



# TITAN®

OPERATING MANUAL

## HELIX™

SUREFIRE™ DUAL HEATED  
HOSE ASSEMBLY



**Models:**

**0138296 (100')**

**0521238 (200')**

# Warning!

**Attention: Danger of injury by injection!**  
**Airless units develop extremely high spraying pressures.**

**1**

**Never put your fingers, hands or any other parts of the body into the spray jet!**  
**Never point the spray gun at yourself, other persons or animals.**  
**Never use the spray gun without safety guard.**  
**Do not treat a spraying injury as a harmless cut. In case of injury to the skin through coating materials or solvents, consult a doctor immediately for quick and expert treatment. Inform the doctor about the coating material or solvent used.**

**2**

**The operating instructions state that the following points must always be observed before starting up:**

1. Faulty units must not be used.
2. Secure spray gun using the safety catch on the trigger.
3. Ensure that the unit is properly earthed.
4. Check allowable operating pressure of high-pressure hose set and spray gun.
5. Check all connections for leaks.

**3**

**The instructions regarding regular cleaning and maintenance of the unit must be strictly observed.**  
**Before any work is done on the unit or for every break in work the following rules must be observed:**

1. Release the pressure from spray gun and hose.
2. Secure the spray gun using the safety catch on the trigger.
3. Switch off unit.
4. Unplug the power cord from the unit.

# Be safety conscious!

<b>1</b>	<b>SAFETY REGULATIONS</b>	<b>4</b>
1.1	Explanation of symbols used	4
1.2	Isocyanate (ISO) Conditions	6
1.3	Electric safety	7
<b>2</b>	<b>GENERAL DESCRIPTION</b>	<b>8</b>
2.1	Hose process	8
<b>3</b>	<b>COMPONENT DESCRIPTION</b>	<b>8</b>
3.1	Component diagram	8
3.2	Attaching the JIC fittings	10
<b>4</b>	<b>OPERATION</b>	<b>11</b>
4.1	Check for leaks	11
<b>5</b>	<b>FLUID HOSE REPLACEMENT</b>	<b>12</b>
5.1	Replacing the fluid hose	12
<b>WARRANTY</b>		<b>13</b>
<b>SPARE PARTS LISTS</b>		<b>14/15</b>

# 1 SAFETY REGULATIONS

## 1.1 EXPLANATION OF SYMBOLS USED

This manual contains information that must be read and understood before using the equipment. When you come to an area that has one of the following symbols, pay particular attention and make certain to heed the safeguard.



→ This symbol indicates a potential hazard that may cause serious injury or loss of life. Important safety information will follow.



→ This symbol indicates a potential hazard to you or to the equipment. Important information that tells how to prevent damage to the equipment or how to avoid causes of minor injuries will follow.



→ Danger of skin injection



→ Danger of fire from solvent and spray fumes



→ Danger of explosion from solvent, spray fumes and incompatible materials



→ Danger of injury from inhalation of harmful vapors



→ Danger of injury from burns



→ Danger of injury from electric shock



→ Notes give important information which should be given special attention.



### HAZARD: INJECTION INJURY

Attention: Danger of injury by injection! A high pressure stream produced by this equipment can pierce the skin and underlying tissues, leading to serious injury and possible amputation.

Do not treat a spraying injury as a harmless cut. In case of injury to the skin through coating materials or solvents, consult a doctor immediately for quick and expert treatment. Inform the doctor about the coating material or solvent used.

### PREVENTION:

- NEVER aim the gun at any part of the body.
- NEVER allow any part of the body to touch the fluid stream. DO NOT allow body to touch a leak in the fluid hose.
- NEVER put your hand in front of the gun. Gloves will not provide protection against an injection injury.
- ALWAYS lock the gun trigger, shut the fluid pump off and release all pressure before servicing, cleaning the tip guard, changing tips, or leaving unattended. Pressure will not be released by turning off the engine. The PRIME/SPRAY valve(s) or pressure bleed valve must be turned to their appropriate positions to relieve system pressure.
- All accessories must be rated at or above the maximum operating pressure range of the sprayer. This includes guns, extensions, and hose.



### HAZARD: EXPLOSION OR FIRE

Solvent and material fumes can explode or ignite. Severe injury and/or property damage can occur.



### PREVENTION:

- Do not use materials with a flashpoint below 38° C (100° F). Flashpoint is the temperature at which a fluid can produce enough vapors to ignite.
- Do not use a material or solvent containing halogenated hydrocarbons. Such as chlorine, bleach mildewcide, methylene chloride and trichloroethane. They are not compatible with aluminum. Contact the coating supplier about compatibility of material with aluminum.
- Do not use the unit in work places which are covered by the explosion protection regulations.
- Provide extensive exhaust and fresh air introduction to keep the air within the spray area free from accumulation of flammable vapors.

