

How to Spray Paint



JOHN DEERE

OPERATORS MANUAL

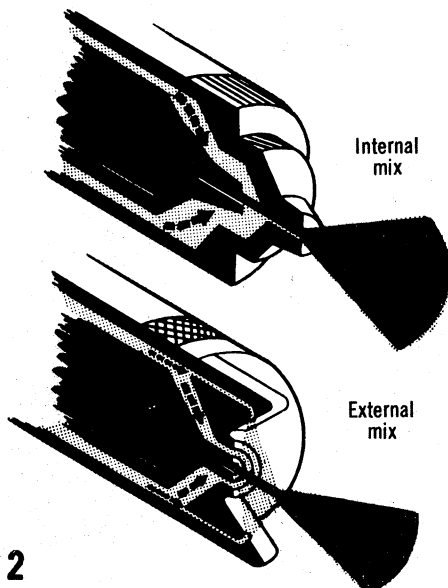
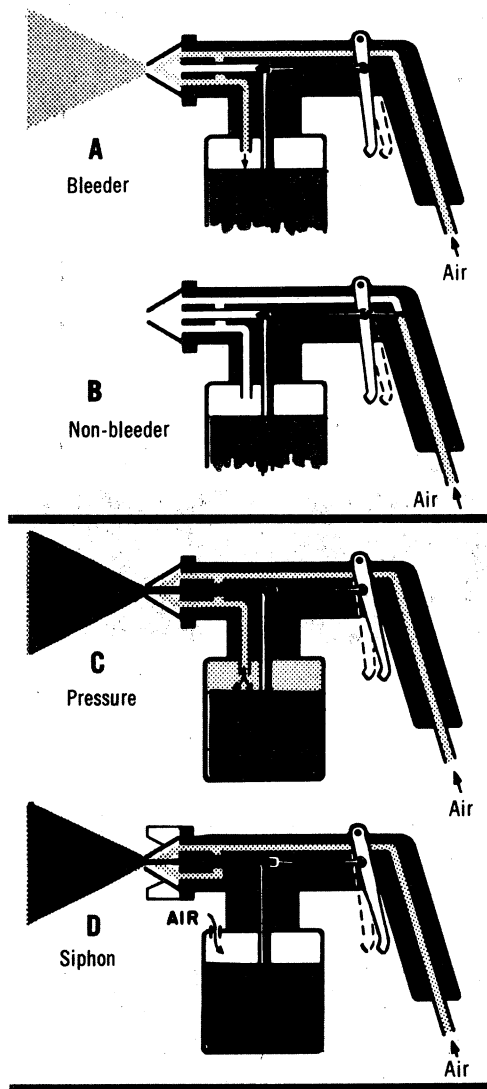
How to
Spray Paint

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Get to know your Spray Gun through practice and use!

Spray Guns

Familiarity with spray gun terminology will be helpful in the successful operation of your equipment.

Bleeder-type paint guns are for use with small continuously running compressors. The trigger controls paint only, and air is constantly "bleeding" through nozzle. A **Non-bleeder type** paint gun has an air valve that stops flow of air when trigger is released. This allows operator to control both air and paint. These guns are used with tank-type sprayers regulated to maintain a constant pressure.

Pressure-feed paint guns are mounted on an air-tight liquid container. Air pressure on the surface of the liquid to be sprayed forces it up to the gun nozzle, and is used to spray relatively heavy paints.

Siphon-feed paint guns, by creating a partial vacuum, draw liquid out of a vented container and into the air stream. Their use is generally restricted to light-bodied enamels, lacquers, etc. They should be used only with external mix nozzles.

Nozzles

Internal-mix paint gun nozzles combine paint with air inside the nozzle and are better for spraying heavy, slow-drying paints.

External-mix nozzles combine paint with air outside the nozzle and are used when spraying light, quick-drying lacquers, shellac, thinned paint, etc.

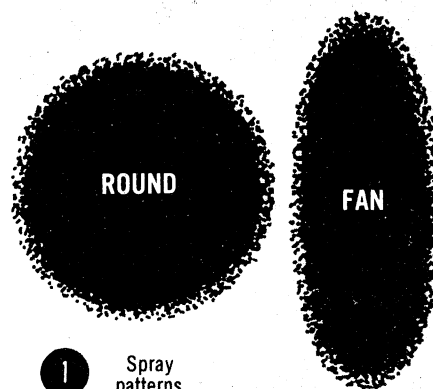
Let's get to spraying

Spray painting is just as easy to learn as correct brush painting. Once you get the knack of stroking, triggering, and keeping the gun the right distance from the work, you're all set.

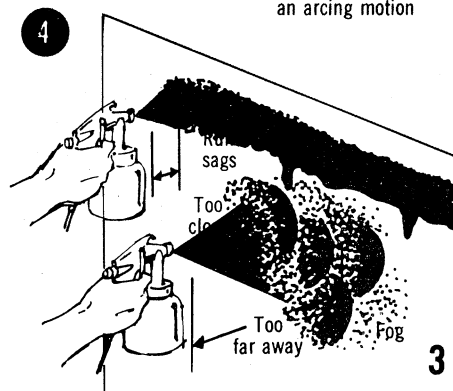
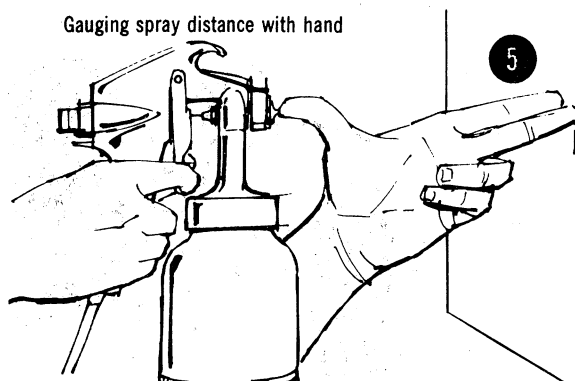
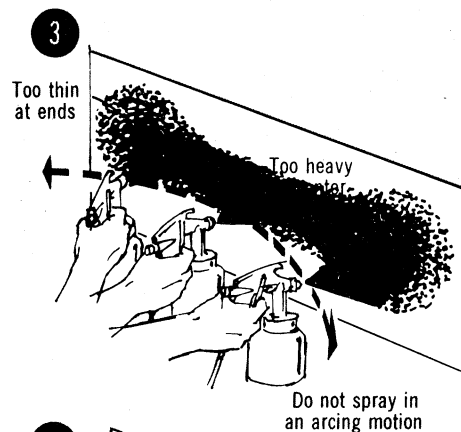
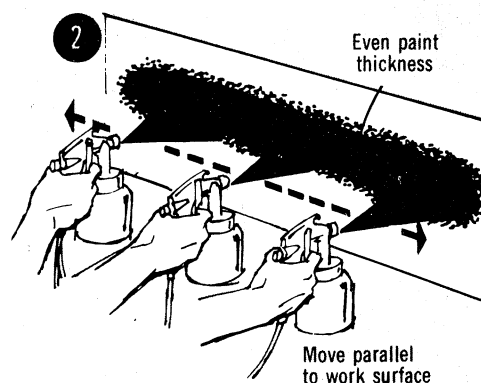
Spray pattern (Fig. 1) depends on nozzle type and how it is adjusted. A fan-shaped pattern is for spraying wide surfaces. To change fan direction for vertical or horizontal strokes, loosen nozzle cap and turn the nozzle. The round pattern covers narrow or small work where you need close control. With either fan or round spray pattern, you can adjust the amount of paint coming out the nozzle by turning the fluid adjusting knob.

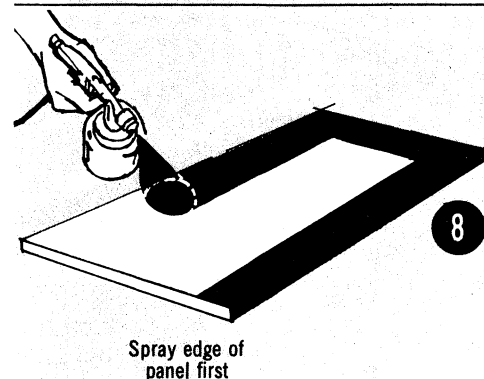
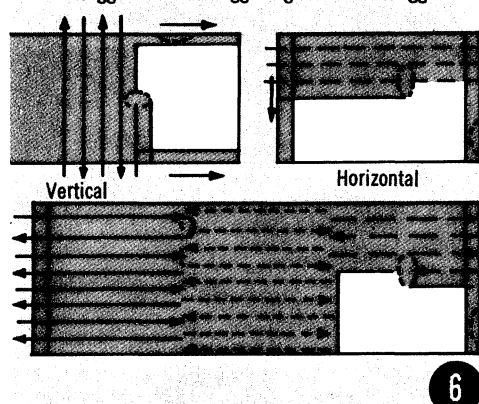
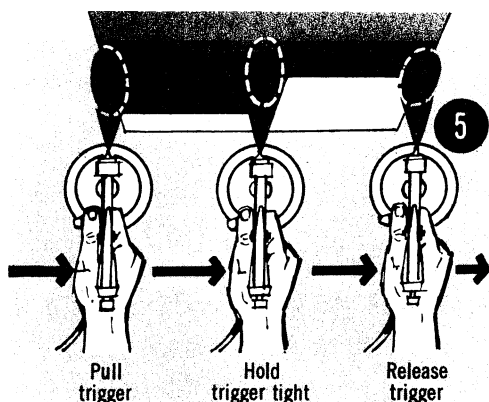
Stroking (Fig. 2) requires flexible wrist action. Notice how the tip of the nozzle moves parallel with the work surface while the axis of the nozzle remains perpendicular. Keeping a stiff wrist and arcing only the arm (Fig. 3) deposits a thick blob of paint near the center and only a mist near the edges. Adjust paint flow from the nozzle until you can move the paint gun back and forth at about the same speed you would paint with a brush.

