

RoadLazer™ RoadPak™ & RoadPak HD Line Striping System

3A5384C

EN

For the application of road marking and reflective coatings. For Professional Use Only.

List of Models (see page 2)

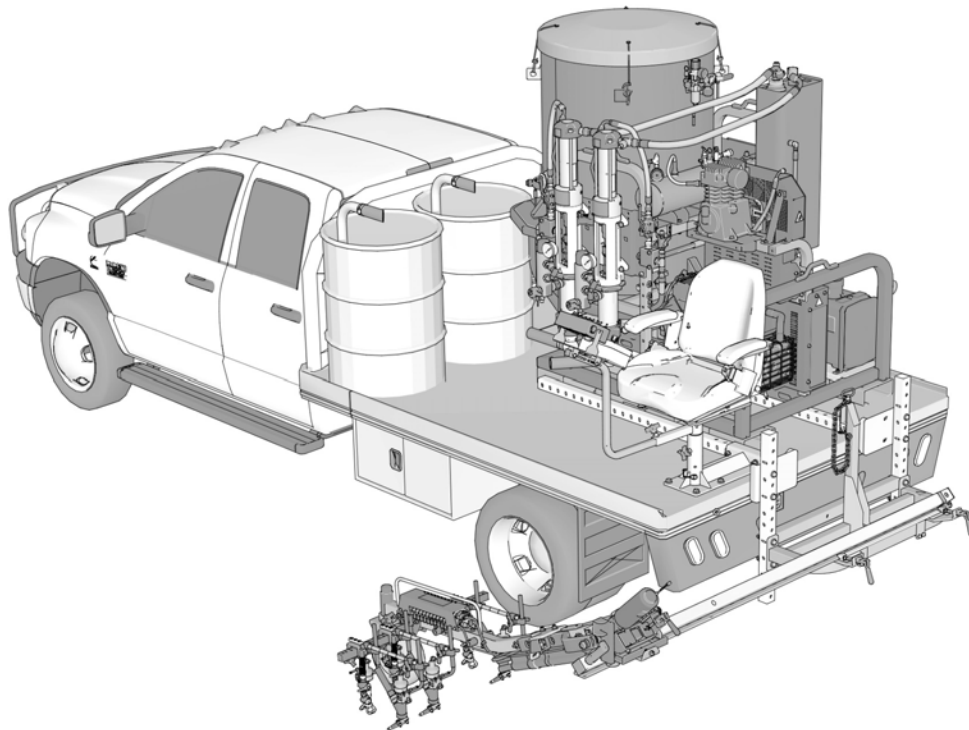
2900 psi (20 MPa, 200 bar) Maximum Working Pressure



Important Safety Instructions

Read all warnings and instructions in this manual and in related manuals.
Be familiar with the controls and the proper usage of the equipment.
Save these instructions.

Related Manuals:	
3A5385	Repair
3A5386	Parts



Complete Assemblies

Part Number	Description	CE
25D268	RoadPak System Option 1 (1, 6, 7, 10, 12)	✓
25D269	RoadPak System Option 2 (1, 6, 7, 10, 11, 12)	✓
25D270	RoadPak System Option 3 (1, 6, 7, 10, 12, 13, 14, 15)	✓
25D271	RoadPak System Option 4 (1, 6, 7, 10, 11, 12, 13, 14, 15)	✓
25D272	RoadPak System Option 5 (2, 6, 8, 10, 12)	✓
25D273	RoadPak System Option 6 (2, 6, 8, 10, 11, 12)	✓
25D274	RoadPak System Option 7 (2, 6, 8, 10, 12, 13, 14, 15)	✓
25D275	RoadPak System Option 8 (2, 6, 8, 10, 11, 12, 13, 14, 15)	✓
25D276	RoadPak System Option 9 (3, 6, 8, 10, 12)	✓
25D277	RoadPak System Option 10 (3, 6, 8, 10, 11, 12)	✓
25D278	RoadPak System Option 11 (3, 6, 8, 10, 12, 13, 14, 15)	✓
25D279	RoadPak System Option 12 (3, 6, 8, 10, 11, 12, 13, 14, 15)	✓
25D280	RoadPak System Option HD1 (4, 6, 9, 10, 12, 14)	✓
25D281	RoadPak System Option HD2 (4, 6, 9, 10, 11, 12, 14)	✓
25D282	RoadPak System Option HD3 (4, 6, 9, 10, 12, 13, 134, 15)	✓
25D283	RoadPak System Option HD4 (4, 6, 9, 10, 11, 12, 13, 14, 15)	✓

Models




Ref.	Model Number	Description
1	25M701	1 Pump RoadPak (450 lb. Bead Tank, 5 gpm)
	25M702	1 Pump RoadPak (No Bead Tank, 5 gpm)
2	25M703	2 Pump RoadPak (450 lb. Bead Tank, 5 gpm)
3	25M704	2 Pump RoadPak (1350 lb. Bead Tank, 5 gpm)
	25M705	2 Pump RoadPak (No Bead Tank, 5 gpm)
4	25M706	2 Pump RoadPak HD (1350 lb. Bead Tank, 10 gpm)
	25M707	2 Pump RoadPak HD (No Bead Tank, 10 gpm)
	24G626	Single Hitch Mounting Frame
6	24G627	RoadPak Slide in Mounting Frame
7	25M708	1 Pump RoadPak Gun Arm
8	25M709	2 Pump RoadPak Gun Arm
	25D932	2 Pump RoadPak Gun Arm (No Bead Guns)
9	25M710	2 Pump RoadPak HD Gun Arm
10	25M711	RoadLazer/RoadPak Control
11	24G633	RoadView Camera System
12	24G634	RoadPak Pointer System
13	25M712	Steerable Carriage
14	25M713	Winch Kit
15	25M716	Seat Kit

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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.

 <h1 style="margin: 0;">WARNING</h1>	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well-ventilated area. • 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. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking). • Ground all equipment in the work area. See Grounding instructions. • Never spray or flush solvent at high pressure. • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. Do not use liners unless they are anti-static or conductive. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
	<p>SKIN INJECTION HAZARD</p> <p>High-pressure spray is able to inject toxins into the body and cause serious injury that can result in amputation. In the event that injection occurs, get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not aim the gun at, or spray any person or animal. • Keep hands and other body parts away from the discharge. For example, do not try to stop leaks with any part of the body. • Always use the nozzle tip guard. Do not spray without nozzle tip guard in place. • Use Graco nozzle tips. • Use caution when cleaning and changing nozzle tips. In the case where the nozzle tip clogs while spraying, follow the Pressure Relief Procedure for turning off the unit and relieving the pressure before removing the nozzle tip to clean. • Equipment maintains pressure after power is shut off. Do not leave the equipment energized or under pressure while unattended. Follow the Pressure Relief Procedure when the equipment is unattended or not in use, and before servicing, cleaning, or removing parts. • This system is capable of producing 2900 psi (200 bar, 20 MPa). Use Graco parts or accessories that are rated a minimum of 2900 psi (200 bar, 20 MPa). • Always engage the trigger lock when not spraying. Verify the trigger lock is functioning properly. • Verify that all connections are secure before operating the unit. • Know how to stop the unit and bleed pressure quickly. Be thoroughly familiar with the controls.

WARNING

 	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Specifications in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Specifications in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer. • Do not leave the work area while equipment is energized or under pressure. • Turn off all equipment and follow the Pressure Relief Procedure when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards. • Make sure all equipment is rated and approved for the environment in which you are using it. • Use equipment only for its intended purpose. Call your distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.
 	<p>MOVING PARTS HAZARD</p> <p>Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Do not operate equipment with protective guards or covers removed. • Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure and disconnect all power sources.
 	<p>ENTANGLEMENT HAZARD</p> <p>Rotating parts can cause serious injury.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Do not operate equipment with protective guards or covers removed. • Do not wear loose clothing, jewelry or long hair while operating equipment. • Equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure and disconnect all power sources.
	<p>CARBON MONOXIDE HAZARD</p> <p>Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death.</p> <ul style="list-style-type: none"> • Do not operate in an enclosed area.
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> • Read Safety Data Sheets (SDSs) to know the specific hazards of the fluids you are using. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
	<p>BURN HAZARD</p> <p>Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> • Do not touch hot fluid or equipment.



WARNING



PERSONAL PROTECTIVE EQUIPMENT

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. Protective equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

CALIFORNIA PROPOSITION 65

The engine exhaust from this product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Introduction and General Information

Introduction

This manual and those listed below provide pre-setup requirements, parts lists, setup, operation, and maintenance instructions for the RoadLazer, RoadPak and RoadPak HD systems. This manual includes instructions for a 2-pump system. For 1-pump systems, all parts remain the same with the exception of plugged ports for missing pumps and hoses.

General Information

The RoadLazer is mounted to a vehicle and is used to stripe up to five stripes in one or two colors with glass beading.

The RoadLazer RoadPak consists of a Programmable Skipline Controller, Displacement Pumps, two Paint Spray Guns, and two Bead Spray Guns. The RoadPak HD is provided with three paint spray guns, and three bead spray guns.

Programmable Skipline Controller

The Programmable Skipline Controller consists of the control box and a 30 ft cable. It is the main control for the RoadLazer system and turns the spray guns and accessories on and off.

RPS 2900 Hydraulic Pumps

The RPS 2900 Hydraulic Pump supplies paint to the spray guns. There are two displacement pumps. Two displacement pumps allows the user to have a two-color system.

Paint Spray Guns

The Paint Spray Guns are pneumatically triggered to spray paint stripes when commanded by the Programmable Skipline Controller.

Bead Spray Guns

The Bead Spray Guns are pneumatically triggered to spray reflective materials when commanded by the Programmable Skipline Controller.

Optional Accessory Kits

Winch Kit

The RoadPak Winch Kit is used to lift the gun arm during spray operation.

Seat Kit

The Seat Kit allows for an operator position to be added to the bed of the vehicle. This allows for better control of the guns and steerable carriage.

Additional Gun Kit

The Additional Gun Kit consists of one bead gun and one spray gun, and the needed fittings, hoses, air tubing and mounting hardware to add the guns to the gun arm carriage.

Laser Kit

The Laser Kit provides the user with a bright green line to follow for vehicle and spray gun alignment.

Steerable Carriage Kit

The Steerable Carriage is fitted to the existing gun arm carriage, which gives the operator the ability to drive the carriage left or right at a chosen speed. The control can be mounted to the Seat Kit control arm, or used as a hand-held control.

Pressure Balancing Kit

The Pressure Balancing Kit allows the operator to connect the two paint pumps at their outlets to balance the pressure between the two pumps. This ensures that each spray pattern is equal at each gun.

Double Drop Kit

The Double Drop Kit consists of one bead gun, one bead hose, and the fittings to connect the parts. It is used for element double drop applications.

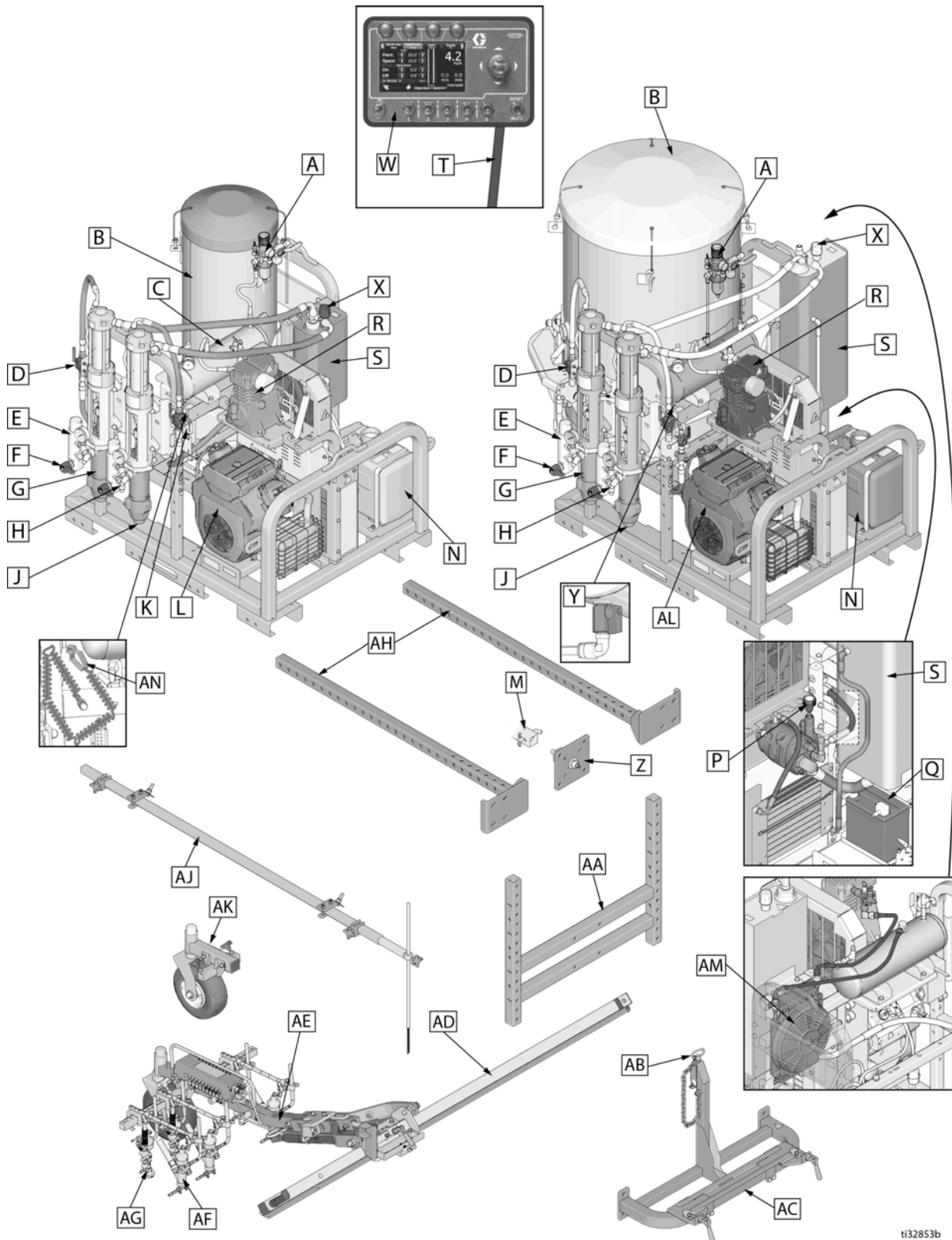
Video Guidance System™

The video Guidance System provides the user with video of a bore sight view for alignment on either the left or right side of the vehicle. The system consists of a 9 in. monitor, interfacing cables, video camera and mounting bracket.

