

MOZZIE FOG



ARRO-GUN SPRAY SYSTEMS

7575 Tamra Drive

Reno, Nevada

1-888 ARRO-GUN

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TECHNICAL SPECIFICATIONS

| | US | Metric |
|---------------------------------------|--|----------------------------|
| Dimensions | 26" W x 28" L x 22.5" H | 66cm W x 71cm L x 57 cm H |
| Weight | Net: 115 Gross: 175 | Net: 52 Kg Gross: 79 Kg |
| Engine | 5.5 HP Honda OHV, Electric Start | |
| Blower | Regenerative Centrifugal, Rated 150 CFM | |
| Chemical Pump | 12 VDC FMI Type RHB | |
| Pump Flow Rate | 1 - 9 OPM, 1 - 6 OPM Recommended | |
| Unit Controls | On Engine Key Starter Switch, Manual Choke and Throttle Remote Engine Ignition, Pump On-Off | |
| 12 Volt Battery (Optional) | Optima Red Top | |
| Safety Controls | NA | |
| Chemical Tank | 3 Gallon Max Capacity HDPE | |
| Solvent Tank | NA | |
| Nozzle | Single Independent 360° Adjustable, Quick Disconnect | |
| Sound Levels | 84 Db @ 10 Ft. Max, < 80 Db @ 20 Ft. | |

SETUP

The Mozzie Fog is shipped with the nozzle assembly, control box, hardware and miscellaneous literature packed separately. Unpack contents from carton. Remove the pins from the quick release camlock and pull up on levers to remove the plug. Keep the plug in a safe place for use during off-season storage. Insert the complete nozzle manifold into the camlock and push the levers down until fully seated. Reinsert the pins to keep the levers locked.

