

APPLI-PRO[®] *SLV C500*

Super Low Volume
Application System



Operation Manual





DECLARATION OF INCORPORATION FOR A PARTIALLY COMPLETED MACHINE: Pioneer Appli-Pro® C500 System.

MANUFACTURER: Harvest Tec, Inc., 2821 Harvey St, P.O. Box 63, Hudson, WI, 54016, U.S.A.

MACHINE DESCRIPTION: An implement mounted machine that applies inoculants to forage crops.

DECLARATION OF APPLICATION OF ESSENTIAL REQUIREMENTS OF THE DIRECTIVE 2006/42/ EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 17, MAY, 2006 AND OTHER RELEVANT EU DIRECTIVES: The Pioneer Appli-Pro® C500 System conforms with the Directive and other relevant EU directives.

SERVICE DUTY OF THE PARTIALLY COMPLETED MACHINE: The Pioneer Appli-Pro® C500 System will only be put into service after installed on a forage harvester that has been declared to conform with the Directive.

Noise from the Pioneer Appli-Pro® C500 System does not exceed 70 dB (A).

MANUFACTURERS NAME PLATE

(This is an example)



PERSON AUTHORIZED TO PROVIDE INFORMATION ON THE MACHINE AND WHO MAKES THIS DECLARATION:

Jeffery S. Roberts, President, Harvest Tec, Inc.

Signed in Hudson, WI, USA on May 21, 2011

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Introduction

The **Appli-Pro® SLV C500 (Super Low Volume Tank Mix) Application System** was built for DuPont Pioneer by a leading agricultural manufacturer. The C500 is an integrated system, designed and calibrated specifically for Pioneer® brand products. This manual will take you through the steps of operation of the applicator and also point out all safety precautions that need to be made while using the applicator. Read this manual carefully to learn how to operate the equipment correctly. Failure to do this can result in personal injury or equipment malfunction. If you are unsure about operating the system after consulting this manual, contact your local authorized dealership for additional assistance. If you are in need of parts for the system please see the parts breakdown in the back of this manual and contact your local authorized dealer to order the parts.

This unique system was developed to offer you the following advantages:

- Treat up to 500 tons with 5 liters of water.
- Operator time savings with fewer stops due to switching bottles.
- Unique back-flush system makes cleaning easy.
- System works without the use of solenoids for reduced maintenance.
- Basic product delivery system is identical to SLV which provides excellent rate and distribution based on SLV experience.
- Tank can be removed for easier cleaning.
- John Deere GreenStar compatible.
- Dedicated compressor air intake for prolonged compressor life.

For information on how to install the C500 to your machine, refer to the Installation Manual.

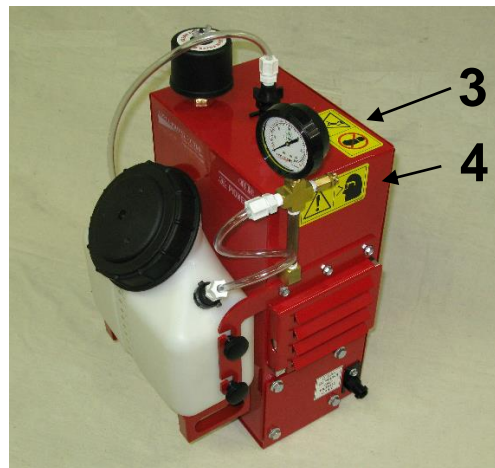
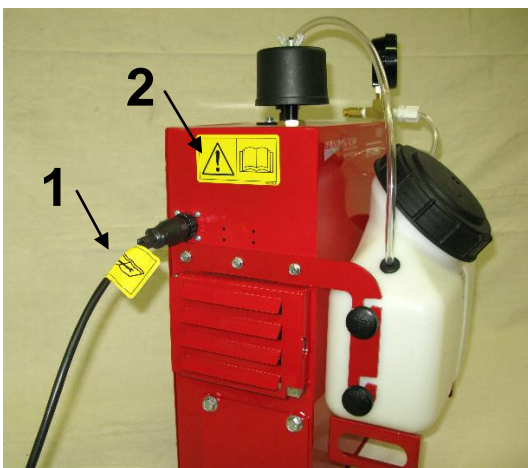
Safety

Carefully read all the safety signs in this manual and on the applicator before use. Keep signs clean and in good working order. Replace missing or damaged safety signs. Replacement signs are available from your local authorized dealer. See your installation manual for under the replacement parts section for the correct part numbers.

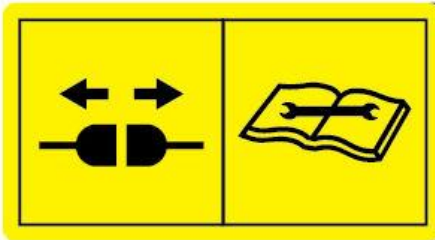
Keep your applicator in proper working condition. Unauthorized modifications to the applicator may impair the function and/or safety of the machine.

Carefully read and understand all of the applicator safety signs before installing or servicing the applicator. Always use the supplied safety equipment on the forage harvester to service the applicator.

Safety Sign Locations



Safety Signs



Number 1
Spraying hazard. Disconnect power before servicing the applicator
Part no. DCL-8003



Number 2
Read and understand the operator's manual before using or working around the equipment.
Part no. DCL-8000



Number 3
Falling hazard. Do Not Step in this area.
Part no. DCL-8002

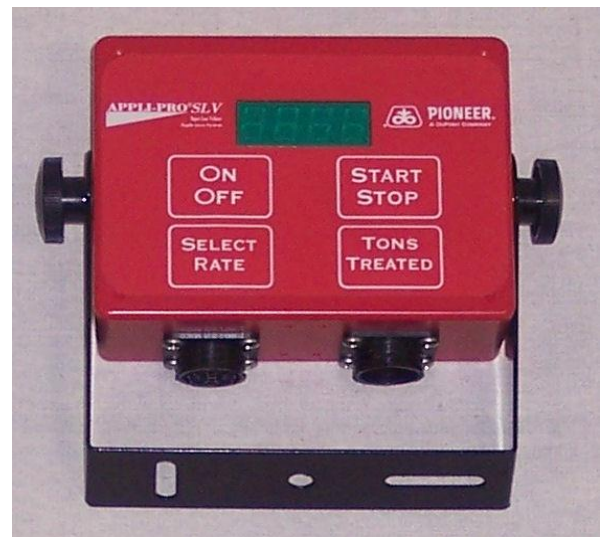


Number 4
Eye protection. Pressure Relief Valve.
Part no. DCL-8005

Operation for Non-GreenStar Equipped Machines

On / Off Button

This button will turn the box on and off. Turning the unit off also activates the automatic clean-out function. When the unit is first turned on, the display will show either GS or SL briefly, then will display STOP. The box can be shut off in any of the operating modes. When you turn the unit off, you will notice that the machine does not immediately turn off, instead CLN is shown in the display. This is part of the automatic clean-out function. The pumps will run a clean-out cycle for 30 seconds and then turn off. There is no need to press the ON/OFF button again when CLN is displayed. If the off button is accidentally pressed during operation, you will have to wait for the applicator to go through the clean-out cycle before it can be turned back on.