Front Guidance System

The Front Mechanical Guidance System provides the user with a pointer for alignment on either the left or right side of the vehicle.

Component Identification



t132853b

Component Function



A	Air Regulator	Allows regulation of the bead tank air pressure
B	Bead Tank	36 gallon or 120 gallon bead tank. Holds reflective materials or element for single or double drop beading
C	Air Accumulator Tank	Helps maintain consistent air power to accessories
D	Hydraulic Valve	Valve to shut off/on the hydraulic fluid to the hydraulic motor
E	Fluid Filter	Filters fluid between the fluid source and the spray gun
F	Prime/Spray Valve	Used to switch between priming and spraying
G	RPS 2900 Paint Pump	Provides fluid to be sprayed through the spray gun
H	Fluid Outlet	Supplies fluid from the displacement pump to the spray gun
J	Fluid Inlet	Displacement Pump entry for fluid from the paint drums (paint drums not shown)
K	Electrical Junction Box	Allows the user access to electrical system
L	18 HP Engine	Powers the hydraulic pump and the air compressor
M	2 in. Hitch Receiver (not provided)	Needed to hook-up the gun arm to the back of a truck
N	Fuel Tank	Holds 6 gallons (23 liters) of gasoline
P	Hydraulic Pressure Control Knob	Provides adjustment of hydraulic pressure (clockwise increases pressure)
Q	Battery	Provides power to start the Engine and Control Box
R	Compressor	Provides an air supply for the solenoids and pressurizes the bead tanks
S	Hydraulic Reservoir	RoadPak holds 4 gallons (15.1 liters) of hydraulic oil for the hydraulic pump. RoadPak HD holds 8 gallons (30.28 liters) of hydraulic oil for the hydraulic pump
T	I/O Cable	Carries electronic control signals from the Controller to the RoadLazer
W	Programmable Skipline Controller	Allows the user to program the operation of the RoadLazer
X	Breather Cap	Provides a means for hydraulic reservoir ventilation, oil check, and fill
Y	Air Pressure Quick Release Connection	Allows the user to use pressurized air
Z	Hitch Insert	Allows the user to connect the gun arm to a single hitch vehicle
AA	Mounting Bracket	Allows the user to connect the gun arm mount to the optimum height
AB	Stow Bracket Pin	Secures the spray gun boom arm when the RoadLazer is in transport mode
AC	Gun Arm Mount	Supports the main beam and the gun arm
AD	Slide Beam	Supports the spray gun boom arm
AE	Spray Gun Boom Arm	Allows striping on either side of the vehicle at adjustable distances
AF	Bead Spray Gun	Sprays beads when commanded by the Controller
AG	Paint Spray Gun	Sprays fluid when controller by the Controller
AH	Slide in Mounting Frame	Allows user to connect the gun arm to the RoadPak frame
AJ	RoadPak Pointer System	Allows the user an alignment tool
AK	Gun Arm Support Wheel	Supports gun arm when needed for wide/multi-gun patterns
AL	26.5 HP Engine	Powers the hydraulic pump and air compressor on RoadPak HDs
AM	Air Cooler/Dryer	Cools and dries air to bead tank and accessories
AN	Grounding Clamp	Dissipates static electricity during flushing

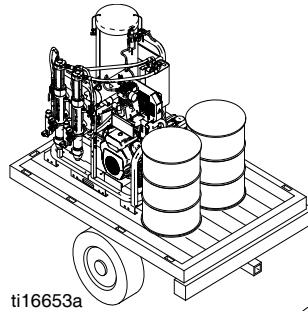
Setup

Charge Battery

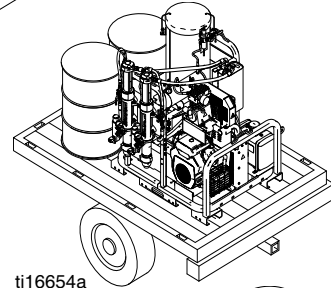
If the battery is newly purchased or has not been used for a long time, use a standard 12vdc automotive battery charger to charge it before use.

Installation of RoadLazer into Vehicle

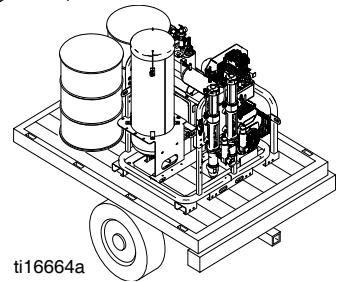
				
CRUSH HAZARD				
RoadLazer needs to be properly secured to prevent it from moving during transportation and operation.				
Paint drums are heavy and could shift from side to side when the vehicle is cornering. The paint drums could fall from the vehicle and cause injury or death. Secure the drums when the vehicle is in transport or spraying.				



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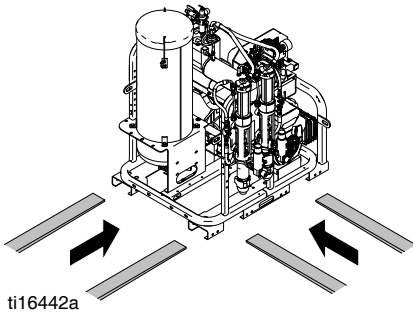


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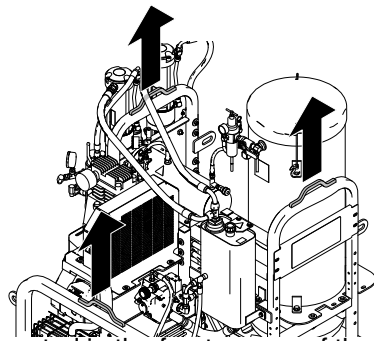
RoadPak Installation

Load RoadPak into vehicle using a forklift or a hoist that is rated for the weight capacity of the RoadPak. For RoadPak weight information see **Technical Data**, page 32.

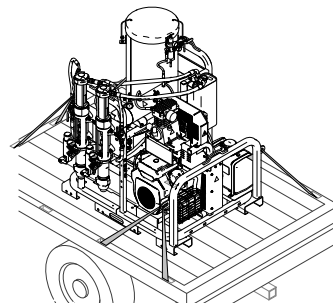
After mounting the RoadPak on the vehicle, firmly secure the RoadPak to the vehicle using the tie-down brackets at all four corners, or by bolting the RoadPak through the bed of the truck to the frame in all four locations.



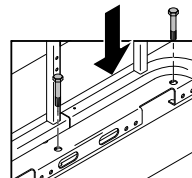
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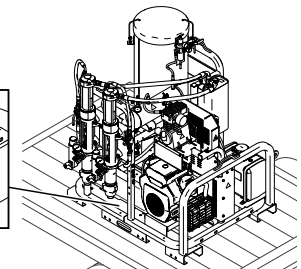
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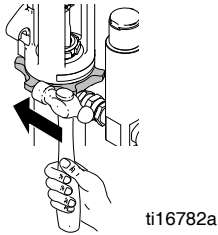


The RoadPak can be mounted in the front or rear of the vehicle bed as well as in any orientation desired. The base of the RoadPak is 39.5 in. x 49.5 in. (1.0m x 1.25m).

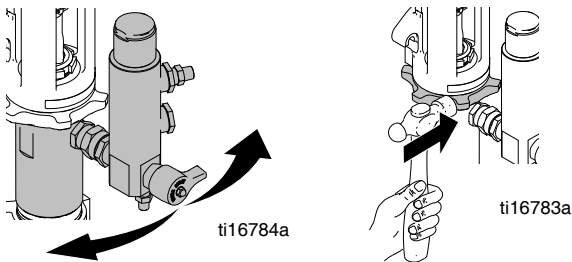
Filter Orientation

After mounting and securing the RoadPak to the vehicle, position the filter assemblies as desired.

1. Use a hammer to loosen the large jam nut on the pump assembly.

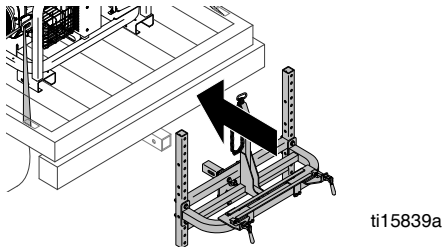


2. Rotate the filter assembly to the desired orientation and use a hammer to tighten the jam nut and lock the assembly into place.

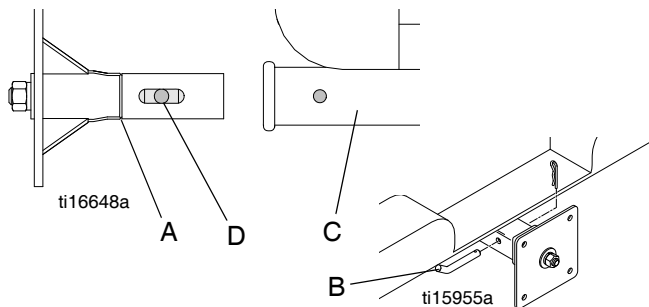


Gun Arm Bracket Mount

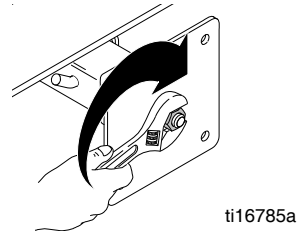
Single Hitch Mounting Bracket (24G626) Installation (Option 1)



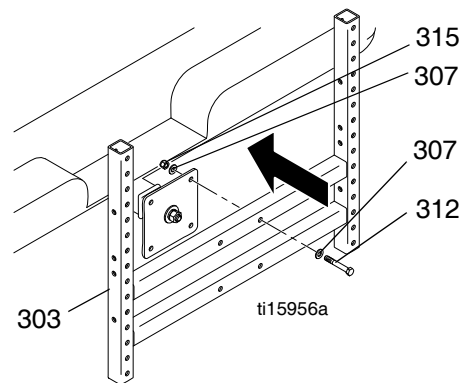
1. Install hitch insert bracket (A) into receiver (C). Ensure hitch pin (B) goes through tightening rod hole (D).



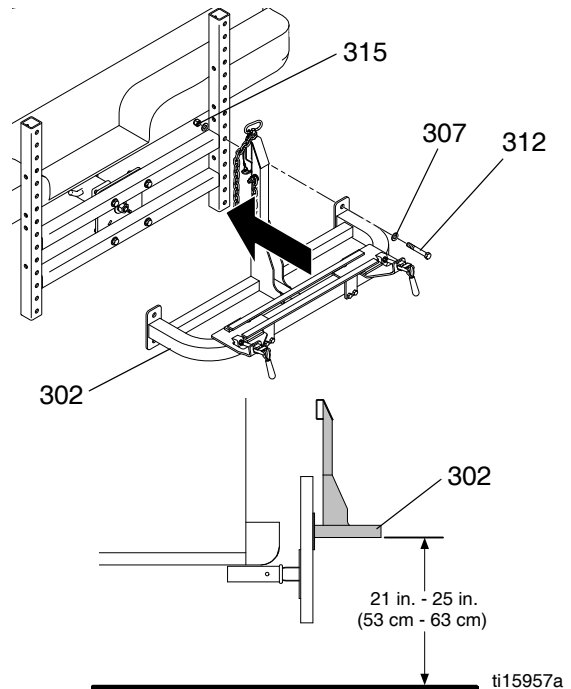
2. Tighten nut until the hitch insert bracket is pulled securely to the receiver and no play is seen between the two parts.



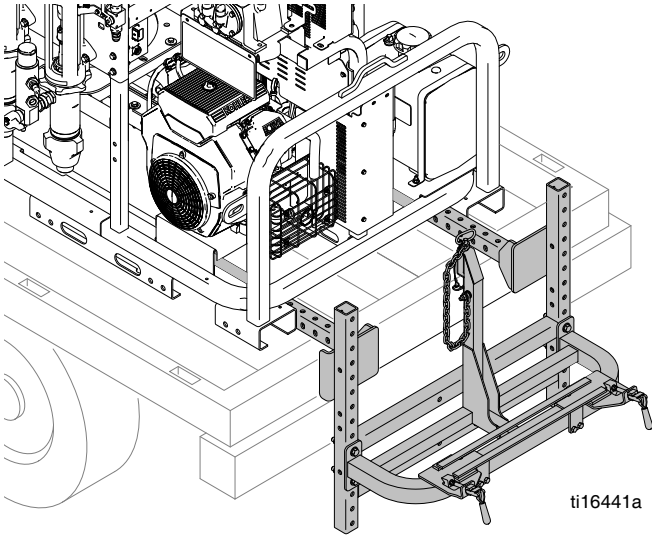
3. Install the height adjustment bracket (303) to the hitch insert bracket with bolts (312), washers (307), and nuts (315). Ensure the height adjustment bracket is installed level.



