

Kings[®] Sprayers

100 Gallon
Skid Sprayer

Model #: KS100P7027

User Manual

Read this manual for complete instructions



If you have any questions regarding this product, please
contact: A.M. Leonard Inc. Mon-Fri 8am-4pm ET
1-800-543-8955

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Warranty

5 year frame / 5 year tank / 1 year parts and labor (limited to manufacturer defects) / 1 year pump (limited to manufacturer defects) / 3 year gas engine (limited to manufacturers defects)

The warranty will not apply to products that were improperly installed, misapplied, damaged, altered or incompatible with fluids or components. Kings Sprayers obligation under this warranty is limited to the repair or replacement of the product. All returns will be tested per factory criteria. Products found not defective (under the terms of this warranty) are subject to charges paid by the returnee for testing and packing of "tested good" non-warranty returns.

No credit or labor allowances will be given for products returned as defective. Warranty replacement will be shipped at Kings Sprayers discretion. Kings Sprayers reserves the right to choose the method of transportation.

Contact Kings Sprayers at 800-228-0905 to receive a Return Merchandise Authorization (RMA#) before returning any products. The RMA number should be clearly marked on the outside of the package. Kings Sprayers shall not be liable for freight damage incurred during shipping. All products returned for warranty work should be sent shipping charges prepaid.

General Safety Information

The following chemicals should never be put through any pump:

- Gasoline (Petrol)
- Kerosene/Kerosine (Paraffin)
- Diesel Fuel
- Ceramic Slurries
- Sewage
- Potable Water

DO NOT pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.

DO NOT use in explosive atmospheres

DO NOT pump asphalt sealer, roofing compounds, concrete sealers, or any two-step curing products

DO NOT pump non-approved liquids (See Above)

DO NOT operate any pump under the influence of drugs or alcohol

DO NOT perform service or maintenance to the pump or attached components until the pumping unit is below 109°F

Only authorized operators having the knowledge and skill necessary to safely use the pump, or any equipment the pump is connected to, may run the pump.

When handling pumps, wear steel-toed shoes and protective gloves in order to protect the feet in the event the pump is dropped and protect the hands from chemicals or any sharp surfaces on the pump.

When spraying manually, chemical-resistant facemasks and clothing should be worn to prevent any chemicals from coming into contact with the skin or being inhaled.

When spraying manually, always spray downwind of yourself as long as the sprayed chemical will not drift into the vicinity of other people.

Never operate a pump outside while there is a chance of getting struck by lightning.

Never leave wires or plumbing components where they can be a tripping hazard or become entangled in a moving component.

All maintenance should be done when machinery is stationary and has been isolated from its energy sources. It is dangerous to perform maintenance while machinery is still connected to its power source. Machinery should be isolated from its electrical, hydraulic, shaft driven or gas engine power source.

Be sure to release all pressure from the system before performing any sort of maintenance on a pump.

The sound level of the pump may exceed 80dBA. Observe all safety precautions when operating the pump within close proximity for extended periods of time by wearing hearing protectors. Extended exposure to elevated sound levels will result in hearing loss and other effects such as loss of balance and awareness.

Do not pump at pressure higher than the maximum recommended pressure.

Operate the pump between a temperature range of 45° to 140°F (7° to 60°C).

Secure the discharge line before starting the pump. An unsecured discharge line may whip, resulting in injury.

Check all hoses for weak or worn condition before each use.

Periodically inspect the pump and the system components. Perform routine maintenance as required.

Do not use pumps for pump water or other liquids for human or animal consumption.

Do not pressure feed pump inlet.

Failure to follow these notices can result in severe personal injury and/or property damage and will void product warranty.

Hazardous Substance Alert

Any hazardous liquids should be disposed of in a manner that complies with local and national regulations. Never dump fluids onto the ground.

Always drain and flush pump before servicing or disassembling for any reason.

Always drain and flush pump prior to returning unit for repair.

Never store pumps containing hazardous chemicals.

Before returning pump for service/repair, drain out all liquids and flush unit with neutralizing liquid. Then, drain the pump. Attach tag or include written notice certifying that this has been done. Please note that it is illegal to ship or transport any hazardous chemicals without United States Environmental Protection Agency Licensing.

