit's bonnet, splash plate, and rear guard.

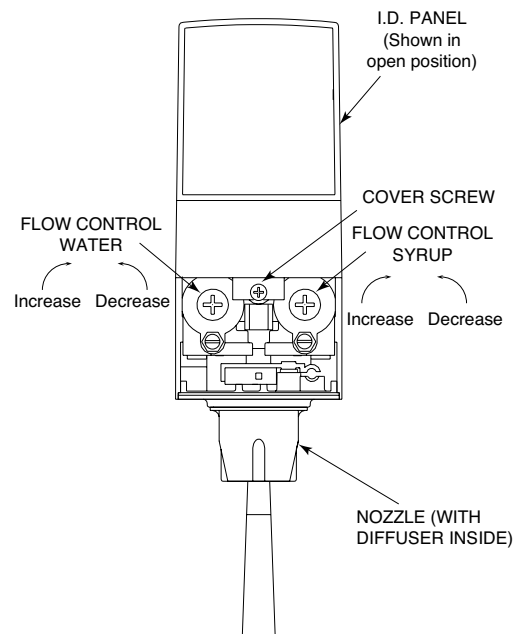
**NOTE:** Ensure a minimum of 5 gallons of water is flushed through each valve prior to use.

## 1.11 PURGING THE WATER AND SYRUP SYSTEMS

- A. Set the adjustable back blocks to deliver plain water
- B. Open a dispensing valve until water and syrup are flowing steadily from the valve.
- C. Repeat procedure "A" for each valve.
- D. Check all of the unit's syrup and water connections for leaks and repair if necessary.
- E. Replace the unit's bonnet, splash plate and cup rest

## 1.12 ADJUSTING WATER FLOW (LEV®)

- A. The water flow can be adjusted between 1.25 oz/sec (37 ml/sec) and 2.50 oz/sec (74 ml/sec) on all dispensing valves using the following procedures.
- B. The refrigeration unit should have been running for at least one (1) hour before you attempt to brix the valves. The drink temperature should be no higher than 40°F (4.4°C) when the brix is set. This is best done after the unit has made an ice bank.
- C. Slide up ID panel until flow controls are exposed (see Figure 2)
- D. Remove nozzle by twisting counter clockwise and pulling down.
- E. Remove diffuser by pulling down.
- F. Install Lancer (yellow) syrup separator (PN 54-0031) in place of nozzle.
- G. Activate dispensing valve to fill separator syrup tube.
- H. Hold a Lancer brix cup under the syrup separator and dispense water and syrup into cup for four (4) seconds. Divide number of ounces (ml) of water in cup by four (4) to determine water flow rate per second
- I. To obtain the proper flow, use a screwdriver to adjust water flow control (see Figure 2).
- J. Repeat process for each valve.



**Figure 2**  
**Typical Valve Adjustment, LEV®**

### 1.13 ADJUSTING WATER TO SYRUP (RATIO) BRUX (LEV®)

- A. Hold the Lancer brix cup under the syrup separator and activate valve. Check brix.
- B. To obtain the proper brix, use screwdriver to adjust syrup flow control (see Figure 1).
- C. Once proper ratio is obtained repeat to verify.
- D. Remove syrup separator (PN 54-0031 installed in Section 1.10.F above).
- E. Install diffuser and nozzle.
- F. Slide down ID panel.
- G. Repeat process for each valve.

## 2. SCHEDULED MAINTENANCE

### 2.1 DAILY

- A. Remove the nozzle and diffuser from each valve and rinse well in warm water. Do NOT use soap or detergent. This will cause foaming and off taste in finished product.
- B. Remove the cup rest and wash in warm soapy water.
- C. Pour warm soapy water into the drip tray and wipe with a clean cloth.
- D. With a clean cloth and warm water, wipe off all of the unit's exterior surfaces. DO NOT USE ABRASIVE SOAPS OR STRONG DETERGENTS.
- E. Replace the cup rest, valve diffusers, and valve nozzles.

### 2.2 WEEKLY

- A. Taste each product for off tastes and/or brix changes.
- B. Remove the bonnet and check the level of water in the water bath. Replenish as required, and replace the bonnet.

### 2.3 MONTHLY

- A. Unplug the dispenser from power source.
- B. Remove the bonnet and clean the dirt from the condenser using a soft brush.
- C. Replace the bonnet and plug in the unit.

### 2.4 EVERY SIX MONTHS

- A. Clean and sanitize the unit using the appropriate procedures outlined in Section 3 of this manual.

### 2.5 YEARLY

- A. Clean water bath interior, including evaporator coils and refrigeration components.
- B. Clean the entire exterior of the unit.
- C. Sanitize syrup lines.

## 3. DISPENSER CLEANING AND SANITIZATION

### 3.1 GENERAL INFORMATION

- A. Lancer equipment (new or reconditioned) is shipped from the factory cleaned and sanitized in accordance with NSF guidelines. The operator of the equipment must provide continuous maintenance as required by this manual and/or state and local health department guidelines to ensure proper operation and sanitation requirements are maintained.

**NOTE:** The cleaning procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established by the manufacturer for that equipment.

- B. Cleaning should be accomplished only by trained personnel. Sanitary gloves are to be used during cleaning operations. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

### 3.2 CLEANING AND SANITIZING SOLUTIONS

**CLEANING SOLUTION:** Mix a mild, non-abrasive detergent (e.g. Sodium Laureth Sulfate, dish soap) with clean, potable water at a temperature of 90°F to 110°F (32°C to 43°C). The mixture ratio is one ounce of cleaner to two gallons of water. Prepare a minimum of five gallons of cleaning solution. Do not use abrasive cleaners or solvents because they can cause permanent damage to the unit. Ensure rinsing is thorough, using clean, potable water at a temperature of 90°F to 110°F. Extended lengths of product lines may require additional cleaning solution.

**SANITIZING SOLUTION:** Prepare sanitizing solutions in accordance with the manufacturer's written recommendations and safety guidelines. The solution must provide 100 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach). A minimum of five gallons of sanitizing solution should be prepared. Any sanitizing solution may be used as long as it is prepared in accordance with the manufacturer's written recommendations and safety guidelines, and provides 50 to 100 parts per million (PPM) chlorine.

### 3.3 AMBIENT PROCESS

The ambient process is the most common method for cleaning and sanitizing dispenser equipment.

- A. Prepare the Cleaning Solution, referred to in Section 3.2.
- B. Fill lines at pump inlet with Cleaning Solution (Section 3.2). The solution should be prepared in accordance with the manufacturer's recommendations. Make sure the lines are completely filled and allow to stand for at least ten (10) minutes.
- C. Flush the detergent solution from the lines with clean water.
- D. Prepare the Sanitizing Solution, referred to in Section 3.2.
- E. Fill the lines with Sanitizing Solution. Make sure that lines are completely filled and allow to stand for ten (10) minutes.
- F. Draw drinks to refill lines and flush solution from the dispenser.
- G. Taste the beverage to verify that there is no off taste. If off-taste is found, flush the syrup system again.



**CAUTION** FOLLOWING SANITIZATION, RINSE WITH END-USE PRODUCT UNTIL THERE IS NO AFTERTASTE. DO NOT USE A FRESH WATER RINSE. THIS IS A NSF REQUIREMENT. RESIDUAL SANITIZING SOLUTION LEFT IN THE SYSTEM CREATES A HEALTH HAZARD.

