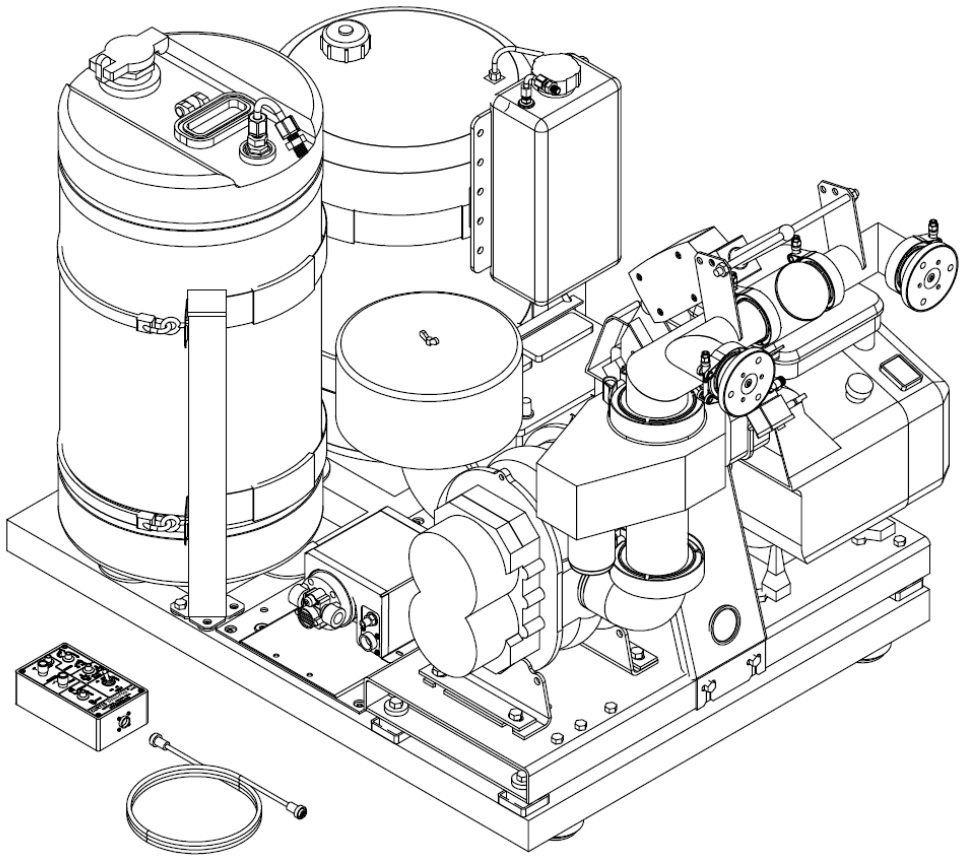
CURTIS DYNA-FOG® Ltd.
"Innovators of Spraying and Fogging Technology Since 1947"

MAXI-PRO™ 2D ULV

Multi-Purpose
Cold Fog Aerosol Applicator



Instruction Manual for Operation and Service

DYNA-FOG® Maxi-Pro™ 2D

MODEL 2745, SERIES 2

Covered By United States Patent Number 6,206,300

Other US and Foreign Patents Pending

Manufactured by:
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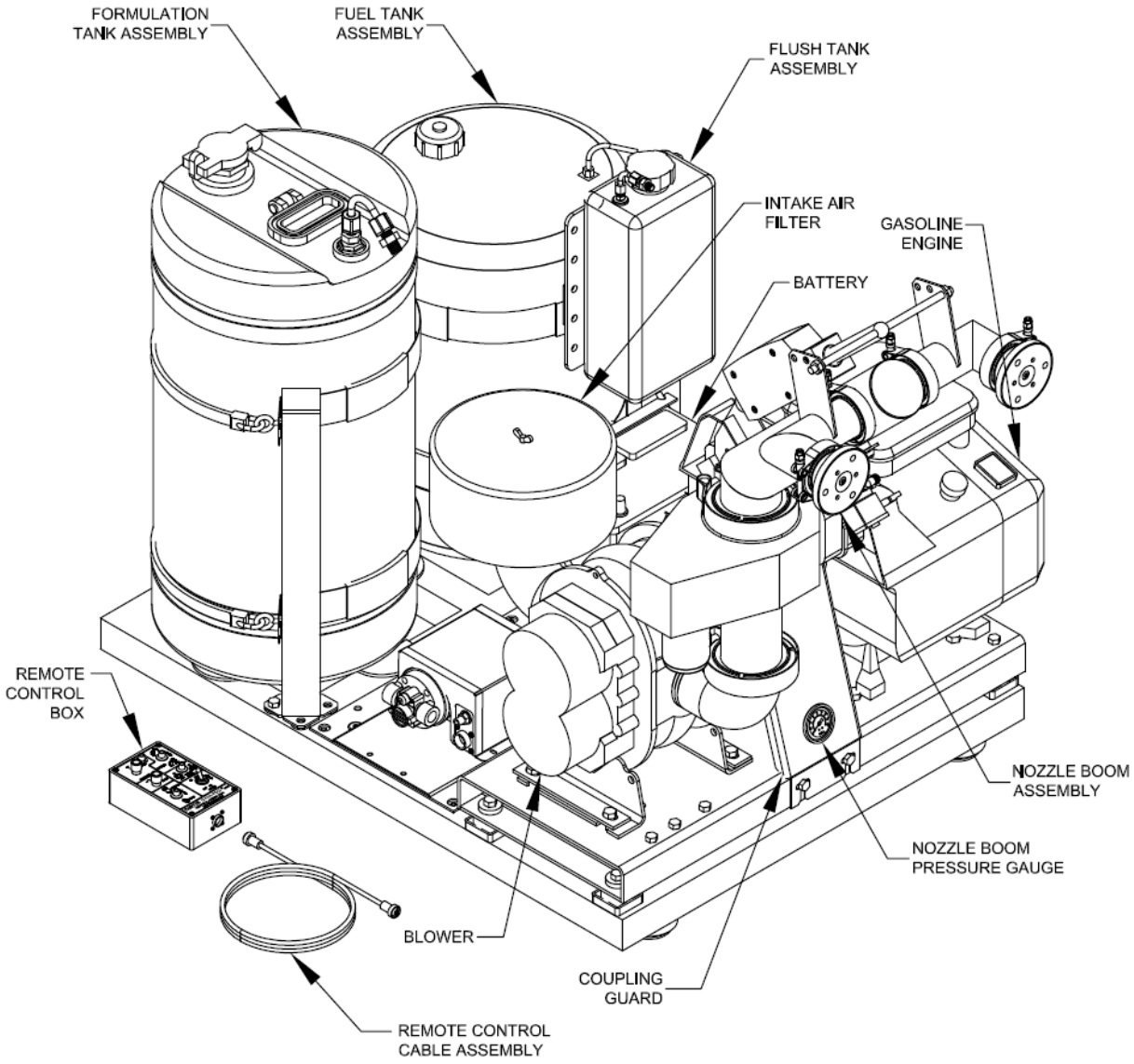
MACHINE SPECIFICATIONS
MAXI-PRO 2D, MODEL 2745 SERIES 2

TYPE:	ULV Chemical Aerosol Applicator
ENGINE:	Briggs & Stratton, OHV Commercial Grade, Twin Cylinder, 4-cycle, gasoline powered, electric start with heavy duty alternator. Tachometer /Hour meter.
BLOWER:	Positive displacement. Straight lobe, rotary type, direct drive. Output Air Pressure: Rated at 0-10 PSI (.68 Bar). Output Air Flow: Rated at 0-400 CFM (11.2 m^3/min.)
FORMULATION PUMP:	2-Types Available: 1) High volume, corrosion resistant diaphragm pump. Flow rate: 0-128 oz/min (0-3.79 L/min) 2) Stainless steel gear pump, digital display with optional radar syncroflow control. Flow rate: 0-18 oz/min (0-.53 L/min)
NOZZLE SYSTEM:	Boom type with dual ULV nozzles. Full, remote control nozzle operation from 0-180° horizontal and 70° total vertical travel. Speed of horizontal nozzle rotation is 180° in 3 seconds.
TANK METERIALS:	Corrosion resistant, high density polyethylene.
TANK CAPACITIES:	Formulation: 15 US Gallons (56.8 liters) Flush: 1 US Gallon (3.79 liters) Gasoline: 12.2 US. Gallons (46 liters)
PARTICLE SIZE:	Meets or exceeds all currently available chemical manufacturers label requirements with 90% or more droplets under 20 microns VMD and can be configured to produce larger droplets if required for special applications. (Consult the manufacturer for further details).
WEIGHT EMPTY:	415 lbs. (188 Kg.)
WEIGHT FILLED:	587 lbs. (266 Kg.)
LENGTH:	59 in. (149.9 cm.)
WIDTH:	37 in. (94 cm.)
HEIGHT:	44 in. (111.8 cm.)
MOUNTING BASE FRAME:	39” L x 30” W (97 cm x 76 cm)

SHIPPING INFORMATION (CRATED).

DIMENSIONS:	47.0” L x 39.5” W x 39” H (119 x 100 x 99 cm.)
VOLUME:	41.9 cu. ft. (1.2 cu. Meter)
SHIPPING WEIGHT:	482 lbs. (219 Kg.)

MAJOR COMPONENTS DIAGRAM



FOREWORD

The application of insecticides is the predominant 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 can be made to be effective. The most efficient method is to break up the liquids into aerosols and distribute these fine droplets over the target area. The small droplets stay suspended for longer periods of time due to their size and are distributed more evenly, remaining effective longer.

The term ULV is an abbreviation for Ultra-Low-Volume, the technology used to treat areas with small amounts of chemical in an aerosol form. These chemicals are usually in a more concentrated state than chemicals used in other methods of application.

For best results, the Dyna-Fog ULV aerosol generator model 2745 should be operated and maintained in compliance with this manual. Insecticides must be applied in compliance with their label instructions.

WARNING

Read and thoroughly understand all information cautions and warnings on the formulation label which may affect personal safety. Know any dangers of the solution used and know what to do in case of an accident involving the solution.

Always use the appropriate safety equipment and dress accordingly to the chemical formulation which is being used.

DESCRIPTION

The Dyna-Fog model 2745 ULV Aerosol Generator is designed to disperse concentrated formulations at flow rates in the range of 0 to 120 oz./min. (0-3548ml/min) with droplet sizes less than 20 microns VMD (Volume-Median-Diameter) depending on boom pressure, flow rate and viscosity of formulation. Maximum flow rate is dependent upon pumping system being used.

This machine is to be vehicle or trailer mounted and is designed to be operated by the driver of the vehicle using the remote control box.

WORKING PRINCIPLES

An 18 Horsepower, electric start, four-cycle gasoline engine with a flexible coupling on its output shaft is used to drive a positive displacement rotary-blower. The air entering the blower is first filtered through a large stainless steel filtering element. The blower supplies air pressure to the nozzle. The air pressure is adjustable between 2-8 PSI (0.14 - 0.69 Bar) by varying the engine speed and/or removing the air bleed orifice at the boom. The formulation is delivered to each nozzle by means of a variable speed positive displacement, rotary gear pump that draws the formulation from the tank, through a filter and 3-way valve, and into each nozzle. The nozzle has six stationary fins that create a swirling effect of the air mass as it leaves each nozzle. In the center of this swirling air mass is a liquid supply spray tube. The spray tube directs the formulation into the air mass where it is sheared into billions of tiny droplets and dispersed into the atmosphere.

This unit is equipped with a flushing system that is controlled from the remote control unit. The flushing liquid is conveyed to the nozzles in the same manner as the formulation. **The system must be flushed after each use.** See following page the Fluid Systems Diagram.

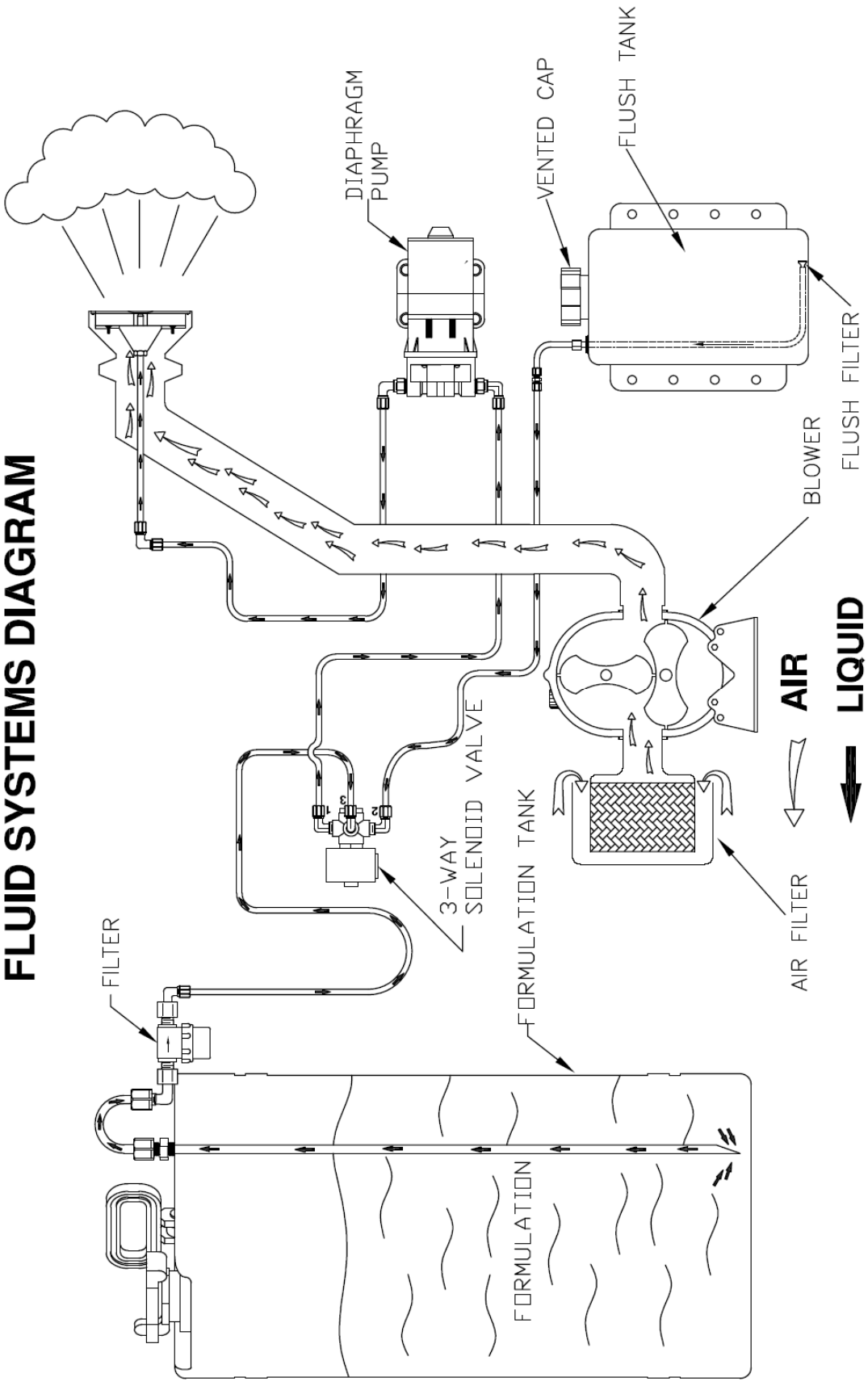
FLUID PUMPING SYSTEMS

There are two types of pumping systems available for the Maxi-Pro 2D:

1) **Diaphragm Pump**: This high volume pumping system utilizes a diaphragm type pump with a needle valve on its outlet port to regulate liquid flow. Once the liquid flow rate has been set, this is the flow rate that will be obtained when the operator activates the SPRAY ON/OFF switch.

2) **Rotary Gear-Pump**: This pump is driven by a variable speed electric motor. All functions are controlled from the remote control box. Once the pump has been set to the desired flow rate, that flow rate will be obtained when the operator activates the SPRAY ON/OFF switch. When adapted with the Dyna-Fog Radar Syncroflow feature, the flow rate of the pump will automatically vary with vehicle speed.

FLUID SYSTEMS DIAGRAM



ASSEMBLY INSTRUCTIONS

1) Uncrate the unit and remove all packing materials.