- Avoid all ignition sources such as static electricity sparks, electrical appliances, flames, pilot lights, hot objects, and sparks from connecting and disconnecting power cords or working light switches.
- Do not smoke in spray area.
- Place sprayer sufficient distance from the spray object in a well ventilated area. Flammable vapors are often heavier than air. Floor area must be extremely well ventilated. The pump contains arcing parts that emit sparks and can ignite vapors.
- The equipment and objects in and around the spray area must be properly grounded to prevent static sparks.
- Use only conductive or earthed high pressure fluid hose. Gun must be earthed through hose connections.
- Power cord must be connected to a grounded circuit (electric units only).
- Follow material and solvent manufacturer's warnings and instructions. Be familiar with the coating material's SDS sheet and technical information to ensure safe use.
- Use lowest possible pressure to flush equipment.
- When cleaning the unit with solvents, the solvent should never be sprayed or pumped back into a container with a small opening (bunghole). An explosive gas/air mixture can arise. The container must be earthed.



### HAZARD: HAZARDOUS VAPORS

Solvents and other materials can be harmful if inhaled or come in contact with body. Vapors can cause severe nausea, fainting, or poisoning.

#### PREVENTION:

- Wear respiratory protection when spraying. Read all instructions supplied with the mask to be sure it will provide the necessary protection.
- All local regulations regarding protection against hazardous vapors must be observed.
- Wear protective eyewear.
- Protective clothing, gloves and possibly skin protection cream are necessary for the protection of the skin. Observe the regulations of the manufacturer concerning coating materials, solvents and cleaning agents in preparation, processing and cleaning units.



### HAZARD: BURN HAZARD

Certain components of the equipment are heated and become hot during operation.

#### PREVENTION:

- To avoid severe burns and injury, do not touch heated fluid or equipment. Wait until the equipment has completely cooled.



### HAZARD: THERMAL EXPANSION

Heated fluids, when in confined areas such as spray hoses, can create a rapid rise in pressure due to thermal expansion. Over-pressurization can lead to a rupture and serious injury.

#### PREVENTION:

- During system heating, make sure PRIME/SPRAY valves are set to SPRAY.
- Before each use, check all hoses for cuts, leaks, abrasion or bulging of cover. Check for damage or movement of couplings. Immediately replace the hose if any of these conditions exist. Never repair a spray hose. Replace it with another earthed high-pressure hose.



### HAZARD: HIGH PRESSURE HOSE

The spray hose can develop leaks from wear, kinking and abuse. A leak can inject material into the skin. Inspect the hose before each use.

#### PREVENTION:

- High-pressure hoses must be checked thoroughly before they are used.
- Replace any damaged high-pressure hose immediately.
- Never repair defective high-pressure hoses yourself!
- Avoid sharp bends and folds: the smallest bending radius is about 20 cm.
- Do not drive over the high-pressure hose. Protect against sharp objects and edges.
- Never pull on the high-pressure hose to move the device.
- Do not twist the high-pressure hose.
- Use only compatible cleaning solutions.
- Lay the high-pressure hose in such a way as to ensure that it cannot be tripped over.



Only use approved original-high-pressure hoses in order to ensure functionality, safety and durability.

**HAZARD: GENERAL**

This product can cause severe injury or property damage.

**PREVENTION:**

- Follow all appropriate local, state, and national codes governing ventilation, fire prevention, and operation.
- Pulling the trigger causes a recoil force to the hand that is holding the spray gun. The recoil force of the spray gun is particularly powerful when a high pressure has been set on the airless pump. When cleaning, set the pressure control to the lowest pressure.
- Use only manufacturer authorized parts. User assumes all risks and liabilities when using parts that do not meet the minimum specifications and safety devices of the pump manufacturer.
- ALWAYS follow the material manufacturer's instructions for safe handling of chemicals.
- Clean up all material and solvent spills immediately to prevent slip hazard.
- Never leave this equipment unattended. Keep away from children or anyone not familiar with the operation of airless equipment.
- Device weighs in excess of 36 kg. Three-person lift is required.
- The device and all related liquids (i.e. hydraulic oil) must be disposed of in an environmentally friendly way.

**1.2 ISOCYANATE (ISO) CONDITIONS**

Important Information Regarding Two-Component Material. Read before using the equipment.

**ISOCYANATE (ISO) CONDITIONS**

- Use only Methyldiisocyanates (MDI).
- Spraying materials that contain isocyanates (ISO) creates mists, vapors and atomized particulates that are potentially harmful.
- Be familiar with the spray material's SDS in order to understand specific hazards and necessary precautions that are related to the use of spray materials containing isocyanates.
- Provide extensive exhaust and fresh air introduction to keep the air within the spray area free from harmful isocyanate vapors. If sufficient ventilation is not available, a supplied-air respirator must be available to everyone in the work area.
- **AVOID ANY BARE-SKIN CONTACT WITH ISOCYANATES.** To prevent contact with isocyanates, all persons located within the spray area must be wearing the appropriate protective equipment, including chemically impermeable gloves, boots, aprons and goggles.

**MATERIAL IGNITION**

- Some materials may become self-igniting if applied too thickly. Read material manufacturer's warnings and material SDS.

