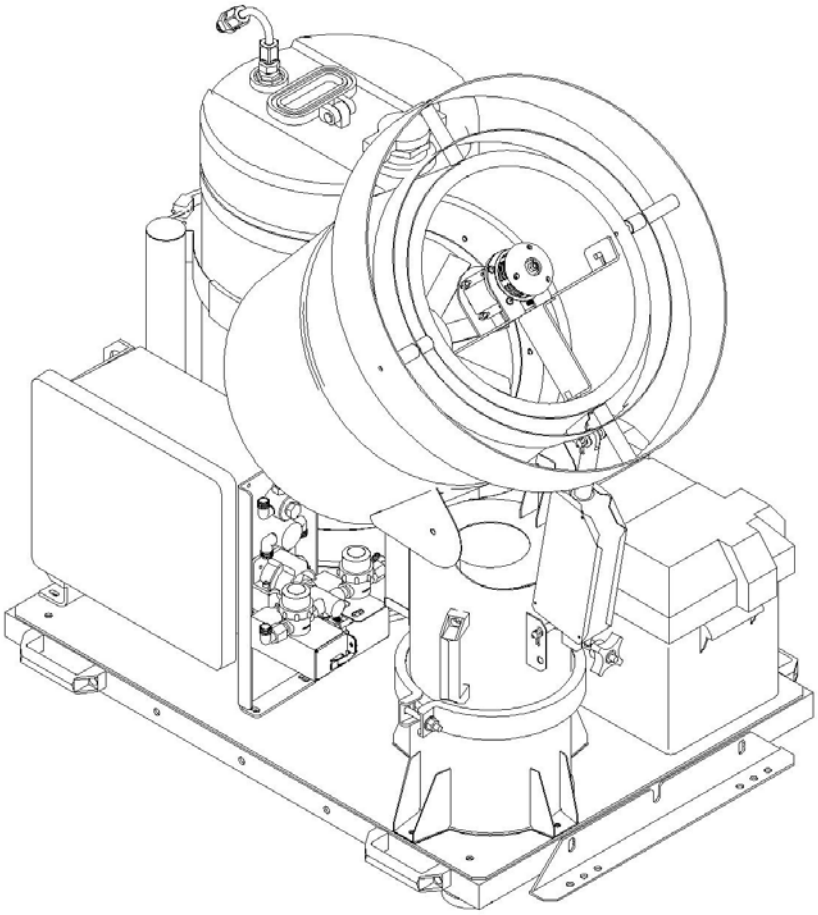
DYNA-JET® L30
DC Rotary Atomizer

Model L30, Series 2 Electric ULV Sprayer



CURTIS DYNA-FOG® Ltd.

(Click to access www.dynafog.com)

Installation, Operation and Maintenance Manual

17335 US 31 North PO Box 297 Westfield, In 46074 USA
Ph: 317.896.2561 Fax: 317.896.3788

Rev. 03-2007

Dear Valued Customer:

Congratulations on purchasing one of the most advanced Sprayers in the world.
This product originated from years of experience in ground and aerial spraying combined with ideas and suggestions provided by people like you. The technology utilized by the Dyna-Jet L30 has long been the standard method for producing spray droplets in the aircraft spraying industry and has proven to be very efficient and reliable. To ensure that you get the maximum performance and safest operation from the machine, we recommend that you first read and understand the contents of the Installation, Operation and Maintenance Manual and all of the Cautions and Warnings contained in the manual and on the machine itself. Properly maintained, the Dyna-Jet L30 will provide you with years of reliable service.

If for any reason you have questions or comments concerning the Dyna-Fog product you can contact us in any of the following methods:

Internet:	www.dynafog.com (click to access our web site now)
Telephone Support:	317.896.2561
Fax:	317.896.3788
Mailing Address:	Curtis Dyna-Fog, Ltd. 17335 US 31 North P.O. Box 297 Westfield, Indiana 46074 USA

Thank you for choosing Dyna-Fog®.

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Warranty Information

To assure prompt service and receive future Service Bulletins, complete the Warranty Registration Form that is contained on the diskette received with your machine. Once complete, the form can either be printed and then Faxed to: 317.896.3788 or E-mailed as an attachment to: dynafog@iquest.net

LIMITED WARRANTY

Curtis Dyna-Fog, Ltd. ("Seller") warrants that the machines it sells will be free of defects in workmanship and material under normal use and service (as described in the operating manual) for a period of **(1) one year** from the date of purchase from Seller or its authorized distributor. Seller's obligation under this Warranty is limited to replacing or repairing, free of charge (other than transportation charges or duties which shall be borne by Purchaser) any defective part or parts of the machine that were manufactured by Seller which are returned to Seller at Westfield, Indiana or are returned to the distributor from whom Purchaser purchased the machine if such distributor is an authorized repairing distributor. Components, such as blowers, not manufactured by Seller will carry only the warranty of the manufacturer of such component and Seller shall have no liability whatsoever for any defect in any component not manufactured by Seller. Correction in the manner provided above shall constitute a fulfillment of all liabilities of Seller in any respect to the machines. **THE FOREGOING WARRANTY AND THE OBLIGATIONS AND LIABILITIES OF SELLER THEREUNDER ARE EXCLUSVIE AND IN LIEU OF AND PURCHASER HEREBY WAIVES ALL OTHER REMEDIES, WARRANTIES, GUARANTEES OR LIABILITIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE (INCLUDING WITHOUT LIMITATION ANY OBLIGATIONS OF THE SELLER WITH RESPECT TO FITNESS, MERCHANTABILITY AND CONSEQUENTIAL DAMAGES) OR WHETHER OR NOT OCCASIONED BY SELLER'S NEGLIGENCE. THIS WARRANTY SHALL NOT BE EXTENDED, ALTERED OR VARIED EXCEPT BY A WRITTEN INSTRUMENT SIGNED BY SELLER AND PURCHASER.** If a **Warranty Registration Form** is not returned to Seller (or, in the case of purchases outside of the United States and Canada, to the importing distributor) within thirty (30) days of purchase, proof of purchase must be provided to Seller (or, in the case of purchases outside of the United States and Canada, to the importing distributor) when submitting the machine for repair. If the date of purchase is not so established, Seller will return to Purchaser, at Purchaser's expense, the machine unless payment arrangements are made for the repair of the machine at the Seller's then-current prices.

Cleaning the Atomizer Assembly and electrically powered components in a manner other than what is described in this manual can cause damage and will prevent the items from being covered under this warranty. Disassembly of the Atomizer will void its warranty. See the section on "Maintaining The Atomizer" in this manual. To assure prompt service, obtain authorization from Curtis Dyna-Fog, Ltd. prior to returning any item for warranty evaluation.

Using this machine in a manner other than what
is described in this manual will void the warranty.

PDF File Format

In an effort to create an "Instruction Manual" that could be universally accessed by all users, this document was created as a **.pdf** file using Adobe® software. To be able to view and print this file you must have a copy of Adobe Acrobat Reader® installed on the PC. To obtain a free copy of Acrobat Reader or to upgrade the existing copy go to www.adobe.com on the Internet or click on the following hyperlink: http://www.adobe.com/products/acrobat/readstep.html. Adobe Acrobat is available to be downloaded in 54 different languages.



To provide you with the most current information, this manual contains several "hyperlinks" that when clicked will try to access an internet web page or another page in this manual containing more information on the particular subject matter. The PC you are using must be connected to the Internet to access these hyperlinks. To test your Internet connection, click on the following Curtis Dyna-Fog logo to go to the www.dynafog.com web site.

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Machine Specifications (Dyna-Jet L30, Series 2)

Atomizer Type	High Speed Rotary, 2-stage Porous Media, Vertical remote control adjustment of 55°, Horizontal manual adjustment of 360°
Atomizer Motor	12 Volt DC, Brushless, High-Speed Shielded Bearings
Droplet Size	90% Below 20 Microns (VMD)*
Pumping System	Positive Displacement, FMI Piston Pump, Ceramic Piston, Stainless Steel Pump Housing (0-20 oz/min, 0-591 ml/min)
Machine Current Draw	25 Amps (Blower, Atomizer & Pump operating)
Blower Performance	1350 Cu. Ft./Min (38.2 Cu. M./Min), Sealed, Ball Bearing Motor
Noise Level	69 dba (at loudest point)
Battery	12 Volt Heavy-Duty Lead Acid, Marine Deep Cycle, Group 36, 100 Minute Reserve Capacity, 750 CCA, Water resistant enclosure, Stainless Steel Safety Restraints, Coiled Cell Technology
Remote Control	**Features:** Machine ON/OFF, Spray ON/OFF, Formulation/Flush Selector, Blower Angle Adjustment, Digital Battery Meter, accumulative Hour meter. Backlit switches.
Tanks	
Formulation (Chemical)	15 US Gal. (57 l), Translucent HDPE with lockable cap and spill tray.
Flush	1 US Gal (3.8 l), Translucent HDPE
Frame/Housing Materials	Anodized aluminum frame, Powder coated Aluminum Housing, Powder-coated stainless steel blower base. Stainless steel fasteners
Machine Weight Empty (less battery)	105 lbs. (47.6 kg)

	Length x	Width x	Height
Base Frame Dimensions	34" (85 cm)	24" (60 cm)	2.5" (6.4 cm)
Machine Outside Dimensions	44" (112 cm)	29" (74 cm)	39" (99 cm)
Shipping Dimensions	46" (117 cm)	36 (91 cm)	46.5 (118 cm)

Shipping Weight W/Battery	205 lbs. (92.9 kg) 250 lbs. (113.3 kg)
Other Features	Atomizer Dust Cover (Standard) Specify P/N-65253 Water Resistant Machine Cover (Optional) Specify P/N-63168

* Consult Curtis Dyna-Fog for applications requiring larger droplets.

CAUTIONS and WARNINGS

Read and thoroughly understand the Cautions and Warnings contained throughout this manual, on the machine and on the Formulation manufacturer's label. Failure to comply with all Cautions and Warnings could result in severe bodily injury or death.

- Never operate the machine with the Atomizer Guards removed and always wear safety goggles when standing near the machine. Do not stand directly to the side of or in front of the atomizer during operation. The atomizer rotates at high speed. In the event of breakage, atomizer components can produce high forces that can cause severe damage.

- Periodically inspect the atomizer sleeve for signs of fracturing or loosening. If an audible change is detected or if you notice a difference in vibration during operation, shutoff the machine immediately. Changes in sound and vibration are signs of loosening or fractured components!

- Keep all loose articles of clothing, jewelry, hair, etc… away from Blower Housing and Atomizer.

- Do not operate machine in enclosed areas for a period longer than the formulation label allows.

- Route all electrical connections safely away from sharp edges and flammable materials that could ignite if wires were cut and produced sparks. Protect the outside wire casing from sharp edges (sheet metal, etc…) when routing the electrical wires through the vehicle to prevent an accidental short circuit.

- Always mount the machine securely to the bed of the vehicle as described in this manual.

- Always wear OSHA approved protective clothing, gloves, safety glasses and respirator when handling formulations to be sprayed with this machine.

- Understand any dangers of the formulation being used and what to do in case of an accident involving the formulation.

- Make sure battery connections are tight. Loose connections will cause poor performance and could cause overheating of the machines electrical system.

Foreword

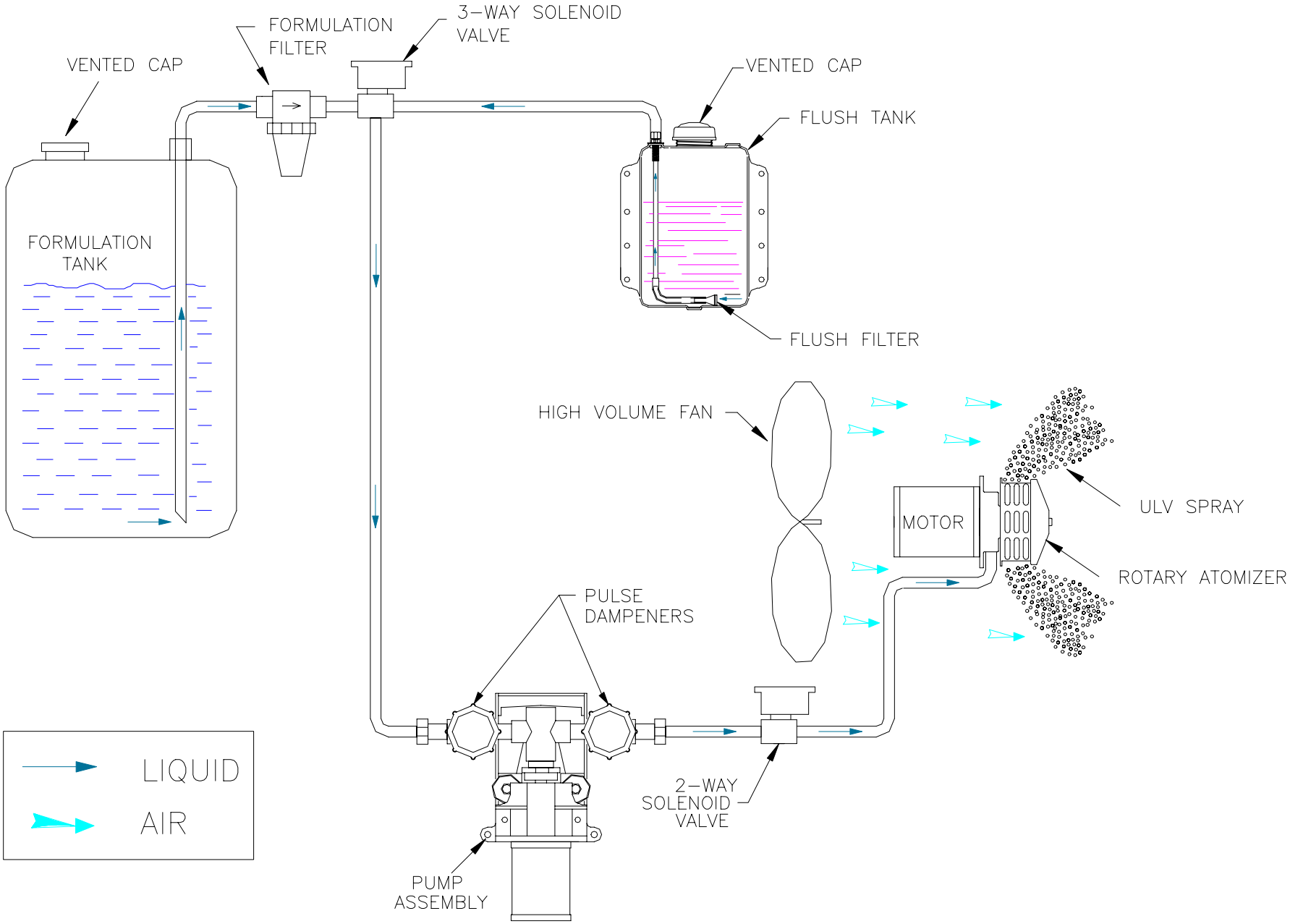
Because of its effectiveness the application of insecticides remains the predominate method by which man attempts to control the size of insect populations. Due to environmental and economical reasons, it is desirable to treat a given area with the least amount of insecticide that has been determined to be effective. The most efficient method is to break up the liquids into fine droplets and distribute these over the target area. With the Dyna-Jet L30, there are literally several billion droplets produced from each ounce (30 ml) of liquid. These billions of small droplets (5-15 Microns) remain suspended in the air for long periods of time allowing them to be effective longer. This type of spray technology is known as "Cold Fogging" or "ULV Spraying". The term ULV is the acronym for Ultra-Low-Volume, the name given to the technology used to treat areas with small amounts of chemical in concentrate form. The World Health Organization defines ULV as: “the rate of product being applied at less than 5 liters per hectare”. Click on the following link to see more information about ULV and Spraying vs. Thermal Fogging on the Dyna-Fog website: http://www.dynafog.com/tech.html

Description of Design and Operation

The Dyna-Jet was designed to be the highest quality, quietest operating ULV machine in the world. The quiet operation, lightweight, and electrical design enable the Dyna-Jet L30 to be used for virtually any application requiring indoor or outdoor space spraying. This machine was designed to dispense formulations at flow rates of up to 14 oz/min (414 ml/min) via a precision FMI Pumping System. The FMI pump (standard on the Dyna-Jet L30) is capable of producing up to 20 oz/min (591 ml/min). Consult Curtis Dyna-Fog for applications requiring more than 14 oz/min. When equipped with the Radar Syncroflow™, pump flow rate is automatically controlled in relationship to vehicle speed without changing the pump setting. Formulation is fed from the FMI pump through a 3-way Formulation/Flush selector valve and into the rotary atomizer rotating at a high rate of speed. Atomizer speed is controlled by a closed loop circuitry to ensure constant and steady operation. A digital tachometer/hour meter mounted on the machine enables monitoring the atomizer speed and accumulated machine run time. Once inside the rotary atomizer, the formulation goes through sequential stages of reduction until it enters the rotating porous media. Extremely high centrifugal force shears the liquid into sub-20 micron size droplets. Once produced, the droplets are carried away from the machine by a high-flow axial blower. A unique feature of the Dyna-Jet L30 is that the direction of the atomizer discharge can be changed at the machine horizontally 360^{o}, or from the Remote Control vertically 55^{o}. Once air born, natural wind currents enable the spray droplets to drift toward their intended target. The rugged and compact Remote Control features lighted switches and a digital battery meter for constant monitoring of battery level during day or night.