**PRECAUCIÓN** DESPUÉS DE LA ESTERILIZACIÓN, ENJUAGUE CON EL PRODUCTO FINAL HASTA QUE ELIMINAR EL SABOR QUE QUEDA. NO ENJUAGUE CON AGUA FRESCA. ÉSTA ES UNA EXIGENCIA DE NSF. SI QUEDA SOLUCIÓN DE ESTERILIZACIÓN EN EL SISTEMA, GENERA UN PELIGRO PARA LA SALUD.

**ATTENTION** DÉFENSE DE RINCER L'OUTIL À L'EAU FRAICHE IMMÉDIATEMENT APRÈS UN TRAITEMENT SEPTIQUE. EN CAS DE APRÈS-GOÛT, NE PURGER AVEC LE PRODUIT FINAL UNE EXIGENCE NSF.

### 3.4 VALVES

- A. Valves may be cleaned and sanitized in the same manner
- B. Remove cover and disconnect power so not to activate the valve while cleaning. Remove nozzle and diffuser. Wash these parts in cleaning solution, then immerse them in a bath of sanitizing solution for 15 minutes.
- C. Visually inspect around nozzle area for syrup residue. This area may be cleaned with warm water and cloth or with the nozzle brush supplied. Wipe off dispensing lever.
- D. Wearing sanitary gloves, remove, drain and air dry the nozzle and diffuser.
- E. Wearing sanitary gloves, replace diffuser and twist nozzle into place.
- F. Draw drinks to flush the chlorine solution from the valves.

**NOTE:** Please note that a fresh water rinse cannot follow sanitization of equipment. Purge only with the end use product. This is an NSF requirement.

- G. Taste the beverage to verify that there is no off taste.
- H. Connect power and replace cover. Valve is ready for operation.

#### 4. TROUBLESHOOTING

TROUBLE	CAUSE	REMEDY
4.1 Water leakage around nozzle.	A. Damaged or improperly installed o-ring above diffuser.	A. if damaged, replace. If improperly installed, adjust.
4.2 Leake between upper and lower valve bodies.	A. Gap between upper and lower valve bodies.  B. Worn or damaged paddle arm assemblies.	A. Tighten all six (6) retaining screws.  B. Replace paddle arm assemblies.
4.3 Miscellanease leakage.	A. Gap between parts.  B. Damaged or improperly installed o-rings.	A. Tighten appropriate retaining screws  B. Replace or adjust appropriate o-rings
4.4 Insufficient water flow.	A. insufficient incoming supply water pressure.  B. Shutoff on mounting bloack not fully open.  C. Foreign debris in water flow control.	A. Verify incoming supply water pressure is a minimum of 35 PSI (2.4 BAR).  B. Open shutoff fully.  C. Remove water flow control from upper body and clean out any foreign material to ensure smooth free spool movement.
4.5 Insufficient syrup flow.	A. Insufficent CO <sub>2</sub> pressure to BIB pumps.  B. Shutoff on mounting block not fully open.  C. Foreign debris in syrup flow control.	A. Adjust CO <sub>2</sub> pressure to 80 PSI (5.5 BAR) [minimum 70 PSI (4.8 BAR)] for BIB pumps.  B. Open shutoff fully.  C. Remove syrup flow control form upper body and clean out any foreign material to ensure smooth free spool movement.
4.6 Erratic ratio.	A. Incoming water and/or syrup supply not at minimum flowing pressure.  B. Foreign debris in water and/or syrup flow controls.	A. Check pressure and adjust  B. Remove flow controls from upper body and clean out any foreign material to ensure smooth free spool movement.

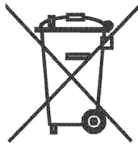


TROUBLE	CAUSE	REMEDY
4.7 No product dispensed	<p>A. Water and syrup shutoffs on mounting block not fully open.</p> <p>B. The key switch on an electric valve is in the OFF position.</p> <p>C. Cup lever arm or ID panel actuator on electric valve is not actuating the switch.</p> <p>D. Electric current not reaching valve.</p> <p>E. Improper or inadequate water or syrup supply.</p>	<p>A. Open shutoff fully.</p> <p>B. Turn key switch to ON position.</p> <p>C. Repair</p> <p>D. Check electric current supplied to valve. If current is adequate, check solenoid coil and switch, and replace if necessary.</p> <p>E. Remove valve from mounting block and open shutoffs slightly and check water and syrup flow. If no flow, check dispenser for freeze-up or other problems</p>
4.8 Water only dispensed; no syrup; or syrup only dispensed, no water	<p>A. Water or syrup shutoff on mounting block not fully open.</p> <p>B. Improper or inadequate water or syrup flow.</p> <p>C. Kinked line.</p>	<p>A. Open shutoff fully.</p> <p>B. Remove valve from mounting block, open shutoffs slightly and check water and syrup flow. If no flow, check dispenser for freeze-up or other problems. Ensure BIB connection is engaged.</p> <p>C. Remove kink or replace line.</p>
4.9 Valve will not shut off.	<p>A. Cup lever may be sticking or binding.</p> <p>B. Switch not actuating freely.</p> <p>C. Solenoid armature not returning to bottom position.</p>	<p>A. Correct or replace lever.</p> <p>B. Check switch for free actuation.</p> <p>C. Replace defective armature or spring.</p>
4.10 Excessive foaming.	<p>A. incoming water or syrup temperature too high.</p> <p>B. Water flow rate too high.</p> <p>C. Nozzle and diffuser not properly installed.</p> <p>D. Nozzle and diffuser not clean.</p> <p>E. Air in BIB lines.</p> <p>F. Poor quality ice.</p> <p>G. High beverage temperature</p>	<p>A. Correct prior to dispenser. Consider larger dispenser or precooler.</p> <p>B. Readjust and reset ratio. Refer to Section 1.11</p> <p>C. Remove and reinstall properly.</p> <p>D. Remove and clean.</p> <p>E. Bleed air from BIB lines.</p> <p>F. Check quality of ice used in drink.</p> <p>G. Check refrigeration system.</p>

