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STANDARD OPERATING PROCEDURE

Airless Spray Gun Operation, Cleaning and Maintenance

Business	Albert Munsell Painting	**Document number**	AMP-WHS-SOP-001
Document owner	Taris Meehan, Owner / Manager	**Version / effective date**	1.0 / 10 September 2026
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Critical safety warning
High-pressure paint injection is a medical emergency. Never point the spray gun at a person, place a hand or finger near the tip, or attempt to stop a leak with any part of the body. If injection occurs, call 000 and provide the product SDS to medical personnel.

1. Purpose

To establish a safe and consistent method for selecting, setting up, operating, depressurising, cleaning, inspecting, maintaining and storing airless spray-gun equipment used by Albert Munsell Painting.

2. Scope

This SOP applies to workers and contractors using electric or petrol-powered airless spray units, spray guns, high-pressure hoses, tips, guards, filters and associated equipment for painting and coating work. Manufacturer instructions, the product SDS, job risk assessment and applicable SWMS must also be followed.

3. Responsibilities

Role	Responsibilities
Owner / Manager	Provide suitable equipment, training and supervision; verify SWMS/JSA/SDS requirements; ensure defects, incidents and maintenance are managed.
Supervisor	Confirm operator competency, site readiness, ventilation, exclusion zones, ignition control, PPE and emergency arrangements before authorising spraying.
Operator	Conduct pre-start checks; follow this SOP and manufacturer instructions; use controls and PPE correctly; stop work and report defects, leaks, exposure, incidents or changed conditions.
Other workers	Remain outside the exclusion zone unless authorised and equipped; comply with warnings and instructions; report unsafe conditions.

4. Required competency and documents

☐ Operator trained and authorised for the specific unit	☐ Manufacturer operating manual available

☐ Current product SDS reviewed	☐ Site JSA / risk assessment completed
☐ Airless spray-painting SWMS available where applicable	☐ Respirator selection and fit requirements confirmed
☐ Electrical / fuel safety requirements checked	☐ Emergency response and first-aid arrangements confirmed

5. Hazards and minimum controls

Hazard	Minimum controls
High-pressure injection	Tip guard installed; trigger lock functional; never point at people; never use hands to find or stop leaks; fully depressurise before clearing, adjusting or cleaning.
Hazardous vapour and mist	Substitute safer product where practicable; follow SDS; provide ventilation/extraction; establish exclusion zone; use selected respiratory and skin/eye protection.
Fire and explosion	Identify flammable products; remove ignition sources; prohibit smoking; ventilate; use compatible/earthed equipment where required; keep extinguisher available.
Electrical shock	Inspect plugs, leads and equipment; use required RCD protection; keep electrical connections dry; remove damaged equipment from service.
Hose failure and stored pressure	Use pressure-rated compatible hose and fittings; inspect for cuts, kinks, abrasion, swelling and leaks; protect from vehicles, sharp edges and hot surfaces.
Overspray and environmental harm	Isolate area; mask and contain; monitor wind; protect vehicles, property and drains; collect paint and cleaning waste for lawful disposal.
Noise and manual tasks	Use hearing protection where assessed; position equipment to reduce noise; use mechanical aids or team lifts; avoid awkward carrying and repetitive posture.
Slips, trips and falls	Route hoses and leads safely; keep access and exits clear; clean spills promptly; use separate height controls when spraying from access equipment.

6. Personal protective equipment

PPE must be selected from the SDS and task risk assessment and used with higher-order controls.

☐ Safety footwear	☐ Long-sleeved protective clothing / spray suit
☐ Chemical-resistant gloves selected for product	☐ Safety glasses / goggles or face protection
☐ Respirator and filters selected for contaminant	☐ Respirator fit test and user seal check where applicable
☐ Hearing protection where required	☐ High-visibility clothing / hard hat where site requires

7. Pre-start inspection

☐ Confirm unit is suitable for paint/coating, pressure and environment.	☐ Check the equipment is isolated and depressurised before inspection.

