



Operator & Parts Manual

9-Gallon Drop-In Tank w/ Boom Kit



The 9-gallon Drop-in is a self-contained, drop-in tank unit to convert your spreader into a spray applicator. I know you will find the Drop-in Tank to be safe, dependable, and accurate tool for your spraying work.

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SAFETY PRECAUTIONS

Pesticides can cause personal injury and harm the environment when used improperly. Be sure to follow label recommendations concerning safety and disposal. Observe all safety precautions including wearing of protective clothing and equipment.

The 9-Gallon Drop-in is designed to fit into many, but not all, commercial broadcast spreaders. Be sure that the overall weight does not exceed the spreader manufacturer's recommendations. A full tank and all hardware will add 102 lbs. to the spreader.

- Use extreme caution to avoid tipping of the spreader.
- Calibrate and test using clean water.
- Check with each use for leaks or damage.

SET-UP PROCEDURE

Your 9-Gallon Drop-in was pressure tested prior to shipment. Some components were disassembled for packaging and shipment. The basic set-up procedure is as follows:

- Remove all contents from inside the tank.
- Remove all contents from the box.
- Cut the plastic ties holding the boom sections together.
- Report any missing or damaged items to your dealer immediately.



Figure 1

Line up the holes in the boom hinges of the center and outside sections and install the bolts and locknuts.

With the boom folded closed, install the springs on the spring mounting tabs.



Figure 2



Figure 3

Install the boom on the front of the spreader. Set the opened boom assembly on the tubular hopper support of the spreader. Center the vertical mounting brackets horizontally and mark the two hole locations. Set the boom assembly aside and drill two 1/4-inch diameter holes for the mounting hardware.

Place the 1-1/2 inch diameter washers on the inside of the hopper wall and insert the 1/4-20 hex head bolts in the holes. The bolt heads should be inside the hopper. They should be snug and will need to be screwed into the holes. Replace the boom assembly and align the bolts with the mounting holes. The small lockwashers and wingnuts are used to secure the boom while in use. See illustration below.

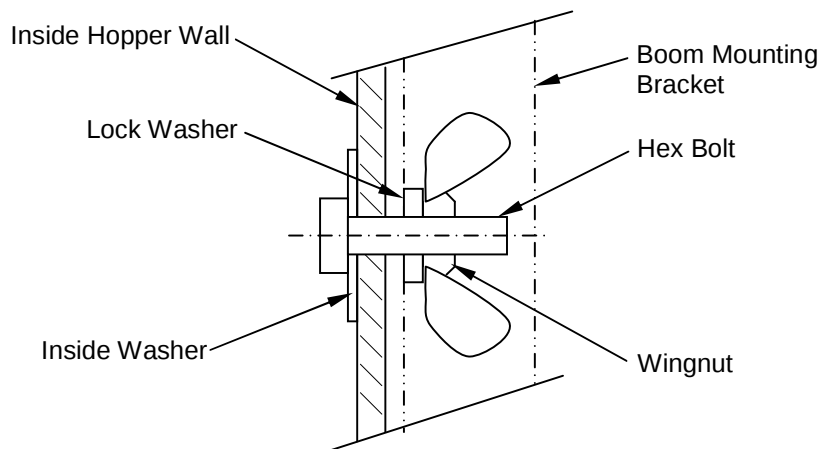


Figure 4

Figure 5

Clean all debris from the spreader hopper.
Place the empty tank assembly in your spreader
hopper with the battery mounted toward the rear.



Figure 6

Hook up the boom hose wingnut to the
boom line valve.

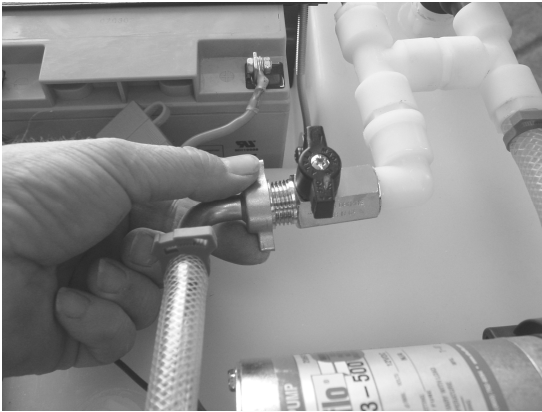


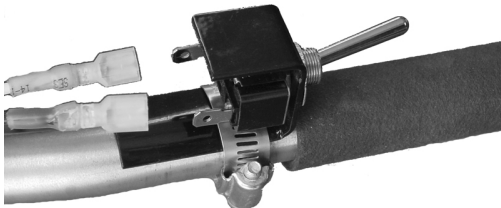
Figure 7

Install the sprayer nozzles,
screens, and caps.



