



Hand held Sprayer (Knapsacks & Pressure sprayers) Routine Check List

1. DETAILS	
Company/Owner name :	
Address:	
Operator Name & NPTC No.	
Sprayer make & model. Include any ID marks (consider adding a unique ID mark if you run multiple sprayers):	
Inspection by (add NPTC No if different from above):	
Inspection date:	

PLEASE WEAR SUITABLE PPE BEFORE COMMENCING THE INSPECTION

2. GENERAL CONDITION	YES	NO	ACTION
Clean, empty & depressurized? ! Follow manufacturer's instructions !			
Check lid – seal & non return valve present & in good condition?			
Tank strainer clean & in good condition?			
Check tank for damage – any cracks or holes?			
Inspect straps & fixing points for damage, cleanliness & security?			
Inspect all hoses for damage – are they still flexible?			
Check trigger & lance – are there signs of damage & leakage?			
Check any filters fitted (in trigger & behind nozzle) –are they clean and in good condition?			
Check nozzle – is it fitted/aligned correctly and has no signs of damage?			
Check pump (piston or diaphragm) – are there signs of damage or leakage?			
Electric sprayers - check condition of battery, charger and circuits			

DO NOT PROCEED TO 3 IF THERE IS A CHEMICAL RESIDUE OR SIGNS OF DAMAGE/LEAKAGE. DECONTAMINATE BY INTRODUCING WATER/DETERGENT MIX OR PROPRIETRY CLEANING CHEMICAL EQUIV. TO 10% OF THE TANK VOLUME, AGITATE, PRESSURISE & SPRAY UNTIL AIR COMES FROM NOZZLE. REPEAT X 2. REPAIR AND/OR REPLACE PARTS AS REQUIRED.



3. FUNCTION CHECKS	YES	NO	ACTION
Using a vessel of a known liquid volume, introduce clean water into the sprayer in stages until full – are the graduations on the tank visible & accurate?			
Check that the straps will take the weight of the full sprayer ! TAKE CARE !			
Is the sprayer stable on the floor or bench when full?			
Check for leaks with the sprayer upright and on its side.			
Pressurise the sprayer – Does the pump work smoothly?			
Check for leaks again paying attention to the hoses, trigger & lance.			
Spray into an appropriate container – does the on/off mechanism function correctly & also any anti-drip/flow management valves?			
Check the spray pattern of the nozzle for uniformity (Further spray nozzle checks should be carried out as part of the recommended calibration regime – see Hand held Sprayer Calibration Sheet below.			
Spray out all liquid until air comes from the nozzle. Is there less than a cupful (250ml) remaining in the tank?			

4. PREPARE TO STORE	YES	NO	ACTION
Ensure the sprayer is empty & depressurized ! Follow manufacturer's instructions !			
Ensure that the external parts of the sprayer including straps are clean and dry.			
Clean spray nozzles & filters in a water/detergent mix using a soft brush (Do not use sharp objects to unblock nozzles)			
Lubricate any moving parts, such as plunger cups or O rings with an appropriate lubricant/grease – Follow manufacturer's instructions			
Store securely in a frost free place away from direct sunlight.			

ALWAYS FOLLOW CORRECT DISPOSAL PROCEDURES FOR ALL RINSINGS & ENSURE THAT NO CONTAMINATED LIQUIDS ENTER DRAINS OR WATERCOURSES.



Hand Held Sprayer Calibration Sheet

ACTION	DETAIL	EXAMPLE	WORK SPACE
1. Read the product label	Application rate Chemical dose rate Spray quality needed from spray nozzle	75 to 100 l/hectare 5 l/hectare Medium	
2. Select nozzle & type of equipment	As above. Consider using a pressure sprayer for small areas or spot treatment.	372022 Blue Polijet	
3. Set pressure (if applicable)	If there is a pressure regulator, limiter or pressure control valve, select the pressure required to deliver the application rate and spray quality required – refer to nozzle manufacturers chart	Low 1bar setting on CP Classic sprayer	
4. Measure spray width	Hold trigger & lance at comfortable height above target, spray onto dry concrete and measure the band applied in metres.	1.5 m	
5. Walk & spray 100m strip and record time	Replicate the real condition as much as possible by wearing PPE and carrying a full sprayer. Repeat and take the average of the two measurements.	68 secs.	
6. Spray into a measuring cylinder for the 100m time	Using a steady pumping action, spray into the vessel for the time it took to walk & spray 100m. Repeat and record the average of the two measurements.	1.3 litres	
7. Calculate walking speed KPH	360 divided by time in secs for 100m = KPH (360 is a constant used in all such metric calculations)	$360/68 = 5.3$ kph	
8. Calculate the spray volume l/hectare	Volume collected in cylinder in litres x 100 ÷ spray width = L/hectare (100 is a constant used in all such metric calculations)	$1.3 \times 100 \div 1.5 = 86.66$ l/hectare	
9. Make adjustments to reach desired application rate l/hectare	If necessary alter the spray pressure, walking speed or spray width to obtain the correct application rate. If this is not practical change nozzle. Many spray product labels give an acceptable range of application i.e. 75 to 100 l/hectare	86.66 l/hectare OK if range of 75-100 l/hectare recommended	
10. Calculate the area to spray	Measure the length and width in meters (L x W = Area to be sprayed)	Length 10m x Width 6m = 60m ₂	
11. Calculate total water required for area to be sprayed	Volume collected in cylinder in litres x area to be sprayed ÷ 100 ÷ spray width (m) = Water required for the area to be sprayed in litres (100 is a constant used in all such metric calculations)	$1.3 \times 60 \div 100 \div 1.5 = 0.52$ liters	
12. Calculate chemical required for area to be sprayed	Water required for area to be sprayed in litres x chemical rate in l/hectare from label ÷ calculated spray volume from 8 above x 1000 = chemical required for the area to be sprayed in millilitres (ml) (1000 is a constant used in all such metric calculations)	$0.52 \times 5 \div 86.66 \times 1000 = 30$ ml	
13. Calculate chemical required for full or part tank	Capacity of spray tank (or part fill) x chemical rate in l/hectare from label ÷ calculated spray volume from 8 above x 1000 = chemical required in ml (1000 is a constant used in all such metric calculations)	$15 \times 5 \div 86.66 \times 1000 = 865$ ml	
14. Record data	Keep a spray record detailing all of the above	As above.	