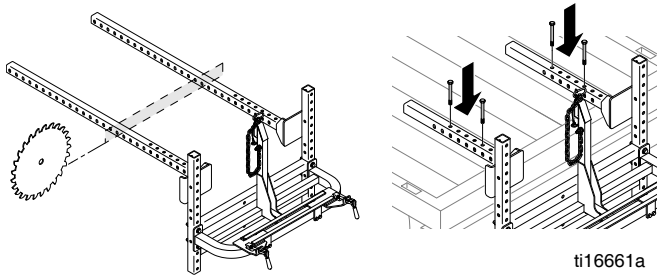
4. Install stow bracket (302) to height adjustment bracket (303) with bolts (312), washers (307), and nuts (315). Locate the bottom of the stow-bracket 21-in. to 25-in. (53cm - 63cm) from the ground. Ensure the stow-bracket is installed level.



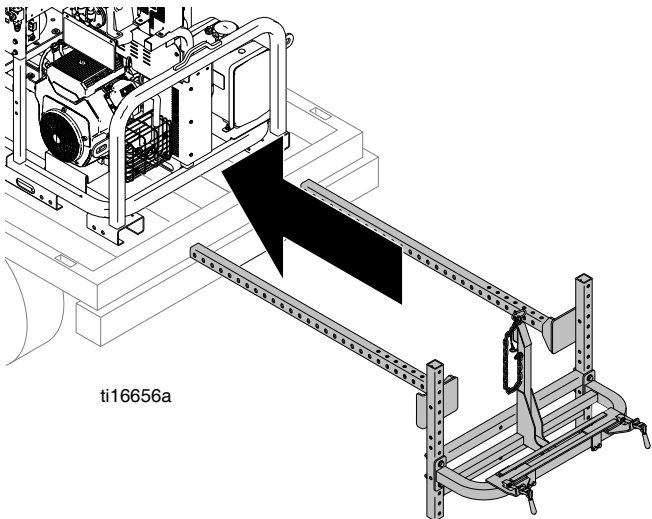
RoadPak Mounting Bracket (24G627) Installation (Option 2)



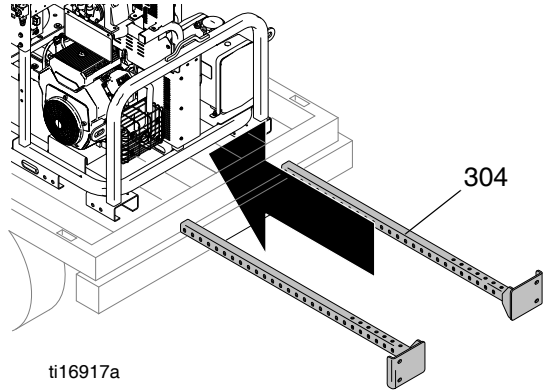
NOTE: Cutting the RoadPak mounting arms and bolting them through the bed to the frame of the vehicle is an option in addition to the following mounting techniques:



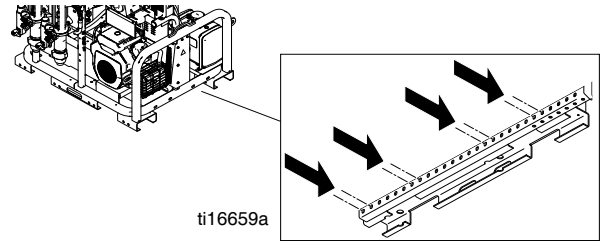
Narrow Orientation



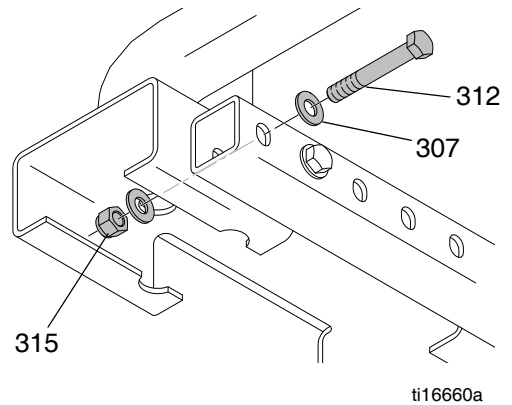
1. Slide the RoadPak mounting arms (304) between the two fork lift channels in the frame.



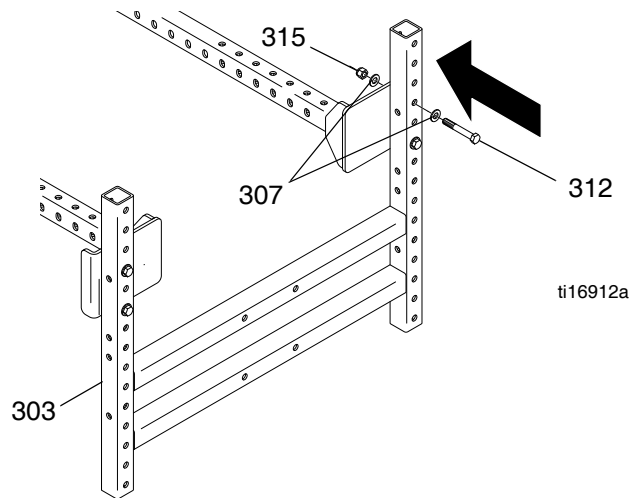
2. Depending on where the RoadPak is located on the vehicle determines which holes to bolt through on the RoadPak frame. There are 8 possible mounting holes for each mounting arm. Fasten to at least two holes on each side.



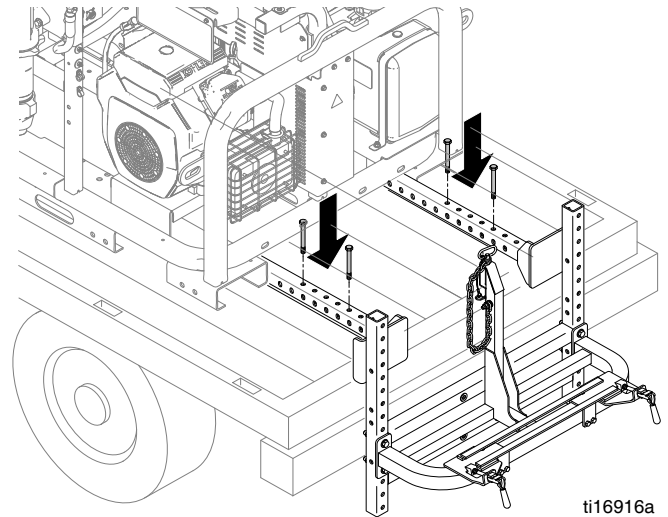
3. Hand-tighten bolts (312), nuts (315), and washers (307) to mounts.



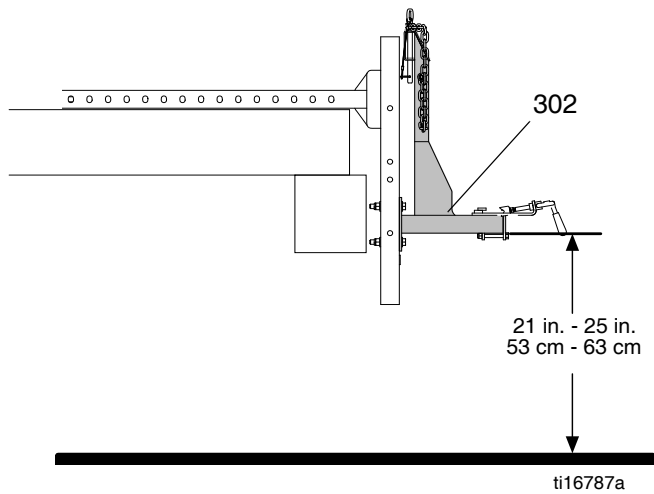
4. Install the height adjustment bracket (303) to the RoadPak mounting arms (304) with bolts (312), washers (307), and nuts (315).



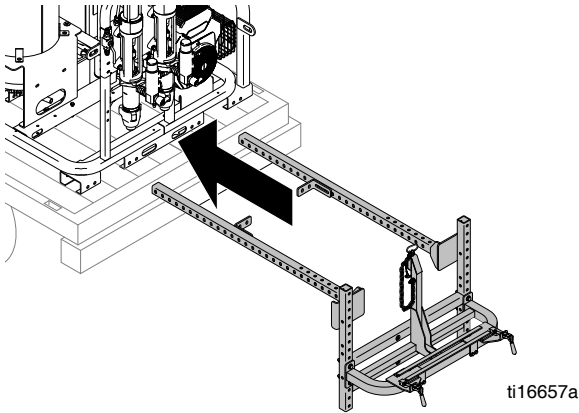
NOTE: It is recommended to bolt the mounting bracket through the bed of the vehicle and to the frame of the vehicle.



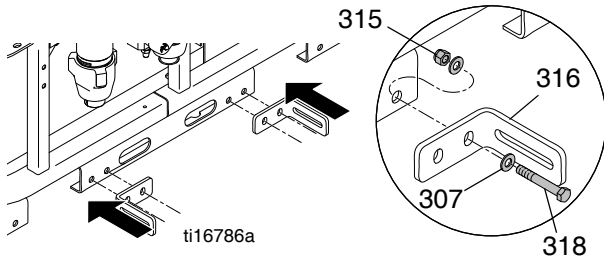
5. Tighten all bolts to lock into place, torque to 28 ft-lb.
6. Install stow-bracket (302) to height adjustment bracket (303). Locate the bottom of the stow-bracket 21 in. to 25 in. (53cm - 63cm) from the ground. Ensure the stow-bracket is installed level.



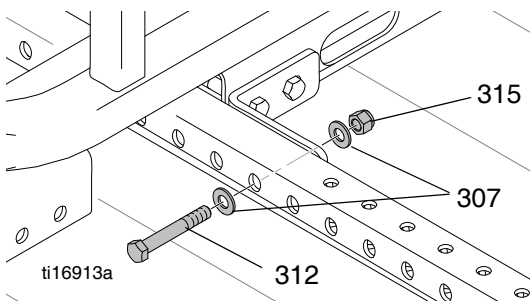
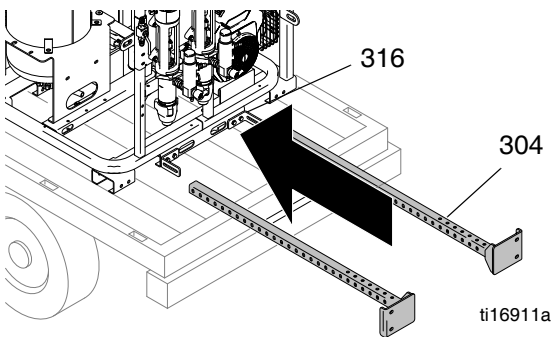
Wide Orientation



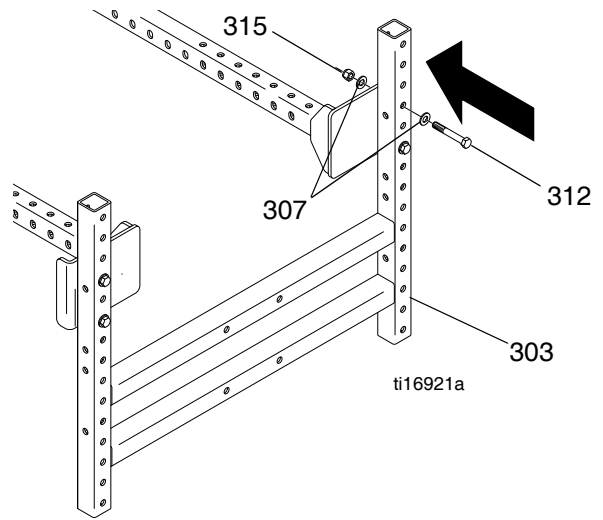
1. Bolt brackets (316) to the RoadPak in four locations with bolts (312), washers (307), and nuts (315). It is ideal to locate the brackets as far apart as possible to provide optimal support. The mounting location of the brackets will depend on where the RoadPak is mounted on the vehicle.



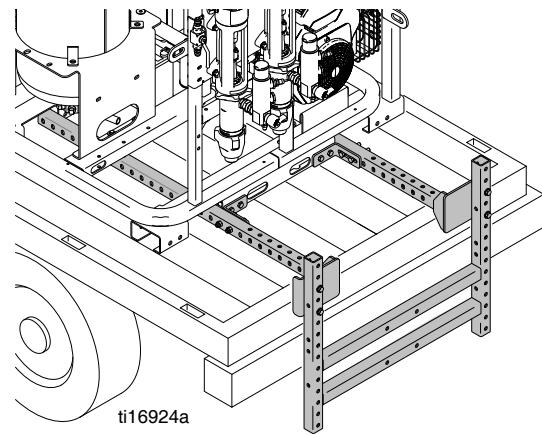
2. Slide the RoadPak mounting brackets (304) through the cut out holes in the frame and hand-tighten the mounting arms to the brackets with bolts (312), washers (307), and nuts (315).



