



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Select Use And Maintain Perway Tools And Equipment Training

Physical Planning and Construction / Civil Engineering Construction

Unit Standard 120035 · NQF Level 2 · 18 Credits · 15 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to select, use, and maintain permanent way (perway) tools and equipment in a rail environment. It covers safe handling, operational procedures, and routine maintenance to ensure compliance with health and safety standards. Learners will be able to apply these competencies in track maintenance and construction activities.

Category	Physical Planning and Construction
Subfield	Civil Engineering Construction
Unit Standard	120035
Accreditation	SAQA Accredited · NQF Level 2 · 18 Credits
Duration	15 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Select appropriate perway tools and equipment for specific track maintenance tasks based on job requirements and safety considerations.
- Demonstrate correct usage techniques for perway tools and equipment in accordance with manufacturer specifications and workplace procedures.
- Apply routine inspection and maintenance procedures to ensure tools and equipment remain in safe working condition.
- Identify and report defects or malfunctions in perway tools and equipment to prevent accidents and downtime.
- Comply with relevant health, safety, and environmental regulations when using and maintaining perway tools and equipment.

WHO SHOULD ATTEND

- This course is designed for track workers, maintenance technicians, and supervisors in the rail industry who are responsible for selecting, using, and maintaining perway tools and equipment.
- It is also suitable for apprentices and new entrants seeking foundational skills in rail infrastructure maintenance.

COURSE OUTLINE

Day 1: Introduction to Perway Tools and Equipment

- Overview of rail infrastructure and perway components.
- Categories of perway tools: hand tools, power tools, and heavy equipment.
- Introduction to relevant standards: SANS, SAQA, and unit standard 120035.
- Basic safety principles: PPE, tool inspection, and hazard identification.
- Tool inventory and documentation procedures.

Day 2: Hand Tools for Perway Maintenance

- Detailed look at track-specific hand tools: rail tongs, claw bars, track gauges.
- Proper gripping, swinging, and leverage techniques.
- Inspection criteria for wear, cracks, and damage.
- Cleaning, oiling, and storage best practices.
- Practical session: tool identification and condition assessment.

Day 3: Power Tools and Pneumatic Equipment

- Types of power tools: electric vs. pneumatic vs. hydraulic.
- Safe operation of rail drills and cut-off saws.
- Air compressor setup and hose management.
- Common faults: overheating, loss of power, vibration.
- Practical: starting, operating, and shutting down tools.

Day 4: Heavy Equipment Overview – Tampers and Regulators

- Introduction to mechanised perway equipment.
- Tamping machine: tamping units, lifting, lining.
- Ballast regulator: plough, broom, and wings.
- Operator responsibilities and daily inspection checklists.
- Safety around moving machinery and track possession.

Day 5: Specialised Tools – Rail Saws, Drills, and Grinders

- Rail saw types: abrasive, friction, and cold saws.
- Rail drill alignment and bit selection.
- Grinding stones and angles for defect removal.
- Measuring rail head wear and profile gauges.
- Practical: cutting and drilling a rail section.

Day 6: Track Measurement and Alignment Tools

- Tools: track gauge, spirit level, optical level, theodolite.
- Measuring gauge, superelevation, and twist.
- String lining for alignment and versine measurement.
- Data recording forms and defect classification.
- Practical: field measurement exercise on a test track.

Day 7: Fastening Systems and Associated Tools

- Types: Pandrol, Fastclip, and traditional fishplate.
- Tools: clip applicators, impact wrenches, torque multipliers.
- Torque specifications and calibration.
- Inspection for broken clips and loose bolts.

- Practical: installing and tensioning clips.

Day 8: Maintenance of Tools – Sharpening and Calibration

- Sharpening techniques for drill bits and chisels.
- Saw blade dressing and replacement criteria.
- Calibration procedures for track gauges and levels.
- Lubrication schedules and oil types.
- Record keeping: tool register and maintenance log.

Day 9: Safe Handling and Transport of Tools and Equipment

- Manual handling risk assessment.
- Lashing and securing loads on trolleys and trains.
- Tool crib management and sign-out procedures.
- Emergency procedures for tool failure or accidents.
- Practical: loading and securing tools on a trailer.

Day 10: Advanced Equipment – Spike Pullers and Screw Spikers

- Hydraulic spike puller: setup, operation, maintenance.
- Screw spiker: depth control and torque adjustment.
- Common faults: hydraulic leaks, worn jaws, misalignment.
- Preventive maintenance: filters, fluids, seals.
- Practical: removing and installing spikes.

Day 11: Tools for Turnouts and Crossings

- Tools: switch tampers, point gauges, crossing templates.
- Measuring switch opening, stock rail gauge, and flangeways.
- Adjusting switch rods and stretcher bars.
- Crossing nose profile measurement and grinding.
- Practical: adjusting a set of points.

Day 12: Tool Inspection and Defect Reporting

- Inspection intervals and criteria per tool type.
- Non-destructive testing basics: visual, magnetic particle.
- Defect classification and tagging system.
- Reporting chain: operator to supervisor to maintenance.
- Practical: inspect a set of tools and complete report.

Day 13: Tool Storage and Inventory Management

- Storage conditions: cleanliness, climate, security.
- Shelving, shadow boards, and tool chests.
- Inventory methods: barcode, RFID, manual logs.
- Reorder levels and procurement procedures.
- Practical: set up a shadow board and perform stock count.

Day 14: Integration – Tool Selection for Typical Perway Tasks

- Task analysis: rail replacement, tamping, fastener renewal.
- Tool selection matrix: task vs. tool vs. condition.
- Worksite organisation: tool layout and access.
- Communication and hand signals for tool handling.
- Practical: plan and execute a small perway task with tools.

Day 15: Final Assessment and Course Review

- Review of key concepts from all days.
- Practical assessment: tool inspection, operation, and maintenance.
- Written assessment: multiple-choice and short-answer.
- Individual feedback and areas for improvement.
- Issuance of certificates and closing.

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **18 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 48,600.00	R 48,600.00
1	In-House	R 63,200.00	R 63,200.00
1	On-Campus (Pretoria)	R 72,900.00	R 72,900.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
04 Aug 2026	24 Aug 2026	On-Campus	Pretoria, South Africa
04 Aug 2026	24 Aug 2026	On-Campus	Lagos, Nigeria
05 Aug 2026	25 Aug 2026	On-Campus	Johannesburg, South Africa
06 Aug 2026	26 Aug 2026	On-Campus	Mauritius
07 Aug 2026	27 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	28 Aug 2026	On-Campus	Pretoria, South Africa
11 Aug 2026	31 Aug 2026	On-Campus	Abu Dhabi, UAE

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 120035) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call +27 12 004 8389 or WhatsApp +27 65 077 6310 and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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