Systems Diagram

Dyna-Jet L30, Series 1
US and Foreign Patents Pending



Installation, Calibration and Operation

Machine Installation

The Dyna-Jet L30 is shipped on a heavy-duty skid for easy transportation. Also, the mounting rails that secure the machine to the skid are designed to be permanently mounted in the vehicle. Always use corrosion resistant bolts, flat washers, lock washers and lock nuts to secure the machine to the Mounting Brackets and the Mounting Brackets to the vehicle (see page 44).

Battery Power Source

For Stand Alone Operation**-** Not connected to vehicle charging system, recharging required

The Dyna-Jet L30 is designed to be operated using a 12 Volt deep-cycle RV/Marine battery with at least a 165 minute reserve capacity. DO NOT USE A STANDARD GRADE AUTOMOTIVE BATTERY. A DEEP CYCLE BATTERY MUST BE USED. For continuous operation you must have your machine connected to the vehicle charging system. If the machine is not connected to the vehicle charging system, the machine will operate for 1-2 hours using a fully charged battery with at least a 115 amp hour capacity. A deep-cycle battery with the following specifications will best handle repeated charging and discharging:

Cranking Amps: 750
Reserve Capacity: 180
Amp Hour: 115 (deep-cycle battery)

Curtis Dyna-Fog, Ltd. can supply a quality deep-cycle battery. Click on the following link and specify ordering Part Number- (65336)
http://www.dynafog.com/contact.html

Note: The battery you purchase may be "Shipped Dry" and therefore will need to have battery acid added. If this is the case, read and follow the recommended filling and charging procedures given by the battery manufacturer before attempting to connect the battery to the sprayer.

IMORTANT

For added safety and extended battery life, your machine is equipped with a battery enclosure and stainless steel battery restraint mounted onto the machine. Place the battery in the enclosure, secure the restraint and connect the battery cables as follows:

WARNING
Always observe the polarity of the battery cables before connecting to the battery. The RED lead connects to the battery (+) terminal post, the BLACK lead connects to the battery (-) terminal post.

For Vehicle Mounted Operation - For continuous operation connected to vehicle charging system

To eliminate the need to recharge the deep-cycle battery, the machine must be connected to the vehicles battery being charged by the vehicles alternator. The Dyna-Jet L30 requires a rate of charge of 30 amps at 13 VDC (when measured at the sprayers deep-cycle battery). A high output automotive alternator of 60 amps or greater is recommended to prevent having to recharge the sprayers deep-cycle battery. A properly performing vehicle charging system will produce 13.8-14.8 volts from the alternator. To simplify installation, Vehicle Electrical Installation Kit is included with your machine. When connecting the battery cables of the kit to the battery terminals on the vehicle, connect the RED positive cable to the terminal marked (+) first and the BLACK negative cable to the terminal marked (-) last. Connecting the negative cable last prevents sparking and shorting when connected.

Note: If your vehicle battery discharges during operation of the sprayer, several factors need to be checked. Make sure the vehicle battery is good and connections are tight and that the alternator is performing properly. Driving at continuous slow speeds with other accessories being powered (ie. Air Conditioning, High Beam Lights, Vehicle battery condition, connections, etc…) will also cause this condition. If after everything is checked and the condition still exists or cannot be avoided, an alternator with a capacity higher than 60 amps may be required.

Using the remote-control mounting bracket provided, mount the Remote Control Box in a position convenient to the operator. When routing the remote cable, use the Poly-Wrap cable protector supplied in the vehicle electrical installation kit to prevent cutting and fraying of wires. It is recommended that you apply a standard grade RTV silicone sealant around the cable where it passes through the vehicle to provide a water tight seal. For your convenience, the remote control is fitted with quick disconnect electrical connectors so that the box can be easily removed for safe storage.

Battery Charging Tips

Warning

Batteries produce combustible gases that can explode! Always read and follow the instructions given by the battery manufacturer's label and on the battery charging device. Always wear proper safety equipment (Safety Goggles, Rubber Gloves, etc…) when handling and charging batteries.

Why charge batteries?

Batteries are not 100% efficient; you need to replenish about 115% of the electricity you use. There are several ways to recharge deep cycle batteries: battery chargers, engine alternators, solar panels, wind or water generators, auxiliary generators, inverter/chargers, etc. Regardless of the method(s) you use, your batteries will last longer and work better if they are charged properly.

What do batteries want?

Batteries should be charged in a controlled way. The chemical processes and physical constraints of batteries dictate that they be charged in distinct phases, rather than in a single phase as with archaic charging systems and simple regulators. **Marine deep-cycle batteries will last the longest and charge the fastest if they are properly charged.** This can save you more than the cost of an effective charging device.

This makes it difficult to recommend precise charging voltages, since they vary according to the temperature of the battery. Higher temperatures require lower voltages, and lower temperatures require higher voltages.

Equalization

An optional (and frequently omitted) stage of battery care is equalization. It is used to prevent flooded lead acid batteries from aging prematurely. After the battery reaches the end of acceptance phase, the battery continues to be charged until the voltage stops rising – usually around 15.5-16.2 volts. This forces the battery to its highest possible state of charge, and dissolves the crystals of lead sulfate which have collected on the battery's plates. In applications where maximum energy storage is important, this phase is done every charge cycle. In the marine environment, it is more likely to be done every 20-50 cycles, which will extend the life and capacity of wet batteries. Since electrical equipment and light-bulb filaments can be damaged by high voltage, the battery should be disconnected from all loads during equalization.

This type of battery charging, consisting of multiple stages, is not possible with automotive-type regulators, unregulated solar panels, ferroresonant chargers, or taffrail generators. We strongly encourage the use of efficient charge devices that use modern multiple-step regulation.

Cyberdyne Digital Battery Gauge

Low Voltage Indicator
When battery voltage reaches a level that is too low, the meter flash on and off. When this happens, battery voltage is at 11.0 volts indicating that the battery is either not receiving sufficient charge or the battery needs charged or replaced. If this occurs, disconnect the battery from the machine and charge it per the battery manufacturers recommended instructions.



If battery voltage should ever drop to 10.0 volts, the gauge will display “LO” and the “LO” will scroll across the face of the gauge. If this happens, disconnect the battery and verify that it is good. If necessary, re-charge or replace the battery.

High Voltage Indicator
Although having too high of a battery voltage is unusual and rarely occurs, it can happen. If the battery voltage should ever reach 15.8 Volts, the gauge will flash as a warning. If the voltage ever reaches 16.5 volts, the word “HI” will scroll across the face of the gauge. If either of these conditions occur, disconnect the battery form the machine. Then have your vehicle charging system checked since a normal vehicle charging voltage at the battery is approximately 14.5-15.0 volts DC.

Pump Calibration- *(For the Dyna-Jet Model L30* ***without*** *the Syncroflow System)*

Before attempting to spray, the FMI pump must be calibrated to the proper flow rate setting. The required flow rate is dictated by the information on the formulation manufacturer's label. **Calibration is performed using the "Calibration Switch" located inside the pump enclosure, not from the Remote Control Box.**

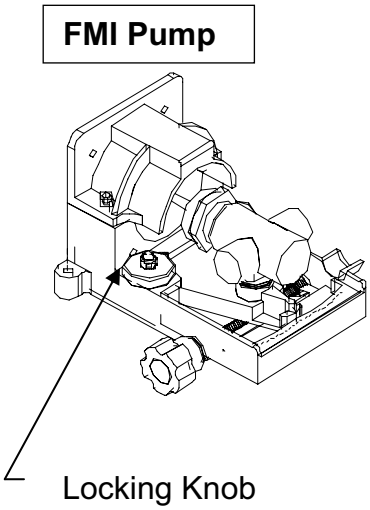
CAUTION:
Using the Calibration Switch does not require having the Atomizer and Blower operating.
Once the switch is depressed liquid will be pumped into the atomizer!

WARNING
Always wear OSHA approved protective clothing, gloves,
safety goggles and respirator when handling any type of formulations. Take
precautions to avoid spills and do not allow the formulation to contact your skin.
In the event of an accident know the proper measures to take. Always follow the information
contained on the formulation manufacturer's label.

Calibration Steps:

1) Loosen the two locking knobs and position the indicator to the setting in the Flow Table below that is closest to your desired output. Note: Tighten both locking knobs after adjusting the pump. Leaving the locking knobs loose can allow the cylinder to move and damage the pump.

Flow Rate Table	
DYNA-JET L30 (FMI Pump)	
Flow oz/min (ml/min)	**Pump Setting**
5.0 (148)	**2**
9.0 (266)	**4**
12.5 (370)	**6**
14.0 (414)	**7 (Max)**



2) Remove the atomizer dust cover and disconnect the formulation delivery tube at the rear of the atomizer. Connect the calibration tube to the formulation tube and place the end of the tube in a beaker or graduated cylinder.
3) Add insecticide (or other formulation to be sprayed) to the Formulation Tank.
4) Turn ON the Master ON/OFF switch located inside the pump enclosure.

5) With the tube placed in the beaker, press and hold the calibration switch and watch for all air bubbles to be evacuated from the tubing. Release the button and empty the beaker back into the formulation tank.
6) Place the tube back into the empty beaker and press and hold the Calibration Switch for 20 seconds and then release the switch. To determine the pump output from this test multiply the measured amount by 3 (3 x 20 seconds = 60 seconds =1 minute). This will be your output per minute.

Example:

If you measured a volume of 80 milliliters (ml) you would then multiply 80 x 3 = 240 ml/minute flow rate. To convert milliliters to ounces, divide the amount of milliliters by 29.57. Therefore, your flow rate would have been: 240 divided by 29.57 = 8.1 ounces/min.

CAUTION
Using the Calibration Switch does not activate the Atomizer and Blower. Therefore, the atomizer will not rotate during calibration. Once the switch is depressed, liquid will begin to be pumped!

7) Adjust the pump indicator up or down and re-calibrate to achieve the desired flow rate.
8) Close the stainless steel pump cover and reconnect the formulation delivery tube. Both the stainless steel cover and the fiberglass pump enclosure can be locked if desired.

IMPORTANT

The FMI pump is a very reliable device. With its microprocessor speed control circuit, it delivers a very precise output. For the output to remain accurate, the battery must be adequately charged. On **stand alone installations** since calibration is done using the sprayer battery, always calibrate the machine with the battery fully charged. On **vehicle mounted installations**, calibrate the sprayer with the vehicle's engine running.

Optional Radar Syncroflow™ Variable-Flow-Control

Thel Dyna-Jet L30 machine can be equipped with the Dyna-Fog Radar Syncroflow. This system enables the operator to set the machine to automatically vary the pump output proportionate to vehicle speed. If your machine is equipped with this feature, *refer to the separate Radar Syncroflow Operation Manual prior to operating.*

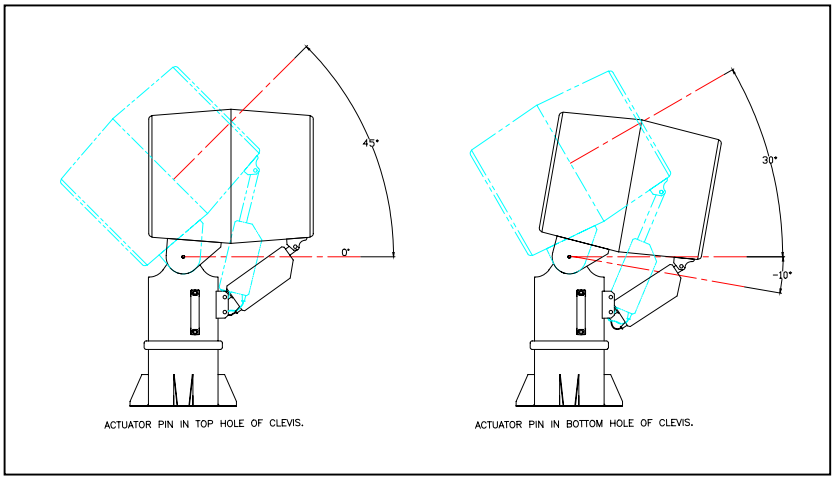
Operation

Once the pump has been calibrated you are then ready to begin preparation for spraying. *If your machine is equipped with the Dyna-Fog Radar Syncroflow variable flow control system, read the steps in this manual under* Variable Flow Control *prior to calibrating your machine.*

Preparation Steps:

1) Make sure the Remote Box is connected properly and mounted within easy reach of the operator and that all switches are in the "OFF" position.

2) Pour the formulation into the formulation tank and flushing solution into the flush tank. Use Dyna-Fog flushing solution in the flush tank. Tighten both caps securely.
3) Open the fiberglass pump enclosure and place the Master Power Switch in the "OFF" position.
4) At the remote box place the Blower/Atomizer switch to the "ON" position.
5) While observing the Tachometer in the fiberglass enclosure, place the master switch to the "ON" position. The atomizer speed should be between 28,000 and 30,000 RPM. If the speed is not in this range, shutoff the switch immediately and check the sprayers battery voltage. The voltage should be between 12.8 and 13.8 Volts DC. If the voltage is in this range and the speed is lower than 28,000 rpm, contact a Curtis Dyna-Fog, Ltd. representative. NOTE: If the voltage is too low, make sure the battery is properly charged and that all electrical connections on the machine and the vehicle are correct.
6) Close the fiberglass pump enclosure and make sure it is latched properly. The pump enclosure and the stainless steel pump cover are designed so that they can be locked using a pad lock. To prevent tampering with the machine while it is left unattended, you can completely "Lock Down" the machine by placing the Master Switch in the "OFF" position and locking the fiberglass pump enclosure and stainless steel pump cover.
7) From the Remote Box, actuate the Atomizer Direction Switch to elevate the atomizer to the correct angle. The machine is pre-set so that the atomizer will be at a 45^{o} upward angle when the actuator is fully extended and at 0^{0} (horizontal) when fully retracted. Adjust the angle to your formulation manufacturer's label recommendation. Typically, a 45^{0} angle is used when doing outdoor spraying. For custom applications, you can change the maximum and minimum angle stop points by moving the actuator to the lower hole location in the actuator clevis as shown below. The atomizer can also be rotated horizontally by manually loosening the clamp knob and positioning the atomizer in the desired direction.



8) At the remote box, place the Spray ON/OFF Switch to the "OFF" position and the Formulation/Flush Switch to the Formulation position.
9) Once you have reached the area you are intending to spray, place the Atomizer/Blower switch to the "ON" position. As a safety feature, the pump will not operate until the Atomizer/Blower Switch is in the "ON" position.
10) After the atomizer is fully up to operating speed (3-5 seconds), and once your vehicle reaches your application driving speed, spray can be started and stopped using the Spray ON/OFF Switch.
11) To stop spraying, first turn OFF the spray. Wait at least one minute to purge liquid from the atomizer sleeve before turning OFF the Atomizer/Blower switch.

Important
Remember to always read and follow the formulation manufacturer's instructions on the proper use of the formulation you are attempting to spray. To prevent over applying the formulation, do not spray when the vehicle is stationary.

Optional Radar Syncroflow System

When equipped, the Curtis Radar Syncroflow™ System allows the dispensing of formulation to be either a constant flow ("Manual") regardless of vehicle speed, or a variable flow ("Syncroflow") which is correlated to vary proportionately with vehicle speeds from 4 to 20 m.p.h.

Either system can be actuated by a toggle switch located at the back of the pump enclosure.

When the syncroflow system is actuated, electronic pulses are fed from the Radar to the formulation pump. As the vehicle moves faster or slower these pulses increase or decrease in frequency which in turn cause the formulation output pump to increase or decrease the fluid flow. A digital readout of the pump and vehicle speed are displayed at the remote control box.

The Syncroflow System can be used by itself or with Dyna-Trax to give you full recording and monitoring capabilities.

Dyna-Trax GPS***- Refer to the separate Dyna-Trax Instruction Manual prior to operating your machine.***

When equipped with the Dyna-Trax GPS System, your machine has the ability to perform the following tasks:

- Vary pump output with vehicle speed (When used with Syncroflow)
- Monitor and record spray route, complete with Spray ON/OFF locations.
- Store large amounts of recorded data that can be easily loaded onto your PC.
- View and Print reports showing spray activity, volume, area, operator, speed, etc…
- Import the recorded data into standard mapping software for seeing data in color on the actual streets in your area. All maps can be modified and printed.
- Monitor your machine as it moves down the street in "Real-Time" from anywhere in the world via the internet. The "Real-Time" feature is sold separately from the basic Dyna-Trax GPS unit.
- Merge reports into Spreadsheets, word processing documents, etc..
- Send recorded files by e-mail to other offices or to anyone in the world who has mapping software installed on their PC.

Refer to the **Dyna-Trax Operation Manual** for details on installation and operation.

Flushing

To keep your machine operating efficiently, you must always flush the machine after every spray application. Flushing helps to remove contaminates and residuals left in the formulation pump, tubes and atomizer sleeve from the formulation. These residuals can sometimes be thick and have a look of "varnish". When the spray operation is complete, place the Formulation/Flush Switch to the Flush position and turn the spray on. You should always perform the first minute of flushing while the vehicle is moving until all insecticide is purged from the system. Once the insecticide is purged, it is safe to complete the flushing operation with the vehicle stopped. Flush for 2-3 minutes. Use only Dyna-Fog flushing solution, or a Curtis Dyna-Fog approved flushing agent such as ***Aire-Mate® ULV Flushing Solution*** (Specify Part No. 1-0224).
Click on the following hyperlink to go to www.airemate.com and specify P/N-1-0224.