NOTE: It is a good idea to retain the original machine shipping carton for storage.

2) Place the remote control unit where it will not be damaged while the machine is being installed.

3) Remove the machine from the shipping skid by removing the three lag screws that retain the shipping brackets. Keep the brackets for mounting the machine to your vehicle or trailer bed.

4) Check the lubricating oil level in both the engine and blower. Refer the engine and blower sections of this manual and to the engine and blower manuals for the correct filling procedure and add oil if necessary.

5) Activate the dry charge storage battery according to the following instructions:

CHARGING THE BATTERY

DANGER: POISON

Batteries produce explosive gases. Keep sparks, flame and cigarettes away! Ventilate when charging or using in an enclosed space.

The battery contains Sulfuric Acid, which causes severe burns. If acid contacts eyes, skin or clothing, flush well with water. For contact with eyes, get immediate medical attention.

Keep battery and acid away from children and other persons who may not be aware of dangers involved.

A. Remove battery from its mounting and place on a stable workbench.

B. Remove vent caps from battery. Remove or destroy any sealing device which may have been used to close or restrict the vent openings in the vent caps.

C. Fill each cell of the battery to the top of the separators with approved battery electrolytes of 1.265 specific gravity.

NOTE: The temperature of the battery and electrolyte at time of filling should be above 60^0F. (15^0C).

CAUTION

NEVER FILL BATTERY IN MACHINE AS SPILLS WILL DAMAGE FINISH AND CAUSE PREMATURE CORROSION AND/OR DAMAGE TO COMPONENTS.

D. Charge 12 volt battery at 3 - 4 amps until the acid temperature is above 80°F (26° C), and the hydrometer reading is 1.250 or higher. Acid temperature must never exceed 125 °F while charging.

NOTE: Both temperature and hydrometer readings must be met.

E. After charging the battery, check acid levels in all cells and fill each cell with acid to the proper level.

F. Re-install vented caps.

G. Re-install the battery onto the machine in same position as it was before being connect the RED positive (+) cable to the positive terminal of the battery and fasten it securely with the hardware provided.

H. Connect the BLACK negative (-) cable to the negative terminal of the battery and fasten it securely with the hardware provided.

I. Connect the BLACK negative (-) cable to the negative terminal of the battery and fasten it securely with the hardware provided.

CAUTION

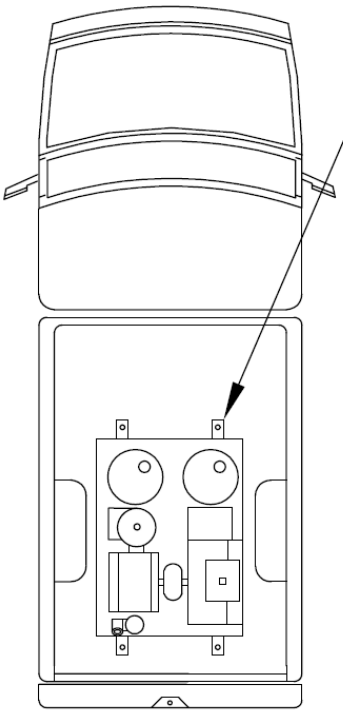
- ***When installing the battery, connect the negative (-) cable last to prevent sparking and shorting.***
- ***When disconnecting is required, remove the negative (-) cable first.***
- ***Reverse polarity can cause damage to the starting and charging system.***

After battery has been initially service, only water should be added to restore the liquid level in each cell. Further addition of acid will cause battery failure.

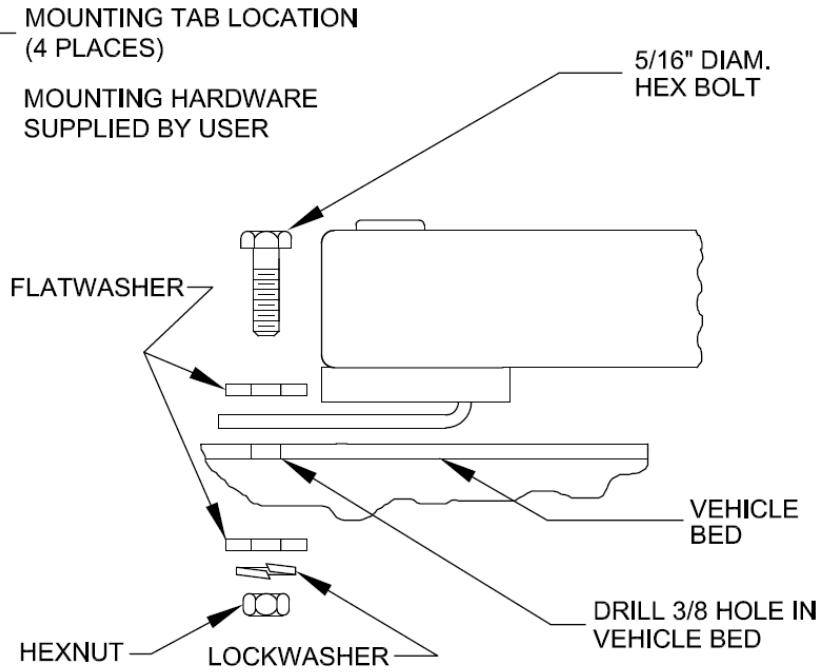
MACHINE INSTALLATION

1. Remove the machine from the skid and lift the machine onto the vehicle with the discharge end of the machine toward the rear of the vehicle.

2. Pass the remote control unit through an open window and locate it within reach of the person operating the machine. If permanent vehicle installation is desired, the remote control cable can be fed through a clearance hole in the vehicle chassis and then reconnected. When boring holes, ensure that all sharp edges are removed and covered to prevent premature wear of the remote cable. When routing the cable to the vehicle cab, do not allow the cable to be exposed to any sharp edges. Avoid sharp bends when routing the cable. Once the cable has been routed to the cab, reseal all drilled openings to prevent moisture and/or exhaust gases from entering the cab.



TOP VIEW OF VEHICLE



DETAIL VIEW OF MACHINE MOUNTING
BRACKET INSTALLATION

3. Using the (3) hold-down brackets used for mounting the machine to the shipping skid, securely mount the machine to the bed of the vehicle (see diagram below). Depending on the type of bed surface, it may be necessary to use additional mounting hardware to secure the machine.

WARNING

NEVER ATTEMPT TO OPERATE THE MACHINE WITHOUT FIRST VERIFYING THAT IT IS SECURELY MOUNTED. FAILURE TO DO SO COULD RESULT IN SEVERE INJURY.

SAFETY PRECAUTIONS

WARNING

READ AND UNDERSTAND THESE SAFETY PRECAUTIONS BEFORE OPERATING MACHINE

1. **ENGINE AND FUEL;** This machine uses gasoline as the fuel for the internal combustion engine and all precautions commonly applying to this volatile fuel should be observed. Exercise extreme caution to avoid spilling of gasoline. If spillage occurs, wipe it off and allow evaporation time before starting the engine. DO NOT attempt to put fuel in tank while the machine is still running. Avoid smoking or open flames in area when handling gasoline. Never run the unit indoors unless exhaust is vented to outside. These fumes contain carbon monoxide which is colorless and odorless and can be fatal.

CAUTION

DO NOT OPERATE ENGINE WITHOUT MUFFLER.

NOTE: The engine is equipped with a muffler that has a U.S. Forestry Service approved spark arrester which is required by law in some states.

DO NOT TOUCH HOT MUFFLER, CYLINDERS OR FINS AS CONTACT MAY CAUSE BURNS.

EXCEPT FOR ADJUSTMENT, DO NOT OPERATE THE ENGINE IF AIR CLEANER OR COVER DIRECTLY OVER THE CARBURETOR AIR INTAKE IS REMOVED.

DO NOT RUN THE UNIT IF THE COUPLING GUARD IS REMOVED.

DO NOT TAMPER WITH GOVERNOR SPRINGS, GOVERNOR LINKS OR OTHER PARTS WHICH MAY INCREASE OR DECREASE THE GOVERNED ENGINE SPEED.

2. **MACHINE DAMAGE**: Never operate a machine after it has been damaged. A damaged machine can be very hazardous.

3. **WIND:** Spraying during windy conditions is not usually practical because the formulation will drift out of the intended area. However, under **NO** circumstances should spraying into the wind be attempted. This may cause hazardous accumulations on the machine or carrying vehicle.

4. **SAFETY EQUIPMENT:** In addition to any safety equipment that may be required by the type of formulation which is being used, the following items should be mandatory for each vehicle which carries this machine during fogging operations.

a. Fire Extinguisher, chemical-type rated for fuel fires.
b. First Aid Kit.
c. Eye Wash Solution.
d. Safety Glasses.
e. Container of Oil Dry Compound.
f. Gloves Rated for High Temperature.
g. Respirator Adequate for Formulation being used.

5. **CHILDREN:** Many spraying operations are performed in residential areas, commonly at dusk. This presents the operator with the problem of children who are attracted to the noise and/or mist being created. Children have been observed running into and riding bicycles through the mist. The possible hazard lies in the toxic effect of some formulations, the severity of which depends upon the chemical used, mist density and the length of time of direct exposure.

IT IS THE OPERATOR'S RESPONSIBILITY TO DISCOURAGE ANYONE FROM PLAYING IN THE MIST OR BEING NEAR THE MOVING VEHICLE.

6. **FORMULATIONS:** Ensure that formulations are applied only in strict compliance with the formulation label as well as local, state and federal regulations and that these formulations are dispersed only by trained personnel of public health organizations, mosquito abatement districts, pest control operators or other qualified personnel.

a. Always comply with any requirements for protective clothing, goggles, gloves, facial masks or respirators required on the formulation label.

b. Do not exceed the dosage set forth on the registration label of the insecticide to be used.

c. Always store formulation in its original labeled container.

7. **BLOWER PRESSURE:** Do not operate with blower pressure above 8 psi, and never under any circumstance exceed 10 psi. For most applications, a blower pressure (nozzle pressure) of 6-7 psi is satisfactory (see table 2).

MACHINE OPERATION

CAUTION

READ THIS COMPLETE OPERATION SECTION AND THE SECTION ON SAFETY PRECAUTIONS BEFORE STARTING THE MACHINE FOR THE FIRST TIME.

For first time operation, the sections on MACHINE INSTALLATION and MACHINE OPERATION must be performed before proceeding with this section.

When operating this machine for the first time, move to an uncongested and well-vented work area away from flammable materials.

WARNING

READ THE SECTION ON SAFETY PRECAUTIONS BEFORE PREPARING TO DISPENSE FORMULATION.

READ AND THOROUGHLY UNDERSTAND ALL INFORMATION, CAUTIONS AND WARNINGS ON THE FORMULATION LABEL WHICH MAY AFFECT PERSONAL SAFETY. KNOW ANY DANGERS OF THE SOLUTION USED AND KNOW WHAT TO DO IN CASE OF AN ACCIDENT INVOLVING THE SOLUTION.

ALWAYS USE THE APPROPRIATE SAFETY EQUIPMENT AND DRESS ACCORDING TO THE CHEMICAL FORMULATION WHICH IS BEING USED.

WARNING

- ***DO NOT USE ANY SUBSTANCES FROM UNMARKED CONTAINERS OR FROM CONTAINERS WITH OBVIOUSLY ALTERED LABELS.***
- ***READ AND FOLLOW THE INSTRUCTIONS ON THE CHEMICAL SOLUTION LABEL FOR ULV SPRAYING OF THE SOLUTION .***
- ***DO NOT SPRAY NEAR AN OPEN FLAME OR HOT MATERIALS.***
- ***DO NOT LEAVE THE MACHINE UNATTENDED.***

PRE-SPRAY CHECK LIST

1. Verify that the remote control box is within easy reach of the operator.
2. *Verify that the adjustable nozzle boom is in the correct position as required for the spraying operation to be accomplished, and that the ring clamp which allows this positioning is tight.*
3. *Verify that the engine has sufficient fuel and is properly lubricated.*
4. *Verify that the blower has been serviced.*
5. *Inspect all hoses for abnormal conditions.*
6. *Verify that no foreign objects or tools have been left in or about the machine.*
7. *Verify that the sufficient amount of formulation is in the tank and that the tank filling cap is tight and it's air vent hole is not restricted.*
8. *Verify that the battery is mounted securely and cable connections are proper and tight.*
9. *Verify that all safety equipment is in place and is in proper working order.*
10. *Verify that the flow rate control has been calibrated and is dispensing formulation in accordance with the manufacturers label requirements.*

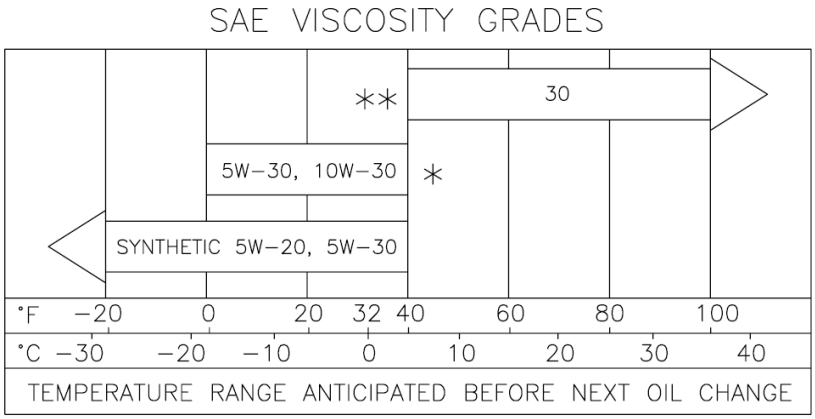
CAUTION

BEFORE PROCEEDING WITH ANY SPRAYING OPERATION, THE OPERATOR SHOULD BE THOROUGHLY FAMILIAR WITH STARTING AND STOPPING THE MACHINE AND WITH ALL THE OPERATING^ CONTROLS. IF YOU ARE OPERATING THE MACHINE FOR THE FIRST TIME, EXERCISE THE MACHINE THROUGH ITS FULL OPERATIONAL SEQUENCES FROM A POSITION OF FULL VISIBILITY OF THE MACHINE BEFORE OPERATING THE MACHINE FULLY REMOTE. THIS IS ALSO A GOOD IDEA FOR EXPERIENCED OPERATORS WHO MAY BE OPERATING A NEW MACHINE OR WHO MAY BE REACTIVATING A MACHINE AFTER REPAIRS OR A PERIOD OF INACTIVITY. REFER TO THE ENGINE MANUAL FOR STARTING AND STOPPING INSTRUCTIONS.

ENGINE PREPARATION

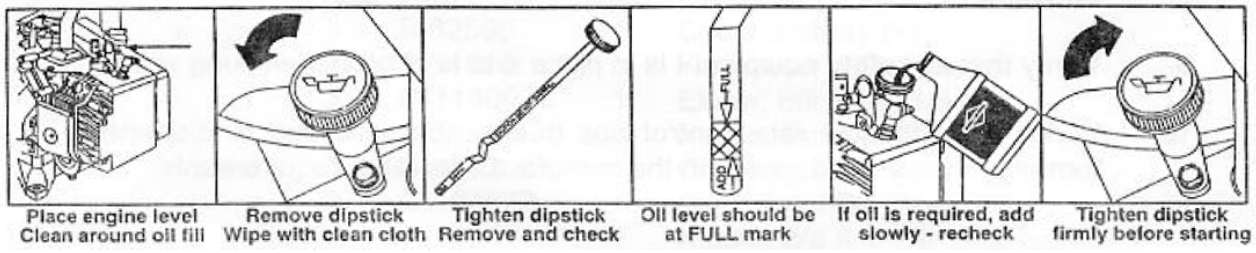
Oil Recommendations

Change and add oil according to chart below. Do not overfill. Use high quality detergent oil classified "For service SC, SD, SE, SF, SG" as B&S "warranty certified" SAE 30 oil, part no. 100005. Use no especial additives with recommended oils.



(*) Air cooled engines run hotter than automotive engines. Use of multi-viscosity oils (10W-30, etc.) Above 40 °F (4°C) will result in high oil consumption and possible engine damage. Check oil level more frequently if using these types of oil. (**) SAE 30 oil, if used below 40 °F (4 °C), will result in hard starting and possible engine bore damage due to inadequate lubrication. Check oil level before starting engine. Add oil (If required) as shown below.