Distance control (Figs. 4 & 5) becomes automatic after a few trials. For a start, keep the paint gun about 6 to 9 in. from the surface—about equal to the distance across your outstretched hand. With the gun too close, paint piles up and causes runs or sags. When the gun is too far from the work surface, paint tends to dry into dust before reaching the surface.



1 Spray patterns





4

Spray edge of panel first

Triggering each stroke (Fig. 5) becomes a habit as you develop skill. Correct triggering prevents a build-up of paint along edges of the work. Start each stroke with the trigger OFF, and beyond the work area. As the gun moves directly opposite the edge of the work, snap the trigger ON, continue the stroke to the opposite edge, snap the trigger OFF and follow through with the stroke beyond the work's edge. In this position you're ready for the return stroke.

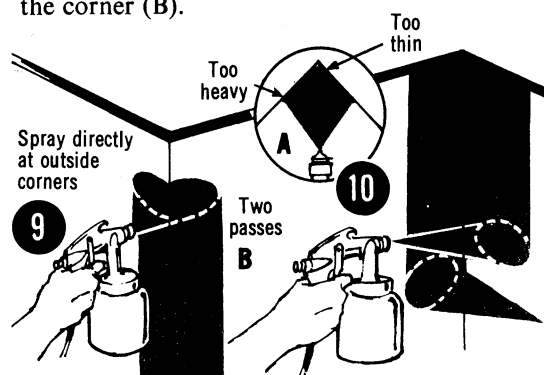
Overlapping each stroke (Fig. 6) assures an overall paint film that's uniform in thickness. Overlap each stroke or pass by $\frac{1}{3}$ to $\frac{1}{2}$. An easy way to judge overlap is to aim the center of the gun along the edge of the previous pass.

Practice spraying (Fig. 7) gets you acquainted with your spray gun and builds up your confidence as you develop skill in stroking, triggering, distance control and lapping without running the risk of improperly painting something important. With an inexpensive colored paint in your spray gun, make trial runs using the sides of a large cardboard box or other stiff surface as a target. Try stroking about 20 to 24 in. at first. Shoot between vertical marks with horizontal strokes to develop your skill at triggering. To see how distance controls painting speed, move the gun in or out as you stroke the gun. Adjust the paint quantity coming from the nozzle.

Edging panels (Fig. 8) prevents thin or uneven coverage as you start and stop strokes. Spray around edges of panels, aiming the gun directly at the edge, before painting the main surface.

Spraying outside corners (Fig. 9) directly from the corner deposits paint where it's needed—along the edge. Spray corners first, then spray surfaces on each side—similar to edging when painting panels.

Spraying inside corners (Fig. 10) head on doesn't deposit enough paint in the corners (A). Instead, spray vertically on each side of the corner (B).



Spray pointers

Avoid applying heavy coats of slow-drying paints to prevent runs or sags. Two thin coats are better than one heavy coating.

Don't tilt the paint gun too much (Fig. 11) as the paint inside the cup may clog the vent hole on a siphon-feed paint gun and cause sputtering. Paint also gets inside the cap and makes cleaning harder.

Paint the nearest part of a flat surface, like a table top, first when painting at an angle (Fig. 12). Work away from the near side with overlapping strokes.

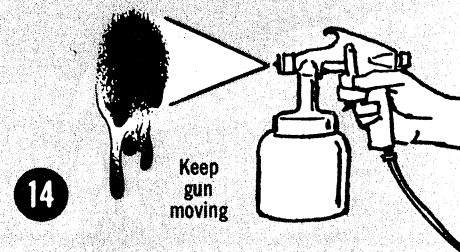
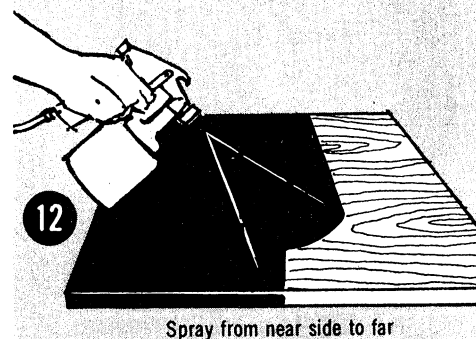
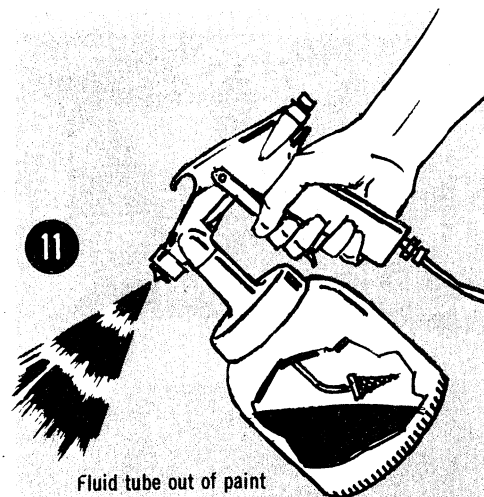
Air caps with 45° angle direction can be used for painting flat surfaces such as floors and ceilings. Also when a spray gun is used with a paint tank, problems of spilling paint from nozzle are eliminated.

Don't jiggle the trigger of the paint gun while making a pass. Opening and closing the trigger causes uneven spray and results in a splotchy surface (Fig. 13).

Always keep the paint gun moving. Keeping the gun in one place with the trigger ON piles paint in one spot (Fig. 14), causing possible runs or sags.

Don't shoot into deep openings (Fig. 15). The air blast that sprays the paint must disperse without affecting the primary spray. In deep corners, the air blast is trapped. Spray parts separately before assembly or leave ends open until sprayed.

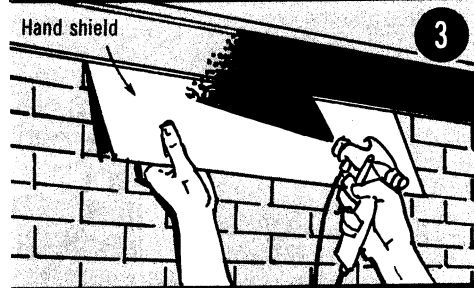
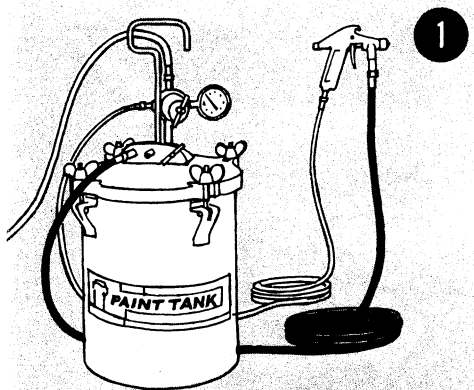
See page 24 for information on paints.





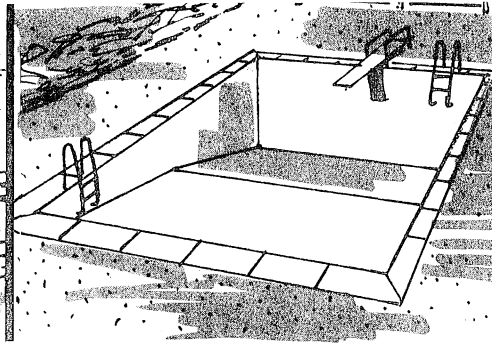
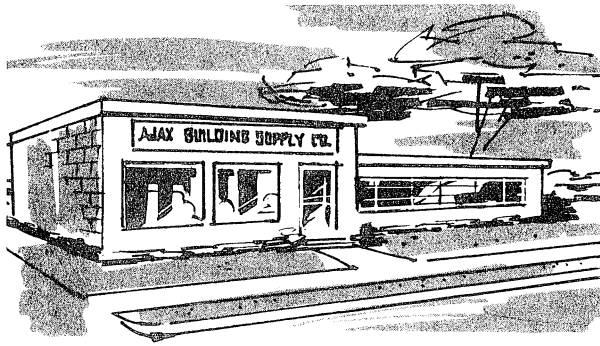
Exterior spray painting

For outdoor spray painting of large surfaces such as a house, barn, or other large building, a tank-type portable spray unit outfit is the ideal tool. With your spray gun hooked to a material container, (Fig. 1) and the portable tank-type compressor, a professional looking job can be done in a relatively short time. The spraying should be done on a moderately warm day (50° F. or above) and when there is practically no wind. Surfaces should be clean and dry.



With a roll of masking tape (Fig. 2) and some newspaper, windows and doors can be quickly covered. As you spray paint, a portable shield (Fig. 3) such as a piece of cardboard can be used wherever paint should be kept off other parts of the structure.