☐ Inspect pump, frame, controls, guards, power lead or engine/fuel system.	☐ Inspect gun body, trigger, trigger lock, tip guard and tip.
☐ Inspect high-pressure hose along its full length and check fittings are secure.	☐ Confirm filters, suction tube and return/drain tube are clean and correctly fitted.
☐ Check pressure-control operation and manufacturer safety devices.	☐ Confirm paint is compatible, mixed and strained as required.
☐ Review SDS for ventilation, PPE, fire, first-aid and disposal requirements.	☐ Establish exclusion zone, warning signs, masking and overspray containment.
☐ Confirm ventilation and remove or control ignition sources.	☐ Verify first-aid kit, fire extinguisher, spill kit and emergency contacts are available.

Defective equipment
Do not operate equipment with a damaged hose, leaking fitting, missing tip guard, faulty trigger lock, damaged electrical components or any other safety defect. Isolate, tag and report it for competent repair.

8. Setup and priming

1. Position the spray unit on a stable surface in a ventilated, protected area outside pedestrian routes.
2. Connect only compatible, pressure-rated hose, gun, guard and tip components according to manufacturer instructions.
3. Confirm the trigger is locked and pressure control is at the manufacturer-specified starting position.
4. Place the suction tube and return/drain tube as directed by the manufacturer.
5. Prime the pump using the manufacturer procedure and an approved container.
6. Check all fittings and hose connections for leakage without using hands or fingers.
7. Select and install the spray tip suitable for the coating and required finish while the system is depressurised.
8. Direct the gun into an approved test area and establish the spray pattern using the lowest effective pressure.

9. Safe operating procedure

Stage	Required procedure
Before triggering	Confirm exclusion zone is clear, ventilation is operating, ignition controls are in place, PPE is correctly worn and the hose route remains protected.
Gun position	Hold the gun firmly and approximately the distance recommended by the coating and equipment manufacturer. Keep the gun perpendicular to the surface unless the manufacturer specifies otherwise.
Spray movement	Begin moving before triggering. Use smooth, controlled passes and release the trigger before stopping movement. Avoid excessive overspray and pressure.
Pressure	Use the lowest pressure that produces an acceptable pattern. Do not exceed the lowest-rated component or manufacturer limit.
Hose management	Do not pull the unit by the hose, kink the hose, drive over it, expose it to sharp edges or heat, or allow the hose to contact moving equipment.
Blockage or poor pattern	Stop spraying, engage trigger lock and complete the pressure-relief procedure before inspecting, rotating or cleaning the tip.
Leaving equipment	Do not leave a pressurised unit unattended. For any interruption, engage the trigger lock, relieve pressure and isolate energy as required.

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Stage	Required procedure
Changed conditions	Stop work if ventilation fails, overspray escapes containment, wind changes, a leak develops, members of the public enter, ignition risk appears or controls become ineffective.

10. Pressure-relief procedure

Follow the manufacturer procedure first
The sequence below is a general control framework. Use the exact pressure-relief sequence in the manual for the specific spray unit.

9. Engage the spray-gun trigger lock.
10. Turn off and isolate the spray unit in accordance with the manufacturer instructions.
11. Set the pressure control to the lowest setting where required by the manufacturer.
12. Disengage the trigger lock only when directed and hold the gun firmly against the side of a grounded or otherwise manufacturer-approved waste container.
13. Trigger the gun into the container to relieve pressure.
14. Re-engage the trigger lock.
15. Open the prime, drain or pressure-relief valve as specified and leave it in the safe position until work resumes.
16. Confirm pressure is relieved before removing the tip, guard, hose, filter or any pressurised component. If pressure cannot be relieved, stop and obtain competent assistance.

