

Operator's Manual & Parts List Contractor Industrial Sprayers: 407Cl and 487Cl



If you are missing parts, instructions or have questions, DO NOT take this unit back to the store. Call 1-800-SOLO-INC. Solo will send the missing parts/information to you promptly.

WARRANTY:

Solo model 407-CI and 487-CI sprayers are covered by Solo's 1-YEAR LIMITED WARRANTY. Solo manufactured parts which fail due to defective material or workmanship will be repaired or replaced without charge. See page 6 for full details.

SAFETY PRECAUTIONS:

- Solo's Contractor Industrial Sprayers are manufactured for specific chemical applications. Failure to use these sprayers for the purposes and with the chemicals intended could be harmful to the operator and cause the sprayer to fail.
- Before adding chemicals, fill the unit with clean water, pressurize and check for proper assembly and operation. CHECK PROPER OPERATION OF PRESSURE RELIEF VALVE PRIOR TO EACH USE!!
- Do not exceed 45 psi pressure.
- Observe the recommendations of the chemical manufacturer.
- Prior to removing any part of the sprayer pull the pressure relief valve to release any pressure in the tank.
- Wear rubber gloves, safety goggles and appropriate protective clothing.
- After pumping be sure handle is in the locked down position.
- Individuals should be trained in the proper use of this sprayer. Where training is not available, individuals should study and follow the procedures detailed in this manual.

WARNING:

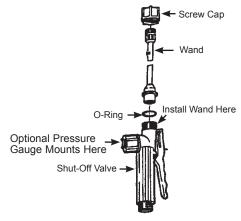
Chemicals can be harmful to individuals and the environment if improperly used. In addition, some chemicals are caustic, corrosive, or poisonous and should be avoided. Read warnings and chemical manufacturer's instructions. Solo high density polyethylene sprayers are fitted with chemically resistent seals which are matched to the specific chemicals used in the Contractor-Industrial trades; however. care should be exercised to ensure that sprayer components are clean, functioning properly, and in a good state of repair before and during use. If in doubt about a particular chemical, check with manufacturer. If you suspect or observe indications that the material may be unsafe in a Solo sprayer... STOP! Do Not Use or Apply Chemical. ALWAYS WEAR RUBBER GLOVES, SAFETY GOGGLES

AND APPROPRIATE PROTECTIVE CLOTHING.

- Read and follow operating instructions.
- Do not fill sprayer over maximum fill mark. Releasing pressure in an overfill condition can cause harmful venting of sprayer contents.
- Relieve pressure only with sprayer upright and while standing on the side of the sprayer opposite the pressure relief valve. Venting of sprayer contents can occur if liquid is over bottom of relief valve.
- CAUTION: To prevent injury from ejected pump assembly and/or solution, never stand with face or body over the top of the tank when pumping, or loosening pump.
- Do not modify sprayer or pressure relief valve.
- Never spray in the direction of humans, animals or property which might be injured or damaged by spray formula.
- Do not use liquids with a temperature above 120°F (45°C).
- Remember that a sprayer with liquid is a significant amount of weight (8 lbs. per gallon). Use caution when bending, leaning or walking. Bend only at the knees and support yourself as required to ensure personal safety.
- Do not inflate sprayer without liquid in the tank.
- Do not climb on ladders or other unsteady or potentially unsafe structures when operating your sprayer.

ASSEMBLY INSTRUCTIONS FOR WAND

- 1. Ensure that the O-ring is on the non-threaded end of the wand.
- 2. Insert the non-threaded end of the wand into the open end of the shut-off valve.
- 3. Tighten the screw cap.



CUSTOMER SERVICE COMMITMENT FROM SOLO'S SERVICE DEPARTMENT

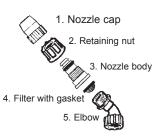
In the event the sprayer you have purchased has missing or damaged parts, please call 1-800-765-6462, 9:00 AM—5:00 PM EST. In order to assist your service representative, please have the following information available: sprayer model number, part description and part number. A parts list is included in your operator's manual.