**KEEP SPRAY COMPONENTS SEPARATE**

- Cross-contamination of individual spray materials can result in cured material in fluid lines which can cause severe injury and/or damage to the equipment.
- To prevent cross-contamination of the equipment wetted parts, **NEVER** interchange Component A (isocyanate) parts with Component B (resin) parts.

## MOISTURE SENSITIVITY

Isocyanates (ISO) are catalysts used in two-component foam and polyurea coatings. ISO will react with moisture (such as humidity) to form small, hard abrasive crystals. These crystals will then contaminate the fluid. Eventually a film will form on the fluid surface and the ISO will begin to gel, increasing in viscosity. Fluid contaminated with partially cured ISO, if used, will reduce spray performance and the overall life of the component wetted parts.



The amount of film formation and the rate of crystalization varies depending upon the blend of ISO, the humidity and the temperature.

### PREVENTION:

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. NEVER store ISO in an open container.
- Use ONLY the moisture-proof hoses specifically designed for ISO that are supplied with your system. If new hoses need to be ordered, contact Titan Technical Service.
- Never flush reclaimed solvents through the system. Reclaimed solvents can contain moisture. Always keep solvent containers closed when not being used to prevent moisture contamination.
- Never use solvent on one side if it has been contaminated from the other side.
- Always lubricate threaded parts with ISO pump oil or grease when reassembling.
- Always circulate a hose and pump that contains ISO at least once a week to prevent the ISO from crystalizing.

## CHANGING MATERIALS

- When changing spray materials, thoroughly flush the equipment multiple times to ensure that it is fully clean.
- Always clean the fluid inlet strainers after flushing.
- Check with your material manufacturer for chemical compatibility.
- Most materials use ISO with Component A, but some use ISO with Component B.
- Epoxies often have amines (hardener) with Component B. Polyureas often have amines with Component B (resin).

## FOAM RESINS WITH 245FA BLOWING AGENT

Some blowing agents will froth at temperatures above 90° F (33°C) when not under pressure, especially if agitated. To reduce frothing, minimize preheating in a circulation system.

## 1.3 ELECTRIC SAFETY

Electric models must be earthed. In the event of an electrical short circuit, earthing reduces the risk of electric shock by providing an escape wire for the electric current. Connection to the mains only through a special feed point, e.g. through an error protection installation with INF < 30 mA.



**DANGER** — Work or repairs at the electrical equipment may only be carried out by a skilled electrician. No liability is assumed for incorrect installation. Switch the unit off. Before all repair work, unplug the power plug from the outlet.



Danger of short-circuits caused by water ingressing into the electrical equipment. Never spray down the unit with high-pressure or high-pressure steam cleaners.

## OPERATING TEMPERATURE

This equipment will operate correctly in its intended ambient, at a minimum between +10°C and +40°C.

## RELATIVE HUMIDITY

The equipment will operate correctly within an environment at 50% RH, +40°C. Higher RH may be allowed at lower temperatures.

Measures shall be taken by the Purchaser to avoid the harmful effects of occasional condensation.

## ALTITUDE

This equipment will operate correctly up to 2100 m above mean sea level.

## TRANSPORTATION AND STORAGE

This equipment will withstand, or has been protected against, transportation and storage temperatures of -25°C to +55°C and for short periods up to +70°C.

It has been packaged to prevent damage from the effects of normal humidity, vibration and shock.



## 2 GENERAL DESCRIPTION



**ELECTRIC SHOCK HAZARD.** The Surefire™ Dual Heated Hose Assembly contains electrical parts. Do not submerge into any liquids.

The TITAN Helix Surefire™ Dual Heated Hose Assembly is for use exclusively on the TITAN Helix Plural Component System. The Surefire™ Dual Heated Hose Assembly contains the following elements:

- "A" (ISO) side fluid hose (marked with red) with internal heating element
- "B" (Resin) side fluid hose (marked with blue) with internal heating element
- Air hose to connect the spray gun to the compressed air source
- Temperature sensor installed approximately 36 inches from the end of each fluid hose
- "A" and "B" side non-heated whip hoses (1 m length) for increased mobility
- Foam insulation to prevent heat loss
- A velcro-secured shroud that runs the length of the entire hose assembly

## 3 COMPONENT DESCRIPTION

### 3.1 COMPONENT DIAGRAM\*

ITEM	DESCRIPTION	FUNCTION	LENGTH(S)
<b>A</b>	Fluid Hose - "A" side (ISO)	The "A" side fluid hose typically carries the the ISO or activator material from Component Pump A to the spray gun. The "A" side fluid hose is marked with red.	100', 200'
<b>B</b>	Fluid Hose - "B" side (resin)	The "B" side fluid hose typically carries the resin or hardener material from Component Pump B to the spray gun. The "B" side fluid hose is marked with blue.	100', 200'
<b>C</b>	Whip Hose - "A" side	Connects the "A" (isocyanate) side fluid hose to the spray gun.	1 m
<b>D</b>	Whip Hose - "B" side	Connects the "B" (resin) side fluid hose to the spray gun.	1 m
<b>E</b>	Air supply hose	Connects the spray gun to the separate air supply.	100', 200'
<b>F</b>	JIC swivel fitting - "A" side (#5)	Connects the "A" side whip hose to the spray gun. This must be assembled to its appropriate whip hose prior to system usage.	N/A
<b>G</b>	JIC swivel fitting - "B" side (#6)	Connects the "B" side whip hose to the spray gun. This must be assembled to its appropriate whip hose prior to system usage.	N/A
<b>H</b>	Heat sensor	Each fluid hose comes installed with a heat sensor that gives the temperature reading of each fluid component. The sensors are connected to the Helix Plural Component System control panel two separate communication cords located underneath the pressure gauges.	N/A