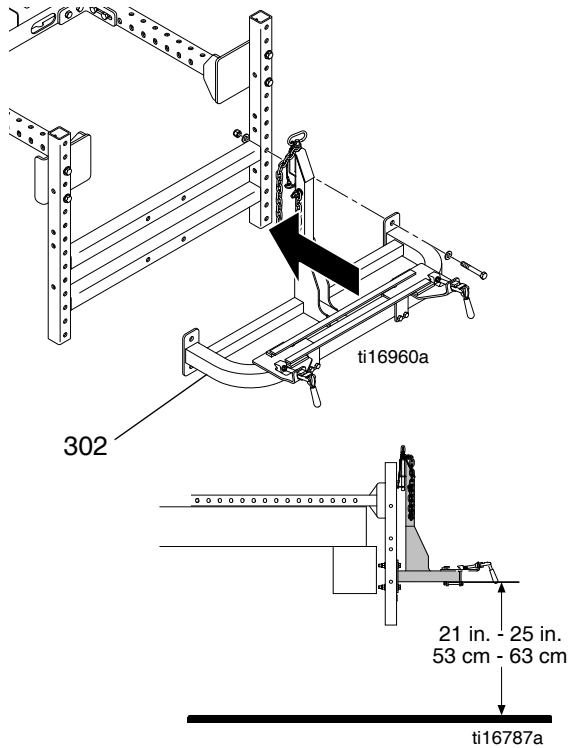
3. Install the height adjustment bracket to the RoadPak mounting arms (303).



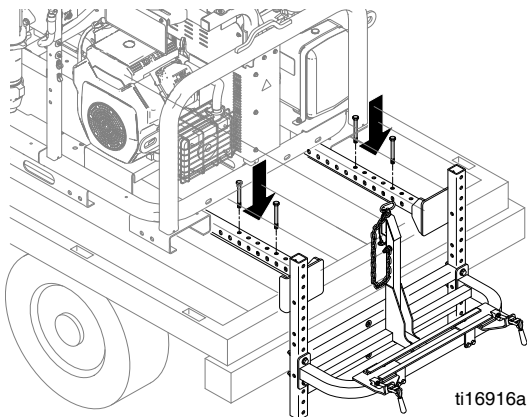
4. Tighten all bolts to lock into place, torque to 28 ft-lb.



5. Install stow-bracket (302) to height adjustment bracket (303). Locate the bottom of the stow-bracket 21 in. to 25 in. (53cm - 63cm) from the ground. Ensure the stow-bracket is installed level.



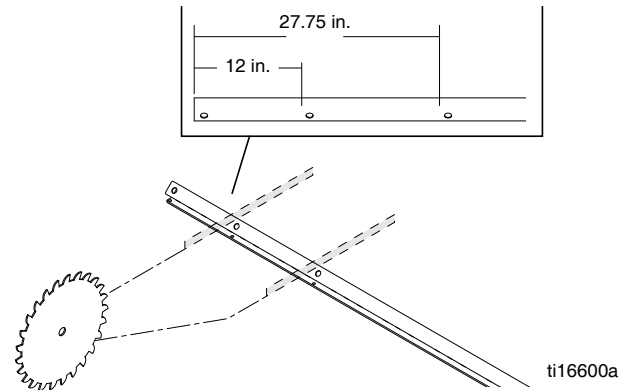
NOTE: It is recommended to bolt the mounting bracket through the bed of the vehicle and to the frame of the vehicle.



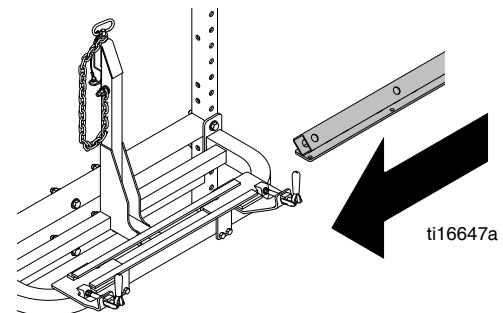
Slide Beam Installation (24G630)

The slide beam is 87.75 in. (2.2m) long. The Slide Beam is shipped to accommodate wider vehicles. The beam can be cut down to 75.75 in. (1.9m) long or 60 in. (1.5m) long to accommodate different vehicle sizes.

1. To shorten the beam to 75.75 in. long, cut 12 in. from the end the beam towards the next hole on the beam. To shorten the beam to 60 in., cut 27.75 in. from the end of the beam towards the third hole as shown below.

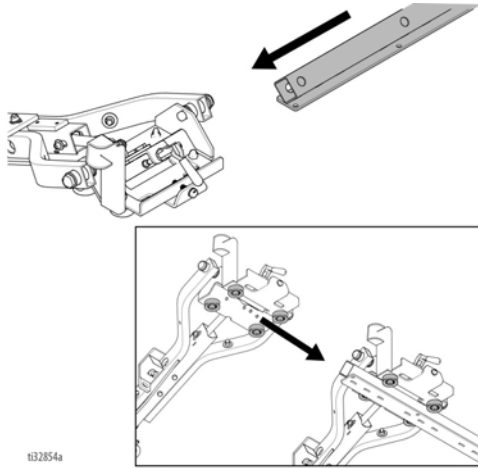


2. After determining the desired length, slide the beam into the channel on the bracket.

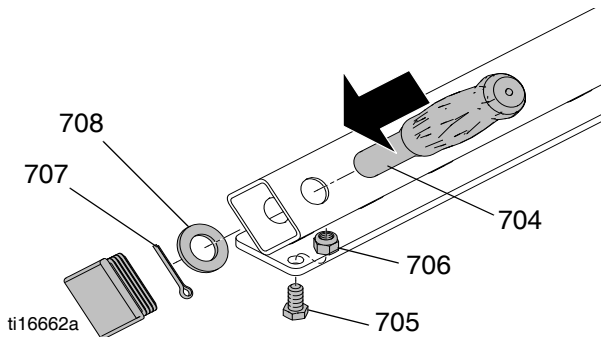


Gun Arm Installation (25M708, 25M709, 25M710)

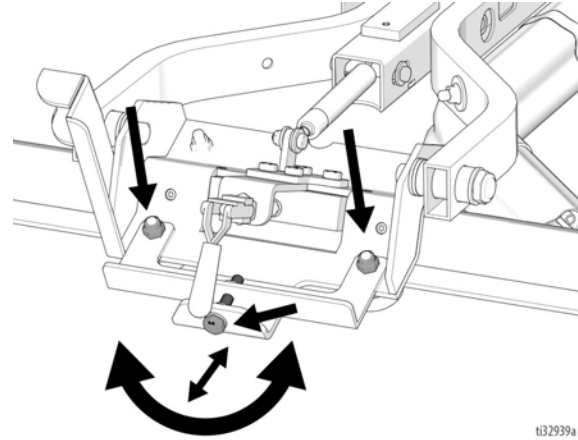
1. Position the gun arm assembly next to the vehicle.
2. Pull the slide beam out to the side of the vehicle where the gun arm is located. Lift the gun arm and hold the traverse bracket in the position shown below. Slide the beam through the wheels so they are mounted on the track of the slide beam as shown below.



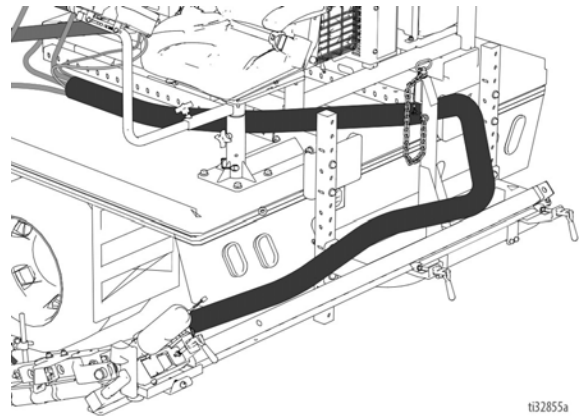
3. Attach the handle (702) to each end of the slide beam. Press the cotter pin (707) through the handle to hold it in place. Fasten nut (706) and bolt (705) through the slide beam on both ends to act as stops on the channel.



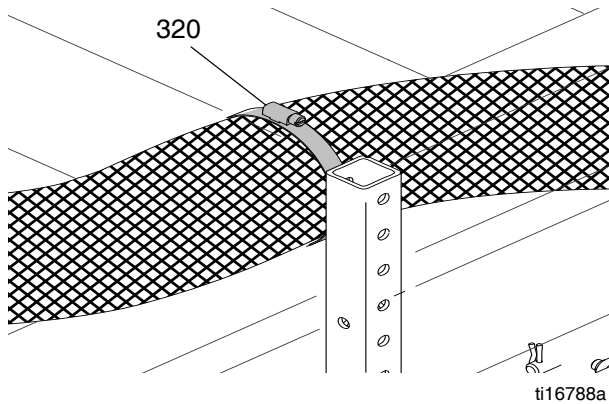
4. If necessary, adjust rollers to eliminate any play in the traverse bracket/gun arm carriage. Loosen roller nuts just enough so that when the adjustment bolt is turned, the rollers will move in or out as desired. Re-tighten roller nuts to lock their position. Adjustment is done correctly when the traverse bracket/gun arm carriage slides freely and there is no play between the rollers and the beam.



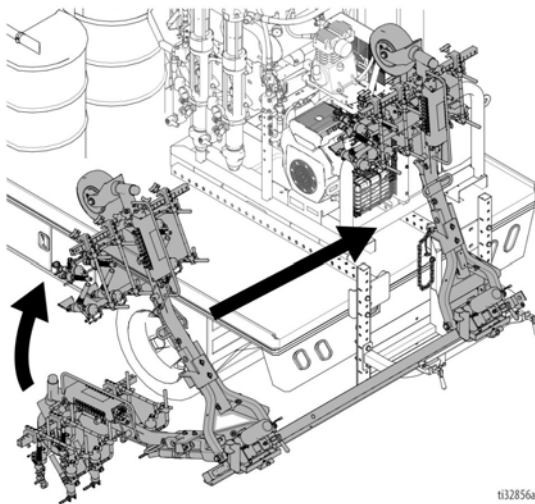
5. Route hoses for the gun arm before moving arm to prevent hoses from being pinched.



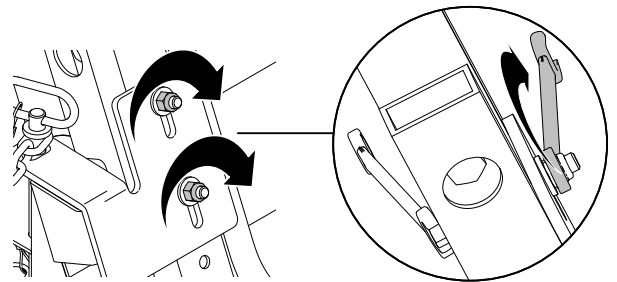
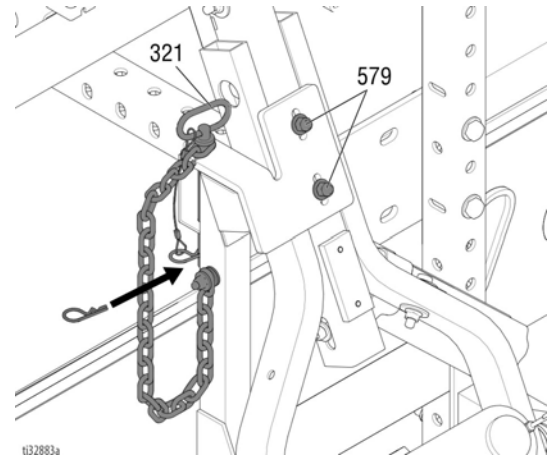
- Position gun arm at the end of the slide beam and secure the hose bundle to the height adjustment bracket with a rubber pad and hose clamp (320).



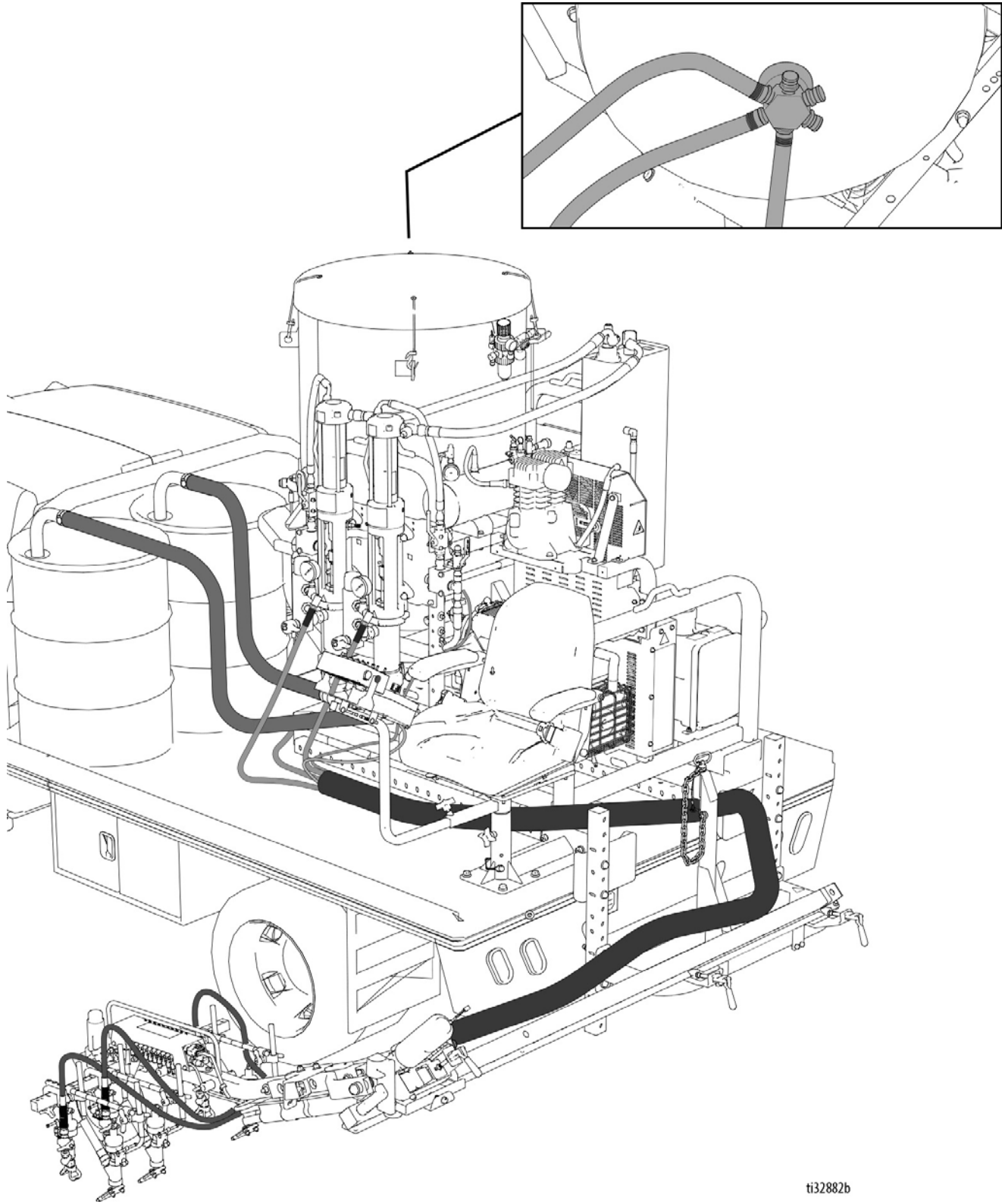
- Lift gun arm to a vertical position and slide it over the stow bracket.



