

LazerGuide™ 1700, 2000 and 3000 Kits 3A5294E

EN

**For installation of the LazerGuide 1700, 2000 and/or 3000 Kits on LineLazer™, RoadPak™, Sure Stripe 3350SP, Brite Striper 3500SP, and TapeLazer™ airless line striping systems.
For professional use only.**



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:	
3A3388	LLV 3900/5900 Operation
3A3426	LLV 200HS Operation
3A3393	LLV 250SPS and 250DC Operation
3A4603	LL ES1000 Operation, Repair, Parts
3A4637	SureStripe 3350 Operation, Repair, Parts
3A4555	BriteStriper 3500 Operation
3A5386	RoadPak Parts
-----	Laser Manufacturer's Manual



LASER LIGHT HAZARD: AVOID DIRECT EYE CONTACT

Eye exposure to Class IIIa/3R levels of laser light can potentially present an eye (retinal) injury hazard, including spot blindness or other retinal injury. Refer to laser warnings in laser manufacturer's manual.

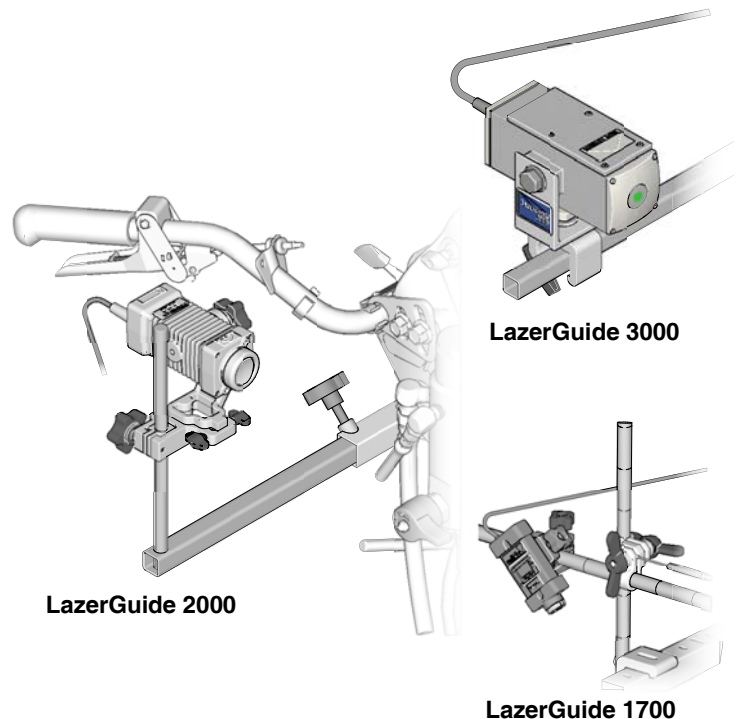
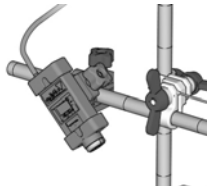
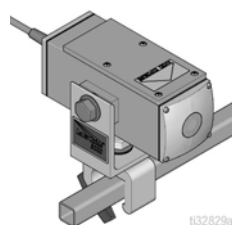


Table of Contents

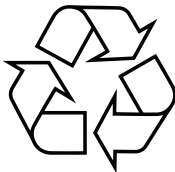
Kits	3	Parts - 17U799 and 17U800	14
Battery Disposal	3	Parts - 17W270	15
LazerGuide 1700	4	LazerGuide 3000	16
LineLazer V 3900, 5900 & 200HS/DC/MMA	4	Using the Laser	17
LazerGuide 1700	5	Wiring Installation (Models prior to 2018)	18
LineLazer 250SPS & 250DC	5	250DC & 250SP	18
Parts	7	Parts - 17T542	19
25A530, 25A691, 17P782, 17P784	7	Parts - 17V405	20
LazerGuide 2000	8	Parts - 17U930	21
Calibrating	9	Y Cable Installation	22
Using the Laser	11	LineLazer V Series (17T537)	22
Parts - 17T540, 17T541 & 17T543	12	Graco Standard Warranty	23
Parts - 17T544 and 17T545	13	Graco Information	24

Kits

LazerGuide 1700 Kits				
		Kit Number	Striper	Pages
		25A530	LineLazer V 3900, 5900 & 200HS/DC/MMA HP Auto- matic Series and 200HS/DC/MMA HP Reflective Series	4-7
		25A691	LineLazer 250DC and 250SPS	
		17P782	LineLazer ES1000 & ES2000	
		17P784	SureStripe 3350SP and BriteStriper 3500SP	
LazerGuide 2000 Kits				
		Kit Number	Striper	Pages
		17T540	LineLazer V HP Automatic Series	8-15
		17T541	LineLazer V Standard Series	
		17T543	LineLazer ES1000 & ES2000	
		17U799	LineLazer 3400 (North America)	
		17T544	LineLazer IV 3900, 5900, 130HS, 200HS/DC/MMA	
		17U800	LineLazer 3400 (Worldwide)	
		17T545	LineLazer IV 3900, 5900, 130HS, 200HS/DC/MMA (Worldwide)	
		17W270	LineLazer 250 (Worldwide)	
LazerGuide 3000 Kits				
		Kit Number	Striper	Pages
		17T542	LineLazer 250DC and 250SPS	16-21
		17U930	RoadPak	
		17V405	LineLazer V 200HS/DC/MMA TapeLazer	

Battery Disposal

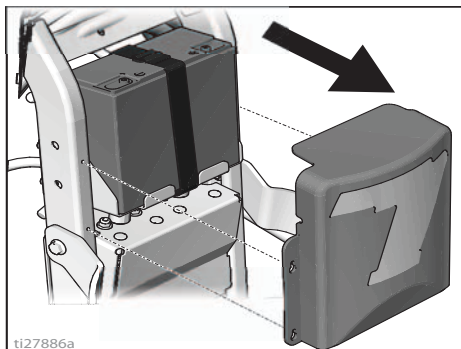
Do not place batteries in the trash. Recycle batteries according to local regulations. In the USA and Canada call 1-800-822-8837 to find recycling location or go to www.call2recycle.org.



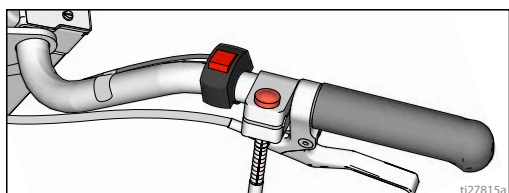
LazerGuide 1700

LineLazer V 3900, 5900 & 200HS/DC/MMA

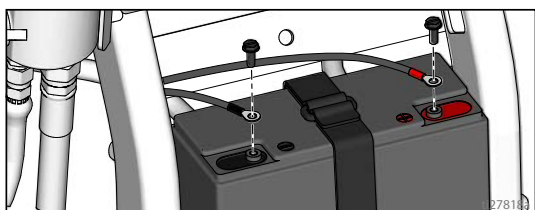
1. Remove battery cover.



2. Attach ON/OFF switch to desired location on the handle bar.



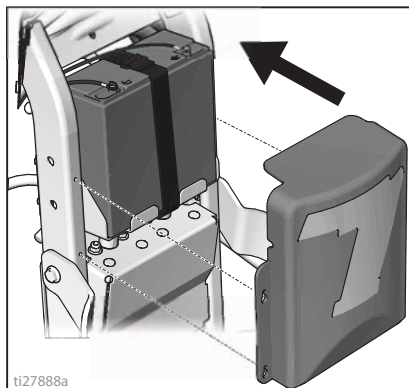
3. Route wires up to the battery and connect to the (+) and (-) terminals.



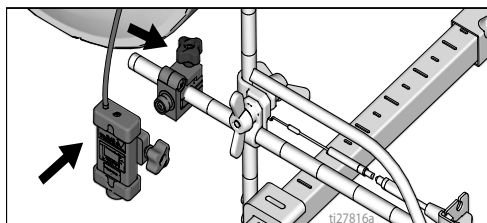
NOTICE

Do not connect GL1700 directly to a generator source as it can create over voltage and damage to the electronics.

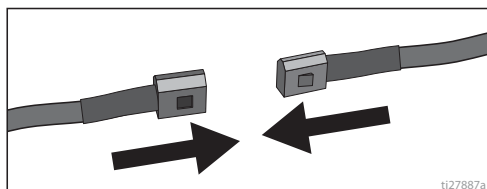
4. Reattach battery cover.



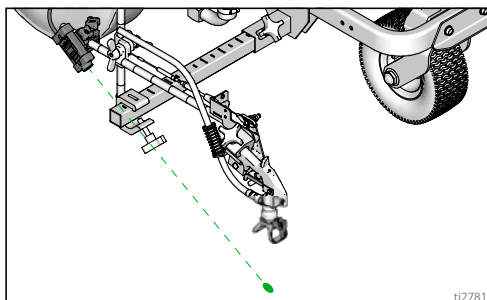
5. Attach laser to desired location on the gun arm.



