

744A SPRAYER CONTROL

USER MANUAL



TeeJet[®]
TECHNOLOGIES

A Subsidiary of  Spraying Systems Co.[®]

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Safety Information

TeeJet Technologies is not responsible for damage or physical harm caused by failure to adhere to the following safety requirements. As the operator of the vehicle, you are responsible for its safe operation.

Photos and illustrations may vary from the actual components provided. This may be due to different installation options, operation modes or production models.

Always try to use original parts. Built to the highest standards of safety and reliability, TeeJet Technologies parts are to be used for this system as others might jeopardize the safety and function of the system.

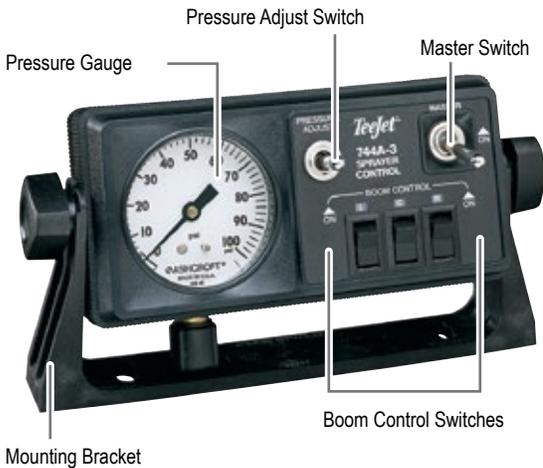
TeeJet is not responsible for any redesign or adaptations of the 744A Sprayer Control. Any changes to the 744A Sprayer Control voids the company warranty.

CHAPTER 1 - INTRODUCTION

The 744A Sprayer Control provides manual spray control in a compact package. The 744A allows for the choice of liquid-filled 100 PSI (7 bar) or 300 PSI (20 bar). The console features a lighted pressure gauge for night use and heavy-duty switches with LED indicators. The 744A is available in a variety of kit forms using solenoid or ball type control valves.

TeeJet 744A manual Sprayer Control for use with Solenoid or Ball Valves

- Manual spray controller in a compact package.
- Liquid filled 100 PSI or 300 PSI pressure gauge.
- Lighted pressure gauge for night use.
- Heavy-duty switches with LED indicators.
- Available in a variety of kit forms using solenoid or ball type control valves.
- DirectoValve shutoff ball valves are ordered separately for 744A ball valve kits.
- Kits include wiring harness.



