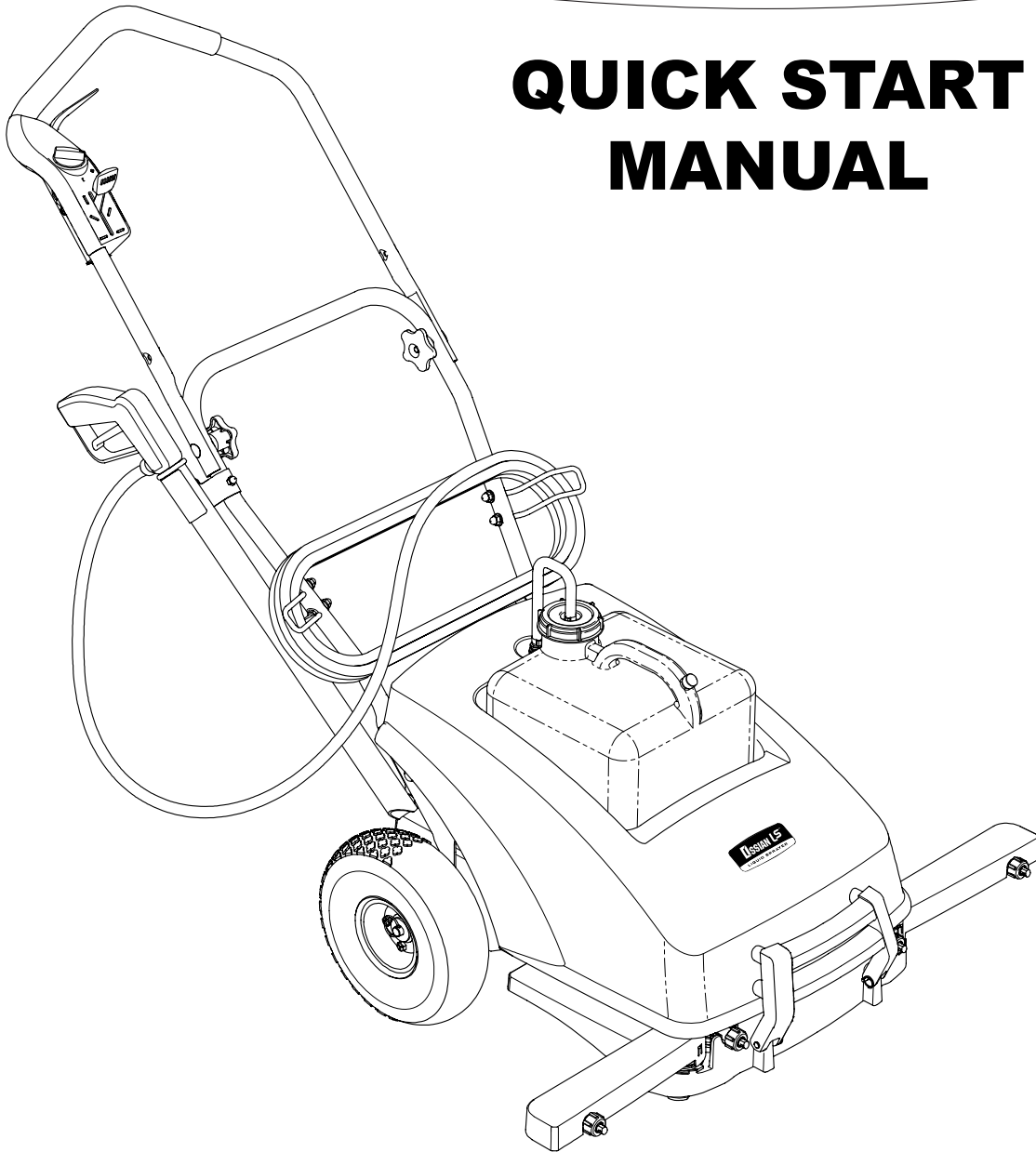




QUICK START MANUAL

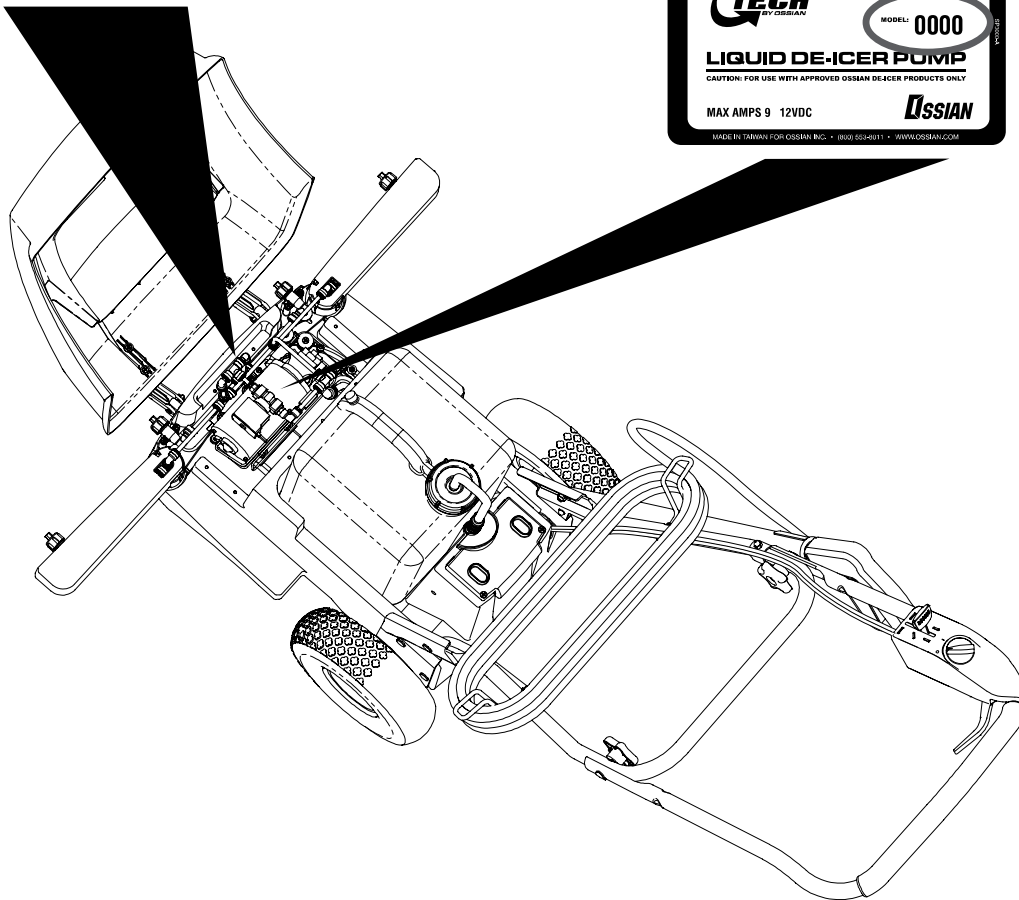
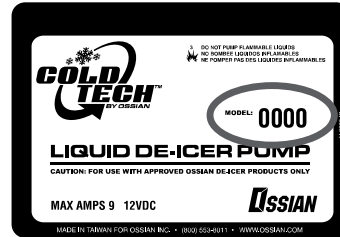


OSSIAN LS™ QUICK START MANUAL © 2008 OSSIAN INC.
OSSIAN LS™ is a trademark of Ossian Inc. Patents Pending
OSSIAN INC. 635 S. Elmwood Ave. Davenport, IA 52802 PH: 800-553-8011
icemelt@ossian.com · www.ossian.com

CUSTOMER SERVICE AND TECHNICAL SUPPORT

CONTACT OSSIAN INC. 1-800-553-8011

To aid in all customer service, technical support and warranty inquiries, you may be asked for the serial number and/or pump model of your **Ossian LS™**. To locate both numbers, open orange cover revealing pump compartment. The serial number is located in the pump compartment of the unit in front of the pump. The pump model number can be found on the pump label. Record these numbers in your manual for easy accessibility.



SERIAL NUMBER				
----------------------	--	--	--	--

PUMP NUMBER: _____ **PURCHASE DATE:** _____

VENDOR: _____

SAFETY



READ OPERATORS MANUAL BEFORE USING.



DO NOT lift sprayer with a full de-icer tank installed. Serious back injury could result.



ALWAYS remove de-icer tank before lifting sprayer into or out of the bed of a truck, or other raised platforms.