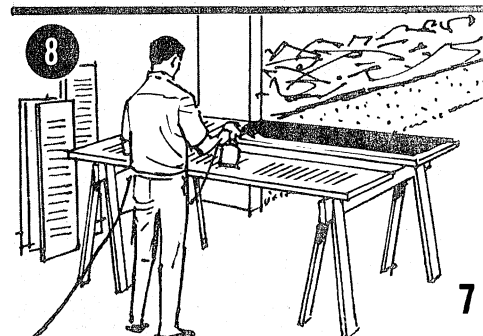
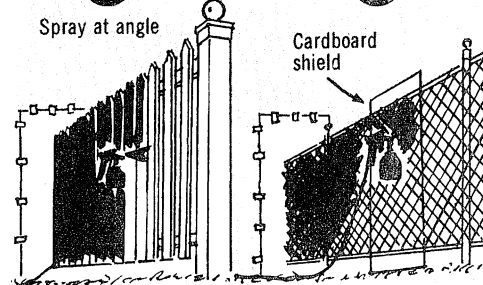
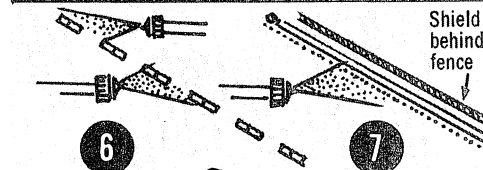
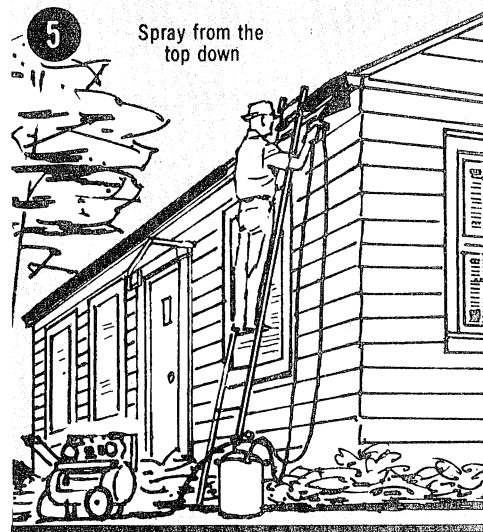
Gutters and downspouts (Fig. 4) should be cleaned and then sprayed with a rust sealing primer if they show signs of rusting.



Start spraying building from the top down, (Fig. 5). Spray sections of the side as you would separate panels, blending in ends of lapped strokes. Avoid too thick an application where paint could run or sag. On new wood apply two finish coats after primer. On previously painted work, apply one or two coats, depending on condition of paint. Apply two coats if colors are changed.

Fences around property (Figs. 6 and 7) can be spray painted at the same time. To save paint, spray at a slight angle, using a vertical motion on picket fence. Place a cardboard or other shield behind each section of a chain link fence when spraying. Aluminum paint or exterior enamel will work well on metal fences, outdoor grills, etc. A chromate primer beforehand will help prevent rust.

Shutters (Fig. 8) should be taken down and sprayed with trim paint. A pair of saw horses or other supports will make this a fast, easy job. Like any other surface exposed to the weather, you may find they require sanding and wood-filler in order to achieve a smooth, continuous painting surface. Although only one side is exposed to weather, they should be finished on both sides to prevent rotting and warping.





Household spray painting

There are dozens of painting jobs around the home that you can now finish in short order with your new spray unit.

Storm sash and screens are troublesome to paint with a brush, but are simple to spray (Fig. 1). Newspaper shields taped to the glass of storm sash are quick to apply and can be left on until all coats are dry (Fig. 2). Use a moveable shield of thin sheet metal or cardboard to catch any overspray. Spray edges of sash frames head-on first. When the paint is dry, simply peel off the masking. Screens are easy to paint if you spray screen cloth and frame the same color. Stack screens behind one another to save paint as in (Fig. 3). Spray the screens with screen enamel, exterior spar varnish or exterior enamel thinned with turpentine. Separate screens after spraying screen cloth and spray paint frames one at a time.

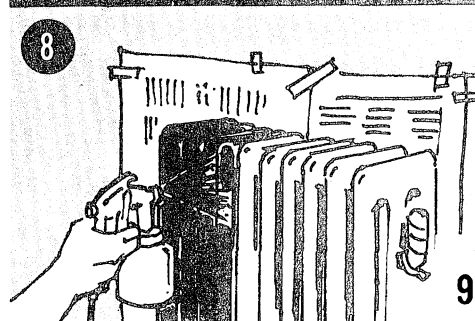
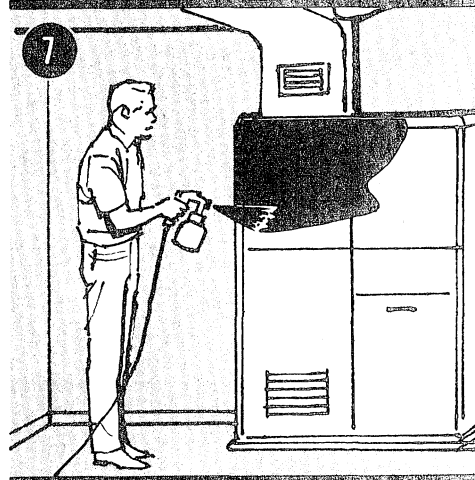
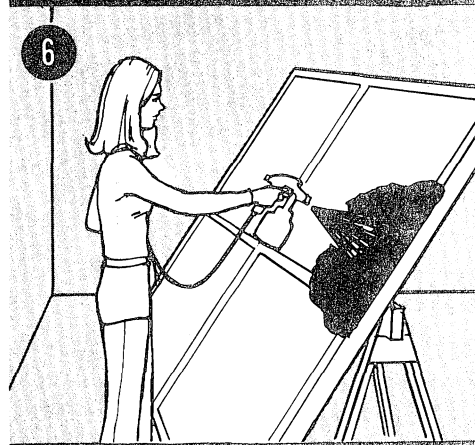
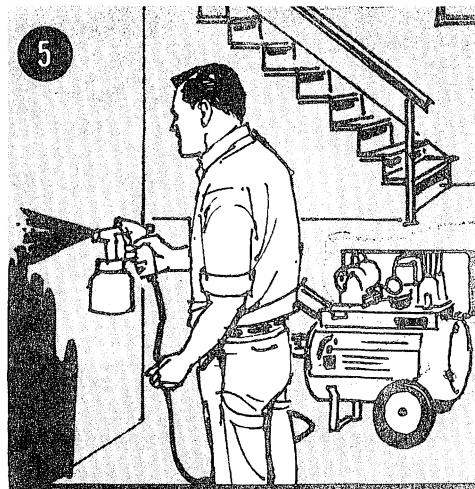
Floor areas of wood, cement, etc., can be finished in minutes, once surface preparation is complete. Follow the directions for surface preparation usually described in detail on the paint label. Use newspaper to mask walls by taping at floor line (Fig. 4). Two light coats of varnish or other clear materials should be sprayed on wood floors, while colored floor, porch or basement paint will usually cover in one application. Notice that a paint tank is used. It eliminates paint dripping from canister or gun when gun is tilted.

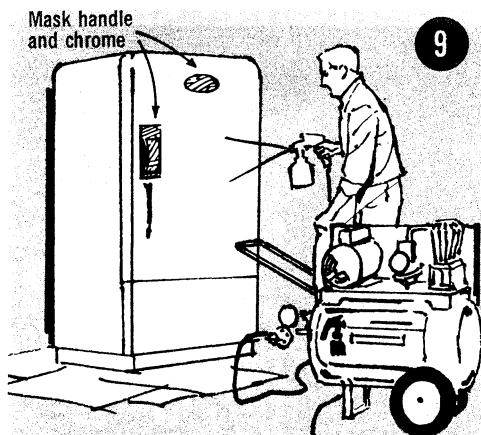
Basement walls can be sprayed with any of the masonry, oil or latex base paints (Fig. 5). If previously painted, select paint with a similar base. If unpainted, check label of paint for information on priming or other surface preparation. While spraying, be sure there is adequate ventilation or wear a mask.

Tables for ping-pong, toys, trains, etc. (Fig. 6) can be varnished or painted with your paint sprayer and the result will be a smooth finish. Edges of tables and table-legs that used to require much time and patience can be covered quickly with a sprayer.

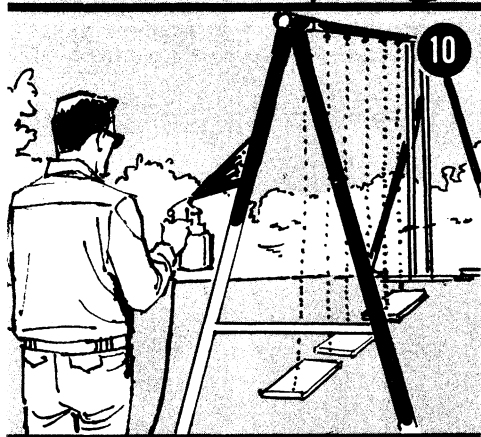
Furnaces and cooling units (Fig. 7), water heaters, stationary laundry trays, and many pieces of permanent or semi-permanent equipment in the home can be kept in beautiful condition through the use of your paint sprayer and a few minutes time. When spraying metal housings of central heating-cooling units or water heaters, be sure units are turned off and operating parts such as burners, blowers, controls, etc., have been masked carefully. Also, surfaces should be cleaned and then sanded lightly. Depending on condition and age, one or two coats will be needed.