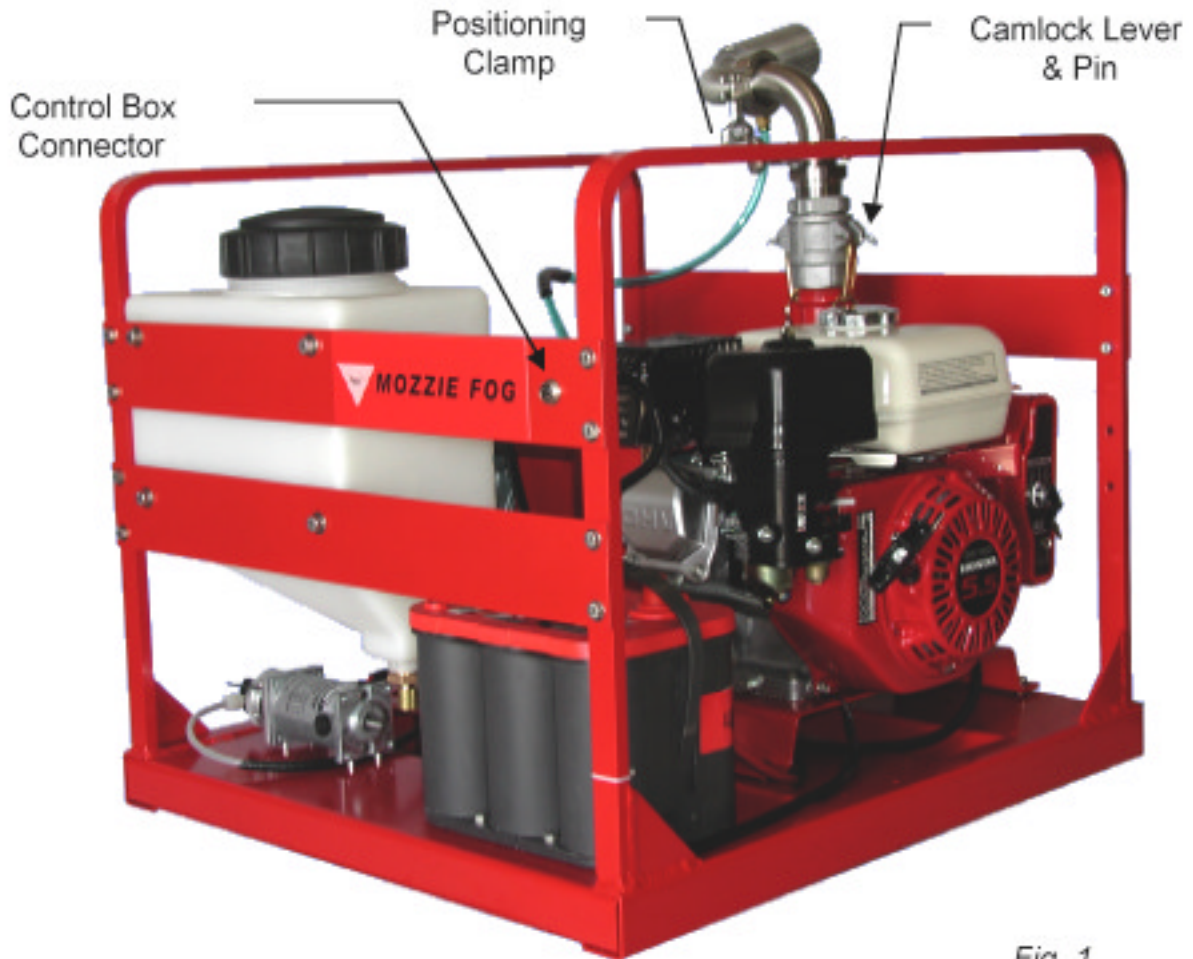


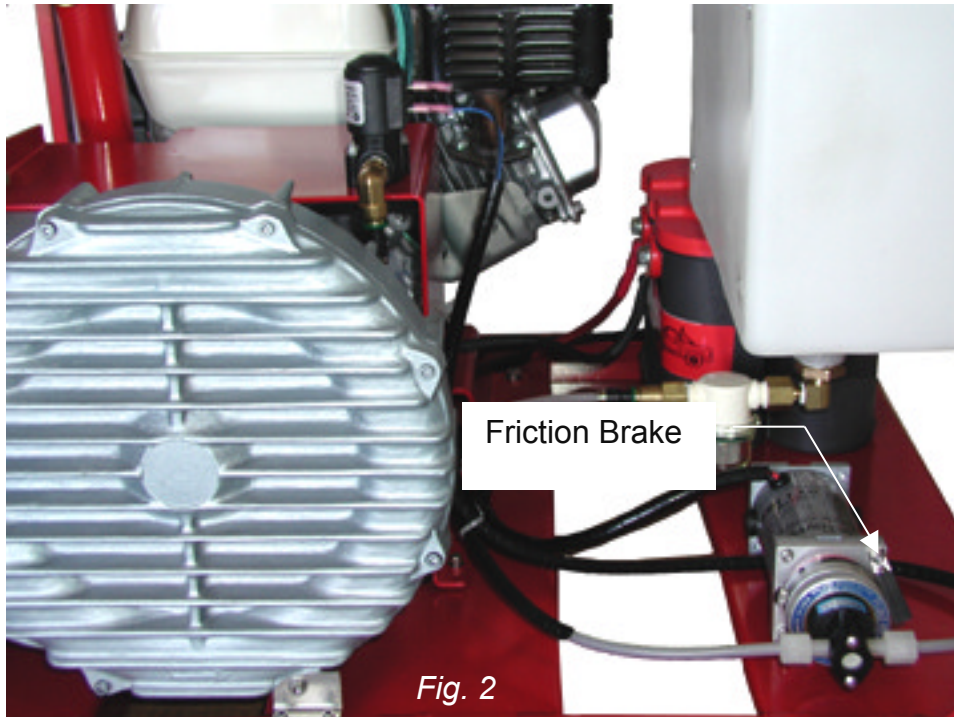
Fig. 1

Mount the unit to the vehicle. Position the nozzle to any desired position by loosening the manifold clamps and rotating the manifold horizontally or vertically. Retighten clamps. If the unit has a battery installed, locate the short bolts included in the unit package and install the red cable to the positive (+) terminal located on the side of the battery. Install the black cable to the negative (-) terminal at the side of the battery. On units shipped without a battery, connect the red and black cables to the vehicle battery. Now connect the control box cable to the plug located at the rear of the unit.

