

# Apollo Sprayers

## PRECISION-5 PRO LE

### Turbine Instruction Manual



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# 1 Safety

Read all instructions and safety precautions before operating the unit.

## **⚠ DANGER**

Indicates a hazardous situation, which, if not avoided, will result in death or serious injury.

## **⚠ WARNING**

Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

## **⚠ CAUTION**

Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

## NOTICE

Indicates a situation that could result in damage to the equipment or other property.

## **⚠ WARNING**

Risk of fire or explosion! Solvent and paint fumes can explode or ignite, causing severe injury and property damage.

Paints and solvents containing HALOGENATED HYDROCARBONS can react explosively with aluminum. Always check the product's label before using these materials in the unit.

Hazardous vapors: Paint, solvents, insecticides and other materials may be harmful if inhaled, causing severe nausea, fainting or poisoning.

Make sure the room is well ventilated. Avoid all ignition sources, such as static electricity, sparks, open flames, hot objects, sparks from connecting and disconnecting power cords, and working light switches.

Follow the material and solvent manufacturers' safety precautions and warnings. Do not use liquids with flash points less than 100° F (38° C).

Static electricity can be produced by HVLP spraying. Make sure any electrically conductive object being sprayed is grounded to prevent static sparking. The sprayer is grounded to prevent static sparking. The sprayer is grounded through the electrical cord.

Use a respirator or mask whenever there is a chance that vapors may be inhaled. Read all instructions with the mask to ensure that the mask will provide the necessary protection against the inhalation of harmful vapors.

Do not carry the turbine while spraying.

Keep the turbine at the maximum distance from the spraying area.



## NOTICE

- Tipping the spray gun causes the spray gun to clog. Dried spray material also clogs the pressure delivery tube and fittings. The spray gun does not function when clogging occurs.
- When not in use, be sure to disconnect the hose and place the spray gun into the Handi-Hold™ Docking Station on the turbine to avoid tipping.

## **⚠ DANGER**

**Improper installation of the ground plug can result in the risk of electrical shock. If repair or replacement of the plug or cord is necessary, do not connect the ground wire to either flat blade terminal. The wire with green insulation (with or without a yellow stripe) is the grounding wire.**

1. For any question regarding proper installation of the ground plug, consult a qualified (licensed or certified) electrician.
2. Do not modify the plug provided. If the plug does not fit the outlet, have the proper outlet installed by a qualified electrician.
3. This product is for use on a nominal 110-volt circuit and has a grounding plug that looks like the plug in Figure 2. Make sure that the product is connected to an outlet having the same configuration as the plug. Do not use adapters with this product.
4. If an extension cord is required, use only a three wire extension cord that has the same configuration as the unit cord, including the (round) ground terminal. Make sure that the extension cord is plugged into a properly grounded receptacle.
5. When using an extension cord, be sure it is in good condition and heavy enough to meet the specifications in the chart below. If an extension cord is needed the following wire sizes must be used.

25' cord (7.62m).....	10, 12, or 14 Gauge
50' cord (15.24m).....	10 or 12 Gauge
100' cord (30.48m).....	10 Gauge

Grounding instructions for all countries using a 2 pronged plug configuration.

## **⚠ CAUTION**

**This product must be properly grounded. In the event of an electrical short circuit, grounding reduces the risk of electrical shock by providing an alternate path for the electrical current.**

This product is equipped with a cord that has a ground wire and an appropriate ground plug. Plug the unit into an outlet that is properly installed and grounded in accordance with local codes and ordinances.

Safety Note: Users in countries in continental Europe and Australia and anywhere that offers a two pronged plug must be aware that this configuration does not provide grounding.

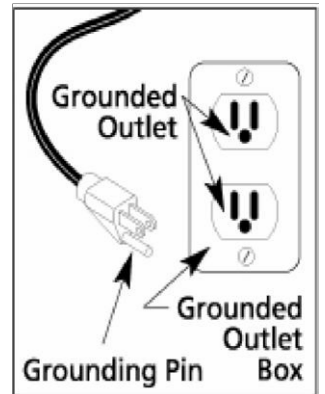


Figure 2

## 2 TrueHVLP™ Spray Finishing Systems

CONGRATULATIONS!! You have just purchased the finest HVLP air turbine system available. You are about to enjoy the great benefits of TrueHVLP™. Our designs are the result of many years experience in manufacturing HVLP turbine systems, and HVLP spray guns. We have painstakingly worked and consulted with professional spray finishers to bring you this versatile, well engineered tool.

Whether you are new to spray finishing, you have spray finished before, or are just new to HVLP spraying; there are some basic spray finishing guidelines that will help you to achieve the best results and optimum success from your new equipment. Reading this information carefully and following these simple steps will ensure that you get the best performance and results from your new TrueHVLP™ spray system.

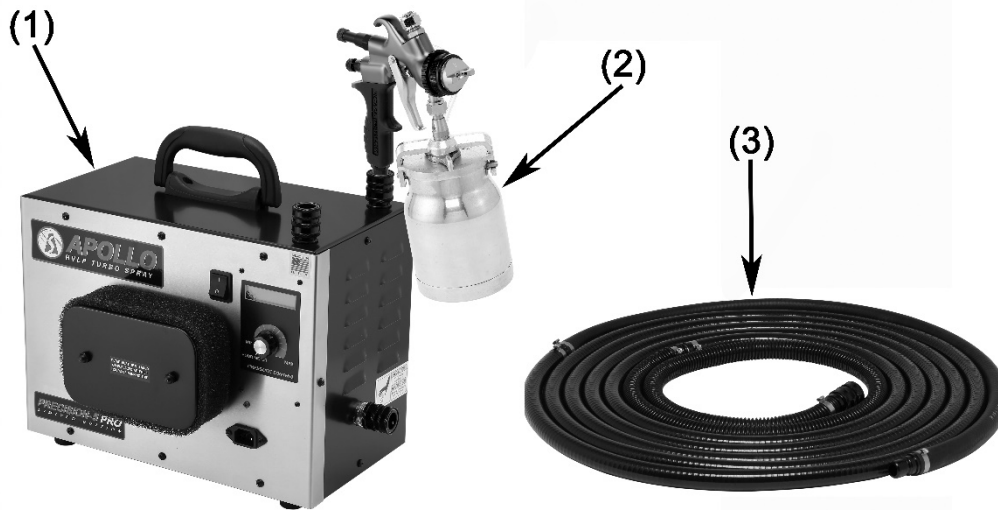


Check the contents of your box. The following are included:

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| (1) Precision-5 PRO LE Turbine Unit | (1) Spray Gun Lube                 |
| (1) TrueHVLP™ Spray Gun             | (1) Cleaning Brush                 |
| (1) 32' Air Hose                    | (1) Electric Cord                  |
| (1) Instruction Manual              | (3) Quick Coupler (2x Handi-Hold™) |
| (1) Wrench                          | (1x Hose Coupler)                  |

### 2.1 How Your HVLP Turbine System Works

Your turbine system has three components: the turbine unit (1), spray gun (2) and air hose (3). The turbine unit, when connected to the correct electrical power supply and with the on/off switch in the “on” position, provides a continuous source of clean, warm, dry, High Volume Low Pressure (HVLP) air. The air hose connects the turbine unit to the spray gun. Air flows through the hose to the nozzle of the specially designed TrueHVLP™ spray gun. Atomization of the coating is achieved when the air mixes with the stream of fluid passing through the tip/nozzle. This low pressure atomization principle achieves minimum misting (overspray) to the spray environment.



### 2.2 How Your Spray Gun Works

Apollo offers two types of Turbine Spray Guns. The 5000 series and the 7700 series. The 5000 series spray guns are bleeder style. When the turbine blower is turned “on”, air will constantly flow through the air cap. The 7700 series spray guns are non-bleeder style. When the turbine blower is turned “on”, air will only flow through the air cap when the trigger on the spray gun is activated or pulled back. Air also flows through the air feed tube to pressurize the cup and deliver fluid to the tip/nozzle. When the paint flow screw is opened and the trigger pulled back, fluid flows through the tip/nozzle mixing with the air flow delivered from the air cap and projects a fine atomized mist to your work piece. Spray pattern control will vary depending on the spray gun model. Consult your individual spray gun manual for detailed operation and maintenance of your spray gun.

## 2.3 Preparing To Use Your HVLP Turbine System

Connect the air hose to the turbine. Pull back the spring loaded quick disconnect coupler and insert the male connector on the air hose into the turbine connector. Release the ring. Your air hose will be locked into place. To release the air hose, pull back on the spring loaded quick coupler ring with your fingers and pull. Connect other end of hose to spray gun using this same procedure. Plug power cord into an outlet that is properly installed and grounded in accordance with local codes and ordinances.

### NOTICE

**Do not cover or enclose the turbine. It is important to draw cool/ambient air through the unit for optimum performance. Avoid placing the turbine in a warm environment or in direct sunlight. Do not spray in ambient temperatures above 90 degrees. If you want to be able to spray in hotter temperatures we recommend placing a fan in front of your turbine to help it pull in cool air.**

## 2.4 Familiarize Yourself with Your True HVLP™ Turbine Spray Gun

Refer to your Spray Gun Instruction Manual for information, setup and operation of your model spray gun. You are now ready to spray your coating of choice on your work piece. Good quality results with your TrueHVLP™ spray finishing equipment are a combination of careful preparation of your project, a proper spraying environment, a basic knowledge of the coatings you will be using and how these coatings work with your TrueHVLP™ spray equipment.

### ▲ CAUTION

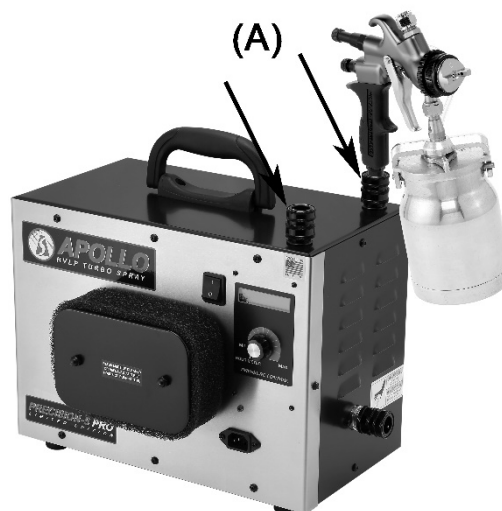
**Pressure will remain in the spray cup when unit is off. If you pull the trigger back, a stream of fluid will flow. To prevent accidents, turn material flow screw clockwise until it is completely closed. The trigger is now locked in the closed position.**

***Note:** It is not necessary to empty and clean your spray gun when you pause between applications. Be sure, however, to clean your spray gun thoroughly at the end of your work session. Do not leave material in your spray gun overnight. Extra caution must be taken when spraying coatings that have a catalyst or hardener added. These coatings can harden in your spray gun quickly, making cleaning difficult or impossible. Read manufacturer's coating instructions as to how much time you have before catalyst/hardener begins to set up.*

## 2.5 Get To Know Your Turbine

### Handi-Hold™ Spray Gun Docking Station

Every Precision-5 PRO LE turbine comes equipped with the Handi-Hold™ Spray Gun Docking Station (A), Apollo's smart innovation. Store, hold or vertical position with no risk of it when you are. Disconnect hose coupler into the Handi-Hold™ Spray shown



transport your spray gun in a vertical position with no risk of it falling over. Ready to spray from spray gun and insert Gun Docking Station (A). As

### 3 Apollo Turbine Model Precision-5 PRO LE

The model Precision-5 PRO LE is the newest Precision Series turbine system by Apollo Sprayers International, Inc. Apollo's Precision Air Control Technology (PACT) allows you to control the air pressure from the turbine to within 1/10th of a PSI. Besides the ability to control your air supply the PRO LE model also has built in filter warning, overheat control and a digital hour meter. The Precision-5 PRO LE comes supplied with one spray gun and a 32' air hose.

In order to operate the Precision-5 PRO LE you have to connect the air hose and spray gun. The turbine will not operate correctly without back pressure to the motor, which means the spray gun and air hose need to be connected. The Precision-5 PRO LE is NOT compatible with "Bleeder" style spray guns. Pull back the ring on the female quick connect located on the turbine and push the male end of the air hose into it, then release the ring. Pull back the ring on the female quick connect on the hose and push it onto the male connector at the bottom of the spray gun handle. Your system is now connected. Put some paint in the cup and you're ready to spray.

To control the air pressure on the Precision-5 PRO LE turbine, connect the spray gun and air hose with the turbine. Plug the turbine into the appropriate voltage for your model. It is a good idea to turn the pressure to the "Hour Meter" position to start. Once you have rotated the dial to the "Hour Meter", push the ON/OFF switch to the ON position. The factory has calibrated your turbine motor for the maximum spraying output pressure possible with the high power 5-stage motor. To get an accurate stable spraying pressure it is advised that you let the turbine warm up for about 5-10 minutes before spraying. Once the turbine motor is warm the LCD will give you an accurate pressure reading to 1/10<sup>th</sup> PSI and hold it there until you turn it off.