Sprayer is designed for use with Ossian Liquid De-Icers **ONLY**.



DO NOT spray flammable or alcohol based liquids.



DO NOT spray water through unit when freezing temperatures are expected. Frozen plumbing or pump damage could occur.



DO NOT store water in unit when freezing temperatures are expected. Frozen plumbing and pump damage could occur.



DO NOT direct spray at an open flame. Sprayer is not to be used as a fire extinguishing device.

UNPACKING AND ASSEMBLY

HANDLE UNPACKING AND ASSEMBLY



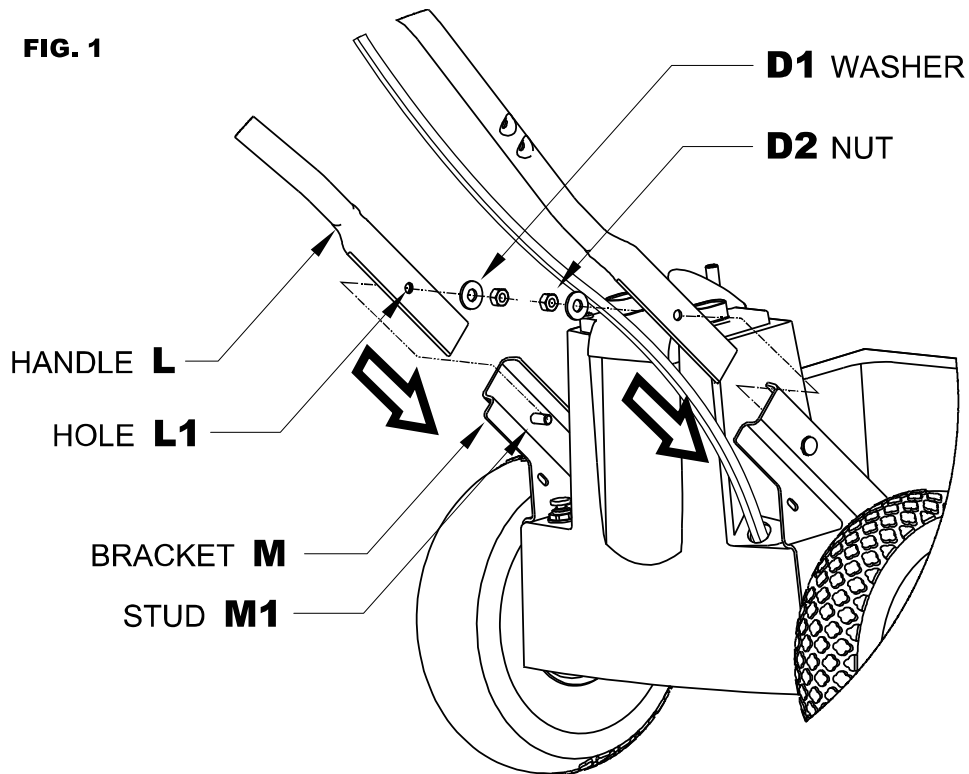
The **Ossian LS™** is shipped with the operator handle attached to base unit by the control cable and power harness, but not bolted to base unit.



CAUTION: When removing operator handle from box, **DO NOT** kink the boom control cable that connects the handle to the base unit.

- 1) **CAREFULLY** lift handle up from box sleeve. **DO NOT** stress connecting cables.
- 2) Slide handle ends (**L**) into handle brackets on base. On each side, slip holes (**L1**) in handle over stud (**M1**) located in channel of handle bracket (**M**) attached to base. See Fig.1

FIG. 1

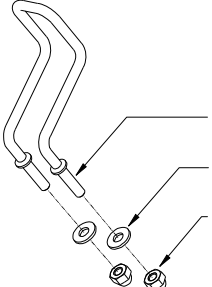



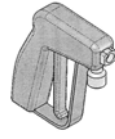

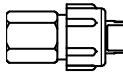






NOTE: Washers (**D1**) and nuts (**D2**) for securing handle to base are located in box labeled: **ASSEMBLY PARTS AND ACCESSORIES.**

