

3A3393D

ΕN

LineLazer V 250sps and 250pc Self-Propelled Line Striper

For the application of line striping materials. For professional use only. For outdoor use only. Not for use in explosive atmospheres or hazardous locations.

Maximum Operating Speed: 10 mph (16 kph) Maximum Operating Pressure: 3300 psi (22.8 MPa, 228 bar)



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.

Model	Guns	Pressurized Bead System	Description
17H471	2	No	LLV 250DC
17H472	3	No	LLV 250DC
17H473	2	Yes - 2 Tank	LLV 250DC
17H474	3	Yes - 2 Tank	LLV 250DC
17H466	1	No	LLV 250SPS
17H467	2	No	LLV 250SPS
17H468	1	Yes - 1 Tank	LLV 250SPS
17J951	2	Yes - 1 Tank	LLV 250SPS
17H469	2	Yes - 2 Tank	LLV 250SPS

Related Manuals:		
3A3394	Repair / Parts	
311254	Gun	
309277	Pump	
3A3428	Auto-Layout Applications Methods	
332230	Pressurized Bead System (PBS)	



Use only genuine Graco replacement parts. The use of non-Graco replacement parts may void warranty. CE

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Driving Instructions



Perform startup see, Setup/Startup, page 10.

Use the handle bars of the LineStriper to control all motion during operation. In addition to steering the LineStriper, the handle bars also control forward and reverse movement by pulling the forward/reverse control lever.

NOTE: Make sure wheel motor bypass valve is engaged (see page 20).

To move forward: Disengage brake and slowly pull control lever on right side of handlebar.



To move in reverse: Slowly pull control lever on left side of handlebar.



To stop: Release control lever and allow it to return to center.



To turn right and left: Turn the handle bar right or left to steer the LineStriper.





Parking/Emergency Brake

This unit is equipped with a parking brake. Always engage parking brake when not in operation. Brake may also be used to slow machine in an emergency situation.

1. Step down on the brake lever to engage parking brake.



2. Lift brake lever up with foot to disengage parking brake.



NOTE: Adjust screw for more or less braking force.

Drive Engagement

The wheel motor bypass valve allows the operator to disengage the wheel tension and push the unit around. Rotate one complete turn counter-clockwise to disengage.



Straight Line Adjustment

The front wheel is set to center the unit and allow the operator to form straight lines. Over time, the wheel may become misaligned and will need to be readjusted. To re-center the front wheel, perform the following steps:

1. Loosen two bolts on the wheel alignment plate.



2. If striper arcs to the right, turn adjuster screw clockwise.



3. If striper arcs to the left, turn adjuster screw counter-clockwise.



4. Test-drive the striper. Repeat steps 2 and 3 until striper drives straight. Tighten two bolts on wheel alignment plate to lock the new wheel setting.





Handle Bar Height Adjustment

1. Loosen handlebar height adjuster lock.



2. Raise or lower handlebars to desired height.



3. Tighten handlebar height adjuster lock.



2. To lower stand, pull pin and lower stand.



Front Pad Adjustment

- 1. Loosen four bolts.
- 2. Slide pad up or down to desired position.



3. Tighten four bolts.

Platform Storage Position

1. Raise stand and pin self-locks.





Smart Control Operation

Menu Tree



(LLV 250pc Shown)

Control Features



Ref.	Switch / Indicator	Explanation
1	Menu Controls	Provides menu specific commands as displayed on LCD screen. Provides skipline paint and space distance storage for instant change. Press and hold button to store pattern. Selects preset values "Favorite" or sub-menus.
2	Menu Control	Selects preset values or exits and returns to previous menu.
3	M/A button	Selects MANUAL or AUTOMATIC mode.
4	Line Width button	Input line width for MIL (thickness) calculation.
5	Reset button	Resets values to zero.
6	MENU arrow buttons	Used to switch between menus, adjusting values and resetting values. Scrolls through Striping Mode, Measure Mode, Layout Mode, and Setup/Information Menus.
7	Arrow buttons	Used in conjunction with the menus to adjust on-screen values. Adjusts adjacent values displayed.
8	Arrow buttons	Used in conjunction with the menus to adjust on-screen values. Adjusts adjacent values displayed.
9	Paint gun switches 1, 2 and 3	Enables/disables paint guns 1, 2 and 3. Up – skip line. Center – off. Down – continuous line.



Main Menus

Use MENU buttons (\bullet) to scroll thorough the four main menus.