TROUBLE	CAUSE	REMEDY
4.11 Compressor does not start (no hum), but condenser fan motor runs	<p>A. Compressor relay or overload malfunctioning.</p> <p>B. Inadequate voltage.</p> <p>C. Incorrect wiring.</p> <p>D. Compressor malfunctioning</p>	<p>A. Replace compressor relay or overload.</p> <p>B. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage.</p> <p>C. Refer to wiring diagram and correct.</p> <p>D. Replace compressor.</p>
4.12 Compressor starts and continues to run until freeze up and will not cut off	<p>A. Ice bank control failure</p> <p>B. Incorrect wiring.</p> <p>C. Probe shortened.</p>	<p>A. Replace ice bank control.</p> <p>B. Refer to wiring diagram and correct.</p> <p>C. Check probe for foreign material or damage.</p>
4.13 Compressor does not start but hums	<p>A. Inadequate voltage.</p> <p>B. Incorrect wiring.</p> <p>C. Starting relay malfunctioning.</p> <p>D. Compressor malfunctioning</p>	<p>A. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage</p> <p>B. Refer to wiring diagram and correct</p> <p>C. Replace starting relay. Be sure to use correct relay. Failure to use correct relay will cause compressor failure.</p> <p>D. Replace compressor</p>
4.14 Compressor starts but does not switch off start winding (will run for only a few seconds before internal overload switches compressor off).	<p>A. Inadequate voltage.</p> <p>B. Incorrect wiring.</p> <p>C. Starting relay malfunctioning</p>	<p>A. Measure voltage across common and run terminal on compressor.</p> <p>B. Refer to wiring diagram and correct</p> <p>C. Replace starting relay. Be sure to use correct relay. Failure to use correct relay will cause compressor failure.</p>
4.15 Compressor starts and runs a short time but shuts off on overload	<p>A. Dirty condenser</p> <p>B. Insufficient or blocked air flow.</p> <p>C. Inadequate voltage.</p> <p>D. Incorrect wiring.</p> <p>E. Defective condenser fan.</p> <p>F. Refrigerant leak.</p> <p>G. Compressor malfunctioning</p>	<p>A. Clean the condenser.</p> <p>B. Remove all obstructions and allow for minimum clearances of 15 inches (380 mm) over top.</p> <p>C. Measure voltage across common and run terminal on compressor. Voltage must not drop below 90% of rated voltage.</p> <p>D. Refer to wiring diagram and correct.</p> <p>E. Replace condenser fan motor.</p> <p>F. Repair and recharge.</p> <p>G. Replace compressor</p>

TROUBLE	CAUSE	REMEDY
4.16 Compressor and Condenser Fan Motor will not start after five (5) minute Power Off Delay ( <b>Lancer EIBC Export only</b> )	<ul style="list-style-type: none"> <li>A. Transformer tripped.</li> <li>B. Relay will not turn on compressor</li> <li>C. Probe unplugged</li> <li>D. Improper wiring</li> <li>E. Damaged electronics</li> </ul>	<ul style="list-style-type: none"> <li>A. Reset transformer.</li> <li>B. Failed relay. Replace Control Board.</li> <li>C. Check probe connection at PCB</li> <li>D. Check Power Indicator Lamp; check wiring per Wiring Diagram</li> <li>E. Replace Control</li> </ul>
4.17 Warm Drinks	<ul style="list-style-type: none"> <li>A. Restricted airflow</li> <li>B. Dispenser connected to hot water supply.</li> <li>C. Refrigeration system not running.</li> <li>D. Refrigeration leak.</li> <li>E. Condenser fan motor not working.</li> <li>F. Dirty Condenser.</li> <li>G. Dispenser capacity exceeded.</li> </ul>	<ul style="list-style-type: none"> <li>A. Check clearances around sides, top, and inlet of unit. Remove objects blocking airflow through grill.</li> <li>B. Switch to cold water supply.</li> <li>C. Refer to Sections 4.11 - 4.15.</li> <li>D. Repair and recharge.</li> <li>E. Replace condenser fan motor.</li> <li>F. Clean condenser.</li> <li>G. Add pre-chiller.</li> </ul>

## 5. DISPENSER DISPOSAL

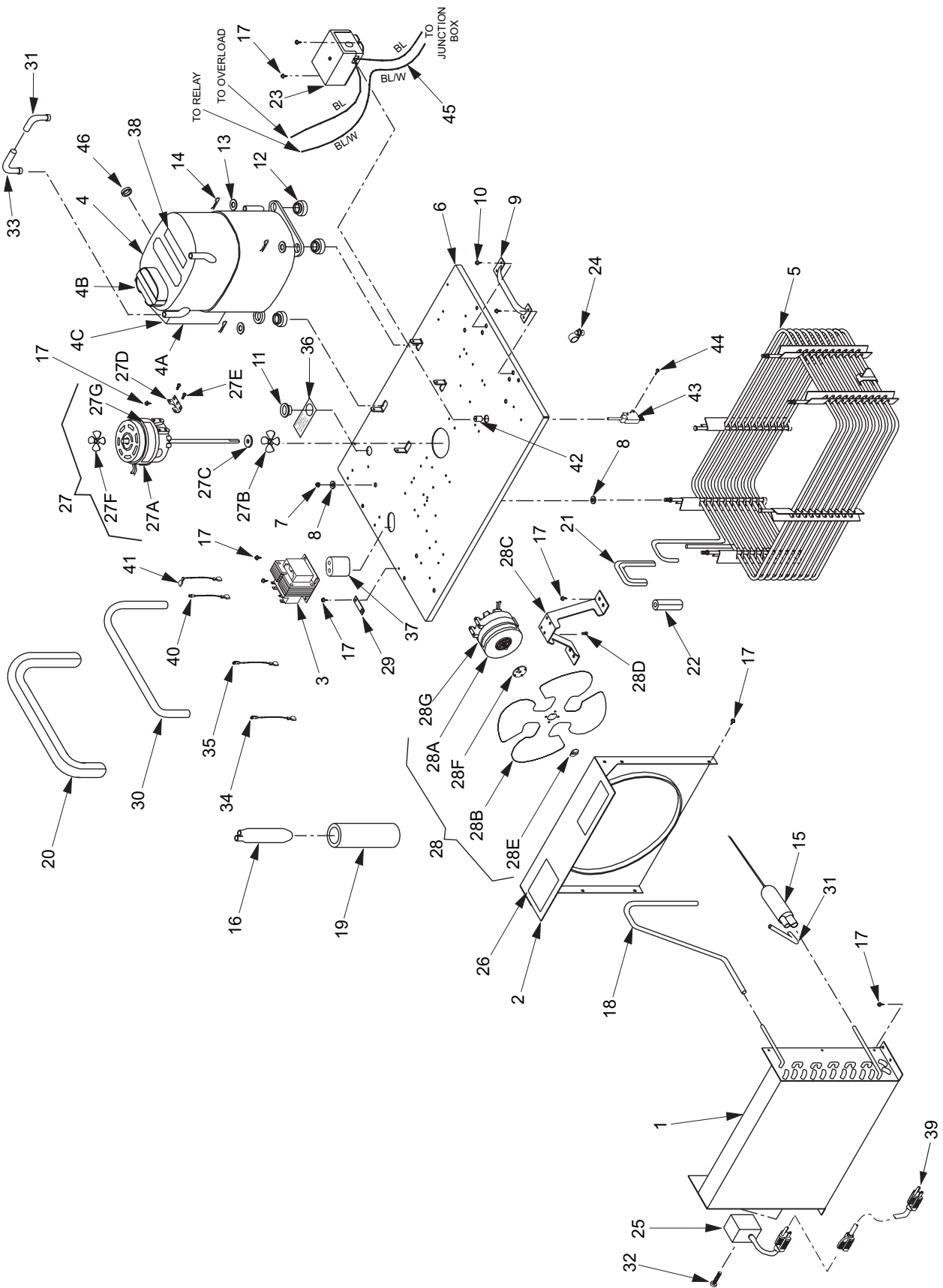


To prevent possible harm to the environment from improper disposal, recycle the unit by locating an authorized recycler or contact the retailer where the product was purchased. Comply with local regulations regarding disposal of the refrigerant and insulation.