System Configurations

Figure 1: Solenoid Valves

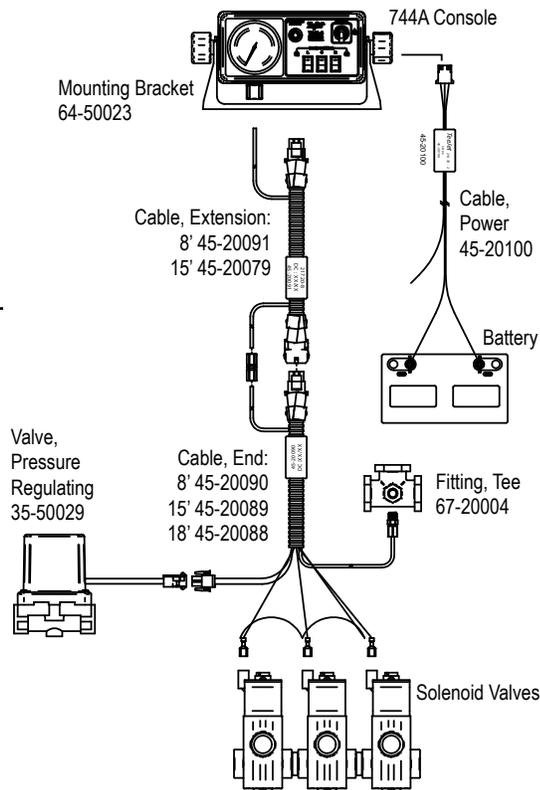


Figure 2: Ball Valves

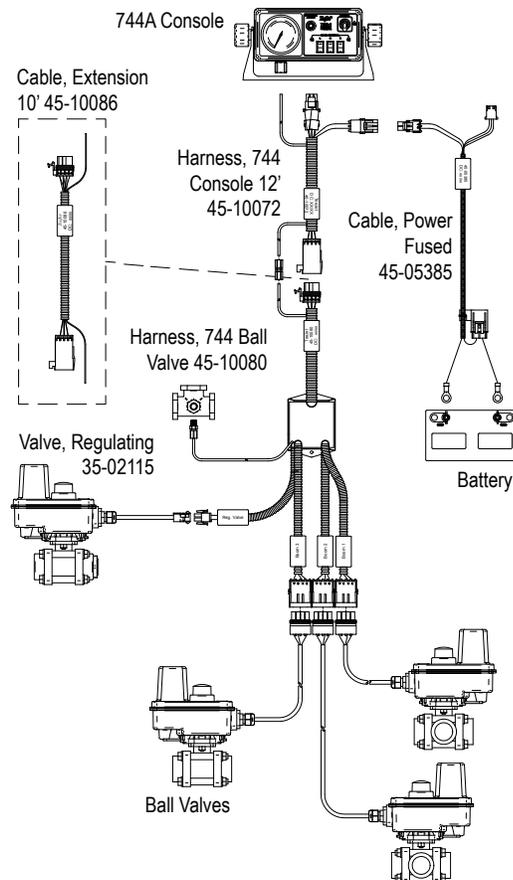


Figure 3: Plumbing Diagram - Diaphragm Pump

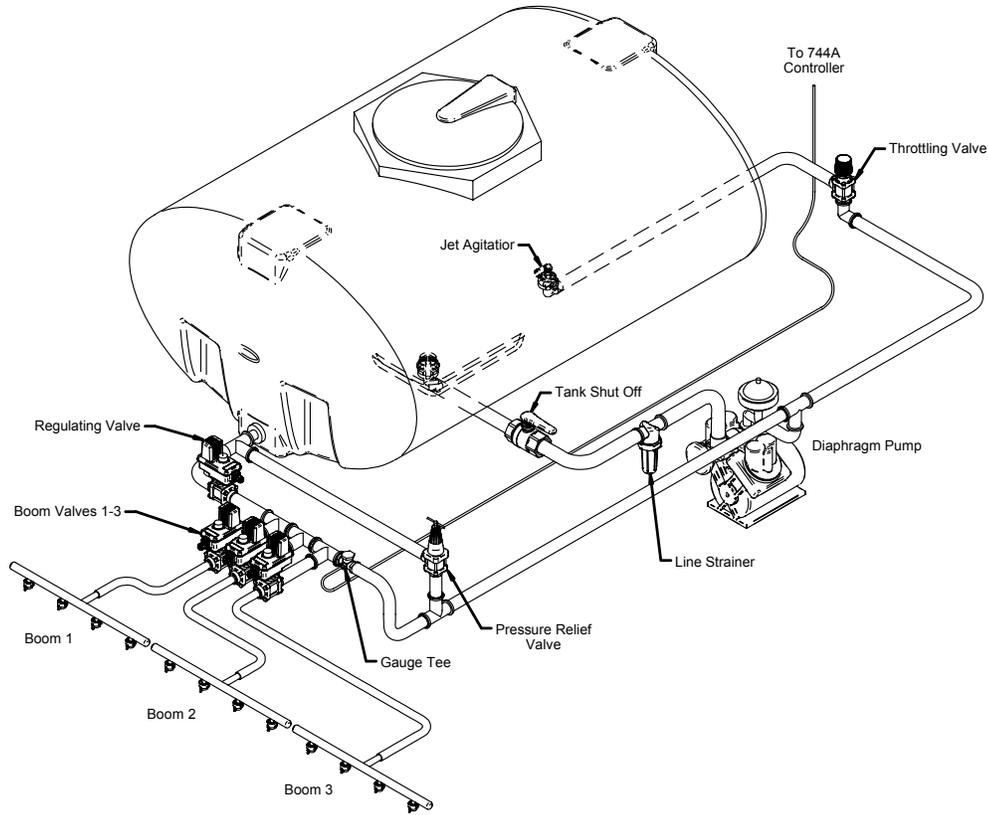
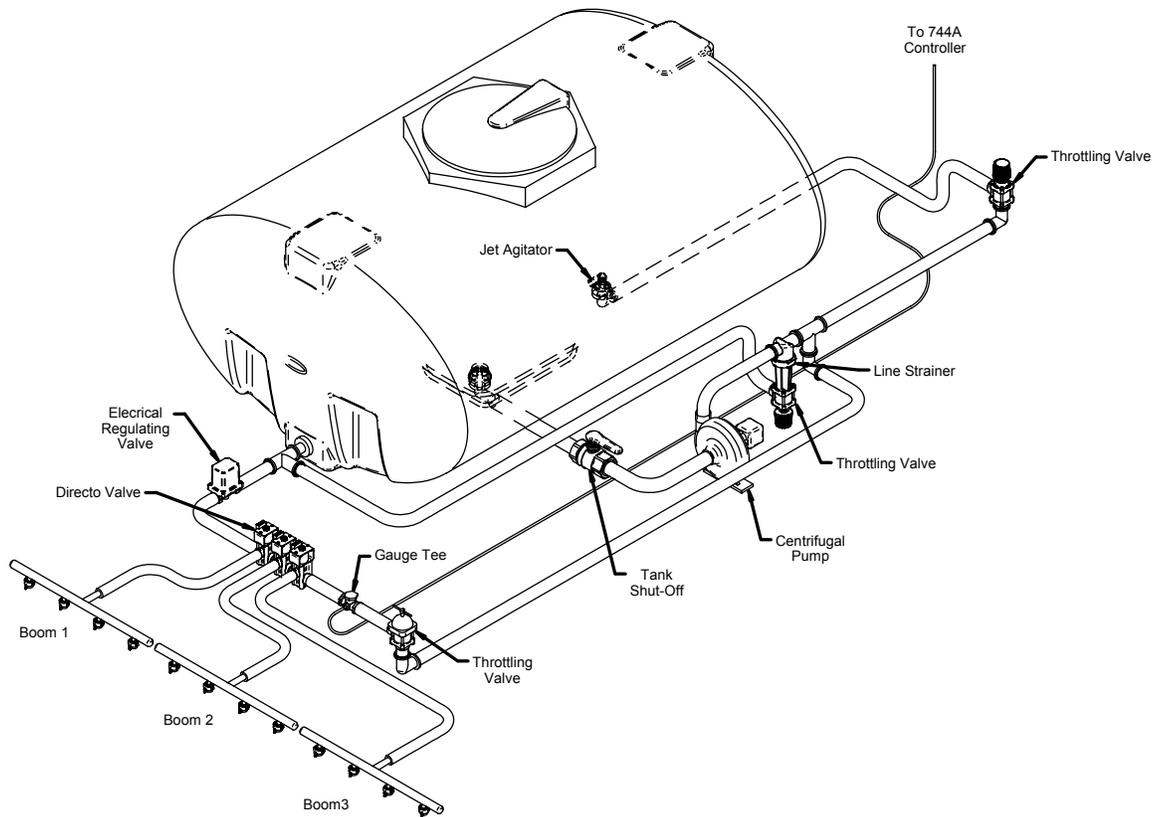