Solo is committed to your satisfaction and is continuing its efforts to earn your future business.

USING THE ADJUSTABLE NOZZLE

To change the spraying pattern, first make sure the retaining nut (2) is screwed tight to the elbow (5). If it is not tight, the nozzle

cap (1) and nozzle body (3) will rotate inside the retaining nut and the nozzle will not adjust. For a straight stream pattern, rotate the nozzle cap outward. For a hollow cone pattern, rotate the nozzle cap inward towards the retaining nut. If it becomes difficult to rotate the nozzle cap, remove the nozzle cap from the nozzle body and lubricate the O-ring on the nozzle body with a non-water soluble grease*.



REMOVING ADJUSTABLE NOZZLE

Unscrew the nozzle cap (1) from the nozzle body (3). This is best accomplished while the retaining nut (2) is securely fastened to the elbow (5). Next, unscrew the retaining nut (2). Push the nozzle body (3) out of the retaining nut (2). To reinstall the nozzle, reverse the above instructions, see "Spray Tip Assembly".

OPERATION:

- Before using sprayer with chemicals, fill sprayer with fresh water to assure that you have it properly assembled; pressurize and then practice spraying. When thoroughly familiar with sprayer operation, follow normal operating procedures.
- Turn pump handle counter clockwise to remove pump.
- Fill tank with premixed formula up to desired level. (Do not exceed maximum fill mark.) Observe recommendations of chemical manufacturer.
- · Tighten cap and pump assembly for a good seal.
- Pump to a maximum 45 psi or 3 bar pressure. The valve stem on the pressure relief valve will rise up to vent excess pressure over 45 psi.
- Start or stop spraying by squeezing or releasing the lever on the shut-off valve (3). The spray pressure can be monitored with an optional pressure gauge.
- Prior to every removal of pump (1), release pressure first by pulling up on the pressure relief valve stem (2).



CLEANING:

- · Carefully clean sprayer after every use.
- Pour or spray all remaining chemical out of sprayer.
- Pour a small amount of water for water soluble chemicals, or mineral spirits for oil-based chemicals, into the tank.
- · Pressurize and spray through system until all liquid is gone.
- Repeat process with warm soapy water.
- · Repeat process with warm clear water.
- · Use an absorbent cloth to dry all internal surfaces.
- Follow the recommendations of the chemical manufacturer for disposing of waste water and chemicals.
- Do not use aggressive or abrasive cleaning agents.

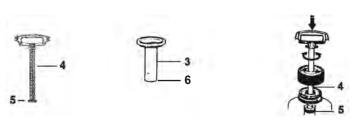
MAINTENANCE:

- Prior to storage, empty, clean and dry sprayer.
- Always store the sprayer in a dry area, protected from freezing, heat and sunlight.
- Lubricate O-ring in pressure relief valve with non-water soluble grease* on a regular basis.

Disassembly: Unscrew pressure relief valve from tank and pull the valve body out of the screw cap. Clean, lubricate, and replace.

• Pump Maintenance: Pump pressure sealing is accomplished with an O-ring (5) on the pump piston (4) which moves within the cylinder (3). Periodically this O-ring should be greased with a non-water soluble grease*. If worn, it should be replaced. A small umbrella valve (6) at the bottom of the cylinder prevents the formula from entering the cylinder. Keep these parts clean and replace if worn.