6. ILLUSTRATIONS, PARTS LISTINGS, AND WIRING DIAGRAMS

6.1 2500 REFRIGERATION DECK ASSEMBLY, R-134A, LANCER ELECTRONIC ICE BANK CONTROL (EIBC), USA ONLY, PN 82-2669

(MANUFACTURED FROM 01/99)

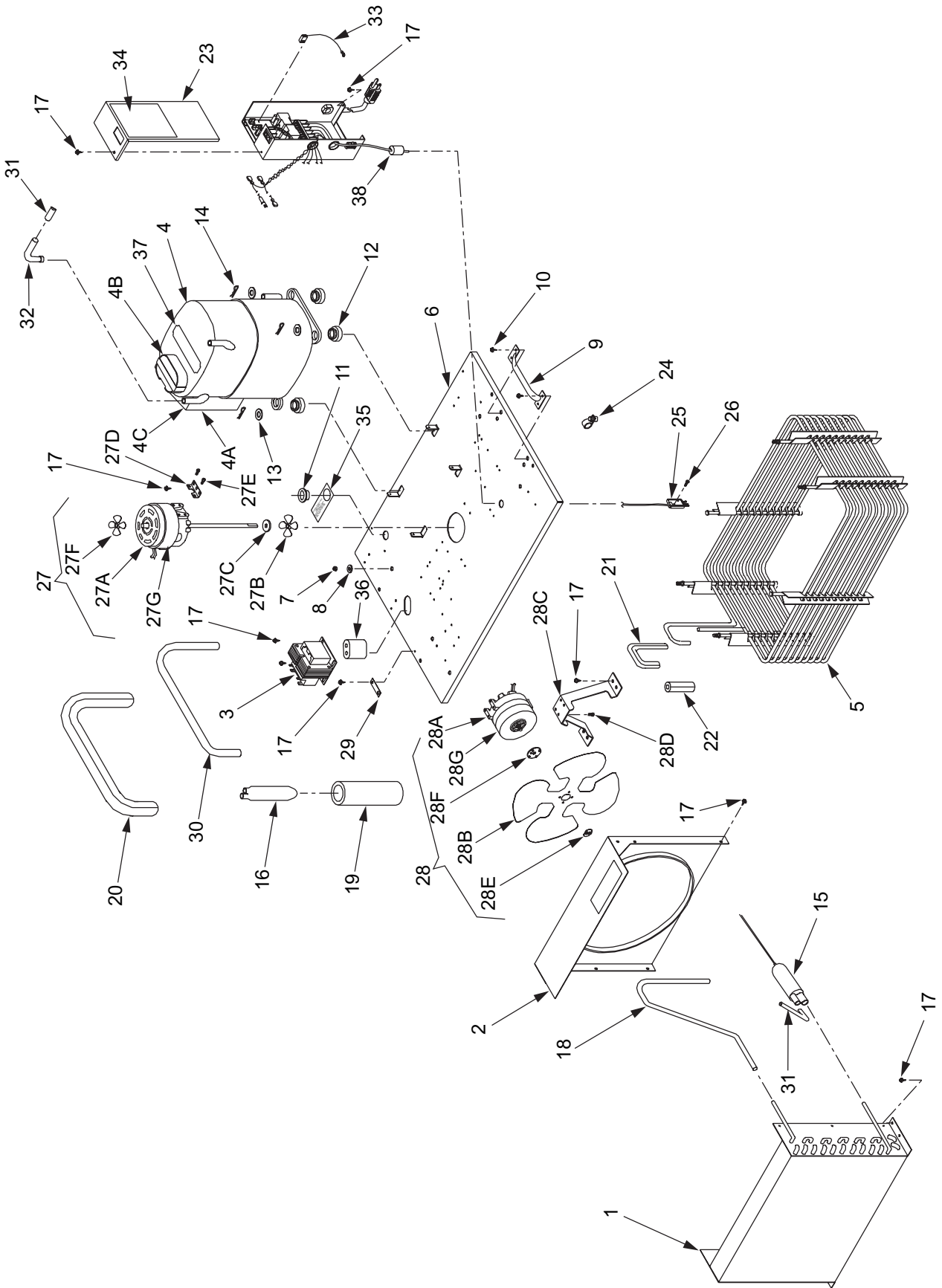


**6.1 2500 REFRIGERATION DECK ASSEMBLY, R-134A, LANCER ELECTRONIC ICE BANK CONTROL (EIBC), USA ONLY, PN 82-2669 (CONTINUED)**

**(MANUFACTURED FROM 01/99)**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	23-0986	Condenser	31	47-0344	Tube, Process
2	51-0349	Shroud Assy	32	04-0070	Screw, 10 - 24 x 1.312
3	25-0047	Transformer, 115V/60Hz	33	01-1713	Reducer, Fitting, Elbow
4	83-0101	Compressor, 115V/60Hz	34	52-0878	Wire, Transformer Lead, Primary
4A	12-0233	Start Capacitor, 115V/60Hz			
4B	12-0227	Overload, 115V/60 Hz	35	52-0879	Wire, Transformer Lead, Primary
4C	12-0232	Relay, 115V/60Hz			
-	-----	Refrigerant, R134A Only, 15.5 Ounces	36	06-0856/01	Fill Hole Label
5	23-1205	Evaporator Coil Assy	37	02-0040	Seal, Extrusion
6	82-0675	Compressor Deck Assy	38	06-0663	Label, 115V/60Hz, 3/4 HP
7	04-0032	Nut, 1/4 - 20	39	21-0085	Power Cord, USA
8	04-0063	Washer, 0.260 ID x 0.687 OD, SS	40	52-1504	Wire Assy, Secondary, White
9	07-0268	Deck Handle	41	52-1505	Wire Assy, Secondary, Black
10	04-0260	Screw, 10 - 16 x 0.625	42	02-0041	Seal
11	04-0538	Fill Hole Plug	43	52-1897	Probe Assy
12	02-0114	Grommet, Compressor	44	04-0394	Screw, 6 - 32 x 0.500, PHP, SS
13	04-0537	Washer, Compressor	45	52-1827	Harness Assy, EIBC
14	03-0150	Retainer Clip, Compressor	46	13-0059	Bushing, Heyco
15	23-0999	Dryer/Capillary Tube Assy			
16	51-5400	Accumulator			
17	04-0504	Screw, 8 - 18 x 0.375			
18	47-2064	Tube, High Side			
19	50-0105	Accumulator Insulator Boot			
20	50-0106	Insulation, Low Side			
21	50-0107	Insulation, Evaporator Outlet			
22	50-0108	Insulation, Evaporator Inlet			
23	52-1882	Electronic Ice Bank Control (EIBC)			
24	03-0049	Cord Clip			
25	52-0100	Power, Junction Assy			
26	06-0031/01	Wiring Diagram, 2500			
27	52-1259	Agitator Motor Assy, 115V/60Hz			
27A	91-0083	Motor, Agitator, 115V/60Hz			
27B	05-0502	Propeller, Agitator			
27C	02-0032	Washer, Rubber, 1.000 OD			
27D	30-5113/01	Agitator Motor Bracket			
27E	04-0059	Screw, 8 - 36 x 0.375			
27F	05-0424/01	Agitator Fan			
27G	06-0633	Label, 115V/60Hz, 25W			
28	52-0740	Fan Motor Assy, 115V/60Hz			
28A	91-0017	Fan Motor, 115V/60Hz			
28B	07-0257	Fan Blade			
28C	30-0043	Bracket, Fan Motor			
28D	04-0059	Screw, 8 - 36 x 0.375			
28E	04-0060	Nut, Fan Blade			
28F	02-0413	Silencer, Fan Blade			
28G	06-0667	Label, 115V/60Hz, 35W			
29	11-0118	Connector, Ground			
30	47-2033/01	Tube, Suction			