Preventative Maintenance Schedule

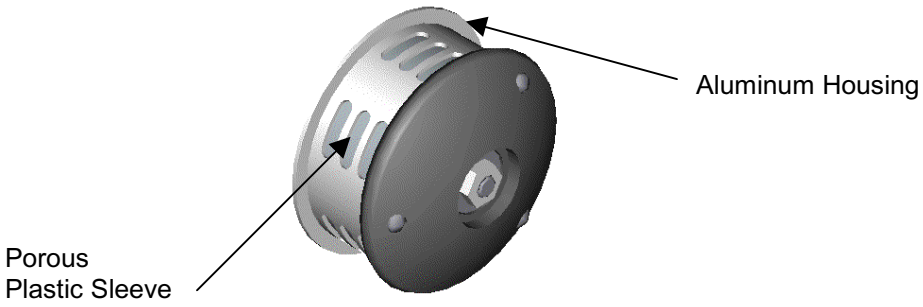
Dyna-Jet L30

Maintenance Time Interval	Check Sprayer Voltage	Flush formulation system	Wash Machine	Check machine mounting	Clean the formulation filter	Inspect Atomizer and Motor	Inspect electrical connections
Daily	Battery meter on remote box should show at least 11 Volts.	Flush for 2-3 minutes after each use	Wash using mild detergent being careful not to spray water directly on motor and other electrical connections. Do not use high pressure spray to clean the machine!				
Weekly				Verify that all mounting bolts are tight and that the machine is held securely in position.	Remove the filter bowl and clean the formulation filter (located on the pickup tube of the formulation tank)		
Monthly						Ensure atomizer retaining nut and motor mounting screws are tight	Ensure all electrical connection are tight. Check battery liquid level and add water if needed. See battery manufacturer's recommendations.

Cleaning the Atomizer's Porous Sleeve

When properly maintained, your Dyna-Jet L30 atomizer will produce spray droplet sizes suitable for all approved labeled formulations registered for use for Mosquito Control and Fly Control. While the formulation pump is capable of producing up to 20 oz/min (591 ml/min) for special applications, the FMI pump has been governed to produce a maximum flow of 14 oz/min (414 ml/min). Most formulation labels require no more than 12 oz/min (355 ml/min).

During normal operation formulation is fed into a porous sleeve and aluminum housing where it is sheared at a high rotational speed into micron sized spray droplets and released into atmosphere. There are literally billions of droplets produced from 1 ounce (30 ml) of liquid. Any solid particles that were suspended in the liquid are "filtered" out by two means: 1) The formulation filter and 2) the porous plastic sleeve. This is why it is extremely important to keep the formulation fresh and clean and to clean the formulation filter as required. *IT IS RECOMMENDED THAT ALL FORMULATIONS BE POURED THRU A FILTERING FUNNEL WHEN FILLING THE FORMULATION TANK.* Using chemicals that have been stored for long periods of time tend to "settle out" and form impurities that can clog the atomizer sleeve. Always pre-filter any old or suspect formulation using a fine mesh or paper element filter before pouring it into the formulation tank.

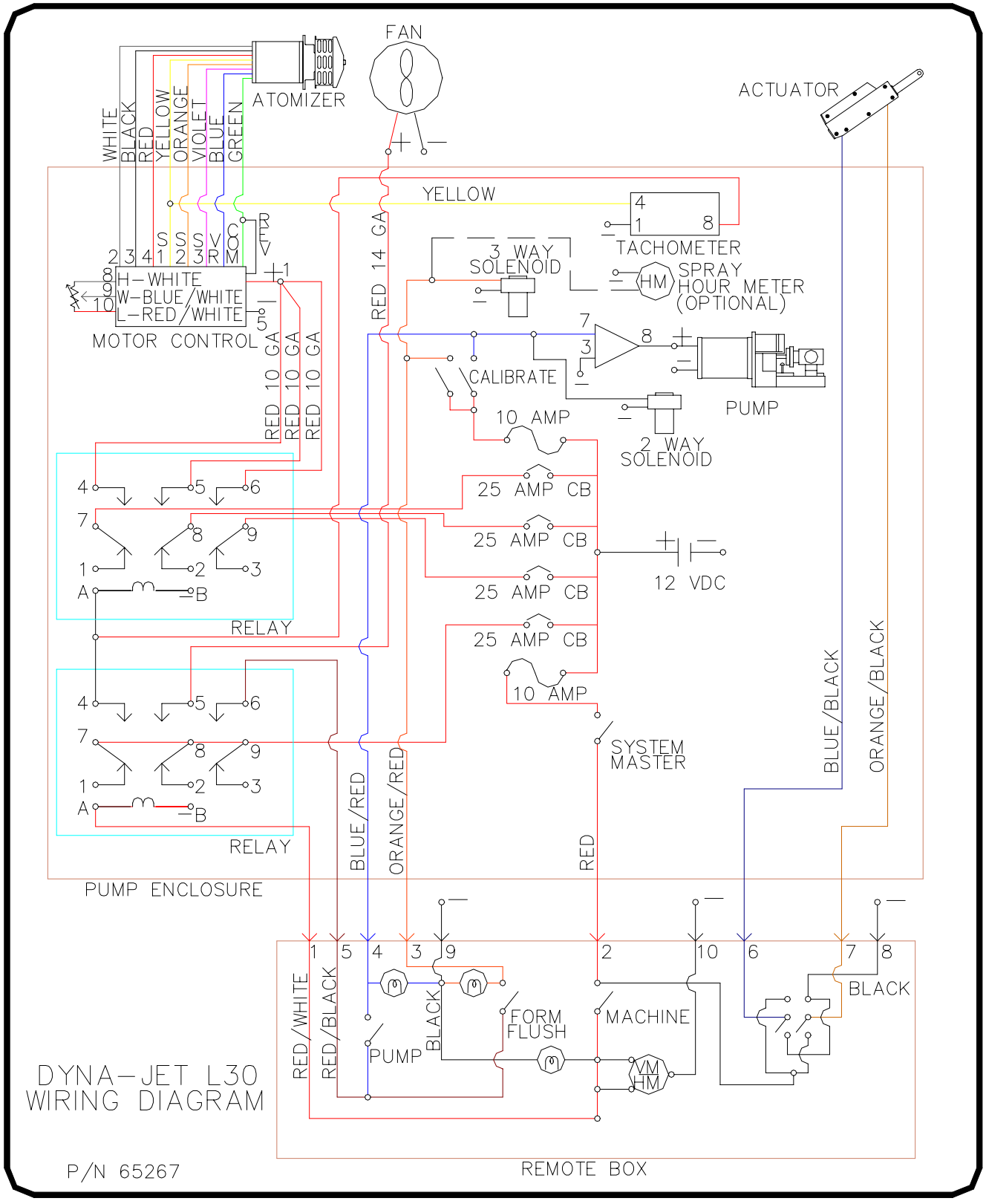


CAUTION

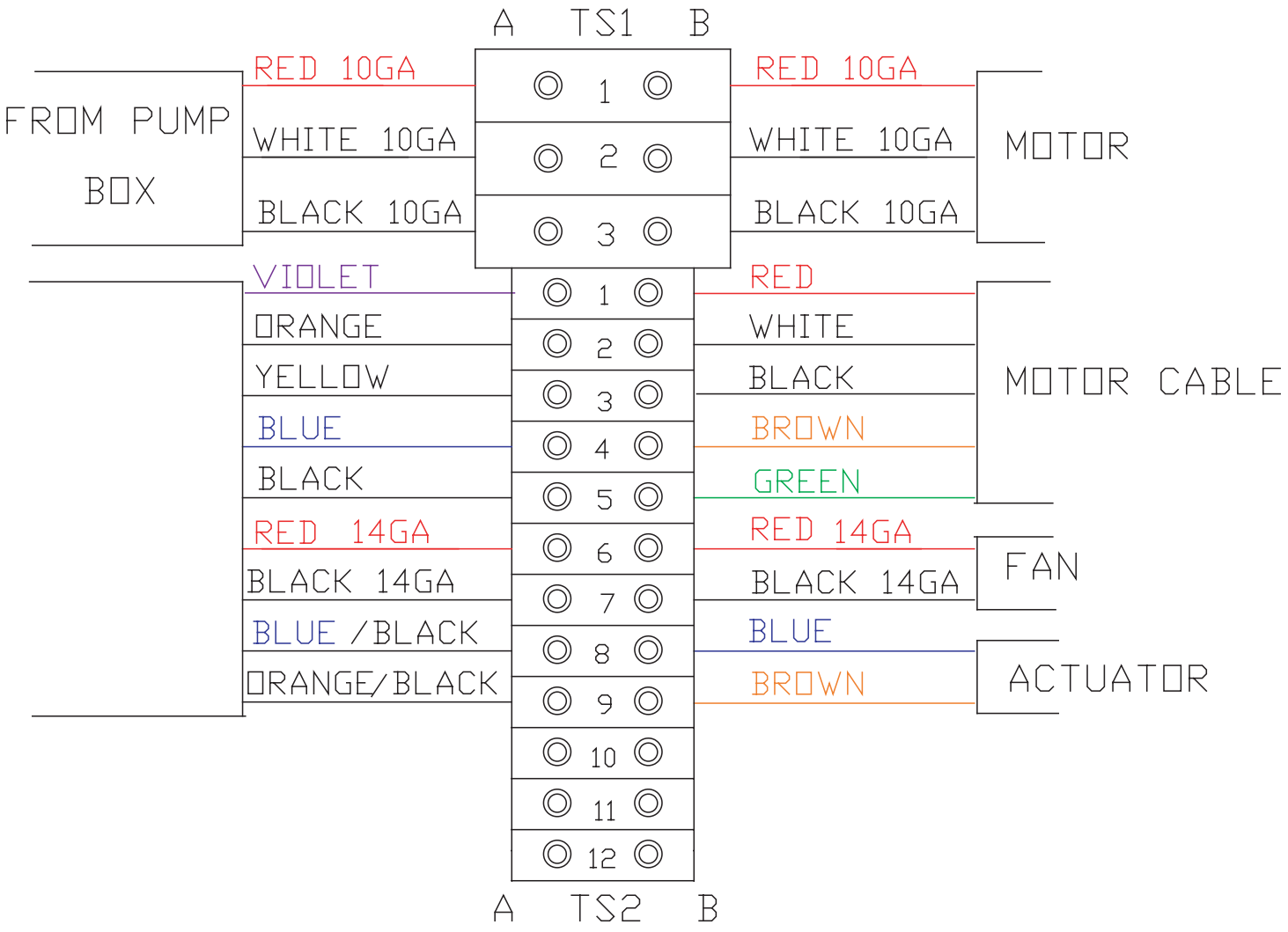
Do not attempt to disassemble the atomizer. The atomizer components are produced with precision tolerances and are balanced after assembly. Disassembling the atomizer will ruin the precision balance. All atomizer components must remain in place for the atomizer to work safely and properly.

To clean the atomizer, you will only need to loosen the center hex nut. DO NOT ATTEMPT TO REMOVE THE THREE LOCKNUTS THAT HOLD THE ASSEMBLY TOGETHER. To reduce the possibility of clogging, do not touch the surface of the porous plastic sleeve when handling the assembly. When using oil-soluble formulations, the atomizer assembly should be cleaned with the special ***Aire-Mate® ULV Flushing Solution*** as discussed in the FLUSHING section of this manual. To clean the sleeve allow it to soak in a container filled with about 1/2" (1.25 cm) of ***Flushing Solution.*** Allow the sleeve to soak for 2 hours to enable the cleaning solution to wick into the surface of the porous plastic sleeve and then air dry using compressed air blowing from the outside surface inward. Repeat this process up to 3 times if necessary until the sleeve appears clean. Any water soluble materials can be quickly cleaned from the sleeve using high-pressure clean water spraying from the outside inward. DO NOT WIPE THE SURFACE OF THE PLASTIC SLEEVE. This will cause contaminates to be forced into the surface and clog the sleeve.

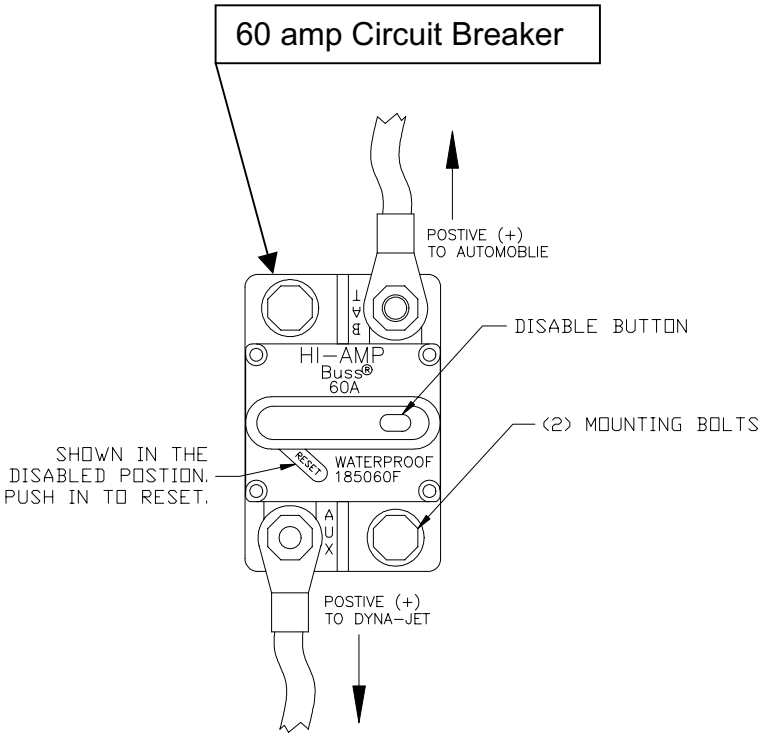
Electrical Wiring Diagram (L30, Series 1)



Terminal Strip Wire Connection Diagram



Connecting the Dyna-Jet L30 to the Vehicle Electrical System



VEHICLE INSTALLATION KIT CONTENTS (P/N 65287)

PART NO.	QTY	DESCRIPTION
120214	2	Washer, lock, 5/16 split
120382	4	Washer, lock, 3/8 split
120392	4	Washer, flat, ¼, reg.
121900	2	Bolt, ¼-20 x 1, hex
65167	2	Adaptor, battery post (GM reg)
65168	2	Adaptor, battery post (GM long)
65169	2	Adaptor, battery post (Ford)
65171	1	Breaker, hi-amp
65176-2	3	Terminal, ring, 6g, ¼
65176-3	4	Terminal, ring, 6g, 3/8
65176-4	4	Terminal, ring, 6g, 5/16
65305	4	Nut, jam, brass 3/8-16
65306	2	Nut, jam, brass 5/16-16
9419454	2	Nut, nylock ¼-20
RM65188		Cable, 6g, black (300 inches)
RM65189		Cable, 6g, red (300 inches)

Refer to the Vehicle Installation Kit Instruction Sheet for detailed installation instructions.

Securely mount the 60 amp circuit breaker using the (2) Hex Bolts, Washers and Lock Nuts provided.