Start and run the engine at idle for 30 seconds. Shut engine off. Wait 30 seconds and check oil level. Add oil to bring level to Full mark on dipstick, if required.



Oil capacity is about 1.5 quarts (1.4 liters) if engine is not equipped with oil filter. Oil capacity is about 1.75 quarts (1.7 liters) if engine is equipped with oil filter.

Note :Engine is shipped from factory without oil. Before starting the engine, check oil level.

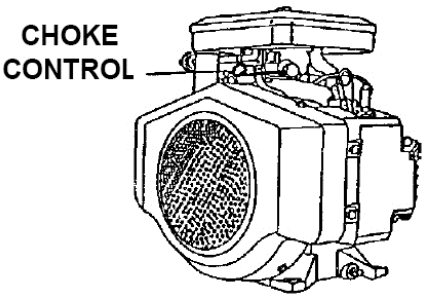
Fuel Recommendations

The engine will operate satisfactorily using any automobile gasoline. Use clean, fresh, lead-free gasoline with a minimum of 77 Octane. (Leaded gasoline may be used if it is commercially available, and if lead-free is not available). Purchase fuel in quantity that can be used within 30 days. DO NOT MIX OIL WITH GASOLINE.

B&S does not recommend using gasoline which contains alcohol, such a gasohol. If gasoline with alcohol is used, it must contain less than 10% Ethanol and must be removed from engine during storage. Do not use gasoline which contains Methanol. Fuel Level : Do not overfill. Allow space in fuel tank for fuel expansion.

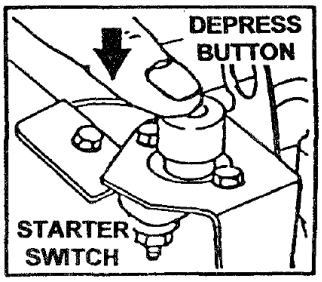
STARTING THE ENGINE

1. CHOKE ENGINE: Move engine choke control to position lever in "choke" position (pulling the control rod). NOTE: This should fully close choke on carburetor.



Note: The manual choke is provided for cold starting of the engine. Once the engine has been allowed to warm-up, choking the engine should not be needed for restarting.

2. TURN "ON" THE MACHINE "ON/OFF" SWITCH: Position Machine "ON/OFF" switch on the remote control box to "ON" position. Also verify that the "OUTPUT" switch on the remote control box is in the "OFF" position.

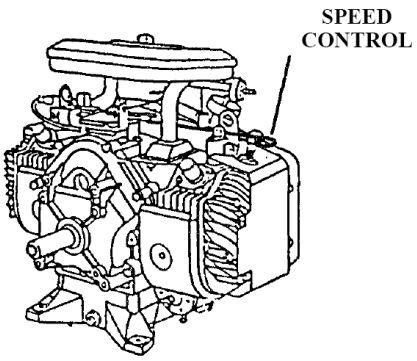


3. TURN "ON" (RUN) THE "RUN/STOP" SWITCH:

Position the kill switch on engine to "ON". This switch is located next to the starter button.

4. START ENGINE: Activate the spring-loaded starter switch on the engine or activate the toggle switch on the remote control box to the start position. NOTE: To prevent overheating the engine starter motor, do not activate the motor longer than 15 seconds at a time.

5. SET ENGINE SPEED: Allow the engine to warm-up and gradually move the choke lever to the "un-choked" position (pushing the control rod).



Adjust the engine Speed control to achieve the desired Boom Pressure, by pulling the control rod to increase the engine speed (increase the boom pressure).

The engine speed control is located close to the cap of the oil level indicator (dipstick).

MEASURING LIQUID FLOWABILITY (VISCOSITY)

In order to achieve consistent results in generating aerosols with a volume-median-diameter (VMD) in the sub 20 micron range, several variables must be kept under control at the same time. The ability of an aerosol generator to consistently break up a liquid into appropriate sized droplets depends on (3) key elements:

1. The available energy flow (air flow) through the nozzle is governed by the blower speed. As the air mass and its velocity through the nozzle decreases, the droplet size (VMD) will increase assuming that the liquids viscosity and flow rate remains constant.

2. The flow rate of the liquid governed by the speed of the liquid pump.

3. The viscosity of the liquid.

Various liquids have different viscosities. Viscosity is defined as a fluids resistance to flow commonly measured in units of a centipoises (CP). Generally, the thicker the liquid, the greater the viscosity and the higher the CP number. Examples of some liquid viscosities are:

LIQUID	VISCOSITY (CP)
WATER	**1**
DIBROM	**3-4**
PYRETHRIN, RESMETHRIN	**6-7**
DURSBAN 1.5 ULV	**12-14**
TECHNICAL MALATHION	**28**

By measuring the flow ability of a liquid, adjusting the engine speed to produce the desired nozzle boom pressure, and by setting the flow rate on the digital readout remote control box, accurate particle size can be achieved.

To measure the flow ability (viscosity) of your formulation:

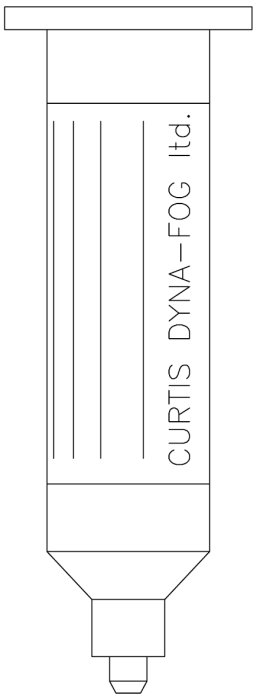
1. Place a sample of the formulation liquid to be dispensed in the relative viscosity meter provided with the machine such that the liquid level is above the top line.

2. Hold the meter vertical and allow the liquid to flow through the brass orifice at the outlet end of the meter into an appropriate container.

3. Using a stopwatch or a watch with a sweep second hand, determine the flow ability time in seconds that it takes for the liquid level to fall from the top line to the bottom line.

Once the flow ability of the liquid has been measured, tables 1 and 2 can be used as an approximate guide for setting the pump flow rate and nozzle boom pressure for your spray application.

NOTE: Periodically calibrate the flow ability meter using plain water. Water should flow through the orifice such that the time between the top line and the bottom line is 32 + 2 seconds.



LINE NO. 1

COUNT SECOND IT TAKES
FLUID TO DRAIN FROM LINE
NO.1 TO LINE NO. 2
(FLOWABILITY TIME)

LINE NO. 2

CAUTION

Follow all warnings and cautions on your formulation label. Do not attempt to apply any formulation at a rate greater than what is specified on the formulation label. This includes driving your vehicle at a rate slower than what is specified.

TYPICAL FLOW RATES FOR INSECTICIDES

TABLE 1

	FLOW RATE			
VEHICLE SPEED **MPH**	DURSBAN (CHLORPYRIFOS) **OZ/MIN**	PYRETHRIN **OZ/MIN**	D1BROM **OZ/MIN**	TECHNICAL MALATHION **OZ/MIN**
5	1.4-2.7	2.0-2.5	3.0-6.0	1.0-2.1
10	2.7-5.3	4.0 - 5.0	6.0-12.0	2.0-4.3
15	—	6.0-7.5	9.0-18.0	3.0-6.5
20	—	8.0-10.0	—	4.0-8.6
	FLOW RATE			
VEHICLE SPEED **KM/HR**	DURSBAN (CHLORPYRIFOS) **ML/MIN**	PYRETHRIN **ML/MIN**	DIBROM **ML/MIN**	TECHNICAL MALATHION **ML/MIN**
8	42-81	60-75	90-180	30-63
16	81 -159	120-150	180-360	60-129
24	—	180-225	270 - 540	90-195
32	—	240 - 300	—	120-258

CAUTION

The above rates are examples of typical application rates found on their respective formulation labels. Refer to the label of your formulation to determine the actual application rate before calibrating your machine to any of the above flow rates.

Once the flow ability of the formulation to be sprayed has been determined, and the formulation pump has been calibrated, select one of the three tables (see next page) that is closest to the flow ability of the formulation to be sprayed (34, 40 or 88 seconds). Then match the closest flow rate in the left hand column with the flow rate specified on the formulation label. A boom pressure can then be selected that will produce a particle size in accordance with the formulation label. Remember, with a constant flow rate supplied to the nozzle system, increasing nozzle boom pressure will decrease particle size.

PARTICLE SIZE (VMD) IN MICRONS RESPECT TO FLOW RATE AND BOOM PRESSURE

TABLE *2*

DIBRON (NAILED) (TIME THROUGH FLOW METER APPORX. 34 SECONDS)						
LIQUID FLOW RATE **OZ/MIN**	LIQUID FLOW RATE **ML/MIN**	**BOOM PRESSURE**				
		8PSI	***8PSI***	**4PSI**	**3PSI**	**2PSI**
1	30	4.7 VMD	5.7 VMD	8.4 VMD	10 VMD	14 VMD
5	150	5.2 VMD	6.7 VMD	9.5 VMD	16.5 VMD	17 VMD
12	360	6.3 VMD	7.5 VMD	12.3 VMD	20 VMD	22 VMD
18	540	7.1VMD	8.2 VMD	16.1 VMD	24 VMD	26 VMD

TABLE 3

PYRETHRIN (TIME THROUGH FLOW METER APPORX. 40 SECONDS)						
LIQUID FLOW RATE **OZ/MIN**	LIQUID FLOW RATE **ML/MIN**	**BOOM PRESSURE**				
		8PSI	**6PSI**	**4PSI**	**3PSI**	**2PSI**
1	30	5 VMD	6.1 VMD	13.8 VMD	14.5 VMD	15.2 VMD
5	150	6.2 VMD	8.5 VMD	15.5 VMD	18.9 VMD	20.3 VMD
12	360	7.9 VMD	11.8 VMD	17.4 VMD	23 VMD	25.7 VMD

TABLE 4

MALATHION (TIME THROUGH FLOW METER APPORX. 88 SECONDS)						
LIQUID FLOW RATE **OZ/MIN**	LIQUID FLOW RATE **ML/MIN**	**BOOM PRESSURE**				
		8PSI	**6PSI**	**4PSI**	**3PSI**	**2PSI**
1	30	7.2 VMD	9.7 VMD	15.1 VMD	14 VMD	18 VMD
5	150	10.3 VMD	12.6 VMD	17.8 VMD	21.1 VMD	25.6 VMD
12	360	14.7 VMD	18.2 VMD	22.1 VMD	27.8 VMD	30 VMD

Note : Boom plugs must be removed when obtaining pressure of 2 and 3 psi.

SYNCROFLOW SYSTEM

When equipped, the Curtis 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 0 to 20 m.p.h. (0-32.2 km/hr)

Either system can be actuated by a toggle switch located in the side of the pump control box which is located on the pump enclosure.

When the syncroflow system is actuated, electronic pulses are fed from the speedometer transmission transducer 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.

SPRAYING – SYNCROFLOW

1. Place the formulation to be used in the formulation container.

CAUTION

Carefully read the formulation label for safety precautions and application rate.

2. Ensure that all switches on the remote control box are in the OFF position.

3. Place the MANUAL - SYNCROFLOW toggle switch which is located on the formulation pump control box into the Syncroflow position.

4. If the required Output rate if 0.3 to 1.8 ounces per minute (9 ml/min to 54 ml/min), contact the factory to set the rate range connections in the chassis interface boxto the LOW position, then place the Function Select switch remote control box in either position 1 or 3 as appropriate. If the required Output rate is 1.8 to 18 ounces per minute (standard factory setting in the pump control box), place the Rate Range switch in the HIGH position and the Function Select switch in position 2 or 4 as appropriate.

5. Place the MACHINE switch on the remote control box in the ON position.

6. Place the RUN-STOP (ON-OFF) switch located on the engine in the RUN (ON) position and start the engine (see STARTING ENGINE section).

7. Place the MODE switch on the remote control box in the SPRAY position.

8. Observe that, the MACHINE light and the SPRAY light are ON and the FLUSH, OUTPUT and FAULT Sights are not ON.

9. The digital rate readout should read zero.

10. Start the vehicle in motion and place the OUTPUT switch on the ON position.

11. Adjust the knob for the rate of flow specified by the formulation label that pertains to your vehicle speed.

Example: If a formulation label calls for an output of 3 oz at 5 MPH (89 ml at 8 Km/h), 6 oz at 10 MPH (177 ml at 16 Km/h), 9 oz at 15 MPH (266 ml at 24KM/h), and 12 oz at 20 MPH (335 ml at 32 Km/h), you may set the flow rate at any of these speeds. If the vehicle is moving at 10 MPH (16 Km/h), set the rate knob to dispense 6 oz (177 ml), which will appear on the digital readout window. Once the rate of 6 oz (177 ml) is established at 10 MPH, leave the rate knob into that position. From this point on, when the vehicle speed increases the output will automatically vary proportionately.

12. At this point the OUTPUT light should also be ON. If the range is adjusted beyond the limits of the measuring system, the FAULT light will come ON.

13. The Spray output can now be started and stopped by placing the OUTPUT switch in the ON or OFF position as required.

NOTE

If the vehicle is driven over 22 MPH (35 Km/h), the fault light will come ON. If the vehicle is driven below 5 MPH (8Km/h), the spray will automatically shut off.

FINISHED OPERATION

When the spraying operation is complete, the unit must be flushed in accordance with FLUSHING SYSTEM section of this manual.

PREVENTIVE MAINTENANCE

NOTE: A successful maintenance program begins after the first use of the machine and not after the machine has ceased to function.

PREVENTIVE MAINTENANCE:

1. Occasionally inspect mounting hardware to ensure that fasteners are tight. Loose hardware can cause excessive vibration leading to major failure of components.

2. Acquaint yourself with the operating sounds of your machine. Strange sounds suddenly appearing can be a forewarning of difficulties which may be preventable with immediate action.

3. Keep the machine clean externally as well as internally. Some insecticides contain chemicals which are corrosive.

BATTERY

WARNING

Batteries produce explosive gases. Keep sparks and flames away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries. The battery contains sulfuric acid and can cause severe bums. Avoid contact with skin, eyes and clothing.

1. Check battery fluid level each week. If the level is low, add distilled water. After initial activation of battery, never add additional electrolytic fluid. Distilled water is preferred.