**6.2 2500 REFRIGERATION DECK ASSEMBLY WITH ELECTRONIC ICE BANK CONTROL (EIBC),  
R-134A; PN 82-2049E, 230V/50Hz; PN 82-2103E, 115V/60Hz; PN 82-2098E, 240V/60Hz  
(INTERNATIONAL ONLY)**

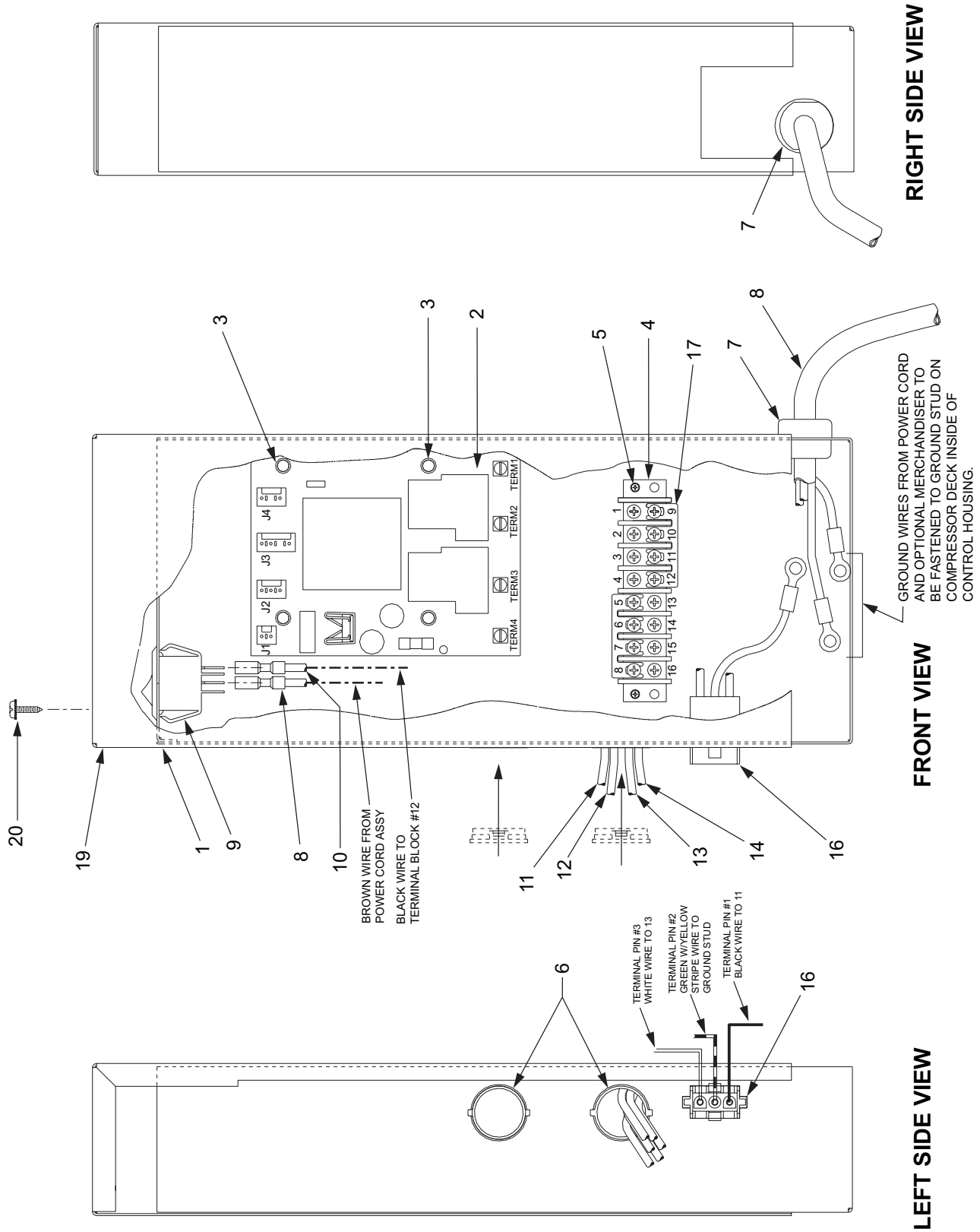


**6.2 2500 REFRIGERATION DECK ASSEMBLY WITH ELECTRONIC ICE BANK CONTROL (EIBC),  
R-134A; PN 82-2049E, 230V/50Hz; PN 82-2103E, 115V/60Hz; PN 82-2098E, 240V/60Hz  
(CONTINUED)**

**(INTERNATIONAL ONLY)**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	23-0986	Condenser	27A	91-0083	Motor, Agitator, 115V/60Hz
2	51-0349	Shroud Assy	-	91-0086	Motor, Agitator, 230V/50Hz and 240V/60Hz
3	25-0047	Transformer, 115V/60Hz	27B	05-0502	Propeller, Agitator
-	25-0048	Transformer, 230V/50-60Hz	27C	02-0032	Washer, Rubber, 1.000 OD
4	83-0101	Compressor, 115V/60Hz	27D	30-5113/01	Agitator Motor Bracket
-	83-0102	Compressor, 230V/50Hz	27E	04-0059	Screw, 8 - 3/8 x 0.375
-	83-0103	Compressor, 240V/60Hz	27F	05-0424/01	Agitator Fan
4A	12-0233	Start Capacitor, 115V/60Hz	27G	06-0633	Label, 115V/60Hz, 25W
-	12-0235	Start Capacitor, 230V/50Hz	-	06-0634	Label, 230V/50-60Hz, 25W
-	12-0246	Start Capacitor, 240V/60Hz	28	52-0740	Fan Motor Assy, 115V/60Hz
4B	12-0227	Overload, 115V/60Hz	-	52-0741	Fan Motor Assy, 240V/60Hz
-	12-0045	Overload, 230V/50Hz	-	52-0742	Fan Motor Assy, 230V/50Hz
-	12-0043	Overload, 240V/60Hz	28A	91-0017	Fan Motor, 115V/60Hz
4C	12-0232	Relay, 115V/60Hz	-	91-0018	Fan Motor, 230V/50Hz
-	12-0236	Relay, 230V/50Hz	-	91-0019	Fan Motor, 240V/60Hz
-	12-0247	Relay, 240V/60Hz	28B	07-0257	Fan Blade
-	-----	Refrigerant, R134A Only; 115V/60Hz and 240V/60Hz, 15.50 Ounces; 230V/50Hz, 15.75 Ounces	28C	30-0043	Bracket, Fan Motor
5	23-1205	Evaporator Coil Assy	28D	04-0059	Screw, 8 - 3/8 x 0.375
6	82-0675	Compressor Deck Assy	28E	04-0060	Nut, Fan Blade
7	04-0032	Nut, 1/4 - 20	28F	02-0413	Silencer, Fan Blade
8	04-0063	Washer, 0.260 ID x 0.687 OD, SS	28G	06-0667	Label, 115V/60Hz, 35W
9	07-0268	Deck Handle	-	06-0668	Label, 230V/50Hz, 35W
10	04-0260	Screw, 10 - 16 x 0.625	-	06-0669	Label, 240V/60Hz, 35W
11	04-0538	Fill Hole Plug	29	11-0118	Connector, Ground
12	02-0114	Grommet, Compressor	30	47-2033/01	Tube, Suction
13	04-0537	Washer, Compressor	31	47-0344	Tube, Process
14	03-0150	Retainer Clip, Compressor	32	01-1713	Reducer, Fitting, Elbow
15	23-0999	Dryer/Capillary Tube Assy	33	52-2027	Harness Assy, EIBC Ground
16	51-5400	Accumulator	34	06-1542	Wiring Diagram, Label, EIBC
17	04-0504	Screw, 8 - 18 x 0.375	35	06-0856/01	Fill Hole Label
18	47-2064	Tube, High Side	36	02-0040	Seal, Extrusion
19	50-0105	Accumulator Insulator Boot	37	06-0663	Label, 115V/60Hz, 3/4HP
20	50-0106	Insulation, Low Side	-	06-0664	Label, 230V/50Hz, 3/4HP
21	50-0107	Insulation, Evaporator Outlet	-	06-0665	Label, 240V/60Hz, 3/4HP
22	50-0108	Insulation, Evaporator Inlet	38	02-0041	Seal
23	52-2026	Control Housing Assy, EIBC			
24	03-0049	Cord Clip			
25	52-1773	Probe Assy, EIBC			
26	04-0394	Screw, 6 - 32 x 0.500			
27	52-1259	Agitator Motor Assy, 115V/60Hz			
-	52-1118	Agitator Motor Assy, 220-240V/50-60Hz			