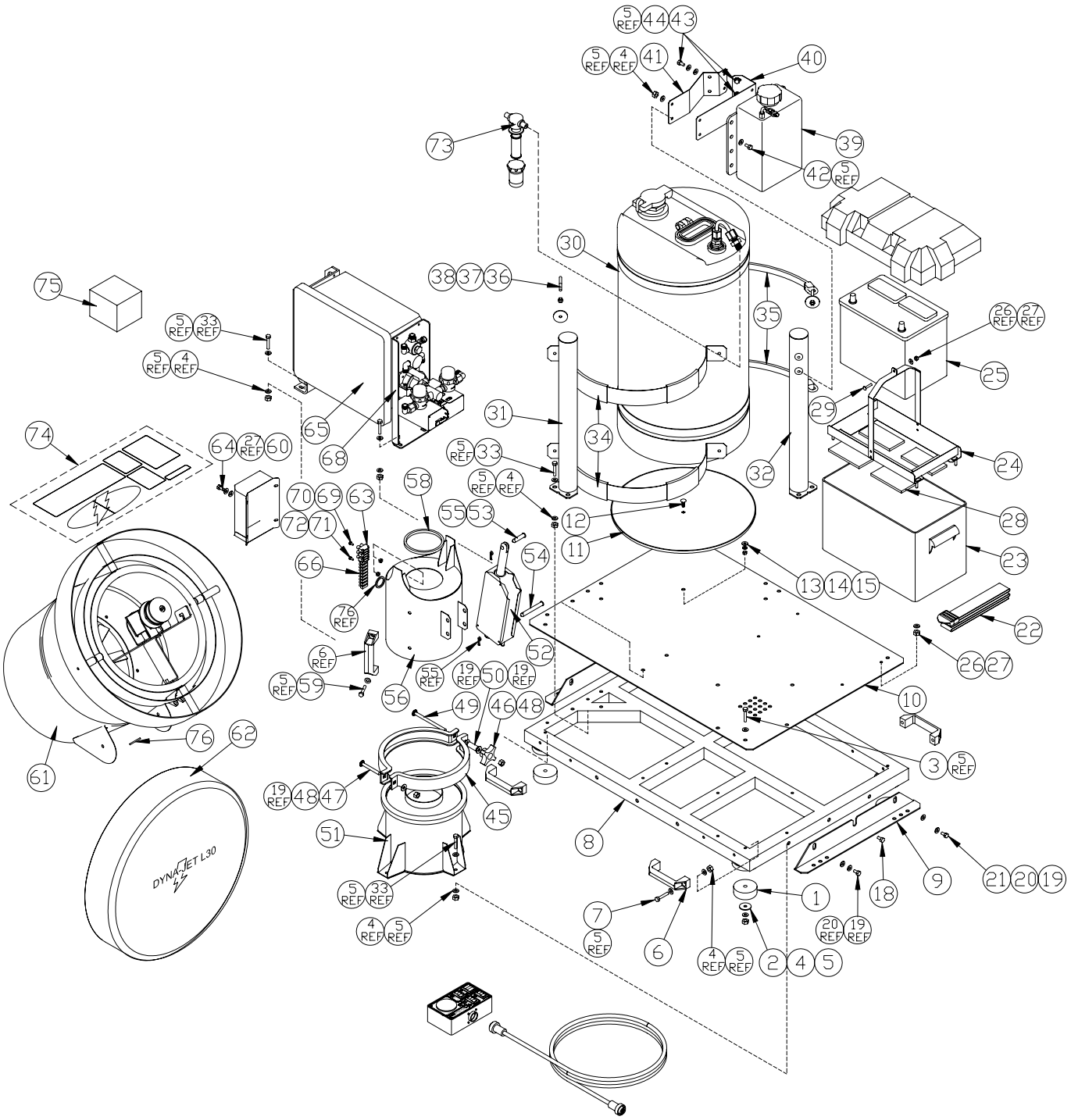
IMPORTANT

To avoid damage to the machine and vehicle, ensure that the battery on the SPRAYER has been fully charged before attaching to vehicle battery.

WARNING

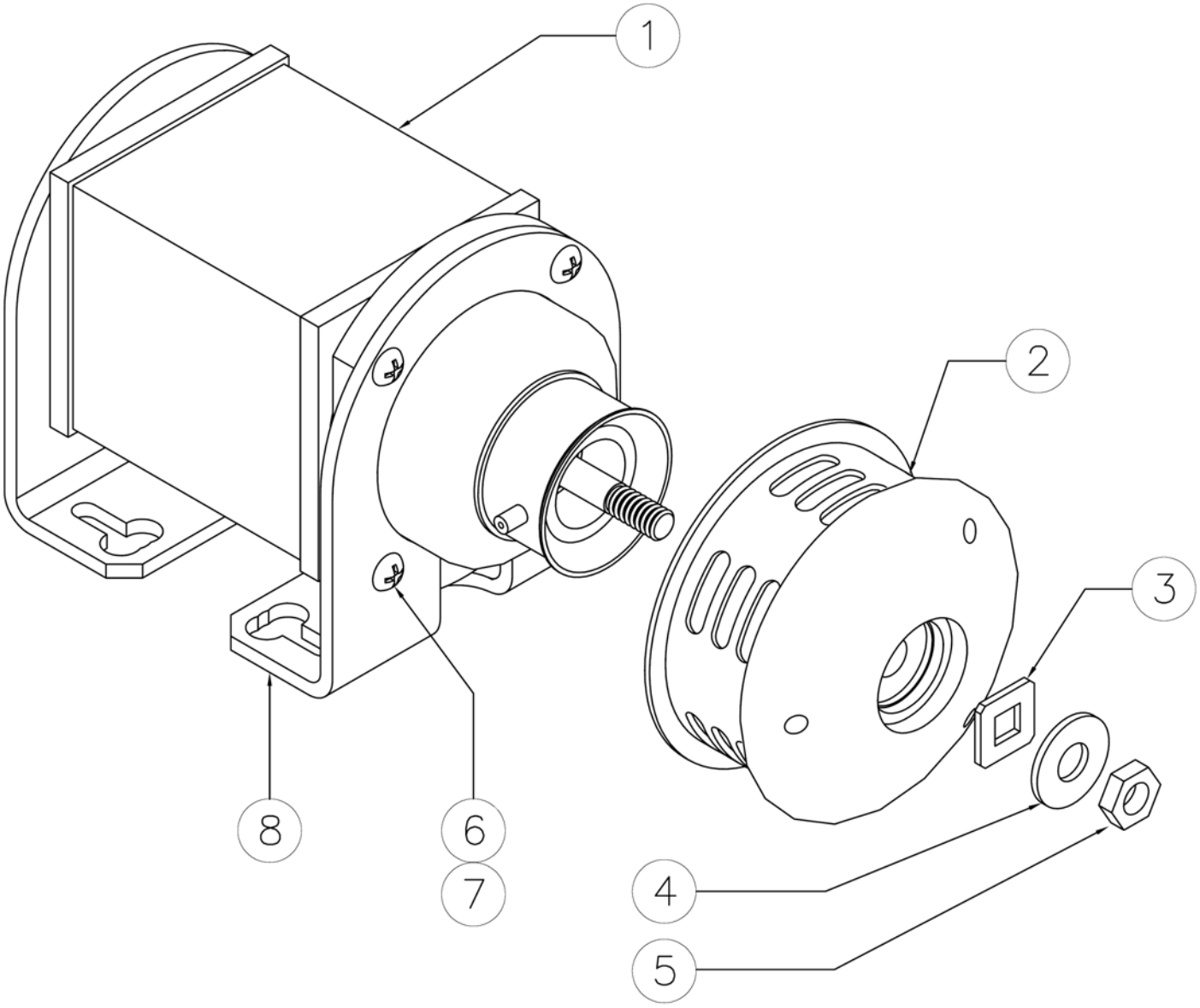
The circuit breaker carries high current. Do not allow any conductive material (metal, etc…) to contact the bare wires or connection terminals. Doing so can cause a short circuit and produce sparks that could lead to a fire or explosion resulting in serious injury or death! Ensure that rubber terminal caps are securely in place after connecting cables! Do not mount the circuit breaker outside of the vehicle. Normal mounting locations include: behind or beneath the drivers seat, under the dash or on or near the firewall.

Major Component Diagram & Parts Listing (L-30)



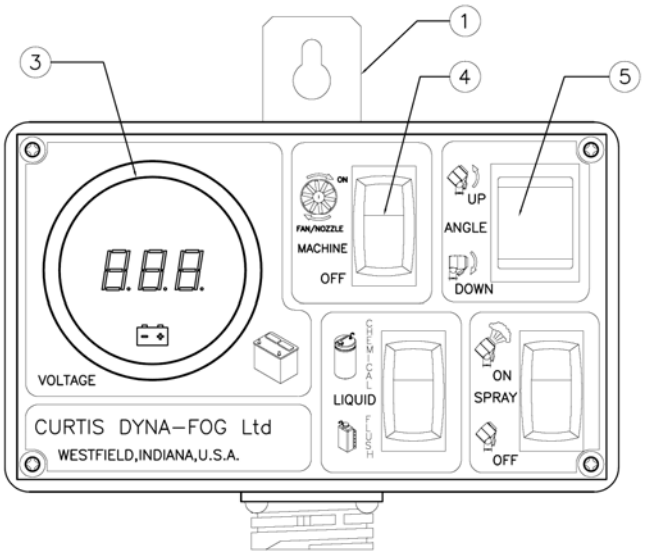
ITEM	PART NO.	QTY.	DESCRIPTION
1	49053	4	Bumper, Rubber 2.5"
2	65236	4	Washer, 1.25 x 5/16, flat, sstl
3	65213	4	Bolt, 1/4-20 x 2.5, sstl
4	65239	29	Nut, 1/4-20, nylock sstl
5	65231	67	Washer, 1/4, flat, sstl
6	65110	6	Handle, plastic
7	65248	8	Bolt, 1/4-20 x 2.75, sstl
8	65135	1	Frame, Assembly, (w/rivnuts)
9	65119	2	Bracket, Machine Mounting
10	65134	1	Plate, Mounting Frame
11	65279	1	Tray, Aluminum
12	65280	1	Bolt, carriage 1/4-20 x 3/4, sstl
13	9416904	1	Washer, 1/4, flat
14	120380	1	Washer, Lock, 1/4 split
15	134551	1	Nut, Hex, 1/4-20
16	65156	1	Remote Control Box Assembly
17	62628	1	Remote Cable harness
18	65149	2	Screw, 5/16-18 x 5/8, socket sstl
19	65219	7	Washer, 5/16, flat sstl
20	138485	4	Washer, lock, 5/16, ext
21	65216	4	Bolt, 5/16-18 x 1, sstl
22	65112	1	Strap, battery enclosure
23	65173-1	1	Box, Battery (modified)
24	65120	1	Bracket, Ay. Battery hold-down
25	65172	1	Battery, 165 amp, (optional)
26	65240	9	Nut, #10, Nylock, sstl
27	65232	13	Washer, #10, flat, sstl
28	48150-1	4	Insulator, Battery box
29	65221	1	Screw, 10-24 x 1, pncr, sstl
30	64004	1	Formulation Tank Assembly
31	65207-1	1	Formulation Tank, post
32	65208-1	1	Formulation Tank, post
33	65214	14	Bolt, 1/4-20 x 2.25, sstl
34	62875-2	2	Tank Strap Assembly
35	63268	2	Tie Down Assembly
36	63151	2	Bolt, Eye, 1/4-20 x 2
37	134551	2	Nut, Hex, 1/4-20
38	63621	4	Washer, Fender
39	63337-1	1	Tank, Ay, 1 Gal Flush
40	65209	1	Bracket, Flush Tank (outer)
41	65210	1	Bracket, Flush Tank (inner)
42	65215	4	Bolt, 1/4-20 x 3/4, sstl
43	65249	3	Bolt, 1/4-20 x 1/2, sstl
44	65235	3	Washer, 1/4, lock, exto, sstl
45	65182	2	Clamp. V #804-8 (half set)
46	65180	1	Knob 5/16-18
47	65217	1	Bolt, 5/16-18 x 2.5, sstl
48	65238	2	Nut, 5/16-18, nylock, sstl
49	65218	1	Bolt, 5/16-18 x 4.5, Carriage, sstl
50	65284	1	Spacer, Knob/clamp
51	65205	1	Support, Blower base
52	65195	1	Actuator Assembly
53	65128-1	1	Pin, Clevis Adjust (short)
54	65128-2	1	Pin, Clevis Adjust (long)
55	29586-3	2	Pin, Hair Cotter
56	65203	1	Upper, Blower support
57	65256	1	Cover Ay, Terminal strip
58	32524-6	1	Rubber Grommet
59	65298	4	Bolt, 1/4-20 x 1 sstl
60	65223	4	Screw, 10-24 x 3/8, pncr, sstl
61	65102	1	Housing Ay., Blower
62	65253	1	Cover, Guard
63	65155-1	1	Terminal Sstrip (big)
64	65250	4	Washer, Lock, exto, #10
65	65103	1	Pump Enclosure Assembly
66	65282	1	Terminal Strip (small)
67	65220	4	Screw, 10-24 x 3/4, pncr, sstl
68	65148	1	Pump/Bracket Assembly
69	65300	2	Screw, 6-32 x 1 phcr, sstl
70	65301	2	Nut, Nylock, 6-32, sstl
71	65299	2	Screw, 4-40 x 5/8, phcr, sstl
72	65243	2	Nut, Nylock, 4-40, sstl
73	62558-8	1	Filter, ay., Long bowl
	62558-4	1	Housing, Replacement
	10200-124	1	O'ring, Aflas
	62558-7	1	Screen, 15 micr., Long
	62558-6	1	LP Long White Bowl
74	65323	1	Kit, Label Replacement
	62592	1	Label, Flush
	63094	1	Label, Formulation
	65262	2	Label, Dyna-Jet L30 Logo
	65263	2	Label, Atomizer Guard Warning
	65267	1	Label, Wiring Diagram
	65268	1	Label, Atomizer Speed
	65272	1	Label, Calibration Steps
	79110-1	2	Label, Logo (blue)
75	65287	1	Kit, Vehicle Connection
76	63238-3	3	Grommet, 1" Caplug

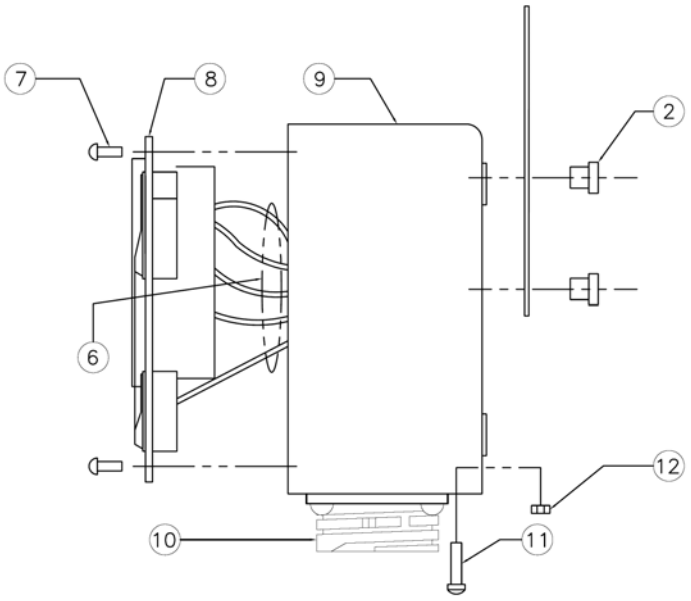
Atomizer Assembly (L30)



ATOMIZER/MOTOR ASSEMBLY, 12 VDC,
P/N 65104

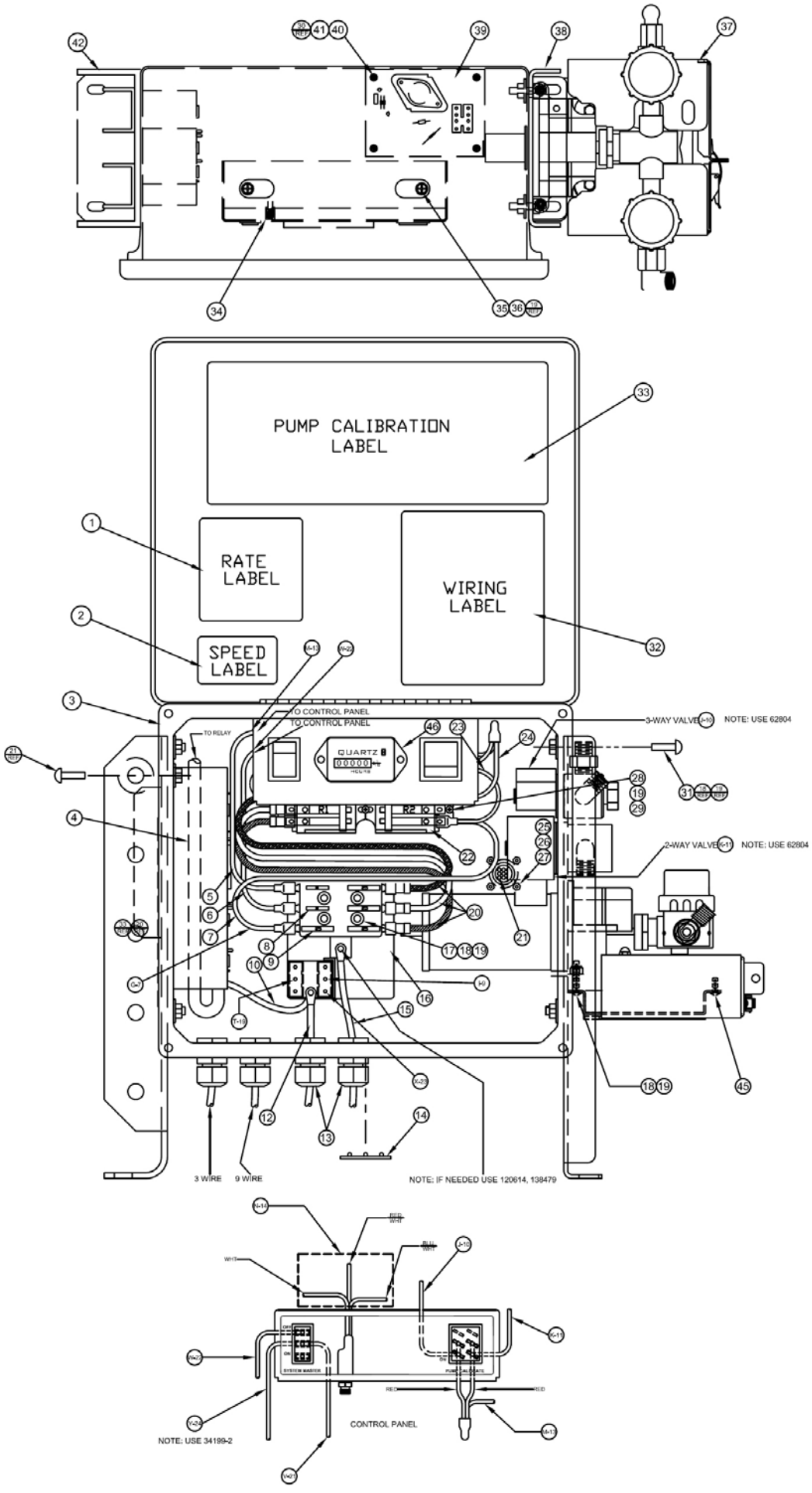
ITEM	PART NO.	QTY	DESCRIPTION
1	65125	1	Motor, 12 VDC, Brushless
2	65283	1	Atomizer Ay.
3	65107	1	Washer, Square, ss
4	65106	1	Washer, Aluminum
5	65239	1	Nut, ¼-20, Nylock, ss
6	65233	8	Washer, Flat, #8, ss
7	65226	8	Screw, 8-32, ss
8	65200	2	Bracket, Motor (Blk. Anod.)





