

## ThermoLazer™ Pavement Marking System

313787C  
ENG

US Patent No. D619,625 S

- For professional application of thermoplastic traffic marking compound materials (reflective beads applied simultaneously with screeding) -
- For outdoor use only (not to be operated in rain or damp conditions) -

**Model No. 258699 North America - Includes 257500 and 4 in. (10 cm) SmartDie™ Screed Box**  
**Model No. 257500 International (SmartDie™ Screed Box not included)**

Fuel: LP Gas (Propane Vapor)

Burner capacities (max total): 138,000 BTU/hr. (40.44 kW) [38,000 BTU/hr. (7.03 kW) without torch]

Material capacity (max): 300 lb (136 kg)



### IMPORTANT SAFETY INSTRUCTIONS

Read all warnings and instructions in this manual. Save these instructions.

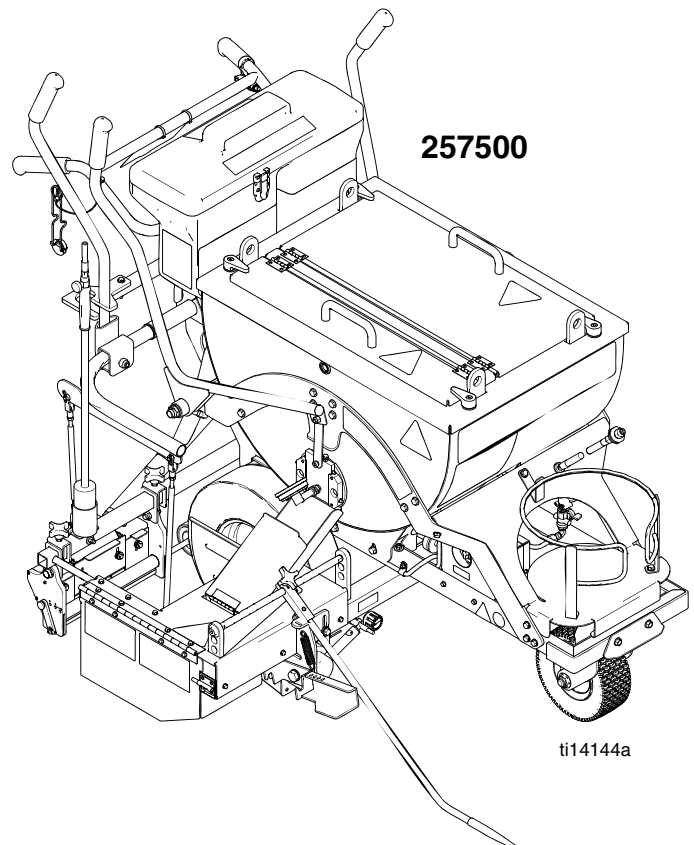
#### Related Manuals

Repair 313879  
Parts 313880

#### For use with the following SmartDie™ Screed Box:

Part	Description
24F630	3 IN. (8 cm) Screed Box
256736	4 in. (10 cm) Screed Box
257469	5 in. (12 cm) Screed Box
256737	6 in. (15 cm) Screed Box
257470	7 in. (18 cm) Screed Box
256738	8 in. (20 cm) Screed Box
257471	9 in. (22.5 cm) Screed Box
257472	10 in. (26 cm) Screed Box
256739	12 in. (30 cm) Screed Box
256799	Double Line 4-4-4 in. (10-10-10 cm) Screed Box
24B729	Double Line 4-3-4 in. (10-8-10 cm) Screed Box
24F631	Double Line 3-3-3 in. (8-8-8 cm) Screed Box

24C528 Double Bead Box Kit








# Table of Contents



Table of Contents .....	2	Adding Beads to SplitBead™ Bead Hopper .....	17
Warnings .....	3	Applying Material to a Surface .....	17
Component Identification .....	5	Shutting Down .....	18
Component ID (Continued) .....	6	Clean-Up .....	19
Important Safety Information .....	7	Transporting .....	19
Lighting Instructions .....	10	Maintenance .....	20
SmartDie™ Screed Box .....	13	Technical Data .....	22
Preparing ThermoLazer™ for Application .....	16	Notes .....	23
Bead Dispenser Box .....	17	Graco Standard Warranty .....	24
		Graco Information .....	24



# Warnings

The following are general warnings related to the safe setup, use, grounding, maintenance and repair of this equipment. In the text of this manual, the exclamation point symbol alerts you to a warning and the hazard symbol refers to specific risks. Refer back to these General Warnings pages. Additional procedure-specific warnings will be included where applicable.

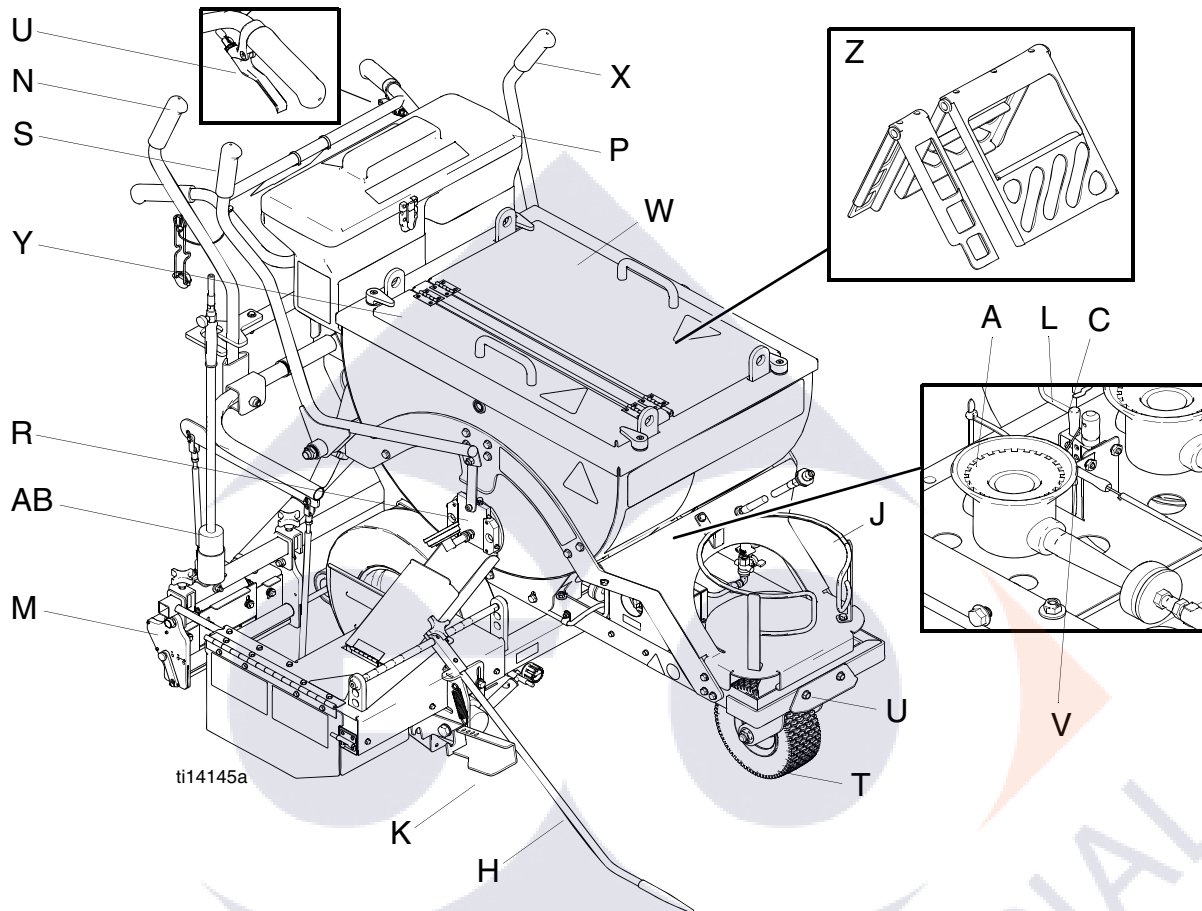
	<h2 style="text-align: center; margin: 0;">Warnings</h2>
	<p><b>FIRE AND EXPLOSION HAZARD</b> Flammable fumes and liquids, such as propane gas, gasoline and combustible fuel, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Do not use equipment unless fully trained and qualified.</li> <li>• Do not allow open containers of flammables within 25 ft (7.6 m) of equipment. Do not operate equipment within 10 ft (3 m) of any structure, combustible material, or other gas cylinders.</li> <li>• Shut off all burners when adding fuel to equipment.</li> <li>• Close the tank shut-off valve immediately if you smell propane gas; extinguish all open flames. If gas odor continues, keep away from equipment and immediately call the fire department.</li> <li>• Follow lighting instructions for the burner and torch.</li> <li>• Do not heat thermoplastic traffic marking compound material above 450° F (232° C)</li> <li>• Fire extinguisher equipment shall be present and working.</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> </ul>
	<p><b>EQUIPMENT MISUSE HAZARD</b> Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not leave equipment unattended.</li> <li>• Keep children and animals away from work area.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your Graco distributor for information.</li> <li>• Do not fill material beyond maximum capacity.</li> <li>• Route gas lines, hoses, wires and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or overbend gas lines.</li> <li>• Do not override or defeat safety devices.</li> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> </ul>
	<p><b>BURN HAZARD</b> Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> <li>• Do not touch hot fluid or equipment.</li> <li>• Wait until equipment and material has cooled completely.</li> </ul>
	<p><b>CARBON MONOXIDE HAZARD</b> Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death. Do not operate in an enclosed area.</p>

