

Water for Profit



Irrigation Season Pre-Season Check List

Pump Station

Electrical - Turn off main switch before opening any cabinets

- ✓ Visually inspect all wiring for damage and condensation. This should include both wiring in cable trays and in cabinets
- ✓ Check for any sign of shorting, burnt cables, hot terminals
- ✓ Test starters / drives, ensure they are working
- ✓ Test priming system – reprime priming pump if applicable
- ✓ Test control systems i.e. pressure switches by shutting valves etc.

Pump System

- ✓ Clean and inspect foot valve (if applicable)
- ✓ Inspect suction and discharge piping for corrosion and leaks
- ✓ Fully close and open all valves to ensure they are still functioning
- ✓ Ensure air valve on discharge is functioning and sealing
- ✓ On systems drawing from a water source below the pump, ensure the suction assembly rises to the pump flange i.e. ensure there is no high point above the pump flange, this includes the fitting bolted to the pump flange
- ✓ Ensure system is primed / priming pump or system working if applicable
- ✓ Spin the pump by hand if possible to ensure it is free
- ✓ Run the pump
 - Check pressure gauges are working, replace as necessary. If they do get frost damage, consider fitting a drain so you can vent the gauge and only pressurise it when required
 - Check it runs up to pressure – note pressure
 - Check pump rotation direction – Phase switching can occur with works outside the property
 - Check for leaks around pump station and from the pump mechanical seal or gland packing
 - Test and control systems
 - Check water meter is functioning and check flow rate

Main Line

- ✓ Drive the mainline and check for leaks and damage (particularly after floods)
- ✓ Check air valves
 - Ensure the isolation valve below the air valve is open
 - Make sure they are working – listen for air escaping when line filling
 - Remove and clean if they leak constantly

Centre Pivots

- ✓ Inspect 3 phase supply from ground to pivot / electric motor for damage to conduit, wires and cable glands
- ✓ Inspect control cable for damage
- ✓ Inspect anchor bolts at centre
- ✓ Grease Pivot point
- ✓ Inspect main panel – looking for obvious damage, insect nests, water and corrosion
- ✓ Remove top and inspect the collector reel for corrosion and water
- ✓ Walk the pivot and look for any obvious damage, loose nuts, bent steel work, damaged drops and sprinklers.
- ✓ Visually inspect span and motor cables for damage – chewed cables, cables pulled from glands etc.
- ✓ Open and inspect tower boxes, check for broken, loose wires, and corrosion
- ✓ Check alignment system – ensure all linkages are free, switches are working
- ✓ Inspection of gear boxes for correct oil level, and leaks.
- ✓ U-joints – check for worn u-joint inserts and ensure driveshaft shields are in place for safety.
- ✓ Check control panel configuration to ensure it is correct.
- ✓ Start and run pivot
 - Check forward and reverse operation
 - Check alignment – adjust if required to ensure it is running straight
 - Test centre stops / auto reverse systems are working
 - Test tower stops / reverse is working
 - Test safety circuit is working (out of alignment circuit)
- ✓ Test pump start system from the Pivot Centre
- ✓ Flush the Pivot by running with the sand trap cap removed. Run until clear water is evident.
- ✓ Replace sand trap and run pivot up to pressure
 - Ensure pivot reaches operational pressure at centre and end of system
 - Inspect sprinklers, ensure they are all working
 - Look for leaks, and repair as required
- ✓ Check tyres for correct operating pressure and general condition. Correct pressures are:

Tyre Size	Suggested Running Pressure (psi)*
14.9 x 24	12 to 14
16.9 x 24	11.5 to 14
11.2 x 38	17

*The suggested pressure does vary between manufacturers, therefore it is best to check what is recommended for your brand machine.