**6.3 2500 CONTROL HOUSING ASSEMBLY, ELECTRONIC ICE BANK CONTROL (EIBC), INTERNATIONAL ONLY**



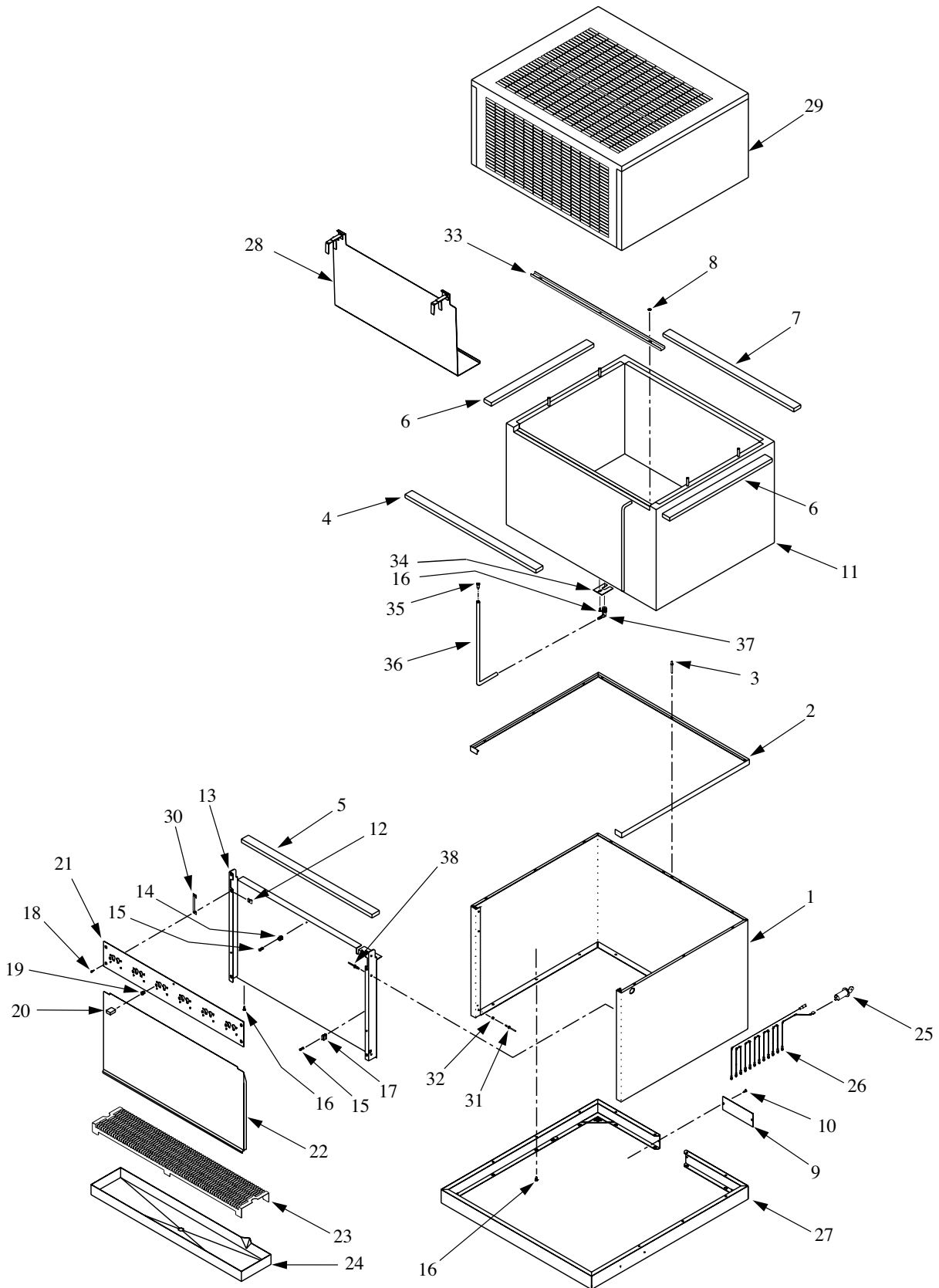


**6.3 2500 CONTROL HOUSING ASSEMBLY, ELECTRONIC ICE BANK CONTROL (EIBC)  
INTERNATIONAL ONLY (CONTINUED)**

**6.3.A CONTROL HOUSING ASSEMBLY, EIBC, PN 52-2026, WITHOUT KILL SWITCH**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<b>WIRING CONNECTION CHART</b>		
			<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>TERMINAL</b>
1	30-7012	Housing, Control			
2	52-1423	PCB Assy			
3	13-0047	Stand Off			
4	12-0190	Block, Terminal			
5	04-0477	Screw, 8 - 32, ROLOK			
6	13-0059	Bushing			
7	13-0028	Strain Relief			
8	52-2057	Power Cord Assy			
9	-----	Not Applicable			
10	-----	Not Applicable			
11	52-2021	Lead Assy, Transformer, Primary, #1			
12	52-2022	Lead Assy, Transformer, Primary, #2			
13	52-2023	Lead Assy, Compressor, #1			
14	52-2024	Lead Assy, Compressor, #2			
15	52-2061	Lead Assy, EIBC			
16	52-1210	Harness Assy, Optional Merchandiser			
17	11-0186	Jumper			
18	52-1058	Harness, Transformer, Secondary			
19	30-7015	Cover, EIBC, Box Without Kill Switch			
20	04-0504	Screw, 8 -18 x 0.375			
			52-1219	Power Cord (BLU)	15
			52-1219 with Kill Switch	Power Cord (GRN/YEL)	Ground Stud
				Power Cord (BRN)	Kill Switch (A-A)
				52-1218	Power Cord (BLU)
			52-1218 without Kill Switch	Power Cord (GRN/YEL)	Ground Stud
				Power Cord (BRN)	12
				52-2038	Lead, Kill Switch, 14 GA (BLK)
			52-2021	Lead, Trans, Pri #1 (BLK)	3
			52-2022	Lead, Trans, Pri #2 (BLK/ WHT)	3
			52-2058	Harness, Trans, Sec (BLK)	J1
				Harness, Trans, Sec (WHT)	
			52-2023	Lead, Comp #1 (BLK)	Terminal 1
			52-2024	Lead, Comp #2 (BLK/ WHT)	6
			52-1773	IBC Probe Assy	J2
			52-1259	Lead, Agitator Motor (BLK)	10
			52-0742	Lead, Agitator Motor (BLK-RIDGED)	14
			52-1210	Harness, Optional Merchandiser (BLK)	11
				Harness, Optional Merchandiser (GRN/YEL)	Ground Stud