6. Connect the switch leads to the laser wire harness.



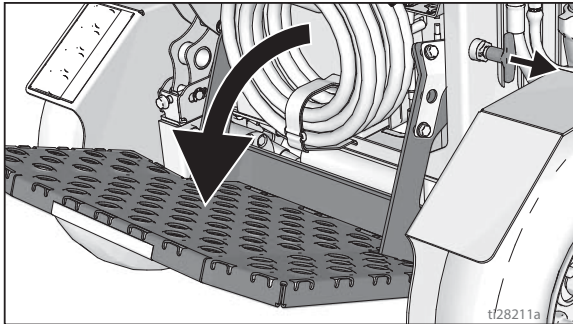
7. Turn on laser and position dot underneath gun head.



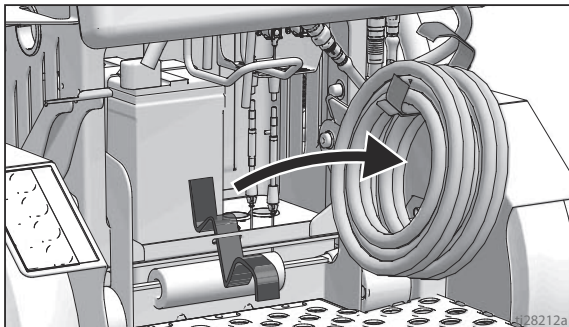
LazerGuide 1700

LineLazer 250SPS & 250DC

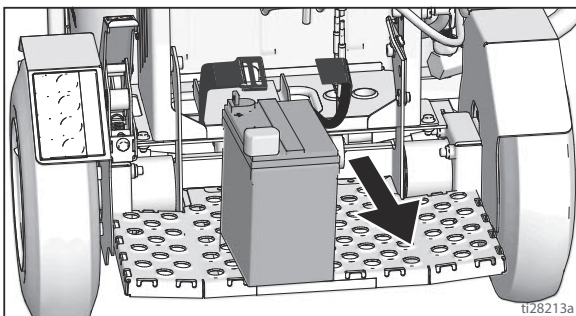
1. Lower platform.



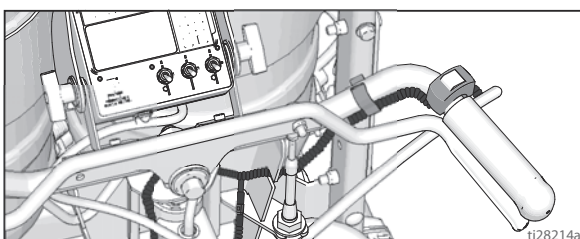
2. Remove coiled hose.



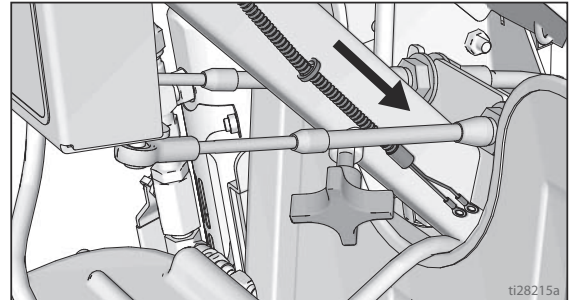
3. Remove battery.



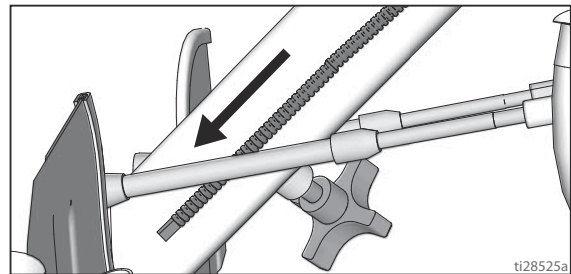
4. Attach ON/OFF switch on right side of handlebar and connect jumper.



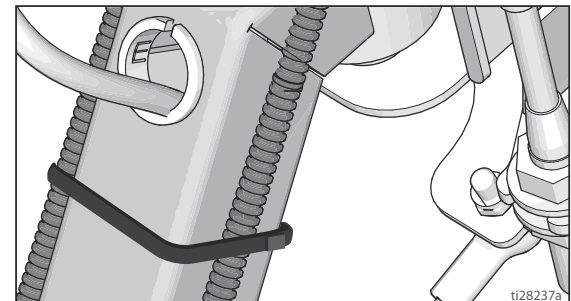
5. Route switch wiring between piston and square tube, and down to battery.



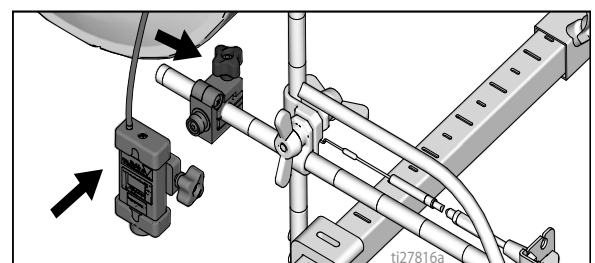
6. Route jumper between piston and square tube, and down to gun cable hole.



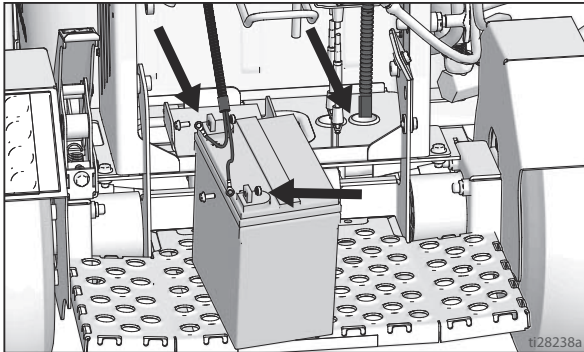
7. Secure switch wiring and jumper using cable tie.



8. Attached laser to desired location on gun arm.



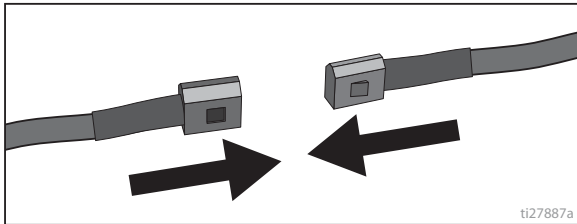
9. Route switch wires down to battery and connect to the (+) and (-) terminals, and route jumper through gun cable hole.



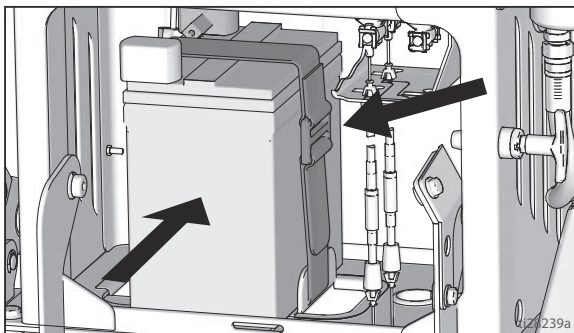
NOTICE

Do not connect GL1700 directly to a generator source as it can create over voltage and damage to the electronics.

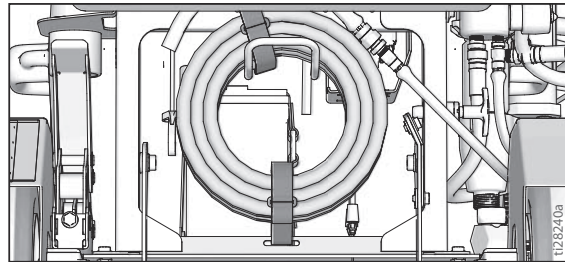
10. Connect the jumper to the laser wire harness, and secure all cables as necessary.



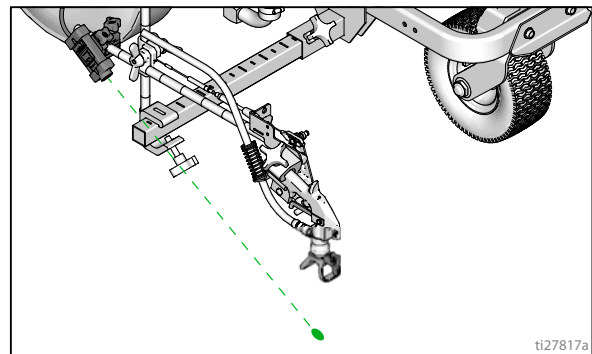
11. Reinstall the battery.