In order to get the most motor longevity out of your motor it is important to understand the difference between static or sealed pressure vs. flow pressure. When setting the turbine pressure for spraying you should always set the "flow" pressure, this is the pressure when you are pulling the trigger on the spray gun. You can set the flow pressure by connecting the spray gun and turning the system on. Turn the material flow screw on the spray gun clockwise until it stops. This will prevent you from accidentally releasing any material in the cup. You only need to release the air pressure from the spray gun, not the material in order to set the flow pressure. This is why it is preferable to set the pressure without any material in the cup. Pull the trigger and release the air from the spray gun. While continuing to pull the trigger, adjust the pressure on the turbine to the spraying pressure of your choice. **NEVER** just turn the pressure all the way to Max. This will make the motor try to give you maximum sealed pressure, which will only create more heat and reduce the life of your motor. The MAX spraying pressure with the PRECISION-5 is approximately 6.7 PSI depending on the motor, some are a little less. Therefore, when setting the MAX pressure rotate the pressure control until the pressure does not increase any more with the trigger pulled, this is usually about 2-3 o'clock on the dial. Once you have set the pressure, release the trigger. The pressure will stay where you set it. Pull the trigger again and watch the LCD screen. You will notice the air pressure drop and then go back to where you set the pressure. This will work for any pressure setting. **NEVER** set the turbine at full power with the trigger not pulled. This will not give you any additional spraying pressure and will only overwork and possibly overheat your turbine motor when not being used.

The control board will automatically adjust the motor speed to compensate for barometric pressure and elevation. The pressure reading will always be extremely accurate. To decrease the pressure from the maximum setting simply turn the knob underneath the LCD pressure display counter-clockwise, toward "MIN". To increase the pressure once reduced, turn the knob clockwise, toward "MAX". As you turn the knob, the pressure will increase or decrease accordingly. The scale behind the knob is there only to indicate the direction to increase and decrease the pressure. The scale does not represent any settings for the air pressure.

The viscosity of the coating you want to spray will determine the amount of pressure needed. The thicker your viscosity, the more pressure you will need to atomize your coating. For highest efficiency, use the lowest pressure that produces the best atomization and finish results. If you experience "Orange Peel", increase the pressure. If you have too much overspray, decrease the pressure.



#### *Precision 5 PRO LE with 7700QT*

##### **High Power 5-Stage Turbine**

110 - 120 volts, 60Hz

15 amps, 1.85 H.P

220 - 240 volts, 50Hz,

8 amps 1.75H.

Dual air filtration

Single spray gun

**Weight:** 31lbs (14.1kg)

**Height:** 12" (30.48cm)

**Width:** 8.5" (21.6cm)

**Length:** 15" (38.1cm)

All EU units shipped



All 120 volt units are tested and certified



The Precision-5 PRO also has four patented features:

1. **Filter warning system** - The filter warning system works to help prevent overheating your motor by warning you when the filters are not allowing ample cooling air to the motor. To prevent damage to the motor the turbine will shut itself down if it gets too hot. If your turbine filters get dirty the unit will tell you by displaying “**Chk Fltr**” in the LCD screen. This means you need to check your filters immediately in order to prevent the unit from overheating. Overheating can be caused by partially clogged or dirty filters. The more the filters are restricted the hotter the motor will run. Once the OverHeat™ point has been reached the motor will shut off until the temperature inside the case has cooled enough for the motor to once again operate normally. When this happens an “**OverHeat**” message is displayed in the LCD screen. Do not ignore this warning. Clean or change your filters to prevent this from happening again.
2. **Hour meter** - The hour meter records the use of the turbine in 1/10<sup>th</sup> of an hour increments. To see how many hours of use your turbine has, turn the power control knob counter-clockwise until the indicator mark on the knob lines up with the line for the hour meter. The LCD will then display the hours of use rather than the pressure.
3. **PowerPause™ Mode** - When your turbo system is turned on with the spray gun and hose connected and you do not pull or release the trigger on the spray gun for more than 45 seconds the motor will drop into “**PwrPause**”, which is displayed in the LCD screen. An intermittent warning signal will start when the unit has been running for 35 seconds without the trigger being pulled on the spray gun. This signal will become solid at 40 seconds. If you don't release the trigger before 45 seconds the unit will go into PowerPause™ and the pressure will drop. This is a safety feature built into your PRECISION-5 PRO LE in order to keep the motor running cool and increase the life expectancy. In order to take your PRECISION-5 PRO LE out of PowerPause™ simply pull or release the trigger on the spray gun and the unit will immediately return to the preset pressure you set prior to PowerPause™. Normal triggering of the spray gun at the end of each pass will prevent the turbo system from entering PowerPause™.
4. **ShutDown™ Mode** - This mode will shut down the power to your motor when the unit has been in PowerPause™ mode for 15 minutes. The LCD screen will remain lit with “ShutDown” displayed in the screen. This will only occur if the motor has been running in PowerPause™ for 15 minutes. To exit ShutDown mode all you need to do is cycle the power switch on and off once and the unit will turn back on to the preset pressure, providing you haven't moved the control knob. We suggest that when you are done using the system, you leave it running in PowerPause™ mode until the unit shuts off. This will cool the motor much faster than just turning off the power and letting the heat radiate into the steel case.

\*All turbine pressures quoted are measured sealed and at the motor outlet. Actual spraying pressures will vary depending on the model and size of the turbine.

## 4 Know Your Coatings

### 4.1 Coating Properties

Coatings are a blend of resins and additives to create a product that will provide a protective and beautifying surface to your work piece. Different resins have different properties. It is important to use the correct coating to achieve a desired result. Manufacturers of coatings can control the resin solids content, production viscosity, sheen, color, flow-out enhancement and other properties. Some products offer ways to adjust the coating properties such as speeding up or slowing down the drying time, adding catalysts to strengthen the molecular bond or adding flattening agents to lower the sheen. Manufacturers will often give some guidelines on how to thin their product for spray application. There are many different types of spray equipment in use. Coatings manufacturers cannot address all of them. It is important for the finisher to understand the spray equipment and to use common sense to arrive at the correct fluid viscosity to produce the best possible results with the selected coating and the equipment being used.