CALIBRATION

The pump was calibrated at the factory to dispense 4.5 oz/minute of mineral oil. Due to voltage variations from vehicle to vehicle, a slight adjustment at the pump control may be needed to fine-tune the chemical system for proper flow rate. To adjust the flow rate, fill the chemical tank about half full of the chemical to be used. Disconnect the chemical line at the nozzle and place in a suitable container or route back to the tank. Turn the pump switch ON and allow the system to fill with fluid. Run the pump until all air is purged from the pump and tubing. When all air has been removed, transfer the fluid line into a graduated cylinder and measure the fluid flow for two minutes. See *Fig 2*. Set the approximate desired flow rate of the pump by referring to the table:

| Pump Setting | Rate OPM |
|--------------|----------|
| 1.25 | 2 |
| 2.2 | 4 |
| 3.15 | 6 |
| 4 | 8.45 |



Loosen the friction brake with the 9/64" Allen wrench included with the unit. Turn the dial counter-clockwise to increase or clockwise to decrease the flow rate. With the pump set, tighten the brake. Reconnect the insecticide line to the nozzle.

DROPLET MEASUREMENT

Determination of median droplet size on the Mozzie Fog can be affected by both the methods of collection and the conditions under which the test is performed. These instructions are provided as a general guide to aid the user in obtaining the most accurate results. As a rule this test recommendation is applicable to both the Mozzie Electric and the Mozzie Gas Fogger and, in addition, is based upon familiarity with the KLD Labs DC-III™ and the label instructions of Aqua-Reslin®.

Begin by positioning the equipment where any existing wind is downstream from the nozzle. If at all possible, locate the unit in a closed structure with one side open where the insecticide cloud will exhaust outdoors. Mix the Aqua-Reslin in the ratio planned for treatment, and place in insecticide tank.

Operate the unit, and, with an anemometer, find the point at which the nozzle velocity reads 3-3.5 meters/second (on the Mozzie Electric this is approximately 36"-42" from the nozzle). The Mozzie 100 will measure 3.5 at 45 - 50" from the nozzle. Although KLD Labs instructions state that velocity should be read at 5-7 meters/second for most testing, the point at which that reading occurs is within an area where the particles are still being sheared by the Mozzie nozzle due to the characteristics of the nozzle design. In consultation with KLD Labs it was recommended not to test lower than 3 meters/second. We have determined that the 3-3.5 range would satisfy the limits of the analyzer and return an accurate representation of the particle size spectrum.

Once all preparation has been made, run a 30-second or 60 second test with the DCIII set to analyze oil. Results obtained with Aqua-Reslin on the Model 100 should compare to the following table:

| Aqua-Reslin Mix | Flow Rate oz/min | Pump Setting | MMD |
|-----------------|---------------------|--------------|--------------|
| Neat | 1.68 | 1.10 | 22-23 |
| 1+1 | 2.10 | 1.25 | 24-25 |
| 1+2 | 3.10 | 1.60 | 26-27 |

As a basis for comparison, plain water run at 3.1 opm and a velocity of 3.5 meters/sec yields a 42-44 mmd spectrum. It follows that the more dilute the mixture is, the higher the shift in droplet median diameter, therefore, we do not recommend dilutions higher than 2+1 of water to Aqua-Reslin.