2. Check vent holes in battery and remove any obstructions such as dirt, corrosion etc.

3. Inspect posts and remove any corrosion build-up using water and baking soda.

4. Apply an anti-corrosion compound or a light coating of petroleum jelly to battery terminals to minimize corrosion.

MAINTENANCE SCHEDULE

TABLE 5

FREQUENCY / MAINTENANCE OPERATION	8 HRS OR DAILY	25 HRS OR NEW SEASON	50 HRS OR NEW SEASON	100 HRS OR NEW SEASON	100-300 HRS
ENGINE					
CHANGE OIL LEVEL	■				
CHANGE OIL LEVEL(W/O FILTER)		■			
CHANGE OIL LEVEL(W/FILTER)			■		
CHANGE OIL FILTER				■	
SERVICE PRE-AIR FILTER		■			
SERVICE AIR FILTER				■	
DEBRIS GUARD (OPTIONAL)	■				
CLEAN COOLING SYSTEM (FINS)				■	
INSPECT SPARK ARRESTER			■		
REPLACE OR CLEAN SPARK PLUG				■	
REPLACE IN-LINE FUEL FILTER				■	
CLEAN COMBUSTION CHAMBER					■
ROTARY BLOWER					
CHECK OIL LEVEL	■				
CLEAN AIR FILTER				■	
GREASE BLOWER				■	
SOLENOID VALVES					
INSPECT INTERNAL PARTS/CLEAN (USE REBULDING KIT IF REQUIRED)					■
OTHERS					
FLUSH FORMULATION SYSTEM	■				
INSPECT BATTERY FLUID LEVEL			■		
CLEAN FORMULATION FILTER			■		
INSPECT FLEXIBLE DRIVE COUPLING				■	

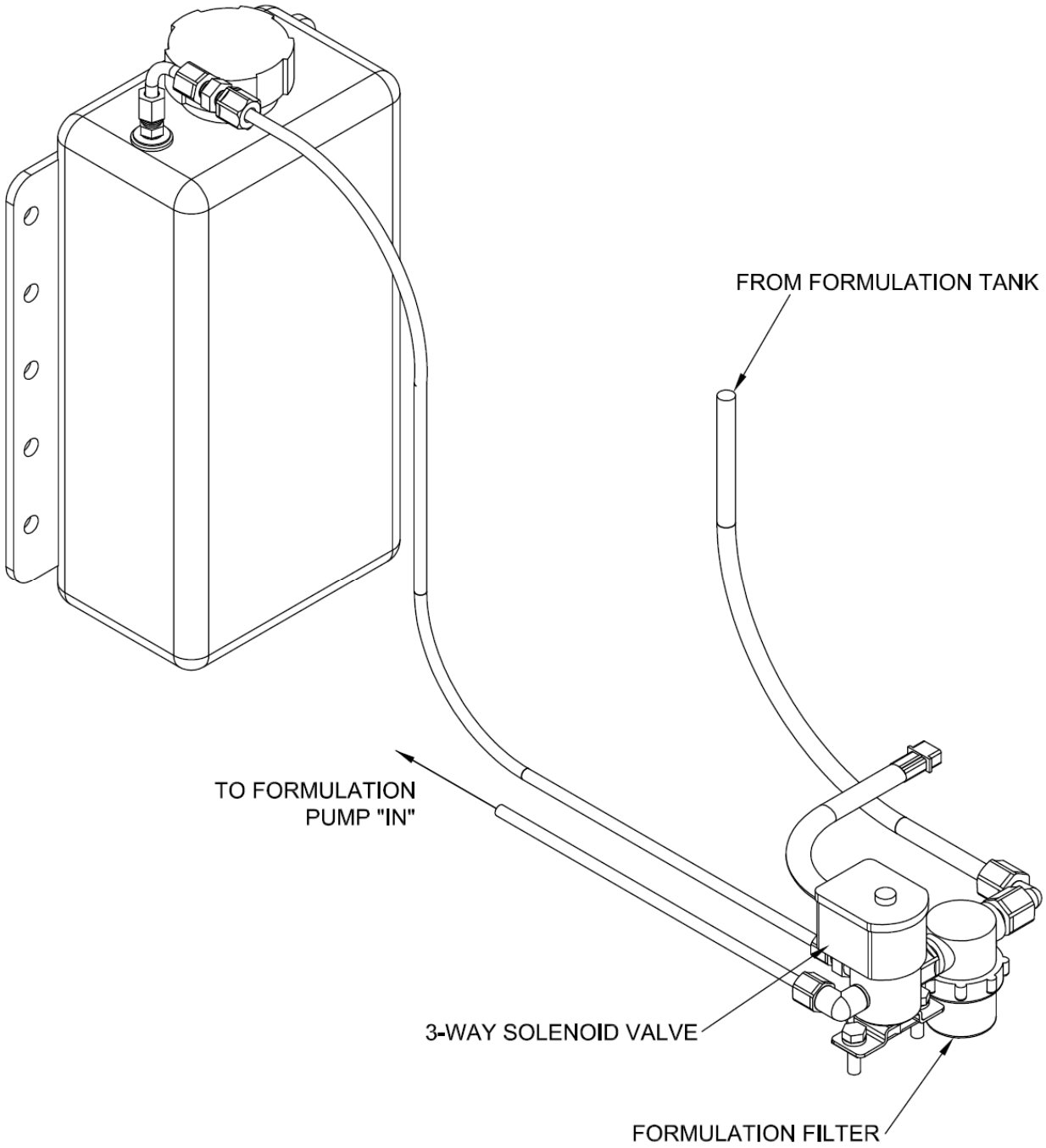
NOTE: Change oil more often when operating in high ambient temperatures. Clean air filters more often under dusty conditions or when airborne debris is present. See engine and blower manuals.

3-WAY SOLENOID VALVE (FORMULATION/FLUSH)

The corrosion resistant 3-way solenoid valve is located under the Nozzle Boom assembly (close to blower brackets) and is used as a selector to route either formulation (spray) or flushing solution (flush) from their respective tanks to the nozzles.

This is done by placing the "MODE" switch located on the remote control box into either "Spray" or "Flush" position.

After each application of formulation it is necessary to flush the system.



3-WAY SOLENOID VALVE (FORMULATION/FLUSH) CONNECTIONS

FLUSHING SYSTEM

The system must be flushed after each use to protect the equipment from the corrosive materials in the formulation.

CAUTION

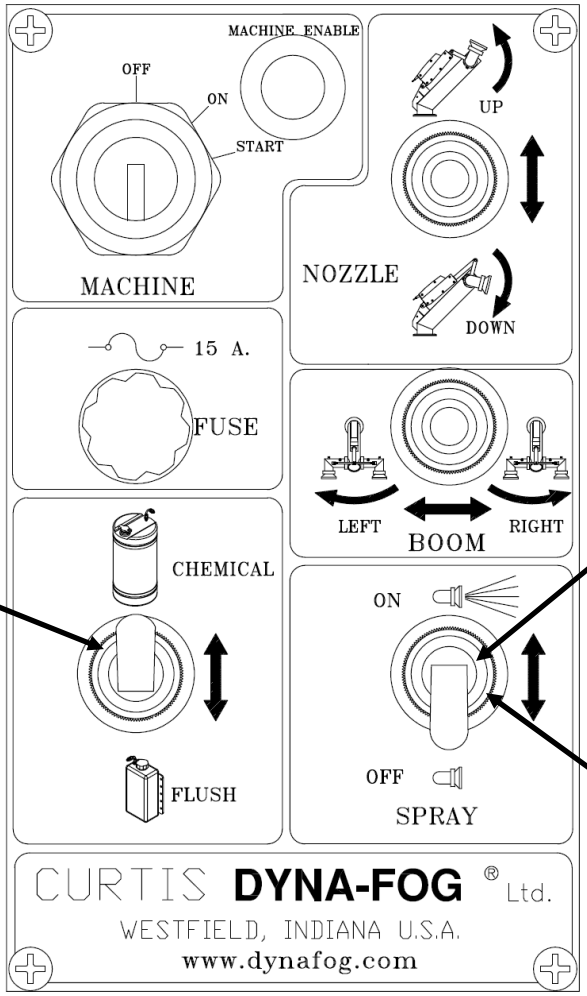
Never handle any parts that come in contact with formulation until the unit has been thoroughly flush with isopropyl alcohol or other recommended flushing agent.

TO FLUSH THE SYSTEM:

1. With the engine and blower operating, place the momentary toggle switch on the remote control box in to the “FLUSH” position (hold it in to the Flush position).
2. Place “SPRAY” toggle switch on the remote control box in to the “ON” position.
3. Flush for 3 to 5 minutes.
4. Place “SPRAY” toggle switch on remote control box in to the “OFF” position.
5. Release the momentary toggle switch on the remote control box from the “FLUSH” position.

FLUSH OPERATION SEQUENCE WITH REMOTE CONTROL BOX

1). Hold the “Chemical/Flush” toggle switch in the flush position

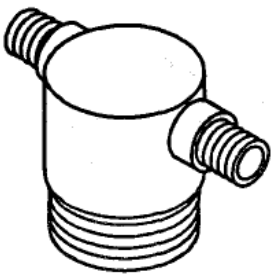


2). Move the “Spray” switch to “On”.

3). After about 3 minutes move the “Spray” switch to “Off”, then release flush switch.

FORMULATION FILTER

The system is equipped with an in line low profile filter located at the formulation tank standpipe. This filter is to prevent any foreign matter from entering the 3-way solenoid valve and the nozzle system. Located inside the filter housing is a fine mesh stainless steel screen and an Atlas gasket seal.



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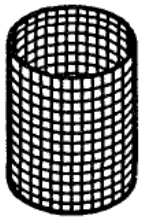

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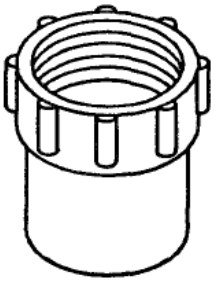


62558-3

IN-LINE FILTER (P/N 62558-5)

TO REMOVE AND CLEAN THE SCREEN

1. Loosen and remove the bottom portion (bowl) from the housing body, being careful not to loose the Atlas gasket seal ring.
2. Remove and clean the fine wire mesh stainless steel screen.
3. Check the Atlas gasket seal ring and replace if necessary.

CAUTION

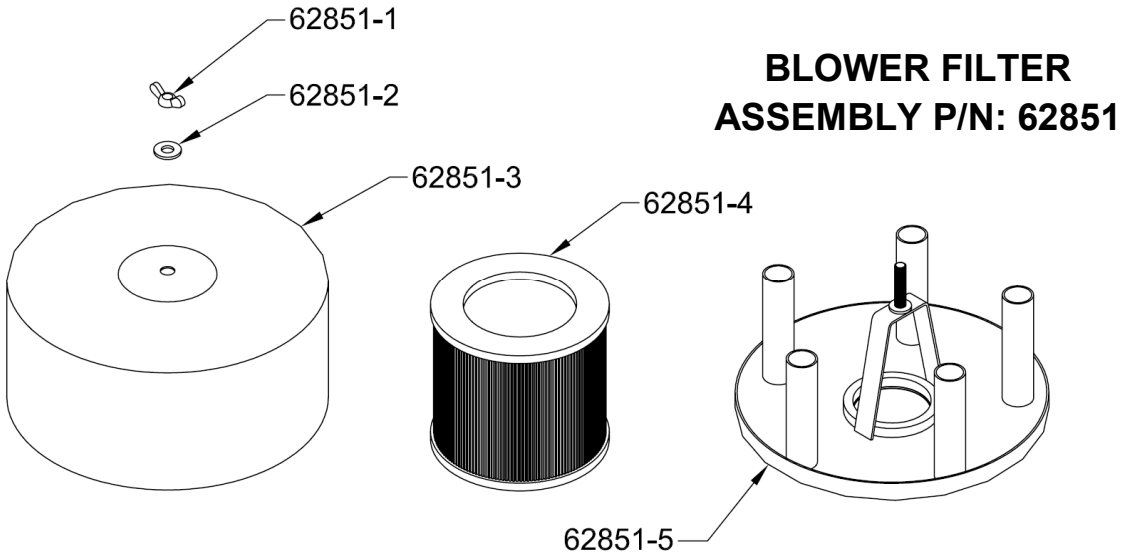
Do Not over tighten as damage to the Aflas gasket seal ring may occur. **Over tightening will not improve the seal.**

Note: *If leakage occurs, open the unit and clean and inspect the Atlas gasket seal ring. A suitable lubricant applied to the ring will help the seal.*

FILTER - SILENCER (Rotary Blower)

A) General: The air blower filter - silencer is mounted on the air blower. Dirt and other foreign particles are filtered from the incoming air by means of the reusable stainless element. The design is such that it partially silences the air also.

***Note: DO NOT** run the machine without this filter silencer assembly, as this would cause serious damage to the blower unit.*



B) Removal and Disassembly:

1. Remove the filter-silencer from the air blower by turning it counter-clockwise.
2. Remove wing nut and washer.
3. Remove outer shell cover.
4. Remove stainless element.

C) Inspection and Cleaning:

1. Clean the stainless screen in an approved solvent, dry with compressed air, or shake to remove excess solvent and allow to dry naturally. Inspect the screen for defects that may permit dirt or other foreign particles to enter the air blower.

2. Inspect the outer shell cover for cracks, breaks or dents and replace if required.

3. Remove any foreign matter of obstruction from any of the tubes of the main base assembly. Be careful not to lose the clips from the base which isolate the shell from the base to prevent excessive vibration.

ULV NOZZLE ASSEMBLY

The design of the ULV Nozzle is such that it should require little maintenance if the machine is properly flushed after each use. However, if it becomes necessary to clean the entire Nozzle Assembly, refer to steps 1-7. To inspect the inside of the Nozzle it is not necessary to remove the entire Nozzle Assembly from the machine. Refer to steps 4-7.

TO REMOVE THE ENTIRE NOZZLE:

1.) Loosen the plastic nut on the rear of the nozzle to enable removing the plastic elbow from the spray tube.

2.) Loosen the steel nut on the rear of the nozzle that secures the nozzle to the nozzle boom. There are two o'rings within the nut used for sealing against the spray tube.

3.) Remove the black plastic clamping knob that is used to tighten the stainless clamp for retaining the nozzle to the boom assembly. Remove the stainless steel clamp. The nozzle should now be free from the boom assembly.

4.) Remove the (3) front plate mounting screws and remove the front plate.

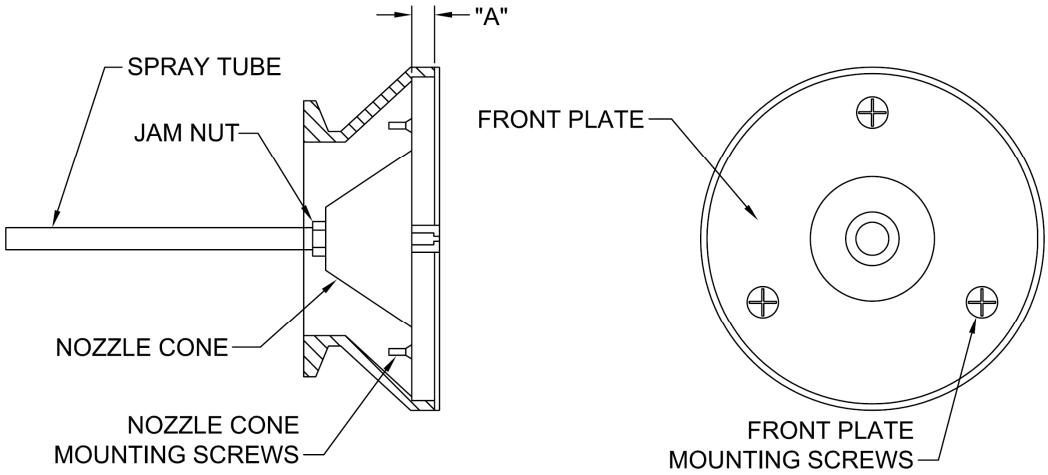
5.) If necessary, the large "o" ring installed beneath the front plate can be removed. NOTE: DO NOT loosen the jam nut that locks the spray tube to the nozzle cone. See "IMPORTANT" bellow.

6.) Soak the nozzle parts in a degreasing solution to remove all residue.

7.) Thoroughly rinse the parts and reassembly.

IMPORTANT

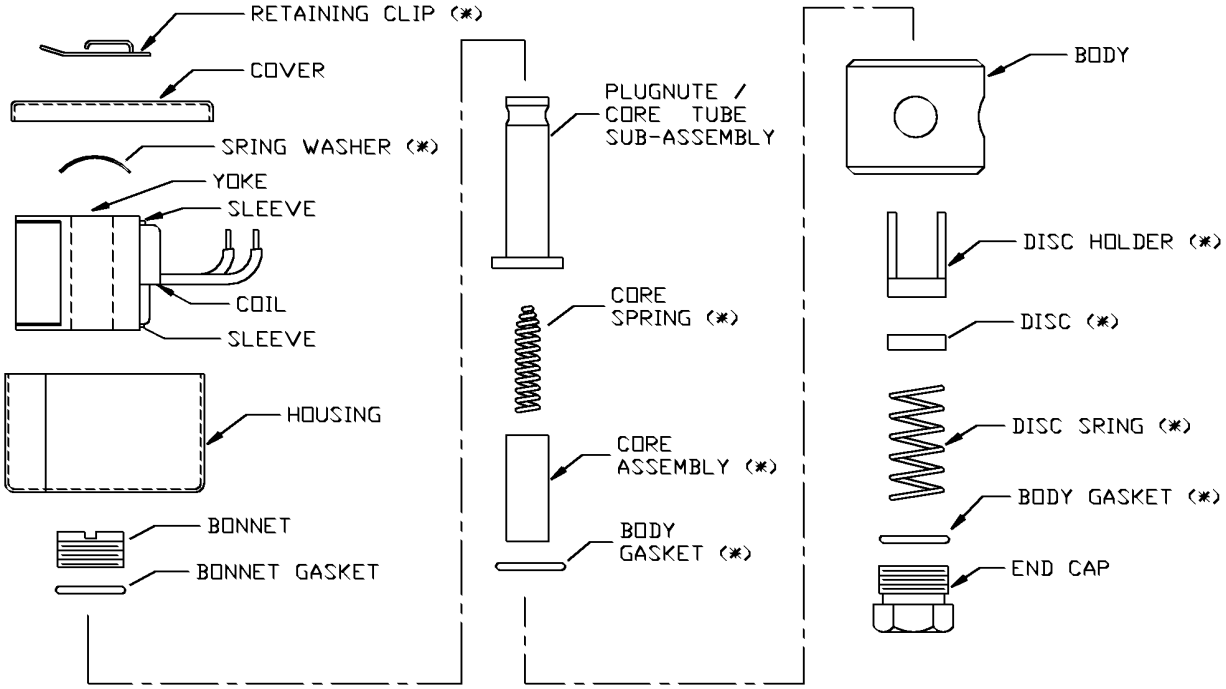
If for any reason it becomes necessary to have to remove the spray tube from the nozzle cone, care must be taken to hold dimension “A” when reassembling. Dimension “A” is the distance from the end of the spray tube to the front face of the nozzle cone. Be careful not to damage the output end of the spray tube when disassembling. Note what dimension “A” measures before disassembling nozzle.