### 4.2 Your Choice of Coatings and Viscosity

Extremely thin, watery or light bodied fluids such as inks, aniline dyes and oil stains can generally be used straight from the can. RTS or Ready to Spray water based finishing products are formulated to be used straight from the can without thinning with a 3 stage or larger turbine. Most other coating products will need to be thinned anywhere from 10% to 50% depending on the available air pressure of the turbine model and the properties of the coating selected. (see chart on next page).



**Chart A - Turbine Performance**

Turbine Size	Sealed Air Pressure	Coating Types
3 STAGE	7.0 PSI	Low-Medium Viscosity Materials
4 STAGE	9.0 PSI	Low-High Viscosity Materials
5 STAGE	10.0 PSI	Low-High Viscosity Materials

**Using Latex (Emulsion) Paint**

Although your turbine spray system is best suited to spray Class A Finish coatings such as lacquers, enamels, urethanes, varnishes, waterborne and water base etc., you can spray latex (emulsion) house paint if you follow a few simple rules. First, it is generally necessary to thin latex (emulsion) paint. This will vary from as little as 10% to as much as 50% depending on the model turbine you are using and the quality of the paint used. Second, it is necessary to use a larger nozzle and needle set in the spray gun (1.8mm, 2.0mm or 2.5mm). It is recommended that a latex (emulsion) paint conditioner like Floetrol®, be added to aid flow-out. These products are sold at local paint stores.

**Chart B - Nozzle, Needle and Air Caps For 7700 Series Spray Guns**

FLUID NOZZLES, NEEDLE ASSEMBLIES, AIR CAPS & VISCOSITY			
TIP/NEEDLE SIZE	APPLICATION	VISCOSITY ZAHN #2	AIR CAP
0.8MM(.031)	Inks, Dyes, Stains, extremely thin viscosity fluids, Water based finishes	16 seconds	A
1.0MM (.039)	All purpose, thin lacquers, thin enamels, Water based finishes, Automotive, Marine, Airplane finish	16-18 seconds	B or B-HS
1.3MM (0.051)	Same as 1.0mm above except slightly higher viscosity	17-20 seconds	B or B-HS
1.5MM (.059)	Catalyzed lacquers, Conversion Varnish, Primers, Automotive, Marine, Airplane finishes, Varnish, High Viscosity Industrial Coatings, Urethanes, Enamels.	18-24 seconds	B or B-HS
1.8MM (0.07)	Same as 1.5mm above except slightly higher viscosity	20-22 seconds	C or C-HS
2.0MM (.079)	Thinned latex paint, Multi-spec, Heavy Primers, Butyrate, nitrate dope, High Viscosity Industrial Coatings	24-35 seconds	C or C-HS
2.5MM (.098)	Thinned latex paint, Multi-spec, Solvent adhesives, Wax based strippers	35+ seconds	D or D-HS

## Chart C - Viscosity

Coating	Thin/Reduce
Lacquers	25%-50%
Sanding Sealer	20%-30%
Enamels	20%-40%
Stains	use from can
Acrylic Enamel	50%-60%
Catalyzed Polyurethane	10%-30%
Polyurethane's Varnishes	20%-30%
Waterborne Coatings	00%-10%
Latex/Emulsion Paint	10%- 40%

**Note:** Chart C should be used as a guide to thinning various coatings. Actual reduction will depend upon model turbine used, flow out properties of the coating and the final visual results of the sprayed work piece.

Viscosity Cup Comparison Chart	
ZAHN #2	FORD # 4
16	5
17	8
18	10
19	12
20	15
22	17
24	19
27	21
30	23
34	26
37	29
41	31
49	36
58	41
66	45
74	51
82	56

## 4.3 Technique

Like any skill, practice makes perfect. Never try to rush the spray finishing process. Learn the characteristics of the coating you will be spraying. Build up layers of material (3-4 applications or more if necessary). Sand between coats and allow proper drying time between applications.

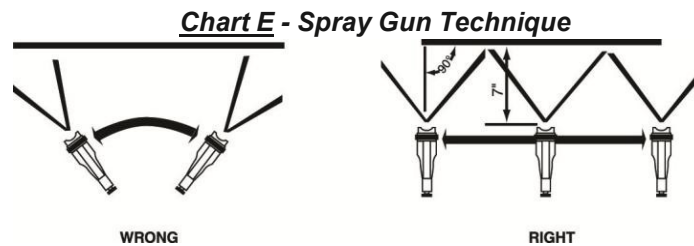
Some rules for effective spray finishing:

1. Remember to always keep the distance between the spray gun and the surface the same when moving across your work, (or up and down) called a “pass”. Do not rotate or turn your wrist from side to side.

See Chart E Below

2. Move the spray gun across your work from end to end.
3. Be sure to maintain the same speed of movement. This ensures an even application of coating.
4. At the end of a “pass” always release the trigger. To continue, spray in the opposite direction and overlap your previous coat by 1/3 to 1/2.
5. When finished you should have an even wet coat on your work. If you have dry spots you have overlapped too wide. If you have heavy or wet spots, you have overlapped too much or sprayed too slowly.
6. When spraying a large or pre-assembled piece, start at the top and work down.
7. Try to spray the hard to reach and underneath surfaces first.

Common sense and some forethought will prevent errors. Remember, that a light wet film will generally produce better results than a heavy wet coat. When spraying a vertical surface it is advisable to apply a thin/light “tack” coat first, followed by a normal light wet coat. This technique will help prevent “runs” and “sags”.



When using your Spray Gun you control five variables:

1. Fluid flow.
2. Distance of the spray gun from your work. 4”-8” (10-20cm) is average. Closer if necessary.
3. Pattern direction (vertical fan, horizontal fan and round).
4. Speed of application.
5. Fan pattern size 7700 series with Fan Pattern Control Ring. 5000 series move the spray gun closer to or further away from work piece.

*NOTE: Items 1, 2, and 4 directly relate to each other.*

### **Cleaning Your TrueHVLP™ Spray Gun**

Refer to your spray gun manual for cleaning and maintenance of your spray gun model.