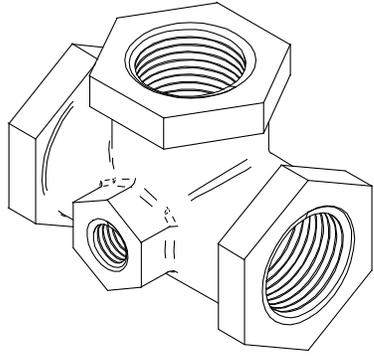
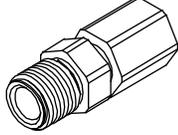
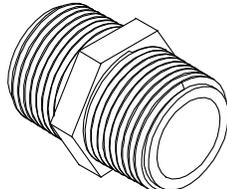
Figure 4: Plumbing Diagram - Centrifugal Pump and Self-Cleaning Strainer

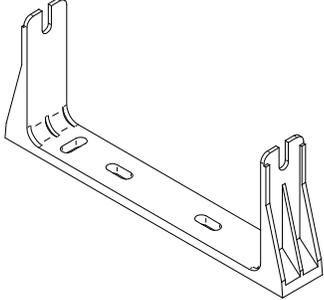
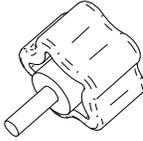
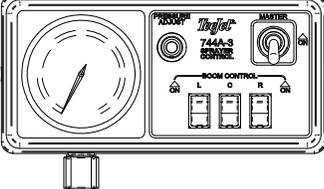
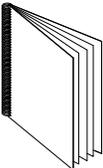


Kit Contents

Unpack the installation kit and identify the required parts.

