

# Complete Pressurized Bead System for LineLazer IV 200HS and LineLazer IV 250SPS

332230J

EN

- For professional use only -

## Models:

16R955 1-Gun LL200HS

16R962 1-Gun LL250

16R960 2-Gun LL200HS

16R961 2-Gun LL250

80 psi (.55 MPa, 5.5 bar) Maximum Working Pressure



## Important Safety Instructions

Read all warnings and instructions in the striper manual.

Be familiar with the controls and the proper usage of the equipment.

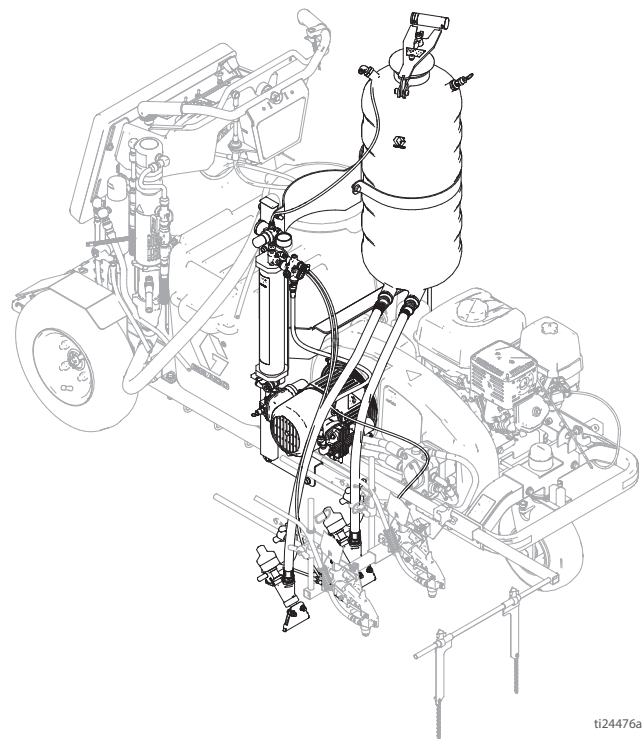
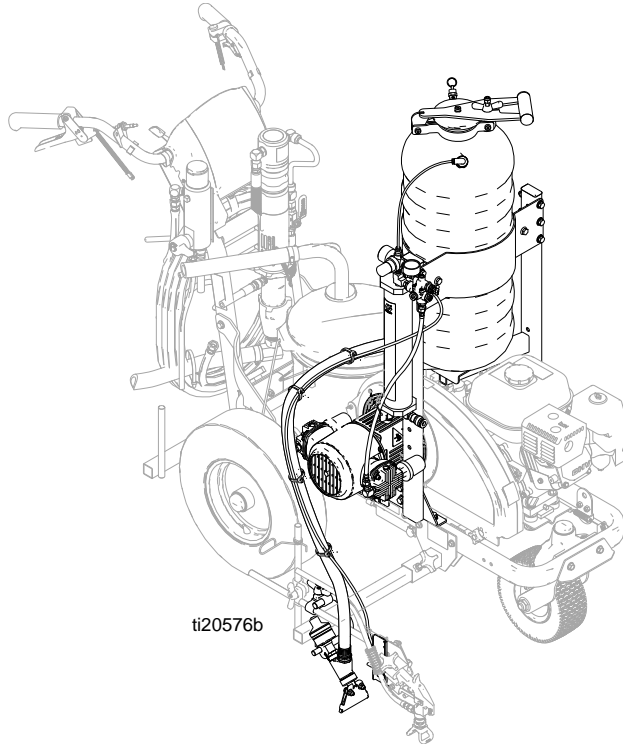
Save these instructions.

## Related Manual

Bead Gun Kit 332226




200HS Repair 311021

250DC Repair 334053












# Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <b>WARNING</b>	
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment only in well ventilated area.</li> <li>• Do not fill fuel tank while engine is running or hot; shut off engine and let it cool. Fuel is flammable and can ignite or explode if spilled on hot surface.</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic or conductive.</li> <li>• <b>Stop operation immediately</b> if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.</li> <li>• Do not leave the work area while equipment is energized or under pressure.</li> <li>• Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>• Make sure all equipment is rated and approved for the environment in which you are using it.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> <li>• Do not carry passengers.</li> <li>• Check work area for reduced overhead clearance (e.g. doorways, tree branches, parking ramp ceilings) and avoid contacting them.</li> </ul>

# ! WARNING

  	<p><b>INJECTION HAZARD</b> High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not spray without tip guard and trigger guard installed.</li> <li>• Engage trigger lock when not spraying.</li> <li>• Do not point gun at anyone or at any part of the body.</li> <li>• Do not put your hand over the spray tip.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow the <b>Pressure Relief Procedure</b> when you stop spraying and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses and couplings daily. Replace worn or damaged parts immediately.</li> </ul>
 	<p><b>ENTANGLEMENT HAZARD</b> Rotating parts can cause serious injury.</p> <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Do not wear loose clothing, jewelry or long hair while operating equipment.</li> <li>• Equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> and disconnect all power sources.</li> </ul>
 	<p><b>MOVING PARTS HAZARD</b> Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> and disconnect all power sources.</li> </ul>
	<p><b>BURN HAZARD</b> Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> <li>• Do not touch hot fluid or equipment.</li> </ul>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b> Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Protective eye wear, and hearing protection.</li> <li>• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.</li> </ul>
<p><b>CALIFORNIA PROPOSITION 65</b> The engine exhaust from this product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.</p>	

## NOTICE

Never store glass beads in tank between jobs. Begin the day with moisture-free beads. Moisture will cause glass beads to resist flow or solidify over time.

If moisture or condensation is present on tank interior, leave lid open until dry. When operating without the bead system, always leave the moisture drain valve open.

*Tools Needed:*

## **CE Safety Checklist**

**(To be completed during non-factory installation)**

- Covers and shrouds for moving parts are in place (see guard installation section).
- Fasteners, belts, covers, grills, and compressor are tight-mounted securely.
- Read and understand all warnings and instructions in this manual and the striper manual.

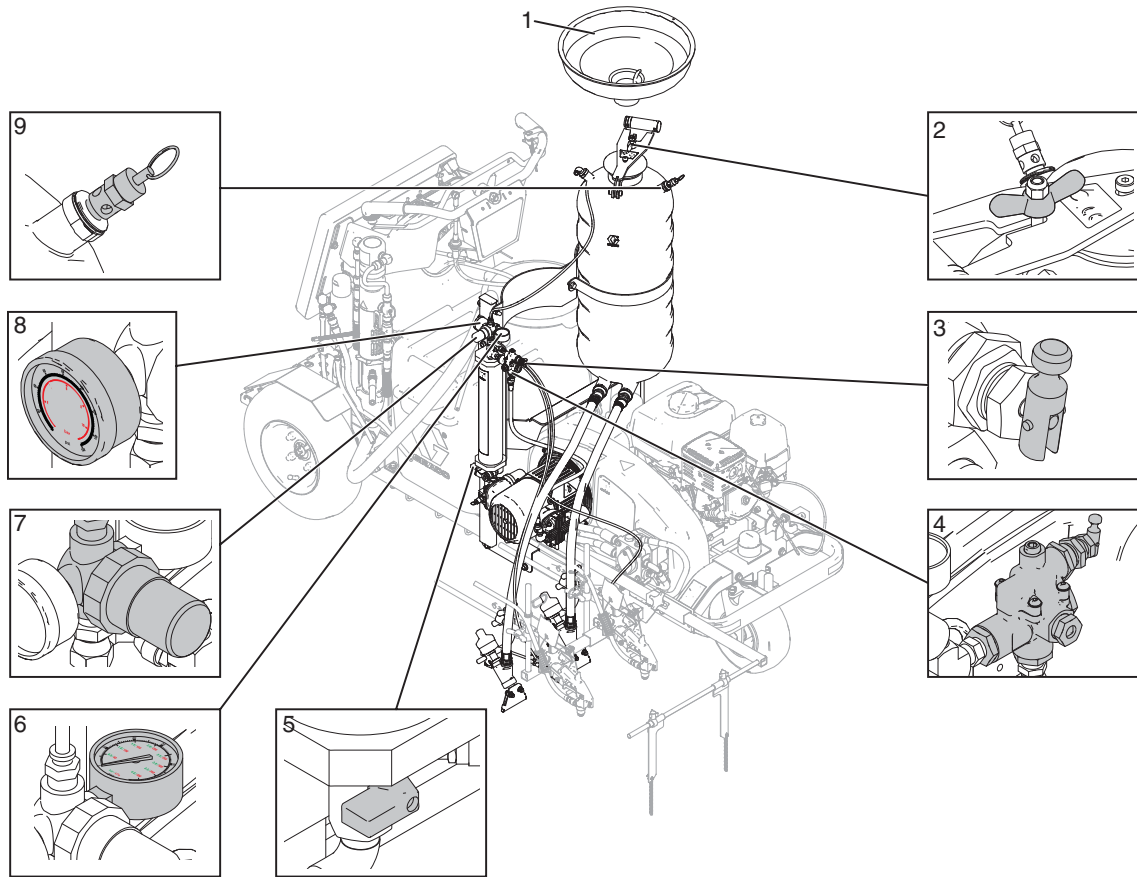
## **Tools Needed:**

- 1/8 in. Allen Wrench (supplied with kit)
- Alignment tool 17C504 (supplied with kit)
- 5/32 in. Allen Wrench
- 1/4 in. Allen Wrench
- 3/16 in. Allen Wrench
- 7/16 in. Wrench
- 3/8 in. Wrench
- 1/2 in. Wrench
- 5/8 in. Wrench
- 9/16 in. Wrench
- 11/16 in. Wrench
- T-20 Torx Bit
- Cutting Blade
- Rubber Mallet
- Phillips Screwdriver
- Straight Edge



# Operation for LL200 and LL250

## Component Identification



ti24477a

Ref.	Description
1	Funnel
2	Wing Nut
3	Compressor Bypass Switch
4	Regulator Unloader

Ref.	Description
5	Pressure Relief Valve
6	Bead Tank Gauge
7	Pressure Regulator Valve
8	Air Tank Gauge
9	Safety Relief Valve

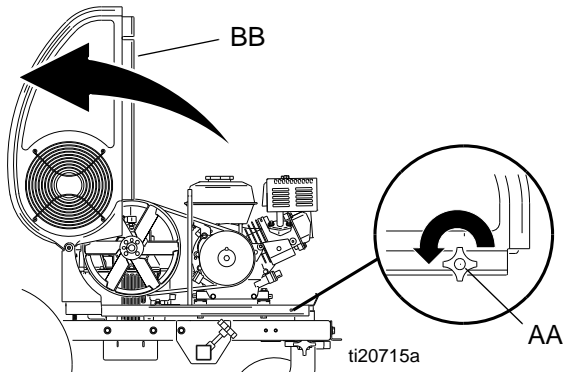
# 200HS Pressurized Bead System Kit 16R955

## Assemble Compressor Mounting and Drive Components

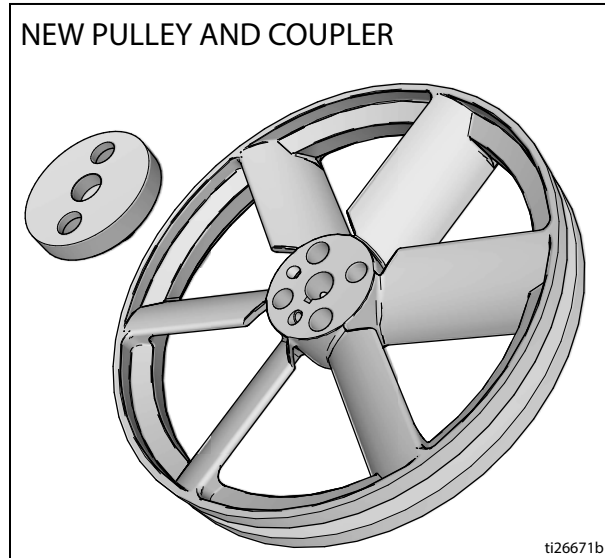
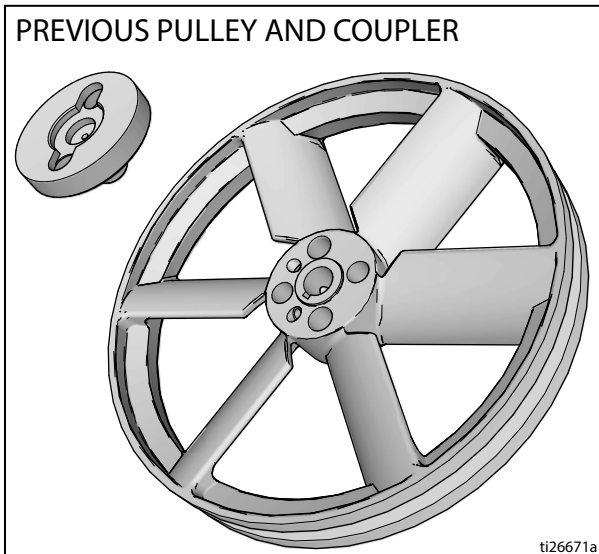


**NOTE:** Glass bead system and paint guns can be mounted on either side of sprayer.

1. Turn off unit. Relieve pressure in paint striper and remove hopper.
2. Locate belt shroud. Loosen knob (AA) and rotate shroud (BB).



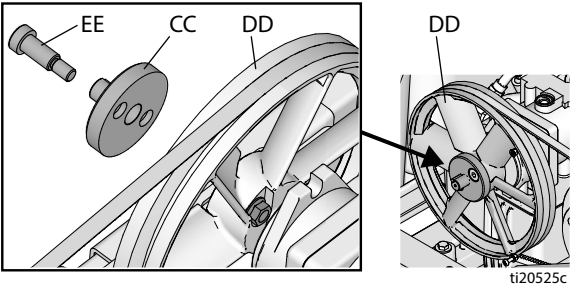
Some units may require that the pulley be replaced. The older pulley and correct pulley is shown in the figures.