### 2.1 HOSE PROCESS

The spray fluids are heated by the heater block as they are drawn into the Helix Plural Component System. An internal heating element located within each hose maintains the temperature of the spray fluid as it travels to the spray gun. The temperature of the heating element is determined by the Surefire™ heated hose settings on the Helix Plural Component System control panel.

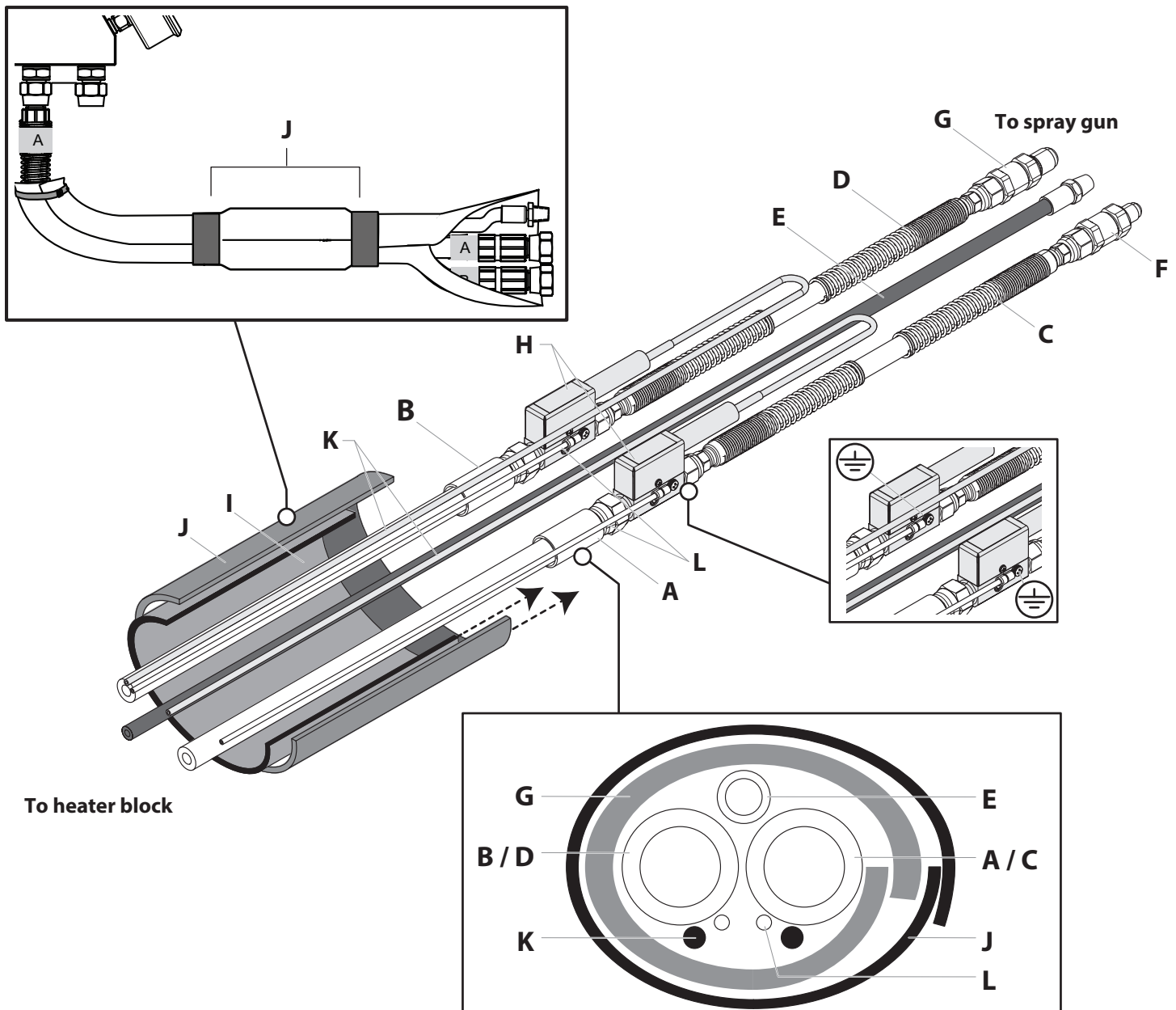
The temperatures of each fluid component are monitored by sensors located 36 inches from the end of each hose and are displayed on the Helix Plural Component System control panel. A 1 m length of non-heated "whip" hose is installed on the end of each Surefire™ heated hose for increased mobility.