Striping Mode



Measure Mode



See **Striping Mode (LLV 250DC Shown)**, page 27 for features. LLV 250DC shown LLV 250SPS displays information for only 1 pump.

See Measure Mode, page 28 for features.

Layout Mode



Setup/Information



See **Layout Mode**, page 29 for features. LLV 250DC shown LLV 250SPS displays information for only 1 pump.

See Setup/Information, page 32 for features.



Initial Setup

The initial setup prepares the striper for operation based on a number of user entered parameters. Language selections and the units of measure selections can be set before you start or changed later.

Language

From Setup/Information select appropriate language by

pressing D until the language is outlined.



- ENG = English
- SPA = Spanish
- FRE = French
- DEU = German
- RUS = Russian

WORLD = Symbols see **World Symbol Key**, page 36.

NOTE: Languages can also be changed later.

Units

Select appropriate units of measure.



US Units

Pressure = psi Volume = gallons Distance = feet Line Thickness = mil

SI Units

Pressure = bar (MPa available) Volume = liters Distance = meters Line thickness = micron (g/m² available)

Paint Specific Gravity = Use UP and DOWN arrows to set specific gravity. Required to determine paint thickness.

NOTE: All units can be changed individually at any time.

Calibration

- 1. Check rear tire pressure 55 ± 5 psi (379 \pm 34 kpa) and fill if necessary.
- Extend steel tape to distance greater than 26 ft. (8m).



3. Press 📻 🐑 to select Setup/Information.





Press A for Calibration. Set TRAVEL DIST to 25 ft (7.6m) or longer. Longer distances ensure better accuracy, depending on conditions.



5. Align part of the unit with 1 foot (30.5cm) on steel tape.



6. Push gun trigger control to start calibration.



7. Move striper forward. Keep unit aligned with steel tape.



8. Stop when chosen part of unit aligns with 26-ft (8m), or distance entered, on steel tape (25-ft./ 7.6m distance).



9. Push gun trigger control to complete calibration.



- Calibration is not complete when the exclamation symbol () is displayed.
- Calibration is finished when the check mark symbol $\sqrt{}$ is displayed.
- 10. Calibration is now complete.

Go to Measure Mode and verify accuracy by measuring the tape (see **Measure Mode**, page 28).



Striping Mode (LLV 250pc Shown)



Ref.	Description
1	Select a "Favorite", press for less than one sec- ond.
	Save a "Favorite", press and hold for more than three seconds.
	Cycles between Manual or Automatic Mode.
2	Manual Mode: Press and hold gun trigger control to stripe.
2	Automatic Mode: Press and release gun trigger control to start striping. Press and release button again to stop.
3	Line width button for MIL (thickness) calculation.
4	Resets "Job" values to zero.
5	Total line length sprayed.
6	Paint and Space length adjustment buttons.
7	Paint and Space distance that is sprayed if a switch is set to skip line.
8	MIL thickness. While spraying "Instant MIL avg" is displayed. When stopped total "Job MIL avg" is displayed.
9	Five skip line favorites

*LLV 250SPS displays information for only 1 pump.

Ref. Description

- 1 Exits and returns to the Striping Mode Menu.
- 2 Select switch 1, 2, or 3.
- 3 Line Width Adjustment, if switch is operating more than one gun add the line widths together.

Operating in Striping Mode

Striper must be running and clutch engaged before activating gun trigger control.

- 1. Make sure engine is running and clutch switch is engaged.
- 2. Use gun selector switches to select guns and line type.
- 3. Activate gun trigger control to began spraying.

In Automatic Mode the striper has a low speed shutoff value of 0.6 MPH (1.0 kilometer/hour). The low speed shutoff value can be adjusted or disabled. See **Information**, page 33.

In Automatic Mode the A will flash when gun trigger control is pressed to signal mode is active.



Measure Mode

Measure Mode replaces a tape measure to measure distances when laying out an area to be striped.

1. Use 💓 🐑 to select Measure Mode.



Ref.	Description
1	Hold to reset values to zero.

2. Press and release gun trigger control. Move striper forwards or backwards. (Moving backwards is a negative distance.)



3. Press and release gun trigger control to end measured length. Up to six lengths are viewable.

The most recent measured length is also saved as the measured distance in the Stall Calculator display. See **Stall Calculator**, page 30.

Press and hold gun trigger control at any time to apply a dot. If trigger is held while striper is moving, a dot is marked every 12-inches (30.5cm).



Layout Mode

Layout Mode is used to calculate and mark parking lot stalls.