Select Rate

This button allows you to select the rate at which you want to apply product. Initially, the display will show 10. This represents the applicator being set to apply for a 10 Ton/Hr harvesting rate. To increase the harvesting rate, press and hold the SELECT/RATE button until the display scrolls to the approximated harvesting rate. As you hold the SELECT RATE button, the numbers will scroll from 10-400 and roll back over to 10. This number should be set at your estimated harvesting rate. Once you reach your selected rate and release the SELECT RATE button, the application rate is set. **IF CONTROL BOX IS DISPLAYING ONLY "•" or "-" DURING OPERATION, REFER TO THE TROUBLESHOOTING GUIDE.**

Start / Stop

This button will manually start and stop the application of product. When the applicator is stopped, STOP will be displayed on the screen. When the applicator is applying, the display will show the accumulated TONS TREATED. If you are using the End of Row function, a signal supplied from the forage harvester, the signal from the machine will override the START/STOP button. You will not be able to stop application by pressing the START/STOP button if the End of Row sensor is plugged into the green pigtail wire on the wire harness.

Tons Treated

This button will show the accumulated tons treated. To reset the accumulated tons treated, press and hold the TONS TREATED button for three or more seconds.

Gauge Pressure

The pressure reading on the gauge should be between 20 and 25psi. Pressure will increase or decrease as the application rate is changed. If pressure is not in normal operating range, refer to trouble shooting guide. If gauge pressure is showing above 30psi, stop C500 immediately.

Cold Weather Operation

If using the applicator during potentially freezing weather (e.g., harvesting high-moisture corn), the addition of a 100% solution of propylene glycol will prevent the inoculant solution from freezing without harming the bacteria.

The table below shows harvest air temperatures and the **recommended amount of 100% propylene glycol to add per 50 tons harvested**. After adding the propylene glycol, top off with water to recommended capacity (50-ton bottle). Obviously, propylene glycol is not a practical alternative for extremely cold operating conditions. RV antifreeze will be your easiest and cheapest source of propylene glycol. It must be factored in that most RV antifreeze products contain only a percentage of propylene glycol.

For example, if the RV antifreeze label shows 25% propylene glycol, you must multiply the recommendations below by 4. At 10° F, you will be using straight RV antifreeze, as the dissolving, carrier solution, if the RV antifreeze contains only 25% propylene glycol.

Temperature °F	Per 50 tons
30°F	25ml (.84 oz)
25°F	50ml (1.7 oz)
20°F	100ml (3.4 oz)
10°F	125ml (4.2 oz)

Operation for John Deere GreenStar Equipped Machines

Overview

The C500 control box has John Deere GreenStar capability. This option allows the C500 to have, "On the Go", rate adjustments done by the GreenStar system. The GreenStar C500 control has two different operational modes. One is called (SL) for regular C500 operation. It also has a GreenStar mode called (GS). Depending on what mode the C500 box is set in, will determine how it will work. You will see what mode the C2000 box is set in, every time you turn the box on.

Function of the Buttons

On / Off: This will turn the C500 box on from the idle state. It also initiates the clean out sequence and turns the box off. This button will take priority over any other buttons when pushed. This button also allows the operator to switch between the SL and GS modes

Start / Stop: This button is inactive in the GS mode

Select Rate: This button will allow you to see what the current inoculant dosing rate is.

Tons Treated: This button will go to a simple diagnostic screen, see below for more information. Also this button will allow you to reset the bottle empty function. See below for more info. You will not be able to see how many tons you have treated in the GreenStar mode (GS) of the C500. You can see how much inoculant has been applied by going to page two of the "Field Totals" screen, on the GreenStar monitor. Push the following buttons in sequence on the GreenStar monitor.

- INFO
- Harvest Monitor
- View Totals
- Field Totals
- Page 2 (It is the last item at the bottom of the screen)

Switching Between Operating Modes

To switch between modes the operator must have the C500 control box in the off state with the power harness attached. Press and hold the ON/OFF button. Keep holding the button, for about 5 seconds, until it starts to toggle between the two operating modes (SL and GS). It will toggle between the two modes every 3 seconds after that. When the mode you have selected is displayed, let go of the button. It will stay in the selected mode until you repeat this procedure. **One note: Every time you switch modes it will reset tons treated and bottle empty to Zero.**

Operating the C500 in Normal (SL) Mode

Please refer to the section in this manual Operation for Non-GreenStar Equipped machines.

Operating the C500 in GreenStar (GS) Mode

With the C500 control box in (GS) mode and also hooked into the GreenStar system, it will work as follows: The C500 will automatically adjust the dosing rate according to the throughput signal from the GreenStar System. It will also pause the C500 when no inoculant should be applied. Example: When you are turning around on the headlands. Before the C500 can receive these messages you must first set up **ComPort 2** on the GreenStar Display.

1. Setting up **ComPort 2** for the GS Display Model 2630
 - a. Power up the GreenStar monitor
 - b. Go to the home screen.
 - c. Select the **Equipment Tab "H"**
 - d. Press the **ComPort** button, located in the lower left corner.
 - e. Press **Profile**, then select **New**. A keyboard will appear. Create a desired name for this new profile. (Example: Dosing 2015, Spring Crop 2015, Fall Crop 201). Enter a profile name and press **Accept**. This profile will retain the settings that you will enter in the next two steps.
 - f. Press **ComPort**. A drop down menu will contain box #1 and box #2. **Select #2**. This allows communication with *ComPort 2*.
 - g. Press **Port Type**. Scroll down and select **Inoculants Dosing**.
 - h. Press **Accept**.
 - i. You should now be back to the "Equipment" Screen.
2. Turn on and priming the C500.
 - a. Turn on the C500
 - b. Once the C500 sees a throughput signal from the GreenStar System it will automatically start the priming sequence.
3. Normal operation.