<b>Warnings</b>	
	<p><b>TOXIC FLUID OR FUMES HAZARD</b></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"> <li>• Read MSDS to know the specific hazards of the materials you are using.</li> </ul>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Clothing and respirator as recommended by the fluid, material, and solvent manufacturer.</li> <li>• Gloves, shoes, overalls, face shield, hat, etc. rated for elevated temperatures of at least 500° F (260° C).</li> </ul>





# Component Identification

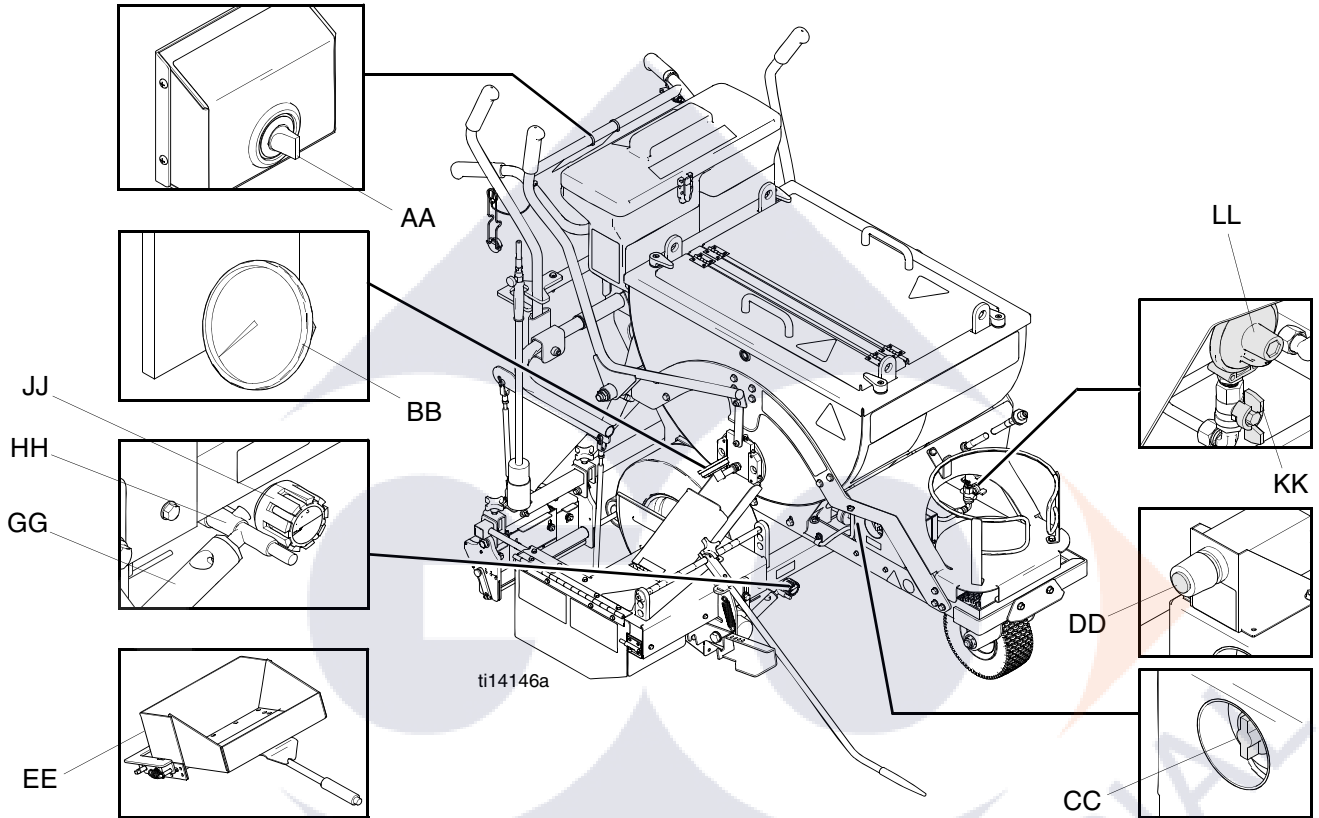


A	Kettle Main Burners
C	Kettle Pilot Burner
H	Line Guide
J	LP Gas Cylinder Holder
K	SmartDie™ Lever
L	Kettle Thermopile
M	Bead Dispenser Box
N	SmartDie™ Screed Box/Bead Dispenser Box Actuator
P	SplitBead™ Bead Hopper

R	ControlFlow™ Gate Valve
S	ControlFlow™ Gate Valve Actuator
T	SmoothRide™ Swivel Tire
U	Lock/Unlock for Swivel Wheel
V	Kettle Pilot Ignitor Electrode
W	Central Pour Access Cover with Latches
X	PaddleMax™ Agitator Actuator
Y	Inspection Cover with Latches
Z	PaddleMax™ Agitator
AB	Torch





\*LP-Gas supply cylinder not supplied by Graco. LP-Gas supply cylinder must be designed, fabricated, and marked in accordance with specifications and regulators for LP-Gas cylinders at The U.S. Department of Transportation (DOT), The National Standard of Canada, CAN/CSA-B339, Cylinders, Spheres, and Tubes for Transportation of Dangerous Goods, The Transportable Pressure Vessels Regulators 2001 (S1 2001/1426), The Gas Cylinders (Pattern Approval) Regulations 1987 (SI 1987/116)(Pattern Approval Regulations) for EEC-type cylinders under European Directive 84/525/EEC, 84/526/EEC, and 84/527/EEC.

# Component ID (Continued)



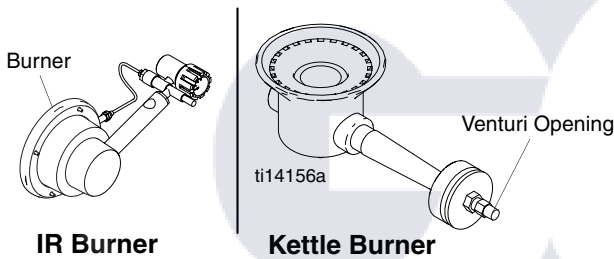
Ref.	Component
AA	Kettle Temperature Control Knob
BB	Kettle Temperature Indicator
CC	Kettle Gas Safety Valve
DD	Kettle Pilot Burner Ignitor
EE	SmartDie™ Screed Box
GG	SmartDie™ Screed Box IR Burner
HH	IR Burner Safety Shut-Off Valve with Thermocouple
JJ	IR Burner Regulator/Flow Control Valve
KK	Kettle Burners Manual Shut-Off Valve
LL	Kettle Burner Regulator

# Important Safety Information

						
<p>If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or death.</p> <p>Keep gas supply hose away from hot surfaces and flames.</p>						

Use equipment in accordance with state and local ordinances with Storage, Handling and Transportation of Liquid Petroleum Gases, ANSI/NFPA58 or CSA B149.1

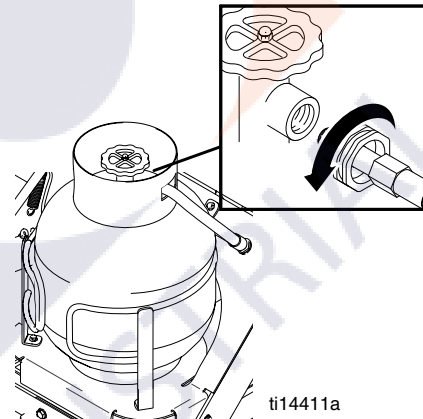
If equipment has been in storage, check for insects and insect nests on burners and Venturi tubes.



