

Training Objectives

Participants will develop the basic knowledge to understand systems, components and operation of Terex Aerial Devices and Digger Derricks. This 3-Day training is performed in the classroom, targeting newer technicians to provide the base industry knowledge on Aerials and Digger Derricks.

Safety & Compliance

- ANSI A92.2 and ANSI A10.31 requirements
- OSHA regulations and safe work practices
- Operator and mechanic responsibilities
- Wind speed limitations
- Documentation and recordkeeping requirements

Unit Identification & Documentation

- Equipment nomenclature and component identification
- Serial number identification
- Decals, placards, and warning labels
- Kitsheets, Tech Tips, and Product Advisories

Insulation & Dielectric Systems

- Insulated vs. non-insulated components
- Annual dielectric testing requirements
- Fiberglass insulation maintenance

Inspection & Structural Integrity

- Frequent and periodic inspections
- Major structural inspections
- Critical weld inspections
- Boom drift testing
- Rotation bearing deflection testing
- Load chart verification and documentation

Hydraulic Systems

- PTOs, drivelines, and hydraulic pumps
- Open-center and closed-center systems
- Vane, gear, tandem, and piston pumps
- Cavitation and aeration troubleshooting
- Hydraulic startup procedures
- Pressure and flow diagnostics

Hydraulic Valves & Cylinders

- Control valve operation
- Port reliefs and load-holding circuits
- Counterbalance and holding valves
- Cylinder diagnostics and repair
- Drift testing and adjustment procedures

Hydraulic Reservoirs, Filters & Plumbing

- Reservoir operation and maintenance
- Oil specifications and sampling
- High-pressure and return filters
- Hydraulic hoses and fittings
- Collector blocks and slip rings

Outriggers & Interlock Systems

- Outrigger designs and operation
- Leakage testing
- Lock valves and holding valves
- Outrigger-to-boom interlocks
- Boom stow protection systems

Aerial Device Mechanical Systems

- Fiberglass boom maintenance and repair
- Rotation bearings and gearboxes
- Backlash and end-play testing
- Leveling rods and chains
- Mechanical, hydraulic, and hybrid leveling systems

Digger Derrick Mechanical Systems

- Boom sections and telescoping systems
- Pole guide systems and interlocks
- Winch assemblies and rope inspection
- Digger drives and auger systems
- Hydraulic Overload Protection (HOP) systems
- X-Boost and Dual Lift options

Load Charts & Capacity Management

- Load chart interpretation
- Stability considerations
- Load radius calculations
- Digger derrick and aerial lifting capacities
- HOP interaction with load charts