Once priming is complete one of three situations will happen

 - a. **It will display a number**. This represents that the C500 is applying inoculant. This rate is going to be the same rate the GreenStar system is displaying.
 - b. **It will display (0)**. This represent that there is not a throughput signal at that time. Example. There is no crop being harvested but the main clutch is on.
 - c. **It will display (STOP)**. This represents one of two conditions.
 1. The main clutch is off and no signal is being received from the GreenStar System
 2. The cable between the C500 and GreenStar System is disconnected or a wire is broken or severed.

GreenStar Diagnostics

Testing Communication and Troubleshooting

1. Turn on GreenStar monitor.
2. Turn on SLV Control box and have it operating in GS Mode. (See “SWITCHING BETWEEN OPERATING MODES”)
3. Press “TONS TREATED” button on the SLV control box.
4. GS should appear in the middle of the screen.
5. This symbol “I” should be flashing in the lower left corner of the screen. This shows GreenStar system communicating. If this symbol is not shown, there is an issue with the GreenStar system. Check all harnesses and connections between DS monitor and SLV control box. Check that the **ComPort 2** is selected under the machinery tab. See your John Deere Dealer.
6. This symbol “I” should be flashing in the lower right corner of the screen. This shows SLV system communicating. If this symbol is not shown, the SLV control box may need to be replaced.

Lost Communication

1. **If communication is lost during harvesting operation:** All systems were communicating and now there is no communication from GreenStar, when looking at the SLV diagnostic screen (TONS TREATED button). Watch the MASS FLOW reading on the GS monitor while harvesting. If MASS FLOW is not showing material flow while harvesting, there may be a mass flow sensor failure on the harvester. See your John Deere Dealer.
2. **To continue applying inoculant in Standard SLV Mode:** Power down the SLV applicator. Press and hold the ON/OFF button for 5 seconds or until SL appears. Select an average tons per hour rate of which you have been harvesting. Press the “Select Rate” button until your selected harvesting rate appears. You will have to press the “Start/Stop” button to operate the applicator. This will allow you to continue applying inoculant in the event that a replacement part for the GreenStar system is not readily available.

Calibration

1. The control box must be in SL mode for calibration of the applicator.
2. When the control box is in the OFF position (screen is dark), **press and hold** the ON/Off button for 5 seconds or until “**SL**” is displayed on the screen.
3. Calibrate the applicator as directed in this manual on the next few pages.
4. When calibration is complete and control box is in the OFF position, **press and hold** the ON/OFF button for 5 seconds or until “**GS**” is displayed.

Other Function of the GreenStar C500

- **Auto stop if no signal from GreenStar.** If there is no signal from the GreenStar System or there is a break in communication between the two boxes the C500 will stop applying inoculant within ten seconds of this condition and display the word (STOP). Stop will also appear if the GreenStar monitor is turned off or the main clutch is not engaged. If you get the message of (STOP) you can go to the diagnostic screen, (tons treated button) and see where the communication is broken. Once the problem is corrected the lights will blink and or it will go back to the rate screen and show the current dosing rate.
- **Reset any of the bottle empty or near empty indicators.** Press and hold the (Tons Treated) button for more then five seconds will reset this function.

Calibration of the C500

Your C500 has been calibrated from the factory at 13.5 volts. Different tractor charging systems, alternators, voltage regulators, bad batteries, or faulty battery cables may affect the output voltage supplied to the C500, which could cause variation in initial calibration. We recommend that if any of these components are replaced during the season, you test and recalibrate your C500. Also test and recalibrate your C500 at the beginning of each season, and when you have a significant change in tonnage harvested (summer to fall crops). Below are the steps that walk you through the recalibration sequence.

Adjusting the box *(Must be in SL Mode)*

1. Power up the box by pushing the ON/OFF Button.
2. When the display shows the word (STOP), Press and hold the START/STOP button for five or more seconds. A letter (C) should appear on the left side of the screen.
3. Adjust number that is shown on the right side of same screen by pushing the SELECT RATE button. Note: Some boxes have an offset already programmed into the box from the factory. Make your offset corrections, from the number that is displayed. The numbers will scroll up only. To get to a number lower then what is originally displayed you will have to scroll up to 40 and then it will go to a negative 39 and then scroll up. Use the formula listed under (Determining your off set) to get your numbers.
 - a. Example: The box shows (C – 5) and according to the calculations, you did below, you have to adjust your box up 18. Since there is a negative number displayed (-5) you will move the number up 18 from that point. So the new displayed number will be (C 13).
4. When the new number has been achieved, press and hold the Start/Stop button until the (C) is removed.
5. Power down box by pushing the ON/OFF button. (**THIS MUST BE DONE TO SAVE THE NEW VALUE.**)

Determining your offset

1. Start with a clean and empty tank.
2. If you are running the C500 in Greenstar mode (GS), switch it to the (SL) mode.
3. Fill the tank with water to just above the 500 treatable ton mark.
4. Prime unit.
5. Set the C500 to run at the rate you are going to be chopping at.
6. Run the unit at this rate and stop when it gets to the 500 treatable ton mark.
7. Push the TONS TREATED button and release. Reset this screen by holding the same button for five seconds. This is your start point.
8. Press START and run the unit for 100 tons (This is the distance between 500 and 400 on the bottle).
9. Once complete, write down the new number from the tons treated screen and use the two simple equations below (Cross multiplication and subtraction) to determine your offset.

$$\text{First Equation: } \frac{(100)}{\text{(Tons Treated)}} = \frac{\text{(Set Rate)}}{X \text{ (New unknown rate)}}$$

$$\text{Second Equation: } (\text{New Rate}) - (\text{Set Rate}) = \text{Box Adjustment (amount to change up or down)}$$

Routing Service and Maintenance

Tools Needed

- Metric sockets
- Metric wrenches
- Philips and flat screwdriver
- 1/4 nut driver
- Hose cutter
- 5/32 & 3/16 Allen wrenches
- Pliers
- Utility knife
- Bleach or OxiClean
- Dishwasher soap

Maintenance

-Daily Maintenance

- Flush with clean water for 15 Min. daily when finished with harvester for the day.
- Filters – Clean pre-filter on top of applicator and tower filters daily with compressed air.
- Tubes – Check hose between tower and tip weekly for damage or wear.
- Screens – Clean screens daily with hot water or as necessary.