All components of the Surefire™ heated hose assembly are wrapped in a 5 mm foam insulation to prevent heat loss, and then encased within a velcro-secured shroud that runs the entire length of the hose assembly.



ITEM	DESCRIPTION	FUNCTION	LENGTH(S)
I	Insulation	The insulation prevents heat loss in the spray material as it travels through the hoses.	Entire length of hose assembly
J	Sheathing	The velcro-secured sheathing wraps all of the elements of the Helix Surefire™ Dual Heated Hose Assembly together.  An approximately 17" length of sheathing with a slightly larger diameter surrounds and heat sensors. It is secured to the main sheathing with tape.	Entire length of hose assembly
K	Communication Cords	Connects the two temperature sensors in the heated hoses to the heater controller.	Entire length from Helix heater block to the heat sensors
L	Heat Sensor Ground Wires	Ensures that the entire Surefire™ heated hose assembly remains grounded.	100', 200'

\* Hose and cord lengths not shown to scale



### 3.2 ATTACHING THE JIC FITTINGS



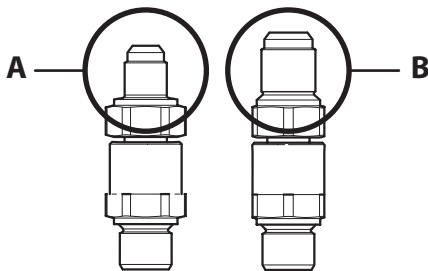
Attention

The JIC swivel fittings are packaged separately and must be attached to their respective whip hoses prior to system usage. Each fitting **MUST** be assembled to the correct hose, otherwise the hoses will not connect to the correct ports on the gun manifold. This can lead to system failure and permanent damage to the equipment. Follow the steps below.

Each of the JIC swivel fittings have different-sized male threads that will connect to the different-sized spray hose ports in the gun manifold.

1. Connect the smaller JIC swivel fitting to the "A" side whip hose.
2. Connect the larger JIC swivel fitting to the "B" side whip hose.

②



Attention

The Helix Plural Component System comes with the Surefire™ Dual Heated Hose Assembly already assembled to the heater block. Attempts to remove the hose assemblies from the heater block should only be done when a fluid hose needs to be replaced.

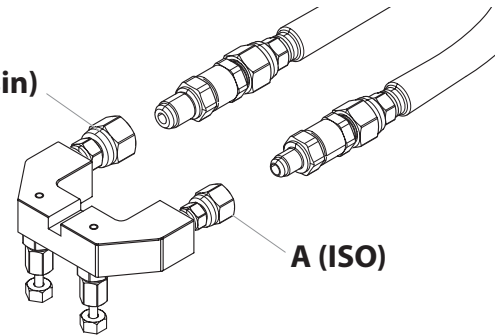
If a fluid hose needs to be replaced, follow the instructions in Section 5.

Each hose within the dual heated hose assembly is marked for identification: red for the "A" (ISO) side, blue for the "B" (resin) side.

On the spray gun end of the whip hoses (the ends not attached to the pump), the female fittings have different sized threads to prevent incorrect installation and fluid crossover at the spray gun.

③

B (Resin)



A (ISO)

The TITAN Helix Surefire™ Dual Heated Hose Assembly comes in two lengths: 100 feet (31 m) and 200 feet (61 m).

## 4 OPERATION



The maximum operating temperature of the Surefire™ Dual Heated Hose Assembly is 180°F (82°C). Do not exceed 180°F (82°C) when heating spray fluids.

Heated fluids inside the confines of a fluid hose can create a rapid rise in pressure due to thermal expansion. Over-pressurization can result in a serious skin injection injury due to a hose rupture. Make sure the PRIME/SPRAY valves on the Component Pumps are turned to PRIME during the heating process.



If a leak exists at any of these connections, follow the Pressure Relief Procedure (section 6.4) in the Plural Component instruction manual, tighten the connections and then re-prime the system to ensure there are no leaks.

4. When it is determined that there are no leaks, the system is ready to use. Follow remaining "Operation" instruction in the Helix Plural Component instruction manual.



If a leak in the body of a fluid hose is discovered, immediately shut down the system and replace the fluid hose. NEVER operate the system with a damaged fluid hose.

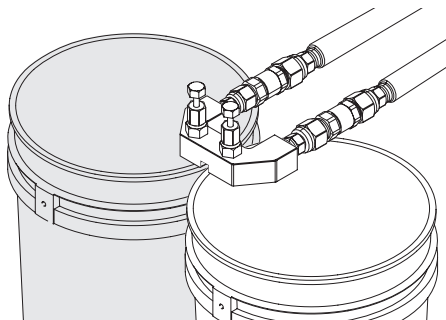
### 4.1 CHECK FOR LEAKS



During use, make sure the hose is properly supported in order to avoid strain due to excessive bending, sharp edges or excessive weight.