Radiators (Fig. 8) and other parts of your heating system are easy to spray. Apply a heat-resistant paint after the parts have been thoroughly cleaned. Often, such equipment can be temporarily disconnected during the summer months and painted outdoors, where little or no masking is required.

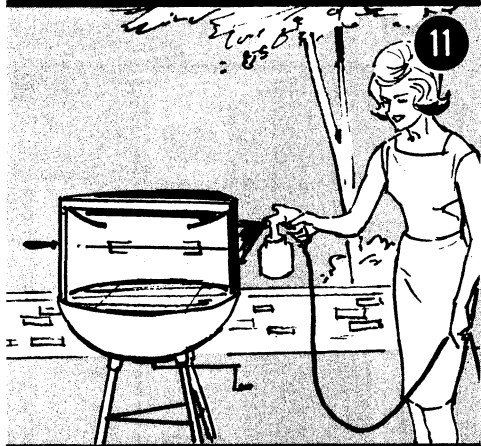




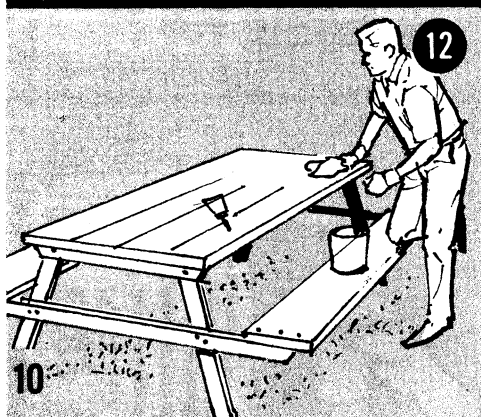
Appliances such as a refrigerator (Fig. 9) or washers and dryers, can be easily refinished by the owner of a paint sprayer. Be sure to clean and dry appliance thoroughly, and mask all hardware such as hinges, handles and rubber gasket around door.



Painting an outdoor gym set (Fig. 10) is another task easily performed with your portable spray unit. For a smooth-looking job, sand worn or chipped paint on cross-piece and legs as well as swing seats, and arms of glider. A prime coat of chromate or other rust-resisting paint on bare metal areas is suggested before spraying outdoor enamel.

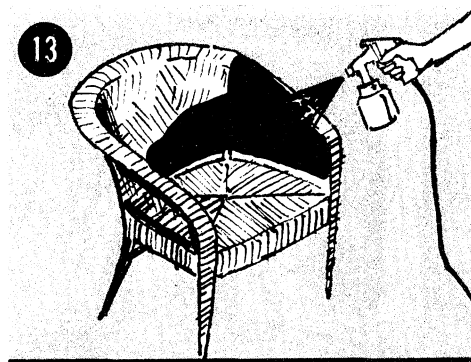


Metal outdoor grills (Fig. 11) should also be similarly prepared before painting. In addition, a grill should be thoroughly scrubbed to remove all stain and grease particles, then dried well to avoid trapping water under paint.

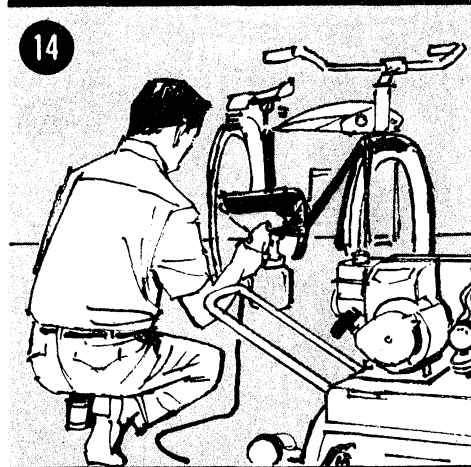


An outdoor wooden bench or picnic table (Fig. 12) should be given regular care to avoid rotting, warping, or cracking of top and seats. Usually, such furniture can be sprayed immediately after brushing off dust and dirt. If the paint has peeled or cracked, remove it completely with a paint and varnish remover. Most of these woods require an initial filler, or at least one coat of shellac if outdoor varnish is used later. If outdoor enamel or trim paint is used, then a primer coat is recommended, applied lightly.

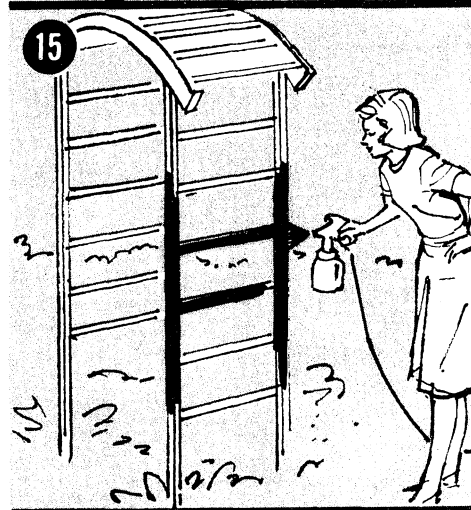
Porch or patio furniture, including wicker, bamboo or rattan, (Fig. 13) can be painted to look like new again along with other yard and garden equipment such as rakes, shovels, lawn rollers, etc. Many of these items are almost impossible to paint with a brush, but can be sprayed very quickly. Use a wire-brush on metal furniture to remove rust and dirt and a stiff bristle brush on wicker or rattan. When painting the latter, thin the paint about 15% to avoid build-up of paint in joints of chairs, and apply two coats.



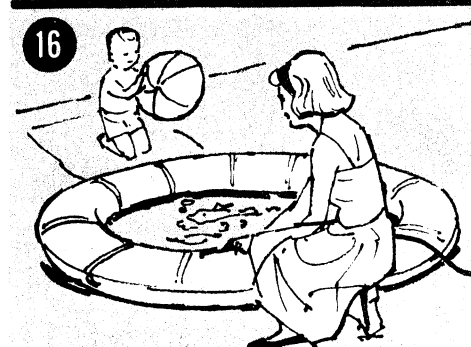
Bicycle frames or wheel goods (Fig. 14) and toys of 'most any type and size can be re-finished with your paint sprayer—a job you would find very time consuming if you had only a brush to apply the paint. First, mask off moving parts and bright plated areas. Be sure surfaces and frame members are clean and dry. After each coat, be sure to allow sufficient time for complete drying before applying another.



Outdoor trellis or rose arbors (Fig. 15) can be painted as they stand in the early spring or late fall. When foliage appears, you'll also find your sprayer a convenient tool for applying insecticides, weed-killers, etc. Be sure to clean all your spray equipment thoroughly between jobs as weed-killer can also kill flowers and shrubs.



Plastic wading pools (Fig. 16) as well as inflated may be spray painted . . . in fact, you'll find that your sprayer, with its capacity for getting more maintenance jobs done faster, will give you more time to enjoy the yard, patio, porch and other equipment you own.



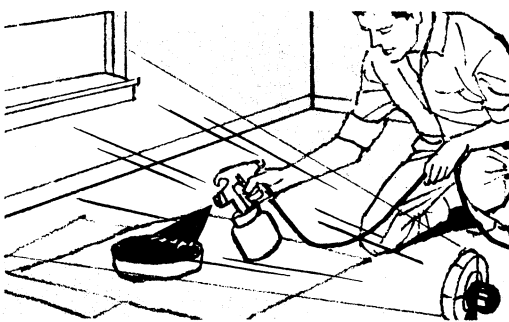
Workshop spraying

One of the most versatile tools in your home workshop, your new sprayer will not only handle painting chores easily, but the compressor will power other air-operated tools like drills, air brushes, cleaning tools, etc.

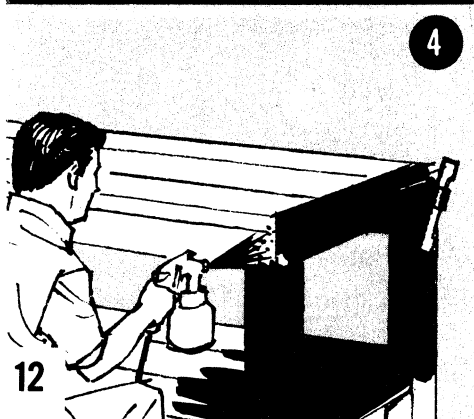
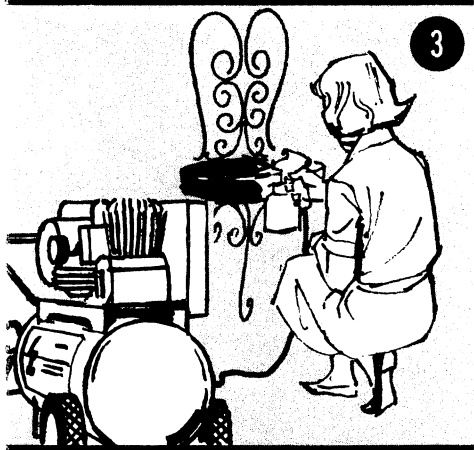
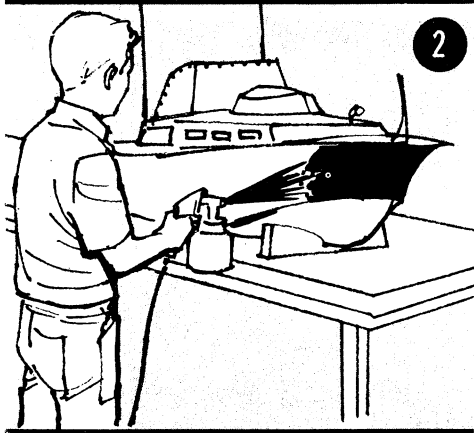
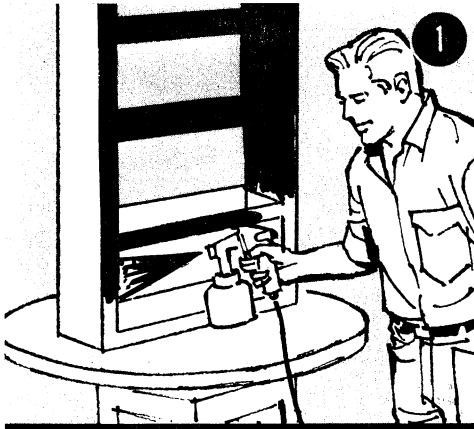
When finishing hardwood furniture such as book-shelves (Fig. 1) with varnish or other transparent stains, be certain to sand out scratches or other surface marks before applying shellac sealer or wood filler. With exception of final coat, surface should be lightly sanded after each spraying.