PARTS SHEET 1B

3) Locate box labeled: **ASSEMBLY PARTS AND ACCESSORIES**

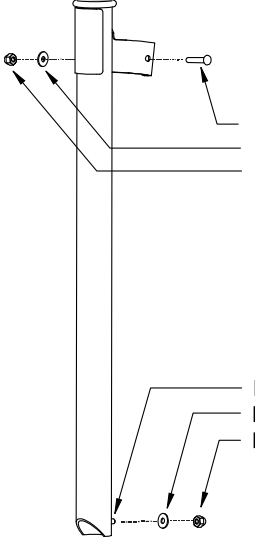












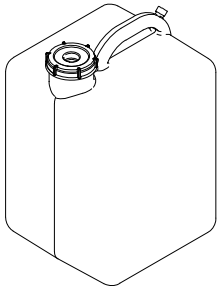
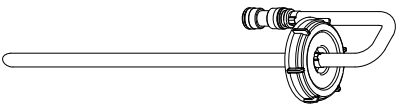
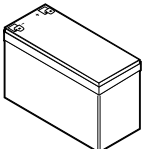



Make sure All Parts shown below are present in box.

 <p>A1 HOSE BRACKET A2 WASHER A3 ACORN NUT</p>	<p>A 2x Hose Storage Bracket Assembly</p>
	<p>A2  4x 1/4" ID Washers</p>
	<p>A3  4x 1/4 - 20 Acorn Nut</p>
	<p>B1 1x Wand Hose with fittings</p>
	<p>B2 1x Trigger, Spray Gun</p>
	<p>B3 1x Spray Wand Lance</p>
	<p>B4 1x Spray Wand Nozzle Assembly</p>
	<p>C 1x Battery Charger</p>
	<p>D1 2x 5/16" Washers</p>
	<p>D2 2x 5/16"-18 Nut</p>
	<p>E 2x 8" Tie Wraps</p>

PARTS SHEET 2B

4) Locate items shipped loose in box and in tank cavity of the **Ossian LS™**

Make sure All Parts shown below are present in box.

 <p>F1 BOLT F2 WASHER F3 ACORN NUT</p> <p>F4 BOLT F2 WASHER F3 ACORN NUT</p>	<p>F Wand Holster Tube Assembly</p> <table border="1"> <tr> <td data-bbox="662 667 820 787">F1</td> <td data-bbox="820 667 982 787"></td> <td data-bbox="982 667 1396 787">1x #10 – 32 x 1.13 Bolt</td> </tr> <tr> <td data-bbox="662 787 820 907">F2</td> <td data-bbox="820 787 982 907"></td> <td data-bbox="982 787 1396 907">2x #10 Washer</td> </tr> <tr> <td data-bbox="662 907 820 1026">F3</td> <td data-bbox="820 907 982 1026"></td> <td data-bbox="982 907 1396 1026">2x #10 – 32 Acorn Nut</td> </tr> <tr> <td data-bbox="662 1026 820 1119">F4</td> <td data-bbox="820 1026 982 1119"></td> <td data-bbox="982 1026 1396 1119">1x #10 -32 x .50 Bolt</td> </tr> </table>	F1		1x #10 – 32 x 1.13 Bolt	F2		2x #10 Washer	F3		2x #10 – 32 Acorn Nut	F4		1x #10 -32 x .50 Bolt
F1		1x #10 – 32 x 1.13 Bolt											
F2		2x #10 Washer											
F3		2x #10 – 32 Acorn Nut											
F4		1x #10 -32 x .50 Bolt											
	<p>H 5 Gallon Empty Liquid De-Icer Tank</p>												
	<p>K Siphon Cap and Hose Assembly</p>												
	<p>J 12v 7.0Ah Sealed Rechargeable Battery</p>												
<table border="1"> <tr> <td data-bbox="235 1774 365 1879"></td> <td data-bbox="365 1774 1388 1879"> <p>WARNING: READ BATTERY SECTION OF MANUAL BEFORE UNPACKING OR INSTALLING BATTERY.</p> </td> </tr> </table>			<p>WARNING: READ BATTERY SECTION OF MANUAL BEFORE UNPACKING OR INSTALLING BATTERY.</p>										
	<p>WARNING: READ BATTERY SECTION OF MANUAL BEFORE UNPACKING OR INSTALLING BATTERY.</p>												

UNPACKING AND ASSEMBLY

HOSE STORAGE BRACKET AND WAND HOLSTER

The **Ossian LS™** is shipped with the hose, spray wand, wand holster, and hose storage brackets unassembled. Hose storage brackets and mounting hardware are included in parts box labeled **ASSEMBLY PARTS AND ACCESSORIES**. Wand holster is shipped loose in shipping box with necessary mounting hardware attached.