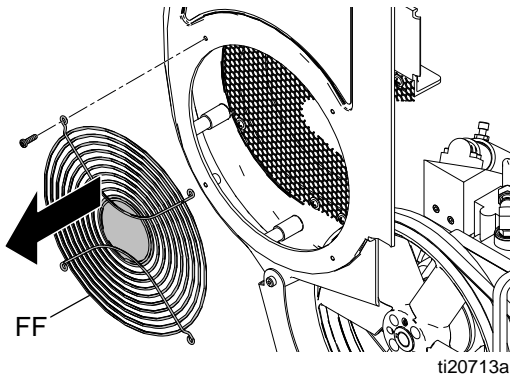
If your unit has the correct pulley installed with the proper spacing as noted in the following steps you can skip the pulley installation procedure.

See Ground Drive Belt Replacement in repair manual for additional instructions and belt tension recommendations.

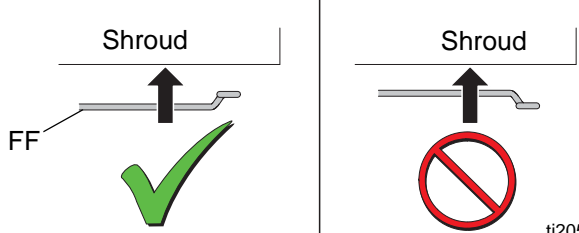
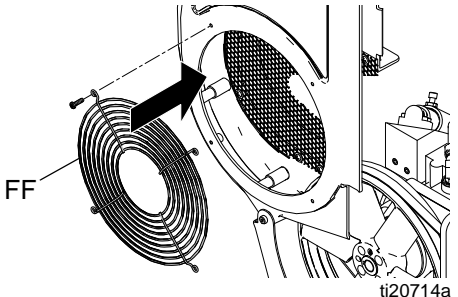
- a. Remove old pulley from unit by loosening the set screws.
  - b. File any rough spots that are on the pump shaft key.
  - c. Slide new pulley on to the pump shaft. Pump shaft should extend 0.125–0.225 beyond the face of the pulley. The pump shaft is the pilot for the coupler adapter.
  - d. Install belt on pulley. Maintain belt alignment to inner groove of the clutch pulley.
  - e. Torque pulley set screws to 58 to 62 in-lb (6.6 to 7 N•m).
3. With belt guard off, install mounting plate coupler (CC) onto pulley (DD) with two shoulder screws (EE) and serrated nuts. Position slot on back of pulley up and move serrated nut with finger to accept shoulder bolt threads. Tighten shoulder bolt by hand until the teeth on the serrated nut catch the aluminum on the fan. Torque to 16 to 18 ft-lb (21 to 24 N•m).



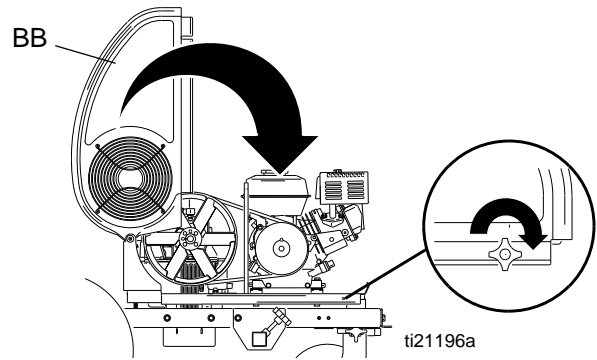
4. Use star bit (supplied) to remove four screws from shroud. Remove original fan grill.



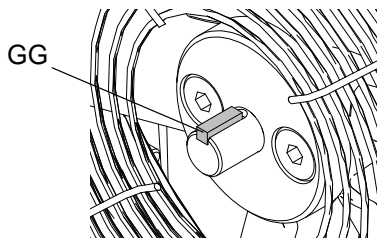
5. Use existing hardware to install new open-centered fan grill (FF). Do not over-tighten. Make sure fan protrudes out, not into the unit. Discard or store old close-centered fan grill.



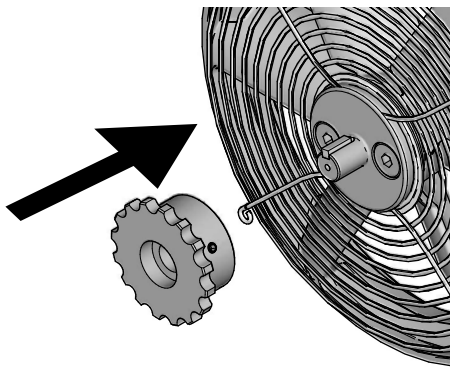
6. Close belt shroud (BB) with new fan grill onto unit. **NOTE:** You may need to flex shroud around extended shaft on the fan pulley.



7. Place key (GG) in keyway opening. Tap into place so that face of key sits recessed slightly from face of hub.

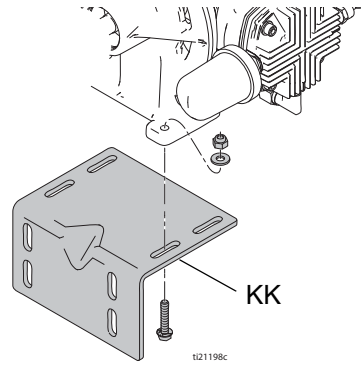


8. Push chain coupler against the shoulder on the mounting plate coupler.

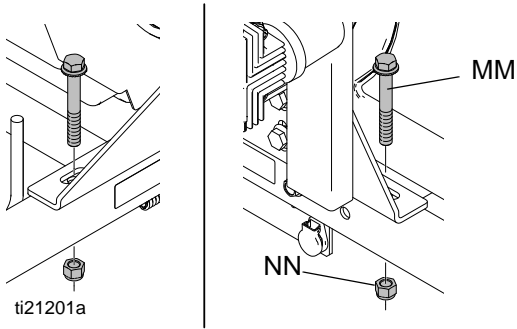


9. Use 1/8 in. Allen wrench to secure coupler set screw. Torque to 58-62 in-lb (6.6-7.0 N•m).

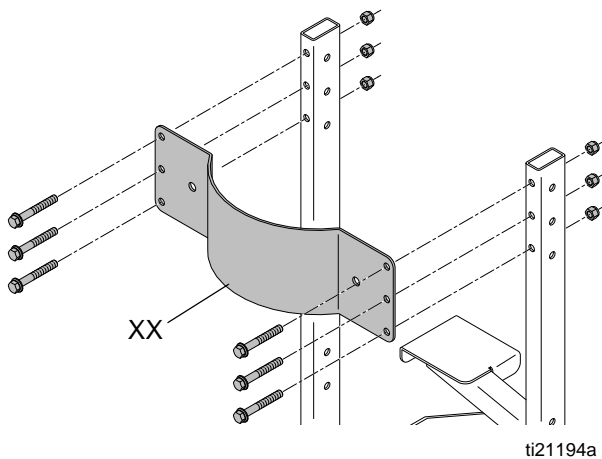
10. Use hardware (shown below) to mount compressor to compressor bracket (KK). Make certain that the square of the carriage bolt heads are seated in the compressor bracket slots.



11. Snug all four nuts down then back the nuts off 1/4 turn. Bracket KK should slide in the slots with some effort.
12. Loosely install two screws (MM) and two locknuts (NN) through bottom of frame mount but do not tighten. Remove existing gun arm bracket to gain access to nut (NN). **NOTE:** See "Compressor Alignment (200HS)" on page 8.



13. Assemble hopper basket (XX) and base with hardware as shown below. Use 9/16 in. wrench to snug screws. Loosen all six screws 1/4 turn.

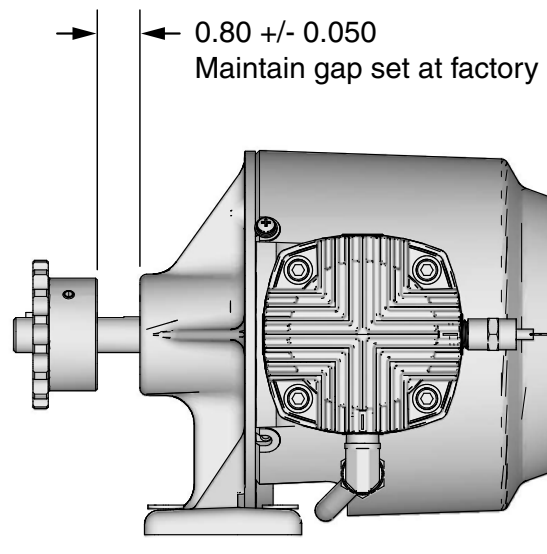
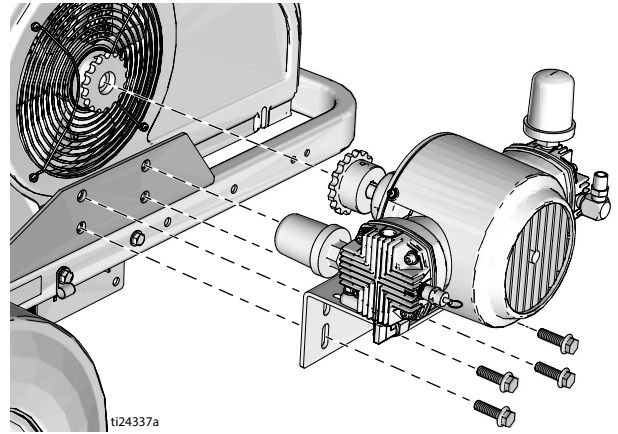


## Compressor Alignment (200HS)

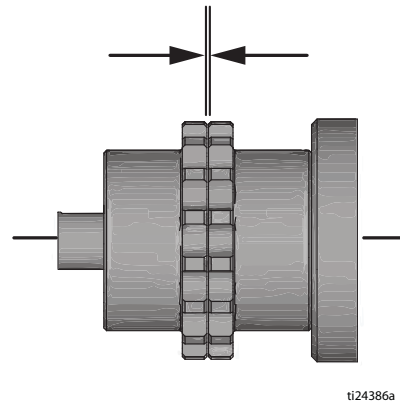


### Install Compressor Assembly

1. Position compressor (RR) and bracket assembly (SS) on frame. Install four screws (VV), snug all four screws down then back the screws off 1/4 turn.



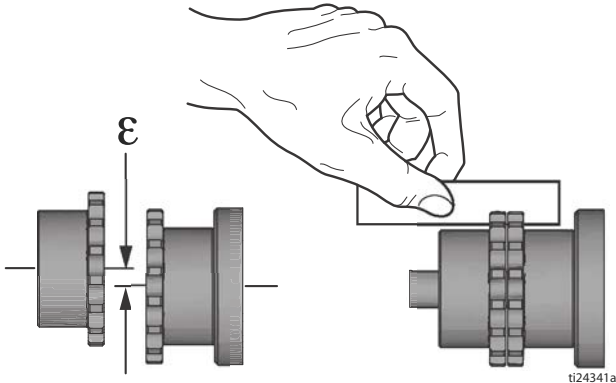
2. Move compressor and mounting bracket up to the chain coupler on the mounting plate so that the two sprockets contact each other.



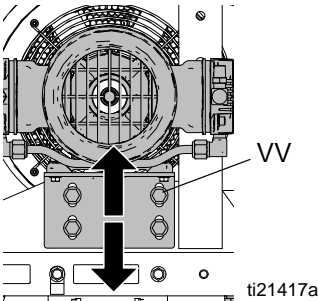
3. Move compressor assembly up or down (vertical) and left or right (horizontal) until the compressor is aligned with the hydraulic pump.

**Vertical Adjustment**

1. Place a straight edge at the bottom of corresponding teeth of the two sprockets and raise or lower the compressor to adjust until the offset misalignment is minimized (use a straightedge for accurate alignment). Repeat this at both the top and bottom of the sprockets. The allowable offset misalignment is 0.005 to 0.010.

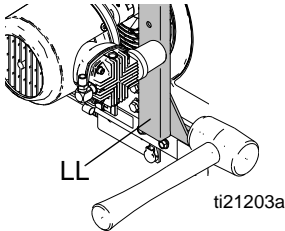


2. Use 9/16 in. wrench to tighten compressor bracket screws (VV).

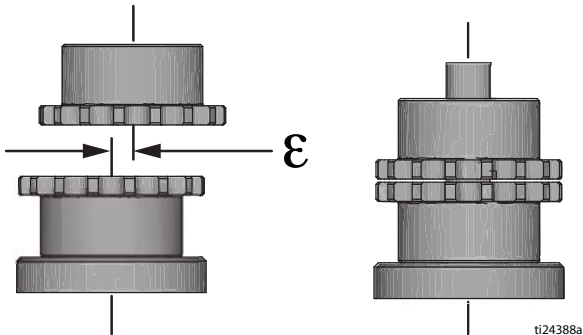


**Horizontal Adjustment**

1. Tap vertical frame mount with rubber mallet to the left or right.

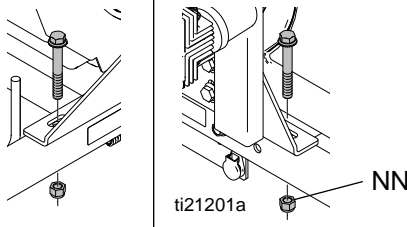


2. Adjust the horizontal misalignment until the sides of the two hubs are even with each other and the sprocket teeth are in alignment.

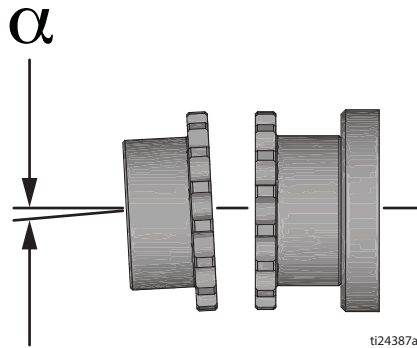


3. Use 9/16 in. wrench to tighten two nuts (NN) to hold vertical frame mount to 200HS frame.

**Angular Adjustment**

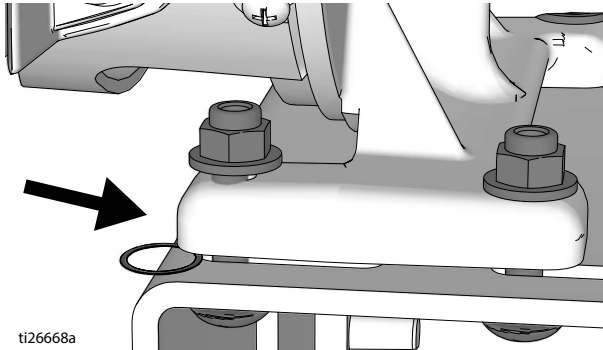


If the two sprocket faces are in full contact, the angular adjustment is good. Go to "Coupler Spacing" on page 10.