Item	Part Number	Description	Quantity
1	67-20004	Tee Fitting, Nylon (Black).....	1
2	67-20003	Male Connector, Nylon	1
3	67-20002	Tubing Nut, Nylon	3
4	67-20005	Close Nipple, Nylon (Black).....	1
5	65-50005	Tubing Insert, Brass.....	4
6	64-50023	Mounting Bracket, Nylon.....	1
7	60-10026	Lock Knob.....	2
8	60-50000	1/4" External Tooth Lock Washer	2
9	60-50003	1" Bolt, Steel, Zinc Plated	2
10	60-50001	Flat Washer, Steel, Zinc Plated.....	2
11	60-50009	Lock Washer, Steel, Zinc Plated	2
12	350-0062	Hex Nut, Steel, Zinc Plated.....	2
13	67-20001	Male Coupling, Nylon.....	1
14	90-50141	Accessory Bag - Items 2, 3, 5, & 7-13	1
15	75-50033	Control Housing 100 psi Liquid.....	1
16	75-50035	Control Housing 300 psi Liquid.....	1
17	98-70025	744A Manual.....	1

Item	Part #	Description	Illustration
A	67-20004	Tee Fitting, Nylon (Black)	
B	67-20003	Male Connector, Nylon	
C	67-20002	Tubing Nut, Nylon	
D	67-20005	Close Nipple, Nylon (Black)	

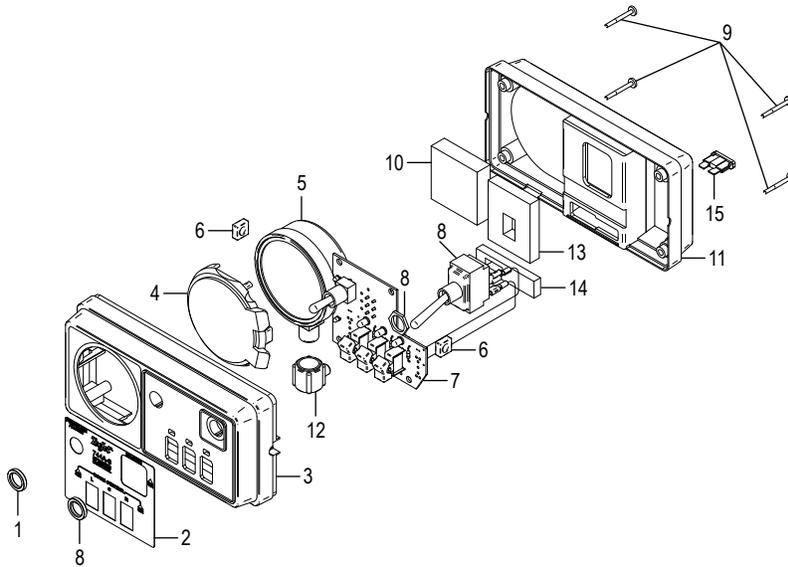
Item	Part #	Description	Illustration
E	65-50005	Tubing Insert, Brass	
F	64-50023	Mounting Bracket, Nylon	
G	60-10026	Lock Knob	
H	60-50000	1/4" External Tooth Lock Washer	
I	60-50003	1" Bolt, Steel, Zinc Plated	
J	60-50001	Flat Washer, Steel, Zinc Plated	
K	60-50009	Lock Washer, Steel, Zinc Plated	
L	350-0062	Hex Nut, Steel, Zinc Plated	
M	67-20001	Male Coupling, Nylon	
N	90-50141	Accessory Bag - Items 2, 3, 5, & 7-13	
O	75-50033	Control Housing 100 psi Liquid	
P	75-50035	Control Housing 300 psi Liquid	
Q	98-70025	744A Manual	

Control Housing Assembly

New consoles have boom switches, gauge lamps/LEDs and boom LED soldered to the circuit board.