-Yearly Maintenance

- Squeeze tube – Replace squeeze tube at the beginning of each season (002-9011 → 2 feet).
 - o To replace the squeeze tube; the four front screws need to be removed from the pump. Remove the old tube and place one side of the tube through the top hole leaving an 8-inch section out of the tube. Use the supplied key to gently roll the tube into the pump and through the opposite top opening. Reinstall the four screws and install on the motor.
- Tip – Replace tip and screens at the beginning of each season.
- Check calibration.
- Remove foam filters and wash with a warm soap solution. Let filters air dry before reassembling.

-Compressor Maintenance

Check the air pressure reading on the gauge. Make sure the gauge goes back to Zero. If the pressure seems low or the compressor sounds under a load, remove the four Allen head bolts from the compressor head and remove the top section.

Be careful not to lose the washer shims under the center reed plate. Wash the two filters in warm water, dry, and replace. Re-install the top section. If filters are not cleanable or o-ring is damaged, replace those parts. **Keep in mind that the voltage on a bench test may vary from the harvester's voltage. This will affect the pressure reading. Pressure on a bench test with 12Volts should be around 25PSI.**

-Winter Storage

1. Clean C500 tubes (See CLEANING THE C500 TUBES).
2. Run Unit for 5 minutes at 400 ton/hr with the tank empty.
3. Remove back cover and look for trapped fluid in the lines. Remove and drain lines if fluid is present.
4. Apply Di-Electric grease to all plugs on the tower, cables, and control box.
5. Put control in a clean dry place.
6. Do not use automotive or RV style antifreeze for winterizing

Cleaning the C500 Tubes

Some organisms that can be found in well water will grow on the carrier used in Pioneer brand water-soluble inoculant products. The amount of growth is influenced by the amount of bugs in the water, the temperature, and the length of time the bugs are allowed to grow. A good rule of thumb to follow is that the rate of growth doubles for every 10-degree increase, so the hotter temperatures will promote faster growth. **FLUSH WITH WATER DAILY.**

1. It is very important to clean the C500 in-between cuttings and at the end of the growing season. Doing this will help keep the system free of plugged lines and clogged tips. While the cleaning process can take about one hour, when done concurrently with other equipment maintenance, the time investment is minimal, and the process can mean saving much additional time later
2. With a clean and empty tank place 2-3 tablespoons of (5% chlorine bleach) into the tank and fill with one gallon of warm water. ***OR*** you can use a product called OXICLEAN. Use the directions for soaking solution that are on the package. Remember to use very warm water when mixing. Make sure it is all dissolved before running the machine.
3. Set control box to 400 tons per hour and run unit at this speed for 25-35 minutes or until solution is gone. *You may want to remove nozzle strap assembly from the harvester and place in a five-gallon pail and cover the pail to prevent the mist from getting on the harvester.*
4. Remove the tank and rinse thoroughly. Fill the tank with one gallon of clean warm water. Attach to the C500. Run the system at 400 tons per hour for another 25-35 minutes or until water is gone.
5. Turn off system and let it run the clean out function. This will blow any remaining fluid out of the lines. Remove tank and dump any remaining fluid out. Place the tank back on the C500
6. Physically inspect the line that runs from the C500 to the nozzle strap for trapped water.

Troubleshooting

Symptom	Possible Cause	
Squeeze Pump does not start	Fault in wiring	
Squeeze Pump will not prime	Air leak in intake Faulty wiring	
Squeeze Pump runs but does not pump product	Pump hose is broke	
Gauge Pressure is ABOVE 30 psi	Plugged spray tip or filter Line restriction	Brass Pop-off valve is stuck
Gauge Pressure is BELOW 20 psi	Tip Missing Strainer bowl screen is plugged Broken hose	Fault in wiring to injector pump Plugged intake filters Worn compressor Compressor head need rebuild kit
Control displays MORE tons treated than product used	Clog in injection line Fault in wiring to injection pump Bad injection pump Faulty injection pump motor Clog in breather tube Build up in output line	Partially plugged spray tip Leaking bottle acceptor assembly Faulty injector pump motor Partially clogged spray tip Calibration off
Control displays LESS tons treated than product used	Bad injection pump tubing Bad 1/4" tubing Fault in wiring	Leak in breather tube or bottle Faulty injection pump motor Calibration off
Control Display shows only "■" or "■"	Hold "Ton Treated" button for 3 seconds to reset.	If problem is not corrected, send control box in for repair.
C500 does not spray out the tip during cleanout cycle	Plugged tip Plugged inline filter	Buildup in 1/4" hose
Control shuts off without going through cleanout cycle	Power connected to keyed source Faulty wiring harness	Faulty control
C500 will not apply when control is in normal operating mode	Faulty wiring harness Faulty compressor or injector pump wiring	
Applicator does not apply when using the end or row option	Wiring harness connection is reversed Faulty wiring harness Faulty injector pump wiring Faulty control box Blown fuse on harvester	No signal from machine Machine's head is not in the lowered position Machine is not moving forward Check for voltage at green wire while harvester is operating.
Bubbles in tank during prime cycle.	Squeeze pump wiring is reversed. Blue wire must be connected to bottom lug.	Squeeze pump tubing is reversed.
Compressor will not build pressure	Plugged intake filters Plugged pre-filter Air leak in hose connections Broken hose	Dirt in compressor Faulty check valves
Blowing 15 amp in-line fuse	Faulty wiring, Faulty control box Bad connection to battery Air compressor filters plugged Faulty air compressor	
Call for Further Assistance	During Normal Business Hours 1-877-Pioneer (746-6337), ext. 82526 or 82280	After Hours or Weekends 1-765-437-7211

Plug Diagrams

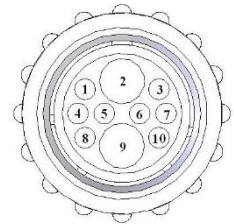
Control Box (Tower / Control Plug)

Pin 1	Blue	Communication to GreenStar (Control Box End Only)
Pin 2	Red	Compressor/Relay Power
Pin 3	Blue	Pump Positive
Pin 4	Yellow	Reversing Relay
Pin 5		Not Used
Pin 6	Brown	Pump Ground
Pin 7	Green	End of Row (Control Box End Only)
Pin 8	Red	Communication from GreenStar (Control Box End Only)
Pin 9	Black	Compressor Ground
Pin 10	Black	GreenStar Ground (Control Box End Only)



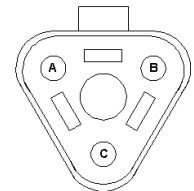
Control Box (Tower Harness)