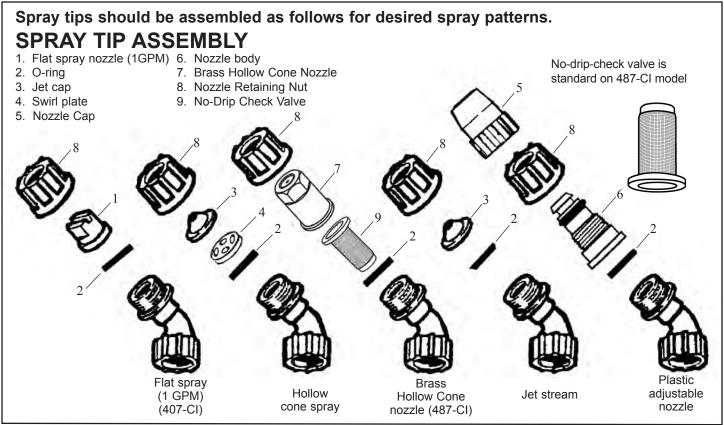
Disassembly: Unscrew pump assembly from tank. Carefully remove umbrella valve (6) from the bottom of cylinder (3). While holding cylinder firmly with one hand and the handle of the pump piston (4) firmly in the other, with the piston fully inserted in the cylinder, pull back on the piston quickly and forcefully. To re-assemble, place the piston assembly back into cylinder, place heel of hands on opposite sides of the tank cap, while keeping cylinder in place with fingers, tap bottom of cylinder against a flat padded surface. Assembly will lock into place.



- Tank Cap: A small amount of non-water soluble grease* on tank cap threads and the gasket eases tightening and loosening.
- Regular Inspection: Inspect and replace worn or damaged parts promptly. Pay particular attention to tank cap gasket, pressure relief valve and seal, inflation valve (if fitted), umbrella valve, O-rings and seals throughout sprayer. Regular lubrication of O-rings and seals is recommended.

OPERATING FEATURES:

Nozzles - Your Solo 407-CI or Solo 487-CI sprayer comes equipped with specialized nozzles for specific applications. The 407-CI is primarily used for curing compounds with up to 33% solids and therefore does not have a filter. The 487-CI Acetone sprayer includes a no-drip check valve. Please review the Spray Tip Assembly section below for assembly instructions of the standard nozzles.



In the best interest of continued technological progress, we reserve the right to change design and configuration of any product without prior or other notice. Therefore, please note that text and illustrations of this manual are not to be considered binding and do not constitute a basis for legal or other claims

WILL THE PLASTIC MATERIAL LAST?

Only high-grade polyethylene is used. The material is chosen for high molecular weight, high-impact strength, and excellent resistance to chemicals and stress. Ultraviolet inhibitors are used in the material to reduce deterioration caused by sunlight.

HOW HEAVY IS THE UNIT?

Solo 3 Gallon Contractor Industrial sprayers weigh approximately 6 1/2 lbs empty.

WHAT SPRAY NOZZLE SHOULD I USE?

Standard on the 407-CI sprayer is a high volume (1GPM) flat spray nozzle. This nozzle will spray chemicals containing up to 33% solids and is perfect for spraying concrete curing compounds. Also included with the 407-CI is a .4 GPM flat spray nozzle, an adjustable nozzle, a jet stream nozzle and a hollow cone nozzle. Available as an

option is a no drip check valve (standard on the 487-CI) with a built-in check valve (27 00 316) which opens at 5 psi and closes at 4 psi. This virtually eliminates the dripping of fluid still contained in the spray wand. Standard on the 487-CI is a brass, 80 degree, .4GPM cone nozzle. Also included with the 487-CI is a brass 80 degree .2GPM cone nozzle, a brass 80 degree .5GPM flat spray nozzle and an adjustable nozzle.

CAN I DO SPOT SPRAYING?

The shut-off valve on the Solo sprayer is well suited for spot spraying. It's almost effortless! The shut-off valve handle incorporates a locking clip which holds the valve open for area spraying without tiring the operator's hand. A pressure gauge (part# 4900622) may be added with increments from 0 to 86 psi (0-6 Bar).

Note: Always wear rubber gloves, safety goggles and appropriate protective clothing when repairing a sprayer. Once a repair is completed, fill the unit with clean water, pressurize, and check for leaks. If the sprayer leaks, DO NOT USE. Repair leaks and re-check.

