





# Patriot Jr.

FLEECEBACK & INSULATION MOBILE ADHESIVE DISPENSING CART

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THERE IS NO COMPARISON

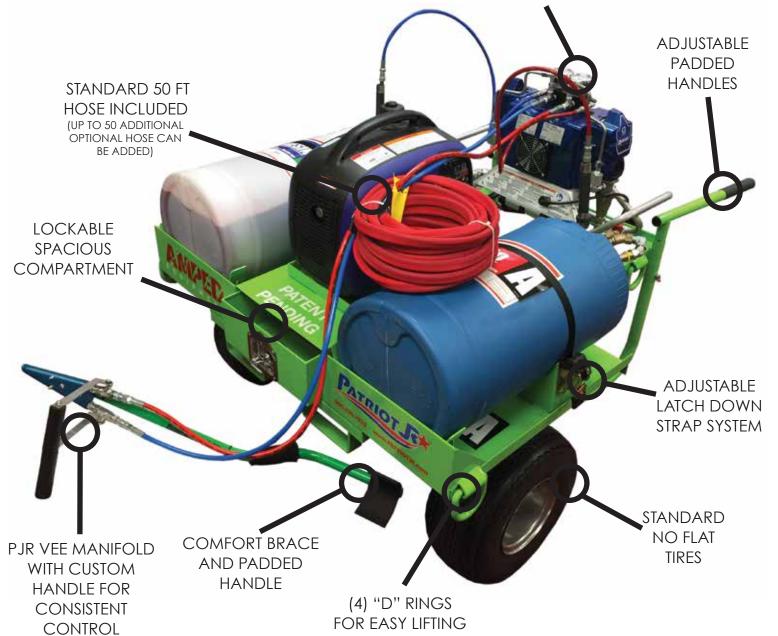


# TABLE OF CONTENTS

Patriot Jr.	03
P-55	04
The Patriot Jr. & The P-55	05
Patriot Jr. Features	06
Startup Procedures	07 - 08
Overnight Shut Down	09 - 10
Fusion Gun Overnight Shut Down	11 - 12
Long Term Shut Down	13 - 14
Safety	15 - 16
Patriot Jr. Overview	17 - 18
Hose Connection Overview	19
Drum Installation Overview	20 - 21
Parts & Accessories	22 - 25
Reactor Instructions	28 - 45

# Patriot Jr.

PJR REACTOR PUMP HAS EASY TO USE INTERFACE AND GAUGES



\* GENERATOR NOT INCLUDED

P-55 The Joker

RUN 15 - 55 GALLON DRUMS WITHOUT COSTLY CONVERSION UPGRADES

RUNS 150' FOOT HOSE

VARIABLE SPEED AND PRESSURE

FULL SPRAY AIR PURGE CAPABLE

AMPED PURPLE HEAVY DUTY COVER

SELF DIAGNOSTIC

ULTRA COMPACT AND LIGHTWEIGHT

WARMING CAPABILITIES

STAINLESS STEEL / ALUMINUM ALLOY FITTINGS

ONE YEAR WARRANTY

BAG-IN-BOX AND JUGS CAPABLE

CUSTOM GRACO REACTOR PUMP (EASY ACCESS FOR QUICK ONSITE OR OFFSITE REPAIRS)



LOCKABLE STORAGE CABINET

EASY REUSABLE CONNECTORS

ONLINE VIDEO INSTRUCTIONS

INLINE STAINLESS STEEL MATERIAL FILTER

AMPED GREEN POWDER COATED COLORS

EASY TO READ PRESSURE GAUGES

WIDE 18 X 8.50 TIRES

\* GENERATOR NOT INCLUDED

800.620.7928

## The Patriot Jr. & The P-55

### There are no substitutes for the industries best pair of mobile adhesive cart options.

Introducing the game changing Patriot Jr. and the P-55 plural component adhesive dispensing carts from Amped Equipment, allowing you to take advantage of the cost saving options by using 15 - 55 gallon drums. All of the components are multi machine compatible.

The P-55 is a great stand alone or can serve as a cost saving compliment to your exising Patriot Jr. system. The insulation adhering and fleeceback Patriot Jr. + P-55 work great with all leading adhesive manufacturers! The perfect compliment for applications of Fast & Flexible Fast Adhesive to Fleeceback Membrance.

-High production on any size job

- -Static (Bead) and/or full spray (PJR+) Applications
- -Works with 15 Gallon Drums, Bag-In-Box or 5 Gallon Jugs or 55 Gallon drums on the P-55.
- -Virtually no waste
- -Simple to learn and easy to use
- -Minimal Clean-up Time
- -Pump design delivers long pump life with balanced and even mixtres
- -Straight flow path reduces clogging and allows for easy clean out
- -12" Drill bit provided for easy cleaning of Vee
- Triple your production
- Simple setup and operation
- (incredibly easy to use and maintain)
- Compact and self contained
- 100ft. "plus" hose length capable
- HUGE savings on materials (30% in some cases)
- Oversized care/flat free tires
- Forklift slots and lifting rings (Standard)
- Lockable storage drawers / cabinets
- Heating options for cooler weather applications
- -Eliminates daily start up and Shut down procedures
- -Easy maintenance and on-site service
- -The P-55 has all of the above benefits and...
- Standard 15 55 gallon A+B drum stations
- Hydraulic drum handling pistons (No lifting!)
- Oversize lockable box with shelves for storing tools and Reactor Pump (takes the place of the lockable drawer on PJR)





### Patriot Jr. Features / Caracteristicas

#### Features

Panther East introduces "The Patriot Jr." (PJR) Dual-Component, Low-Rise Foam Adhesive Spray Rig. This customized cart was requested by an industry leading manufacturer of low-rise foam adhesive, to meet the market's demand for a low cost, fleeceback & bag in a box dispensing cart. The Patriot Jr. (PJR) is an inexpensive spray foam dispensing system on a customized cart, using the GRACO Reactor E8P as the main feature. This lightweight spray foam system is easy to maneuver and operate, compatible with a variety of roofing systems, and it is versatile enough for both 15 Gallon Drums and Bag In a Box. The PJR can be used with a static gun and is the most cost effective spray foam system of its kind. Whether you're expanding your existing insulation application opportunities or just starting your business, the PJR provides a quick return on investment. Why get a Pace Cart when you can save so much money and get the job done faster by using The Patriot Jr?

Specifications

- Haul it in your van or pickup truck
- Handle and wheels make it easy to maneuver
- Plugs into a standard residential outlet 15amp @ 120V
- Easy to read pressure gauges ensure you're spraying on-ratio and delivering high-quality foam
- An economical alternative to froth kits

#### Caracteristicas

Panther East presenta "The Patriot Jr." (PJR) una máquina de aplicación adhesivos espuma de doble componente de baja altura. Esta máquina especializada fue solicitada por un fabricante líder en la industria para satisfacer la demanda de desarrollar un carro de dispensación de bajo costo para adhesivos de "Bag in a Box" y membranas de fleeceback El Patriot Jr. (PJR) es un sistema de dispensación de espuma en aerosol de bajo costo en un carrito modificado, utilizando el Reactor Graco E8P como la característica principal. Este sistema de espuma ligero en aerosol es fácil de maniobrar y operar, compatible con una variedad de sistemas de impermeabilización y es lo suficientemente versátil para acomodar los sistemas de cubetas de 15 galones y la "Bag in a Box". El PJR se puede utilizar con pistola estático y es el sistema de espuma pulverización más rentable de su tipo. Si estas ampliando las posibilidades de aplicación de aislamiento existentes o acaba de empezar su negocio, la PJR proporciona un rápido recuperación de su inversión. ¿Por qué compras un PACE Cart cuando puedes hacer el trabajo más rápido utilizando el Patriota Jr?

Especificaciones:

- Fácil llevar en su furgoneta o camioneta.
- Manija y las ruedas hacen que sea fácil de maniobrar
- Se conecta a una toma de residencial estándar de 15 amperios @ 120V
- Fácil de leer medidores de presión aseguran que estés pulverización de la ratio y la
- entrega de espuma de alta calidad
- Una alternativa

### Startup Procedures

This manual is an important part of your machine and should remain with the machine at all times for continued reference on proper use and care of this machine.

01. Open drums and insert fittings. Fittings for drum should correspond to fitting on PJR Reactor. Be sure to set drums up to match stickers and labels. Never change product once designated and used in lines and PJR Reactor.

02. Mount PJR Reactor on PJR Cart. MAKE SURE ALL CLIPS AND HOLD DOWNS ARE SECURE!!!!

03. Stand PJR Cart upright with the help of another person. DO NOT ATTEMPT ON YOUR OWN.

04. Line drums up according to labels and fitting location. Small cam lock fittings should face the bottom of the cart.

05. Make sure valves are closed and vents remain plugged.

06. Roll drums into place.

07. Secure drums using the provided ratchet straps. Make sure drum straps are in the locked position and the drums are firmly against the deck.

08. Connect cam lock fitting to drums. Ensure all fittings are connected securely and are in the locked position. PLEASE DOUBLE CHECK ALL FITTINGS AND CLIPS.

09. With the help of another person, pull PJR Cart down from the upright position, so the drums are parallel with the roof deck and the wheels and rear legs are on the surface securely.

10. Place Generator in tray.

11. Connect all hoses and gun making sure that the hoses are in the proper place. Hose fittings will only fit in one way.

12. Make sure all fittings are secure and firm.

13. Start Generator and plug PJR Reactor into power. Allow time to warm up. DO NOT USE IDLE CONTROL / ECOSWITCH ! Generator should run at full throttle all the time to prevent damage to PJR Reactor.