Sprayer Components

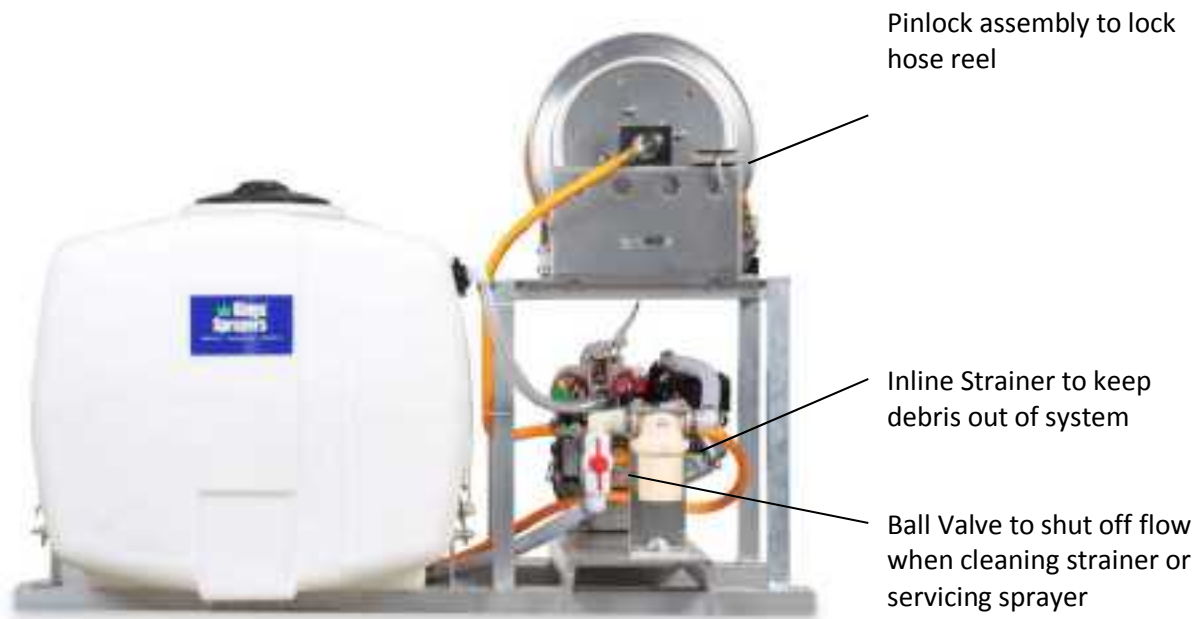


Figure 1: Side View

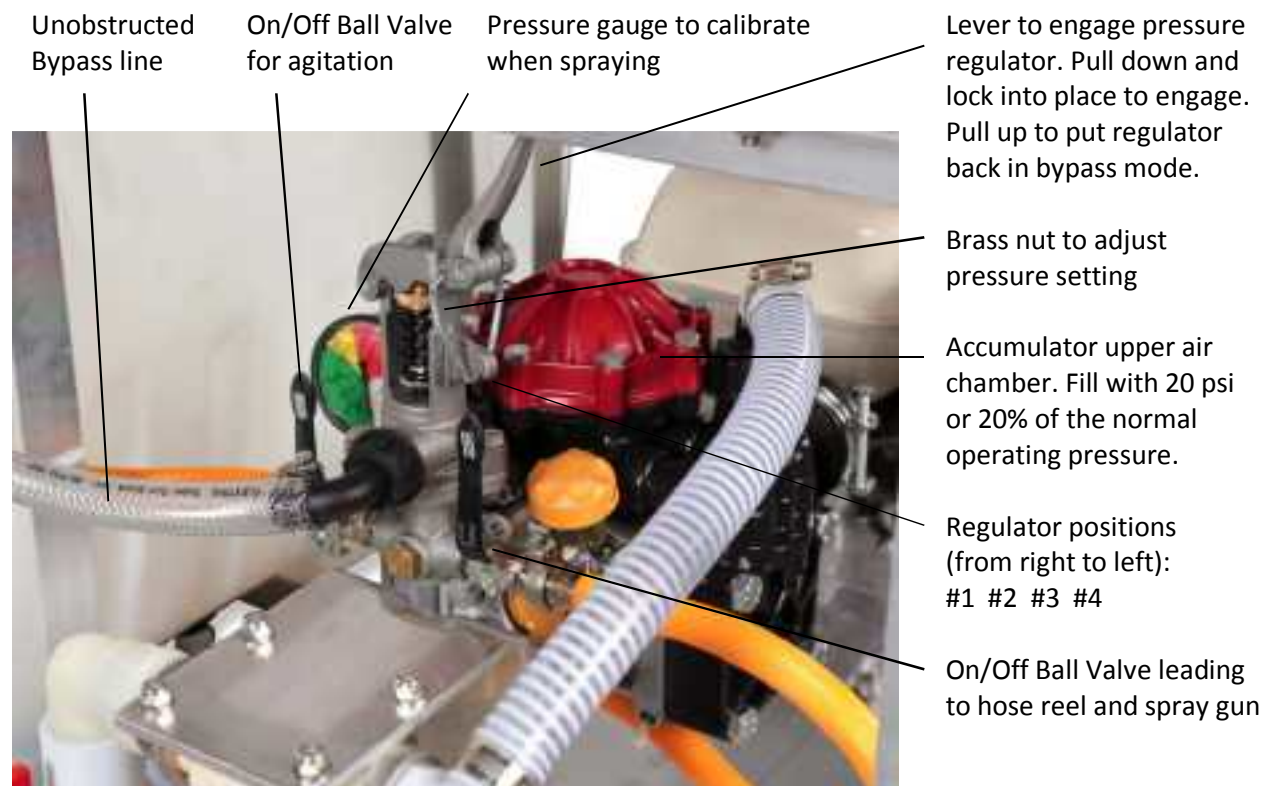


Figure 2: Detailed View

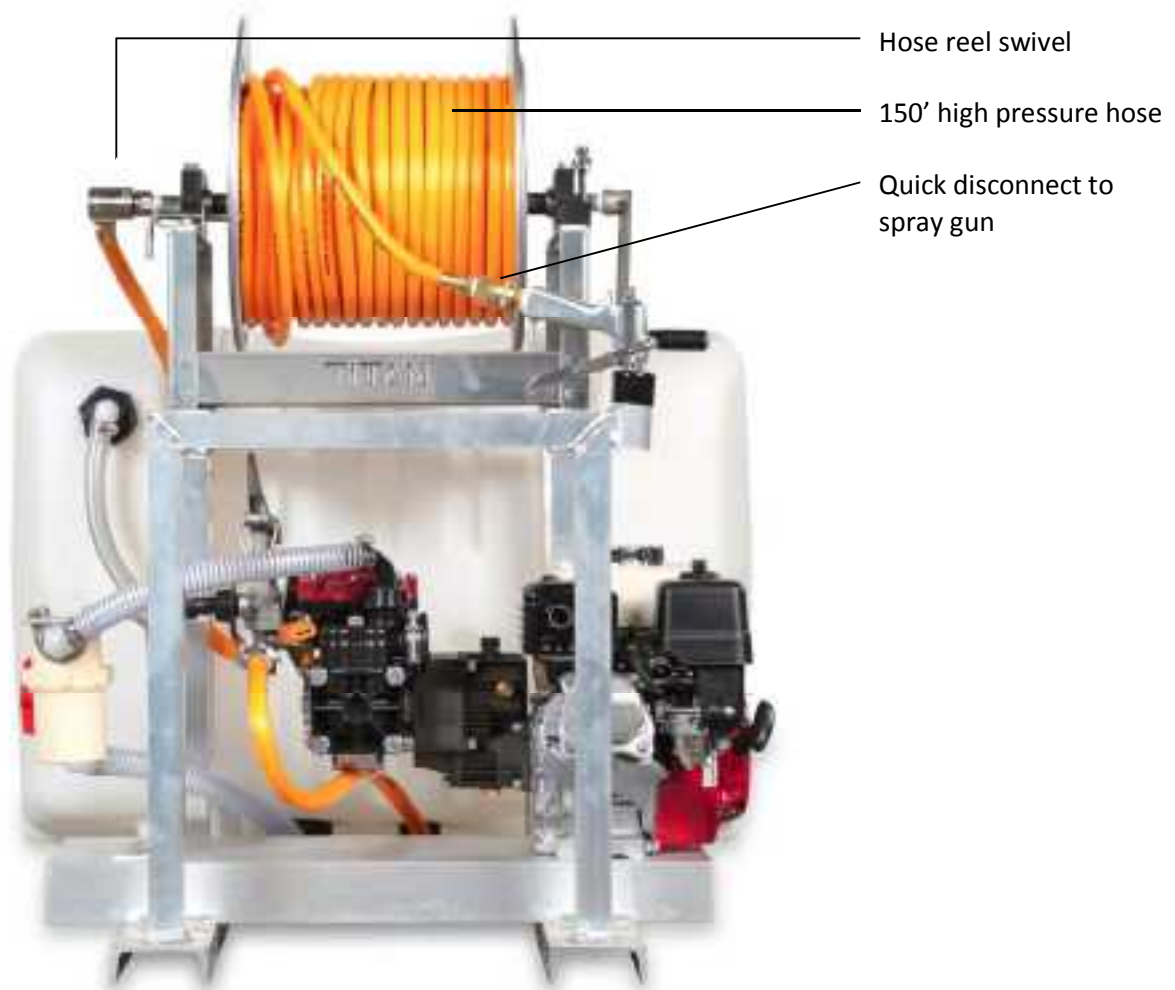


Figure 3: Front View

Getting Started

Starting Your Skid Sprayer for the First Time

1. Ensure all unnecessary personnel are clear of the area.
2. For initial testing, it is recommended to start with clean water instead of chemicals to confirm the system and plumbing components are leak free.
3. Ensure there is fluid in the tank and supply line.
4. Check line strainer for debris or clogs and remove if any found.
5. Check all plumbing connections to ensure tightness.
6. Ensure all valves and regulators are set to the desired setting and working properly.
7. Ensure all hoses are positioned properly and undamaged.
8. Follow the next steps on starting the engine.
9. Set the engine ON/OFF switch to the ON position.
10. For a cold start, set the choke to FULL.
11. Make sure the throttle is at SLOW.
12. Turn the gas switch to the ON position.
13. Pull start the engine.
14. Release the choke.
15. Raise the throttle to FULL.
16. The regulator has four settings. Set the base pressure with the adjustment nut.
 - a. When the regulator is engaged in the number one position (located farthest from the brass nut), the pressure is roughly 100 psi;
 - b. In the number two position, the pressure is approximately 250 psi;