12. Replace the coiled hose.

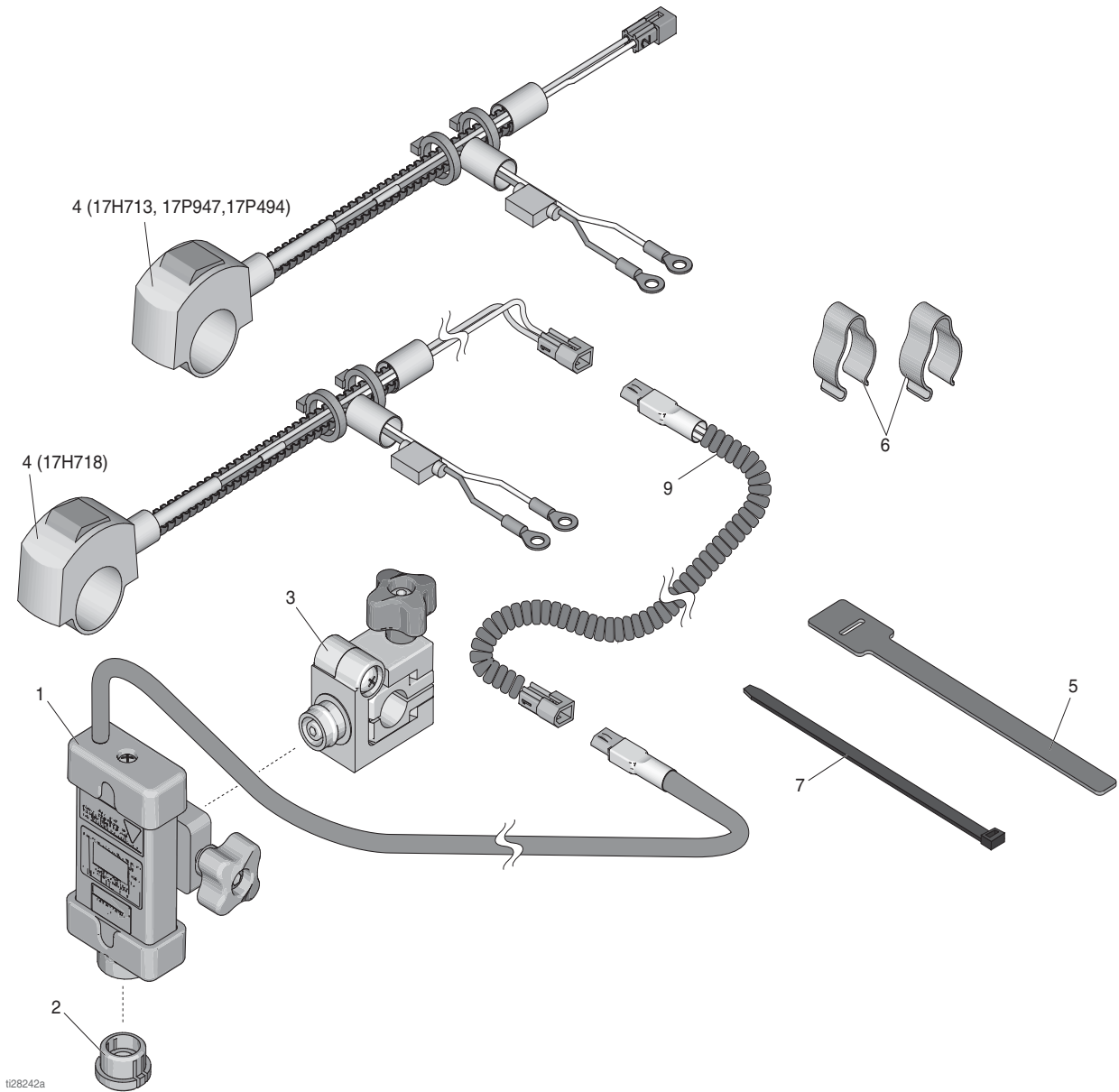


13. Turn on laser and position dot underneath gun head.



Parts

25A530, 25A691, 17P782, 17P784



Ref.	Part	Description	Qty
1	17H714	MODULE, laser, green dot	1
	128914	MANUAL, operations, laser	1
	128915	CARD, operator, laser	1
	128916	LABEL, operations, laser light	1
2	128917	SHIELD, paint, laser, assy.	1
3	128865	BRACKET, mounting, laser, assy.	1
4	17H718	SWITCH, on/off, laser module (25A691)	1
	17H713	SWITCH, on/off, laser module (25A530)	1
	17P947	SWITCH, on/off, laser module (17P782)	1
	17P494	SWITCH, on/off, laser module (17P784)	1
	128857	FUSE, blade, mini, 3 amp	1
5	128854	STRAP, cable, velcro	1

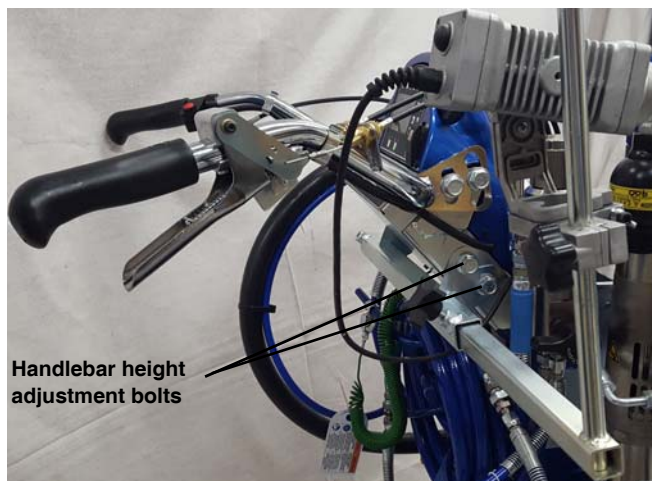
Ref.	Part	Description	Qty
6	178342	CLIP, spring	2
7	404989	STRAP, tie (25A691, 17P782, 17P784)	4
		(25A530)	2
9	17H745	CONDUCTOR, electrical, jumper (25A691)	1

Series A uses an external in-line fuse
Series B uses an internal self-resetting fuse
Series C uses an internal self-resetting fuse and an external in-line fuse

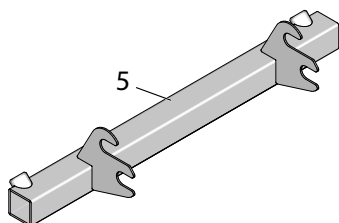
LazerGuide 2000

Mounting

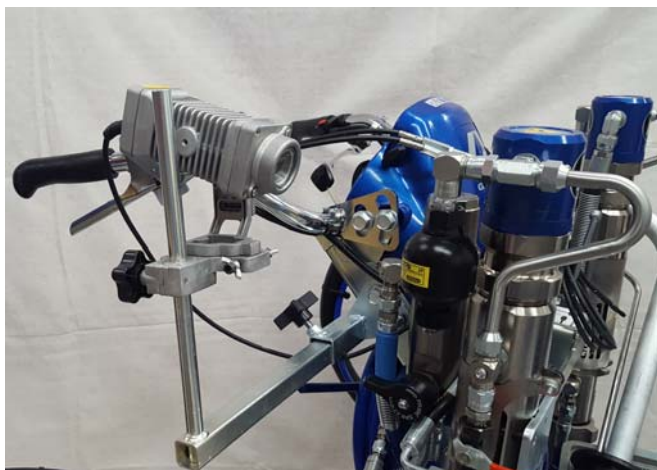
1. Loosen the four handlebar height adjustment bolts (3 turns). Do not remove completely as it will be difficult to replace the bolts.



2. Slide new bracket (5) over loosened bolts and securely retighten bolts.



3. Install LazerGuide 2000 as shown below.



Recommended Battery Location (if applicable)

NOTICE

Do not operate the LazerGuide 2000 directly from a generator source as doing so can create over voltage to the laser and damage the electronics.

Bolt the 12V DC battery kit to the machine's existing plate using supplied 1/4-20 hardware.

NOTE: Some machines will require different mounting locations.

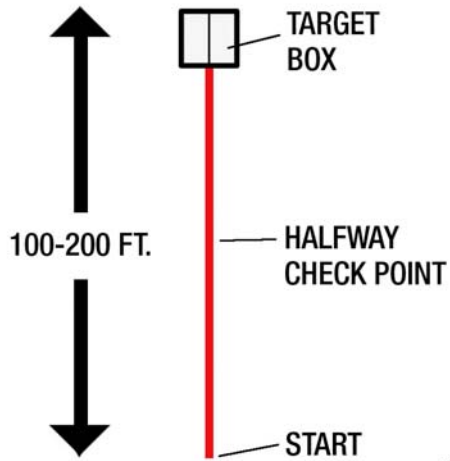
LL3400 shown:



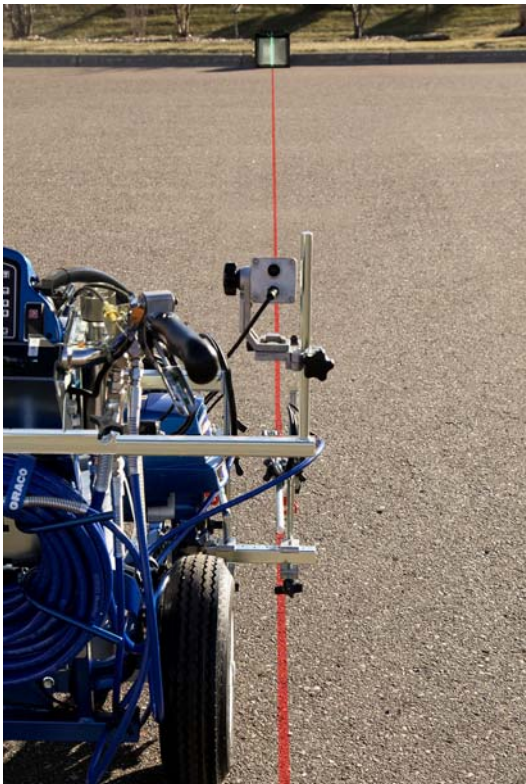
Calibrating

The procedure may take a few attempts until properly aligned. Calibration only has to be performed periodically. Use this procedure for front or rear mounted laser. Also applies to auto-layout series.