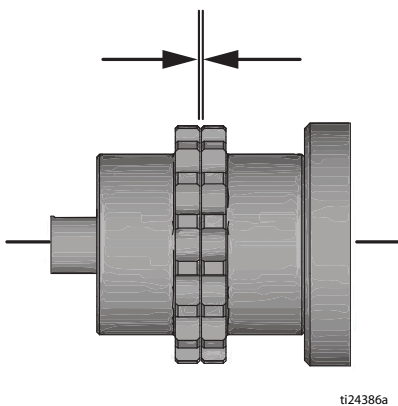




1. Loosen the four compressor mounting bolts enough to slide the shims provided between the compressor and mounting bracket.



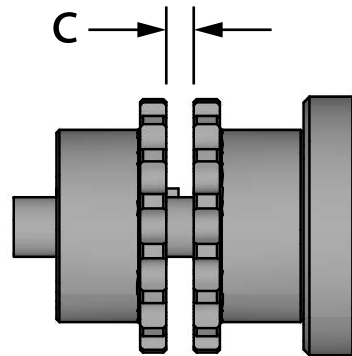
2. Install shims until the two sprocket faces are in full contact.



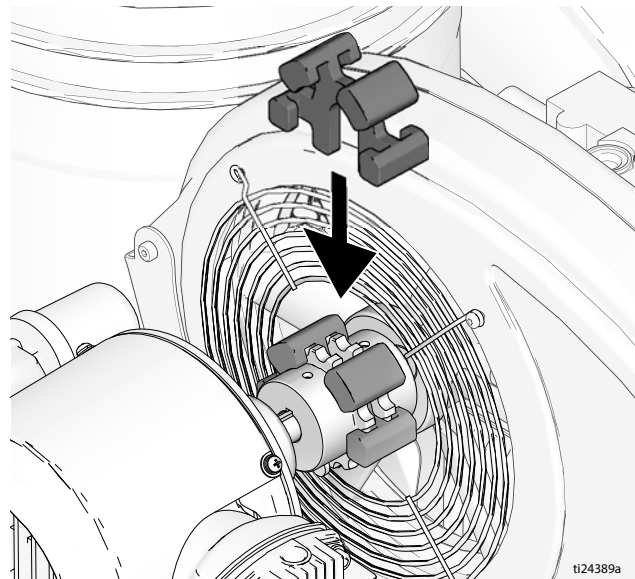
3. Note the location and number of shims placed under the compressor.
4. Remove the compressor and bracket assembly. Separate compressor from mounting bracket.
5. Assemble compressor to mounting bracket. Install the shims on the carriage bolts between the compressor and mounting bracket at the locations noted in Step 3.
6. Repeat "Compressor Alignment (200HS)" on page 8. Check Angular Adjustment and repeat adjustment as necessary until proper alignment is achieved.
7. After the sprocket faces make full contact, use 9/16 in. wrenches to tighten all eight screws.

## Coupler Spacing

1. Slide compressor assembly away from the mounting plate coupler leaving a (C) 9/32" (6.35mm) space between the sprockets.



2. Use spacer alignment tool (17C504) to set the sprocket spacing. Slide tool between the sprockets. The sprocket teeth of both sprockets should sit flush in the inner pockets of the tool.
3. With alignment tool holding sprockets in alignment, tighten four compressor to mounting bracket nuts.



4. After tightening compressor to mounting bracket nuts verify that the 9/32" space between the two sprockets has not changed. Alignment tool (17C504) should slide in and out of the gap between the sprockets with little resistance.
5. If the spacing has changed repeat **Compressor Alignment (200HS)** procedure.
6. Properly tighten all screws and nuts.
7. Wrap chain around both sprockets. Install connecting pin and spring clip.

**NOTICE**

Broken hydraulic pump or compressor shafts may result, if not aligned properly. Always verify compressor alignment whenever a compressor is installed or the belt is tightened or replaced.

8. Install coupler guard using three pan head screws with flatwashers and lockwashers.

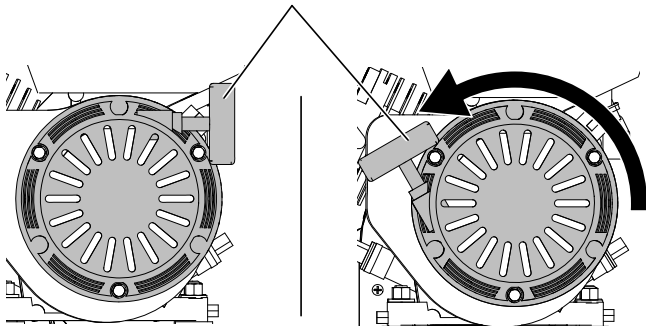
### Chain Coupler Maintenance

Periodic chain coupler lubrication is necessary to ensure proper operation of your striper regularly once a month.

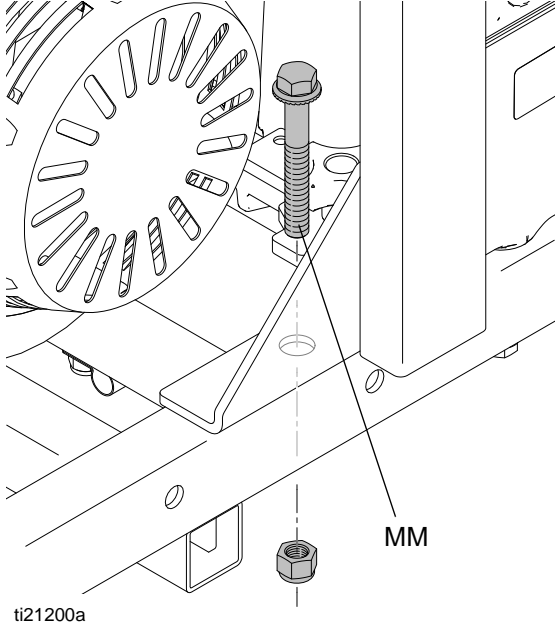
1. Remove three pan head screws with flatwashers and lockwashers from chain coupler guard.
2. Remove chain coupler guard.
3. Lubricate coupler chain with Justice Brothers heavy duty chain lube or equivalent (NLGI grade 1 or 2 grease).
4. Install coupler guard using three pan head screws with flatwashers and lockwashers.

### Complete Frame Assembly

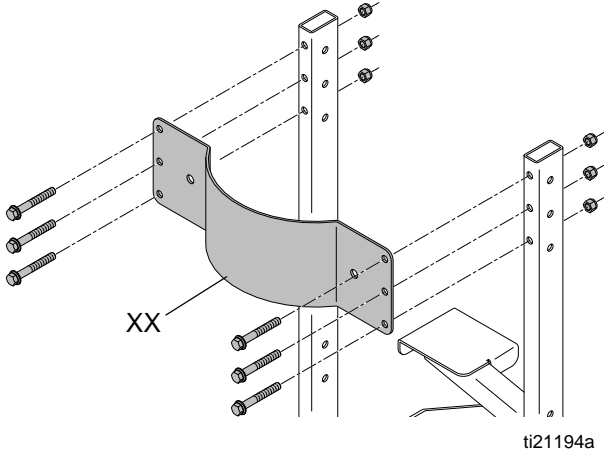
**NOTE:** If desired, rotate recoil 90° counter-clockwise.



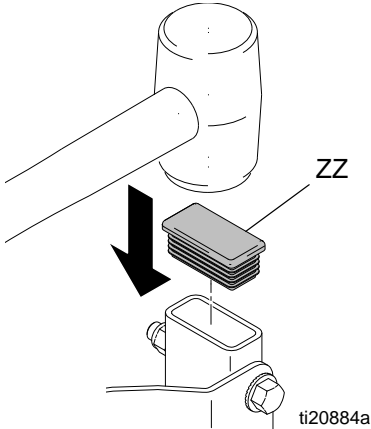
1. Use 9/16 wrench to tighten bottom screws (MM) to hardware shown.



2. Use 9/16 in. wrench to tighten hopper basket (XX) and base bolts.



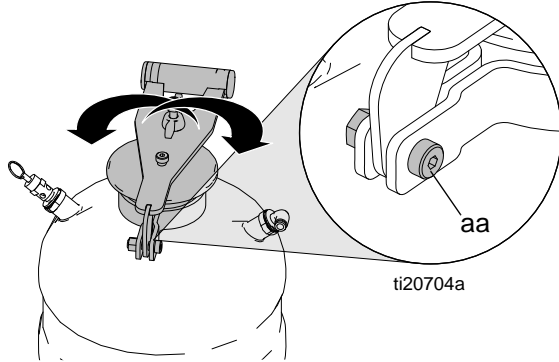
3. Install plastic end caps (ZZ) into frame. Use rubber mallet to pound end caps into place.



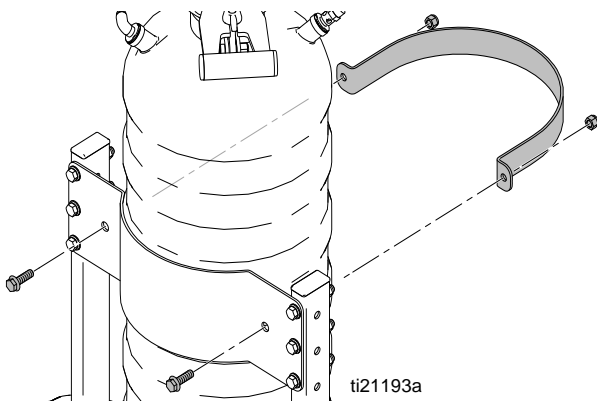
## Bead Tank Mounting

1. Place bead tank on supporting base with outlet fittings facing compressor.

**NOTE:** Position handle to best suit filling needs. Loosen bolt (aa) to help swivel, then retighten.



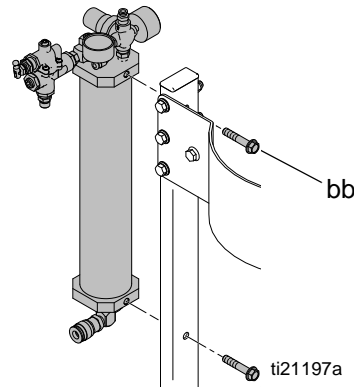
2. Place clamping band around tank and secure with mounting hardware shown below. Tighten until there is no movement between clamp and bead tank.



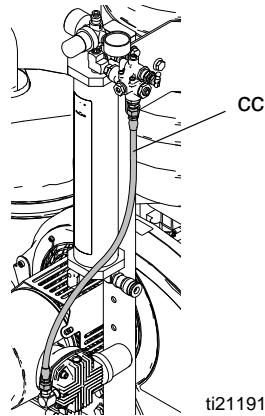
**NOTE:** The flats on the clamp are not intended to touch the hopper bracket when tightened.

## Air Tank Mounting

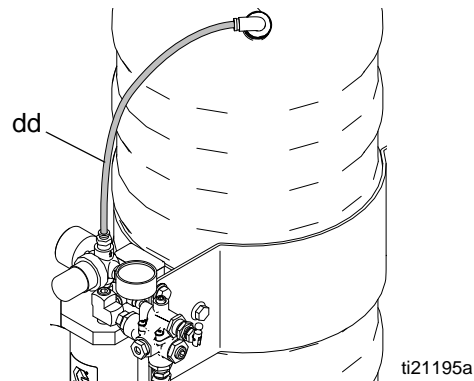
1. Install air tank to frame mount as shown below and use 9/16 in. wrench to tighten two screws (bb).



2. Use 11/16 in. wrench to attach braided hose (cc) from air tank to compressor.



3. Install 36 in. nylon air line (dd) from top of regulator to swivel fitting on top of bead hopper. Cut air line to desired length. Push air line into fitting until end touches bottom of fitting.





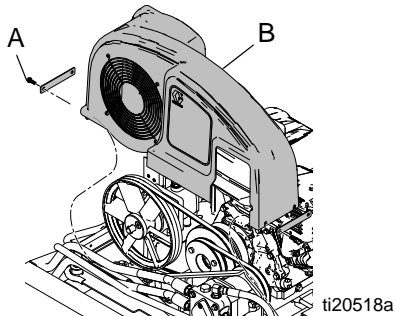
# LL250 Pressurized Bead System Kit 16R962

## Assemble Compressor Mounting and Drive Components

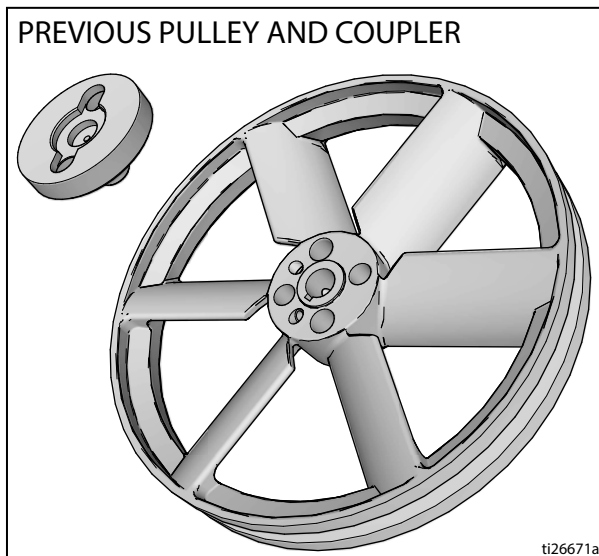


**NOTE:** Glass bead system and paint guns can be mounted on either side of sprayer.

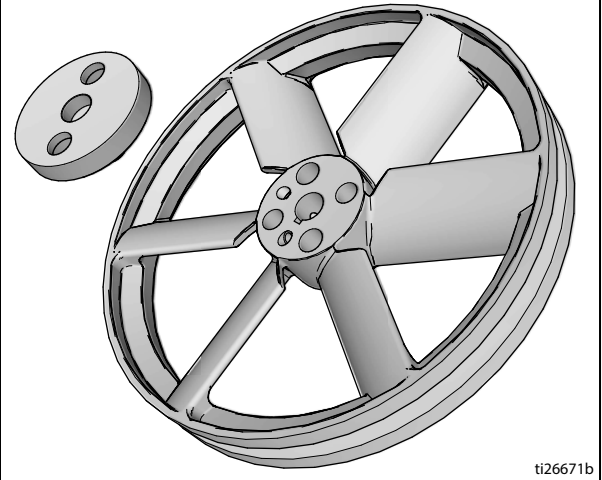
1. Turn off unit. Relieve pressure in paint striper and remove hopper.
2. Locate belt shroud. Loosen four screws (A) and remove shroud (B).