14. Install Driers into vent fittings. It may be necessary to use bleed lines into vent fittings first.

15. Put bleed valves in "spray" position. and turn dial to 1-2 with gun open.

16. Make sure fluids are flowing through clear tubing. Open valves allowing product to flow into pumps.

17. Install Static Nozzle and begin spraying.

18. Run until even flow comes through gun end on both sides. When in use to prevent clogging at tip purge gun every 1-2 mins/or as necessary so adhesive does not clog.

#### NOTE:

To change drums reverse procedure.

Reverse procedure and change one drum at a time to prevent "crossing" drums.

### Procedimientos de Arranque

This manual is an important part of your machine and should remain with the machine at all times for continued reference on proper use and care of this machine.

01. Abrir los tambores e insertar las conexiones. Cada conexión debe corresponder a la conexión del reactor en el Patriot Jr. Asegúrese de configurar los tambores hasta partido pegatinas, y etiquetas. Nunca cambio de producto una vez señalado y utilizado en las líneas y Reactor de PJR.

02. Montas el reactor de PJR en el carro de PJR. ¡ASEGÚRESE DE QUE TODOS LOS CLIPS Y ANCLAS SON SEGURAS!

03. Pare el carro con la ayuda de otra persona. NO INTENTE POR SU CUENTA.

04. Alinearse los tambores para arriba según las etiquetas y el lugar de montaje. Conexiones de la cerradura de leva pequeña deben quedar hacia la parte inferior del carro.

05. Asegurarse que todas las válvulas estén cerradas y las rejillas de ventilación permanece tapado

06. Roll drums into place.

07. Utilizase correas para asegurar los tambores en su lugar. Asegúrese que las correas estén en la posición de cerrada y los tambores estén firmemente colocadas sobre la estructura.

08. Conecte la cerradura de la leva a los tambores. Asegúrese de que todas las conexiones se conecten de forma segura y en la posición de bloqueo. POR FAVOR VERIFIQUE TODAS LAS CONEXIONES Y CLIPS.

09. Con la ayuda de otro persona jala el Patriot Jr. hasta abajo así que los tambores son paralelos a los suportes anteriores y ruedas son seguramente en la losa.

10. Situar el generador en bandeja.

11. Conecte todas las mangueras y la pistola, asegurándose de que las mangueras estén en el lugar correcto. Las conexiones de manguera solamente encajarán en una manera.

12. Asegúrese de que todas las conexiones son seguras y firmes.

13. Arranque generador y conectan el reactor a la electricidad. Deje tiempo que se caliente la maquina. NO ADJUSTE EL CON-TROL DE RALENTÍ / ECO-SWITCH !) El generador debe funcionar a velocidad maxima todo el tiempo para evitar daños en el Reactor de Patriot Jr.

14. Instalarse los secadores en conectores de ventilación. Puede ser necesario utilizar las líneas de purga en las conexiones de ventilación antes de instalar el secador.

15. Colocar las válvulas de purga en posición de "spray" y gire el dial a 1-2 con la pistola abierta.

16. Asegúrese que los fluidos están fluyendo a través de tubería clara. Open valves allowing product to flow into pump.

17. Instale la boquilla estática y GO!

18. Corren el reactor hasta que tienes un flujo uniforme a través del extremo de la pistola. Para evitar que se atasque en la punta, purga la pistola cada 1-2 minutos o como sea necesario para no tapa el punto del adhesivo.

#### NOTE:

To change drums reverse procedure.

Reverse procedure and change one drum at a time to prevent "crossing" drums.

## **Overnight Shut Down**

This manual is an important part of your machine and should remain with the machine at all times for continued reference on proper use and care of this machine.

- 1. Turn off rocker switch on pump. Unplug Unit.
- 2. Turn down pressure knob to off position on pump.
- 3. Open gun to relieve pressure in hoses.
- 4. Close PJR VEE Manifold
- 5. Grease gun to point of having 3" 4" of grease in nozzle
- 6. Turn off both ball valves at inlet hoses from drums.
- 7. Take recirculation hoses out of vents and let hang down.
- 8. Insert plugs back on vent tubes.
- 9. Allow generator to completely cool down or remove from cart before covering.

Note: Suggested times for shut down Lunch breaks, Overnight, 3-5 days

### Procedimiento Para Apagar La Maquina a Corto Plazo

- 1. Apague el interruptor en la bomba. Desenchufela.
- 2. Gire la perilla de presión a posición "OFF" en la bomba.
- 3. Abrir la pistola para aliviar la presión en las mangueras.
- 4. Cierre válvula múltiple "VEE"
- 5. Añades grasa a la pistola hasta el punto de tener 3"- 4" de grasa en la boquilla
- 6. Apague ambas válvulas de bola en las mangueras de entrada de los tambores
- 7. Retiran las mangueras de recirculación de respiraderos y déjelas a colgar
- 8. Meten los tapones en los tubos de ventilación
- 9. Cubres el Patriot Jr. con cubierta verde incluida.

Note: Yiempos de descanso y almuerzo, cerrarla anoche, cerrarla hasta 5 días

### Fusion Gun Overnight Shut Down

- 1. Turn off rocker switch on pump. Unplug Unit.
- 2. Turn down pressure knob to off position on pump.
- 3. Shut off valves on gunblock.
- 4. Allow air to blow through gun for 5 minutes.
- 5. Trigger gun a few times to help clear tip.
- 6. Shut off air compressor.
- 7. Remove air line from gun.
- 8. Remove cap from top of grease fitting on gun until grease comes out of gun end.
- 9. Replace cap.
- 10. Store gun in a dry bag.
- 11. Turn off both ball valves at inlet hoses from drums.
- 12. Insert plugs back on vent tubes.
- 13. Cover Patriot Jr. with green stock cover provided.

Note: Suggested times for shut down Lunch breaks, Overnight, 3-5 days

### Pistola de Fusión Lista de Verificación Para Cerrarla Anoche.

1. Apague el interruptor en la bomba. Desenchufe la unidad.

2. Apagan la perilla de presión en la bomba (cierre de válvulas en el marco de la pistola) para limpiar la punta.

3. Permitir que el aire sople a través de la pistola de 2 a 3 minutos. Dispare la pistola unas veces a limpiar la punta.

4. Apague el compresor de aire. Retire la línea de aire de la pistola. Retire la tapa al parte superior de inyector de grasa hasta que grasa salga por fin de pistola de grasa. Reemplace la tapa.

10. Guarde la pistola en una bolsa seca.

11. Apague ambas válvulas de bola en las mangueras de entrada de los tambores.

12. Retirense las mangueras de recirculación de respiraderos y dejelas a colgar.

13. Meten los tapones de nuevo en los tubos de ventilación.

14. Cubrense el Patriot Jr. con cubierta verde.

### Long Term Shut Down

- 1. Close inlet ball valves
- 2. Disconnect inlet hoses from drums.
- 3. Using the bag-in-a-box connector hoses, connect the appropriate hose to the A side inlet cam lock.
- 4. Place hose into container of neutralizer.

5. Open both ball valves inlet - allow B side to pump air through lines while neutralizer is being pumped through A side.

6. Have both residual materials left in hoses to be pumped into a container that can be discarded after foam has hardened.

7. Once all materials have been purged from lines and neutralizer is present, allow the neutralizer to refill the same container from which you are pumping out of.

- 8. Pull hose from container allowing neutralizer in hose to run back into container.
- 9. Now insert same inlet lose into container of Surf-A-Lube.
- 10. Flush out neutralizer until lube is present.
- 11. Pump lube through system until it comes out gun.
- 12. Leave air in B side.
- 13. Close off inlet ball valves.
- 14. Install dust caps and convers in cam locks.
- 15. Turn off pump and close gun.
- 16.Add grease into guns through grease nozzle inlets.
- 17. Fill 2" 3" into tip.

Note: Suggested times for shut down Lunch breaks, Overnight, 3-5 days

## Procedimiento Para Almacenaje de Largo Plazo

1. Cierre las válvulas de bola de entrada

2. Desconecte las mangueras de entrada de los tambores.

3. Usando las mangueras de conector de "bolsa en caja", conecte la manguera apropiada a la cerradura leva a lado "A".

4. Coloque la manguera dentro del envase de neutralizador.

5. Abrir ambas válvulas de bola entrada - permiten lado "B" al bombear aire mientras bombeas neutralizador a lado "A".

6. Descargan ambos materiales residuales que queda en las mangueras en un contenedor que puede ser desechado después de que la espuma se ha endurecido.

7. Una vez que todos los materiales han sido vaciados de las líneas y neutralizador está presente, rellenas el contenedor original del neutralizador.

- 8. Ahora mismo insertan la manguera en envase de Surf-A-Lube.
- 9. Enjuages el neutralizador hasta que el lubricante está presente.
- 10. Bomba el lubricante a través del sistema hasta que sale de la pistola.
- 11. Deje el aire en el lado B
- 12. Cierran las válvulas de bola de entrada.
- 13. Instale tapones antipolvo y tapas en las cerraduras de la leva.
- 14. Apague la bomba y cierre la pistola.
- 15. Añades grasa en la pistola a través de boquillas de inyector de grasa.
- 16. llene 2"- 3" en la punta.

\* Si tienes preguntas, no dude llamarnos al 800.620.7928 o visítenos en línea en www.patriotjr.com

## SAFETY

Complete fall protection training before exposing a worker to fall hazards in accordance with OSHA standards or other governing bodies.

1. Observe and follow all applicable local, state, federal, or provincial regulations.

2. Check the roof and deck for deterioration before allowing personnel on the roof or operating this machine on the roof. The Machine Owner and/or Building Owner are responsible for ensuring the roof and structure are strong enough to support the weight of this machine any workers.

3. Check the roof system depth prior to operating the machine.

4. Remove all potential hazardous obstacles from the work area before operating the machine.

5. Properly cover and/or guard and label any roof openings in accordance with OSHA or other governing bodies.

6. Never operate the machine near a roof edge without proper fall protection in accordance with OHSA or other governing bodies.