- Rest the gun arm on the stow bracket and position the stop to sit properly on the stow bracket. Slide the pin (321) through the gun arm bracket and stow bracket to secure the gun arm. Insert clip through pin. Tighten the two bolts (579) down to lock the gun arm bracket into place.



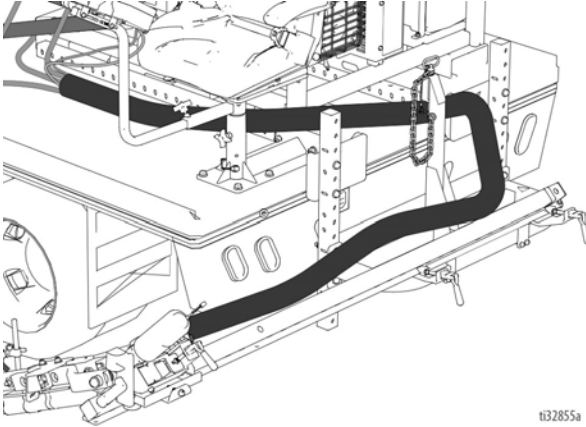
Hose Routing to Pumps and Tanks



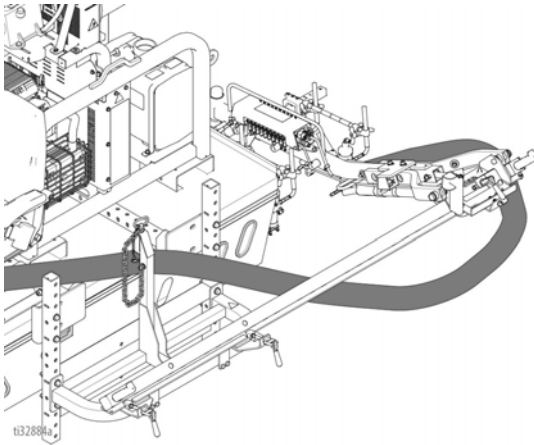
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Hose Routing

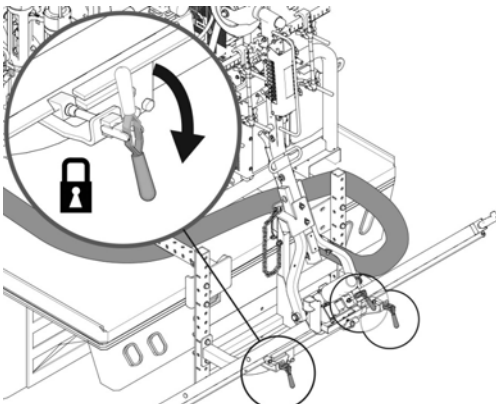
1. Pull slide beam out to one side of the vehicle. Pull gun arm out and lower it to make sure the hose bundle has been secured at the proper location to ensure full movement for the gun arm to move from one side to the other. Make adjustments to the hose clamp that secures the bundle as needed.



2. Lift gun arm back to the stow position. Pull slide beam out to other side of vehicle and pull the gun arm to that side to ensure the hose length is adequate for full movement.

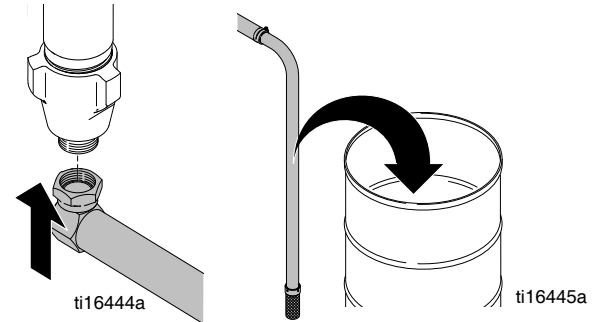


3. Put gun arm back to the stow position and pin it into place. Center the slide beam to the vehicle. Lock the slide beam and gun arm into place by engaging the clamps for each.

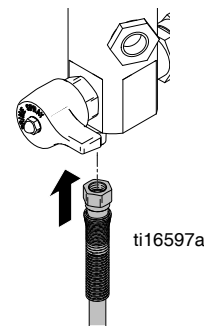


Hose Connection

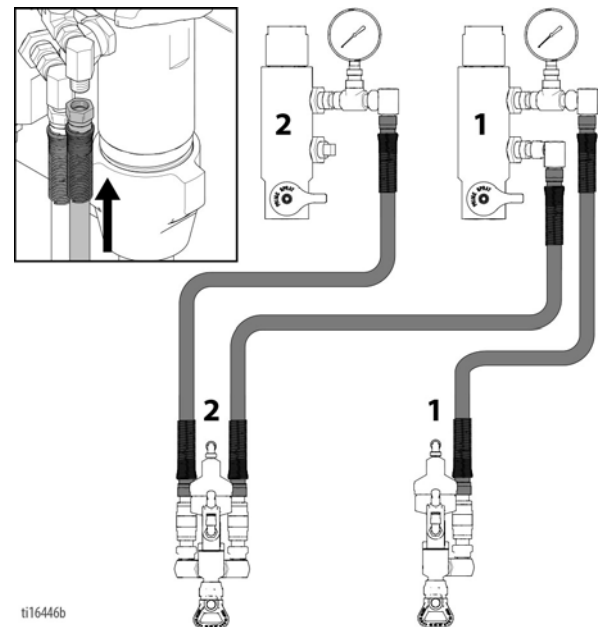
1. Install suction tubes to the RPS 2900 pump and route to paint drum or tote.



2. Install return line from the RPS 2900 filter assembly and route back to the paint drum or tote.

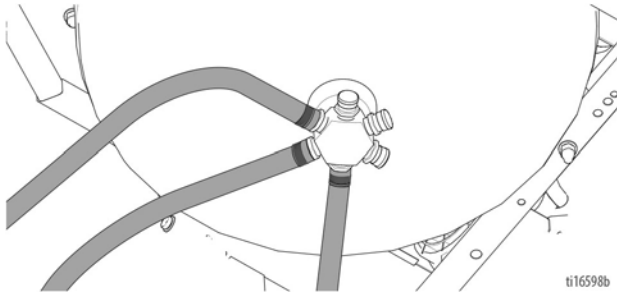


3. Install paint lines to RPS 2900 filter assemblies. For a two color system, route the hose from paint gun 1 to pump 1 and route one hose from paint gun 2 to pump 1. Route the second hose from paint gun 2 to pump 2.

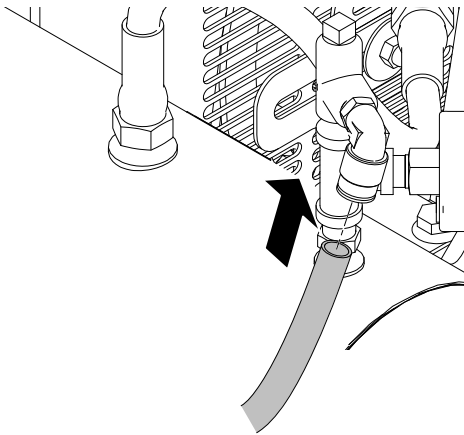


Setup

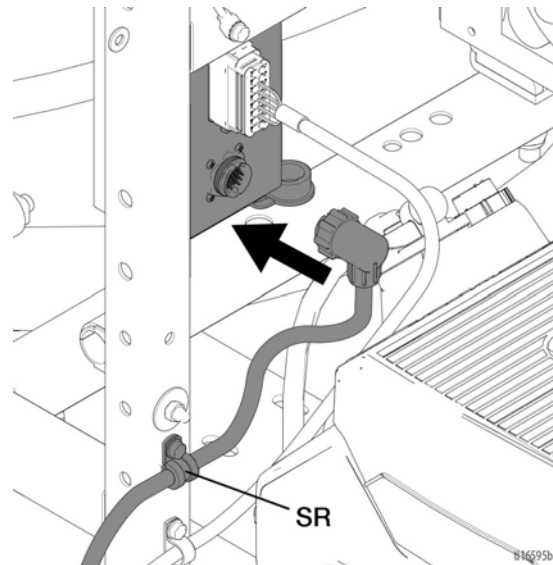
4. Install bead lines to the bead tank.



5. Install air hose from gun arm to quick connect fitting on air tank.



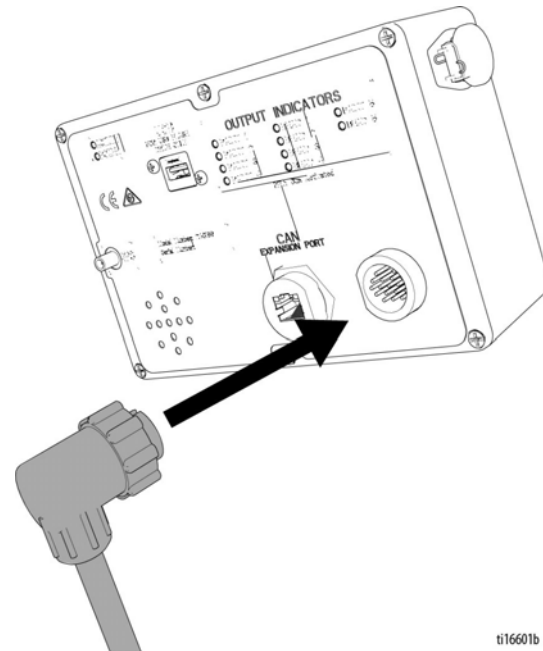
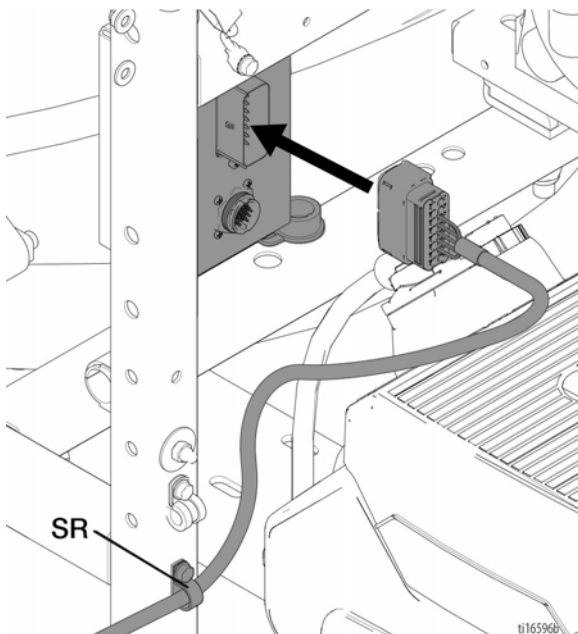
2. Connect control cable to the junction box. Fasten cable to cable clamp for strain relief (SR) on the connection.



3. Route the control cable to the cab of the vehicle without pinching the cable, or to the Seat Kit control arm. Connect the cable to the control box.

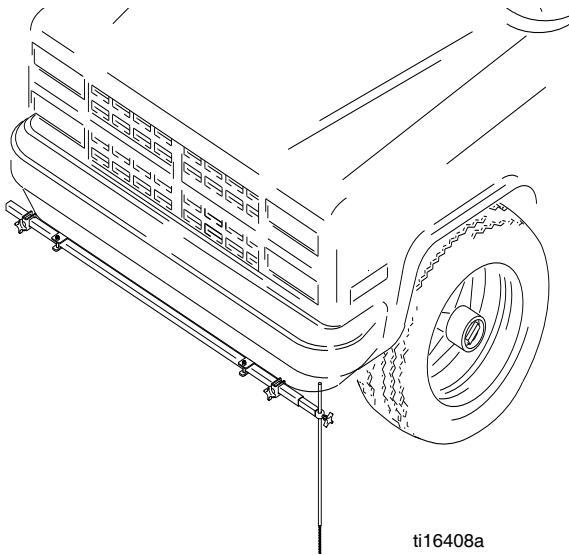
Electrical Cable Connections

1. Connect gun arm cable to the junction box. Fasten cable to cable clamp for strain relief (SR) on the connection.

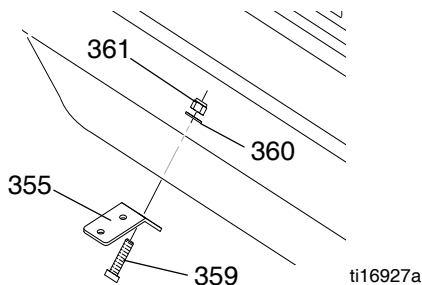


Install Front Pointer Instructions

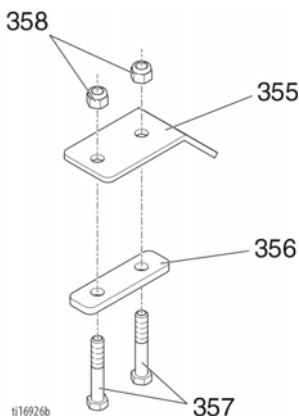
1. Locate an area on the vehicle to mount the Road-Pak pointer system that will allow the user to see the indicator rod from the driving position or with the help of the Road View Camera System.