Pin 1	Blue	Communication to GreenStar (Control Box End Only)
Pin 2	Red	Compressor/Relay Power
Pin 3	Blue	Pump Positive
Pin 4	Yellow	Reversing Relay
Pin 5		Not Used
Pin 6	Brown	Pump Ground
Pin 7	Green	End of Row (Control Box End Only)
Pin 8	Red	Communication from GreenStar (Control Box End Only)
Pin 9	Black	Compressor Ground
Pin 10	Black	GreenStar Ground (Control Box End Only)

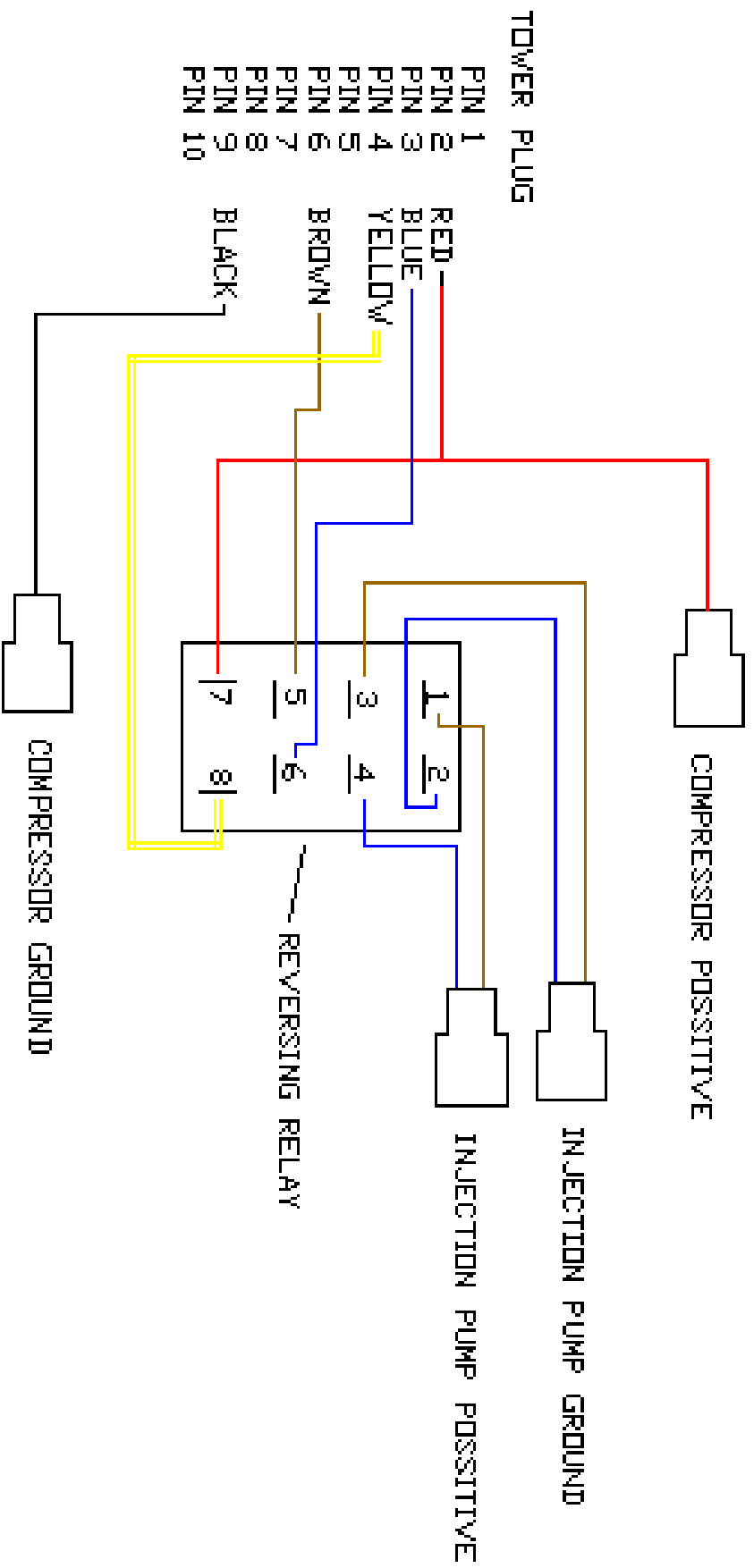


GreenStar Harness & Plug

Pin A	Red	Communication from GreenStar
Pin B	Black	GreenStar Ground
Pin C	Blue	Communication to GreenStar