7. Wear safety glasses at all time with operating or working around this machine.

8. Keep hands, feet, hair, jewelry and loose clothing away from the engine and any other moving parts.

9. Do not make adjustments to the machine. The exception is while the machine is running you CAN increase or decrease pressure while it is running.

10. Do not touch the engine or muffler during or immediately after use.

11. Turn off the machine and allow it to cool before performing any maintenance.

12. Do not fill the fuel tank while the engine is running or hot.

13. Use caution when operating to avoid tripping and falling.

14. Slow down and use caution when making turns, changing direction or operating on low-slopes.

15. Shut off the engine before leaving the machine unattended. Turn the Engine Switch to the off position to shut down the engine.

## SAFETY

Properly cover and/or guard and label any roof openings in accordance with OSHA Standards or other governing bodies to avoid serious injury or death.

Never operate this machine while walking backwards to avoid trips or falls through holes or openings.

#### **Safety Decals**

Replace worn, damaged or illegible decals before operating the machine.

Obtain replacement Safety Decals from Panther East or your local distributor.

A copy of the Safety Decals in included in this manual along with their reorder code.

#### Machine Usage

This machine shall be used and operated as described in this manual and may be supplemented by additional media published by Panther East.

The owner and/or operators of this machine are responsible for ensuring its use for intended purposes only.

Improper use not described herein may result in damage to the machine, property and/or serious injury or death to the operator or other persons.



### Patriot Jr. Detailed Overview



This is the On/Off switch.



Typically you're going to run between 3-5. The higher you turn it up the higher the pressure is. The lower you turn it the lower the pressure.



The recirculation controls are the two black switches on the top below the two round pressure gauges.



The pressure gauges show the pressure in your spray line.



Both gauges are at the 12:00 position for spraying.



The Pressure line is where the red caps on the back where the hoses get connected. (The B-Side is shown here.)



This right side of the pump for the B-Side.



There is a screen here to filter out any foreign materials before it goes into your pump.



The tube allows the material to flow through.



The silver tubes are the air vents for your drums (even though it is shown in black here).



The A-Side has the same parts as the B-Side. These are the valves to turn on and off.



This is a picture of air dryers.

### Patriot Jr. Detailed Overview Continued



Make sure the clips are down and in place so that when you tilt your cart up the pump does not fall out. There are 2 clips are in the back and one in the front center below with pressure gauges.



There are two clips on the bottom base to hold the air compressor. The typical gun uses an air gun so that is why you would need the air compressor.



As an add on we sell small generators that is enough to run the pump so that everything stays compact, light and self contained.



The handles are for lifting and maneuvering the cart and can be swung out of the way at the end of the night



There are 4 lifting D-Rings on either side of the cart in each corner.



They are strictly for lifting the cart and NOT for tie off.



18 x 8.50 tires will not go flat.



There's a built in locking storage compartment.



There is a roomy storage drawer.



It Has forklift pockets for lifting the cart.



Get started with our online training video library. Get out your iPhone or smartphone with a QR reader. (iPhones have them built into the camera already)

Click on this QR code pic.

Watch how easy it is to watch these great and instructional videos.

### Hose Connection Overview



When hooking up the hoses to the PJR The hose diameter is the same but the fittings are different sizes so they can only go on one way.



And there is a male and female on either side so you can add a second set either at the pump or at the gun.



Be sure to carefully tighten each hose connection.



Add on the whip hoses that are the same blue and red colors.



When you go to spray, pull the black handle back away from the blue point and then it is in the ON position as showed here.



When you're connecting the hose to the gun, it is the male size of the hose that goes into the smaller fitting typically on the left side.



Make sure to tighten each connection lightly.



The gun is in the closed position.



There is a drill bit placed next to the tip of the gun used for cleaning.



The bit supplied can be used to clean out both of the holes near the tip if needed in case of a clog.



When you are purging materials through the hoses you must have the gun in the open position to allow the air to escape.



## Drum Installation Overview

A Side Drum



В

Side

When installing the barrels on the Patriot Jr. be sure to first place the barrels on the correct side matching the A side and the B side.



Male and female cam locks connect the barrels to the Patriot Jr.



Vents are placed onto the two inch opening.



The vent fitting fits into the 2 inch opening to allow materials to flow smoothly. This is the larger of the two holes.



Point vents away from the Patriot Jr. in a horizontal position away from the cart so that when it's laying down the vents will face up.



Extra caps and plugs are supplied to you if you choose to disconnect for any reason.



Make sure to note that this male plug goes into the female insert in the barrel for the B-Side barrel.











The B-Side gets the male cam lock for the hose that goes into the female fitting for the barrel.

## Drum Installation Overview



The cart then stands up and you roll the B Side Barrels into place.





Tie down the straps and tighten them to keep them in place.



Then to make a connection attach the hose and move the ears out of the way and push the male down into it and clamp it.



Load the A Side barrel on the same way.



Tighten the strap so that the barrel is secure.



Pull down the A Side Hose into place, tighten and clamp it makign sure to mvoe the ears back.



Squirt the provided ISO oil 1 time in the pump in the AM in BOTH ends of the the reactor.





Once the barrels are in place find be sure to tighten the Y Strainer Fittings BEFORE use.



Then you are ready to go.



Next flnd a healping hand. We recommend a buddy system for any lifting, especially for drums and carts.



Just tilt the cart down to the ground.

### PARTS & ACCESSORIES





ltem# PJRLock **Description** (1) PJR Handle Lock, Key System



ltem#

**Description** (1) PJR Vee Manifold Gun GUNPJRVee



No Flat Tire

ltem# PJRTire



ltem# DrumStrap

**Description** (1) Drum Latch Strap Down Kit

WWW.PATRIOTJR.COM



**DeWalt Comp** 

ltem# PJR-COMPRESSOR D55151



Description

ISO Pump

Oil Bottle

Description

(1) Standard

Hand Pump

. Grease Gun

(1) PJR Reactor

ltem#

247124

ltem#

1402

ltem#

ltem#

75-A-AL

P.JR-CAMMALE-FEMALE

PJR-GREASE

PJR-FusionGun



**Fusion Gun** Description (1) Fusion Gun and Orifice Kit



PJR or P-55 Cover ltem# Description PJRCover (1) PJR Green or (1) P55 Purple 15G Riveted Cover

Nozzle PJR

**Quick Connect Nozzle** 

**Camfem-MNPT PJR** 

Description

20 Pk Nozzles

Description

Nozzle (Gray)

(1) Quick Connect

(1) PJR Vee

Manifold

ltem#

417J

ltem#

QuickConnectGray

PJR-NozzleVEE



**Pin Handles Short for PJR** 

ltem#	Description
PJR-PINSHORT	(2) PJR Pins
910420	



**Wrench Drum** 

ltem# PJR-DrumWrench PJR856475

Description (1) PJR 15 Gallon Drum Wrench

Description

(1) Quick Connect



**Quick Connect Nozzle** 

ltem# QuickConnectBlack



**Cam Lock PJR FEFE** 

em#	Descrip
JR-CAMLOCKFEFE	(1)
75-D-AL	Female x Fe

ption ) NPT emale 3/4"



**Oil PJR Pump** 

ltem# PJR-PumpOil 217374



Grease Gun LX-1150

ltem# PJR-GreaseGun LX-1150



**Cammale - MNPT PJR** 

ltem# P.JR-CAMMALE-MNPT 75-F-AL

Description (1) 3/4" NPT Male x Male Camlock

**MNIGUARI** 

Grease PJR 1402

Description (1) Omniguard Container Grease



Hose

Description PJR-HOSE50-2B HB2-1006HB (1) 50' of 2 bundle PJR-HOSE50-3 HB3-1006HB3 (2 is used on bead) (1) 50' of 3 bundle



**Cammale-Female PJR** 

Description (1) 3/4" Male x Female Camlock ltem# P.JR-CAMFEM-MNPT G75-B-AL

Description (1) 3/4" NPT Male x Female Camlock Cap **Ite** PJF G7







**Cap Cam Lock F** ltem# Description PJR-CADCAMGRV (1) 3/4" 75-DC-AL Cap Female . Camlock



**Cam Lock PJR Plug** Description PJR-CAMLOCKPLUG (1) Male 75-DD-AL Camlock Cap

ltem#



**PJR Y Strainer Y BRASS** Description ltem# PJR-STRAINERBRASSWATTS (1) WYE Joint 75-DD-AL Female x Female

3/4"

Description

Connection

(1) 90° Angled

3/4" Male x Female



**Hose Barb PJR** ltem# PJR-HOSEBARB

Description (1) 3/4" NPT x 3/4" Barbed



**Tube CLR PJR** ltem# Description PJR-TUBECLR (1) Standard 4TCF-110-3613 3/4" Clear Tubing



ltem#

PJR-BLEEDPIPE

4004-600

**Threaded Pump** Description 1/4"X6" Stainless Steel Threaded Pump to Drum Vents Extensions



PJR Valve Ball 34 Description ltem# PJR-VALVEBALL34 (1) Wye Connection LFFBV-3C Shut off valve



Wye Strainer Description ltem# WYESTRNKIT (2) Wye Strainer Kits with Stop . Valves / Hose

**Fitting Drum** Description PJR-DRUMVENTASSY (2) Drum Vents



**SURF A LUBE** Description PJR-GSPSURFALUBEIG (1) Gallon A-Side Flush

ltem#



Fitting 3490

ltem#

PJR-FITTING3490

2PL-2107-12-12





Fitting Brass 34 PJR

ltem# PJR-FITTINGBRASS34 2BRBNHX-12-BCN75

Description (1) 3/4" Male x Male Connection



**Drum Vents & Camlocks Kit** Description Item# (1) Kit Containing PJR-DRUMCAMLOCKSET 2 Drum Vents, 2 MxM Camlocks 2 FxF Camlocks