Figure 8

Install the handle thumb switch.



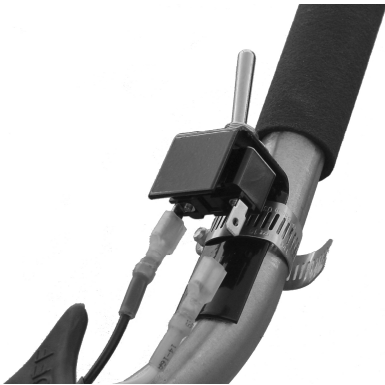


Figure 9

Install the pump wiring assembly clips to the switch spades.

Figure 10

Connect the battery wires.

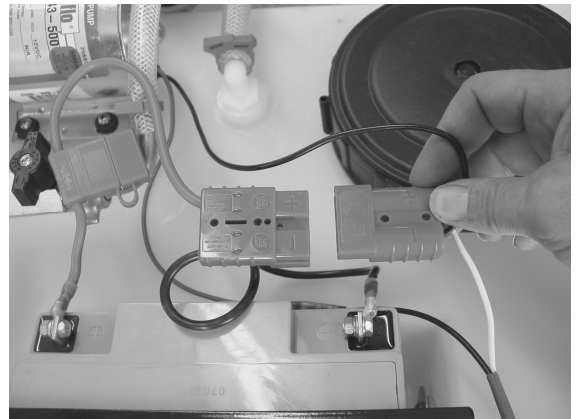


Figure 11

Install filter element and bowl.



Figure 12

Install the pressure gauge.

IMPORTANT! Screw in the gauge hand-tight, with only sufficient force to prevent leaking. Overtightening the gauge can break the regulator housing.



GENERAL OPERATION AND MAINTENANCE

The sprayer pump is turned on and off by the thumb switch mounted on the handlebar of the spreader. Each dripless nozzle body has a special shut-off cap. The nozzle body requires 5 psi of system pressure to open, thus keeping the nozzles from dripping when the pump is off. The nozzles can be completely shut off by turning the cap clockwise. The operator can turn off individual nozzles as needed. The hand spray wand is activated by closing the boom line valve (ball valve on top of the tank) to turn off flow to the boom. To drain the tank of unused liquids, remove the spray tip from the wand and pump the remaining liquid into the proper receptacle.

- Clean pump filter daily.
- Clean tip screens regularly.
- Prevent from freezing.
- Adjust hinge lock nut tension as necessary.
- Flush with water after each use.
- Lubricate hinges with grease.

INITIAL START UP AND PRESSURE TESTING

1. Turn the pressure regulator knob counter-clockwise all the way.
2. Put about one gallon of water in the tank for testing.
3. Be sure that the boom line valve is turned off.
4. Turn on the handlebar thumb switch. You should hear the pump running and see water moving through the hoses.
5. Slowly turn the pressure regulator knob clockwise to increase the pressure. You should notice movement of the needle on the pressure gauge. Adjust the pressure to 30 psi for testing.
6. With the spray wand assembled, operate the trigger valve and check it for leaks. Note the trigger lock. Also adjust the nozzle and angle adapter orientation to the desired position.
7. Turn off the switch. Turn on the boom line valve and all four caps on the top of each boom nozzle body.
8. Turn on the switch and observe the spray pattern from each boom nozzle. Check the entire boom assembly for leaks.
9. Once the unit has been pressure tested and you are familiar with its operation, you can begin the calibration procedure.