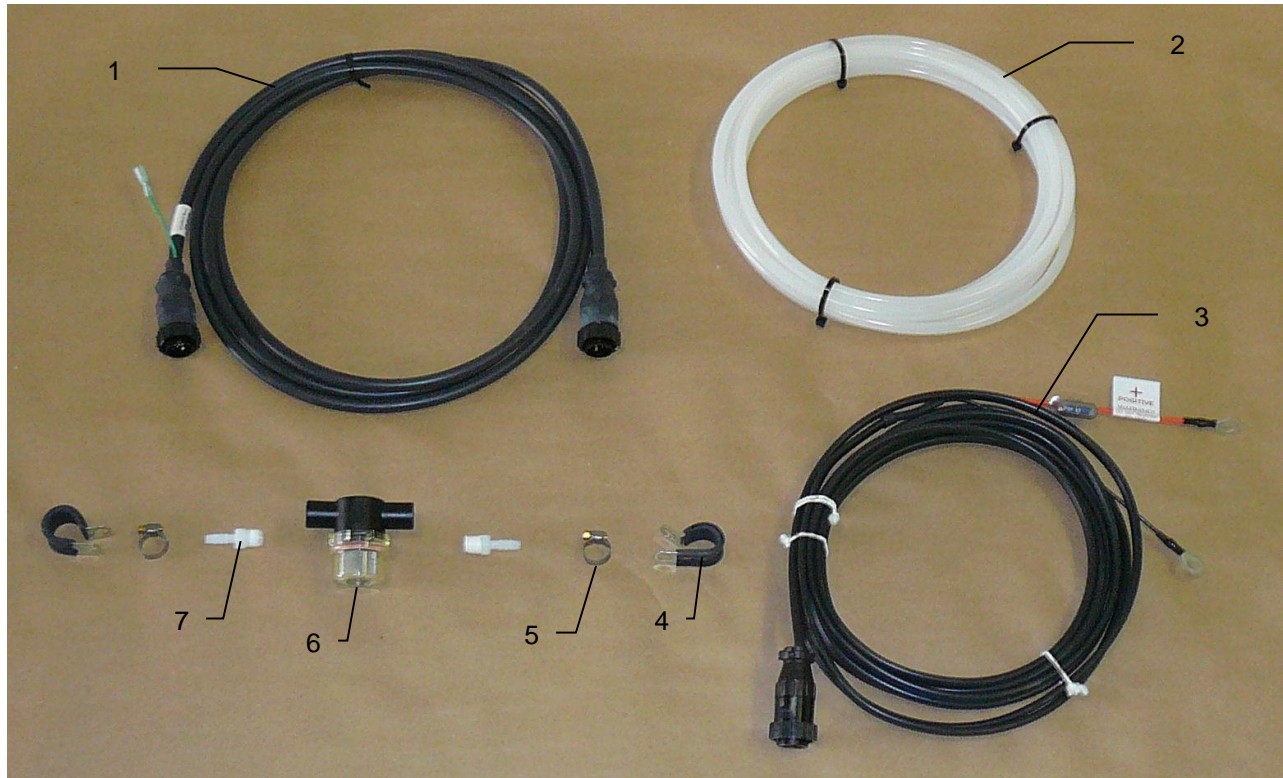


TOWER WIRING DIAGRAM



C500 Parts Breakdown

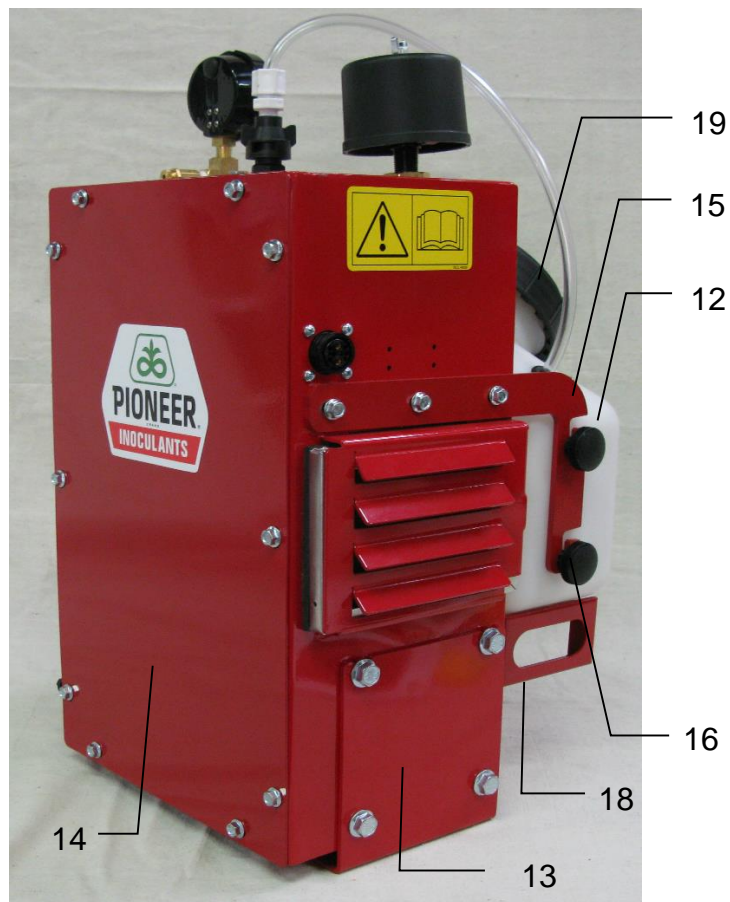
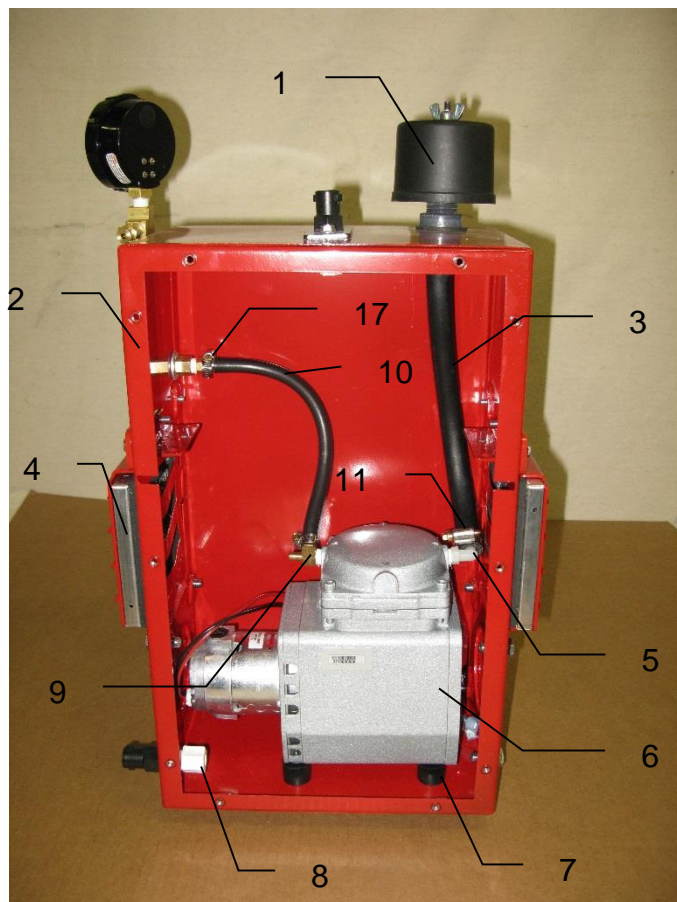
Wiring and Plumbing



<u>Ref #</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Wire Harness	006-4524HG	1
2	1/4" EVA Tubing	002-9006	20ft
3	Power Harness	006-4640P	1
4	Jiffy Clip	008-9010	2
5	Hose Clamp	003-9002	2
6	Filter Bowl	002-4314	1
7	Adapter 1/4" MPT x 1/4" HB	003-A1414	2