**SURF X Flush** ltem# PJR-GSPSURFXFLUSH2000IG

Description (1) Gallon of Surf X Flush

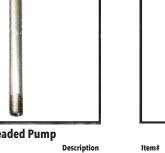


NZD ISO FLUSH Item# PJR-GSPISOFLUSHIG

Description

(1) Gallon of

NZD ISO Flush



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vent assembly (see page 3 for drum vents)

Adapter Kit / Holder

Dryer Can

Adapter

## P55 BEAD & FULL SPRAY MODELS

#### STATIC



Pictured P55 no compressor Shown with included generator. Drums not included. Ships with PJR-V Adhesive Dispenser

ltem#	Description	ltem#	Description
PJR-Bare	(1) PJR Reactor	Cam/Wye	(2) Drum and Cam Fittings (Complete)
PJR-P55Carto	(1) P55 Custom Cart	VentFit	(2) Vent Fittings (Complete)
PJR-Hose502B	(1) 50' 2-Bundle Hose	DryerPJR	(2) Desiccant Kits (Complete)
PJR-DrumStraps	(2) 6' Drum Straps	Adhesive App	lication Dispensing Options
PJR-NozzieV	(20) Nozzles/Tips	PATRIOT /	
PJR-ISOFlush	(1) 1 gal. I SO Flush	CUSTOM 2 PART ADHESIVE GUN SYSTEM	
PJR-SurfALube	(1) 1 gal. Lubricant (Storage Liquid)	_	(1) Patriot "V" Adhesive Dispenser
PJR-GreaseGun	(1) Grease Gun and Grease	PATRIOT	2 1 - 37
PJR-DrumWrenc	<b>h</b> (1) Drum Wrench	**PJR-02	(1) Patriot "O2" Adhesive Air Purge Dispenser
PJR-P55Cover	(1) Custom Green Cover		**(recommeded not included)

NOTE: PJR FULL SPRAY (INCLUDES ALL ITEMS FROM ABOVE PJR STATIC MODEL, AND THE FOLLOWING, UNLESS MARKED WITH \*\*.)





Pictured P55 with compressor Shown with included generator. Options also include PJR-O2 or Fusion Gun

ltem#	Description	ltem#	Description
PJR-Compressor	(1) 1.1-HP Air Compressor	**PJR-MaskFull	(1) Full Respiratory Mask
PJR-FusionGun	(1) Fusion Gun and Orifice Kit	**PJR-Goggles	(1) Pair Safety Goggles
**PJR-02	(1) Patriot "O2" Dispenser	GENERATOR	Select (1) bottom left
PJR-Hose503B	(1) 50' 3-Bundle Hose		
Working Air Inl	et Pressure:	Electrical Requ	irements:
Fusion Gun	80-130 psi	Pump	15amp @ 120V
		Compressor	15amp @ 120V

\*\*(recommeded not included)



#### Patriot Jr. Reactor® Specifications

Max Fluid Working Pressure	2000 psi (140 bar, 14 MPa)	
Electrical Requirements	Model 259082: 120 Vac, dedicated 15 A-circuit,	
	1 phase, 50/60 Hz	
Max Output	12 lb/min (5.4 kg/min) at 340 cycles/min	
Dimensions (Bare sprayer)	35" L x 24" H x 15" W (89 x 61 x 38 cm)	
Weight (Bare sprayer, no hose, gun, or cart)	95 lb (43 kg)	
Electrical Requirements:	<b>Pump</b> 15amp @ 120V	

#### Generator Options (Choose one that is included with your purchase)



YAM2000 (1) Yamaha EF2000i Generator OHV, Air-Cooled, Four-Stroke, Single Cylinder



WIN3000 (1) Winco 3000 Generator Honda GX160 Engine, OHC

## WE GOT THE HEAT



### **HOT BOXES**

- 64 cubic feet, 4' x 4' x 4' with other sizes and temps available
- Adjustable or fixed temperature from ambient to 145°F / 62°C (± 5°F / 3°C)
- Provide an insulated full-wrap design
- Deliver uniform heat to temperature sensitive materials & products
- Quickly and effortlessly install the compact portable design
- Localize heat and save money by not heating a warehouse or building
- Prevent waste and increase production by maintaining consistent temperatures



### **HEAT DRUM WRAPS**

- Cinch straps to secure tight fit
- Delivers safe, uniform heat to temperature sensitive materials
- Preserve expensive materials without overheating or burning
- Insulated full wrap design making it ultra energy-efficient
- Safe for outdoor use (water-resistant)
- Up to 145° heating, fixed or variable
- Works on both poly and steel drums
- Prevent product waste by safely maintaining consistent temperatures
- Optional thermostatic control available



### **BAND HEATERS**

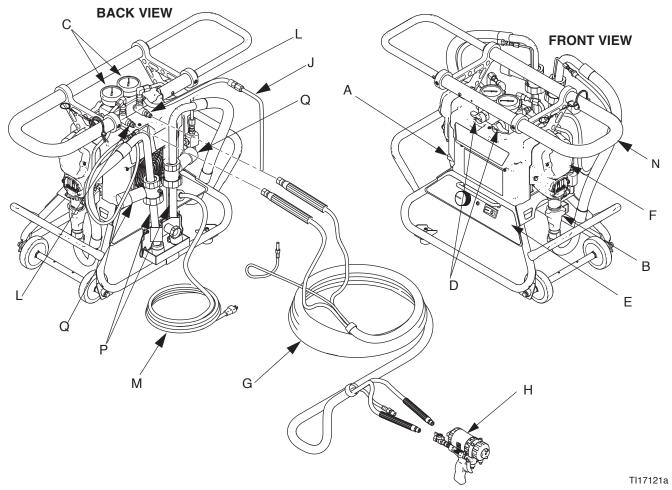
Drum Band Heaters are thin, flexible electrical resistance heaters that may easily be wrapped and secured around drums, pails and tanks. They are made of silicone rubber-reinforced fiberglass cloth laminated around a nickel alloy circuit. This construction provides an even heat transfer, which keeps contents at proper handling or process consistency and limits scorching or degradation of sensitive contents. A sturdy spring and hook arrangement easily attaches these products to 5, 15, 55gal. plastic or metal drums. (Not recommended for use on Carlisle adhesives)



**The Foam Hose Starter Sleeve** is designed for use with foam insulation delivery hoses to keep the components at optimum temperature for best results.Constructed of industrial grade 16 AWG buss wires which provide reliable electrical current capability.

- Outer Material: Heavy Duty Red Nylon Shell CPAI 84 2000 PSI
- Self Regulating Heat Tape Warming System 5 Watts Per Foot
- Polyethylene Closed Cell Flame Retardant Foam Insulated Lining
- A&B Hoses Slide On With Easy Pull String System & Pulling Mesh
- Nylon Tie Wraps Secure Heat Tape To Foam Hose
- 6' Heavy Duty Industrial Cord on 25' Starter Unit
- 25' Long Extensions can be Added to Accommodate 150' of Foam Delivery
- 120 VAC 5 Watts Per Foot Along the Entire Length

### **Component Identification**



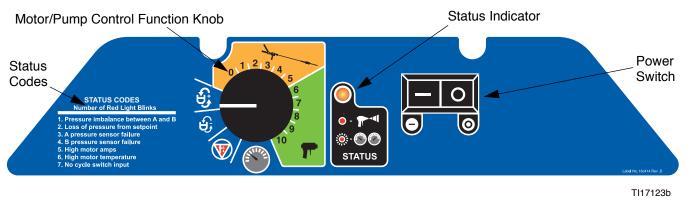
#### FIG. 1: Component Identification

#### Key:

- A Pump A
- B Pump B
- C Fluid Pressure Gauges
- D Recirc/Spray and Overpressure Relief Valves
- E Control Panel
- F Electric Motor and Drive Housings
- G Hose Bundle
- H Spray Gun
- J Recirculation Tubes
- K Air Line Inlet (quick-disconnect fitting)
- L Outlet Hose Connections
- M Power Cord
- N Lift Ring/Handle/Hose Rack
- P Fluid Inlet Tubes
- Q Desiccant Dryers

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### **Controls and Indicators**



#### FIG. 2: Controls and Indicators

#### **Power Switch**

Powers the Reactor E-8p on and off.

#### **Motor/Pump Control Function Knob**

Use knob to select desired function.

lcon	Setting	Function
	Stop/Park	Stops motor and automati- cally parks pumps.
<del>(</del> b	Slow Recirc	Slow recirculation speed.
÷	Fast Recirc	Fast recirculation speed.
Spe	Static Mix	Use fluid pressure settings 1-5 to dispense polyurea joint-fill materials through a static mixer.
T	Spray	Use fluid pressure settings 6-10 to spray polyurethane foam.

#### STATUS Indicator

Indicates system status, including power and error codes.

- Indicator steady on: power switch is turned on.
- Indicator blinking: If an error occurs, the status indicator light will blink one to seven times to indicate a specific status code, pause, and then repeat. The following table provides a brief description of each status code. For more detailed information and corrective action, see **Status Codes** on page 27.

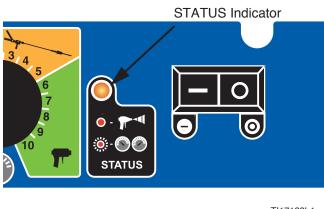
### Table 1: Status Codes (also located on front of Reactor)

Code	Code Name
1	Pressure imbalance between A and B sides
2	Unable to maintain pressure setpoint
3	Pressure transducer A failure
4	Pressure transducer B failure
5	Excessive current draw
6	High motor temperature
7	No cycle counter switch input

**NOTE:** The default is to shut down if a status code indication occurs. Codes 1 and 2 may be set to disable automatic shutdown if desired; see page 28. You cannot set the other codes.