5) Unfold operator handle.

Loosen knob clamps (N) and straighten upper handle (O) to its full extension. Retighten knob clamp (N).

6) Assemble both hose storage brackets to left and right sides of operator handle as shown in FIG.2

Insert hose brackets (A1) through holes on outside of operator handle. Secure with (A2) washers and (A3) acorn nuts on the inside of the operator handle.

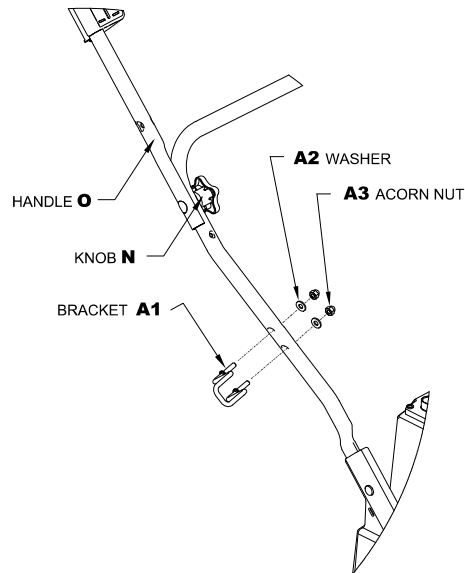


FIG.2

7) Mount wand holster to handle on operator's right as shown in FIG. 3

Position holster mounting bracket at top of wand holster over mounting hole in handle on operator's right, below knob.

Carefully remove nut and washer from pre-assembled bolt.

DO NOT REMOVE BOLT F5.

Insert pre-assembled bolt (F5) in wand holster. Insert bolt (F5) through slot in handle bracket and secure with washer (F3) and acorn nut (F4).

Insert bolt (F2) through holster mounting bracket and operator handle and secure below handle with washer (F3) and acorn nut (F4).

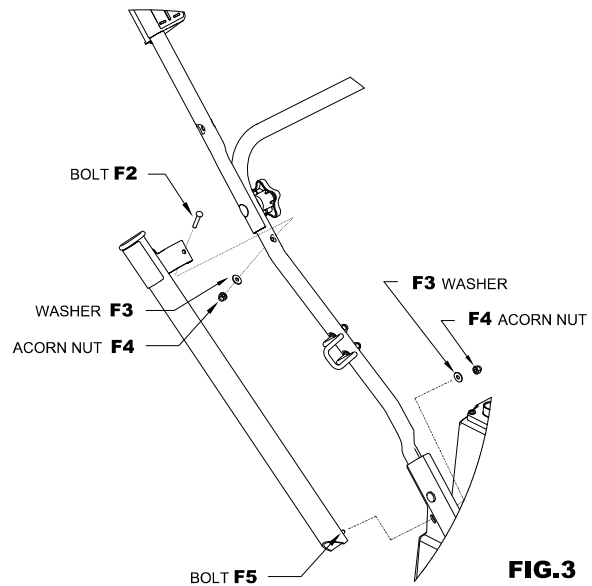


FIG.3

UNPACKING AND ASSEMBLY

SPRAY WAND AND HOSE ASSEMBLY

All parts for assembling and installing the spray wand and hose to the **Ossian LS™** are included in the parts box labeled **ASSEMBLY PARTS AND ACCESSORIES**.

- 8)** Locate stem plug in rear of base unit on operators left. FIG. 4.

Stem plug must be removed prior to installing wand hose.

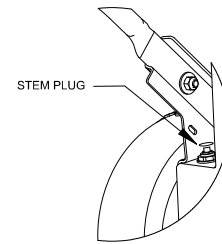


FIG.4

- 9)** To remove stem plug push restraining collar squarely against bulkhead fitting. Hold collar against fitting when pulling on plug to remove. FIG.5

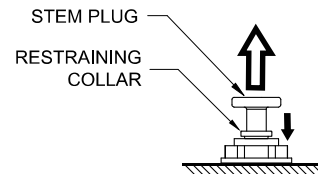


FIG.5



Stem plug must be replaced if unit is to be operated without wand hose connected.