BATTERY RECHARGING

The 9-Gallon Drop-in battery is a sealed, maintenance-free 12-volt battery. Charging at a low rate (3 amp max.) with an automotive quality battery charger will extend battery life. A 110-volt powered plug-in battery charger is available as an optional accessory to recharge the battery when not in use.

CALIBRATION

The 9-Gallon Drop-in is equipped with Turbo TeeJet Air Induction nozzles. The nozzle table below will serve as a reference for application rates. The nozzle spacing is 20 inches. The pressure is adjustable. A working pressure of 20 psi will provide adequate coverage. A four-inch overlap of the previous spray pass is recommended.

Turbo TeeJet Nozzle Number:	Pressure PSIG	Capacity 1 nozzle 1GPM	Gallons per Acre at 20" Spacing							
			2.5 MPH	3 MPH	3.5 MPH	4 MPH	4.5 MPH	5 MPH	5.5 MPH	6 MPH
TTI11002-VP	20	0.14	16.6	13.9	11.9	10.4	9.2	8.3	7.6	6.9
	30	0.17	20.2	16.8	14.4	12.6	11.2	10.1	9.2	8.4
	40	0.20	23.8	19.8	17.0	14.9	13.2	11.9	10.8	9.9
	50	0.22	26.1	21.8	18.7	16.3	14.5	13.1	11.9	10.9

Table 1

Because walking speeds vary, it is always best to perform a field test to confirm the application rate. The procedure is simple:

1. Measure an area at least 10,000 square feet.
2. Fill the tank with water.
3. Spray the measured area at 20 psi and at a comfortable sustainable walking speed.
4. Refill the tank from a calibrated container keeping track of the amount needed to refill the tank.
5. Divide the number of gallons used by the square footage of the area sprayed (Expressed in 1000 square foot increments)
6. Since the tank holds 9 gallons, divide 9 by the result to obtain the expected coverage per tank full.

Example: 4.5 gallons used
 10,000 square feet sprayed
 $4.5 \text{ divided by } 10 = .45 \text{ gallons per } 1000 \text{ square feet}$
 $9 \text{ divided by } .45 = 20$

The capacity is 9 gallons, so in this example a full tank should cover 20,000 square feet.

TROUBLESHOOTING

Problem	Possible cause	Solution
Pump runs, but little or no flow	Battery drained Tank empty Filter clogged Filter bowl not on tight Filter gasket faulty or missing Broken fitting or hose Pump needs repair Plugged intake line	Recharge battery Refill tank Clean filter screen Tighten filter Check / Replace gasket Repair as necessary Repair as necessary Remove obstruction
Pump won't turn on	Battery dead Loose or faulty connection Faulty switch	Recharge battery Repair as necessary Repair as necessary
Not all nozzles spraying	Caps on nozzle bodies turned off Nozzle screen is plugged	Turn all caps to the ON position Clean all nozzle screens

Table 2

**CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS**

The California Air Resources Board and MTD Consumer Group Inc are pleased to explain the evaporative emission control system warranty on your 2006 lawn mower. In California, new lawn mower must be designed, built and equipped to meet the State's stringent anti-smog standards. MTD Consumer Group Inc must warrant the EECS on your lawn mower for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your lawn mower.

Your EECS may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic converter, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated emission-related components.

Where a warrantable condition exists, MTD Consumer Group Inc will repair your lawn mower at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

This evaporative emission control system is warranted for two years. If any evaporative emission-related part on your equipment is defective, the part will be repaired or replaced by MTD Consumer Group Inc.

OWNER'S WARRANTY RESPONSIBILITIES:

As the lawn mower owner, you are responsible for performance of the required maintenance listed in your owner's manual. MTD Consumer Group Inc recommends that you retain all receipts covering maintenance on your lawn mower, but MTD Consumer Group Inc cannot deny warranty solely for the lack of receipts.

As the lawn mower owner, you should however be aware that MTD Consumer Group Inc may deny you warranty coverage if your lawn mower or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.

You are responsible for presenting your lawn mower to MTD Consumer Group Inc's distribution center or service center as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact the MTD Consumer Group Inc Service Department at 1-800-800-7310.