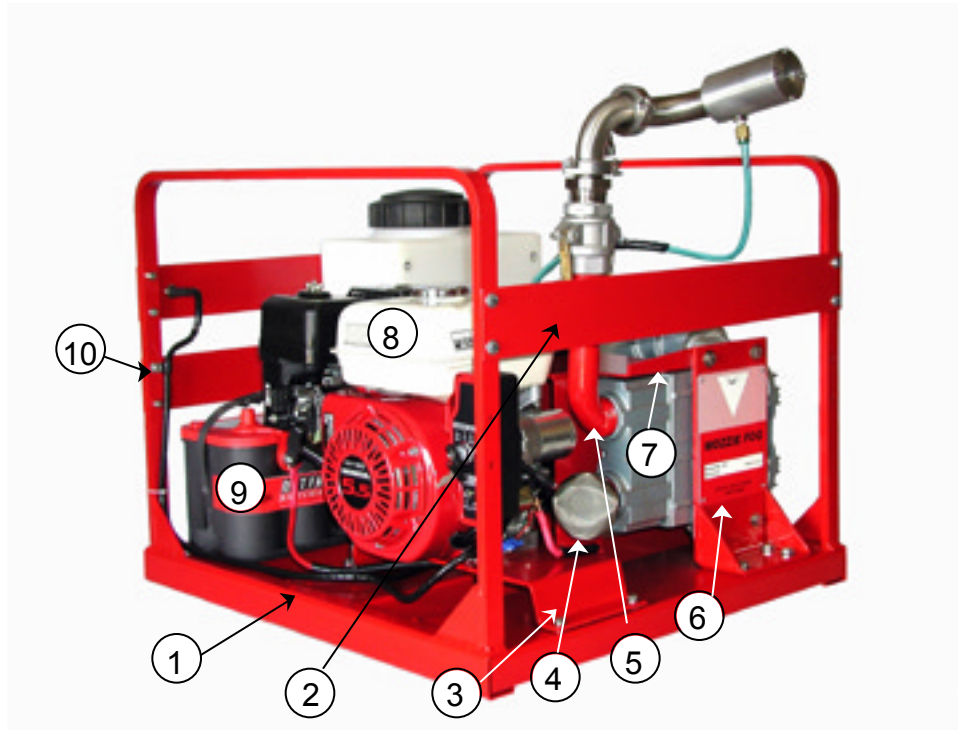
Another important aspect of the results returned by the DC-III is the total droplet count. In our experience, a probe in good condition should indicate total droplet counts of 2500-3500 in a one-minute run and roughly 1/2 of those totals in a 30 second run. Significantly lower counts than these might indicate a probe in poor condition or not in the correct position. In this instance, re-verify the velocity at the point where the probe is placed within the fog. In addition, when taking readings move the probe slowly across the fog pattern, being careful to keep the probe perpendicular to the cloud.

MAINTENANCE

Maintenance on the Mozzie is routinely simple. Once a month check the cable terminations at the battery and clean if needed. Check all chemical tubing for wear and tear and replace if needed. Periodically flush and wipe the interior of the tank clean. Inspect and clean the fluid filter screen. Also check the screen on the blower intake and clean in warm soapy water if necessary. Rinse with clear water and blow dry. If the unit is to be stored for long periods, remove the battery and charge every thirty days or maintain battery level with a trickle charger. Remove the nozzle and install the outlet plug. Clean the nozzle at this time by disassembling the components beginning where the nozzle attaches to the manifold. Remove the interior chemical tube from the push lock connector. Now remove the faceplate assembly. Remove the 1/4 tube fitting and set aside. It is not necessary to remove the tubing from the fitting unless it needs replacement. Use a good quality carburetor cleaning fluid to flush the metal components of the nozzle until the fluid runs clear. Blow and dry the nozzle assembly with compressed air. Reassemble the nozzle and reattach to the manifold.