## 5 Using Pressure Pots with Turbine Systems

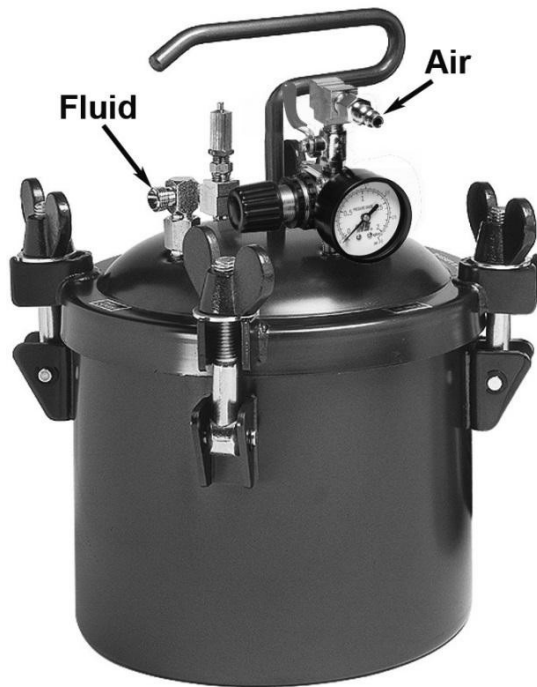
There are many advantages to using pressure pots with a turbine system. Apollo Sprayers have made this very easy with our fluid feed systems, 4500 and 4550. Refer to the accessories section of this manual for more information on these and other products. By removing the paint cup from the spray gun you immediately reduce the overall weight of the spray gun by ½. You also get a smaller tool to hold in your hand thereby allowing you to more easily access the back of cabinets or other tight spaces where a standard cup gun would not fit. By using a pressure pot you are able to spray larger quantities of material without stopping to refill a smaller cup. This can save a lot of time on a long job where you are spraying the same material all the time.

Using a pressure pot with any size turbine system is very easy. All you need is any size pressure pot, a fluid hose and a small air compressor. When using a remote cup or pressure pot, it is necessary to introduce compressed air in order to pressurize the remote pot and move the fluid from the pot to the spray gun tip/nozzle. In general 5PSI (0.345 Bar) of air pressure is adequate to push most average viscosity fluids to the spray gun nozzle. Higher pressure would only be necessary for heavier viscosity fluids or if you are spraying up a ladder where the fluid has to travel more than 6 feet of elevation.



Connect the black fluid hose to the fluid outlet on the top of the pressure pot. Refer to your pressure pot instructions for the specific location of the fluid outlet. Seal the threads with Teflon tape and tighten with a wrench (spanner) to assure no fluid leaks once you pressurize the pot. Next, connect the air line from your compressor to the air inlet. This should be a male quick connect adjacent to the regulator and gauge. If your quick connect is the same style as the one on the pot you can pull back the ring on the female end and insert into the male end, releasing the ring to fasten them together. Connect the other ends of the fluid line and air line to the spray gun and air compressor respectively. Your turbine air hose will connect as normal directly to your spray gun. Refer to your spray gun instruction manual for more specific instructions.

**Part #A4900 - 2.5 gallon (10 liter) deluxe pressure pot.**



**Part #A4600 - 2 quart (2 liter) pressure pot.**



## 5.1 Testing Air Pressure In Pressure Pot

It is necessary to test the air pressure in the pressure pot to make sure that it is appropriate for the viscosity of material being sprayed and the situation in which it is being sprayed. You don't want the material coming out too quickly so that you get runs and sags, but you also don't want it to come out too slowly so that you are spraying very slowly. To test the air pressure in the pressure pot follow these simple instructions:

1. DO NOT turn on the turbine at this time.
2. Make sure your air hose and material hoses are connected appropriately to the pressure pot.
3. Turn on your air compressor and wait until you have about 5PSI (0.345 Bar) in the pressure pot. Then, pull the trigger on the spray gun until a stream of fluid flows from the tip/nozzle. NOTE: This may take a few minutes depending on the length of your fluid hose.
4. Adjust the pressure on the pot regulator until the fluid drops off or bends at approximately 2-1/2 " (6.35cm).
5. Your pot air pressure should be correct at this point, however, if the stream bends too short then increase the air pressure. If the stream bends too far, then reduce the air pressure. If you need additional help, please feel free to call our technicians at 1-888-900-4857.

### **▲ CAUTION**

**Depressurize pressure pot using safety valve when equipment will be idle for a while. This will prevent excess fluid from remaining in fluid hose, and prevent a possible accident if the trigger is pulled causing material to stream from the spray gun.**

Always ensure that the remote pot is tightly sealed, and all gaskets are in good shape, to prevent air and fluid leaks. Be sure to flush and clean the fluid hose at the end of a work session. For smaller jobs, insert a one gallon can inside the 2.5 gallon (10 liter) pressure pot. This will help to keep the inside of the pot cleaner.

*NOTE: It may be necessary to provide extra clearance by removing the filter on the bottom of the pickup tube for some paint cans to fit inside the 2.5 gallon (10 liter) pressure pot.*

## 5.2 Cleaning Pressure Pot

Cleaning your pressure pot is important to many years of long faithful service. If you don't clean your pressure pot it will eventually get clogged up with dried material from previous jobs. Make sure you not only clean your pressure pot well, but do it quickly after you are done spraying so as to reduce the amount of time the material has to dry. To clean your pressure pot follow these simple instructions:

1. Remove the lid and pour your remaining finish back into your can or if you have reduced it, into a different container for storage.
2. Pour solvent or water (depending on the type of finish you have used) into the pressure pot and reseal the lid.
3. Re-pressurize the pressure pot with air.
4. Turn on your turbine and pull the trigger on the spray gun fully open until the material comes out clean.
5. Remove the lid once again and pour out any unused water or solvent.
6. Wipe the inside of the pressure pot, pickup tube and lid with a clean rag.
7. If you use water-based materials, dry the pressure pot.
8. Store in a clean dry place for use next time.

## 6 Record Of Turbine Use

Record Of Turbine Use		
Model	Serial #	Date Purchased
Date	Hours Of Use	Total Hours

Turbine Recommended Maintenance: Clean and/or change pre-filters and/or cartridge filters every 50 hours or when necessary. See Accessories Page for appropriate filter replacement for your model.

## 7 Record Of Turbine Maintenance

Record Of Turbine Maintenance	
Date	Maintenance Performed

## 8 Turbine Maintenance and Cleaning

### **CAUTION**

**Always unplug your turbine from the main electrical supply before doing any maintenance or repairs.**

After Each Use:

Your Apollo turbine system requires very little maintenance. The turbine motor has sealed bearings that are lubricated for life. The only maintenance that you will need to perform is checking, cleaning and replacing your filters and pre-filters as required. You should check your filters every 10 hours and replace as necessary. It is very important that your motor has cool, clean air to operate efficiently. If you maintain your filters and prefilters well, you will enjoy many years of long service from your turbine motor.