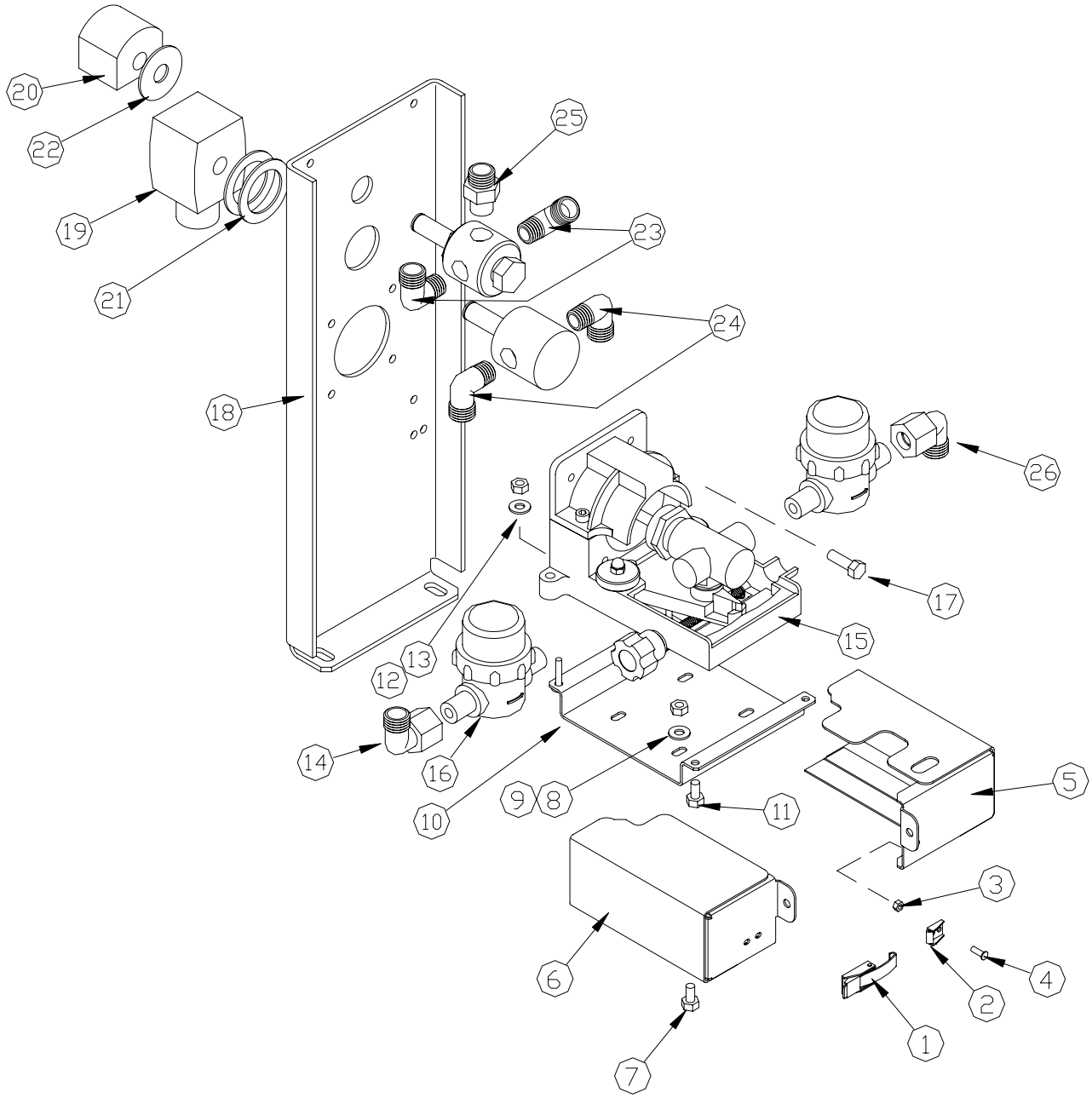
REMOTE BOX ASSEMBLY, P/N 65156

ITEM	PART NO.	QTY	DESCRIPTION
1	54022	1	Mounting tab
2	58652	2	Rivet, drive, .187 x .6L
3	65153-1	1	Digital Volt Meter, Green
4	64687	3	Switch, spst rocker
5	65166	1	Switch, rocker, dpdt
6	65141	1	Remote harness AY.
7	159028	4	Screw, 4-40 x ¼ phcrz
8	65126-1	1	Plate, remote control panel
9	65127	1	Box, plastic (machined)
10	62661-1	1	Receptacle, 16 pin
11	159341	4	Screw, 6-32 x 5/8, pncr
12	114524	4	Nut, 6-32, hex


PUMP CALIBRATION LABEL
RATE LABEL
WIRING LABEL
SPEED LABEL
TO CONTROL PANEL
TO CONTROL PANEL
TO RELAY
QUARTZ 8
R1
R2
3-WAY VALVE
NOTE: USE 62804
2-WAY VALVE
NOTE: USE 62804
3 WIRE
9 WIRE
NOTE: IF NEEDED USE 120614, 138479
CONTROL PANEL
NOTE: USE 34199-2

ITEM	PART NO.	QTY	DESCRIPTION
1	65265	1	LABEL, FLOW RATE
2	65268	1	LABEL, ATOMIZER SPEED
3	65281	1	ENCLOSURE, PUMP (MACHINED)
4	65295-12	1	WIRE AY, MOTOR CONTROL TO RELAY
5	65295-8	1	WIRE AY, RED/XXX
6	65295-7	1	WIRE AY, RED/XXX
7	65295-1	1	WIRE AY, RED/XXX
8	65303	2	FUSE, 10A
9	65286	4	CIRCUIT BREAKER, THERM. 25A
10	65295-11	1	WIRE AY, BLK/XXX, MOTOR CONTROL, NEG
11	65143	1	HARNESS, MACHINE CONTROL
12	65295-10	1	WIRE AY, BATTERY NEGATIVE, BLACK/XXX
13	45933-2	2	STRAIN CONNECTOR
14	74275	1	LOUVER, MIDGET
15	65295-9	1	WIRE AY, BATTERY POSITIVE, RED/XXX
16	65151	1	PANEL, FUSE
17	65224	4	SCREW, 10-24 x 1.25, PHCR, SSTL
18	65240	16	NUT 310, NYLOCK, SSTL
19	65232	22	WASHER, #10, FLAT, SSTL
20	65295-4	3	WIRE AY, RED/XXX
21	65142	1	HARNESS, PUMP BOX
22	65152	2	RELAY
23	65295-3	1	WIRE AY, RED/XXX
24	65295-2	1	WIRE AY, BLK/XXX
25	65228	8	SCREW, 6-32 x 1/2. PHCR. SSTL
26	65244	4	NUT, 6-32, SS
27	138526	8	WASHER, LOCK, #6, INTO
28	65226	3	SCREW, 8-32 x 5/8, PHCR, SSTL
29	65241	3	NUT, #8, NYLOCK, SSTL
30	65233	4	WASHER, #8, FLAT, SSTL
31	65220	12	SCREW, 10-24 x 3/4, PHCR, SSTL
32	65267	1	LABEL, WIRING DIAGRAM
33	65272	1	LABEL, CALIBRATION STEPS
34	65144	1	POTENTIOMETER AY
35	65222	2	SCREW, 10-24 x ½, PHCR, SSTL
36	65250	2	WASHER, LOCK, #10, EXTO, SSTL
37	65329	1	COVER AY, PUMP
38	65148	1	PUMP BRACKET AY
39	64694	4	REGULATOR AY, VOLT. FMI
40	65228	8	SCREW, 6-32 x 1/2, PHCR, SSTL
41	138526	8	WASHER, LOCK, #6, INTO
42	65330	1	HEAT SINK/CONTROLLER AY
43	65295-6	1	WIRE AY, BLK/XXX
42	65295-5	1	WIRE AY, YLW/XXX
45	62163	1	8/32/3/8, TAP PHCR SS
46	64930	1	HOUR METER, 12 VOLT

Pump/Bracket Assembly (L30)

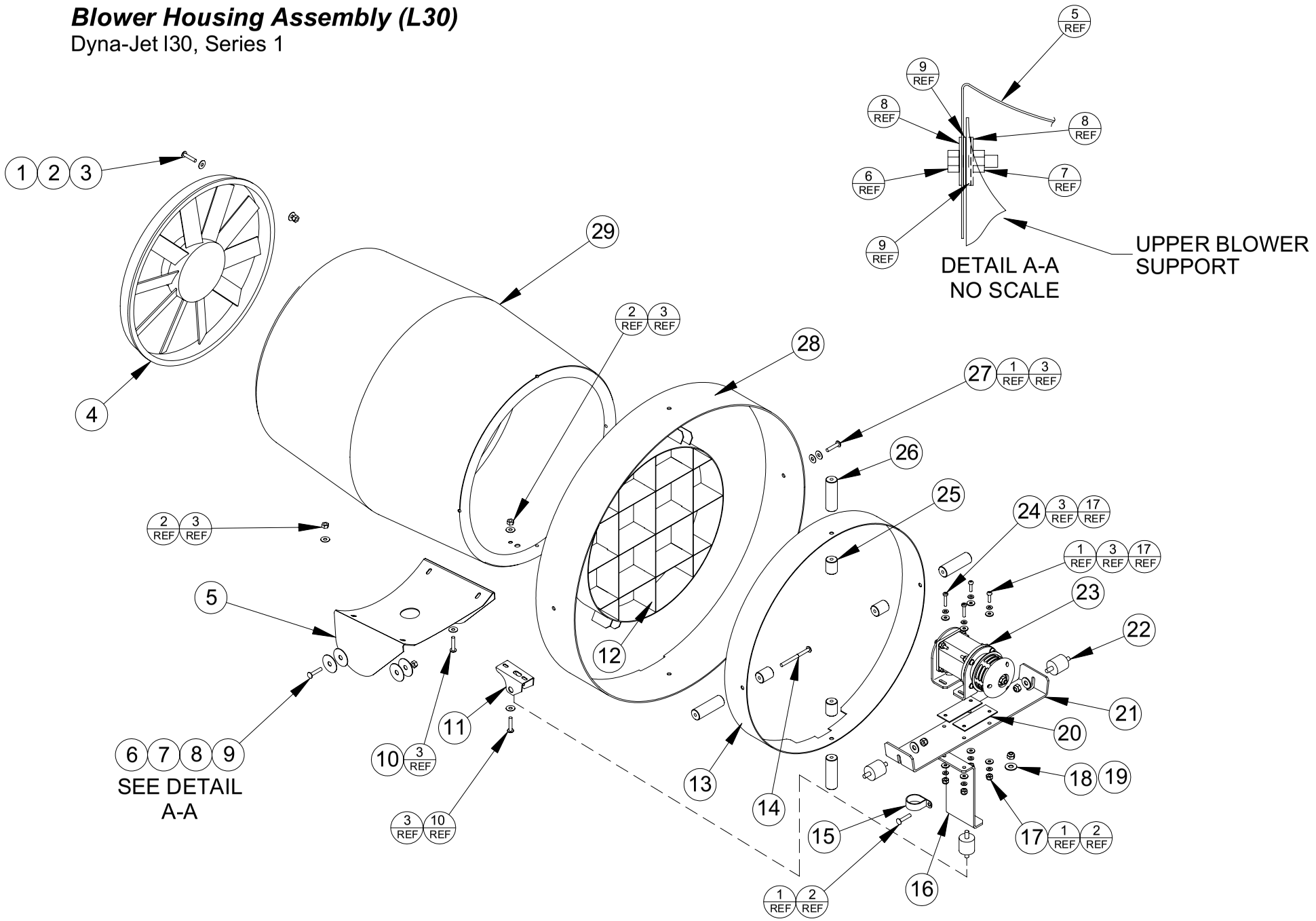


PUMP BRACKET ASSEMBLY, P/N 65148

ITEM	PART NO.	QTY	DESCRIPTION
1	62437	1	Latch, draw
2	62437-1	1	Keeper, latch
3	65243	3	Nut, #4, nylock, sstl
4	65245	3	Screw, 4-40 x 3/8, phcr, sstl
5	65137-2	1	FMI cover, welded ay., right
6	65137-1	1	FMI cover, welded ay., left
7	65223	4	Screw, 10-24 x 3/8, phcr, sstl
8	65240	4	Nut, #10, nylock, sstl
9	65232	4	Washer, #10, flat, sstl
10	65328	1	Plate Ay., FMI mounting
11	65246	2	Screw,8-32x 3/8,phcr,tap, sstl
12	65233	2	Washer, #8 Flat
13	65241	2	Nut, #8, nylock, sstl
14	62554-4	1	Elbow, 1/4 FP - 3/8 T
15	63320-1	1	Pump, FMI (mach.)
16	62558-10	2	Filter,profile (w/o filter screen)
17	65302	4	Screw,8-32x5/8, socket hd
18	65147	1	Support, pump enclosure
19	62638-3	1	Valve, 2 way, ay.
20	62650-6	1	Valve, 3 way, ay.
21	65304-1	2	Seal, solenoid mtg 1.625 OD
22	65304	1	Seal, solenoid mtg 1.375 OD
23	62641-3	1	Elbow, ¼MP – 3/8 T
24	62641-2	2	Elbow, ¼MP – ¼ T
25	62552-1	1	Connector, ¼MP – ¼ T
26	62554-2	1	Elbow, cl, 1/4 FP – ¼ T

Blower Housing Assembly (L30)

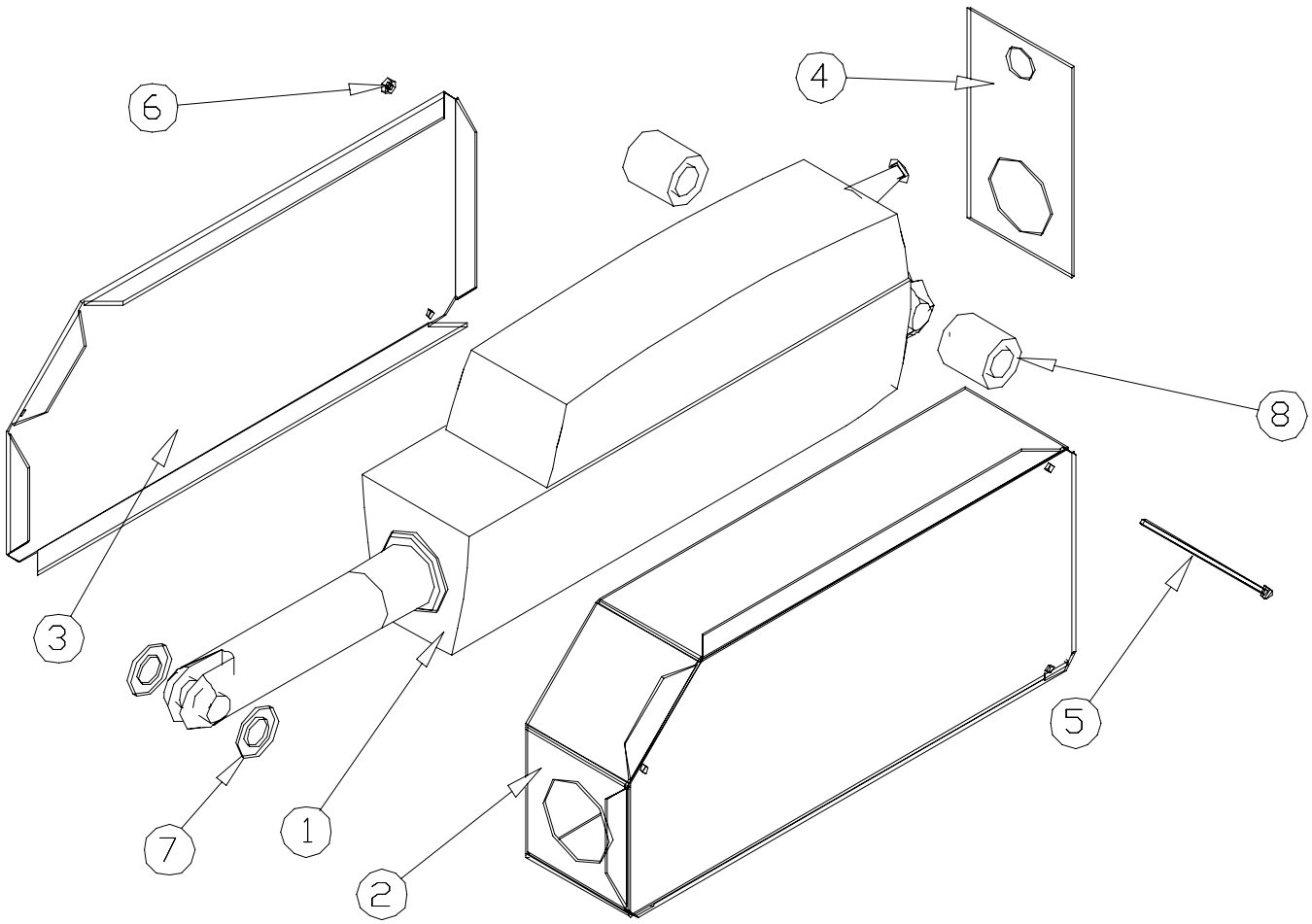
Dyna-Jet I30, Series 1



HOUSING ASSEMBLY (L30), P/N 65102

ITEM	PART #	QTY	DESCRIPTION
1	65220	11	SCREW, 10-24 x ¾, PNCR SSTL
2	65240	11	NUT, #10 NYLOCK SSTL
3	65232	34	WASHER, #10 FLAT SSTL
4	65170-1	1	FAN, 12 VDC, ELECT MOD.
5	65191	1	CLEVIS, BLOWER
6	65216	2	BOLT, 5/16-18 x 1, SSTL
7	65238	2	NUT, 5/16-18, NYLOCK SSTL
8	65237	4	WASHER, 1.25 x 5/16. FENDER SSTL
9	65211	4	WASHER, POLYETHYLENE, 5/16
10	65222	6	SCREW, 10-24 x ½, TRUSS SSTL
11	65199	1	CLEVIS, ACTUATOR
12	65319	1	FAN GUARD ASSEMBLY
13	65308	1	GUARD, INNER
14	65225	4	SCREW, 10-24 x 2.5, BUTTON SSTL
15	86690-4	1	CLAMP
16	65202	1	VERTICAL SUPPORT, MOTOR
17	65344	8	ISOLATOR WASHER
18	65239	6	NUT, ¼-20, NYLOCK SSTL
19	65231	6	WASHER, ¼ FLAT SSTL
20	65338	2	ISOLATOR PAD
21	65201	1	SUPPORT, CROSS MOTOR
22	63148	3	SKOCK, MOUNT
23	65104	1	ATOMIZER/MOTOR AY
24	65221	2	SCREW, 10-24 x 1
25	65309-2	4	SPACER (LONG)
26	65309-1	4	SPACER (SHORT)
27	65250	4	WASHER, LOCK EXT #10
28	65190	1	GUARD, OUTER
29	65161	1	HOUSING AY, WELDED