1. Use 💓 💓 to select Layout Mode.



*LLV 250SPS displays information for only 1 pump.

Ref.	Description
1	Opens Stall Calculator Menu. See Stall Calculator , page 30.
2	Opens Angle Calculator Menu. See Angle Calculator , page 31.
3	Distance between dots laid by striper
4	Adjust stall size/dot spacing width.
5	Adjust dot size.

2. Press and release gun trigger control and move striper forward.



- 3. Striper default is to place a dot every 9.0 ft (2.7m) to mark the stall size. Stall size is adjustable.
- 4. Dots are laid down until gun trigger control is pressed and released again.

An indicator before and after Layout Mode on the screen alternately flash when gun trigger control is pressed to signal mode is active.



*LLV 250SPS displays information for only 1 pump.



Stall Calculator

Stall Calculator is used to set the stall size. The striper divides the measured length by the stall size to determine the number of stalls that will fit in the length measured.

1. Use 🐋 🐑 to select Layout Mode. Press 🔺 to open Stall Calculator Menu.



ti23821a

Ref.	Description
1	Opens Angle Calculator Menu. See Angle Calculator , page 31.
2	Exits and returns stall size to Layout Mode.
3	Measured distance.
4	Calculated # of stalls. Changing the number of stalls will change the stall size.
5	Stall size. Changing stall size changes the calcu- lated # of stalls.

2. The most recent length measured in Measure Mode is displayed or press gun trigger control to start a new measurement. Press again to stop measuring.

Stall size and calculated number of stalls are both adjustable.

3. Press $_$ to return to Layout Mode. The Stall size

is saved and displayed on the Layout Mode screen.

4. Press and release gun trigger control to start marking dots. Press and release gun trigger control again to stop.



Angle Calculator

Angle Calculator is used to determine the offset value and dot spacing value for a layout.

1. Use to select Layout Mode. Press b to open Angle Calculator Menu.



Ref.	Description
1	Opens Stall Calculator.
2	Exits and returns to Layout Mode.
3	Select θ, h, or x.
4	Adjust the parameter selected.
5	Calculated offset and dot spacing.

- 2. Dot spacing (m) and offset (z) are calculated based on the parameters entered:
 - $\boldsymbol{\theta}$ Stall angle
 - h Depth of stall
 - x Stall size (width)ll

3. Measure and mark the offset distance (z) calculated for the first stall.



4. Press E to return to Layout Mode. The dot spacing value (m) is saved and displayed as stall size on the Layout Mode screen.



5. Press and release gun trigger control to start marking stall size dots. Press and release gun trigger control to stop marking.



Setup/Information

Use to select Setup/Information.





Information

Use 🔝 🐑 to select Setup/Information. Press 🕝 to open Information Menu.





Information (2)

Use to select Setup/Information. Press c to open Information Menu. Press D to open Information (2) Menu.



Set low speed limit (X) and high speed limit (Y). If you travel outside of these speeds while striping the striper will beep. Fast beep if traveling above the limit and a slow beep if traveling below the limit.

Adjust screen contrast to the desired value.

Used for Troubleshooting.

____ Membrane Switch

Wheel Sensor

Gallon Counter

Gun Switches

Used for Troubleshooting.

└-⊢ Clutch

Solenoids

Caution Guns will Spray



⚠

Marker Layout Mode

The Measure Mode feature sprays a dot or a series of dots to mark an area.

- 1. Use 📻 🐑 to select Setup/Information. Press
 - E to open Marker Layout Mode.



Ref.	Description
1	Exits and returns to Information Menu.
2	Select value to change.
3	Adjust spacing value.

- 2. Use arrow keys to set up a marker pattern.
- 3. Marker layout example shows a typical lane layout for reflective markers. Set space sizes up to eight consecutive measurements. By leaving zeros in any space, Marker Layout Mode will skip to the next measurement in a continuous loop.

Some other uses of Marker Layout Mode are:

- Multiple spaced handicap stall layout
- Double line stalls

4. Set gun switch to skip line.



5. Press gun trigger control to start marking dots. Press gun trigger control again to stop.



An indicator before and after Marker Mode on the screen alternately flash when gun trigger control is pressed to signal mode is active.







World Symbol Key





Hydraulic Oil/Filter Change

Removal



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 the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

- 1. Perform Pressure Relief Procedure, page 9.
- 2. Place drip pan or rags under sprayer to catch hydraulic oil that drains out.
- 3. Remove drain plug. Allow hydraulic oil to drain.
- 4. Unscrew filter slowly oil runs into groove and drains out rear.