Some units may require that the pulley be replaced. The older pulley and correct pulley is shown in the figures.

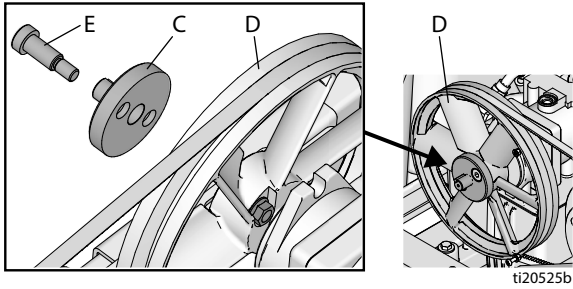


### NEW PULLEY AND COUPLER

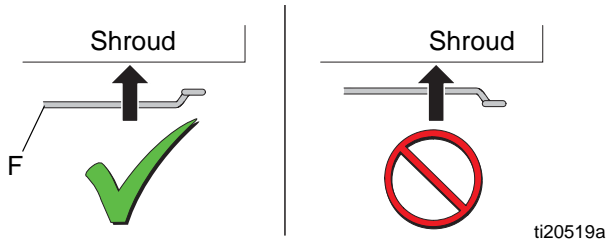


If your unit has the correct pulley installed with the proper spacing as noted in the following steps you can skip the pulley installation procedure.

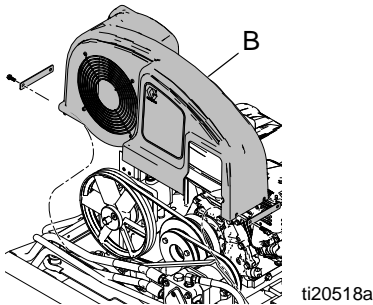
- a. Remove old pulley from unit by loosening the set screws.
  - b. File any rough spots that are on the pump shaft key.
  - c. Slide new pulley on to the pump shaft. Pump shaft should extend 0.125–0.225 beyond the face of the pulley. The pump shaft is the pilot for the coupler adapter.
  - d. Install belt on pulley. Maintain belt alignment to inner groove of the clutch pulley.
  - e. Torque pulley set screws to 58 to 62 in-lb (6.6 to 7 N•m).
3. With belt guard off, install mounting plate coupler (C) onto pulley (D) with two shoulder screws (E) and serrated nuts. Position slot on back of pulley up and move serrated nut with finger to accept shoulder bolt threads. Tighten shoulder bolt by hand until the teeth on the serrated nut catch the aluminum on the fan. Torque shoulder bolt to 16 to 18 ft-lb (21 to 24 N•m) to secure mounting plate coupler.



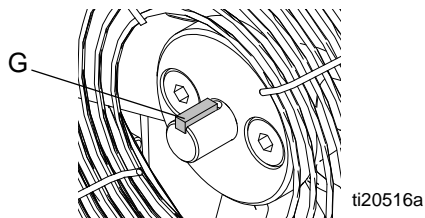
4. Use existing hardware to install new open-centered fan grill (F). Make sure fan protrudes out, not into the unit. Discard or store old close-centered fan grill.



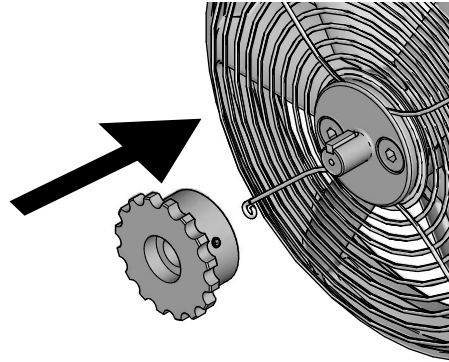
5. Install belt shroud with new fan grill onto unit. **NOTE:** You may need to flex shroud around extended shaft on the fan pulley.



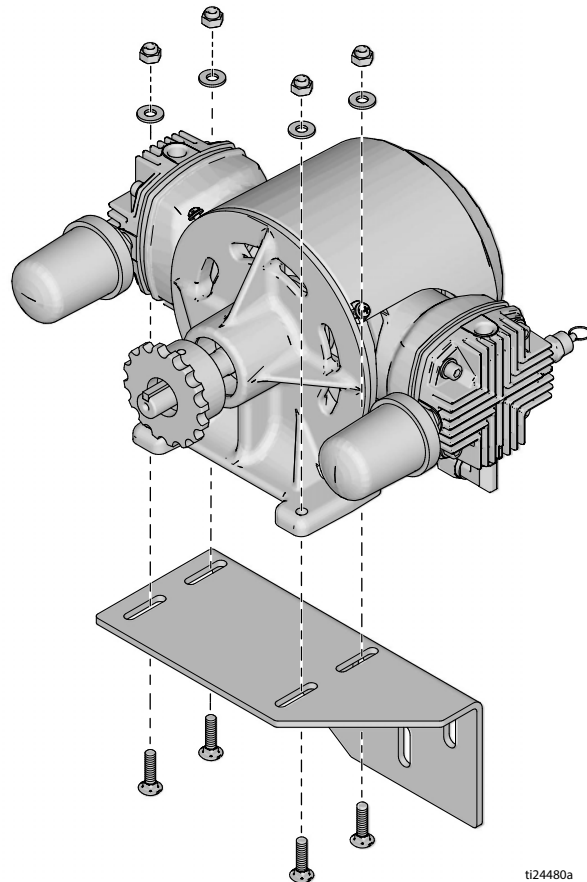
6. Place key (G) in keyway opening. Tap into place so that face of key sits recessed slightly from face of hub.



7. Push chain coupler against the shoulder on the mounting plate coupler.

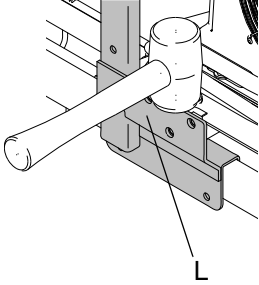


8. Use 1/8 in. Allen wrench to secure coupler set screw. Torque to 58-62 in-lb (6.6-7.0 N•m).
9. Use hardware (shown below) to mount compressor to compressor bracket. Make certain that the square of the carriage bolt heads are seated in the compressor bracket slots.

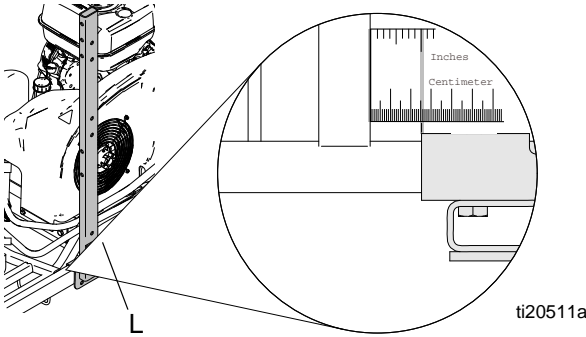


10. Snug all four nuts down then back the nuts off 1/4 turn. Bracket KK should slide in the slots with some effort.

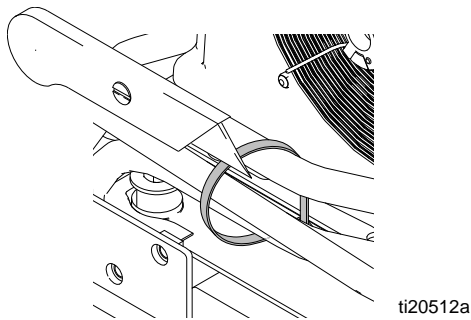
11. Use rubber mallet or wood block to position right frame mount (L) flush to LL250 frame (this location will be adjusted to help center the compressor with the drive pulley).



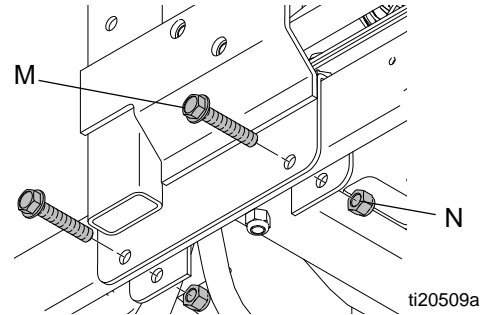
12. Place right frame mount (L) onto LL250 frame in location shown below (approximately 1 in. from cross member of LL250 frame). **NOTE:** To ensure flush sitting, scrape frame free of any raised debris on frame surface.



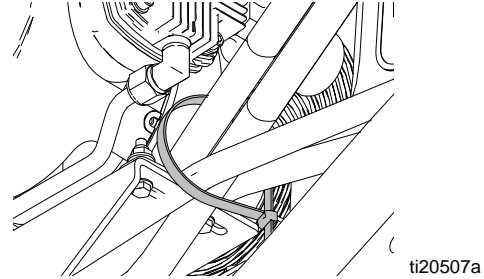
13. Cut any existing tie wraps that interfere (they will be replaced later with new tie straps).



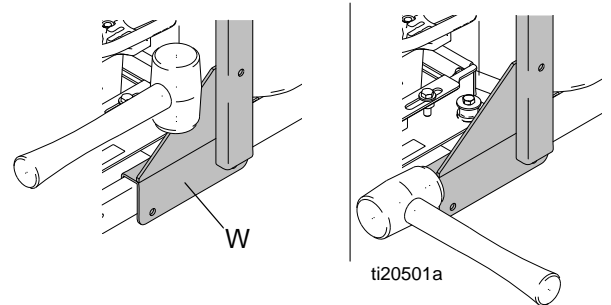
14. Loosely install two screws (M) and two locknuts (N) through bottom of frame mount. **NOTE:** See alignment section then use 9/16 in. wrench to fully tighten.



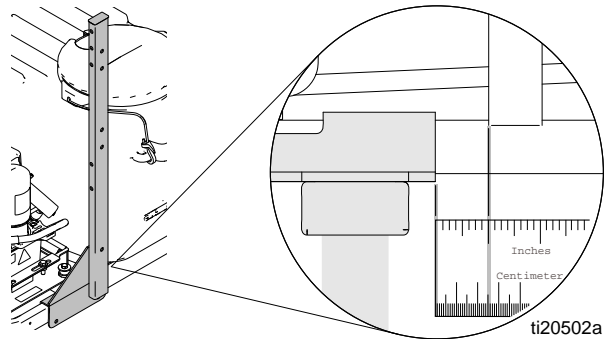
15. Secure hydraulic lines with zip ties.



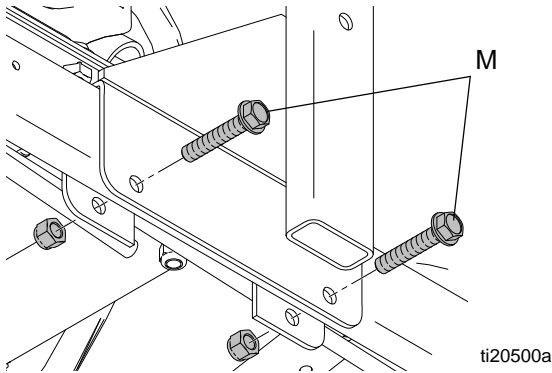
16. Position left frame mount (W) on LL250 frame. Remove any zip ties in the way. Use a rubber mallet to tap into place if needed.



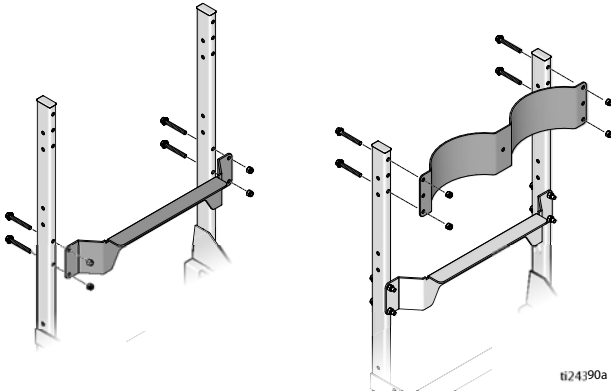
17. Make sure left and right frame mounts are aligned. The left leg should mirror the right leg location from LL250 frame cross member.



18. Use 9/16 wrench to tighten bottom screws (M) to hardware shown.



19. Assemble hopper bracket (X) and base (Y) with hardware provided. Install carriage bolts with the heads facing the paint tanks. Use 9/16 in. wrench to tighten bolts. Loosen all eight nuts 1/4 turn.