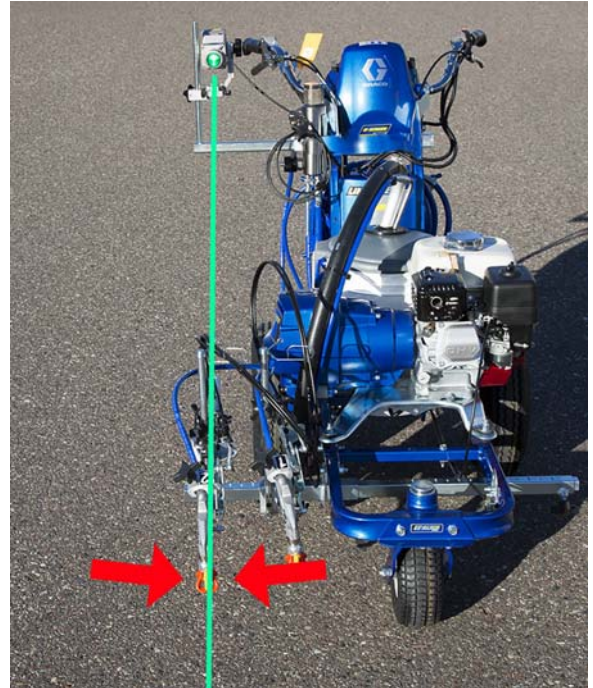
1. **Find an existing long straight line such as a curb or a previously striped line.** Mark halfway point and set the target box at far end.



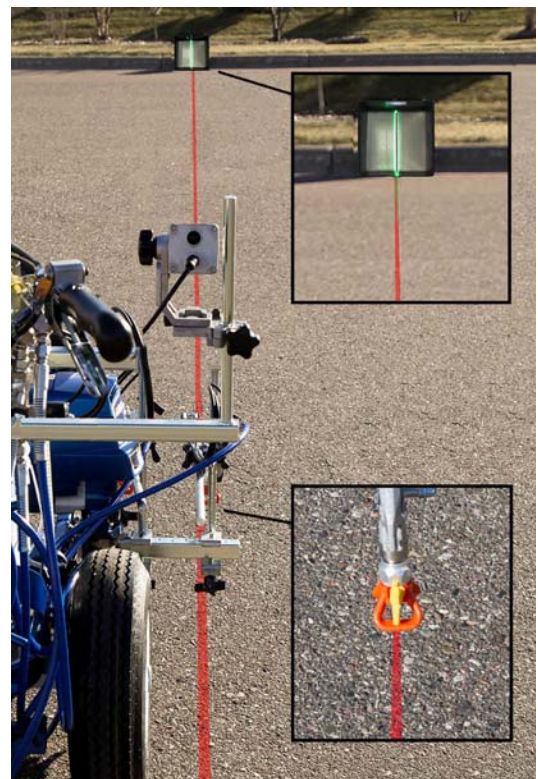
2. At the starting point, make sure your striper frame is true to your reference line by pushing the machine about 10 feet while keeping the spray nozzle over or parallel with the line. Make sure the laser is level, then adjust the laser left-right until it is centered in the target box at the far end.



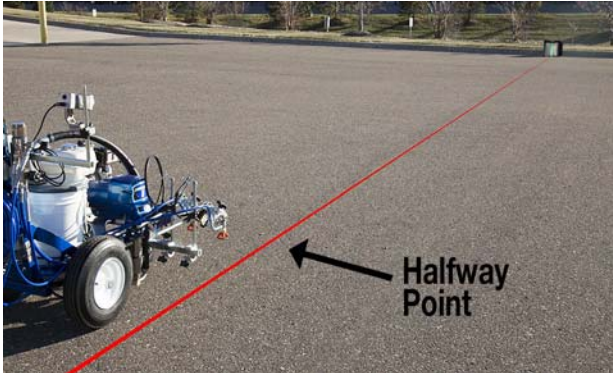
3. Tilt laser downward and swing **spray gun left or right** until it is in line with the laser. Adjust laser back to upward position.



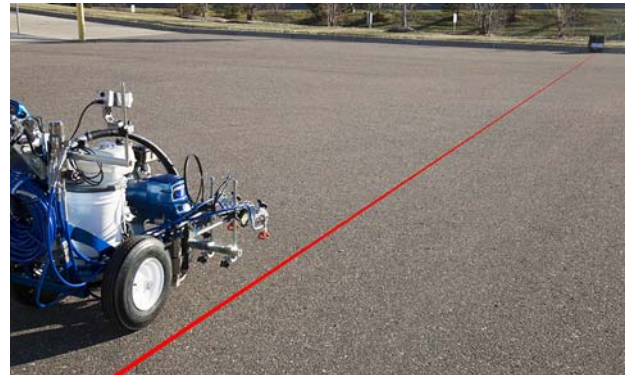
4. Position spray nozzle directly over reference line and maneuver machine left-right until laser is centered in target box at the far end. Make sure spray nozzle is centered over line.



5. Walk towards target box while keeping the laser centered in the target box at the far end. Look only at the target NOT at the spray nozzle. Stop at half-way point and check the position of the spray nozzle relative to the line.



7. Go back to the starting point and center the laser in the target box with the spray nozzle directly over the line. Walk to the halfway point keeping the laser centered on the target. If the laser is centered in the target and the spray nozzle is over the reference line, you are calibrated. If not, repeat step 6.



6. If the spray nozzle is to the left of the reference line by 1 1/2", for example, adjust the laser using the fine-line adjustment screws 1 1/2" to the left of the center line (same distance to the same side on the target box).



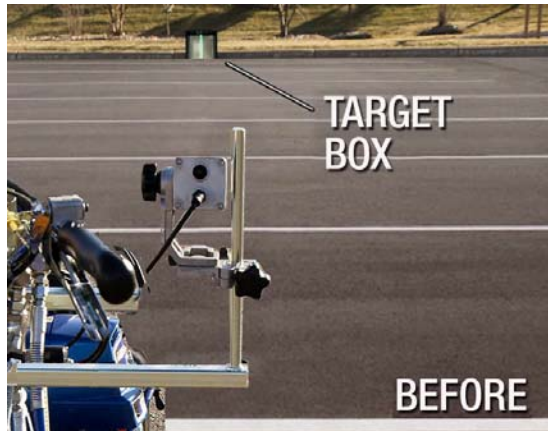
Using the Laser

You need two points. A starting point to position the spray nozzle over and an ending point to stripe to.

Day Use

For day operation, the target box is placed at the far point of your stripe to line (use two target boxes at either end for quicker operation). You will not see the green line along the surface you are striping during the day, but you will see the line on the target at the far end up to several hundred feet away.

1. Place reflective target box at your ending point (up to 700 feet).
2. Position spray nozzle with laser over your starting point.
3. Slightly loosen vertical adjustment knob and rotate LazerGuide 2000 up or down until the laser stripe on the far target is the brightest. Lock vertical adjustment knob.
4. Start striping while keeping laser in the center of the target box. Keep your eyes on the target, NOT on the spray nozzle.



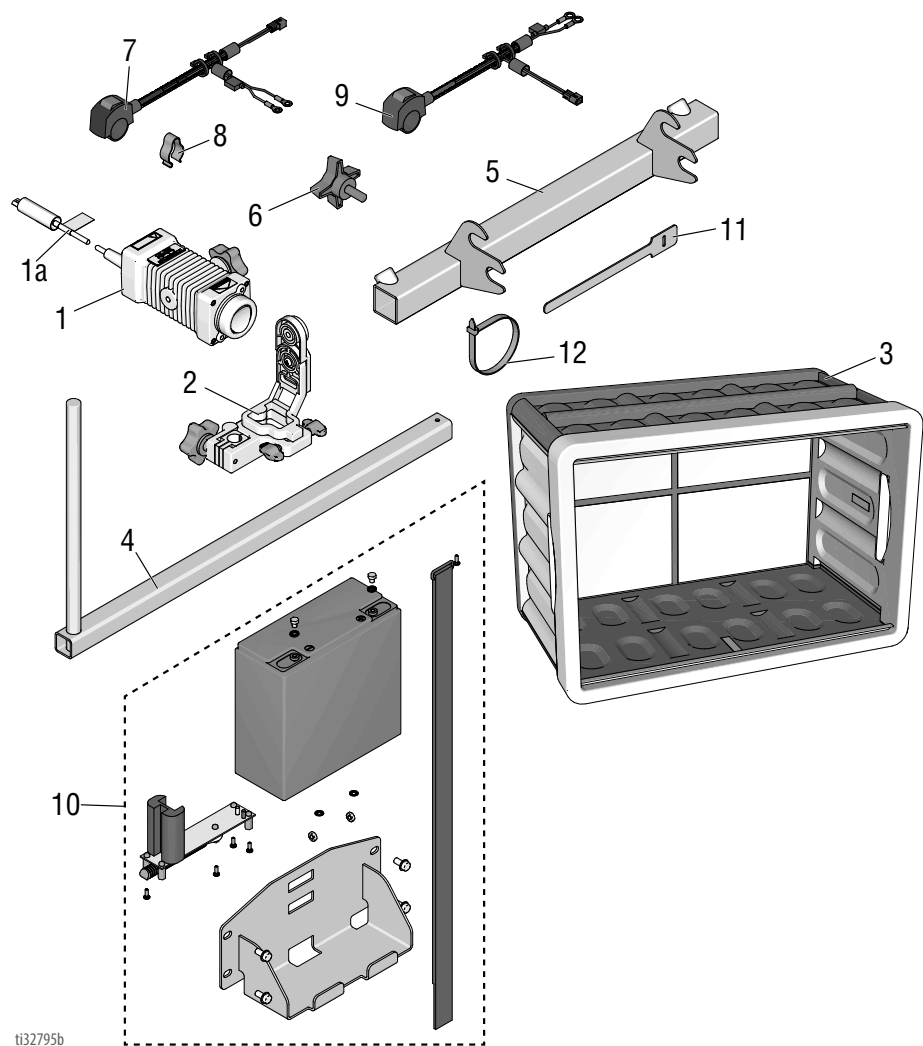
Night Use

For night operation, the target box is optional since you can see the bright green line on the surface you are striping. However, the target is useful for longer runs as a visual tool to determine the end of the run.