C500 Parts Breakdown

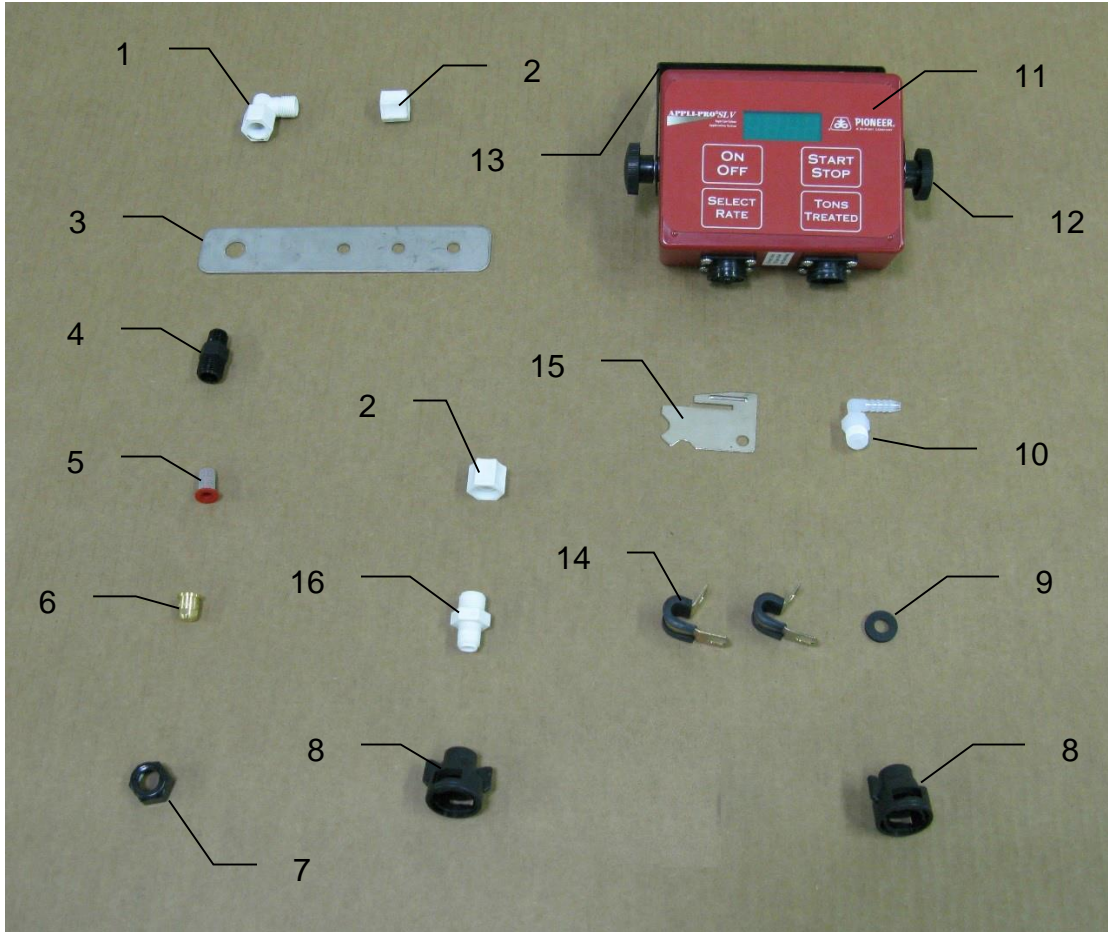
Main Unit



<u>Ref #</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Filter	002-4522	1
2	C500 Enclosure	001-4590	1
3	Air Hose 1/2"	002-9000	1ft
4	Box Air Filter	002-4521	2
5	Elbow 1/4" MPT x 1/2" HB Brass	003-EL1412B	1
6	Compressor	007-4530	1
7	Compressor Mounts	007-4530M	4
8	Jaco Fitting	003-JA1414	2
9	Tee 1/4" HB x 1/4" HB x 1/4" MPT	003-T1414TB	1
10	Air Hose 1/4"	002-9012	4ft
11	Hose Clamp	003-9004	2
12	Tank	005-9216	1
13	Mounting Bracket	001-4582	1
14	Back Cover	001-4592	1
15	Bottle Straps	001-4593	2
16	Knobs	008-0923	4
17	1/4" Hose Clamp	003-9001	4
18	Tank Legs	001-4595	2
19	Tank Cap	005-9022CP	1