SERVICE AND REPAIR SECTION HANDHELD SPRAYER TROUBLESHOOTING GUIDE					
PROBLEM	CAUSE	SOLUTION			
Difficulty in moving pump handle	dirty cylinder wall O-ring on piston swollen (not cleaned properly)	remove piston, clean, grease and replace replace O-ring, grease			
Low pressure & resistance during pumping	No lube on piston/cylinder	lubricate with heavy grease			
	 Chemical in cylinder Damaged O-ring in pressure relief valve worn or damaged O-ring in shut-off valve 	Replace umbrella valvereplace O-ringreplace O-ring			
	tank cap not tight	tighten cap			
Leaks from end of spray wand	worn or damaged O-ring in shut-off valve	 rebuild shut-off valve 			
Leaks from inside cylinder	no lube on piston cylinder	 lubricate piston, O-ring and cylinder 			
Leaks under cap	worn or damaged umbrella valve	 replace umbrella valve at bottom of cylinder 			
Leaks from shut-off valve	damaged or missing gasket	replace gasket			
Leaks from hose	screw cap not tight	tighten screw cap			
Pressure relief valve sticks	 worn, damaged or loose fittings, lack of lubrication 	 tighten fittings and replace worn parts, disassemble and lubricate O-rings 			
Air leak - air coming out between halves of the pump support	worn, damaged or loose fittings	tighten fittings and replace worn parts			
	 lack of lubrication or contaminated pressure relief valve assembly 	 clean and lubricate pressure relief valve assembly 			
	tank cap not tight	tighten tank cap			
	gasket twisted or lacking lubrication	 straighten gasket and lubricate with grease 			
	tank lip damaged	repair or replace tank			

ACCESSORIES:

The following accessories are not standard. Order them from your Solo dealer.



Pressure control gauge (#49 00 622): displays spraying pressure so operator



can maintain desired pressure level.



Brass adjustable spray nozzle (#06 10 410-P): affords operator a full range of sprays from fine to jet stream.



Drift guard (#49 00 430):

helps control application of formula under breezy conditions.



Brass spray wand (#49 00 528): The 2 pcs spray wand is 60" (150 cm) long and replaces the standard spray tube for treating up to heights of 16 ft. (5 meters). Additional extension tube available in 20" length (#49 00 513).



Controlled Flow Valve (CFValve™): Provides constant pressure and flow to the spray nozzle and can be used in various applications.

(Y3/8BSP - 15 psi)

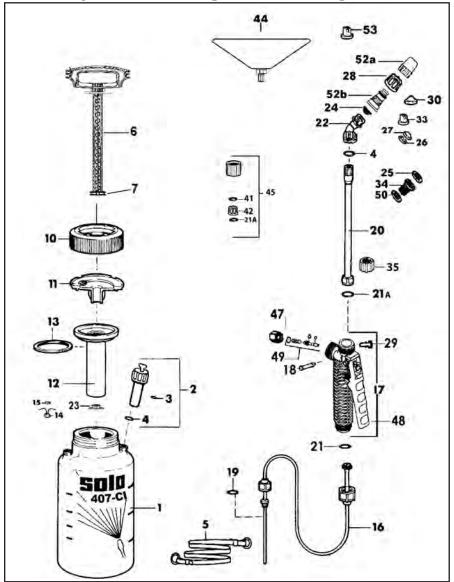
(R3/8BSP - 21.7 psi) (B3/8BSP - 29 psi)

(G3/8BSP - 43.5 psi)