### **Status Codes**

Determine the status code by counting the number of times the status indicator blinks.



TI17123b1

FIG. 46

#### Status Code 1: Pressure Imbalance

**NOTE:** The unit does not check for pressure imbalance at setpoints less than 250 psi (1.75 MPa, 17.5 bar). The unit does not check for pressure imbalance for 10 seconds after entering pressure mode.

Unit senses pressure imbalance between components A and B, and warns or shuts down, depending on settings of DIP switches 1 and 2. To turn off automatic shutdown and/or tighten pressure tolerances for status code 1, see **Status Code 1 and 2 Settings**.

1. Check fluid supply of lower pressure component and refill if necessary.

2. Reduce pressure of higher component by **slightly** turning Recirc/Spray valve for that component toward Recirc, until gauges show balanced pressures.



**NOTE:** Turn Recirc/Spray valve only enough to balance pressure. If turned completely, all pressure will bleed off.

3. Check fluid inlet strainers and fluid filters at gun.

## Status Code 2: Pressure Deviation from Setpoint

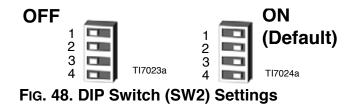
**NOTE:** The unit does not check for pressure deviation at setpoint less than 400 psi (2.8 MPa, 28 bar).

Unit senses pressure deviation from setpoint, and warns or shuts down, depending on settings of DIP switches 3 and 4. If equipment cannot maintain enough pressure for a good mix at the gun, try using a smaller mix chamber or nozzle.

To turn off automatic shutdown and/or tighten pressure tolerances for status code 2, see **Status Code 1 and 2 Settings**.

### Status Code 1 and 2 Settings

- 1. Locate switch SW2 on the control board.
- 2. Set the four DIP switches to the desired positions. See Fig. 48 and Table 2.



#### Table 2: Status Code 1 and 2 Settings

DIP Switch and Function	Left	Right (default setting)
<b>DIP Switch 1</b> If selected, causes shutdown or displays a warning if the pres- sure imbalance exceeds selection made in DIP Switch 2	WARNING	SHUTDOWN
DIP Switch 2		
If selected, causes <i>shutdown</i> if A and B pressure imbalance is greater than	500 psi (3.5 MPa, 35 bar) (60% if < 800 psi [5.6 MPa, 56 bar] running)	800 psi (5.6 MPa, 56 bar) (70% if < 800 psi [5.6 MPa, 56 bar] running)
If selected, causes <i>warning</i> if A and B pressure imbalance is greater than	300 psi (2.1 MPa, 21 bar) (50% if < 800 psi [5.6 MPa, 56 bar] running)	500 psi (3.5 MPa, 35 bar) (60% if < 800 psi [5.6 MPa, 56 bar] running)
<b>DIP Switch 3</b> If selected, causes shutdown or displays a warning due to devi- ation of pressure from setpoint exceeds selection made in DIP Switch 4	WARNING	SHUTDOWN
<b>DIP Switch 4</b> Causes warning if deviation of pressure from setpoint is greater than	300 psi (2.1 MPa, 21 bar) (25% if < 800 psi [5.6 MPa, 56 bar])	500 psi (3.5 MPa, 35 bar) (40% if < 800 psi [5.6 MPa, 56 bar])

#### Status Code 3: Transducer A Failure

- 1. Check transducer A electrical connections (J3) at board, page 38.
- 2. Reverse A and B transducer electrical connections at board, page 38. If error moves to transducer B (Status Code 4), replace transducer A, page 37.

#### Status Code 4: Transducer B Failure

- 1. Check transducer B electrical connections (J8) at board, page 38.
- Reverse A and B transducer electrical connections at board, page 38. If error moves to transducer A (Status Code 4), replace transducer B, page 37.

## Status Code 5: Excessive Current Draw

Shut off unit and contact distributor before resuming operation.

- 1. Locked rotor: motor unable to turn. Replace motor, page 43.
- 2. Short on control board. Replace board, page 37.
- 3. Worn or hung up motor brush causing arching of brush at commutator. Replace brushes, page 44.

### Status Code 6: High Motor Temperature

Motor is running too hot.

- 1. Motor temperature too high. Reduce pressure duty cycle, gun tip size, or move Reactor E-8p to a cooler location. Allow 1 hour for cooling.
- 2. Check fan operation. Clean fan and motor housing.

### Status Code 7: No Cycle Counter Switch Input

Have not received input from cycle counter switch for 10 seconds after selecting Recirculation Mode.

- Check cycle counter switch connection to board (J10, pins 5, 6), page 38 (figure control module wiring connections).
- Check that magnet (224) and cycle counter switch (223) are in place under B side motor end cover (227). Replace if necessary.

### **Troubleshooting Chart**

Problem	Cause	Solution
Reactor E-8p does not operate.	No power.	Plug in power cord.
		Cycle Motor Power off
Motor does not operate.	Power turned on with function knob set to a run position.	Set function knob to Stop/Park
	Loose connection on control board.	Check connection at J11 (120V models) or J4 (240V models). See page 37.
	Worn brushes.	Check both sides. Replace brushes worn to less than 1/2 in. (13 mm), see page 44.
	Broken or misaligned brush springs.	Realign or replace, page 44.
	Brushes or springs binding in brush holder.	Clean brush holder and align brush leads for free movement.
	Shorted armature.	Replace motor, page 43.
	Check motor commutator for burn spots, black pitting, or other damage.	Remove motor. Have motor shop resurface commutator, or replace motor, page 43.
	Failed control board.	Replace board. See page 37.
Fan not working.	Loose fan cable.	Check that cable is connected at fan and at J9 on control board. See pages 44 and 37.
	Defective fan.	Test and replace if necessary, page 44.
Pump output low.	Plugged fluid inlet strainer.	Clear, see page 24.
	Plugged disposable mixer.	Clean or replace.
	Leaking or plugged piston valve or intake valve in displacement pump.	Check valves. See pump manual.
One side doesn't come up to pres- sure in spray mode.	Dirty or damaged Recirc/Spray valve.	Clean or repair, page 33.
	Plugged fluid inlet strainer.	Clear, see page 24.
	Pump intake valve plugged or stuck open.	Clean pump intake valve. See page 34.
	Material is too viscous to siphon feed.	Warm the material feed pails with flexible band heaters. See <b>Acces</b> - <b>sories</b> on page 55.