If hobbies in your family include model boat-building, airplanes, cars, etc., your paint sprayer will be in demand for applying that factory finish to such items (Fig. 2).

Wrought-iron metal furniture (Fig. 3) should be cleaned with a stiff bristle brush before spraying. One or two light coats are recommended to avoid caking on legs or backrest.



Adequate ventilation is a necessity whenever you are using your paint sprayer indoors. In addition to opening windows, the forced ventilation from a small household fan directed at an open window or door will keep the room reasonably free of any paint fumes.



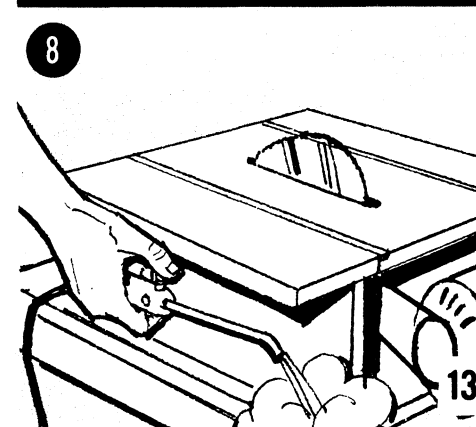
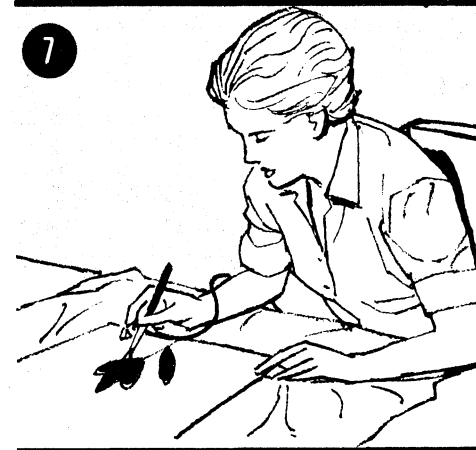
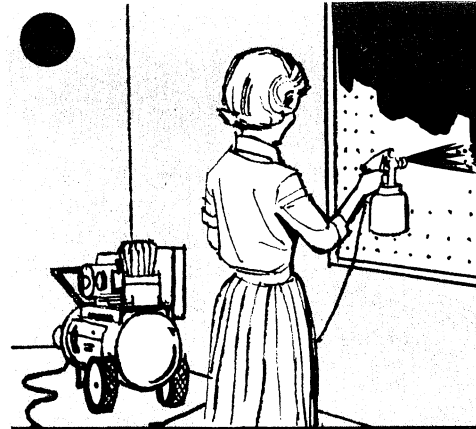
Your work-bench or table can be one of the first jobs to tackle with your paint sprayer (Fig. 4). This will be good practice for you in handling the gun and you can usually cover mistakes on a work-bench as you go along.

Peg-board covered walls in workrooms and garages are very convenient for hanging tools and other equipment. You'll find the application of a sealer and finish coats in any desired colors is a simple task for your sprayer (Fig. 5). Newspaper can be used to mask portions of wall, ceiling or floor near your work.

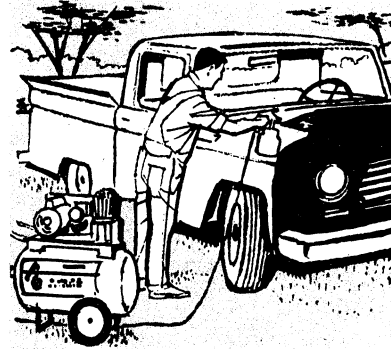
If you have air-operated tools such as a drill (Fig. 6), you can use your compressor to power this equipment. Another small but useful tool is an artist's airbrush which can be used for a variety of decorative work on objects around the home (Fig. 7).

When cleaning equipment such as a table saw (Fig. 8), typewriter, electric shaver or other tools which cannot be immersed in a liquid or cleaned otherwise, your air compressor will finish the job in seconds.

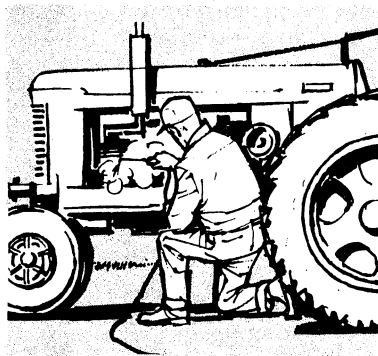
As a portable, utility air source, you'll find many labor-saving jobs around the home for your new unit. Bicycle tires, wading pools, footballs, basketballs, or other air-inflated equipment can all be kept in useable condition. And a flat tire on your car in the garage needn't be a problem. Just use your air compressor to restore inflation temporarily, until you can get to a station or garage.



Panel or pick-up trucks are relatively easy to mask with newspaper and tape. Cover lights, hardware, glass, wheels, etc., and then roll-out or fill-in dents in body and sand entire surface. You can use your sprayer to apply metal primer as well as finish coats of auto enamel.

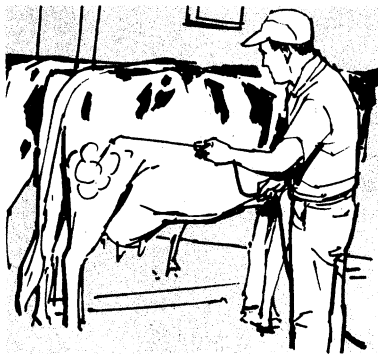


Tractor engines accumulate heavy deposits of dust and dirt on critical moving parts which are often difficult to clean by hand. Your compressor with air hose will clean up the tractor in short order. Also, you can use the air power to attach to lube guns.



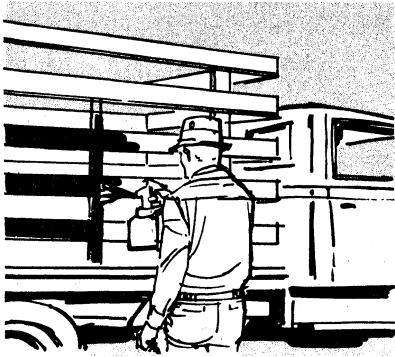
Farm and commercial equipment

Insecticides to control various farm animal pests can be applied with your portable sprayer.

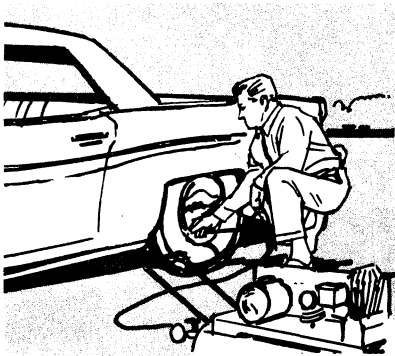


Roofs and rafters in storage building or attics often become infested with various insects. Control and elimination of these with proper insecticides applied with your sprayer will help save time and trouble later on.





If your truck has side rails, you know how easily they can be painted with your sprayer versus the hours of labor required to paint them with a brush.



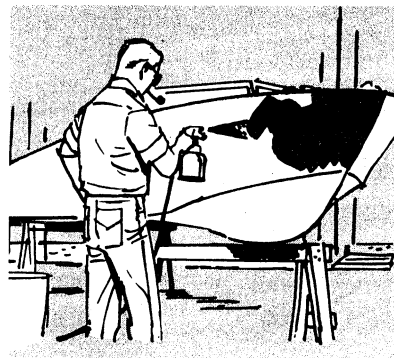
You'll find a portable compressor will help save money for you in keeping tractor, truck, auto or other tires properly inflated for longer wear.

This is a partial list of tools that a John Deere portable compressor will operate.