Installation

- 1. Apply a light film of oil on filter gasket. Install drain plug and oil filter. Tighten oil filter 3/4 turn after gasket contacts base.
- 2. Fill with five quarts of Graco hydraulic oil 169236 (5 gallon/20 liter) or 207428 (1 gallon/3.8 liter).
- 3. Check oil level.





Technical Specifications

LineLazer V 250DC (Models 17H471, 17H472)					
	U.S.	Metric			
Dimensions	Dimensions				
Height (with handle bar down)	Unpackaged - 50.5 in. Packaged - 63.5 in.	Unpackaged - 128.3 cm Packaged - 161.3 cm			
Width	Unpackaged - 33.0 in. Packaged - 45.0 in.	Unpackaged - 83.8 cm Packaged - 114.3 cm			
Length (with platform down)	Unpackaged - 73.5 in. Packaged - 78.0 in.	Unpackaged - 186.7 cm Packaged - 198.1 cm			
Weight (dry - no paint)	Unpackaged - 752 lbs Packaged - 890 lbs	Unpackaged - 341 kg Packaged - 404 kg			
Noise (dBa)					
Sound Power per ISO 3744:	Sound Power per ISO 3744: 103.1				
Sound Pressure measured at 3.3 feet (1m):	8	36.5			
Vibration (m/s ²) (8 hours daily exposure)					
Hand Arm (per ISO 5349) 1.6		1.6			
Whole Body (per ISO 2631)	0.4				
Power Rating (Horse Power)	Power Rating (Horse Power)				
Power Rating (Horse Power) per SAE J1349	11.9 HP @ 3600 rpm	8.8 kW @ 3600 rpm			
Maximum Delivery	2.5 gpm	9.5 lpm			
Maximum Tip Size 1 gun 2 gun 3 gun	.055 .039 .033				
Inlet paint strainer	16 mesh	1190 micron			
Outlet paint strainer	50 mesh	297 micron			
Pump inlet size	1 in. N	ISPM (m)			
Pump outlet size	3/8 NPT (f)				
Hydraulic reservoir capacity	1.25 gallons	4.73 liters			
Maximum hydraulic pressure	1825 psi	124 bar			
Maximum working pressure	3300 psi	228 bar, 22.8 MPa			
Maximum forward speed 10 mph		16 kph			
Maximum reverse speed	Maximum reverse speed 6 mph 9.7 kph				
Electrical Capacity	lectrical Capacity 14 A @ 3600 rpm				
Starting Battery	12V, 33Ah, Sealed lead acid				



LineLazer V 250DC with Pressurized Bead System (Models 17H473, 17H474)				
	U.S.	Metric		
Dimensions				
Height (with handle bar down)	Unpackaged - 55.7 in. Packaged - 63.5 in.	Unpackaged - 141.5 cm Packaged - 161.3 cm		
Width	Unpackaged - 33.0 in. Packaged - 45 in.	Unpackaged - 83.8 cm Packaged - 114.3 cm		
Length (with platform down)	Unpackaged - 73.5 in. Packaged - 78.0 in.	Unpackaged - 186.7 cm Packaged - 198.1 cm		
Weight (dry - no paint or beads)	Unpackaged - 864 lbs Packaged - 1002 lbs	Unpackaged - 392 kg Packaged - 455kg		
Noise (dBa)				
Sound Power per ISO 3744:	105.9			
Sound Pressure measured at 3.3 feet (1m):	89.1			
Vibration (m/s ²) (8 hours daily exposure)				
Hand Arm (per ISO 5349)	2.4			
Whole Body (per ISO 2631)	0.4			
Power Rating (Horse Power)				
Power Rating (Horse Power) per SAE J1349	11.9 HP @ 3600 rpm	8.8 kW @ 3600 rpm		
Maximum Delivery	2.5 gpm	9.5 lpm		
Maximum Tip Size 1 gun 2 gun 3 gun	.055 .039 .033			
Inlet paint strainer	16 mesh	1190 micron		
Outlet paint strainer	50 mesh	297 micron		
Pump inlet size	1 in. NSPM (m)			
Pump outlet size	3/8 NPT (f)			
Hydraulic reservoir capacity	1.25 gallons	4.73 liters		
Maximum hydraulic pressure	1825 psi	124 bar		
Maximum working pressure	3300 psi	228 bar, 22.8 MPa		
Maximum forward speed	10 mph	16 kph		
Maximum reverse speed	6 mph	9.7 kph		
Electrical Capacity	14 A @ 3600 rpm			
Starting Battery	12V, 33Ah, Sealed lead acid			