### **NOTICE**

**Always use genuine Apollo filters and pre-filters. Other types of filters and pre-filters may prevent proper air flow to the motor, resulting in premature motor failure and voiding your warranty.**

### 8.1 Pre-Filter Maintenance

We recommend that you remove your pre-filters after each use. To remove the pre-filters: push your finger between the filter and pre-filter until you can curl it up and pull the pre-filter off, rotating your finger around the pre-filter as you pull. Do not pull hard as you will break the glue line on the pre-filter. Make sure you check both pre-filters as they can get dirty at different intervals. If they appear to be a little dirty or clogged, you can wash them out using a mild soap and warm water. If they are not cleanable you need to install new pre-filters.

To reinstall the pre-filters, hold one in both hands and apply the top first, moving your fingers around the inside as you slide it back over the filter cartridge from top to bottom. NEVER operate your turbine without both filters and pre-filters installed and clean.



## 8.2 Filter Maintenance

Visually check your filters every 10 hours and when you remove your pre-filters for cleaning. Check for accumulated material in the filter element. If you suspect they may be dirty, or if you can see material building up, don't take a chance, remove the filter and hold it up to the light.

To remove your filters, remove two dome nuts as shown in picture 1 and pull filter plate off as shown in picture 2. Filter plate can hang up on the threads so make sure you pull it off straight. Remove filter as shown in picture 3. If filter is stuck to the side of the case, gently tap them with your hand.



To check your filters, hold them up to a light, similar to your car air intake filter. If you cannot see light through more than 50% of the filter, replace filter element.

### NOTICE

**Filter element may be damaged if more than 50 PSI of air pressure is used to blow out filter element.**

If they appear to be dirty, you can tap them gently on a flat surface to remove any debris. If you have compressed air available, you can also blow them off with air. If you use compressed air to clean your filters, make sure you blow the air from the inside out and never use more than 50 PSI or this will damage the filter element.

To reinstall the filters, reverse the instructions above. Make sure that you line the filter up with the filter plate first, this will help to keep it straight when replacing the dome nuts.



## 8.3 Annual Maintenance

Check carbon brushes at least once a year or every 300 hours, whichever comes first. To check your carbon brushes consult with an authorized Apollo repair facility.

## 9 Running Multiple Spray Guns with A Turbine

All current Apollo Turbine Models have one air hose outlet on the side of the unit and are designed to run one spray gun. These models are equipped with an internal air relief valve to accommodate a non-bleed style spray gun (Apollo Model 7700).

It is possible to run a 5-stage turbine system with two spray guns at the same time by installing an optional “Y” Connector, to the turbine outlet port. It is important to note that if the “Y” Connector is installed and only one spray gun is operated, the 2nd outlet must be capped or closed so that performance to the single spray gun will not be affected. To install a “Y” connector follow these instructions:

1. Unscrew the female quick connect from the air outlet located on the side of your turbine.
2. Screw on the “Y” connector. Make sure the “Y” is sideways so you can easily attach your hoses.
3. Screw the female quick connect you removed from your turbine onto the “Y” connector. If you plan on using two spray guns right away, then make sure you have a 2nd quick connect installed on the other side of the “Y” connector.
4. You are now ready to connect your air hoses and spray guns.

Remember, we do not recommend using the “Y” connector with turbines smaller than 4 or 5-stages. This is due to the power that each model has. The more stages you have the more power you have. When you are running two spray guns on a single turbine you are splitting the air power that turbine has. While you will not divide it equally, you will reduce it considerably, so make sure you do some test areas before you start on your project.