1. In the Helix Plural Component instruction manual, perform all steps located in the Setup section (section 5.):
  - 5.1 Locate the system
  - 5.2 Install the transfer pumps
  - 5.3 Connect the Surefire™ heated hoses
  - 5.4 Connect the electrical cord
  - 5.5 Ground the system
  - 5.6 Lubricate the component pumps
2. Prime the system by following the Startup (section 6.1) steps in the Plural Component manual.

4



3. Once the fluid hoses have been purged of any remaining air, check the hoses at the following locations for leaks:
  - a) Check the connections at the gun manifold
  - b) Check the connections at the heater block
  - c) Unwrap the velcro sheathing at the fluid hose / whip hose connection, approximately 1 m from the gun manifold

## 5 FLUID HOSE REPLACEMENT



If a rupture has been found in one of the spray hoses, it needs to be replaced. NEVER operate the system with a damaged fluid hose. NEVER attempt to repair a damaged hose, it needs to be replaced.



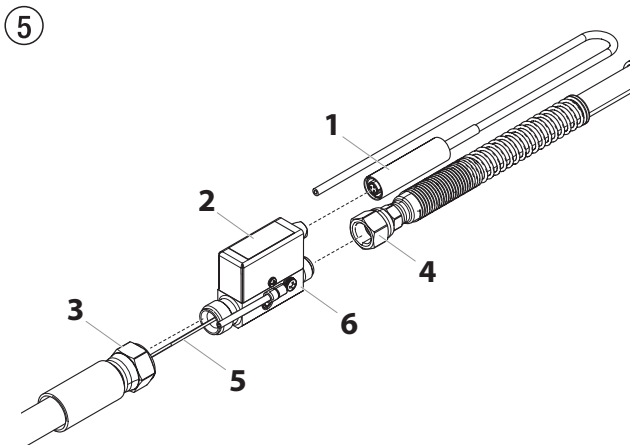
Component pump B has been removed from the graphic below for purposes of clarity. The entire Component Pump does not have to be removed in order to replace the fluid hose.

### 5.1 REPLACING THE FLUID HOSE

1. Immediately relieve pressure to the damaged spray hose. Turn the PRIME/SPRAY knob to PRIME on whichever side of the system (A or B) to relieve pressure.
2. Engage the trigger safety (refer to the spray gun instruction manual).
3. Close the gun manifold valves A and B. Remove the gun manifold from the spray gun.
4. Shut off all electrical power to the system (see Helix Plural Component instruction manual, section 7.).
5. Uncoil the hose. Open up the velcro sheathing down the entire length of the Surefire™ dual heated hose assembly.
6. Disconnect the heat sensor (Fig. 5, item 1) of the damaged hose from the communication cord (2). Using wrenches, loosen the hose nut (3) from the sensor by placing one wrench on the nut and the other wrench on the sensor body (6). DO NOT place a wrench on the cover (2) as it could damage the sensor.

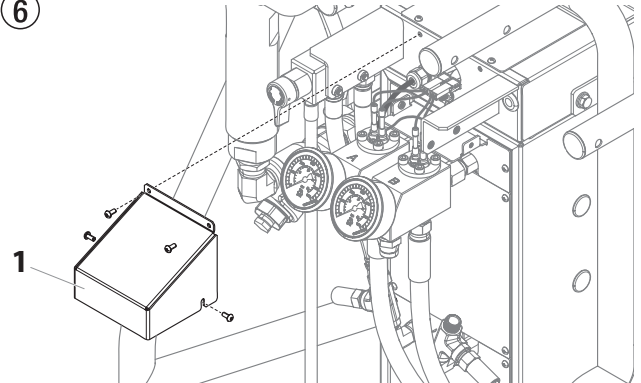
Pull the heat sensor probe (5) from the interior of the hose.

If replacing the whip hose also, repeat step 6 by placing wrench on the whip hose nut (4) and remove the heat sensor from the whip hose.



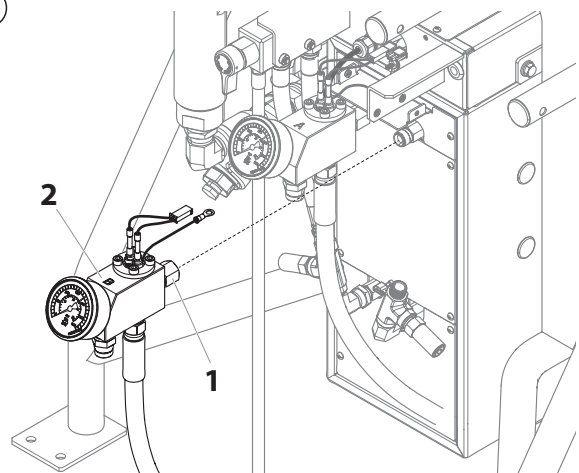
7. At the heater block, remove the four screws that secure the hose heater cover (Fig. 6, item 1).

⑥



8. Disconnect the electrical connections on the damaged hose from the heater block. Remove the nut that secures the green grounding wire to the ground screw.
9. Unscrew the fitting behind the hose head (Fig. 7, item 1) to remove the hose assembly (2) from the heater block.