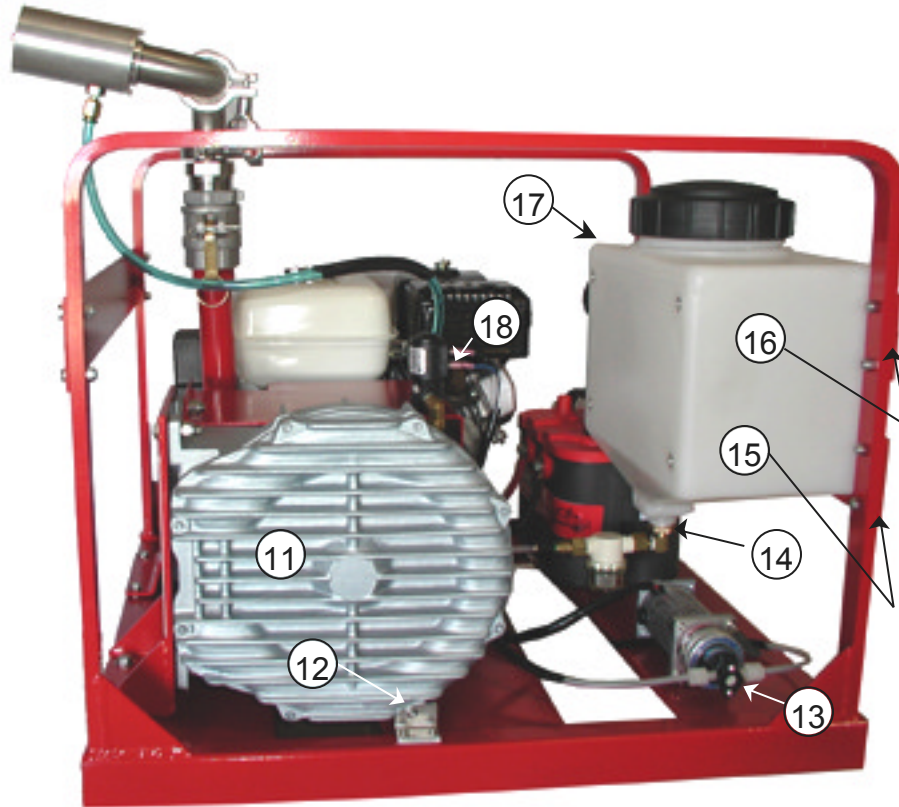
Service the engine following guidelines set forth in the Engine Manual provided with the unit.

PARTS



| Key | Part No. | Description | Qty |
|-----|------------|-------------------------------|-----|
| 1 | 55-70-0100 | Base Plate Assembly | 1 |
| 2 | 55-70-0101 | Cross Brace | 1 |
| | 1/4-20 X 1 | Stainless Steel Bolt | 4 |
| | 1/4-20 | Stainless Steel Fiber Locknut | 4 |
| | 1/4 | Stainless Steel Washer | 4 |
| 3 | 55-70-0102 | Engine Mount Bracket | 1 |
| | 1/4-20 X 1 | Stainless Steel Bolt | 4 |
| | 1/4 | Stainless Steel Lockwasher | 4 |
| | 1/4 | Stainless Steel Washer | 4 |
| 4 | 55-70-0127 | Intake Manifold | 1 |
| | 55-70-0129 | Compressor Intake Filter | 1 |
| 5 | 55-70-0121 | Manifold-Blower to Coupler | 1 |