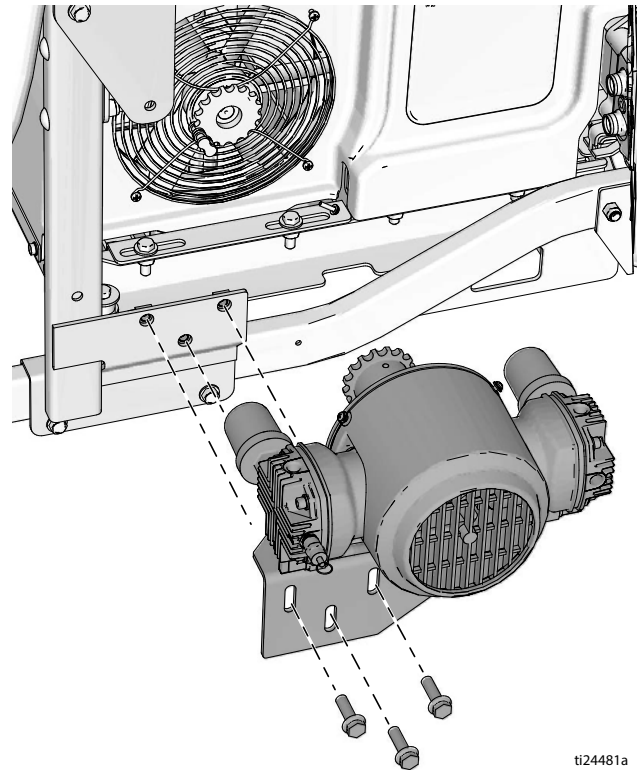


## Compressor Alignment (LL250)

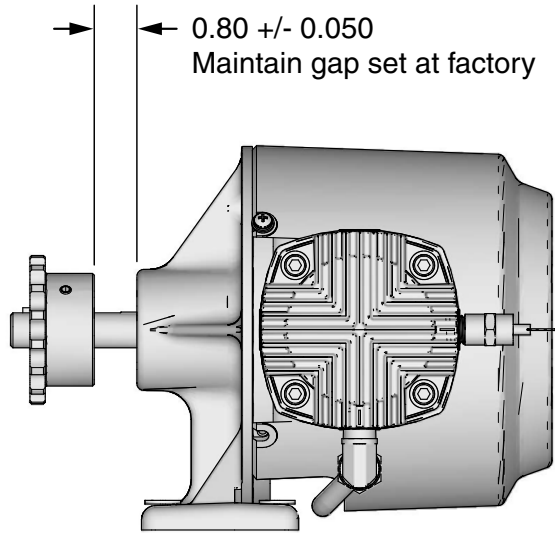


### Install Compressor Assembly

1. Position compressor and bracket assembly on frame. Align compressor coupler sprocket with chain coupler installed on mounting plate coupler. Install three screws, snug all three screws down then back the screws off 1/4 turn.

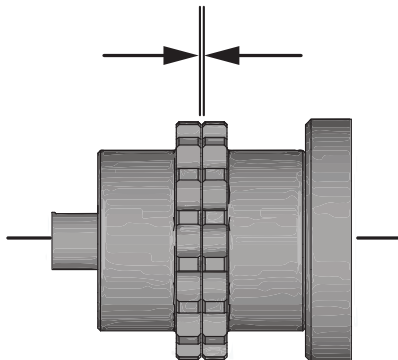


## Vertical Adjustment



ti24339a

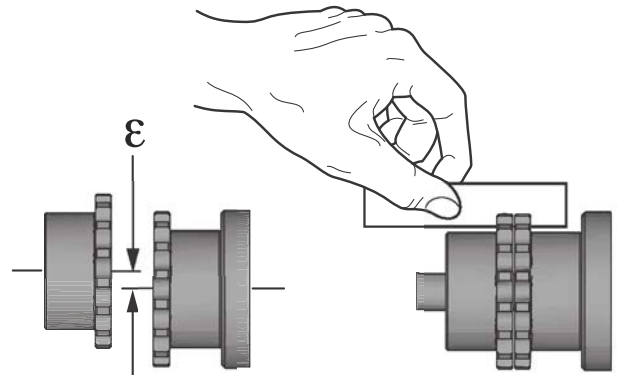
2. Move compressor and mounting bracket up to the chain coupler on the mounting plate so that the two sprockets contact each other.



ti24386a

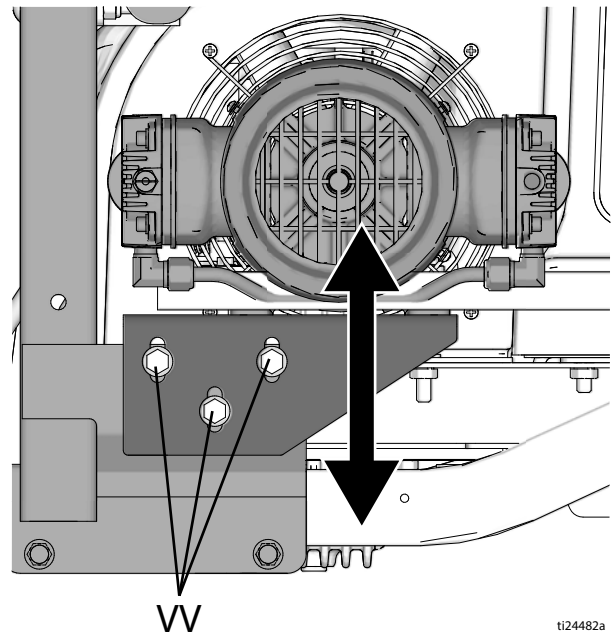
3. Move compressor assembly up or down (vertical) and left or right (horizontal) until the compressor is aligned with the hydraulic pump.

1. Place a straight edge at the bottom of corresponding teeth of the two sprockets and raise or lower the compressor to adjust until the offset misalignment is minimized (use a straightedge for accurate alignment). Repeat this at both the top and bottom of the sprockets. The allowable offset misalignment is 0.005 to 0.010.



ti24341a

2. Use 9/16 in. wrench to tighten compressor bracket screws (VV).

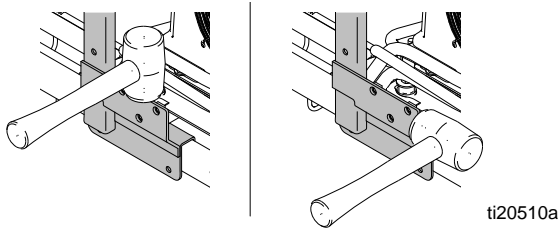


ti24482a

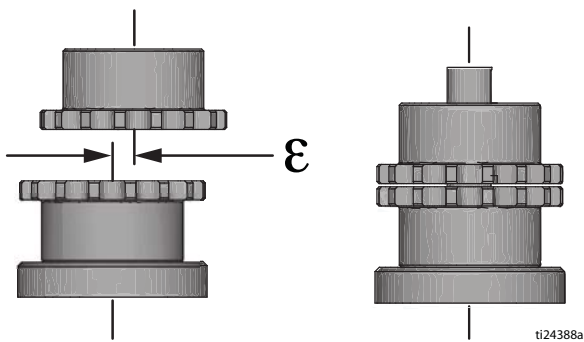


## Horizontal Adjustment

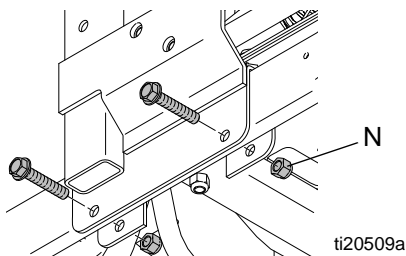
1. Tap vertical frame mount with rubber mallet to the left or right.



2. Adjust the horizontal misalignment until the sides of the two hubs are even with each other and the sprocket teeth are in alignment.

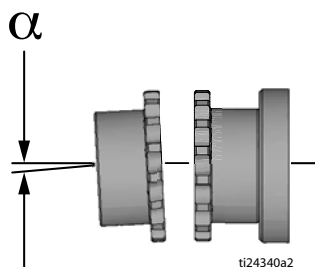


3. Use 9/16 in. wrench to tighten two nuts (N) to fully clamp vertical frame mount to LL250 frame.

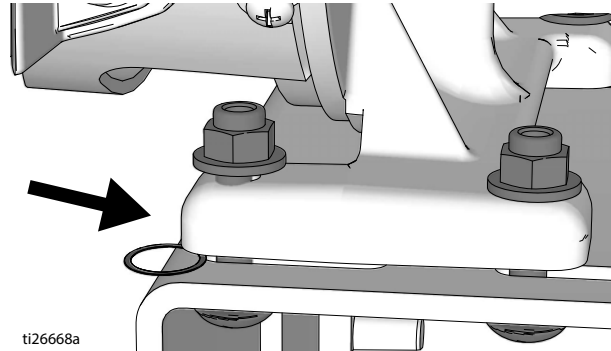


## Angular Adjustment

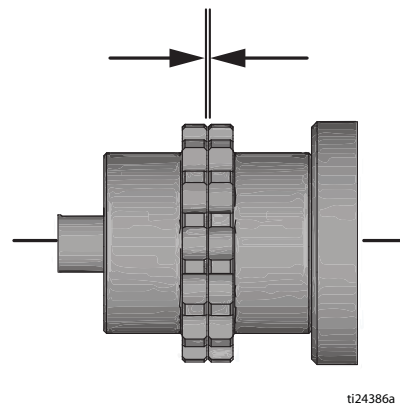
If the two sprocket faces are in full contact, the angular adjustment is good. Go to "Coupler Spacing" on page 19. If the two sprocket faces are NOT in full contact an angular adjustment must be made.



1. Loosen the four compressor mounting bolts enough to slide the shims provided between the compressor and mounting bracket.



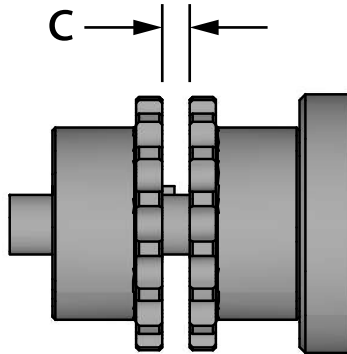
2. Install shims until the two sprocket faces are in full contact.



3. Note the location and number of shims placed under the compressor.
4. Remove the compressor and bracket assembly. Separate compressor from mounting bracket.
5. Assemble compressor to mounting bracket. Install the shims on the carriage bolts between the compressor and mounting bracket at the locations noted in Step 3.
6. Repeat "Compressor Alignment (LL250)" on page 16. Check Angular Adjustment and repeat adjustment as necessary until proper alignment is achieved.
7. After the sprocket faces make full contact, use 9/16 in. wrenches to tighten all seven nuts.

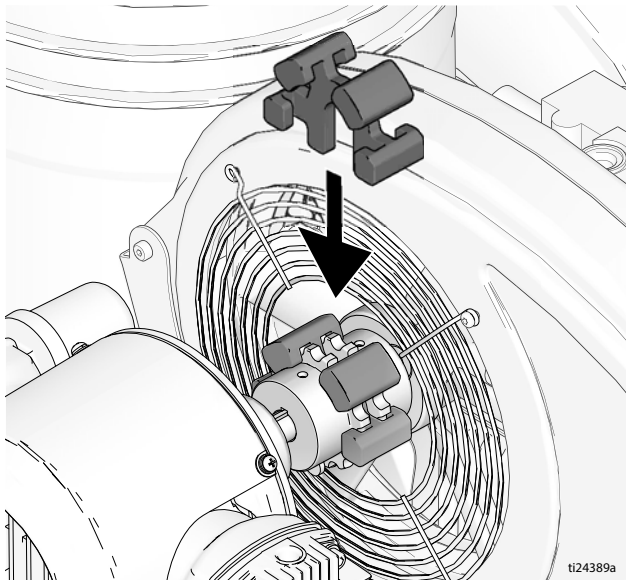
## Coupler Spacing

1. Slide compressor assembly away from the mounting plate coupler leaving a (C) 9/32" (6.35mm) space between the sprockets.



ti24342a

2. Use spacer alignment tool (17C504) to set the sprocket spacing. Slide tool between the sprockets. The sprocket teeth of both sprockets should sit flush in the inner pockets of the tool.



ti24389a

3. With alignment tool holding sprockets in alignment, tighten four compressor to mounting bracket nuts.
4. After tightening compressor to mounting bracket nuts verify that the 9/32" space between the two sprockets has not changed. Alignment tool (17C504) should slide in and out of the gap between the sprockets with little resistance.
5. If the spacing has changed repeat **Compressor Alignment (LL250)** procedure.
6. Properly tighten all screws and nuts.
7. Wrap chain around both sprockets. Install connecting pin and spring clip.

## NOTICE

Broken hydraulic pump or compressor shafts may result, if not aligned properly. Always verify compressor alignment whenever a compressor is installed or the belt is tightened or replaced.

8. Install coupler guard using three pan head screws with flatwashers and lockwashers.

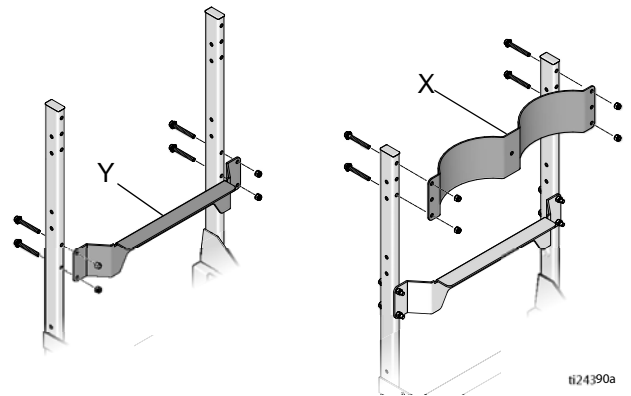
## Chain Coupler Maintenance

Periodic chain coupler lubrication is necessary to ensure proper operation of your striper regularly once a month.

1. Remove three pan head screws with flatwashers and lockwashers from chain coupler guard.
2. Remove chain coupler guard.
3. Lubricate coupler chain with Justice Brothers heavy duty chain lube or equivalent (NLGI grade 1 or 2 grease).
4. Install coupler guard using three pan head screws with flatwashers and lockwashers.