GENERAL EMISSIONS WARRANTY COVERAGE:

MTD Consumer Group Inc warrants to the ultimate purchaser and each subsequent purchaser that the lawn mower is: Designed, built and equipped so as to conform with all applicable regulations; and free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in MTD Consumer Group Inc's application for certification.

The warranty period begins on the date the lawn mower is delivered to an ultimate purchaser or first placed into service. The warranty period is two years.

Subject to certain conditions and exclusions as stated below, the warranty on emission-related parts is as follows:

1. Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by MTD Consumer Group Inc according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period.
2. Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
3. Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by MTD Consumer Group Inc according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
4. Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.
5. Notwithstanding the provisions herein, warranty services or repairs will be provided at all of our distribution centers that are franchised to service the subject engines or equipment.
6. The lawn mower owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station.
7. MTD Consumer Group Inc is liable for damages to other engine or equipment components proximately caused by a failure under warranty of any warranted part.
8. Throughout the lawn mower warranty period stated above, MTD Consumer Group Inc will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.
9. Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of MTD Consumer Group Inc.
10. Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claims. MTD Consumer Group Inc will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

WARRANTED PARTS:

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if MTD Consumer Group Inc demonstrates that the lawn mower has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for repair or replacement of the part. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emission warranty parts list are covered: Fuel Line, Fuel Line Clamps

MANUFACTURER'S LIMITED WARRANTY FOR CUB CADET COMMERCIAL LAWN APPLICATION EQUIPMENT



IMPORTANT: To obtain warranty coverage owner may be required present proof of purchase and applicable maintenance records to the servicing dealer. Please see the operator's manual for information on required maintenance and service intervals. In addition, Cub Cadet may deny warranty coverage if the hour meter, or any part thereof, is altered, modified, disconnected or otherwise tampered with.

The limited warranty set forth below is given by Cub Cadet LLC with respect to new merchandise used for commercial and related purposes purchased and used in the United States and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased and used in Canada and/or its territories and possessions (either entity respectively, "Cub Cadet").

Cub Cadet warrants this product against defects in material and workmanship for a period of ninety (90) days from the date of original retail purchase or lease and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE AND APPLICABLE MAINTAINANCE RECORDS, through your local authorized service dealer. To locate the dealer in your area;

In the U.S.A.:

Check your Yellow Pages, or contact Cub Cadet LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-877-282- 8684, or log on to our Web site at www.cubcadetcommercial.com.

In Canada:

For all provinces excluding Quebec contact Modern Power Products d/o MTD Canada Ltd. At 60 Ottawa Street South, Kitchener, Ontario N2G 3S7 or call 1-800-567-6775 or log on to our website at www.cubcadet.ca.

In Quebec contact Les Distributions RVI Ltee. d/o MTD Canada Ltd. 2955 Jean-Baptiste Deschamps, Ville Lachane, Quebec H8T 1C5 or call 1-800-361-5770 or log on to our website at www.cubcadet.info.

This limited warranty does not provide coverage in the following cases:

Routine maintenance items such as lubricants, filters, tune-ups, brake adjustments, clutch adjustments, control linkages, drive system, engines, and normal deterioration of the exterior finish due to use or exposure.

Service completed by someone other than an authorized service dealer.

For products sold or exported outside of the United States and/or Canada, and their respective possessions and territories, except those sold through Cub Cadet's authorized channels of export distribution.

Damage or failure resulting from the use of defective or improper replacement parts and/or accessories other than genuine Cub Cadet parts.

Transportation charges and service calls.

Failure to operate and maintain the product in accordance with the Operator's Manual furnished with the product,

Damages and failures resulting from misuse, abuse, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster.

There are no implied warranties, including without limitation any implied warranty of merchantability or fitness for a particular purpose. No warranties shall apply after the applicable period of express written warranty above. No other express warranties beyond those mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind Cub Cadet. The exclusive remedy is repair or replacement of the product as set forth above. The terms of this warranty provide the sole and exclusive remedy arising from the sale and/or lease of the products covered hereby. Cub Cadet shall not be liable for any incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights that vary in different jurisdictions.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of improper use, misuse or inability to use the product. This limited warranty shall not extend to anyone other than the original purchaser/Leasee or to the person for whom it was purchased or leased as a gift.