⑦



10. On the new hose assembly, thread the fitting behind the hose head to the corresponding fitting on the heater block. Tighten with a wrench.
11. Reconnect the electrical connections on the new hose head to the wires coming from the heater block. Replace the green grounding wire on the ground screw and secure with the nut.

12. Carefully insert the heat sensor probe (Fig. 5, item 5) onto the new hose. Reconnect the heat sensor to the new hose using wrenches. Place one wrench on the hose nut (3) and the other wrench on the sensor body (6). DO NOT place a wrench on the cover (7) as it could damage the sensor.

Reattach the heat sensor (1) to the communication cord (2).

If you disconnected the whip hose from the heat sensor, reinstall and secure by tightening the whip hose nut (4).

13. Replace the hose heater cover. Secure with the four screws.
14. Restart the system. Follow "Startup" (section 6.1) steps in the Helix Plural Component instruction manual.
15. Once the new hose has been checked for leaks, re-secure the velcro sheathing around the entire hose assembly.

## WARRANTY

Titan Tool, Inc., ("Titan") warrants that at the time of delivery to the original purchaser for use ("End User"), the equipment covered by this warranty is free from defects in material and workmanship.

### SYSTEM WARRANTY:

#### Two Year (24 months) Manufacturer's Defects:

With the exception of any special, limited, or extended warranty published by Titan, Titan's obligation under this warranty is limited to replacing or repairing without charge those parts which, to Titan's reasonable satisfaction, are shown to be defective within twenty-four (24) months after sale to the End User. This warranty applies only when the unit is installed and operated in accordance with the recommendations and instructions of Titan.

This warranty does not apply in the case of damage or wear caused by abrasion, corrosion or misuse, negligence, accident, faulty installation, substitution of non-Titan component parts, or tampering with the unit in a manner to impair normal operation. This warranty excludes normal wear items and consumables such as, filters, piston, packings, tips, etc.

### HELIX MOTOR WARRANTY:

#### Four Year (48 months) Manufacturer's Defects:

With the exception of any special, limited, or extended warranty published by Titan, Titan's obligation under this warranty is limited to replacing or repairing without charge the Helix Motors, to Titan's reasonable satisfaction, are shown to be defective within forty-eight (48) months after sale to the End User. This warranty applies only when the unit is installed and operated in accordance with the recommendations and instructions of Titan.

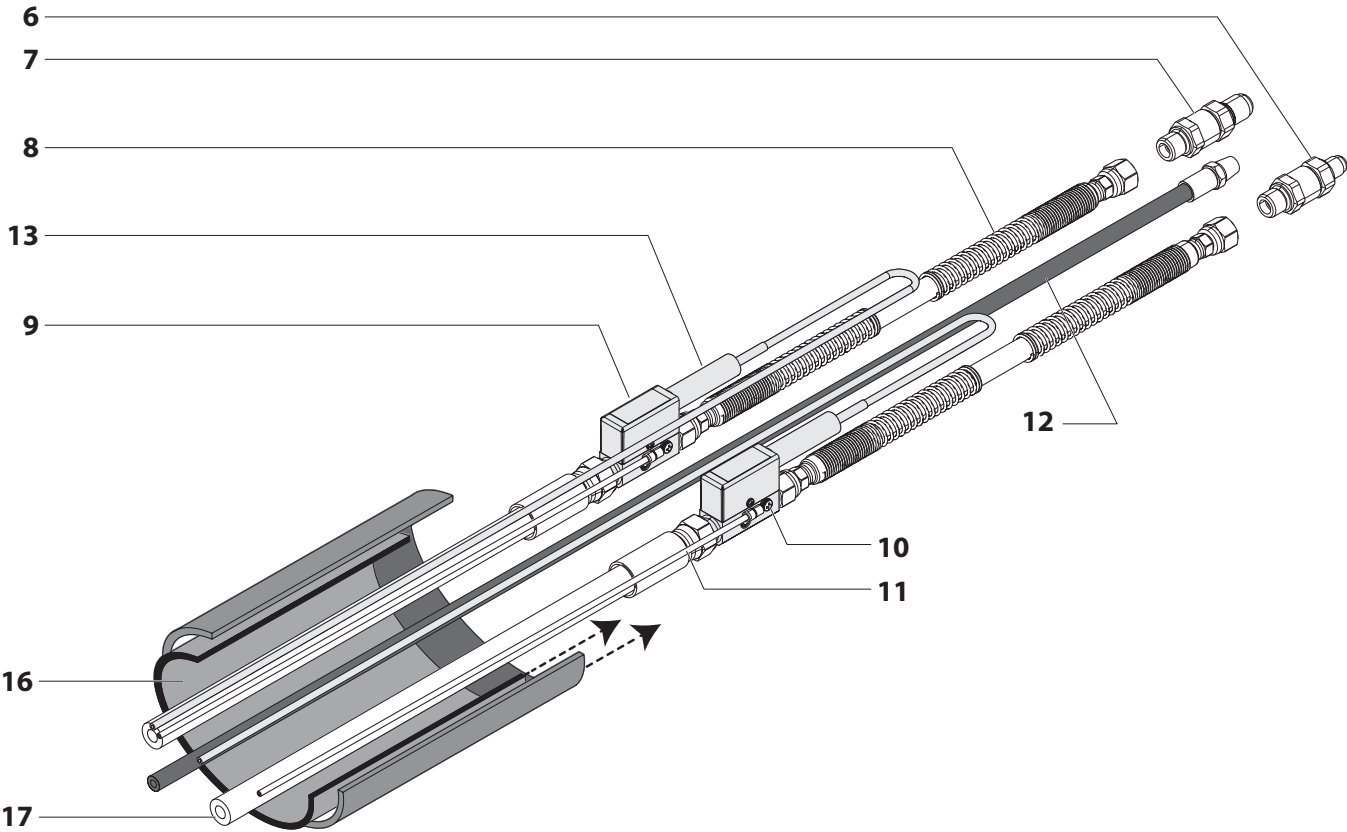
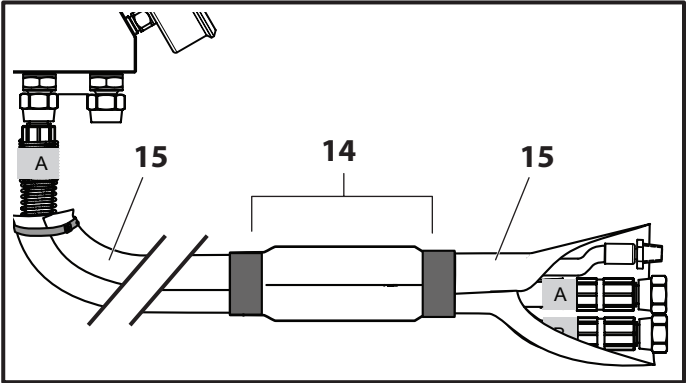
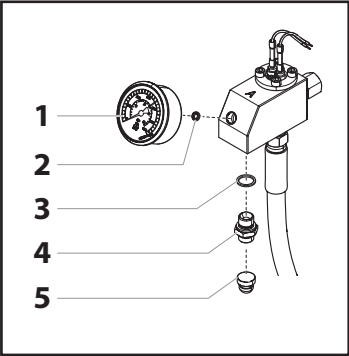
This warranty does not apply in the case of damage or wear caused by abrasion, corrosion or misuse, negligence, accident, faulty installation, substitution of non-Titan component parts, or tampering with the unit in a manner to impair normal operation.