 - c. In the number three position, the pressure is roughly 450 psi;
 - d. In the number four position, the pressure is about 550 psi;
 - e. To fine-tune the pressure rating, use the brass nut on top of the spring.
17. The left lever turns ON pressure to the spray gun.
18. The right lever turns ON the agitator. You will notice a drop in pressure when the agitator is engaged. The agitator mixes the tank and helps to evenly dispense chemical.
19. Adjust the spray gun to the desired setting and you are ready to spray.

Shutting Down Your Skid Sprayer

1. Shut sprayer down using the outlined steps.
2. Release the pressure.
3. Turn the engine ON/OFF switch to the OFF position.
4. If pump will not be used for several hours flush your system to prolong the life of the components.

For a step-by-step video guide, visit the Sprayer Depot YouTube Channel to watch instructional videos on a variety of topics. Tune in by visiting <http://YouTube.com/SprayerDepot>.

Engaging / Disengaging the Regulator

Pump Model	Engage	Disengage
Hypro D30	Move lever down	Move lever up
Hypro D252	Turn knob to "C"	Turn knob to "A"
Iota 20	Turn lever clockwise	Turn lever counterclockwise

Kappa 40	Move lever up	Move lever down
Kappa 43	Turn lever clockwise	Turn lever counterclockwise

For regulators found on roller pumps and 3-Point Hitches, leaving regulators engaged will not hurt the pumps.

Troubleshooting Your Sprayer