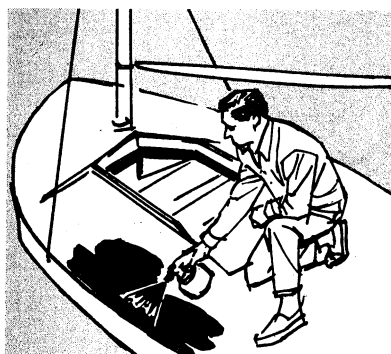
Less than 100 PSI	Average Free Air Consumed
Air Chisel	4 CFM
*Body Polisher	2
*Body Sander	5
Brake Tester	3.5
Caulking Gun	1.2
Drill 3/8"	6-8
*Engine Cleaner	4-6
Hoist (1-Ton)	1.0
Impact Wrench 3/8"	3-6
Nailer	6
Sand Blast Gun	6
120-150 PSI	Average Free Air Consumed
Grease Gun	3-4 CFM
Hydraulic Lift	5.0 CFM
Pneumatic Garage Door	2.0
Tire Changer	1.0
*Vacuum Cleaner	6.5

*These tools are to be considered as continuously operating devices when operating normally. All other devices listed are to be considered as intermittently operated when operating normally.

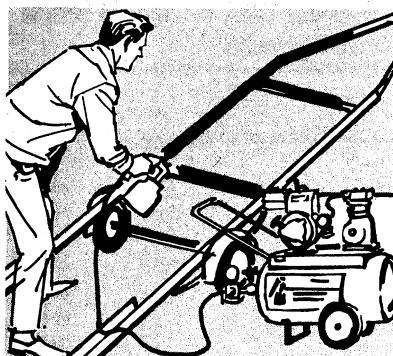
Spray painting is a simple matter, once you have cleaned and prepared the hull surface—whether wood, metal or plastic. Start at the gunwale and spray in sections down to the keel. Two or three light coats of marine paint will give better protection than one heavy coat.



Your paint sprayer will shorten hours of brushing on a deck paint or varnish. Makes it a fast, pleasant task.



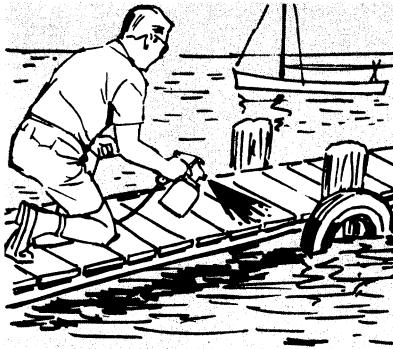
Periodically scrape and sand boat trailers. A rust resistant primer is applied over bare metal, followed by at least two coats of marine paint.



Surface preparation of other boating equipment such as water skis, will depend upon material—wood, plastic, etc. Nevertheless, the basic spray painting techniques are the same.

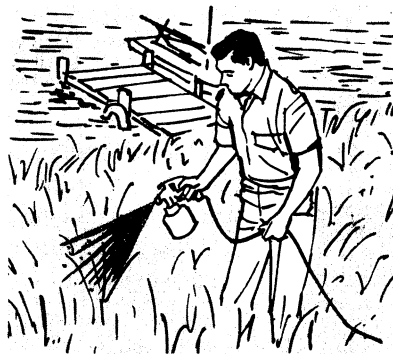


**Boats
and
trailers**

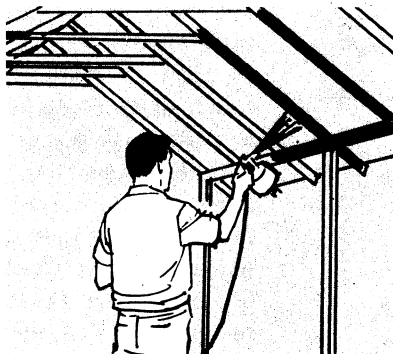


Your sprayer can be used not only to paint boat docks but also to rid them of fungus by spraying various anti-bacterial preparations.

**A versatile
tool . . .
use your
sprayer to
control
weeds and
insects**



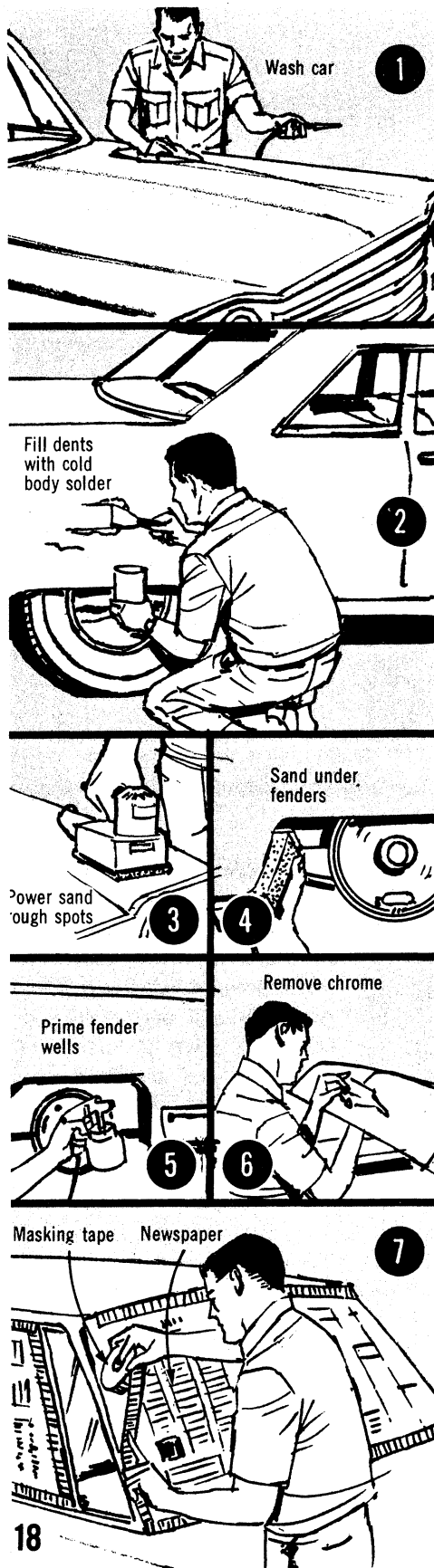
To clear stream, lake or river banks of weeds, ivy, etc., near dock or boat launching areas, use your sprayer. It can complete the job in just a few minutes.



Boat sheds or other river-based structures are susceptible to infestations of many kinds of insects, and often become mildewed. An occasional once-over spraying with proper insecticides will eliminate such problems.



Avoid the delay and expense of having your trailer painted. Wash it down, repair any worn or damaged areas and spray paint it as you would any other structure.



Repainting your car or truck

Whether you want to paint a fender or the entire body, your sprayer is an absolute necessity for maintaining an original luster-finish quality. Surface preparation must be made carefully, as follows:

(Fig. 1) Wash the vehicle thoroughly to remove road film, tar, grease and wax. Use a rubber-tipped hammer to knock out dents. Add cold body solder, fibreglas filler or lead to fill in larger depressions or deep scratches (Fig. 2). Sand the entire surface (Fig. 3) to remove rough spots, excess filler and rust. (A rotary or platen-type power sander with 2/0 silicon carbide paper will speed this operation.) Fender edges, hoods, etc., may be corroded (Fig. 4) and require extra sanding to expose bare metal. After cleaning and scraping inside of fenders (Fig. 5) spray on a primer coat to prevent rust. Remove all chrome trim (Fig. 6) and tape newspapers over windows (Fig. 7) and wheels. Spray in the garage or any available dust-free area.

If the present paint on your car is peeling all over and is rusty in enough spots to need overall treatment, you may find it easier to spray on a paint remover and take off the present finish completely.

To help settle dust before painting, moisten the floor area (Fig. 8). Be sure to wear a respirator when working in a garage or any partially closed area.

To avoid lapping, spray a full wet coat on each panel before going on to another section of the car (Fig. 9). For example, spray the complete width of the car top in one section if possible. Do not spray a section too heavily as this will cause runs and sags. Should this happen, sand it down to a smooth meeting surface with surrounding area.

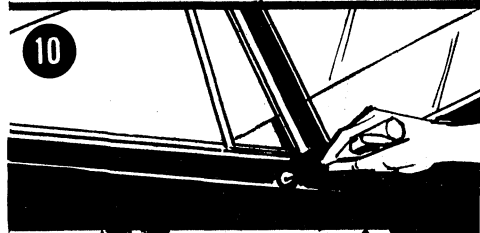
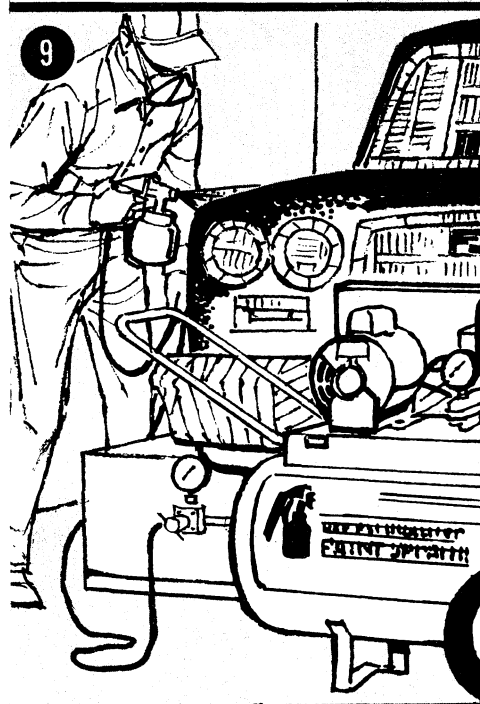
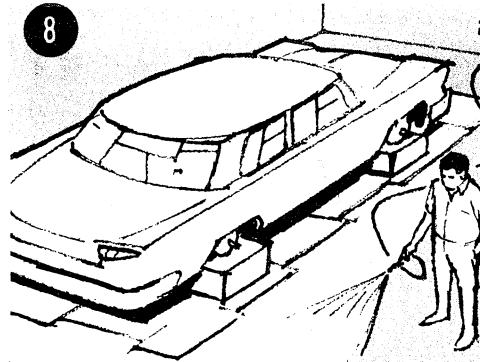
Sand the undercoat down smoothly by hand with 4/0 or 6/0 silicon carbide paper, being careful not to sand through paint along edges. Before attempting to spray on the finish coats, remove all traces of the sanded paint dust with a tack rag.

