

Hand-held Sprayer (Knapsack & Pressure Sprayers) Routine Checklist

In association with



| 1. DETAILS | |
|---|--|
| Company/Owner Name | |
| Address | |
| Operator Name & NPTC No. | |
| Sprayer Make & Model | |
| Identification/Serial Number | |
| Inspected By (Add NPTC No. If Different From Above) | |
| Inspection Date | |

WEAR SUITABLE PPE BEFORE COMMENCING THE INSPECTION

| 2. GENERAL CONDITION | PASS | FAIL | REPAIR | 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 or leakage? | | | | |
| Check all 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 EQUIVALENT TO 10% OF THE TANK VOLUME, AGITATE, PRESSURISE & SPRAY UNTIL AIR COMES FROM NOZZLE. REPEAT X2. REPAIR AND/OR REPLACE PARTS AS REQUIRED.

| 3. FUNCTION CHECKS | PASS | FAIL | REPAIR | ACTION |
|---|------|------|--------|--------|
| Using a vessel of a known liquid volume, introduce clean water into 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 and also any anti-drip/flow management valves function correctly | | | | |
| 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 Handheld 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 | PASS | FAIL | REPAIR | ACTION |
|--|------|------|--------|--------|
| Ensure the sprayer is completely empty and depressurized. Follow manufacturer's instructions | | | | |
| Ensure all external parts of the sprayer (including straps) are clean and dry | | | | |
| Clean spray nozzles and 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 AND ENSURE THAT NO CONTAMINATED LIQUIDS ENTER DRAINS OR WATERCOURSES

Sprayer Calibration Sheet

| ACTION | EXAMPLE | DETAIL | WORK SPACE |
|--|--|---|------------|
| 1. Read The Product Label | Application rate Chemical dose rate Spray quality needed from spray nozzle | 75 to 100 ltr/ha 5 ltr/ha 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 1 bar setting on CP Classic Sprayer | |
| 4. Measure spray width | Hold trigger and lance at comfortable height above target, spray onto dry concrete and measure the band applied in metres. | 1.5m | |
| 5. Walk and 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 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 and spray 100m. Repeat and take the average of the two measurements | 1.3 litres | |
| 7. Calculate walking speed KPH | $360 \div$ by time in secs for 100m = KPH (360 is a constant used in all such metric calculations) | $360 \div 68 = 5.3$ KPH | |
| 8. Calculate the spray volume in ltr/ha | Volume collected in cylinder in litres x 100 \div spray width = ltr/ha (100 is a constant used in all such metric calculations) | $1.3 \times 100 \div 1.5 = 86.66$ ltr/ha | |
| 9. Make adjustments to reach desired application rate ltr/ha | 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 ltr/ha | 86.66 ltr/ha OK if range of 75-100 ltr/ha recommended | |
| 10. Calculate the area to spray | Measure the length and width in metres (L x W = Area to be sprayed) | Length 10m x Width 6m = 60 sq.m | |
| 11. Calculate total water required for area to be sprayed | Volume collected in cylinder in litres x area to be sprayed + 100 \div spray width (m) = water required for the area to be sprayed in litres (100 is a constant used in all such metric calculations) | $1.3 \times 60 \div 100 \div 1.5 = 0.52$ ltrs | |
| 12. Calculate chemical required for area to be sprayed | Water required for area to be sprayed in litres x chemical rate in ltr/ha from label \div 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 sprayer tank (or part fill) x chemical rate in ltr/ha from label \div 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 | |