Symptom	Possible Reason	Correction
Pump does not draw water	One or more valves are seating improperly.	Remove valve and check for debris. Remove any debris found. Examine valve seatings and clean them.
	Suction line is plugged or collapsed. Clogged strainer.	Examine and clean the suction line. Clean the strainer.
Liquid flow is irregular	The charge in the pulsation dampener is incorrect.	Check the pressure in the pulsation dampener. (It should be 20% of your spray pressure.)
	One or more valves are seating improperly.	Remove valve and check for debris. Remove any debris found. Examine the valve seatings and clean them.
Output drops and the pump is noisy	The oil level is too low.	Add oil to the correct level (halfway up the sight tube).
Oil comes out of the discharge port or oil is a milky color	One or more diaphragms have split.	Remove the manifold and heads. Drain the oil and clean the crankcase of water. Replace the diaphragms, heads, and manifold. Refill with Hyrpo Oil (part number 2160-0038).
Loss of pressure / pressure fluctuation	Check valve spring is worn or valve seat is not sealing.	Examine spring to ensure it is not broken or gummed up with chemical. Inspect seat to make sure valve is still sealing.
	Pressure regulator internal parts are worn/compromised.	Examine o-rings to ensure they are not swollen or ripped. Inspect poppet/seat to make sure it is still intact and not broken apart or shrunk down.