Actuator Assembly

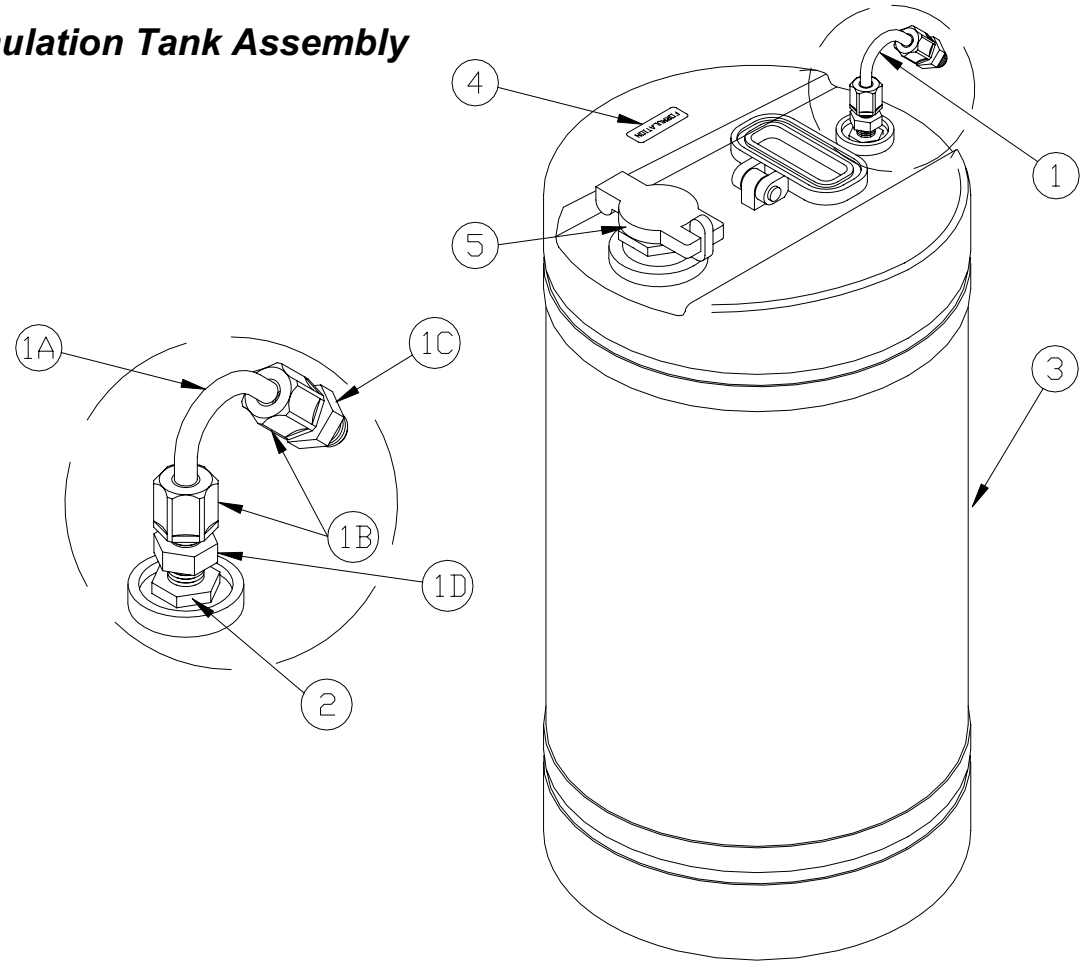


ACTUATOR ASSEMBLY, P/N B65195

	ITEM	PART NO.	QTY	DESCRIPTION
	1	64850	1	Linear actuator
	2	65196	1	Actuator cover (right side)
	3	65197	1	Actuator cover (left side)
	4	65212	1	Cover, rear actuator cover
	5	65229-1	3	Screw, 4-40 x 2.25, phcr, sstl
	6	65243	3	Nut, #4, nylock, sstl
(*)	7	65271-1	2	Spacer, act. clevis (short)
(*)	8	65271-2	2	Spacer, act. clevis (long)

(*) Not included with reference 65195, shown as reference.

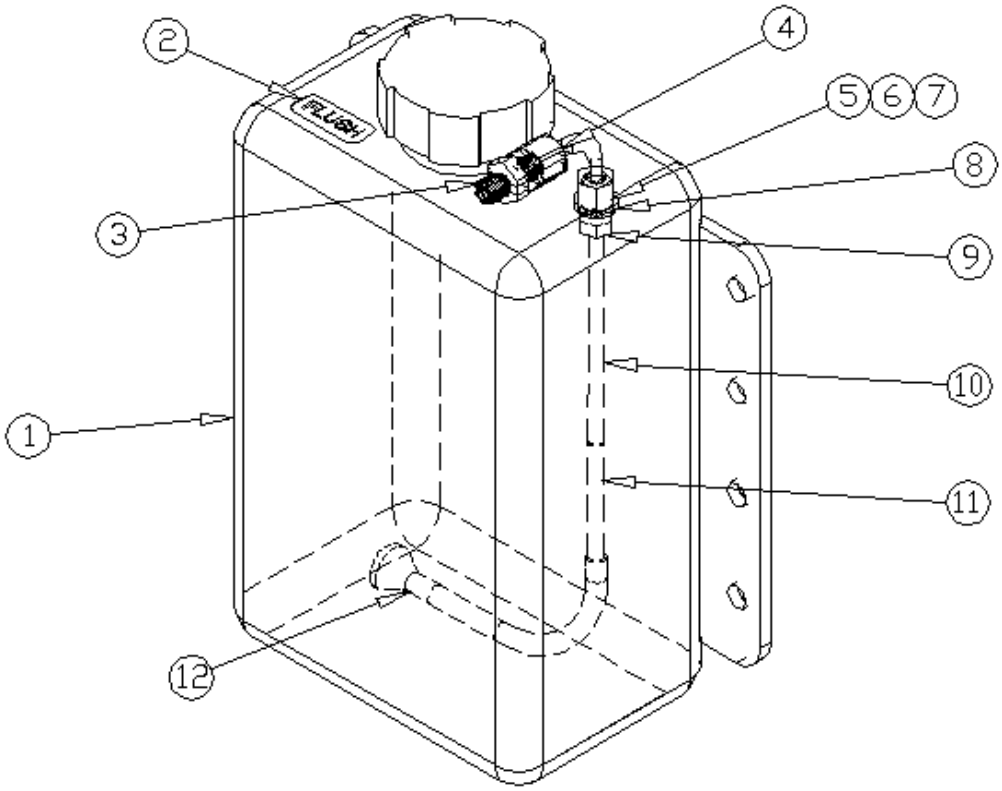
Formulation Tank Assembly



FORMULATION TANK ASSEMBLY, P/N 64004

ITEM	PART #	QTY	DESCRIPTION
1	62574	1	FORMULTION STANDPIPE AY
1A	62545	1	FORMULATION STANDPIPE
1B	62550-3	2	NUT, STEEL GRIPPER
1C	62553-3	1	CONNECTOR, UNION 3/8 T
1D	62573-2	1	CONNECTOR, MALE, MOD
2	64772	1	BUSHING, ¾ MPT x 3/8 FPT, NYL
3	64002	1	TANK, 15 GAL.
4	63094	1	LABEL, FORMULATION
5	64077	1	CAP ASSEMBLY

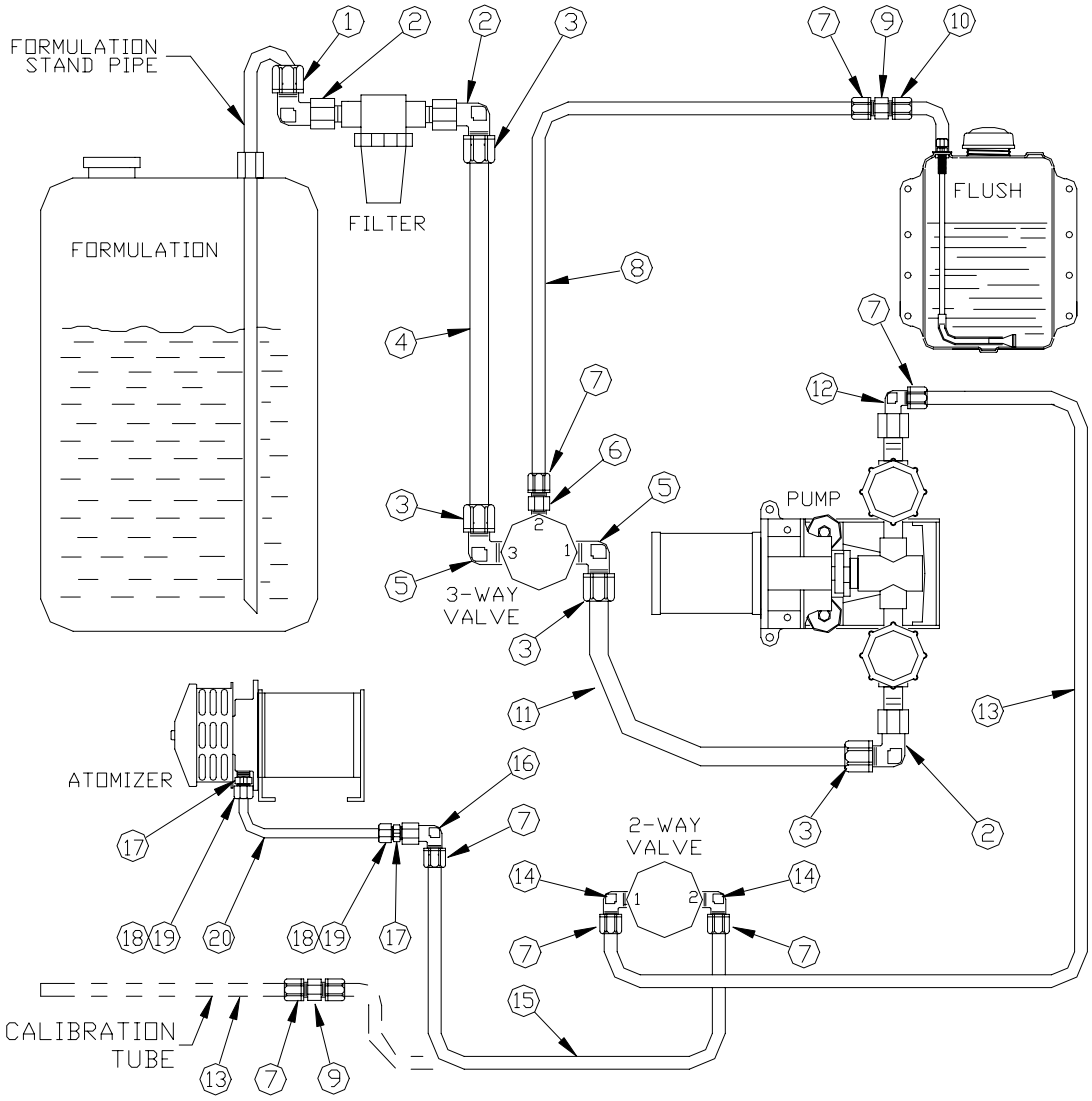
Flush Tank Assembly



FLUSH TANK ASSEMBLY (1 GAL), P/N 63337-1

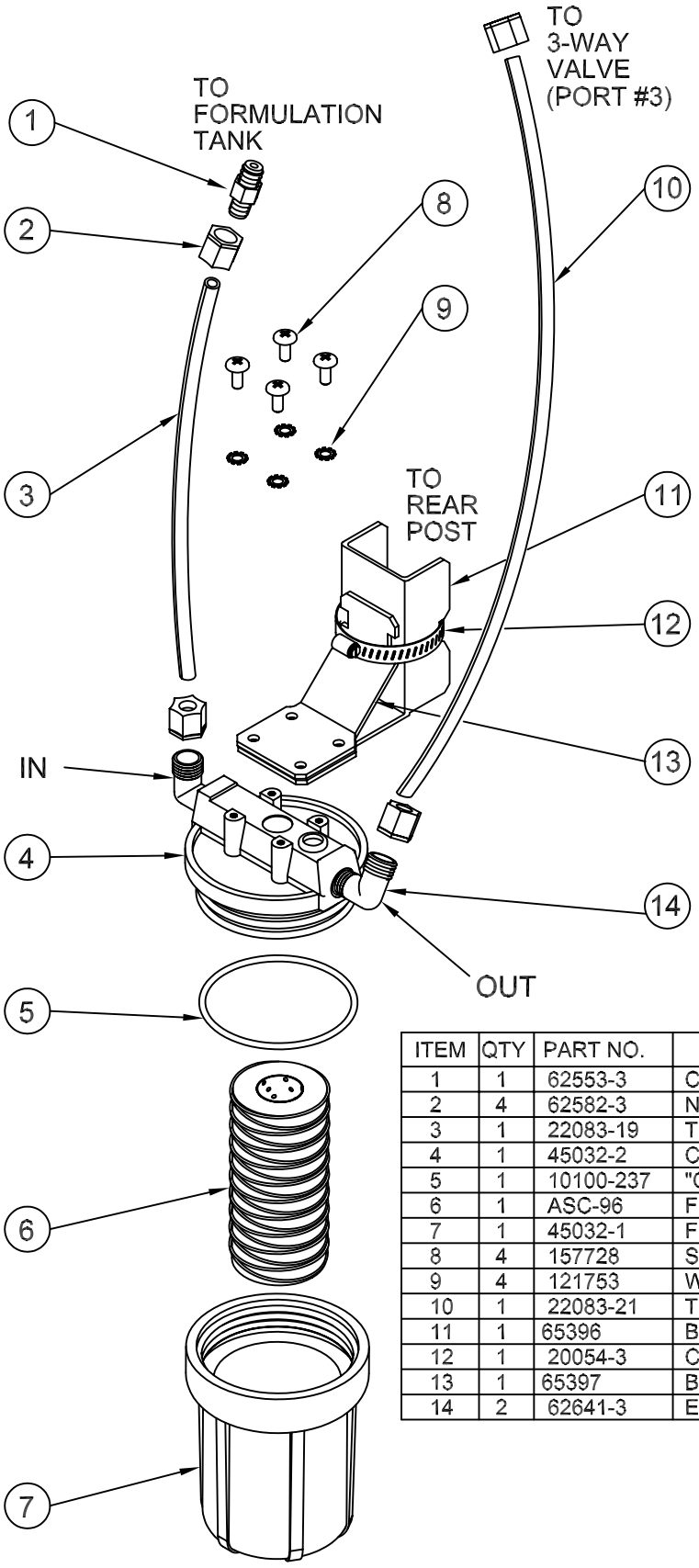
ITEM	PART NO.	QTY	DESCRIPTION
1	63302-6	1	Tank, 1 Gal. (Mach.)
2	62592	1	Label, flush
3	62553-1	1	Connector, union, ¼ T
4	62550-1	1	Nut, 0.25, Steel grip
5	114628	1	Sleeve, ¼ T
6	145463	1	Nut, ¼ T
7	10105	1	Connector, standpipe
8	53131	1	Washer, flat
9	74288	1	Nut, lock, 1/8 NPSL
10	63336	1	Standpipe, flush tank
11	62054-14	1	Tubing, 0.25
12	62346	1	Filter, plastic, pick-up