- 10)** Remove wand hose from parts box and packaging material. Locate the unthreaded stem end of hose. FIG.6

- 11)** Insert hose stem into bulkhead fitting. Pull gently to assure that hose stem is firmly seated. FIG.6

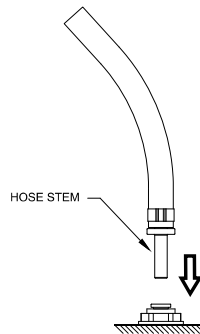


FIG.6

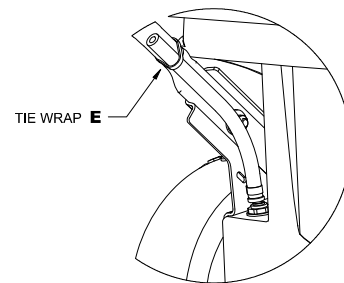


FIG.7

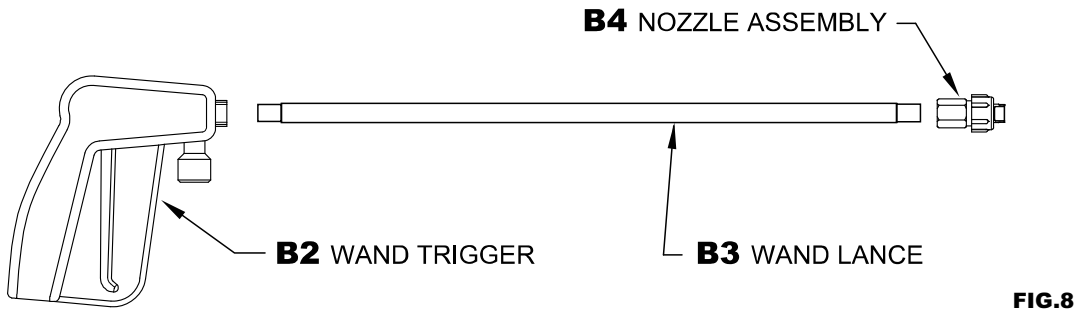
- 12)** Secure wand hose to operator handle with tie wrap (E).

UNPACKING AND ASSEMBLY

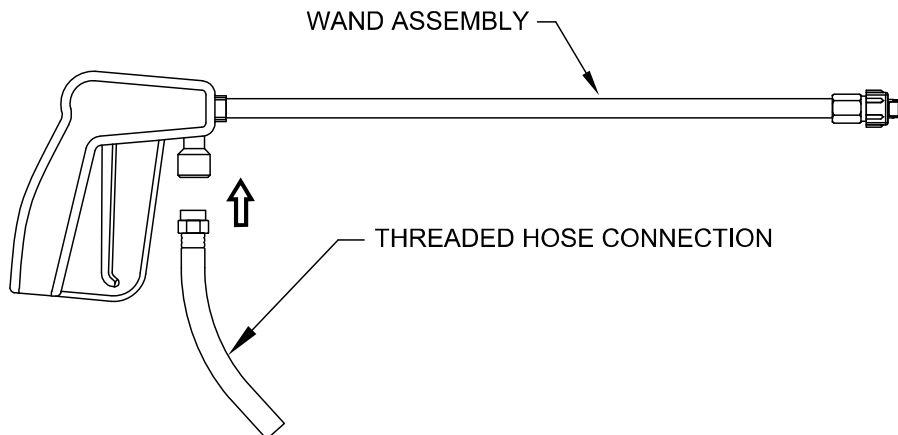
SPRAY WAND AND HOSE ASSEMBLY

All parts for assembling and installing the spray wand and hose to the **Ossian LS™** are included in the parts box labeled **ASSEMBLY PARTS AND ACCESSORIES**.

- 13)** From parts box, remove spray gun trigger (**B2**), spray wand lance (**B3**), and nozzle assembly (**B4**).
- 14)** Carefully screw one threaded end of wand lance (**B3**) to wand trigger (**B2**) as shown in FIG. 8.
- 15)** Carefully screw nozzle assembly (**B4**). FIG. 8
DO NOT over tighten when screwing nozzle assembly to wand lance.