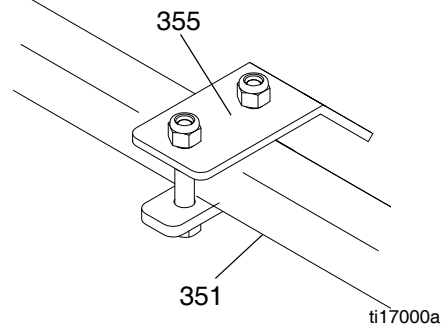
2. If needed, drill two 9/16 in. holes in the desired location.
3. Assemble mounting bracket (355) to desired location with bolt (359), washer (360), and nut (361).



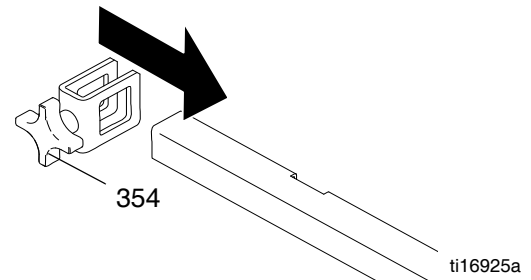
4. Hand tighten lock bar (356) to mounting bracket (355) with bolts (357) and nuts (358).



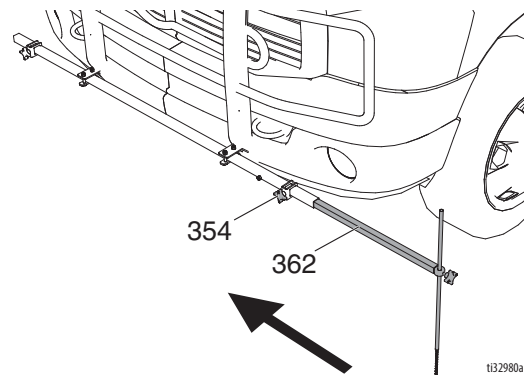
5. Slide support bar (351) through brackets (355) and tighten fasteners to secure in place.



6. Assemble extension clamp to support bar.



7. Insert indicator rod (362) into guide extension arm (352) and secure in place with knob (354).



8. Adjust the indicator rod by loosening extension clamps and sliding the guide extension arm (352) to desired position. Secure by tightening knob (354).




Kits (Optional)

Refer to the kit manuals for installation and usage.

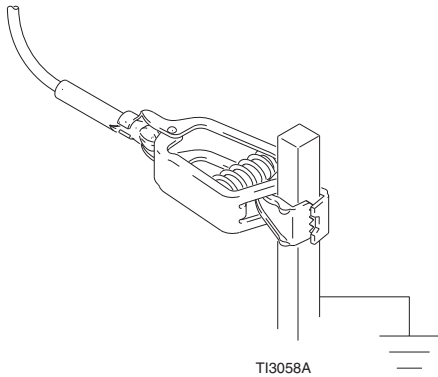
- Front Guidance System
- Video Guidance System
- Winch Kit
- Seat Kit
- Additional Gun Kit
- Laser Kit
- Steerable Carriage Kit
- Pressure Balance Kit
- Double Drop Kit

Operation

Grounding Procedure (For Flammable Materials Only)

				
<p>The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.</p>				






1. Ground RoadLazer with grounding clamp to earth ground while flushing.



Pressure Relief Procedure

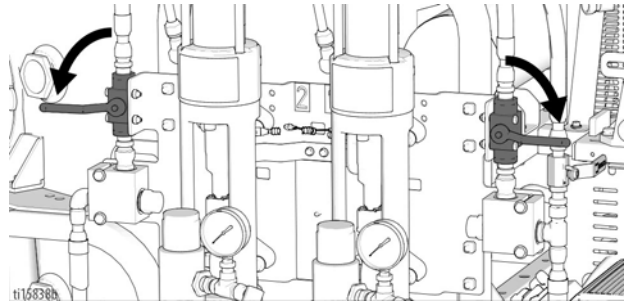


Follow the **Pressure Relief Procedure** whenever you see this symbol.

				
<p>This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.</p>				

RPS 2900 Pump Fluid Pressure Relief

1. Set hydraulic valve to OFF position.

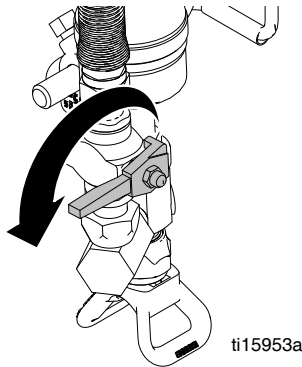


2. Run engine at half throttle.
3. Place empty pail under paint guns to catch drainage.
4. Relieve hose pressure through guns. Use Programmable Skipline Controller to trigger each gun for at least 3 seconds each.

NOTICE

Always relieve pressure with the guns, not with the filter drain valves. Using the filter drain valves can cause damage, and prevent them from sealing in the close/spray positions.

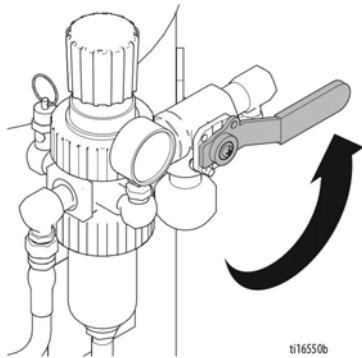
- Close paint gun ball valves.



- Open all drain valves, one at a time.
- Close valves immediately to prevent paint from drying in system.
- If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved:
 - VERY SLOWLY loosen the tip guard retaining nut or the hose end coupling and relieve pressure gradually.
 - Loosen the nut or the coupling completely.
 - Clear the obstruction in the hose or tip.

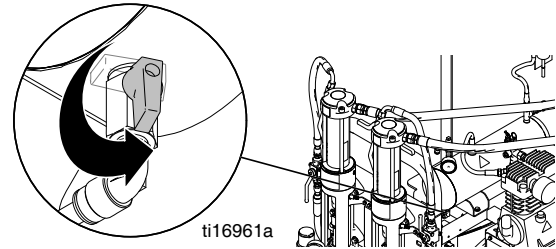
Bead System Pressure Relief

- Relieve air pressure in bead tank by turning bead system valve to OFF position.



Air System Pressure Relief and Condensation Drain

- Relieve air pressure and drain condensation in air tank by turning air valve to OPEN position.



EMERGENCY SHUT OFF

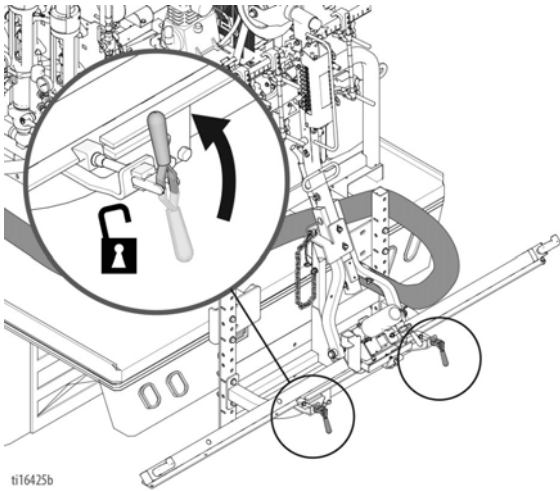
To shut down the entire RoadLazer system, set POWER ON/OFF on the Programmable Skipline Controller to the OFF position.

Load Reflecting Materials

- Set POWER ON/OFF on Programmable Skipline Controller to OFF.
- Set RoadLazer engine ignition key to OFF.
- Relieve air system pressure by opening ball valve on the air tank until gauge reads 0.
- Relieve air pressure in bead tank by turning bead system valve to OFF position.
- Remove cover from bead tank.
- Screen reflective materials to prevent debris from entering tank.
- Turn T-handle counterclockwise to open bead fill port.
- Load bead tank with reflective materials.
- Once filled, turn T-handle clockwise, and place cover on tank.

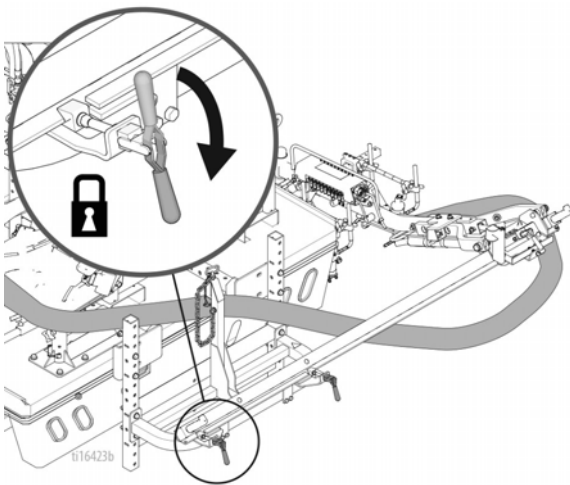
Set Up Slide Beam and Gun Arm

1. Unlock gun arm clamp and the slide beam clamps.



2. Pull slide beam to left or right side of vehicle. Lock the slide beam clamps.

3. Remove gun arm from upright stowed position, and slide to end of boom. Slowly lower gun arm, and lock into position with clamp.



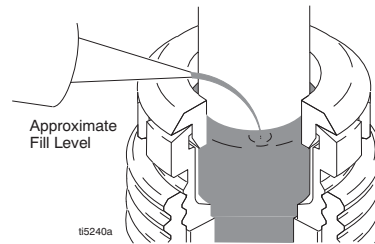
Prepare System to Paint

NOTICE

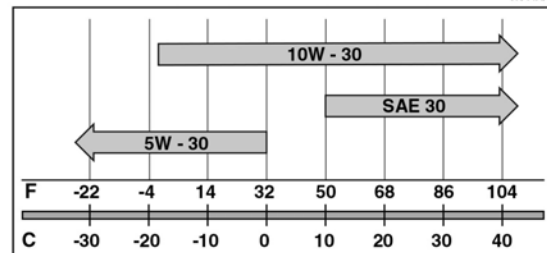
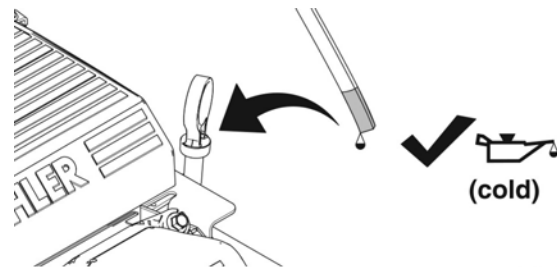
Paint could splash from the paint drum bung adapters when the paint drums are full and the vehicle is moving. Do not overfill the paint drums.

Initial Settings

1. Ground RoadLazer with grounding clamp to earth ground. See **Grounding Procedure**, page 22.
2. Fill throat packing nut with TSL to prevent premature packing wear. **Do this each time you spray and store.**



3. Check engine oil level when engine is cold. If necessary, add appropriate oil for air temperature at time of operation.



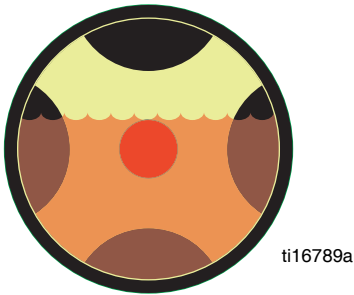
NOTICE

Engine can be started with low oil and may not shut off when low oil is detected. Damage may occur if oil is not at appropriate level before starting and while running equipment.

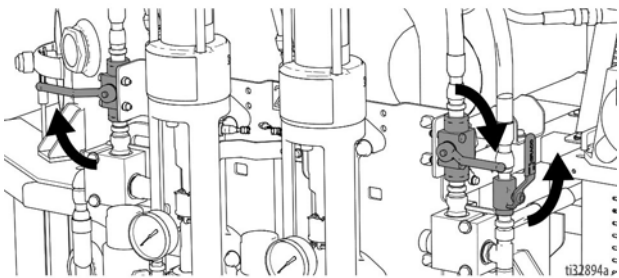
- Fill fuel tank.
- Check hydraulic oil level. Add only synthetic Hydraulic Oil, ISO 46 with a viscosity index (VI) of 154 or higher. Hydraulic tank capacity is approximately 4.0 gallons (15.14 liters) for RoadPak models and approximately 8.0 gallons (30.28 liters) for RoadPak HD models.



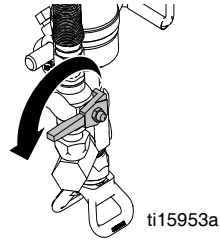
- Check oil level in compressor. **NOTE:** If red dot is visible, add SAE 30W non-detergent air compressor oil.



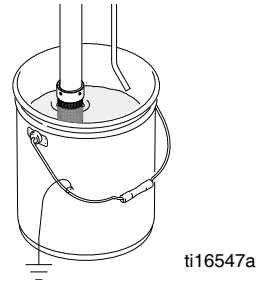
- Verify all hose/fitting connections are tight.
- Turn paint pump hydraulic valves to OFF (closed) position, and bypass valve to START position.