Plumbing Diagram (L30)



ITEM	P/N	DESCRIPTION	ITEM	P/N	DESCRIPTION
1	62550-3	Nut, 3/8, Steel Grip	11	22083-19	Tubing, 3/8 OD
2	62554-4	Elbow, 1/4FP, 3/8T	12	62554-2	Elbow, ¼ FP, ¼ T
3	62582-3	Nut, 3/8T, Plst Grip	13	58212-5	Tube, Nylon, ¼ OD
4	22083-11	Tubing, 3/8 OD	14	62641-2	Elbow, ¼ MP, ¼ T
5	62641-3	Elbow, ¼ MP, 3/8T	15	58212-26	Tube, Nylon, ¼ OD
6	62552-1	Connector, ¼MP, ¼T	16	62554-1	Elbow, 1/8 FP, ¼ T
7	62582-1	Nut, ¼ T, Plst Grip	17	65324	Connector, 1/8 P- 3/16 T
8	58212-12	Tube, Nylon, ¼ OD	18	20408	Sleeve, 3/16 T
9	62553-1	Connector, Union, ¼T	19	59942	Nut, 3/16 T
10	62550-1	Nut, ¼ T, Stl Grip	20	65321	Tube, Feeder Body

KIT,FILTER HIGH CAPACITY P/N 65395

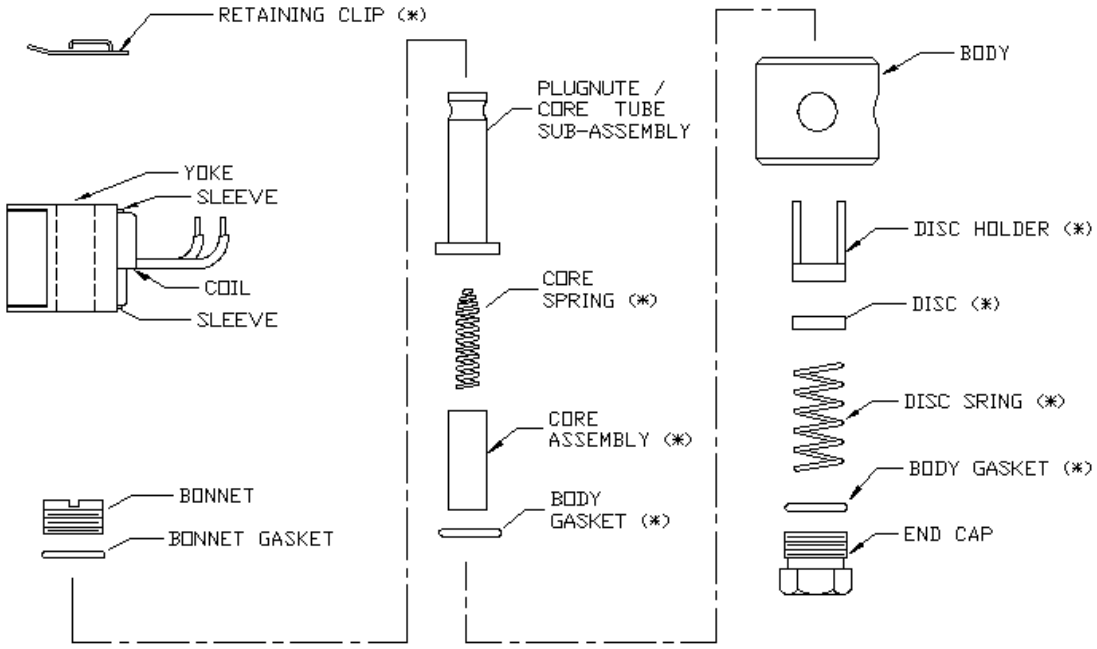


ITEM	QTY	PART NO.	DESCRIPTION
1	1	62553-3	CONNECTOR,UNION,3/8T
2	4	62582-3	NUT,.375,PLST GRIP
3	1	22083-19	TUBING,POLYE.66P,3/8x16"
4	1	45032-2	CAP,FUEL FILTER
5	1	10100-237	"O"-RING,VITON
6	1	ASC-96	FILTER, ELEMENT, 25µ
7	1	45032-1	FILTER BODY
8	4	157728	SCREW,1/4-20x5/8 TRCR
9	4	121753	WASHER,LOCK,1/4,EXTO
10	1	22083-21	TUBING,POLYE.66P,.375
11	1	65396	BRACKET,FILTER,L30
12	1	20054-3	CLAMP,WORM,2.5 DIA
13	1	65397	BRACKET,45°
14	2	62641-3	ELBOW,1/4MP-3/8T

3-Way Valve Assembly

(INSTRUCTIONS FOR REBUILDING AND CLEANING)

1. Using a screwdriver, snap off the retaining clip, which secures the coil assembly.



2. Remove the retaining clip.

3. Slide the coil off the valve body, and using a spanner nut (P/N 62650-15), remove the core housing for cleaning or rebuilding.

4. Clean all parts thoroughly, using a cleaning solvent.

5. When reassembling the valve, be sure that the body seal (“O” ring) is in place.

6. Tighten gently.

7. Re-assemble coil assembly and retainer clip.

8. Remove red cap and push solenoid down. Then lift nameplate/retainer and push to remove.

9. Remove solenoid.

10. Unscrew solenoid base sub-assembly or valve bonnet with special wrench adapter. Remove core assembly, core spring, and solenoid base gasket from valve body.

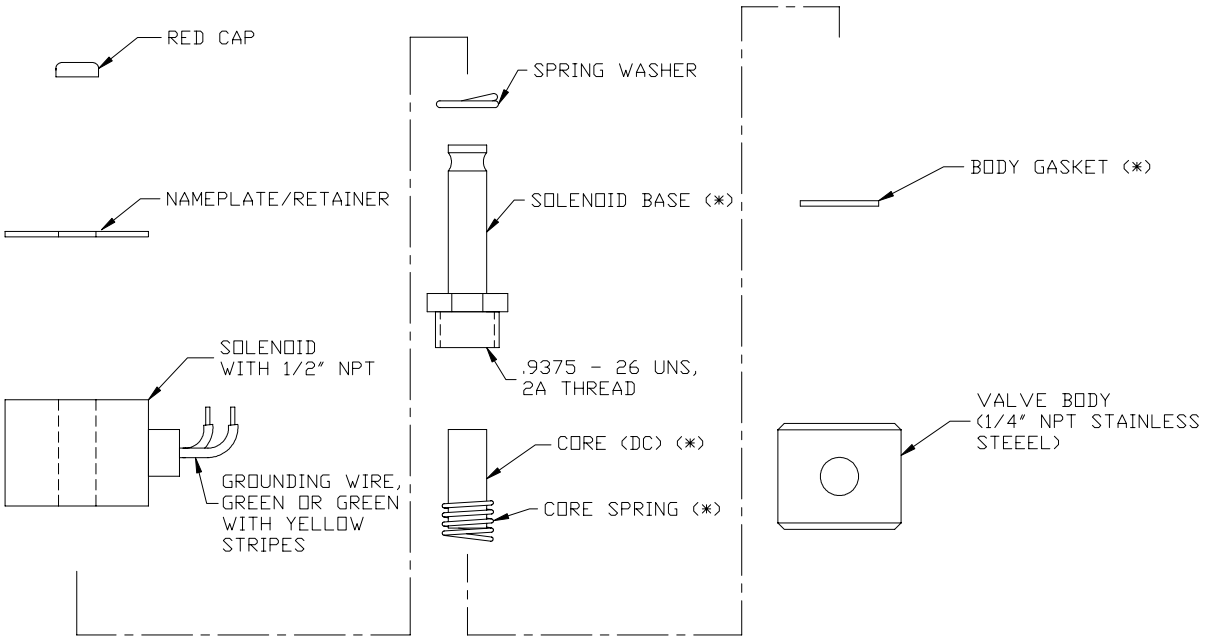
11. All parts are now accessible to clean or replace. If parts are worn or damaged, install a complete ASCO Rebuild Kit

* Indicates parts supplied in rebuild kit (P/N 62650-14).

Note: A spanner nut P/N 62650-15 will be needed for disassembling core housing from body.

2-way Valve Assembly

Valve Disassembly



Valve Reassembly

1. Lubricate all gaskets with high-grade silicone grease.

2. Torque end cap to 175 ± 25 in-lbs [8,5 ± 1,1 Nm]

3. Replace solenoid base gasket, core assembly with core spring and solenoid base sub-assembly or plugnut/core tube sub-assembly and valve bonnet.

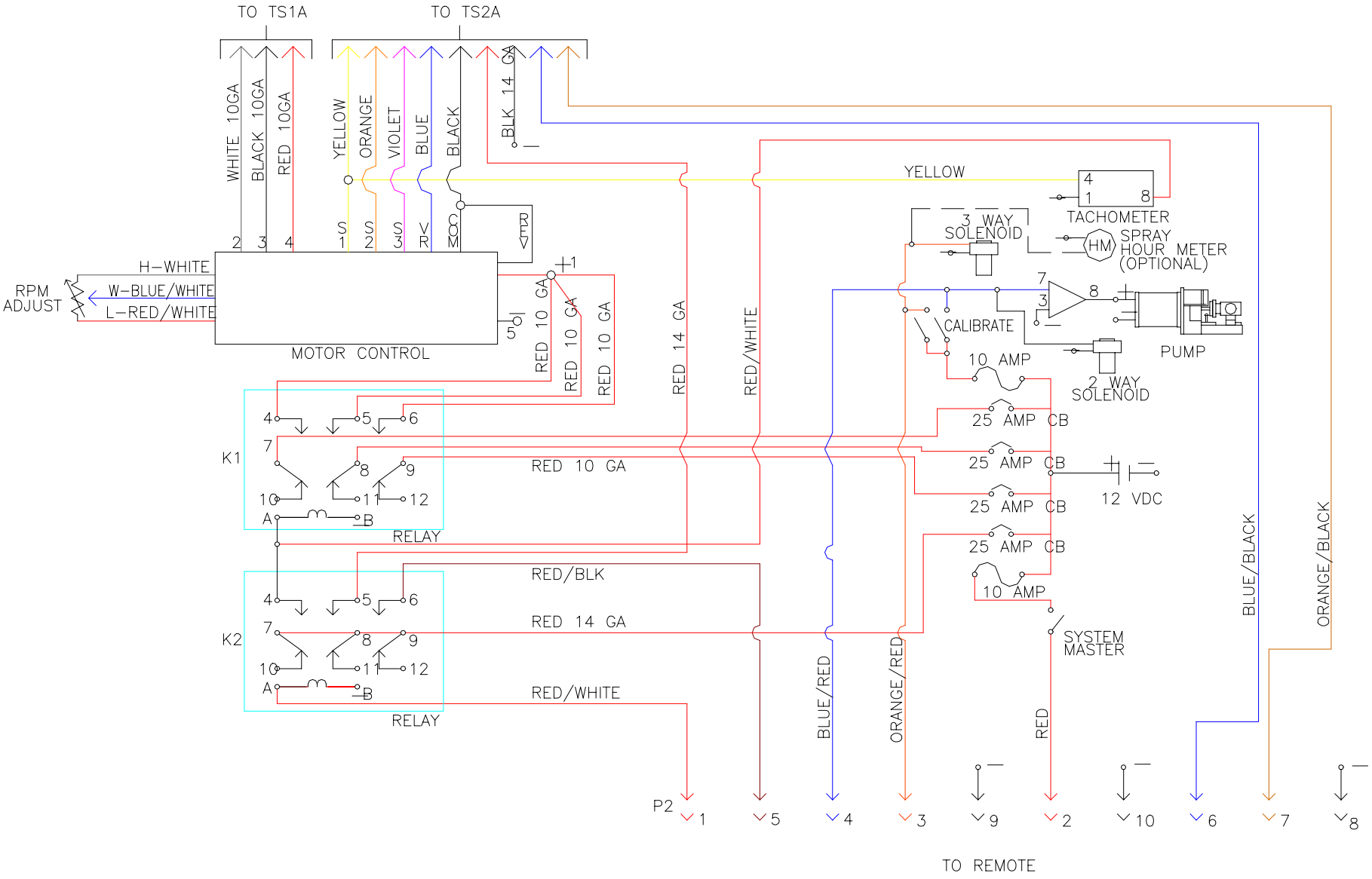
4. Tighten solenoid base sub-assembly.

5. Reinstall solenoid. Then make electrical hookup to solenoid.

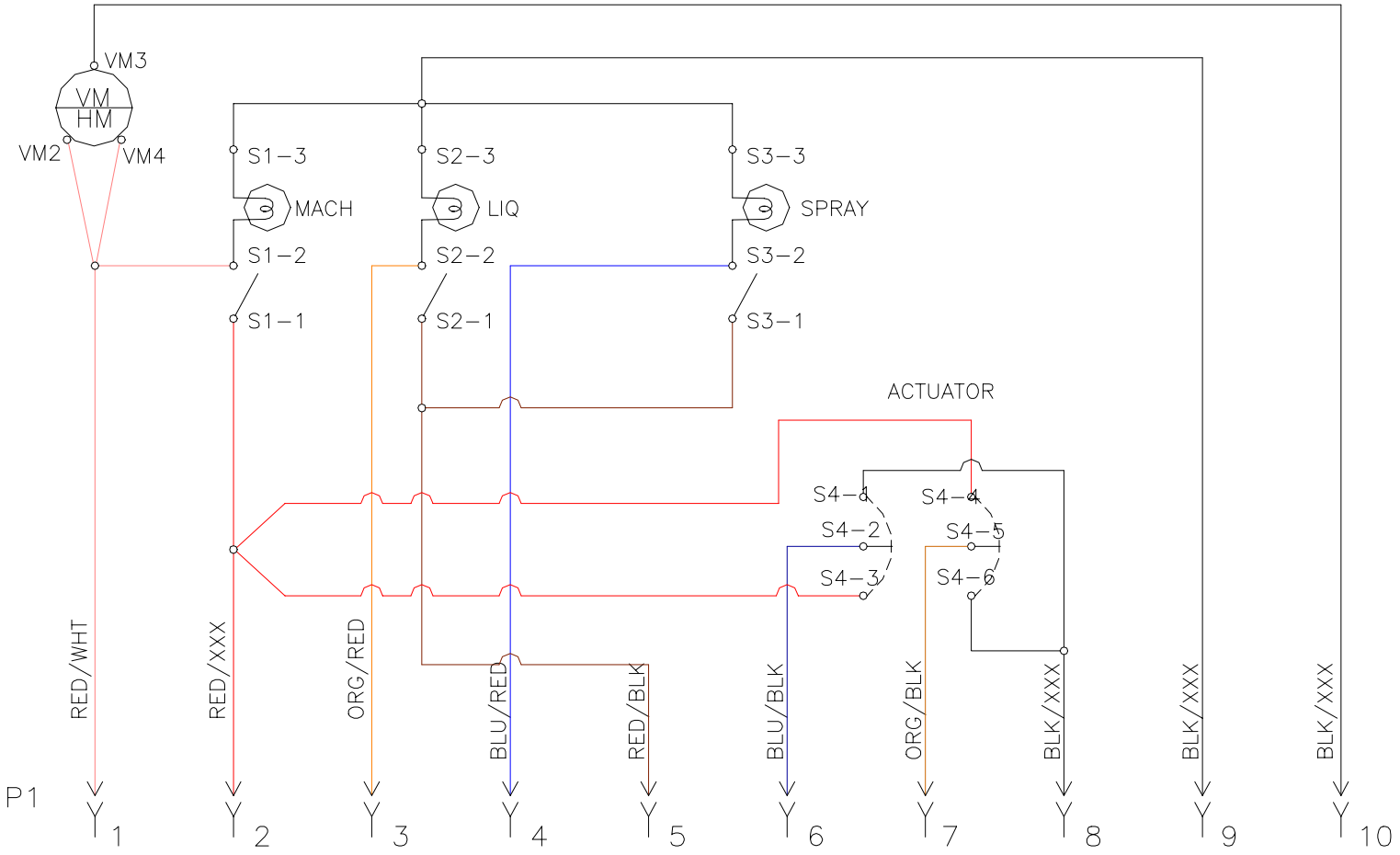
* Indicates parts supplied in rebuild kit (P/N 62650-14).

Note: A spanner nut P/N 62650-15 will be needed for disassembling core housing from body.