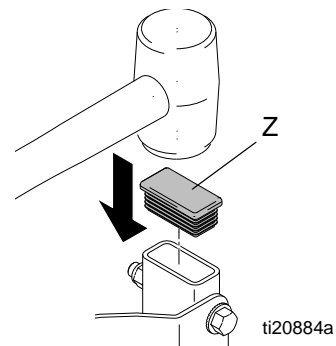
## Complete Frame Assembly

1. Use 9/16 in. wrench to tighten hopper bracket (X) and base (Y) nuts.



ti24390a

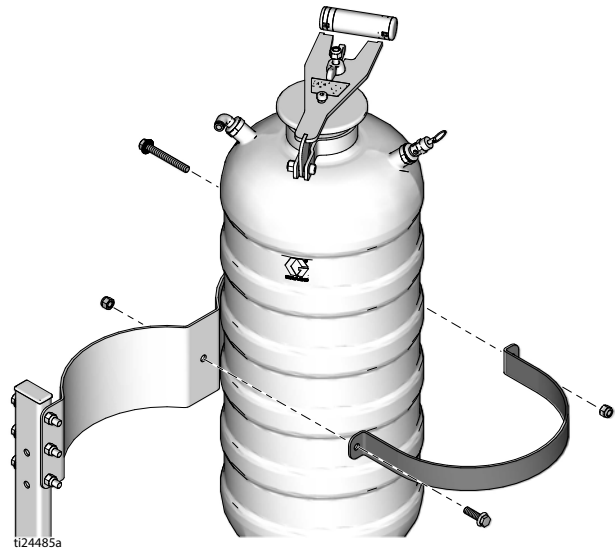
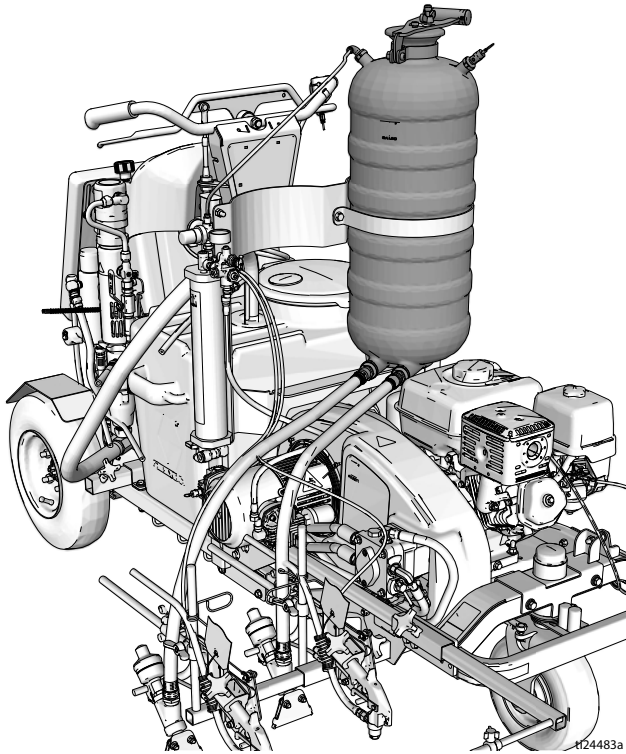
2. Install plastic end caps (Z) into frame. Use rubber mallet to pound end caps into place.



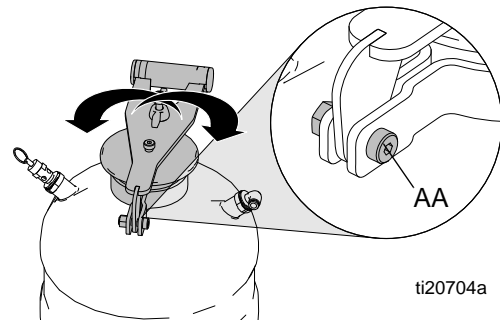
ti20884a

## Bead Tank Mounting

1. When only one bead tank is being installed, it should be placed on the side of the frame furthest from the compressor to best distribute weight.



**NOTE:** Position handle to best suit filling needs. Loosen bolt (AA) to help swivel, then retighten.

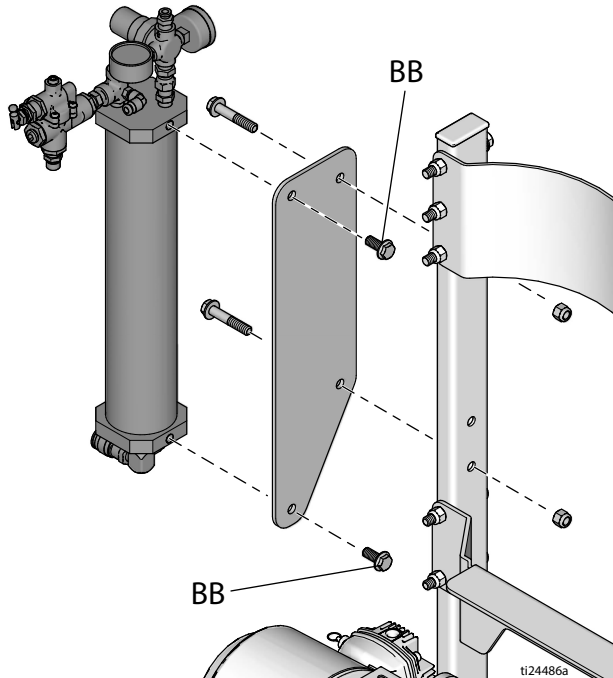


2. Place bead tank on supporting base with outlet fittings facing compressor.
3. Place clamping band around tank and secure with mounting hardware shown below. Tighten until there is no movement between clamp and bead tank. **NOTE:** The flats on the clamp are not intended to touch when hopper bracket is tightened.

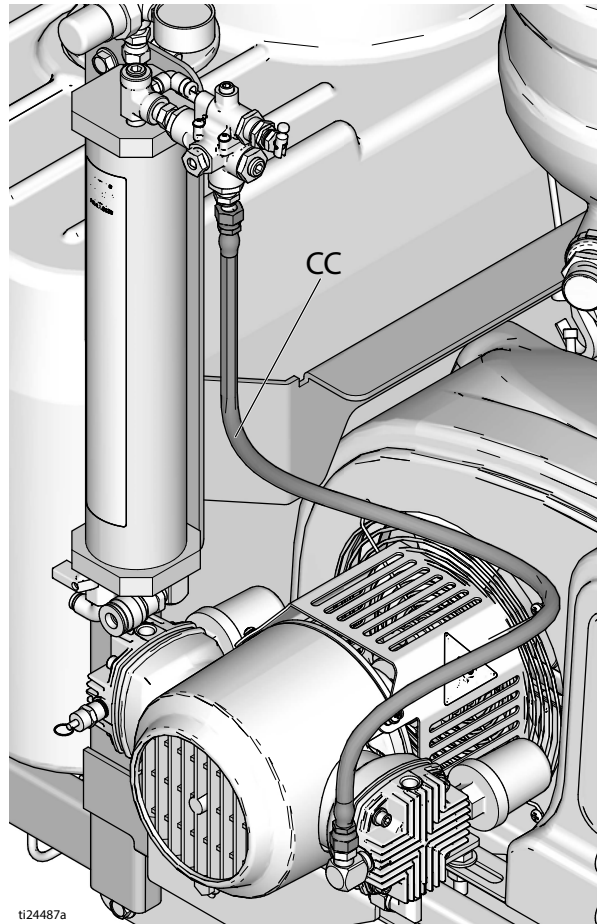


## Air Tank Mounting

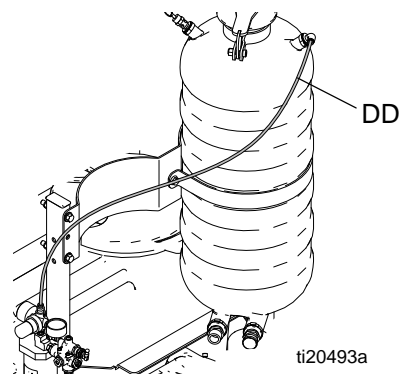
1. Install air tank to frame mount as shown below and use 9/16 in. wrench to tighten two screws (BB).



2. Use 11/16 in. wrench to attach braided hose (CC) from air tank to compressor.



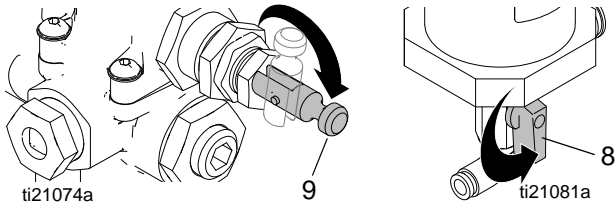
3. Install 36 in. nylon air line (DD) from top of regulator to swivel fitting on top of bead hopper. Cut air hose to desired length. Push air line into fitting until end touches bottom of fitting.



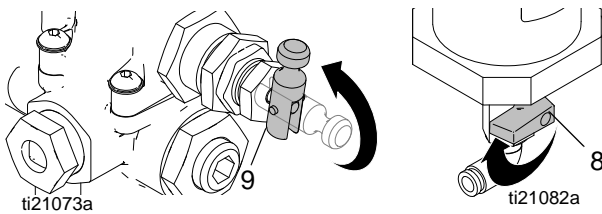
# Operation

## Charging Air Tank

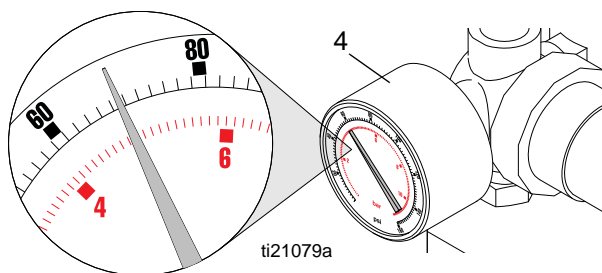
1. Start engine and engage clutch. Compressor is now engaged.
2. If compressor is not needed for a job, move compressor bypass switch (9) to horizontal ON position. Compressor is now exhausting air into atmosphere.



3. Move compressor bypass switch (9) to vertical OFF position to charge air pressure tank. Air tank will continue to charge to 80 psi (5.5 bar, 55 MPa) then cycle between 60-80 psi (4.1-5.5 bar, 41-55 MPa).



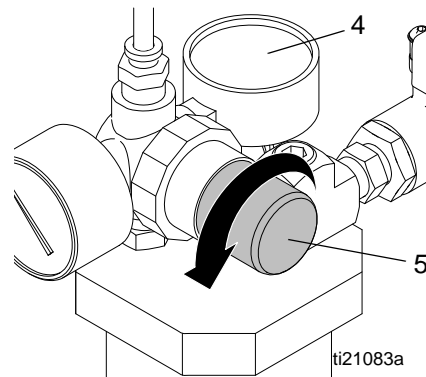
4. See bead tank gauge (4) to read air tank pressure. Pressure from air tank is used to open bead valves at bead gun.



## Setting Bead Hopper Pressure

The pressure regulator valve (5) controls pressure sent from the air tank to the bead tank. The regulator is set to 0 pressure from the factory.

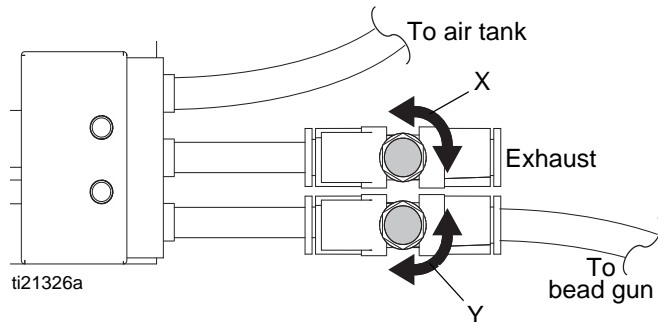
1. Before charging bead tank, confirm that bead tank lid is fully secured and beads have been loaded into tank.
2. To increase pressure, pull knob on pressure regulator valve (5) out and turn counter-clockwise. Watch bead tank gauge (4) pressure and continue turning valve until desired pressure is met.



3. See bead flow chart to find proper settings for your application.
4. Various orifices can be used in gun to obtain different flow rates in conjunction with bead tank pressure. See **Determining Bead Application Pressure Table**, page 24.

## Bead Timing With Gun

1. Use air flow restrictor valves to help time the opening and closing of the bead guns to best match the start and stop of paint lines.
2. Valve (X) is exhausting air and will control the timing end of the bead application. Valve (Y) is sending air to the gun and will control the timing of the start of the bead application.



3. Turning the valve clockwise will delay gun opening/closing time. Turning the valve counter-clockwise will speed up gun opening/closing time.

### NOTICE

Never store glass beads in tank between jobs. Begin the day with moisture-free beads. Moisture will cause glass beads to resist flow or solidify over time.

If moisture or condensation is present on tank interior, leave lid open until dry. When operating without the bead system, always leave the moisture drain valve open.

## Determining Bead Application Pressure

The table below lists bead delivery rates for 4 inch (10 cm) lines with standard size highway beads.

- Wider lines use multiples of 4 in. to determine bead delivery.
- Larger beads reduce flow rates, so a larger nozzle and higher pressure may be required.
- Always verify flow rates with a stopwatch and a scale for weight.

To determine application pressure, follow steps 1 - 4 below:

1. Determine speed the machine will travel when applying line.

2. Identify what the required bead delivery rate is in job specifications.
3. Under bead gun nozzle size, find nearest value compared to Step 2.
4. Match pressure needed to Step 3. Set air regulator to this pressure.

### † EXAMPLE:

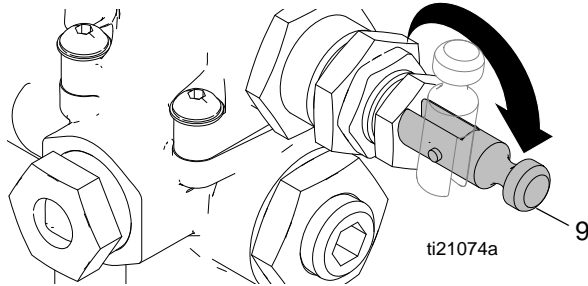
- a. At 4 mph and 6 lb/gal with 0.234 nozzle set tank pressure to 15 psi.
- b. At 4 mph and 6 lb/gal with 0.281 nozzle set tank pressure to 10 psi.
- c. For 8 in. width, multiply weight/min value (7.1) x 2 and for 12 in. width x 3.

