



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

Positive Displacement Pump Overhaul Procedure

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 253386 · NQF Level 3 · 7 Credits · 4 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills required to overhaul positive displacement pumps in an industrial or mining environment. Participants will learn to dismantle, inspect, repair, reassemble, and test pumps according to manufacturer specifications and safety standards.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	253386
Accreditation	SAQA Accredited · NQF Level 3 · 7 Credits
Duration	4 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate understanding of positive displacement pump principles, types, and applications.
- Apply safe work practices and use appropriate tools and equipment during pump overhaul.
- Dismantle and inspect pump components for wear, damage, and tolerances.
- Evaluate component condition and determine repair or replacement requirements.
- Reassemble and align pump components to manufacturer specifications.
- Test overhauled pump for performance, leakage, and operational efficiency.

WHO SHOULD ATTEND

- This course is designed for mechanical fitters, millwrights, pump technicians, and maintenance personnel responsible for the overhaul and repair of positive displacement pumps in sectors such as mining, petrochemical, water treatment, and manufacturing.

COURSE OUTLINE

Day 1: Introduction to Positive Displacement Pumps

- Overview of positive displacement pumps
- Types: reciprocating, rotary, and diaphragm pumps
- Operating principles and flow characteristics
- Pump components: casing, rotor, stator, valves, seals
- Applications in industry (mining, chemical, water)
- Safety precautions during pump maintenance
- Introduction to overhaul procedures and documentation

Day 2: Disassembly and Inspection

- Pre-disassembly safety checks and lockout/tagout
- Step-by-step disassembly of a positive displacement pump
- Cleaning and inspection of components
- Measuring clearances: rotor-to-casing, inter-lobe, end clearances
- Wear patterns and failure analysis
- Documentation of inspection results
- Ordering replacement parts

Day 3: Repair and Reassembly

- Repair methods: lapping, polishing, welding (overview)
- Replacement of bearings, seals, and mechanical seals
- Reassembly steps: lubrication, torque values, bolt tightening patterns
- Installation of packing and mechanical seals
- Rotor and stator alignment
- Clearance verification after reassembly
- Pressure testing and leak checks

Day 4: Testing, Commissioning, and Documentation

- Pre-start checks and safety precautions
- Performance testing: flow, pressure, vibration, temperature
- Commissioning procedures and operational checks
- Troubleshooting: cavitation, overheating, leakage
- Completion of overhaul report and maintenance log
- Quality assurance and handover
- Course review and assessment

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 **7 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 20,500.00	R 20,500.00
1	In-House	R 26,600.00	R 26,600.00
1	On-Campus (Pretoria)	R 30,800.00	R 30,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	13 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	13 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	13 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	13 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	13 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	13 Aug 2026	On-Campus	Mauritius
18 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
18 Aug 2026	21 Aug 2026	On-Campus	Pretoria, South Africa

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 253386) 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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