Item	Part Number	Description	Quantity
1	60-50020	Knurled Nut, Brass Nickel Plated	
2	84-20002	Graphic Panel	
3	64-50024	Front Housing	
4	64-50031	Lens Gauge	
5	51-20008 51-20002	100 psi Liquid Gauge 300 psi Liquid Gauge	
6	60-50019	Square Nut (2 Req'd)	
7	01-50007	Circuit Board	
8	32-50010	Toggle Switch	
9	350-2610	Plastic Screw	
10	64-50030	Foam Spacer	
11	64-50025	Back Housing	
12	64-50029	Elbow, Nylon (Black)	
13	64-50032	Output Cable Shield, Neoprene	
14	64-50026	Receptacle Fuse Shield, Neoprene	
15	604-0014	Fuse, 15A	

Figure 5: Assembly

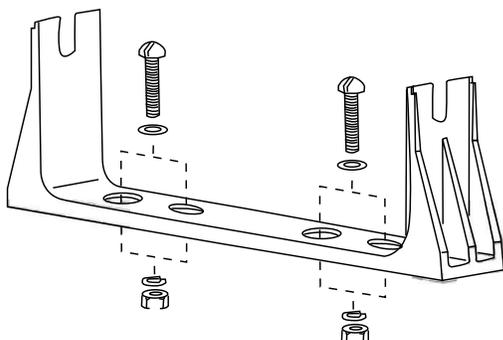


CHAPTER 2 - INSTALLATION

Mounting Bracket

1. Make sure all switches on the 744A Sprayer Control are turned to the "Off" position.
2. Determine the best location for the 744A Sprayer Control in the vehicle cab according to the following guidelines:
 - pressure gauge should be readily visible
 - switches should be within easy reach
 - controller bracket should rest on a flat surface
 - 12 volt DC power source must be accessible (maximum draw 10 amps)
3. Determine the proper routing for power cables and pressure tube:
 - away from operators' movement area
 - away from moving parts
 - away from sharp objects
4. Install the mounting bracket using ¼" (6.4mm) drill, machine screws, nut, washers, and lock washers as illustrated below. Attach the control housing assembly to the mounting bracket using the console adjusting knobs and washers.

Figure 6: Mounting Bracket



Output Control Cable

Cut a 1.0" (3.0 cm) diameter opening used to feed the output control cable from the interior of the tractor cab to the boom control valves. Make sure the hole has no burrs or sharp edges that could damage the wires.

744A-3 Unit

6 wires from the output cable are used to control a three-section boom.

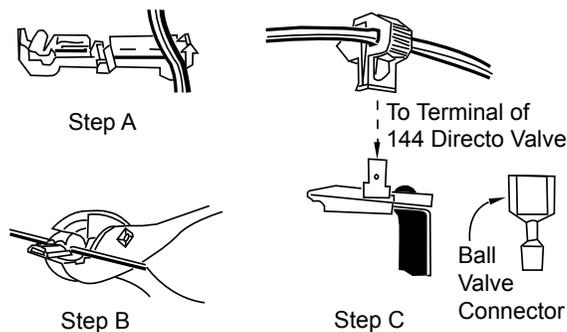
- Orange (Right) Yellow (Center) Green (Left) – connect to 144A Valves. When using a *344AEC Ball Valve, connect to the white wire.
- **Black – connect to other terminal on 144A Valves. When using the *344AEC Ball Valve, black is not connected.
- Red and Brown – connect to red and black wires on the Regulator Valve (244, 344AE-PR, or 344AE-RL).

**When using 344AEC DirectoValve® Ball Valves, connect black wire(s) and red wire(s) using the Valve End and Battery End Cables (supplied only when Ball Valve Kits are purchased) to an uninterrupted power supply such as the battery.*

***The black ground wire for the control cable is not supplied with connectors attached. The T-Tap connectors are supplied separately and should be attached as per Figure 7.*

WARNING! Do not plug the control cable into the control box until it has been fully connected to the control valves. Doing so may allow the unconnected leads to short out.

Figure 7: T-Tap Connector Assembly



Input Power Cable

The Input Power Cable consists of three wires. The red wire should be connected to a 12 Volt power supply within the cab of the vehicle (i.e., ignition switch). If the power source is located outside of the cab, the power cable should exit the cab through the same 1.0" (3.0 cm) diameter hole as the output control cable. The blue wire should be connected to the headlight system of the tractor. This can be accomplished by connecting the blue wire to the auxiliary terminal of the headlight switch or by splicing into the wire connected to the headlight. The black wire is the negative lead and should be connected to a good chassis ground.

Plug the input power cable into the power cable socket on the back of the 744A console. Turn the vehicle ignition switch to the "Run" position. If the wiring has been connected properly, the boom section indicator lights should illuminate when the boom section switches are toggled. The gauge light should appear when the headlights are illuminated.