1. Turn laser on. Position spray nozzle with laser over your starting point.
2. Use the laser as your string line to connect the starting point to the ending point.
3. Optional: Use the reflective target box for long distance lines.

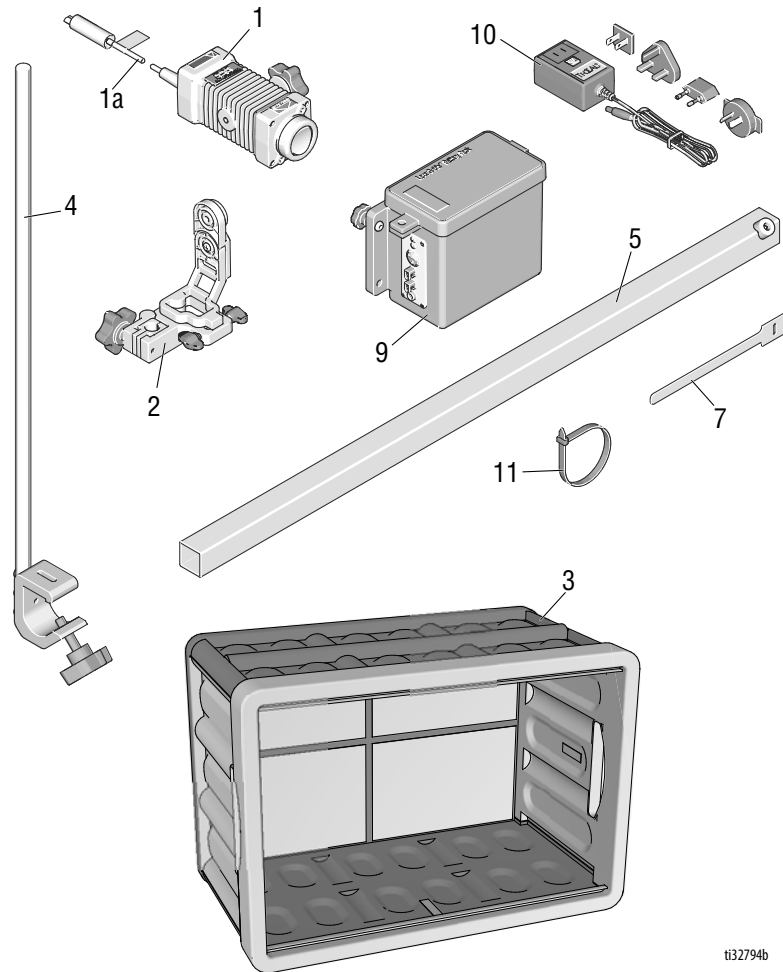


Parts - 17T540, 17T541 & 17T543



Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	17T534	LASER, LazerGuide 2000 (includes 1a)	1	7	17H713	SWITCH, on/off laser (17T540 & 17T541)	1
1a	17Z042	KIT, cable, LazerGuide 2000	1	8	178342	CLIP, spring	2
2	17T535	MOUNT, laser	1	9	17P947	SWITCH, on/off laser (17T543)	1
3	17T536	BOX, target	1	10	25A526	KIT, battery, 12 V (includes charger board) (17T541)	1
4	287453	BRACKET, support	1	11	128854	STRAP, cable velcro	1
5	17Y651	BRACKET, mount	1	12	404989	STRAP, tie	4
6	111145	KNOB, pronged	1				