				Harness, Optional Merchandiser (WHT)	13
			52-2061	Lead Assy, EIBC, 2500	Terminal 2 to 1

## 6.4 2500 CABINET ASSEMBLY



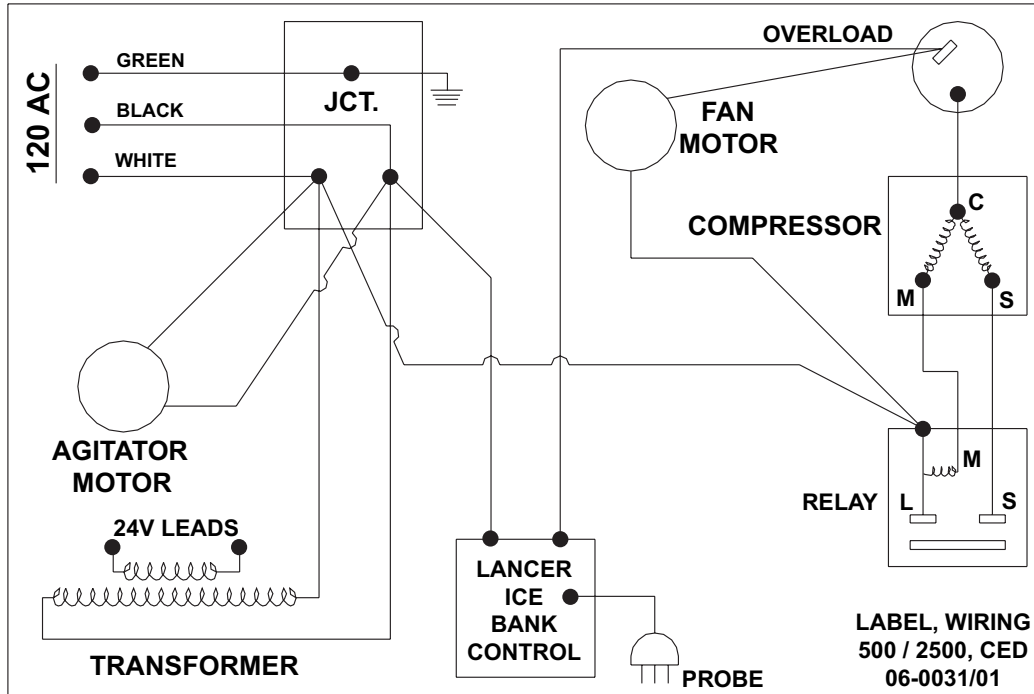
**6.4 2500 CABINET ASSEMBLY (CONTINUED)**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	30-0643/01	Wrapper, External	<b>NOTE: Cage Assembly Part Numbers are:</b>		
2	51-0547	Trim, Gray	23-1232/01		6-Valve, 3-2-1 Manifold,
3	04-0067	Rivet	3/8 inch		Syrup Inlets
4	50-0175	Insulation, 1/2 inch	23-1236/01		8-Valve, 3-1-1-3 Manifold,
5	50-0180	Insulation, 1/2 inch	3/8 inch		Syrup Inlets
6	50-0102	Insulation, 1/8 inch	23-0919		4-Circuit Chiller
7	50-0184	Insulation, 1/8 inch	23-0798/01		9-Circuit Chiller
8	04-0082	Nut, Hex, 10 - 24, SS	23-1103		6-Valve Premix
9	30-0612	Back Plate			
10	04-0477	Screw, 8 - 32 x 0.375 inch			
11	42-0013	Tank, Foamed			
12	04-0074	Nut, Clip, 10 - 24			
13	30-0649/02	Front Support Plate			
14	03-0036	Clip, Drain Tube			
15	04-0077	Screw, #4 x 1/4 inch			
16	04-0061	Screw, #8 x 1/2 inch			
17	03-0115	Clip, Overflow Tube			
18	04-0443	Screw, 10 - 24 x 0.375			
19	13-0005	Bushing, Strain Relief			
20	11-0015	Connector Housing			
21	23-0391	Faucet Plate, 8-Valve			
--	23-0605	Faucet Plate, 6-Valve			
--	30-6702	Faucet Plate, 6-Valve, Premix			
--	30-6703	Faucet Plate Stiffener, 6-Valve, Premix			
22	30-6640	Splash Plate			
23	30-0535	Cup Rest			
24	23-0306	Drip Tray			
25	12-0097	Key Lock Switch			
26	52-0893/01	Harness Assy, 8-Valve			
--	52-1214	Harness Assy, 6-Valve			
27	51-0582	Base Assy			
28	82-1120	Insulator Plate Assy			
29	23-0443/02	Bonnet Assy (Specify Graphics)			
30	30-5314	Shim Plate			
31	04-1012	Rivet, Splash Plate Spacer			
32	01-1705	Spacer, Splash Plate			
33	30-5599/02	Retainer, Cage, 2500			
34	30-5143	Clip, Drain			
35	01-0450	Tube Support			
36	08-0190	Drain Tube			
37	01-1483	Elbow Drain Assy			
38	04-0072	Rivet			