3- WAY SOLENOID 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, the nameplate spacer and the coil housing.

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, nameplate spacer, and retainer clip.

* 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.

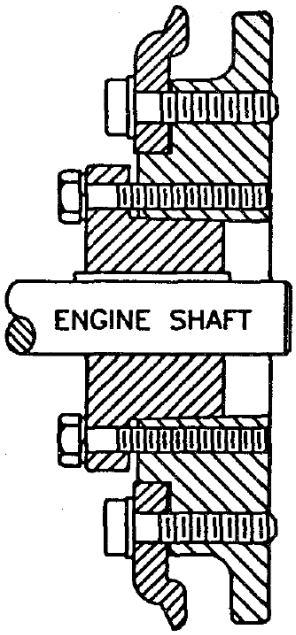
HI-FLEX COUPLING INSTALLATION INSTRUCTIONS

FLANGE AND BUSHING INSTALLATION

Make sure the bore and tapered cone surface of the bushing and flanges are free of all foreign substances such a paint or dirt.

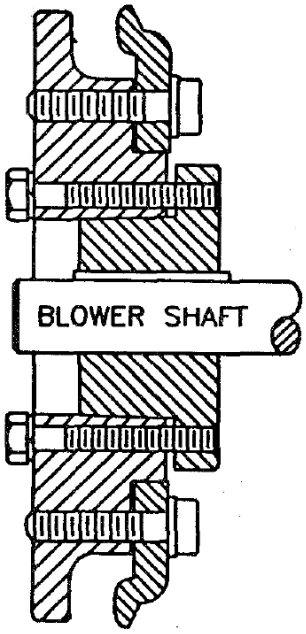
1. Place *QD bushing on the shaft over the key with flange end first. The end of bushing should be flush with the end of the shaft for best results. NOTE : If shaft end project beyond the bushing, be sure to allow for end float and misalignment.

2. Either loosen flange assembly screws as much as possible or disassemble. Slip flange over *QD bushing and assemble in the following manner:



OUTSIDE MOUNT

A. OUTSIDE MOUNT. Align the clearance holes in the *QD bushing with the tapped holes of the flange assembly. Assemble pull-up bolts and lock washers as shown in above figure. Tighten pull-up bolts progressively and evenly to the *QD bushing bolt torque (108 in-lb).



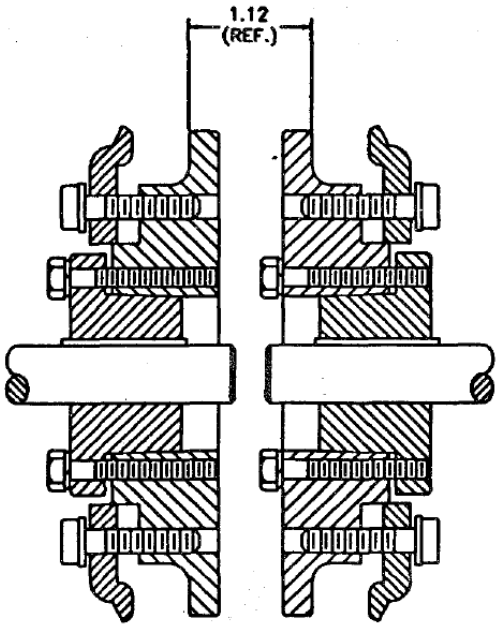
INSIDE MOUNT

B. INSIDE MOUNT. Align clearance holes in the flange assembly with the tapped holes in the *QD bushing. Assemble pull-up bolts and lock washers as shown in above figure. Tighten pull-up bolts progressively and evenly to the *QD bushing bolt torque (108 in-lb).

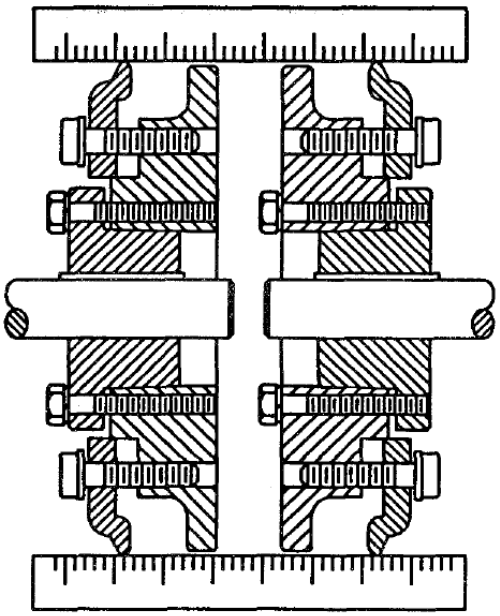
CAUTION : NEVER ALLOW THE FLANGE ASSEMBLY TO BE DRAWN IN CONTACT WITH THE FLANGE OF THE *QD BUSHING. THERE SHOULD BE A GAP FROM 1/8" TO 1/4" BETWEEN THEM. IF THE GAP IS CLOSED, THE SHAFT IS SERIOUSLY UNDERSIZED.

Bolts of *QD Bushing: 1/4-20 x 1-1/4 , grade 5. Bolts of Flange Assembly: 5/16-18 Socket Head Cap, equivalent to grade 8.

3. The second *QD bushing is placed on the other shaft as described on step 1 and the second flange assembly is slipped over the bushing and assembled to the distance of 1 -1/8" (as indicated in below/left drawing) apart following the instructions in step 2.



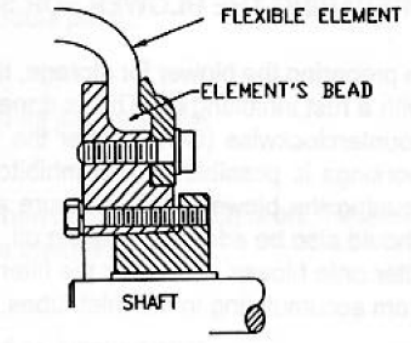
FLANGE ASSEMBLY MOUNTED DISTANCE PRIOR TO INSTALLING FLEXIBLE ELEMENT



CHECKING THE FLANGE SPACING

4. **FOR PARALLEL SHAFTS** : Using a scale or straight edge, check the flange spacing and angular misalignment at four places 90° apart around the coupling without rotating the flanges. The flanges should be aligned so that the dimensions at all four places do not vary more than 1/32" for best results. Check parallel misalignment by laying the straight edge across the flange O.D. several places around the circumference of the coupling. Parallel misalignment not to exceed 1/32" for best results.

FOR PARALLEL AND NON PARALLEL SHAFTS : For the longest coupling life is always best to align couplings as accurately as possible upon the initial installation.



FLEXIBLE ELEMENT INSTALLATION

INSTALLATION OF FLEXIBLE ELEMENT

5. You may loosen the flange assembly screws as much as possible without disassembly of cover or you may remove the screws completely thus disassembling the cover. In either case wrap the flexible element around the flange assembling. Make sure the beads of the element are fully worked down upon the seats of covers as shown in the detail on the right drawing. To insure proper seating, rap on the tire O.D. with a small mallet until the split is closed.

IMPORTANT: Split must be closed after assembly is completed.

6. Hold with your hand the split of the flexible element. Tighten (finger tight) one or two screws directly opposite the split. Using both hands knead the tire pulling it toward the split. Repeat the procedure on all remaining screws. Retighten each screw, in succession, with a torque wrench to 300 in.-lb.

NOTE : The metal pieces of the coupling that clamp the rubber element will operate properly only if tightly clamped by the screws. Over tightening cannot damage the rubber element, but being too loose may damage the coupling.

TO REPLACE TIRE

Loosen all flange assembly screws completely to disengage the covers of the flange assemblies. Grasp one end of the flexible element at the split and peel it off the flange assemblies. Remove any foreign substances, such dirt, off both sides of the flange assemblies and install the new flexible element according to step 5 and 6. If necessary to replace flange assembly screws, use only grade 8 or equivalent.

IMPORTANT NOTICE: Because of the possible danger to person(s) or property from accidents which may result in the use of these products, it is important that the Hi-Flex coupling be used in accordance with the engineering information specified in the catalog and in these instructions. Proper installation, maintenance and operating procedures must be observed. Proper guards and other safety devices that may be needed or specified in safety codes should be provided and used, but are neither provided by, nor the responsibility of the manufacturer.

STORAGE & SHIPMENT

PREPARING THE BLOWER FOR STORAGE

In preparing the blower for storage, the inner workings of the blower must be coated with a rust inhibiting oil. This is done by removing the air filter/silencer by turning it counterclockwise (CCW). After the filter/silencer is removed, access to the inner workings is possible. A rust inhibitor can then be sprayed into the blower while rotating the blower shaft to insure all parts are oiled. A compatible rust inhibitor should also be added to existing oil, and all bearings should be greased. Re-install filter onto blower and cover the filter assembly with a plastic bag to prevent debris from accumulating in the inlet tubes.

PREPARING THE ENGINE FOR STORAGE

An engine to be stored over 30 days should be completely drained of fuel to prevent gum deposits forming on essential parts, fuel filter, and tank.

NOTE:
The use of a fuel additive, such as Dyna-Fog STA-BIL will minimize the formation of fuel gum deposits during storage. Such an additive may be added to the gasoline in the fuel tank of the engine, or to the gasoline in a storage container.

A. All fuel should be removed from the tank. Run the engine until it stops from lack of fuel. The small amount of fuel that remains in the sump of tank should be removed by absorbing it with a clean, dry cloth.

B. While the engine is still warm, drain the oil from the crankcase. Refill with fresh oil.

C. Remove the spark plug and pour approximately half ounce (15 cc.) of engine oil into each cylinder and crank slowly to distribute the oil. Replace the spark plugs.

D. Clean dirt and chaff from cylinders, cylinder head fins, blower housing, rotating screen and muffler areas.

E. Store in a clean dry area.

PREPARING THE BATTERY FOR STORAGE

Disconnect positive (+) and negative (-) battery cables and wrap cable ends with electrical tape. Remove battery and store in a cool dry area.

CAUTION

WHEN DISCONNECTING OF THE BATTERY IS REQUIRED, REMOTE NEGATIVE (-) CABLE FIRST.

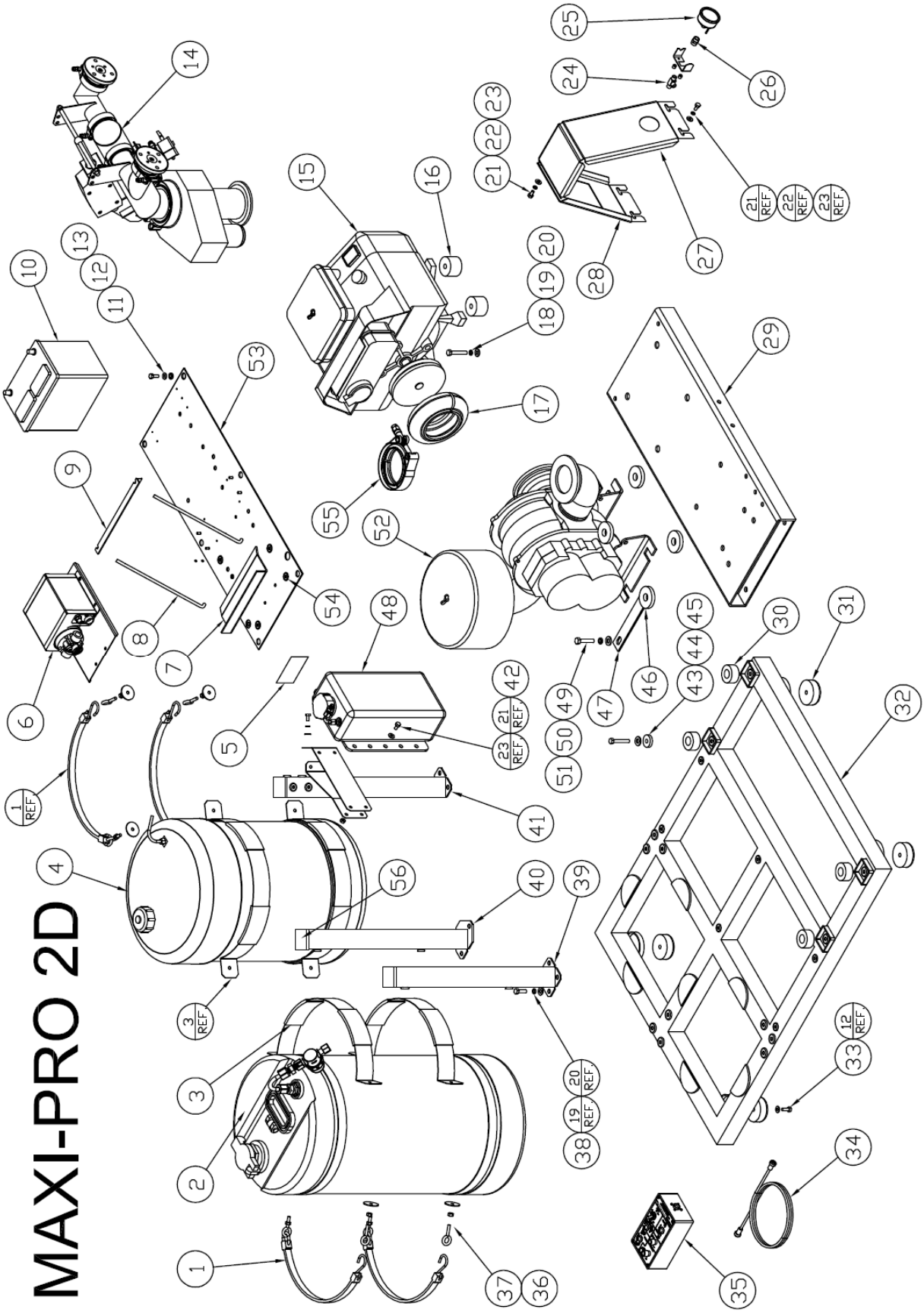
PREPARING THE FRAME ASSEMBLY FOR STORAGE

The frame should be wiped down with Isopropyl Alcohol and dried. If original shipping carton is not available the unit should be covered with a tarpaulin or plastic sheet.