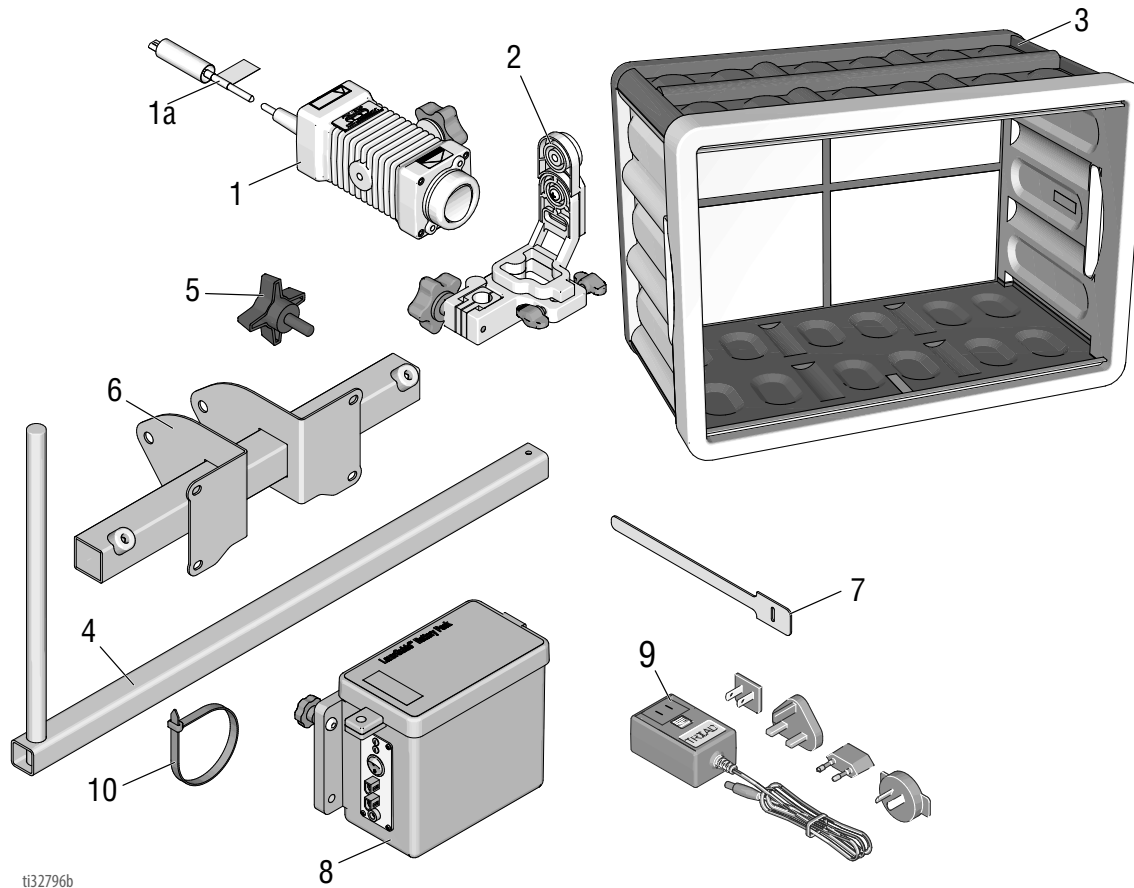
Parts - 17T544 and 17T545



ti32794b

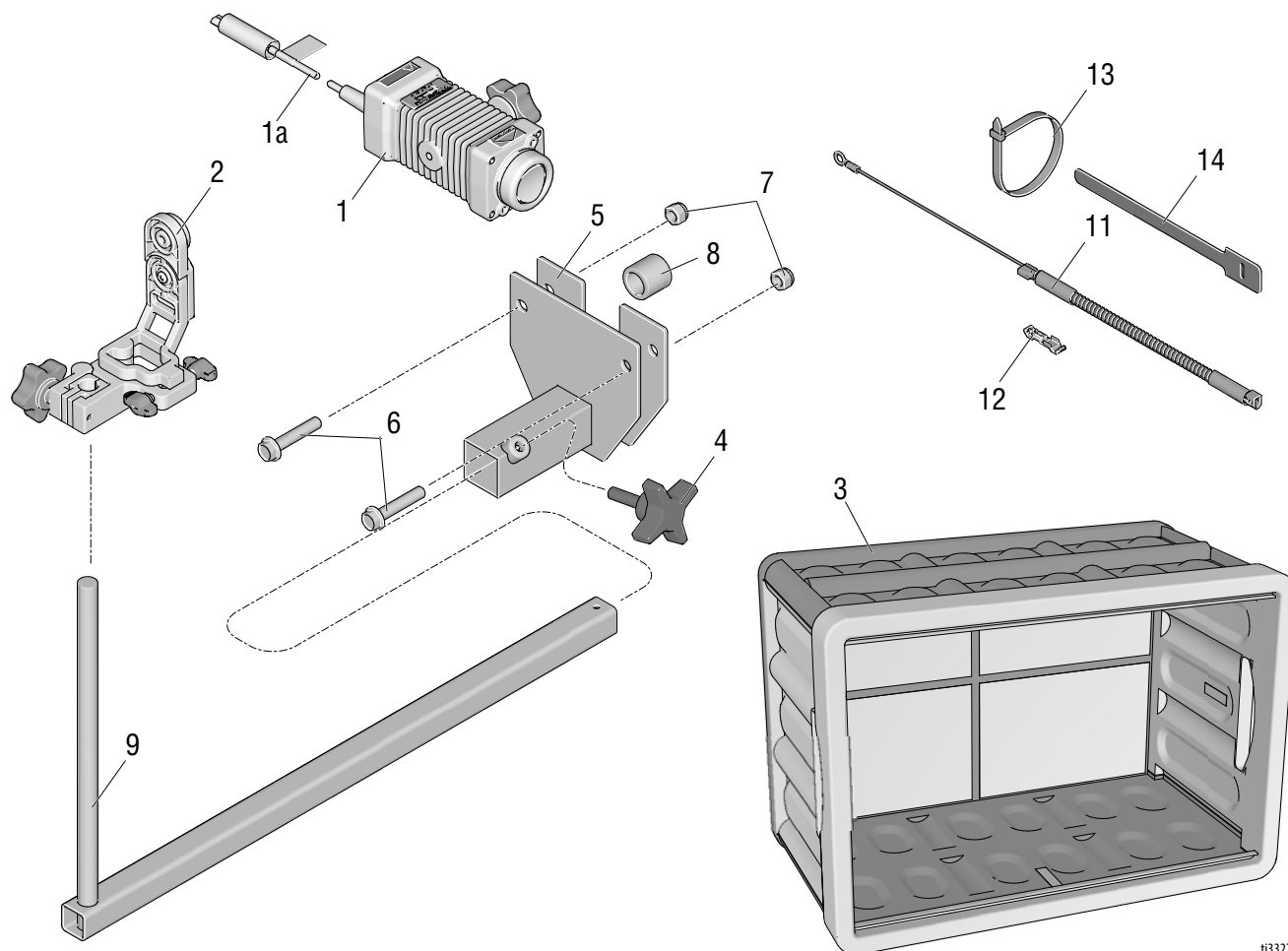
Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	17T534	LASER, LazerGuide 2000 (includes 1a)	1	5	17J407	ARM, extension, gun support	1
1a	17Z042	KIT, cable, LazerGuide2000	1	7	128854	STRAP, cable velcro	1
2	17T535	MOUNT, laser	1	9	17T408	KIT, battery, 12V	1
3	17T536	BOX, target	1	10	17V737	CHARGER, battery, 12V	1
4	17T398	MOUNT, g-clamp	1	11	404989	STRAP, tie	1

Parts - 17U799 and 17U800



Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	17T534	LASER, LazerGuide 2000 (includes 1a)	1	6	17U801	BRACKET, battery	1
1a	17Z042	KIT, cable, LazerGuide 2000	1	7	128854	STRAP, cable velcro	1
2	17T535	MOUNT, laser	1	8	17T408	KIT, battery, 12V	1
3	17T536	BOX, target	1	9	17V737	CHARGER, battery, 12V (17U800 model only)	1
4	287453	BRACKET, support	1	10	404989	STRAP, tie	1
5	111145	KNOB, pronged	1				

Parts - 17W270



ti33270b

Ref	Part	Description	Qty
1	17T534	LASER, LazerGuide 2000 (includes 1a)	1
1a	17Z042	KIT, cable, LazerGuide2000	1
2	17T535	MOUNT, laser	1
3	17T536	BOX, target	1
4	108471	KNOB, pronged	1
5	17H528	BRACKET, gun arm	1
6	114982	SCREW, cap, flng hd	2
7	101566	NUT, lock	2
8	193658	SPACER, seal	1
9	287453	BRACKET, support, extension	1
11	131389	CONDUCTOR, electrical, jumper	1
12	15B187	CONNECTOR, wire tap	1
13	404989	STRAP, tie	4
14	128854	STRAP, cable, velcro	2

Kit is designed for mounting on existing Pressure Bead System. Alternative mountings require additional parts to be ordered:

- For gun arm mount (low mount), order item 17T398.

- For bead bracket mount (high mount), order right bead tank bracket 16T697, bolt 111194 (2x) and nut 101566 (2x).

LazerGuide 3000

NOTICE

The LazerGuide 3000 is not polarity protected. Always use the supplied voltage protection control.

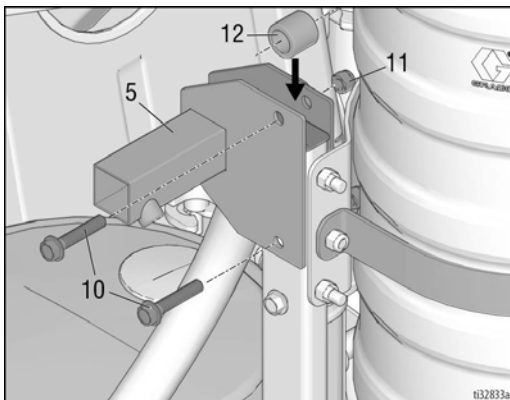
Do not operate the LazerGuide 3000 directly from a generator source as doing so can create over voltage to the laser and damage the electronics.

Mounting (250SPS & 250DC)

If prior to 2018, install a wiring harness onto the 250SPS/250DC. See **Wiring Installation (Models prior to 2018)**, page 18.



Install bracket and spacer as shown.



NOTE: LazerGuide 3000 Kit installation for LineLazer 250 systems is shown for mounting on existing Pressure Bead System (right bracket). When no Pressurized Bead System is present, order right bead tank bracket 16T697, bolt 111194 (2x) and nut 101566 (2x).

Mounting (RoadPak)

If prior to 2018, the power needs to come from the vehicle ignition switched power, splicing into the wiring harness provided.

Mount the LazerGuide 3000 on the vehicle at least five feet off the ground. Most operators prefer to mount the laser on top of the cab. The higher up the laser is mounted, the farther ahead of the vehicle you can aim the laser.

The laser must be mounted on a stable surface. If the laser base is vibrating on the vehicle, the vibration is magnified at the laser spot and can make it difficult to see.



Mounting (TapeLazer)

To install the wiring, follow steps 1-4 on page 4. To install bracket, see steps 1-3 on page 8.



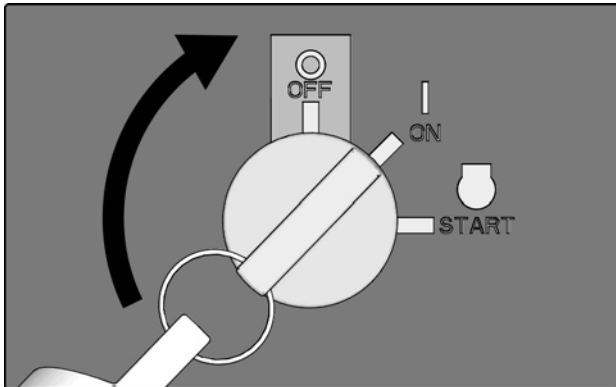
Using the Laser

1. Slide the laser out over the line or target to be striped.



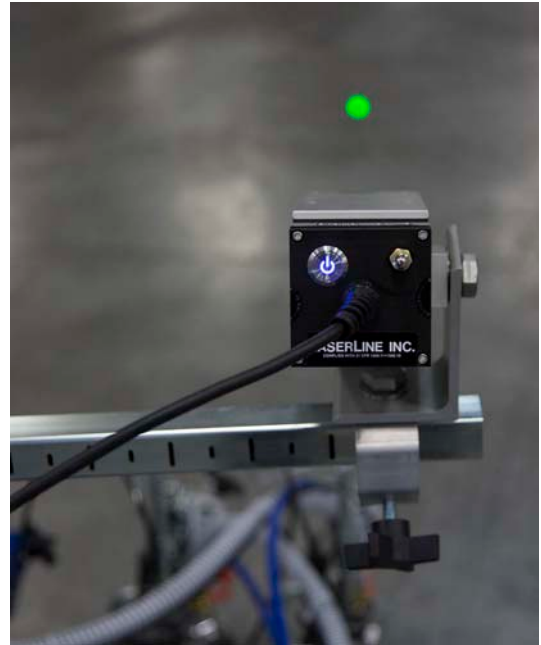
2. Turn laser ON by turning on the sprayer.

NOTE: The laser is connected to ignition switched power to prevent the battery from draining.



3. Push the power button on the laser.

NOTE: The laser may take a few minutes to warm up. Be patient. The power switch will stop blinking when ready.