Pressure Gauge

The tubing for the pressure gauge is supplied as part of the wiring harness. To avoid chemical leakage into the vehicle cab, the tube coupler should be installed outside of the vehicle cab. If a gauge isolator is used with the system, it should be installed in place of the coupler, also outside of the vehicle cab.

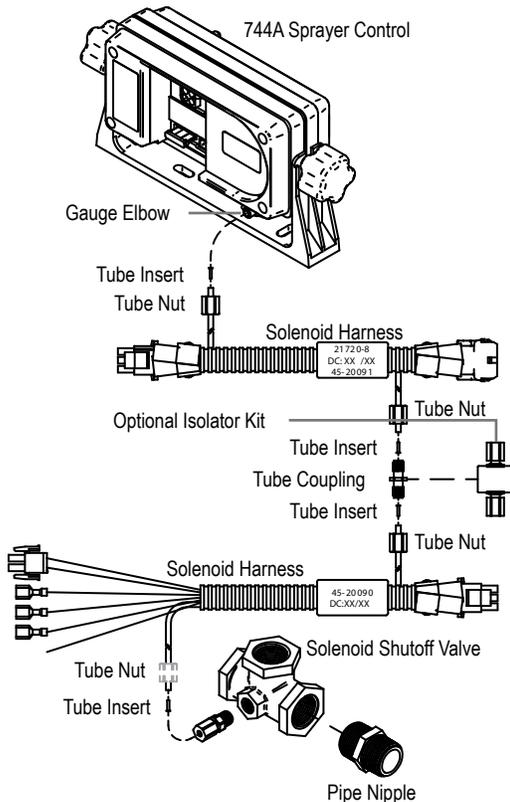
The pressure gauge should be checked for accuracy each season. If the unit is equipped with a liquid-filled gauge and it does not read accurately, the gauge may need to be vented. To vent the gauge, remove the four screws in the back of the sprayer control housing and lift off the back. The rear of the gauge will be exposed. To vent the gauge, clip off the nib of the rubber plug in the back of the gauge or puncture it with a needle. Once the gauge has been vented, do not store the sprayer control on its back as this may cause a loss of fluid from within the gauge. If further inaccuracy is suspected at 0 PSI and a gauge isolator is being used, the isolator line may need to be bled according to the instructions furnished with the gauge isolator.

Pressure Gauge Tube Assembly

1. Determine the location at which the coupler is to be installed. Cut the tubing at that point.
2. Remove the tube nuts from the 3 couplers and slide the tubing through the nuts. The threaded portion of the nut should face their respective couplings. The tube should protrude approximately ½" beyond the nut.
3. One brass tube insert is provided. This must be used with the gauge coupling assembly.
4. A ¾" x ¾" nylon close nipple is provided if a male connected is needed with the gauge tee fitting.
5. Fluid leakage around the gauge indicates a poor connection or a defective gauge.

NOTE: All cables and tubes should be out of the way of the operator's feet and path so that they cannot be snagged or pulled. These tubes should be routed around sharp metal objects, edges, and moving parts with enough slack that they will not be pulled apart when sharp turns are made.

Figure 8: Pressure Gauge Tube Assembly



CHAPTER 3 - MAINTENANCE

Routine Procedures

Several routine procedures should be followed to help maintain the 744A Sprayer Control system.

1. Check all wires and connections for wear, damage, and frayed ends to prevent shorting out of the system.
2. Make sure that the mounting bracket for the 744A Sprayer Control is mounted securely.
3. All connections and terminals should be free of corrosion.
4. The control unit is designed so that it may be removed, cleaned, and stored during periods of non-use to protect it from extreme heat or cold.
5. The 744A Sprayer Control is NOT WATERPROOF. Do not immerse the unit when cleaning.
6. Periodic flushing of the sprayer will help prevent clogging due to residue buildup.

Removal of Control Unit

1. De-pressurize the system.
2. Uncouple the nylon pressure tube from outside the vehicle cab and allow the liquid to drain. Uncouple the tube from the bottom of the unit.
3. Disconnect the input power cable from the back of the unit.
4. Disconnect the output control cable from the back of the unit.
5. Loosen the triangular knobs on both sides of the unit and slide the unit off of the bracket.

744A SPRAYER CONTROL

U S E R M A N U A L

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- Manual spray controller in a compact package.
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