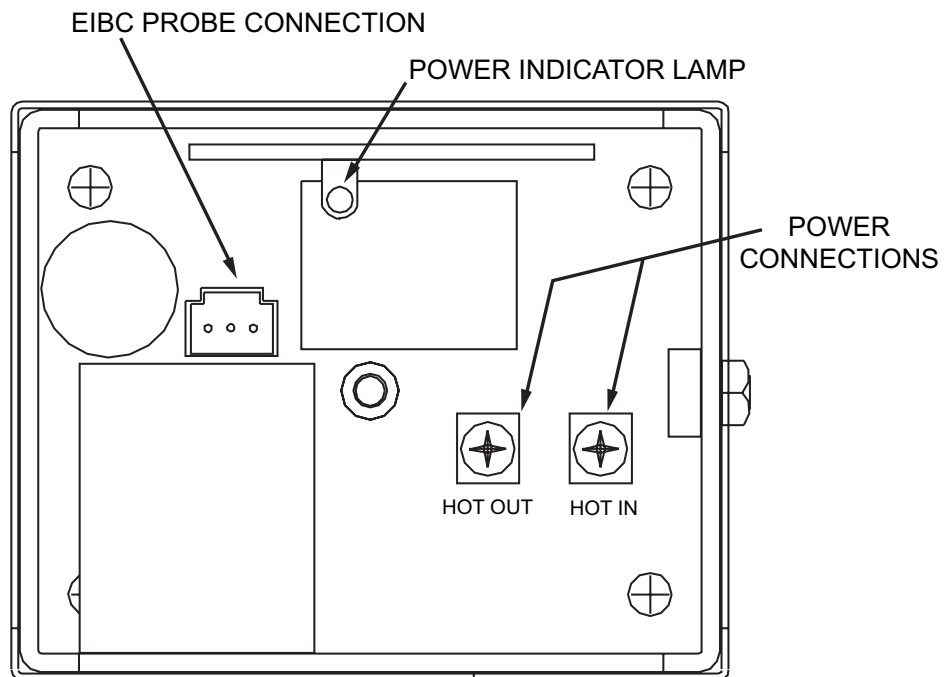
6.5 2500 WIRING DIAGRAM AND HOUSING CONNECTIONS, LANCER ELECTRONIC ICE BANK CONTROL, USA ONLY

# IMPORTANT

WHEN STARTING UNIT OR IF CURRENT IS INTERRUPTED, THERE IS A FIVE (5) MINUTE DELAY BEFORE THE COMPRESSOR/FAN STARTS.



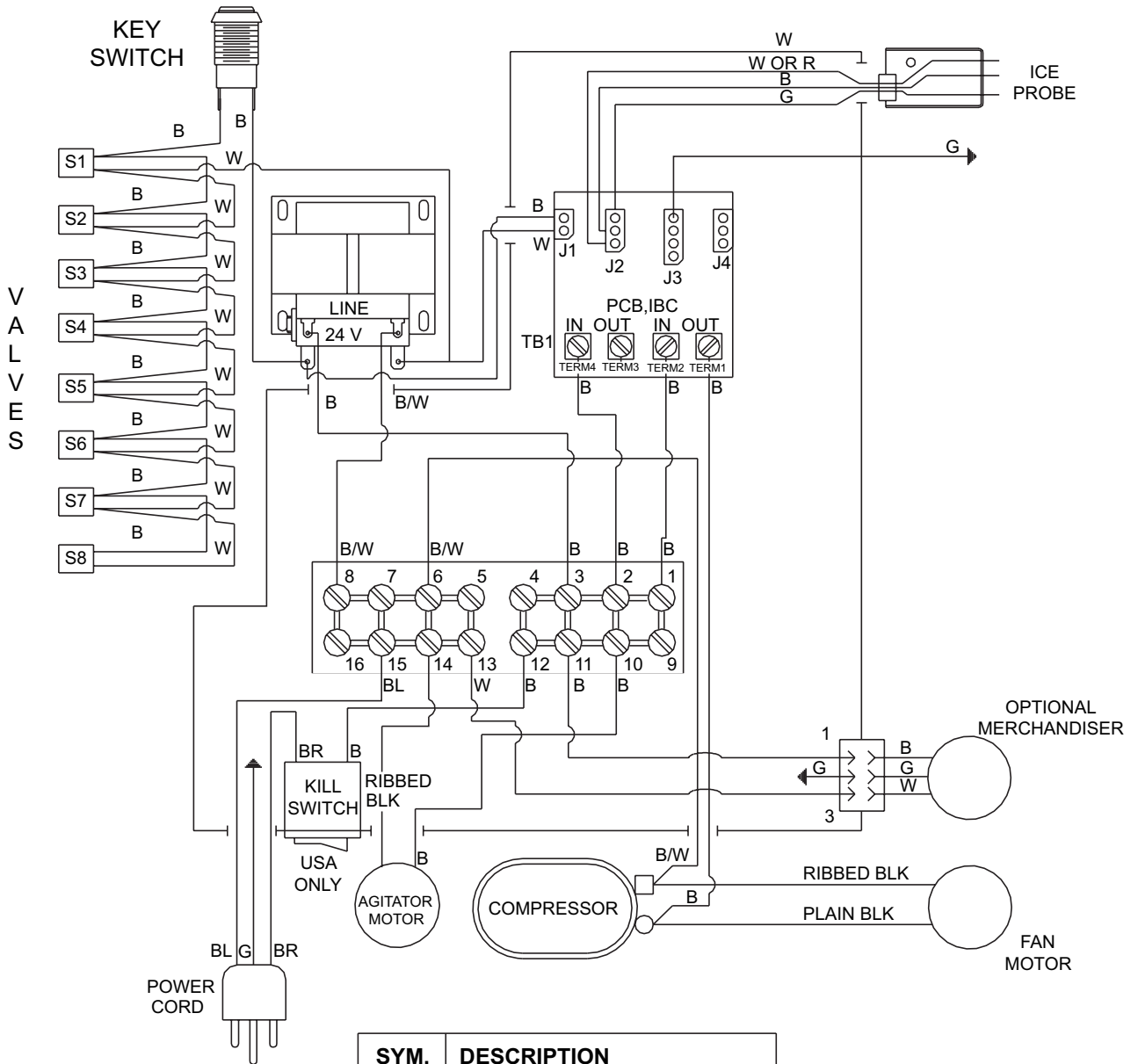
LABEL, WIRING DIAGRAM, CED, PN 06-0031/01



CONTROL HOUSING CONNECTIONS

# IMPORTANT

**WHEN STARTING UNIT OR IF CURRENT IS INTERRUPTED, THERE IS A FIVE (5) MINUTE DELAY BEFORE THE COMPRESSOR/FAN STARTS.**



SYM.	DESCRIPTION
	CHASSIS GROUND
	CONTROL BOX
	CHAMFER PIN 1

*LANCER* LABEL,  
WIRING DIAGRAM  
06-1542

## 6.7 INSTALLATION KITS AND OPTIONAL ACCESSORIES

<u>Part No.</u>	<u>Description</u>
• 82-1796	BIB Installation Kit - For 3/8 Inch Syrup Inlets
• 82-0221-06	FIGAL Installation Kit - 6 Valve - For 1/4 Inch Syrup Inlets
• 82-0221-08	FIGAL Installation Kit - 8 Valve - For 1/4 Inch Syrup Inlets
• 82-2613-06	FIGAL Installation Kit - 6 Valve - For 3/8 Inch Syrup Inlets
• 82-2613-08	FIGAL Installation Kit - 8 Valve - For 3/8 Inch Syrup Inlets
• 82-0344	Leg Kit
• 82-2139	EIBC Retrofit Kit - International Only
• 82-2572 ELS	Marquee Kit - Graphics Included
• 82-1802	24VAC Lighted Marquee (Graphics Ordered Separately)
<b>Marquee Graphics for PN 82-1802 Only</b>	
• 06-1790	Coca-Cola Dynamic Ribbon, Screened
• 06-1789	Coca-Cola Three Cup, "Taste Real Refreshment", Duratrans

## NOTES

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***LANCER***<sup>®</sup>

Lancer Corp.

800-729-1500

Technical Support/Warranty: 800-729-1550

[custserv@lancercorp.com](mailto:custserv@lancercorp.com)

[lancercorp.com](http://lancercorp.com)