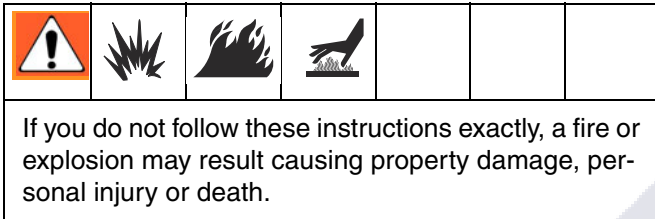
Use only vertical vapor-withdrawal LP gas cylinders which have been designed, fabricated, tested and marked in accordance with registration of the U.S. Department of Transportation (DOT) or the Standard for Cylinders, Spheres, and Tubes for the Transportation of Dangerous Goods CAN/CSA-B337, The Transportable Pressure Vessels Regulators 2001 (S1 2001/1426), The Gas Cylinders (Pattern Approval) Regulations 1987 (SI 1987/116)(Pattern Approval Regulations) for EEC-type cylinders (under European Directive 84/525/EEC, 84/526/EEC, and 84/527/EEC. Use only 20 lb to 30 lb (9.07 kg to 13.6 kg) LP-Gas cylinders.

LP-Gas cylinder to be used only in vertical upright position as noted on agency approved LP-Gas cylinder for proper vapor withdrawal.

Check gas supply hose connection to LP-Gas cylinder. Make sure fitting is free of debris before connecting to tank. Make sure gas connection is screwed completely on and is free of leaks.

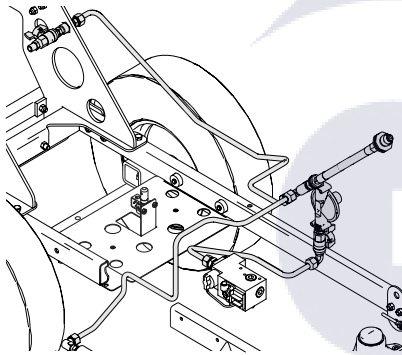


## Important Safety Information

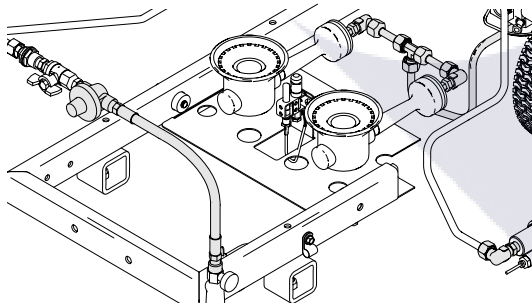


**BEFORE LIGHTING:** Smell all around the working area for gas. Be sure to smell next to the ground because propane is heavier than air and will settle on the ground.

**DAILY:** Check for gas leaks. Use mild soap and water solution or other approved method. Apply solution to all gas lines and fittings then watch for gas bubbles.



ti14560a

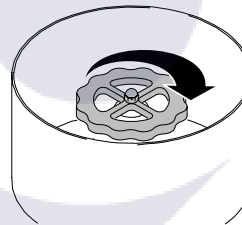


ti14561a

**NOTE:** Burners will need to be ignited to test gas lines and fittings downstream of gas safety valves (CC and HH). Ignite burners only after thoroughly checking gas line and fitting upstream of gas safety valves.

### WHAT TO DO IF YOU SMELL GAS OR FIND GAS BUBBLES:

- Evacuate all unqualified personnel from area
- Do not try to light any burner
- Do not strike a flame
- Do not use electric fans to remove gas from area
- Do not touch any electric switch and do not use any phone
- If leak is from a gas fitting, tighten fitting until leak stops
- If leak is from a gas line, shut off at LP-gas cylinder and replace gas line
- Immediately call your gas supplier from a remote phone. Follow gas supplier's instructions.
- If leak can not be stopped by shutting off LP-gas cylinder shut-off valve, immediately call your gas supplier from a remote phone. Follow gas supplier's instructions.
- If you cannot reach your gas supplier call the fire department



ti14128a

Use only your hand to push in or turn the kettle gas safety valve (CC). Never use tools. If the knob will not push in or turn by hand, do not try to repair it; call a qualified service technician. Attempted repair or force may result in a fire or explosion.

Do not use this equipment if any part has been under water. Immediately call a qualified service technician to inspect equipment and all components. Replace defective parts only with approved manufactured parts.

# Important Safety Information

## Before attempting to start equipment:



If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or death.



All surfaces are capable of becoming extremely hot. Be sure to always wear heat-resistant gloves and other protective equipment rated for 500° F (260° C). Material and unit are very hot 350° - 500° F (177° C - 260° C). Never exceed 450° F (232° C) material temperatures.

Hot molten plastic will burn skin. Do not attempt to remove from skin. Cool under running water and seek medical attention.

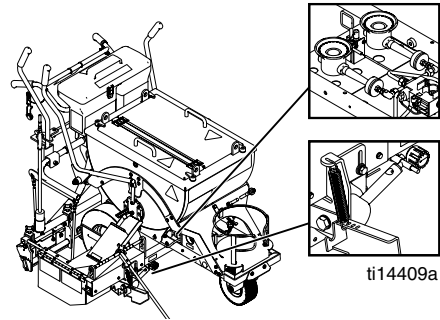
See MSDS for Thermoplastic Traffic Marking Compound.



If using Thermolazer™ in conjunction with Line-Driver™, do not fill gasoline tank while burners are ignited. Allow equipment to completely cool before refueling.



Avoid prolonged inhalation of fumes.



**DAILY:** Check all gas lines and fittings for gas leaks.

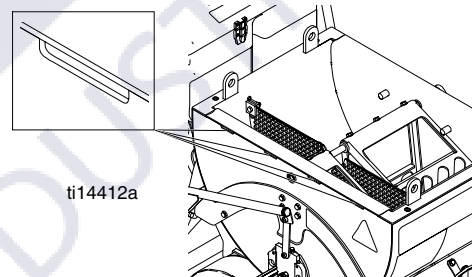
**DAILY:** Check gas supply hose for wear, abrasions, cuts or leaks. Replace only with hoses recommended by Graco.

Check gas supply hose connection to LP-gas cylinder. Make sure fitting is free of debris before connecting to tank. Make sure gas connection is screwed completely on and is free of leaks.

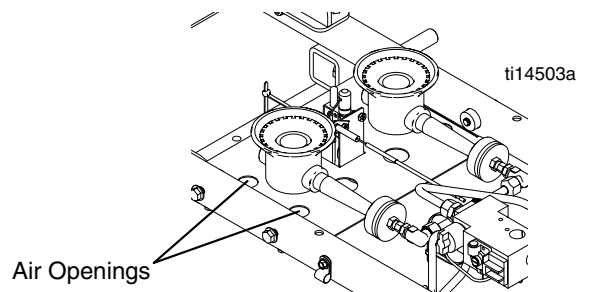
Check to ensure that the following are closed:

- LP Gas Tank manual shut-off valve
- ControlFlow™ gate valve
- Scream IR burner regulator/gas flow control valve
- Kettle gas burner manual shut-off valve
- Kettle gas safety valve
- Torch manual shut-off valve
- Kettle temperature control knob (turn to "OFF")
- Torch gas flow control valve

Check to make sure exhaust openings on kettle are not obstructed.

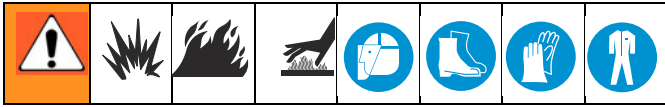


Check to make sure combustion air supply openings on kettle are not obstructed.



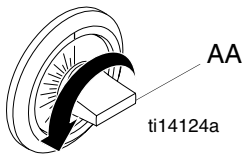
# Lighting Instructions

## Lighting Kettle Burners

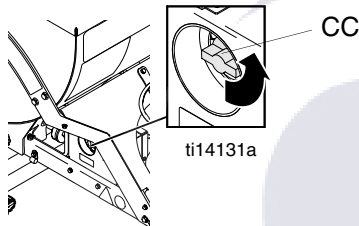


Read **For Your Safety**, page 7.