“Y” Connector with single hose and cap



“Y” Connector with two hoses

# 10 Model 4500

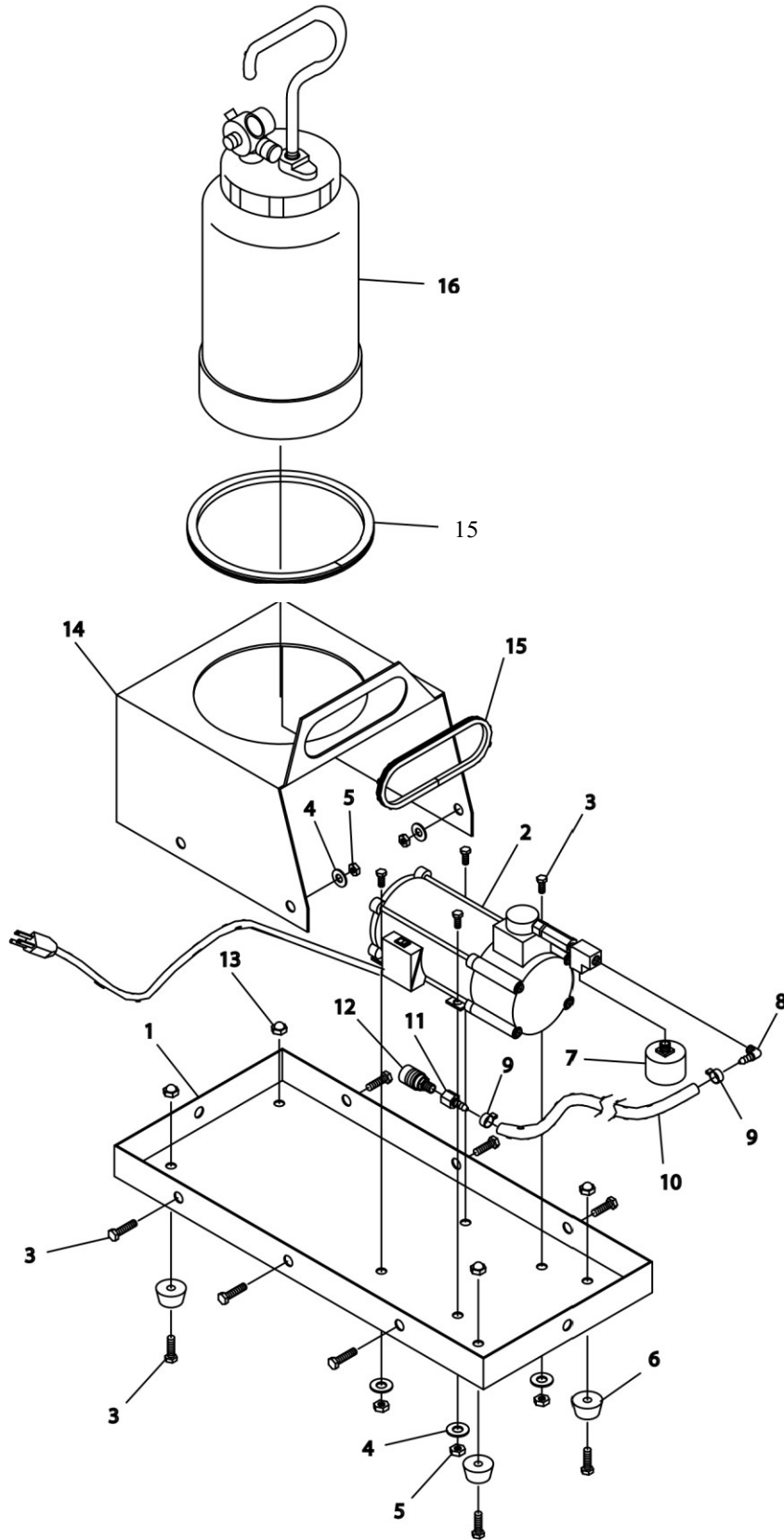


Diagram #	Part #	Description	Quantity
1	A4501	Compressor Deck	1
2	A4198	110v Mini Compressor Unit	1
3	A4320	1/4" X 20 X 1/2" Hex Bolt Plated .5.	12
4	A4300	1/4" SAE F/W Plated Washer	16
5	A4308	1/4" X 20 Hex Nuts Plated	4
6	A9016	Rubber Foot	4
7	A4998	Pressure Regulator	1
8	A4503	1/8" Male NPT X 1/4" Male Hose Barb 90°	1
9	A4033	Air Line Hose Clip S.S.	2
10	A2116	1/4" Air Hose, Per Foot	3
11	A2119	1/4" X 1/4" Female Swivel Barb	1
12	A4026	Quick Connect Female With 1/4" Male Thread	1
13	A4310	1/4" X 20 Cap Nut Plated	8
14	A4502	Pressure Pot Support Bracket	1
15	A4613	Rubber Edge Trim	2
16	A4200	2 Quart Pressure Pot W/Single Regulator	1