Step 1	Step 2		Step 3		Step 4
Speed	Bead Delivery Requirement (4 in.)		Nozzle Size		Pressure Needed
	6 lb/gal	8 lb/gal	0.234	0.281	
mph	lb/min	lb/min	lb/min	lb/min	psi
2	3.6	4.7	4	5	5
3	5.3	7.1	6	<b>† 7</b>	10
4	<b>† 7.1</b>	9.5	<b>† 7</b>	9	15
5	8.9	11.9	9	11	20
6	10.7	14.2	11	14	25
7	12.4	16.6	13	16	30
8	14.2	19	16	19	35

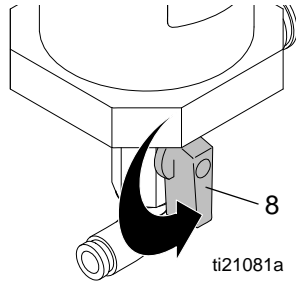
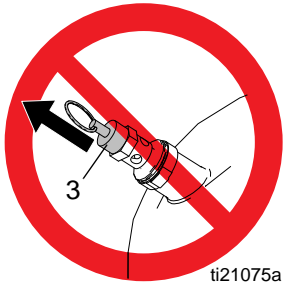
Step 1	Step 2		Step 3		Step 4
Speed	Bead Delivery Requirement (10 cm)		Nozzle Size		Pressure Needed
	720 gram/liter	960 gram/liter	0.234	0.281	
mph	lb/min	lb/min	lb/min	lb/min	psi
2	3.6	4.7	4	5	5
3	5.3	7.1	6	<b>† 7</b>	10
4	<b>† 7.1</b>	9.5	<b>† 7</b>	9	15
5	8.9	11.9	9	11	20
6	10.7	14.2	11	14	25
7	12.4	16.6	13	16	30
8	14.2	19	16	19	35

## Filling Bead Hopper

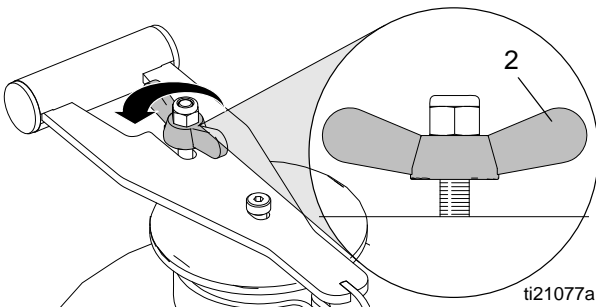
1. Move compressor bypass switch (9) to horizontal position to disengage compressor or turn engine off.



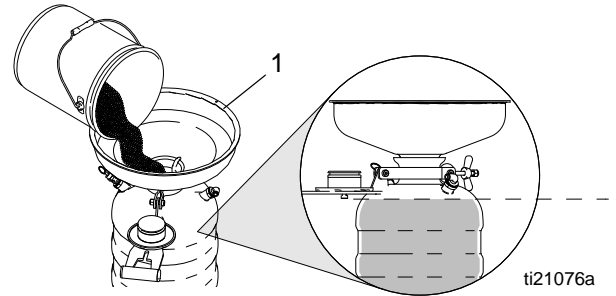
2. Release pressure on bead tank to 0 psi (0 bar, 0 MPa). Turn pressure relief valve (8) to vertical position and watch bead tank pressure gauge (3) until pressure reads 0 psi (0 bar, 0 MPa). Do not use safety valve (3) to release pressure from bead tank.



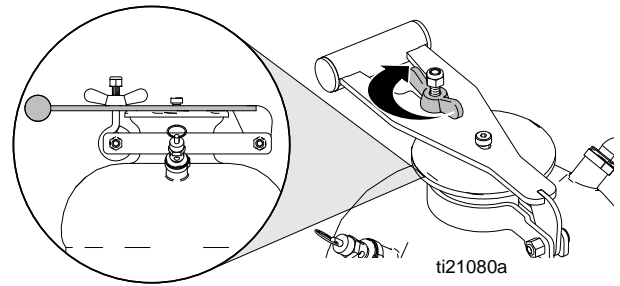
3. Loosen wing nut (2) until it reaches end of threads. If any remaining pressure is in bead tank, it will be released through seal while wing nut secures lid to hopper. Confirm pressure is at 0 psi (0 bar, 0 MPa) and open lid.



4. Place funnel (1) into opening. Pour beads into hopper. Beads should not be filled to a height higher than shown in figure below. Bead level can be viewed through tank wall if light is present.

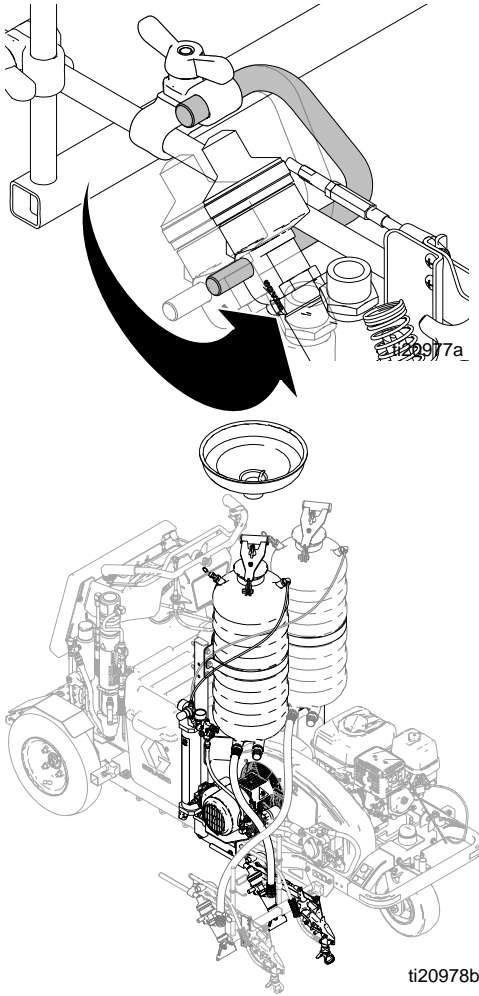


5. Secure lid over opening and tighten wing nut until lid is level with hopper.



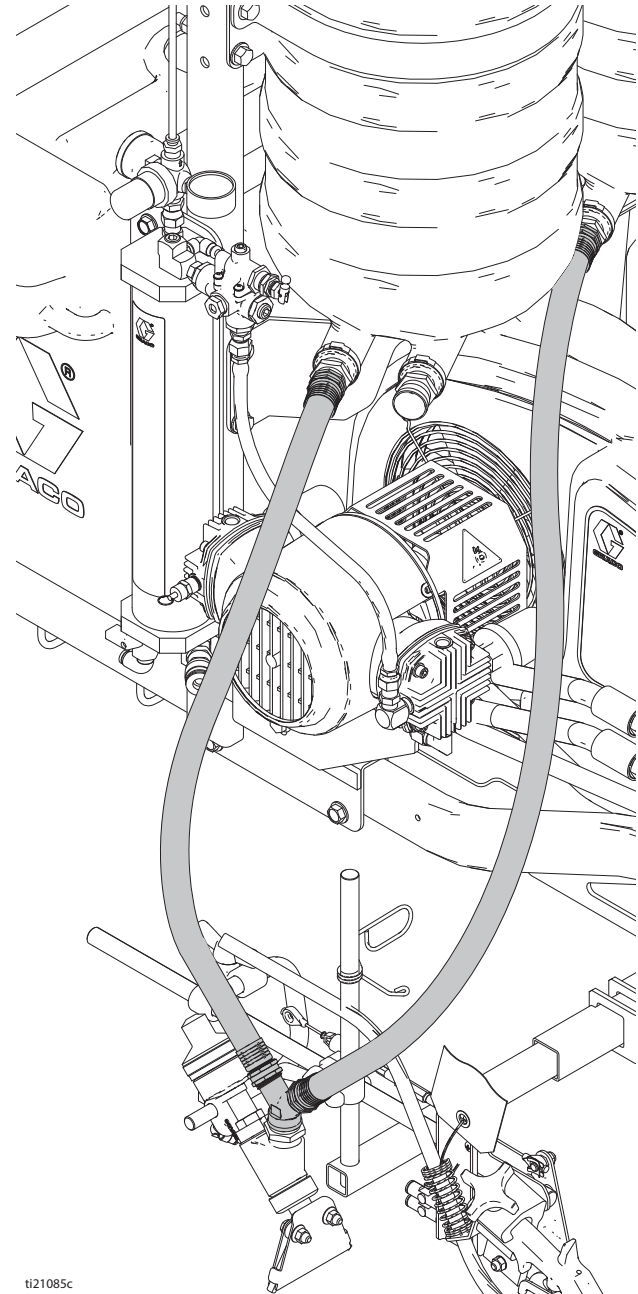
## 0 to 8 in. Line Setup

For wider lines it may be necessary to mount bead gun as shown below.

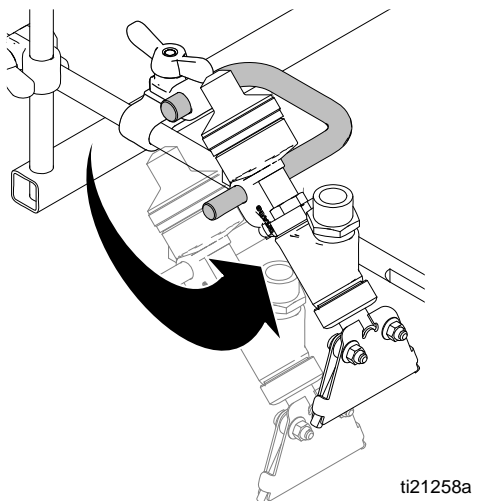


## 2 Tank 1 Gun Setup

Connect "Y" fitting as shown below to allow two tanks to flow into one gun.

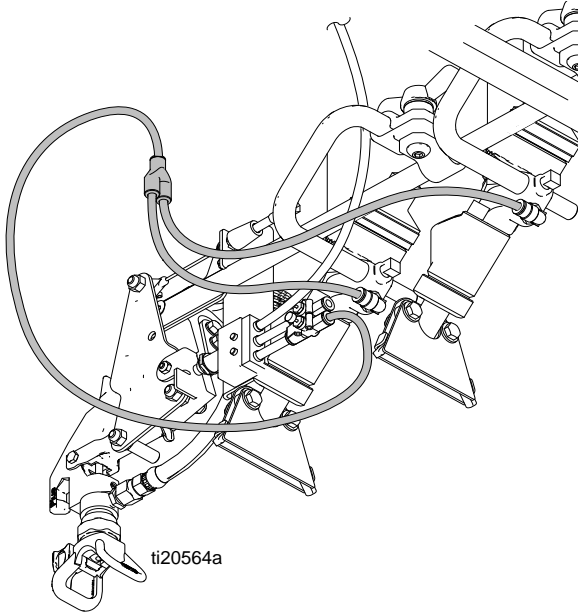


## 8 - 12 in. Line Setup

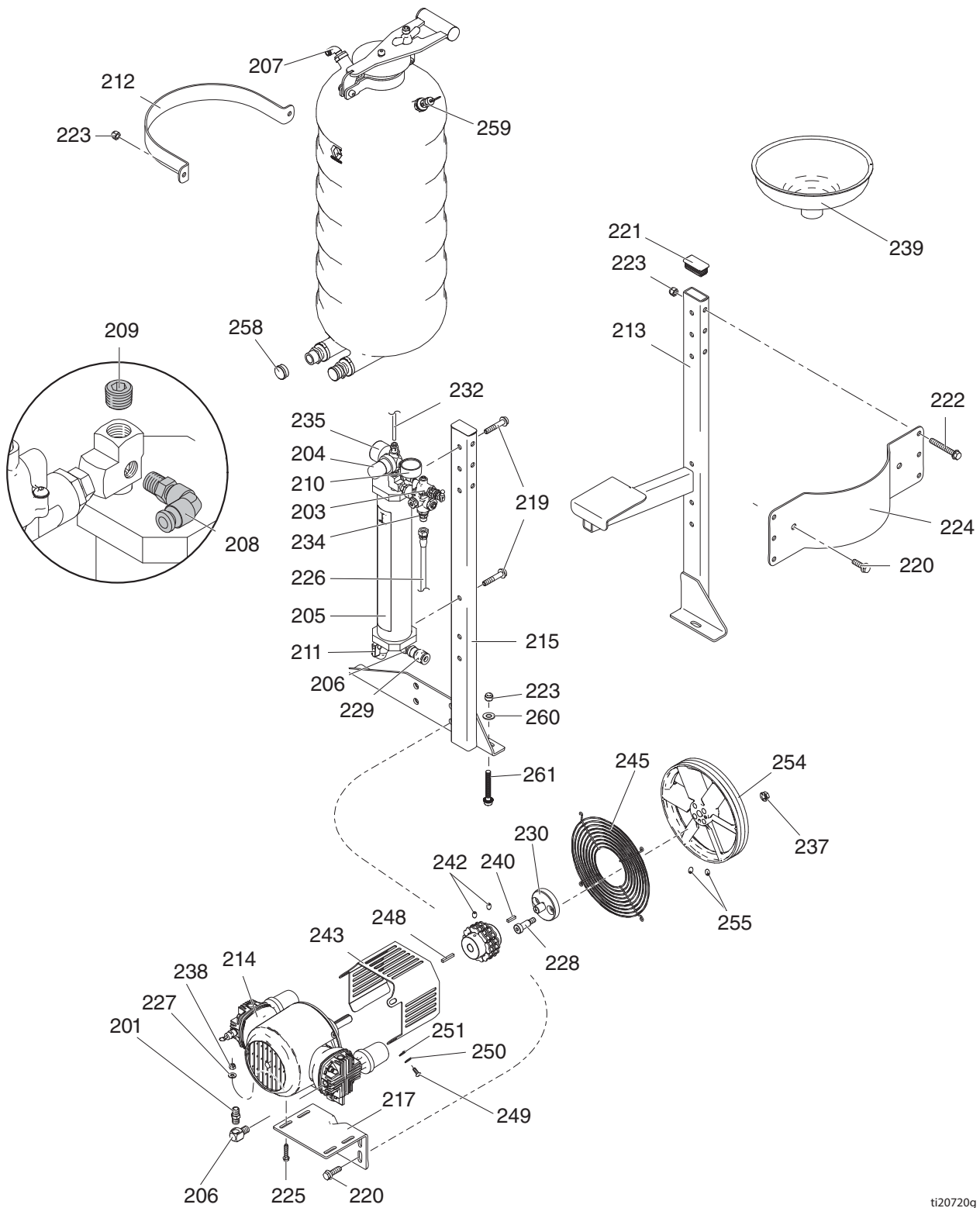


## Double Drop Setup

Use a “Y” fitting to create a dual bead gun setup for double drop beads. Splice exit hose on bottom of air switch and branch into both guns.