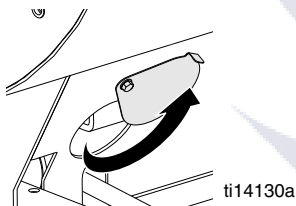
1. Turn temperature control knob (AA) to 0 ("OFF").



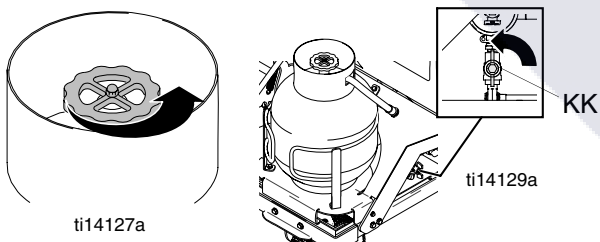
2. Turn kettle gas safety valve (CC) to "OFF".



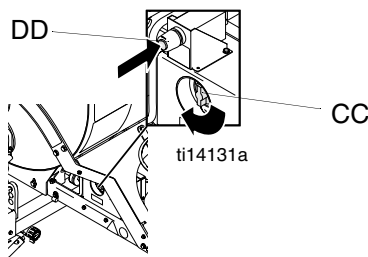
3. Open burner view port.



4. Open manual shut-off valve on propane tank located at front of unit; open kettle manual shut-off valve (KK) below kettle and behind propane tank.



5. Turn gas safety valve (CC) to "PILOT".



6. Push in gas safety valve knob.
7. Push kettle pilot burner igniter (DD) until pilot ignites.
8. Continue to push in gas safety valve (CC) in for approximately 1 minute. If pilot goes out, repeat steps 4-6 after 10 minutes.



If pilot ignites without depressing the gas safety valve knob, replace gas safety valve. If gas safety valve knob does not pop back after releasing in pilot position, STOP and replace gas safety valve. Shut off gas at propane tank before replacing valve.

9. Turn gas safety valve knob to "ON".
10. Turn temperature to 250° F (121° C) and observe that main burners have ignited. Turn kettle temperature control back to "0" and observe that main burners shut off.

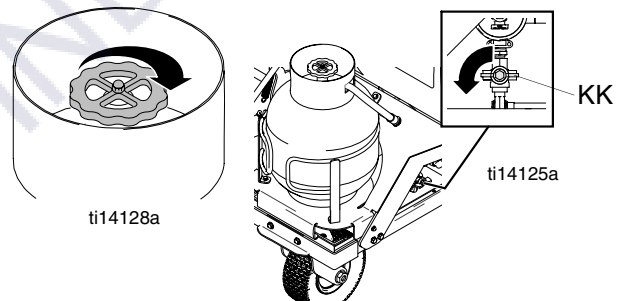


If main burners do not ignite or shut off when rotating temperature control knob, STOP. Shut off gas at the propane tank. Follow diagnostic procedure in Repair manual.

11. Close burner view port.
12. Turn temperature control to desired setting.

### Shutting Off Burner

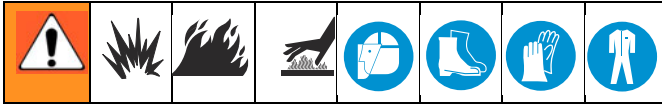
1. Turn gas safety valve to "OFF".
2. Close manual shut-off valve on propane tank. Close kettle manual shut-off valve (KK) when finished heating with kettle burners.



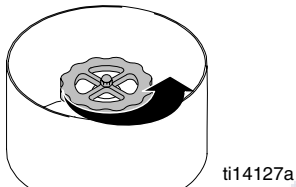
**NOTE:** The kettle gas burner can be lit manually with a small torch (for example: DOT 39 NRC 228/286 Cylinder with #3 torch tip) if the battery powered pulse ignitor fails to light the pilot.



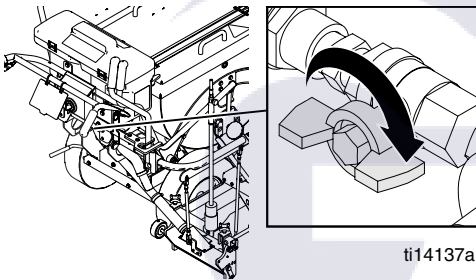
# Torch Lighting Instructions



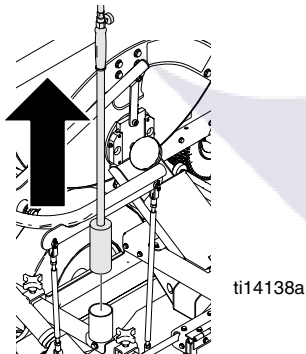
1. Open manual shut-off valve on propane tank located at front of unit.



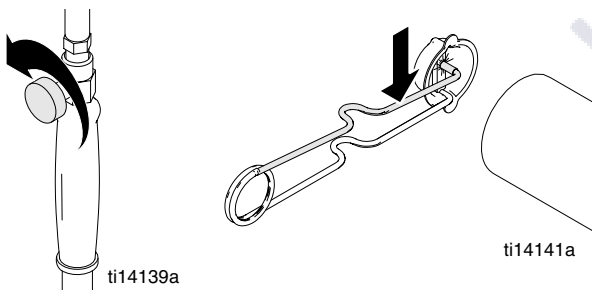
2. Open torch manual shut-off valve next to torch regulator.



3. Remove external torch from holder.



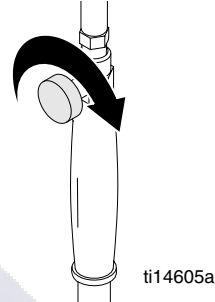
4. Slowly open torch flame adjusting valve and use striker to ignite flame.



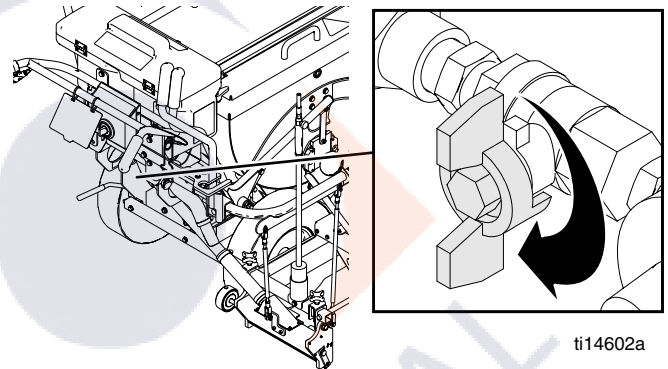
5. Adjust flame to desired length.

## Shutting Off Torch

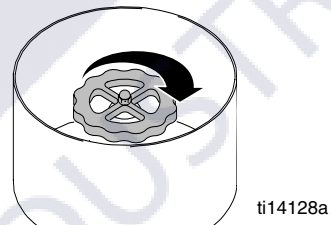
1. Fully close torch flame adjusting valve.



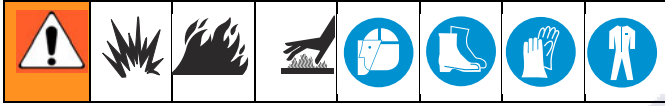
2. Close torch manual shut-off valve when finished heating with torch.



3. Close manual shut-off valve on propane tank when finished heating with torch.

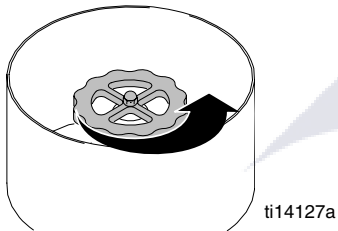


# SmartDie™ Scred Box IR Burner Lighting Instructions



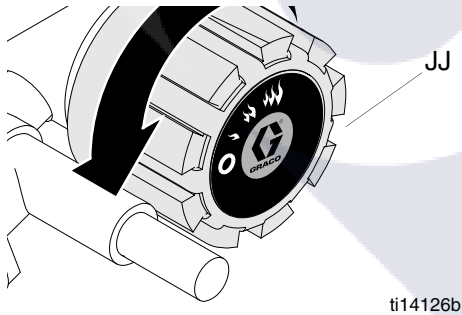
Read **Important Safety Information**, page 7.