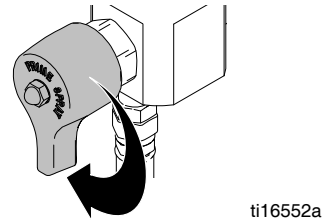
- Turn valve lever by guns clockwise 1/4 turn to OFF position.



- Place suction tube and drain tube in grounded metal pail partially filled with flushing fluid. Attach ground wire to pail and to earth ground.

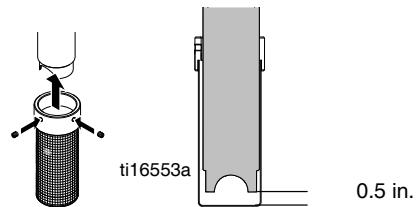


- Turn prime/spray valve down.



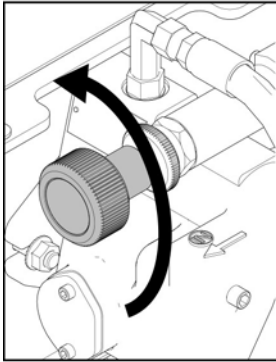
- Install clean inlet strainer.

NOTE: There must be a minimum of 0.5 in. between bottom of strainer and suction tube.

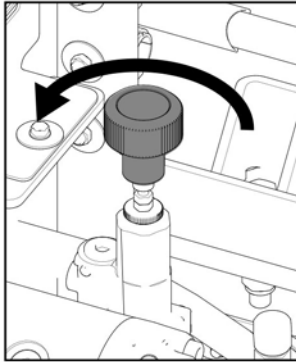


- Turn pressure control counterclockwise to lowest pressure.

ROAD PAK

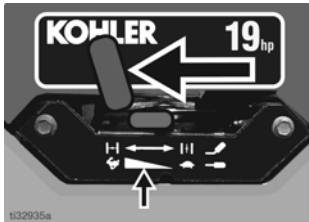


ROAD PAK HD



Start Engine

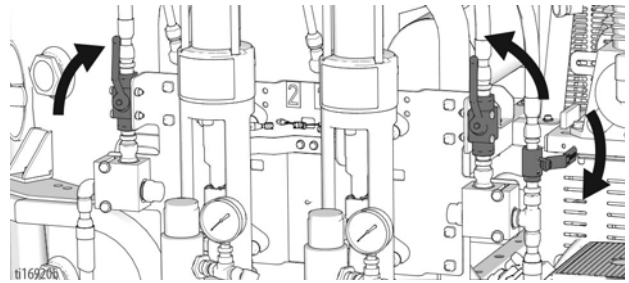
- Set POWER ON/OFF on Programmable Skipline Controller to ON.
- Set engine choke to ON position (19 HP only).
- Set throttle to half speed and turn key.



- After engine starts, set choke to OFF (19 HP only).

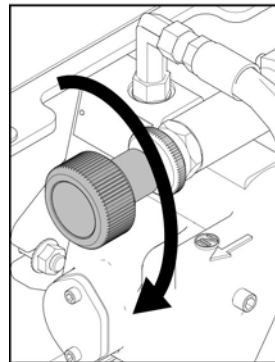
Select/Prime Pumps

- Turn the bypass valve to RUN and open hydraulic valve(s) to activate pumps.

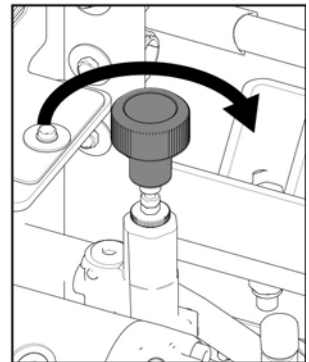


- Slowly turn pressure control clockwise until pump begins to stroke.

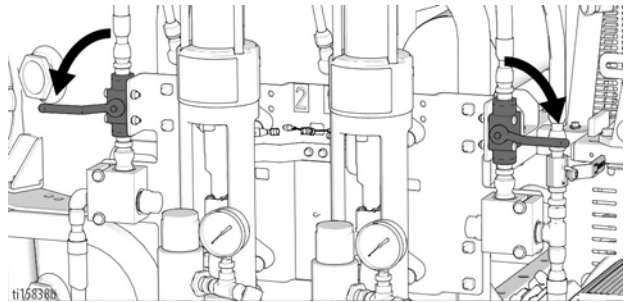
ROAD PAK



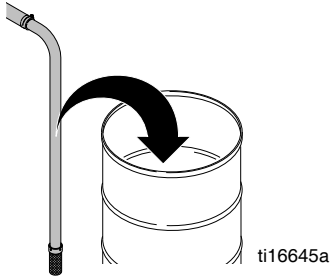
ROAD PAK HD



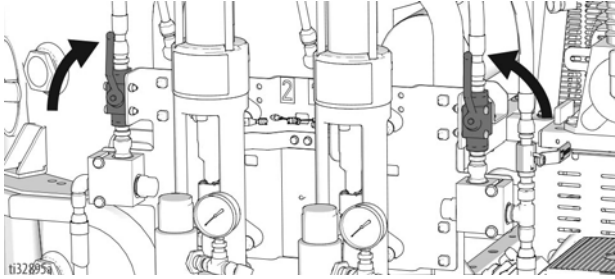
- When flushing fluid comes out of return lines, set hydraulic valve to OFF position.



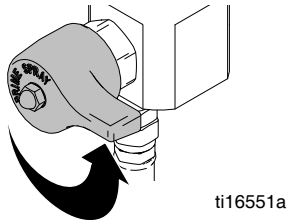
- Place suction hoses in paint drums.



- Open hydraulic valve(s) to activate pumps.



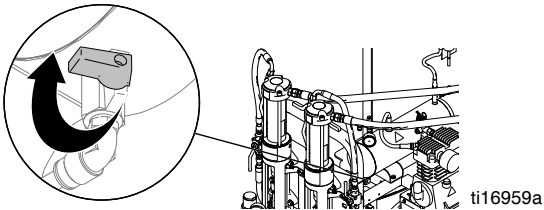
- When paint comes out of return lines, set hydraulic valve to OFF position.
- Turn all drain valves to the SPRAY (closed) position.



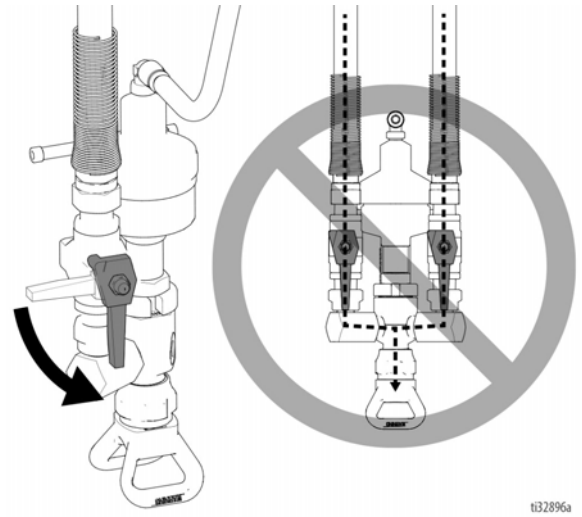
- Place return lines into paint drum.

Prime Guns

- Close air valve to pressurize air system.

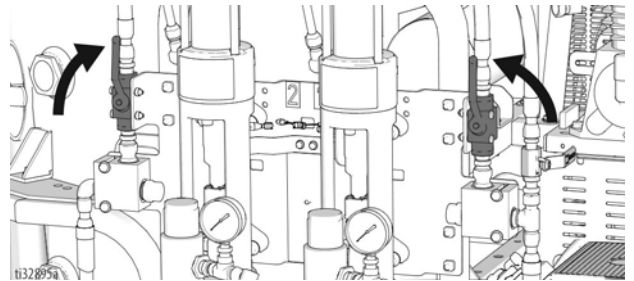


- Only open the spray gun ball valves corresponding to paint pumps and/or color to be used.



NOTE: Never open both ball valves on the two-color gun at the same time. Paint color contamination could result.

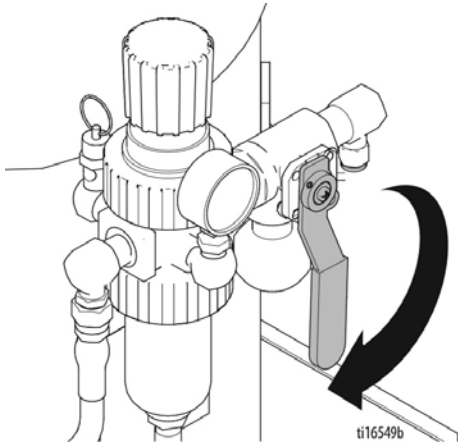
- Place an empty pail under spray guns to catch drainage from spray guns.
- Turn guns on with Programmable Skipline Controller (see Skipline Controller manual).
- Open hydraulic valve(s) to activate pumps.



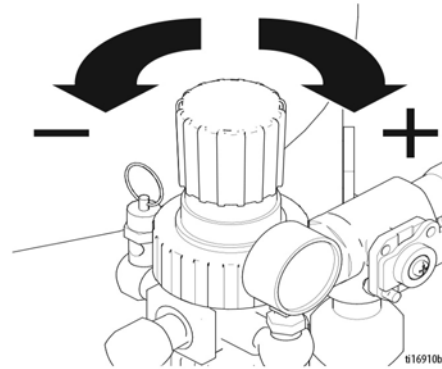
- Turn off guns with Programmable Skipline Controller.

Turn on Bead System

1. To pressurize the bead tanks, turn bead system valve to ON position.



2. Set desired bead tank pressure by turning regulator knob.



3. Remove and secure ground strap from earth ground.
4. System is now ready for painting. Select guns with the Programmable Skipline Controller.

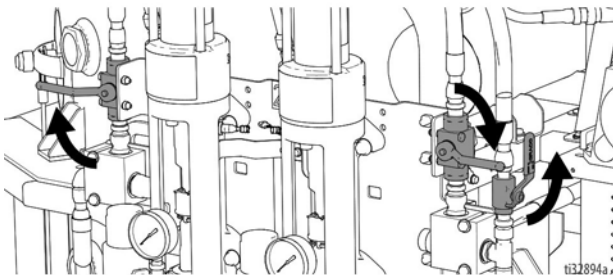
Begin to Spray

Select appropriate procedure from menu on RoadLazer control system. See Skipline Controller manual.

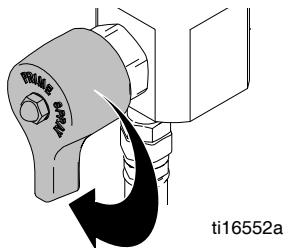
Flush the System

The grounding clamp and ground strap are both required for safe operation. The grounding clamp is for stationary use.

1. Perform **Pressure Relief Procedure**, page 22.
2. Flush the system with compatible solvent. Check the system under pressure for leaks. If any are found, **relieve the pressure**, and repair the leaks. Pressurize the system again, and check for leaks.
3. Ground RoadLazer with grounding clamp to earth ground. See **Grounding Procedure**, page 22
4. Set paint pump hydraulic valve(s) to OFF (closed) position.



5. Fill a 5-gallon pail with water or compatible solvent. Place paint suction hose in pail.
6. Place paint return lines in empty pail.
7. Turn all prime/spray valve to the PRIME (open) position.



8. Turn on Programmable Skipline Controller.

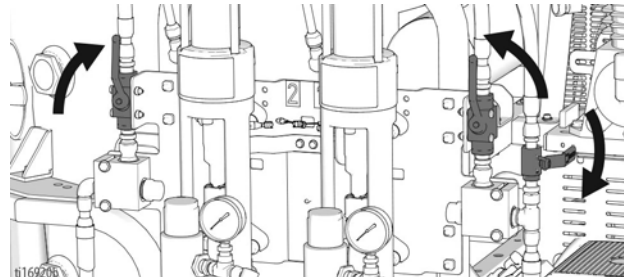
NOTE: Unit will not start until Controller is turned ON.

9. Start Engine as follows:
 - a. Set Choke ON (19 HP only).
 - b. Set throttle to half speed.
 - c. Turn key.
 - d. After engine starts, set choke to OFF (19 HP only).

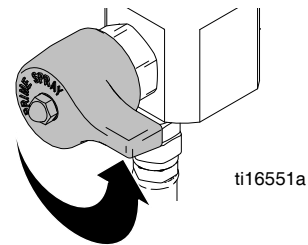
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FIRE AND EXPLOSION HAZARD
To reduce static sparking and splashing, always remove the spray tip from the gun, and hold a metal part of the gun firmly to the side of a grounded metal pail during flushing.

10. Turn the bypass valve to RUN (closed), and open hydraulic valve(s) to activate pumps.



11. When water/solvent comes out of spray gun(s), set paint pump hydraulic valve(s) to OFF position.
12. Turn all prime/spray valves to the SPRAY (closed) position.

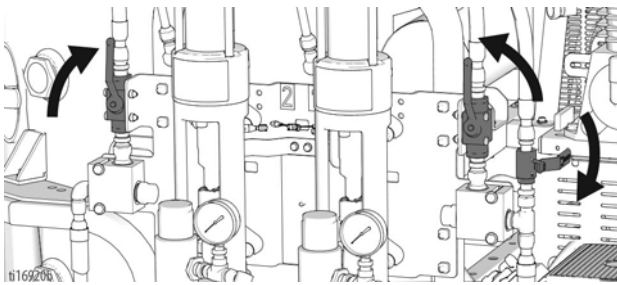


Operation

13. Only open spray gun ball valves corresponding to paint pumps or color used.

NOTE: Never open both valves on the two-color gun at the same time. Paint color contamination could result.