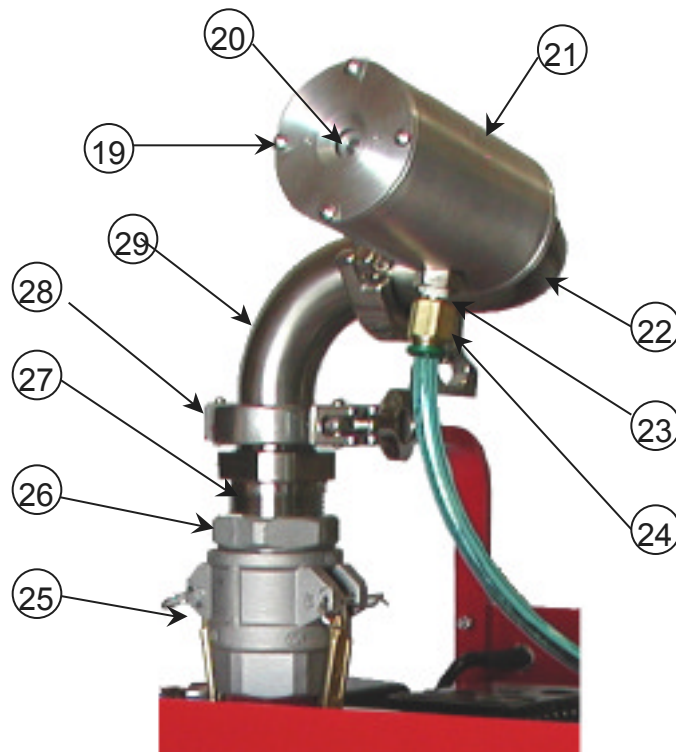
| Key | Part No. | Description | Qty |
|-----|------------------------|---|-----|
| 6 | 55-70-0103 | Blower Mount Bracket | 1 |
| | 3/8-16 X 1 | Stainless Steel Bolt | 4 |
| | 3/8-16 | Stainless Steel Fiber Locknut | 4 |
| | 3/8 | Stainless Steel Washer | 8 |
| | 55-70-0167 | Serial No. Plate | 1 |
| 7 | 55-70-0104 | Coupling Guard Assembly | 1 |
| | 10-32X1 | Stainless Steel Socket Head Machine Screw | 4 |
| | #10 | Stainless Steel Lockwasher | 4 |
| | #10 | Stainless Steel Washer | 8 |
| 8 | 55-70-0105 | Engine, Honda 5.5 HP | 1 |
| | 5/16-18 X 1-1/2 | Stainless Steel Bolt | 4 |
| | 5/16-18 | Stainless Steel Fiber Locknut | 4 |
| | 5/16 | Stainless Steel Washer | 8 |
| | 55-70-0108 | Engine Coupler Body | 1 |
| | 55-70-0109 | Coupler Insert | 1 |
| 9 | 55-70-0634 | Battery (Optional) | 1 |
| | 1/4-20 X 1 | Stainless Steel Bolt | 2 |
| | 1/4-20 | Hexnut | 2 |
| | 1/4-20 | Stainless Steel Fiber Locknut | 2 |
| | 1/4 | Stainless Steel Lockwasher | 2 |
| | 1/4 | Stainless Steel Washer | 4 |
| | 55-70-0133 | Battery Terminal | 4 |
| | 55-70-0134 | Red Battery Cable | |
| | 55-70-0135 | Black Battery Cable | |
| | 3/8-16X 5/8 | Stainless Battery Bolt | 2 |
| | 3/8 | Stainless Steel Lockwasher | 2 |
| 3/8 | Stainless Steel Washer | 2 | |
| 10 | 55-70-0154 | Electrical Retainer | 1 |



| Key | Part No. | Description | Qty |
|---------------|-----------------|---|----------------------|
| 11 | 55-70-0106 | Blower | 1 |
| | 3/8-16 X 1 | Stainless Steel Bolt | 3 |
| | 3/8-16 X 1 -1/2 | Stainless Steel Bolt | 1 |
| | 3/8-16 | Stainless Steel Fiber Locknut | 4 |
| | 3/8 | Stainless Steel Washer | 8 |
| | 55-70-0107 | Blower Coupler Body | 1 |
| | 12 | 55-70-0119 | Blower Support Angle |
| 10-32 X 1-1/4 | | Stainless Steel Socket Head Machine Screw | 1 |
| #10 | | Stainless Steel Lockwasher | 1 |
| #10 | | Stainless Steel Washer | 1 |
| 8-32 X 3/4 | | Stainless Steel Socket Head Machine Screw | 2 |
| 8-32 | | Stainless Steel Fiber Locknut | 2 |
| #8 | | Stainless Steel Washer | 4 |

| Key | Part No. | Description | Qty |
|--|---------------|---|-----|
| 13 | 55-70-0113 | Pump | 1 |
| | 55-70-0166 | Pump Standoff | 4 |
| | * | Friction Brake | 1 |
| | 55-70-0165 | 9/64" Allen wrench | 1 |
| | 8-32 X 5/8 | Stainless Steel Socket Head Machine Screw | 4 |
| | #8 | Stainless Steel Washer | 4 |
| | #8 | Stainless Steel Lockwasher | 4 |
| 14 (Model 100 Previous Designs) | 55-70-0163 | Reducer Bushing | 1 |
| | (55-70-0132) | 1/4 NPT 90° Swivel (Not Shown) | 1 |
| | (55-70-0139) | Chemical Filter (Not Shown) | 1 |
| | 55-70-0240 | Filter Elbow | 1 |
| | 55-70-0239 | Filter Adapter | 1 |
| | 55-70-0217 | Chemical Filter, 80 Mesh | 1 |
| | 55-70-0238 | Filter Connector | 1 |
| | 55-70-0242 | Tube End Reducer | 1 |
| 15 | 55-70-0118 | Lower Crossmember | 1 |
| | 1/4-20 X 1 | Stainless Steel Bolt | 4 |
| | 1/4-20 | Stainless Steel Fiber Locknut | 4 |
| | 1/4 | Stainless Steel Washer | 8 |
| 16 | 55-70-0117 | Upper Crossmember | 1 |
| | 55-70-0145 | Connector, 6-Pin Male | 1 |
| | 1/4-20 X 1 | Stainless Steel Bolt | 4 |
| | 1/4-20 | Stainless Steel Fiber Locknut | 4 |
| | 1/4 | Stainless Steel Washer | 8 |
| 17 | 55-70-0111 | Chemical Tank, 3 Gal (Includes Cap) | 1 |
| | 55-70-0111-1 | Tank Gasket | 1 |
| | 5/16-18 X 5/8 | Stainless Steel Bolt | 4 |
| | 5/16 | Stainless Steel Washer | 4 |
| | 5/16 | Stainless Steel Lockwasher | 4 |