1. Open manual shut-off valve on propane tank located at front of unit.

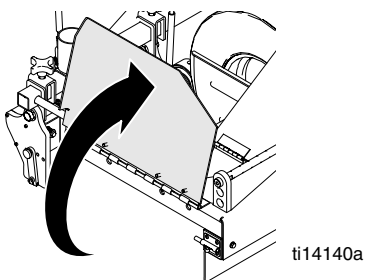


2. Light torch (see **Torch Lighting Instructions**, page 11).

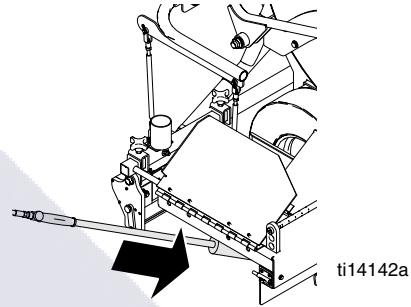
3. Turn gas flow control knob (JJ) to full-on (three flames position).



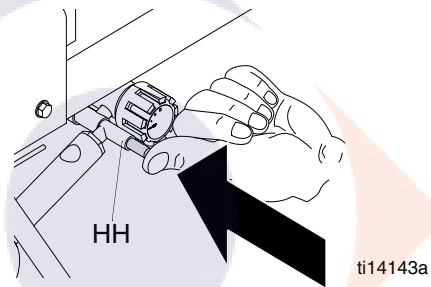
4. Open screed box shroud access door.



5. Place torch at end of IR burner next to stainless steel mesh on burner.



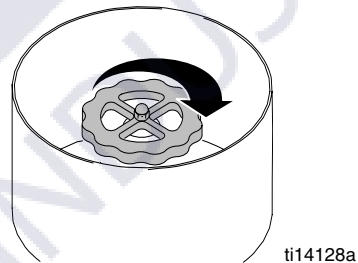
6. Press in safety shut-off valve knob (HH).



7. Hold in safety shut-off knob until burner ignites. The burner will give off a bright glow once burner ignites.

## Shutting Off Gas

1. Turn gas flow control knob to "OFF" (0 position).
2. Close manual shut-off valve on propane tank when finished heating with screed box IR burner.



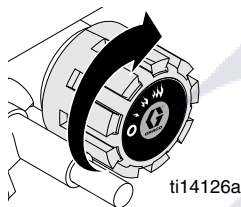


# SmartDie™ Screed Box

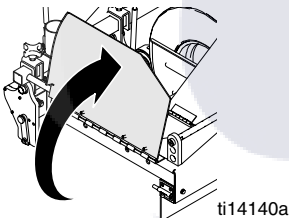
## Installation



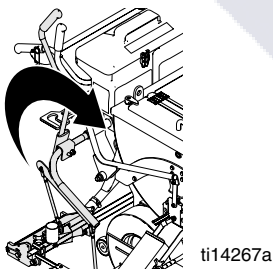
1. Shut off the SmartDie™ screed box IR burner.



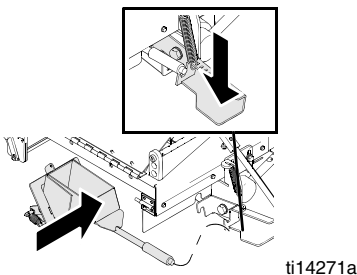
2. Open screed shroud door.



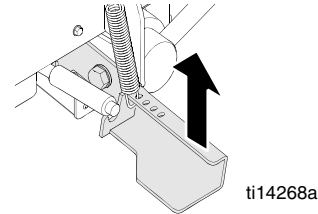
3. Move SmartDie™ screed box actuator out of full raised locked position.



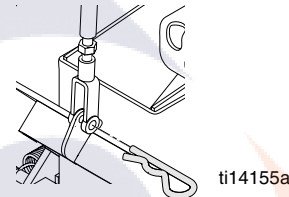
4. Slide SmartDie™ screed box under screed shroud and press down on SmartDie™ lever.



5. Engage SmartDie™ screed box rod into SmartDie™ lever.



6. Align hole of rod clevis with connecting hole in SmartDie™ screed box yoke and install hairpin cotter pin.

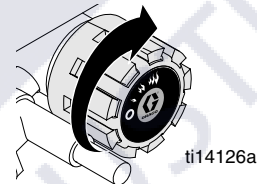


7. Close and lock screed shroud door.

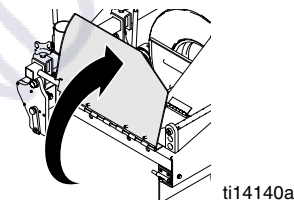
8. Re-light SmartDie™ screed box IR burner as required.

## Removal

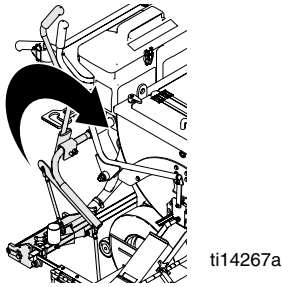
1. Shut off SmartDie™ screed box IR burner.



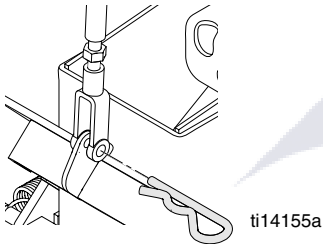
2. Open screed shroud door.



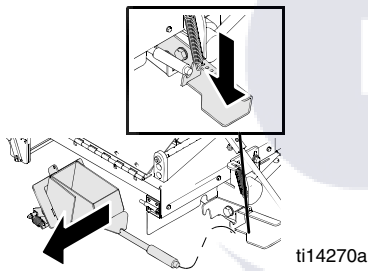
3. Set SmartDie™ screed box on ground but not in locked open position.



4. Remove hairpin cotter pin connecting SmartDie™ screed box to rod clevis.



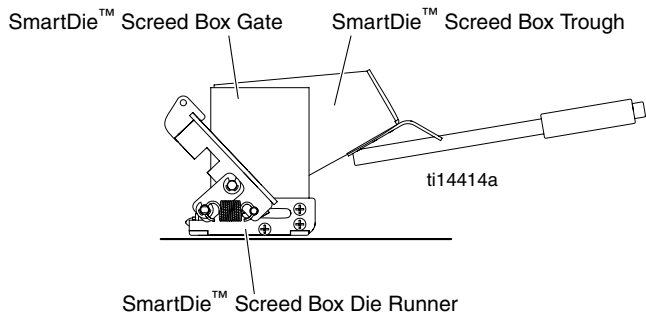
5. Press down SmartDie™ lever.



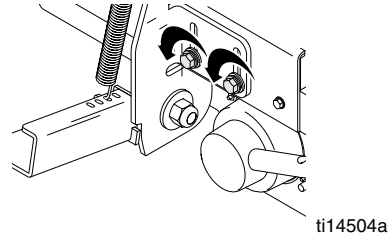
6. Disengage SmartDie™ screed box rod from SmartDie™ lever and carefully remove SmartDie™.

## Adjustment

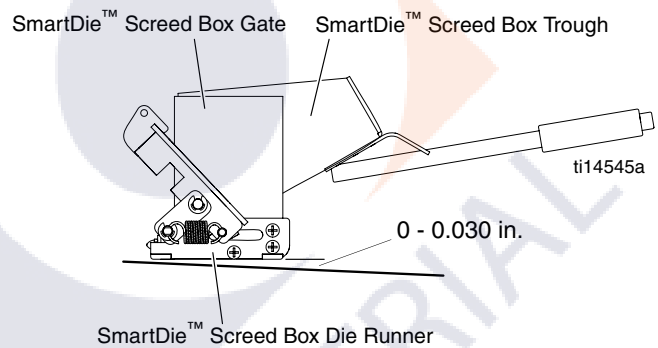
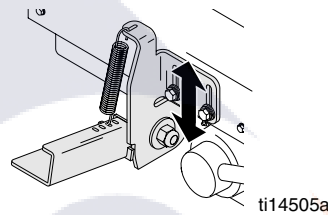
The height and angle of the SmartDie™ screed box can be adjusted to ensure a solid line of material on any surface. For optimum delivery of thermoplastic material, make sure the SmartDie™ screed box die runner is parallel to road surface.



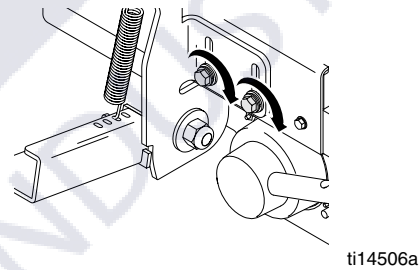
1. Loosen two bolts on SmartDie™ screed box mounting bracket.



