

Centre Pivot and Linear Move Irrigators



THIS CHECKLIST

This is a minimum list of checks of pivot and linear systems that should be made before the irrigation season starts.

BE SAFETY CONSCIOUS – ELECTRICAL, HEIGHT AND MECHANICAL HAZARDS PRESENT.

Checks include structural and mechanical checks of the structure, and performance checks of water flow, nozzle delivery and pressure. It can be helpful if two people work together to perform checks.

- **Begin the checks with the machine turned off**
 - Ensure the electrical isolator switch is tagged/locked to prevent accidental starting.
 - Observe the state of the machine, looking for damage or wear and tear.
 - Tighten, adjust, maintain or replace components as required.
- **Make checks with the system running**
 - Consider which aspects required qualified expert (e.g. electrical).
 - Ensure the irrigator travel path is clear before starting the machine.
 - Check the operation of the machine, drive system and nozzles.
- **Check system calibration**
 - Ensure the depth and uniformity of application are as expected.

Many items can be fixed on-farm. Others require specialist skills or equipment. Tick the check boxes as each item is found OK. Make notes on the checklist overleaf against items requiring follow-up attention.

OTHER RESOURCES

System Operation Manual

Every system should be supplied with a system operation manual. Read it and follow instructions. The manual may include extra checks not listed here. It will give more detail than this checklist including information specific to your system.

Other Checklists

This checklist is only for the centre pivot or linear move machine itself. Irrigation New Zealand has additional checklists for the water supply system (intakes, pumps and mainlines) and for other irrigation types.

See www.irrigationnz.co.nz.

Calibration Guidelines

IRRIG8Lite software and IRRIG8Quick system calibration guidelines and worksheets for centre pivot and linear move systems can be downloaded from www.pagebloomer.co.nz/resources.

PRE-SEASON CHECKLIST

Checks completed by: _____

Signature: _____

Date: _____



SYSTEM OFF CHECKS

(SYSTEM NOT RUNNING)

Component	Check
Safety	<input type="checkbox"/> Electrical isolator switch is tagged/locked
Pivot point	<input type="checkbox"/> Lubrication, grease
Drag hose (linear)	<input type="checkbox"/> Condition of other connections <input type="checkbox"/> Hose condition and fittings secure
Towers	<input type="checkbox"/> U joints for wear, replace if necessary <input type="checkbox"/> Cable and rod connections <input type="checkbox"/> Wheel lug bolts, tyre condition and pressure <input type="checkbox"/> Gearboxes, drive shafts – lubricate as required
Riser and spans	<input type="checkbox"/> Boots – tighten bands if necessary <input type="checkbox"/> Flanges
End gun, corners	<input type="checkbox"/> Connections <input type="checkbox"/> Wiring and hydraulic lines
Sprinklers	<input type="checkbox"/> Every sprinkler against nozzle chart, for damage and correct size <input type="checkbox"/> Droppers for wear or damage, replace as necessary
Control unit	<input type="checkbox"/> Electronic controls and battery charge
Prepare to start	<input type="checkbox"/> Before starting: Ensure nothing is parked in front of the irrigator

SYSTEM ON CHECKS

(SYSTEM RUNNING)

Component	Check
Pivot point	<input type="checkbox"/> For leaks, movement
Riser and spans	<input type="checkbox"/> For leaks along spans and at towers <input type="checkbox"/> Flanges – call service company if flanges leaking
Towers	<input type="checkbox"/> Motors, gear box and drive shaft operation for noise or vibration
Sand trap	<input type="checkbox"/> Empty and flush
Sprinklers	<input type="checkbox"/> Each sprinkler is turning correctly and cage not damaged
End gun, corners	<input type="checkbox"/> Droppers for leaks, repair or replace as necessary <input type="checkbox"/> Connections <input type="checkbox"/> Operation <input type="checkbox"/> Gun angles are correct, turns on and off at right locations <input type="checkbox"/> Corner arm sprinklers turn on and off correctly
System pressure	<input type="checkbox"/> Inlet pressure gauge with alternative – replace if necessary <input type="checkbox"/> Inlet pressure is correct <input type="checkbox"/> End pressure – above pressure regulator at last dropper
Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>