Pump Enclosure Wiring Diagram (L30)



Remote Control Box Schematic (L30, Series 1)



Maintaining the L30 Atomizer

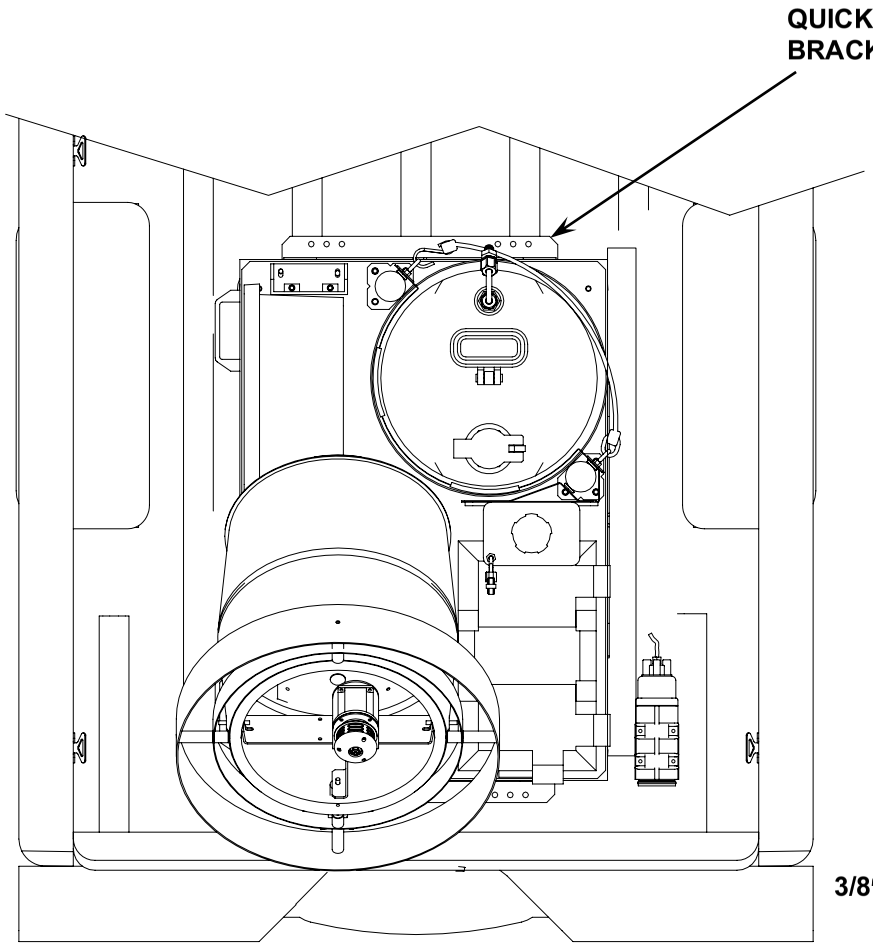
Several design factors are in place to help you maximize the life of the atomizer assembly. Some factors are:

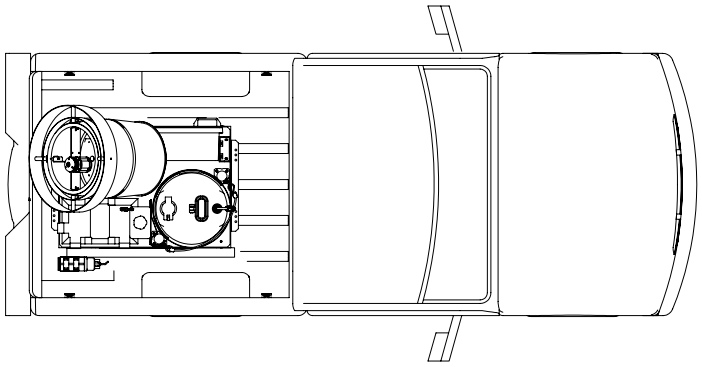
- The atomizer is precision balanced. The rough depressions on the face of the atomizer are normal. These are the spots that were removed during balancing to equalize the mass of the assembly while it is rotating. Balancing enables the atomizer to operate at high speed. If at any time you detect a change in noise of the machine, turn OFF the Machine Switch immediately and inspect the atomizer assembly. Be sure that all fasteners are tight including the ones on the motor mounting bracket. A change in noise is a symptom of a loose atomizer assembly or one that is out of balance. **Do not continue to operate the machine if you suspect the atomizer is out of balance.**
- Two formulation filters are included with your machine. The particle retention is 15 microns. One of the 15 micron filter is installed in the machine from the factory. The other 15 micron filter is included in the service kit. If the spray looks pulsing or intermittent, could be a clogged formulation filter. It need a cleaning procedure. The filter could be changed, if after several cleaning procedures the formulation clogs too rapidly.
- A filter is also installed inside the Flush Tank.

While the Dyna-Jet L30 Atomizer life can be prolonged with routine flushing and cleaning procedures, there becomes a point when the atomizer can become clogged. The number of hours before reaching this point depends greatly on some other key factors:

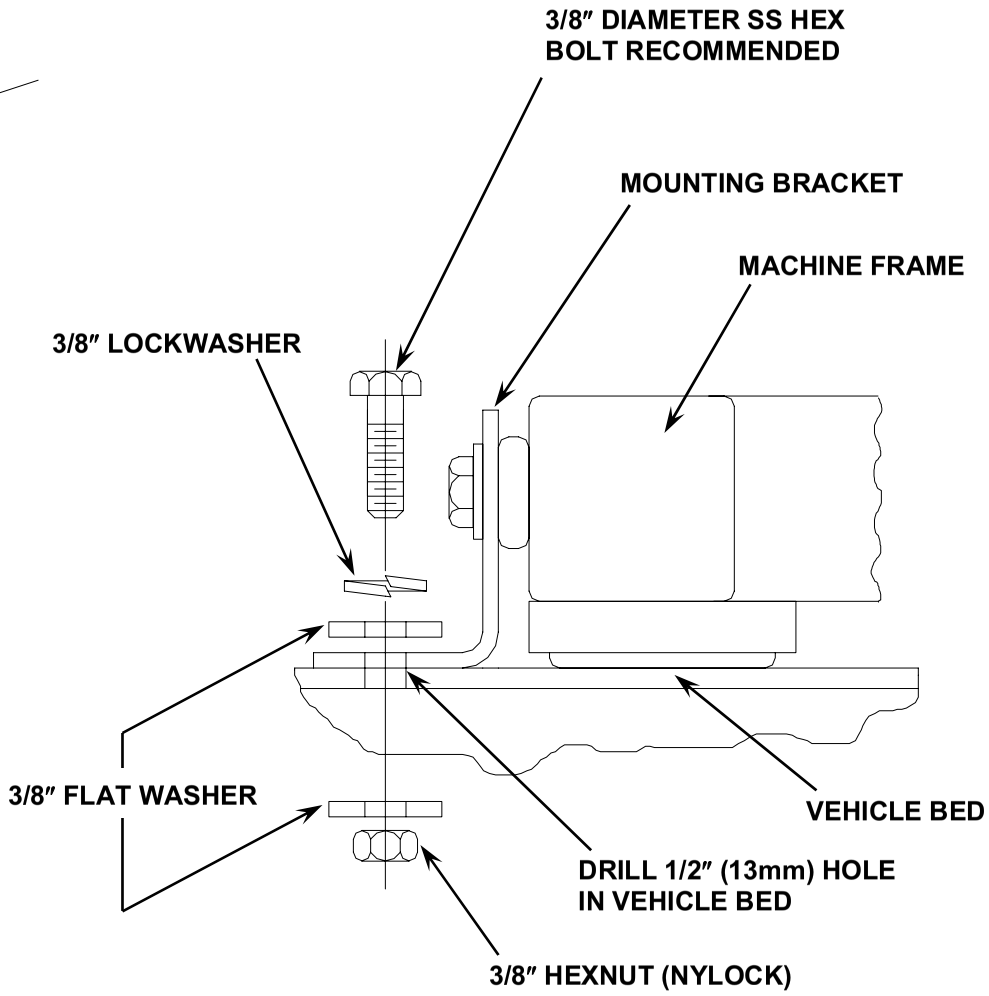
1) How well the formulation is filtered as it is poured into the tank
2) The quality of the formulation
3) Cleaning the formulation filter as required
4) Properly cleaning and handling of the atomizer sleeve
5) Protecting the atomizer when not in use

However, when your atomizer reaches the point of becoming clogged you must exchange the atomizer assembly for a new clean and balanced assembly. Refer to the Atomizer Exchange Program sheet that was shipped with your machine for details on how to handle an atomizer exchange.





TOP VIEW OF VEHICLE

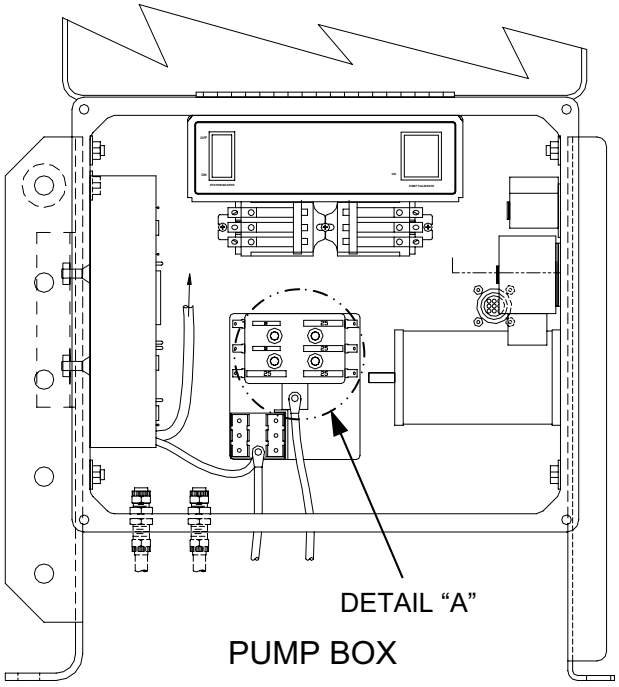


DETAIL VIEW OF MACHINE MOUNTING BRACKET INSTALLATION

Bolts, nuts and washer supplied by the user
(Machine shown with Optional Radar)

FUSE BLOCK

Protective devices like Fuses and Circuit Breakers are included to protect against short-circuits and/or overload currents. The general idea of the fuse is that it melts a conductive link when current gets higher than its rating and thus stops the current flowing.

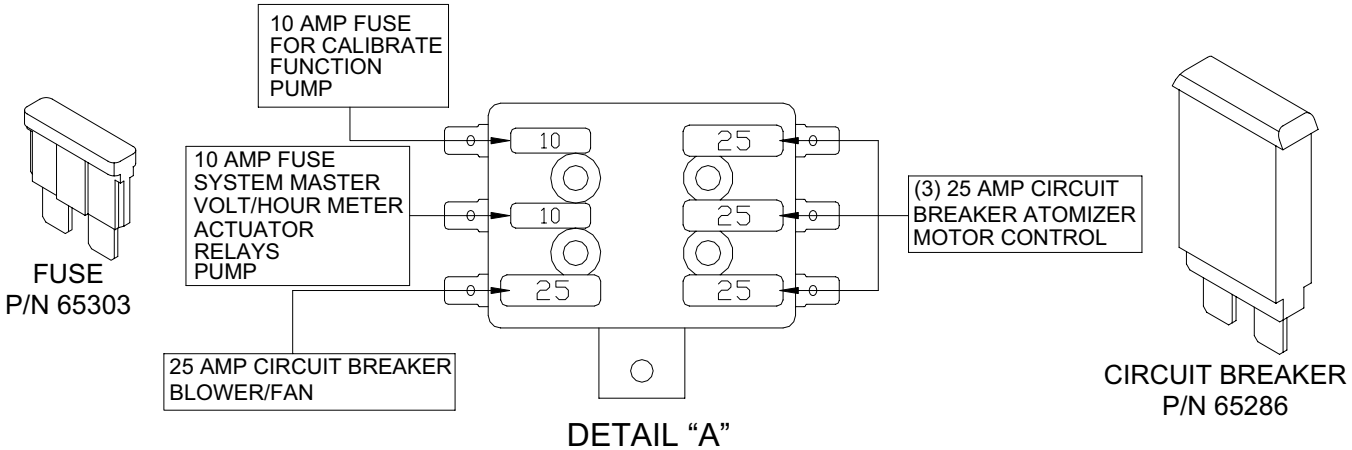


PUMP BOX

The Circuit Breaker is a thermal device used in the motor distribution system for protecting against overload and short-circuits in the system. The circuit breaker has a "switch" on it which opens once the current exceeds its rating. It has a time delay effect with brief over-current conditions (common in motor start up).

Automatic reset circuit breakers will recycle continuously during an over-current condition. The composite alloy material will deflect and separate the contacts when an over-current situation occurs and return to the run mode as it cools. The process will continue until the source of the over-current is removed or corrected.

CAUTION: Each Red Fuse is rated for 10 Amps; do not replace it for one of higher rating. Each Circuit Breaker is rated for 25 Amps. Do not replace it for one of higher rating.



DETAIL “A”

If a fuse blows, or if the circuit breaker opens the circuit, it means that a short-circuit and/or overload situation was present, and a detailed inspection is required to define the condition or fault which caused the protective device to activate.

Conversion Chart

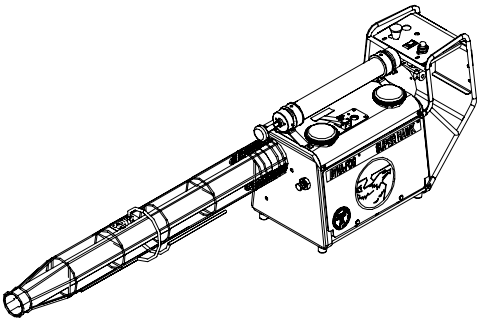
To Convert	To	Multiply By
Millimeters	Inches	.03937
Centimeters	Inches	.3937
Meters	Feet	3.281
Kilometers	Miles	.6213712
Square Meters	Square Feet	10.764
Square Meters	Acres	.000247
Hectares	Acres	2.471
Grams	Ounces (Fluid)	.035
Milliliters	Ounces	.0338
Liters	Gallons (US)	.264
Kilograms	Pounds	2.204

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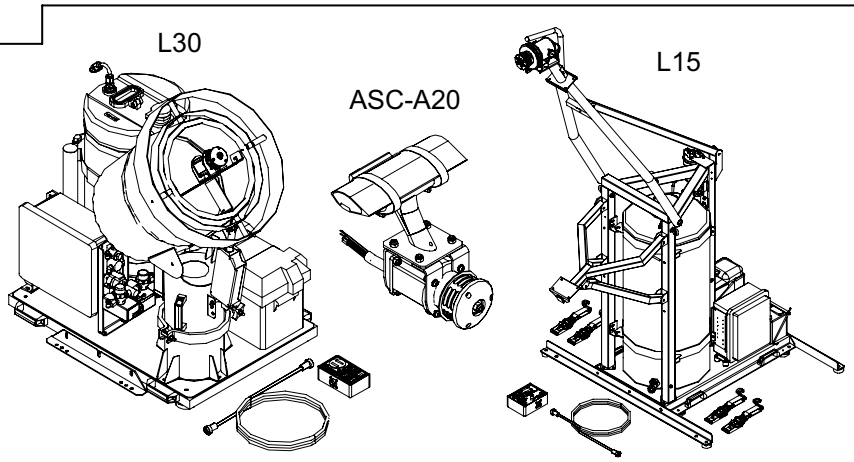
Printout and use for quick reference

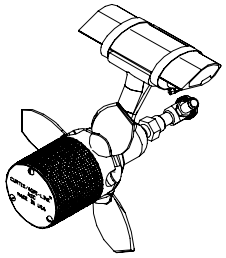
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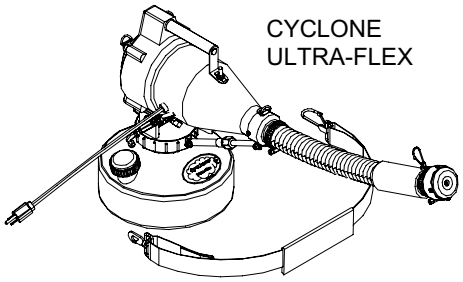
ELECTRIC ROTARY ATOMIZERS:
DYNA-JET L30: State of the Art, Electric Rotary Atomizer ULV Aerosol Generator. 12 VDC, Light Weight, Truck mounted Machine wit FMI pump. Optional Radar Sincroflow.
DYNA-JET L15: Drift Sprayer for migratory pest control like Locust. Flow Rate from 0 to 2000 ml/min. Optional Radar Syncroflow.
ASC-A20: State of the Art, Electric Rotary Atomizer, for use on Fixed Wing and Rotary Wing aircraft.

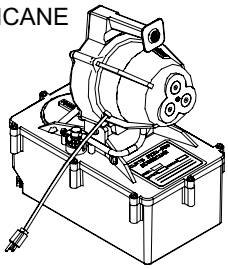


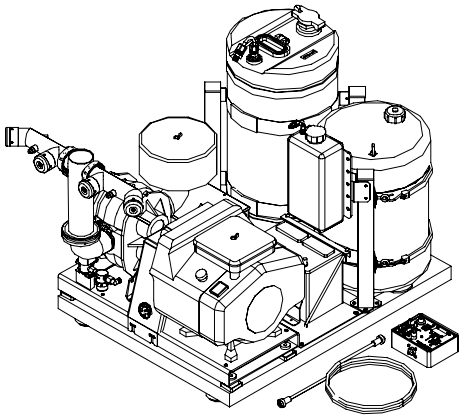


WIND DRIVEN ROTARY ATOMIZERS:
The ASC-A10 is a wind driven atomizer designed for Fixed Wing aircraft. The rotational speed of the atomizer controls the droplet size and can be adjusted by changing the angle of the blades. Also available is the ASC-A10H for Rotary Wing application.
No other Rotary atomizer for aircraft can handle the amount of Flow rate as the ASC Atomizer.
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