2. Slide mount down until leading box edge of SmartDie™ screed box die runner is just off of the ground surface. For best performance, raise leading edge 0 - 0.03 in. (0 - 0.076 cm) off ground surface.

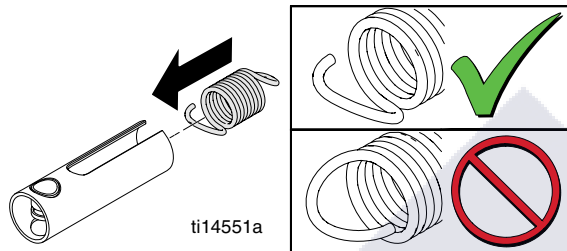


3. Tighten bolts on screed box mounting bracket.

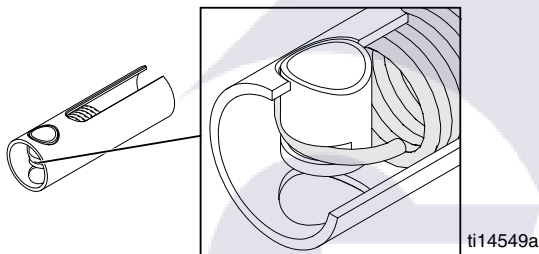


## Replacing SmartDie™ Screed Box Spring

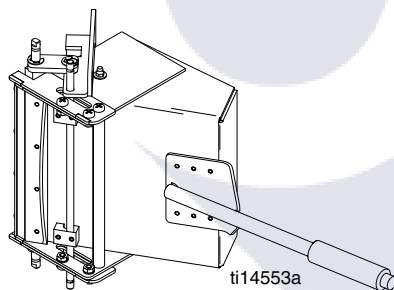
1. Position replacement spring as shown below and slide into spring guard.



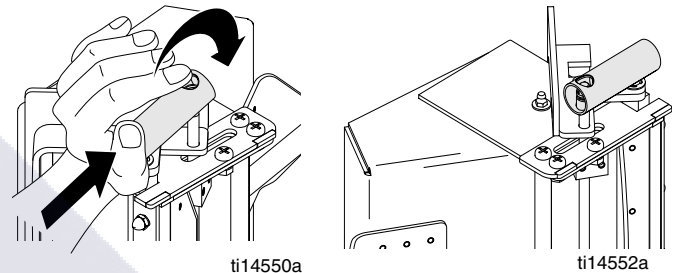
2. Push spring up through guard and loop end around guard pin until spring sits in groove.



3. Set SmartDie™ screed box on its side.



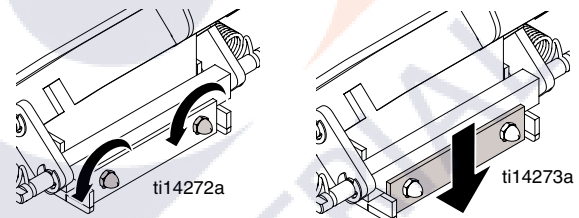
4. Loop open end of spring and guard over first pin on SmartDie™ screed box. Then push spring guard up and over second pin on SmartDie™ screed box.



**NOTE:** Make sure spring end is fully engaged in groove to prevent spring from coming loose.

## Line Thickness Adjustment

To adjust the thickness of the line of material delivered from the screed box, loosen all acorn nuts on the SmartDie™ screed box gate and move the spacer until desired line thickness is achieved.



Typical settings on pavement: 0.060 - 0.125 in. (0.153 - 0.318 cm).

Typical settings on metal stencil: Flush - 0.0 in. (0.0 cm).

# Preparing ThermoLazer™ for Application

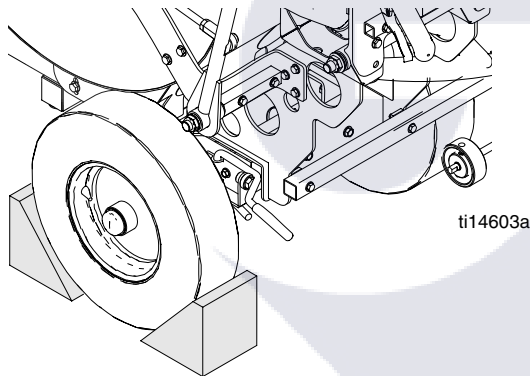


Keep all access covers closed and latched when equipment is in use.

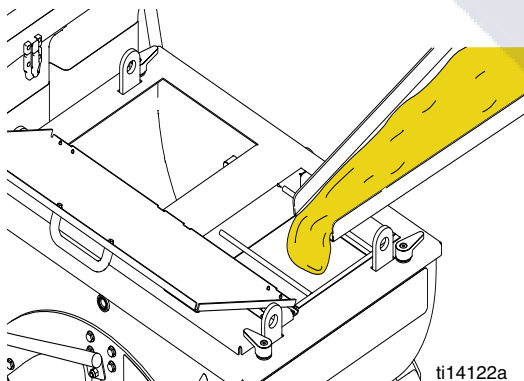
Always secure ThermoLazer™ by chocking wheels when adding thermoplastic.

1. Make sure kettle burners and SmartDie™ screed box burner are lit.
2. Allow kettle to heat up before adding material. If kettle is completely empty, allow kettle to reach 300° - 350° F (149° - 177° C) before adding material. If kettle has material, allow material to reach 380° F (193° C) before adding material.

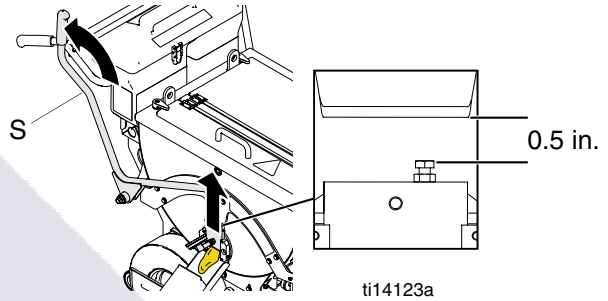
3. Secure ThermoLazer™ by chocking wheels.



4. Add thermoplastic material to kettle.

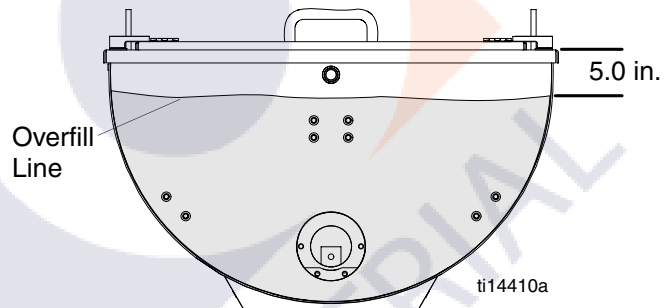


5. Move ControlFlow™ Gate Valve Actuator (S) to raised position and fill screed box with melted thermoplastic material.



**NOTE:** The material gate is adjustable. The gate is factory set at a 0.5 in. (1.3 cm) gap. You can increase this gap for more material flow or decrease the gap for less material flow.

6. Do not overfill material in kettle. Overfill would be material higher than 5 in. (13 cm) below top of kettle.

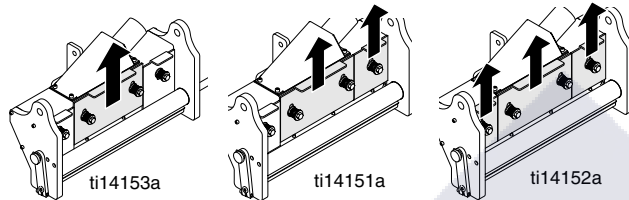


7. Close and latch cover access doors when applying thermoplastic.

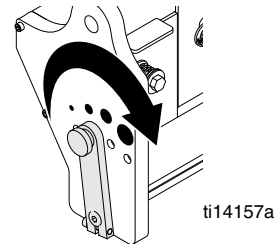
8. Avoid bumping or impacting ThermoLazer™ to prevent spillage or splashing of hot material.

# Bead Dispenser Box

The Bead Dispenser Box has three doors which can be opened and closed to allow beads to be dispensed at desired width patterns.



Bead flow rate can be adjusted using the Bead Flow Rate Lever on the outside of the Bead Dispenser Box.