C500 Parts Breakdown

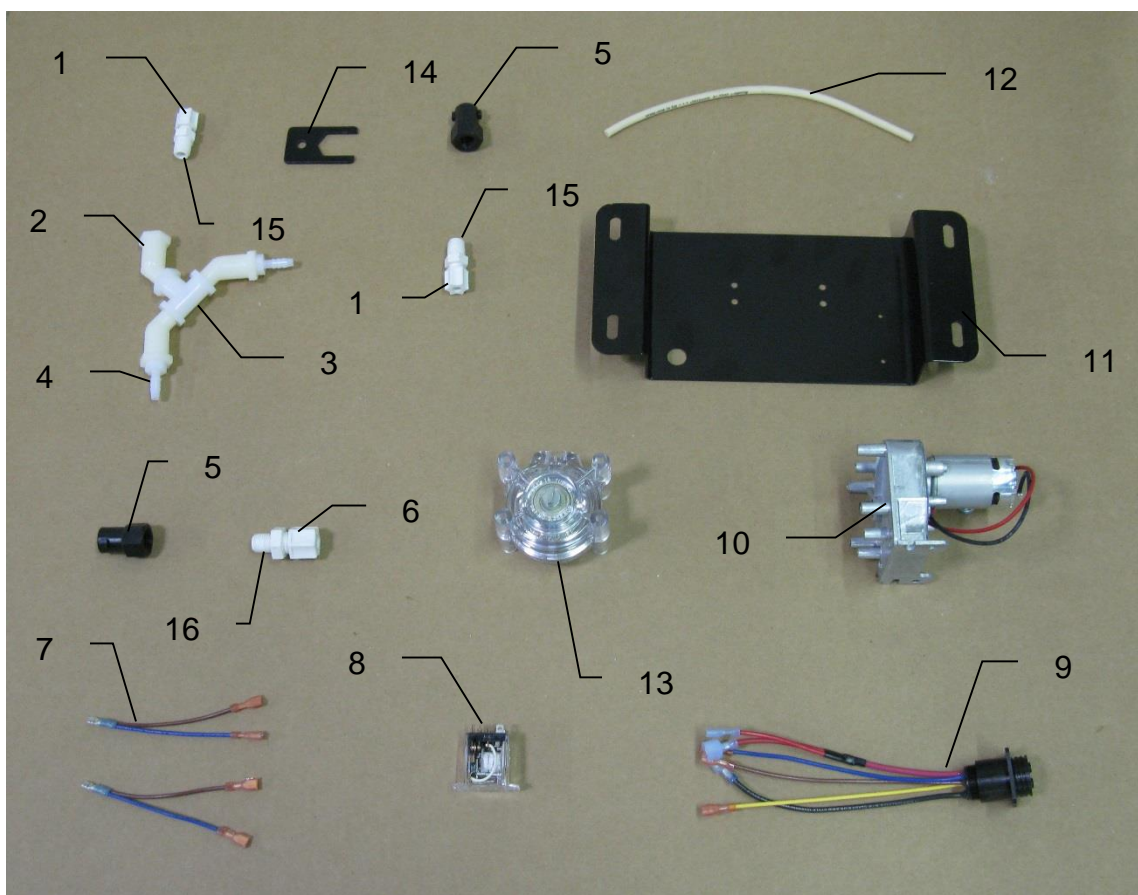
Control Box and Spray Parts



<u>Ref #</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Jaco Elbow	003-JEL1414F	1
2	Jaco Nut	003-JN14	3
3	Strap	001-4216	1
4	Nozzle Body	004-4722	1
5	Strainer	004-1203-50	1
6	Tip	004-TX-10	1
7	Nozzle Cap	004-4723	1
8	Female Coupler	004-1207H	2
9	Washer	004-1207W	3
10	Elbow 1/4" MPT x 1/4" HB	003-EL1414	1
11	Control Box	006-4525G	1
12	Control Box Knob	008-0923	6
13	Control Box Bracket	001-2012E	1
14	Jiffy Clip	008-9012	2
15	Tubing Key	007-4523	1
16	Jaco Fitting	003-JA1414	2
NP	Suction Cup Mount	001-2012SCM	1

C500 Parts Breakdown

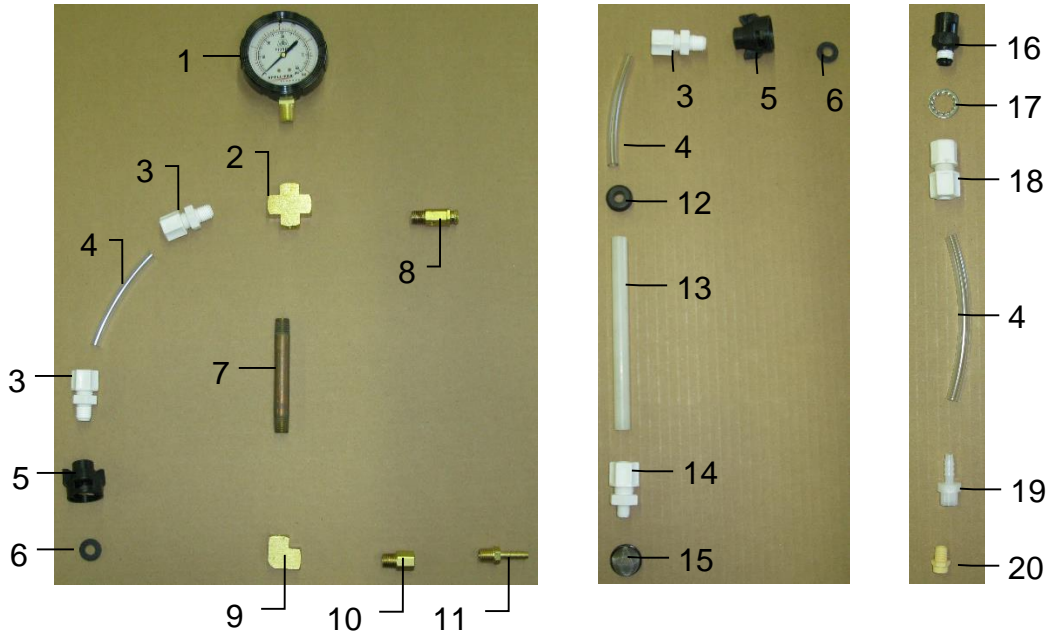
Pump and Wiring



<u>Ref #</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Jaco Nut 1/8"	003-JN18	2
2	Street Elbow	003-SE4514	3
3	Tee 1/4" FPT	003-TT14	1
4	Adapter 1/4" MPT x 1/4" HB	003-A1414	4
5	Female Coupler	004-1207G	2
6	Jaco Nut 1/4"	003-JN14	3
7	Relay to Pump Wire	006-4524Q	2
8	Reversing Relay	006-2187	1
9	Wiring Harness Connector	006-4524P3	1
10	Injection Motor	007-4533A	1
11	C500 Pump Plate	001-4591	1
12	Squeeze Tube	002-9011	2ft
13	Injection Pump	007-4533B	1
14	Fitting Stops	001-4594	2
15	Jaco Fitting	003-JA1814	2
16	Jaco Fitting	003-JA1414	2

C500 Parts Breakdown

Intake and Gauge



<u>Ref #</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Gauge	002-2207P	1
2	1/4" Brass Cross	003-C14B	1
3	Jaco Straight 1/4" HB x 1/4" NPT	003-JA1414	3
4	1/4" PVC Tubing	002-9014	4
5	Female Quick Connect	004-1207H	2
6	Washer	004-1207W	2
7	1/4" Brass Pipe 4" Long	003-M14BP	1
8	Pop Off Valve	002-4520	1
9	1/4" FPT Elbow	003-SE14FB	1
10	Adapter 1/4" FPT x 1/4" MPT	003-M1414FB	1
11	Adapter 1/4" MPT x 1/4" HB	003-A1414B	1
12	Tank Grommet	Hardware	1
13	Intake Tube	001-4542	1
14	Jaco Straight 1/4" HB x 1/8" NPT	003-A1814	1
15	Screen	002-4565	1
16	Nozzle Body	004-4710	1
17	9/16" Interlocking Nut Washer	Hardware	1
18	Straight Jaco Fitting Female	003-A1414F	1
19	Adapter 1/8" FPT x 1/4" HB	003-A1814F	1
20	Air Agitation Tip	004-TXP2	1

C500 Parts Breakdown

Hardware

<u>Quantity</u>	<u>Item</u>	<u>Where used</u>
4	3/16" Fender Washer	Compressor Mount
2	6/32" x 1/2" Philips Machine Screw	Relay
2	6/32" Nylon Lock Nut	Relay
4	10/32" x 1/2" Philips Machine Screw	Injection Pump Mount
8	10/32 Nylon Lock Nut	Injection Pump Mount, Compressor
22	M6 x 16 Flange Bolt	Cover, Injection Pump Plate, Bottlehanger
6	M6 Flange Nut	"Y" block Holder, Injection Pump Plate
8	M10 x 20 Flange Bolt	C500 Mounting Bracket
2	1/4" x 1 1/4" Self Tapping Bolts	Nozzle Strap
4	#8 x 3/8" Plastite Screw	Wire Harness Plug
2	1/2" SAE Washer	Pump Plate, Airline
6	5/16" Internal Tooth Washer	Control, Bottle
4	5/16" x 5/8" Button Head Socket Bolt	Bottle
4	5/16" Lock Washers	Bottle

Notes:



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