- 16)** Carefully screw the threaded end of the wand hose to the wand trigger.



BATTERY

BATTERY INSTALLATION

The battery powering the **Ossian LS™** is a rechargeable sealed lead acid, non-spillable, gel cell battery and conforms to all applicable state and federal guidelines.

Battery is shipped uninstalled from unit.

Battery can be found boxed, inside tank cavity of the **Ossian LS™**.

- 1) Lift orange cover from rear catch and pivot forward providing access to battery cover and battery compartment.
- 2) With a Phillips screwdriver unscrew battery cover and rotate out of position to expose battery compartment.
- 3) Inside battery compartment find battery leads and extend above opening to compartment.
- 4) Unpack battery shipping box and remove battery from box (J).
- 5) Remove plastic covers that protect battery terminals and save.

WARNING: Covers must be reinstalled on any battery removed from unit.

- 6) Steady battery (J) on top of battery tower when connecting power leads to battery.
- 7) Connect battery leads from battery compartment to corresponding terminals on battery.

Connect Black lead to Black terminal and Red lead to Red battery terminal.

- 8) Install battery into compartment using care not to pinch wiring harness.
- 9) Re-install battery cover and screw shut.

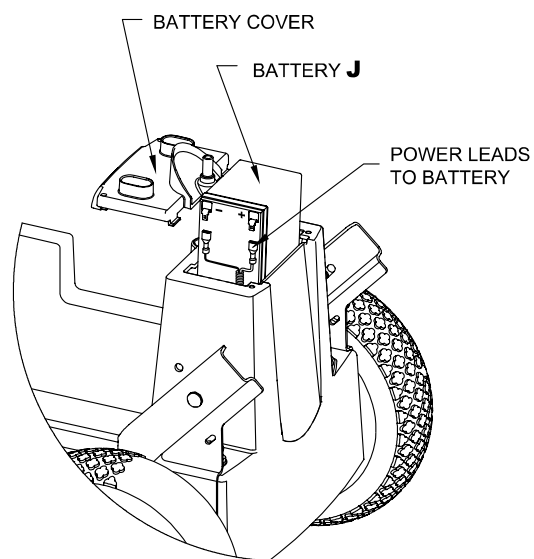


FIG. 10



WARNING: Reinstall terminal covers any time battery is disconnect for any reason.



Keep battery cable clear of being pinched under battery when installing.



Make sure battery cover is firmly secured with both screws. Cover will be used to lift unit

BATTERY

BATTERY CHARGING

NOTE: Battery must be properly installed in unit to charge.

Fully charge battery prior to first use:

- 1)** Lift orange cover from rear catch and swing forward to reveal charging port on operator's left side of rear battery compartment tower.
- 2)** Plug round end of battery charger (C) into charging port on battery tower.
- 3)** Plug battery charger transformer into standard 110w outlet.
- 4)** LED will turn red when battery is below a full charge.
- 5)** LED on transformer will turn green when battery is fully charged.
- 6)** When battery is fully charged, disconnect battery charger from charge port and close cover. Push rear of cover down so that it fits snugly over battery cover.
- 7)** Your **Ossian LS™** is now ready for operation.



DO NOT turn on or attempt to operate unit while charging.



DO NOT Freeze Battery.



NOTE:

- For optimum performance, recharge unit at end of each use.
- Never attempt to fully drain battery.
- **DO NOT store unit in unheated area with less than a 50% charge on battery.**

OPERATION

DE-ICER PREPARATION

The **Ossian LS™ Liquid Sprayer** uses a standard Ossian 5 gallon tank (**H**) as its de-icer tank. An empty tank was provided with the unit. To begin operation, a full tank is required.

- 1)** Remove cap from a full 5 gallon de-icer tank (**H**).
- 2)** Screw on provided siphon hose/cap to de-icer tank (**K**).
- 3)** Install full de-icer tank into tank cavity of sprayer with cover of unit closed.
- 4)** Plug female connection on siphon hose (**K**) into male inlet port in back of tank compartment. Apply gentle back and forth twisting motion.
- 5)** Insure that inverted “U” shape created by siphon hose (K) when plugged into inlet port is not kinked.

NOTE: Siphon hose utilizes a female push fitting and can be slid onto and removed from the male inlet port without tools.