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Pressure is higher on one side when setting pressure with function knob.         Pump intake valve partially plugged.         Clean pump intake valve. See page 34.           Air in hose. Fluid is compressible.         Purge air from hose.         Purge air from hose.           Pressures are not balanced when running, but pressure is generated and holds on both strokes.         Unequal viscosities.         Check that A and B chemicals are within the chemical manufacturer's specified application temperature range.           Fluid leak in pump packing nut area.         Restriction on one side.         Clean mix module or restrictor at mix manifold.           Pressure doesn't hold when stalled against gun in spray mode.         Leaking Recirc/Spray valve.         Repair. See pump manual.           Pressure is higher on B side during values as the other when pumps are cycling.         This is normal. Component B is typ- nent A until the material is heated during recirculation.         No action required.           One gauge shows half as many pulses as the other when pumps are cycling.         Loss of pressure on downstoke.         Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.           Status indicator (red LED) not lit.         Motor Power switch off.         Cycle Motor Power off uir opins 1 (red) and 2 (black) on control board. See page 37.	Problem	Cause	Solution
Arr in nose. Fluid is compressible.Purge arr rom nose.Unequal size hoses or unequal hose construction.Use matching hoses, or balance pressures before spraying.Pressures are not balanced when running, but pressure is generated and holds on both strokes.Unequal viscosities.Check that A and B chemicals are within the chemical manufacturer's specified application temperature range.Fluid leak in pump packing nut area.Restriction on one side.Clean mix module or restrictor at mix manifold.Fluid leak in pump packing nut area.Worn throat seals.Replace. See pump manual.Pressure doesn't hold when stalled against gun in spray mode.Leaking Recirc/Spray valve. In displacement pump.Repair. See gun manual.Pressure is higher on B side during uring recirculation, especially in high Recirc mode.This is normal. Component B is type are cycling.No action required.One gauge shows half as many pulses as the other when pumps are cycling.Loss of pressure on downstoke. Loss of pressure on upstoke.Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Cycle Motor Power off then on tigs; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Cycle Motor Power off then on tigs; see page 37.	when setting pressure with function	Pump intake valve partially plugged.	
nose construction.         pressures before spraying.           Pressures are not balanced when running, but pressure is generated and holds on both strokes.         Unequal viscosities.         Check that A and B chemicals are within the chemical manufacturer's specified application temperature range.           Pressure is generated         Restriction on one side.         Chang restrictor at mix point to balance back pressure.           Fluid leak in pump packing nut area.         Worn throat seals.         Replace. See pump manual.           Pressure doesn't hold when stalled against gun in spray mode.         Leaking Recirc/Spray valve.         Repair. See gun manual.           Leaking gun shutoff.         Repair. See gun manual.         Repair. See gun manual.           Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.         This is normal. Component B is typ- ically higher viscosity than compo- nent A until the material is heated during recirculation.         No action required.           One gauge shows half as many pulses as the other when pumps are cycling.         Loss of pressure on downstoke.         Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.           Status indicator (red LED) not lit.         Motor Power switch off.         Cycle Motor Power off then on for the cable is connected at 110 pins 1 (red) and 2 (black) on control board. See page 37.	knob.	Air in hose. Fluid is compressible.	Purge air from hose.
running, but pressure is generated and holds on both strokes.         within the chemical manufacturer's specified application temperature range.           Change restrictor at mix point to balance back pressure.         Change restrictor at mix point to balance back pressure.           Restriction on one side.         Clean mix module or restrictor at mix manifold.           Fluid leak in pump packing nut area.         Worn throat seals.         Replace. See pump manual.           Pressure doesn't hold when stalled against gun in spray mode.         Leaking Recirc/Spray valve.         Repair. See pump manual.           Leaking gun shutoff.         Repair. See gun manual.         Repair. See gun manual.           Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.         This is normal. Component B is typionent A until the material is heated during recirculation is heated during recirculation.         No action required.           One gauge shows half as many pulses as the other when pumps are cycling.         Loss of pressure on downstoke.         Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.           Status indicator (red LED) not lit.         Motor Power switch off.         Cycle Motor Power off or eset breaker.           Losse indicator cable.         Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.			<b>–</b>
Image: balance back pressure.           Restriction on one side.         Clean mix module or restrictor at mix manifold.           Fluid leak in pump packing nut area.         Worn throat seals.         Replace. See pump manual.           Pressure doesn't hold when stalled against gun in spray mode.         Leaking Recirc/Spray valve.         Repair, page 33.           Leaking gun shutoff.         Repair. See pump manual.         Repair. See gun manual.           Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.         This is normal. Component B is typ- ically higher viscosity than compo- nent A until the material is heated during recirculation.         No action required.           One gauge shows half as many pulses as the other when pumps are cycling.         Loss of pressure on downstoke.         Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.           Status indicator (red LED) not lit.         Motor Power switch off.         Cycle Motor Power off to reset breaker.           Losse indicator cable.         Losse indicator cable.         Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.	running, but pressure is generated	Unequal viscosities.	within the chemical manufacturer's specified application temperature
mix manifold.         mix manifold.           Fluid leak in pump packing nut area.         Worn throat seals.         Replace. See pump manual.           Pressure doesn't hold when stalled against gun in spray mode.         Leaking Recirc/Spray valve.         Repair, page 33.           Leaking gu shutoff.         Repair. See pump manual.         Repair. See gun manual.           Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.         This is normal. Component B is typically higher viscosity than component A until the material is heated during recirculation.         No action required.           One gauge shows half as many pulses as the other when pumps are cycling.         Loss of pressure on downstoke.         Piston valve is leaking or not closing. Clean or replace valve; see page 34.           Status indicator (red LED) not lit.         Motor Power switch off.         Cycle Motor Power off for see prease 34.           Loss indicator cable.         Loss indicator cable.         Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.			
Fluid leak in pump packing nut area.       Worn throat seals.       Replace. See pump manual.         Pressure doesn't hold when stalled against gun in spray mode.       Leaking Recirc/Spray valve.       Repair, page 33.         Leaking gu shut or intake valve in displacement pump.       Leaking gu shutoff.       Repair. See pump manual.         Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.       This is normal. Component B is typically higher viscosity than component B is typically higher viscosity than component A until the material is heated during recirculation.       No action required.         One gauge shows half as many pulses as the other when pumps are cycling.       Loss of pressure on downstoke.       Intake valve is leaking or not closing. Clean or replace valve; see page 34.         Status indicator (red LED) not lit.       Motor Power switch off.       Cycle Motor Power off or set breaker.         Loose indicator cable.       Loose indicator cable.       Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.		Restriction on one side.	
Pressure doesn't hold when stalled against gun in spray mode.       Leaking Recirc/Spray valve.       Repair, page 33.         Leaking piston valve or intake valve in displacement pump.       Repair. See pump manual.         Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.       This is normal. Component B is typically higher viscosity than component B is heated during recirculation.       No action required.         One gauge shows half as many pulses as the other when pumps are cycling.       Loss of pressure on downstoke.       Intake valve is leaking or not closing. Clean or replace valve; see page 34.         Status indicator (red LED) not lit.       Motor Power switch off.       Cycle Motor Power off to reset breaker.         Loose indicator cable.       Loose indicator cable.       Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.			Clean gun check valve screens.
against gun in spray mode.Leaking piston valve or intake valve in displacement pump.Repair. See pump manual.Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.This is normal. Component B is typ- ically higher viscosity than compo- nent A until the material is heated during recirculation.No action required.One gauge shows half as many pulses as the other when pumps are cycling.Loss of pressure on downstoke.Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Cycle Motor Power off o reset breaker.Loose indicator cable.Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.	Fluid leak in pump packing nut area.	Worn throat seals.	Replace. See pump manual.
Leaking pictor valve of intake valve in displacement pump.       Repair. See pum manual.         Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.       This is normal. Component B is typ- ically higher viscosity than compo- nent A until the material is heated during recirculation.       No action required.         One gauge shows half as many pulses as the other when pumps are cycling.       Loss of pressure on downstoke.       Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.         Status indicator (red LED) not lit.       Motor Power switch off.       Cycle Motor Power off or set breaker.         Losse indicator cable.       Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.		Leaking Recirc/Spray valve.	Repair, page 33.
Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.This is normal. Component B is typ- ically higher viscosity than compo- nent A until the material is heated during recirculation.No action required.One gauge shows half as many pulses as the other when pumps are cycling.Loss of pressure on downstoke.Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Piston valve is leaking or not clos- ing. Clean or replace valve or pack- ings; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Cycle Motor Power off o to reset breaker.Loss indicator cable.Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.	against gun in spray mode.		Repair. See pump manual.
startup of recirculation, especially in High Recirc mode.ically higher viscosity than compo- nent A until the material is heated during recirculation.Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.One gauge shows half as many pulses as the other when pumps are cycling.Loss of pressure on downstoke.Intake valve is leaking or not clos- ing. Clean or replace valve; see page 34.Loss of pressure on upstoke.Piston valve is leaking or not clos- ing. Clean or replace valve or pack- ings; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Cycle Motor Power off o to reset breaker.Loss indicator cable.Loss indicator cable.Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.		Leaking gun shutoff.	Repair. See gun manual.
pulses as the other when pumps are cycling.ing. Clean or replace valve; see page 34.Loss of pressure on upstoke.Piston valve is leaking or not clos- ing. Clean or replace valve or pack- ings; see page 34.Status indicator (red LED) not lit.Motor Power switch off.Cycle Motor Power off o to reset breaker.Loss indicator cable.Lose indicator cable.Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.	startup of recirculation, especially in	ically higher viscosity than compo- nent A until the material is heated	No action required.
Status indicator (red LED) not lit.       Motor Power switch off.       Cycle Motor Power off         Status indicator (red LED) not lit.       Motor Power switch off.       Cycle Motor Power off         Loose indicator cable.       Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.	pulses as the other when pumps	Loss of pressure on downstoke.	ing. Clean or replace valve; see
Cycle Motor Power off       Cycle Motor Power off         then on       to reset breaker.         Loose indicator cable.       Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.		Loss of pressure on upstoke.	ing. Clean or replace valve or pack-
Loose indicator cable. Loose indicator cable. Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 37.	Status indicator (red LED) not lit.	Motor Power switch off.	Cycle Motor Power off
J10 pins 1 (red) and 2 (black) on control board. See page 37.			then on to reset breaker.
Failed control board.Replace board. See page 37.		Loose indicator cable.	J10 pins 1 (red) and 2 (black) on
		Failed control board.	Replace board. See page 37.

Problem	Cause	Solution
A side rich; lack of B side.	A side gauge is low.	B side restriction downstream of gauge. Check gun check valve screen, mix module, or mix manifold restrictor.
	B side gauge is low.	B side material supply problem. Check B side inlet strainer and pump intake valve.
B side rich; lack of A side.	A side gauge is low.	A side material supply problem. Check A side inlet strainer and pump intake valve.
	B side gauge is low.	A side restriction downstream of gauge. Check gun check valve screen, mix module, or mix manifold restrictor.

3A1602J

## Repair

### **Control Board**

#### **Power Bootup Check**

**NOTE:** There is one red LED (D11) on the board. Power must be on to check. See Fig. 58 for location. Function is:

- Startup: 1 blink for 60 Hz, 2 blinks for 50 Hz.
- Motor running: LED on.
- Motor not running: LED off.
- Status code (motor not running): LED blinks status code

#### **Control Board Replacement**

**NOTE:** Check motor before replacing board. See **Electric Motor**, page 43.

- 1. See **Before Beginning Repair**, page 33. Relieve pressure, page 23.
- 2. Insert pin through cart handle and lock with lanyard.
- Carefully lay sprayer on it's side on a level surface. Rotate sprayer and rest upside down on cart handle.

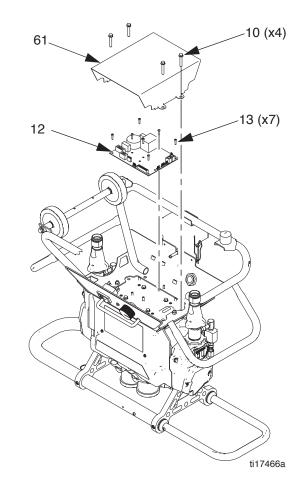
**NOTE:** Always use two people when lifting the sprayer up on to a workbench.

- 4. Remove four screws (10) and control board cover (61) to expose the control board (12).
- 5. Disconnect all cables and connectors from board.
- 6. Remove seven screws (13) and remove board.
- 7. Install new board in reverse order.

**NOTE:** Apply thermal compound between the square steel piece on the back of the board and the main aluminum plate. Order Part No. 110009 Thermal Compound.