# Parts - Model 16R955



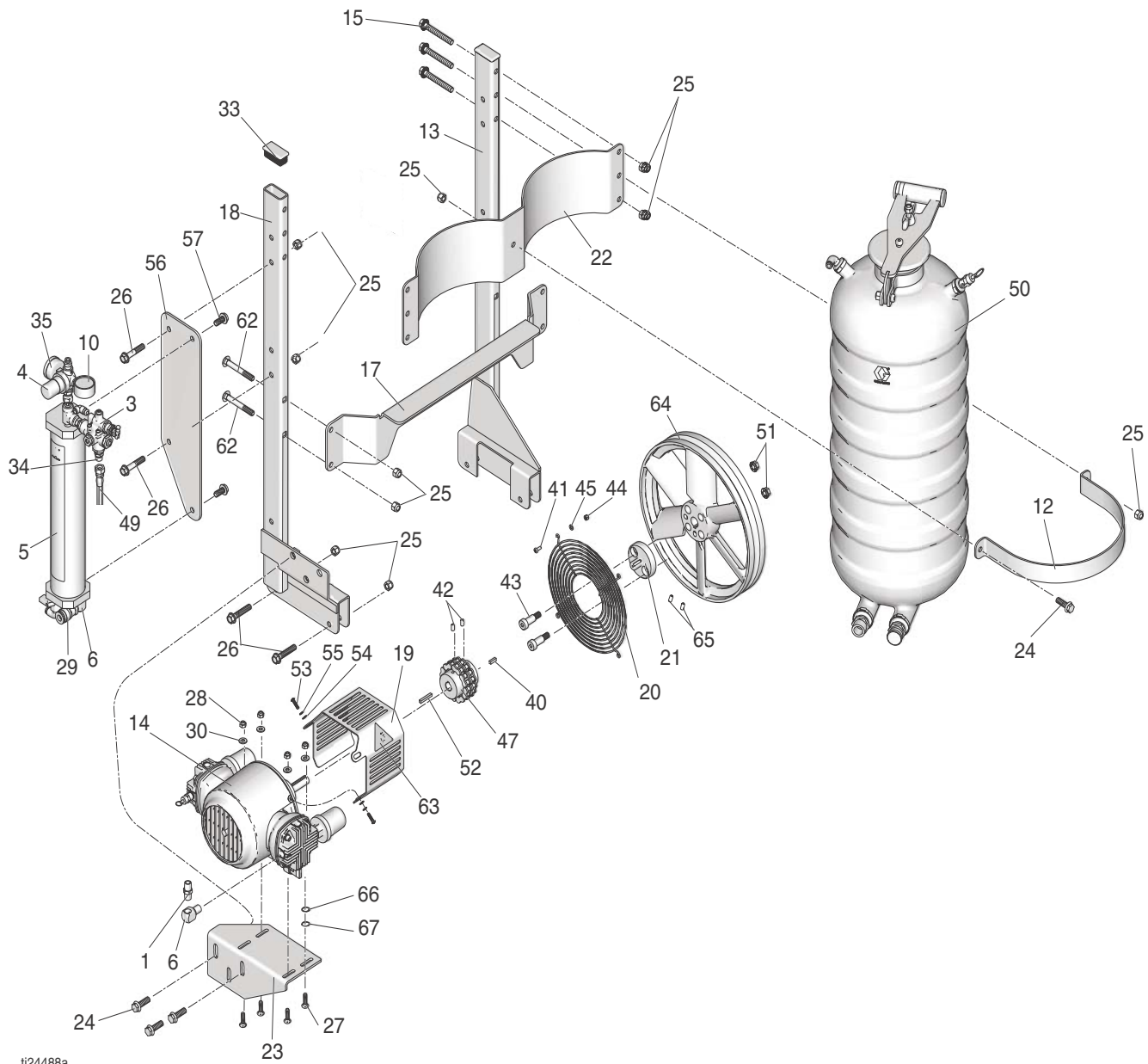
ti20720g



## Parts List - 16R955

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
201	156971	FITTING, nipple, short	3	228	126833	SCREW, shoulder, socket head	2
202	15K299	FITTING, tee, street, modification	1	229	116720	COUPLER, quick disconnect	1
203	126804	REGULATOR, unloader	1	230		COUPLER, mounting plate	1
204	16U375	REGULATOR	1	232	16U273	HOSE, pneumatic	1
205	16U174	TANK, pressure	1	234	162453	FITTING, (1/4 npsm x 1/4 npt)	1
206	187357	ELBOW, street	2	235	124762	GAUGE, pressure, air, bsp	1
207	113321	FITTING, elbow, tube	1	237	112958	NUT, hex, flanged	2
208	118486	FITTING, elbow, push	1	238	102040	NUT, lock, hex	4
209	101970	PLUG, pipe, hlds	1	239	16T437	FUNNEL, bead tank	1
210	104655	GAUGE, press air	1	240	120376	KEY, square 0.188	1
211	15B565	VALVE, ball	1	241	16R963	KIT, accessory, bead gun (see manual 332226)	1
212	16T580	BAND, clamping, bead hopper	1	242	120087	SCREW, set, 1/4 x 1/2	4
213	16T763	FRAME, bead hopper, left	1	243	16X197	GUARD, coupler, assembly	1
214	126789	COMPRESSOR, piston air, 1.7 hp (6 cfm)	1	245	16U327	GRILL, fan guard, cap trimmed	1
215	16T762	FRAME, bead hopper, right	1	247	16X252	COUPLING, keyway hub, flex, L type	1
216	101690	TOOL, Allen wrench	1	248	117632	KEY, square, 0.188 x 1.25	1
217	16T579	BRACKET, compressor, 130 and 200	1	249	867489	SCREW, pan head	3
218	24V582	TANK, bead	1	250	116876	WASHER, flat	3
219	111194	SCREW, cap flang hd	2	251	100020	WASHER, lock	3
220	111193	SCREW, cap flang hd	6	254	17H256	KIT, pulley <i>includes 230, 255</i>	1
221	115087	PLUG, tubing	2	255	101962	SCREW, set	2
222	121488	SCREW, hex hd, flanged	6	256	128558	SHIM, 0.010"	6
223	101566	NUT, lock	11	257	128559	SHIM, 0.020"	6
224	16T593	BRACKET, hopper	1	258	16U377	CAP, hose	1
225	120757	SCREW, carriage	4	259	16T908	VALVE, safety	1
226	16T939	HOSE, coupled	1	260	100023	WASHER, flat	3
227	110755	WASHER, plain	4	261	125626	SCREW, hex head, flanged	3

# Parts - Model 16R962



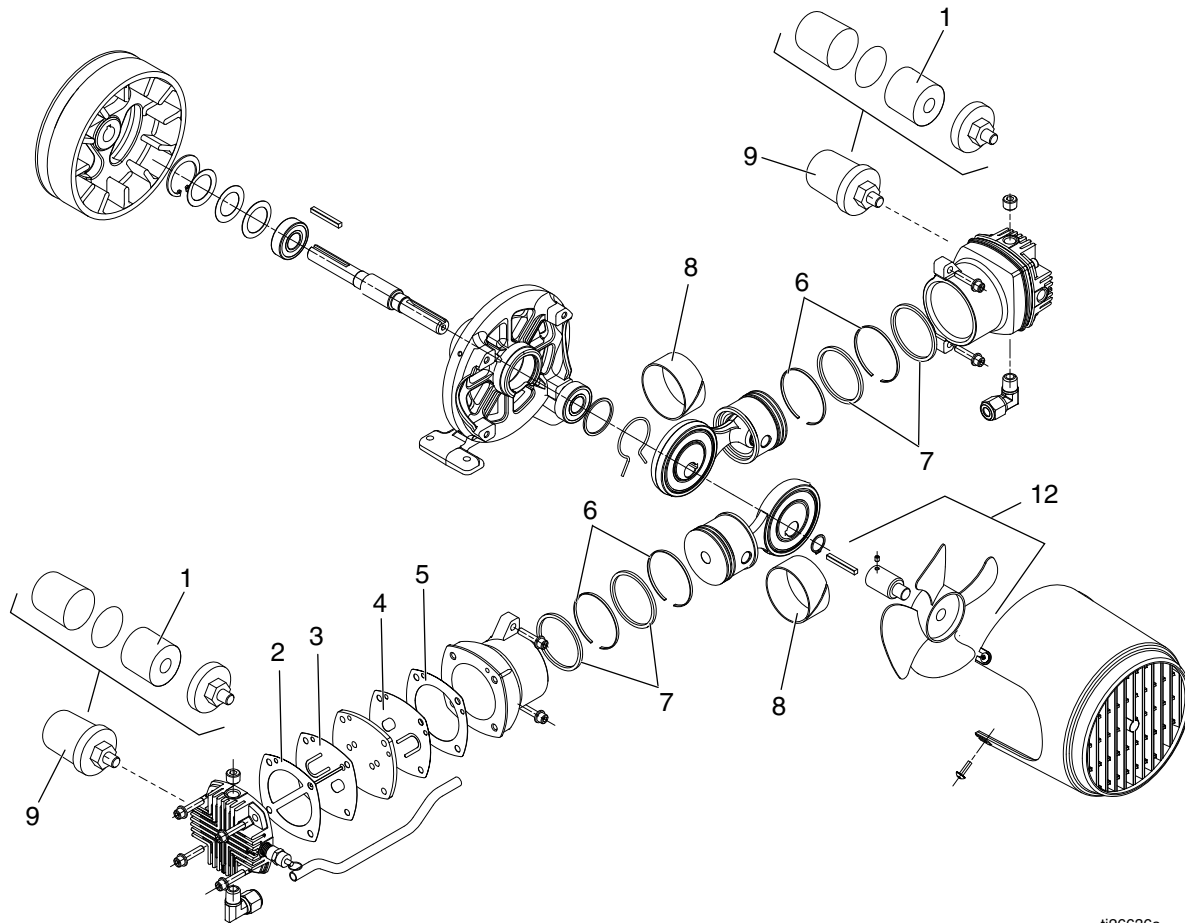
ti24488a

## Parts List - Model 16R962

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	156971	FITTING, nipple, short	3	34	162453	FITTING, (1/4 npsm x 1/4 npt)	1
2	15K299	FITTING, tee, street, modification	1	35	124762	GAUGE, pressure, air, bsp	1
3	126804	REGULATOR, unloader	1	37	101690	TOOL, Allen wrench	1
4	16U375	REGULATOR	1	39	16R963	KIT, accessory, bead gun (see manual 332226)	1
5	16U174	TANK, pressure	1				
6	187357	ELBOW, street	2	40	120376	KEY, square 0.188	2
7	113321	FITTING, elbow, tube	1	41	260387	SCREW, pan hd, x recess	4
8	118486	FITTING, elbow, push	1	42	120087	SCREW, set, 1/4 x 1/2	4
9	101970	PLUG, pipe, hdls	1	43	126833	SCREW, shoulder, socket head	2
10	104655	GAUGE, press air	1	44	116969	NUT, lock	4
11	15B565	VALVE, ball	1	45	116876	WASHER, flat	4
12	16T580	BAND, clamping, bead hopper	1	47	16X252	COUPLING, keyway hub, flex, L type	1
13	16T698	FRAME, bead hopper, left, LL250	1	49	16T939	HOSE, coupled, 061120, 1.5 ft	1
14	126789	COMPRESSOR, piston air, 1.7 hp (6 cfm)	1	50	24V582	TANK, bead	1
15	125626	SCREW, hex hd, flanged	10	51	112958	NUT, hex, flanged	2
16	16T437	FUNNEL, bead tank	1	52	117632	KEY, square, 3/16 x 1.25	1
17	16T596	BASE, hopper frame, LL250	1	53	867489	SCREW, pan head	3
18	16T697	FRAME, bead hopper, right, LL250	1	54	116876	WASHER, flat	3
19	16X197	GUARD, coupler, assembly	1	55	100020	WASHER, lock	3
20	16U327	GRILL, fan guard, cap trimmed	1	56	17A647	BRACKET, air tank, LL250	1
21		COUPLER, mounting plate	1	57	111192	SCREW, cap flange head	2
22	16T594	BRACKET, bead hopper, LL250	1	62	124258	BOLT, carriage	4
23	16T591	BRACKET, compressor, LL250	1	63▲	16C394	LABEL, pinch hazard ISO	1
24	111193	SCREW, cap flang hd	4	64	17H256	KIT, pulley <i>includes 21, 65</i>	1
25	101566	NUT, lock	15	65	101962	SCREW, set	2
26	111194	SCREW, cap flang hd	6	66	128558	SHIM, 0.010"	6
27	120757	SCREW, hex hd, flanged	4	67	128559	SHIM, 0.020"	6
28	102040	NUT, lock, hex	4				
29	116720	COUPLER, quick disconnect	1				
30	110755	WASHER, plain	4				
32	16U273	HOSE, pneumatic	1				
33	115087	PLUG, tubing	2				

▲ Replacement warning labels may be ordered free of charge.

# Parts - Compressor 126789



ti26636a

## Parts List - Compressor 126789

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	17H030	KIT, filter, element ( <i>two</i> )	1	9	17H084	KIT, filter assembly	1
2	*	GASKET, head	2	10	17H029	KIT, service <i>includes 1, 2, 3, 4, 5, 6, 7, and 8</i>	1
3	*	VALVE, outlet	2	12	24V932	FAN, compressor <i>includes adapter, set screws, and retainer</i>	1
4	*	VALVE, inlet	2				
5	*	GASKET, cylinder	2				
6	*	RING, piston	4				
7	*	SEAL, piston	4				
8	*	RING, rider	2				

\* – Gast parts not available from Graco

# Graco Standard Warranty

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.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

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.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

**GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO.** These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

## **FOR GRACO CANADA CUSTOMERS**

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

# Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

For patent information, see [www.graco.com/patents](http://www.graco.com/patents).

**TO PLACE AN ORDER**, contact your Graco distributor or call 1-800-690-2894 to identify the nearest distributor.

*All written and visual data contained in this document reflects the latest product information available at the time of publication.  
Graco reserves the right to make changes at any time without notice.*

*This manual contains English. MM 332230*

**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA**  
**Copyright 2013, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.**

[www.graco.com](http://www.graco.com)  
Revision J June 2017