11. Tip blockage and leak response

- Never place fingers near the tip opening and never use a hand, rag or body part to locate a leak.
- Engage the trigger lock and complete the pressure-relief procedure before rotating, removing or cleaning the tip.
- Use only the manufacturer-approved method and tools for clearing a blocked tip.
- For a leaking hose, fitting, gun or pump, stop work, isolate and depressurise. Tag the equipment out of service until repaired or replaced.
- Do not tape, clamp or otherwise improvise a repair to a high-pressure hose.

12. Temporary shutdown and end-of-job shutdown

17. Stop spraying and engage the trigger lock.
18. Complete the pressure-relief procedure.
19. Isolate electrical, battery, engine or fuel energy as applicable.
20. Secure the gun, hose and unit against unauthorised use and damage.
21. At job completion, remove paint and flush only in accordance with the coating and equipment manufacturer instructions.
22. Inspect equipment after cleaning and report defects before storage.

13. Cleaning and flushing

- Review the paint and cleaning-product SDS before cleaning.
- Maintain ventilation, ignition controls, PPE and exclusion zones during flushing.
- Use only compatible cleaning material specified by the paint and equipment manufacturers.
- Use the minimum effective pressure and approved containers.
- Keep containers closed when not in use and prevent discharge to soil, stormwater or unauthorised drains.
- Clean gun, tip, guard and filters only after pressure relief.
- Collect paint residue, solvent, wastewater and contaminated materials in labelled containers for lawful disposal.
- Do not use compressed air or unsafe methods to clean contaminated clothing or skin.

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14. Inspection, maintenance and storage

Frequency	Requirement
Before each use	Inspect gun, lock, guard, tip, hose, fittings, controls, power/fuel system and safety devices.
After each use	Clean and flush as specified; inspect for leaks, wear and damage; record defects.
Scheduled servicing	Service pump, seals, filters and other components at manufacturer intervals by a competent person.
Storage	Relieve pressure; clean and dry equipment; engage trigger lock; coil hose without kinks; store securely away from heat, ignition, weather and incompatible chemicals.
Records	Record asset ID, inspection, service, repairs, removed-from-service status and return-to-service authorisation in the plant register.

15. Emergency procedures

Emergency	Immediate response
High-pressure injection	Call 000 immediately. State that a high-pressure injection injury has occurred. Provide the paint/coating SDS. Do not delay treatment because the wound appears small.
Eye or skin exposure	Stop exposure, follow SDS first-aid directions, use eyewash/washing facilities and obtain medical advice as required.
Inhalation or illness	Move the affected person to fresh air only if safe, call 000 for serious symptoms and follow SDS advice.
Fire or explosion	Raise alarm, call 000, isolate power/fuel only if safe, evacuate and use an extinguisher only if trained and a safe escape remains.
Spill	Stop the source only if safe, isolate the area, prevent entry to drains, use the spill kit and follow SDS and environmental reporting requirements.
Equipment failure	Stop work, isolate and depressurise, tag out of service and report to the supervisor.

16. Prohibited actions

☐ Pointing the gun at any person or body part	☐ Placing hands or fingers near the spray tip
☐ Stopping or locating a leak with hands	☐ Operating without the tip guard
☐ Using a faulty trigger lock	☐ Disconnecting components while pressurised
☐ Improvised high-pressure hose repairs	☐ Spraying near uncontrolled ignition sources
☐ Using incompatible paint, solvent or parts	☐ Leaving pressurised equipment unattended
☐ Allowing untrained or unauthorised operation	☐ Discharging paint or cleaning waste to drains or ground

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17. Operator acknowledgment

By signing, the operator confirms this SOP, the manufacturer instructions, relevant SWMS/JSA and product SDS were explained, questions were addressed and the operator will stop work if controls are ineffective.

Operator / worker	Role / employer	Equipment / competency verified	Signature	Date

18. Approval and review

Prepared by		**Signature / date**	
Approved by / position		**Signature / date**	
Consulted workers		**Review trigger / date**	
Supersedes		**Document location**	