# Table 3: Control Board Connectors (see FIG. 58)

Board		
Jack	Pin	Description
J1	n/a	Main power from breaker
J2	n/a	Function knob
JЗ	n/a	Transducer A
J4	n/a	Motor power (230 V units)
J7	1, 2	Motor thermal overload signal
J8	n/a	Transducer B
J9	n/a	Fan
J10	1, 2	Status Indicator
	3, 4	Not used
	5, 6	Cycle switch signal
	7, 8	Jumpered
	9, 10	Jumpered
J11	n/a	Motor power (120 V)

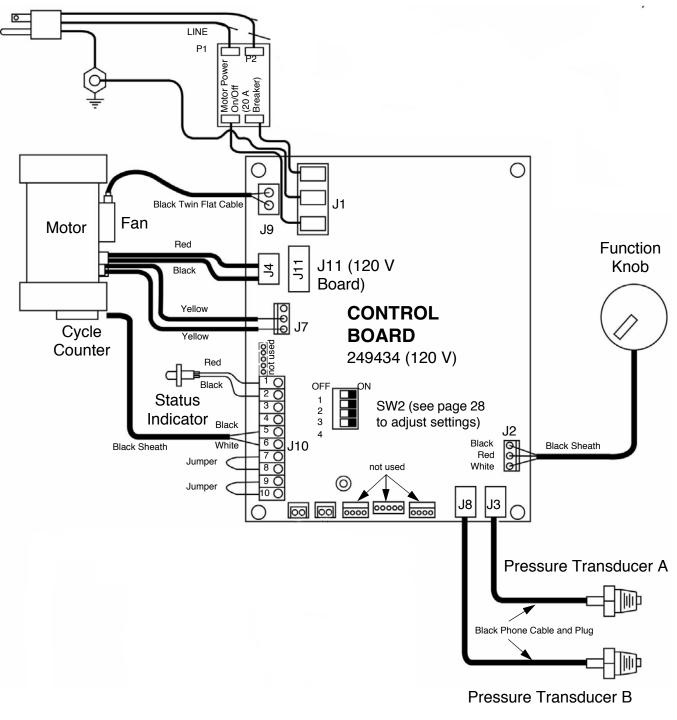


#### FIG. 57: Control Board Removal

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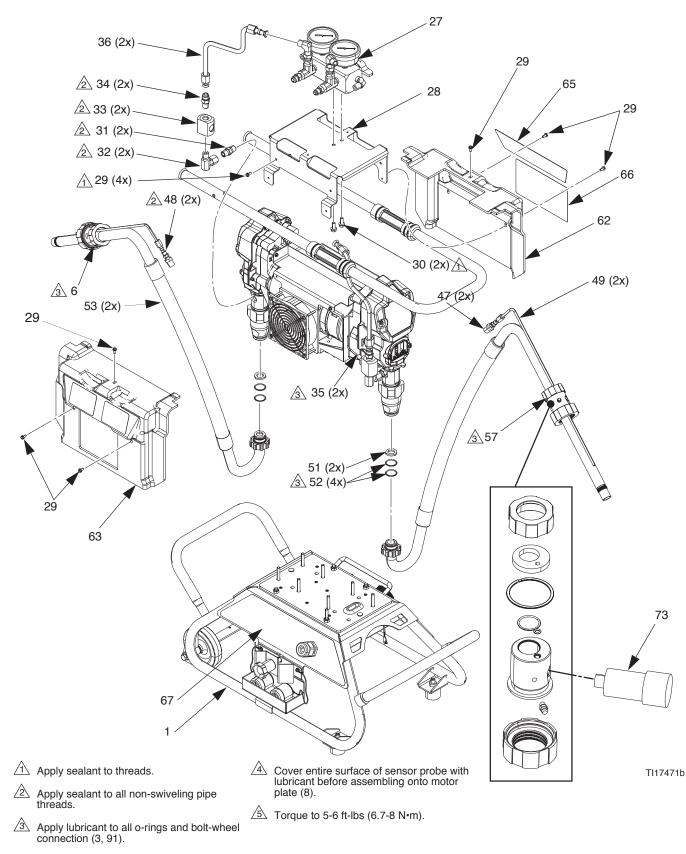
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# Repair



#### FIG. 58: Control Module Wiring Connections

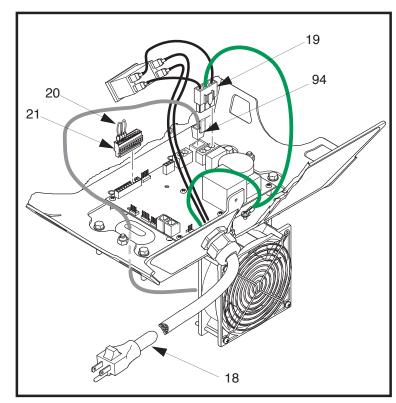
## Parts

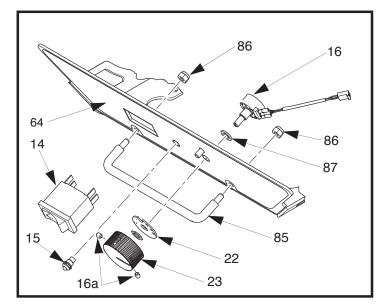


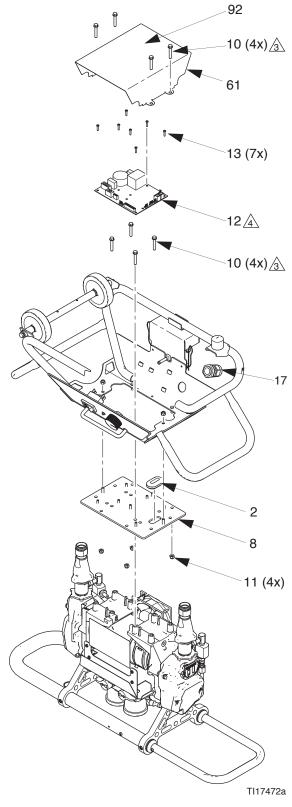
### 259082, 25A836 (120V) and 259083 (240V), Bare Proportioner

# Parts

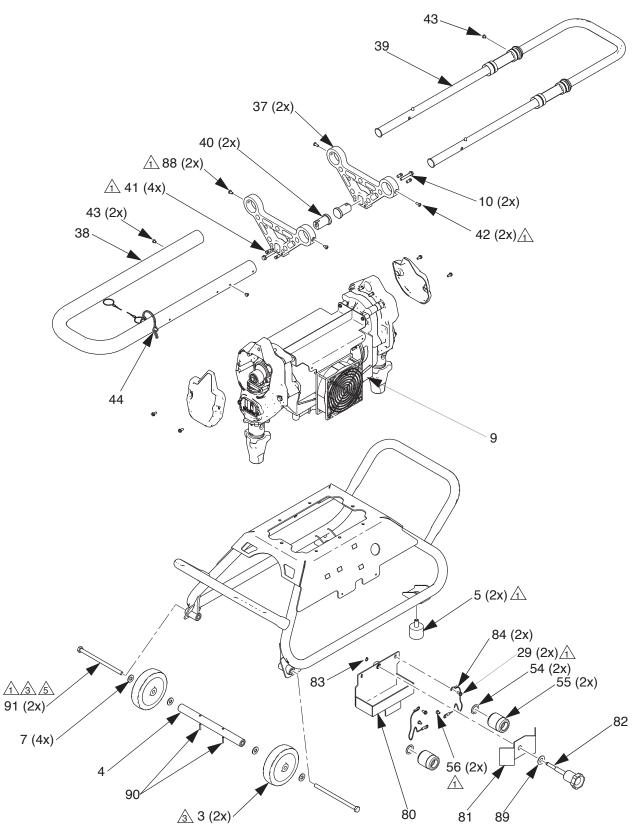
259082, 25A836 (120V) and 259083 (240V), Bare Proportioner (continued)











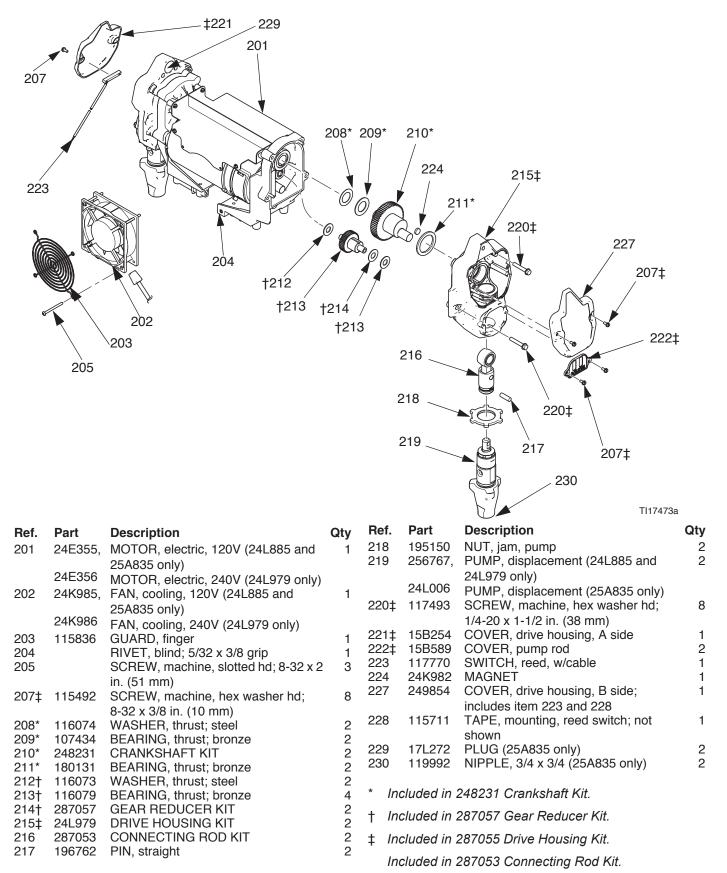
259082, 25A836 (120V) and 259083 (240V), Bare Proportioner (continued)

