



Daley's Water Service Pty Ltd  
Specialising in  
Water & Energy Efficiency

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## **Centre Pivot & Lateral Move Seasonal Check List**

**Pump:** - Check suction pipe and foot valve example float were fastened to pipe, blockages and free movement for any draw down in water level.

Check pump for any sounds indicating cavitation.

Test discharge valves.

Test shut down device is operational.

Document the total flow reading on water meter to compare with initial reading.

Calculate the flow when pump is at normal pressure and compare with commissioning reading.

Check pressure at pump discharge and compare with commissioning pressure.

**Mainline:** - Visually check for leaks along the mainline.

**Connecting Hose:** - Check for leaks, signs of damage and kinks in hose.

**Filters:** - Check and compare inlet & outlet pressure with commissioning pressures.

Check operation of auto flush & brush systems.

**Pivot or Cart:** - Check for leaks on riser pipe. Test solenoid auto valve shut down if fitted.

Check anchor bolts or chains for tightness.

Check earth grounding wire is connected.

Check and grease main pivot bush for Centre Pivots and Pivoting Laterals

Check run light is operational.

Check settings such as stop in slot degrees and end gun activation is matched to field.

Check and document power supply at Pivot or Lateral and compare with commissioning.

Check calibration of controller matches spray pack document. Example 90% is 6mm.

Check for signs of ants or moisture in control panel.

Check and document pressure at riser pipe and compare with commissioning pressure.

Check tyre pressure on towable pivots and lateral moves.

Check drive couplings on Lateral move cart.

Check for signs of oil leaks on Centre drives and wheel gearboxes on Laterals.

Check for corrosion around proximity switches for End Gun activation or Lateral alignment systems.

Check guidance arm operation for Lateral Moves and Universal machines

Visually check all furrow guidance or cable guidance over the length of field.

Check in field barrier stops are secured and at the correct height to stop the machine.

**Span Structure:** - Check each span for signs of loose, broken, corroded or missing bolts. Check for any distortion of structure for example uneven bow in pipe or span leans to one side. Check for water leaks at gooseneck connections, drain valves at end of each span and span connecting boots.

Check alignment of spans

Check for corrosion on alignment control arm and switch cam arm.

Check all cables & bolts on overhangs.

Check all electrical cables, glands and ensure they are fastened securely.

Open and clean sand trap at end of machine and follow up with flushing.

**Drive Train:** - Check for any signs of oil leaks at the final drive and centre drives.

Check for any corrosion on final drive expansion chamber.

Drain Oil and refill to required level with the recommended oil.

Check for excessive back lash on drive rods.

Check tension of all nuts & bolts including wheel nuts.

Check tyre condition and pressure.

**Spray Pack:** - Check end pressure with the end gun off and check with it on. Document this pressure and compare with commissioning pressures. This pressure is best to be taken upstream of the pressure regulator on the last spray.

Check that all sprays have the same ground clearance including part circle boom back sprays.

Check all spray spacings.

Visually check for any abnormal spray patterns when in operation and take note of there positions.

Test the down stream pressure of the last regulator and document.

Conduct a shroud test on the last spray and document. (Measure flow over 30 seconds)

Check end gun arc. Example: 100 degrees behind the machine direction and 110 degrees in front of machine direction.

Compare all the above with the spray pack design chart that you should receive at commissioning

Conduct a catch can test. You will need two rows of cans set out at 2 meter spacings from the first tower to the outer limit of the machine. Each row should be offset. The cans should have no protruding lip at its entry and walls should be straight. Pressurize the machine away from the cans, when full pressure is obtained set the machine walking. The application rate target should be at least 15mm. Note cans on the outer end were there may be an end gun need to be anchored.

Once the machine passes over the cans contents is measured and documented in the order of collection.

(Down one row and back down the other).

**Paddock Condition:**-Check and document any signs of water logging, wheel ruts, erosion, poor yields, poor germination. Document the co ordinations on the map supplied if you have a GPS.

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