Spray on one or two finish coats of auto enamel in thin coats. Don't attempt to move the car between coats.

Final striping with a striping tool adds a truly professional touch to your car spraying (Fig. 10). Select a contrasting color and stripe after the last enamel coat has dried for at least 48 hours.

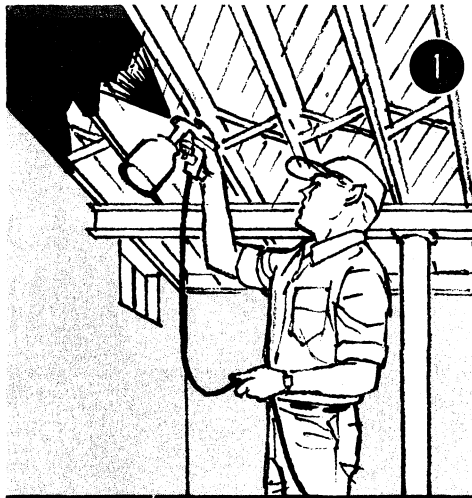
For a 2-tone color finish, mask the line between colors with masking tape while spraying the opposite color. You can also spray wide stripes by masking both sides of the striped area with masking tape.

Let the enamel fully harden for at least two weeks before attempting to rub down the surface with rubbing compound or applying a wax coating (Fig. 11). In most cases, the final protective wax coating is all that's needed.

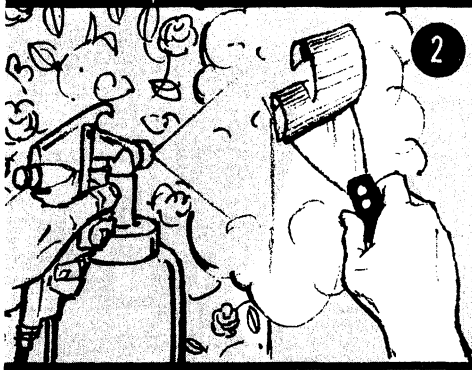


Interior painting

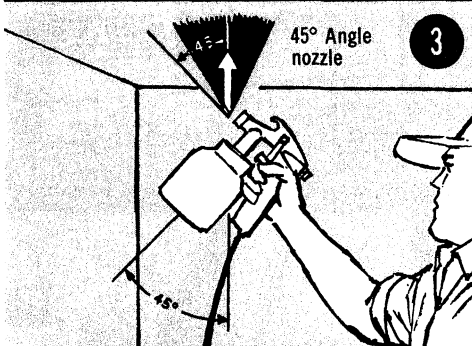
You can put your sprayer to work in dozens of time and trouble saving "around the house" jobs. Shown on these pages are a few of the many uses.



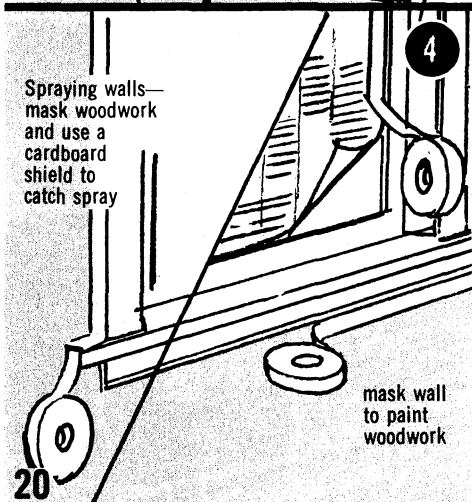
(Fig. 1) If you want to brighten an unfinished ceiling in the basement, attic, cupboard or garage, your sprayer will help you finish the job in record time. Allow for sufficient ventilation and be sure to cover floor, walls and other furnishings and equipment.



(Fig. 2) Although it's possible to spray paint over clean, tight wallpaper, it is usually better removed. Use your sprayer for several applications of hot water to simplify paper removal. Fill in all cracks with spackling plaster, sand smooth when dry, and apply a coat of sealer.



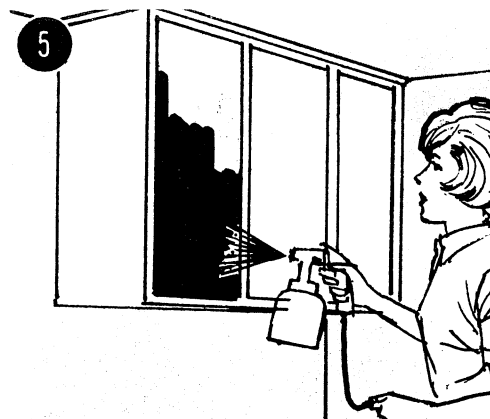
Cover furniture carefully or remove it from the room. Use newspapers to cover floor. Caution! When working indoors, always wear a respirator even though windows are open.



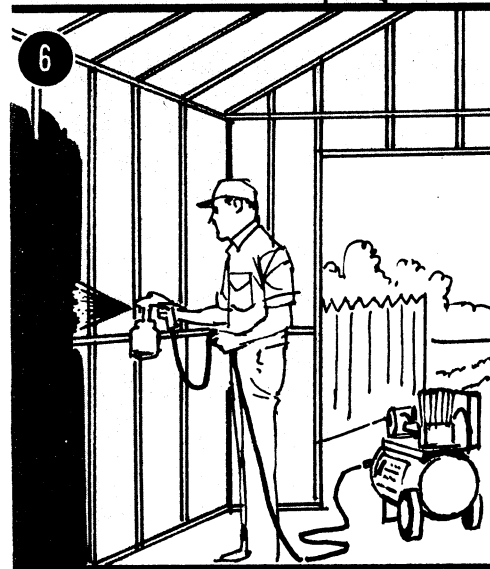
When the walls and ceiling are clean, you are ready to begin. Spray the ceiling first using a 45° angle nozzle to keep the gun and canister level (Fig. 3). This way, you will use all the paint and prevent excessive dusting. Consider the use of a paint tank when painting ceilings or other places where orientation of the gun is important.

Mask all windows (Fig. 4), and block out spaces around doors to keep airborne pigment from circulating to other parts of the house.

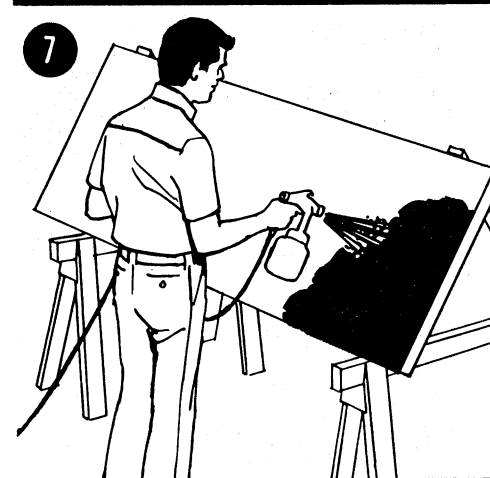
Wall or ceiling-hung cabinets can be spray painted or varnished on the spot (Fig. 5). Even new cabinets should be cleaned and sanded lightly before spraying. Time spent in carefully masking other surfaces adjacent to them will usually offset the trouble of removing them.



You'll find spray painting is a natural for your garage interior or carport (Fig. 6). It's quick and takes little preparation. Your sprayer is ideal for obtaining a smooth, mirror-like finish on doors. Sand and apply woodfiller where necessary. If unpainted or spot sanded, use a primer coat first. Be sure to mask handles, lock-set, hinges, etc. Avoid any paint build-up on or near door edges. These can cause door to stick. Cover floor with damp newspaper to catch any over-spray and to hold dust to a minimum. Prop portable panels against low fence or other support (Fig. 7).

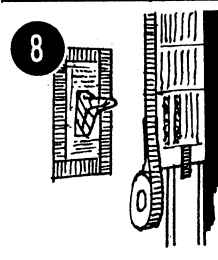


When painting interiors, remove switch plates and cover plugs and other electrical circuitry with paper (Fig. 8). If possible, lower and cover ceiling fixtures (Fig. 9), to achieve uninterrupted ceiling coverage with sprayer.



Woodwork can be finished with an oil-base paint in same color as the walls or in a contrasting color. Dull the surface of previous paint coat by sanding with fine sandpaper and wash. A piece of cardboard or metal can be used as a moveable mask along junction of wood and walls.

Oil-base paints tend to show lap marks more than water or latex-base, so always work towards wet edge when using them.



Spray Gun performance problems



Heavy end (Fig. 1A) results from a partially clogged nozzle. Unscrew the cap, remove it and clean thoroughly in thinner.

Heavy center (Fig. 1B) is due to either too little air pressure or too heavy a paint.

Half-Moon (Fig. 1C) results from a nozzle orifice clogged around one side. Clean nozzle. If pattern persists, tip may be damaged.

