



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

Hydraulic Hose Assembly

Custom Courses / Hydraulics, Pneumatics & Fluid Power

Unit Standard AATICD-0225 · NQF Level 5 · 10 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the skills to safely assemble, test, and maintain hydraulic hoses used in industrial and mobile equipment. Participants will gain hands-on knowledge of hose selection, crimping procedures, and safety protocols, ensuring compliance with industry standards.

Category	Custom Courses
Subfield	Hydraulics, Pneumatics & Fluid Power
Unit Standard	AATICD-0225
Accreditation	SAQA Accredited · NQF Level 5 · 10 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Identify and select appropriate hose types, fittings, and adapters for specific hydraulic applications
- Demonstrate correct hose assembly techniques including cutting, skiving, and crimping
- Apply safety procedures during assembly, pressure testing, and installation of hydraulic hoses
- Inspect assembled hoses for defects and verify compliance with manufacturer specifications
- Implement proper storage and handling practices to extend hose service life

WHO SHOULD ATTEND

- This course is ideal for maintenance technicians, plant engineers, and mechanical fitters who assemble or replace hydraulic hoses in workshop or field environments.

COURSE OUTLINE

Day 1: Introduction to Hydraulic Systems and Safety

- Overview of hydraulic systems: principles, applications, and advantages.
- Key components: pumps, valves, actuators, reservoirs, filters, and hoses.
- Hydraulic fluids: types, viscosity, contamination, and compatibility.
- Safety regulations: lockout/tagout, PPE, safe handling of fluids and tools.
- Introduction to hose construction: layers, materials, and reinforcement.
- Standards and specifications: SAE, ISO, and manufacturer guidelines.

Day 2: Hose Selection and Measurement

- Factors influencing hose selection: pressure, temperature, fluid compatibility, environment.
- Hose sizing: inside diameter, outside diameter, and working pressure.
- Measuring techniques: using tape measures, templates, and software.
- Fitting types: permanent, reusable, crimp, and field-attachable.
- Fitting identification: threads, O-ring seals, and flange connections.
- Adapters and transition pieces: common configurations and uses.
- Reading and interpreting manufacturer catalogues and datasheets.

Day 3: Cutting, Skiving, and Fitting Preparation

- Cutting equipment: abrasive saws, shears, and manual cutters.
- Cutting techniques: achieving square cuts and avoiding fraying.
- Skiving tools: manual and powered skivers.
- Skiving depth and length: matching fitting specifications.
- Cleaning processes: removing debris and contamination.
- Inspection for defects: cuts, abrasions, and layer separation.
- Safe handling and disposal of waste materials.

Day 4: Crimping and Assembly Techniques

- Crimping machine types: manual, electric, and hydraulic.
- Die selection and setup: matching die to fitting and hose.
- Crimping process: insertion, alignment, and actuation.
- Reusable fittings: assembly steps and torque requirements.
- Quality checks: visual inspection, dimensional verification, and gauge use.
- Pressure testing: procedures, equipment, and safety.
- Common assembly defects: leaks, misalignment, and over-crimping.
- Documentation and traceability: tagging and recording.

Day 5: Installation, Maintenance, and Troubleshooting

- Installation best practices: bend radius, routing, clamping, and protection.
- Inspection schedules: visual, tactile, and pressure checks.
- Failure modes: abrasion, kinking, blistering, and leaks.
- Troubleshooting flow charts: identifying root causes.
- Replacement criteria: age, wear, and performance degradation.
- Record keeping: maintenance logs and replacement history.
- Environmental considerations: recycling and disposal of used hoses.
- Course review and assessment preparation.

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 **10 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 24,200.00	R 24,200.00
1	In-House	R 31,400.00	R 31,400.00
1	On-Campus (Pretoria)	R 36,200.00	R 36,200.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Harare, Zimbabwe
17 Aug 2026	21 Aug 2026	On-Campus	Shenzhen, China
24 Aug 2026	28 Aug 2026	On-Campus	Bangkok, Thailand
24 Aug 2026	28 Aug 2026	On-Campus	Victoria Falls, Zimbabwe
31 Aug 2026	04 Sep 2026	On-Campus	Lusaka, Zambia
31 Aug 2026	04 Sep 2026	On-Campus	London, UK

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 AATICD-0225) 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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