Nozzle Tip Specifications

Description	Order number	Spray Press		Pressure Angle		Angle	Applications	
		1/min	US gal /min	at atm	psi			
Flat Spray nozzle	10F110 4074263	3.75 0.88 1.25 1.53	1.00 .23 .33 .40	3.0 1.0 2.0 3.0	44 15 29 44	120° 120° 120°	Curing Compound, large area	
Flat spray nozzle -brass -plastic with stainless steel insert	CI-TP8005 0065132	0.78 0.64 0.78	.50 .40 .50	3.0 2.0 3.0	44 29 44	80° 80° 80°		
Adjustable nozzle -brass -plastic	4900207 4900527	1.53 0.76	.40 .20	2.8 2.8	40 40	Straight stream Hollow cone	adjustable spraying pattern	
Full cone nozzle	CI-TX-26					80° .4 GPM	high viscosity chemicals, acetones	
Full cone nozzle	CI-TX-12	•			\	80° .2 GPM	high viscosity chemicals, acetones	
Full cone nozzle	0065214				game repellents			
Hollow cone nozzle 1 mm orifice	4900209	0.4 0.55	.10 .15	1.0 2.0	15 29		high viscosity chemicals	
Hollow cone nozzle 1.4 mm orifice	4900252	0.64 0.91 1.11	.17 .24 .29	1.0 2.0 3.0	15 29 44	50° 65° 65°		
Hollow cone nozzle 1.8 mm orifice	4900322*	0.88 1.25 1.53	.23 .33 .40	1.0 2.0 3.0	15 29 44	55° 70° 72°		

407-CI PARTS BREAKDOWN



Pos.	Order	For	Description
No.	No.	Model	
1 2 3 4 4 5 6 7 7 100 111 213 16 17 18 19 20 21 A 22 23 26 27 28 29 33 47 48 52	4071263 4800185 0062166V 0062258V 4300245 4073835 0062264V 4073111 4074387 4073834 4061345V 4900515 4800170 4074295 0062144V 4900230 0062271V 0062258V 4074756 4074756 4074758 4074138 4074138 4074329 10F110 4074263 4074335 4900527	* * * * *	Tank, 3 gallon Pressure relief valve assy. O-ring O-ring O-ring Carrying strap Pump piston, solid O-ring Tank cap, black Cylinder support (need 2) Cylinder (use with 0094308V) Gasket Pressure hose, assy. Shut-off valve, assy. Pin retaining O-ring Wand, assy. (inc. 35 & 21A) O-ring Elbow Umbrella valve Swirl plate Jet cap tip Retaining nut Lock clip Flat spray nozzle Retaining nut Lever Plastic adj. nozzle (incl. a & b)
	Α	cces	sories
Pos.	Order	For	Description
No.	No.	Model	
25 30 34 35 41 42 44 45 49 50	4900407-K 0062106V 4074726 2700316 4074337 0062249V 4074338 4900430 4900622 0610402-K	HD HD	Pump repair kit (Viton) O-ring Hollow cone nozzle No drip check valve Retaining nut O-ring Retaining nut Drift guard Pressure gauge assy. Shut-off Valve Repair Kit O-ring
53	0065210	HD	Brass flat spray nozzle

^{*} Pump repair kit

Prices and technical specifications are subject to change without notice.

SOLO LIMITED WARRANTY

Solo Incorporated guarantees the original purchaser of Solo equipment, that any failure of Solo manufactured parts due to defects in material and workmanship occurring during the applicable warranty period will be repaired or replaced without charge for parts or labor, except for those items not covered by warranty.

CONSUMER LIMITED WARRANTY: Solo equipment purchased for consumer use is covered by this Limited Warranty for a period of ONE (1) YEAR.

COMMERCIAL LIMITED WARRANTY: Solo equipment purchased for commercial use is covered by this Limited Warranty for a period of ONE (1) YEAR.

OPERATOR'S OBLIGATION AND RESPONSIBILITY: proof of purchase must be provided by the owner in order to obtain warranty service. Should any failure covered by this Limited Warranty occur, deliver or ship the Solo products or parts to an authorized Solo service center. Freight, packing and insurance costs, if any, will be borne by the owner. Follow normal maintenance service to include applicable lubrication, operation and storage of the product as explained in the operator's manual.