Dumb-Bell (Fig. 1D) pattern with heavy end blobs results from orifice clogged at center. Clean orifice. If trouble persists, orifice may be damaged.

Sags and runs (Fig. 2) come from poor spraying technique—trying to spray too heavy a coat with one pass. Don't thin paint unnecessarily. 35 pounds-per-square-inch pressure lets you spray many paints at can consistency.

Streaks (Fig. 3) result from poor overlapping, poor blending at end laps, or partially clogged nozzle. Practice spraying to get even film over surface.

Fogging (Fig. 4) comes from holding the gun too far from the surface. Paint either dries before it hits work, or spraying material is too thin for pressure.

Scratchy or sandy surface results when dried paint dust from overspray sticks to wet paint (Fig. 5). Sandy surfaces occur with quick-drying lacquers or shellac. Spray wet coat, and direct overspray away from newly painted surface.

Orange peeling (Fig. 6) results when quick-drying lacquers are sprayed too thin and do not flow together, or when material sprayed is too heavy.

Nozzle leaks (Fig. 7) result when valve needle is dirty or not tightly seated. Clean thoroughly and check valve needle for binding in packing nut.

Sputtering spray (Fig. 8) is caused by air in the fluid line from too little material in the cup, or from tipping the cup so the supply tube breaks the surface of the paint. Fluid tube may be loose or cracked. Sputtering can also be caused by trying to spray heavy paint with a siphon-feed gun or from a clogged vent hole in the paint cup.

No paint flow may be due to spraying a paint that is too thick. Try water. If it sprays, thin your material. If water won't spray, gun is clogged or air supply is blocked.

Filter blockage causing the heavy center spray pattern indicates too little air pressure or complete paint stoppage. Remove and clean filter.

Packing nut drip (Fig. 9) may be due to loose nut or dry packing. Tighten packing nut. If drip persists, remove packing, oil it or replace with new packing.

For more details refer to your operating instructions on spray gun and compressor.

Cleaning should be done as soon as possible after each spraying job

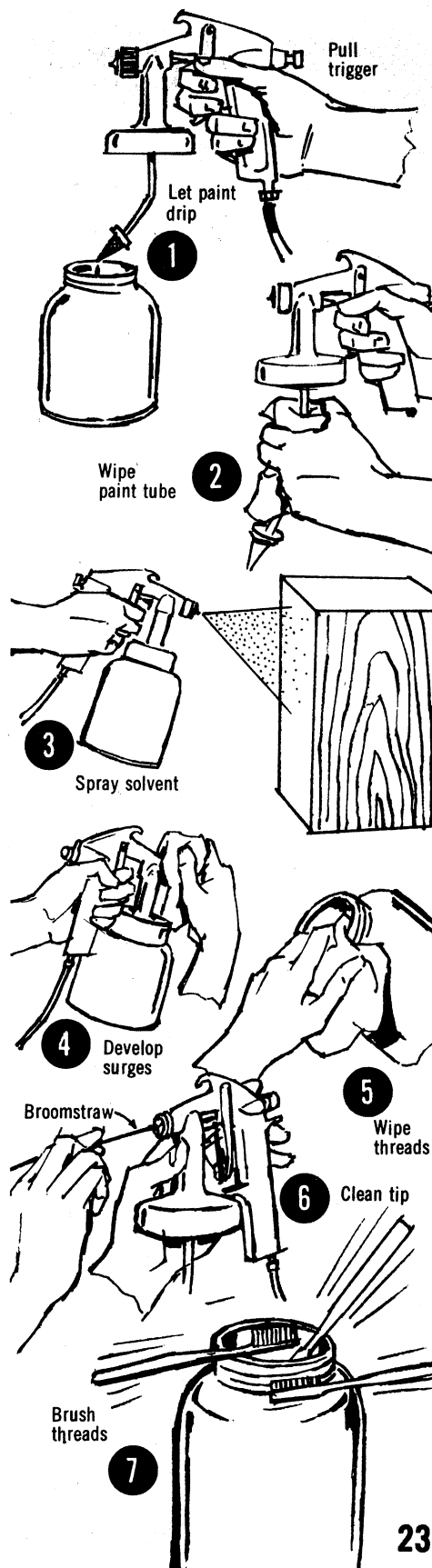
NOTE: It is not necessary to disassemble the entire spray gun for cleaning.

1. With the compressor off, unscrew the cup. Pull the trigger and let the paint drip into the cup (Fig. 1). Pour paint back into paint can.
2. Wipe off the tube with a paper towel (Fig. 2).
3. Empty paint cup, rinse cup with proper solvent (lacquer thinner for lacquer, mineral spirits for oil base paints, warm soap water for latex) and clean interior and exterior with a rag soaked in solvent. Discard the solvent and refill cup one-half full. Attach cup to spray gun and spray until all traces of paint are removed. While spraying, shake gun vigorously to remove all paint. Spray into a cardboard box (Fig. 3) or out in the open air where the spray will not hit anything.
4. While spraying with solvent, hold rag over air cap and wipe exterior surfaces of the gun clean (Fig. 4). Repeat the above process (Step 3 and 4) using clean solvent to assure a clean gun.
5. Hold the gun over the solvent cup, pull trigger and let solvent drip into the cup. Store gun with fluid tube hanging down.
6. Clean paint cup with solvent. Wipe threads clean on both cup and cap (Fig. 5).
7. Apply a few drops of light household oil on all moving parts and Vaseline or mineral-type grease on paint cup threads.

When more complete cleaning may be necessary:

1. After using the gun for 4 or 5 jobs, soak the air cap 8 to 10 hours in a jar of solvent. With a toothpick, sharpened matchstick or broomstraw, clean out the orifices in the fluid tip and air cap (Fig. 6). NEVER USE A WIRE OR METAL OBJECT TO CLEAN ORIFICES, as it may damage the openings.
2. Clean threads of paint cup cover and paint cup with a small brush, such as a toothbrush (Fig. 7).
3. If necessary, the gun may be submerged in thinner in order to thoroughly clean any remaining paint after the above steps have been taken.

Caution: Don't soak rubber gaskets or packings in paint cleaner. When spraying water-based paints, clean the gun and nozzle parts first with clean water. Then spray mineral spirits to remove residual moisture and wipe steel nozzle tip with turpentine to prevent the nozzle from rusting.



Painting materials and how to spray them...

Type of Spraying Material	Nozzle Type*	Gun Type†	Thinner‡	% Thinner at Pressures		General Remarks
				35 psi	40 psi up	
Aluminum Paint	Any	Any	T-P	0	0	exterior surfaces, radiators, etc.
Anti-Rust Primer	Int.	Press.	T	20	10-15	galvanized metal
Auto Enamel	Ext.	Any	P	20	10-15	automobile spraying
Barn Paint	Any	Press.	T	10	0	barns and fences
Clear Sealer	Ext.	Any	T-P	0	0	floors and woodwork
Color Fast Enamel	Any	Any	T-P	10-15	5-10	interior or exterior wood or metal surfaces
Concrete-Floor-Epoxy	Ext.	Press.	L	10-15	10-15	mix thinner at time of mixing components
Concrete Floor Enamel Latex	Ext.	Press.	W	10-15	10-15	concrete floors
Enamel Undercoat	Int.	Press.	T	10-15	5-10	new wood, interior
Epoxy Enamel	Ext.	Press.	L	10-15	10-15	wood, metal
Epoxy Swimming Pool	Ext.	Press.	L	15-20	10-15	swimming pools and patios
House Paint—Oil	Int.	Press.	T	10-15	5-10	exterior wood
House Paint Undercoat	Int.	Press.	T	15-20	10-15	new exterior wood surfaces
Interior Latex	Ext.	Press.	W	10-15	5-10	interior walls, ceilings, trim
Latex—Exterior House	Ext.	Press.	W	25	15-20	any exterior surface
Odorless Flat Oil Finish	Int.	Press.	O	10-15	5-10	interior walls
Red Chromate Primer (Auto)	Ext.	Any	P	10-15	5-10	undercoat for auto
Redwood Finish	Any	Any	P	0	0	exterior redwood or cedar
Semi-Gloss Enamel—Latex	Ext.	Press.	W	10-15	5-10	interior surfaces
Semi-Gloss Enamel—Oil	Any	Any	O	10-15	5-10	interior surfaces
Shellac	Ext.	Any	A	See Text	See Text	floors, furniture, woodwork
Shingle Stain	Any	Any	T	0	0	exterior wood stain
Stucco, Asbestos Shingle, & Masonry Paint—Latex	Ext.	Press.	W	25	15-20	exterior masonry except very porous surfaces
Trim Paint—Oil Exterior	Int.	Press.	T	10-15	5-10	exterior wood
Varnish—Interior, Exterior	Int.	Press.	T	Heat	Heat	exterior wood and metal
Wallpaper Coating, Plastic	Int.	Press.	P	0	0	seal wallpaper
Wall Primer and Sealer	Int.	Press.	T-P	0	0	seal new walls
Wiping Stains	Ext.	Any	P	0	0	furniture

*Int.—Internal Mix nozzle; Ext.—Exterior Mix nozzle. †Press.—Pressure-Feed gun.

‡T—Turpentine; P—Paint Thinner; W—Water; L—Lacquer Thinner; A—Alcohol; O—Odorless Thinner.

Note: The combination of internal mix-siphon feed will not operate.