WARNING

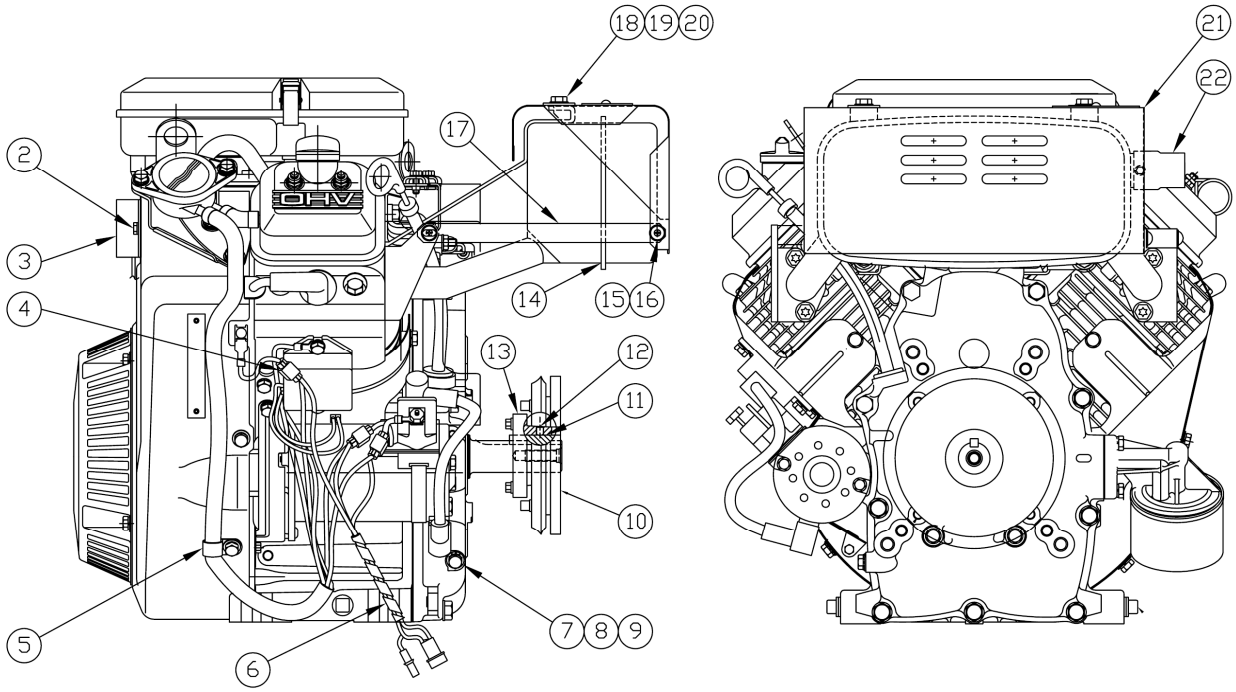
IT IS AGAINST FEDERAL LAW TO SHIP INSECTICIDES AND FLAMMABLE LIQUIDS IN AN UNMARKED, NON-D.O.T. APPROVED CONTAINER WITHOUT PROPER LABELING AND U.N. NUMBER.

IF FOR ANY REASON IT BECOMES NECESSARY TO RETURN YOUR MACHINE TO OUR FACTORY, MAKE CERTAIN THAT THE FORMULATION AND FUEL TANKS HAVE BEEN AND FLUSHED AS DESCRIBED ABOVE. IF A MACHINE IS RECEIVED THAT HAS NOT BEEN DRAINED AND FLUSHED, A SERVICE FEE WILL BE CHARGED FOR DOING SO.


MAXI-PRO 2D

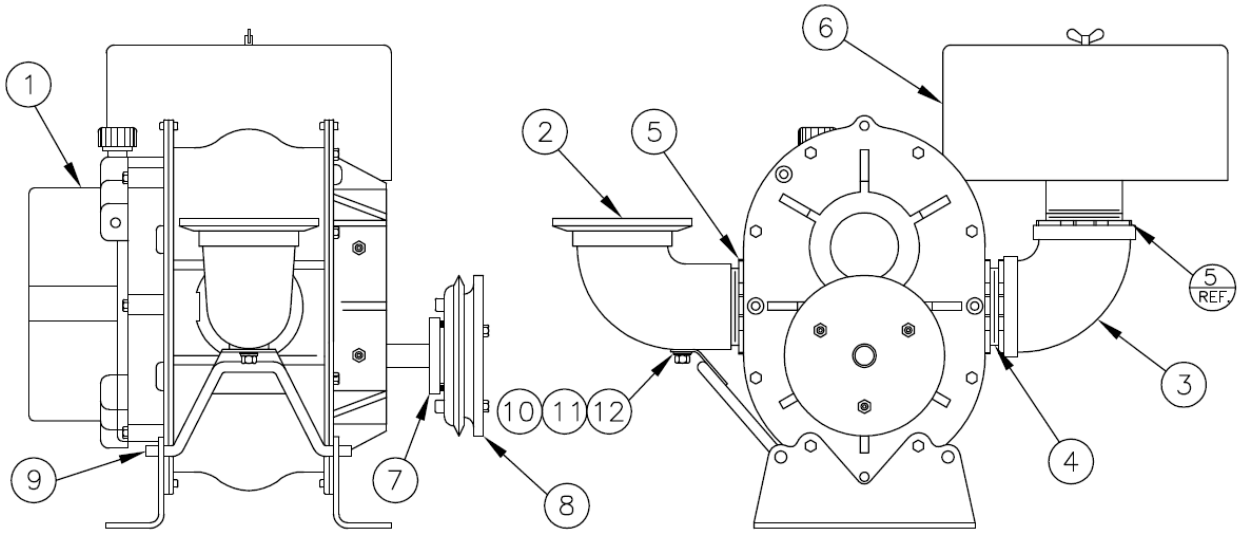
MAXI-PRO 2D PARTS LIST

ITEM	QTY	P/N	DESCRIPTION
1	4	63268	TIE DOWN A.Y.
2	1	64004-1	FORMULATION TANK AY
3	4	62875-2	STRAP, TANK AY.
4	1	63860	TANK AY., FUEL 12.2 GAL.
5	1	79110-1	LABEL, LOGO (BLUE)
6	1	64894-1	PUMP AY.
7	1	62843	BATTERY RETAINER
8	2	62845	ROD, BATTERY RETAINER
9	1	62844	BATTERY STOP
10	1	62595	BATTERY
11	6	63382	BOLT, 1/4-20 X 3/4 LOCK
12	6	9416904	WASHER, FLAT ¼
13	6	63323	GROMMET, 3/8 ID., NEOPR.
14	1	64905	BOOM AY.
15	1	62799-10	ENGINE AY., 18 HP (W/ELECTRICK CHOKE)
16	4	63178	ENGINE SPACER
17	1	67087-3	INSERT, FLEX COUPLING, PX70
18	13	120393	WASHER, FLAT 5/16 REG.
19	13	120214	WASHER, LOCK, 5/16 SPLIT
20	4	63432	BOLT, 5/16-18 X 1.5 HEX
21	16	121887	BOLT, 1/4-20 X 3/4
22	22	120392	WASHER, FLAT 1/4 REG.
23	20	120380	WASHER, LOCK, 1/4 SPLIT
24	1	22184	MALE RUN TEE
25	1	63245-4	GAUGE, LIQUID FILLED
26	1	444104	REDUCER COUPLING, 1/8 X 1/4
27	1	63466	GUARD, COUPLING, FRONT
28	1	63468	GUARD, COUPLING, REAR
29	1	62855	ENGINE/BLOWER MOUNTING AY
30	4	63327	FOOT, EPDM RUBBER
31	4	49053	BUMPER, RUBBER 2.5”
32	1	62826	FRAME AY., WELDED
33	6	121900	BOLT, 1/4-20 X 1
34	1	62628	REMOTE CONTROL CABLE AY.
35	1	64888	REMOTE CONTROL BOX AY.
36	8	63621	WASHER, FENDER
37	4	63151	BOLT, EYE, 1/4-20 X 2
38	9	122017	BOLT, 5/16-18 X 1, HEX
39	1	62836	SIDE POST AY.
40	1	64818	POST AY., CENTER
41	1	64816	POST AY (FLUEL/FLUSH)
42	4	9419454	NUT, LOCK 1/4-20 HEX
43	4	63432	BOLT, 5/16 X 1.5
44	4	63477	WASHER, FENDER
45	4	62899	ISOLATOR
46	4	63178	ENGINE SPACER
47	2	62873	HOLD DOWN, BLOWER
48	1	63337-1	TANK AY, FLUSH, 1 GAL.
49	4	120918	BOLT, 3/8-16 X 1.50
50	4	120382	WASHER, LOCK 3/8, SPLIT
51	4	120394	WASHER, FLAT, 3/8 REG.
52	1	63461	BLOWER AY
53	1	62874	PLATE AY., MOUNTING
54	4	64680	SLEEVE, SHOCK MOUNT
55	1	45927	CLAMP, V-INSERT
56	3	63150	PLUG, 2” SQUARE CAP



ENGINE ASSEMBLY P/N:62799-10

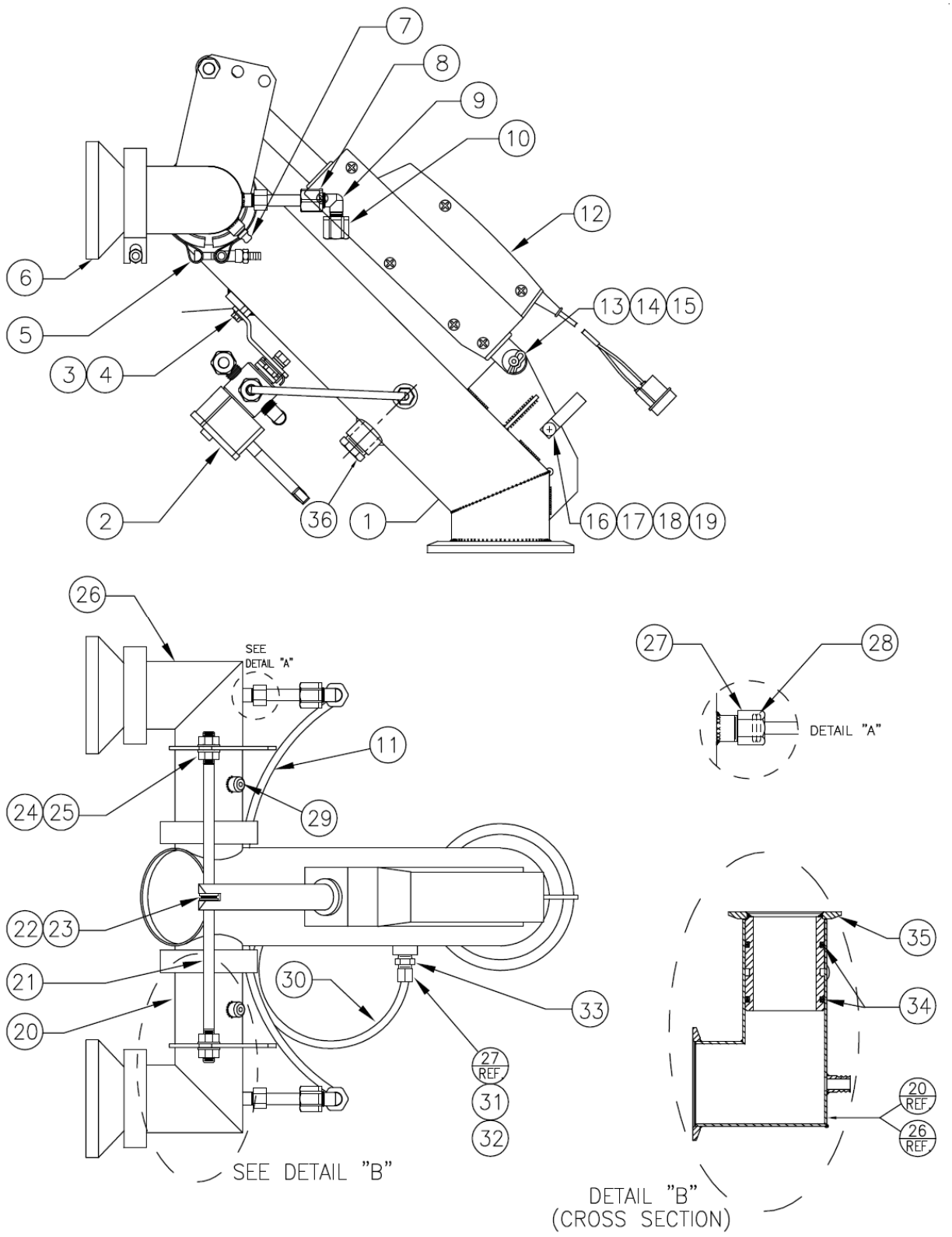
ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	62799	ENGINE, 18 HP, VANGUARD
2	2	190254	NUT, 10-24 LOCK HEX
3	1	64016	HOURMETER / TACHOMETER
4	3	85685	CONNECTOR 3M
5	1	63285-1	CLAMP, CABLE 5/8
6	1	49078	HARNESS, ADAPTER (B&S)
7	1	63186	BOLT, M8-1.25 x 16, HEX
8	1	138485	WASHER, LOCK, 5/16, EXT
9	1	120393	WASHER, FLAT, 5/16, REG
10	1	63458-1	FLANGE AY
11	1	62549	KEY, ¼ x 1 ¾
12	1	139009	SCREW, SET, ¼-28 x ¼
13	1	63460-7	BUSHING, 1″
14	1	62800	MUFFLER (18 HP VANG)
15	2	159920	SCREW, 10-24 x ½ PH
16	2	120391	WASHER, FLAT #10, REG
17	2	63189	STRUT, HEAT SHIELD
18	2	63191	SCREW, ¼ x ½, TAP AB, ZINC
19	2	9416904	WASHER, ¼ FLAT
20	2	121753	WASHER, ¼ LOCK, EXT
21	1	63877	SHIELD AY (MUFFLER 18 HP VANG)
22	1	62781	SPARK ARRESTER (18 HP VANG)



BLOWER ASSEMBLY P/N:63461-2

ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	62809	BLOWER, ROOT 5.45
2	1	62871	CUTPUT FLANGE AY
3	1	62823	ELBOW, INPUT
4	1	62824	NIPPLE 2.5 NPT. X 3.5
5	4	62805	LOCKING RING
6	1	62851	FILTER SILENCER
7	1	63460-6	BUSHING, 7/8” BORE, 5H
8	1	63458-1	FLANGE AY
9	1	62877	ANTI-TURN WELD ASSEMBLY
10	1	120388	WASHER, FLAT, 3/8 REG.
11	1	48034-6	LOCKNUT, 3/8-16HX
12	1	63438	BOLT, .25-20 X 1.5 GRADE 8

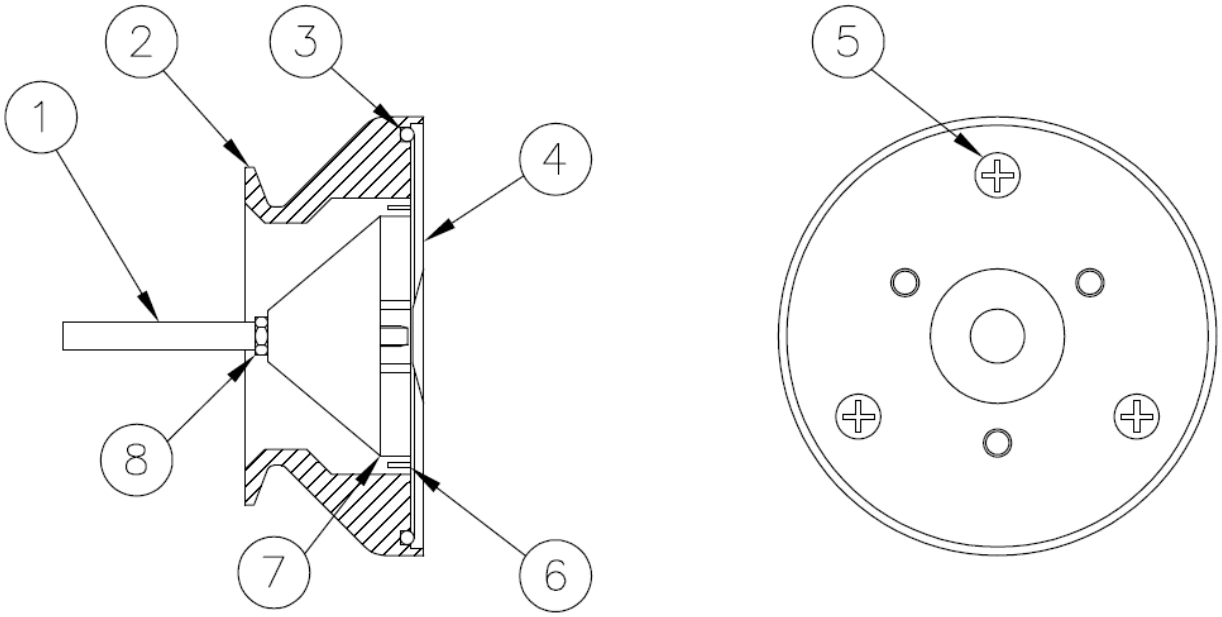
BOOM ASSEMBLY, MAXI-PRO 2D (P/N: 64905)



BOOM AY., MAXI-PRO 2D PARTS LIST(P/N: 64905)