ITEMS NOT COVERED BY WARRANTY: provisions of the Limited Warranty will not apply to the following: Any indirect or consequential damages that may result from the failure or malfunction of the Solo product. Normal service requirements arising during the warranty period, such as cleaning, normal wear, lubrication, filter, spray tips, etc. Normal service work over and above the repair or replacement of defective parts. Any failure that results from an accident, customer abuse, normal wear, neglect or failure to operate the product in accordance with the instructions provided in the operator's manual or provided with the product. When an alteration or modification has been performed on a Solo product, Solo is responsible only for products as originally furnished by Solo, provided the alterations or modifications do not adversely affect the product's operation, performance or durability. Parts or accessories that are incompatable with the product are not approved for use by Solo.

Full disclosure of Solo's Limited Warranty is available from your local Solo dealer or Solo Incorporated, 5100 Chestnut Avenue, Newport News, Virginia 23605.

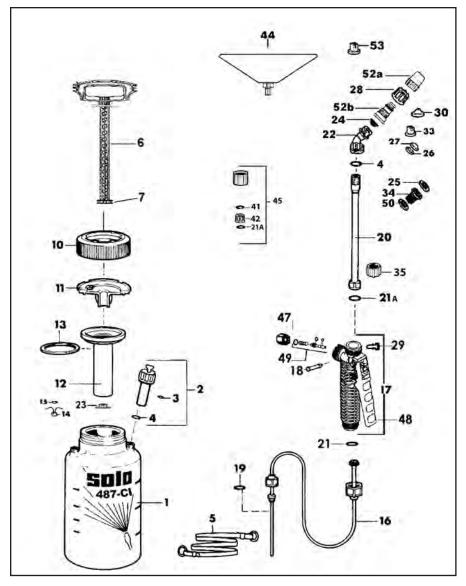
This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state.



Order parts and accessories from your Solo dealer. If there is no local dealer, use this form to order from Solo.

	Item Names/Description	Part No.	Retail Price	Qty.	Total
Nozzles					
5	Flat spray nozzle - surface area & row treatment Jet cap	40 74 263 40 74 755	2.00 1.50	-	
are	Swirl plate	40 74 756	1.50		
	Filter - standard	40 74 283	2.55		
	Sprayer elbow and nozzle assortment No-drift wide angle flat nozzles60 GPM	06 10 408-P 40 74 513	14.95 2.50		
	mainly for spraying herbicides at low pressure30 GPM	40 74 514	2.50		
	At 15 psi they deliver: .24 GPM	40 74 386	2.50		
000	.12 GPM Elbow nozzle assembly	40 74 385 49 00 258N	2.50 6.35		
	Double spray nozzle - for double row application	49 00 477	29.95		
	spraying in two directions simultaneously. Brass adjustable spray nozzle kit - with filter and screw	06 10 410-P	8.75		
	cap for tree spraying (from fine misting to a jet stream). Brass adjustable spray nozzle (same nozzle as kit above)	49 00 207	6.25 4.25		
	Plastic adjustable nozzle Hollow cone nozzles - for shrubs & bushes: 1.4 mm	49 00 527 49 00 252	4.25 2.85		
	1.8 mm	49 00 322	2.85		
	Jet stream nozzle	40 74 758 49 00 397	2.70		
	Foam spray nozzle - for low drift & water saving application of herbicides which tend to foam.	49 00 397	14.95		
	No drip check valve - prevents spray tip from leaking when not in use.	27 00 316	4.95		
	Nozzle assortment - includes flat, hollow cone, no drift, and plastic adjustable nozzles.	06 10 456-P	12.95		
Extension	1 tubes and spray wands	40.00.450	04.05		
	6" bendable spray wand 20" spray wand	49 00 450 49 00 230	21.95 9.95		
	20" extension tube	49 00 513	16.95		
	21" stainless steel wand	49 00 645-P	11.95		
	20" brass spray wand 27" spray wand	49 00 421 49 00 319	12.95 13.95		
	40" brass telescoping wand	49 00 478	34.95		
	48" carbon fiber wand	49 00 449	39.95		
	60" brass spray wand 4' to 8' Carbon Fiber Wand	49 00 528 49 00 445	34.95 79.95		
	Note: extension tubes attach to wands to extend length.		1 0.00		
	Spray wands attach to shut-off valve only.				
Spray box	ame.				
Spray boo	<u>JIIIS</u>				
	Spray booms - spray 2 or 4 rows at once with: 2-nozzle spray boom - handheld (total width 33")	49 00 514	34.95		
	distance between nozzles 24". Includes 2 flat spray nozzles	49 00 298	99.90		
	4-nozzle spray boom - mounts on rear of sprayer (total width 49 3/4"; distance between nozzles 16"). Includes 4 hollow cone nozzles.	49 00 296	99.90		
Specialty	Solo Superior grease	9850-P	2.95		
₽ •• ®	Pressure gauge kits - indicates spray pressure. Use with shut-off valve 4800170. Fits all models.	49 00 622	29.95		
	Prift guard - complete control for herbicide applications in berry, flower, vegetable, cotton & other applications.	49 00 430	16.95		
	Shut-off valve	48 00 170	15.95		
Succession 1	Shut-off valve, wand & elbow nozzle assy.	49 00 170N	19.95		
	Pump repair kit - contains original equipment O-rings to renew all sealing surfaces on 454, 456, 457 sprayers	49 00 405-K	5.95		
	Shut-off valve and wand repair kit	0610411-K	9.95		
	Sprayer Service DVD	998SPDVD	9.95		
	407-CI, 487-CI Operator's Manual, Spare Parts List	US9407CI12	NC		NC
Prices and tec	chnical specifications are subject to change without notice.	SUBTOTAL			\$