Defective parts are to be returned to an authorized Titan sales/service outlet. All transportation charges, including return to the factory, if necessary, are to be borne and prepaid by the End User. Repaired or replaced equipment will be returned to the End User transportation prepaid.

THERE IS NO OTHER EXPRESS WARRANTY. TITAN HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT PERMITTED BY LAW. THE DURATION OF ANY IMPLIED WARRANTIES WHICH CANNOT BE DISCLAIMED IS LIMITED TO THE TIME PERIOD SPECIFIED IN THE EXPRESS WARRANTY. IN NO CASE SHALL TITAN LIABILITY EXCEED THE AMOUNT OF THE PURCHASE PRICE. LIABILITY FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES UNDER ANY AND ALL WARRANTIES IS EXCLUDED TO THE EXTENT PERMITTED BY LAW.

TITAN MAKES NO WARRANTY AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY TITAN. THOSE ITEMS SOLD, BUT NOT MANUFACTURED BY TITAN (SUCH AS GAS ENGINES, SWITCHES, HOSES, ETC.) ARE SUBJECT TO THE WARRANTY, IF ANY, OF THEIR MANUFACTURER. TITAN WILL PROVIDE THE PURCHASER WITH REASONABLE ASSISTANCE IN MAKING ANY CLAIM FOR BREACH OF THESE WARRANTIES.

SUREFIRE™ DUAL HEATED HOSE ASSEMBLY



Pos.	Helix A	Helix B	Description
1	9991956A	9991956A	Pressure gauge
2	0153318	0153318	Copper crush washer
3	9970103	9970103	Washer
4	2308887	2308887	Fitting
5	0138597	0138597	Plug
6	0138631	-----	Swivel fitting, JIC #5
7	-----	0138632	Swivel fitting, JIC #6
8	0138680	0138627	Whip hose
9	0153830A	0153830A	Temperature sensor assembly
10	2403112	2403112	Ground screw
11	0138678A	0138678A	Ground wire, 200'
	0522130A	0522130A	Ground wire, 100'
12	0153332A		Air hose, 200'
	0153730A		Air hose, 100'
13	0522124A	0522125A	Communication cable, 200'
	0522129A	0522128A	Communication cable, 100'
14	0153330A		Hose shroud, 25' x 2.5"
15	0153329A		Hose shroud, 150' x 2"
16	0138681A		Insulation, 50'
17	0138968	0138969	Heated hose assembly, 200'
	0153731	0153732	Heated hose assembly, 100'





The logo for HELIX, featuring the word 'HELIX' in a bold, sans-serif font with a trademark symbol. A vertical line from the TITAN logo and a horizontal line intersect at the 'H'.

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