| Key | Part No. | Description | Qty |
|-----|----------|-------------------|-----|
| 18 | | Discontinued Item | |



| Key | Part No. | Description | Qty |
|-----|------------|---|-----|
| 19 | 55-70-0170 | Vortex Plate | 1 |
| | 6-32 X 1/2 | Stainless Steel Socket Head Machine Screw | 4 |
| | #6 | Stainless Steel Lockwasher | 4 |
| 20 | 55-70-0171 | Ejector Body | 1 |
| | 55-70-0172 | Ejector Insert (Included w/above) | 1 |
| | 4-40 X 3/4 | Stainless Steel Socket Head Machine Screw | 2 |
| | #4 | Stainless Steel Lockwasher | 2 |
| | | | |

| Key | Part No. | Description | Qty |
|---------------|------------|---|-----|
| 20 (cont.) | 55-70-0176 | 1/8 Barb X 10-32 Fitting (Not Shown) | 1 |
| 21 | 55-70-0174 | Housing | 1 |
| 22 | 55-70-0177 | 90° El Clamp X Weld | 1 |
| | 55-70-0175 | Manifold Adapter (Included w/above) | 1 |
| | 6-32 X 1/2 | Stainless Steel Socket Head Machine Screw | 4 |
| | #6 | Stainless Steel Lockwasher | 4 |
| 23 | 55-70-0173 | Liquid Port | 1 |
| 24 | 55-70-0281 | 1/8 NPT X 1/4 Tube Prestolok | 1 |
| 25 | 55-70-0126 | PT 150 Aluminum Coupler | 1 |
| | 55-70-0253 | Blower Seal (Not Shown) | 1 |
| 26 | 55-70-0125 | PT 150A Adapter | 1 |
| 27 | 55-70-0178 | Adapter, 1.5 MPT | 1 |
| 28 | 55-70-0180 | Clamp, Single Pin | 2 |
| 29 | 55-70-0179 | 90° El Clamp X Clamp | 1 |
| | 55-70-0181 | Viton Gasket (Not Shown) | 2 |



| Key | Part No. | Description | Qty |
|------|------------|-------------------------------|-----|
| 30** | 55-70-0140 | Control Chassis | 1 |
| 31 | 55-70-0150 | Control Overlay | 1 |
| | 6-32 X 1/2 | Stainless Steel Machine Screw | 4 |
| | #6 | Stainless Steel Lockwasher | 4 |
| 32 | 55-70-0143 | Engine/Pump Switch | 2 |
| 33 | 55-70-0142 | Red Indicator Lamp, Pump | 1 |
| 34 | 55-70-0153 | Strain Relief | 1 |
| 35 | 55-70-0146 | Connector, Female | 1 |
| | 55-70-0144 | Cable, 18 Ga, 7-Wire | 18' |

** For complete assembly, order 55-74-0100 (Includes all components)

How to Order Parts

Parts are available from Arro-Gun Spray Systems by contacting the toll free factory number:

Arro-Gun Spray Systems, LLC
7575 Tamra Drive
Reno, Nevada 89506
Phone: 775-972-4782 (Cell 775-843-2647)
(Factory Toll Free) 1-888-277-6486

Please have available the serial number of the unit requiring replacement parts.