POWER UP | POWER DOWN PROCEDURE

- 1)** To energize unit rotate knob on user control pod, clockwise from “O” to “I”
 - If plumbing is not primed pump will run for 10-15 to prime internal plumbing and wand hose with de-icer, before shutting off automatically.
 - If plumbing and wand hose are fully primed, pump will not activate when unit is energized and will wait until operator sprays de-icer through boom arms or wand before it reactivate.



NOTE: If pump does not shut off automatically after priming, or pulses periodically when not in use but turned on, check unit for small leaks.



WARNING: DO NOT leave unit unattended with knob in “I” position.

OPERATION

ANTI-ICING SIDEWALKS AND TRAFFIC AREAS

The **Ossian LS™ Liquid Sprayer** was designed for use ONLY with Ossian approved Liquid De-icers on sidewalks and stairs. For a list of de-icers available to you, contact Ossian Inc. at 1-800-553-8011.



The use of unapproved de-icing chemicals will void unit warranty.

- 1)** For anti-icing wide sidewalks and traffic areas, fully extend boom arms by pushing boom lever on control pod to the full forward position. If boom arms do not extend properly, check the troubleshooting area of this manual.

For narrower sidewalks adjust spray width with boom control lever.

- 2)** Pull/Push unit backwards on wheels to a comfortable operator angle and raise front of unit off ground, approximately 3 – 4 inches. Unit should look “level” in correct position.
- 3)** With unit energized (control knob in “1” position), squeeze orange trigger extending from control pod, to spray de-icer from boom nozzles.
- 4)** Release orange trigger to stop spray.
- 5)** Push unit forward balancing on rear wheels only.



DO NOT attempt to push unit with front skids dragging on pavement. This will not damage unit but will result in uneven coverage of product and unnecessary operator effort.

OPERATION

ANTI-ICING SIDEWALKS AND TRAFFIC AREAS CONTINUED

- 6) Anti-ice sidewalk by pushing unit at a comfortable walking pace (approximately 2 miles per hour) while holding down spray trigger.

Watch pavement to insure even coverage. Surface should be wet, not puddled.

- 7) When not in use, close/retract boom arms to fully parked position under cover to protect from damage.
- Application rate of **Ossian LS™** is 1 gallon per 1000sqft.
 - For over or under application, adjust walking speed as necessary.



CAUTION: Do not puddle liquid de-icer on sidewalk or stairs as this can cause a tracking issue or slip hazard.

DE-ICING APPLICATION

De-icing is the operation of removing residual ice and snow after an area has been cleared with mechanical means.

- 1) After snow has been mechanically removed by blade or other equipment, the Ossian LS™ can be used to apply liquid de-icer to the residual ice and snow left behind with standard application rate.
- 2) Slush created by the combination of de-icer and snow must be removed to prevent refreezing and causing a dangerous uneven and slick surface.



WARNING: Slush must be removed from to prevent refreezing.

OPERATION

ANTI-ICING STAIRS

The **Ossian LS™ Liquid Sprayer** was designed to easily treat stairs and other hard to access areas without significant changes to sidewalk operation.

- 1) If unit is not turned on, rotate control knob on user control pod clockwise to energize pump and pressurize unit. Pump will automatically shut off when plumbing lines are primed.
- 2) Close boom arms if they are open, to protect from damage if unit gets bumped during operation.
- 3) Park unit on level surface near base of stairs to insure that unit will not roll during operation.



DO NOT pull unit by wand hose. Damage to unit could result.

- 4) Remove wand from holster on side of unit. Unspool necessary amount of hose to reach top stair.
- 5) Starting at the top stair, point wand at area to treat with product and squeeze wand trigger.
- 6) Move wand side to side while spraying to cover area evenly.
- 7) Treat stairs from top step to bottom. **DO NOT** pull LS unit by wand hose.
- 8) When stairs are treated, recoil hose and holster wand. If no further anti-icing is to be done, return knob to “O” position to shut unit off. With wand tip pointed towards treated surface, pull wand trigger to de-pressurize unit.

NOTE: Volume of product sprayed from wand is higher than that of boom arms.



CAUTION: Do not puddle liquid de-icer on sidewalk or stairs as this can cause a tracking issue or slip hazard.