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## Parts

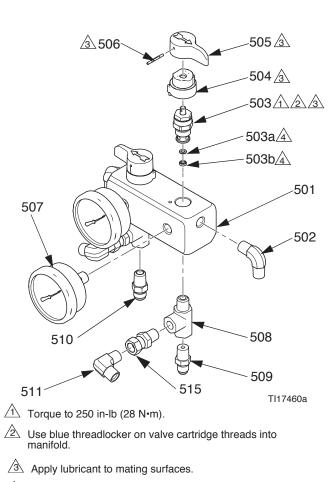
### 259082, 25A836 (120V) and 259083 (240V), Bare Proportioner (continued)

			Qty			Qty
Ref.	Part	Description		f. Part	Description	
1	24J139	CART	146	249630	HOSE, component B (resin), 1/4 in.	1
2	16H888	GROMMET, 7/8 in. ID	1		(6 mm) ID; thermoplastic hose; 1/4	
3	16F820	WHEEL, caster	2		npsm(f) x 48 in. (1219 mm)	
4	16H352	SPACER, axle	147	100030	BUSHING	2
5	121573	BUMPER, urethane, 3/8-16,	248	125212	FITTING, -3 JIC x 1/8 npt(m)	2
		80-90 dur	49	16H615	TUBE, recirculation	2
6	24J766	ADAPTER, spout, pour, 40 mm	151	115099	WASHER, garden hose	2
		assembly, B; see page 54	52	117559	O-RING	4
7	120454	WASHER, flat	453	246010	HOSE, suction	2 2 2
8	16G939	PLATE, motor mount	154	113575	O-RING	2
9	24L885,	PROPORTIONER, 120V	155 56	15W249 112144	CAP, tube, suction SCREW, mach, pan hd	2
	24L979,	PROPORTIONER, 240V	57	24J155	ADAPTER, spout, pour, 40 mm	1
	25A835	PROPORTIONER, 120V		240100	assembly, A; see page 54	'
10	117493	SCREW, mach, hex washer hd	10 658	103473	STRAP, TIE, WIRE	4
11	102040	NUT, lock, hex	161	24J141	COVER, electronics	1
12	249434,	BOARD, circuit 120V	62	24J151	COVER, shroud, front	1
10	249432	BOARD, circuit 240V	763	24J152	COVER, shroud, back	1
13	107156	SCREW, mach, pan hd	164	16J414	LABEL, control	1
14	24K983	SWITCH, rocker, w/breaker, 240V,	65	16H202	LABEL, branding	1
15	110020	20A	<b>₁</b> 66	16J415	LABEL, quick start	1
15 16	119930 24L002	DIODE ,light-emitting POTENTIOMETER, adjustment,	¦67	16H569	LABEL, warning	1
10	24002		'73	24K984	DRYER, desiccant, mini in-line	2
17	119897	pressure FITTING, bulkhead, cablE, 0.250	180	16H809	TRAY, containment	1
18	24K995,		181	16H810	BRACKET, containment	1
10	15G220	CORD SET, power, 240V	<sup>1</sup> 82	16H811	KNOB, containment	1
19	15G230	CABLE, harness, power	84 1 or	125321	CABLE, sst lanyard, 10 in.	2
20	15C866	WIRE, jumper	1 <sub>85</sub> 2 <sub>86</sub>	16H543	HANDLE, pull	1
21	116773	CONNECTOR, plug, 3.81 mm (10	1 <sub>87</sub>	121114 261841	NUT, hex, self locking	2 1
		position)	88	104859	WASHER, flat SCREW, tapping pan hd	2
22	15G053	PLATE, detent, display	189	111743	WASHER, flat	1
23	24L001	KNOB, control	190	112154	PIN, straight, slotted	2
27	24J147	MANIFOLD, recirculation	191	15M314	SCREW, cap	2
28	24J140	BRACKET, recirculation manifold	192	189930	LABEL, caution	1
29	115492	SCREW ,mach, slot hex wash hd	1293	16H902,	TAG, informational 120V; not shown	1
30	108296	SCREW, mach, hex wash hd	2	16M900	TAG, informational 240V; not shown	
31	156971	NIPPLE, short	2 <sub>94</sub> 2 <sub>95</sub>	15G458	CABLE, fan	1
32	155541	SWIVEL, 90°	<u>_</u> 95	16H984	CAP, adapting cap, 38 mm	1
33 34	15G292 116704	MANIFOLD, pressure transducer ADAPTER, #6 JIC x 1/4 npt	2 <sub>96</sub> 2	242001	CORD SET, adapter, Europe	1
35	24K999	TRANSDUCER, pressure, control			(240V); not shown	
36	16H530	TUBE, fluid	2 <sub>97</sub> 2	242005	CORD SET, adapter, Australia	1
37	16G943	BRACKET, lift handle	2		(240V); not shown	
38	16G945	TUBE, lift handle, fixed	1			
39	24J244	HANDLE, lift, sliding		•	Danger and Warning labels, tags, and	
40	16H546	PIN, mounting, lift handle	2	cards are avail	able at no cost.	
41	16H547	PIN, alignment, lift handle	4	Only used with	proportioner 259082.	
42	110037	SCREW, mach, pnh	2	•		
43 44	109032 24J154	SCREW, mach, pnh PIN, W/LANYARD	3 1	-	proportioner 259083.	
45	249629	HOSE, component A; 1/4 in. (6 mm)	1	Only used with	proportioner 25A836.	
		ID; thermoplastic hose with moisture				
		guard; 1/4 npsm(f) x 48 in. (1219				
		mm)				
		•				



### **Recirculation Manifold, 24J147**

### **Parts**



$\overline{A}$	Part	of	item	503
	гaн	UI.	nem	505.

Ref.	Part	Description	Qty
501	24K993	MANIFOLD, recirculation	1
502	111763	ELBOW; 1/4 npt (mbe)	4
503	239914	VALVE, recirc/spray; includes	2
		items 503a, 503b	
503a	15E022	SEAT	1
503b	111699	. GASKET	1
504	224807	BASE, valve	2
505	187625	HANDLE, valve, drain	2
506	111600	PIN, grooved	2
507	113641	GAUGE, pressure, fluid	2
508	116504	TEE; 1/4 npt(m) x 1/4 npt(f) run;	2
		1/4 npt(f) branch	
509	119998	ADAPTER; 5/16 JIC x 1/4	1
		npt(m)	
510	116704	ADAPTER; 3/8 JIC x 1/4 npt(m)	1
511	556765	ELBOW, tube; 1/4 npt(m) x 3/8	2
		in. (10 mm) OD tube	
515	156823	UNION, swivel; 1/4-18 npt	2

3A1602J

## Suggested Spare Replacement Parts

249855 246010 24M115 24M114	Description DRYER, desiccant STRAINER, pump inlet SWITCH, motor power, with circuit breaker GAUGE, pressure, fluid; sst VALVE, recirc/spray; includes seat and gasket POTENTIOMETER, control knob BOARD, control; 120 V units only BOARD, control; 240 V units only BOARD, control; 240 V units only TRANSDUCER, pressure PUMP, displacement; fits either side REPAIR KIT, displacement pump; includes seals, balls, bearings, intake valve seat) SUCTION HOSE, pump to 5 gallon pail ADAPTER, spout, pour, assembly A; 40 mm ADAPTER, spout, pour, assembly B; 40 mm ADAPTER, spout, pour, assembly A: 38 mm
24M114 24M052 24M053	

## Unheated Hoses with Scuff Guard, 2000 psi (138 bar, 13.8 MPa)

24R823 HOSE BUNDLE, 1/4 in. (6.4 mm), 35 ft (10 m), no air hose, uninsulated 249633 HOSE BUNDLE, 1/4 in. (6.4 mm), 35 ft

- (10 m), air, uninsulated
- 24R137 HOSE BUNDLE, 3/8 in. (9.5 mm), 50 ft (15 m), no air hose, uninsulated
- 24M653 HOSE BUNDLE, 3/8 in. (9.5 mm), 50 ft (15 m), air, insulated

## Accessories

### **Fusion Air Purge Gun**

Air purge gun, available in round or flat patterns. See manual 309550.

### Fusion ClearShot<sup>™</sup>

Air purge gun with ClearShot Liquid Technology, available in round or flat patterns. See manual 312666.

### Probler<sup>®</sup> P2

Air purge gun, available in round or flat patterns. See manual 313213.

### Manual 2K Gun

Manually opened and closed, two-component gun. See manual 332198.

#### Pail Heater, 16U623

Flexible band heaters for 5 gallon pails.

#### **Recirculation Hose Kit, 24M654**

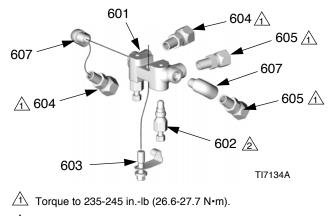
3/8 in. (9.5 mm), 50 ft. (15 m)

Ref.	Part	Description	Qty
550	24M939	HOSE, non-heated, insulated, recir-	1
		culation, quad, 2000 psi (14 MPa,	
		138 bar), 3/8 in. (9.5 mm), 50 ft.	
		(15 m)	
551	111697	ADAPTER, #5 JIC x 1/4 NPT	1
		PLUG, pipe	2
553	249523	MANIFOLD, gun, assembly, 4-hose	1

#### **Recirculation Gun Manifold Kit, 249523**

Only compatible with Fusion Air Purge Gun.

Ref.	Part	Description	Qty
601		MANIFOLD	1
602	246356	VALVE, fluid	2
603	15B221	BOLT; 5/16-24	1
604	117634	SWIVEL, B side; 1/8 npt(m) x # 6	2
		JIC(f)	
605	117635	SWIVEL, A side, 1/8 npt(m) x #5	2
		JIC(f)	
606	15B993	SPRÍNG, ring, lock	1
607	112307	ELBOW, street; 1/8 npt (m x f);	2
		round and flat pattern guns only	



Torque to 32-40 ft-lb (43-54 N•m).

3A1602J

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Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Original instructions. This manual contains English. MM 3A1602

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