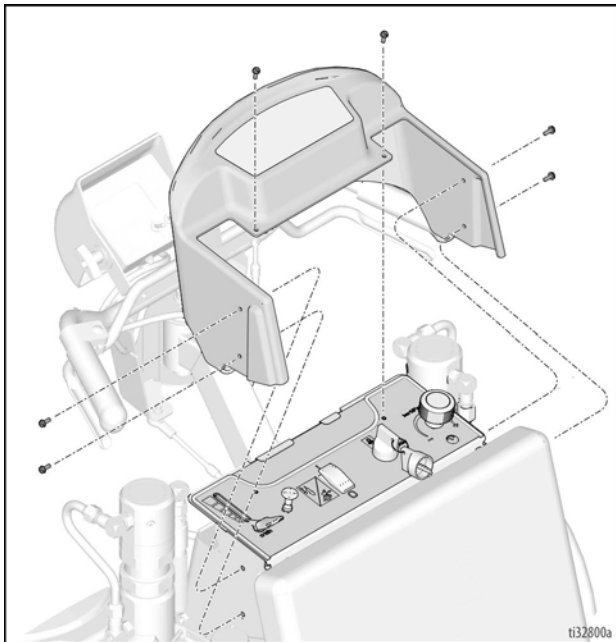


4. Push power button once for solid dot. Push power button a second time for blinking dot.

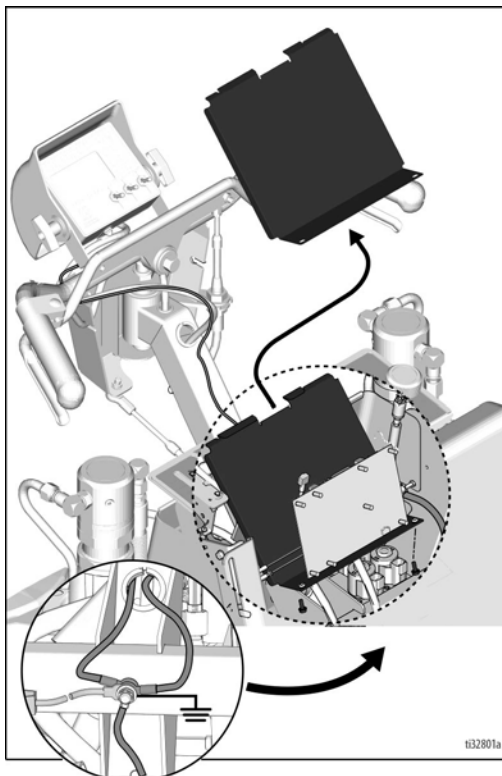
Wiring Installation (Models prior to 2018)

250DC & 250SP

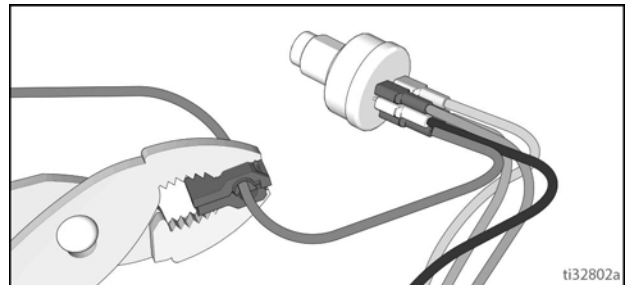
1. Remove blue cover (6 screws) with 5/16 screw nut.



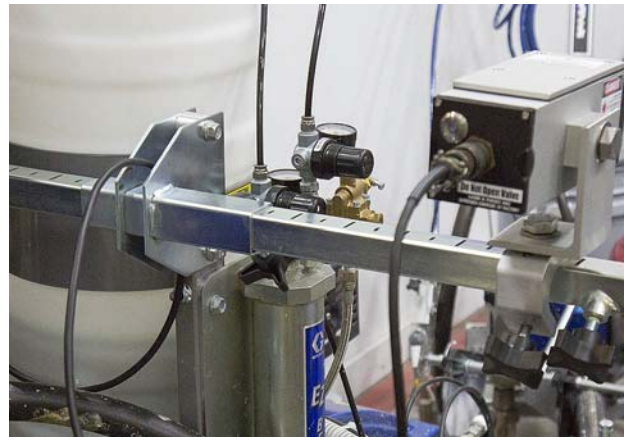
2. Remove circuit board cover with 5/16 nut driver.



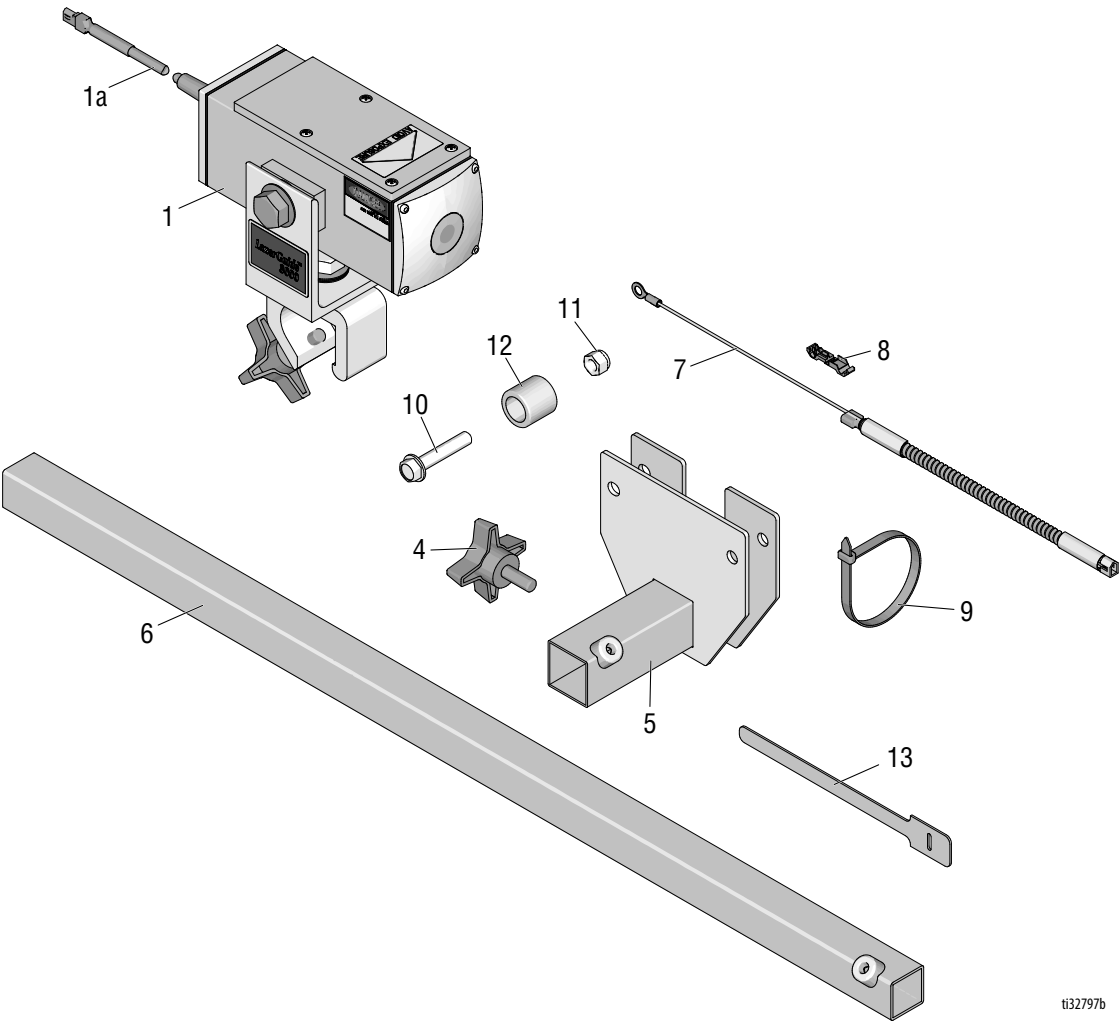
3. Install blue wire tap to the only RED wire having a bullet connector. This is necessary so the battery does not drain over night. For better access, you can remove the key switch.



4. Use existing holes and install mounting bracket as shown. Bracket fits snug so you may have to slightly loosen the upper bead tank brackets to slide into place.