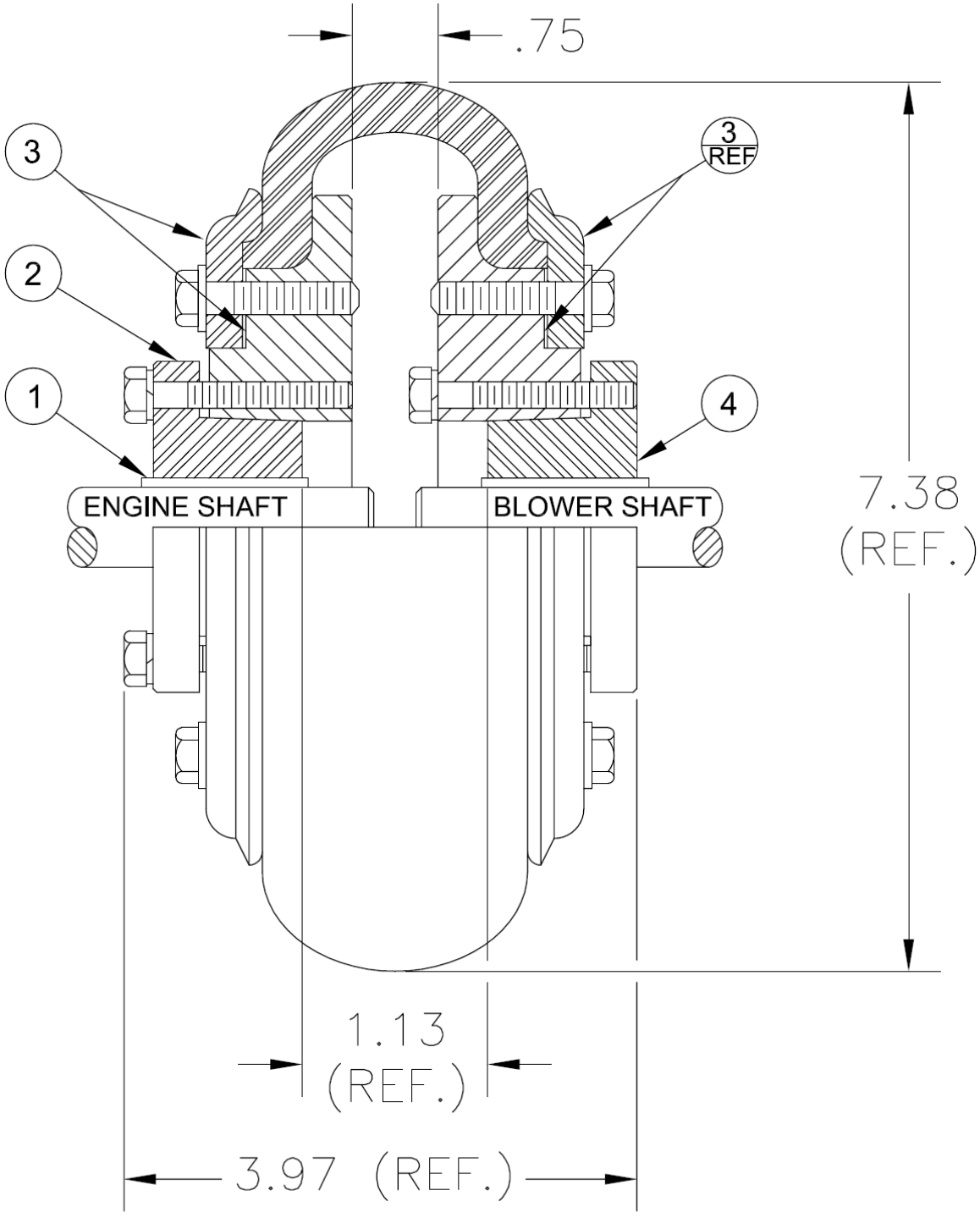
ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	64877	TEE ASSEMBLY
2	1	62890-2	3-WAY VALVE AY.
3	2	189772	SCREW, 10-32 X 3/8
4	2	138479	WASHER #10, EXTO
5	4	63019	CLAMP, “V” INSERT
6	2	64630	NOZZLE AY.
7	2	64879	FITTING, GREASE
8	2	62550-1	NUT, STEEL GRIP, 1/4T
9	2	62555-1	UNION ELBOW, 1/4T
10	5	62582-1	NUT, PLASTIC GRIP, 1/4T
11	2	62584-8	TUBING, ¼ OD. (11”)
12	1	64925	ACTUATOR ASSEMBLY
13	1	29586-3	PIN, HAIR COTTER
14	5	120394	WASHER, FLAT, 3/8, REG.
15	1	65128-1	PIN, CLEVIS ADJUSTABLE
16	1	86690-5	CLAMP, CABLE
17	1	157728	SCREW, 1/4 – 20 X 5/8
18	2	120392	WASHER, FLAT, 1/4
19	1	9419454	NUT, NYLOCK, 1/4 – 20
20	1	64883	ARM AY., RH.
21	1	64889	ROD, 3/8 DIA.
22	2	120394	WASHER, FLAT, 3/8, REG.
23	1	64900	“E” RING, 3/8
24	4	120382	WASHER, OCK, 3/8, SPLIT
25	4	120377	NUT, 3/8 – 16, HEX
26	1	64883-1	ARM AY., LH.
27	3	145463	NUT, 1/4 T
28	4	10100-10	O-RING
29	2	140870	SCREW, SET, 10 – 24 X 3/8
30	1	62584-17	TUBING, 1/4 OD. (12.2”)
31	2	114628	SLEEVE 1/4T
32	2	58239	INSERT, BRASS, 1/4T
33	1	21036-24	CONNECTOR/ORIFICE AY
34	4	10100-225	O-RING 2.1375 OD.
35	2	64884	INSERT AY., FLANGED
36	1	63147-3	PLUG, 1/2 – 1/4 NPT, 3/8 HOLE

ULV NOZZLE ASSEMBLY P/N: 64630-1



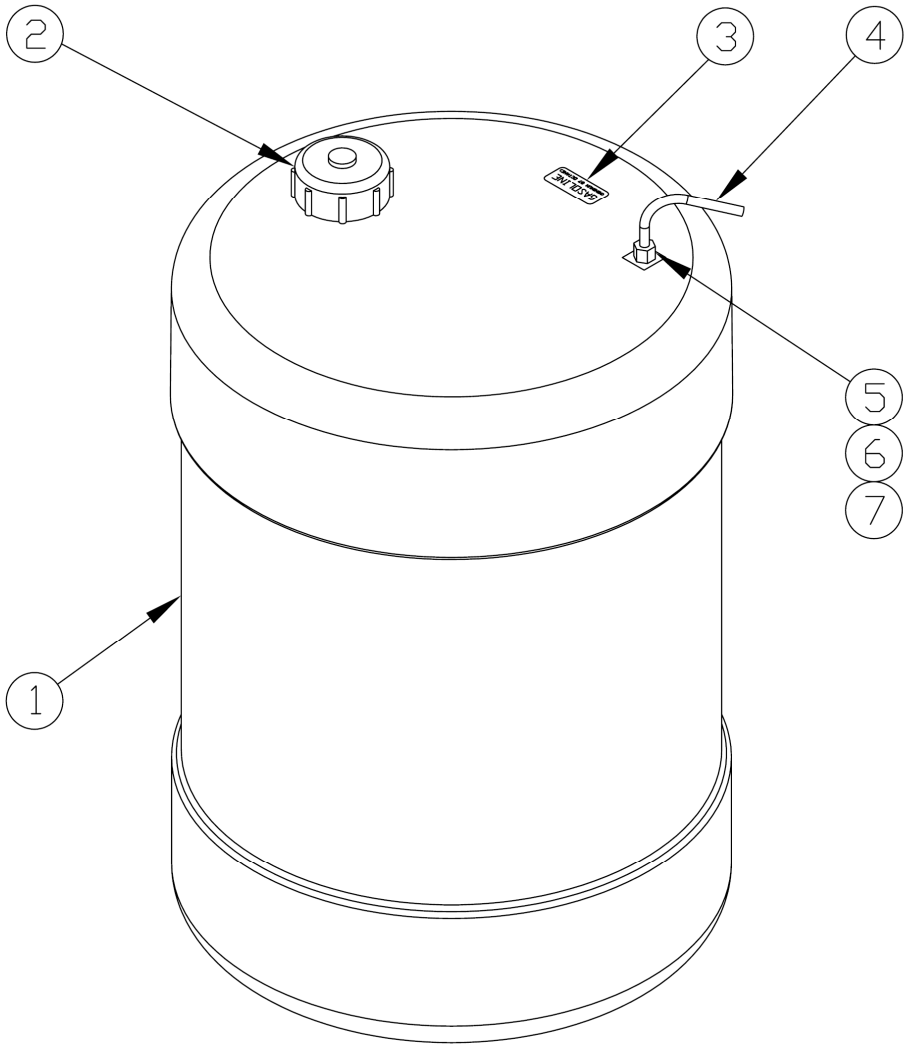
ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	64650	TUBE, NOZZLE SPRAY
2	1	64647	BODY, NOZZLE
3	1	10100-153	O'RING, 3.693 O.D.
4	1	64649	DISC, NOZZLE, MACHINED
5	3	64643	SCREW, #10-24 X 3/8, SST
6	3	64642	SCREW, #6-32 X 3/8, SST
7	1	64651	FIN/NOZZLE CONE AY.
8	1	422987	NUT, .250, STL GRIP

FLEXIBLE COUPLING
P/N: 67087-3



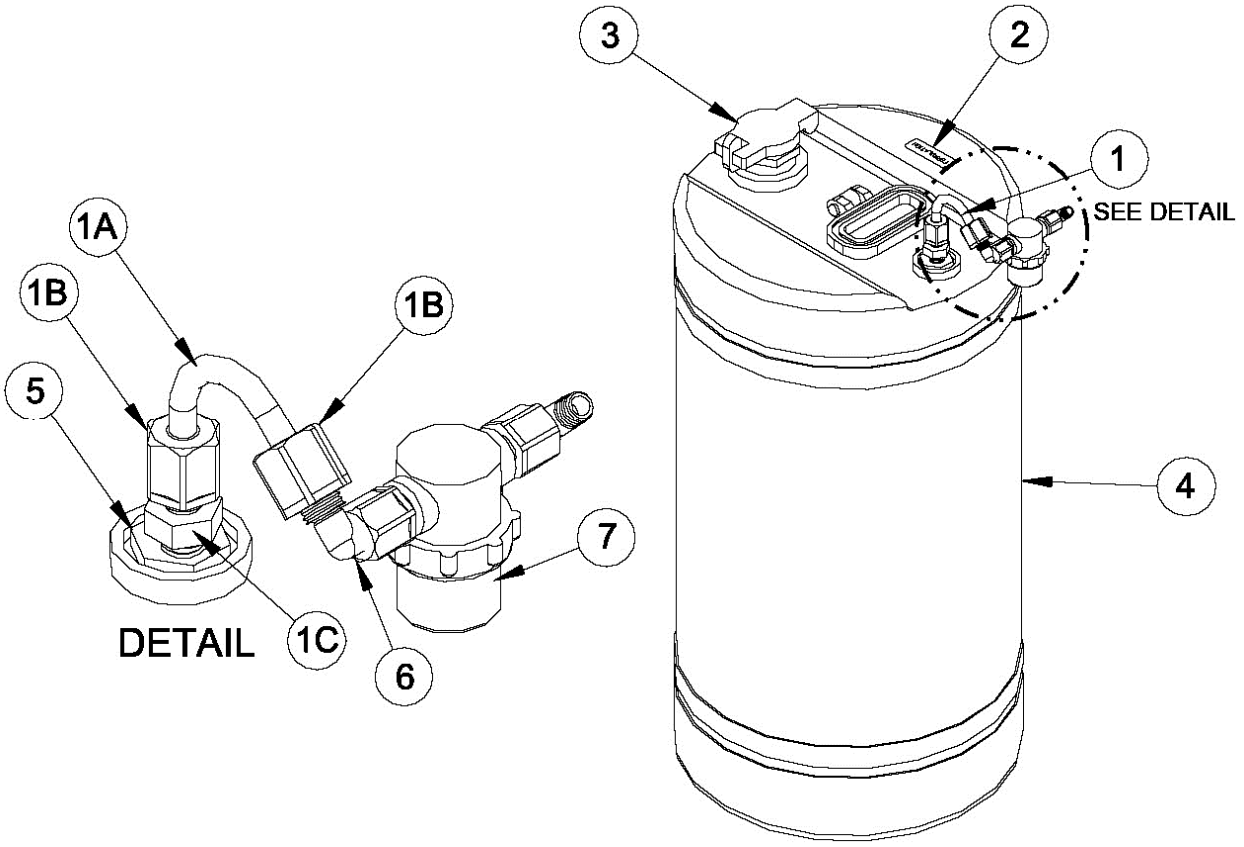
ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	62549	KEY, 1/4 X 1.75
2	1	64360-7	BUSHING, TYPE SH, 1”
3	2	67087	FLANGE AY., SH70
4	1	63460-6	BUSHING, TYP SH., .875”

TANK ASSEMBLY, GASOLINE 12.2
P/N 63860



ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	64088-1	TANK, 12.2 GAL., MACHINED
2	1	62578-4	CAP WITH GAUGE
3	1	85520	LABEL, GASOLINE
4	1	62563-5	STANDPIPE, SSTU, .25
5	1	10105	CONNECTOR, STANDPIPE
6	1	114628	SLEEVE, 1/4 T
7	1	145463	NUT, 1/4 T

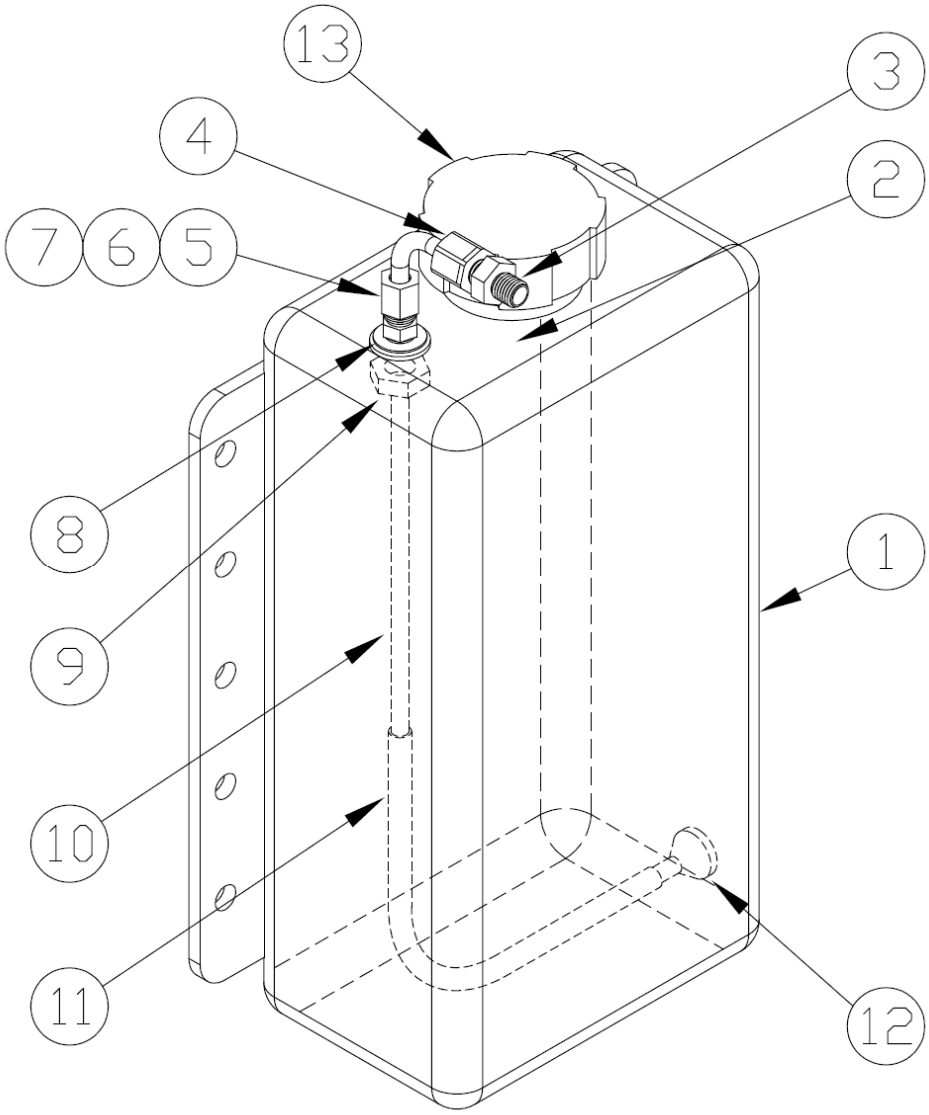
FORMULATION TANK ASSEMBLY WITH FILTER
P/N 64004-1