487-CI PARTS BREAKDOWN



Prices and tecl	hnical specifications	are subject to	change without notice.
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We cannot process your credit card purchase without a signature and expiration date.

City _____ State___ Zip ____

PLEASE PRINT:

Name_

Pos.	Order	For	Description
No.	No.	Model	Description
1 2 3 4 5 6 7 10 111 112 113 116 117 118 119 20 21 A 22 23 227 228 29 30 33 34 35 52 55	4071263 4800186 0062365 0062365 0062363 4300245 4073835 0062369 4073111 4074387 4073834 4061347 4900571 4800245 4074295 0062371 4900421 0062364 0062363 4074527 0094352 CI-TX-12 4074148 4074329 CI-TX-26 CI-TP8005 2700316 4074337 4074337 4074336 4074337 4074336 4074335 0062368 4074335	### ### ### ### ### ### #### #### ######	Tank, 3 gallon Pressure relief valve assy. O-ring O-ring Carrying strap Pump piston, solid O-ring Tank cap, black Cylinder support (need 2) Cylinder support (need 2) Gasket Pressure hose, assy. Shut-off valve, assy. Pin retaining O-ring Brass Wand, assy. (inc. 35&21A) O-ring Umbrella valve Hollow Cone Nozzle .2Gpm Retaining nut Lock clip Hollow Cone Nozzle .5Gpm No Drip Check Valve Retaining Nut Retaining Nut Retaining nut Lever O-ring Plastic adj. nozzle (incl. a & b)
	Α	cces	sories
Pos.	Order	For	Description
No.	No.	Model	
44 45 52 53	4900406-K 4900430 4900622 4900207 0065210		Sprayer repair kit 487-CI Drift guard Pressure gauge assy. Brass Adjustable Nozzle Brass flat spray nozzle

Mail or Fax to: Solo • 5100 Chestnut Avenue	Total from Previous Page	\$	
Newport News, VA 23605 • Phone: (757) 245-4228 • Fax: (757) 245-0800 Order Online: www.solousa.com E-mail: solo@solousa.com	VA,NC,WA residents add applicable sales tax \$		
Please do not send cash with this order. Make check or money order payable to Solo Incorporated. You may request C.O.D. shipment. Please call for	Shipping	\$ 7.95	
current C.O.D. charges.	Grand Total	\$	
Form of Payment: Credit Card Check or Money Order	Please allow 1-2 weeks for delivery		
☐ C.O.D.			
Credit Card Number	CO	®	
Expiration Date Signature and Phone Number			

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