14. Place empty pail under spray guns to catch drainage from spray guns.
15. Turn guns on with Programmable Skipline Controller.
16. Turn the bypass valve to RUN (closed), and open hydraulic valve(s) to activate pumps.

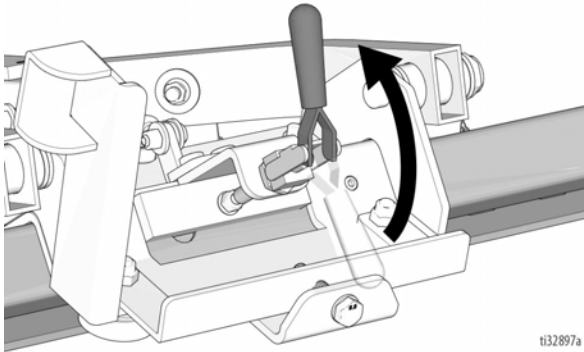


17. When water/solvent comes out of spray gun(s), set paint pump hydraulic valve(s) to OFF position.
18. Turn off guns with Programmable Skipline Controller.
19. Shut off engine and Programmable Skipline Controller.
20. Leave paint pump prime/spray valve(s) and spray gun ball valve(s) open.
21. Remove and secure ground strap from earth ground.

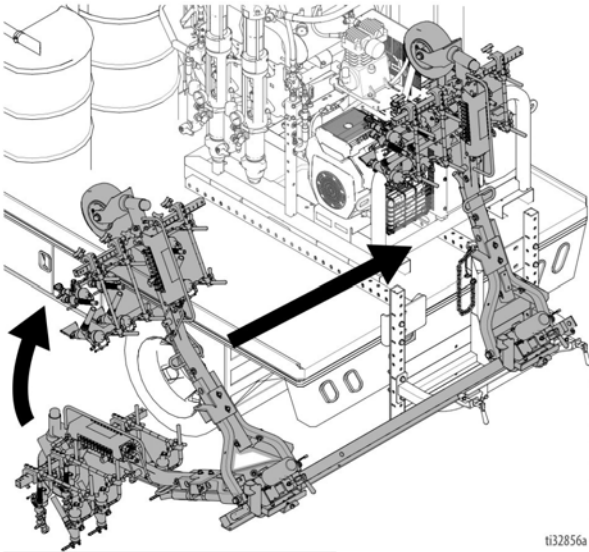
Securing Gun Arm for Transportation

NOTE: Never transport the RoadLazer while the paint gun ball valves are open, the system is under pressure, and/or the engine is running, as this could cause damage to components.

1. Unlock red-handled clamp to allow gun arm to move along slide beam.

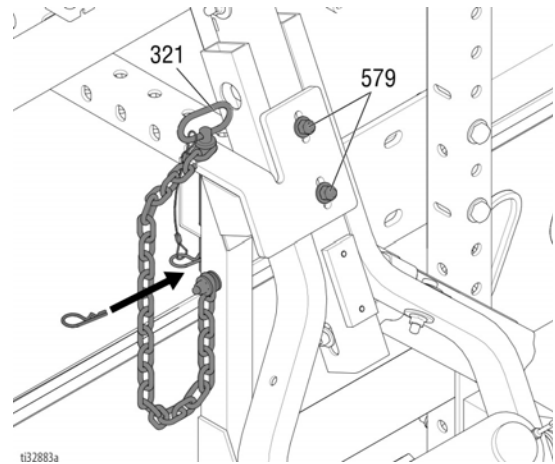


2. Lift gun arm up from ground, and push in to center of height adjustment bracket, and align it with the stow bracket.

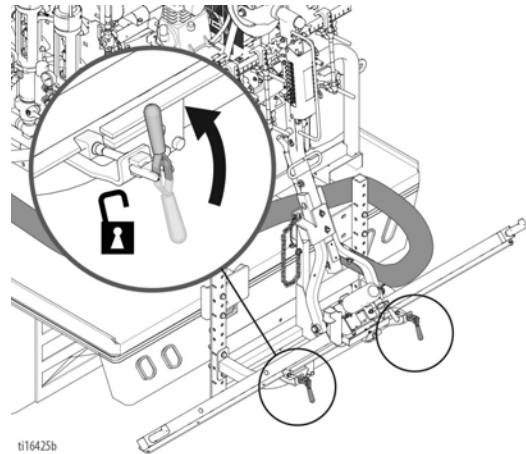


3. Pull gun arm hitch pin out of the stow bracket.

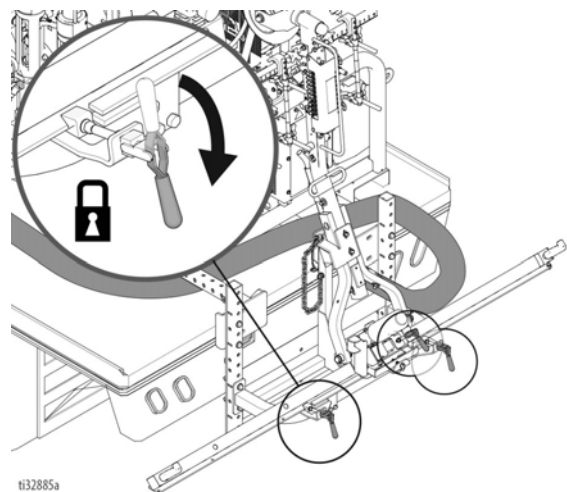
4. Slide the hitch pin through the gun arm bracket and stow bracket. Insert clip through pin.



5. Unlock two red-handled clamps and center the slide beam on the vehicle.



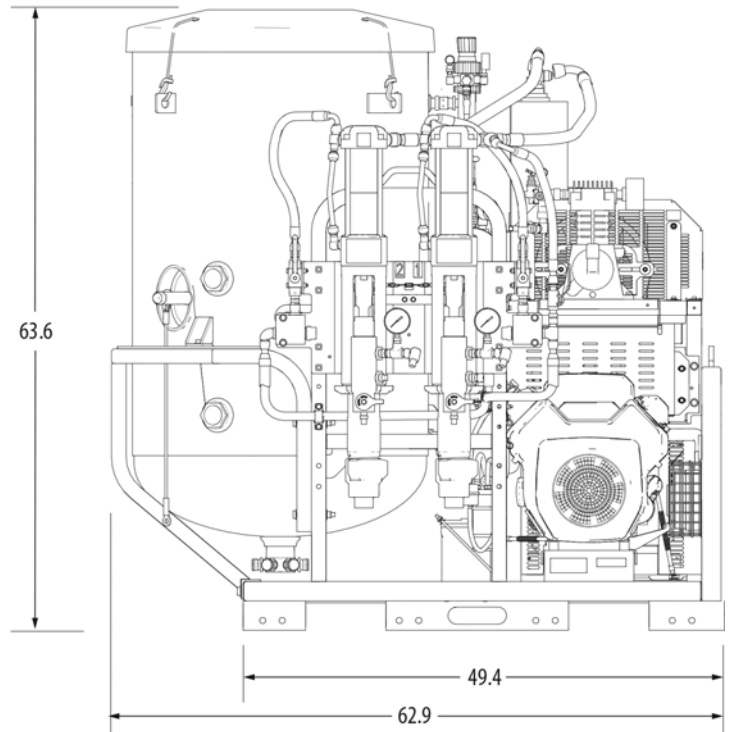
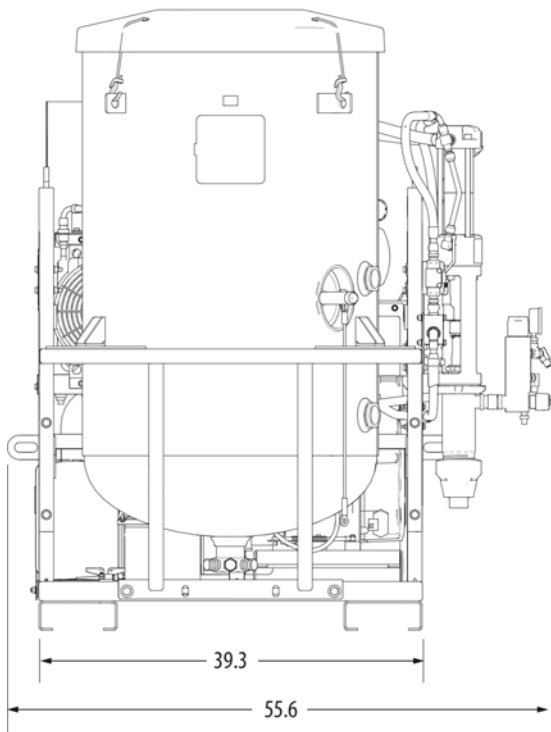
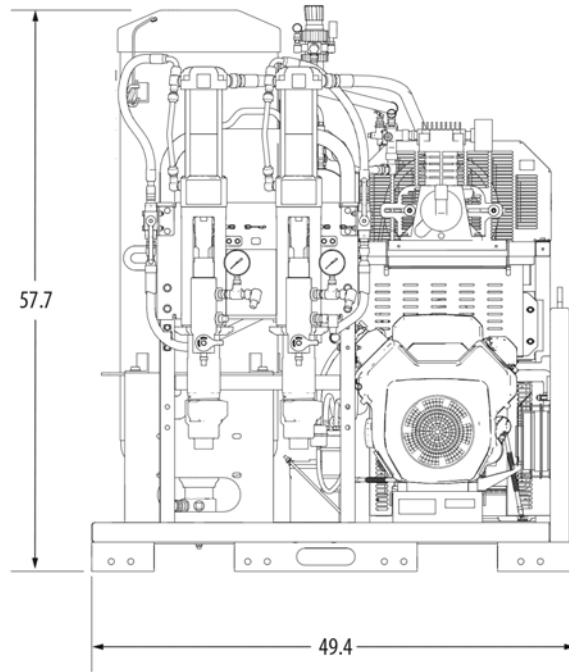
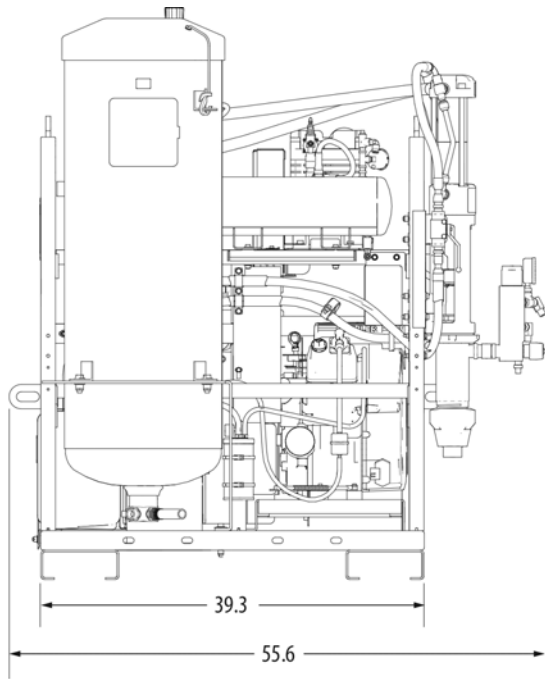
6. Lock three red-handle clamps to secure the slide beam and gun arm.



Technical Data

	RoadPak	RoadPak HD
	US (Metric)	US (Metric)
Maximum Working Pressure		
Paint	2900 psi (200 bar)	
Hydraulics	1950 psi (134 bar)	
Glass bead system	75 psi (5 bar)	
Maximum paint flow	5 gpm (18.9 lpm) @ 2000 psi (138 bar)	10 gpm (37.9 lpm) @ 1600 psi (110 bar)
Operating pressure of air-actuated trigger		
Minimum	80 psi (5.5 bar)	
Maximum	200 psi (14 bar)	
Sound levels per ISO-3744		
Sound power level	111.7 dB(A)	112.8 dB(A)
Sound pressure level	91.7 dB(A)	95.2 dB(A)
Weight		
25M701 (1-Pump RoadPak)	850 lb (386 kg)	--
25M702 (1-Pump RoadPak, No Bead Tank)	742 lb (337 kg)	--
25M703 (2-Pump RoadPak)	950 lb (431 kg)	--
25M704 (2-Pump RoadPak) *(1350 lb. bead tank)	1280 lb (581 kg)	--
25M705 (2-Pump RoadPak, No Bead Tank)	842 lb (382 kg)	--
25M706 (2-Pump RoadPak HD)	--	1317 lb (597 kg)
25M707 (2-Pump RoadPak HD, No Bead Tank)	--	885 lb (401 kg)
25M708 (1-Pump/2-Gun Arm)	128 lb (58 kg)	--
25M709 (2-Pump/2-Gun Arm)	132 lb (60 kg)	--
25M710 (2-Pump/3-Gun HD Arm)	--	182 lb (83 kg)
25D932 (2-Pump/3-Paint Guns only Gun Arm)	164 lb (74 kg)	--
24G627 Slide-in Mounting Frame	170 lb (77 kg)	
24G626 Hitch Mounting Frame	120 lb (54 kg)	
Engine	Kohler® 19 HP (14.2 kW)	Kohler® 26.5 HP (19.8 kW)
Hydraulic oil reservoir capacity	4 gallons (15 liters)	8 gallons (30 liters)
Compressor Oil	9502 SAE 30W non-detergent oil	
Hydraulic Oil	ISO 46 synthetic with a VI equal or greater than 154	
Glass bead capacity	450 lb (204 kg)/36 gal. (136 L)	1350 lb (612 kg)/120 gal. (454 L)
<i>Kohler® is a registered trademark of the Kohler Co.</i>		

Dimensions



1136862a

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.

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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 3A5384

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