LineLazer V 250SPS (Models 17H466, 17H467)				
	U.S.	Metric		
Dimensions				
Height (with handle bar down)	Unpackaged - 55.7 in. Packaged - 63.5 in.	Unpackaged - 141.5 cm Packaged - 161.3 cm		
Width	Unpackaged - 33.0 in. Packaged - 45 in.	Unpackaged - 83.8 cm Packaged - 114.3 cm		
Length (with platform down)	Unpackaged - 73.5 in. Packaged - 78.0 in.	Unpackaged - 186.7 cm Packaged - 198.1 cm		
Weight (dry - no paint or beads)	Unpackaged - 666 lbs Packaged - 769 lbs	Unpackaged - 302.1 kg Packaged - 348.8 kg		
Noise (dBa)				
Sound Power per ISO 3744:	105.9			
Sound Pressure measured at 3.3 feet (1m):	89.1			
Vibration (m/s ²) (8 hours daily exposure)				
Hand Arm (per ISO 5349)	2.4			
Whole Body (per ISO 2631)	0.4			
Power Rating (Horse Power)				
Power Rating (Horse Power) per SAE J1349	11.9 HP @ 3600 rpm	8.8 kW @ 3600 rpm		
Maximum Delivery	2.5 gpm	9.5 lpm		
Maximum Tip Size 1 gun 2 gun 3 gun	.055 .039 .033			
Inlet paint strainer	16 mesh	1190 micron		
Outlet paint strainer	50 mesh	297 micron		
Pump inlet size	1 in. NSPM (m)			
Pump outlet size	3/8 NPT (f)			
Hydraulic reservoir capacity	1.25 gallons	4.73 liters		
Maximum hydraulic pressure	1825 psi	124 bar		
Maximum working pressure	3300 psi	228 bar, 22.8 MPa		
Maximum forward speed	10 mph	16 kph		
Maximum reverse speed	6 mph	9.7 kph		
Electrical Capacity	14 A @ 3600 rpm			
Starting Battery	12V, 33Ah, Sealed lead acid			



LineLazer V 250SPS with Pressurized Bead System (Models 17H468, 17J951, 17H469)				
	U.S.	Metric		
Dimensions				
Height (with handle bar down)	Unpackaged - 55.7 in. Packaged - 63.5 in.	Unpackaged - 141.5 cm Packaged - 161.3 cm		
Width	Unpackaged - 33.0 in. Packaged - 45 in.	Unpackaged - 83.8 cm Packaged - 114.3 cm		
Length (with platform down)	Unpackaged - 73.5 in. Packaged - 78.0 in.	Unpackaged - 186.7 cm Packaged - 198.1 cm		
Weight (dry - no paint or beads)	Unpackaged - 778 lbs Packaged - 916 lbs	Unpackaged - 352.9 kg Packaged - 415.5 kg		
Noise (dBa)				
Sound Power per ISO 3744:	105.9			
Sound Pressure measured at 3.3 feet (1m):	89.1			
Vibration (m/s ²) (8 hours daily exposure)				
Hand Arm (per ISO 5349)	2.4			
Whole Body (per ISO 2631)	0.4			
Power Rating (Horse Power)				
Power Rating (Horse Power) per SAE J1349	11.9 HP @ 3600 rpm	8.8 kW @ 3600 rpm		
Maximum Delivery	2.5 gpm	9.5 lpm		
Maximum Tip Size 1 gun 2 gun 3 gun	.055 .039 .033			
Inlet paint strainer	16 mesh	1190 micron		
Outlet paint strainer	50 mesh	297 micron		
Pump inlet size	1 in. NSPM (m)			
Pump outlet size	3/8 NPT (f)			
Hydraulic reservoir capacity	1.25 gallons	4.73 liters		
Maximum hydraulic pressure	1825 psi	124 bar		
Maximum working pressure	3300 psi	228 bar, 22.8 MPa		
Maximum forward speed	10 mph	16 kph		
Maximum reverse speed	6 mph	9.7 kph		
Electrical Capacity	14 A @ 3600 rpm			
Starting Battery	12V, 33Ah, Sealed lead acid			



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.

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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.

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Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see 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.

Original instructions. This manual contains English. MM 3A3393

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