## Adding Beads to SplitBead™ Bead Hopper

### Single Bead Application

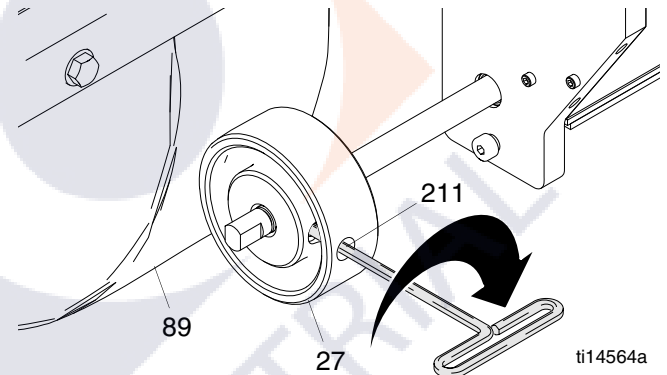
1. Unlock and open SplitBead™ bead hopper door.
2. Fill both sides of hopper with beads.
3. Close and lock hopper door. Do not allow beads to remain in hopper, hoses or bead dispenser for an extended period of time. Beads will absorb moisture, bond to adjacent beads and harden.

### Double Bead Application (Requires Installation of Double Bead Kit 24C528)

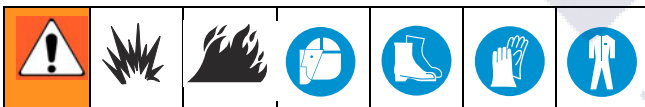
1. Fill element beads on left side (smaller chamber).
2. Fill glass beads on right side (larger chamber).
3. Close and lock hopper door. Do not allow beads to remain in hopper, hoses or bead dispenser for an extended period of time. Beads will absorb moisture, bond to adjacent beads and harden.

### Bead Dispenser Engagement Wheel

To properly dispense beads, drive wheel (27) must be in direct contact with tire (89). If drive wheel (27) becomes loose and/or starts to slip, use allen wrench to tighten set screw (211).



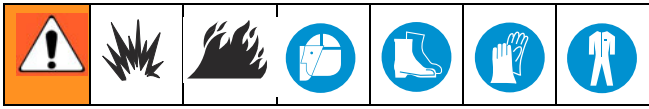
## Applying Material to a Surface



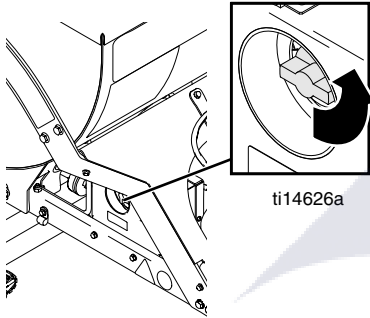
1. Position unit over target area and push ThermoLazer™ forward in a straight line until front wheel locks into centered position (a slight click will be heard when wheel is engaged). Use Line Guide to help orientate ThermoLazer™.
2. Pull unit back to start of target area and move screed box into position.
3. Pull thermoplastic ControlFlow™ Gate Valve Actuator (S) and fill screed box with melted material.
4. Open bead box gate and fill bead box dispenser to a level 1.5 in. (3.8 cm) from top.
5. Push SmartDie™ screed box/bead dispenser box actuator (N) lever forward to deploy screed box and engage bead dispense wheel.
6. Push ThermoLazer™ unit forward with screed box deployed and bead dispenser wheel engaged to apply material.

For examples of correct and incorrect material application, see **Troubleshooting** section in Repair manual.

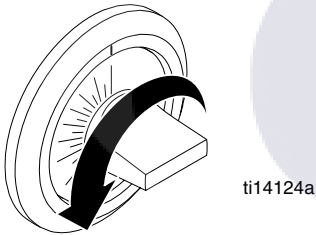
# Shutting Down



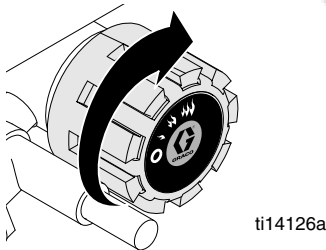
1. Turn kettle gas safety valve (CC) to "OFF" position.



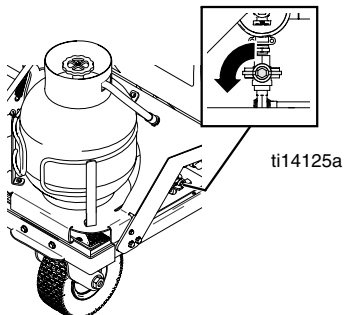
2. Turn temperature control knob (AA) to 0 ("OFF").



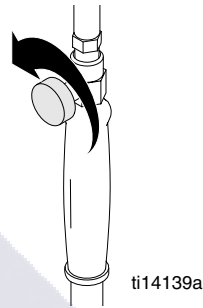
3. Turn screw burner regulator/flow control valve to "0" (OFF).



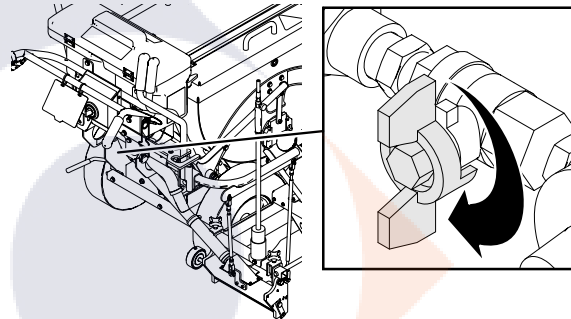
4. Close kettle burner manual shut-off valve (KK) below kettle and behind propane tank OFF.



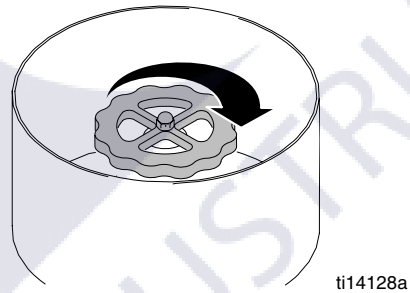
5. Turn torch gas flow valve to closed position.



6. Turn torch manual shut-off valve OFF.



7. Turn main gas valve on propane tank OFF.

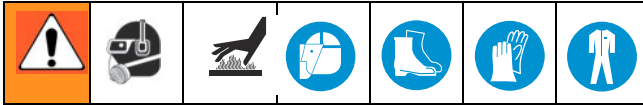


Always store LP-Gas cylinder outside and in an approved/secure storage locker.

Thermolazer™ can be stored inside a building ONLY IF the LP-Gas cylinder has been removed.



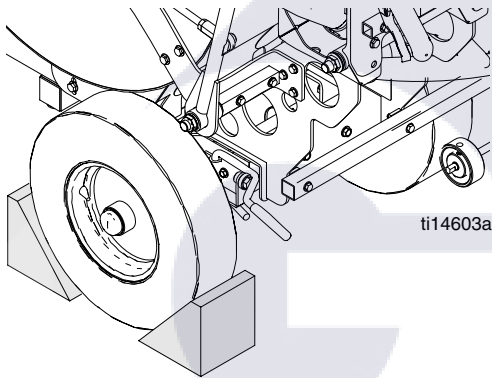
# Clean-Up



Never scoop out remaining melted thermoplastic from kettle. Remaining thermoplastic can be left to harden inside the kettle and can be remelted at a later date.

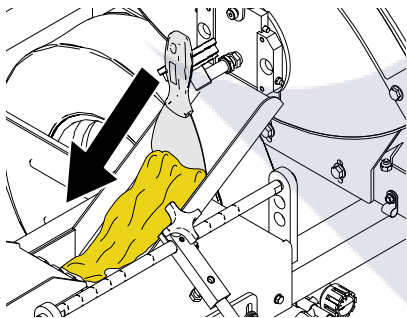
Always secure ThermoLazer™ by chocking wheels when adding thermoplastic.

1. Secure ThermoLazer™ by chocking wheels.



ti14603a

2. Use scraper to clean out trough and screed box.



ti14529a

## NOTICE

Be sure to thoroughly clean all material on BlackMax™ Screed Die bar of screed box and any open areas to prevent material from freezing moving parts of screed box. Always run all material out of each die before removing. Scrape out all remaining material before it sets within the die.

## NOTICE

To prevent material from hardening and blocking flow, scrape all excess material off of external surfaces after each use, including the material trough.