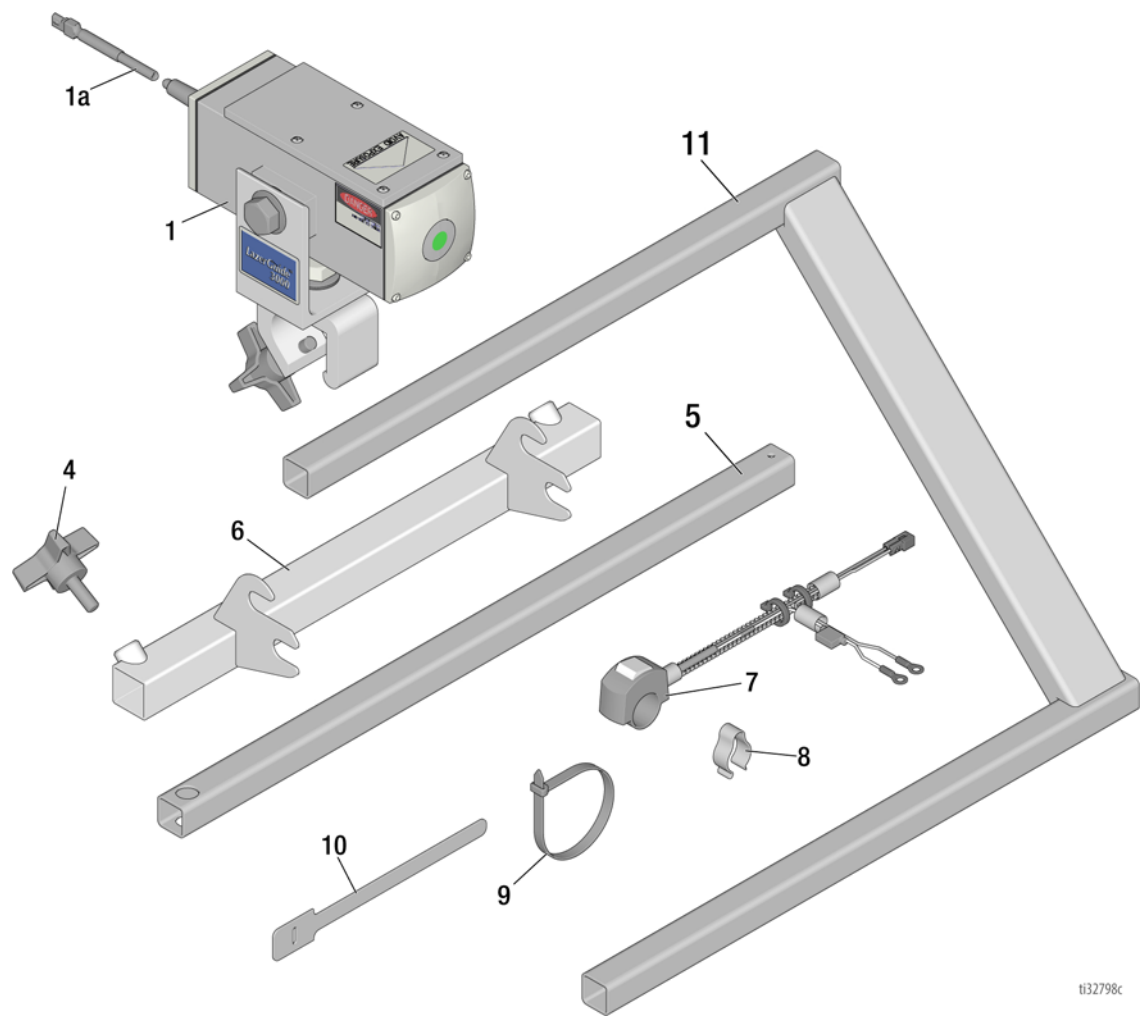
Parts - 17T542



ti32797b

Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	17U933	LASER, LazerGuide 3000, includes 1a	1	10	114982	BOLT	2
1a	17Z055	KIT, cable, LazerGuide 3000	1	11	101566	NUT	2
4	111145	KNOB, pronged	1	12	193658	SPACER	1
5	17H528	BRACKET, gun	1	13	128854	STRAP, cable, velcro	2
6	17J407	ARM, extension	2	<i>Kit is designed for mounting on existing Pressure Bead System (right bracket). When no Pressurized Bead System is present, order right bead tank bracket 16T697, bolt 111194 (2x) and nut 101566 (2x).</i>			
7	131389	CONDUCTOR, electrical	1				
8	15B187	TAP, wire	1				
9	404989	STRAP, tie	4				

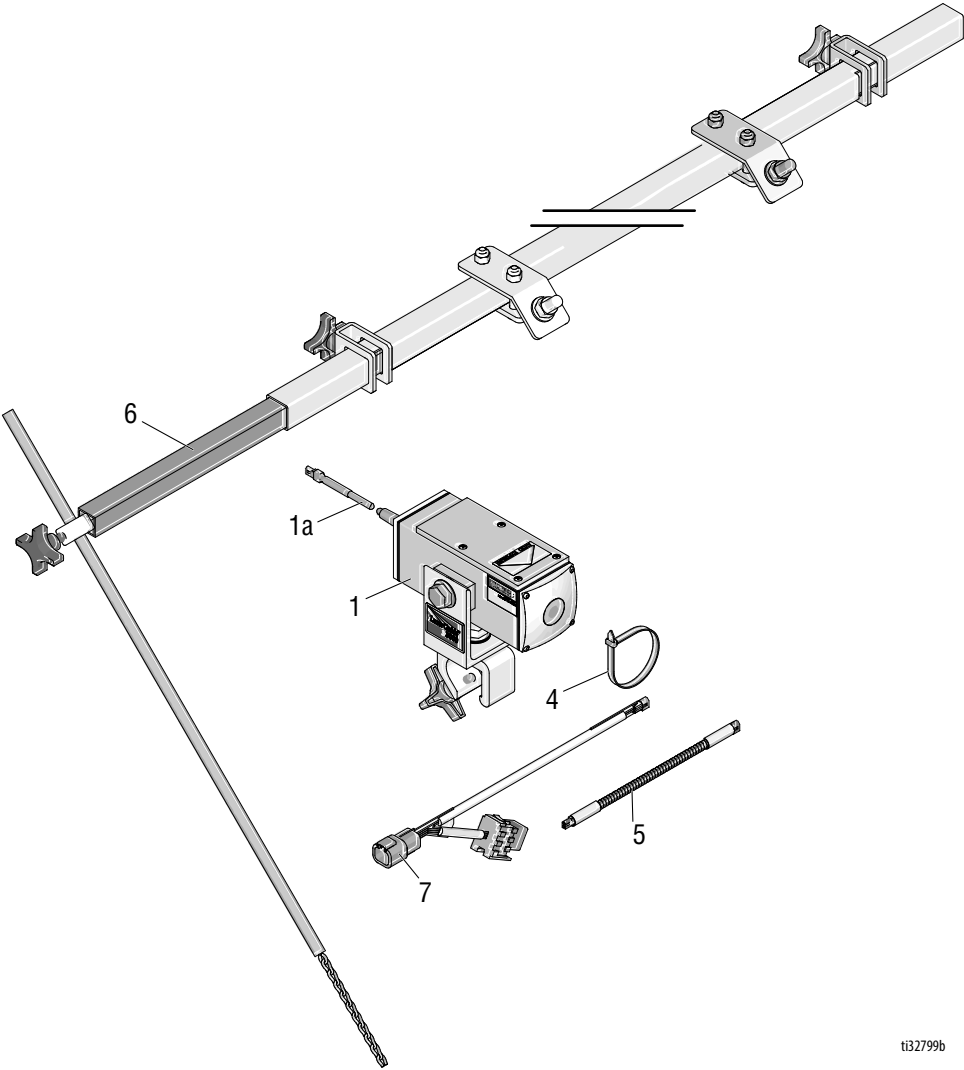
Parts - 17V405



Ref	Part	Description	Qty
1	17U933	LASER, LazerGuide 3000; includes 1a	1
1a	17Z055	KIT, cable, LazerGuide 3000	1
4	111145	KNOB, pronged	1
5	17J408	ARM, extension	1
6	17Y651	BRACKET, mounting, laser	1

Ref	Part	Description	Qty
7	17H713	SWITCH, on/off laser	1
8	178342	CLIP, spring	1
9	404989	STRAP, tie	4
10	128854	SRTAP, cable, velcro	2
11	19C273	BRACKET, laser	1

Parts - 17U930



ti32799b

Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	17U933	LASER, LazerGuide 3000, <i>includes 1a</i>	1	5	17H745	CONDUCTOR, electrical	1
1a	17Z055	KIT, cable, LazerGuide 3000	1	6	24G634	BRACKET, pointer	1
4	404989	STRAP, tie	4	7‡	131386	CABLE, harness, laser	1

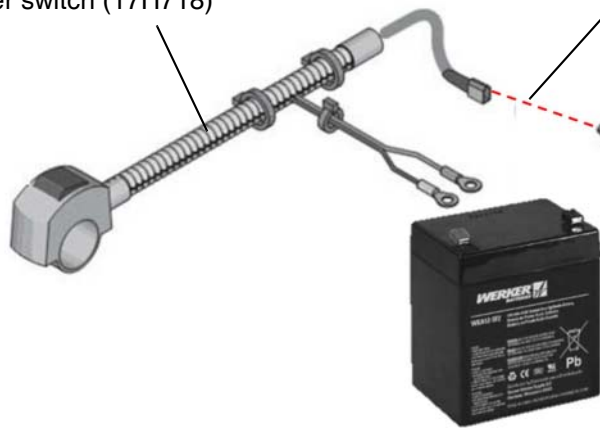
‡ Connects to plug on RoadPak Control 178 in junction box 179.

Y Cable Installation

LineLazer V Series (17T537)

NOTE: You may have to remove the Graco battery box cover to get access to the wiring harness connections. Once you have access, disconnect the LazerGuide 1700 connector from the Graco wiring harness connector (see below for next step).

Graco wiring harness with on/off rocker switch (17H718)



12v Battery

LazerGuide 1700 Start-Stop Laser (17H714)

Insert provided Graco "Y" cable adapter (17T537) to the wiring harness as shown. Then connect both the LazerGuide 2000 and LazerGuide 1700 to either one of the two connectors.



Graco wiring harness with on/off rocker switch (17H718)

LazerGuide 1700 Start-Stop Laser (17H714)

Graco LazerGuide 2000



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.

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 3A5294

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA
Copyright 2017, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com

Revision E, February 2021