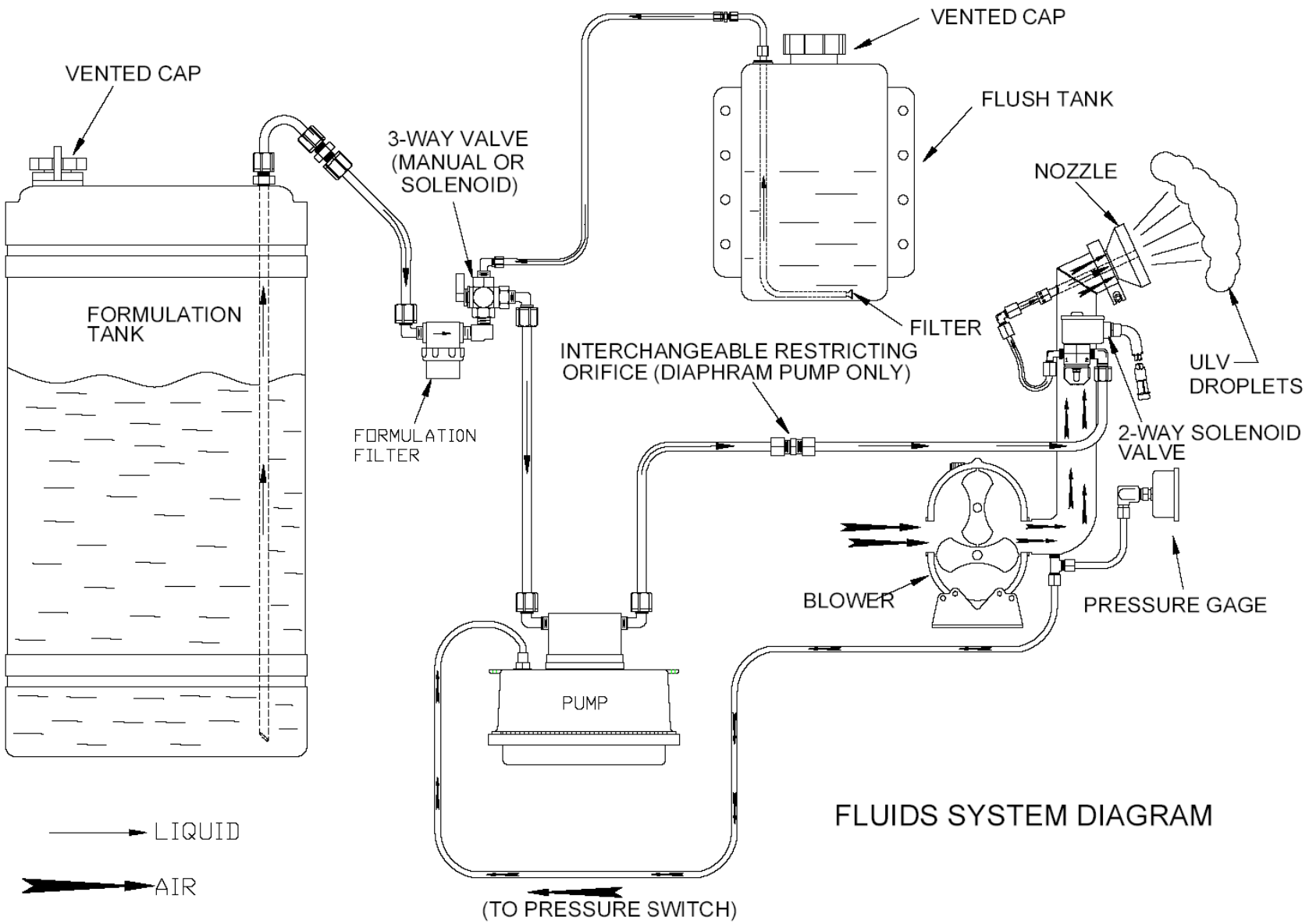
FORMULATION TANK ASSEMBLY WITH FILTER

ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	62574	FORMULATION STANDPIPE AY
1A	1	62545	FORMULATION STANDPIPE
1B	2	62550-3	NUT, .375 STL GRIP
1C	1	62573-2	CONNECTOR, MALE MOD.
2	1	63094	LABEL, FORMULATION
3	1	64077	CAP AY, MALE FILL 2”
4	1	64002	TANK, 15 GAL NAT POLY
5	1	64772	BUSHING, 3/4 MPT X 3/8 FPT, NYL
6	2	62554-4	FEMALE ELBOW, 1/4FPT X 3/8T
7	1	62558-5	FILTER/O’RING AY.

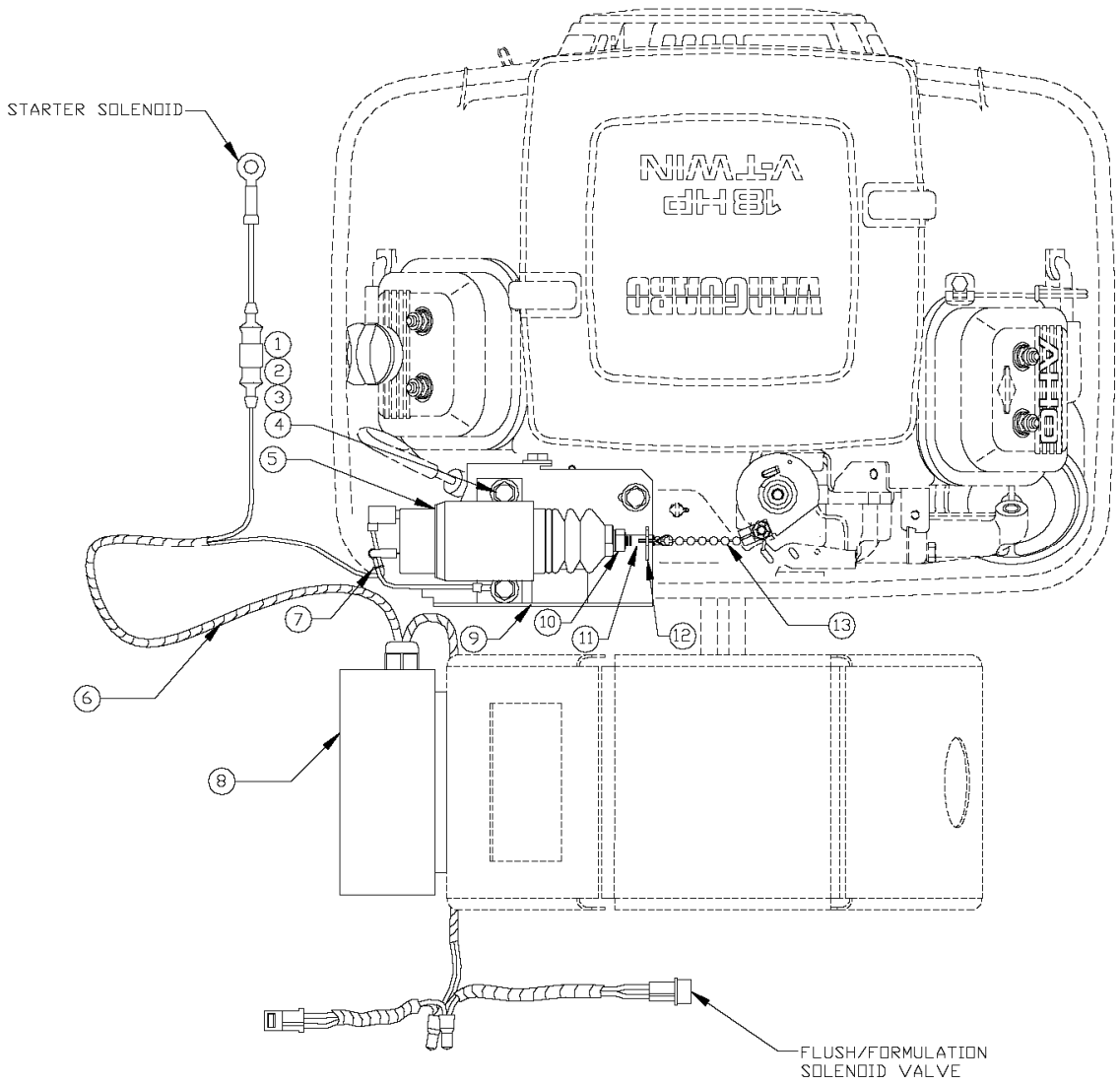
FLUSH TANK ASSEMBLY (1 GALLON), P/N: 63337-1



ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	1	63302-6	TANK, 1 GAL. (MACHINED)
2	1	62592	LABEL, FLUSH
3	1	62553-1	CONNECTOR, UNION, 1/4 T
4	1	62550-1	NUT, .25, STEEL GRIP
5	1	114628	SLEEVE, 1/4 T
6	1	145463	NUT, 1/4 T
7	1	10105	CONNECTOR, STANDPIPE
8	1	53131	WASHER, FLAT
9	1	74288	NUT, LOCK, 1/8 NPSL
10	1	63336	STANDPIPE, FLUSH TANK
11	1	62054-14	TUBING, .25
12	1	62346	FILTER, PLASTIC, PICK-UP
13	1	63302-2	CAP AY., 2 QT. VENTED



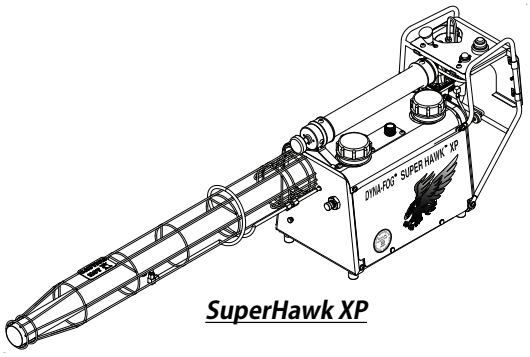
FLUIDS SYSTEM DIAGRAM



IDLEBACK KIT, P/N: 63875

ITEM	QUANTITY	PART NUMBER	ITEM DESCRIPTION
1	2	120854	BOLT HEX 1/4-20 X 5/8”
2	2	120392	WASHER, FLAT 1/4 REG
3	2	121753	WASHER, LOCK 1/4 EXTO
4	2	134551	NUT, HEX 1/4-20
5	1	63850	SOLENOID, 12V DC
6	1	62693-140	WIRE ASSEMBLY, BLACK
7	1	20247	TIE, CABLE
8	1	63849	ENCLOSURE, RELAY
9	1	63874	BRACKET, SOLENOID
10	1	120367	NUT, HEX 1/4-28
11	1	63856	ROD, SOLENOID (ZINC PLATED)
12	1	20414	INTERNAL HAIR PIN
13	1	63855	CHAIN, SOLENOID CONNECTOR

Dyna-Fog Offers a Complete Assortment of Sprayers and Foggers



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PULSE-JET POWERED THERMAL FOGGERS:
From 0-120 GPH (0-453 LPH) output. Our complete line include different models like the Superhawk, Golden Eagle, Trailblazer, Falcon, Patriot, Blackhawk, Mister III, SilverCloud and Model 1200. Portable or Truck mounted machines. Different models are available for Oil base or Water base formulations.

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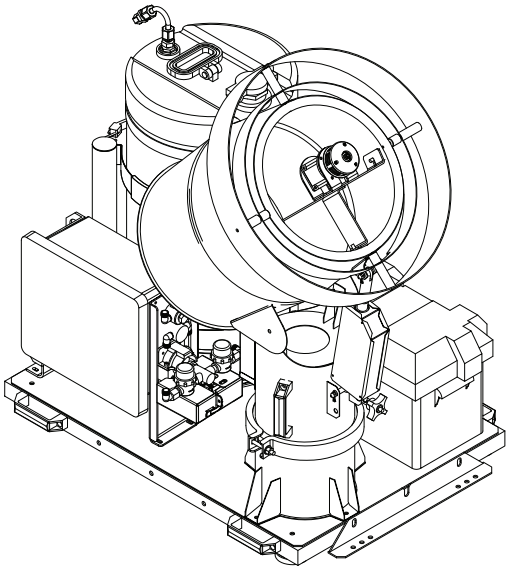
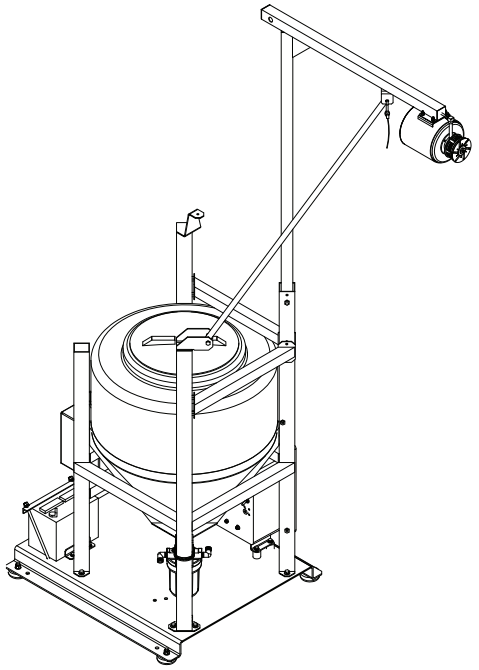
DYNA-JET L15: Drift Sprayer for migratory pest control like Locust. Flow Rate from 0 to 2 L/min. Optional Radar Syncroflow.

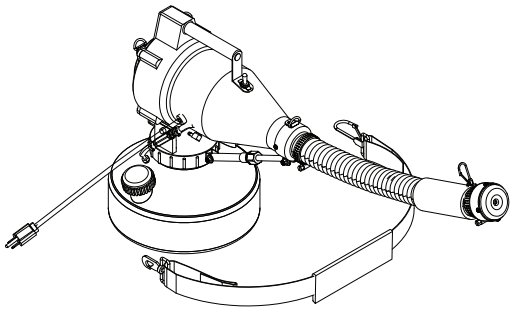


Dyna-Jet L-30

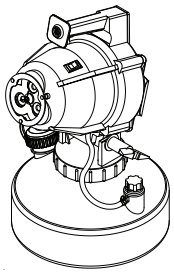


Dyna-Jet L-15

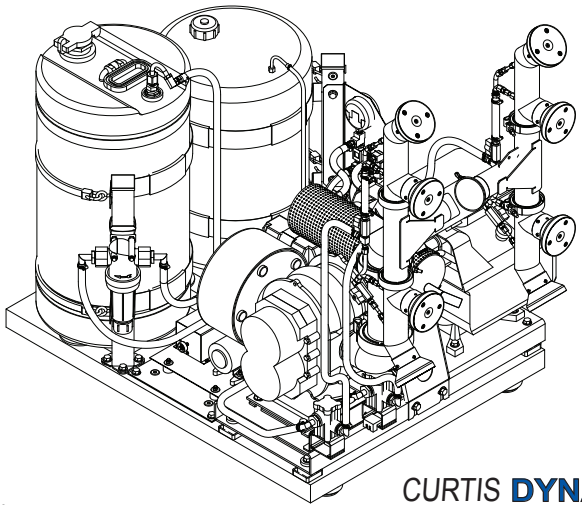
ELECTRIC HAND-HELD ULV/MIST GENERATORS:
A Full line of electric cold fog applicators with 1-3 gallon tanks, available in 115 and 230 VAC.



Cyclone Ultra-Flex



Hurricane ES



LV-8

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Truck mounted Units powered by 8, 9, 11, 18 and 20 HP four cycle, OHV Gasoline Engines. Diesel versions also available. One, two, four and eight nozzle configurations. Patented full remote control of boom functions (rotation of turntable and angle of nozzles) available on certain models. Your choice of Gear, Piston or Diaphragm pumping system. Pressurized system versions available for specific international markets. Optional Automatic flow control "Syncroflow" also available with Radar or GPS speed sensing. 25 cc and 40 cc two cycle portable models are also available.

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