# 11 Model 4550

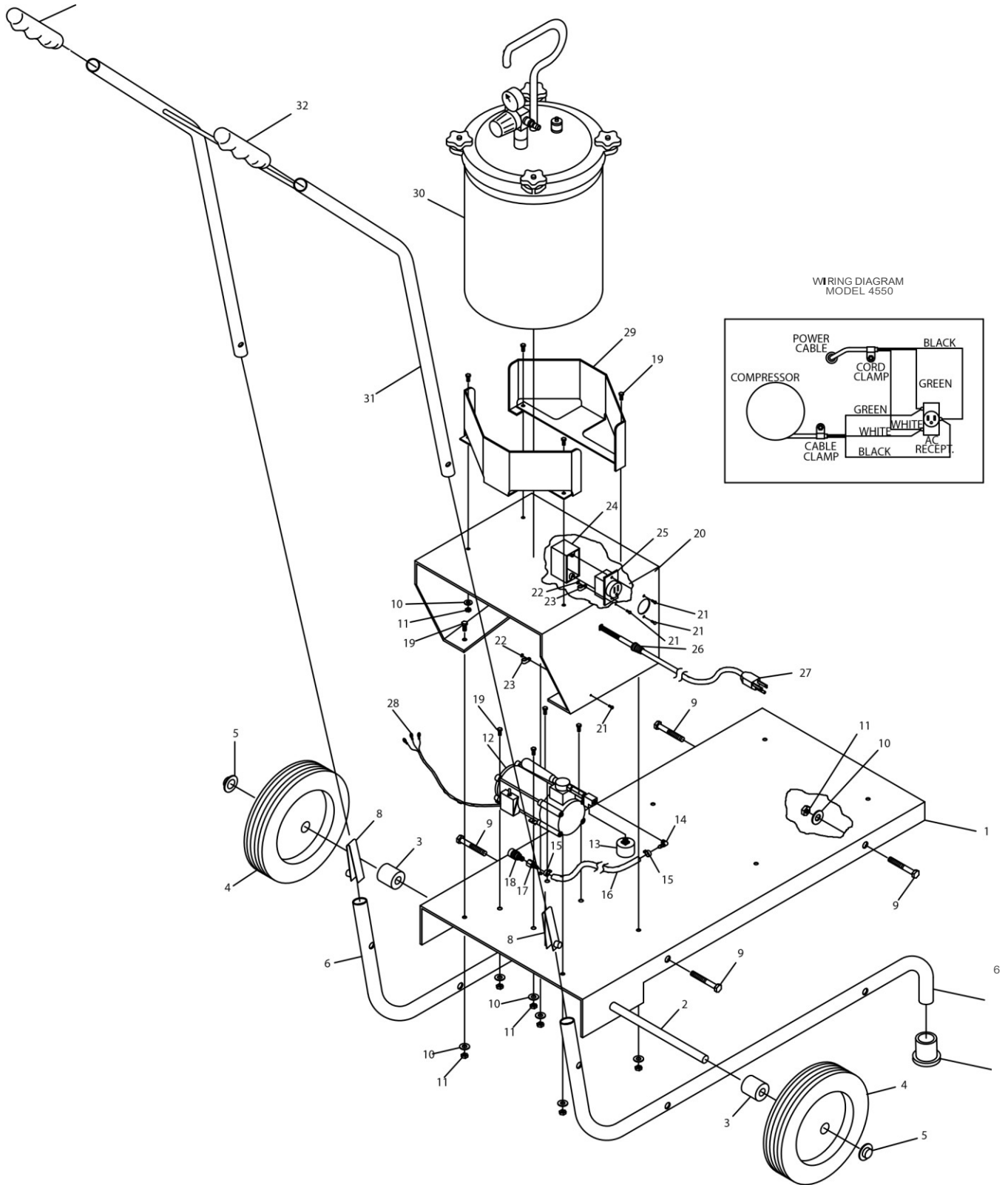


Diagram #	Part #	Description	Quantity
1	A4554	Cart Base Plate Paint Blue	1
2	A4555	Cart Axle (Zinc Plated	1
3	A4556	Wheel Spacer (6061 Alum.)	2
4	A4558	10" X 1 3/4" Wheel	2
5	A4374	1/2" Axle Cap	2
6	A4551	Frame Tube (Chrome)	2
7	A4559	Rubber Tip For Frame Tube	2
8	A4560	Handle Button	2
9	A4364	1/4" X 20 X 1 1/4" Hex Bolt Plated .5.	4
10	A4300	1/4" SAE F/W Plated Washer	20
11	A4308	1/4" X 20 Hex Nuts Plated	20
12	A4198	110v Mini Compressor Unit	1
13	A4998	Pressure Regulator	1
14	A4503	1/8" Male NPT X 1/4" Male Hose Barb 90°	1
15	A4033	Air Hose Clip S.S.	2
16	A2116	1/4" Air Hose, Per Foot	3
17	A2119	1/4" X 1/4" Female Swivel Barb	1
18	A4026	Quick Connect Female With 1/4" Male Thread	1
19	A4320	1/4" X 20 X 1/2" Hex Bolt Plated .5.	16
20	A4553	Pressure Pot Deck	1
21	A4318	6-32 X 1/2" Phillips Pan M/S Plated	4
22	A4307	6-32 Hex M/S Nuts Plated	2
23	A4051	Cable Clamps, Black	2
24	A4557	Outlet Box (Plastic)	1
25	A4197	Outlet 15 amp-125 Volt	1
26	A4053	Flexible Cord Protector	1
27	A4028	8 Foot Power Cord	1
28	A4178	Large Ring Terminal	3
29	A4552	Support Ring For Pressure Pot.	2
30	A4900	2.5 Gallon Pressure Pot	1
31	A4006	Handle (Chrome)	1
32	A4042	Handle Grip	2

## 10 Genuine Apollo Accessories

4500–2 Quart (2 Liter)  
Fluid Feed System #A4500



Designed to be used with Apollo turbine systems:  
Models Power-3, Power-4, Power-5, and 900.

Excellent in the shop or on site. Perfect for that larger job when a quart (liter) is just not enough or when greater spray gun mobility is needed to get into a tight corner.

**Includes:** oil-less mini air compressor, 2 quart (2 liter) non-stick coated pressure pot with stainless steel material tube, 20' (6m) or 30' (9m) fluid hose, air blanking screw and 4 wheels for easy mobility. Order part #A4500.

4550 –Mobile Cart and  
Fluid Feed System #A4550



Designed to be used with Apollo turbine systems:  
Models Power-3, Power-4, Power-5 and 900.

Excellent in the shop or on site. Perfect for larger jobs when a quart (liter) is just not enough or when greater spray gun mobility is needed to get into a tight corner. 2.5 gallon (10 liter) pressure pot, non-stick coated inside and out, with stainless steel fluid parts throughout. Large wheels provide easier mobility when going up and down stairs or curbs.

**Includes:** 2.5 gallon (10 liter) deluxe pressure pot, oil-less mini air compressor, 20' (6m) or 30' (9m) fluid hose, air blanking screw and cart. Order part #A4550.

Using genuine Apollo accessories is important to the longevity, ergonomics and portability of your equipment. Other brands of accessories are not designed specifically with your Apollo brand equipment in mind and could cause abnormal functionality. For a complete list of Genuine Apollo parts please visit our website at [www.hvlp.com](http://www.hvlp.com) or call a Customer Service Representative at 888-900-4857.

Handi-Hold™ Spray Gun Docking Station #A5326



A4096 - Pre-Filters

A4098 - Replacement Filters



Fluid Hoses

- A2113 - 6' (2m) x 1/4" (6mm) fluid hose with couplers
- A2059 - 20' (6m) x 1/4" (6mm) fluid hose with couplers
- A2060 - 40' (12m) x 1/4" (6mm) fluid hose with couplers
- A2114 - 6' (2m) x 3/8" (10mm) fluid hose with couplers
- A2159 - 20' (6m) x 3/8" (10mm) fluid hose with couplers
- A2160 - 40' (12m) x 3/8" (10mm) fluid hose with couplers



Turbine Air Hoses

- A1068-5 24' (7m) x 5/8" (16mm) flex-air hose
- A1069-5 34' (10m) x 5/8" (16mm) flex-air hose



FS1900 – Deluxe Cleaning Kit, Life-Time Warranty

FS 1670 - Filter Stand, Fits 1 & 2 Quart (1 & 2 Liter) Cups.



A5251 - 1 Quart (1 Liter) Cup Assembly



A5269 - 8oz (250ml) Cup Assembly



A755A - non-teflon 90cc cup assembly  
A5033A - non-teflon 250cc cup assembly  
A5034A - non-teflon 600cc cup assembly  
A7536A - non-teflon 1000cc cup assembly





## 13 Limited Warranty

### 2 + 3 Year Limited Warranty

All PRECISION-5 turbo paint spray system is WARRANTED by APOLLO SPRAYERS INTERNATIONAL, INC. for a total period of TWO YEARS from the ORIGINAL date of purchase by the ORIGINAL PURCHASER. Proof of purchase to be included and all SHIPPING CHARGES to be pre-paid.

All PRECISION-5 PRO LE system warranties can be extended by an additional 3-years by registering your purchase using our online registration page located at [www.hvlp.com/warranty-registration/](http://www.hvlp.com/warranty-registration/) within 30 days of your purchase giving you a total of 5-years limited warranty.

APOLLO SPRAYERS INTERNATIONAL INC., upon examination of the machine/equipment will replace or repair at their discretion any defects in material or workmanship.

This WARRANTY does NOT include: misuse, damage, neglect, alterations, disassembled equipment or modifications, lack of maintenance, cleaning, water damage to electrical parts, INCORRECT VOLTAGE CONNECTION.

This Warranty is in lieu of all other express warranties, any WARRANTY implied by law, including but not limited to, implied Warranties of merchantability or fitness, is excluded to the maximum extent permitted by law and, if not excludable, is limited to the duration of the express Warranty.

No representative or person is authorized to extend this Warranty or to create for APOLLO SPRAYERS INTERNATIONAL, INC. any other liability in connection with the sale of any APOLLO SPRAYERS product. APOLLO SPRAYERS INTERNATIONAL, INC. shall not be liable for any consequential, incidental or special damages of any kind directly or indirectly resulting from breach of any express or implied warranty.

Some states do allow the exclusion or limitation of incidental or consequential damages or limitations on the length of any Warranty so that the above limitations and exclusions may not apply to you: however, to the maximum extent permitted under applicable law, the only rights and remedies shall be to obtain a replacement for any defective product.

This Warranty gives you specific legal rights and you may also have other rights which vary from State to State.

Apollo Sprayers International, Inc.  
1030 Joshua Way, Vista, CA 92081  
Customer Service: (760) 727-6226  
Fax: (760) 727-9325  
Toll Free Sales: (888) 900-HVLP (4857)  
[www.hvlp.com](http://www.hvlp.com)

### **WARNING:**

This product can expose you to chemicals including Chromium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).