## NOTICE

When using hand torch to loosen material from screed box, do not allow flames to come in contact with screed box springs. Screed box springs will lose their temper from flames and will not properly close screed box.

## NOTICE

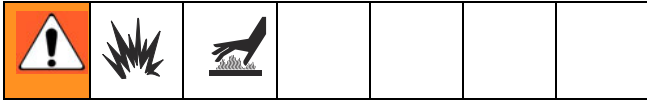
Remove any remaining beads in the bead hopper and bead dispenser to prevent beads from clogging hopper and dispenser.

## Transporting

Remove LP-Gas supply cylinder from ThermoLazer™ before transporting. Secure in an approved location and method as authorized by local, state, federal, national, and international agencies.

Always use the designated mounted lifting lugs when lifting the ThermoLazer™. When lifting the ThermoLazer™ only use ANSI approved slings and equipment rated for a minimum of 2000 lb. Always use ANSI approved equipment for securing ThermoLazer to transporting equipment.

# Maintenance

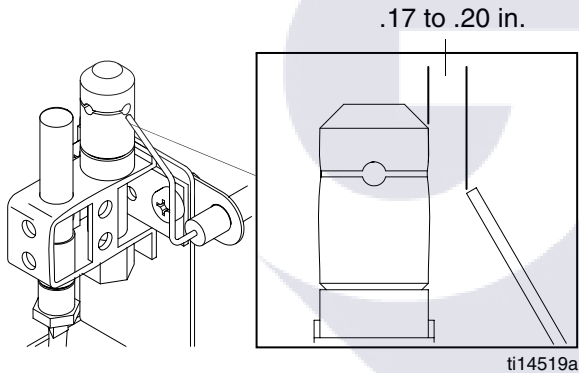


**DAILY:** Check gas lines and fittings for gas leaks. Use soap and water mixture or LP-gas leak detector to detect gas leaks.

**DAILY:** Check LP-gas supply hose for abrasions, cut or wear. Make sure hose fitting and tank fitting are free of debris before connecting.

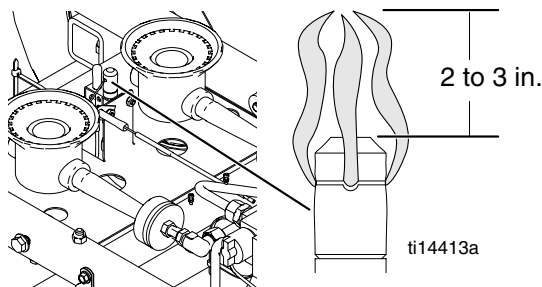
**DAILY:** Make sure kettle gas safety valve (CC) rotates freely. Make sure valve freely moves in and out at the "PILOT" position.

**DAILY:** Make sure a good spark is being produced at the kettle pilot burner by the kettle pilot igniter electrode. Spark gap should be .17 - .20 in. (.43 - .50 cm).

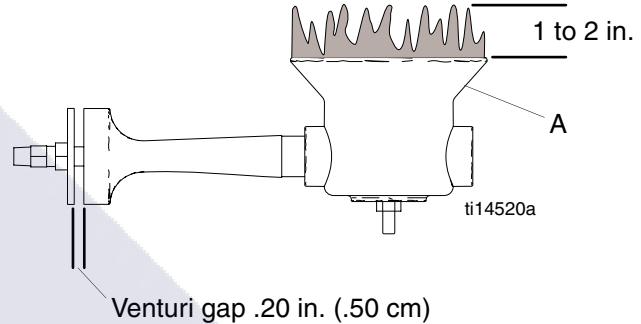


**DAILY:** Make sure kettle main burners (A) ignite when heat is required and shut-off when heat is not required.

**DAILY:** Make sure kettle pilot burner (C) is burning correctly. The flame should be 2 - 3 in. (5.0 - 7.6 cm) high and blue/orange in color.



**DAILY:** Make sure kettle main burners (A) are burning correctly. The flame should be 1 - 2 in. (2.5 - 5.0 cm) high and blue/orange in color.



**DAILY:** Make sure IR burner safety shut-off valve (HH) moves freely in and out.

**DAILY:** Make sure LP-gas only flows to burner when safety shut-off valve knob is pressed in.

**DAILY:** Make sure the IR burner face emits a bright orange glow when at high fire; i.e. the "three flames" position on the Regulator/Flow Control Valve (JJ).

**DAILY:** Grease SmartDie™ screed box.

**DAILY:** Check screed box springs for foreign debris & wear.

**DAILY:** Check bead box dispenser drive wheel (27) and Thermolazer™ tire (89) for foreign debris.

**WEEKLY:** Grease thermoplastic flow control gate valve guides.

**WEEKLY:** Check tire pressures.

**WEEKLY:** Check screed box die bar carbide runners for wear.

**MONTHLY:** Grease PaddleMax™ agitator rod ball joint ends.



## Fat Track™ Front Swivel Wheel System

**ANNUALLY:** Tighten nut (86a) on screw under dust cap (92) until spring washer bottoms out. Then back off the nut 1/2 to 3/4 turns.

**ANNUALLY:** Tighten nut (82) on screw (90) until it begins to compress spring washer (83). Then tighten an additional 1/4 turn.

**MONTHLY:** Grease the wheel bearing.

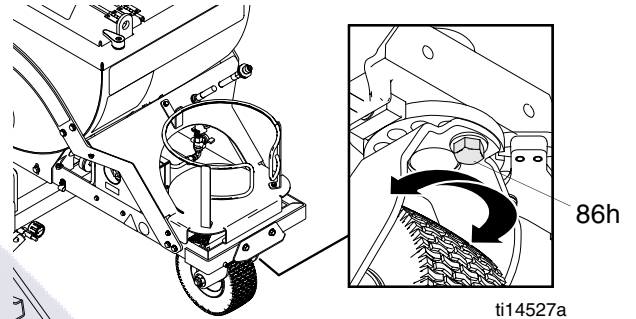
**PERIODICALLY:** Check caster locking pin (86t) for wear. If pin is worn out, there will be play in the caster wheel. Reverse or replace the pin as needed.

**PERIODICALLY:** Check caster wheel alignment as necessary.

## FatTrack™ Front Swivel Tire Alignment

Align front wheel as follows:

1. Loosen cap screw (86h).



2. Rotate front wheel fork left or right, as necessary, to straighten alignment.
3. Tighten cap screw (86h). Push striper and let striper roll with hands off of striper.

**NOTE:** If striper rolls right or left, then repeat steps 1 and 3 until striper rolls straight.

## Technical Data

Fuel:	Liquefied petroleum gas (LP-gas) (propane vapor)
Gas supply pressure (maximum):	250 psi (17.24 bar)
Kettle burner inlet pressure:	11 in. w.c. (2.7 kPa)
IR burner inlet pressure:	12 psi (.83 bar)
Torch inlet pressure:	18 psi (1.24 bar)
Kettle main burner heating capacity (maximum):	Two (2) burners; each burner rated at 10,100 btu/hr (2.96 kW)
Kettle pilot burner heating capacity (maximum):	3800 btu/hr (1.11 kW)
IR burner heating capacity (maximum):	14,000 btu/hr (4.10 kW)
Torch heating capacity (maximum):	100,000 btu/hr (29.31 kW)
Kettle holding capacity (maximum):	300 lb (136 kg) (thermoplastic traffic marking compound materials)
Kettle Temperature (maximum):	450° F (232° C)
Kettle Temperature (operating):	380° - 420° F (193° - 216° C) 60 psi (4.14 bar)
Tire pressure (rear wheels):	60 psi (4.14 bar)
Tire pressure (swivel wheel):	45 psi (3.10 bar)
Battery (Kettle Pilot Burner Igniter):	AA (1.5 V)
Bead Hopper Capacity (maximum):	80 lb (36.3 kg) Type II glass beads

## Dimensions

Weight:	295 lb (134 kg)
Length:	72 in. (1.83 m)
Height:	51 in. (1.30 m)
Width:	48 in. (1.22 m)



# Graco Standard Warranty

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

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

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

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

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

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

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

## **FOR GRACO CANADA CUSTOMERS**

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

## Graco Information

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

*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 313787

**Graco Headquarters:** Minneapolis

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

**GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441**

**Copyright 2008, Graco Inc. is registered to ISO 9001**

www.graco.com  
Revised 10/2010